Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

Toxics Cleanup Program
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January 2015

Appendix B
General Recycling

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

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B-1 Introduction and Background

Facility Name	**General Recycling**
Address	4260 West Marginal Way SW Seattle, WA 98106
NPDES Permit Type	Industrial Stormwater General Permit
NPDES Permit No.	WAR002341
Permit Monitoring Requirements	Turbidity, TSS, pH, oil sheen, total petroleum hydrocarbons (TPH), total zinc, total copper, total lead, hardness
SIC Code	5093: Scrap and Waste Materials
Inspection Date	April 4, 2013; April 11, 2013
Grab Samples	1 Water Sample, 3 Solids Samples
Sample ID(s)	GR-MH-03-20130404-S GR-CB-07-20130411-S GR-WS-05-20130411-S GR-MH-01-20130404-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 (MH-03), 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

General Recycling began operating at this property in 2002. General Recycling receives, stores, and ships pre-processed ferrous scrap at the 4260 West Marginal Way SW location. According to the facility's Stormwater Pollution Prevention Plan (SWPPP), scrap is delivered by truck, rail, and barge transportation and shipped off the property via truck and rail transportation. Material that is unloaded from barges has the potential to spill to the Lower Duwamish Waterway (LDW). Scrap is sorted and stored outdoors on a paved surface. Oily scrap is stored on a concrete pad. Vehicle maintenance is performed on the concrete pad. Oil filter scrap is stored in a container to prevent contact with stormwater (General Recycling 2010). A facility map is presented in Figure B-1.

B-1.1 Stormwater Conveyance and Treatment System

There are 37 catch basins on the property (Figure B-1). Thirty-three of the catch basins are connected to the facility stormwater collection, recycling, and treatment system. The treatment system is designed for a 25-year storm. The system was installed in 2003 and upgraded in 2006 to operate as a detention/settling system in the winter months, when not being operated as a recycling system. During the summer months, the collected stormwater is used for dust control at

the facility. Berms are used to direct stormwater flow into the collection system. Prior to recycling, stormwater is conveyed through oil water separators and detention tanks to remove solids, silt, and metals. Stormwater from the oily-scrap collection pad is conveyed to an oil water separator. When the capacity of the collection system is exceeded, stormwater is discharged to the LDW via OF1 (Figure B-1). No discharges occur between April and September as all stormwater is recycled for dust control during these months (General Recycling 2010).

The catch basins are equipped with compost socks and are inspected and maintained on a bimonthly schedule (General Recycling 2011).

Groundwater infiltrates the stormwater collection system and is recycled for dust control. Wastewater generated during fire protection system flushing, testing, and maintenance is also discharged to the stormwater collection system. During storm events, the groundwater and the fire-protection system wastewater may commingle with stormwater and be discharged to the LDW via OF1 (Figure B-1) (General Recycling 2010).

B-1.2 Recent Compliance History

Ecology previously completed a stormwater compliance inspection at General Recycling on April 12, 2011. Ecology reviewed the facility's discharge monitoring report data for the 4th quarter of 2010 and 1st quarter of 2011. The facility collected stormwater for use as dust suppression during the 2nd and 3rd quarters and did not discharge to the LDW. General Recycling exceeded the permit benchmarks for copper and zinc during the 4th quarter of 2010 and 1st quarter of 2011, triggering a Level Two Corrective Action. The exceedances were more than 10 times the permit benchmarks for each analyte. Ecology required the facility to submit an engineering report requesting approval to use a chemical treatment system. Additionally, Ecology requested that the facility update the SWPPP to include a new expansion area south of the property and include operations and maintenance (O&M) details for the oily metals and municipal waste storage areas. General Recycling needed to evaluate the increased impervious surface of the expansion area and submit a Modification of Coverage if necessary (Ecology 2011a).

In November 2011, Ecology issued Administrative Order Docket #8888 to General Recycling. The Order required the facility to advise Ecology on the status of the stormwater treatment system in Annual Reports, implement all applicable operational and structural source control best management practices (BMPs), submit an engineering report for the proposed stormwater treatment system, and have the treatment system operational by September 30, 2013 (Ecology 2011b).

General Recycling evaluated different stormwater treatment options to address benchmark exceedances and submitted an engineering report to Ecology on March 31, 2012. The facility elected to complete bench scale testing of a Chitosan sand filtration treatment system during April and May 2012 (General Recycling 2012). Following submittal of the testing results, Ecology approved the stormwater treatment system on August 31, 2012. On September 20, 2012, Ecology issued Amended Administrative Order Docket #9515. The Order required General Recycling to advise Ecology on the status of compliance with Level One, Two, and Three Corrective Actions in Annual Reports, continue to implement all Level One corrective actions,

and install and have operational the stormwater treatment system at the facility by October 31, 2012 (Ecology 2012).

Based on available Discharge Monitoring Report (DMR) data, General Recycling exceeded the permit benchmark for zinc, copper, and turbidity for the 1st quarter of 2012 and for zinc during the 4th quarter 2012, triggering a Level Two Corrective Action. General Recycling exceeded the permit benchmark for zinc during the 1st quarter of 2013 monitoring (Ecology 2013c).

B-2 Inspection and Sampling

B-2.1 April 2013 Stormwater Compliance Inspection

On April 4 and 11, 2013, Ecology conducted a stormwater compliance inspection at General Recycling. Leidos assisted Ecology with the inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at drainage structures, 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 B-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments B-1 and B-2, respectively.

The field team inspected the following stormwater conveyance structures at General Recycling. (Figure B-2): stormwater treatment system at manhole 01 (MH-01), manhole 03 (MH-03), catch basin 07 (CB-07), catch basin 5D (CB-5D), catch basin 6D (CB-6D), and oil water separator 05 (WS-05). A water sample was collected from a port on the effluent line of the facility's stormwater treatment system at MH-01. Locations MH-03, CB-07, and WS-05 contained sufficient sampleable solids to collect grab samples. Locations CB-5D and CB-6D were fitted with filter socks and did not contain sufficient sampleable material.

B-2.2 Stormwater Conveyance System Sampling

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

B-2.2.1 Water Sample

Water sample GR-MH-01-20130404-W was collected from the effluent sampling port of the facility's stormwater treatment system (Figure B-2). The treatment system processes the majority of stormwater at the facility. The treatment system was manually activated to facilitate discharge and purge the sample port prior to collecting the sample. Following the sampling port purge, a water sample was collected from the treatment system. A field water quality meter measured the effluent turbidity at 31 NTU. The treatment system's internal turbidity meter measured influent turbidity at 44 NTU and effluent turbidity at 0.13 NTU. General Recycling's portable turbidity meter measured the effluent turbidity at 1.81 NTU.

B-2.2.2 Solids Samples

Solids sample GR-MH-03-20130404-S was collected from MH-03, which is located upstream of the facility's treatment system (Figure B-2, Attachment B-1). Location MH-03 receives stormwater from an oil water separator to the north and a stockpile yard to the west. The sample was collected from the central portion of the manhole. The sample consisted of brown silty sand.

After multiple grab attempts, sufficient sample volume was obtained to perform all analyses, including dioxins/furans.

Solids sample GR-WS-05-20130411-S was collected from WS-05 located on the south side of crushed aluminum can and tire turning piles (Figure B-2, Attachment B-1). The location is also south of a railway used to transport incoming material. The oil water separator receives stormwater from the material stockpile areas. The solids sample was collected from the center of the oil water separator between the separator plates. The sample consisted of black fine-grained sand and silt. A slight petroleum odor was detected during sample collection. Sufficient sample volume was obtained to submit the samples for all analyses. Per discussion with Ecology, dioxin/furan analysis was not requested for this sample.

Solids sample GR-CB-07-20130411-S was collected from CB-07 located on the southwest portion of the facility (Figure B-2). Location CB-07 receives stormwater that contacts material stockpiles to the north and west. The solids sample was collected from the center of the catch basin structure. The sample consisted of silt/clay and debris. The solid material was brown on the surface and black on the lower portion of the grab sample. A slight hydrogen sulfide odor was detected during sample collection. Sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was not requested for this sample.

B-3 Results

B-3.1 Chemical Analysis

Ecology collected one water sample and three solids samples during the April 2013 stormwater compliance inspection at General Recycling. Analytical methods, chemical results and regulatory criteria are presented in Tables B-1 through B-7.

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

B-3.2 Inspection Results and Permit Compliance Requirements

During the April 2013 inspection, General Recycling was out of compliance with permit requirements. Several storm drain catch basins to the north of the facility scale house were not included on the site map. The drains are likely to connect to the large City of Seattle municipal storm drain line that flows from West Marginal Way to the LDW. The expanded area south of the property was not included on the site map. Ecology observed vacuum truck sweeper solids in an ecology block bin that was exposed to stormwater. The SWPPP did not contain O&M details for the facility's stormwater treatment system. There were several areas where scrap metal was stored on bare dirt where the pavement was missing. Contaminants in stormwater have the potential to infiltrate the exposed soil to groundwater and enter cracks in the facility's storm drain structures or discharge directly to the LDW (Ecology 2013a).

As a result of the inspection, Ecology issued a Warning Letter to General Recycling and identified the following corrective actions (Ecology 2013b):

- Submit an updated SWPPP that meets the requirements of Permit Condition S3.
- Submit an updated and accurate site map that meets Permit Condition S3.B.1(a-1).
- Provide adequate cover or properly stabilize the sweeper solids.
- Include an O&M manual for the stormwater treatment system in the SWPPP.
- Discontinue the use of the oily scrap metal containment pad for routine oil changes and major service of vehicles and equipment.

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

B-4 References

Ecology (Washington Department of Ecology). 2011a. Stormwater Compliance Inspection Report, General Recycling of Washington LLC, 4260 W Marginal Way SW, Seattle, WA 98134. April 12, 2011.

Ecology. 2011b. Administrative Order Docket Number 8888. November 29, 2011.

Ecology. 2012. Amended Administrative Order Docket Number 9515. September 20, 2012.

Ecology. 2013a. Stormwater Compliance Inspection, General Recycling of Washington LLC, 4260 W Marginal Way SW, Seattle, WA 98134. June 14, 2013.

Ecology. 2013b. Letter from Robert Wright, Ecology, to Barton Kale, Nucor Steel Seattle, Inc. Re: Warning Letter – Noncompliance with Industrial Stormwater General Permit No. WAR002341, terms and conditions. June 14, 2013.

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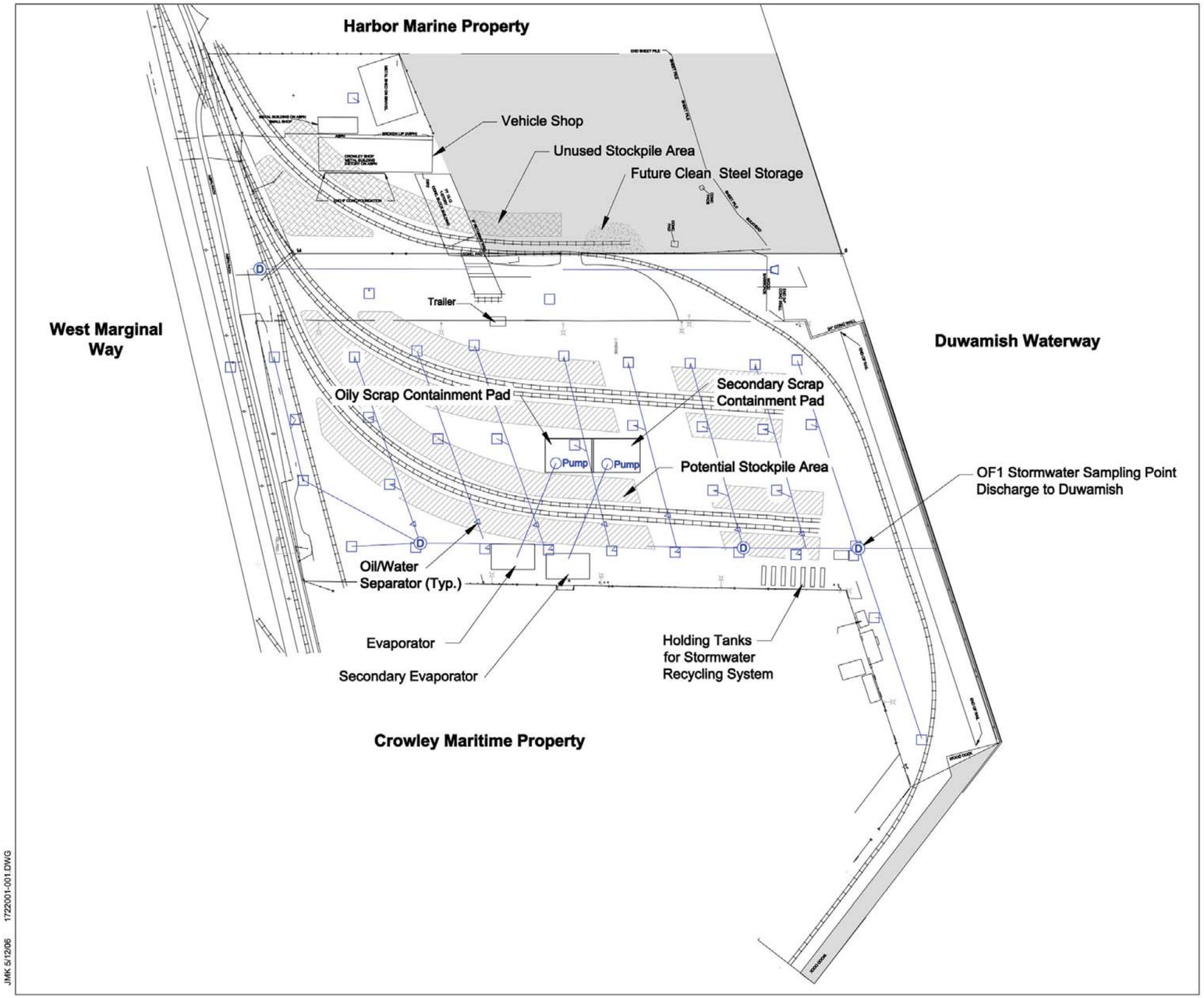
General Recycling. 2011. Industrial Stormwater General Permit Annual Report 2010, Permit No. WAR-002341. May 3, 2011.

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

SWPPP Plan



Storm Drain

Oil/Water Separator

Catch Basin

Non-Paved Area

Scrap Stockpile Area

Notes:
1. No stockpiles are stored on catch basins.
2. Site covered with asphalt or concrete except in non-paved areas.
3. No surface water exists on site.

N

0 150 300

Scale in Feet

HARTCROWSER

17220-01 5/06

Figure 1

DEPARTMENT OF ECOLOGY
State of Washington

Figure B–1. General Recycling Facility SWPPP Map

Source: General Recycling 2010 [10448]

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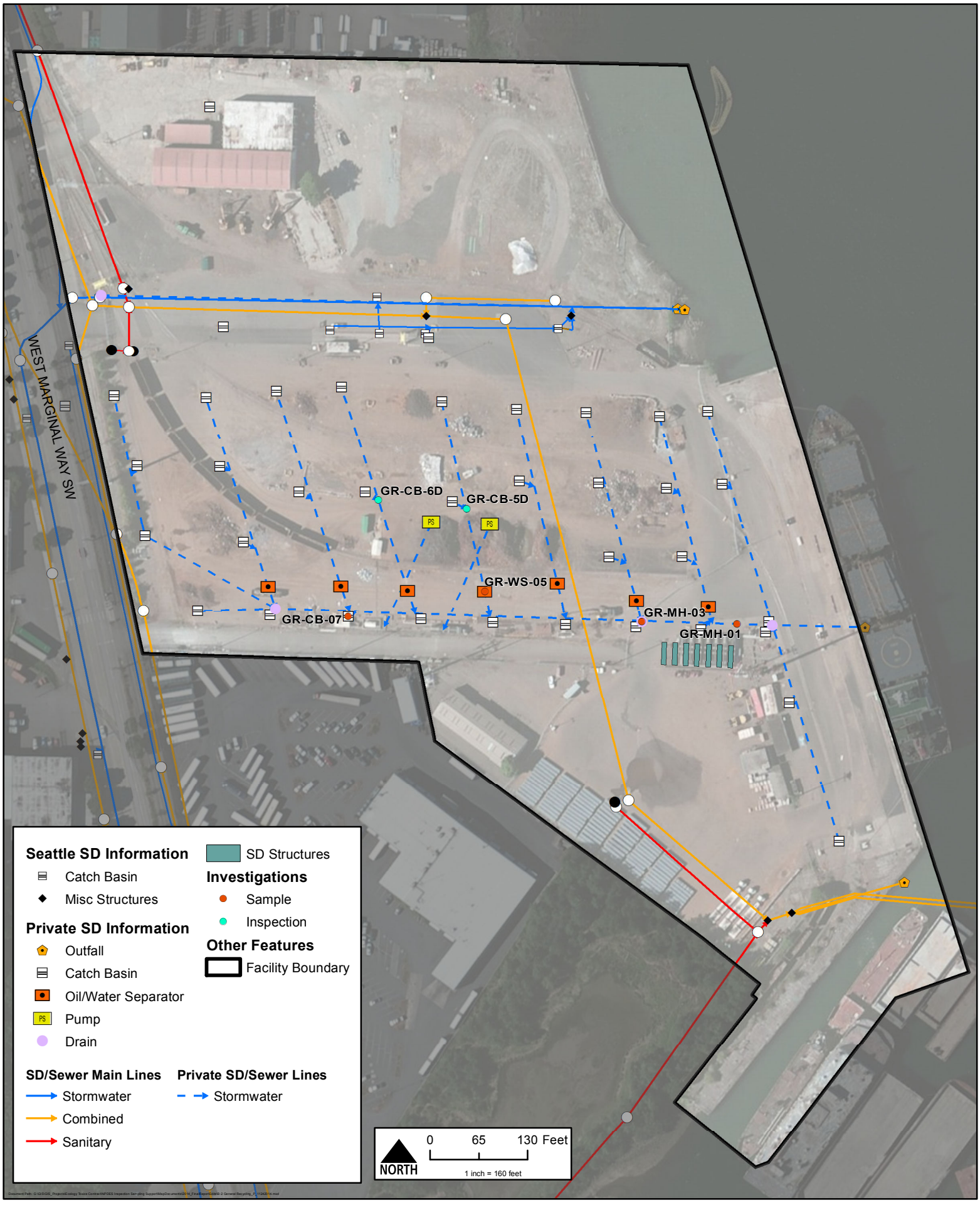

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Figure B–2. General Recycling Inspection and Sample Locations

DEPARTMENT OF ECOLOGY
State of Washington

Tables

Table B-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date		GR-MH-01
Analyte	**Units**	**4/4/2013**
Metals (Total)		
Antimony	µg/L	E200.8
Arsenic	µg/L	E200.8
Beryllium	µg/L	E200.8
Cadmium	µg/L	E200.8
Chromium	µg/L	E200.8
Copper	µg/L	E200.8
Lead	µg/L	E200.8
Mercury	µg/L	SW7470A
Nickel	µg/L	E200.8
Selenium	µg/L	E200.8
Silver	µg/L	E200.8
Thallium	µg/L	E200.8
Zinc	µg/L	E200.8
Metals (Dissolved)		
Antimony	µg/L	E200.8
Arsenic	µg/L	E200.8
Beryllium	µg/L	E200.8
Cadmium	µg/L	E200.8
Chromium	µg/L	E200.8
Copper	µg/L	E200.8
Lead	µg/L	E200.8
Mercury	µg/L	SW7470A
Nickel	µg/L	E200.8
Selenium	µg/L	E200.8
Silver	µg/L	E200.8
Thallium	µg/L	E200.8
Zinc	µg/L	E200.8
PAHs		
1-Methylnaphthalene	µg/L	SW8270DSIM
2-Chloronaphthalene	µg/L	SW8270D
2-Methylnaphthalene	µg/L	SW8270DSIM
Acenaphthene	µg/L	SW8270DSIM
Acenaphthylene	µg/L	SW8270DSIM
Anthracene	µg/L	SW8270DSIM
Benzo(a)anthracene	µg/L	SW8270DSIM
Benzo(a)pyrene	µg/L	SW8270DSIM
Benzo(b)fluoranthene	µg/L	SW8270DSIM
Benzo(g,h,i)perylene	µg/L	SW8270DSIM
Benzo(k)fluoranthene	µg/L	SW8270DSIM
Chrysene	µg/L	SW8270DSIM
Dibenz(a,h)anthracene	µg/L	SW8270DSIM
Dibenzofuran	µg/L	SW8270DSIM
Fluoranthene	µg/L	SW8270DSIM
Fluorene	µg/L	SW8270DSIM

Table B-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date		GR-MH-01
Analyte	**Units**	**4/4/2013**
Indeno(1,2,3-cd)pyrene	µg/L	SW8270DSIM
Naphthalene	µg/L	SW8270DSIM
Phenanthrene	µg/L	SW8270DSIM
Pyrene	µg/L	SW8270DSIM
Total Benzofluoranthenes	µg/L	SW8270DSIM
Total HPAHs	µg/L	SW8270DSIM
Total LPAHs	µg/L	SW8270DSIM
Total PAHs	µg/L	SW8270DSIM
cPAHs, nd RL*0	µg/L	SW8270DSIM
cPAHs, nd RL*0.5	µg/L	SW8270DSIM
cPAHs, nd RL*1	µg/L	SW8270DSIM
Phthalates		
bis(2-Ethylhexyl)phthalate	µg/L	SW8270D
Butylbenzylphthalate	µg/L	SW8270D
Di-n-Butylphthalate	µg/L	SW8270D
Diethylphthalate	µg/L	SW8270D
Dimethylphthalate	µg/L	SW8270D
Di-n-Octyl phthalate	µg/L	SW8270D
Phenols		
2,3,4,6-Tetrachlorophenol	µg/L	SW8270D
2,4,5-Trichlorophenol	µg/L	SW8270D
2,4,6-Trichlorophenol	µg/L	SW8270D
2,4-Dichlorophenol	µg/L	SW8270D
2,4-Dimethylphenol	µg/L	SW8270D
2,4-Dinitrophenol	µg/L	SW8270D
2-Chlorophenol	µg/L	SW8270D
2-Methylphenol	µg/L	SW8270D
2-Nitrophenol	µg/L	SW8270D
4,6-Dinitro-2-Methylphenol	µg/L	SW8270D
4-Chloro-3-methylphenol	µg/L	SW8270D
4-Methylphenol	µg/L	SW8270D
4-Nitrophenol	µg/L	SW8270D
Pentachlorophenol	µg/L	SW8270D
Phenol	µg/L	SW8270D
Other SVOCs		
1,2,4-Trichlorobenzene	µg/L	SW8270D
1,2-Dichlorobenzene	µg/L	SW8270D
1,2-Diphenylhydrazine	µg/L	SW8270D
1,3-Dichlorobenzene	µg/L	SW8270D
1,4-Dichlorobenzene	µg/L	SW8270D
2,4-Dinitrotoluene	µg/L	SW8270D
2,6-Dinitrotoluene	µg/L	SW8270D
2-Nitroaniline	µg/L	SW8270D

Table B-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date		GR-MH-01
Analyte	**Units**	**4/4/2013**
3,3'-Dichlorobenzidine	µg/L	SW8270D
3-Nitroaniline	µg/L	SW8270D
4-Bromophenyl-phenylether	µg/L	SW8270D
4-Chloroaniline	µg/L	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D
4-Nitroaniline	µg/L	SW8270D
Aniline	µg/L	SW8270D
Azobenzene	µg/L	SW8270D
Benzoic Acid	µg/L	SW8270D
Benzyl Alcohol	µg/L	SW8270D
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D
bis(2-Chloroethoxy) Methane	µg/L	SW8270D
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D
Carbazole	µg/L	SW8270D
Hexachlorobenzene	µg/L	SW8081B
Hexachlorobutadiene	µg/L	SW8081B
Hexachlorocyclopentadiene	µg/L	SW8270D
Hexachloroethane	µg/L	SW8270D
Isophorone	µg/L	SW8270D
Nitrobenzene	µg/L	SW8270D
N-Nitrosodimethylamine	µg/L	SW8270D
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D
N-Nitrosodiphenylamine	µg/L	SW8270D
N-Nitrosomethylethylamine	µg/L	SW8270D
PCB Aroclors		
PCB Aroclors	µg/L	na
PCB Congeners		
PCB Congeners	pg/L	1668C
Pesticides		
Pesticides	µg/L	SW8081B
Conventionals		
Alkalinity	mg/L CaCO3	SM2320
Bicarbonate	mg/L CaCO3	SM2320
Carbonate	mg/L CaCO3	SM2320
Chloride	mg/L	EPA300.0
Conductivity	µmhos/cm	EPA120.1
Dissolved Organic Carbon	mg/L	SM 5310B
Hydroxide	mg/L CaCO3	SM2320
Nitrate + Nitrite	mg-N/L	na
N-Nitrate	mg-N/L	EPA300.0
N-Nitrite	mg-N/L	na
pH	std units	SM4500H
Sulfate	mg/L	EPA300.0
Total Organic Carbon	mg/L	SM 5310B
Total Suspended Solids	mg/L	SM2540D

Table B-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date		GR-MH-01
Analyte	Units	4/4/2013

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 B-2. Water Quality Data
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-MH-01
Collection Date			4/4/2013
Analyte	WA NPDES ISGP	Unit	Result
Field Parameters			
Flow	--	Yes/No	No
pH	5.0 to 9.0	std units	7.58
Conductivity	--	mS/cm	347
Temperature	--	degrees C	12.8
Total Dissolved Solids	--	g/L	0.22
Turbidity	25	NTU	**31**[b]
Oil & Grease	No visible sheen	Yes/No	No
Dissolved Oxygen	--	mg/L	na

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

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

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

Table B-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: General Recycling

Location ID						GR-MH-01				
Collection Date						4/4/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Metals (µg/L)										
Antimony	--	--	--	--	--	1.1				
Arsenic	150	36	69	--	--	0.9				
Beryllium	--	--	--	--	--	< 0.2 U				
Cadmium	2.1	9.4	42	--	--	< 0.1 U				
Chromium	--	--	--	--	--	< 0.5 U				
Copper	14	3.7	5.8	--	--	2.7				
Lead	81.6	8.5	221	--	--	0.3				
Mercury	1.4	0.025	2.1	--	--	< 0.02 U				
Nickel	--	8.3	75	--	--	3.6				
Selenium	5	71	291	--	--	< 0.5 U				
Silver	3.8	--	2.2	--	--	< 0.2 U				
Thallium	--	--	--	--	--	< 0.2 U				
Zinc	117	86	95	--	--	26				
Dissolved Metals (µg/L)										
Antimony		--	--	4,300	640	1.0				
Arsenic		36	69	--	--	0.8				
Beryllium		--	--	--	--	< 0.2 U				
Cadmium		9.3	42	--	--	< 0.1 U				
Chromium		--	--	--	--	< 0.5 U				
Copper		3.1	4.8	--	--	2.0				
Lead		8.1	210	--	--	< 0.1 U				
Mercury		0.025	1.8	0.15	--	< 0.02 U				
Nickel		8.2	74	4,600	4,600	3.2				
Selenium		71	290	--	4,200	< 0.5 U				
Silver		--	1.9	--	--	< 0.2 U				
Thallium		--	--	6.3	0.47	< 0.2 U				
Zinc		81	90	--	26,000	15				
PAHs (µg/L)										
1-Methylnaphthalene		--	--	--	--	0.015				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U				
2-Methylnaphthalene		--	--	--	--	0.018				
Acenaphthene		--	--	--	990	0.033				
Acenaphthylene		--	--	--	--	< 0.01 U				
Anthracene		--	--	110,000	40,000	< 0.01 U				
Benzo(a)anthracene		--	--	0.031	0.018	< 0.01 U				
Benzo(a)pyrene		--	--	0.031	0.018	< 0.01 U				
Benzo(b)fluoranthene		--	--	0.031	0.018	< 0.01 U				
Benzo(g,h,i)perylene		--	--	--	--	< 0.01 U				
Benzo(k)fluoranthene		--	--	0.031	0.018	< 0.01 U				
Chrysene		--	--	0.031	0.018	< 0.01 U				
Dibenz(a,h)anthracene		--	--	0.031	0.018	< 0.01 U				
Dibenzofuran		--	--	--	--	0.019				
Fluoranthene		--	--	370	140	0.08				
Fluorene		--	--	14,000	5,300	0.027				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	< 0.01 U				
Naphthalene		--	--	--	--	0.024				
Phenanthrene		--	--	--	--	0.052				
Pyrene		--	--	11,000	4,000	0.06				
Total Benzofluoranthenes		--	--	--	--	< 0.02 U				
Total HPAHs		--	--	--	--	0.14				
Total LPAHs		--	--	--	--	0.14				
Total PAHs		--	--	--	--	0.28				
cPAHs, nd RL*0		--	--	--	--	< 0 U				

Table B-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: General Recycling

Location ID						GR-MH-01				
Collection Date						4/4/2013				
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
cPAHs, nd RL*0.5		--	--	--	--	< 0.0076 U				
cPAHs, nd RL*1		--	--	--	--	< 0.015 U				
Phthalates (µg/L)										
bis(2-Ethylhexyl)phthalate		--	--	5.9	2.2	< 1.0 U				
Butylbenzylphthalate		--	--	--	1,900	< 1.0 U				
Di-n-Butylphthalate		--	--	12,000	4,500	< 1.0 U				
Diethylphthalate		--	--	120,000	44,000	< 1.0 U				
Dimethylphthalate		--	--	2,900,000	1,100,000	< 1.0 U				
Di-n-Octyl phthalate		--	--	--	--	< 1.0 U				
Phenols (µg/L)										
2,3,4,6-Tetrachlorophenol		--	--	--	--	< 1.0 U				
2,4,5-Trichlorophenol		--	--	--	3,600	< 5.0 U				
2,4,6-Trichlorophenol		--	--	6.5	2.4	< 3.0 U				
2,4-Dichlorophenol		--	--	790	290	< 3.0 U				
2,4-Dimethylphenol		--	--	--	850	< 3.0 U				
2,4-Dinitrophenol		--	--	14,000	5,300	< 20 U				
2-Chlorophenol		--	--	--	150	< 1.0 U				
2-Methylphenol		--	--	--	--	< 1.0 U				
2-Nitrophenol		--	--	--	--	< 3.0 U				
4,6-Dinitro-2-Methylphenol		--	--	765	280	< 10 U				
4-Chloro-3-methylphenol		--	--	--	--	< 3.0 U				
4-Methylphenol		--	--	--	--	4.7				
4-Nitrophenol		--	--	--	--	< 10 U				
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**				
Phenol		--	--	4,600,000	860,000	0.7 J				
Other SVOCs (µg/L)										
1,2,4-Trichlorobenzene		--	--	--	70	< 1.0 U				
1,2-Dichlorobenzene		--	--	17,000	1,300	< 1.0 U				
1,2-Diphenylhydrazine		--	--	0.54	0.2	**< 1.0 U**				
1,3-Dichlorobenzene		--	--	2,600	960	< 1.0 U				
1,4-Dichlorobenzene		--	--	2,600	190	< 1.0 U				
2,4-Dinitrotoluene		--	--	9.1	3.4	< 3.0 U				
2,6-Dinitrotoluene		--	--	--	--	< 3.0 U				
2-Nitroaniline		--	--	--	--	< 3.0 U				
3,3'-Dichlorobenzidine		--	--	0.077	0.028	**< 5.0 U**				
3-Nitroaniline		--	--	--	--	< 3.0 U				
4-Bromophenyl-phenylether		--	--	--	--	< 1.0 U				
4-Chloroaniline		--	--	--	--	< 5.0 U				
4-Chlorophenyl-phenylether		--	--	--	--	< 1.0 U				
4-Nitroaniline		--	--	--	--	< 3.0 U				
Aniline		--	--	--	--	< 1.0 U				
Azobenzene		--	--	--	--	< 1.0 U				
Benzoic Acid		--	--	--	--	< 20 U				
Benzyl Alcohol		--	--	--	--	< 2.0 U				
2,2'-Oxybis(1-Chloropropane)		--	--	170,000	65,000	< 1.0 U				
bis(2-Chloroethoxy) Methane		--	--	--	--	< 1.0 U				
Bis-(2-Chloroethyl) Ether		--	--	1.4	0.53	< 1.0 U				
Carbazole		--	--	--	--	< 1.0 U				
Hexachlorobenzene		--	--	0.00077	0.00029	**< 0.05 U**				
Hexachlorobutadiene		--	--	50	18	< 0.05 U				
Hexachlorocyclopentadiene		--	--	17,000	1,100	< 5.0 U				
Hexachloroethane		--	--	8.9	3.3	< 2.0 U				
Isophorone		--	--	600	960	< 1.0 U				
Nitrobenzene		--	--	1,900	690	< 1.0 U				
N-Nitrosodimethylamine		--	--	8.1	3	< 3.0 U				
N-Nitroso-Di-N-Propylamine		--	--	--	0.51	< 1.0 U				
N-Nitrosodiphenylamine		--	--	16	6	< 1.0 U				
PCB Aroclors (µg/L)										
Aroclor 1016		--	--	--	--	na				

Table B-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: General Recycling

Location ID						GR-MH-01				
Collection Date						4/4/2013				
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
Aroclor 1221		--	--	--	--	na				
Aroclor 1232		--	--	--	--	na				
Aroclor 1242		--	--	--	--	na				
Aroclor 1248		--	--	--	--	na				
Aroclor 1254		--	--	--	--	na				
Aroclor 1260		--	--	--	--	na				
Aroclor 1262		--	--	--	--	na				
Aroclor 1268		--	--	--	--	na				
Total PCB Aroclors		0.03	10	0.00017	0.000064	na				
Pesticides (µg/L)										
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**				
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**				
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**				
Total DDTs		0.001	0.13	--	--	**< 0.1 U**				
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**				
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**				
beta-BHC		--	--	0.046	0.017	**< 0.05 U**				
cis-Chlordane		--	--	--	--	< 0.05 U				
delta-BHC		--	--	--	--	< 0.05 U				
Dieldrin		--	--	0.00014	0.000054	**< 0.1 U**				
Endosulfan I		0.0087	0.034	2.0	89	***< 0.05 U***				
Endosulfan II		0.0087	0.034	2.0	89	***< 0.1 U***				
Endosulfan Sulfate		0.0087	0.034	2.0	89	***< 0.1 U***				
Endrin		0.0023	0.037	0.81	0.06	***< 0.1 U***				
Endrin Aldehyde		--	--	0.81	0.3	< 0.1 U				
Endrin Ketone		--	--	--	--	< 0.1 U				
Heptachlor		0.0036	0.053	0.00021	0.000079	**< 0.05 U**				
Heptachlor Epoxide		--	--	0.00011	0.000039	**< 0.05 U**				
gamma-BHC (Lindane)		--	0.16	0.063	1.8	< 0.05 U				
Methoxychlor		--	--	--	--	< 0.5 U				
Toxaphene		0.0002	0.21	0.00075	0.00028	***< 5.0 U***				
trans-Chlordane		--	--	--	--	< 0.05 U				
Total aldrin/dieldrin		0.0019	0.71	--	--	**< 0.1 U**				
Total Chlordane		0.004	0.09	0.00059	0.00081	**< 0.05 U**				

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

Results in underline exceed the WA NPDES ISGP Benchmark for that parameter.

Results in **bold** exceed the WA WQC Marine Chronic.

Results in ***bold italics*** exceed the WA WQC Marine Acute.

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.

Table B-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: General Recycling

Location ID						GR-MH-01				
Collection Date						4/4/2013				
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

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

Table B-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: General Recycling

Location ID					GR-MH-01					
Collection Date					4/4/2013					
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result		EF			
	Chronic	Acute	Organism	Organism			WA MC	WA MA	NTR HHO	NR HHO
Total PCB Congeners (µg/L)[a]	0.03	10	0.00017	0.000064	0.0113	CJ			66	177
Total PCB Congeners (pg/L)[a]					11,300	CJ				
Congeners (pg/L)[b]					11,400	CJ				
Total Monochlorobiphenyl (pg/L)[a]					< 2.44	U				
Estimated Total Monochlorobiphenyl (pg/L)[b]					< 2.44	U				
PCB-1					< 2.25	U				
PCB-2					< 2.52	U				
PCB-3					< 2.62	U				
Total Dichlorobiphenyl (pg/L)[a]					1,930					
Estimated Total Dichlorobiphenyl (pg/L)[b]					1,930					
PCB-4					1,400					
PCB-5					< 5.70	U				
PCB-6					< 5.67	U				
PCB-7					< 5.30	U				
PCB-8					< 5.45	U				
PCB-9					< 6.02	U				
PCB-10					40.4					
PCB-11					< 14.5	U				
PCB-12/13					7.21	CJ				
PCB-14					< 4.77	U				
PCB-15					483					
(pg/L)[a]					7,050					
Estimated Total Trichlorobiphenyl (pg/L)[b]					7,050					
PCB-16					1,300					
PCB-17					766					
PCB-18/30					2,120	C				
PCB-19					369					
PCB-20/28					703	C				
PCB-21/33					13.3	CJ				
PCB-22					32.6					
PCB-23					< 3.66	U				
PCB-24					24.2					
PCB-25					40.7					
PCB-26/29					172	C				
PCB-27					152					
PCB-31					694					
PCB-32					519					
PCB-34					< 3.73	U				
PCB-35					< 3.98	U				
PCB-36					< 3.57	U				
PCB-37					141					
PCB-38					< 3.86	U				
PCB-39					< 3.43	U				
Total Tetrachlorobiphenyl (pg/L)[a]					2,110					
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					2,150	J				
PCB-40/71					180	C				
PCB-41					52.6					
PCB-42					89.4					
PCB-43					20.7					
PCB-44/47/65					369	C				
PCB-45					135					
PCB-46					61.2					
PCB-48					90.5					
PCB-49/69					161	C				
PCB-50/53					117	C				
PCB-51					< 27.0	U				

Table B-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: General Recycling

Location ID					GR-MH-01				
Collection Date					4/4/2013				
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result	EF			
	Chronic	Acute	Organism	Organism		WA MC	WA MA	NTR HHO	NR HHO
PCB-52					400				
PCB-54					3.07 J				
PCB-55					< 2.70 U				
PCB-56					30.7				
PCB-57					< 2.57 U				
PCB-58					< 2.55 U				
PCB-59/62/75					36.1 C				
PCB-60					< 17.6 U				
PCB-61/70/74/76					161 C				
PCB-63					2.98 J				
PCB-64					123				
PCB-66					68.3				
PCB-67					4.79 J				
PCB-68					< 2.33 U				
PCB-72					< 2.47 U				
PCB-73					< 2.07 U				
PCB-77					4.64 J				
PCB-78					< 2.84 U				
PCB-79					< 2.30 U				
PCB-80					< 2.30 U				
PCB-81					< 2.72 U				
Total Pentachlorobiphenyl (pg/L)[a]					203				
Estimated Total Pentachlorobiphenyl (pg/L)[b]					248 J				
PCB-82					< 4.68 U				
PCB-83					< 2.87 U				
PCB-84					< 17.3 U				
PCB-85/116					4.56 CJ				
PCB-86/87/97/109/119/125					29.5 CJ				
PCB-88					< 3.08 U				
PCB-89					< 2.67 U				
PCB-90/101/113					33.9 C				
PCB-91					5.88 J				
PCB-92					< 4.64 U				
PCB-93/100					< 2.39 CU				
PCB-94					< 2.55 U				
PCB-95					59.5				
PCB-96					< 1.84 U				
PCB-98					< 2.71 U				
PCB-99					< 11.1 U				
PCB-102					< 2.05 U				
PCB-103					< 2.18 U				
PCB-104					< 1.55 U				
PCB-105					< 8.10 U				
PCB-106					< 1.97 U				
PCB-107					< 1.85 U				
PCB-108/124					< 1.92 CU				
PCB-110					51.9				
PCB-111					< 1.73 U				
PCB-112					< 1.8 U				
PCB-114					< 1.84 U				
PCB-115					< 1.71 U				
PCB-117					< 2.21 U				
PCB-118					17.4				
PCB-120					< 1.74 U				
PCB-121					< 1.75 U				
PCB-122					< 2.21 U				

Table B-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: General Recycling

Location ID					GR-MH-01				
Collection Date					4/4/2013				
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result	EF			
	Chronic	Acute	Organism	Organism		WA MC	WA MA	NTR HHO	NR HHO
PCB-123					< 1.72 U				
PCB-126					< 2.22 U				
PCB-127					< 2.10 U				
Total Hexachlorobiphenyl (pg/L)[a]					19.4				
Estimated Total Hexachlorobiphenyl (pg/L)[b]					43.5 J				
PCB-128/166					< 2.32 CU				
PCB-129/138/163					< 13.3 CU				
PCB-130					< 2.28 U				
PCB-131					< 2.16 U				
PCB-132					4.18 J				
PCB-133					< 2.02 U				
PCB-134					< 2.27 U				
PCB-135/151					4.81 CJ				
PCB-136					< 1.45 U				
PCB-137					< 1.94 U				
PCB-139/140					< 1.85 CU				
PCB-141					< 2.26 U				
PCB-142					< 2.19 U				
PCB-143					< 2.03 U				
PCB-144					< 1.87 U				
PCB-145					< 1.43 U				
PCB-146					< 1.81 U				
PCB-147/149					10.4 CJ				
PCB-148					< 1.86 U				
PCB-150					< 1.33 U				
PCB-152					< 1.33 U				
PCB-153/168					< 8.54 U				
PCB-154					< 1.67 U				
PCB-155					< 1.24 U				
PCB-156/157					< 2.44 CU				
PCB-158					< 1.40 U				
PCB-159					< 1.99 U				
PCB-160					< 1.62 U				
PCB-161					< 1.47 U				
PCB-162					< 1.99 U				
PCB-164					< 1.44 U				
PCB-165					< 1.56 U				
PCB-167					< 1.85 U				
PCB-169					< 2.12 U				
Total Heptachlorobiphenyl (pg/L)[a]					4.38				
Estimated Total Heptachlorobiphenyl (pg/L)[b]					4.38				
PCB-170					< 2.96 U				
PCB-171/173					< 2.81 CU				
PCB-172					< 2.74 U				
PCB-174					< 2.70 U				
PCB-175					< 2.35 U				
PCB-176					< 1.55 U				
PCB-177					< 2.84 U				
PCB-178					< 2.30 U				
PCB-179					< 1.68 U				
PCB-180/193					4.38 CJ				

Table B-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: General Recycling

Location ID					GR-MH-01				
Collection Date					4/4/2013				
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result	EF			
	Chronic	Acute	Organism	Organism		WA MC	WA MA	NTR HHO	NR HHO
PCB-181					< 2.47 U				
PCB-182					< 2.25 U				
PCB-183					< 2.29 U				
PCB-184					< 1.70 U				
PCB-185					< 2.47 U				
PCB-186					< 1.65 U				
PCB-187					< 2.31 U				
PCB-188					< 1.53 U				
PCB-189					< 1.76 U				
PCB-190					< 2.18 U				
PCB-191					< 2.01 U				
PCB-192					< 2.10 U				
Total Octachlorobiphenyl (pg/L)[a]					< 1.93 U				
Estimated Total Octachlorobiphenyl (pg/L)[b]					< 1.93 U				
PCB-194					< 2.39 U				
PCB-195					< 2.64 U				
PCB-196					< 2.45 U				
PCB-197					< 1.67 U				
PCB-198/199					< 2.55 CU				
PCB-200					< 1.83 U				
PCB-201					< 1.73 U				
PCB-202					< 1.94 U				
PCB-203					< 2.33 U				
PCB-204					< 1.82 U				
PCB-205					< 1.92 U				
Total Nonachlorobiphenyl (pg/L)[a]					< 4.53 U				
Estimated Total Nonachlorobiphenyl (pg/L)[b]					< 4.53 U				
PCB-206					< 5.53 U				
PCB-207					< 3.44 U				
PCB-208					< 3.52 U				
Decachlorobiphenyl (pg/L)					< 1.4 U				
PCB-209					< 1.4 U				
PCB TEQ, nd SDL*0					0.000986 J				
PCB TEQ, nd SDL*0.5					0.144 J				
PCB TEQ, nd SDL*1					0.288 J				

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

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

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

Table B-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-MH-01
Collection Date			4/4/2013
Analyte	WA NPDES ISGP	Unit	Result
Conventionals			
Alkalinity	--	mg/L CaCO3	75.2
Bicarbonate	--	mg/L CaCO3	75.2
Carbonate	--	mg/L CaCO3	< 1.0 U
Chloride	--	mg/L	39.1
Conductivity	--	µmhos/cm	304
Dissolved Organic Carbon	--	mg/L	4.35
Hydroxide	--	mg/L CaCO3	< 1.0 U
N-Nitrate	--	mg-N/L	< 0.1 U
pH	5-9	std units	7.49
Sulfate	--	mg/L	11.8
Total Organic Carbon	--	mg/L	19.8
Total Suspended Solids	--	mg/L	< 1.1 U

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 B-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date	GR-CB-07	GR-MH-03	GR-WS-05
Analyte	**4/11/2013**	**4/4/2013**	**4/11/2013**
Metals (Total) (mg/kg)			
Antimony	EPA200.8	EPA200.8	EPA200.8
Arsenic	EPA200.8	EPA200.8	EPA200.8
Beryllium	SW6010C	SW6010C	SW6010C
Cadmium	EPA200.8	EPA200.8	EPA200.8
Chromium	EPA200.8	EPA200.8	EPA200.8
Copper	SW6010C	SW6010C	SW6010C
Lead	EPA200.8	EPA200.8	EPA200.8
Mercury	SW7471A	SW7471A	SW7471A
Nickel	EPA200.8	EPA200.8	EPA200.8
Selenium	EPA200.8	EPA200.8	EPA200.8
Silver	EPA200.8	EPA200.8	EPA200.8
Thallium	EPA200.8	EPA200.8	EPA200.8
Zinc	SW6010C	SW6010C	SW6010C
PAHs (µg/kg)			
1-Methylnaphthalene	SW8270D	SW8270D	SW8270D
2-Chloronaphthalene	SW8270D	SW8270D	SW8270D
2-Methylnaphthalene	SW8270D	SW8270D	SW8270D
Acenaphthene	SW8270D	SW8270D	SW8270D
Acenaphthylene	SW8270D	SW8270D	SW8270D
Anthracene	SW8270D	SW8270D	SW8270D
Benzo(a)anthracene	SW8270D	SW8270D	SW8270D
Benzo(a)pyrene	SW8270D	SW8270D	SW8270D
Benzo(g,h,i)perylene	SW8270D	SW8270D	SW8270D
Chrysene	SW8270D	SW8270D	SW8270D
Dibenz(a,h)anthracene	SW8270DSIM	SW8270D	SW8270D
Dibenzofuran	SW8270D	SW8270D	SW8270D
Fluoranthene	SW8270D	SW8270D	SW8270D
Fluorene	SW8270D	SW8270D	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D	SW8270D	SW8270D
Naphthalene	SW8270D	SW8270D	SW8270D
Phenanthrene	SW8270D	SW8270D	SW8270D
Pyrene	SW8270D	SW8270D	SW8270D
Total Benzofluoranthenes	SW8270D	SW8270D	SW8270D
Total HPAHs	SW8270DSIM	SW8270D	SW8270D
Total LPAHs	SW8270D	SW8270D	SW8270D
Total PAHs	SW8270DSIM	SW8270D	SW8270D
cPAHs, nd RL*0	SW8270DSIM	SW8270D	SW8270D
cPAHs, nd RL*0.5	SW8270DSIM	SW8270D	SW8270D
cPAHs, nd RL*1	SW8270DSIM	SW8270D	SW8270D
Phthalates (µg/kg)			
bis(2-Ethylhexyl)phthalate	SW8270D	SW8270D	SW8270D
Butylbenzylphthalate	SW8270D	SW8270DSIM	SW8270D
Di-n-Butylphthalate	SW8270D	SW8270D	SW8270D
Diethylphthalate	SW8270DSIM	SW8270DSIM	SW8270DSIM

Table B-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date	GR-CB-07	GR-MH-03	GR-WS-05
Analyte	**4/11/2013**	**4/4/2013**	**4/11/2013**
Dimethylphthalate	SW8270DSIM	SW8270D	SW8270DSIM
Di-n-Octyl phthalate	SW8270D	SW8270D	SW8270D
Phenols (µg/kg)			
2,4,5-Trichlorophenol	SW8270D	SW8270D	SW8270D
2,4,6-Trichlorophenol	SW8270D	SW8270D	SW8270D
2,4-Dichlorophenol	SW8270D	SW8270D	SW8270D
2,4-Dimethylphenol	SW8270DSIM	SW8270DSIM	SW8270DSIM
2,4-Dinitrophenol	SW8270D	R	SW8270D
2-Chlorophenol	SW8270D	SW8270D	SW8270D
2-Methylphenol	SW8270DSIM	SW8270DSIM	SW8270DSIM
2-Nitrophenol	SW8270D	R	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D	R	SW8270D
4-Chloro-3-methylphenol	SW8270D	SW8270D	SW8270D
4-Methylphenol	SW8270D	SW8270D	SW8270D
4-Nitrophenol	SW8270D	SW8270D	SW8270D
Pentachlorophenol	SW8270DSIM	SW8270DSIM	SW8270DSIM
Phenol	SW8270D	SW8270D	SW8270D
Other SVOCs (µg/kg)			
1,2,4-Trichlorobenzene	SW8260C	SW8260C	SW8260C
1,2-Dichlorobenzene	SW8260C	SW8260C	SW8260C
1,3-Dichlorobenzene	SW8260C	SW8260C	SW8260C
1,4-Dichlorobenzene	SW8260C	SW8260C	SW8260C
2,4-Dinitrotoluene	SW8270D	SW8270D	SW8270D
2,6-Dinitrotoluene	SW8270D	SW8270D	SW8270D
2-Nitroaniline	SW8270D	SW8270D	SW8270D
3,3'-Dichlorobenzidine	SW8270D	R	SW8270D
3-Nitroaniline	SW8270D	SW8270D	SW8270D
4-Bromophenyl-phenylether	SW8270D	SW8270D	SW8270D
4-Chloroaniline	SW8270D	R	SW8270D
4-Chlorophenyl-phenylether	SW8270D	SW8270D	SW8270D
4-Nitroaniline	SW8270D	SW8270D	SW8270D
Aniline	SW8270D	R	SW8270D
Benzoic Acid	SW8270D	SW8270D	SW8270D
Benzyl Alcohol	SW8270DSIM	SW8270D	SW8270D
2,2'-Oxybis(1-Chloropropane)	SW8270D	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D	SW8270D	SW8270D
Carbazole	SW8270D	SW8270D	SW8270D
Hexachlorobenzene	SW8081B	SW8081B	SW8081B
Hexachlorobutadiene	SW8260C	SW8260C	SW8260C
Hexachlorocyclopentadiene	SW8270D	R	SW8270D
Hexachloroethane	SW8270D	SW8270D	SW8270D
Isophorone	SW8270D	SW8270D	SW8270D
Nitrobenzene	SW8270D	SW8270D	SW8270D
N-Nitrosodimethylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM

Table B-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: General Recycling

Location ID / Collection Date	GR-CB-07	GR-MH-03	GR-WS-05
Analyte	**4/11/2013**	**4/4/2013**	**4/11/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM
N-Nitrosodiphenylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM
PCB Aroclors (µg/kg)			
PCB Aroclors	SW8082A	SW8082A	SW8082A
Pesticides (µg/kg)			
Pesticides	SW8081B	SW8081B	SW8081B
VOCs (µg/kg)			
VOCs	SW8260C	SW8260C	SW8260C
TPHs (mg/kg)			
Gasoline-Range Hydrocarbons	NWTPHG	NWTPHG	NWTPHG
Diesel-Range Hydrocarbons	NWTPHD	NWTPHD	NWTPHD
Motor Oil-Range Hydrocarbons	NWTPHD	NWTPHD	NWTPHD
Dioxins and Furans (ng/kg)			
Dioxins and Furans	na	EPA 1613B	na
Grain size (%)			
Grain size	PSEP-PS	PSEP-PS	PSEP-PS
Conventionals (%)			
Total Organic Carbon	PLUMB81TC	PLUMB81TC	PLUMB81TC
Total Solids	SM2540B	SM2540B	SM2540B

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

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

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)											
Antimony	--	--	1.0 J			0.9 J			11.5 J		
Arsenic	57	93	20.2			22.9			32.9		
Beryllium	--	--	< 0.6 U			< 0.8 U			< 1.0 U		
Cadmium	5.1	6.7	**13.6**	2.7	2.0	**19.3**	3.8	2.9	**36**	7.1	5.4
Chromium	260	270	219			233			218		
Copper	390	390	**814**	2.1	2.1	**837**	2.1	2.1	**1,700**	4.4	4.4
Lead	450	530	**954**	2.1	1.8	**938**	2.1	1.8	**1,820**	4	3.4
Mercury	0.41	0.59	**3.43**	8.4	5.8	**7.3**	18	12	**7.2**	18	12
Nickel	--	--	152			167			235		
Selenium	--	--	< 1.0 U			< 2.0 U			< 2.0 U		
Silver	6.1	6.1	2.6 J			2.6 J			6.1 J		
Thallium	--	--	< 0.5 U			< 0.6 U			< 0.9 U		
Zinc	410	960	**5,800**	14	6.0	**8,480**	21	8.8	**15,700**	38	16
PAHs (µg/kg)											
1-Methylnaphthalene	--	--	< 180 U			< 330 U			180 J		
2-Chloronaphthalene	--	--	< 180 U			< 330 U			< 360 U		
2-Methylnaphthalene	670	1,400	190			180 J			310 J		
Acenaphthene	500	730	< 180 U			< 330 U			< 360 U		
Acenaphthylene	1,300	1,300	140 J			< 330 U			200 J		
Anthracene	960	4,400	380			300 J			560		
Benzo(a)anthracene	1,300	1,600	1,100			1,300			**1,600**	1.2	
Benzo(a)pyrene	1,600	3,000	1,100			1,400			1,400		
Benzo(g,h,i)perylene	670	720	590			**1,200**	1.8	1.7	670		
Chrysene	1,400	2,800	**1,800**	1.3		**2,400**	1.7		**2,500**	1.8	
Dibenz(a,h)anthracene	230	540	230			**490**	2.1		**360**	1.6	
Dibenzofuran	540	700	160 J			< 330 U			200 J		
Fluoranthene	1,700	2,500	**3,000**	1.8	1.2	**3,400**	2	1.4	**4,400**	2.6	1.8
Fluorene	540	1,000	190			180 J			360		
Indeno(1,2,3-cd)pyrene	600	690	510			**850**	1.4	1.2	580		
Naphthalene	2,100	2,400	220			200 J			380		
Phenanthrene	1,500	5,400	1,200			1,200			**2,200**	1.5	
Pyrene	2,600	3,300	**3,000**	1.2		**3,900**	1.5	1.2	**4,200**	1.6	1.3

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Total Benzofluoranthenes	3,200	3,600	2,300			2,900			3,000		
Total HPAHs	12,000	17,000	**14,000**	1.2		**18,000**	1.5	1.1	**19,000**	1.6	1.1
Total LPAHs	5,200	13,000	2,100 J			1,900 J			3,700 J		
Total PAHs	--	--	16,000 J			20,000 J			22,000 J		
cPAHs, nd RL*0	1,000	--	**1,500**	1.5		**2,000**	2.0		**2,000**	2	
cPAHs, nd RL*0.5	1,000	--	**1,500**	1.5		**2,000**	2.0		**2,000**	2	
cPAHs, nd RL*1	1,000	--	**1,500**	1.5		**2,000**	2.0		**2,000**	2	
Phthalates (µg/kg)											
bis(2-Ethylhexyl)phthalate	1,300	1,900	**14,000**	11	7.4	**22,000**	17	12	**42,000**	32	22
Butylbenzylphthalate	63	900	**1,200**	19	1.3	**1,600 J**	25	1.8	**1,300**	21	1.4
Di-n-Butylphthalate	1,400	5,100	370			< 330 U			420		
Diethylphthalate	200	1,200	< 46 U			< 82 U			< 91 U		
Dimethylphthalate	71	160	64			**200 J**	2.8	1.3	**91**	1.3	
Di-n-Octyl phthalate	6,200	--	730			< 330 U			1,600		
Phenols (µg/kg)											
2,4,5-Trichlorophenol	--	--	< 910 U			< 1,600 U			< 1,800 U		
2,4,6-Trichlorophenol	--	--	< 910 U			< 1,600 U			< 1,800 U		
2,4-Dichlorophenol	--	--	< 1,800 U			< 3,300 U			< 3,600 U		
2,4-Dimethylphenol	29	29	**51 J**	1.8	1.8	**< 330 U**			**140 J**	4.8	4.8
2,4-Dinitrophenol	--	--	< 7,700 U			R			< 16,000 U		
2-Chlorophenol	--	--	< 180 U			< 330 U			< 360 U		
2-Methylphenol	63	63	58			**< 82 U**			**94**	1.5	1.5
2-Nitrophenol	--	--	< 910 U			R			< 1,800 U		
4,6-Dinitro-2-Methylphenol	--	--	< 1,800 U			R			< 3,600 U		
4-Chloro-3-methylphenol	--	--	< 910 U			< 1,600 U			< 1,800 U		
4-Methylphenol	670	670	290			180 J			**910**	1.4	1.4
4-Nitrophenol	--	--	< 910 U			< 1,600 U			< 1,800 U		
Pentachlorophenol	360	690	**< 460 UJ**			**< 820 UJ**			**< 910 UJ**		
Phenol	420	1,200	**540**	1.3		300 J			**690**	1.6	
Other SVOCs (µg/kg)											
1,2,4-Trichlorobenzene	31	51	< 8.6 U			< 17 U			< 17 UJ		
1,2-Dichlorobenzene	35	50	< 1.7 U			< 3.4 U			< 3.3 UJ		
1,3-Dichlorobenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,4-Dichlorobenzene	110	120	< 1.7 U			< 3.4 U			< 3.3 UJ		
2,4-Dinitrotoluene	--	--	< 910 U			< 1,600 U			< 1,800 U		
2,6-Dinitrotoluene	--	--	< 910 U			< 1,600 U			< 1,800 U		
2-Nitroaniline	--	--	< 910 U			< 1,600 U			< 1,800 U		
3,3'-Dichlorobenzidine	--	--	< 1,400 U			R			< 2,700 U		
3-Nitroaniline	--	--	< 910 U			< 1,600 UJ			< 1,800 U		
4-Bromophenyl-phenylether	--	--	< 180 U			< 330 U			< 360 U		
4-Chloroaniline	--	--	< 2,400 U			R			< 4,900 U		
4-Chlorophenyl-phenylether	--	--	< 180 U			< 330 U			< 360 U		
4-Nitroaniline	--	--	< 910 U			< 1,600 U			< 1,800 U		
Aniline	--	--	< 4,900 U			R			< 9,800 U		
Benzoic Acid	650	650	**1,000 J**	1.5	1.5	**< 6,600 U**			**< 7,300 U**		
Benzyl Alcohol	57	73	**140 J**	2.5	1.9	**< 330 U**			**< 360 UJ**		
2,2'-Oxybis(1-Chloropropane)	--	--	< 180 U			< 330 U			< 360 U		
bis(2-Chloroethoxy) Methane	--	--	< 180 U			< 330 U			< 360 U		
Bis-(2-Chloroethyl) Ether	--	--	< 180 U			< 330 U			< 360 U		
Carbazole	--	--	170 J			230 J			330 J		
Hexachlorobenzene	22	70	< 9.8 U			**< 57 UJ**			**< 61 U**		
Hexachlorobutadiene	11	120	< 8.6 U			**< 17 U**			**< 17 UJ**		
Hexachlorocyclopentadiene	--	--	< 3,600 U			R			< 7,300 U		
Hexachloroethane	--	--	< 180 U			< 330 U			< 360 U		
Isophorone	--	--	< 180 U			< 330 U			< 360 U		
Nitrobenzene	--	--	< 180 U			< 330 U			< 360 U		
N-Nitrosodimethylamine	--	--	< 230 U			< 410 U			< 460 U		
N-Nitroso-Di-N-Propylamine	--	--	< 110 U			< 200 U			< 220 U		
N-Nitrosodiphenylamine	28	40	**77 J**	2.8	1.9	**140 J**	5.0	3.5	**240 J**	8.6	6.0
PCB Aroclors (µg/kg)											
Aroclor 1016	--	--	< 390 U			< 460 U			< 480 U		
Aroclor 1221	--	--	< 390 U			< 460 U			< 480 U		
Aroclor 1232	--	--	< 390 U			< 460 U			< 480 U		
Aroclor 1242	--	--	< 390 U			3,100			< 480 U		
Aroclor 1248	--	--	4,500			< 460 U			20,000		
Aroclor 1254	--	--	3,400			4,200			10,000		

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Aroclor 1260	--	--	1,300 J			< 1,100 U			2,800		
Aroclor 1262	--	--	< 390 U			< 460 U			< 480 U		
Aroclor 1268	--	--	< 390 U			< 460 U			< 480 U		
Total PCB Aroclors	130	1,000	**9,200 J**	71	9.2	**7,300**	56	7.3	**33,000**	250	33
Pesticides (µg/kg)											
4,4'-DDD	--	--	< 9.8 U			< 57 UJ			< 61 U		
4,4'-DDE	--	--	< 62 U			< 57 UJ			< 250 U		
4,4'-DDT	--	--	< 82 UJ			< 240 UJ			< 340 UJ		
Total DDTs	--	--	< 82 U			< 240 UJ			< 340 U		
Aldrin	--	--	< 63 U			< 28 UJ			< 340 U		
alpha-BHC	--	--	< 4.9 U			< 28 UJ			< 31 U		
beta-BHC	--	--	< 10 U			< 28 UJ			< 200 U		
cis-Chlordane	--	--	< 4.9 U			< 28 UJ			< 31 U		
delta-BHC	--	--	< 4.9 U			< 28 UJ			< 31 U		
Dieldrin	--	--	< 9.8 U			< 57 UJ			< 61 U		
Endosulfan I	--	--	< 4.9 U			< 28 UJ			< 31 U		
Endosulfan II	--	--	< 9.8 U			< 57 UJ			< 61 U		
Endosulfan Sulfate	--	--	< 9.8 U			< 57 UJ			< 61 U		
Endrin	--	--	< 9.8 U			< 100 UJ			< 260 U		
Endrin Aldehyde	--	--	< 9.8 U			< 57 UJ			< 61 U		
Endrin Ketone	--	--	< 39 UJ			< 57 UJ			< 120 UJ		
Heptachlor	--	--	< 39 UJ			< 42 UJ			< 270 UJ		
Heptachlor Epoxide	--	--	< 110 U			< 170 UJ			< 490 U		
gamma-BHC (Lindane)	--	--	< 13 U			< 28 UJ			< 31 U		
Methoxychlor	--	--	< 140 UJ			< 280 UJ			< 310 UJ		
Toxaphene	--	--	< 980 UJ			< 5700 UJ			< 6,100 UJ		
trans-Chlordane	--	--	< 4.9 U			< 28 UJ			< 31 U		
Total aldrin/dieldrin	--	--	< 63 U			< 57 UJ			< 340 U		
Total Chlordane	--	--	< 4.9 U			< 28 UJ			< 31 U		
VOCs (µg/kg)											
1,1,1,2-Tetrachloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,1,1-Trichloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,1,2,2-Tetrachloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	< 3.4 U			< 6.7 U			< 6.6 U		
1,1,2-Trichloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,1-Dichloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,1-Dichloroethene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,1-Dichloropropene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,2,3-Trichlorobenzene	--	--	< 8.6 U			< 17 U			< 17 UJ		
1,2,3-Trichloropropane	--	--	< 3.4 U			< 6.7 U			< 6.6 UJ		
1,2,4-Trimethylbenzene	--	--	< 1.7 U			< 3.4 U			5.4 J		
1,2-Dibromo-3-chloropropane	--	--	< 8.6 U			< 17 U			< 17 UJ		
1,2-Dibromoethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,2-Dichloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,2-Dichloropropane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
1,3,5-Trimethylbenzene	--	--	< 1.7 U			< 3.4 U			3.3 J		
1,3-Dichloropropane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
2,2-Dichloropropane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
2-Chloroethylvinylether	--	--	< 8.6 U			< 17 U			< 17 U		
2-Chlorotoluene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
2-Hexanone	--	--	< 8.6 U			< 17 U			< 17 U		
4-Chlorotoluene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
Acetone	--	--	110 J			420			380 J		
Acrolein	--	--	< 86 UJ			< 170 UJ			< 170 UJ		
Acrylonitrile	--	--	< 8.6 U			< 17 U			< 17 U		
Benzene	--	--	< 1.7 U			4.2			7.2		
Bromobenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
Bromochloromethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Bromoethane	--	--	< 3.4 U			< 6.7 U			< 6.6 U		
Bromoform	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
Bromomethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Carbon Disulfide	--	--	29			100 J			8.7		
Carbon Tetrachloride	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Chlorobenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Dibromochloromethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Chloroethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Chloroform	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Chloromethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
cis-1,2-Dichloroethene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
cis-1,3-Dichloropropene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Dibromomethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Bromodichloromethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Dichlorodifluoromethane	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Ethylbenzene	--	--	< 1.7 U			< 3.4 U			3.4		
Isopropylbenzene	--	--	< 1.7 U			< 3.4 U			2.7 J		
m,p-Xylene	--	--	< 1.7 U			3.7			< 3.3 U		
2-Butanone	--	--	26 J			90			98 J		
Iodomethane	--	--	< 1.7 UJ			< 3.4 U			< 3.3 UJ		
4-Methyl-2-Pentanone (MIBK)	--	--	6.9 J			29			9.6 J		
Methyl tert-Butyl Ether	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Methylene Chloride	--	--	< 3.6 U			7.0			< 6.6 U		
n-Butylbenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
n-Propylbenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
o-Xylene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
4-Isopropyltoluene	--	--	< 1.7 U			< 3.4 U			3 J		
sec-Butylbenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
Styrene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
tert-Butylbenzene	--	--	< 1.7 U			< 3.4 U			< 3.3 UJ		
Tetrachloroethene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Toluene	--	--	< 1.7 U			3.3 J			3.7		
Total Xylenes	--	--	< 1.7 U			3.7			< 3.3 U		
trans-1,2-Dichloroethene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
trans-1,3-Dichloropropene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
trans-1,4-Dichloro-2-butene	--	--	< 8.6 UJ			< 17 U			< 17 UJ		
Trichloroethene	--	--	< 1.7 U			< 3.4 U			< 3.3 U		
Trichlorofluoromethane	--	--	< 1.7 U			8.4			6.7		
Vinyl Acetate	--	--	< 8.6 UJ			< 17 UJ			< 17 UJ		
Vinyl Chloride	--	--	< 1.7 U			< 3.4 U			< 3.3 U		

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
TPH (mg/kg)											
Gasoline-Range Hydrocarbons	30/100	--	< 19 U			< 19 U			< 35 U		
Diesel-Range Hydrocarbons	2,000	--	**4,700**	2.4		**2,500**	1.3		**7,000**	3.5	
Motor Oil-Range Hydrocarbons	2,000	--	**16,000**	8.0		**11,000**	5.5		**23,000**	12	
Dioxins and Furans (ng/kg)											
2,3,7,8-TCDD	--	--	na			16.5			na		
1,2,3,7,8-PeCDD	--	--	na			25.6			na		
1,2,3,4,7,8-HxCDD	--	--	na			25.9			na		
1,2,3,6,7,8-HxCDD	--	--	na			124			na		
1,2,3,7,8,9-HxCDD	--	--	na			63.8			na		
1,2,3,4,6,7,8-HpCDD	--	--	na			2,000			na		
OCDD	--	--	na			18,100			na		
2,3,7,8-TCDF	--	--	na			36.1			na		
1,2,3,7,8-PeCDF	--	--	na			23.5			na		
2,3,4,7,8-PeCDF	--	--	na			29.5			na		
1,2,3,4,7,8-HxCDF	--	--	na			53.5			na		
1,2,3,6,7,8-HxCDF	--	--	na			40			na		
1,2,3,7,8,9-HxCDF	--	--	na			15.3			na		
2,3,4,6,7,8-HxCDF	--	--	na			52.7			na		
1,2,3,4,6,7,8-HpCDF	--	--	na			649			na		
1,2,3,4,7,8,9-HpCDF	--	--	na			41.4			na		
OCDF	--	--	na			1,590			na		
Dioxin/Furan TEQ, nd SDL*0	25	--	na			**126**	5.0		na		
Dioxin/Furan TEQ, nd SDL*0.5	25	--	na			**126**	5.0		na		
Dioxin/Furan TEQ, nd SDL*1	25	--	na			**126**	5.0		na		
Total TCDD	--	--	na			129			na		
Total TCDF	--	--	na			555 J			na		
Total PeCDD	--	--	na			215			na		
Total PeCDF	--	--	na			684 J			na		
Total HxCDD	--	--	na			923			na		
Total HxCDF	--	--	na			1,070			na		
Total HpCDD	--	--	na			4,080			na		
Total HpCDF	--	--	na			2,150 J			na		

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Grain size (%)											
> 10 Phi Clay	--	--	2.4			17.6			3.7		
8-9 Phi Clay	--	--	2.1			12.6			2.5		
9-10 Phi Clay	--	--	3.6			12.7			3.7		
Very Fine Silt	--	--	2.2			12.5			3.2		
Fine Silt	--	--	5.1			10			14.9		
Medium Silt	--	--	36.7			4.0			40.1		
Coarse Silt	--	--	1.8			1.5			3.1		
Total Fines	--	--	53.9			70.9			71.2		
Very Fine Sand	--	--	3.9			4.3			6.1		
Fine Sand	--	--	5.0			5.3			7.7		
Medium Sand	--	--	6.9			6.2			1.2		
Coarse Sand	--	--	6.8			6.5			3.5		
Very Coarse Sand	--	--	6.7			3.8			4.6		
Gravel	--	--	16.7			3.0			5.8		
Conventionals (%)											
Total Organic Carbon	--	--	9.47			14.2			9.44		
Total Solids	--	--	34.1			30.63			25.08		

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.

Table B-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: General Recycling

Location ID			GR-CB-07			GR-MH-03			GR-WS-05		
Collection Date			4/11/2013			4/4/2013			4/11/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET

% - 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

Attachment B-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: GR-CB-6D	**N** 
Structure Type: Catch Basin	
General Location: Central portion of facility	
Characteristics: Shallow catch basin with elbow Catch basin insert and filter sock	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: No sample collected due to insufficient material volume available.	
Drainage Information:	
One of 37 catch basins on property draining materials storage yard. Observed materials included tire turnings and scrap metal. Stormwater conveyed to oil water separator and stormwater treatment system prior to discharge to the LDW via OF1.	**N** 

Conveyance Structure Information	
Structure Identification Number: Unnumbered Catch Basins	**N↑**
Structure Type: Catch Basin	
General Location: Southwestern portion of facility	
Characteristics: Shallow catch basin with elbow Catch basin insert and filter sock	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Sealed catch basin grate	
Volume Gauge: No	
Sample ID: No sample was collected due to the identification of a further downgradient sample location.	
Drainage Information:	
Catch basins collect stormwater on the western portion of the facility. Majority of stormwater is conveyed to and oil water separator prior to treatment by stormwater treatment system. Treated stormwater is discharged to the LDW via OF1. Inspection team did not open/inspect catch basins presented on this page.	**N➔**

Conveyance Structure Information	
Structure Identification Number: GR-MH-03	**N↑** 
Structure Type: Manhole	
General Location: Southeastern portion of facility Upstream from treatment system	
Characteristics: ~8 feet to bottom of structure 2 feet diameter manhole	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Sealed manhole cover	
Volume Gauge: No	
Sample ID: GR-MH-03-20130404-S	
Drainage Information	
Stormwater from the facility is collected in catch basins throughout the site and conveyed to MH-03 prior to entering the facility's stormwater treatment system. Flow pattern in storm drain indicated potential source of stormwater to the south. The facility drainage map does not indicate drainage from the south.	**N↓** 

Conveyance Structure Information	
Structure Identification Number: GR-WS-05	**N↑** 
Structure Type: Oil Water Separator	
General Location: South central portion of facility	
Characteristics: ~8-9 feet to bottom of structure	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Sealed grate	
Volume Gauge: No	
Sample ID: GR-WS-05-20130411-S	
Drainage Information	
The oil water separator receives stormwater from the northern portion of property. Scrap metal and tire turnings stock piles were observed in the drainage area. Stormwater is conveyed from the oil water separator to the facility's stormwater treatment system prior to discharge to the LDW via OF1.	**N↑** 

Attachment B-2
Field Documentation

SAIC
From Science to Solutions

SURFACE WATER SAMPLING FORM

Client: Department of Ecology **Site:** General Recycling **Job #:** 209977

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
GR-MH-01-20130404-W	1330	4/4/2013	Treatment	7.58	0.347 ☑ S/cm	12.8	0.22g/L	31.0		Turbidity Reading Appears high
					☐ S/cm					Treatment influent 44-45 NTU
					☐ S/cm					effluent 0.13
					☐ S/cm					Treatment instrument
					☐ S/cm					1.81
					☐ S/cm					HACH 2100Q
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
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					☐ S/cm					

Sample Date: 4 / 4 /2013

SAIC
From Science to Solutions

Sediment Collection Form

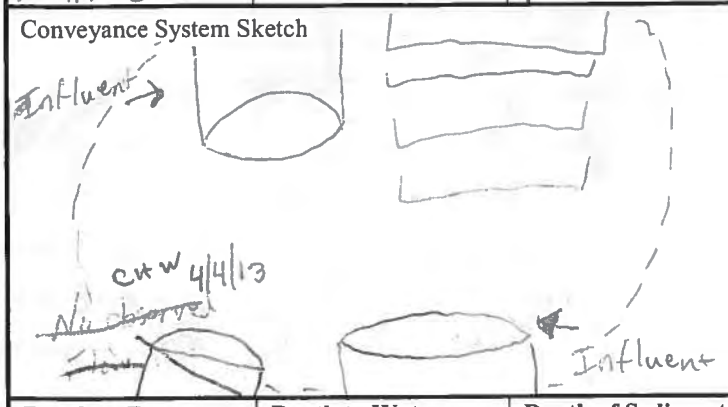
Project: NPDES Sampling Support **Location ID:** GR-MH-03

Facility Name: **Sample ID:**

Sampled By: CW / CN **Date:** 4 / 4 / 2013 **Time:** 1458

Structure Type:	Dimensions:	Standing Water:	Flow:
Manhole	W ____ L 24" Diam	Y / N	Y / N

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / N
8.25 ft	5.75 ft	~30 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):
Debris	Tan	H_2S	
		Petroleum	GPS ID: GR-MH-03

NOTES: Tested Depth; Felt material

Recorded By/Date: CW 4/4/2013 **Reviewed By/Date:** ____

Version2 -030311

SAIC
From Science to Solutions

Sediment Collection Form

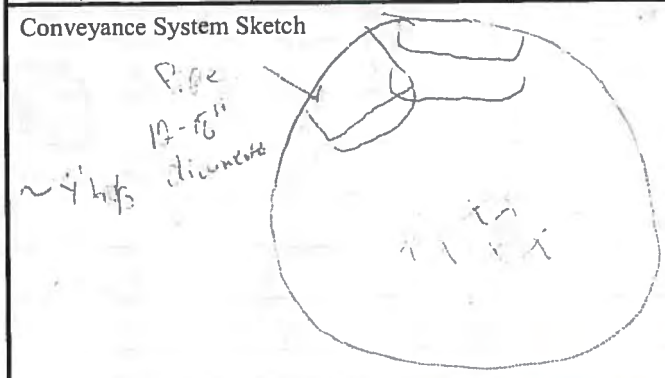
Project: NPDES Sampling Support **Location ID:** GR-MH-07

Facility Name: General Recycling **Sample ID:** GR-MH-07-20130411-S

Sampled By: CW CV **Date:** 4 / 11 / 2013 **Time:** 0917

Structure Type:	Dimensions:	Standing Water:	Flow:
MH	W_____ L_____	(Y) / N	Y / (N)

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / N Discrete / Composite *(circle one)*
~5 ft	~0.5 ft	~0.1 in	

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble Gravel Sand C M F Silt/clay Organic matter Debris	Drab olive Brown Brown surface Gray Black Tan	None Slight Moderate Strong Overwhelming H_2S Petroleum	Photo ID(s): _____ GPS ID: GR-MH-07

NOTES: Collected grit sample from MH-07. Sediment mostly wet. Silt layer was thin on top of hard base of MH.

Recorded By/Date: [signature] 4/11/13 **Reviewed By/Date:** _____

Version2 -030311

SAIC
From Science to Solutions

Sediment Collection Form

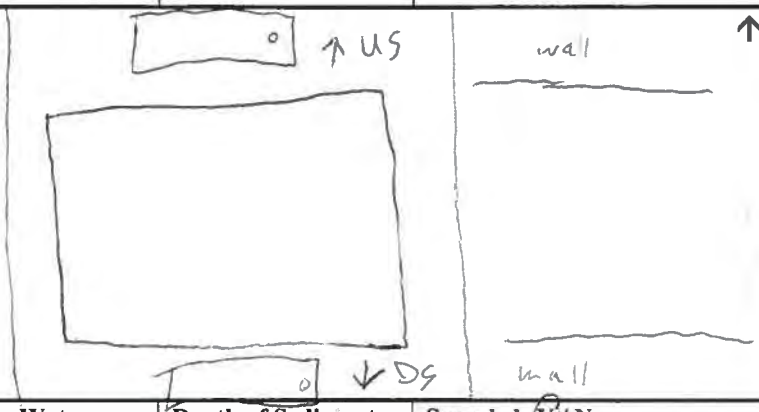
Project: NPDES Sampling Support **Location ID:** GR-WS-05

Facility Name: General Recycling **Sample ID:** GR-WS-05-20130410-S

Sampled By: CW CN **Date:** 4 / 11 / 2013 **Time:** 1051

Structure Type:	**Dimensions:**	**Standing Water:**	**Flow:**
OWS	W 3' L 3'	(Y) / N	Y / (N)

Conveyance System Sketch



Depth to Bottom:	**Depth to Water:**	**Depth of Sediment:**	**Sampled:** (Y) / N
8-9' ft	CW ~~7~~ 6 ft 4/11/13	12 in	**Discrete / Composite** *(circle one)*

Sediment type:	***Sediment color:***	***Sediment Odor:***	***Comments:***
Cobble	Drab olive	None	
Gravel	Brown	(Slight)	
(Sand) C M (F)	Brown surface	Moderate	
(Silt/clay)	Gray	Strong	
Organic matter	(Black)	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		Petroleum	GPS ID: GR-WS-05

NOTES: Collected Sed Sample from GR-WS-05
Location is an oil water separator
Sed collection from center between Outfalls
OWS is located on southside of Crushed Car piles and crushed tire turnings
Rail line directly north of locations

Recorded By/Date: [signature] 4/11/13 **Reviewed By/Date:** _____

Version2 -030311

4Apr12013 General Recycling

0630 CN, CW meet at Field Office (FO)
Load equipment
decon field gear

0732 Collect EB-01-20130403-W for SVOCs, T/D Metals. Did not have DI water from SGS so no PCB EB was collected.

0756 Call from Mahbub re: traffic - will be 5 min delayed.

0803 Call from Bob Wright.

0821- Held tailgate meeting w/ team
0843 Discussed locns
Jeremy is site contact for General Recycling.

0848 Ecology MOB to Tully's.

0901 Sample Team mob from Tully's to General Recycling

0915 Drop off CW vehicle at Park near GR

0919 Ecology and SAIC arrive at GR

CN Site walk around

MP-01- Silversock + geotextile

Site walk accompanied by
Pat Jablonski
Rob

1140 Hart Crowser arrives onsite
Mary
Nick

Prep water sample Staging area

1339 Collect ~~QC~~ sample from sample pair GR-MH-01-20130404-W
Site has expressed concern about sample

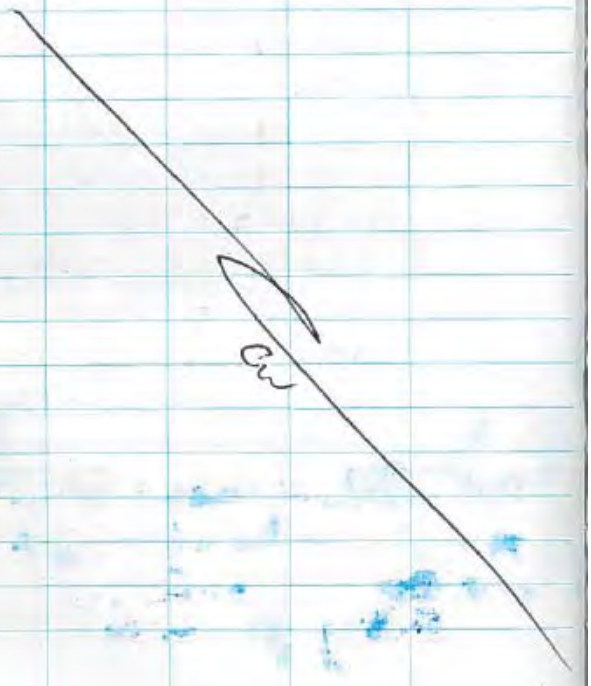
1500 Split sample w/ Hart Crowser/General Recycling

~~1530~~ Mobbed to GR-MH-03 to test location for sediment sample
Sufficient sample volume

General Recycling 4 April 2013

1611 Collect sediment sample at
GR-MH-03-20130404-S
Sufficient material for VOA's
and gasoline simple analysis
Split samples w/ HC

Demob equipment. All parties offsite.



General Recycling

Cloudy ~45° 4/11/13

0530 LW leave home
Stop at Fedex to print COCs
Stop at Plaid Pantry to get ice
0605 CW Arrive at FO
Bagging Ice
0620 CN arrive at Field lab
Bottle check and COC Review
0700 Mob from Field office to ARI
0720 Arrive at ARI. Drop two coolers and receive 3 empty coolers.
0725 Mob from ARI to Ind Metals Plant 2
0740 Arrive at Ind Metals
Drop two coolers & COC
0750 Mob from Ind Metals to General Recycling
0800 Arrive at General Recycling
0806 MA onsite
0809 Meet w/ GR, HC, ECY, & SAIC
Discussion about samples being pulled under Stormwater quality inspection
0815 DW onsite
Kim Reimer & Nick Galvin Hart Crowser
0835 Gear loaded on Forklift moving to first location

General Recycling 4/11/13

0617 Mobbed to GR-MH-07
cw 4/11/13 Recorded structure information
~~0940~~ Collected GPS Location info
0940 Begin sediment Sample Collection
Collected Voa Vials + 8 oz TPH-Gas
After collection continued to grab
sediment from MH and Composite
in pail. After sufficient Sediment
Collected we homogenized sediment
and spoon sediment into jar
(~1 L) No Dioxin collected
0947 Completed Sample Collection and
Mobilized to new location.
0957 Reviewing Drainage map to establish
and Sample location.
Pulled lids from 8D & 5D.
Removed filter sock and sediment
barrier. Water infiltration from
Surface at both. Used pike pole
to test depth. No sediment at
either location.
1038 Setting up at WS-05 for Sediment
Sample collection from the South side
(downstream) of WS

General Recycling 4/11/13

1057 Sample collected
GR-WS-05-20130411-S
Split Samples w/ HC
1129 Demob from WS-05

1157 Completed loading field gear in truck

1219 Arrive at Field office. Begin unload
Verify bottle count + COC
1340 Leave field office for ARI
1354 Arrive ARI. Drop off 1 cooler
1358 Leave ARI for INW
Arrive INW
Depart INW
Arrive SAIC Bothell. Unload PCB Congener
samples into sample fridge.
Unload truck.
Depart SAIC

Attachment B-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard 10d	Date: 4/4/2013
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: 4.3, 2.9
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CN CW	

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 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	TPH-6x (NWTPH-6x)	Notes/Comments
					Analysis Requested (Sediment Sample)												
GR-MH-03-20130404-S	4/4/13	1611	Sediment	10	X	X	X	X	X	X	X	X	X	X	X	X	

Comments/Special Instructions
Do not dispose of samples w/out written approval from SAIC PM.

	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name:	Corey H. Wilson	Jennifer Millsap		
Company:	SAIC	ARI		
Date & Time:	0930 4/5/13	4/5/13 930		

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

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard 10d	Date: 4/4/13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 2 Cooler Temps: 4.3, 2.9
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CN CW	

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 / PAH (EPA 8270/8270SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8/6010)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8/6010)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	PCB Aroclors (EPA 8082)	Notes/Comments
					Analysis Requested (Aqueous Sample)													
GA-MH-01-20130404-W	4/4/13 CW	1339	Water	10	X	X	X	X	X*	X	X	X	X	X	X	X		*see note below
GC-EB-01-20130404-W	4/4/13	0732	Water	4			✓	✓	✓*								✓	*see note below

Comments/Special Instructions
Do not dispose of samples without written concent from SAIC PM.

* Upon receipt, please filter dissolved metals. This bottle was not field filtered.

	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:
		Corey H. Wilson	SAIC	0930 4/5/13		Jennifer Millsap	ARI	4/5/13 930
	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	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, nol withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Date: 4/11/13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact: **Christine Nancarrow**		No. of Coolers:	Cooler Temps: 4.1, 4
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers:		

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 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Gasoline (TPH-Gx)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments
GR-CB-072013041l-S	4/11/13	0900	Sediment	10	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
GR-WS-05-20130411-S	4/11/13	1051	Sediment	10	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Corey H. Wilson	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 4/11/13 1355	Date & Time: 4.11.13 1355	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.

Attachment B-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 WL67

Client: SAIC

Project: 209977 NPDES Sampling Support

BL

Signature

April-26-2013

Date

Table of Contents: ARI Job WL67

Client: SAIC

Project: 209977 NPDES Sampling Support

BC

Signature

April-26-2013

Date

Table of Contents: ARI Job WL67

Client: SAIC

Project: 209977 NPDES Sampling Support

BC

Signature

April-26-2013

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 2, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WL67

Dear Christine:

Please find enclosed the Chain-of-Custody record (COC), 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 WL67

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WL67

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: W.L.67	Turn-around Requested:
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:

Date: 4/11/13

Page: 1 of 1

No. of Coolers: 1 Cooler Temps: 1.4

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 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Gasoline (TPH-Gx)	TPH-Diesel (NW TPH-Dx)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments
GR-CB-072013041l-S	4/11/13	0900	Sediment	10	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	
GR-WS-05-2013041l-S	4/11/13	1051	Sediment	10	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	

Comments/Special Instructions

	Relinquished by (Signature)	Received by (Signature)	Relinquished by: (Signature)	Received by (Signature)
Printed Name	Corey H. Wilson	Taylor Streeter		
Company	SAIC	ARI		
Date & Time	4/11/13 1355	4/11/13 1355		

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 egreement 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.

W.L.67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Saic Project Name: NPDES Sampling Sup

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

Assigned ARI Job No: WL67 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): 4.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90677952

Cooler Accepted by: IB Date: 4-11-13 Time: 1355

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:

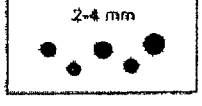
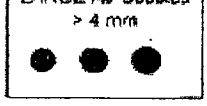
Samples Logged by: JM Date: 4/11/13 Time: 1651

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	
			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

GIB
WL67 0000H

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WL67

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WL67

Sample Receipt

Two sediment samples were received on April 11, 2013 under ARI job WL67. The cooler temperature measured by IR thermometer following ARI SOP was 4.9°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 (CCAL) on 4/18/13 was outside the 20% control limit high for Acetone, 2-Butanone, and 2-Hexanone. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 4/23/13 was outside the 20% control limit high for Methylene Chloride, 2-Butanone, and 2-Hexanone. The CCAL fell outside the control limit low for Bromomethane and Iodomethane. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The internal standard area of d4-1,4-Dichlorobenzene fell outside the control limits low for sample **GW-WS-05-20130411-S**. The sample was re-analyzed and the internal standard areas were comparable to the initial analysis. Both sets of data have been reported for this sample. No further corrective action was taken.

The surrogate percent recovery of Bromofluorobenzene fell outside the control limits low for the re-analysis of sample **GR-WS-05-20130411-S**. All surrogate percent recoveries were within control limits for the initial sample analysis. No corrective action was taken.

Methylene Chloride and Naphthalene were present at low levels in **MB-041813A**. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

Methylene Chloride, Acetone, and Naphthalene were present at low levels in **MB-042313A**. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries of Acetone were outside the control limits high for **LCS-041813A**. All other percent recoveries were within control limits. No corrective action as taken.

The LCS percent recovery of Acetone, the LCSD percent recovery of Acrylonitrile, and the LCS/LCSD percent recoveries of 2-Butanone were outside the control limits with a wide RPD for Acrylonitrile for **LCS-042313A**. All other percent recoveries were within control limits. No corrective action was taken.

Semivolatiles by SW8270D

The samples were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 4/24/13 fell outside the 20% control limit low for Benzyl Alcohol, Hexachlorocyclopentadiene, and 3,3'-Dichlorobenzidine. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 4/25/13 fell outside the 20% control limit low for Hexachlorocyclopentadiene, 2,4-Dinitrophenol, and Pentachlorophenol. Associated sample results were undetected. No corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recovery of d5-Nitrobenzene fell outside control limits low for sample **GR-WS-05-20130411-S**. The sample was re-analyzed at a dilution and all surrogate percent recoveries were comparable to the initial analysis. No further corrective action was taken.

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

SIM Semivolatiles by SW78270

The samples were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Butylbenzylphthalate, and fell out low for Benzyl Alcohol and Pentachlorophenol. 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 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 samples were initially analyzed on 4/24/13 at a ten-fold dilution due to dark color of extracts. The initial CCAL on 4/24/13 fell outside the 20% control limit low for Hexachlorobutadiene on the first column but was within the control limit on the second column. The closing CCAL on 4/24/13 fell outside the 20% control limit for several compounds on both columns. The closing Toxaphene CCAL on 4/24/13 fell outside the control limit low and the 4/24/13 closing Endrin breakdown was outside control limits. The samples were re-analyzed on 4/25/13 at higher dilutions. All 4/25/13 CCALs and Endrin breakdowns were within control limits. Both sets of data have been reported. 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 were within control limits.

Aroclor PCBs by SW8082

The samples were extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The internal standard area of Hexabromobiphenyl was outside the control limits high for the initial analysis for both samples on both columns. The samples were re-analyzed at dilutions and all internal standards were within control limits. Only the re-analysis data have been reported. No further corrective action was taken.

The surrogate percent recovery of Tetrachlorometaxylene was outside the control limits high for sample **GR-WS-05-20130411-S**. All other surrogate percent recoveries were within control limits. No corrective action was taken.

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

NWTPH-Dx

The samples 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.

The matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits for sample **GR-CB-07-20130411-S**. No corrective action is required for matrix QC.

NWTPH-Gx

The samples were analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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

Metals and Mercury

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

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

The matrix spike percent recoveries of antimony and silver fell outside the control limits low for sample **GR-CB-07-20130411-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 RPDs of copper and zinc were outside the 20% control limit for sample **GR-CB-07-20130411-S**. All relevant data have been flagged with a "*" qualifier on the appropriate Form VI. No further corrective action was taken.

General Chemistry

The samples 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.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WL67
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. Two samples were submitted for analysis on April 11, 2013, and were in good condition.
2. The samples were submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The samples were run in a single batch and a sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the samples to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. The samples contained a percentage of organic material. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis.
6. The data is provided in summary tables and plots.
7. There were no other noted anomalies in the samples or methods on this project.

Released by: Elizabeth Dobbs _____ Date: April 29, 2013
Technician

Reviewed by: Katherine J Buchanan _____ Date: 04/30/2013
Technician

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WL67
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	GR-CB-07-20130411-S	WL67A	13-7791	Sediment	04/11/13 09:00	04/11/13 13:55
2.	GR-WS-05-20130411-S	WL67B	13-7792	Sediment	04/11/13 10:51	04/11/13 13:55

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

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

* — Duplicate RPD is not within established control limits

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

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

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

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

Organic Data

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

* — Flagged value is not within established control limits

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

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

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

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

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

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

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

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

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

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

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

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

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

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

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

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

Geotechnical Data

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

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

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

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

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

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

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

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							**MB / LCS**	**Samples**	**RPD**
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)

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	
Soil / Sediment Samples (Microwave Extraction – EPA Method 3546)									
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	
Soil / Sediment Samples Medium Level (Vortex Extraction – EPA Method 3546)									
PCB 12-3019F	5 g to 40 mL	38.2	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		73.1	400	800	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	

(1) Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ) are defined in ARI SOP 1018S.
(2) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(3) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(5) Control Limits calculated usng all data generated between 6/1/12 and 12/31/12

Analytical Resources, Incorporated
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	
Aqueous Samples – No Extract Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
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	
Aqueous Samples – With Acid and/or Silica Gel Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
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	
Solid Matrix Samples – No Extract Clean-up – Microwave Extraction – 10 g to 1 mL								
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	
Solid Matrix Samples – With Acid and/or Silica Gel Clean-up – Microwave Extraction – 10 g to 1 mL								
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

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	
Aqueous Samples 5 mL purge volume (DL, LOD & LOQ values in µg/L (ppb) for BTEX and mg/L (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	0.057	0.125	0.25	**80 – 120**	--	--	
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**	--	--	≤ 40
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**	--	--	
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**	--	--	≤ 40
8021B	o-Xylene	0.136	0.5	1.0	75 – 121	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 – 120**	**80 - 120**	
	Bromobenzene	--	--	--	--	**80 – 120**	77 - **120**	
Solid Samples - (DL, LOD & LOQ values in µg/kg (ppb) for BTEX and mg/kg (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	1.66	2.5	5	**80 – 120**	--	--	
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**	--	--	≤ 40
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**	--	--	
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**	--	--	≤ 40
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.

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**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

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

Quality Control Parameters for Metals Analysis ICP-MS EPA Methods 200.8 or 6020A								
Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD [3]	Solids[2]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	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_0=Original, C_D=Duplicate
(4) ARI has no accreditation for these elements.

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

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	LOD[1] mg/kg	LOQ[1] mg/kg	Matrix Spike	LCS	
Mercury	0.0021	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: WL67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: GR-CB-07-20130411-S**
 SAMPLE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/18/13 12:41

Sample Amount: 2.92 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 61.2%

CAS Number	Analyte	MDL	RL	Result
74-87-3	Chloromethane	0.45	1.7	< 1.7 U
74-83-9	Bromomethane	0.32	1.7	< 1.7 U
75-01-4	Vinyl Chloride	0.40	1.7	< 1.7 U
75-00-3	Chloroethane	0.79	1.7	< 1.7 U
75-09-2	**Methylene Chloride**	**1.1**	**3.4**	**3.6 QB**
67-64-1	**Acetone**	**0.83**	**8.6**	**110 Q**
75-15-0	**Carbon Disulfide**	**0.96**	**1.7**	**29**
75-35-4	1,1-Dichloroethene	0.58	1.7	< 1.7 U
75-34-3	1,1-Dichloroethane	0.35	1.7	< 1.7 U
156-60-5	trans-1,2-Dichloroethene	0.46	1.7	< 1.7 U
156-59-2	cis-1,2-Dichloroethene	0.41	1.7	< 1.7 U
67-66-3	Chloroform	0.40	1.7	< 1.7 U
107-06-2	1,2-Dichloroethane	0.33	1.7	< 1.7 U
78-93-3	**2-Butanone**	**0.88**	**8.6**	**26 Q**
71-55-6	1,1,1-Trichloroethane	0.39	1.7	< 1.7 U
56-23-5	Carbon Tetrachloride	0.36	1.7	< 1.7 U
108-05-4	Vinyl Acetate	0.65	8.6	< 8.6 U
75-27-4	Bromodichloromethane	0.43	1.7	< 1.7 U
78-87-5	1,2-Dichloropropane	0.28	1.7	< 1.7 U
10061-01-5	cis-1,3-Dichloropropene	0.39	1.7	< 1.7 U
79-01-6	Trichloroethene	0.36	1.7	< 1.7 U
124-48-1	Dibromochloromethane	0.46	1.7	< 1.7 U
79-00-5	1,1,2-Trichloroethane	0.49	1.7	< 1.7 U
71-43-2	Benzene	0.51	1.7	< 1.7 U
10061-02-6	trans-1,3-Dichloropropene	0.37	1.7	< 1.7 U
110-75-8	2-Chloroethylvinylether	0.47	8.6	< 8.6 U
75-25-2	Bromoform	0.51	1.7	< 1.7 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.72**	**8.6**	**6.9 J**
591-78-6	2-Hexanone	0.75	8.6	< 8.6 U
127-18-4	Tetrachloroethene	0.44	1.7	< 1.7 U
79-34-5	1,1,2,2-Tetrachloroethane	0.43	1.7	< 1.7 U
108-88-3	Toluene	0.26	1.7	< 1.7 U
108-90-7	Chlorobenzene	0.38	1.7	< 1.7 U
100-41-4	Ethylbenzene	0.35	1.7	< 1.7 U
100-42-5	Styrene	0.24	1.7	< 1.7 U
75-69-4	Trichlorofluoromethane	0.46	1.7	< 1.7 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.49	3.4	< 3.4 U
179601-23-1	m,p-Xylene	0.67	1.7	< 1.7 U
95-47-6	o-Xylene	0.38	1.7	< 1.7 U
95-50-1	1,2-Dichlorobenzene	0.50	1.7	< 1.7 U
541-73-1	1,3-Dichlorobenzene	0.39	1.7	< 1.7 U
106-46-7	1,4-Dichlorobenzene	0.40	1.7	< 1.7 U
107-02-8	Acrolein	6.5	86	< 86 U

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Date Analyzed: 04/18/13 12:41

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	MDL	RL	Result
74-88-4	Iodomethane	0.37	1.7	< 1.7 U
74-96-4	Bromoethane	0.75	3.4	< 3.4 U
107-13-1	Acrylonitrile	1.8	8.6	< 8.6 U
563-58-6	1,1-Dichloropropene	0.53	1.7	< 1.7 U
74-95-3	Dibromomethane	0.25	1.7	< 1.7 U
630-20-6	1,1,1,2-Tetrachloroethane	0.40	1.7	< 1.7 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	8.6	< 8.6 U
96-18-4	1,2,3-Trichloropropane	0.89	3.4	< 3.4 U
110-57-6	trans-1,4-Dichloro-2-butene	0.75	8.6	< 8.6 U
108-67-8	1,3,5-Trimethylbenzene	0.43	1.7	< 1.7 U
95-63-6	1,2,4-Trimethylbenzene	0.39	1.7	< 1.7 U
87-68-3	Hexachlorobutadiene	0.70	8.6	< 8.6 U
106-93-4	1,2-Dibromoethane	0.30	1.7	< 1.7 U
74-97-5	Bromochloromethane	0.55	1.7	< 1.7 U
75-71-8	Dichlorodifluoromethane	0.35	1.7	< 1.7 U
594-20-7	2,2-Dichloropropane	0.50	1.7	< 1.7 U
142-28-9	1,3-Dichloropropane	0.36	1.7	< 1.7 U
98-82-8	Isopropylbenzene	0.40	1.7	< 1.7 U
103-65-1	n-Propylbenzene	0.47	1.7	< 1.7 U
108-86-1	Bromobenzene	0.26	1.7	< 1.7 U
95-49-8	2-Chlorotoluene	0.51	1.7	< 1.7 U
106-43-4	4-Chlorotoluene	0.47	1.7	< 1.7 U
98-06-6	tert-Butylbenzene	0.52	1.7	< 1.7 U
135-98-8	sec-Butylbenzene	0.41	1.7	< 1.7 U
99-87-6	4-Isopropyltoluene	0.40	1.7	< 1.7 U
104-51-8	n-Butylbenzene	0.45	1.7	< 1.7 U
120-82-1	1,2,4-Trichlorobenzene	0.57	8.6	< 8.6 U
91-20-3	Naphthalene	0.73	8.6	< 8.6 U
87-61-6	1,2,3-Trichlorobenzene	0.52	8.6	< 8.6 U
1634-04-4	Methyl tert-Butyl Ether	0.40	1.7	< 1.7 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	114%
d8-Toluene	99.9%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: GR-WS-05-20130411-S**
 SAMPLE

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/18/13 13:05

Sample Amount: 1.51 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 76.8%

CAS Number	Analyte	MDL	RL	Result
74-87-3	Chloromethane	0.87	3.3	< 3.3 U
74-83-9	Bromomethane	0.62	3.3	< 3.3 U
75-01-4	Vinyl Chloride	0.78	3.3	< 3.3 U
75-00-3	Chloroethane	1.5	3.3	< 3.3 U
75-09-2	Methylene Chloride	2.1	6.6	< 6.6 U
67-64-1	**Acetone**	**1.6**	**17**	**380 Q**
75-15-0	**Carbon Disulfide**	**1.9**	**3.3**	**8.7**
75-35-4	1,1-Dichloroethene	1.1	3.3	< 3.3 U
75-34-3	1,1-Dichloroethane	0.67	3.3	< 3.3 U
156-60-5	trans-1,2-Dichloroethene	0.88	3.3	< 3.3 U
156-59-2	cis-1,2-Dichloroethene	0.79	3.3	< 3.3 U
67-66-3	Chloroform	0.77	3.3	< 3.3 U
107-06-2	1,2-Dichloroethane	0.63	3.3	< 3.3 U
78-93-3	**2-Butanone**	**1.7**	**17**	**98 Q**
71-55-6	1,1,1-Trichloroethane	0.75	3.3	< 3.3 U
56-23-5	Carbon Tetrachloride	0.71	3.3	< 3.3 U
108-05-4	Vinyl Acetate	1.3	17	< 17 U
75-27-4	Bromodichloromethane	0.84	3.3	< 3.3 U
78-87-5	1,2-Dichloropropane	0.54	3.3	< 3.3 U
10061-01-5	cis-1,3-Dichloropropene	0.75	3.3	< 3.3 U
79-01-6	Trichloroethene	0.70	3.3	< 3.3 U
124-48-1	Dibromochloromethane	0.88	3.3	< 3.3 U
79-00-5	1,1,2-Trichloroethane	0.95	3.3	< 3.3 U
71-43-2	**Benzene**	**0.98**	**3.3**	**7.2**
10061-02-6	trans-1,3-Dichloropropene	0.72	3.3	< 3.3 U
110-75-8	2-Chloroethylvinylether	0.91	17	< 17 U
75-25-2	Bromoform	0.98	3.3	< 3.3 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**1.4**	**17**	**9.6 J**
591-78-6	2-Hexanone	1.5	17	< 17 U
127-18-4	Tetrachloroethene	0.85	3.3	< 3.3 U
79-34-5	1,1,2,2-Tetrachloroethane	0.84	3.3	< 3.3 U
108-88-3	**Toluene**	**0.50**	**3.3**	**3.7**
108-90-7	Chlorobenzene	0.73	3.3	< 3.3 U
100-41-4	**Ethylbenzene**	**0.67**	**3.3**	**3.4**
100-42-5	Styrene	0.46	3.3	< 3.3 U
75-69-4	**Trichlorofluoromethane**	**0.88**	**3.3**	**6.7**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.95	6.6	< 6.6 U
179601-23-1	m,p-Xylene	1.3	3.3	< 3.3 U
95-47-6	o-Xylene	0.74	3.3	< 3.3 U
95-50-1	1,2-Dichlorobenzene	0.97	3.3	< 3.3 U
541-73-1	1,3-Dichlorobenzene	0.75	3.3	< 3.3 U
106-46-7	1,4-Dichlorobenzene	0.77	3.3	< 3.3 U
107-02-8	Acrolein	13	170	< 170 U

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Date Analyzed: 04/18/13 13:05

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	MDL	RL	Result
74-88-4	Iodomethane	0.71	3.3	< 3.3 U
74-96-4	Bromoethane	1.5	6.6	< 6.6 U
107-13-1	Acrylonitrile	3.4	17	< 17 U
563-58-6	1,1-Dichloropropene	1.0	3.3	< 3.3 U
74-95-3	Dibromomethane	0.49	3.3	< 3.3 U
630-20-6	1,1,1,2-Tetrachloroethane	0.77	3.3	< 3.3 U
96-12-8	1,2-Dibromo-3-chloropropane	1.9	17	< 17 U
96-18-4	1,2,3-Trichloropropane	1.7	6.6	< 6.6 U
110-57-6	trans-1,4-Dichloro-2-butene	1.4	17	< 17 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.84**	**3.3**	**3.3**
95-63-6	**1,2,4-Trimethylbenzene**	**0.76**	**3.3**	**5.4**
87-68-3	Hexachlorobutadiene	1.4	17	< 17 U
106-93-4	1,2-Dibromoethane	0.58	3.3	< 3.3 U
74-97-5	Bromochloromethane	1.1	3.3	< 3.3 U
75-71-8	Dichlorodifluoromethane	0.69	3.3	< 3.3 U
594-20-7	2,2-Dichloropropane	0.97	3.3	< 3.3 U
142-28-9	1,3-Dichloropropane	0.69	3.3	< 3.3 U
98-82-8	**Isopropylbenzene**	**0.77**	**3.3**	**2.7 J**
103-65-1	n-Propylbenzene	0.90	3.3	< 3.3 U
108-86-1	Bromobenzene	0.51	3.3	< 3.3 U
95-49-8	2-Chlorotoluene	0.99	3.3	< 3.3 U
106-43-4	4-Chlorotoluene	0.92	3.3	< 3.3 U
98-06-6	tert-Butylbenzene	1.0	3.3	< 3.3 U
135-98-8	sec-Butylbenzene	0.79	3.3	< 3.3 U
99-87-6	**4-Isopropyltoluene**	**0.78**	**3.3**	**3.0 J**
104-51-8	n-Butylbenzene	0.87	3.3	< 3.3 U
120-82-1	1,2,4-Trichlorobenzene	1.1	17	< 17 U
91-20-3	Naphthalene	1.4	17	< 17 U
87-61-6	1,2,3-Trichlorobenzene	1.0	17	< 17 U
1634-04-4	Methyl tert-Butyl Ether	0.76	3.3	< 3.3 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	113%
d8-Toluene	95.2%
Bromofluorobenzene	81.1%
d4-1,2-Dichlorobenzene	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: GR-WS-05-20130411-S**
Page 1 of 2 **REANALYSIS**

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/23/13 16:42

Sample Amount: 1.07 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 76.8%

CAS Number	Analyte	MDL	RL	Result
74-87-3	Chloromethane	1.2	4.6	< 4.6 U
74-83-9	Bromomethane	0.87	4.6	< 4.6 U
75-01-4	Vinyl Chloride	1.1	4.6	< 4.6 U
75-00-3	Chloroethane	2.2	4.6	< 4.6 U
75-09-2	**Methylene Chloride**	**3.0**	**9.3**	**14 QB**
67-64-1	**Acetone**	**2.3**	**23**	**500 B**
75-15-0	**Carbon Disulfide**	**2.6**	**4.6**	**18**
75-35-4	1,1-Dichloroethene	1.6	4.6	< 4.6 U
75-34-3	1,1-Dichloroethane	0.95	4.6	< 4.6 U
156-60-5	trans-1,2-Dichloroethene	1.2	4.6	< 4.6 U
156-59-2	cis-1,2-Dichloroethene	1.1	4.6	< 4.6 U
67-66-3	Chloroform	1.1	4.6	< 4.6 U
107-06-2	1,2-Dichloroethane	0.89	4.6	< 4.6 U
78-93-3	**2-Butanone**	**2.4**	**23**	**120 Q**
71-55-6	1,1,1-Trichloroethane	1.1	4.6	< 4.6 U
56-23-5	Carbon Tetrachloride	1.0	4.6	< 4.6 U
108-05-4	Vinyl Acetate	1.8	23	< 23 U
75-27-4	Bromodichloromethane	1.2	4.6	< 4.6 U
78-87-5	1,2-Dichloropropane	0.76	4.6	< 4.6 U
10061-01-5	cis-1,3-Dichloropropene	1.1	4.6	< 4.6 U
79-01-6	Trichloroethene	0.99	4.6	< 4.6 U
124-48-1	Dibromochloromethane	1.2	4.6	< 4.6 U
79-00-5	1,1,2-Trichloroethane	1.3	4.6	< 4.6 U
71-43-2	**Benzene**	**1.4**	**4.6**	**9.8**
10061-02-6	trans-1,3-Dichloropropene	1.0	4.6	< 4.6 U
110-75-8	2-Chloroethylvinylether	1.3	23	< 23 U
75-25-2	Bromoform	1.4	4.6	< 4.6 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**2.0**	**23**	**28**
591-78-6	2-Hexanone	2.1	23	< 23 U
127-18-4	Tetrachloroethene	1.2	4.6	< 4.6 U
79-34-5	1,1,2,2-Tetrachloroethane	1.2	4.6	< 4.6 U
108-88-3	**Toluene**	**0.71**	**4.6**	**5.3**
108-90-7	Chlorobenzene	1.0	4.6	< 4.6 U
100-41-4	**Ethylbenzene**	**0.94**	**4.6**	**6.3**
100-42-5	Styrene	0.64	4.6	< 4.6 U
75-69-4	Trichlorofluoromethane	1.2	4.6	< 4.6 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.3	9.3	< 9.3 U
179601-23-1	**m,p-Xylene**	**1.8**	**4.6**	**6.0**
95-47-6	**o-Xylene**	**1.0**	**4.6**	**3.9 J**
95-50-1	1,2-Dichlorobenzene	1.4	4.6	< 4.6 U
541-73-1	1,3-Dichlorobenzene	1.1	4.6	< 4.6 U
106-46-7	1,4-Dichlorobenzene	1.1	4.6	< 4.6 U
107-02-8	Acrolein	18	230	< 230 U

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Date Analyzed: 04/23/13 16:42

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	MDL	RL	Result
74-88-4	Iodomethane	1.0	4.6	< 4.6 U
74-96-4	Bromoethane	2.1	9.3	< 9.3 U
107-13-1	Acrylonitrile	4.8	23	< 23 U
563-58-6	1,1-Dichloropropene	1.5	4.6	< 4.6 U
74-95-3	Dibromomethane	0.69	4.6	< 4.6 U
630-20-6	1,1,1,2-Tetrachloroethane	1.1	4.6	< 4.6 U
96-12-8	1,2-Dibromo-3-chloropropane	2.7	23	< 23 U
96-18-4	1,2,3-Trichloropropane	2.4	9.3	< 9.3 U
110-57-6	trans-1,4-Dichloro-2-butene	2.0	23	< 23 U
108-67-8	**1,3,5-Trimethylbenzene**	**1.2**	**4.6**	**6.0**
95-63-6	**1,2,4-Trimethylbenzene**	**1.1**	**4.6**	**10**
87-68-3	Hexachlorobutadiene	1.9	23	< 23 U
106-93-4	1,2-Dibromoethane	0.82	4.6	< 4.6 U
74-97-5	Bromochloromethane	1.5	4.6	< 4.6 U
75-71-8	Dichlorodifluoromethane	0.97	4.6	< 4.6 U
594-20-7	2,2-Dichloropropane	1.4	4.6	< 4.6 U
142-28-9	1,3-Dichloropropane	0.98	4.6	< 4.6 U
98-82-8	**Isopropylbenzene**	**1.1**	**4.6**	**4.6 J**
103-65-1	n-Propylbenzene	1.3	4.6	< 4.6 U
108-86-1	Bromobenzene	0.71	4.6	< 4.6 U
95-49-8	2-Chlorotoluene	1.4	4.6	< 4.6 U
106-43-4	4-Chlorotoluene	1.3	4.6	< 4.6 U
98-06-6	tert-Butylbenzene	1.4	4.6	< 4.6 U
135-98-8	sec-Butylbenzene	1.1	4.6	< 4.6 U
99-87-6	**4-Isopropyltoluene**	**1.1**	**4.6**	**5.0**
104-51-8	n-Butylbenzene	1.2	4.6	< 4.6 U
120-82-1	1,2,4-Trichlorobenzene	1.6	23	< 23 U
91-20-3	Naphthalene	2.0	23	< 23 U
87-61-6	1,2,3-Trichlorobenzene	1.4	23	< 23 U
1634-04-4	Methyl tert-Butyl Ether	1.1	4.6	< 4.6 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	123%
d8-Toluene	93.0%
Bromofluorobenzene	78.1%
d4-1,2-Dichlorobenzene	99.4%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-041813A	Method Blank	Low	104%	101%	101%	101%	0
LCS-041813A	Lab Control	Low	109%	102%	101%	102%	0
LCSD-041813A	Lab Control Dup	Low	104%	100%	100%	100%	0
WL67A	GR-CB-07-20130411-S	Low	114%	99.9%	93.2%	100%	0
MB-042313A	Method Blank	Low	117%	102%	99.8%	104%	0
LCS-042313A	Lab Control	Low	115%	102%	100%	102%	0
LCSD-042313A	Lab Control Dup	Low	115%	103%	100%	103%	0
WL67B	GR-WS-05-20130411-S	Low	113%	95.2%	81.1%	100%	0
WL67BRE	GR-WS-05-20130411-S	Low	123%	93.0%	78.1%*	99.4%	1

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

Log Number Range: 13-7791 to 13-7792

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-041813A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-041813A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 04/18/13 10:12
LCSD: 04/18/13 10:36

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	41.4	50.0	82.8%	46.3	50.0	92.6%	11.2%
Bromomethane	47.8	50.0	95.6%	53.1	50.0	106%	10.5%
Vinyl Chloride	45.0	50.0	90.0%	52.2	50.0	104%	14.8%
Chloroethane	45.5	50.0	91.0%	50.9	50.0	102%	11.2%
Methylene Chloride	58.4 B	50.0	117%	60.9 B	50.0	122%	4.2%
Acetone	356 Q	250	142%	333 Q	250	133%	6.7%
Carbon Disulfide	45.8	50.0	91.6%	53.9	50.0	108%	16.2%
1,1-Dichloroethene	45.2	50.0	90.4%	53.1	50.0	106%	16.1%
1,1-Dichloroethane	46.3	50.0	92.6%	51.6	50.0	103%	10.8%
trans-1,2-Dichloroethene	48.1	50.0	96.2%	53.4	50.0	107%	10.4%
cis-1,2-Dichloroethene	46.8	50.0	93.6%	51.4	50.0	103%	9.4%
Chloroform	46.9	50.0	93.8%	51.2	50.0	102%	8.8%
1,2-Dichloroethane	46.0	50.0	92.0%	48.9	50.0	97.8%	6.1%
2-Butanone	299 Q	250	120%	271 Q	250	108%	9.8%
1,1,1-Trichloroethane	45.1	50.0	90.2%	51.6	50.0	103%	13.4%
Carbon Tetrachloride	42.7	50.0	85.4%	49.6	50.0	99.2%	15.0%
Vinyl Acetate	55.6	50.0	111%	55.7	50.0	111%	0.2%
Bromodichloromethane	46.0	50.0	92.0%	49.8	50.0	99.6%	7.9%
1,2-Dichloropropane	45.2	50.0	90.4%	50.1	50.0	100%	10.3%
cis-1,3-Dichloropropene	48.2	50.0	96.4%	51.5	50.0	103%	6.6%
Trichloroethene	43.9	50.0	87.8%	49.4	50.0	98.8%	11.8%
Dibromochloromethane	47.3	50.0	94.6%	50.3	50.0	101%	6.1%
1,1,2-Trichloroethane	49.7	50.0	99.4%	51.2	50.0	102%	3.0%
Benzene	45.9	50.0	91.8%	51.1	50.0	102%	10.7%
trans-1,3-Dichloropropene	50.1	50.0	100%	52.4	50.0	105%	4.5%
2-Chloroethylvinylether	53.6	50.0	107%	54.2	50.0	108%	1.1%
Bromoform	49.5	50.0	99.0%	50.5	50.0	101%	2.0%
4-Methyl-2-Pentanone (MIBK)	290	250	116%	282	250	113%	2.8%
2-Hexanone	277 Q	250	111%	274 Q	250	110%	1.1%
Tetrachloroethene	43.0	50.0	86.0%	49.4	50.0	98.8%	13.9%
1,1,2,2-Tetrachloroethane	49.6	50.0	99.2%	50.4	50.0	101%	1.6%
Toluene	43.9	50.0	87.8%	49.1	50.0	98.2%	11.2%
Chlorobenzene	44.6	50.0	89.2%	49.7	50.0	99.4%	10.8%
Ethylbenzene	46.4	50.0	92.8%	52.0	50.0	104%	11.4%
Styrene	47.3	50.0	94.6%	52.5	50.0	105%	10.4%
Trichlorofluoromethane	45.0	50.0	90.0%	51.8	50.0	104%	14.0%
1,1,2-Trichloro-1,2,2-trifluoroetha	44.9	50.0	89.8%	53.0	50.0	106%	16.5%

Lab Sample ID: LCS-041813A QC Report No: WL67-SAIC
LIMS ID: 13-7791 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	92.6	100	92.6%	104	100	104%	11.6%
o-Xylene	45.2	50.0	90.4%	50.8	50.0	102%	11.7%
1,2-Dichlorobenzene	43.9	50.0	87.8%	47.2	50.0	94.4%	7.2%
1,3-Dichlorobenzene	44.6	50.0	89.2%	49.0	50.0	98.0%	9.4%
1,4-Dichlorobenzene	43.6	50.0	87.2%	47.5	50.0	95.0%	8.6%
Acrolein	290	250	116%	288	250	115%	0.7%
Iodomethane	43.6	50.0	87.2%	51.5	50.0	103%	16.6%
Bromoethane	43.8	50.0	87.6%	50.7	50.0	101%	14.6%
Acrylonitrile	54.9	50.0	110%	51.1	50.0	102%	7.2%
1,1-Dichloropropene	42.2	50.0	84.4%	48.2	50.0	96.4%	13.3%
Dibromomethane	48.4	50.0	96.8%	49.8	50.0	99.6%	2.9%
1,1,1,2-Tetrachloroethane	44.6	50.0	89.2%	49.1	50.0	98.2%	9.6%
1,2-Dibromo-3-chloropropane	49.7	50.0	99.4%	49.1	50.0	98.2%	1.2%
1,2,3-Trichloropropane	50.2	50.0	100%	50.4	50.0	101%	0.4%
trans-1,4-Dichloro-2-butene	47.8	50.0	95.6%	47.9	50.0	95.8%	0.2%
1,3,5-Trimethylbenzene	46.1	50.0	92.2%	51.5	50.0	103%	11.1%
1,2,4-Trimethylbenzene	46.5	50.0	93.0%	51.5	50.0	103%	10.2%
Hexachlorobutadiene	41.9	50.0	83.8%	48.8	50.0	97.6%	15.2%
1,2-Dibromoethane	50.1	50.0	100%	50.9	50.0	102%	1.6%
Bromochloromethane	48.8	50.0	97.6%	50.4	50.0	101%	3.2%
Dichlorodifluoromethane	45.6	50.0	91.2%	50.9	50.0	102%	11.0%
2,2-Dichloropropane	46.5	50.0	93.0%	52.1	50.0	104%	11.4%
1,3-Dichloropropane	48.2	50.0	96.4%	50.4	50.0	101%	4.5%
Isopropylbenzene	46.4	50.0	92.8%	51.8	50.0	104%	11.0%
n-Propylbenzene	46.7	50.0	93.4%	51.6	50.0	103%	10.0%
Bromobenzene	43.8	50.0	87.6%	47.5	50.0	95.0%	8.1%
2-Chlorotoluene	45.1	50.0	90.2%	50.0	50.0	100%	10.3%
4-Chlorotoluene	45.2	50.0	90.4%	49.7	50.0	99.4%	9.5%
tert-Butylbenzene	45.4	50.0	90.8%	50.9	50.0	102%	11.4%
sec-Butylbenzene	46.7	50.0	93.4%	52.4	50.0	105%	11.5%
4-Isopropyltoluene	47.6	50.0	95.2%	53.3	50.0	107%	11.3%
n-Butylbenzene	47.2	50.0	94.4%	52.8	50.0	106%	11.2%
1,2,4-Trichlorobenzene	44.0	50.0	88.0%	48.8	50.0	97.6%	10.3%
Naphthalene	48.0 B	50.0	96.0%	51.0 B	50.0	102%	6.1%
1,2,3-Trichlorobenzene	42.8	50.0	85.6%	47.2	50.0	94.4%	9.8%
Methyl tert-Butyl Ether	53.6	50.0	107%	54.3	50.0	109%	1.3%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	109%	104%
d8-Toluene	102%	100%
Bromofluorobenzene	101%	100%
d4-1,2-Dichlorobenzene	102%	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-042313A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-042313A
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 04/23/13 12:06
LCSD: 04/23/13 12:30

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	44.5	50.0	89.0%	44.0	50.0	88.0%	1.1%
Bromomethane	29.4 Q	50.0	58.8%	31.4 Q	50.0	62.8%	6.6%
Vinyl Chloride	50.6	50.0	101%	52.8	50.0	106%	4.3%
Chloroethane	51.4	50.0	103%	52.0	50.0	104%	1.2%
Methylene Chloride	63.9 QB	50.0	128%	63.3 QB	50.0	127%	0.9%
Acetone	356 B	250	142%	308 B	250	123%	14.5%
Carbon Disulfide	54.8	50.0	110%	56.2	50.0	112%	2.5%
1,1-Dichloroethene	54.2	50.0	108%	55.6	50.0	111%	2.6%
1,1-Dichloroethane	50.4	50.0	101%	53.0	50.0	106%	5.0%
trans-1,2-Dichloroethene	52.3	50.0	105%	51.9	50.0	104%	0.8%
cis-1,2-Dichloroethene	50.4	50.0	101%	52.3	50.0	105%	3.7%
Chloroform	50.7	50.0	101%	50.9	50.0	102%	0.4%
1,2-Dichloroethane	46.3	50.0	92.6%	48.8	50.0	97.6%	5.3%
2-Butanone	377 Q	250	151%	304 Q	250	122%	21.4%
1,1,1-Trichloroethane	50.7	50.0	101%	53.3	50.0	107%	5.0%
Carbon Tetrachloride	45.6	50.0	91.2%	48.0	50.0	96.0%	5.1%
Vinyl Acetate	58.1	50.0	116%	60.7	50.0	121%	4.4%
Bromodichloromethane	46.2	50.0	92.4%	48.6	50.0	97.2%	5.1%
1,2-Dichloropropane	46.6	50.0	93.2%	48.6	50.0	97.2%	4.2%
cis-1,3-Dichloropropene	47.9	50.0	95.8%	50.4	50.0	101%	5.1%
Trichloroethene	45.7	50.0	91.4%	48.1	50.0	96.2%	5.1%
Dibromochloromethane	46.1	50.0	92.2%	48.2	50.0	96.4%	4.5%
1,1,2-Trichloroethane	47.9	50.0	95.8%	50.4	50.0	101%	5.1%
Benzene	47.9	50.0	95.8%	50.0	50.0	100%	4.3%
trans-1,3-Dichloropropene	48.7	50.0	97.4%	51.6	50.0	103%	5.8%
2-Chloroethylvinylether	51.7	50.0	103%	54.0	50.0	108%	4.4%
Bromoform	46.9	50.0	93.8%	49.0	50.0	98.0%	4.4%
4-Methyl-2-Pentanone (MIBK)	278	250	111%	296	250	118%	6.3%
2-Hexanone	298 Q	250	119%	283 Q	250	113%	5.2%
Tetrachloroethene	45.3	50.0	90.6%	46.6	50.0	93.2%	2.8%
1,1,2,2-Tetrachloroethane	47.8	50.0	95.6%	49.8	50.0	99.6%	4.1%
Toluene	45.5	50.0	91.0%	47.8	50.0	95.6%	4.9%
Chlorobenzene	45.1	50.0	90.2%	46.9	50.0	93.8%	3.9%
Ethylbenzene	47.5	50.0	95.0%	49.4	50.0	98.8%	3.9%
Styrene	47.5	50.0	95.0%	49.3	50.0	98.6%	3.7%
Trichlorofluoromethane	51.1	50.0	102%	52.7	50.0	105%	3.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	54.4	50.0	109%	55.7	50.0	111%	2.4%

Lab Sample ID: LCS-042313A QC Report No: WL67-SAIC
LIMS ID: 13-7792 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	95.1	100	95.1%	98.6	100	98.6%	3.6%
o-Xylene	45.8	50.0	91.6%	47.8	50.0	95.6%	4.3%
1,2-Dichlorobenzene	43.3	50.0	86.6%	44.6	50.0	89.2%	3.0%
1,3-Dichlorobenzene	45.0	50.0	90.0%	46.0	50.0	92.0%	2.2%
1,4-Dichlorobenzene	43.8	50.0	87.6%	45.0	50.0	90.0%	2.7%
Acrolein	266	250	106%	286	250	114%	7.2%
Iodomethane	38.4 Q	50.0	76.8%	38.3 Q	50.0	76.6%	0.3%
Bromoethane	54.4	50.0	109%	55.1	50.0	110%	1.3%
Acrylonitrile	55.3	50.0	111%	28.9	50.0	57.8%	62.7%
1,1-Dichloropropene	45.6	50.0	91.2%	47.9	50.0	95.8%	4.9%
Dibromomethane	47.3	50.0	94.6%	49.2	50.0	98.4%	3.9%
1,1,1,2-Tetrachloroethane	44.4	50.0	88.8%	46.8	50.0	93.6%	5.3%
1,2-Dibromo-3-chloropropane	47.9	50.0	95.8%	50.6	50.0	101%	5.5%
1,2,3-Trichloropropane	47.6	50.0	95.2%	49.8	50.0	99.6%	4.5%
trans-1,4-Dichloro-2-butene	46.0	50.0	92.0%	46.6	50.0	93.2%	1.3%
1,3,5-Trimethylbenzene	47.0	50.0	94.0%	48.5	50.0	97.0%	3.1%
1,2,4-Trimethylbenzene	47.0	50.0	94.0%	48.5	50.0	97.0%	3.1%
Hexachlorobutadiene	44.8	50.0	89.6%	44.9	50.0	89.8%	0.2%
1,2-Dibromoethane	47.9	50.0	95.8%	50.5	50.0	101%	5.3%
Bromochloromethane	50.1	50.0	100%	52.1	50.0	104%	3.9%
Dichlorodifluoromethane	50.9	50.0	102%	52.9	50.0	106%	3.9%
2,2-Dichloropropane	52.1	50.0	104%	54.3	50.0	109%	4.1%
1,3-Dichloropropane	46.6	50.0	93.2%	48.7	50.0	97.4%	4.4%
Isopropylbenzene	47.5	50.0	95.0%	49.2	50.0	98.4%	3.5%
n-Propylbenzene	47.6	50.0	95.2%	49.0	50.0	98.0%	2.9%
Bromobenzene	43.3	50.0	86.6%	44.6	50.0	89.2%	3.0%
2-Chlorotoluene	45.8	50.0	91.6%	47.2	50.0	94.4%	3.0%
4-Chlorotoluene	45.7	50.0	91.4%	46.9	50.0	93.8%	2.6%
tert-Butylbenzene	46.3	50.0	92.6%	48.1	50.0	96.2%	3.8%
sec-Butylbenzene	47.7	50.0	95.4%	49.2	50.0	98.4%	3.1%
4-Isopropyltoluene	49.0	50.0	98.0%	49.8	50.0	99.6%	1.6%
n-Butylbenzene	48.7	50.0	97.4%	49.4	50.0	98.8%	1.4%
1,2,4-Trichlorobenzene	45.4	50.0	90.8%	45.2	50.0	90.4%	0.4%
Naphthalene	47.1 B	50.0	94.2%	48.2 B	50.0	96.4%	2.3%
1,2,3-Trichlorobenzene	44.0	50.0	88.0%	43.9	50.0	87.8%	0.2%
Methyl tert-Butyl Ether	52.6	50.0	105%	54.4	50.0	109%	3.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	115%	115%
d8-Toluene	102%	103%
Bromofluorobenzene	100%	100%
d4-1,2-Dichlorobenzene	102%	103%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0418

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPORT

Lab File ID: MB0418

Lab Sample ID: MB0418

Date Analyzed: 04/18/13

Time Analyzed: 1100

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	LCS0418	LCS0418	LCS0418	1012
02	LCS0418	LCS0418	LCS0418A	1036
03	GR-CB-07-201	WL67A	WL67A	1241
04	GR-WS-05-201	WL67B	WL67B	1305
05				
06				
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-041813A**
 METHOD BLANK

Lab Sample ID: MB-041813A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/18/13 11:00

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

CAS Number	Analyte	MDL	RL	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**	**1.9 J**
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-041813A**
 METHOD BLANK

Lab Sample ID: MB-041813A QC Report No: WL67-SAIC
LIMS ID: 13-7791 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 04/18/13 11:00

CAS Number	Analyte	MDL	RL	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**	**1.0 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	104%
d8-Toluene	101%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	101%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0423

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPORT

Lab File ID: MB0423

Lab Sample ID: MB0423

Date Analyzed: 04/23/13

Time Analyzed: 1254

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	LCS0423	LCS0423	LCS0423	1206
02	LCS0423	LCS0423	LCS0423A	1230
03	GR-WS-05-201	WL67B	WL67B2	1642
04				
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COMMENTS:

WL67-0001Q

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-042313A**
 METHOD BLANK

Lab Sample ID: MB-042313A
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/23/13 12:54

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

CAS Number	Analyte	MDL	RL	Result
74-87-3	Chloromethane	0.26	1.0	< 1.0 U
74-83-9	Bromomethane	0.19	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.24	1.0	< 1.0 U
75-00-3	Chloroethane	0.46	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.64**	**2.0**	**3.2**
67-64-1	**Acetone**	**0.48**	**5.0**	**7.1**
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-042313A**
 METHOD BLANK

Lab Sample ID: MB-042313A QC Report No: WL67-SAIC
LIMS ID: 13-7792 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 04/23/13 12:54

CAS Number	Analyte	MDL	RL	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**	**0.9 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	117%
d8-Toluene	102%
Bromofluorobenzene	99.8%
d4-1,2-Dichlorobenzene	104%

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.: WL67

Lab File ID: BFB0416A BFB Injection Date: 04/16/13

Instrument ID: NT5 BFB Injection Time: 1508

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	20.5
75	30.0 - 66.0% of mass 95	47.0
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	80.8
175	4.0 - 9.0% of mass 174	6.0 (7.5)1
176	95.0 - 101.0% of mass 174	77.3 (95.6)1
177	5.0 - 9.0% of mass 176	5.1 (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	200	IC200	2000416	04/16/13	1610
02	150	IC150	1500416	04/16/13	1634
03	100	IC100	1000416	04/16/13	1658
04	IC050	IC050	0500416	04/16/13	1722
05	5	IC005	0100416	04/16/13	1746
06	2.5	IC0025	0050416	04/16/13	1809
07	1	IC001	0020416	04/16/13	1833
08	0.5	IC0005	0010416	04/16/13	1857
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5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SUPPORT SDG No.: WL67

Lab File ID: BFB0418 BFB Injection Date: 04/18/13

Instrument ID: NT5 BFB Injection Time: 0903

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	19.7
75	30.0 - 66.0% of mass 95	46.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	50.0 - 101.0% of mass 95	84.1
175	4.0 - 9.0% of mass 174	6.2 (7.3)1
176	95.0 - 101.0% of mass 174	82.0 (97.6)1
177	5.0 - 9.0% of mass 176	5.3 (6.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0418	CC0418	CC0418	04/18/13	0948
02	LCS0418	LCS0418	LCS0418	04/18/13	1012
03	LCS0418	LCS0418	LCS0418A	04/18/13	1036
04	MB0418	MB0418	MB0418	04/18/13	1100
05	GR-CB-07-2013041	WL67A	WL67A	04/18/13	1241
06	GR-WS-05-2013041	WL67B	WL67B	04/18/13	1305
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WL67 0803W

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.: WL67

Lab File ID: BFB0423 BFB Injection Date: 04/23/13

Instrument ID: NT5 BFB Injection Time: 0911

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	19.7
75	30.0 - 66.0% of mass 95	47.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	81.2
175	4.0 - 9.0% of mass 174	6.0 (7.4)1
176	95.0 - 101.0% of mass 174	79.1 (97.3)1
177	5.0 - 9.0% of mass 176	5.1 (6.5)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	CC0423	CC0423	04/23/13	1124
02	LCS0423	LCS0423	LCS0423	04/23/13	1206
03	LCS0423	LCS0423	LCS0423A	04/23/13	1230
04	MB0423	MB0423	MB0423	04/23/13	1254
05	GR-WS-05-2013041	WL67B	WL67B2	04/23/13	1642
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WL67-0423

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

LAB FILE ID: RF0.5: 0010416 RF1: 0020416 RF2.5: 0050416
RF5: 0100416 RF50: 0500416

COMPOUND	RF0.5	RF1	RF2.5	RF5	RF50
Chloromethane	0.857	0.700	0.652	0.671	0.626
Vinyl Chloride	0.631	0.604	0.624	0.639	0.640
Bromomethane	0.349	0.331	0.315	0.301	0.294
Chloroethane	0.462	0.388	0.374	0.376	0.366
Trichlorofluoromethane	0.732	0.675	0.691	0.680	0.673
Acrolein		0.092	0.076	0.072	0.072
112Trichloro122Trifluoroetha	0.438	0.390	0.411	0.411	0.406
Acetone		0.454	0.288	0.196	0.228
1,1-Dichloroethene	0.464	0.429	0.437	0.444	0.438
Bromoethane	0.338	0.309	0.292	0.299	0.294
Iodomethane	0.563	0.531	0.500	0.511	0.525
Methylene Chloride		1.196	0.756	0.554	0.454
Acrylonitrile	0.270	0.191	0.176	0.186	0.190
Carbon Disulfide	1.679	1.510	1.496	1.499	1.484
Trans-1,2-Dichloroethene	0.526	0.502	0.499	0.446	0.475
Vinyl Acetate	1.212	1.103	1.104	1.156	1.193
1,1-Dichloroethane	1.070	0.992	0.996	1.007	0.987
2-Butanone	0.066	0.061	0.050	0.055	0.057
2,2-Dichloropropane	0.787	0.735	0.744	0.757	0.757
Cis-1,2-Dichloroethene	0.590	0.527	0.513	0.532	0.520
Chloroform	0.994	0.888	0.874	0.874	0.866
Bromochloromethane	0.254	0.237	0.215	0.224	0.222
1,1,1-Trichloroethane	0.859	0.828	0.825	0.807	0.821
1,1-Dichloropropene	0.475	0.413	0.427	0.492	0.427
Carbon Tetrachloride	0.403	0.389	0.387	0.394	0.396
1,2-Dichloroethane	0.480	0.419	0.385	0.408	0.397
Benzene	1.352	1.250	1.259	1.255	1.224
Trichloroethene	0.332	0.289	0.291	0.305	0.299
1,2-Dichloropropane	0.362	0.342	0.323	0.332	0.333
Bromodichloromethane	0.429	0.388	0.378	0.383	0.386
Dibromomethane	0.180	0.160	0.150	0.158	0.160
2-Chloroethyl Vinyl Ether	0.185	0.178	0.171	0.185	0.200
4-Methyl-2-Pentanone	0.135	0.119	0.112	0.127	0.136
Cis 1,3-dichloropropene	0.502	0.477	0.463	0.502	0.501
Toluene	0.993	0.863	0.837	0.815	0.788
Trans 1,3-Dichloropropene	0.462	0.426	0.431	0.442	0.460
2-Hexanone	0.244	0.223	0.201	0.226	0.227

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

LAB FILE ID: RF0.5: 0010416 RF1: 0020416 RF2.5: 0050416
RF5: 0100416 RF50: 0500416

COMPOUND	RF0.5	RF1	RF2.5	RF5	RF50
1,1,2-Trichloroethane	0.268	0.228	0.228	0.238	0.242
1,3-Dichloropropane	0.506	0.459	0.432	0.456	0.456
Tetrachloroethene	0.348	0.329	0.324	0.331	0.323
Chlorodibromomethane	0.313	0.282	0.274	0.282	0.286
1,2-Dibromoethane	0.272	0.240	0.217	0.227	0.233
Chlorobenzene	0.955	0.880	0.875	0.878	0.817
Ethyl Benzene	1.661	1.523	1.550	1.561	1.456
1,1,1,2-Tetrachloroethane	0.325	0.302	0.285	0.296	0.296
m,p-xylene	0.618	0.558	0.572	0.579	0.556
o-Xylene	0.571	0.518	0.534	0.547	0.543
Styrene	0.989	0.922	0.906	0.932	0.919
Bromoform	0.433	0.355	0.342	0.362	0.366
1,1,2,2-Tetrachloroethane	0.658	0.606	0.540	0.596	0.588
1,2,3-Trichloropropane	0.190	0.186	0.167	0.178	0.178
Trans-1,4-Dichloro 2-Butene	0.323	0.247	0.213	0.234	0.235
N-Propyl Benzene	3.449	3.142	3.201	3.277	2.897
Bromobenzene	0.739	0.674	0.642	0.659	0.610
Isopropyl Benzene	2.827	2.575	2.644	2.724	2.501
2-Chloro Toluene	2.157	1.942	1.895	1.941	1.814
4-Chloro Toluene	2.316	2.048	2.025	2.052	1.877
T-Butyl Benzene	2.045	1.905	1.920	1.988	1.884
1,3,5-Trimethyl Benzene	2.361	2.167	2.181	2.276	2.118
1,2,4-Trimethylbenzene	2.320	2.177	2.221	2.246	2.089
S-Butyl Benzene	3.125	2.821	2.898	2.976	2.713
4-Isopropyl Toluene	2.509	2.287	2.362	2.448	2.271
1,3-Dichlorobenzene	1.494	1.298	1.238	1.246	1.171
1,4-Dichlorobenzene	1.633	1.400	1.305	1.317	1.191
N-Butyl Benzene	2.488	2.221	2.283	2.314	2.147
1,2-Dichlorobenzene	1.501	1.318	1.234	1.237	1.121
1,2-Dibromo 3-Chloropropane	0.150	0.119	0.102	0.116	0.112
1,2,4-Trichlorobenzene	1.098	0.948	0.895	0.876	0.821
Hexachloro 1,3-Butadiene	0.623	0.538	0.533	0.512	0.497
Naphthalene		3.261	2.414	2.284	1.870
1,2,3-Trichlorobenzene	1.061	0.934	0.831	0.845	0.758
Dichlorodifluoromethane	0.429	0.390	0.410	0.394	0.387
Methyl tert butyl ether	1.535	1.455	1.358	1.304	1.422

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

LAB FILE ID: RF0.5: 0010416 RF1: 0020416 RF2.5: 0050416
RF5: 0100416 RF50: 0500416

COMPOUND	RF0.5	RF1	RF2.5	RF5	RF50
d4-1,2-Dichloroethane	0.633	0.626	0.605	0.617	0.620
d8-Toluene	1.272	1.271	1.267	1.274	1.269
4-Bromofluorobenzene	0.541	0.541	0.542	0.538	0.539
d4-1,2-Dichlorobenzene	0.926	0.920	0.909	0.918	0.908
Dibromofluoromethane	0.540	0.541	0.531	0.540	0.545

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

LAB FILE ID: RF100: 1000416 RF150: 1500416 RF200: 2000416

COMPOUND	RF100	RF150	RF200
Chloromethane	0.656	0.738	0.733
Vinyl Chloride	0.607	0.670	0.692
Bromomethane	0.284	0.296	
Chloroethane	0.358	0.397	0.368
Trichlorofluoromethane	0.661	0.669	0.732
Acrolein	0.055	0.060	
112Trichloro122Trifluoroetha	0.388	0.296	0.466
Acetone	0.188	0.234	
1,1-Dichloroethene	0.428	0.325	0.493
Bromoethane	0.269	0.212	0.332
Iodomethane	0.498		
Methylene Chloride	0.381	0.477	
Acrylonitrile	0.181	0.166	
Carbon Disulfide	1.426	0.977	1.510
Trans-1,2-Dichloroethene	0.419		
Vinyl Acetate	1.142	1.076	1.112
1,1-Dichloroethane	0.959	1.001	
2-Butanone	0.055	0.050	
2,2-Dichloropropane	0.747	0.794	0.829
Cis-1,2-Dichloroethene	0.510	0.535	0.557
Chloroform	0.851	0.884	0.909
Bromochloromethane	0.219	0.246	0.240
1,1,1-Trichloroethane	0.806	0.855	0.883
1,1-Dichloropropene	0.420	0.453	0.468
Carbon Tetrachloride	0.389	0.422	0.438
1,2-Dichloroethane	0.387	0.381	0.393
Benzene	1.143	1.111	1.046
Trichloroethene	0.297	0.318	0.331
1,2-Dichloropropane	0.328	0.341	0.351
Bromodichloromethane	0.380	0.388	0.397
Dibromomethane	0.155	0.156	0.164
2-Chloroethyl Vinyl Ether	0.198	0.192	0.202
4-Methyl-2-Pentanone	0.126	0.112	0.115
Cis 1,3-dichloropropene	0.486	0.491	0.497
Toluene	0.744	0.739	0.707
Trans 1,3-Dichloropropene	0.443	0.437	0.442
2-Hexanone	0.201	0.174	0.187

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

LAB FILE ID: RF100: 1000416 RF150: 1500416 RF200: 2000416

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.235	0.234	0.242
1,3-Dichloropropane	0.437	0.431	0.437
Tetrachloroethene	0.319	0.349	0.362
Chlorodibromomethane	0.280	0.282	0.292
1,2-Dibromoethane	0.227	0.222	0.231
Chlorobenzene	0.768	0.759	0.724
Ethyl Benzene	1.272	1.168	1.071
1,1,1,2-Tetrachloroethane	0.290	0.300	0.304
m,p-xylene	0.504	0.480	0.446
o-Xylene	0.529	0.545	0.544
Styrene	0.850	0.812	0.755
Bromoform	0.366	0.360	0.375
1,1,2,2-Tetrachloroethane	0.578	0.560	0.587
1,2,3-Trichloropropane	0.175	0.168	0.178
Trans-1,4-Dichloro 2-Butene	0.228	0.221	0.239
N-Propyl Benzene	2.538	2.331	2.116
Bromobenzene	0.612	0.637	0.660
Isopropyl Benzene	2.256	2.091	1.917
2-Chloro Toluene	1.717	1.672	1.588
4-Chloro Toluene	1.776	1.725	1.641
T-Butyl Benzene	1.770	1.726	1.628
1,3,5-Trimethyl Benzene	1.971	1.887	1.774
1,2,4-Trimethylbenzene	1.935	1.830	1.704
S-Butyl Benzene	2.401	2.207	2.015
4-Isopropyl Toluene	2.061	1.908	1.754
1,3-Dichlorobenzene	1.142	1.140	1.104
1,4-Dichlorobenzene	1.165	1.172	1.160
N-Butyl Benzene	1.975	1.870	1.757
1,2-Dichlorobenzene	1.089	1.086	1.089
1,2-Dibromo 3-Chloropropane	0.108	0.101	0.109
1,2,4-Trichlorobenzene	0.829	0.852	0.894
Hexachloro 1,3-Butadiene	0.494	0.515	0.548
Naphthalene	1.695	1.522	
1,2,3-Trichlorobenzene	0.748	0.755	0.806
Dichlorodifluoromethane	0.384	0.407	0.412
Methyl tert butyl ether	1.334	1.347	

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

LAB FILE ID: RF100: 1000416 RF150: 1500416 RF200: 2000416

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	0.626	0.605	0.607
d8-Toluene	1.267	1.271	1.265
4-Bromofluorobenzene	0.531	0.526	0.524
d4-1,2-Dichlorobenzene	0.912	0.899	0.901
Dibromofluoromethane	0.554	0.546	0.550

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	0.704	10.4
Vinyl Chloride	AVRG	0.638	4.7
Bromomethane	AVRG	0.310	7.4
Chloroethane	AVRG	0.386	8.5
Trichlorofluoromethane	AVRG	0.689	4.0
Acrolein	AVRG	0.071	18.6
112Trichloro122Trifluoroetha	AVRG	0.400	12.3
Acetone	2ORDR		0.9928
1,1-Dichloroethene	AVRG	0.432	11.2
Bromoethane	AVRG	0.293	13.5
Iodomethane	AVRG	0.521	4.7
Methylene Chloride	2ORDR		0.9938
Acrylonitrile	AVRG	0.194	17.8
Carbon Disulfide	AVRG	1.448	14.0
Trans-1,2-Dichloroethene	AVRG	0.478	8.3
Vinyl Acetate	AVRG	1.137	4.2
1,1-Dichloroethane	AVRG	1.002	3.4
2-Butanone	AVRG	0.056	10.4
2,2-Dichloropropane	AVRG	0.769	4.2
Cis-1,2-Dichloroethene	AVRG	0.536	4.9
Chloroform	AVRG	0.893	5.0
Bromochloromethane	AVRG	0.232	6.0
1,1,1-Trichloroethane	AVRG	0.836	3.3
1,1-Dichloropropene	AVRG	0.447	6.6
Carbon Tetrachloride	AVRG	0.402	4.5
1,2-Dichloroethane	AVRG	0.406	8.0
Benzene	AVRG	1.205	8.1
Trichloroethene	AVRG	0.308	5.5
1,2-Dichloropropane	AVRG	0.339	3.7
Bromodichloromethane	AVRG	0.391	4.2
Dibromomethane	AVRG	0.160	5.5
2-Chloroethyl Vinyl Ether	AVRG	0.189	5.9
4-Methyl-2-Pentanone	AVRG	0.123	7.8
Cis 1,3-dichloropropene	AVRG	0.490	2.9
Toluene	AVRG	0.811	11.2
Trans 1,3-Dichloropropene	AVRG	0.443	2.9
2-Hexanone	AVRG	0.210	11.1

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.239	5.3
1,3-Dichloropropane	AVRG	0.452	5.5
Tetrachloroethene	AVRG	0.335	4.6
Chlorodibromomethane	AVRG	0.286	4.1
1,2-Dibromoethane	AVRG	0.234	7.3
Chlorobenzene	AVRG	0.832	9.4
Ethyl Benzene	AVRG	1.408	15.0
1,1,1,2-Tetrachloroethane	AVRG	0.300	4.0
m,p-xylene	AVRG	0.539	10.6
o-Xylene	AVRG	0.541	2.9
Styrene	AVRG	0.886	8.4
Bromoform	AVRG	0.370	7.3
1,1,2,2-Tetrachloroethane	AVRG	0.589	5.9
1,2,3-Trichloropropane	AVRG	0.177	4.4
Trans-1,4-Dichloro 2-Butene	AVRG	0.242	14.1
N-Propyl Benzene	AVRG	2.869	16.9
Bromobenzene	AVRG	0.654	6.3
Isopropyl Benzene	AVRG	2.442	13.2
2-Chloro Toluene	AVRG	1.841	9.9
4-Chloro Toluene	AVRG	1.932	11.4
T-Butyl Benzene	AVRG	1.858	7.5
1,3,5-Trimethyl Benzene	AVRG	2.092	9.5
1,2,4-Trimethylbenzene	AVRG	2.065	10.6
S-Butyl Benzene	AVRG	2.644	14.9
4-Isopropyl Toluene	AVRG	2.200	12.1
1,3-Dichlorobenzene	AVRG	1.229	10.2
1,4-Dichlorobenzene	AVRG	1.293	12.6
N-Butyl Benzene	AVRG	2.132	11.6
1,2-Dichlorobenzene	AVRG	1.209	12.1
1,2-Dibromo 3-Chloropropane	AVRG	0.115	13.5
1,2,4-Trichlorobenzene	AVRG	0.902	9.9
Hexachloro 1,3-Butadiene	AVRG	0.532	7.8
Naphthalene	2ORDR		0.9998
1,2,3-Trichlorobenzene	AVRG	0.842	12.8
Dichlorodifluoromethane	AVRG	0.402	3.9
Methyl tert butyl ether	AVRG	1.394	5.8

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/16/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	0.618	1.8
d8-Toluene	AVRG	1.269	0.2
4-Bromofluorobenzene	AVRG	0.535	1.4
d4-1,2-Dichlorobenzene	AVRG	0.912	1.0
Dibromofluoromethane	AVRG	0.543	1.3

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

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/18/13

Init. Calib. Date: 04/16/13 Cont. Calib. Time: 0948

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.704	0.5877	0.100	AVRG	-16.5	
Vinyl Chloride	0.638	0.5897	0.010	AVRG	-7.6	
Bromomethane	0.310	0.2975	0.010	AVRG	-4.0	
Chloroethane	0.386	0.3488	0.010	AVRG	-9.6	
Trichlorofluoromethane	0.689	0.6069	0.010	AVRG	-11.9	
Acrolein	0.071	0.0776	0.010	AVRG	9.3	
112Trichloro122Trifluoroetha	0.401	0.3600	0.010	AVRG	-10.2	
Acetone	250.00	443.93	0.010	2ORDR	77.6	<-
1,1-Dichloroethene	0.432	0.3897	0.010	AVRG	-9.8	
Bromoethane	0.293	0.2557	0.010	AVRG	-12.7	
Iodomethane	0.521	0.4548	0.010	AVRG	-12.7	
Methylene Chloride	50.000	54.951	0.010	2ORDR	9.9	
Acrylonitrile	0.194	0.2042	0.010	AVRG	5.2	
Carbon Disulfide	1.448	1.3329	0.010	AVRG	-7.9	
Trans-1,2-Dichloroethene	0.478	0.4383	0.010	AVRG	-8.3	
Vinyl Acetate	1.137	1.2093	0.010	AVRG	6.4	
1,1-Dichloroethane	1.002	0.9017	0.100	AVRG	-10.0	
2-Butanone	0.056	0.0820	0.010	AVRG	46.4	<-
2,2-Dichloropropane	0.769	0.7164	0.010	AVRG	-6.8	
Cis-1,2-Dichloroethene	0.536	0.4878	0.010	AVRG	-9.0	
Chloroform	0.892	0.7996	0.010	AVRG	-10.4	
Bromochloromethane	0.232	0.2406	0.010	AVRG	3.7	
1,1,1-Trichloroethane	0.836	0.7218	0.010	AVRG	-13.7	
1,1-Dichloropropene	0.447	0.3690	0.010	AVRG	-17.4	
Carbon Tetrachloride	0.402	0.3350	0.010	AVRG	-16.7	
1,2-Dichloroethane	0.406	0.3603	0.010	AVRG	-11.2	
Benzene	1.205	1.0803	0.010	AVRG	-10.3	
Trichloroethene	0.308	0.2623	0.010	AVRG	-14.8	
1,2-Dichloropropane	0.339	0.2988	0.010	AVRG	-11.8	
Bromodichloromethane	0.391	0.3466	0.010	AVRG	-11.4	
Dibromomethane	0.160	0.1485	0.010	AVRG	-7.2	
2-Chloroethyl Vinyl Ether	0.189	0.1935	0.010	AVRG	2.4	
4-Methyl-2-Pentanone	0.123	0.1349	0.010	AVRG	9.7	
Cis 1,3-dichloropropene	0.490	0.4587	0.010	AVRG	-6.4	
Toluene	0.811	0.6911	0.010	AVRG	-14.8	
Trans 1,3-Dichloropropene	0.443	0.4268	0.010	AVRG	-3.6	
2-Hexanone	0.210	0.2561	0.010	AVRG	22.0	<-

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/18/13

Init. Calib. Date: 04/16/13 Cont. Calib. Time: 0948

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.239	0.2260	0.010	AVRG	-5.4
1,3-Dichloropropane	0.452	0.4228	0.010	AVRG	-6.5
Tetrachloroethene	0.336	0.2878	0.010	AVRG	-14.3
Chlorodibromomethane	0.286	0.2660	0.010	AVRG	-7.0
1,2-Dibromoethane	0.234	0.2219	0.010	AVRG	-5.2
Chlorobenzene	0.832	0.7284	0.300	AVRG	-12.4
Ethyl Benzene	1.408	1.2803	0.010	AVRG	-9.1
1,1,1,2-Tetrachloroethane	0.300	0.2632	0.010	AVRG	-12.3
m,p-xylene	0.539	0.4922	0.010	AVRG	-8.7
o-Xylene	0.541	0.4786	0.010	AVRG	-11.5
Styrene	0.886	0.8201	0.010	AVRG	-7.4
Bromoform	0.370	0.3578	0.100	AVRG	-3.3
1,1,2,2-Tetrachloroethane	0.589	0.5679	0.300	AVRG	-3.6
1,2,3-Trichloropropane	0.178	0.1744	0.010	AVRG	-2.0
Trans-1,4-Dichloro 2-Butene	0.242	0.2320	0.010	AVRG	-4.1
N-Propyl Benzene	2.869	2.6452	0.010	AVRG	-7.8
Bromobenzene	0.654	0.5626	0.010	AVRG	-14.0
Isopropyl Benzene	2.442	2.2384	0.010	AVRG	-8.3
2-Chloro Toluene	1.841	1.6376	0.010	AVRG	-11.0
4-Chloro Toluene	1.932	1.7254	0.010	AVRG	-10.7
T-Butyl Benzene	1.858	1.6556	0.010	AVRG	-10.9
1,3,5-Trimethyl Benzene	2.092	1.9064	0.010	AVRG	-8.9
1,2,4-Trimethylbenzene	2.065	1.8961	0.010	AVRG	-8.2
S-Butyl Benzene	2.644	2.4378	0.010	AVRG	-7.8
4-Isopropyl Toluene	2.200	2.0699	0.010	AVRG	-5.9
1,3-Dichlorobenzene	1.229	1.0833	0.010	AVRG	-11.8
1,4-Dichlorobenzene	1.293	1.1219	0.010	AVRG	-13.2
N-Butyl Benzene	2.132	1.9907	0.010	AVRG	-6.6
1,2-Dichlorobenzene	1.209	1.0428	0.010	AVRG	-13.7
1,2-Dibromo 3-Chloropropane	0.115	0.1097	0.010	AVRG	-4.6
1,2,4-Trichlorobenzene	0.902	0.7997	0.010	AVRG	-11.3
Hexachloro 1,3-Butadiene	0.532	0.4481	0.010	AVRG	-15.8
Naphthalene	50.000	48.245	0.010	2ORDR	-3.5
1,2,3-Trichlorobenzene	0.842	0.7292	0.010	AVRG	-13.4
Dichlorodifluoromethane	0.402	0.3600	0.010	AVRG	-10.4
Methyl tert butyl ether	1.394	1.4132	0.010	AVRG	1.4

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/18/13

Init. Calib. Date: 04/16/13 Cont. Calib. Time: 0948

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.617	0.6322	0.010	AVRG	2.5
d8-Toluene	1.270	1.2776	0.010	AVRG	0.6
4-Bromofluorobenzene	0.535	0.5311	0.010	AVRG	-0.7
d4-1,2-Dichlorobenzene	0.912	0.9189	0.010	AVRG	0.8
Dibromofluoromethane	0.543	0.5748	0.010	AVRG	5.8

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

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/23/13

Init. Calib. Date: 04/16/13 Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.704	0.6507	0.100	AVRG	-7.6	
Vinyl Chloride	0.638	0.6831	0.010	AVRG	7.1	
Bromomethane	0.310	0.1740	0.010	AVRG	-43.9	<-
Chloroethane	0.386	0.4226	0.010	AVRG	9.5	
Trichlorofluoromethane	0.689	0.7616	0.010	AVRG	10.5	
Acrolein	0.071	0.0763	0.010	AVRG	7.5	
112Trichloro122Trifluoroetha	0.401	0.4802	0.010	AVRG	19.8	
Acetone	250.00	222.07	0.010	2ORDR	-11.2	
1,1-Dichloroethene	0.432	0.5027	0.010	AVRG	16.4	
Bromoethane	0.293	0.3464	0.010	AVRG	18.2	
Iodomethane	0.521	0.4019	0.010	AVRG	-22.8	<-
Methylene Chloride	50.000	68.084	0.010	2ORDR	36.2	<-
Acrylonitrile	0.194	0.2166	0.010	AVRG	11.6	
Carbon Disulfide	1.448	1.7079	0.010	AVRG	17.9	
Trans-1,2-Dichloroethene	0.478	0.5586	0.010	AVRG	16.9	
Vinyl Acetate	1.137	1.3324	0.010	AVRG	17.2	
1,1-Dichloroethane	1.002	1.0950	0.100	AVRG	9.3	
2-Butanone	0.056	0.0924	0.010	AVRG	65.0	<-
2,2-Dichloropropane	0.769	0.8617	0.010	AVRG	12.0	
Cis-1,2-Dichloroethene	0.536	0.5751	0.010	AVRG	7.3	
Chloroform	0.892	0.8912	0.010	AVRG	-0.1	
Bromochloromethane	0.232	0.2436	0.010	AVRG	5.0	
1,1,1-Trichloroethane	0.836	0.8952	0.010	AVRG	7.1	
1,1-Dichloropropene	0.447	0.4370	0.010	AVRG	-2.2	
Carbon Tetrachloride	0.402	0.3589	0.010	AVRG	-10.7	
1,2-Dichloroethane	0.406	0.3893	0.010	AVRG	-4.1	
Benzene	1.205	1.2325	0.010	AVRG	2.3	
Trichloroethene	0.308	0.3016	0.010	AVRG	-2.1	
1,2-Dichloropropane	0.339	0.3335	0.010	AVRG	-1.6	
Bromodichloromethane	0.391	0.3802	0.010	AVRG	-2.8	
Dibromomethane	0.160	0.1553	0.010	AVRG	-2.9	
2-Chloroethyl Vinyl Ether	0.189	0.2009	0.010	AVRG	6.3	
4-Methyl-2-Pentanone	0.123	0.1381	0.010	AVRG	12.3	
Cis 1,3-dichloropropene	0.490	0.4962	0.010	AVRG	1.3	
Toluene	0.811	0.7893	0.010	AVRG	-2.7	
Trans 1,3-Dichloropropene	0.443	0.4508	0.010	AVRG	1.8	
2-Hexanone	0.210	0.2747	0.010	AVRG	30.8	<-

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/23/13

Init. Calib. Date: 04/16/13 Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.239	0.2383	0.010	AVRG	-0.3
1,3-Dichloropropane	0.452	0.4375	0.010	AVRG	-3.2
Tetrachloroethene	0.336	0.3311	0.010	AVRG	-1.4
Chlorodibromomethane	0.286	0.2753	0.010	AVRG	-3.7
1,2-Dibromoethane	0.234	0.2301	0.010	AVRG	-1.7
Chlorobenzene	0.832	0.7957	0.300	AVRG	-4.4
Ethyl Benzene	1.408	1.4353	0.010	AVRG	1.9
1,1,1,2-Tetrachloroethane	0.300	0.2836	0.010	AVRG	-5.5
m,p-xylene	0.539	0.5520	0.010	AVRG	2.4
o-Xylene	0.541	0.5332	0.010	AVRG	-1.4
Styrene	0.886	0.8943	0.010	AVRG	0.9
Bromoform	0.370	0.3573	0.100	AVRG	-3.4
1,1,2,2-Tetrachloroethane	0.589	0.5676	0.300	AVRG	-3.6
1,2,3-Trichloropropane	0.178	0.1730	0.010	AVRG	-2.8
Trans-1,4-Dichloro 2-Butene	0.242	0.2274	0.010	AVRG	-6.0
N-Propyl Benzene	2.869	2.9160	0.010	AVRG	1.6
Bromobenzene	0.654	0.5937	0.010	AVRG	-9.2
Isopropyl Benzene	2.442	2.4936	0.010	AVRG	2.1
2-Chloro Toluene	1.841	1.7937	0.010	AVRG	-2.6
4-Chloro Toluene	1.932	1.8766	0.010	AVRG	-2.9
T-Butyl Benzene	1.858	1.8517	0.010	AVRG	-0.3
1,3,5-Trimethyl Benzene	2.092	2.1008	0.010	AVRG	0.4
1,2,4-Trimethylbenzene	2.065	2.0824	0.010	AVRG	0.8
S-Butyl Benzene	2.644	2.7090	0.010	AVRG	2.4
4-Isopropyl Toluene	2.200	2.2994	0.010	AVRG	4.5
1,3-Dichlorobenzene	1.229	1.1767	0.010	AVRG	-4.2
1,4-Dichlorobenzene	1.293	1.1950	0.010	AVRG	-7.6
N-Butyl Benzene	2.132	2.2264	0.010	AVRG	4.4
1,2-Dichlorobenzene	1.209	1.1035	0.010	AVRG	-8.7
1,2-Dibromo 3-Chloropropane	0.115	0.1099	0.010	AVRG	-4.4
1,2,4-Trichlorobenzene	0.902	0.8599	0.010	AVRG	-4.7
Hexachloro 1,3-Butadiene	0.532	0.5177	0.010	AVRG	-2.7
Naphthalene	50.000	48.092	0.010	2ORDR	-3.8
1,2,3-Trichlorobenzene	0.842	0.7682	0.010	AVRG	-8.8
Dichlorodifluoromethane	0.402	0.4556	0.010	AVRG	13.3
Methyl tert butyl ether	1.394	1.5784	0.010	AVRG	13.2

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/23/13

Init. Calib. Date: 04/16/13 Cont. Calib. Time: 1124

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.617	0.7363	0.010	AVRG	19.3
d8-Toluene	1.270	1.2937	0.010	AVRG	1.9
4-Bromofluorobenzene	0.535	0.5368	0.010	AVRG	0.3
d4-1,2-Dichlorobenzene	0.912	0.9334	0.010	AVRG	2.3
Dibromofluoromethane	0.543	0.6230	0.010	AVRG	14.7

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

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100416 Ical Date: 04/16/13

Instrument ID: NT5 Project Run Date: 04/18/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	1568560	4.66	2754051	5.11	2655390	7.59
	UPPER LIMIT	3137120	5.16	5508102	5.61	5310780	8.09
	LOWER LIMIT	784280	4.16	1377026	4.61	1327695	7.09
	Sample ID						
01	LCS0418	1401434	4.67	2616101	5.12	2623092	7.60
02	LCS0418	1479359	4.66	2730006	5.11	2688123	7.59
03	MB0418	1467188	4.67	2727382	5.12	2678112	7.59
04	GR-CB-07-201	1262651	4.68	2335334	5.12	2181216	7.59
05	GR-WS-05-201	1192751	4.68	2232679	5.12	1852486	7.59
06							
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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: WL67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100416 | Ical Date: 04/16/13

Instrument ID: NT5 | Project Run Date: 04/18/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1411599	9.67				
	UPPER LIMIT	2823198	10.17				
	LOWER LIMIT	705800	9.17				
	Sample ID						
01	LCS0418	1424539	9.67				
02	LCS0418	1472447	9.67				
03	MB0418	1435960	9.66				
04	GR-CB-07-201	960894	9.66				
05	GR-WS-05-201	553202*	9.66				
06							
07							
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22							

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

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100416 Ical Date: 04/16/13

Instrument ID: NT5 Project Run Date: 04/23/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	1568560	4.66	2754051	5.11	2655390	7.59
	UPPER LIMIT	3137120	5.16	5508102	5.61	5310780	8.09
	LOWER LIMIT	784280	4.16	1377026	4.61	1327695	7.09
	Sample ID						
01	LCS0423	1448065	4.67	2843472	5.12	2846242	7.59
02	LCS0423	1439164	4.67	2806042	5.11	2827746	7.59
03	MB0423	1350783	4.68	2648069	5.12	2639019	7.59
04	GR-WS-05-201	1217385	4.68	2445662	5.12	1924163	7.59
05							
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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: WL67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100416 | Ical Date: 04/16/13

Instrument ID: NT5 | Project Run Date: 04/23/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1411599	9.67				
	UPPER LIMIT	2823198	10.17				
	LOWER LIMIT	705800	9.17				
	Sample ID						
01	LCS0423	1545161	9.67				
02	LCS0423	1541650	9.67				
03	MB0423	1400375	9.66				
04	GR-WS-05-201	570621*	9.66				
05							
06							
07							
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22							

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

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

* Values outside of QC limits.

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WL67

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GR-CB-07-20130411-S
SAMPLE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 22:41
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 3.30 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 59.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**79**	**180**	**540**
111-44-4	Bis-(2-Chloroethyl) Ether	30	180	< 180 U
95-57-8	2-Chlorophenol	22	180	< 180 U
541-73-1	1,3-Dichlorobenzene	24	180	< 180 U
106-46-7	1,4-Dichlorobenzene	26	180	< 180 U
100-51-6	Benzyl Alcohol	55	180	< 180 U
95-50-1	1,2-Dichlorobenzene	23	180	< 180 U
95-48-7	2-Methylphenol	48	180	< 180 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	34	180	< 180 U
106-44-5	**4-Methylphenol**	**60**	**180**	**290**
621-64-7	N-Nitroso-Di-N-Propylamine	31	180	< 180 U
67-72-1	Hexachloroethane	27	180	< 180 U
98-95-3	Nitrobenzene	37	180	< 180 U
78-59-1	Isophorone	26	180	< 180 U
88-75-5	2-Nitrophenol	350	910	< 910 U
105-67-9	2,4-Dimethylphenol	31	360	< 360 U
65-85-0	**Benzoic Acid**	**920**	**3,600**	**1,000 J**
111-91-1	bis(2-Chloroethoxy) Methane	18	180	< 180 U
120-83-2	2,4-Dichlorophenol	200	1,800	< 1,800 U
120-82-1	1,2,4-Trichlorobenzene	32	180	< 180 U
91-20-3	**Naphthalene**	**25**	**180**	**220**
106-47-8	4-Chloroaniline	200	2,400	< 2,400 U
87-68-3	Hexachlorobutadiene	42	180	< 180 U
59-50-7	4-Chloro-3-methylphenol	140	910	< 910 U
91-57-6	**2-Methylnaphthalene**	**28**	**180**	**190**
77-47-4	Hexachlorocyclopentadiene	600	3,600	< 3,600 U
88-06-2	2,4,6-Trichlorophenol	200	910	< 910 U
95-95-4	2,4,5-Trichlorophenol	190	910	< 910 U
91-58-7	2-Chloronaphthalene	24	180	< 180 U
88-74-4	2-Nitroaniline	170	910	< 910 U
131-11-3	Dimethylphthalate	26	180	< 180 U
208-96-8	**Acenaphthylene**	**52**	**180**	**140 J**
99-09-2	3-Nitroaniline	200	910	< 910 U
83-32-9	Acenaphthene	30	180	< 180 U
51-28-5	2,4-Dinitrophenol	1000	7,700	< 7,700 U
100-02-7	4-Nitrophenol	320	910	< 910 U
132-64-9	**Dibenzofuran**	**37**	**180**	**160 J**
606-20-2	2,6-Dinitrotoluene	280	910	< 910 U
121-14-2	2,4-Dinitrotoluene	180	910	< 910 U
84-66-2	Diethylphthalate	330	460	< 460 U
7005-72-3	4-Chlorophenyl-phenylether	48	180	< 180 U
86-73-7	**Fluorene**	**40**	**180**	**190**
100-01-6	4-Nitroaniline	340	910	< 910 U

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Date Analyzed: 04/24/13 22:41

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	190	1,800	< 1,800 U
86-30-6	N-Nitrosodiphenylamine	49	180	< 180 U
101-55-3	4-Bromophenyl-phenylether	46	180	< 180 U
118-74-1	Hexachlorobenzene	39	180	< 180 U
87-86-5	Pentachlorophenol	440	1,800	< 1,800 U
85-01-8	**Phenanthrene**	**33**	**180**	**1,200**
86-74-8	**Carbazole**	**24**	**180**	**170 J**
120-12-7	**Anthracene**	**41**	**180**	**380**
84-74-2	**Di-n-Butylphthalate**	**74**	**180**	**370**
206-44-0	**Fluoranthene**	**26**	**180**	**3,000**
129-00-0	**Pyrene**	**18**	**180**	**3,000**
85-68-7	**Butylbenzylphthalate**	**56**	**180**	**1,200**
91-94-1	3,3'-Dichlorobenzidine	160	1,400	< 1,400 U
56-55-3	**Benzo(a)anthracene**	**30**	**180**	**1,100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**130**	**230**	**14,000**
218-01-9	**Chrysene**	**34**	**180**	**1,800**
117-84-0	**Di-n-Octyl phthalate**	**53**	**180**	**730**
50-32-8	**Benzo(a)pyrene**	**50**	**180**	**1,100**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**43**	**180**	**510**
53-70-3	**Dibenz(a,h)anthracene**	**39**	**180**	**230**
191-24-2	**Benzo(g,h,i)perylene**	**40**	**180**	**590**
62-53-3	Aniline	360	4,900	< 4,900 U
62-75-9	N-Nitrosodimethylamine	130	910	< 910 U
90-12-0	1-Methylnaphthalene	24	180	< 180 U
TOTBFA	**Total Benzofluoranthenes**	**25**	**360**	**2,300**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	31.8%	2-Fluorobiphenyl	55.2%
d14-p-Terphenyl	54.0%	d4-1,2-Dichlorobenzene	46.2%
d5-Phenol	66.0%	2-Fluorophenol	46.8%
2,4,6-Tribromophenol	34.8%	d4-2-Chlorophenol	53.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GR-WS-05-20130411-S
SAMPLE

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 23:18
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.65 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 72.8%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**160**	**360**	**690**
111-44-4	Bis-(2-Chloroethyl) Ether	61	360	< 360 U
95-57-8	2-Chlorophenol	43	360	< 360 U
541-73-1	1,3-Dichlorobenzene	48	360	< 360 U
106-46-7	1,4-Dichlorobenzene	52	360	< 360 U
100-51-6	Benzyl Alcohol	110	360	< 360 U
95-50-1	1,2-Dichlorobenzene	45	360	< 360 U
95-48-7	2-Methylphenol	95	360	< 360 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	68	360	< 360 U
106-44-5	**4-Methylphenol**	**120**	**360**	**910**
621-64-7	N-Nitroso-Di-N-Propylamine	61	360	< 360 U
67-72-1	Hexachloroethane	53	360	< 360 U
98-95-3	Nitrobenzene	74	360	< 360 U
78-59-1	Isophorone	52	360	< 360 U
88-75-5	2-Nitrophenol	700	1,800	< 1,800 U
105-67-9	2,4-Dimethylphenol	63	730	< 730 U
65-85-0	Benzoic Acid	1800	7,300	< 7,300 U
111-91-1	bis(2-Chloroethoxy) Methane	36	360	< 360 U
120-83-2	2,4-Dichlorophenol	390	3,600	< 3,600 U
120-82-1	1,2,4-Trichlorobenzene	63	360	< 360 U
91-20-3	**Naphthalene**	**50**	**360**	**380**
106-47-8	4-Chloroaniline	410	4,900	< 4,900 U
87-68-3	Hexachlorobutadiene	83	360	< 360 U
59-50-7	4-Chloro-3-methylphenol	270	1,800	< 1,800 U
91-57-6	**2-Methylnaphthalene**	**56**	**360**	**310 J**
77-47-4	Hexachlorocyclopentadiene	1200	7,300	< 7,300 U
88-06-2	2,4,6-Trichlorophenol	410	1,800	< 1,800 U
95-95-4	2,4,5-Trichlorophenol	390	1,800	< 1,800 U
91-58-7	2-Chloronaphthalene	48	360	< 360 U
88-74-4	2-Nitroaniline	330	1,800	< 1,800 U
131-11-3	Dimethylphthalate	53	360	< 360 U
208-96-8	**Acenaphthylene**	**100**	**360**	**200 J**
99-09-2	3-Nitroaniline	410	1,800	< 1,800 U
83-32-9	Acenaphthene	60	360	< 360 U
51-28-5	2,4-Dinitrophenol	2000	16,000	< 16,000 U
100-02-7	4-Nitrophenol	630	1,800	< 1,800 U
132-64-9	**Dibenzofuran**	**75**	**360**	**200 J**
606-20-2	2,6-Dinitrotoluene	560	1,800	< 1,800 U
121-14-2	2,4-Dinitrotoluene	350	1,800	< 1,800 U
84-66-2	Diethylphthalate	670	910	< 910 U
7005-72-3	4-Chlorophenyl-phenylether	96	360	< 360 U
86-73-7	**Fluorene**	**79**	**360**	**360**
100-01-6	4-Nitroaniline	690	1,800	< 1,800 U

WL67 00059

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Date Analyzed: 04/24/13 23:18

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	390	3,600	< 3,600 U
86-30-6	**N-Nitrosodiphenylamine**	**98**	**360**	**220 J**
101-55-3	4-Bromophenyl-phenylether	91	360	< 360 U
118-74-1	Hexachlorobenzene	78	360	< 360 U
87-86-5	Pentachlorophenol	880	3,600	< 3,600 U
85-01-8	**Phenanthrene**	**66**	**360**	**2,200**
86-74-8	**Carbazole**	**49**	**360**	**330 J**
120-12-7	**Anthracene**	**82**	**360**	**560**
84-74-2	**Di-n-Butylphthalate**	**150**	**360**	**420**
206-44-0	**Fluoranthene**	**53**	**360**	**4,400**
129-00-0	**Pyrene**	**35**	**360**	**4,200**
85-68-7	**Butylbenzylphthalate**	**110**	**360**	**1,300**
91-94-1	3,3'-Dichlorobenzidine	320	2,700	< 2,700 U
56-55-3	**Benzo(a)anthracene**	**60**	**360**	**1,600**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**270**	**460**	**43,000 E**
218-01-9	**Chrysene**	**68**	**360**	**2,500**
117-84-0	**Di-n-Octyl phthalate**	**110**	**360**	**1,600**
50-32-8	**Benzo(a)pyrene**	**99**	**360**	**1,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**85**	**360**	**580**
53-70-3	**Dibenz(a,h)anthracene**	**78**	**360**	**360**
191-24-2	**Benzo(g,h,i)perylene**	**80**	**360**	**670**
62-53-3	Aniline	730	9,800	< 9,800 U
62-75-9	N-Nitrosodimethylamine	260	1,800	< 1,800 U
90-12-0	**1-Methylnaphthalene**	**49**	**360**	**180 J**
TOTBFA	**Total Benzofluoranthenes**	**50**	**730**	**3,000**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	25.2%	2-Fluorobiphenyl	51.6%
d14-p-Terphenyl	51.0%	d4-1,2-Dichlorobenzene	40.2%
d5-Phenol	54.8%	2-Fluorophenol	46.4%
2,4,6-Tribromophenol	30.4%	d4-2-Chlorophenol	46.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GR-WS-05-20130411-S
DILUTION

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/25/13 11:58
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.65 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 6.00
Percent Moisture: 72.8%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**310**	**730**	**620 J**
111-44-4	Bis-(2-Chloroethyl) Ether	120	730	< 730 U
95-57-8	2-Chlorophenol	87	730	< 730 U
541-73-1	1,3-Dichlorobenzene	96	730	< 730 U
106-46-7	1,4-Dichlorobenzene	100	730	< 730 U
100-51-6	Benzyl Alcohol	220	730	< 730 U
95-50-1	1,2-Dichlorobenzene	91	730	< 730 U
95-48-7	2-Methylphenol	190	730	< 730 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	140	730	< 730 U
106-44-5	4-Methylphenol	240	730	< 730 U
621-64-7	N-Nitroso-Di-N-Propylamine	120	730	< 730 U
67-72-1	Hexachloroethane	110	730	< 730 U
98-95-3	Nitrobenzene	150	730	< 730 U
78-59-1	Isophorone	100	730	< 730 U
88-75-5	2-Nitrophenol	1400	3,600	< 3,600 U
105-67-9	2,4-Dimethylphenol	130	1,400	< 1,400 U
65-85-0	Benzoic Acid	3700	14,000	< 14,000 U
111-91-1	bis(2-Chloroethoxy) Methane	73	730	< 730 U
120-83-2	2,4-Dichlorophenol	780	7,300	< 7,300 U
120-82-1	1,2,4-Trichlorobenzene	130	730	< 730 U
91-20-3	**Naphthalene**	**100**	**730**	**360 J**
106-47-8	4-Chloroaniline	810	9,800	< 9,800 U
87-68-3	Hexachlorobutadiene	170	730	< 730 U
59-50-7	4-Chloro-3-methylphenol	550	3,600	< 3,600 U
91-57-6	2-Methylnaphthalene	110	730	< 730 U
77-47-4	Hexachlorocyclopentadiene	2400	14,000	< 14,000 U
88-06-2	2,4,6-Trichlorophenol	810	3,600	< 3,600 U
95-95-4	2,4,5-Trichlorophenol	780	3,600	< 3,600 U
91-58-7	2-Chloronaphthalene	96	730	< 730 U
88-74-4	2-Nitroaniline	670	3,600	< 3,600 U
131-11-3	Dimethylphthalate	110	730	< 730 U
208-96-8	Acenaphthylene	210	730	< 730 U
99-09-2	3-Nitroaniline	820	3,600	< 3,600 U
83-32-9	Acenaphthene	120	730	< 730 U
51-28-5	2,4-Dinitrophenol	4000	31,000	< 31,000 U
100-02-7	4-Nitrophenol	1300	3,600	< 3,600 U
132-64-9	Dibenzofuran	150	730	< 730 U
606-20-2	2,6-Dinitrotoluene	1100	3,600	< 3,600 U
121-14-2	2,4-Dinitrotoluene	710	3,600	< 3,600 U
84-66-2	Diethylphthalate	1300	1,800	< 1,800 U
7005-72-3	4-Chlorophenyl-phenylether	190	730	< 730 U
86-73-7	Fluorene	160	730	< 730 U
100-01-6	4-Nitroaniline	1400	3,600	< 3,600 U

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Date Analyzed: 04/25/13 11:58

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	770	7,300	< 7,300 U
86-30-6	N-Nitrosodiphenylamine	200	730	< 730 U
101-55-3	4-Bromophenyl-phenylether	180	730	< 730 U
118-74-1	Hexachlorobenzene	160	730	< 730 U
87-86-5	Pentachlorophenol	1800	7,300	< 7,300 U
85-01-8	**Phenanthrene**	**130**	**730**	**2,100**
86-74-8	Carbazole	98	730	< 730 U
120-12-7	**Anthracene**	**160**	**730**	**510 J**
84-74-2	**Di-n-Butylphthalate**	**300**	**730**	**360 J**
206-44-0	**Fluoranthene**	**110**	**730**	**4,200**
129-00-0	**Pyrene**	**71**	**730**	**4,400**
85-68-7	**Butylbenzylphthalate**	**220**	**730**	**1,400**
91-94-1	3,3'-Dichlorobenzidine	650	5,400	< 5,400 U
56-55-3	**Benzo(a)anthracene**	**120**	**730**	**1,600**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**530**	**910**	**42,000**
218-01-9	**Chrysene**	**140**	**730**	**2,400**
117-84-0	**Di-n-Octyl phthalate**	**210**	**730**	**1,300**
50-32-8	**Benzo(a)pyrene**	**200**	**730**	**1,500**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**170**	**730**	**800**
53-70-3	**Dibenz(a,h)anthracene**	**160**	**730**	**400 J**
191-24-2	**Benzo(g,h,i)perylene**	**160**	**730**	**1,000**
62-53-3	Aniline	1500	20,000	< 20,000 U
62-75-9	N-Nitrosodimethylamine	510	3,600	< 3,600 U
90-12-0	1-Methylnaphthalene	97	730	< 730 U
TOTBFA	**Total Benzofluoranthenes**	**100**	**1,400**	**3,000**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	25.2%	2-Fluorobiphenyl	51.6%
d14-p-Terphenyl	51.6%	d4-1,2-Dichlorobenzene	39.6%
d5-Phenol	52.8%	2-Fluorophenol	44.0%
2,4,6-Tribromophenol	29.6%	d4-2-Chlorophenol	44.0%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-041813	61.0%	55.2%	66.0%	51.6%	62.3%	56.4%	47.2%	55.5%	0
LCS-041813	65.4%	55.6%	67.8%	54.8%	70.0%	65.5%	51.3%	59.9%	0
GR-CB-07-20130411-	31.8%	55.2%	54.0%	46.2%	66.0%	46.8%	34.8%	53.2%	0
GR-WS-05-20130411-	25.2%*	51.6%	51.0%	40.2%	54.8%	46.4%	30.4%	46.8%	1
GR-WS-05-20130411- DL	25.2%*	51.6%	51.6%	39.6%	52.8%	44.0%	29.6%	44.0%	1

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-102)	(30-100)
(FBP) = 2-Fluorobiphenyl	(35-101)	(35-100)
(TPH) = d14-p-Terphenyl	(42-124)	(37-111)
(DCB) = d4-1,2-Dichlorobenzene	(37-100)	(32-100)
(PHL) = d5-Phenol	(32-101)	(29-100)
(2FP) = 2-Fluorophenol	(32-100)	(27-100)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(37-100)	(31-100)

Prep Method: SW3546
Log Number Range: 13-7791 to 13-7792

WL67 00072

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized: B
Reported: 05/02/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 19:37
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	338	500	67.6%
Bis-(2-Chloroethyl) Ether	333	500	66.6%
2-Chlorophenol	287	500	57.4%
1,3-Dichlorobenzene	283	500	56.6%
1,4-Dichlorobenzene	281	500	56.2%
Benzyl Alcohol	213 Q	500	42.6%
1,2-Dichlorobenzene	288	500	57.6%
2-Methylphenol	284	500	56.8%
2,2'-Oxybis(1-Chloropropane)	297	500	59.4%
4-Methylphenol	610	1000	61.0%
N-Nitroso-Di-N-Propylamine	337	500	67.4%
Hexachloroethane	303	500	60.6%
Nitrobenzene	335	500	67.0%
Isophorone	350	500	70.0%
2-Nitrophenol	291	500	58.2%
2,4-Dimethylphenol	602	1500	40.1%
Benzoic Acid	1270	2750	46.2%
bis(2-Chloroethoxy) Methane	355	500	71.0%
2,4-Dichlorophenol	1070	1500	71.3%
1,2,4-Trichlorobenzene	303	500	60.6%
Naphthalene	278	500	55.6%
4-Chloroaniline	776	1500	51.7%
Hexachlorobutadiene	291	500	58.2%
4-Chloro-3-methylphenol	1090	1500	72.7%
2-Methylnaphthalene	303	500	60.6%
Hexachlorocyclopentadiene	574 Q	1500	38.3%
2,4,6-Trichlorophenol	891	1500	59.4%
2,4,5-Trichlorophenol	905	1500	60.3%
2-Chloronaphthalene	299	500	59.8%
2-Nitroaniline	1170	1500	78.0%
Dimethylphthalate	336	500	67.2%
Acenaphthylene	282	500	56.4%
3-Nitroaniline	964	1500	64.3%
Acenaphthene	290	500	58.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
LIMS ID: 13-7791
Matrix: Sediment
Date Analyzed: 04/24/13 19:37

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1250	2750	45.5%
4-Nitrophenol	939	1500	62.6%
Dibenzofuran	306	500	61.2%
2,6-Dinitrotoluene	1010	1500	67.3%
2,4-Dinitrotoluene	1020	1500	68.0%
Diethylphthalate	318	500	63.6%
4-Chlorophenyl-phenylether	311	500	62.2%
Fluorene	291	500	58.2%
4-Nitroaniline	1030	1500	68.7%
4,6-Dinitro-2-Methylphenol	1800	2750	65.5%
N-Nitrosodiphenylamine	324	500	64.8%
4-Bromophenyl-phenylether	331	500	66.2%
Hexachlorobenzene	280	500	56.0%
Pentachlorophenol	747	1500	49.8%
Phenanthrene	324	500	64.8%
Carbazole	441	500	88.2%
Anthracene	308	500	61.6%
Di-n-Butylphthalate	377	500	75.4%
Fluoranthene	339	500	67.8%
Pyrene	355	500	71.0%
Butylbenzylphthalate	396	500	79.2%
3,3'-Dichlorobenzidine	503 Q	1500	33.5%
Benzo(a)anthracene	310	500	62.0%
bis(2-Ethylhexyl)phthalate	363	500	72.6%
Chrysene	297	500	59.4%
Di-n-Octyl phthalate	333	500	66.6%
Benzo(a)pyrene	307	500	61.4%
Indeno(1,2,3-cd)pyrene	315	500	63.0%
Dibenz(a,h)anthracene	301	500	60.2%
Benzo(g,h,i)perylene	300	500	60.0%
Aniline	414 J	1500	27.6%
N-Nitrosodimethylamine	899	1500	59.9%
1-Methylnaphthalene	324	500	64.8%
Total Benzofluoranthenes	629	1000	62.9%

Semivolatile Surrogate Recovery	
d5-Nitrobenzene	65.4%
2-Fluorobiphenyl	55.6%
d14-p-Terphenyl	67.8%
d4-1,2-Dichlorobenzene	54.8%
d5-Phenol	70.0%
2-Fluorophenol	65.5%
2,4,6-Tribromophenol	51.3%
d4-2-Chlorophenol	59.9%

Reported in µg/kg (ppb)

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WL67
Project: NPDES SAMPLING SUPPO

Lab File ID: WL49MB
Date Extracted: 04/18/13

Instrument ID: NT10
Date Analyzed: 04/24/13

Matrix: SOLID
Time Analyzed: 1900

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WL49LCSS1	WL49LCSS1	WL49SB	04/24/13
02	IM-CB-01-2013041	WL49F	WL49F	04/24/13
03	IM-CB-02-2013041	WL49G	WL49G	04/24/13
04	IM-CB-02-201304	WL49GMS	WL49GMS	04/24/13
05	IM-CB-02-201304	WL49GMSD	WL49GMSD	04/24/13
06	GR-CB-07-2013041	WL67A	WL67A	04/24/13
07	GR-WS-05-2013041	WL67B	WL67B	04/24/13
08	GR-WS-05-2013041	WL67B	WL67B2	04/25/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-041813
METHOD BLANK

Lab Sample ID: MB-041813
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 19:00
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-041813**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-041813 QC Report No: WL67-SAIC
LIMS ID: 13-7791 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 04/24/13 19:00

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	61.0%	2-Fluorobiphenyl	55.2%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	62.3%	2-Fluorophenol	56.4%
2,4,6-Tribromophenol	47.2%	d4-2-Chlorophenol	55.5%

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: 01/25/13 DFTPP Injection Time: 1243

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	39.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.9
197	Less than 2.0% of mass 198	0.2
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	28.9
365	Greater than 1.0% of mass 198	4.43
441	0.0 - 24.0% of mass 442	16.5 (15.1)2
442	50.0 - 200.0% of mass 198	109.2
443	15.0 - 24.0% of mass 442	21.8 (20.0)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		IC0125A	IC0125A	01/25/13	1259
02		IC0125B	IC0125B	01/25/13	1336
03		IC0125C	IC0125C	01/25/13	1413
04		IC0125D	IC0125D	01/25/13	1450
05		IC0125E	IC0125E	01/25/13	1527
06		IC0125F	IC0125F	01/25/13	1603
07		IC0125H	IC0125H	01/25/13	1716
08					
09					
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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: 04/24/13 DFTPP Injection Time: 1730

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.0
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.5
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	6.6
275	10.0 - 60.0% of mass 198	26.7
365	Greater than 1.0% of mass 198	3.93
441	0.0 - 24.0% of mass 442	16.4 (15.4)2
442	50.0 - 200.0% of mass 198	107.0
443	15.0 - 24.0% of mass 442	20.3 (18.9)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		CC0424	CC0424	04/24/13	1746
02	WL49MBS1	WL49MBS1	WL49MB	04/24/13	1900
03	WL49LCSS1	WL49LCSS1	WL49SB	04/24/13	1937
04	IM-CB-01-2013041	WL49F	WL49F	04/24/13	2014
05	IM-CB-02-2013041	WL49G	WL49G	04/24/13	2051
06	IM-CB-02-201304	WL49GMS	WL49GMS	04/24/13	2127
07	IM-CB-02-201304	WL49GMSD	WL49GMSD	04/24/13	2204
08	GR-CB-07-2013041	WL67A	WL67A	04/24/13	2241
09	GR-WS-05-2013041	WL67B	WL67B	04/24/13	2318
10					
11					
12					
13					
14					
15					
16					
17					
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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: 04/25/13 DFTPP Injection Time: 1106

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	19.0
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	34.4
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	46.0
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	27.1
365	Greater than 1.0% of mass 198	4.34
441	0.0 - 24.0% of mass 442	16.2 (15.3)2
442	50.0 - 200.0% of mass 198	105.8
443	15.0 - 24.0% of mass 442	20.3 (19.2)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		CC0425	CC0425	04/25/13	1121
02	GR-WS-05-2013041	WL67B	WL67B2	04/25/13	1158
03					
04					
05					
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22					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 01/25/13

LAB FILE ID: RRF0.2=IC0125C RRF0.5=IC0125H RRF1 =IC0125E
RRF2.5=IC0125F RRF5 =IC0125A RRF10 =IC0125D
RRF20 =IC0125B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
Phenol	1.852	1.689	1.647	1.637	1.690	1.617	1.561	1.670	5.5
Bis(2-Chloroethyl)ether	1.405	1.303	1.303	1.247	1.283	1.211	1.143	1.271	6.5
2-Chlorophenol	1.595	1.461	1.477	1.405	1.455	1.419	1.363	1.454	5.1
1,3-Dichlorobenzene	1.834	1.635	1.581	1.518	1.535	1.523	1.446	1.582	7.9
1,4-Dichlorobenzene	1.825	1.555	1.602	1.503	1.518	1.510	1.450	1.566	7.9
1,2-Dichlorobenzene	1.738	1.523	1.513	1.446	1.472	1.449	1.401	1.506	7.3
Benzyl alcohol	0.840	0.769	0.792	0.773	0.813	0.817	0.791	0.799	3.2
2,2'-oxybis(1-Chloropropane)	0.480	0.448	0.443	0.443	0.448	0.445	0.424	0.447	3.8
2-Methylphenol	1.350	1.220	1.246	1.223	1.300	1.267	1.221	1.261	3.9
Hexachloroethane	0.680	0.602	0.638	0.592	0.610	0.614	0.597	0.619	5.0
N-Nitroso-di-n-propylamine	0.916	0.796	0.856	0.819	0.862	0.846	0.803	0.842	4.9
4-Methylphenol	1.342	1.292	1.314	1.307	1.336	1.313	1.275	1.311	1.8
Nitrobenzene	0.387	0.340	0.348	0.341	0.348	0.344	0.342	0.350	4.8
Isophorone	0.633	0.568	0.608	0.594	0.627	0.618	0.621	0.610	3.7
2-Nitrophenol	0.193	0.184	0.205	0.208	0.219	0.217	0.213	0.206	6.2
2,4-Dimethylphenol	0.376	0.348	0.358	0.346	0.353	0.341	0.330	0.350	4.1
Bis(2-Chloroethoxy)methane	0.421	0.396	0.385	0.380	0.383	0.364	0.361	0.384	5.3
2,4-Dichlorophenol	0.318	0.294	0.308	0.307	0.314	0.306	0.297	0.306	2.8
1,2,4-Trichlorobenzene	0.403	0.363	0.355	0.335	0.339	0.329	0.317	0.349	8.2
Naphthalene	1.171	1.066	1.041	1.002	1.012	1.007	0.987	1.041	6.1
Benzoic acid		0.168	0.242	0.273	0.305	0.306	0.314	0.268	0.999
4-Chloroaniline	0.436	0.407	0.416	0.409	0.424	0.417	0.423	0.419	2.4
Hexachlorobutadiene	0.234	0.212	0.220	0.214	0.214	0.215	0.211	0.217	3.6
4-Chloro-3-methylphenol	0.265	0.271	0.296	0.292	0.313	0.319	0.317	0.296	7.3
2-Methylnaphthalene	0.738	0.668	0.674	0.657	0.702	0.683	0.688	0.687	3.9
Hexachlorocyclopentadiene	0.445	0.408	0.446	0.444	0.480	0.467	0.469	0.451	5.3
2,4,6-Trichlorophenol	0.379	0.370	0.409	0.401	0.416	0.415	0.416	0.401	4.7
2,4,5-Trichlorophenol	0.379	0.396	0.423	0.438	0.449	0.451	0.446	0.426	6.7
2-Chloronaphthalene	1.237	1.069	1.096	1.077	1.109	1.074	1.072	1.105	5.4
2-Nitroaniline	0.217	0.223	0.256	0.268	0.285	0.282	0.283	0.259	11.0
Acenaphthylene	1.864	1.821	1.856	1.806	1.824	1.741	1.701	1.802	3.3
Dimethylphthalate	1.309	1.228	1.231	1.180	1.219	1.174	1.128	1.210	4.7
2,6-Dinitrotoluene	0.257	0.256	0.280	0.285	0.294	0.284	0.280	0.276	5.2
Acenaphthene	1.185	1.134	1.118	1.082	1.094	1.069	1.050	1.104	4.1
3-Nitroaniline	0.227	0.255	0.291	0.273	0.260	0.263	0.217	0.255	10.0
2,4-Dinitrophenol		0.114	0.165	0.208	0.243	0.249	0.253	0.205	0.999
Dibenzofuran	1.690	1.549	1.565	1.497	1.527	1.480	1.448	1.536	5.1

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 01/25/13

LAB FILE ID: RRF0.2=IC0125C RRF0.5=IC0125H RRF1 =IC0125E
RRF2.5=IC0125F RRF5 =IC0125A RRF10 =IC0125D
RRF20 =IC0125B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
4-Nitrophenol		0.100	0.130	0.161	0.180	0.176	0.179	0.154	0.999
2,4-Dinitrotoluene	0.317	0.346	0.381	0.389	0.406	0.391	0.385	0.374	8.3
Fluorene	1.403	1.351	1.321	1.303	1.297	1.245	1.216	1.305	4.8
4-Chlorophenyl-phenylether	0.649	0.643	0.631	0.592	0.600	0.579	0.564	0.608	5.4
Diethylphthalate	1.359	1.231	1.288	1.262	1.291	1.233	1.207	1.267	4.0
4-Nitroaniline	0.243	0.272	0.278	0.267	0.272	0.281	0.272	0.269	4.7
4,6-Dinitro-2-methylphenol	0.113	0.135	0.160	0.170	0.183	0.181	0.180	0.160	16.8
N-Nitrosodiphenylamine (1)	0.526	0.486	0.512	0.479	0.473	0.458	0.438	0.482	6.3
4-Bromophenyl-phenylether	0.242	0.214	0.218	0.217	0.226	0.223	0.222	0.223	4.2
Hexachlorobenzene	0.307	0.283	0.288	0.273	0.277	0.270	0.262	0.280	5.2
Pentachlorophenol	0.151	0.165	0.189	0.189	0.208	0.203	0.202	0.187	11.4
Phenanthrene	1.209	1.074	1.063	1.003	1.062	1.029	1.023	1.066	6.4
Anthracene	1.117	1.020	1.065	1.048	1.104	1.099	1.062	1.074	3.2
Carbazole		0.862	0.878	0.650	0.517	0.658	0.738	0.717	19.3
Di-n-butylphthalate	1.119	0.992	1.078	1.112	1.230	1.241	1.247	1.146	8.5
Fluoranthene	1.285	1.126	1.219	1.190	1.272	1.246	1.258	1.228	4.5
Pyrene	1.170	1.065	1.142	1.136	1.154	1.158	1.150	1.139	3.0
Butylbenzylphthalate	0.416	0.361	0.430	0.433	0.463	0.467	0.454	0.432	8.4
Benzo(a)anthracene	1.199	1.074	1.123	1.108	1.100	1.112	1.096	1.116	3.6
3,3'-Dichlorobenzidine	0.585	0.521	0.474	0.382	0.358	0.470	0.476	0.466	16.6
Chrysene	1.132	1.022	1.018	0.971	0.985	0.981	0.968	1.011	5.7
bis(2-Ethylhexyl)phthalate	0.594	0.506	0.519	0.530	0.531	0.511	0.504	0.528	5.9
Di-n-octylphthalate	1.158	1.024	0.982	0.930	0.934	0.915	0.886	0.976	9.5
Benzo(b)fluoranthene	1.206	1.106	1.092	1.149	1.141	1.204	1.217	1.159	4.3
Benzo(k)fluoranthene	1.420	1.260	1.290	1.205	1.269	1.165	1.158	1.252	7.2
Benzo(a)pyrene	1.077	0.949	0.979	0.983	1.014	1.008	1.008	1.002	4.0
Indeno(1,2,3-cd)pyrene	1.259	1.150	1.216	1.223	1.276	1.272	1.258	1.236	3.6
Dibenzo(a,h)anthracene	0.971	0.924	0.986	0.983	1.004	1.001	0.985	0.979	2.8
Benzo(g,h,i)perylene	1.081	1.010	1.046	1.045	1.083	1.080	1.081	1.061	2.6
N-Nitrosodimethylamine	0.833	0.733	0.747	0.736	0.796	0.756	0.724	0.761	5.2
Aniline	4.034	3.608	3.698	3.544	3.670	3.463	3.216	3.605	6.9
Benzidine		0.373	0.356	0.208	0.161	0.193	0.226	0.253	0.995
Retene	0.562	0.585	1.008	0.545	0.562	0.571	0.546	0.626	0.998
Perylene	1.319	1.138	1.160	1.114	1.115	1.112	1.108	1.152	6.6
Pyridine	0.666	0.652	0.657	0.637	0.680	0.638	0.613	0.649	3.4
1-methylnaphthalene	0.687	0.616	0.617	0.610	0.625	0.629	0.629	0.630	4.1
Azobenzene (1,2-DP-Hydrazine	1.198	1.135	1.184	1.156	1.172	1.126	1.076	1.150	3.6

(1) Cannot be seperated from Diphenylamine

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 01/25/13

LAB FILE ID: RRF0.2=IC0125C RRF0.5=IC0125H RRF1 =IC0125E
RRF2.5=IC0125F RRF5 =IC0125A RRF10 =IC0125D
RRF20 =IC0125B

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	0.329	0.344	0.373	0.382	0.393	0.392	0.395	0.372	7.0
Total Benzofluoranthenes	1.238	1.131	1.130	1.111	1.140	1.118	1.120	1.141	3.8
2-Fluorophenol	1.346	1.221	1.319	1.250	1.327	1.274	1.216	1.279	4.1
Phenol-d5	1.640	1.529	1.548	1.558	1.646	1.601	1.589	1.587	2.8
2-Chlorophenol-d4	1.454	1.368	1.391	1.344	1.389	1.367	1.306	1.374	3.3
1,2-Dichlorobenzene-d4	1.188	0.999	1.001	0.957	0.978	0.992	0.953	1.010	8.0
Nitrobenzene-d5	0.395	0.354	0.368	0.361	0.372	0.367	0.368	0.369	3.5
2-Fluorobiphenyl	1.492	1.363	1.371	1.342	1.369	1.328	1.341	1.372	4.0
2,4,6-Tribromophenol	0.243	0.241	0.254	0.262	0.263	0.262	0.262	0.255	3.8
Terphenyl-d14	0.805	0.736	0.790	0.761	0.768	0.774	0.743	0.768	3.2

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

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 04/24/13

Init. Calib. Date: 01/25/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.670	1.760	0.800	AVRG	5.4	
Bis(2-Chloroethyl)ether	1.271	1.245	0.700	AVRG	-2.0	
2-Chlorophenol	1.454	1.382	0.800	AVRG	-5.0	
1,3-Dichlorobenzene	1.582	1.453	0.010	AVRG	-8.2	
1,4-Dichlorobenzene	1.566	1.421	0.010	AVRG	-9.2	
1,2-Dichlorobenzene	1.506	1.370	0.010	AVRG	-9.0	
Benzyl alcohol	0.799	0.547	0.010	AVRG	-31.5	<-
2,2'-oxybis(1-Chloropropane)	0.447	0.411	0.010	AVRG	-8.0	
2-Methylphenol	1.261	1.391	0.700	AVRG	10.3	
Hexachloroethane	0.619	0.595	0.300	AVRG	-3.9	
N-Nitroso-di-n-propylamine	0.842	0.876	0.500	AVRG	4.0	
4-Methylphenol	1.311	1.407	0.600	AVRG	7.3	
Nitrobenzene	0.350	0.355	0.200	AVRG	1.4	
Isophorone	0.610	0.668	0.400	AVRG	9.5	
2-Nitrophenol	0.206	0.214	0.100	AVRG	3.9	
2,4-Dimethylphenol	0.350	0.375	0.200	AVRG	7.1	
Bis(2-Chloroethoxy)methane	0.384	0.401	0.300	AVRG	4.4	
2,4-Dichlorophenol	0.306	0.314	0.200	AVRG	2.6	
1,2,4-Trichlorobenzene	0.349	0.320	0.010	AVRG	-8.3	
Naphthalene	1.041	0.966	0.700	AVRG	-7.2	
Benzoic acid	20.00	18.79	0.010	2ORDR	-6.0	
4-Chloroaniline	0.419	0.414	0.010	AVRG	-1.2	
Hexachlorobutadiene	0.217	0.206	0.010	AVRG	-5.1	
4-Chloro-3-methylphenol	0.296	0.336	0.200	AVRG	13.5	
2-Methylnaphthalene	0.687	0.687	0.400	AVRG	0.0	
Hexachlorocyclopentadiene	0.451	0.352	0.050	AVRG	-22.0	<-
2,4,6-Trichlorophenol	0.401	0.404	0.200	AVRG	0.7	
2,4,5-Trichlorophenol	0.426	0.445	0.200	AVRG	4.5	
2-Chloronaphthalene	1.105	1.021	0.800	AVRG	-7.6	
2-Nitroaniline	0.259	0.306	0.010	AVRG	18.1	
Acenaphthylene	1.802	1.711	0.900	AVRG	-5.0	
Dimethylphthalate	1.210	1.120	0.010	AVRG	-7.4	
2,6-Dinitrotoluene	0.276	0.272	0.200	AVRG	-1.4	
Acenaphthene	1.104	1.049	0.900	AVRG	-5.0	
3-Nitroaniline	0.255	0.270	0.010	AVRG	5.9	
2,4-Dinitrophenol	20.00	18.26	0.010	2ORDR	-8.7	
Dibenzofuran	1.536	1.528	0.800	AVRG	-0.5	

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

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 04/24/13

Init. Calib. Date: 01/25/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	9.475	0.010	2ORDR	-5.2	
2,4-Dinitrotoluene	0.374	0.371	0.200	AVRG	-0.8	
Fluorene	1.305	1.242	0.900	AVRG	-4.8	
4-Chlorophenyl-phenylether	0.608	0.552	0.400	AVRG	-9.2	
Diethylphthalate	1.267	1.117	0.010	AVRG	-11.8	
4-Nitroaniline	0.269	0.292	0.010	AVRG	8.6	
4,6-Dinitro-2-methylphenol	0.160	0.177	0.010	AVRG	10.6	
N-Nitrosodiphenylamine(1)	0.482	0.445	0.010	AVRG	-7.7	
4-Bromophenyl-phenylether	0.223	0.220	0.100	AVRG	-1.3	
Hexachlorobenzene	0.280	0.253	0.100	AVRG	-9.6	
Pentachlorophenol	0.187	0.155	0.050	AVRG	-17.1	
Phenanthrene	1.066	1.012	0.700	AVRG	-5.1	
Anthracene	1.074	1.066	0.700	AVRG	-0.7	
Carbazole	0.717	0.729	0.010	AVRG	1.7	
Di-n-butylphthalate	1.146	1.162	0.010	AVRG	1.4	
Fluoranthene	1.228	1.225	0.600	AVRG	-0.2	
Pyrene	1.139	1.206	0.600	AVRG	5.9	
Butylbenzylphthalate	0.432	0.454	0.010	AVRG	5.1	
Benzo(a)anthracene	1.116	1.055	0.800	AVRG	-5.5	
3,3'-Dichlorobenzidine	0.466	0.363	0.010	AVRG	-22.1	<-
Chrysene	1.011	0.895	0.700	AVRG	-11.5	
bis(2-Ethylhexyl)phthalate	0.528	0.503	0.010	AVRG	-4.7	
Di-n-octylphthalate	0.976	0.835	0.010	AVRG	-14.4	
Benzo(b)fluoranthene	1.159	1.237	0.700	AVRG	6.7	
Benzo(k)fluoranthene	1.252	1.120	0.700	AVRG	-10.5	
Benzo(a)pyrene	1.002	0.976	0.700	AVRG	-2.6	
Indeno(1,2,3-cd)pyrene	1.236	1.175	0.500	AVRG	-4.9	
Dibenzo(a,h)anthracene	0.979	0.900	0.400	AVRG	-8.1	
Benzo(g,h,i)perylene	1.061	1.012	0.500	AVRG	-4.6	
N-Nitrosodimethylamine	0.761	0.795	0.010	AVRG	4.5	
Aniline	3.605	4.126	0.010	AVRG	14.4	
Benzidine	10.00	9.395	0.010	2ORDR	-6.0	
Retene	5.000	0.000	0.010	2ORDR		
Perylene	1.152	1.054	0.010	AVRG	-8.5	
Pyridine	0.649	0.680	0.010	AVRG	4.8	
1-methylnaphthalene	0.630	0.627	0.010	AVRG	-0.5	

(1) Cannot be separated from Diphenylamine
<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII SV-2

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 04/24/13

Init. Calib. Date: 01/25/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.150	1.129	0.010	AVRG	-1.8
2,3,4,6-Tetrachlorophenol	0.372	0.342	0.010	AVRG	-8.1
Total Benzofluoranthenes	1.141	1.093	0.010	AVRG	-4.2
2-Fluorophenol	1.279	1.355	0.010	AVRG	5.9
Phenol-d5	1.587	1.766	0.010	AVRG	11.3
2-Chlorophenol-d4	1.374	1.313	0.010	AVRG	-4.4
1,2-Dichlorobenzene-d4	1.010	0.960	0.010	AVRG	-5.0
Nitrobenzene-d5	0.369	0.391	0.010	AVRG	6.0
2-Fluorobiphenyl	1.372	1.314	0.010	AVRG	-4.2
2,4,6-Tribromophenol	0.255	0.209	0.010	AVRG	-18.0
Terphenyl-d14	0.768	0.729	0.010	AVRG	-5.1

<- 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: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 04/25/13

Init. Calib. Date: 01/25/13 Cont. Calib. Time: 1121

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.670	1.663	0.800	AVRG	-0.4	
Bis(2-Chloroethyl)ether	1.271	1.208	0.700	AVRG	-5.0	
2-Chlorophenol	1.454	1.352	0.800	AVRG	-7.0	
1,3-Dichlorobenzene	1.582	1.431	0.010	AVRG	-9.5	
1,4-Dichlorobenzene	1.566	1.429	0.010	AVRG	-8.7	
1,2-Dichlorobenzene	1.506	1.385	0.010	AVRG	-8.0	
Benzyl alcohol	0.799	0.725	0.010	AVRG	-9.3	
2,2'-oxybis(1-Chloropropane)	0.447	0.417	0.010	AVRG	-6.7	
2-Methylphenol	1.261	1.260	0.700	AVRG	-0.1	
Hexachloroethane	0.619	0.601	0.300	AVRG	-2.9	
N-Nitroso-di-n-propylamine	0.842	0.831	0.500	AVRG	-1.3	
4-Methylphenol	1.311	1.299	0.600	AVRG	-0.9	
Nitrobenzene	0.350	0.338	0.200	AVRG	-3.4	
Isophorone	0.610	0.653	0.400	AVRG	7.0	
2-Nitrophenol	0.206	0.211	0.100	AVRG	2.4	
2,4-Dimethylphenol	0.350	0.364	0.200	AVRG	4.0	
Bis(2-Chloroethoxy)methane	0.384	0.390	0.300	AVRG	1.6	
2,4-Dichlorophenol	0.306	0.334	0.200	AVRG	9.2	
1,2,4-Trichlorobenzene	0.349	0.320	0.010	AVRG	-8.3	
Naphthalene	1.041	0.965	0.700	AVRG	-7.3	
Benzoic acid	20.00	17.22	0.010	2ORDR	-13.9	
4-Chloroaniline	0.419	0.392	0.010	AVRG	-6.4	
Hexachlorobutadiene	0.217	0.210	0.010	AVRG	-3.2	
4-Chloro-3-methylphenol	0.296	0.338	0.200	AVRG	14.2	
2-Methylnaphthalene	0.687	0.680	0.400	AVRG	-1.0	
Hexachlorocyclopentadiene	0.451	0.296	0.050	AVRG	-34.4	<-
2,4,6-Trichlorophenol	0.401	0.399	0.200	AVRG	-0.5	
2,4,5-Trichlorophenol	0.426	0.428	0.200	AVRG	0.5	
2-Chloronaphthalene	1.105	1.007	0.800	AVRG	-8.9	
2-Nitroaniline	0.259	0.287	0.010	AVRG	10.8	
Acenaphthylene	1.802	1.665	0.900	AVRG	-7.6	
Dimethylphthalate	1.210	1.134	0.010	AVRG	-6.3	
2,6-Dinitrotoluene	0.276	0.275	0.200	AVRG	-0.4	
Acenaphthene	1.104	1.055	0.900	AVRG	-4.4	
3-Nitroaniline	0.255	0.271	0.010	AVRG	6.3	
2,4-Dinitrophenol	20.00	15.96	0.010	2ORDR	-20.2	<-
Dibenzofuran	1.536	1.497	0.800	AVRG	-2.5	

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

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WL67 | Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 | Cont. Calib. Date: 04/25/13

Init. Calib. Date: 01/25/13 | Cont. Calib. Time: 1121

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	8.781	0.010	2ORDR	-12.2	
2,4-Dinitrotoluene	0.374	0.373	0.200	AVRG	-0.3	
Fluorene	1.305	1.227	0.900	AVRG	-6.0	
4-Chlorophenyl-phenylether	0.608	0.570	0.400	AVRG	-6.2	
Diethylphthalate	1.267	1.197	0.010	AVRG	-5.5	
4-Nitroaniline	0.269	0.270	0.010	AVRG	0.4	
4,6-Dinitro-2-methylphenol	0.160	0.165	0.010	AVRG	3.1	
N-Nitrosodiphenylamine(1)	0.482	0.430	0.010	AVRG	-10.8	
4-Bromophenyl-phenylether	0.223	0.213	0.100	AVRG	-4.5	
Hexachlorobenzene	0.280	0.251	0.100	AVRG	-10.4	
Pentachlorophenol	0.187	0.139	0.050	AVRG	-25.7	<-
Phenanthrene	1.066	1.002	0.700	AVRG	-6.0	
Anthracene	1.074	1.024	0.700	AVRG	-4.6	
Carbazole	0.717	0.817	0.010	AVRG	13.9	
Di-n-butylphthalate	1.146	1.192	0.010	AVRG	4.0	
Fluoranthene	1.228	1.197	0.600	AVRG	-2.5	
Pyrene	1.139	1.226	0.600	AVRG	7.6	
Butylbenzylphthalate	0.432	0.457	0.010	AVRG	5.8	
Benzo(a)anthracene	1.116	1.010	0.800	AVRG	-9.5	
3,3'-Dichlorobenzidine	0.466	0.522	0.010	AVRG	12.0	
Chrysene	1.011	0.919	0.700	AVRG	-9.1	
bis(2-Ethylhexyl)phthalate	0.528	0.513	0.010	AVRG	-2.8	
Di-n-octylphthalate	0.976	0.834	0.010	AVRG	-14.5	
Benzo(b)fluoranthene	1.159	1.053	0.700	AVRG	-9.1	
Benzo(k)fluoranthene	1.252	1.235	0.700	AVRG	-1.4	
Benzo(a)pyrene	1.002	0.951	0.700	AVRG	-5.1	
Indeno(1,2,3-cd)pyrene	1.236	1.181	0.500	AVRG	-4.4	
Dibenzo(a,h)anthracene	0.979	0.950	0.400	AVRG	-3.0	
Benzo(g,h,i)perylene	1.061	0.984	0.500	AVRG	-7.2	
N-Nitrosodimethylamine	0.761	0.662	0.010	AVRG	-13.0	
Aniline	3.605	3.692	0.010	AVRG	2.4	
Benzidine	10.00	12.57	0.010	2ORDR	25.7	<-
Retene	5.000	0.000	0.010	2ORDR		
Perylene	1.152	1.087	0.010	AVRG	-5.6	
Pyridine	0.649	0.574	0.010	AVRG	-11.6	
1-methylnaphthalene	0.630	0.626	0.010	AVRG	-0.6	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 04/25/13

Init. Calib. Date: 01/25/13 Cont. Calib. Time: 1121

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.150	1.122	0.010	AVRG	-2.4
2,3,4,6-Tetrachlorophenol	0.372	0.346	0.010	AVRG	-7.0
Total Benzofluoranthenes	1.141	1.066	0.010	AVRG	-6.6
2-Fluorophenol	1.279	1.268	0.010	AVRG	-0.9
Phenol-d5	1.587	1.588	0.010	AVRG	0.1
2-Chlorophenol-d4	1.374	1.290	0.010	AVRG	-6.1
1,2-Dichlorobenzene-d4	1.010	0.943	0.010	AVRG	-6.6
Nitrobenzene-d5	0.369	0.375	0.010	AVRG	1.6
2-Fluorobiphenyl	1.372	1.257	0.010	AVRG	-8.4
2,4,6-Tribromophenol	0.255	0.225	0.010	AVRG	-11.8
Terphenyl-d14	0.768	0.759	0.010	AVRG	-1.2

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-3

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WL67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A | Ical Date: 01/25/13

Instrument ID: NT10 | Cont. Cal Date: 04/24/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	46623	9.08	176978	11.76	110872	15.66
	UPPER LIMIT	93246		353956		221744	
	LOWER LIMIT	23312		88489		55436	
	CCAL	58556	7.66	212952	10.27	132668	14.10
	UPPER LIMIT		8.16		10.77		14.60
	LOWER LIMIT		7.16		9.77		13.60
01	WL49MBS1	52770	7.65	203934	10.27	121815	14.10
02	WL49LCSS1	46529	7.65	171858	10.27	111063	14.11
03	IM-CB-01-201	47052	7.65	173120	10.27	98772	14.11
04	IM-CB-02-201	39444	7.66	153130	10.27	90352	14.11
05	IM-CB-02-201	41745	7.66	159336	10.26	98536	14.11
06	IM-CB-02-201	42104	7.66	167020	10.26	97905	14.11
07	GR-CB-07-201	48352	7.66	187776	10.27	114903	14.11
08	GR-WS-05-201	40596	7.66	157743	10.27	98608	14.11
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A Ical Date: 01/25/13

Instrument ID: NT10 Cont. Cal Date: 04/24/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	188290	18.94	213681	24.01	208584	26.51
	UPPER LIMIT	376580		427362		417168	
	LOWER LIMIT	94145		106840		104292	
	CCAL	220641	17.34	227119	22.64	205360	24.94
	UPPER LIMIT		17.84		23.14		25.44
	LOWER LIMIT		16.84		22.14		24.44
01	WL49MBS1	205587	17.34	210775	22.63	182935	24.94
02	WL49LCSS1	183550	17.34	193070	22.64	174938	24.94
03	IM-CB-01-201	156141	17.36	192699	22.70	186003	25.03
04	IM-CB-02-201	136238	17.34	156248	22.65	149715	24.97
05	IM-CB-02-201	150903	17.35	175942	22.66	167594	24.97
06	IM-CB-02-201	153490	17.35	173061	22.66	165087	24.98
07	GR-CB-07-201	184248	17.35	197814	22.69	189875	25.03
08	GR-WS-05-201	150379	17.35	175439	22.68	176764	25.01
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A

Ical Date: 01/25/13

Instrument ID: NT10

Cont. Cal Date: 04/24/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	264159	25.10				
	UPPER LIMIT	528318					
	LOWER LIMIT	132080					
	CCAL	288338	23.90				
	UPPER LIMIT		24.40				
	LOWER LIMIT		23.40				
01	WL49MBS1	259915	23.90				
02	WL49LCSS1	240110	23.90				
03	IM-CB-01-201	241387	23.96				
04	IM-CB-02-201	205378	23.91				
05	IM-CB-02-201	226126	23.92				
06	IM-CB-02-201	222579	23.92				
07	GR-CB-07-201	250530	23.96				
08	GR-WS-05-201	224657	23.95				
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

FORM VIII SV-3

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A Ical Date: 01/25/13

Instrument ID: NT10 Cont. Cal Date: 04/25/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	46623	9.08	176978	11.76	110872	15.66
	UPPER LIMIT	93246		353956		221744	
	LOWER LIMIT	23312		88489		55436	
	CCAL	34832	7.66	127588	10.27	83340	14.11
	UPPER LIMIT		8.16		10.77		14.61
	LOWER LIMIT		7.16		9.77		13.61
01	GR-WS-05-201	49177	7.66	192232	10.27	118062	14.10
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WL67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A | Ical Date: 01/25/13

Instrument ID: NT10 | Cont. Cal Date: 04/25/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	188290	18.94	213681	24.01	208584	26.51
	UPPER LIMIT	376580		427362		417168	
	LOWER LIMIT	94145		106840		104292	
	CCAL	146392	17.34	142269	22.64	133418	24.95
	UPPER LIMIT		17.84		23.14		25.45
	LOWER LIMIT		16.84		22.14		24.45
01	GR-WS-05-201	187598	17.34	190857	22.66	185585	24.98
02							
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WL67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A | Ical Date: 01/25/13

Instrument ID: NT10 | Cont. Cal Date: 04/25/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	264159	25.10				
	UPPER LIMIT	528318					
	LOWER LIMIT	132080					
	CCAL	181192	23.90				
	UPPER LIMIT		24.40				
	LOWER LIMIT		23.40				
01	GR-WS-05-201	242500	23.92				
02							
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

FORM VIII SV-3

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WL67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: GR-CB-07-20130411-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 22:41
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 3.30 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 59.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**18**	**46**	**230**
106-46-7	1,4-Dichlorobenzene	11	46	< 46 U
120-82-1	1,2,4-Trichlorobenzene	17	46	< 46 U
118-74-1	Hexachlorobenzene	11	46	< 46 U
87-68-3	Hexachlorobutadiene	8.7	46	< 46 U
131-11-3	**Dimethylphthalate**	**12**	**46**	**64**
84-66-2	Diethylphthalate	30	46	< 46 U
85-68-7	**Butylbenzylphthalate**	**26**	**46**	**930 Q**
95-48-7	**2-Methylphenol**	**16**	**46**	**58**
105-67-9	**2,4-Dimethylphenol**	**26**	**180**	**51 J**
86-30-6	**N-Nitrosodiphenylamine**	**13**	**180**	**77 J**
100-51-6	**Benzyl Alcohol**	**64**	**180**	**140 J**
87-86-5	Pentachlorophenol	130	460	< 460 U
95-50-1	1,2-Dichlorobenzene	10	46	< 46 U
541-73-1	1,3-Dichlorobenzene	12	46	< 46 U
621-64-7	N-Nitroso-Di-N-Propylamine	86	110	< 110 U
62-75-9	N-Nitrosodimethylamine	29	230	< 230 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	48.4%
d14-p-Terphenyl	47.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: GR-WS-05-20130411-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 23:18
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.65 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 72.8 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**37**	**91**	**330**
106-46-7	1,4-Dichlorobenzene	22	91	< 91 U
120-82-1	1,2,4-Trichlorobenzene	34	91	< 91 U
118-74-1	Hexachlorobenzene	23	91	< 91 U
87-68-3	Hexachlorobutadiene	17	91	< 91 U
131-11-3	**Dimethylphthalate**	**24**	**91**	**91**
84-66-2	Diethylphthalate	59	91	< 91 U
85-68-7	**Butylbenzylphthalate**	**53**	**91**	**1,300 Q**
95-48-7	**2-Methylphenol**	**33**	**91**	**94**
105-67-9	**2,4-Dimethylphenol**	**53**	**360**	**140 J**
86-30-6	**N-Nitrosodiphenylamine**	**25**	**360**	**240 J**
100-51-6	Benzyl Alcohol	130	360	< 360 U
87-86-5	Pentachlorophenol	260	910	< 910 U
95-50-1	1,2-Dichlorobenzene	20	91	< 91 U
541-73-1	1,3-Dichlorobenzene	24	91	< 91 U
621-64-7	N-Nitroso-Di-N-Propylamine	170	220	< 220 U
62-75-9	N-Nitrosodimethylamine	57	460	< 460 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	45.6%
d14-p-Terphenyl	43.8%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977

Client ID	FPH	TER	TOT OUT
MB-041813	55.5%	59.6%	0
LCS-041813	64.3%	60.4%	0
GR-CB-07-20130411-S	48.4%	47.4%	0
GR-WS-05-20130411-S	45.6%	43.8%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(32-100)	(27-100)
(TER) = d14-p-Terphenyl	(42-124)	(37-111)

Prep Method: SW3546
Log Number Range: 13-7791 to 13-7792

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-041813**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-041813
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/18/13
Date Analyzed LCS: 04/24/13 19:37
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	309		500	61.8%
1,4-Dichlorobenzene	280		500	56.0%
1,2,4-Trichlorobenzene	286		500	57.2%
Hexachlorobenzene	274		500	54.8%
Hexachlorobutadiene	285		500	57.0%
Dimethylphthalate	316		500	63.2%
Diethylphthalate	308		500	61.6%
Butylbenzylphthalate	436	Q	500	87.2%
2-Methylphenol	309		500	61.8%
2,4-Dimethylphenol	579		1500	38.6%
N-Nitrosodiphenylamine	335		500	67.0%
Benzyl Alcohol	269	Q	500	53.8%
Pentachlorophenol	841	Q	1500	56.1%
1,2-Dichlorobenzene	288		500	57.6%
1,3-Dichlorobenzene	275		500	55.0%
N-Nitroso-Di-N-Propylamine	318		500	63.6%
N-Nitrosodimethylamine	858		1500	57.2%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	64.3%
d14-p-Terphenyl	60.4%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPO

Lab File ID: WL49MB

Date Extracted: 04/18/13

Instrument ID: NT10

Date Analyzed: 04/24/13

Matrix: SOLID

Time Analyzed: 1900

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WL49LCSS1	WL49LCSS1	WL49SB	04/24/13
02	IM-CB-01-2013041	WL49F	WL49F	04/24/13
03	IM-CB-02-2013041	WL49G	WL49G	04/24/13
04	IM-CB-02-201304	WL49GMS	WL49GMS	04/24/13
05	IM-CB-02-201304	WL49GMSD	WL49GMSD	04/24/13
06	GR-CB-07-2013041	WL67A	WL67A	04/24/13
07	GR-WS-05-2013041	WL67B	WL67B	04/24/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-041813**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-041813
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 19:00
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	< 5.0 U
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	55.5%
d14-p-Terphenyl	59.6%

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: 01/25/13 DFTPP Injection Time: 1243

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	39.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.9
197	Less than 2.0% of mass 198	0.2
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	28.9
365	Greater than 1.0% of mass 198	4.43
441	0.0 - 24.0% of mass 442	16.5 (15.1)2
442	50.0 - 200.0% of mass 198	109.2
443	15.0 - 24.0% of mass 442	21.8 (20.0)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		IC0125A	IC0125A	01/25/13	1259
02		IC0125C	IC0125C	01/25/13	1413
03		IC0125E	IC0125E	01/25/13	1527
04		IC0125F	IC0125F	01/25/13	1603
05		IC0125G	IC0125G	01/25/13	1640
06		IC0125H	IC0125H	01/25/13	1716
07		IC0125I	IC0125I	01/25/13	1753
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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: 04/24/13 DFTPP Injection Time: 1730

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.0
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.5
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	6.6
275	10.0 - 60.0% of mass 198	26.7
365	Greater than 1.0% of mass 198	3.93
441	0.0 - 24.0% of mass 442	16.4 (15.4)2
442	50.0 - 200.0% of mass 198	107.0
443	15.0 - 24.0% of mass 442	20.3 (18.9)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		CC0424A	CC0424A	04/24/13	1823
02	WL49MBS1	WL49MBS1	WL49MB	04/24/13	1900
03	WL49LCSS1	WL49LCSS1	WL49SB	04/24/13	1937
04	IM-CB-01-2013041	WL49F	WL49F	04/24/13	2014
05	IM-CB-02-2013041	WL49G	WL49G	04/24/13	2051
06	IM-CB-02-201304	WL49GMS	WL49GMS	04/24/13	2127
07	IM-CB-02-201304	WL49GMSD	WL49GMSD	04/24/13	2204
08	GR-CB-07-2013041	WL67A	WL67A	04/24/13	2241
09	GR-WS-05-2013041	WL67B	WL67B	04/24/13	2318
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6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 01/25/13

LAB FILE ID: RRF0.05=IC0125G RRF0.1=IC0125I RRF0.2=IC0125C
RRF0.5=IC0125H RRF1 =IC0125E RRF2.5=IC0125F
RRF5 =IC0125A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	___ RRF	%RSD /R^2
Phenol	1.601	1.526	1.748	1.603	1.643	1.579	1.613	1.616	4.2
1,3-Dichlorobenzene	1.699	1.643	1.783	1.628	1.586	1.508	1.512	1.623	6.1
1,4-Dichlorobenzene	1.693	1.663	1.780	1.620	1.578	1.502	1.505	1.620	6.2
1,2-Dichlorobenzene	1.595	1.565	1.691	1.527	1.505	1.429	1.429	1.534	6.1
Benzyl alcohol	0.900	0.896	1.033	0.938	0.976	0.957	1.003	0.958	5.3
2-Methylphenol	1.162	1.143	1.334	1.208	1.243	1.198	1.224	1.216	5.1
N-Nitroso-di-n-propylamine	0.762	0.755	0.862	0.784	0.802	0.776	0.802	0.792	4.5
4-Methylphenol	1.156	1.173	1.372	1.262	1.286	1.266	1.301	1.259	5.9
2,4-Dimethylphenol	0.317	0.316	0.382	0.343	0.358	0.346	0.351	0.345	6.7
1,2,4-Trichlorobenzene	0.375	0.423	0.400	0.373	0.357	0.338	0.340	0.372	8.4
Hexachlorobutadiene	0.236	0.226	0.246	0.222	0.222	0.214	0.215	0.226	5.1
Dimethylphthalate	1.176	1.163	1.340	1.210	1.233	1.198	1.203	1.218	4.8
Diethylphthalate	1.319	1.462	1.578	1.408	1.426	1.370	1.394	1.422	5.8
N-Nitrosodiphenylamine (1)	0.394	0.422	0.515	0.477	0.497	0.476	0.472	0.465	9.1
Hexachlorobenzene	0.314	0.306	0.329	0.308	0.296	0.280	0.284	0.302	5.6
Pentachlorophenol		0.128	0.169	0.168	0.193	0.201	0.213	0.179	17.0
Butylbenzylphthalate	0.324	0.315	0.404	0.357	0.410	0.413	0.453	0.382	13.4
Dibenzo(a,h)anthracene	0.870	0.840	1.028	0.946	1.004	0.974	1.011	0.953	7.6
N-Nitrosodimethylamine	0.751	0.750	0.815	0.754	0.748	0.729	0.768	0.759	3.6
2-Fluorophenol	1.241	1.219	1.388	1.258	1.279	1.241	1.282	1.272	4.4
Terphenyl-d14	0.496	0.580	0.577	0.517	0.529	0.500	0.520	0.531	6.5

(1) Cannot be seperated from Diphenylamine

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

FORM VI SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 04/24/13

Init. Calib. Date: 01/25/13 Cont. Calib. Time: 1823

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.616	1.884	0.800	AVRG	16.6	
1,3-Dichlorobenzene	1.623	1.591	0.010	AVRG	-2.0	
1,4-Dichlorobenzene	1.620	1.588	0.010	AVRG	-2.0	
1,2-Dichlorobenzene	1.534	1.534	0.010	AVRG	0.0	
Benzyl alcohol	0.958	0.718	0.010	AVRG	-25.0	<-
2-Methylphenol	1.216	1.282	0.700	AVRG	5.4	
N-Nitroso-di-n-propylamine	0.792	0.843	0.500	AVRG	6.4	
4-Methylphenol	1.259	1.482	0.600	AVRG	17.7	
2,4-Dimethylphenol	0.345	0.358	0.200	AVRG	3.8	
1,2,4-Trichlorobenzene	0.372	0.370	0.010	AVRG	-0.5	
Hexachlorobutadiene	0.226	0.227	0.010	AVRG	0.4	
Dimethylphthalate	1.218	1.187	0.010	AVRG	-2.5	
Diethylphthalate	1.422	1.363	0.010	AVRG	-4.1	
N-Nitrosodiphenylamine(1)	0.465	0.497	0.010	AVRG	6.9	
Hexachlorobenzene	0.302	0.288	0.100	AVRG	-4.6	
Pentachlorophenol	0.179	0.117	0.050	AVRG	-34.6	<-
Butylbenzylphthalate	0.382	0.473	0.010	AVRG	23.8	<-
Dibenzo(a,h)anthracene	0.953	0.932	0.400	AVRG	-2.2	
N-Nitrosodimethylamine	0.759	0.753	0.010	AVRG	-0.8	
2-Fluorophenol	1.272	1.396	0.010	AVRG	9.7	
Terphenyl-d14	0.531	0.499	0.010	AVRG	-6.0	

(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: WL67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125E Ical Date: 01/25/13

Instrument ID: NT10 Cont. Cal Date: 04/24/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	53853	9.09	200104	11.75	112392	15.66
	UPPER LIMIT	107706		400208		224784	
	LOWER LIMIT	26926		100052		56196	
	CCAL	64368	7.66	235264	10.26	134084	14.11
	UPPER LIMIT		8.16		10.76		14.61
	LOWER LIMIT		7.16		9.76		13.61
01	WL49MBS1	62056	7.66	235471	10.26	133819	14.11
02	WL49LCSS1	53955	7.66	202366	10.26	120107	14.11
03	IM-CB-01-201	55621	7.66	199995	10.27	105965	14.12
04	IM-CB-02-201	45698	7.66	175549	10.27	98060	14.11
05	IM-CB-02-201	48830	7.66	186600	10.27	105738	14.11
06	IM-CB-02-201	49791	7.66	192622	10.27	107090	14.12
07	GR-CB-07-201	57007	7.67	219195	10.27	123616	14.12
08	GR-WS-05-201	47798	7.67	181756	10.27	104571	14.12
09							
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125E Ical Date: 01/25/13

Instrument ID: NT10 Cont. Cal Date: 04/24/13

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	ICAL MIDPT	210710		18.94		240805		24.01		230834		26.51	
	UPPER LIMIT	421420				481610				461668			
	LOWER LIMIT	105355				120402				115417			
	CCAL	242738		17.34		250279		22.64		226945		24.94	
	UPPER LIMIT			17.84				23.14				25.44	
	LOWER LIMIT			16.84				22.14				24.44	
01	WL49MBS1	241354		17.34		250567		22.64		221480		24.94	
02	WL49LCSS1	213856		17.34		229947		22.64		210603		24.95	
03	IM-CB-01-201	184592		17.36		226727		22.70		224029		25.02	
04	IM-CB-02-201	158125		17.34		188920		22.65		193290		24.97	
05	IM-CB-02-201	177609		17.34		210924		22.65		216411		24.98	
06	IM-CB-02-201	175504		17.34		207051		22.65		197195		24.98	
07	GR-CB-07-201	216207		17.35		239042		22.69		229899		25.04	
08	GR-WS-05-201	173569		17.35		213736		22.68		206547		25.02	
09													
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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

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WL67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: GR-CB-07-20130411-S
SAMPLE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 16:53
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 59.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.80	4.9	< 4.9 U
319-85-7	beta-BHC	1.4	10	< 10 Y
319-86-8	delta-BHC	0.81	4.9	< 4.9 U
58-89-9	gamma-BHC (Lindane)	0.47	13	< 13 Y
76-44-8	Heptachlor	1.3	39	< 39 Y
309-00-2	Aldrin	0.54	63	< 63 Y
1024-57-3	Heptachlor Epoxide	0.83	110	< 110 Y
959-98-8	Endosulfan I	0.71	4.9	< 4.9 U
60-57-1	Dieldrin	0.98	9.8	< 9.8 U
72-55-9	4,4'-DDE	1.2	62	< 62 Y
72-20-8	Endrin	2.1	9.8	< 9.8 U
33213-65-9	Endosulfan II	1.1	9.8	< 9.8 U
72-54-8	4,4'-DDD	1.3	9.8	< 9.8 U
1031-07-8	Endosulfan Sulfate	1.9	9.8	< 9.8 U
50-29-3	4,4'-DDT	1.9	82	< 82 Y
72-43-5	Methoxychlor	6.9	140	< 140 Y
53494-70-5	Endrin Ketone	1.2	39	< 39 Y
7421-93-4	Endrin Aldehyde	2.1	9.8	< 9.8 U
5103-74-2	trans-Chlordane	0.76	4.9	< 4.9 U
5103-71-9	cis-Chlordane	0.50	4.9	< 4.9 U
8001-35-2	Toxaphene	340	980	< 980 U
118-74-1	Hexachlorobenzene	0.92	9.8	< 9.8 U
87-68-3	Hexachlorobutadiene	1.4	9.8	< 9.8 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	93.5%
Tetrachlorometaxylene	123%

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

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: GR-CB-07-20130411-S
DILUTION

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/25/13 13:31
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 500
Silica Gel: Yes

Percent Moisture: 59.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	40	250	< 250 U
319-85-7	beta-BHC	68	250	< 250 U
319-86-8	delta-BHC	40	250	< 250 U
58-89-9	gamma-BHC (Lindane)	24	250	< 250 U
76-44-8	Heptachlor	65	250	< 250 U
309-00-2	Aldrin	27	250	< 250 U
1024-57-3	Heptachlor Epoxide	42	490	< 490 U
959-98-8	Endosulfan I	35	250	< 250 U
60-57-1	Dieldrin	49	490	< 490 U
72-55-9	4,4'-DDE	61	490	< 490 U
72-20-8	Endrin	110	490	< 490 U
33213-65-9	Endosulfan II	57	490	< 490 U
72-54-8	4,4'-DDD	66	490	< 490 U
1031-07-8	Endosulfan Sulfate	94	490	< 490 U
50-29-3	4,4'-DDT	94	490	< 490 U
72-43-5	Methoxychlor	340	2500	< 2,500 U
53494-70-5	Endrin Ketone	58	490	< 490 U
7421-93-4	Endrin Aldehyde	110	490	< 490 U
5103-74-2	trans-Chlordane	38	250	< 250 U
5103-71-9	cis-Chlordane	25	250	< 250 U
8001-35-2	Toxaphene	17000	49000	< 49,000 U
118-74-1	Hexachlorobenzene	46	490	< 490 U
87-68-3	Hexachlorobutadiene	68	490	< 490 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: GR-WS-05-20130411-S
SAMPLE

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 17:13
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 2.05 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 72.8%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	5.0	31	< 31 U
319-85-7	beta-BHC	8.5	200	< 200 Y
319-86-8	delta-BHC	5.0	31	< 31 U
58-89-9	gamma-BHC (Lindane)	2.9	31	< 31 U
76-44-8	Heptachlor	8.1	270	< 270 Y
309-00-2	Aldrin	3.4	340	< 340 Y
1024-57-3	Heptachlor Epoxide	5.2	490	< 490 Y
959-98-8	Endosulfan I	4.4	31	< 31 U
60-57-1	Dieldrin	6.1	61	< 61 U
72-55-9	4,4'-DDE	7.6	250	< 250 Y
72-20-8	Endrin	13	260	< 260 Y
33213-65-9	Endosulfan II	7.1	61	< 61 U
72-54-8	4,4'-DDD	8.3	61	< 61 U
1031-07-8	Endosulfan Sulfate	12	61	< 61 U
50-29-3	4,4'-DDT	12	340	< 340 Y
72-43-5	Methoxychlor	43	310	< 310 U
53494-70-5	Endrin Ketone	7.3	120	< 120 Y
7421-93-4	Endrin Aldehyde	13	61	< 61 U
5103-74-2	trans-Chlordane	4.7	31	< 31 U
5103-71-9	cis-Chlordane	3.1	31	< 31 U
8001-35-2	Toxaphene	2100	6100	< 6,100 U
118-74-1	Hexachlorobenzene	5.7	61	< 61 U
87-68-3	Hexachlorobutadiene	8.4	61	< 61 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	122%
Tetrachlorometaxylene	78.0%

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
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: GR-WS-05-20130411-S
DILUTION

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/25/13 13:49
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 2.05 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 500
Silica Gel: Yes

Percent Moisture: 72.8%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	250	1500	< 1,500 U
319-85-7	beta-BHC	420	1500	< 1,500 U
319-86-8	delta-BHC	250	1500	< 1,500 U
58-89-9	gamma-BHC (Lindane)	150	1500	< 1,500 U
76-44-8	Heptachlor	400	1500	< 1,500 U
309-00-2	Aldrin	170	1500	< 1,500 U
1024-57-3	Heptachlor Epoxide	260	3100	< 3,100 U
959-98-8	Endosulfan I	220	1500	< 1,500 U
60-57-1	Dieldrin	310	3100	< 3,100 U
72-55-9	4,4'-DDE	380	3100	< 3,100 U
72-20-8	Endrin	660	3100	< 3,100 U
33213-65-9	Endosulfan II	350	3100	< 3,100 U
72-54-8	4,4'-DDD	410	3100	< 3,100 U
1031-07-8	Endosulfan Sulfate	590	3100	< 3,100 U
50-29-3	4,4'-DDT	590	3100	< 3,100 U
72-43-5	Methoxychlor	2100	15000	< 15,000 U
53494-70-5	Endrin Ketone	360	3100	< 3,100 U
7421-93-4	Endrin Aldehyde	670	3100	< 3,100 U
5103-74-2	trans-Chlordane	240	1500	< 1,500 U
5103-71-9	cis-Chlordane	160	1500	< 1,500 U
8001-35-2	Toxaphene	110000	310000	< 310,000 U
118-74-1	Hexachlorobenzene	290	3100	< 3,100 U
87-68-3	Hexachlorobutadiene	420	3100	< 3,100 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
GR-CB-07-20130411-S	93.5%	123%	0
GR-CB-07-20130411-S DL	D	D	0
MB-041913	82.0%	70.2%	0
LCS-041913	83.2%	72.5%	0
GR-WS-05-20130411-S	122%	78.0%	0
GR-WS-05-20130411-S DL	D	D	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(60-149)	(36-182)
(TCMX) = Tetrachlorometaxylene	(47-124)	(34-169)

Prep Method: SW3546
Log Number Range: 13-7791 to 13-7792

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: LCS-041913
LAB CONTROL

Lab Sample ID: LCS-041913
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 14:54
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
alpha-BHC	3.02	4.00	75.5%
beta-BHC	3.00	4.00	75.0%
delta-BHC	3.30	4.00	82.5%
gamma-BHC (Lindane)	3.16	4.00	79.0%
Heptachlor	3.08	4.00	77.0%
Aldrin	3.08	4.00	77.0%
Heptachlor Epoxide	3.40	4.00	85.0%
Endosulfan I	3.44	4.00	86.0%
Dieldrin	7.06	8.00	88.2%
4,4'-DDE	7.64	8.00	95.5%
Endrin	7.30	8.00	91.2%
Endosulfan II	6.98	8.00	87.2%
4,4'-DDD	7.20	8.00	90.0%
Endosulfan Sulfate	7.08	8.00	88.5%
4,4'-DDT	7.14	8.00	89.2%
Methoxychlor	33.6	40.0	84.0%
Endrin Ketone	6.84	8.00	85.5%
Endrin Aldehyde	3.96	8.00	49.5%
trans-Chlordane	3.40	4.00	85.0%
cis-Chlordane	3.36	4.00	84.0%
Hexachlorobenzene	3.08	4.00	77.0%
Hexachlorobutadiene	2.56	4.00	64.0%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	83.2%
Tetrachlorometaxylene	72.5%

Reported in µg/kg (ppb)

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WL49MBS1
Lab File ID: 0424A008

Date Extracted: 04/19/13
Matrix: SOLID

Date Analyzed: 04/24/13
Instrument ID: ECD6

Time Analyzed: 1434
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	WL49LCSS1	WL49LCSS1	04/24/13
02	IM-CB-01-20130410-S	WL49F	04/24/13
03	IM-CB-02-20130410-S	WL49G	04/24/13
04	IM-CB-02-201304 MS	WL49GMS	04/24/13
05	IM-CB-02-201304 MSD	WL49GMSD	04/24/13
06	GR-CB-07-20130411-S	WL67A	04/24/13
07	GR-WS-05-20130411-S	WL67B	04/24/13
08	IM-CB-01-20130410-S	WL49F	04/25/13
09	IM-CB-02-20130410-S	WL49G	04/25/13
10	GR-CB-07-20130411-S	WL67A	04/25/13
11	GR-WS-05-20130411-S	WL67B	04/25/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: MB-041913**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-041913
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 14:34
Instrument/Analyst: ECD6/YZ
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	82.0%
Tetrachlorometaxylene	70.2%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.28	4.38
beta-BHC	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.64	4.74
delta-BHC	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.81	4.91
gamma-BHC (Lindane)	4.61	4.61	4.61	4.61	4.62	4.62	4.61	4.61	4.56	4.66
Heptachlor	5.06	5.06	5.06	5.07	5.07	5.07	5.07	5.07	5.02	5.12
Aldrin	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.31	5.41
Heptachlor epoxide b	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.94	5.89	5.99
Endosulfan I	6.31	6.31	6.31	6.31	6.32	6.32	6.31	6.31	6.26	6.36
Dieldrin	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.49	6.59
4,4'-DDE	6.23	6.23	6.23	6.23	6.24	6.24	6.23	6.23	6.18	6.28
Endrin	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.71	6.81
Endosulfan II	6.96	6.96	6.96	6.96	6.96	6.96	6.96	6.96	6.91	7.01
4,4'-DDD	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.74	6.84
Endosulfan sulfate	7.73	7.73	7.73	7.73	7.73	7.73	7.73	7.73	7.68	7.78
4,4'-DDT	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.00	7.10
Methoxychlor	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.47	7.42	7.52
Endrin ketone	7.98	7.98	7.98	7.98	7.99	7.99	7.98	7.98	7.93	8.03
Endrin aldehyde	7.34	7.34	7.34	7.34	7.34	7.34	7.34	7.34	7.29	7.39
gamma-Chlordane	6.05	6.06	6.05	6.05	6.06	6.06	6.06	6.06	6.01	6.11
alpha-Chlordane	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Hexachlorobutadiene	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.29	2.39
Hexachlorobenzene	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.13	4.23
Tetrachloro-m-xylene	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.79	3.89
Decachlorobiphenyl	8.83	8.83	8.83	8.83	8.83	8.83	8.83	8.83	8.78	8.88

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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	4.75	4.75	4.76	4.76	4.76	4.76	4.76	4.76	4.71	4.81
beta-BHC	5.18	5.18	5.18	5.19	5.19	5.19	5.18	5.18	5.13	5.23
delta-BHC	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.45	5.55
gamma-BHC (Lindane)	5.11	5.11	5.11	5.12	5.12	5.12	5.12	5.12	5.07	5.17
Heptachlor	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.58	5.53	5.63
Aldrin	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.92	5.87	5.97
Heptachlor epoxide b	6.47	6.47	6.47	6.47	6.48	6.48	6.48	6.47	6.43	6.53
Endosulfan I	6.86	6.86	6.86	6.86	6.86	6.86	6.86	6.86	6.81	6.91
Dieldrin	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.07	7.17
4,4'-DDE	6.92	6.92	6.92	6.92	6.92	6.92	6.92	6.92	6.87	6.97
Endrin	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan II	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.55	7.65
4,4'-DDD	7.46	7.46	7.46	7.46	7.46	7.46	7.46	7.46	7.41	7.51
Endosulfan sulfate	8.14	8.14	8.14	8.14	8.14	8.14	8.14	8.14	8.09	8.19
4,4'-DDT	7.74	7.74	7.75	7.74	7.75	7.75	7.75	7.75	7.70	7.80
Methoxychlor	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.28	8.38
Endrin ketone	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.58	8.68
Endrin aldehyde	7.89	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.85	7.95
gamma-Chlordane	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.61	6.71
alpha-Chlordane	6.79	6.79	6.79	6.79	6.80	6.80	6.80	6.79	6.75	6.85
Hexachlorobutadiene	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.45	2.55
Hexachlorobenzene	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.58	4.68
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.12	4.22
Decachlorobiphenyl	9.79	9.79	9.79	9.79	9.80	9.80	9.80	9.79	9.75	9.85

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5850	1.5728	1.6410	1.6367	2.0398	2.0141	1.8276	1.7596	11.4
beta-BHC	0.7516	0.7010	0.6787	0.6433	0.7667	0.7377	0.6558	0.7050	6.8
delta-BHC	1.4166	1.4025	1.4623	1.4604	1.8203	1.7847	1.6161	1.5661	11.2
gamma-BHC (Lindane)	1.4575	1.4395	1.4917	1.4788	1.8271	1.7978	1.6242	1.5881	10.4
Heptachlor	1.4735	1.4270	1.4526	1.4223	1.7348	1.6690	1.4754	1.5221	8.3
Aldrin	1.4032	1.3779	1.4068	1.3920	1.7226	1.6694	1.4810	1.4933	9.6
Heptachlor epoxide b	1.3942	1.3016	1.3050	1.2572	1.5332	1.4673	1.2957	1.3649	7.5
Endosulfan I	1.2716	1.2077	1.1957	1.1518	1.4084	1.3437	1.1884	1.2525	7.5
Dieldrin	1.2547	1.2325	1.2540	1.2295	1.5164	1.4573	1.3018	1.3209	8.9
4,4'-DDE	1.0492	1.0057	1.0114	0.9825	1.2247	1.1988	1.1032	1.0822	8.9
Endrin	1.2287	1.1484	1.1743	1.1357	1.4263	1.3755	1.1993	1.2412	9.2
Endosulfan II	1.2958	1.2034	1.2123	1.1559	1.4237	1.3960	1.2149	1.2717	8.1
4,4'-DDD	1.1576	1.0913	1.1167	1.0799	1.3430	1.3243	1.1709	1.1834	9.1
Endosulfan sulfate	1.1636	1.0661	1.0652	1.0098	1.2453	1.2235	1.0748	1.1212	8.0
4,4'-DDT	1.1719	1.0973	1.1136	1.0691	1.3368	1.3322	1.1810	1.1860	9.2
Methoxychlor	0.6219	0.5648	0.5574	0.5292	0.6557	0.6473	0.5877	0.5948	8.1
Endrin ketone	1.5031	1.3537	1.3294	1.2557	1.5429	1.5240	1.3456	1.4078	8.0
Endrin aldehyde	1.0911	1.0015	0.9985	0.9428	1.1527	1.1352	0.9891	1.0444	7.8
gamma-Chlordane	1.3619	1.3157	1.3122	1.2826	1.5801	1.5369	1.3761	1.3951	8.4
alpha-Chlordane	1.3546	1.2820	1.2742	1.2303	1.5034	1.4533	1.2952	1.3418	7.5
Hexachlorobutadiene	1.8641	1.7656	1.7595	1.7111	2.0820	1.9921	1.7878	1.8517	7.4
Hexachlorobenzene	1.3836	1.2836	1.2500	1.1765	1.3833	1.3244	1.1736	1.2821	6.8
Tetrachloro-m-xylene	1.2209	1.1752	1.1709	1.1202	1.3321	1.2746	1.1300	1.2034	6.4
Decachlorobiphenyl	1.2271	1.3922	1.1835	1.0386	1.1890	1.1472	0.9966	1.1677	11.1

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.7014	1.7557	1.8534	1.8750	2.2358	2.2060	2.0002	1.9468	10.8
beta-BHC	0.7515	0.7378	0.7316	0.7113	0.8367	0.8205	0.7240	0.7590	6.5
delta-BHC	1.4851	1.5056	1.5835	1.5918	1.8774	1.8601	1.6804	1.6548	9.6
gamma-BHC (Lindane)	1.5439	1.5596	1.6289	1.6378	1.9541	1.9248	1.7456	1.7135	9.8
Heptachlor	1.5359	1.5297	1.5603	1.5410	1.7948	1.7071	1.4537	1.5889	7.5
Aldrin	1.3793	1.3704	1.3986	1.3874	1.6421	1.5853	1.3771	1.4486	7.9
Heptachlor epoxide b	1.2760	1.2167	1.2236	1.1904	1.3960	1.3359	1.1461	1.2550	6.9
Endosulfan I	1.0760	1.0597	1.0631	1.0394	1.2180	1.1843	1.0179	1.0940	7.0
Dieldrin	1.0687	1.0634	1.0785	1.0572	1.2262	1.1701	1.0227	1.0981	6.6
4,4'-DDE	1.0723	1.0733	1.0978	1.0785	1.2486	1.2032	1.0559	1.1185	6.8
Endrin	2.1787	2.0481	2.0959	2.0218	2.5718	2.3364	1.9560	2.1727	9.9
Endosulfan II	2.4375	2.2805	2.3036	2.1955	2.7593	2.5634	2.1645	2.3863	9.0
4,4'-DDD	2.2608	2.1456	2.2046	2.1344	2.6910	2.5143	2.1449	2.2994	9.5
Endosulfan sulfate	1.9830	1.8458	1.8784	1.8141	2.3056	2.1776	1.8671	1.9816	9.5
4,4'-DDT	2.0590	1.9308	1.9780	1.9201	2.3980	2.3029	2.0225	2.0873	9.0
Methoxychlor	0.9420	0.8584	0.8524	0.7968	0.9929	0.9315	0.6825	0.8652	12.0
Endrin ketone	2.0825	1.9243	1.9309	1.8415	2.3113	2.1946	1.9037	2.0270	8.6
Endrin aldehyde	1.9336	1.7928	1.8028	1.7227	2.1623	2.0316	1.7287	1.8821	8.9
gamma-Chlordane	1.2314	1.2052	1.2171	1.1959	1.4062	1.3753	1.2095	1.2629	7.0
alpha-Chlordane	1.1539	1.1266	1.1246	1.1000	1.2919	1.2588	1.1016	1.1653	6.7
Hexachlorobutadiene	1.6896	1.5477	1.5250	1.4472	1.5155	1.5688	1.4323	1.5323	5.6
Hexachlorobenzene	1.8543	1.7715	1.7637	1.6852	1.9613	1.8781	1.6389	1.7933	6.3
Tetrachloro-m-xylene	1.4581	1.4253	1.4216	1.3602	1.5724	1.4790	1.1884	1.4150	8.4
Decachlorobiphenyl	2.0796	1.8792	1.8282	1.7001	2.1061	1.9737	1.7103	1.8967	8.7

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.012	6.96- 7.06	0.0515
2	7.063	7.01- 7.11	0.0350
3	7.320	7.27- 7.37	0.0588
4	7.645	7.59- 7.69	0.0593
5	7.684	7.63- 7.73	0.0392
6	7.966	7.92- 8.02	0.0336

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.344	7.29- 7.39	0.0735
2	7.668	7.62- 7.72	0.1100
3	7.898	7.85- 7.95	0.1175
4	8.366	8.32- 8.42	0.0849
5	8.406	8.36- 8.46	0.1075

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/24/13,1358

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.33	4.28	4.38	21.4	20.0	7.1
beta-BHC	4.68	4.64	4.74	19.4	20.0	-3.1
delta-BHC	4.86	4.81	4.91	20.4	20.0	2.1
gamma-BHC (Lindane)	4.61	4.56	4.66	21.2	20.0	6.2
Heptachlor	5.06	5.02	5.12	21.1	20.0	5.5
Aldrin	5.35	5.31	5.41	20.6	20.0	3.2
Heptachlor epoxide b	5.93	5.89	5.99	20.1	20.0	0.7
Endosulfan I	6.31	6.26	6.36	20.1	20.0	0.4
Dieldrin	6.53	6.49	6.59	41.7	40.0	4.3
4,4'-DDE	6.23	6.18	6.28	39.9	40.0	-0.2
Endrin	6.75	6.71	6.81	45.6	40.0	13.9
Endosulfan II	6.95	6.91	7.01	41.9	40.0	4.7
4,4'-DDD	6.78	6.74	6.84	44.4	40.0	11.0
Endosulfan sulfate	7.72	7.68	7.78	42.0	40.0	5.0
4,4'-DDT	7.04	7.00	7.10	44.2	40.0	10.4
Methoxychlor	7.47	7.42	7.52	205.0	200.0	2.5
Endrin ketone	7.98	7.93	8.03	40.5	40.0	1.3
Endrin aldehyde	7.33	7.29	7.39	40.2	40.0	0.4
gamma-Chlordane	6.05	6.01	6.11	20.6	20.0	3.1
alpha-Chlordane	6.17	6.13	6.23	20.3	20.0	1.7
Hexachlorobutadiene	2.34	2.29	2.39	20.8	20.0	3.9
Hexachlorobenzene	4.18	4.13	4.23	20.8	20.0	4.1
Tetrachloro-m-xylene	3.83	3.79	3.89	41.7	40.0	4.2
Decachlorobiphenyl	8.82	8.78	8.88	37.6	40.0	-5.9

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/24/13,1358

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	21.6	20.0	7.9	
beta-BHC	5.18	5.13	5.23	20.1	20.0	0.6	
delta-BHC	5.50	5.45	5.55	20.9	20.0	4.6	
gamma-BHC (Lindane)	5.11	5.07	5.17	21.4	20.0	7.2	
Heptachlor	5.58	5.53	5.63	21.4	20.0	6.8	
Aldrin	5.92	5.87	5.97	21.4	20.0	7.1	
Heptachlor epoxide b	6.47	6.43	6.53	21.6	20.0	7.8	
Endosulfan I	6.86	6.81	6.91	21.9	20.0	9.7	
Dieldrin	7.12	7.07	7.17	43.1	40.0	7.7	
4,4'-DDE	6.92	6.87	6.97	42.8	40.0	7.1	
Endrin	7.40	7.36	7.46	40.2	40.0	0.4	
Endosulfan II	7.59	7.55	7.65	36.6	40.0	-8.6	
4,4'-DDD	7.45	7.41	7.51	37.9	40.0	-5.2	
Endosulfan sulfate	8.14	8.09	8.19	35.1	40.0	-12.3	
4,4'-DDT	7.74	7.70	7.80	34.4	40.0	-14.1	
Methoxychlor	8.32	8.28	8.38	166.9	200.0	-16.5	
Endrin ketone	8.63	8.58	8.68	33.3	40.0	-16.7	
Endrin aldehyde	7.89	7.85	7.95	34.3	40.0	-14.3	
gamma-Chlordane	6.65	6.61	6.71	21.6	20.0	8.0	
alpha-Chlordane	6.79	6.75	6.85	21.7	20.0	8.6	
Hexachlorobutadiene	2.50	2.45	2.55	15.5	20.0	-22.7	<-
Hexachlorobenzene	4.63	4.58	4.68	21.9	20.0	9.6	
Tetrachloro-m-xylene	4.16	4.12	4.22	39.4	40.0	-1.4	
Decachlorobiphenyl	9.79	9.75	9.85	34.3	40.0	-14.4	

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/24/13,1416

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.00	6.96	7.06	2530	2500	1.2
Toxaphene -2	7.06	7.01	7.11	2510	2500	0.4
Toxaphene -3	7.31	7.27	7.37	2490	2500	-0.4
Toxaphene -4	7.64	7.59	7.69	2500	2500	0.0
Toxaphene -5	7.68	7.63	7.73	2540	2500	1.6
Toxaphene -6	7.96	7.92	8.02	2440	2500	-2.4

AVERAGE %D = 1.0

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/24/13,1416

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.34	7.29	7.39	2230	2500	-10.8
Toxaphene -2	7.66	7.62	7.72	2130	2500	-14.8
Toxaphene -3	7.89	7.85	7.95	2130	2500	-14.8
Toxaphene -4	8.36	8.32	8.42	2020	2500	-19.2
Toxaphene -5	8.40	8.36	8.46	2040	2500	-18.4

AVERAGE %D = 15.6

FORM VII PEST-3

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/24/13,1749

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.33	4.28	4.38	20.5	20.0	2.4	
beta-BHC	4.69	4.64	4.74	17.4	20.0	-13.1	
delta-BHC	4.86	4.81	4.91	18.7	20.0	-6.5	
gamma-BHC (Lindane)	4.61	4.56	4.66	18.8	20.0	-5.8	
Heptachlor	5.06	5.02	5.12	13.4	20.0	-33.0	<-
Aldrin	5.35	5.31	5.41	18.5	20.0	-7.3	
Heptachlor epoxide b	5.93	5.89	5.99	17.5	20.0	-12.4	
Endosulfan I	6.31	6.26	6.36	17.9	20.0	-10.5	
Dieldrin	6.53	6.49	6.59	35.6	40.0	-10.9	
4,4'-DDE	6.23	6.18	6.28	38.4	40.0	-4.1	
Endrin	6.75	6.71	6.81	34.4	40.0	-14.0	
Endosulfan II	6.95	6.91	7.01	37.1	40.0	-7.2	
4,4'-DDD	6.79	6.74	6.84	52.6	40.0	31.5	<-
Endosulfan sulfate	7.72	7.68	7.78	35.7	40.0	-10.7	
4,4'-DDT	7.04	7.00	7.10	15.3	40.0	-61.7	<-
Methoxychlor	7.47	7.42	7.52	59.2	200.0	-70.4	<-
Endrin ketone	7.98	7.93	8.03	31.0	40.0	-22.5	<-
Endrin aldehyde	7.33	7.29	7.39	33.7	40.0	-15.8	
gamma-Chlordane	6.05	6.01	6.11	17.7	20.0	-11.3	
alpha-Chlordane	6.17	6.13	6.23	17.5	20.0	-12.5	
Hexachlorobutadiene	2.34	2.29	2.39	21.1	20.0	5.3	
Hexachlorobenzene	4.18	4.13	4.23	20.4	20.0	1.8	
Tetrachloro-m-xylene	3.83	3.79	3.89	40.3	40.0	0.9	
Decachlorobiphenyl	8.83	8.78	8.88	37.0	40.0	-7.6	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/24/13,1749

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.75	4.71	4.81	17.1	20.0	-14.3	
beta-BHC	5.18	5.13	5.23	14.8	20.0	-26.2	<-
delta-BHC	5.50	5.45	5.55	15.4	20.0	-22.8	<-
gamma-BHC (Lindane)	5.11	5.07	5.17	15.6	20.0	-21.8	<-
Heptachlor	5.58	5.53	5.63	11.1	20.0	-44.6	<-
Aldrin	5.92	5.87	5.97	14.6	20.0	-27.0	<-
Heptachlor epoxide b	6.47	6.43	6.53	13.2	20.0	-33.8	<-
Endosulfan I	6.86	6.81	6.91	12.0	20.0	-39.9	<-
Dieldrin	7.12	7.07	7.17	26.2	40.0	-34.5	<-
4,4'-DDE	6.92	6.87	6.97	24.4	40.0	-39.0	<-
Endrin	7.41	7.36	7.46	23.7	40.0	-40.7	<-
Endosulfan II	7.59	7.55	7.65	31.4	40.0	-21.4	<-
4,4'-DDD	7.45	7.41	7.51	34.8	40.0	-13.1	
Endosulfan sulfate	8.14	8.09	8.19	27.1	40.0	-32.2	<-
4,4'-DDT	7.74	7.70	7.80	8.7	40.0	-78.2	<-
Methoxychlor	8.32	8.28	8.38	48.3	200.0	-75.8	<-
Endrin ketone	8.63	8.58	8.68	26.9	40.0	-32.8	<-
Endrin aldehyde	7.89	7.85	7.95	24.5	40.0	-38.6	<-
gamma-Chlordane	6.65	6.61	6.71	12.2	20.0	-39.1	<-
alpha-Chlordane	6.79	6.75	6.85	11.5	20.0	-42.3	<-
Hexachlorobutadiene	2.50	2.45	2.55	16.4	20.0	-18.2	
Hexachlorobenzene	4.63	4.58	4.68	17.8	20.0	-10.8	
Tetrachloro-m-xylene	4.16	4.12	4.22	35.5	40.0	-11.3	
Decachlorobiphenyl	9.79	9.75	9.85	31.7	40.0	-20.7	<-

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/24/13,1807

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	7.01	6.96	7.06	723	2500	-71.1	<-
Toxaphene -2	7.06	7.01	7.11	1060	2500	-57.6	<-
Toxaphene -3	7.32	7.27	7.37	782	2500	-68.7	<-
Toxaphene -4	7.64	7.59	7.69	676	2500	-73.0	<-
Toxaphene -5	7.68	7.63	7.73	497	2500	-80.1	<-
Toxaphene -6	7.96	7.92	8.02	473	2500	-81.1	<-

AVERAGE %D = 71.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/24/13,1807

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	7.34	7.29	7.39	1140	2500	-54.4	<-
Toxaphene -2	7.67	7.62	7.72	892	2500	-64.3	<-
Toxaphene -3	7.89	7.85	7.95	644	2500	-74.2	<-
Toxaphene -4	8.36	8.32	8.42	456	2500	-81.8	<-
Toxaphene -5	8.40	8.36	8.46	387	2500	-84.5	<-

AVERAGE %D = 71.8

FORM VII PEST-3

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/25/13,1217

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.33	4.28	4.38	21.4	20.0	7.0
beta-BHC	4.69	4.64	4.74	19.6	20.0	-1.9
delta-BHC	4.86	4.81	4.91	20.9	20.0	4.7
gamma-BHC (Lindane)	4.61	4.56	4.66	21.3	20.0	6.4
Heptachlor	5.06	5.02	5.12	21.2	20.0	6.0
Aldrin	5.35	5.31	5.41	20.9	20.0	4.7
Heptachlor epoxide b	5.93	5.89	5.99	20.5	20.0	2.3
Endosulfan I	6.31	6.26	6.36	20.6	20.0	3.1
Dieldrin	6.53	6.49	6.59	42.3	40.0	5.7
4,4'-DDE	6.23	6.18	6.28	41.2	40.0	3.0
Endrin	6.75	6.71	6.81	43.9	40.0	9.7
Endosulfan II	6.95	6.91	7.01	42.8	40.0	7.1
4,4'-DDD	6.79	6.74	6.84	45.5	40.0	13.8
Endosulfan sulfate	7.72	7.68	7.78	41.8	40.0	4.4
4,4'-DDT	7.04	7.00	7.10	44.7	40.0	11.8
Methoxychlor	7.47	7.42	7.52	205.5	200.0	2.8
Endrin ketone	7.98	7.93	8.03	40.6	40.0	1.6
Endrin aldehyde	7.33	7.29	7.39	41.7	40.0	4.2
gamma-Chlordane	6.05	6.01	6.11	20.8	20.0	3.8
alpha-Chlordane	6.17	6.13	6.23	20.7	20.0	3.7
Hexachlorobutadiene	2.34	2.29	2.39	21.1	20.0	5.5
Hexachlorobenzene	4.18	4.13	4.23	21.4	20.0	6.8
Tetrachloro-m-xylene	3.83	3.79	3.89	42.7	40.0	6.7
Decachlorobiphenyl	8.83	8.78	8.88	37.8	40.0	-5.6

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/25/13,1217

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.75	4.71	4.81	21.4	20.0	7.0
beta-BHC	5.18	5.13	5.23	20.0	20.0	0.1
delta-BHC	5.50	5.45	5.55	21.2	20.0	6.2
gamma-BHC (Lindane)	5.11	5.07	5.17	21.3	20.0	6.5
Heptachlor	5.58	5.53	5.63	21.4	20.0	7.1
Aldrin	5.92	5.87	5.97	21.6	20.0	7.9
Heptachlor epoxide b	6.47	6.43	6.53	21.7	20.0	8.6
Endosulfan I	6.86	6.81	6.91	22.3	20.0	11.7
Dieldrin	7.11	7.07	7.17	44.5	40.0	11.2
4,4'-DDE	6.92	6.87	6.97	44.6	40.0	11.6
Endrin	7.40	7.36	7.46	38.1	40.0	-4.6
Endosulfan II	7.59	7.55	7.65	37.0	40.0	-7.6
4,4'-DDD	7.45	7.41	7.51	38.3	40.0	-4.1
Endosulfan sulfate	8.14	8.09	8.19	35.1	40.0	-12.2
4,4'-DDT	7.74	7.70	7.80	34.5	40.0	-13.8
Methoxychlor	8.32	8.28	8.38	168.5	200.0	-15.7
Endrin ketone	8.63	8.58	8.68	33.3	40.0	-16.8
Endrin aldehyde	7.89	7.85	7.95	35.0	40.0	-12.4
gamma-Chlordane	6.65	6.61	6.71	22.0	20.0	10.1
alpha-Chlordane	6.79	6.75	6.85	21.9	20.0	9.7
Hexachlorobutadiene	2.50	2.45	2.55	16.3	20.0	-18.3
Hexachlorobenzene	4.63	4.58	4.68	22.3	20.0	11.4
Tetrachloro-m-xylene	4.16	4.12	4.22	40.4	40.0	1.0
Decachlorobiphenyl	9.79	9.75	9.85	33.5	40.0	-16.1

FORM VII PEST-2

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/25/13,1237

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.01	6.96	7.06	2580	2500	3.2
Toxaphene -2	7.06	7.01	7.11	2580	2500	3.2
Toxaphene -3	7.32	7.27	7.37	2550	2500	2.0
Toxaphene -4	7.64	7.59	7.69	2480	2500	-0.8
Toxaphene -5	7.68	7.63	7.73	2500	2500	0.0
Toxaphene -6	7.96	7.92	8.02	2370	2500	-5.2

AVERAGE %D = 2.4

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/25/13,1237

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	7.34	7.29	7.39	2260	2500	-9.6	
Toxaphene -2	7.67	7.62	7.72	2120	2500	-15.2	
Toxaphene -3	7.90	7.85	7.95	2100	2500	-16.0	
Toxaphene -4	8.37	8.32	8.42	1960	2500	-21.6	<-
Toxaphene -5	8.40	8.36	8.46	1980	2500	-20.8	<-

AVERAGE %D = 16.6

FORM VII PEST-3

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/25/13,1425

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.33	4.28	4.38	21.5	20.0	7.3
beta-BHC	4.69	4.64	4.74	19.6	20.0	-2.0
delta-BHC	4.86	4.81	4.91	20.7	20.0	3.7
gamma-BHC (Lindane)	4.61	4.56	4.66	21.3	20.0	6.3
Heptachlor	5.06	5.02	5.12	21.1	20.0	5.4
Aldrin	5.35	5.31	5.41	20.8	20.0	4.2
Heptachlor epoxide b	5.93	5.89	5.99	20.3	20.0	1.5
Endosulfan I	6.31	6.26	6.36	20.4	20.0	2.0
Dieldrin	6.53	6.49	6.59	41.4	40.0	3.6
4,4'-DDE	6.23	6.18	6.28	40.9	40.0	2.3
Endrin	6.75	6.71	6.81	44.7	40.0	11.6
Endosulfan II	6.95	6.91	7.01	42.9	40.0	7.2
4,4'-DDD	6.79	6.74	6.84	45.8	40.0	14.6
Endosulfan sulfate	7.72	7.68	7.78	42.0	40.0	5.1
4,4'-DDT	7.04	7.00	7.10	43.8	40.0	9.4
Methoxychlor	7.47	7.42	7.52	204.5	200.0	2.2
Endrin ketone	7.98	7.93	8.03	41.0	40.0	2.5
Endrin aldehyde	7.33	7.29	7.39	40.7	40.0	1.7
gamma-Chlordane	6.05	6.01	6.11	20.5	20.0	2.7
alpha-Chlordane	6.17	6.13	6.23	20.5	20.0	2.5
Hexachlorobutadiene	2.34	2.29	2.39	21.2	20.0	5.9
Hexachlorobenzene	4.18	4.13	4.23	21.4	20.0	7.0
Tetrachloro-m-xylene	3.83	3.79	3.89	42.5	40.0	6.3
Decachlorobiphenyl	8.82	8.78	8.88	38.4	40.0	-4.0

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/25/13,1425

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.75	4.71	4.81	21.2	20.0	5.9
beta-BHC	5.18	5.13	5.23	19.8	20.0	-1.1
delta-BHC	5.50	5.45	5.55	20.8	20.0	3.9
gamma-BHC (Lindane)	5.11	5.07	5.17	21.0	20.0	5.2
Heptachlor	5.58	5.53	5.63	21.0	20.0	4.8
Aldrin	5.92	5.87	5.97	21.2	20.0	5.9
Heptachlor epoxide b	6.47	6.43	6.53	20.8	20.0	4.0
Endosulfan I	6.86	6.81	6.91	21.0	20.0	5.2
Dieldrin	7.11	7.07	7.17	42.3	40.0	5.8
4,4'-DDE	6.92	6.87	6.97	42.0	40.0	4.9
Endrin	7.40	7.36	7.46	38.1	40.0	-4.7
Endosulfan II	7.59	7.55	7.65	37.8	40.0	-5.4
4,4'-DDD	7.45	7.41	7.51	38.2	40.0	-4.4
Endosulfan sulfate	8.14	8.09	8.19	34.3	40.0	-14.1
4,4'-DDT	7.74	7.70	7.80	34.3	40.0	-14.4
Methoxychlor	8.32	8.28	8.38	166.1	200.0	-17.0
Endrin ketone	8.63	8.58	8.68	33.1	40.0	-17.3
Endrin aldehyde	7.89	7.85	7.95	33.8	40.0	-15.4
gamma-Chlordane	6.65	6.61	6.71	20.9	20.0	4.3
alpha-Chlordane	6.79	6.75	6.85	20.6	20.0	3.2
Hexachlorobutadiene	2.50	2.45	2.55	16.1	20.0	-19.3
Hexachlorobenzene	4.63	4.58	4.68	22.2	20.0	11.2
Tetrachloro-m-xylene	4.16	4.12	4.22	40.2	40.0	0.6
Decachlorobiphenyl	9.79	9.75	9.85	33.8	40.0	-15.4

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/25/13,1443

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.01	6.96	7.06	2570	2500	2.8
Toxaphene -2	7.06	7.01	7.11	2580	2500	3.2
Toxaphene -3	7.31	7.27	7.37	2510	2500	0.4
Toxaphene -4	7.64	7.59	7.69	2470	2500	-1.2
Toxaphene -5	7.68	7.63	7.73	2490	2500	-0.4
Toxaphene -6	7.96	7.92	8.02	2360	2500	-5.6

AVERAGE %D = 2.3

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/25/13,1443

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	7.34	7.29	7.39	2260	2500	-9.6	
Toxaphene -2	7.66	7.62	7.72	2150	2500	-14.0	
Toxaphene -3	7.89	7.85	7.95	2090	2500	-16.4	
Toxaphene -4	8.36	8.32	8.42	1920	2500	-23.2	<-
Toxaphene -5	8.40	8.36	8.46	1960	2500	-21.6	<-

AVERAGE %D = 17.0

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5448520	3.165	4807902	8.980
	UPPER LIMIT	10897040	3.215	9615804	9.030
	LOWER LIMIT	2724260	3.115	2403951	8.930

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	04/05/13	1247	5448520	3.165	4807902	8.980
02		INDAA	04/05/13	1305	6225835	3.164	5241456	8.979
03		INDAB	04/05/13	1323	6111022	3.164	5357211	8.979
04		INDAC	04/05/13	1341	5854383	3.165	5133358	8.979
05		INDAD	04/05/13	1358	5880001	3.165	5227384	8.979
06		INDAF	04/05/13	1417	4847986	3.165	4193877	8.980
07		INDAG	04/05/13	1435	5342959	3.165	4760154	8.980
08		TOXAPHENE	04/05/13	1528	5312805	3.165	4975008	8.979
09		DS	04/22/13	1912	5390540	3.163	4933477	8.978
10		INDAE	04/22/13	1930	4818676	3.163	4405181	8.977
11		TOXAPH	04/22/13	1947	5000157	3.163	4618745	8.978
12	WL74MBW1	WL74MBW1	04/22/13	2005	5168032	3.163	4891195	8.977
13	WL74LCSW1	WL74LCSW1	04/22/13	2023	5405363	3.163	5067377	8.977
14	WL74LCSDW1	WL74LCSDW1	04/22/13	2043	5321844	3.163	5012726	8.979
15	IM-MH-01-201	WL49A	04/22/13	2118	5135385	3.163	4998028	8.977
16	IM-SW-01-201	WL49B	04/22/13	2137	5041193	3.163	4663889	8.983
17		DS	04/22/13	2342	5293535	3.164	4896701	8.978
18		INDAE	04/22/13	2359	4764753	3.163	4487572	8.978
19		TOXAPH	04/23/13	0017	4939736	3.163	4686270	8.978
20		DS	04/24/13	1340	7011501	3.162	6143253	8.975
21		INDAE	04/24/13	1358	5283698	3.162	4526048	8.975
22		TOXAPH	04/24/13	1416	5712922	3.162	4986693	8.975
23	WL49MBS1	WL49MBS1	04/24/13	1434	5625864	3.162	4848327	8.975
24	WL49LCSS1	WL49LCSS1	04/24/13	1454	5855175	3.164	5015612	8.977
25	ZZZZZ	ZZZZZ	04/24/13	1514	5996099	3.163	5177861	8.978
26	IM-CB-01-201	WL49F	04/24/13	1533	6507252	3.164	6379216	9.052*
27	IM-CB-02-201	WL49G	04/24/13	1553	5458670	3.165	5046076	8.981
28	IM-CB-02-201	WL49GMS	04/24/13	1613	5387879	3.164	4817583	8.981
29	IM-CB-02-201	WL49GMSD	04/24/13	1633	5180949	3.164	4692113	8.981
30	GR-CB-07-201	WL67A	04/24/13	1653	5422038	3.164	7369319	9.035*
31	GR-WS-05-201	WL67B	04/24/13	1713	4888700	3.163	6167839	8.998
32		DS	04/24/13	1731	6300007	3.162	5105256	8.978
33		INDAE	04/24/13	1749	4870788	3.162	3969794	8.977
34		TOXAPH	04/24/13	1807	5355166	3.162	4498838	8.977
35		DS	04/25/13	1159	4492658	3.162	3829261	8.976

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

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	5448520	3.165	4807902	8.980
				UPPER LIMIT	10897040	3.215	9615804	9.030
				LOWER LIMIT	2724260	3.115	2403951	8.930
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
36		INDAE	04/25/13	1217	4277863	3.162	3672659	8.976
37		TOXAPH	04/25/13	1237	4072392	3.164	3476416	8.980
38	IM-CB-01-201	WL49F	04/25/13	1256	4800725	3.163	4316695	8.979
39	IM-CB-02-201	WL49G	04/25/13	1314	5131616	3.162	4347872	8.975
40	GR-CB-07-201	WL67A	04/25/13	1331	5229453	3.161	4371380	8.976
41	GR-WS-05-201	WL67B	04/25/13	1349	4951352	3.162	4147776	8.975
42		DS	04/25/13	1408	4467136	3.162	3702432	8.978
43		INDAE	04/25/13	1425	4243504	3.162	3558332	8.976
44		TOXAPH	04/25/13	1443	4091075	3.162	3470518	8.976

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.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	21702340	3.333	7681727	10.368
	UPPER LIMIT	43404680	3.383	15363454	10.418
	LOWER LIMIT	10851170	3.283	3840864	10.318

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	04/05/13	1247	21702340	3.333	7681727	10.368
02		INDAA	04/05/13	1305	24741508	3.333	9038709	10.366
03		INDAB	04/05/13	1323	25491655	3.333	9687228	10.367
04		INDAC	04/05/13	1341	25508207	3.333	9574018	10.367
05		INDAD	04/05/13	1358	26036651	3.334	9979752	10.368
06		INDAF	04/05/13	1417	21952139	3.333	8109922	10.368
07		INDAG	04/05/13	1435	24214609	3.333	9338784	10.367
08		TOXAPHENE	04/05/13	1528	24507429	3.333	9646485	10.367
09		DS	04/22/13	1912	28296442	3.333	12455116	10.367
10		INDAE	04/22/13	1930	25714748	3.333	11364629	10.365
11		TOXAPH	04/22/13	1947	26731310	3.333	11950392	10.366
12	WL74MBW1	WL74MBW1	04/22/13	2005	27791553	3.333	12930004	10.366
13	WL74LCSW1	WL74LCSW1	04/22/13	2023	28925697	3.333	13465655	10.366
14	WL74LCSDW1	WL74LCSDW1	04/22/13	2043	28755903	3.333	13395607	10.367
15	IM-MH-01-201	WL49A	04/22/13	2118	26949577	3.333	13696900	10.366
16	IM-SW-01-201	WL49B	04/22/13	2137	26361349	3.332	9792172	10.370
17		DS	04/22/13	2342	29760201	3.333	13654247	10.366
18		INDAE	04/22/13	2359	27081590	3.333	12603113	10.367
19		TOXAPH	04/23/13	0017	28148455	3.333	13112891	10.366
20		DS	04/24/13	1340	35905751	3.332	15425715*	10.362
21		INDAE	04/24/13	1358	27378463	3.332	11909558	10.362
22		TOXAPH	04/24/13	1416	30001246	3.332	12823922	10.362
23	WL49MBS1	WL49MBS1	04/24/13	1434	28518898	3.332	12917484	10.362
24	WL49LCSS1	WL49LCSS1	04/24/13	1454	29363941	3.334	13214015	10.364
25	ZZZZZ	ZZZZZ	04/24/13	1514	30969939	3.333	13910754	10.364
26	IM-CB-01-201	WL49F	04/24/13	1533	20558444	3.333	10095252	10.413
27	IM-CB-02-201	WL49G	04/24/13	1553	19305502	3.334	9485174	10.368
28	IM-CB-02-201	WL49GMS	04/24/13	1613	25948196	3.333	9866622	10.367
29	IM-CB-02-201	WL49GMSD	04/24/13	1633	25143824	3.333	9577863	10.367
30	GR-CB-07-201	WL67A	04/24/13	1653	20726145	3.333	10158261	10.405
31	GR-WS-05-201	WL67B	04/24/13	1713	16124116	3.332	9708084	10.378
32		DS	04/24/13	1731	25596909	3.332	10309793	10.366
33		INDAE	04/24/13	1749	25415091	3.332	8634792	10.364
34		TOXAPH	04/24/13	1807	27561322	3.332	9831517	10.364
35		DS	04/25/13	1159	23353754	3.332	9875133	10.362

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

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	21702340	3.333	7681727	10.368
				UPPER LIMIT	43404680	3.383	15363454	10.418
				LOWER LIMIT	10851170	3.283	3840864	10.318
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
36		INDAE	04/25/13	1217	22469005	3.332	9462408	10.363
37		TOXAPH	04/25/13	1237	21400279	3.333	8850635	10.365
38	IM-CB-01-201	WL49F	04/25/13	1256	22385485	3.332	10331150	10.365
39	IM-CB-02-201	WL49G	04/25/13	1314	26933980	3.332	11002628	10.361
40	GR-CB-07-201	WL67A	04/25/13	1331	27347820	3.331	10480048	10.363
41	GR-WS-05-201	WL67B	04/25/13	1349	25771812	3.332	10208556	10.362
42		DS	04/25/13	1408	23738822	3.332	9692922	10.363
43		INDAE	04/25/13	1425	22903981	3.332	9309949	10.362
44		TOXAPH	04/25/13	1443	22111997	3.332	9045595	10.362

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: WL67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: GR-CB-07-20130411-S
SAMPLE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 08:46
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 100
Silica Gel: Yes

Percent Moisture: 59.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	99	390	< 390 U
53469-21-9	Aroclor 1242	130	390	< 390 U
12672-29-6	**Aroclor 1248**	**130**	**390**	**4,500**
11097-69-1	**Aroclor 1254**	**130**	**390**	**3,400**
11096-82-5	**Aroclor 1260**	**130**	**390**	**1,300 P**
11104-28-2	Aroclor 1221	130	390	< 390 U
11141-16-5	Aroclor 1232	130	390	< 390 U
37324-23-5	Aroclor 1262	130	390	< 390 U
11100-14-4	Aroclor 1268	130	390	< 390 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: GR-WS-05-20130411-S
SAMPLE

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/23/13 21:55
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 2.06 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 20.0
Silica Gel: Yes

Percent Moisture: 72.8%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	120	480	< 480 U
53469-21-9	Aroclor 1242	160	480	< 480 U
12672-29-6	**Aroclor 1248**	**160**	**480**	**20,000**
11097-69-1	**Aroclor 1254**	**160**	**480**	**10,000**
11096-82-5	**Aroclor 1260**	**160**	**480**	**2,800**
11104-28-2	Aroclor 1221	160	480	< 480 U
11141-16-5	Aroclor 1232	160	480	< 480 U
37324-23-5	Aroclor 1262	160	480	< 480 U
11100-14-4	Aroclor 1268	160	480	< 480 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	112%

FORM I

WL67-SOILS

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-041913	89.2%	64-105	74.5%	54-100	0
LCS-041913	95.0%	64-105	78.5%	54-100	0
GR-CB-07-20130411-S	D	37-128	D	45-102	0
GR-WS-05-20130411-S	112%	37-128	112%*	45-102	1

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-7791 to 13-7792

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-041913
LAB CONTROL

Lab Sample ID: LCS-041913
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/19/13
Date Analyzed: 04/23/13 18:16
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	74.9	101	74.2%
Aroclor 1260	78.6	101	77.8%

PCB Surrogate Recovery

Decachlorobiphenyl	95.0%
Tetrachlorometaxylene	78.5%

Results reported in µg/kg (ppb)

PCB METHOD BLANK SUMMARY

BLANK NO. WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WL49MBS1
Lab File ID: 0423A005

Date Extracted: 04/19/13
Matrix: SOLID

Date Analyzed: 04/23/13
Instrument ID: ECD7

Time Analyzed: 1754
GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WL49LCSS1	WL49LCSS1	04/23/13
02	IM-CB-01-20130410-S	WL49F	04/23/13
03	IM-CB-02-20130410-S	WL49G	04/23/13
04	IM-CB-02-201304 MS	WL49GMS	04/23/13
05	IM-CB-02-201304 MSD	WL49GMSD	04/23/13
06	GR-CB-07-20130411-S	WL67A	04/23/13
07	GR-WS-05-20130411-S	WL67B	04/23/13
08	IM-CB-01-20130410-S	WL49F	04/23/13
09	GR-CB-07-20130411-S	WL67A	04/23/13
10	GR-WS-05-20130411-S	WL67B	04/23/13

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-041913
METHOD BLANK

Lab Sample ID: MB-041913
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/19/13
Date Analyzed: 04/23/13 17:54
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.4	4.0	< 4.0 U
11096-82-5	Aroclor 1260	1.4	4.0	< 4.0 U
11104-28-2	Aroclor 1221	1.4	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.4	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.4	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.4	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	89.2%
Tetrachlorometaxylene	74.5%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 04/16/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	5.63- 5.83	1.0115	0.9603	0.9886	0.9860	1.0167	1.0050	0.9947	2.1
DCB	14.49-14.69	1.4808	1.2739	1.2390	1.1466	1.1090	1.0660	1.2192	12.3

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	7.64- 7.84	0.0283	0.0249	0.0243	0.0229	0.0227	0.0219	0.0242	9.5
2	8.16- 8.36	0.0921	0.0825	0.0822	0.0776	0.0776	0.0746	0.0811	7.6
3	8.34- 8.54	0.0368	0.0332	0.0325	0.0304	0.0301	0.0289	0.0320	8.9
4	8.77- 8.97	0.0213	0.0191	0.0187	0.0173	0.0171	0.0163	0.0183	9.8

AROCLOR AVERAGE %RSD = 9.0

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	11.94-12.14	0.0571	0.0512	0.0498	0.0473	0.0459	0.0439	0.0492	9.5
2	12.26-12.46	0.0571	0.0508	0.0497	0.0474	0.0463	0.0445	0.0493	9.0
3	12.63-12.83	0.1332	0.1198	0.1196	0.1160	0.1140	0.1105	0.1189	6.6
4	13.03-13.23	0.0638	0.0623	0.0627	0.0610	0.0605	0.0589	0.0615	2.9
5	13.21-13.41	0.0335	0.0299	0.0295	0.0284	0.0280	0.0271	0.0294	7.7

AROCLOR AVERAGE %RSD = 7.1

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 04/16/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	5.29- 5.49	1.2871	1.1073	1.0688	1.0027	0.9992	0.9767	1.0736	10.8
DCB	14.54-14.74	0.9025	0.9213	0.9437	0.9266	0.9013	0.9078	0.9172	1.8

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	6.55- 6.75	0.0236	0.0212	0.0197	0.0170	0.0158	0.0146	0.0186	18.5
2	7.43- 7.63	0.0540	0.0457	0.0419	0.0367	0.0347	0.0325	0.0409	19.6
3	8.24- 8.44	0.1006	0.0865	0.0810	0.0725	0.0701	0.0678	0.0798	15.6
4	9.31- 9.51	0.0318	0.0274	0.0257	0.0228	0.0219	0.0209	0.0251	16.3

AROCLOR AVERAGE %RSD = 17.5

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	11.86-12.06	0.0832	0.0718	0.0679	0.0625	0.0585	0.0568	0.0668	14.7
2	12.41-12.61	0.0625	0.0558	0.0536	0.0500	0.0468	0.0454	0.0523	12.2
3	12.68-12.88	0.1285	0.1129	0.1095	0.1028	0.0987	0.0980	0.1084	10.6
4	13.24-13.44	0.0827	0.0755	0.0733	0.0692	0.0654	0.0640	0.0717	9.7

AROCLOR AVERAGE %RSD = 11.8

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 04/16/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	6.173	6.07- 6.27	0.00974
2	6.384	6.28- 6.48	0.00736
3	6.506	6.41- 6.61	0.02468

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.506	6.41- 6.61	0.01635
2	7.729	7.63- 7.83	0.00952
3	8.248	8.15- 8.35	0.03181
4	8.437	8.34- 8.54	0.01279

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	7.737	7.64- 7.84	0.01845
2	8.257	8.16- 8.36	0.06225
3	8.444	8.34- 8.54	0.02456
4	9.411	9.31- 9.51	0.02301

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	8.249	8.15- 8.35	0.04360
2	8.871	8.77- 8.97	0.02774
3	9.411	9.31- 9.51	0.03854
4	9.882	9.78- 9.98	0.05133

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.220	10.12-10.32	0.04767
2	10.610	10.51-10.71	0.02881
3	10.752	10.65-10.85	0.05688
4	11.111	11.01-11.21	0.06046
5	11.809	11.71-11.91	0.05707

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.357	12.26-12.46	0.05813
2	12.729	12.63-12.83	0.15569
3	13.127	13.03-13.23	0.05024
4	13.305	13.20-13.40	0.05855
5	13.887	13.79-13.99	0.05133

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.236	13.14-13.34	0.16806
2	13.302	13.20-13.40	0.15680
3	13.649	13.55-13.75	0.13284
4	14.286	14.19-14.39	0.40564

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 04/16/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	6.227	6.13- 6.33	0.01234
2	6.525	6.43- 6.63	0.00787
3	6.661	6.56- 6.76	0.02274
4	7.553	7.45- 7.65	0.00781

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.660	6.56- 6.76	0.01589
2	7.542	7.44- 7.64	0.01754
3	8.351	8.25- 8.45	0.03158
4	8.950	8.85- 9.05	0.01028

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.638	6.54- 6.74	0.01486
2	7.521	7.42- 7.62	0.02966
3	8.333	8.23- 8.43	0.05866
4	9.404	9.30- 9.50	0.02035

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	7.528	7.43- 7.63	0.01635
2	8.338	8.24- 8.44	0.04205
3	8.941	8.84- 9.04	0.02999
4	10.350	10.25-10.45	0.04073

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.052	9.95-10.15	0.02578
2	10.237	10.14-10.34	0.03193
3	10.933	10.83-11.03	0.05208
4	11.187	11.09-11.29	0.05172
5	11.959	11.86-12.06	0.03841

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.516	12.42-12.62	0.06071
2	12.786	12.69-12.89	0.13995
3	13.291	13.19-13.39	0.05344
4	13.349	13.25-13.45	0.08764
5	13.974	13.87-14.07	0.04822

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.290	13.19-13.39	0.14002
2	13.352	13.25-13.45	0.13287
3	13.698	13.60-13.80	0.10716
4	14.348	14.25-14.45	0.35159

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL67
Project: NPDES SAMPLING

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1254
Time Analyzed :1710

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.22	10.12	10.32	254.4	250.0	1.8
Aroclor-1254-2	10.61	10.51	10.71	254.6	250.0	1.8
Aroclor-1254-3	10.75	10.65	10.85	253.5	250.0	1.4
Aroclor-1254-4	11.11	11.01	11.21	244.8	250.0	-2.1
Aroclor-1254-5	11.81	11.71	11.91	246.1	250.0	-1.6

AVERAGE %D = 1.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1254 Time Analyzed :1710

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.05	9.95	10.15	251.2	250.0	0.5
Aroclor-1254-2	10.24	10.13	10.33	254.8	250.0	1.9
Aroclor-1254-3	10.93	10.83	11.03	253.2	250.0	1.3
Aroclor-1254-4	11.19	11.08	11.28	257.3	250.0	2.9
Aroclor-1254-5	11.96	11.85	12.05	246.6	250.0	-1.3

AVERAGE %D = 1.6

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL67
Project: NPDES SAMPLING

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660
Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	239.6	250.0	-4.2
Aroclor-1016-2	8.25	8.16	8.36	248.2	250.0	-0.7
Aroclor-1016-3	8.44	8.34	8.54	242.7	250.0	-2.9
Aroclor-1016-4	8.87	8.77	8.97	242.5	250.0	-3.0

AVERAGE %D = 2.7

Date Analyzed :04/23/13

Lab Standard ID: AR1660
Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	243.5	250.0	-2.6
Aroclor-1260-2	12.36	12.26	12.46	247.3	250.0	-1.1
Aroclor-1260-3	12.73	12.63	12.83	250.1	250.0	0.0
Aroclor-1260-4	13.13	13.03	13.23	254.2	250.0	1.7
Aroclor-1260-5	13.31	13.20	13.40	233.2	250.0	-6.7

AVERAGE %D = 2.4

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.55	6.75	234.3	250.0	-6.3
Aroclor-1016-2	7.53	7.43	7.63	231.0	250.0	-7.6
Aroclor-1016-3	8.34	8.24	8.44	233.9	250.0	-6.4
Aroclor-1016-4	9.41	9.30	9.50	259.1	250.0	3.6

AVERAGE %D = 6.0

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	248.0	250.0	-0.8
Aroclor-1260-2	12.50	12.40	12.60	258.3	250.0	3.3
Aroclor-1260-3	12.77	12.67	12.87	249.4	250.0	-0.2
Aroclor-1260-4	13.34	13.23	13.43	256.8	250.0	2.7

AVERAGE %D = 1.8

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL67
Project: NPDES SAMPLING

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1248
Time Analyzed :2301

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	8.25	8.15	8.35	250.1	250.0	0.0
Aroclor-1248-2	8.87	8.77	8.97	251.1	250.0	0.4
Aroclor-1248-3	9.41	9.31	9.51	251.0	250.0	0.4
Aroclor-1248-4	9.88	9.78	9.98	238.6	250.0	-4.6

AVERAGE %D = 1.3

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL67

Project: NPDES SAMPLING

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1248

Time Analyzed :2301

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	7.53	7.42	7.62	248.3	250.0	-0.7
Aroclor-1248-2	8.34	8.23	8.43	252.8	250.0	1.1
Aroclor-1248-3	8.94	8.84	9.04	255.2	250.0	2.1
Aroclor-1248-4	10.35	10.25	10.45	247.1	250.0	-1.2

AVERAGE %D = 1.3

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL67
Project: NPDES SAMPLING

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660
Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	240.3	250.0	-3.9
Aroclor-1016-2	8.26	8.16	8.36	250.2	250.0	0.1
Aroclor-1016-3	8.45	8.34	8.54	244.0	250.0	-2.4
Aroclor-1016-4	8.87	8.77	8.97	243.6	250.0	-2.6

AVERAGE %D = 2.2

Date Analyzed :04/23/13

Lab Standard ID: AR1660
Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	273.5	250.0	9.4
Aroclor-1260-2	12.36	12.26	12.46	274.0	250.0	9.6
Aroclor-1260-3	12.73	12.63	12.83	273.7	250.0	9.5
Aroclor-1260-4	13.13	13.03	13.23	275.4	250.0	10.2
Aroclor-1260-5	13.31	13.20	13.40	251.7	250.0	0.7

AVERAGE %D = 7.9

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.55	6.75	235.4	250.0	-5.8
Aroclor-1016-2	7.53	7.43	7.63	233.9	250.0	-6.4
Aroclor-1016-3	8.34	8.24	8.44	236.8	250.0	-5.3
Aroclor-1016-4	9.41	9.30	9.50	264.3	250.0	5.7

AVERAGE %D = 5.8

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	277.3	250.0	10.9
Aroclor-1260-2	12.50	12.40	12.60	284.1	250.0	13.6
Aroclor-1260-3	12.77	12.67	12.87	276.4	250.0	10.6
Aroclor-1260-4	13.33	13.23	13.43	277.8	250.0	11.1

AVERAGE %D = 11.6

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL67

Project: NPDES SAMPLING

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1242

Time Analyzed :0803

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	7.74	7.63	7.83	243.9	250.0	-2.4
Aroclor-1242-2	8.26	8.15	8.35	250.9	250.0	0.4
Aroclor-1242-3	8.44	8.34	8.54	244.7	250.0	-2.1
Aroclor-1242-4	9.41	9.31	9.51	241.1	250.0	-3.5

AVERAGE %D = 2.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL67

Project: NPDES SAMPLING

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1242

Time Analyzed :0803

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.65	6.54	6.74	245.2	250.0	-1.9
Aroclor-1242-2	7.53	7.42	7.62	251.1	250.0	0.4
Aroclor-1242-3	8.34	8.23	8.43	249.9	250.0	-0.0
Aroclor-1242-4	9.41	9.30	9.50	295.2	250.0	18.1

AVERAGE %D = 5.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1660 Time Analyzed :0825

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.73	7.64	7.84	238.7	250.0	-4.5
Aroclor-1016-2	8.26	8.16	8.36	247.8	250.0	-0.9
Aroclor-1016-3	8.44	8.34	8.54	241.9	250.0	-3.2
Aroclor-1016-4	8.87	8.77	8.97	241.9	250.0	-3.2

AVERAGE %D = 3.0

Date Analyzed :04/24/13

Lab Standard ID: AR1660 Time Analyzed :0825

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	264.4	250.0	5.8
Aroclor-1260-2	12.36	12.26	12.46	265.8	250.0	6.3
Aroclor-1260-3	12.73	12.63	12.83	266.0	250.0	6.4
Aroclor-1260-4	13.13	13.03	13.23	269.1	250.0	7.6
Aroclor-1260-5	13.31	13.20	13.40	247.2	250.0	-1.1

AVERAGE %D = 5.4

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL67
Project: NPDES SAMPLING

GC Column: ZB35
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1660
Time Analyzed :0825

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.55	6.75	234.1	250.0	-6.4
Aroclor-1016-2	7.53	7.43	7.63	233.3	250.0	-6.7
Aroclor-1016-3	8.34	8.24	8.44	236.0	250.0	-5.6
Aroclor-1016-4	9.41	9.30	9.50	263.0	250.0	5.2

AVERAGE %D = 6.0

Date Analyzed :04/24/13

Lab Standard ID: AR1660
Time Analyzed :0825

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	272.0	250.0	8.8
Aroclor-1260-2	12.50	12.40	12.60	281.3	250.0	12.5
Aroclor-1260-3	12.77	12.67	12.87	271.5	250.0	8.6
Aroclor-1260-4	13.33	13.23	13.43	275.6	250.0	10.2

AVERAGE %D = 10.0

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1248 Time Analyzed :0908

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	8.25	8.15	8.35	247.5	250.0	-1.0
Aroclor-1248-2	8.87	8.77	8.97	248.6	250.0	-0.5
Aroclor-1248-3	9.41	9.31	9.51	250.9	250.0	0.4
Aroclor-1248-4	9.88	9.78	9.98	243.6	250.0	-2.6

AVERAGE %D = 1.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1248 Time Analyzed :0908

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	7.53	7.42	7.62	249.7	250.0	-0.1
Aroclor-1248-2	8.34	8.23	8.43	253.0	250.0	1.2
Aroclor-1248-3	8.94	8.84	9.04	255.8	250.0	2.3
Aroclor-1248-4	10.35	10.25	10.45	254.2	250.0	1.7

AVERAGE %D = 1.3

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1660 Time Analyzed :0930

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	239.1	250.0	-4.4
Aroclor-1016-2	8.26	8.16	8.36	248.2	250.0	-0.7
Aroclor-1016-3	8.45	8.35	8.55	242.3	250.0	-3.1
Aroclor-1016-4	8.87	8.77	8.97	242.4	250.0	-3.0

AVERAGE %D = 2.8

Date Analyzed :04/24/13

Lab Standard ID: AR1660 Time Analyzed :0930

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	268.3	250.0	7.3
Aroclor-1260-2	12.36	12.26	12.46	270.1	250.0	8.0
Aroclor-1260-3	12.73	12.63	12.83	269.7	250.0	7.9
Aroclor-1260-4	13.13	13.03	13.23	272.0	250.0	8.8
Aroclor-1260-5	13.31	13.21	13.41	248.9	250.0	-0.4

AVERAGE %D = 6.5

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/24/13

Lab Standard ID: AR1660 Time Analyzed :0930

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.55	6.75	233.1	250.0	-6.7
Aroclor-1016-2	7.53	7.43	7.63	232.1	250.0	-7.1
Aroclor-1016-3	8.34	8.24	8.44	234.7	250.0	-6.1
Aroclor-1016-4	9.41	9.30	9.50	261.4	250.0	4.5

AVERAGE %D = 6.1

Date Analyzed :04/24/13

Lab Standard ID: AR1660 Time Analyzed :0930

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	275.1	250.0	10.0
Aroclor-1260-2	12.50	12.40	12.60	283.8	250.0	13.5
Aroclor-1260-3	12.77	12.67	12.87	274.5	250.0	9.8
Aroclor-1260-4	13.33	13.23	13.43	281.6	250.0	12.6

AVERAGE %D = 11.5

FORM VII PCB

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 04/16/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5591339	2.771	4375297	14.854
	UPPER LIMIT	11182678	2.871	8750594	14.954
	LOWER LIMIT	2795670	2.671	2187648	14.754

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546				
02		AR1660 .25	04/16/13	1606	5591339	2.771	4375297	14.854
03		AR1660 .02	04/16/13	1627	5596271	2.772	4352111	14.855
04		AR1660 .05	04/16/13	1647	5580646	2.770	4394416	14.855
05		AR1660 1	04/16/13	1708	5497548	2.771	4450563	14.850
06		AR1660 0.1	04/16/13	1729	5547889	2.771	4450577	14.853
07		AR1660 0.5	04/16/13	1749	5500666	2.772	4448503	14.851
08		AR1242	04/16/13	1810	5416449	2.772	4295436	14.854
09		AR1248	04/16/13	1830	5269055	2.770	4171971	14.855
10		AR1254	04/16/13	1851	5495311	2.769	4409997	14.854
11		AR2162	04/16/13	1911	5446032	2.772	4395558	14.854
12		AR3268	04/16/13	1932	5579954	2.772	4509857	14.855
13		AR1660 ICV	04/16/13	1953	5325274	2.770	4313581	14.855
14		AR1242 ICV	04/16/13	2013	5508987	2.771	4423479	14.855
15		AR1248 ICV	04/16/13	2034	5656162	2.771	4633321	14.852
16		AR1254 ICV	04/16/13	2054	5751969	2.772	4697181	14.855
17		AR2162 ICV	04/16/13	2115	5806766	2.771	4739232	14.853
18		AR3268 ICV	04/16/13	2135	5678965	2.770	4626646	14.854
19		DDTS 0.1	04/16/13	2156	5513871	2.769		
20	ZZZZZ	ZZZZZ	04/16/13	2216	5805570	2.770		
21	ZZZZZ	ZZZZZ	04/23/13	1626	7483794	2.776	5651246	14.853
22	ZZZZZ	ZZZZZ	04/23/13	1648	8091175	2.774	6264824	14.851
23		AR1254	04/23/13	1710	7676793	2.776	6025884	14.851
24		AR1660	04/23/13	1732	7130069	2.780	5697247	14.850
25	WL49MBS1	WL49MBS1	04/23/13	1754	7579277	2.780	6537300	14.850
26	WL49LCSS1	WL49LCSS1	04/23/13	1816	7448891	2.780	6465787	14.850
27	ZZZZZ	ZZZZZ	04/23/13	1838	7571939	2.780	6644829	14.851
28	IM-CB-01-201	WL49F	04/23/13	1859	7220412	2.793	10880104*	14.902
29	IM-CB-02-201	WL49G	04/23/13	1921	7500732	2.788	4716599	14.856
30	IM-CB-02-201	WL49GMS	04/23/13	1943	7616089	2.784	5014043	14.854
31	IM-CB-02-201	WL49GMSD	04/23/13	2005	7653577	2.785	4927850	14.855
32	GR-CB-07-201	WL67A	04/23/13	2027	7869105	2.789	13402977*	14.892

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.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 04/16/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5591339	2.771	4375297	14.854
	UPPER LIMIT	11182678	2.871	8750594	14.954
	LOWER LIMIT	2795670	2.671	2187648	14.754

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33	GR-WS-05-201	WL67B	04/23/13	2049	7760210	2.789	9129018*	14.869
34	IM-CB-01-201	WL49F	04/23/13	2111	7118271	2.787	5199799	14.859
35	GR-CB-07-201	WL67A	04/23/13	2133	7339503	2.788	5385278	14.857
36	GR-WS-05-201	WL67B	04/23/13	2155	7346497	2.783	5094891	14.854
37		AR1248	04/23/13	2301	7314104	2.782	4667881	14.852
38		AR1660	04/23/13	2323	7411382	2.783	4822919	14.852

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.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 04/16/13

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

			IS1 AREA	RT	IS2 AREA	RT
		ICAL MIDPT	8525322	3.214	6077527	15.246
		UPPER LIMIT	17050644	3.314	12155054	15.346
		LOWER LIMIT	4262661	3.114	3038764	15.146

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546	20136*	3.292		
02		AR1660 .25	04/16/13	1606	8525322	3.214	6077527	15.246
03		AR1660 .02	04/16/13	1627	8598192	3.216	5984997	15.248
04		AR1660 .05	04/16/13	1647	8596607	3.214	6084847	15.248
05		AR1660 1	04/16/13	1708	8542994	3.216	6408602	15.245
06		AR1660 0.1	04/16/13	1729	8580903	3.215	6158519	15.246
07		AR1660 0.5	04/16/13	1749	8487736	3.215	6324175	15.246
08		AR1242	04/16/13	1810	8375773	3.215	5833847	15.246
09		AR1248	04/16/13	1830	8150106	3.214	5682178	15.247
10		AR1254	04/16/13	1851	8458741	3.212	5993280	15.247
11		AR2162	04/16/13	1911	8381800	3.215	5896928	15.246
12		AR3268	04/16/13	1932	8556043	3.214	6168153	15.247
13		AR1660 ICV	04/16/13	1953	8177137	3.214	5796454	15.246
14		AR1242 ICV	04/16/13	2013	8450305	3.214	5884105	15.246
15		AR1248 ICV	04/16/13	2034	8702323	3.215	6212763	15.245
16		AR1254 ICV	04/16/13	2054	8808751	3.215	6232306	15.247
17		AR2162 ICV	04/16/13	2115	8866116	3.213	6276279	15.245
18		AR3268 ICV	04/16/13	2135	8638794	3.212	6054334	15.246
19		DDTS 0.1	04/16/13	2156	8408899	3.211		
20	ZZZZZ	ZZZZZ	04/16/13	2216	8797710	3.211		
21	ZZZZZ	ZZZZZ	04/23/13	1626	9882519	3.188	6655346	15.235
22	ZZZZZ	ZZZZZ	04/23/13	1648	10602503	3.199	7328514	15.236
23		AR1254	04/23/13	1710	10259981	3.201	7152297	15.236
24		AR1660	04/23/13	1732	9610207	3.205	6765963	15.235
25	WL49MBS1	WL49MBS1	04/23/13	1754	10284318	3.207	7683630	15.236
26	WL49LCSS1	WL49LCSS1	04/23/13	1816	10165748	3.206	7566852	15.236
27	ZZZZZ	ZZZZZ	04/23/13	1838	10301000	3.206	7699918	15.235
28	IM-CB-01-201	WL49F	04/23/13	1859	8896861	3.218	14910131*	15.271
29	IM-CB-02-201	WL49G	04/23/13	1921	10060256	3.211	9259857	15.238
30	IM-CB-02-201	WL49GMS	04/23/13	1943	10192509	3.208	6773424	15.238
31	IM-CB-02-201	WL49GMSD	04/23/13	2005	10186147	3.209	7728397	15.237
32	GR-CB-07-201	WL67A	04/23/13	2027	9786447	3.213	17653600*	15.263

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.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 04/16/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	8525322	3.214	6077527	15.246
				UPPER LIMIT	17050644	3.314	12155054	15.346
				LOWER LIMIT	4262661	3.114	3038764	15.146
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
33	GR-WS-05-201	WL67B	04/23/13	2049	9802244	3.213	14991459*	15.246
34	IM-CB-01-201	WL49F	04/23/13	2111	9157275	3.210	7654262	15.240
35	GR-CB-07-201	WL67A	04/23/13	2133	9757803	3.211	7938725	15.239
36	GR-WS-05-201	WL67B	04/23/13	2155	9943648	3.207	7233676	15.236
37		AR1248	04/23/13	2301	9906194	3.206	6215952	15.235
38		AR1660	04/23/13	2323	9841379	3.208	6076952	15.235

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.: WL67 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 04/16/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	5591339	2.771	4375297	14.854
				UPPER LIMIT	11182678	2.871	8750594	14.954
				LOWER LIMIT	2795670	2.671	2187648	14.754
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546				
02		AR1660 .25	04/16/13	1606	5591339	2.771	4375297	14.854
03		AR1660 .02	04/16/13	1627	5596271	2.772	4352111	14.855
04		AR1660 .05	04/16/13	1647	5580646	2.770	4394416	14.855
05		AR1660 1	04/16/13	1708	5497548	2.771	4450563	14.850
06		AR1660 0.1	04/16/13	1729	5547889	2.771	4450577	14.853
07		AR1660 0.5	04/16/13	1749	5500666	2.772	4448503	14.851
08		AR1242	04/16/13	1810	5416449	2.772	4295436	14.854
09		AR1248	04/16/13	1830	5269055	2.770	4171971	14.855
10		AR1254	04/16/13	1851	5495311	2.769	4409997	14.854
11		AR2162	04/16/13	1911	5446032	2.772	4395558	14.854
12		AR3268	04/16/13	1932	5579954	2.772	4509857	14.855
13		AR1660 ICV	04/16/13	1953	5325274	2.770	4313581	14.855
14		AR1242 ICV	04/16/13	2013	5508987	2.771	4423479	14.855
15		AR1248 ICV	04/16/13	2034	5656162	2.771	4633321	14.852
16		AR1254 ICV	04/16/13	2054	5751969	2.772	4697181	14.855
17		AR2162 ICV	04/16/13	2115	5806766	2.771	4739232	14.853
18		AR3268 ICV	04/16/13	2135	5678965	2.770	4626646	14.854
19		DDTS 0.1	04/16/13	2156	5513871	2.769		
20	ZZZZZ	ZZZZZ	04/16/13	2216	5805570	2.770		
21		AR1254	04/23/13	1710	7676793	2.776	6025884	14.851
22		AR1660	04/23/13	1732	7130069	2.780	5697247	14.850
23	WL67MBS1	WL67MBS1	04/23/13	1754	7579277	2.780	6537300	14.850
24	WL67LCSS1	WL67LCSS1	04/23/13	1816	7448891	2.780	6465787	14.850
25	GR-WS-05-201	WL67B	04/23/13	2155	7346497	2.783	5094891	14.854
26		AR1248	04/23/13	2301	7314104	2.782	4667881	14.852
27		AR1660	04/23/13	2323	7411382	2.783	4822919	14.852
28		AR1242	04/24/13	0803	8972878	2.779	6206262	14.852
29		AR1660	04/24/13	0825	7747657	2.781	5432734	14.852
30	GR-CB-07-201	WL67A	04/24/13	0846	7777239	2.783	5998151	14.853
31		AR1248	04/24/13	0908	7376855	2.782	5106171	14.852
32		AR1660	04/24/13	0930	7673323	2.783	5376960	14.852

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

* Indicates value outside QC Limits

8/16/13

WL67: 001760A

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL67 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 04/16/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	8525322	3.214	6077527	15.246
	UPPER LIMIT	17050644	3.314	12155054	15.346
	LOWER LIMIT	4262661	3.114	3038764	15.146

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546	20136*	3.292		
02		AR1660 .25	04/16/13	1606	8525322	3.214	6077527	15.246
03		AR1660 .02	04/16/13	1627	8598192	3.216	5984997	15.248
04		AR1660 .05	04/16/13	1647	8596607	3.214	6084847	15.248
05		AR1660 1	04/16/13	1708	8542994	3.216	6408602	15.245
06		AR1660 0.1	04/16/13	1729	8580903	3.215	6158519	15.246
07		AR1660 0.5	04/16/13	1749	8487736	3.215	6324175	15.246
08		AR1242	04/16/13	1810	8375773	3.215	5833847	15.246
09		AR1248	04/16/13	1830	8150106	3.214	5682178	15.247
10		AR1254	04/16/13	1851	8458741	3.212	5993280	15.247
11		AR2162	04/16/13	1911	8381800	3.215	5896928	15.246
12		AR3268	04/16/13	1932	8556043	3.214	6168153	15.247
13		AR1660 ICV	04/16/13	1953	8177137	3.214	5796454	15.246
14		AR1242 ICV	04/16/13	2013	8450305	3.214	5884105	15.246
15		AR1248 ICV	04/16/13	2034	8702323	3.215	6212763	15.245
16		AR1254 ICV	04/16/13	2054	8808751	3.215	6232306	15.247
17		AR2162 ICV	04/16/13	2115	8866116	3.213	6276279	15.245
18		AR3268 ICV	04/16/13	2135	8638794	3.212	6054334	15.246
19		DDTS 0.1	04/16/13	2156	8408899	3.211		
20	ZZZZZ	ZZZZZ	04/16/13	2216	8797710	3.211		
21		AR1254	04/23/13	1710	10259981	3.201	7152297	15.236
22		AR1660	04/23/13	1732	9610207	3.205	6765963	15.235
23	WL67MBS1	WL67MBS1	04/23/13	1754	10284318	3.207	7683630	15.236
24	WL67LCSS1	WL67LCSS1	04/23/13	1816	10165748	3.206	7566852	15.236
25	GR-WS-05-201	WL67B	04/23/13	2155	9943648	3.207	7233676	15.236
26		AR1248	04/23/13	2301	9906194	3.206	6215952	15.235
27		AR1660	04/23/13	2323	9841379	3.208	6076952	15.235
28		AR1242	04/24/13	0803	11831890	3.203	7553438	15.235
29		AR1660	04/24/13	0825	10306550	3.204	6693134	15.235
30	GR-CB-07-201	WL67A	04/24/13	0846	10517552	3.206	7399273	15.235
31		AR1248	04/24/13	0908	10111638	3.206	6337981	15.234
32		AR1660	04/24/13	0930	10349906	3.206	6619803	15.235

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

* Indicates value outside QC Limits

8/16/13

WL67:001763

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WL67

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: WL67-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 04/11/13

Data Release Authorized:
Reported: 04/22/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-041513	Method Blank	04/17/13	1.0	Diesel	< 5.0 U	5.0	1.4
13-7791		FID3B		Motor Oil	< 10 U	10	2.5
				HC ID	---		
				o-Terphenyl	95.5%		
WL67A	GR-CB-07-20130411-S	04/17/13	50	**Diesel**	**4,700**	610	160
13-7791		FID3B		**Motor Oil**	**16,000**	1,200	300
				HC ID	DRO/MOTOR OIL		
				o-Terphenyl	D		
WL67B	GR-WS-05-20130411-S	04/17/13	50	**Diesel**	**7,000**	920	250
13-7792		FID3B		**Motor Oil**	**23,000**	1,800	450
				HC ID	DRO/MOTOR OIL		
				o-Terphenyl	D		

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
041513MBS	95.5%	0
041513LCS	83.6%	0
GR-CB-07-20130411-S	D	0
GR-CB-07-20130411-S MS	D	0
GR-CB-07-20130411-S MSD	D	0
GR-WS-05-20130411-S	D	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-7791 to 13-7792

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: GR-CB-07-20130411-S
MS/MSD

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized: MW
Reported: 04/22/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Date Extracted MS/MSD: 04/15/13

Date Analyzed MS: 04/17/13 14:18
MSD: 04/17/13 14:38
Instrument/Analyst MS: FID3B/VTS
MSD: FID3B/VTS

Sample Amount MS: 4.11 g-dry-wt
MSD: 4.10 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 50.0
MSD: 50.0
Percent Moisture: 59.1%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	4,700	4,560	365	NA	5,020	366	NA	9.6%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	D	D

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.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LCS-041513
LAB CONTROL

Lab Sample ID: LCS-041513
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/15/13
Date Analyzed: 04/17/13 12:17
Instrument/Analyst: FID3B/VTS

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	123	150	82.0%

TPHD Surrogate Recovery

o-Terphenyl	83.6%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Sediment
Date Received: 04/11/13

ARI Job: WL67
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-7791-041513MB1	Method Blank	10.0 g	1.00 mL	-	04/15/13
13-7791-041513LCS1	Lab Control	10.0 g	1.00 mL	-	04/15/13
13-7791-WL67A	GR-CB-07-20130411-S	4.10 g	1.00 mL	D	04/15/13
13-7791-WL67AMS	GR-CB-07-20130411-S	4.11 g	1.00 mL	D	04/15/13
13-7791-WL67AMSD	GR-CB-07-20130411-S	4.10 g	1.00 mL	D	04/15/13
13-7792-WL67B	GR-WS-05-20130411-S	2.73 g	1.00 mL	D	04/15/13

Basis: D=Dry Weight W=As Received

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WL67MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL67 Project No.: NPDES

Date Extracted: 04/15/13 Matrix: SOLID

Date Analyzed : 04/17/13 Instrument ID : FID3B

Time Analyzed : 1158

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WL67LCSS1	WL67LCSS1	04/17/13
02	GR-CB-07-201	WL67A	04/17/13
03	GR-WS-05-201	WL67B	04/17/13
04	GR-CB-07-201	WL67A	04/17/13
05	GR-CB-07-201	WL67AMS	04/17/13
06	GR-CB-07-201	WL67AMSD	04/17/13
07			
08			
09			
10			
11			
12			
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30			

FORM IV TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES

Calibration Date: 22-MAR-2013 SDG No.: WL67

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	11942	11745	11577	11280	10897	10565	11334	4.6
AK Diesel	14741	14402	14061	13657	13217	12780	13810	5.3
OR Diesel	14785	14452	14109	13705	13264	12828	13857	5.3
Cal Diesel	14721	14382	14041	13635	13196	12760	13789	5.3
o-Terph	15493	15300	15046	14446	14040	12750	14512	7.0

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

Quant Ranges : WA Diesel C12-C24 (3.112-5.835)
AK Diesel C10-C25 (2.342-6.010)
OR Diesel C10-C28 (2.342-6.502)
Cal Diesel C10-C24 (2.342-5.835)

Calibration Files	Analysis Time
0322b005.d	22-MAR-2013 12:48
0322b006.d	22-MAR-2013 13:07
0322b007.d	22-MAR-2013 13:27
0322b008.d	22-MAR-2013 13:46
0322b009.d	22-MAR-2013 14:05
0322b010.d	22-MAR-2013 14:25

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES

Calibration Date: 13-APR-2013 SDG No.: WL67

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	11213	11384	11352	11114	10744	10361	11028	3.6
Triac Surr	15652	15497	15248	15442	15268	14582	15281	2.4

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

Calibration Files	Analysis Time
0413b006.d	13-APR-2013 11:55
0413b007.d	13-APR-2013 12:13
0413b008.d	13-APR-2013 12:32
0413b009.d	13-APR-2013 12:51
0413b010.d	13-APR-2013 13:11
0413b011.d	13-APR-2013 13:30

7a
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 22-MAR-2013
Project: NPDES

CCal Date: 17-APR-2013
SDG No.: WL67

Analysis Time: 10:45
Lab ID: DIESEL#1

Instrument: FID3B.I
Lab File Name: 0417b004.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2770415	244.3	250	-2.3
AK102 (C10-C25)	3276685	237.6	250	-5.0
ITDIES (C10-C24)	3269661	237.1	250	-5.2
Terphenyl	707266	48.7	45	8.3

* 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: 13-APR-2013
Project: NPDES

CCal Date: 17-APR-2013
SDG No.: WL67

Analysis Time: 11:05
Lab ID: MOIL#1

Instrument: FID3B.I
Lab File Name: 0417b005.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5012678	454.5	500	-9.1
AK103 (C25-C36)	4362255	596.2	500	19.2
n-Triacontane	668011	43.7	45	-2.9

* 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: 22-MAR-2013
Project: NPDES

CCal Date: 17-APR-2013
SDG No.: WL67

Analysis Time: 14:58
Lab ID: DIESEL#2

Instrument: FID3B.I
Lab File Name: 0417b016.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2885895	254.5	250	1.8
AK102 (C10-C25)	3386812	245.5	250	-1.8
ITDIES (C10-C24)	3379646	245.1	250	-2.0
Terphenyl	717187	49.4	45	9.8

* 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: 13-APR-2013
Project: NPDES

CCal Date: 17-APR-2013
SDG No.: WL67

Analysis Time: 15:17
Lab ID: MOIL#2

Instrument: FID3B.I
Lab File Name: 0417b017.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	4826622	437.7	500	-12.5
AK103 (C25-C36)	4279253	584.8	500	17.0
n-Triacontane	681204	44.6	45	-0.9

* 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.: WL67 Project: NPDES

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.76

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0944	4.67	6.72
02		RT0413	04/13/13	1002	4.68	6.73
03		IB0413	04/13/13	1021	4.68	6.73
04		DIESEL#1	04/13/13	1040	4.68	6.73
05		MOIL#1	04/13/13	1059	4.67	6.73
06		MOIL100	04/13/13	1155	4.68	6.72
07		MOIL250	04/13/13	1213	4.68	6.72
08		MOIL500	04/13/13	1232	4.69	6.73
09		MOIL1000	04/13/13	1251	4.68	6.74
10		MOIL2500	04/13/13	1311	4.68	6.76
11		MOIL5000	04/13/13	1330	4.67	6.76
12		MOILICV500	04/13/13	1349	4.67	6.73

	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.: WL67 Project: NPDES

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.76 TRIAC: 6.79

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	03/22/13	1131	4.76	6.80
02		RINSE	03/22/13	1150	4.76	6.80
03		RT0322	03/22/13	1209	4.76	6.79
04		IB0322	03/22/13	1229	4.75	6.78
05		DIESEL50	03/22/13	1248	4.74	6.79
06		DIESEL100	03/22/13	1307	4.74	6.79
07		DIESEL250	03/22/13	1327	4.74	6.79
08		DIESEL500	03/22/13	1346	4.75	6.80
09		DIESEL1000	03/22/13	1405	4.76	6.79
10		DIESEL2500	03/22/13	1425	4.78	6.79
11		DIESELICV250	03/22/13	1444	4.74	6.79
12		MOIL100	03/22/13	1504	4.78	6.78
13		MOIL250	03/22/13	1523	4.78	6.78
14		MOIL500	03/22/13	1543	4.78	6.78
15		MOIL1000	03/22/13	1602	4.77	6.79
16		MOIL2500	03/22/13	1622	4.78	6.81
17		MOIL5000	03/22/13	1641	4.78	6.83
18		MOILICV500	03/22/13	1701	4.78	6.79

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL67 Project: NPDES

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: 6.73

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RT0417	04/17/13	1007	4.69	6.73
02	NPDES	DIESEL#1	04/17/13	1045	4.69	6.74
03	NPDES	MOIL#1	04/17/13	1105	4.69	6.73
04	WL67MBS1	WL67MBS1	04/17/13	1158	4.69	6.73
05	WL67LCSS1	WL67LCSS1	04/17/13	1217	4.69	6.73
06	GR-CB-07-201	WL67A	04/17/13	1237	4.69	6.73
07	GR-WS-05-201	WL67B	04/17/13	1338	4.68	
08	GR-CB-07-201	WL67A	04/17/13	1358	4.68	
09	GR-CB-07-201	WL67AMS	04/17/13	1418	4.68	
10	GR-CB-07-201	WL67AMSD	04/17/13	1438	4.68	
11	NPDES	DIESEL#2	04/17/13	1458	4.69	6.72
12	NPDES	MOIL#2	04/17/13	1517	4.68	6.74
13	FORMER IROND	DIESEL#5	04/18/13	0209	4.69	6.74
14	FORMER IROND	MOIL#5	04/18/13	0227	4.68	6.74
15	FORMER IROND	DIESEL#6	04/18/13	0532	4.69	6.72
16	FORMER IROND	MOIL#6	04/18/13	0551	4.68	6.74
17	FUEL FARM SA	DIESEL#7	04/18/13	0921	4.69	6.72

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: WL67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

ARI ID	Client ID	Analysis Date	Range	Result	RL	MDL
MB-041213	Method Blank	04/12/13	Gasoline	< 5.0 U	5.0	1.7
13-7791		PID1	HC ID	---		
			Trifluorotoluene	92.2%		
			Bromobenzene	91.0%		
WL67A	GR-CB-07-201304	104/12/13	Gasoline	< 19 U	19	6.3
13-7791		PID1	HC ID	---		
			Trifluorotoluene	87.2%		
			Bromobenzene	89.5%		
WL67B	GR-WS-05-201304	104/12/13	Gasoline	< 35 U	35	12
13-7792		PID1	HC ID	---		
			Trifluorotoluene	86.5%		
			Bromobenzene	88.2%		

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: WL67
Matrix: Sediment

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-041213	NA	92.2%	91.0%	0
LCS-041213	NA	91.9%	87.5%	0
LCSD-041213	NA	90.7%	87.1%	0
GR-CB-07-20130411-S	NA	87.2%	89.5%	0
GR-WS-05-20130411-S	NA	86.5%	88.2%	0

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

Log Number Range: 13-7791 to 13-7792

FORM II TPHG

WL67 : 091305

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-041213
LAB CONTROL SAMPLE

Lab Sample ID: LCS-041213
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 04/12/13 11:35
LCSD: 04/12/13 12:04
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	47.0	50.0	94.0%	44.8	50.0	89.6%	4.8%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	91.9%	90.7%
Bromobenzene	87.5%	87.1%

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0412

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL67 Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 04/12/13 Matrix: SOIL

Time Analyzed : 1234 Instrument ID : PID1

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0412	LCS0412	04/12/13
02	LCSD0412	LCSD0412	04/12/13
03	GR-CB-07-201	WL67A	04/12/13
04	GR-WS-05-201	WL67B	04/12/13
05			
06			
07			
08			
09			
10			
11			
12			
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30			

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.: WL67

Surr Calibration Date: 15-MAR-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)	38.27273	39.72727	34.27273	33.85075	33.14000	33.12030		
	32.06742	33.04500					34.68702	7.973
$ BB(Surr)	26.90909	26.90909	22.56818	22.22388	21.09000	21.29323		
	20.60112	20.99000					22.82308	11.408

<- 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
0315a013.d	15-MAR-2013 20:08
0315a012.d	15-MAR-2013 19:39
0315a011.d	15-MAR-2013 19:09
0315a010.d	15-MAR-2013 18:40
0315a009.d	15-MAR-2013 18:11
0315a008.d	15-MAR-2013 17:42
0315a007.d	15-MAR-2013 17:12
1023a006.d	15-MAR-2013 16:43

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 12-APR-2013
SDG No.: WL67

Lab File Name: 0412a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	858192	2.40	2.50	-4.1
AKGas (C6-C10)	1382449	2.37	2.50	-5.1
NWGas (Tol-Nap)	895302	2.39	2.50	-4.5
8015C (2MP-TMB)	1705910	2.36	2.50	-5.7

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

FORM VII-GAS

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 12-APR-2013
SDG No.: WL67

Lab File Name: 0412a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	47926	98.8	100.0	-1.2
Bromobenzene	19420	90.9	100.0	-9.1

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 12-APR-2013
SDG No.: WL67

Lab File Name: 0412a013.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	871027	2.43	2.50	-2.7
AKGas (C6-C10)	1429882	2.45	2.50	-1.9
NWGas (Tol-Nap)	907123	2.42	2.50	-3.3
8015C (2MP-TMB)	1758902	2.43	2.50	-2.8

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

FORM VII-GAS

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 12-APR-2013
SDG No.: WL67

Lab File Name: 0412a013.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	49495	100.8	100.0	0.8
Bromobenzene	19613	93.2	100.0	-6.8

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

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

CCal Date: 12-APR-2013 SDG No.: WL67

Lab File Name: 0412a023.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	802460	2.24	2.50	-10.4
AKGas (C6-C10)	1263564	2.17	2.50	-13.3
NWGas (Tol-Nap)	864084	2.30	2.50	-7.9
8015C (2MP-TMB)	1562553	2.16	2.50	-13.6

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

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

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

CCal Date: 12-APR-2013 SDG No.: WL67

Lab File Name: 0412a023.d Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46143	94.1	100.0	-5.9
Bromobenzene	18894	89.3	100.0	-10.7

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

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

					METHOD SURROGATE RT S1 : 7.89 S2 : 15.39	
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		RINSE	10/23/12	0941		
02		RT1023+BCAL1	10/23/12	1010	7.88	15.39
03		GCAL1	10/23/12	1039	7.88	15.39
04		B 200	10/23/12	1750	7.89	15.39
05		B 100	10/23/12	1820	7.88	15.39
06		B 50	10/23/12	1849	7.88	15.39
07		B 25	10/23/12	1918	7.89	15.39
08		B 5	10/23/12	1947	7.88	15.39
09		B 1	10/23/12	2016	7.88	15.39
10		B 0.5	10/23/12	2045	7.88	15.39
11		B 0.25	10/23/12	2115	7.89	15.39
12		BICV	10/23/12	2144	7.88	15.39
13		G 0.10	10/23/12	2213	7.89	15.39
14		G 0.25	10/23/12	2242	7.89	15.39
15		G 1.0	10/23/12	2311	7.89	15.39
16		G 2.5	10/23/12	2340	7.88	15.39
17		G 5.0	10/24/12	0010	7.88	15.39
18		G 10	10/24/12	0039	7.88	15.39
19		GICV	10/24/12	0108	7.88	15.39

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID/PID

Run Date: 03/15/13

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

METHOD SURROGATE RT
S1 : 7.85 S2 : 15.39

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	BTEX 200	BTEX 200	03/15/13	1643	7.85		15.39	
02	BTEX 100	BTEX 100	03/15/13	1712	7.85		15.39	
03	BTEX 50	BTEX 50	03/15/13	1742	7.85		15.39	
04	BTEX 25	BTEX 25	03/15/13	1811	7.85		15.39	
05	BTEX 5	BTEX 5	03/15/13	1840	7.85		15.39	
06	BTEX 1	BTEX 1	03/15/13	1909	7.85		15.39	
07	BTEX 0.5	BTEX 0.5	03/15/13	1939	7.85		15.39	
08	BTEX 0.25	BTEX 0.25	03/15/13	2008	7.85		15.39	
09	BTEX ICV 25	BTEX ICV 25	03/15/13	2037	7.85		15.39	

QC LIMITS

S1 = TFT(Surr) (+/- 0.05 MINUTES)
S2 = BB(Surr) (+/- 0.05 MINUTES)

* Values outside of QC limits.

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL67 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 04/12/13

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

METHOD SURROGATE RT
S1 : 7.84 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT/BCAL 1	RT/BCAL 1	04/12/13	1037	7.84		15.38	
02	NPDES SAMPLI	GCAL 1	04/12/13	1106	7.84		15.38	
03	LCS0412	LCS0412	04/12/13	1135	7.85		15.38	
04	LCSD0412	LCSD0412	04/12/13	1204	7.84		15.38	
05	MB0412	MB0412	04/12/13	1234	7.85		15.38	
06	NPDES SAMPLI	GCAL 2	04/12/13	1631	7.85		15.38	
07	GR-CB-07-201	WL67A	04/12/13	1828	7.85		15.38	
08	GR-WS-05-201	WL67B	04/12/13	1858	7.85		15.38	
09	NPDES SAMPLI	GCAL 3	04/12/13	2124	7.85		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WL67

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
GR-CB-07-20130411-	WL67A	13-7791	
GR-CB-07-20130411-D	WL67ADUP	13-7791	
GR-CB-07-20130411-S	WL67ASPK	13-7791	
GR-WS-05-20130411-	WL67B	13-7792	
PBS	WL67MB1	13-7792	
LCSS	WL67MB1SPK	13-7792	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn Name: Jay Kuhn

Date: 4/22/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GR-CB-07-20130411-S
SAMPLE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Percent Total Solids: 38.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.032	0.5	**1.0**	
3050B	04/15/13	200.8	04/18/13	**7440-38-2**	**Arsenic**	0.22	0.5	**20.2**	
3050B	04/15/13	6010C	04/16/13	7440-41-7	Beryllium	0.063	0.6	0.6	U
3050B	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.030	0.2	**13.6**	
3050B	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.094	1	**219**	
3050B	04/15/13	6010C	04/16/13	**7440-50-8**	**Copper**	0.31	1	**814**	
3050B	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.29	0.6	**954**	
CLP	04/15/13	7471A	04/19/13	**7439-97-6**	**Mercury**	0.0032	0.06	**3.43**	
3050B	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.12	1	**152**	
3050B	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.25	1	1	U
3050B	04/15/13	200.8	04/18/13	**7440-22-4**	**Silver**	0.020	0.5	**2.6**	
3050B	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.0074	0.5	0.5	U
3050B	04/15/13	6010C	04/16/13	**7440-66-6**	**Zinc**	0.75	6	**5,800**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GR-WS-05-20130411-S
SAMPLE

Lab Sample ID: WL67B
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Percent Total Solids: 23.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.056	0.9	**11.5**	
3050B	04/15/13	200.8	04/18/13	**7440-38-2**	**Arsenic**	0.37	0.9	**32.9**	
3050B	04/15/13	6010C	04/16/13	7440-41-7	Beryllium	0.10	1	1	U
3050B	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.051	0.4	**36.0**	
3050B	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.16	2	**218**	
3050B	04/15/13	6010C	04/16/13	**7440-50-8**	**Copper**	0.51	2	**1,700**	
3050B	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.50	1	**1,820**	
CLP	04/15/13	7471A	04/19/13	**7439-97-6**	**Mercury**	0.0052	0.1	**7.2**	
3050B	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.21	2	**235**	
3050B	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.42	2	2	U
3050B	04/15/13	200.8	04/18/13	**7440-22-4**	**Silver**	0.034	0.9	**6.1**	
3050B	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.013	0.9	0.9	U
3050B	04/15/13	6010C	04/16/13	**7440-66-6**	**Zinc**	1.2	10	**15,700**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GR-CB-07-20130411-S
MATRIX SPIKE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/11/13
Date Received: 04/11/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	1.0	3.9	62.2	4.7%	N
Arsenic	200.8	20.2	90.7	62.2	113%	
Beryllium	6010C	0.6 U	128	126	102%	
Cadmium	200.8	13.6	76.1	62.2	100%	
Chromium	200.8	219	278	62.2	94.9%	
Copper	6010C	814	1,020	126	163%	H
Lead	200.8	954	1,010	62.2	90.0%	H
Mercury	7471A	3.43	4.91	0.623	238%	H
Nickel	200.8	152	224	62.2	116%	
Selenium	200.8	1 U	180	199	90.5%	
Silver	200.8	2.6	31.0	62.2	45.7%	N
Thallium	200.8	0.5 U	56.3	62.2	90.5%	
Zinc	6010C	5,800	5,560	126	-190%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GR-CB-07-20130411-S
DUPLICATE

Lab Sample ID: WL67A
LIMS ID: 13-7791
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/11/13
Date Received: 04/11/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	1.0	1.2	18.2%	+/- 0.5	L
Arsenic	200.8	20.2	21.4	5.8%	+/- 20%	
Beryllium	6010C	0.6 U	0.6 U	0.0%	+/- 0.6	L
Cadmium	200.8	13.6	13.3	2.2%	+/- 20%	
Chromium	200.8	219	232	5.8%	+/- 20%	
Copper	6010C	814	625	26.3%	+/- 20%	*
Lead	200.8	954	913	4.4%	+/- 20%	
Mercury	7471A	3.43	3.90	12.8%	+/- 20%	
Nickel	200.8	152	154	1.3%	+/- 20%	
Selenium	200.8	1 U	1 U	0.0%	+/- 1	L
Silver	200.8	2.6	2.6	0.0%	+/- 20%	
Thallium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Zinc	6010C	5,800	4,140	33.4%	+/- 20%	*

Reported in mg/kg-dry

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WL67LCS
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-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	26.2	25.0	105%	
Arsenic	200.8	24.8	25.0	99.2%	
Beryllium	6010C	51.3	50.0	103%	
Cadmium	200.8	26.4	25.0	106%	
Chromium	200.8	24.7	25.0	98.8%	
Copper	6010C	52.7	50.0	105%	
Lead	200.8	25.6	25.0	102%	
Mercury	7471A	0.50	0.50	100%	
Nickel	200.8	26.0	25.0	104%	
Selenium	200.8	80.4	80.0	100%	
Silver	200.8	28.0	25.0	112%	
Thallium	200.8	23.9	25.0	95.6%	
Zinc	6010C	53	50	106%	

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
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WL67MB
LIMS ID: 13-7792
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL67-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	RL	Result	Q
3050B	04/15/13	200.8	04/18/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	04/15/13	6010C	04/16/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	04/15/13	200.8	04/18/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	04/15/13	200.8	04/18/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	04/15/13	6010C	04/16/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	04/15/13	7471A	04/19/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	04/15/13	200.8	04/18/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	04/15/13	6010C	04/16/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS041811	50.0	49.89	**99.8**	50.0	49.07	**98.1**	49.10	**98.2**	49.56	**99.1**	49.98	**100.0**	50.10	**100.2**
Arsenic	AS	PMS	MS041811	50.0	49.96	**99.9**	50.0	49.50	**99.0**	50.24	**100.5**	52.72	**105.4**	52.66	**105.3**	52.18	**104.4**
Beryllium	BE	ICP	IP041671	1000.0	1000.78	**100.1**	1000.0	1017.32	**101.7**	1007.73	**100.8**	997.14	**99.7**	1006.80	**100.7**	996.41	**99.6**
Cadmium	CD	PMS	MS041811	50.0	48.33	**96.7**	50.0	49.66	**99.3**	49.70	**99.4**	50.95	**101.9**	50.78	**101.6**	50.81	**101.6**
Chromium	CR	PMS	MS041811	50.0	47.91	**95.8**	50.0	49.01	**98.0**	49.16	**98.3**	48.29	**96.6**	49.09	**98.2**	49.83	**99.7**
Copper	CU	ICP	IP041671	1000.0	1005.98	**100.6**	1000.0	1060.27	**106.0**	1047.23	**104.7**	1046.03	**104.6**	1065.77	**106.6**	1053.95	**105.4**
Lead	PB	PMS	MS041811	50.0	49.04	**98.1**	50.0	49.60	**99.2**	48.90	**97.8**	48.46	**96.9**	48.16	**96.3**	48.29	**96.6**
Mercury	HG	CVA	HG041901	8.0	8.20	**102.5**	4.0	4.11	**102.8**	4.10	**102.5**	4.04	**101.0**	4.05	**101.3**	4.05	**101.3**
Nickel	NI	PMS	MS041811	50.0	49.47	**98.9**	50.0	50.48	**101.0**	49.85	**99.7**	50.32	**100.6**	50.86	**101.7**	49.66	**99.3**
Silver	AG	PMS	MS041811	50.0	50.07	**100.1**	50.0	50.57	**101.1**	51.77	**103.5**	52.68	**105.4**	52.15	**104.3**	53.35	**106.7**
Thallium	TL	PMS	MS041811	50.0	49.76	**99.5**	50.0	50.98	**102.0**	46.01	**92.0**	46.02	**92.0**	45.65	**91.3**	45.44	**90.9**
Zinc	ZN	ICP	IP041671	1000.0	1015.85	**101.6**	1000.0	1044.61	**104.5**	1053.78	**105.4**	1046.53	**104.7**	1059.17	**105.9**	1037.08	**103.7**

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS041811	50.0	50.86	**101.7**										
Arsenic	AS	PMS	MS041811	50.0	53.81	**107.6**										
Beryllium	BE	ICP	IP041671	1000.0	1020.36	**102.0**	1015.54	**101.6**	1032.40	**103.2**	1034.01	**103.4**				
Cadmium	CD	PMS	MS041811	50.0	51.37	**102.7**										
Chromium	CR	PMS	MS041811	50.0	49.78	**99.6**										
Copper	CU	ICP	IP041671	1000.0	1056.03	**105.6**	1043.21	**104.3**	1061.20	**106.1**	1064.64	**106.5**				
Lead	PB	PMS	MS041811	50.0	48.00	**96.0**										
Mercury	HG	CVA	HG041901	4.0	4.01	**100.3**	4.02	**100.5**	3.99	**99.8**	4.01	**100.3**	4.01	**100.3**	4.00	**100.0**
Nickel	NI	PMS	MS041811	50.0	50.72	**101.4**										
Silver	AG	PMS	MS041811	50.0	53.16	**106.3**										
Thallium	TL	PMS	MS041811	50.0	45.57	**91.1**										
Zinc	ZN	ICP	IP041671	1000.0	1055.96	**105.6**	1050.37	**105.0**	1065.96	**106.6**	1067.88	**106.8**				

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WL67

ANALYTE	EL	M	RUN	CCVTV	CCV12	%R	CCV13	%R	CCV14	%R	CCV15	%R	CCV16	%R	CCV17	%R
Antimony	SB	PMS	MS041811	50.0												
Arsenic	AS	PMS	MS041811	50.0												
Beryllium	BE	ICP	IP041671	1000.0												
Cadmium	CD	PMS	MS041811	50.0												
Chromium	CR	PMS	MS041811	50.0												
Copper	CU	ICP	IP041671	1000.0												
Lead	PB	PMS	MS041811	50.0												
Mercury	HG	CVA	HG041901	4.0	3.99	**99.8**	3.97	**99.3**								
Nickel	NI	PMS	MS041811	50.0												
Silver	AG	PMS	MS041811	50.0												
Thallium	TL	PMS	MS041811	50.0												
Zinc	ZN	ICP	IP041671	1000.0												

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS041912	50.0	49.08	**98.2**	50.0	49.63	**99.3**	48.66	**97.3**	48.27	**96.5**	49.46	**98.9**	48.52	**97.0**
Selenium	SE	PMS	MS041912	80.0	77.32	**96.7**	50.0	50.37	**100.7**	49.94	**99.9**	49.79	**99.6**	50.76	**101.5**	49.98	**100.0**

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WL67

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Arsenic	AS	PMS	MS041912	50.0	49.59	**99.2**										
Selenium	SE	PMS	MS041912	50.0	51.13	**102.3**										

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WL67

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	MS041811	0.2	0.20	**100.0**										
Arsenic	AS	PMS	MS041811	0.2	0.11	**55.0**										
Beryllium	BE	ICP	IP041671	1.0	1.02	**102.0**	1.02	**102.0**	1.03	**103.0**						
Cadmium	CD	PMS	MS041811	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS041811	0.5	0.53	**106.0**										
Copper	CU	ICP	IP041671	2.0	2.10	**105.0**	2.41	**120.5**	2.13	**106.5**						
Lead	PB	PMS	MS041811	0.1	0.10	**100.0**										
Mercury	HG	CVA	HG041901	0.1	0.11	**110.0**										
Nickel	NI	PMS	MS041811	0.5	0.53	**106.0**										
Silver	AG	PMS	MS041811	0.2	0.22	**110.0**										
Thallium	TL	PMS	MS041811	0.2	0.20	**100.0**										
Zinc	ZN	ICP	IP041671	10.0	9.43	**94.3**	10.63	**106.3**	9.67	**96.7**						
Arsenic	AS	PMS	MS041912	0.2	0.19	**95.0**										
Selenium	SE	PMS	MS041912	0.5	0.51	**102.0**										

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: WL67

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS041811	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	MS041811	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	IP041671	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	MS041811	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	MS041811	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	IP041671	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	MS041811	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	HG041901	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS041811	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS041811	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	MS041811	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	IP041671	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

SDG: WL67

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS041811	60.0	0.2	0.2	U										
Arsenic	AS	PMS	MS041811	10.0	0.2	0.2	U										
Beryllium	BE	ICP	IP041671	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U				
Cadmium	CD	PMS	MS041811	5.0	0.1	0.1	U										
Chromium	CR	PMS	MS041811	10.0	0.5	0.5	U										
Copper	CU	ICP	IP041671	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U				
Lead	PB	PMS	MS041811	3.0	0.1	0.1	U										
Mercury	HG	CVA	HG041901	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS041811	40.0	0.5	0.5	U										
Silver	AG	PMS	MS041811	10.0	0.2	0.2	U										
Thallium	TL	PMS	MS041811	10.0	0.2	0.2	U										
Zinc	ZN	ICP	IP041671	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U				

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	C	CCB13	C	CCB14	C	CCB15	C	CCB16	C	CCB17	C
Antimony	SB	PMS	MS041811	60.0	0.2												
Arsenic	AS	PMS	MS041811	10.0	0.2												
Beryllium	BE	ICP	IP041671	5.0	1.0												
Cadmium	CD	PMS	MS041811	5.0	0.1												
Chromium	CR	PMS	MS041811	10.0	0.5												
Copper	CU	ICP	IP041671	25.0	2.0												
Lead	PB	PMS	MS041811	3.0	0.1												
Mercury	HG	CVA	HG041901	0.2	0.1	0.1	U	0.1	U								
Nickel	NI	PMS	MS041811	40.0	0.5												
Silver	AG	PMS	MS041811	10.0	0.2												
Thallium	TL	PMS	MS041811	10.0	0.2												
Zinc	ZN	ICP	IP041671	20.0	10.0												

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS041912	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Selenium	SE	PMS	MS041912	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Arsenic	AS	PMS	MS041912	10.0	0.2	0.2	U										
Selenium	SE	PMS	MS041912	5.0	0.5	0.5	U										

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP041671

SDG: WL67

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	208460.6	205466.3	**102.7**	204050.4	203703.9	**101.9**	201160.5	201746.5	**100.9**
Antimony		1000	-9.1	1016.5	**101.7**	-8.7	1022.5	**102.3**	-9.9	1015.0	**101.5**
Arsenic		1000	33.8	1080.1	**108.0**	32.0	1086.5	**108.7**	32.9	1085.7	**108.6**
Barium		1000	-3.0	1051.0	**105.1**	-3.6	1059.8	**106.0**	-3.7	1043.1	**104.3**
Beryllium		1000	0.2	1000.6	**100.1**	0.1	988.3	**98.8**	0.1	1000.9	**100.1**
Boron			14.9	4.1		14.1	1.0		14.2	3.4	
Cadmium		1000	3.2	1064.0	**106.4**	3.1	1065.5	**106.6**	3.2	1034.3	**103.4**
Calcium	100000	100000	105050.1	103326.5	**103.3**	103988.9	103619.4	**103.6**	103680.1	103789.7	**103.8**
Chromium		1000	-4.4	1054.8	**105.5**	-4.2	1047.7	**104.8**	-3.9	1055.4	**105.5**
Cobalt		1000	2.0	990.5	**99.1**	2.0	1006.4	**100.6**	2.0	994.3	**99.4**
Copper		1000	1.8	1032.5	**103.3**	1.7	1063.4	**106.3**	1.5	1049.2	**104.9**
Iron	200000	200000	194316.2	193236.2	**96.6**	189316.8	189088.0	**94.5**	190553.6	191421.4	**95.7**
Lead		1000	-13.3	985.0	**98.5**	-13.1	994.2	**99.4**	-15.1	989.3	**98.9**
Magnesium	100000	100000	108737.1	102670.4	**102.7**	107725.0	103172.0	**103.2**	106339.0	102698.5	**102.7**
Manganese		1000	0.3	997.8	**99.8**	0.4	979.6	**98.0**	0.2	986.2	**98.6**
Molybdenum			4.8	5.0		5.0	4.5		4.9	4.7	
Nickel		1000	0.3	999.8	**100.0**	1.2	1007.2	**100.7**	0.7	1008.0	**100.8**
Potassium			28.2	29.2		30.0	23.6		14.7	-32.9	
Selenium		1000	-16.3	1002.8	**100.3**	-23.3	1015.7	**101.6**	-24.0	1019.8	**102.0**
Silicon			0.0	-5.6		-1.2	-7.1		-2.6	-7.7	
Silver		1000	-0.5	1047.3	**104.7**	-0.5	1100.0	**110.0**	-0.6	1071.5	**107.2**
Sodium			23.1	12.6		19.1	11.1		16.3	11.0	
Strontium			4.2	4.1		4.1	4.1		4.0	4.1	
Thallium		1000	15.0	988.7	**98.9**	15.5	1006.4	**100.6**	13.1	989.7	**99.0**
Tin			-10.1	-9.7		-11.9	-12.2		-11.6	-10.0	
Titanium			4.4	4.3		3.9	3.6		4.1	3.9	
Vanadium		1000	0.0	985.6	**98.6**	-1.0	1019.1	**101.9**	-0.7	999.8	**100.0**
Zinc		1000	-1.5	993.1	**99.3**	-0.8	994.1	**99.4**	-1.7	1005.1	**100.5**

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS041811

SDG: WL67

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	0.0	18.7	**93.5**						
Barium			0.0	0.1							
Cadmium		20	0.1	20.0	**100.0**						
Chromium		20	0.5	19.2	**96.0**						
Cobalt		20	0.0	19.6	**98.0**						
Copper		20	0.7	20.5	**102.5**						
Manganese		20	0.1	18.3	**91.5**						
Molybdenum	400	400	475.3	499.0	**124.8**						
Nickel		20	0.4	19.7	**98.5**						
Selenium			-0.1	-0.2							
Silver		20	0.0	20.7	**103.5**						
Vanadium			0.1	-0.1							
Zinc		20	0.9	19.6	**98.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS041912

SDG: WL67

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	19.4	**97.0**						
Cadmium		20	0.1	19.9	**99.5**						
Copper		20	0.8	20.2	**101.0**						
Nickel		20	0.3	19.9	**99.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	21.1	**105.5**						
Zinc		20	0.9	19.3	**96.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WL67

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	GR-CB-07-20130411-	WL67APOST	MS041811	489.78	B	8.20	B	500	Sediment	**96.3**
Copper	GR-CB-07-20130411-	WL67APOST	IP041671	9311.06		6472.55		2500	Sediment	**113.5**
Silver	GR-CB-07-20130411-	WL67APOST	MS041811	525.86		21.20	B	500	Sediment	**100.9**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

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: 1/22/2013

SDG: WL67

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	13.7020120	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0911890	0.0000000	-1.1057220	1.4447090	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1795110	0.0000000	0.0000000	0.1469350
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.5964570	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	0.0295099	0.0000000	0.1250000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0309050
Cobalt	228.62	0.0000000	0.0000000	0.1133150	0.0000000	0.0000000	0.0000000	0.0000000	-0.0333930	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1698980	-0.0211960	0.0000000	-0.0491600
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.7025530	0.0000000	0.0000000
Lead	220.35	-0.2707930	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.8104440	1.2410760	0.0536970
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1060020	0.0000000	-1.4277330	-1.1381670	0.0000000	0.5549620
Manganese	257.61	0.0049690	0.0000000	0.0000000	0.0000000	0.0038740	0.0000000	0.0125790	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0117860	0.0000000	0.0000000	0.0509920	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	0.1149780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4775670	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.2795240	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054570	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	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	5.9747620	0.3985520	0.0000000	-0.1326730
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0837380	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0594390	0.0000000	0.0000000	0.1892210	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.3335490	0.0000000	0.0501910
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1801790	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 1/22/2013

SDG: WL67

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.5877940	0.0000000	0.0000000	0.0000000	2.0603180	0.0000000	14.5677200	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.7545320	0.0000000	-3.8306350	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.3991370	0.0000000	0.0000000	0.0000000	-34.6204750	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1174000	0.0000000	0.0000000	0.0000000	0.0000000	0.2171460	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0100680	0.0000000	0.2372710	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9200350	0.0000000	0.0000000	0.0000000	0.0000000	0.0629730	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	0.0938730	0.0834700	0.0738780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3293430	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1425980	0.1557020	0.0000000	0.0000000	1.7571760	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0053240	0.0000000	0.3083290	0.0000000	0.0000000	0.0000000	0.1931400	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	6.3157650	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	-4.9970650	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	-0.1877320	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	-0.4494500	0.0000000	0.4360770	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	0.5722860	0.0000000
Silicon	288.16	-0.1122540	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	-0.3208460	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	-1.6204090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.6226430	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5136310	-0.1873890	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	1.0549050	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1522160	-0.5618640	0.0000000	0.0000000	0.0000000	0.5717940	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2590480	0.0000000	-0.0606610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
GR-CB-07-20130411-	WL67A	1.025	0.0	50.0
GR-CB-07-20130411-D	WL67ADUP	1.027	0.0	50.0
GR-CB-07-20130411-S	WL67ASPK	1.026	0.0	50.0
GR-WS-05-20130411-	WL67B	1.057	0.0	50.0
PBS	WL67MB1	1.000	0.0	50.0
LCSS	WL67MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
GR-CB-07-20130411-	WL67A	1.040	0.0	50.0
GR-CB-07-20130411-D	WL67ADUP	1.044	0.0	50.0
GR-CB-07-20130411-S	WL67ASPK	1.036	0.0	50.0
GR-WS-05-20130411-	WL67B	1.009	0.0	50.0
PBS	WL67MB1	1.000	0.0	50.0
LCSS	WL67MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL67

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
GR-CB-07-20130411-	WL67A	0.211	0.0	50.0
GR-CB-07-20130411-D	WL67ADUP	0.216	0.0	50.0
GR-CB-07-20130411-S	WL67ASPK	0.207	0.0	50.0
GR-WS-05-20130411-	WL67B	0.216	0.0	50.0
PBS	WL67MB1	0.200	0.0	50.0
LCSW	WL67MB1SPK	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: 4/16/2013

SDG: WL67 | RUNID: IP041671 | METHOD: ICP | END DATE: 4/16/2013

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	08401							X					X																		X
S2	S2	1.00	08443												X																		
S3	S3	1.00	08463							X																							X
S4	S4	1.00	08491																														
S5	S5	1.00	08512																														
ICV	ICV	1.00	08580							X					X																		X
ICB	ICB	1.00	09015							X					X																		X
CRI	CRII	1.00	09060							X					X																		X
ICSA	ICSAI	1.00	09102							X					X																		X
ICSAB	ICSABI	1.00	09144							X					X																		X
CCV	CCV1	1.00	09183							X					X																		X
CCB	CCB1	1.00	09223							X					X																		X
ZZZZZZ	WL68MB1	2.00	09265																														
ZZZZZZ	WL68B	2.00	09310																														
ZZZZZZ	WL68A-L	10.00	09351																														
ZZZZZZ	WL68A	2.00	09391																														
ZZZZZZ	WL68ADUP	2.00	09431																														
ZZZZZZ	WL68ASPK	2.00	09471																														
ZZZZZZ	ZZZZZZ	2.00	09502																														
ZZZZZZ	WL68REF1	2.00	09532																														
ZZZZZZ	WL68MB1SPK	2.00	09573																														
CCV	CCV2	1.00	10013							X					X																		X
CCB	CCB2	1.00	10053							X					X																		X
ZZZZZZ	WL68B	5.00	10095																														
ZZZZZZ	WL68A-L	50.00	10135																														
ZZZZZZ	WL68A	10.00	10175																														
ZZZZZZ	WL68ADUP	10.00	10215																														
ZZZZZZ	WL68ASPK	10.00	10255																														
ZZZZZZ	WL68APOST	10.00	10295																														
CCV	CCV3	1.00	10340							X					X																		X
CCB	CCB3	1.00	10380							X					X																		X
CRI	CRIF	1.00	10422							X					X																		X
ICSA	ICSAF	1.00	10463							X					X																		X
ICSAB	ICSABF	1.00	10505							X					X																		X
CCV	CCV4	1.00	10545							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/16/2013

SDG: WL67 | RUNID: IP041671 | METHOD: ICP | END DATE: 4/16/2013

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
CCB	CCB4	1.00	10590							X					X																		X
ZZZZZZ	WL74MB1	2.00	11031																														
ZZZZZZ	WL74B	2.00	11073																														
ZZZZZZ	WL74C	2.00	11113																														
ZZZZZZ	WL74J-L	10.00	11153																														
ZZZZZZ	WL74J	2.00	11195																														
ZZZZZZ	WL74JDUP	2.00	11235																														
ZZZZZZ	WL74JSPK	2.00	11275																														
ZZZZZZ	WL74JPOST	2.00	11315																														
ZZZZZZ	WL74REF1	2.00	11360																														
ZZZZZZ	WL74MB1SPK	2.00	11400																														
CCV	CCV5	1.00	11440							X					X																		X
CCB	CCB5	1.00	11480							X					X																		X
ZZZZZZ	WL74D	2.00	11522																														
ZZZZZZ	WL74E	2.00	11562																														
ZZZZZZ	WL74F	2.00	12003																														
ZZZZZZ	WL74G	2.00	12043																														
ZZZZZZ	WL74H	2.00	12083																														
ZZZZZZ	WL74I	2.00	12123																														
CCV	CCV6	1.00	12163							X					X																		X
CCB	CCB6	1.00	12203							X					X																		X
CRI	CRIF1	1.00	12245							X					X																		X
ICSA	ICSAF1	1.00	12291							X					X																		X
ICSAB	ICSABF1	1.00	12332							X					X																		X
CCV	CCV7	1.00	12373							X					X																		X
CCB	CCB7	1.00	12413							X					X																		X
ZZZZZZ	WL49MB3	2.00	12455																														
ZZZZZZ	WL49G	2.00	12500																														
ZZZZZZ	WL49FDUP	5.00	12541																														
ZZZZZZ	WL49F	5.00	12581																														
ZZZZZZ	WL49FSPK	5.00	13021																														
ZZZZZZ	ZZZZZZ	5.00	13061																														
ZZZZZZ	WL49MB3SPK	2.00	13102																														
CCV	CCV8	1.00	13142							X					X																		X
CCB	CCB8	1.00	13182							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/16/2013

SDG: WL67 | RUNID: IP041671 | METHOD: ICP | END DATE: 4/16/2013

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
PBS	WL67MB1	2.00	13224							X					X																		X
GR-WS-05-20130411-	WL67B	5.00	13270							X					X																		X
GR-CB-07-20130411-D	WL67ADUP	5.00	13310							X					X																		X
GR-CB-07-20130411-	WL67A	5.00	13350							X					X																		X
GR-CB-07-20130411-S	WL67ASPK	5.00	13390							X					X																		X
GR-CB-07-20130411-A	WL67APOST	5.00	13430												X																		
LCSS	WL67MB1SPK	2.00	13470							X					X																		X
CCV	CCV9	1.00	13511							X					X																		X
CCB	CCB9	1.00	13551							X					X																		X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/18/2013

SDG: WL67 | RUNID: MS041811 METHOD: PMS | END DATE: 4/18/2013

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	09040		X		X					X		X									X	X	X					X			
S1	S1	1.00	09080		X		X					X		X									X	X	X					X			
S2	S2	1.00	09120		X		X					X		X									X	X	X					X			
S3	S3	1.00	09170		X		X					X		X									X	X	X					X			
S4	S4	1.00	09210		X		X					X		X									X	X	X					X			
S5	S5	1.00	09270																														
ZZZZZZ	Rinse samp1	1.00	09340																														
ICV	MICV	1.00	09410		X		X					X		X									X	X	X					X			
ICB	ICB	1.00	09480		X		X					X		X									X	X	X					X			
CCV	MCCV1	1.00	09520		X		X					X		X									X	X	X					X			
CCB	CCB1	1.00	09590		X		X					X		X									X	X	X					X			
CRI	MCRI	1.00	10030		X		X					X		X									X	X	X					X			
CRI	MCRI	1.00	10100		X		X					X		X									X	X	X					X			
ICSA	ICSAI	1.00	10140		X		X					X		X									X	X	X					X			
ICSAB	ICSABI	1.00	10200		X		X					X		X									X	X	X					X			
ZZZZZZ	LR200	1.00	10270																														
ZZZZZZ	LR300	1.00	10340																														
ZZZZZZ	B1	1.00	10410																														
CCV	MCCV2	1.00	10470		X		X					X		X									X	X	X					X			
CCB	CCB2	1.00	10540		X		X					X		X									X	X	X					X			
ZZZZZZ	WL49MB1	2.00	11020																														
ZZZZZZ	WL49ADUP	2.00	11060																														
ZZZZZZ	WL49A	2.00	11100																														
ZZZZZZ	WL49ASPK	2.00	11140																														
ZZZZZZ	WL49CDUP	2.00	11180																														
ZZZZZZ	WL49C	2.00	11220																														
ZZZZZZ	WL49CSPK	2.00	11270																														
ZZZZZZ	WL49B	2.00	11310																														
ZZZZZZ	WL49D	2.00	11350																														
ZZZZZZ	WL49MB1SPK	2.00	11390																														
CCV	MCCV3	1.00	11440		X		X					X		X									X	X	X					X			
CCB	CCB3	1.00	11510		X		X					X		X									X	X	X					X			
ZZZZZZ	WL49MB2	2.00	11570																														
ZZZZZZ	WL49MB3	20.00	12010																														
ZZZZZZ	WL49G	20.00	12050																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/18/2013

SDG: WL67 | RUNID: MS041811 | METHOD: PMS | END DATE: 4/18/2013

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
ZZZZZZ	WL49FDUP	20.00	12090																														
ZZZZZZ	WL49F	20.00	12130																														
ZZZZZZ	WL49FSPK	20.00	12170																														
ZZZZZZ	WL49FPOST	20.00	12210																														
ZZZZZZ	WL68B	20.00	12250																														
ZZZZZZ	WL49MB3SPK	20.00	12310																														
ZZZZZZ	WL49MB2SPK	2.00	12350																														
CCV	MCCV4	1.00	12390		X		X					X		X									X	X	X				X			
CCB	CCB4	1.00	12460		X		X					X		X									X	X	X				X			
ZZZZZZ	WL68MB1	20.00	12530																														
ZZZZZZ	WL68B	50.00	12570																														
GR-WS-05-20130411-	WL67B	50.00	13010																					X									
GR-WS-05-20130411-	WL67B	20.00	13050		X		X					X		X									X		X				X			
ZZZZZZ	WL68A-L	100.00	13090																														
ZZZZZZ	WL68A	20.00	13130																														
ZZZZZZ	WL68ADUP	20.00	13170																														
ZZZZZZ	WL68ASPK	20.00	13210																														
ZZZZZZ	WL68APOST	20.00	13260																														
ZZZZZZ	WL68MB1SPK	20.00	13300																														
CCV	MCCV5	1.00	13350		X		X					X		X									X	X	X				X			
CCB	CCB5	1.00	13420		X		X					X		X									X	X	X				X			
PBS	WL67MB1	20.00	13480		X		X					X		X									X	X	X				X			
GR-CB-07-20130411-D	WL67ADUP	50.00	13520																					X									
GR-CB-07-20130411-	WL67A	50.00	13570																					X									
GR-CB-07-20130411-S	WL67ASPK	50.00	14010																					X									
GR-CB-07-20130411-D	WL67ADUP	20.00	14050		X		X					X		X									X		X				X			
GR-CB-07-20130411-	WL67A	20.00	14090		X		X					X		X									X		X				X			
GR-CB-07-20130411-S	WL67ASPK	20.00	14130		X		X					X		X									X		X				X			
GR-CB-07-20130411-A	WL67APOST	20.00	14170		X																				X								
ZZZZZZ	WL68REF1	50.00	14210																														
LCSS	WL67MB1SPK	20.00	14250		X							X		X									X	X	X				X			
CCV	MCCV6	1.00	14310		X		X					X		X									X	X	X				X			
CCB	CCB6	1.00	14370		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: 4/19/2013

SDG: WL67 | RUNID: MS041912 METHOD: PMS | END DATE: 4/19/2013

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	10210				X																			X							
S1	S1	1.00	10250				X																			X							
S2	S2	1.00	10280				X																			X							
S3	S3	1.00	10320				X																			X							
S4	S4	1.00	10360				X																			X							
S5	S5	1.00	10420																														
ZZZZZZ	Rinse sampl	1.00	10480																														
ICV	MICV	1.00	10540				X																			X							
ICB	ICB	1.00	11000				X																			X							
CCV	MCCV1	1.00	11040				X																			X							
CCB	CCB1	1.00	11100				X																			X							
CRI	MCRI	1.00	11140				X																			X							
ICSA	ICSAI	1.00	11170				X																			X							
ICSAB	ICSABI	1.00	11230				X																			X							
ZZZZZZ	B1	1.00	11290																														
CCV	MCCV2	1.00	11340				X																			X							
CCB	CCB2	1.00	11400				X																			X							
ZZZZZZ	WL49MB1	2.00	11460																														
ZZZZZZ	WL49ADUP	2.00	11490																														
ZZZZZZ	WL49A	2.00	11530																														
ZZZZZZ	WL49ASPK	2.00	11570																														
ZZZZZZ	WL49CDUP	2.00	12000																														
ZZZZZZ	WL49C	2.00	12040																														
ZZZZZZ	WL49CSPK	2.00	12070																														
ZZZZZZ	WL49B	10.00	12110																														
ZZZZZZ	WL49D	2.00	12140																														
ZZZZZZ	WL49MB1SPK	2.00	12180																														
CCV	MCCV3	1.00	12220				X																			X							
CCB	CCB3	1.00	12290				X																			X							
ZZZZZZ	WL49MB2	2.00	12320																														
ZZZZZZ	WL49MB3	20.00	12360																														
ZZZZZZ	WL49G	20.00	12390																														
ZZZZZZ	WL49FDUP	20.00	12430																														
ZZZZZZ	WL49F	20.00	12460																														
ZZZZZZ	WL49FSPK	20.00	12500																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/19/2013

SDG: WL67 | RUNID: MS041912 METHOD: PMS | END DATE: 4/19/2013

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	WL74D	20.00	12530																														
ZZZZZZ	WL74E	20.00	12570																														
ZZZZZZ	WL49MB3SPK	20.00	13010																														
ZZZZZZ	WL49MB2SPK	2.00	13040																														
CCV	MCCV4	1.00	13090				X																			X							
CCB	CCB4	1.00	13150				X																			X							
ZZZZZZ	WL68MB1	20.00	13230																														
ZZZZZZ	WL68A-L	100.00	13260																														
ZZZZZZ	WL68A	20.00	13300																														
ZZZZZZ	WL68ADUP	20.00	13330																														
ZZZZZZ	WL68ASPK	20.00	13370																														
ZZZZZZ	ZZZZZZ	20.00	13400																														
ZZZZZZ	WL68B	20.00	13440																														
ZZZZZZ	WL74B	20.00	13470																														
ZZZZZZ	WL68REF1	50.00	13510																														
ZZZZZZ	WL68MB1SPK	20.00	13550																														
CCV	MCCV5	1.00	13590				X																			X							
CCB	CCB5	1.00	14050				X																			X							
PBS	WL67MB1	20.00	14090																							X							
GR-CB-07-20130411-D	WL67ADUP	20.00	14130																							X							
GR-CB-07-20130411-	WL67A	20.00	14160																							X							
GR-CB-07-20130411-S	WL67ASPK	20.00	14200																							X							
GR-WS-05-20130411-	WL67B	20.00	14230																							X							
ZZZZZZ	WL74F	20.00	14270																														
ZZZZZZ	WL74G	20.00	14300																														
ZZZZZZ	WL74H	20.00	14340																														
ZZZZZZ	WL74I	20.00	14370																														
LCSS	WL67MB1SPK	20.00	14410				X																			X							
CCV	MCCV6	1.00	14450				X																			X							
CCB	CCB6	1.00	14520				X																			X							

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/19/2013

SDG: WL67 | RUNID: HG041901 | METHOD: CVA | END DATE: 4/19/2013

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	09452														X																
S0.1	S0.1	1.00	09470														X																
S0.5	S0.5	1.00	09484														X																
S1	S1	1.00	09501														X																
S2	S2	1.00	09515														X																
S5	S5	1.00	09533														X																
S10	S10	1.00	09551														X																
ICV	AICV	1.00	09581														X																
ICB	ICB	1.00	09595														X																
CCV	ACCV1	1.00	10012														X																
CCB	CCB1	1.00	10030														X																
CRA	CRA	1.00	10044														X																
ZZZZZZ	WM16MB1	1.00	10062																														
ZZZZZZ	WM16MB1SPK	1.00	10075																														
ZZZZZZ	WM16MB1SPD	1.00	10093																														
ZZZZZZ	WM16A	1.00	10111																														
ZZZZZZ	WM16ADUP	1.00	10124																														
ZZZZZZ	WM16ASPK	1.00	10142																														
ZZZZZZ	WM16B	1.00	10160																														
ZZZZZZ	WM16C	1.00	10173																														
ZZZZZZ	WM16D	1.00	10191																														
CCV	ACCV2	1.00	10205														X																
CCB	CCB2	1.00	10223														X																
ZZZZZZ	WL49MB3	1.00	10241																														
ZZZZZZ	WL49MB3SPK	1.00	10254																														
ZZZZZZ	WL49F	1.00	10272																														
ZZZZZZ	WL49FDUP	1.00	10290																														
ZZZZZZ	WL49FSPK	1.00	10303																														
ZZZZZZ	WL49G	1.00	10321																														
ZZZZZZ	WL68MB1	1.00	10335																														
ZZZZZZ	WL68MB1SPK	1.00	10352																														
ZZZZZZ	WL68REF1	5.00	10370																														
ZZZZZZ	WL68A	1.00	10384																														
CCV	ACCV3	1.00	10402														X																
CCB	CCB3	1.00	10420														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/19/2013

SDG: WL67 | RUNID: HG041901 | METHOD: CVA | END DATE: 4/19/2013

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	WL68ADUP	1.00	10434																														
ZZZZZZ	WL68ASPK	1.00	10452																														
ZZZZZZ	WL68B	1.00	10465																														
ZZZZZZ	WM28MB1	1.00	10483																														
ZZZZZZ	WM28MB1SPK	1.00	10501																														
ZZZZZZ	WM28A	1.00	10514																														
ZZZZZZ	WM28ADUP	1.00	10532																														
ZZZZZZ	WM28ASPK	1.00	10550																														
ZZZZZZ	WM28B	1.00	10563																														
ZZZZZZ	WM28C	1.00	10581																														
CCV	ACCV4	1.00	10595														X																
CCB	CCB4	1.00	11013														X																
ZZZZZZ	WM28D	1.00	11031																														
ZZZZZZ	WM28E	1.00	11045																														
CCV	ACCV5	1.00	11063														X																
CCB	CCB5	1.00	11081														X																
ZZZZZZ	WL49F	1.00	11100																														
ZZZZZZ	WL49FDUP	1.00	11114																														
ZZZZZZ	WL49FSPK	1.00	11131																														
ZZZZZZ	WL68A	1.00	11145																														
ZZZZZZ	WL68ADUP	1.00	11162																														
ZZZZZZ	WL68ASPK	1.00	11180																														
ZZZZZZ	WM28A	1.00	11193																														
ZZZZZZ	WM28ADUP	1.00	11211																														
ZZZZZZ	WM28ASPK	1.00	11225																														
CCV	ACCV6	1.00	11243														X																
CCB	CCB6	1.00	11261														X																
ZZZZZZ	WL74MB1	1.00	11280																														
ZZZZZZ	WL74MB1SPK	1.00	11294																														
ZZZZZZ	WL74REF1	5.00	11311																														
ZZZZZZ	WL74B	1.00	11325																														
ZZZZZZ	WL74C	1.00	11342																														
ZZZZZZ	WL74D	1.00	11360																														
ZZZZZZ	WL74E	1.00	11374																														
ZZZZZZ	WL74F	1.00	11391																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/19/2013

SDG: WL67 | RUNID: HG041901 | METHOD: CVA | END DATE: 4/19/2013

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	WL74G	1.00	11405																														
ZZZZZZ	WL74H	1.00	11423																														
CCV	ACCV7	1.00	11441														X																
CCB	CCB7	1.00	11455														X																
ZZZZZZ	WL74I	1.00	11473																														
ZZZZZZ	WL74J	1.00	11490																														
ZZZZZZ	WL74JDUP	1.00	11504																														
ZZZZZZ	WL74JSPK	1.00	11522																														
PBW	WL67MB1	1.00	11535														X																
LCSW	WL67MB1SPK	1.00	11553														X																
GR-CB-07-20130411-	WL67A	1.00	11570														X																
GR-CB-07-20130411-D	WL67ADUP	1.00	11584														X																
GR-CB-07-20130411-S	WL67ASPK	1.00	12002														X																
GR-WS-05-20130411-	WL67B	1.00	12015														X																
CCV	ACCV8	1.00	12033														X																
CCB	CCB8	1.00	12051														X																
ZZZZZZ	WM08MB1	1.00	12065																														
ZZZZZZ	WM08MB1SPK	1.00	12083																														
ZZZZZZ	WM08A	1.00	12101																														
ZZZZZZ	WM08ADUP	1.00	12115																														
ZZZZZZ	WM08ASPK	1.00	12132																														
ZZZZZZ	WM08B	1.00	12150																														
ZZZZZZ	WL85MB	1.00	12164																														
ZZZZZZ	WL85MBSPK	1.00	12181																														
ZZZZZZ	WL85A	1.00	12195																														
ZZZZZZ	WL85ADUP	1.00	12212																														
CCV	ACCV9	1.00	12231														X																
CCB	CCB9	1.00	12244														X																
ZZZZZZ	WL85ASPK	1.00	12262																														
ZZZZZZ	WL85B	1.00	12280																														
ZZZZZZ	WL85C	1.00	12294																														
ZZZZZZ	WK89MB	1.00	12312																														
ZZZZZZ	WK89MBSPK	1.00	12325																														
ZZZZZZ	WK89I	1.00	12343																														
ZZZZZZ	WK89IDUP	1.00	12361																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/19/2013

SDG: WL67 | RUNID: HG041901 | METHOD: CVA | END DATE: 4/19/2013

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	WK89ISPK	1.00	12375																														
ZZZZZZ	WM42MB	1.00	12392																														
ZZZZZZ	WM42MBSPK	1.00	12410																														
CCV	ACCV10	1.00	12424														X																
CCB	CCB10	1.00	12442														X																
ZZZZZZ	WM42A	1.00	12460																														
ZZZZZZ	WM42ADUP	1.00	12473																														
ZZZZZZ	WM42ASPK	1.00	12491																														
ZZZZZZ	WM36MB	1.00	12505																														
ZZZZZZ	WM36MBSPK	1.00	12523																														
ZZZZZZ	WM36A	1.00	12541																														
ZZZZZZ	WM36ADUP	1.00	12555																														
ZZZZZZ	WM36ASPK	1.00	12572																														
ZZZZZZ	WM46MB	1.00	12590																														
ZZZZZZ	WM46MBSPK	1.00	13004																														
CCV	ACCV11	1.00	13022														X																
CCB	CCB11	1.00	13040														X																
ZZZZZZ	WM46A	1.00	13054																														
ZZZZZZ	WM46ADUP	1.00	13071																														
ZZZZZZ	WM46ASPK	1.00	13085																														
ZZZZZZ	WM46B	1.00	13103																														
ZZZZZZ	WM46C	1.00	13121																														
CCV	ACCV12	1.00	13135														X																
CCB	CCB12	1.00	13153														X																
GR-CB-07-20130411-	WL67A	1.00	13172																														
GR-CB-07-20130411-D	WL67ADUP	1.00	13185																														
GR-CB-07-20130411-S	WL67ASPK	1.00	13202																														
CCV	ACCV13	1.00	13220														X																
CCB	CCB13	1.00	13234														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WL67

SAMPLE RESULTS-CONVENTIONALS
WL67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Client ID: GR-CB-07-20130411-S
ARI ID: 13-7791 WL67A

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/12/13 041213#1	SM2540B	Percent	0.01	34.10
Total Organic Carbon	04/18/13 041813#1	Plumb,1981	Percent	0.020	9.47

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WL67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/11/13
Date Received: 04/11/13

Client ID: GR-WS-05-20130411-S
ARI ID: 13-7792 WL67B

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/12/13 041213#1	SM2540B	Percent	0.01	25.08
Total Organic Carbon	04/18/13 041813#1	Plumb,1981	Percent	0.020	9.44

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
WL67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

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	04/18/13	Percent	0.097	0.100	97.0%

METHOD BLANK RESULTS-CONVENTIONALS
WL67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

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

Analyte	Date	Units	Blank	QC ID
Total Solids	04/12/13	Percent	< 0.01 U	ICB
Total Organic Carbon	04/18/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WL67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

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	04/18/13	Percent	2.77	2.99	92.6%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WL67

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
GR-MH-03-20130404-S	100.0	100.0	97.0	93.2	86.7	80.4	75.2	70.9	69.4	65.4	55.4	42.9	30.3	17.6
	100.0	100.0	99.1	94.0	86.5	79.9	74.6	70.2	69.6	63.0	51.4	38.6	25.6	16.2
	100.0	100.0	98.2	94.3	87.4	81.2	75.8	71.7	70.0	62.5	50.7	37.6	24.6	13.2
GR-CB-07-20130411-S	100.0	93.9	83.3	76.6	69.7	62.9	57.9	53.9	52.1	15.4	10.3	8.1	6.0	2.4
GR-WS-05-20130411-S	100.0	99.5	94.2	89.7	86.2	84.9	77.3	71.2	68.1	28.0	13.1	9.9	7.4	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.

WL67

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)
GR-MH-03-20130404-S	3.0	3.8	6.5	6.2	5.3	4.3	1.5	4.0	10.0	12.5	12.6	12.7	17.6	70.9
	0.9	5.1	7.4	6.6	5.3	4.4	0.6	6.6	11.6	12.8	13.0	9.4	16.2	70.2
	1.8	3.9	6.9	6.3	5.4	4.1	1.7	7.5	11.8	13.1	13.0	11.4	13.2	71.7
GR-CB-07-20130411-S	16.7	6.7	6.8	6.9	5.0	3.9	1.8	36.7	5.1	2.2	2.1	3.6	2.4	53.9
GR-WS-05-20130411-S	5.8	4.6	3.5	1.2	7.7	6.1	3.1	40.1	14.9	3.2	2.5	3.7	3.7	71.2

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.

WL67

QA SUMMARY

Client.	SAIC	Client Project:	NPDES Sampling Support
ARI Trip Sample ID:	WK49E	Client Project No.:	209977
Client Trip Sample ID:	GR-MH-03-20130404-S	Batch No :	WL67-1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
GR-MH-03-20130404-S	100 0	100.0	97.0	93 2	86.7	80 4	75 2	70.9	69.4	65.4	55.4	42.9	30.3	17.6
	100 0	100 0	99 1	94.0	86.5	79 9	74.6	70.2	69.6	63.0	51 4	38 6	25.6	16.2
	100.0	100 0	98 2	94 3	87.4	81.2	75.8	71.7	70.0	62.5	50.7	37.6	24.6	13.2
AVE	NA	100.00	98.09	93.82	86 87	80.51	75.19	70.91	69.67	63.63	52.50	39.70	26 83	15 67
STDEV	NA	0.00	1 02	0 55	0.49	0.63	0.62	0.77	0 31	1 55	2.54	2.82	3.04	2.25
%RSD	NA	0.00	1.04	0.59	0.57	0.78	0.83	1.08	0.44	2.44	4.83	7.09	11 34	14.35

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	Data Qualifier	Sedigraph Fine Portion Dry Mass (g)
GR-MH-03-20130404-S	4/4/2013	4/11/2013	4/16/2013		3.8
	4/4/2013	4/11/2013	4/16/2013		3.6
	4/4/2013	4/11/2013	4/16/2013		3.9
GR-CB-07-20130411-S	4/11/2013	4/22/2013	4/25/2013		10.5
GR-WS-05-20130411-S	4/11/2013	4/22/2013	4/25/2013		7 6

* 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: WL67

Volatiles Total Solids-voats
Data By: Pat Basilio
Created: 4/24/13

Worklist: 7551
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.	WL67A 13-7791	_____	_____		% 38.78
2.	WL67B 13-7792	_____	_____		% 23.20

* - 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: 4/12/13

Worklist: 4251
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WL67A 13-7791 GR-CB-07-20130411-S	1.19	12.40	5.77	40.9	NR
2.	WL67B 13-7792 GR-WS-05-20130411-S	1.17	13.80	4.61	27.2	NR

WL67 : 00250

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/12/13

Worklist: 4251
Analyst: AC
Comments:

Oven ID: ϕ15

Balance ID: B13929866Z

Samples In: Date: 4.12.13 Time: 17.55 Temp: 104°C Analyst: AC

Samples Out: Date: 4/15/13 Time: 06.38 Temp: 109° Analyst: RR

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WL67A 13-7791 GR-CB-07-20130411-S	1.19	12.4ϕ	5.77		NR
2.	WL67B 13-7792 GR-WS-05-20130411-S	1.17	13.8ϕ	4.61		NR

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 4/25/13

Worklist: 8195
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.	WL67A 13-7791	_____	_____	*	38.8
2.	WL67B 13-7792	_____	_____	*	23.2

* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

Solids Data Entry Report Checked by: DM Date: 4/16/13
Date: 04/16/13 Data Analyst: CB

Solids Determination performed on 04/15/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WL67	A	GR-CB-07-20130411-S	1.005	10.836	4.817	38.78
WL67	B	GR-WS-05-20130411-S	1.000	10.363	3.172	23.20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 04-15-13 Time: 1025 Temp: 101°C Analyst: CB

Removed from Oven: Date: 04-16-13 Time: 0725 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]
WL74	B	0.982	10.170	9.601	—	√
"	C	1.000	10.306	9.805	—	√
"	D	0.990	10.672	9.330	—	√
"	E	0.986	10.630	10.287	—	√
"	F	0.983	10.241	9.788	—	√
"	G	0.973	10.220	8.564	—	√
"	I	0.978	10.458	8.634	—	√
"	J	0.995	10.422	8.709	—	√
"	H	0.993	10.184	8.465	—	√
WL67	A	1.005	10.836	4.817	—	√
"	B	1.000	10.363	3.172	—	√
WL49	F	0.995	10.397	6.126	—	√
"	G	0.979	10.309	9.190	—	√
			CB			
			4-15-13			

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.

WL67 0025

Volatile Raw Data
Preparation Log

ARI Job ID: WL67

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
WL67, WL68, WL85, WL88	Seneca	4/18/2013	N/A	PC

	Lab ID	Vial No.	Preservative: $NaHSO_4$	Preservative: CH_3OH	Preservative: Lot #	Method 5035 Sample Weight: Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	Comments
1	WL67A	1	X		VWT883	42.52	34.98	7.54	5	N/A	
2	WL67B	1			"	41.48	34.99	6.49	"	"	
3	WL68A	3			"	41.81	35.16	6.65	"	"	
4	WL68B	3			"	41.30	34.86	6.44	"	"	
5	WL85A	4			VWT883	39.94	34.83	5.11	"	"	
6	WL85B	4			"	40.42	34.70	5.72	"	"	
7	WL85C	5	"		"	39.49	34.72	4.77	"	10	
8	WL88B	1		X	DB695	33.31	27.966	5.344	"	10	
9	WL88C	1		X	"	31.72	28.154	3.566	"	10	
10											
11	WL88B	2	X		VWT883	40.10	34.33	5.77	5	N/A	
12	C	2	X		"	37.91	34.62	3.29	"	"	
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:	4005004 #T120					

WL67,WL68,WL85,WL88 AV 5/14/13

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WL67

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): 4/16/13 Internal Standard ID VMT74-2 Expiration 5/27/13

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
Ultra	VM7853	6/27/13	Accustd	VM7454	10/1/13
Absolute	"	"	SPEX	VM7831	3/1/13
Restek	"	"	Supelco	"	"
			Ultra	I7148	3/31/13

Detail problems, corrective actions and/or other pertinent information below:

PCM, acetone, naphthalene quad
4 standard calibration (bottom 4 points spiked at 1/2 usual level)
ICV acetone 38.2% – solution with hexane.
ICV acrolein 74.8%, iodomethane 76.0%, DCE 48.6%, trans 1,4 dichloro 2 butene 68%
high point removed acetone, 2 butanone, bromomethane, acrolein, MTBE, 1,1 DCA, acrylonitrile, naphthalene

Analyst: VC **Date:** 4/17/13

Reviewer: [signature] **Date:** 4/17/13

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 4/16/13 Analysis: 8260 Analyst: PL

GC Program: VOA.MTH Column No: 938152 Column Type: RTX VMS

Instrument Tune (.U or .CT.): Pfb1003.u EM Voltage: 1482

Inj. Vol: 5 Calibration File: LB04167 Curve Date: 4/17/13

IS/SS	Ical/Ccal	LCS/ICV
	LW795-3	LW794-4
		LW787-1 37948
		LW795-3

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/16APR13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	1508	bfb0416a.d	BFB0416	BFB0416			1							
2	1610	2000416.d	IC200	200			1	4.67	1625129	5.12	2841409	7.60	2754294	9.68	1431016
3	1634	1500416.d	IC150	150			1	4.65	1628978	5.11	2849514	7.60	2757407	9.67	1469733
4	1658	1000416.d	IC100	100			1	4.66	1614464	5.11	2854552	7.60	2785971	9.67	1487183
5	1722	0500416.d	IC050	IC050			1	4.67	1616720	5.12	2842987	7.60	2779083	9.67	1529325
6	1746	0100416.d	IC005	5			1	4.66	1568560	5.11	2754051	7.59	2655390	9.67	1411599
7	1809	0050416.d	IC0025	2.5			1	4.67	1556549	5.12	2739537	7.59	2648382	9.67	1434013
8	1833	0020416.d	IC001	1			1	4.66	1518888	5.11	2685656	7.59	2596197	9.66	1393772
9	1857	0010416.d	IC0005	0.5			1	4.68	1512456	5.12	2662747	7.59	2575110	9.67	1362220
10	1921	icv0416.d	ICV050	ICV050			1	4.67	1553140	5.12	2745632	7.59	2685907	9.67	1468092
11	1945	lcs0416x.d	LCS0416	LCS0416			1	4.67	1551303	5.11	2757367	7.59	2681532	9.67	1419112
12	2009	lcs0416y.d	LCS0416	LCS0416			1	4.66	1523667	5.11	2687784	7.59	2604247	9.67	1379090
13	2033	lcs0416z.d	LCS0416	LCS0416			1	4.67	1539167	5.12	2741966	7.60	2679108	9.67	1442147
14	2057	mb0416x.d	MB0416	MB0416			1	4.67	1493461	5.11	2679285	7.59	2614087	9.66	1407557
15	2120	wk21n2.d	WK21N	GEI-13-13-16			1	4.66	1502171	5.11	2706250	7.59	2659104	9.67	1461786
16	2144	wk21o2.d	WK21O	GEI-13-23.5-24.5			1	4.67	1537572	5.12	2750234	7.59	2684319	9.67	1438636
17	2208	wk21p2.d	WK21P	GEI-13-25.0-25.5			1	4.66	1474680	5.11	2670501	7.59	2598315	9.66	1380530
18	2232	wk21q2.d	WK21Q	GEI-1-16.5-17.0			1	4.67	1485129	5.12	2692010	7.59	2612856	9.66	1392127

PL 4/17/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/16APR13.b/V0121012S.m
Batch File: /chem1/nt5.i/16APR13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	2000416	1500416	1000416	0500416	0100416	0050416	0020416	0010416	icv0416
INJ.DATE:	16-APR-2013	16-APR-2013	16-APR-2013	16-APR-2013	16-APR-2013	16-APR-2013	16-APR-2013	16-APR-2013	16-APR-2013
INJ.TIME:	16:10	16:34	16:58	17:22	17:46	18:09	18:33	18:57	19:21

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.068	1.034	1.040	1.068	1.040	1.068	1.040	1.062	1.057	1.068	0.975-1.161	1.053	0.014
2 Chloromethane	1.385	1.153	1.159	1.379	1.164	1.193	1.164	1.198	1.362	1.379	1.286-1.473	1.240	0.103
3 Vinyl Chloride	1.238	1.204	1.209	1.238	1.210	1.232	1.215	1.238	1.227	1.238	1.144-1.331	1.223	0.014
4 Bromomethane	1.447	1.408	1.419	1.447	1.419	1.447	1.419	1.447	1.430	1.447	1.354-1.540	1.431	0.016
5 Chloroethane	1.526	1.492	1.504	1.532	1.504	1.532	1.498	1.532	1.521	1.532	1.438-1.625	1.516	0.016
6 Trichlorofluoromethane	1.622	1.589	1.594	1.622	1.594	1.623	1.600	1.628	1.611	1.622	1.529-1.716	1.609	0.015
7 1,1-Dichloroethene	1.979	1.928	1.950	1.979	1.951	1.985	1.962	1.979	1.968	1.979	1.885-2.072	1.964	0.019
8 Carbon Disulfide	1.985	1.934	1.956	1.984	1.956	1.990	1.956	1.984	1.973	1.984	1.891-2.078	1.969	0.019
9 112Trichloro122Trifluo	2.024	1.973	1.996	2.030	2.002	2.030	2.007	2.030	2.013	2.030	1.936-2.123	2.012	0.019
10 Iodomethane	2.081	2.030	2.052	2.081	2.052	2.086	2.064	2.092	2.069	2.081	1.987-2.174	2.067	0.020
11 Bromoethane	2.177	2.126	2.148	2.177	2.149	2.177	2.154	2.188	2.166	2.177	2.083-2.270	2.162	0.020
12 Acrolein	2.301	2.239	2.262	2.296	2.267	2.296	2.256	2.301	2.279	2.296	2.202-2.389	2.277	0.023
13 Methylene Chloride	2.454	2.409	2.426	2.454	2.426	2.454	2.426	2.460	2.437	2.454	2.361-2.547	2.438	0.018
14 Acetone	2.680	2.629	2.652	2.686	2.652	2.686	2.663	2.692	2.669	2.686	2.592-2.779	2.668	0.021
15 Trans-1,2-Dichloroethe	2.590	2.545	2.561	2.595	2.567	2.596	2.579	2.595	2.579	2.595	2.502-2.689	2.578	0.018
16 Methyl tert butyl ethe	2.760	2.754	2.737	2.765	2.731	2.765	2.737	2.759	2.754	2.765	2.672-2.859	2.751	0.013
17 1,1-Dichloroethane	3.195	3.167	3.178	3.206	3.178	3.207	3.184	3.218	3.189	3.206	3.113-3.300	3.191	0.016

Reviewer 1 _____ Date: 4/17/13
Reviewer 2 _____ Date: 4/17/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/16APR13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Acrylonitrile	3.337	3.280	3.297	3.325	3.308	3.325	3.303	3.325	3.314	3.325	3.232-3.419	3.313	0.018
	19 Vinyl Acetate	3.546	3.518	3.523	3.546	3.518	3.540	3.523	3.546	3.535	3.546	3.452-3.639	3.533	0.012
	20 Cis-1,2-Dichloroethene	3.738	3.721	3.727	3.749	3.727	3.744	3.727	3.749	3.738	3.749	3.656-3.843	3.736	0.011
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.466-4.654	+++++	+++++
	22 2,2-Dichloropropane	3.834	3.817	3.823	3.846	3.823	3.846	3.829	3.857	3.834	3.846	3.752-3.939	3.834	0.013
	23 Bromochloromethane	3.925	3.908	3.913	3.930	3.908	3.931	3.914	3.936	3.925	3.930	3.837-4.024	3.921	0.011
	24 Chloroform	4.027	4.010	4.015	4.032	4.010	4.032	4.021	4.032	4.021	4.032	3.939-4.126	4.022	0.009
	25 Carbon Tetrachloride	4.112	4.095	4.100	4.117	4.100	4.123	4.106	4.128	4.112	4.117	4.015-4.220	4.110	0.011
	26 1,1,1-Trichloroethane	4.185	4.168	4.174	4.191	4.168	4.191	4.179	4.196	4.179	4.191	4.097-4.284	4.181	0.010
$	27 Dibromofluoromethane	4.196	4.179	4.185	4.196	4.179	4.196	4.185	4.202	4.191	4.196	4.103-4.290	4.190	0.008
	28 1,1-Dichloropropene	4.304	4.287	4.292	4.309	4.293	4.310	4.298	4.309	4.298	4.309	4.207-4.412	4.300	0.008
	29 2-Butanone	+++++	4.372	4.389	4.400	4.389	4.400	4.383	4.400	4.394	4.400	4.306-4.493	4.391	0.010
	30 Benzene	4.536	4.519	4.524	4.536	4.519	4.536	4.525	4.536	4.530	4.536	4.433-4.638	4.529	0.007
*	31 Pentafluorobenzene	4.672	4.655	4.660	4.672	4.660	4.672	4.660	4.677	4.666	4.672	4.579-4.765	4.666	0.007
$	32 d4-1,2-Dichloroethane	4.666	4.649	4.654	4.666	4.649	4.666	4.655	4.666	4.660	4.666	4.572-4.759	4.659	0.007
	33 1,2-Dichloroethane	4.728	4.711	4.717	4.728	4.711	4.728	4.711	4.722	4.723	4.728	4.626-4.831	4.720	0.008
	34 Trichloroethene	5.068	5.056	5.056	5.067	5.056	5.068	5.056	5.067	5.062	5.067	4.965-5.170	5.062	0.006
*	35 1,4-Difluorobenzene	5.118	5.107	5.113	5.124	5.107	5.124	5.113	5.124	5.118	5.124	5.022-5.226	5.117	0.007
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.590-5.796	+++++	+++++
	37 Dibromomethane	5.424	5.413	5.413	5.424	5.413	5.418	5.407	5.418	5.418	5.424	5.321-5.526	5.416	0.006
	38 1,2-Dichloropropane	5.520	5.509	5.509	5.514	5.503	5.515	5.503	5.514	5.509	5.514	5.412-5.617	5.511	0.006
	39 Bromodichloromethane	5.594	5.582	5.582	5.588	5.582	5.588	5.582	5.588	5.588	5.588	5.485-5.690	5.586	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/16APR13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	40 2-Chloroethyl Vinyl Et	6.131	6.120	6.120	6.125	6.114	6.120	6.114	6.125	6.120	6.125	6.023-6.228	6.121	0.005
	41 Cis 1,3-dichloropropen	6.137	6.131	6.131	6.137	6.125	6.131	6.131	6.137	6.131	6.137	6.034-6.239	6.132	0.004
$	42 d8-Toluene	6.295	6.289	6.289	6.295	6.284	6.290	6.284	6.295	6.289	6.295	6.193-6.397	6.290	0.004
	43 Toluene	6.340	6.335	6.329	6.335	6.323	6.329	6.329	6.335	6.329	6.335	6.232-6.437	6.332	0.005
	44 Tetrachloroethene	6.651	6.646	6.646	6.646	6.640	6.646	6.640	6.646	6.646	6.646	6.494-6.798	6.645	0.003
	45 4-Methyl-2-Pentanone	6.719	6.702	6.702	6.702	6.691	6.697	6.691	6.697	6.697	6.702	6.600-6.805	6.700	0.009
	46 Trans 1,3-Dichloroprop	6.702	6.697	6.697	6.697	6.691	6.697	6.691	6.697	6.697	6.697	6.594-6.799	6.696	0.003
	47 1,1,2-Trichloroethane	6.832	6.827	6.827	6.827	6.821	6.821	6.816	6.827	6.821	6.827	6.724-6.929	6.824	0.005
	48 Chlorodibromomethane	6.968	6.963	6.963	6.963	6.957	6.957	6.957	6.963	6.963	6.963	6.811-7.114	6.961	0.004
	49 1,3-Dichloropropane	7.053	7.047	7.042	7.047	7.042	7.042	7.042	7.047	7.042	7.047	6.895-7.199	7.045	0.004
	50 1,2-Dibromoethane	7.149	7.138	7.138	7.138	7.132	7.138	7.132	7.138	7.138	7.138	7.035-7.240	7.138	0.005
	51 2-Hexanone	7.426	7.415	7.415	7.409	7.404	7.410	7.404	7.409	7.410	7.409	7.257-7.561	7.411	0.007
*	52 d5-Chlorobenzene	7.602	7.596	7.596	7.596	7.591	7.591	7.591	7.590	7.591	7.596	7.444-7.748	7.594	0.004
	53 Chlorobenzene	7.619	7.613	7.607	7.607	7.602	7.608	7.602	7.602	7.608	7.607	7.455-7.759	7.607	0.006
	54 Ethyl Benzene	7.675	7.664	7.664	7.658	7.653	7.653	7.653	7.653	7.658	7.658	7.506-7.810	7.659	0.008
	55 1,1,1,2-Tetrachloroeth	7.692	7.681	7.675	7.675	7.670	7.670	7.670	7.675	7.675	7.675	7.523-7.827	7.676	0.007
	56 m,p-xylene	7.811	7.800	7.794	7.794	7.783	7.789	7.783	7.788	7.789	7.794	7.642-7.946	7.792	0.009
	57 o-Xylene	8.168	8.162	8.156	8.156	8.151	8.151	8.151	8.150	8.151	8.156	8.004-8.308	8.155	0.006
	58 Styrene	8.213	8.207	8.201	8.201	8.196	8.196	8.196	8.196	8.201	8.201	8.049-8.353	8.201	0.006
	59 Bromoform	8.207	8.201	8.196	8.196	8.190	8.190	8.190	8.190	8.190	8.196	8.002-8.389	8.195	0.006
	60 Isopropyl Benzene	8.450	8.445	8.445	8.439	8.433	8.439	8.433	8.439	8.439	8.439	8.246-8.632	8.440	0.005
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.415-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.671	8.665	8.660	8.660	8.660	8.660	8.660	8.660	8.660	8.660	8.508-8.812	8.662	0.004
	63 Bromobenzene	8.750	8.745	8.739	8.739	8.733	8.733	8.733	8.733	8.739	8.739	8.545-8.932	8.738	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/16APR13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	64 N-Propyl Benzene	8.824	8.818	8.812	8.807	8.801	8.801	8.801	8.801	8.807	8.807	8.613-9.000	8.808	0.008
	65 1,1,2,2-Tetrachloroeth	8.886	8.875	8.869	8.869	8.863	8.863	8.863	8.863	8.869	8.869	8.676-9.062	8.869	0.007
	66 2-Chloro Toluene	8.931	8.926	8.920	8.920	8.914	8.914	8.914	8.914	8.914	8.920	8.726-9.113	8.919	0.006
	67 1,3,5-Trimethyl Benzen	9.022	9.010	9.005	8.999	8.993	8.994	8.993	8.993	8.999	8.999	8.806-9.192	9.001	0.010
	68 1,2,3-Trichloropropane	8.982	8.971	8.971	8.965	8.965	8.960	8.965	8.965	8.965	8.965	8.772-9.158	8.968	0.006
	69 Trans-1,4-Dichloro 2-B	9.044	9.033	9.027	9.022	9.022	9.022	9.022	9.022	9.022	9.022	8.828-9.215	9.026	0.008
	70 4-Chloro Toluene	9.090	9.078	9.073	9.073	9.067	9.067	9.067	9.067	9.067	9.073	8.879-9.266	9.072	0.008
	71 T-Butyl Benzene	9.288	9.282	9.276	9.271	9.265	9.265	9.271	9.271	9.271	9.271	9.077-9.464	9.273	0.008
	72 1,2,4-Trimethylbenzene	9.355	9.350	9.344	9.338	9.333	9.333	9.333	9.333	9.339	9.338	9.145-9.532	9.340	0.008
	73 S-Butyl Benzene	9.452	9.446	9.440	9.435	9.429	9.429	9.429	9.429	9.435	9.435	9.241-9.628	9.436	0.008
	74 4-Isopropyl Toluene	9.604	9.593	9.587	9.582	9.576	9.576	9.576	9.576	9.582	9.582	9.388-9.775	9.584	0.010
	75 1,3-Dichlorobenzene	9.616	9.604	9.599	9.593	9.587	9.588	9.587	9.587	9.593	9.593	9.400-9.786	9.595	0.010
*	76 d4-1,4-Dichlorobenzene	9.684	9.672	9.672	9.667	9.667	9.667	9.661	9.666	9.667	9.667	9.474-9.860	9.669	0.006
	77 1,4-Dichlorobenzene	9.701	9.689	9.683	9.684	9.678	9.678	9.678	9.678	9.678	9.684	9.491-9.877	9.683	0.008
	78 N-Butyl Benzene	9.989	9.978	9.972	9.966	9.961	9.961	9.961	9.961	9.966	9.966	9.773-10.160	9.968	0.010
$	79 d4-1,2-Dichlorobenzene	10.068	10.057	10.057	10.051	10.046	10.046	10.046	10.046	10.051	10.051	9.858-10.245	10.052	0.008
	80 1,2-Dichlorobenzene	10.074	10.068	10.062	10.057	10.057	10.057	10.057	10.057	10.057	10.057	9.864-10.251	10.061	0.006
	81 1,2-Dibromo 3-Chloropr	10.821	10.809	10.809	10.809	10.809	10.804	10.804	10.809	10.809	10.809	10.616-11.003	10.809	0.005
	82 Hexachloro 1,3-Butadie	11.516	11.499	11.488	11.488	11.482	11.483	11.483	11.482	11.482	11.488	11.295-11.682	11.489	0.012
	83 1,2,4-Trichlorobenzene	11.505	11.488	11.477	11.477	11.471	11.471	11.471	11.471	11.471	11.477	11.284-11.670	11.478	0.012
	84 Naphthalene	11.816	11.794	11.788	11.788	11.782	11.782	11.782	11.782	11.782	11.788	11.595-11.982	11.789	0.011
	85 1,2,3-Trichlorobenzene	12.003	11.980	11.975	11.969	11.963	11.963	11.963	11.963	11.969	11.969	11.776-12.163	11.972	0.013

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/16APR13.b

ARI Job No.: IC00 Method: VO121012S.m Instrument: nt5.i Date: 16-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1857	0010416.d	IC0005	0.5	1	Chloromethane, Acrolein, Acetone, 1,1-Dichloroethene, Acrylonitrile, 2,2-Dichloropropane, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene, Methyl tert butyl ether,
1833	0020416.d	IC001	1	1	Chloromethane, Acrolein, Acetone, Iodomethane, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
1809	0050416.d	IC0025	2.5	1	Chloromethane, Acrolein, Acetone, Acrylonitrile, 1,2,3-Trichloropropane,
1746	0100416.d	IC005	5	1	Chloromethane, Acrylonitrile,
1722	0500416.d	IC050	IC050	1	Chloromethane, Acetone, Dichlorodifluoromethane,
1658	1000416.d	IC100	100	1	Chloromethane, Vinyl Chloride, Dichlorodifluoromethane,
1634	1500416.d	IC150	150	1	Chloromethane, Vinyl Chloride, Acetone, Dichlorodifluoromethane,
1610	2000416.d	IC200	200	1	Chloromethane, Dichlorodifluoromethane,
1921	icv0416.d	ICV050	ICV050	1	Chloromethane, Vinyl Chloride, Dichlorodifluoromethane,

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:10
End Cal Date : 16-APR-2013 18:57
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/VO121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/16APR13.b/0010416.d
Level 2: /chem1/nt5.i/16APR13.b/0020416.d
Level 3: /chem1/nt5.i/16APR13.b/0050416.d
Level 4: /chem1/nt5.i/16APR13.b/0100416.d
Level 5: /chem1/nt5.i/16APR13.b/0500416.d
Level 6: /chem1/nt5.i/16APR13.b/1000416.d
Level 7: /chem1/nt5.i/16APR13.b/1500416.d
Level 8: /chem1/nt5.i/16APR13.b/2000416.d

Compound	0.50000 Level 1 / 150.000 Level 7	1.000 Level 2 / 200.000 Level 8	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
1 Dichlorodifluoromethane	0.42924	0.38963	0.41057	0.39377	0.38665	0.38410		
	0.40706	0.41160					0.40158	3.891
2 Chloromethane	0.85669	0.70005	0.65258	0.67084	0.62653	0.65582		
	0.73823	0.73306					0.70423	10.381
3 Vinyl Chloride	0.63063	0.60383	0.62459	0.63868	0.63981	0.60698		
	0.67039	0.69194					0.63836	4.709
4 Bromomethane	0.34930	0.33103	0.31520	0.30140	0.29425	0.28410		
	0.29633	+++++					0.31023	7.437
5 Chloroethane	0.46163	0.38792	0.37351	0.37592	0.36634	0.35760		
	0.39675	0.36791					0.38595	8.547
6 Trichlorofluoromethane	0.73179	0.67490	0.69075	0.67983	0.67348	0.66060		
	0.66945	0.73221					0.68913	4.035

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:10
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
7 1,1-Dichloroethene	0.46362	0.42883	0.43699	0.44394	0.43828	0.42764			
	0.32470	0.49281					0.43210	11.218	
8 Carbon Disulfide	1.67912	1.50959	1.49650	1.49889	1.48372	1.42625			
	0.97723	1.51042					1.44772	14.045	
9 112Trichloro122Trifluoroethan	0.43750	0.38982	0.41088	0.41106	0.40559	0.38763			
	0.29588	0.46553					0.40049	12.330	
10 Iodomethane	0.56299	0.53091	0.50020	0.51088	0.52532	0.49753			
	+++++	+++++					0.52130	4.672	
11 Bromoethane	0.33859	0.30921	0.29166	0.29925	0.29375	0.26892			
	0.21255	0.33192					0.29323	13.488	
12 Acrolein	+++++	0.09221	0.07660	0.07249	0.07251	0.05466			
	0.05976	+++++					0.07137	18.571	
13 Methylene Chloride	+++++	1.19555	0.75563	0.55402	0.45408	0.38135			
	0.47697	0.42832					0.60656	47.326	<-
14 Acetone	+++++	0.45405	0.28784	0.19584	0.22755	0.18777			
	0.23387	+++++					0.26449	37.573	<-
15 Trans-1,2-Dichloroethene	0.52583	0.50165	0.49876	0.44558	0.47468	0.41904			
	+++++	+++++					0.47759	8.278	

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
16 Methyl tert butyl ether	1.53519	1.45541	1.35812	1.30378	1.42258	1.33359			
	1.34741	+++++					1.39372	5.841	
17 1,1-Dichloroethane	1.07025	0.99194	0.99640	1.00741	0.98732	0.95871			
	1.00062	+++++					1.00181	3.388	
18 Acrylonitrile	0.27055	0.19073	0.17633	0.18619	0.18976	0.18128			
	0.16631	+++++					0.19445	17.802	
19 Vinyl Acetate	1.21194	1.10314	1.10371	1.15656	1.19310	1.14167			
	1.07609	1.11172					1.13724	4.174	
20 Cis-1,2-Dichloroethene	0.58990	0.52660	0.51346	0.53193	0.51969	0.51010			
	0.53546	0.55710					0.53553	4.940	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	0.78746	0.73498	0.74361	0.75716	0.75747	0.74678			
	0.79380	0.82932					0.76882	4.161	
23 Bromochloromethane	0.25396	0.23741	0.21543	0.22441	0.22190	0.21889			
	0.24622	0.23982					0.23225	6.047	
24 Chloroform	0.99401	0.88812	0.87410	0.87417	0.86604	0.85088			
	0.88438	0.90929					0.89262	4.970	

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.40285	0.38886	0.38736	0.39446	0.39635	0.38877			
	0.42160	0.43778					0.40225	4.522	
26 1,1,1-Trichloroethane	0.85907	0.82791	0.82531	0.80705	0.82074	0.80657			
	0.85541	0.88322					0.83566	3.279	
28 1,1-Dichloropropene	0.47534	0.41290	0.42712	0.49247	0.42714	0.42032			
	0.45299	0.46810					0.44705	6.558	
29 2-Butanone	0.06645	0.06070	0.04971	0.05545	0.05702	0.05491			
	0.05024	+++++					0.05636	10.389	<-
30 Benzene	1.35214	1.24964	1.25883	1.25488	1.22391	1.14324			
	1.11132	1.04551					1.20493	8.145	
33 1,2-Dichloroethane	0.47996	0.41865	0.38482	0.40835	0.39726	0.38671			
	0.38128	0.39318					0.40628	7.952	
34 Trichloroethene	0.33169	0.28937	0.29096	0.30521	0.29912	0.29684			
	0.31751	0.33089					0.30770	5.525	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.18008	0.16020	0.15041	0.15824	0.15960	0.15535			
	0.15596	0.16384					0.16046	5.521	

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.36166	0.34204	0.32327	0.33207	0.33337	0.32761		
	0.34126	0.35100					0.33903	3.745
39 Bromodichloromethane	0.42933	0.38775	0.37774	0.38287	0.38579	0.37987		
	0.38777	0.39661					0.39097	4.230
40 2-Chloroethyl Vinyl Ether	0.18530	0.17837	0.17120	0.18491	0.20048	0.19794		
	0.19241	0.20239					0.18912	5.869
41 Cis 1,3-dichloropropene	0.50234	0.47696	0.46280	0.50158	0.50110	0.48552		
	0.49138	0.49669					0.48980	2.873
43 Toluene	0.99281	0.86299	0.83744	0.81537	0.78837	0.74423		
	0.73929	0.70678					0.81091	11.172
44 Tetrachloroethene	0.34783	0.32883	0.32402	0.33079	0.32260	0.31866		
	0.34927	0.36171					0.33546	4.614
45 4-Methyl-2-Pentanone	0.13500	0.11933	0.11237	0.12685	0.13580	0.12634		
	0.11231	0.11501					0.12288	7.771
46 Trans 1,3-Dichloropropene	0.46245	0.42587	0.43110	0.44153	0.46041	0.44304		
	0.43723	0.44176					0.44293	2.898
47 1,1,2-Trichloroethane	0.26788	0.22814	0.22827	0.23770	0.24192	0.23475		
	0.23417	0.24235					0.23940	5.304

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/VO121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.31272	0.28162	0.27456	0.28174	0.28593	0.28002		
	0.28225	0.29194					0.28635	4.104
49 1,3-Dichloropropane	0.50561	0.45908	0.43196	0.45624	0.45583	0.43723		
	0.43069	0.43687					0.45169	5.461
50 1,2-Dibromoethane	0.27190	0.24028	0.21672	0.22699	0.23290	0.22708		
	0.22215	0.23103					0.23363	7.272
51 2-Hexanone	0.24374	0.22286	0.20093	0.22562	0.22714	0.20068		
	0.17415	0.18719					0.21029	11.102
53 Chlorobenzene	0.95542	0.88033	0.87549	0.87821	0.81692	0.76776		
	0.75880	0.72447					0.83217	9.404
54 Ethyl Benzene	1.66140	1.52346	1.54966	1.56080	1.45631	1.27205		
	1.16818	1.07128					1.40789	15.012
55 1,1,1,2-Tetrachloroethane	0.32511	0.30158	0.28522	0.29655	0.29659	0.28951		
	0.29979	0.30389					0.29978	3.987
56 m,p-xylene	0.61759	0.55779	0.57190	0.57942	0.55657	0.50423		
	0.48020	0.44564					0.53917	10.616
57 o-Xylene	0.57143	0.51766	0.53410	0.54727	0.54326	0.52911		
	0.54484	0.54409					0.54147	2.901

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/VO121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
58 Styrene	0.98881	0.92223	0.90581	0.93206	0.91869	0.84956			
	0.81252	0.75541					0.88564	8.455	
59 Bromoform	0.43304	0.35533	0.34240	0.36201	0.36646	0.36609			
	0.36016	0.37526					0.37009	7.342	
60 Isopropyl Benzene	2.82737	2.57546	2.64423	2.72392	2.50121	2.25561			
	2.09093	1.91691					2.44195	13.169	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
63 Bromobenzene	0.73887	0.67411	0.64216	0.65895	0.60976	0.61174			
	0.63718	0.66031					0.65413	6.287	
64 N-Propyl Benzene	3.44937	3.14259	3.20123	3.27676	2.89718	2.53854			
	2.33115	2.11628					2.86914	16.943	
65 1,1,2,2-Tetrachloroethane	0.65760	0.60587	0.53955	0.59644	0.58839	0.57798			
	0.55977	0.58709					0.58909	5.905	
66 2-Chloro Toluene	2.15699	1.94239	1.89488	1.94147	1.81414	1.71749			
	1.67179	1.58791					1.84088	9.885	
67 1,3,5-Trimethyl Benzene	2.36144	2.16696	2.18103	2.27628	2.11781	1.97122			
	1.88733	1.77397					2.09200	9.533	

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	150.000 Level 7	200.000 Level 8	___ RRF	% RSD
68 1,2,3-Trichloropropane	0.18962	0.18583	0.16735	0.17804	0.17771	0.17468	0.16771	0.17807	0.17737	4.385
69 Trans-1,4-Dichloro 2-Butene	0.32264	0.24710	0.21319	0.23351	0.23468	0.22758	0.22060	0.23922	0.24232	14.087
70 4-Chloro Toluene	2.31600	2.04822	2.02478	2.05210	1.87734	1.77552	1.72488	1.64068	1.93244	11.392
71 T-Butyl Benzene	2.04541	1.90544	1.91972	1.98753	1.88389	1.76975	1.72629	1.62839	1.85830	7.514
72 1,2,4-Trimethylbenzene	2.32026	2.17704	2.22094	2.24642	2.08891	1.93485	1.83053	1.70379	2.06534	10.638
73 S-Butyl Benzene	3.12541	2.82073	2.89797	2.97597	2.71338	2.40082	2.20744	2.01495	2.64458	14.907
74 4-Isopropyl Toluene	2.50929	2.28682	2.36162	2.44837	2.27136	2.06062	1.90783	1.75389	2.19997	12.147
75 1,3-Dichlorobenzene	1.49455	1.29820	1.23760	1.24594	1.17061	1.14206	1.14047	1.10424	1.22921	10.200
77 1,4-Dichlorobenzene	1.63329	1.39958	1.30463	1.31745	1.19137	1.16496	1.17260	1.16030	1.29302	12.631

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/VO121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
78 N-Butyl Benzene	2.48858	2.22102	2.28280	2.31438	2.14713	1.97533			
	1.86995	1.75685					2.13201	11.561	
80 1,2-Dichlorobenzene	1.50123	1.31808	1.23381	1.23680	1.12115	1.08896			
	1.08615	1.08883					1.20937	12.118	
81 1,2-Dibromo 3-Chloropropane	0.14990	0.11899	0.10164	0.11559	0.11225	0.10856			
	0.10143	0.10931					0.11471	13.496	
82 Hexachloro 1,3-Butadiene	0.62310	0.53807	0.53305	0.51250	0.49672	0.49360			
	0.51514	0.54767					0.53248	7.764	
83 1,2,4-Trichlorobenzene	1.09813	0.94775	0.89518	0.87608	0.82147	0.82937			
	0.85184	0.89432					0.90177	9.885	
84 Naphthalene	+++++	3.26090	2.41377	2.28416	1.86960	1.69544			
	1.52257	+++++					2.17441	29.065	<-
85 1,2,3-Trichlorobenzene	1.06099	0.93394	0.83097	0.84501	0.75818	0.74809			
	0.75550	0.80643					0.84239	12.780	
$ 27 Dibromofluoromethane	0.54052	0.54067	0.53124	0.53996	0.54485	0.55415			
	0.54567	0.55041					0.54343	1.296	
$ 32 d4-1,2-Dichloroethane	0.63342	0.62586	0.60540	0.61736	0.62045	0.62606			
	0.60496	0.60669					0.61753	1.759	

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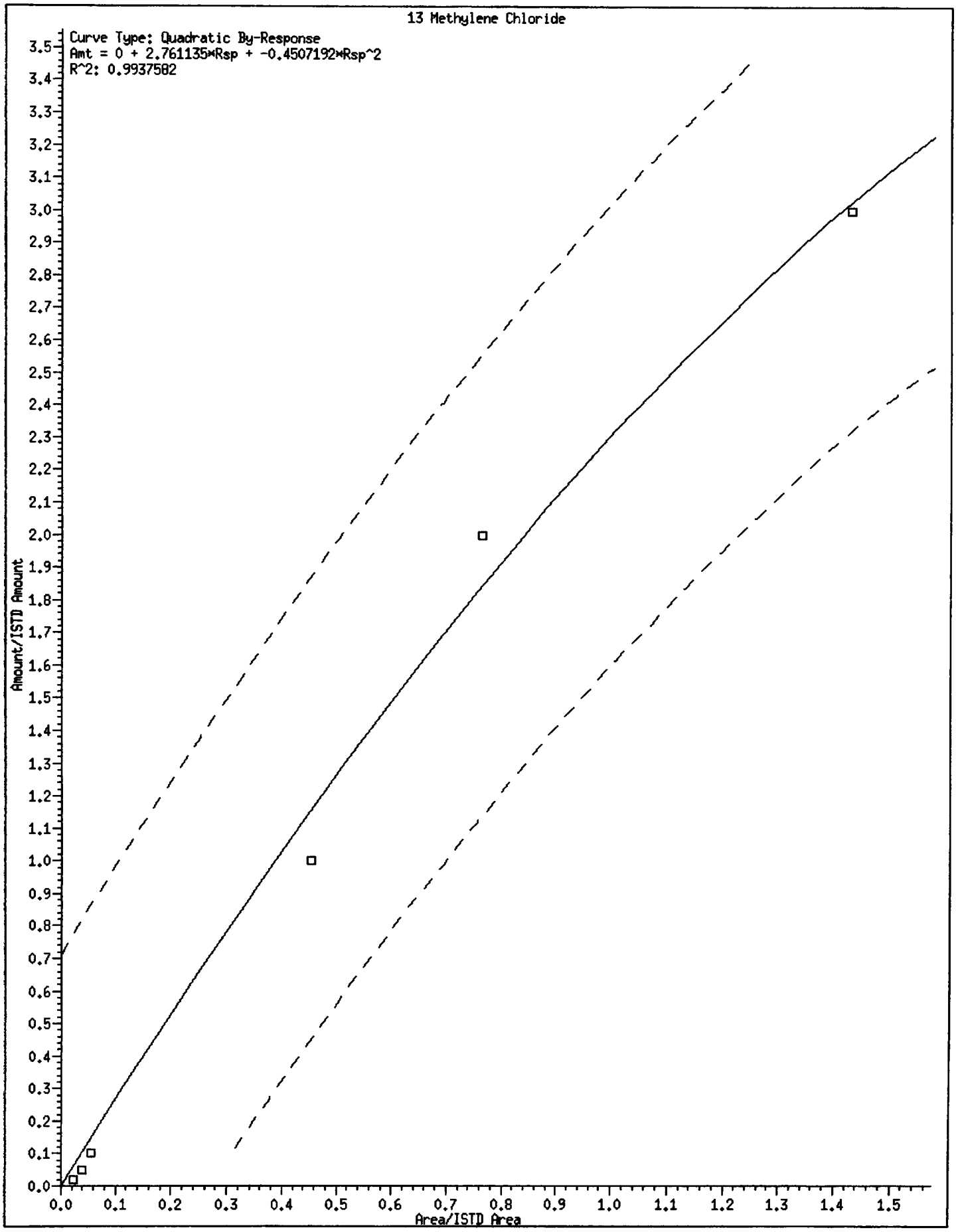
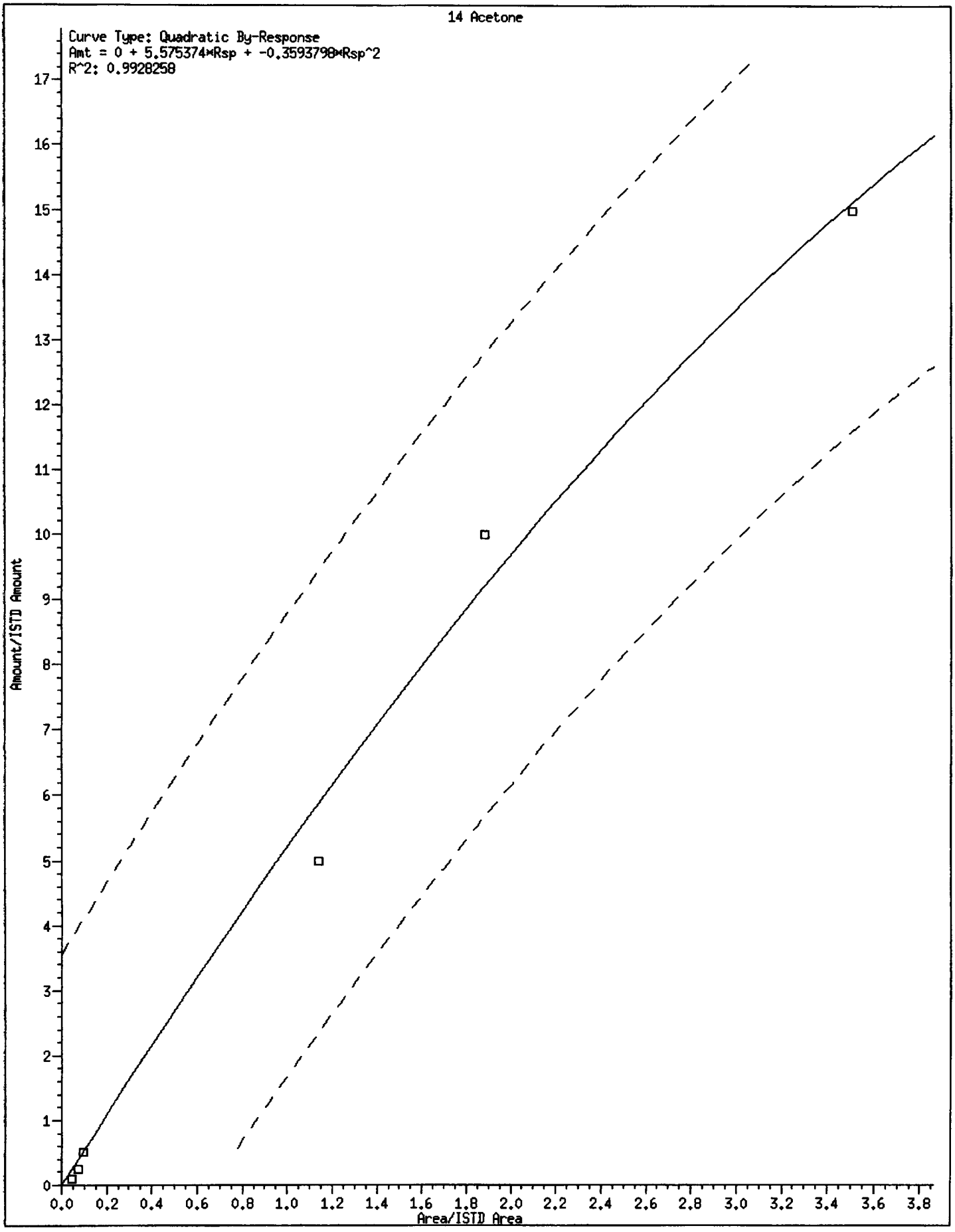
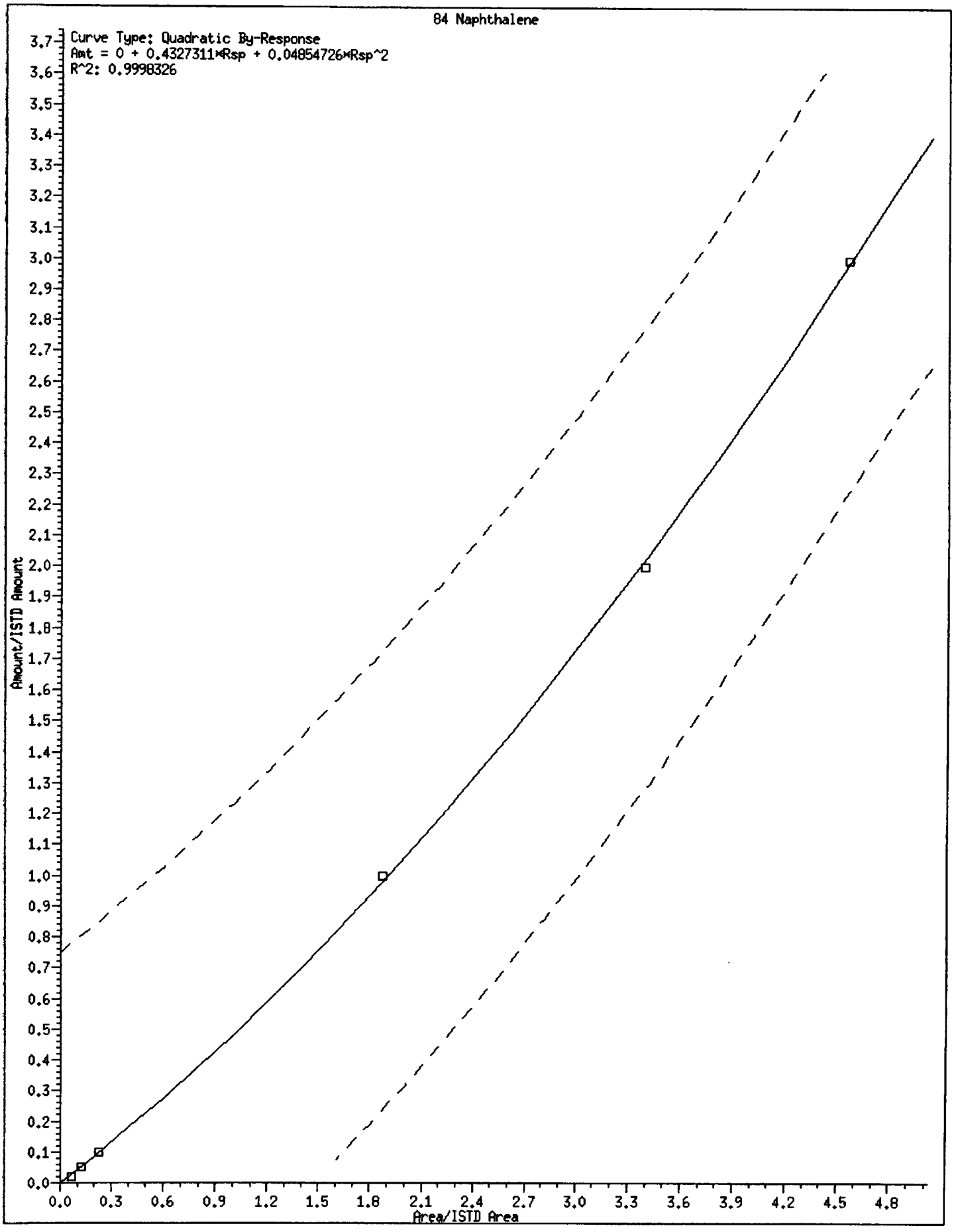
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul
Curve Type : Average

Compound	0.50000 Level 1	1.000 Level 2	2.500 Level 3	5.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
$ 42 d8-Toluene	1.27203	1.27090	1.26721	1.27403	1.26932	1.26696		
	1.27083	1.26465					1.26949	0.242
$ 62 4-Bromofluorobenzene	0.54077	0.54149	0.54193	0.53828	0.53903	0.53081		
	0.52644	0.52380					0.53532	1.350
$ 79 d4-1,2-Dichlorobenzene	0.92565	0.92024	0.90926	0.91804	0.90849	0.91217		
	0.89875	0.90122					0.91173	1.017


13 Methylene Chloride
Curve Type: Quadratic By-Response
Amt = 0 + 2.761135*Rsp + -0.4507192*Rsp^2
R^2: 0.9937582
Amount/ISTD Amount
Area/ISTD Area
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
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


14 Acetone
Curve Type: Quadratic By-Response
Amt = 0 + 5.575374*Rsp + -0.3593798*Rsp^2
R^2: 0.9928258
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
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


84 Naphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 0.4327311*Rsp + 0.04854726*Rsp^2
R^2: 0.9998326
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
4.8

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:10
End Cal Date : 16-APR-2013 18:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul

Compound	0.5000 Level 1	1 Level 2	2 Level 3	5 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	0.33859	0.30921	0.29166	0.29925	0.29375	0.26892					
	0.21255	0.33192					AVRG		0.29323		13.48776
12 Acrolein	+++++	0.09221	0.07660	0.07249	0.07251	0.05466					
	0.05976	+++++					AVRG		0.07137		18.57066
13 Methylene Chloride	+++++	36318	58809	86902	734128	1231347					
	2330906	+++++					QUAD	0.000e+00	2.76114	-0.45072	0.99376
14 Acetone	+++++	68965	112009	153591	1839450	3031480					
	5714622	+++++					QUAD	0.000e+00	5.57537	-0.35938	0.99283
15 Trans-1,2-Dichloroethene	0.52583	0.50165	0.49876	0.44558	0.47468	0.41904					
	+++++	+++++					AVRG		0.47759		8.27817
16 Methyl tert butyl ether	1.53519	1.45541	1.35812	1.30378	1.42258	1.33359					
	1.34741	+++++					AVRG		1.39372		5.84140
17 1,1-Dichloroethane	1.07025	0.99194	0.99640	1.00741	0.98732	0.95871					
	1.00062	+++++					AVRG		1.00181		3.38764

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:10
End Cal Date : 16-APR-2013 18:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul

Compound	0.5000 Level 1	1 Level 2	2 Level 3	5 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	1.09813	0.94775	0.89518	0.87608	0.82147	0.82937					
	0.85184	0.89432					AVRG		0.90177		9.88456
84 Naphthalene	+++++	90899	173069	322432	2859226	5042853					
	6621969	+++++					QUAD	0.000e+00	0.43273	0.04855	0.99983
85 1,2,3-Trichlorobenzene	1.06099	0.93394	0.83097	0.84501	0.75818	0.74809					
	0.75550	0.80643					AVRG		0.84239		12.78003
$ 27 Dibromofluoromethane	0.54052	0.54067	0.53124	0.53996	0.54485	0.55415					
	0.54567	0.55041					AVRG		0.54343		1.29626
$ 32 d4-1,2-Dichloroethane	0.63342	0.62586	0.60540	0.61736	0.62045	0.62606					
	0.60496	0.60669					AVRG		0.61753		1.75911
$ 42 d8-Toluene	1.27203	1.27090	1.26721	1.27403	1.26932	1.26696					
	1.27083	1.26465					AVRG		1.26949		0.24161
$ 62 4-Bromofluorobenzene	0.54077	0.54149	0.54193	0.53828	0.53903	0.53081					
	0.52644	0.52380					AVRG		0.53532		1.35027

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:10
End Cal Date : 16-APR-2013 18:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/16APR13.b/V0121012S.m
Cal Date : 17-Apr-2013 11:30 paul

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

PG 4/16/13

Data File: /chem1/nt5.i/16APR13.b/bfb0416a.d

Date : 16-APR-2013 15:08

Client ID: BFB0416

Instrument: nt5.i

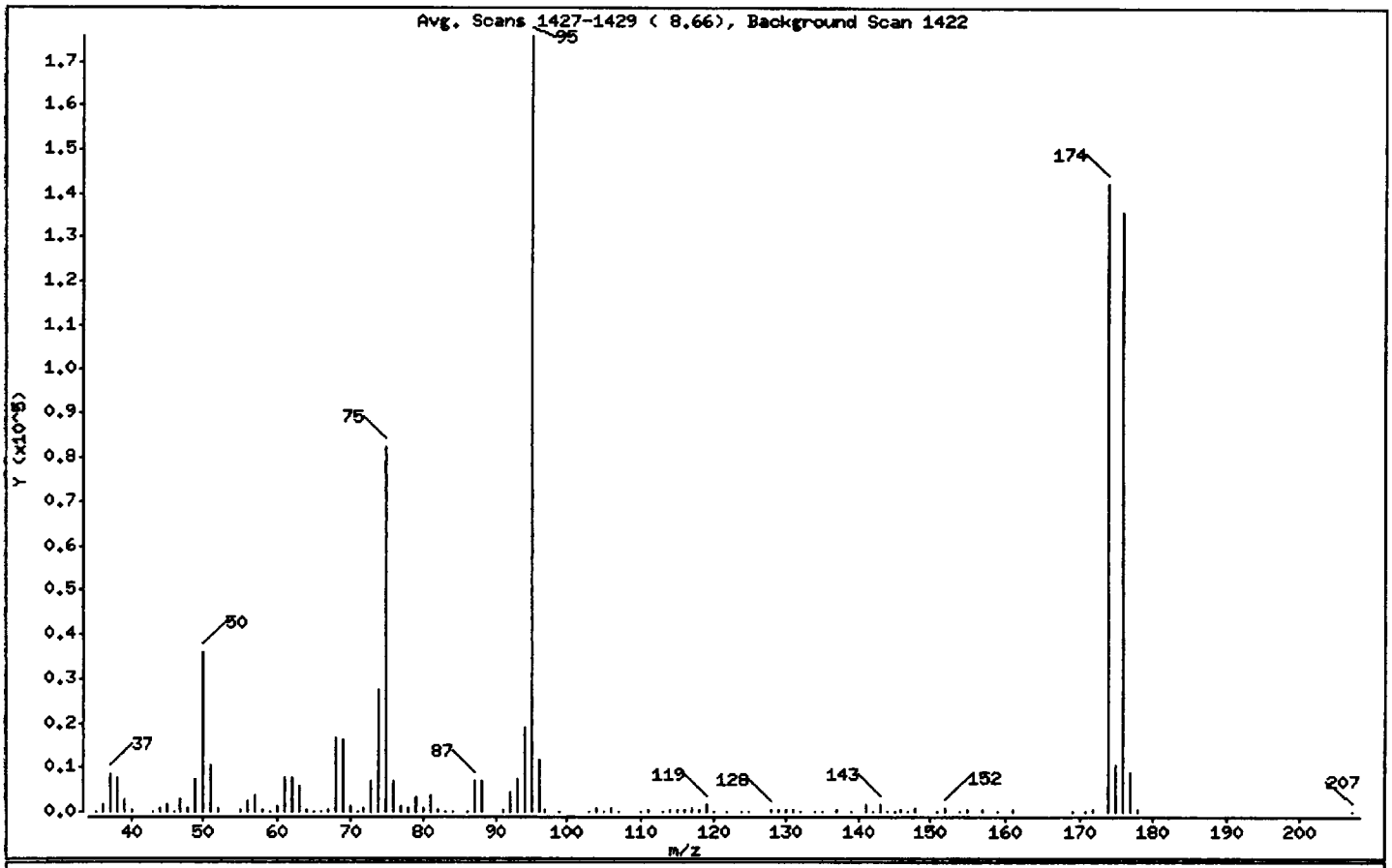
Sample Info: BFB0416,BFB0416,,1,16APR13,,

Operator: PC

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	20.46
75	30.00 - 66.00% of mass 95	46.96
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	80.82
175	4.00 - 9.00% of mass 174	6.05 (7.48)
176	95.00 - 101.00% of mass 174	77.26 (95.59)
177	5.00 - 9.00% of mass 176	5.10 (6.61)

Data File: /chem1/nt5.i/16APR13.b/bfb0416a.d

Date : 16-APR-2013 15:08

Client ID: BFB0416

Instrument: nt5.i

Sample Info: BFB0416,BFB0416,,1,16APR13,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0416a.d

Spectrum: Avg. Scans 1427-1429 (8.66), Background Scan 1422

Location of Maximum: 95.00

Number of points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	44	67.00	422	99.00	169	141.00	1563
36.00	1545	68.00	16720	103.00	70	142.00	202
37.00	8397	69.00	16328	104.00	709	143.00	1608
38.00	7612	70.00	1408	105.00	37	144.00	40
39.00	2643	71.00	33	106.00	622	145.00	193
40.00	232	72.00	855	107.00	102	146.00	405
43.00	164	73.00	6944	110.00	97	147.00	80
44.00	918	74.00	27296	111.00	226	148.00	765
45.00	1544	75.00	82592	113.00	160	151.00	161
46.00	120	76.00	7025	114.00	226	152.00	621
47.00	2646	77.00	1152	115.00	326	154.00	45
48.00	998	78.00	884	116.00	602	155.00	402
49.00	7215	79.00	3042	117.00	794	157.00	229
50.00	35984	80.00	885	118.00	429	159.00	195
51.00	10713	81.00	3450	119.00	1502	161.00	230
52.00	722	82.00	519	120.00	189	169.00	34
55.00	263	83.00	149	122.00	39	171.00	34
56.00	2330	84.00	178	124.00	140	172.00	222
57.00	3674	86.00	135	125.00	48	174.00	142144
58.00	504	87.00	6940	128.00	592	175.00	10637
59.00	57	88.00	6798	129.00	379	176.00	135872
60.00	1405	91.00	261	130.00	554	177.00	8978
61.00	7697	92.00	4584	131.00	213	178.00	272
62.00	7603	93.00	7143	132.00	38	207.00	91
63.00	5685	94.00	19192	134.00	135		
64.00	389	95.00	175872	135.00	176		
65.00	61	96.00	11809	137.00	255		
66.00	76	97.00	360	139.00	39		

Data File: /chem1/nt5.i/16APR13.b/bfb0416a.d

Date : 16-APR-2013 15:08

Client ID: BFB0416

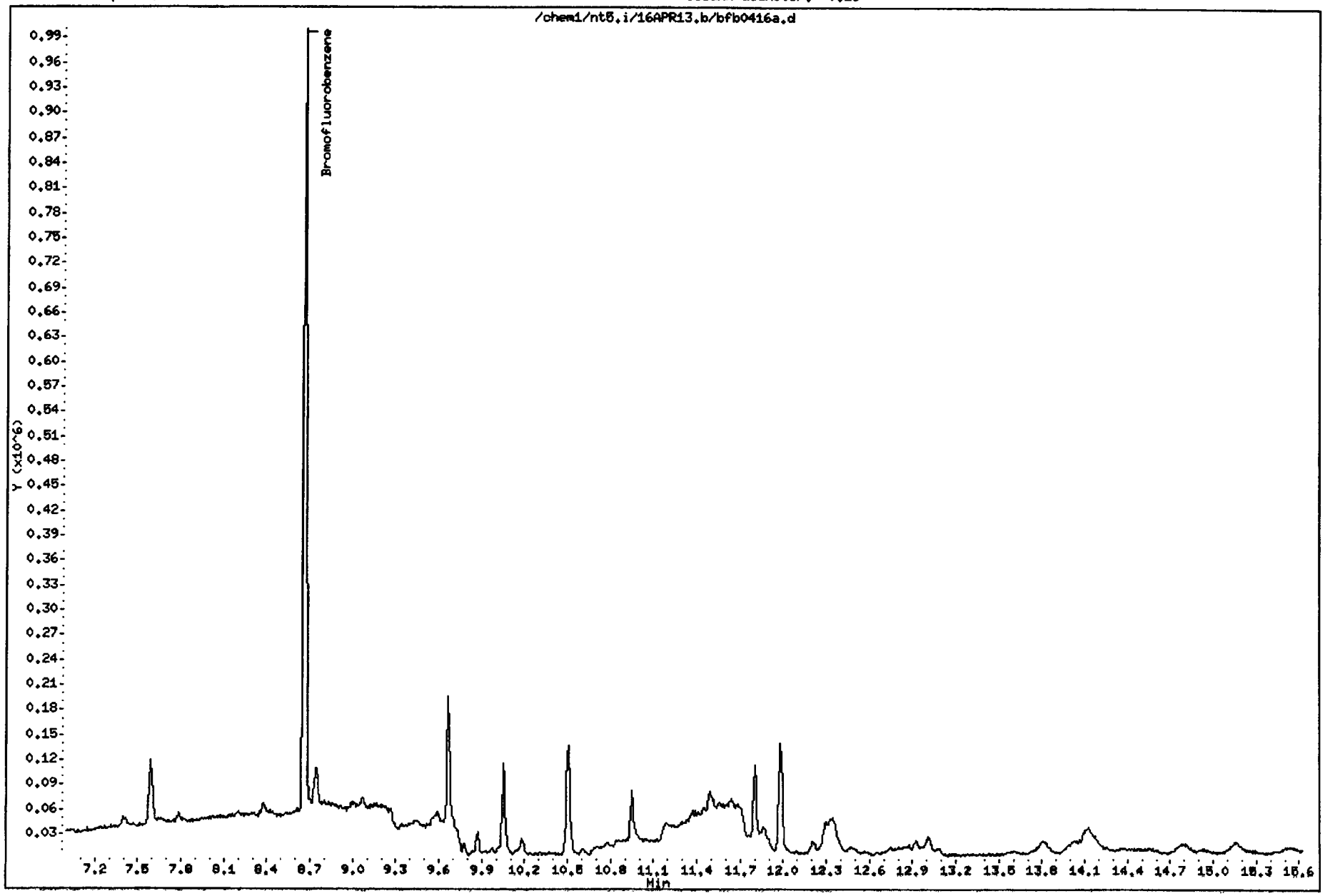
Sample Info: BFB0416,BFB0416,,1,16APR13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PC

Column diameter: 0.18



KG 4/16/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/0010416.d
Lab Smp Id: IC0005 Client Smp ID: 0.5
Inj Date : 16-APR-2013 18:57
Operator : PC Inst ID: nt5.i
Smp Info : IC0005,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.062	1.068	(0.227)	6492	0.50000	0.5344
2	Chloromethane	50	1.198	1.379	(0.256)	12957	0.50000	0.6082(TM)
4	Bromomethane	94	1.447	1.447	(0.309)	5283	0.50000	0.5630
5	Chloroethane	64	1.532	1.532	(0.328)	6982	0.50000	0.5981
6	Trichlorofluoromethane	101	1.628	1.622	(0.348)	11068	0.50000	0.5310
7	1,1-Dichloroethene	96	1.979	1.979	(0.423)	7012	0.50000	0.5365(QM)
8	Carbon Disulfide	76	1.984	1.984	(0.424)	25396	0.50000	0.5799(T)
9	112Trichloro122Trifluoroethane	101	2.030	2.030	(0.434)	6617	0.50000	0.5462
10	Iodomethane	142	2.092	2.081	(0.447)	8515	0.50000	0.5400
11	Bromoethane	108	2.188	2.177	(0.468)	5121	0.50000	0.5773
12	Acrolein	56	2.301	2.296	(0.492)	8648	2.50000	4.006(QM)
13	Methylene Chloride	84	2.460	2.454	(0.526)	29788	0.50000	2.710(Q)
14	Acetone	43	2.692	2.686	(0.575)	50518	2.50000	9.291(QM)
15	Trans-1,2-Dichloroethene	96	2.595	2.595	(0.555)	7953	0.50000	0.5505
16	Methyl tert butyl ether	73	2.759	2.765	(0.590)	23219	0.50000	0.5507(QM)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	17 1,1-Dichloroethane	63	3.218	3.206	(0.688)	16187	0.50000	0.5342
	18 Acrylonitrile	53	3.325	3.325	(0.711)	4092	0.50000	0.6957(QM)
	19 Vinyl Acetate	43	3.546	3.546	(0.758)	18330	0.50000	0.5328
	20 Cis-1,2-Dichloroethene	96	3.749	3.749	(0.802)	8922	0.50000	0.5508(Q)
	22 2,2-Dichloropropane	77	3.857	3.846	(0.825)	11910	0.50000	0.5121(QM)
	23 Bromochloromethane	128	3.936	3.930	(0.842)	3841	0.50000	0.5467
	24 Chloroform	83	4.032	4.032	(0.862)	15034	0.50000	0.5568
	25 Carbon Tetrachloride	117	4.128	4.117	(0.806)	10727	0.50000	0.5007
$	27 Dibromofluoromethane	111	4.202	4.196	(0.898)	817516	50.0000	49.732
	26 1,1,1-Trichloroethane	97	4.196	4.191	(0.897)	12993	0.50000	0.5140
	28 1,1-Dichloropropene	75	4.309	4.309	(0.841)	12657	0.50000	0.5316
	29 2-Butanone	72	4.400	4.400	(0.941)	5025	2.50000	2.948
	30 Benzene	78	4.536	4.536	(0.885)	36004	0.50000	0.5611
*	31 Pentafluorobenzene	168	4.677	4.672	(1.000)	1512456	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.998)	958022	50.0000	51.287
	33 1,2-Dichloroethane	62	4.722	4.728	(0.922)	12780	0.50000	0.5907
	34 Trichloroethene	95	5.067	5.067	(0.989)	8832	0.50000	0.5390
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	2662747	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.057)	4795	0.50000	0.5611
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	9630	0.50000	0.5334
	39 Bromodichloromethane	83	5.588	5.588	(1.091)	11432	0.50000	0.5491
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.198)	13376	0.50000	0.5128
$	42 d8-Toluene	98	6.295	6.295	(1.229)	3387091	50.0000	50.100
	43 Toluene	92	6.335	6.335	(1.236)	26436	0.50000	0.6122(Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	8957	0.50000	0.5184
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.307)	17973	2.50000	2.747(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.307)	12314	0.50000	0.5220(Q)
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.332)	7133	0.50000	0.5595
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	8053	0.50000	0.5461
	49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	13020	0.50000	0.5597
	50 1,2-Dibromoethane	107	7.138	7.138	(1.393)	7240	0.50000	0.5819
	51 2-Hexanone	43	7.409	7.409	(0.976)	31383	2.50000	2.898
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2575110	50.0000	
	53 Chlorobenzene	112	7.602	7.607	(1.001)	24603	0.50000	0.5740(Q)
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	42783	0.50000	0.5900
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	8372	0.50000	0.5423
	56 m,p-xylene	106	7.788	7.794	(1.026)	31807	1.00000	1.145(Q)
	57 o-Xylene	106	8.150	8.156	(1.074)	14715	0.50000	0.5277(Q)
	58 Styrene	104	8.196	8.201	(1.080)	25463	0.50000	0.5583
	59 Bromoform	173	8.190	8.196	(0.847)	5899	0.50000	0.5850
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	38515	0.50000	0.5789
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1392530	50.0000	50.509
	63 Bromobenzene	156	8.733	8.739	(0.903)	10065	0.50000	0.5648(Q)
	64 N-Propyl Benzene	91	8.801	8.807	(0.910)	46988	0.50000	0.6011
	65 1,1,2,2-Tetrachloroethane	83	8.863	8.869	(0.917)	8958	0.50000	0.5582
	66 2-Chloro Toluene	91	8.914	8.920	(0.922)	29383	0.50000	0.5859
	67 1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	32168	0.50000	0.5644

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
68	1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	2583	0.50000	0.5345 (M)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.022	(0.933)	4395	0.50000	0.6657 (QM)
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	31549	0.50000	0.5992
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	27863	0.50000	0.5503
72	1,2,4-Trimethylbenzene	105	9.333	9.338	(0.965)	31607	0.50000	0.5617
73	S-Butyl Benzene	105	9.429	9.435	(0.975)	42575	0.50000	0.5909
74	4-Isopropyl Toluene	119	9.576	9.582	(0.991)	34182	0.50000	0.5703
75	1,3-Dichlorobenzene	146	9.587	9.593	(0.992)	20359	0.50000	0.6079
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	1362220	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	22249	0.50000	0.6316 (Q)
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	33900	0.50000	0.5836
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.051	(1.039)	1260940	50.0000	50.764 (Q)
80	1,2-Dichlorobenzene	146	10.057	10.057	(1.040)	20450	0.50000	0.6207 (Q)
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	2042	0.50000	0.6534
82	Hexachloro 1,3-Butadiene	225	11.482	11.488	(1.188)	8488	0.50000	0.5851
83	1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	14959	0.50000	0.6089
84	Naphthalene	128	11.782	11.788	(1.219)	63013	0.50000	1.006
85	1,2,3-Trichlorobenzene	180	11.963	11.969	(1.238)	14453	0.50000	0.6297

QC Flag Legend

T - Target compound detected outside RT window.
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: 0010416.d
Lab Smp Id: IC0005
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 0.5
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	1616720	808360	3233440	1512456	-6.45
35 1,4-Difluorobenze	2842987	1421494	5685974	2662747	-6.34
52 d5-Chlorobenzene	2779083	1389542	5558166	2575110	-7.34
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1362220	-10.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.68	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

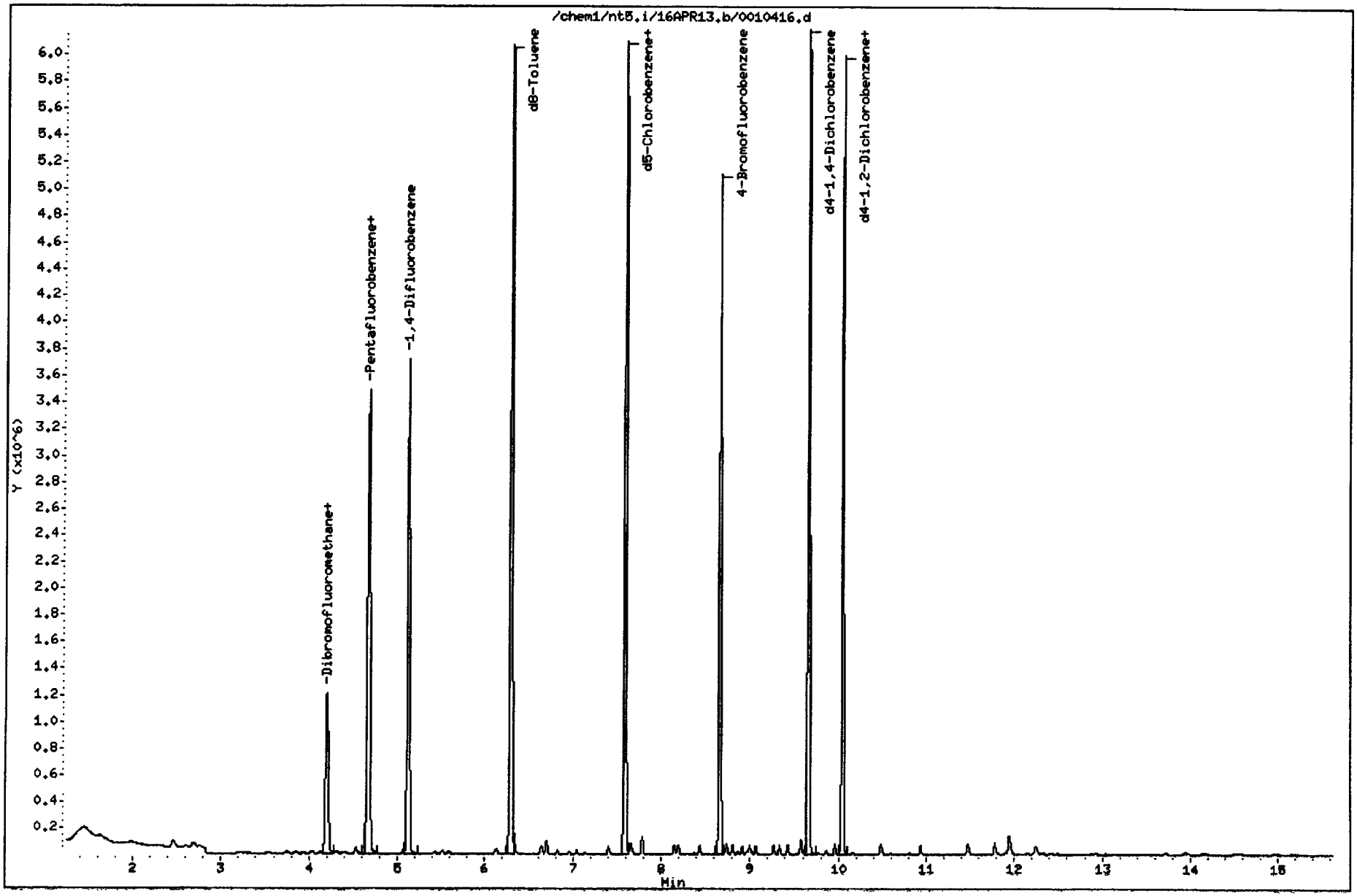
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/16APR13.b/0010416.d
Date : 16-APR-2013 18:57
Client ID: 0.5
Sample Info: IC0005,5,5,0,

Instrument: nt5.i

Operator: PC
Column diameter: 0.18

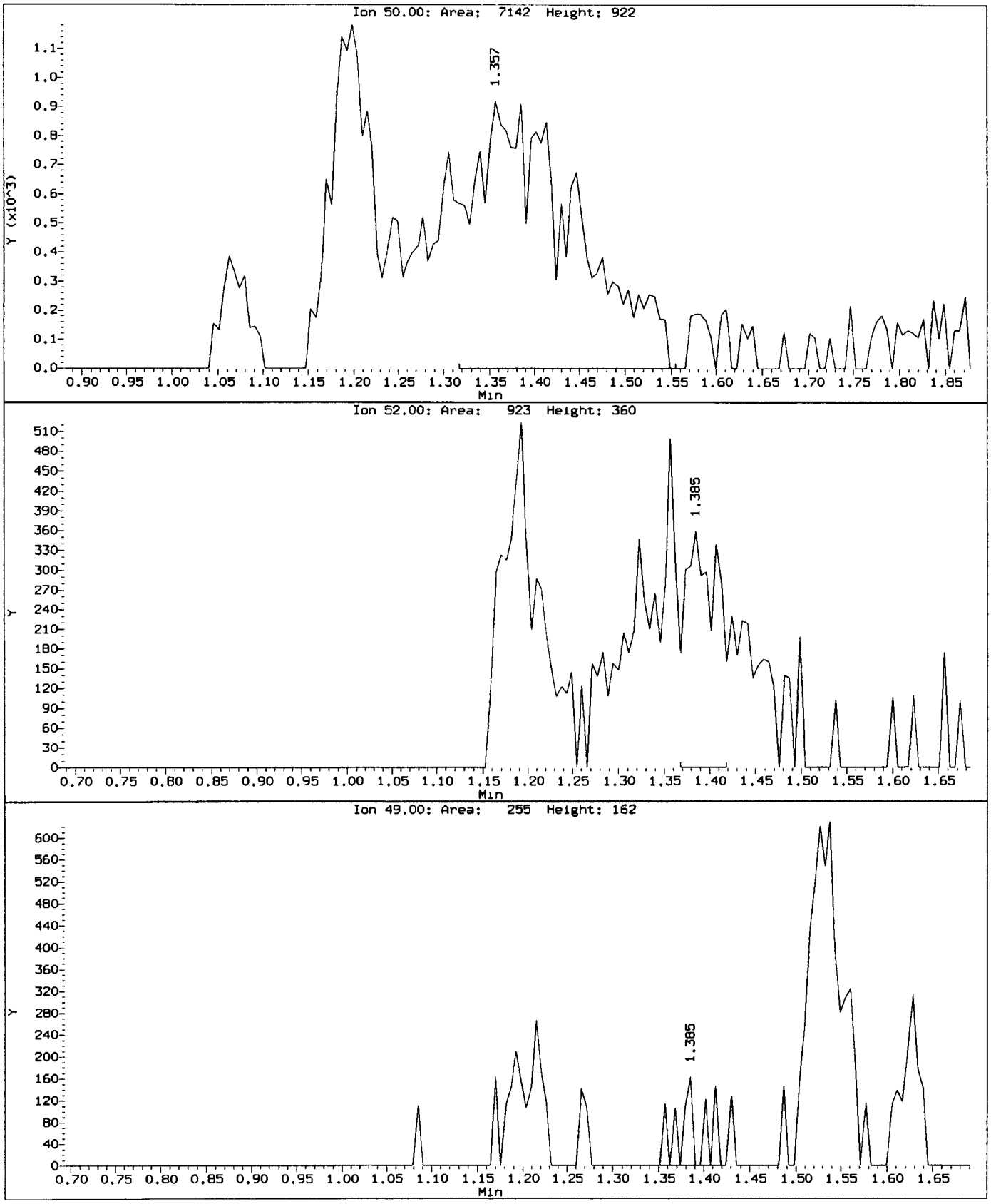
Column phase: RTXVMS



Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

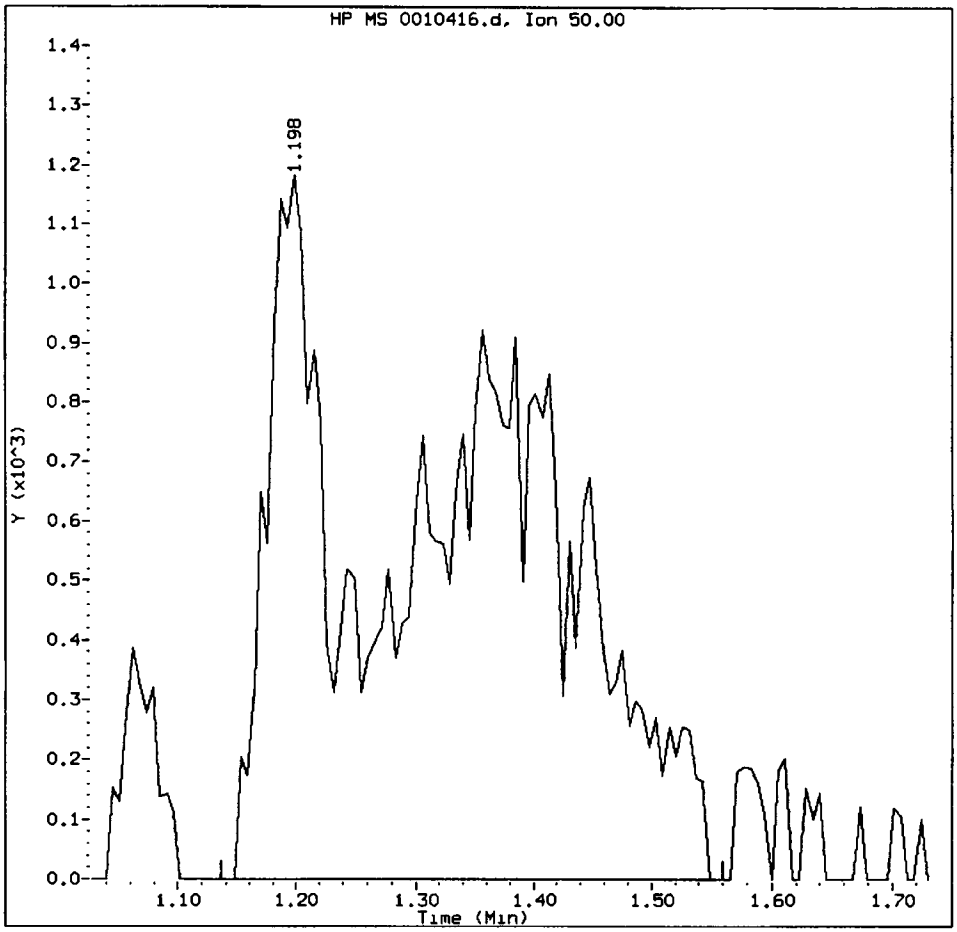
Compound: Chloromethane
CAS Number:

PG 4/16/13



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

Chloromethane Amount: 0.61 Area: 12957



MANUAL INTEGRATION for Chloromethane

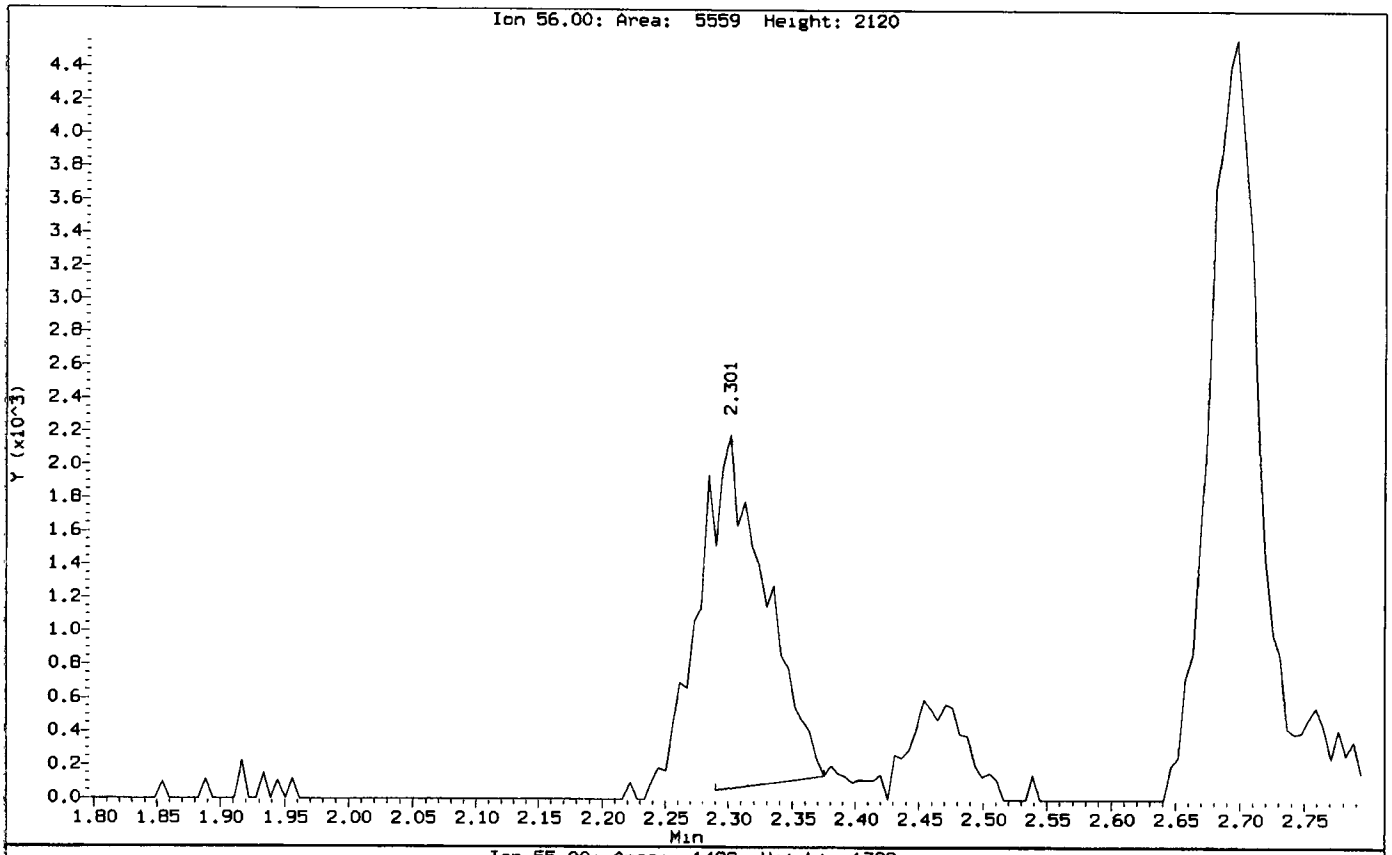
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

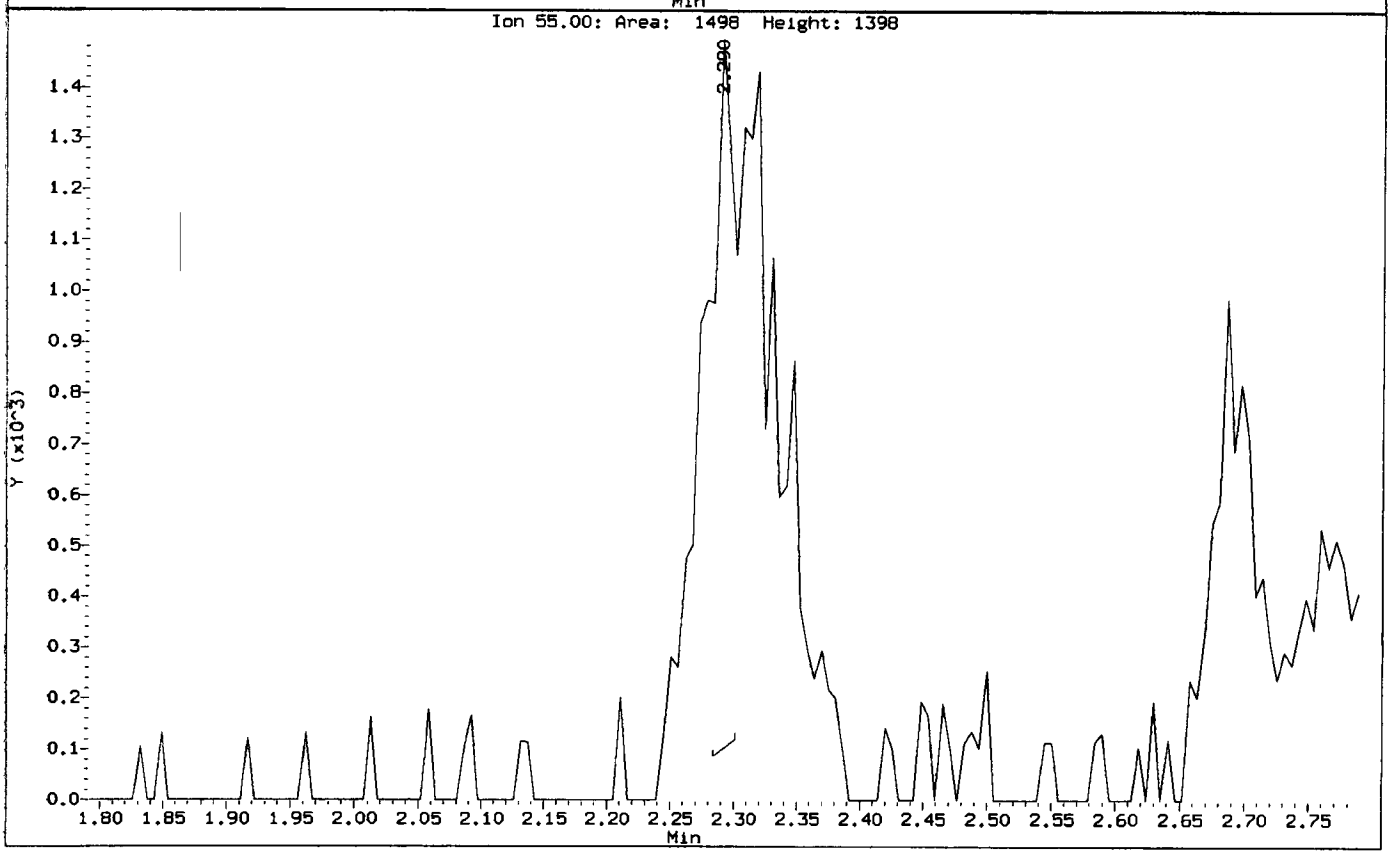
5. Other _____

Analyst: PC Date: 4/16/13

Data File: /chem1/nt5.1/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.1
Client Sample ID:

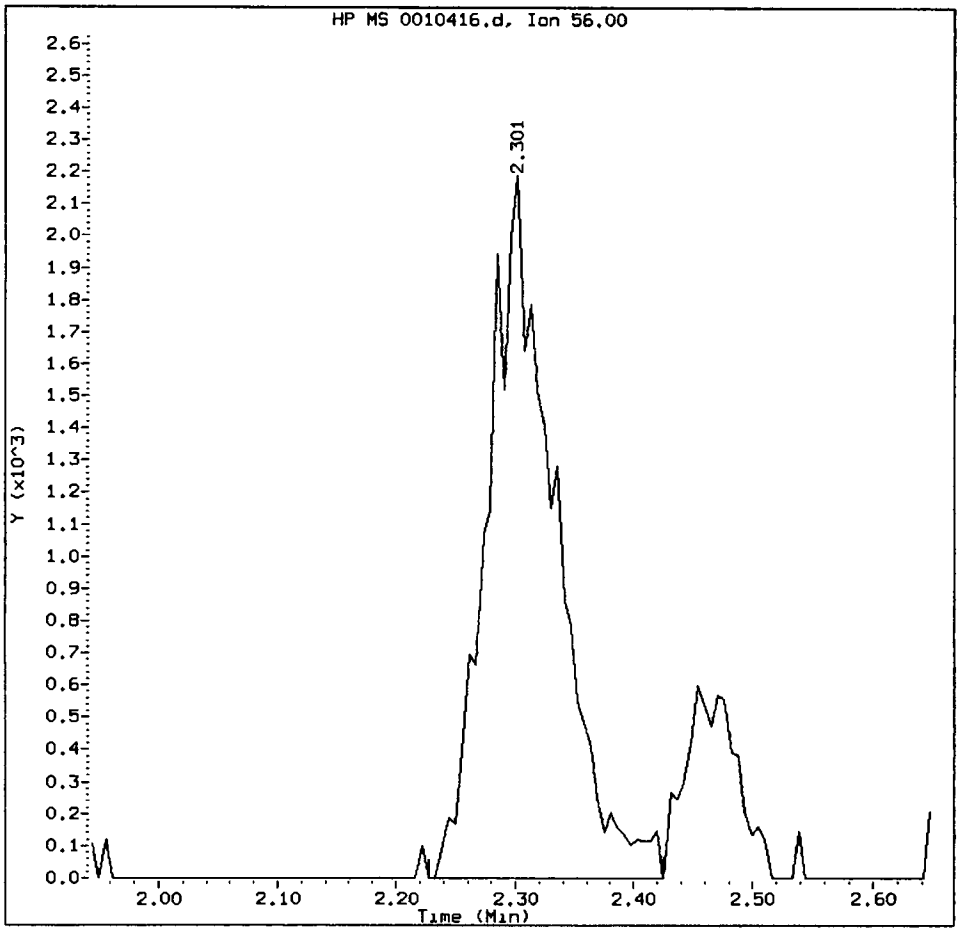
Compound: Acrolein
CAS Number:





IC0005, /chem1/nt5.i/16APR13.b/0010416.d

Acrolein Amount: 4.01 Area: 8648



MANUAL INTEGRATION for Acrolein

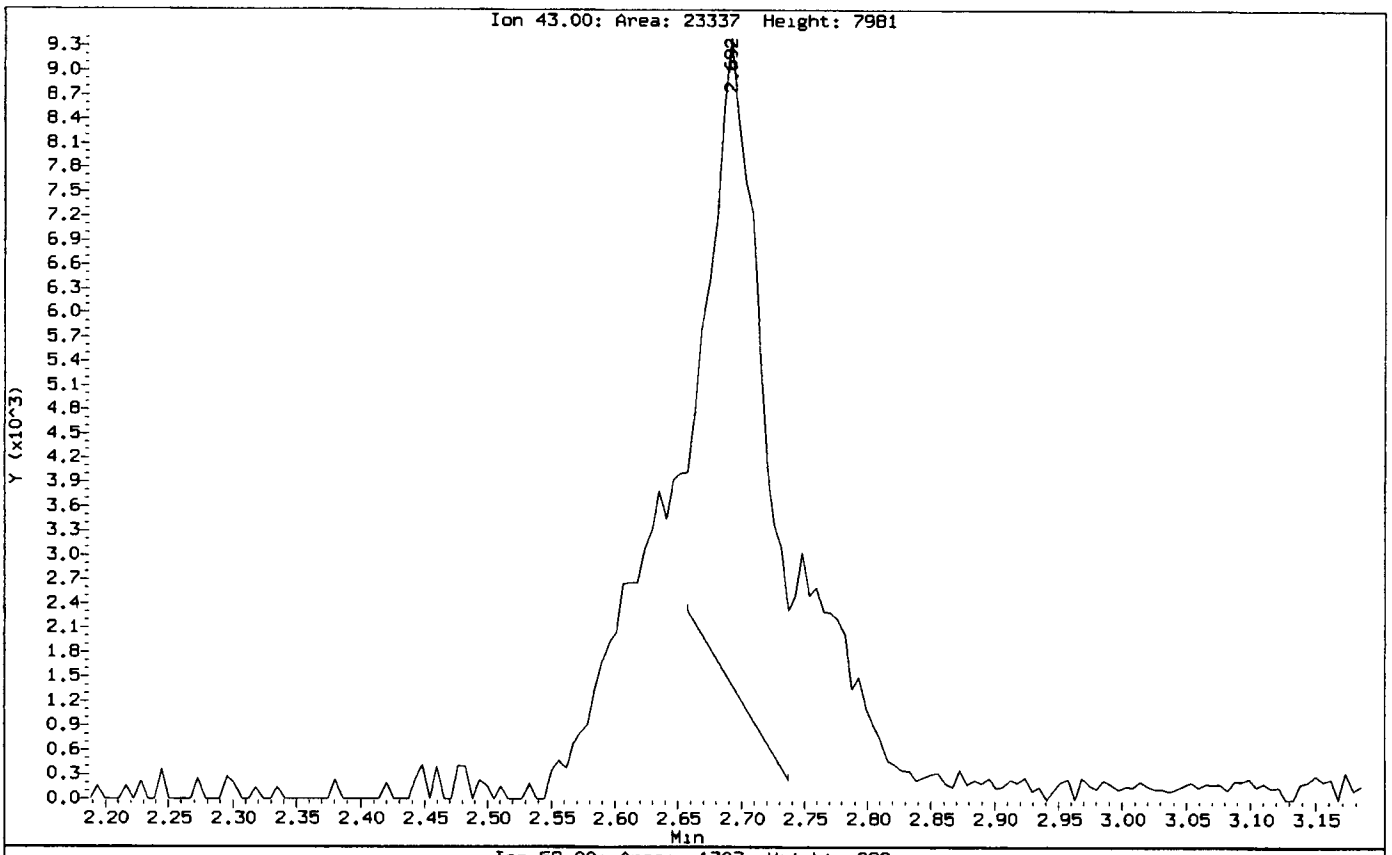
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

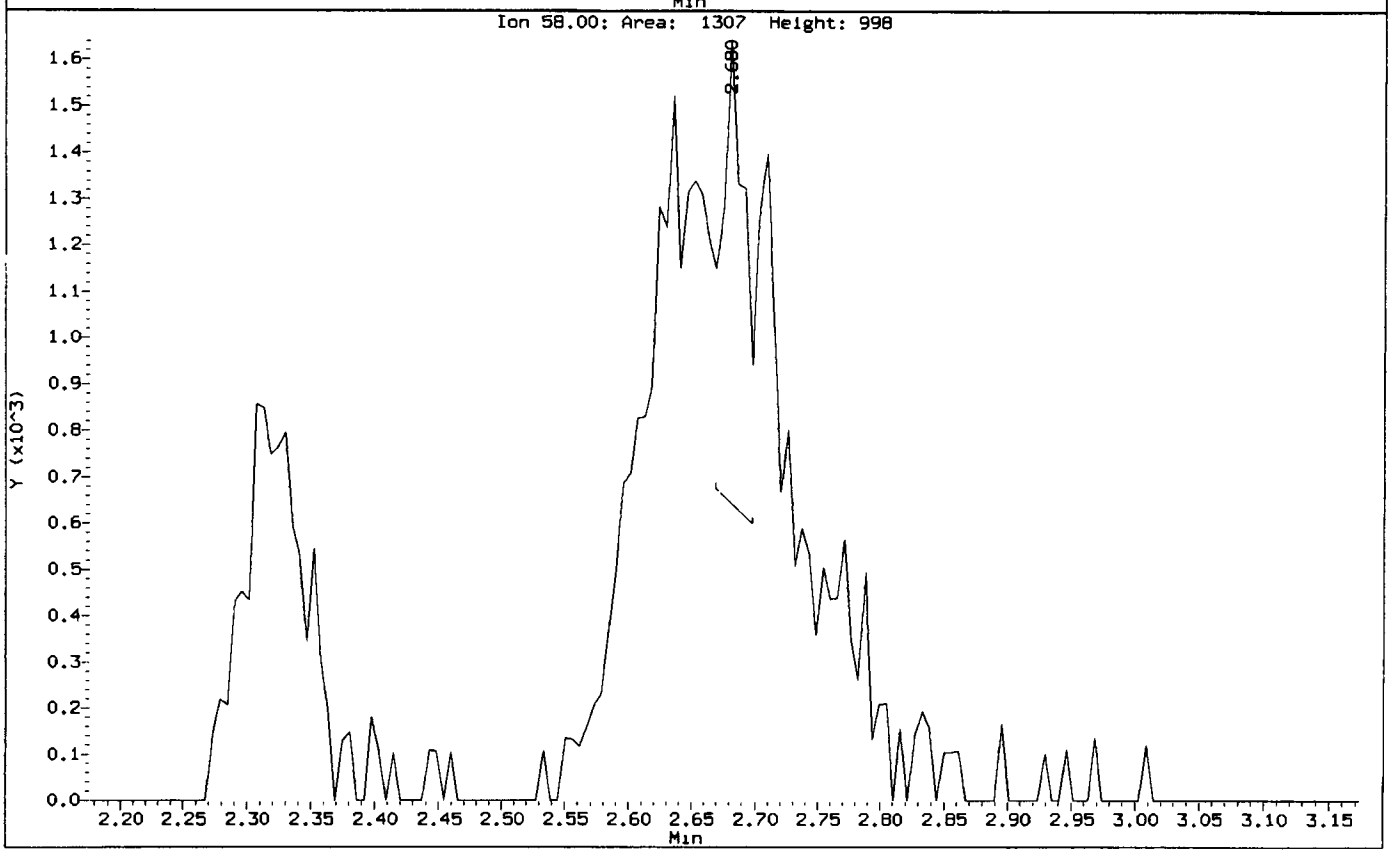
5. Other _____

Analyst: KC Date: 4/16/13

Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

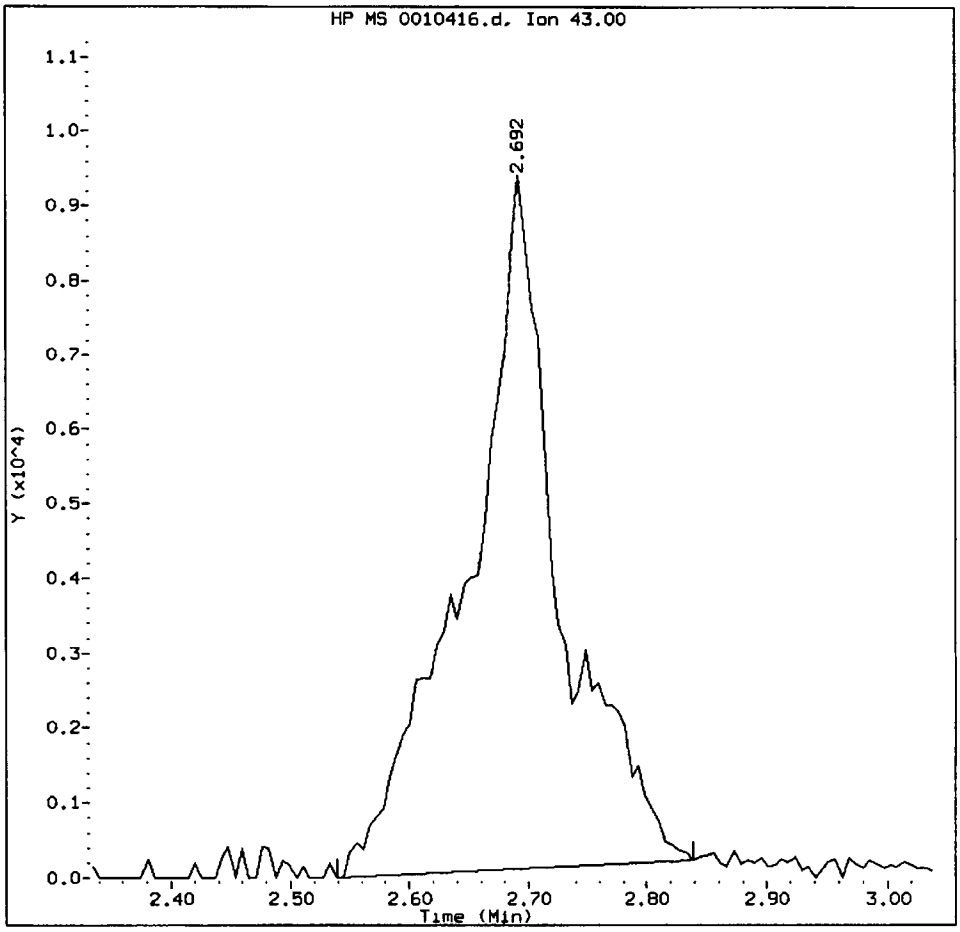
Compound: Acetone
CAS Number:





IC0005, /chem1/nt5.i/16APR13.b/0010416.d

Acetone Amount: 9.29 Area: 50518



MANUAL INTEGRATION for Acetone

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

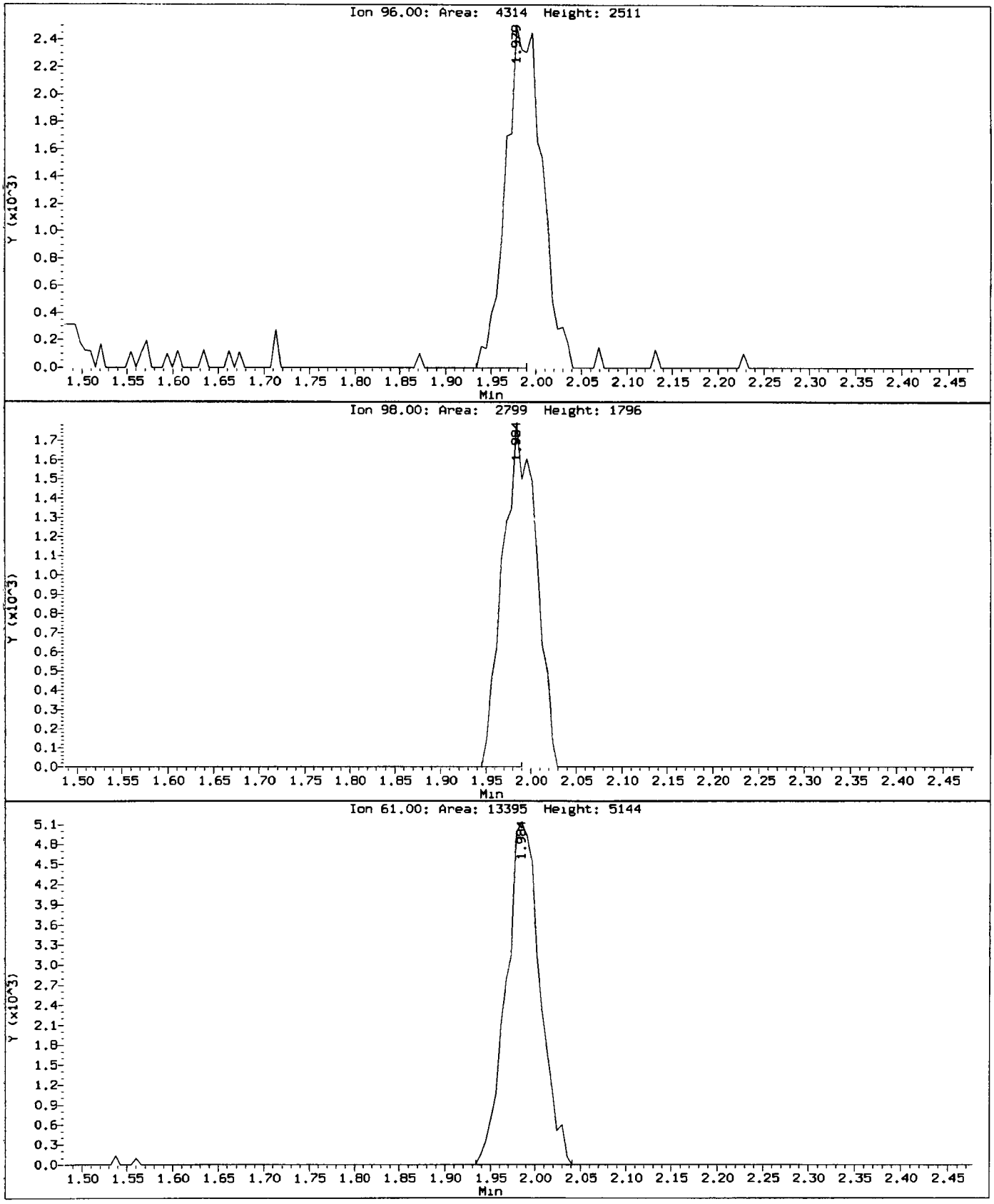
5. Other _____

Analyst: JC Date: 4/16/13

Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

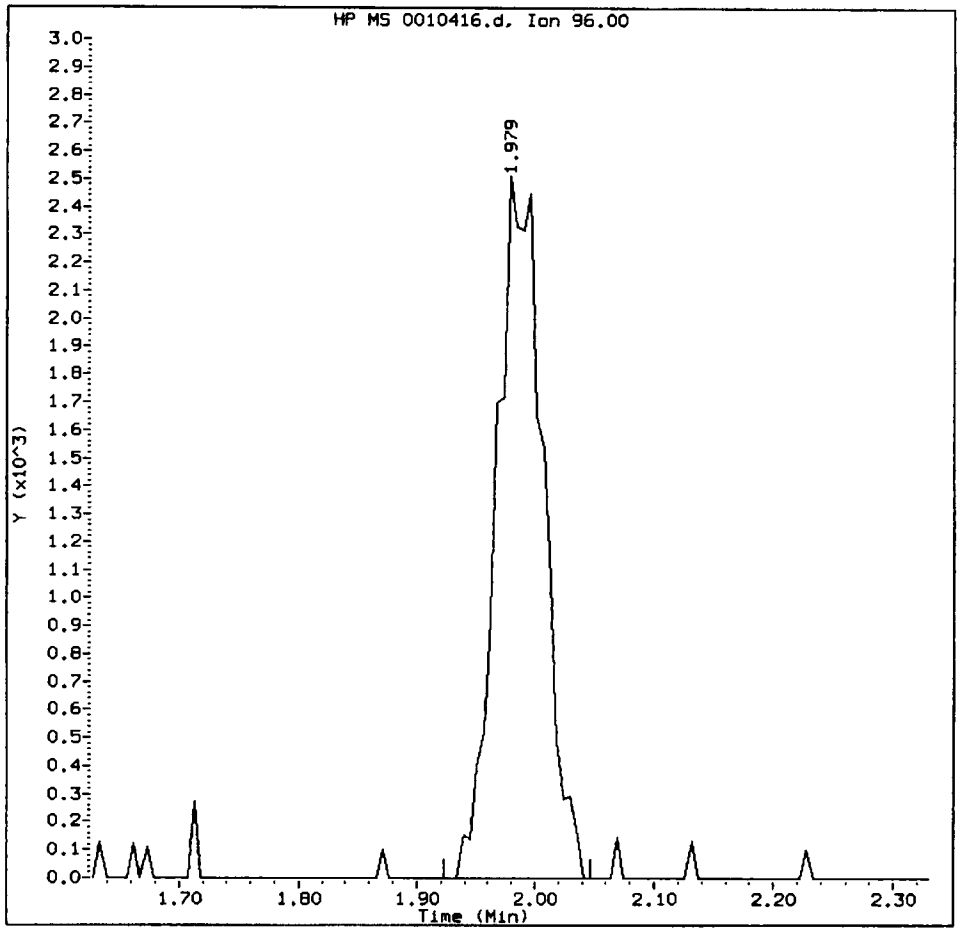
Compound: 1,1-Dichloroethene
CAS Number:

4/17/13



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

1,1-Dichloroethene Amount: 0.54 Area: 7012



MANUAL INTEGRATION for 1,1-Dichloroethene

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

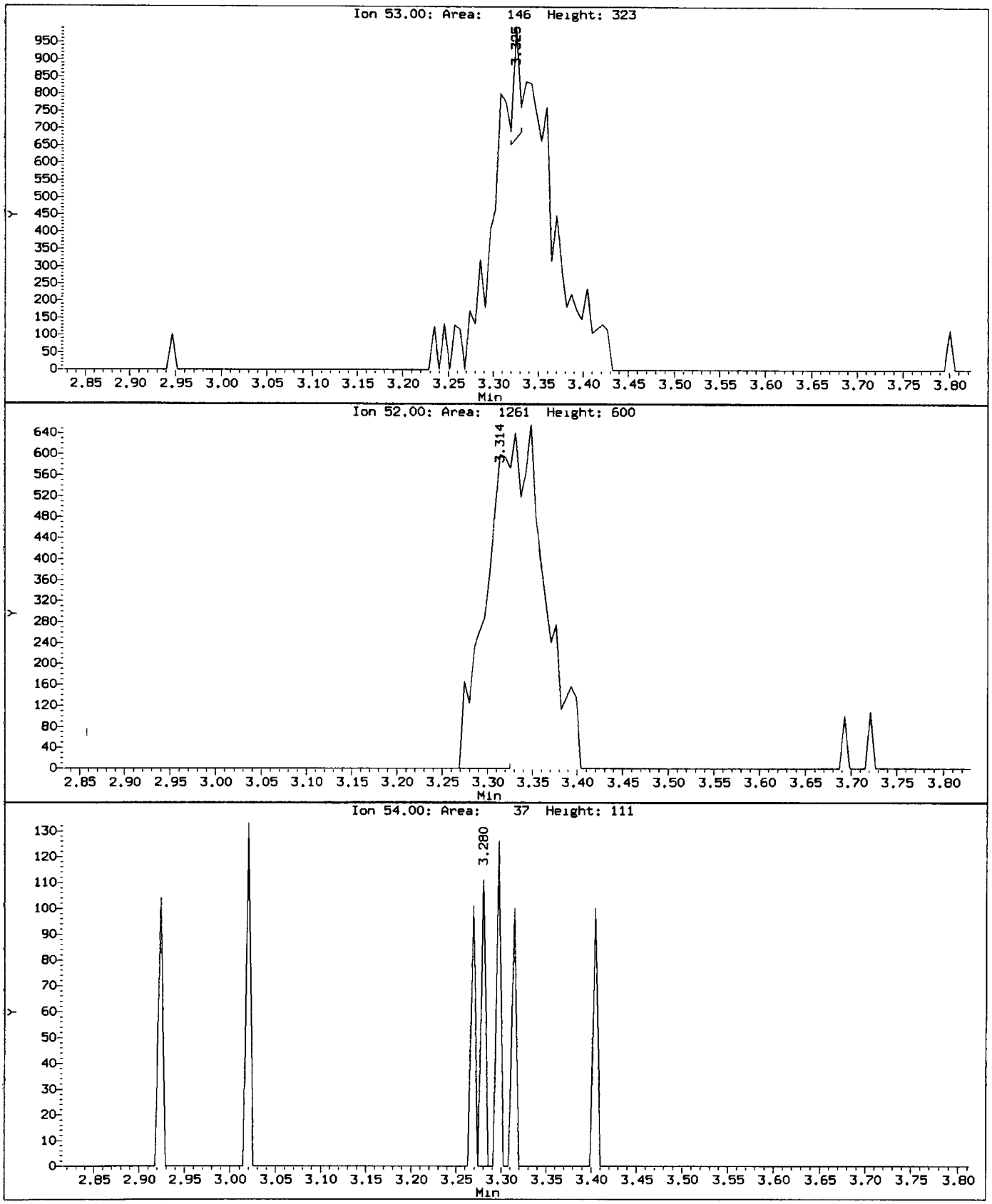
5. Other _____

Analyst: PL Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

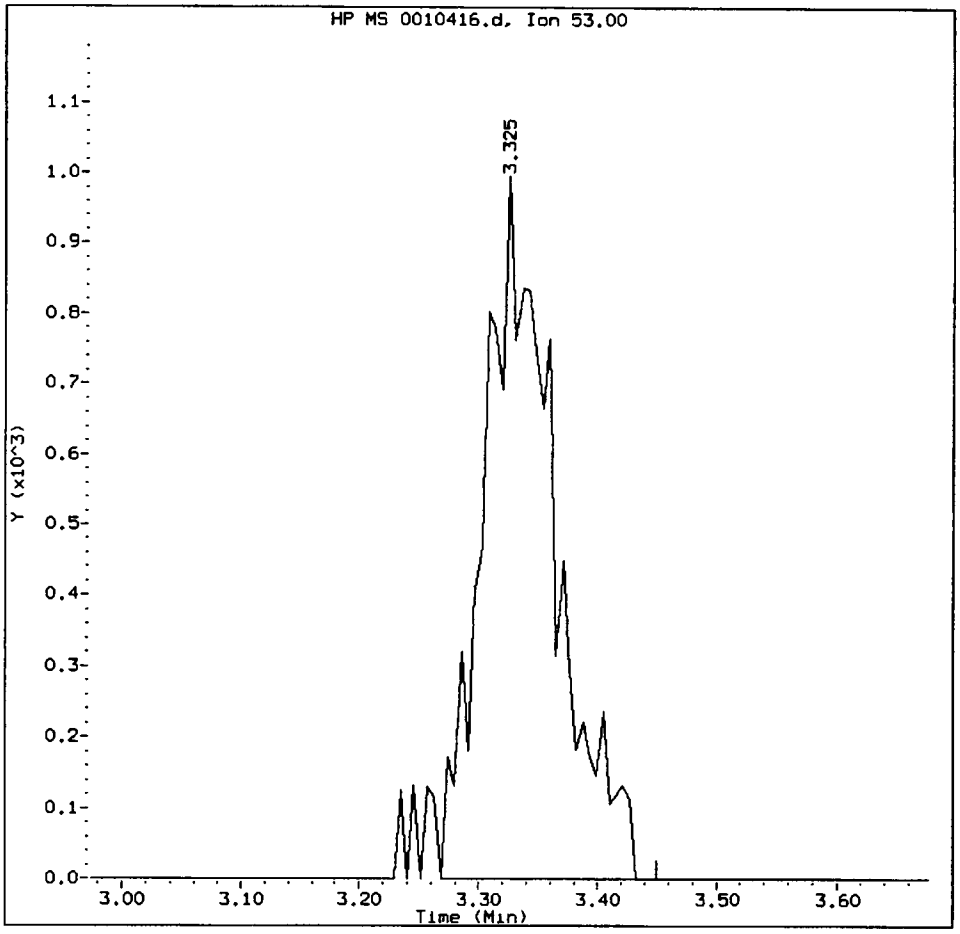
Compound: Acrylonitrile
CAS Number:

PG 4/17/13



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

Acrylonitrile Amount: 0.70 Area: 4092



MANUAL INTEGRATION for Acrylonitrile

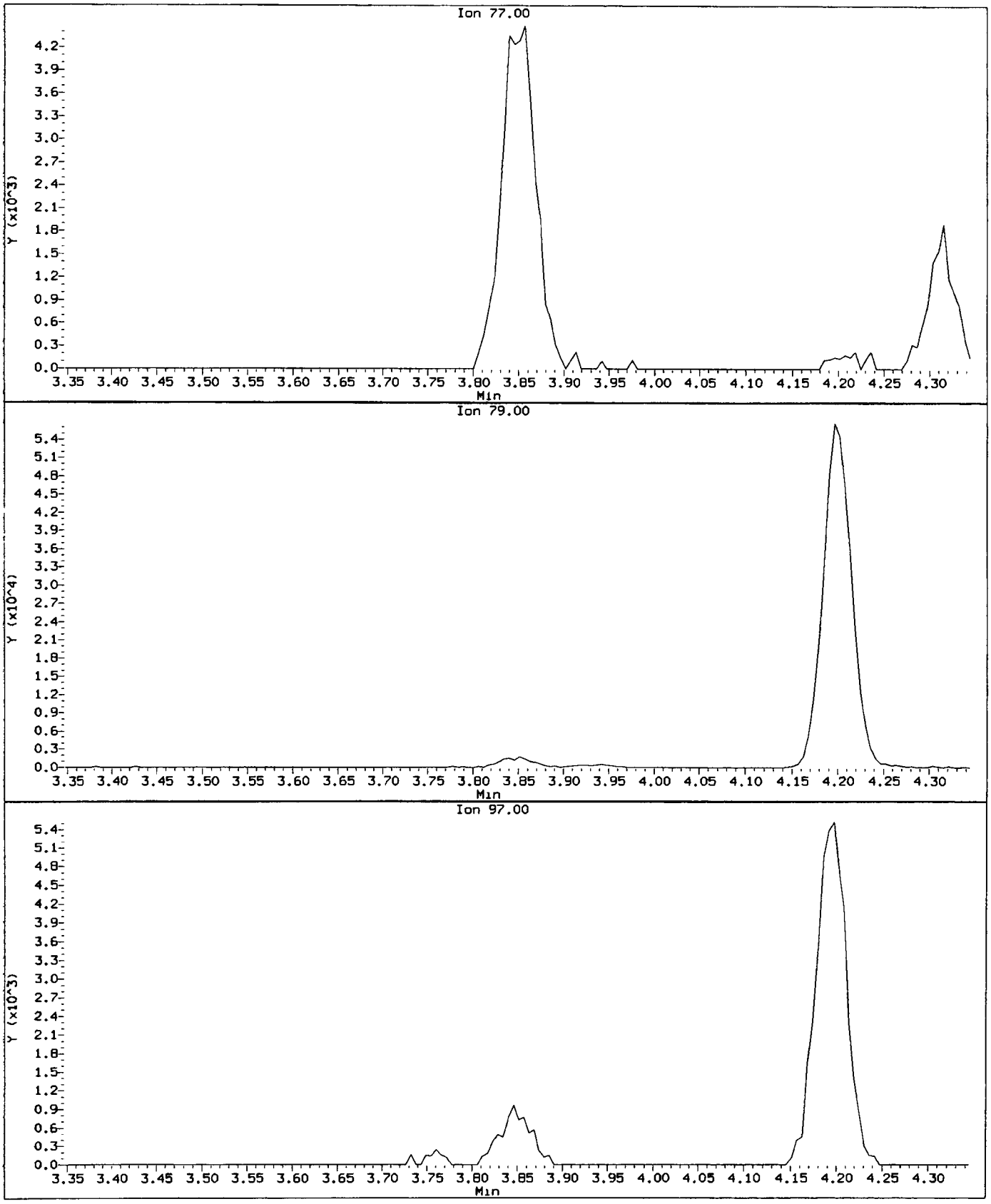
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 4/17/13

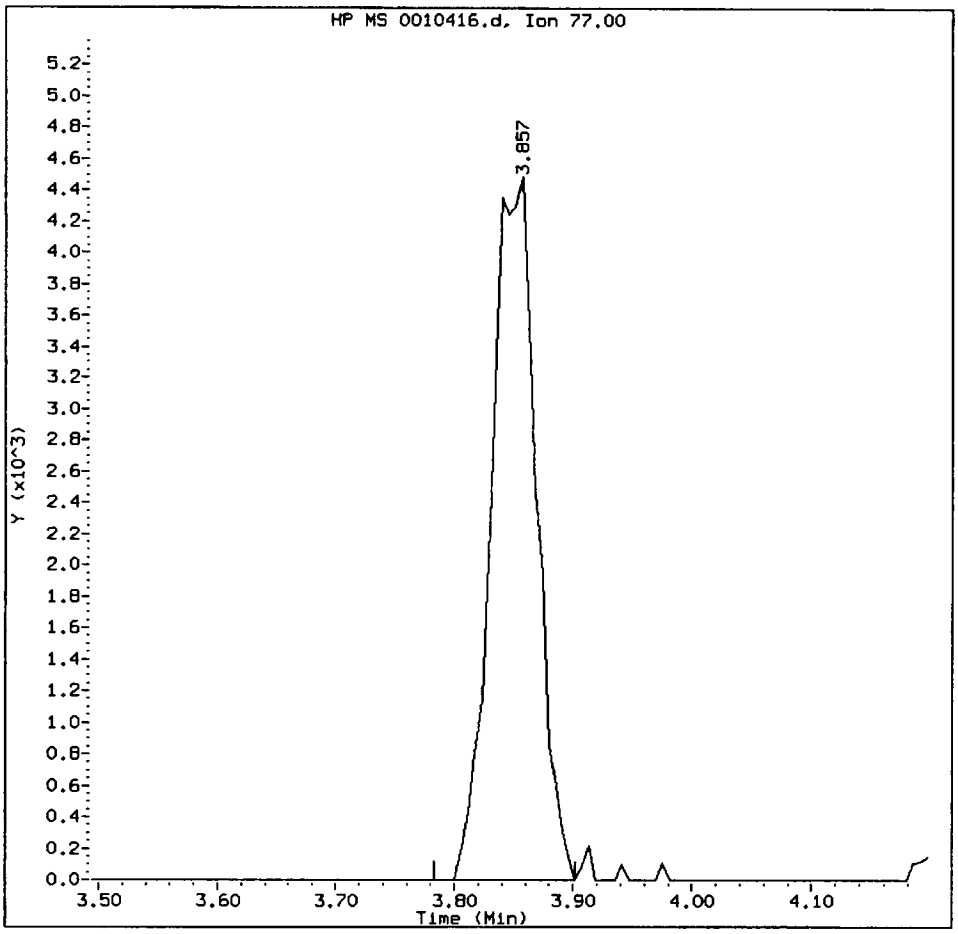
Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

Compound: 2,2-Dichloropropane
CAS Number:



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

2,2-Dichloropropane Amount: 0.51 Area: 11910



MANUAL INTEGRATION for 2,2-Dichloropropane

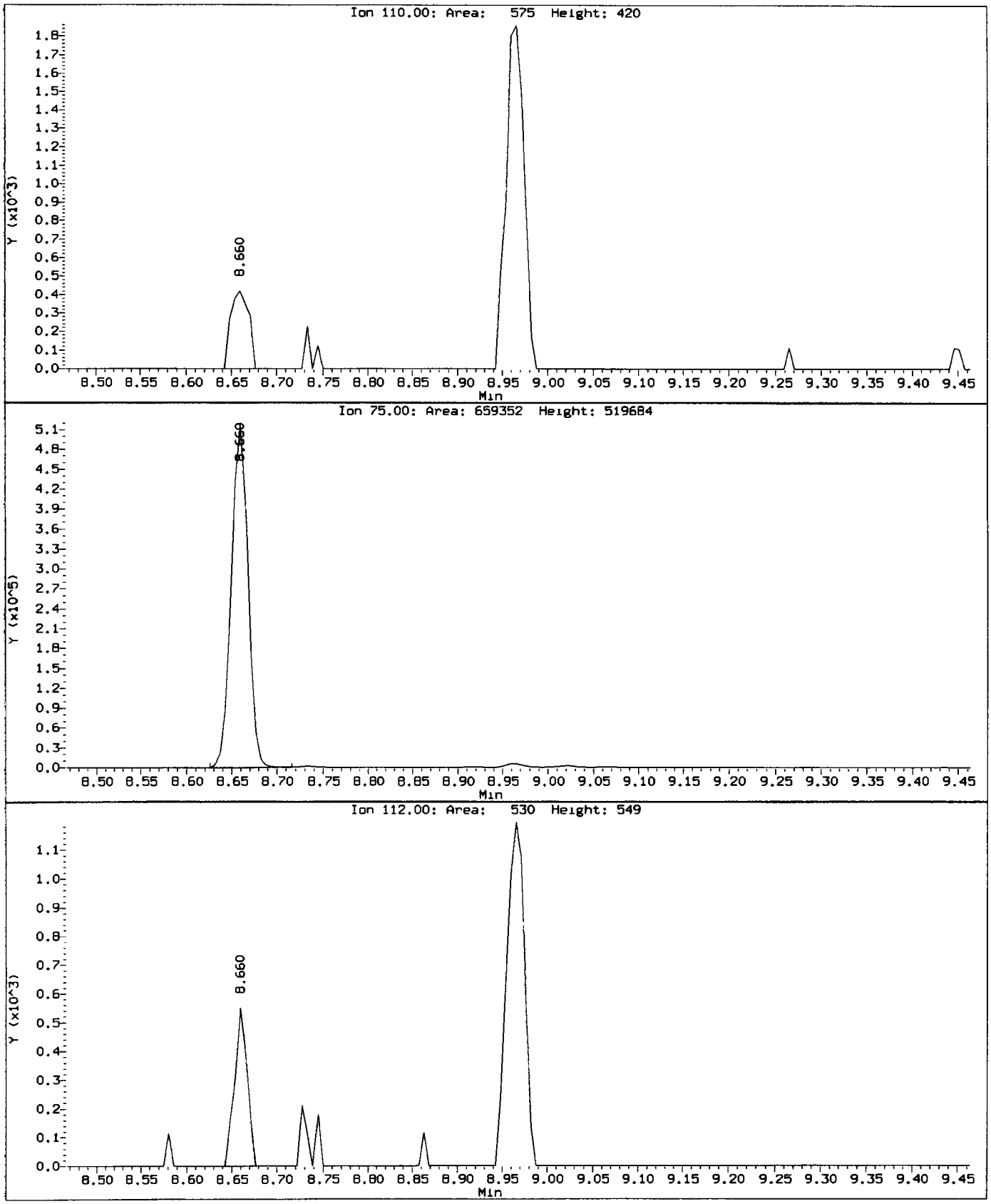
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 4/17/13

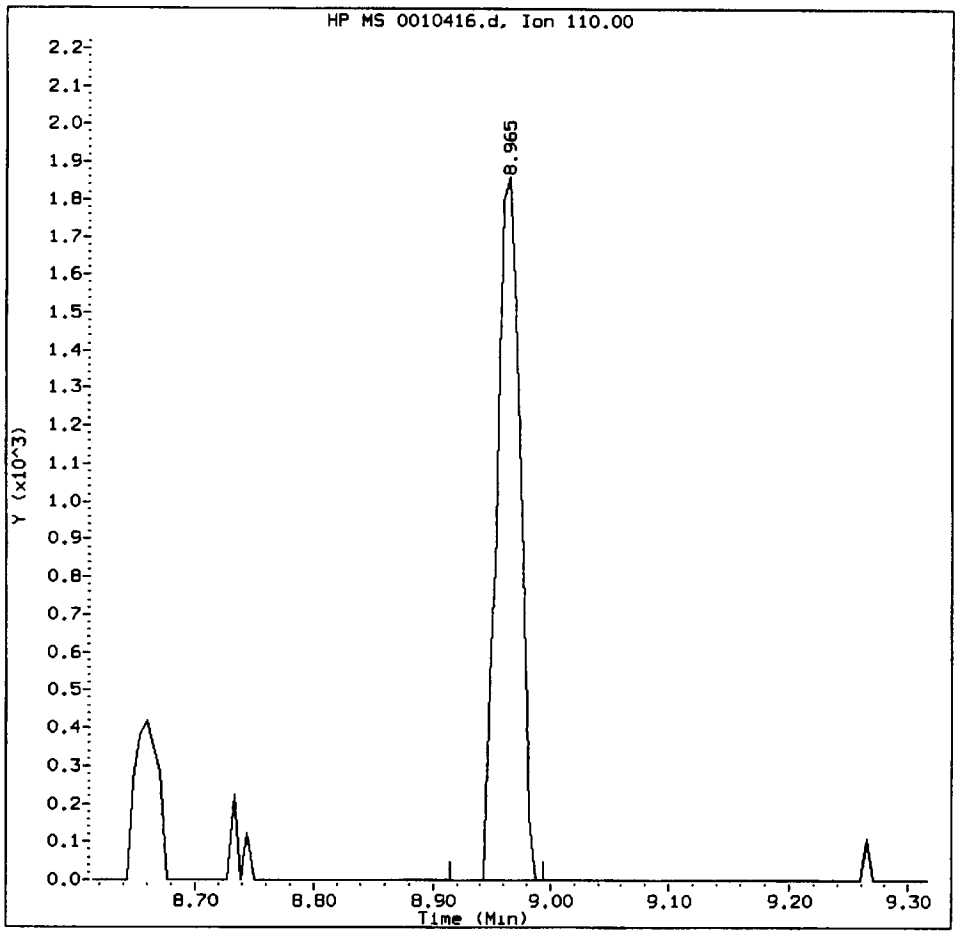
Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

Compound: 1,2,3-Trichloropropane
CAS Number:



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

1,2,3-Trichloropropane Amount: 0.53 Area: 2583



MANUAL INTEGRATION for 1,2,3-Trichloropropane

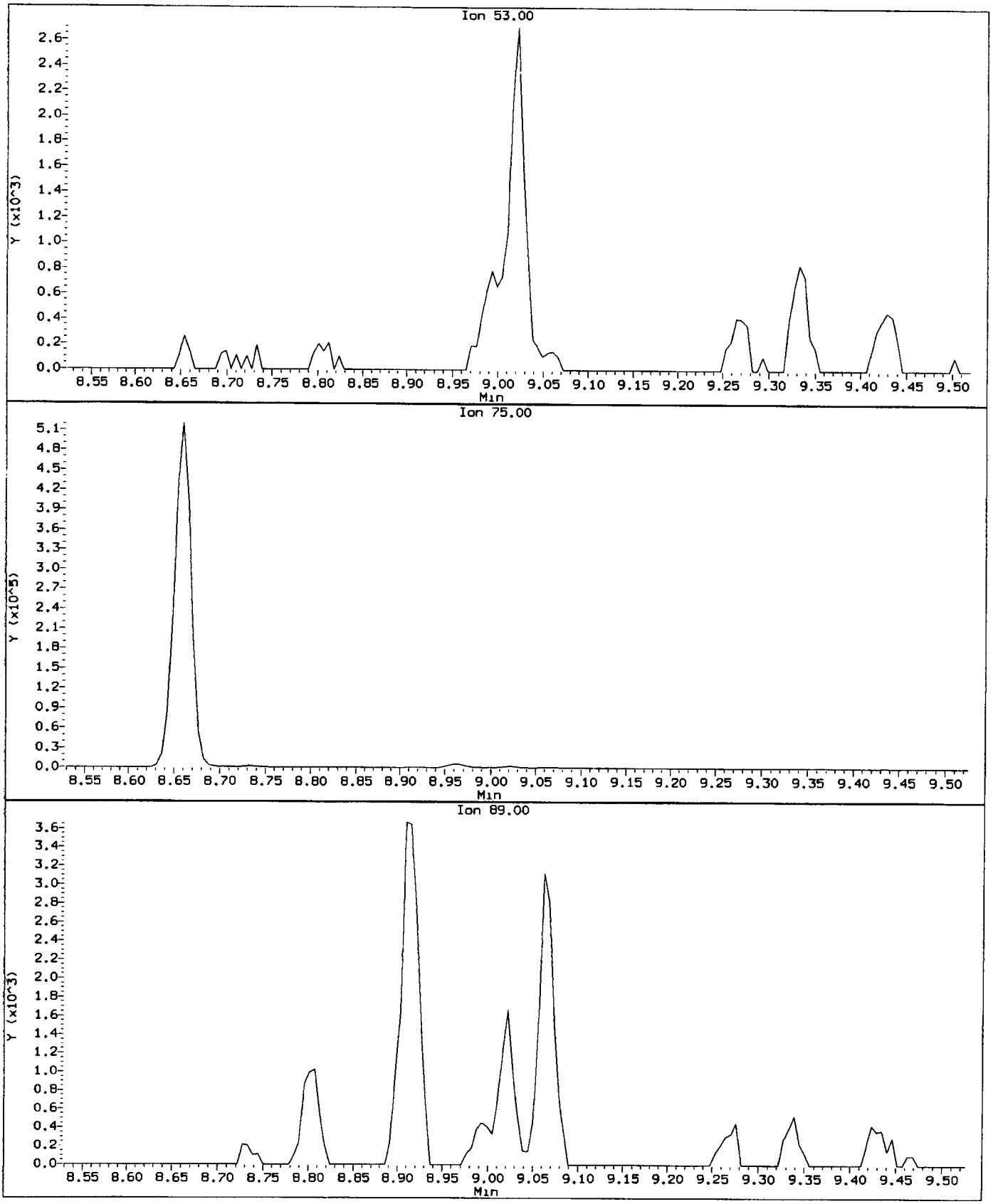
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 4/17/13

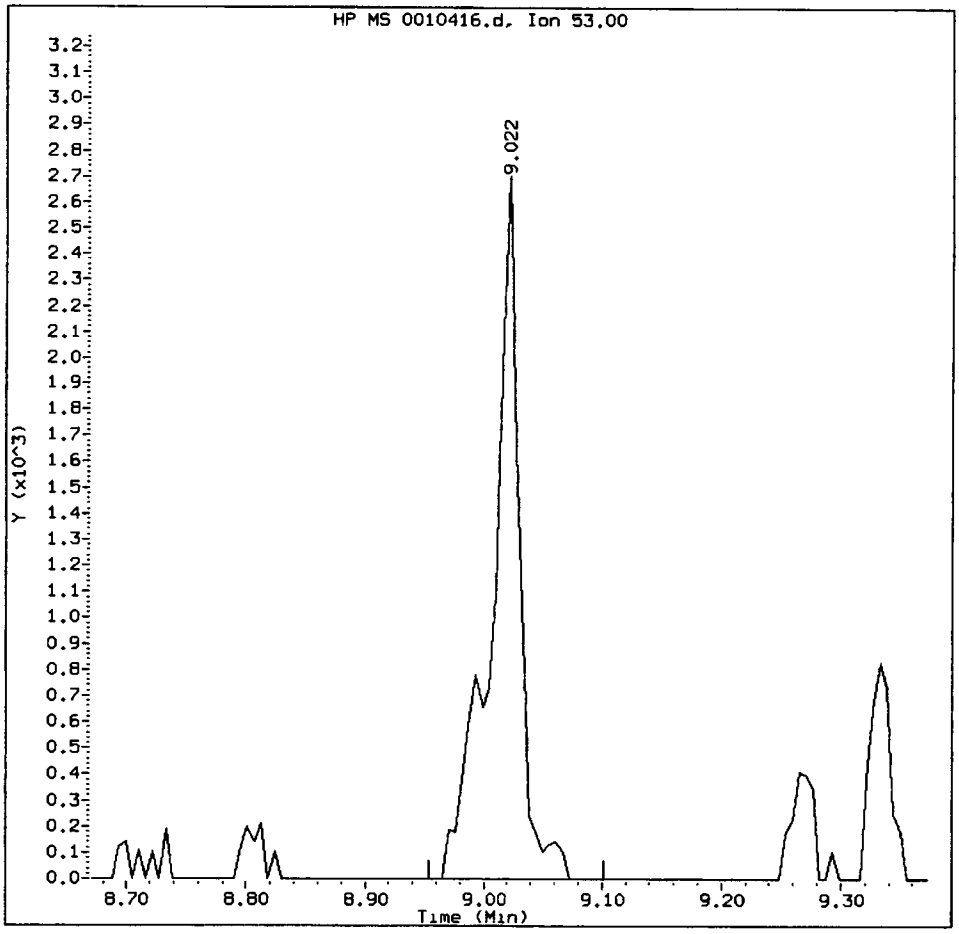
Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

Trans-1,4-Dichloro 2-Butene Amount: 0.67 Area: 4395



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

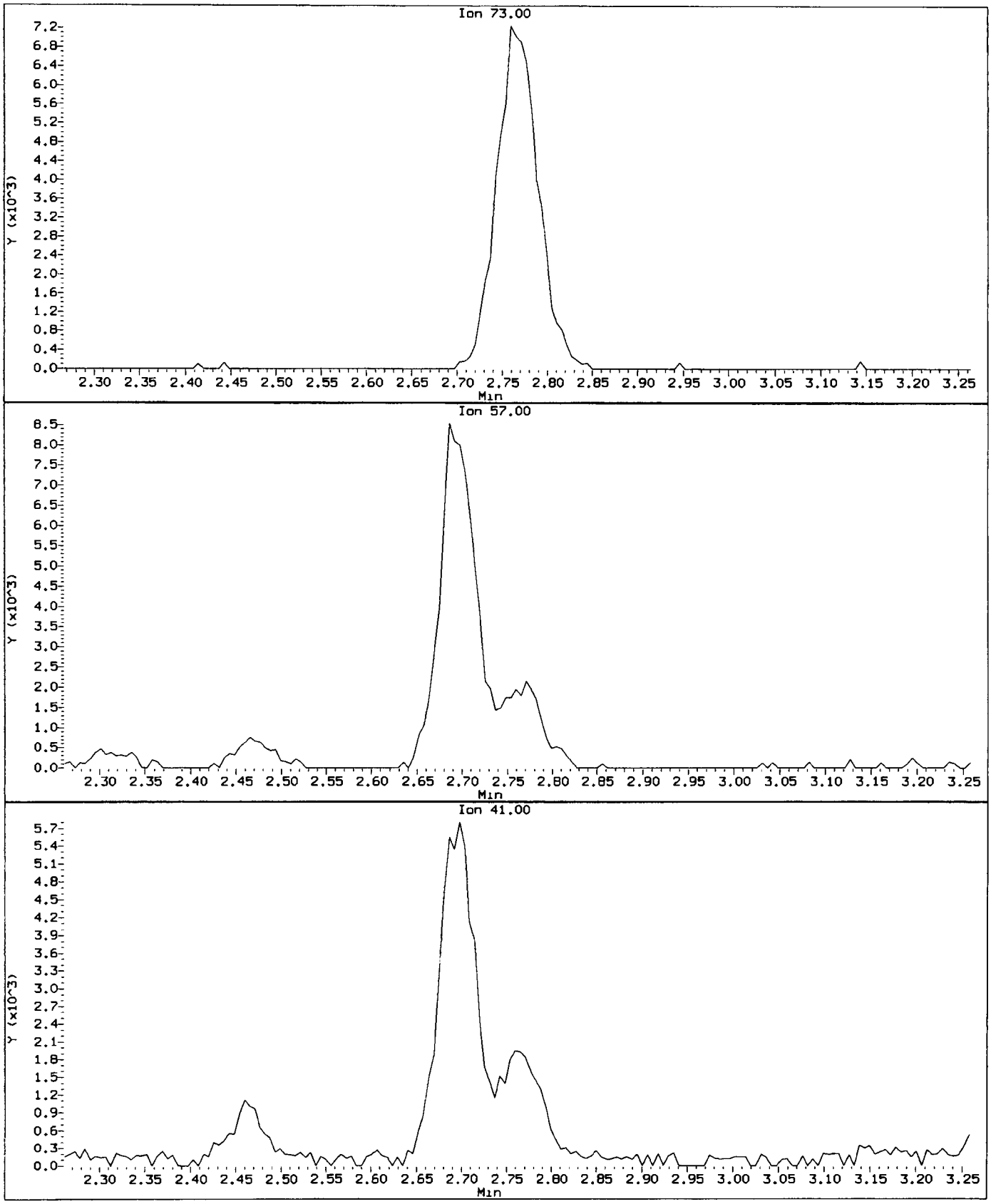
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 4/17/13

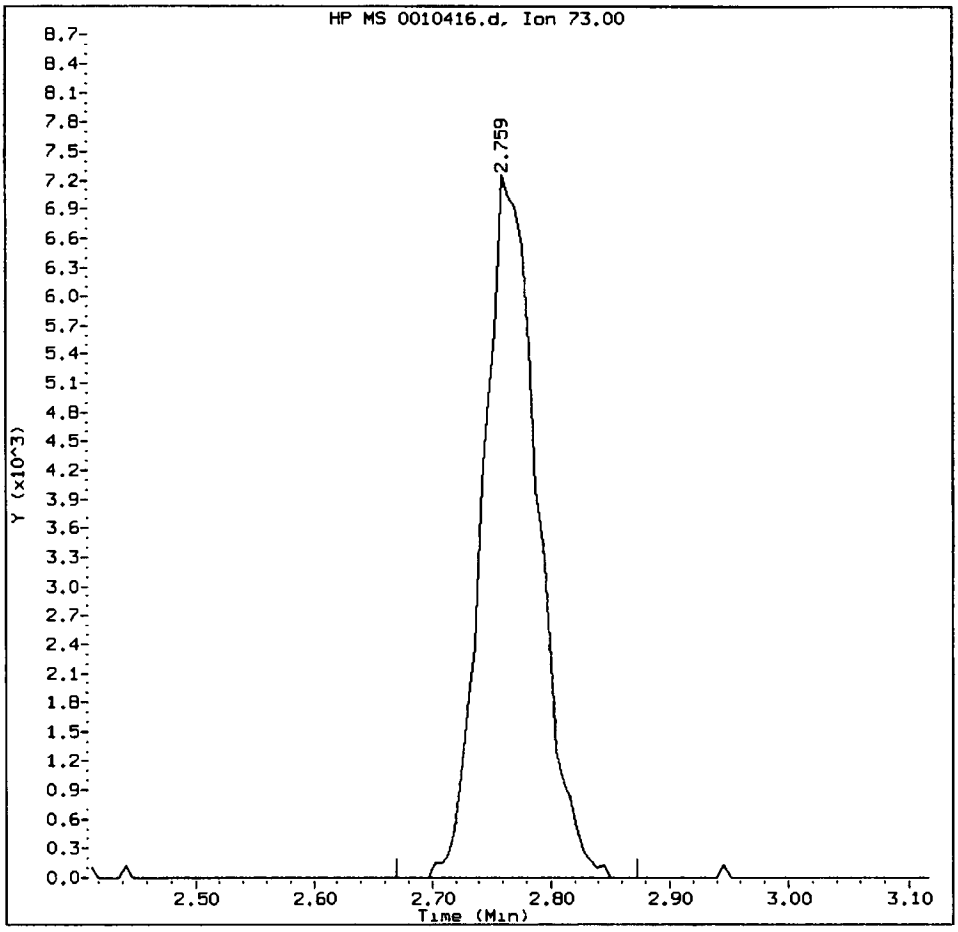
Data File: /chem1/nt5.i/16APR13.b/0010416.d
Injection Date: 16-APR-2013 18:57
Instrument: nt5.i
Client Sample ID:

Compound: Methyl tert butyl ether
CAS Number:



IC0005, /chem1/nt5.i/16APR13.b/0010416.d

Methyl tert butyl ether Amount: 0.55 Area: 23219



MANUAL INTEGRATION for Methyl tert butyl ether

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

5. Other _____

Analyst: KC Date: 4/17/13

WLS7:00216

CO-ELUTION SUMMARY FOR FILE - 0010416.d

Lab ID: IC0005, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

VG 4/17/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/0020416.d
Lab Smp Id: IC001 Client Smp ID: 1
Inj Date : 16-APR-2013 18:33
Operator : PC Inst ID: nt5.i
Smp Info : IC001,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.068	(0.223)	11836	1.00000	0.9702
2 Chloromethane	50	1.164	1.379	(0.250)	21266	1.00000	0.9941(TM)
3 Vinyl Chloride	62	1.215	1.238	(0.261)	18343	1.00000	0.9459
4 Bromomethane	94	1.419	1.447	(0.304)	10056	1.00000	1.067
5 Chloroethane	64	1.498	1.532	(0.321)	11784	1.00000	1.005
6 Trichlorofluoromethane	101	1.600	1.622	(0.343)	20502	1.00000	0.9794
7 1,1-Dichloroethene	96	1.962	1.979	(0.421)	13027	1.00000	0.9924
8 Carbon Disulfide	76	1.956	1.984	(0.420)	45858	1.00000	1.043(T)
9 112Trichloro122Trifluoroethane	101	2.007	2.030	(0.431)	11842	1.00000	0.9734
10 Iodomethane	142	2.064	2.081	(0.443)	16128	1.00000	1.018(M)
11 Bromoethane	108	2.154	2.177	(0.462)	9393	1.00000	1.054
12 Acrolein	56	2.256	2.296	(0.484)	14006	5.00000	6.460(M)
13 Methylene Chloride	84	2.426	2.454	(0.521)	36318	1.00000	3.288(Q)
14 Acetone	43	2.663	2.686	(0.572)	68965	5.00000	12.620(M)
15 Trans-1,2-Dichloroethene	96	2.579	2.595	(0.553)	15239	1.00000	1.050

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.737	2.765	(0.587)	44212	1.00000	1.044
	17 1,1-Dichloroethane	63	3.184	3.206	(0.683)	30133	1.00000	0.9902
	18 Acrylonitrile	53	3.303	3.325	(0.709)	5794	1.00000	0.9809(TM)
	19 Vinyl Acetate	43	3.523	3.546	(0.756)	33511	1.00000	0.9700
	20 Cis-1,2-Dichloroethene	96	3.727	3.749	(0.800)	15997	1.00000	0.9833
	22 2,2-Dichloropropane	77	3.829	3.846	(0.822)	22327	1.00000	0.9560
	23 Bromochloromethane	128	3.914	3.930	(0.840)	7212	1.00000	1.022
	24 Chloroform	83	4.021	4.032	(0.863)	26979	1.00000	0.9949
	25 Carbon Tetrachloride	117	4.106	4.117	(0.803)	20887	1.00000	0.9667
$	27 Dibromofluoromethane	111	4.185	4.196	(0.898)	821217	50.0000	49.746
	26 1,1,1-Trichloroethane	97	4.179	4.191	(0.897)	25150	1.00000	0.9907
	28 1,1-Dichloropropene	75	4.298	4.309	(0.841)	22178	1.00000	0.9236
	29 2-Butanone	72	4.383	4.400	(0.941)	9220	5.00000	5.386
	30 Benzene	78	4.525	4.536	(0.885)	67122	1.00000	1.037
*	31 Pentafluorobenzene	168	4.660	4.672	(1.000)	1518888	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.999)	950616	50.0000	50.675
	33 1,2-Dichloroethane	62	4.711	4.728	(0.921)	22487	1.00000	1.030
	34 Trichloroethene	95	5.056	5.067	(0.989)	15543	1.00000	0.9404
*	35 1,4-Difluorobenzene	114	5.113	5.124	(1.000)	2685656	50.0000	
	37 Dibromomethane	93	5.407	5.424	(1.058)	8605	1.00000	0.9984
	38 1,2-Dichloropropane	63	5.503	5.514	(1.076)	18372	1.00000	1.009
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	20827	1.00000	0.9918
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.125	(1.196)	9581	1.00000	0.9432
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	25619	1.00000	0.9738
$	42 d8-Toluene	98	6.284	6.295	(1.229)	3413190	50.0000	50.055
	43 Toluene	92	6.329	6.335	(1.238)	46354	1.00000	1.064(Q)
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	17074	1.00000	0.9802
	45 4-Methyl-2-Pentanone	58	6.691	6.702	(1.309)	32049	5.00000	4.856(Q)
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.309)	22875	1.00000	0.9615
	47 1,1,2-Trichloroethane	97	6.816	6.827	(1.333)	12254	1.00000	0.9530
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	14623	1.00000	0.9835
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	23837	1.00000	1.016
	50 1,2-Dibromoethane	107	7.132	7.138	(1.395)	12906	1.00000	1.028
	51 2-Hexanone	43	7.404	7.409	(0.975)	57858	5.00000	5.299
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2596197	50.0000	
	53 Chlorobenzene	112	7.602	7.607	(1.001)	45710	1.00000	1.058(Q)
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	79104	1.00000	1.082
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	15659	1.00000	1.006
	56 m,p-xylene	106	7.783	7.794	(1.025)	57925	2.00000	2.069(Q)
	57 o-Xylene	106	8.151	8.156	(1.074)	26879	1.00000	0.9560(Q)
	58 Styrene	104	8.196	8.201	(1.080)	47886	1.00000	1.041
	59 Bromoform	173	8.190	8.196	(0.848)	9905	1.00000	0.9601
	60 Isopropyl Benzene	105	8.433	8.439	(0.873)	71792	1.00000	1.055
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1405807	50.0000	50.576
	63 Bromobenzene	156	8.733	8.739	(0.904)	18791	1.00000	1.031
	64 N-Propyl Benzene	91	8.801	8.807	(0.911)	87601	1.00000	1.095
	65 1,1,2,2-Tetrachloroethane	83	8.863	8.869	(0.917)	16889	1.00000	1.028

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
66	2-Chloro Toluene	91	8.914	8.920	(0.923)	54145	1.00000	1.055
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.931)	60405	1.00000	1.036
68	1,2,3-Trichloropropane	110	8.965	8.965	(0.928)	5180	1.00000	1.048(QM)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.022	(0.934)	6888	1.00000	1.020(QM)
70	4-Chloro Toluene	91	9.067	9.073	(0.939)	57095	1.00000	1.060
71	T-Butyl Benzene	119	9.271	9.271	(0.960)	53115	1.00000	1.025
72	1,2,4-Trimethylbenzene	105	9.333	9.338	(0.966)	60686	1.00000	1.054
73	S-Butyl Benzene	105	9.429	9.435	(0.976)	78629	1.00000	1.067
74	4-Isopropyl Toluene	119	9.576	9.582	(0.991)	63746	1.00000	1.039
75	1,3-Dichlorobenzene	146	9.587	9.593	(0.992)	36188	1.00000	1.056
* 76	d4-1,4-Dichlorobenzene	152	9.661	9.667	(1.000)	1393772	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.002)	39014	1.00000	1.082(Q)
78	N-Butyl Benzene	91	9.961	9.966	(1.031)	61912	1.00000	1.042
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.051	(1.040)	1282610	50.0000	50.467(Q)
80	1,2-Dichlorobenzene	146	10.057	10.057	(1.041)	36742	1.00000	1.090(Q)
81	1,2-Dibromo 3-Chloropropane	75	10.804	10.809	(1.118)	3317	1.00000	1.037
82	Hexachloro 1,3-Butadiene	225	11.483	11.488	(1.189)	14999	1.00000	1.010
83	1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	26419	1.00000	1.051
84	Naphthalene	128	11.782	11.788	(1.220)	90899	1.00000	1.421
85	1,2,3-Trichlorobenzene	180	11.963	11.969	(1.238)	26034	1.00000	1.109

QC Flag Legend

T - Target compound detected outside RT window.
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: 0020416.d
Lab Smp Id: IC001
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 1
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	1616720	808360	3233440	1518888	-6.05
35 1,4-Difluorobenze	2842987	1421494	5685974	2685656	-5.53
52 d5-Chlorobenzene	2779083	1389542	5558166	2596197	-6.58
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1393772	-8.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-0.06

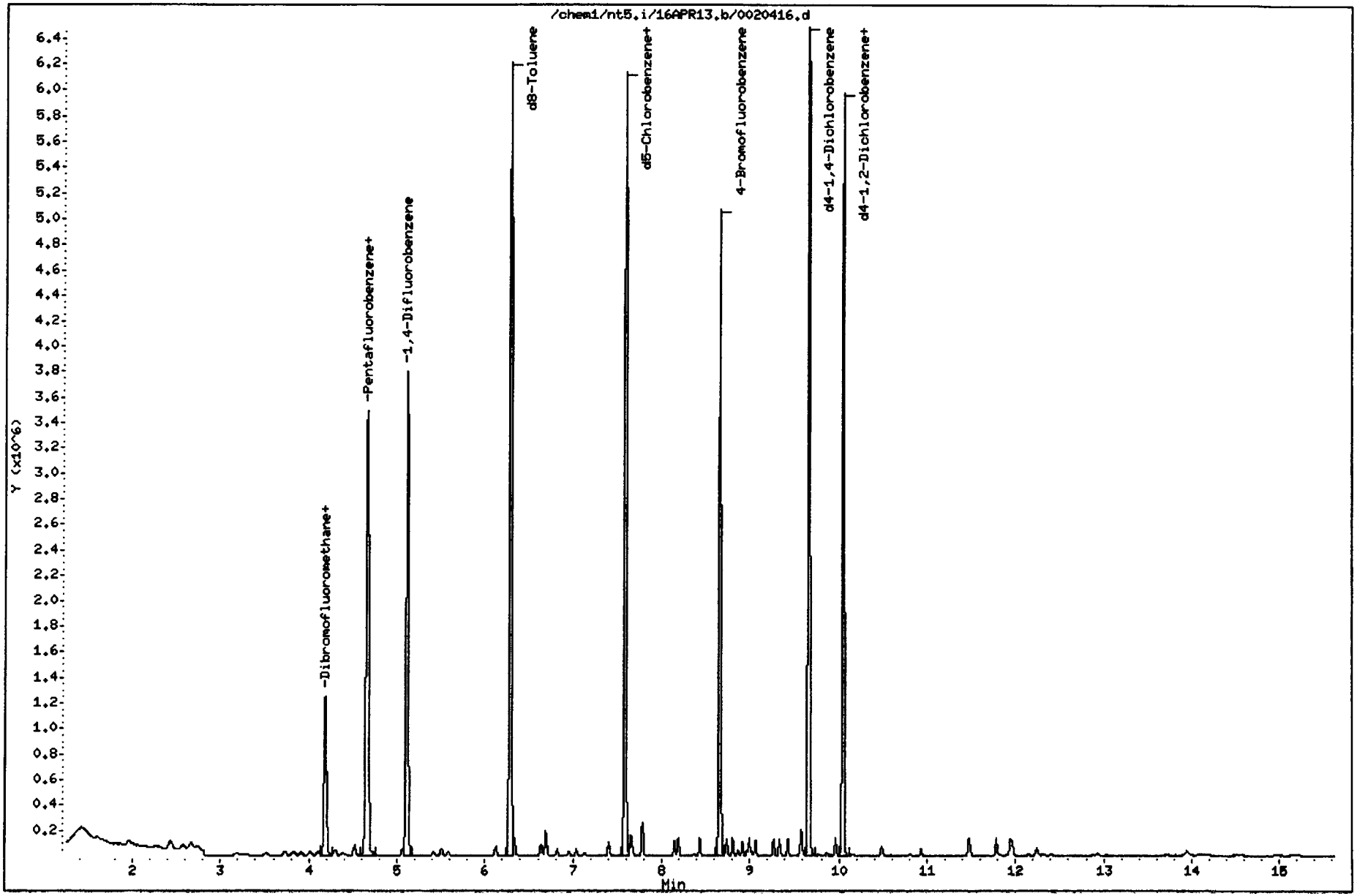
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/16APR13.b/0020416.d
Date : 16-APR-2013 18:33
Client ID: 1
Sample Info: IC001,5,5,0,

Instrument: nt5.i

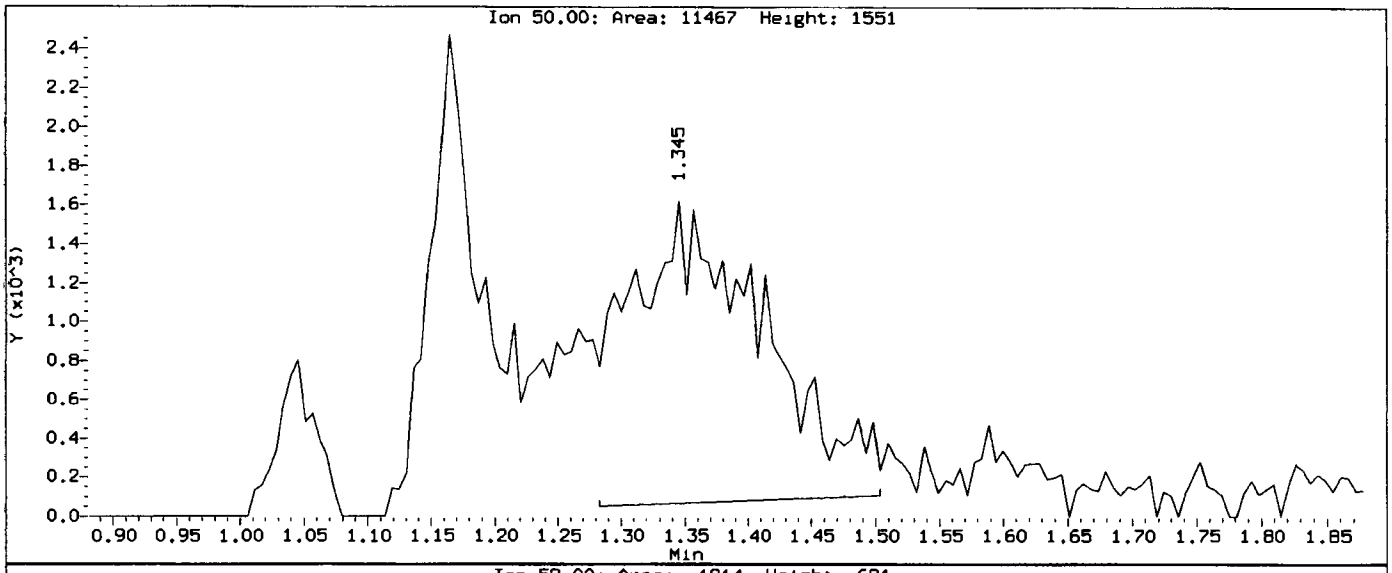
Operator: PC
Column diameter: 0.18

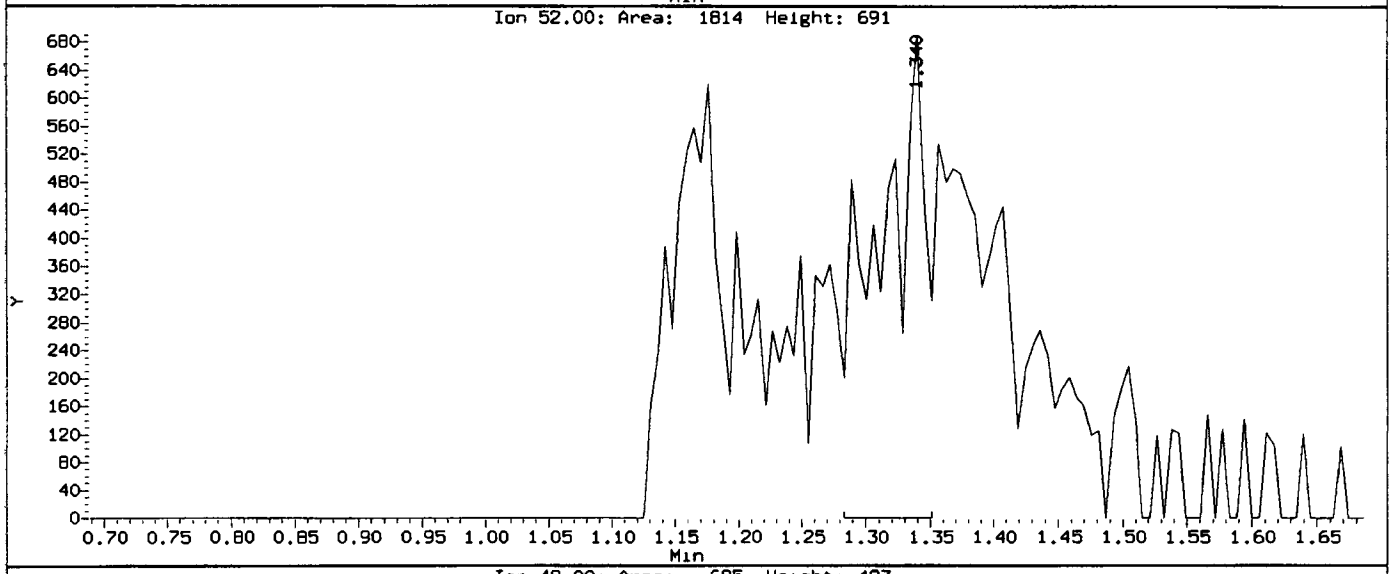
Column phase: RTXVMS

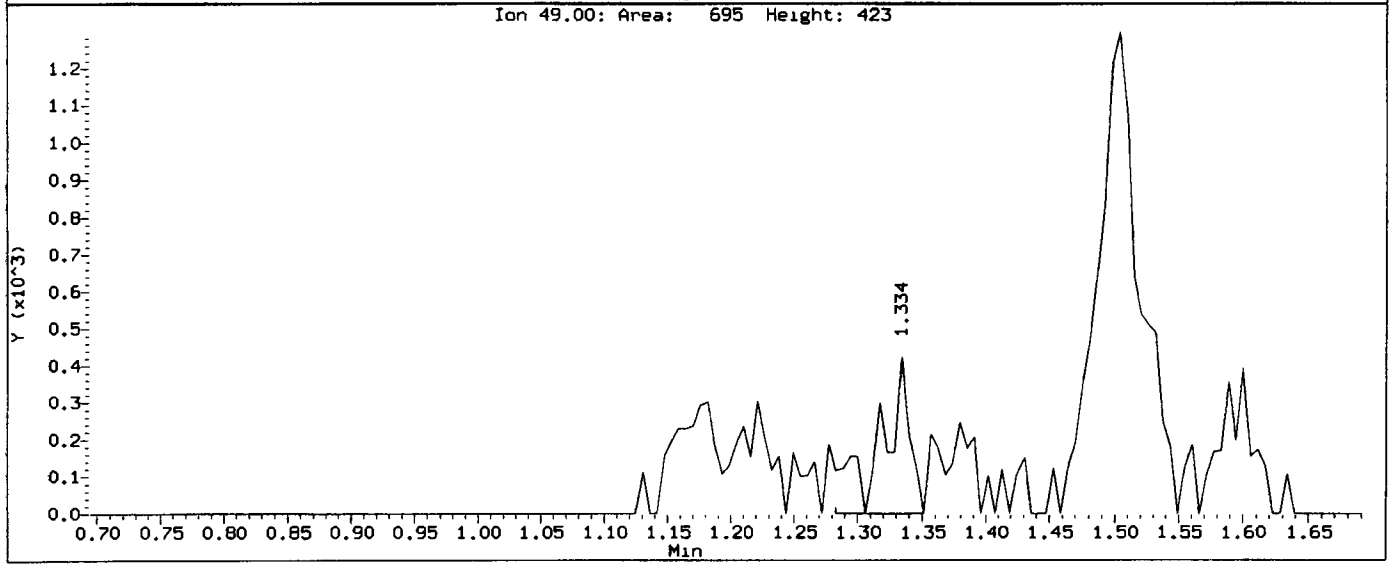


Data File: /chem1/nt5.i/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.i
Client Sample ID:

Compound: Chloromethane
CAS Number:

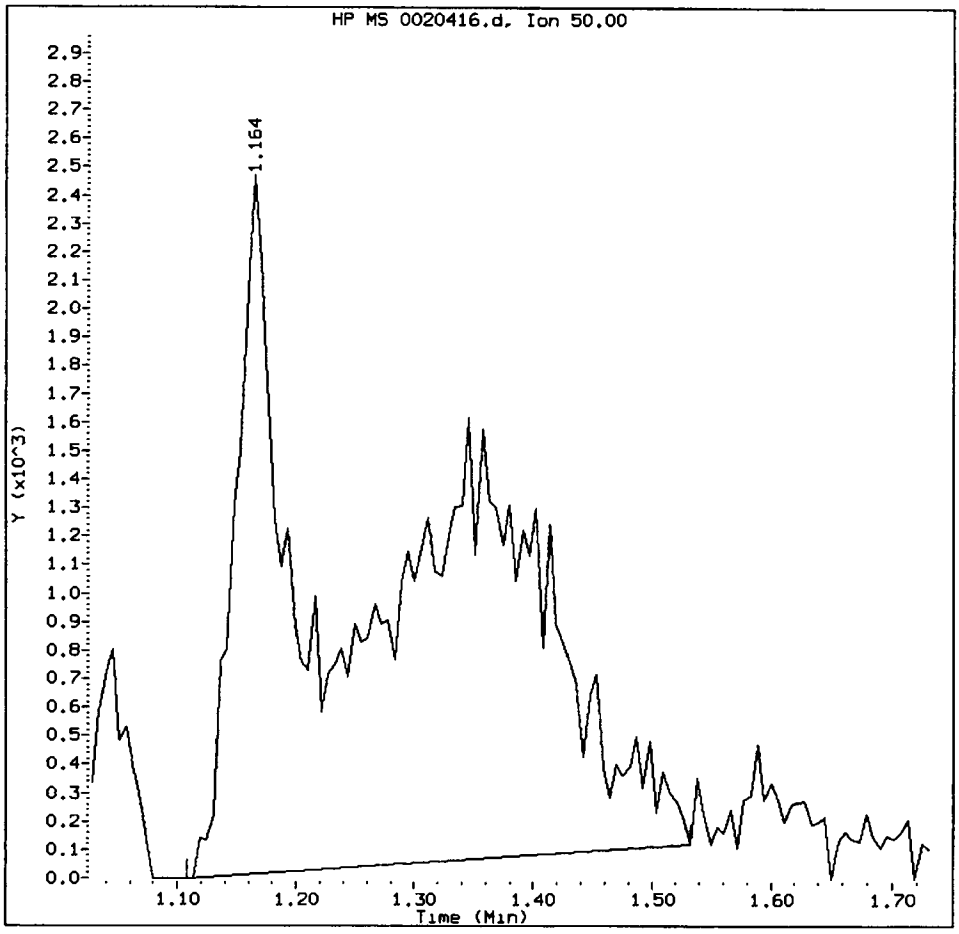






IC001, /chem1/nt5.i/16APR13.b/0020416.d

Chloromethane Amount: 0.99 Area: 21266



MANUAL INTEGRATION for Chloromethane

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

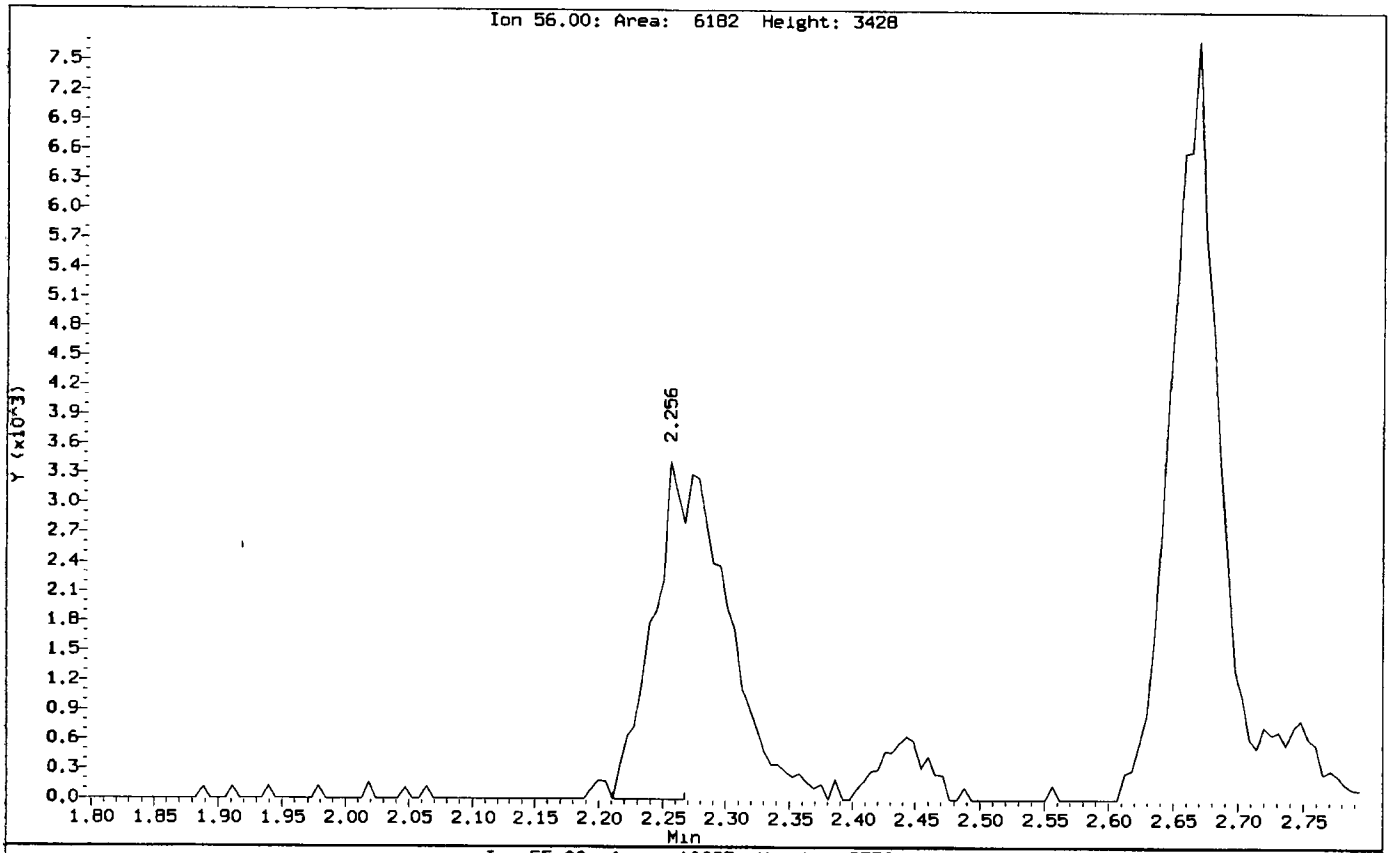
5. Other _____

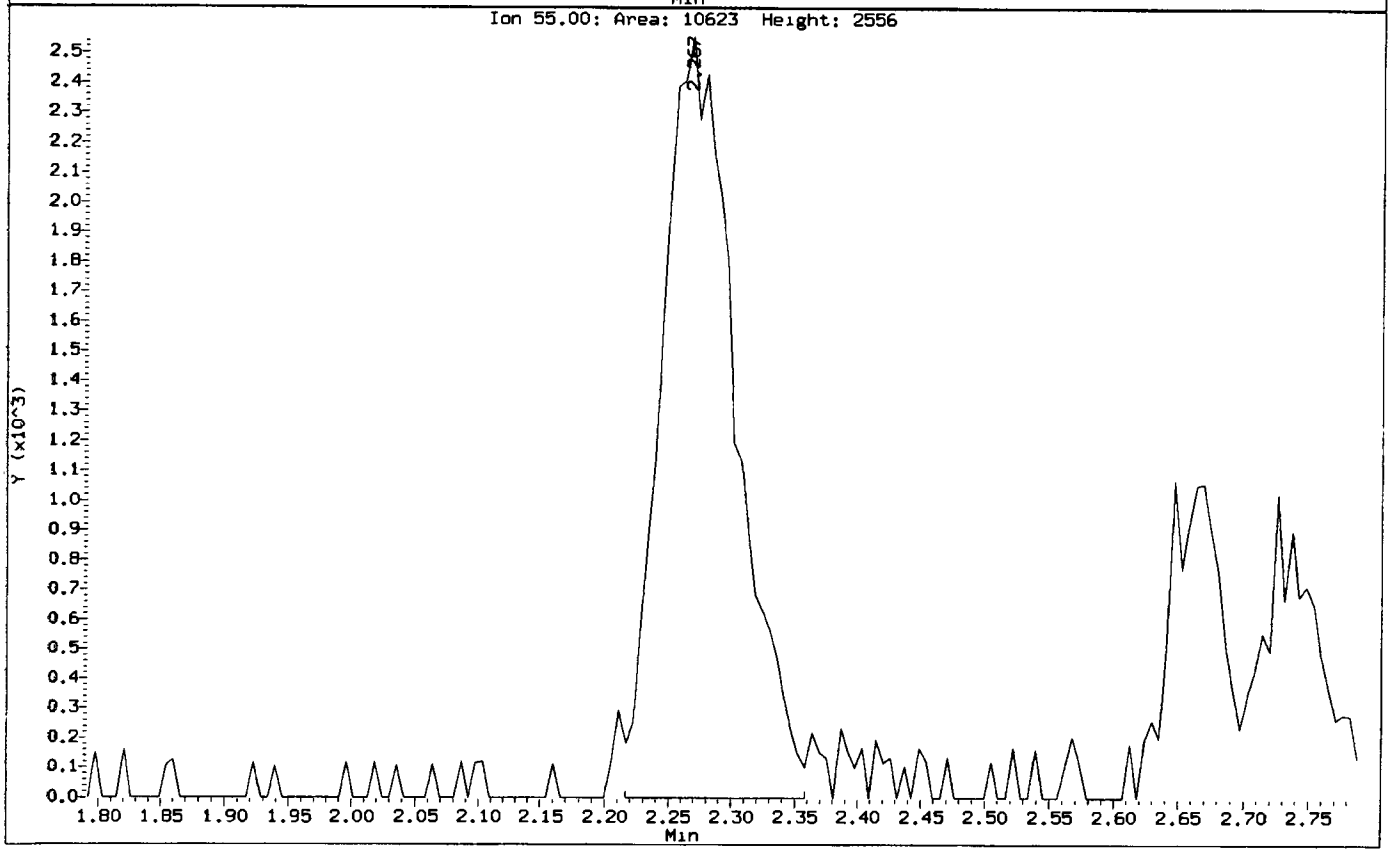
Analyst: IC Date: 4/17/13

Data File: /chem1/nt5.1/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.1
Client Sample ID:

Compound: Acrolein
CAS Number:

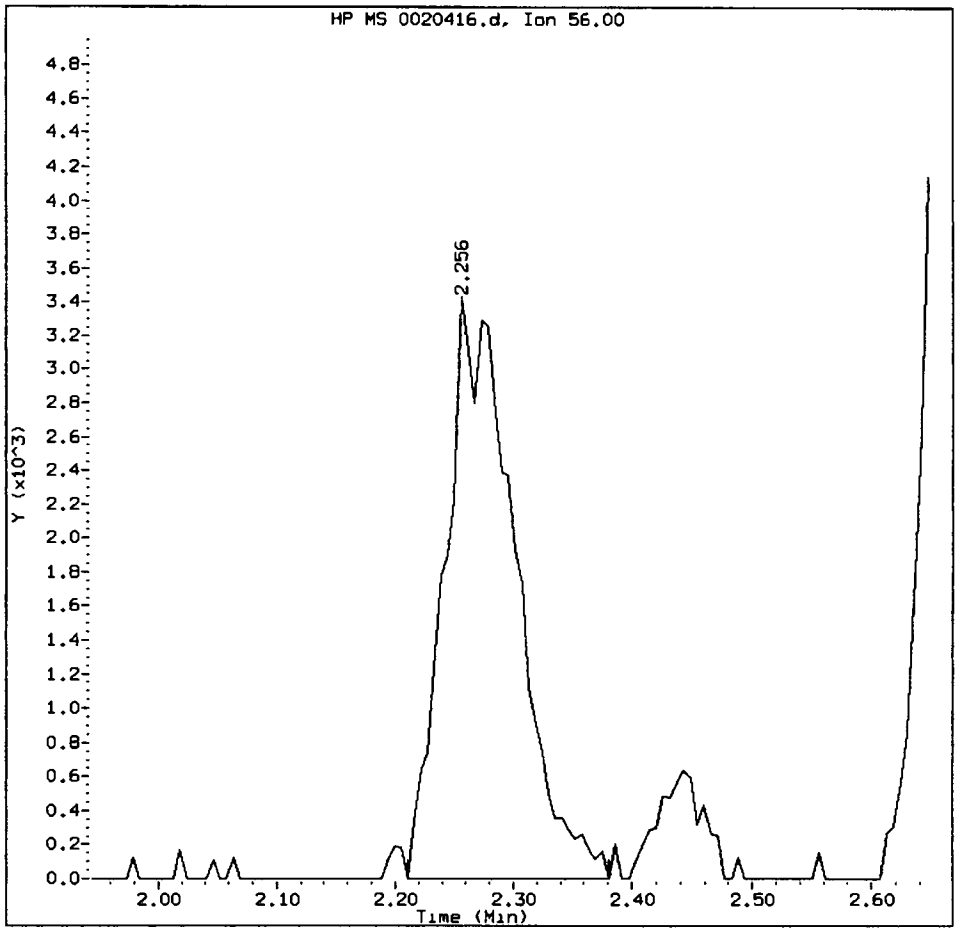
RG 4/17/13





IC001, /chem1/nt5.i/16APR13.b/0020416.d

Acrolein Amount: 6.46 Area: 14006



MANUAL INTEGRATION for Acrolein

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

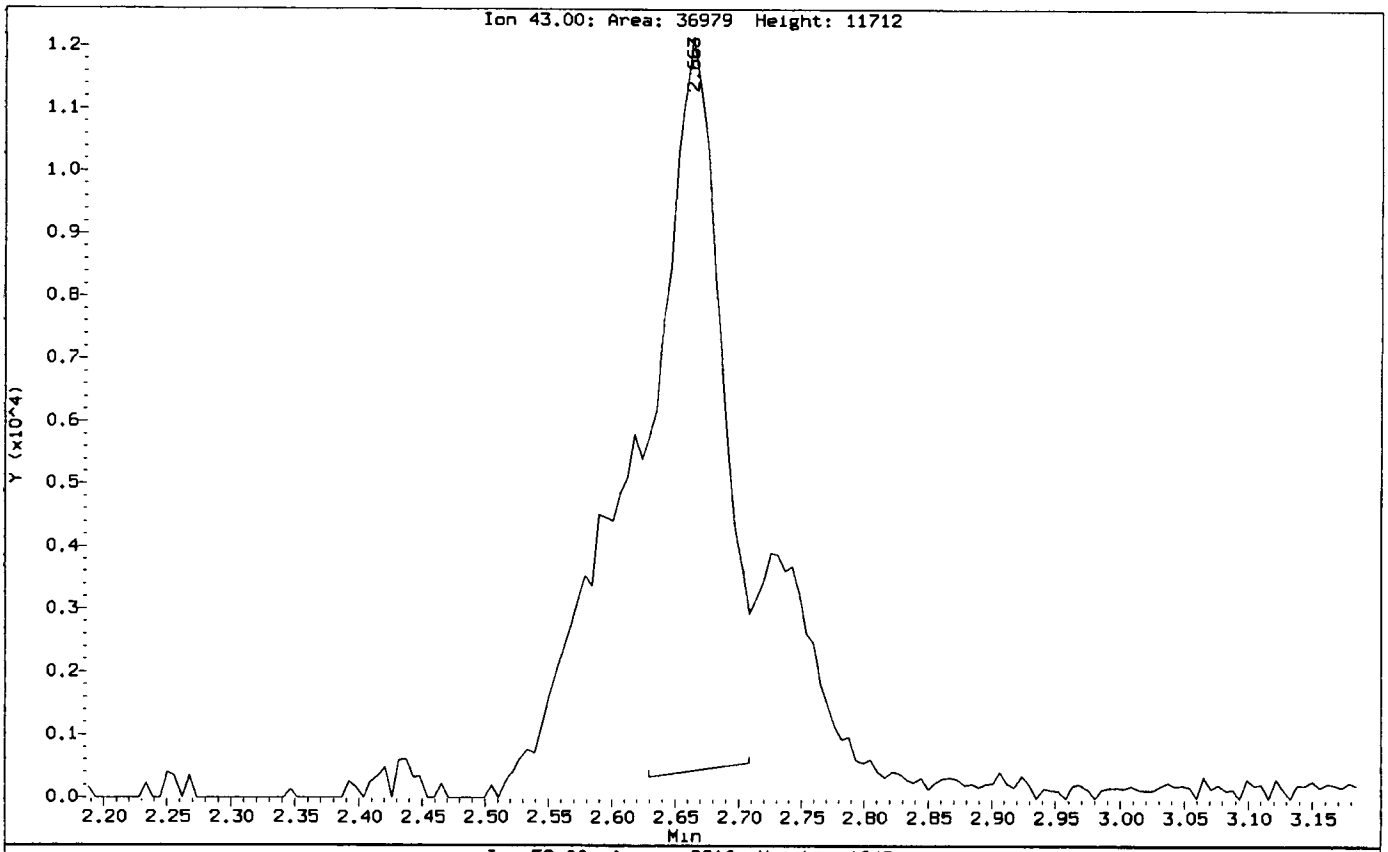
5. Other _____

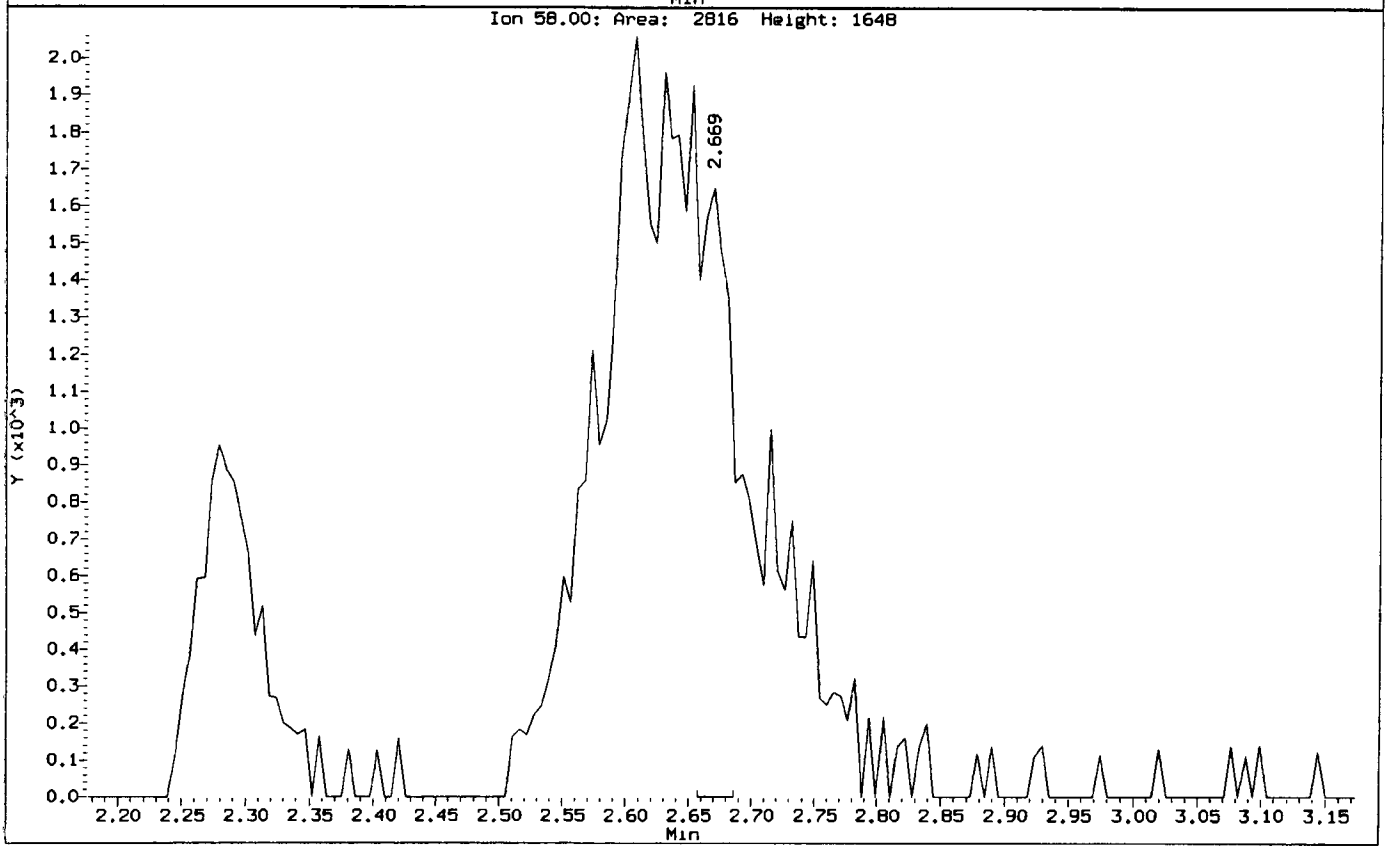
Analyst: PL Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.i
Client Sample ID:

Compound: Acetone
CAS Number:

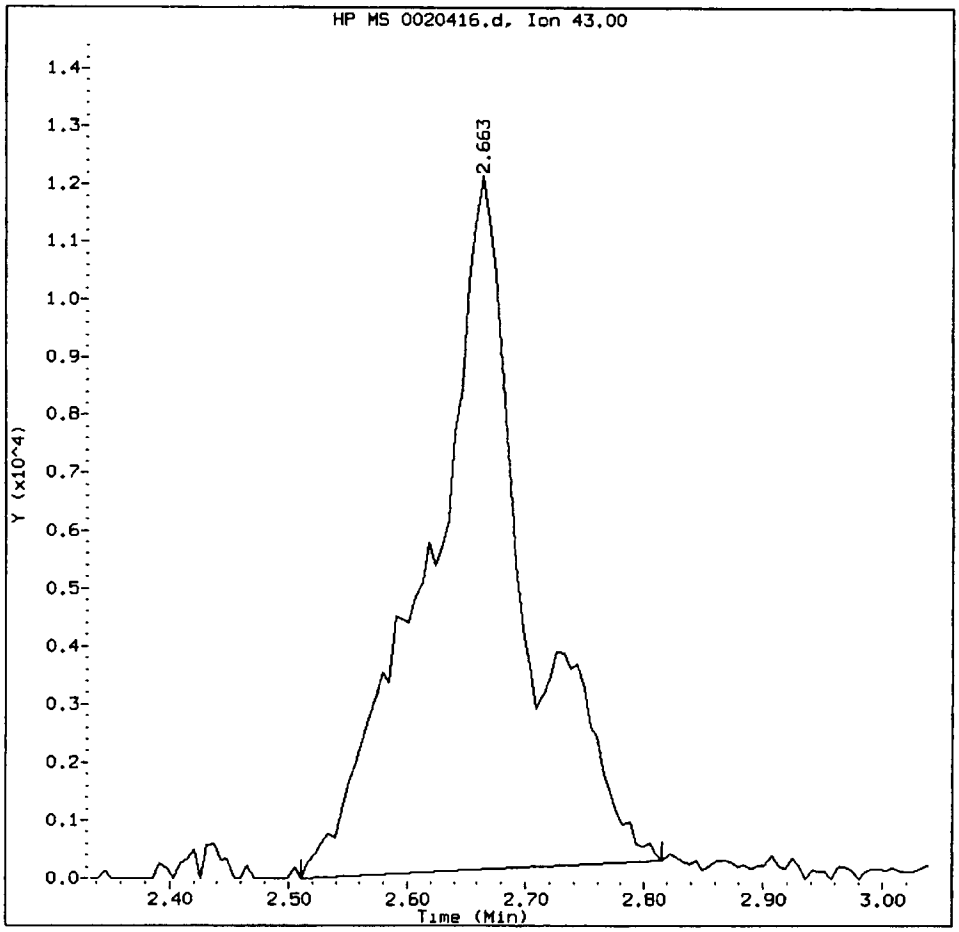
PC 4/17/13





IC001, /chem1/nt5.i/16APR13.b/0020416.d

Acetone Amount: 12.62 Area: 68965



MANUAL INTEGRATION for Acetone

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

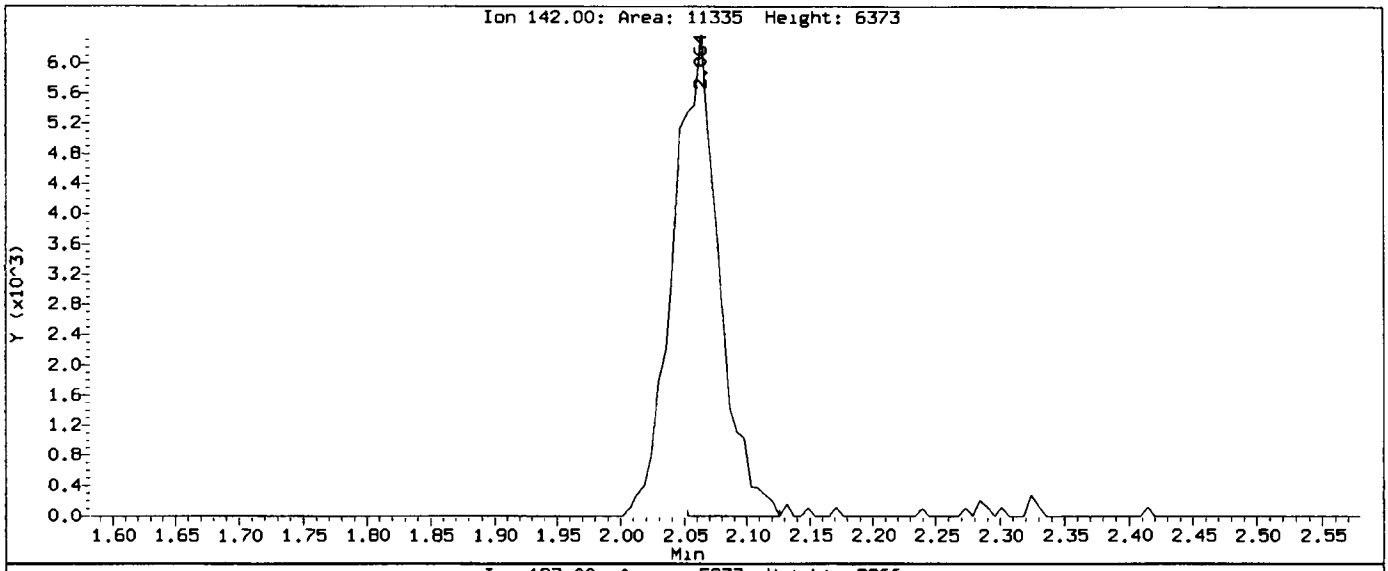
5. Other _____

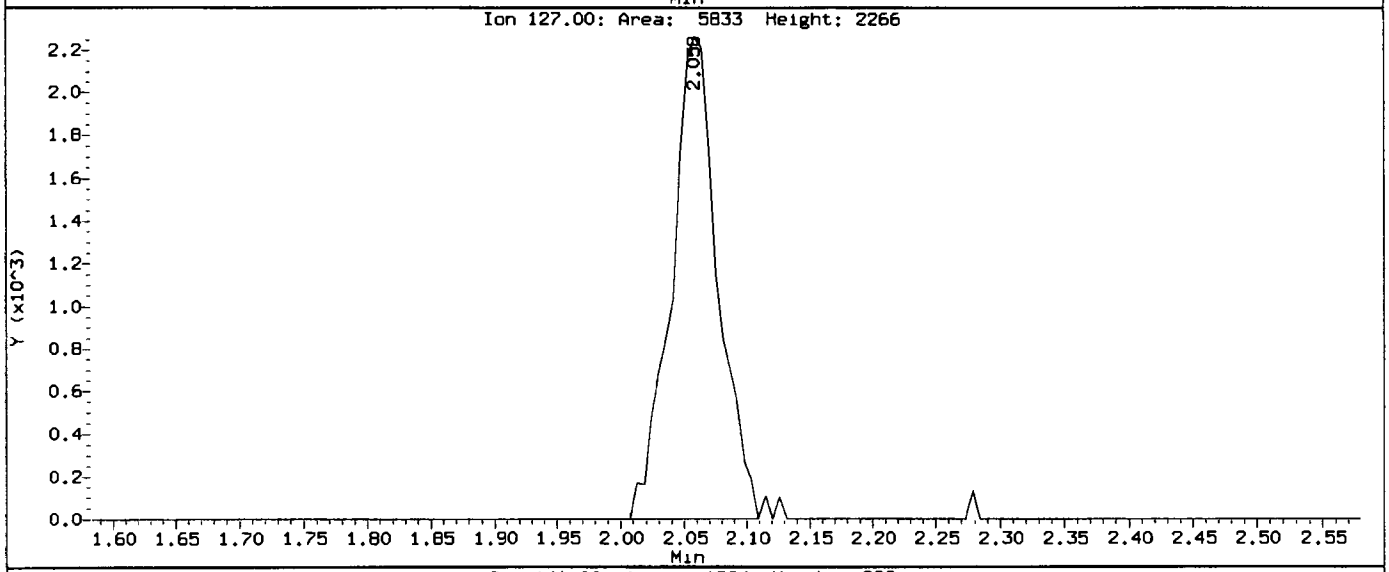
Analyst: YC Date: 4/17/13

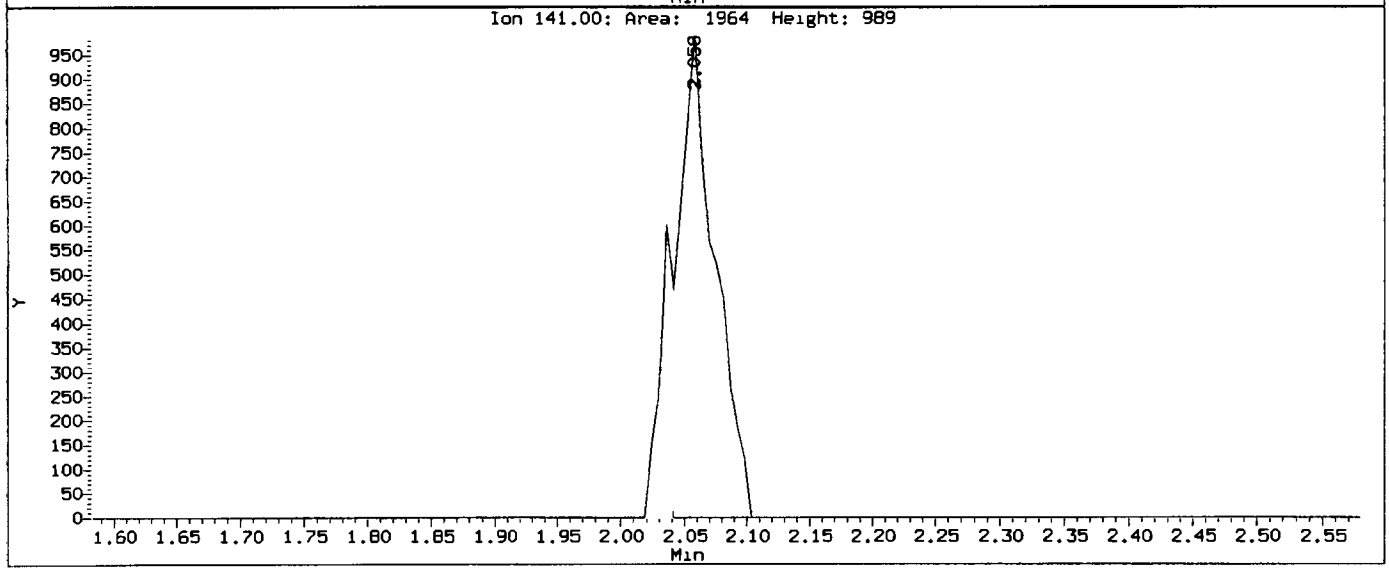
Data File: /chem1/nt5.i/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.i
Client Sample ID:

Compound: Iodomethane
CAS Number:

PG 4/17/13



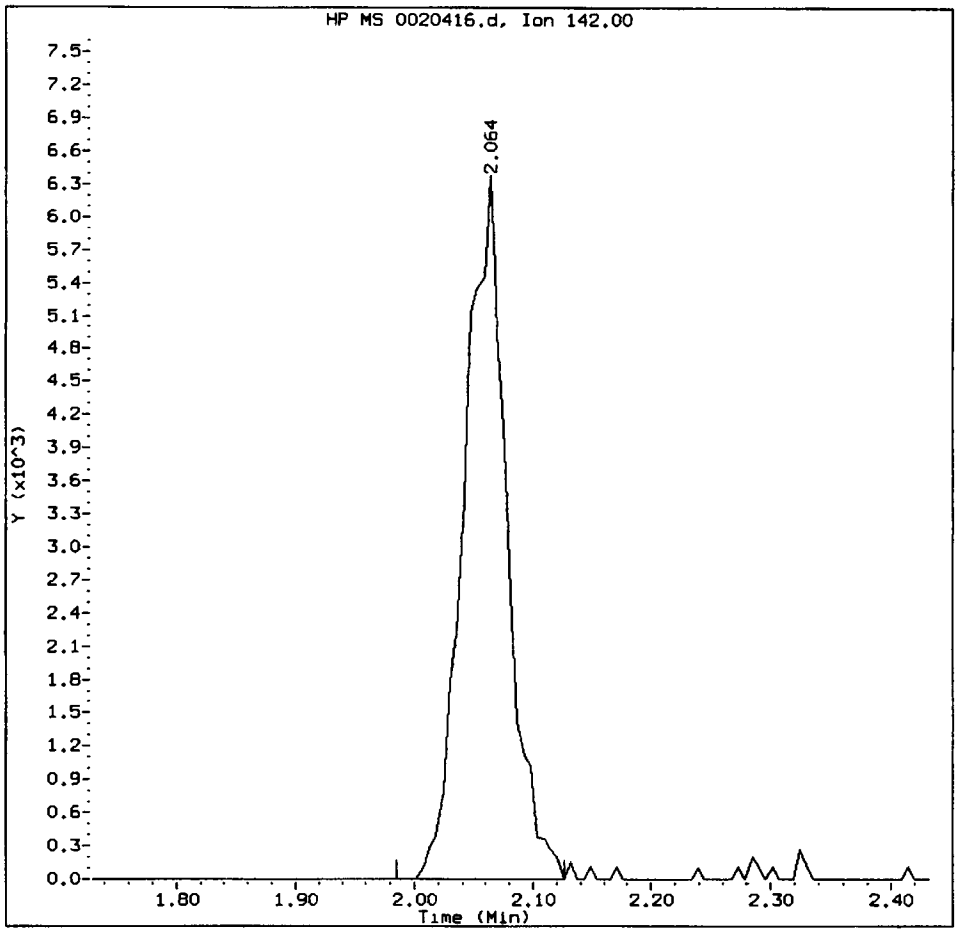




WL67 : 00228

IC001, /chem1/nt5.i/16APR13.b/0020416.d

Iodomethane Amount: 1.02 Area: 16128



MANUAL INTEGRATION for Iodomethane

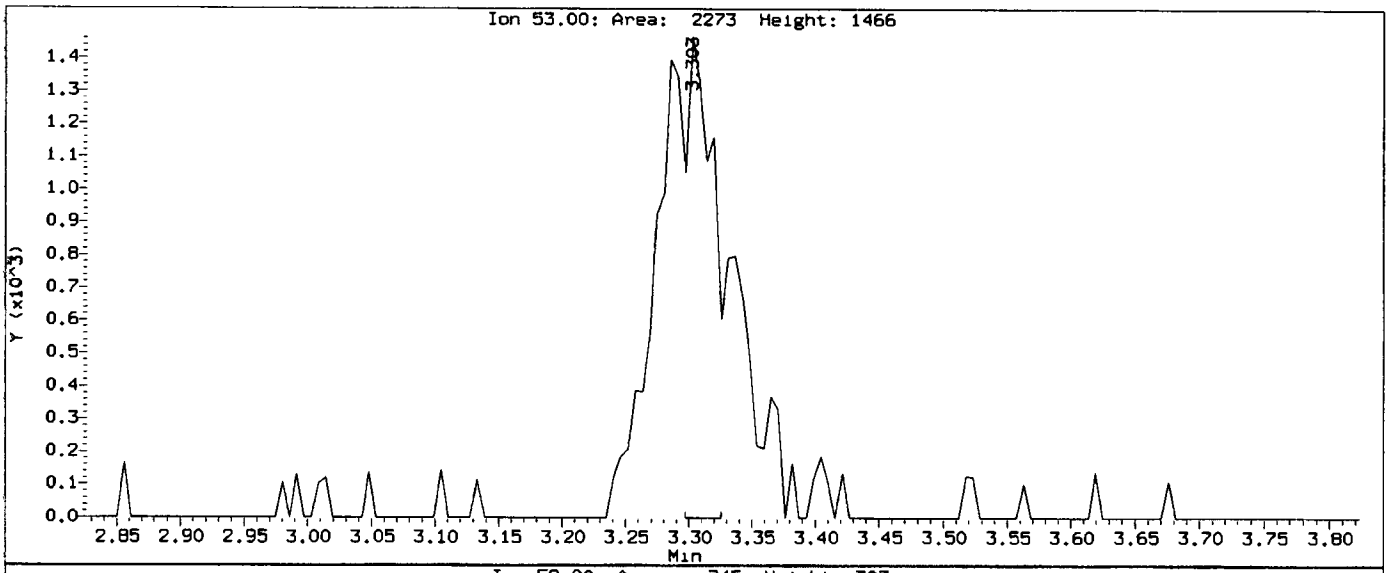
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

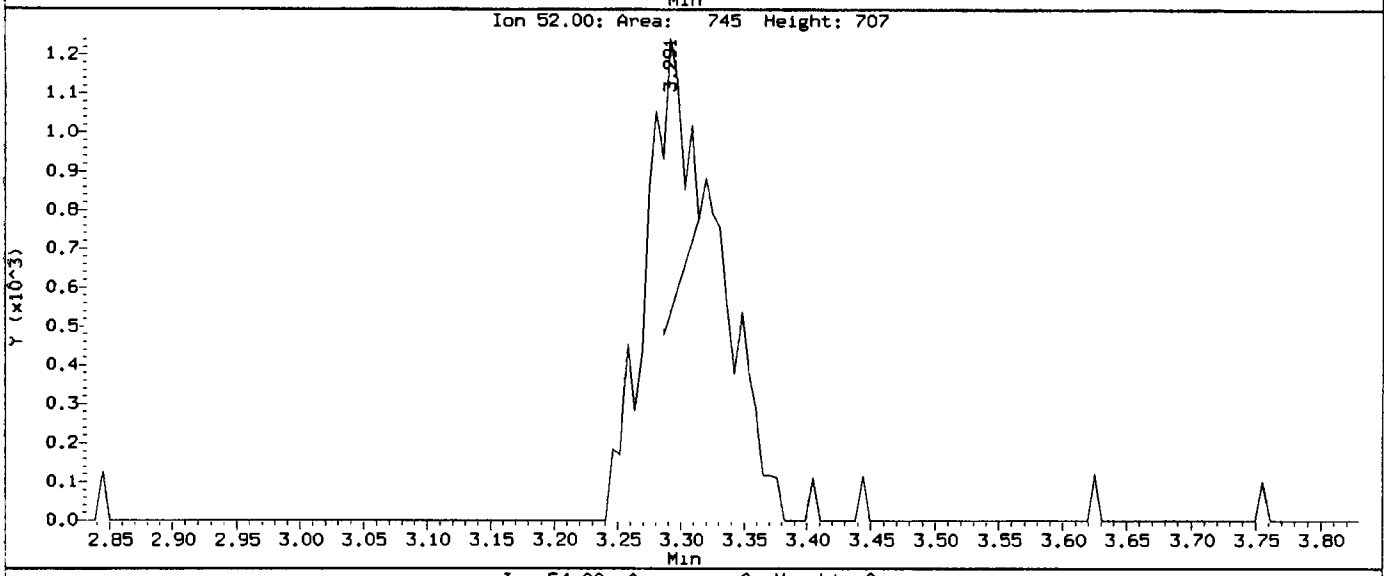
5. Other _____

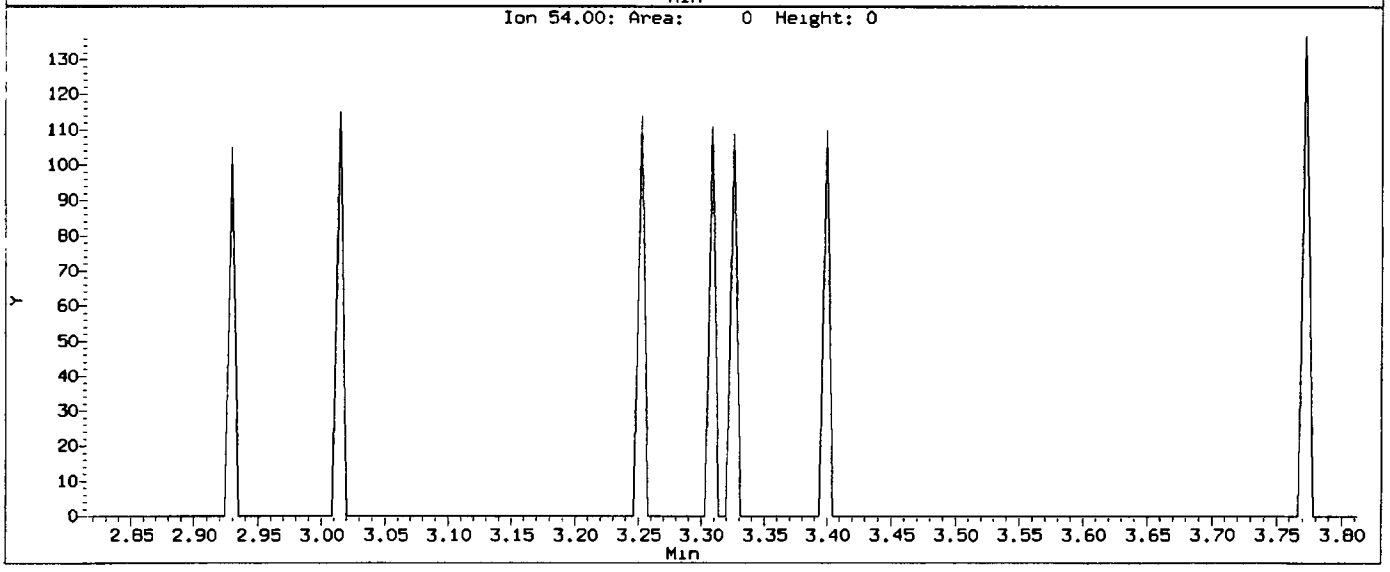
Analyst: KL Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.i
Client Sample ID:

Compound: Acrylonitrile
CAS Number:

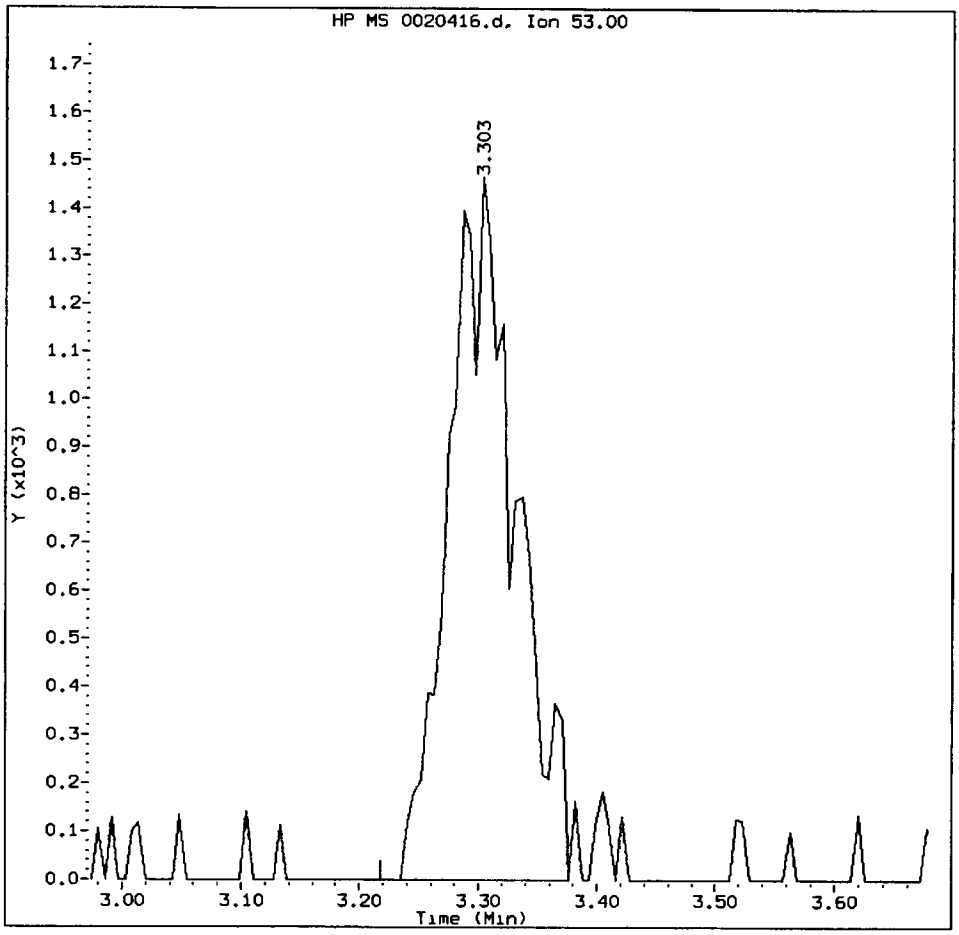






IC001, /chem1/nt5.i/16APR13.b/0020416.d

Acrylonitrile Amount: 0.98 Area: 5794



MANUAL INTEGRATION for Acrylonitrile

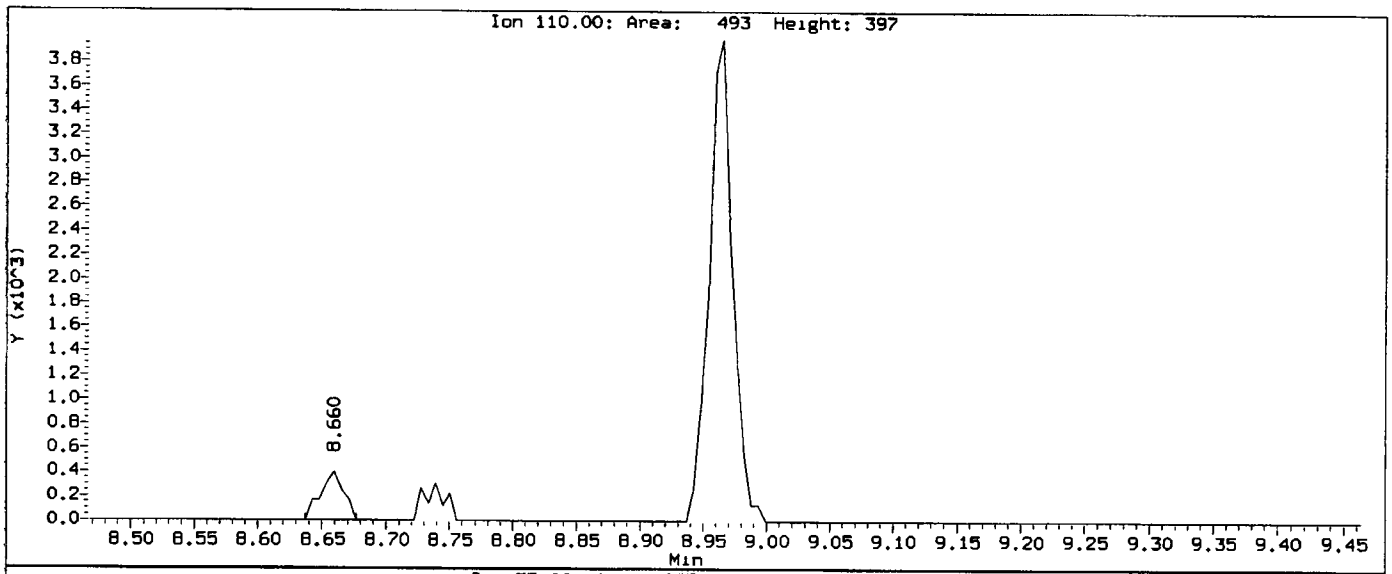
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

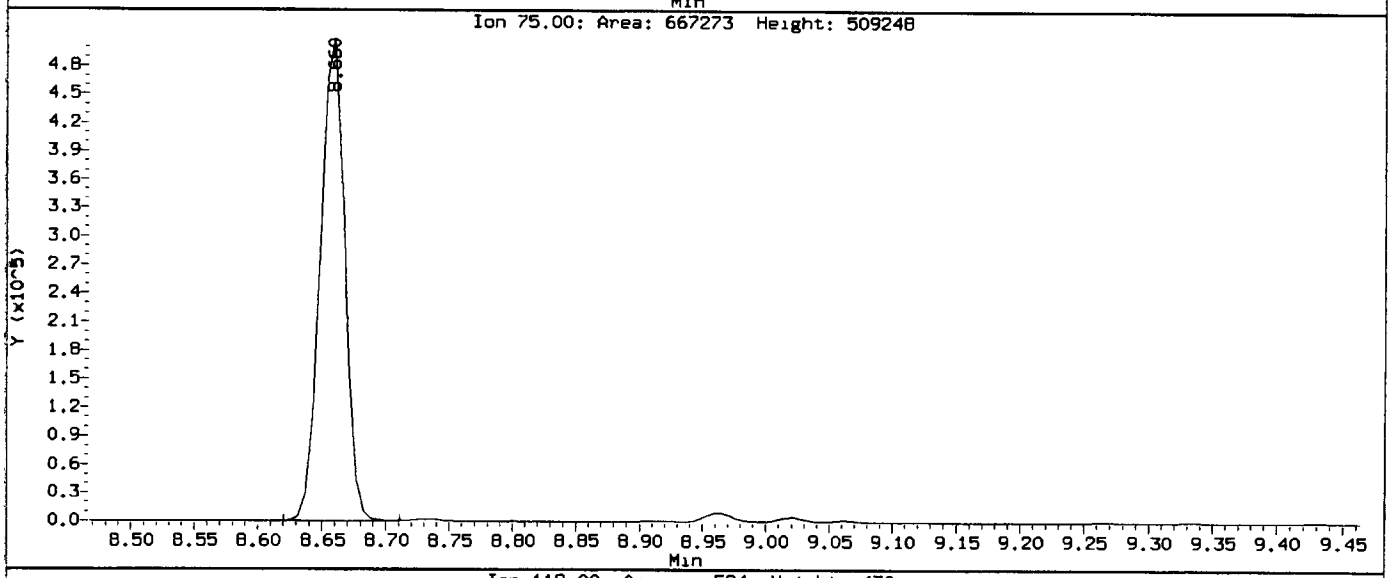
5. Other _____

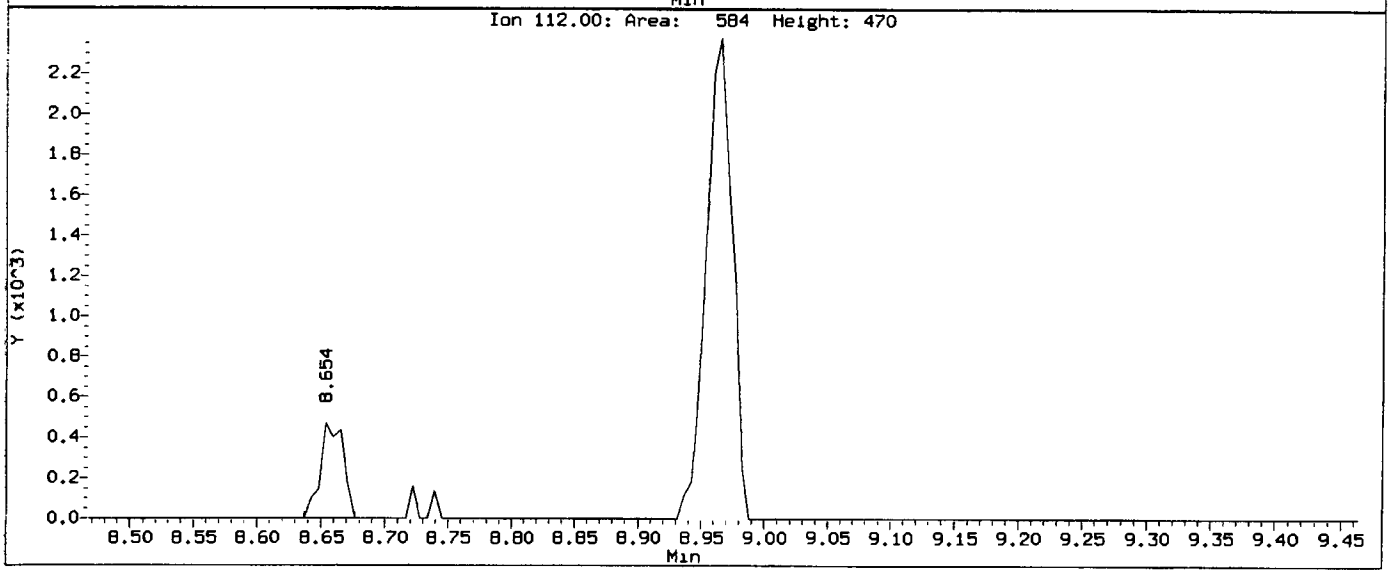
Analyst: PC Date: 4/16/13

Data File: /chem1/nt5.1/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.1
Client Sample ID:

Compound: 1,2,3-Trichloropropane
CAS Number:

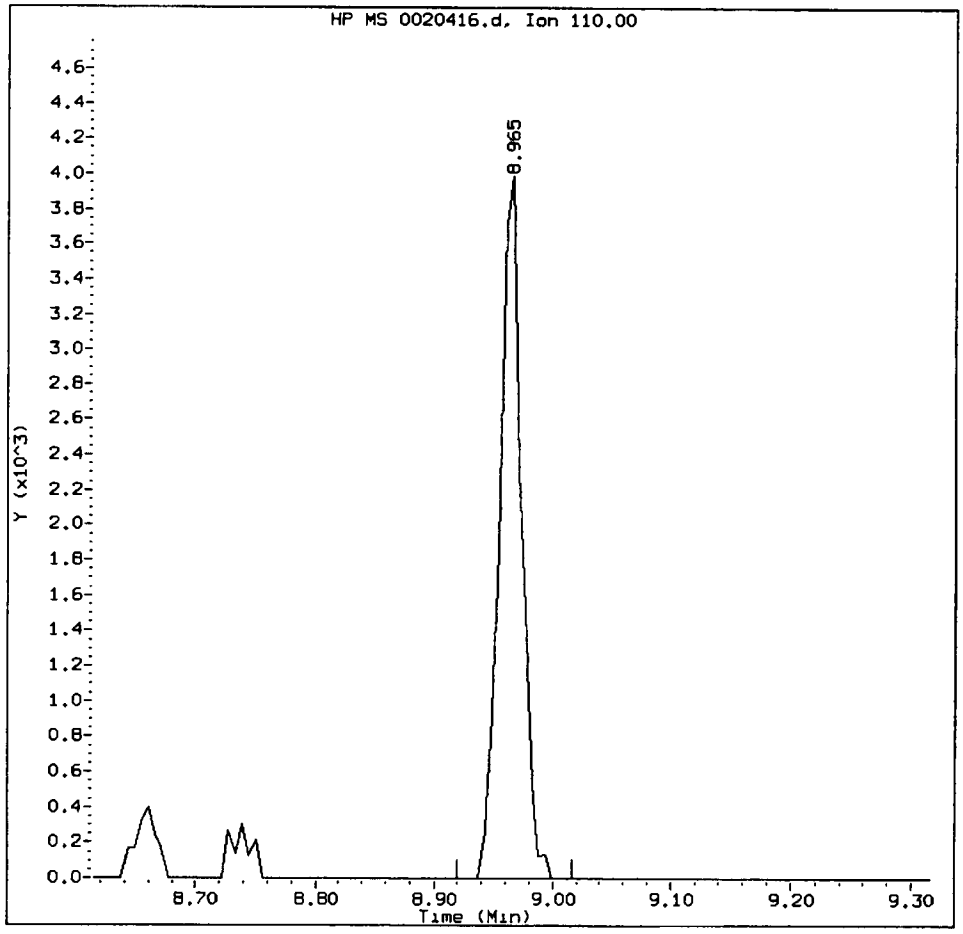






IC001, /chem1/nt5.i/16APR13.b/0020416.d

1,2,3-Trichloropropane Amount: 1.05 Area: 5180



MANUAL INTEGRATION for 1,2,3-Trichloropropane

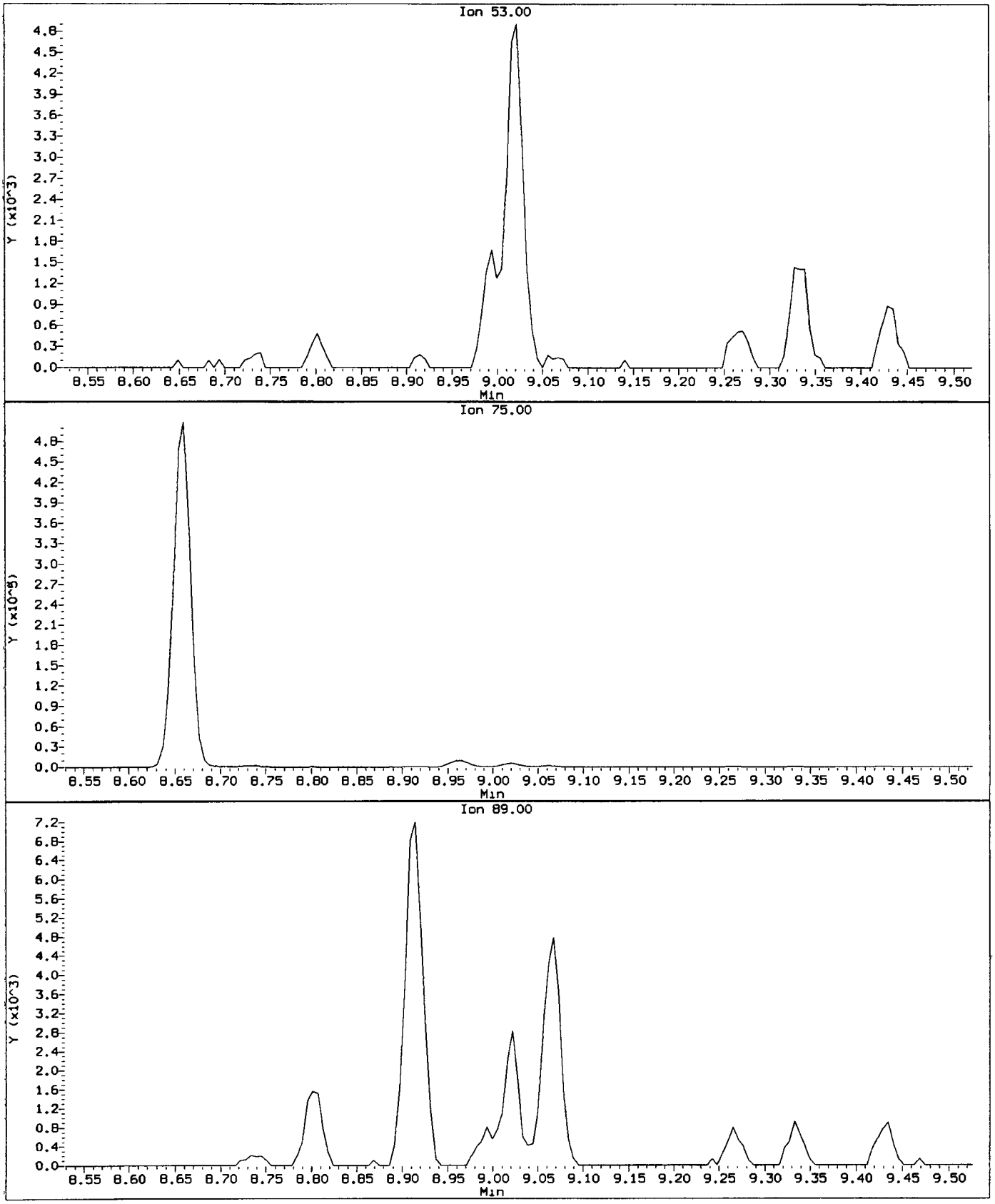
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 4/16/13

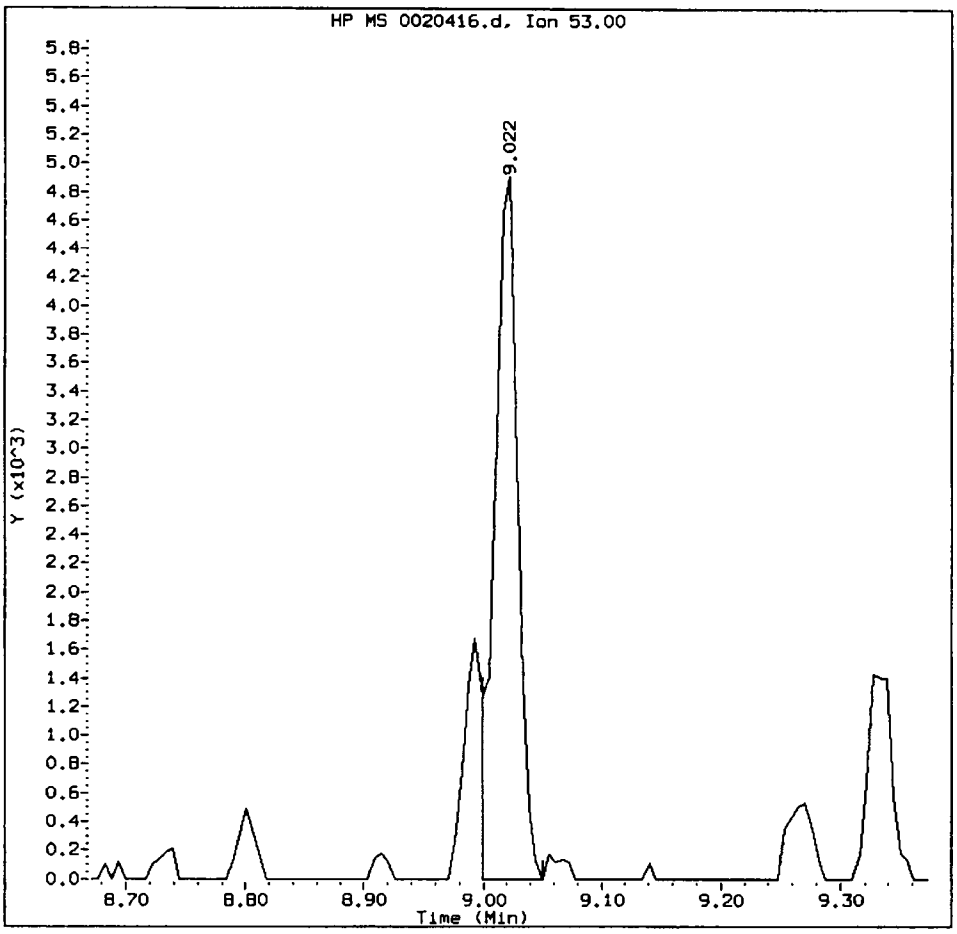
Data File: /chem1/nt5.1/16APR13.b/0020416.d
Injection Date: 16-APR-2013 18:33
Instrument: nt5.1
Client Sample ID:

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:



IC001, /chem1/nt5.i/16APR13.b/0020416.d

Trans-1,4-Dichloro 2-Butene Amount: 1.02 Area: 6888



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: VC Date: 4/16/13

CO-ELUTION SUMMARY FOR FILE - 0020416.d

Lab ID: IC001, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/0050416.d
Lab Smp Id: IC0025 Client Smp ID: 2.5
Inj Date : 16-APR-2013 18:09
Operator : PC Inst ID: nt5.i
Smp Info : IC0025,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.068	1.068	(0.229)	31954	2.50000	2.556
2 Chloromethane	50	1.193	1.379	(0.255)	50789	2.50000	2.317(TM)
3 Vinyl Chloride	62	1.232	1.238	(0.264)	48610	2.50000	2.446
4 Bromomethane	94	1.447	1.447	(0.310)	24531	2.50000	2.540
5 Chloroethane	64	1.532	1.532	(0.328)	29069	2.50000	2.419
6 Trichlorofluoromethane	101	1.623	1.622	(0.347)	53759	2.50000	2.506
7 1,1-Dichloroethene	96	1.985	1.979	(0.425)	34010	2.50000	2.528
8 Carbon Disulfide	76	1.990	1.984	(0.426)	116469	2.50000	2.584(T)
9 112Trichloro122Trifluoroethane	101	2.030	2.030	(0.434)	31978	2.50000	2.565
10 Iodomethane	142	2.086	2.081	(0.447)	38929	2.50000	2.399
11 Bromoethane	108	2.177	2.177	(0.466)	22699	2.50000	2.487
12 Acrolein	56	2.296	2.296	(0.491)	29807	12.5000	13.415(QM)
13 Methylene Chloride	84	2.454	2.454	(0.525)	58809	2.50000	5.184
14 Acetone	43	2.686	2.686	(0.575)	112009	12.5000	19.967(QM)
15 Trans-1,2-Dichloroethene	96	2.596	2.595	(0.556)	38817	2.50000	2.611

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.765	2.765	(0.592)	105699	2.50000	2.436
	17 1,1-Dichloroethane	63	3.207	3.206	(0.686)	77547	2.50000	2.486
	18 Acrylonitrile	53	3.325	3.325	(0.712)	13723	2.50000	2.267(QM)
	19 Vinyl Acetate	43	3.540	3.546	(0.758)	85899	2.50000	2.426
	20 Cis-1,2-Dichloroethene	96	3.744	3.749	(0.801)	39961	2.50000	2.397
	22 2,2-Dichloropropane	77	3.846	3.846	(0.823)	57873	2.50000	2.418
	23 Bromochloromethane	128	3.931	3.930	(0.841)	16766	2.50000	2.319
	24 Chloroform	83	4.032	4.032	(0.863)	68029	2.50000	2.448
	25 Carbon Tetrachloride	117	4.123	4.117	(0.805)	53059	2.50000	2.407
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	826903	50.0000	48.878
	26 1,1,1-Trichloroethane	97	4.191	4.191	(0.897)	64232	2.50000	2.469
	28 1,1-Dichloropropene	75	4.310	4.309	(0.841)	58505	2.50000	2.389
	29 2-Butanone	72	4.400	4.400	(0.942)	19343	12.5000	11.025
	30 Benzene	78	4.536	4.536	(0.885)	172431	2.50000	2.612
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	1556549	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	942329	50.0000	49.018
	33 1,2-Dichloroethane	62	4.728	4.728	(0.923)	52712	2.50000	2.368
	34 Trichloroethene	95	5.068	5.067	(0.989)	39855	2.50000	2.364
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	2739537	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.057)	20603	2.50000	2.343
	38 1,2-Dichloropropane	63	5.515	5.514	(1.076)	44280	2.50000	2.384
	39 Bromodichloromethane	83	5.588	5.588	(1.091)	51741	2.50000	2.415
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.194)	23451	2.50000	2.263
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.196)	63393	2.50000	2.362
$	42 d8-Toluene	98	6.290	6.295	(1.227)	3471558	50.0000	49.910
	43 Toluene	92	6.329	6.335	(1.235)	114710	2.50000	2.582(Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	42906	2.50000	2.415
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.307)	76958	12.5000	11.431(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.307)	59051	2.50000	2.433
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.331)	31268	2.50000	2.384
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	36357	2.50000	2.397
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	57200	2.50000	2.391
	50 1,2-Dibromoethane	107	7.138	7.138	(1.393)	29686	2.50000	2.319
	51 2-Hexanone	43	7.410	7.409	(0.976)	133036	12.5000	11.944
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2648382	50.0000	
	53 Chlorobenzene	112	7.608	7.607	(1.002)	115932	2.50000	2.630
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	205204	2.50000	2.752
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	37768	2.50000	2.379
	56 m,p-xylene	106	7.789	7.794	(1.026)	151460	5.00000	5.304(Q)
	57 o-Xylene	106	8.151	8.156	(1.074)	70725	2.50000	2.466(Q)
	58 Styrene	104	8.196	8.201	(1.080)	119946	2.50000	2.557
	59 Bromoform	173	8.190	8.196	(0.847)	24550	2.50000	2.313
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	189593	2.50000	2.707
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1435242	50.0000	50.618
	63 Bromobenzene	156	8.733	8.739	(0.903)	46043	2.50000	2.454
	64 N-Propyl Benzene	91	8.801	8.807	(0.910)	229530	2.50000	2.789
	65 1,1,2,2-Tetrachloroethane	83	8.863	8.869	(0.917)	38686	2.50000	2.290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	135864	2.50000	2.573
67	1,3,5-Trimethyl Benzene	105	8.994	8.999	(0.930)	156381	2.50000	2.606
68	1,2,3-Trichloropropane	110	8.960	8.965	(0.927)	11999	2.50000	2.359(QM)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.022	(0.933)	15286	2.50000	2.200(Q)
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	145178	2.50000	2.619
71	T-Butyl Benzene	119	9.265	9.271	(0.958)	137645	2.50000	2.583
72	1,2,4-Trimethylbenzene	105	9.333	9.338	(0.965)	159243	2.50000	2.688
73	S-Butyl Benzene	105	9.429	9.435	(0.975)	207786	2.50000	2.740
74	4-Isopropyl Toluene	119	9.576	9.582	(0.991)	169330	2.50000	2.684
75	1,3-Dichlorobenzene	146	9.588	9.593	(0.992)	88737	2.50000	2.517
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1434013	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	93543	2.50000	2.522(Q)
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	163678	2.50000	2.677
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.051	(1.039)	1303886	50.0000	49.865(Q)
80	1,2-Dichlorobenzene	146	10.057	10.057	(1.040)	88465	2.50000	2.551
81	1,2-Dibromo 3-Chloropropane	75	10.804	10.809	(1.118)	7288	2.50000	2.215
82	Hexachloro 1,3-Butadiene	225	11.483	11.488	(1.188)	38220	2.50000	2.503
83	1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	64185	2.50000	2.482
84	Naphthalene	128	11.782	11.788	(1.219)	173069	2.50000	2.647
85	1,2,3-Trichlorobenzene	180	11.963	11.969	(1.238)	59581	2.50000	2.466

QC Flag Legend

T - Target compound detected outside RT window.
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: 0050416.d
Lab Smp Id: IC0025
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 2.5
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	1616720	808360	3233440	1556549	-3.72
35 1,4-Difluorobenze	2842987	1421494	5685974	2739537	-3.64
52 d5-Chlorobenzene	2779083	1389542	5558166	2648382	-4.70
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1434013	-6.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Data File: /chem1/nt5.i/16APR13.b/0050416.d

Date : 16-APR-2013 18:09

Client ID: 2.5

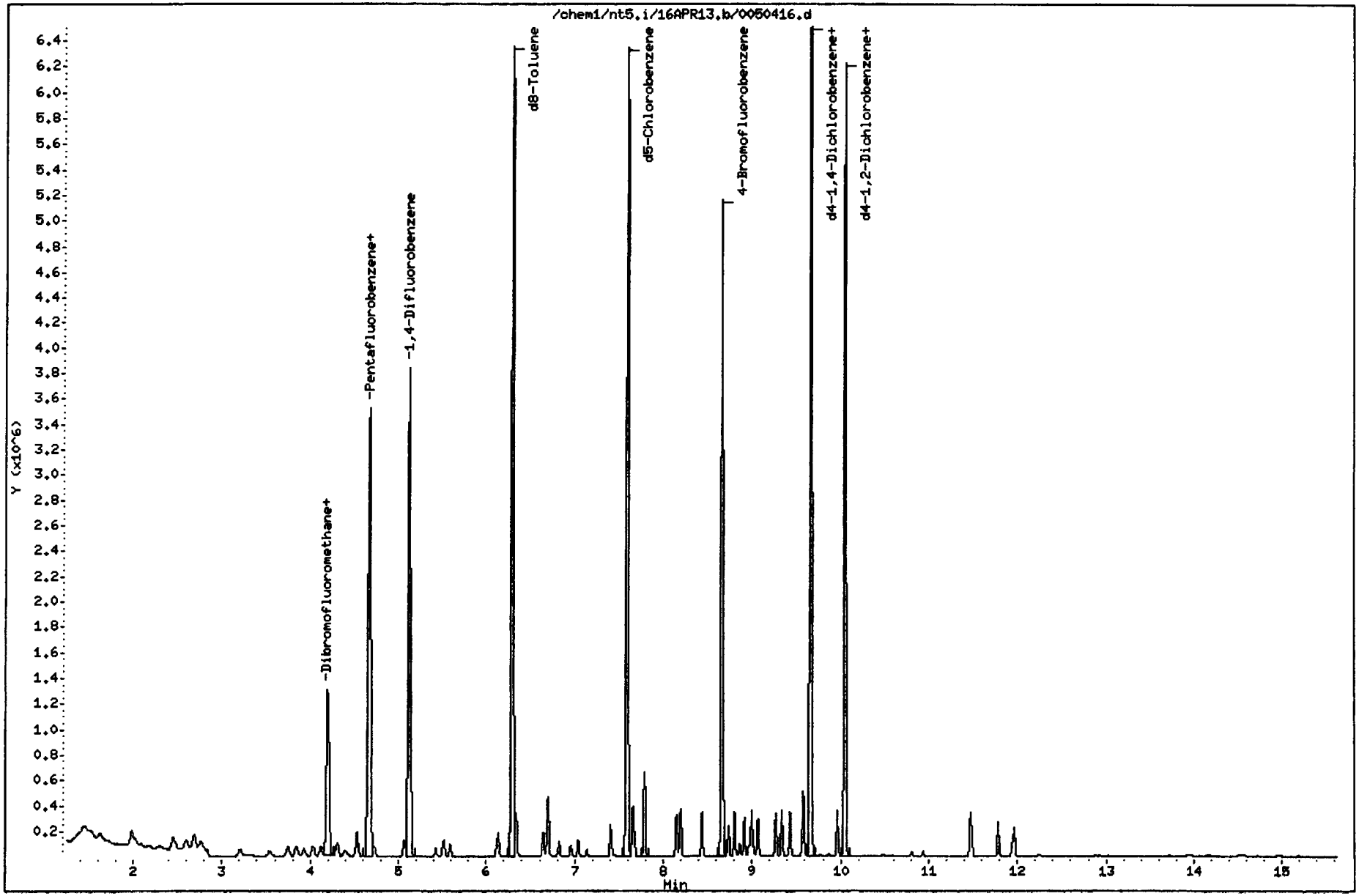
Sample Info: IC0025,5,5,0,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PC

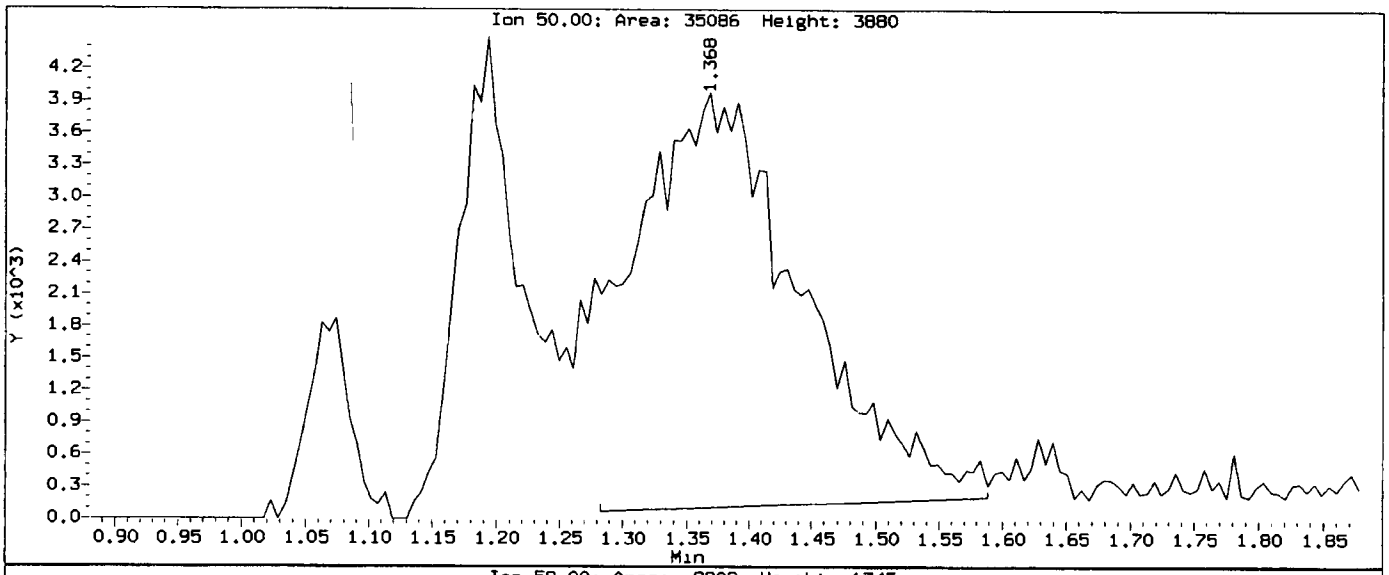
Column diameter: 0.18

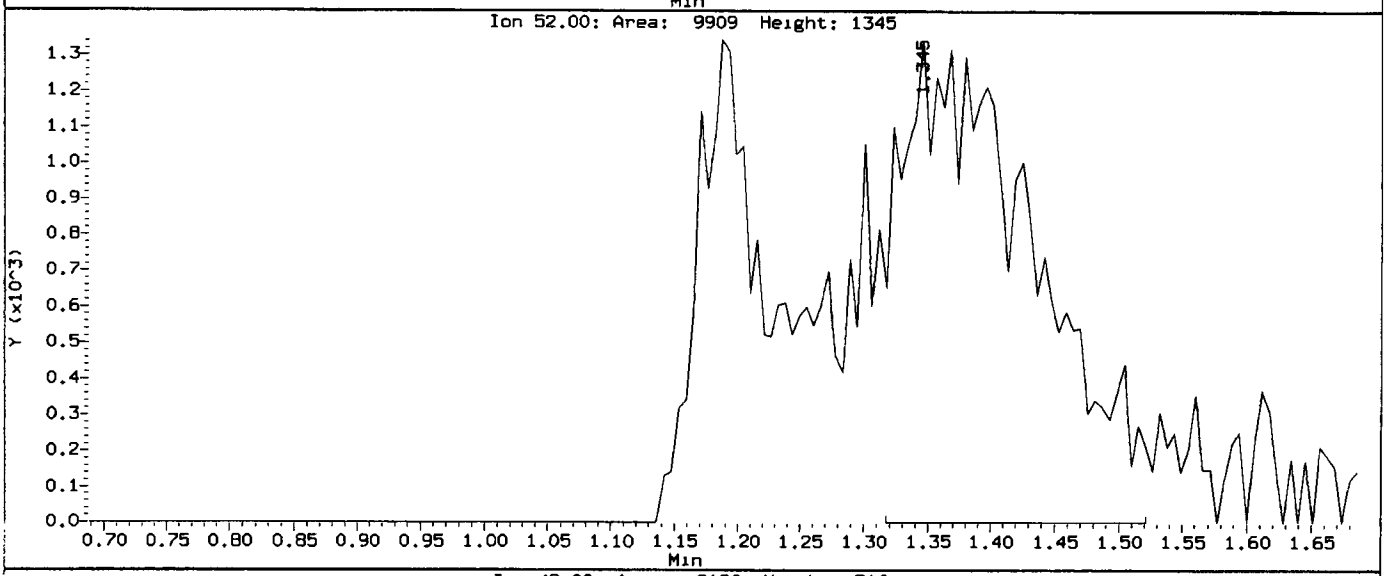


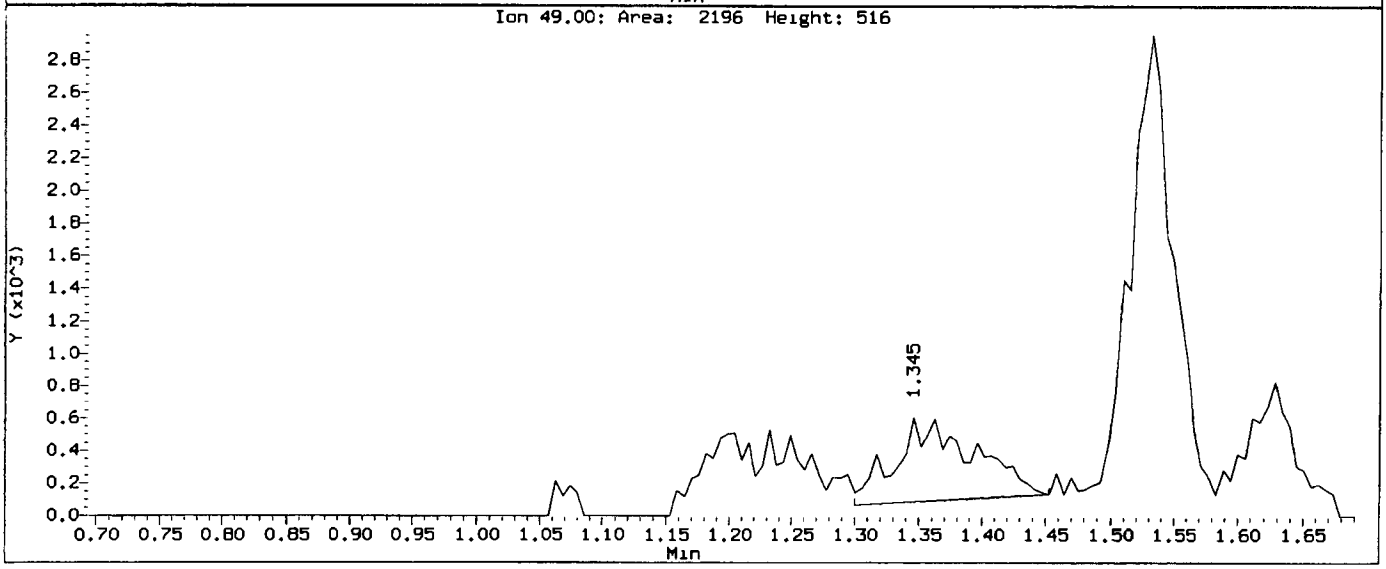
RL
4/17/13

Data File: /chem1/nt5.i/16APR13.b/0050416.d
Injection Date: 16-APR-2013 18:09
Instrument: nt5.i
Client Sample ID:

Compound: Chloromethane
CAS Number:

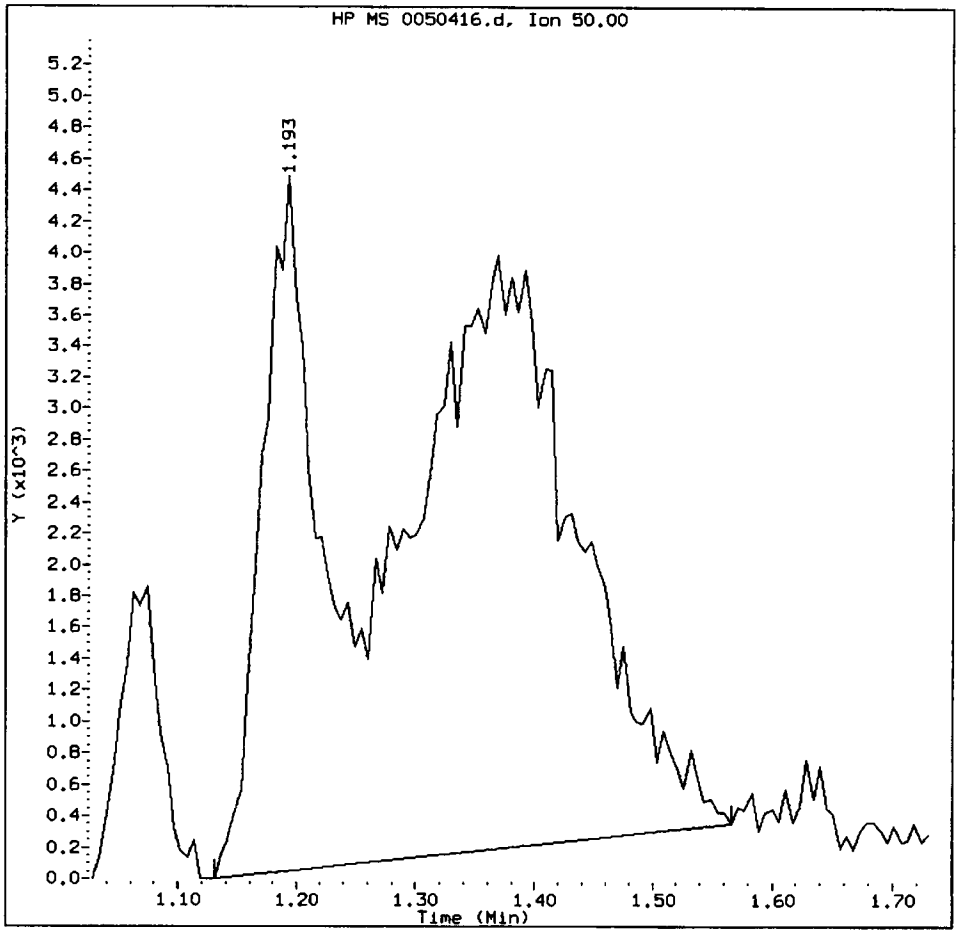






IC0025, /chem1/nt5.i/16APR13.b/0050416.d

Chloromethane Amount: 2.32 Area: 50789



MANUAL INTEGRATION for Chloromethane

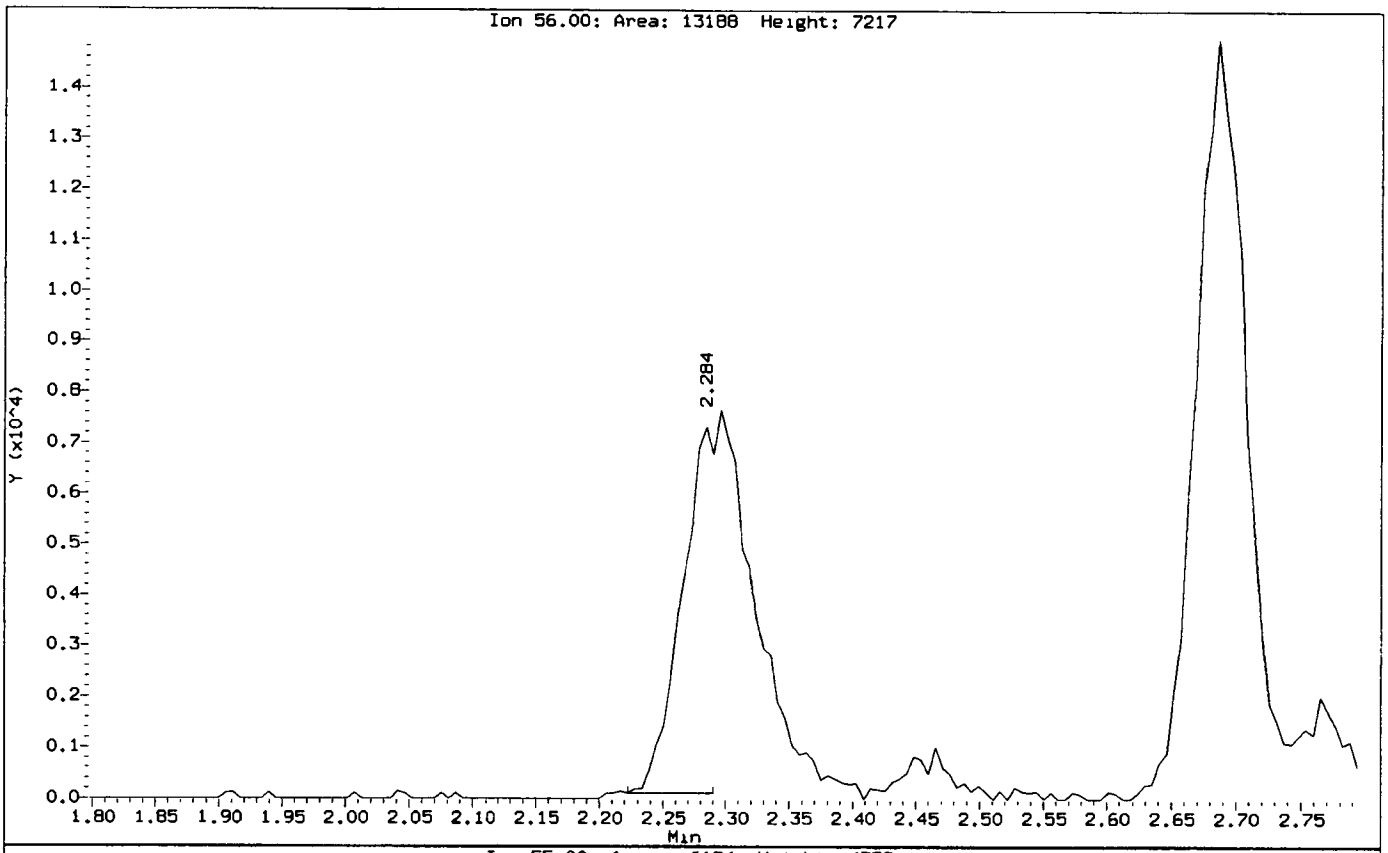
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

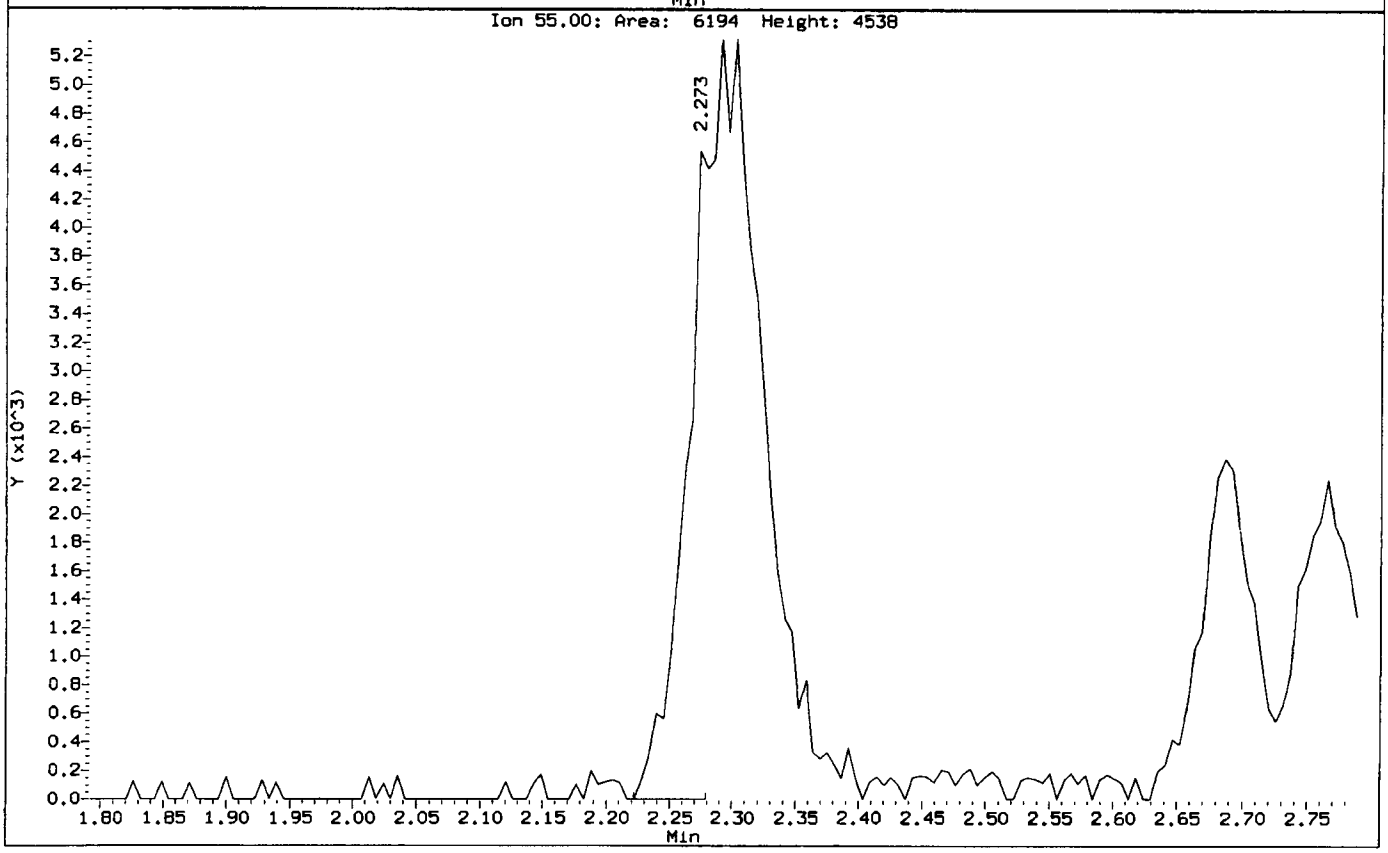
5. Other _____

Analyst: KC Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0050416.d
Injection Date: 16-APR-2013 18:09
Instrument: nt5.i
Client Sample ID:

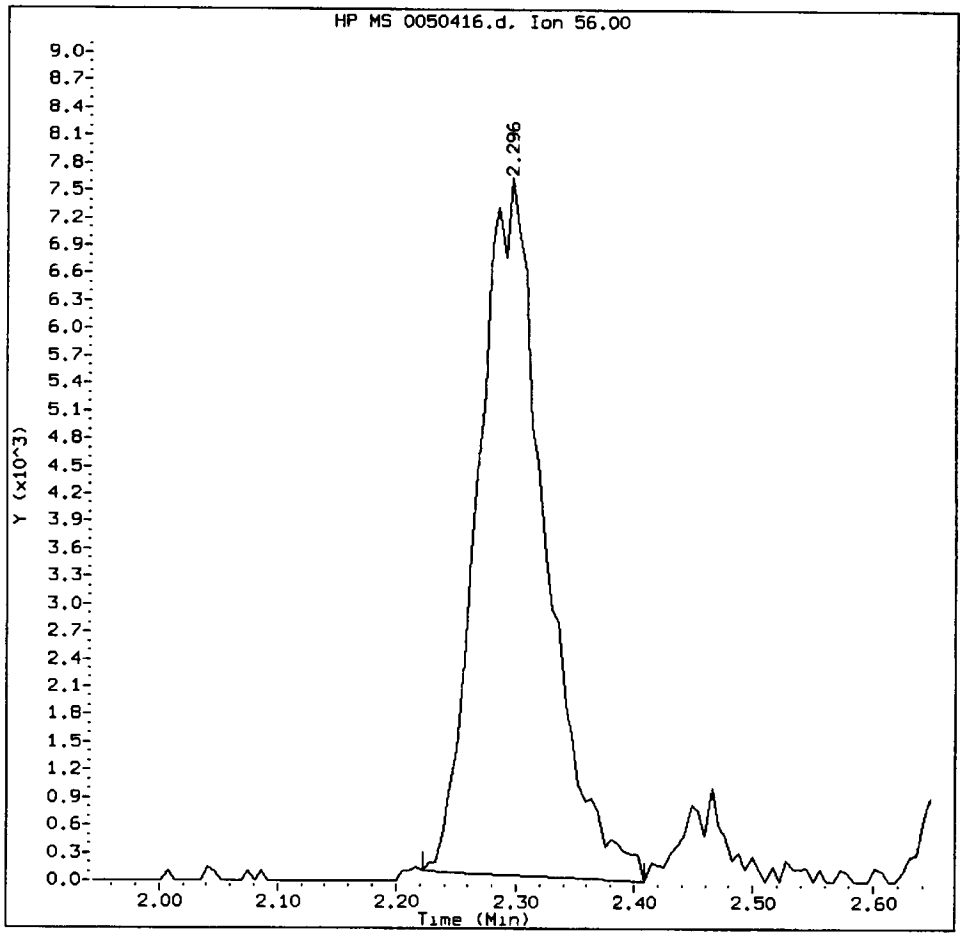
Compound: Acrolein
CAS Number:





IC0025, /chem1/nt5.i/16APR13.b/0050416.d

Acrolein Amount: 13.42 Area: 29807



MANUAL INTEGRATION for Acrolein

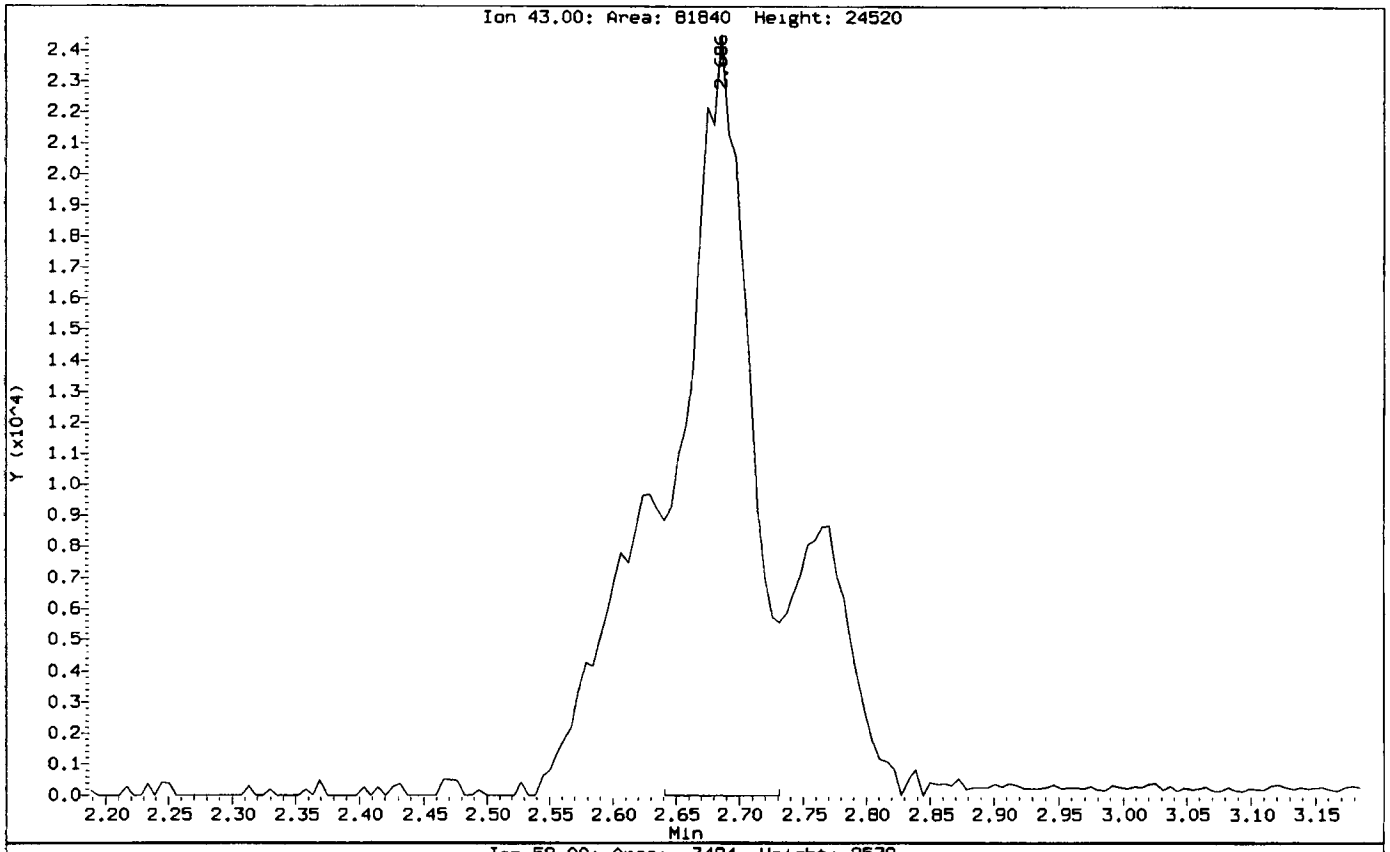
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

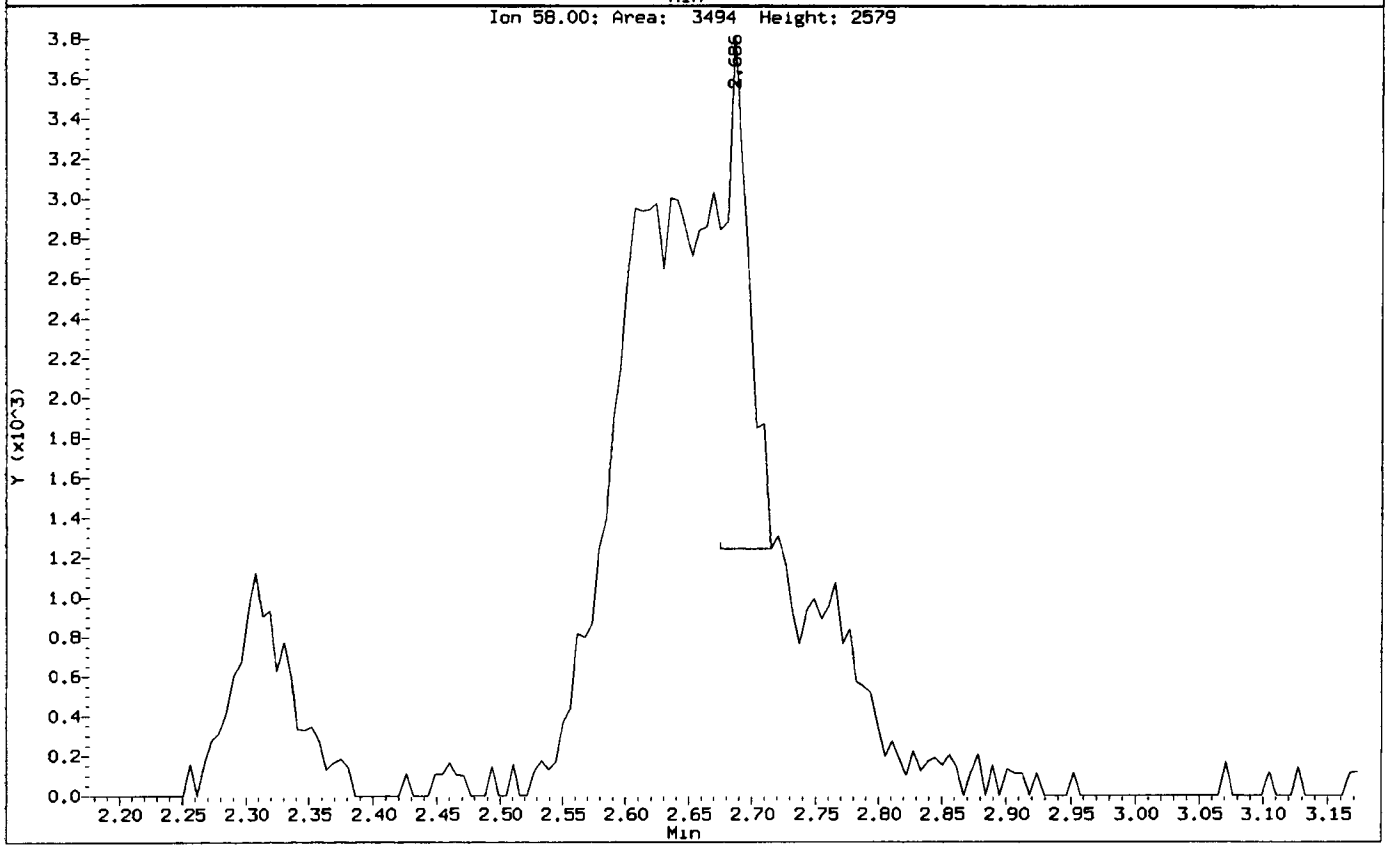
5. Other _____

Analyst: KC Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0050416.d
Injection Date: 16-APR-2013 18:09
Instrument: nt5.i
Client Sample ID:

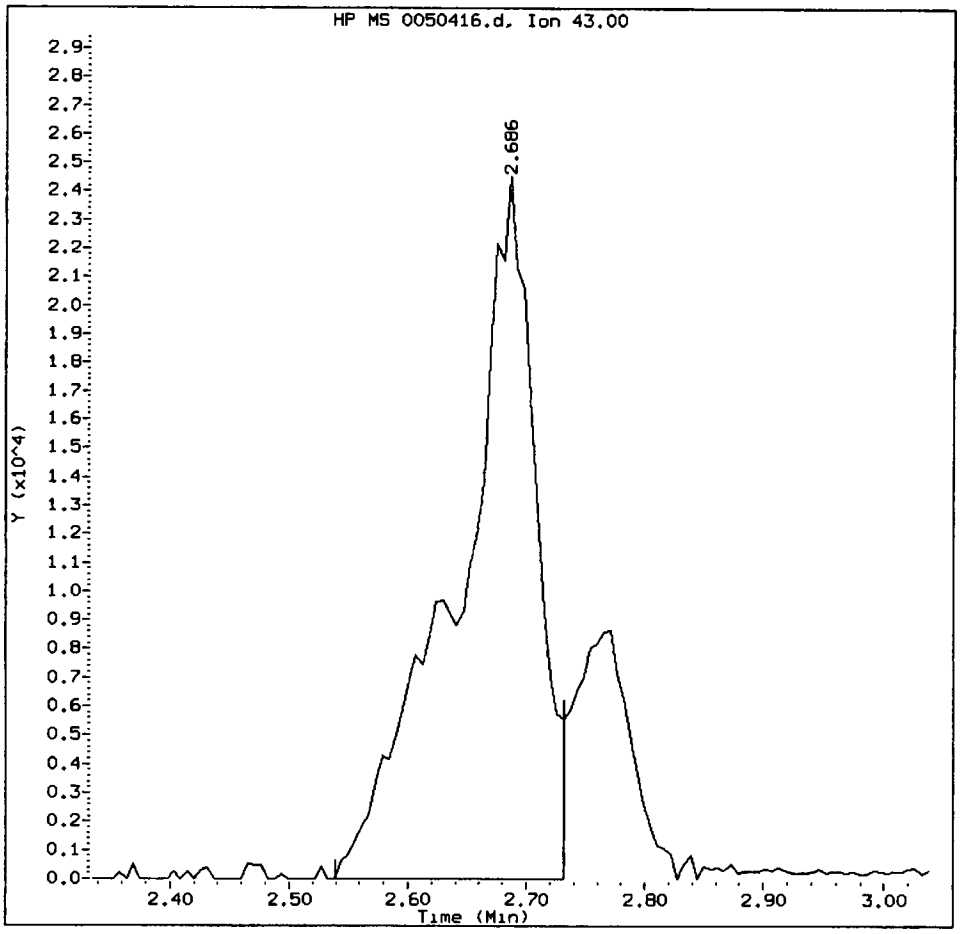
Compound: Acetone
CAS Number:





IC0025, /chem1/nt5.i/16APR13.b/0050416.d

Acetone Amount: 19.97 Area: 112009



MANUAL INTEGRATION for Acetone

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

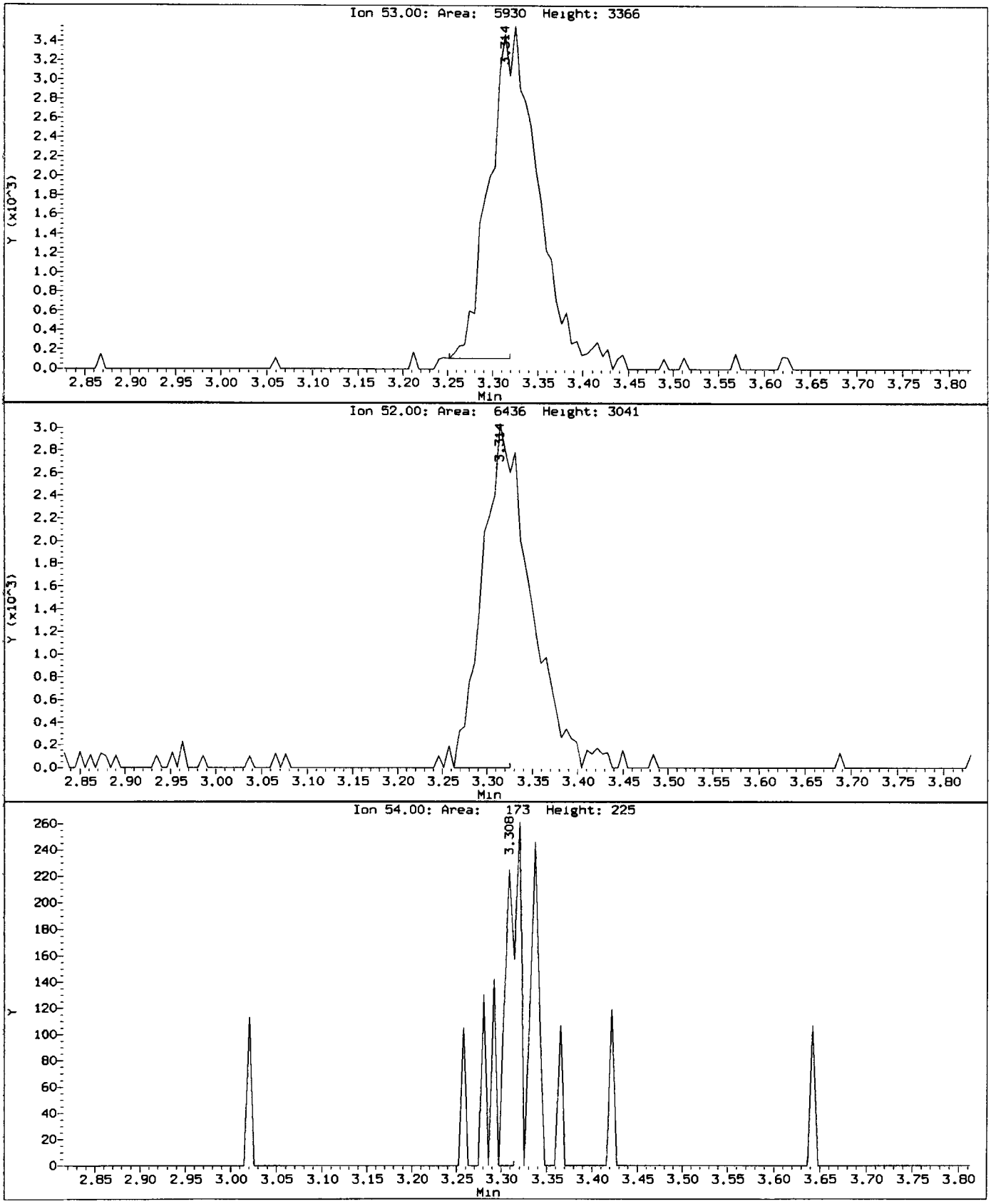
5. Other _____

Analyst: MC Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0050416.d
Injection Date: 16-APR-2013 18:09
Instrument: nt5.i
Client Sample ID:

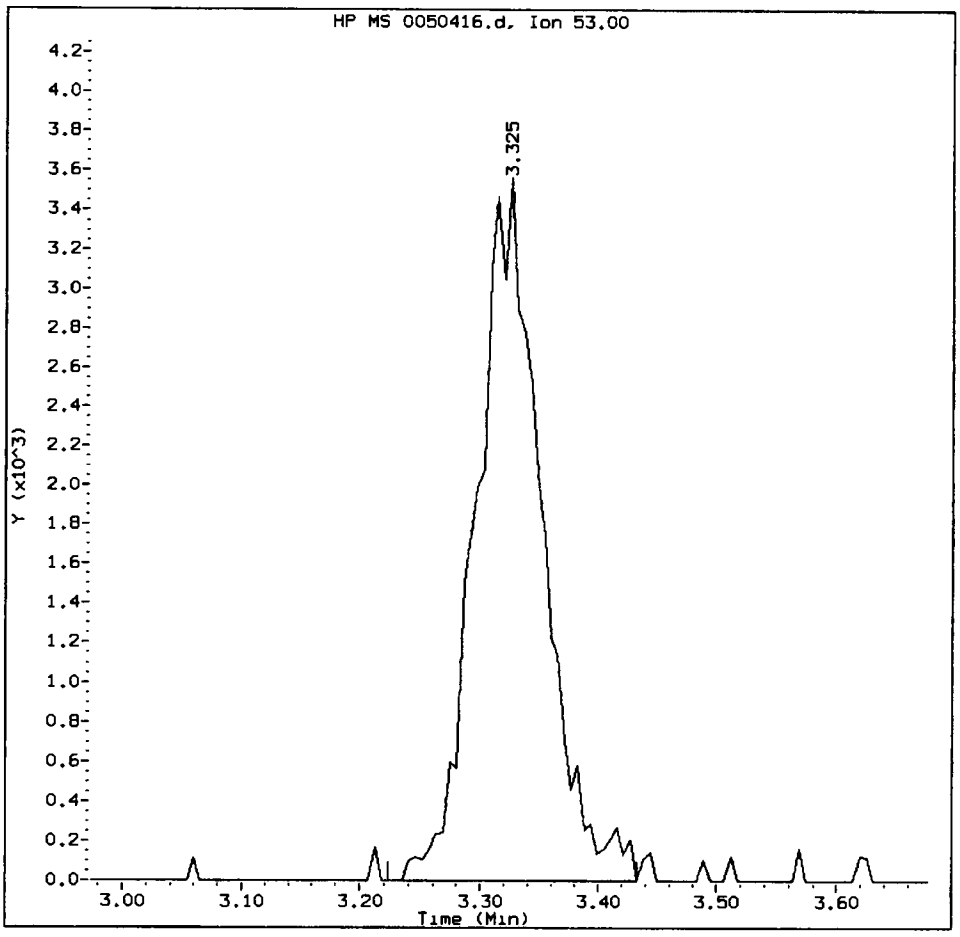
Compound: Acrylonitrile
CAS Number:

PG 4/17/13



IC0025, /chem1/nt5.i/16APR13.b/0050416.d

Acrylonitrile Amount: 2.27 Area: 13723



MANUAL INTEGRATION for Acrylonitrile

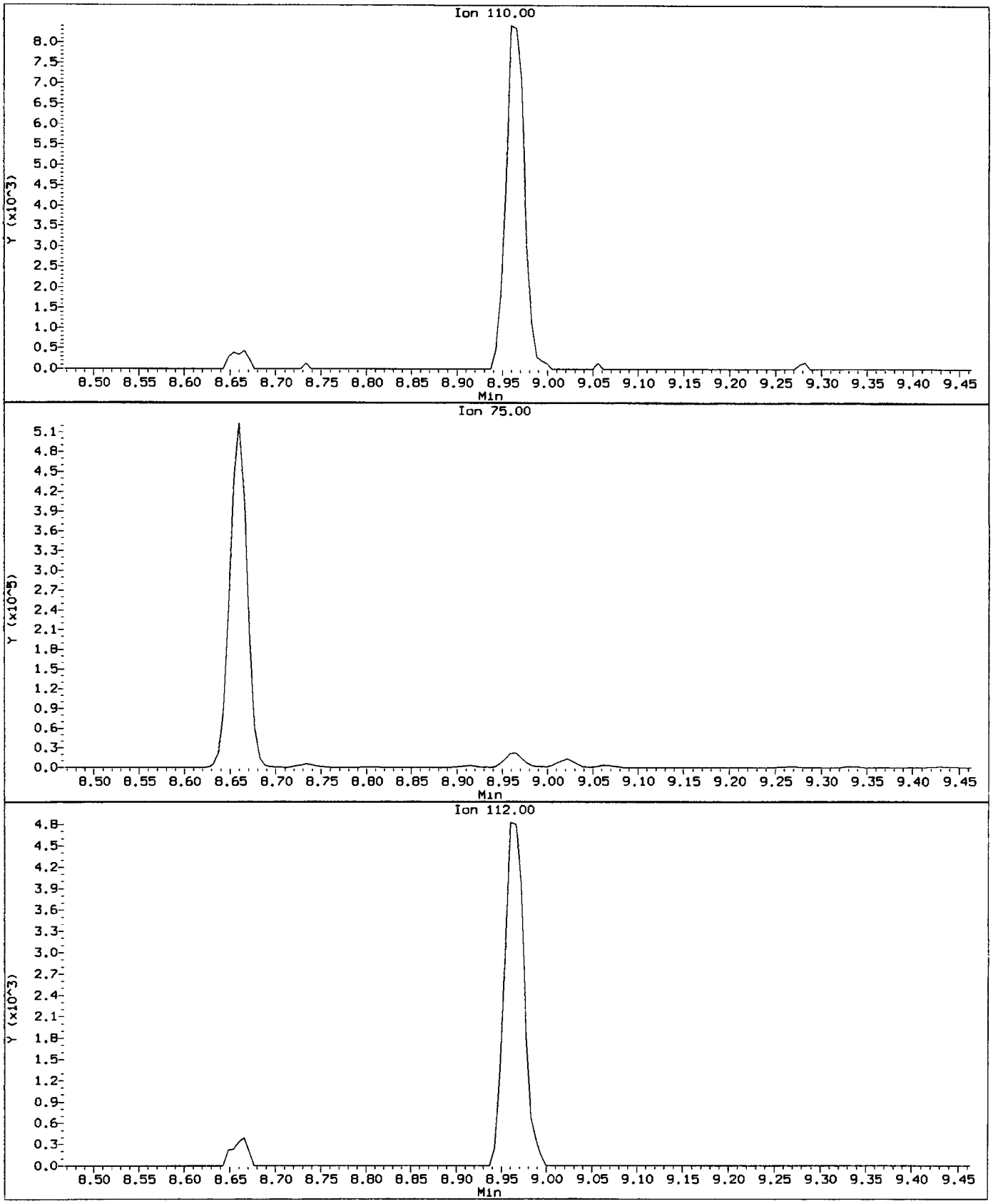
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JC Date: 4/17/13

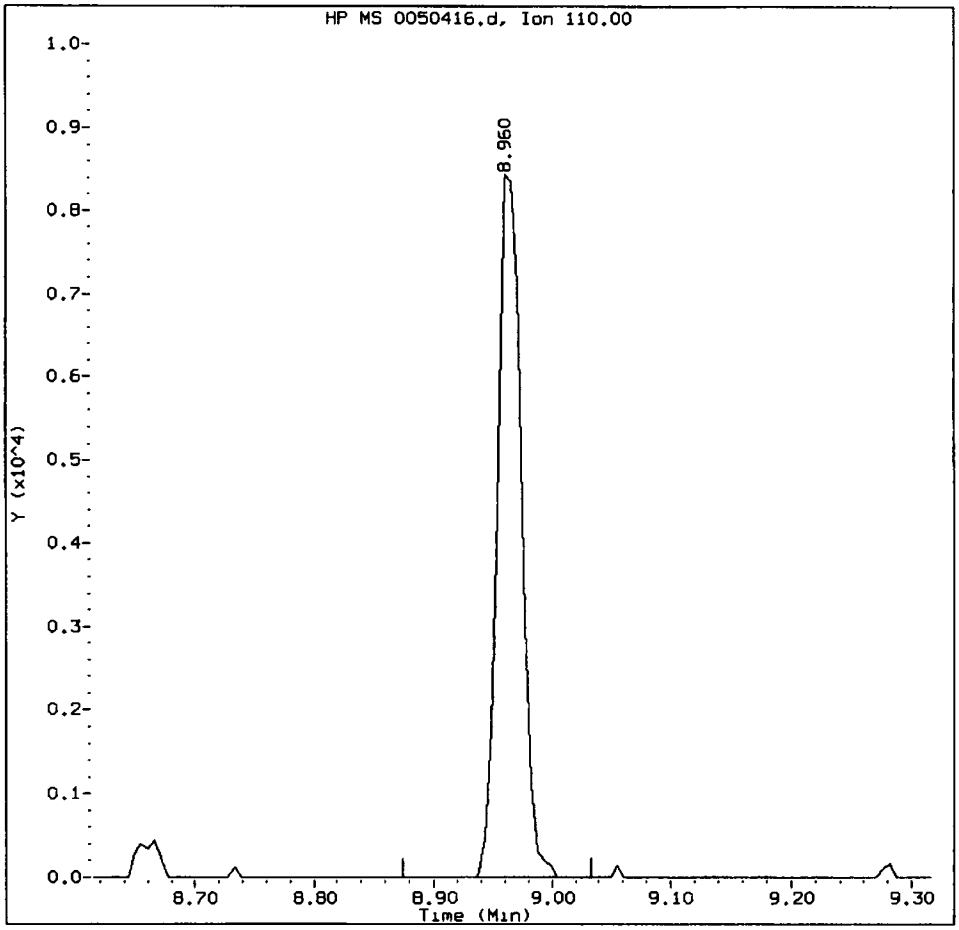
Data File: /chem1/nt5.i/16APR13.b/0050416.d
Injection Date: 16-APR-2013 18:09
Instrument: nt5.i
Client Sample ID:

Compound: 1,2,3-Trichloropropane
CAS Number:



IC0025, /chem1/nt5.i/16APR13.b/0050416.d

1,2,3-Trichloropropane Amount: 2.36 Area: 11999



MANUAL INTEGRATION for 1,2,3-Trichloropropane

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

5. Other _____

Analyst: JC Date: 4/17/13

CO-ELUTION SUMMARY FOR FILE - 0050416.d

Lab ID: IC0025, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PS 4/16/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/0100416.d
Lab Smp Id: IC005 Client Smp ID: 5
Inj Date : 16-APR-2013 17:46
Operator : PC Inst ID: nt5.i
Smp Info : IC005,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.068	(0.223)	61765	5.00000	4.903
2 Chloromethane	50	1.164	1.379	(0.250)	105226	5.00000	4.763(TM)
3 Vinyl Chloride	62	1.210	1.238	(0.260)	100181	5.00000	5.003
4 Bromomethane	94	1.419	1.447	(0.304)	47276	5.00000	4.858
5 Chloroethane	64	1.504	1.532	(0.323)	58965	5.00000	4.870
6 Trichlorofluoromethane	101	1.594	1.622	(0.342)	106636	5.00000	4.933
7 1,1-Dichloroethene	96	1.951	1.979	(0.419)	69635	5.00000	5.137
8 Carbon Disulfide	76	1.956	1.984	(0.420)	235110	5.00000	5.177(T)
9 112Trichloro122Trifluoroethane	101	2.002	2.030	(0.429)	64477	5.00000	5.132
10 Iodomethane	142	2.052	2.081	(0.440)	80134	5.00000	4.900
11 Bromoethane	108	2.149	2.177	(0.461)	46939	5.00000	5.103
12 Acrolein	56	2.267	2.296	(0.487)	56852	25.0000	25.392(Q)
13 Methylene Chloride	84	2.426	2.454	(0.521)	86902	5.00000	7.580
14 Acetone	43	2.652	2.686	(0.569)	153591	25.0000	27.124(Q)
15 Trans-1,2-Dichloroethene	96	2.567	2.595	(0.551)	69892	5.00000	4.665

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.731	2.765	(0.586)	204505	5.00000	4.677
	17 1,1-Dichloroethane	63	3.178	3.206	(0.682)	158019	5.00000	5.028
	18 Acrylonitrile	53	3.308	3.325	(0.710)	29205	5.00000	4.788(M)
	19 Vinyl Acetate	43	3.518	3.546	(0.755)	181414	5.00000	5.085
	20 Cis-1,2-Dichloroethene	96	3.727	3.749	(0.800)	83436	5.00000	4.966
	22 2,2-Dichloropropane	77	3.823	3.846	(0.820)	118765	5.00000	4.924
	23 Bromochloromethane	128	3.908	3.930	(0.839)	35200	5.00000	4.831
	24 Chloroform	83	4.010	4.032	(0.860)	137119	5.00000	4.897
	25 Carbon Tetrachloride	117	4.100	4.117	(0.803)	108635	5.00000	4.903
$	27 Dibromofluoromethane	111	4.179	4.196	(0.897)	846964	50.0000	49.681
	26 1,1,1-Trichloroethane	97	4.168	4.191	(0.894)	126590	5.00000	4.829
	28 1,1-Dichloropropene	75	4.293	4.309	(0.840)	135628	5.00000	5.508
	29 2-Butanone	72	4.389	4.400	(0.942)	43491	25.0000	24.600
	30 Benzene	78	4.519	4.536	(0.885)	345601	5.00000	5.207
*	31 Pentafluorobenzene	168	4.660	4.672	(1.000)	1568560	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.666	(0.998)	968362	50.0000	49.986
	33 1,2-Dichloroethane	62	4.711	4.728	(0.922)	112463	5.00000	5.026
	34 Trichloroethene	95	5.056	5.067	(0.990)	84056	5.00000	4.960
*	35 1,4-Difluorobenzene	114	5.107	5.124	(1.000)	2754051	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.060)	43581	5.00000	4.931
	38 1,2-Dichloropropane	63	5.503	5.514	(1.078)	91453	5.00000	4.897
	39 Bromodichloromethane	83	5.582	5.588	(1.093)	105443	5.00000	4.896
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.125	(1.197)	50925	5.00000	4.889
	41 Cis 1,3-dichloropropene	75	6.125	6.137	(1.199)	138138	5.00000	5.120
$	42 d8-Toluene	98	6.284	6.295	(1.230)	3508735	50.0000	50.179
	43 Toluene	92	6.323	6.335	(1.238)	224558	5.00000	5.028(Q)
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	87838	5.00000	4.930
	45 4-Methyl-2-Pentanone	58	6.691	6.702	(1.310)	174677	25.0000	25.809(Q)
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.310)	121599	5.00000	4.984
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.336)	65465	5.00000	4.965
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	74812	5.00000	4.919
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	121149	5.00000	5.050
	50 1,2-Dibromoethane	107	7.132	7.138	(1.397)	62515	5.00000	4.858
	51 2-Hexanone	43	7.404	7.409	(0.975)	299553	25.0000	26.823
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2655390	50.0000	
	53 Chlorobenzene	112	7.602	7.607	(1.001)	233198	5.00000	5.277
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	414454	5.00000	5.543
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	78746	5.00000	4.946
	56 m,p-xylene	106	7.783	7.794	(1.025)	307716	10.0000	10.747(Q)
	57 o-Xylene	106	8.151	8.156	(1.074)	145322	5.00000	5.054(Q)
	58 Styrene	104	8.196	8.201	(1.080)	247497	5.00000	5.262
	59 Bromoform	173	8.190	8.196	(0.847)	51102	5.00000	4.891
	60 Isopropyl Benzene	105	8.433	8.439	(0.872)	384508	5.00000	5.577
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1429350	50.0000	50.277
	63 Bromobenzene	156	8.733	8.739	(0.903)	93018	5.00000	5.037
	64 N-Propyl Benzene	91	8.801	8.807	(0.910)	462547	5.00000	5.710
	65 1,1,2,2-Tetrachloroethane	83	8.863	8.869	(0.917)	84194	5.00000	5.062

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)	
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	274058	5.00000	5.273	
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	321319	5.00000	5.440	
68	1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	25132	5.00000	5.019	
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.022	(0.933)	32962	5.00000	4.818	
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	289674	5.00000	5.310	
71	T-Butyl Benzene	119	9.265	9.271	(0.958)	280560	5.00000	5.348	
72	1,2,4-Trimethylbenzene	105	9.333	9.338	(0.965)	317104	5.00000	5.438	
73	S-Butyl Benzene	105	9.429	9.435	(0.975)	420087	5.00000	5.627	
74	4-Isopropyl Toluene	119	9.576	9.582	(0.991)	345612	5.00000	5.565	
75	1,3-Dichlorobenzene	146	9.587	9.593	(0.992)	175877	5.00000	5.068	
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1411599	50.0000		(Q)
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	185971	5.00000	5.094	(Q)
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	326698	5.00000	5.428	
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.051	(1.039)	1295900	50.0000	50.346	(Q)
80	1,2-Dichlorobenzene	146	10.057	10.057	(1.040)	174586	5.00000	5.113	
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	16317	5.00000	5.038	
82	Hexachloro 1,3-Butadiene	225	11.482	11.488	(1.188)	72345	5.00000	4.812	
83	1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	123667	5.00000	4.858	
84	Naphthalene	128	11.782	11.788	(1.219)	322432	5.00000	5.069	
85	1,2,3-Trichlorobenzene	180	11.963	11.969	(1.238)	119282	5.00000	5.016	

QC Flag Legend

T - Target compound detected outside RT window.
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: 0100416.d
Lab Smp Id: IC005
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 5
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	1616720	808360	3233440	1568560	-2.98
35 1,4-Difluorobenze	2842987	1421494	5685974	2754051	-3.13
52 d5-Chlorobenzene	2779083	1389542	5558166	2655390	-4.45
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1411599	-7.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.33
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

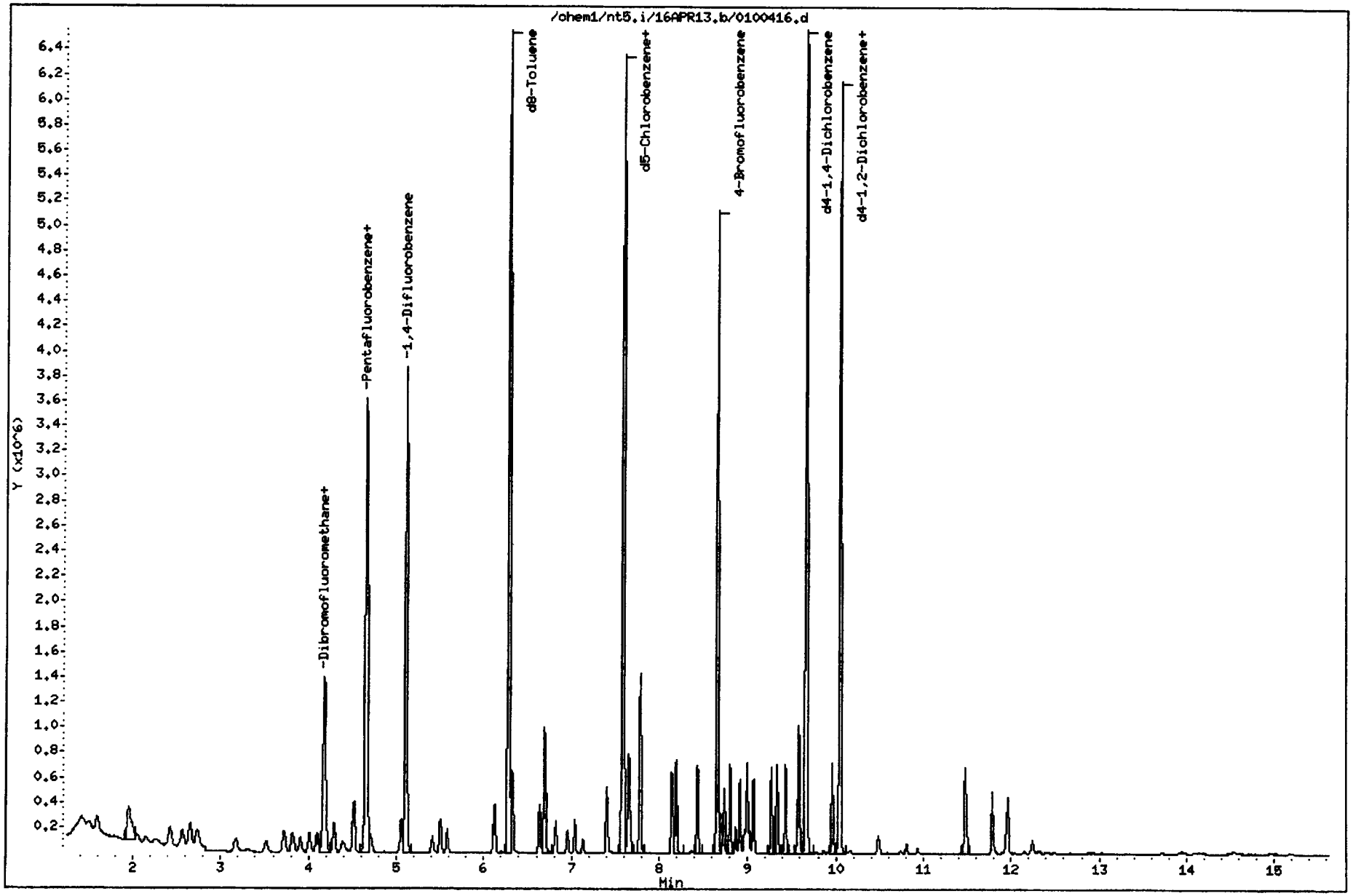
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /ohem1/nt5.i/16APR13.b/0100416.d
Date : 16-APR-2013 17:46
Client ID: 5
Sample Info: IC005,5,5,0,

Instrument: nt5.i

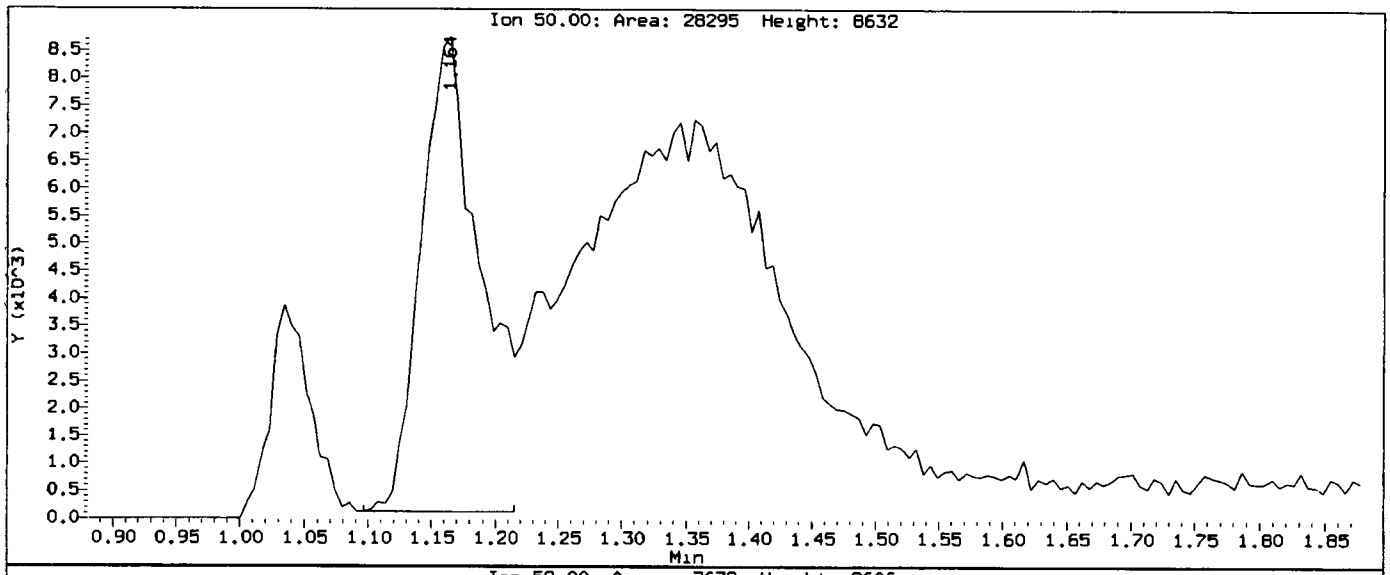
Operator: PC
Column diameter: 0.18

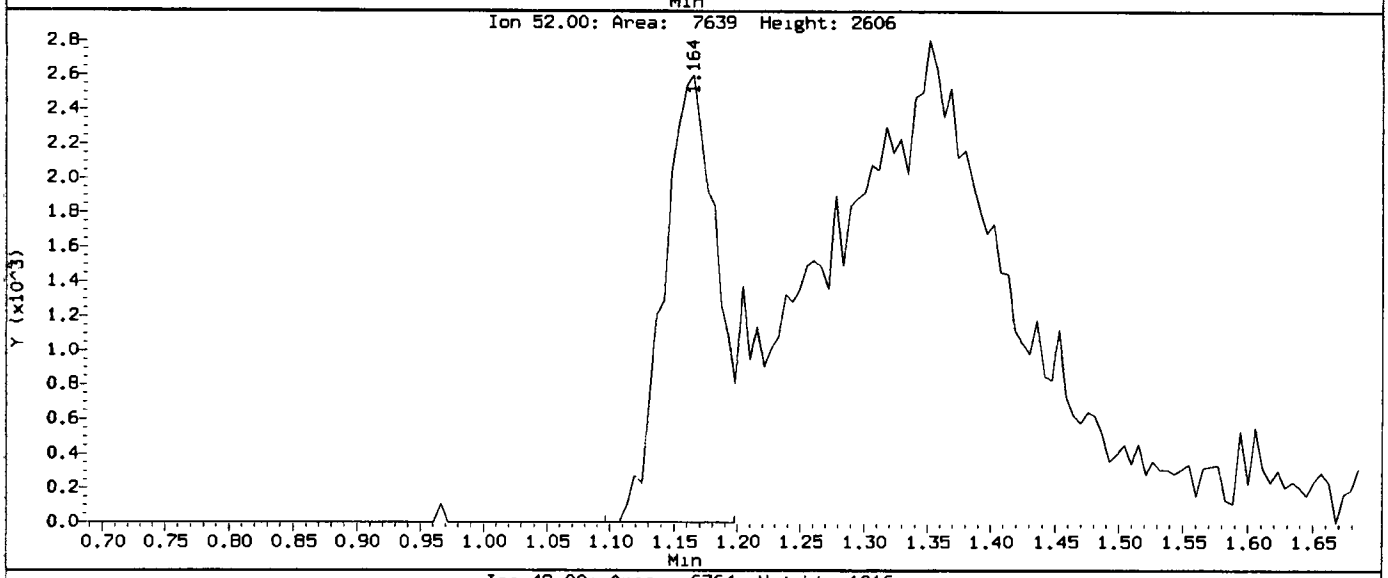
Column phase: RTXVMS

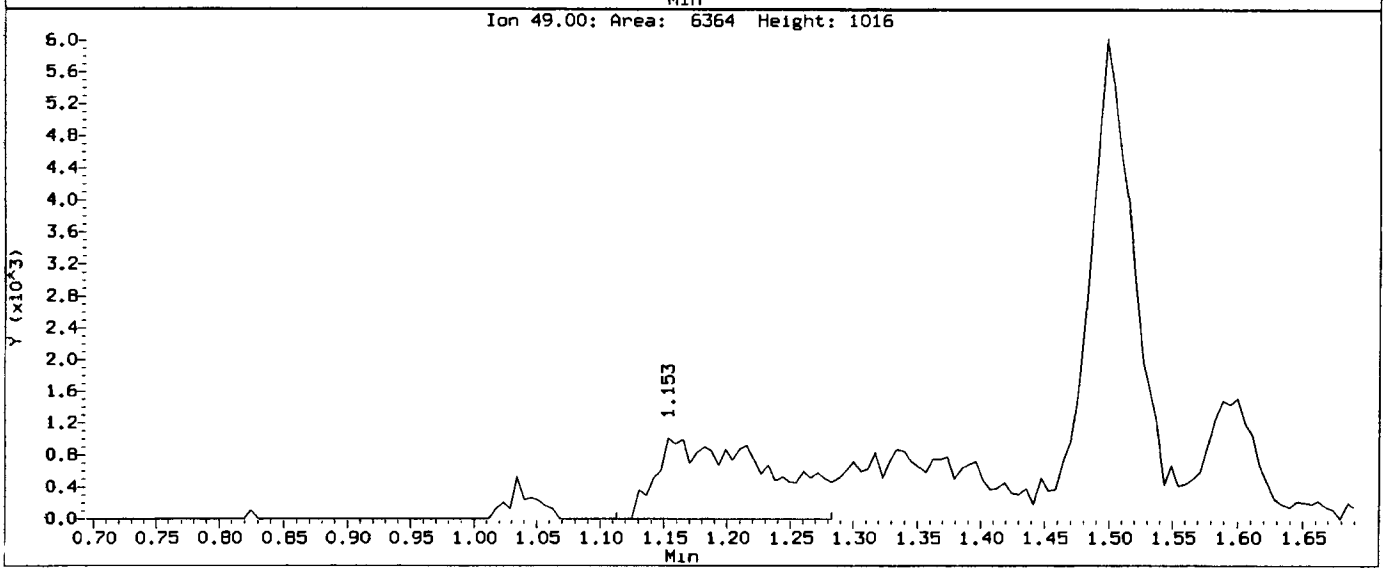


Data File: /chem1/nt5.1/16APR13.b/0100416.d
Injection Date: 16-APR-2013 17:46
Instrument: nt5.1
Client Sample ID:

Compound: Chloromethane
CAS Number:

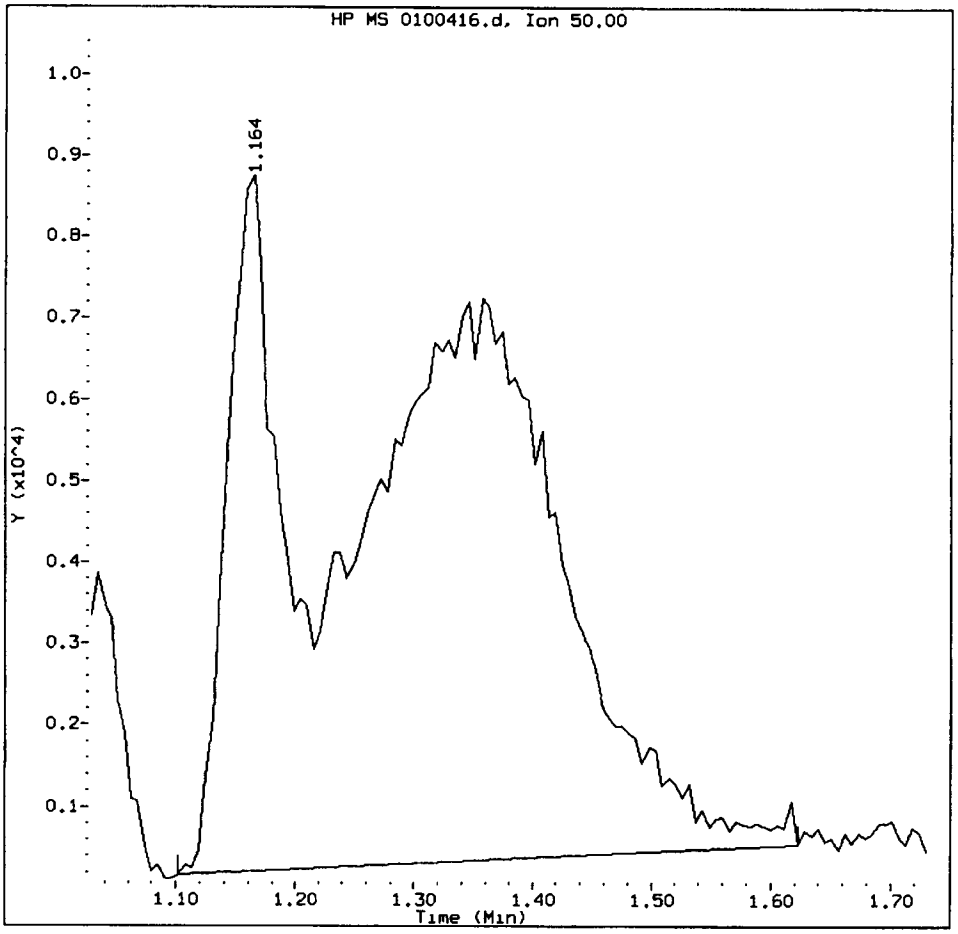






IC005, /chem1/nt5.i/16APR13.b/0100416.d

Chloromethane Amount: 4.76 Area: 105226



MANUAL INTEGRATION for Chloromethane

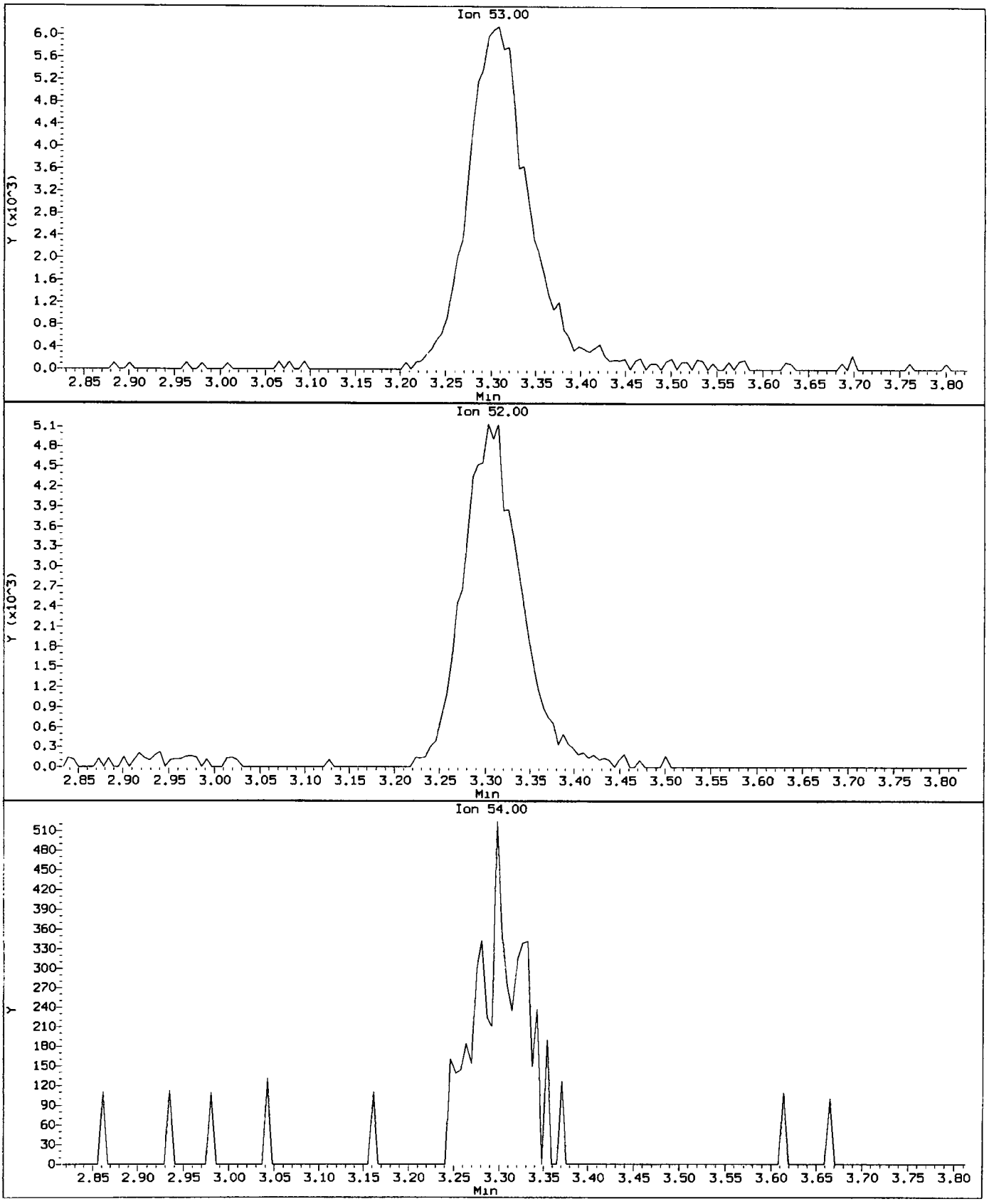
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 4/17/13

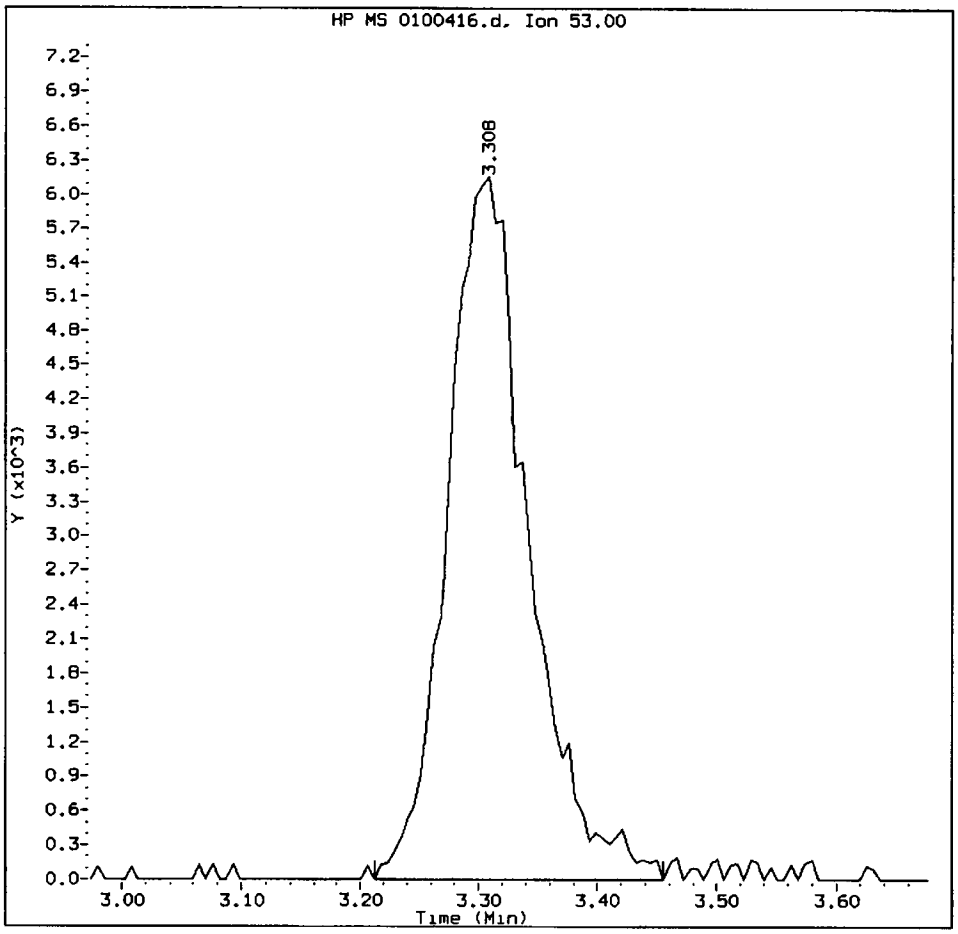
Data File: /chem1/nt5.1/16APR13.b/0100416.d
Injection Date: 16-APR-2013 17:46
Instrument: nt5.1
Client Sample ID:

Compound: Acrylonitrile
CAS Number:



IC005, /chem1/nt5.i/16APR13.b/0100416.d

Acrylonitrile Amount: 4.79 Area: 29205



MANUAL INTEGRATION for Acrylonitrile

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

5. Other _____

Analyst: KC Date: 4/17/13

CO-ELUTION SUMMARY FOR FILE - 0100416.d

Lab ID: IC005, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PC 4/17/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/0500416.d
Lab Smp Id: IC050 Client Smp ID: IC050
Inj Date : 16-APR-2013 17:22
Operator : PC Inst ID: nt5.i
Smp Info : IC050,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.068	1.068	(0.229)	625099	50.0000	48.141(M)
2 Chloromethane	50	1.379	1.379	(0.295)	1012925	50.0000	44.484(TM)
3 Vinyl Chloride	62	1.238	1.238	(0.265)	1034387	50.0000	50.114
4 Bromomethane	94	1.447	1.447	(0.310)	475712	50.0000	47.424
5 Chloroethane	64	1.532	1.532	(0.328)	592272	50.0000	47.460
6 Trichlorofluoromethane	101	1.622	1.622	(0.347)	1088826	50.0000	48.865
7 1,1-Dichloroethene	96	1.979	1.979	(0.424)	708570	50.0000	50.715
8 Carbon Disulfide	76	1.984	1.984	(0.425)	2398758	50.0000	51.243
9 112Trichloro122Trifluoroethane	101	2.030	2.030	(0.434)	655721	50.0000	50.637
10 Iodomethane	142	2.081	2.081	(0.445)	849289	50.0000	50.385
11 Bromoethane	108	2.177	2.177	(0.466)	474919	50.0000	50.090
12 Acrolein	56	2.296	2.296	(0.491)	586172	250.000	254.00
13 Methylene Chloride	84	2.454	2.454	(0.525)	734128	50.0000	58.043
14 Acetone	43	2.686	2.686	(0.575)	1839450	250.000	293.91(M)
15 Trans-1,2-Dichloroethene	96	2.595	2.595	(0.556)	767425	50.0000	49.695

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.765	2.765	(0.592)	2299915	50.0000	51.035
	17 1,1-Dichloroethane	63	3.206	3.206	(0.686)	1596221	50.0000	49.277
	18 Acrylonitrile	53	3.325	3.325	(0.712)	306791	50.0000	48.794
	19 Vinyl Acetate	43	3.546	3.546	(0.759)	1928911	50.0000	52.456
	20 Cis-1,2-Dichloroethene	96	3.749	3.749	(0.803)	840194	50.0000	48.521
	22 2,2-Dichloropropane	77	3.846	3.846	(0.823)	1224616	50.0000	49.262
	23 Bromochloromethane	128	3.930	3.930	(0.841)	358752	50.0000	47.771
	24 Chloroform	83	4.032	4.032	(0.863)	1400147	50.0000	48.511
	25 Carbon Tetrachloride	117	4.117	4.117	(0.803)	1126814	50.0000	49.266
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	880864	50.0000	50.130
	26 1,1,1-Trichloroethane	97	4.191	4.191	(0.897)	1326905	50.0000	49.107
	28 1,1-Dichloropropene	75	4.309	4.309	(0.841)	1214364	50.0000	47.774
	29 2-Butanone	72	4.400	4.400	(0.942)	460949	250.000	252.96
	30 Benzene	78	4.536	4.536	(0.885)	3479566	50.0000	50.788
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	1616720	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	1003097	50.0000	50.237
	33 1,2-Dichloroethane	62	4.728	4.728	(0.923)	1129418	50.0000	48.891
	34 Trichloroethene	95	5.067	5.067	(0.989)	850405	50.0000	48.607
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	2842987	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	453738	50.0000	49.732
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	947757	50.0000	49.164
	39 Bromodichloromethane	83	5.588	5.588	(1.091)	1096793	50.0000	49.338
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.195)	569965	50.0000	53.002
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.198)	1424633	50.0000	51.154
$	42 d8-Toluene	98	6.295	6.295	(1.229)	3608661	50.0000	49.993
	43 Toluene	92	6.335	6.335	(1.236)	2241318	50.0000	48.610(Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	896538	50.0000	48.083
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.308)	1930401	250.000	276.30(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.307)	1308941	50.0000	51.974
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.332)	687784	50.0000	50.527
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	794634	50.0000	49.928
	49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	1266783	50.0000	50.458
	50 1,2-Dibromoethane	107	7.138	7.138	(1.393)	662122	50.0000	49.843
	51 2-Hexanone	43	7.409	7.409	(0.975)	3156215	250.000	270.03
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2779083	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	2270285	50.0000	49.083
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	4047207	50.0000	51.720
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	824256	50.0000	49.468
	56 m,p-xylene	106	7.794	7.794	(1.026)	3093494	100.000	103.23(Q)
	57 o-Xylene	106	8.156	8.156	(1.074)	1509770	50.0000	50.165(Q)
	58 Styrene	104	8.201	8.201	(1.080)	2553106	50.0000	51.866
	59 Bromoform	173	8.196	8.196	(0.848)	560429	50.0000	49.509
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3825157	50.0000	51.213
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1498003	50.0000	50.346
	63 Bromobenzene	156	8.739	8.739	(0.904)	932516	50.0000	46.608
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	4430728	50.0000	50.489
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	899837	50.0000	49.941

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	2774405	50.0000	49.274
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	3238820	50.0000	50.617
68	1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	271771	50.0000	50.093
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.022	(0.933)	358905	50.0000	48.425
70	4-Chloro Toluene	91	9.073	9.073	(0.939)	2871062	50.0000	48.574
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	2881075	50.0000	50.688
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	3194624	50.0000	50.571
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	4149641	50.0000	51.301
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	3473644	50.0000	51.622
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1790249	50.0000	47.617
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1529325	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	1821991	50.0000	46.069
78	N-Butyl Benzene	91	9.966	9.966	(1.031)	3283665	50.0000	50.355
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1389379	50.0000	49.823(Q)
80	1,2-Dichlorobenzene	146	10.057	10.057	(1.040)	1714599	50.0000	46.352
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	171667	50.0000	48.927
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	759650	50.0000	46.642
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	1256289	50.0000	45.548
84	Naphthalene	128	11.788	11.788	(1.219)	2859226	50.0000	48.936
85	1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	1159509	50.0000	45.002

QC Flag Legend

T - Target compound detected outside RT window.
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: 0500416.d
Lab Smp Id: IC050
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: IC050
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	1616720	808360	3233440	1616720	0.00
35 1,4-Difluorobenze	2842987	1421494	5685974	2842987	0.00
52 d5-Chlorobenzene	2779083	1389542	5558166	2779083	0.00
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1529325	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

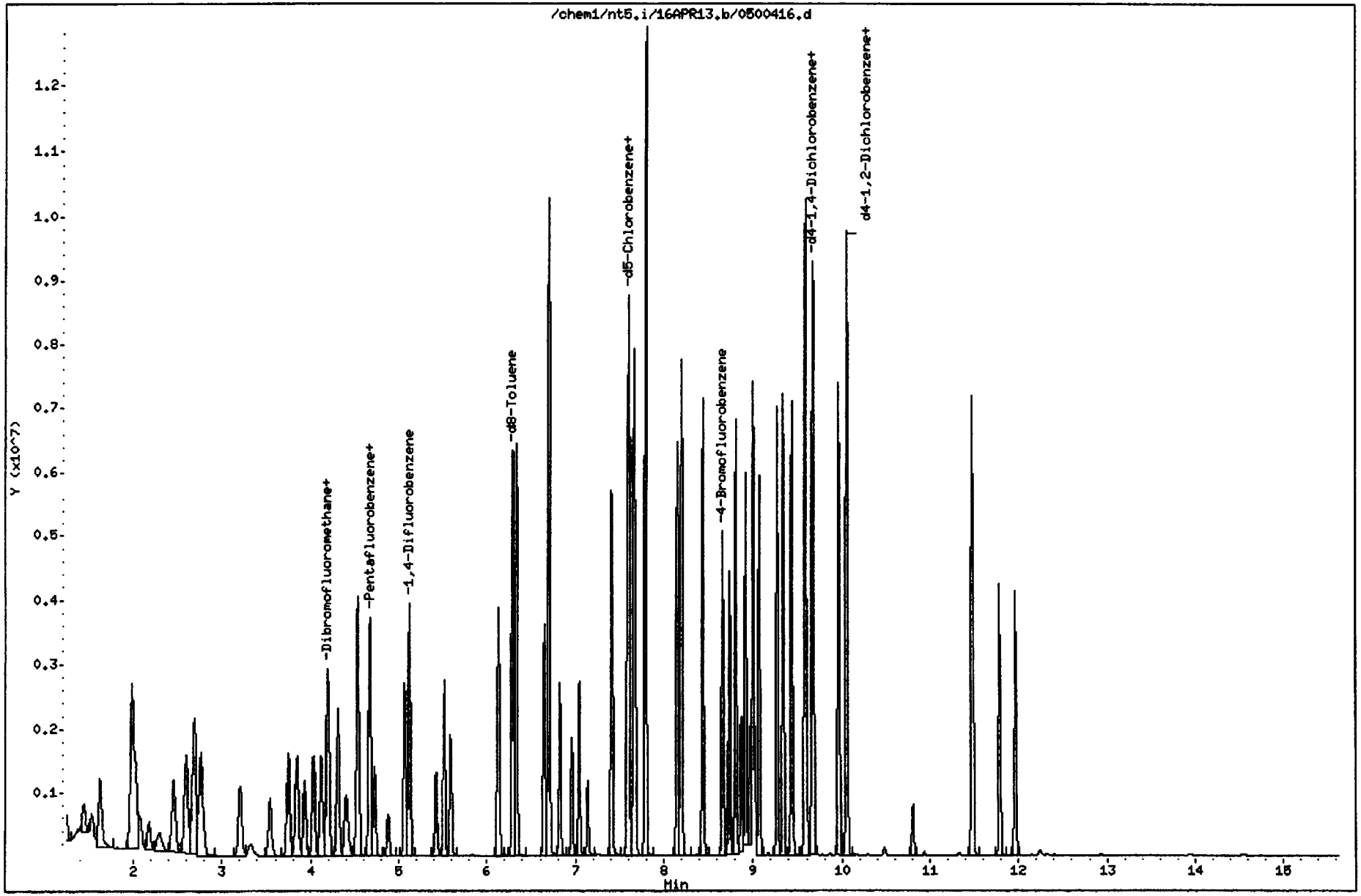
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/16APR13.b/0500416.d
Date : 16-APR-2013 17:22
Client ID: IC050
Sample Info: IC050,5,5,0,

Instrument: nt5.i

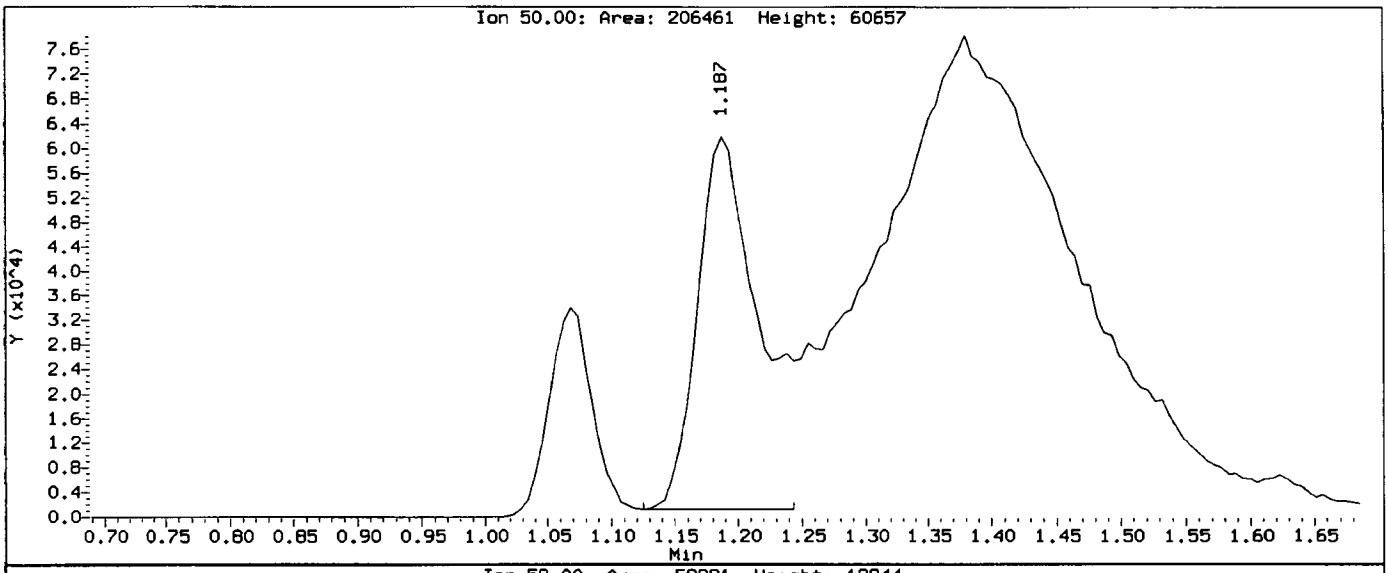
Operator: PC
Column diameter: 0.18

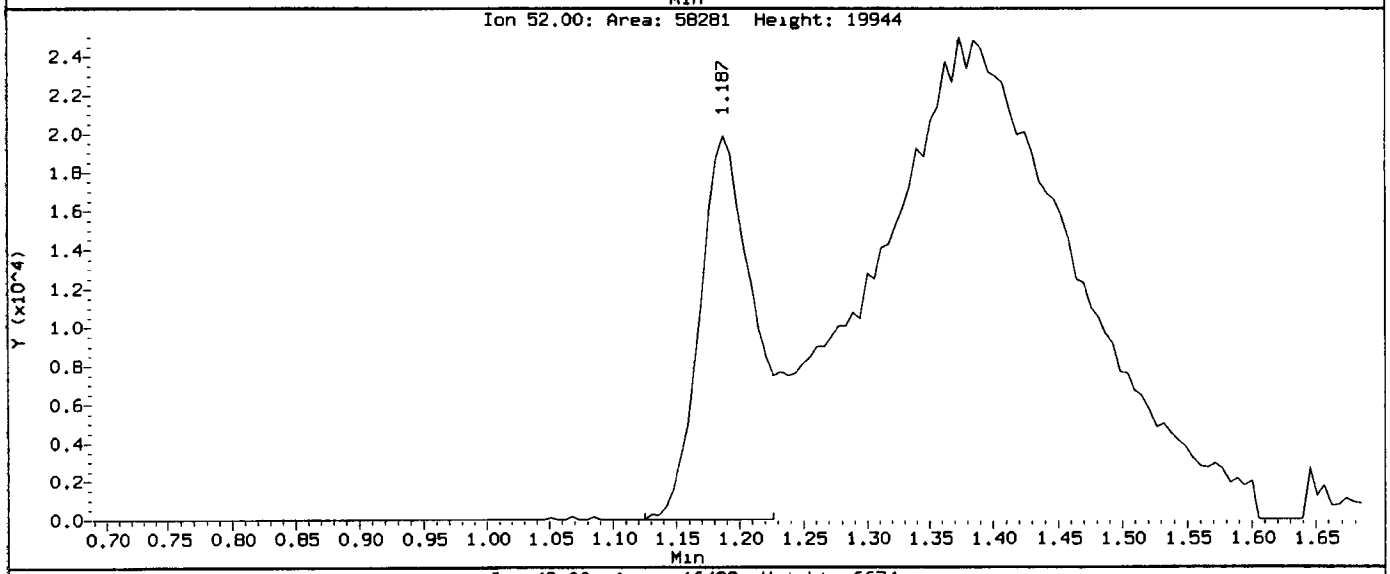
Column phase: RTXVMS

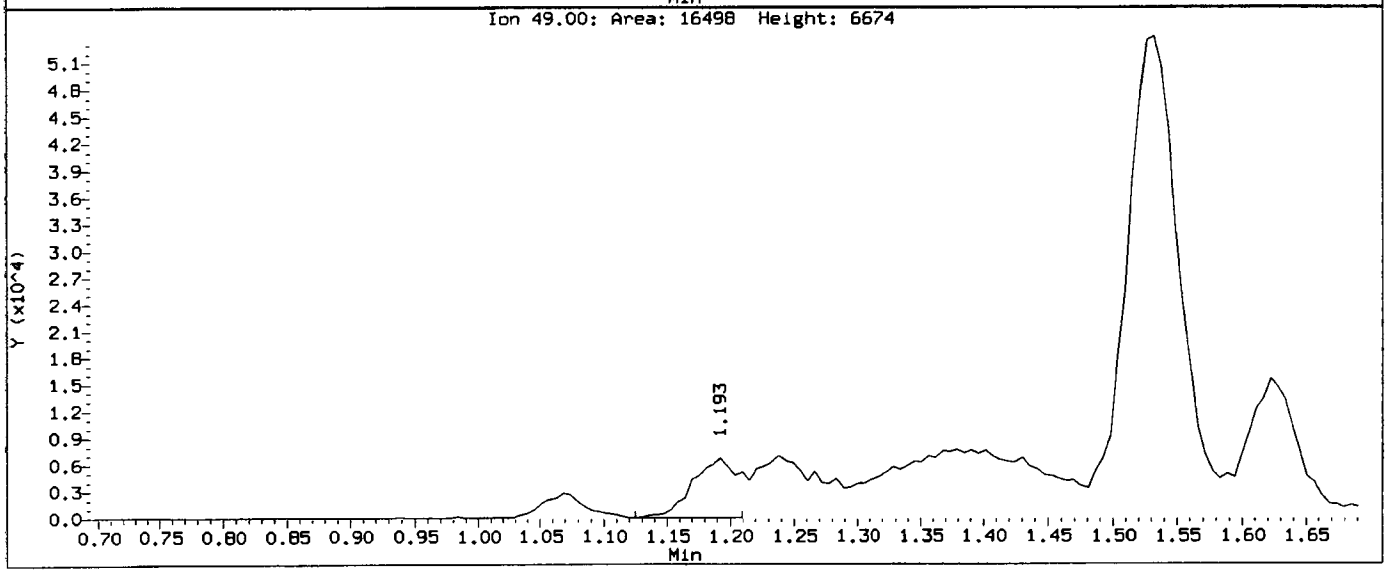


Data File: /chem1/nt5.i/16APR13.b/0500416.d
Injection Date: 16-APR-2013 17:22
Instrument: nt5.i
Client Sample ID: IC050

Compound: Chloromethane
CAS Number:

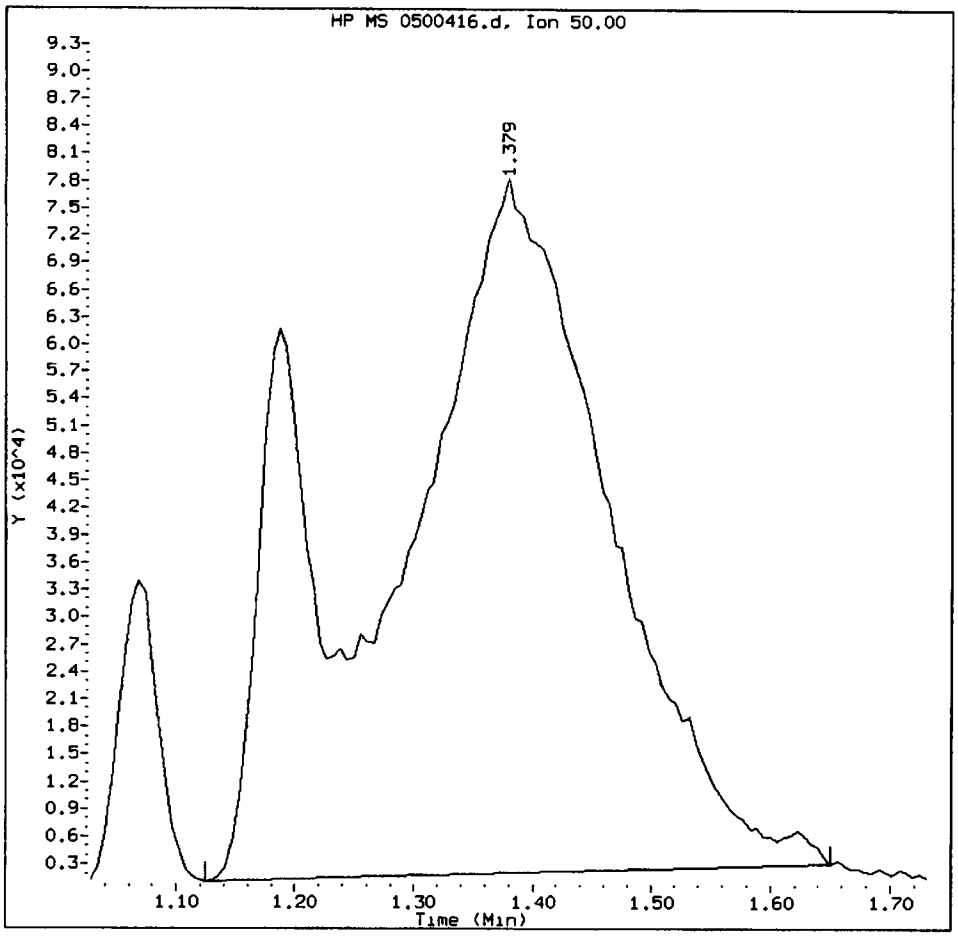






IC050, /chem1/nt5.i/16APR13.b/0500416.d

Chloromethane Amount: 44.48 Area: 1012925



MANUAL INTEGRATION for Chloromethane

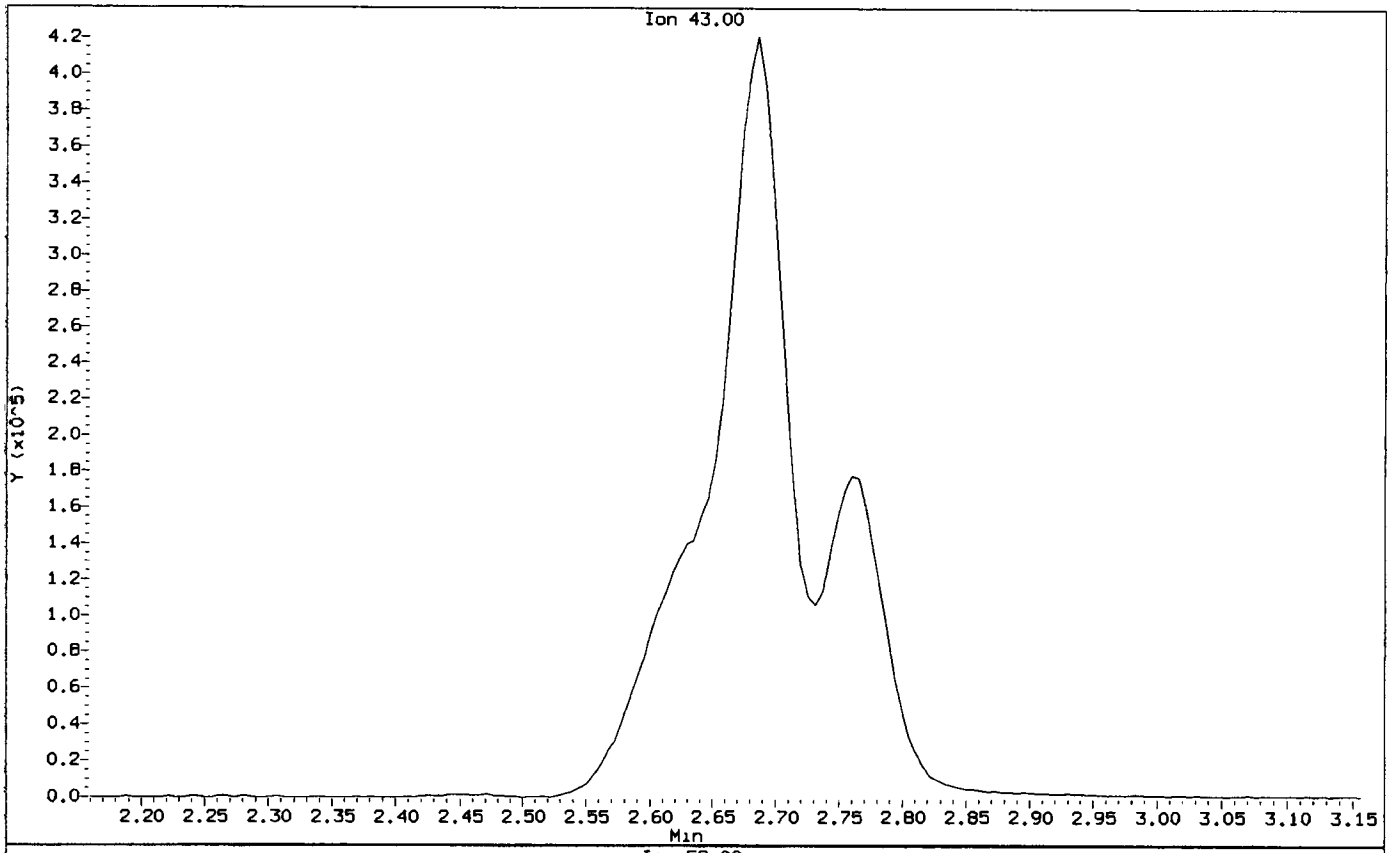
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

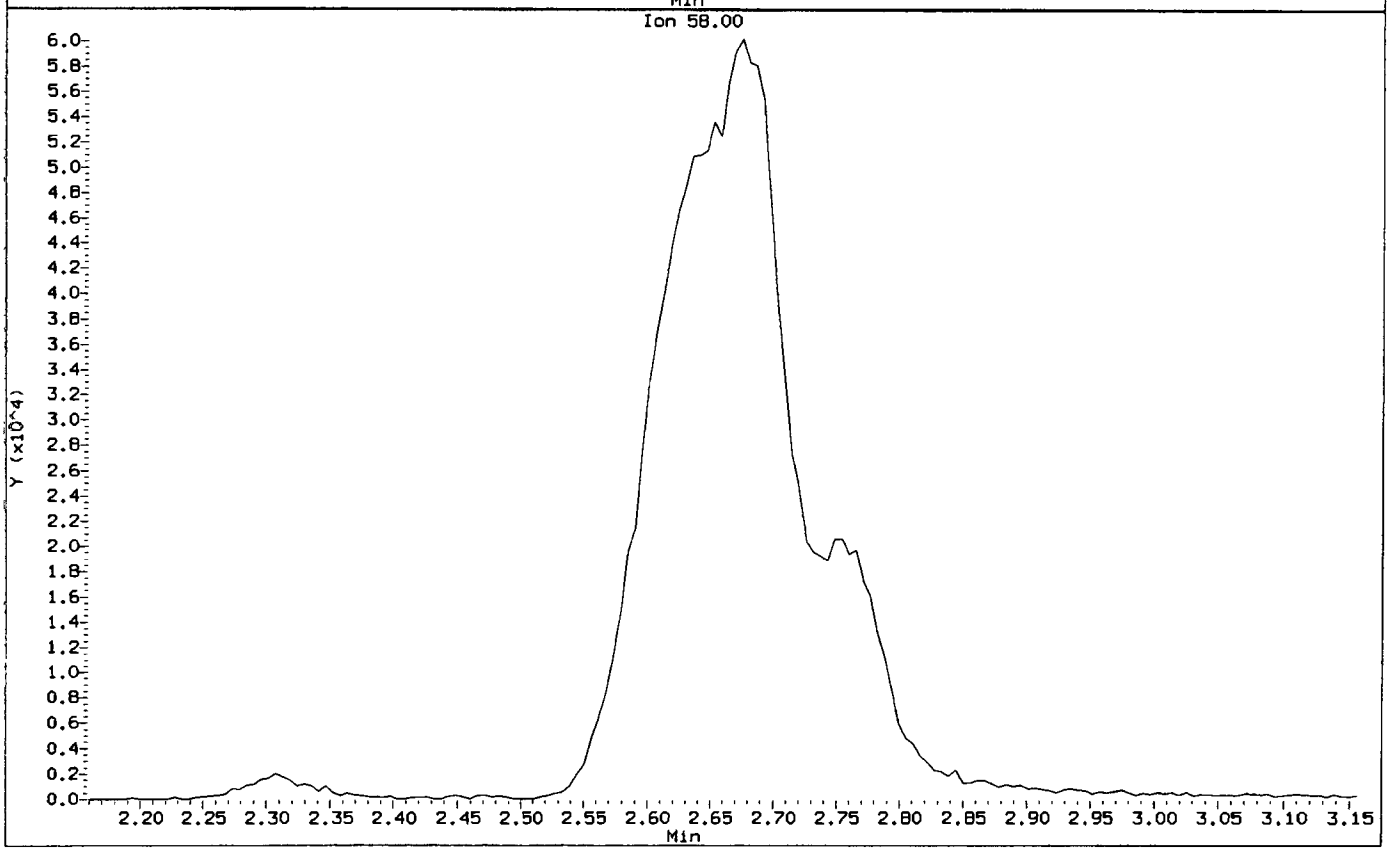
5. Other _____

Analyst: JC Date: 4/17/13

Data File: /chem1/nt5.1/16APR13.b/0500416.d
Injection Date: 16-APR-2013 17:22
Instrument: nt5.1
Client Sample ID: IC050

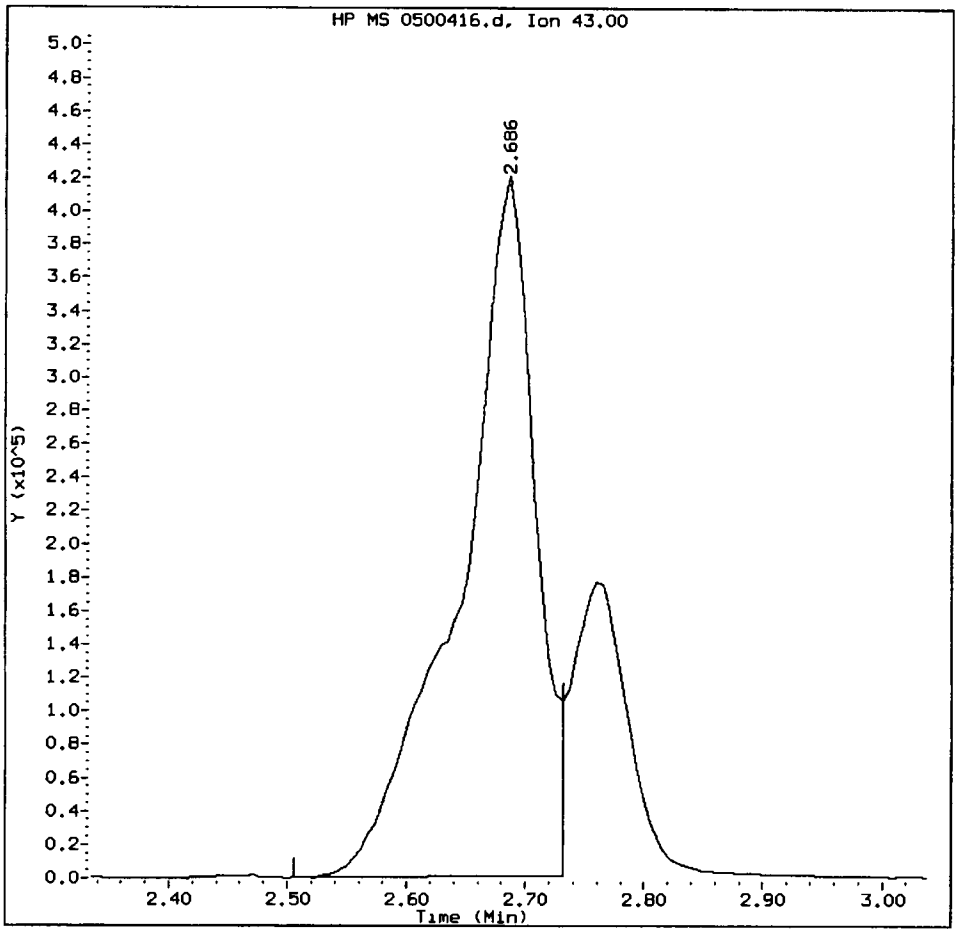
Compound: Acetone
CAS Number:





IC050, /chem1/nt5.i/16APR13.b/0500416.d

Acetone Amount: 293.91 Area: 1839450



MANUAL INTEGRATION for Acetone

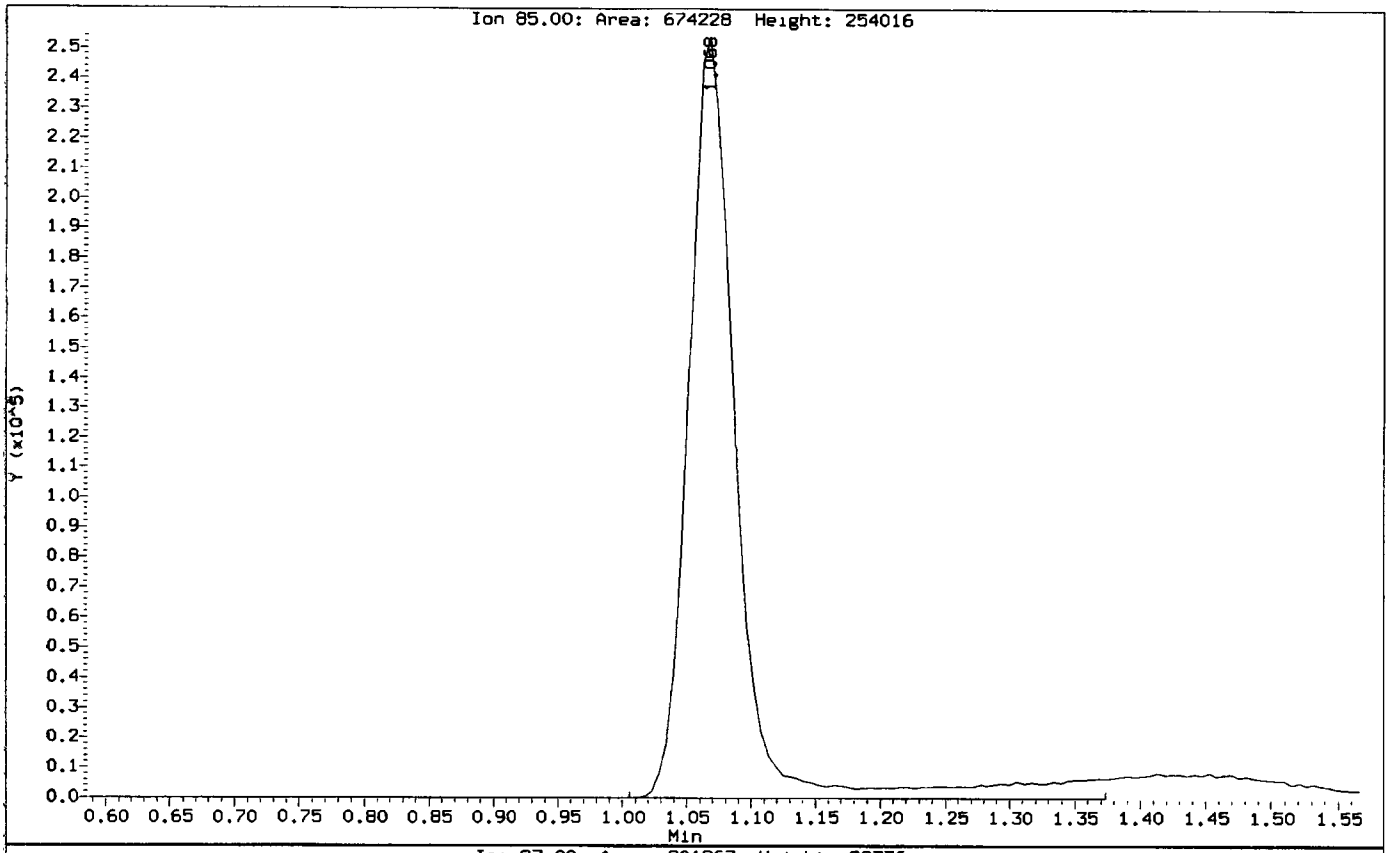
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

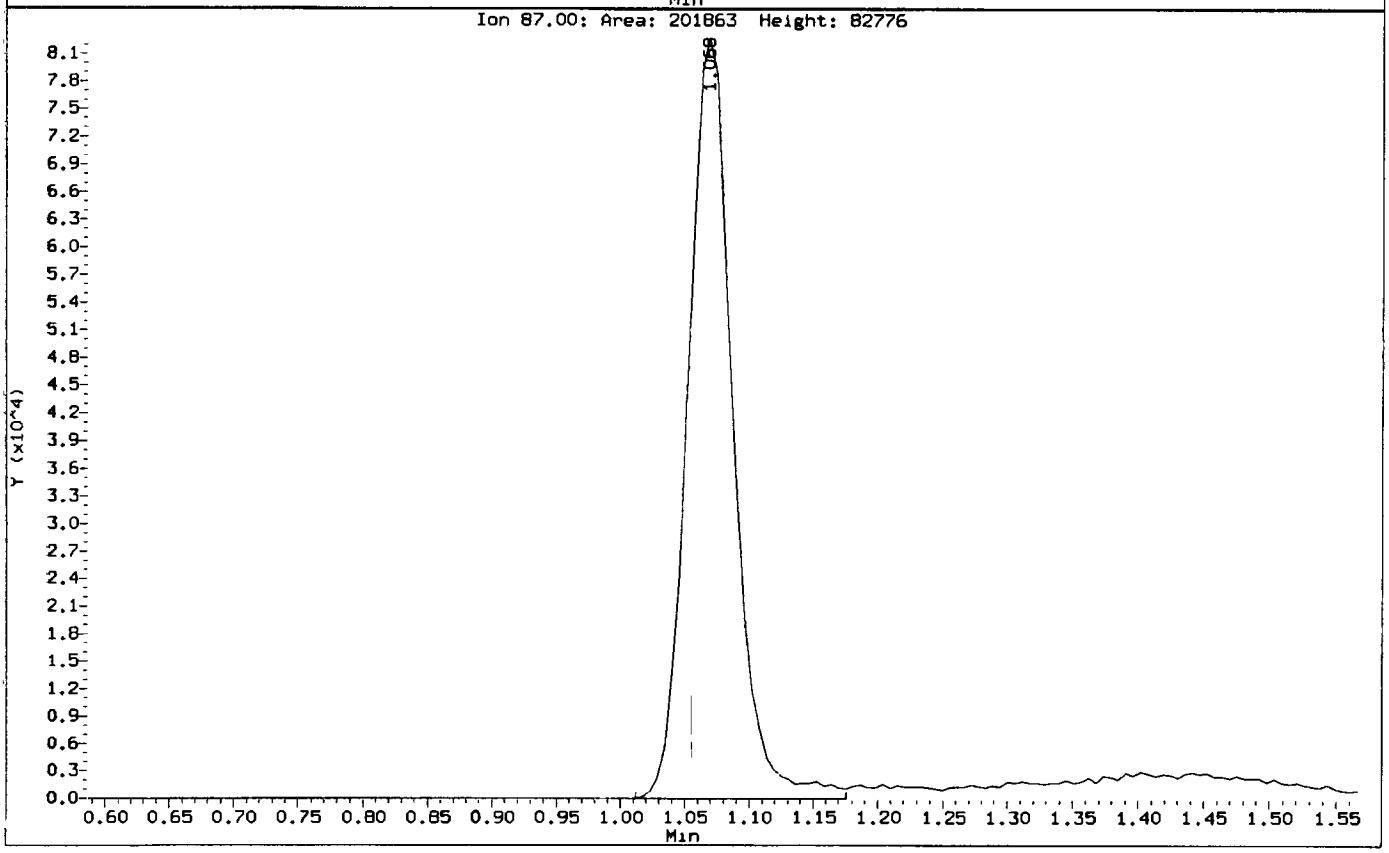
5. Other _____

Analyst: YC Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/0500416.d
Injection Date: 16-APR-2013 17:22
Instrument: nt5.i
Client Sample ID: IC050

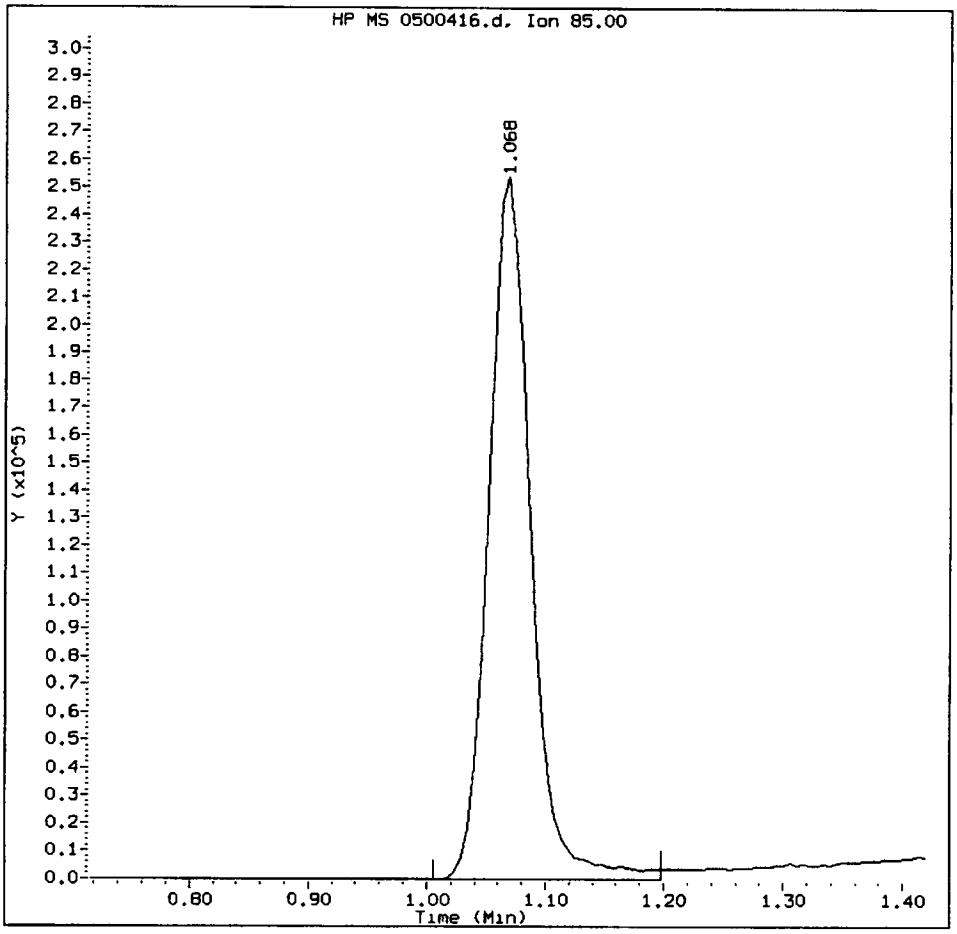
Compound: Dichlorodifluoromethane
CAS Number:





IC050, /chem1/nt5.i/16APR13.b/0500416.d

Dichlorodifluoromethane Amount: 48.14 Area: 625099



MANUAL INTEGRATION for Dichlorodifluoromethane

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

5. Other _____

Analyst: MC Date: 4/17/13

CO-ELUTION SUMMARY FOR FILE - 0500416.d

Lab ID: IC050, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PC 4/17/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/1000416.d
Lab Smp Id: IC100 Client Smp ID: 100
Inj Date : 16-APR-2013 16:58
Operator : PC Inst ID: nt5.i
Smp Info : IC100,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/V0121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.068	(0.223)	1240219	100.000	95.647(M)
2 Chloromethane	50	1.159	1.379	(0.249)	2117610	100.000	93.127(TM)
3 Vinyl Chloride	62	1.209	1.238	(0.260)	1959904	100.000	95.085(M)
4 Bromomethane	94	1.419	1.447	(0.304)	917325	100.000	91.576
5 Chloroethane	64	1.504	1.532	(0.323)	1154649	100.000	92.654
6 Trichlorofluoromethane	101	1.594	1.622	(0.342)	2133037	100.000	95.861
7 1,1-Dichloroethene	96	1.950	1.979	(0.419)	1380805	100.000	98.967
8 Carbon Disulfide	76	1.956	1.984	(0.420)	4605260	100.000	98.517
9 112Trichloro122Trifluoroethane	101	1.996	2.030	(0.428)	1251625	100.000	96.789
10 Iodomethane	142	2.052	2.081	(0.440)	1606499	100.000	95.440
11 Bromoethane	108	2.148	2.177	(0.461)	868308	100.000	91.708
12 Acrolein	56	2.262	2.296	(0.485)	882487	500.000	382.93
13 Methylene Chloride	84	2.426	2.454	(0.520)	1231347	100.000	92.186
14 Acetone	43	2.652	2.686	(0.569)	3031480	500.000	460.09
15 Trans-1,2-Dichloroethene	96	2.561	2.595	(0.550)	1353054	100.000	87.741

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.737	2.765	(0.587)	4306054	100.000	95.685
	17 1,1-Dichloroethane	63	3.178	3.206	(0.682)	3095605	100.000	95.698
	18 Acrylonitrile	53	3.297	3.325	(0.707)	585338	100.000	93.226
	19 Vinyl Acetate	43	3.523	3.546	(0.756)	3686384	100.000	100.39
	20 Cis-1,2-Dichloroethene	96	3.727	3.749	(0.800)	1647092	100.000	95.252
	22 2,2-Dichloropropane	77	3.823	3.846	(0.820)	2411289	100.000	97.133
	23 Bromochloromethane	128	3.913	3.930	(0.840)	706774	100.000	94.245
	24 Chloroform	83	4.015	4.032	(0.862)	2747421	100.000	95.323
	25 Carbon Tetrachloride	117	4.100	4.117	(0.802)	2219506	100.000	96.647
$	27 Dibromofluoromethane	111	4.185	4.196	(0.898)	894659	50.0000	50.986
	26 1,1,1-Trichloroethane	97	4.174	4.191	(0.896)	2604349	100.000	96.519
	28 1,1-Dichloropropene	75	4.292	4.309	(0.840)	2399640	100.000	94.021
	29 2-Butanone	72	4.389	4.400	(0.942)	886568	500.000	487.21
	30 Benzene	78	4.524	4.536	(0.885)	6526858	100.000	94.880
*	31 Pentafluorobenzene	168	4.660	4.672	(1.000)	1614464	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.666	(0.999)	1010752	50.0000	50.691
	33 1,2-Dichloroethane	62	4.717	4.728	(0.923)	2207777	100.000	95.184
	34 Trichloroethene	95	5.056	5.067	(0.989)	1694669	100.000	96.470
*	35 1,4-Difluorobenzene	114	5.113	5.124	(1.000)	2854552	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	886922	100.000	96.816
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	1870381	100.000	96.632
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	2168744	100.000	97.163
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.197)	1130034	100.000	104.66
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	2771883	100.000	99.127
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3616591	50.0000	49.900
	43 Toluene	92	6.329	6.335	(1.238)	4248903	100.000	91.777
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	1775534	100.000	94.990
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.311)	3606346	500.000	514.08(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	2529352	100.000	100.03
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	1340231	100.000	98.059
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	1560243	100.000	97.789
	49 1,3-Dichloropropane	76	7.042	7.047	(0.927)	2436211	100.000	96.799
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	1296428	100.000	97.196
	51 2-Hexanone	43	7.415	7.409	(0.976)	5590867	500.000	477.15
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2785971	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	4277902	100.000	92.259
	54 Ethyl Benzene	91	7.664	7.658	(1.009)	7087771	100.000	90.351
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	1613145	100.000	96.575
	56 m,p-xylene	106	7.794	7.794	(1.026)	5619136	200.000	187.04(Q)
	57 o-Xylene	106	8.156	8.156	(1.074)	2948145	100.000	97.716(Q)
	58 Styrene	104	8.201	8.201	(1.080)	4733708	100.000	95.927
	59 Bromoform	173	8.196	8.196	(0.847)	1088873	100.000	98.917
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	6709011	100.000	92.369
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1478825	50.0000	49.579
	63 Bromobenzene	156	8.739	8.739	(0.903)	1819526	100.000	93.519
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	7550554	100.000	88.478
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	1719137	100.000	98.115

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	5108435	100.000	93.297
67	1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	5863129	100.000	94.226
68	1,2,3-Trichloropropane	110	8.971	8.965	(0.927)	519551	100.000	98.479
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.022	(0.933)	676900	100.000	93.918
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	5281061	100.000	91.880
71	T-Butyl Benzene	119	9.276	9.271	(0.959)	5263884	100.000	95.235
72	1,2,4-Trimethylbenzene	105	9.344	9.338	(0.966)	5754959	100.000	93.682
73	S-Butyl Benzene	105	9.440	9.435	(0.976)	7140929	100.000	90.783
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	6129039	100.000	93.666
75	1,3-Dichlorobenzene	146	9.599	9.593	(0.992)	3396908	100.000	92.910
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1487183	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.683	9.684	(1.001)	3465025	100.000	90.096
78	N-Butyl Benzene	91	9.972	9.966	(1.031)	5875341	100.000	92.651
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1356559	50.0000	50.024 (Q)
80	1,2-Dichlorobenzene	146	10.062	10.057	(1.040)	3238961	100.000	90.043
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	322887	100.000	94.635
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	1468144	100.000	92.698
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	2466838	100.000	91.971
84	Naphthalene	128	11.788	11.788	(1.219)	5042853	100.000	101.28
85	1,2,3-Trichlorobenzene	180	11.975	11.969	(1.238)	2225085	100.000	88.805

QC Flag Legend

T - Target compound detected outside RT window.
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: 1000416.d
Lab Smp Id: IC100
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 100
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	1616720	808360	3233440	1614464	-0.14
35 1,4-Difluorobenze	2842987	1421494	5685974	2854552	0.41
52 d5-Chlorobenzene	2779083	1389542	5558166	2785971	0.25
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1487183	-2.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

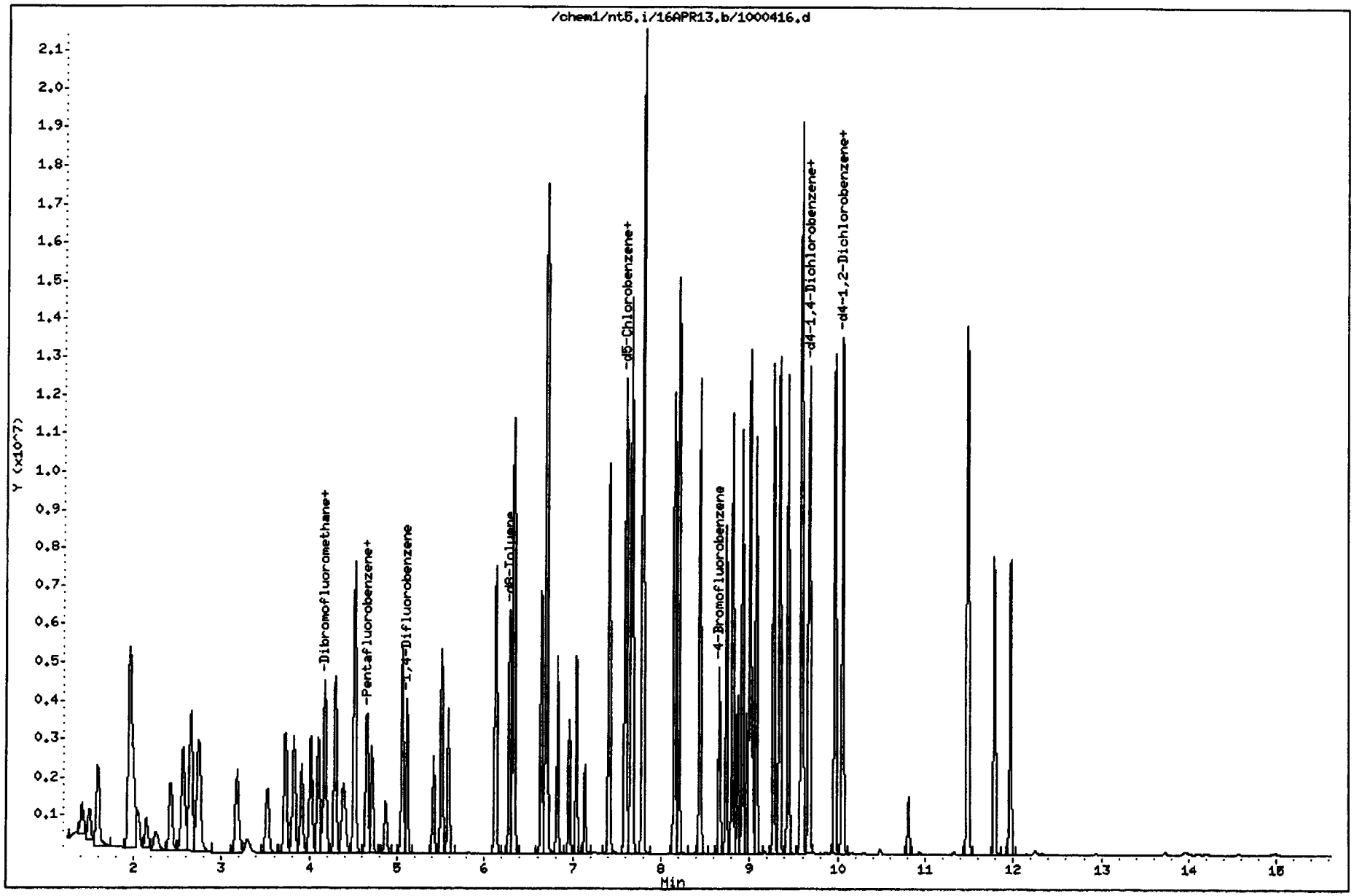
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/16APR13.b/1000416.d
Date : 16-APR-2013 16:58
Client ID: 100
Sample Info: IC100,5,5,0,

Instrument: nt5.i

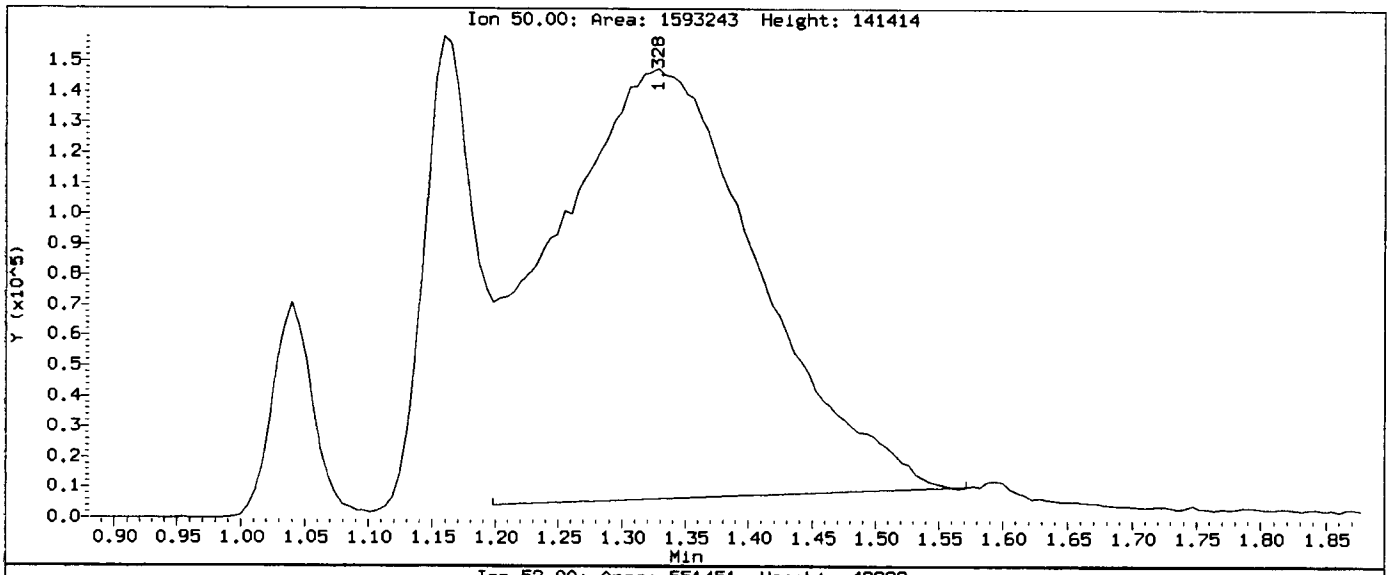
Operator: PC
Column diameter: 0.18

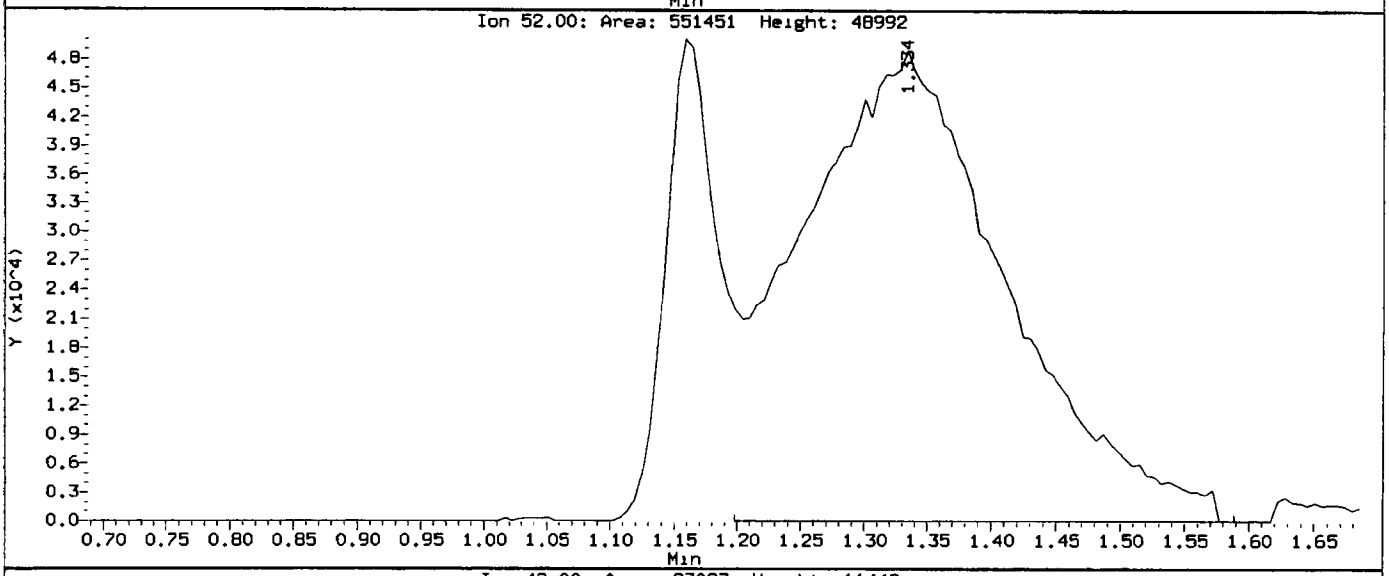
Column phase: RTXVMS

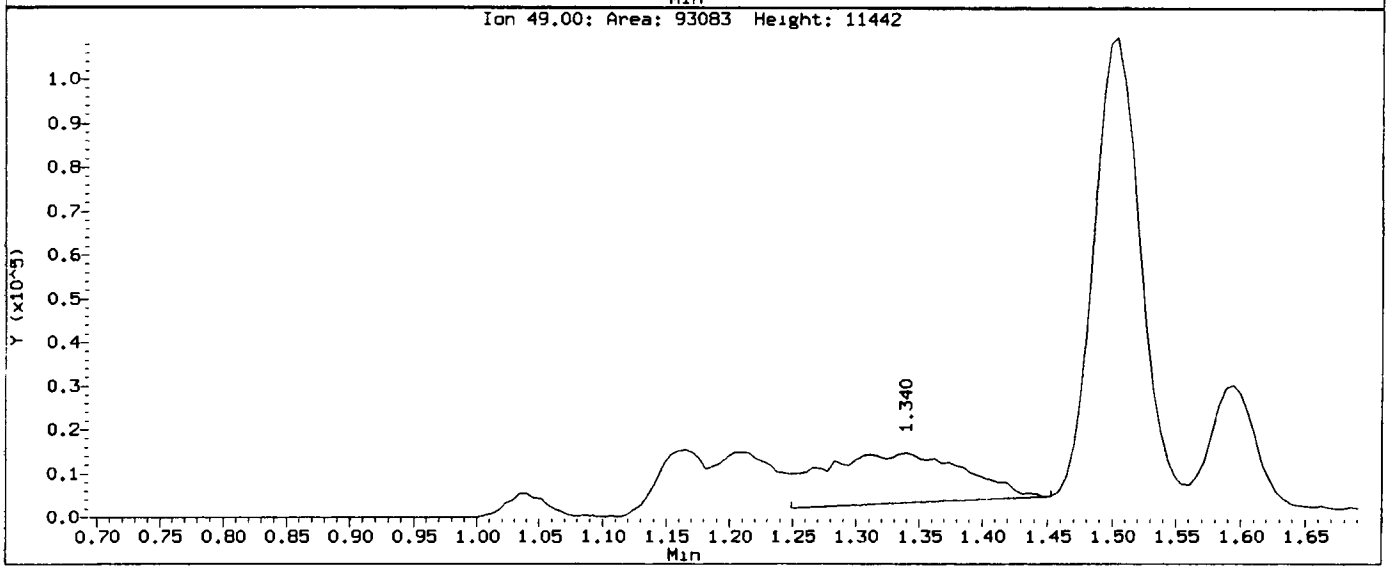


Data File: /chem1/nt5.i/16APR13.b/1000416.d
Injection Date: 16-APR-2013 16:58
Instrument: nt5.1
Client Sample ID:

Compound: Chloromethane
CAS Number:

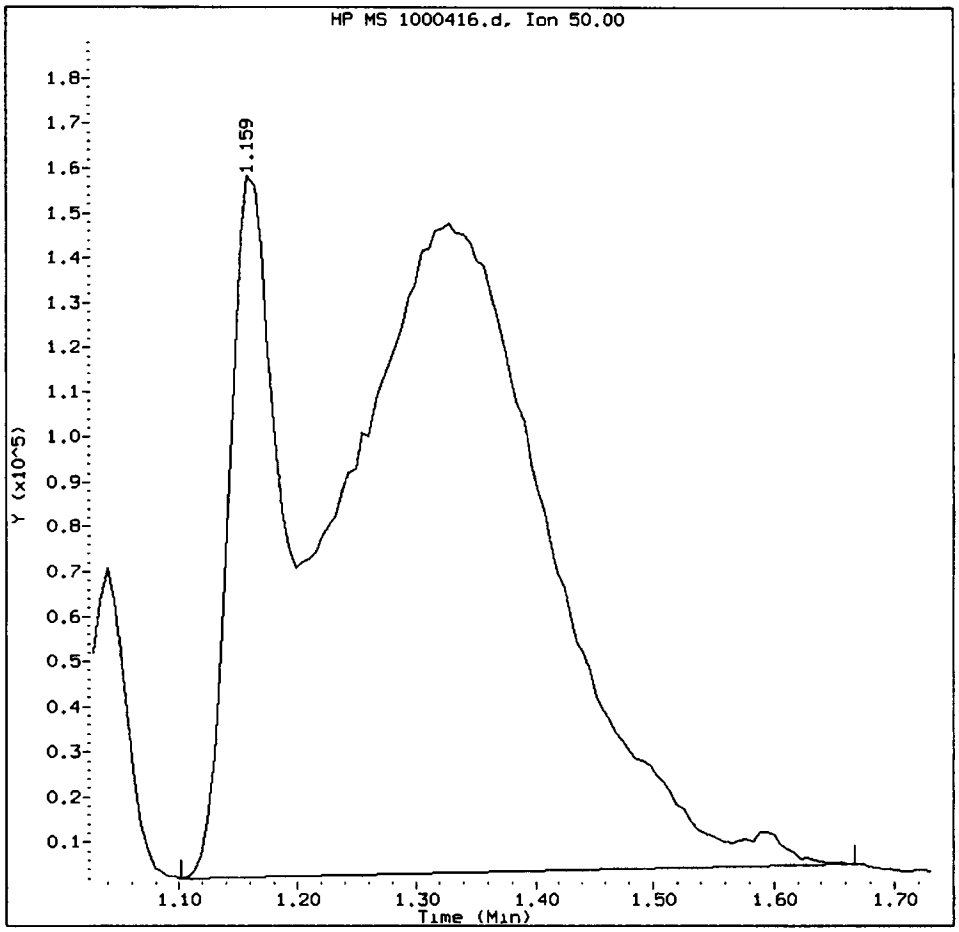






IC100, /chem1/nt5.i/16APR13.b/1000416.d

Chloromethane Amount: 93.13 Area: 2117610



MANUAL INTEGRATION for Chloromethane

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

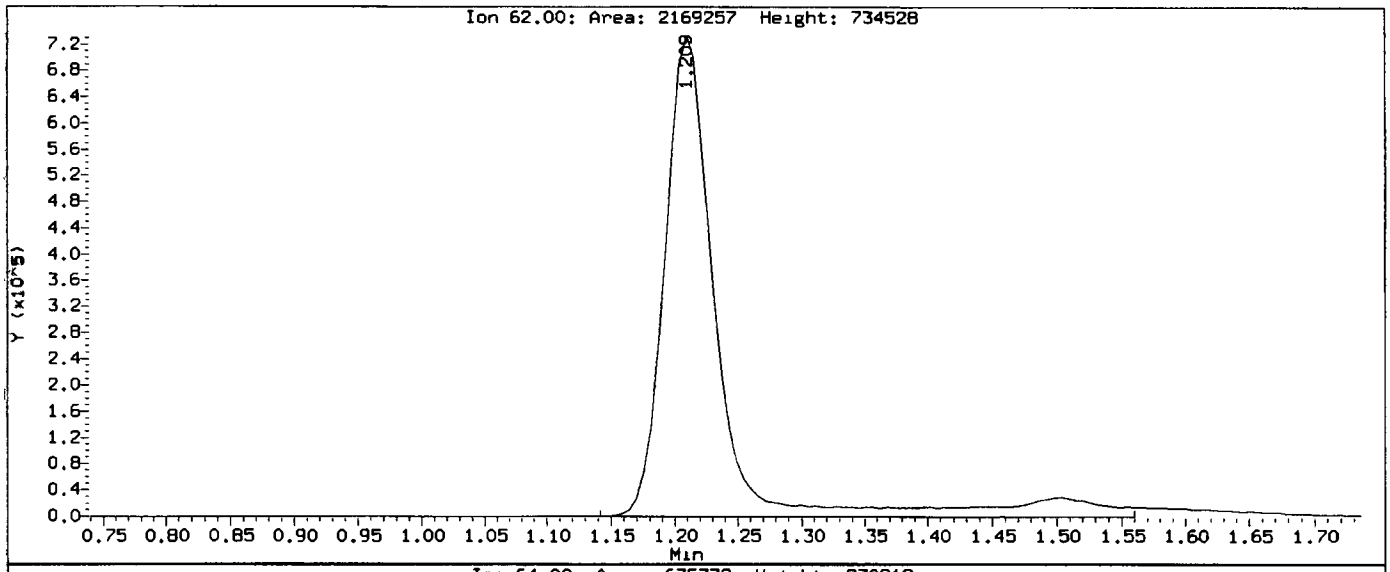
5. Other _____

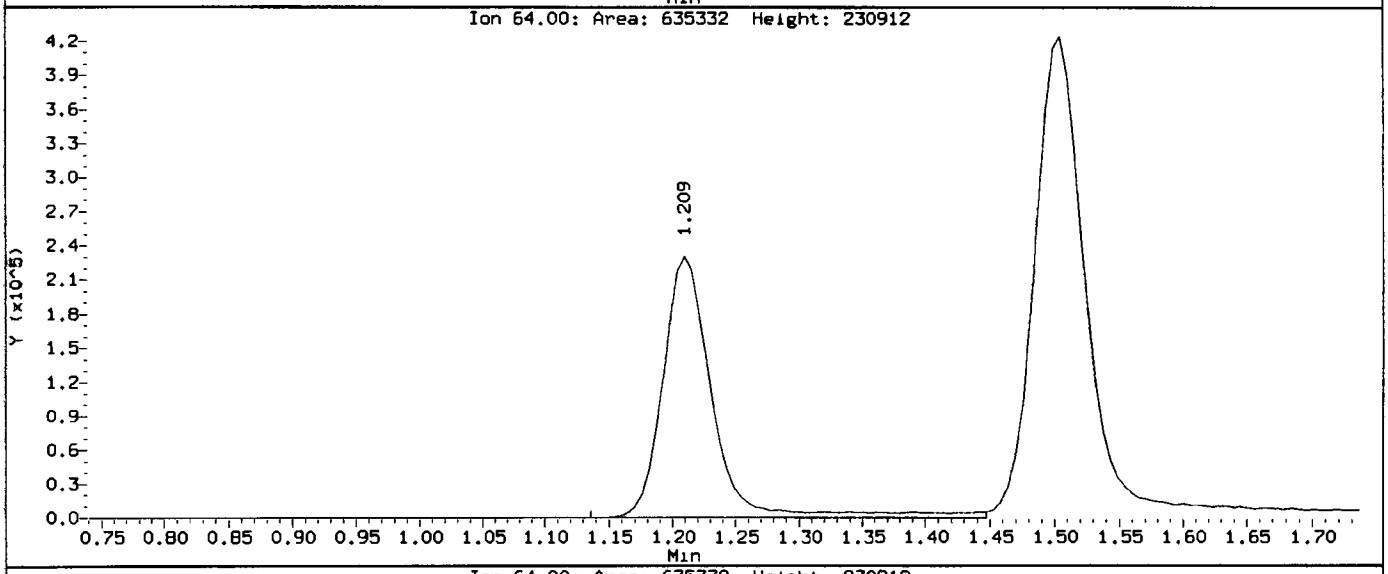
Analyst: PL Date: 4/17/13

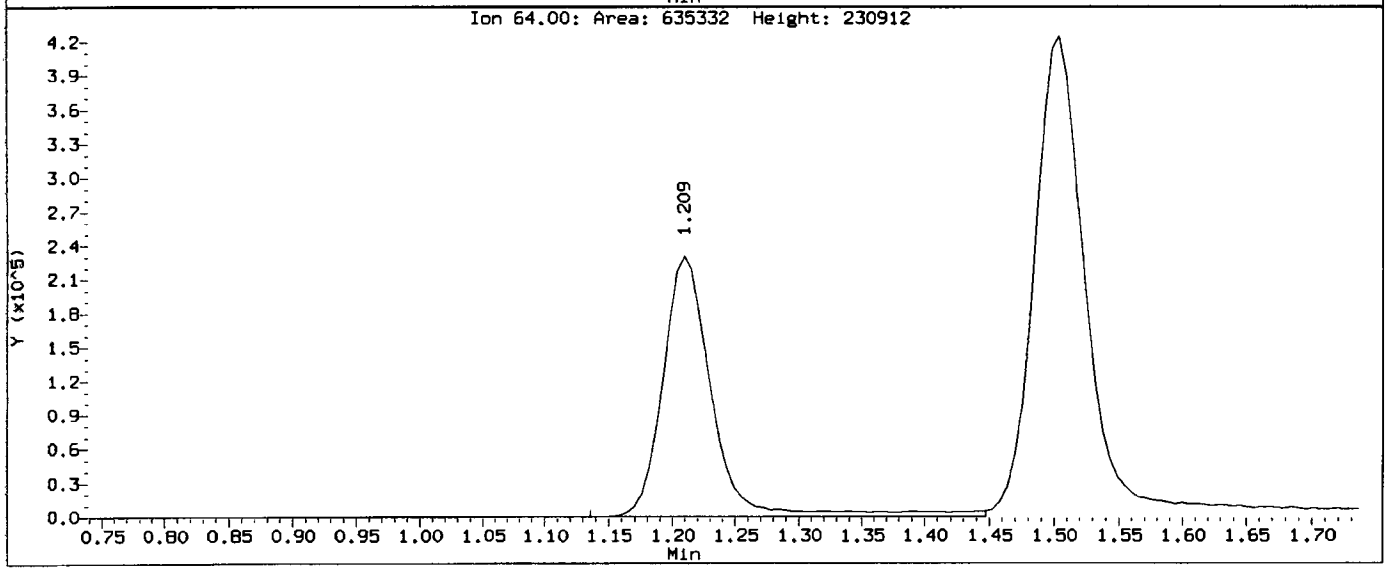
Data File: /chem1/nt5.1/16APR13.b/1000416.d
Injection Date: 16-APR-2013 16:58
Instrument: nt5.1
Client Sample ID:

Compound: Vinyl Chloride
CAS Number:

PG 4/17/13

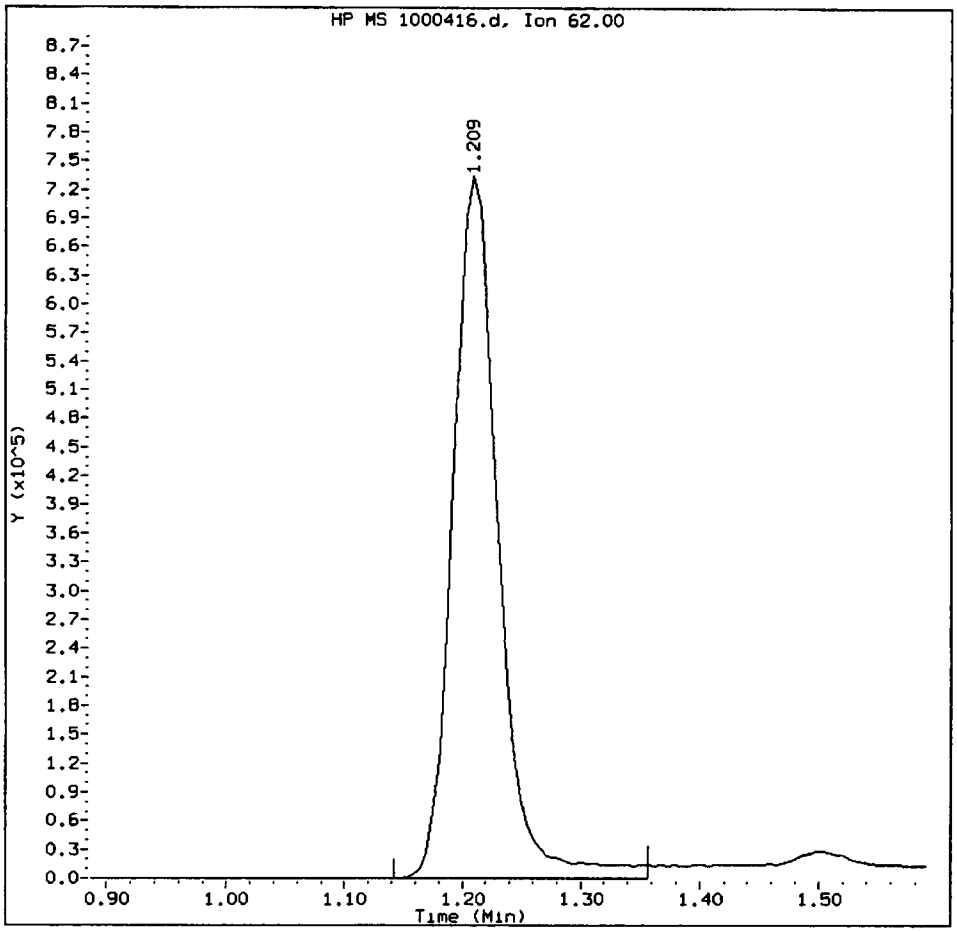






IC100, /chem1/nt5.i/16APR13.b/1000416.d

Vinyl Chloride Amount: 95.09 Area: 1959904



MANUAL INTEGRATION for Vinyl Chloride

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

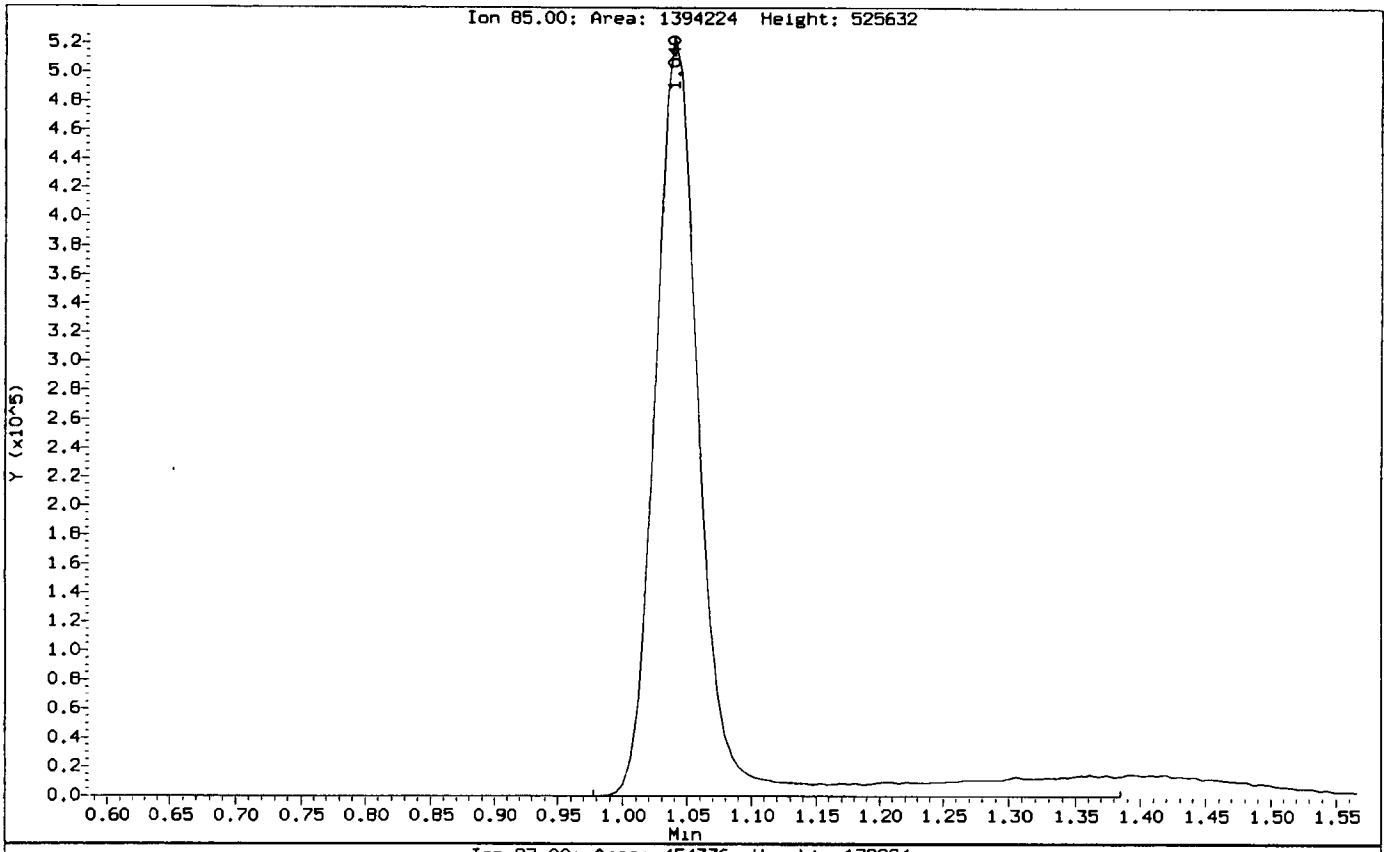
5. Other _____

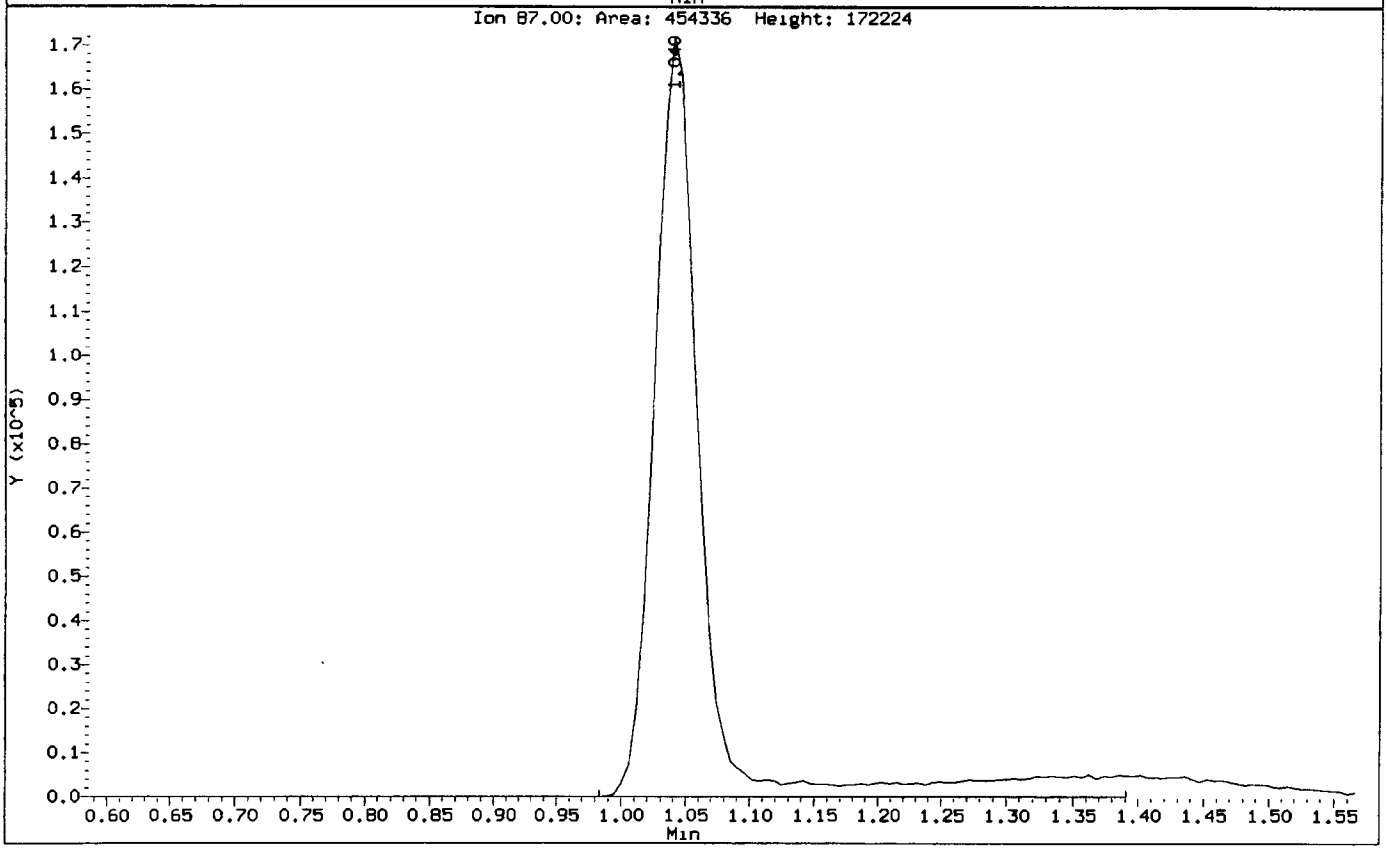
Analyst: JC Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/1000416.d
Injection Date: 16-APR-2013 16:58
Instrument: nt5.i
Client Sample ID:

Compound: Dichlorodifluoromethane
CAS Number:

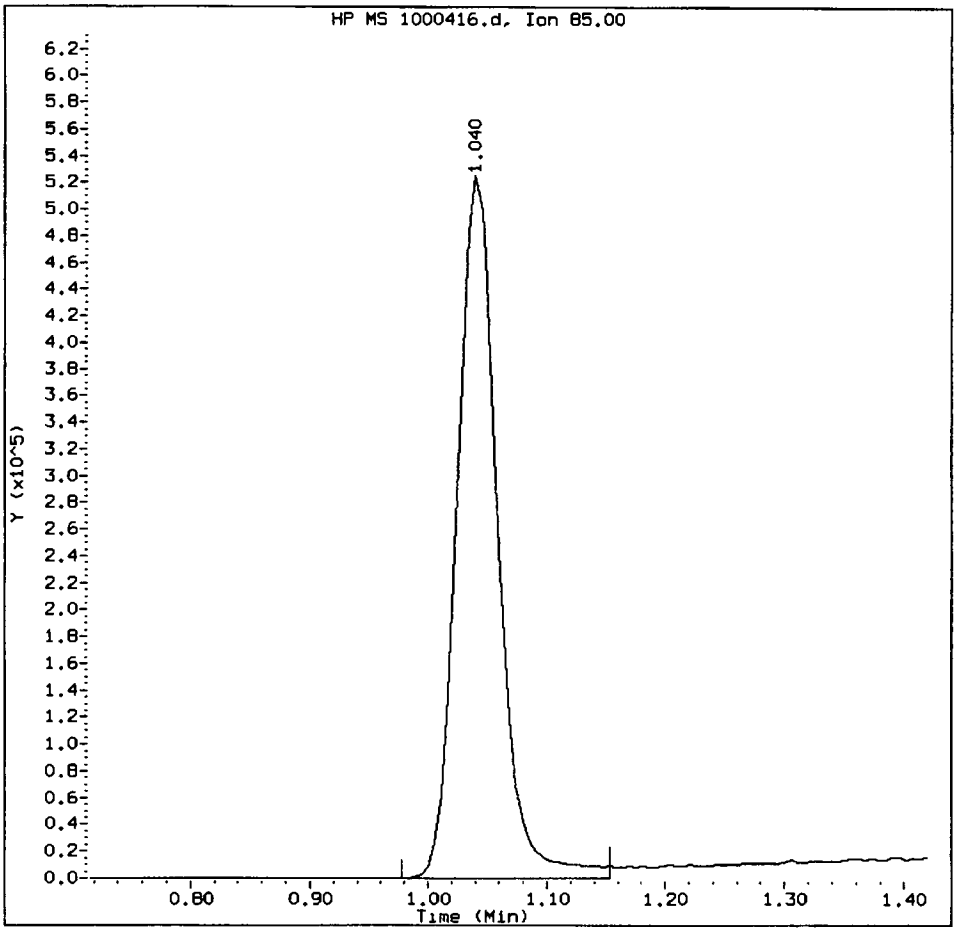
PG 4/17/13





IC100, /chem1/nt5.i/16APR13.b/1000416.d

Dichlorodifluoromethane Amount: 95.65 Area: 1240219



MANUAL INTEGRATION for Dichlorodifluoromethane

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

5. Other _____

Analyst: _____ Date: 4/17/13

CO-ELUTION SUMMARY FOR FILE - 1000416.d

Lab ID: IC100, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PC 4/17/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/1500416.d
Lab Smp Id: IC150 Client Smp ID: 150
Inj Date : 16-APR-2013 16:34
Operator : PC Inst ID: nt5.i
Smp Info : IC150,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1	Dichlorodifluoromethane	85	1.034	1.068	(0.222)	1989279	150.000	152.05(M)
2	Chloromethane	50	1.153	1.379	(0.248)	3607686	150.000	157.24(TM)
3	Vinyl Chloride	62	1.204	1.238	(0.259)	3276172	150.000	157.53(M)
4	Bromomethane	94	1.408	1.447	(0.302)	1448139	150.000	143.28
5	Chloroethane	64	1.492	1.532	(0.321)	1938867	150.000	154.20
6	Trichlorofluoromethane	101	1.589	1.622	(0.341)	3271574	150.000	145.72
7	1,1-Dichloroethene	96	1.928	1.979	(0.414)	1586796	150.000	112.72(Q)
8	Carbon Disulfide	76	1.934	1.984	(0.415)	4775678	150.000	101.25
9	112Trichloro122Trifluoroethane	101	1.973	2.030	(0.424)	1445927	150.000	110.82
10	Iodomethane	142	2.030	2.081	(0.436)	2003395	150.000	117.96
11	Bromoethane	108	2.126	2.177	(0.457)	1038696	150.000	108.73
12	Acrolein	56	2.239	2.296	(0.481)	1460103	750.000	627.93
13	Methylene Chloride	84	2.409	2.454	(0.518)	2330906	150.000	151.40
14	Acetone	43	2.629	2.686	(0.565)	5714622	750.000	756.81(TMH)
15	Trans-1,2-Dichloroethene	96	2.545	2.595	(0.547)	2550523	150.000	163.92

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.754	2.765	(0.592)	6584714	150.000	145.02
	17 1,1-Dichloroethane	63	3.167	3.206	(0.680)	4889942	150.000	149.82
	18 Acrylonitrile	53	3.280	3.325	(0.705)	812761	150.000	128.29
	19 Vinyl Acetate	43	3.518	3.546	(0.756)	5258773	150.000	141.93
	20 Cis-1,2-Dichloroethene	96	3.721	3.749	(0.799)	2616734	150.000	149.98
	22 2,2-Dichloropropane	77	3.817	3.846	(0.820)	3879237	150.000	154.87
	23 Bromochloromethane	128	3.908	3.930	(0.840)	1203271	150.000	159.02
	24 Chloroform	83	4.010	4.032	(0.861)	4321928	150.000	148.62
	25 Carbon Tetrachloride	117	4.095	4.117	(0.802)	3604105	150.000	157.22
$	27 Dibromofluoromethane	111	4.179	4.196	(0.898)	888883	50.0000	50.206
	26 1,1,1-Trichloroethane	97	4.168	4.191	(0.895)	4180353	150.000	153.55
	28 1,1-Dichloropropene	75	4.287	4.309	(0.839)	3872403	150.000	151.99
	29 2-Butanone	72	4.372	4.400	(0.939)	1227638	750.000	668.63
	30 Benzene	78	4.519	4.536	(0.885)	9500168	150.000	138.35
*	31 Pentafluorobenzene	168	4.655	4.672	(1.000)	1628978	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.666	(0.999)	985465	50.0000	48.983
	33 1,2-Dichloroethane	62	4.711	4.728	(0.922)	3259347	150.000	140.77
	34 Trichloroethene	95	5.056	5.067	(0.990)	2714207	150.000	154.78
*	35 1,4-Difluorobenzene	114	5.107	5.124	(1.000)	2849514	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.060)	1333218	150.000	145.79
	38 1,2-Dichloropropane	63	5.509	5.514	(1.079)	2917302	150.000	150.99
	39 Bromodichloromethane	83	5.582	5.588	(1.093)	3314849	150.000	148.77
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.198)	1644827	150.000	152.61
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.200)	4200554	150.000	150.48
$	42 d8-Toluene	98	6.289	6.295	(1.231)	3621250	50.0000	50.053
	43 Toluene	92	6.335	6.335	(1.240)	6319813	150.000	136.75
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	2889213	150.000	156.17
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.312)	4800382	750.000	685.50
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	3737684	150.000	148.07
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.337)	2001854	150.000	146.73
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	2334855	150.000	147.85
	49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	3562740	150.000	143.03
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	1899046	150.000	142.63
	51 2-Hexanone	43	7.415	7.409	(0.976)	7202883	750.000	621.10
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2757407	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	6276944	150.000	136.77
	54 Ethyl Benzene	91	7.664	7.658	(1.009)	9663434	150.000	124.46
	55 1,1,1,2-Tetrachloroethane	131	7.681	7.675	(1.011)	2479934	150.000	150.00
	56 m,p-xylene	106	7.800	7.794	(1.027)	7944647	300.000	267.19
	57 o-Xylene	106	8.162	8.156	(1.074)	4507047	150.000	150.93
	58 Styrene	104	8.207	8.201	(1.080)	6721329	150.000	137.62
	59 Bromoform	173	8.201	8.196	(0.848)	1566405	150.000	145.97
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	9093864	150.000	128.44
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1451614	50.0000	49.171
	63 Bromobenzene	156	8.745	8.739	(0.904)	2771201	150.000	146.11
	64 N-Propyl Benzene	91	8.818	8.807	(0.912)	10138648	150.000	121.87
	65 1,1,2,2-Tetrachloroethane	83	8.875	8.869	(0.918)	2434568	150.000	142.54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
66	2-Chloro Toluene	91	8.926	8.920	(0.923)	7270947	150.000	136.22
67	1,3,5-Trimethyl Benzene	105	9.010	8.999	(0.932)	8208394	150.000	135.32
68	1,2,3-Trichloropropane	110	8.971	8.965	(0.927)	729422	150.000	141.83
69	Trans-1,4-Dichloro 2-Butene	53	9.033	9.022	(0.934)	959451	150.000	136.56
70	4-Chloro Toluene	91	9.078	9.073	(0.939)	7501839	150.000	133.89
71	T-Butyl Benzene	119	9.282	9.271	(0.960)	7507998	150.000	139.34
72	1,2,4-Trimethylbenzene	105	9.350	9.338	(0.967)	7961335	150.000	132.95
73	S-Butyl Benzene	105	9.446	9.435	(0.977)	9600592	150.000	125.21
74	4-Isopropyl Toluene	119	9.593	9.582	(0.992)	8297520	150.000	130.08
75	1,3-Dichlorobenzene	146	9.604	9.593	(0.993)	4960128	150.000	139.17
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1449733	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.684	(1.002)	5099858	150.000	136.03
78	N-Butyl Benzene	91	9.978	9.966	(1.032)	8132768	150.000	131.56
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1302951	50.0000	49.288
80	1,2-Dichlorobenzene	146	10.068	10.057	(1.041)	4723871	150.000	134.72
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	441158	150.000	132.64
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	2240457	150.000	145.12
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	3704827	150.000	141.70
84	Naphthalene	128	11.794	11.788	(1.219)	6621969	150.000	149.47
85	1,2,3-Trichlorobenzene	180	11.980	11.969	(1.239)	3285818	150.000	134.53

QC Flag Legend

T - Target compound detected outside RT window.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1500416.d
Lab Smp Id: IC150
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 150
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	1616720	808360	3233440	1628978	0.76
35 1,4-Difluorobenze	2842987	1421494	5685974	2849514	0.23
52 d5-Chlorobenzene	2779083	1389542	5558166	2757407	-0.78
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1449733	-5.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.65	-0.36
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.33
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

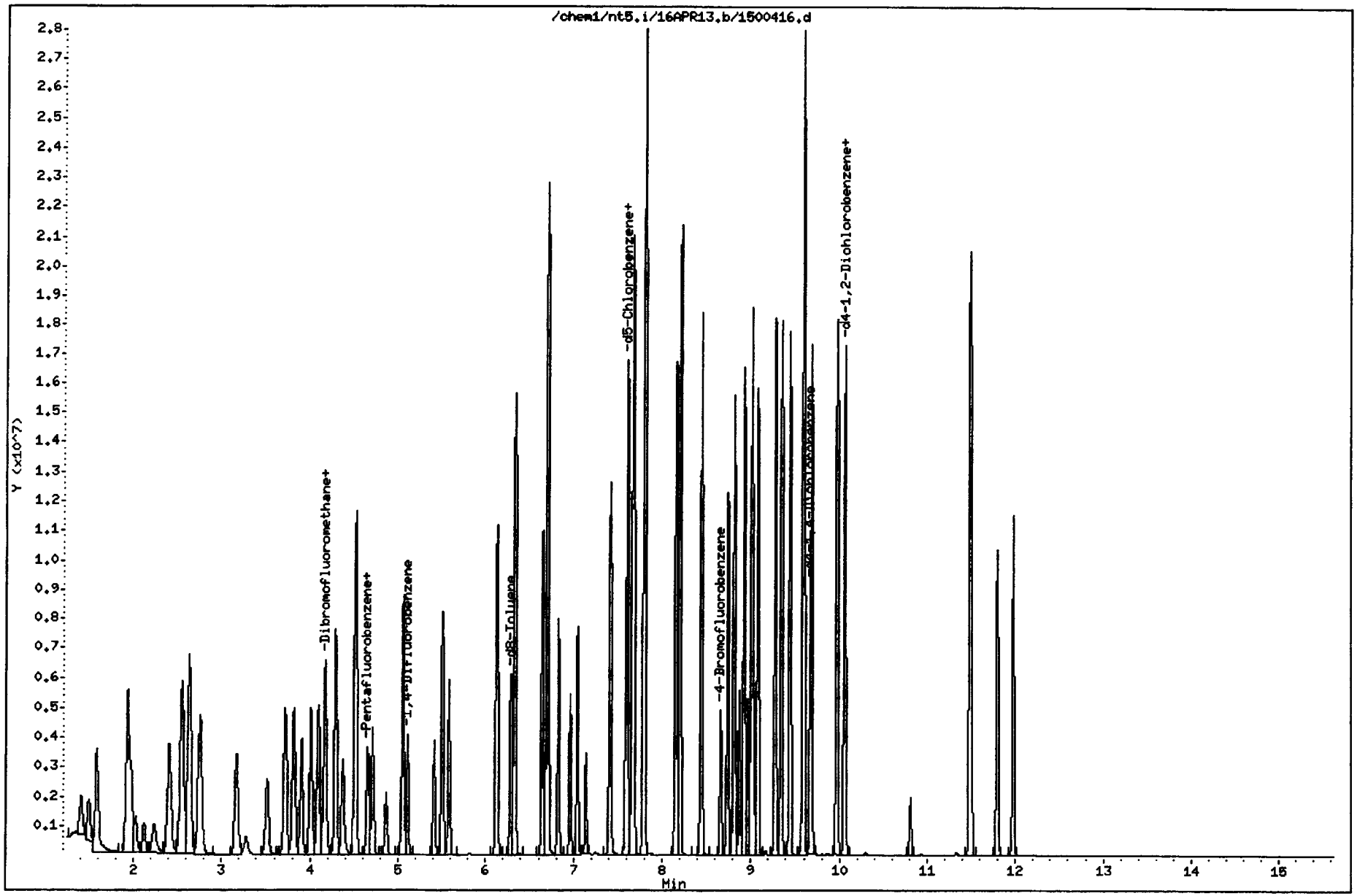
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/16APR13.b/1500416.d
Date : 16-APR-2013 16:34
Client ID: 150
Sample Info: IC150,5,5,0,

Column phase: RTXVMS

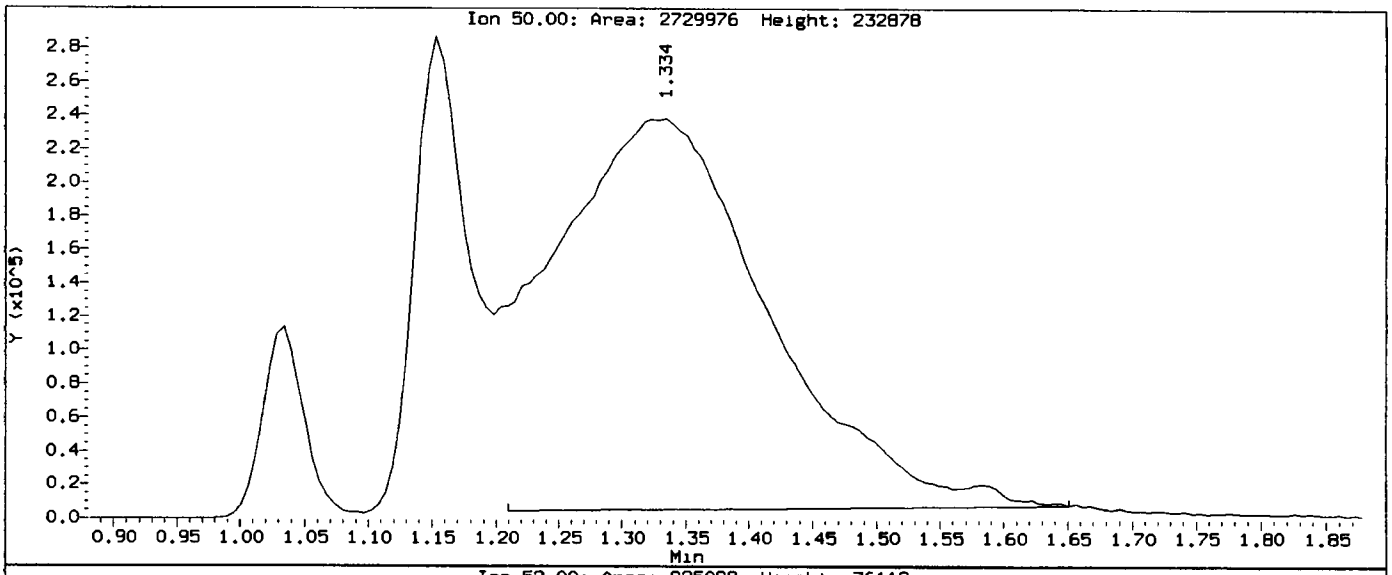
Instrument: nt5.i

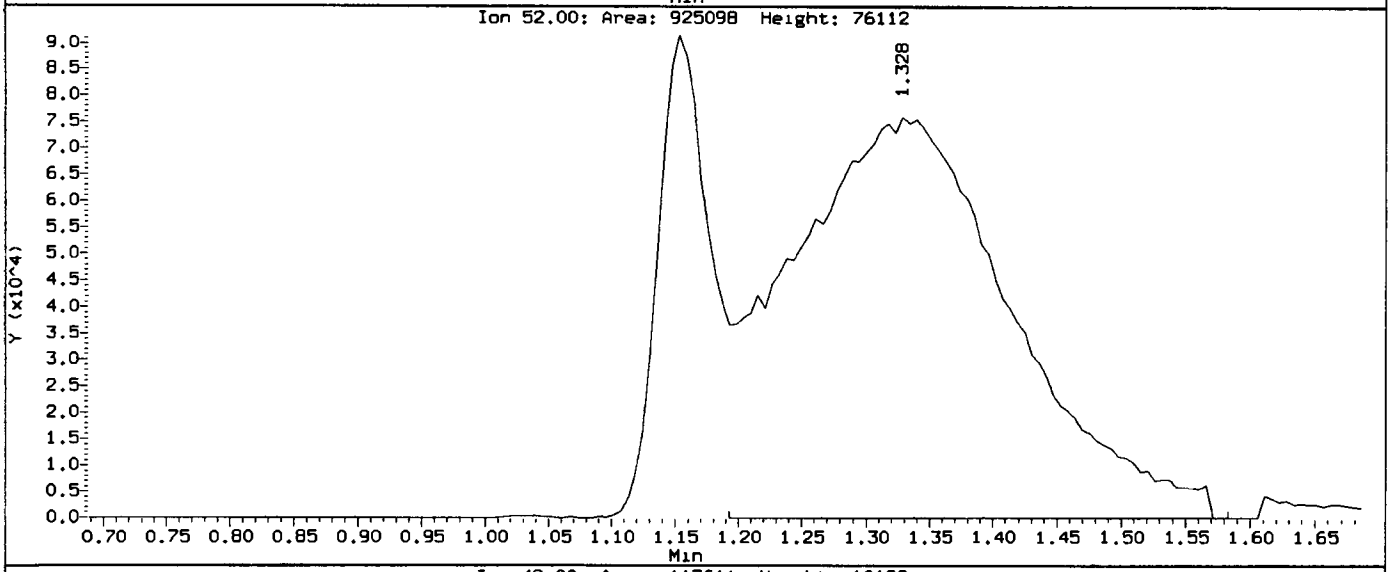
Operator: PC
Column diameter: 0.18

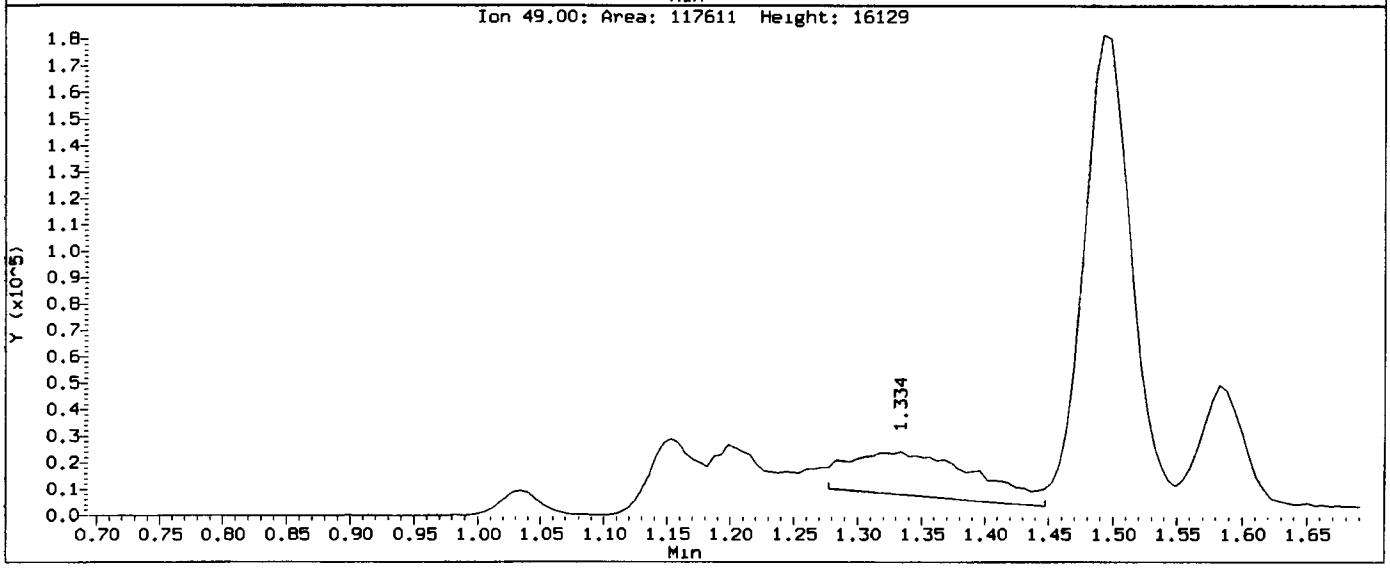


Data File: /chem1/nt5.i/16APR13.b/1500416.d
Injection Date: 16-APR-2013 16:34
Instrument: nt5.i
Client Sample ID:

Compound: Chloromethane
CAS Number:

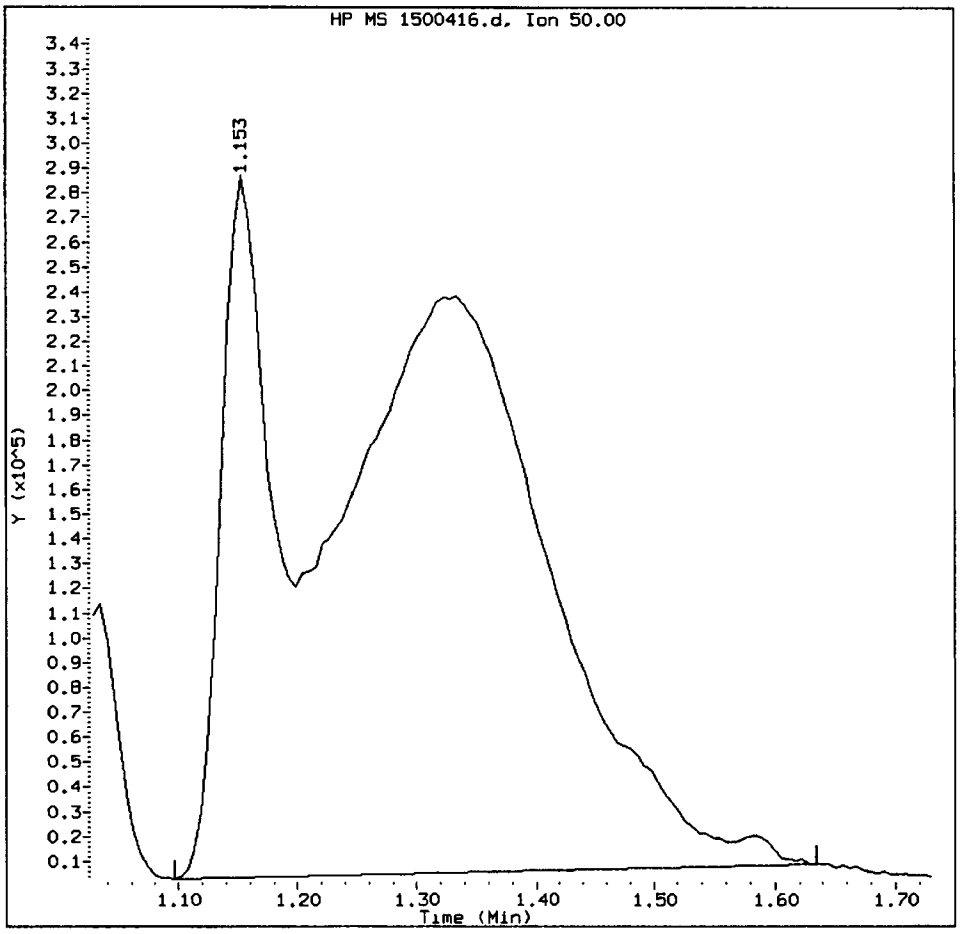






IC150, /chem1/nt5.i/16APR13.b/1500416.d

Chloromethane Amount: 157.24 Area: 3607686



MANUAL INTEGRATION for Chloromethane

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

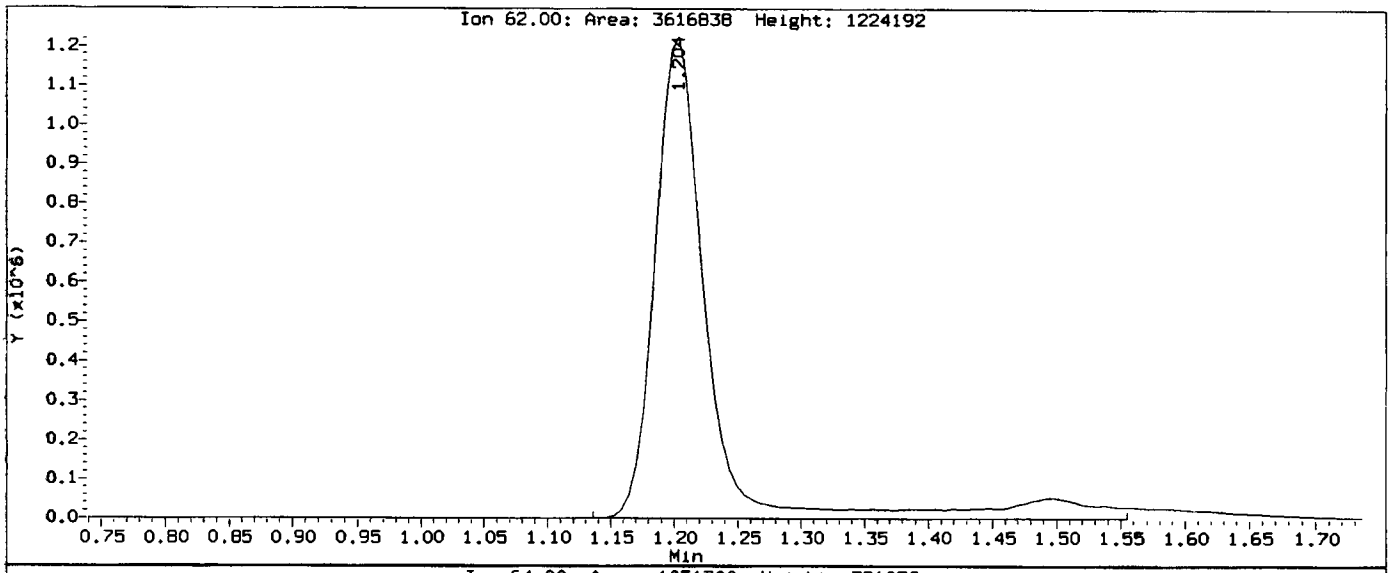
5. Other _____

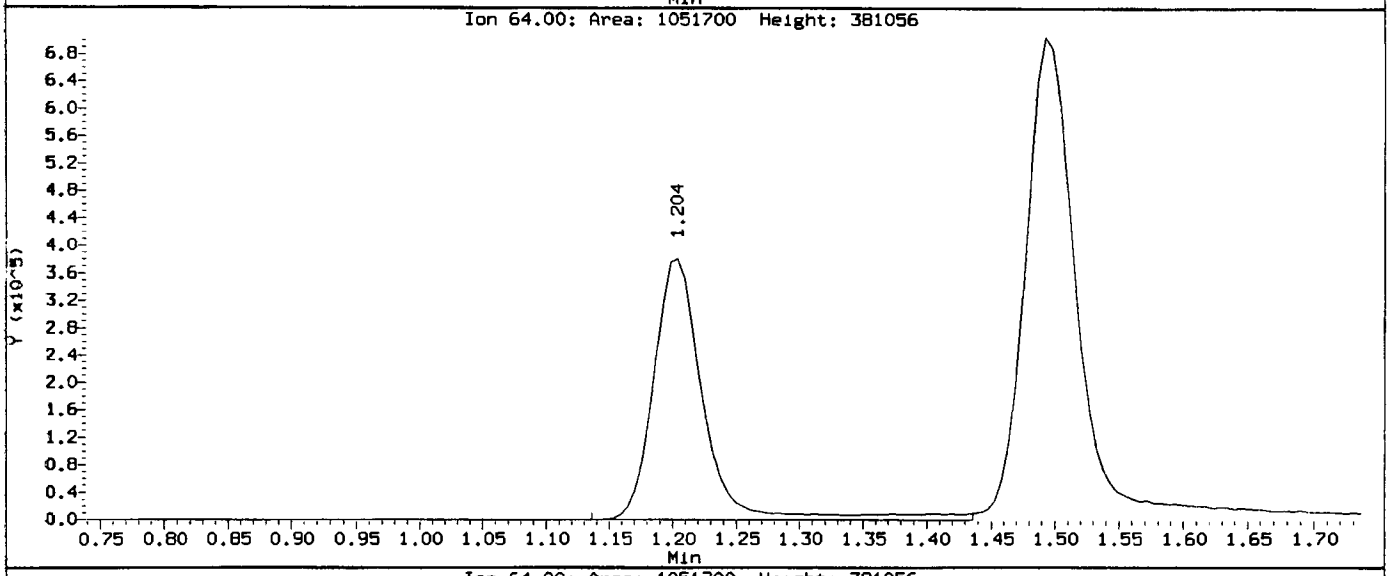
Analyst: PL Date: 4/17/13

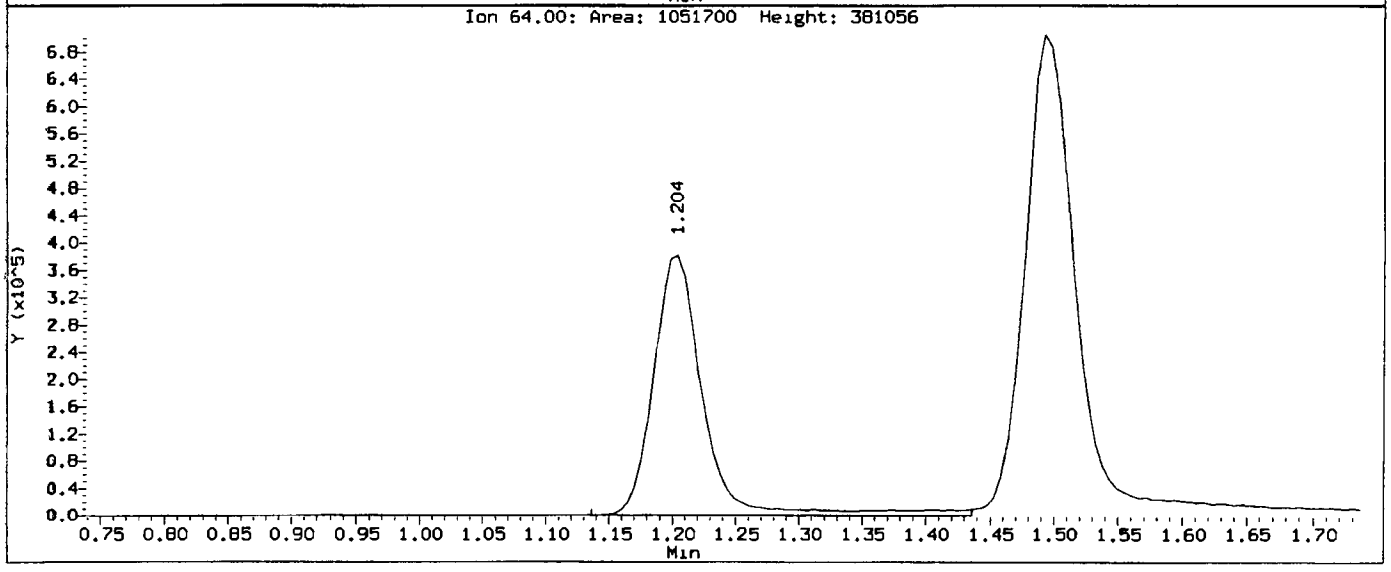
Data File: /chem1/nt5.i/16APR13.b/1500416.d
Injection Date: 16-APR-2013 16:34
Instrument: nt5.i
Client Sample ID:

Compound: Vinyl Chloride
CAS Number:

RG 4/17/13



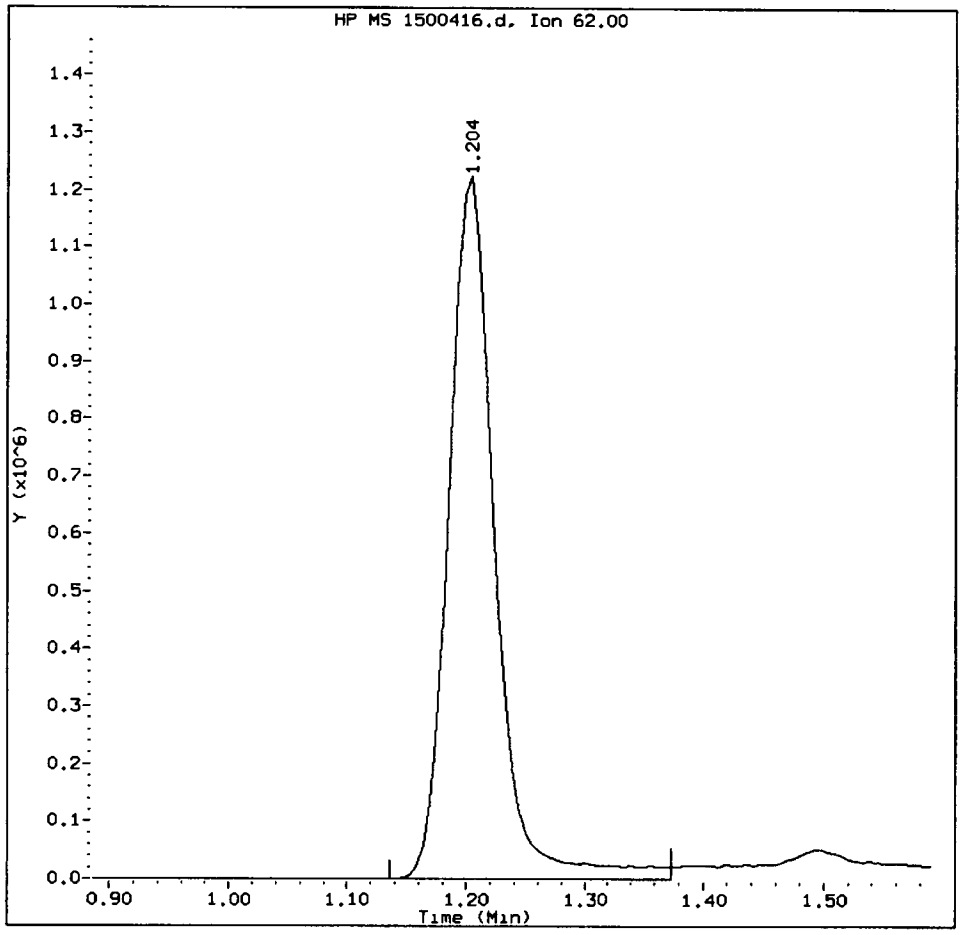




WLS7 · 00395

IC150, /chem1/nt5.i/16APR13.b/1500416.d

Vinyl Chloride Amount: 157.53 Area: 3276172



MANUAL INTEGRATION for Vinyl Chloride

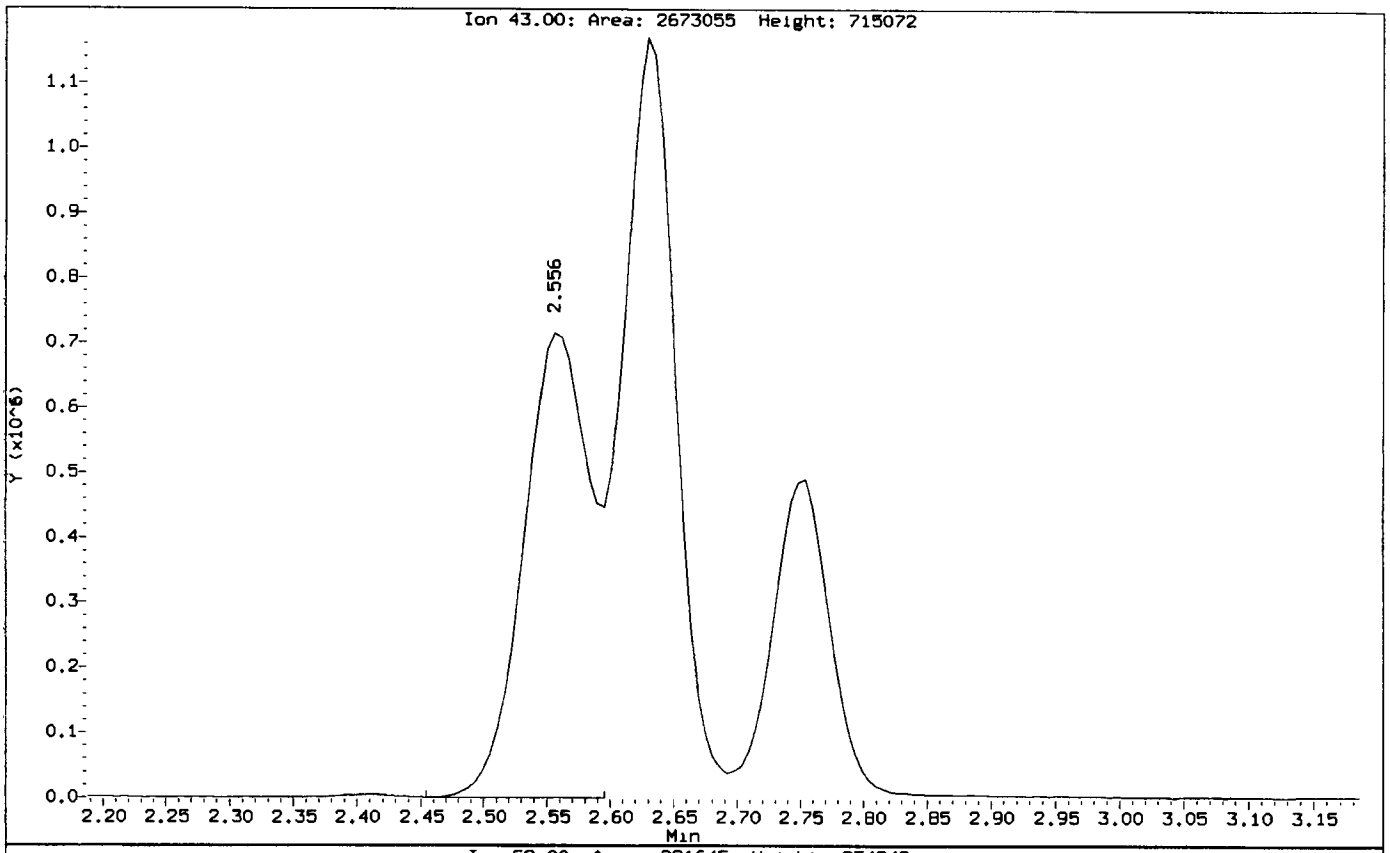
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

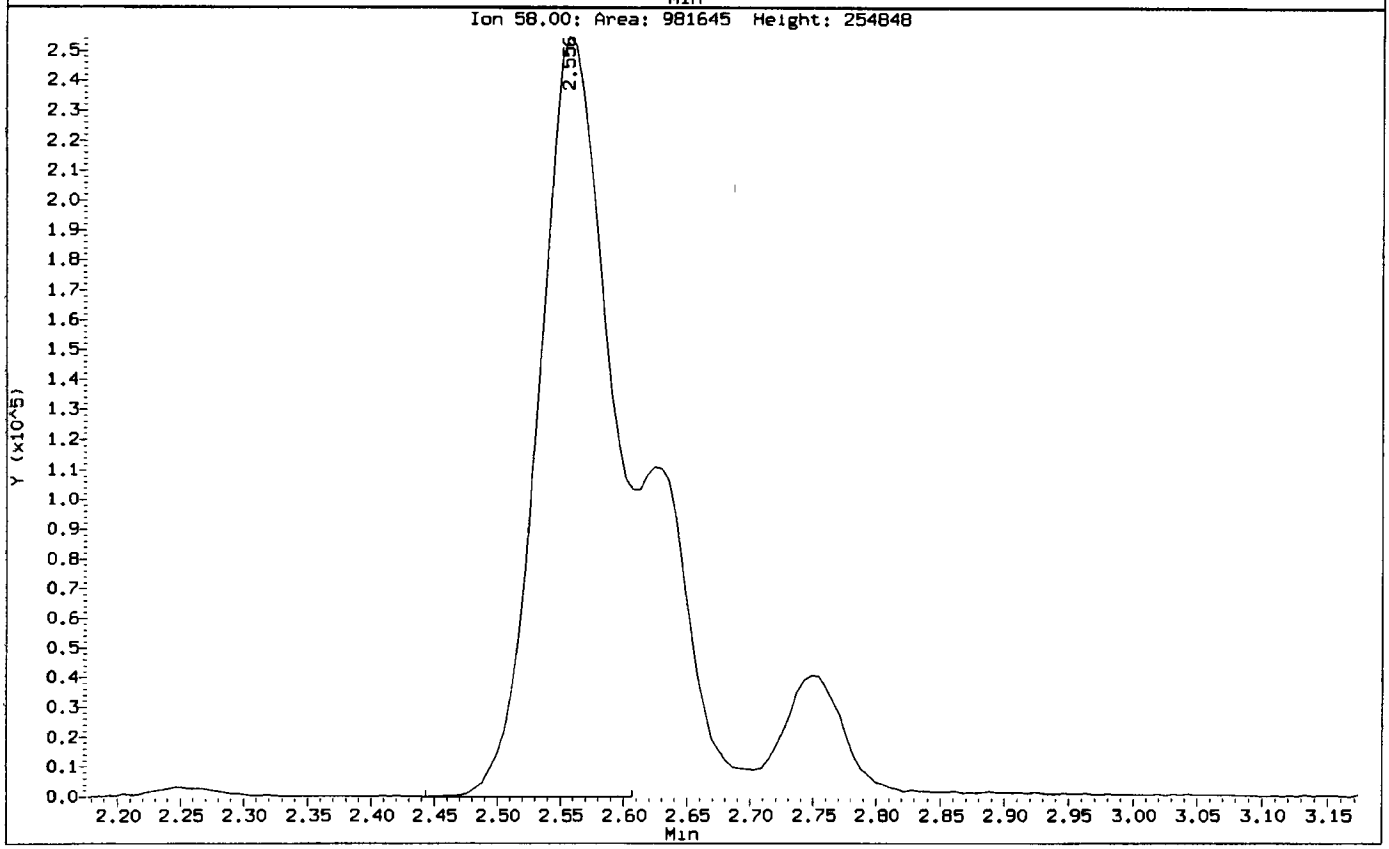
5. Other _____

Analyst: VC Date: 4/17/13

Data File: /chem1/nt5.1/16APR13.b/1500416.d
Injection Date: 16-APR-2013 16:34
Instrument: nt5.1
Client Sample ID:

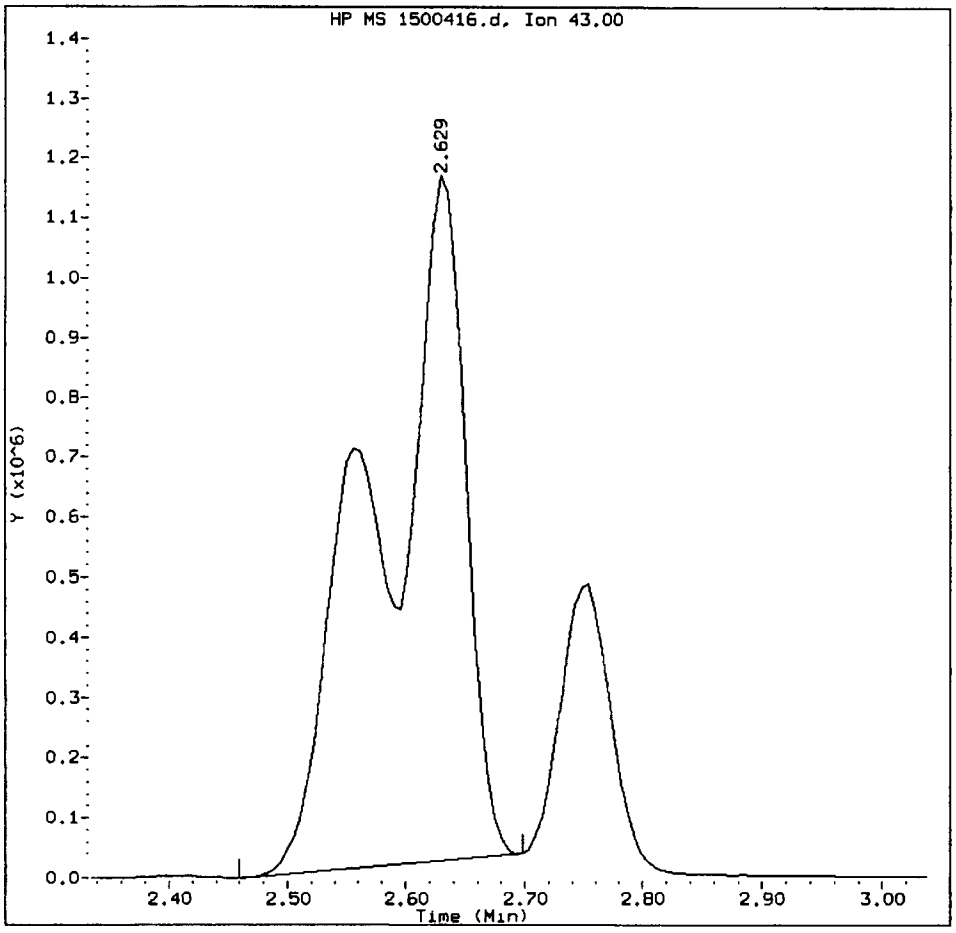
Compound: Acetone
CAS Number:





IC150, /chem1/nt5.i/16APR13.b/1500416.d

Acetone Amount: 756.81 Area: 5714622



MANUAL INTEGRATION for Acetone

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

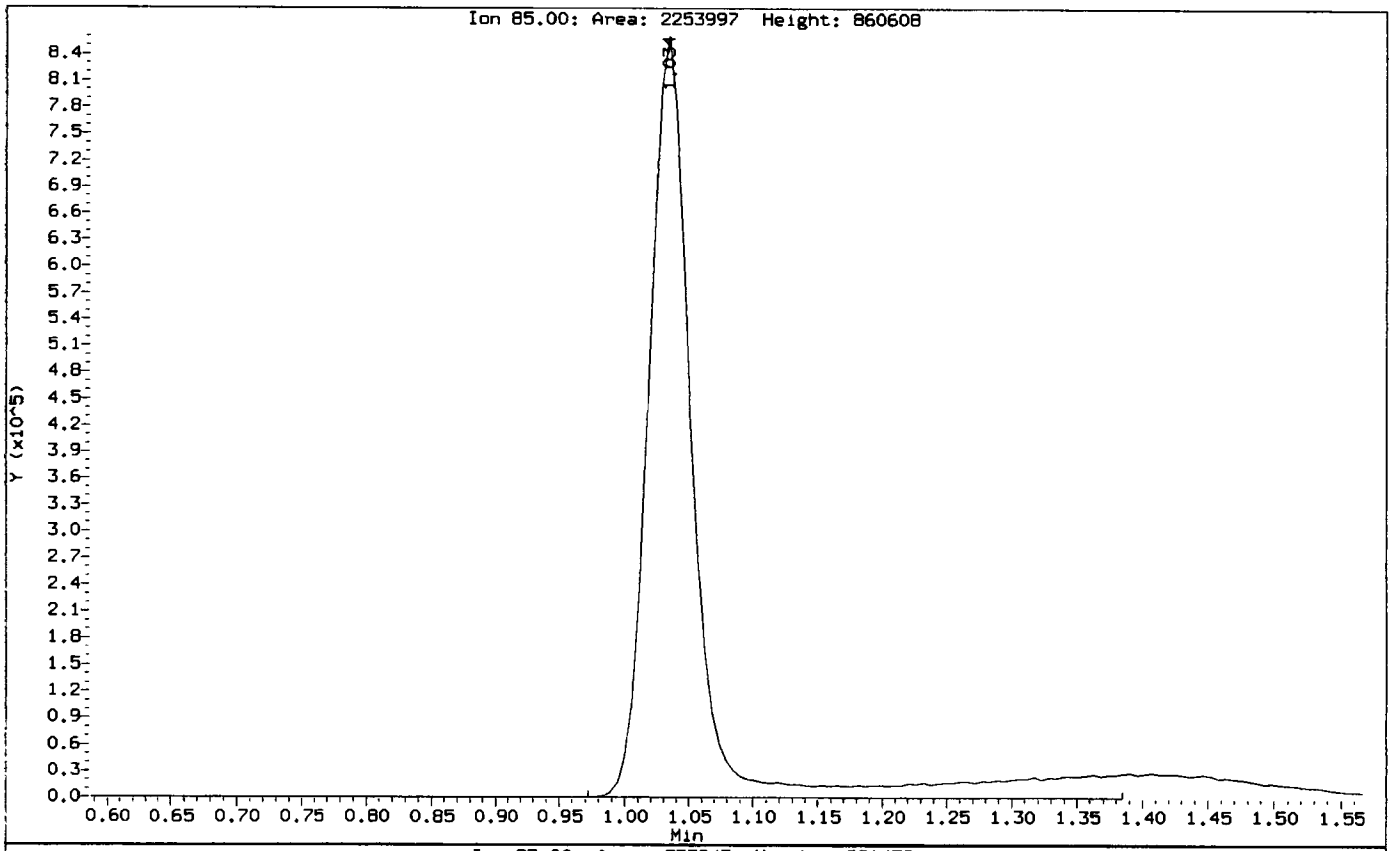
5. Other _____

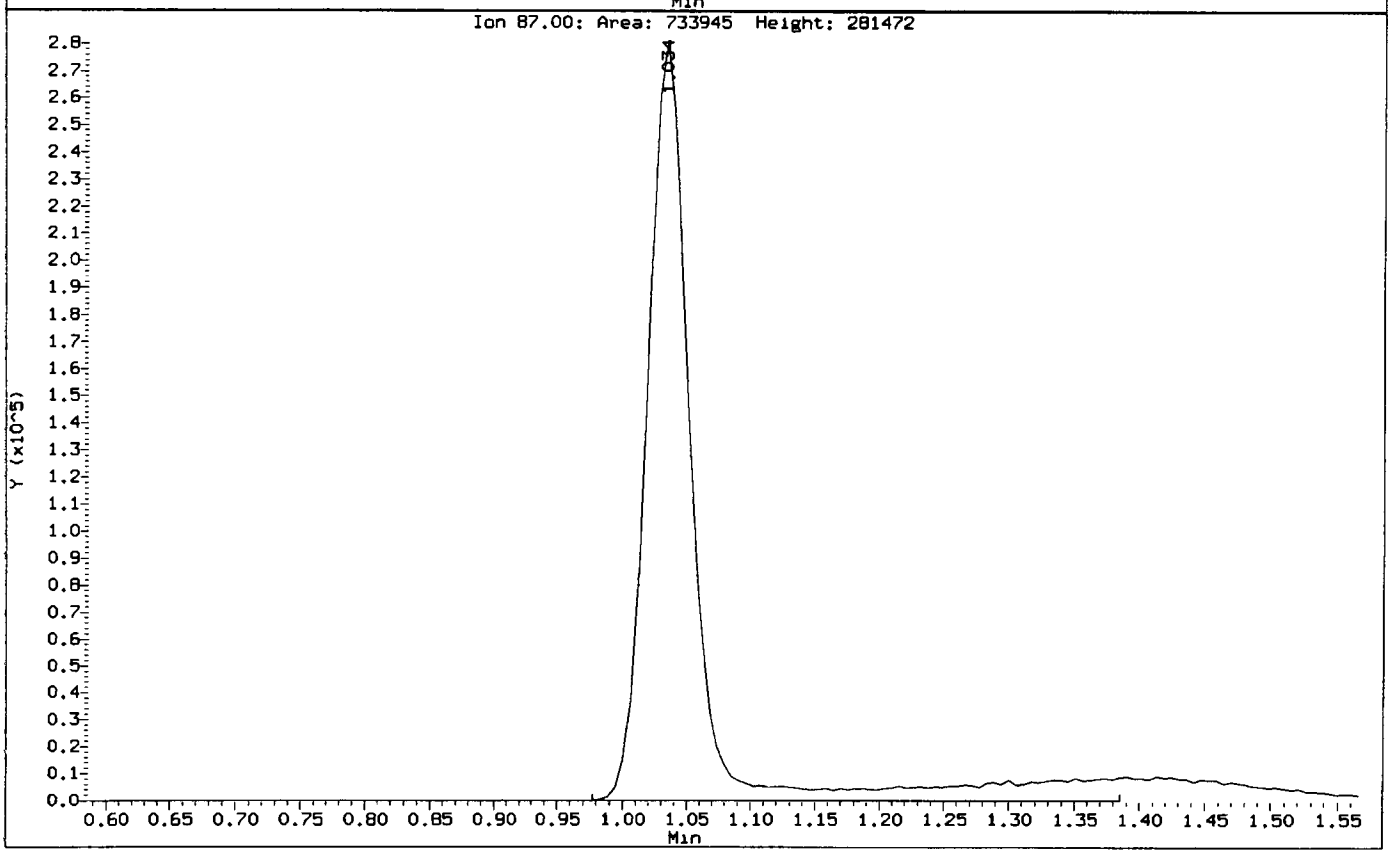
Analyst: MC Date: 4/17/13

Data File: /chem1/nt5.1/16APR13.b/1500416.d
Injection Date: 16-APR-2013 16:34
Instrument: nt5.1
Client Sample ID:

Compound: Dichlorodifluoromethane
CAS Number:

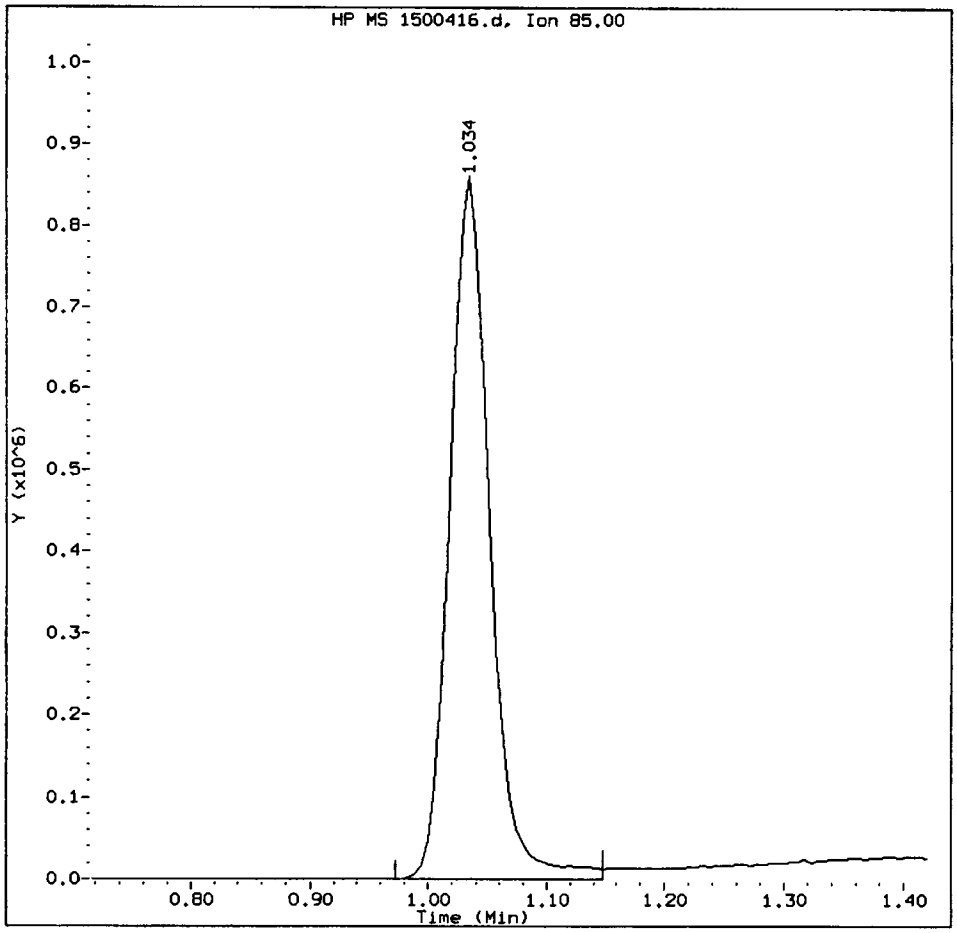
KC
4/17/13





IC150, /chem1/nt5.i/16APR13.b/1500416.d

Dichlorodifluoromethane Amount: 152.05 Area: 1989279



MANUAL INTEGRATION for Dichlorodifluoromethane

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

5. Other _____

Analyst: YI Date: 4/17/13

WL67:00109

CO-ELUTION SUMMARY FOR FILE - 1500416.d

Lab ID: IC150, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

MC 4/17/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/2000416.d
Lab Smp Id: IC200 Client Smp ID: 200
Inj Date : 16-APR-2013 16:10
Operator : PC Inst ID: nt5.i
Smp Info : IC200,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.068	1.068	(0.229)	2675580	200.000	204.99(M)
2 Chloromethane	50	1.385	1.379	(0.296)	4765276	200.000	208.19(M)
3 Vinyl Chloride	62	1.238	1.238	(0.265)	4497938	200.000	216.79
4 Bromomethane	94	1.447	1.447	(0.310)	1752768	200.000	173.83
5 Chloroethane	64	1.526	1.532	(0.327)	2391613	200.000	190.65
6 Trichlorofluoromethane	101	1.622	1.622	(0.347)	4759737	200.000	212.50
7 1,1-Dichloroethene	96	1.979	1.979	(0.424)	3203510	200.000	228.10
8 Carbon Disulfide	76	1.985	1.984	(0.425)	9818500	200.000	208.66
9 112Trichloro122Trifluoroethane	101	2.024	2.030	(0.433)	3026194	200.000	232.48
10 Iodomethane	142	2.081	2.081	(0.445)	3863444	200.000	228.02
11 Bromoethane	108	2.177	2.177	(0.466)	2157630	200.000	226.39
12 Acrolein	56	2.301	2.296	(0.493)	1763927	1000.00	760.39
13 Methylene Chloride	84	2.454	2.454	(0.525)	2784281	200.000	170.38
14 Acetone	43	2.680	2.686	(0.574)	5092210	1000.00	697.07
15 Trans-1,2-Dichloroethene	96	2.590	2.595	(0.554)	2924015	200.000	188.37

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.760	2.765	(0.591)	7071026	200.000	156.09
	17 1,1-Dichloroethane	63	3.195	3.206	(0.684)	4569975	200.000	140.35
	18 Acrylonitrile	53	3.337	3.325	(0.714)	863816	200.000	136.68
	19 Vinyl Acetate	43	3.546	3.546	(0.759)	7226767	200.000	195.51
	20 Cis-1,2-Dichloroethene	96	3.738	3.749	(0.800)	3621447	200.000	208.06
	22 2,2-Dichloropropane	77	3.834	3.846	(0.821)	5391007	200.000	215.74
	23 Bromochloromethane	128	3.925	3.930	(0.840)	1558938	200.000	206.51
	24 Chloroform	83	4.027	4.032	(0.862)	5910881	200.000	203.73
	25 Carbon Tetrachloride	117	4.112	4.117	(0.803)	4975693	200.000	217.67
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	894486	50.0000	50.642
	26 1,1,1-Trichloroethane	97	4.185	4.191	(0.896)	5741401	200.000	211.38
	28 1,1-Dichloropropene	75	4.304	4.309	(0.841)	5320283	200.000	209.42
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	4.536	4.536	(0.886)	11882848	200.000	173.54
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	1625129	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	985953	50.0000	49.123
	33 1,2-Dichloroethane	62	4.728	4.728	(0.924)	4468737	200.000	193.55
	34 Trichloroethene	95	5.068	5.067	(0.990)	3760765	200.000	215.07
*	35 1,4-Difluorobenzene	114	5.118	5.124	(1.000)	2841409	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.060)	1862143	200.000	204.21
	38 1,2-Dichloropropane	63	5.520	5.514	(1.078)	3989332	200.000	207.06
	39 Bromodichloromethane	83	5.594	5.588	(1.093)	4507750	200.000	202.89
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.125	(1.198)	2300261	200.000	214.03
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.199)	5645200	200.000	202.81
$	42 d8-Toluene	98	6.295	6.295	(1.230)	3593400	50.0000	49.810
	43 Toluene	92	6.340	6.335	(1.239)	8033057	200.000	174.32
	44 Tetrachloroethene	166	6.651	6.646	(0.875)	3985029	200.000	215.65
	45 4-Methyl-2-Pentanone	58	6.719	6.702	(1.313)	6535755	1000.00	935.98
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.309)	5020923	200.000	199.48
	47 1,1,2-Trichloroethane	97	6.832	6.827	(1.335)	2754456	200.000	202.46
	48 Chlorodibromomethane	129	6.968	6.963	(0.917)	3216350	200.000	203.91
	49 1,3-Dichloropropane	76	7.053	7.047	(0.928)	4813029	200.000	193.44
	50 1,2-Dibromoethane	107	7.149	7.138	(1.397)	2625775	200.000	197.77
	51 2-Hexanone	43	7.426	7.409	(0.977)	10311708	1000.00	890.17
*	52 d5-Chlorobenzene	117	7.602	7.596	(1.000)	2754294	50.0000	
	53 Chlorobenzene	112	7.619	7.607	(1.002)	7981568	200.000	174.11
	54 Ethyl Benzene	91	7.675	7.658	(1.010)	11802439	200.000	152.18
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.675	(1.012)	3348062	200.000	202.74
	56 m,p-xylene	106	7.811	7.794	(1.028)	9819361	400.000	330.61
	57 o-Xylene	106	8.168	8.156	(1.074)	5994299	200.000	200.97
	58 Styrene	104	8.213	8.201	(1.080)	8322454	200.000	170.59
	59 Bromoform	173	8.207	8.196	(0.848)	2147995	200.000	202.79
	60 Isopropyl Benzene	105	8.450	8.439	(0.873)	10972499	200.000	157.00
$	62 4-Bromofluorobenzene	95	8.671	8.660	(1.141)	1442705	50.0000	48.924
	63 Bromobenzene	156	8.750	8.739	(0.904)	3779632	200.000	201.89
	64 N-Propyl Benzene	91	8.824	8.807	(0.911)	12113698	200.000	147.52
	65 1,1,2,2-Tetrachloroethane	83	8.886	8.869	(0.918)	3360558	200.000	199.32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	66 2-Chloro Toluene	91	8.931	8.920	(0.922)	9089315	200.000	172.52
	67 1,3,5-Trimethyl Benzene	105	9.022	8.999	(0.932)	10154295	200.000	169.59
	68 1,2,3-Trichloropropane	110	8.982	8.965	(0.928)	1019289	200.000	200.78
	69 Trans-1,4-Dichloro 2-Butene	53	9.044	9.022	(0.934)	1369337	200.000	197.45
	70 4-Chloro Toluene	91	9.090	9.073	(0.939)	9391331	200.000	169.80
	71 T-Butyl Benzene	119	9.288	9.271	(0.959)	9321001	200.000	175.26
	72 1,2,4-Trimethylbenzene	105	9.355	9.338	(0.966)	9752575	200.000	164.99
	73 S-Butyl Benzene	105	9.452	9.435	(0.976)	11533677	200.000	152.38
	74 4-Isopropyl Toluene	119	9.604	9.582	(0.992)	10039361	200.000	159.45
	75 1,3-Dichlorobenzene	146	9.616	9.593	(0.993)	6320746	200.000	179.67
*	76 d4-1,4-Dichlorobenzene	152	9.684	9.667	(1.000)	1431016	50.0000	
	77 1,4-Dichlorobenzene	146	9.701	9.684	(1.002)	6641616	200.000	179.47
	78 N-Butyl Benzene	91	9.989	9.966	(1.032)	10056321	200.000	164.81
$	79 d4-1,2-Dichlorobenzene	152	10.068	10.051	(1.040)	1289659	50.0000	49.424
	80 1,2-Dichlorobenzene	146	10.074	10.057	(1.040)	6232548	200.000	180.07
	81 1,2-Dibromo 3-Chloropropane	75	10.821	10.809	(1.117)	625725	200.000	190.59
	82 Hexachloro 1,3-Butadiene	225	11.516	11.488	(1.189)	3134910	200.000	205.71
	83 1,2,4-Trichlorobenzene	180	11.505	11.477	(1.188)	5119117	200.000	198.35
	84 Naphthalene	128	11.816	11.788	(1.220)	8673182	200.000	220.30
	85 1,2,3-Trichlorobenzene	180	12.003	11.969	(1.240)	4616055	200.000	191.46

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: 2000416.d
Lab Smp Id: IC200
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: 200
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	1616720	808360	3233440	1625129	0.52
35 1,4-Difluorobenze	2842987	1421494	5685974	2841409	-0.06
52 d5-Chlorobenzene	2779083	1389542	5558166	2754294	-0.89
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1431016	-6.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.18

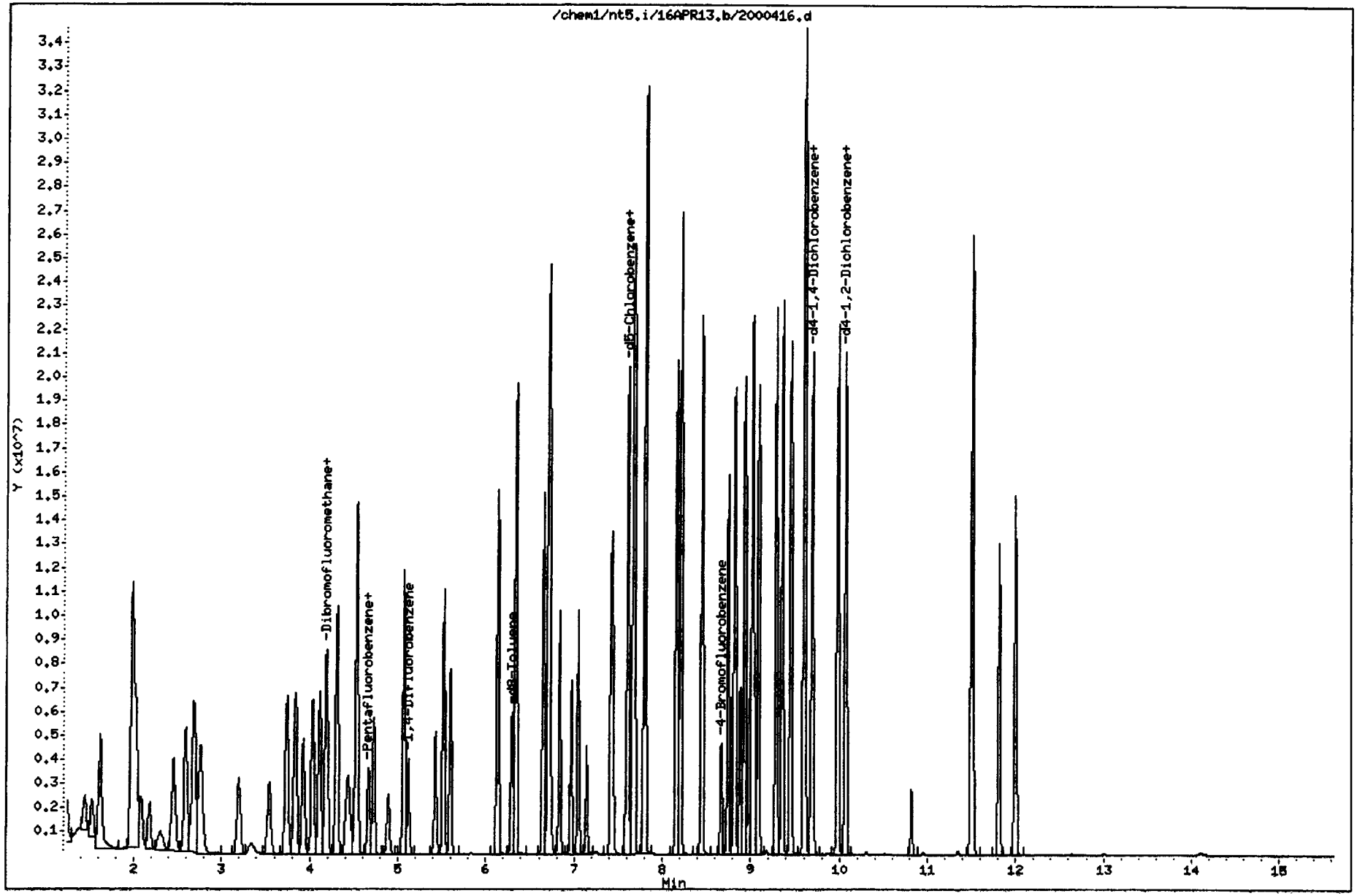
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/16APR13.b/2000416.d
Date : 16-APR-2013 16:10
Client ID: 200
Sample Info: IC200,5,5,0,

Instrument: nt5.i

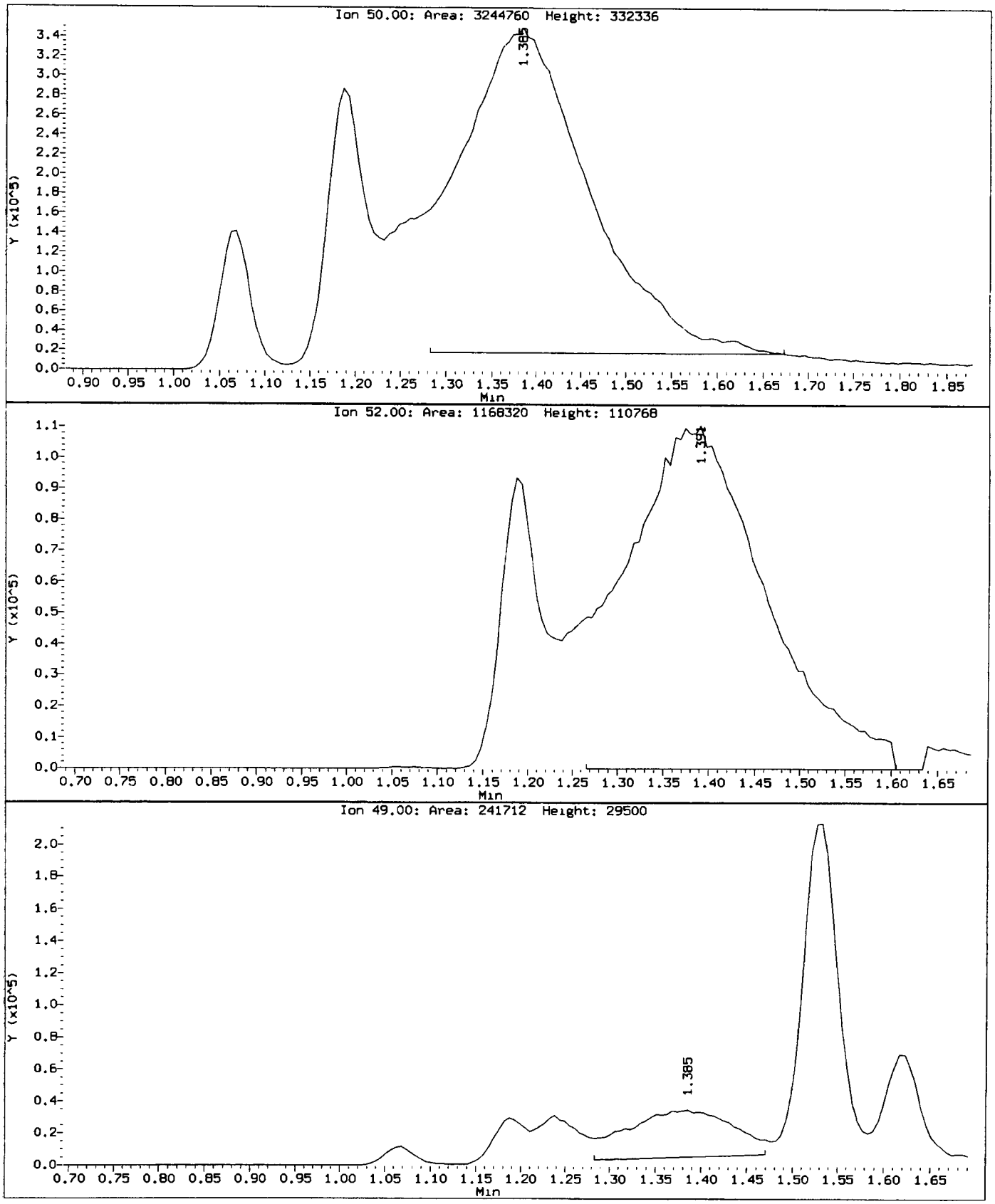
Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



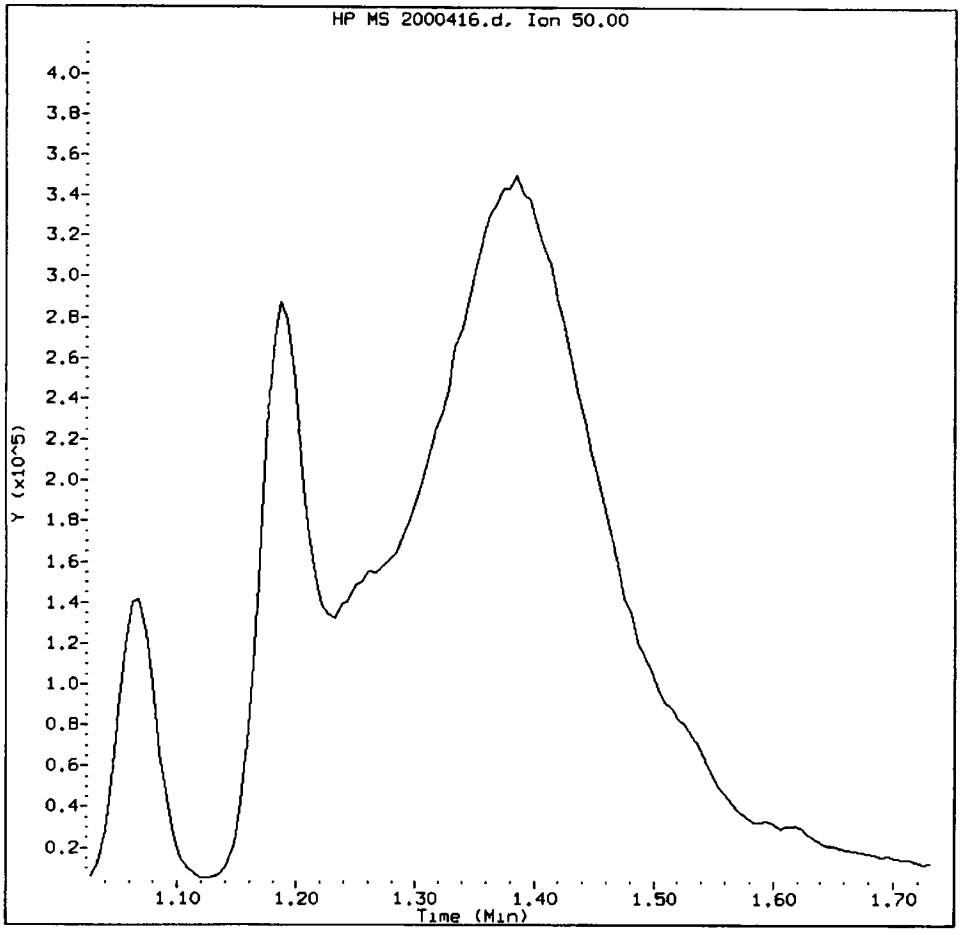
Data File: /chem1/nt5.1/16APR13.b/2000416.d
Injection Date: 16-APR-2013 16:10
Instrument: nt5.1
Client Sample ID:

Compound: Chloromethane
CAS Number:



IC200, /chem1/nt5.i/16APR13.b/2000416.d

Chloromethane Amount: 208.19 Area: 4765276



MANUAL INTEGRATION for Chloromethane

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

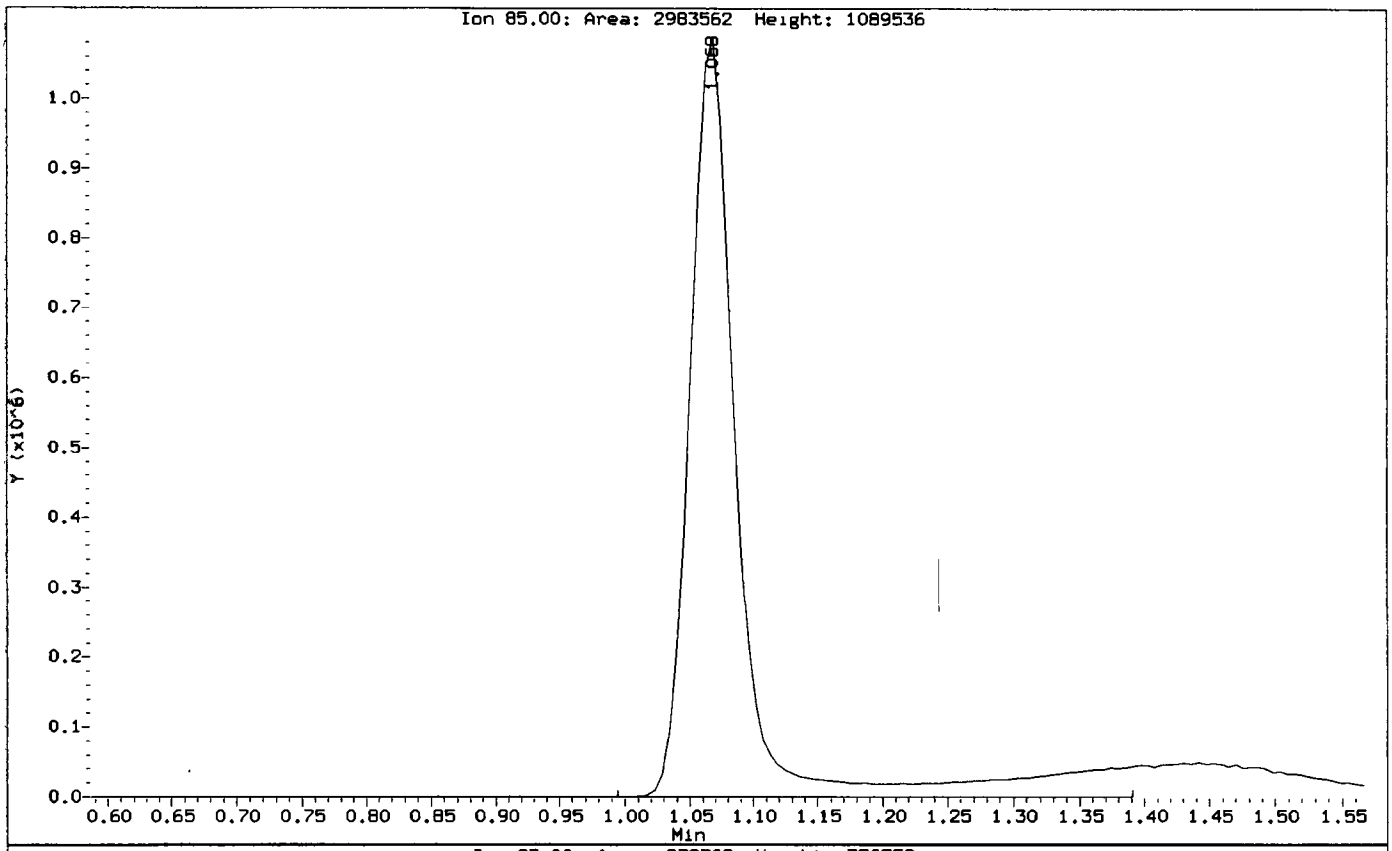
5. Other _____

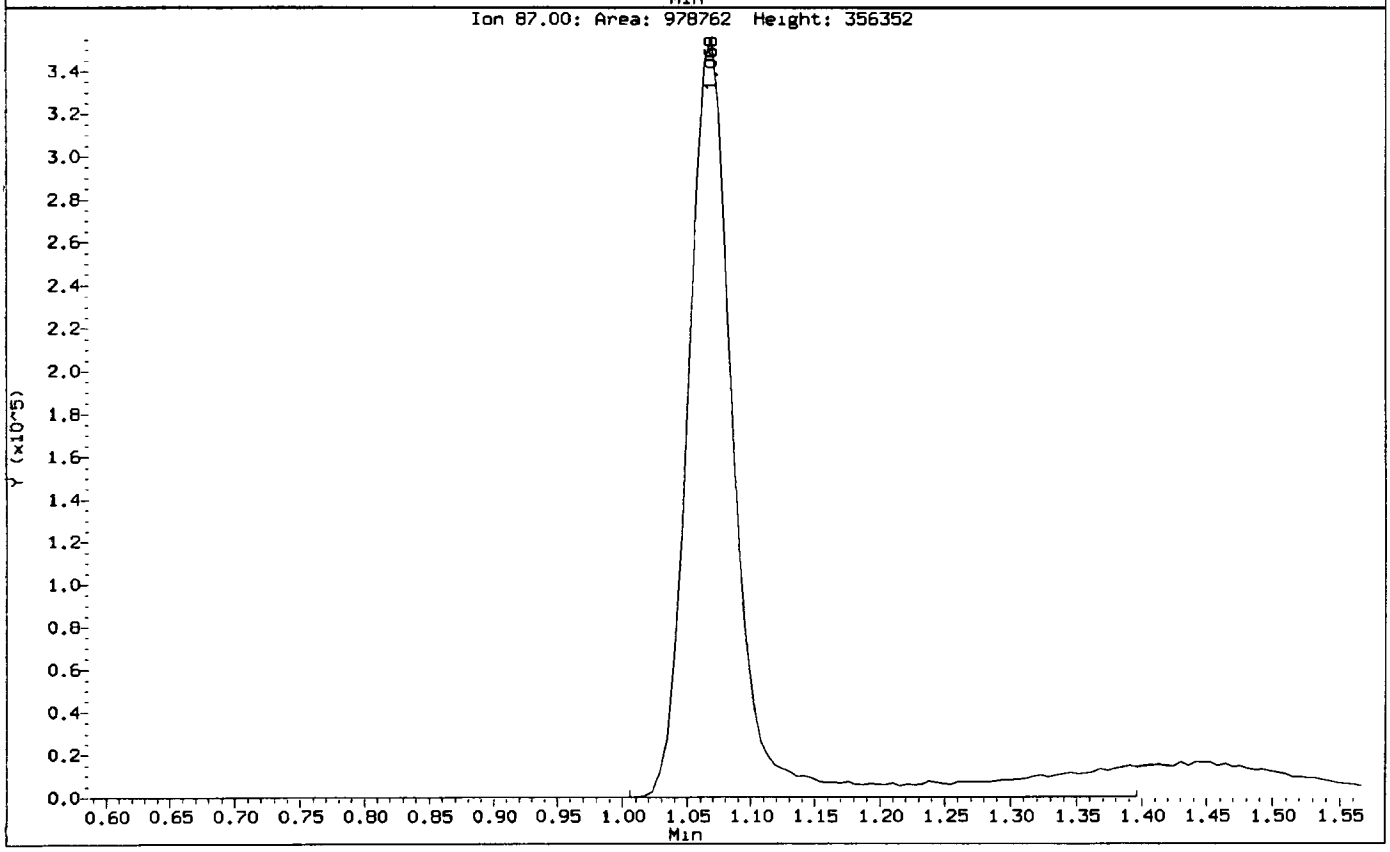
Analyst: TC Date: 4/17/13

Data File: /chem1/nt5.1/16APR13.b/2000416.d
Injection Date: 16-APR-2013 16:10
Instrument: nt5.1
Client Sample ID:

Compound: Dichlorodifluoromethane
CAS Number:

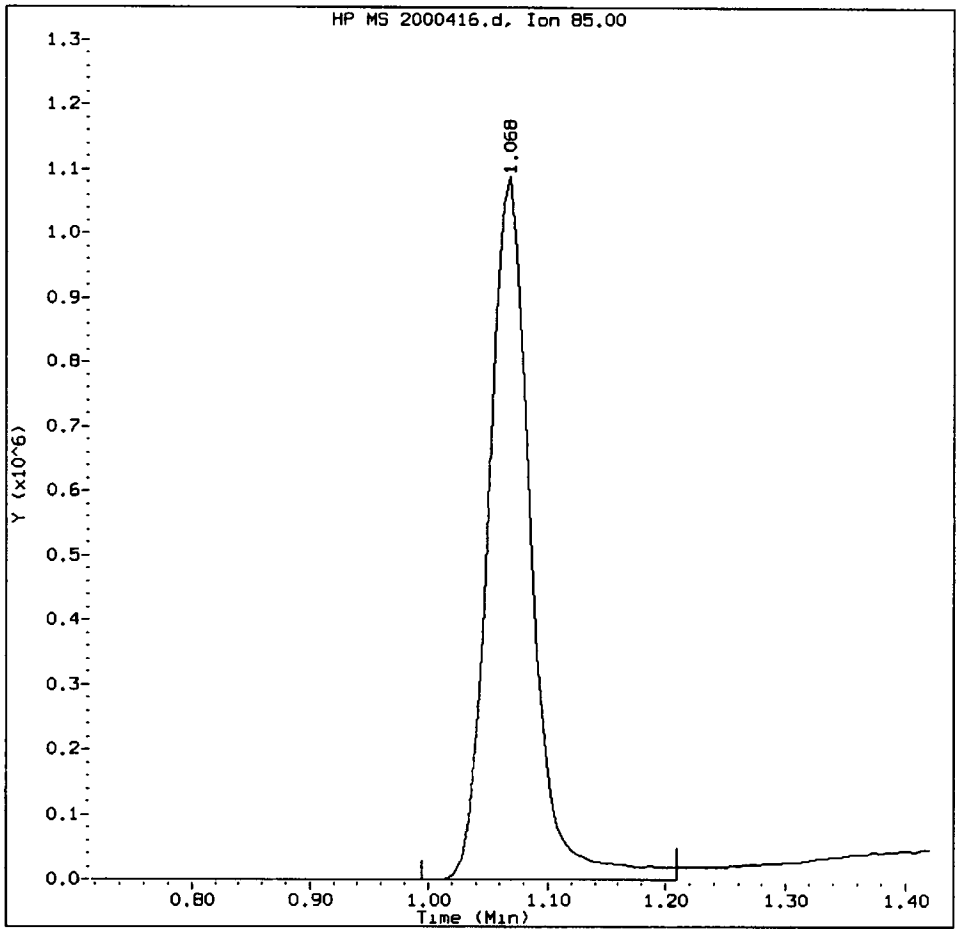
RC
4/17/13





IC200, /chem1/nt5.i/16APR13.b/2000416.d

Dichlorodifluoromethane Amount: 204.99 Area: 2675580



MANUAL INTEGRATION for Dichlorodifluoromethane

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

5. Other _____

Analyst: VL Date: 4/17/13

WLC7 : 09\13

CO-ELUTION SUMMARY FOR FILE - 2000416.d

Lab ID: IC200, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/16APR13.b/icv0416.d
Lab Smp Id: ICV050 Client Smp ID: ICV050
Inj Date : 16-APR-2013 19:21
Operator : PC Inst ID: nt5.i
Smp Info : ICV050,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/16APR13.b/VO121012S.m
Meth Date : 17-Apr-2013 12:40 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.068	(0.226)	736601	59.0507	59.051(M)
2 Chloromethane	50	1.362	1.379	(0.292)	1007243	46.0449	46.045(M)
3 Vinyl Chloride	62	1.227	1.238	(0.263)	1028824	51.8846	51.885(M)
4 Bromomethane	94	1.430	1.447	(0.306)	480420	49.8540	49.854
5 Chloroethane	64	1.521	1.532	(0.326)	581523	48.5065	48.507
6 Trichlorofluoromethane	101	1.611	1.622	(0.345)	1053369	49.2086	49.209
7 1,1-Dichloroethene	96	1.968	1.979	(0.422)	665497	49.5816	49.582
8 Carbon Disulfide	76	1.973	1.984	(0.423)	1826510	40.6161	40.616
9 112Trichloro122Trifluoroethane	101	2.013	2.030	(0.431)	559713	44.9922	44.992
10 Iodomethane	142	2.069	2.081	(0.444)	615910	38.0351	38.035(R)
11 Bromoethane	108	2.166	2.177	(0.464)	387925	42.5892	42.589
12 Acrolein	56	2.279	2.296	(0.488)	82785	37.3410	37.341(R)
13 Methylene Chloride	84	2.437	2.454	(0.522)	625106	51.9143	51.914
14 Acetone	43	2.669	2.686	(0.572)	1054628	181.007	181.01(R)
15 Trans-1,2-Dichloroethene	96	2.579	2.595	(0.553)	666906	44.9540	44.954

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	16 Methyl tert butyl ether	73	2.754	2.765	(0.590)	2062135	47.6321	47.632
	17 1,1-Dichloroethane	63	3.189	3.206	(0.684)	1427726	45.8797	45.880
	18 Acrylonitrile	53	3.314	3.325	(0.710)	265728	43.9934	43.993
	19 Vinyl Acetate	43	3.535	3.546	(0.758)	859089	24.3189	24.319(R)
	20 Cis-1,2-Dichloroethene	96	3.738	3.749	(0.801)	813671	48.9130	48.913
	22 2,2-Dichloropropane	77	3.834	3.846	(0.822)	1061928	44.4661	44.466
	23 Bromochloromethane	128	3.925	3.930	(0.841)	653936	90.6424	90.642
	24 Chloroform	83	4.021	4.032	(0.862)	1289114	46.4924	46.492
	25 Carbon Tetrachloride	117	4.112	4.117	(0.803)	1002616	45.3902	45.390
$	27 Dibromofluoromethane	111	4.191	4.196	(0.898)	853221	50.5445	50.545
	26 1,1,1-Trichloroethane	97	4.179	4.191	(0.896)	1190024	45.8443	45.844
	28 1,1-Dichloropropene	75	4.298	4.309	(0.840)	1053898	42.9313	42.931
	29 2-Butanone	72	4.394	4.400	(0.942)	76382	43.6328	43.633
	30 Benzene	78	4.530	4.536	(0.885)	3135014	47.3810	47.381
*	31 Pentafluorobenzene	168	4.666	4.672	(1.000)	1553140	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.666	(0.999)	968344	50.4817	50.482
	33 1,2-Dichloroethane	62	4.723	4.728	(0.923)	1020012	45.7205	45.720
	34 Trichloroethene	95	5.062	5.067	(0.989)	765045	45.2783	45.278
*	35 1,4-Difluorobenzene	114	5.118	5.124	(1.000)	2745632	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.059)	406088	46.0871	46.087
	38 1,2-Dichloropropane	63	5.509	5.514	(1.076)	863593	46.3867	46.387
	39 Bromodichloromethane	83	5.588	5.588	(1.092)	1107642	51.5928	51.593
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.196)	500688	48.2110	48.211
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.198)	1347238	50.0906	50.091
$	42 d8-Toluene	98	6.289	6.295	(1.229)	3513557	50.4017	50.402
	43 Toluene	92	6.329	6.335	(1.236)	2007874	45.0911	45.091(Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	770936	42.7812	42.781
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	332559	49.2869	49.287(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	1135717	46.6947	46.695(Q)
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.333)	619386	47.1157	47.116
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	785450	51.0626	51.063
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	1138692	46.9297	46.930
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	582478	45.4022	45.402
	51 2-Hexanone	43	7.410	7.409	(0.976)	557163	49.3226	49.323
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2685907	50.0000	
	53 Chlorobenzene	112	7.608	7.607	(1.002)	1941650	43.4347	43.435
	54 Ethyl Benzene	91	7.658	7.658	(1.009)	3647218	48.2249	48.225
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	744099	46.2068	46.207
	56 m,p-xylene	106	7.789	7.794	(1.026)	2683982	92.6694	92.669(Q)
	57 o-Xylene	106	8.151	8.156	(1.074)	1271979	43.7305	43.731(Q)
	58 Styrene	104	8.201	8.201	(1.080)	2323841	48.8462	48.846
	59 Bromoform	173	8.190	8.196	(0.847)	515279	47.4186	47.419
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3200545	44.6379	44.638
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1450165	50.4294	50.429
	63 Bromobenzene	156	8.739	8.739	(0.904)	849511	44.2303	44.230
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	3751808	44.5355	44.535
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	790196	45.6847	45.685

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	66 2-Chloro Toluene	91	8.914	8.920	(0.922)	2376314	43.9637	43.964
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	2966384	48.2927	48.293
	68 1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	235836	45.2829	45.283
	69 Trans-1,4-Dichloro 2-Butene	53	9.022	9.022	(0.933)	242178	34.0385	34.039(R)
	70 4-Chloro Toluene	91	9.067	9.073	(0.938)	2386465	42.0597	42.060
	71 T-Butyl Benzene	119	9.271	9.271	(0.959)	2424126	44.4279	44.428
	72 1,2,4-Trimethylbenzene	105	9.339	9.338	(0.966)	2939872	48.4789	48.479
	73 S-Butyl Benzene	105	9.435	9.435	(0.976)	3470549	44.6949	44.695
	74 4-Isopropyl Toluene	119	9.582	9.582	(0.991)	2950117	45.6708	45.671
	75 1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1499837	41.5561	41.556
*	76 d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1468092	50.0000	(Q)
	77 1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	1629211	42.9129	42.913
	78 N-Butyl Benzene	91	9.966	9.966	(1.031)	2892885	46.2125	46.213
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1345994	50.2800	50.280(Q)
	80 1,2-Dichlorobenzene	146	10.057	10.057	(1.040)	1461651	41.1623	41.162
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	148424	44.0672	44.067
	82 Hexachloro 1,3-Butadiene	225	11.482	11.488	(1.188)	644402	41.2162	41.216
	83 1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	1088971	41.1281	41.128
	84 Naphthalene	128	11.782	11.788	(1.219)	2477632	43.4286	43.429
	85 1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	1021454	41.2974	41.297

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: icv0416.d
Lab Smp Id: ICV050
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 16-APR-2013
Calibration Time: 17:22
Client Smp ID: ICV050
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	1616720	808360	3233440	1553140	-3.93
35 1,4-Difluorobenze	2842987	1421494	5685974	2745632	-3.42
52 d5-Chlorobenzene	2779083	1389542	5558166	2685907	-3.35
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1468092	-4.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Client SDG: 16APR13
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: ICV050
Client Smp ID: ICV050
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: LCS
SpikeList File: icv.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/16APR13.b/VO121012S.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	59.051	118.10	80-120
2 Chloromethane	50.000	46.045	92.09	80-120
3 Vinyl Chloride	50.000	51.885	103.77	80-120
4 Bromomethane	50.000	49.854	99.71	80-120
5 Chloroethane	50.000	48.507	97.01	80-120
6 Trichlorofluoromet	50.000	49.209	98.42	80-120
12 Acrolein	50.000	37.341	74.68*	80-120
9 112Trichloro122Tri	50.000	44.992	89.98	80-120
14 Acetone	50.000	181.01	362.01*	80-120
7 1,1-Dichloroethene	50.000	49.582	99.16	80-120
11 Bromoethane	50.000	42.589	85.18	80-120
10 Iodomethane	50.000	38.035	76.07*	80-120
13 Methylene Chloride	50.000	51.914	103.83	80-120
8 Carbon Disulfide	50.000	40.616	81.23	80-120
18 Acrylonitrile	50.000	43.993	87.99	80-120
15 Trans-1,2-Dichloro	50.000	44.954	89.91	80-120
16 Methyl tert butyl	50.000	47.632	95.26	80-120
19 Vinyl Acetate	50.000	24.319	48.64*	80-120
17 1,1-Dichloroethane	50.000	45.880	91.76	80-120
29 2-Butanone	50.000	43.633	87.27	80-120
22 2,2-Dichloropropan	50.000	44.466	88.93	80-120
20 Cis-1,2-Dichloroet	50.000	48.913	97.83	80-120
24 Chloroform	50.000	46.492	92.98	80-120
23 Bromochloromethane	100.00	90.642	90.64	80-120
26 1,1,1-Trichloroeth	50.000	45.844	91.69	80-120
28 1,1-Dichloropropen	50.000	42.931	85.86	80-120
25 Carbon Tetrachlori	50.000	45.390	90.78	80-120
33 1,2-Dichloroethane	50.000	45.720	91.44	80-120
30 Benzene	50.000	47.381	94.76	80-120
34 Trichloroethene	50.000	45.278	90.56	80-120
38 1,2-Dichloropropan	50.000	46.387	92.77	80-120
39 Bromodichlorometha	50.000	51.593	103.19	80-120
37 Dibromomethane	50.000	46.087	92.17	80-120

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
40 2-Chloroethyl Viny	50.000	48.211	96.42	80-120
45 4-Methyl-2-Pentano	50.000	49.287	98.57	80-120
41 Cis 1,3-dichloropr	50.000	50.091	100.18	80-120
43 Toluene	50.000	45.091	90.18	80-120
46 Trans 1,3-Dichloro	50.000	46.695	93.39	80-120
51 2-Hexanone	50.000	49.323	98.65	80-120
47 1,1,2-Trichloroeth	50.000	47.116	94.23	80-120
49 1,3-Dichloropropan	50.000	46.930	93.86	80-120
44 Tetrachloroethene	50.000	42.781	85.56	80-120
48 Chlorodibromometha	50.000	51.063	102.13	80-120
50 1,2-Dibromoethane	50.000	45.402	90.80	80-120
53 Chlorobenzene	50.000	43.435	86.87	80-120
55 1,1,1,2-Tetrachlor	50.000	46.207	92.41	80-120
54 Ethyl Benzene	50.000	48.225	96.45	80-120
56 m,p-xylene	100.00	92.669	92.67	80-120
57 o-Xylene	50.000	43.731	87.46	80-120
58 Styrene	50.000	48.846	97.69	80-120
60 Isopropyl Benzene	50.000	44.638	89.28	80-120
59 Bromoform	50.000	47.419	94.84	80-120
65 1,1,2,2-Tetrachlor	50.000	45.685	91.37	80-120
68 1,2,3-Trichloropro	50.000	45.283	90.57	80-120
69 Trans-1,4-Dichloro	50.000	34.039	68.08*	80-120
64 N-Propyl Benzene	50.000	44.535	89.07	80-120
63 Bromobenzene	50.000	44.230	88.46	80-120
67 1,3,5-Trimethyl Be	50.000	48.293	96.59	80-120
66 2-Chloro Toluene	50.000	43.964	87.93	80-120
70 4-Chloro Toluene	50.000	42.060	84.12	80-120
71 T-Butyl Benzene	50.000	44.428	88.86	80-120
72 1,2,4-Trimethylben	50.000	48.479	96.96	80-120
73 S-Butyl Benzene	50.000	44.695	89.39	80-120
74 4-Isopropyl Toluen	50.000	45.671	91.34	80-120
75 1,3-Dichlorobenzen	50.000	41.556	83.11	80-120
77 1,4-Dichlorobenzen	50.000	42.913	85.83	80-120
78 N-Butyl Benzene	50.000	46.213	92.43	80-120
80 1,2-Dichlorobenzen	50.000	41.162	82.32	80-120
81 1,2-Dibromo 3-Chlo	50.000	44.067	88.13	80-120
83 1,2,4-Trichloroben	50.000	41.128	82.26	80-120
82 Hexachloro 1,3-But	50.000	41.216	82.43	80-120
84 Naphthalene	50.000	43.429	86.86	80-120
85 1,2,3-Trichloroben	50.000	41.297	82.59	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	50.545	101.09	70-130

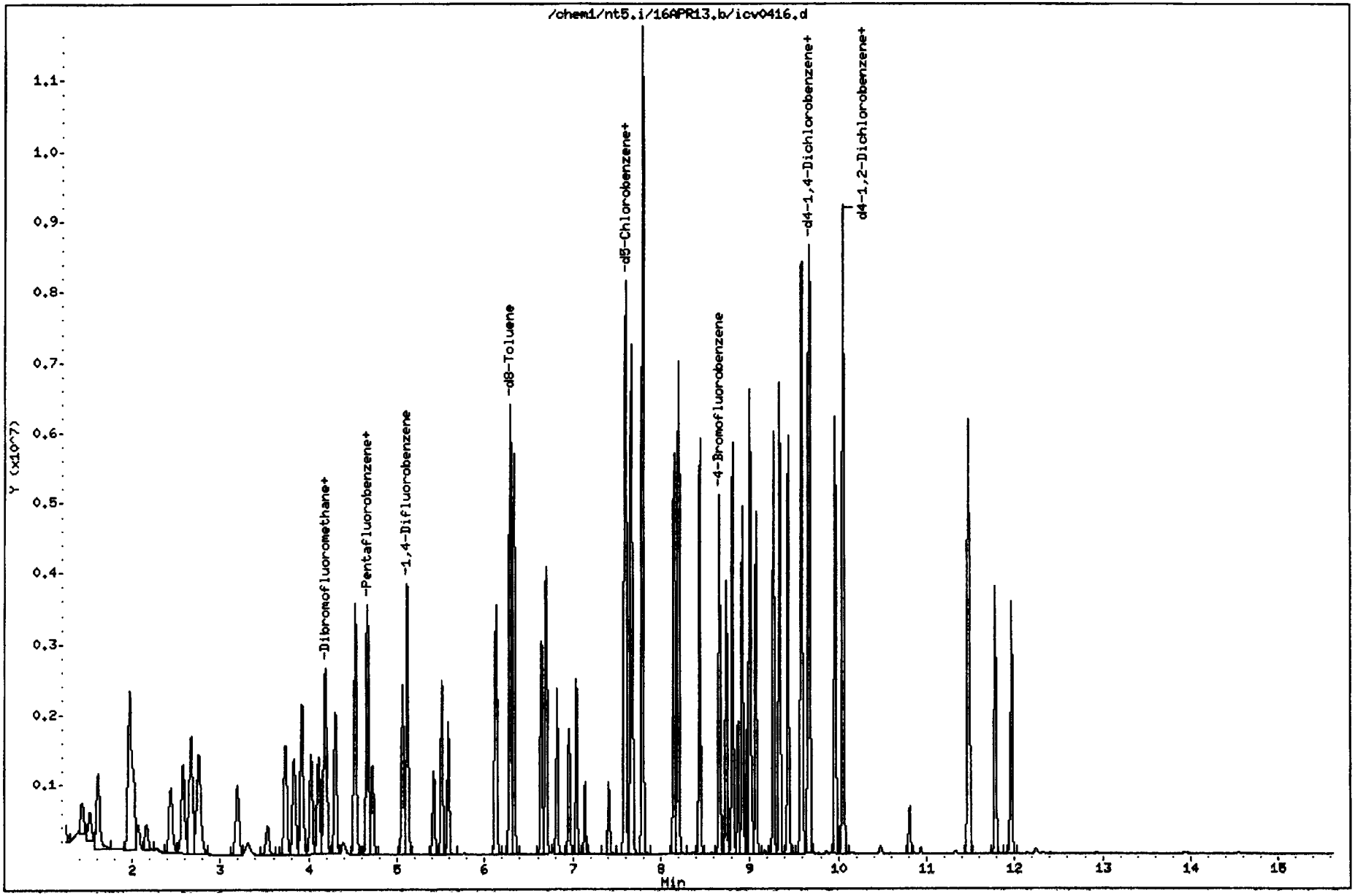
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.482	100.96	80-149
$ 42 d8-Toluene	50.000	50.402	100.80	77-120
$ 62 4-Bromofluorobenze	50.000	50.429	100.86	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.280	100.56	80-120

Data File: /chem1/nt5.i/16APR13.b/icv0416.d
Date : 16-APR-2013 19:21
Client ID: ICV050
Sample Info: ICV050,5,5,0,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PC
Column diameter: 0.18



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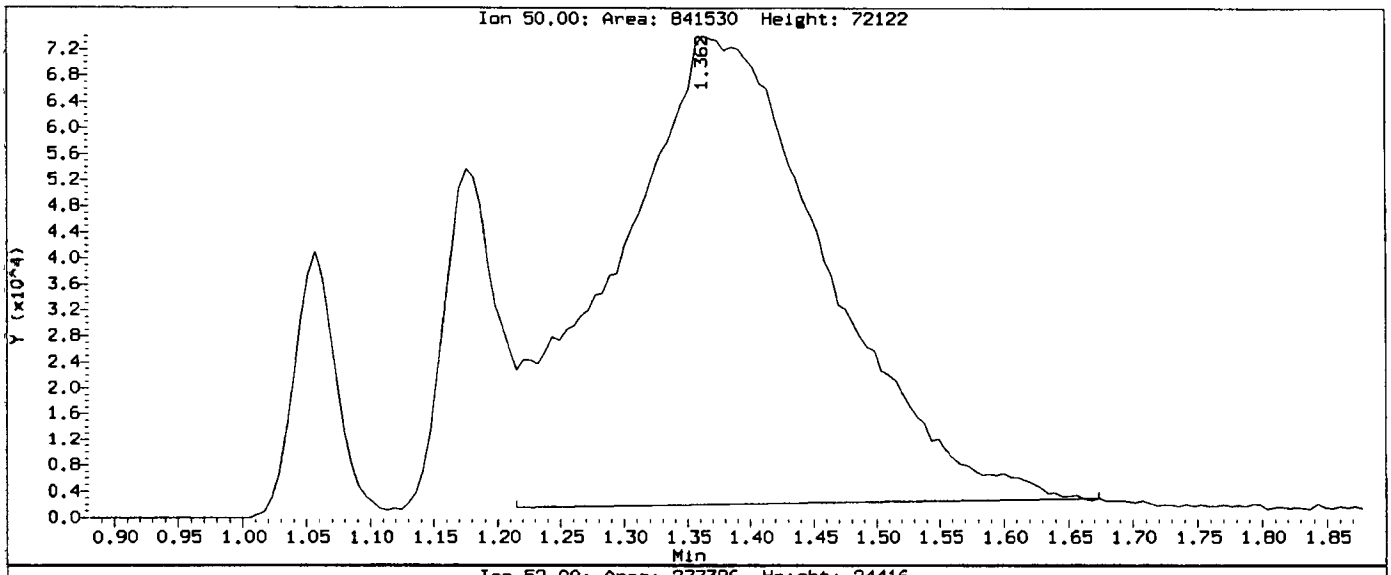
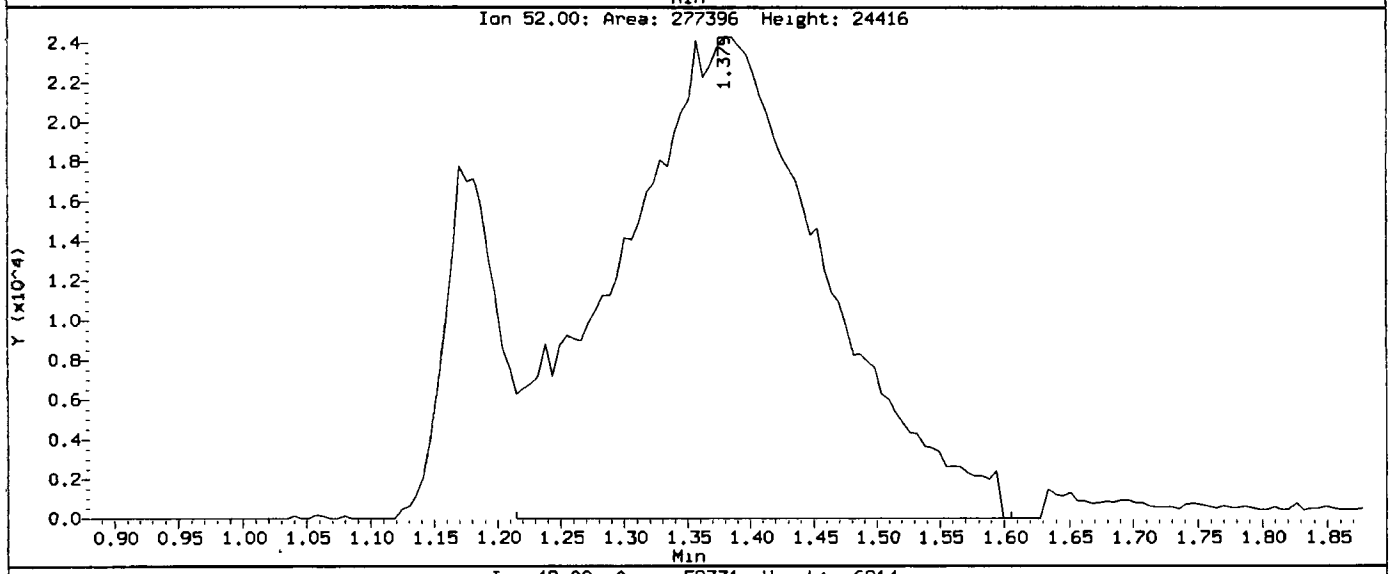
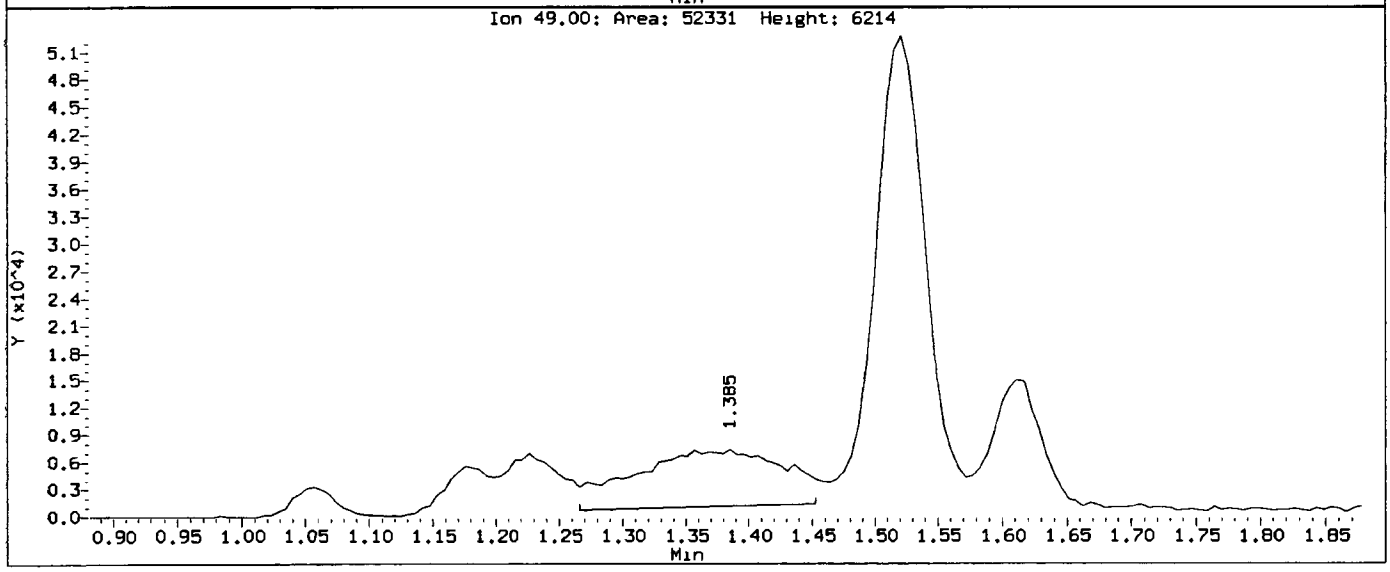
Injection Date: 16-APR-2013 19:21
Instrument: nt5.i
Client Sample ID: ICV050

Compound: Chloromethane
CAS Number:

MC 4/17/13



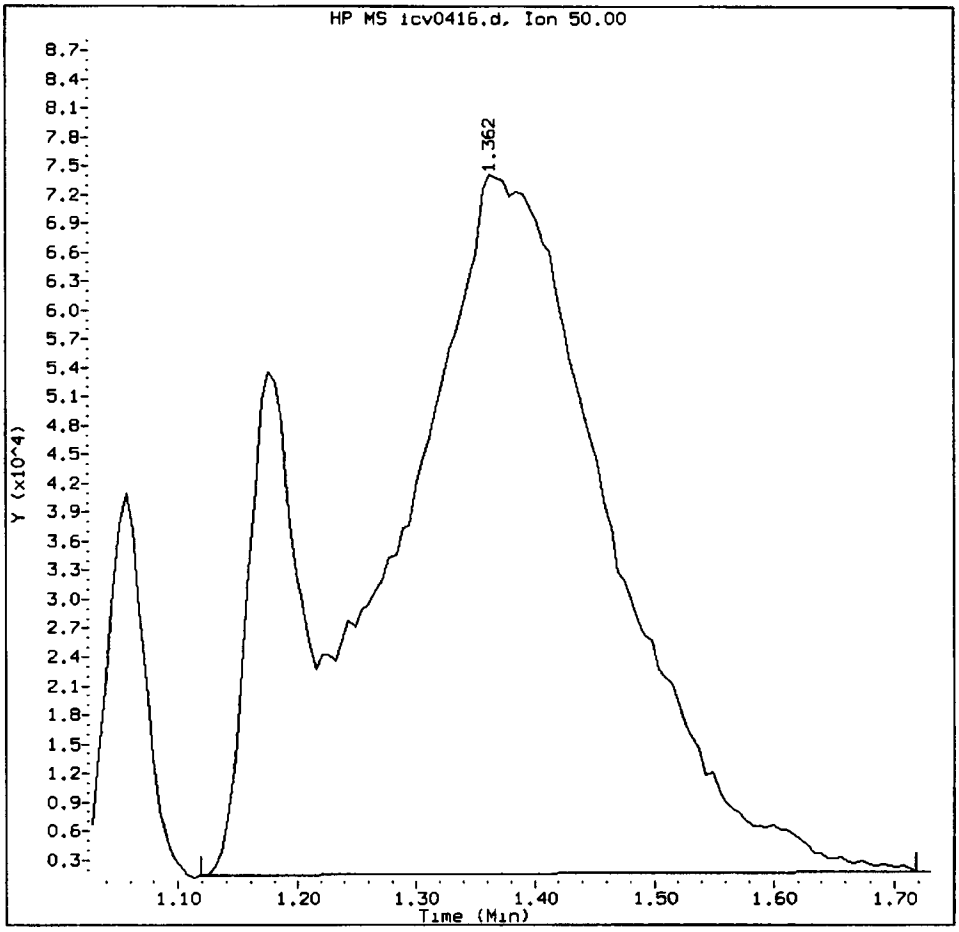




WLS7 : 08122

ICV050, /chem1/nt5.i/16APR13.b/icv0416.d

Chloromethane Amount: 46.04 Area: 1007243



MANUAL INTEGRATION for Chloromethane

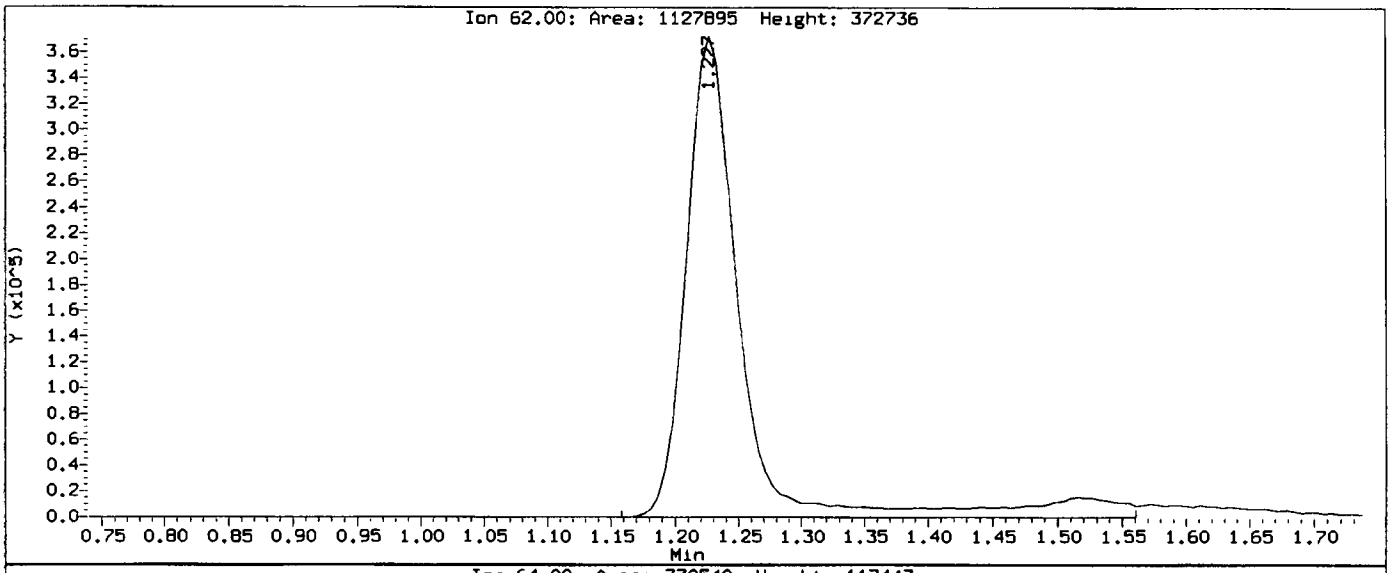
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

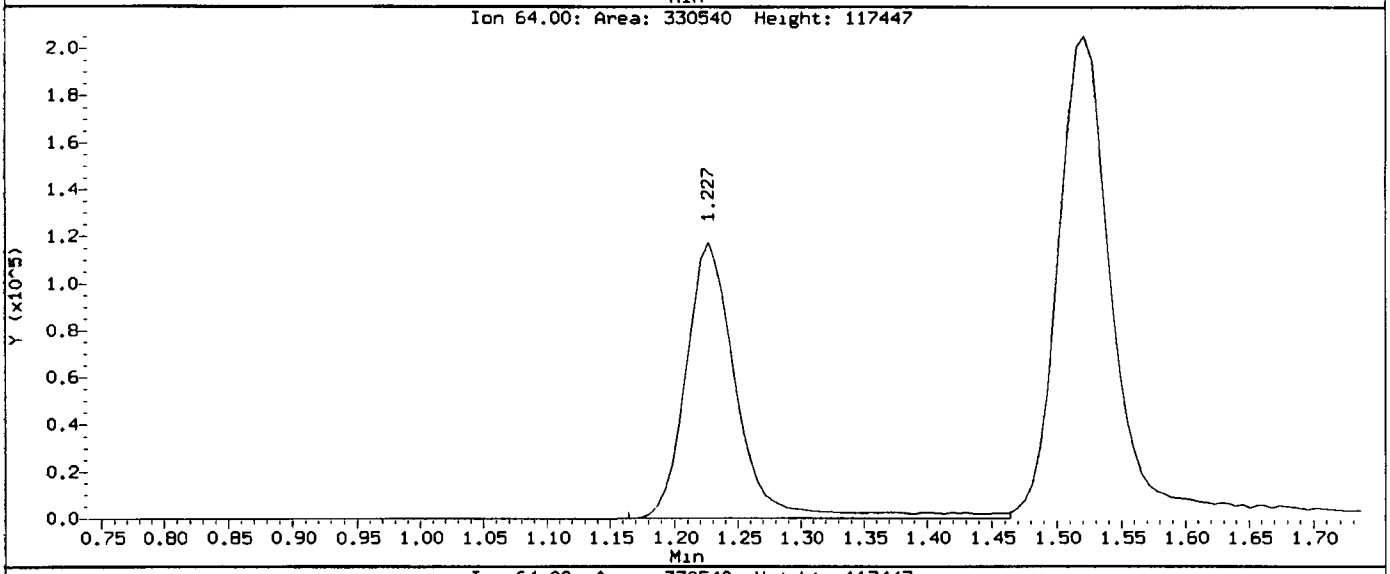
5. Other _____

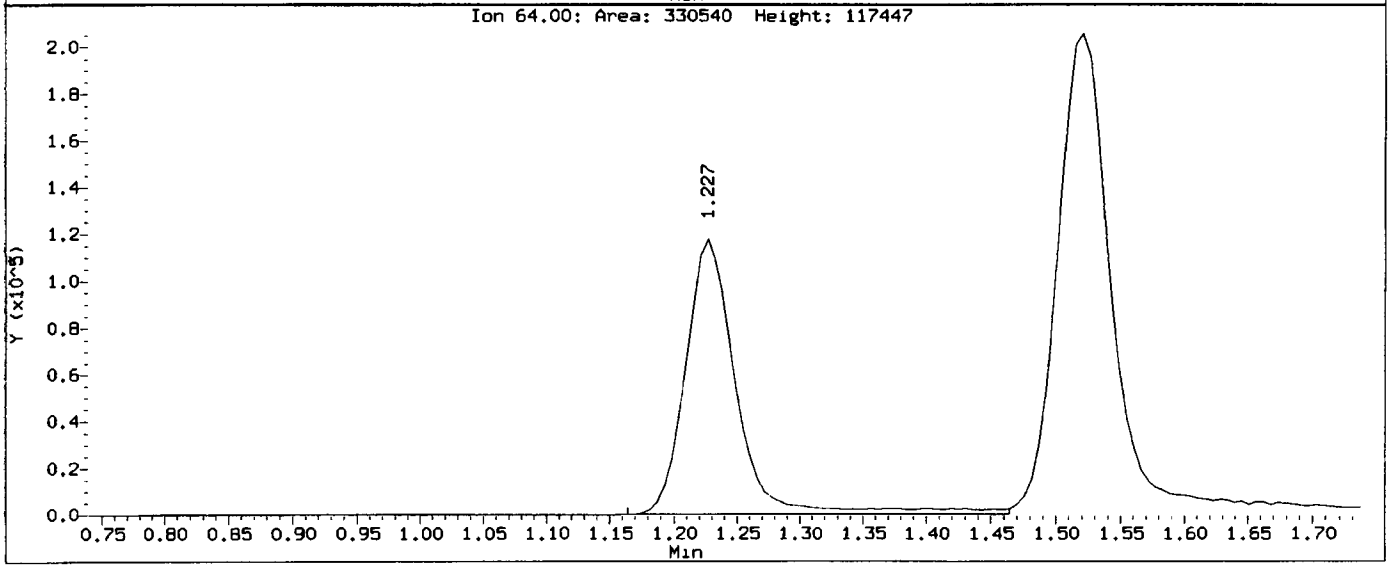
Analyst: _____ Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/icv0416.d
Injection Date: 16-APR-2013 19:21
Instrument: nt5.i
Client Sample ID: ICV050

Compound: Vinyl Chloride
CAS Number:

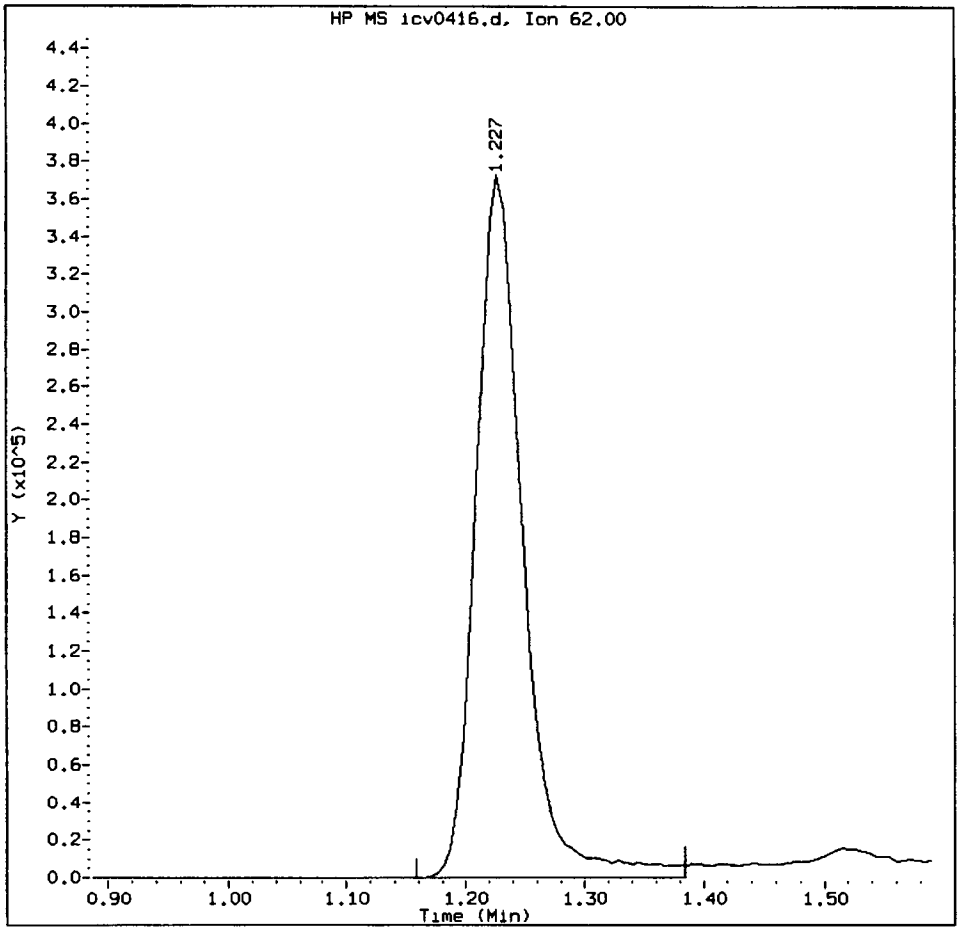






ICV050, /chem1/nt5.i/16APR13.b/icv0416.d

Vinyl Chloride Amount: 51.88 Area: 1028824



MANUAL INTEGRATION for Vinyl Chloride

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

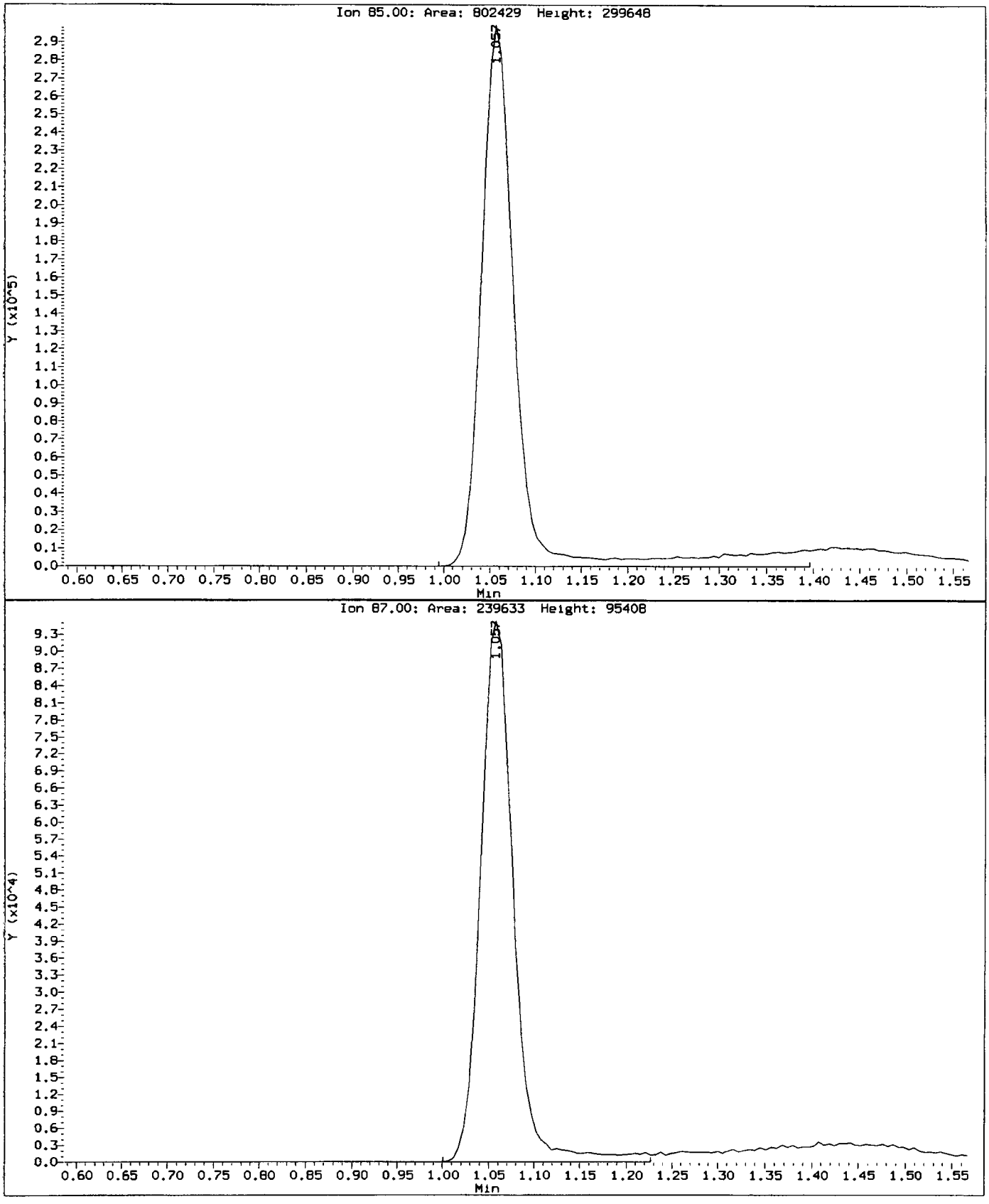
5. Other _____

Analyst: PL Date: 4/17/13

Data File: /chem1/nt5.i/16APR13.b/icv0416.d
Injection Date: 16-APR-2013 19:21
Instrument: nt5.i
Client Sample ID: ICV050

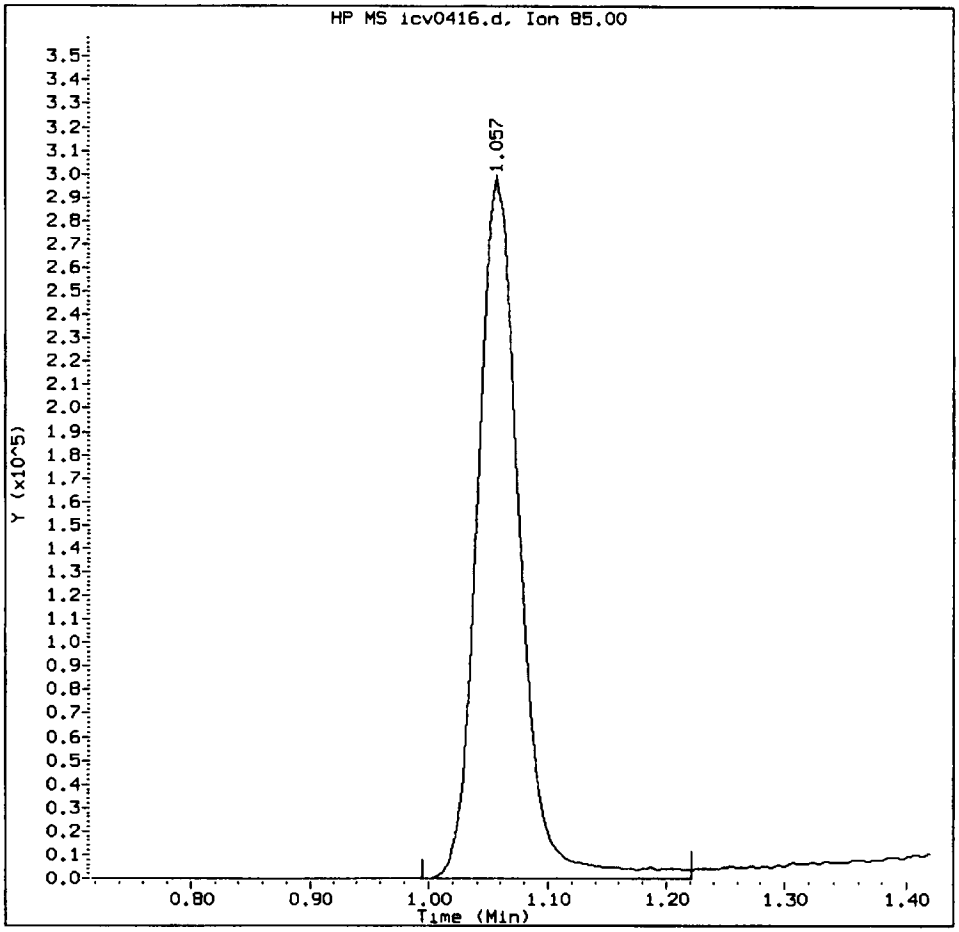
Compound: Dichlorodifluoromethane
CAS Number:

MG 4/17/13



ICV050, /chem1/nt5.i/16APR13.b/icv0416.d

Dichlorodifluoromethane Amount: 59.05 Area: 736601



MANUAL INTEGRATION for Dichlorodifluoromethane

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

5. Other _____

Analyst: PC Date: 4/17/13

CO-ELUTION SUMMARY FOR FILE - icv0416.d

Lab ID: ICV050, Method: VO121012S.m, Instrument: nt5.i, Date: 16-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL67 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: 4/16/17 Analysis Start Date: 4/23/17

	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 / NA
CCAL Q Flag applied	NA / (Y) / N / ✓	MS / MSD RPD ≤30%?	(NA) / NA
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	Y / (N) / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ✓

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

4/18 - A, B run - B - IS d4,d8 DCB out low
- B rerun on 4/23/17 - same IS SS BFB out low
- both runs reported (matrix)

(Review 1)Analyst: [signature] **Date:** 4/24/17

(Review 2)Reviewer: [signature] **Date:** 4/24/17

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 4/18/13 Analysis: 826d Analyst: PC

GC Program: VOA6A Column No: 938152 Column Type: RTXVMS

Instrument Tune (.U or .CT.): BAT1003 EM Voltage: 1482

Inj. Vol: 5 Calibration File: b80418 Curve Date: 4/16/13

IS/SS	Ical/Ccal	LCS/ICV
LW774-2	LW795-3	LW795-3

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/18APR13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	0903	bfb0418.d	BFB0418	BFB0418			1								
2	0948	cc0418.d	CC0418	CC0418			1	4.67	1433293	5.12	2641110	7.60	2596581	9.67	1401049
3	1012	lcs0418.d	LCS0418	LCS0418			1	4.67	1401434	5.12	2616101	7.60	2623092	9.67	1424539
4	1036	lcs0418a.d	LCS0418	LCS0418			1	4.66	1479359	5.11	2730006	7.59	2688123	9.67	1472447
5	1100	mb0418.d	MB0418	MB0418			1	4.67	1467188	5.12	2727382	7.59	2678112	9.66	1435960
6	1153	wl88b0.d	WL88B	MW32D-43.5-44.5			1	4.67	1391836	5.11	2586483	7.59	2499254	9.67	1334440
7	1217	wl88c0.d	WL88C	MW-32S-29-30			1	4.66	1493351	5.11	2758809	7.59	2730532	9.66	1491367
8	1241	wl67a.d	WL67A	GR-CB-07-20130411-S			1	4.68	1262651	5.12	2335334	7.59	2181216	9.66	960894
9	1305	wl67b.d	WL67B	GR-WS-05-20130411-S			1	4.68	1192751	5.12	2232679	7.59	1852486	9.66	553202
10	1329	wl68a.d	WL68A	HC-GR-MW-07-2013041			1	4.67	1321071	5.12	2468107	7.59	2288058	9.66	990666
11	1352	wl68b.d	WL68B	HC-GR-WS-05-2013041			1	4.67	1218632	5.12	2245970	7.59	1865177	9.66	536116
12	1416	wl85a.d	WL85A	PCC-CAR01			1	4.68	1373175	5.12	2575155	7.59	2558749	9.66	1336550
13	1440	wl85b.d	WL85B	PCC-CAR02			1	4.68	1358798	5.12	2566890	7.59	2583247	9.66	1407023
14	1504	wl85c.d	WL85C	PCC-CAR03			1	4.67	1479860	5.11	2771776	7.59	2809242	9.66	1577443
15	1528	wl85d.d	WL85D	Trip Blank	1	CZ	1	4.67	1465071	5.12	2744360	7.59	2740291	9.66	1518062
16	1552	wl88g.d	WL88G	Trip Blank	2		1	4.67	1427242	5.11	2693095	7.59	2684382	9.66	1487519
17	1616	wl88b.d	WL88B	MW32D-43.5-44.5			1	4.68	798512	5.12	1471793	7.59	1407420	9.66	726116
18	1640	wl88c.d	WL88C	MW-32S-29-30			1	4.66	1175147	5.11	2199912	7.59	1939599	9.66	698855

PC 4/23/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

LW_ST_00129

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/18APR13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 18-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0903	bfb0418.d	BFB0418	BFB0418	1	NO MANUAL INTEGRATION
0948	cc0418.d	CC0418	CC0418	1	Chloromethane, Acetone,
1012	lcs0418.d	LCS0418	LCS0418	1	Chloromethane, Acetone,
1036	lcs0418a.d	LCS0418	LCS0418	1	Chloromethane, Acetone,
1100	mb0418.d	MB0418	MB0418	1	NO MANUAL INTEGRATION
1241	wl67a.d	WL67A	GR-CB-07-2	1	Acetone,
1305	wl67b.d	WL67B	GR-WS-05-2	1	Trichlorofluoromethane, Acetone,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/18APR13.b

Instrument: nt5.i Date: 18-APR-2013 Method: VO121012S.m

INITIAL CAL: 16-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 18-APR-2013

Compound	%D
Acetone	77.6
2-Butanone	45.5
2-Hexanone	21.8

Data File: /chem1/nt5.i/18APR13.b/bfb0418.d

Date : 18-APR-2013 09:03

Client ID: BFB0418

Instrument: nt5.i

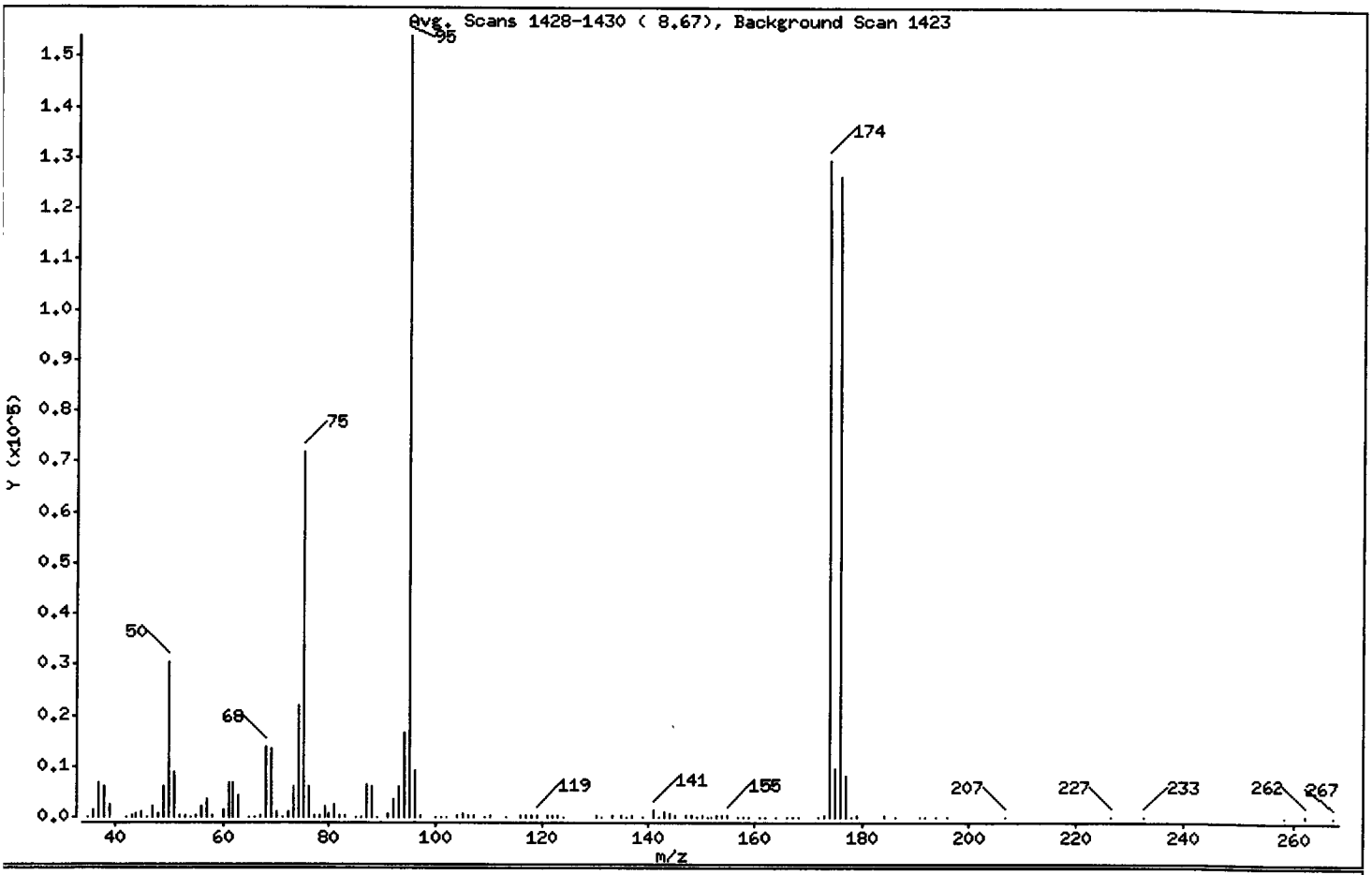
Sample Info: BFB0418,BFB0418,,1,18APR13,,

Operator: PC

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	19.72
75	30.00 - 66.00% of mass 95	46.61
96	5.00 - 9.00% of mass 95	6.07
173	Less than 2.00% of mass 174	0.12 (0.15)
174	50.00 - 101.00% of mass 95	84.05
175	4.00 - 9.00% of mass 174	6.15 (7.32)
176	95.00 - 101.00% of mass 174	82.04 (97.61)
177	5.00 - 9.00% of mass 176	5.26 (6.41)

Data File: /chem1/nt5.i/18APR13.b/bfb0418.d

Date : 18-APR-2013 09:03

Client ID: BFB0418

Instrument: nt5.i

Sample Info: BFB0418,BFB0418,,1,18APR13,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0418.d

Spectrum: Avg. Scans 1428-1430 (8.67), Background Scan 1423

Location of Maximum: 95.00

Number of points: 125

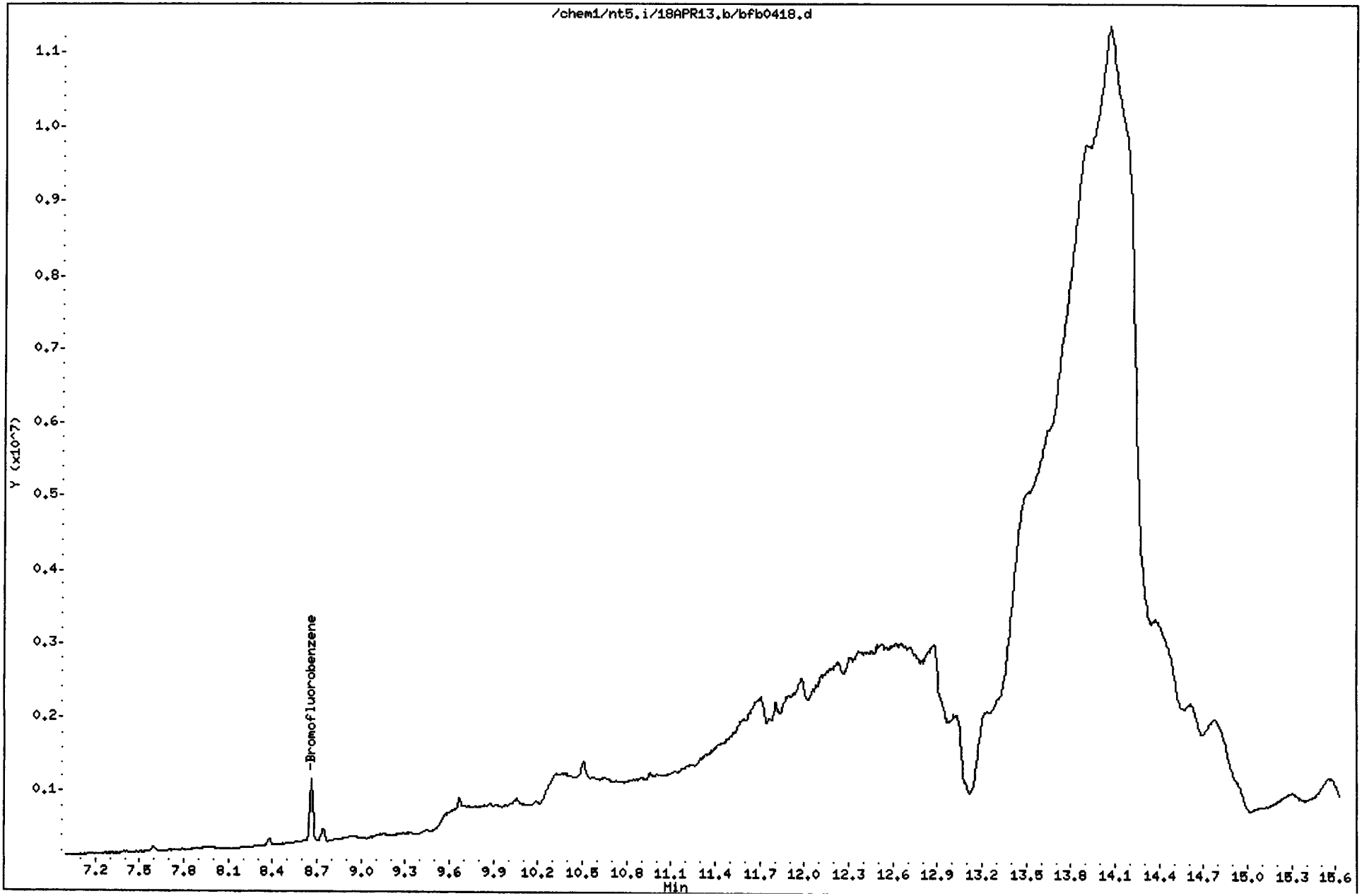
m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	115	71.00	95	109.00	80	157.00	171
36.00	1365	72.00	1027	110.00	253	158.00	40
37.00	6785	73.00	6012	113.00	46	159.00	141
38.00	6068	74.00	22080	116.00	315	161.00	153
39.00	2466	75.00	71768	117.00	419	162.00	86
42.00	62	76.00	5907	118.00	375	164.00	2
43.00	418	77.00	519	119.00	527	166.00	21
44.00	666	78.00	369	121.00	218	167.00	111
45.00	1199	79.00	2101	122.00	194	168.00	87
46.00	106	80.00	837	123.00	196	172.00	67
47.00	2100	81.00	2537	124.00	112	173.00	191
48.00	735	82.00	526	130.00	320	174.00	129424
49.00	5953	83.00	289	131.00	147	175.00	9473
50.00	30368	85.00	99	133.00	316	176.00	126336
51.00	8946	86.00	164	135.00	392	177.00	8098
52.00	287	87.00	6289	136.00	62	178.00	136
53.00	262	88.00	6183	137.00	295	179.00	289
54.00	63	89.00	47	139.00	127	184.00	197
55.00	355	91.00	698	141.00	1486	186.00	125
56.00	1973	92.00	3600	142.00	65	191.00	36
57.00	3592	93.00	5925	143.00	1025	192.00	2
58.00	184	94.00	16464	144.00	675	194.00	38
60.00	1382	95.00	153984	145.00	441	196.00	36
61.00	6651	96.00	9343	147.00	199	207.00	40
62.00	6703	97.00	432	148.00	299	227.00	102
63.00	4420	100.00	88	149.00	4	233.00	126
65.00	160	101.00	3	150.00	239	258.00	79
66.00	58	102.00	45	151.00	86	262.00	183
67.00	212	104.00	349	152.00	121	267.00	44
68.00	13829	105.00	750	153.00	247		
69.00	13523	106.00	353	154.00	222		
70.00	1218	107.00	321	155.00	267		

Data File: /chem1/nt5.i/18APR13.b/bfb0418.d
Date : 18-APR-2013 09:03
Client ID: BFB0418
Sample Info: BFB0418,BFB0418,,1,18APR13,,

Instrument: nt5.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



PC 4/23/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/18APR13.b/cc0418.d
Lab Smp Id: CC0418 Client Smp ID: CC0418
Inj Date : 18-APR-2013 09:48
Operator : PC Inst ID: nt5.i
Smp Info : CC0418,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/18APR13.b/VO121012S.m
Meth Date : 23-Apr-2013 11:50 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1	Dichlorodifluoromethane	85	1.068	1.068	(0.229)	516005	50.0000	44.825
2	Chloromethane	50	1.379	1.379	(0.295)	842308	50.0000	41.725(M)
3	Vinyl Chloride	62	1.243	1.243	(0.266)	845237	50.0000	46.190
4	Bromomethane	94	1.447	1.447	(0.310)	426440	50.0000	47.953
5	Chloroethane	64	1.532	1.532	(0.328)	499922	50.0000	45.187
6	Trichlorofluoromethane	101	1.628	1.628	(0.349)	869910	50.0000	44.036
7	1,1-Dichloroethene	96	1.985	1.985	(0.425)	558518	50.0000	45.091
8	Carbon Disulfide	76	1.985	1.985	(0.425)	1910484	50.0000	46.036
9	112Trichloro122Trifluoroethane	101	2.030	2.030	(0.434)	515983	50.0000	44.945
10	Iodomethane	142	2.081	2.081	(0.445)	651801	50.0000	43.617
11	Bromoethane	108	2.183	2.183	(0.467)	366455	50.0000	43.596
12	Acrolein	56	2.290	2.290	(0.490)	555769	250.000	271.65
13	Methylene Chloride	84	2.454	2.454	(0.525)	613344	50.0000	54.951
14	Acetone	43	2.680	2.680	(0.574)	2582379	250.000	443.93(M)
15	Trans-1,2-Dichloroethene	96	2.590	2.590	(0.554)	628258	50.0000	45.890

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	16 Methyl tert butyl ether	73	2.765	2.765	(0.592)	2025592	50.0000	50.700
	17 1,1-Dichloroethane	63	3.206	3.206	(0.686)	1292416	50.0000	45.004
	18 Acrylonitrile	53	3.320	3.320	(0.711)	292701	50.0000	52.511
	19 Vinyl Acetate	43	3.540	3.540	(0.758)	1733255	50.0000	53.167
	20 Cis-1,2-Dichloroethene	96	3.749	3.749	(0.803)	699095	50.0000	45.539
	22 2,2-Dichloropropane	77	3.846	3.846	(0.823)	1026866	50.0000	46.593
	23 Bromochloromethane	128	3.930	3.930	(0.841)	344805	50.0000	51.790
	24 Chloroform	83	4.032	4.032	(0.863)	1146090	50.0000	44.790
	25 Carbon Tetrachloride	117	4.123	4.123	(0.805)	884795	50.0000	41.641
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	823835	50.0000	52.884
	26 1,1,1-Trichloroethane	97	4.191	4.191	(0.897)	1034496	50.0000	43.185
	28 1,1-Dichloropropene	75	4.309	4.309	(0.842)	974523	50.0000	41.269
	29 2-Butanone	72	4.389	4.389	(0.939)	587623	250.000	363.74
	30 Benzene	78	4.536	4.536	(0.886)	2853089	50.0000	44.827
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	1433293	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	906128	50.0000	51.188
	33 1,2-Dichloroethane	62	4.722	4.722	(0.923)	951689	50.0000	44.346
	34 Trichloroethene	95	5.068	5.068	(0.990)	692795	50.0000	42.625
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	2641110	50.0000	
	37 Dibromomethane	93	5.418	5.418	(1.059)	392185	50.0000	46.271
	38 1,2-Dichloropropane	63	5.514	5.514	(1.077)	789129	50.0000	44.064
	39 Bromodichloromethane	83	5.588	5.588	(1.092)	915467	50.0000	44.329
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	510985	50.0000	51.150
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.198)	1211504	50.0000	46.827
$	42 d8-Toluene	98	6.289	6.289	(1.229)	3374202	50.0000	50.318
	43 Toluene	92	6.335	6.335	(1.238)	1825184	50.0000	42.611
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	747260	50.0000	42.894
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.308)	1781907	250.000	274.54
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	1127153	50.0000	48.177
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.334)	596924	50.0000	47.204
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	690598	50.0000	46.441
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	1097915	50.0000	46.806
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	585987	50.0000	47.483
	51 2-Hexanone	43	7.409	7.409	(0.975)	3324451	250.000	304.42
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2596581	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	1891358	50.0000	43.765
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3324490	50.0000	45.470
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	683567	50.0000	43.908
	56 m,p-xylene	106	7.788	7.788	(1.025)	2555816	100.000	91.280
	57 o-Xylene	106	8.151	8.151	(1.073)	1242727	50.0000	44.195
	58 Styrene	104	8.201	8.201	(1.080)	2129545	50.0000	46.302
	59 Bromoform	173	8.190	8.190	(0.847)	501366	50.0000	48.346
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	3136079	50.0000	45.832
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1378971	50.0000	49.603
	63 Bromobenzene	156	8.739	8.739	(0.903)	788235	50.0000	43.004
	64 N-Propyl Benzene	91	8.807	8.807	(0.910)	3706090	50.0000	46.098
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	795725	50.0000	48.206

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2294411	50.0000	44.480
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2670937	50.0000	45.564
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	244394	50.0000	49.172
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	325023	50.0000	47.868
	70 4-Chloro Toluene	91	9.073	9.073	(0.938)	2417300	50.0000	44.642
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2319603	50.0000	44.547
	72 1,2,4-Trimethylbenzene	105	9.338	9.338	(0.965)	2656491	50.0000	45.902
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	3415443	50.0000	46.090
	74 4-Isopropyl Toluene	119	9.587	9.587	(0.991)	2899988	50.0000	47.043
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1517755	50.0000	44.065
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1401049	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1571808	50.0000	43.382
	78 N-Butyl Benzene	91	9.972	9.972	(1.031)	2789018	50.0000	46.685
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1287431	50.0000	50.394
	80 1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1461093	50.0000	43.116
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	153702	50.0000	47.818
	82 Hexachloro 1,3-Butadiene	225	11.499	11.499	(1.189)	627772	50.0000	42.074
	83 1,2,4-Trichlorobenzene	180	11.488	11.488	(1.188)	1120437	50.0000	44.341
	84 Naphthalene	128	11.799	11.799	(1.220)	2587817	50.0000	48.245
	85 1,2,3-Trichlorobenzene	180	11.986	11.986	(1.239)	1021686	50.0000	43.283

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 18-APR-2013 09:48
Lab File ID: cc0418.d Init. Cal. Date(s): 16-APR-2013 16-APR-2013
Analysis Type: SOIL Init. Cal. Times: 16:10 18:57
Lab Sample ID: CC0418 Quant Type: ISTD
Method: /chem1/nt5.i/18APR13.b/VO121012S.m

			CCAL	MIN		MAX	
COMPOUND	RRF / AMOUNT	RF50	RRF50	RRF	%D / %DRIFT	%D / %DRIFT	CURVE TYPE
1 Dichlorodifluoromethane	0.40158	0.36001	0.36001	0.100	-10.34973	20.00000	Averaged
2 Chloromethane	0.70423	0.58767	0.58767	0.100	-16.55057	20.00000	Averaged
3 Vinyl Chloride	0.63836	0.58972	0.58972	0.100	-7.61942	20.00000	Averaged
4 Bromomethane	0.31023	0.29752	0.29752	0.100	-4.09482	20.00000	Averaged
5 Chloroethane	0.38595	0.34879	0.34879	0.100	-9.62651	20.00000	Averaged
6 Trichlorofluoromethane	0.68913	0.60693	0.60693	0.100	-11.92752	20.00000	Averaged
7 1,1-Dichloroethene	0.43210	0.38967	0.38967	0.100	-9.81859	20.00000	Averaged
8 Carbon Disulfide	1.44772	1.33293	1.33293	0.010	-7.92855	20.00000	Averaged
9 112Trichloro122Trifluoroeth	0.40049	0.36000	0.36000	0.010	-10.10971	20.00000	Averaged
10 Iodomethane	0.52130	0.45476	0.45476	0.010	-12.76547	20.00000	Averaged
11 Bromoethane	0.29323	0.25567	0.25567	0.100	-12.80765	20.00000	Averaged
12 Acrolein	0.07137	0.07755	0.07755	0.000	8.65853	20.00000	Averaged
13 Methylene Chloride	54.95133	50.00000	0.42793	0.010	9.90266	20.00000	Quadratic
14 Acetone	444	250	0.18037	0.001	77.57216	20.00000	Quadratic <-
15 Trans-1,2-Dichloroethene	0.47759	0.43833	0.43833	0.010	-8.22013	20.00000	Averaged
16 Methyl tert butyl ether	1.39372	1.41324	1.41324	0.100	1.40054	20.00000	Averaged
17 1,1-Dichloroethane	1.00181	0.90171	0.90171	0.100	-9.99151	20.00000	Averaged
18 Acrylonitrile	0.19445	0.20422	0.20422	0.001	5.02189	20.00000	Averaged
19 Vinyl Acetate	1.13724	1.20928	1.20928	0.010	6.33455	20.00000	Averaged
20 Cis-1,2-Dichloroethene	0.53553	0.48775	0.48775	0.010	-8.92117	20.00000	Averaged
22 2,2-Dichloropropane	0.76882	0.71644	0.71644	0.010	-6.81340	20.00000	Averaged
23 Bromochloromethane	0.23225	0.24057	0.24057	0.050	3.57986	20.00000	Averaged
24 Chloroform	0.89262	0.79962	0.79962	0.100	-10.41923	20.00000	Averaged
25 Carbon Tetrachloride	0.40225	0.33501	0.33501	0.100	-16.71713	20.00000	Averaged
$ 27 Dibromofluoromethane	0.54343	0.57478	0.57478	0.100	5.76899	20.00000	Averaged
26 1,1,1-Trichloroethane	0.83566	0.72176	0.72176	0.100	-13.62970	20.00000	Averaged
28 1,1-Dichloropropene	0.44705	0.36898	0.36898	0.010	-17.46217	20.00000	Averaged
29 2-Butanone	0.05636	0.08200	0.08200	0.001	45.49768	20.00000	Averaged <-
30 Benzene	1.20493	1.08026	1.08026	0.100	-10.34681	20.00000	Averaged
$ 32 d4-1,2-Dichloroethane	0.61753	0.63220	0.63220	0.010	2.37641	20.00000	Averaged
33 1,2-Dichloroethane	0.40628	0.36034	0.36034	0.100	-11.30761	20.00000	Averaged
34 Trichloroethene	0.30770	0.26231	0.26231	0.100	-14.75011	20.00000	Averaged
37 Dibromomethane	0.16046	0.14849	0.14849	0.010	-7.45863	20.00000	Averaged
38 1,2-Dichloropropane	0.33903	0.29879	0.29879	0.100	-11.87113	20.00000	Averaged
39 Bromodichloromethane	0.39097	0.34662	0.34662	0.100	-11.34193	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 18-APR-2013 09:48
Lab File ID: cc0418.d Init. Cal. Date(s): 16-APR-2013 16-APR-2013
Analysis Type: SOIL Init. Cal. Times: 16:10 18:57
Lab Sample ID: CC0418 Quant Type: ISTD
Method: /chem1/nt5.i/18APR13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
40 2-Chloroethyl Vinyl Ether	0.18912	0.19347	0.19347	0.000	2.29941	20.00000	Averaged	
41 Cis 1,3-dichloropropene	0.48980	0.45871	0.45871	0.100	-6.34676	20.00000	Averaged	
$ 42 d8-Toluene	1.26949	1.27757	1.27757	0.010	0.63646	20.00000	Averaged	
43 Toluene	0.81091	0.69107	0.69107	0.100	-14.77891	20.00000	Averaged	
44 Tetrachloroethene	0.33546	0.28779	0.28779	0.100	-14.21215	20.00000	Averaged	
45 4-Methyl-2-Pentanone	0.12288	0.13494	0.13494	0.000	9.81554	20.00000	Averaged	
46 Trans 1,3-Dichloropropene	0.44293	0.42677	0.42677	0.010	-3.64682	20.00000	Averaged	
47 1,1,2-Trichloroethane	0.23940	0.22601	0.22601	0.100	-5.59191	20.00000	Averaged	
48 Chlorodibromomethane	0.28635	0.26596	0.26596	0.100	-7.11866	20.00000	Averaged	
49 1,3-Dichloropropane	0.45169	0.42283	0.42283	0.100	-6.38844	20.00000	Averaged	
50 1,2-Dibromoethane	0.23363	0.22187	0.22187	0.010	-5.03323	20.00000	Averaged	
51 2-Hexanone	0.21029	0.25606	0.25606	0.010	21.76782	20.00000	Averaged	<-
53 Chlorobenzene	0.83217	0.72840	0.72840	0.300	-12.46970	20.00000	Averaged	
54 Ethyl Benzene	1.40789	1.28033	1.28033	0.100	-9.06022	20.00000	Averaged	
55 1,1,1,2-Tetrachloroethane	0.29978	0.26326	0.26326	0.010	-12.18362	20.00000	Averaged	
56 m,p-xylene	0.53917	0.49215	0.49215	0.100	-8.72008	20.00000	Averaged	
57 o-Xylene	0.54147	0.47860	0.47860	0.100	-11.61074	20.00000	Averaged	
58 Styrene	0.88564	0.82013	0.82013	0.100	-7.39591	20.00000	Averaged	
59 Bromoform	0.37009	0.35785	0.35785	0.100	-3.30790	20.00000	Averaged	
60 Isopropyl Benzene	2.44195	2.23838	2.23838	0.010	-8.33653	20.00000	Averaged	
$ 62 4-Bromofluorobenzene	0.53532	0.53107	0.53107	0.200	-0.79333	20.00000	Averaged	
63 Bromobenzene	0.65413	0.56260	0.56260	0.010	-13.99239	20.00000	Averaged	
64 N-Propyl Benzene	2.86914	2.64523	2.64523	0.010	-7.80414	20.00000	Averaged	
65 1,1,2,2-Tetrachloroethane	0.58909	0.56795	0.56795	0.300	-3.58846	20.00000	Averaged	
66 2-Chloro Toluene	1.84088	1.63764	1.63764	0.010	-11.04061	20.00000	Averaged	
67 1,3,5-Trimethyl Benzene	2.09200	1.90638	1.90638	0.010	-8.87286	20.00000	Averaged	
68 1,2,3-Trichloropropane	0.17737	0.17444	0.17444	0.010	-1.65663	20.00000	Averaged	
69 Trans-1,4-Dichloro 2-Butene	0.24232	0.23199	0.23199	0.001	-4.26301	20.00000	Averaged	
70 4-Chloro Toluene	1.93244	1.72535	1.72535	0.010	-10.71646	20.00000	Averaged	
71 T-Butyl Benzene	1.85830	1.65562	1.65562	0.010	-10.90694	20.00000	Averaged	
72 1,2,4-Trimethylbenzene	2.06534	1.89607	1.89607	0.010	-8.19569	20.00000	Averaged	
73 S-Butyl Benzene	2.64458	2.43778	2.43778	0.010	-7.82002	20.00000	Averaged	
74 4-Isopropyl Toluene	2.19997	2.06987	2.06987	0.010	-5.91392	20.00000	Averaged	
75 1,3-Dichlorobenzene	1.22921	1.08330	1.08330	0.100	-11.87031	20.00000	Averaged	
77 1,4-Dichlorobenzene	1.29302	1.12188	1.12188	0.100	-13.23590	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 18-APR-2013 09:48
Lab File ID: cc0418.d Init. Cal. Date(s): 16-APR-2013 16-APR-2013
Analysis Type: SOIL Init. Cal. Times: 16:10 18:57
Lab Sample ID: CC0418 Quant Type: ISTD
Method: /chem1/nt5.i/18APR13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
78 N-Butyl Benzene	2.13201	1.99066	1.99066	0.010	-6.62949	20.00000	Averaged	
$ 79 d4-1,2-Dichlorobenzene	0.91173	0.91891	0.91891	0.010	0.78727	20.00000	Averaged	
80 1,2-Dichlorobenzene	1.20937	1.04286	1.04286	0.100	-13.76894	20.00000	Averaged	
81 1,2-Dibromo 3-Chloropropane	0.11471	0.10970	0.10970	0.010	-4.36417	20.00000	Averaged	
82 Hexachloro 1,3-Butadiene	0.53248	0.44807	0.44807	0.010	-15.85214	20.00000	Averaged	
83 1,2,4-Trichlorobenzene	0.90177	0.79971	0.79971	0.010	-11.31707	20.00000	Averaged	
84 Naphthalene	48.24518	50.00000	1.84706	0.010	-3.50964	0.000e+00	Quadratic	<-
85 1,2,3-Trichlorobenzene	0.84239	0.72923	0.72923	0.010	-13.43318	20.00000	Averaged	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0418.d
Lab Smp Id: CC0418
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 18-APR-2013
Calibration Time: 09:48
Client Smp ID: CC0418
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	1616720	808360	3233440	1433293	-11.35
35 1,4-Difluorobenze	2842987	1421494	5685974	2641110	-7.10
52 d5-Chlorobenzene	2779083	1389542	5558166	2596581	-6.57
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1401049	-8.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

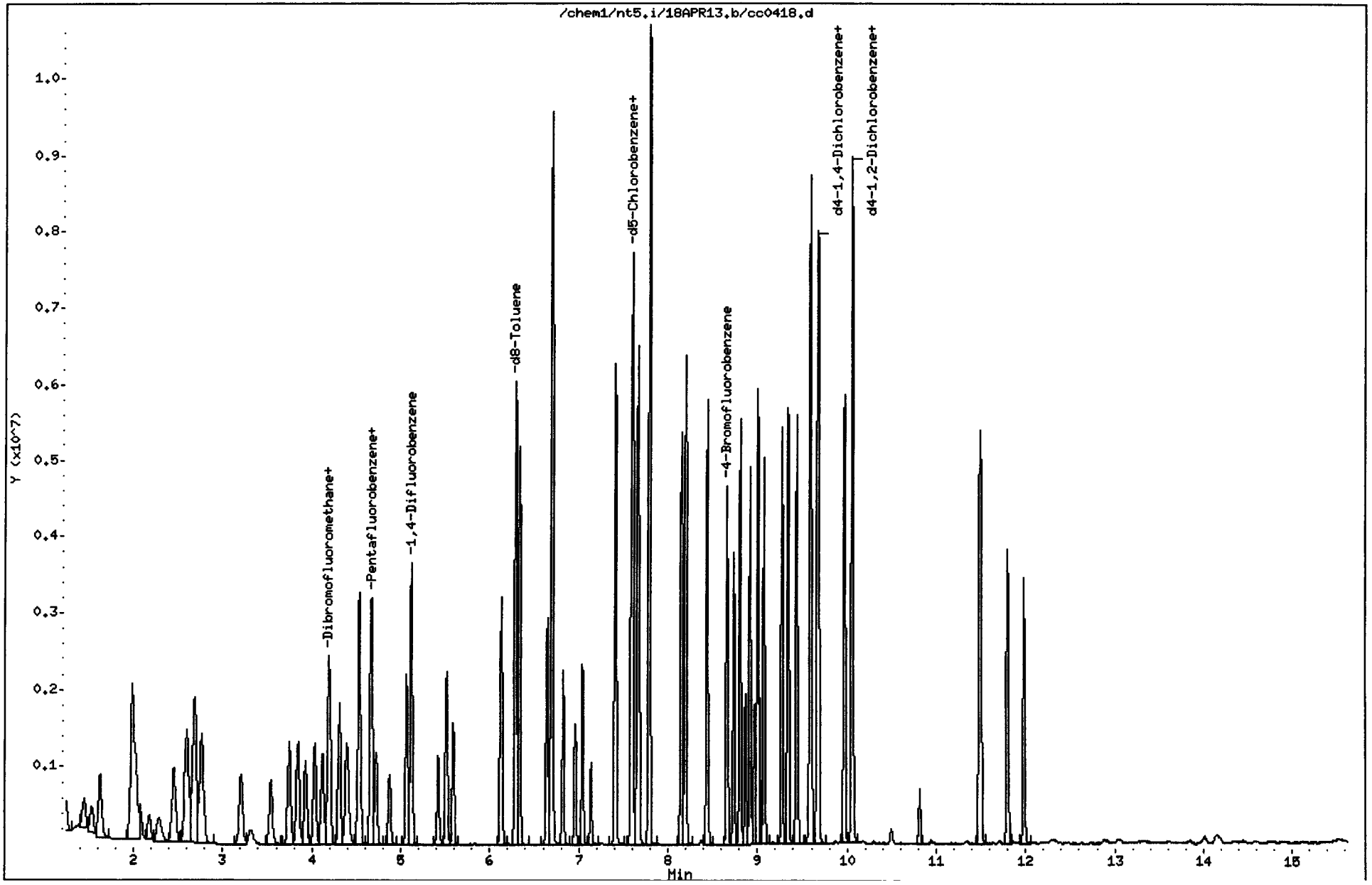
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/18APR13.b/cc0418.d
Date : 18-APR-2013 09:48
Client ID: CC0418
Sample Info: CC0418,5,5,0

Instrument: nt5.i

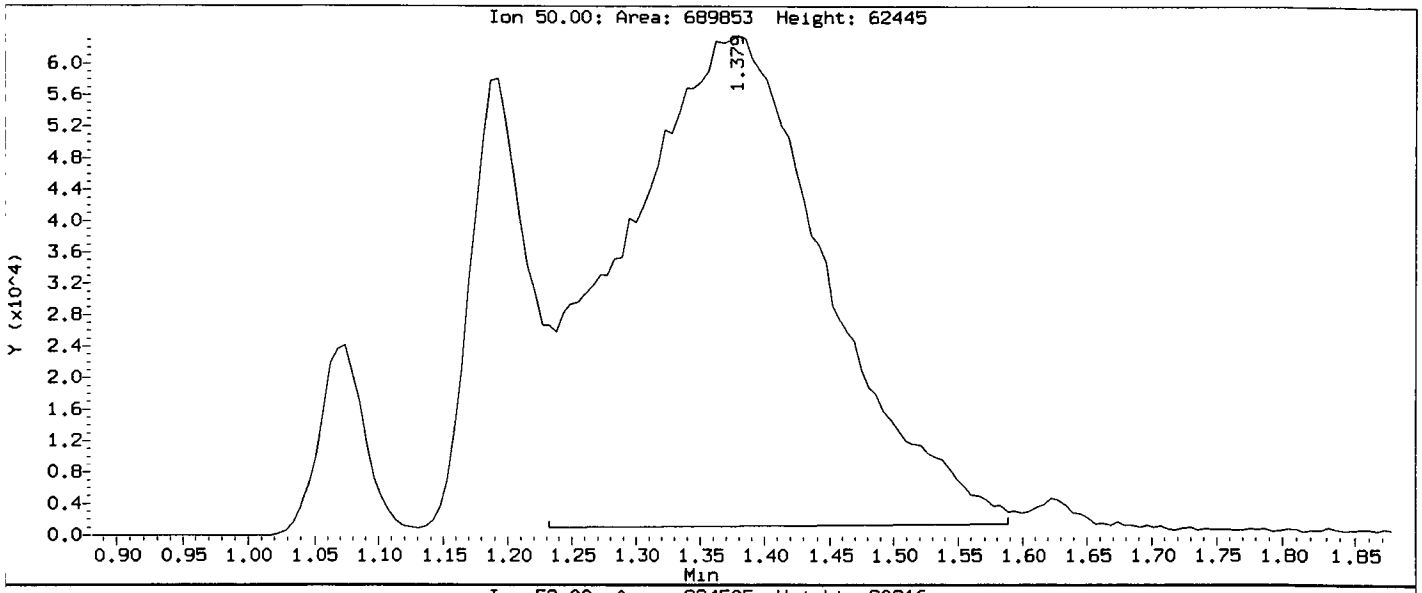
Operator: PC
Column diameter: 0.18

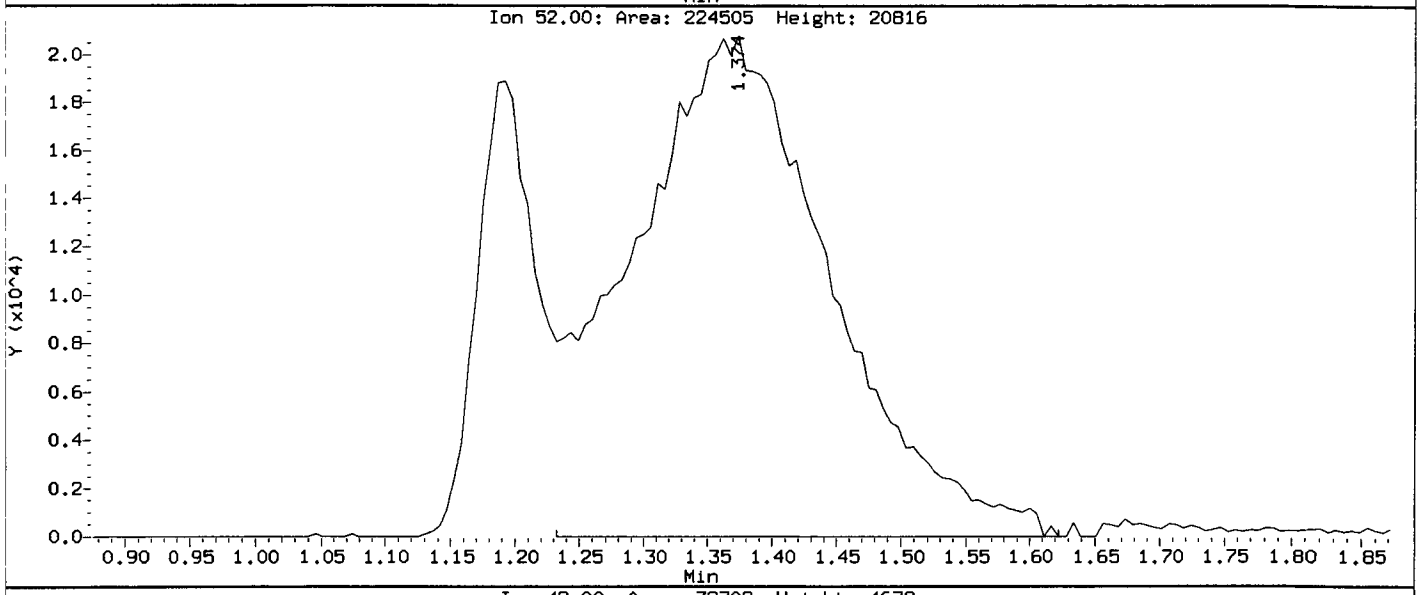
Column phase: RTXVMS

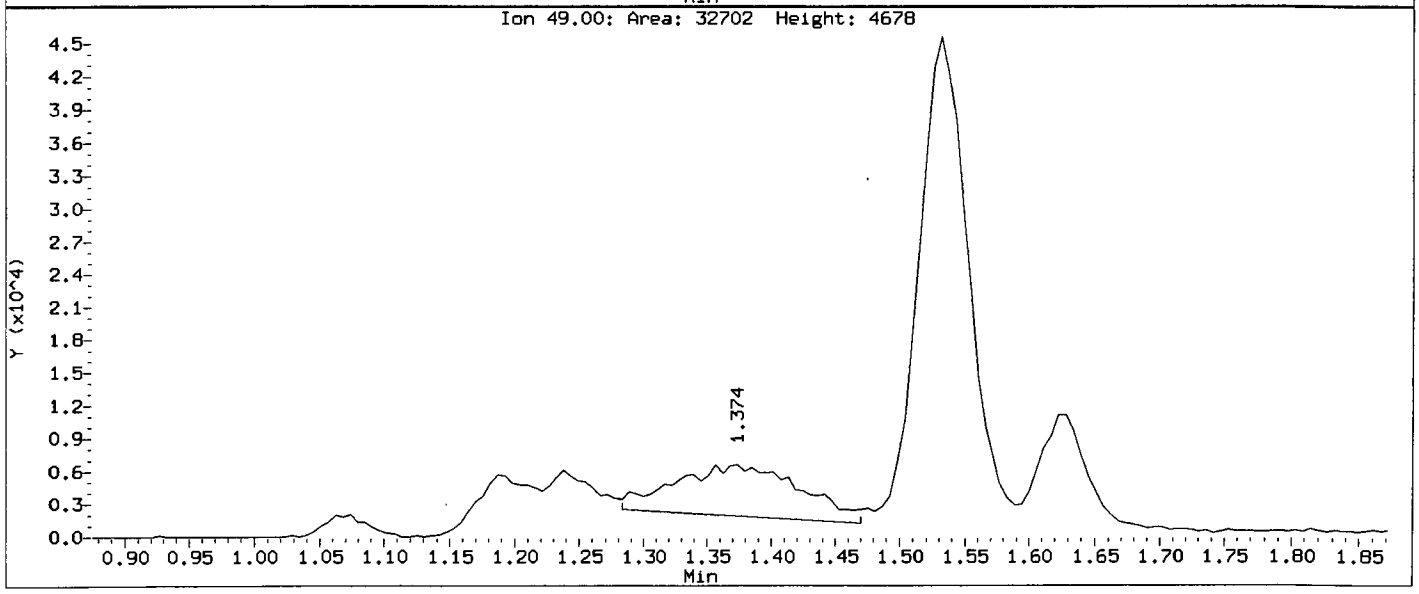


Data File: /chem1/nt5.i/18APR13.b/cc0418.d
Injection Date: 18-APR-2013 09:48
Instrument: nt5.i
Client Sample ID: CC0418

Compound: Chloromethane
CAS Number:

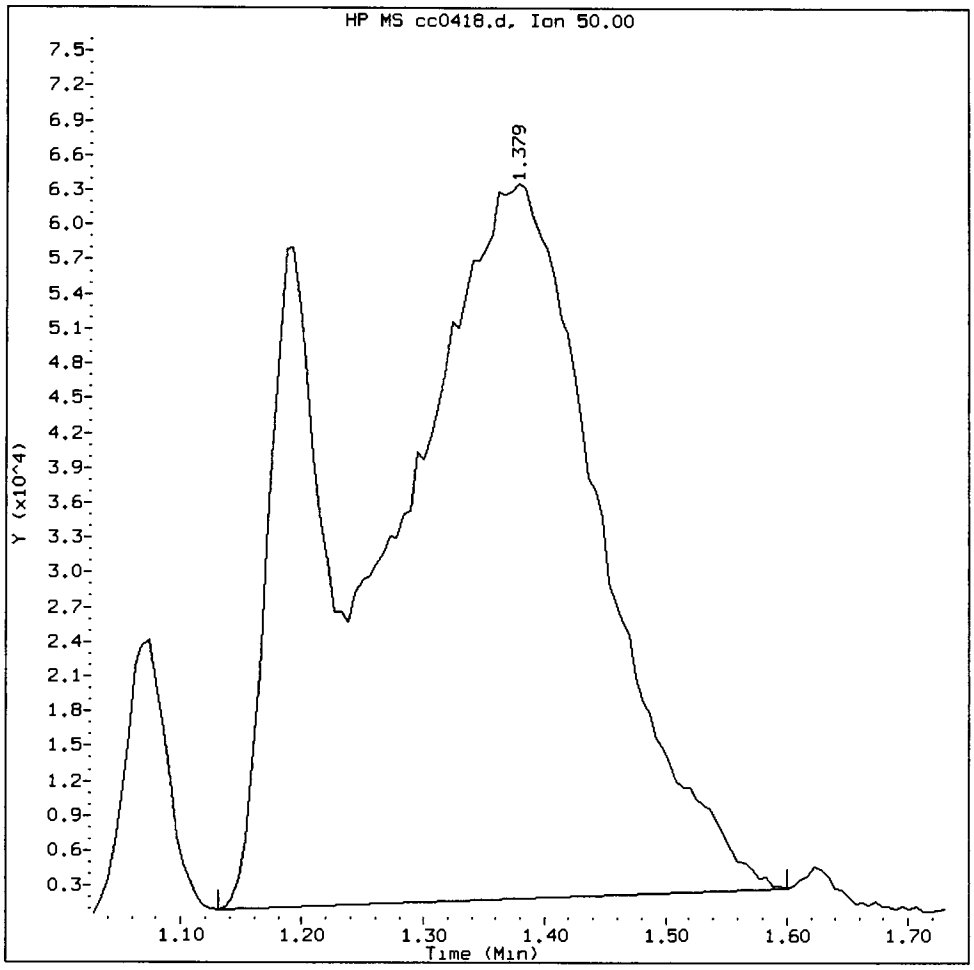






CC0418, /chem1/nt5.i/18APR13.b/cc0418.d

Chloromethane Amount: 41.72 Area: 842308



MANUAL INTEGRATION for Chloromethane

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

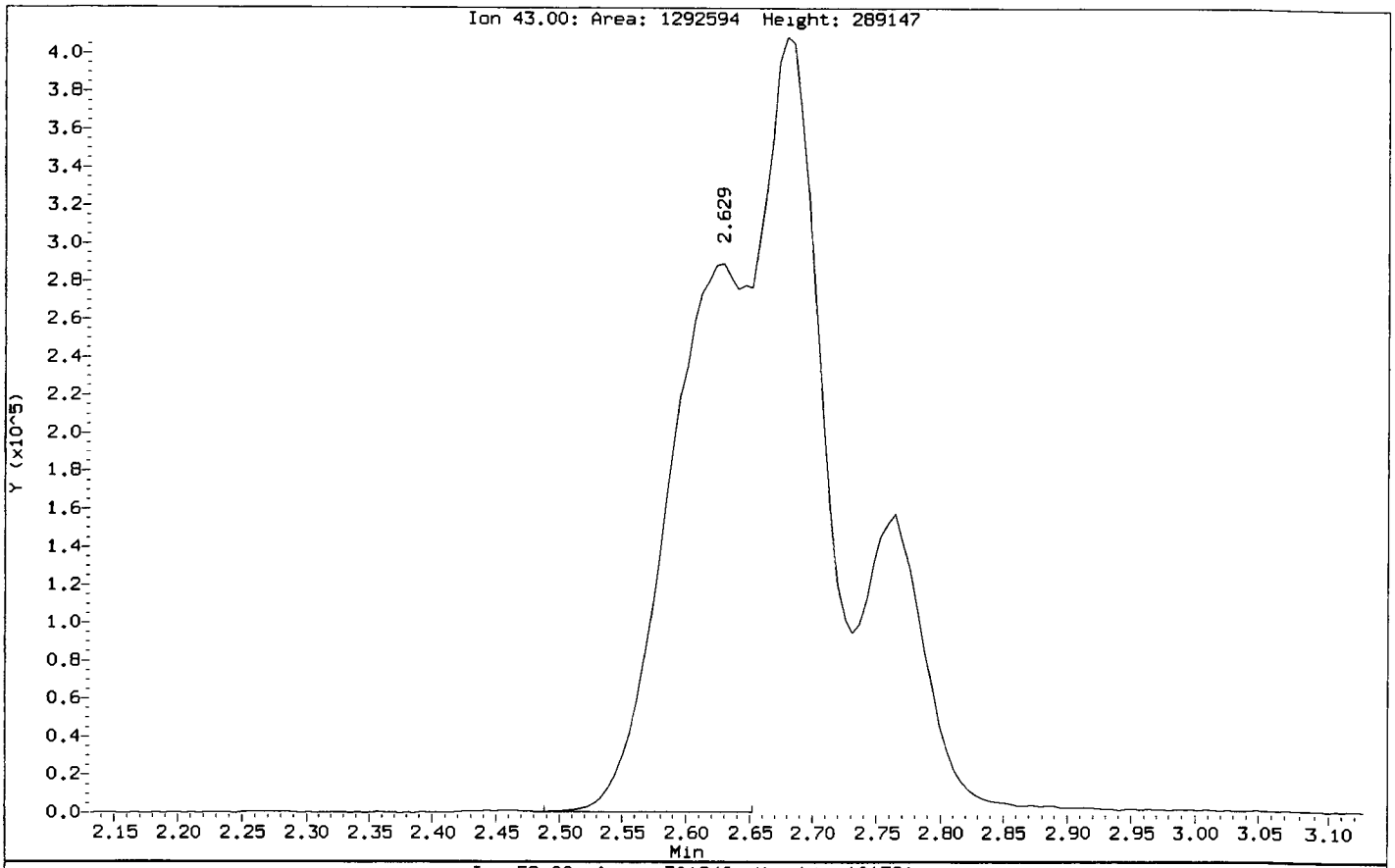
5. Other _____

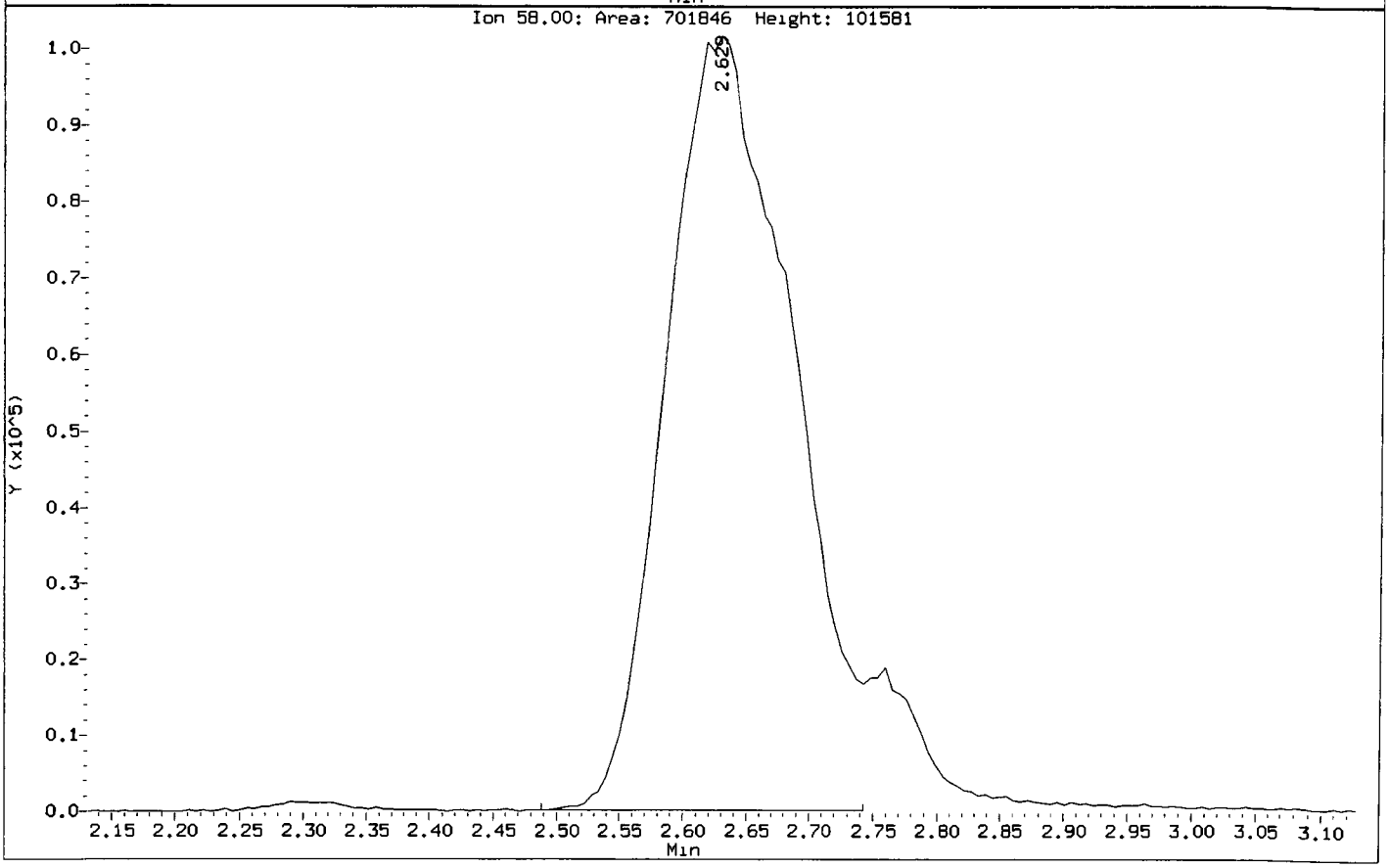
Analyst: MC Date: 4/23/13

PC
4/23/13

Data File: /chem1/nt5.i/18APR13.b/cc0418.d
Injection Date: 18-APR-2013 09:48
Instrument: nt5.i
Client Sample ID: CC0418

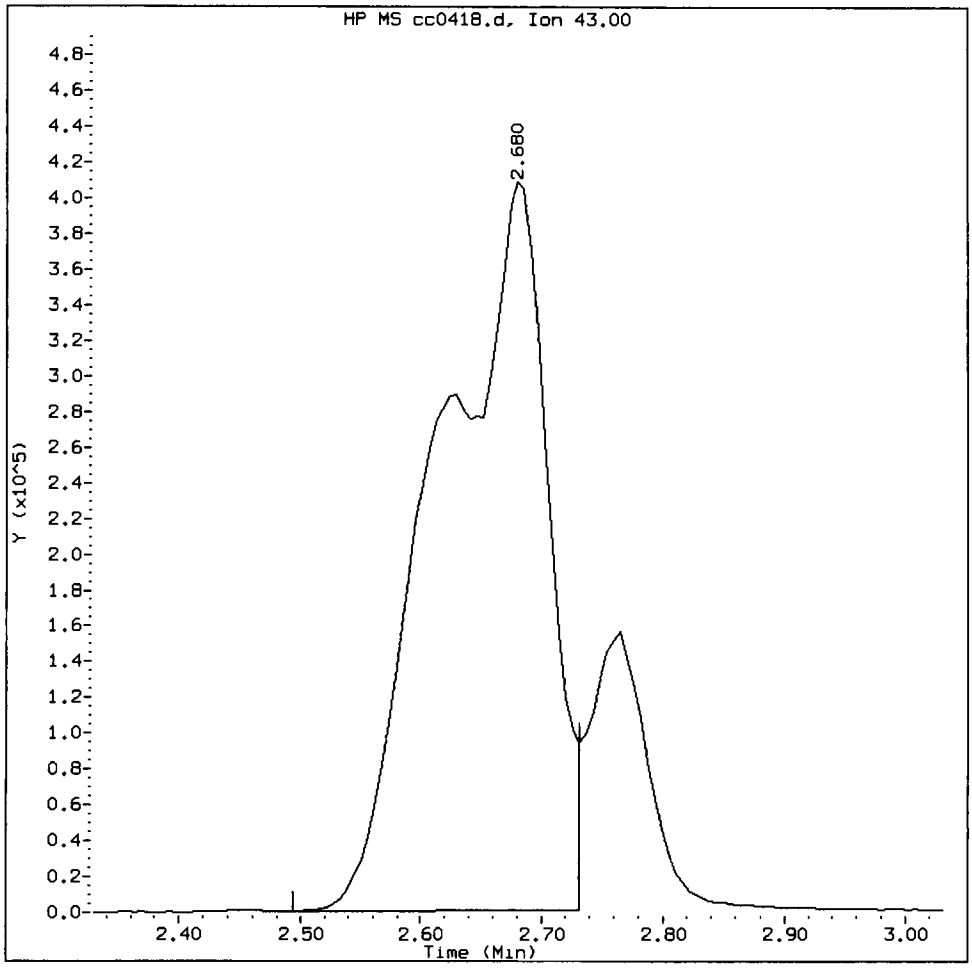
Compound: Acetone
CAS Number:





CC0418, /chem1/nt5.i/18APR13.b/cc0418.d

Acetone Amount: 443.93 Area: 2582379



MANUAL INTEGRATION for Acetone

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

5. Other _____

Analyst: PC Date: 4/23/13

CO-ELUTION SUMMARY FOR FILE - cc0418.d

Lab ID: CC0418, Method: VO121012S.m, Instrument: nt5.i, Date: 18-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PC 4/23/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/18APR13.b/lcs0418a.d
Lab Smp Id: LCS0418 Client Smp ID: LCS0418
Inj Date : 18-APR-2013 10:36
Operator : PC Inst ID: nt5.i
Smp Info : LCS0418,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/18APR13.b/V0121012S.m
Meth Date : 23-Apr-2013 11:50 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1	Dichlorodifluoromethane	85	1.045	1.068	(0.224)	605230	50.9389	50.939
2	Chloromethane	50	1.368	1.379	(0.294)	965199	46.3235	46.323(M)
3	Vinyl Chloride	62	1.215	1.243	(0.261)	986233	52.2171	52.217
4	Bromomethane	94	1.419	1.447	(0.304)	487562	53.1184	53.118
5	Chloroethane	64	1.509	1.532	(0.324)	581400	50.9149	50.915
6	Trichlorofluoromethane	101	1.600	1.628	(0.343)	1055817	51.7828	51.783
7	1,1-Dichloroethene	96	1.956	1.985	(0.420)	679319	53.1355	53.136
8	Carbon Disulfide	76	1.962	1.985	(0.421)	2309409	53.9155	53.916
9	112Trichloro122Trifluoroethane	101	2.001	2.030	(0.429)	627618	52.9669	52.967
10	Iodomethane	142	2.058	2.081	(0.442)	794823	51.5318	51.532
11	Bromoethane	108	2.154	2.183	(0.462)	439597	50.6692	50.669
12	Acrolein	56	2.267	2.290	(0.487)	608924	288.359	288.36
13	Methylene Chloride	84	2.431	2.454	(0.522)	708185	60.9248	60.925
14	Acetone	43	2.658	2.680	(0.570)	1926682	332.583	332.58(RM)
15	Trans-1,2-Dichloroethene	96	2.567	2.590	(0.551)	754504	53.3952	53.395

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	16 Methyl tert butyl ether	73	2.742	2.765	(0.588)	2240631	54.3363	54.336
	17 1,1-Dichloroethane	63	3.184	3.206	(0.683)	1530549	51.6369	51.637
	18 Acrylonitrile	53	3.291	3.320	(0.706)	293832	51.0724	51.072
	19 Vinyl Acetate	43	3.523	3.540	(0.756)	1872899	55.6619	55.662
	20 Cis-1,2-Dichloroethene	96	3.732	3.749	(0.801)	813986	51.3724	51.372
	22 2,2-Dichloropropane	77	3.829	3.846	(0.822)	1185343	52.1093	52.109
	23 Bromochloromethane	128	3.913	3.930	(0.840)	346038	50.3567	50.357
	24 Chloroform	83	4.015	4.032	(0.862)	1350889	51.1502	51.150
	25 Carbon Tetrachloride	117	4.106	4.123	(0.803)	1090041	49.6305	49.631
$	27 Dibromofluoromethane	111	4.185	4.196	(0.898)	858686	53.4052	53.405
	26 1,1,1-Trichloroethane	97	4.174	4.191	(0.896)	1276536	51.6298	51.630
	28 1,1-Dichloropropene	75	4.298	4.309	(0.841)	1175401	48.1548	48.155
	29 2-Butanone	72	4.383	4.389	(0.941)	452023	271.094	271.09
	30 Benzene	78	4.524	4.536	(0.885)	3364338	51.1379	51.138
*	31 Pentafluorobenzene	168	4.660	4.672	(1.000)	1479359	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.666	(0.999)	948876	51.9339	51.934
	33 1,2-Dichloroethane	62	4.717	4.722	(0.923)	1083909	48.8627	48.863
	34 Trichloroethene	95	5.056	5.068	(0.989)	830377	49.4262	49.426
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2730006	50.0000	
	37 Dibromomethane	93	5.412	5.418	(1.059)	436041	49.7697	49.770
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	927990	50.1310	50.131
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	1062075	49.7535	49.754
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.196)	559693	54.2011	54.201
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	1376415	51.4683	51.468
$	42 d8-Toluene	98	6.289	6.289	(1.230)	3478744	50.1880	50.188
	43 Toluene	92	6.329	6.335	(1.238)	2175475	49.1346	49.135
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	890391	49.3694	49.369
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.310)	1894917	282.444	282.44
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.309)	1268299	52.4442	52.444
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.334)	668980	51.1795	51.180
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	774422	50.3041	50.304
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	1225114	50.4499	50.450
	50 1,2-Dibromoethane	107	7.132	7.138	(1.395)	649461	50.9131	50.913
	51 2-Hexanone	43	7.409	7.409	(0.976)	3091706	273.466	273.47
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2688123	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.002)	2225536	49.7442	49.744
	54 Ethyl Benzene	91	7.658	7.658	(1.009)	3939169	52.0423	52.042
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	791683	49.1212	49.121
	56 m,p-xylene	106	7.788	7.788	(1.026)	3020357	104.197	104.20
	57 o-Xylene	106	8.150	8.151	(1.074)	1479616	50.8271	50.827
	58 Styrene	104	8.196	8.201	(1.080)	2499431	52.4937	52.494
	59 Bromoform	173	8.190	8.190	(0.847)	550657	50.5244	50.524
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3727353	51.8315	51.831
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1439839	50.0291	50.029
	63 Bromobenzene	156	8.739	8.739	(0.904)	915526	47.5265	47.526
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	4364086	51.6502	51.650
	65 1,1,2,2-Tetrachloroethane	83	8.863	8.869	(0.917)	875136	50.4458	50.446

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	66 2-Chloro Toluene	91	8.914	8.920	(0.922)	2711607	50.0185	50.019
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	3171521	51.4796	51.480
	68 1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	263354	50.4171	50.417
	69 Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	341902	47.9127	47.913
	70 4-Chloro Toluene	91	9.067	9.073	(0.938)	2830720	49.7418	49.742
	71 T-Butyl Benzene	119	9.270	9.276	(0.959)	2787813	50.9422	50.942
	72 1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	3134363	51.5333	51.533
	73 S-Butyl Benzene	105	9.435	9.440	(0.976)	4077467	52.3557	52.356
	74 4-Isopropyl Toluene	119	9.582	9.587	(0.991)	3450398	53.2577	53.258
	75 1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	1772708	48.9713	48.971
*	76 d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1472447	50.0000	
	77 1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	1808262	47.4882	47.488
	78 N-Butyl Benzene	91	9.966	9.972	(1.031)	3316345	52.8204	52.820
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1344146	50.0624	50.062
	80 1,2-Dichlorobenzene	146	10.057	10.063	(1.040)	1680667	47.1901	47.190
	81 1,2-Dibromo 3-Chloropropane	75	10.803	10.815	(1.118)	165808	49.0829	49.083
	82 Hexachloro 1,3-Butadiene	225	11.488	11.499	(1.188)	764514	48.7540	48.754
	83 1,2,4-Trichlorobenzene	180	11.471	11.488	(1.187)	1294670	48.7523	48.752
	84 Naphthalene	128	11.782	11.799	(1.219)	2851736	51.0091	51.009
	85 1,2,3-Trichlorobenzene	180	11.969	11.986	(1.238)	1171771	47.2346	47.235

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: nt5.i
Lab File ID: lcs0418a.d
Lab Smp Id: LCS0418
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 18-APR-2013
Calibration Time: 09:48
Client Smp ID: LCS0418
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	1616720	808360	3233440	1479359	-8.50
35 1,4-Difluorobenze	2842987	1421494	5685974	2730006	-3.97
52 d5-Chlorobenzene	2779083	1389542	5558166	2688123	-3.27
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1472447	-3.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.25
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 18APR13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0418 Client Smp ID: LCS0418
Level: LOW Operator: PC
Data Type: MS DATA SampleType: LCS
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	50.939	101.88	53-148
2	Chloromethane	50.000	46.323	92.65	64-125
3	Vinyl Chloride	50.000	52.217	104.43	63-137
4	Bromomethane	50.000	53.118	106.24	57-136
5	Chloroethane	50.000	50.915	101.83	64-131
6	Trichlorofluoromet	50.000	51.783	103.57	69-132
12	Acrolein	250.00	288.36	115.34	54-137
9	112Trichloro122Tri	50.000	52.967	105.93	74-130
14	Acetone	250.00	332.58	133.03*	60-131
7	1,1-Dichloroethene	50.000	53.136	106.27	75-126
11	Bromoethane	50.000	50.669	101.34	76-126
10	Iodomethane	50.000	51.532	103.06	65-139
13	Methylene Chloride	50.000	60.925	121.85	70-123
8	Carbon Disulfide	50.000	53.916	107.83	71-129
18	Acrylonitrile	50.000	51.072	102.14	67-125
15	Trans-1,2-Dichloro	50.000	53.395	106.79	80-120
19	Vinyl Acetate	50.000	55.662	111.32	60-136
17	1,1-Dichloroethane	50.000	51.637	103.27	80-120
29	2-Butanone	250.00	271.09	108.44	70-120
22	2,2-Dichloropropan	50.000	52.109	104.22	74-123
20	Cis-1,2-Dichloroet	50.000	51.372	102.74	80-120
24	Chloroform	50.000	51.150	102.30	80-120
23	Bromochloromethane	50.000	50.357	100.71	80-120
26	1,1,1-Trichloroeth	50.000	51.630	103.26	77-121
28	1,1-Dichloropropen	50.000	48.155	96.31	80-120
25	Carbon Tetrachlori	50.000	49.631	99.26	77-122
33	1,2-Dichloroethane	50.000	48.863	97.73	76-120
30	Benzene	50.000	51.138	102.28	80-120
34	Trichloroethene	50.000	49.426	98.85	80-120
38	1,2-Dichloropropan	50.000	50.131	100.26	80-120
39	Bromodichlorometha	50.000	49.754	99.51	77-121
37	Dibromomethane	50.000	49.770	99.54	80-120
40	2-Chloroethyl Viny	50.000	54.201	108.40	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	282.44	112.98	67-120
41 Cis 1,3-dichloropr	50.000	51.468	102.94	74-120
43 Toluene	50.000	49.135	98.27	80-120
46 Trans 1,3-Dichloro	50.000	52.444	104.89	65-120
51 2-Hexanone	250.00	273.47	109.39	65-130
47 1,1,2-Trichloroeth	50.000	51.180	102.36	80-120
49 1,3-Dichloropropan	50.000	50.450	100.90	80-120
44 Tetrachloroethene	50.000	49.369	98.74	80-121
48 Chlorodibromometha	50.000	50.304	100.61	64-120
50 1,2-Dibromoethane	50.000	50.913	101.83	75-120
53 Chlorobenzene	50.000	49.744	99.49	80-120
55 1,1,1,2-Tetrachlor	50.000	49.121	98.24	69-121
54 Ethyl Benzene	50.000	52.042	104.08	80-127
56 m,p-xylene	100.00	104.20	104.20	80-125
57 o-Xylene	50.000	50.827	101.65	78-120
58 Styrene	50.000	52.494	104.99	80-123
60 Isopropyl Benzene	50.000	51.831	103.66	80-127
59 Bromoform	50.000	50.524	101.05	60-120
65 1,1,2,2-Tetrachlor	50.000	50.446	100.89	74-120
68 1,2,3-Trichloropro	50.000	50.417	100.83	72-121
69 Trans-1,4-Dichloro	50.000	47.913	95.83	65-126
64 N-Propyl Benzene	50.000	51.650	103.30	80-132
63 Bromobenzene	50.000	47.526	95.05	80-120
67 1,3,5-Trimethyl Be	50.000	51.480	102.96	80-125
66 2-Chloro Toluene	50.000	50.019	100.04	80-125
70 4-Chloro Toluene	50.000	49.742	99.48	80-127
71 T-Butyl Benzene	50.000	50.942	101.88	87-122
72 1,2,4-Trimethylben	50.000	51.533	103.07	80-126
73 S-Butyl Benzene	50.000	52.356	104.71	80-134
74 4-Isopropyl Toluen	50.000	53.258	106.52	80-131
75 1,3-Dichlorobenzen	50.000	48.971	97.94	80-120
77 1,4-Dichlorobenzen	50.000	47.488	94.98	80-120
78 N-Butyl Benzene	50.000	52.820	105.64	80-138
80 1,2-Dichlorobenzen	50.000	47.190	94.38	80-120
81 1,2-Dibromo 3-Chlo	50.000	49.083	98.17	59-120
83 1,2,4-Trichloroben	50.000	48.752	97.50	78-130
82 Hexachloro 1,3-But	50.000	48.754	97.51	76-129
84 Naphthalene	50.000	51.009	102.02	66-120
85 1,2,3-Trichloroben	50.000	47.235	94.47	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	53.405	106.81	70-130

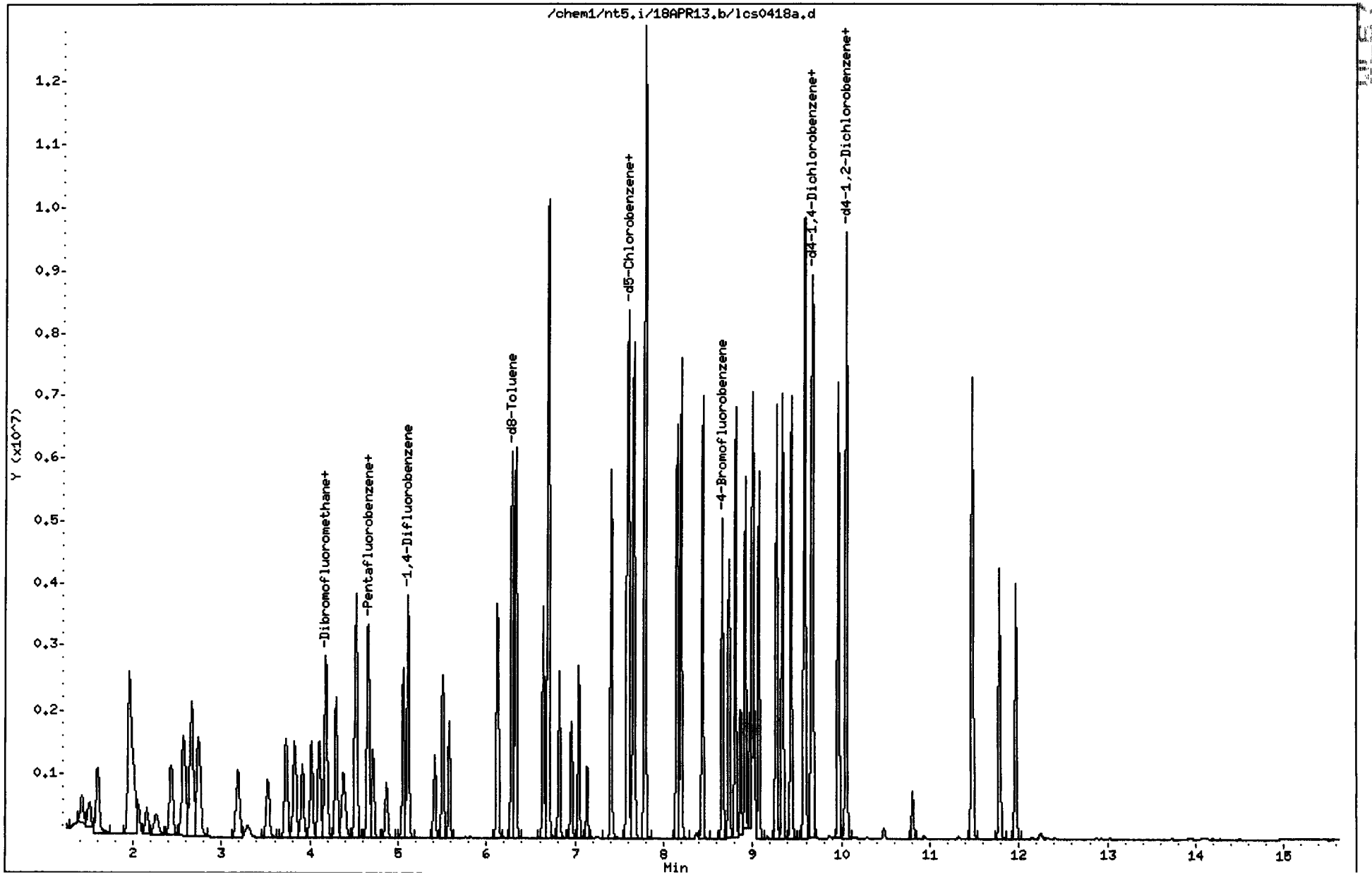
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	51.934	103.87	80-149
$ 42 d8-Toluene	50.000	50.188	100.38	77-120
$ 62 4-Bromofluorobenze	50.000	50.029	100.06	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.062	100.12	80-120

Data File: /chem1/nt5.i/18APR13.b/lcs0418a.d
Date : 18-APR-2013 10:36
Client ID: LCS0418
Sample Info: LCS0418,5,5,0,

Instrument: nt5.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



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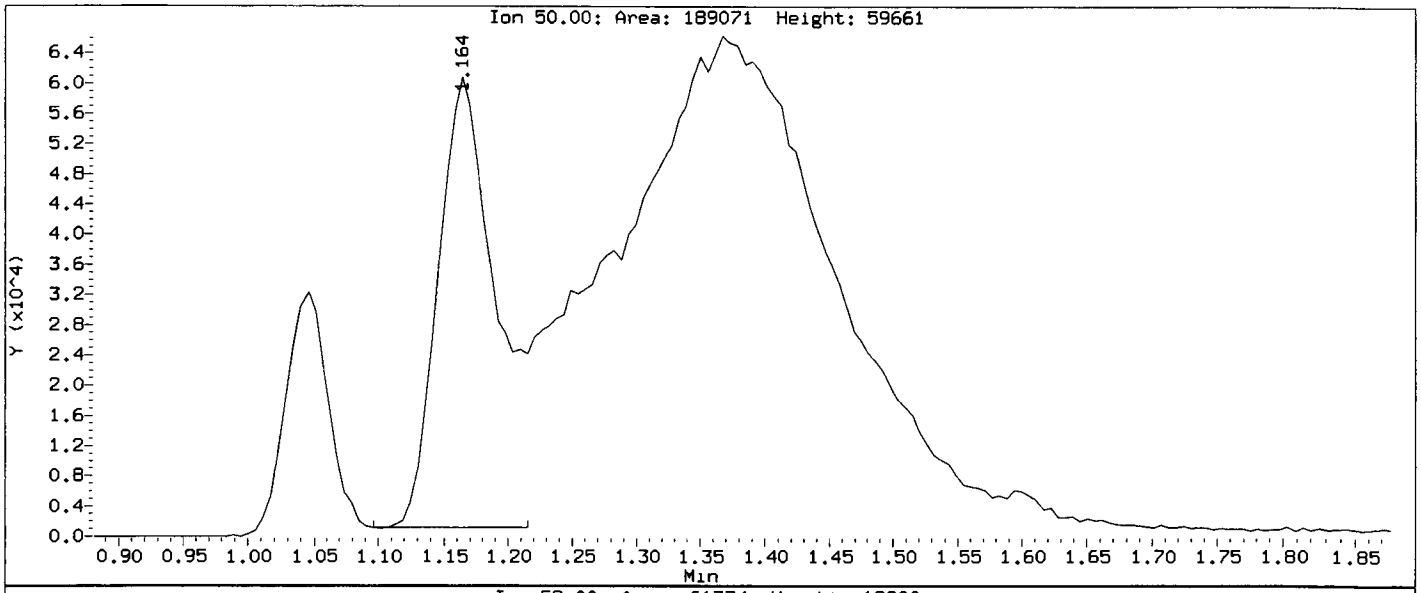
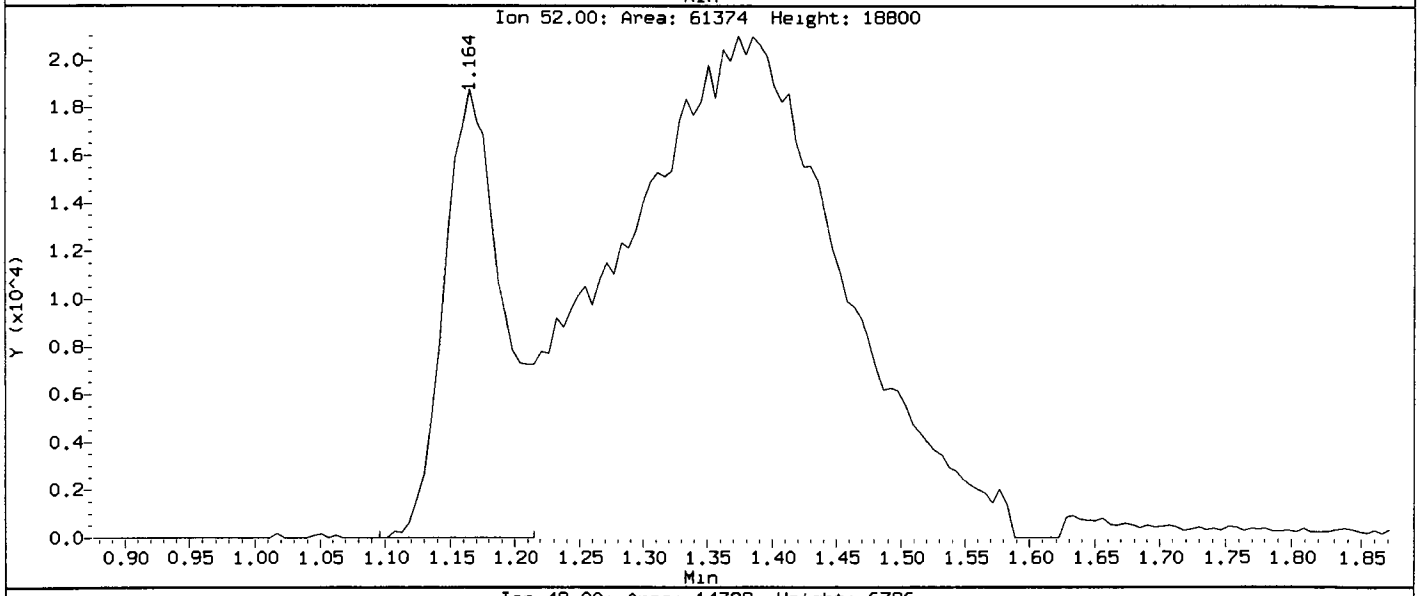
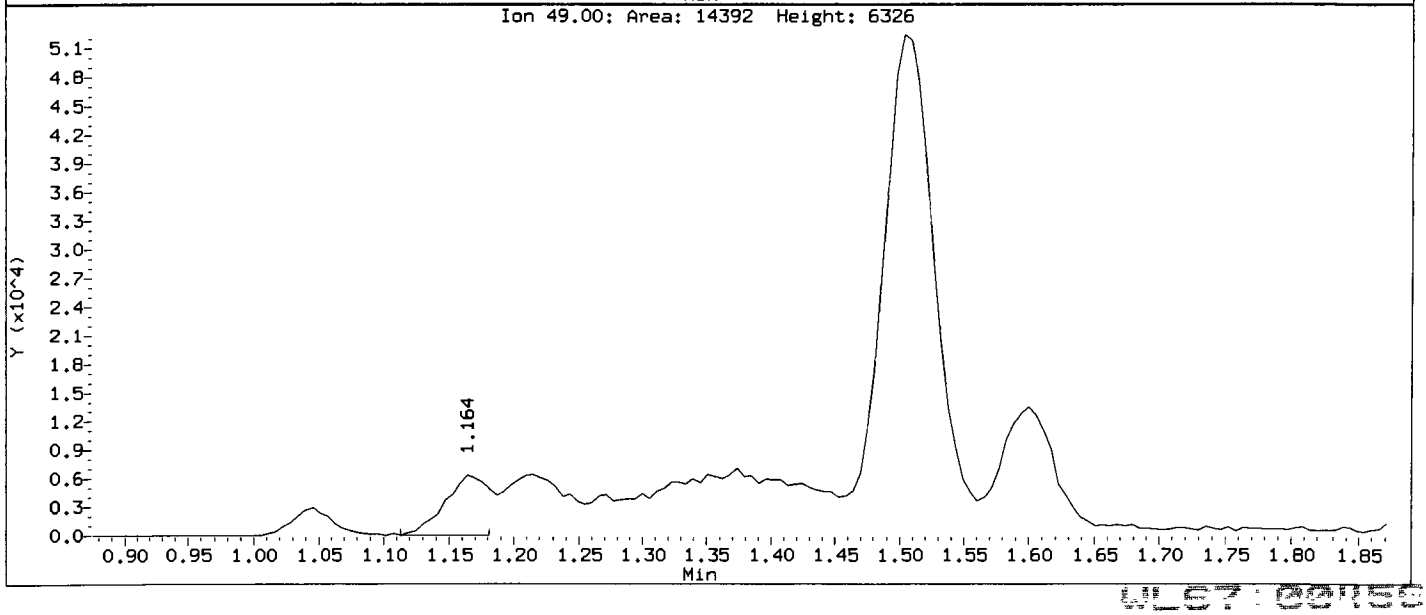
4/23/13

Data File: /chem1/nt5.i/18APR13.b/lcs0418a.d
Injection Date: 18-APR-2013 10:36
Instrument: nt5.i
Client Sample ID: LCS0418

Compound: Chloromethane
CAS Number:







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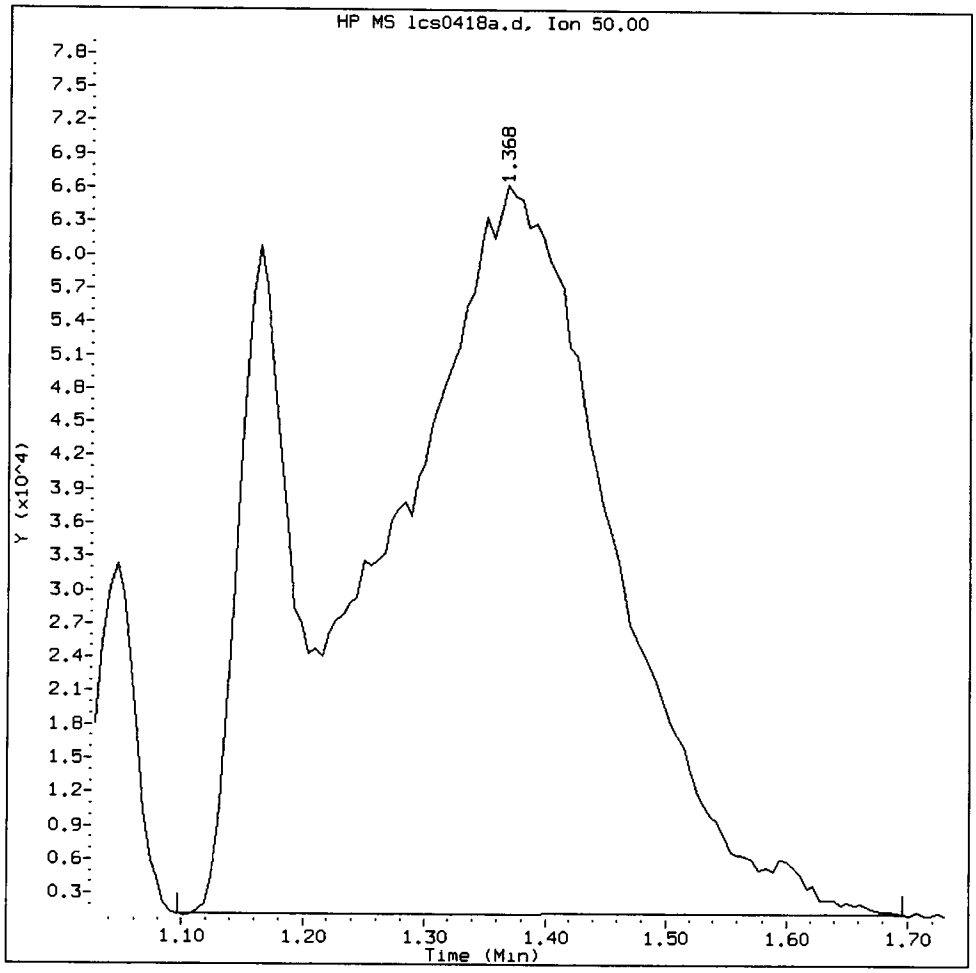
Chloromethane Amount: 46.32 Area: 965199



MANUAL INTEGRATION for Chloromethane

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

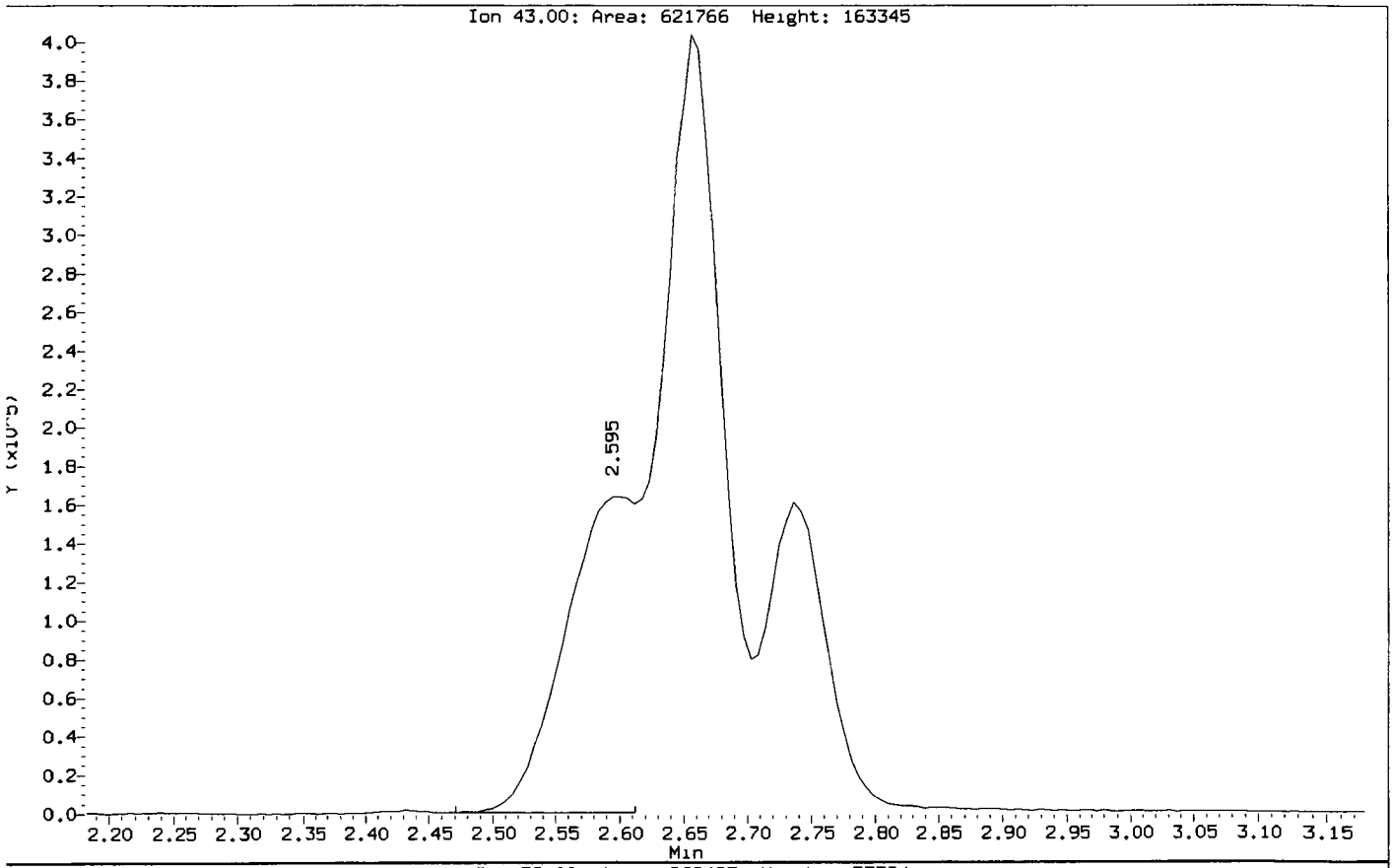
5. Other _____

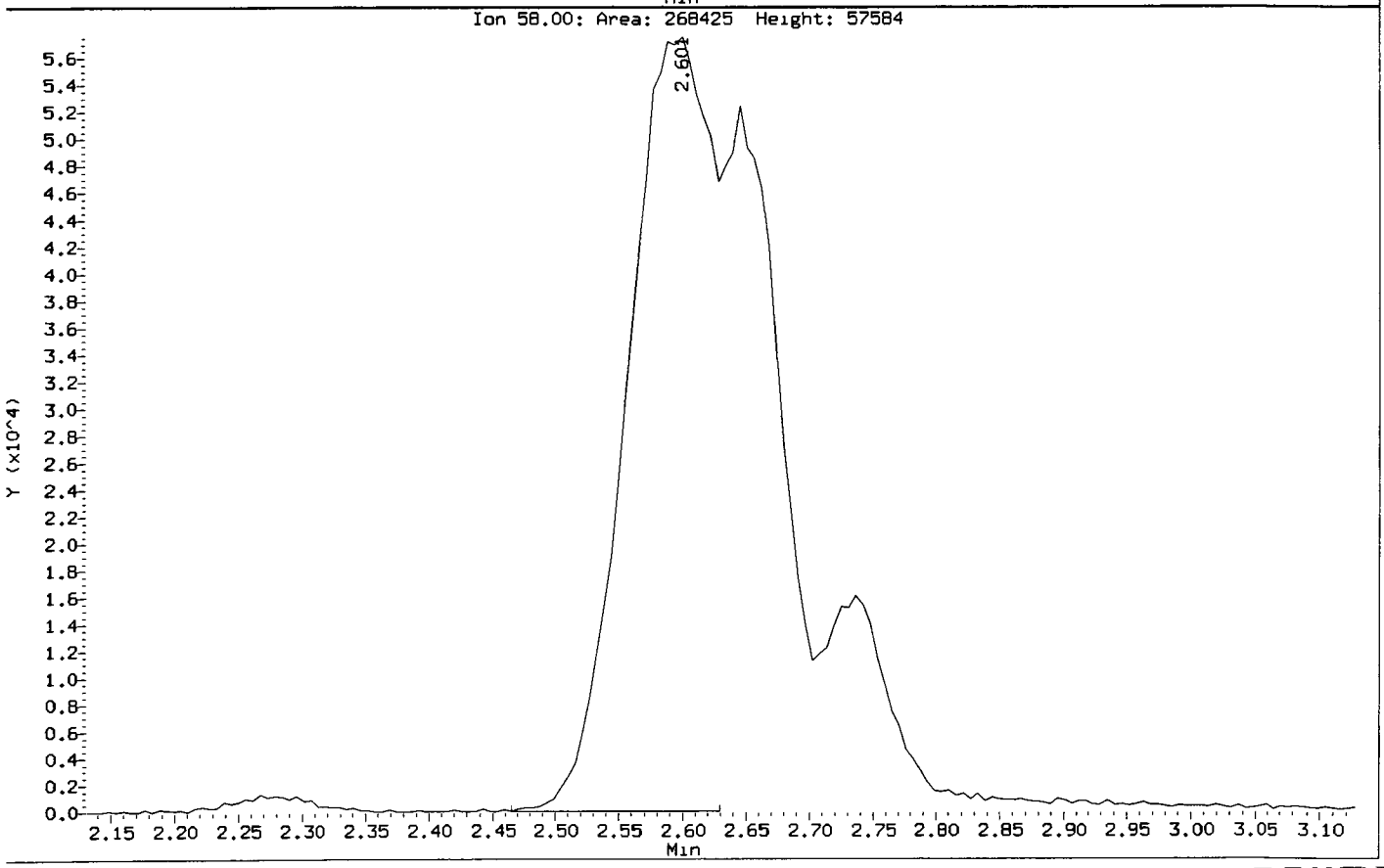
Analyst: PC Date: 4/23/13

Data File: /chem1/nt5.i/18APR13.b/lcs0418a.d
Injection Date: 18-APR-2013 10:36
Instrument: nt5.i
Client Sample ID: LCS0418

Compound: Acetone
CAS Number:

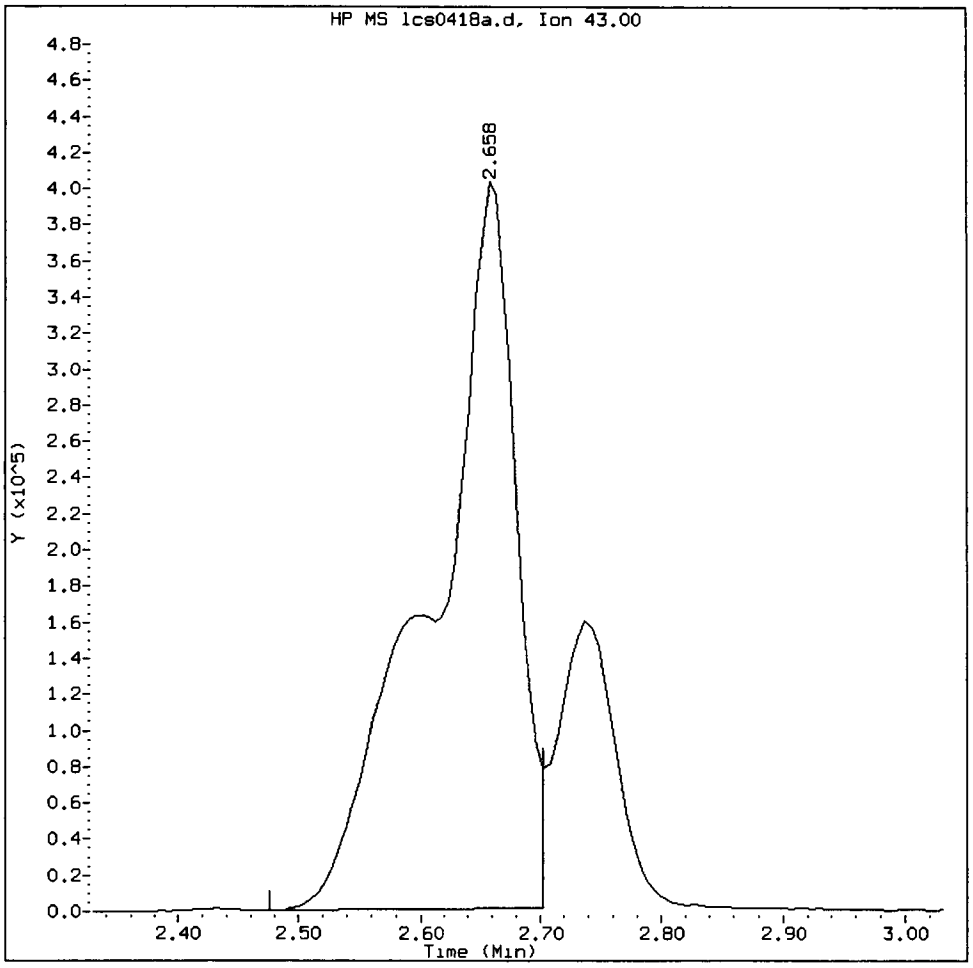
PC 4/23/13





LCS0418, /chem1/nt5.i/18APR13.b/lcs0418a.d

Acetone Amount: 332.58 Area: 1926682



MANUAL INTEGRATION for Acetone

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

5. Other _____

Analyst: PC Date: 4/23/13

CO-ELUTION SUMMARY FOR FILE - lcs0418a.d

Lab ID: LCS0418, Method: VO121012S.m, Instrument: nt5.i, Date: 18-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PC 4/23/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/18APR13.b/lcs0418.d
Lab Smp Id: LCS0418 Client Smp ID: LCS0418
Inj Date : 18-APR-2013 10:12
Operator : PC Inst ID: nt5.i
Smp Info : LCS0418,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/18APR13.b/VO121012S.m
Meth Date : 23-Apr-2013 11:50 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	1.074	1.068	(0.230)	513365	45.6096	45.610
2 Chloromethane	50	1.385	1.379	(0.296)	818110	41.4474	41.447(M)
3 Vinyl Chloride	62	1.244	1.243	(0.266)	805900	45.0418	45.042
4 Bromomethane	94	1.447	1.447	(0.310)	415314	47.7632	47.763
5 Chloroethane	64	1.538	1.532	(0.329)	491800	45.4632	45.463
6 Trichlorofluoromethane	101	1.628	1.628	(0.349)	869565	45.0195	45.019
7 1,1-Dichloroethene	96	1.985	1.985	(0.425)	547169	45.1787	45.179
8 Carbon Disulfide	76	1.985	1.985	(0.425)	1857589	45.7787	45.779
9 112Trichloro122Trifluoroethane	101	2.030	2.030	(0.434)	503733	44.8756	44.876
10 Iodomethane	142	2.081	2.081	(0.445)	637863	43.6549	43.655
11 Bromoethane	108	2.177	2.183	(0.466)	359699	43.7652	43.765
12 Acrolein	56	2.284	2.290	(0.489)	580923	290.396	290.40
13 Methylene Chloride	84	2.454	2.454	(0.525)	640109	58.3563	58.356
14 Acetone	43	2.686	2.680	(0.575)	1966644	355.813	355.81(RM)
15 Trans-1,2-Dichloroethene	96	2.596	2.590	(0.556)	643960	48.1062	48.106

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
16	Methyl tert butyl ether	73	2.765	2.765	(0.592)	2092512	53.5659	53.566
17	1,1-Dichloroethane	63	3.207	3.206	(0.686)	1299440	46.2775	46.277
18	Acrylonitrile	53	3.320	3.320	(0.711)	299177	54.8929	54.893
19	Vinyl Acetate	43	3.540	3.540	(0.758)	1772557	55.6089	55.609
20	Cis-1,2-Dichloroethene	96	3.750	3.749	(0.803)	702499	46.8014	46.801
22	2,2-Dichloropropane	77	3.846	3.846	(0.823)	1001136	46.4585	46.458
23	Bromochloromethane	128	3.936	3.930	(0.843)	317600	48.7882	48.788
24	Chloroform	83	4.032	4.032	(0.863)	1173568	46.9069	46.907
25	Carbon Tetrachloride	117	4.123	4.123	(0.805)	898439	42.6878	42.688
$ 27	Dibromofluoromethane	111	4.202	4.196	(0.899)	830159	54.5019	54.502
26	1,1,1-Trichloroethane	97	4.191	4.191	(0.897)	1056897	45.1233	45.123
28	1,1-Dichloropropene	75	4.310	4.309	(0.841)	986859	42.1908	42.191
29	2-Butanone	72	4.394	4.389	(0.941)	472175	298.925	298.93
30	Benzene	78	4.536	4.536	(0.885)	2892647	45.8826	45.883
* 31	Pentafluorobenzene	168	4.672	4.672	(1.000)	1401434	50.0000	
$ 32	d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	943236	54.4958	54.496
33	1,2-Dichloroethane	62	4.728	4.722	(0.923)	976946	45.9583	45.958
34	Trichloroethene	95	5.068	5.068	(0.989)	706119	43.8600	43.860
* 35	1,4-Difluorobenzene	114	5.124	5.118	(1.000)	2616101	50.0000	
37	Dibromomethane	93	5.418	5.418	(1.057)	406386	48.4045	48.404
38	1,2-Dichloropropane	63	5.515	5.514	(1.076)	801709	45.1948	45.195
39	Bromodichloromethane	83	5.588	5.588	(1.091)	940873	45.9948	45.995
40	2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.194)	530840	53.6452	53.645
41	Cis 1,3-dichloropropene	75	6.137	6.131	(1.198)	1236215	48.2385	48.239
$ 42	d8-Toluene	98	6.290	6.289	(1.227)	3380725	50.8975	50.897
43	Toluene	92	6.335	6.335	(1.236)	1862480	43.8969	43.897
44	Tetrachloroethene	166	6.646	6.646	(0.875)	756967	43.0120	43.012
45	4-Methyl-2-Pentanone	58	6.697	6.697	(1.307)	1864488	290.008	290.01
46	Trans 1,3-Dichloropropene	75	6.697	6.697	(1.307)	1160577	50.0794	50.079
47	1,1,2-Trichloroethane	97	6.827	6.827	(1.332)	622379	49.6875	49.687
48	Chlorodibromomethane	129	6.963	6.963	(0.917)	710374	47.2877	47.288
49	1,3-Dichloropropane	76	7.048	7.042	(0.928)	1142356	48.2082	48.208
50	1,2-Dibromoethane	107	7.138	7.138	(1.393)	612135	50.0764	50.076
51	2-Hexanone	43	7.410	7.409	(0.975)	3057924	277.184	277.18
* 52	d5-Chlorobenzene	117	7.596	7.596	(1.000)	2623092	50.0000	
53	Chlorobenzene	112	7.608	7.607	(1.001)	1947348	44.6053	44.605
54	Ethyl Benzene	91	7.658	7.658	(1.008)	3425699	46.3806	46.381
55	1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	701799	44.6237	44.624
56	m,p-xylene	106	7.789	7.788	(1.025)	2619794	92.6192	92.619
57	o-Xylene	106	8.151	8.151	(1.073)	1283886	45.1969	45.197
58	Styrene	104	8.202	8.201	(1.080)	2199336	47.3362	47.336
59	Bromoform	173	8.190	8.190	(0.847)	522240	49.5285	49.529
60	Isopropyl Benzene	105	8.439	8.439	(0.873)	3231894	46.4532	46.453
$ 62	4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1414549	50.3689	50.369
63	Bromobenzene	156	8.739	8.739	(0.904)	816736	43.8240	43.824
64	N-Propyl Benzene	91	8.807	8.807	(0.911)	3819908	46.7302	46.730
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	832131	49.5800	49.580

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	2363534	45.0642	45.064
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	2749949	46.1379	46.138
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	253856	50.2332	50.233
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	330080	47.8117	47.812
70	4-Chloro Toluene	91	9.073	9.073	(0.939)	2487595	45.1824	45.182
71	T-Butyl Benzene	119	9.271	9.276	(0.959)	2402308	45.3741	45.374
72	1,2,4-Trimethylbenzene	105	9.339	9.338	(0.966)	2734749	46.4752	46.475
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	3519555	46.7118	46.712
74	4-Isopropyl Toluene	119	9.582	9.587	(0.991)	2982318	47.5808	47.581
75	1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	1561760	44.5948	44.595
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1424539	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	1605014	43.5681	43.568
78	N-Butyl Benzene	91	9.966	9.972	(1.031)	2864638	47.1604	47.160
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1321242	50.8643	50.864
80	1,2-Dichlorobenzene	146	10.057	10.063	(1.040)	1511699	43.8733	43.873
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.815	(1.118)	162318	49.6657	49.666
82	Hexachloro 1,3-Butadiene	225	11.488	11.499	(1.188)	636140	41.9317	41.932
83	1,2,4-Trichlorobenzene	180	11.477	11.488	(1.187)	1130350	43.9961	43.996
84	Naphthalene	128	11.788	11.799	(1.219)	2617856	47.9586	47.959
85	1,2,3-Trichlorobenzene	180	11.969	11.986	(1.238)	1027224	42.8004	42.800

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: nt5.i
Lab File ID: lcs0418.d
Lab Smp Id: LCS0418
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 18-APR-2013
Calibration Time: 09:48
Client Smp ID: LCS0418
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	1616720	808360	3233440	1401434	-13.32
35 1,4-Difluorobenze	2842987	1421494	5685974	2616101	-7.98
52 d5-Chlorobenzene	2779083	1389542	5558166	2623092	-5.61
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1424539	-6.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 18APR13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0418 Client Smp ID: LCS0418
Level: LOW Operator: PC
Data Type: MS DATA SampleType: LCS
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	45.610	91.22	53-148
2	Chloromethane	50.000	41.447	82.89	64-125
3	Vinyl Chloride	50.000	45.042	90.08	63-137
4	Bromomethane	50.000	47.763	95.53	57-136
5	Chloroethane	50.000	45.463	90.93	64-131
6	Trichlorofluoromet	50.000	45.019	90.04	69-132
12	Acrolein	250.00	290.40	116.16	54-137
9	112Trichloro122Tri	50.000	44.876	89.75	74-130
14	Acetone	250.00	355.81	142.33*	60-131
7	1,1-Dichloroethene	50.000	45.179	90.36	75-126
11	Bromoethane	50.000	43.765	87.53	76-126
10	Iodomethane	50.000	43.655	87.31	65-139
13	Methylene Chloride	50.000	58.356	116.71	70-123
8	Carbon Disulfide	50.000	45.779	91.56	71-129
18	Acrylonitrile	50.000	54.893	109.79	67-125
15	Trans-1,2-Dichloro	50.000	48.106	96.21	80-120
19	Vinyl Acetate	50.000	55.609	111.22	60-136
17	1,1-Dichloroethane	50.000	46.277	92.55	80-120
29	2-Butanone	250.00	298.93	119.57	70-120
22	2,2-Dichloropropan	50.000	46.458	92.92	74-123
20	Cis-1,2-Dichloroet	50.000	46.801	93.60	80-120
24	Chloroform	50.000	46.907	93.81	80-120
23	Bromochloromethane	50.000	48.788	97.58	80-120
26	1,1,1-Trichloroeth	50.000	45.123	90.25	77-121
28	1,1-Dichloropropen	50.000	42.191	84.38	80-120
25	Carbon Tetrachlori	50.000	42.688	85.38	77-122
33	1,2-Dichloroethane	50.000	45.958	91.92	76-120
30	Benzene	50.000	45.883	91.77	80-120
34	Trichloroethene	50.000	43.860	87.72	80-120
38	1,2-Dichloropropan	50.000	45.195	90.39	80-120
39	Bromodichlorometha	50.000	45.995	91.99	77-121
37	Dibromomethane	50.000	48.404	96.81	80-120
40	2-Chloroethyl Viny	50.000	53.645	107.29	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	290.01	116.00	67-120
41 Cis 1,3-dichloropr	50.000	48.239	96.48	74-120
43 Toluene	50.000	43.897	87.79	80-120
46 Trans 1,3-Dichloro	50.000	50.079	100.16	65-120
51 2-Hexanone	250.00	277.18	110.87	65-130
47 1,1,2-Trichloroeth	50.000	49.687	99.37	80-120
49 1,3-Dichloropropan	50.000	48.208	96.42	80-120
44 Tetrachloroethene	50.000	43.012	86.02	80-121
48 Chlorodibromometha	50.000	47.288	94.58	64-120
50 1,2-Dibromoethane	50.000	50.076	100.15	75-120
53 Chlorobenzene	50.000	44.605	89.21	80-120
55 1,1,1,2-Tetrachlor	50.000	44.624	89.25	69-121
54 Ethyl Benzene	50.000	46.381	92.76	80-127
56 m,p-xylene	100.00	92.619	92.62	80-125
57 o-Xylene	50.000	45.197	90.39	78-120
58 Styrene	50.000	47.336	94.67	80-123
60 Isopropyl Benzene	50.000	46.453	92.91	80-127
59 Bromoform	50.000	49.529	99.06	60-120
65 1,1,2,2-Tetrachlor	50.000	49.580	99.16	74-120
68 1,2,3-Trichloropro	50.000	50.233	100.47	72-121
69 Trans-1,4-Dichloro	50.000	47.812	95.62	65-126
64 N-Propyl Benzene	50.000	46.730	93.46	80-132
63 Bromobenzene	50.000	43.824	87.65	80-120
67 1,3,5-Trimethyl Be	50.000	46.138	92.28	80-125
66 2-Chloro Toluene	50.000	45.064	90.13	80-125
70 4-Chloro Toluene	50.000	45.182	90.36	80-127
71 T-Butyl Benzene	50.000	45.374	90.75	87-122
72 1,2,4-Trimethylben	50.000	46.475	92.95	80-126
73 S-Butyl Benzene	50.000	46.712	93.42	80-134
74 4-Isopropyl Toluen	50.000	47.581	95.16	80-131
75 1,3-Dichlorobenzen	50.000	44.595	89.19	80-120
77 1,4-Dichlorobenzen	50.000	43.568	87.14	80-120
78 N-Butyl Benzene	50.000	47.160	94.32	80-138
80 1,2-Dichlorobenzen	50.000	43.873	87.75	80-120
81 1,2-Dibromo 3-Chlo	50.000	49.666	99.33	59-120
83 1,2,4-Trichloroben	50.000	43.996	87.99	78-130
82 Hexachloro 1,3-But	50.000	41.932	83.86	76-129
84 Naphthalene	50.000	47.959	95.92	66-120
85 1,2,3-Trichloroben	50.000	42.800	85.60	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.502	109.00	70-130

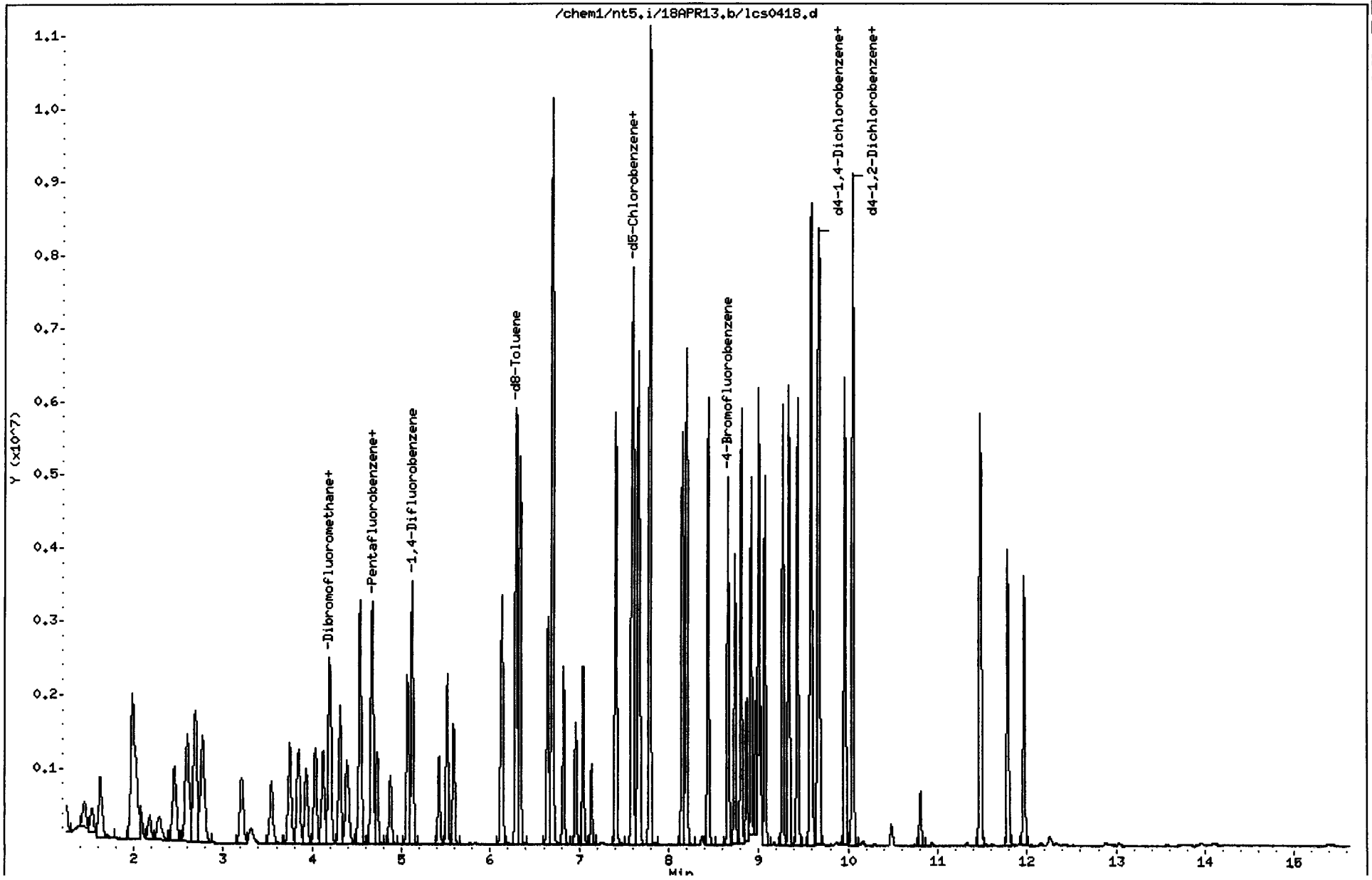
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	54.496	108.99	80-149
$ 42 d8-Toluene	50.000	50.897	101.79	77-120
$ 62 4-Bromofluorobenze	50.000	50.369	100.74	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.864	101.73	80-120

Data File: /chem1/nt5.i/18APR13.b/lcs0418.d
Date : 18-APR-2013 10:12
Client ID: LCS0418
Sample Info: LCS0418,5,5,0,

Instrument: nt5.i

Operator: PC
Column diameter: 0.18

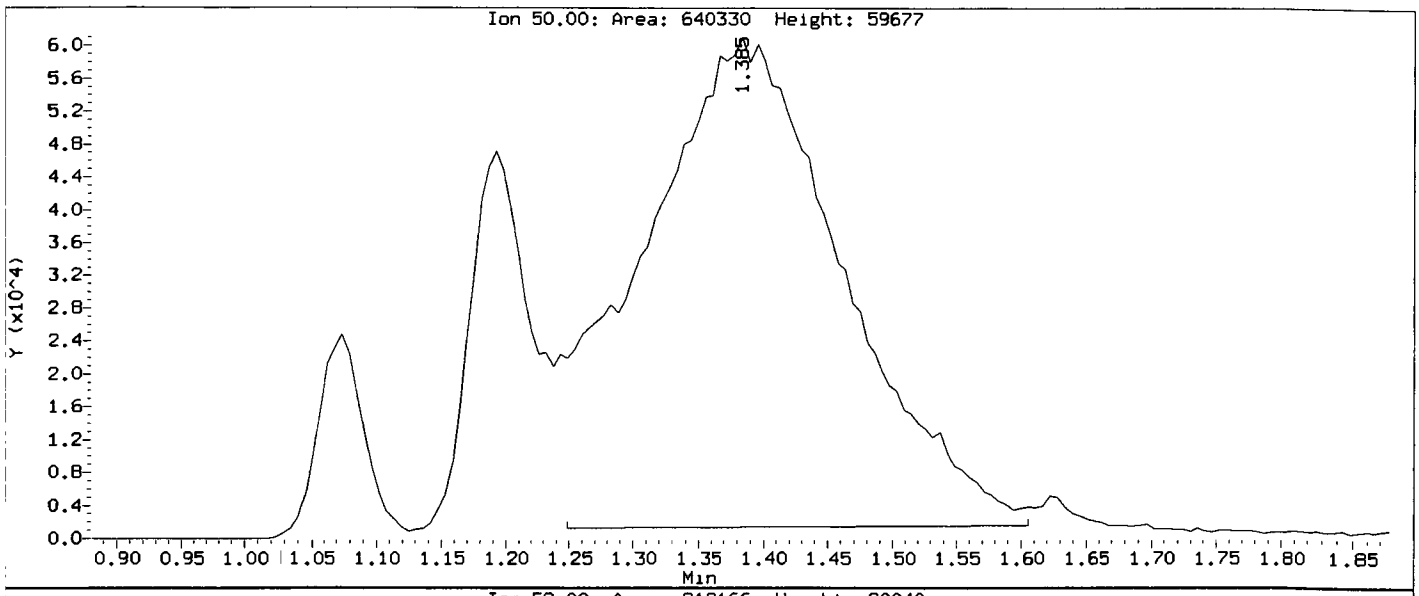
Column phase: RTXVMS

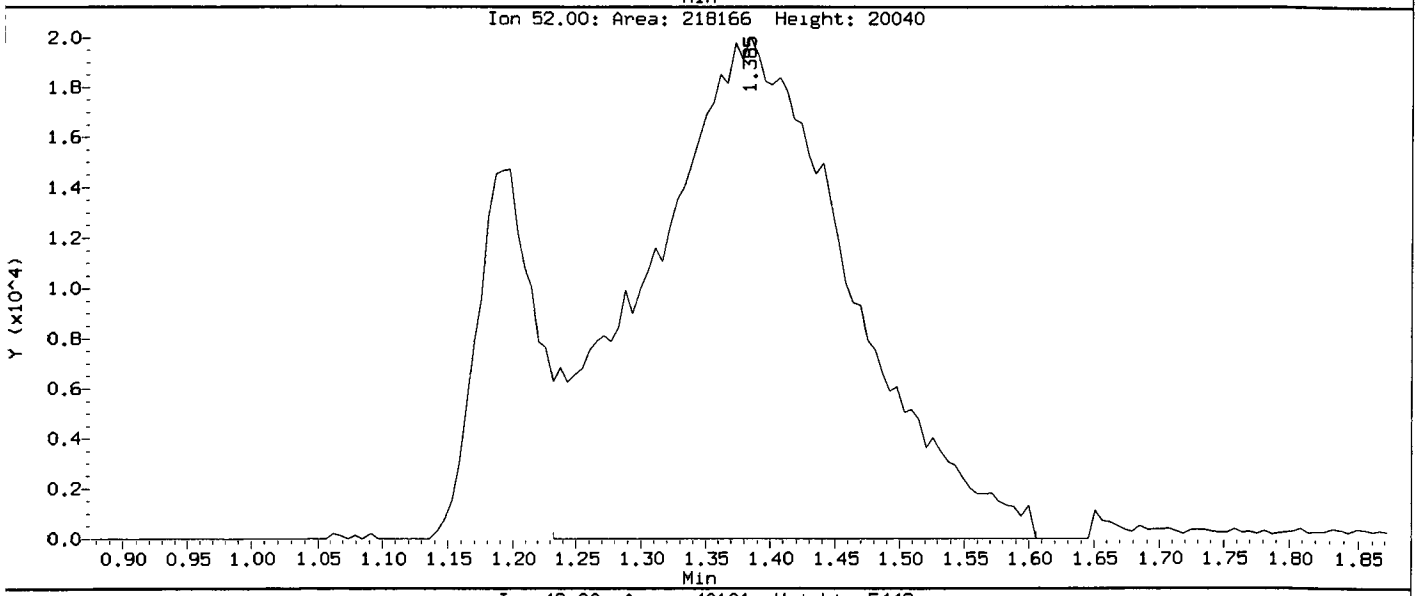


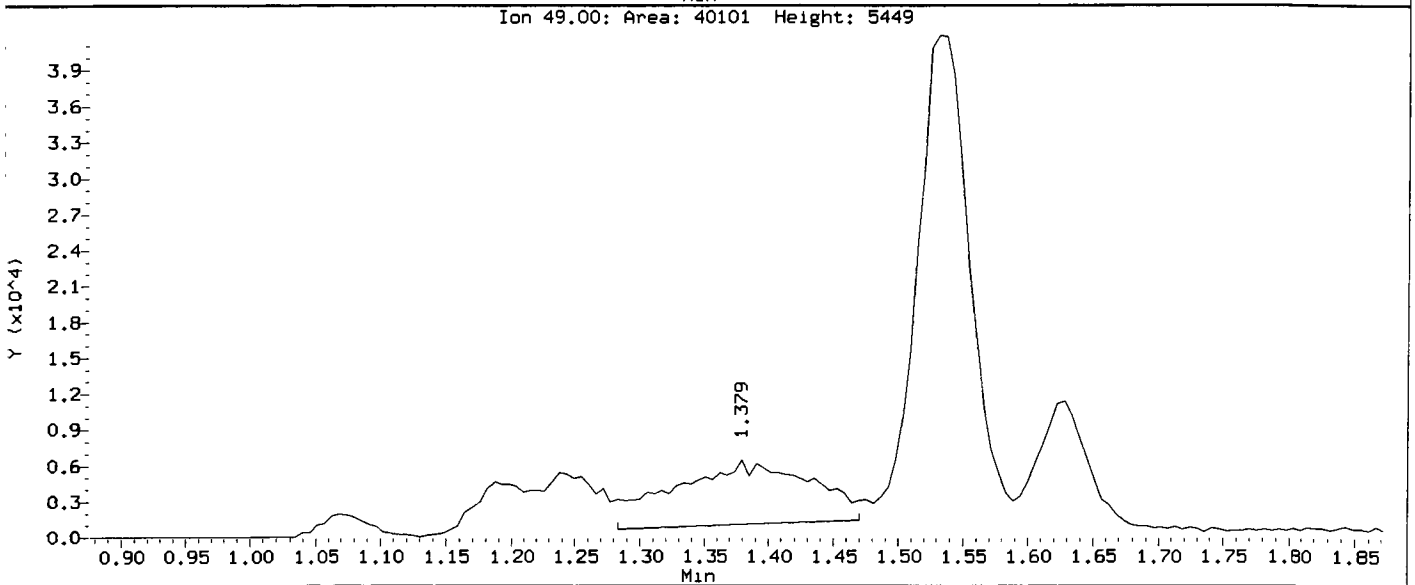
Data File: /chem1/nt5.i/18APR13.b/lcs0418.d
Injection Date: 18-APR-2013 10:12
Instrument: nt5.i
Client Sample ID: LCS0418

Compound: Chloromethane
CAS Number:

PG 4/23/13



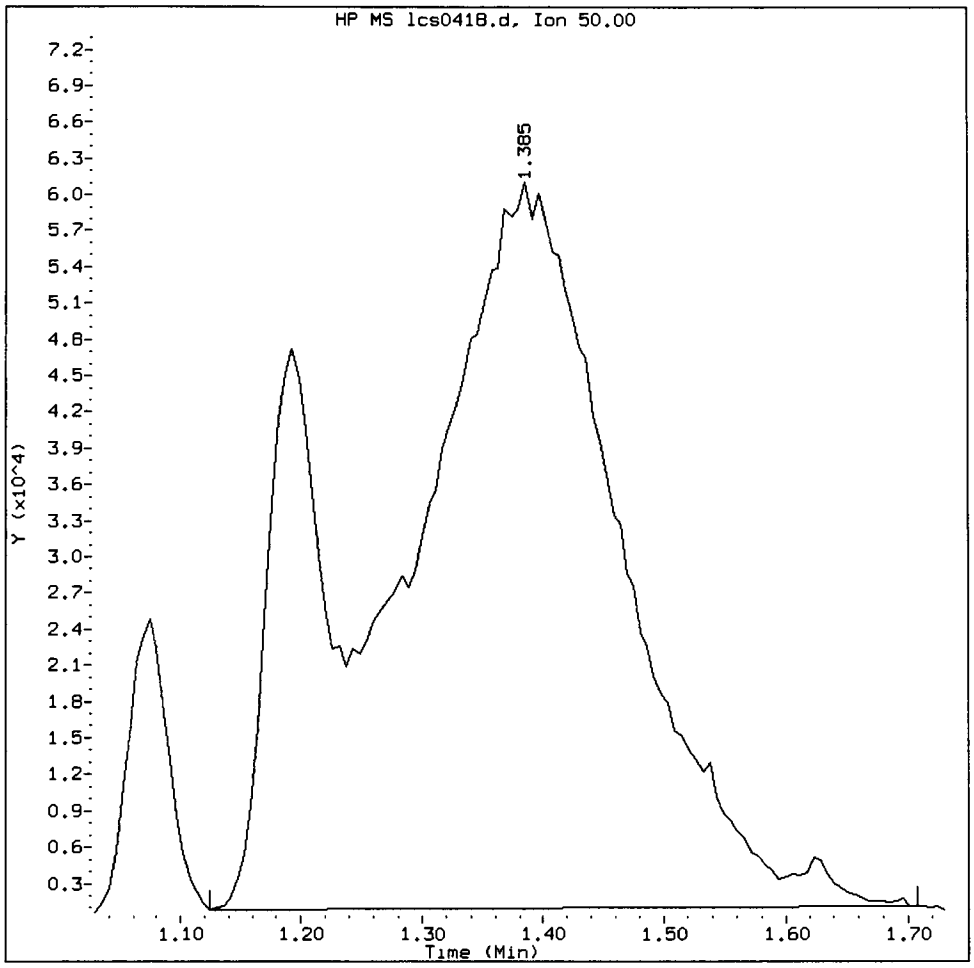




ULG7 0015

LCS0418, /chem1/nt5.i/18APR13.b/lcs0418.d

Chloromethane Amount: 41.45 Area: 818110



MANUAL INTEGRATION for Chloromethane

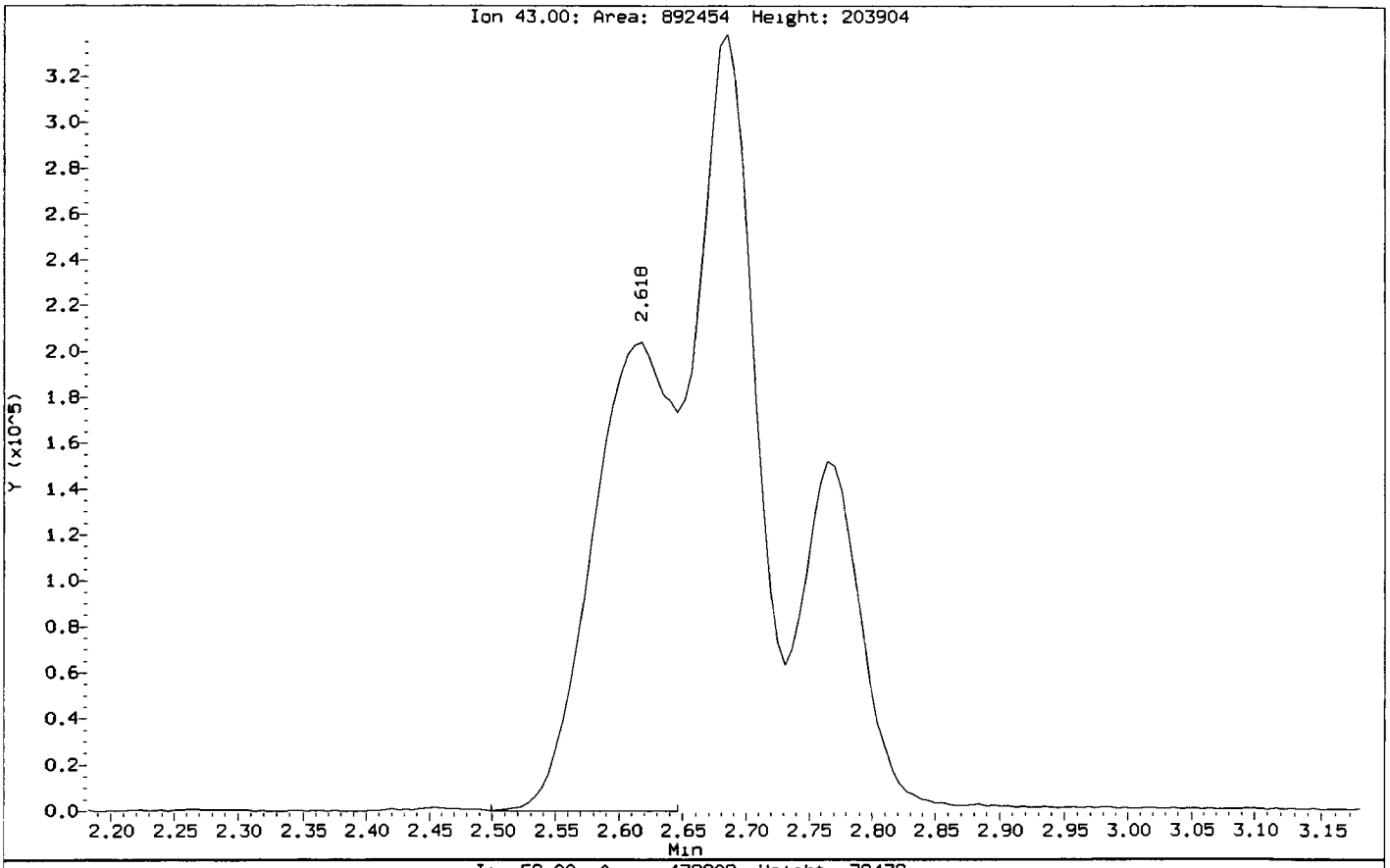
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

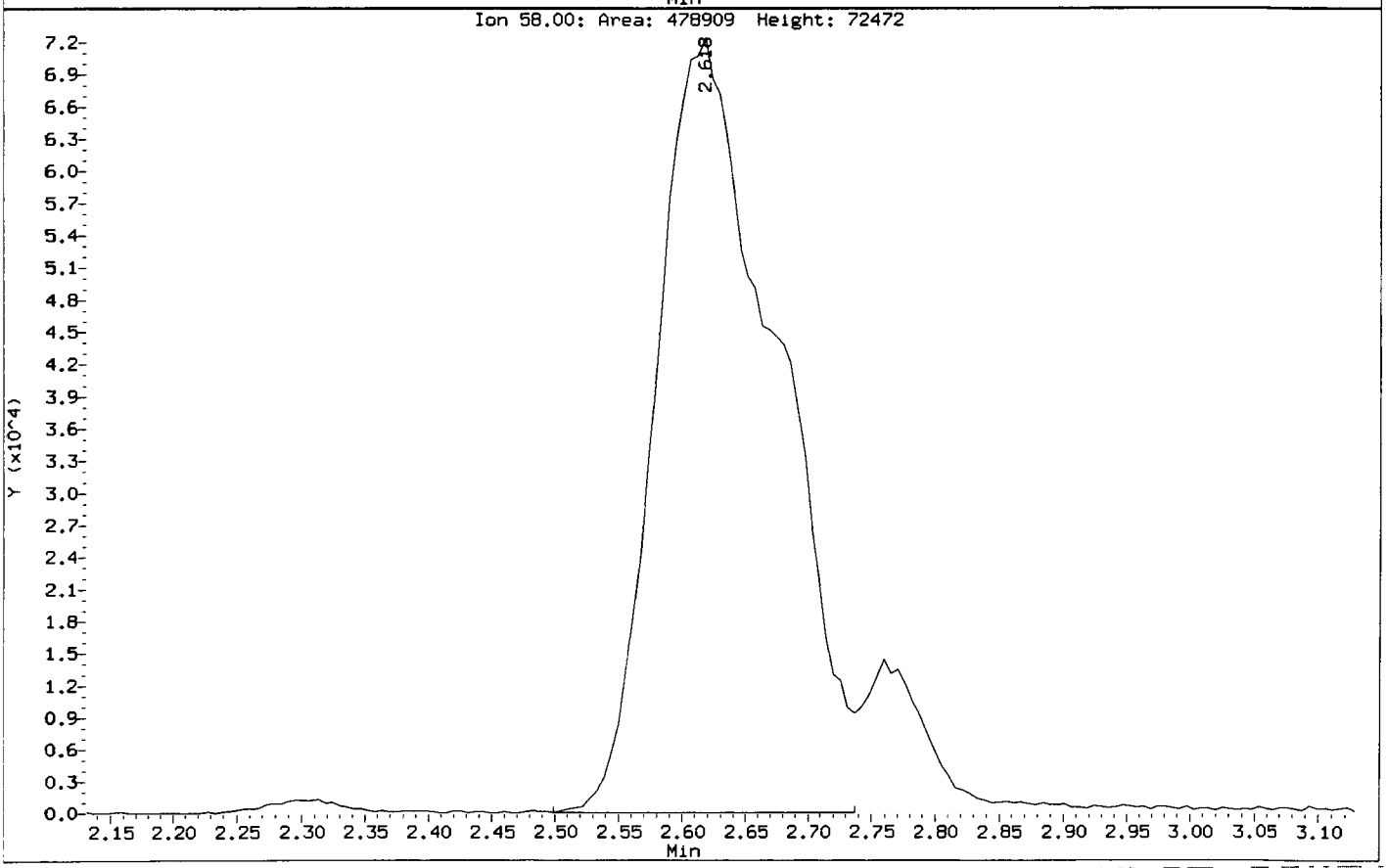
5. Other _____

Analyst: JC Date: 4/23/13

Data File: /chem1/nt5.i/18APR13.b/lcs0418.d
Injection Date: 18-APR-2013 10:12
Instrument: nt5.i
Client Sample ID: LCS0418

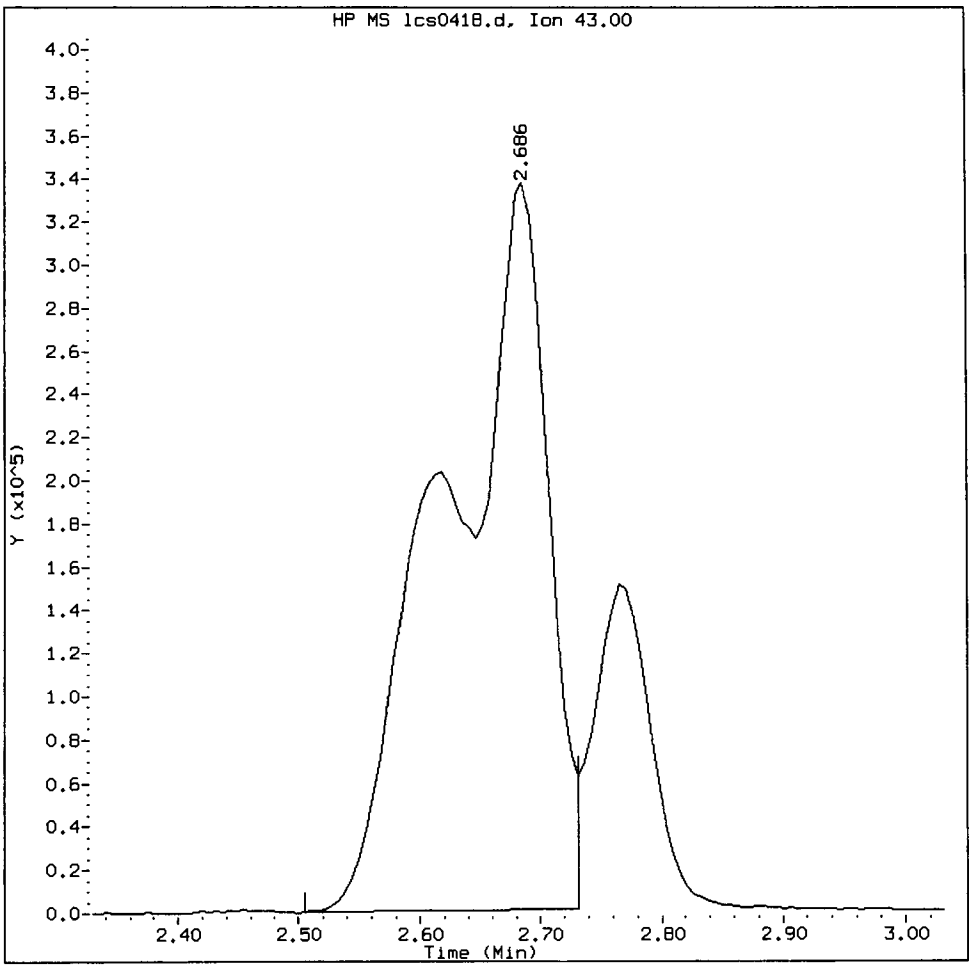
Compound: Acetone
CAS Number:





LCS0418, /chem1/nt5.i/18APR13.b/lcs0418.d

Acetone Amount: 355.81 Area: 1966644



MANUAL INTEGRATION for Acetone

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

5. Other _____

Analyst: YL Date: 4/23/13

CO-ELUTION SUMMARY FOR FILE - lcs0418.d

Lab ID: LCS0418, Method: VO121012S.m, Instrument: nt5.i, Date: 18-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

PC 4/23/13

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/18APR13.b/mb0418.d
Lab Smp Id: MB0418 Client Smp ID: MB0418
Inj Date : 18-APR-2013 11:00
Operator : PC Inst ID: nt5.i
Smp Info : MB0418,5,5,0,
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/18APR13.b/VO121012S.m
Meth Date : 23-Apr-2013 11:51 paul Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50

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	2.443	2.454	(0.524)	19777	1.85684	1.857
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/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	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.196	(0.898)	843009	52.8652	52.865
	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	4.672	(1.000)	1467188	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.666	(0.999)	944559	52.1265	52.127
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	2727382	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	6.289	(1.229)	3487530	50.3631	50.363
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2678112	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)	1443421	50.3410	50.341
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
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	9.661	9.672	(1.000)	1435960	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.057	(1.040)	1321831	50.4822	50.482
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.782	11.799	(1.220)	66874	1.01290	1.013
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0418.d
Lab Smp Id: MB0418
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 18-APR-2013
Calibration Time: 09:48
Client Smp ID: MB0418
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	1616720	808360	3233440	1467188	-9.25
35 1,4-Difluorobenze	2842987	1421494	5685974	2727382	-4.07
52 d5-Chlorobenzene	2779083	1389542	5558166	2678112	-3.63
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1435960	-6.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 18APR13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: MB0418 Client Smp ID: MB0418
Level: LOW Operator: PC
Data Type: MS DATA SampleType: BLANK
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	52.865	105.73	70-130
$ 32 d4-1,2-Dichloroeth	50.000	52.127	104.25	80-149
$ 42 d8-Toluene	50.000	50.363	100.73	77-120
$ 62 4-Bromofluorobenze	50.000	50.341	100.68	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.482	100.96	80-120

Data File: /chem1/nt5.i/18APR13.b/mb0418.d

Date : 18-APR-2013 11:00

Client ID: MB0418

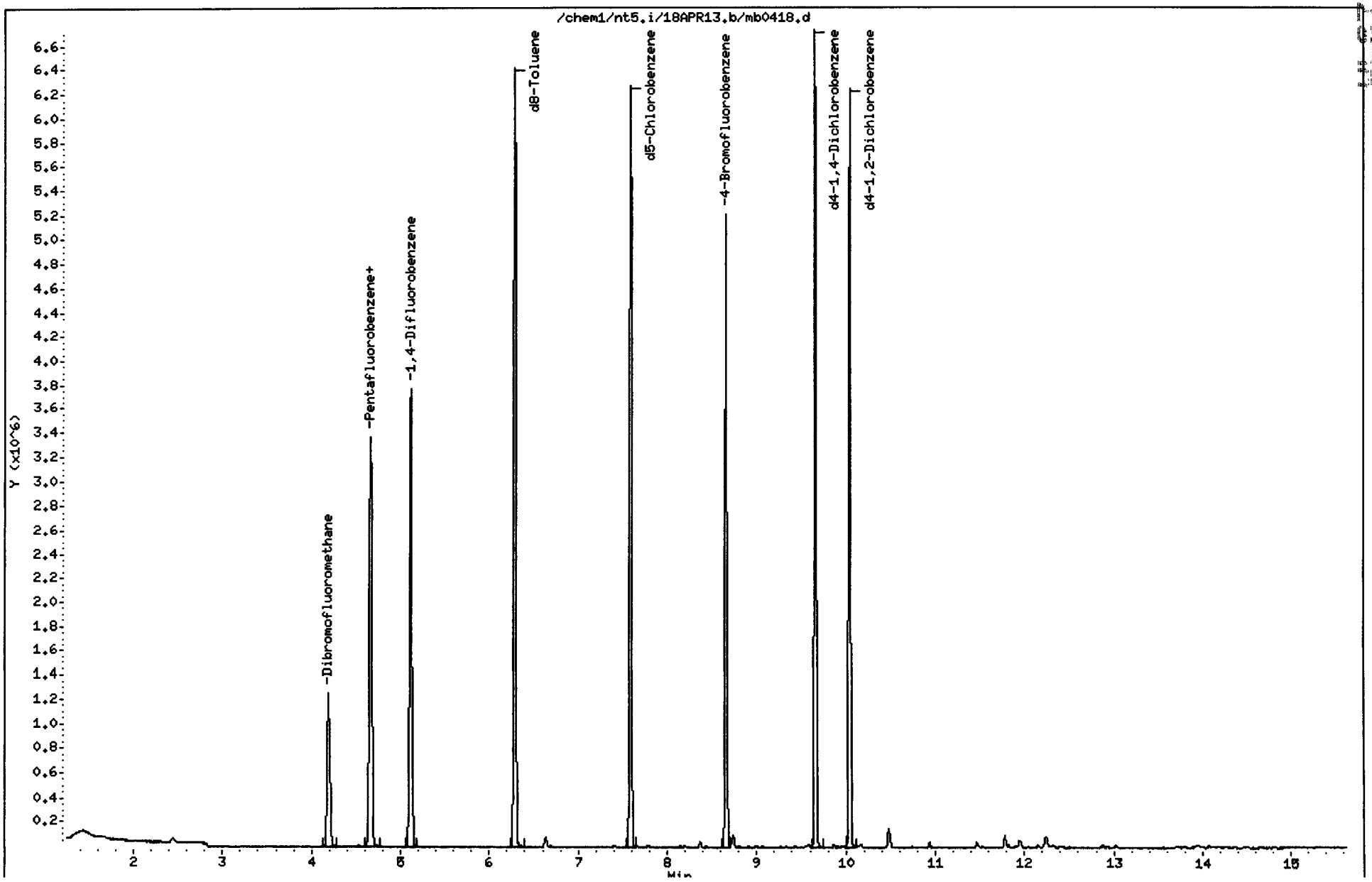
Sample Info: MB0418,5,5,0,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt5.i/18APR13.b/mb0418.d

Date : 18-APR-2013 11:00

Client ID: MB0418

Instrument: nt5.i

Sample Info: MB0418,5,5,0,

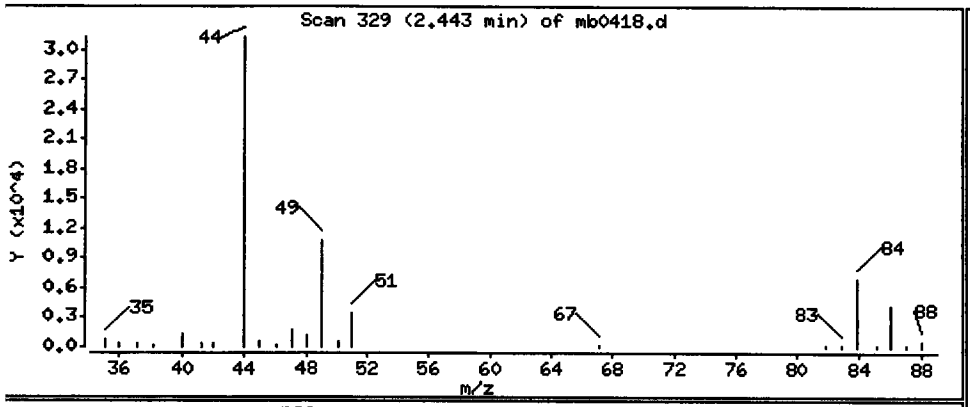
Operator: PC

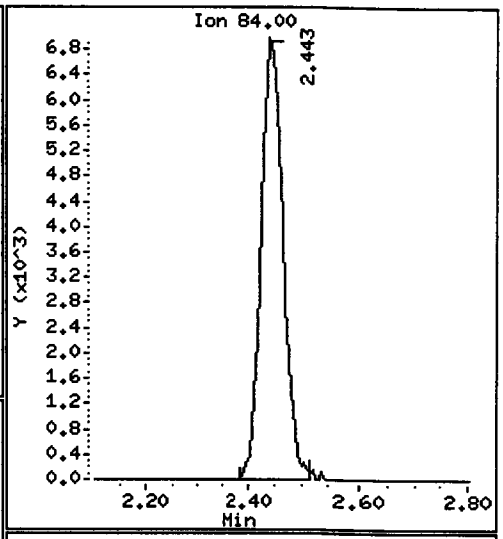
Column phase: RTXVMS

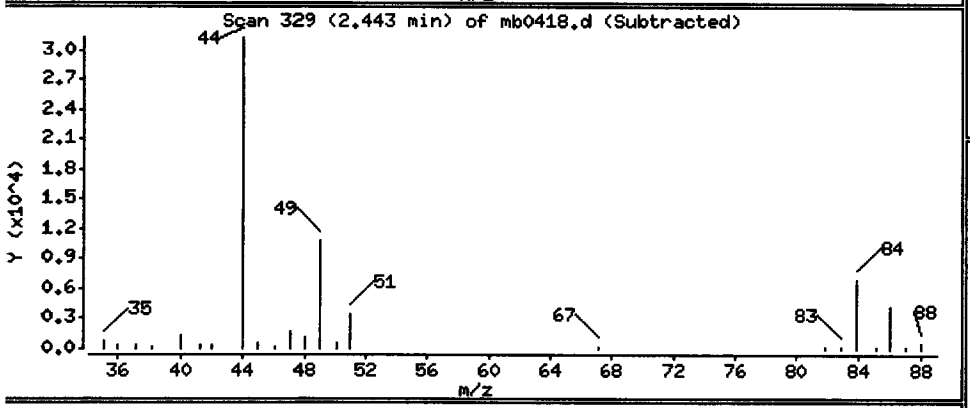
Column diameter: 0.18

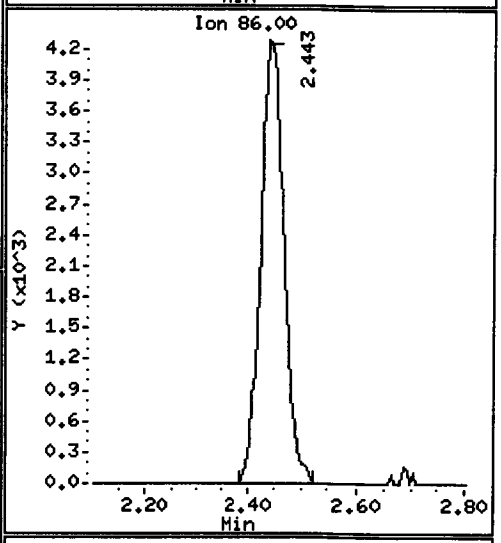
13 Methylene Chloride

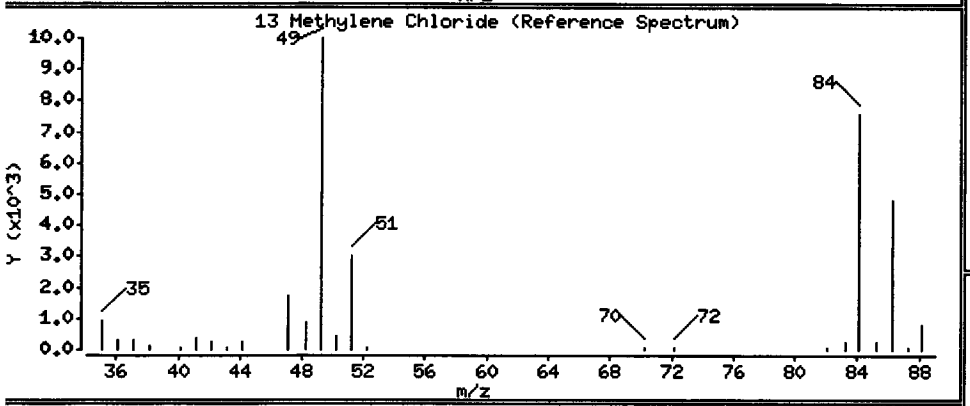
Concentration: 1.857 ug/Kg

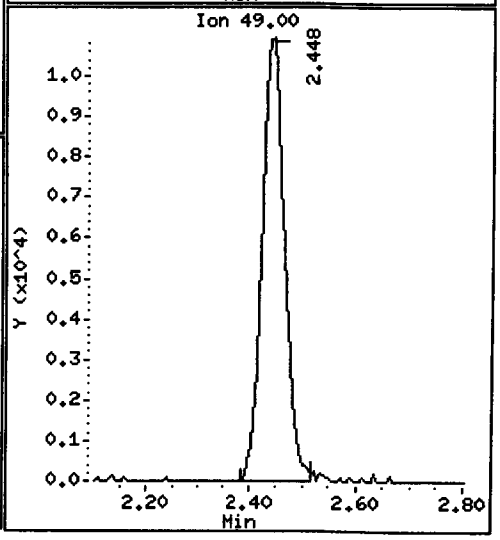


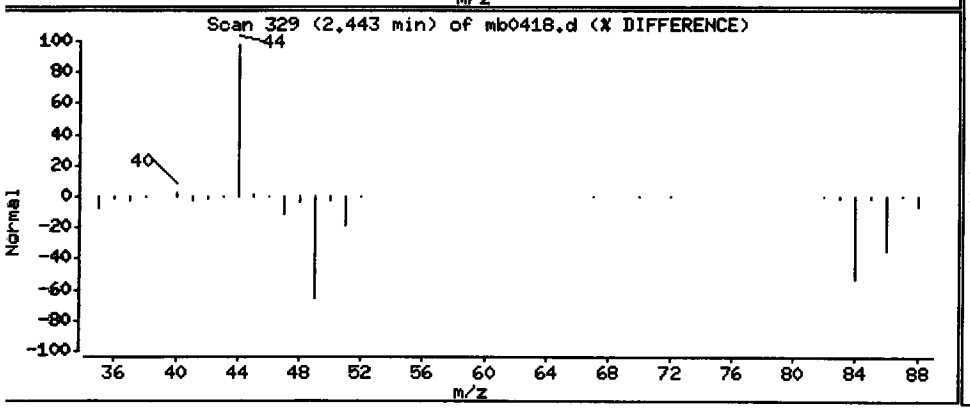












Data File: /chem1/nt5.i/18APR13.b/mb0418.d

Date : 18-APR-2013 11:00

Client ID: MB0418

Instrument: nt5.i

Sample Info: MB0418,5,5,0,

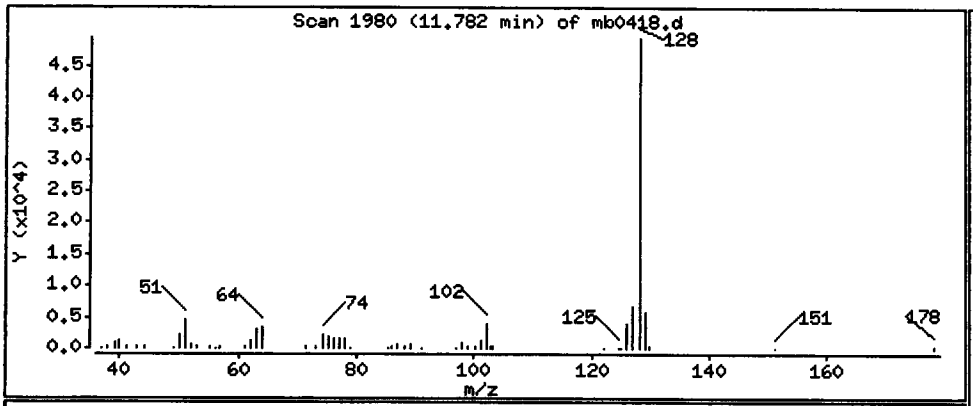
Operator: PC

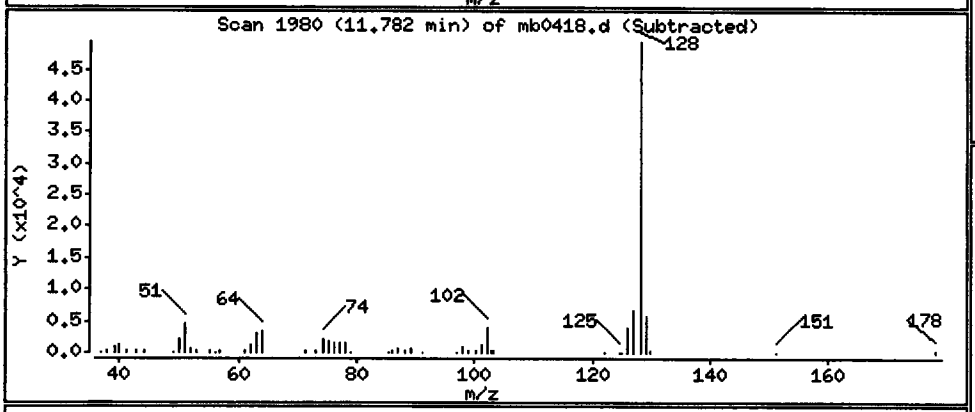
Column phase: RTXVMS

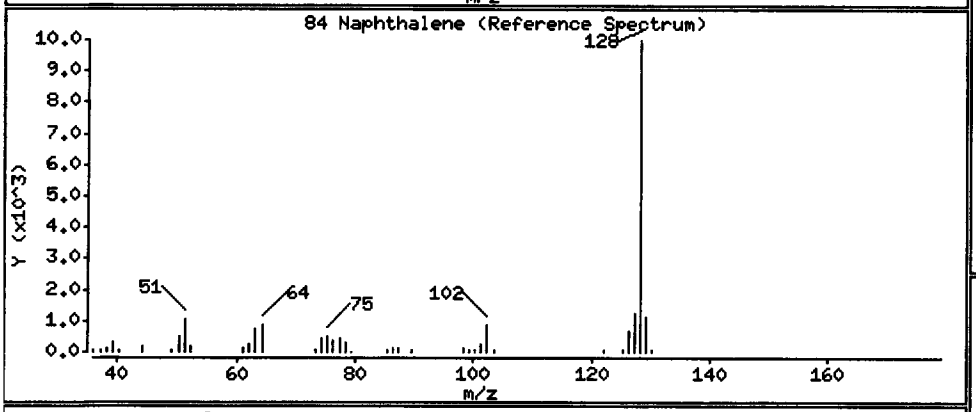
Column diameter: 0.18

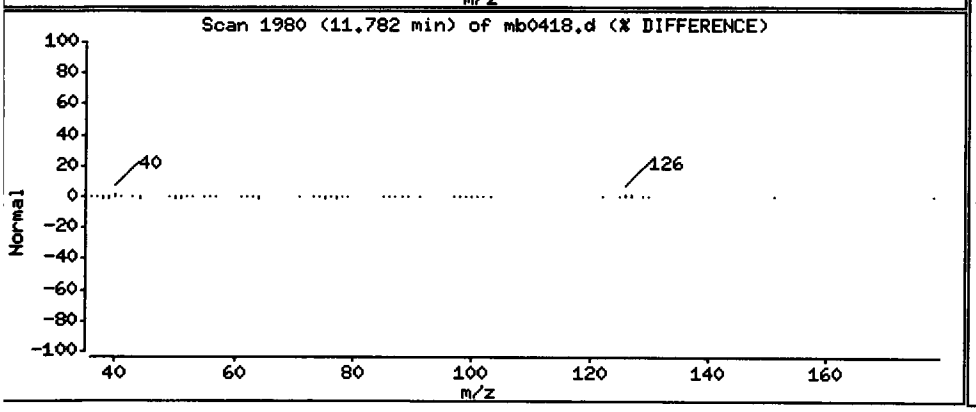
84 Naphthalene

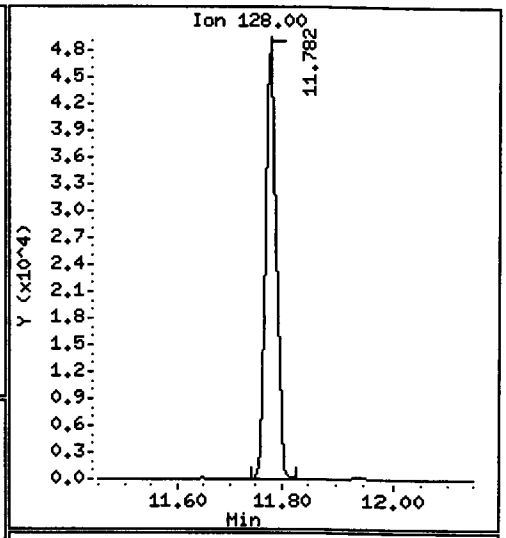
Concentration: 1.013 ug/Kg

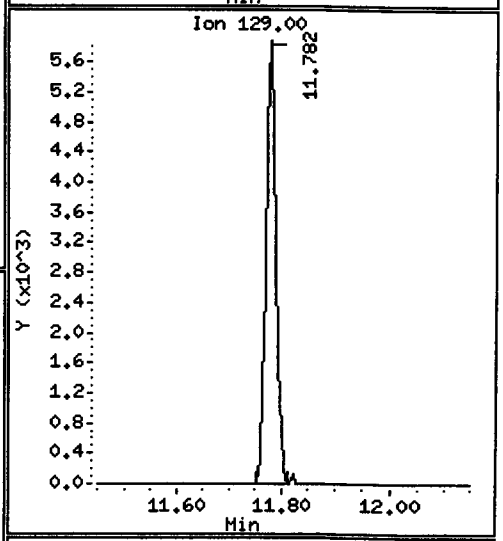


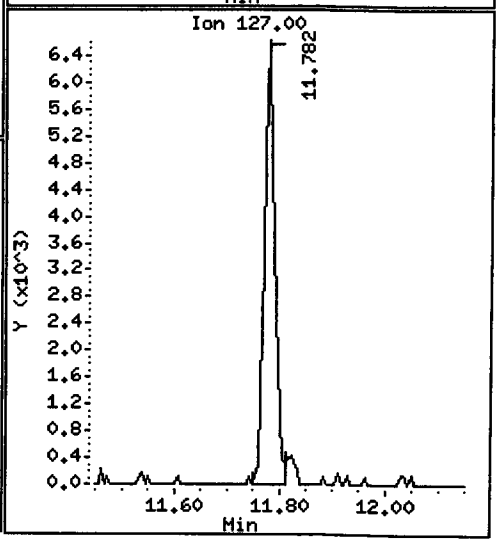












CO-ELUTION SUMMARY FOR FILE - mb0418.d

Lab ID: MB0418, Method: VO121012S.m, Instrument: nt5.i, Date: 18-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/18APR13.b/wl67a.d
Lab Smp Id: WL67A Client Smp ID: GR-CB-07-20130411-S
Inj Date : 18-APR-2013 12:41
Operator : PC Inst ID: nt5.i
Smp Info : WL67A,5,7.54,0,,
Misc Info : 13-7791
Comment :
Method : /chem1/nt5.i/18APR13.b/VO121012S.m
Meth Date : 24-Apr-2013 12:48 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	7.54000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.996	1.985	(0.427)	620727	16.9787	11.259
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	2.465	2.454	(0.527)	19079	2.08093	1.380
14 Acetone	43	2.669	2.680	(0.571)	303430	65.9537	43.736(M)
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	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.202	4.196	(0.898)	737695	53.7547	35.646
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.394	4.389	(0.940)	21923	15.4045	10.215(Q)
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.677	4.672	(1.000)	1262651	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.671	4.666	(0.999)	884809	56.7390	37.625
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	2335334	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.289	(1.229)	2962083	49.9562	33.127
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.307)	23319	4.06318	2.694(Q)
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2181216	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.788	(1.026)	12980	0.55185	0.3660
	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)	1087859	46.5834	30.891
	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/Kg)
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	9.661	9.672	(1.000)	960894	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.057	(1.040)	879977	50.2228	33.304
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.782	11.799	(1.220)	57490	1.30320	0.8642
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: wl67a.d
Lab Smp Id: WL67A
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-7791

Calibration Date: 18-APR-2013
Calibration Time: 09:48
Client Smp ID: GR-CB-07-20130411-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1616720	808360	3233440	1262651	-21.90
35 1,4-Difluorobenze	2842987	1421494	5685974	2335334	-17.86
52 d5-Chlorobenzene	2779083	1389542	5558166	2181216	-21.51
76 d4-1,4-Dichlorobe	1529325	764662	3058650	960894	-37.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.68	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL67A
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-7791

Client SDG: WL67
Fraction: VOA
Client Smp ID: GR-CB-07-20130411-S
Operator: PC
SampleType: SAMPLE
Quant Type: ISTD

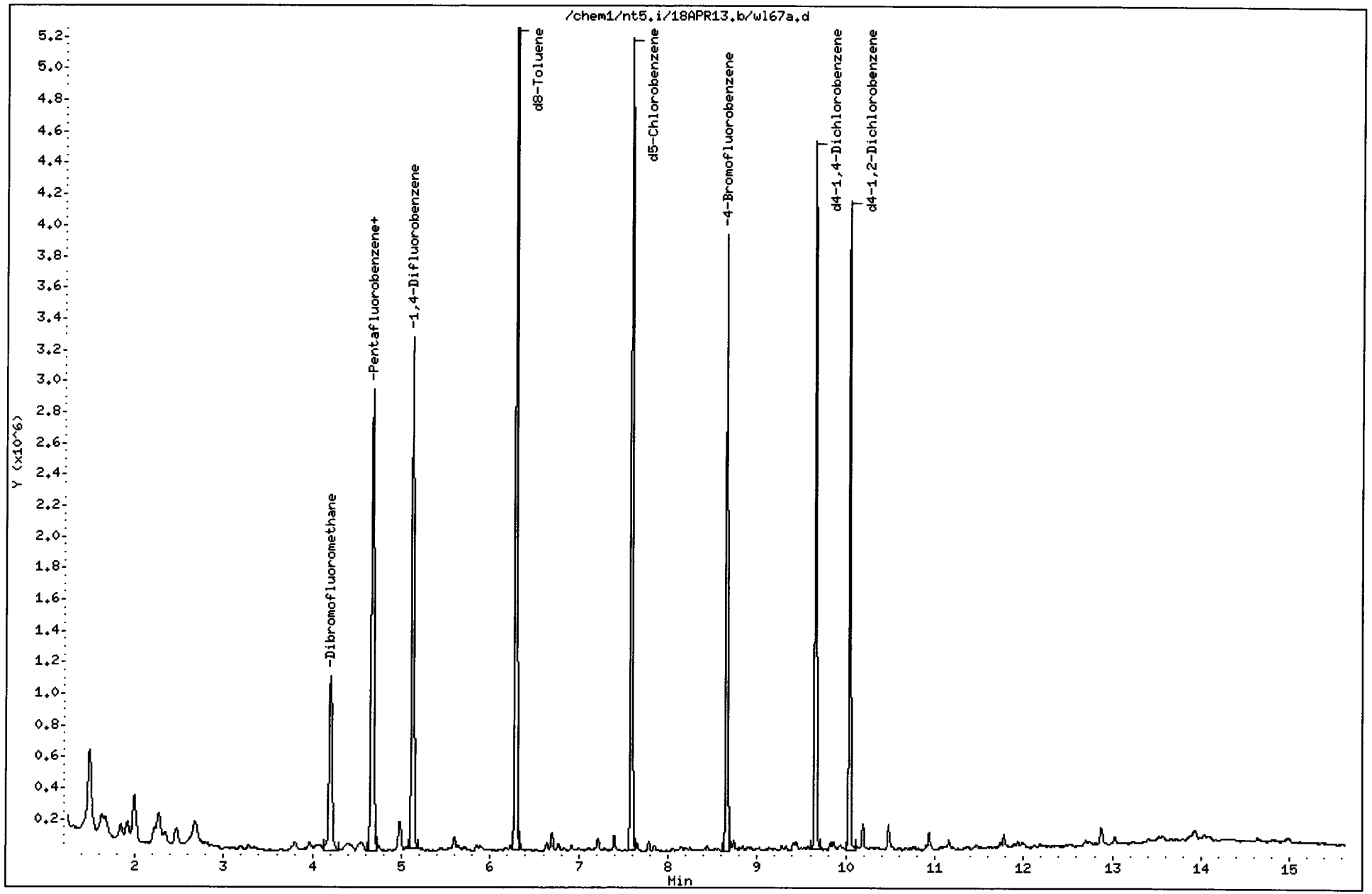
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	53.755	107.51	70-130
$ 32 d4-1,2-Dichloroeth	50.000	56.739	113.48	80-149
$ 42 d8-Toluene	50.000	49.956	99.91	77-120
$ 62 4-Bromofluorobenze	50.000	46.583	93.17	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.223	100.45	80-120

Data File: /chem1/nt5.i/18APR13.b/wl67a.d
Date : 18-APR-2013 12:41
Client ID: GR-CB-07-20130411-S
Sample Info: WL67A,5,7.54,0,,

Instrument: nt5.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

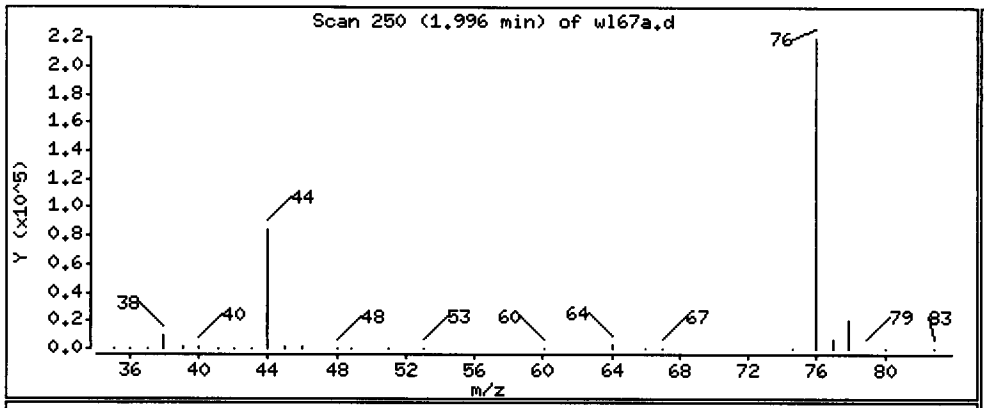
Operator: PC

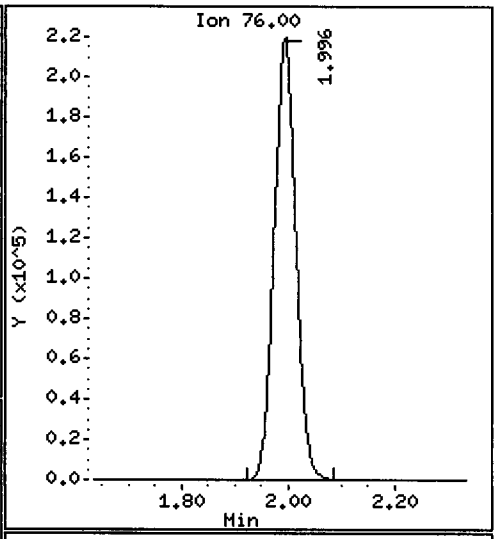
Column phase: RTXVMS

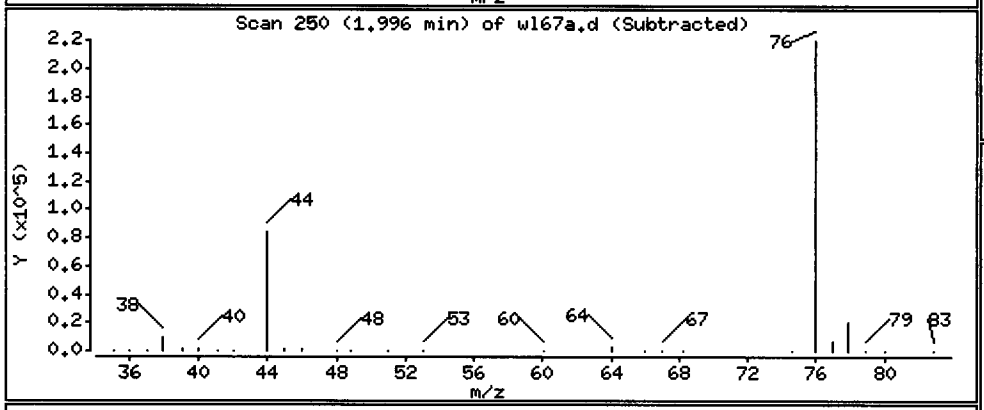
Column diameter: 0.18

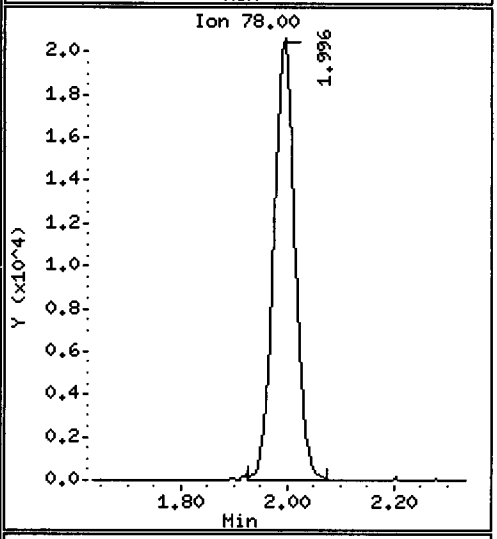
8 Carbon Disulfide

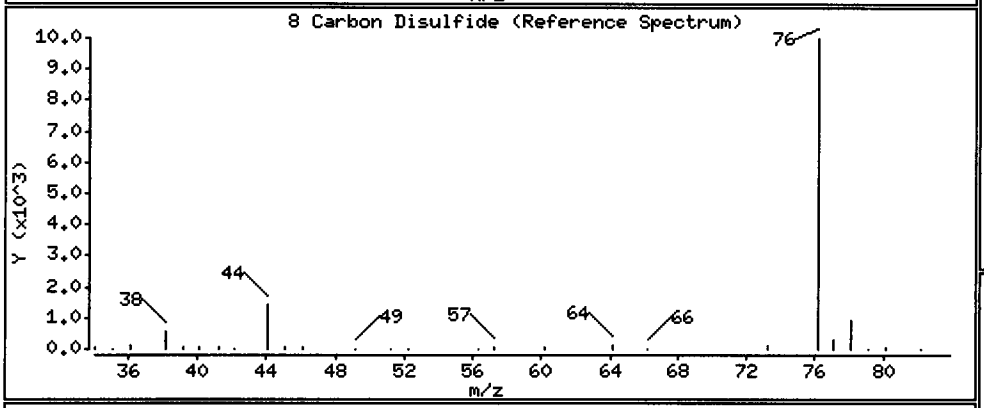
Concentration: 11.259 ug/Kg

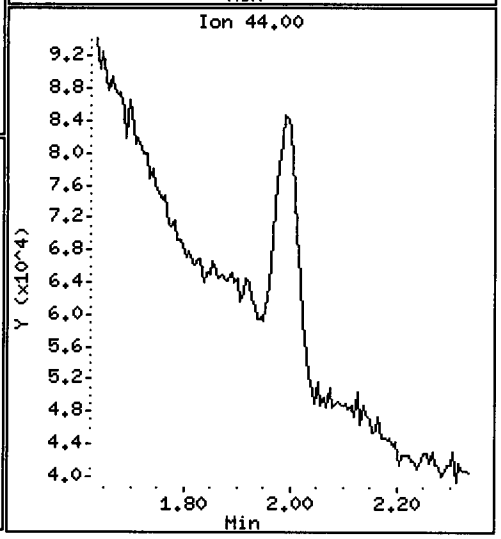


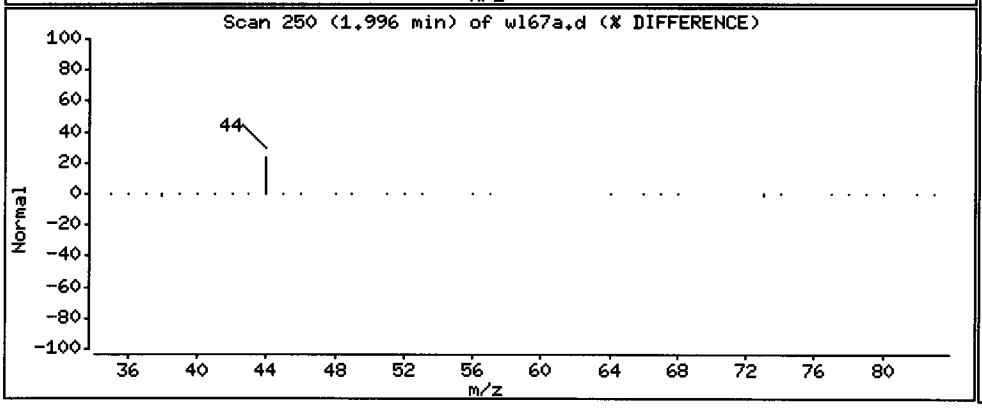












Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

Operator: PC

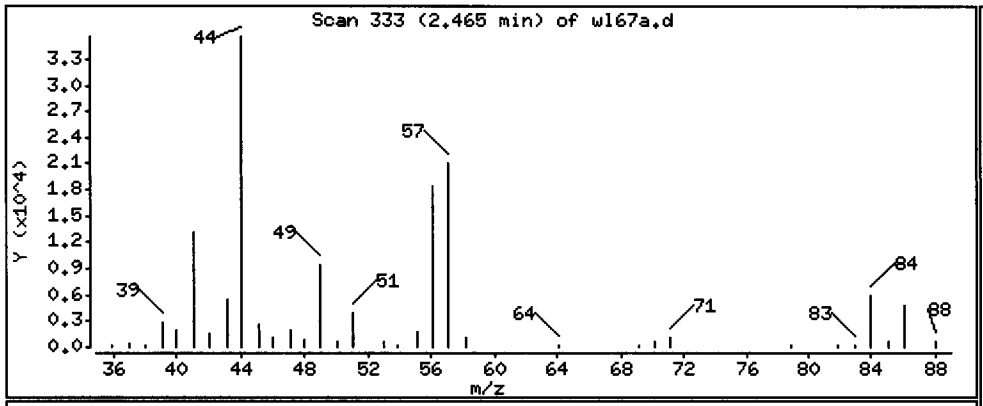
Column phase: RTXVMS

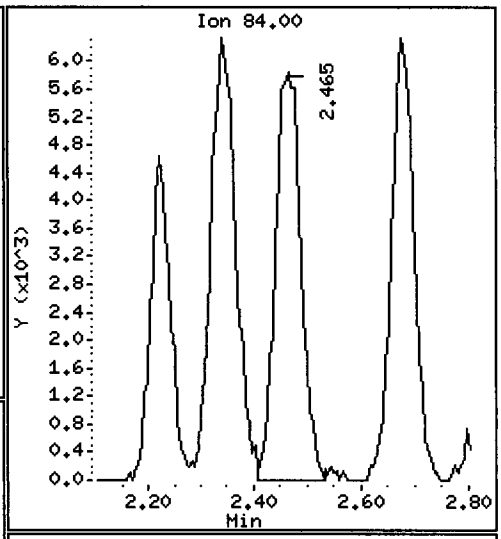
Column diameter: 0.18

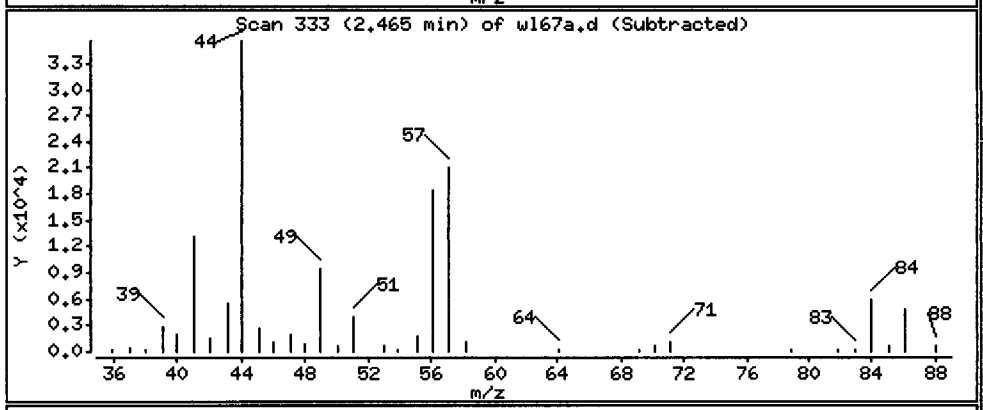
4B

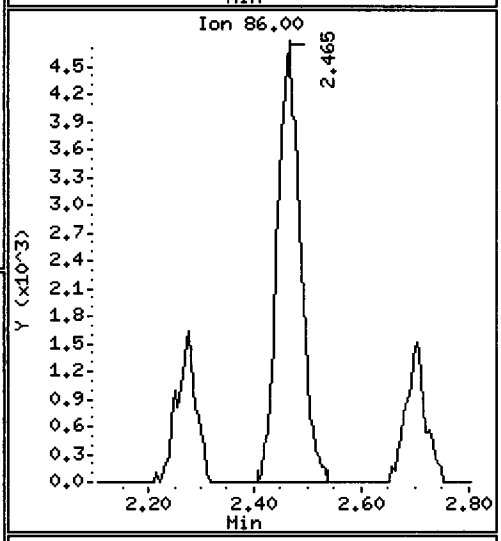
13 Methylene Chloride

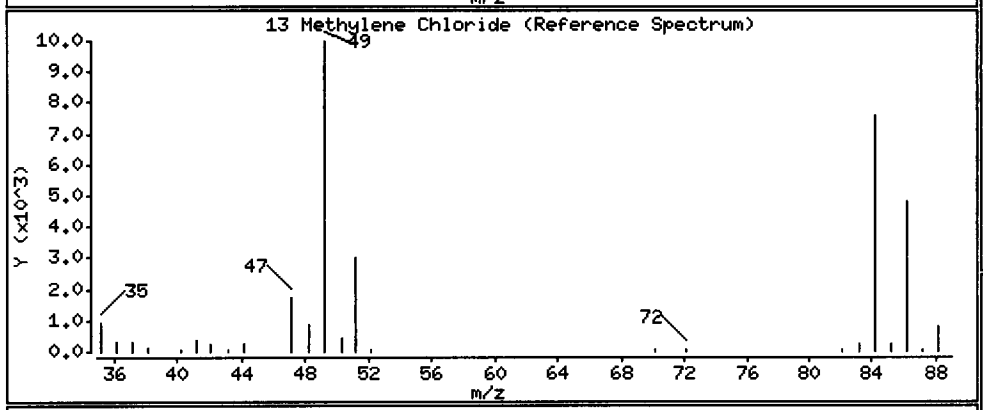
Concentration: 1.380 ug/Kg

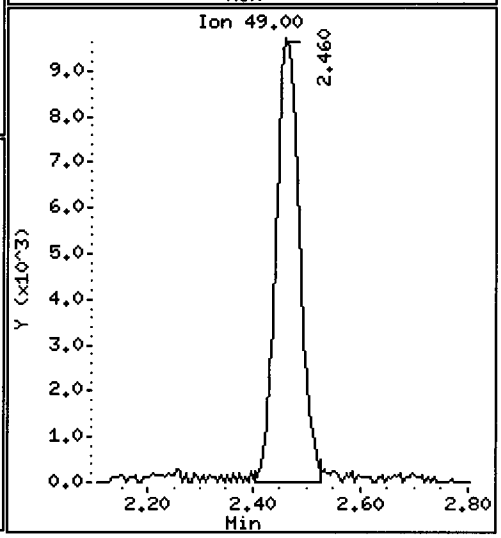


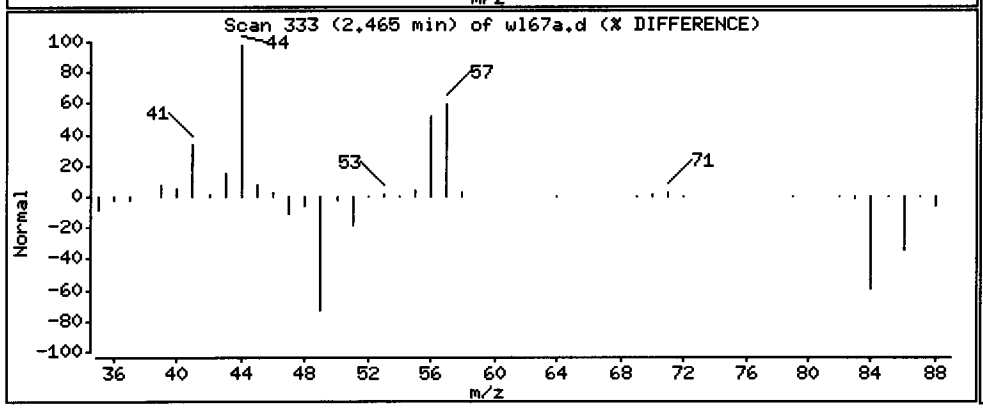












WL67:0010

Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

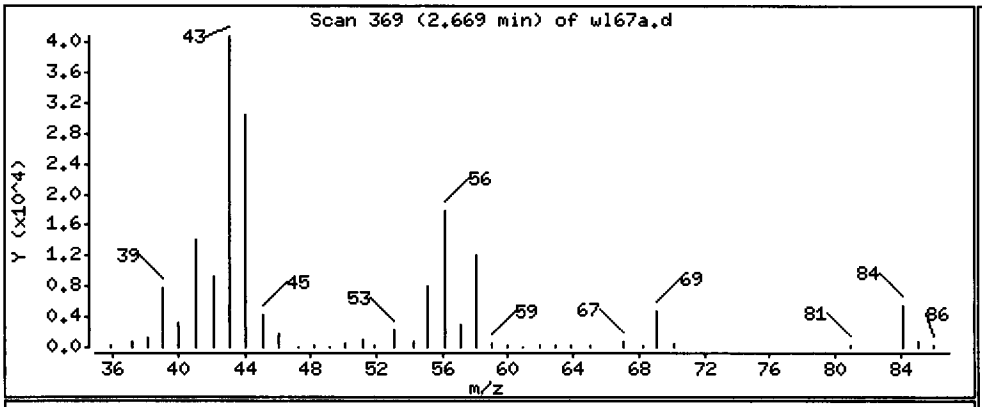
Operator: PC

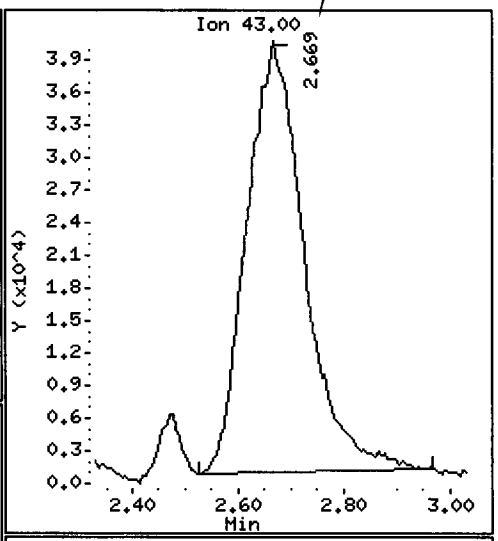
Column phase: RTXVMS

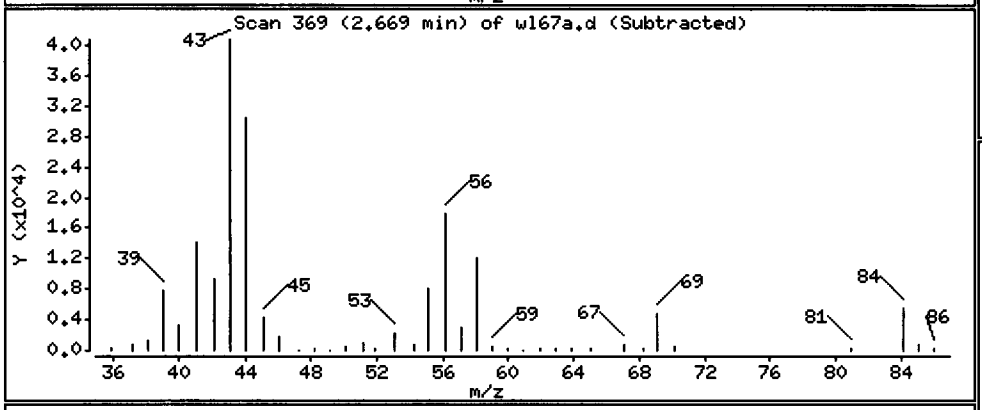
Column diameter: 0.18

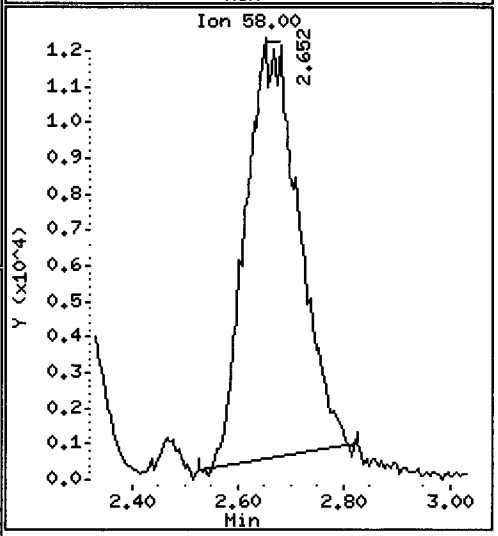
14 Acetone

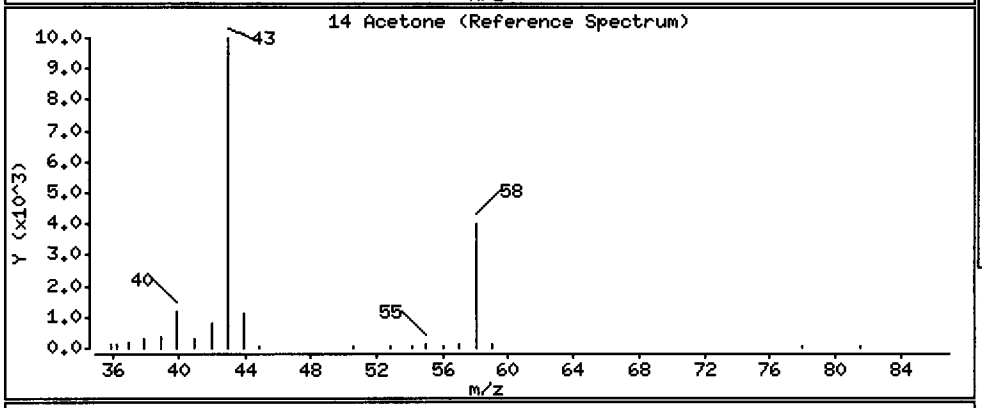
Concentration: 43.736 ug/Kg

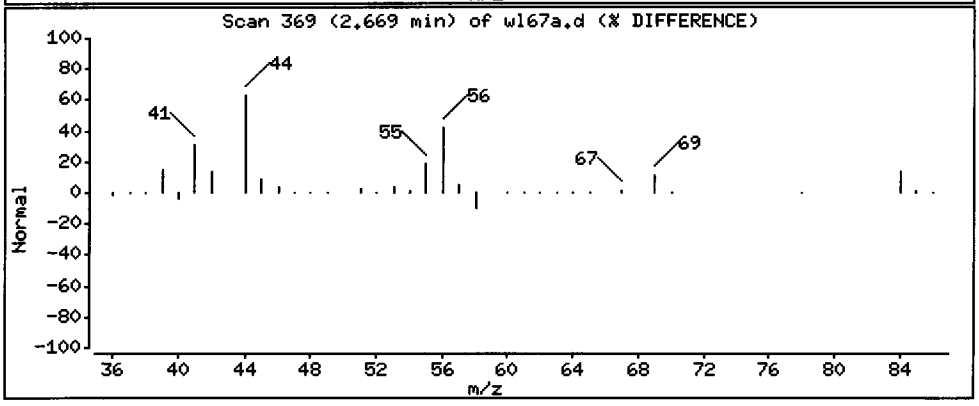












Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

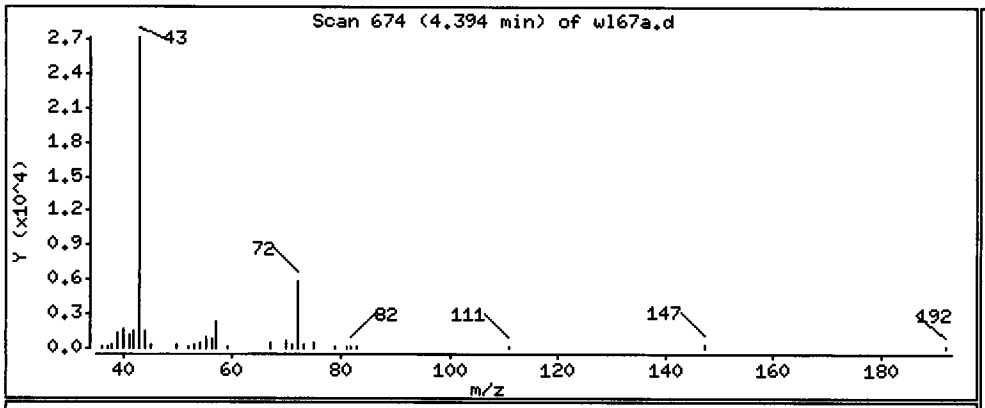
Operator: PC

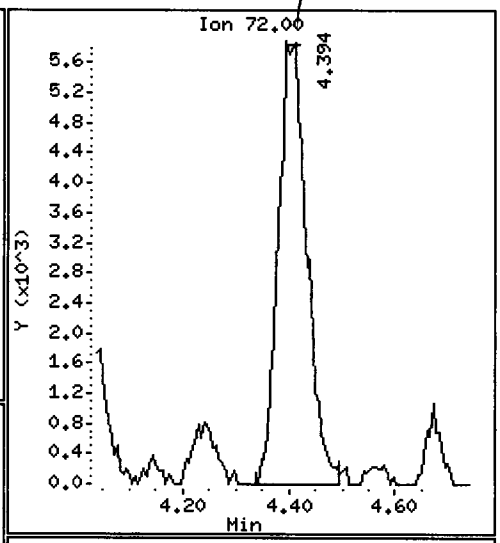
Column phase: RTXVMS

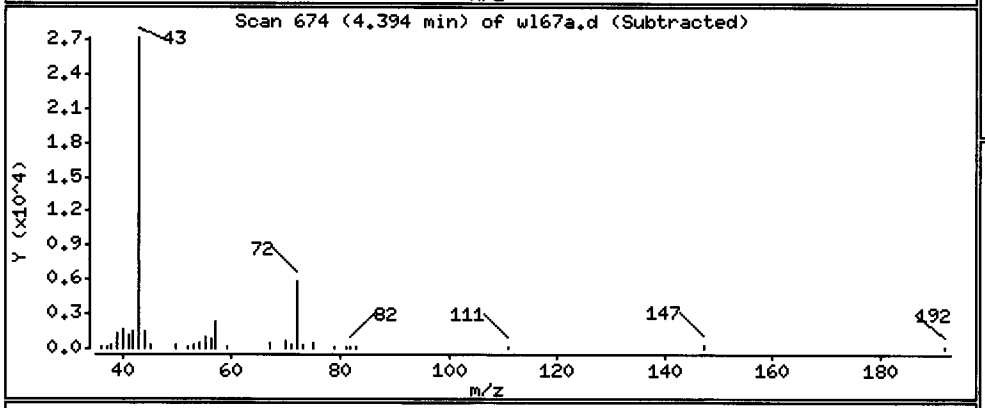
Column diameter: 0.18

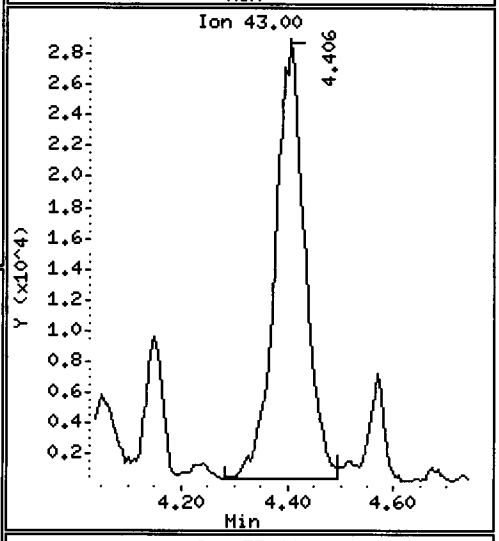
29 2-Butanone

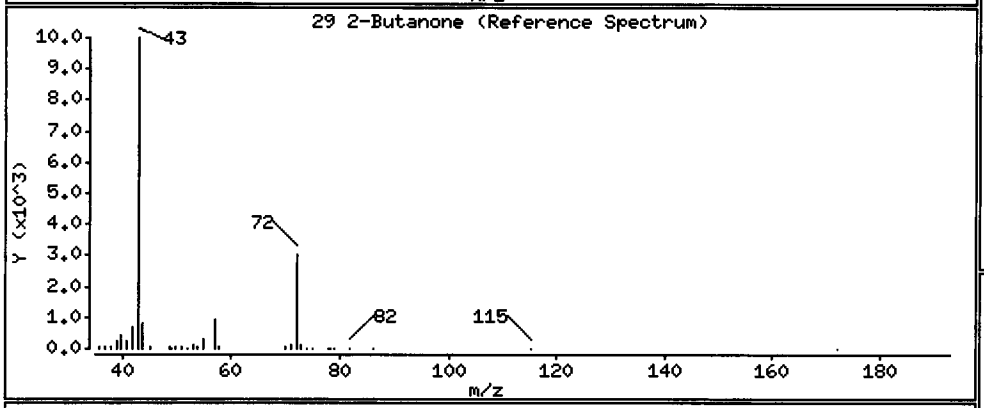
Concentration: 10.215 ug/Kg

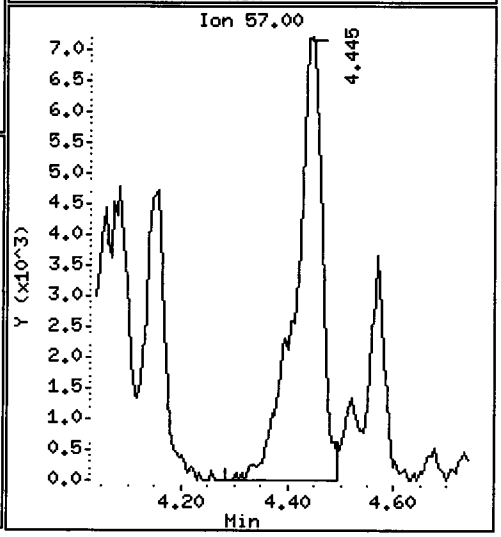


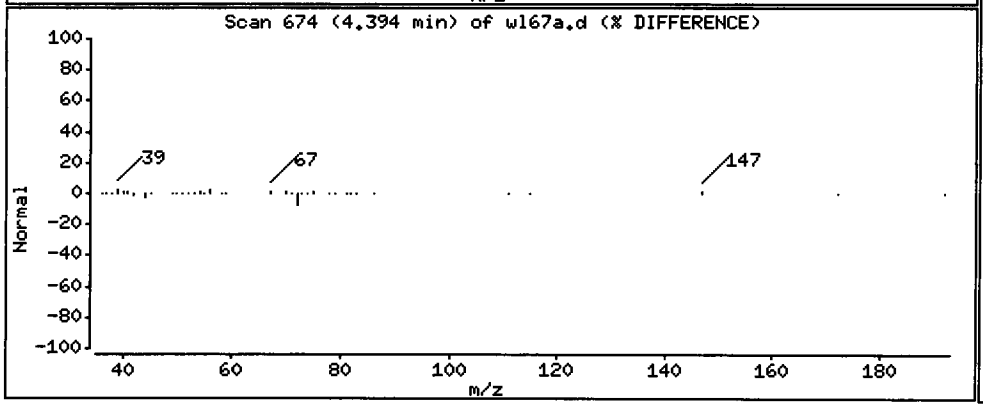












WL67 0610

Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

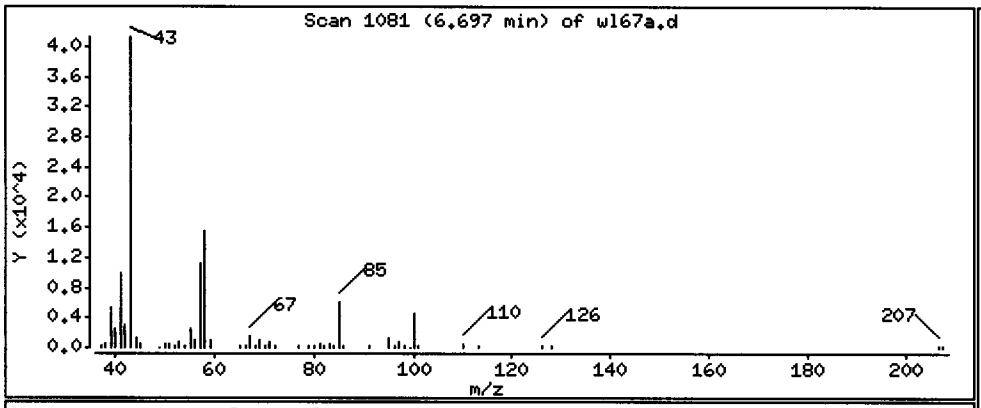
Operator: PC

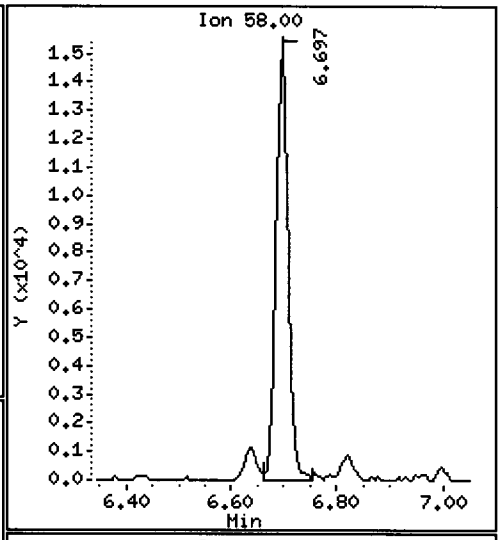
Column phase: RTXVMS

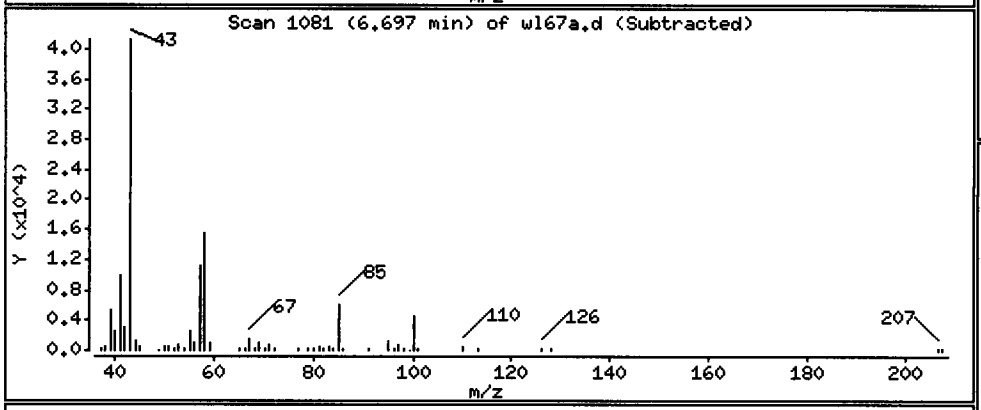
Column diameter: 0.18

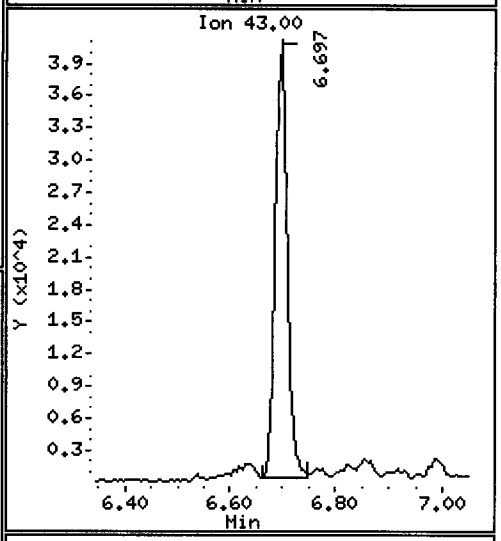
45 4-Methyl-2-Pentanone

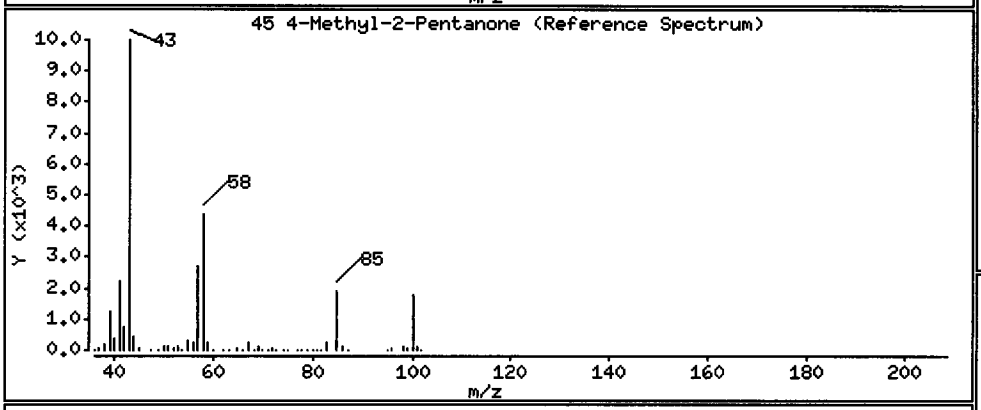
Concentration: 2.694 ug/Kg

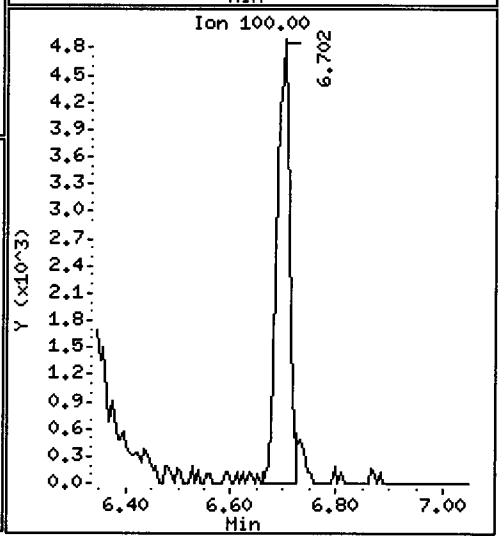


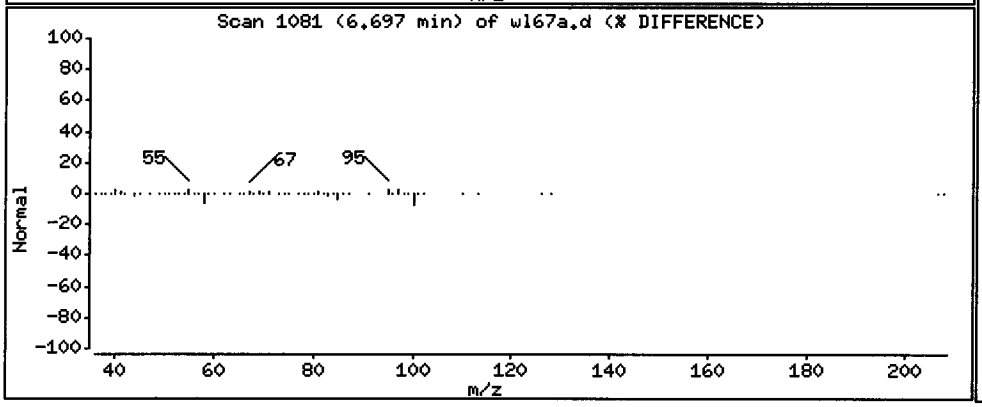












Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

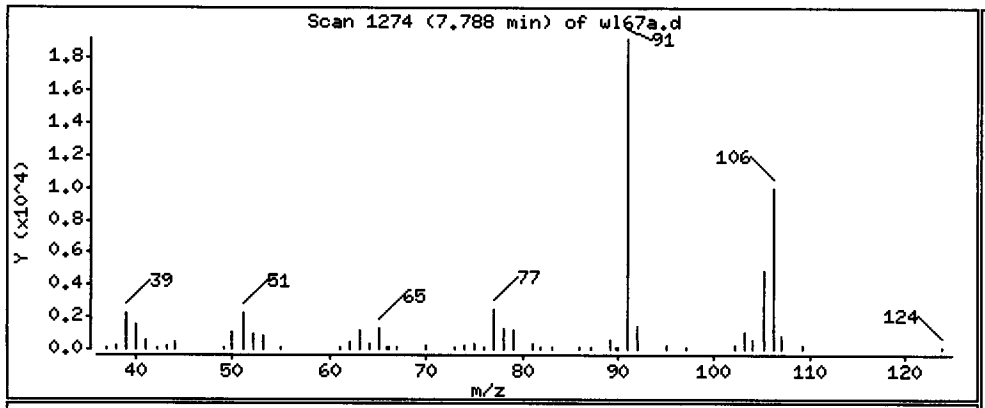
Operator: PC

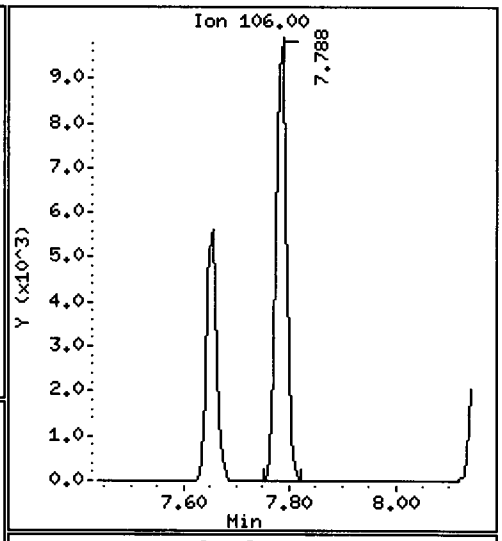
Column phase: RTXVMS

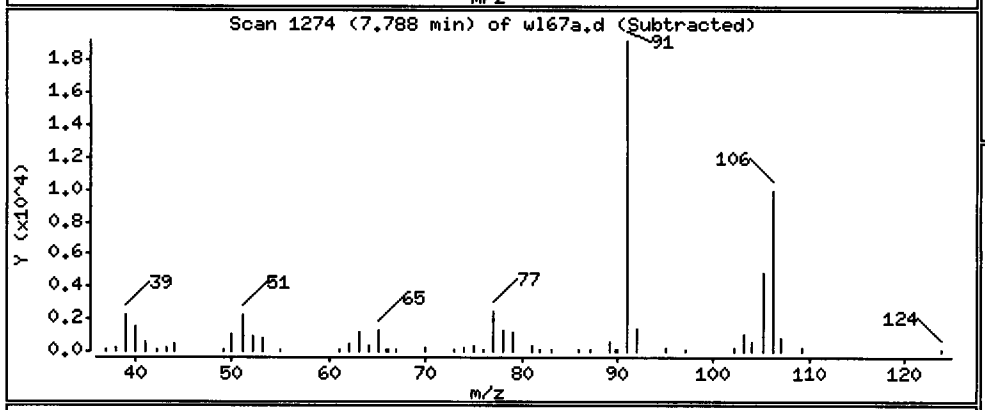
Column diameter: 0.18

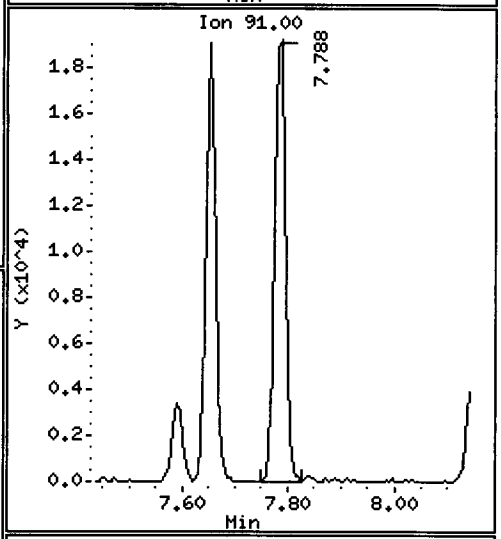
56 m,p-xylene

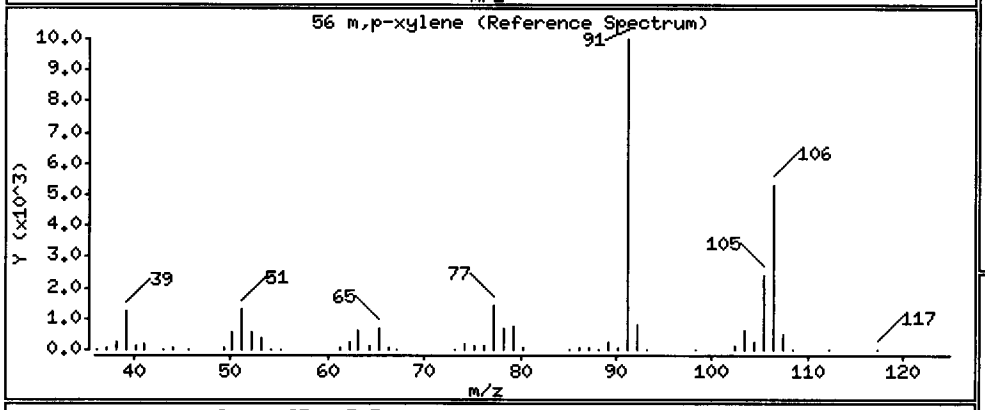
Concentration: 0.3660 ug/Kg

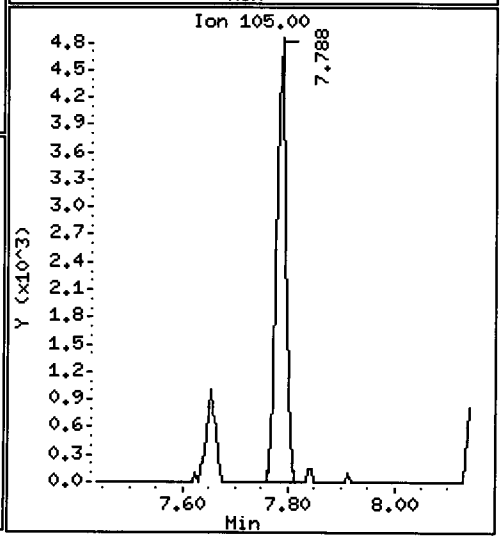


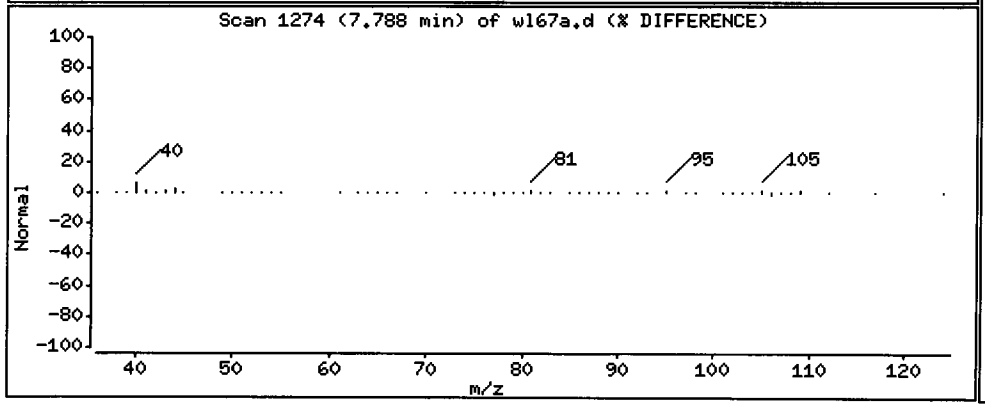












WL67-09UG

Data File: /chem1/nt5.i/18APR13.b/wl67a.d

Date : 18-APR-2013 12:41

Client ID: GR-CB-07-20130411-S

Instrument: nt5.i

Sample Info: WL67A,5,7.54,0,,

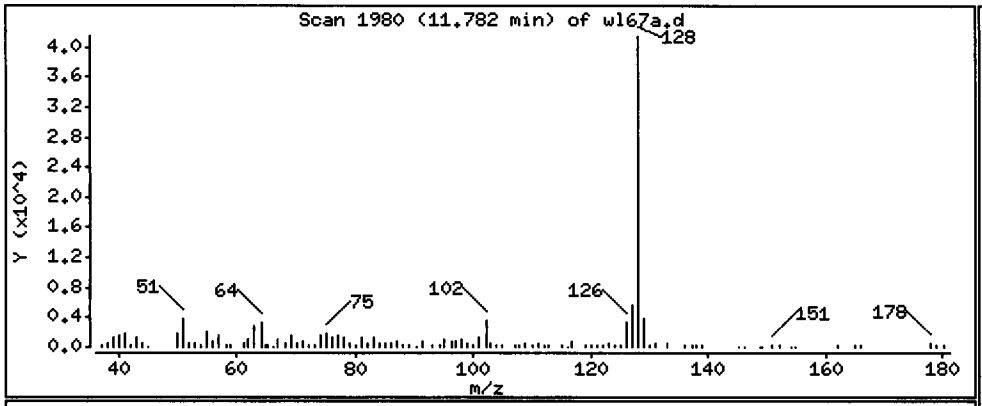
Operator: PC

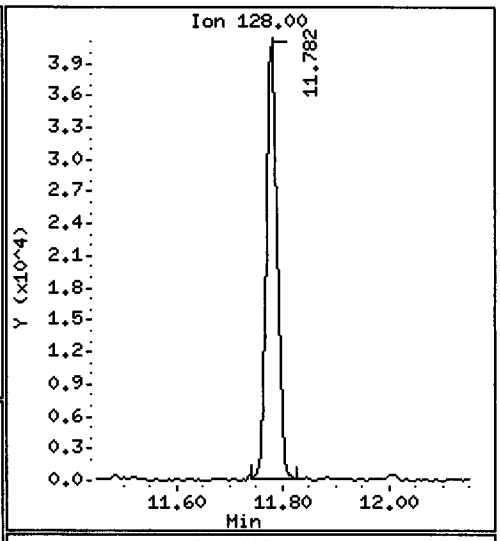
Column phase: RTXVMS

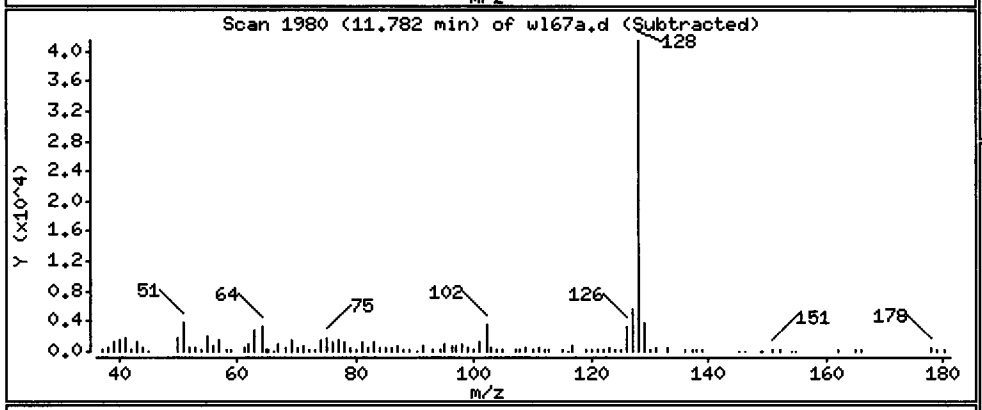
Column diameter: 0.18

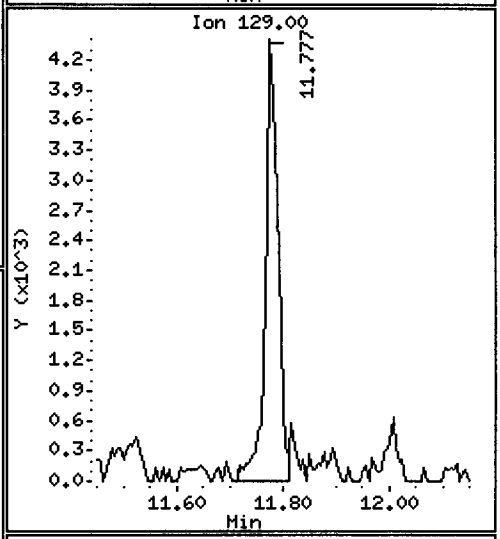
84 Naphthalene

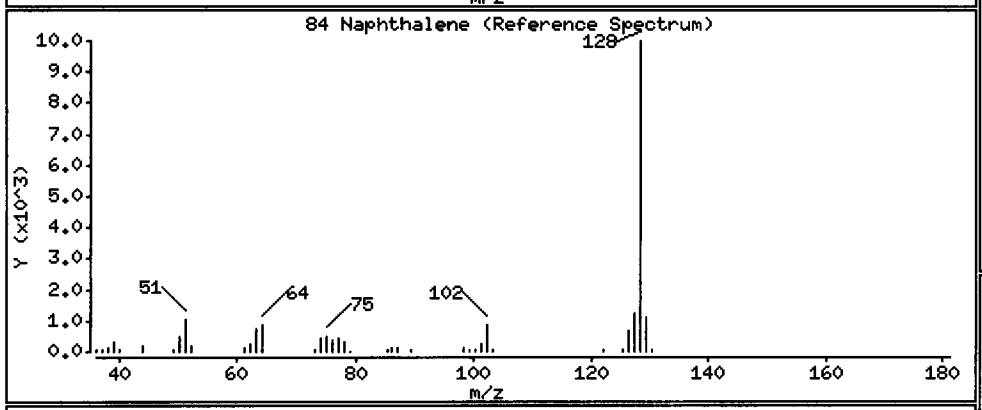
Concentration: 0.8642 ug/Kg

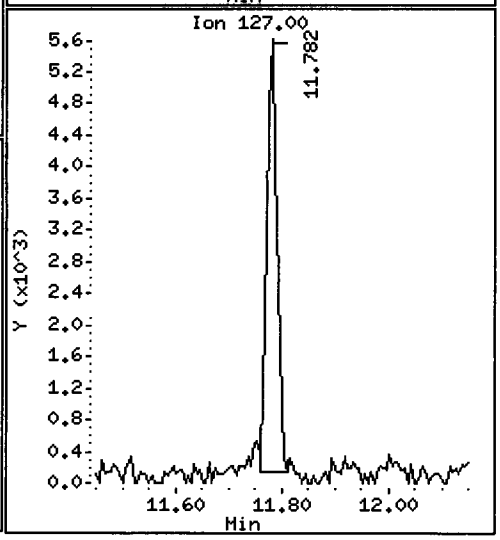


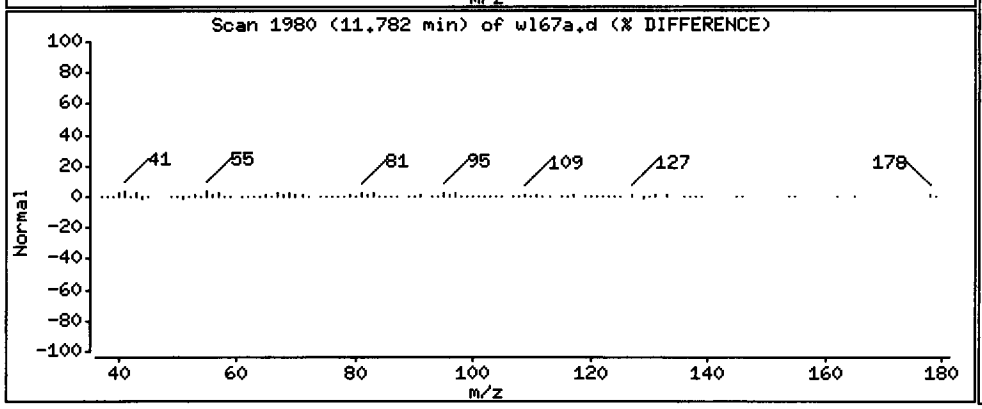








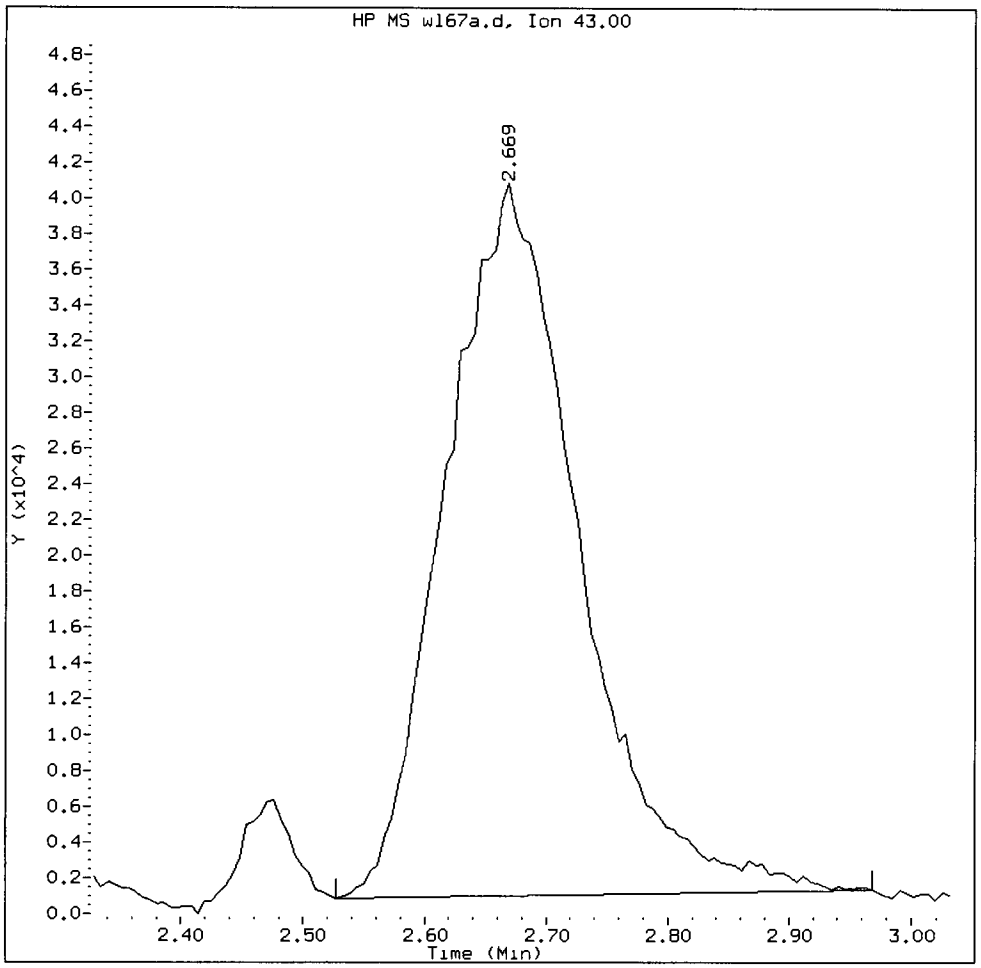




WL67:09195

WL67A, /chem1/nt5.i/18APR13.b/wl67a.d

Acetone Amount: 65.95 Area: 303430



MANUAL INTEGRATION for Acetone

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

5. Other _____

Analyst: JP Date: 4/24/13

WL67-00105

CO-ELUTION SUMMARY FOR FILE - wl67a.d

Lab ID: WL67A, Method: VO121012S.m, Instrument: nt5.i, Date: 18-APR-2013

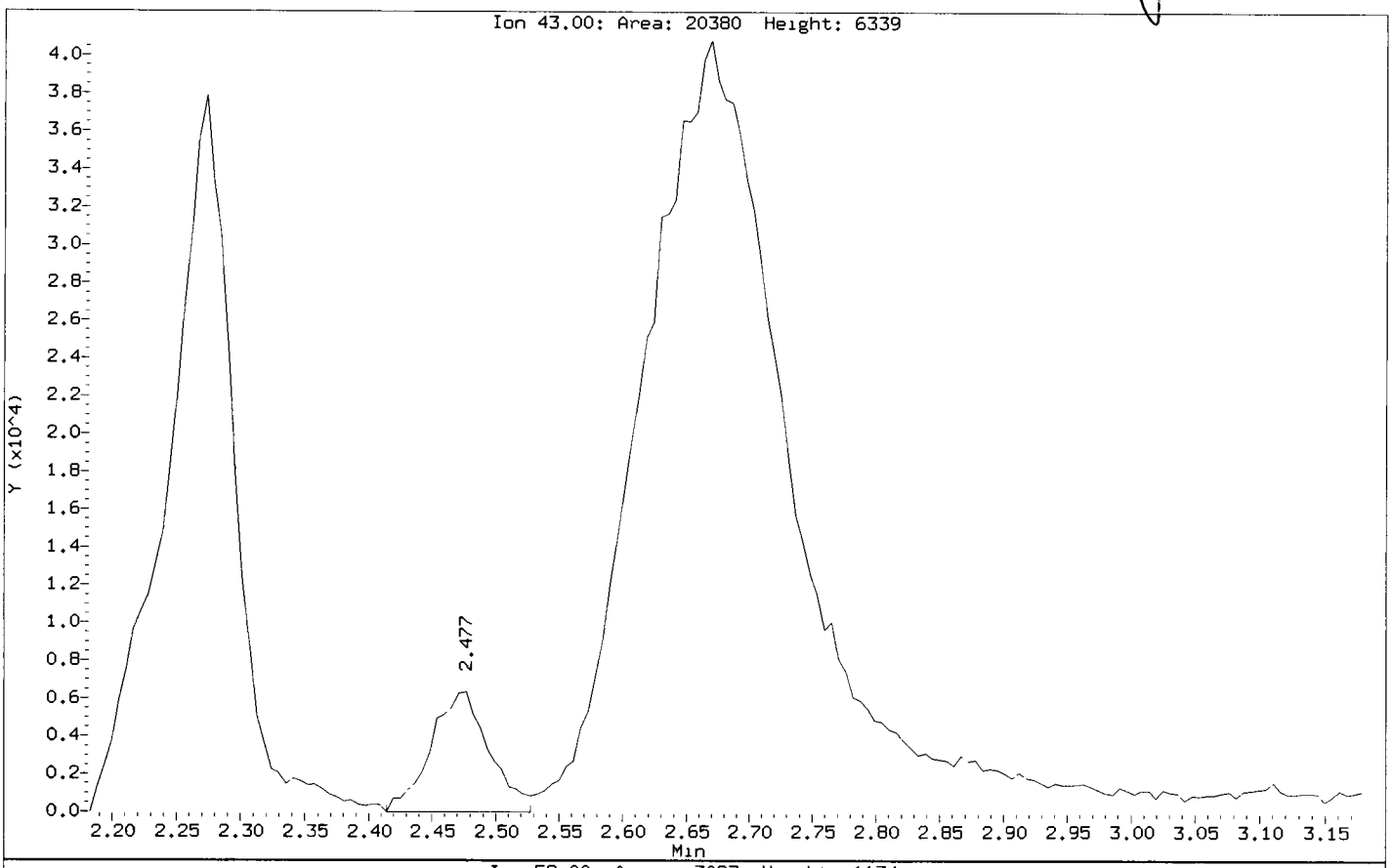
RT	CO-ELUTION COMPOUNDS

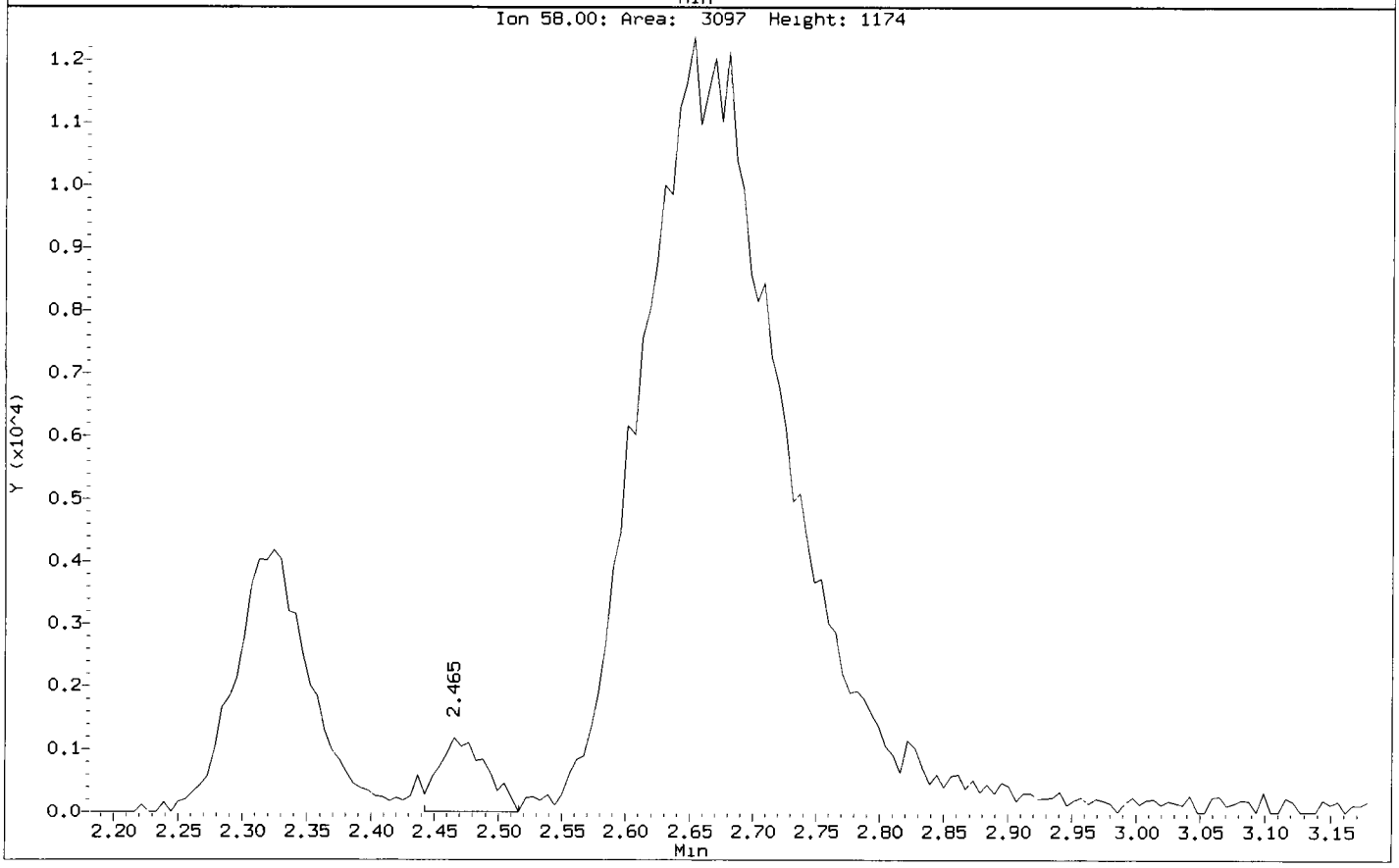
NO CO-ELUTIONS

Data File: /chem1/nt5.1/18APR13.b/wl67a.d
Injection Date: 18-APR-2013 12:41
Instrument: nt5.1
Client Sample ID: GR-CB-07-20130411-S

Compound: Acetone
CAS Number:

14/44





WL67 : 20130

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/18APR13.b/wl67b.d
Lab Smp Id: WL67B Client Smp ID: GR-WS-05-20130411-S
Inj Date : 18-APR-2013 13:05
Operator : PC Inst ID: nt5.i
Smp Info : WL67B,5,6.49,0,,
Misc Info : 13-7792
Comment :
Method : /chem1/nt5.i/18APR13.b/VO121012S.m
Meth Date : 24-Apr-2013 12:48 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.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	6.49000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1	Dichlorodifluoromethane	85	Compound Not Detected.					
2	Chloromethane	50	Compound Not Detected.					
3	Vinyl Chloride	62	Compound Not Detected.					
4	Bromomethane	94	Compound Not Detected.					
5	Chloroethane	64	Compound Not Detected.					
6	Trichlorofluoromethane	101	1.673	1.628	(0.358)	33228	2.02127	1.557(M)
7	1,1-Dichloroethene	96	Compound Not Detected.					
8	Carbon Disulfide	76	1.996	1.985	(0.427)	90507	2.62071	2.019
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	2.465	2.454	(0.527)	14992	1.73171	1.334
14	Acetone	43	2.692	2.680	(0.575)	505506	114.919	88.535(M)
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	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.202	4.196	(0.898)	710137	54.7792	42.203
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.411	4.389	(0.943)	39821	29.6207	22.820(Q)
	30 Benzene	78	4.541	4.536	(0.886)	117161	2.17753	1.678
*	31 Pentafluorobenzene	168	4.677	4.672	(1.000)	1192751	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.998)	835083	56.6885	43.674
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	2232679	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	6.289	(1.227)	2696966	47.5762	36.653
	43 Toluene	92	6.335	6.335	(1.236)	40121	1.10801	0.8536
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.307)	15840	2.88692	2.224(Q)
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	1852486	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	53110	1.01817	0.7844
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.783	7.788	(1.025)	18858	0.94404	0.7273(Q)
	57 o-Xylene	106	8.150	8.151	(1.074)	13007	0.64836	0.4995(Q)
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.433	8.439	(0.873)	21697	0.80306	0.6187
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	803880	40.5316	31.226
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.931)	23208	1.00268	0.7725
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	9.333	9.338	(0.966)	37517	1.64181	1.265
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	9.576	9.587	(0.991)	21747	0.89345	0.6883
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.661	9.672	(1.000)	553202	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.057	(1.040)	505417	50.1039	38.601
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.782	11.799	(1.220)	60460	2.39307	1.844
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: wl67b.d
Lab Smp Id: WL67B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-7792

Calibration Date: 18-APR-2013
Calibration Time: 09:48
Client Smp ID: GR-WS-05-20130411-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1616720	808360	3233440	1192751	-26.22
35 1,4-Difluorobenze	2842987	1421494	5685974	2232679	-21.47
52 d5-Chlorobenzene	2779083	1389542	5558166	1852486	-33.34
76 d4-1,4-Dichlorobe	1529325	764662	3058650	553202	-63.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.68	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL67B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/18APR13.b/VO121012S.m
Misc Info: 13-7792

Client SDG: WL67
Fraction: VOA
Client Smp ID: GR-WS-05-20130411-S
Operator: PC
SampleType: SAMPLE
Quant Type: ISTD

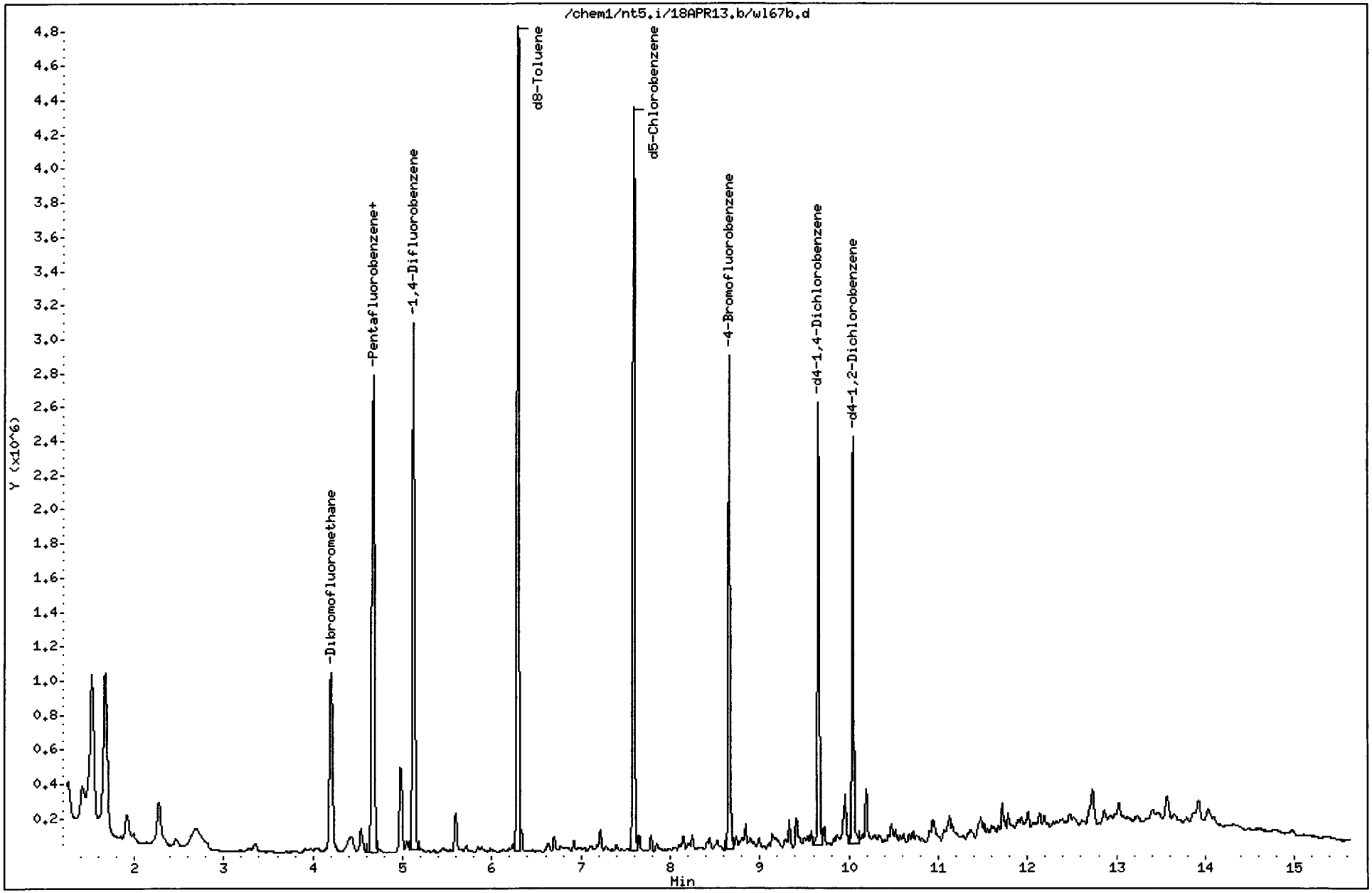
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.779	109.56	70-130
$ 32 d4-1,2-Dichloroeth	50.000	56.689	113.38	80-149
$ 42 d8-Toluene	50.000	47.576	95.15	77-120
$ 62 4-Bromofluorobenze	50.000	40.532	81.06	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.104	100.21	80-120

Data File: /chem1/nt5.i/18APR13.b/wl67b.d
Date : 18-APR-2013 13:05
Client ID: GR-WS-05-20130411-S
Sample Info: WL67B,5,6,49,0,,

Instrument: nt5.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

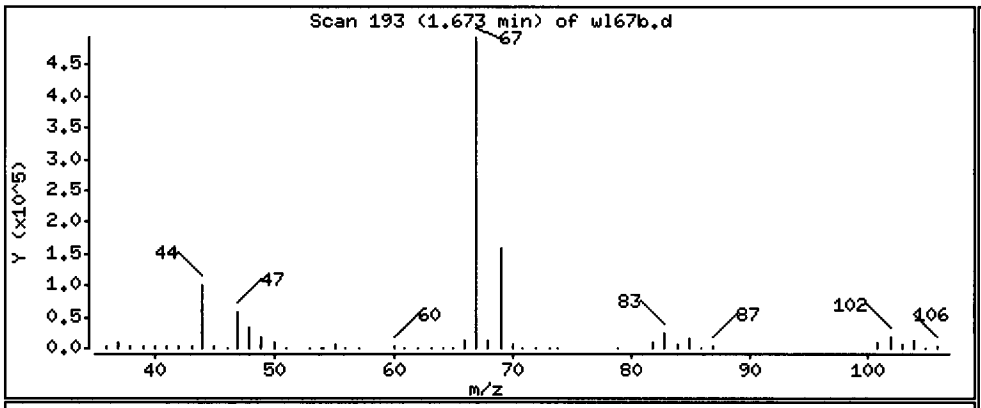
Operator: PC

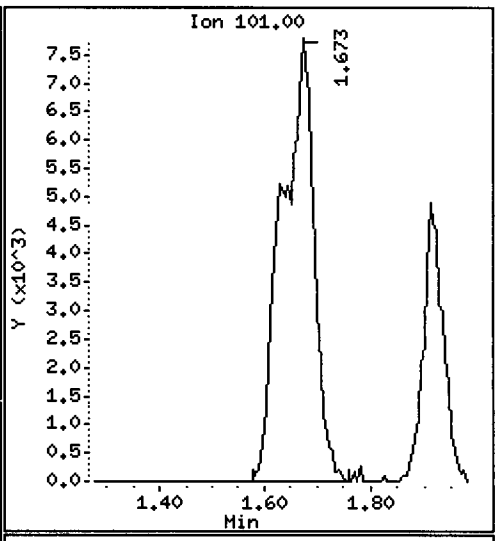
Column phase: RTXVMS

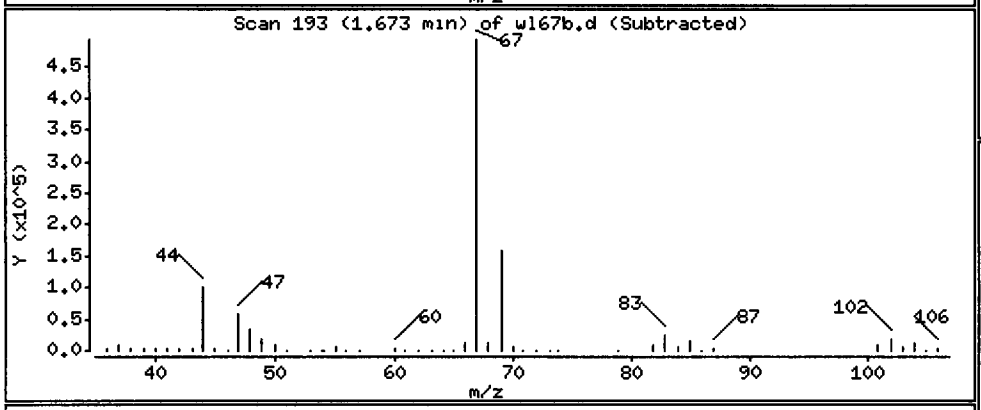
Column diameter: 0.18

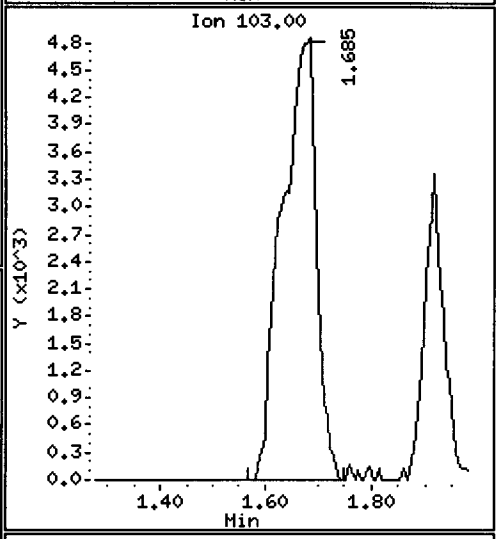
6 Trichlorofluoromethane

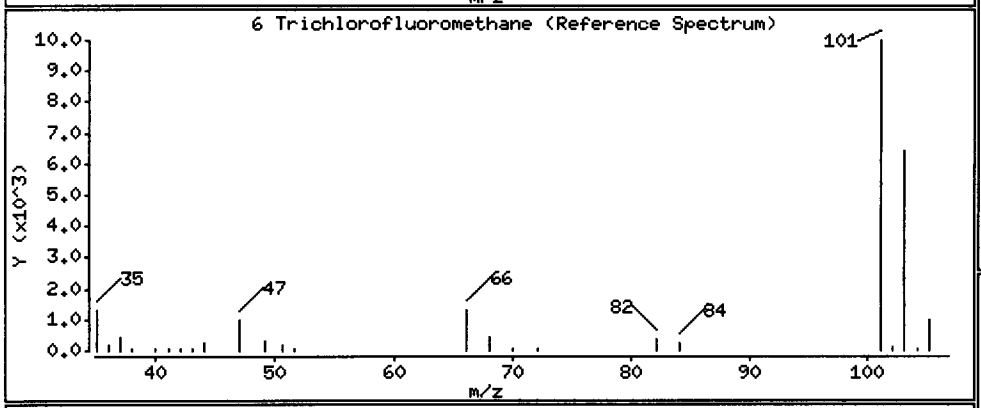
Concentration: 1.557 ug/Kg

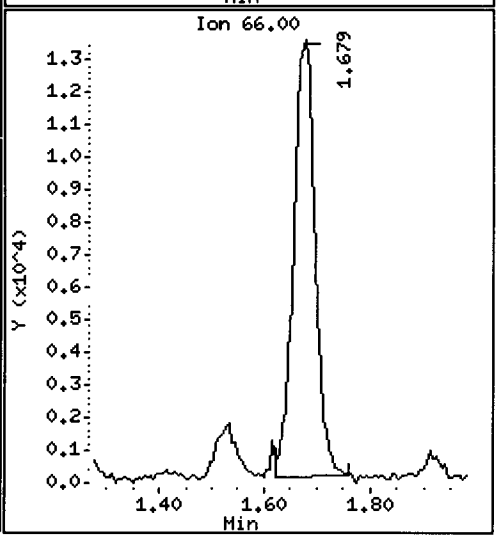


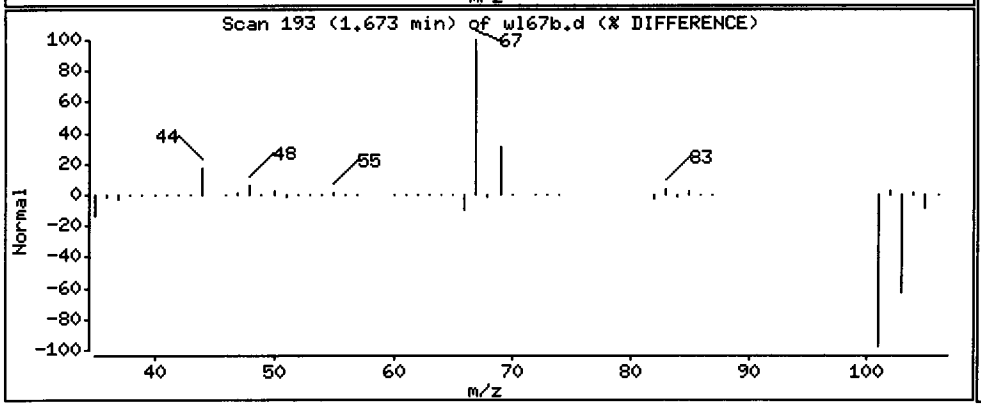












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

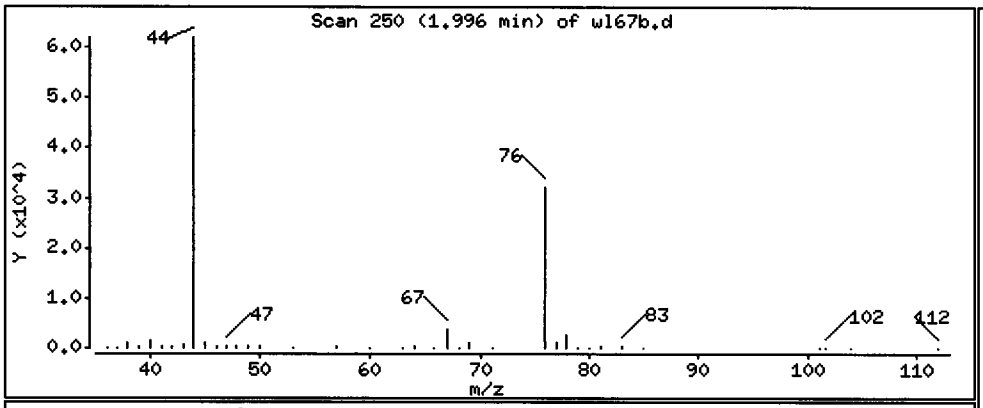
Operator: PC

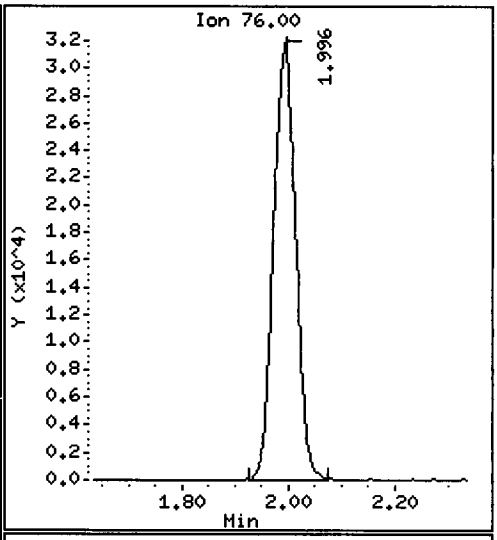
Column phase: RTXVMS

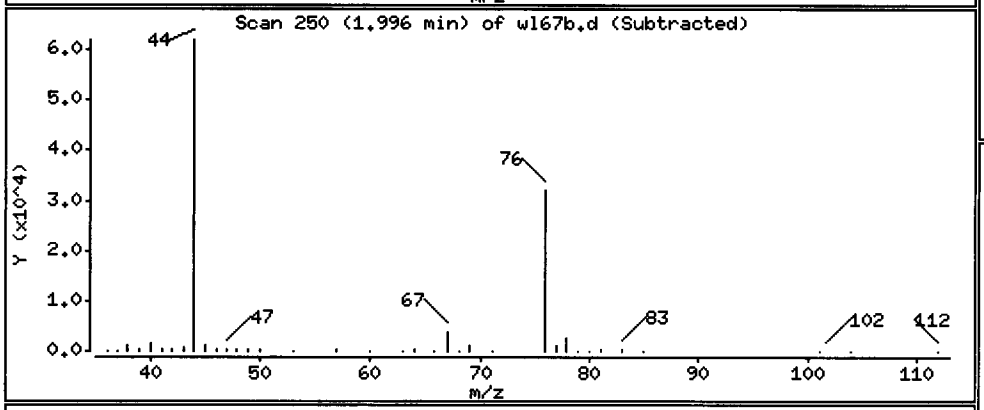
Column diameter: 0.18

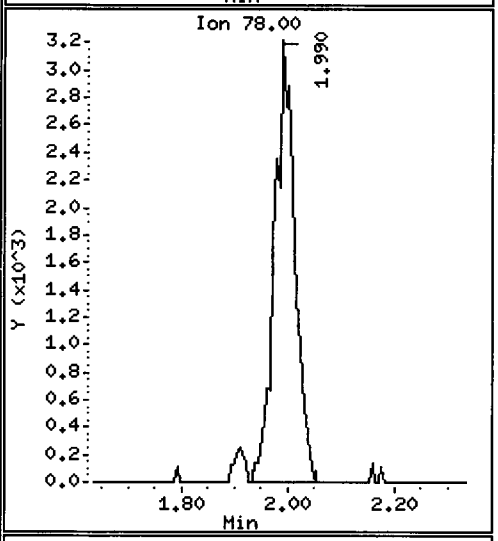
8 Carbon Disulfide

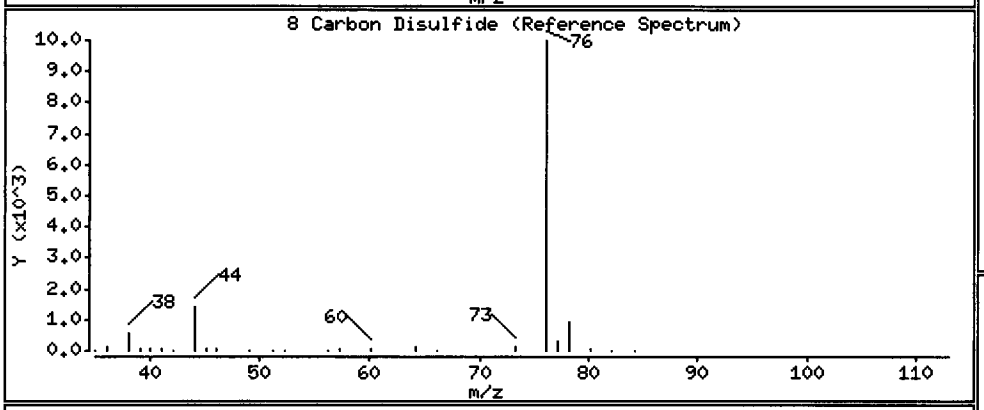
Concentration: 2.019 ug/Kg

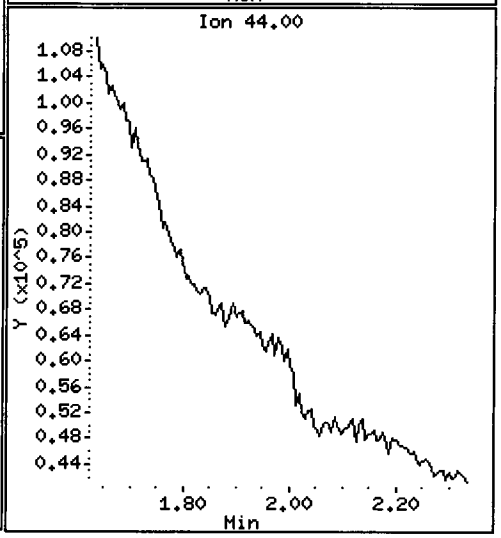


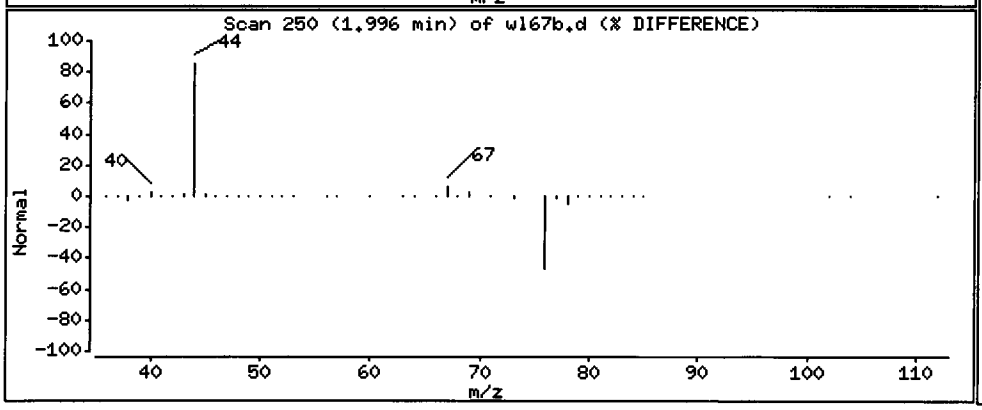












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

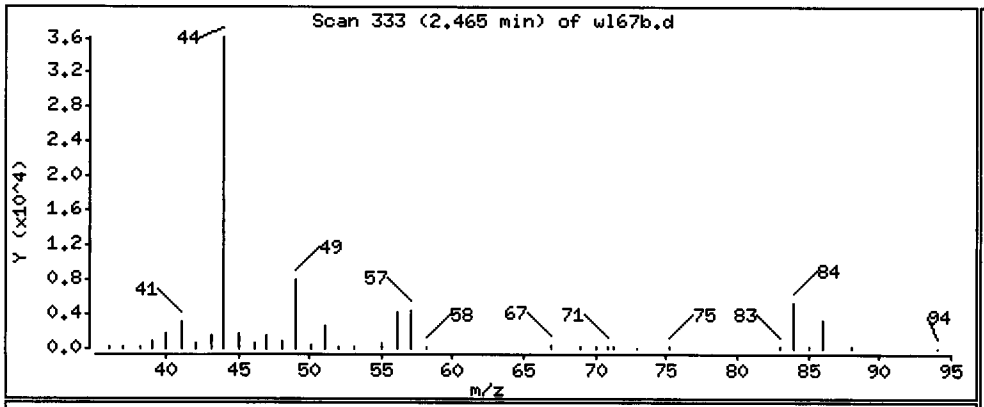
Operator: PC

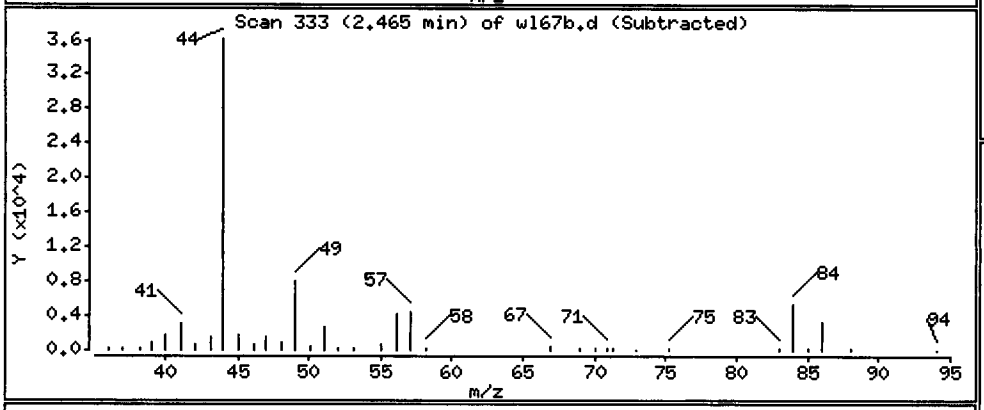
Column phase: RTXVMS

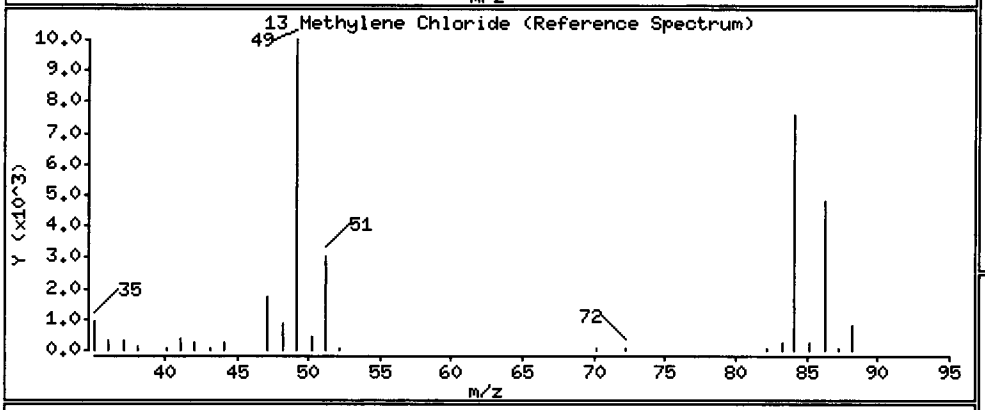
Column diameter: 0.18

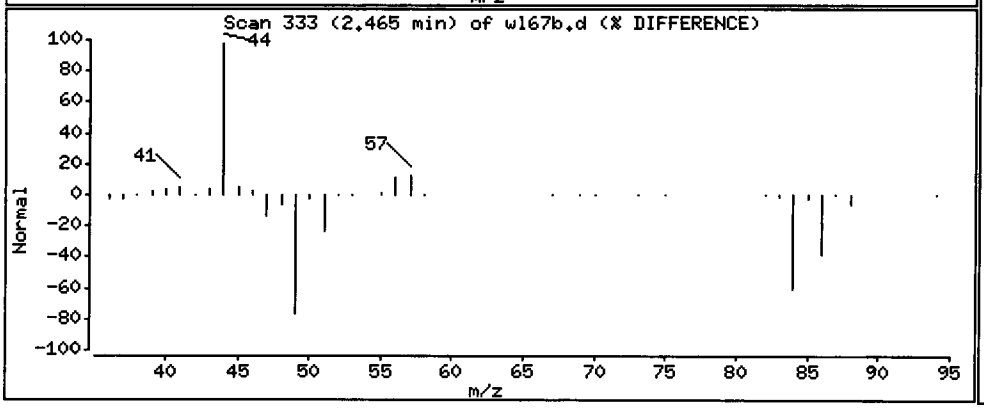
13 Methylene Chloride

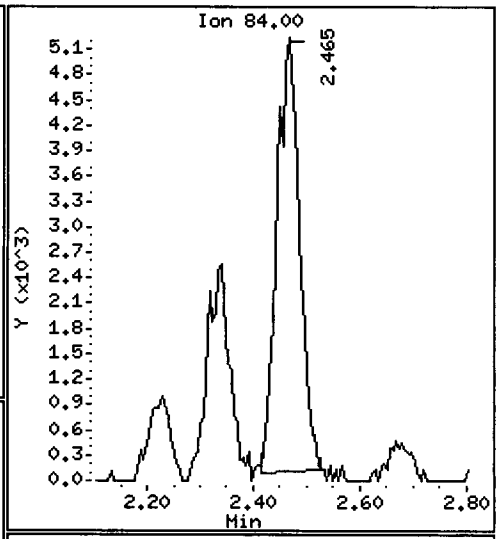
Concentration: 1.334 ug/Kg (B; 4mpL

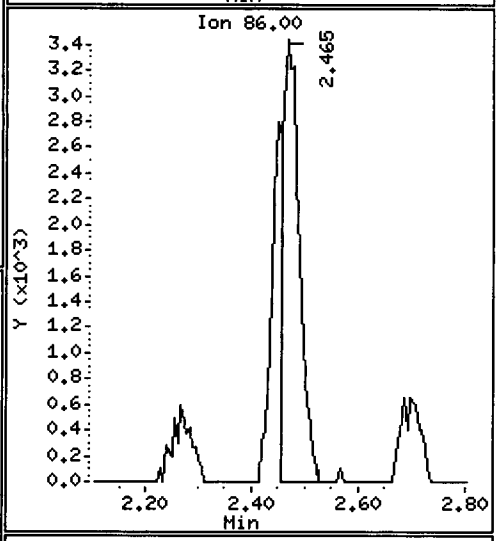


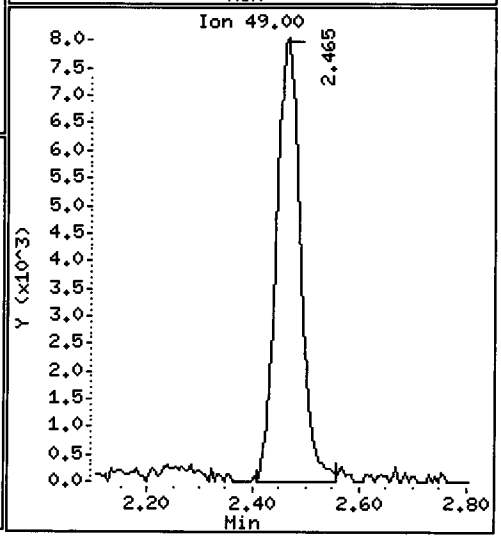












WL67-00507

Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

Operator: PC

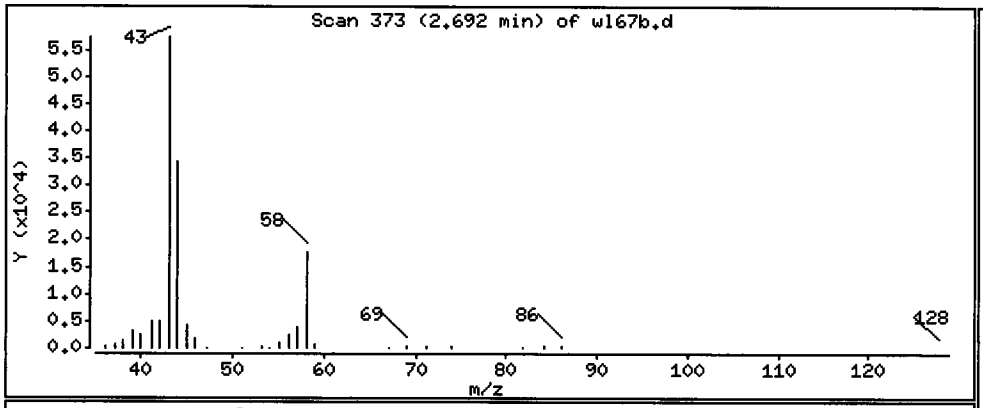
Column phase: RTXVMS

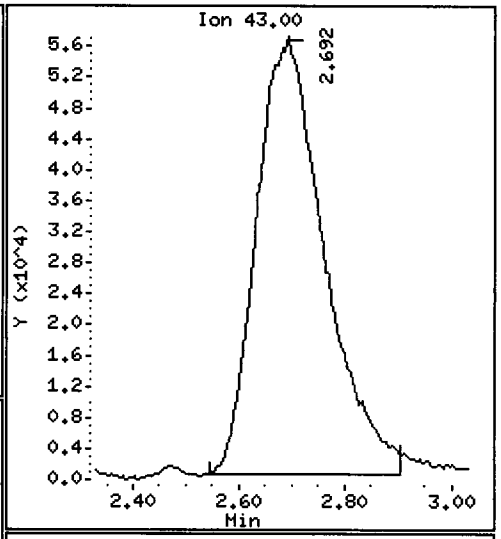
Column diameter: 0.18

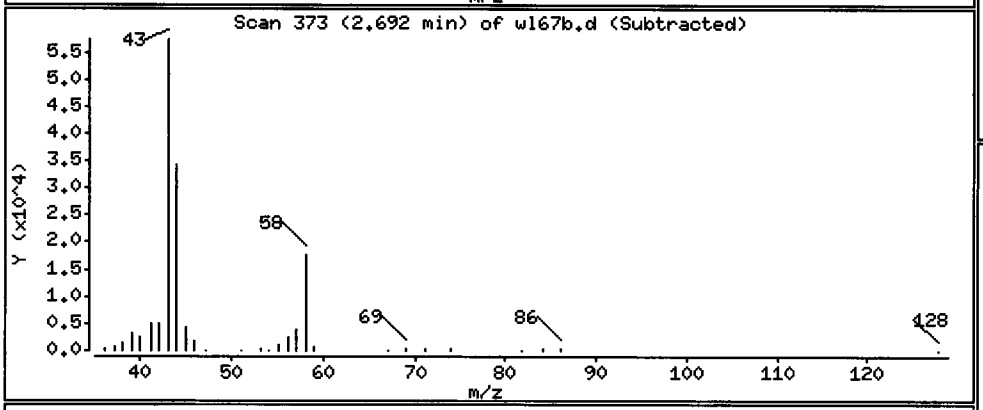
14 Acetone

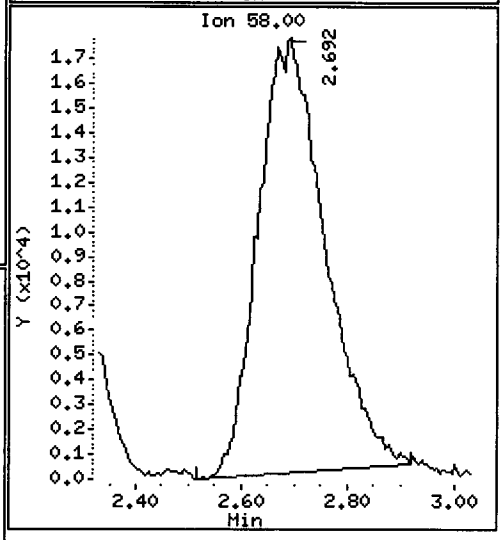
Concentration: 88.535 ug/Kg

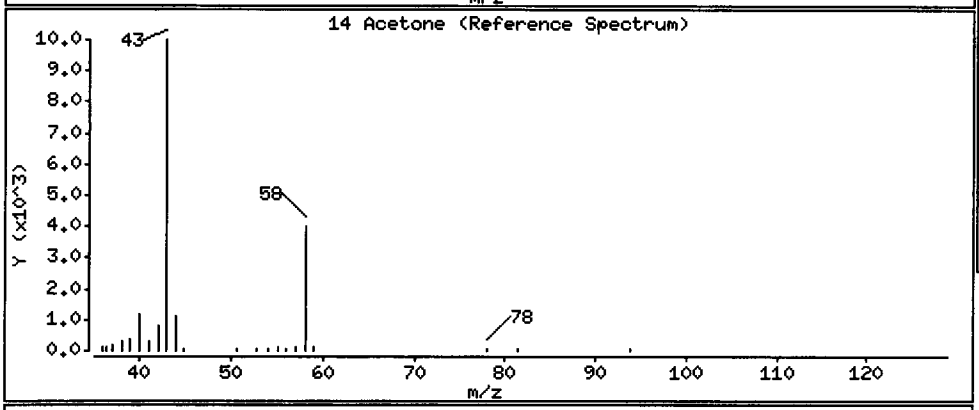
9

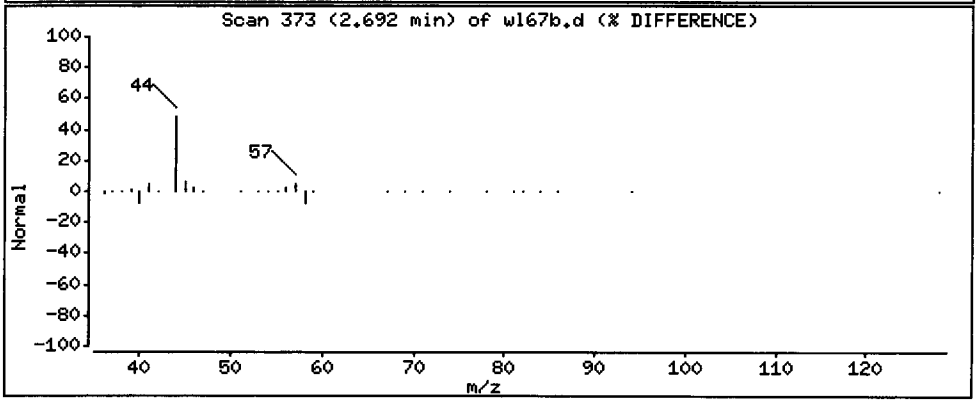












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

Operator: PC

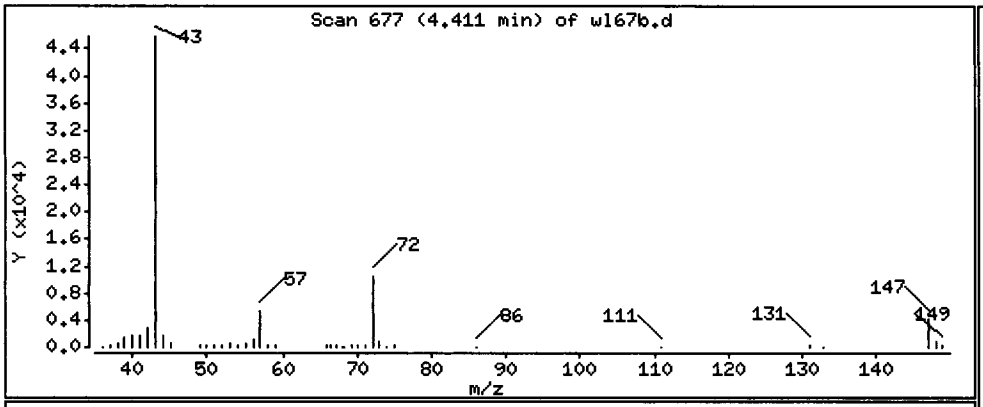
Column phase: RTXVMS

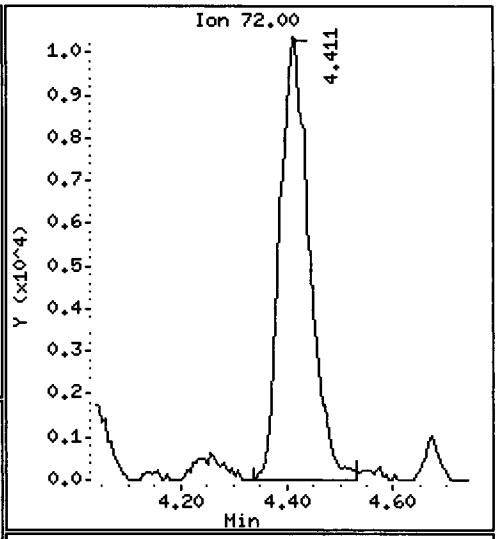
Column diameter: 0.18

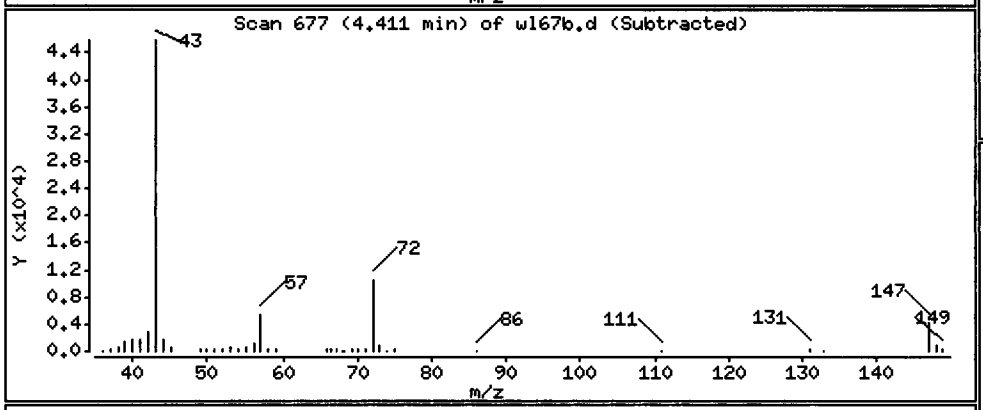
4

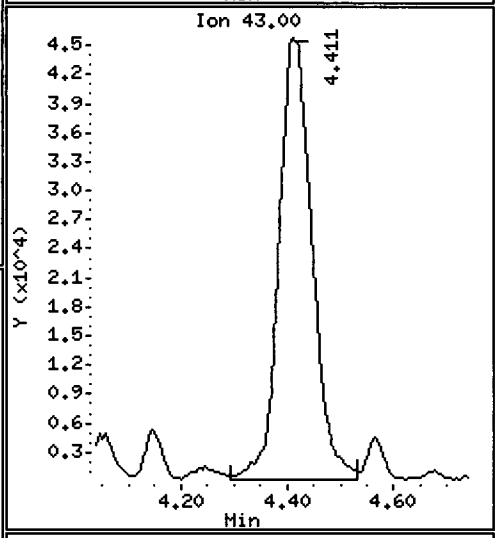
29 2-Butanone

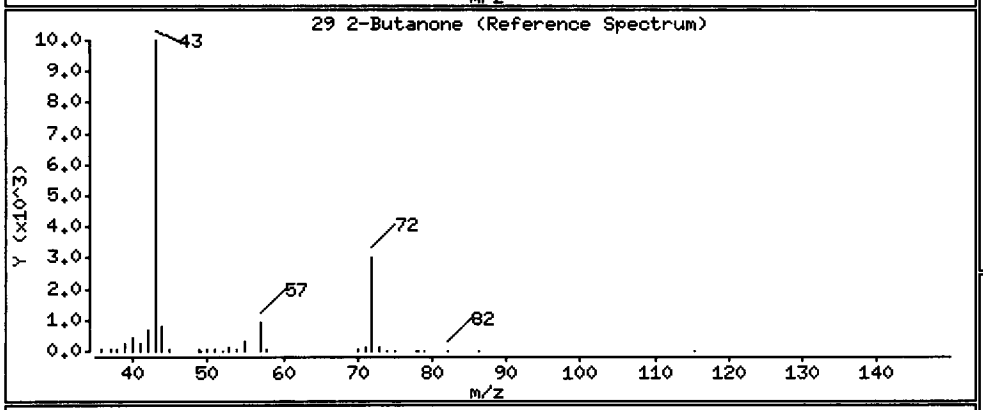
Concentration: 22.820 ug/Kg

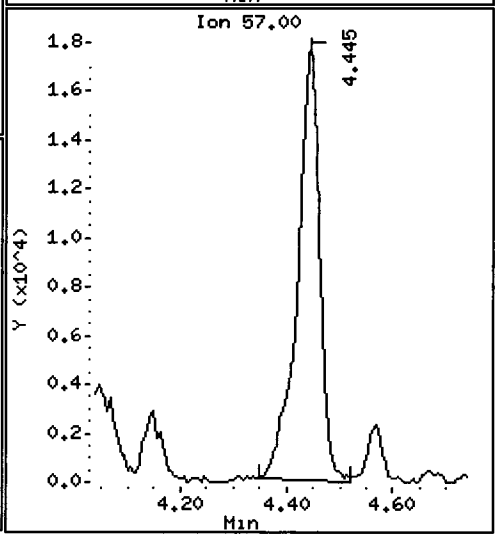


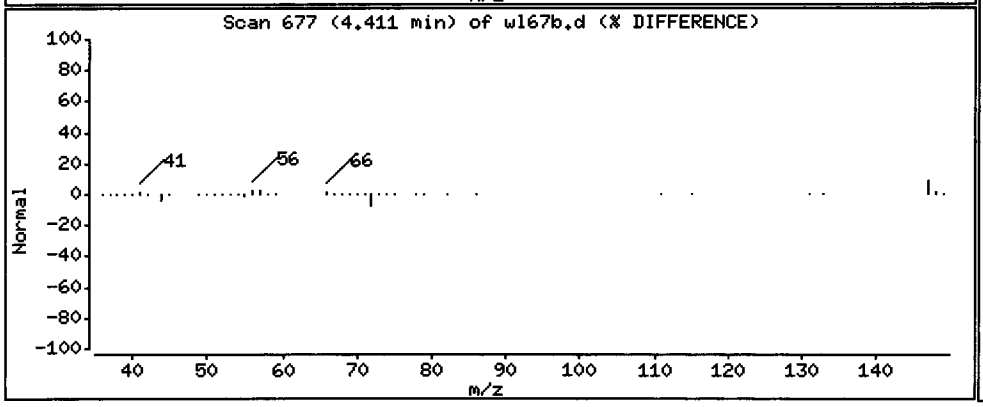












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

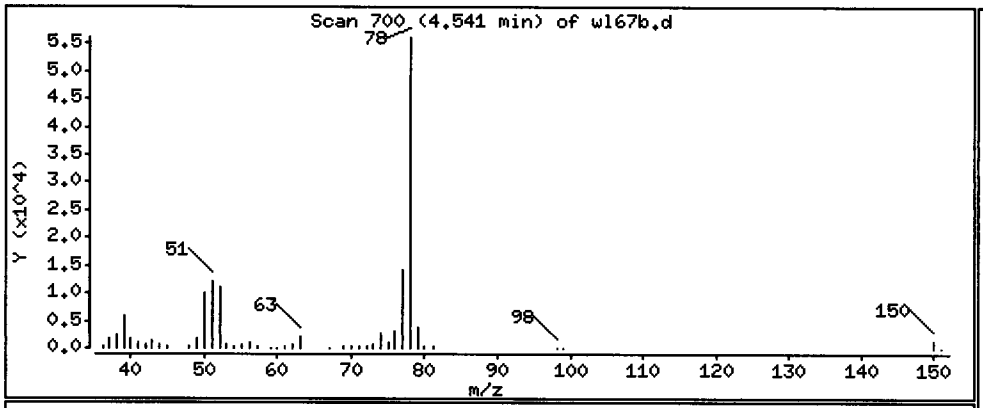
Operator: PC

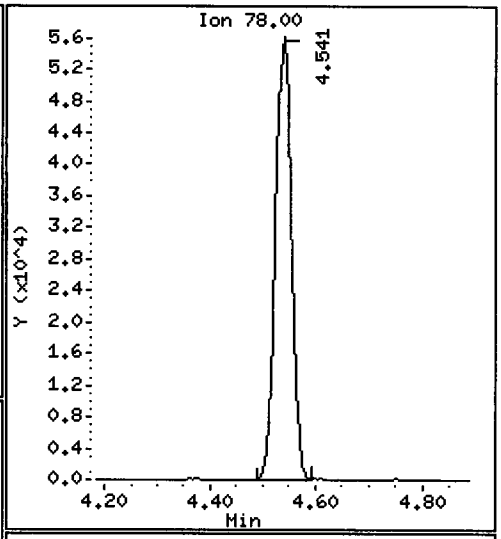
Column phase: RTXVMS

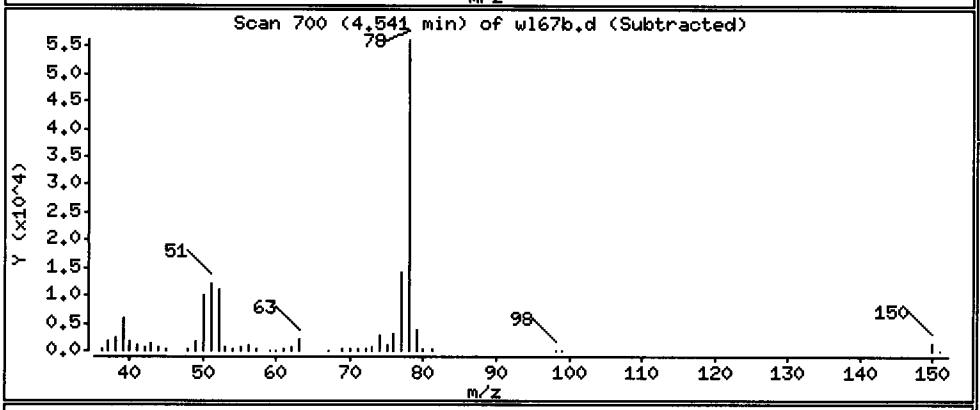
Column diameter: 0.18

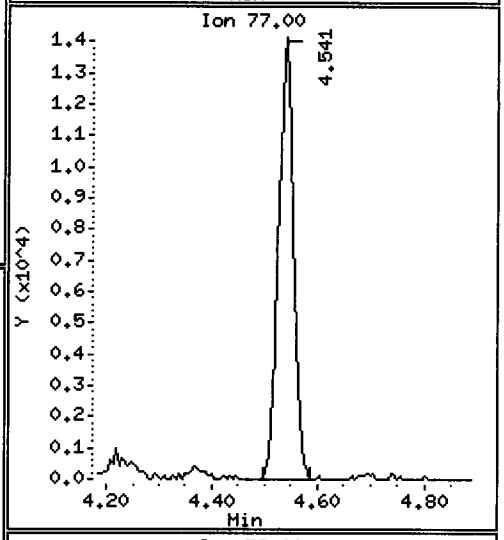
30 Benzene

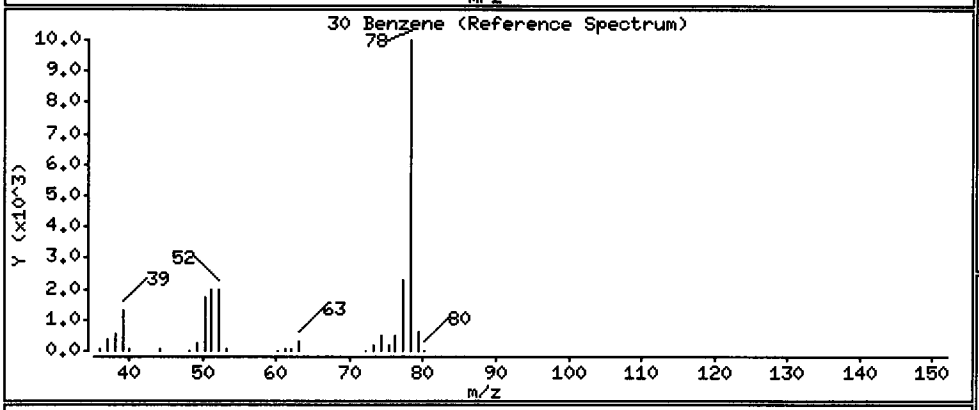
Concentration: 1.678 ug/Kg

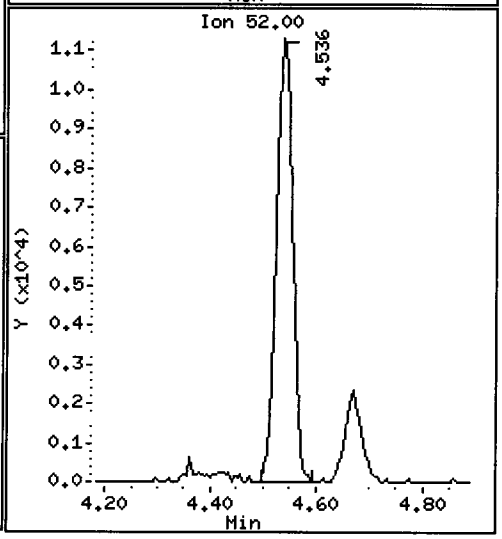


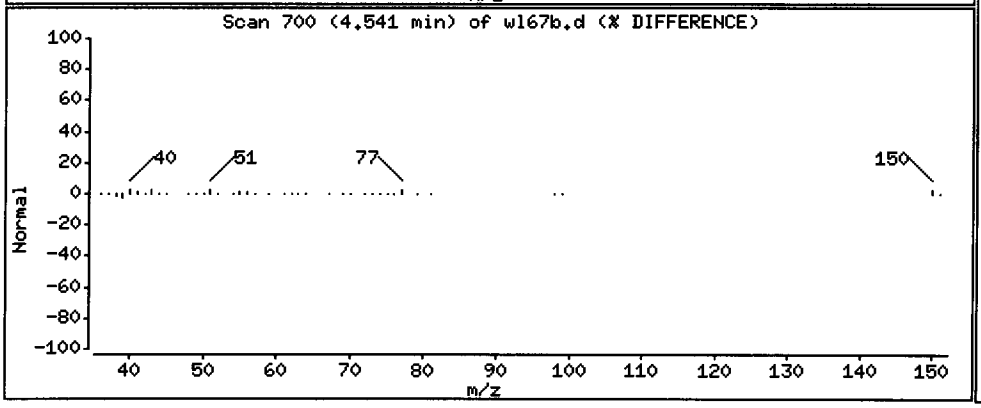












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

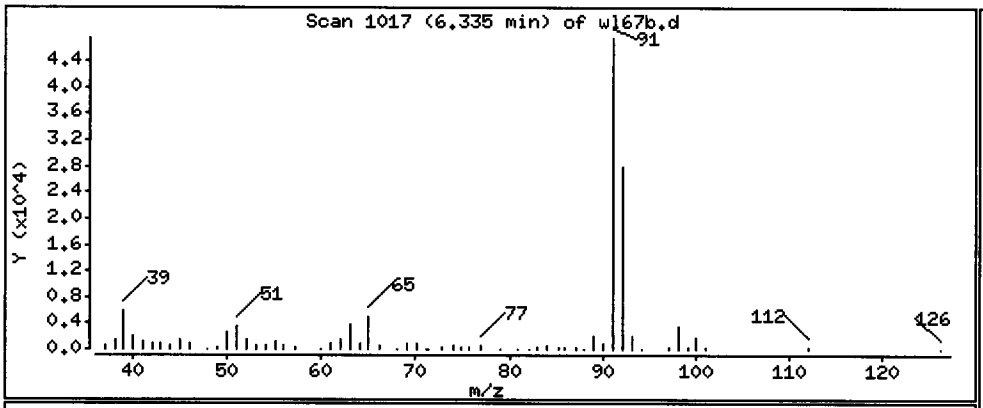
Operator: PC

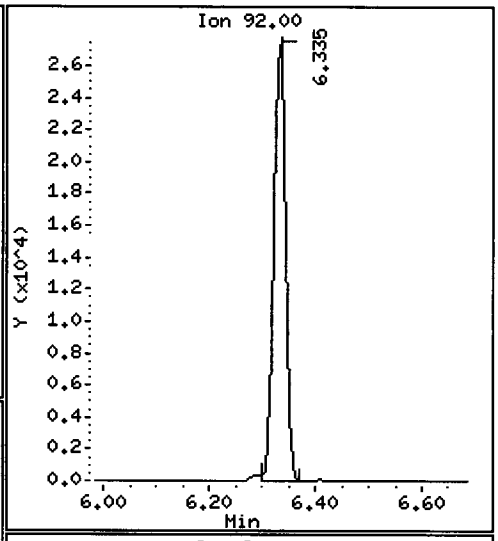
Column phase: RTXVMS

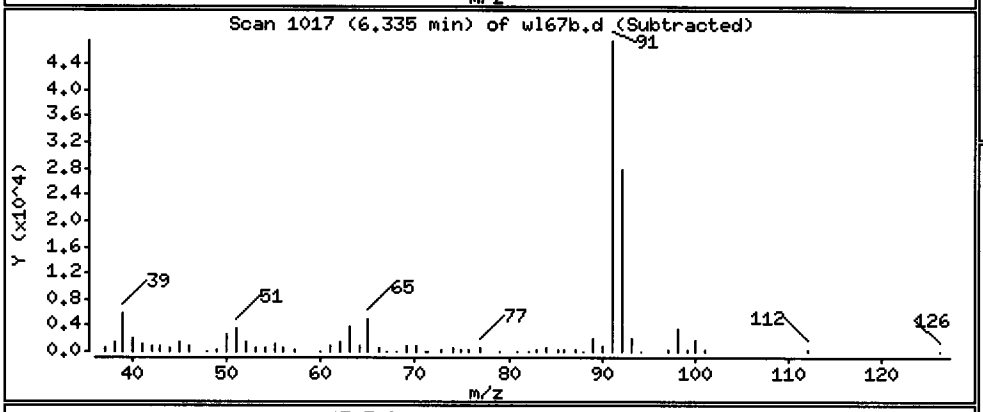
Column diameter: 0.18

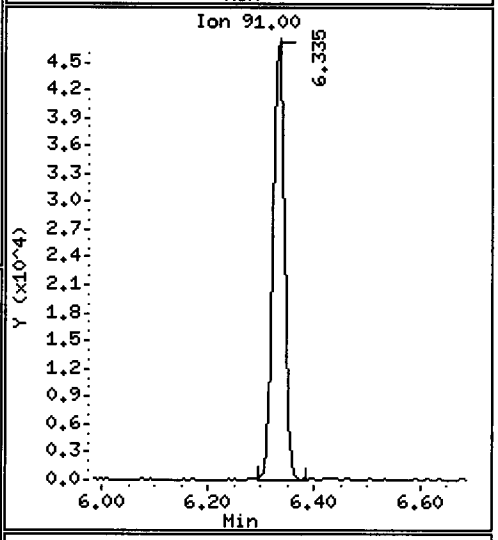
43 Toluene

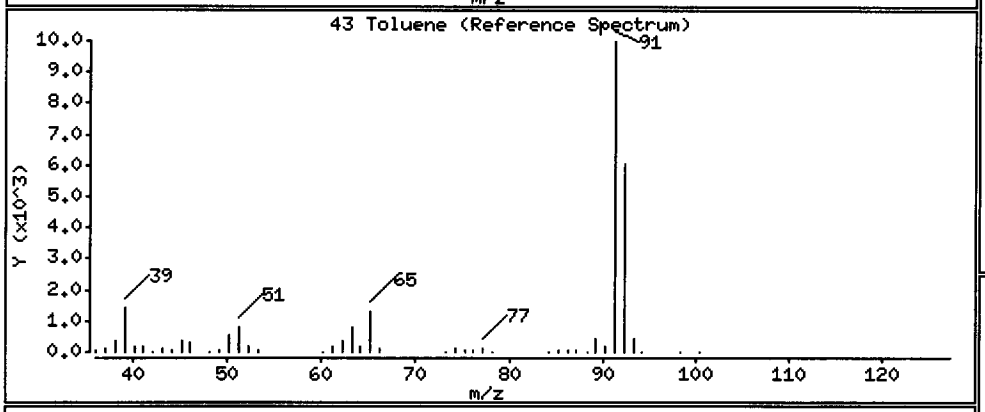
Concentration: 0.8536 ug/Kg

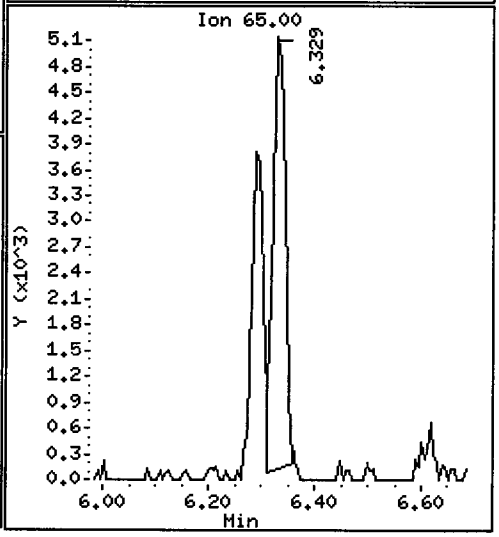


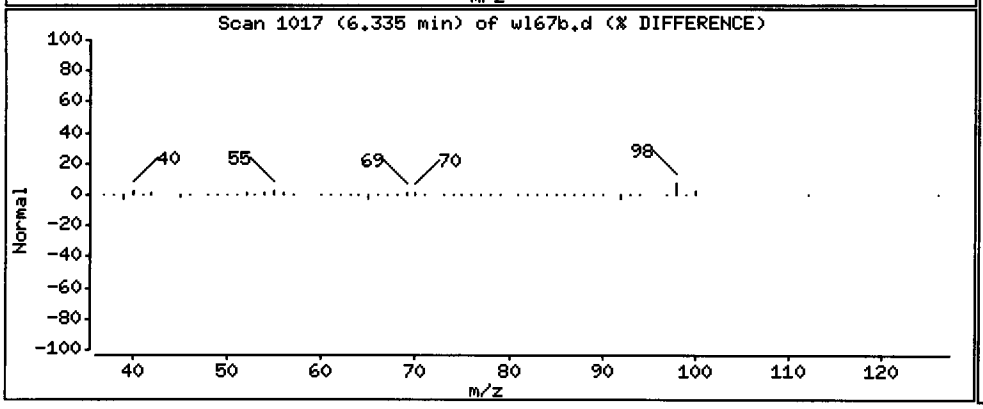












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

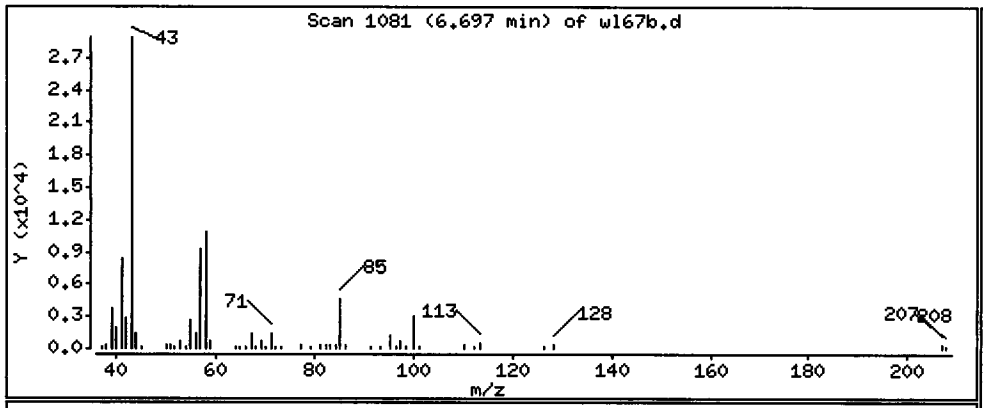
Operator: PC

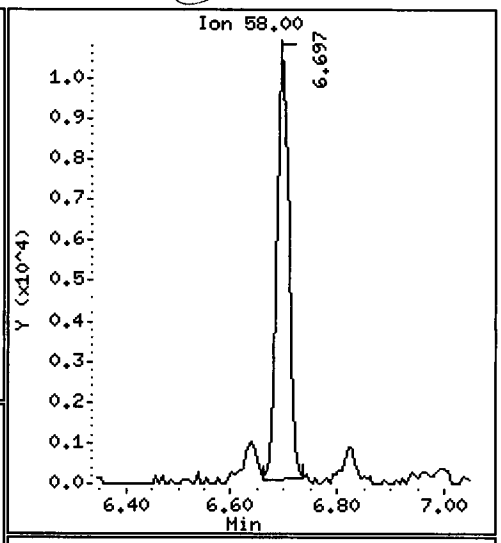
Column phase: RTXVMS

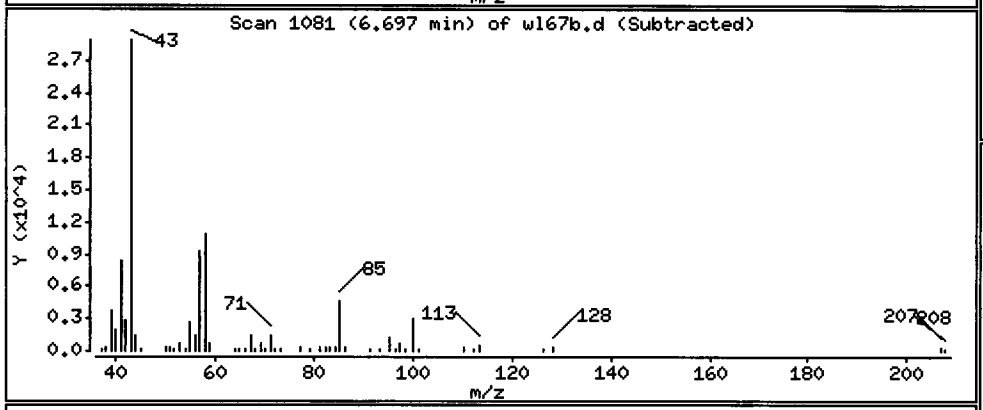
Column diameter: 0.18

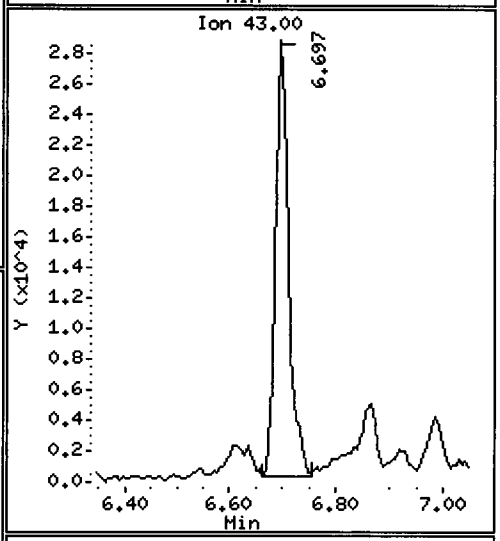
45 4-Methyl-2-Pentanone

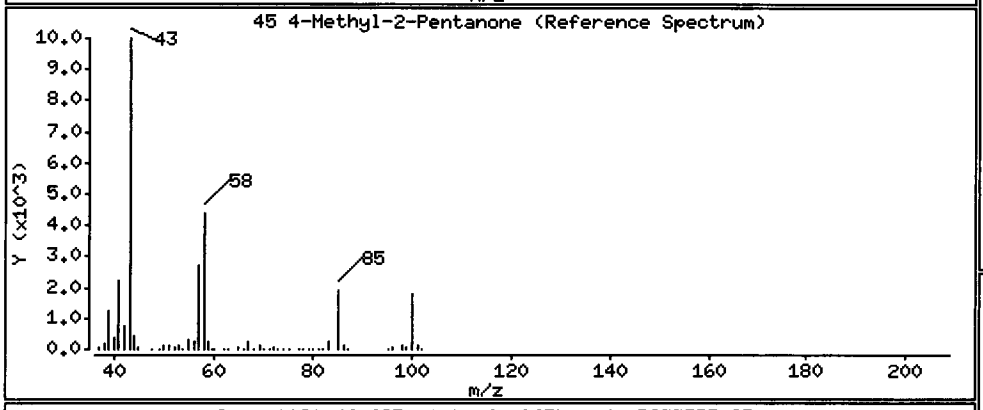
Concentration: 2.224 ug/Kg

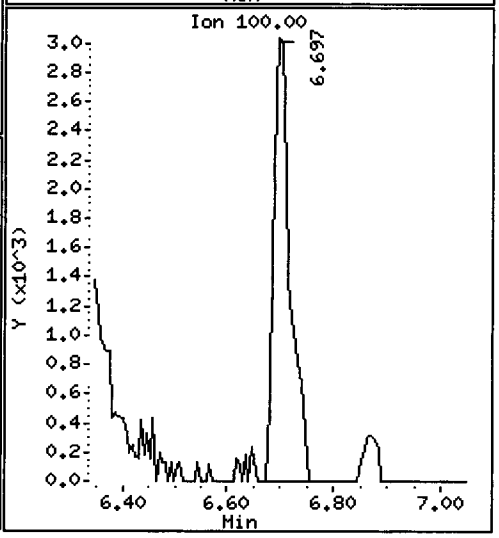


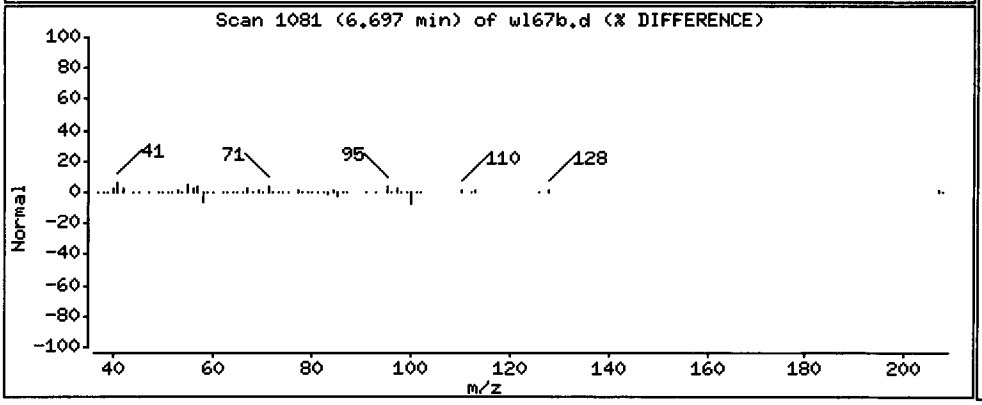












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

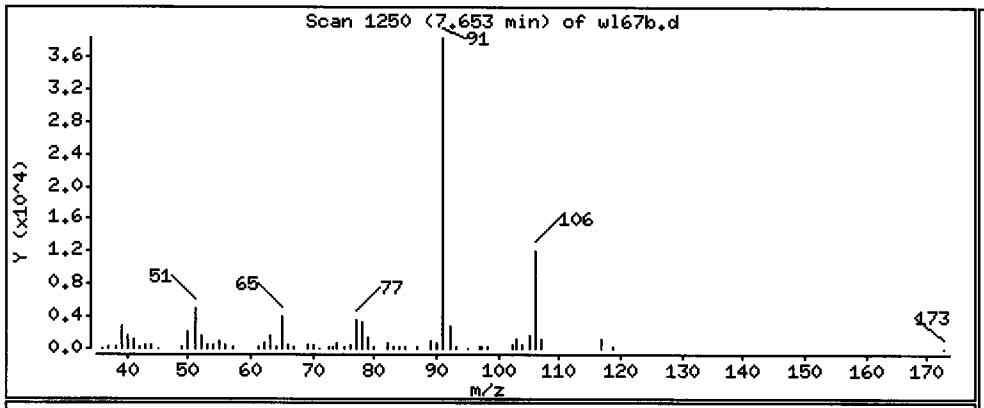
Operator: PC

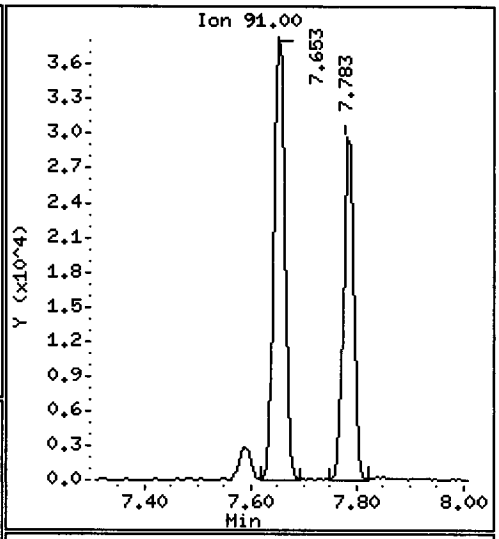
Column phase: RTXVMS

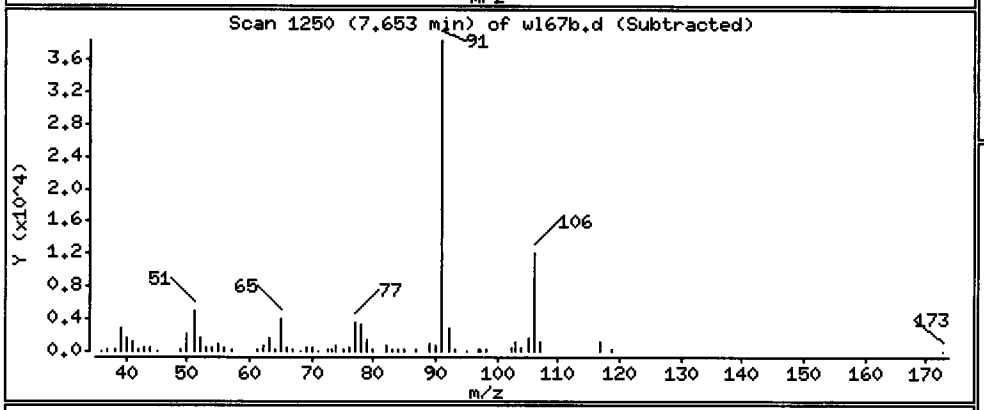
Column diameter: 0.18

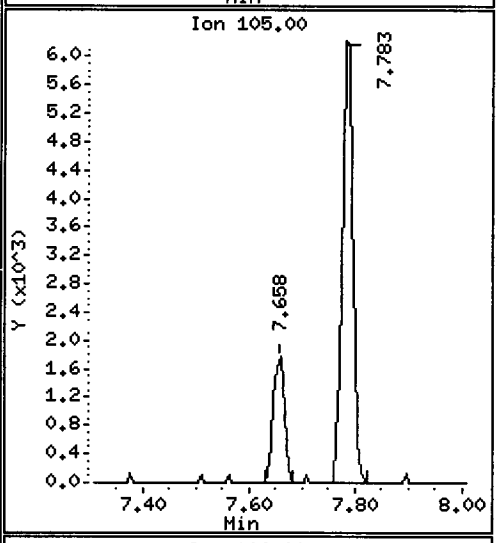
54 Ethyl Benzene

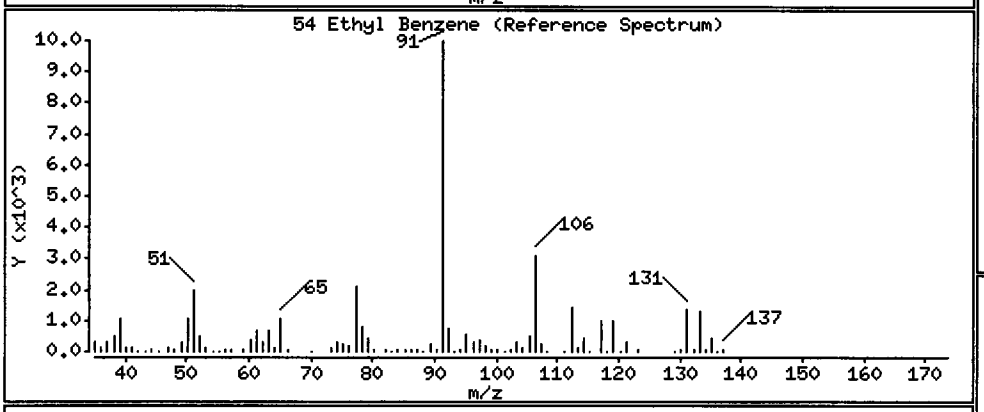
Concentration: 0.7844 ug/Kg

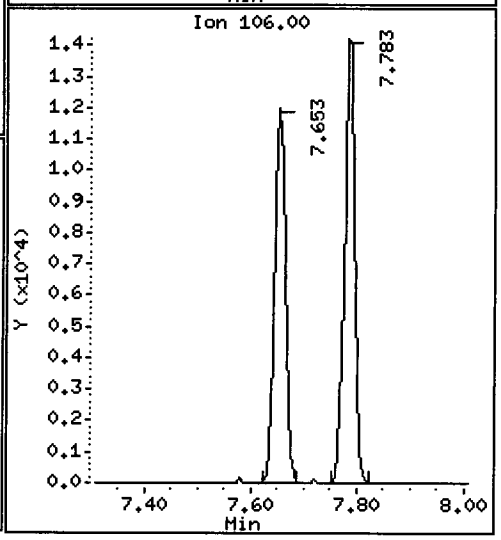


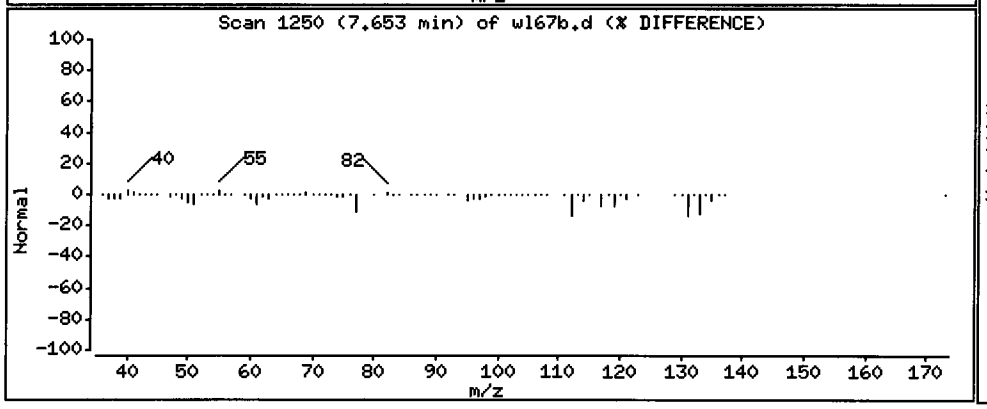












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

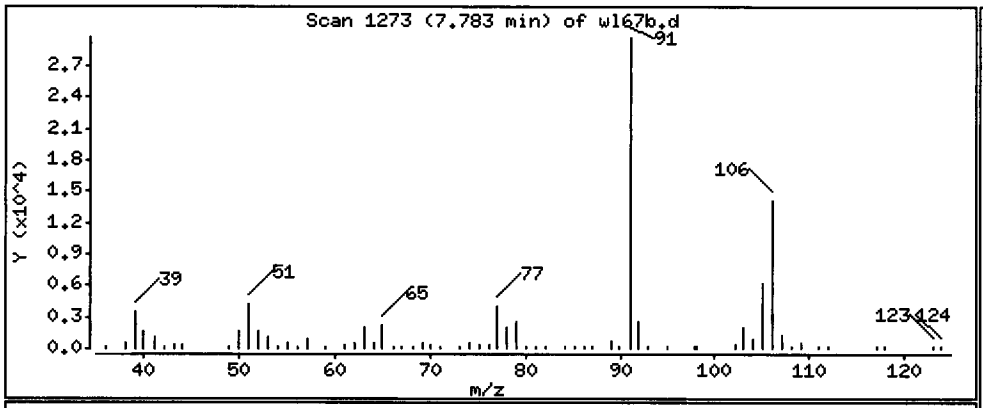
Operator: PC

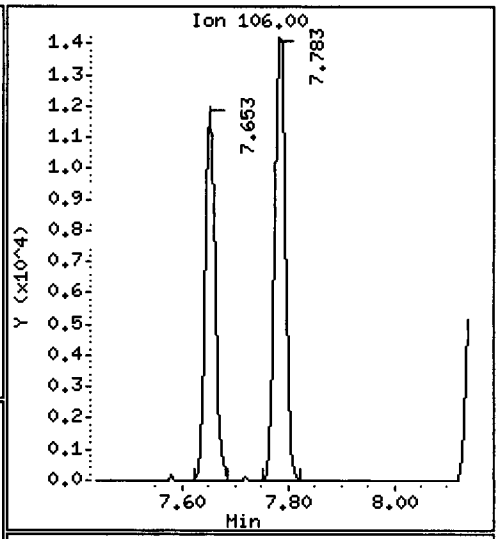
Column phase: RTXVMS

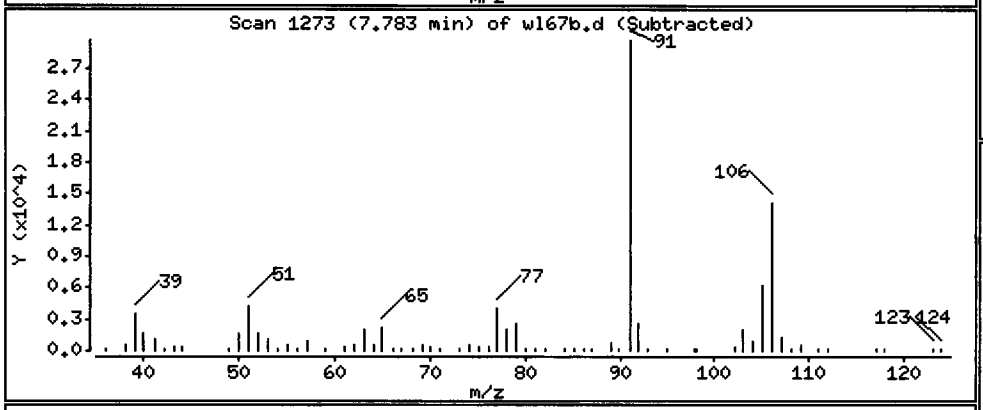
Column diameter: 0.18

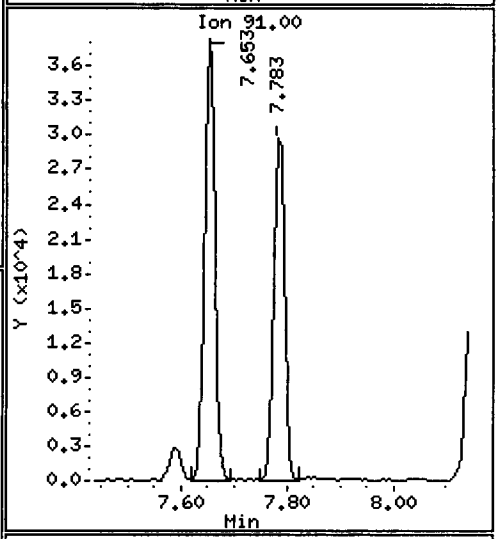
56 m,p-xylene

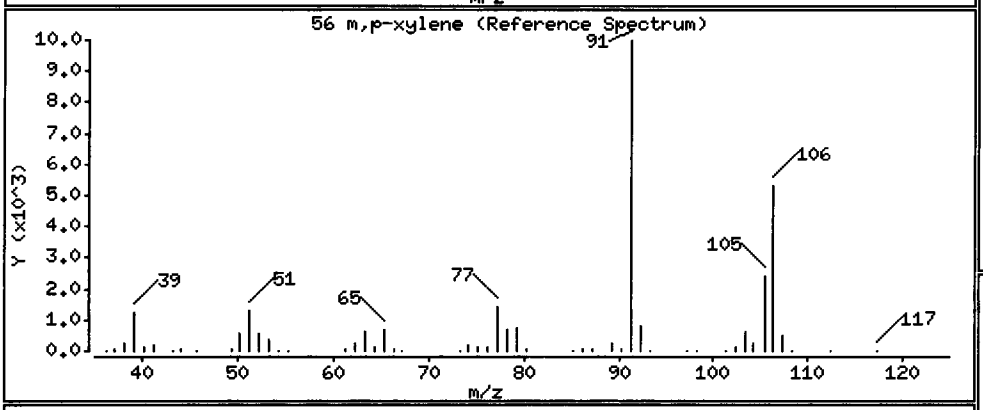
Concentration: 0.7273 ug/Kg

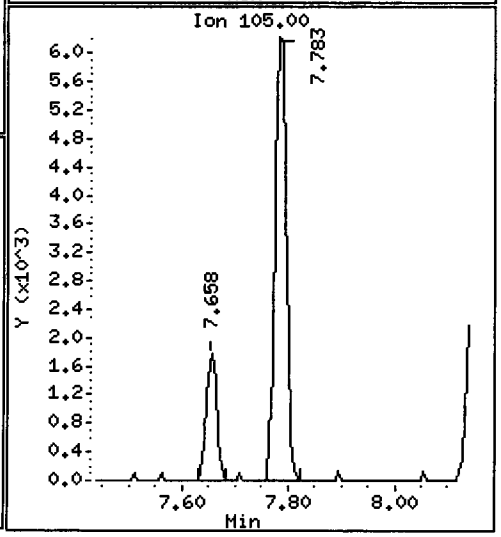


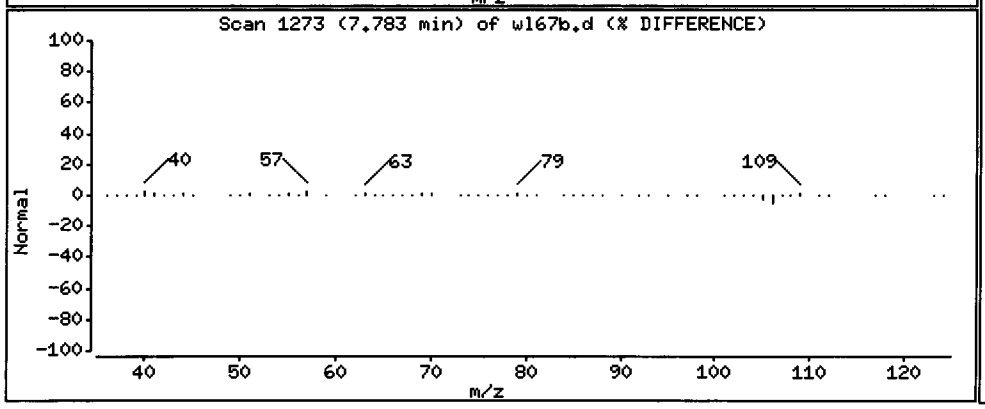












WL67:0051

Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

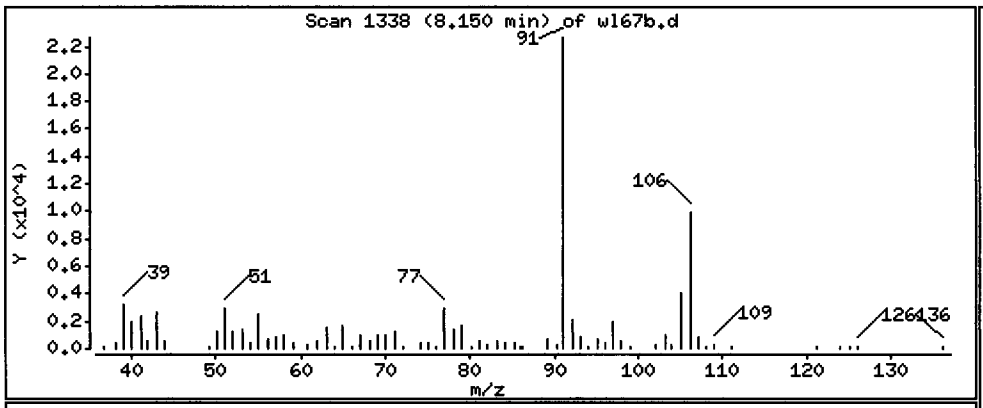
Operator: PC

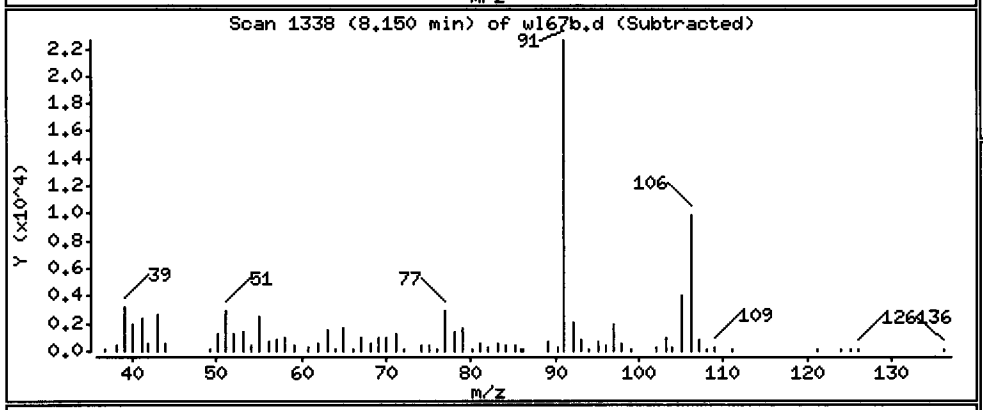
Column phase: RTXVMS

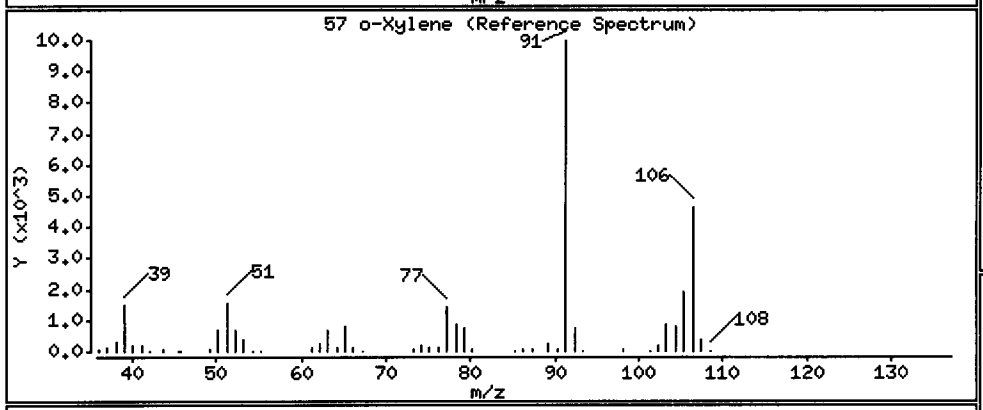
Column diameter: 0.18

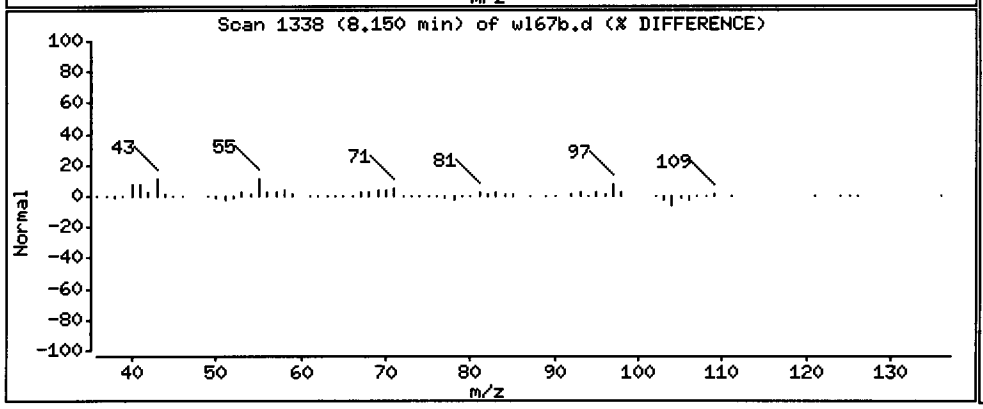
57 o-Xylene

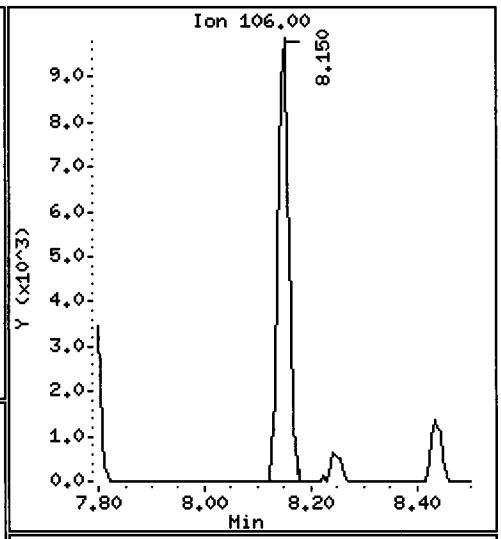
Concentration: 0.4995 ug/Kg

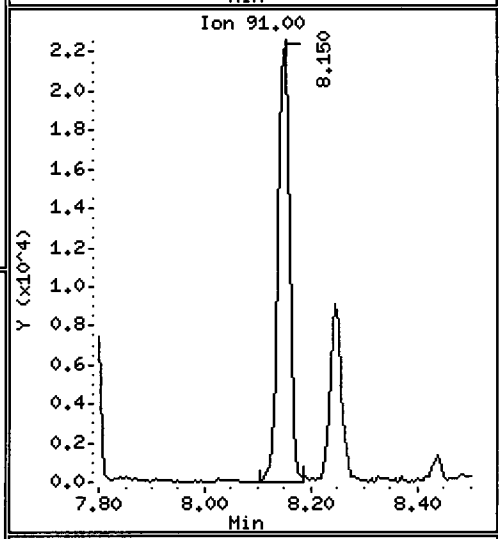


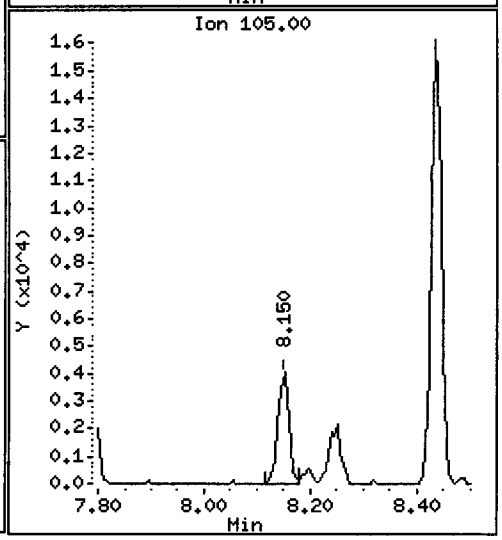












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

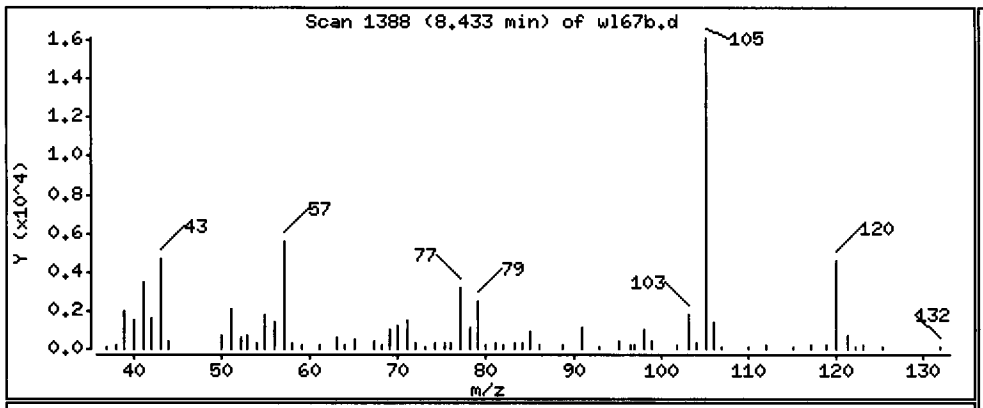
Operator: PC

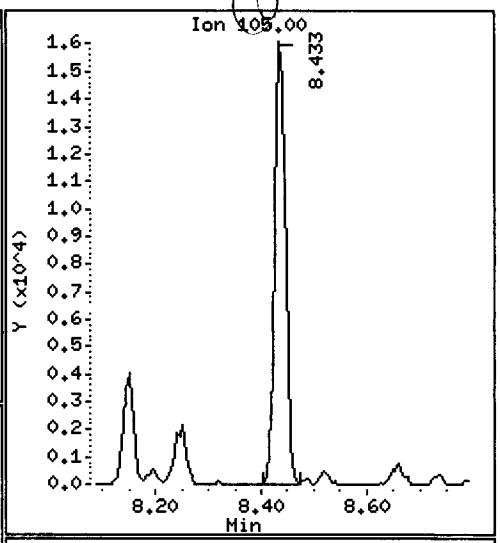
Column phase: RTXVMS

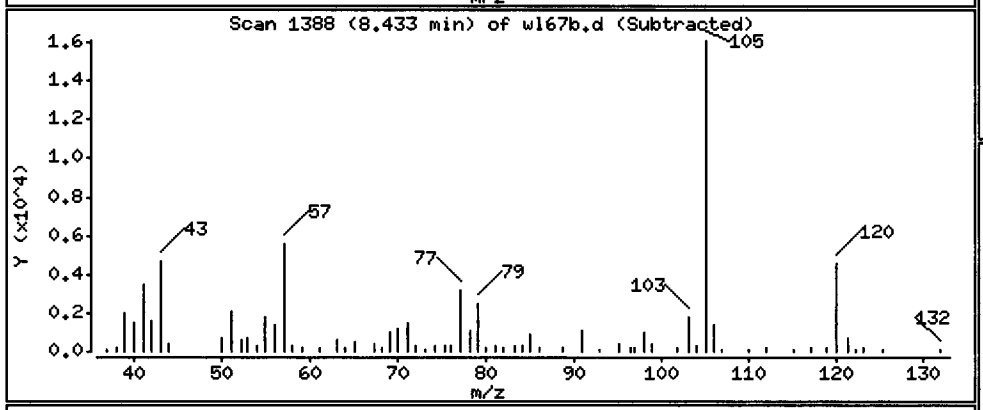
Column diameter: 0.18

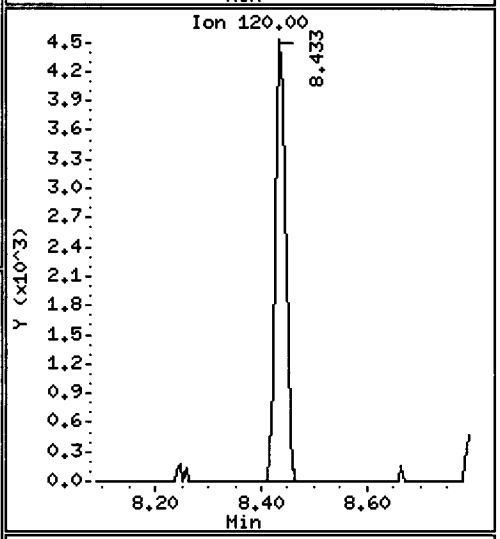
60 Isopropyl Benzene

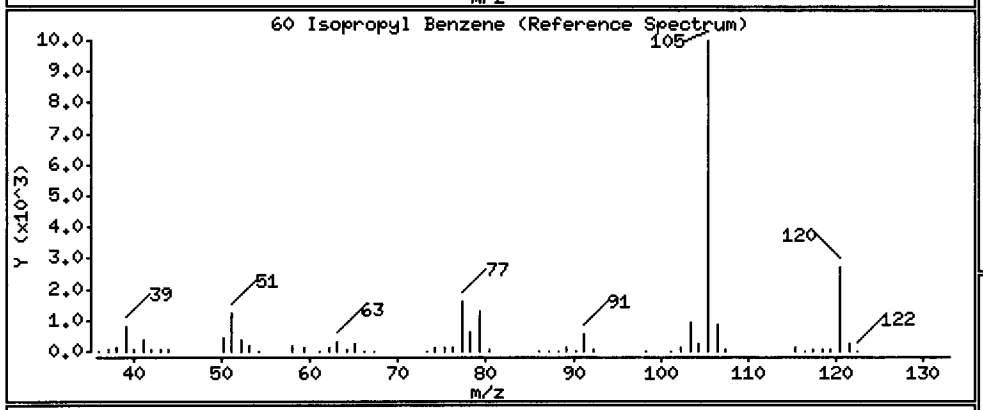
Concentration: 0.6187 ug/Kg

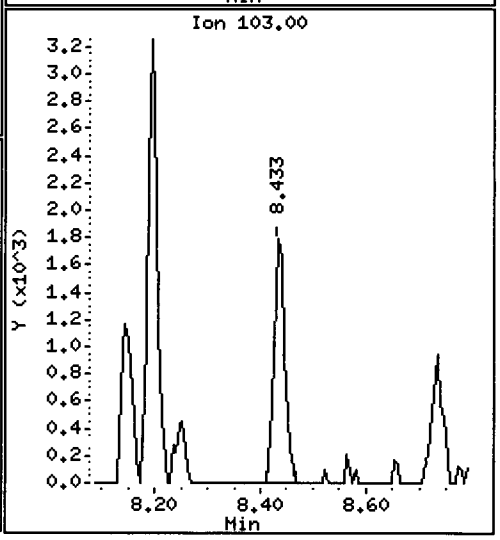


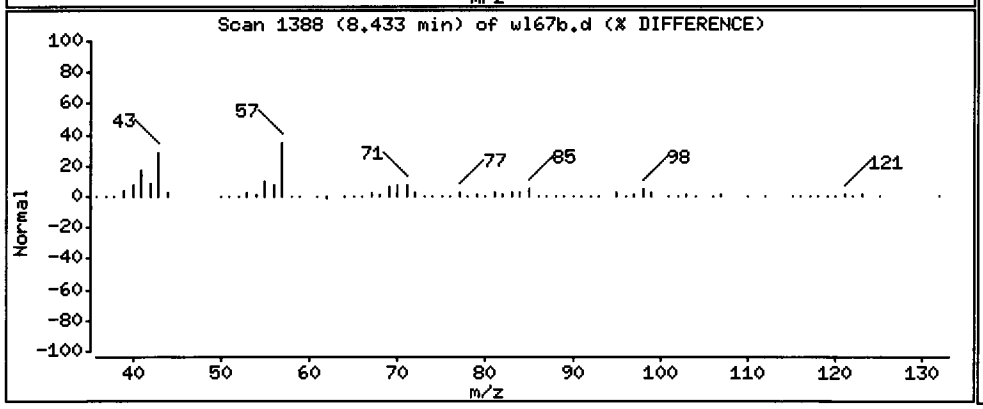












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

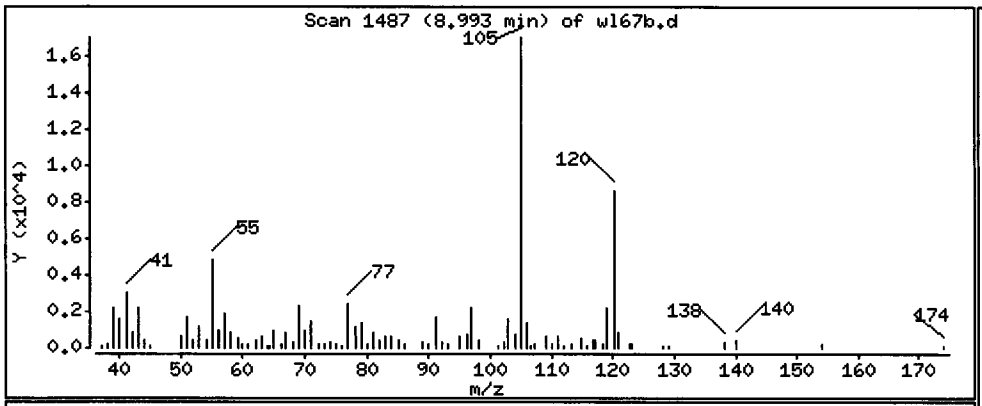
Operator: PC

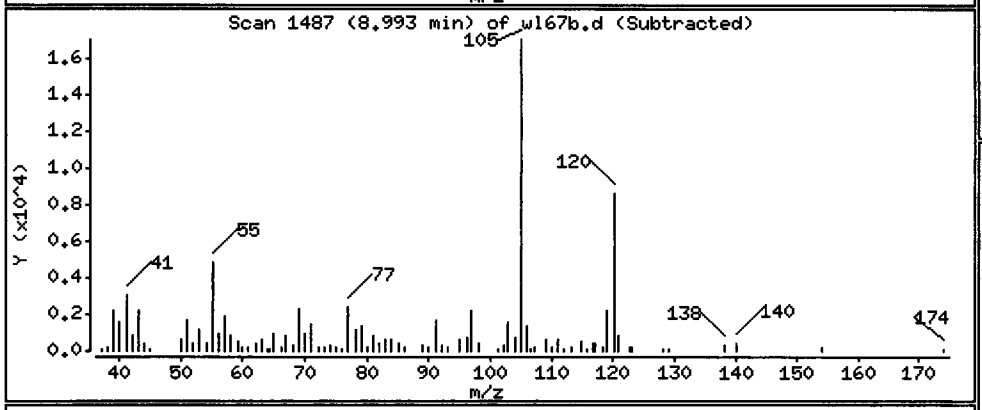
Column phase: RTXVMS

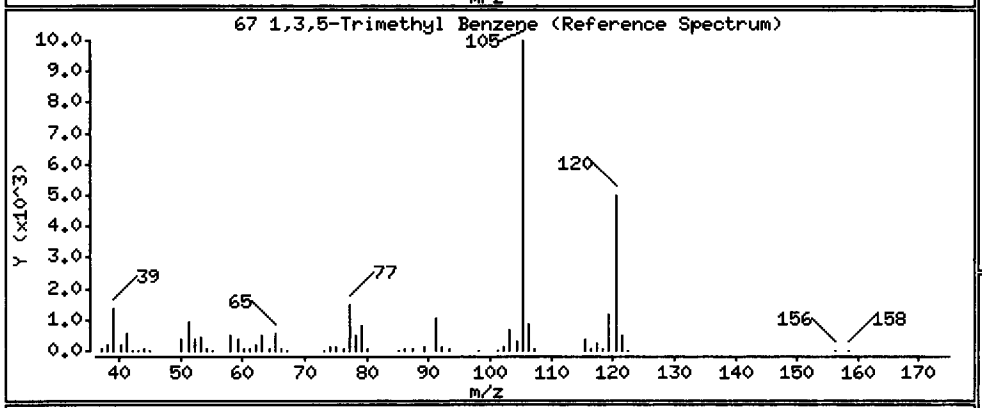
Column diameter: 0.18

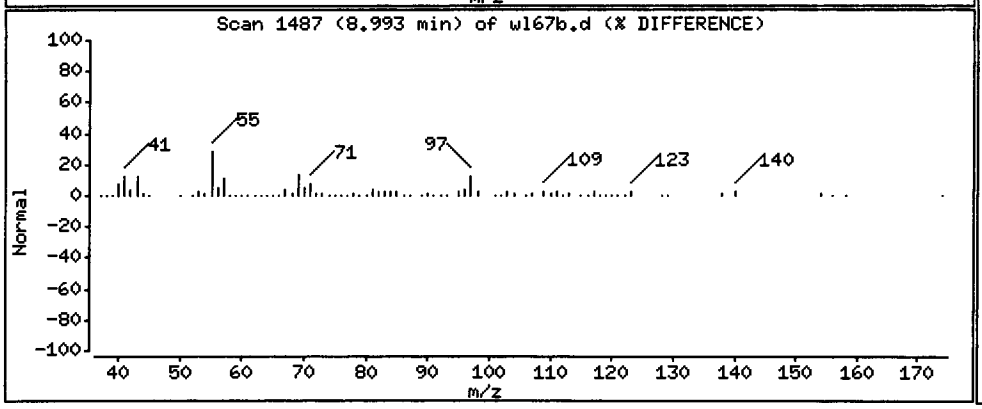
67 1,3,5-Trimethyl Benzene

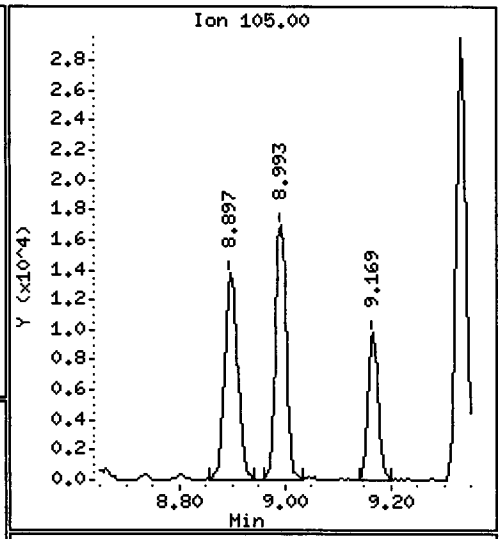
Concentration: 0.7725 ug/Kg

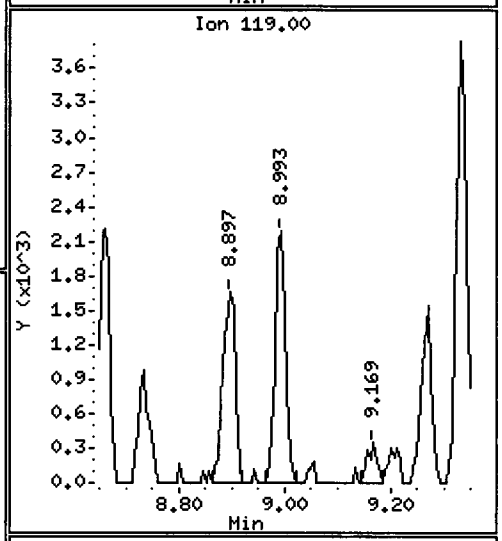


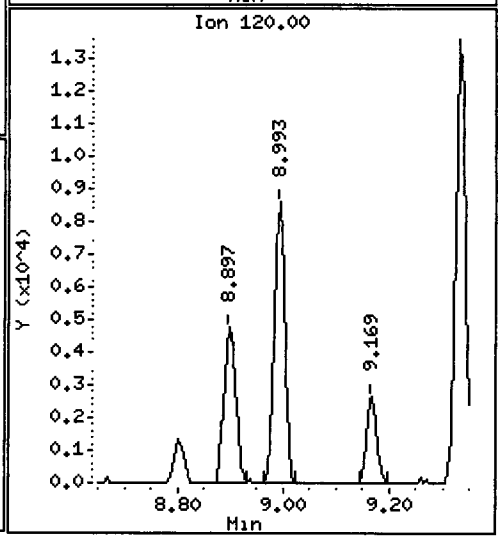












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

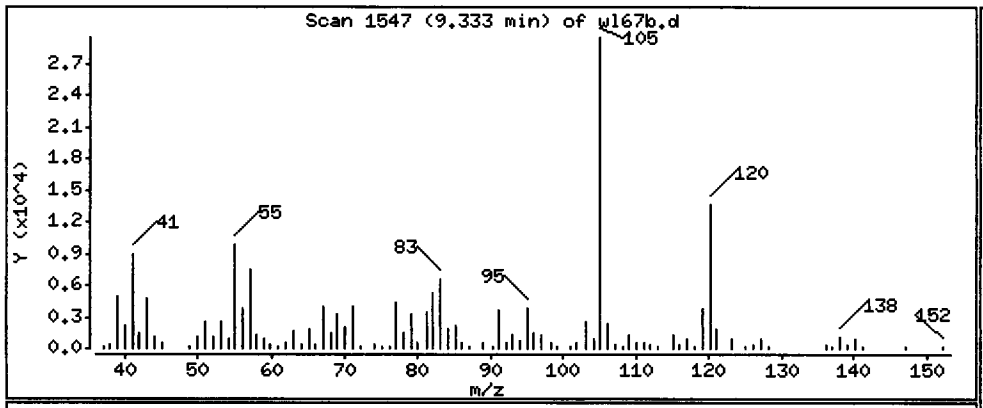
Operator: PC

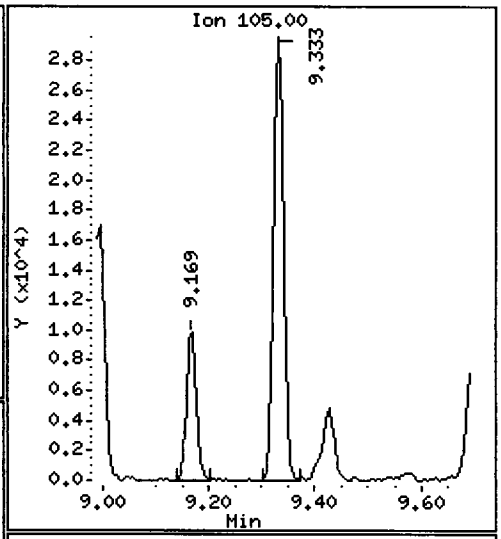
Column phase: RTXVMS

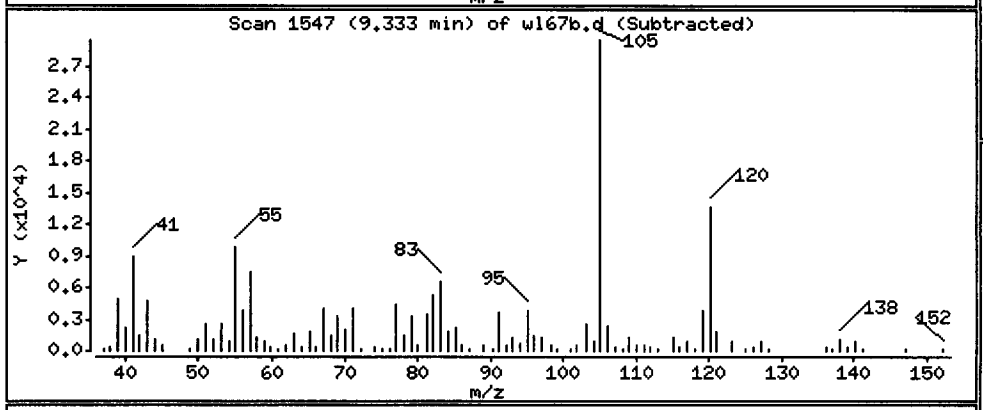
Column diameter: 0.18

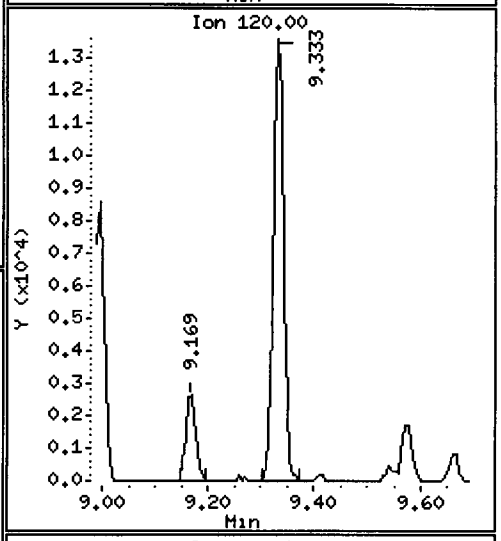
72 1,2,4-Trimethylbenzene

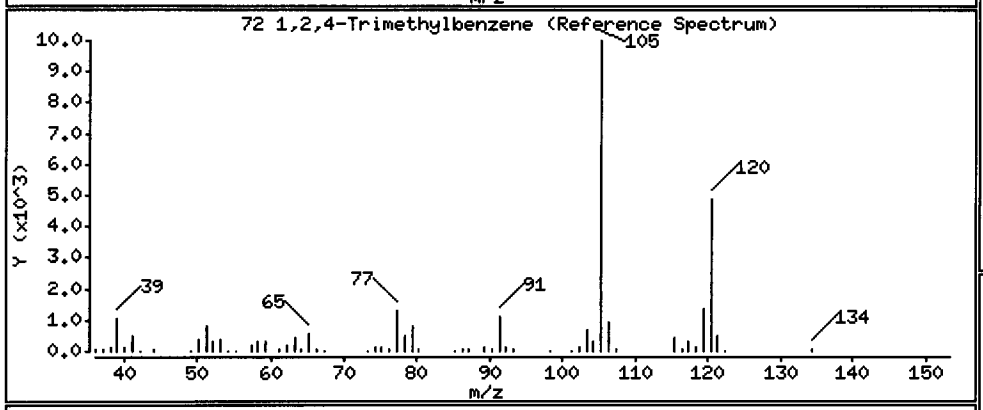
Concentration: 1.265 ug/Kg

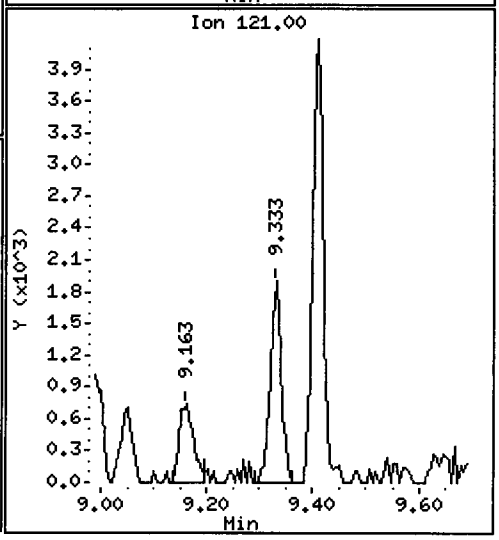


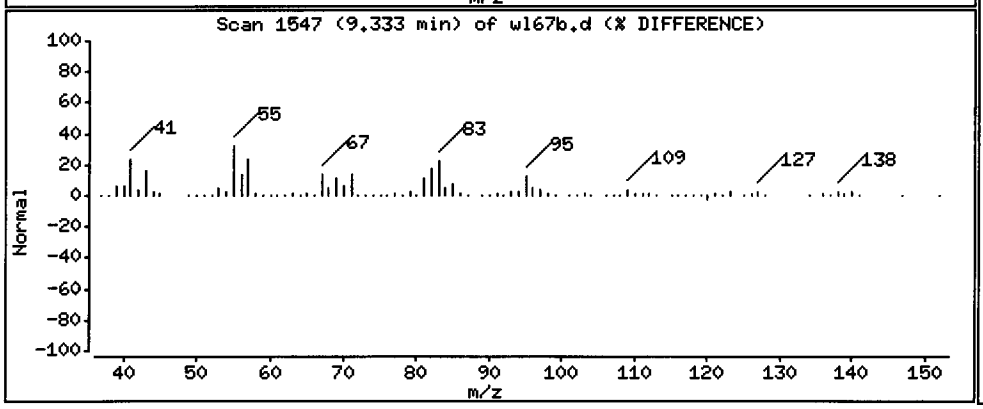












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

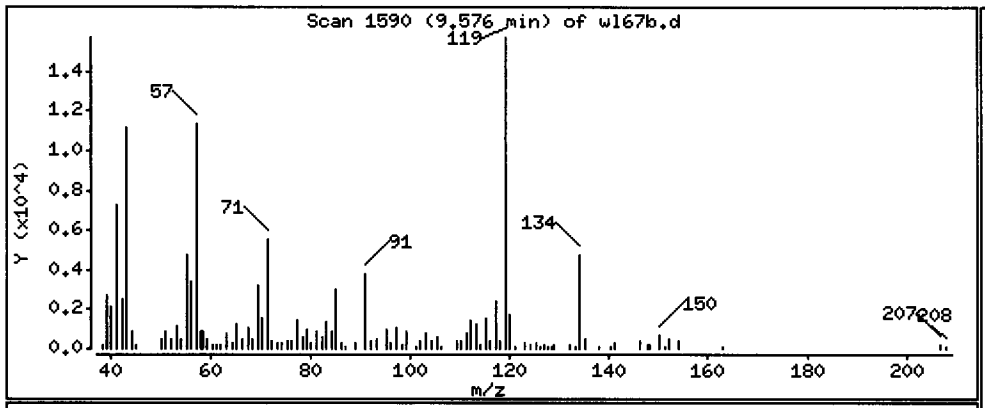
Operator: PC

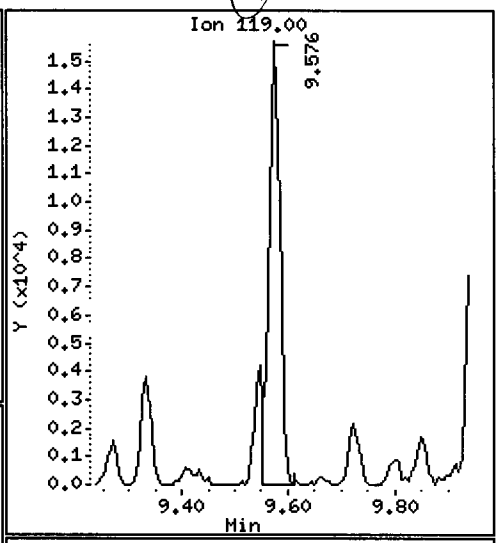
Column phase: RTXVMS

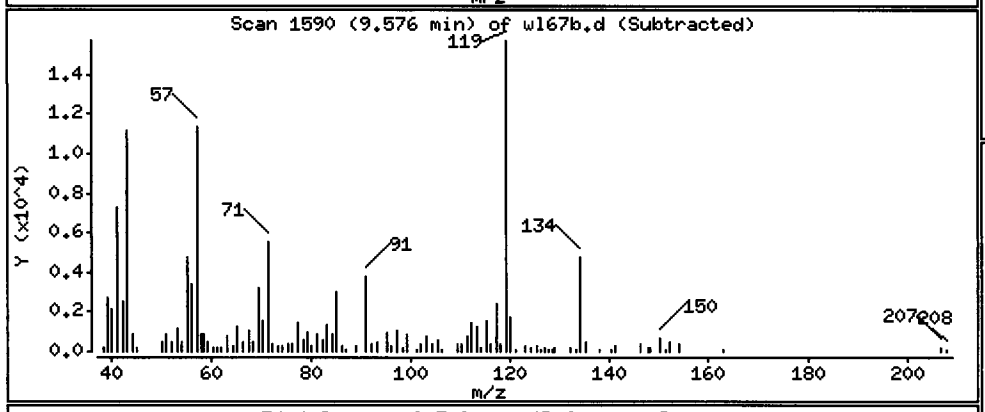
Column diameter: 0.18

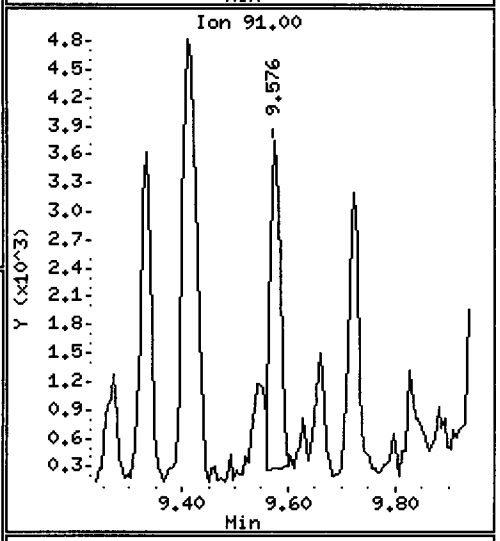
74 4-Isopropyl Toluene

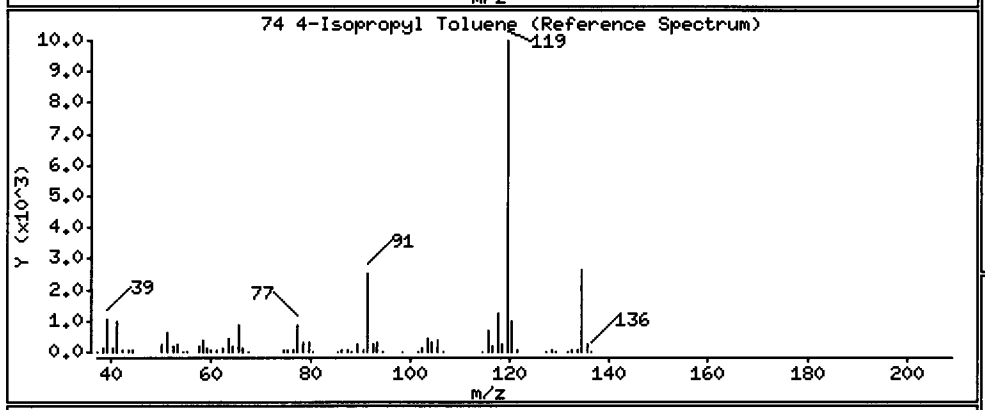
Concentration: 0.6883 ug/Kg

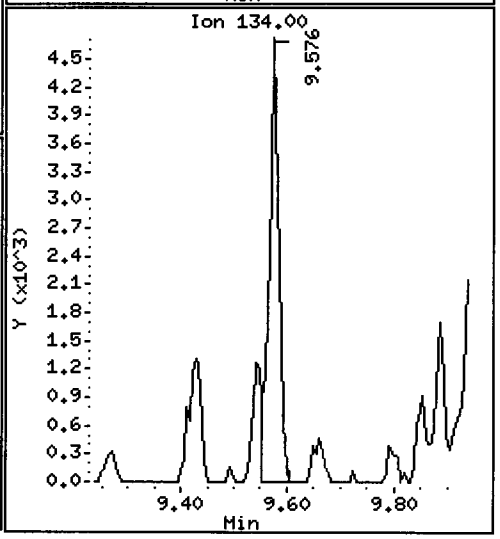


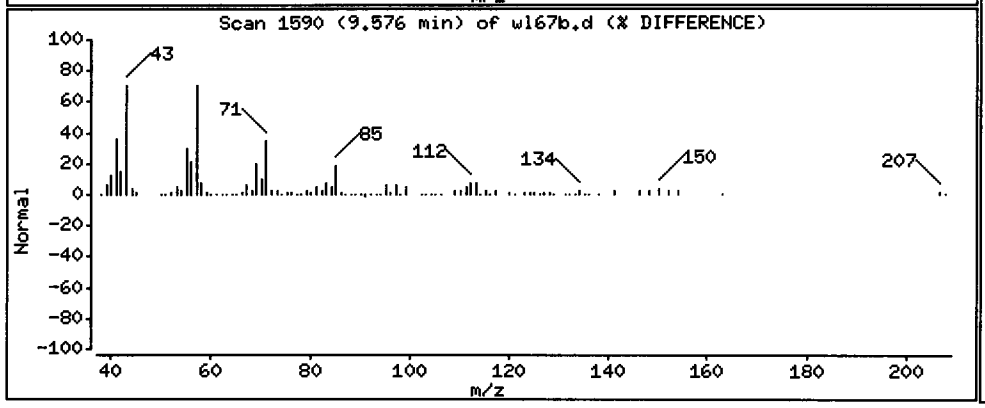












Data File: /chem1/nt5.i/18APR13.b/wl67b.d

Date : 18-APR-2013 13:05

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,6.49,0,,

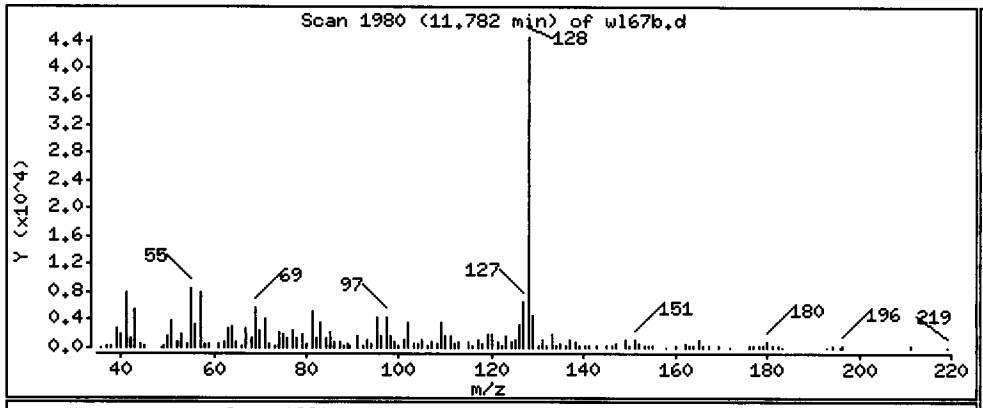
Operator: PC

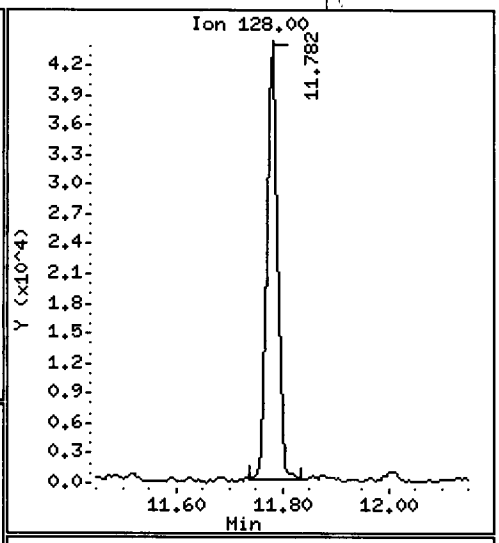
Column phase: RTXVMS

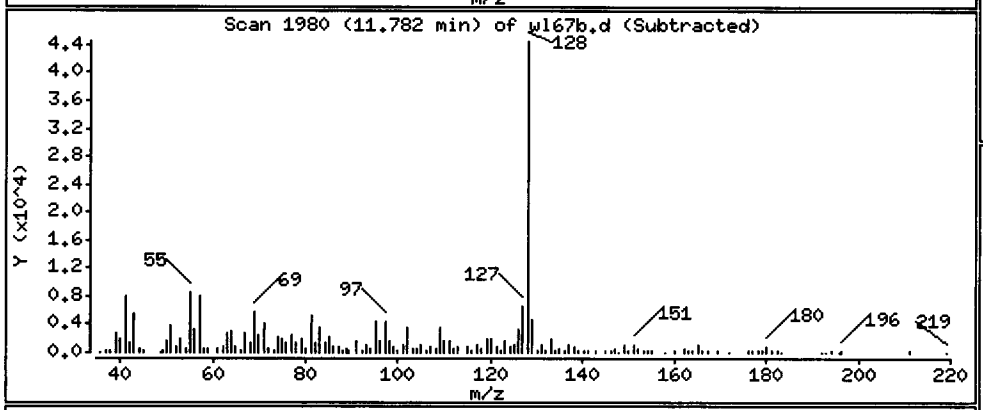
Column diameter: 0.18

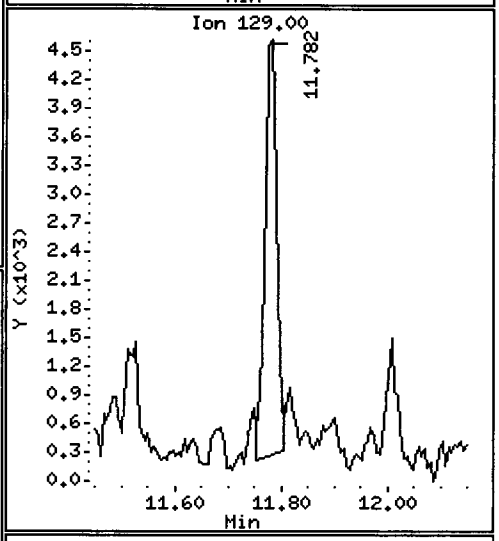
84 Naphthalene

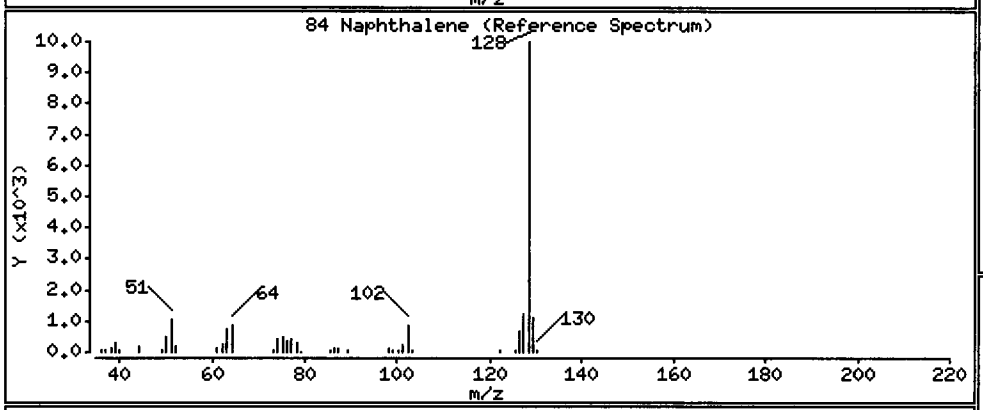
Concentration: 1.844 ug/Kg

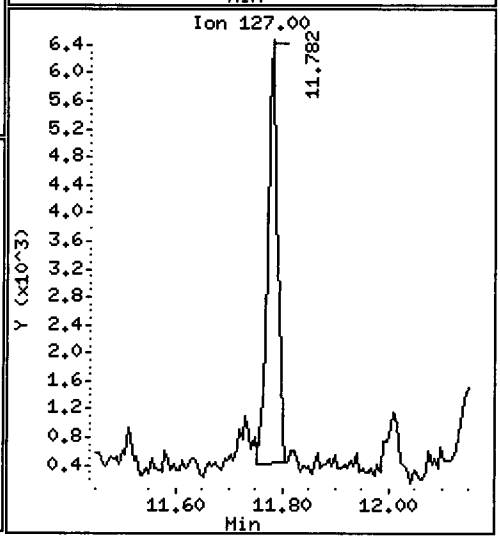


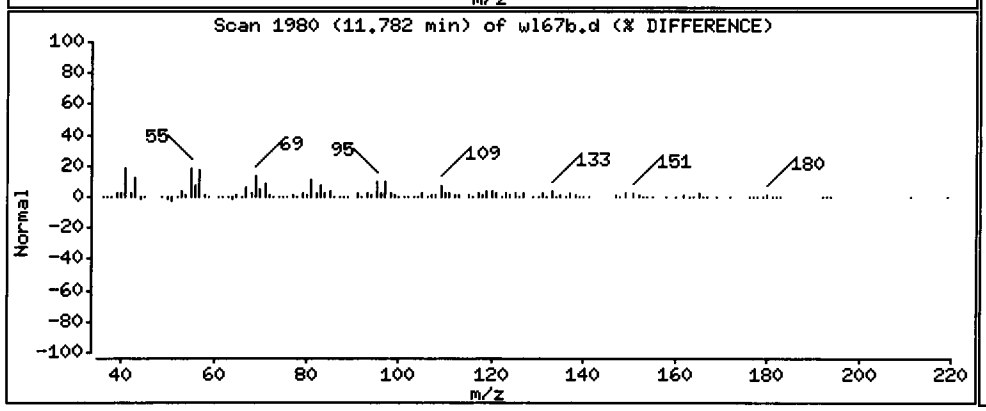






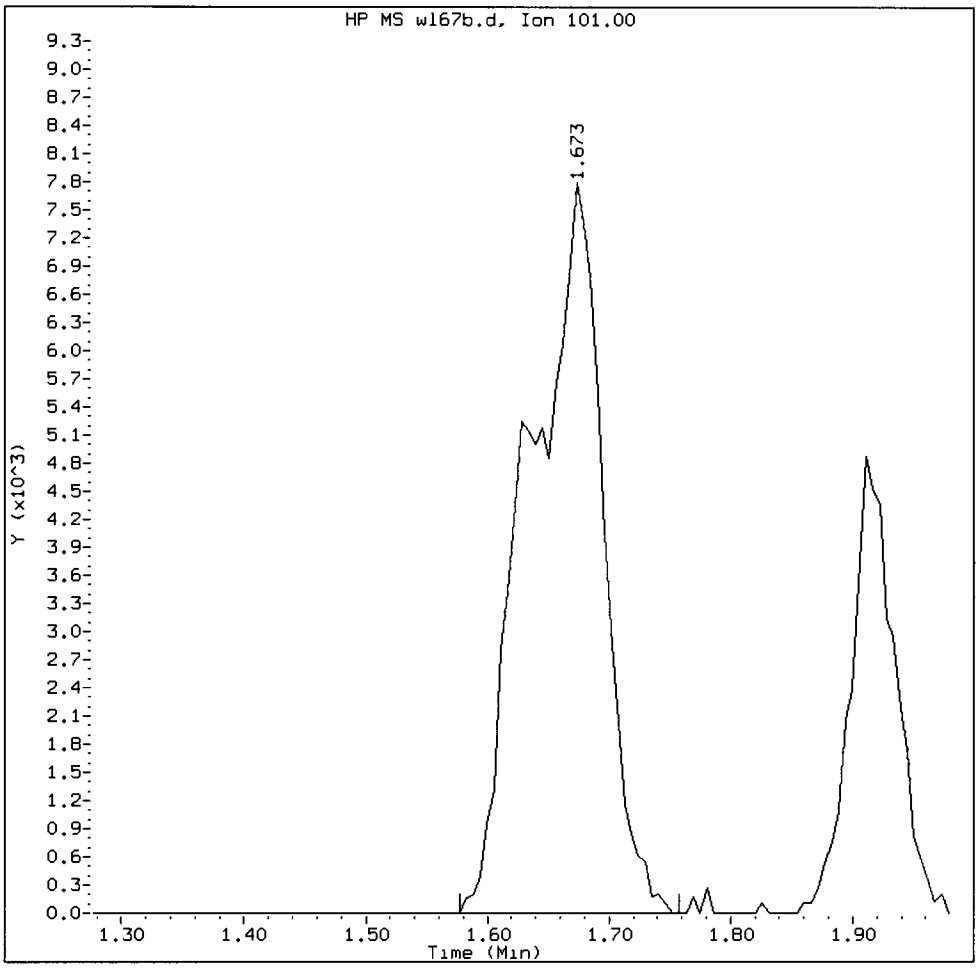






WL67B, /chem1/nt5.i/18APR13.b/wl67b.d

Trichlorofluoromethane Amount: 2.02 Area: 33228



MANUAL INTEGRATION for Trichlorofluoromethane

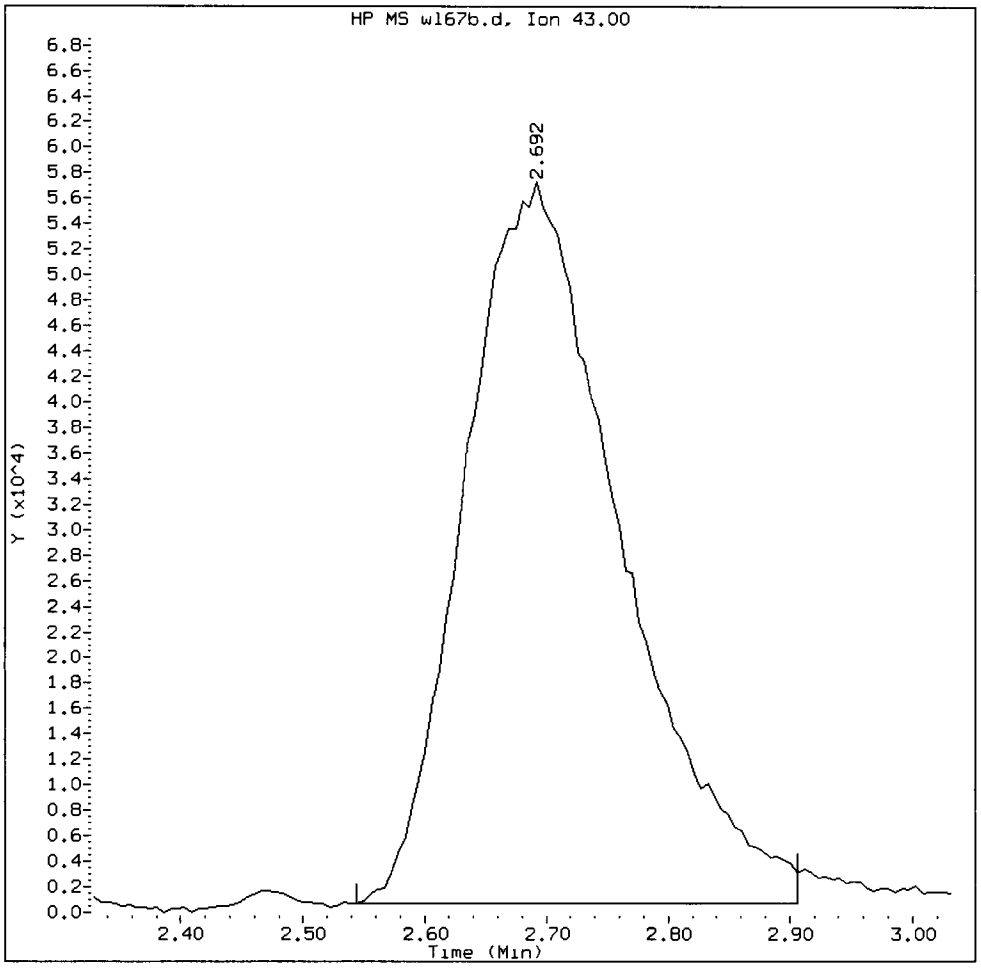
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 4/24

WL67B, /chem1/nt5.i/18APR13.b/wl67b.d

Acetone Amount: 114.92 Area: 505506



MANUAL INTEGRATION for Acetone

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

5. Other _____

Analyst: _____ Date: 4/4/4

CO-ELUTION SUMMARY FOR FILE - wl67b.d

Lab ID: WL67B, Method: VO121012S.m, Instrument: nt5.i, Date: 18-APR-2013

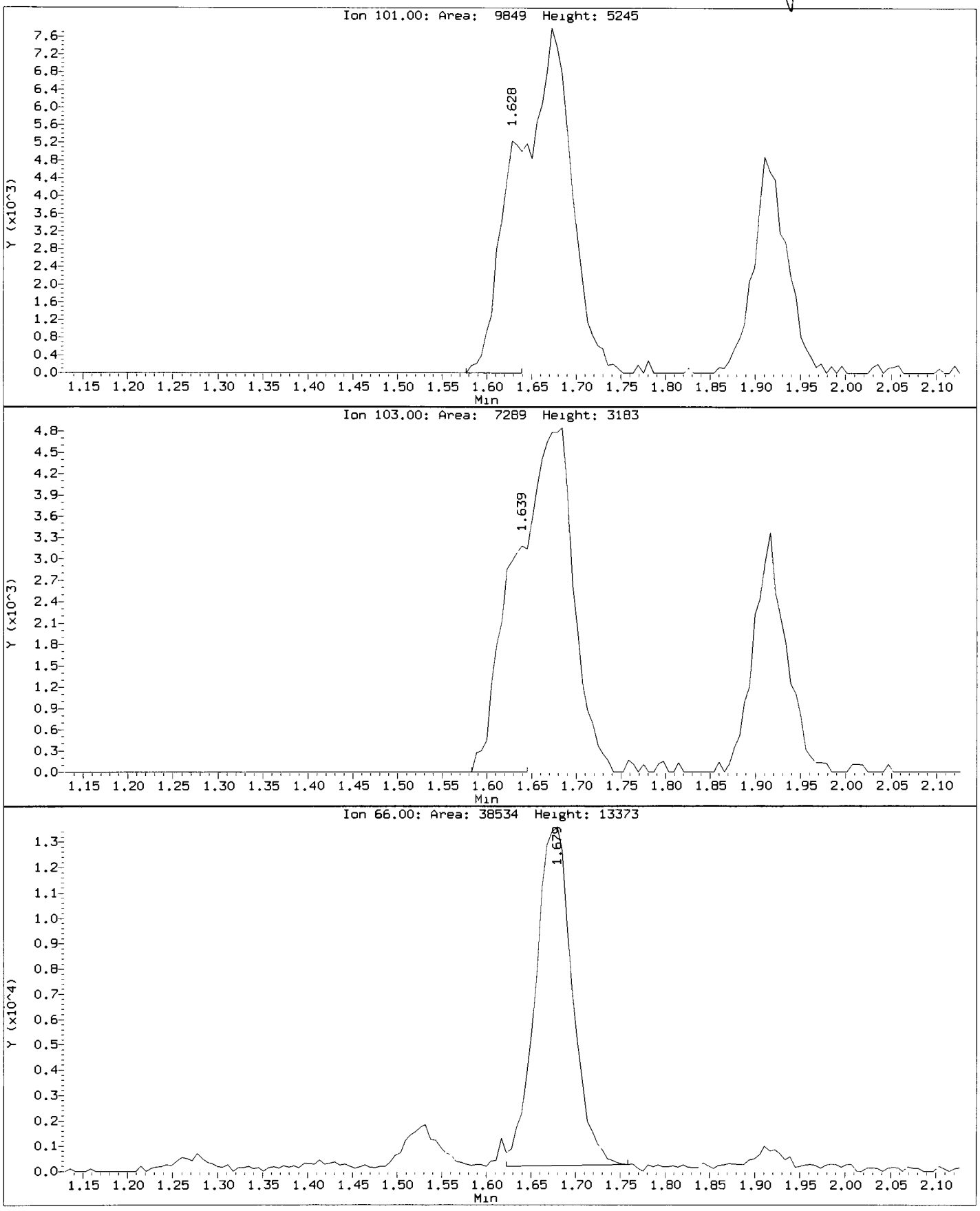
RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/18APR13.b/wl67b.d
Injection Date: 18-APR-2013 13:05
Instrument: nt5.i
Client Sample ID: GR-WS-05-20130411-S

Compound: Trichlorofluoromethane
CAS Number:

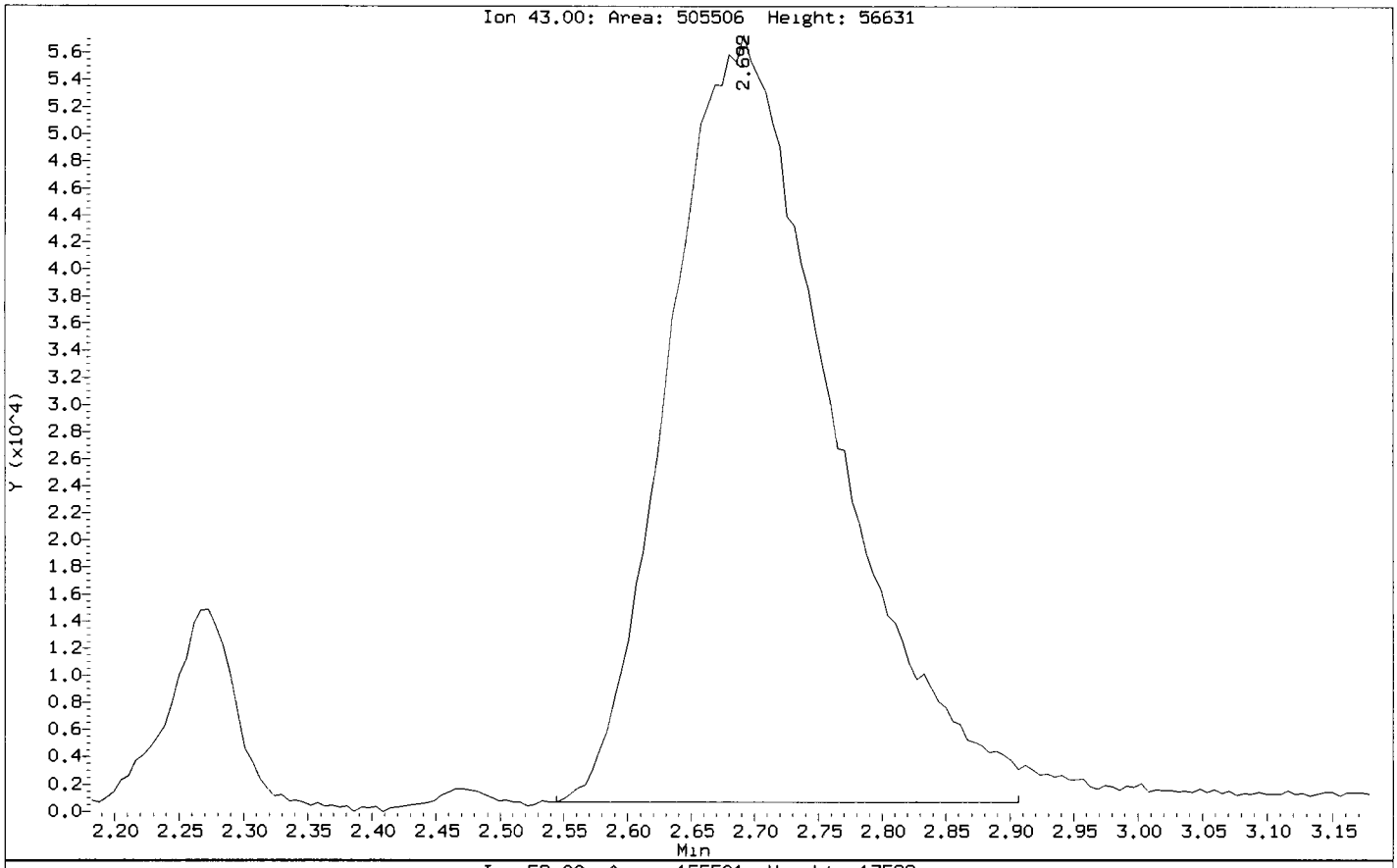
17/4/13

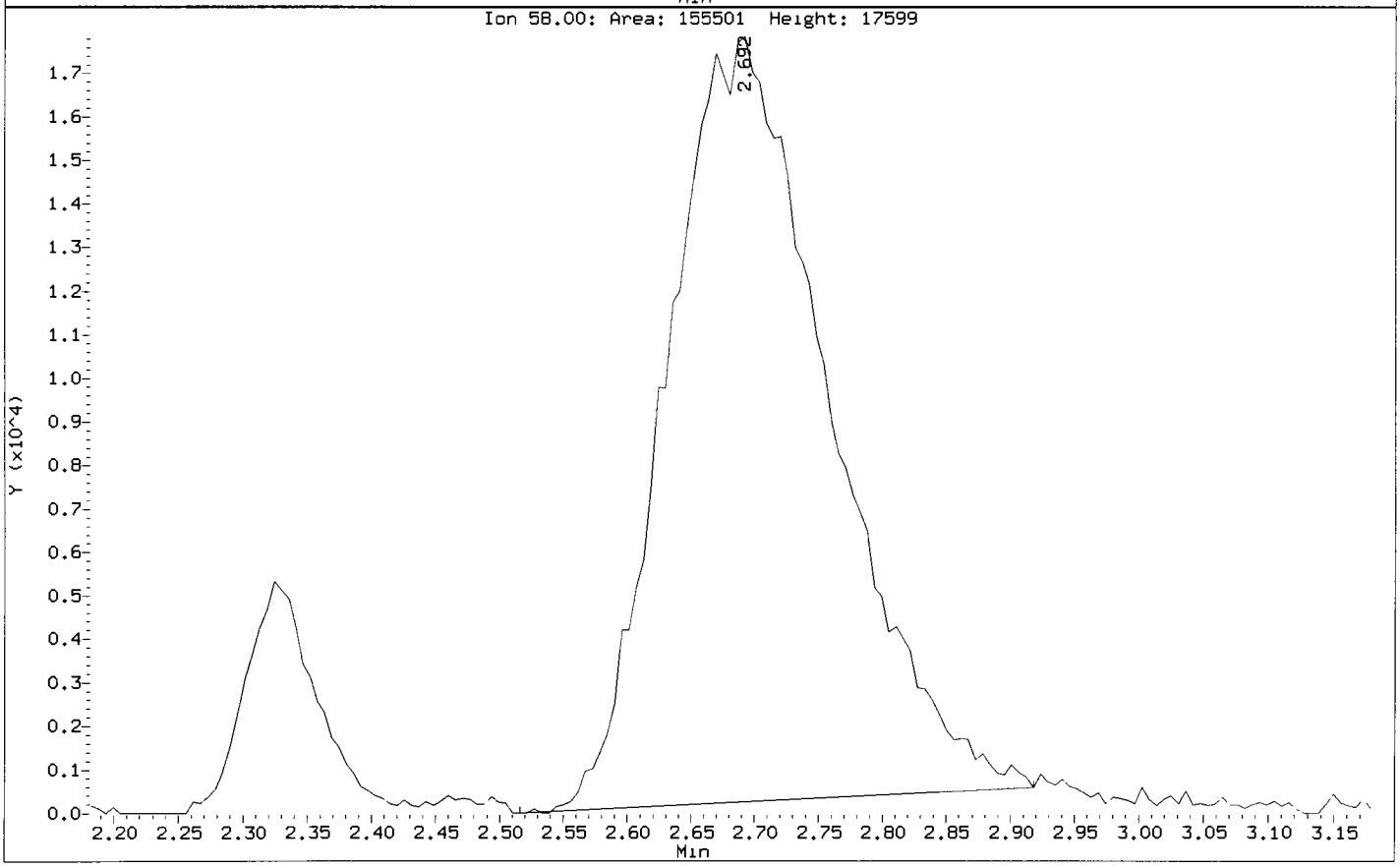


Data File: /chem1/nt5.i/18APR13.b/wl67b.d
Injection Date: 18-APR-2013 13:05
Instrument: nt5.i
Client Sample ID: GR-WS-05-20130411-S

Compound: Acetone
CAS Number:

19/24





WLS7:00525

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 4/23/13 Analysis: SVOA Analyst: [illegible]

GC Program: WATER Column No: 93157L Column Type: MXRV4

Instrument Tune (.U or .CT.): PA1003 EM Voltage: 1452

Inj. Vol: 5 Calibration File: 1423042 Curve Date: 4/10/13

IS/SS	Ical/Ccal	LCS/ICV
W7742	W7953	W7953

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/23APR13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0911	bfb0423.d	BFB0423	BFB0423			1							
2	1124	cc0423.d	CC0423	VSTD50			1	4.68	1433732	5.12	2808439	7.60	2801056	9.67	1530375
3	1206	lcs0423.d	LCS0423	LCS0423			1	4.67	1448065	5.12	2843472	7.59	2846242	9.67	1545161
4	1230	lcs0423a.d	LCS0423	LCS0423			1	4.67	1439164	5.11	2806042	7.59	2827746	9.67	1541650
5	1254	mb0423.d	MB0423	MB0423			1	4.68	1350783	5.12	2648069	7.59	2639019	9.66	1400375
6	1419	wm28f.d	WM28F	NS-TB-01-20130416-W	2	4.2	1	4.68	1400987	5.12	2728297	7.59	2711924	9.67	1427455
7	1442	wm28a.d	WM28A	NS-CB-547-20130416-			1	4.67	1290098	5.11	2544935	7.59	2477548	9.66	1099871
8	1506	wm28b.d	WM28B	NS-MH-536-20130416-			1	4.67	1312274	5.11	2598756	7.59	2305484	9.66	791266
9	1530	wm28c.d	WM28C	NS-CB-423-20130416-			1	4.67	1252862	5.12	2486338	7.59	2162657	9.66	662762
10	1554	wm28d.d	WM28D	NS-CB-421-20130416-			1	4.67	1082275	5.12	2125608	7.58	1940405	9.66	735231
11	1618	wm28e.d	WM28E	NS-FD-001-20130416-			1	4.68	1166813	5.12	2327422	7.59	2011685	9.66	587768
12	1642	w167b2.d	WL67B	GR-WS-05-20130411-S			1	4.68	1217385	5.12	2445662	7.59	1924163	9.66	570621
13	1706	w168b2.d	WL68B	HC-GR-WS-05-2013041			1	4.67	1201667	5.12	2391933	7.58	1949713	9.66	523932
14	1730	w188b2.d	WL88B	MW32D-43.5-44.5			1	4.67	1448418	5.12	2880062	7.58	2963748	9.66	1673774
15	1753	wm42a.d	WM42A	PF-PA-9-0413			1	4.67	1388073	5.12	2725813	7.58	2697518	9.66	1413450
16	1817	wm28c2.d	WM28C	NS-CB-423-20130416-			1	4.67	1151386	5.12	2307713	7.58	2039391	9.66	666905
17	1841	wm28d2.d	WM28D	NS-CB-421-20130416-			1	4.68	1118665	5.13	2255427	7.59	2118724	9.66	915217
18	1905	wm28e2 d	WM28E	NS-FD-001-20130416-			1	4.68	1238772	5.12	2506558	7.59	2123122	9.66	616322

Maintenance / Comments

4/24/13

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/23APR13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 23-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0911	bfb0423.d	BFB0423	BFB0423	1	NO MANUAL INTEGRATION
1124	cc0423.d	CC0423	VSTD50	1	Chloromethane, 2-Butanone,
1206	lcs0423.d	LCS0423	LCS0423	1	Chloromethane,
1230	lcs0423a.d	LCS0423	LCS0423	1	Chloromethane,
1254	mb0423.d	MB0423	MB0423	1	NO MANUAL INTEGRATION
1642	wl67b2.d	WL67B	GR-WS-05-2	1	Methylene Chloride,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/23APR13.b

Instrument: nt5.i Date: 23-APR-2013 Method: VO121012S.m

INITIAL CAL: 16-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 23-APR-2013

Compound	%D
Bromomethane	-43.9
Iodomethane	-22.9
Methylene Chloride	36.2
2-Butanone	63.9
2-Hexanone	30.6

Data File: /chem1/nt5.i/23APR13.b/bfb0423.d

Date : 23-APR-2013 09:11

Client ID: BFB0423

Instrument: nt5.i

Sample Info: BFB0423,BFB0423,,1,23APR13,,

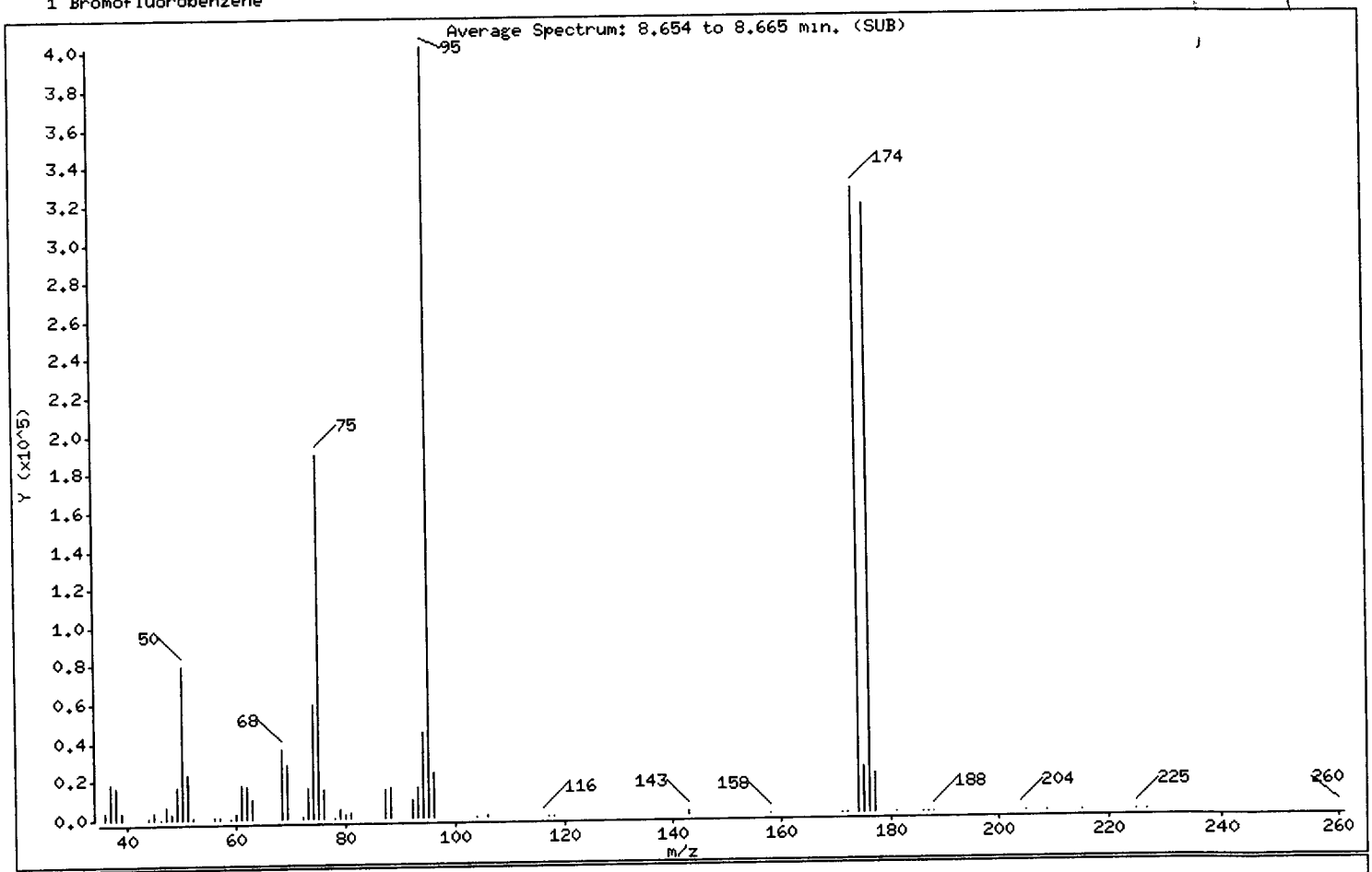
Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene

14/24/4



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.71
75	30.00 - 66.00% of mass 95	47.07
96	5.00 - 9.00% of mass 95	5.79
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	81.25
175	4.00 - 9.00% of mass 174	6.00 (7.38)
176	95.00 - 101.00% of mass 174	79.05 (97.29)
177	5.00 - 9.00% of mass 176	5.12 (6.48)

Data File: /chem1/nt5.i/23APR13.b/bfb0423.d

Date : 23-APR-2013 09:11

Client ID: BFB0423

Instrument: nt5.1

Sample Info: BFB0423,BFB0423,,1,23APR13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0423.d

Spectrum: Average Spectrum: 8.654 to 8.665 min. (SUB)

Location of Maximum: 95.00

Number of points: 67

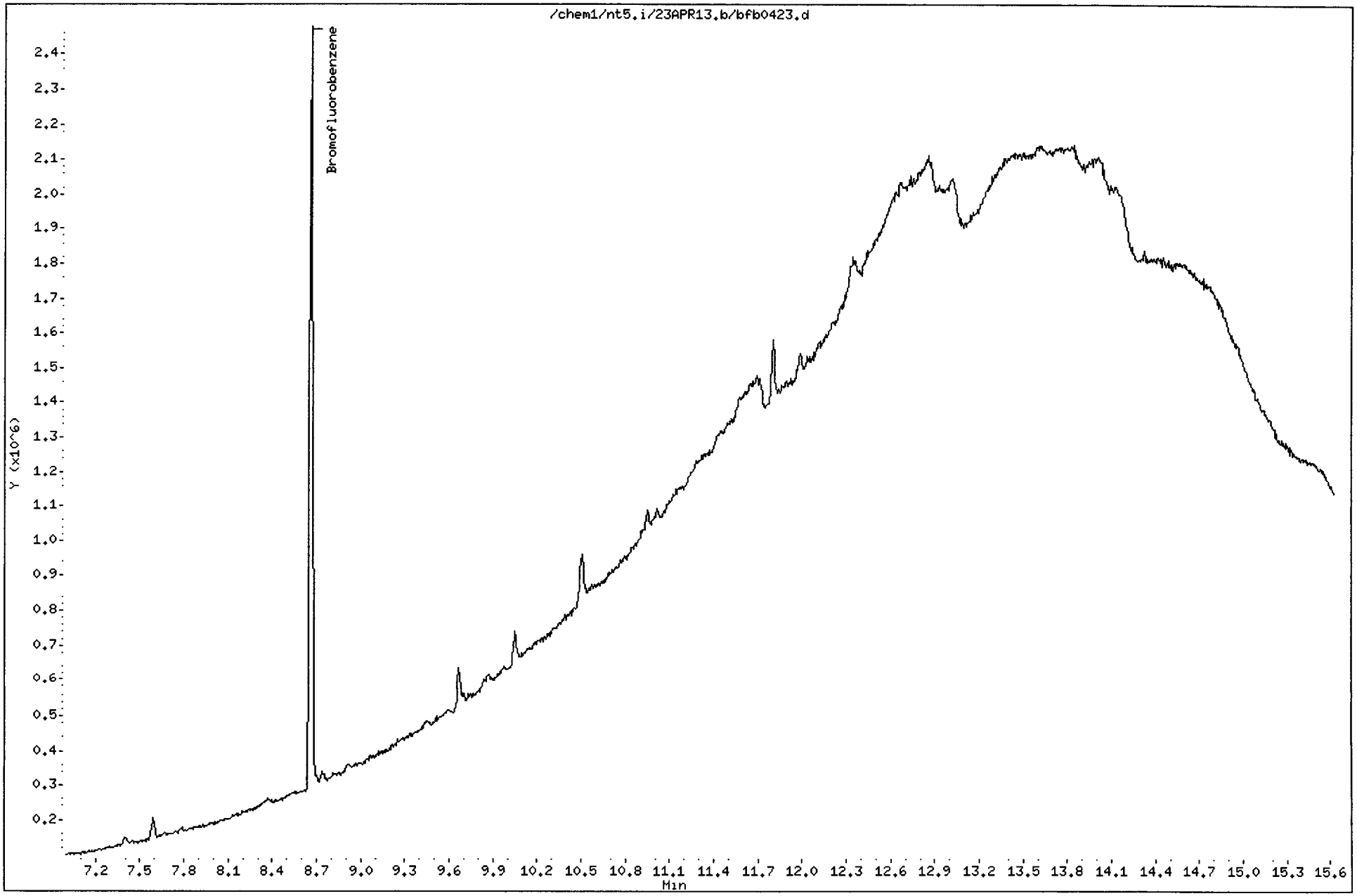
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3414	61.00	17768	93.00	15471	176.00	318016
37.00	18256	62.00	17008	94.00	44720	177.00	20616
38.00	16472	63.00	9813	95.00	402304	178.00	211
39.00	3673	68.00	36296	96.00	23296	181.00	32
44.00	1070	69.00	27960	104.00	442	186.00	33
45.00	3411	72.00	1063	106.00	681	187.00	43
46.00	151	73.00	15568	116.00	427	188.00	224
47.00	6582	74.00	59040	117.00	309	204.00	149
48.00	2494	75.00	189376	118.00	185	205.00	43
49.00	16424	76.00	15198	130.00	325	209.00	65
50.00	79296	78.00	289	143.00	2154	211.00	72
51.00	23312	79.00	4565	158.00	163	215.00	35
52.00	635	80.00	1560	170.00	182	223.00	37
56.00	1104	81.00	2538	171.00	197	225.00	38
57.00	494	87.00	15241	172.00	36	227.00	33
59.00	32	88.00	15907	174.00	326848	260.00	34
60.00	3178	92.00	9692	175.00	24120		

Data File: /chem1/nt5.i/23APR13.b/bfb0423.d
Date : 23-APR-2013 09:11
Client ID: BFB0423
Sample Info: BFB0423,BFB0423,,1,23APR13,,

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/23APR13.b/cc0423.d
Lab Smp Id: CC0423 Client Smp ID: VSTD50
Inj Date : 23-APR-2013 11:24
Operator : PB Inst ID: nt5.i
Smp Info : CC0423,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/23APR13.b/VO121012S.m
Meth Date : 23-Apr-2013 11:49 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.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	1.079	1.079	(0.231)	653274	50.0000	56.732
2 Chloromethane	50	1.413	1.413	(0.302)	932910	50.0000	46.199(M)
3 Vinyl Chloride	62	1.249	1.249	(0.267)	979448	50.0000	53.508
4 Bromomethane	94	1.453	1.453	(0.311)	249512	50.0000	28.049
5 Chloroethane	64	1.543	1.543	(0.330)	605837	50.0000	54.743
6 Trichlorofluoromethane	101	1.634	1.634	(0.349)	1091927	50.0000	55.258
7 1,1-Dichloroethene	96	1.996	1.996	(0.427)	720789	50.0000	58.173
8 Carbon Disulfide	76	1.996	1.996	(0.427)	2448666	50.0000	58.986
9 112Trichloro122Trifluoroethane	101	2.035	2.035	(0.435)	688555	50.0000	59.959
10 Iodomethane	142	2.092	2.092	(0.447)	576281	50.0000	38.552
11 Bromoethane	108	2.188	2.188	(0.468)	496603	50.0000	59.061
12 Acrolein	56	2.369	2.369	(0.507)	546980	250.000	267.27
13 Methylene Chloride	84	2.471	2.471	(0.528)	775536	50.0000	68.084
14 Acetone	43	2.703	2.703	(0.578)	1207709	250.000	222.07

	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	2.607	2.607	(0.557)	800835	50.0000	58.478
	16 Methyl tert butyl ether	73	2.771	2.771	(0.592)	2262999	50.0000	56.625
	17 1,1-Dichloroethane	63	3.218	3.218	(0.688)	1569871	50.0000	54.649
	18 Acrylonitrile	53	3.404	3.404	(0.728)	310553	50.0000	55.697
	19 Vinyl Acetate	43	3.557	3.557	(0.761)	1910376	50.0000	58.582
	20 Cis-1,2-Dichloroethene	96	3.755	3.755	(0.803)	824600	50.0000	53.698
	22 2,2-Dichloropropane	77	3.851	3.851	(0.823)	1235396	50.0000	56.038
	23 Bromochloromethane	128	3.942	3.942	(0.843)	349305	50.0000	52.450
	24 Chloroform	83	4.038	4.038	(0.863)	1277712	50.0000	49.919
	25 Carbon Tetrachloride	117	4.128	4.128	(0.806)	1008020	50.0000	44.614
$	27 Dibromofluoromethane	111	4.202	4.202	(0.898)	893285	50.0000	57.325
	26 1,1,1-Trichloroethane	97	4.196	4.196	(0.897)	1283457	50.0000	53.562
	28 1,1-Dichloropropene	75	4.315	4.315	(0.842)	1227323	50.0000	48.878
	29 2-Butanone	72	4.468	4.468	(0.955)	662170	250.000	409.76(QM)
	30 Benzene	78	4.541	4.541	(0.886)	3461475	50.0000	51.145
*	31 Pentafluorobenzene	168	4.677	4.677	(1.000)	1433732	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.671	4.671	(0.999)	1055659	50.0000	59.617
	33 1,2-Dichloroethane	62	4.734	4.734	(0.924)	1093322	50.0000	47.911
	34 Trichloroethene	95	5.067	5.067	(0.989)	847070	50.0000	49.012
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	2808439	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	436284	50.0000	48.407
	38 1,2-Dichloropropane	63	5.514	5.514	(1.076)	936550	50.0000	49.180
	39 Bromodichloromethane	83	5.588	5.588	(1.091)	1067828	50.0000	48.626
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.195)	564132	50.0000	53.105
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.198)	1393422	50.0000	50.649
$	42 d8-Toluene	98	6.289	6.289	(1.227)	3633404	50.0000	50.955
	43 Toluene	92	6.335	6.335	(1.236)	2216765	50.0000	48.669
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	927335	50.0000	49.345
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.308)	1939394	250.000	281.00
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.307)	1265928	50.0000	50.884
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.332)	669155	50.0000	49.763
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	771220	50.0000	48.076
	49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	1225598	50.0000	48.435
	50 1,2-Dibromoethane	107	7.138	7.138	(1.393)	646128	50.0000	49.237
	51 2-Hexanone	43	7.415	7.415	(0.976)	3847642	250.000	326.61
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2801056	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	2228766	50.0000	47.808
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	4020427	50.0000	50.974
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	794460	50.0000	47.306
	56 m,p-xylene	106	7.788	7.788	(1.025)	3092537	100.000	102.39
	57 o-Xylene	106	8.150	8.150	(1.073)	1493429	50.0000	49.233
	58 Styrene	104	8.201	8.201	(1.080)	2504944	50.0000	50.488
	59 Bromoform	173	8.190	8.190	(0.847)	546842	50.0000	48.275
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3816157	50.0000	51.058
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1503510	50.0000	50.135
	63 Bromobenzene	156	8.739	8.739	(0.904)	908619	50.0000	45.383
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	4462553	50.0000	50.816

	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)	868578	50.0000	48.173
	66 2-Chloro Toluene	91	8.920	8.920	(0.923)	2745001	50.0000	48.718
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	3214991	50.0000	50.210
	68 1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	264771	50.0000	48.770
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.934)	348049	50.0000	46.928
	70 4-Chloro Toluene	91	9.073	9.073	(0.939)	2871933	50.0000	48.556
	71 T-Butyl Benzene	119	9.271	9.271	(0.959)	2833812	50.0000	49.823
	72 1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	3186889	50.0000	50.414
	73 S-Butyl Benzene	105	9.435	9.435	(0.976)	4145786	50.0000	51.218
	74 4-Isopropyl Toluene	119	9.582	9.582	(0.991)	3518939	50.0000	52.260
	75 1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1800822	50.0000	47.865
*	76 d4-1,4-Dichlorobenzene	152	9.666	9.666	(1.000)	1530375	50.0000	
	77 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1828812	50.0000	46.210
	78 N-Butyl Benzene	91	9.966	9.966	(1.031)	3407251	50.0000	52.214
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1428412	50.0000	51.187
	80 1,2-Dichlorobenzene	146	10.062	10.062	(1.041)	1688828	50.0000	45.624
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	168226	50.0000	47.914
	82 Hexachloro 1,3-Butadiene	225	11.494	11.494	(1.189)	792217	50.0000	48.608
	83 1,2,4-Trichlorobenzene	180	11.482	11.482	(1.188)	1315951	50.0000	47.678
	84 Naphthalene	128	11.793	11.793	(1.220)	2819030	50.0000	48.092
	85 1,2,3-Trichlorobenzene	180	11.980	11.980	(1.239)	1175640	50.0000	45.597

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

ata File: /chem1/nt5.i/23APR13.b/cc0423.d
eport Date: 23-Apr-2013 11:49

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0423.d
Lab Smp Id: CC0423
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 23-APR-2013
Calibration Time: 10:48
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1616720	808360	3233440	1433732	-11.32
35 1,4-Difluorobenze	2842987	1421494	5685974	2808439	-1.22
52 d5-Chlorobenzene	2779083	1389542	5558166	2801056	0.79
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1530375	0.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.68	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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/23APR13.b/cc0423.d
Report Date: 23-Apr-2013 11:49

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0423.d
Analysis Type: SOIL
Lab Sample ID: CC0423
Method: /chem1/nt5.i/23APR13.b/VO121012S.m

Injection Date: 23-APR-2013 11:24
Init. Cal. Date(s): 16-APR-2013 16-APR-2013
Init. Cal. Times: 16:10 18:57
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.40158	0.45565	0.45565	0.100	13.46452	20.00000	Averaged	
2 Chloromethane	0.70423	0.65069	0.65069	0.100	-7.60271	20.00000	Averaged	
3 Vinyl Chloride	0.63836	0.68315	0.68315	0.100	7.01646	20.00000	Averaged	
4 Bromomethane	0.31023	0.17403	0.17403	0.100	-43.90262	20.00000	Averaged	<-
5 Chloroethane	0.38595	0.42256	0.42256	0.100	9.48676	20.00000	Averaged	
6 Trichlorofluoromethane	0.68913	0.76160	0.76160	0.100	10.51634	20.00000	Averaged	
7 1,1-Dichloroethene	0.43210	0.50274	0.50274	0.100	16.34695	20.00000	Averaged	
8 Carbon Disulfide	1.44772	1.70790	1.70790	0.010	17.97178	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.40049	0.48025	0.48025	0.010	19.91763	20.00000	Averaged	
10 Iodomethane	0.52130	0.40194	0.40194	0.010	-22.89639	20.00000	Averaged	<-
11 Bromoethane	0.29323	0.34637	0.34637	0.100	18.12289	20.00000	Averaged	
12 Acrolein	0.07137	0.07630	0.07630	0.000	6.90745	20.00000	Averaged	
13 Methylene Chloride	68.08390	50.00000	0.54092	0.010	36.16779	20.00000	Quadratic	<-
14 Acetone	222	250	0.16847	0.001	-11.17132	20.00000	Quadratic	
15 Trans-1,2-Dichloroethene	0.47759	0.55857	0.55857	0.010	16.95517	20.00000	Averaged	
16 Methyl tert butyl ether	1.39372	1.57840	1.57840	0.100	13.25038	20.00000	Averaged	
17 1,1-Dichloroethane	1.00181	1.09495	1.09495	0.100	9.29798	20.00000	Averaged	
18 Acrylonitrile	0.19445	0.21660	0.21660	0.001	11.39311	20.00000	Averaged	
19 Vinyl Acetate	1.13724	1.33245	1.33245	0.010	17.16498	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	0.53553	0.57514	0.57514	0.010	7.39686	20.00000	Averaged	
22 2,2-Dichloropropane	0.76882	0.86166	0.86166	0.010	12.07607	20.00000	Averaged	
23 Bromochloromethane	0.23225	0.24363	0.24363	0.050	4.89954	20.00000	Averaged	
24 Chloroform	0.89262	0.89118	0.89118	0.100	-0.16196	20.00000	Averaged	
25 Carbon Tetrachloride	0.40225	0.35893	0.35893	0.100	-10.77148	20.00000	Averaged	
$ 27 Dibromofluoromethane	0.54343	0.62305	0.62305	0.100	14.65029	20.00000	Averaged	
26 1,1,1-Trichloroethane	0.83566	0.89519	0.89519	0.100	7.12330	20.00000	Averaged	
28 1,1-Dichloropropene	0.44705	0.43701	0.43701	0.010	-2.24448	20.00000	Averaged	
29 2-Butanone	0.05636	0.09237	0.09237	0.001	63.90560	20.00000	Averaged	<-
30 Benzene	1.20493	1.23253	1.23253	0.100	2.28999	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	0.61753	0.73630	0.73630	0.010	19.23424	20.00000	Averaged	
33 1,2-Dichloroethane	0.40628	0.38930	0.38930	0.100	-4.17895	20.00000	Averaged	
34 Trichloroethene	0.30770	0.30162	0.30162	0.100	-1.97658	20.00000	Averaged	
37 Dibromomethane	0.16046	0.15535	0.15535	0.010	-3.18654	20.00000	Averaged	
38 1,2-Dichloropropane	0.33903	0.33348	0.33348	0.100	-1.63906	20.00000	Averaged	
39 Bromodichloromethane	0.39097	0.38022	0.38022	0.100	-2.74803	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 23-APR-2013 11:24
Lab File ID: cc0423.d Init. Cal. Date(s): 16-APR-2013 16-APR-2013
Analysis Type: SOIL Init. Cal. Times: 16:10 18:57
Lab Sample ID: CC0423 Quant Type: ISTD
Method: /chem1/nt5.i/23APR13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
40 2-Chloroethyl Vinyl Ether	0.18912	0.20087	0.20087	0.000	6.21044	20.00000	Averaged	
41 Cis 1,3-dichloropropene	0.48980	0.49616	0.49616	0.100	1.29828	20.00000	Averaged	
$ 42 d8-Toluene	1.26949	1.29375	1.29375	0.010	1.91062	20.00000	Averaged	
43 Toluene	0.81091	0.78932	0.78932	0.100	-2.66218	20.00000	Averaged	
44 Tetrachloroethene	0.33546	0.33107	0.33107	0.100	-1.31054	20.00000	Averaged	
45 4-Methyl-2-Pentanone	0.12288	0.13811	0.13811	0.000	12.40000	20.00000	Averaged	
46 Trans 1,3-Dichloropropene	0.44293	0.45076	0.45076	0.010	1.76857	20.00000	Averaged	
47 1,1,2-Trichloroethane	0.23940	0.23827	0.23827	0.100	-0.47358	20.00000	Averaged	
48 Chlorodibromomethane	0.28635	0.27533	0.27533	0.100	-3.84729	20.00000	Averaged	
49 1,3-Dichloropropane	0.45169	0.43755	0.43755	0.100	-3.13009	20.00000	Averaged	
50 1,2-Dibromoethane	0.23363	0.23007	0.23007	0.010	-1.52551	20.00000	Averaged	
51 2-Hexanone	0.21029	0.27473	0.27473	0.010	30.64336	20.00000	Averaged	<-
53 Chlorobenzene	0.83217	0.79569	0.79569	0.300	-4.38429	20.00000	Averaged	
54 Ethyl Benzene	1.40789	1.43533	1.43533	0.100	1.94856	20.00000	Averaged	
55 1,1,1,2-Tetrachloroethane	0.29978	0.28363	0.28363	0.010	-5.38792	20.00000	Averaged	
56 m,p-xylene	0.53917	0.55203	0.55203	0.100	2.38601	20.00000	Averaged	
57 o-Xylene	0.54147	0.53317	0.53317	0.100	-1.53352	20.00000	Averaged	
58 Styrene	0.88564	0.89429	0.89429	0.100	0.97676	20.00000	Averaged	
59 Bromoform	0.37009	0.35733	0.35733	0.100	-3.44974	20.00000	Averaged	
60 Isopropyl Benzene	2.44195	2.49361	2.49361	0.010	2.11534	20.00000	Averaged	
$ 62 4-Bromofluorobenzene	0.53532	0.53677	0.53677	0.200	0.27026	20.00000	Averaged	
63 Bromobenzene	0.65413	0.59372	0.59372	0.010	-9.23499	20.00000	Averaged	
64 N-Propyl Benzene	2.86914	2.91599	2.91599	0.010	1.63290	20.00000	Averaged	
65 1,1,2,2-Tetrachloroethane	0.58909	0.56756	0.56756	0.300	-3.65476	20.00000	Averaged	
66 2-Chloro Toluene	1.84088	1.79368	1.79368	0.010	-2.56421	20.00000	Averaged	
67 1,3,5-Trimethyl Benzene	2.09200	2.10079	2.10079	0.010	0.41979	20.00000	Averaged	
68 1,2,3-Trichloropropane	0.17737	0.17301	0.17301	0.010	-2.46052	20.00000	Averaged	
69 Trans-1,4-Dichloro 2-Butene	0.24232	0.22743	0.22743	0.001	-6.14411	20.00000	Averaged	
70 4-Chloro Toluene	1.93244	1.87662	1.87662	0.010	-2.88851	20.00000	Averaged	
71 T-Butyl Benzene	1.85830	1.85171	1.85171	0.010	-0.35473	20.00000	Averaged	
72 1,2,4-Trimethylbenzene	2.06534	2.08242	2.08242	0.010	0.82706	20.00000	Averaged	
73 S-Butyl Benzene	2.64458	2.70900	2.70900	0.010	2.43583	20.00000	Averaged	
74 4-Isopropyl Toluene	2.19997	2.29940	2.29940	0.010	4.51927	20.00000	Averaged	
75 1,3-Dichlorobenzene	1.22921	1.17672	1.17672	0.100	-4.27027	20.00000	Averaged	
77 1,4-Dichlorobenzene	1.29302	1.19501	1.19501	0.100	-7.58019	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0423.d
Analysis Type: SOIL
Lab Sample ID: CC0423
Method: /chem1/nt5.i/23APR13.b/VO121012S.m

Injection Date: 23-APR-2013 11:24
Init. Cal. Date(s): 16-APR-2013 16-APR-2013
Init. Cal. Times: 16:10 18:57
Quant Type: ISTD

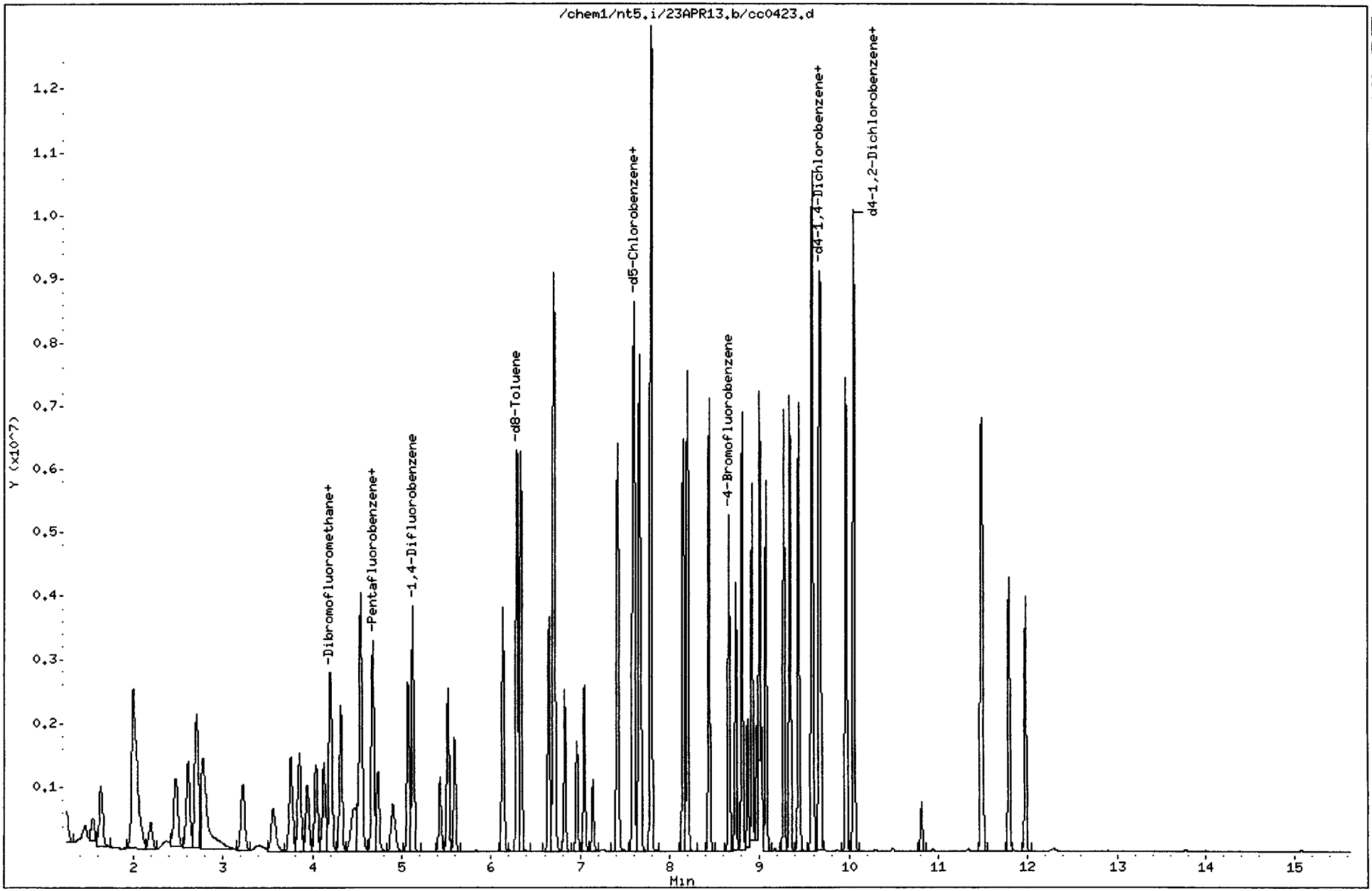
COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	2.13201	2.22642	2.22642	0.010	4.42825	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.91173	0.93337	0.93337	0.010	2.37424	20.00000	Averaged
80 1,2-Dichlorobenzene	1.20937	1.10354	1.10354	0.100	-8.75129	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.11471	0.10992	0.10992	0.010	-4.17260	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.53248	0.51766	0.51766	0.010	-2.78333	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.90177	0.85989	0.85989	0.010	-4.64406	20.00000	Averaged
84 Naphthalene	48.09207	50.00000	1.84205	0.010	-3.81586	20.00000	Quadratic
85 1,2,3-Trichlorobenzene	0.84239	0.76820	0.76820	0.010	-8.80650	20.00000	Averaged

Data File: /chem1/nt5.i/23APR13.b/cc0423.d
Date : 23-APR-2013 11:24
Client ID: VSTD50
Sample Info: CC0423,5,5,0

Column phase: RTXVMS

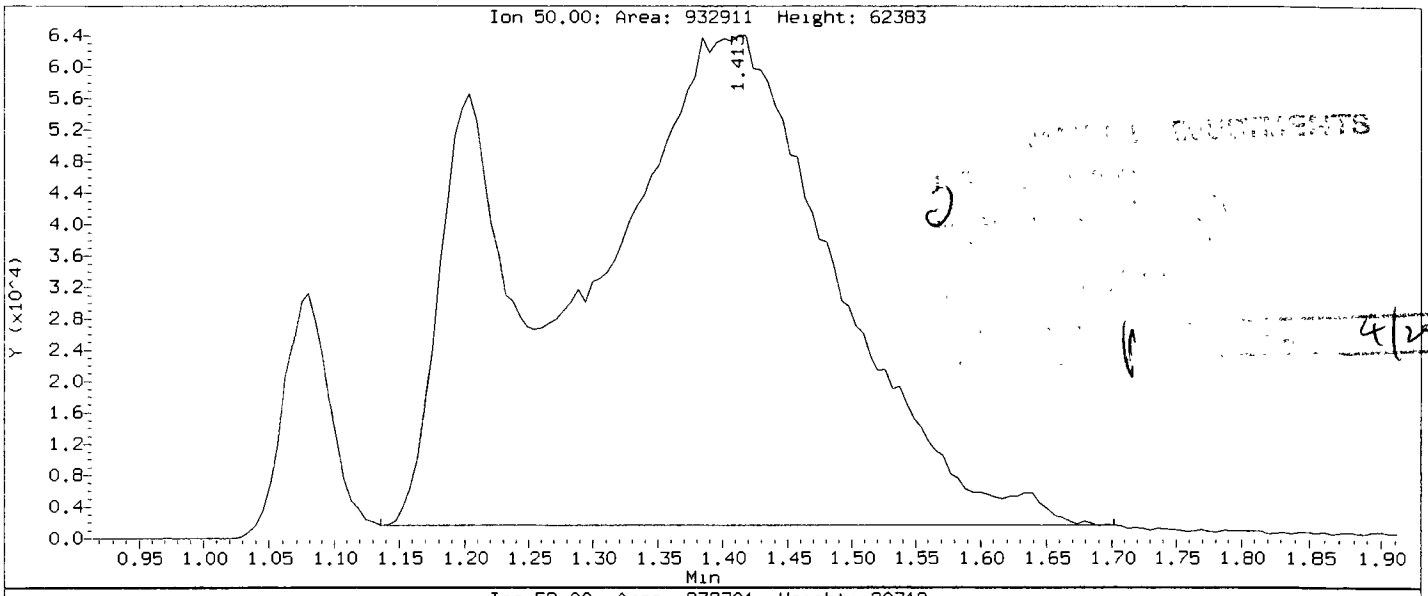
Instrument: nt5.i

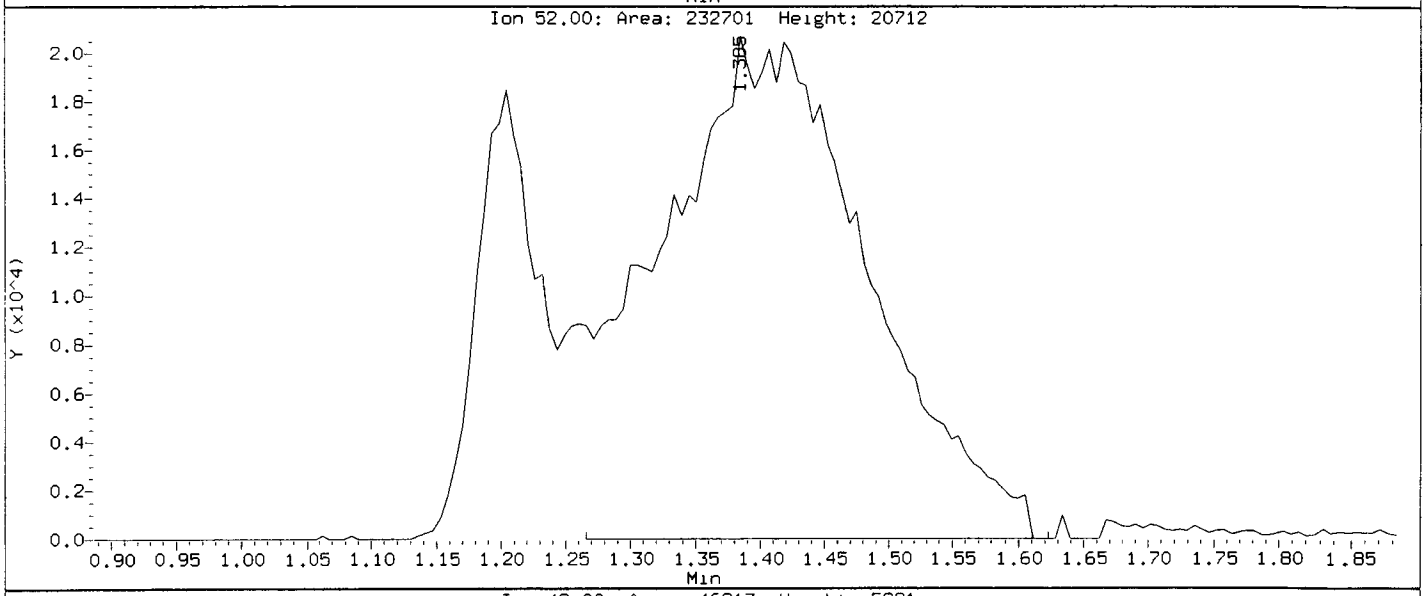
Operator: PB
Column diameter: 0.18

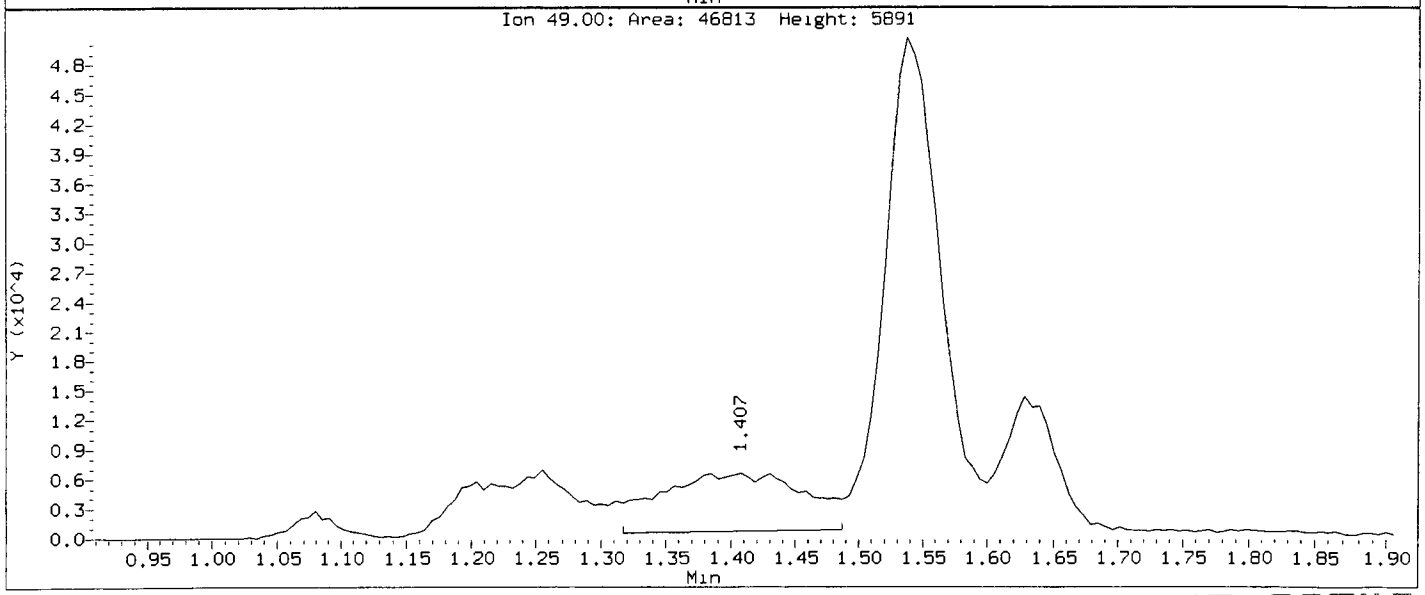


Data File: /chem1/nt5.i/23APR13.b/SampleInfo/cc0423.d
Injection Date: 23-APR-2013 11:24
Instrument: nt5.i
Client Sample ID: VSTD50

Compound: Chloromethane
CAS Number:



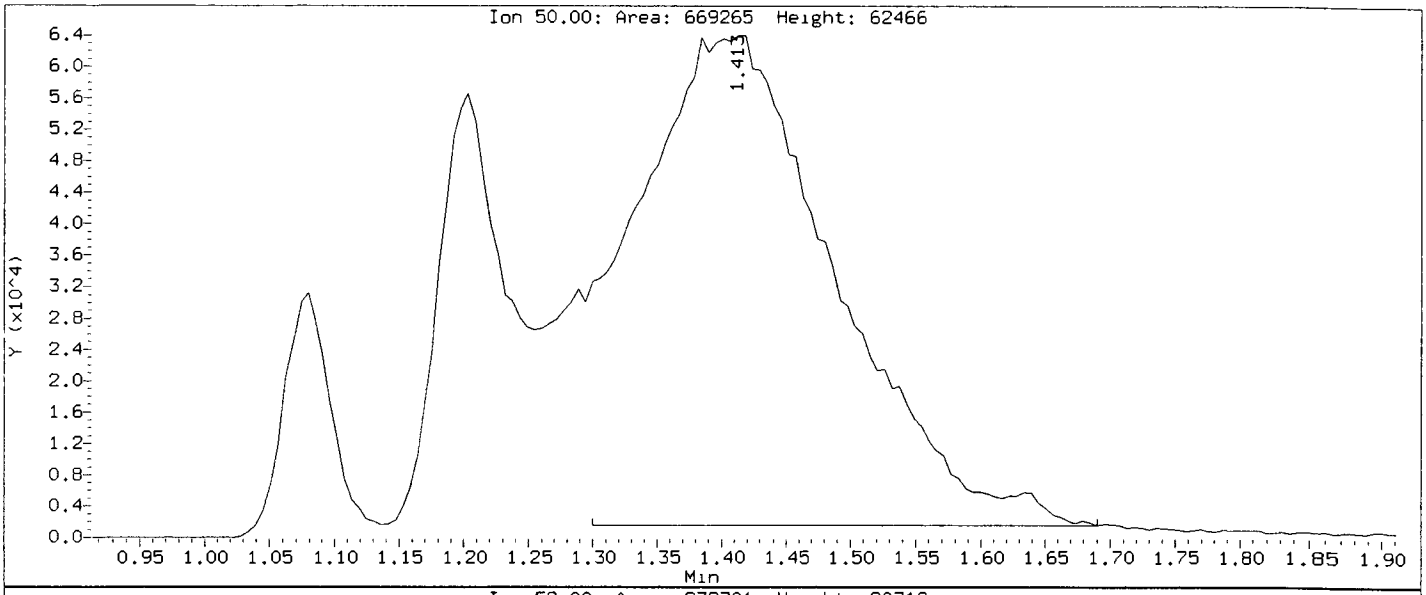


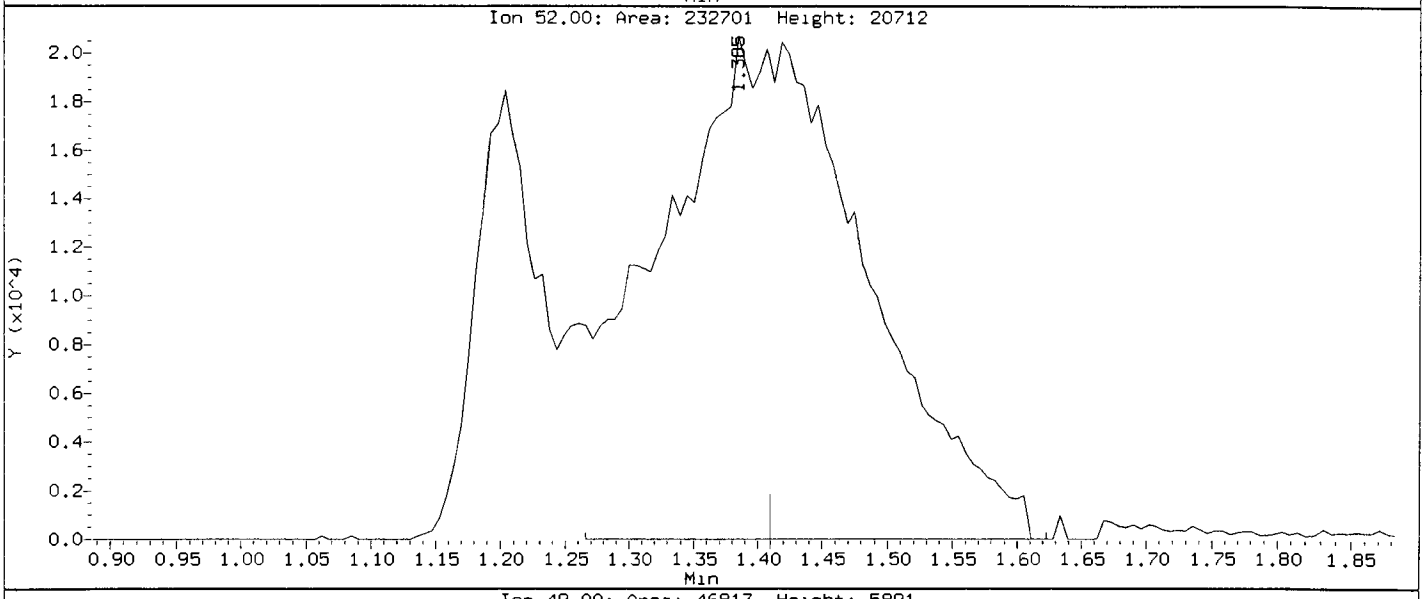


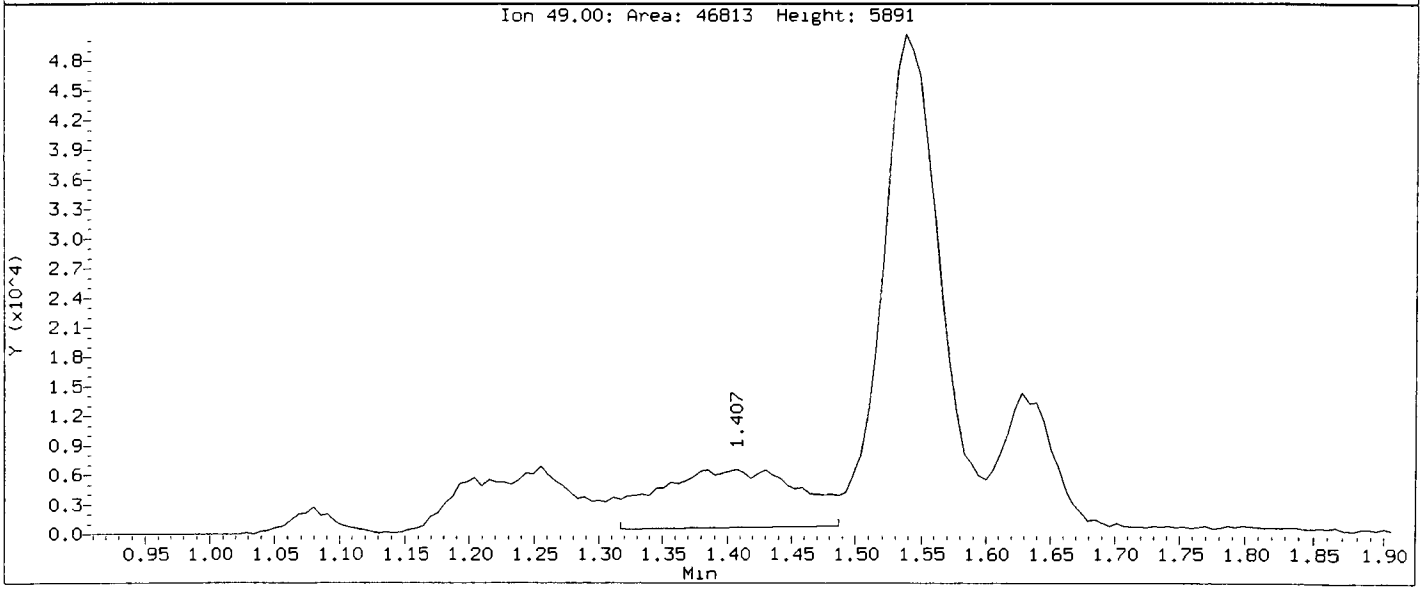
Data File: /chem1/nt5.i/23APR13.b/SampleInfo/cc0423.d
Injection Date: 23-APR-2013 11:24
Instrument: nt5.i
Client Sample ID: VSTD50

Compound: Chloromethane
CAS Number:

1 7 (46)







Data File: /chem1/nt5.i/23APR13.b/lcs0423.d
Report Date: 24-Apr-2013 10:18

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/23APR13.b/lcs0423.d
Lab Smp Id: LCS0423 Client Smp ID: LCS0423
Inj Date : 23-APR-2013 12:06
Operator : PB Inst ID: nt5.i
Smp Info : LCS0423,5,5,0,
Misc Info : 13-7794
Comment :
Method : /chem1/nt5.i/23APR13.b/VO121012S.m
Meth Date : 24-Apr-2013 10:18 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.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	1.068	1.079	(0.229)	592103	50.9110	50.911
2 Chloromethane	50	1.407	1.413	(0.301)	907641	44.5024	44.502(M)
3 Vinyl Chloride	62	1.238	1.249	(0.265)	934589	50.5522	50.552
4 Bromomethane	94	1.441	1.453	(0.309)	263902	29.3727	29.373
5 Chloroethane	64	1.532	1.543	(0.328)	574924	51.4359	51.436
6 Trichlorofluoromethane	101	1.622	1.634	(0.347)	1019850	51.0998	51.100
7 1,1-Dichloroethene	96	1.984	1.996	(0.425)	678316	54.2037	54.204
8 Carbon Disulfide	76	1.984	1.996	(0.425)	2299010	54.8327	54.833
9 112Trichloro122Trifluoroethane	101	2.030	2.035	(0.434)	630388	54.3503	54.350
10 Iodomethane	142	2.081	2.092	(0.445)	579486	38.3825	38.383
11 Bromoethane	108	2.182	2.188	(0.467)	462155	54.4205	54.420
12 Acrolein	56	2.312	2.369	(0.495)	550571	266.360	266.36(Q)
13 Methylene Chloride	84	2.454	2.471	(0.525)	730253	63.8902	63.890(R)
14 Acetone	43	2.686	2.703	(0.575)	2036369	356.488	356.49(QR)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.595	2.607	(0.556)	723071	52.2766	52.277
	16 Methyl tert butyl ether	73	2.759	2.771	(0.591)	2123167	52.6004	52.600
	17 1,1-Dichloroethane	63	3.201	3.218	(0.685)	1462577	50.4100	50.410
	18 Acrylonitrile	53	3.342	3.404	(0.715)	311359	55.2884	55.288(Q)
	19 Vinyl Acetate	43	3.540	3.557	(0.758)	1914540	58.1291	58.129
	20 Cis-1,2-Dichloroethene	96	3.744	3.755	(0.801)	781953	50.4172	50.417
	22 2,2-Dichloropropane	77	3.840	3.851	(0.822)	1160770	52.1318	52.132
	23 Bromochloromethane	128	3.930	3.942	(0.841)	337265	50.1407	50.141
	24 Chloroform	83	4.027	4.038	(0.862)	1311550	50.7339	50.734
	25 Carbon Tetrachloride	117	4.117	4.128	(0.804)	1042047	45.5520	45.552
$	27 Dibromofluoromethane	111	4.196	4.202	(0.898)	919739	58.4386	58.439
	26 1,1,1-Trichloroethane	97	4.185	4.196	(0.896)	1226955	50.6969	50.697
	28 1,1-Dichloropropene	75	4.304	4.315	(0.841)	1159475	45.6068	45.607
	29 2-Butanone	72	4.417	4.468	(0.946)	615121	376.881	376.88(R)
	30 Benzene	78	4.530	4.541	(0.885)	3282773	47.9070	47.907
*	31 Pentafluorobenzene	168	4.671	4.677	(1.000)	1448065	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.671	(0.999)	1026960	57.4223	57.422
	33 1,2-Dichloroethane	62	4.722	4.734	(0.923)	1070700	46.3411	46.341
	34 Trichloroethene	95	5.062	5.067	(0.989)	799460	45.6871	45.687
*	35 1,4-Difluorobenzene	114	5.118	5.124	(1.000)	2843472	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.059)	431494	47.2854	47.285
	38 1,2-Dichloropropane	63	5.514	5.514	(1.077)	899119	46.6332	46.633
	39 Bromodichloromethane	83	5.588	5.588	(1.092)	1027593	46.2173	46.217
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.196)	556075	51.7018	51.702
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.198)	1333270	47.8656	47.866
$	42 d8-Toluene	98	6.289	6.289	(1.229)	3674759	50.9003	50.900
	43 Toluene	92	6.329	6.335	(1.237)	2098215	45.4986	45.499
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	864901	45.2919	45.292
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	1941886	277.895	277.89
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	1227316	48.7245	48.724
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.333)	651710	47.8688	47.869
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	751154	46.0821	46.082
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	1197607	46.5774	46.577
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	636137	47.8786	47.879
	51 2-Hexanone	43	7.409	7.415	(0.976)	3570655	298.284	298.28
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2846242	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.002)	2137143	45.1147	45.115
	54 Ethyl Benzene	91	7.658	7.658	(1.009)	3805071	47.4779	47.478
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	757427	44.3849	44.385
	56 m,p-xylene	106	7.788	7.788	(1.026)	2919193	95.1127	95.113
	57 o-Xylene	106	8.150	8.150	(1.074)	1410622	45.7651	45.765
	58 Styrene	104	8.196	8.201	(1.080)	2396603	47.5378	47.538
	59 Bromoform	173	8.190	8.190	(0.847)	536718	46.9280	46.928
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3584985	47.5058	47.506
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1528651	50.1642	50.164
	63 Bromobenzene	156	8.739	8.739	(0.904)	874877	43.2791	43.279
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	4222913	47.6274	47.627

	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)	869605	47.7681	47.768
	66 2-Chloro Toluene	91	8.914	8.920	(0.922)	2602643	45.7493	45.749
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	3039179	47.0100	47.010
	68 1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	260980	47.6114	47.611
	69 Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	344367	45.9872	45.987
	70 4-Chloro Toluene	91	9.067	9.073	(0.938)	2727093	45.6657	45.666
	71 T-Butyl Benzene	119	9.270	9.271	(0.959)	2658901	46.3001	46.300
	72 1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	3002701	47.0453	47.045
	73 S-Butyl Benzene	105	9.434	9.435	(0.976)	3900897	47.7313	47.731
	74 4-Isopropyl Toluene	119	9.582	9.582	(0.991)	3330975	48.9948	48.995
	75 1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1708099	44.9659	44.966
*	76 d4-1,4-Dichlorobenzene	152	9.666	9.666	(1.000)	1545161	50.0000	
	77 1,4-Dichlorobenzene	146	9.683	9.683	(1.002)	1750022	43.7959	43.796
	78 N-Butyl Benzene	91	9.966	9.966	(1.031)	3207892	48.6886	48.689
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1436381	50.9801	50.980
	80 1,2-Dichlorobenzene	146	10.062	10.062	(1.041)	1617784	43.2869	43.287
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	169801	47.8995	47.899
	82 Hexachloro 1,3-Butadiene	225	11.499	11.494	(1.190)	736334	44.7472	44.747
	83 1,2,4-Trichlorobenzene	180	11.482	11.482	(1.188)	1265105	45.3972	45.397
	84 Naphthalene	128	11.793	11.793	(1.220)	2794457	47.0695	47.069
	85 1,2,3-Trichlorobenzene	180	11.980	11.980	(1.239)	1146542	44.0427	44.043

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: lcs0423.d
Lab Smp Id: LCS0423
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7794

Calibration Date: 23-APR-2013
Calibration Time: 11:24
Client Smp ID: LCS0423
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	1616720	808360	3233440	1448065	-10.43
35 1,4-Difluorobenze	2842987	1421494	5685974	2843472	0.02
52 d5-Chlorobenzene	2779083	1389542	5558166	2846242	2.42
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1545161	1.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.68	4.18	5.18	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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: 23APR13
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: LCS0423
Client Smp ID: LCS0423
Level: LOW
Operator: PB
Data Type: MS DATA
SampleType: LCS
SpikeList File: all.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7794

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	50.911	101.82	53-148
2	Chloromethane	50.000	44.502	89.00	64-125
3	Vinyl Chloride	50.000	50.552	101.10	63-137
4	Bromomethane	50.000	29.373	58.75	57-136
5	Chloroethane	50.000	51.436	102.87	64-131
6	Trichlorofluoromet	50.000	51.100	102.20	69-132
12	Acrolein	250.00	266.36	106.54	54-137
9	112Trichloro122Tri	50.000	54.350	108.70	74-130
14	Acetone	250.00	356.49	142.60*	60-131
7	1,1-Dichloroethene	50.000	54.204	108.41	75-126
11	Bromoethane	50.000	54.420	108.84	76-126
10	Iodomethane	50.000	38.383	76.77	65-139
13	Methylene Chloride	50.000	63.890	127.78*	70-123
8	Carbon Disulfide	50.000	54.833	109.67	71-129
18	Acrylonitrile	50.000	55.288	110.58	67-125
15	Trans-1,2-Dichloro	50.000	52.277	104.55	80-120
19	Vinyl Acetate	50.000	58.129	116.26	60-136
17	1,1-Dichloroethane	50.000	50.410	100.82	80-120
29	2-Butanone	250.00	376.88	150.75*	70-120
22	2,2-Dichloropropan	50.000	52.132	104.26	74-123
20	Cis-1,2-Dichloroet	50.000	50.417	100.83	80-120
24	Chloroform	50.000	50.734	101.47	80-120
23	Bromochloromethane	50.000	50.141	100.28	80-120
26	1,1,1-Trichloroeth	50.000	50.697	101.39	77-121
28	1,1-Dichloropropen	50.000	45.607	91.21	80-120
25	Carbon Tetrachlori	50.000	45.552	91.10	77-122
33	1,2-Dichloroethane	50.000	46.341	92.68	76-120
30	Benzene	50.000	47.907	95.81	80-120
34	Trichloroethene	50.000	45.687	91.37	80-120
38	1,2-Dichloropropan	50.000	46.633	93.27	80-120
39	Bromodichlorometha	50.000	46.217	92.43	77-121
37	Dibromomethane	50.000	47.285	94.57	80-120
40	2-Chloroethyl Viny	50.000	51.702	103.40	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	277.89	111.16	67-120
41 Cis 1,3-dichloropr	50.000	47.866	95.73	74-120
43 Toluene	50.000	45.499	91.00	80-120
46 Trans 1,3-Dichloro	50.000	48.724	97.45	65-120
51 2-Hexanone	250.00	298.28	119.31	65-130
47 1,1,2-Trichloroeth	50.000	47.869	95.74	80-120
49 1,3-Dichloropropan	50.000	46.577	93.15	80-120
44 Tetrachloroethene	50.000	45.292	90.58	80-121
48 Chlorodibromometha	50.000	46.082	92.16	64-120
50 1,2-Dibromoethane	50.000	47.879	95.76	75-120
53 Chlorobenzene	50.000	45.115	90.23	80-120
55 1,1,1,2-Tetrachlor	50.000	44.385	88.77	69-121
54 Ethyl Benzene	50.000	47.478	94.96	80-127
56 m,p-xylene	100.00	95.113	95.11	80-125
57 o-Xylene	50.000	45.765	91.53	78-120
58 Styrene	50.000	47.538	95.08	80-123
60 Isopropyl Benzene	50.000	47.506	95.01	80-127
59 Bromoform	50.000	46.928	93.86	60-120
65 1,1,2,2-Tetrachlor	50.000	47.768	95.54	74-120
68 1,2,3-Trichloropro	50.000	47.611	95.22	72-121
69 Trans-1,4-Dichloro	50.000	45.987	91.97	65-126
64 N-Propyl Benzene	50.000	47.627	95.25	80-132
63 Bromobenzene	50.000	43.279	86.56	80-120
67 1,3,5-Trimethyl Be	50.000	47.010	94.02	80-125
66 2-Chloro Toluene	50.000	45.749	91.50	80-125
70 4-Chloro Toluene	50.000	45.666	91.33	80-127
71 T-Butyl Benzene	50.000	46.300	92.60	87-122
72 1,2,4-Trimethylben	50.000	47.045	94.09	80-126
73 S-Butyl Benzene	50.000	47.731	95.46	80-134
74 4-Isopropyl Toluen	50.000	48.995	97.99	80-131
75 1,3-Dichlorobenzen	50.000	44.966	89.93	80-120
77 1,4-Dichlorobenzen	50.000	43.796	87.59	80-120
78 N-Butyl Benzene	50.000	48.689	97.38	80-138
80 1,2-Dichlorobenzen	50.000	43.287	86.57	80-120
81 1,2-Dibromo 3-Chlo	50.000	47.899	95.80	59-120
83 1,2,4-Trichloroben	50.000	45.397	90.79	78-130
82 Hexachloro 1,3-But	50.000	44.747	89.49	76-129
84 Naphthalene	50.000	47.069	94.14	66-120
85 1,2,3-Trichloroben	50.000	44.043	88.09	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	58.439	116.88	70-130

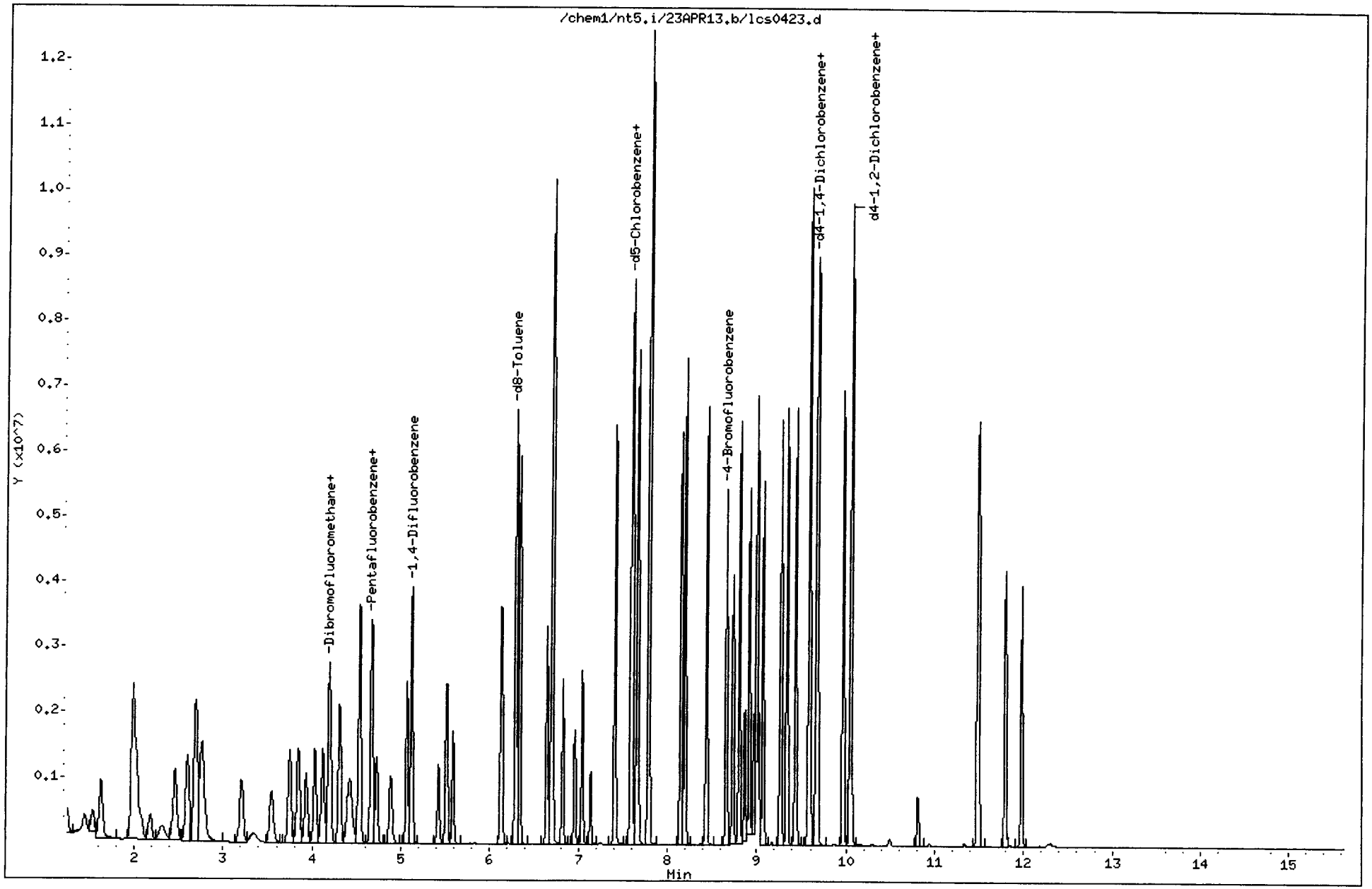
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	57.422	114.84	80-149
$ 42 d8-Toluene	50.000	50.900	101.80	77-120
$ 62 4-Bromofluorobenze	50.000	50.164	100.33	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.980	101.96	80-120

Data File: /chem1/nt5.i/23APR13.b/lcs0423.d
Date : 23-APR-2013 12:06
Client ID: LCS0423
Sample Info: LCS0423,5,5,0,

Instrument: nt5.i

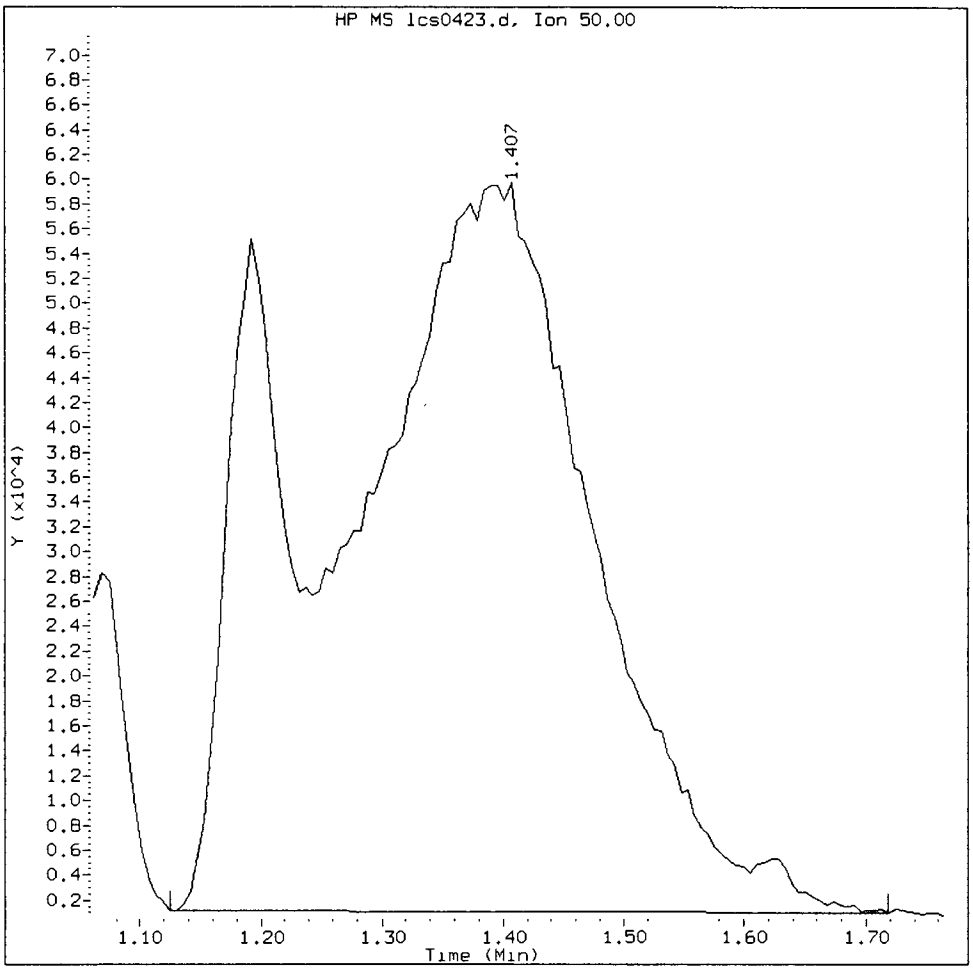
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



LCS0423, /chem1/nt5.i/23APR13.b/lcs0423.d

Chloromethane Amount: 44.50 Area: 907641



MANUAL INTEGRATION for Chloromethane

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

5. Other _____

Analyst: _____ Date: 4/24

CO-ELUTION SUMMARY FOR FILE - lcs0423.d

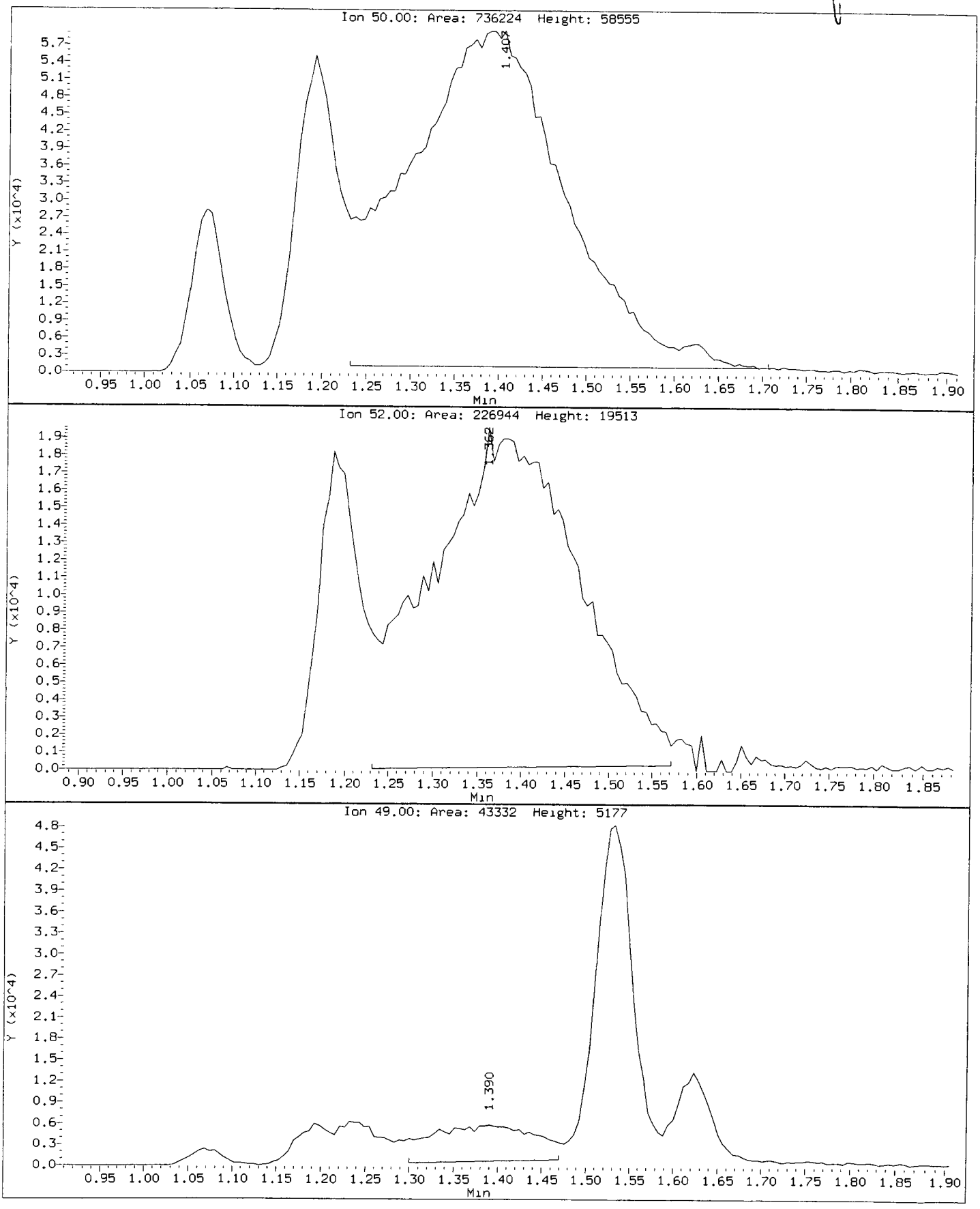
Lab ID: LCS0423, Method: VO121012S.m, Instrument: nt5.i, Date: 23-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.1/23APR13.b/lcs0423.d
Injection Date: 23-APR-2013 12:06
Instrument: nt5.1
Client Sample ID: LCS0423

Compound: Chloromethane
CAS Number:



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/23APR13.b/lcs0423a.d
Lab Smp Id: LCS0423 Client Smp ID: LCS0423
Inj Date : 23-APR-2013 12:30
Operator : PB Inst ID: nt5.i
Smp Info : LCS0423,5,5,0,
Misc Info : 13-7794
Comment :
Method : /chem1/nt5.i/23APR13.b/VO121012S.m
Meth Date : 24-Apr-2013 10:18 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.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	1.079	(0.226)	611321	52.8886	52.889
2 Chloromethane	50	1.391	1.413	(0.298)	890967	43.9551	43.955(QM)
3 Vinyl Chloride	62	1.227	1.249	(0.263)	969968	52.7903	52.790
4 Bromomethane	94	1.430	1.453	(0.306)	280271	31.3875	31.388
5 Chloroethane	64	1.515	1.543	(0.325)	577768	52.0100	52.010
6 Trichlorofluoromethane	101	1.611	1.634	(0.345)	1044861	52.6768	52.677
7 1,1-Dichloroethene	96	1.968	1.996	(0.422)	691225	55.5769	55.577
8 Carbon Disulfide	76	1.973	1.996	(0.423)	2344036	56.2523	56.252
9 112Trichloro122Trifluoroethane	101	2.013	2.035	(0.431)	642311	55.7208	55.721
10 Iodomethane	142	2.064	2.092	(0.442)	574347	38.2774	38.277
11 Bromoethane	108	2.166	2.188	(0.464)	465277	55.1270	55.127
12 Acrolein	56	2.284	2.369	(0.490)	587975	286.215	286.22(Q)
13 Methylene Chloride	84	2.443	2.471	(0.524)	718427	63.3017	63.302(R)
14 Acetone	43	2.669	2.703	(0.572)	1726107	308.501	308.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.579	2.607	(0.553)	713982	51.9387	51.939
	16 Methyl tert butyl ether	73	2.748	2.771	(0.589)	2180349	54.3512	54.351
	17 1,1-Dichloroethane	63	3.189	3.218	(0.684)	1528599	53.0114	53.011
	18 Acrylonitrile	53	3.308	3.404	(0.709)	161550	28.8640	28.864(QR)
	19 Vinyl Acetate	43	3.529	3.557	(0.756)	1986315	60.6813	60.681
	20 Cis-1,2-Dichloroethene	96	3.733	3.755	(0.800)	806231	52.3041	52.304
	22 2,2-Dichloropropane	77	3.834	3.851	(0.822)	1200699	54.2586	54.259
	23 Bromochloromethane	128	3.919	3.942	(0.840)	348242	52.0928	52.093
	24 Chloroform	83	4.021	4.038	(0.862)	1307586	50.8934	50.893
	25 Carbon Tetrachloride	117	4.106	4.128	(0.803)	1083684	48.0041	48.004
$	27 Dibromofluoromethane	111	4.185	4.202	(0.897)	914203	58.4461	58.446
	26 1,1,1-Trichloroethane	97	4.179	4.196	(0.896)	1280955	53.2555	53.255
	28 1,1-Dichloropropene	75	4.298	4.315	(0.841)	1201338	47.8838	47.884
	29 2-Butanone	72	4.400	4.468	(0.943)	493647	304.326	304.33(R)
	30 Benzene	78	4.524	4.541	(0.885)	3377652	49.9491	49.949
*	31 Pentafluorobenzene	168	4.666	4.677	(1.000)	1439164	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.671	(0.998)	1022317	57.5163	57.516
	33 1,2-Dichloroethane	62	4.717	4.734	(0.923)	1111589	48.7526	48.753
	34 Trichloroethene	95	5.062	5.067	(0.990)	830286	48.0816	48.082
*	35 1,4-Difluorobenzene	114	5.113	5.124	(1.000)	2806042	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	442929	49.1860	49.186
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	924970	48.6139	48.614
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	1066458	48.6051	48.605
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.197)	572912	53.9778	53.978
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	1384161	50.3555	50.355
$	42 d8-Toluene	98	6.289	6.289	(1.230)	3653482	51.2807	51.281
	43 Toluene	92	6.329	6.335	(1.238)	2175991	47.8145	47.815
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	883707	46.5794	46.579
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.310)	2038785	295.653	295.65
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.309)	1283275	51.6256	51.626
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.334)	677049	50.3933	50.393
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	780418	48.1906	48.191
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	1243971	48.6970	48.697
	50 1,2-Dibromoethane	107	7.132	7.138	(1.395)	662560	50.5326	50.533
	51 2-Hexanone	43	7.410	7.415	(0.976)	3363008	282.776	282.78
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2827746	50.0000	
	53 Chlorobenzene	112	7.602	7.607	(1.001)	2206351	46.8803	46.880
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	3934079	49.4087	49.409
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	792839	46.7639	46.764
	56 m,p-xylene	106	7.789	7.788	(1.026)	3007982	98.6467	98.647
	57 o-Xylene	106	8.151	8.150	(1.074)	1464450	47.8222	47.822
	58 Styrene	104	8.196	8.201	(1.080)	2467310	49.2605	49.260
	59 Bromoform	173	8.190	8.190	(0.847)	559225	49.0072	49.007
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3705042	49.2085	49.208
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1518895	50.1701	50.170
	63 Bromobenzene	156	8.733	8.739	(0.903)	898818	44.5646	44.565
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	4329900	48.9453	48.945

	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	8.863	8.869	(0.917)	904537	49.8001	49.800
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	2677585	47.1739	47.174
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	3129510	48.5175	48.517
68	1,2,3-Trichloropropane	110	8.965	8.965	(0.927)	272353	49.7994	49.799
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	348411	46.6332	46.633
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	2795406	46.9162	46.916
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	2754959	48.0820	48.082
72	1,2,4-Trimethylbenzene	105	9.339	9.338	(0.966)	3088527	48.5002	48.500
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	4015295	49.2430	49.243
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	3380374	49.8347	49.835
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1742649	45.9799	45.980
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.666	(1.000)	1541650	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	1792280	44.9556	44.956
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	3246666	49.3894	49.389
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1445490	51.4203	51.420
80	1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	1663864	44.6212	44.621
81	1,2-Dibromo 3-Chloropropane	75	10.804	10.809	(1.118)	178808	50.5552	50.555
82	Hexachloro 1,3-Butadiene	225	11.488	11.494	(1.188)	736689	44.8707	44.871
83	1,2,4-Trichlorobenzene	180	11.471	11.482	(1.187)	1258026	45.2460	45.246
84	Naphthalene	128	11.782	11.793	(1.219)	2844813	48.1915	48.192
85	1,2,3-Trichlorobenzene	180	11.969	11.980	(1.238)	1140254	43.9009	43.901

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: lcs0423a.d
Lab Smp Id: LCS0423
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7794

Calibration Date: 23-APR-2013
Calibration Time: 11:24
Client Smp ID: LCS0423
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	1616720	808360	3233440	1439164	-10.98
35 1,4-Difluorobenze	2842987	1421494	5685974	2806042	-1.30
52 d5-Chlorobenzene	2779083	1389542	5558166	2827746	1.75
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1541650	0.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.68	4.18	5.18	4.67	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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: 23APR13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0423 Client Smp ID: LCS0423
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCSD
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7794

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	52.889	105.78	53-148
2	Chloromethane	50.000	43.955	87.91	64-125
3	Vinyl Chloride	50.000	52.790	105.58	63-137
4	Bromomethane	50.000	31.388	62.78	57-136
5	Chloroethane	50.000	52.010	104.02	64-131
6	Trichlorofluoromet	50.000	52.677	105.35	69-132
12	Acrolein	250.00	286.22	114.49	54-137
9	112Trichloro122Tri	50.000	55.721	111.44	74-130
14	Acetone	250.00	308.50	123.40	60-131
7	1,1-Dichloroethene	50.000	55.577	111.15	75-126
11	Bromoethane	50.000	55.127	110.25	76-126
10	Iodomethane	50.000	38.277	76.55	65-139
13	Methylene Chloride	50.000	63.302	126.60*	70-123
8	Carbon Disulfide	50.000	56.252	112.50	71-129
18	Acrylonitrile	50.000	28.864	57.73*	67-125
15	Trans-1,2-Dichloro	50.000	51.939	103.88	80-120
19	Vinyl Acetate	50.000	60.681	121.36	60-136
17	1,1-Dichloroethane	50.000	53.011	106.02	80-120
29	2-Butanone	250.00	304.33	121.73*	70-120
22	2,2-Dichloropropan	50.000	54.259	108.52	74-123
20	Cis-1,2-Dichloroet	50.000	52.304	104.61	80-120
24	Chloroform	50.000	50.893	101.79	80-120
23	Bromochloromethane	50.000	52.093	104.19	80-120
26	1,1,1-Trichloroeth	50.000	53.255	106.51	77-121
28	1,1-Dichloropropen	50.000	47.884	95.77	80-120
25	Carbon Tetrachlori	50.000	48.004	96.01	77-122
33	1,2-Dichloroethane	50.000	48.753	97.51	76-120
30	Benzene	50.000	49.949	99.90	80-120
34	Trichloroethene	50.000	48.082	96.16	80-120
38	1,2-Dichloropropan	50.000	48.614	97.23	80-120
39	Bromodichlorometha	50.000	48.605	97.21	77-121
37	Dibromomethane	50.000	49.186	98.37	80-120
40	2-Chloroethyl Viny	50.000	53.978	107.96	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	295.65	118.26	67-120
41 Cis 1,3-dichloropr	50.000	50.355	100.71	74-120
43 Toluene	50.000	47.815	95.63	80-120
46 Trans 1,3-Dichloro	50.000	51.626	103.25	65-120
51 2-Hexanone	250.00	282.78	113.11	65-130
47 1,1,2-Trichloroeth	50.000	50.393	100.79	80-120
49 1,3-Dichloropropan	50.000	48.697	97.39	80-120
44 Tetrachloroethene	50.000	46.579	93.16	80-121
48 Chlorodibromometha	50.000	48.191	96.38	64-120
50 1,2-Dibromoethane	50.000	50.533	101.07	75-120
53 Chlorobenzene	50.000	46.880	93.76	80-120
55 1,1,1,2-Tetrachlor	50.000	46.764	93.53	69-121
54 Ethyl Benzene	50.000	49.409	98.82	80-127
56 m,p-xylene	100.00	98.647	98.65	80-125
57 o-Xylene	50.000	47.822	95.64	78-120
58 Styrene	50.000	49.260	98.52	80-123
60 Isopropyl Benzene	50.000	49.208	98.42	80-127
59 Bromoform	50.000	49.007	98.01	60-120
65 1,1,2,2-Tetrachlor	50.000	49.800	99.60	74-120
68 1,2,3-Trichloropro	50.000	49.799	99.60	72-121
69 Trans-1,4-Dichloro	50.000	46.633	93.27	65-126
64 N-Propyl Benzene	50.000	48.945	97.89	80-132
63 Bromobenzene	50.000	44.565	89.13	80-120
67 1,3,5-Trimethyl Be	50.000	48.517	97.03	80-125
66 2-Chloro Toluene	50.000	47.174	94.35	80-125
70 4-Chloro Toluene	50.000	46.916	93.83	80-127
71 T-Butyl Benzene	50.000	48.082	96.16	87-122
72 1,2,4-Trimethylben	50.000	48.500	97.00	80-126
73 S-Butyl Benzene	50.000	49.243	98.49	80-134
74 4-Isopropyl Toluen	50.000	49.835	99.67	80-131
75 1,3-Dichlorobenzen	50.000	45.980	91.96	80-120
77 1,4-Dichlorobenzen	50.000	44.956	89.91	80-120
78 N-Butyl Benzene	50.000	49.389	98.78	80-138
80 1,2-Dichlorobenzen	50.000	44.621	89.24	80-120
81 1,2-Dibromo 3-Chlo	50.000	50.555	101.11	59-120
83 1,2,4-Trichloroben	50.000	45.246	90.49	78-130
82 Hexachloro 1,3-But	50.000	44.871	89.74	76-129
84 Naphthalene	50.000	48.192	96.38	66-120
85 1,2,3-Trichloroben	50.000	43.901	87.80	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	58.446	116.89	70-130

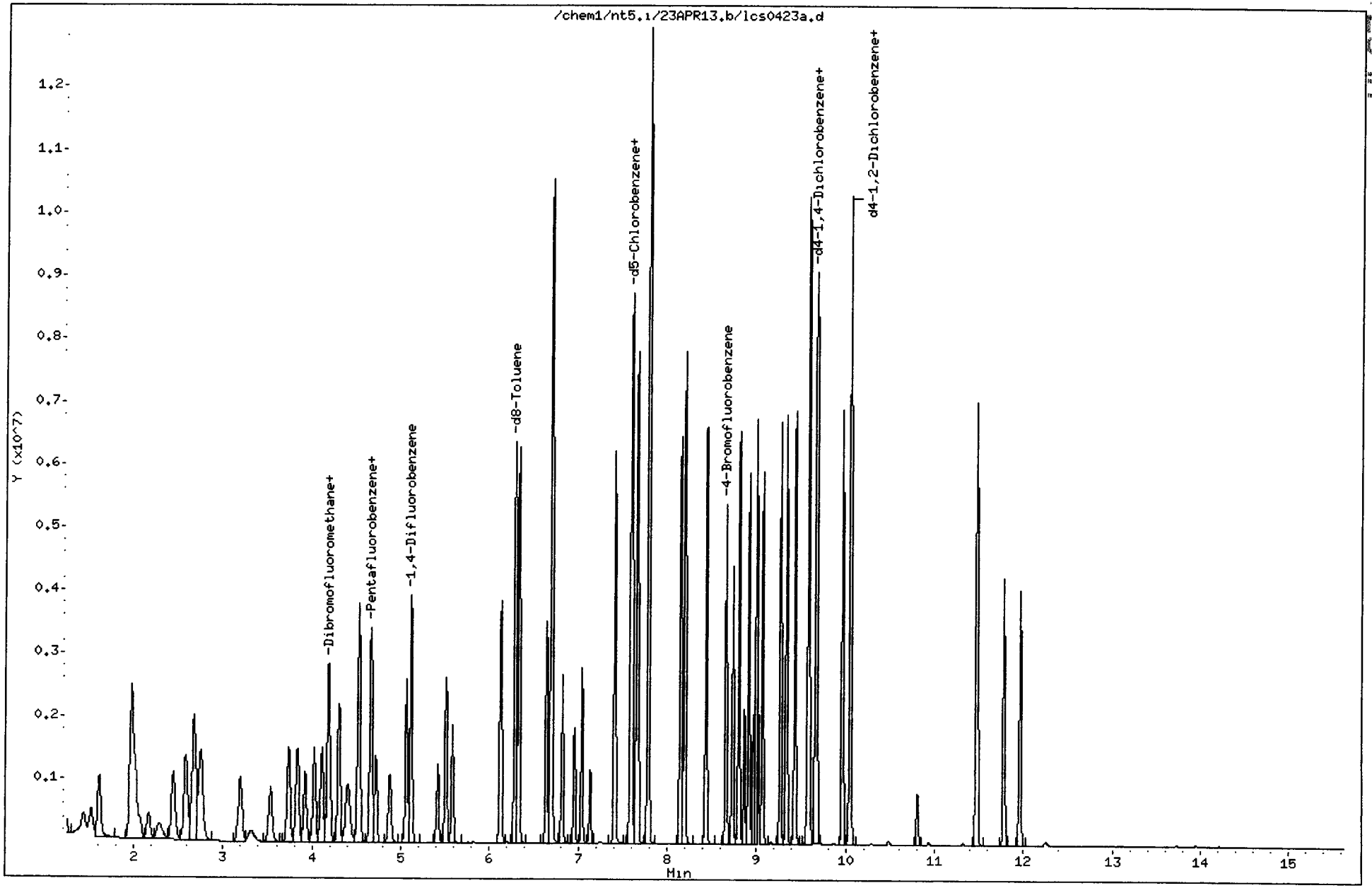
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	57.516	115.03	80-149
$ 42 d8-Toluene	50.000	51.281	102.56	77-120
$ 62 4-Bromofluorobenze	50.000	50.170	100.34	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.420	102.84	80-120

Data File: /chem1/nt5.i/23APR13.b/lcs0423a.d
Date : 23-APR-2013 12:30
Client ID: LCS0423
Sample Info: LCS0423,5,5,0,

Instrument: nt5.i

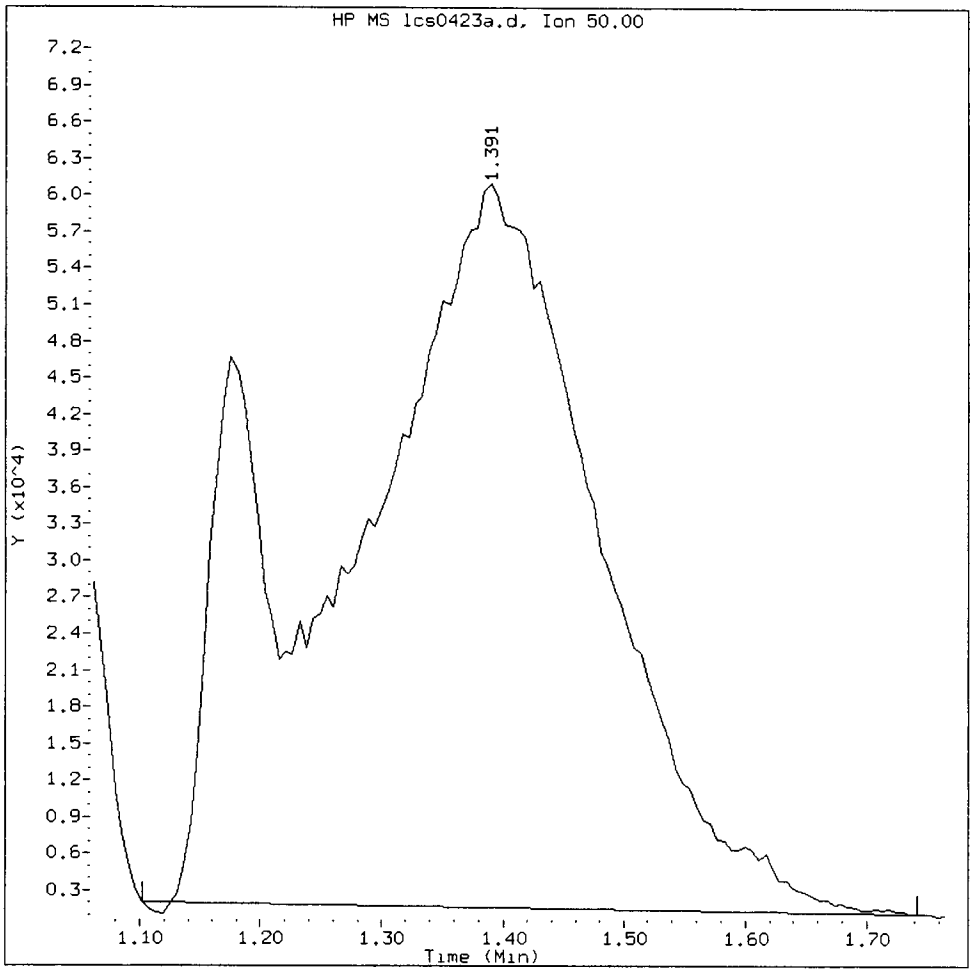
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



LCS0423, /chem1/nt5.i/23APR13.b/lcs0423a.d

Chloromethane Amount: 43.96 Area: 890967



MANUAL INTEGRATION for Chloromethane

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

5. Other _____

Analyst: _____ Date: 4/24/13

CO-ELUTION SUMMARY FOR FILE - lcs0423a.d

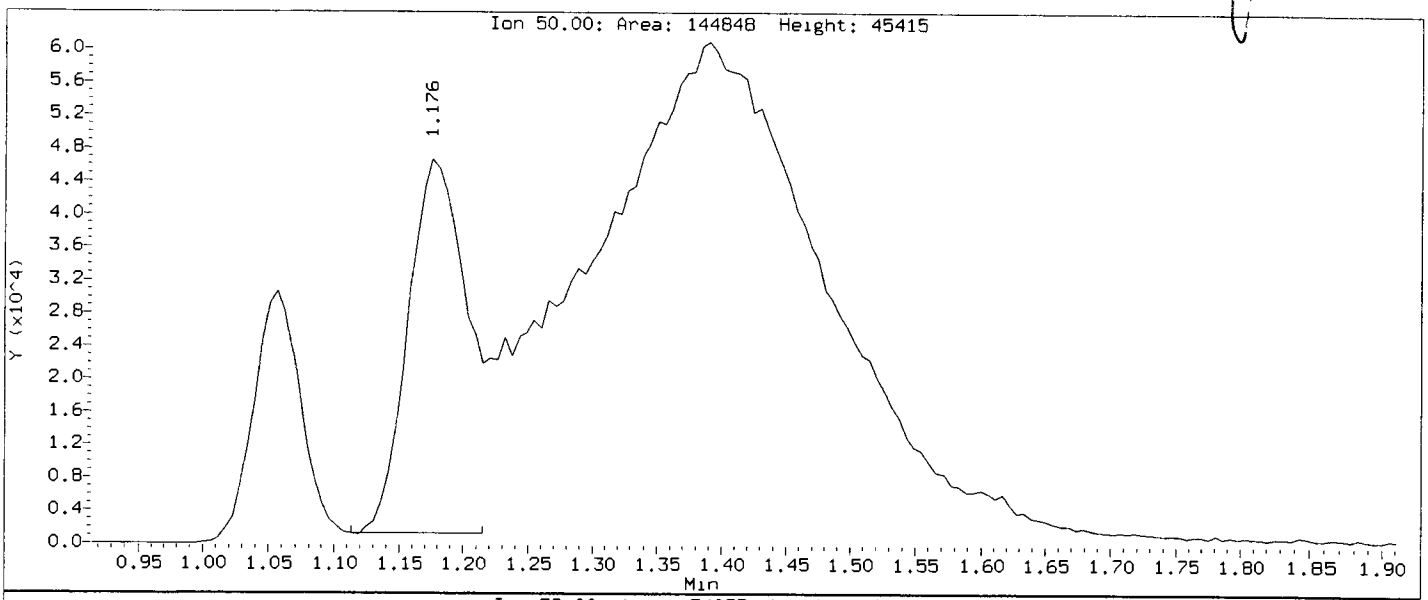
Lab ID: LCS0423, Method: VO121012S.m, Instrument: nt5.i, Date: 23-APR-2013

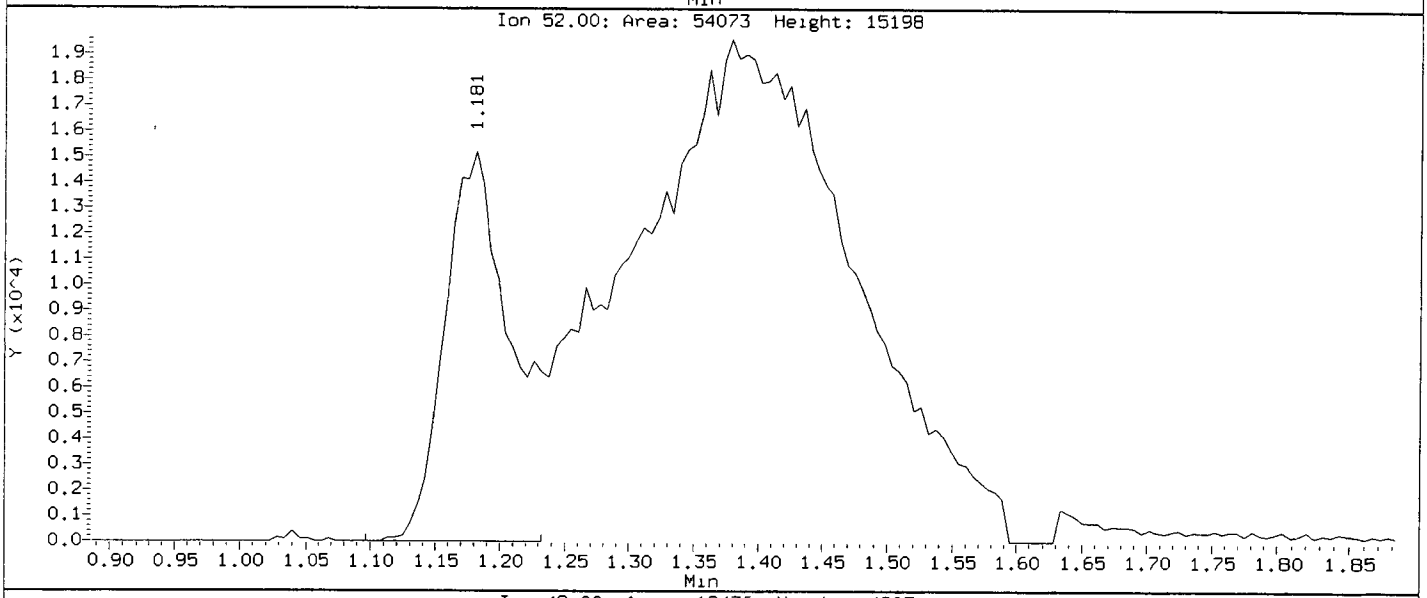
RT	CO-ELUTION COMPOUNDS

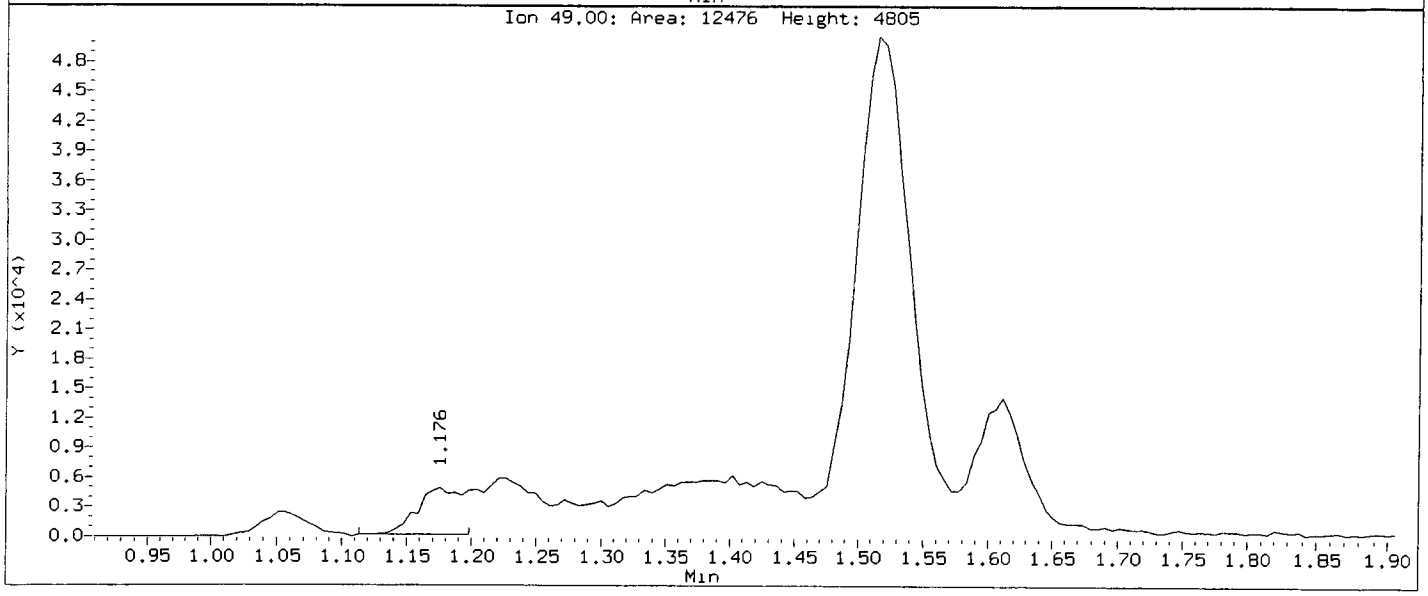
NO CO-ELUTIONS

Data File: /chem1/nt5.i/23APR13.b/lcs0423a.d
Injection Date: 23-APR-2013 12:30
Instrument: nt5.i
Client Sample ID: LCS0423

Compound: Chloromethane
CAS Number:







Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/23APR13.b/mb0423.d
Lab Smp Id: MB0423 Client Smp ID: MB0423
Inj Date : 23-APR-2013 12:54
Operator : PB Inst ID: nt5.i
Smp Info : MB0423,5,5,0,
Misc Info : 13-7794
Comment :
Method : /chem1/nt5.i/23APR13.b/VO121012S.m
Meth Date : 24-Apr-2013 10:18 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.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	2.482	2.369	(0.531)	5970	3.09623	3.096 (Q)
13 Methylene Chloride	84	2.471	2.471	(0.528)	31267	3.18357	3.184
14 Acetone	43	2.714	2.703	(0.580)	34252	7.05722	7.057
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/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	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.208	4.202	(0.900)	850504	57.9314	57.931
	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	4.677	4.677	(1.000)	1350783	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.671	4.671	(0.999)	975944	58.4998	58.500
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	2648069	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.289	(1.229)	3442178	51.1970	51.197
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2639019	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)	1409920	49.9010	49.901
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
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	9.661	9.666	(1.000)	1400375	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.045	10.051	(1.040)	1322395	51.7871	51.787
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	11.777	11.793	(1.219)	55249	0.85741	0.8574
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: mb0423.d
Lab Smp Id: MB0423
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7794

Calibration Date: 23-APR-2013
Calibration Time: 11:24
Client Smp ID: MB0423
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	1616720	808360	3233440	1350783	-16.45
35 1,4-Difluorobenze	2842987	1421494	5685974	2648069	-6.86
52 d5-Chlorobenzene	2779083	1389542	5558166	2639019	-5.04
76 d4-1,4-Dichlorobe	1529325	764662	3058650	1400375	-8.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.68	4.18	5.18	4.68	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-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: MB0423
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7794

Client SDG: 23APR13
Fraction: VOA
Client Smp ID: MB0423
Operator: PB
SampleType: BLANK
Quant Type: ISTD

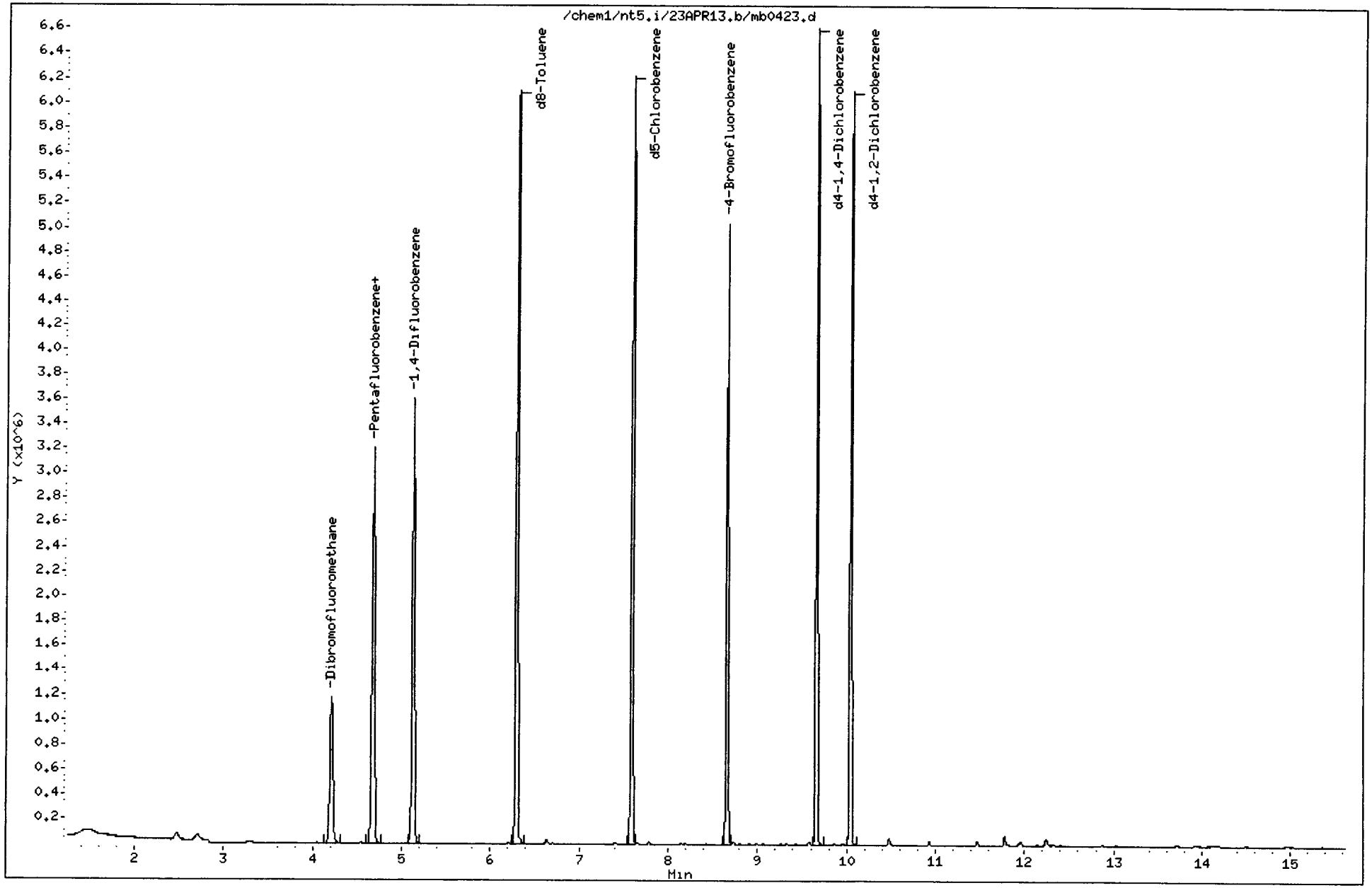
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.931	115.86	70-130
$ 32 d4-1,2-Dichloroeth	50.000	58.500	117.00	80-149
$ 42 d8-Toluene	50.000	51.197	102.39	77-120
$ 62 4-Bromofluorobenze	50.000	49.901	99.80	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.787	103.57	80-120

Data File: /chem1/nt5.1/23APR13.b/mb0423.d
Date : 23-APR-2013 12:54
Client ID: MB0423
Sample Info: MB0423,5,5,0,

Instrument: nt5.1

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - mb0423.d

Lab ID: MB0423, Method: VO121012S.m, Instrument: nt5.i, Date: 23-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.1/23APR13.b/mb0423.d

Date : 23-APR-2013 12:54

Client ID: MB0423

Instrument: nt5.1

Sample Info: MB0423,5,5,0,

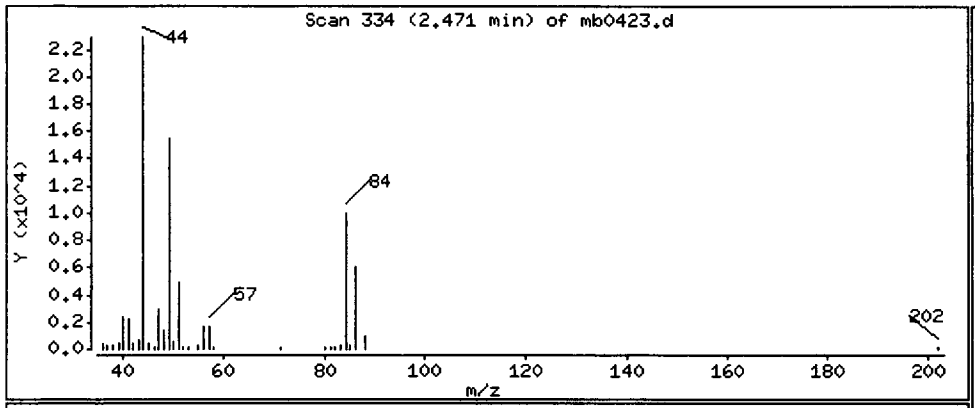
Operator: PB

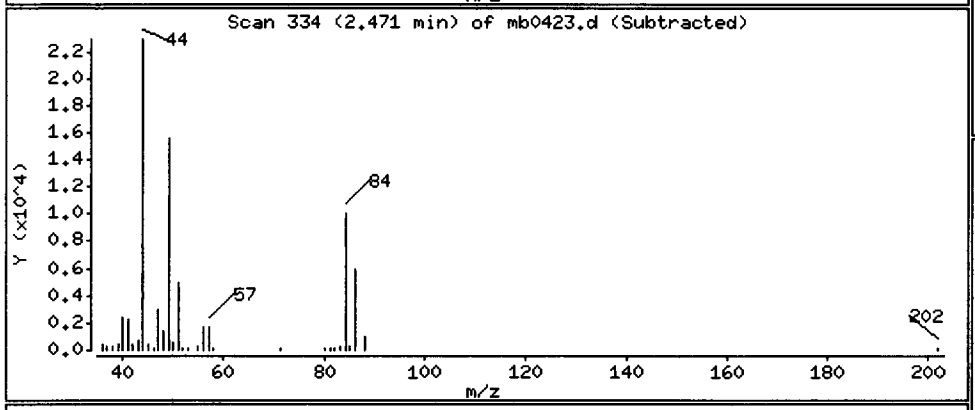
Column phase: RTXVMS

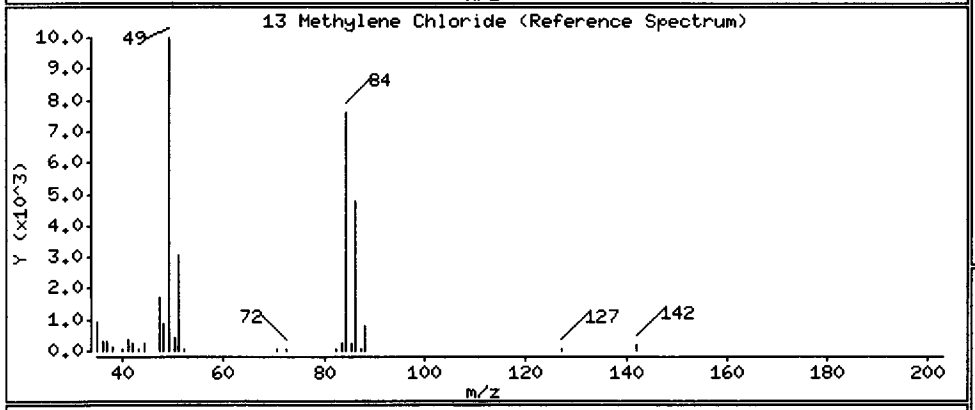
Column diameter: 0.18

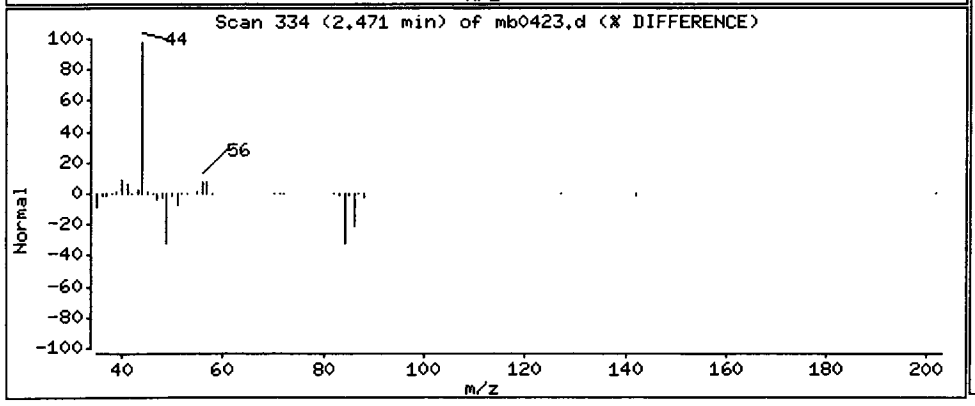
13 Methylene Chloride

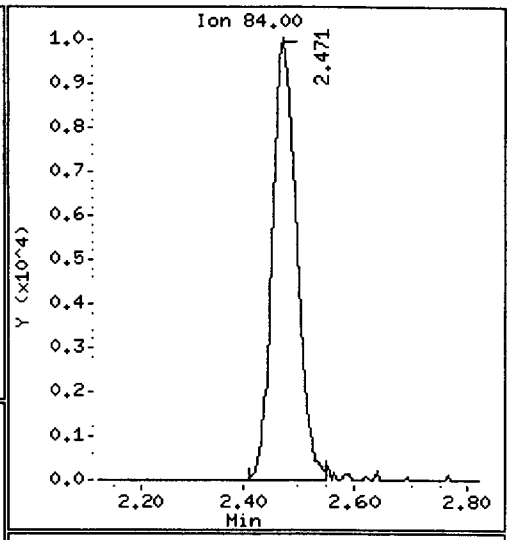
Concentration: 3.184 ug/Kg

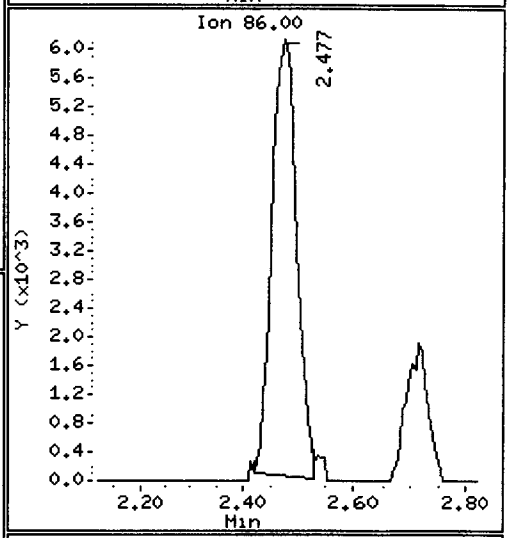


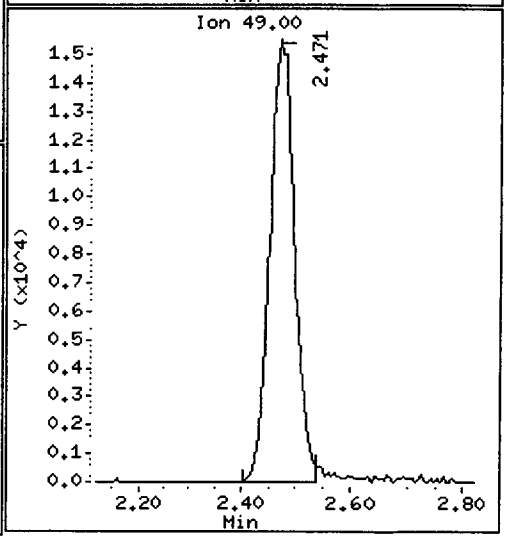












Data File: /chem1/nt5.i/23APR13.b/mb0423.d

Date : 23-APR-2013 12:54

Client ID: MB0423

Instrument: nt5.i

Sample Info: MB0423,5,5,0,

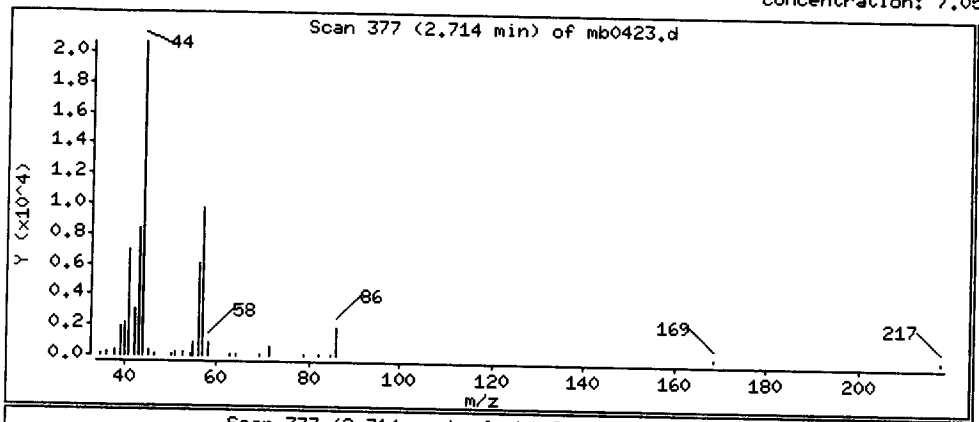
Operator: PB

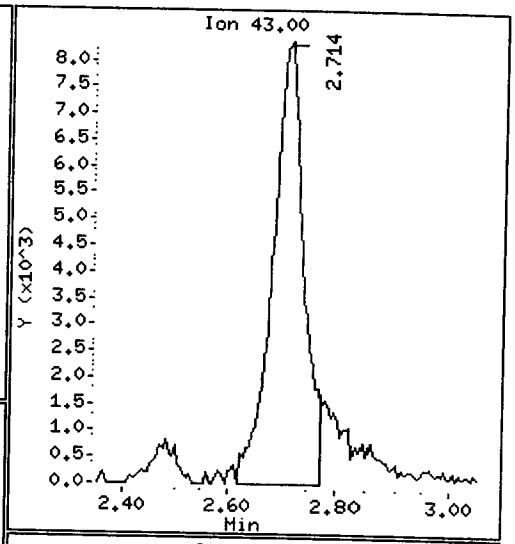
Column phase: RTXVMS

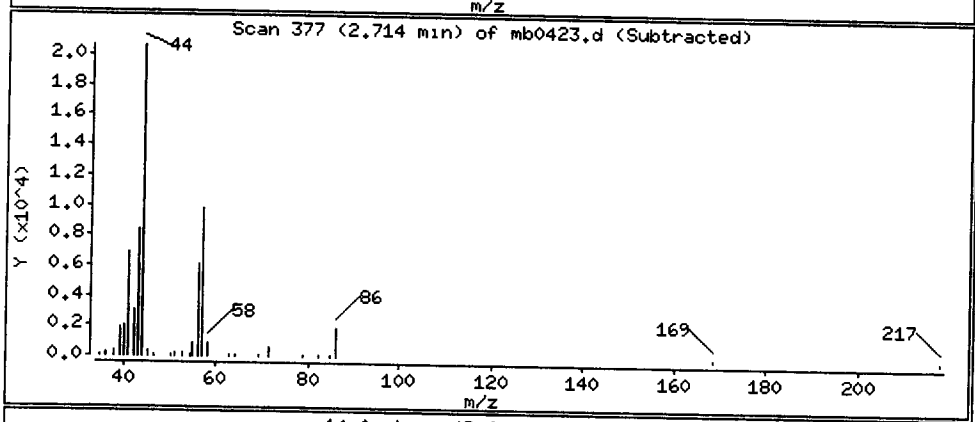
Column diameter: 0.18

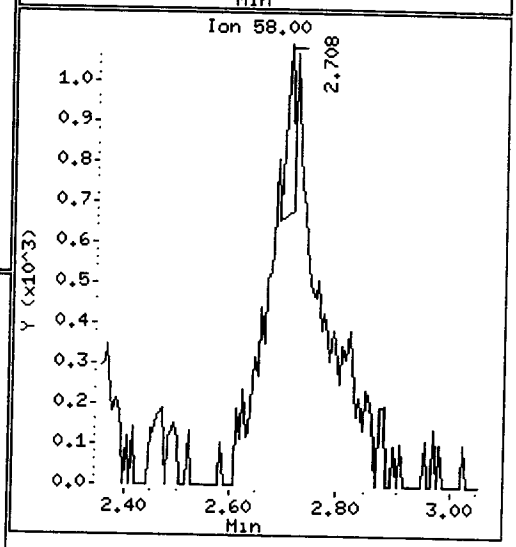
14 Acetone

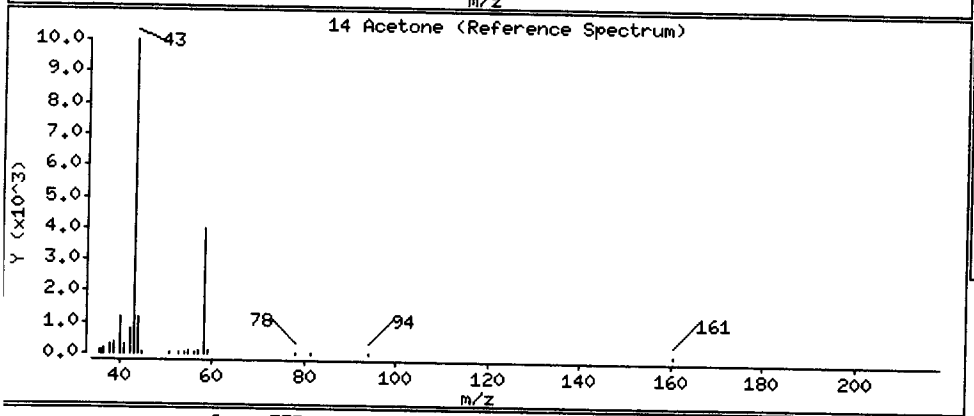
Concentration: 7.057 ug/Kg

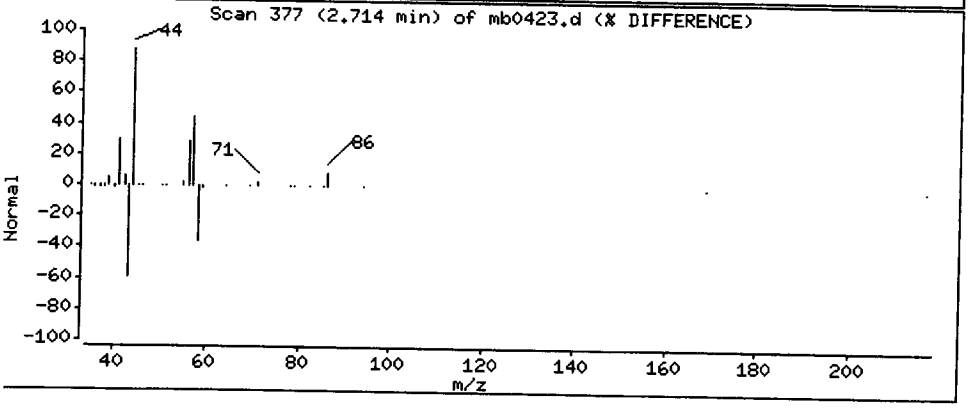












Data File: /chem1/nt5.i/23APR13.b/mb0423.d

Date : 23-APR-2013 12:54

Client ID: MB0423

Instrument: nt5.i

Sample Info: MB0423,5,5,0,

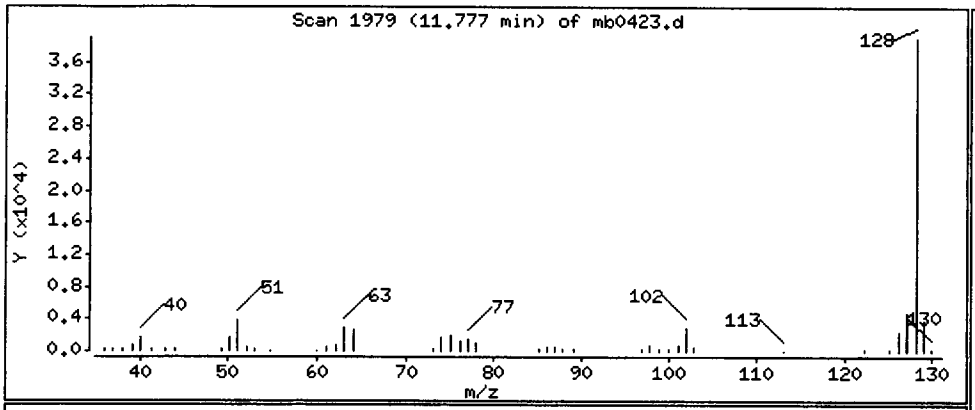
Operator: PB

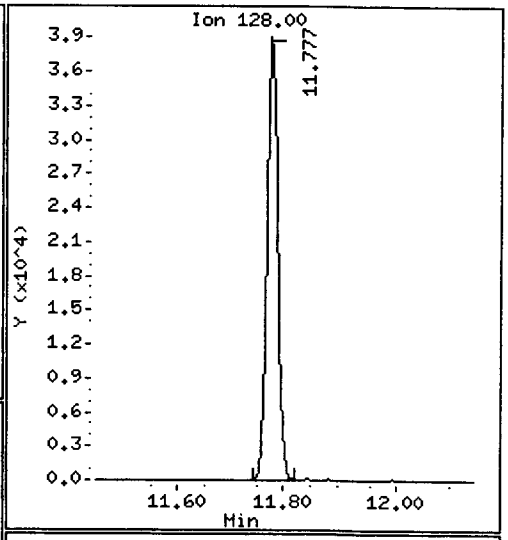
Column phase: RTXVMS

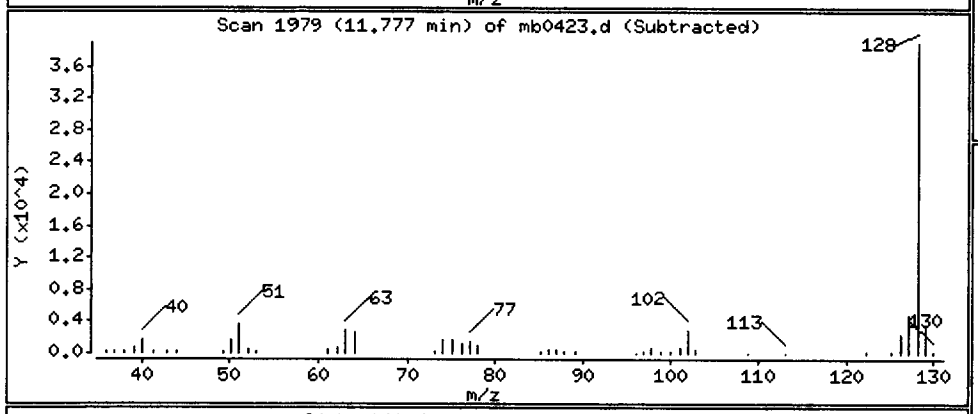
Column diameter: 0.18

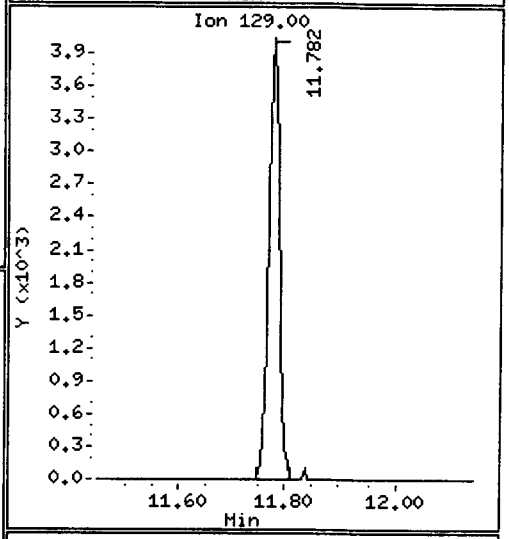
84 Naphthalene

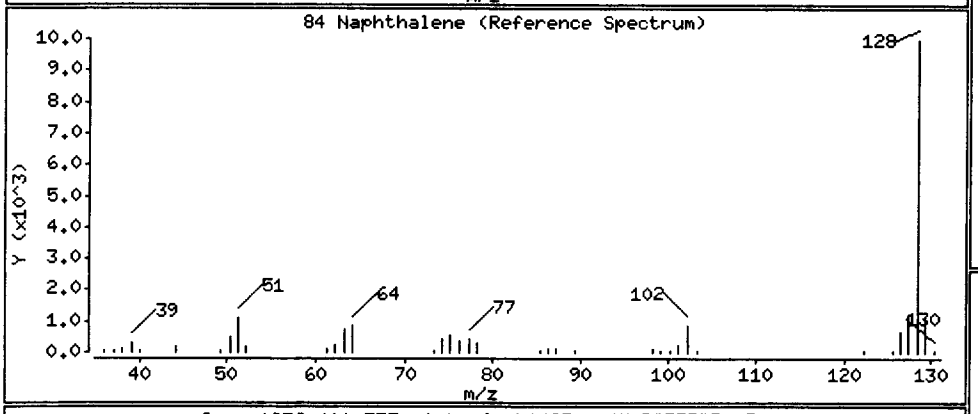
Concentration: 0.8574 ug/Kg

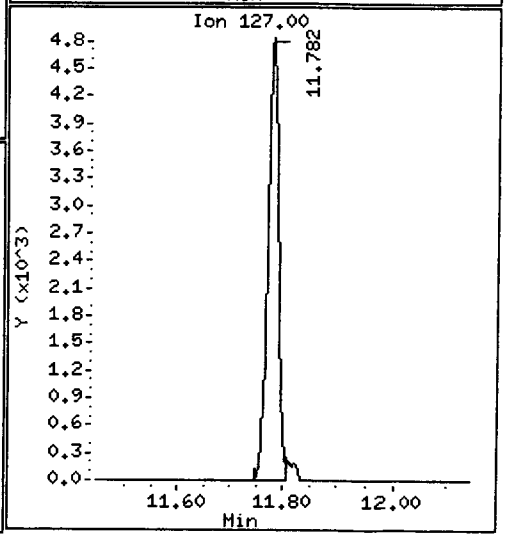


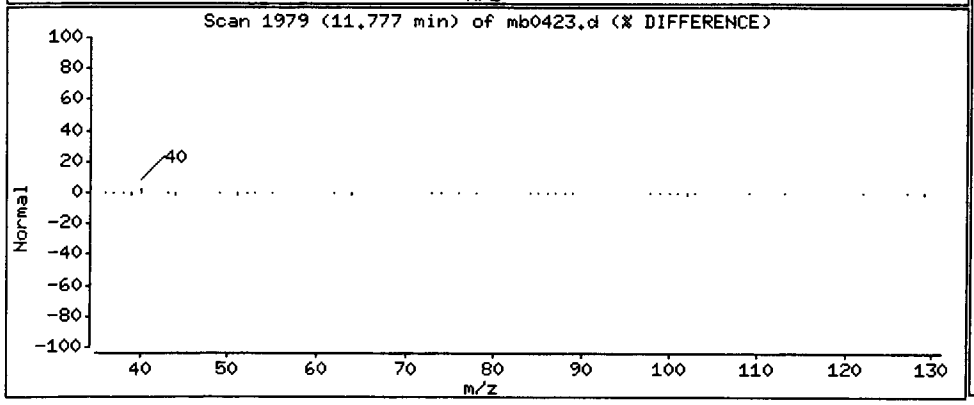












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/23APR13.b/wl67b2.d
Lab Smp Id: WL67B Client Smp ID: GR-WS-05-20130411-S
Inj Date : 23-APR-2013 16:42
Operator : PB Inst ID: nt5.i
Smp Info : WL67B,5,4.63,0
Misc Info : 13-7792
Comment :
Method : /chem1/nt5.i/23APR13.b/VO121012S.m
Meth Date : 24-Apr-2013 12:23 patrickb Quant Type: ISTD
Cal Date : 16-APR-2013 16:10 Cal File: 2000416.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

4/24/13

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	4.63000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	1.685	1.634	(0.360)	16000	0.95359	1.030(Q)
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	2.007	1.996	(0.429)	133810	3.79618	4.100
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	2.482	2.471	(0.530)	27243	3.07819	3.324(M)
14 Acetone	43	2.658	2.703	(0.568)	481190	107.380	115.96
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/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	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.208	4.202	(0.899)	800503	60.5004	65.335
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.406	4.468	(0.941)	35567	25.9210	27.992(Q)
	30 Benzene	78	4.547	4.541	(0.887)	123816	2.10081	2.269
*	31 Pentafluorobenzene	168	4.683	4.677	(1.000)	1217385	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.671	4.671	(0.998)	923052	61.3922	66.298
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	2445662	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.289	(1.229)	2888135	46.5117	50.229
	43 Toluene	92	6.335	6.335	(1.236)	44852	1.13079	1.221
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.307)	36244	6.03038	6.512(Q)
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	1924163	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.653	7.658	(1.008)	73087	1.34896	1.457
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.783	7.788	(1.025)	26815	1.29236	1.396(Q)
	57 o-Xylene	106	8.150	8.150	(1.074)	17455	0.83767	0.9046
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.433	8.439	(0.873)	27195	0.97583	1.054
$	62 4-Bromofluorobenzene	95	8.654	8.660	(1.140)	804421	39.0480	42.169(R)
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.988	8.999	(0.930)	30620	1.28252	1.385
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	9.333	9.338	(0.966)	50686	2.15040	2.322
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	9.570	9.582	(0.991)	26954	1.07356	1.159
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.661	9.666	(1.000)	570621	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.040	10.051	(1.039)	516948	49.6826	53.653
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	11.777	11.793	(1.219)	60644	2.32689	2.513
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

J(B) CRL Not Reported 3/3 4/24/13

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: wl67b2.d
Lab Smp Id: WL67B
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7792

Calibration Date: 23-APR-2013
Calibration Time: 11:24
Client Smp ID: GR-WS-05-20130411-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1616720	808360	3233440	1217385	-24.70
35 1,4-Difluorobenze	2842987	1421494	5685974	2445662	-13.98
52 d5-Chlorobenzene	2779083	1389542	5558166	1924163	-30.76
76 d4-1,4-Dichlorobe	1529325	764662	3058650	570621	-62.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.68	4.18	5.18	4.68	0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL67B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/23APR13.b/VO121012S.m
Misc Info: 13-7792

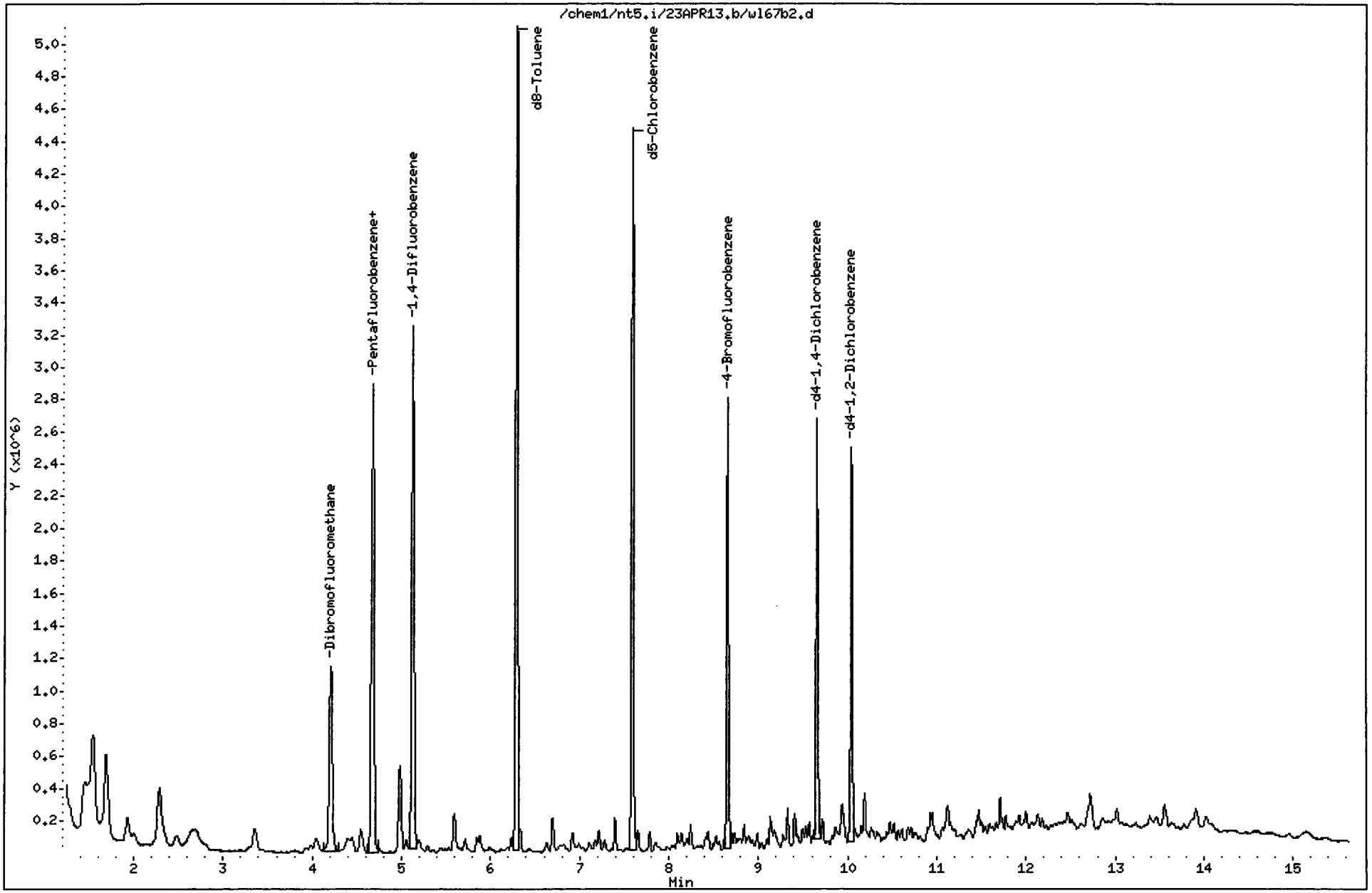
Client SDG: WL67
Fraction: VOA
Client Smp ID: GR-WS-05-20130411-S
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	60.500	121.00	70-130
$ 32 d4-1,2-Dichloroeth	50.000	61.392	122.78	80-149
$ 42 d8-Toluene	50.000	46.512	93.02	77-120
$ 62 4-Bromofluorobenze	50.000	39.048	78.10	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.683	99.37	80-120

Data File: /chem1/nt5.i/23APR13.b/wl67b2.d
Date : 23-APR-2013 16:42
Client ID: GR-WS-05-20130411-S
Sample Info: WL67B,5,4.63,0

Instrument: nt5.i

Operator: PB
Column phase: RTXVMS
Column diameter: 0.18



WL67-000178

Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

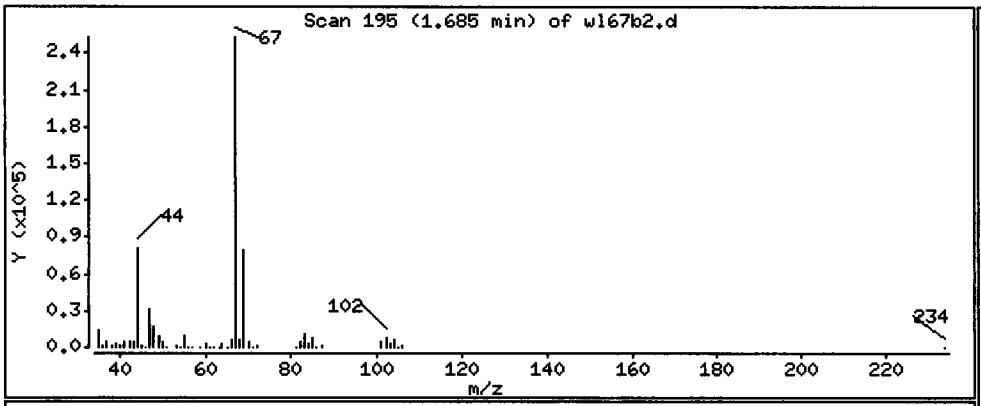
Operator: PB

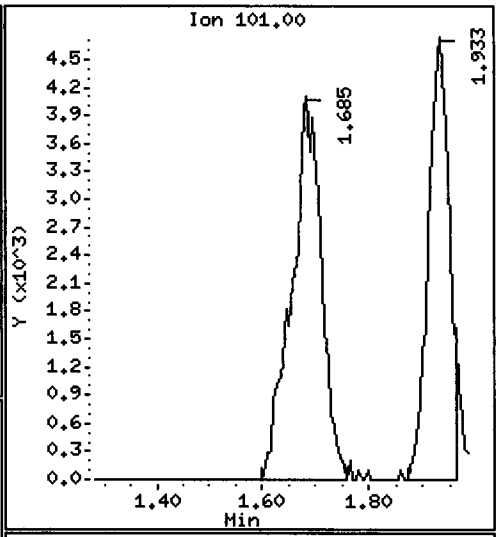
Column phase: RTXVMS

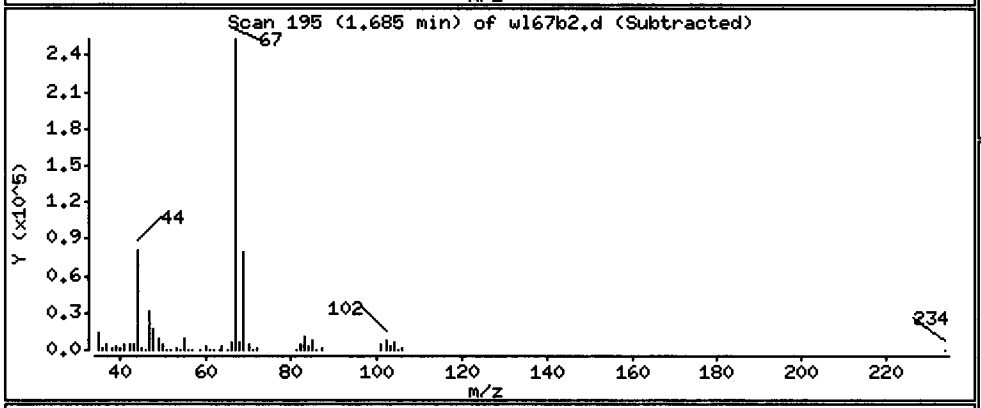
Column diameter: 0.18

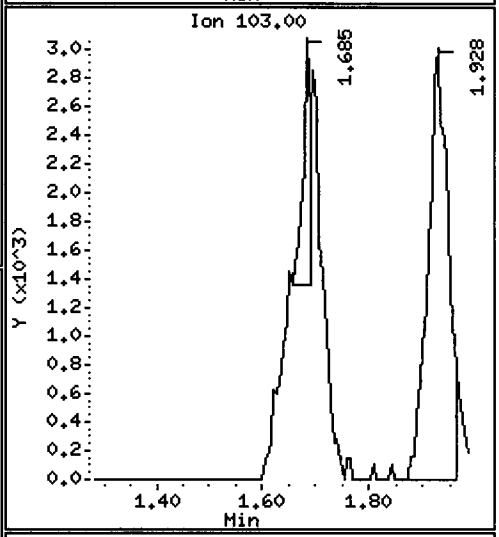
6 Trichlorofluoromethane

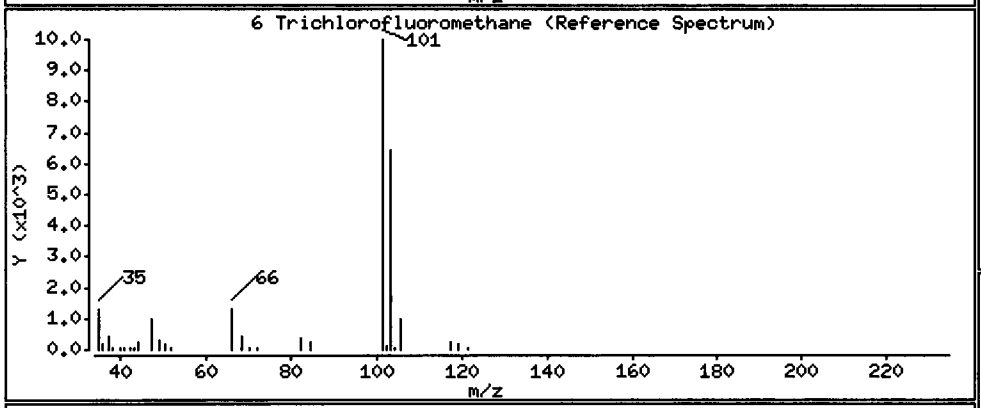
Concentration: 1.030 ug/Kg

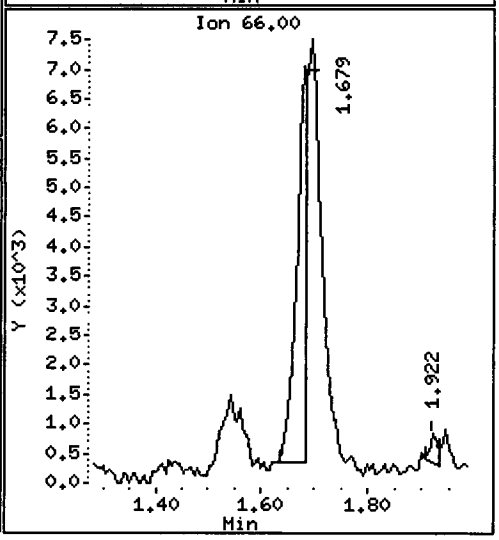


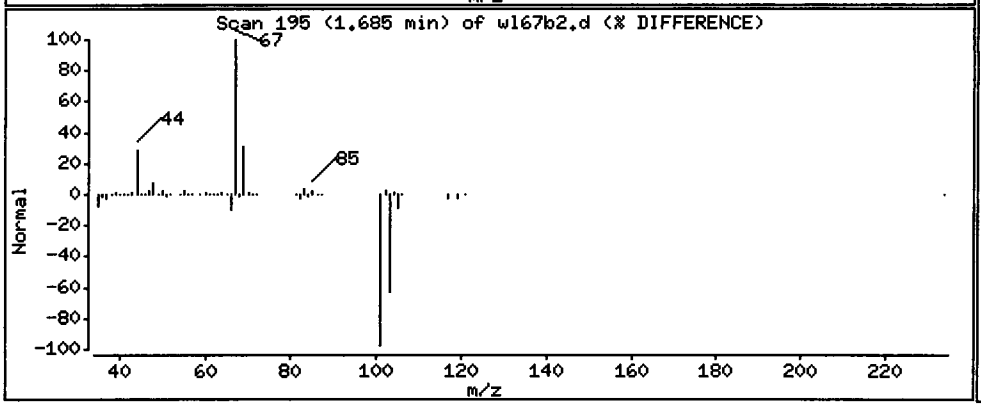












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

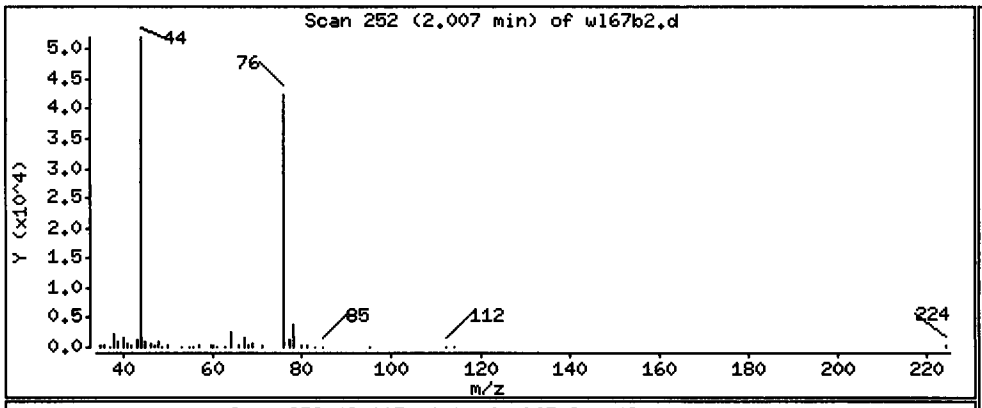
Operator: PB

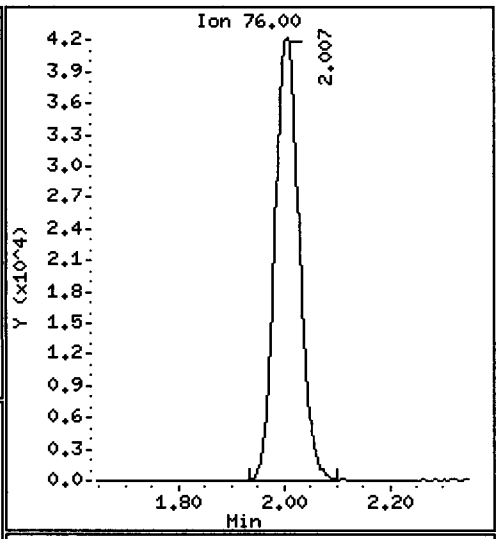
Column phase: RTXVMS

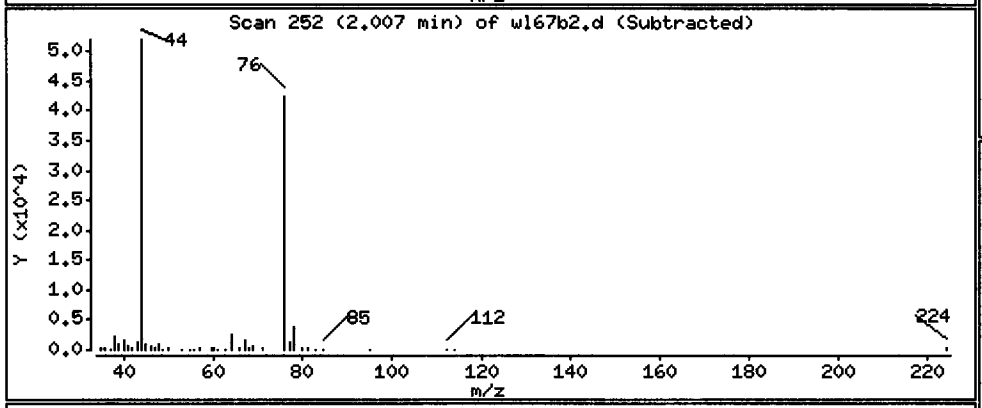
Column diameter: 0.18

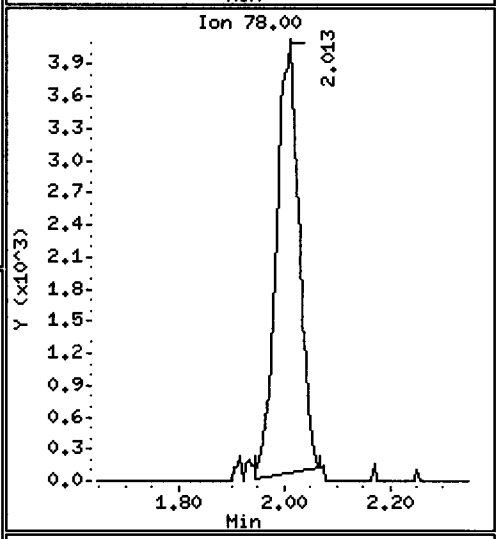
8 Carbon Disulfide

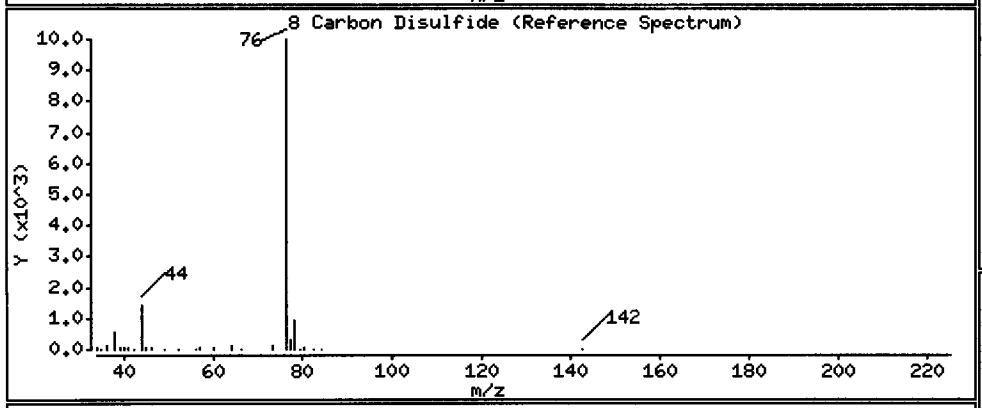
Concentration: 4.100 ug/Kg

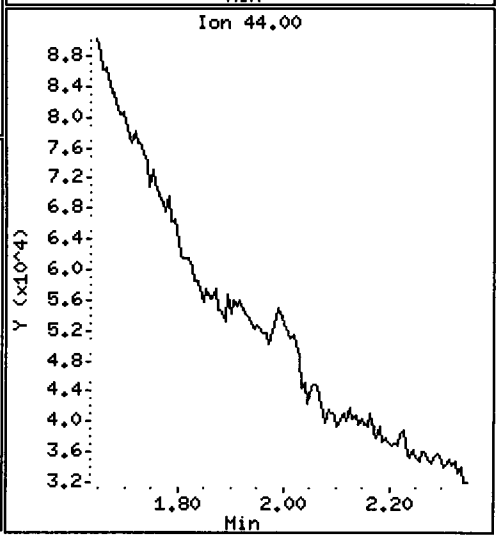


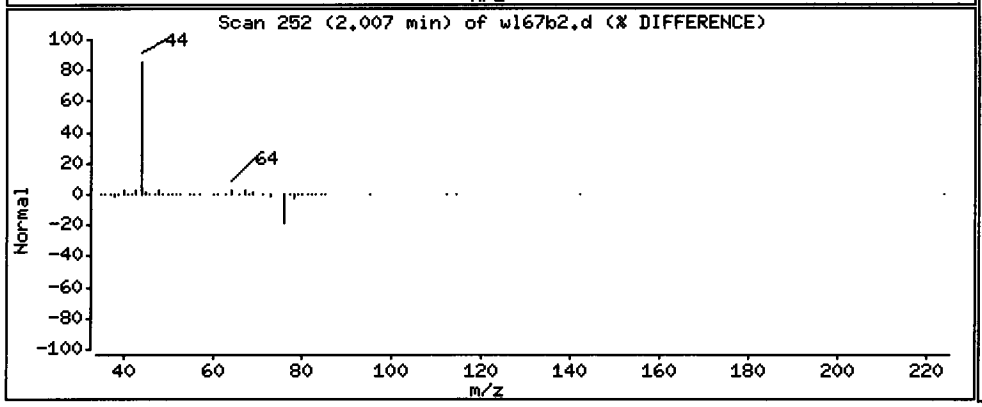












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

Operator: PB

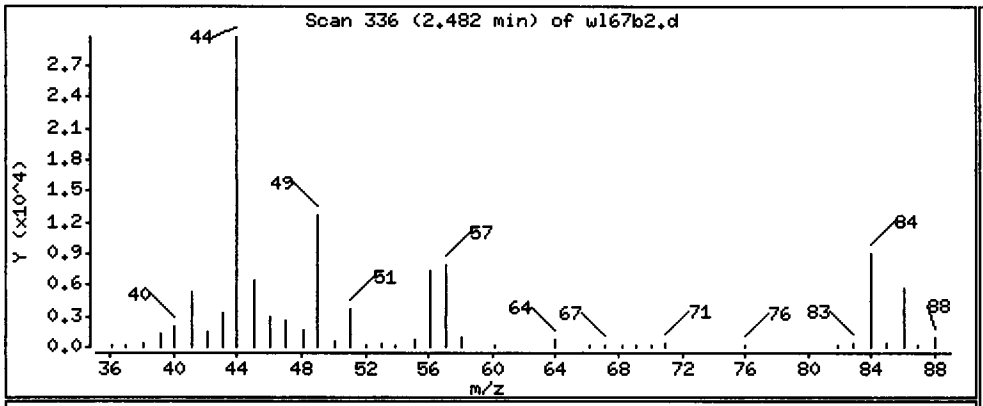
Column phase: RTXVMS

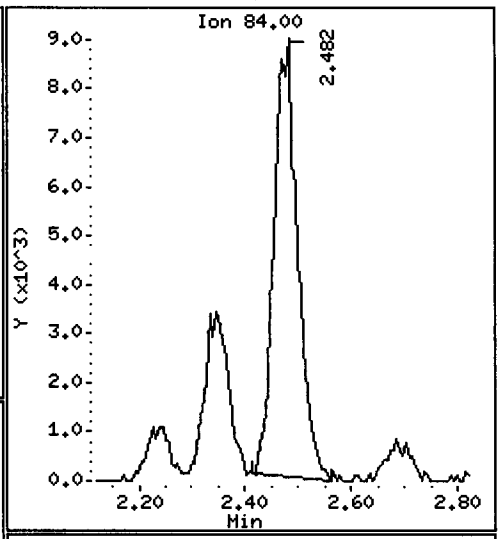
Column diameter: 0.18

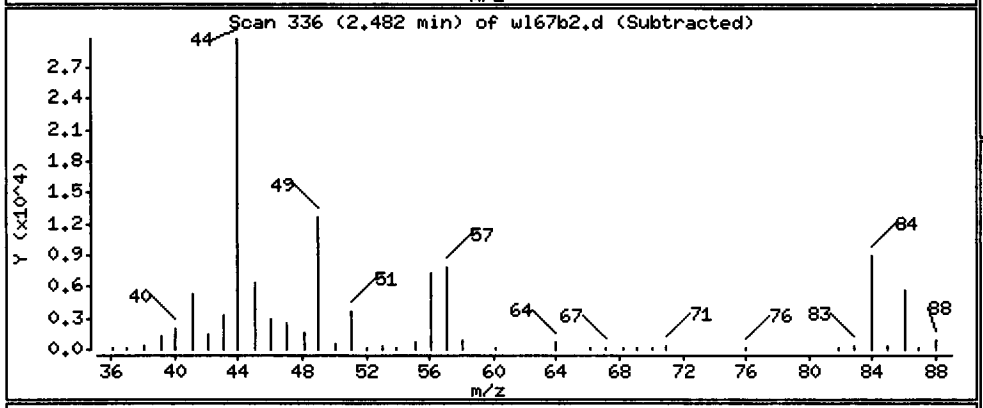
13 Methylene Chloride

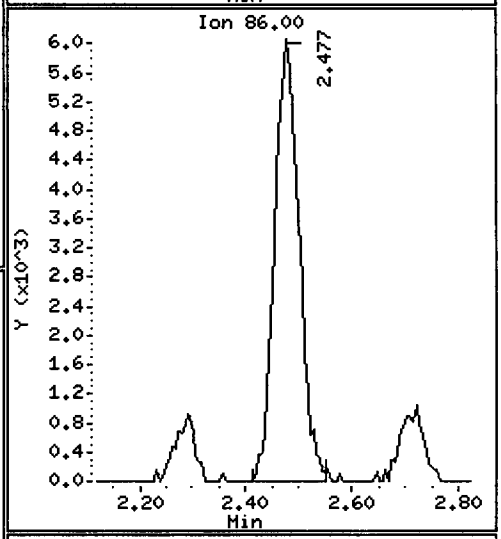
Concentration: 3.324 ug/Kg

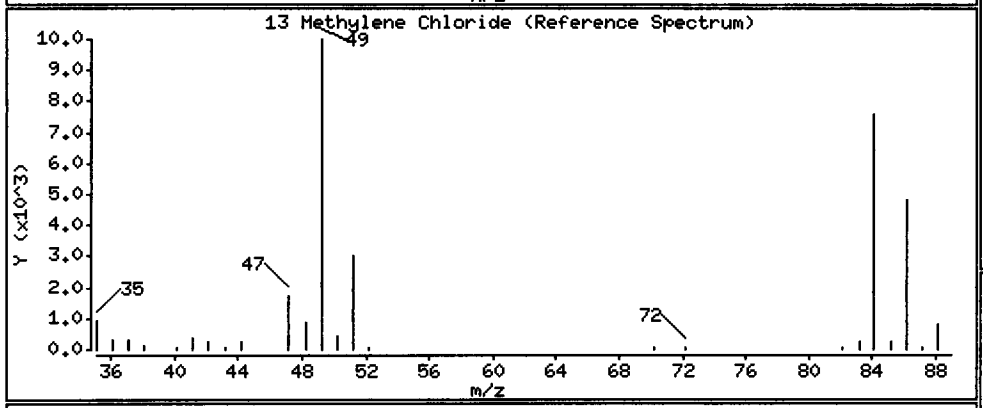
QB

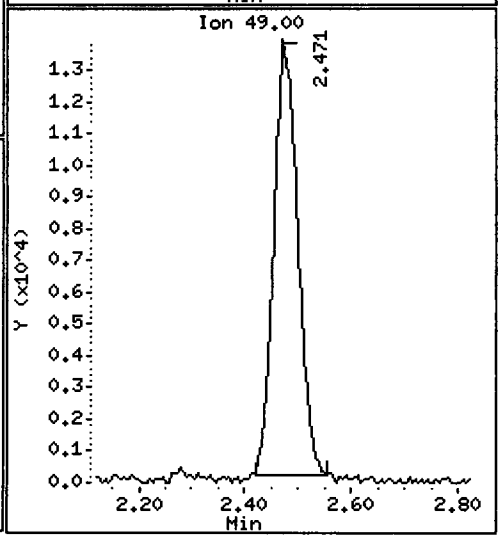


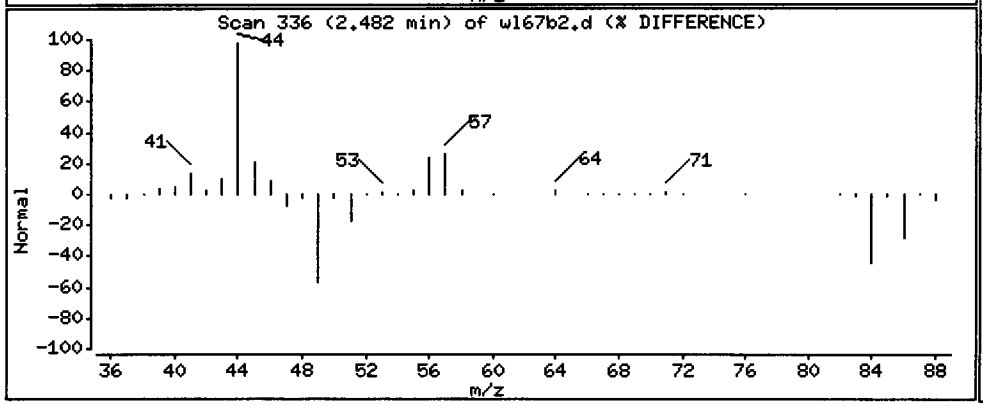












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

Operator: PB

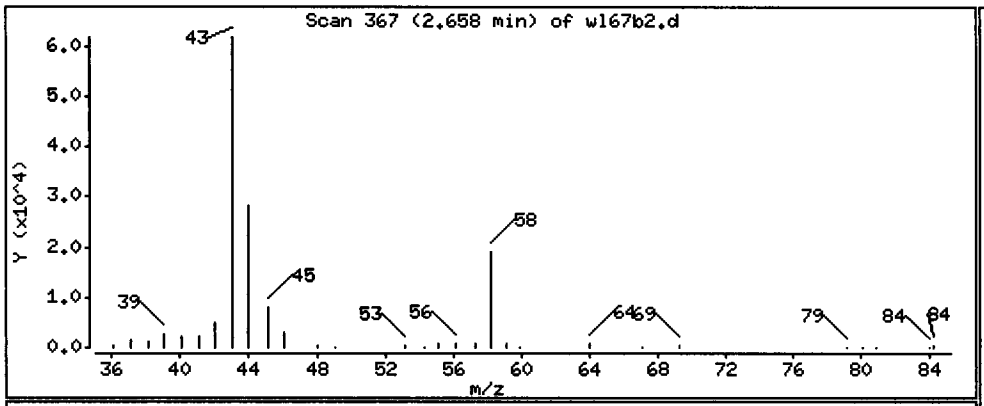
Column phase: RTXVMS

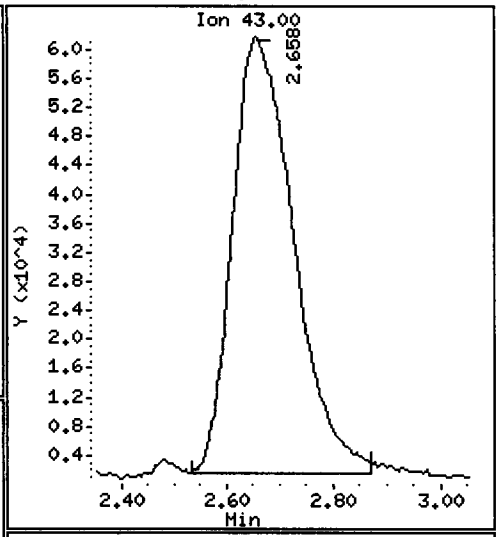
Column diameter: 0.18

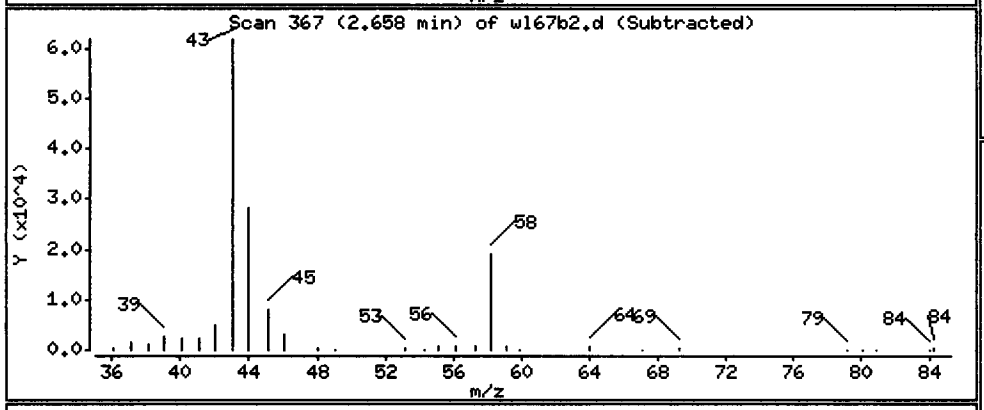
14 Acetone

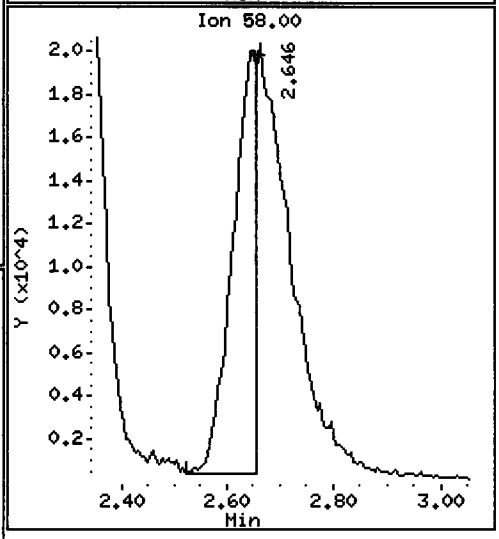
Concentration: 115.96 ug/Kg

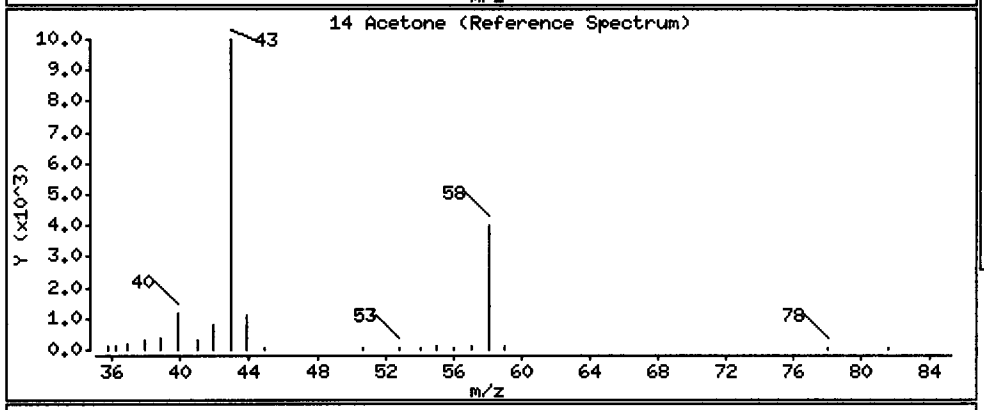
(6)

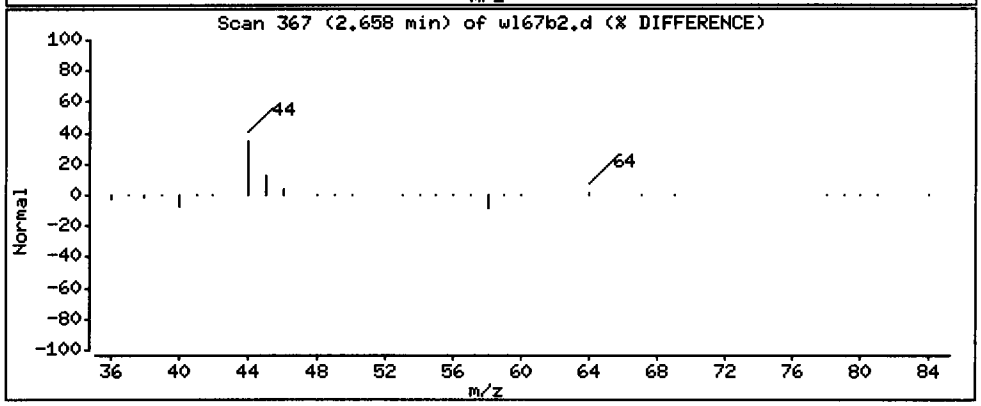












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

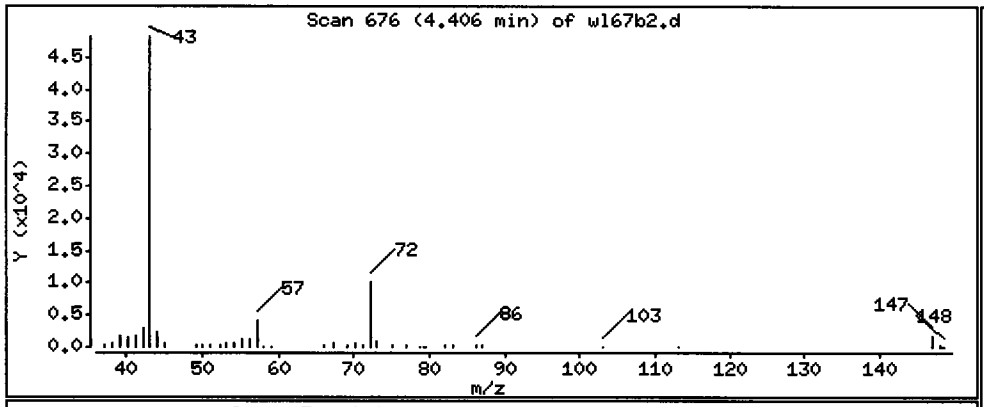
Operator: PB

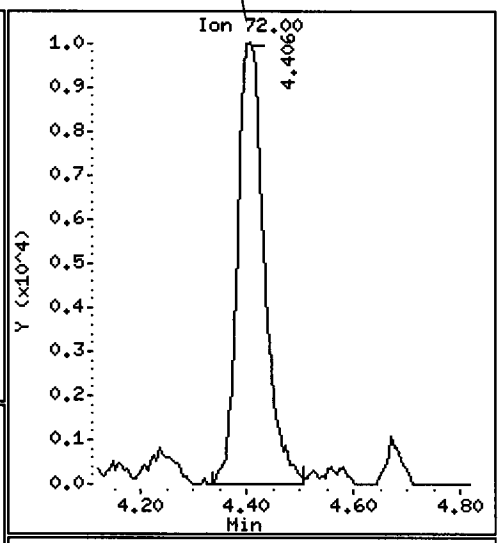
Column phase: RTXVMS

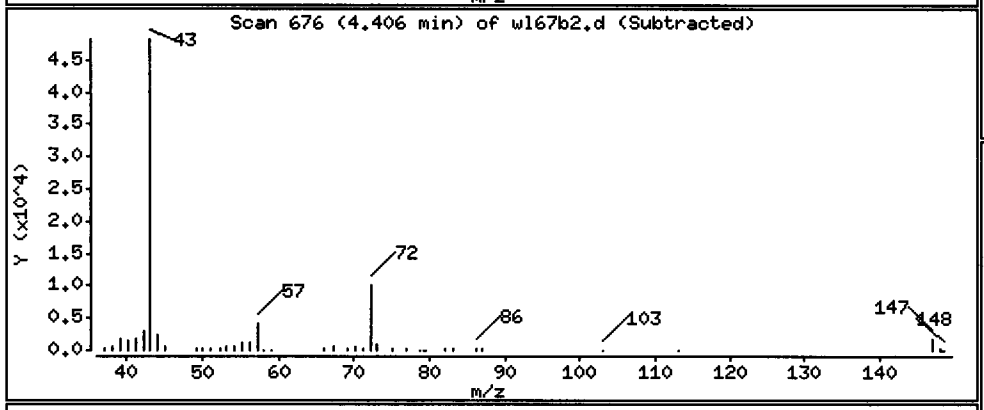
Column diameter: 0.18

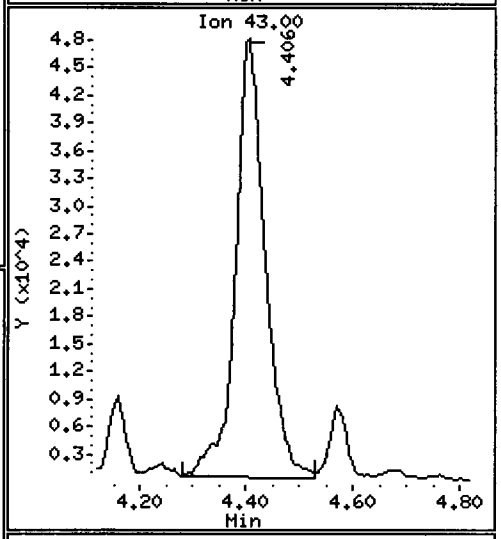
29 2-Butanone

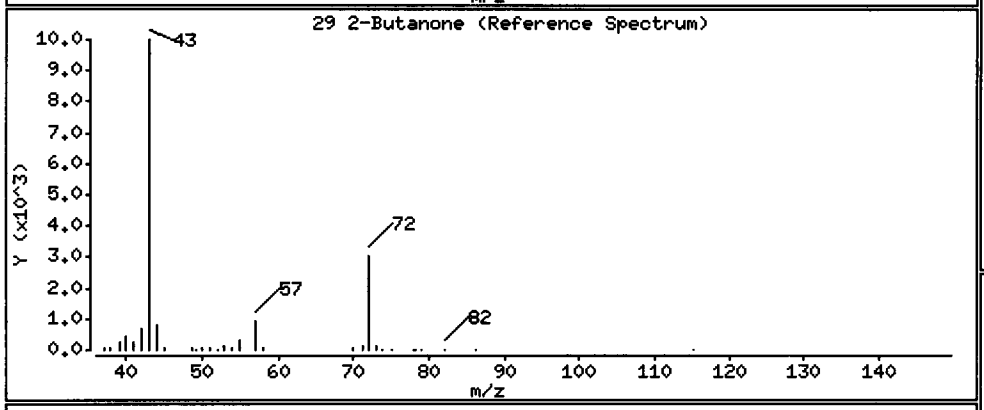
Concentration: 27.992 ug/Kg

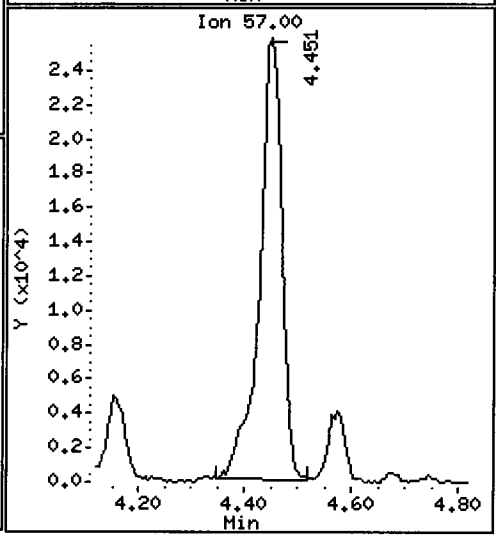


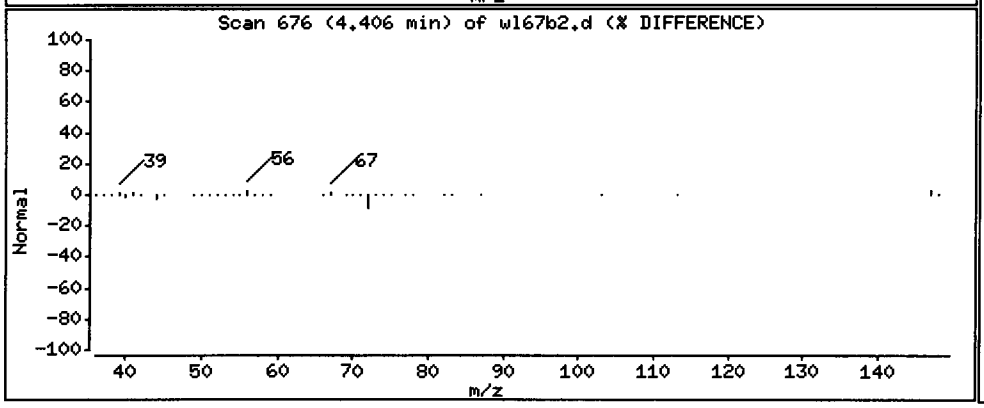












WL67 0050

Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

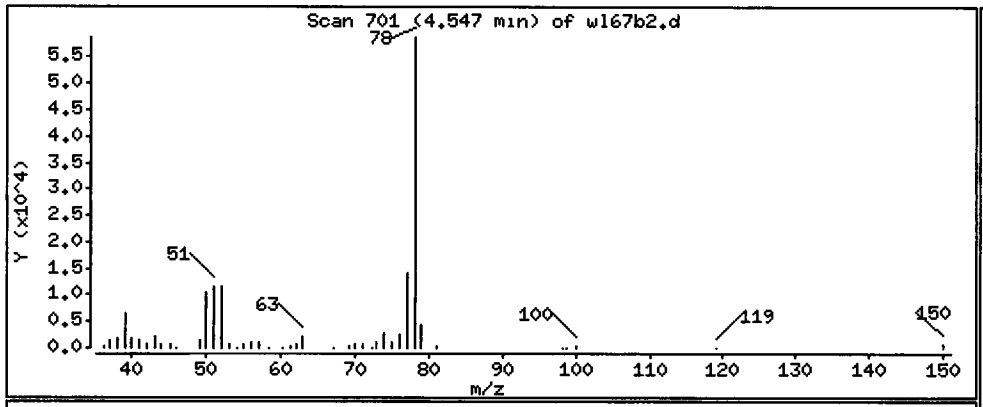
Operator: PB

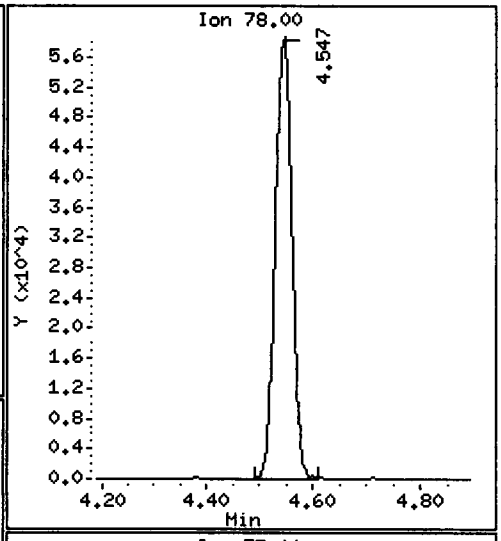
Column phase: RTXVMS

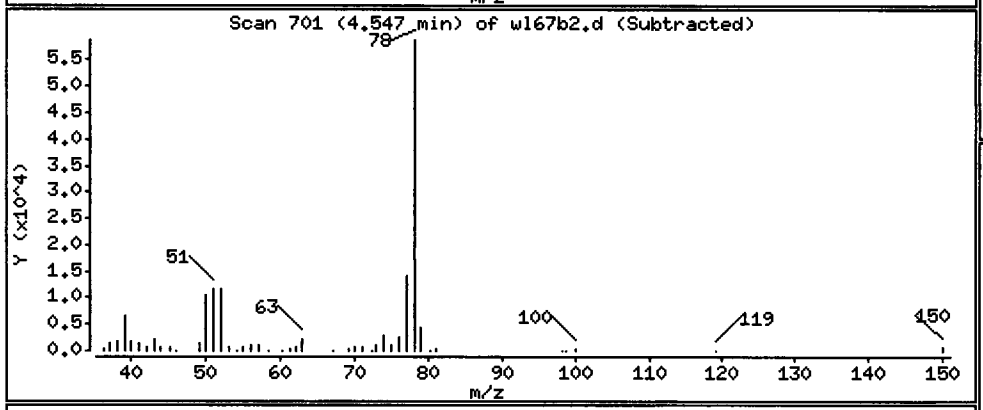
Column diameter: 0.18

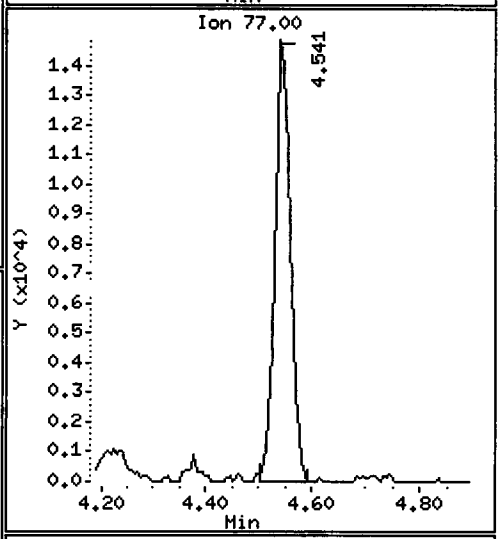
30 Benzene

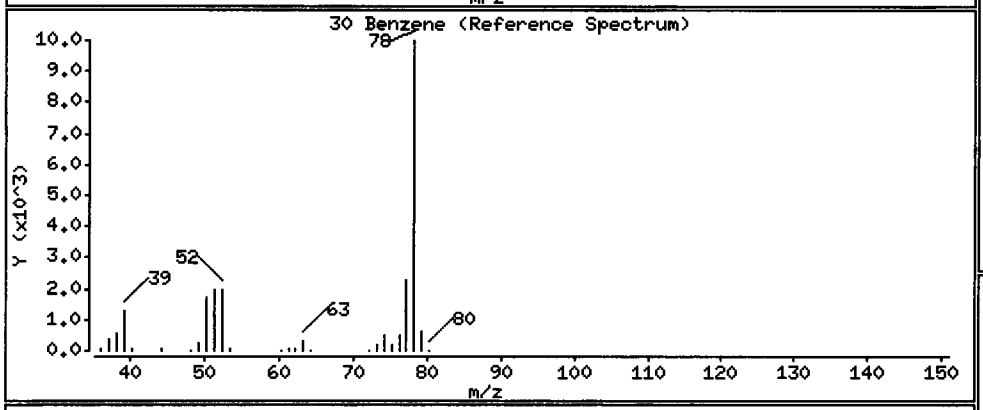
Concentration: 2.269 ug/Kg

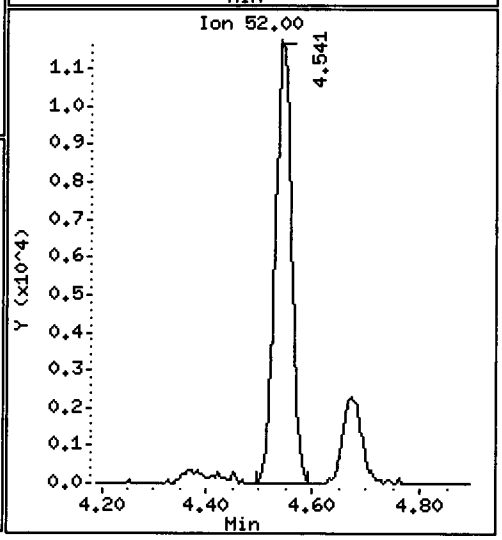


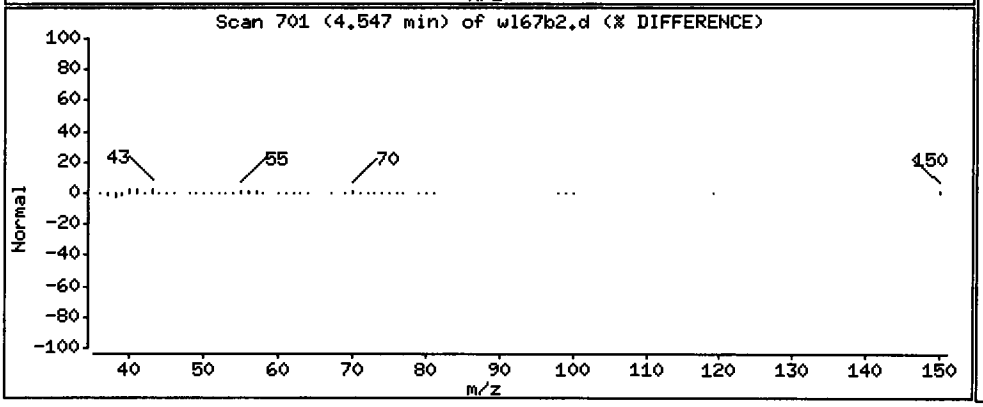












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

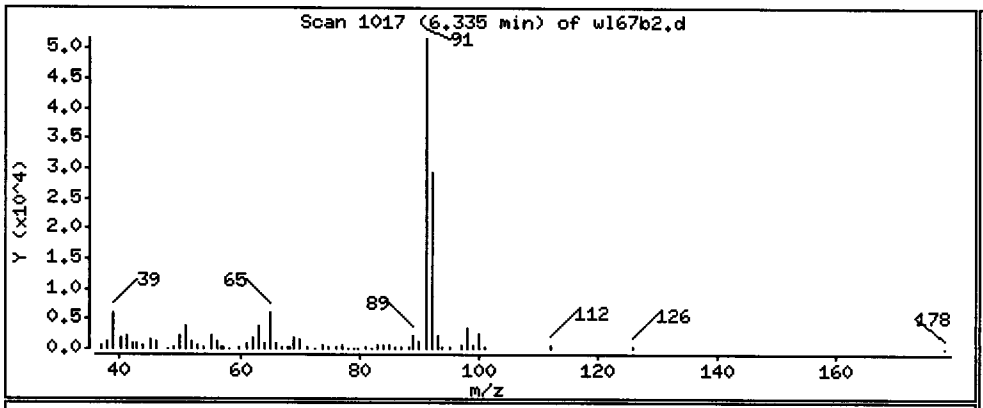
Operator: PB

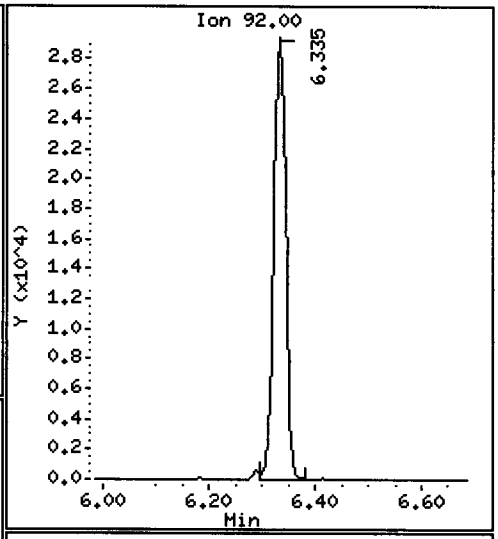
Column phase: RTXVMS

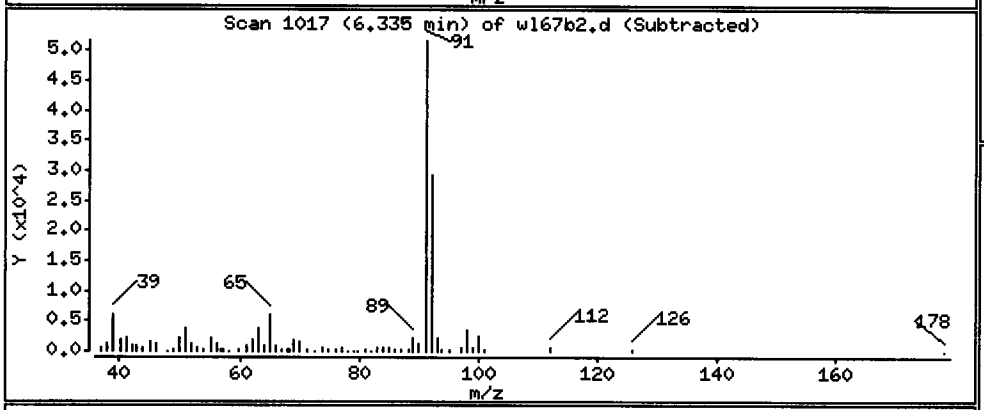
Column diameter: 0.18

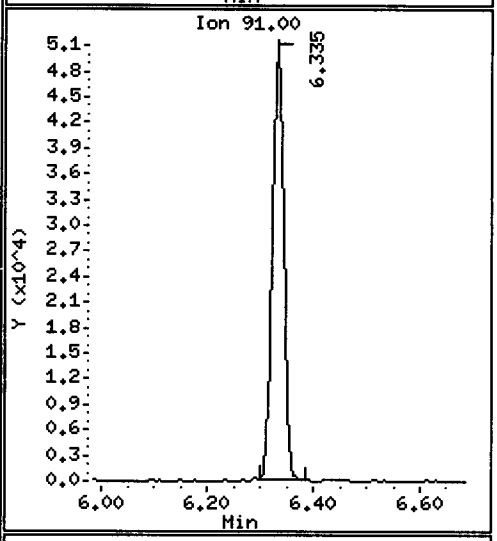
43 Toluene

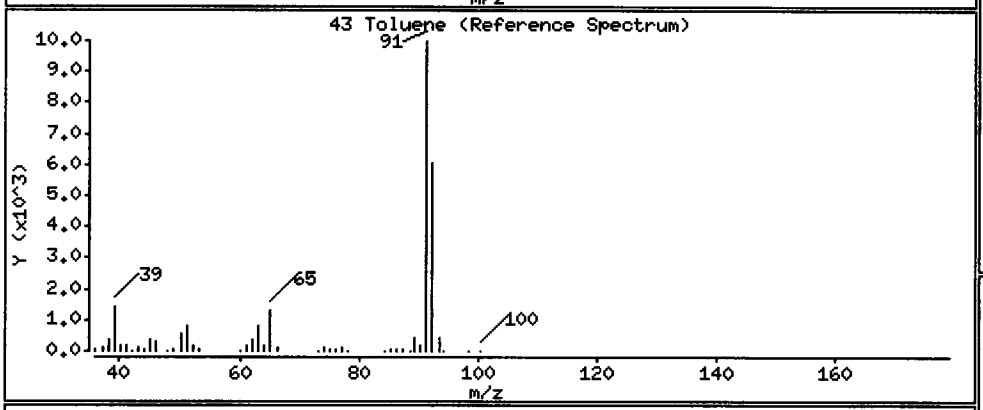
Concentration: 1.221 ug/Kg

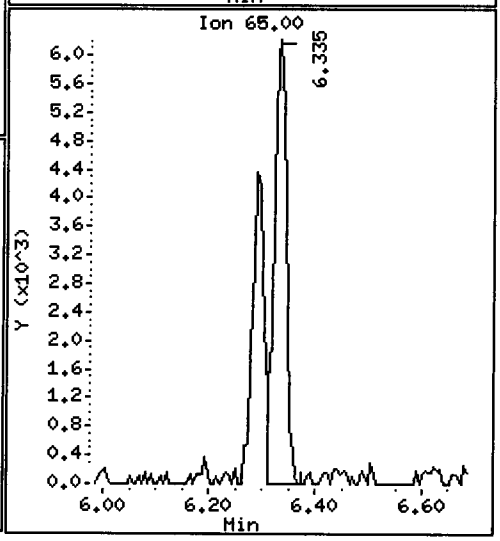


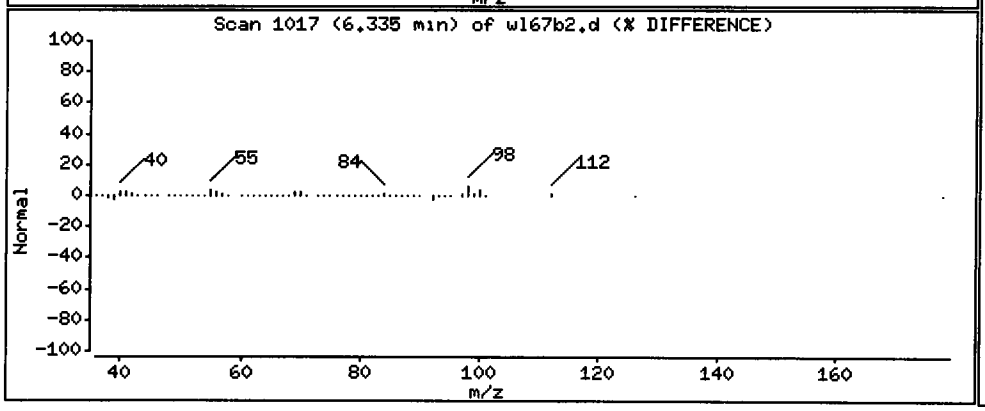












WL67 00585

Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

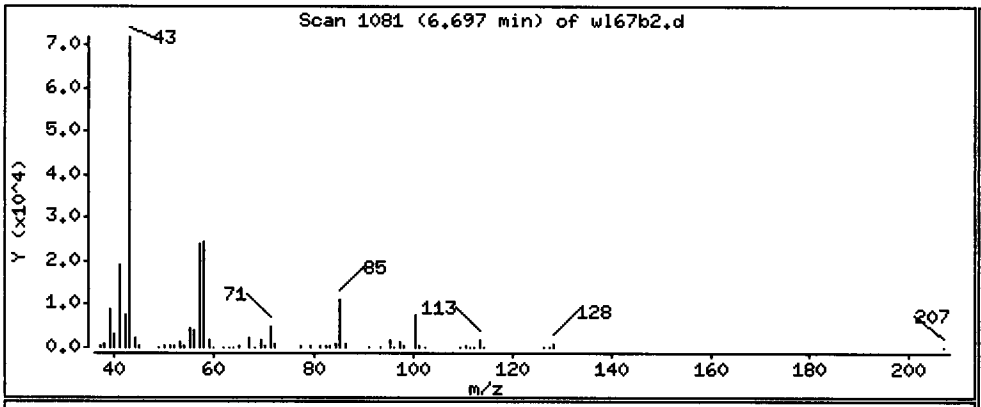
Operator: PB

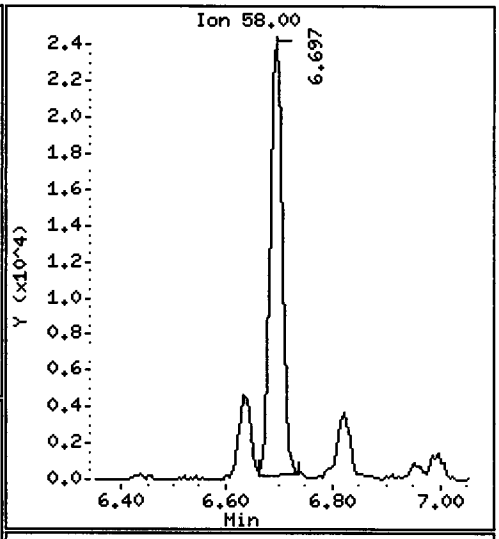
Column phase: RTXVMS

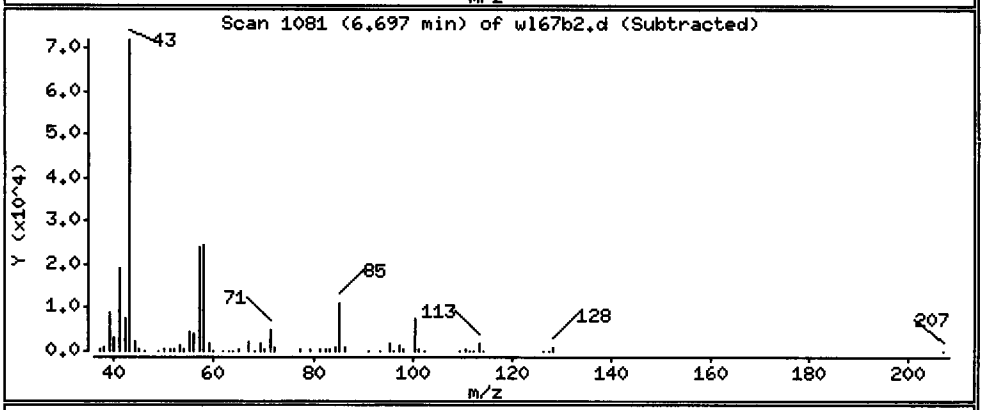
Column diameter: 0.18

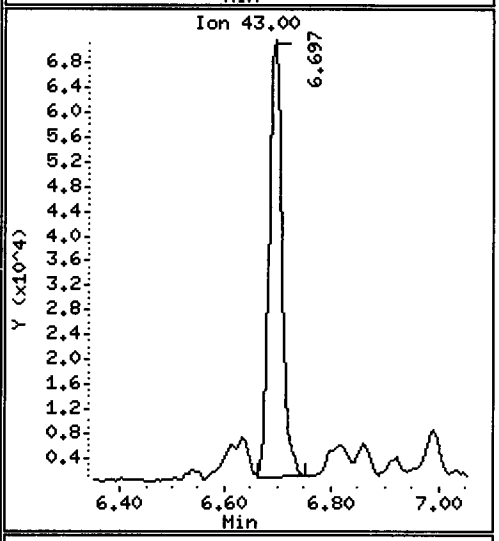
45 4-Methyl-2-Pentanone

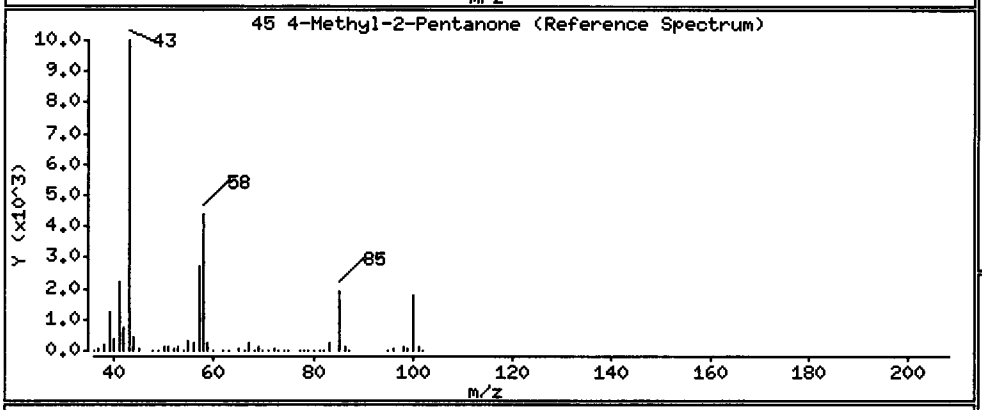
Concentration: 6.512 ug/Kg

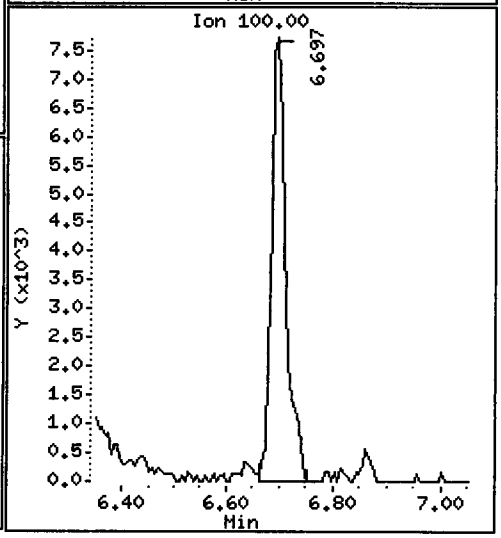


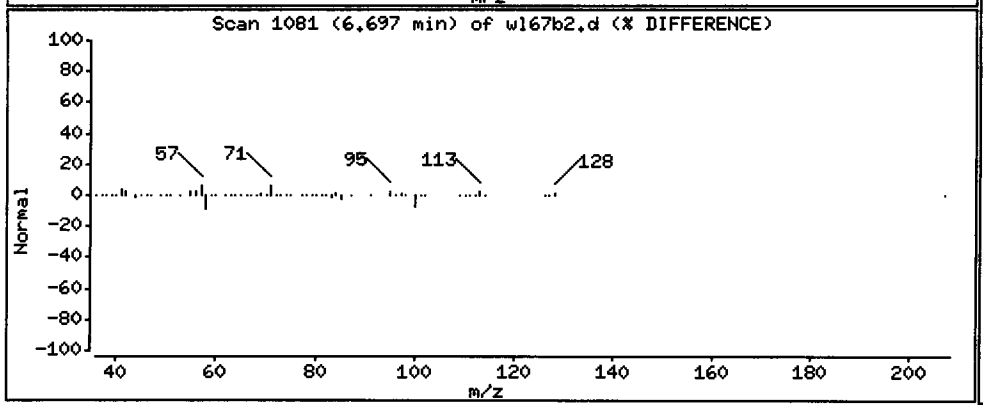












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

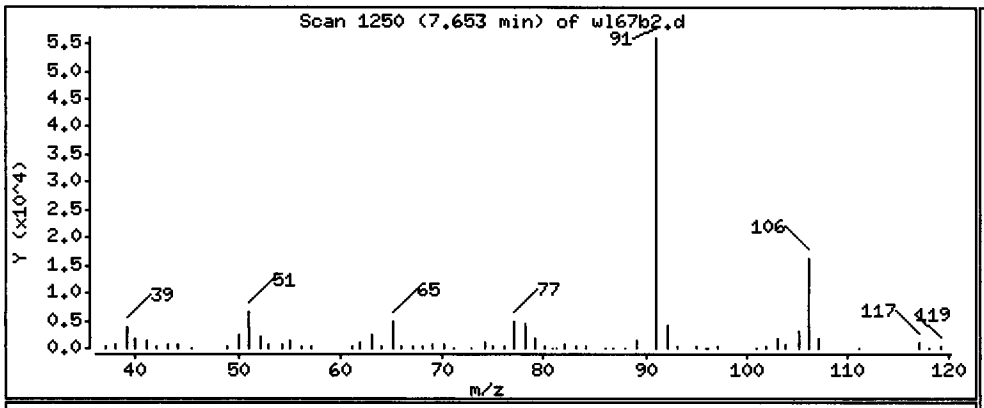
Operator: PB

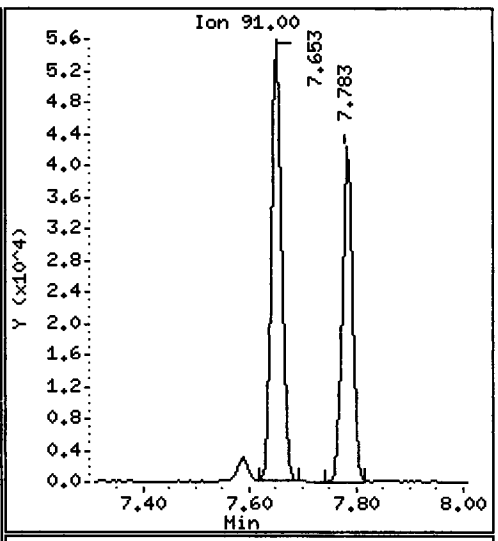
Column phase: RTXVMS

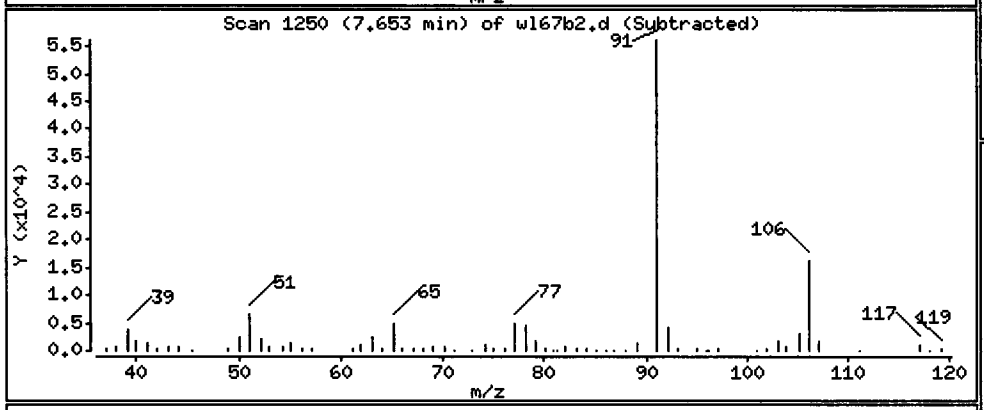
Column diameter: 0.18

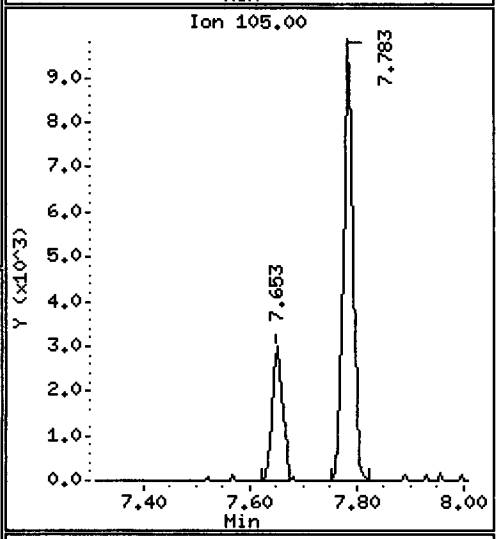
54 Ethyl Benzene

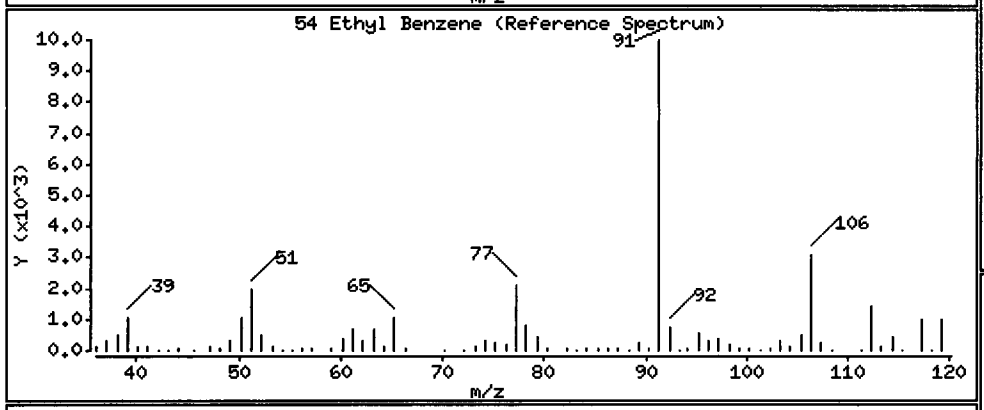
Concentration: 1.457 ug/Kg

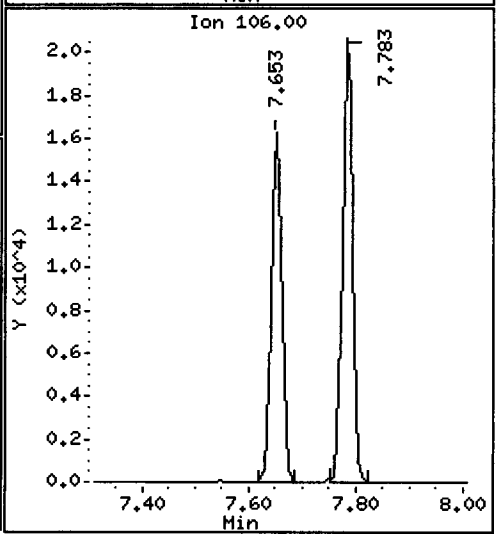


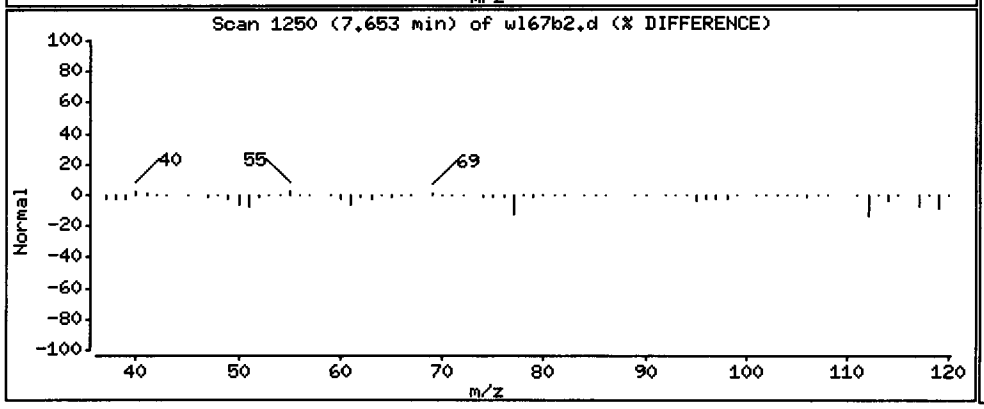












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

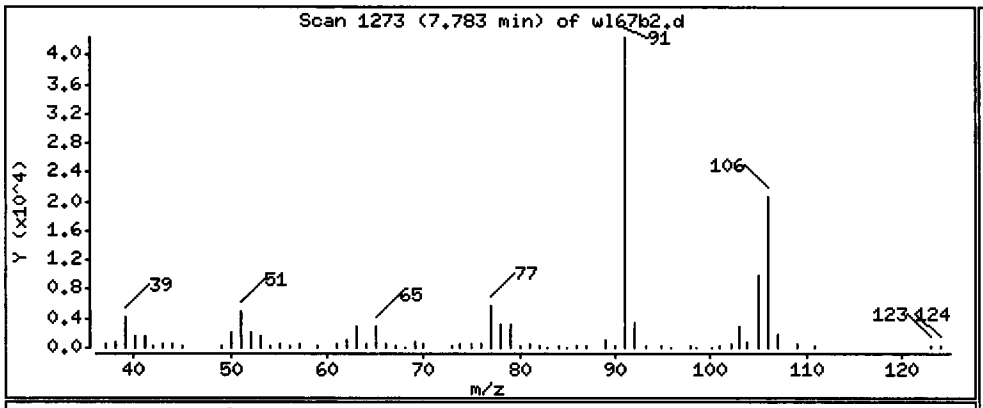
Operator: PB

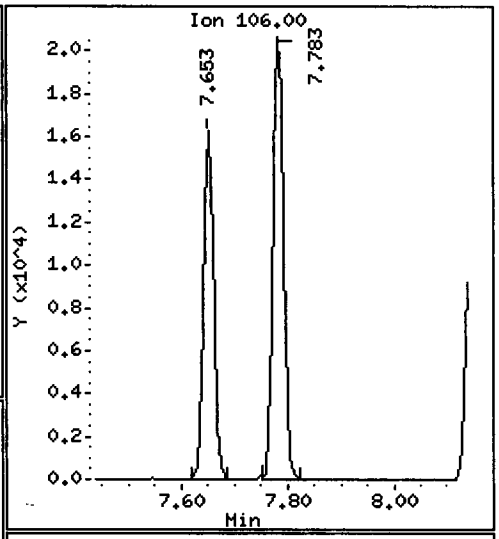
Column phase: RTXVMS

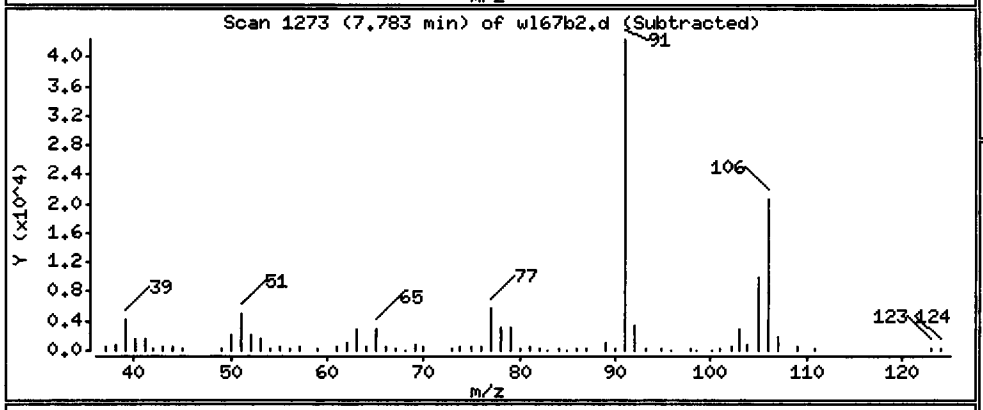
Column diameter: 0.18

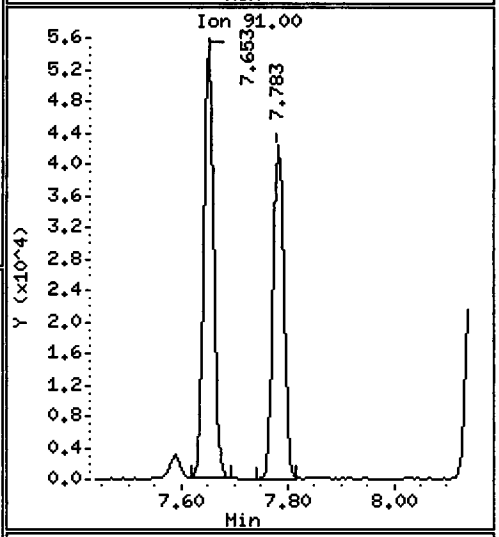
56 m,p-xylene

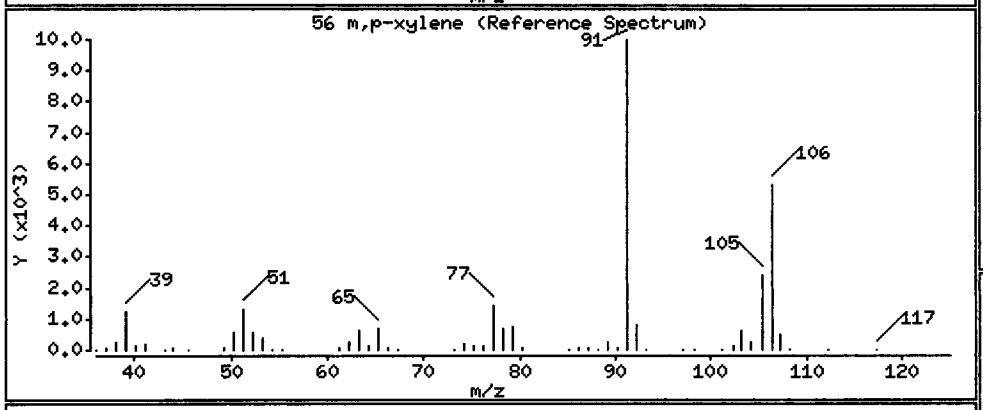
Concentration: 1.396 ug/Kg

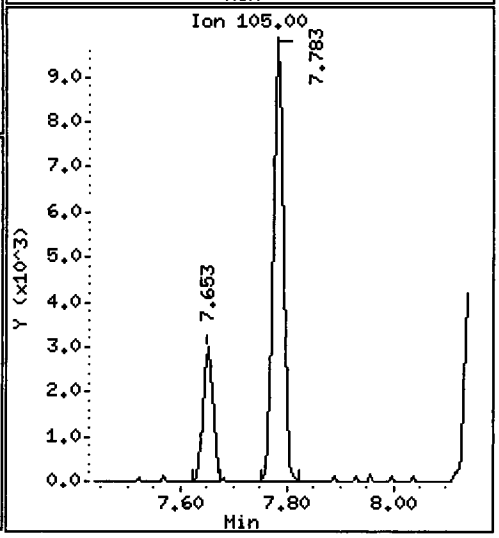


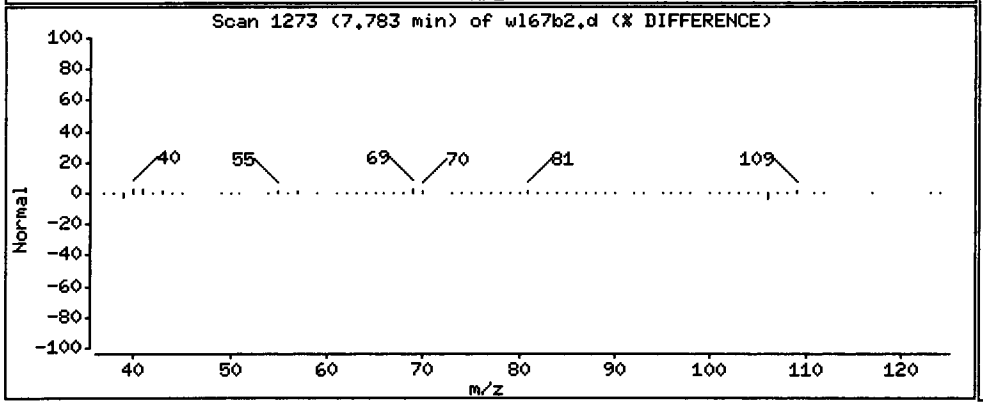












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

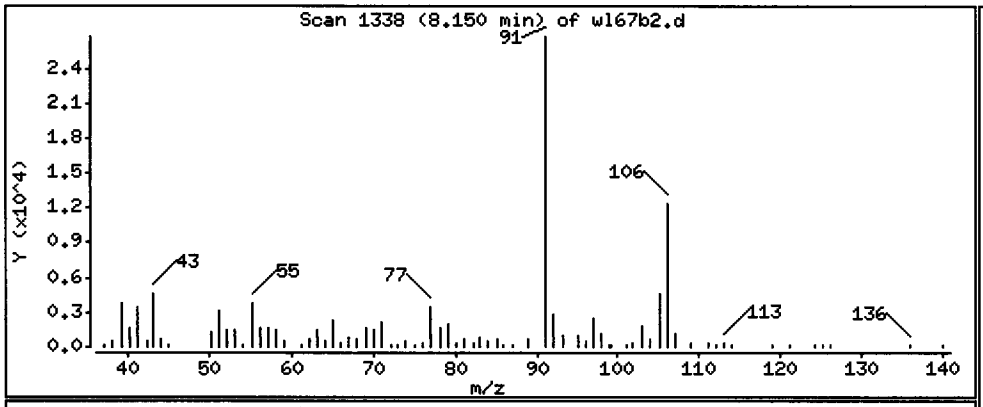
Operator: PB

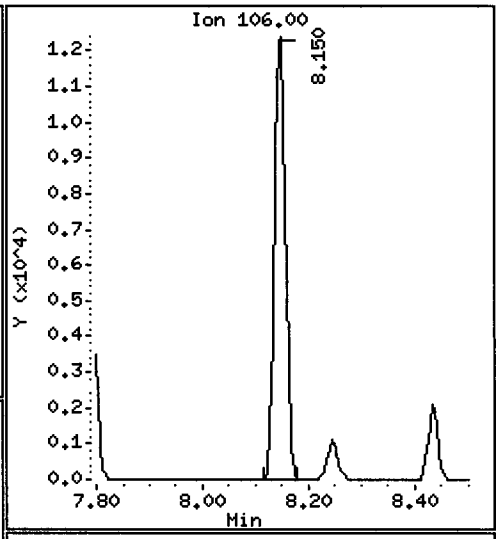
Column phase: RTXVMS

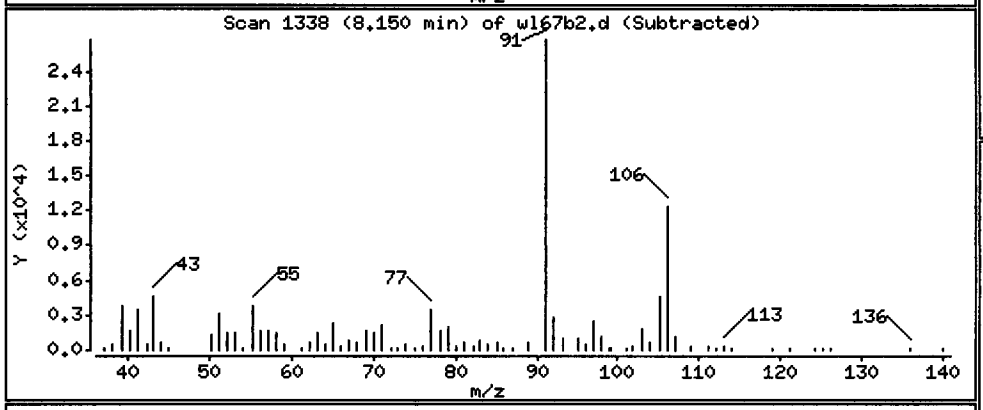
Column diameter: 0.18

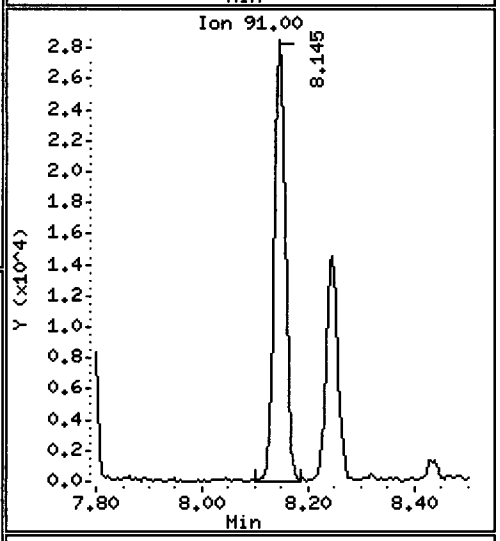
57 o-Xylene

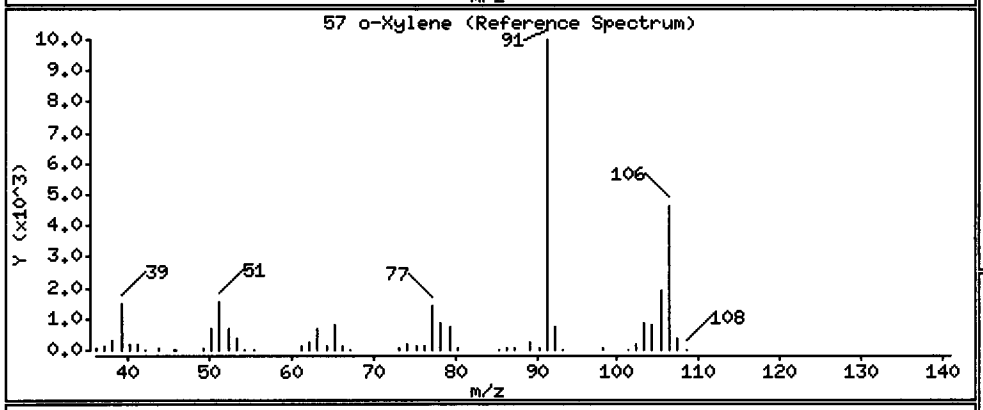
Concentration: 0.9046 ug/Kg

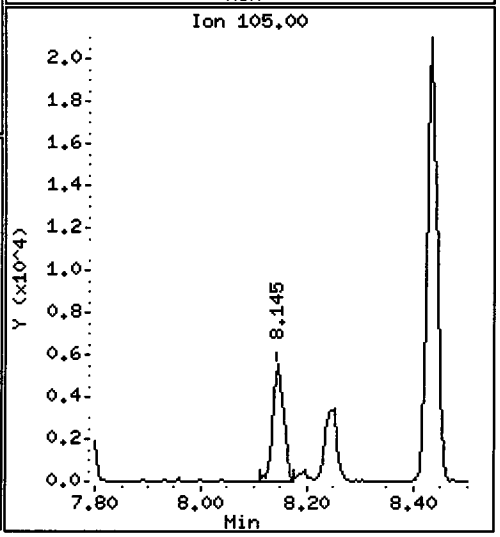


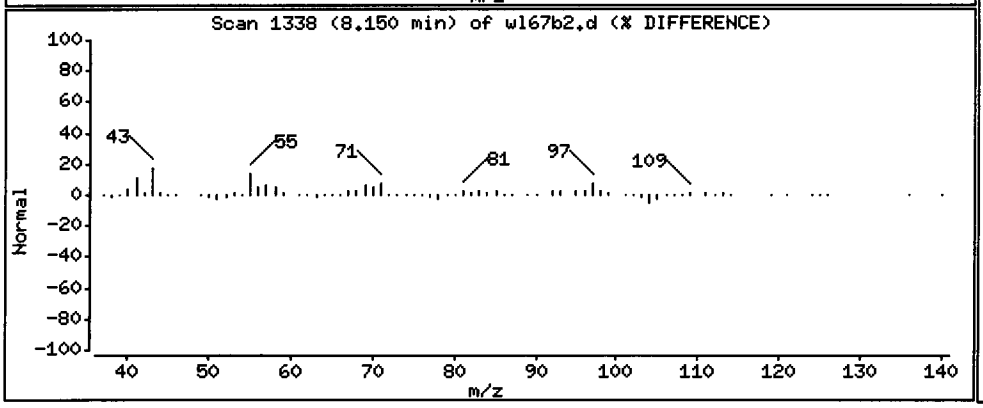












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

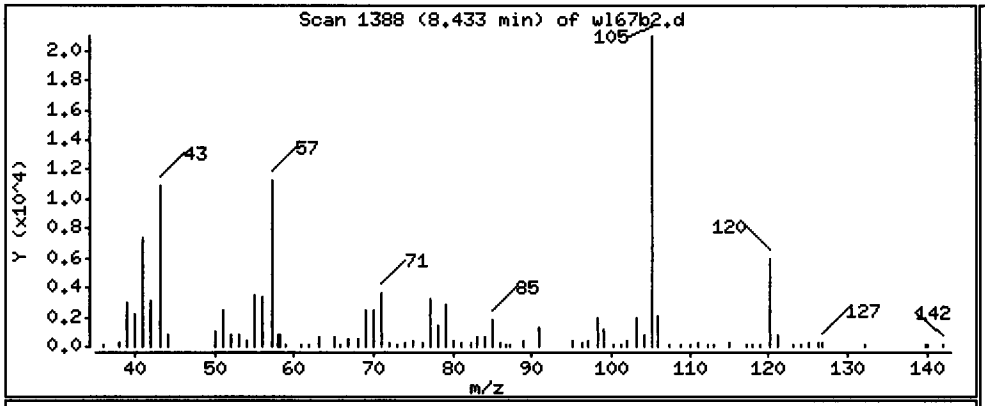
Operator: PB

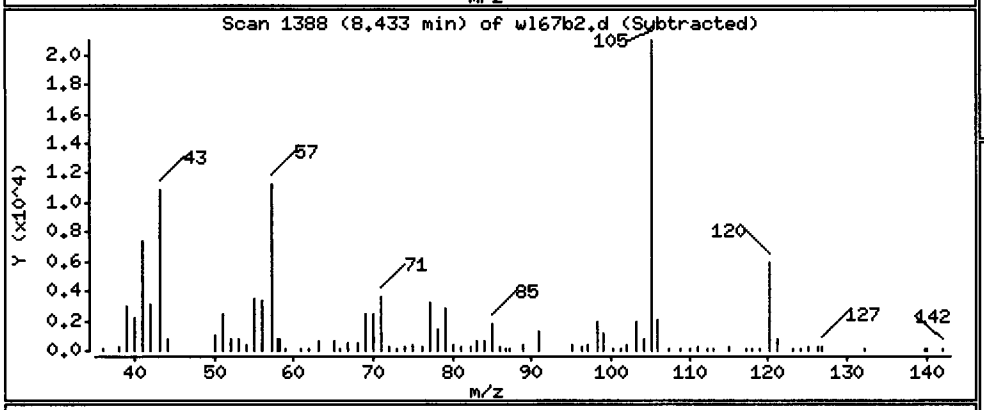
Column phase: RTXVMS

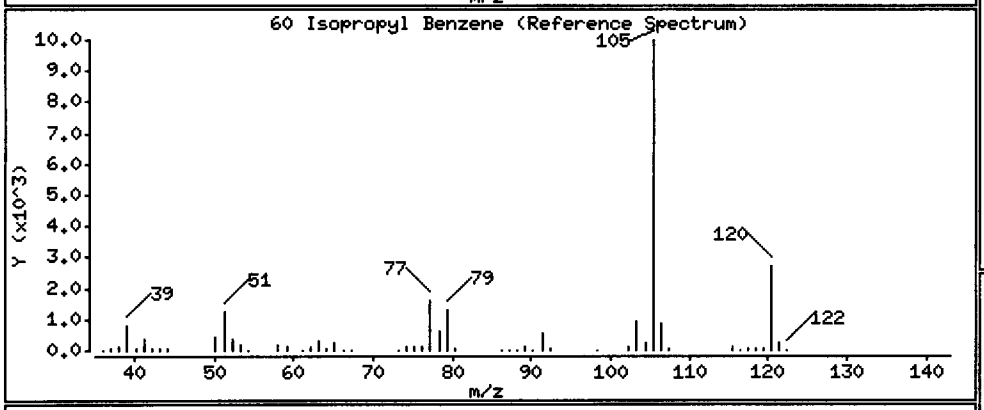
Column diameter: 0.18

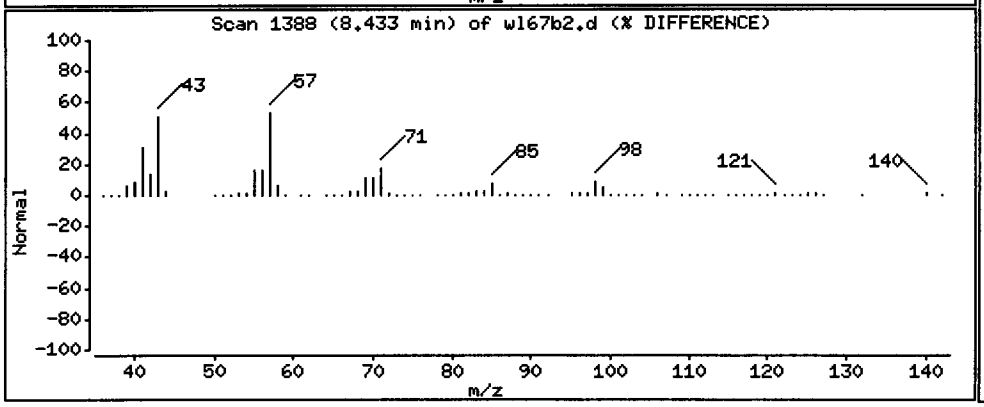
60 Isopropyl Benzene

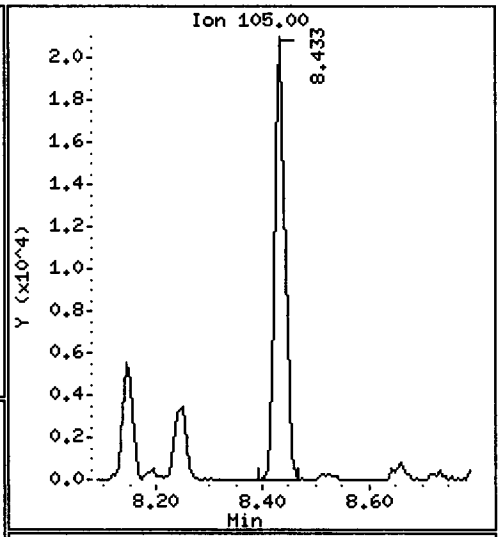
Concentration: 1.054 ug/Kg

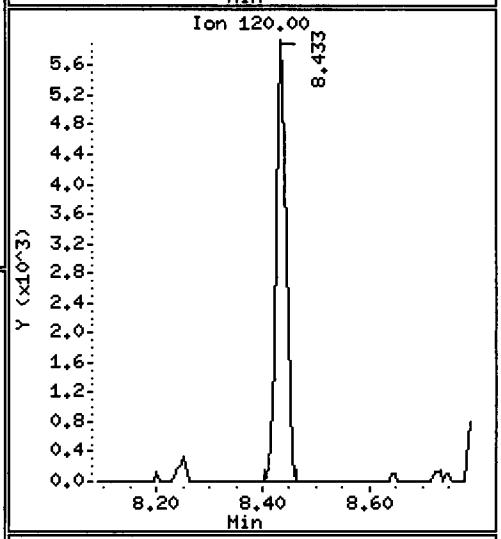


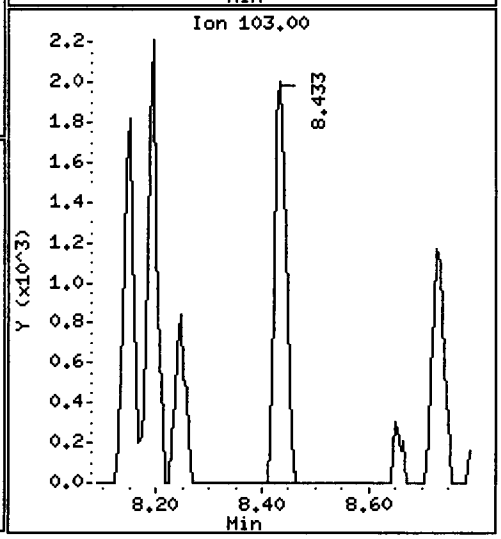












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

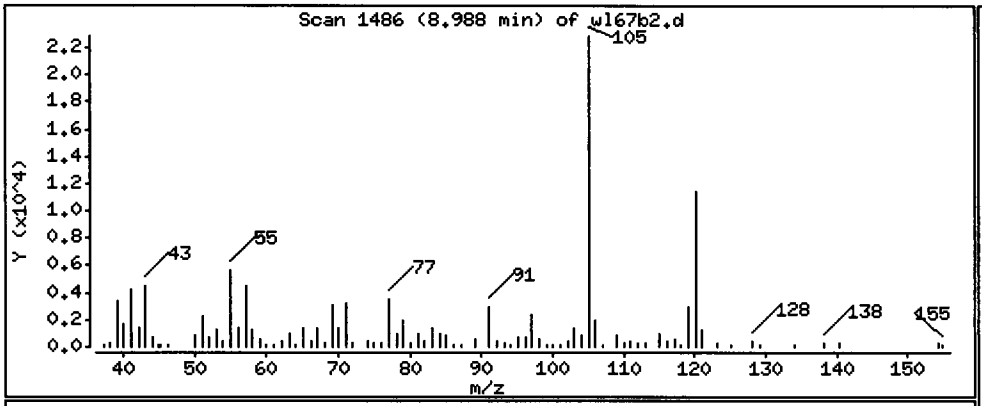
Operator: PB

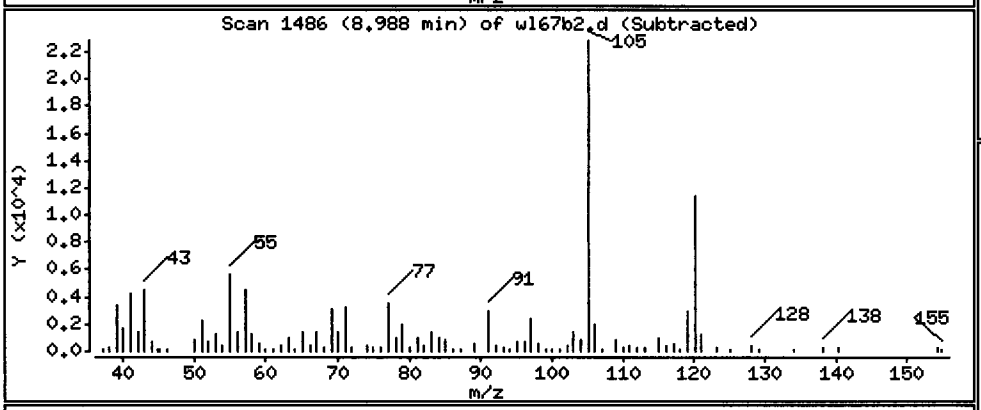
Column phase: RTXVMS

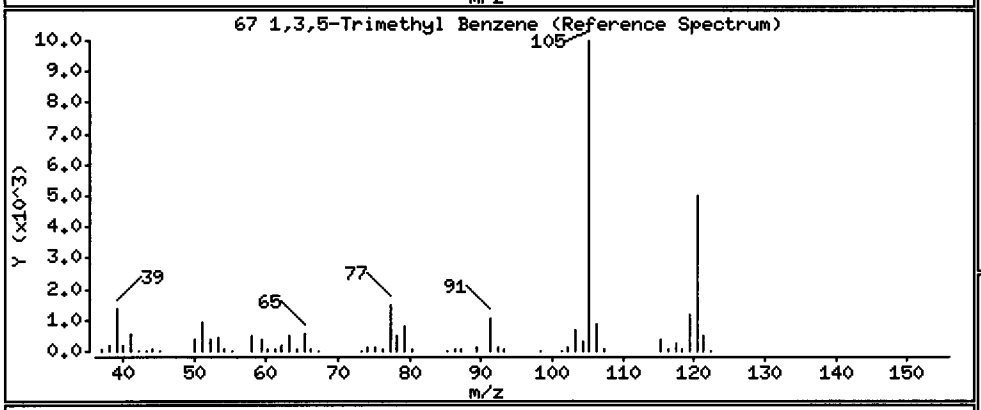
Column diameter: 0.18

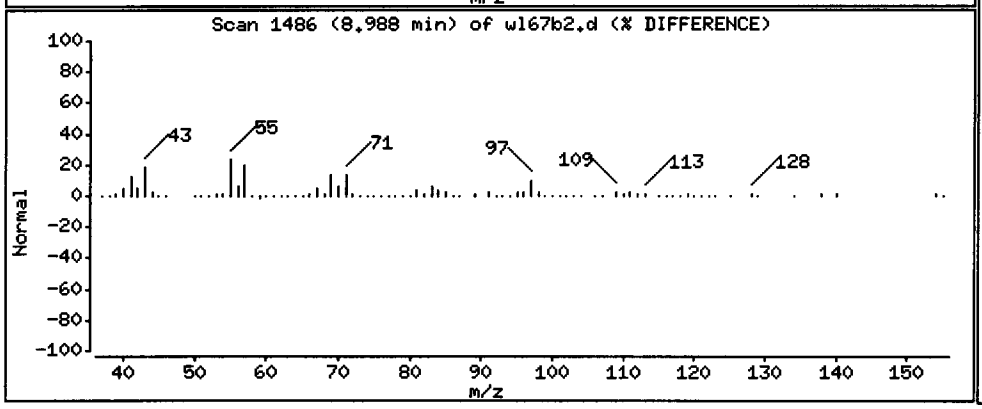
67 1,3,5-Trimethyl Benzene

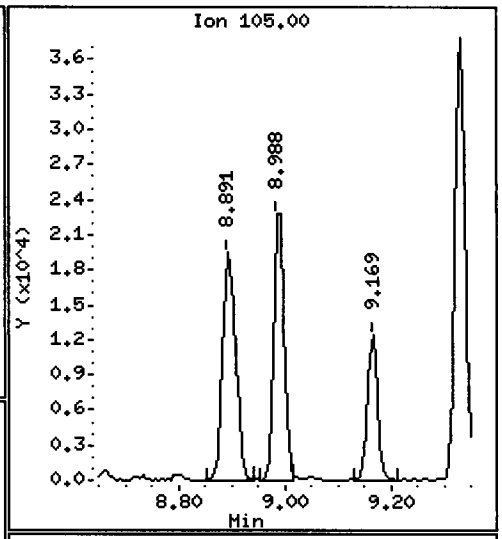
Concentration: 1.385 ug/Kg

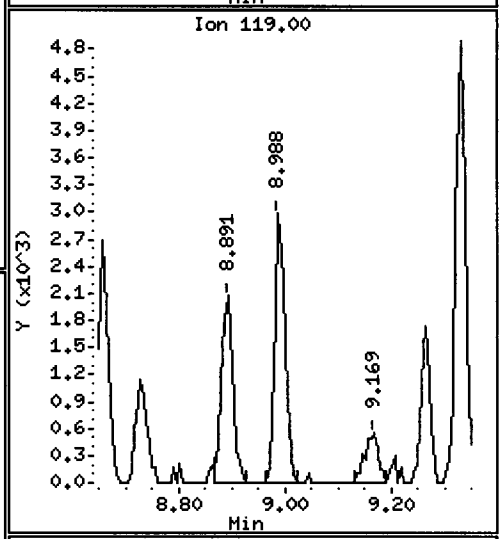


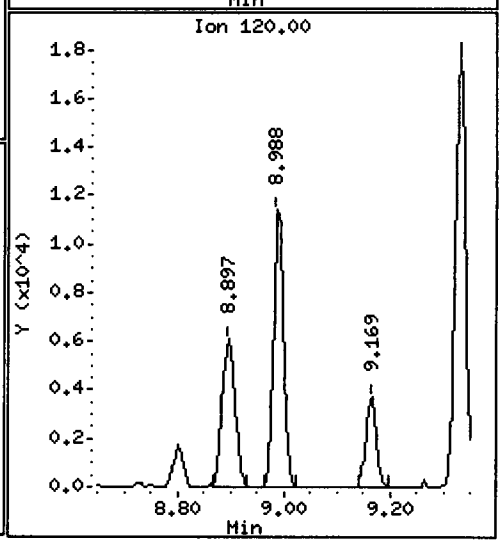












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

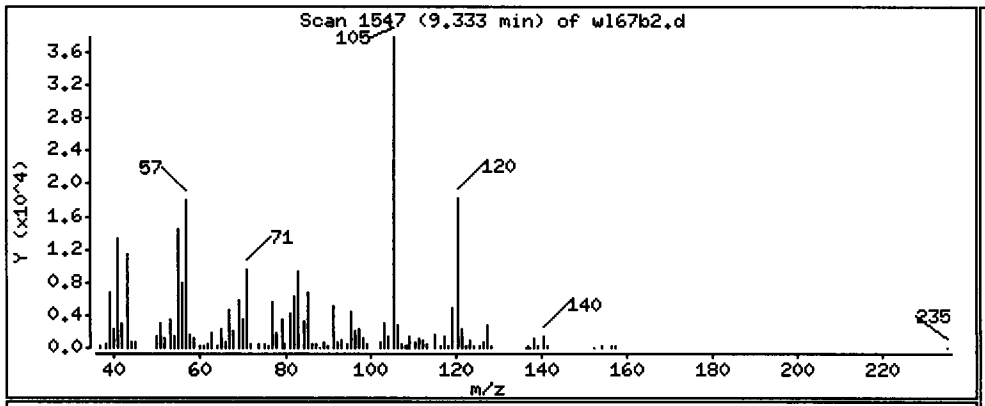
Operator: PB

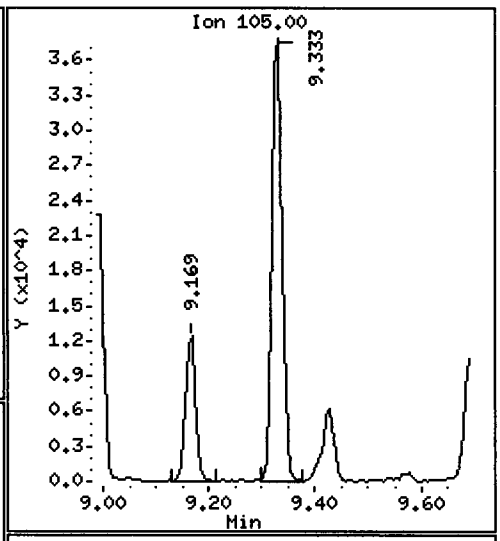
Column phase: RTXVMS

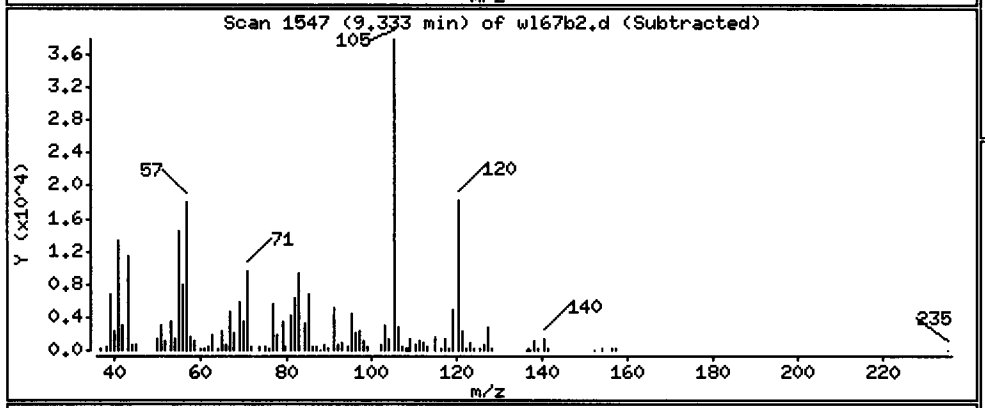
Column diameter: 0.18

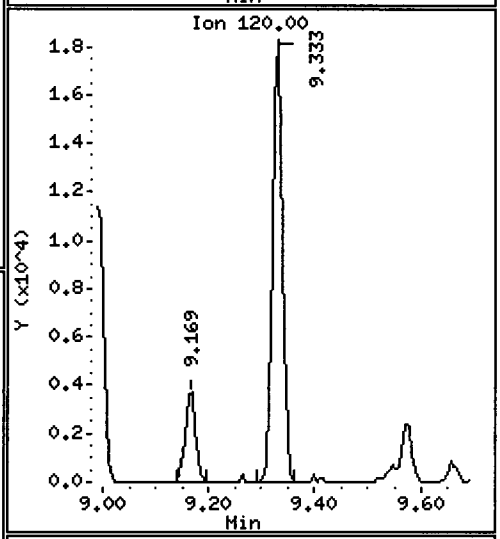
72 1,2,4-Trimethylbenzene

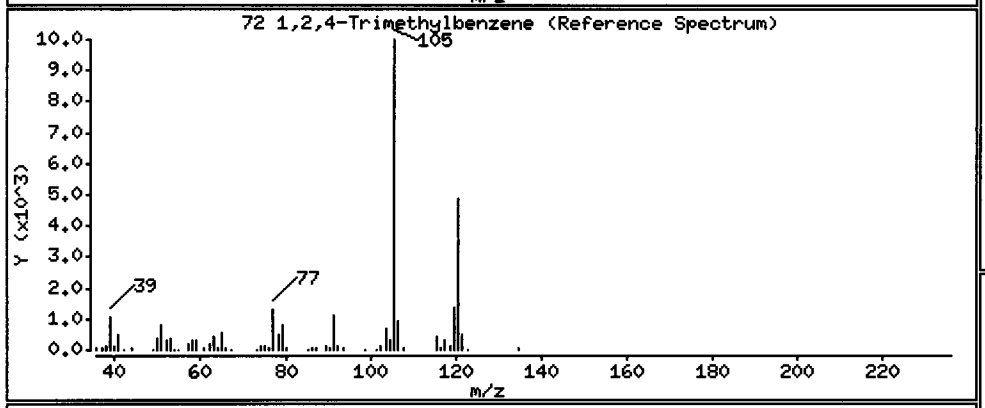
Concentration: 2.322 ug/Kg

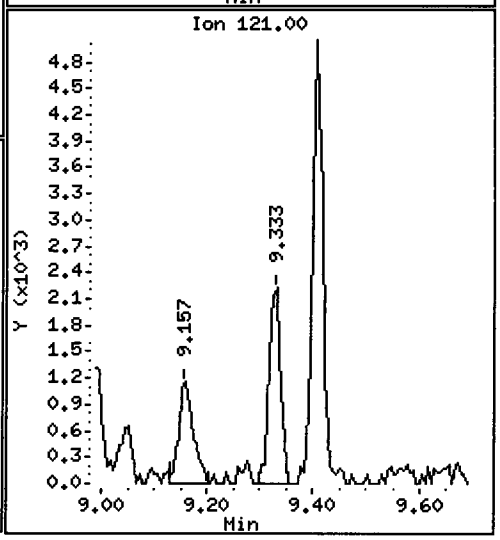


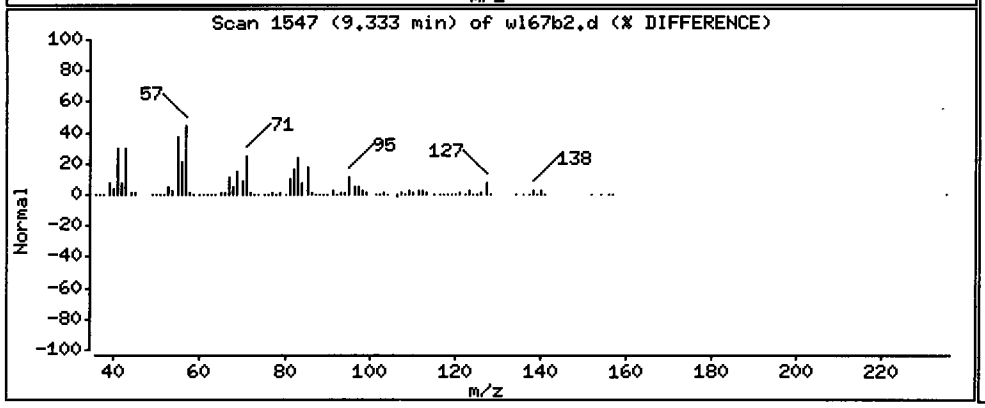












Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

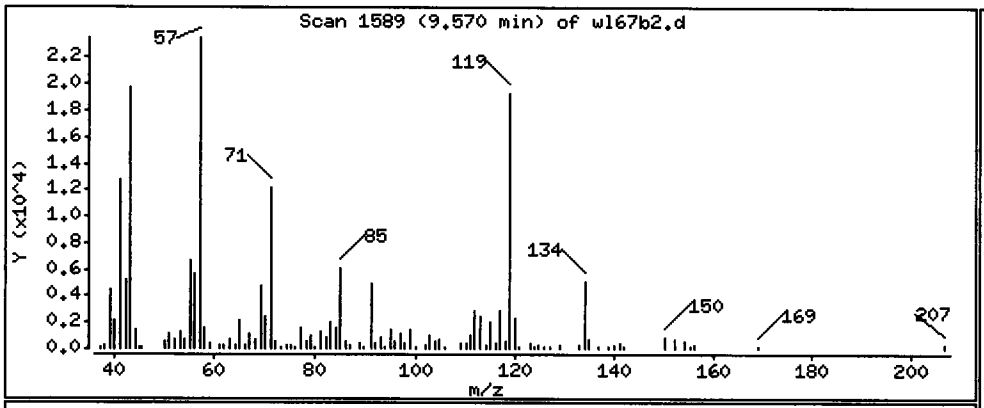
Operator: PB

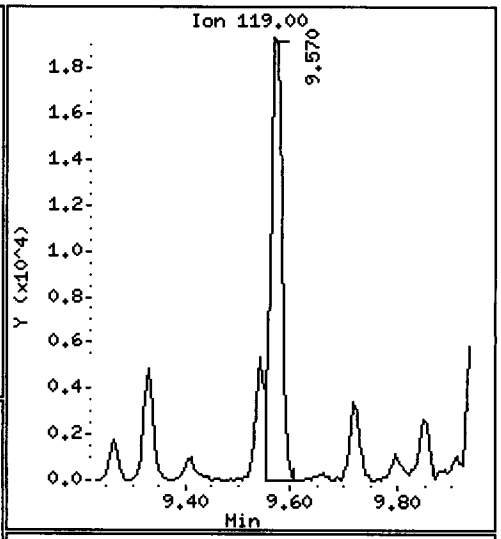
Column phase: RTXVMS

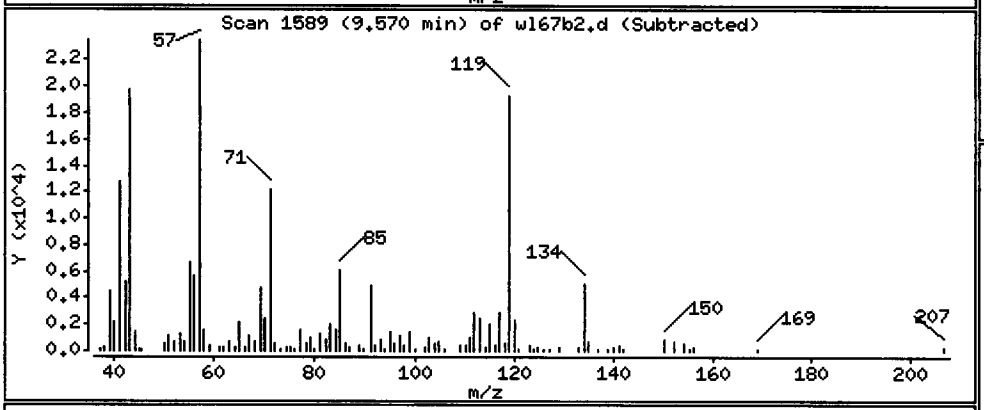
Column diameter: 0.18

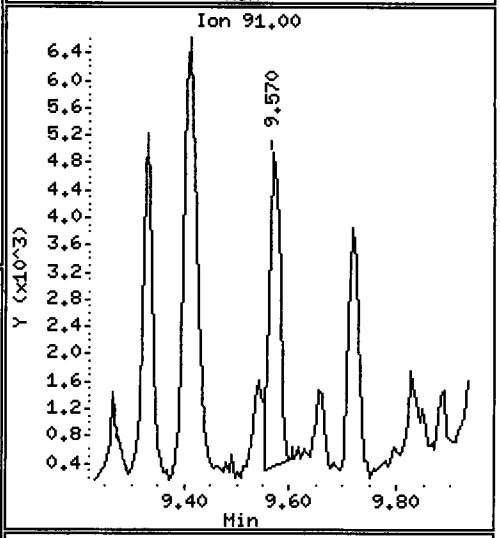
74 4-Isopropyl Toluene

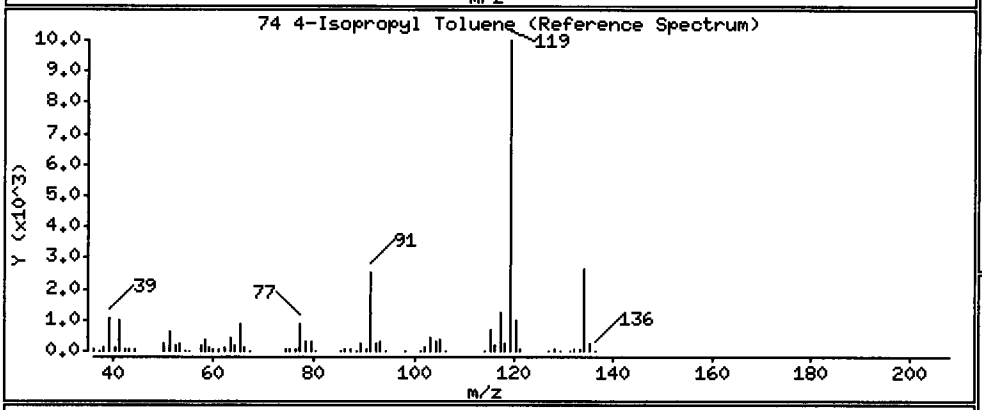
Concentration: 1.159 ug/Kg

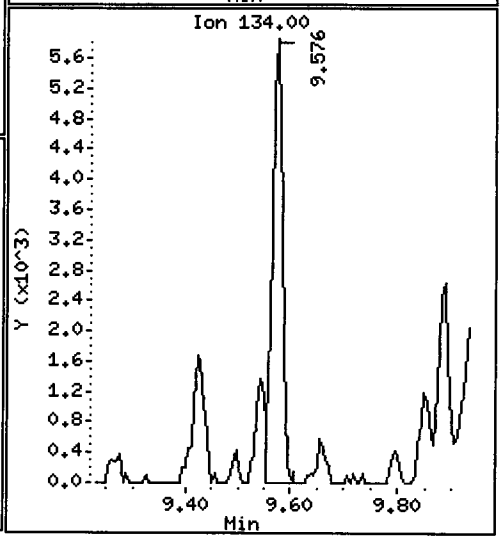


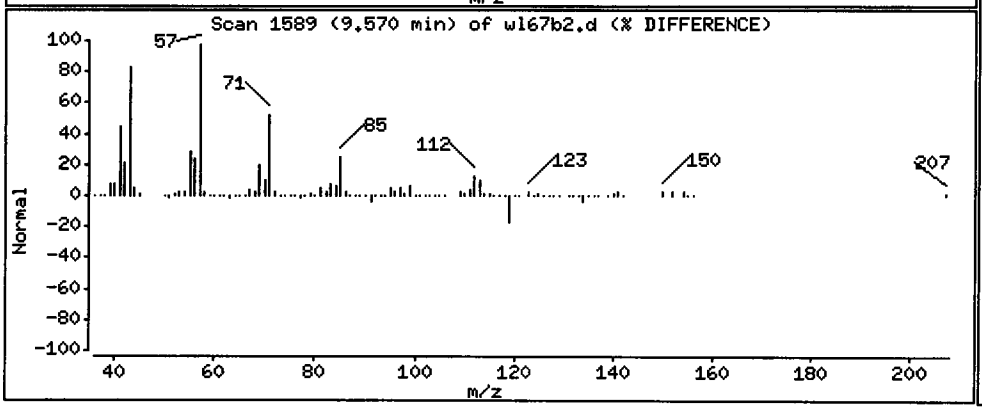












WL67 : 0050

Data File: /chem1/nt5.i/23APR13.b/wl67b2.d

Date : 23-APR-2013 16:42

Client ID: GR-WS-05-20130411-S

Instrument: nt5.i

Sample Info: WL67B,5,4.63,0

Operator: PB

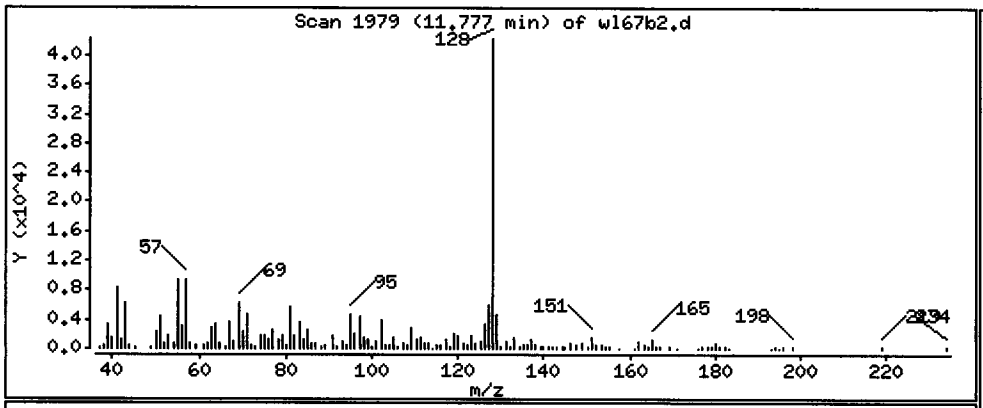
Column phase: RTXVMS

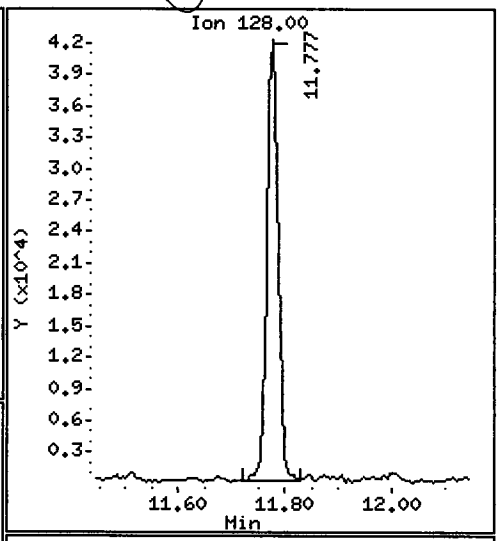
Column diameter: 0.18

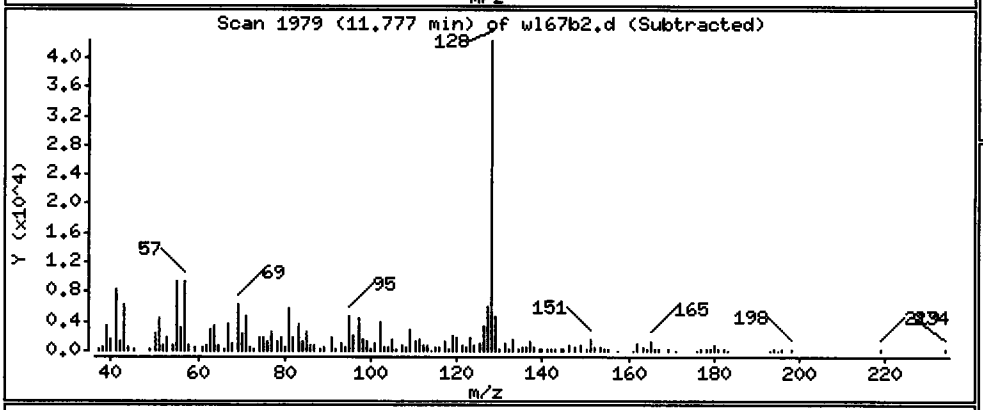
84 Naphthalene

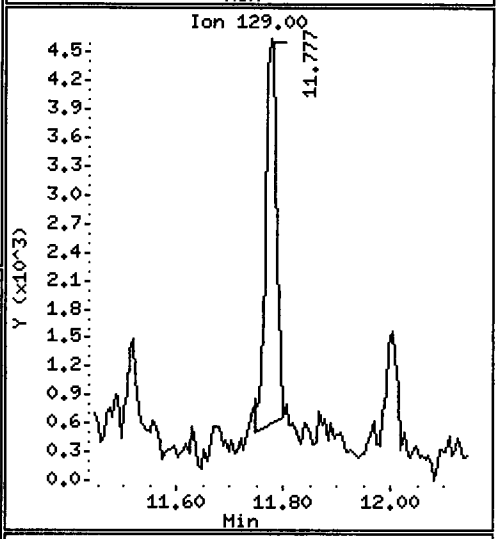
Concentration: 2.513 ug/Kg

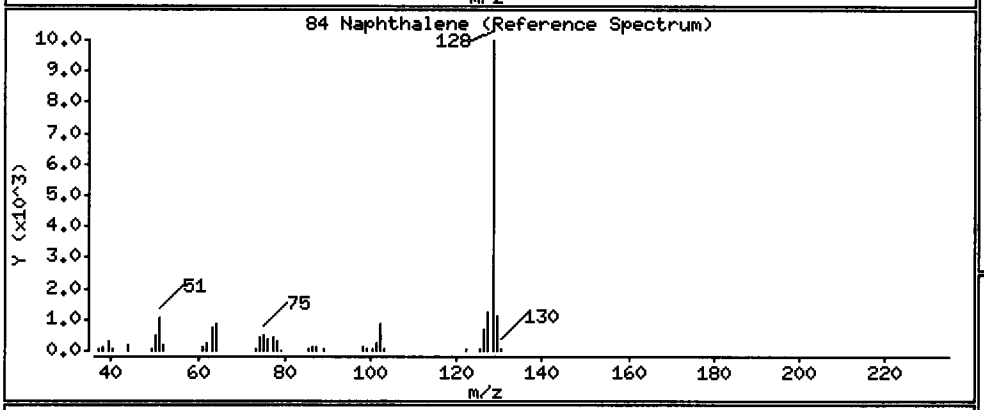
TIC
(B) MT Report 5/14/13

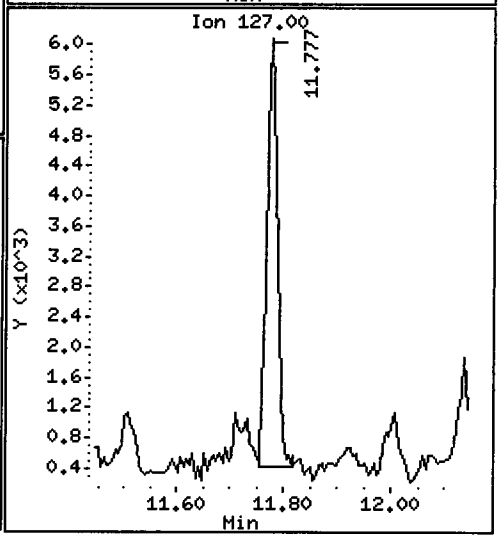


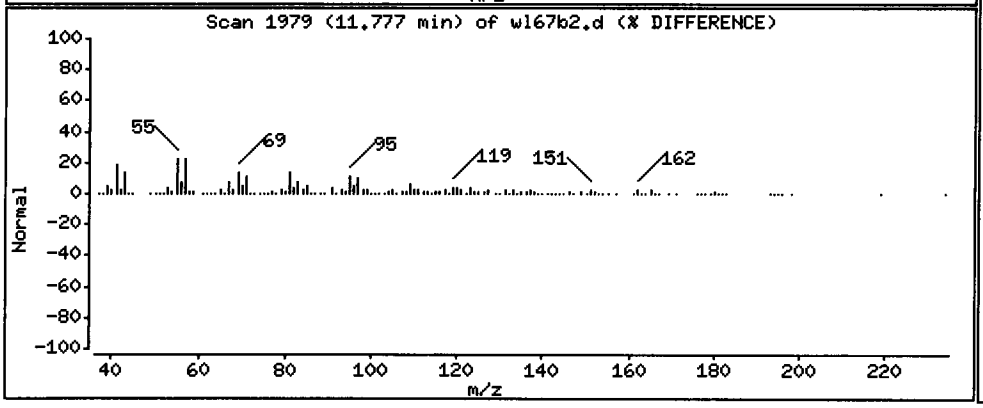








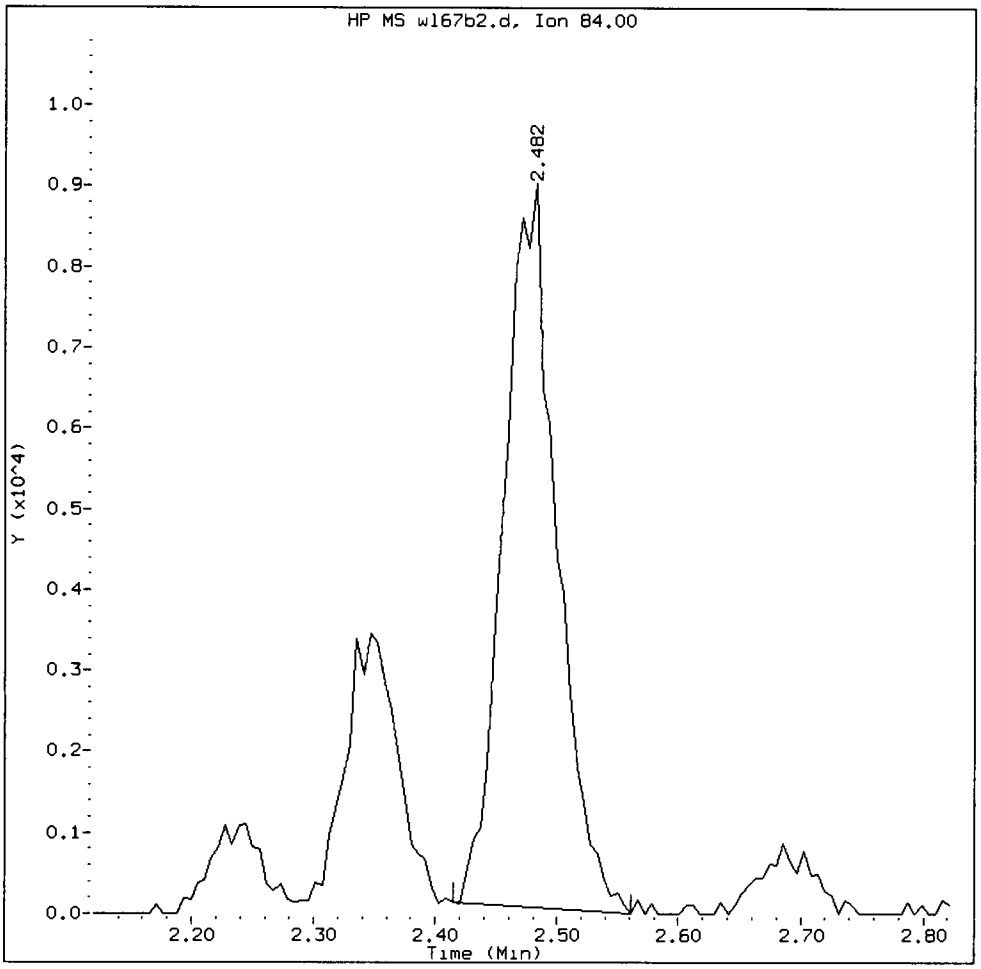




WL67 : 02505

WL67B, /chem1/nt5.i/23APR13.b/wl67b2.d

Methylene Chloride Amount: 3.08 Area: 27243



MANUAL INTEGRATION for Methylene Chloride

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

5. Other _____

Analyst: _____ Date: 4/24

CO-ELUTION SUMMARY FOR FILE - wl67b2.d

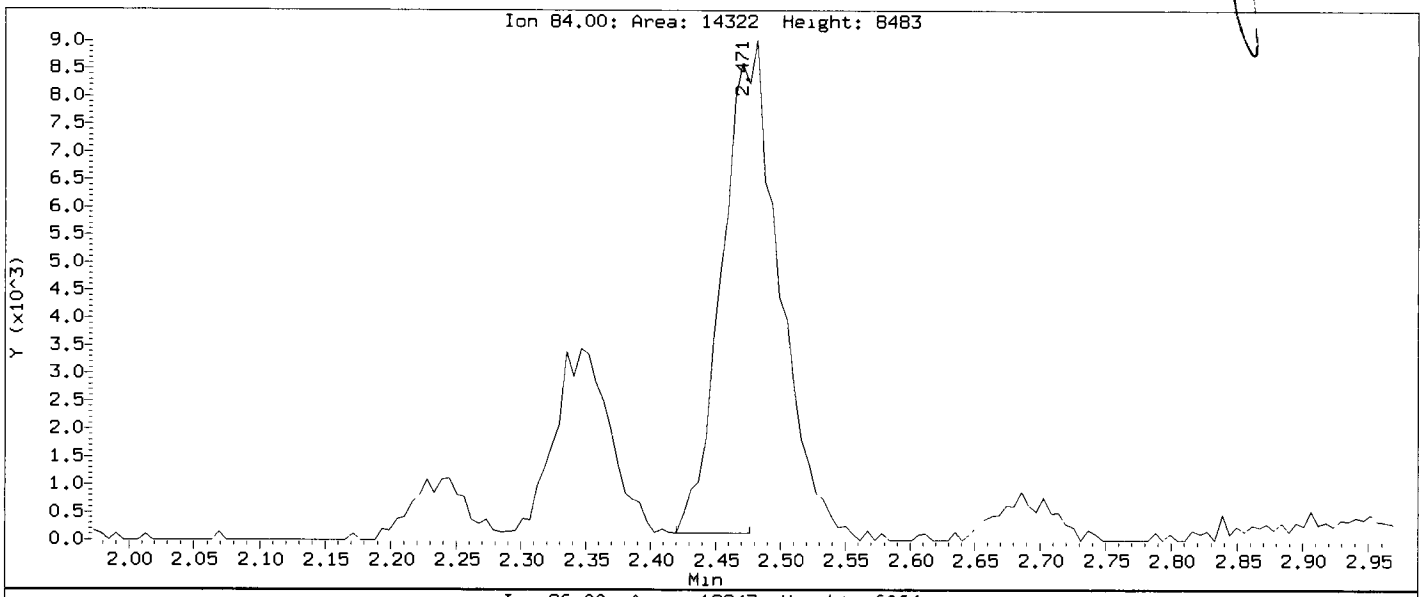
Lab ID: WL67B, Method: VO121012S.m, Instrument: nt5.i, Date: 23-APR-2013

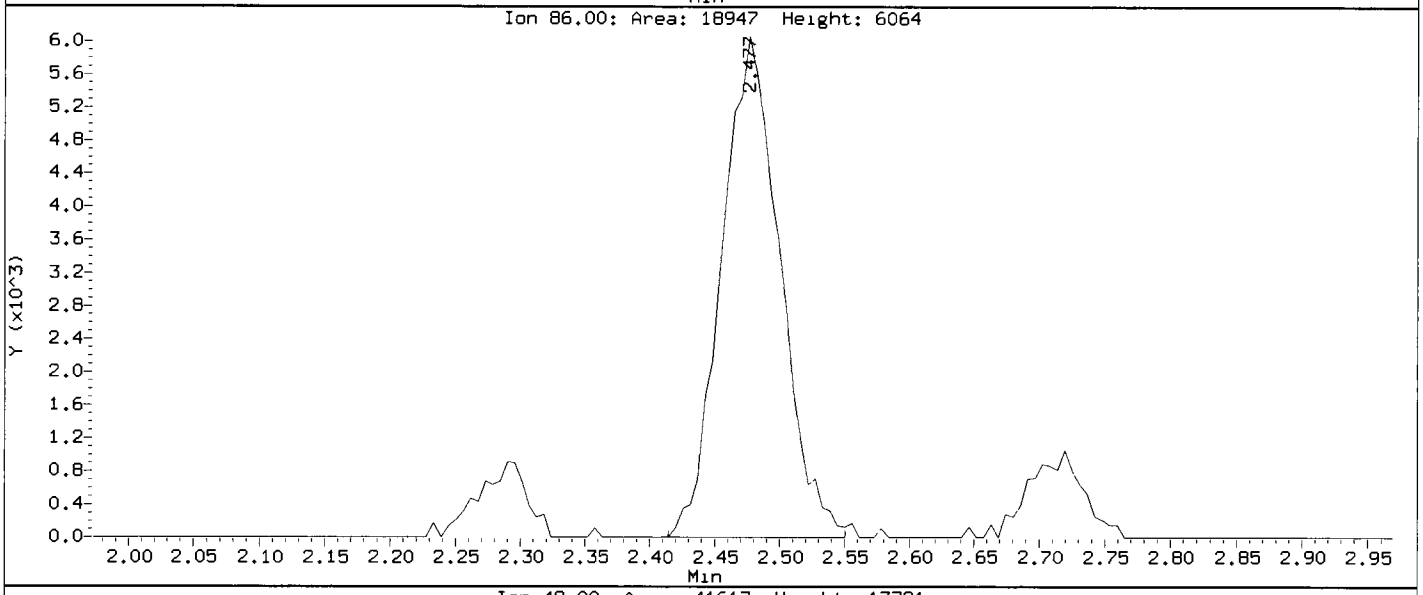
RT	CO-ELUTION COMPOUNDS

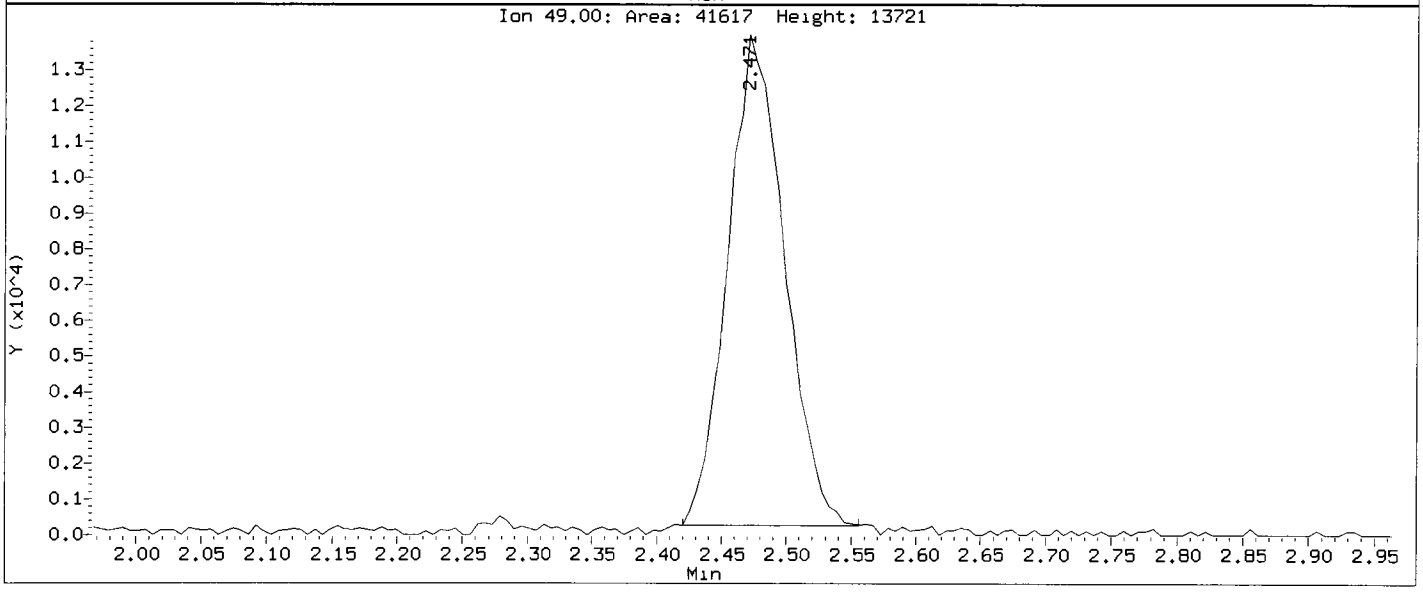
NO CO-ELUTIONS

Data File: /chem1/nt5.1/23APR13.b/w167b2.d
Injection Date: 23-APR-2013 16:42
Instrument: nt5.1
Client Sample ID: GR-WS-05-20130411-S

Compound: Methylene Chloride
CAS Number:







Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL67

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) WL49, WL67 Page 1 of 1 Batch set up by: ~~JH~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or (2)	Final Effective Volume	Volume to Lab	Comments	Verify Client ID CT 4/18/13 Analyst/Date
	WL49 MBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 (2) 3 CT 4/18/13 Analyst/Date
	↓ SBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C 1 2 3 4 5 6 RR 4/19/13 Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 (2) 3 WW 4/19/13 Analyst/Date
7	WL49 F	2.03	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	
3	G	13.05	(1:1) (Y) / N	1mL	1mL		GPC Prep Filter (1:1) WW 4/19/13 Analyst/Date
3	GMS	13.05	(1:1) (Y) / N	1mL	1mL		
3	↓ GMSL	13.04	(1:1) (Y) / N	1mL	1mL		
8	WL67 A	8.06	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	Post GPC KD 80-85°C 1 2 3 4 5 6 RR 4/22/13 Analyst/Date
8	↓ B	6.05	(1:1) (Y) / N	1mL	1mL	↓	
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 (2) 3 AC 4-22-13 Analyst/Date
Analyst/Date CT 4/18/13			WW 4/19/13	AC	AC		

4-22-13 4-22-13

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2084-3)	100/150µg/mL	50µL	7/02/13	CT	TH
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	CT	TH
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	CT	TH
Acid Spike	38(2074-1)	100/150µg/mL	50µL	7/31/13	CT	TH
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 13:48			Balance ID: B14662614			

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)

WL67 : 00606

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL67 Client ID: SAIC

Parameter: RAN/SIM SVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= C: wet A: wet	AC 4-12-13
☐ Standing Water Decanted (Not shared)= A, B	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= A: light >1.5"	
☐ 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 extraction weights for both samples, based on sample pre-screens.	
	JH 4/17/13

3056F

Revision 009
08/14/12

WL67:00001

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WL67

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): 01/25/13 Internal Standard ID 1998-2 Expiration 07/02/13

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?	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	2086-2	02/07/13	Ultra	2055-1	12/05/13
	2050-1	02/07/13		2054-1	12/31/13
	2050-2	8/10/13	~~07/01/13~~	2053-2	02/13/13
	2061-2	~~04/01/14~~ 01/25/14			
	1998-4	07/02/13			

Detail problems, corrective actions and/or other pertinent information below:

- Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine — quadratic fit used
- Low point of the curve dropped for Benzoic acid, 2,4 Dinitrophenol 4 Nitrophenol, Benzidine, Carbazole.
- 4,6 - Dinitro -2- methylphenol ICV >30%

Analyst: YZ **Date:** 01/28/13

Reviewer: VD **Date:** 1/29/13

WL57 : 00503

08/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 2013/01/25 Analysis: ABN/SimABN Analyst: YZ

GC Program: ABN2 Column No: 247358 Column Type: ZB5 ms1

Instrument Tune (.U or .CT.): 12130414 EM Voltage: 1500

Calibration File: DF0125 Curve Date: 01/25/13 Injection Vol.: 1 uL

DF 0125A

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2036-2	~~2060-1~~
	2050-1	2055-1
	2050-2	2054-1
	2064-2	2053-2
	1998-4	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130125.b

	Time	Filename	LabID	ClientId	DF										
1	1243	df0125.d	DFTPP	DFTPP	1	NO ISTDS FOUND									
2	1259	ic0125a.d	IC0125A		1	9.08	66623	11.76	176978	15.66	110872	18.94	186290	24.01	313681	26.51	208584	25.10	264159
3	1336	ic0125b.d	IC0125B		1	9.09	43831	11.76	168229	15.66	106731	18.95	180535	24.02	300009	26.52	199837	25.10	268158
4	1413	ic0125c.d	IC0125C		1	9.08	64358	11.75	169256	15.66	101836	18.93	170953	24.01	193229	26.51	179458	25.10	216658
5	1450	ic0125d.d	IC0125D		1	9.08	42972	11.76	165867	15.66	107661	18.94	182628	24.01	203223	26.52	202904	25.10	260852
6	1527	ic0125e.d	IC0125E		1	9.08	48848	11.75	183261	15.66	111653	18.94	191397	24.00	212807	26.51	206726	25.10	246669
7	1603	ic0125f.d	IC0125F		1	9.08	46627	11.75	176830	15.66	108024	18.94	188394	24.01	208658	26.51	206198	25.10	249963
8	1716	ic0125h.d	IC0125H		1	9.09	45029	11.75	169265	15.66	103177	18.94	178448	24.00	202098	26.50	191018	25.09	218399
9	1830	icv0125.d	ICV0125		1	9.09	48184	11.75	180678	15.66	93376	18.94	187911	24.01	186268	26.51	179038	25.10	217021
10	1902	df0125a.d	DFTPP	DFTPP	1	NO ISTDS FOUND													
11	1917	cc0125.d	CC0125		1	9.09	46821	11.75	170888	15.66	106773	18.94	184813	24.01	208971	26.51	204624	25.10	251016
12	1954	wa01mb.d	WA01MB01		1	9.08	40085	11.75	153884	15.66	91793	18.94	159313	24.00	176429	26.50	159629	25.10	196633
13	2038	wa01mb.d	WA01LCS01		1	9.08	42127	11.75	159698	15.66	99832	18.94	171977	24.01	196878	26.51	185431	25.10	237586
14	2106	wa01qls.d	WA01QLS		1	9.08	43091	11.75	167212	15.66	100580	18.94	176603	24.01	190229	26.50	172299	25.10	218779
15	2142	wa01a.d	WA01A		1	9.08	43275	11.75	164288	15.66	97983	18.94	168607	24.01	188149	26.52	186692	25.11	242528
16	2219	wa01b.d	WA01B		1	9.08	43756	11.75	170747	15.66	105605	18.94	179683	24.01	196568	26.52	198190	25.10	259392
17	2255	wa01c.d	WA01C		1	9.09	44751	11.75	171538	15.66	102652	18.94	175182	24.01	197188	26.52	187564	25.11	240873
18	2331	wa01d.d	WA01D		1	9.08	40012	11.76	158975	15.66	93741	18.95	162795	24.02	184964	26.55	137219	25.12	261290
19	0008	wa01e.d	WA01E		1	9.08	42963	11.76	166582	15.66	96689	18.95	166756	24.02	185290	26.52	159850	25.11	242382
20	0044	wa01f.d	WA01F		1	9.08	45587	11.76	175719	15.66	106499	18.95	183346	24.02	203487	26.53	168521	25.11	268784
21	0121	wa01g.d	WA01G		1	9.08	45396	11.76	172840	15.66	103775	18.95	176189	24.02	197623	26.52	164129	25.11	263118
22	0157	wa01gms.d	WA01GMS		1	9.09	43139	11.76	161806	15.67	99580	18.95	169688	24.02	189335	26.52	167266	25.11	266365
23	0233	wa01gmsd.d	WA01GMSD		1	9.08	41081	11.76	153485	15.67	93479	18.95	161564	24.02	186926	26.51	158513	25.11	246361

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

YZ 01/28/13

WLS7 00691

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0125a	ic0125b	ic0125c	ic0125d	ic0125e	ic0125f	ic0125h
INJ.DATE:	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013
INJ.TIME:	12:59	13:36	14:13	14:50	15:27	16:03	17:16

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.719	6.728	6.720	6.728	6.720	6.719	6.720	6.719	3.719-9.719	6.722	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 YZ Date: 01/28/13
Reviewer 2 VB Date: 1/29/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	25.100	25.100	25.100	25.100	25.100	25.100	25.093	25.100	22.100-28.100	25.099	0.003
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/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.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	16.467	16.476	16.460	16.468	16.460	16.467	16.460	16.467	13.467-19.467	16.466	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	17.224	17.240	17.217	17.233	17.217	17.224	17.217	17.224	14.224-20.224	17.225	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/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.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	13.551	13.551	13.543	13.551	13.543	13.551	13.544	13.551	10.551-16.551	13.548	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	8.435	8.451	8.428	8.435	8.428	8.427	8.428	8.435	5.435-11.435	8.433	0.009
	3 Phenol	8.458	8.474	8.451	8.459	8.451	8.451	8.451	8.458	5.458-11.458	8.456	0.009
	4 Bis(2-Chloroethyl)ethe	8.620	8.629	8.621	8.621	8.621	8.620	8.621	8.620	5.620-11.620	8.622	0.003
$	5 2-Chlorophenol-d4	8.698	8.706	8.698	8.698	8.698	8.698	8.698	8.698	5.698-11.698	8.699	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.729	8.737	8.729	8.729	8.729	8.729	8.729	8.729	5.729-11.729	8.730	0.003
	7 1,3-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	6.015-12.015	9.015	0.000
*	8 1,4-Dichlorobenzene-d4	9.085	9.085	9.085	9.085	9.085	9.085	9.085	9.085	6.085-12.085	9.085	0.000
	9 1,4-Dichlorobenzene	9.116	9.124	9.116	9.116	9.116	9.116	9.116	9.116	6.116-12.116	9.117	0.003
$	10 1,2-Dichlorobenzene-d4	9.465	9.473	9.465	9.473	9.465	9.465	9.465	9.465	6.465-12.465	9.467	0.004
	11 Benzyl alcohol	9.387	9.403	9.387	9.395	9.387	9.387	9.388	9.387	6.387-12.387	9.391	0.006
	12 1,2-Dichlorobenzene	9.496	9.504	9.496	9.496	9.496	9.496	9.496	9.496	6.496-12.496	9.497	0.003
	13 2-Methylphenol	9.651	9.659	9.644	9.652	9.644	9.643	9.644	9.651	6.651-12.651	9.648	0.006
	14 2,2'-oxybis(1-Chloropr	9.721	9.729	9.714	9.721	9.721	9.721	9.722	9.721	6.721-12.721	9.721	0.005
	15 4-Methylphenol	9.938	9.954	9.939	9.947	9.939	9.938	9.939	9.938	6.938-12.938	9.942	0.006
	16 N-Nitroso-di-n-propyla	10.000	10.016	10.001	10.001	10.001	9.993	9.993	10.000	7.000-13.000	10.001	0.008
	17 Hexachloroethane	10.132	10.133	10.125	10.133	10.133	10.132	10.133	10.132	7.132-13.132	10.132	0.003
$	18 Nitrobenzene-d5	10.264	10.273	10.257	10.265	10.265	10.264	10.257	10.264	7.264-13.264	10.263	0.005
	19 Nitrobenzene	10.303	10.311	10.296	10.303	10.296	10.295	10.296	10.303	7.303-13.303	10.300	0.006
	20 Isophorone	10.792	10.816	10.785	10.800	10.785	10.784	10.785	10.792	7.792-13.792	10.792	0.012
	21 2-Nitrophenol	10.978	10.986	10.978	10.978	10.978	10.978	10.978	10.978	7.978-13.978	10.979	0.003
	22 2,4-Dimethylphenol	11.070	11.078	11.063	11.071	11.063	11.063	11.063	11.070	8.070-14.070	11.067	0.006
	23 Bis(2-Chloroethoxy)met	11.278	11.286	11.279	11.279	11.279	11.278	11.271	11.278	8.278-14.278	11.279	0.004
	24 Benzoic acid	11.325	11.487	11.163	11.402	11.217	11.271	11.186	11.325	8.325-14.325	11.293	0.119
	25 2,4-Dichlorophenol	11.471	11.487	11.471	11.479	11.471	11.471	11.464	11.471	8.471-14.471	11.473	0.007
	26 1,2,4-Trichlorobenzene	11.671	11.672	11.664	11.672	11.664	11.671	11.664	11.671	8.671-14.671	11.668	0.004
*	27 Naphthalene-d8	11.756	11.757	11.749	11.757	11.749	11.749	11.749	11.756	8.756-14.756	11.752	0.004
	28 Naphthalene	11.795	11.803	11.795	11.795	11.795	11.795	11.795	11.795	8.795-14.795	11.796	0.003
	29 4-Chloroaniline	11.965	11.981	11.957	11.965	11.957	11.957	11.957	11.965	8.965-14.965	11.963	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.212	12.212	12.205	12.212	12.212	12.212	12.205	12.212	9.212-15.212	12.210	0.004
	31 4-Chloro-3-methylpheno	13.025	13.033	13.017	13.025	13.017	13.017	13.017	13.025	10.025-16.025	13.022	0.006
	32 2-Methylnaphthalene	13.311	13.311	13.303	13.311	13.311	13.311	13.311	13.311	10.311-16.311	13.310	0.003
	33 Hexachlorocyclopentadi	13.822	13.830	13.822	13.830	13.822	13.822	13.822	13.822	10.822-16.822	13.824	0.004
	34 2,4,6-Trichlorophenol	13.992	14.000	13.992	14.000	13.992	13.992	13.992	13.992	10.992-16.992	13.994	0.004
	35 2,4,5-Trichlorophenol	14.069	14.078	14.070	14.070	14.062	14.069	14.070	14.069	11.069-17.069	14.070	0.005
$	36 2-Fluorobiphenyl	14.178	14.178	14.170	14.178	14.170	14.170	14.170	14.178	11.178-17.178	14.174	0.004
	37 2-Chloronaphthalene	14.379	14.387	14.371	14.379	14.379	14.379	14.379	14.379	11.379-17.379	14.379	0.005
	38 2-Nitroaniline	14.681	14.697	14.673	14.681	14.673	14.673	14.674	14.681	11.681-17.681	14.679	0.009
	39 Dimethylphthalate	15.176	15.192	15.169	15.176	15.169	15.168	15.169	15.176	12.176-18.176	15.174	0.009
	40 Acenaphthylene	15.315	15.324	15.316	15.316	15.316	15.316	15.316	15.315	12.315-18.315	15.317	0.003
	41 2,6-Dinitrotoluene	15.308	15.324	15.300	15.316	15.300	15.308	15.300	15.308	12.308-18.308	15.308	0.009
*	42 Acenaphthene-d10	15.664	15.664	15.656	15.664	15.656	15.664	15.656	15.664	12.664-18.664	15.660	0.004
	43 3-Nitroaniline	15.609	15.625	15.594	15.618	15.594	15.602	15.594	15.609	12.609-18.609	15.605	0.013
	44 Acenaphthene	15.733	15.741	15.726	15.733	15.726	15.733	15.726	15.733	12.733-18.733	15.731	0.006
	45 2,4-Dinitrophenol	15.834	15.865	15.826	15.842	15.826	15.826	15.826	15.834	12.834-18.834	15.835	0.014
	46 Dibenzofuran	16.089	16.105	16.081	16.097	16.081	16.089	16.089	16.089	13.089-19.089	16.090	0.008
	47 4-Nitrophenol	15.980	16.012	15.973	15.989	15.973	15.973	15.973	15.980	12.980-18.980	15.982	0.014
	48 2,4-Dinitrotoluene	16.181	16.197	16.174	16.190	16.174	16.174	16.174	16.181	13.181-19.181	16.181	0.009
	49 Fluorene	16.862	16.870	16.854	16.870	16.854	16.862	16.855	16.862	13.862-19.862	16.861	0.007
	50 Diethylphthalate	16.761	16.785	16.754	16.769	16.754	16.761	16.754	16.761	13.761-19.761	16.763	0.011
	51 4-Chlorophenyl-phenyle	16.877	16.885	16.870	16.878	16.870	16.877	16.870	16.877	13.877-19.877	16.875	0.006
	52 4-Nitroaniline	16.985	17.024	16.963	16.994	16.970	16.978	16.963	16.985	13.985-19.985	16.982	0.022
	53 4,6-Dinitro-2-methylph	17.086	17.117	17.070	17.101	17.078	17.078	17.071	17.086	14.086-20.086	17.086	0.017

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.155	17.163	17.148	17.155	17.148	17.147	17.148	17.155	14.155-20.155	17.152	0.006
$	55 2,4,6-Tribromophenol	17.440	17.448	17.433	17.441	17.433	17.440	17.433	17.440	14.440-20.440	17.438	0.006
	56 4-Bromophenyl-phenylet	17.965	17.965	17.957	17.965	17.957	17.957	17.957	17.965	14.965-20.965	17.961	0.004
	57 Hexachlorobenzene	18.289	18.289	18.281	18.282	18.281	18.281	18.274	18.289	15.289-21.289	18.283	0.005
	58 Pentachlorophenol	18.676	18.684	18.669	18.676	18.669	18.676	18.669	18.676	15.676-21.676	18.674	0.006
*	59 Phenanthrene-d10	18.939	18.947	18.932	18.939	18.939	18.939	18.940	18.939	15.939-21.939	18.939	0.005
	60 Phenanthrene	18.986	19.001	18.986	18.994	18.986	18.986	18.986	18.986	15.986-21.986	18.989	0.006
	61 Anthracene	19.086	19.094	19.079	19.086	19.079	19.086	19.079	19.086	16.086-22.086	19.084	0.006
	62 Carbazole	19.434	19.442	19.435	19.442	19.435	19.434	19.435	19.434	16.434-22.434	19.437	0.004
	63 Di-n-butylphthalate	20.293	20.301	20.293	20.293	20.293	20.293	20.294	20.293	17.293-23.293	20.294	0.003
	64 Fluoranthene	21.399	21.400	21.392	21.400	21.392	21.392	21.392	21.399	18.399-24.399	21.395	0.004
	65 Pyrene	21.817	21.825	21.810	21.818	21.810	21.810	21.810	21.817	18.817-24.817	21.814	0.006
$	66 Terphenyl-d14	22.135	22.135	22.127	22.135	22.127	22.135	22.127	22.135	19.135-25.135	22.131	0.004
	67 Butylbenzylphthalate	23.079	23.080	23.079	23.080	23.072	23.079	23.072	23.079	20.079-26.079	23.077	0.004
	68 Benzo(a)anthracene	23.977	23.986	23.978	23.985	23.978	23.977	23.970	23.977	20.977-26.977	23.979	0.005
*	69 Chrysene-d12	24.008	24.017	24.009	24.009	24.001	24.008	24.001	24.008	21.008-27.008	24.007	0.005
	70 3,3'-Dichlorobenzidine	23.954	23.970	23.954	23.962	23.947	23.954	23.947	23.954	20.954-26.954	23.955	0.008
	71 Chrysene	24.055	24.063	24.047	24.055	24.047	24.047	24.048	24.055	21.055-27.055	24.052	0.006
	72 bis(2-Ethylhexyl)phtha	24.117	24.125	24.117	24.117	24.117	24.117	24.117	24.117	21.117-27.117	24.118	0.003
	73 Di-n-octylphthalate	25.108	25.116	25.108	25.108	25.108	25.108	25.108	25.108	22.108-28.108	25.109	0.003
	74 Benzo(b)fluoranthene	25.804	25.813	25.797	25.805	25.797	25.797	25.789	25.804	22.804-28.804	25.800	0.008
	75 Benzo(k)fluoranthene	25.843	25.859	25.836	25.843	25.836	25.835	25.836	25.843	22.843-28.843	25.841	0.009
	187 Total Benzofluoranthen	25.843	25.859	25.797	25.843	25.836	25.835	25.836	25.843	22.843-28.843	25.836	0.019
	76 Benzo(a)pyrene	26.401	26.416	26.393	26.401	26.393	26.393	26.393	26.401	23.401-29.401	26.399	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.509	26.517	26.509	26.517	26.509	26.509	26.502	26.509	23.509-29.509	26.510	0.005
	78 Indeno(1,2,3-cd)pyrene	28.942	28.958	28.926	28.942	28.926	28.934	28.919	28.942	25.942-31.942	28.935	0.013
	79 Dibenzo(a,h)anthracene	28.957	28.989	28.950	28.973	28.950	28.957	28.942	28.957	25.957-31.957	28.960	0.016
	80 Benzo(g,h,i)perylene	29.648	29.680	29.633	29.657	29.625	29.641	29.633	29.648	26.648-32.648	29.645	0.018
$	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	4.442	4.457	4.450	4.450	4.442	4.434	4.442	4.442	1.442-7.442	4.445	0.008
	91 Aniline	8.512	8.521	8.505	8.513	8.505	8.512	8.505	8.512	5.512-11.512	8.510	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.655	21.655	21.647	21.655	21.647	21.655	21.648	21.655	18.655-24.655	21.652	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.429	18.429-24.429	+++++	+++++
	99 Perylene	26.563	26.579	26.556	26.564	26.556	26.556	26.548	26.563	23.563-29.563	26.560	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	4.457	4.450	4.496	4.457	4.473	4.457	4.481	4.457	1.457-7.457	4.467	0.017
	188 2,6-Dichlorophenol	11.980	11.988	11.973	11.988	11.973	11.980	11.973	11.980	8.980-14.980	11.979	0.007
	189 N-Nitrosomethylethylam	5.901	5.917	5.909	5.909	5.909	5.909	5.909	5.901	2.901-8.901	5.909	0.005

Analytical Resources, Inc.

Averaged.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130125.b/ic0125c.d
Level 2: /chem1/nt10.i/20130125.b/ic0125h.d
Level 3: /chem1/nt10.i/20130125.b/ic0125e.d
Level 4: /chem1/nt10.i/20130125.b/ic0125f.d
Level 5: /chem1/nt10.i/20130125.b/ic0125a.d
Level 6: /chem1/nt10.i/20130125.b/ic0125d.d
Level 7: /chem1/nt10.i/20130125.b/ic0125b.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 : 25-JAN-2013 12:59
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	0.32876	0.34403	0.37326	0.38202	0.39296	0.39166						
	0.39526						AVRG		0.37257		7.03242	
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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	0.68712	0.61568	0.61713	0.60970	0.62479	0.62906						
	0.62899						AVRG		0.63035		4.13400	
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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	1.85175	1.68940	1.64707	1.63733	1.68988	1.61673					
	1.56109						AVRG		1.67046		5.47002
4 Bis(2-Chloroethyl)ether	1.40493	1.30334	1.30347	1.24707	1.28325	1.21128					
	1.14349						AVRG		1.27098		6.47097

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	1.59520	1.46146	1.47707	1.40489	1.45513	1.41902					
	1.36285						AVRG		1.45366		5.06063
7 1,3-Dichlorobenzene	1.83372	1.63504	1.58082	1.51847	1.53497	1.52312					
	1.44646						AVRG		1.58180		7.92392
9 1,4-Dichlorobenzene	1.82470	1.55544	1.60187	1.50303	1.51800	1.51039					
	1.45049						AVRG		1.56627		7.86403
11 Benzyl alcohol	0.84043	0.76875	0.79217	0.77311	0.81313	0.81712					
	0.79116						AVRG		0.79941		3.20420
12 1,2-Dichlorobenzene	1.73768	1.52346	1.51327	1.44648	1.47158	1.44915					
	1.40064						AVRG		1.50604		7.32876
13 2-Methylphenol	1.34993	1.22001	1.24558	1.22322	1.30059	1.26671					
	1.22080						AVRG		1.26098		3.89432
14 2,2'-oxybis(1-Chloropropane)	0.48018	0.44753	0.44284	0.44270	0.44800	0.44534					
	0.42355						AVRG		0.44716		3.75395

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	1.34226	1.29197	1.31371	1.30699	1.33604	1.31349					
	1.27512						AVRG		1.31137		1.78362
16 N-Nitroso-di-n-propylamine	0.91573	0.79575	0.85580	0.81875	0.86236	0.84584					
	0.80313						AVRG		0.84248		4.90461
17 Hexachloroethane	0.67992	0.60175	0.63806	0.59248	0.60974	0.61412					
	0.59743						AVRG		0.61907		4.95719
19 Nitrobenzene	0.38734	0.34048	0.34857	0.34062	0.34785	0.34389					
	0.34151						AVRG		0.35004		4.79352
20 Isophorone	0.63301	0.56793	0.60847	0.59443	0.62728	0.61846					
	0.62125						AVRG		0.61012		3.68947
21 2-Nitrophenol	0.19332	0.18421	0.20543	0.20796	0.21920	0.21663					
	0.21298						AVRG		0.20568		6.19855
22 2,4-Dimethylphenol	0.37623	0.34842	0.35856	0.34561	0.35338	0.34129					
	0.33058						AVRG		0.35058		4.10928

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	0.42114	0.39616	0.38461	0.37952	0.38304	0.36431						
	0.36096						AVRG		0.38425		5.27643	
24 Benzoic acid	+++++	0.16802	0.24258	0.27289	0.30536	0.30569						
	0.31370						AVRG		0.26804		20.82037	<-
25 2,4-Dichlorophenol	0.31804	0.29394	0.30839	0.30694	0.31451	0.30586						
	0.29711						AVRG		0.30640		2.81805	
26 1,2,4-Trichlorobenzene	0.40294	0.36312	0.35495	0.33490	0.33893	0.32931						
	0.31675						AVRG		0.34870		8.17173	
28 Naphthalene	1.17113	1.06629	1.04085	1.00184	1.01216	1.00690						
	0.98667						AVRG		1.04083		6.08299	
29 4-Chloroaniline	0.43597	0.40727	0.41596	0.40868	0.42429	0.41696						
	0.42308						AVRG		0.41889		2.36753	
30 Hexachlorobutadiene	0.23385	0.21233	0.22032	0.21378	0.21418	0.21548						
	0.21128						AVRG		0.21732		3.61019	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26481	0.27149	0.29550	0.29260	0.31285	0.31892					
	0.31685						AVRG		0.29615		7.33327
32 2-Methylnaphthalene	0.73829	0.66758	0.67440	0.65675	0.70171	0.68317					
	0.68851						AVRG		0.68720		3.90226
33 Hexachlorocyclopentadiene	0.44473	0.40757	0.44583	0.44429	0.47974	0.46666					
	0.46906						AVRG		0.45113		5.27242
34 2,4,6-Trichlorophenol	0.37875	0.37012	0.40921	0.40113	0.41623	0.41485					
	0.41565						AVRG		0.40085		4.72757
35 2,4,5-Trichlorophenol	0.37884	0.39598	0.42331	0.43767	0.44881	0.45127					
	0.44592						AVRG		0.42597		6.65640
37 2-Chloronaphthalene	1.23689	1.06915	1.09647	1.07749	1.10903	1.07360					
	1.07168						AVRG		1.10490		5.43307
38 2-Nitroaniline	0.21672	0.22323	0.25658	0.26793	0.28461	0.28174					
	0.28315						AVRG		0.25914		11.03790

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	1.30877	1.22841	1.23078	1.18054	1.21915	1.17353						
	1.12753						AVRG		1.20981		4.72547	
40 Acenaphthylene	1.86378	1.82126	1.85629	1.80591	1.82377	1.74121						
	1.70079						AVRG		1.80186		3.32697	
41 2,6-Dinitrotoluene	0.25669	0.25630	0.27994	0.28469	0.29374	0.28380						
	0.27957						AVRG		0.27639		5.20021	
43 3-Nitroaniline	0.22713	0.25471	0.29079	0.27321	0.26059	0.26304						
	0.21716						AVRG		0.25523		10.01066	
44 Acenaphthene	1.18524	1.13444	1.11843	1.08189	1.09441	1.06919						
	1.05036						AVRG		1.10485		4.11445	
45 2,4-Dinitrophenol	+++++	0.11441	0.16472	0.20765	0.24305	0.24872						
	0.25284						AVRG		0.20523		27.11606	<-
46 Dibenzofuran	1.68997	1.54872	1.56513	1.49747	1.52707	1.47995						
	1.44776						AVRG		1.53658		5.12483	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.09998	0.13026	0.16110	0.17953	0.17551						
	0.17902						AVRG		0.15424		21.05350	<-
48 2,4-Dinitrotoluene	0.31718	0.34651	0.38077	0.38891	0.40653	0.39149						
	0.38462						AVRG		0.37372		8.26839	
49 Fluorene	1.40265	1.35139	1.32070	1.30322	1.29668	1.24547						
	1.21601						AVRG		1.30516		4.79174	
50 Diethylphthalate	1.35866	1.23097	1.28760	1.26224	1.29138	1.23346						
	1.20698						AVRG		1.26733		4.00618	
51 4-Chlorophenyl-phenylether	0.64889	0.64348	0.63067	0.59203	0.60007	0.57862						
	0.56392						AVRG		0.60824		5.43948	
52 4-Nitroaniline	0.24294	0.27239	0.27818	0.26676	0.27205	0.28138						
	0.27241						AVRG		0.26944		4.67658	
53 4,6-Dinitro-2-methylphenol	0.11263	0.13500	0.16003	0.16959	0.18328	0.18067						
	0.18008						AVRG		0.16018		16.77594	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
54 N-Nitrosodiphenylamine	0.52611	0.48647	0.51232	0.47864	0.47347	0.45779						
	0.43800						AVRG		0.48183		6.27832	
56 4-Bromophenyl-phenylether	0.24194	0.21358	0.21802	0.21684	0.22551	0.22344						
	0.22256						AVRG		0.22313		4.15933	
57 Hexachlorobenzene	0.30710	0.28329	0.28763	0.27321	0.27683	0.27013						
	0.26191						AVRG		0.28001		5.22545	
58 Pentachlorophenol	0.15074	0.16509	0.18887	0.18922	0.20807	0.20324						
	0.20185						AVRG		0.18673		11.42453	
60 Phenanthrene	1.20922	1.07453	1.06296	1.00313	1.06202	1.02943						
	1.02293						AVRG		1.06632		6.37828	
61 Anthracene	1.11703	1.02015	1.06543	1.04831	1.10358	1.09925						
	1.06181						AVRG		1.07365		3.21436	
62 Carbazole	0.94108	0.86167	0.87784	0.65476	0.51676	0.65824						
	0.74419						AVRG		0.75065		20.14812	<-

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Cal Date : 28-Jan-2013 12:34 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	1.11890	0.99204	1.07832	1.11232	1.23021	1.24150					
	1.24670						AVRG		1.14571		8.47014
64 Fluoranthene	1.28527	1.12599	1.21902	1.18994	1.27165	1.24630					
	1.25777						AVRG		1.22799		4.50231
65 Pyrene	1.17011	1.06492	1.14258	1.13631	1.15430	1.15777					
	1.14963						AVRG		1.13938		3.03479
67 Butylbenzylphthalate	0.41650	0.36082	0.43017	0.43330	0.46321	0.46708					
	0.45389						AVRG		0.43214		8.44745
68 Benzo(a)anthracene	1.19920	1.07431	1.12286	1.10780	1.09980	1.11248					
	1.09644						AVRG		1.11613		3.55235
70 3,3'-Dichlorobenzidine	0.58480	0.52082	0.47361	0.38174	0.35778	0.46977					
	0.47574						AVRG		0.46632		16.63286
71 Chrysene	1.13171	1.02241	1.01786	0.97103	0.98519	0.98069					
	0.96753						AVRG		1.01092		5.68546

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
72 bis(2-Ethylhexyl)phthalate	0.59458	0.50606	0.51947	0.53003	0.53141	0.51142						
	0.50438							AVRG		0.52819		5.90419
73 Di-n-octylphthalate	1.15851	1.02427	0.98247	0.92974	0.93393	0.91460						
	0.88657							AVRG		0.97573		9.48185
74 Benzo(b)fluoranthene	1.20608	1.10628	1.09252	1.14920	1.14101	1.20366						
	1.21674							AVRG		1.15936		4.33609
75 Benzo(k)fluoranthene	1.42017	1.25965	1.28978	1.20526	1.26889	1.16546						
	1.15821							AVRG		1.25249		7.17965
187 Total Benzofluoranthenes	1.23756	1.13080	1.13020	1.11091	1.13997	1.11859						
	1.12045							AVRG		1.14121		3.81526
76 Benzo(a)pyrene	1.07669	0.94944	0.97894	0.98320	1.01372	1.00840						
	1.00814							AVRG		1.00265		3.95585
78 Indeno(1,2,3-cd)pyrene	1.25868	1.15059	1.21659	1.22284	1.27651	1.27173						
	1.25832							AVRG		1.23647		3.58261

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
79 Dibenzo(a,h)anthracene	0.97137	0.92360	0.98583	0.98269	1.00428	1.00142						
	0.98469						AVRG		0.97912		2.75358	
80 Benzo(g,h,i)perylene	1.08126	1.00992	1.04627	1.04488	1.08346	1.07955						
	1.08065						AVRG		1.06086		2.64699	
90 N-Nitrosodimethylamine	0.83322	0.73286	0.74717	0.73648	0.79641	0.75614						
	0.72459						AVRG		0.76098		5.20213	
91 Aniline	4.03355	3.60799	3.69841	3.54445	3.67007	3.46281						
	3.21579						AVRG		3.60472		6.90741	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
93 Benzidine	+++++	0.37327	0.35642	0.20770	0.16127	0.19301						
	0.22575						AVRG		0.25290		35.35224	<-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
99 Perylene	1.31908	1.13841	1.15956	1.11360	1.11501	1.11215	1.10824						
								AVRG		1.15229		6.58107	
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	0.66617	0.65238	0.65710	0.63694	0.68053	0.63792	0.61262						
								AVRG		0.64909		3.42053	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.30451	0.28895	0.29558	0.29116	0.30141	0.30051						
	0.30173						AVRG		0.29769		1.97814	
189 N-Nitrosomethylethylamine	0.56360	0.54392	0.55233	0.53833	0.57892	0.55478						
	0.53912						AVRG		0.55300		2.63905	
$ 1 2-Fluorophenol	1.34632	1.22090	1.31944	1.24951	1.32743	1.27358						
	1.21571						AVRG		1.27898		4.13634	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.63984	1.52897	1.54799	1.55779	1.64552	1.60078						
	1.58876						AVRG		1.58709		2.83567	
$ 5 2-Chlorophenol-d4	1.45363	1.36836	1.39076	1.34459	1.38932	1.36694						
	1.30596						AVRG		1.37422		3.31230	
$ 10 1,2-Dichlorobenzene-d4	1.18806	0.99936	1.00074	0.95728	0.97859	0.99252						
	0.95272						AVRG		1.00989		8.00955	

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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	0.39550	0.35376	0.36820	0.36061	0.37202	0.36662					
	0.36760						AVRG		0.36919		3.53490
$ 36 2-Fluorobiphenyl	1.49260	1.36294	1.37060	1.34186	1.36884	1.32778					
	1.34117						AVRG		1.37225		4.04118
$ 55 2,4,6-Tribromophenol	0.24314	0.24083	0.25407	0.26157	0.26265	0.26204					
	0.26253						AVRG		0.25526		3.75063
$ 66 Terphenyl-d14	0.80516	0.73645	0.78962	0.76124	0.76780	0.77440					
	0.74332						AVRG		0.76828		3.16113
$ 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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 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.

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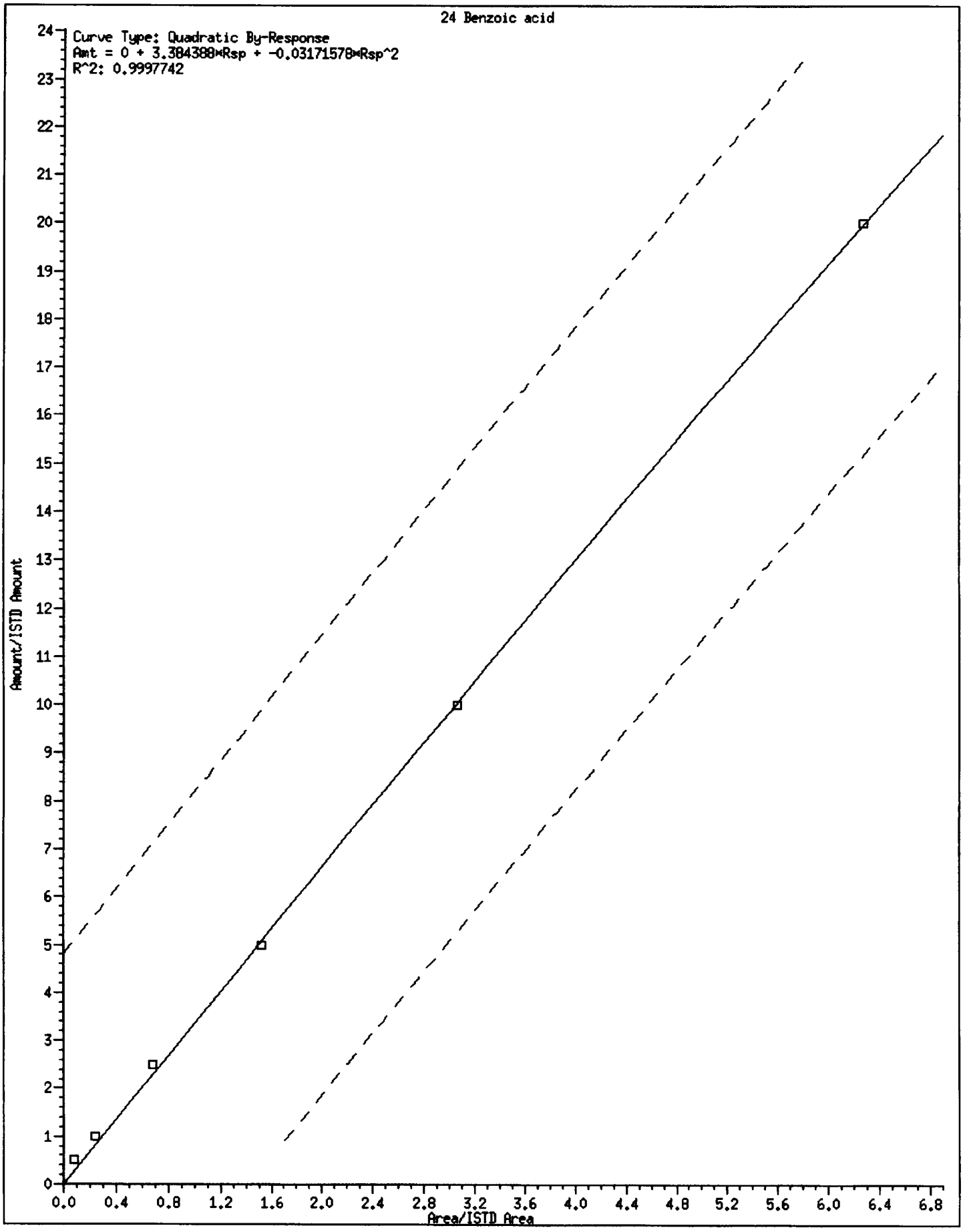
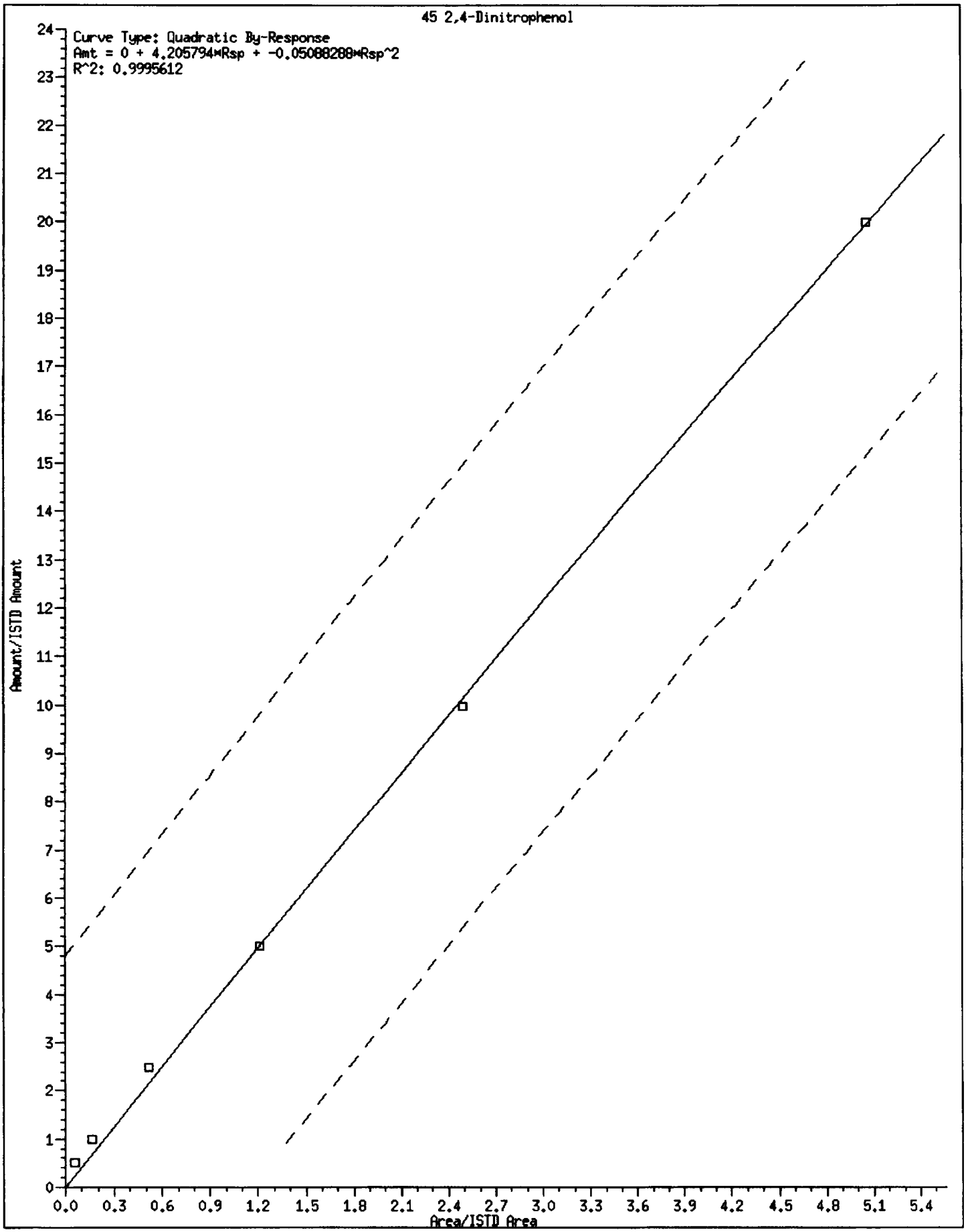
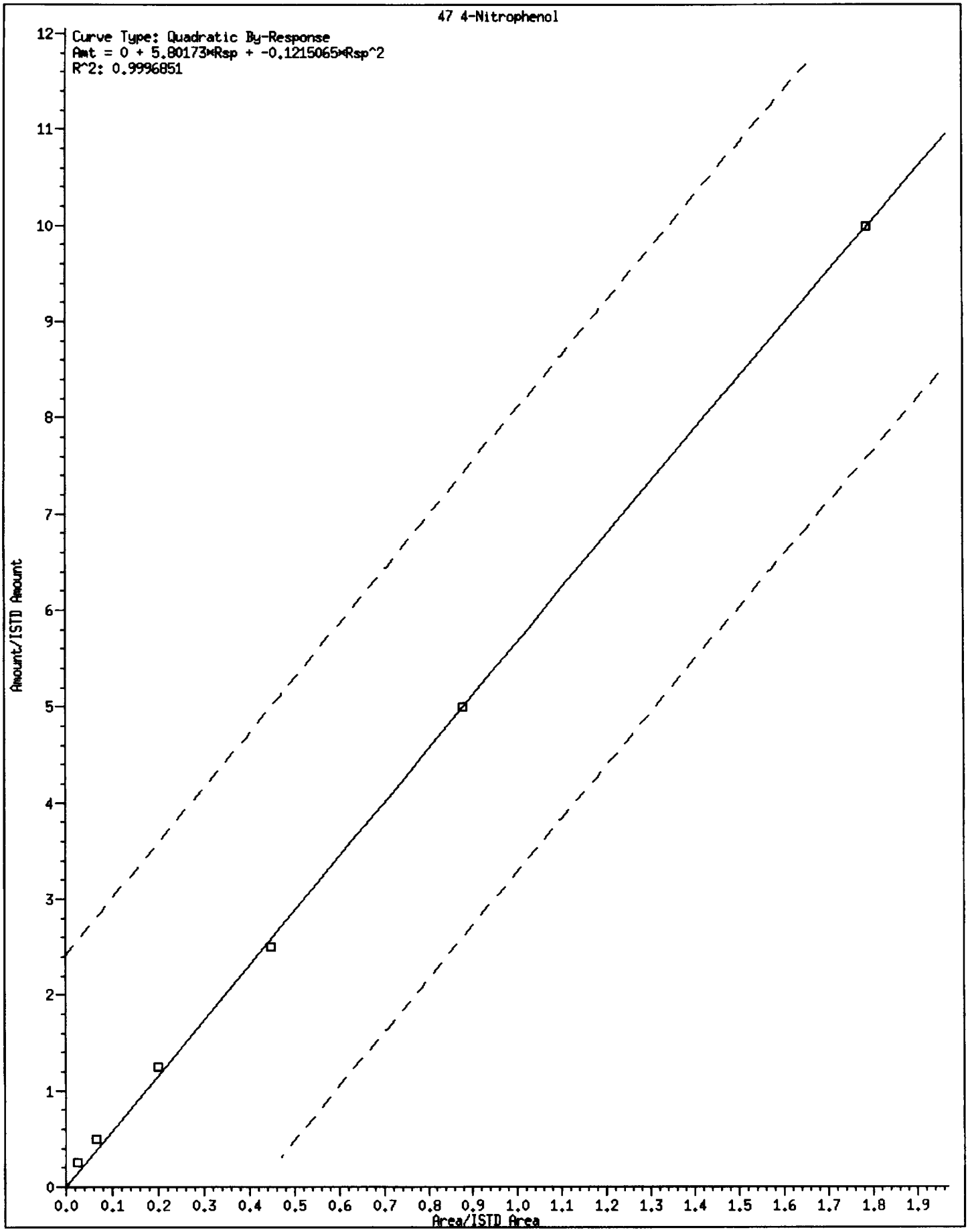
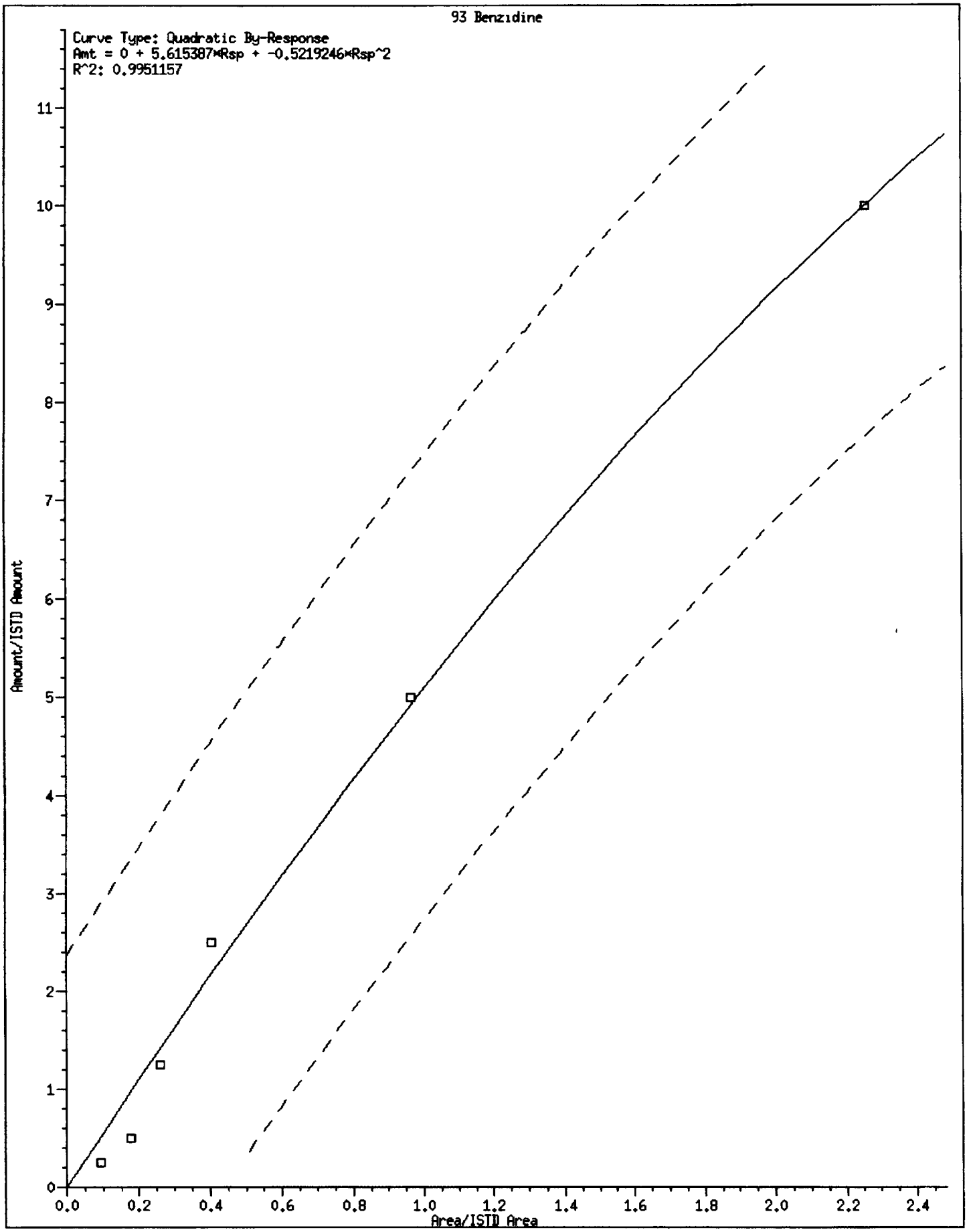
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

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


24 Benzoic acid
Curve Type: Quadratic By-Response
Amt = 0 + 3.384388*Rsp + -0.03171578*Rsp^2
R^2: 0.9997742
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
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


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 4.205794*Rsp + -0.05088288*Rsp^2
R^2: 0.9995612
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
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


47 4-Nitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 5.80173*Rsp + -0.1215065*Rsp^2
R^2: 0.9996851
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
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


93 Benzidine
Curve Type: Quadratic By-Response
Amt = 0 + 5.615387*Rsp + -0.5219246*Rsp^2
R^2: 0.9951157
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
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Quant Method : ISTD
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Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130125.b/ic0125c.d
Level 2: /chem1/nt10.i/20130125.b/ic0125h.d
Level 3: /chem1/nt10.i/20130125.b/ic0125e.d
Level 4: /chem1/nt10.i/20130125.b/ic0125f.d
Level 5: /chem1/nt10.i/20130125.b/ic0125a.d
Level 6: /chem1/nt10.i/20130125.b/ic0125d.d
Level 7: /chem1/nt10.i/20130125.b/ic0125b.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	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
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	0.32876	0.34403	0.37326	0.38202	0.39296	0.39166	0.39526						
								AVRG		0.37257		7.03242	
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	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
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)	1.19800	1.13498	1.18460	1.15565	1.17192	1.12589						
	1.07570						AVRG		1.14954		3.61126	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.68712	0.61568	0.61713	0.60970	0.62479	0.62906						
	0.62899						AVRG		0.63035		4.13400	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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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	1.85175	1.68940	1.64707	1.63733	1.68988	1.61673					
	1.56109						AVRG		1.67046		5.47002
4 Bis(2-Chloroethyl)ether	1.40493	1.30334	1.30347	1.24707	1.28325	1.21128					
	1.14349						AVRG		1.27098		6.47097

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.59520	1.46146	1.47707	1.40489	1.45513	1.41902					
	1.36285						AVRG		1.45366		5.06063
7 1,3-Dichlorobenzene	1.83372	1.63504	1.58082	1.51847	1.53497	1.52312					
	1.44646						AVRG		1.58180		7.92392
9 1,4-Dichlorobenzene	1.82470	1.55544	1.60187	1.50303	1.51800	1.51039					
	1.45049						AVRG		1.56627		7.86403
11 Benzyl alcohol	0.84043	0.76875	0.79217	0.77311	0.81313	0.81712					
	0.79116						AVRG		0.79941		3.20420
12 1,2-Dichlorobenzene	1.73768	1.52346	1.51327	1.44648	1.47158	1.44915					
	1.40064						AVRG		1.50604		7.32876
13 2-Methylphenol	1.34993	1.22001	1.24558	1.22322	1.30059	1.26671					
	1.22080						AVRG		1.26098		3.89432
14 2,2'-oxybis(1-Chloropropane)	0.48018	0.44753	0.44284	0.44270	0.44800	0.44534					
	0.42355						AVRG		0.44716		3.75395

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.34226	1.29197	1.31371	1.30699	1.33604	1.31349					
	1.27512						AVRG		1.31137		1.78362
16 N-Nitroso-di-n-propylamine	0.91573	0.79575	0.85580	0.81875	0.86236	0.84584					
	0.80313						AVRG		0.84248		4.90461
17 Hexachloroethane	0.67992	0.60175	0.63806	0.59248	0.60974	0.61412					
	0.59743						AVRG		0.61907		4.95719
19 Nitrobenzene	0.38734	0.34048	0.34857	0.34062	0.34785	0.34389					
	0.34151						AVRG		0.35004		4.79352
20 Isophorone	0.63301	0.56793	0.60847	0.59443	0.62728	0.61846					
	0.62125						AVRG		0.61012		3.68947
21 2-Nitrophenol	0.19332	0.18421	0.20543	0.20796	0.21920	0.21663					
	0.21298						AVRG		0.20568		6.19855
22 2,4-Dimethylphenol	0.37623	0.34842	0.35856	0.34561	0.35338	0.34129					
	0.33058						AVRG		0.35058		4.10928

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.42114	0.39616	0.38461	0.37952	0.38304	0.36431					
	0.36096						AVRG		0.38425		5.27643
24 Benzoic acid	+++++	14218	44455	119275	270210	507039					
	1036662						QUAD	0.000e+00	3.38439	-0.03172	0.99977
25 2,4-Dichlorophenol	0.31804	0.29394	0.30839	0.30694	0.31451	0.30586					
	0.29711						AVRG		0.30640		2.81805
26 1,2,4-Trichlorobenzene	0.40294	0.36312	0.35495	0.33490	0.33893	0.32931					
	0.31675						AVRG		0.34870		8.17173
28 Naphthalene	1.17113	1.06629	1.04085	1.00184	1.01216	1.00690					
	0.98667						AVRG		1.04083		6.08299
29 4-Chloroaniline	0.43597	0.40727	0.41596	0.40868	0.42429	0.41696					
	0.42308						AVRG		0.41889		2.36753
30 Hexachlorobutadiene	0.23385	0.21233	0.22032	0.21378	0.21418	0.21548					
	0.21128						AVRG		0.21732		3.61019

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26481	0.27149	0.29550	0.29260	0.31285	0.31892					
	0.31685						AVRG		0.29615		7.33327
32 2-Methylnaphthalene	0.73829	0.66758	0.67440	0.65675	0.70171	0.68317					
	0.68851						AVRG		0.68720		3.90226
33 Hexachlorocyclopentadiene	0.44473	0.40757	0.44583	0.44429	0.47974	0.46666					
	0.46906						AVRG		0.45113		5.27242
34 2,4,6-Trichlorophenol	0.37875	0.37012	0.40921	0.40113	0.41623	0.41485					
	0.41565						AVRG		0.40085		4.72757
35 2,4,5-Trichlorophenol	0.37884	0.39598	0.42331	0.43767	0.44881	0.45127					
	0.44592						AVRG		0.42597		6.65640
37 2-Chloronaphthalene	1.23689	1.06915	1.09647	1.07749	1.10903	1.07360					
	1.07168						AVRG		1.10490		5.43307
38 2-Nitroaniline	0.21672	0.22323	0.25658	0.26793	0.28461	0.28174					
	0.28315						AVRG		0.25914		11.03790

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	20 Level 7										
39 Dimethylphthalate	1.30877	1.22841	1.23078	1.18054	1.21915	1.17353					
	1.12753						AVRG		1.20981		4.72547
40 Acenaphthylene	1.86378	1.82126	1.85629	1.80591	1.82377	1.74121					
	1.70079						AVRG		1.80186		3.32697
41 2,6-Dinitrotoluene	0.25669	0.25630	0.27994	0.28469	0.29374	0.28380					
	0.27957						AVRG		0.27639		5.20021
43 3-Nitroaniline	0.22713	0.25471	0.29079	0.27321	0.26059	0.26304					
	0.21716						AVRG		0.25523		10.01066
44 Acenaphthene	1.18524	1.13444	1.11843	1.08189	1.09441	1.06919					
	1.05036						AVRG		1.10485		4.11445
45 2,4-Dinitrophenol	+++++	5902	18391	56078	134737	267779					
	539709						QUAD	0.000e+00	4.20579	-0.05088	0.99956
46 Dibenzofuran	1.68997	1.54872	1.56513	1.49747	1.52707	1.47995					
	1.44776						AVRG		1.53658		5.12483

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	+++++	2579	7272	21754	49763	94479					
	191069						QUAD	0.000e+00	5.80173	-0.12151	0.99969
48 2,4-Dinitrotoluene	0.31718	0.34651	0.38077	0.38891	0.40653	0.39149					
	0.38462						AVRG		0.37372		8.26839
49 Fluorene	1.40265	1.35139	1.32070	1.30322	1.29668	1.24547					
	1.21601						AVRG		1.30516		4.79174
50 Diethylphthalate	1.35866	1.23097	1.28760	1.26224	1.29138	1.23346					
	1.20698						AVRG		1.26733		4.00618
51 4-Chlorophenyl-phenylether	0.64889	0.64348	0.63067	0.59203	0.60007	0.57862					
	0.56392						AVRG		0.60824		5.43948
52 4-Nitroaniline	0.24294	0.27239	0.27818	0.26676	0.27205	0.28138					
	0.27241						AVRG		0.26944		4.67658
53 4,6-Dinitro-2-methylphenol	0.11263	0.13500	0.16003	0.16959	0.18328	0.18067					
	0.18008						AVRG		0.16018		16.77594

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	0.52611	0.48647	0.51232	0.47864	0.47347	0.45779					
	0.43800						AVRG		0.48183		6.27832
56 4-Bromophenyl-phenylether	0.24194	0.21358	0.21802	0.21684	0.22551	0.22344					
	0.22256						AVRG		0.22313		4.15933
57 Hexachlorobenzene	0.30710	0.28329	0.28763	0.27321	0.27683	0.27013					
	0.26191						AVRG		0.28001		5.22545
58 Pentachlorophenol	0.15074	0.16509	0.18887	0.18922	0.20807	0.20324					
	0.20185						AVRG		0.18673		11.42453
60 Phenanthrene	1.20922	1.07453	1.06296	1.00313	1.06202	1.02943					
	1.02293						AVRG		1.06632		6.37828
61 Anthracene	1.11703	1.02015	1.06543	1.04831	1.10358	1.09925					
	1.06181						AVRG		1.07365		3.21436
62 Carbazole	+++++	0.86167	0.87784	0.64971	0.51676	0.65824					
	0.73841						AVRG		0.71710		19.25543

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	1.11890	0.99204	1.07832	1.11232	1.23021	1.24150					
	1.24670						AVRG		1.14571		8.47014
64 Fluoranthene	1.28527	1.12599	1.21902	1.18994	1.27165	1.24630					
	1.25777						AVRG		1.22799		4.50231
65 Pyrene	1.17011	1.06492	1.14258	1.13631	1.15430	1.15777					
	1.14963						AVRG		1.13938		3.03479
67 Butylbenzylphthalate	0.41650	0.36082	0.43017	0.43330	0.46321	0.46708					
	0.45389						AVRG		0.43214		8.44745
68 Benzo(a)anthracene	1.19920	1.07431	1.12286	1.10780	1.09980	1.11248					
	1.09644						AVRG		1.11613		3.55235
70 3,3'-Dichlorobenzidine	0.58480	0.52082	0.47361	0.38174	0.35778	0.46977					
	0.47574						AVRG		0.46632		16.63286
71 Chrysene	1.13171	1.02241	1.01786	0.97103	0.98519	0.98069					
	0.96753						AVRG		1.01092		5.68546

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.59458	0.50606	0.51947	0.53003	0.53141	0.51142					
	0.50438						AVRG		0.52819		5.90419
73 Di-n-octylphthalate	1.15851	1.02427	0.98247	0.92974	0.93393	0.91460					
	0.88657						AVRG		0.97573		9.48185
74 Benzo(b)fluoranthene	1.20608	1.10628	1.09252	1.14920	1.14101	1.20366					
	1.21674						AVRG		1.15936		4.33609
75 Benzo(k)fluoranthene	1.42017	1.25965	1.28978	1.20526	1.26889	1.16546					
	1.15821						AVRG		1.25249		7.17965
187 Total Benzofluoranthenes	1.23756	1.13080	1.13020	1.11091	1.13997	1.11859					
	1.12045						AVRG		1.14121		3.81526
76 Benzo(a)pyrene	1.07669	0.94944	0.97894	0.98320	1.01372	1.00840					
	1.00814						AVRG		1.00265		3.95585
78 Indeno(1,2,3-cd)pyrene	1.25868	1.15059	1.21659	1.22284	1.27651	1.27173					
	1.25832						AVRG		1.23647		3.58261

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	Coefficients m1	Coefficients m2	%RSD or R^2
79 Dibenzo(a,h)anthracene	0.97137	0.92360	0.98583	0.98269	1.00428	1.00142	0.98469	AVRG		0.97912		2.75358
80 Benzo(g,h,i)perylene	1.08126	1.00992	1.04627	1.04488	1.08346	1.07955	1.08065	AVRG		1.06086		2.64699
90 N-Nitrosodimethylamine	0.83322	0.73286	0.74717	0.73648	0.79641	0.75614	0.72459	AVRG		0.76098		5.20213
91 Aniline	4.03355	3.60799	3.69841	3.54445	3.67007	3.46281	3.21579	AVRG		3.60472		6.90741
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	18859	37924	54172	86152	196119	451512	QUAD	0.000e+00	5.61539	-0.52192	0.99512
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
99 Perylene	1.31908	1.13841	1.15956	1.11360	1.11501	1.11215						
	1.10824						AVRG		1.15229		6.58107	
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	0.66617	0.65238	0.65710	0.63694	0.68053	0.63792						
	0.61262						AVRG		0.64909		3.42053	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	0.30451	0.28895	0.29558	0.29116	0.30141	0.30051						
	0.30173						AVRG		0.29769		1.97814	
189 N-Nitrosomethylethylamine	0.56360	0.54392	0.55233	0.53833	0.57892	0.55478						
	0.53912						AVRG		0.55300		2.63905	
$ 1 2-Fluorophenol	1.34632	1.22090	1.31944	1.24951	1.32743	1.27358						
	1.21571						AVRG		1.27898		4.13634	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.63984	1.52897	1.54799	1.55779	1.64552	1.60078						
	1.58876						AVRG		1.58709		2.83567	
$ 5 2-Chlorophenol-d4	1.45363	1.36836	1.39076	1.34459	1.38932	1.36694						
	1.30596						AVRG		1.37422		3.31230	
$ 10 1,2-Dichlorobenzene-d4	1.18806	0.99936	1.00074	0.95728	0.97859	0.99252						
	0.95272						AVRG		1.00989		8.00955	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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	0.39550	0.35376	0.36820	0.36061	0.37202	0.36662					
	0.36760						AVRG		0.36919		3.53490
$ 36 2-Fluorobiphenyl	1.49260	1.36294	1.37060	1.34186	1.36884	1.32778					
	1.34117						AVRG		1.37225		4.04118
$ 55 2,4,6-Tribromophenol	0.24314	0.24083	0.25407	0.26157	0.26265	0.26204					
	0.26253						AVRG		0.25526		3.75063
$ 66 Terphenyl-d14	0.80516	0.73645	0.78962	0.76124	0.76780	0.77440					
	0.74332						AVRG		0.76828		3.16113
$ 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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 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

Data file : /chem1/nt10.i/20130125.b/ic0125a.d
Lab Smp Id: IC0125A
Inj Date : 25-JAN-2013 12:59
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 12:59 Cal File: ic0125a.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	6.719	6.720	(0.740)	77361	5.00000	5.189
$	2 Phenol-d5	99	8.435	8.428	(0.928)	95899	5.00000	5.184
	3 Phenol	94	8.458	8.451	(0.931)	98484	5.00000	5.058
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	80968	5.00000	5.055
	4 Bis(2-Chloroethyl)ether	93	8.620	8.621	(0.949)	74786	5.00000	5.048
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	84803	5.00000	5.005
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	89456	5.00000	4.852
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	46623	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	88467	5.00000	4.846
$	10 1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	57031	5.00000	4.845
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	85762	5.00000	4.886
	11 Benzyl alcohol	108	9.387	9.388	(1.033)	47388	5.00000	5.086
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	26109	5.00000	5.009
	13 2-Methylphenol	108	9.651	9.644	(1.062)	75797	5.00000	5.157
	17 Hexachloroethane	117	10.132	10.133	(1.115)	35535	5.00000	4.925
	16 N-Nitroso-di-n-propylamine	70	10.000	9.993	(1.101)	50257	5.00000	5.118
	15 4-Methylphenol	108	9.938	9.939	(1.094)	77863	5.00000	5.094
$	18 Nitrobenzene-d5	82	10.264	10.257	(0.873)	82299	5.00000	5.038
	19 Nitrobenzene	77	10.303	10.296	(0.876)	76953	5.00000	4.969
	20 Isophorone	82	10.792	10.785	(0.918)	138769	5.00000	5.141
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	48492	5.00000	5.329
	22 2,4-Dimethylphenol	107	11.070	11.063	(0.942)	156350	10.0000	10.08
	23 Bis(2-Chloroethoxy)methane	93	11.278	11.271	(0.959)	84737	5.00000	4.984
	24 Benzoic acid	105	11.325	11.186	(0.963)	270210	20.0000	20.37
	25 2,4-Dichlorophenol	162	11.471	11.464	(0.976)	139155	10.0000	10.26
	26 1,2,4-Trichlorobenzene	180	11.671	11.664	(0.993)	74980	5.00000	4.860
*	27 Naphthalene-d8	136	11.756	11.749	(1.000)	176978	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	11.795	11.795	(1.003)	223912	5.00000	4.862
	29 4-Chloroaniline	127	11.965	11.957	(1.018)	187727	10.0000	10.13
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	47381	5.00000	4.928
	31 4-Chloro-3-methylphenol	107	13.025	13.017	(1.108)	138421	10.0000	10.56
	32 2-Methylnaphthalene	142	13.311	13.311	(1.132)	155233	5.00000	5.106
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.882)	132975	10.0000	10.63
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.893)	115372	10.0000	10.38
	35 2,4,5-Trichlorophenol	196	14.069	14.070	(0.898)	124402	10.0000	10.54
$	36 2-Fluorobiphenyl	172	14.178	14.170	(0.905)	189707	5.00000	4.988
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	153701	5.00000	5.019
	38 2-Nitroaniline	65	14.681	14.674	(0.937)	78889	10.0000	10.98
	39 Dimethylphthalate	163	15.176	15.169	(0.969)	168962	5.00000	5.039
	40 Acenaphthylene	152	15.315	15.316	(0.978)	252756	5.00000	5.061
	41 2,6-Dinitrotoluene	165	15.308	15.300	(0.977)	81419	10.0000	10.63
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	110872	4.00000	
	43 3-Nitroaniline	138	15.609	15.594	(0.997)	72229	10.0000	10.21
	44 Acenaphthene	153	15.733	15.726	(1.004)	151674	5.00000	4.953
	45 2,4-Dinitrophenol	184	15.834	15.826	(1.011)	134737	20.0000	20.14
	46 Dibenzofuran	168	16.089	16.089	(1.027)	211637	5.00000	4.969
	47 4-Nitrophenol	109	15.980	15.973	(1.020)	49763	10.0000	10.32
	48 2,4-Dinitrotoluene	165	16.181	16.174	(1.033)	112681	10.0000	10.88
	50 Diethylphthalate	149	16.761	16.754	(1.070)	178972	5.00000	5.095
	49 Fluorene	166	16.862	16.855	(1.077)	179707	5.00000	4.968
	51 4-Chlorophenyl-phenylether	204	16.877	16.870	(1.077)	83164	5.00000	4.933
	52 4-Nitroaniline	138	16.985	16.963	(1.084)	75406	10.0000	10.10
	53 4,6-Dinitro-2-methylphenol	198	17.086	17.071	(0.902)	172550	20.0000	22.88
	54 N-Nitrosodiphenylamine	169	17.155	17.148	(0.906)	111436	5.00000	4.913
$	55 2,4,6-Tribromophenol	330	17.440	17.433	(1.113)	36401	5.00000	5.145
	56 4-Bromophenyl-phenylether	248	17.965	17.957	(0.949)	53077	5.00000	5.053
	57 Hexachlorobenzene	284	18.289	18.274	(0.966)	65155	5.00000	4.943
	58 Pentachlorophenol	266	18.676	18.669	(0.986)	97943	10.0000	11.14
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	188290	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	249959	5.00000	4.980
	61 Anthracene	178	19.086	19.079	(1.008)	259741	5.00000	5.139
	62 Carbazole	167	19.434	19.435	(1.026)	121626	5.00000	3.449
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	289545	5.00000	5.369
	64 Fluoranthene	202	21.399	21.392	(1.130)	299299	5.00000	5.178
	65 Pyrene	202	21.817	21.810	(0.909)	308315	5.00000	5.065
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	205081	5.00000	4.997
	67 Butylbenzylphthalate	149	23.079	23.072	(0.961)	123724	5.00000	5.360
	68 Benzo(a)anthracene	228	23.977	23.970	(0.999)	293758	5.00000	4.927
*	69 Chrysene-d12	240	24.008	24.001	(1.000)	213681	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.954	23.947	(0.998)	191126	10.0000	7.672
	71 Chrysene	228	24.055	24.048	(1.002)	263146	5.00000	4.873
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	175471	5.00000	5.030
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	264159	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	308384	5.00000	4.786

	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	25.804	25.789	(0.973)	297496	5.00000	4.921
	75 Benzo(k)fluoranthene	252	25.843	25.836	(0.975)	330837	5.00000	5.065
	76 Benzo(a)pyrene	252	26.401	26.393	(0.996)	264308	5.00000	5.055
*	77 Perylene-d12	264	26.509	26.502	(1.000)	208584	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.942	28.919	(1.092)	332825	5.00000	5.162
	79 Dibenzo(a,h)anthracene	278	28.957	28.942	(1.092)	261845	5.00000	5.128
	80 Benzo(g,h,i)perylene	276	29.648	29.633	(1.118)	282491	5.00000	5.107
	90 N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	92827	10.0000	10.47
	91 Aniline	93	8.512	8.505	(0.937)	213887	5.00000	5.091
	93 Benzidine	184	21.655	21.648	(0.902)	86152	10.0000	8.717
	103 Pyridine	79	4.457	4.481	(0.491)	79321	10.0000	10.48
	105 1-methylnaphthalene	142	13.551	13.544	(1.153)	138218	5.00000	4.956
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.224	17.217	(1.100)	162417	5.00000	5.097
	187 Total Benzofluoranthenes	252	25.843	25.836	(0.975)	594451	10.0000	9.989
	99 Perylene	252	26.563	26.548	(1.002)	290716	5.00000	4.838
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	16.467	16.460	(1.051)	54461	5.00000	5.274
	188 2,6-Dichlorophenol	162	11.980	11.973	(1.019)	133358	10.0000	10.12
	189 N-Nitrosomethylethylamine	88	5.901	5.909	(0.650)	67477	10.0000	10.47

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125a.d
Lab Smp Id: IC0125A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	46623	0.00
27 Naphthalene-d8	176978	88489	353956	176978	0.00
42 Acenaphthene-d10	110872	55436	221744	110872	0.00
59 Phenanthrene-d10	188290	94145	376580	188290	0.00
69 Chrysene-d12	213681	106840	427362	213681	0.00
134 Di-n-octylphthala	264159	132080	528318	264159	0.00
77 Perylene-d12	208584	104292	417168	208584	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.76	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

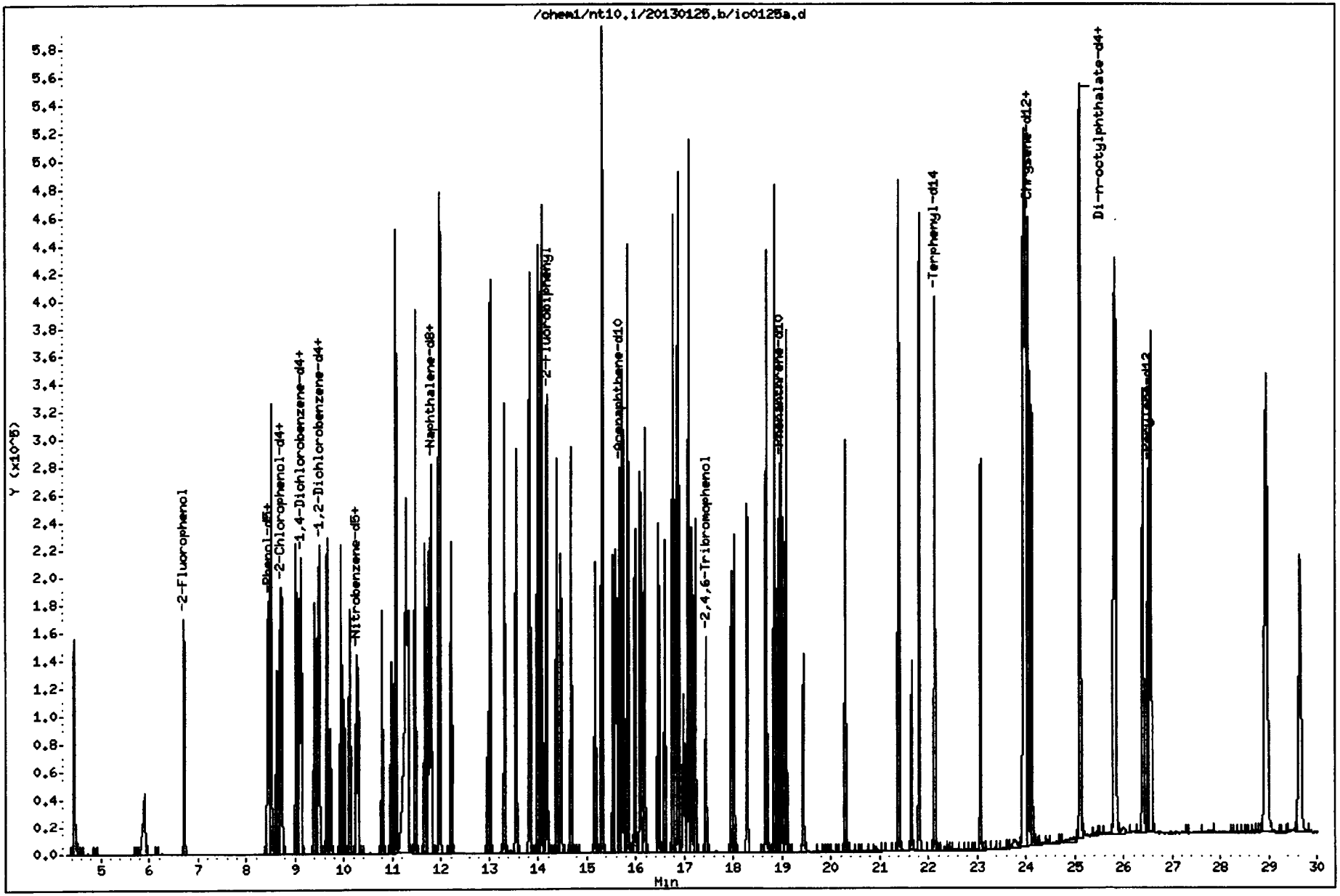
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/ic0125a.d
Date : 25-JAN-2013 12:59
Client ID:
Sample Info: IC0125A

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125a.d

Lab ID: IC0125A, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YE 4/28/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125b.d
Lab Smp Id: IC0125B
Inj Date : 25-JAN-2013 13:36
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 13:36 Cal File: ic0125b.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	6.728	6.720	(0.741)	264606	20.0000	19.01
$	2 Phenol-d5	99	8.451	8.428	(0.930)	345802	20.0000	20.02
	3 Phenol	94	8.474	8.451	(0.933)	339779	20.0000	18.69
$	5 2-Chlorophenol-d4	132	8.706	8.698	(0.958)	284249	20.0000	19.01
	4 Bis(2-Chloroethyl)ether	93	8.629	8.621	(0.950)	248887	20.0000	17.99
	6 2-Chlorophenol	128	8.737	8.729	(0.962)	296632	20.0000	18.75
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	314829	20.0000	18.29
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	43531	4.00000	
	9 1,4-Dichlorobenzene	146	9.124	9.116	(1.004)	315706	20.0000	18.52
$	10 1,2-Dichlorobenzene-d4	152	9.473	9.465	(1.043)	207364	20.0000	18.87
	12 1,2-Dichlorobenzene	146	9.504	9.496	(1.046)	304856	20.0000	18.60
	11 Benzyl alcohol	108	9.403	9.388	(1.035)	172201	20.0000	19.79
	14 2,2'-oxybis(1-Chloropropane)	121	9.729	9.722	(1.071)	92188	20.0000	18.94
	13 2-Methylphenol	108	9.659	9.644	(1.063)	265714	20.0000	19.36
	17 Hexachloroethane	117	10.133	10.133	(1.115)	130033	20.0000	19.30
	16 N-Nitroso-di-n-propylamine	70	10.016	9.993	(1.103)	174805	20.0000	19.07
	15 4-Methylphenol	108	9.954	9.939	(1.096)	277537	20.0000	19.45
$	18 Nitrobenzene-d5	82	10.273	10.257	(0.874)	303692	20.0000	19.91
	19 Nitrobenzene	77	10.311	10.296	(0.877)	282133	20.0000	19.51
	20 Isophorone	82	10.816	10.785	(0.920)	513246	20.0000	20.37
	21 2-Nitrophenol	139	10.986	10.978	(0.934)	175952	20.0000	20.71
	22 2,4-Dimethylphenol	107	11.078	11.063	(0.942)	546216	40.0000	37.72
	23 Bis(2-Chloroethoxy)methane	93	11.286	11.271	(0.960)	298208	20.0000	18.79
	24 Benzoic acid	105	11.487	11.186	(0.977)	1036662	80.0000	79.94(M)
	25 2,4-Dichlorophenol	162	11.487	11.464	(0.977)	490916	40.0000	38.79
	26 1,2,4-Trichlorobenzene	180	11.672	11.664	(0.993)	261680	20.0000	18.17
*	27 Naphthalene-d8	136	11.757	11.749	(1.000)	165229	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	11.803	11.795	(1.004)	815133	20.0000	18.96
	29 4-Chloroaniline	127	11.981	11.957	(1.019)	699058	40.0000	40.40
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	174544	20.0000	19.44
	31 4-Chloro-3-methylphenol	107	13.033	13.017	(1.109)	523532	40.0000	42.80
	32 2-Methylnaphthalene	142	13.311	13.311	(1.132)	568813	20.0000	20.04
	33 Hexachlorocyclopentadiene	237	13.830	13.822	(0.883)	500637	40.0000	41.59
	34 2,4,6-Trichlorophenol	196	14.000	13.992	(0.894)	443629	40.0000	41.48
	35 2,4,5-Trichlorophenol	196	14.078	14.070	(0.899)	475930	40.0000	41.87
$	36 2-Fluorobiphenyl	172	14.178	14.170	(0.905)	715720	20.0000	19.55
	37 2-Chloronaphthalene	162	14.387	14.379	(0.918)	571909	20.0000	19.40
	38 2-Nitroaniline	65	14.697	14.674	(0.938)	302207	40.0000	43.71
	39 Dimethylphthalate	163	15.192	15.169	(0.970)	601710	20.0000	18.64
	40 Acenaphthylene	152	15.324	15.316	(0.978)	907637	20.0000	18.88
	41 2,6-Dinitrotoluene	165	15.324	15.300	(0.978)	298383	40.0000	40.46
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	106731	4.00000	
	43 3-Nitroaniline	138	15.625	15.594	(0.998)	231778	40.0000	34.03
	44 Acenaphthene	153	15.741	15.726	(1.005)	560530	20.0000	19.01
	45 2,4-Dinitrophenol	184	15.865	15.826	(1.013)	539709	80.0000	79.87
	46 Dibenzofuran	168	16.105	16.089	(1.028)	772605	20.0000	18.84
	47 4-Nitrophenol	109	16.012	15.973	(1.022)	191069	40.0000	39.99
	48 2,4-Dinitrotoluene	165	16.197	16.174	(1.034)	410508	40.0000	41.17
	50 Diethylphthalate	149	16.785	16.754	(1.072)	644112	20.0000	19.05
	49 Fluorene	166	16.870	16.855	(1.077)	648932	20.0000	18.63
	51 4-Chlorophenyl-phenylether	204	16.885	16.870	(1.078)	300938	20.0000	18.54
	52 4-Nitroaniline	138	17.024	16.963	(1.087)	290742	40.0000	40.44
	53 4,6-Dinitro-2-methylphenol	198	17.117	17.071	(0.903)	650220	80.0000	89.94
	54 N-Nitrosodiphenylamine	169	17.163	17.148	(0.906)	395375	20.0000	18.18
$	55 2,4,6-Tribromophenol	330	17.448	17.433	(1.114)	140098	20.0000	20.57
	56 4-Bromophenyl-phenylether	248	17.965	17.957	(0.948)	200896	20.0000	19.95
	57 Hexachlorobenzene	284	18.289	18.274	(0.965)	236417	20.0000	18.71
	58 Pentachlorophenol	266	18.684	18.669	(0.986)	364411	40.0000	43.24
*	59 Phenanthrene-d10	188	18.947	18.940	(1.000)	180535	4.00000	
	60 Phenanthrene	178	19.001	18.986	(1.003)	923370	20.0000	19.19
	61 Anthracene	178	19.094	19.079	(1.008)	958468	20.0000	19.78
	62 Carbazole	167	19.442	19.435	(1.026)	666542	20.0000	19.71 (M)
	63 Di-n-butylphthalate	149	20.301	20.294	(1.071)	1125365	20.0000	21.76
	64 Fluoranthene	202	21.400	21.392	(1.129)	1135359	20.0000	20.49
	65 Pyrene	202	21.825	21.810	(0.909)	1149677	20.0000	20.18
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	743352	20.0000	19.35
	67 Butylbenzylphthalate	149	23.080	23.072	(0.961)	453914	20.0000	21.01
	68 Benzo(a)anthracene	228	23.986	23.970	(0.999)	1096487	20.0000	19.65
*	69 Chrysene-d12	240	24.017	24.001	(1.000)	200009	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.970	23.947	(0.998)	951529	40.0000	40.81
	71 Chrysene	228	24.063	24.048	(1.002)	967573	20.0000	19.14
	72 bis(2-Ethylhexyl)phthalate	149	24.125	24.117	(0.961)	668708	20.0000	19.10
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	265158	4.00000	
	73 Di-n-octylphthalate	149	25.116	25.108	(1.001)	1175410	20.0000	18.17

	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	25.813	25.789	(0.973)	1215752	20.0000	20.99
75	Benzo(k)fluoranthene	252	25.859	25.836	(0.975)	1157269	20.0000	18.49
76	Benzo(a)pyrene	252	26.416	26.393	(0.996)	1007316	20.0000	20.11
* 77	Perylene-d12	264	26.517	26.502	(1.000)	199837	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.958	28.919	(1.092)	1257296	20.0000	20.35
79	Dibenzo(a,h)anthracene	278	28.989	28.942	(1.093)	983890	20.0000	20.11
80	Benzo(g,h,i)perylene	276	29.680	29.633	(1.119)	1079771	20.0000	20.37
90	N-Nitrosodimethylamine	74	4.457	4.442	(0.491)	315420	40.0000	38.09
91	Aniline	93	8.521	8.505	(0.938)	699933	20.0000	17.84
93	Benzidine	184	21.655	21.648	(0.902)	451512	40.0000	40.07
103	Pyridine	79	4.450	4.481	(0.490)	266680	40.0000	37.75
105	1-methylnaphthalene	142	13.551	13.544	(1.153)	519637	20.0000	19.96
111	Azobenzene (1,2-DP-Hydrazine)	77	17.240	17.217	(1.101)	574054	20.0000	18.72
187	Total Benzofluoranthenes	252	25.859	25.836	(0.975)	2239076	40.0000	39.27
99	Perylene	252	26.579	26.548	(1.002)	1107338	20.0000	19.24
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.476	16.460	(1.052)	210935	20.0000	21.22
188	2,6-Dichlorophenol	162	11.988	11.973	(1.020)	498549	40.0000	40.54
189	N-Nitrosomethylethylamine	88	5.917	5.909	(0.651)	234684	40.0000	39.00

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: ic0125b.d
Lab Smp Id: IC0125B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	43531	-6.63
27 Naphthalene-d8	176978	88489	353956	165229	-6.64
42 Acenaphthene-d10	110872	55436	221744	106731	-3.73
59 Phenanthrene-d10	188290	94145	376580	180535	-4.12
69 Chrysene-d12	213681	106840	427362	200009	-6.40
134 Di-n-octylphthala	264159	132080	528318	265158	0.38
77 Perylene-d12	208584	104292	417168	199837	-4.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.09	0.01
27 Naphthalene-d8	11.76	11.26	12.26	11.76	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.95	0.04
69 Chrysene-d12	24.01	23.51	24.51	24.02	0.03
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.52	0.03

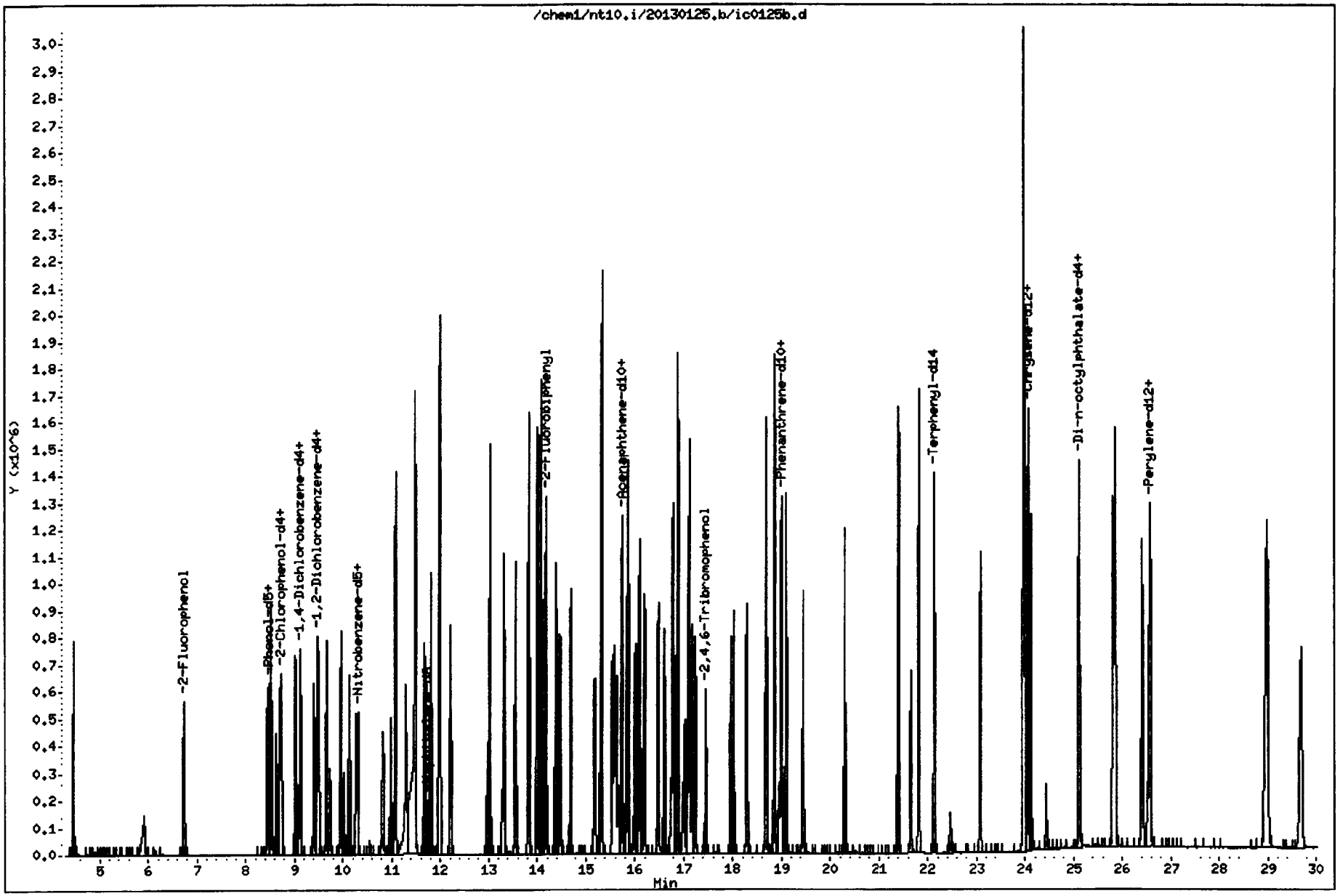
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/ic0125b.d
Date : 25-JAN-2013 13:36
Client ID:
Sample Info: IC0125B

Instrument: nt10.i

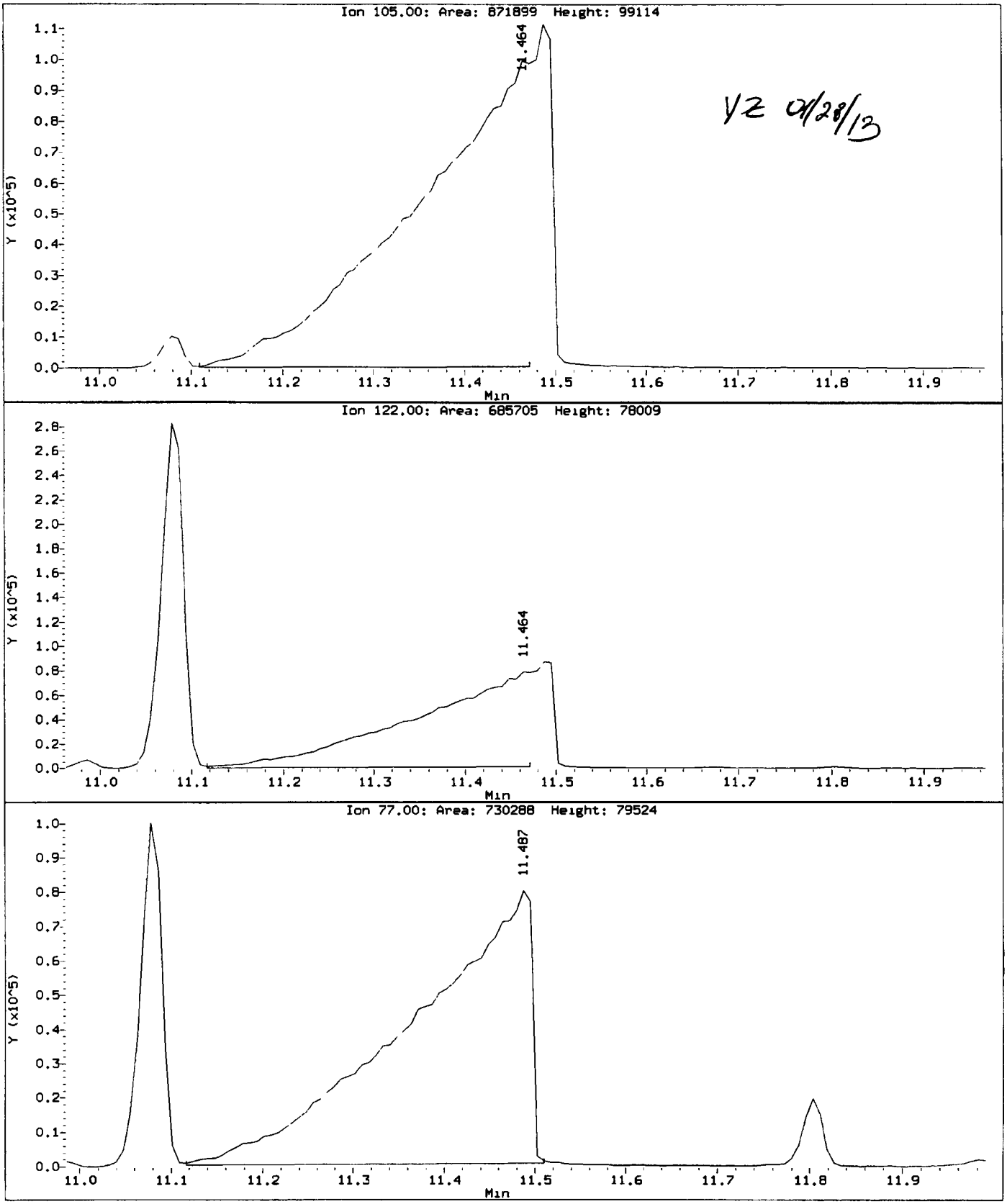
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.1/20130125.b/1c0125b.d
Injection Date: 25-JAN-2013 13:36
Instrument: nt10.1
Client Sample ID:

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

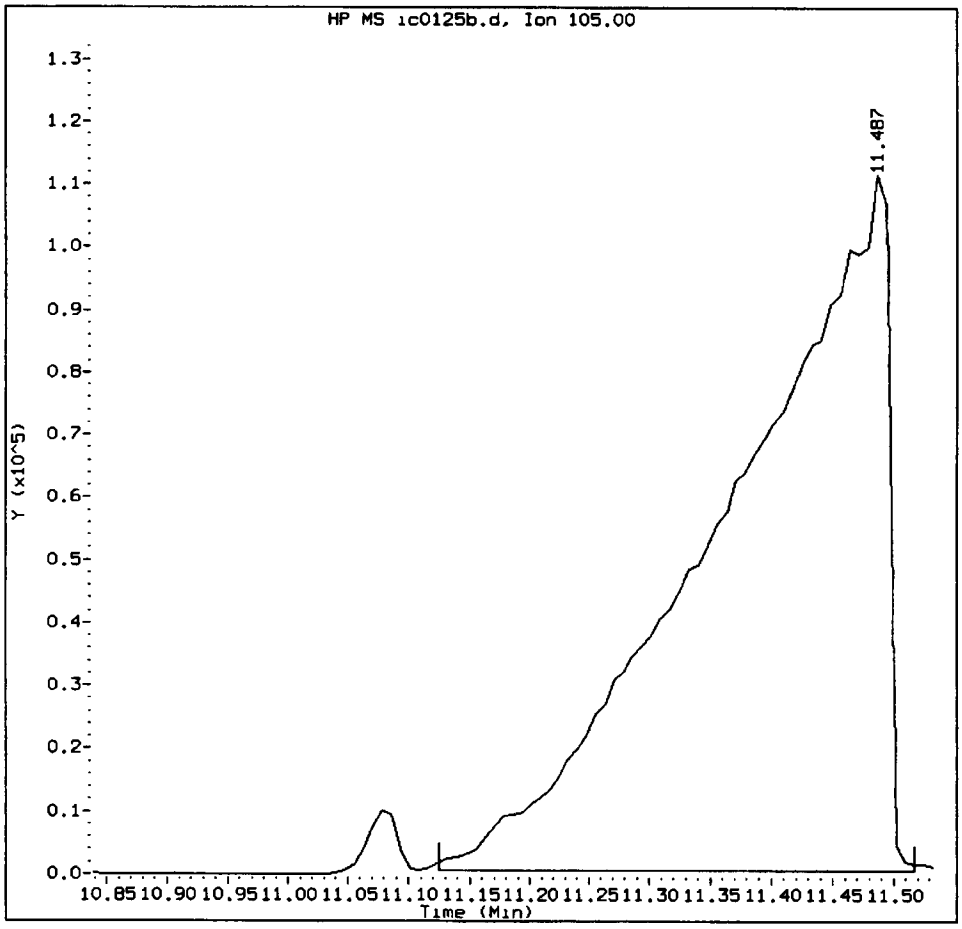


YZ 01/28/13

WLGT:00000

IC0125B, /chem1/nt10.i/20130125.b/ic0125b.d

Benzoic acid Amount: 79.94 Area: 1036662



MANUAL INTEGRATION for Benzoic acid

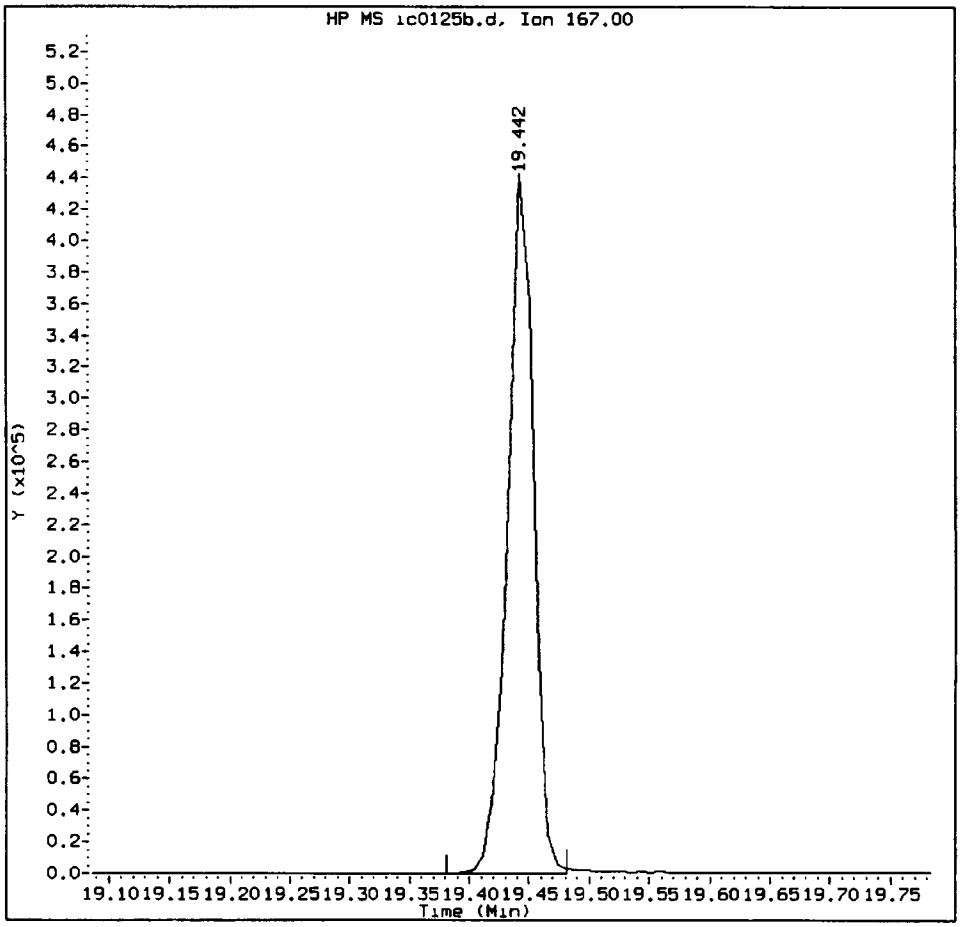
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 01/28/13

IC0125B, /chem1/nt10.i/20130125.b/ic0125b.d

Carbazole **Amount: 19.71** **Area: 666542**



MANUAL INTEGRATION for Carbazole

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

5. Other _____

Analyst: YZ **Date:** 01/22/13

CO-ELUTION SUMMARY FOR FILE - ic0125b.d

Lab ID: IC0125B, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS
15.324	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

YZ 01/28/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125c.d
Lab Smp Id: IC0125C
Inj Date : 25-JAN-2013 14:13
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 14:13 Cal File: ic0125c.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)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.720	6.720	(0.740)	2986	0.20000	0.2105
$	2 Phenol-d5	99	8.428	8.428	(0.928)	3637	0.20000	0.2066
	3 Phenol	94	8.451	8.451	(0.930)	4107	0.20000	0.2217
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	3224	0.20000	0.2116
	4 Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	3116	0.20000	0.2211
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	3538	0.20000	0.2195
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	4067	0.20000	0.2319
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	44358	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	4047	0.20000	0.2330
$	10 1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	2635	0.20000	0.2353
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	3854	0.20000	0.2308
	11 Benzyl alcohol	108	9.387	9.388	(1.033)	1864	0.20000	0.2103
	14 2,2'-oxybis(1-Chloropropane)	121	9.714	9.722	(1.069)	1065	0.20000	0.2148
	13 2-Methylphenol	108	9.644	9.644	(1.062)	2994	0.20000	0.2141
	17 Hexachloroethane	117	10.125	10.133	(1.114)	1508	0.20000	0.2197
	16 N-Nitroso-di-n-propylamine	70	10.001	9.993	(1.101)	2031	0.20000	0.2174
	15 4-Methylphenol	108	9.939	9.939	(1.094)	2977	0.20000	0.2047
$	18 Nitrobenzene-d5	82	10.257	10.257	(0.873)	3347	0.20000	0.2143
	19 Nitrobenzene	77	10.296	10.296	(0.876)	3278	0.20000	0.2213
	20 Isophorone	82	10.785	10.785	(0.918)	5357	0.20000	0.2075
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	1636	0.20000	0.1880
	22 2,4-Dimethylphenol	107	11.063	11.063	(0.942)	6368	0.40000	0.4293
	23 Bis(2-Chloroethoxy)methane	93	11.279	11.271	(0.960)	3564	0.20000	0.2192
	24 Benzoic acid	105	11.163	11.186	(0.950)	4260	0.80000	0.3406(M)
	25 2,4-Dichlorophenol	162	11.471	11.464	(0.976)	5383	0.40000	0.4152
	26 1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	3410	0.20000	0.2311
*	27 Naphthalene-d8	136	11.749	11.749	(1.000)	169256	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	11.795	11.795	(1.004)	9911	0.20000	0.2250
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	7379	0.40000	0.4163
	30 Hexachlorobutadiene	225	12.205	12.205	(1.039)	1979	0.20000	0.2152
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	4482	0.40000	0.3577
	32 2-Methylnaphthalene	142	13.303	13.311	(1.132)	6248	0.20000	0.2149
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.883)	4529	0.40000	0.3943
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.894)	3857	0.40000	0.3779
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.899)	3858	0.40000	0.3557
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	7600	0.20000	0.2175
	37 2-Chloronaphthalene	162	14.371	14.379	(0.918)	6298	0.20000	0.2239
	38 2-Nitroaniline	65	14.673	14.674	(0.937)	2207	0.40000	0.3345
	39 Dimethylphthalate	163	15.169	15.169	(0.969)	6664	0.20000	0.2164
	40 Acenaphthylene	152	15.316	15.316	(0.978)	9490	0.20000	0.2069
	41 2,6-Dinitrotoluene	165	15.300	15.300	(0.977)	2614	0.40000	0.3715
*	42 Acenaphthene-d10	164	15.656	15.656	(1.000)	101836	4.00000	
	43 3-Nitroaniline	138	15.594	15.594	(0.996)	2313	0.40000	0.3560(M)
	44 Acenaphthene	153	15.726	15.726	(1.004)	6035	0.20000	0.2146
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.011)	1345	0.80000	0.2222
	46 Dibenzofuran	168	16.081	16.089	(1.027)	8605	0.20000	0.2200
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	692	0.40000	0.1577
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	3230	0.40000	0.3395
	50 Diethylphthalate	149	16.754	16.754	(1.070)	6918	0.20000	0.2144
	49 Fluorene	166	16.854	16.855	(1.077)	7142	0.20000	0.2149
	51 4-Chlorophenyl-phenylether	204	16.870	16.870	(1.078)	3304	0.20000	0.2134
	52 4-Nitroaniline	138	16.963	16.963	(1.083)	2474	0.40000	0.3607
	53 4,6-Dinitro-2-methylphenol	198	17.070	17.071	(0.902)	3851	0.80000	0.5625
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.906)	4497	0.20000	0.2184
$	55 2,4,6-Tribromophenol	330	17.433	17.433	(1.113)	1238	0.20000	0.1905
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.949)	2068	0.20000	0.2169
	57 Hexachlorobenzene	284	18.281	18.274	(0.966)	2625	0.20000	0.2193
	58 Pentachlorophenol	266	18.669	18.669	(0.986)	2577	0.40000	0.3229
*	59 Phenanthrene-d10	188	18.932	18.940	(1.000)	170953	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.003)	10336	0.20000	0.2268
	61 Anthracene	178	19.079	19.079	(1.008)	9548	0.20000	0.2081
	62 Carbazole	167	19.435	19.435	(1.027)	8044	0.20000	0.2513
	63 Di-n-butylphthalate	149	20.293	20.294	(1.072)	9564	0.20000	0.1953
	64 Fluoranthene	202	21.392	21.392	(1.130)	10986	0.20000	0.2093
	65 Pyrene	202	21.810	21.810	(0.908)	11305	0.20000	0.2054
$	66 Terphenyl-d14	244	22.127	22.127	(0.922)	7779	0.20000	0.2096
	67 Butylbenzylphthalate	149	23.079	23.072	(0.961)	4024	0.20000	0.1928
	68 Benzo(a)anthracene	228	23.978	23.970	(0.999)	11586	0.20000	0.2149
*	69 Chrysene-d12	240	24.009	24.001	(1.000)	193229	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.954	23.947	(0.998)	11300	0.40000	0.5016
	71 Chrysene	228	24.047	24.048	(1.002)	10934	0.20000	0.2239
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	6441	0.20000	0.2251
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	216658	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	12550	0.20000	0.2375

	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	25.797	25.789	(0.973)	10822	0.20000	0.2081
75	Benzo(k)fluoranthene	252	25.836	25.836	(0.975)	12743	0.20000	0.2268
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	9661	0.20000	0.2148
* 77	Perylene-d12	264	26.509	26.502	(1.000)	179458	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.926	28.919	(1.091)	11294	0.20000	0.2036
79	Dibenzo(a,h)anthracene	278	28.950	28.942	(1.092)	8716	0.20000	0.1984
80	Benzo(g,h,i)perylene	276	29.633	29.633	(1.118)	9702	0.20000	0.2038
90	N-Nitrosodimethylamine	74	4.450	4.442	(0.490)	3696	0.40000	0.4380
91	Aniline	93	8.505	8.505	(0.936)	8946	0.20000	0.2238
93	Benzidine	184	21.647	21.648	(0.902)	8735	0.40000	1.011
103	Pyridine	79	4.496	4.481	(0.495)	2955	0.40000	0.4105
105	1-methylnaphthalene	142	13.543	13.544	(1.153)	5815	0.20000	0.2180
111	Azobenzene (1,2-DP-Hydrazine)	77	17.217	17.217	(1.100)	6100	0.20000	0.2084
187	Total Benzofluoranthenes	252	25.797	25.836	(0.973)	22209	0.40000	0.4338
99	Perylene	252	26.556	26.548	(1.002)	11836	0.20000	0.2289
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.460	16.460	(1.051)	1674	0.20000	0.1765
188	2,6-Dichlorophenol	162	11.973	11.973	(1.019)	5154	0.40000	0.4092
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	2500	0.40000	0.4077

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: ic0125c.d
Lab Smp Id: IC0125C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	44358	-4.86
27 Naphthalene-d8	176978	88489	353956	169256	-4.36
42 Acenaphthene-d10	110872	55436	221744	101836	-8.15
59 Phenanthrene-d10	188290	94145	376580	170953	-9.21
69 Chrysene-d12	213681	106840	427362	193229	-9.57
134 Di-n-octylphthala	264159	132080	528318	216658	-17.98
77 Perylene-d12	208584	104292	417168	179458	-13.96

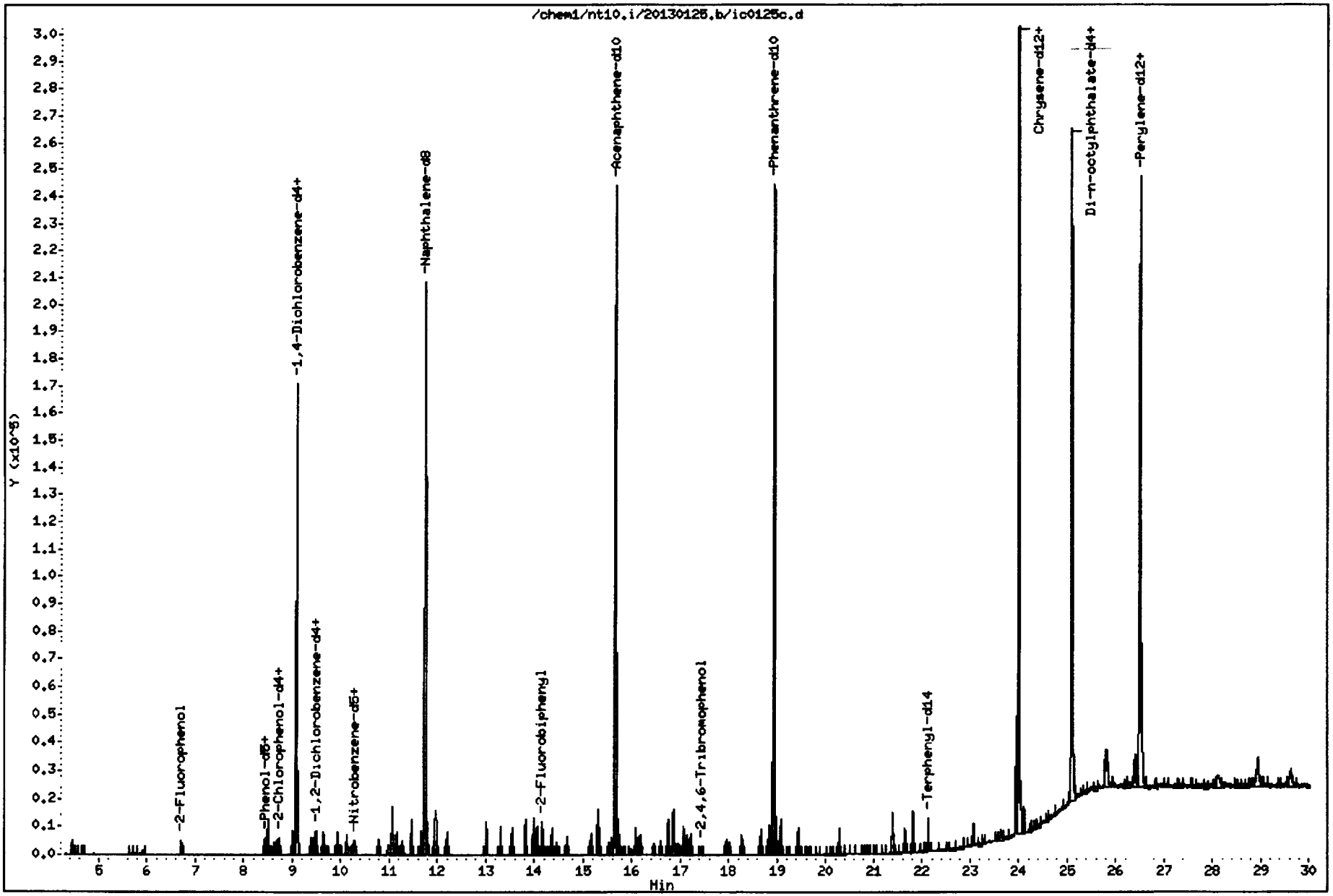
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.06
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	-0.05
59 Phenanthrene-d10	18.94	18.44	19.44	18.93	-0.04
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	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/20130125.b/ic0125c.d
Date : 25-JAN-2013 14:13
Client ID:
Sample Info: IC0125C

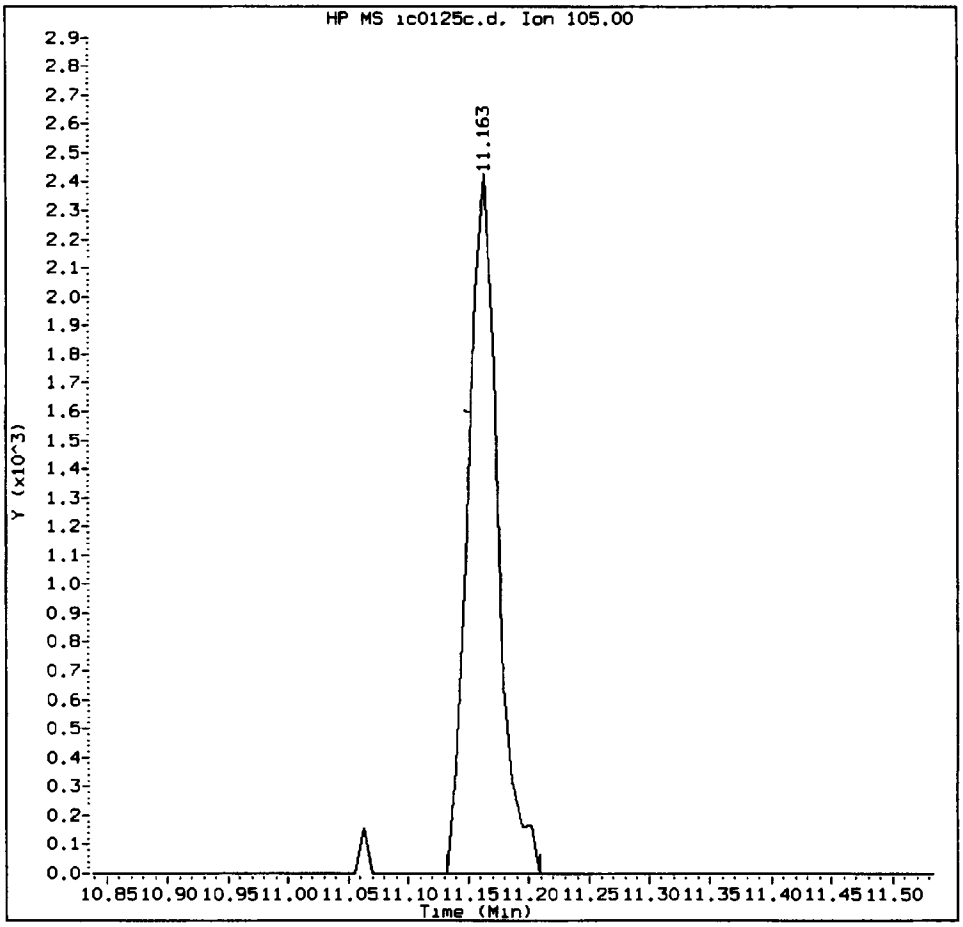
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0125C, /chem1/nt10.i/20130125.b/ic0125c.d

Benzoic acid Amount: 0.34 Area: 4260



MANUAL INTEGRATION for Benzoic acid

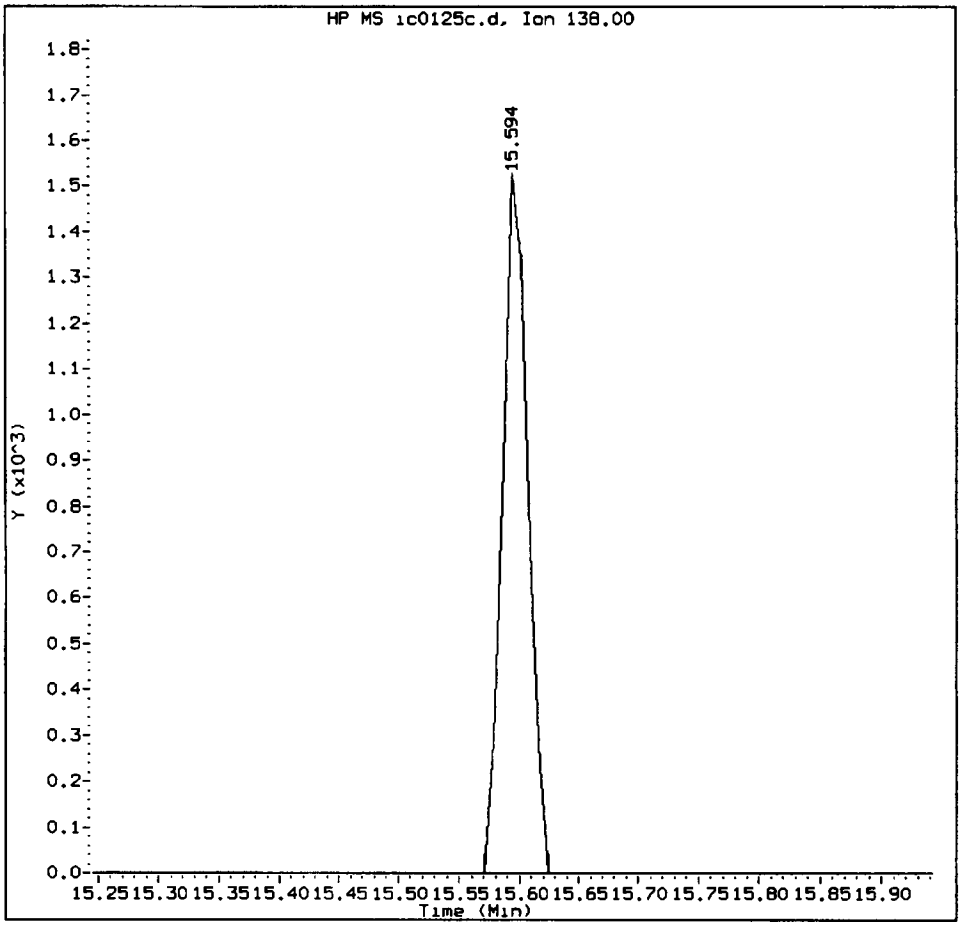
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 02/28/13

IC0125C, /chem1/nt10.i/20130125.b/ic0125c.d

3-Nitroaniline Amount: 0.36 Area: 2313



MANUAL INTEGRATION for 3-Nitroaniline

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

5. Other _____

Analyst: YZ Date: 01/28/13

CO-ELUTION SUMMARY FOR FILE - ic0125c.d

Lab ID: IC0125C, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 01/28/13

Data file : /chem1/nt10.i/20130125.b/ic0125d.d
Lab Smp Id: IC0125D
Inj Date : 25-JAN-2013 14:50
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 14:50 Cal File: ic0125d.d
Als bottle: 5 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)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.728	6.720	(0.740)	136821	10.0000	9.958
$	2 Phenol-d5	99	8.435	8.428	(0.928)	171972	10.0000	10.09
	3 Phenol	94	8.459	8.451	(0.931)	173685	10.0000	9.678
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	146850	10.0000	9.947
	4 Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	130128	10.0000	9.530
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	152445	10.0000	9.762
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	163629	10.0000	9.629
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	42972	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	162261	10.0000	9.643
$	10 1,2-Dichlorobenzene-d4	152	9.473	9.465	(1.043)	106626	10.0000	9.828
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	155682	10.0000	9.622
	11 Benzyl alcohol	108	9.395	9.388	(1.034)	87783	10.0000	10.22
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	47843	10.0000	9.959
	13 2-Methylphenol	108	9.652	9.644	(1.062)	136083	10.0000	10.05
	17 Hexachloroethane	117	10.133	10.133	(1.115)	65975	10.0000	9.920
	16 N-Nitroso-di-n-propylamine	70	10.001	9.993	(1.101)	90869	10.0000	10.04
	15 4-Methylphenol	108	9.947	9.939	(1.095)	141108	10.0000	10.02
$	18 Nitrobenzene-d5	82	10.265	10.257	(0.873)	152027	10.0000	9.931
	19 Nitrobenzene	77	10.303	10.296	(0.876)	142601	10.0000	9.824
	20 Isophorone	82	10.800	10.785	(0.919)	256454	10.0000	10.14
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	89829	10.0000	10.53
	22 2,4-Dimethylphenol	107	11.071	11.063	(0.942)	283047	20.0000	19.47
	23 Bis(2-Chloroethoxy)methane	93	11.279	11.271	(0.959)	151067	10.0000	9.481
	24 Benzoic acid	105	11.402	11.186	(0.970)	507039	40.0000	40.20
	25 2,4-Dichlorophenol	162	11.479	11.464	(0.976)	253663	20.0000	19.96
	26 1,2,4-Trichlorobenzene	180	11.672	11.664	(0.993)	136553	10.0000	9.444
*	27 Naphthalene-d8	136	11.757	11.749	(1.000)	165867	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	11.795	11.795	(1.003)	417528	10.0000	9.674
	29 4-Chloroaniline	127	11.965	11.957	(1.018)	345799	20.0000	19.91
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	89353	10.0000	9.916
	31 4-Chloro-3-methylphenol	107	13.025	13.017	(1.108)	264492	20.0000	21.54
	32 2-Methylnaphthalene	142	13.311	13.311	(1.132)	283288	10.0000	9.941
	33 Hexachlorocyclopentadiene	237	13.830	13.822	(0.883)	251203	20.0000	20.69
	34 2,4,6-Trichlorophenol	196	14.000	13.992	(0.894)	223317	20.0000	20.70
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.898)	242921	20.0000	21.19
$	36 2-Fluorobiphenyl	172	14.178	14.170	(0.905)	357374	10.0000	9.676
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	288962	10.0000	9.717
	38 2-Nitroaniline	65	14.681	14.674	(0.937)	151663	20.0000	21.74
	39 Dimethylphthalate	163	15.176	15.169	(0.969)	315858	10.0000	9.700
	40 Acenaphthylene	152	15.316	15.316	(0.978)	468651	10.0000	9.663
	41 2,6-Dinitrotoluene	165	15.316	15.300	(0.978)	152771	20.0000	20.54
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	107661	4.00000	
	43 3-Nitroaniline	138	15.618	15.594	(0.997)	141594	20.0000	20.61
	44 Acenaphthene	153	15.733	15.726	(1.004)	287776	10.0000	9.677
	45 2,4-Dinitrophenol	184	15.842	15.826	(1.011)	267779	40.0000	40.58
	46 Dibenzofuran	168	16.097	16.089	(1.028)	398333	10.0000	9.631
	47 4-Nitrophenol	109	15.989	15.973	(1.021)	94479	20.0000	19.99
	48 2,4-Dinitrotoluene	165	16.190	16.174	(1.034)	210743	20.0000	20.95
	50 Diethylphthalate	149	16.769	16.754	(1.071)	331988	10.0000	9.733
	49 Fluorene	166	16.870	16.855	(1.077)	335222	10.0000	9.543
	51 4-Chlorophenyl-phenylether	204	16.878	16.870	(1.077)	155738	10.0000	9.513
	52 4-Nitroaniline	138	16.994	16.963	(1.085)	151466	20.0000	20.89
	53 4,6-Dinitro-2-methylphenol	198	17.101	17.071	(0.903)	329949	40.0000	45.12
	54 N-Nitrosodiphenylamine	169	17.155	17.148	(0.906)	209012	10.0000	9.501
$	55 2,4,6-Tribromophenol	330	17.441	17.433	(1.113)	70530	10.0000	10.27
	56 4-Bromophenyl-phenylether	248	17.965	17.957	(0.949)	102014	10.0000	10.01
	57 Hexachlorobenzene	284	18.282	18.274	(0.965)	123331	10.0000	9.647
	58 Pentachlorophenol	266	18.676	18.669	(0.986)	185585	20.0000	21.77
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	182628	4.00000	
	60 Phenanthrene	178	18.994	18.986	(1.003)	470008	10.0000	9.654
	61 Anthracene	178	19.086	19.079	(1.008)	501886	10.0000	10.24
	62 Carbazole	167	19.442	19.435	(1.027)	300533	10.0000	8.787
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	566831	10.0000	10.84
	64 Fluoranthene	202	21.400	21.392	(1.130)	569024	10.0000	10.15
	65 Pyrene	202	21.818	21.810	(0.909)	588216	10.0000	10.16
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	393438	10.0000	10.08
	67 Butylbenzylphthalate	149	23.080	23.072	(0.961)	237303	10.0000	10.81
	68 Benzo(a)anthracene	228	23.985	23.970	(0.999)	565205	10.0000	9.967
*	69 Chrysene-d12	240	24.009	24.001	(1.000)	203223	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.962	23.947	(0.998)	477339	20.0000	20.15
	71 Chrysene	228	24.055	24.048	(1.002)	498249	10.0000	9.701
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	333510	10.0000	9.682
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	260852	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	596440	10.0000	9.374

	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	25.805	25.789	(0.973)	610570	10.0000	10.38
75	Benzo(k)fluoranthene	252	25.843	25.836	(0.975)	591193	10.0000	9.305
76	Benzo(a)pyrene	252	26.401	26.393	(0.996)	511521	10.0000	10.06
* 77	Perylene-d12	264	26.517	26.502	(1.000)	202904	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.942	28.919	(1.091)	645100	10.0000	10.29
79	Dibenzo(a,h)anthracene	278	28.973	28.942	(1.093)	507978	10.0000	10.23
80	Benzo(g,h,i)perylene	276	29.657	29.633	(1.118)	547612	10.0000	10.18
90	N-Nitrosodimethylamine	74	4.450	4.442	(0.490)	162464	20.0000	19.87
91	Aniline	93	8.513	8.505	(0.937)	372010	10.0000	9.606
93	Benzidine	184	21.655	21.648	(0.902)	196119	20.0000	19.73
103	Pyridine	79	4.457	4.481	(0.491)	137064	20.0000	19.66
105	1-methylnaphthalene	142	13.551	13.544	(1.153)	260850	10.0000	9.979
111	Azobenzene (1,2-DP-Hydrazine)	77	17.233	17.217	(1.100)	303035	10.0000	9.794
187	Total Benzofluoranthenes	252	25.843	25.836	(0.975)	1134836	20.0000	19.60
99	Perylene	252	26.564	26.548	(1.002)	564148	10.0000	9.652
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.468	16.460	(1.051)	105417	10.0000	10.51
188	2,6-Dichlorophenol	162	11.988	11.973	(1.020)	249221	20.0000	20.19
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	119200	20.0000	20.06

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125d.d
Lab Smp Id: IC0125D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	42972	-7.83
27 Naphthalene-d8	176978	88489	353956	165867	-6.28
42 Acenaphthene-d10	110872	55436	221744	107661	-2.90
59 Phenanthrene-d10	188290	94145	376580	182628	-3.01
69 Chrysene-d12	213681	106840	427362	203223	-4.89
134 Di-n-octylphthala	264159	132080	528318	260852	-1.25
77 Perylene-d12	208584	104292	417168	202904	-2.72

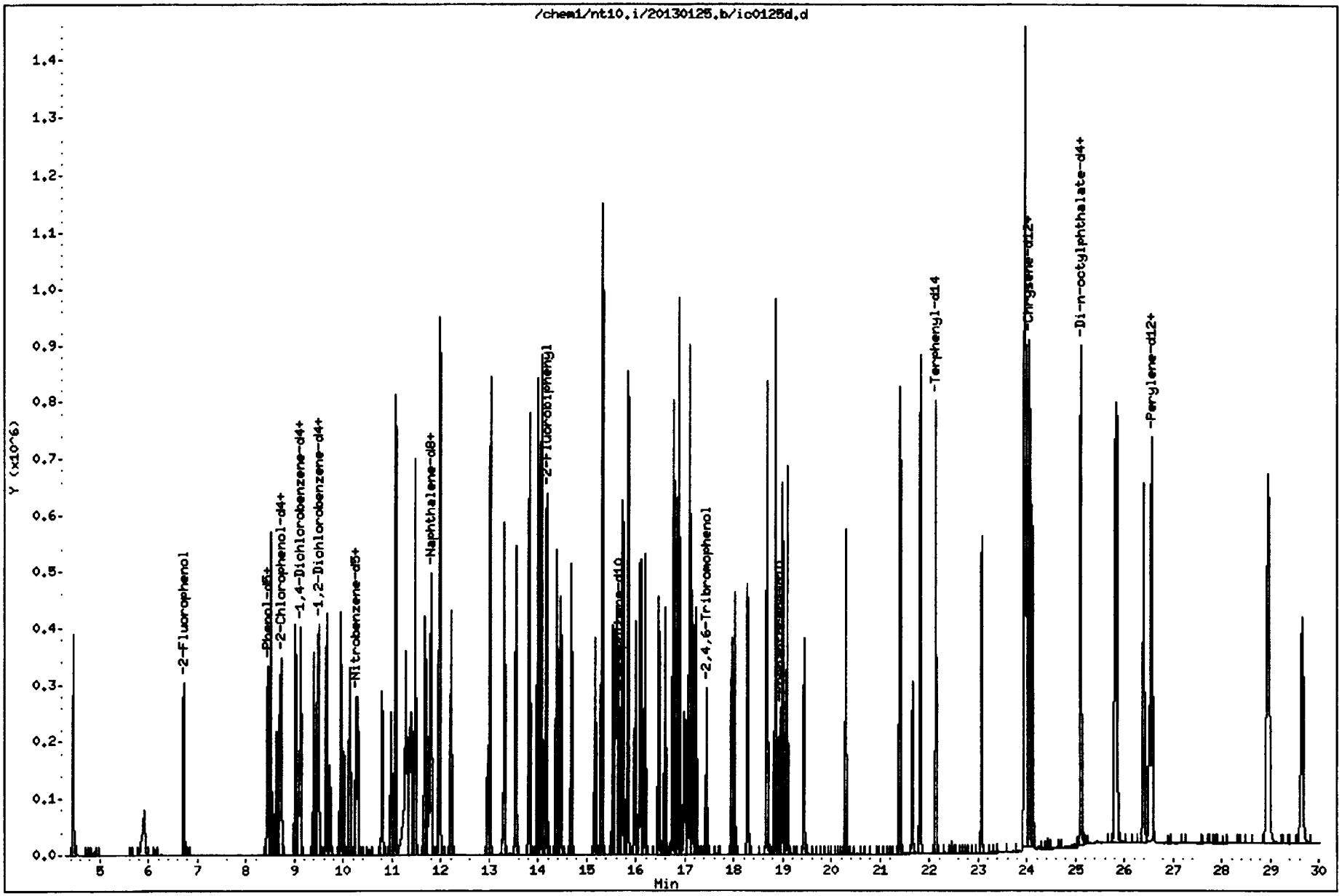
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.76	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.52	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/20130125.b/ic0125d.d
Date : 25-JAN-2013 14:50
Client ID:
Sample Info: IC0125D

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125d.d

Lab ID: IC0125D, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS
15.316	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

YZ 01/28/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125e.d
Lab Smp Id: IC0125E
Inj Date : 25-JAN-2013 15:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 15:27 Cal File: ic0125e.d
Als bottle: 6 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	6.720	6.720	(0.740)	16113	1.00000	1.032
$	2 Phenol-d5	99	8.428	8.428	(0.928)	18904	1.00000	0.9754
	3 Phenol	94	8.451	8.451	(0.930)	20114	1.00000	0.9860
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	16984	1.00000	1.012
	4 Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	15918	1.00000	1.026
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	18038	1.00000	1.016
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	19305	1.00000	0.9994
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	48848	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	19562	1.00000	1.023
$	10 1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	12221	1.00000	0.9909
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	18480	1.00000	1.005
	11 Benzyl alcohol	108	9.387	9.388	(1.033)	9674	1.00000	0.9909
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	5408	1.00000	0.9903
	13 2-Methylphenol	108	9.644	9.644	(1.062)	15211	1.00000	0.9878
	17 Hexachloroethane	117	10.133	10.133	(1.115)	7792	1.00000	1.031
	16 N-Nitroso-di-n-propylamine	70	10.001	9.993	(1.101)	10451	1.00000	1.016
	15 4-Methylphenol	108	9.939	9.939	(1.094)	16043	1.00000	1.002
$	18 Nitrobenzene-d5	82	10.265	10.257	(0.874)	16869	1.00000	0.9973
	19 Nitrobenzene	77	10.296	10.296	(0.876)	15970	1.00000	0.9958
	20 Isophorone	82	10.785	10.785	(0.918)	27877	1.00000	0.9973
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	9412	1.00000	0.9988
	22 2,4-Dimethylphenol	107	11.063	11.063	(0.942)	32855	2.00000	2.046
	23 Bis(2-Chloroethoxy)methane	93	11.279	11.271	(0.960)	17621	1.00000	1.001
	24 Benzoic acid	105	11.217	11.186	(0.955)	44455	4.00000	3.276
	25 2,4-Dichlorophenol	162	11.471	11.464	(0.976)	28258	2.00000	2.013
	26 1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	16262	1.00000	1.018
*	27 Naphthalene-d8	136	11.749	11.749	(1.000)	183261	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	11.795	11.795	(1.004)	47687	1.00000	1.000
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	38115	2.00000	1.986
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	10094	1.00000	1.014
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	27077	2.00000	1.996
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	30898	1.00000	0.9814
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.883)	24889	2.00000	1.977
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.894)	22845	2.00000	2.042
	35 2,4,5-Trichlorophenol	196	14.062	14.070	(0.898)	23632	2.00000	1.988
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	38258	1.00000	0.9988
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	30606	1.00000	0.9924
	38 2-Nitroaniline	65	14.673	14.674	(0.937)	14324	2.00000	1.980
	39 Dimethylphthalate	163	15.169	15.169	(0.969)	34355	1.00000	1.017
	40 Acenaphthylene	152	15.316	15.316	(0.978)	51815	1.00000	1.030
	41 2,6-Dinitrotoluene	165	15.300	15.300	(0.977)	15628	2.00000	2.026
*	42 Acenaphthene-d10	164	15.656	15.656	(1.000)	111653	4.00000	
	43 3-Nitroaniline	138	15.594	15.594	(0.996)	16234	2.00000	2.279
	44 Acenaphthene	153	15.726	15.726	(1.004)	31219	1.00000	1.012
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.011)	18391	4.00000	2.766
	46 Dibenzofuran	168	16.081	16.089	(1.027)	43688	1.00000	1.019
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	7272	2.00000	1.509
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	21257	2.00000	2.038
	50 Diethylphthalate	149	16.754	16.754	(1.070)	35941	1.00000	1.016
	49 Fluorene	166	16.854	16.855	(1.077)	36865	1.00000	1.012
	51 4-Chlorophenyl-phenylether	204	16.870	16.870	(1.078)	17604	1.00000	1.037
	52 4-Nitroaniline	138	16.970	16.963	(1.084)	15530	2.00000	2.065
	53 4,6-Dinitro-2-methylphenol	198	17.078	17.071	(0.902)	30630	4.00000	3.996
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.905)	24514	1.00000	1.063
$	55 2,4,6-Tribromophenol	330	17.433	17.433	(1.113)	7092	1.00000	0.9953
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	10432	1.00000	0.9771
	57 Hexachlorobenzene	284	18.281	18.274	(0.965)	13763	1.00000	1.027
	58 Pentachlorophenol	266	18.669	18.669	(0.986)	18075	2.00000	2.023
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	191397	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	50862	1.00000	0.9969
	61 Anthracene	178	19.079	19.079	(1.007)	50980	1.00000	0.9923
	62 Carbazole	167	19.435	19.435	(1.026)	42004	1.00000	1.172
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	51597	1.00000	0.9412
	64 Fluoranthene	202	21.392	21.392	(1.129)	58329	1.00000	0.9927
	65 Pyrene	202	21.810	21.810	(0.909)	60787	1.00000	1.003
$	66 Terphenyl-d14	244	22.127	22.127	(0.922)	42009	1.00000	1.028
	67 Butylbenzylphthalate	149	23.072	23.072	(0.961)	22886	1.00000	0.9955
	68 Benzo(a)anthracene	228	23.978	23.970	(0.999)	59738	1.00000	1.006
*	69 Chrysene-d12	240	24.001	24.001	(1.000)	212807	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.947	23.947	(0.998)	50394	2.00000	2.031
	71 Chrysene	228	24.047	24.048	(1.002)	54152	1.00000	1.007
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	32034	1.00000	0.9835
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	246669	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	60586	1.00000	1.007

	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	25.797	25.789	(0.973)	56463	1.00000	0.9423
75	Benzo(k)fluoranthene	252	25.836	25.836	(0.975)	66658	1.00000	1.030
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	50593	1.00000	0.9764
* 77	Perylene-d12	264	26.509	26.502	(1.000)	206726	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.926	28.919	(1.091)	62875	1.00000	0.9839
79	Dibenzo(a,h)anthracene	278	28.950	28.942	(1.092)	50949	1.00000	1.007
80	Benzo(g,h,i)perylene	276	29.625	29.633	(1.118)	54073	1.00000	0.9863
90	N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	18249	2.00000	1.964
91	Aniline	93	8.505	8.505	(0.936)	45165	1.00000	1.026
93	Benzidine	184	21.647	21.648	(0.902)	37924	2.00000	3.937
103	Pyridine	79	4.473	4.481	(0.492)	16049	2.00000	2.025
105	1-methylnaphthalene	142	13.543	13.544	(1.153)	28274	1.00000	0.9790
111	Azobenzene (1,2-DP-Hydrazine)	77	17.217	17.217	(1.100)	33066	1.00000	1.031
187	Total Benzofluoranthenes	252	25.836	25.836	(0.975)	116821	2.00000	1.981
99	Perylene	252	26.556	26.548	(1.002)	59928	1.00000	1.006
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.460	16.460	(1.051)	10419	1.00000	1.002
188	2,6-Dichlorophenol	162	11.973	11.973	(1.019)	27084	2.00000	1.986
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	13490	2.00000	1.998

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125e.d
Lab Smp Id: IC0125E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	48848	4.77
27 Naphthalene-d8	176978	88489	353956	183261	3.55
42 Acenaphthene-d10	110872	55436	221744	111653	0.70
59 Phenanthrene-d10	188290	94145	376580	191397	1.65
69 Chrysene-d12	213681	106840	427362	212807	-0.41
134 Di-n-octylphthala	264159	132080	528318	246669	-6.62
77 Perylene-d12	208584	104292	417168	206726	-0.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.06
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	-0.05
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.00	-0.03
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

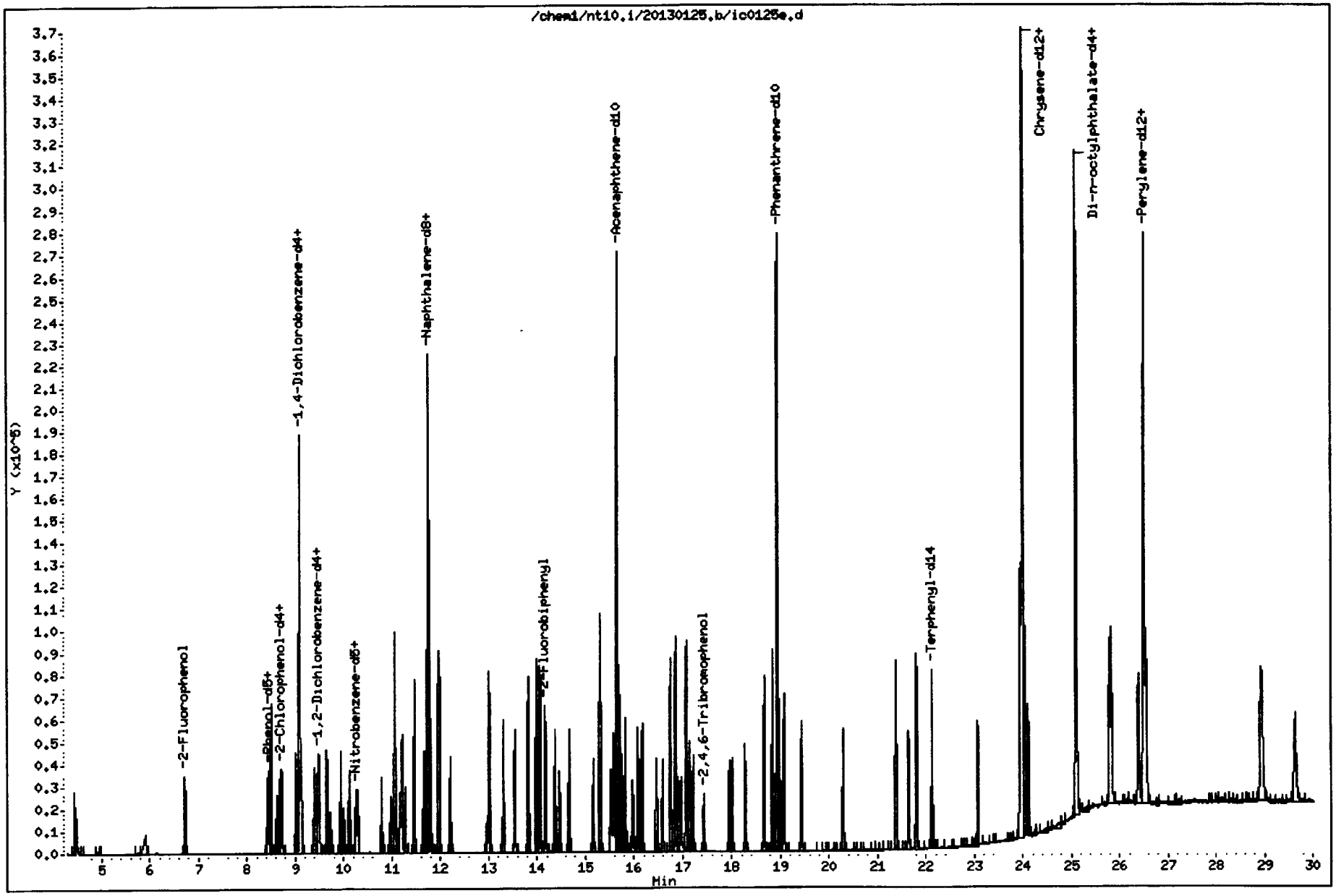
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.1/20130125.b/ic0125e.d
Date : 25-JAN-2013 15:27
Client ID:
Sample Info: IC0125E

Instrument: nt10.1

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125e.d

Lab ID: IC0125E, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 01/28/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125f.d
Lab Smp Id: IC0125F
Inj Date : 25-JAN-2013 16:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125F
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 16:03 Cal File: ic0125f.d
Als bottle: 7 Calibration Sample, Level: 4
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	6.719	6.720	(0.740)	36413	2.50000	2.442
$	2 Phenol-d5	99	8.427	8.428	(0.928)	45397	2.50000	2.454
	3 Phenol	94	8.451	8.451	(0.930)	47715	2.50000	2.450
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	39184	2.50000	2.446
	4 Bis(2-Chloroethyl)ether	93	8.620	8.621	(0.949)	36342	2.50000	2.453
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	40941	2.50000	2.416
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	44251	2.50000	2.400
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	46627	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	43801	2.50000	2.399
$	10 1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	27897	2.50000	2.370
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	42153	2.50000	2.401
	11 Benzyl alcohol	108	9.387	9.388	(1.033)	22530	2.50000	2.418
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	12901	2.50000	2.475
	13 2-Methylphenol	108	9.643	9.644	(1.062)	35647	2.50000	2.425
	17 Hexachloroethane	117	10.132	10.133	(1.115)	17266	2.50000	2.393
	16 N-Nitroso-di-n-propylamine	70	9.993	9.993	(1.100)	23860	2.50000	2.430
	15 4-Methylphenol	108	9.938	9.939	(1.094)	38088	2.50000	2.492
$	18 Nitrobenzene-d5	82	10.264	10.257	(0.874)	39403	2.50000	2.442
	19 Nitrobenzene	77	10.295	10.296	(0.876)	37219	2.50000	2.433
	20 Isophorone	82	10.784	10.785	(0.918)	64953	2.50000	2.436
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	22724	2.50000	2.528
	22 2,4-Dimethylphenol	107	11.063	11.063	(0.942)	75528	5.00000	4.929
	23 Bis(2-Chloroethoxy)methane	93	11.278	11.271	(0.960)	41470	2.50000	2.469
	24 Benzoic acid	105	11.271	11.186	(0.959)	119275	10.0000	9.177
	25 2,4-Dichlorophenol	162	11.471	11.464	(0.976)	67077	5.00000	5.009
	26 1,2,4-Trichlorobenzene	180	11.671	11.664	(0.993)	36594	2.50000	2.401
*	27 Naphthalene-d8	136	11.749	11.749	(1.000)	174830	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	11.795	11.795	(1.004)	109470	2.50000	2.406
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	89311	5.00000	4.878
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	23360	2.50000	2.459
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	63944	5.00000	4.940
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	71762	2.50000	2.389
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.882)	59993	5.00000	4.924
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.893)	54164	5.00000	5.003
	35 2,4,5-Trichlorophenol	196	14.069	14.070	(0.898)	59098	5.00000	5.137
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	90596	2.50000	2.445
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	72747	2.50000	2.438
	38 2-Nitroaniline	65	14.673	14.674	(0.937)	36178	5.00000	5.170
	39 Dimethylphthalate	163	15.168	15.169	(0.968)	79704	2.50000	2.440
	40 Acenaphthylene	152	15.316	15.316	(0.978)	121926	2.50000	2.506
	41 2,6-Dinitrotoluene	165	15.308	15.300	(0.977)	38442	5.00000	5.150
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	108024	4.00000	
	43 3-Nitroaniline	138	15.602	15.594	(0.996)	36892	5.00000	5.352
	44 Acenaphthene	153	15.733	15.726	(1.004)	73044	2.50000	2.448
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.010)	56078	10.0000	8.678
	46 Dibenzofuran	168	16.089	16.089	(1.027)	101102	2.50000	2.436
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	21754	5.00000	4.654
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	52515	5.00000	5.203
	50 Diethylphthalate	149	16.761	16.754	(1.070)	85220	2.50000	2.490
	49 Fluorene	166	16.862	16.855	(1.076)	87987	2.50000	2.496
	51 4-Chlorophenyl-phenylether	204	16.877	16.870	(1.077)	39971	2.50000	2.433
	52 4-Nitroaniline	138	16.978	16.963	(1.084)	36020	5.00000	4.950
	53 4,6-Dinitro-2-methylphenol	198	17.078	17.071	(0.902)	79873	10.0000	10.59
	54 N-Nitrosodiphenylamine	169	17.147	17.148	(0.905)	56358	2.50000	2.483
$	55 2,4,6-Tribromophenol	330	17.440	17.433	(1.113)	17660	2.50000	2.562
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	25532	2.50000	2.430
	57 Hexachlorobenzene	284	18.281	18.274	(0.965)	32170	2.50000	2.439
	58 Pentachlorophenol	266	18.676	18.669	(0.986)	44559	5.00000	5.067
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	188394	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	118115	2.50000	2.352
	61 Anthracene	178	19.086	19.079	(1.008)	123434	2.50000	2.441
	62 Carbazole	167	19.434	19.435	(1.026)	76501	2.50000	2.168(M)
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	130971	2.50000	2.427
	64 Fluoranthene	202	21.392	21.392	(1.129)	140111	2.50000	2.423
	65 Pyrene	202	21.810	21.810	(0.908)	148186	2.50000	2.493
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	99273	2.50000	2.477
	67 Butylbenzylphthalate	149	23.079	23.072	(0.961)	56506	2.50000	2.507
	68 Benzo(a)anthracene	228	23.977	23.970	(0.999)	144467	2.50000	2.481
*	69 Chrysene-d12	240	24.008	24.001	(1.000)	208655	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.954	23.947	(0.998)	99566	5.00000	4.093
	71 Chrysene	228	24.047	24.048	(1.002)	126632	2.50000	2.401
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	82805	2.50000	2.509
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	249963	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	145251	2.50000	2.382

	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	25.797	25.789	(0.973)	146665	2.50000	2.478
75	Benzo(k)fluoranthene	252	25.835	25.836	(0.975)	153820	2.50000	2.406
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	125480	2.50000	2.452
* 77	Perylene-d12	264	26.509	26.502	(1.000)	204198	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.934	28.919	(1.091)	156063	2.50000	2.472
79	Dibenzo(a,h)anthracene	278	28.957	28.942	(1.092)	125414	2.50000	2.509
80	Benzo(g,h,i)perylene	276	29.641	29.633	(1.118)	133352	2.50000	2.462
90	N-Nitrosodimethylamine	74	4.434	4.442	(0.488)	42925	5.00000	4.839
91	Aniline	93	8.512	8.505	(0.937)	103292	2.50000	2.458
93	Benzidine	184	21.655	21.648	(0.902)	54172	5.00000	5.691
103	Pyridine	79	4.457	4.481	(0.491)	37123	5.00000	4.906
105	1-methylnaphthalene	142	13.551	13.544	(1.153)	66621	2.50000	2.418
111	Azobenzene (1,2-DP-Hydrazine)	77	17.224	17.217	(1.100)	78024	2.50000	2.513
187	Total Benzofluoranthenes	252	25.835	25.836	(0.975)	283558	5.00000	4.867
99	Perylene	252	26.556	26.548	(1.002)	142122	2.50000	2.416
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.467	16.460	(1.051)	25792	2.50000	2.563
188	2,6-Dichlorophenol	162	11.980	11.973	(1.020)	63629	5.00000	4.890
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	31376	5.00000	4.867

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: ic0125f.d
Lab Smp Id: IC0125F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	46627	0.01
27 Naphthalene-d8	176978	88489	353956	174830	-1.21
42 Acenaphthene-d10	110872	55436	221744	108024	-2.57
59 Phenanthrene-d10	188290	94145	376580	188394	0.06
69 Chrysene-d12	213681	106840	427362	208655	-2.35
134 Di-n-octylphthala	264159	132080	528318	249963	-5.37
77 Perylene-d12	208584	104292	417168	204198	-2.10

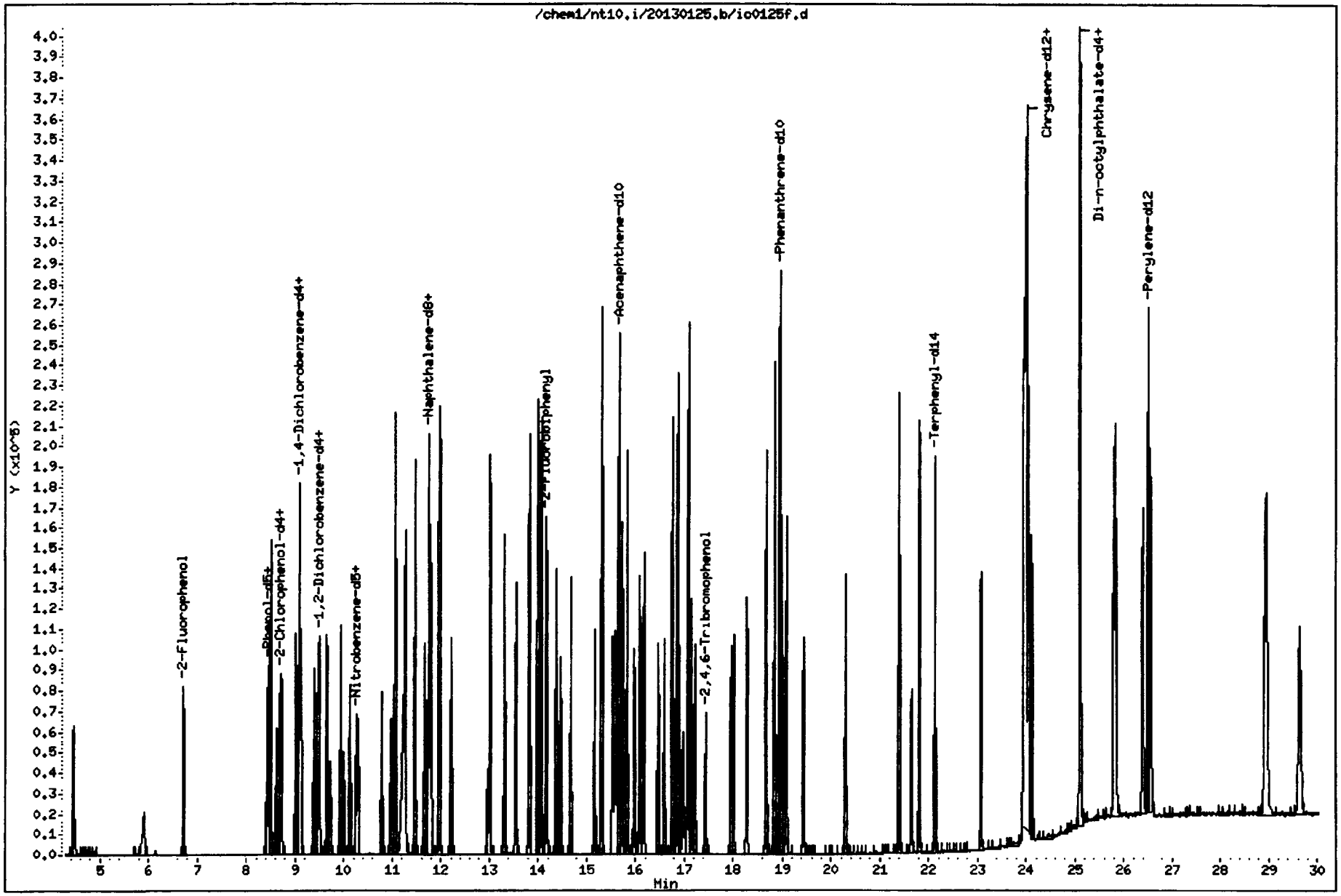
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.07
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	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/20130125.b/ic0125f.d
Date : 25-JAN-2013 16:03
Client ID:
Sample Info: IC0125F

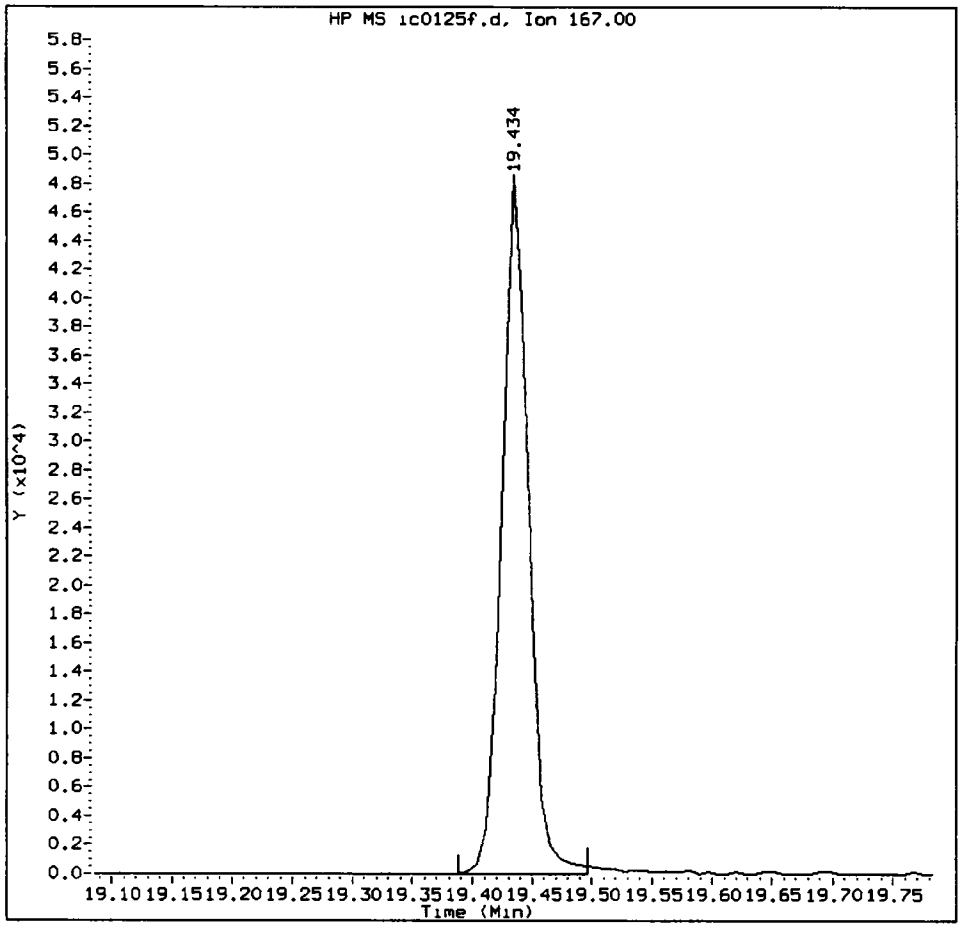
Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0125F, /chem1/nt10.i/20130125.b/ic0125f.d

Carbazole Amount: 2.17 Area: 76501



MANUAL INTEGRATION for Carbazole

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

5. Other _____

Analyst: YZ Date: 04/28/13

CO-ELUTION SUMMARY FOR FILE - ic0125f.d

Lab ID: IC0125F, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 01/29/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125h.d
Lab Smp Id: IC0125H
Inj Date : 25-JAN-2013 17:16
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125H
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 9 Calibration Sample, Level: 2
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	6.720	6.720	(0.740)	6872	0.50000	0.4773
$	2 Phenol-d5	99	8.428	8.428	(0.928)	8606	0.50000	0.4817
	3 Phenol	94	8.451	8.451	(0.930)	9509	0.50000	0.5057
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	7702	0.50000	0.4979
	4 Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	7336	0.50000	0.5127
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	8226	0.50000	0.5027
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	9203	0.50000	0.5168
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	45029	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	8755	0.50000	0.4965
$	10 1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	5625	0.50000	0.4948
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	8575	0.50000	0.5058
	11 Benzyl alcohol	108	9.388	9.388	(1.033)	4327	0.50000	0.4808
	14 2,2'-oxybis(1-Chloropropane)	121	9.722	9.722	(1.070)	2519	0.50000	0.5004
	13 2-Methylphenol	108	9.644	9.644	(1.062)	6867	0.50000	0.4838
	17 Hexachloroethane	117	10.133	10.133	(1.115)	3387	0.50000	0.4860
	16 N-Nitroso-di-n-propylamine	70	9.993	9.993	(1.100)	4479	0.50000	0.4723
	15 4-Methylphenol	108	9.939	9.939	(1.094)	7272	0.50000	0.4926
$	18 Nitrobenzene-d5	82	10.257	10.257	(0.873)	7484	0.50000	0.4791
	19 Nitrobenzene	77	10.296	10.296	(0.876)	7203	0.50000	0.4863
	20 Isophorone	82	10.785	10.785	(0.918)	12015	0.50000	0.4654
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	3897	0.50000	0.4478
	22 2,4-Dimethylphenol	107	11.063	11.063	(0.942)	14742	1.00000	0.9938
	23 Bis(2-Chloroethoxy)methane	93	11.271	11.271	(0.959)	8381	0.50000	0.5155
	24 Benzoic acid	105	11.186	11.186	(0.952)	14218	2.00000	1.136
	25 2,4-Dichlorophenol	162	11.464	11.464	(0.976)	12437	1.00000	0.9593
	26 1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	7682	0.50000	0.5207
*	27 Naphthalene-d8	136	11.749	11.749	(1.000)	169245	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	11.795	11.795	(1.004)	22558	0.50000	0.5122
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	17232	1.00000	0.9723
	30 Hexachlorobutadiene	225	12.205	12.205	(1.039)	4492	0.50000	0.4885
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	11487	1.00000	0.9167
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	14123	0.50000	0.4857
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.883)	10513	1.00000	0.9035
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.894)	9547	1.00000	0.9233
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.899)	10214	1.00000	0.9296
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	17578	0.50000	0.4966
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	13789	0.50000	0.4838
	38 2-Nitroaniline	65	14.674	14.674	(0.937)	5758	1.00000	0.8614
	39 Dimethylphthalate	163	15.169	15.169	(0.969)	15843	0.50000	0.5077
	40 Acenaphthylene	152	15.316	15.316	(0.978)	23489	0.50000	0.5054
	41 2,6-Dinitrotoluene	165	15.300	15.300	(0.977)	6611	1.00000	0.9273
*	42 Acenaphthene-d10	164	15.656	15.656	(1.000)	103177	4.00000	
	43 3-Nitroaniline	138	15.594	15.594	(0.996)	6570	1.00000	0.9979
	44 Acenaphthene	153	15.726	15.726	(1.004)	14631	0.50000	0.5134
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.011)	5902	2.00000	0.9617
	46 Dibenzofuran	168	16.089	16.089	(1.028)	19974	0.50000	0.5039
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	2579	1.00000	0.5798
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	8938	1.00000	0.9272
	50 Diethylphthalate	149	16.754	16.754	(1.070)	15876	0.50000	0.4857
	49 Fluorene	166	16.855	16.855	(1.077)	17429	0.50000	0.5177
	51 4-Chlorophenyl-phenylether	204	16.870	16.870	(1.078)	8299	0.50000	0.5290
	52 4-Nitroaniline	138	16.963	16.963	(1.083)	7026	1.00000	1.011
	53 4,6-Dinitro-2-methylphenol	198	17.071	17.071	(0.901)	12045	2.00000	1.686
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.905)	10851	0.50000	0.5048
$	55 2,4,6-Tribromophenol	330	17.433	17.433	(1.113)	3106	0.50000	0.4717
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	4764	0.50000	0.4786
	57 Hexachlorobenzene	284	18.274	18.274	(0.965)	6319	0.50000	0.5059
	58 Pentachlorophenol	266	18.669	18.669	(0.986)	7365	1.00000	0.8841
*	59 Phenanthrene-d10	188	18.940	18.940	(1.000)	178445	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	23968	0.50000	0.5038
	61 Anthracene	178	19.079	19.079	(1.007)	22755	0.50000	0.4751
	62 Carbazole	167	19.435	19.435	(1.026)	19220	0.50000	0.5751
	63 Di-n-butylphthalate	149	20.294	20.294	(1.071)	22128	0.50000	0.4329
	64 Fluoranthene	202	21.392	21.392	(1.129)	25116	0.50000	0.4585
	65 Pyrene	202	21.810	21.810	(0.909)	26902	0.50000	0.4673
$	66 Terphenyl-d14	244	22.127	22.127	(0.922)	18604	0.50000	0.4793
	67 Butylbenzylphthalate	149	23.072	23.072	(0.961)	9115	0.50000	0.4175
	68 Benzo(a)anthracene	228	23.970	23.970	(0.999)	27139	0.50000	0.4813
*	69 Chrysene-d12	240	24.001	24.001	(1.000)	202095	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.947	23.947	(0.998)	26314	1.00000	1.117
	71 Chrysene	228	24.048	24.048	(1.002)	25828	0.50000	0.5057
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	13815	0.50000	0.4790
*	134 Di-n-octylphthalate-d4	153	25.093	25.093	(1.000)	218395	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.001)	27962	0.50000	0.5249

	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	25.789	25.789	(0.973)	26415	0.50000	0.4771
75	Benzo(k)fluoranthene	252	25.836	25.836	(0.975)	30077	0.50000	0.5029
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	22670	0.50000	0.4735
* 77	Perylene-d12	264	26.502	26.502	(1.000)	191018	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.919	28.919	(1.091)	27473	0.50000	0.4653
79	Dibenzo(a,h)anthracene	278	28.942	28.942	(1.092)	22053	0.50000	0.4716
80	Benzo(g,h,i)perylene	276	29.633	29.633	(1.118)	24114	0.50000	0.4760
90	N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	8250	1.00000	0.9630
91	Aniline	93	8.505	8.505	(0.936)	20308	0.50000	0.5005
93	Benzidine	184	21.648	21.648	(0.902)	18859	1.00000	2.078
103	Pyridine	79	4.481	4.481	(0.493)	7344	1.00000	1.005
105	1-methylnaphthalene	142	13.544	13.544	(1.153)	13025	0.50000	0.4884
111	Azobenzene (1,2-DP-Hydrazine)	77	17.217	17.217	(1.100)	14638	0.50000	0.4937
187	Total Benzofluoranthenes	252	25.836	25.836	(0.975)	54001	1.00000	0.9909
99	Perylene	252	26.548	26.548	(1.002)	27182	0.50000	0.4940
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.460	16.460	(1.051)	4437	0.50000	0.4617
188	2,6-Dichlorophenol	162	11.973	11.973	(1.019)	12226	1.00000	0.9706
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	6123	1.00000	0.9836

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125h.d
Lab Smp Id: IC0125H
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	45029	-3.42
27 Naphthalene-d8	176978	88489	353956	169245	-4.37
42 Acenaphthene-d10	110872	55436	221744	103177	-6.94
59 Phenanthrene-d10	188290	94145	376580	178445	-5.23
69 Chrysene-d12	213681	106840	427362	202095	-5.42
134 Di-n-octylphthala	264159	132080	528318	218395	-17.32
77 Perylene-d12	208584	104292	417168	191018	-8.42

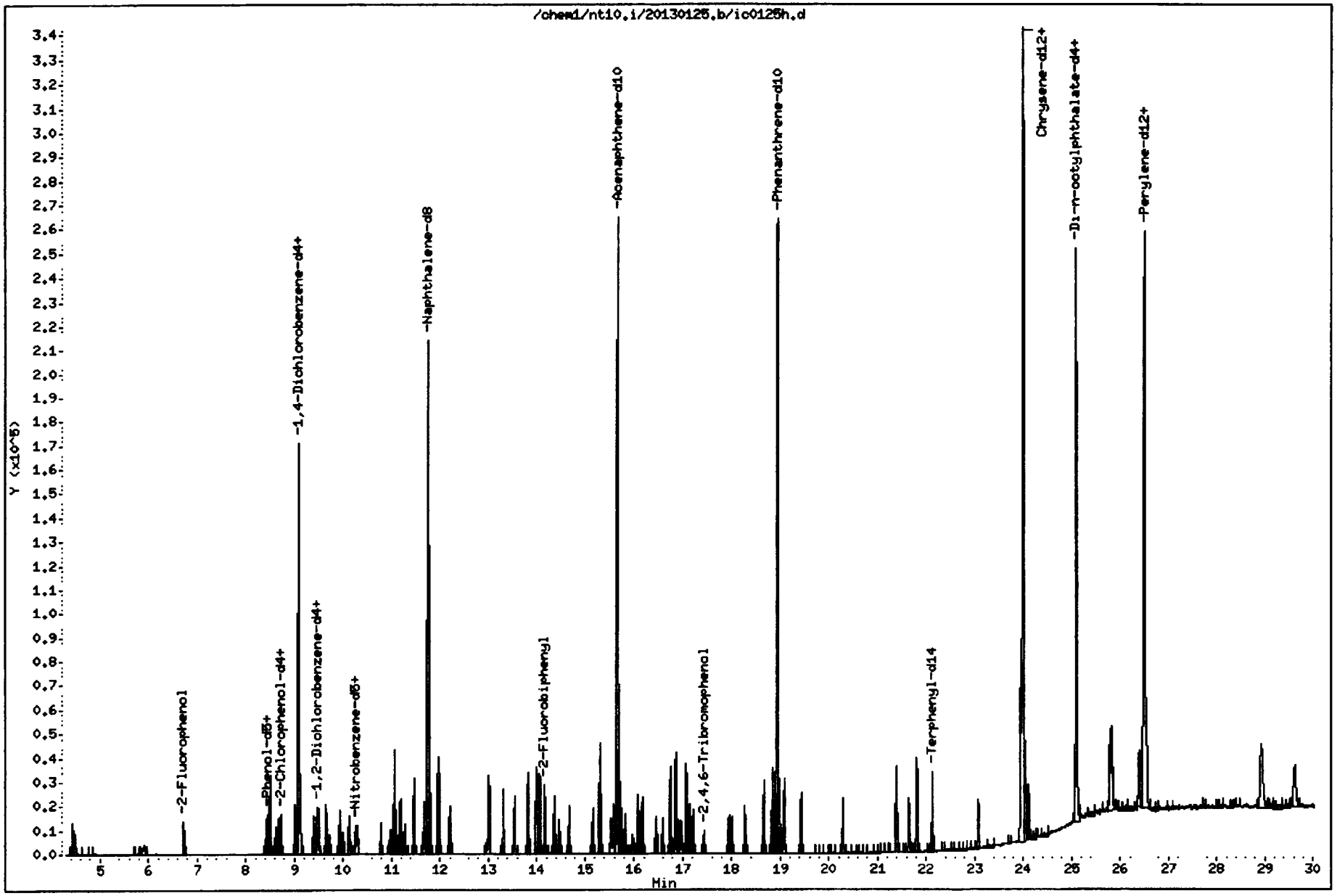
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.09	0.01
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.06
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	-0.05
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.00	-0.03
134 Di-n-octylphthala	25.10	24.60	25.60	25.09	-0.03
77 Perylene-d12	26.51	26.01	27.01	26.50	-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/20130125.b/ic0125h.d
Date : 25-JAN-2013 17:16
Client ID:
Sample Info: IC0125H

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125h.d

Lab ID: IC0125H, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/icv0125.d
Lab Smp Id: ICV0125
Inj Date : 25-JAN-2013 18:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ICV0125
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 14:27 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.451	8.451	(0.930)	90240	5.37736	5.377
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	67005	5.24779	5.248
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	76426	5.23342	5.233
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	81987	5.15942	5.159
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	40184	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	80089	5.08994	5.090
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	78072	5.16020	5.160
	11 Benzyl alcohol	108	9.388	9.387	(1.033)	37478	4.66673	4.667
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.721	(1.070)	23386	5.20590	5.206
	13 2-Methylphenol	108	9.644	9.644	(1.062)	72173	5.69736	5.697
	17 Hexachloroethane	117	10.125	10.125	(1.114)	32416	5.21225	5.212
	16 N-Nitroso-di-n-propylamine	70	10.001	10.001	(1.101)	44778	5.29068	5.291
	15 4-Methylphenol	108	9.939	9.939	(1.094)	75643	5.74184	5.742
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.296	10.296	(0.876)	68075	5.16288	5.163
	20 Isophorone	82	10.792	10.792	(0.919)	123290	5.36454	5.365
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	43581	5.62514	5.625
	22 2,4-Dimethylphenol	107	11.071	11.070	(0.942)	149122	11.2920	11.29
	23 Bis(2-Chloroethoxy)methane	93	11.279	11.279	(0.960)	75953	5.24749	5.247
	24 Benzoic acid	105	11.333	11.332	(0.965)	260337	23.0115	23.01
	25 2,4-Dichlorophenol	162	11.471	11.471	(0.976)	132923	11.5168	11.52
	26 1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	67351	5.12757	5.128
*	27 Naphthalene-d8	136	11.749	11.749	(1.000)	150675	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
28	Naphthalene	128	11.795	11.795	(1.004)	187621	4.78541	4.785
29	4-Chloroaniline	127	11.957	11.957	(1.018)	153482	9.72700	9.727
30	Hexachlorobutadiene	225	12.212	12.212	(1.039)	43061	5.26029	5.260
31	4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	133464	11.9640	11.96
32	2-Methylnaphthalene	142	13.311	13.311	(1.133)	125970	4.86634	4.866
33	Hexachlorocyclopentadiene	237	13.822	13.822	(0.882)	112957	10.7260	10.73
34	2,4,6-Trichlorophenol	196	13.992	13.992	(0.893)	112602	12.0334	12.03
35	2,4,5-Trichlorophenol	196	14.070	14.070	(0.898)	126526	12.7240	12.72
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.379	14.379	(0.918)	140953	5.46481	5.465
38	2-Nitroaniline	65	14.673	14.673	(0.937)	65450	10.8194	10.82
39	Dimethylphthalate	163	15.169	15.169	(0.968)	152463	5.39846	5.398
40	Acenaphthylene	152	15.316	15.316	(0.978)	205925	4.89568	4.896
41	2,6-Dinitrotoluene	165	15.308	15.308	(0.977)	74654	11.5706	11.57
* 42	Acenaphthene-d10	164	15.664	15.664	(1.000)	93376	4.00000	
43	3-Nitroaniline	138	15.602	15.610	(0.996)	70409	11.8173	11.82
44	Acenaphthene	153	15.734	15.733	(1.004)	127159	4.93024	4.930
45	2,4-Dinitrophenol	184	15.834	15.834	(1.011)	130506	23.1152	23.12
46	Dibenzofuran	168	16.089	16.089	(1.027)	176205	4.91232	4.912
47	4-Nitrophenol	109	15.981	15.981	(1.020)	46091	11.3367	11.34
48	2,4-Dinitrotoluene	165	16.182	16.182	(1.033)	100886	11.5642	11.56
50	Diethylphthalate	149	16.762	16.761	(1.070)	149613	5.05715	5.057
49	Fluorene	166	16.862	16.862	(1.076)	149065	4.89256	4.893
51	4-Chlorophenyl-phenylether	204	16.870	16.878	(1.077)	76545	5.39097	5.391
52	4-Nitroaniline	138	16.978	16.986	(1.084)	68248	10.8505	10.85
53	4,6-Dinitro-2-methylphenol	198	17.086	17.086	(0.902)	170570	26.9732	26.97(R)
54	N-Nitrosodiphenylamine	169	17.148	17.148	(0.905)	103308	5.43113	5.431
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	48685	5.52706	5.527
57	Hexachlorobenzene	284	18.282	18.281	(0.965)	60692	5.49033	5.490
58	Pentachlorophenol	266	18.677	18.676	(0.986)	93039	12.6214	12.62
* 59	Phenanthrene-d10	188	18.940	18.939	(1.000)	157911	4.00000	
60	Phenanthrene	178	18.986	18.986	(1.002)	207268	4.92372	4.924
61	Anthracene	178	19.079	19.086	(1.007)	213272	5.03174	5.032
62	Carbazole	167	19.435	19.435	(1.026)	140507	4.96322	4.963
63	Di-n-butylphthalate	149	20.294	20.293	(1.071)	261975	5.79204	5.792
64	Fluoranthene	202	21.392	21.392	(1.129)	251144	5.18054	5.181
65	Pyrene	202	21.810	21.817	(0.908)	256428	4.83356	4.834
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	23.072	23.079	(0.961)	114331	5.68210	5.682
68	Benzo(a)anthracene	228	23.978	23.978	(0.999)	251589	4.84113	4.841
* 69	Chrysene-d12	240	24.009	24.009	(1.000)	186248	4.00000	
70	3,3'-Dichlorobenzidine	252	23.955	23.954	(0.998)	167305	7.70530	7.705
71	Chrysene	228	24.047	24.055	(1.002)	226455	4.81098	4.811
72	bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	162652	5.67579	5.676
* 134	Di-n-octylphthalate-d4	153	25.100	25.100	(1.000)	217021	4.00000	
73	Di-n-octylphthalate	149	25.108	25.108	(1.000)	278132	5.25388	5.254

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.797	25.797	(0.973)	260552	5.02102	5.021
75	Benzo(k)fluoranthene	252	25.844	25.843	(0.975)	269345	4.80452	4.805
76	Benzo(a)pyrene	252	26.401	26.401	(0.996)	216125	4.81584	4.816
* 77	Perylene-d12	264	26.509	26.509	(1.000)	179038	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.934	28.942	(1.091)	278396	5.03032	5.030
79	Dibenzo(a,h)anthracene	278	28.958	28.965	(1.092)	222187	5.06986	5.070
80	Benzo(g,h,i)perylene	276	29.657	29.641	(1.119)	235666	4.96313	4.963
90	N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	79113	10.3486	10.35
91	Aniline	93	8.505	8.505	(0.936)	165967	4.58307	4.583
93	Benzidine	184	21.655	21.655	(0.902)	99836	11.4404	11.44
103	Pyridine	79	4.457	4.457	(0.491)	67216	10.3079	10.31
105	1-methylnaphthalene	142	13.544	13.543	(1.153)	117579	4.95182	4.952
111	Azobenzene (1,2-DP-Hydrazine)	77	17.225	17.225	(1.100)	149907	5.58630	5.586
187	Total Benzofluoranthenes	252	25.844	25.843	(0.975)	501763	9.82305	9.823
99	Perylene	252	26.556	26.563	(1.002)	228097	4.42254	4.423
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.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: icv0125.d
Lab Smp Id: ICV0125
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 19:17

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	40184	-13.81
27 Naphthalene-d8	176978	88489	353956	150675	-14.86
42 Acenaphthene-d10	110872	55436	221744	93376	-15.78
59 Phenanthrene-d10	188290	94145	376580	157911	-16.13
69 Chrysene-d12	213681	106840	427362	186248	-12.84
134 Di-n-octylphthala	264159	132080	528318	217021	-17.84
77 Perylene-d12	208584	104292	417168	179038	-14.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	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: ICV0125
Level:
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Client SDG:
Fraction: SV
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3 Phenol	5.000	5.377	107.55	
4 Bis(2-Chloroethyl)	5.000	5.248	104.96	
6 2-Chlorophenol	5.000	5.233	104.67	
7 1,3-Dichlorobenzen	5.000	5.159	103.19	
9 1,4-Dichlorobenzen	5.000	5.090	101.80	
11 Benzyl alcohol	5.000	4.667	93.33	
12 1,2-Dichlorobenzen	5.000	5.160	103.20	
13 2-Methylphenol	5.000	5.697	113.95	
14 2,2'-oxybis(1-Chlo	5.000	5.206	104.12	
15 4-Methylphenol	5.000	5.742	114.84	
16 N-Nitroso-di-n-pro	5.000	5.291	105.81	
17 Hexachloroethane	5.000	5.212	104.25	
19 Nitrobenzene	5.000	5.163	103.26	
20 Isophorone	5.000	5.365	107.29	
21 2-Nitrophenol	5.000	5.625	112.50	
22 2,4-Dimethylphenol	10.00	11.29	112.92	
23 Bis(2-Chloroethoxy	5.000	5.247	104.95	
24 Benzoic acid	20.00	23.01	115.06	
25 2,4-Dichlorophenol	10.00	11.52	115.17	
26 1,2,4-Trichloroben	5.000	5.128	102.55	
28 Naphthalene	5.000	4.785	95.71	
29 4-Chloroaniline	10.00	9.727	97.27	
30 Hexachlorobutadien	5.000	5.260	105.21	
31 4-Chloro-3-methylp	10.00	11.96	119.64	
32 2-Methylnaphthalen	5.000	4.866	97.33	
33 Hexachlorocyclopen	10.00	10.73	107.26	
34 2,4,6-Trichlorophe	10.00	12.03	120.33	
35 2,4,5-Trichlorophe	10.00	12.72	127.24	
37 2-Chloronaphthalen	5.000	5.465	109.30	
38 2-Nitroaniline	10.00	10.82	108.19	
39 Dimethylphthalate	5.000	5.398	107.97	
40 Acenaphthylene	5.000	4.896	97.91	
41 2,6-Dinitrotoluene	10.00	11.57	115.71	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	11.82	118.17	
44	Acenaphthene	5.000	4.930	98.60	
45	2,4-Dinitrophenol	20.00	23.12	115.58	
46	Dibenzofuran	5.000	4.912	98.25	
47	4-Nitrophenol	10.00	11.34	113.37	
48	2,4-Dinitrotoluene	10.00	11.56	115.64	
49	Fluorene	5.000	4.893	97.85	
50	Diethylphthalate	5.000	5.057	101.14	
51	4-Chlorophenyl-phe	5.000	5.391	107.82	
52	4-Nitroaniline	10.00	10.85	108.50	
53	4,6-Dinitro-2-meth	20.00	26.97	134.87*	
54	N-Nitrosodiphenyla	5.000	5.431	108.62	
56	4-Bromophenyl-phen	5.000	5.527	110.54	
57	Hexachlorobenzene	5.000	5.490	109.81	
58	Pentachlorophenol	10.00	12.62	126.21	
60	Phenanthrene	5.000	4.924	98.47	
61	Anthracene	5.000	5.032	100.63	
63	Di-n-butylphthalat	5.000	5.792	115.84	
64	Fluoranthene	5.000	5.181	103.61	
65	Pyrene	5.000	4.834	96.67	
67	Butylbenzylphthala	5.000	5.682	113.64	
68	Benzo(a)anthracene	5.000	4.841	96.82	
70	3,3'-Dichlorobenzi	10.00	7.705	77.05	
71	Chrysene	5.000	4.811	96.22	
72	bis(2-Ethylhexyl)p	5.000	5.676	113.52	
73	Di-n-octylphthalat	5.000	5.254	105.08	
74	Benzo(b)fluoranthe	5.000	5.021	100.42	
75	Benzo(k)fluoranthe	5.000	4.805	96.09	
76	Benzo(a)pyrene	5.000	4.816	96.32	
78	Indeno(1,2,3-cd)py	5.000	5.030	100.61	
79	Dibenzo(a,h)anthra	5.000	5.070	101.40	
80	Benzo(g,h,i)peryle	5.000	4.963	99.26	
90	N-Nitrosodimethyla	10.00	10.35	103.49	
91	Aniline	5.000	4.583	91.66	
93	Benzidine	10.00	11.44	114.40	
105	1-methylnaphthalen	5.000	4.952	99.04	
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

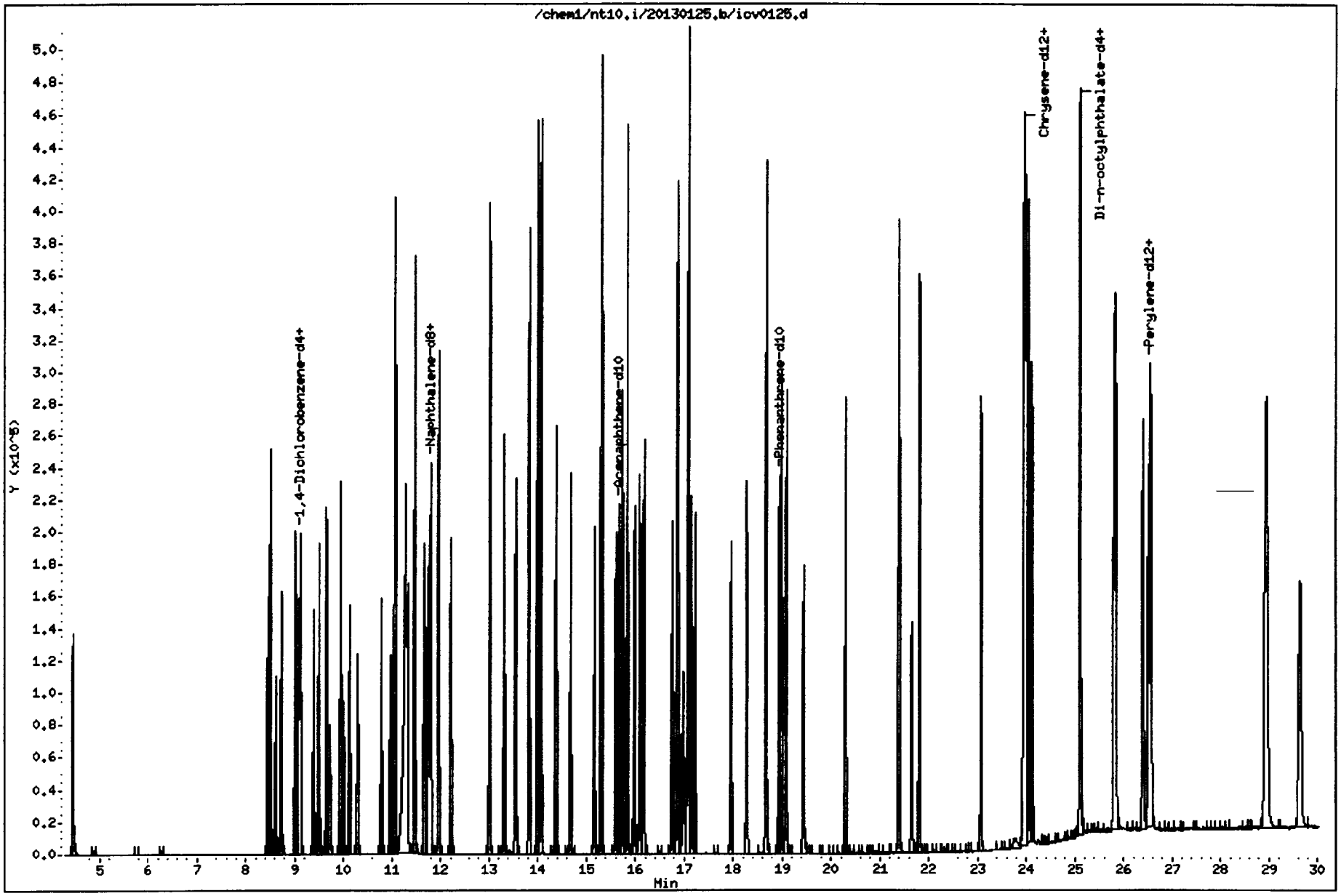
Client Name: Client SDG:
Sample Matrix: NONE Fraction: SV
Lab Smp Id: ICV0125
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

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/20130125.b/icv0125.d
Date : 25-JAN-2013 18:30
Client ID:
Sample Info: ICV0125

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - icv0125.d

Lab ID: ICV0125, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

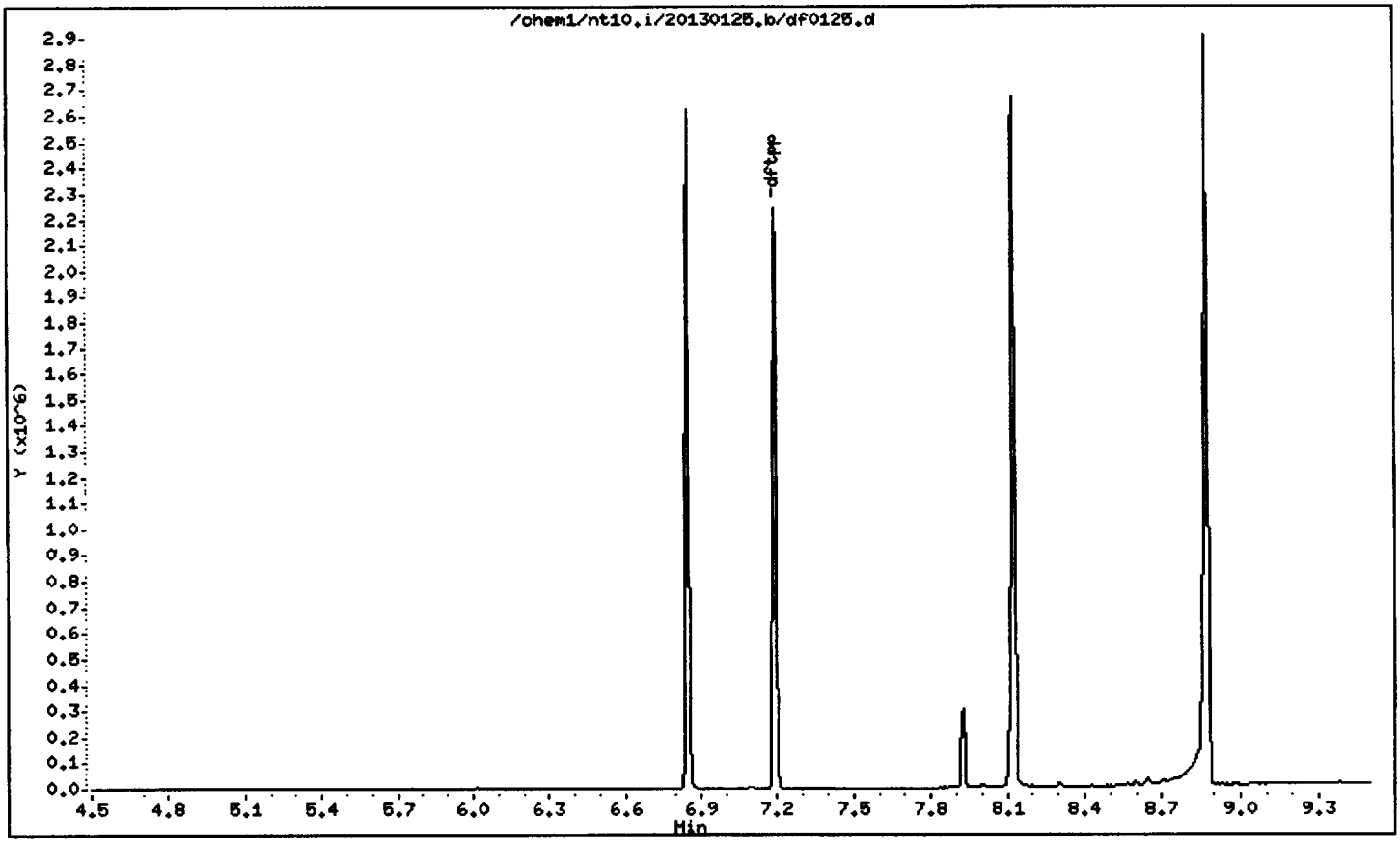
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

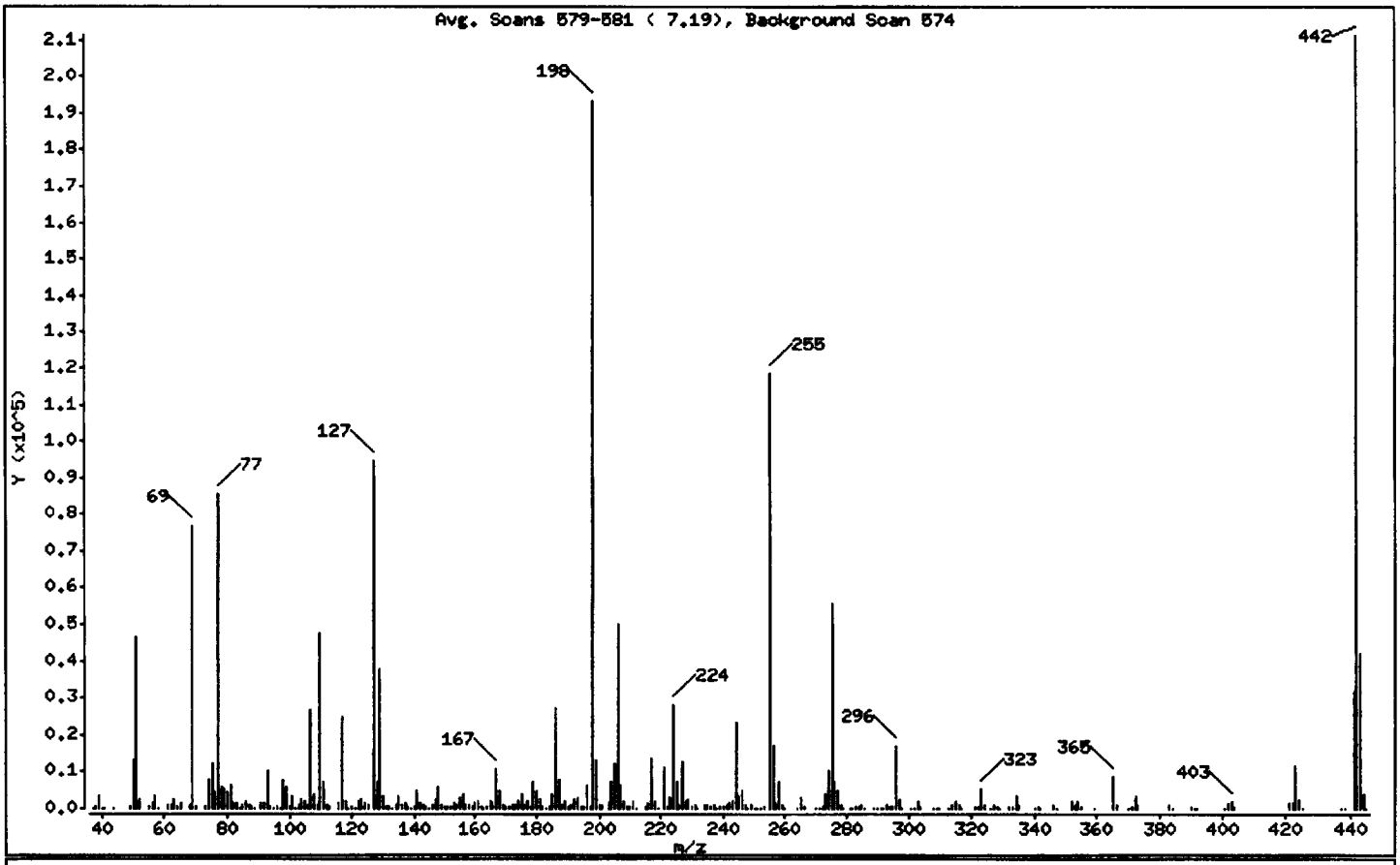
Sample Info: DFTPP

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	24.19
68	Less than 2.00% of mass 69	0.61 (1.54)
69	Mass 69 relative abundance	39.80
70	Less than 2.00% of mass 69	0.19 (0.49)
127	10.00 - 80.00% of mass 198	48.91
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	28.93
365	Greater than 1.00% of mass 198	4.43
441	0.01 - 24.00% of mass 442	16.45 (15.06)
442	50.00 - 200.00% of mass 198	109.23
443	15.00 - 24.00% of mass 442	21.82 (19.98)

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	197	129.00	37936	204.00	7247	290.00	134
38.00	705	130.00	3252	205.00	12071	291.00	73
39.00	3533	131.00	616	206.00	50152	292.00	193
40.00	113	132.00	309	207.00	6355	293.00	1040
41.00	57	133.00	201	208.00	1855	294.00	300
44.00	41	134.00	1063	209.00	685	295.00	432
49.00	407	135.00	3189	210.00	390	296.00	17168
50.00	12941	136.00	1177	211.00	2076	297.00	2409
51.00	46792	137.00	1570	212.00	126	298.00	117
52.00	2479	138.00	318	215.00	691	301.00	186
55.00	299	139.00	141	216.00	1249	302.00	228
56.00	1601	140.00	439	217.00	13670	303.00	1845
57.00	3595	141.00	5058	218.00	1710	304.00	531
58.00	186	142.00	1565	219.00	125	308.00	197
61.00	736	143.00	1108	221.00	10937	309.00	121
62.00	914	144.00	315	222.00	480	310.00	187
63.00	2618	145.00	214	223.00	3072	313.00	153
64.00	316	146.00	882	224.00	28320	314.00	792
65.00	1300	147.00	2615	225.00	7216	315.00	2023
68.00	1189	148.00	6026	226.00	852	316.00	1067
69.00	76976	149.00	1129	227.00	12743	317.00	159
70.00	375	150.00	301	228.00	1719	321.00	638
73.00	705	151.00	726	229.00	2389	322.00	299
74.00	7863	152.00	293	230.00	329	323.00	5388
75.00	12207	153.00	1577	231.00	1021	324.00	1013
76.00	4289	154.00	1181	232.00	167	326.00	50
77.00	85576	155.00	2757	233.00	188	327.00	1029
78.00	5655	156.00	4011	234.00	771	328.00	558
79.00	5556	157.00	812	235.00	861	329.00	60
80.00	4359	158.00	873	236.00	627	332.00	351
81.00	6233	159.00	710	237.00	1022	333.00	548
82.00	1534	160.00	1489	238.00	110	334.00	3620
83.00	1401	161.00	2161	239.00	541	335.00	964
84.00	112	162.00	649	240.00	417	340.00	51
85.00	1085	163.00	146	241.00	730	341.00	679

Date : 25-JAN-2013 12:43

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1703	164.00	290	242.00	1687	342.00	153
87.00	795	165.00	1882	243.00	1735	346.00	1164
88.00	279	166.00	1494	244.00	23312	347.00	162
89.00	81	167.00	10689	245.00	3158	352.00	1760
91.00	1338	168.00	4694	246.00	4620	353.00	1209
92.00	1519	169.00	848	247.00	978	354.00	1709
93.00	9994	170.00	329	248.00	181	355.00	309
94.00	645	171.00	378	249.00	862	359.00	64
95.00	134	172.00	865	250.00	149	365.00	8589
96.00	471	173.00	1141	251.00	169	366.00	1203
97.00	212	174.00	2025	252.00	221	370.00	156
98.00	7840	175.00	3911	253.00	585	371.00	436
99.00	5867	176.00	1174	255.00	118624	372.00	3166
100.00	531	177.00	1772	256.00	17216	373.00	730
101.00	3503	178.00	645	257.00	1329	383.00	830
102.00	180	179.00	7329	258.00	7275	384.00	228
103.00	1140	180.00	4831	259.00	1188	390.00	433
104.00	2300	181.00	2296	260.00	200	391.00	237
105.00	2067	182.00	354	261.00	142	392.00	163
106.00	732	183.00	241	264.00	186	401.00	177
107.00	26848	184.00	572	265.00	2938	402.00	1244
108.00	4043	185.00	3662	266.00	493	403.00	1787
109.00	744	186.00	27072	270.00	126	404.00	646
110.00	47768	187.00	7673	271.00	234	421.00	1637
111.00	7142	188.00	763	272.00	384	422.00	1574
112.00	909	189.00	1730	273.00	3889	423.00	11637
113.00	338	190.00	325	274.00	10079	424.00	2495
116.00	1403	191.00	859	275.00	55952	425.00	200
117.00	24664	192.00	2439	276.00	7415	437.00	50
118.00	1723	193.00	2782	277.00	4869	438.00	71
119.00	207	194.00	548	278.00	775	441.00	31824
120.00	344	195.00	439	279.00	140	442.00	211264
121.00	108	196.00	6210	281.00	108	443.00	42208
122.00	1841	197.00	402	282.00	139	444.00	4074
123.00	2656	198.00	193408	283.00	558	445.00	209

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d

Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574

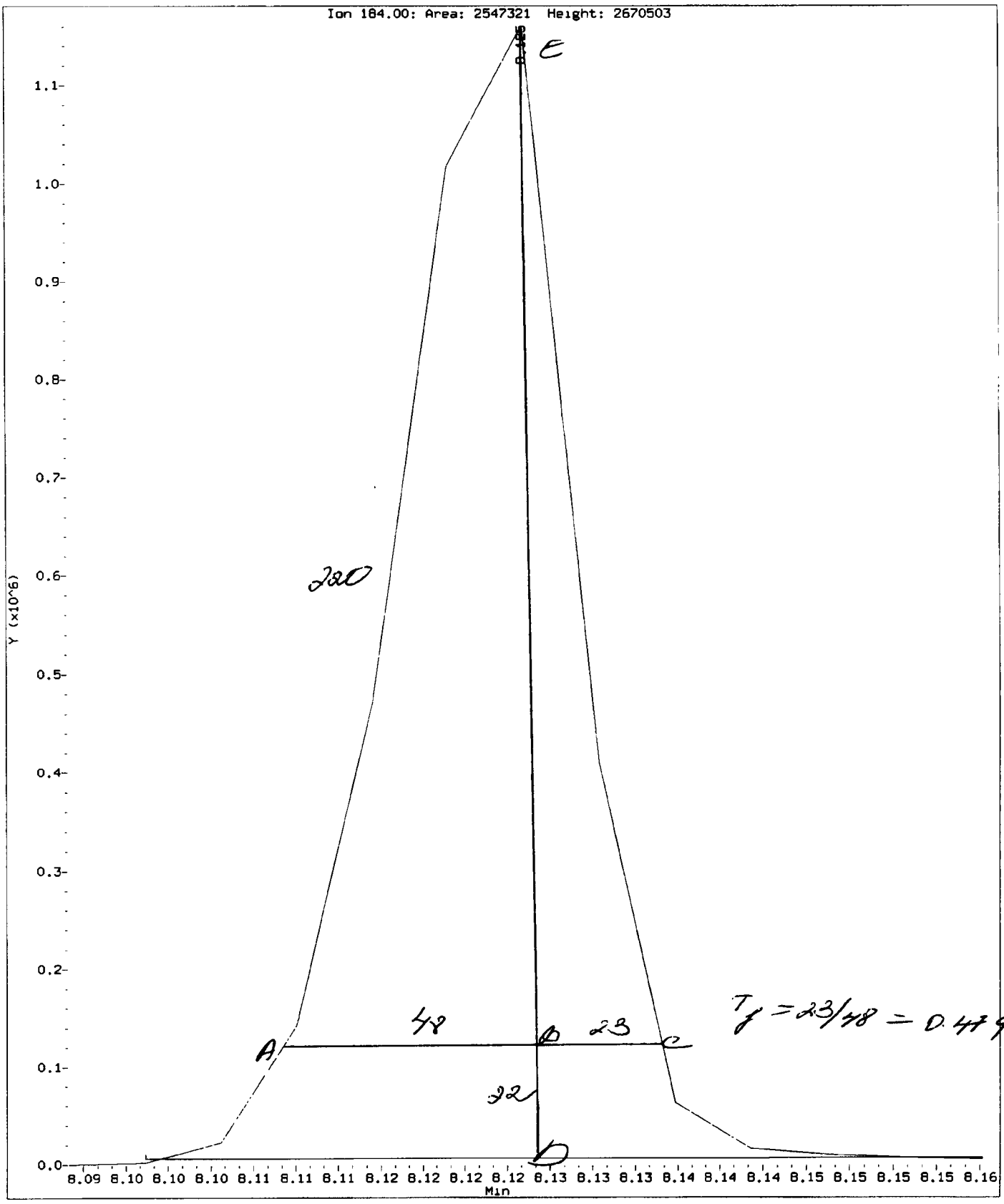
Location of Maximum: 442.00

Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1219	199.00	12893	284.00	387		
125.00	1090	200.00	1075	285.00	813		
127.00	94600	201.00	925	286.00	126		
128.00	7116	203.00	1424	289.00	147		

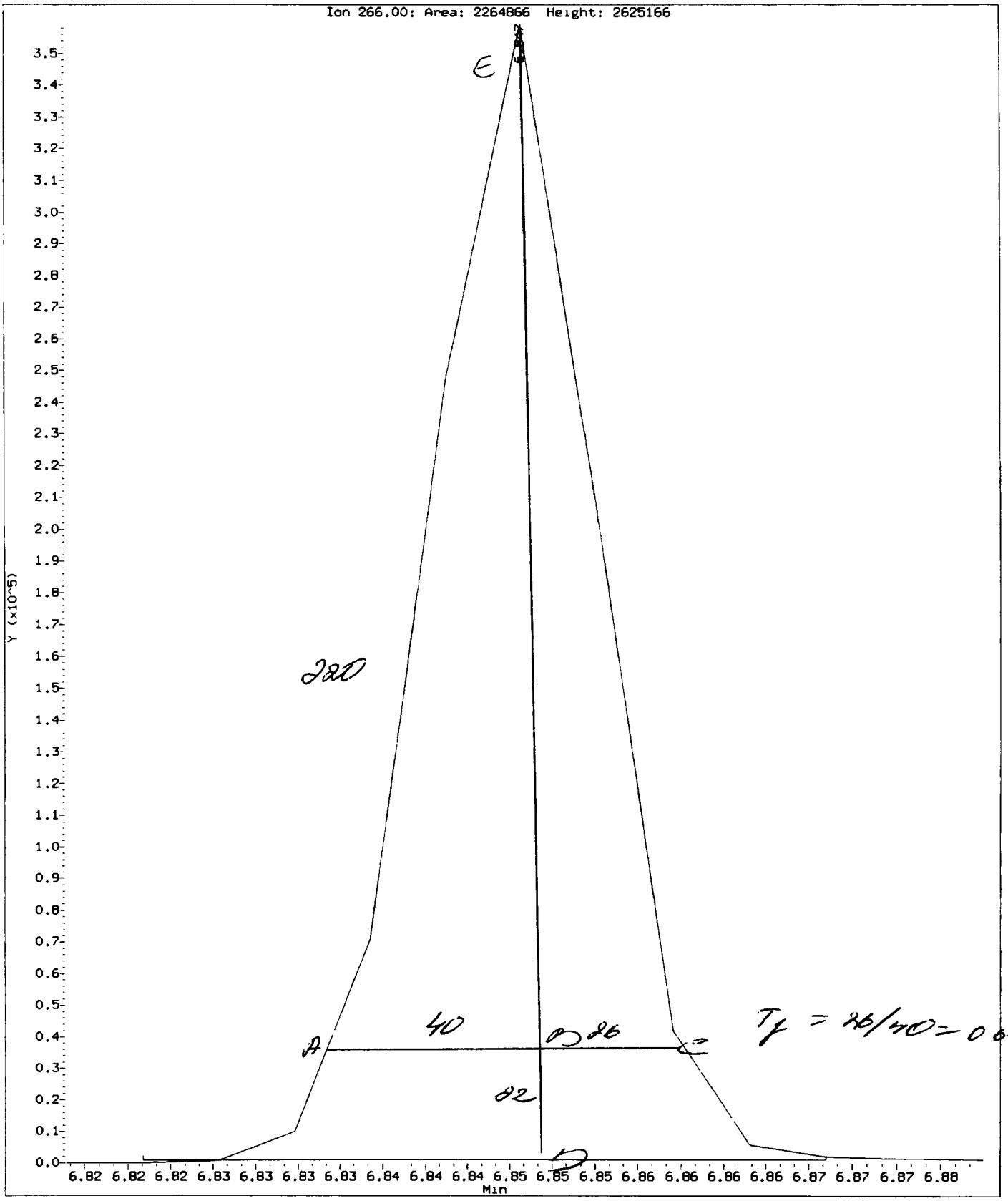
Data File: /chem1/nt10.1/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.1/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.1
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/20130125.b/ddt.b/df0125.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130125.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 25-JAN-2013 12:43 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.847	2264865
Benzidine	8.125	2547321
4,4'-DDE	8.307	1813
4,4'-DDD	8.644	5130
4,4'-DDT	8.874	537797

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

$$\text{DDT Percent Breakdown} = \frac{(1813 + 5130) * 100}{(1813 + 5130 + 537797)}$$

DDT Percent Breakdown = 1.3 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL67 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: 04/25/13 Analysis Start Date: 04/26/13

	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 / ✓ LCS ONLY
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 / B	MS / MSD RPD ≤ 30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / BX 6X
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

- Both samples were run at 3 dilutions.
- Sample B was re-run at 6X dilution ~~due to~~ on 04/25/13
- Sample B: d5-Nitrobenzene surrogate recovery below QC.

(Review 1) Analyst: YZ **Date:** 4/25/13

(Review 2) Reviewer: [signature] **Date:** 4/26/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

ARI Job No.: WL49 Method: ABN.m Instrument: nt10.i Date: 24-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1900	wl49mb.d	WL49MBS1	WL49MBS1	1	NO MANUAL INTEGRATION
1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	NO MANUAL INTEGRATION
2014	wl49f.d	WL49F	IM-CB-01-2	3	Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2051	wl49g.d	WL49G	IM-CB-02-2	1	Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2127	wl49gms.d	WL49GMS	IM-CB-02-2	1	3,3'-Dichlorobenzidine, Aniline,
2204	wl49gmsd.d	WL49GMSD	IM-CB-02-2	1	3,3'-Dichlorobenzidine, Di-n-octylphthalate, Aniline,
2241	wl67a.d	WL67A	GR-CB-07-2	3	Butylbenzylphthalate, Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2318	wl67b.d	WL67B	GR-WS-05-2	3	Di-n-butylphthalate, Butylbenzylphthalate, Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
1158	wl67b2.d	WL67B	GR-WS-05-2	6	Butylbenzylphthalate, Di-n-octylphthalate, Dibenzo(a,h)anthracene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

Instrument: nt10.i Date: 24-APR-2013 Method: ABN.m

INITIAL CAL: 25-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 24-APR-2013

Compound	%D
Benzyl alcohol	-31.6
Hexachlorocyclopentadiene	-22.0
3,3'-Dichlorobenzidine	-22.1
Retene	-100.0

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

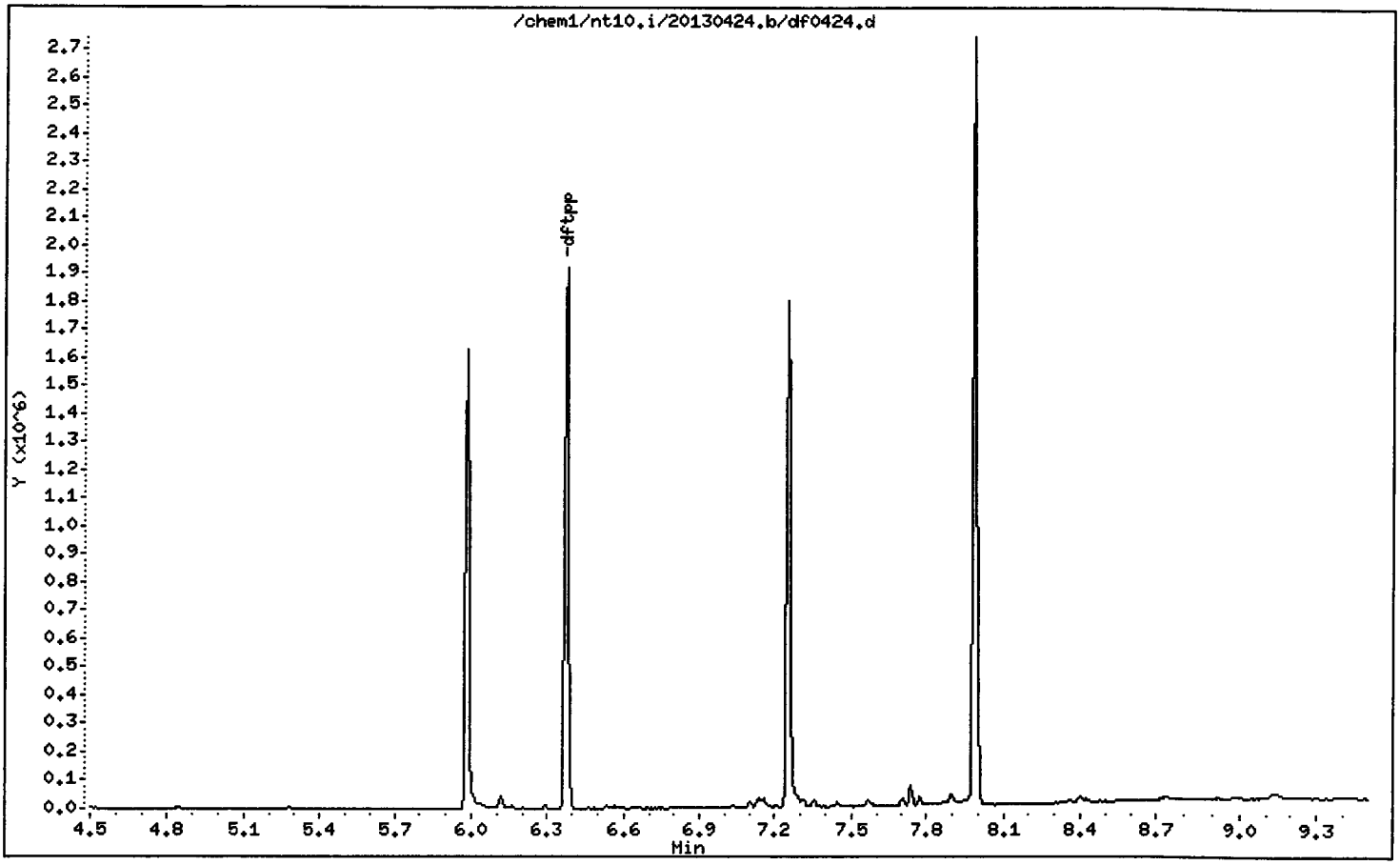
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

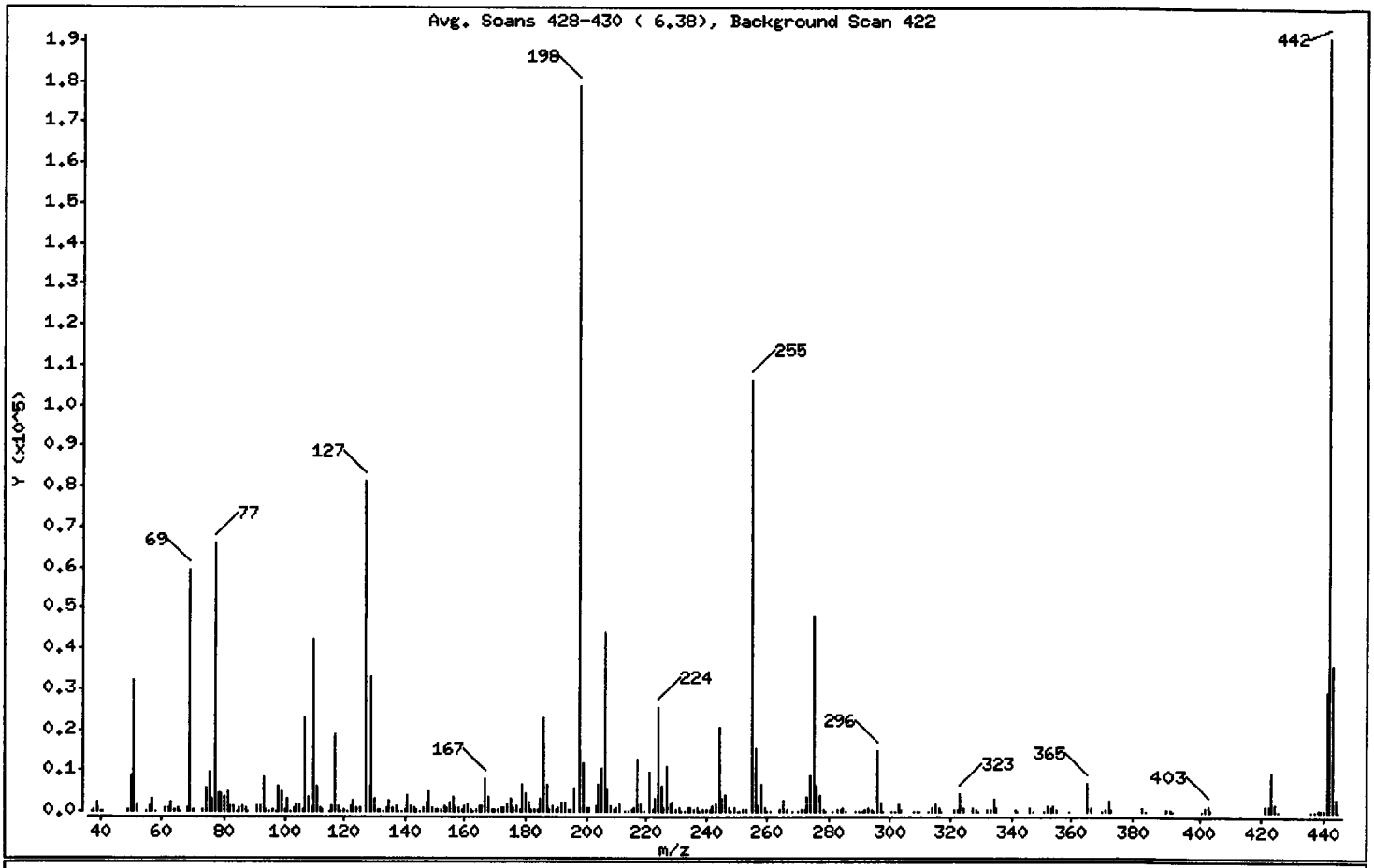
Sample Info: DFTPP

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	18.02
68	Less than 2.00% of mass 69	0.56 (1.68)
69	Mass 69 relative abundance	33.29
70	Less than 2.00% of mass 69	0.14 (0.44)
127	10.00 - 80.00% of mass 198	45.50
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.59
275	10.00 - 60.00% of mass 198	26.71
365	Greater than 1.00% of mass 198	3.93
441	0.01 - 24.00% of mass 442	16.43 (15.36)
442	50.00 - 200.00% of mass 198	106.98
443	15.00 - 24.00% of mass 442	20.26 (18.94)

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	62	129.00	32808	205.00	10718	290.00	51
38.00	420	130.00	2896	206.00	44136	291.00	54
39.00	2403	131.00	583	207.00	5430	292.00	222
40.00	124	132.00	275	208.00	1492	293.00	990
41.00	119	133.00	139	209.00	487	294.00	258
49.00	232	134.00	875	210.00	870	295.00	142
50.00	8942	135.00	2524	211.00	1733	296.00	14776
51.00	32216	136.00	990	213.00	137	297.00	2046
52.00	1767	137.00	1248	214.00	51	298.00	79
55.00	209	138.00	208	215.00	470	301.00	193
56.00	1373	139.00	131	216.00	1026	302.00	201
57.00	3288	140.00	385	217.00	12663	303.00	1630
58.00	125	141.00	4070	218.00	1617	304.00	406
61.00	732	142.00	1272	219.00	123	308.00	209
62.00	713	143.00	934	221.00	9746	309.00	118
63.00	2186	144.00	239	222.00	376	310.00	146
64.00	352	145.00	196	223.00	2876	313.00	120
65.00	1059	146.00	707	224.00	25448	314.00	746
66.00	55	147.00	2048	225.00	6292	315.00	1736
68.00	999	148.00	4742	226.00	710	316.00	874
69.00	59536	149.00	818	227.00	10853	317.00	86
70.00	259	150.00	258	228.00	1541	321.00	496
73.00	521	151.00	595	229.00	2340	322.00	312
74.00	5709	152.00	403	230.00	329	323.00	4532
75.00	9567	153.00	1361	231.00	983	324.00	924
76.00	3032	154.00	960	232.00	161	327.00	907
77.00	66016	155.00	2359	233.00	157	328.00	495
78.00	4326	156.00	3300	234.00	690	329.00	55
79.00	4544	157.00	722	235.00	824	332.00	410
80.00	3456	158.00	725	236.00	501	333.00	464
81.00	4912	159.00	585	237.00	800	334.00	2983
82.00	1250	160.00	1364	238.00	54	335.00	737
83.00	1243	161.00	1883	239.00	520	341.00	555
84.00	206	162.00	571	240.00	310	342.00	55
85.00	820	163.00	138	241.00	588	346.00	1033

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d

Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422

Location of Maximum: 442.00

Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1326	164.00	270	242.00	1459	347.00	181
87.00	703	165.00	1532	243.00	1641	351.00	51
88.00	177	166.00	1277	244.00	20496	352.00	1489
91.00	1264	167.00	7974	245.00	2914	353.00	930
92.00	1216	168.00	3308	246.00	4015	354.00	1380
93.00	8379	169.00	651	247.00	869	355.00	264
94.00	617	170.00	234	248.00	153	359.00	143
95.00	125	171.00	352	249.00	707	365.00	7026
96.00	426	172.00	743	250.00	143	366.00	864
97.00	63	173.00	1004	251.00	215	370.00	61
98.00	6323	174.00	1678	252.00	244	371.00	407
99.00	4695	175.00	3145	253.00	592	372.00	2609
100.00	409	176.00	1010	255.00	106344	373.00	599
101.00	3009	177.00	1443	256.00	15303	383.00	669
102.00	160	178.00	550	257.00	1302	384.00	214
103.00	942	179.00	6588	258.00	6520	390.00	340
104.00	1960	180.00	4195	259.00	999	391.00	255
105.00	1831	181.00	2153	260.00	182	392.00	125
106.00	619	182.00	401	261.00	199	401.00	137
107.00	23016	183.00	228	264.00	283	402.00	1000
108.00	3453	184.00	507	265.00	2702	403.00	1513
109.00	678	185.00	3200	266.00	287	404.00	508
110.00	42288	186.00	22896	268.00	56	421.00	1378
111.00	6306	187.00	6675	270.00	185	422.00	1170
112.00	776	188.00	598	271.00	282	423.00	9532
113.00	262	189.00	1483	272.00	389	424.00	1837
115.00	58	190.00	274	273.00	3694	425.00	180
116.00	1306	191.00	747	274.00	8678	436.00	112
117.00	18768	192.00	2090	275.00	47760	437.00	156
118.00	1384	193.00	2239	276.00	6344	438.00	351
119.00	190	194.00	525	277.00	3970	439.00	457
120.00	264	195.00	249	278.00	627	440.00	251
121.00	65	196.00	5697	279.00	68	441.00	29376
122.00	1472	198.00	178816	281.00	58	442.00	191296
123.00	2448	199.00	11790	283.00	520	443.00	36224

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d

Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422

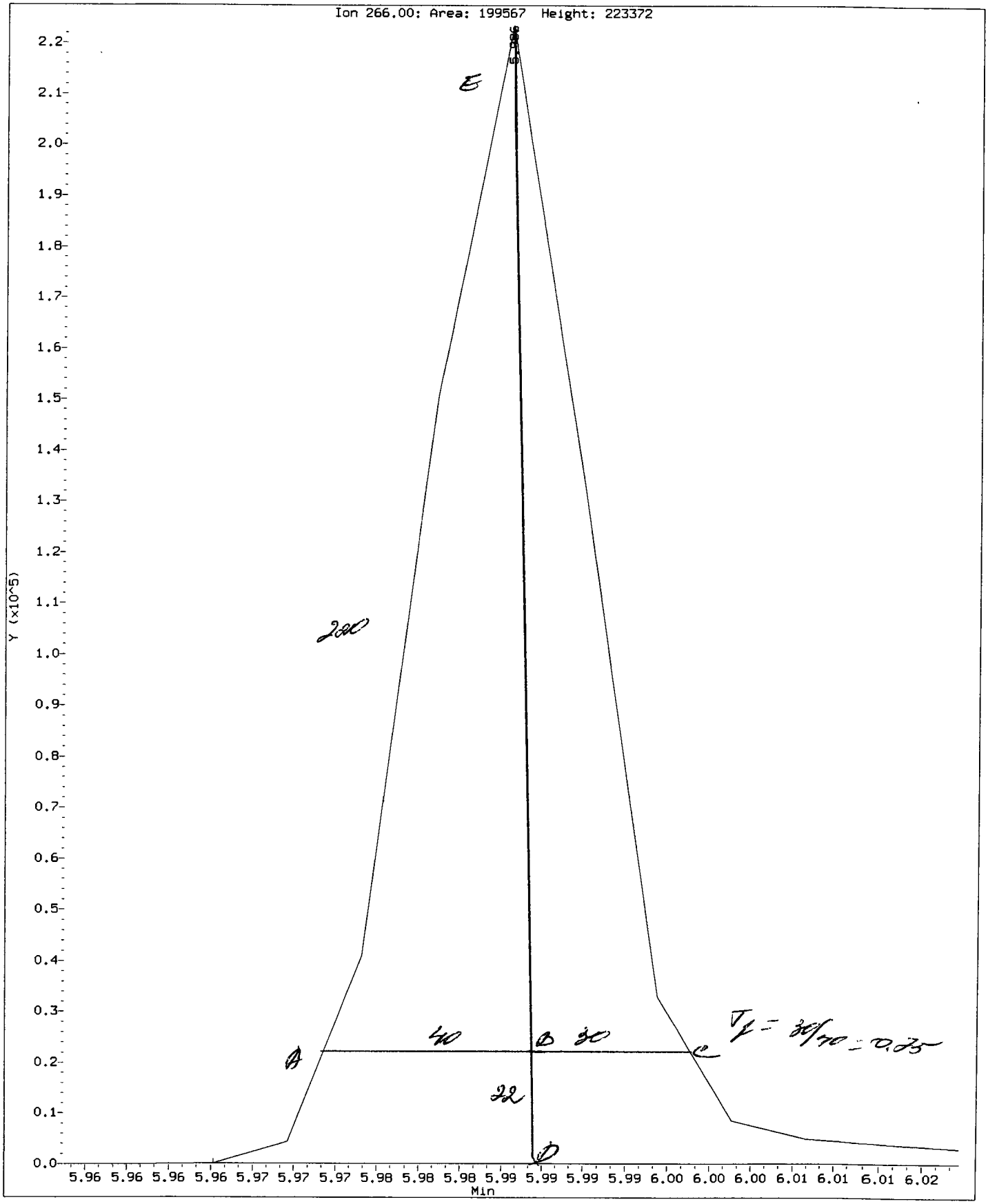
Location of Maximum: 442.00

Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1020	200.00	934	284.00	341	444.00	3289
125.00	1068	201.00	969	285.00	759	445.00	129
127.00	81368	203.00	1335	286.00	60		
128.00	6094	204.00	6384	289.00	105		

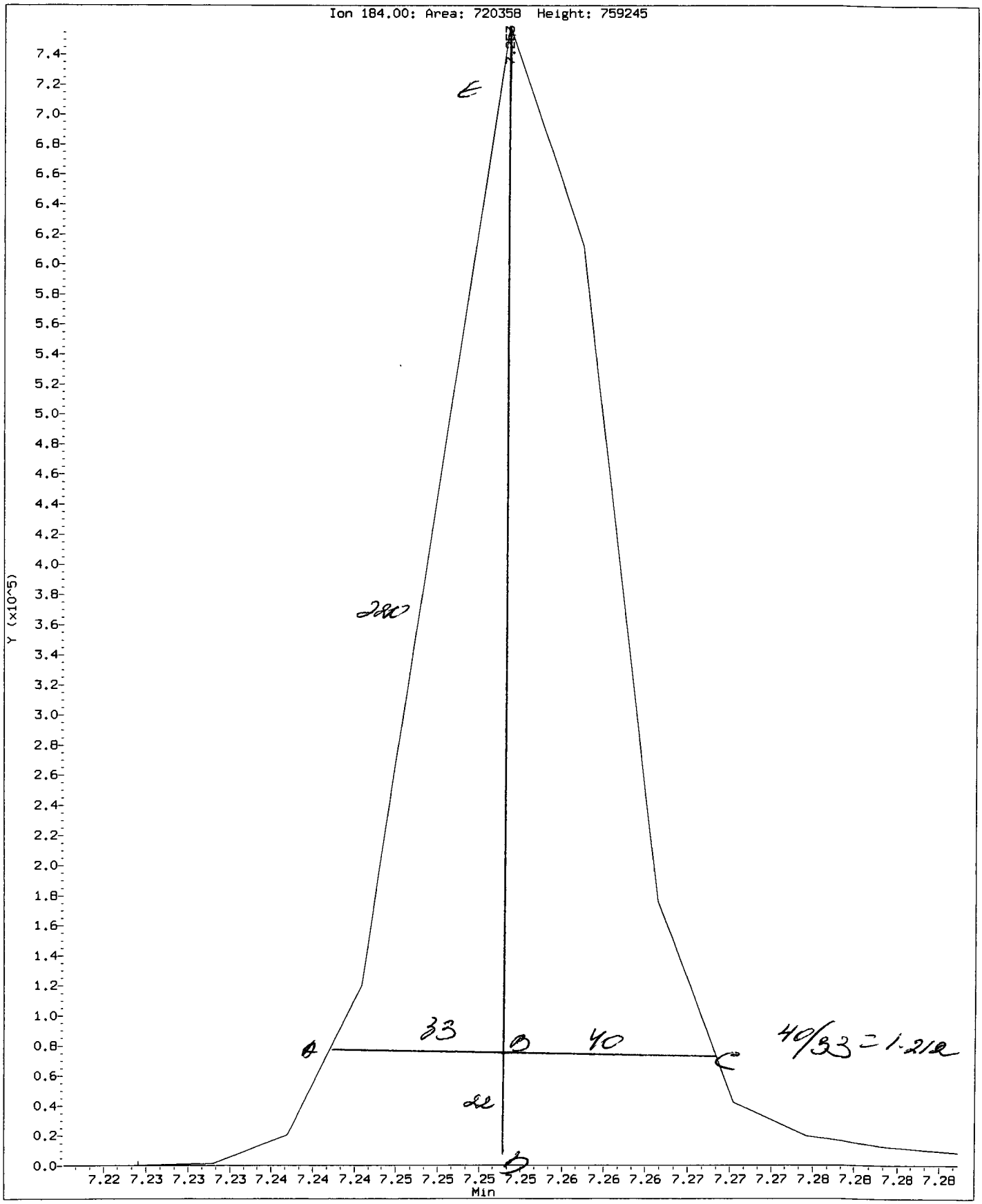
Data File: /chem1/nt10.i/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
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/20130424.b/ddt.b/df0424.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130424.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 24-APR-2013 17:30 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.986	199567
Benzidine	7.253	720358
4,4'-DDE	7.446	1704
4,4'-DDD	7.735	12189
4,4'-DDT	7.991	515480

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

$$\text{DDT Percent Breakdown} = \frac{(1704 + 12189) * 100}{(1704 + 12189 + 515480)}$$

DDT Percent Breakdown = 2.6 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-APR-2013 17:46
Lab File ID: cc0424.d Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Analysis Type: Init. Cal. Times: 12:59 17:16
Lab Sample ID: CC0424 Quant Type: ISTD
Method: /chem1/nt10.i/20130424.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.27898	1.35504	1.35504	0.010	5.94628	20.00000	Averaged	
$ 2 Phenol-d5	1.58709	1.76626	1.76626	0.010	11.28885	20.00000	Averaged	
3 Phenol	1.67046	1.76030	1.76030	0.100	5.37816	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.37422	1.31350	1.31350	0.010	-4.41913	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.27098	1.24489	1.24489	0.700	-2.05268	20.00000	Averaged	
6 2-Chlorophenol	1.45366	1.38201	1.38201	0.800	-4.92868	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.58180	1.45311	1.45311	0.010	-8.13561	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.56627	1.42072	1.42072	0.010	-9.29290	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00989	0.96021	0.96021	0.010	-4.91987	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.50604	1.37020	1.37020	0.010	-9.01947	20.00000	Averaged	
11 Benzyl alcohol	0.79941	0.54678	0.54678	0.010	-31.60180	20.00000	Averaged	<-
14 2,2'-oxybis(1-Chloropropane	0.44716	0.41095	0.41095	0.010	-8.09880	20.00000	Averaged	
13 2-Methylphenol	1.26098	1.39134	1.39134	0.700	10.33782	20.00000	Averaged	
17 Hexachloroethane	0.61907	0.59460	0.59460	0.300	-3.95238	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.84248	0.87655	0.87655	0.500	4.04390	20.00000	Averaged	
15 4-Methylphenol	1.31137	1.40738	1.40738	0.600	7.32175	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.36919	0.39064	0.39064	0.010	5.80988	20.00000	Averaged	
19 Nitrobenzene	0.35004	0.35507	0.35507	0.200	1.43646	20.00000	Averaged	
20 Isophorone	0.61012	0.66798	0.66798	0.300	9.48355	20.00000	Averaged	
21 2-Nitrophenol	0.20568	0.21456	0.21456	0.100	4.31717	20.00000	Averaged	
22 2,4-Dimethylphenol	0.35058	0.37473	0.37473	0.200	6.88840	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.38425	0.40061	0.40061	0.050	4.25691	20.00000	Averaged	
24 Benzoic acid	18.78980	20.00000	0.28130	0.010	-6.05102	20.00000	Quadratic	
25 2,4-Dichlorophenol	0.30640	0.31428	0.31428	0.100	2.57282	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.34870	0.31970	0.31970	0.010	-8.31591	20.00000	Averaged	
28 Naphthalene	1.04083	0.96617	0.96617	0.100	-7.17372	20.00000	Averaged	
29 4-Chloroaniline	0.41889	0.41382	0.41382	0.010	-1.20980	20.00000	Averaged	
30 Hexachlorobutadiene	0.21732	0.20599	0.20599	0.010	-5.21256	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.29615	0.33631	0.33631	0.200	13.56218	20.00000	Averaged	
32 2-Methylnaphthalene	0.68720	0.68747	0.68747	0.300	0.03842	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.45113	0.35172	0.35172	0.001	-22.03638	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.40085	0.40426	0.40426	0.200	0.85015	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.42597	0.44464	0.44464	0.200	4.38189	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.37225	1.31437	1.31437	0.010	-4.21799	20.00000	Averaged	
37 2-Chloronaphthalene	1.10490	1.02065	1.02065	0.700	-7.62504	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-APR-2013 17:46
Lab File ID: cc0424.d Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Analysis Type: Init. Cal. Times: 12:59 17:16
Lab Sample ID: CC0424 Quant Type: ISTD
Method: /chem1/nt10.i/20130424.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.25914	0.30612	0.30612	0.010	18.12932	20.00000	Averaged	
39 Dimethylphthalate	1.20981	1.11953	1.11953	0.010	-7.46294	20.00000	Averaged	
40 Acenaphthylene	1.80186	1.71071	1.71071	0.900	-5.05838	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.27639	0.27248	0.27248	0.100	-1.41435	20.00000	Averaged	
43 3-Nitroaniline	0.25523	0.27023	0.27023	0.010	5.87602	20.00000	Averaged	
44 Acenaphthene	1.10485	1.04933	1.04933	0.100	-5.02523	20.00000	Averaged	
45 2,4-Dinitrophenol	18.25964	20.00000	0.22001	0.030	-8.70179	20.00000	Quadratic	
46 Dibenzofuran	1.53658	1.52782	1.52782	0.800	-0.57064	20.00000	Averaged	
47 4-Nitrophenol	9.47467	10.00000	0.16473	0.010	-5.25326	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.37372	0.37093	0.37093	0.200	-0.74640	20.00000	Averaged	
50 Diethylphthalate	1.26733	1.11738	1.11738	0.010	-11.83127	20.00000	Averaged	
49 Fluorene	1.30516	1.24209	1.24209	0.100	-4.83200	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.60824	0.55175	0.55175	0.100	-9.28731	20.00000	Averaged	
52 4-Nitroaniline	0.26944	0.29238	0.29238	0.010	8.51314	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	0.16018	0.17691	0.17691	0.001	10.44072	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.48183	0.44530	0.44530	0.010	-7.58002	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.25526	0.20917	0.20917	0.010	-18.05718	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22313	0.21962	0.21962	0.100	-1.56997	20.00000	Averaged	
57 Hexachlorobenzene	0.28001	0.25304	0.25304	0.100	-9.63184	20.00000	Averaged	
58 Pentachlorophenol	0.18673	0.15493	0.15493	0.010	-17.02634	20.00000	Averaged	
60 Phenanthrene	1.06632	1.01217	1.01217	0.700	-5.07787	20.00000	Averaged	
61 Anthracene	1.07365	1.06618	1.06618	0.700	-0.69604	20.00000	Averaged	
62 Carbazole	0.71710	0.72864	0.72864	0.010	1.60843	20.00000	Averaged	
63 Di-n-butylphthalate	1.14571	1.16185	1.16185	0.010	1.40842	20.00000	Averaged	
64 Fluoranthene	1.22799	1.22462	1.22462	0.600	-0.27485	20.00000	Averaged	
65 Pyrene	1.13938	1.20602	1.20602	0.600	5.84889	20.00000	Averaged	
$ 66 Terphenyl-d14	0.76828	0.72865	0.72865	0.010	-5.15896	20.00000	Averaged	
67 Butylbenzylphthalate	0.43214	0.45424	0.45424	0.010	5.11490	20.00000	Averaged	
68 Benzo(a)anthracene	1.11613	1.05495	1.05495	0.700	-5.48079	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.46632	0.36310	0.36310	0.010	-22.13500	20.00000	Averaged	<-
71 Chrysene	1.01092	0.89495	0.89495	0.700	-11.47162	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.52819	0.50289	0.50289	0.010	-4.79014	20.00000	Averaged	
73 Di-n-octylphthalate	0.97573	0.83461	0.83461	0.010	-14.46334	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.15936	1.23705	1.23705	0.700	6.70178	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25249	1.12045	1.12045	0.700	-10.54228	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-APR-2013 17:46
Lab File ID: cc0424.d Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Analysis Type: Init. Cal. Times: 12:59 17:16
Lab Sample ID: CC0424 Quant Type: ISTD
Method: /chem1/nt10.i/20130424.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.00265	0.97593	0.97593	0.700	-2.66433	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.23647	1.17496	1.17496	0.500	-4.97406	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.97912	0.90035	0.90035	0.400	-8.04574	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.06086	1.01203	1.01203	0.500	-4.60264	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.76098	0.79517	0.79517	0.010	4.49205	20.00000	Averaged	
91 Aniline	3.60472	4.12635	4.12635	0.010	14.47071	20.00000	Averaged	
93 Benzidine	9.39540	10.00000	0.17438	0.010	-6.04599	20.00000	Quadratic	
103 Pyridine	0.64909	0.68021	0.68021	0.010	4.79316	20.00000	Averaged	
105 1-methylnaphthalene	0.63035	0.62732	0.62732	0.010	-0.48067	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.14954	1.12916	1.12916	0.010	-1.77212	20.00000	Averaged	
187 Total Benzofluoranthenes	1.14121	1.09301	1.09301	0.010	-4.22383	20.00000	Averaged	
99 Perylene	1.15229	1.05456	1.05456	0.010	-8.48119	20.00000	Averaged	
98 Retene	++++	++++	++++	0.010	++++	20.00000	Quadratic	<-
120 2,3,4,6-Tetrachlorophenol	0.37257	0.34156	0.34156	0.010	-8.32206	20.00000	Averaged	

Analytical Resources, Inc. 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/cc0424.d
Lab Smp Id: CC0424
Inj Date : 24-APR-2013 17:46
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0424
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.444	5.444	(0.710)	99182	5.00000	5.297
$	2 Phenol-d5	99	7.159	7.159	(0.934)	129281	5.00000	5.564
	3 Phenol	94	7.182	7.182	(0.937)	128845	5.00000	5.269
$	5 2-Chlorophenol-d4	132	7.306	7.306	(0.954)	96141	5.00000	4.779
	4 Bis(2-Chloroethyl)ether	93	7.260	7.260	(0.947)	91119	5.00000	4.897
	6 2-Chlorophenol	128	7.337	7.337	(0.958)	101156	5.00000	4.754
	7 1,3-Dichlorobenzene	146	7.584	7.584	(0.990)	106360	5.00000	4.593
*	8 1,4-Dichlorobenzene-d4	152	7.662	7.662	(1.000)	58556	4.00000	
	9 1,4-Dichlorobenzene	146	7.693	7.693	(1.004)	103989	5.00000	4.535
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.048)	70282	5.00000	4.754
	12 1,2-Dichlorobenzene	146	8.058	8.058	(1.052)	100292	5.00000	4.549
	11 Benzyl alcohol	108	8.019	8.019	(1.047)	40021	5.00000	3.420
	14 2,2'-oxybis(1-Chloropropane)	121	8.337	8.337	(1.088)	30079	5.00000	4.595
	13 2-Methylphenol	108	8.322	8.322	(1.086)	101839	5.00000	5.517
	17 Hexachloroethane	117	8.663	8.663	(1.131)	43522	5.00000	4.802
	16 N-Nitroso-di-n-propylamine	70	8.609	8.609	(1.124)	64159	5.00000	5.202
	15 4-Methylphenol	108	8.625	8.625	(1.126)	103013	5.00000	5.366
$	18 Nitrobenzene-d5	82	8.826	8.826	(0.860)	103983	5.00000	5.290
	19 Nitrobenzene	77	8.857	8.857	(0.863)	94515	5.00000	5.072
	20 Isophorone	82	9.354	9.354	(0.911)	177810	5.00000	5.474
	21 2-Nitrophenol	139	9.525	9.525	(0.928)	57112	5.00000	5.216
	22 2,4-Dimethylphenol	107	9.710	9.710	(0.946)	199500	10.0000	10.69
	23 Bis(2-Chloroethoxy)methane	93	9.880	9.880	(0.962)	106637	5.00000	5.213
	24 Benzoic acid	105	10.072	10.072	(0.981)	299521	20.0000	18.79
	25 2,4-Dichlorophenol	162	10.049	10.049	(0.979)	167318	10.0000	10.26
	26 1,2,4-Trichlorobenzene	180	10.196	10.196	(0.993)	85101	5.00000	4.584
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	212952	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	10.304	10.304	(1.004)	257185	5.00000	4.641
	29 4-Chloroaniline	127	10.520	10.520	(1.025)	220310	10.0000	9.879
	30 Hexachlorobutadiene	225	10.736	10.736	(1.046)	54832	5.00000	4.739
	31 4-Chloro-3-methylphenol	107	11.650	11.650	(1.135)	179045	10.0000	11.36
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	182997	5.00000	5.002
	33 Hexachlorocyclopentadiene	237	12.323	12.323	(0.874)	116653	10.0000	7.796
	34 2,4,6-Trichlorophenol	196	12.516	12.516	(0.888)	134080	10.0000	10.09
	35 2,4,5-Trichlorophenol	196	12.601	12.601	(0.894)	147473	10.0000	10.44
$	36 2-Fluorobiphenyl	172	12.687	12.687	(0.900)	217969	5.00000	4.789
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	169260	5.00000	4.619
	38 2-Nitroaniline	65	13.190	13.190	(0.935)	101529	10.0000	11.81
	39 Dimethylphthalate	163	13.708	13.708	(0.972)	185657	5.00000	4.627
	40 Acenaphthylene	152	13.762	13.762	(0.976)	283696	5.00000	4.747
	41 2,6-Dinitrotoluene	165	13.824	13.824	(0.980)	90373	10.0000	9.859
*	42 Acenaphthene-d10	164	14.103	14.103	(1.000)	132668	4.00000	
	43 3-Nitroaniline	138	14.111	14.111	(1.001)	89627	10.0000	10.59
	44 Acenaphthene	153	14.180	14.180	(1.005)	174016	5.00000	4.749
	45 2,4-Dinitrophenol	184	14.342	14.342	(1.017)	145938	20.0000	18.26
	46 Dibenzofuran	168	14.536	14.536	(1.031)	253365	5.00000	4.971
	47 4-Nitrophenol	109	14.605	14.605	(1.036)	54635	10.0000	9.475
	48 2,4-Dinitrotoluene	165	14.683	14.683	(1.041)	123025	10.0000	9.925
	50 Diethylphthalate	149	15.293	15.293	(1.084)	185301	5.00000	4.408
	49 Fluorene	166	15.293	15.293	(1.084)	205983	5.00000	4.758
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	91499	5.00000	4.536
	52 4-Nitroaniline	138	15.471	15.471	(1.097)	96973	10.0000	10.85
	53 4,6-Dinitro-2-methylphenol	198	15.579	15.579	(0.898)	195166	20.0000	22.09
	54 N-Nitrosodiphenylamine	169	15.633	15.633	(0.902)	122816	5.00000	4.621
$	55 2,4,6-Tribromophenol	330	15.872	15.872	(1.125)	34687	5.00000	4.097
	56 4-Bromophenyl-phenylether	248	16.412	16.412	(0.946)	60572	5.00000	4.922
	57 Hexachlorobenzene	284	16.690	16.690	(0.962)	69790	5.00000	4.518
	58 Pentachlorophenol	266	17.116	17.116	(0.987)	85462	10.0000	8.297
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	220641	4.00000	
	60 Phenanthrene	178	17.394	17.394	(1.003)	279158	5.00000	4.746
	61 Anthracene	178	17.487	17.487	(1.008)	294054	5.00000	4.965
	62 Carbazole	167	17.897	17.897	(1.032)	200960	5.00000	5.080
	63 Di-n-butylphthalate	149	18.918	18.918	(1.091)	320440	5.00000	5.070
	64 Fluoranthene	202	19.947	19.947	(1.150)	337751	5.00000	4.986
	65 Pyrene	202	20.373	20.373	(0.900)	342387	5.00000	5.292
$	66 Terphenyl-d14	244	20.775	20.775	(0.918)	206862	5.00000	4.742
	67 Butylbenzylphthalate	149	21.797	21.797	(0.963)	128959	5.00000	5.256
	68 Benzo(a)anthracene	228	22.610	22.610	(0.999)	299500	5.00000	4.726
*	69 Chrysene-d12	240	22.641	22.641	(1.000)	227119	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.633	22.633	(1.000)	206169	10.0000	7.787
	71 Chrysene	228	22.680	22.680	(1.002)	254076	5.00000	4.426
	72 bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	181253	5.00000	4.760
*	134 Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	288338	4.00000	
	73 Di-n-octylphthalate	149	23.903	23.903	(1.000)	300811	5.00000	4.277

	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	24.383	24.383	(0.978)	317553	5.00000	5.335
75	Benzo(k)fluoranthene	252	24.422	24.422	(0.979)	287620	5.00000	4.473
76	Benzo(a)pyrene	252	24.855	24.855	(0.997)	250523	5.00000	4.867
* 77	Perylene-d12	264	24.941	24.941	(1.000)	205360	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.608	26.608	(1.067)	301614	5.00000	4.751
79	Dibenzo(a,h)anthracene	278	26.631	26.631	(1.068)	231119	5.00000	4.598
80	Benzo(g,h,i)perylene	276	27.074	27.074	(1.086)	259788	5.00000	4.770
90	N-Nitrosodimethylamine	74	3.204	3.204	(0.418)	116404	10.0000	10.45
91	Aniline	93	7.128	7.128	(0.930)	302029	5.00000	5.724
93	Benzidine	184	20.280	20.280	(0.896)	99013	10.0000	9.395
103	Pyridine	79	3.196	3.196	(0.417)	99575	10.0000	10.48
105	1-methylnaphthalene	142	12.029	12.029	(1.172)	166987	5.00000	4.976
111	Azobenzene (1,2-DP-Hydrazine)	77	15.687	15.687	(1.112)	187255	5.00000	4.911
187	Total Benzofluoranthenes	252	24.422	24.422	(0.979)	561154	10.0000	9.578
99	Perylene	252	24.979	24.979	(1.002)	270708	5.00000	4.576
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	14.945	14.945	(1.060)	56643	5.00000	4.584

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0424.d
Lab Smp Id: CC0424
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info:

Calibration Date: 24-APR-2013
Calibration Time: 16:57

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	58556	25.59
27 Naphthalene-d8	176978	88489	353956	212952	20.33
42 Acenaphthene-d10	110872	55436	221744	132668	19.66
59 Phenanthrene-d10	188290	94145	376580	220641	17.18
69 Chrysene-d12	213681	106840	427362	227119	6.29
134 Di-n-octylphthala	264159	132080	528318	288338	9.15
77 Perylene-d12	208584	104292	417168	205360	-1.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.10	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

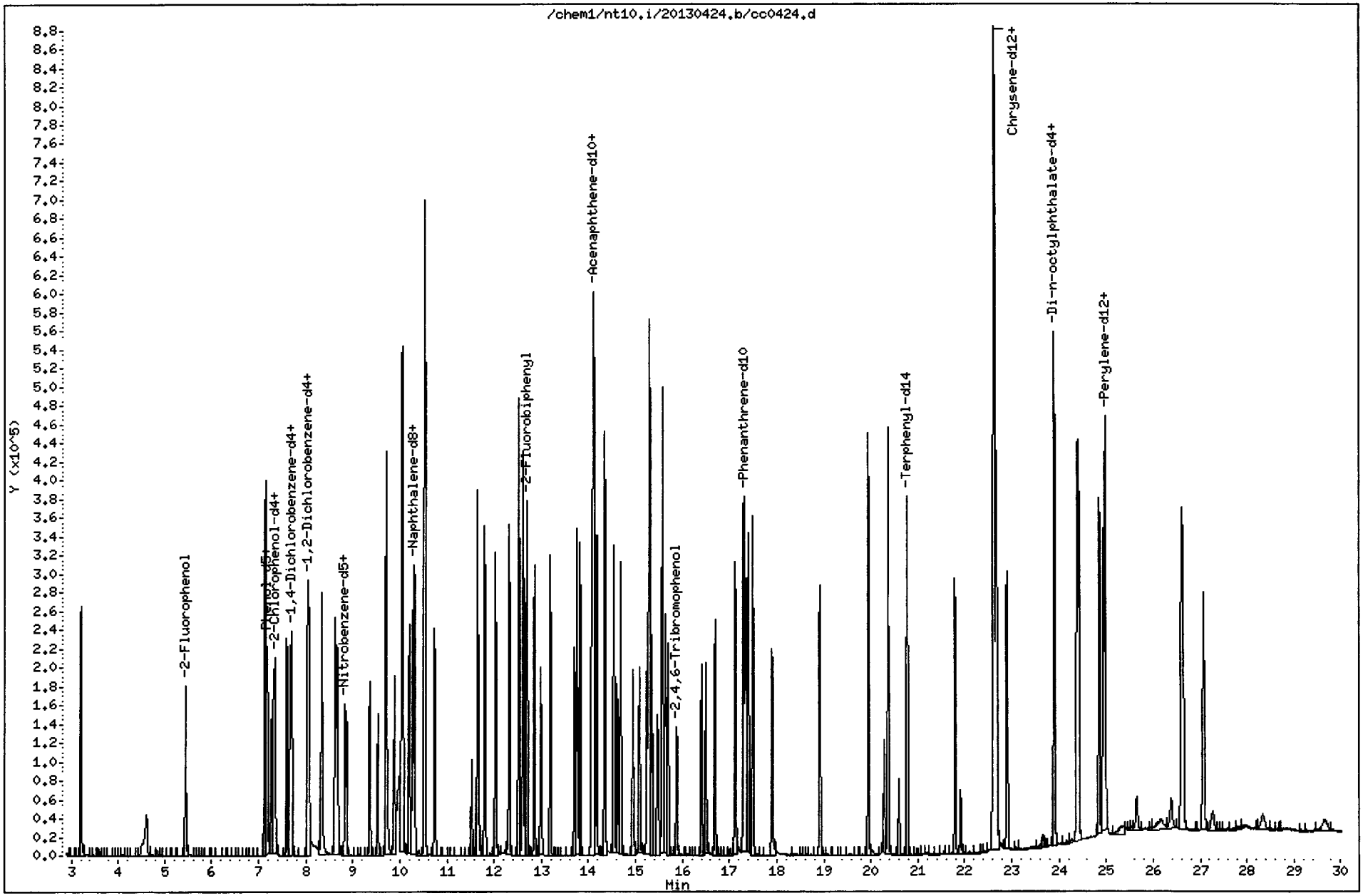
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Date : 24-APR-2013 17:46
Client ID:
Sample Info: CC0424

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0424.d

Lab ID: CC0424, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49mb.d
Lab Smp Id: WL49MBS1 Client Smp ID: WL49MBS1
Inj Date : 24-APR-2013 19:00
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49MBS1
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 5 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	5.428	5.444	(0.709)	71356	4.22900	422.9
$	2 Phenol-d5	99	7.151	7.159	(0.934)	97765	4.66932	466.9
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.298	7.306	(0.954)	75403	4.15914	415.9
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.654	7.662	(1.000)	52770	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.049)	34393	2.58147	258.1
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	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	8.818	8.826	(0.859)	57345	3.04664	304.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	203934	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	12.679	12.687	(0.899)	115484	2.76342	276.3
	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	14.103	14.103	(1.000)	121815	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	15.872	15.872	(1.125)	27484	3.53552	353.6
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	205587	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	20.775	20.775	(0.918)	133437	3.29607	329.6
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	22.633	22.641	(1.000)	210775	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	3843	0.11197	11.20 (R)
* 134	Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	259915	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	24.940	24.941	(1.000)	182935	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.					

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: wl49mb.d
Lab Smp Id: WL49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: WL49MBS1
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	46623	23312	93246	52770	13.18
27 Naphthalene-d8	176978	88489	353956	203934	15.23
42 Acenaphthene-d10	110872	55436	221744	121815	9.87
59 Phenanthrene-d10	188290	94145	376580	205587	9.19
69 Chrysene-d12	213681	106840	427362	210775	-1.36
134 Di-n-octylphthala	264159	132080	528318	259915	-1.61
77 Perylene-d12	208584	104292	417168	182935	-12.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.65	-0.10
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.10	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.63	-0.03
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	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.

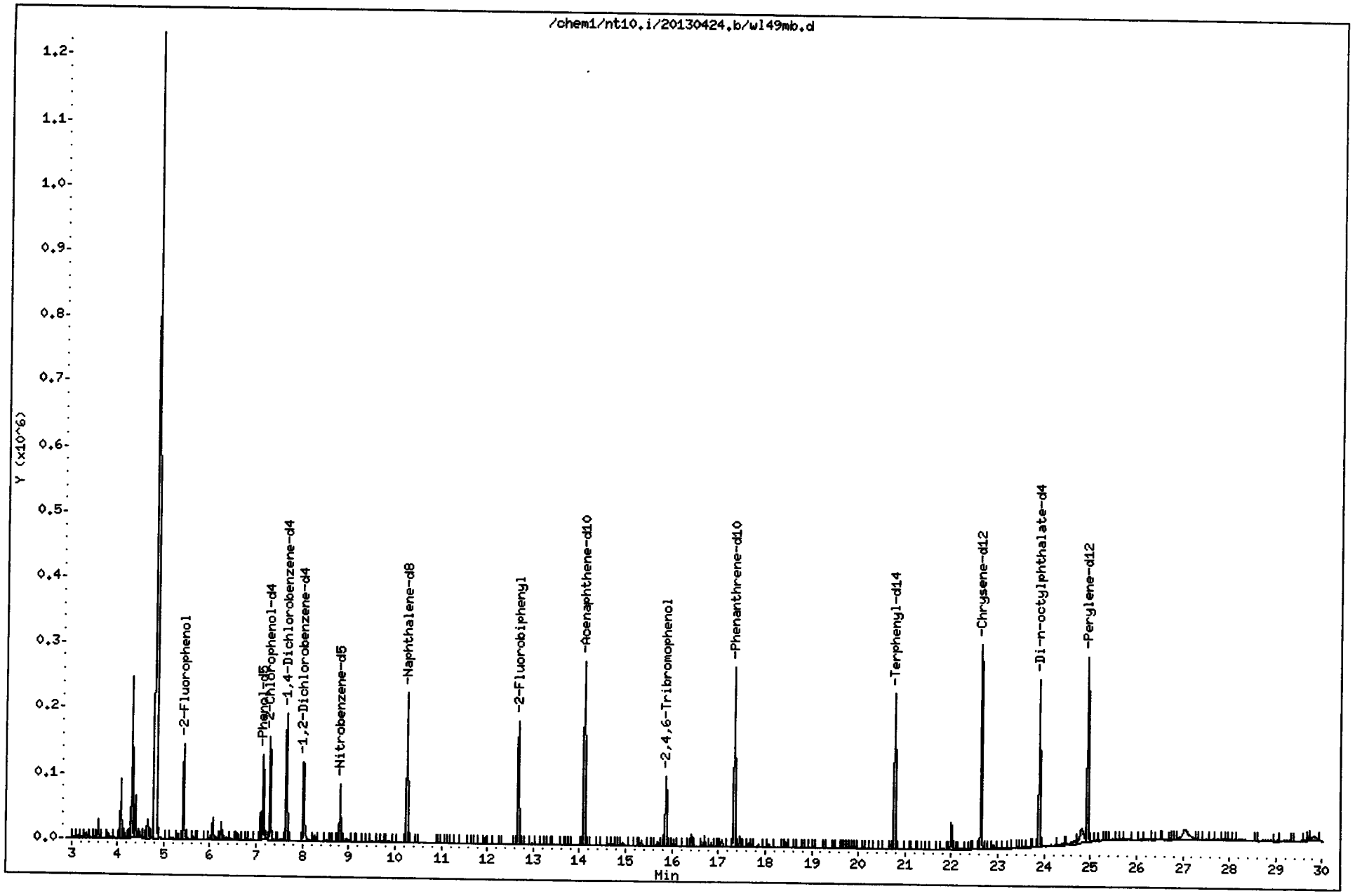
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	42-113
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-133
80 Benzo(g,h,i)peryl	500.0	0.000	*	38-126
105 1-methylnaphthale	500.0	0.000	*	42-100
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	422.9	56.39	30-160
$ 2 Phenol-d5	750.0	466.9	62.26	30-160
$ 5 2-Chlorophenol-d4	750.0	415.9	55.46	30-160
$ 10 1,2-Dichlorobenzen	500.0	258.1	51.63	30-160
$ 18 Nitrobenzene-d5	500.0	304.7	60.93	30-160
$ 36 2-Fluorobiphenyl	500.0	276.3	55.27	30-160
$ 55 2,4,6-Tribromophen	750.0	353.6	47.14	30-160
$ 66 Terphenyl-d14	500.0	329.6	65.92	30-160

Data File: /chem1/nt10.i/20130424.b/wl49mb.d
Date : 24-APR-2013 19:00
Client ID: WL49MBS1
Sample Info: WL49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/wl49mb.d

Date : 24-APR-2013 19:00

Client ID: WL49MBS1

Instrument: nt10.i

Sample Info: WL49MBS1

Volume Injected (uL): 1.0

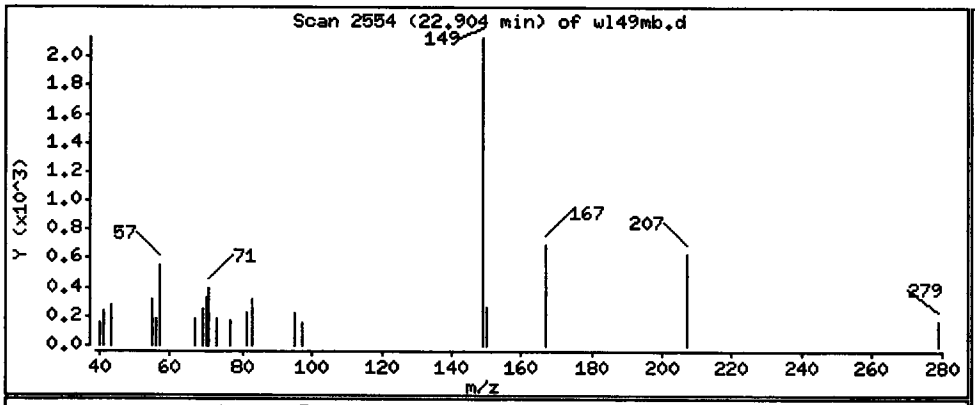
Operator: VTS/YZ

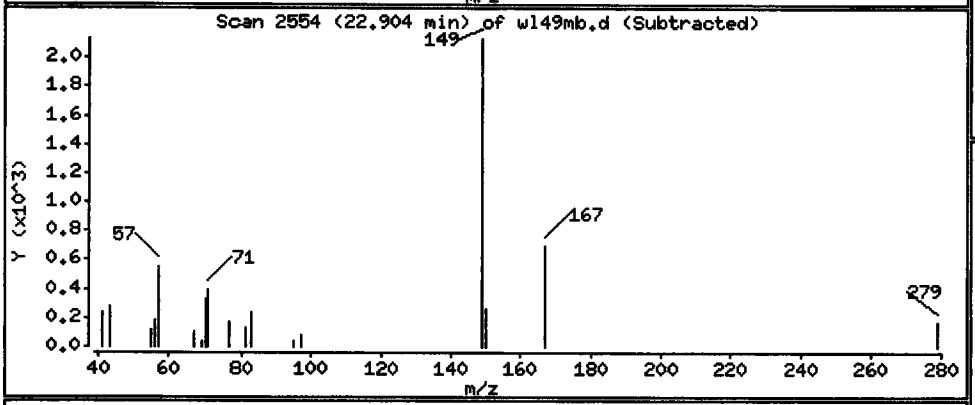
Column phase: ZB-5msi

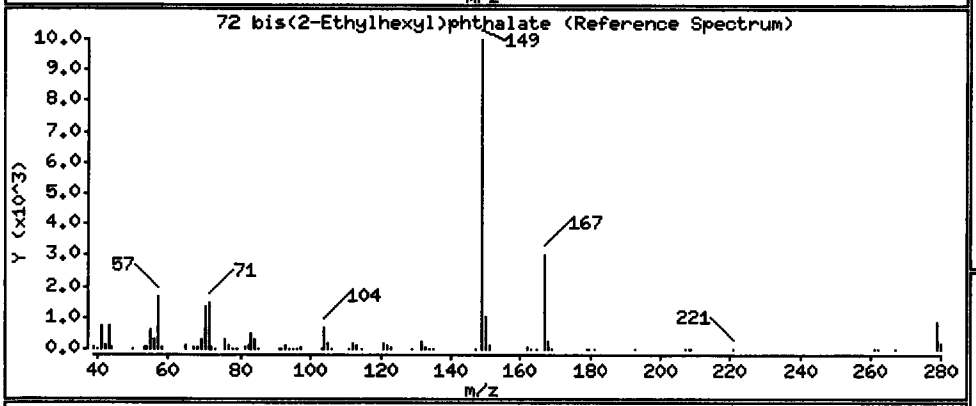
Column diameter: 0.25

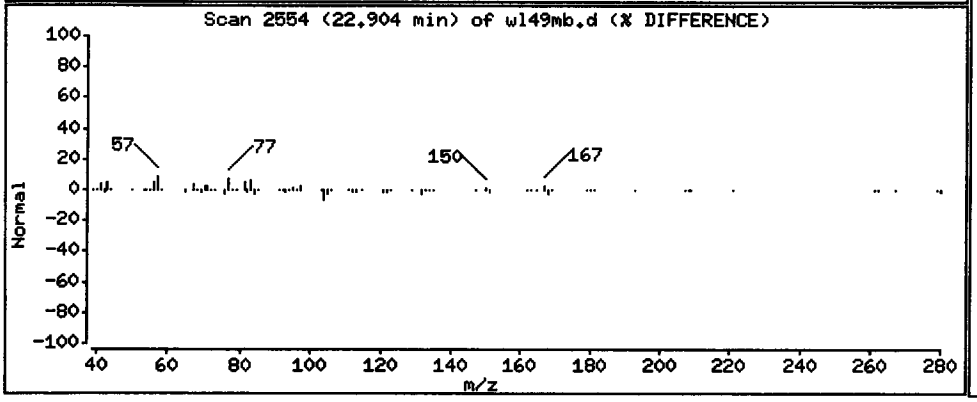
72 bis(2-Ethylhexyl)phthalate

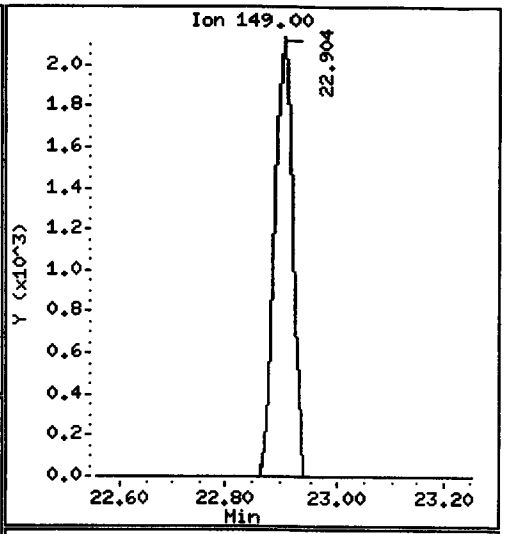
Concentration: 11.20 ug/kg

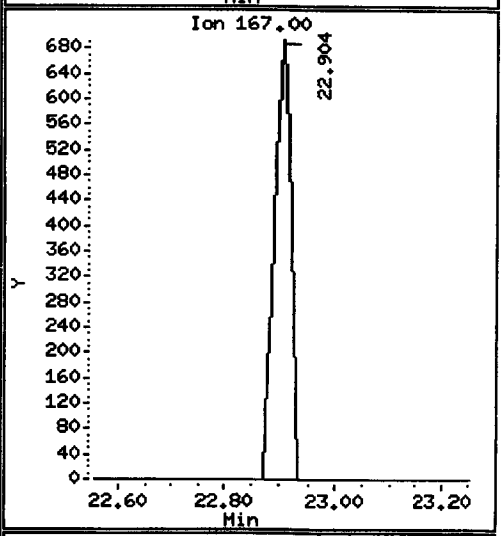


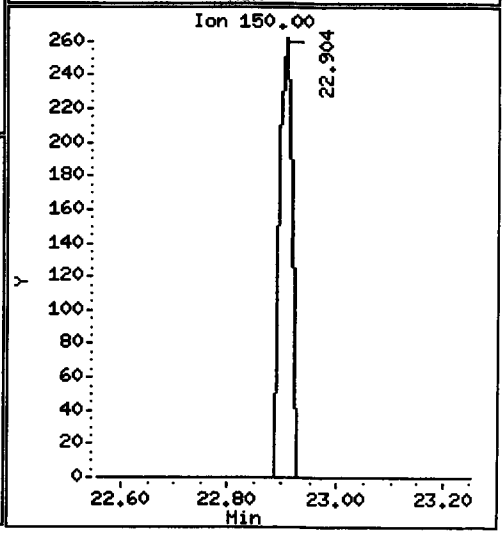












CO-ELUTION SUMMARY FOR FILE - wl49mb.d

Lab ID: WL49MBS1, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

IZ 04/25/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49sb.d
Lab Smp Id: WL49LCSS1 Client Smp ID: WL49LCSS1
Inj Date : 24-APR-2013 19:37
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49LCSS1
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 09:16 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 6 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	5.428	5.444	(0.709)	73019	4.90802	490.8
$	2 Phenol-d5	99	7.151	7.159	(0.934)	96965	5.25229	525.2
	3 Phenol	94	7.167	7.182	(0.936)	65668	3.37950	338.0
$	5 2-Chlorophenol-d4	132	7.298	7.306	(0.954)	71842	4.49425	449.4
	4 Bis(2-Chloroethyl)ether	93	7.244	7.260	(0.946)	49289	3.33387	333.4
	6 2-Chlorophenol	128	7.329	7.337	(0.958)	48452	2.86540	286.5
	7 1,3-Dichlorobenzene	146	7.577	7.584	(0.990)	52100	2.83154	283.2
*	8 1,4-Dichlorobenzene-d4	152	7.654	7.662	(1.000)	46529	4.00000	
	9 1,4-Dichlorobenzene	146	7.685	7.693	(1.004)	51230	2.81186	281.2
$	10 1,2-Dichlorobenzene-d4	152	8.019	8.027	(1.048)	32159	2.73755	273.8
	12 1,2-Dichlorobenzene	146	8.050	8.058	(1.052)	50389	2.87632	287.6
	11 Benzyl alcohol	108	8.011	8.019	(1.047)	19836	2.13314	213.3
	14 2,2'-oxybis(1-Chloropropane)	121	8.329	8.337	(1.088)	15454	2.97105	297.1
	13 2-Methylphenol	108	8.314	8.322	(1.086)	41623	2.83767	283.8

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/kg)
	17 Hexachloroethane	117	8.655	8.663	(1.131)	21826	3.03089	303.1
	16 N-Nitroso-di-n-propylamine	70	8.593	8.609	(1.123)	33066	3.37410	337.4
	15 4-Methylphenol	108	8.624	8.625	(1.127)	93125	6.10489	610.5
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	51857	3.26928	326.9
	19 Nitrobenzene	77	8.849	8.857	(0.862)	50359	3.34852	334.9
	20 Isophorone	82	9.346	9.354	(0.910)	91711	3.49862	349.9
	21 2-Nitrophenol	139	9.525	9.525	(0.928)	25726	2.91125	291.1
	22 2,4-Dimethylphenol	107	9.702	9.710	(0.945)	90662	6.01903	601.9
	23 Bis(2-Chloroethoxy)methane	93	9.872	9.880	(0.962)	58526	3.54508	354.5
	24 Benzoic acid	105	10.011	10.072	(0.975)	163048	12.7294	1273
	25 2,4-Dichlorophenol	162	10.041	10.049	(0.978)	140480	10.6713	1067
	26 1,2,4-Trichlorobenzene	180	10.196	10.196	(0.993)	45439	3.03297	303.3
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	171858	4.00000	
	28 Naphthalene	128	10.304	10.304	(1.004)	124154	2.77632	277.6
	29 4-Chloroaniline	127	10.512	10.520	(1.024)	139664	7.76028	776.0
	30 Hexachlorobutadiene	225	10.736	10.736	(1.046)	27202	2.91339	291.3
	31 4-Chloro-3-methylphenol	107	11.642	11.650	(1.134)	139063	10.9294	1093
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	89556	3.03320	303.3
	33 Hexachlorocyclopentadiene	237	12.315	12.323	(0.873)	71958	5.74474	574.5
	34 2,4,6-Trichlorophenol	196	12.516	12.516	(0.887)	99190	8.91204	891.2
	35 2,4,5-Trichlorophenol	196	12.601	12.601	(0.893)	107049	9.05092	905.1
$	36 2-Fluorobiphenyl	172	12.679	12.687	(0.899)	105745	2.77534	277.5
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	91880	2.99493	299.5
	38 2-Nitroaniline	65	13.182	13.190	(0.934)	84180	11.6996	1170
	39 Dimethylphthalate	163	13.708	13.708	(0.971)	112853	3.35958	336.0
	40 Acenaphthylene	152	13.762	13.762	(0.975)	141147	2.82125	282.1
	41 2,6-Dinitrotoluene	165	13.824	13.824	(0.980)	77704	10.1254	1013
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	111063	4.00000	
	43 3-Nitroaniline	138	14.110	14.111	(1.000)	68288	9.63605	963.6
	44 Acenaphthene	153	14.172	14.180	(1.004)	88993	2.90096	290.1
	45 2,4-Dinitrophenol	184	14.335	14.342	(1.016)	83083	12.4710	1247
	46 Dibenzofuran	168	14.536	14.536	(1.030)	130461	3.05784	305.8
	47 4-Nitrophenol	109	14.605	14.605	(1.035)	45344	9.39374	939.4
	48 2,4-Dinitrotoluene	165	14.675	14.683	(1.040)	106341	10.2483	1025
	50 Diethylphthalate	149	15.285	15.293	(1.083)	111870	3.17919	317.9
	49 Fluorene	166	15.285	15.293	(1.083)	105449	2.90984	291.0
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	52445	3.10542	310.5
	52 4-Nitroaniline	138	15.463	15.471	(1.096)	76966	10.2878	1029
	53 4,6-Dinitro-2-methylphenol	198	15.571	15.579	(0.898)	132349	18.0057	1801
	54 N-Nitrosodiphenylamine	169	15.633	15.633	(0.902)	71671	3.24159	324.2
$	55 2,4,6-Tribromophenol	330	15.872	15.872	(1.125)	27315	3.85395	385.4
	56 4-Bromophenyl-phenylether	248	16.404	16.412	(0.946)	33928	3.31371	331.4
	57 Hexachlorobenzene	284	16.690	16.690	(0.962)	36028	2.80392	280.4
	58 Pentachlorophenol	266	17.115	17.116	(0.987)	64024	7.47210	747.2
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	183550	4.00000	
	60 Phenanthrene	178	17.386	17.394	(1.003)	158511	3.23950	324.0
	61 Anthracene	178	17.487	17.487	(1.008)	151845	3.08207	308.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	62 Carbazole	167	17.897	17.897	(1.032)	145181	4.41198	441.2
	63 Di-n-butylphthalate	149	18.918	18.918	(1.091)	198020	3.76651	376.7
	64 Fluoranthene	202	19.947	19.947	(1.150)	191116	3.39162	339.2
	65 Pyrene	202	20.373	20.373	(0.900)	195441	3.55381	355.4
$	66 Terphenyl-d14	244	20.775	20.775	(0.918)	125753	3.39111	339.1
	67 Butylbenzylphthalate	149	21.797	21.797	(0.963)	82665	3.96317	396.3
	68 Benzo(a)anthracene	228	22.610	22.610	(0.999)	166914	3.09831	309.8
*	69 Chrysene-d12	240	22.641	22.641	(1.000)	193070	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.633	22.633	(1.000)	113152	5.02712	502.7
	71 Chrysene	228	22.680	22.680	(1.002)	144941	2.97043	297.0
	72 bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	115224	3.63414	363.4
*	134 Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	240110	4.00000	
	73 Di-n-octylphthalate	149	23.903	23.903	(1.000)	194962	3.32867	332.9
	74 Benzo(b)fluoranthene	252	24.383	24.383	(0.978)	178476	3.51997	352.0
	75 Benzo(k)fluoranthene	252	24.422	24.422	(0.979)	161421	2.94688	294.7
	76 Benzo(a)pyrene	252	24.855	24.855	(0.997)	134573	3.06892	306.9
*	77 Perylene-d12	264	24.940	24.941	(1.000)	174938	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.600	26.608	(1.067)	170589	3.15460	315.5
	79 Dibenzo(a,h)anthracene	278	26.631	26.631	(1.068)	128791	3.00763	300.8
	80 Benzo(g,h,i)perylene	276	27.066	27.074	(1.085)	138978	2.99547	299.5
	90 N-Nitrosodimethylamine	74	3.181	3.204	(0.416)	79539	8.98550	898.6
	91 Aniline	93	7.113	7.128	(0.929)	173426	4.13598	413.6
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	3.173	3.196	(0.415)	104405	13.8277	1383
	105 1-methylnaphthalene	142	12.029	12.029	(1.172)	87655	3.23656	323.7
	111 Azobenzene (1,2-DP-Hydrazine)	77	15.687	15.687	(1.112)	107207	3.35885	335.9
	187 Total Benzofluoranthenes	252	24.422	24.422	(0.979)	314002	6.29131	629.1
	99 Perylene	252	24.971	24.979	(1.001)	70284	1.39466	139.5
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	14.938	14.945	(1.059)	27874	2.69455	269.5

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49sb.d
Lab Smp Id: WL49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: WL49LCSS1
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	46623	23312	93246	46529	-0.20
27 Naphthalene-d8	176978	88489	353956	171858	-2.89
42 Acenaphthene-d10	110872	55436	221744	111063	0.17
59 Phenanthrene-d10	188290	94145	376580	183550	-2.52
69 Chrysene-d12	213681	106840	427362	193070	-9.65
134 Di-n-octylphthala	264159	132080	528318	240110	-9.10
77 Perylene-d12	208584	104292	417168	174938	-16.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.65	-0.10
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	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: WL49LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Client SDG: WL49
Fraction: SV
Client Smp ID: WL49LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

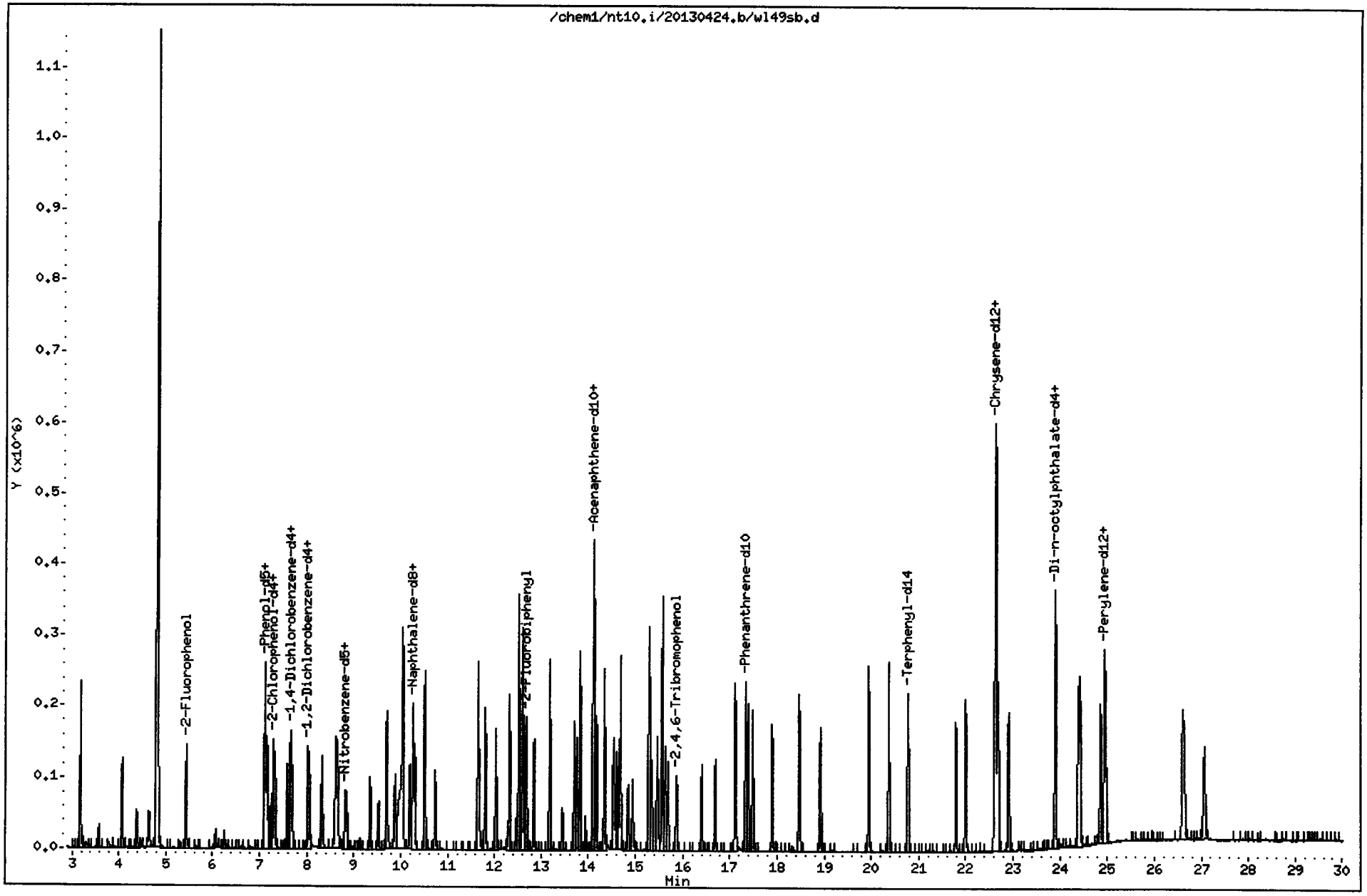
	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	338.0	67.59	34-105
7	1,3-Dichlorobenzen	500.0	283.2	56.63	40-100
9	1,4-Dichlorobenzen	500.0	281.2	56.24	39-100
11	Benzyl alcohol	500.0	213.3	42.66	19-117
12	1,2-Dichlorobenzen	500.0	287.6	57.53	40-100
13	2-Methylphenol	500.0	283.8	56.75	28-100
15	4-Methylphenol	1000	610.5	61.05	29-100
17	Hexachloroethane	500.0	303.1	60.62	38-100
22	2,4-Dimethylphenol	1500	601.9	40.13	10-100
24	Benzoic acid	2750	1273	46.29	10-107
26	1,2,4-Trichloroben	500.0	303.3	60.66	35-103
28	Naphthalene	500.0	277.6	55.53	43-100
30	Hexachlorobutadien	500.0	291.3	58.27	37-100
32	2-Methylnaphthalen	500.0	303.3	60.66	43-100
39	Dimethylphthalate	500.0	336.0	67.19	43-114
40	Acenaphthylene	500.0	282.1	56.43	42-102
44	Acenaphthene	500.0	290.1	58.02	45-100
46	Dibenzofuran	500.0	305.8	61.16	43-103
49	Fluorene	500.0	291.0	58.20	45-107
50	Diethylphthalate	500.0	317.9	63.58	50-120
54	N-Nitrosodiphenyla	500.0	324.2	64.83	36-111
57	Hexachlorobenzene	500.0	280.4	56.08	33-113
58	Pentachlorophenol	1500	747.2	49.81	16-120
60	Phenanthrene	500.0	324.0	64.79	49-112
61	Anthracene	500.0	308.2	61.64	45-106
63	Di-n-butylphthalat	500.0	376.7	75.33	48-126
64	Fluoranthene	500.0	339.2	67.83	53-118
65	Pyrene	500.0	355.4	71.08	48-121
67	Butylbenzylphthala	500.0	396.3	79.26	45-132
68	Benzo(a)anthracene	500.0	309.8	61.97	49-115
71	Chrysene	500.0	297.0	59.41	47-115
72	bis(2-Ethylhexyl)p	500.0	363.4	72.68	34-130
73	Di-n-octylphthalat	500.0	332.9	66.57	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	306.9	61.38	42-113
78 Indeno(1,2,3-cd)py	500.0	315.5	63.09	42-123
79 Dibenzo(a,h)anthra	500.0	300.8	60.15	30-133
80 Benzo(g,h,i)peryle	500.0	299.5	59.91	38-126
105 1-methylnaphthalen	500.0	323.7	64.73	42-100
187 Total Benzofluoran	1000	629.1	62.91	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	490.8	65.44	30-160
$ 2 Phenol-d5	750.0	525.2	70.03	30-160
$ 5 2-Chlorophenol-d4	750.0	449.4	59.92	30-160
$ 10 1,2-Dichlorobenzen	500.0	273.8	54.75	30-160
$ 18 Nitrobenzene-d5	500.0	326.9	65.39	30-160
$ 36 2-Fluorobiphenyl	500.0	277.5	55.51	30-160
$ 55 2,4,6-Tribromophen	750.0	385.4	51.39	30-160
$ 66 Terphenyl-d14	500.0	339.1	67.82	30-160

Data File: /chem1/nt10.i/20130424.b/wl49sb.d
Date : 24-APR-2013 19:37
Client ID: WL49LCSS1
Sample Info: WL49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49sb.d

Lab ID: WL49LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
14.110	Acenaphthene-d10 and 3-Nitroaniline

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl67a.d
Lab Smp Id: WL67A Client Smp ID: GR-CB-07-20130411-S
Inj Date : 24-APR-2013 22:41
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL67A,3
Misc Info : 13-7791
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 11
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	8.07000	Weight of sample extracted (g)
M	59.10000	% 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	5.482	5.444	(0.716)	18047	1.16731	1061
$	2 Phenol-d5	99	7.190	7.159	(0.938)	31626	1.64849	1498
	3 Phenol	94	7.213	7.182	(0.941)	12063	0.59740	543.0
$	5 2-Chlorophenol-d4	132	7.329	7.306	(0.957)	22117	1.33142	1210
	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	7.661	7.662	(1.000)	48352	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.026	8.027	(1.048)	9424	0.77198	701.7
	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	8.655	8.625	(1.130)	5058	0.31908	290.0
$	18 Nitrobenzene-d5	82	8.834	8.826	(0.860)	9128	0.52668	478.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	9.964	10.072	(0.970)	15932	1.14769	1043
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.272	10.265	(1.000)	187776	4.00000	
	28 Naphthalene	128	10.311	10.304	(1.004)	11611	0.23763	216.0
	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	11.812	11.804	(1.150)	6765	0.20970	190.6
	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	12.694	12.687	(0.900)	36150	0.91707	833.5
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	13.770	13.762	(0.976)	7728	0.14931	135.7
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	114903	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	14.535	14.536	(1.030)	7383	0.16727	152.0
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	15.301	15.293	(1.084)	8040	0.21445	194.9
	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	15.887	15.872	(1.126)	6359	0.86723	788.2
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.355	17.340	(1.000)	184248	4.00000	
	60 Phenanthrene	178	17.401	17.394	(1.003)	62691	1.27637	1160
	61 Anthracene	178	17.502	17.487	(1.008)	20844	0.42148	383.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	17.927	17.897	(1.033)	6357	0.19245	174.9
63	Di-n-butylphthalate	149	18.941	18.918	(1.091)	21851	0.41405	376.3
64	Fluoranthene	202	19.978	19.947	(1.151)	185917	3.28686	2987
65	Pyrene	202	20.403	20.373	(0.899)	182450	3.23802	2943
$ 66	Terphenyl-d14	244	20.806	20.775	(0.917)	34142	0.89861	816.8
67	Butylbenzylphthalate	149	21.843	21.797	(0.963)	28187	1.31895	1199 (M)
68	Benzo(a)anthracene	228	22.664	22.610	(0.999)	65337	1.18372	1076
* 69	Chrysene-d12	240	22.687	22.641	(1.000)	197814	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.734	22.680	(1.002)	101624	2.03274	1848
72	bis(2-Ethylhexyl)phthalate	149	22.958	22.904	(0.958)	505442	15.2785	13890
* 134	Di-n-octylphthalate-d4	153	23.965	23.895	(1.000)	250530	4.00000	
73	Di-n-octylphthalate	149	23.980	23.903	(1.001)	49035	0.80237	729.3 (M)
74	Benzo(b)fluoranthene	252	24.491	24.383	(0.978)	139606	2.53676	2306
75	Benzo(k)fluoranthene	252	24.491	24.422	(0.978)	139606	2.34813	2134
76	Benzo(a)pyrene	252	24.948	24.855	(0.997)	59342	1.24683	1133
* 77	Perylene-d12	264	25.033	24.941	(1.000)	189875	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.770	26.608	(1.069)	32764	0.55822	507.4 (M)
79	Dibenzo(a,h)anthracene	278	26.786	26.631	(1.070)	11603	0.24965	226.9 (M)
80	Benzo(g,h,i)perylene	276	27.252	27.074	(1.089)	32588	0.64713	588.2
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.491	24.422	(0.978)	138069	2.54871	2317
99	Perylene	252	25.072	24.979	(1.002)	34249	0.62615	569.1
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl67a.d
Lab Smp Id: WL67A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7791

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: GR-CB-07-2013041
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	46623	23312	93246	48352	3.71
27 Naphthalene-d8	176978	88489	353956	187776	6.10
42 Acenaphthene-d10	110872	55436	221744	114903	3.64
59 Phenanthrene-d10	188290	94145	376580	184248	-2.15
69 Chrysene-d12	213681	106840	427362	197814	-7.43
134 Di-n-octylphthala	264159	132080	528318	250530	-5.16
77 Perylene-d12	208584	104292	417168	189875	-8.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	-0.01
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.07
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.35	0.09
69 Chrysene-d12	22.64	22.14	23.14	22.69	0.20
134 Di-n-octylphthala	23.90	23.40	24.40	23.96	0.29
77 Perylene-d12	24.94	24.44	25.44	25.03	0.37

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

Analytical Resources, Inc.

RECOVERY REPORT

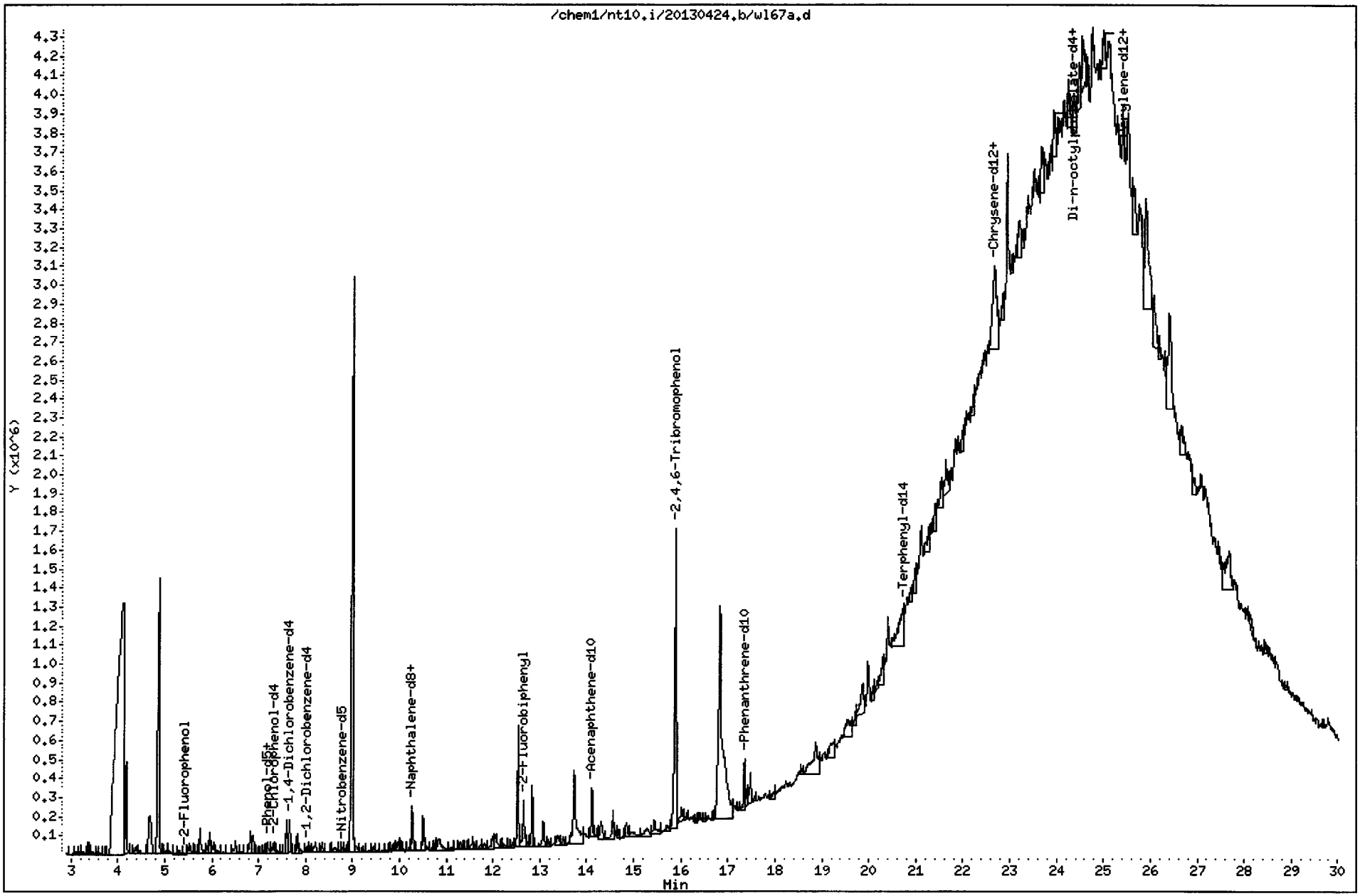
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL67A
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7791

Client SDG: WL67
Fraction: SV
Client Smp ID: GR-CB-07-20130411-S
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	2272	1061	46.69	30-160
$ 2 Phenol-d5	2272	1498	65.94	30-160
$ 5 2-Chlorophenol-d4	2272	1210	53.26	30-160
$ 10 1,2-Dichlorobenzen	1515	701.7	46.32	30-160
$ 18 Nitrobenzene-d5	1515	478.7	31.60	30-160
$ 36 2-Fluorobiphenyl	1515	833.5	55.02	30-160
$ 55 2,4,6-Tribromophen	2272	788.2	34.69	30-160
$ 66 Terphenyl-d14	1515	816.8	53.92	30-160

Data File: /chem1/nt10.i/20130424.b/wl67a.d
Date : 24-APR-2013 22:41
Client ID: GR-CB-07-20130411-S
Sample Info: WL67A,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WL67-06TCS

Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

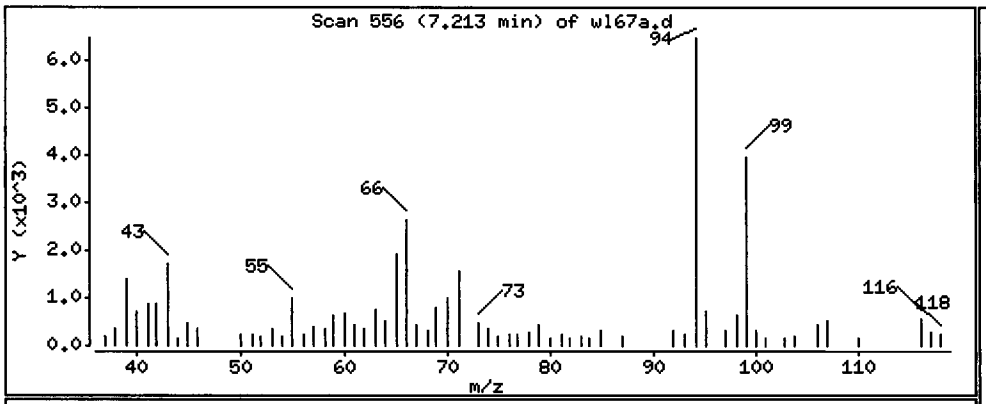
Operator: VTS/YZ

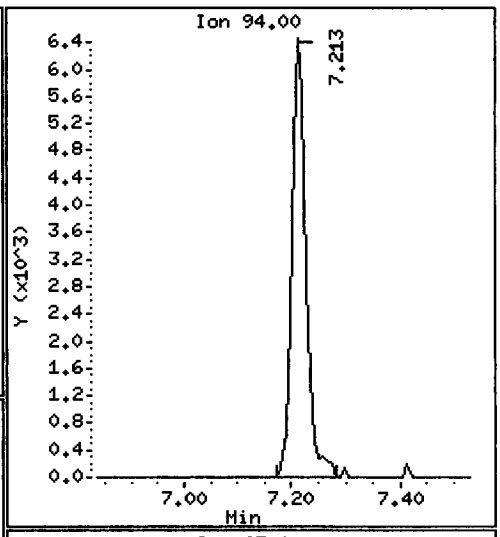
Column phase: ZB-5msi

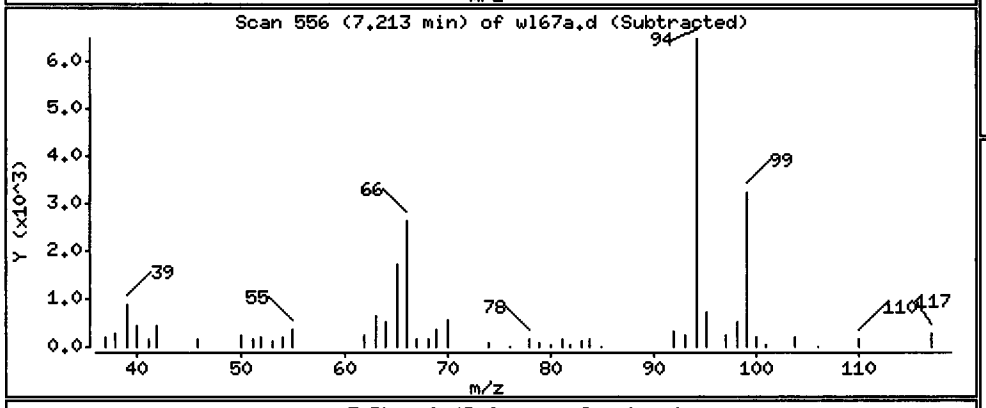
Column diameter: 0.25

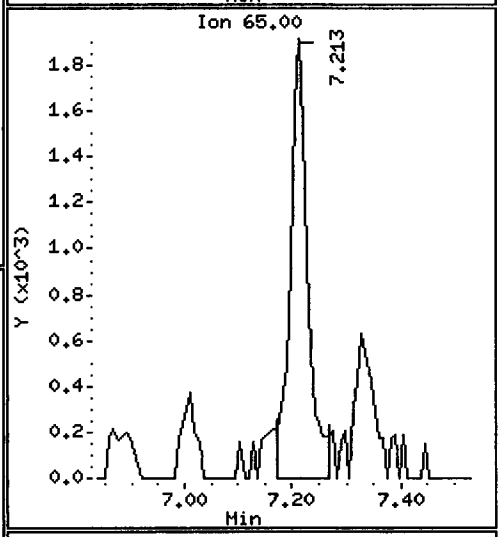
3 Phenol

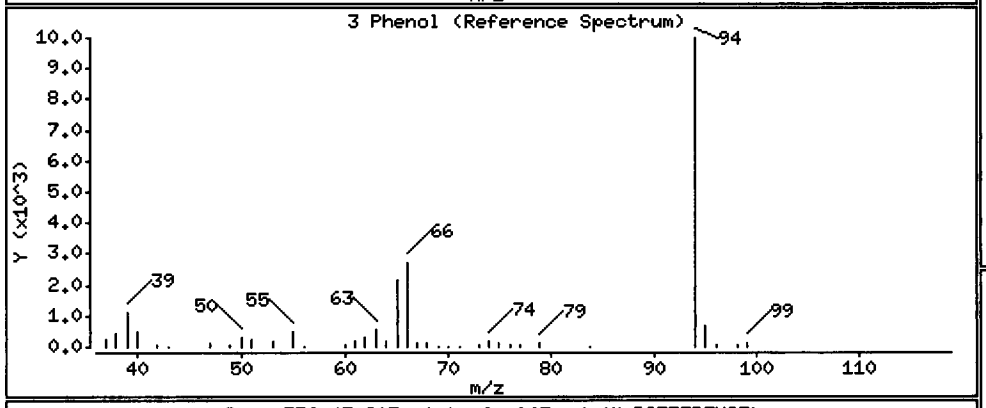
Concentration: 543.0 ug/kg

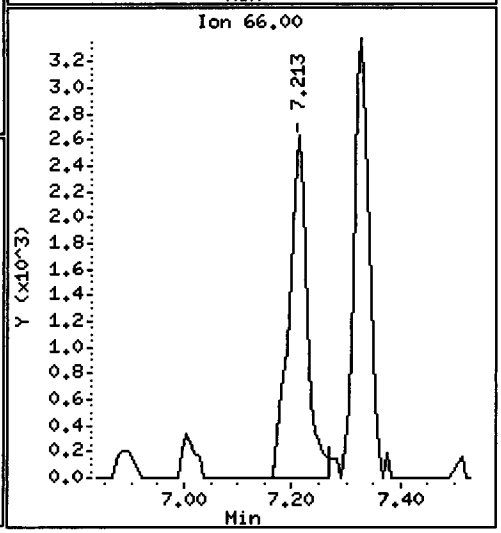


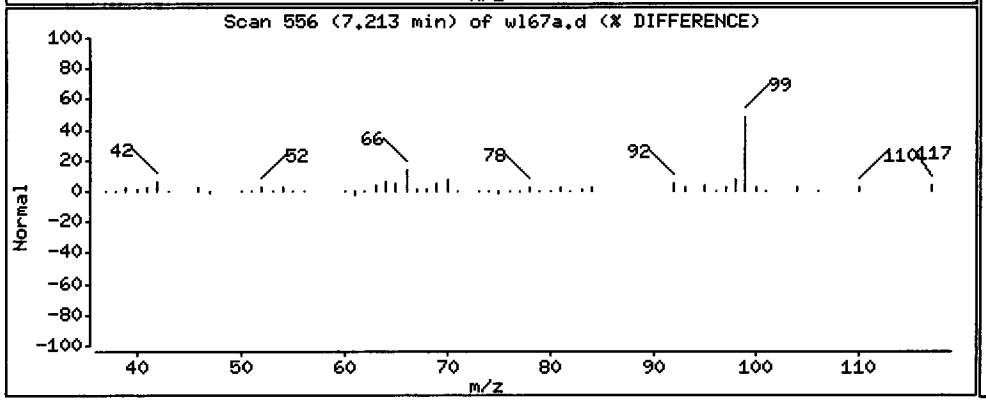












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

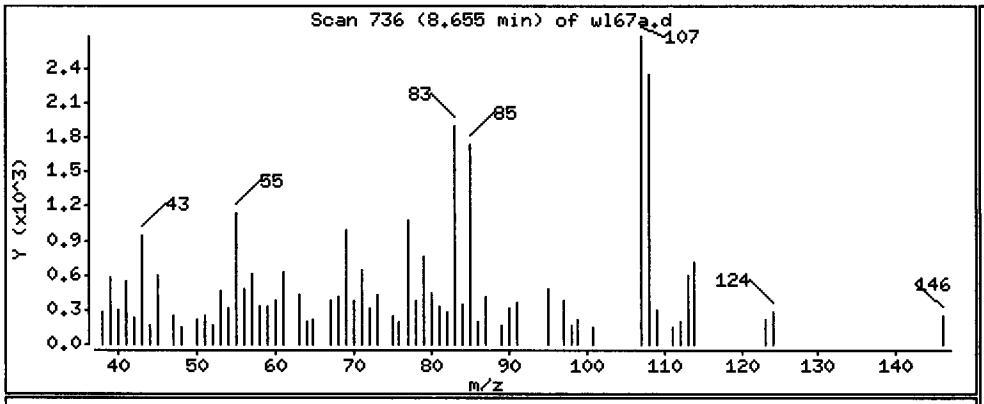
Operator: VTS/YZ

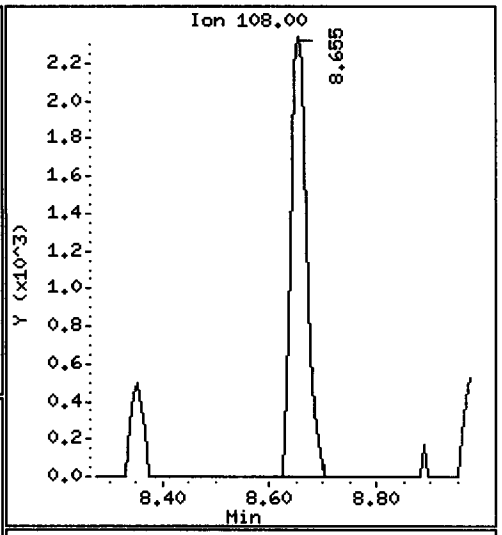
Column phase: ZB-5msi

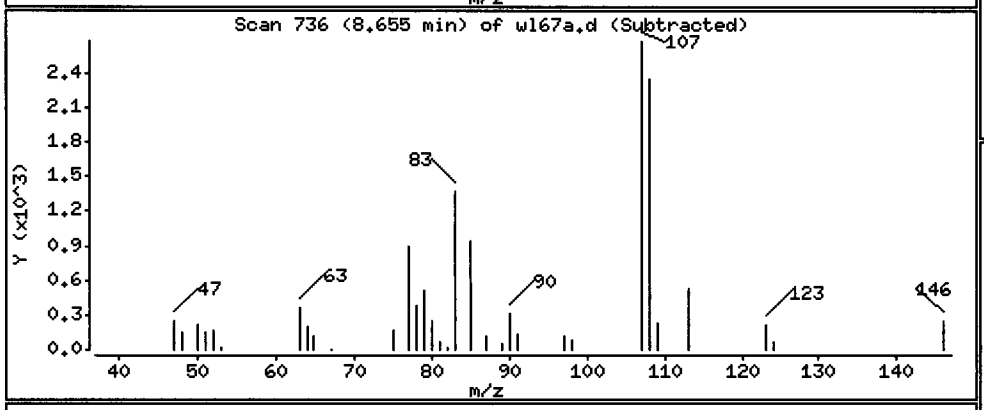
Column diameter: 0.25

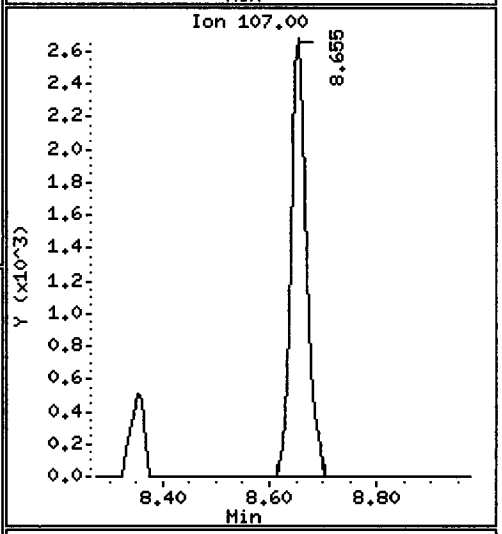
15 4-Methylphenol

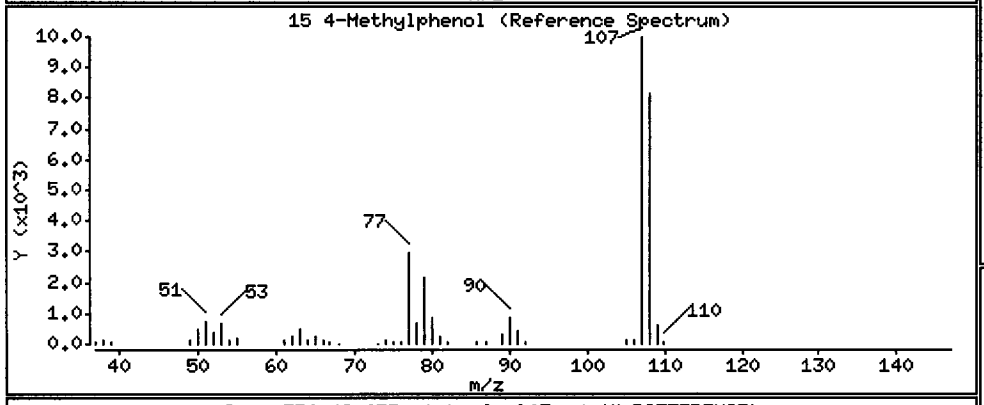
Concentration: 290.0 ug/kg

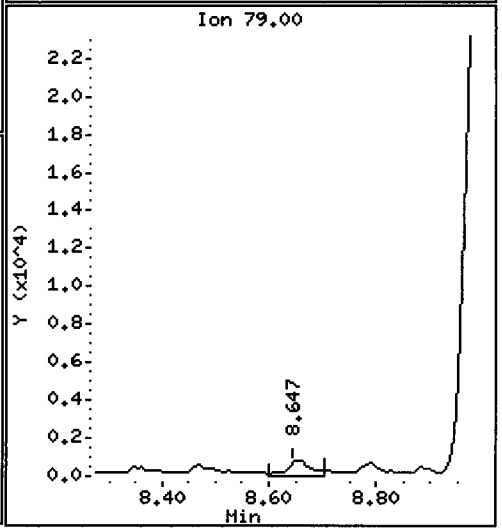


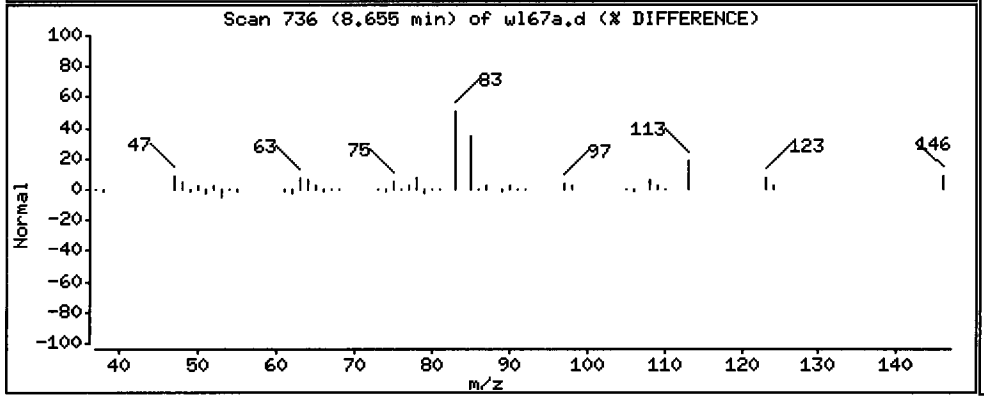












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

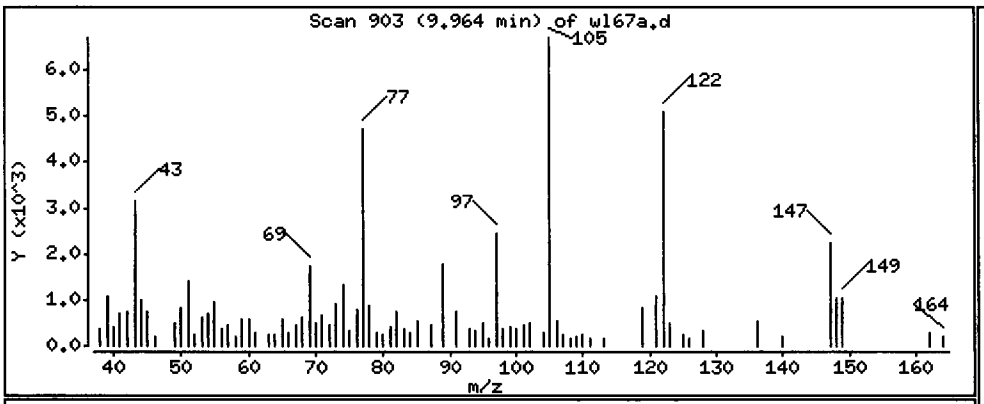
Operator: VTS/YZ

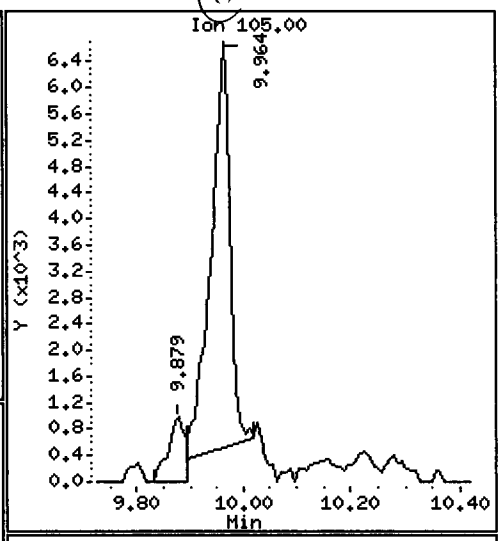
Column phase: ZB-5msi

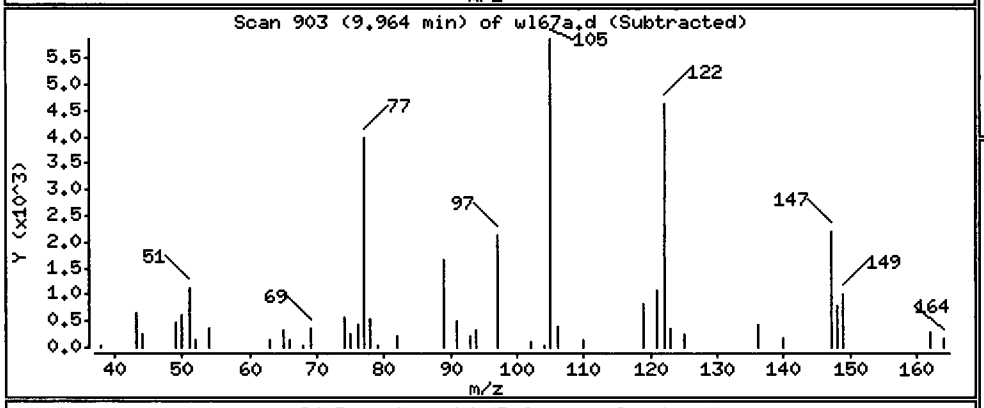
Column diameter: 0.25

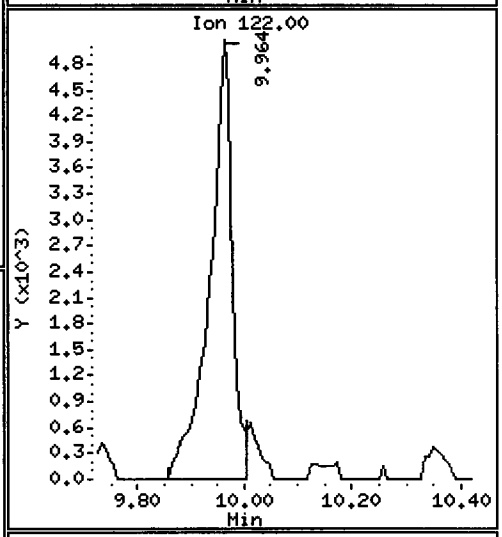
24 Benzoic acid

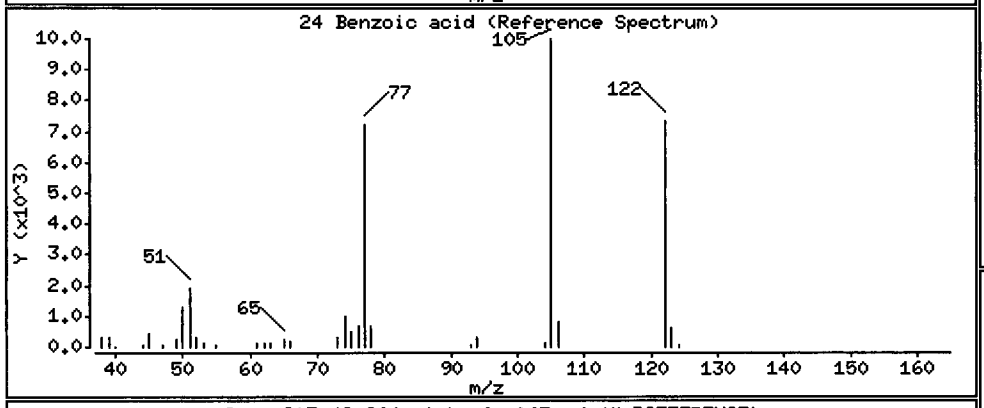
Concentration: 1043 ug/kg

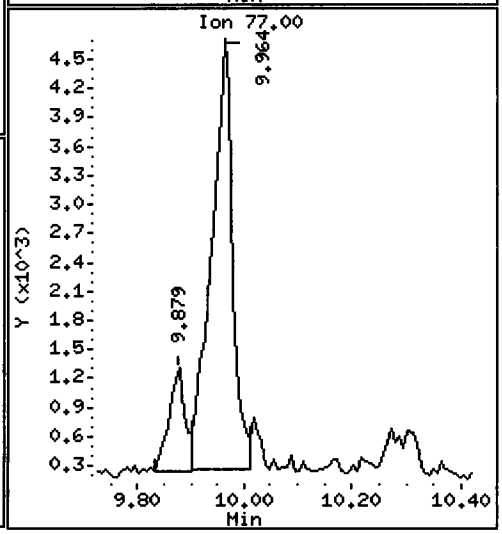


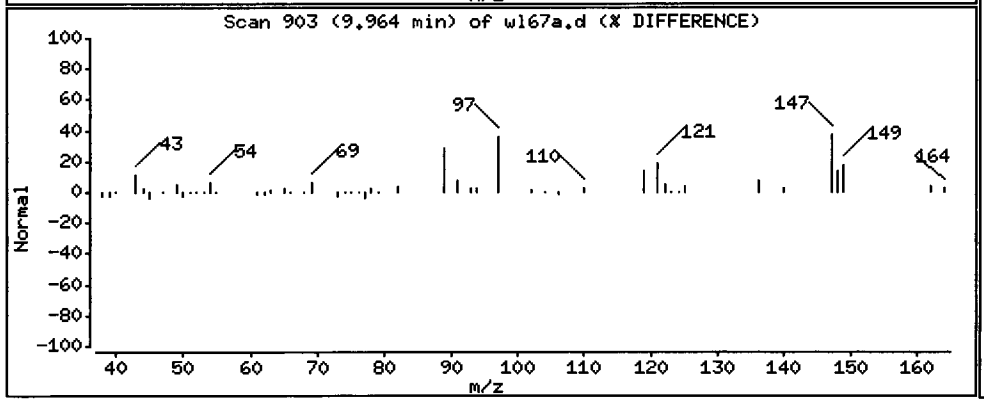












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

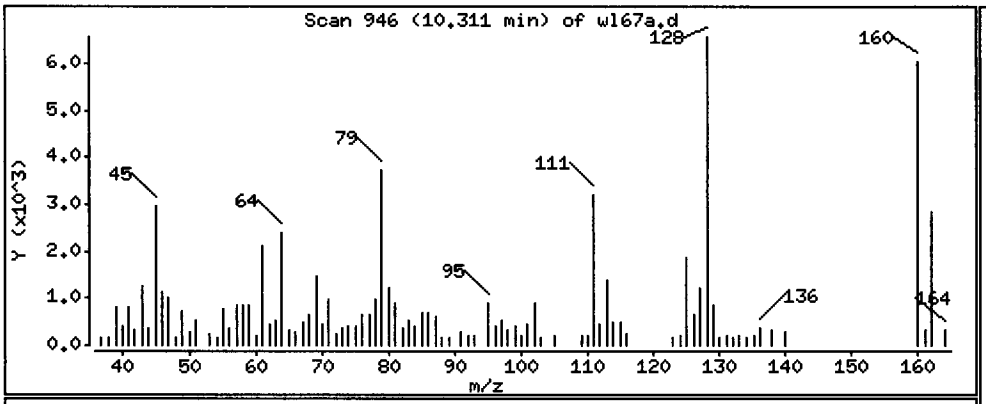
Operator: VTS/YZ

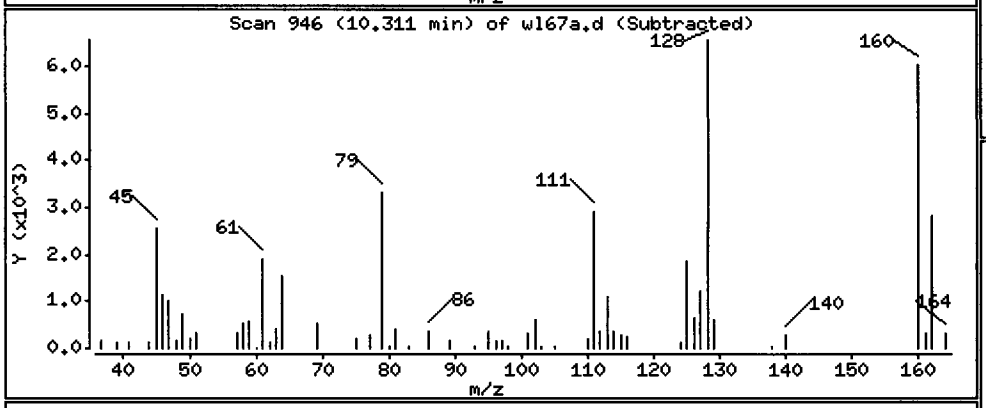
Column phase: ZB-5msi

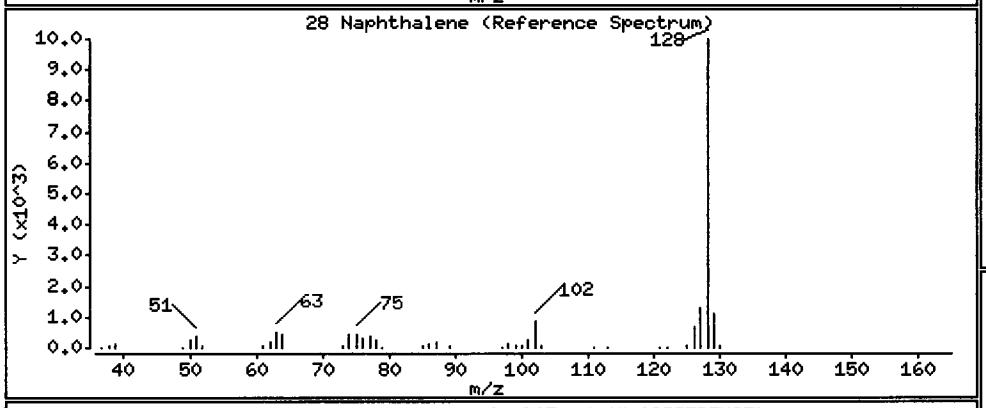
Column diameter: 0.25

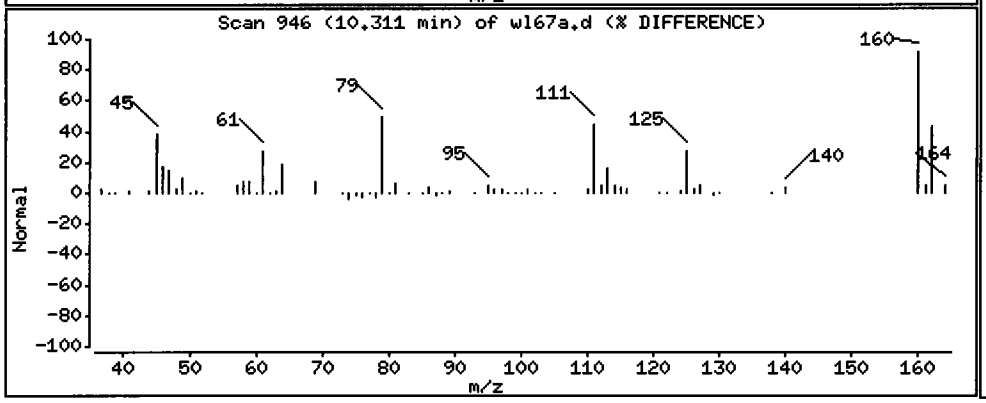
28 Naphthalene

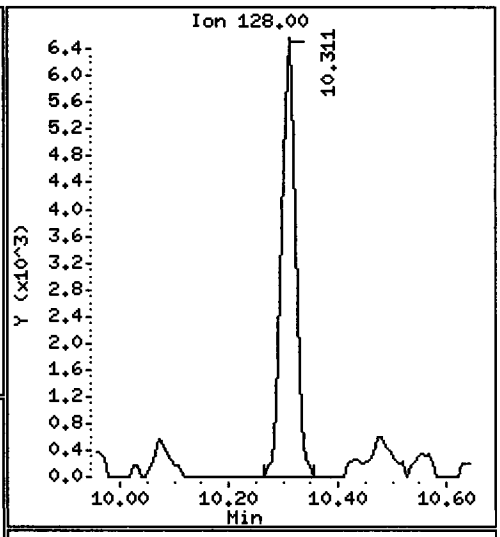
Concentration: 216.0 ug/kg

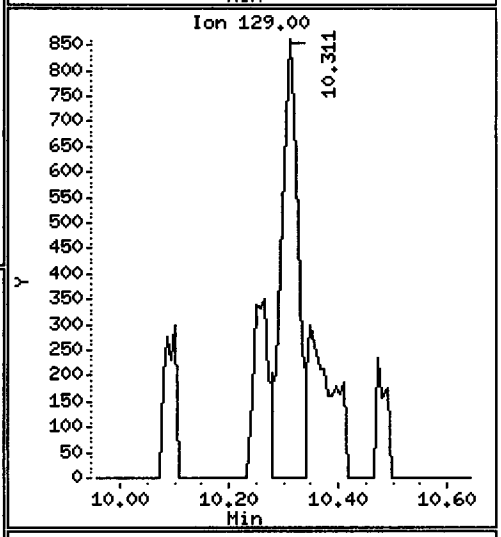


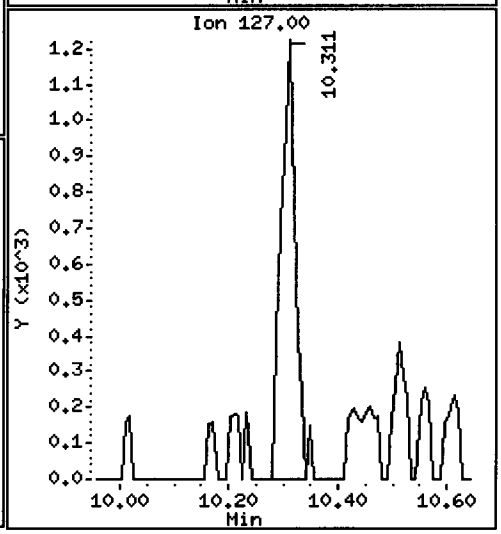












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

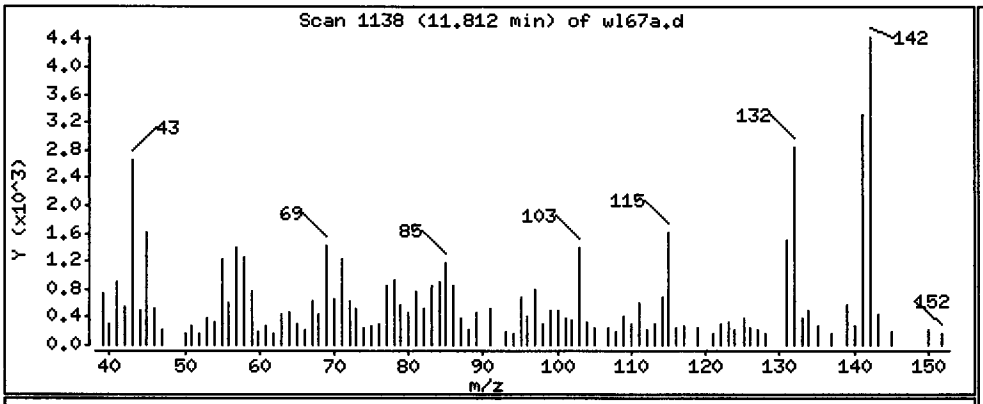
Operator: VTS/YZ

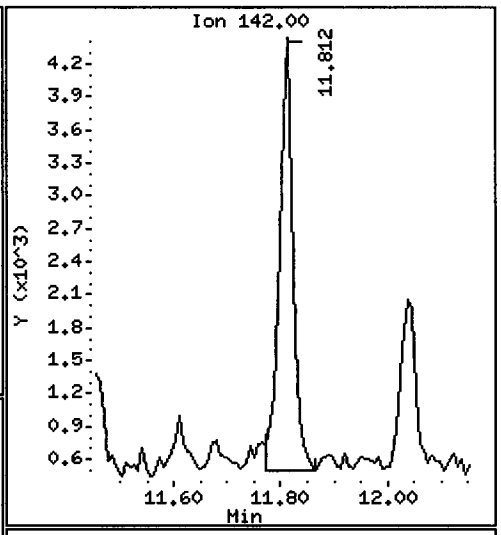
Column phase: ZB-5msi

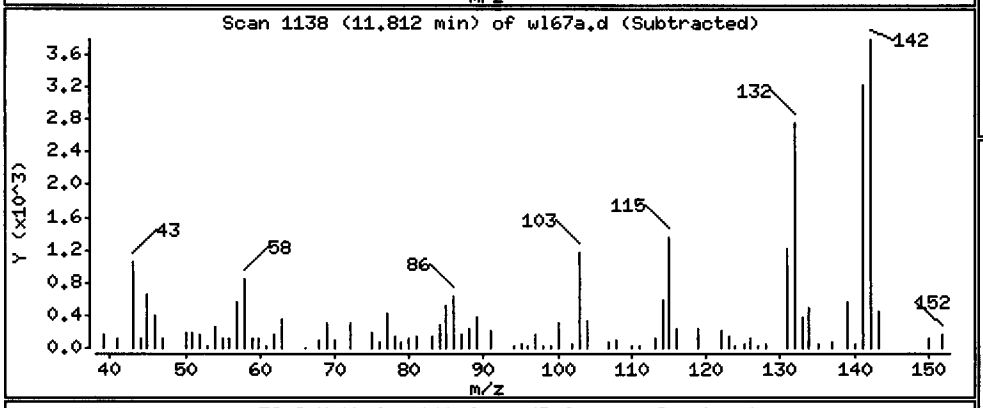
Column diameter: 0.25

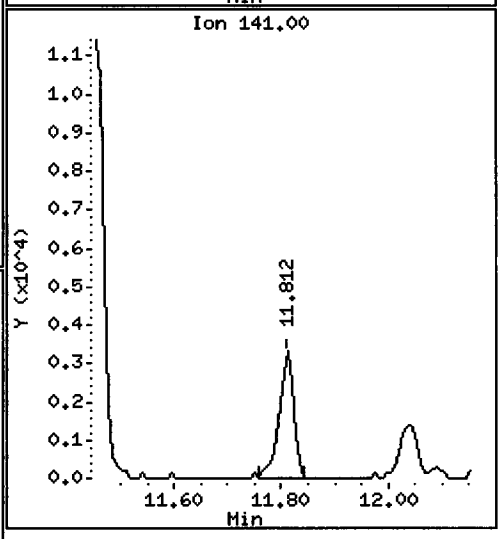
32 2-Methylnaphthalene

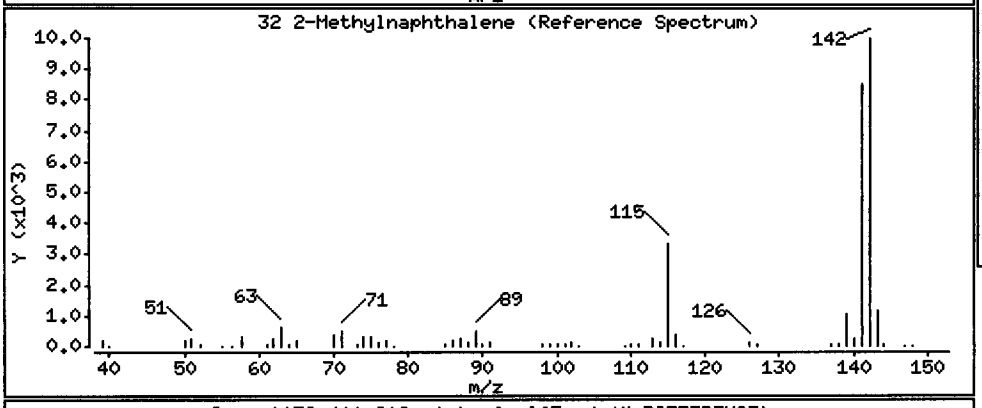
Concentration: 190.6 ug/kg

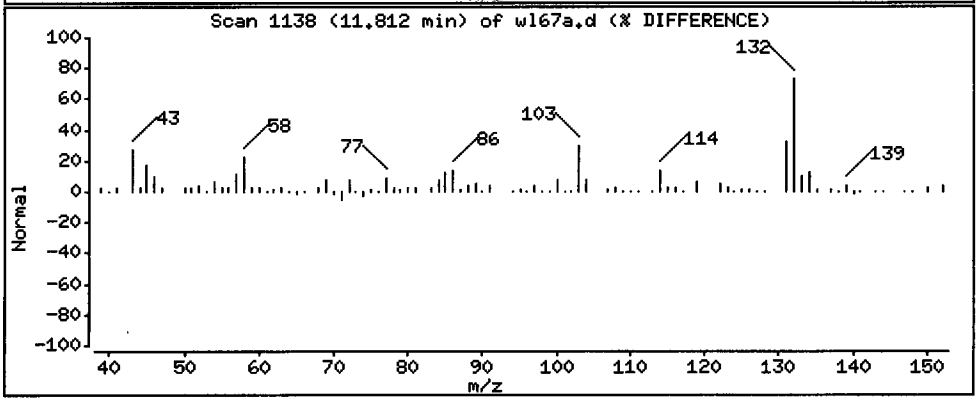












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

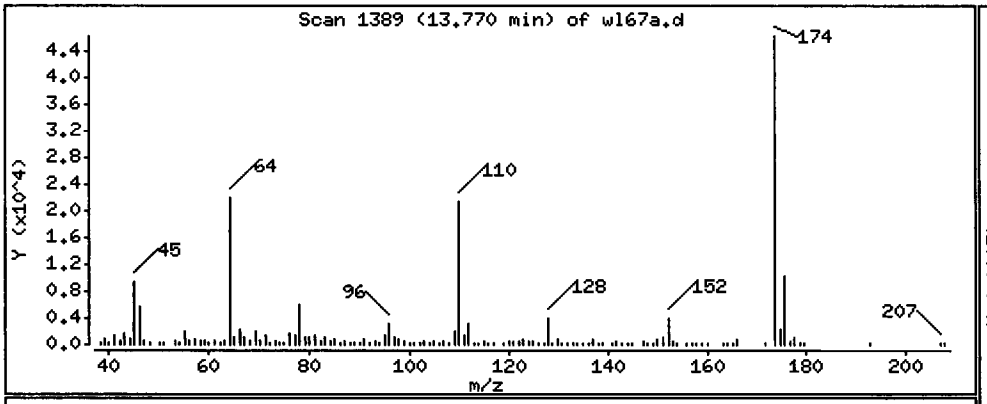
Operator: VTS/YZ

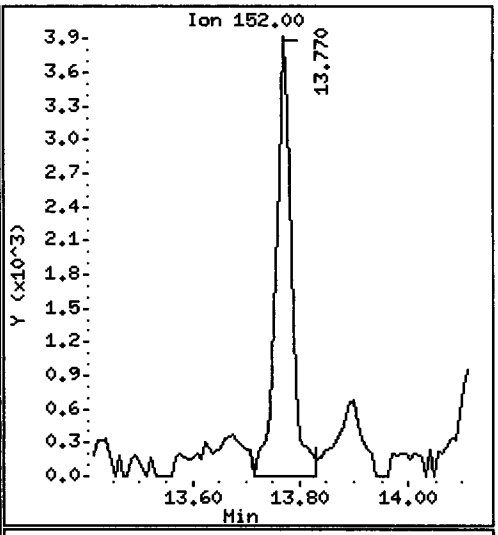
Column phase: ZB-5msi

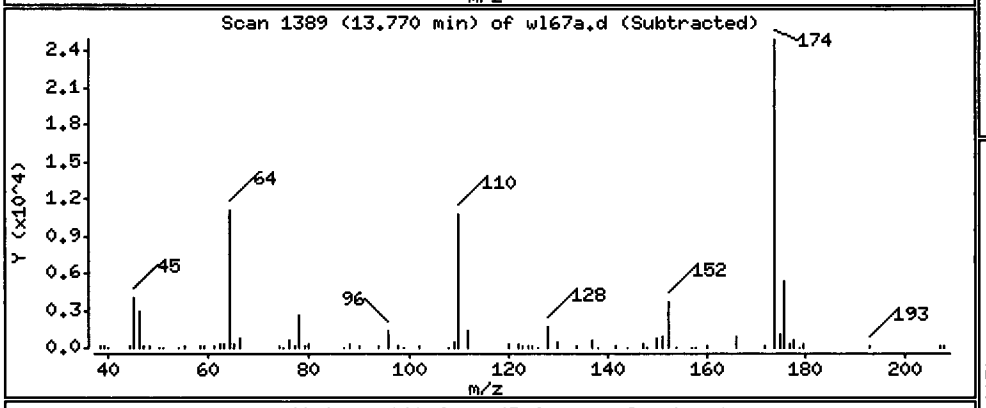
Column diameter: 0.25

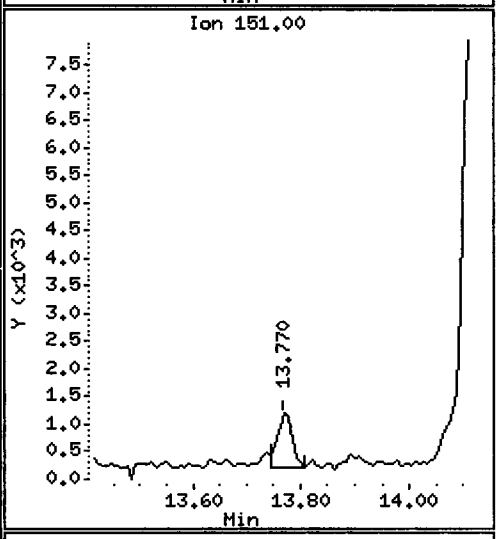
40 Acenaphthylene

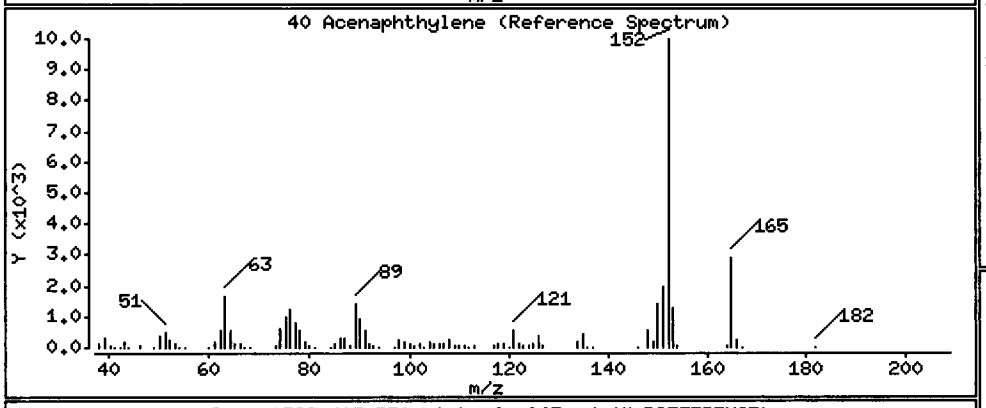
Concentration: 135.7 ug/kg

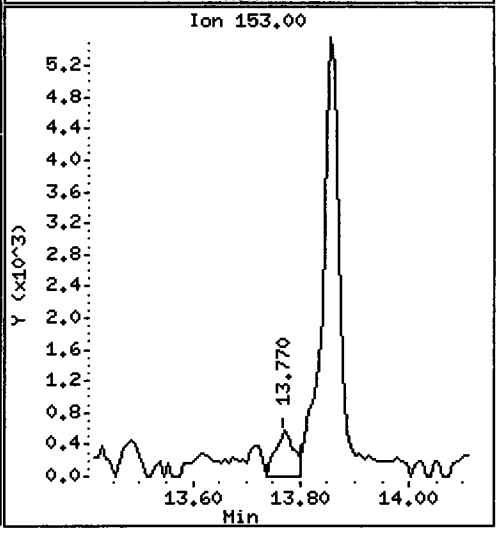


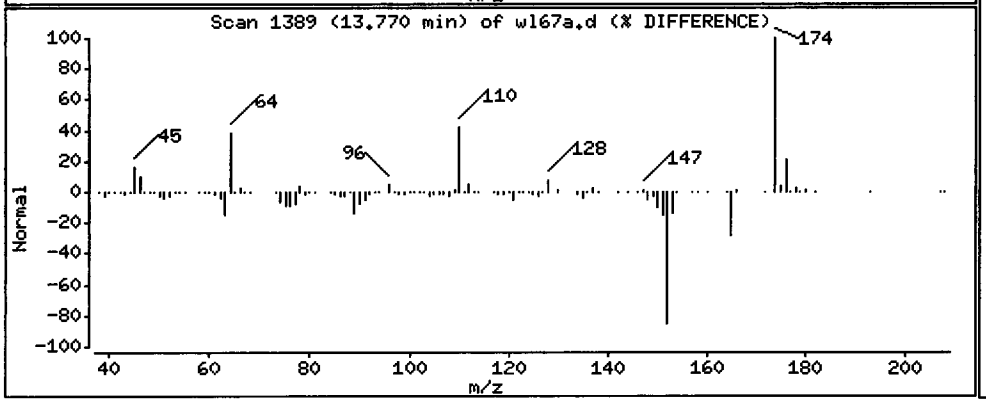












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

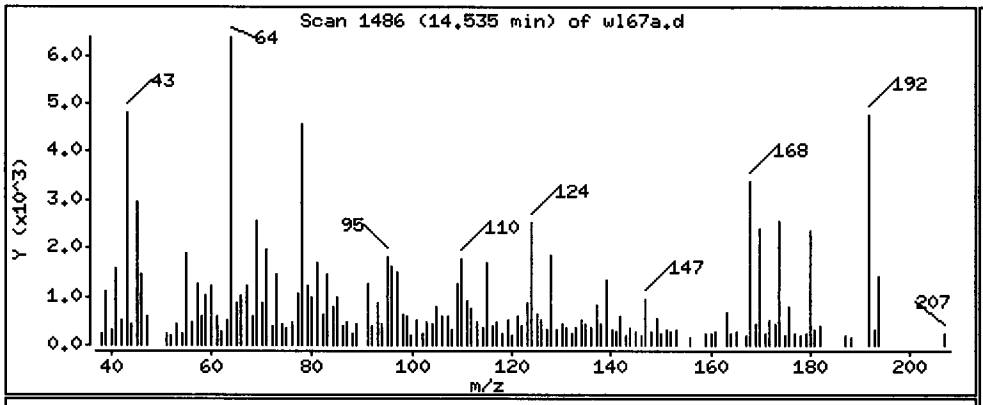
Operator: VTS/YZ

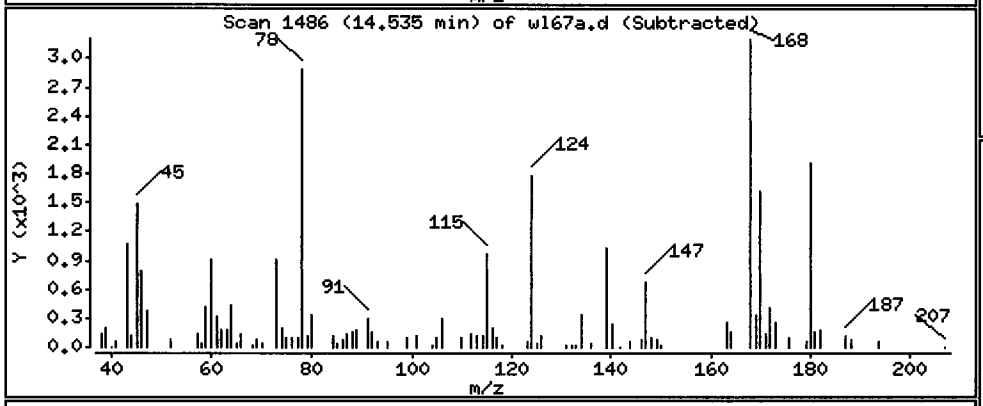
Column phase: ZB-5msi

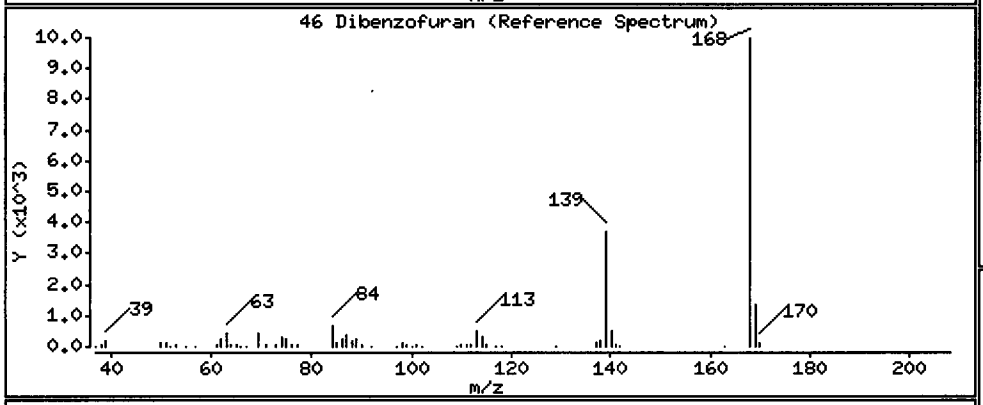
Column diameter: 0.25

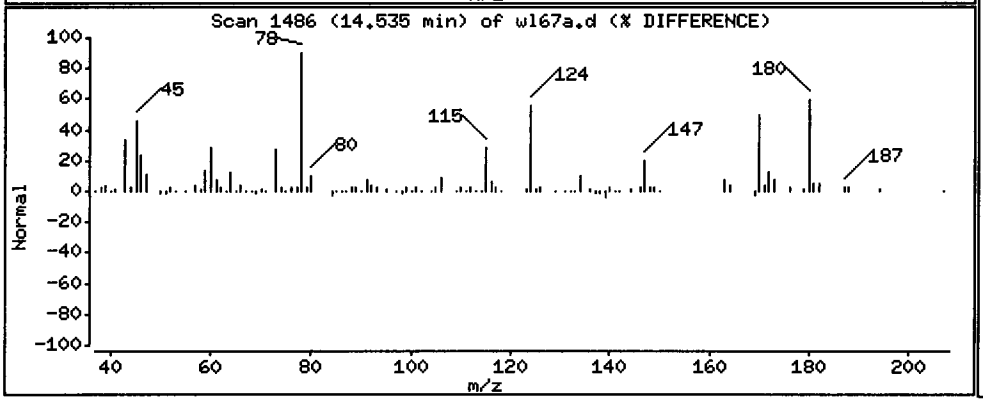
46 Dibenzofuran

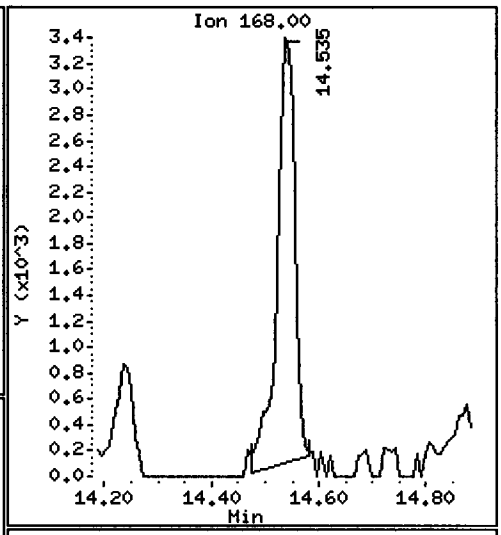
Concentration: 152.0 ug/kg

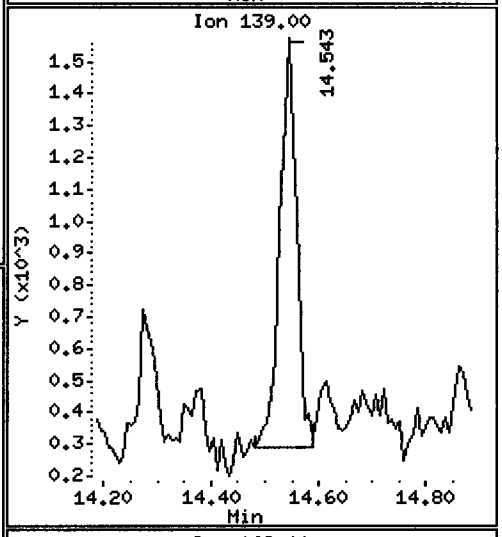


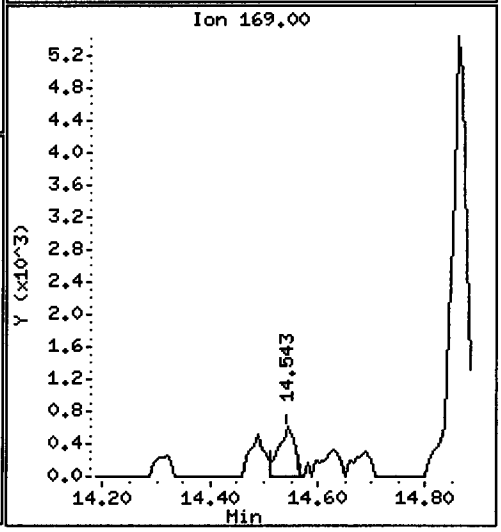












WL67-0076

Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

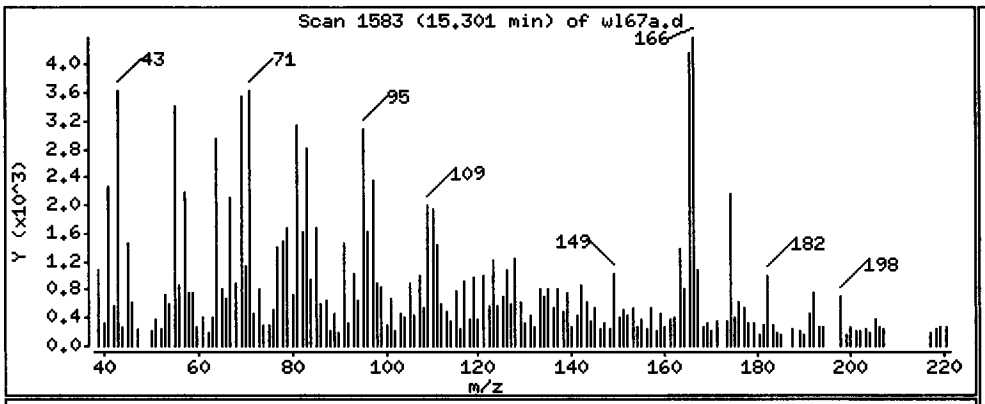
Operator: VTS/YZ

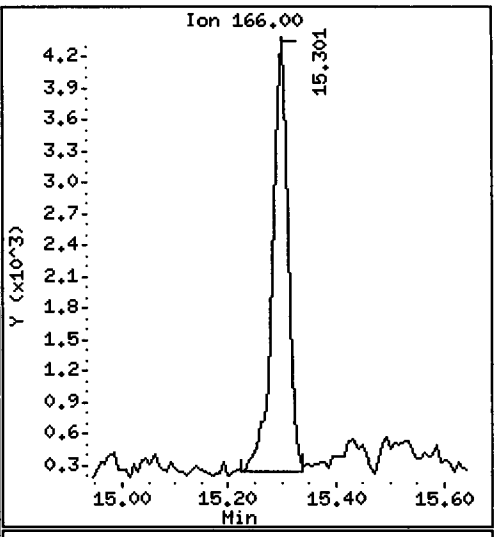
Column phase: ZB-5msi

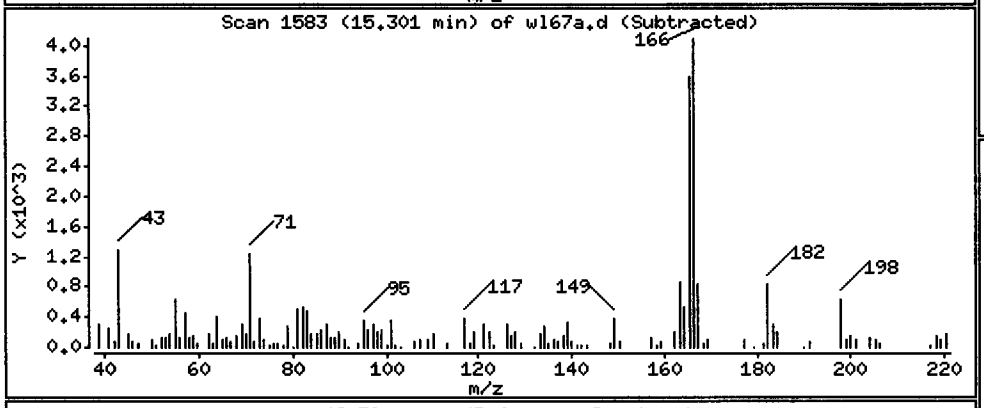
Column diameter: 0.25

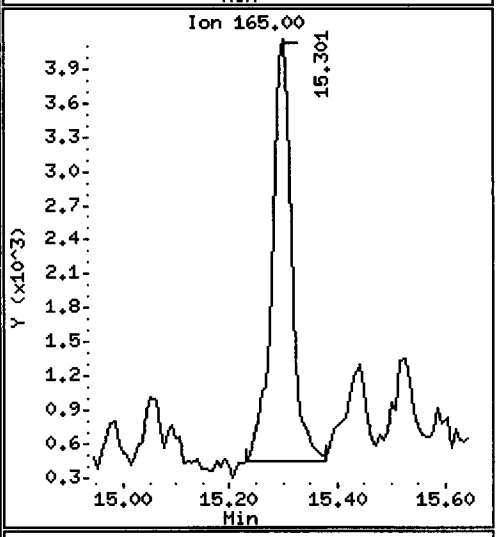
49 Fluorene

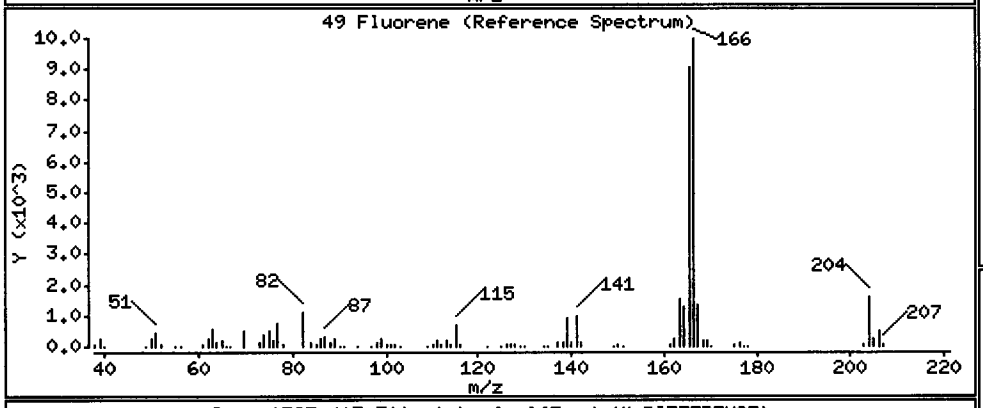
Concentration: 194.9 ug/kg

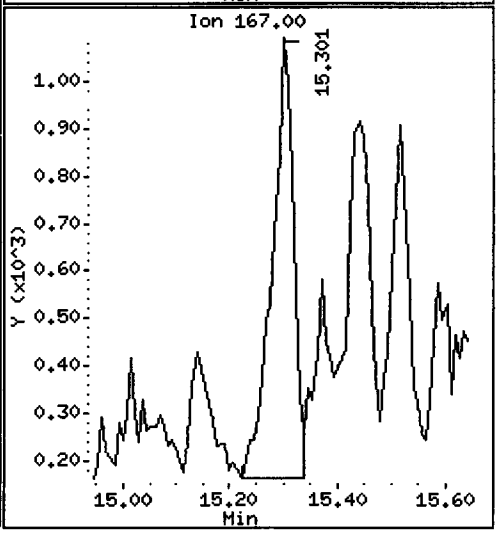


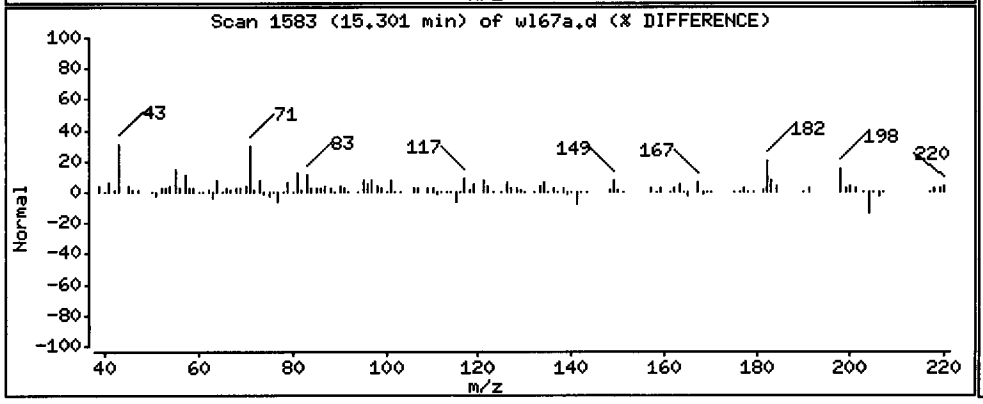












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

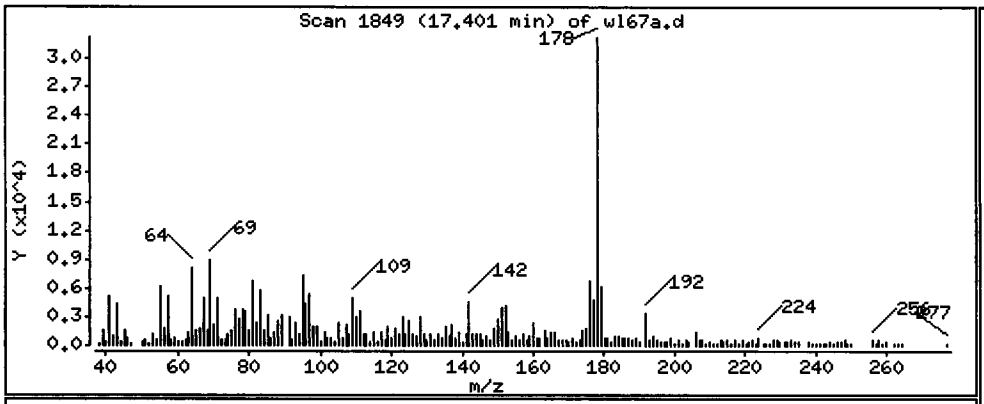
Operator: VTS/YZ

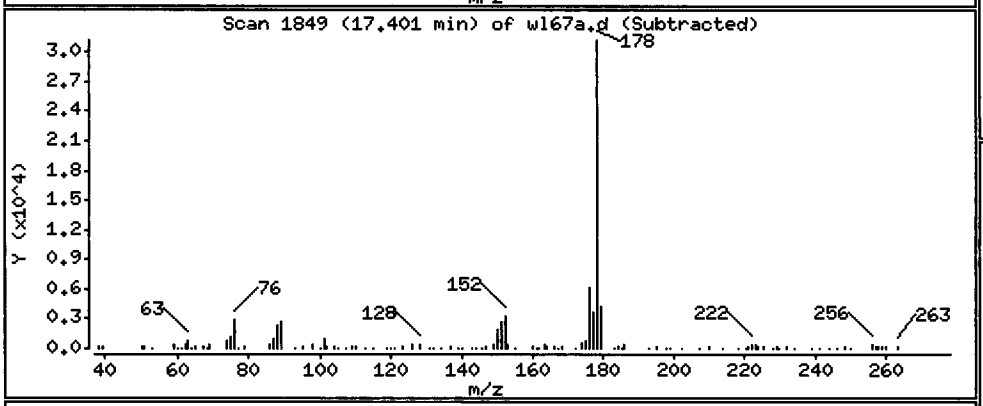
Column phase: ZB-5msi

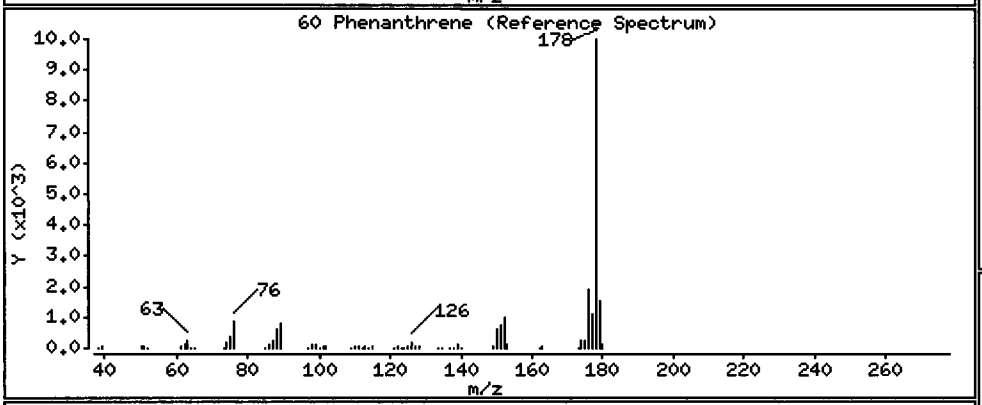
Column diameter: 0.25

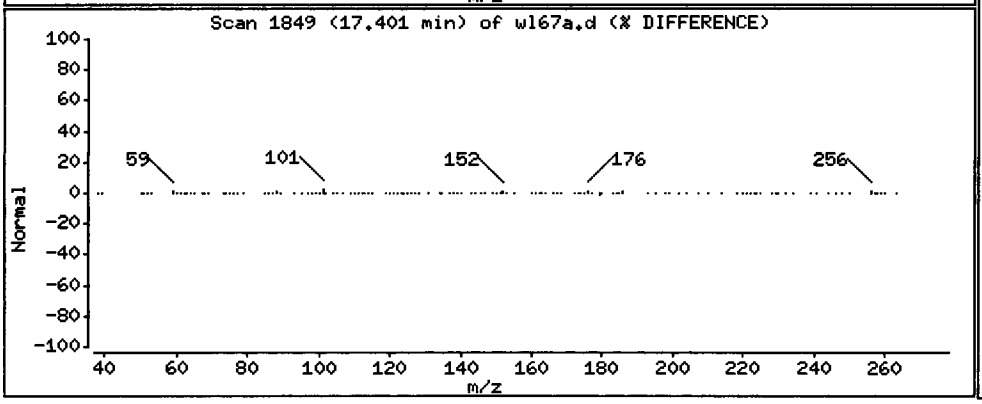
60 Phenanthrene

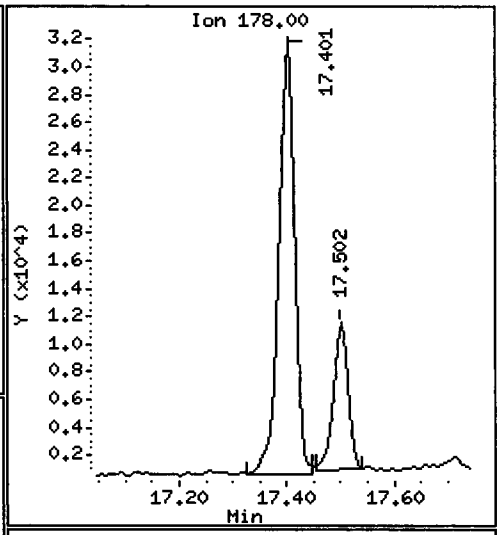
Concentration: 1160 ug/kg

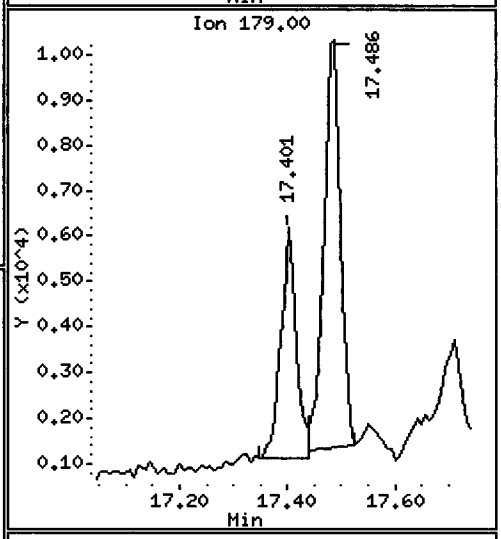


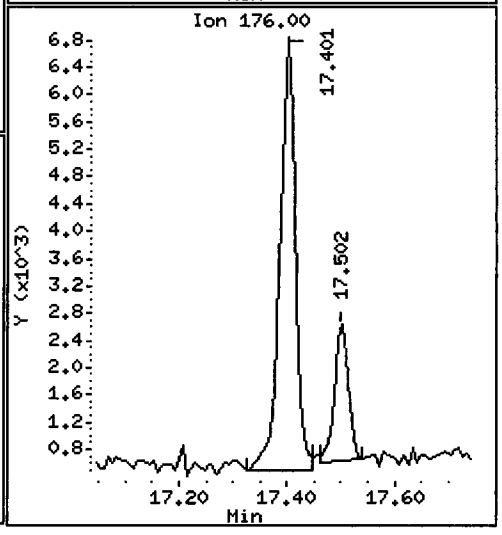












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

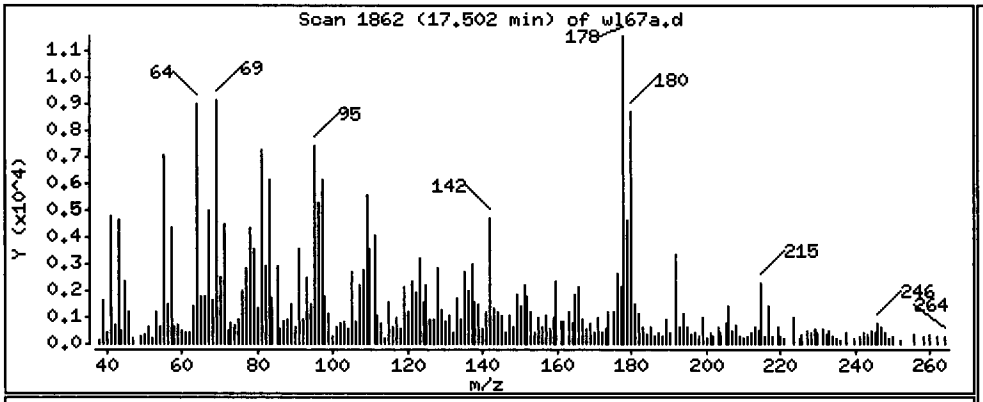
Operator: VTS/YZ

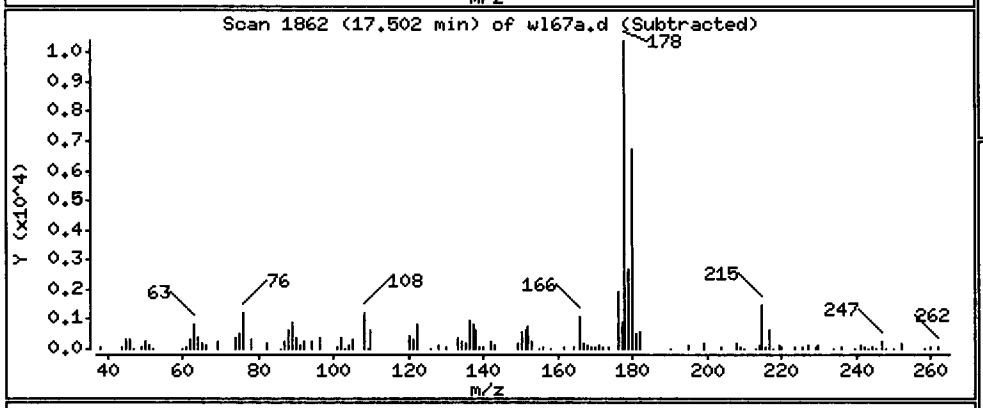
Column phase: ZB-5msi

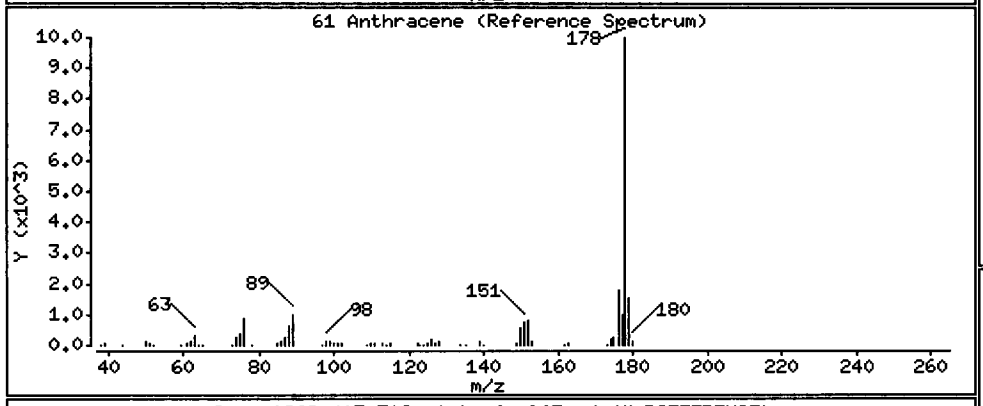
Column diameter: 0.25

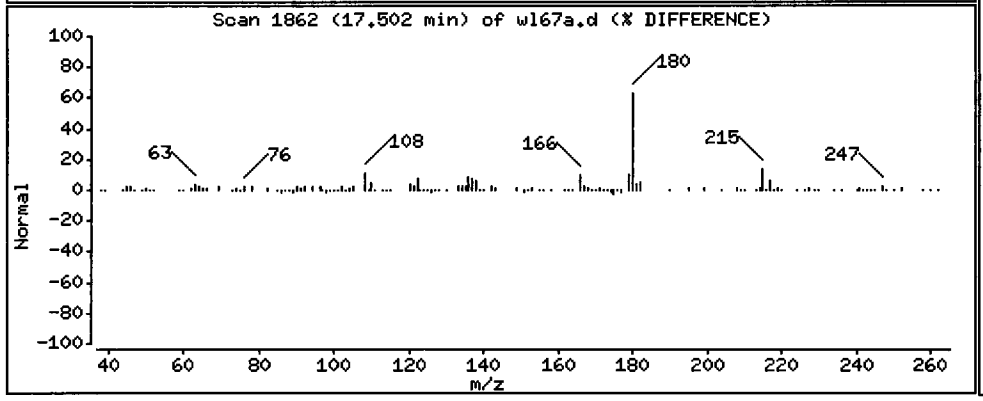
61 Anthracene

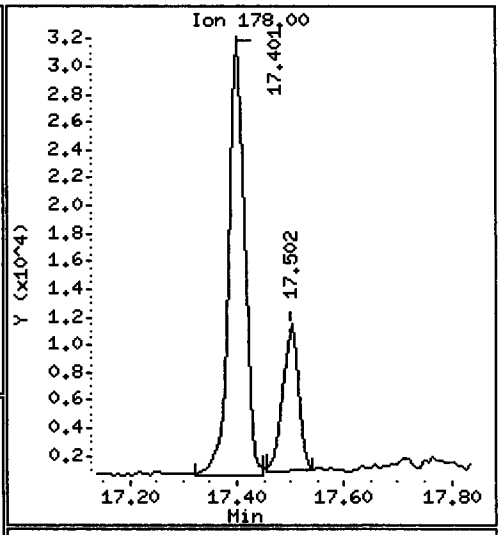
Concentration: 383.1 ug/kg

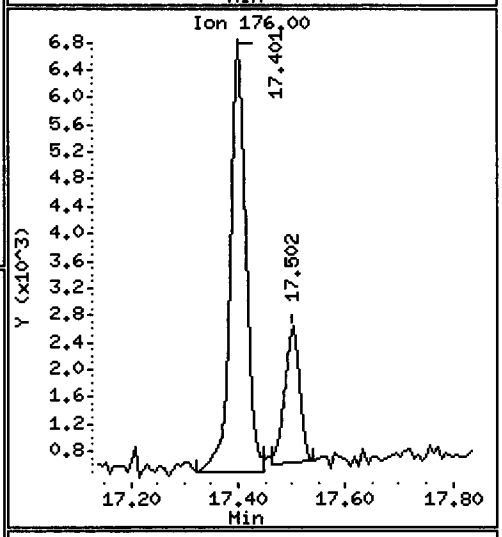


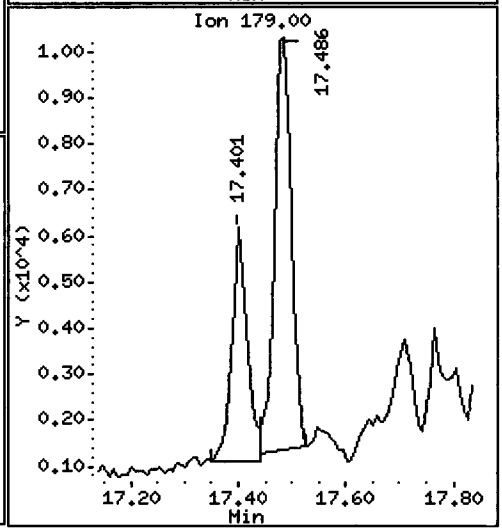












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

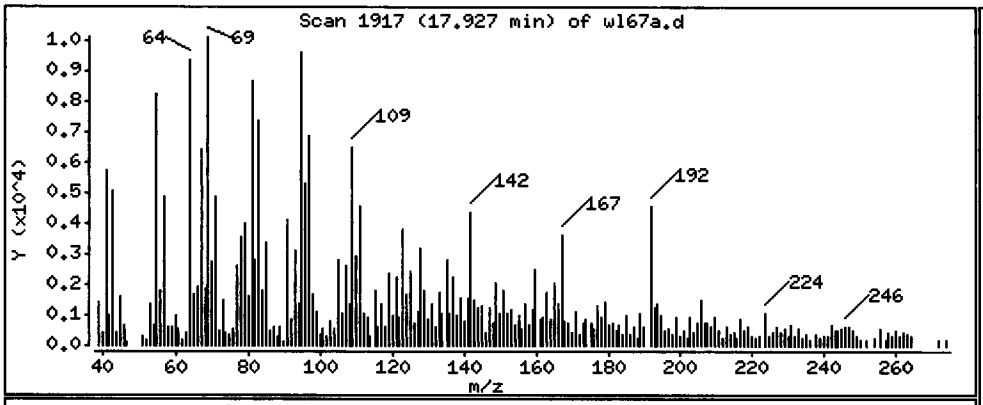
Operator: VTS/YZ

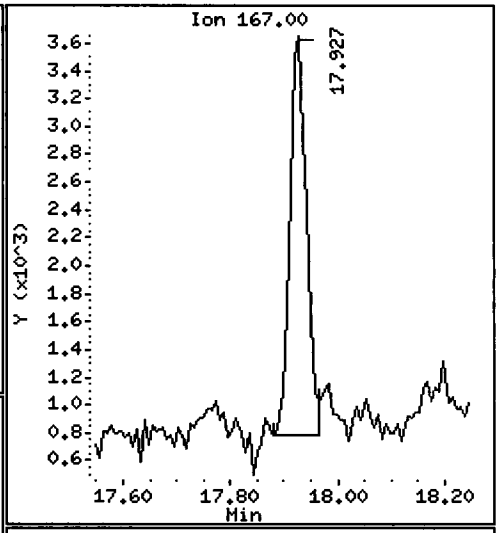
Column phase: ZB-5msi

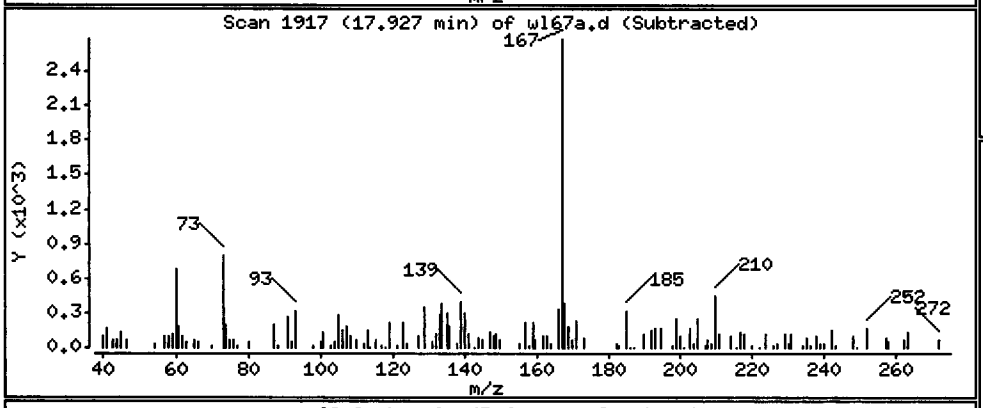
Column diameter: 0.25

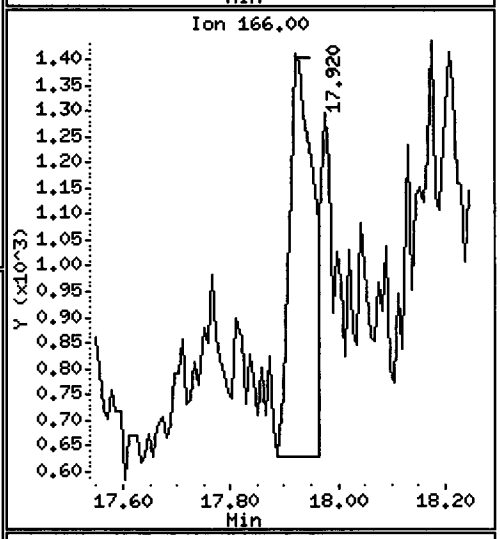
62 Carbazole

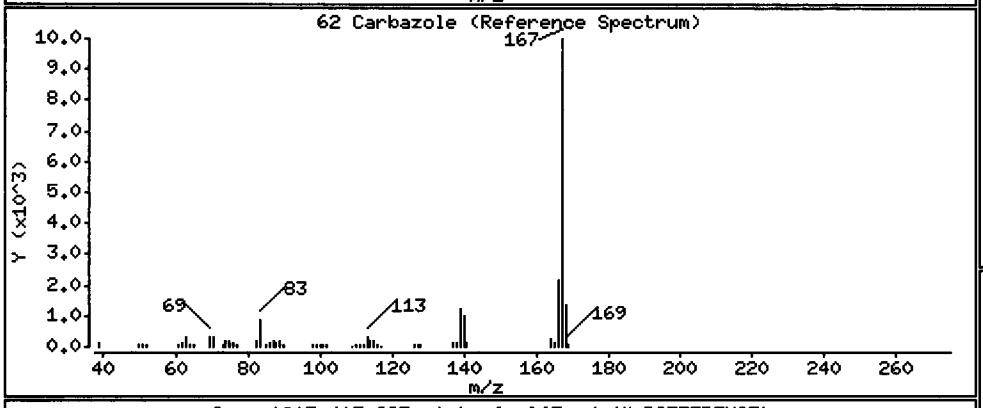
Concentration: 174.9 ug/kg

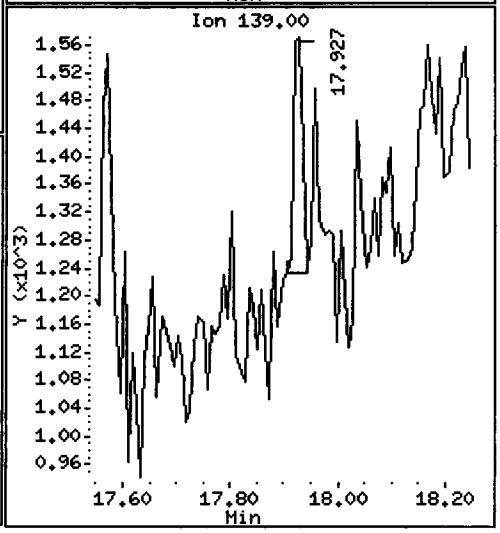


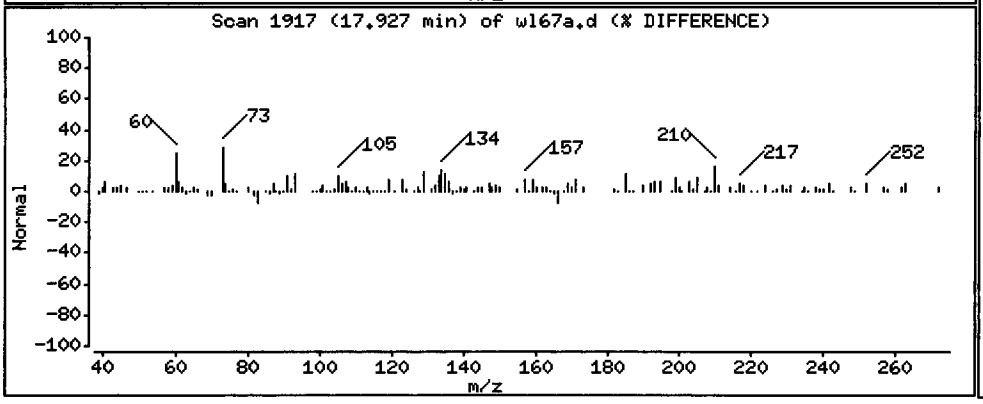












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

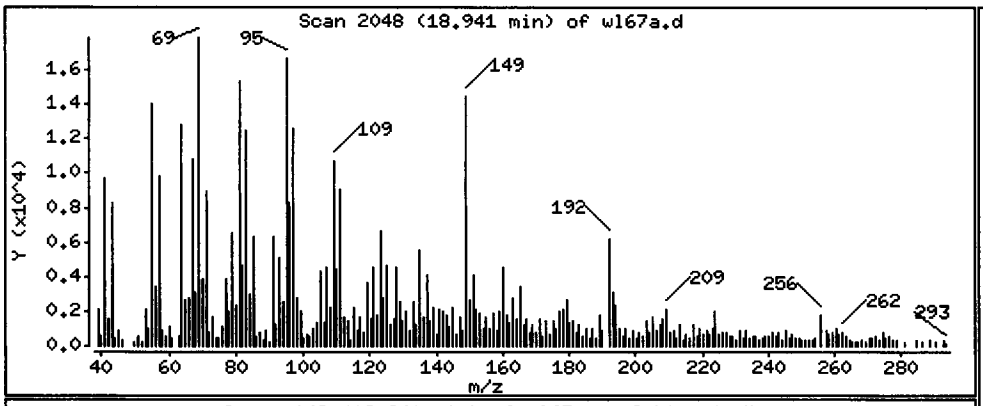
Operator: VTS/YZ

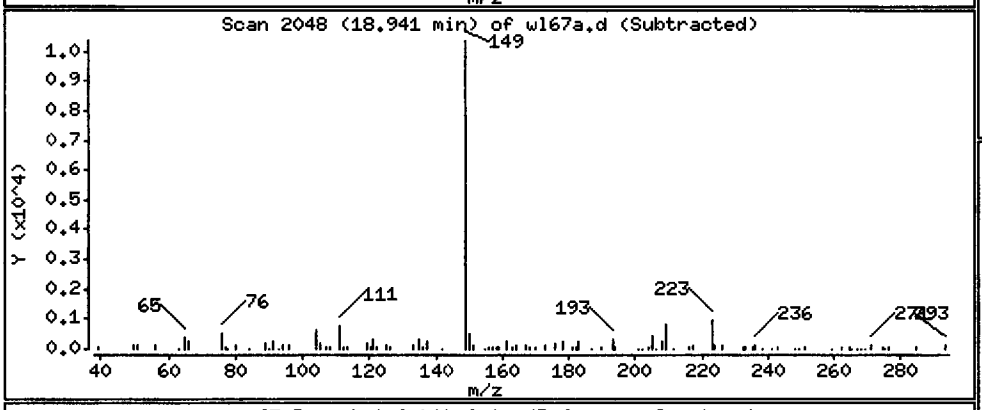
Column phase: ZB-5msi

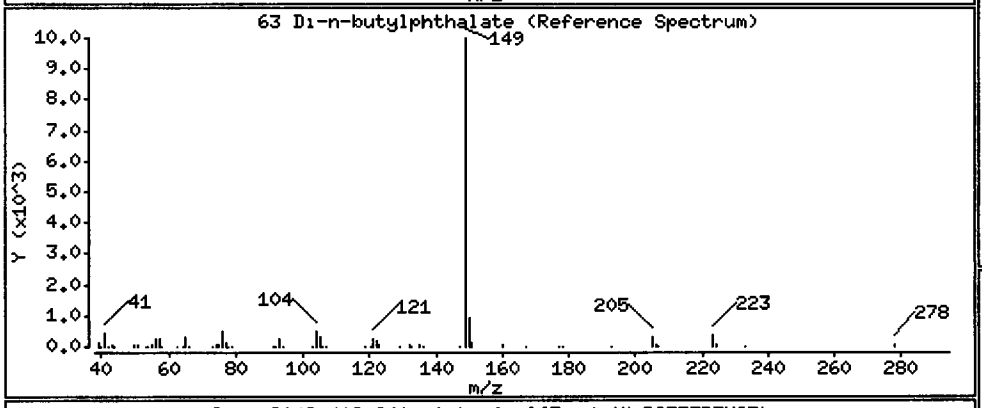
Column diameter: 0.25

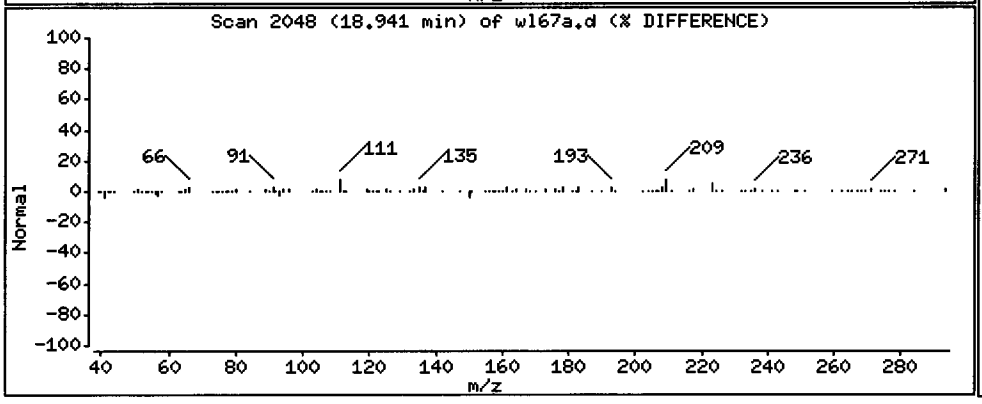
63 Di-n-butylphthalate

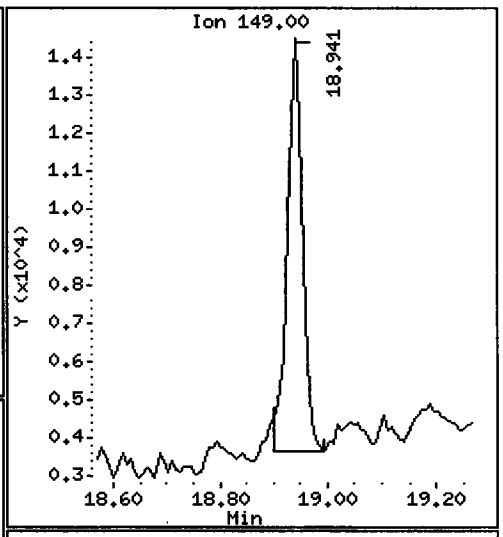
Concentration: 376.3 ug/kg

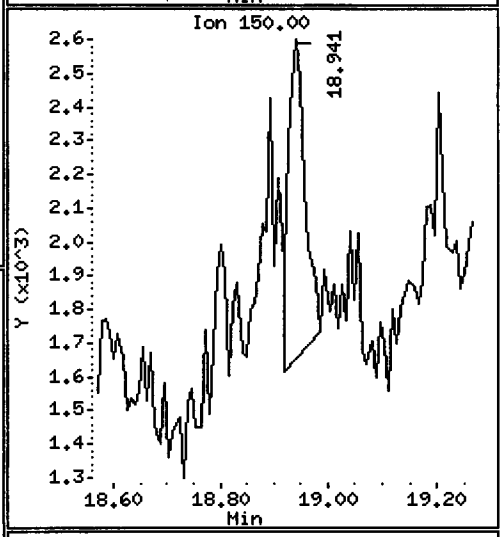


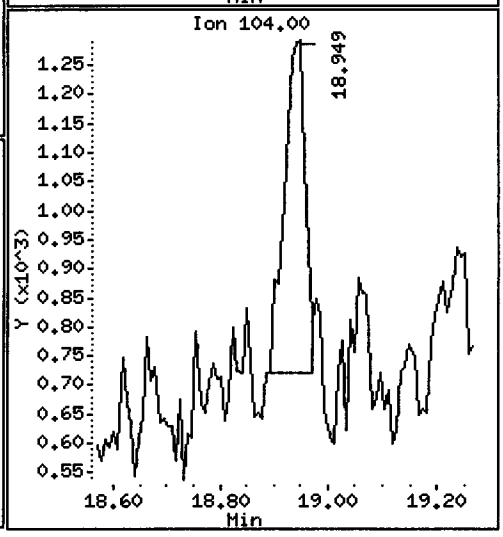












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

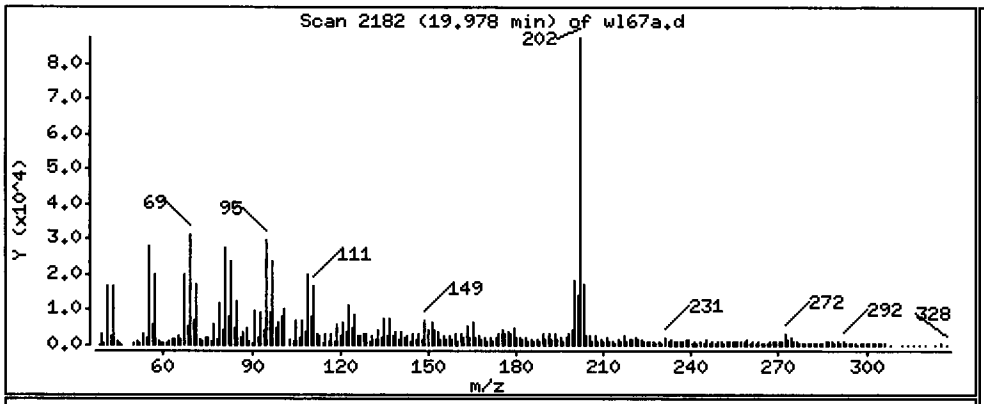
Operator: VTS/YZ

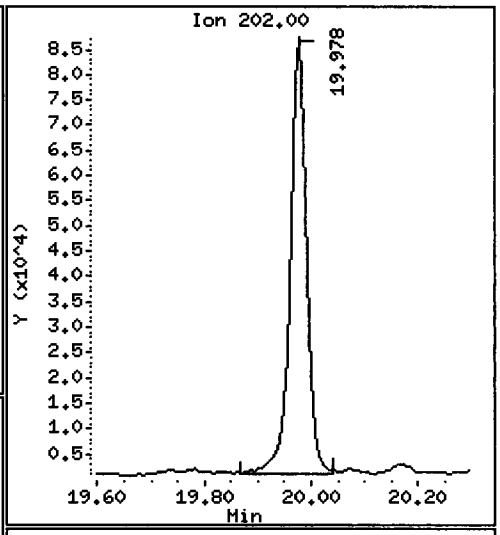
Column phase: ZB-5msi

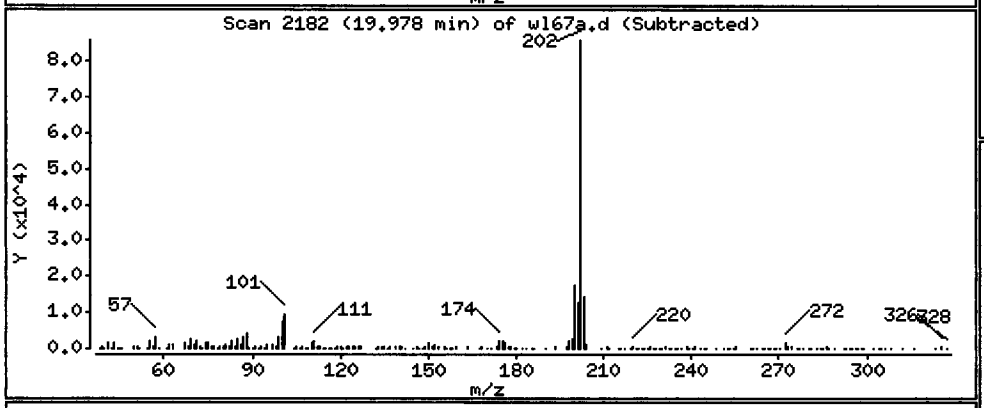
Column diameter: 0.25

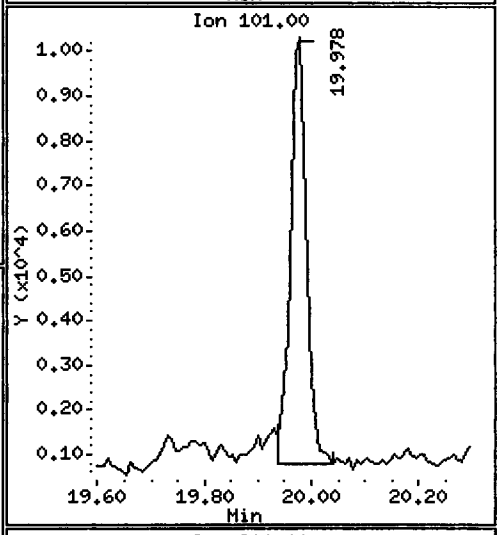
64 Fluoranthene

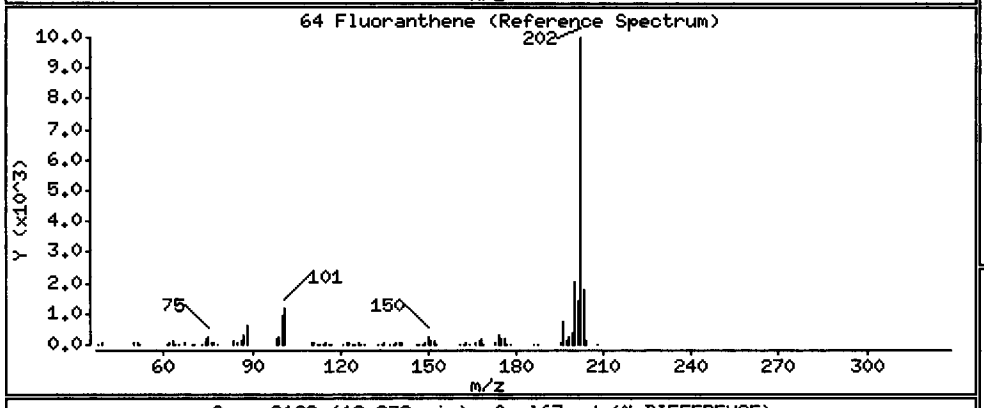
Concentration: 2987 ug/kg

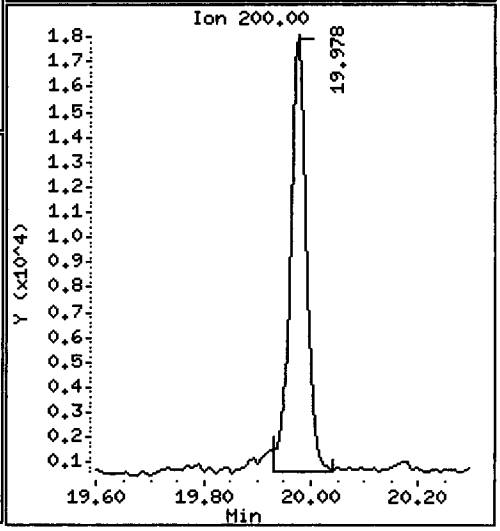


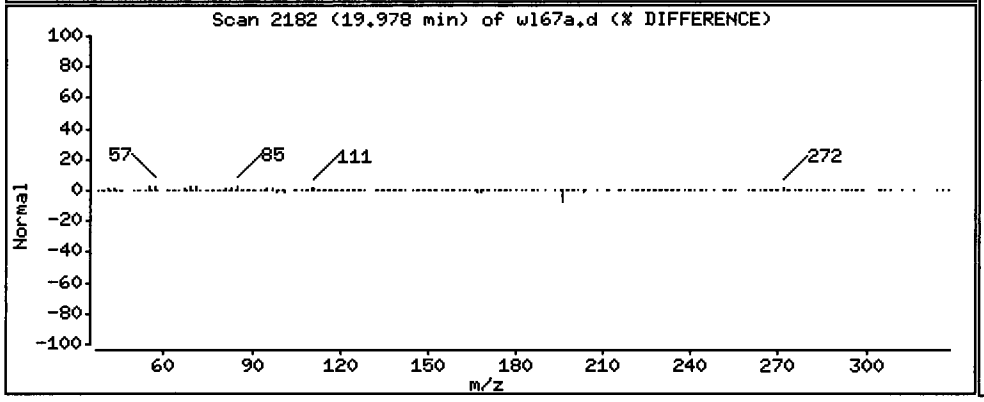












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

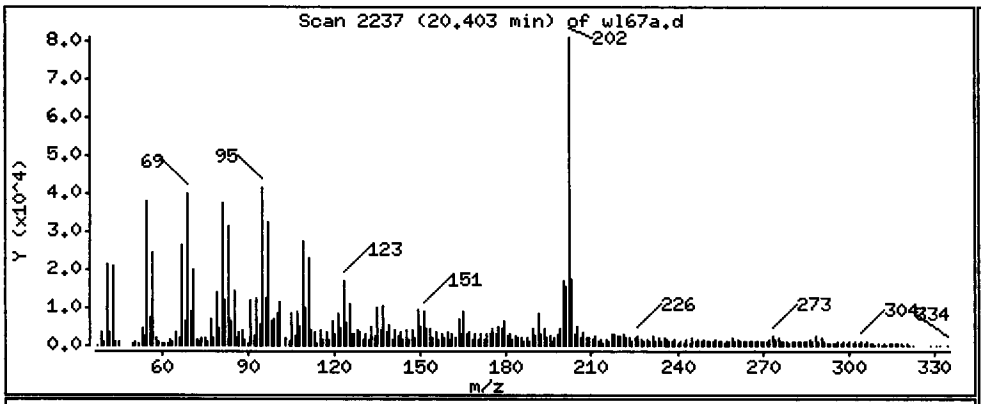
Operator: VTS/YZ

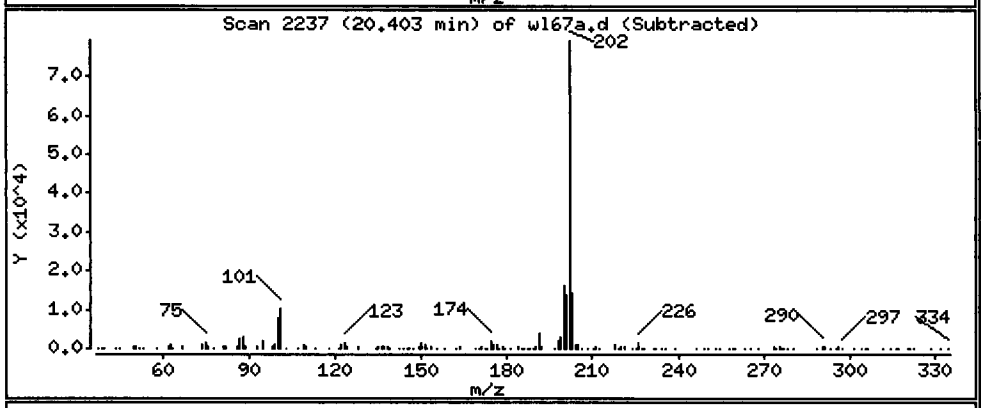
Column phase: ZB-5msi

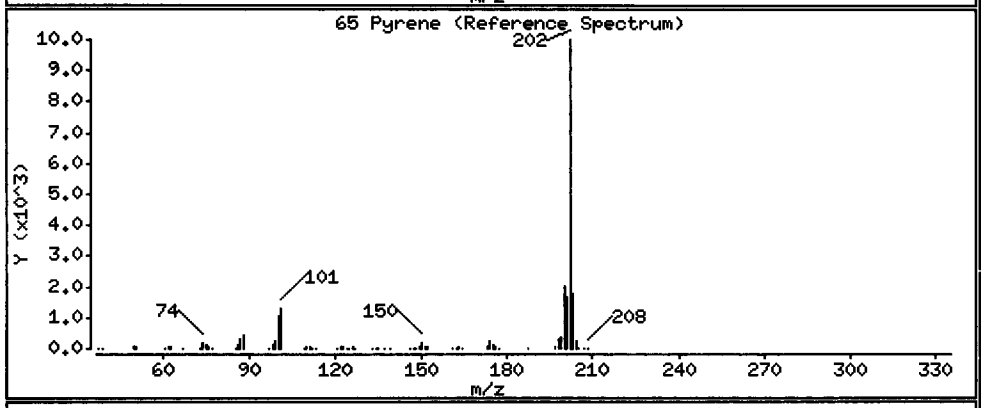
Column diameter: 0.25

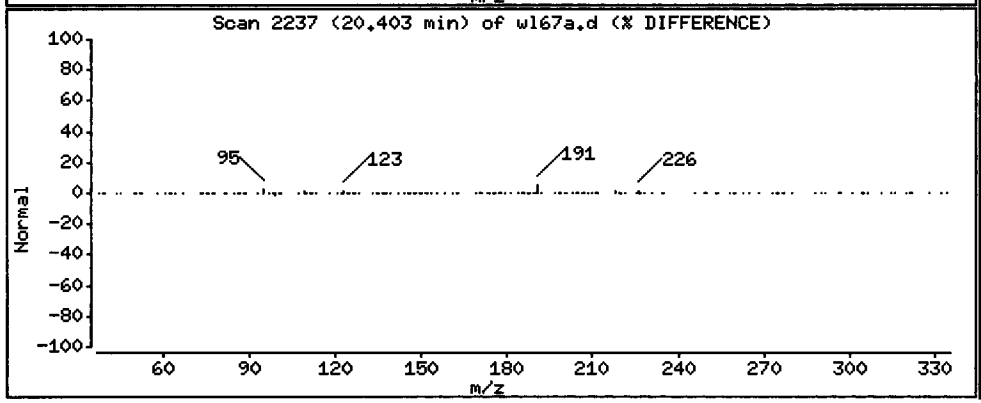
65 Pyrene

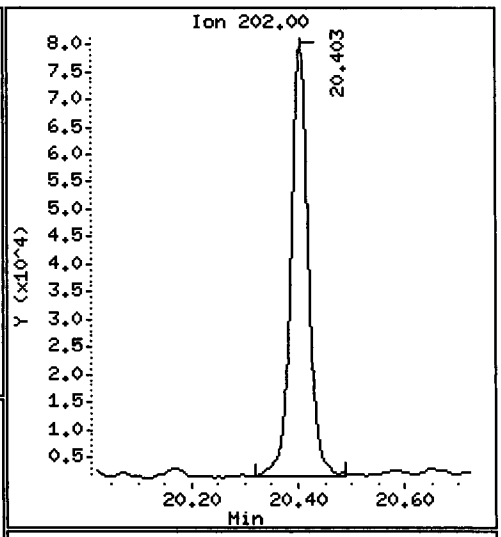
Concentration: 2943 ug/kg

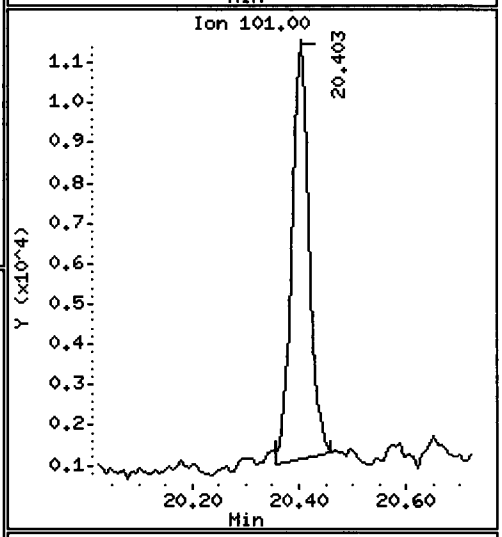


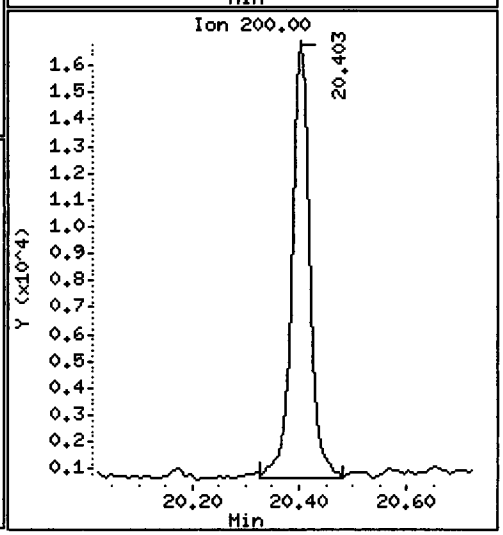












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

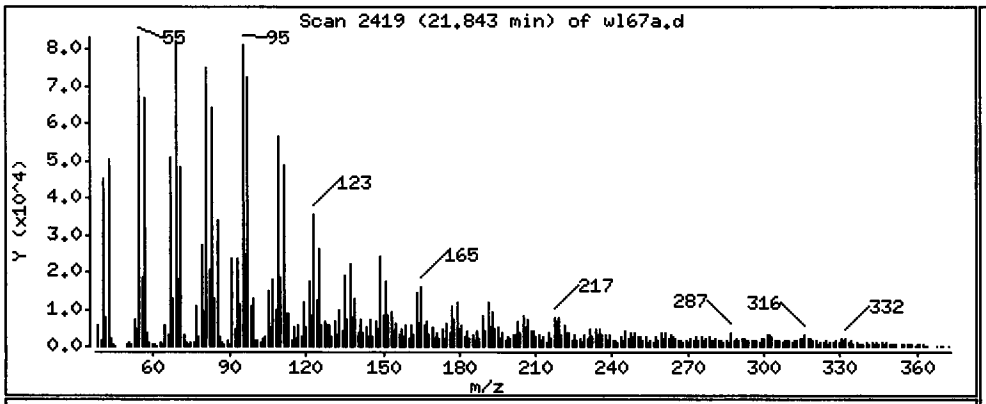
Operator: VTS/YZ

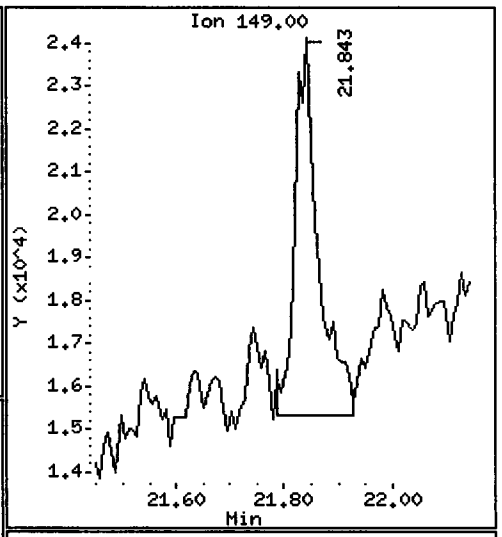
Column phase: ZB-5msi

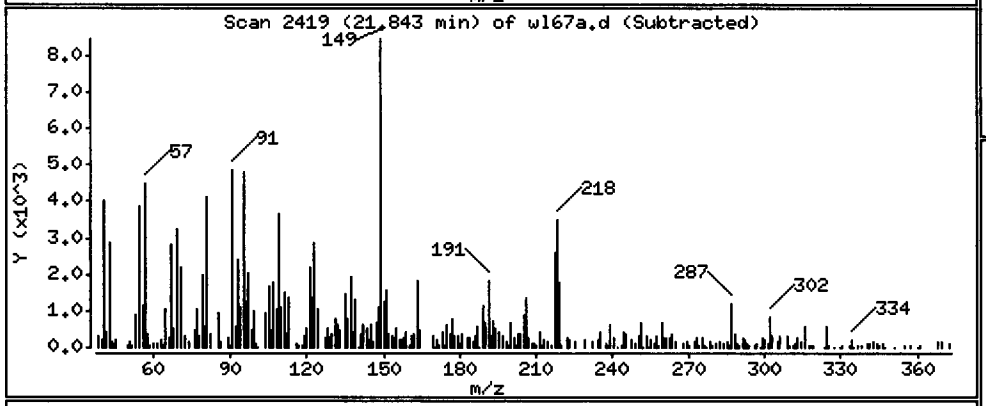
Column diameter: 0.25

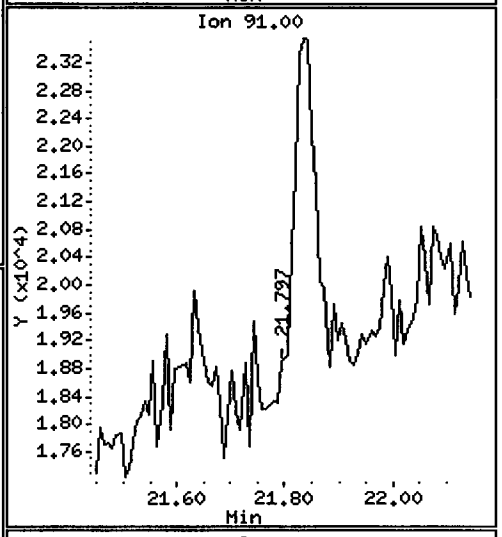
67 Butylbenzylphthalate

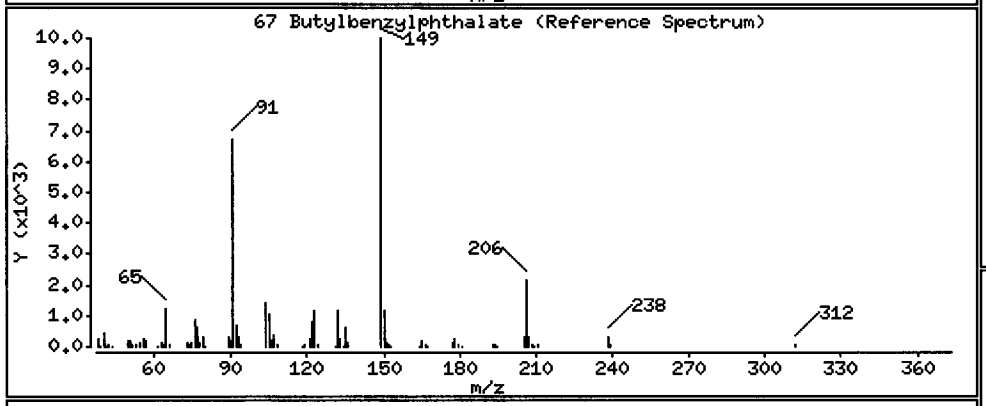
Concentration: 1199 ug/kg

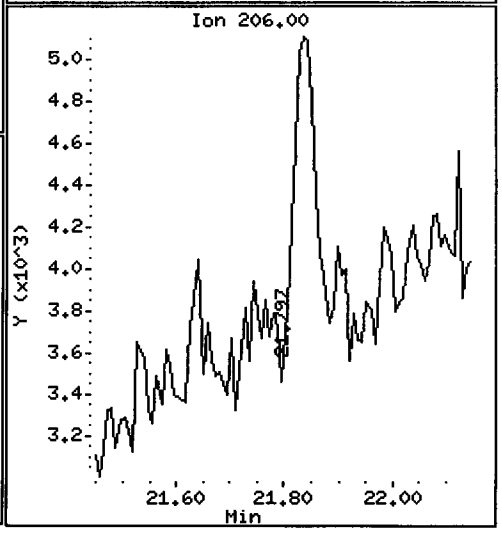


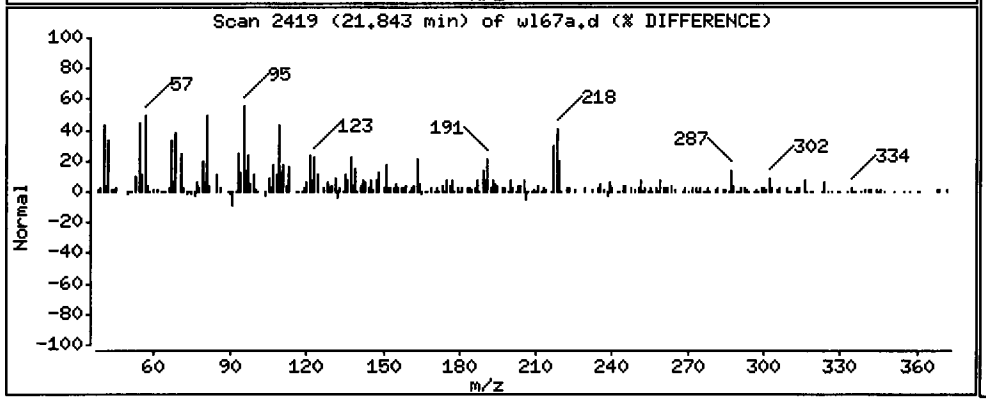












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

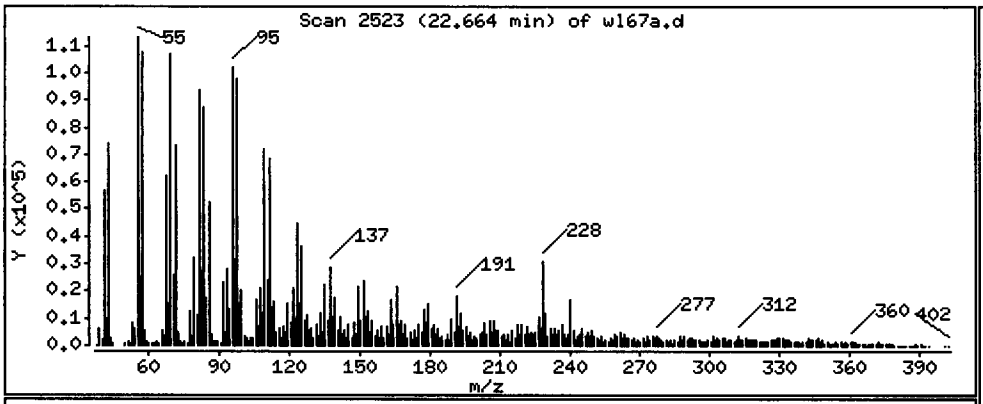
Operator: VTS/YZ

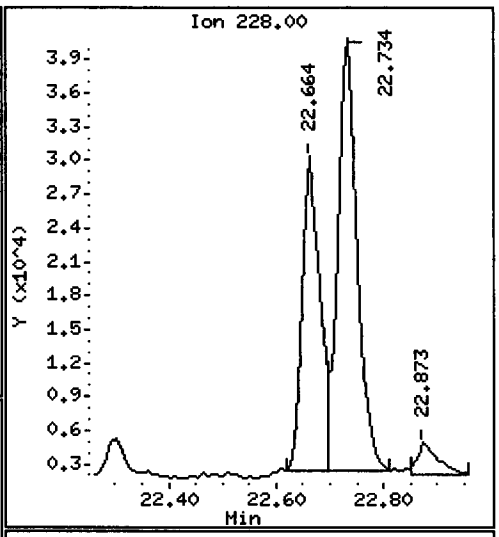
Column phase: ZB-5msi

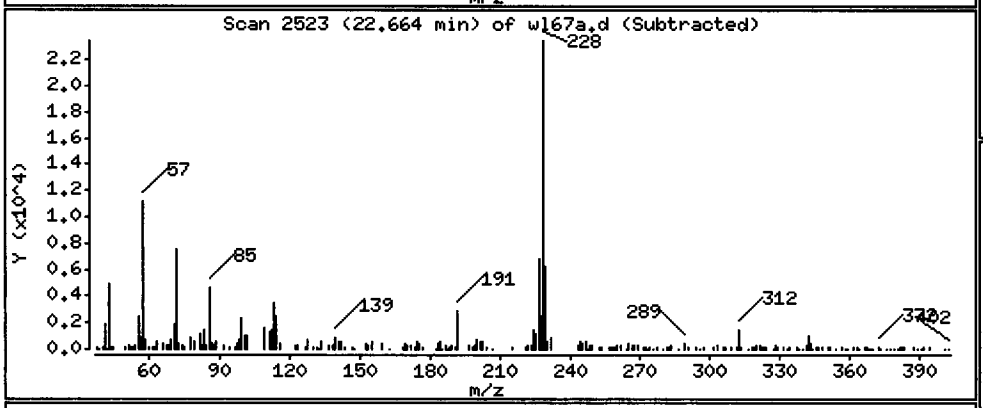
Column diameter: 0.25

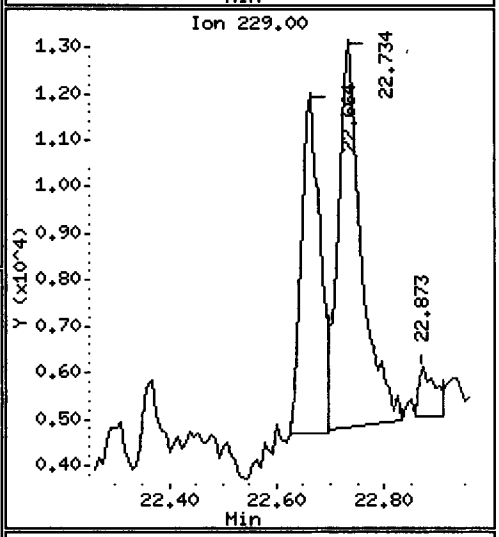
68 Benzo(a)anthracene

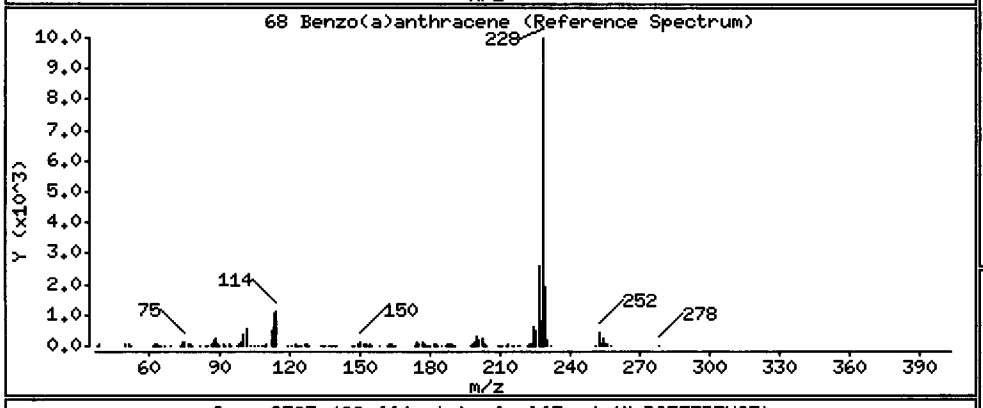
Concentration: 1076 ug/kg

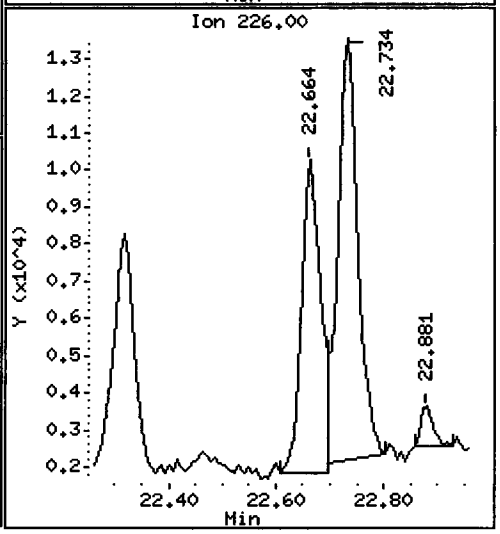


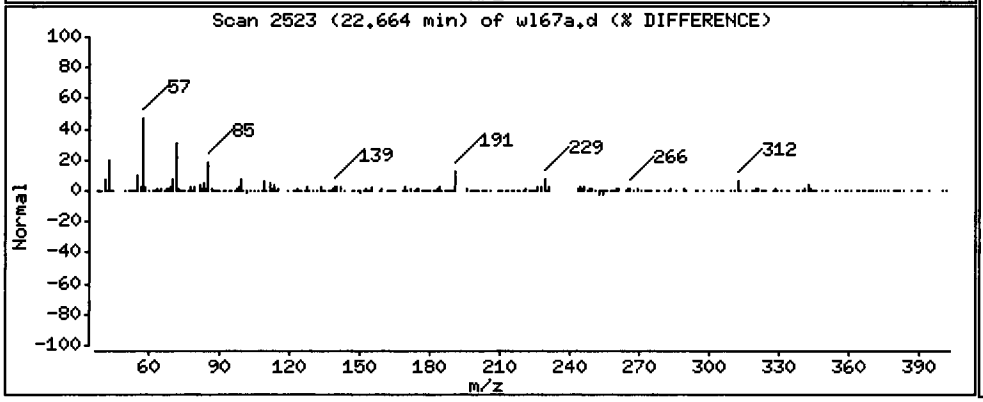












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

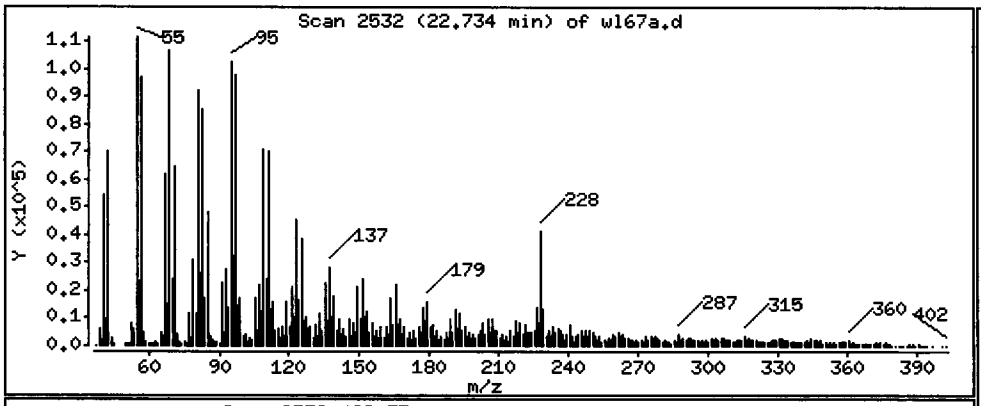
Operator: VTS/YZ

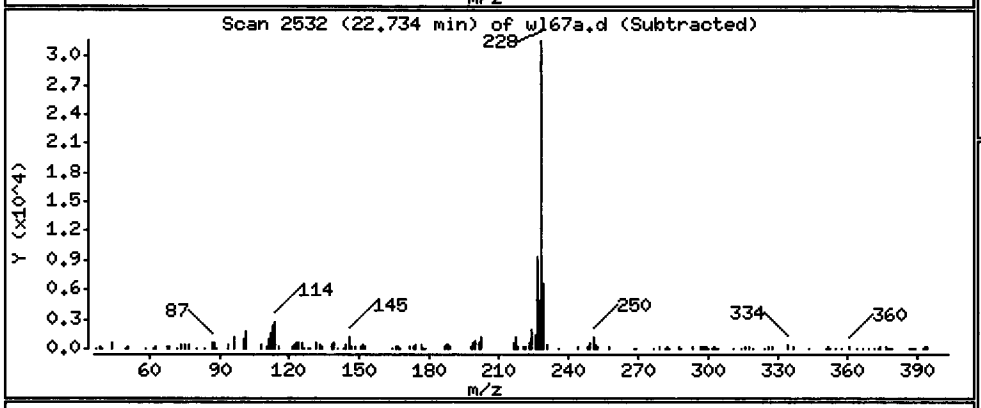
Column phase: ZB-5msi

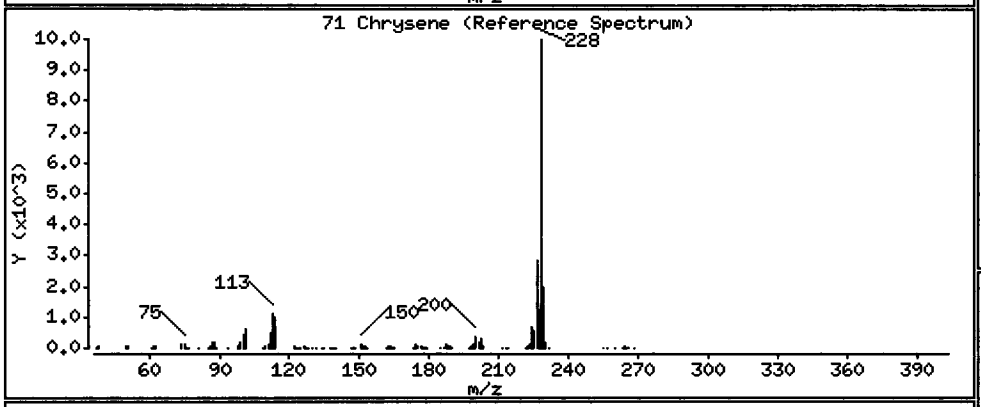
Column diameter: 0.25

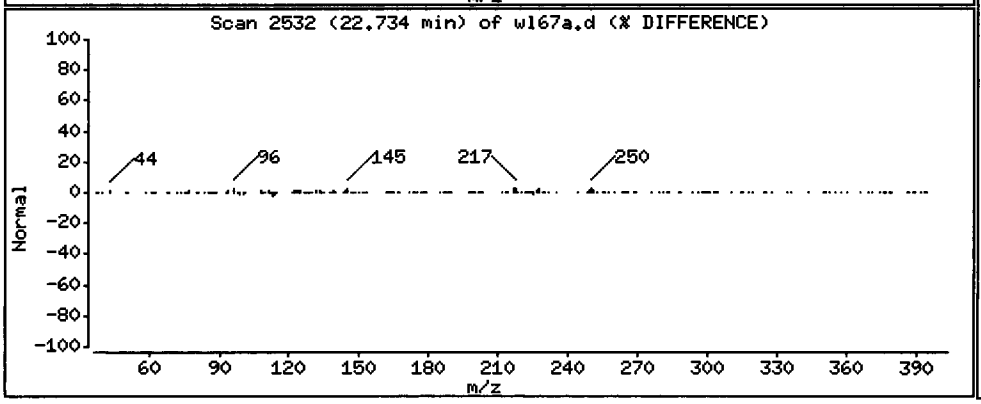
71 Chrysene

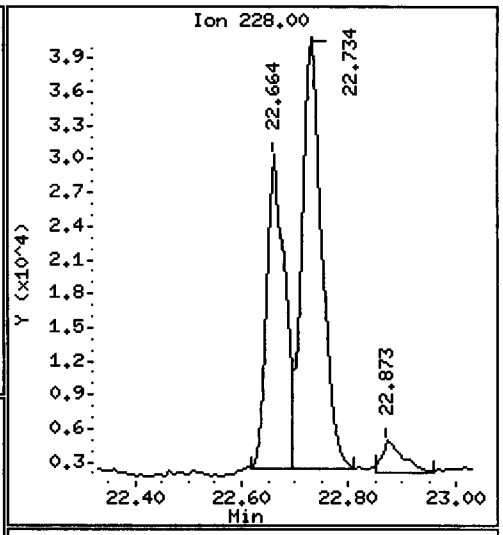
Concentration: 1848 ug/kg

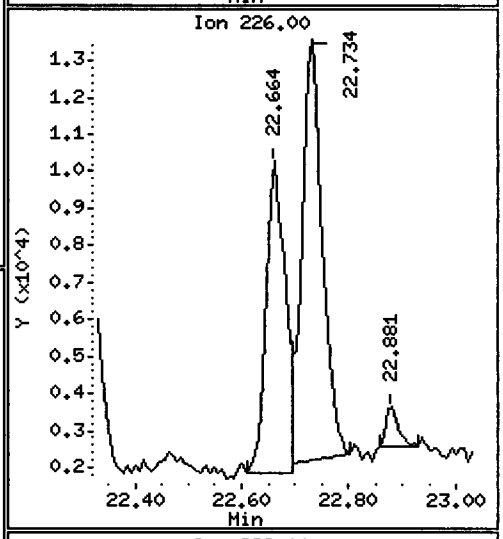


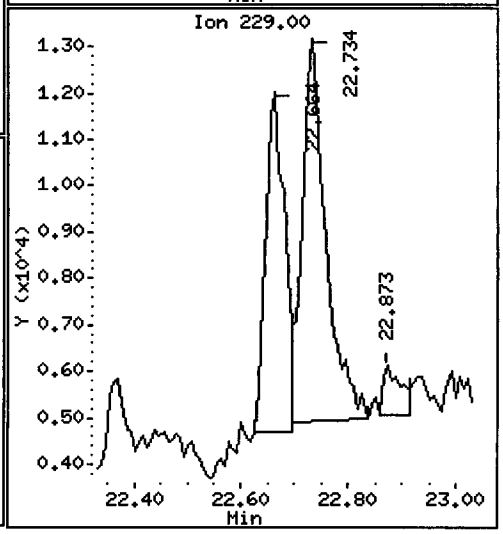












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

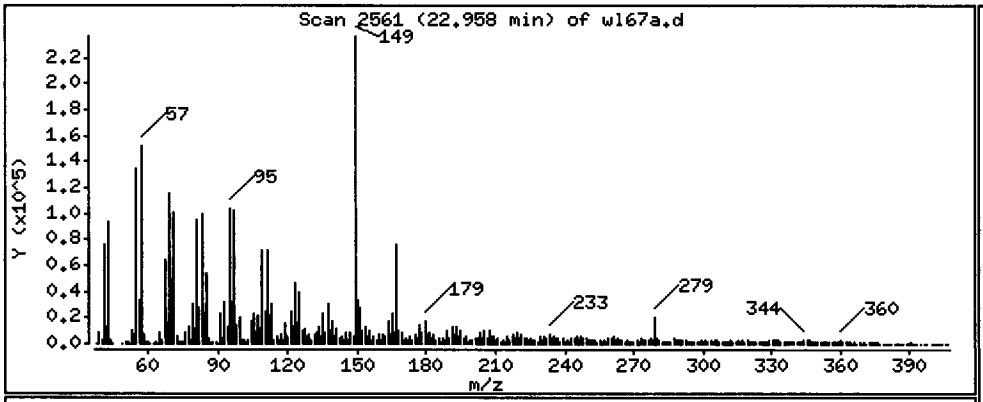
Operator: VTS/YZ

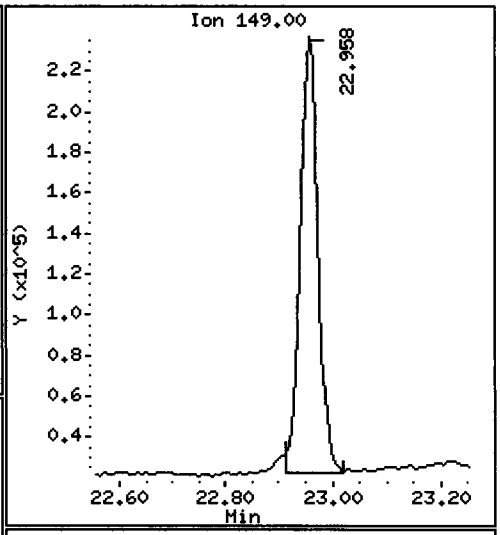
Column phase: ZB-5msi

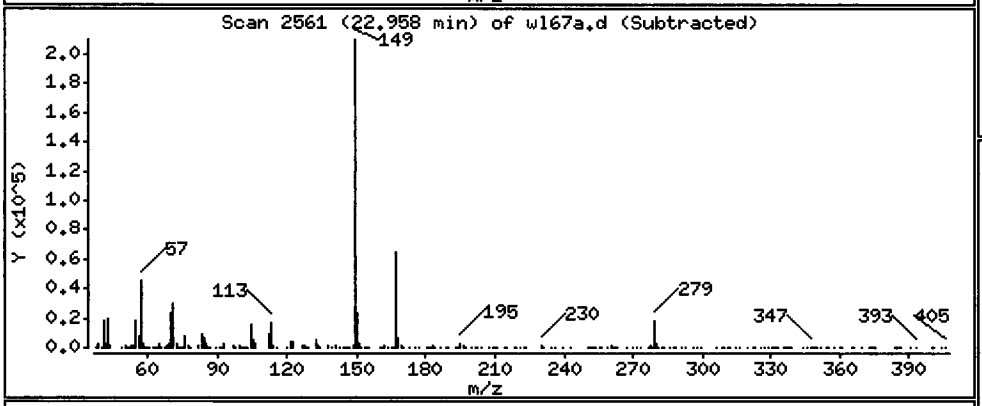
Column diameter: 0.25

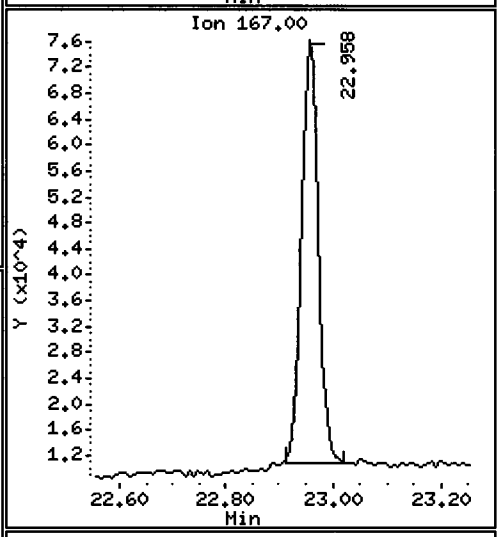
72 bis(2-Ethylhexyl)phthalate

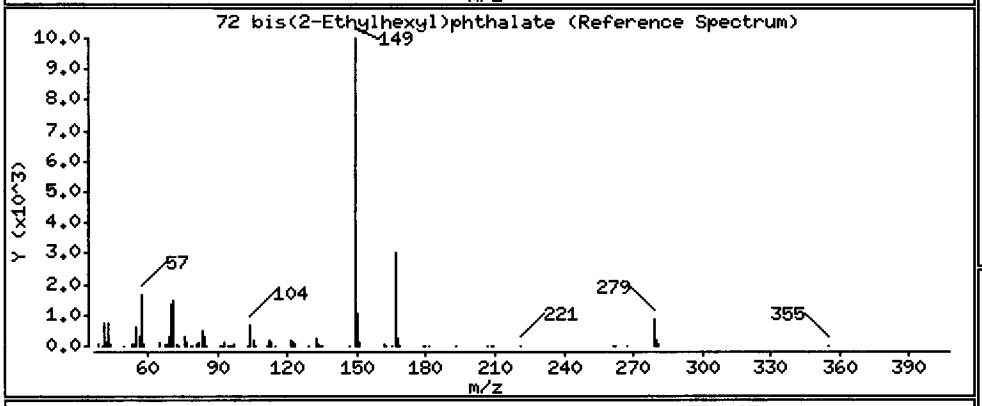
Concentration: 13890 ug/kg

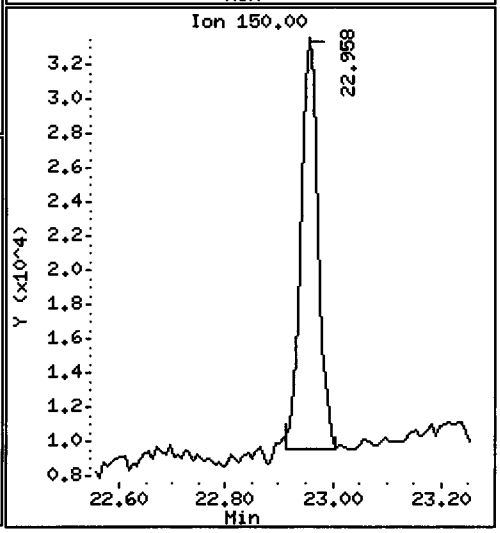


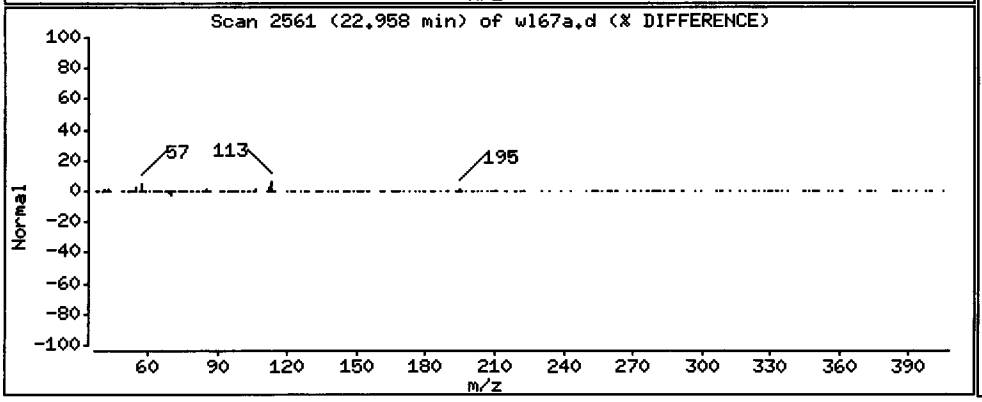












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

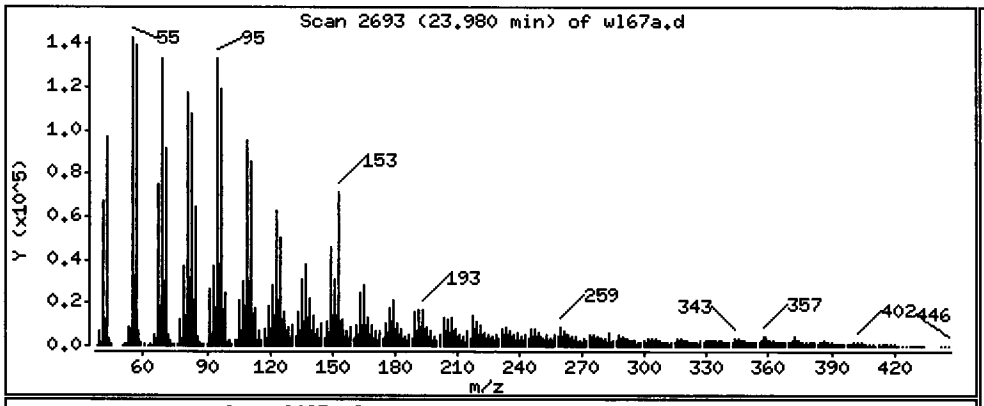
Operator: VTS/YZ

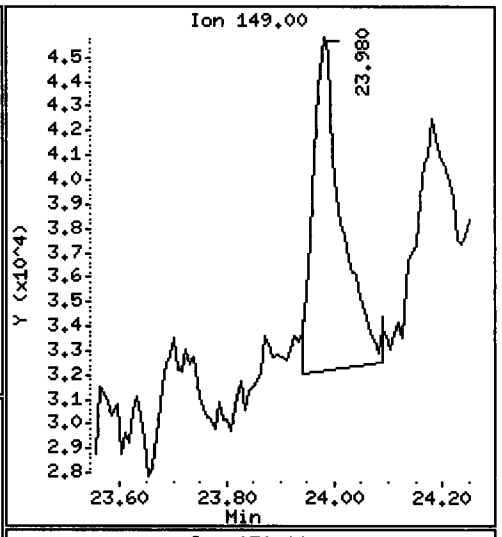
Column phase: ZB-5msi

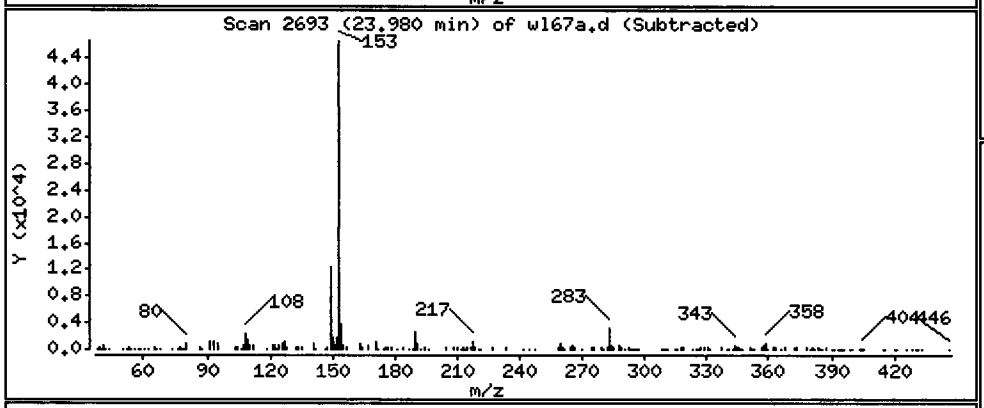
Column diameter: 0.25

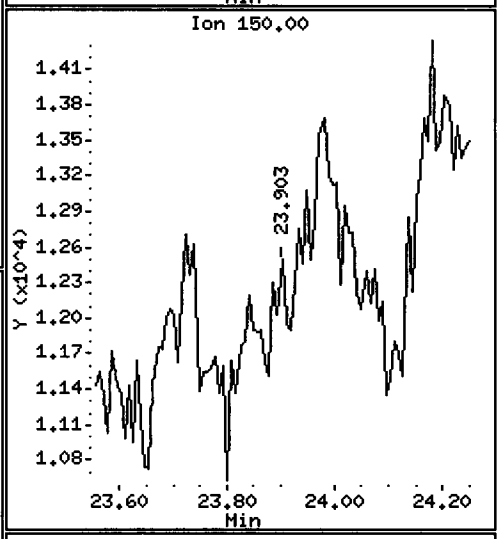
73 Di-n-octylphthalate

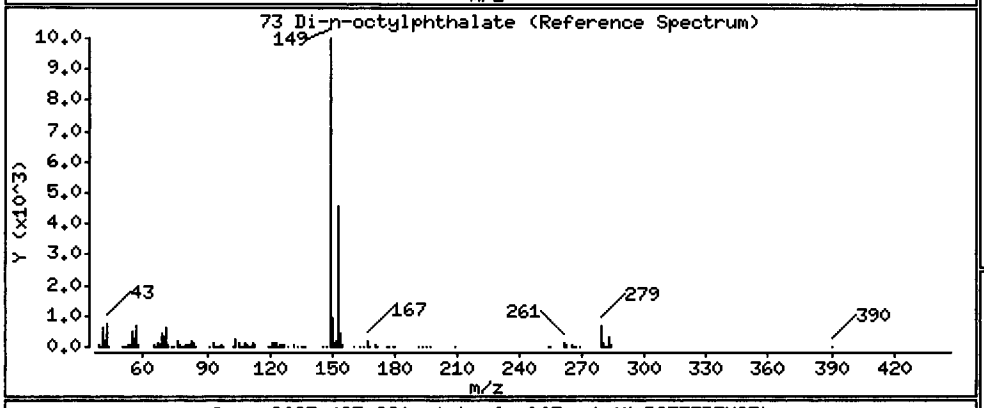
Concentration: 729.3 ug/kg

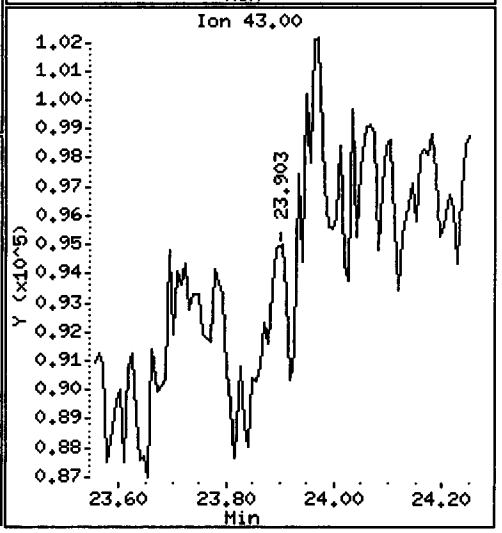


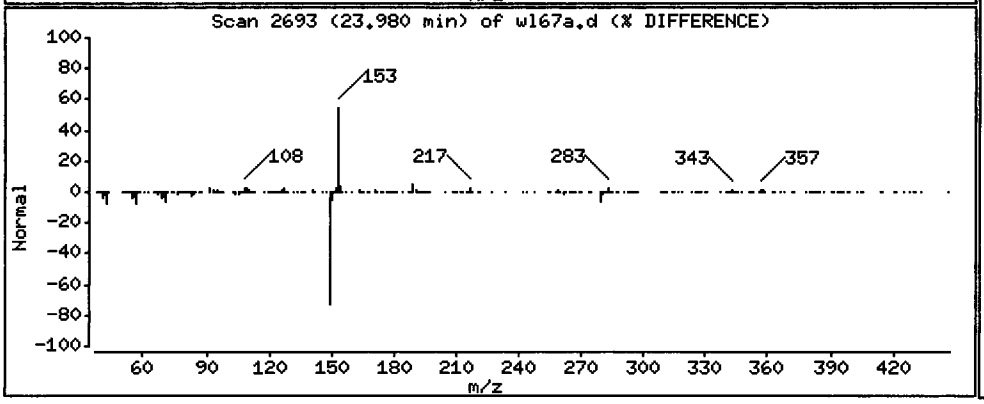












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

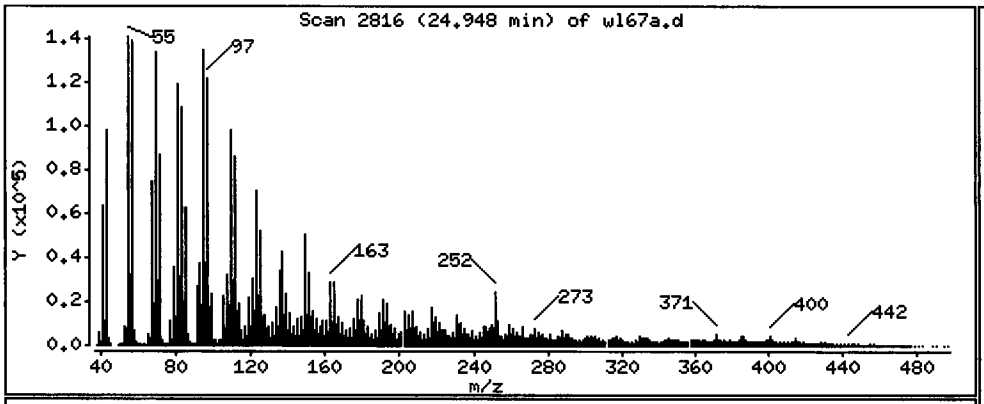
Operator: VTS/YZ

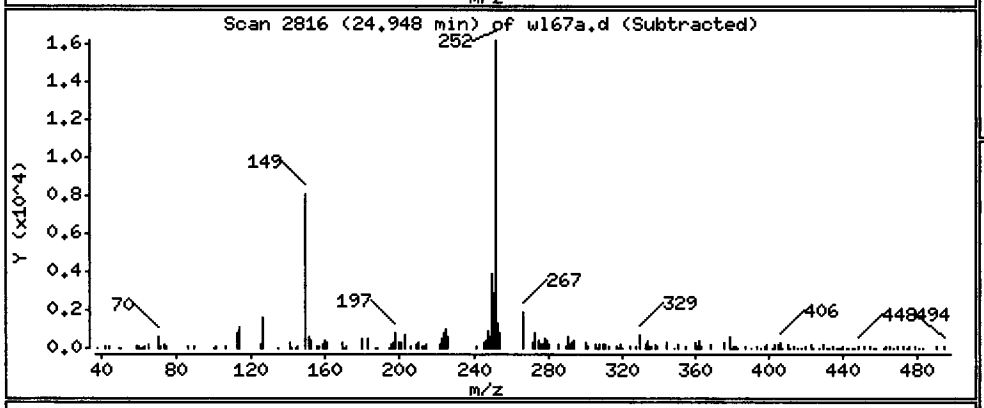
Column phase: ZB-5msi

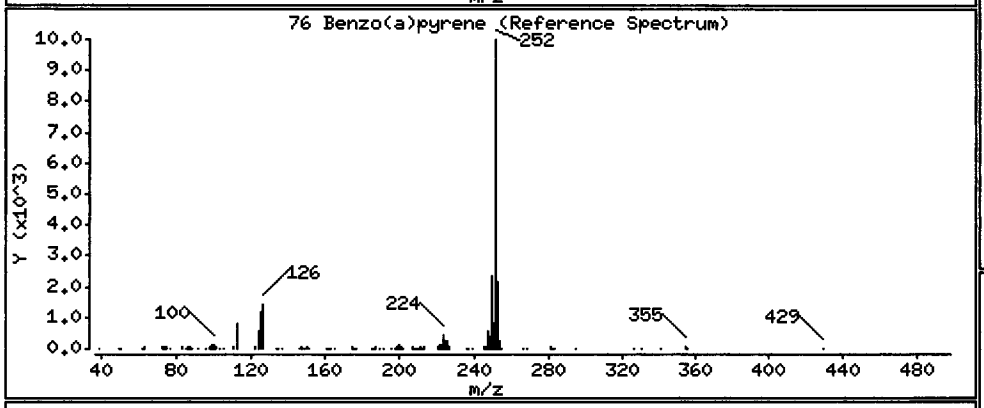
Column diameter: 0.25

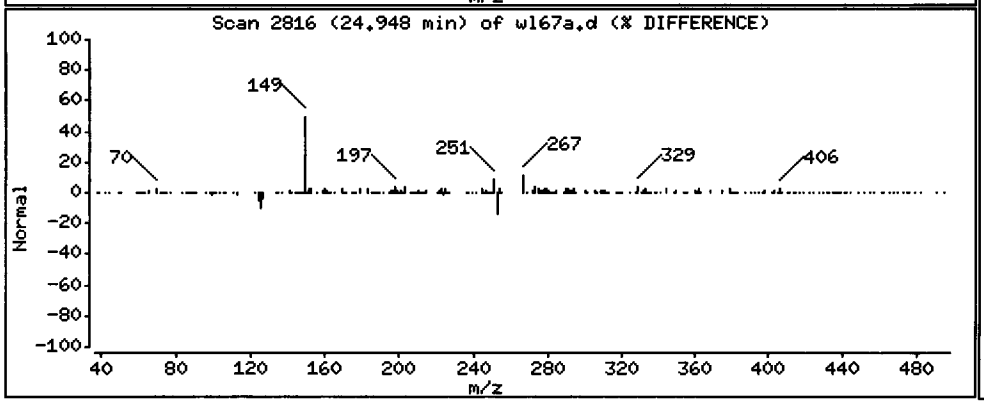
76 Benzo(a)pyrene

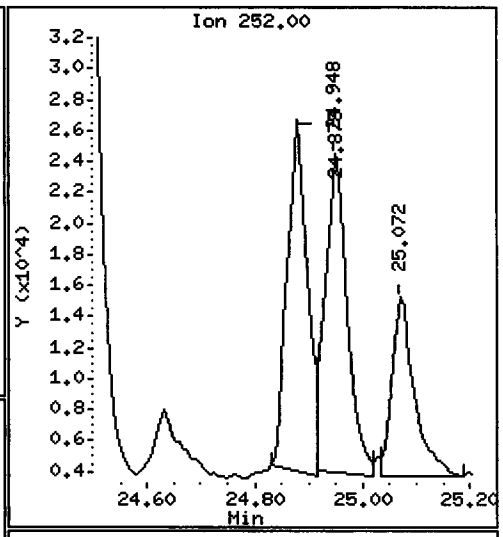
Concentration: 1133 ug/kg

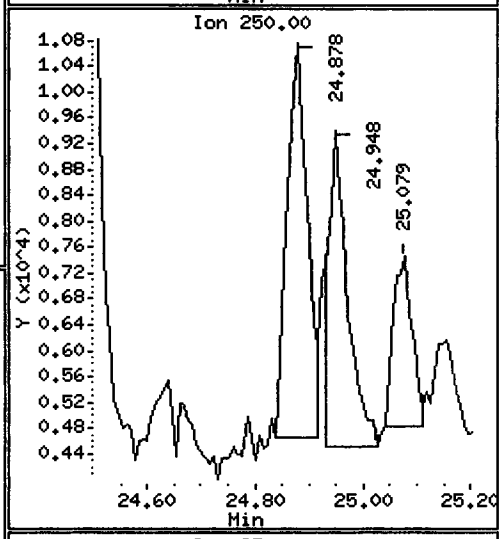


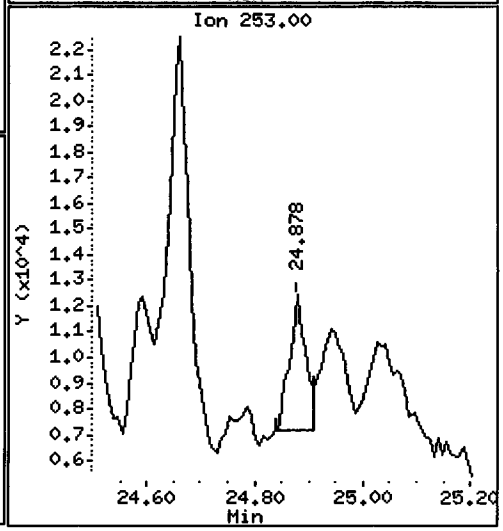












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

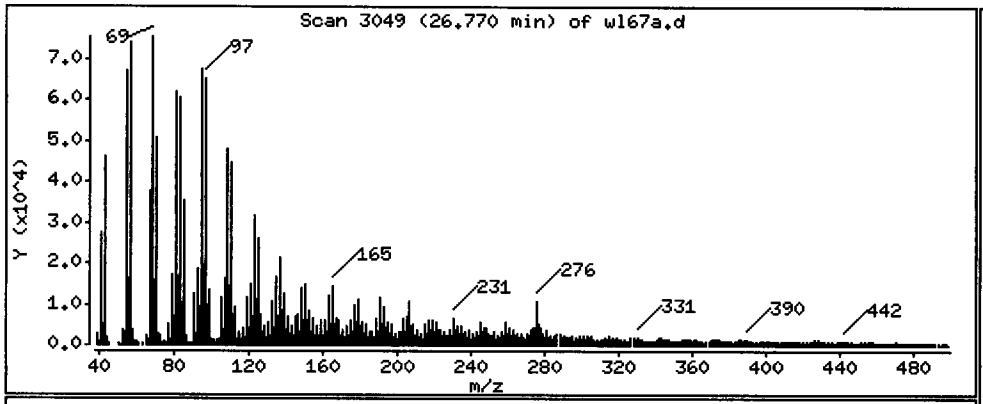
Operator: VTS/YZ

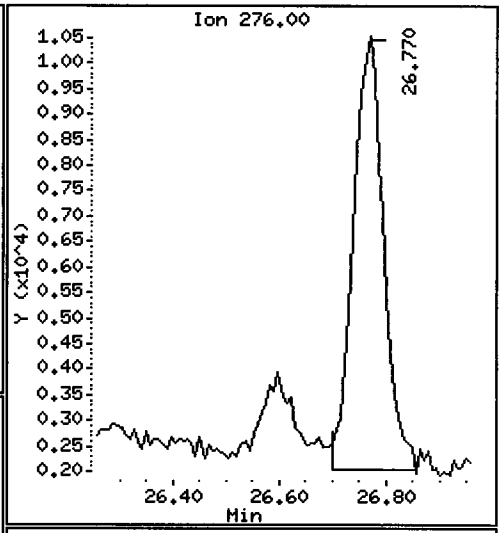
Column phase: ZB-5msi

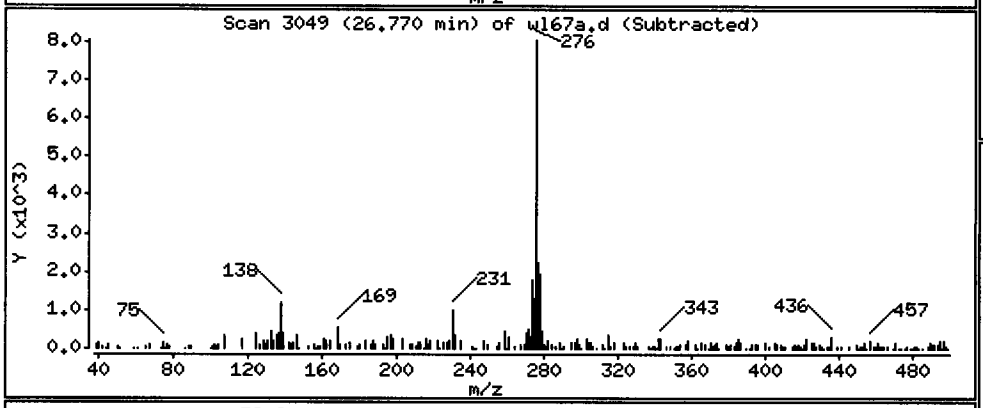
Column diameter: 0.25

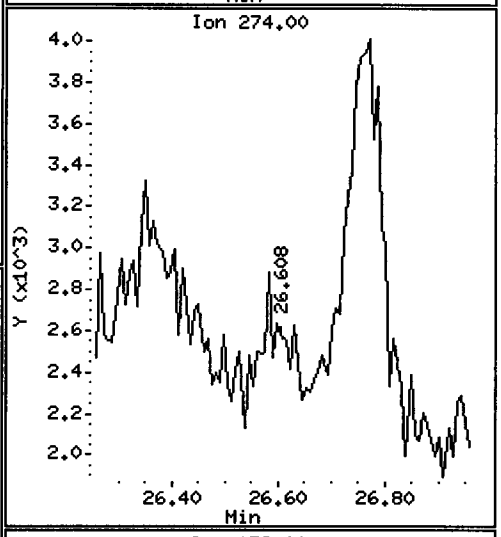
78 Indeno(1,2,3-cd)pyrene

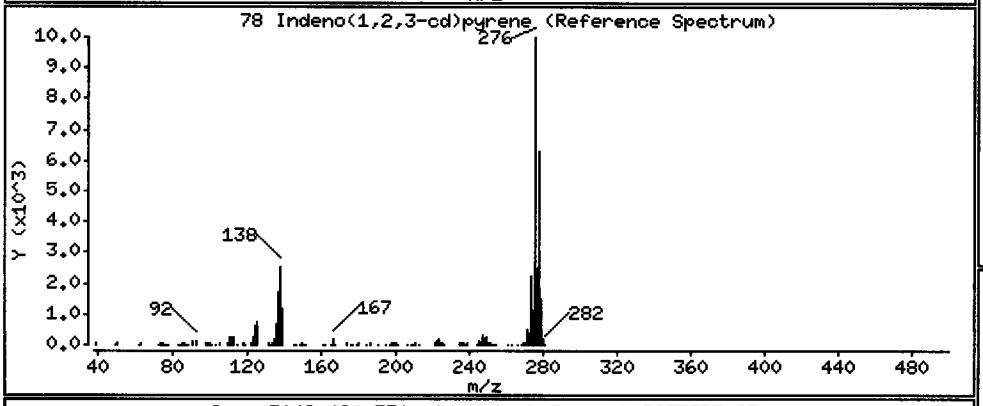
Concentration: 507.4 ug/kg

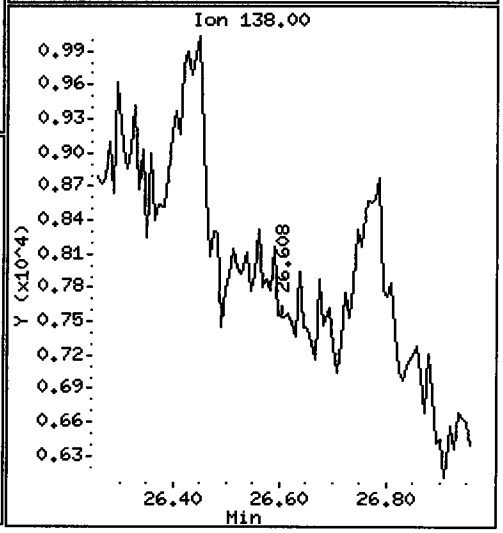


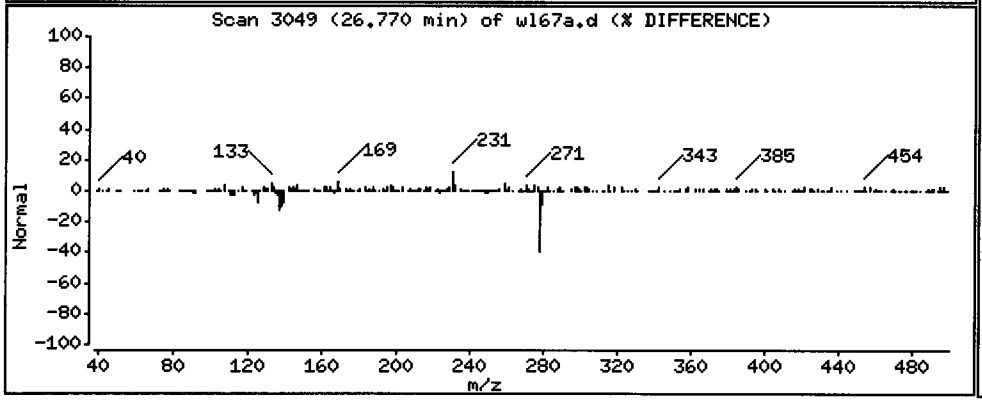












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

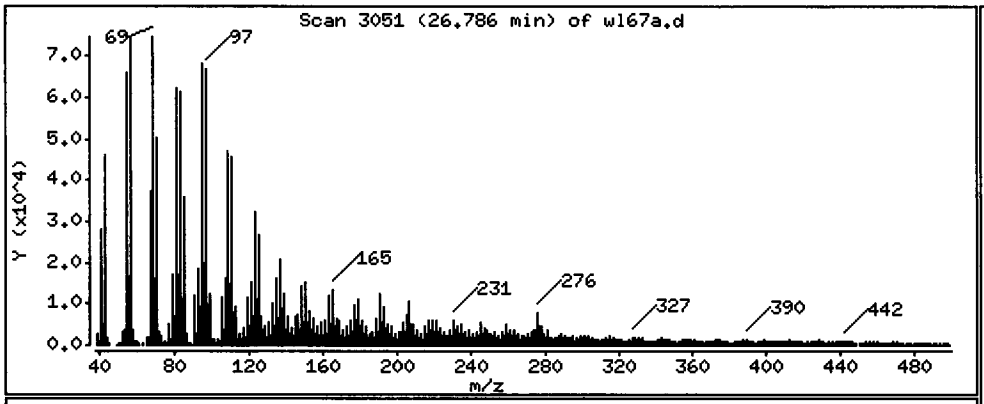
Operator: VTS/YZ

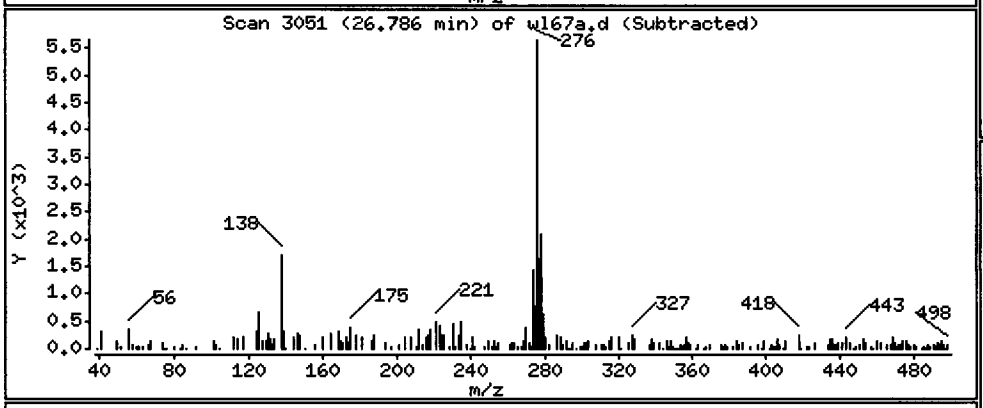
Column phase: ZB-5msi

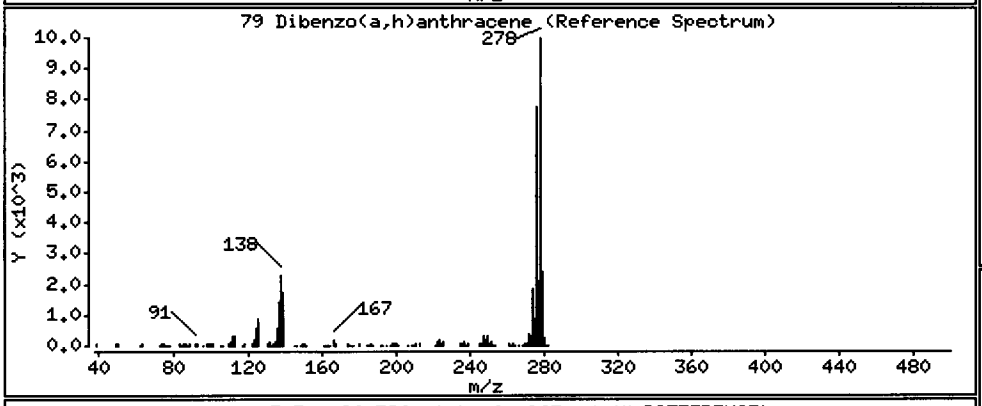
Column diameter: 0.25

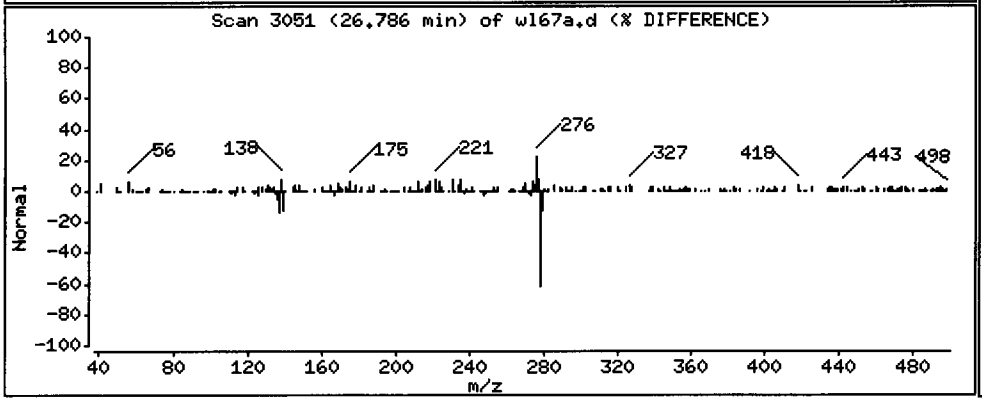
79 Dibenzo(a,h)anthracene

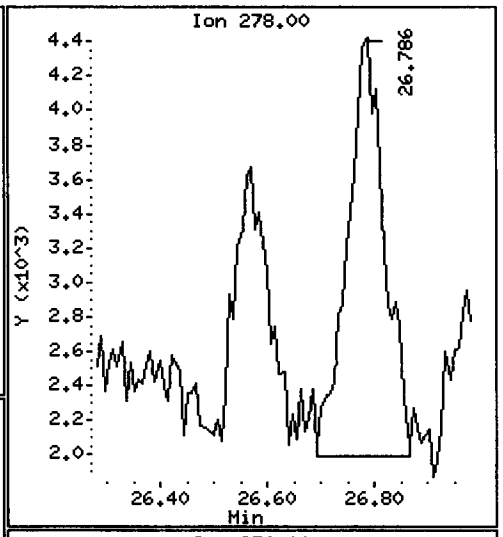
Concentration: 226.9 ug/kg

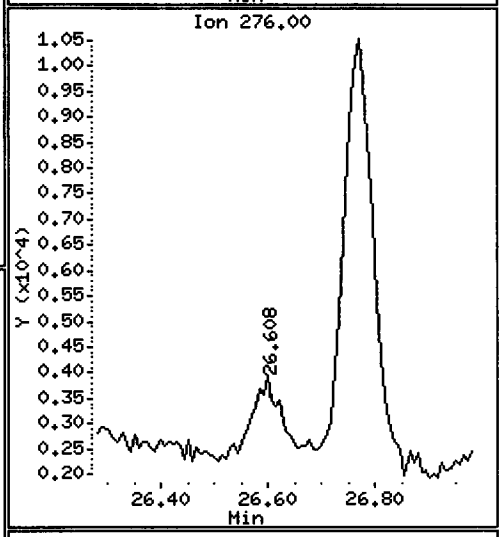


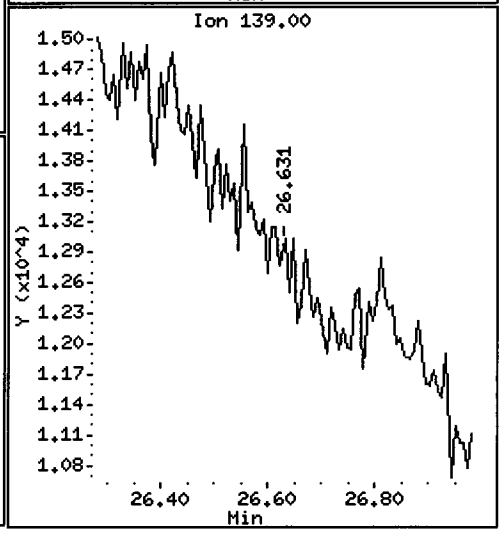












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

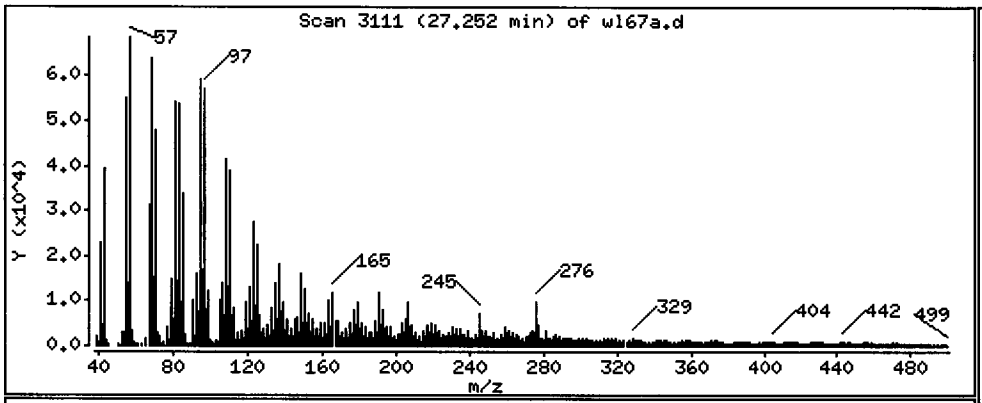
Operator: VTS/YZ

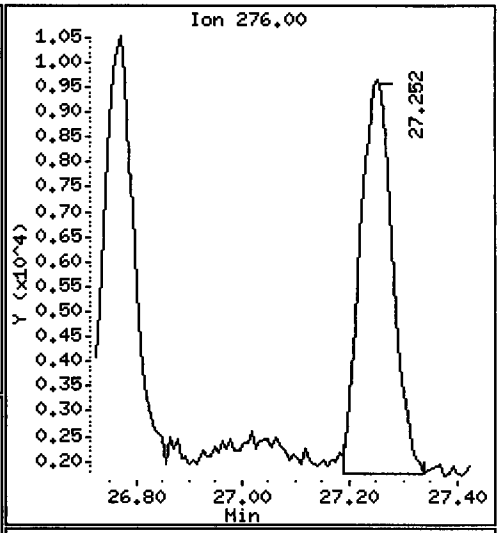
Column phase: ZB-5msi

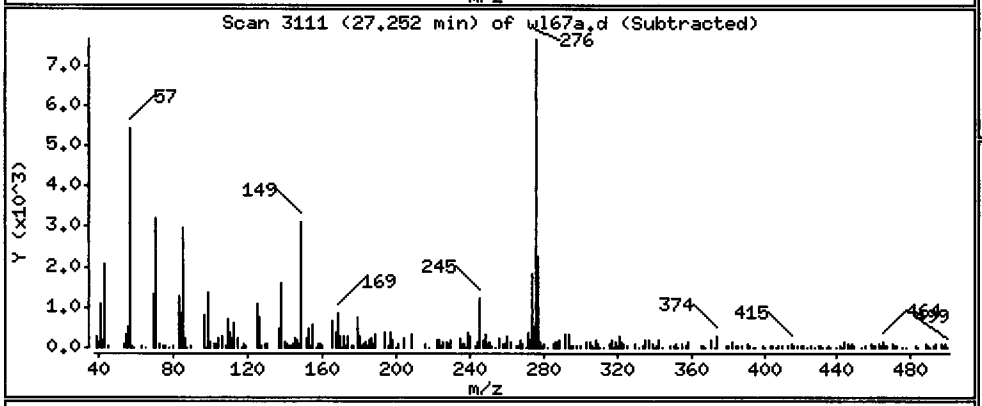
Column diameter: 0.25

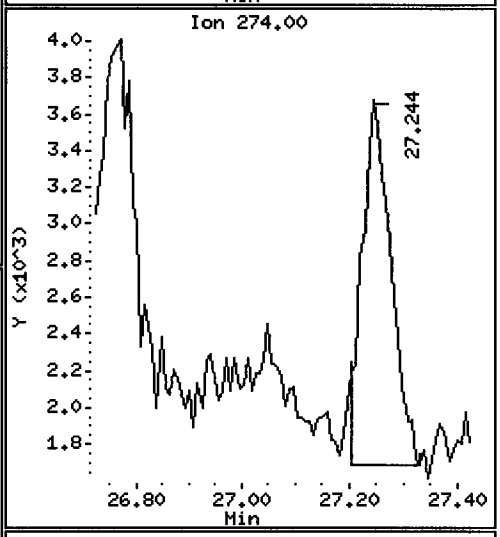
80 Benzo(g,h,i)perylene

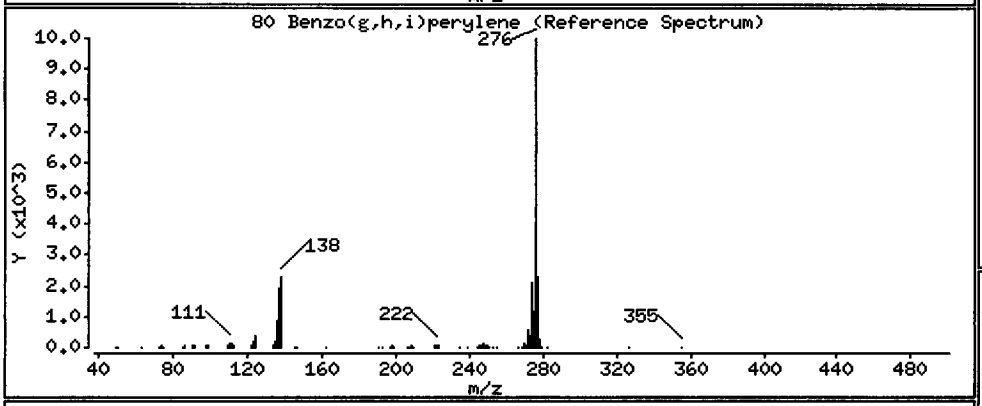
Concentration: 588.2 ug/kg

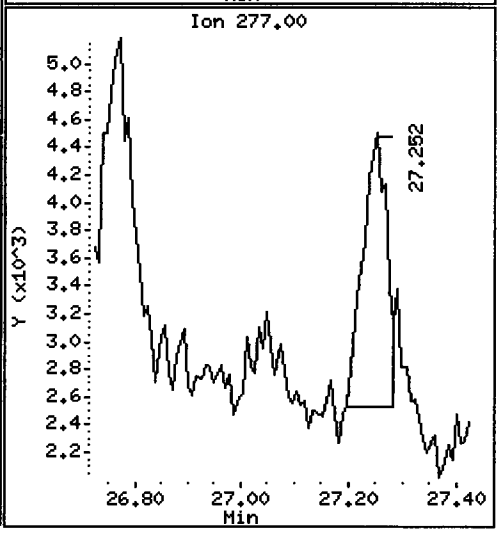


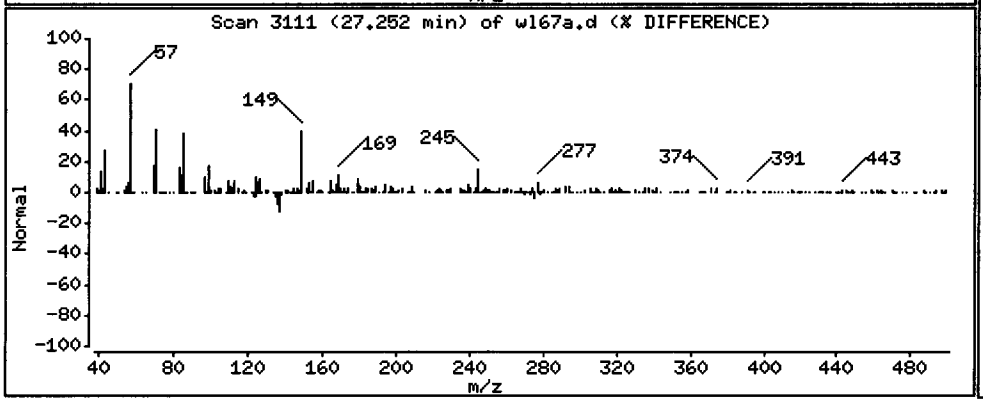












Data File: /chem1/nt10.i/20130424.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

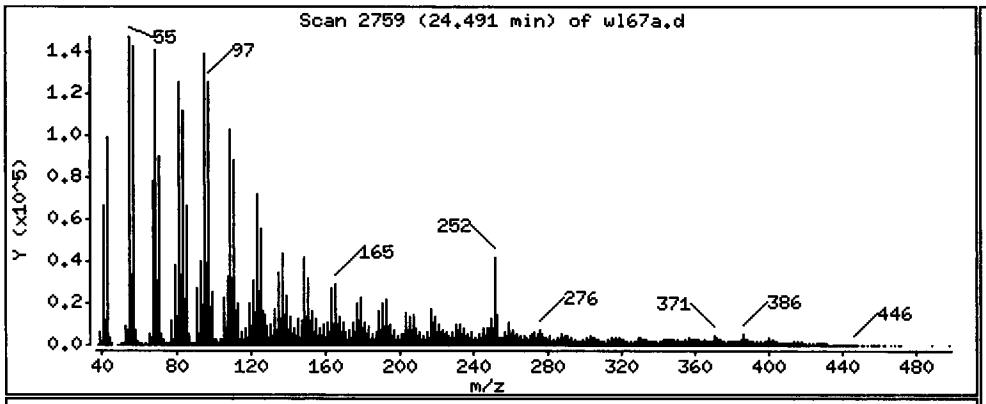
Operator: VTS/YZ

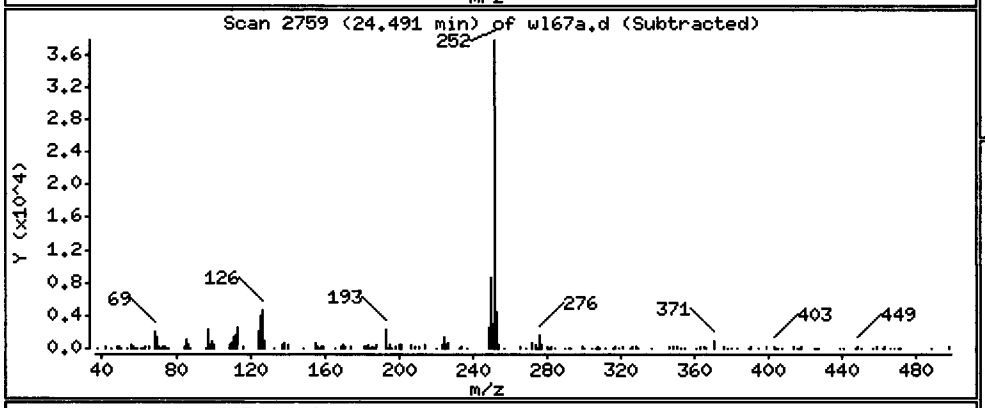
Column phase: ZB-5msi

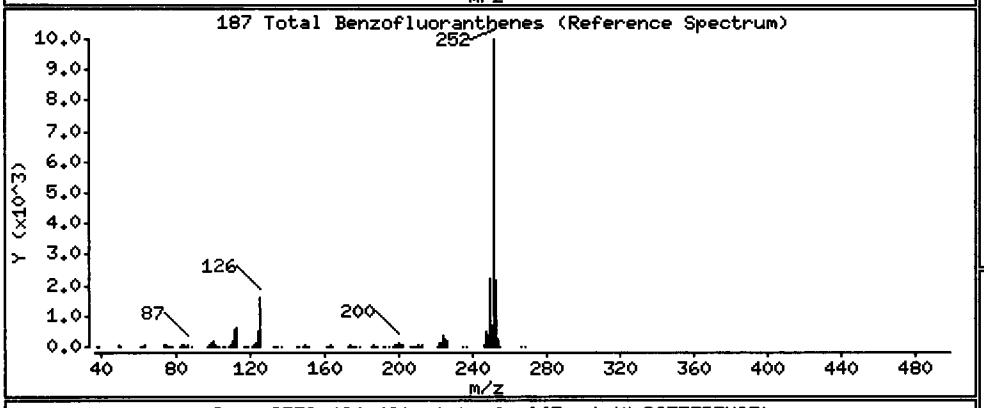
Column diameter: 0.25

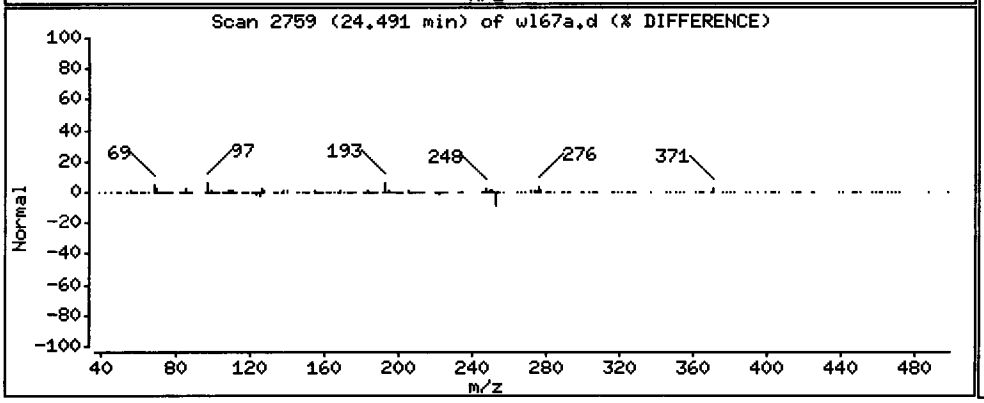
187 Total Benzofluoranthenes

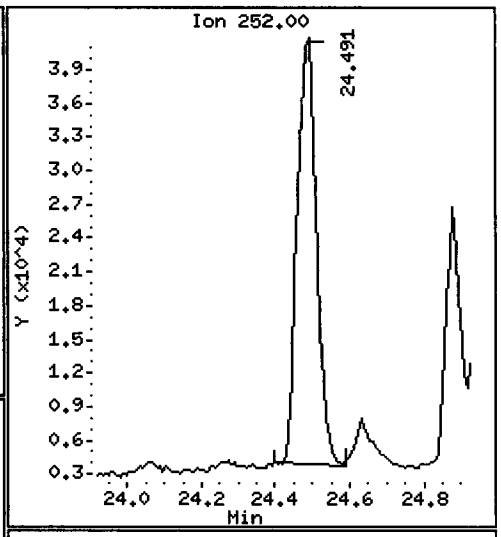
Concentration: 2317 ug/kg

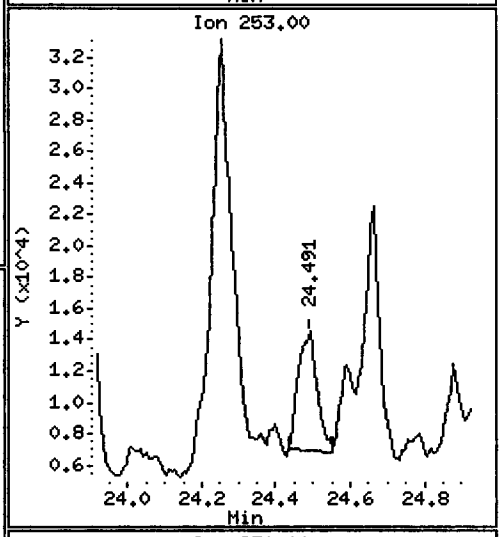


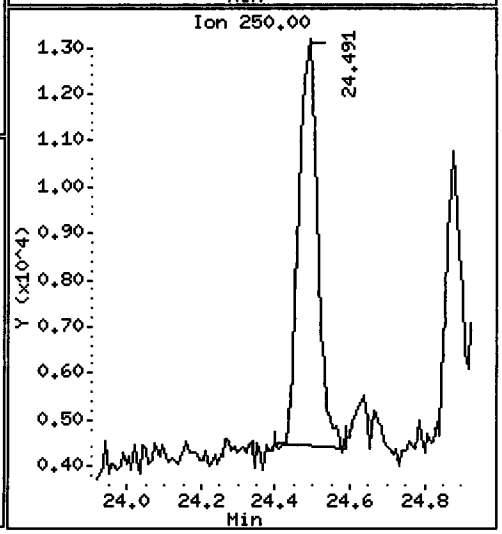






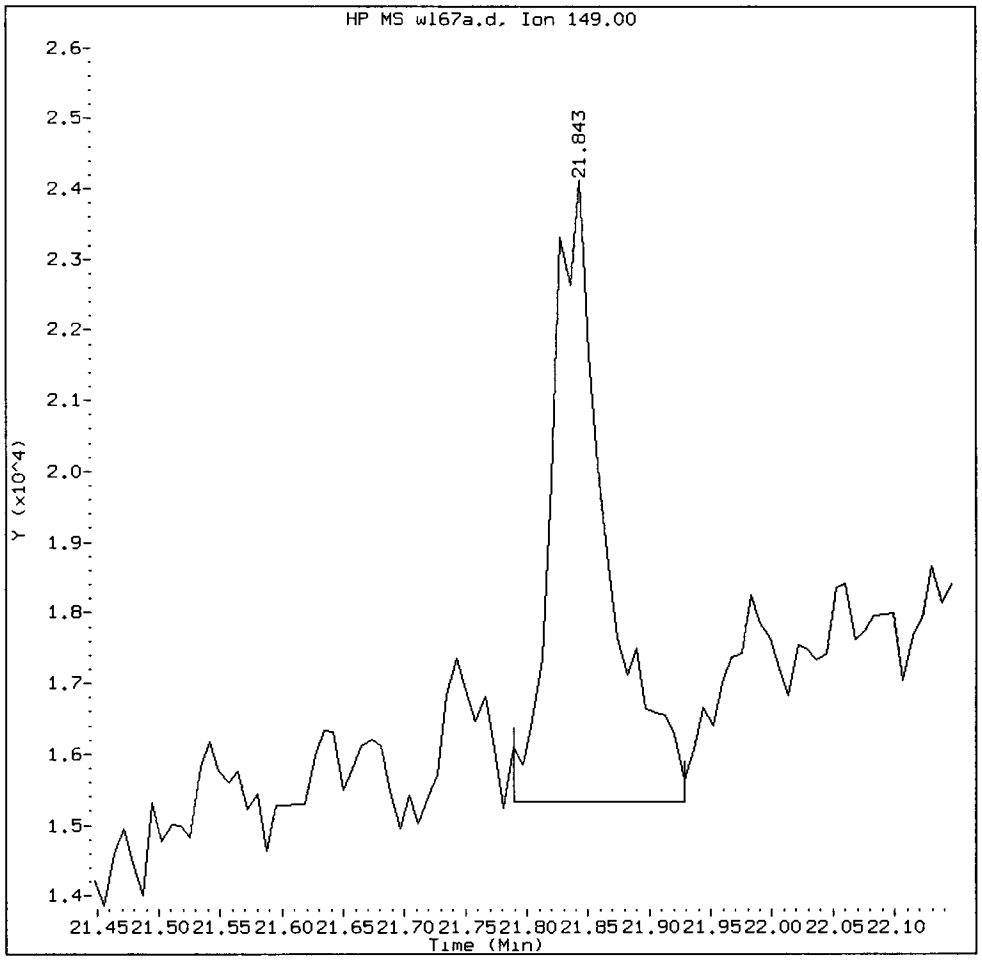






WL67A, /chem1/nt10.i/20130424.b/wl67a.d

Butylbenzylphthalate Amount: 1.32 Area: 28187



MANUAL INTEGRATION for Butylbenzylphthalate

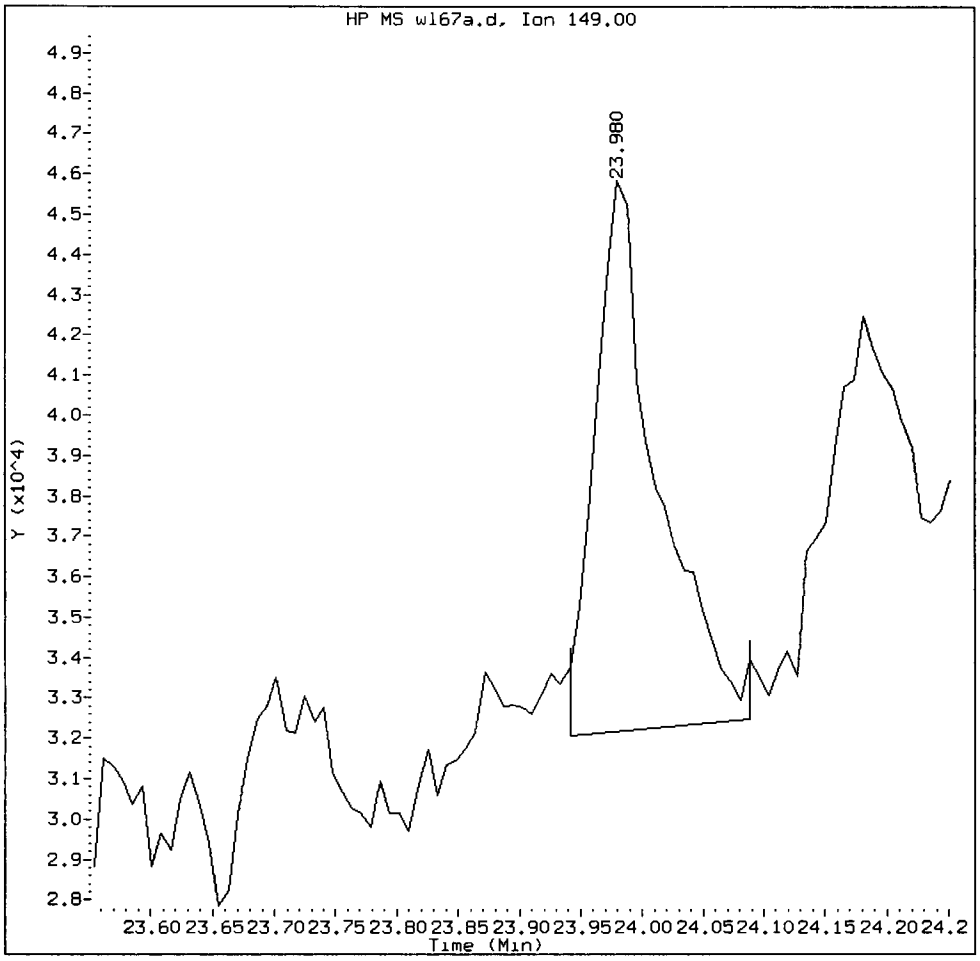
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL67A, /chem1/nt10.i/20130424.b/wl67a.d

Di-n-octylphthalate Amount: 0.80 Area: 49035



MANUAL INTEGRATION for Di-n-octylphthalate

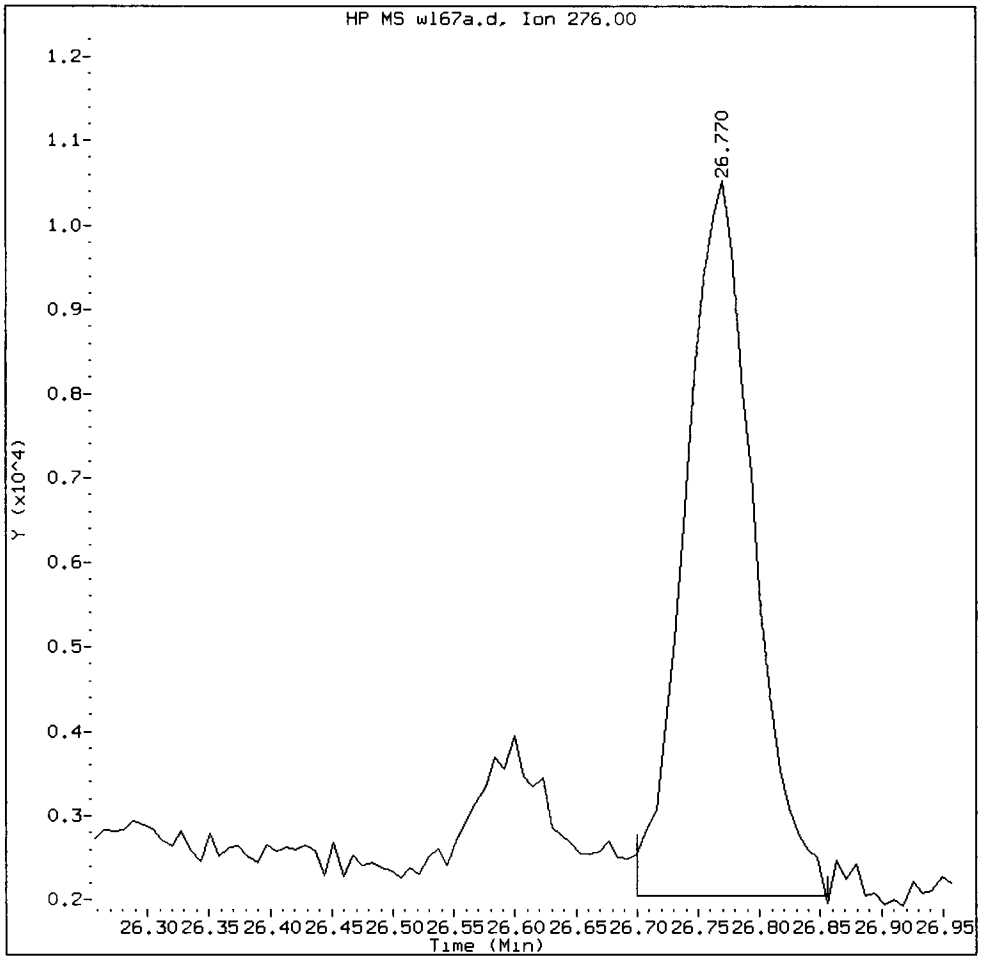
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 4/25/13

WL67A, /chem1/nt10.i/20130424.b/wl67a.d

Indeno(1,2,3-cd)pyrene Amount: 0.56 Area: 32764



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

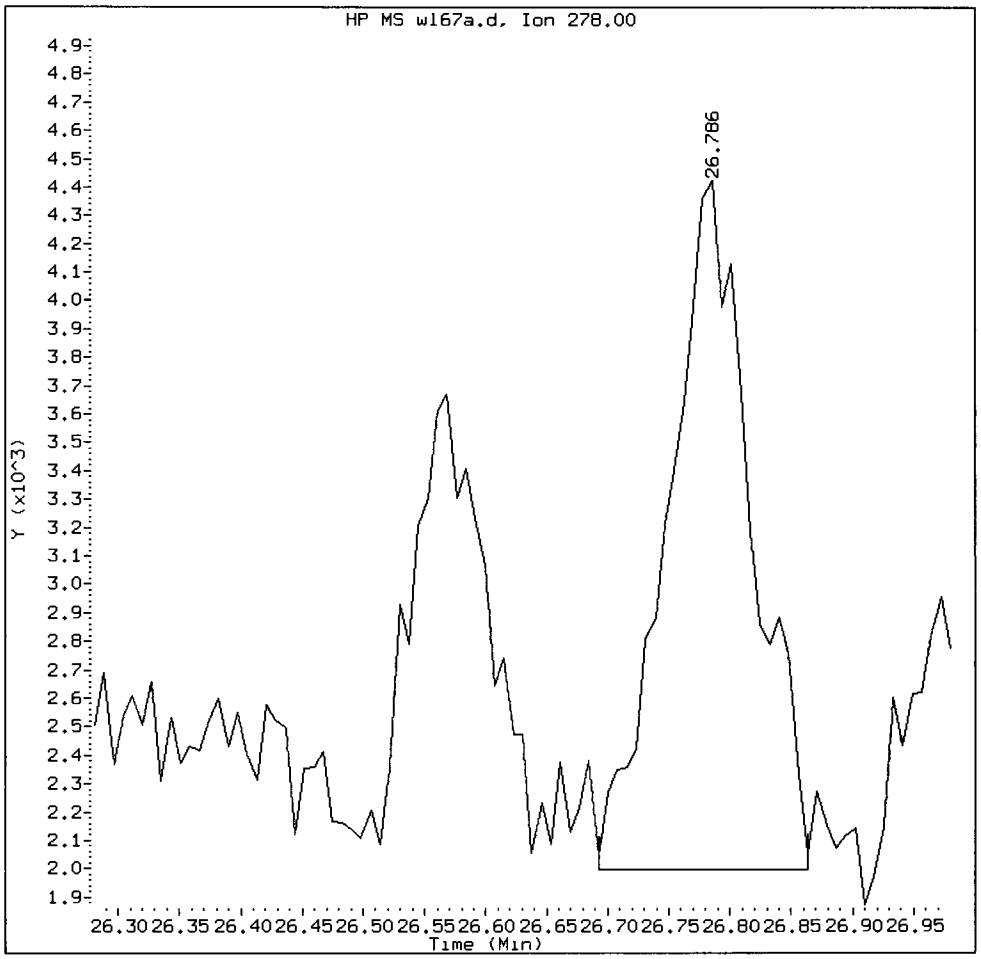
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 4/25/13

WL67A, /chem1/nt10.i/20130424.b/wl67a.d

Dibenzo(a,h)anthracene Amount: 0.25 Area: 11603



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: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl67a.d

Lab ID: WL67A, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
24.491	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Analytical Resources, Inc.

YZ 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl67b.d
Lab Smp Id: WL67B Client Smp ID: GR-WS-05-20130411-S
Inj Date : 24-APR-2013 23:18
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL67B,3
Misc Info : 13-7792
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 12
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.10000	Weight of sample extracted (g)
M	72.80000	% Moisture

Cpnd Variable Local Compound Variable

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/kg)
$	1 2-Fluorophenol	112	5.467	5.444	(0.714)	15002	1.15574	2090
$	2 Phenol-d5	99	7.182	7.159	(0.937)	22055	1.36925	2476
	3 Phenol	94	7.206	7.182	(0.940)	6526	0.38493	696.0
$	5 2-Chlorophenol-d4	132	7.321	7.306	(0.956)	16386	1.17488	2124
	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	7.662	7.662	(1.000)	40596	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.048)	6848	0.66814	1208
	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	8.648	8.625	(1.129)	6606	0.49635	897.5
$	18 Nitrobenzene-d5	82	8.834	8.826	(0.861)	6171	0.42386	766.4(R)
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	157743	4.00000	
	28 Naphthalene	128	10.312	10.304	(1.004)	8712	0.21225	383.8
	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	11.804	11.804	(1.150)	4561	0.16830	304.3
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.687	12.687	(0.899)	29152	0.86175	1558
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	13.762	13.762	(0.975)	4677	0.10529	190.4
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	98608	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	14.543	14.536	(1.031)	4007	0.10578	191.3
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	15.293	15.293	(1.084)	6335	0.19689	356.0
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	15.641	15.633	(0.902)	2215	0.12228	221.1
$	55 2,4,6-Tribromophenol	330	15.880	15.872	(1.125)	4778	0.75929	1373
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.348	17.340	(1.000)	150379	4.00000	
	60 Phenanthrene	178	17.402	17.394	(1.003)	49869	1.24399	2249
	61 Anthracene	178	17.502	17.487	(1.009)	12443	0.30827	557.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	62 Carbazole	167	17.920	17.897	(1.033)	4871	0.18068	326.7
	63 Di-n-butylphthalate	149	18.934	18.918	(1.091)	9983	0.23177	419.1(M)
	64 Fluoranthene	202	19.970	19.947	(1.151)	113120	2.45029	4430
	65 Pyrene	202	20.396	20.373	(0.899)	114991	2.30108	4161
$	66 Terphenyl-d14	244	20.798	20.775	(0.917)	28658	0.85047	1538
	67 Butylbenzylphthalate	149	21.836	21.797	(0.963)	13835	0.72994	1320(M)
	68 Benzo(a)anthracene	228	22.657	22.610	(0.999)	44278	0.90450	1635
*	69 Chrysene-d12	240	22.680	22.641	(1.000)	175439	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.726	22.680	(1.002)	60141	1.35640	2453
	72 bis(2-Ethylhexyl)phthalate	149	22.951	22.904	(0.958)	702300	23.6740	42800
*	134 Di-n-octylphthalate-d4	153	23.949	23.895	(1.000)	224657	4.00000	
	73 Di-n-octylphthalate	149	23.965	23.903	(1.001)	46585	0.85007	1537(M)
	74 Benzo(b)fluoranthene	252	24.468	24.383	(0.978)	83932	1.63824	2962
	75 Benzo(k)fluoranthene	252	24.468	24.422	(0.978)	83932	1.51642	2742
	76 Benzo(a)pyrene	252	24.933	24.855	(0.997)	35252	0.79561	1439
*	77 Perylene-d12	264	25.010	24.941	(1.000)	176764	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.724	26.608	(1.069)	17658	0.32317	584.3(M)
	79 Dibenzo(a,h)anthracene	278	26.747	26.631	(1.069)	8538	0.19733	356.8(M)
	80 Benzo(g,h,i)perylene	276	27.198	27.074	(1.087)	17166	0.36617	662.1
	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	12.036	12.029	(1.173)	2492	0.10025	181.3
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	24.468	24.422	(0.978)	82506	1.63600	2958
	99 Perylene	252	25.049	24.979	(1.002)	17841	0.35037	633.5
	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: wl67b.d
Lab Smp Id: WL67B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7792

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: GR-WS-05-2013041
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	46623	23312	93246	40596	-12.93
27 Naphthalene-d8	176978	88489	353956	157743	-10.87
42 Acenaphthene-d10	110872	55436	221744	98608	-11.06
59 Phenanthrene-d10	188290	94145	376580	150379	-20.13
69 Chrysene-d12	213681	106840	427362	175439	-17.90
134 Di-n-octylphthala	264159	132080	528318	224657	-14.95
77 Perylene-d12	208584	104292	417168	176764	-15.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.35	0.04
69 Chrysene-d12	22.64	22.14	23.14	22.68	0.17
134 Di-n-octylphthala	23.90	23.40	24.40	23.95	0.23
77 Perylene-d12	24.94	24.44	25.44	25.01	0.28

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

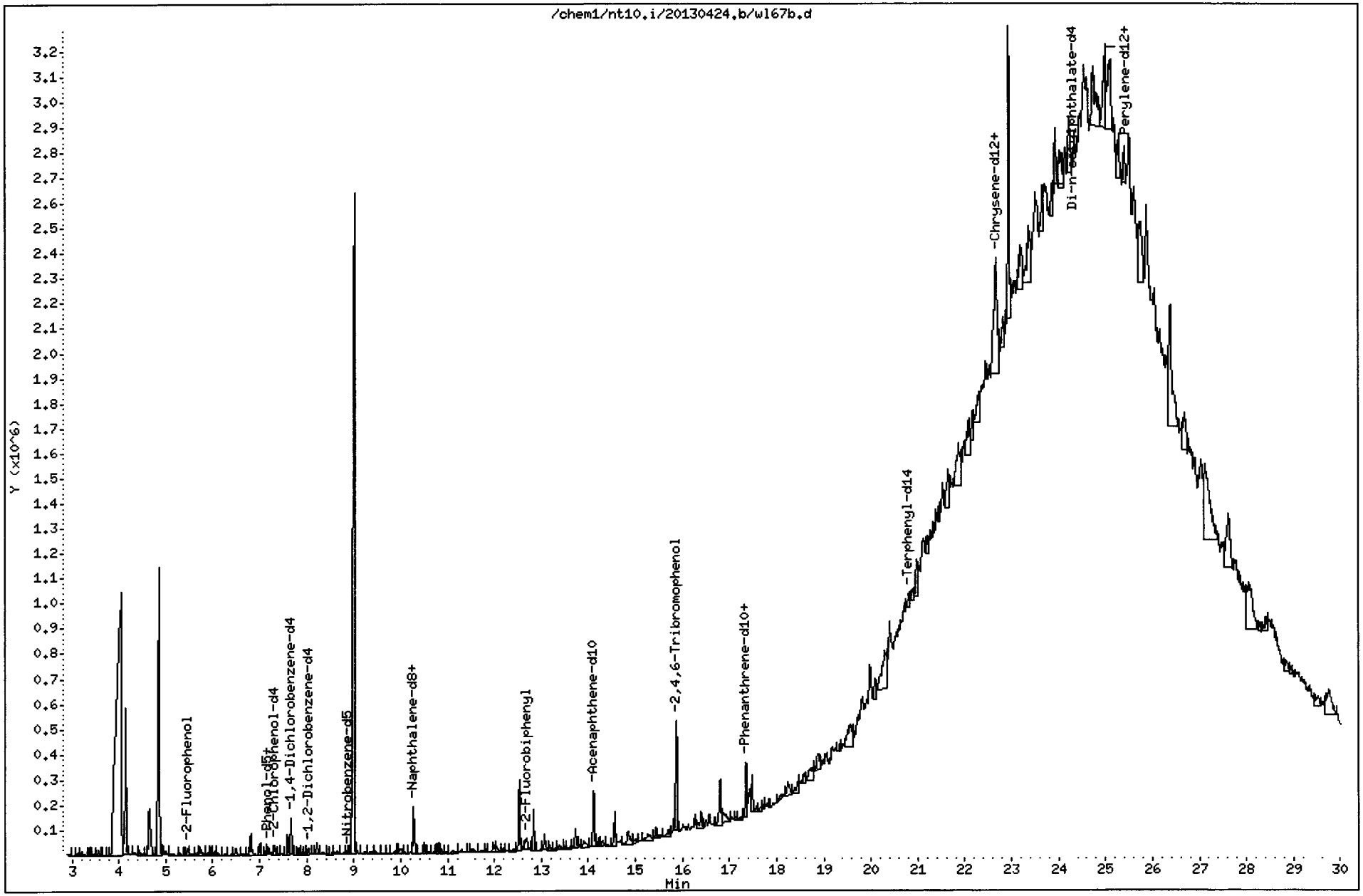
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL67B
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7792

Client SDG: WL67
Fraction: SV
Client Smp ID: GR-WS-05-20130411-S
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	4520	2090	46.23	30-160
$ 2 Phenol-d5	4520	2476	54.77	30-160
$ 5 2-Chlorophenol-d4	4520	2124	47.00	30-160
$ 10 1,2-Dichlorobenzen	3014	1208	40.09	30-160
$ 18 Nitrobenzene-d5	3014	766.4	25.43*	30-160
$ 36 2-Fluorobiphenyl	3014	1558	51.71	30-160
$ 55 2,4,6-Tribromophen	4520	1373	30.37	30-160
$ 66 Terphenyl-d14	3014	1538	51.03	30-160

Data File: /chem1/nt10.i/20130424.b/wl67b.d
Date : 24-APR-2013 23:18
Client ID: GR-WS-05-20130411-S
Sample Info: WL67B,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

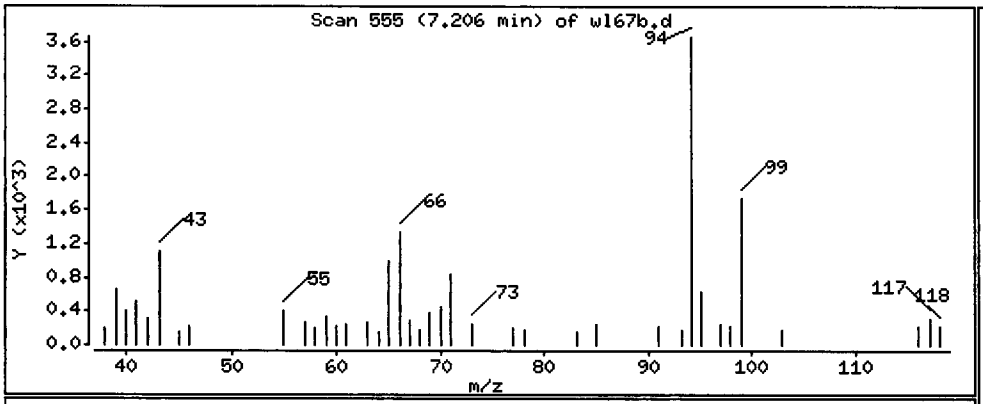
Operator: VTS/YZ

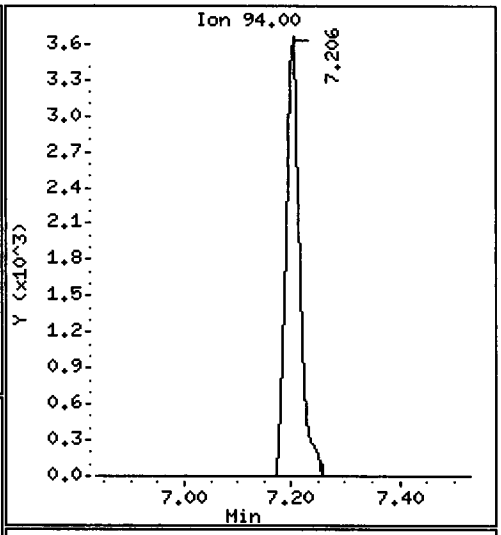
Column phase: ZB-5msi

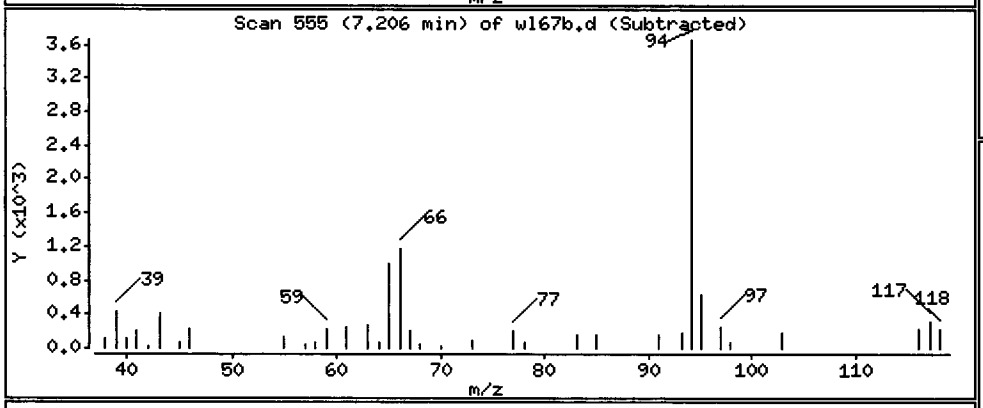
Column diameter: 0.25

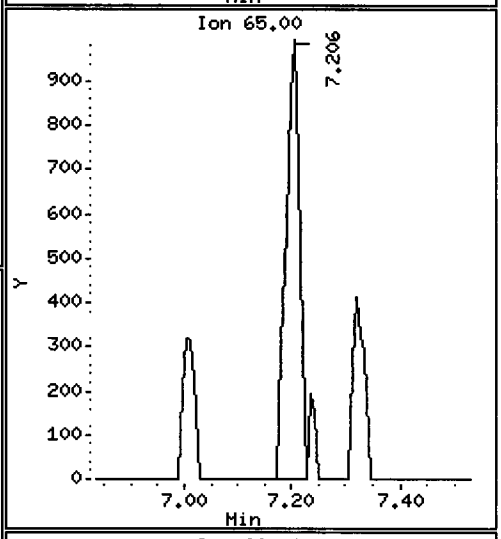
3 Phenol

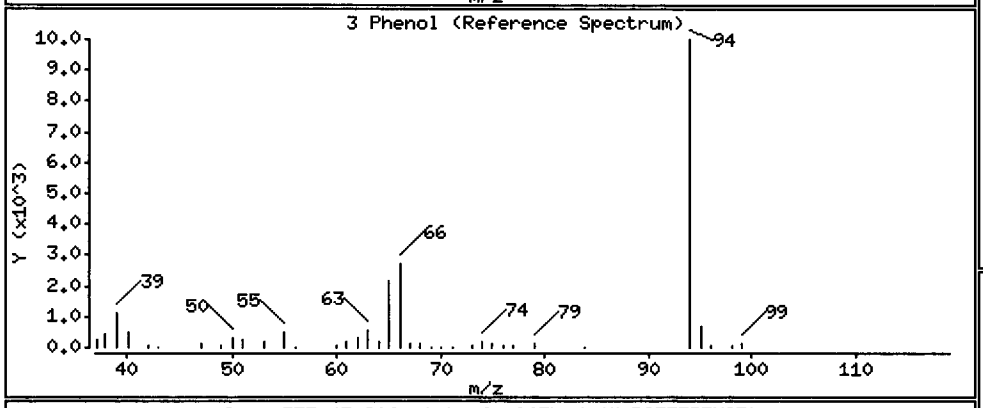
Concentration: 696.0 ug/kg

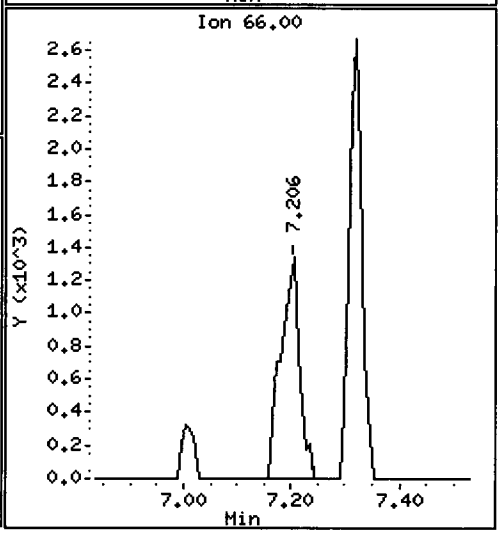


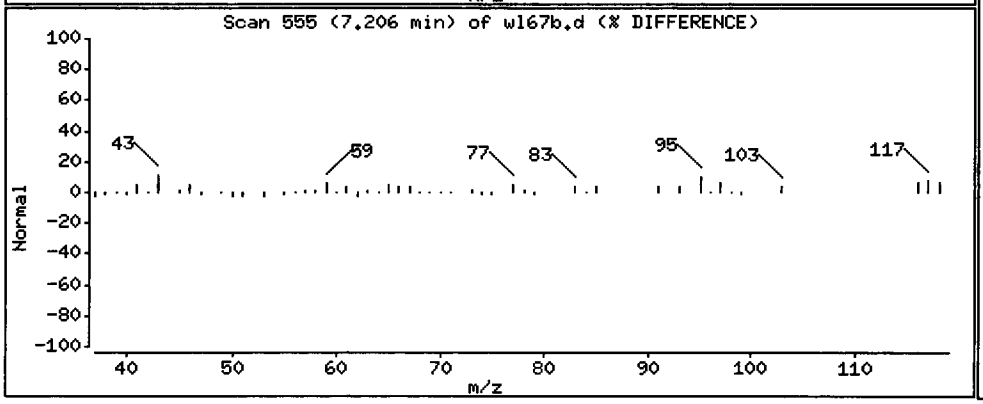












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

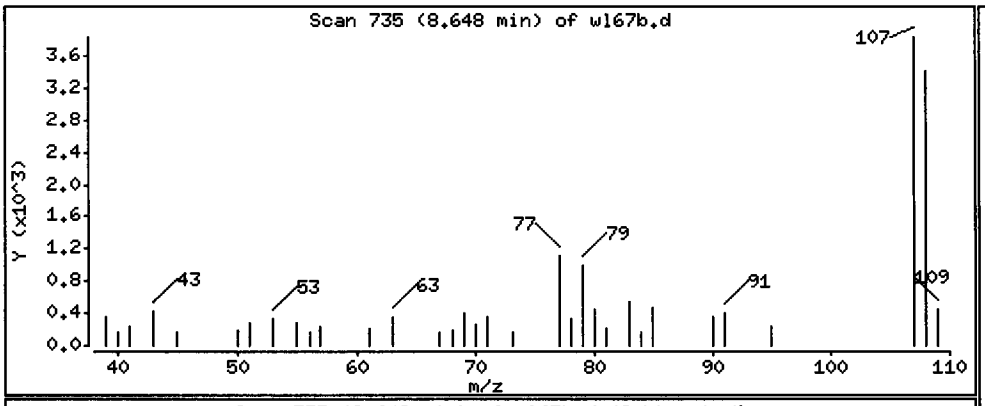
Operator: VTS/YZ

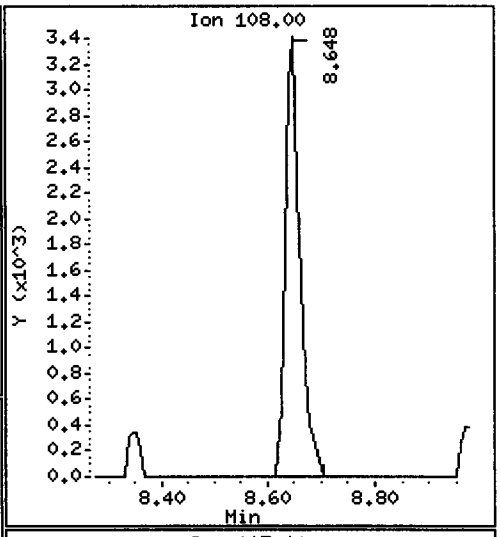
Column phase: ZB-5msi

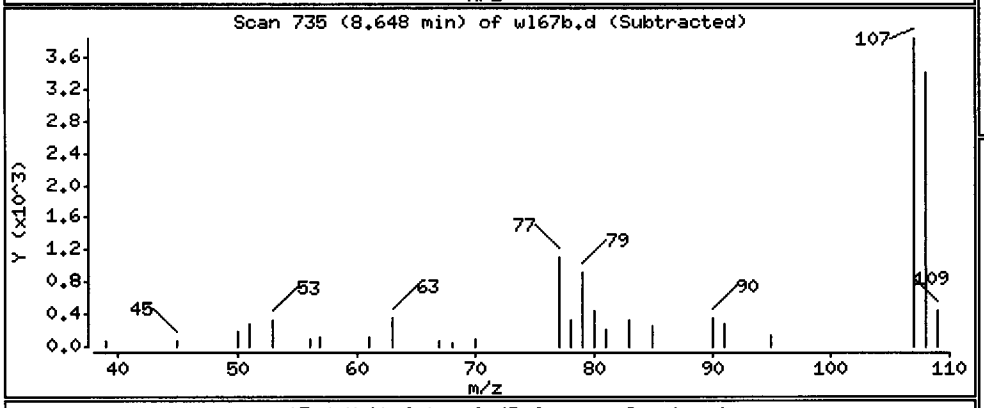
Column diameter: 0.25

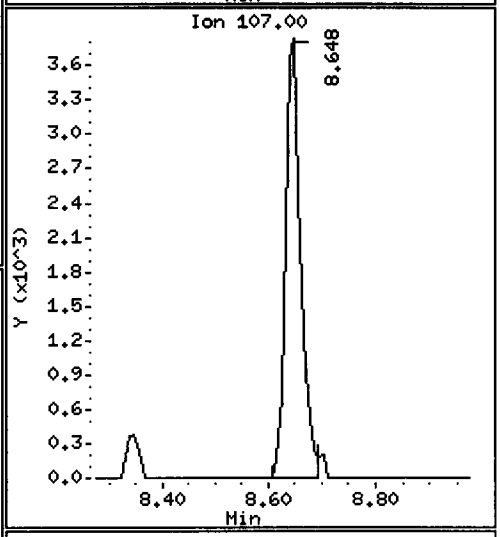
15 4-Methylphenol

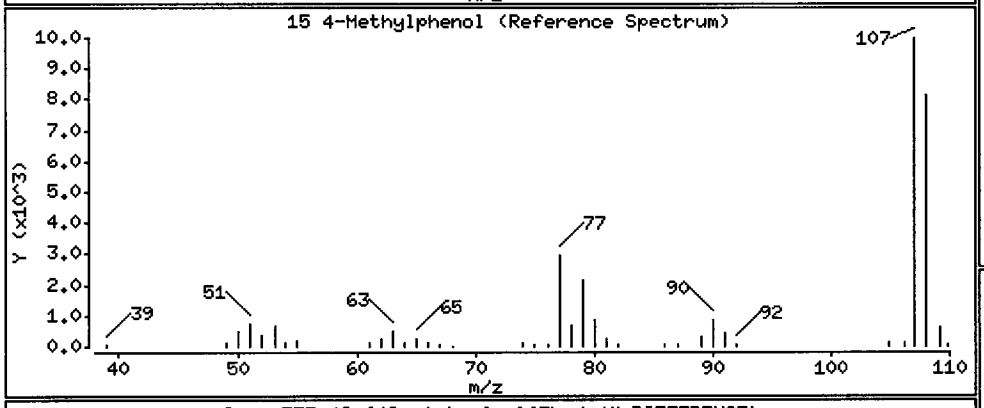
Concentration: 897.5 ug/kg

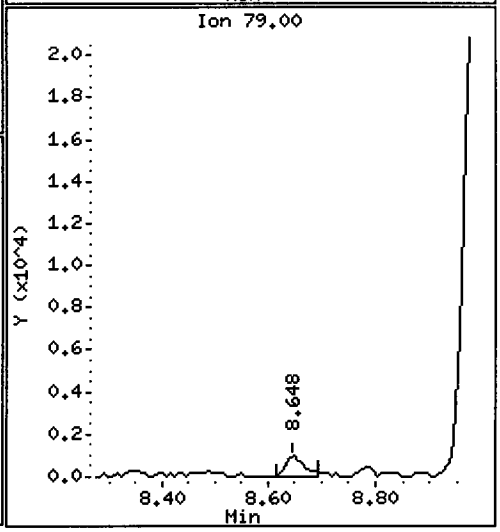


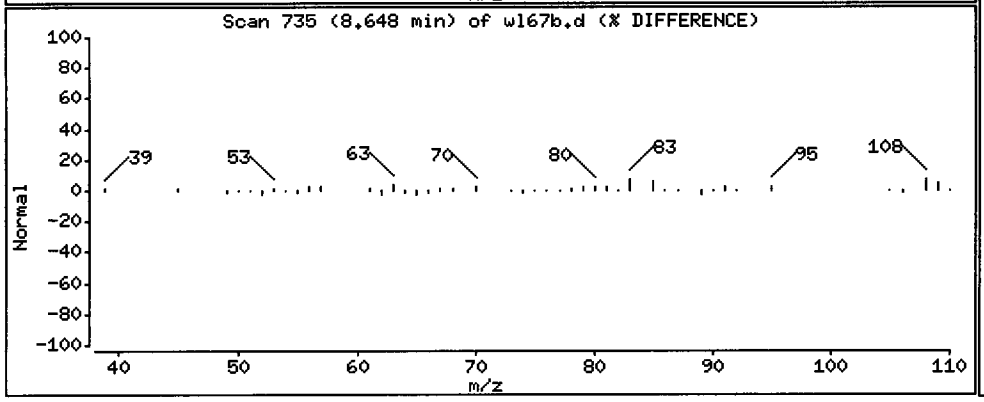












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

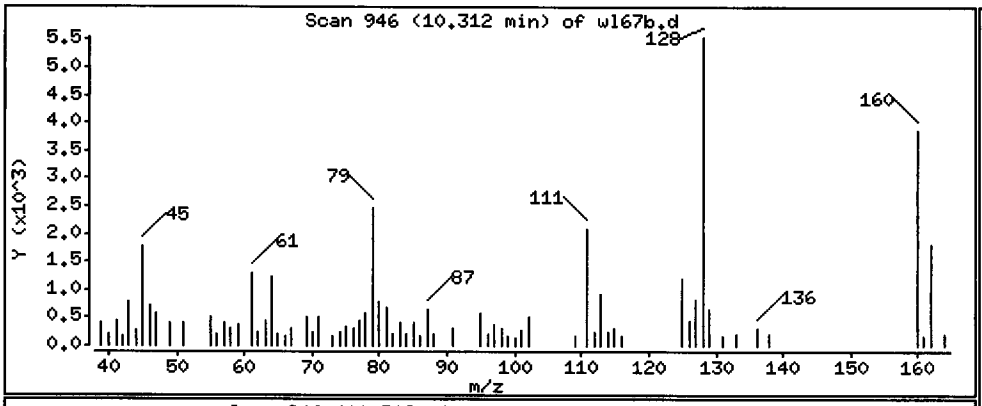
Operator: VTS/YZ

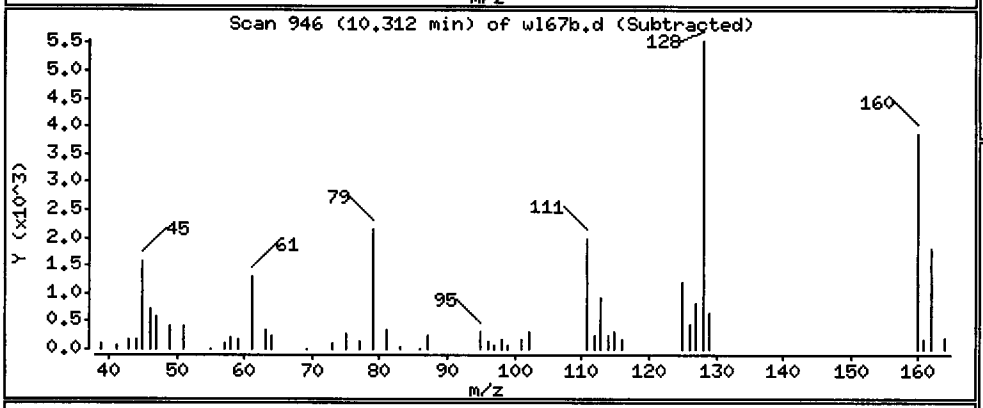
Column phase: ZB-5msi

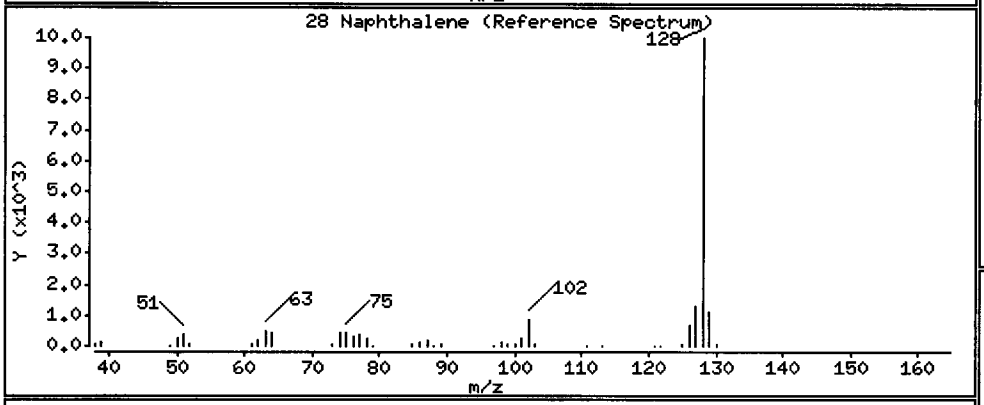
Column diameter: 0.25

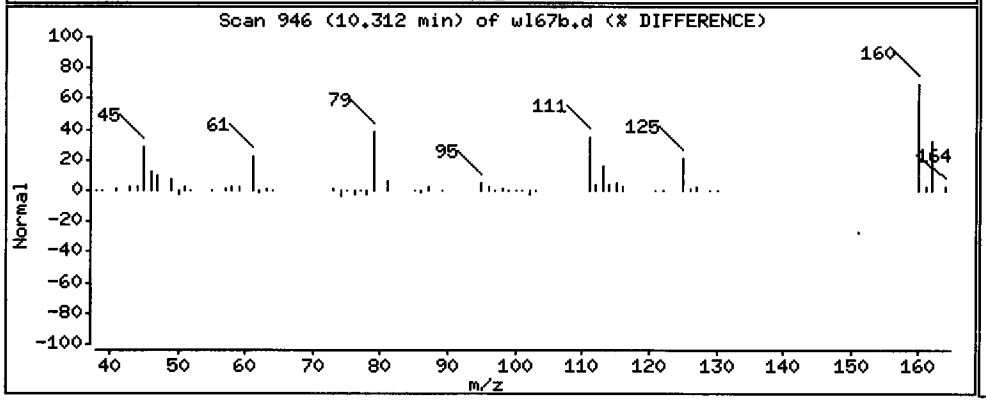
28 Naphthalene

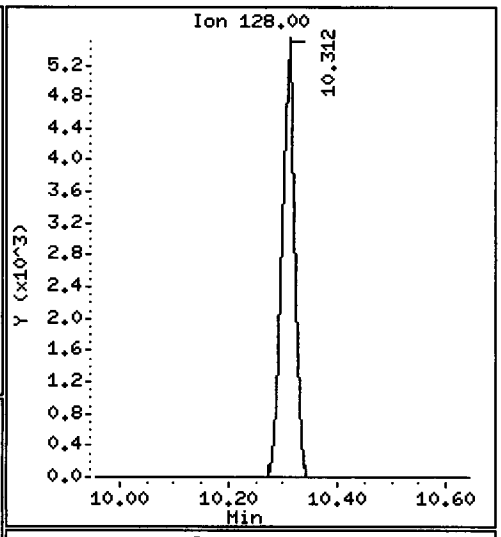
Concentration: 383.8 ug/kg

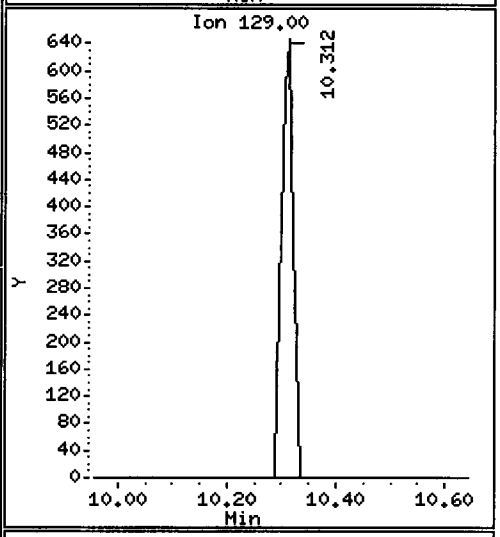


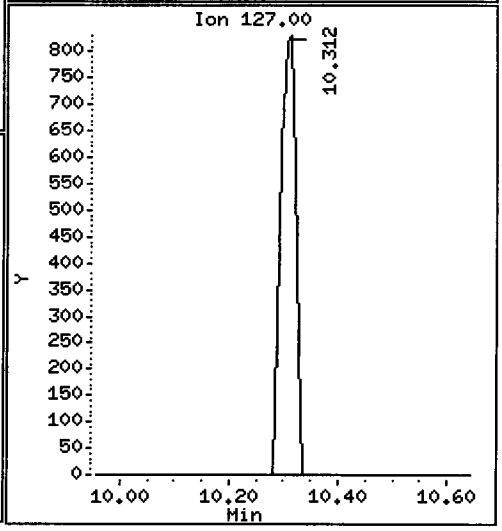












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

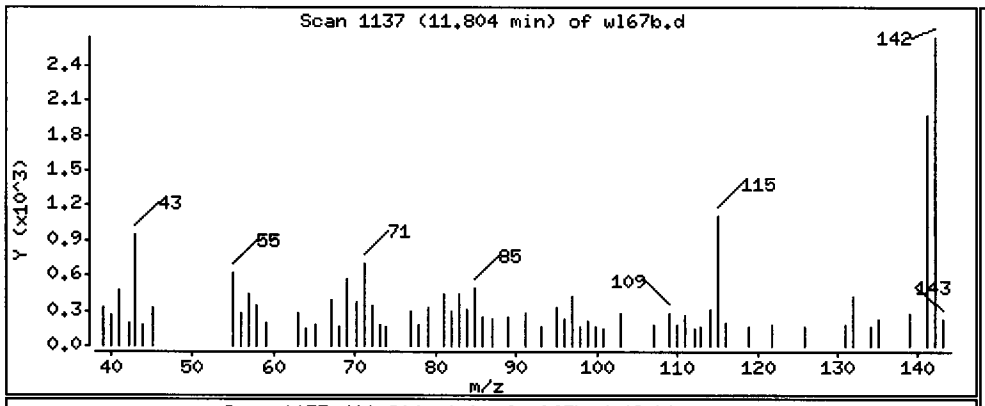
Operator: VTS/YZ

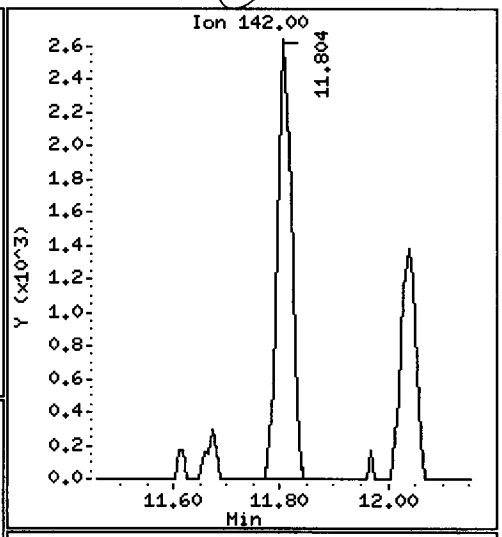
Column phase: ZB-5msi

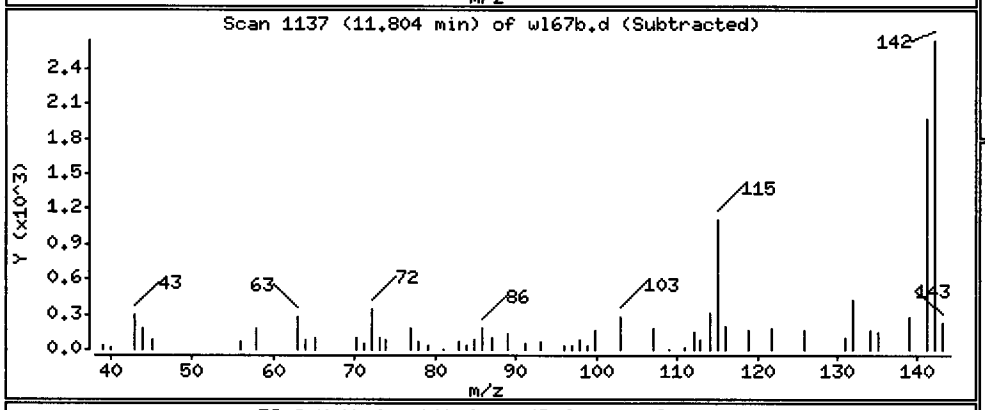
Column diameter: 0.25

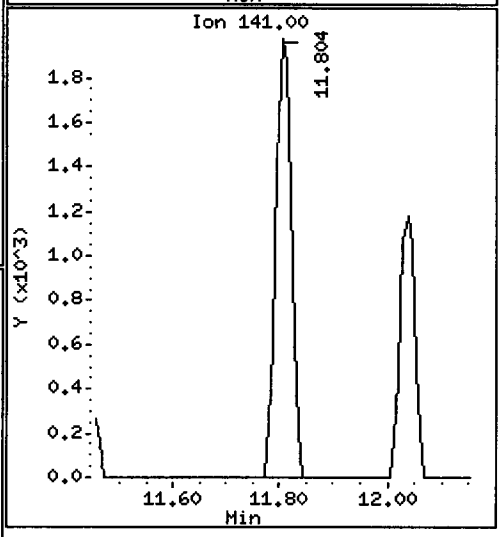
32 2-Methylnaphthalene

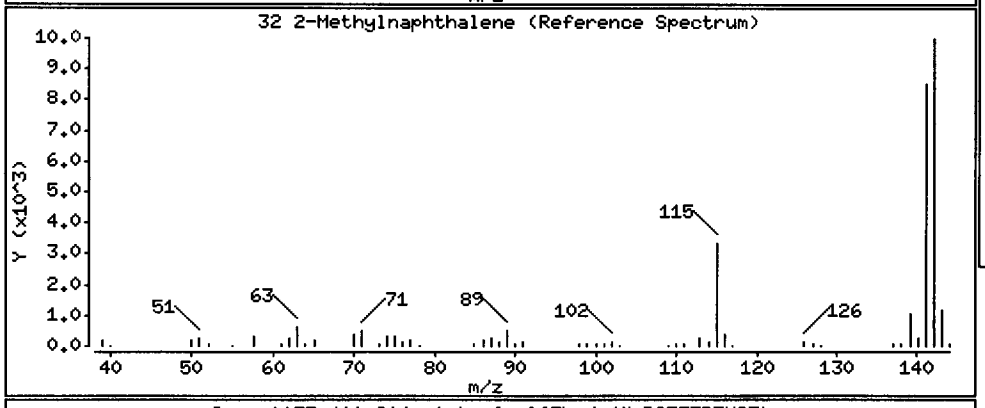
Concentration: 304.3 ug/kg

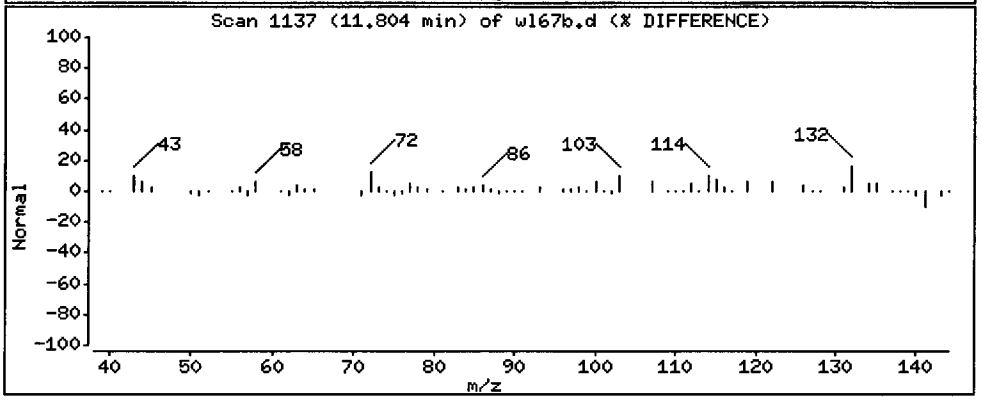












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

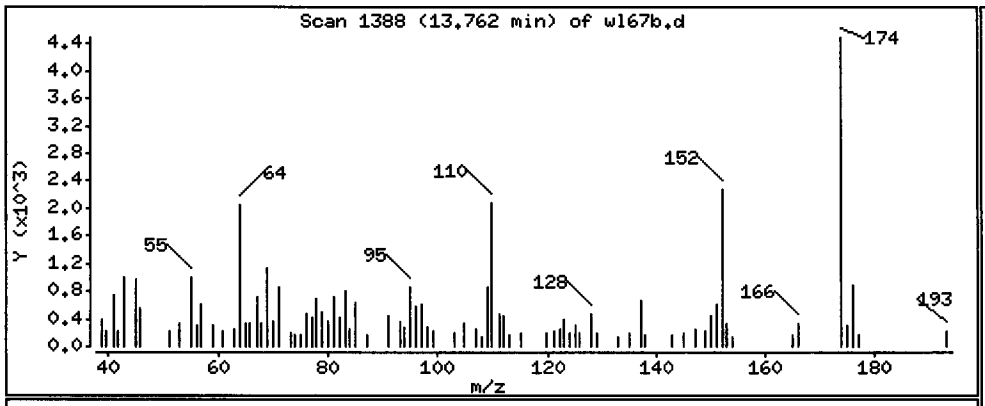
Operator: VTS/YZ

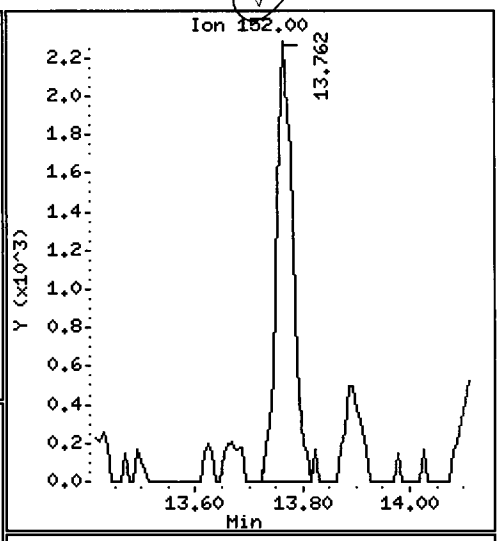
Column phase: ZB-5msi

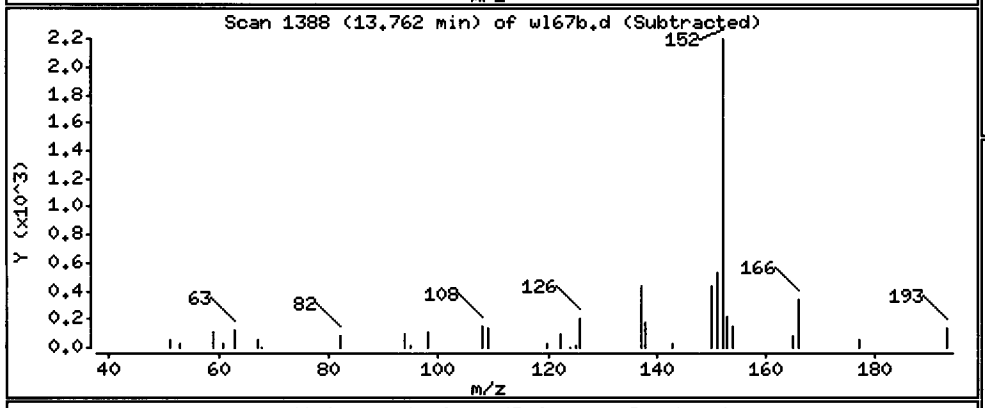
Column diameter: 0.25

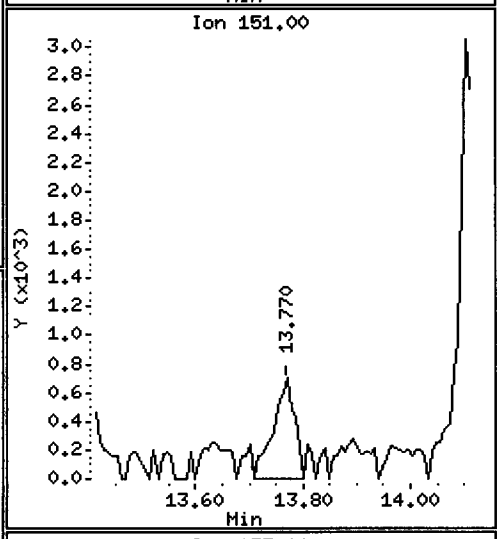
40 Acenaphthylene

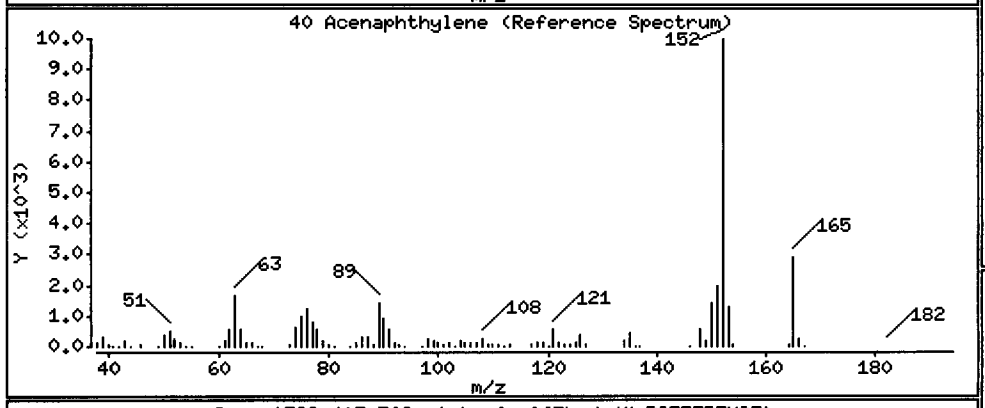
Concentration: 190.4 ug/kg

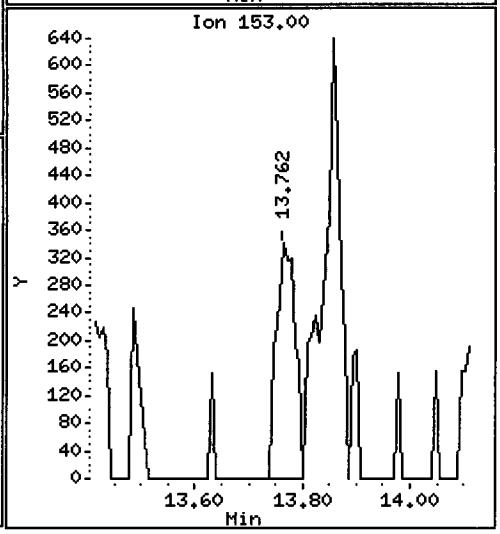


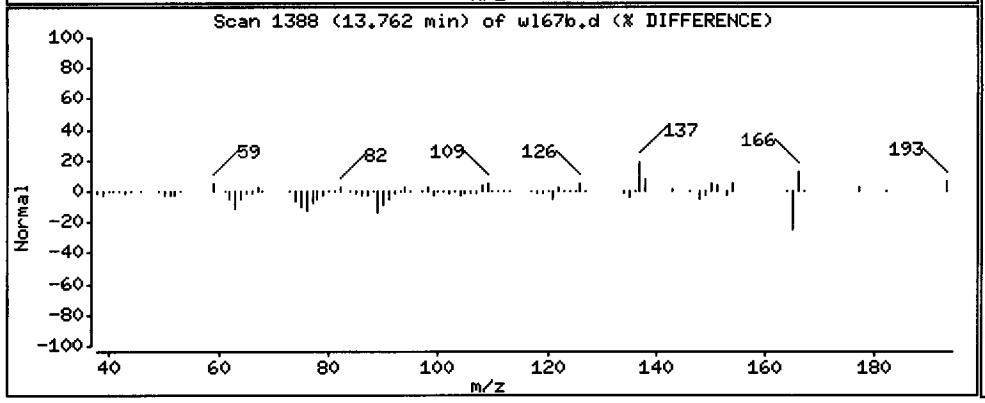












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

Operator: VTS/YZ

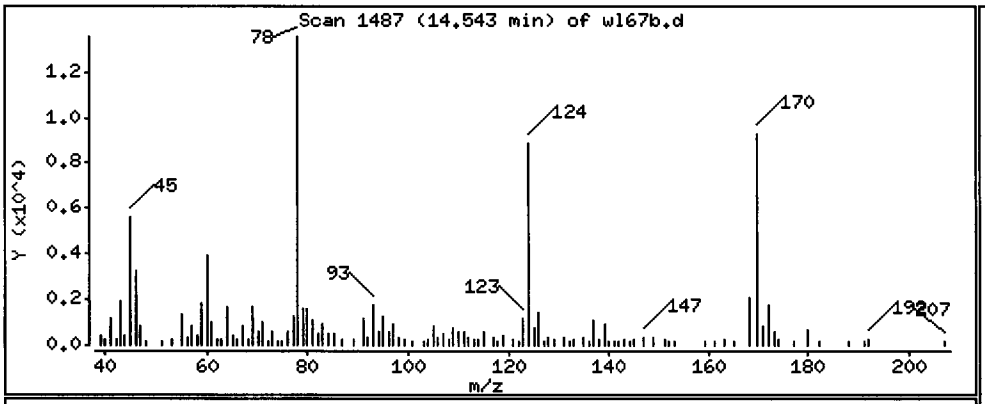
Column phase: ZB-5msi

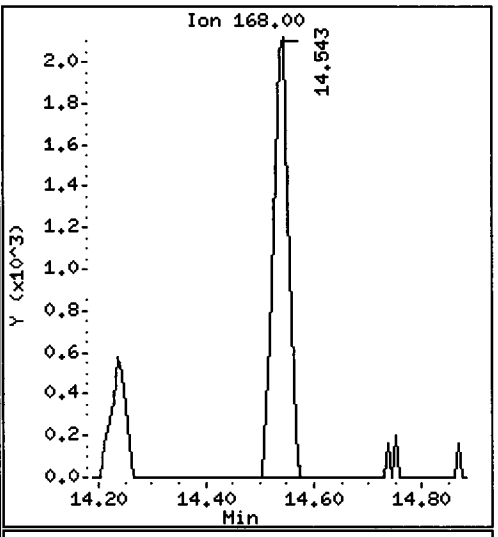
Column diameter: 0.25

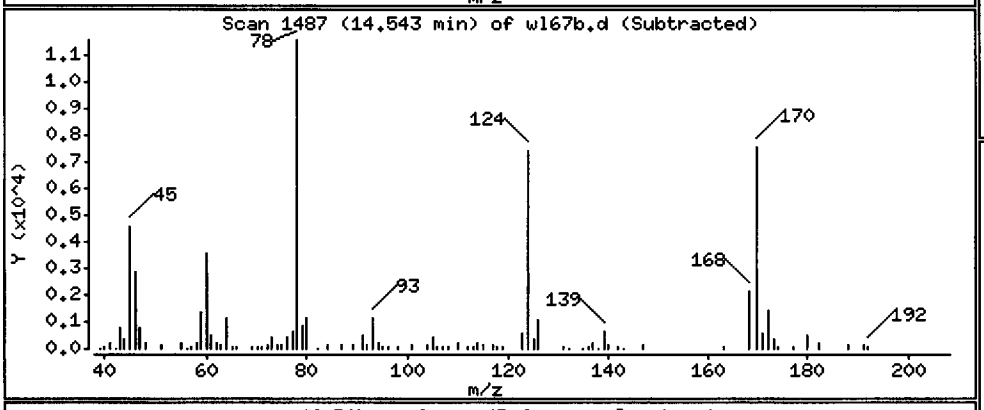
6 uL

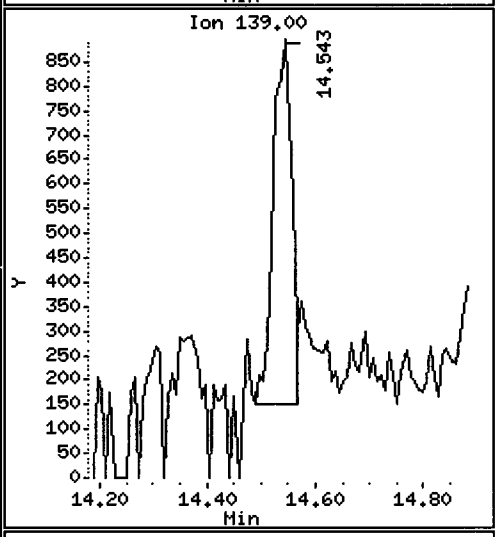
46 Dibenzofuran

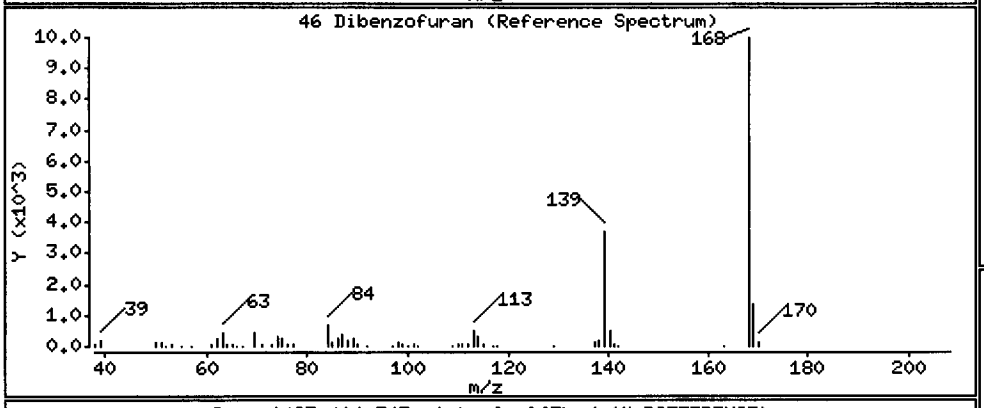
Concentration: 191.3 ug/kg

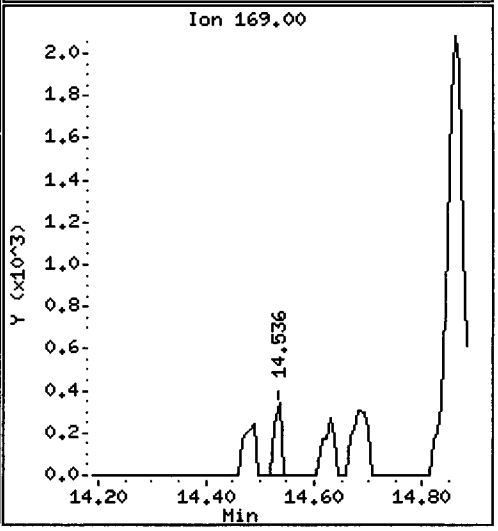


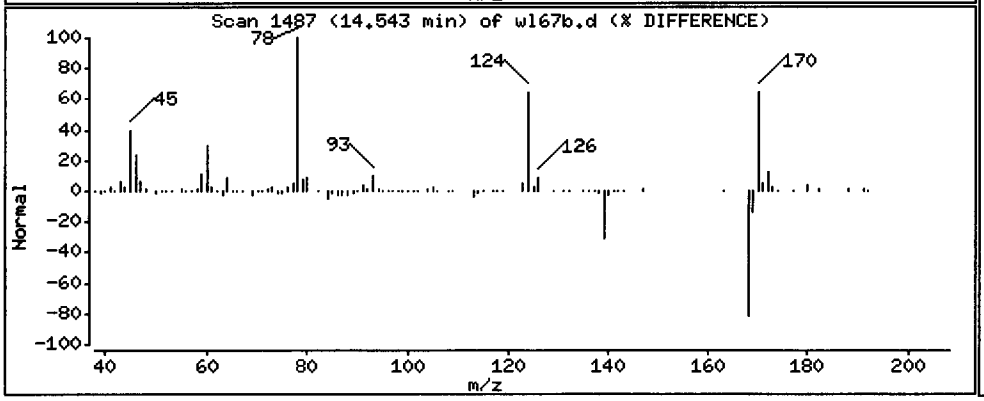












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

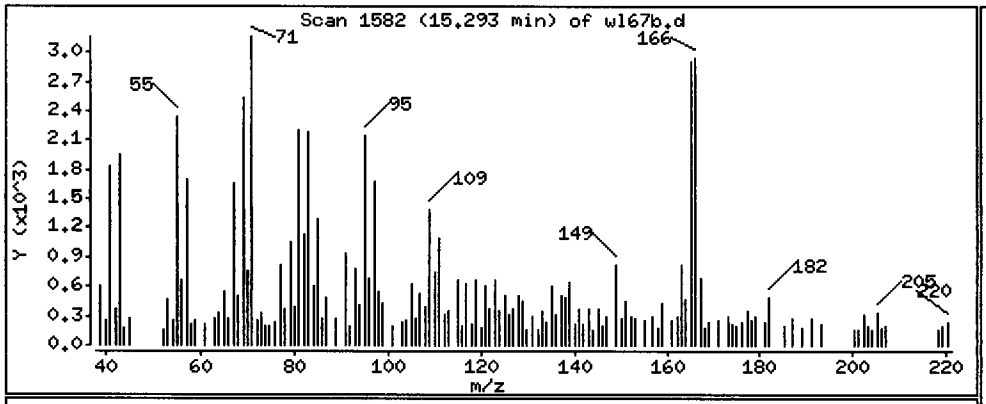
Operator: VTS/YZ

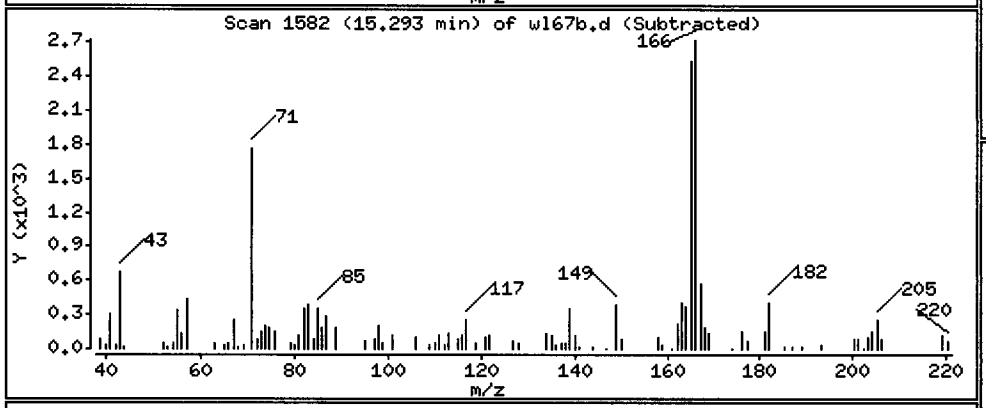
Column phase: ZB-5msi

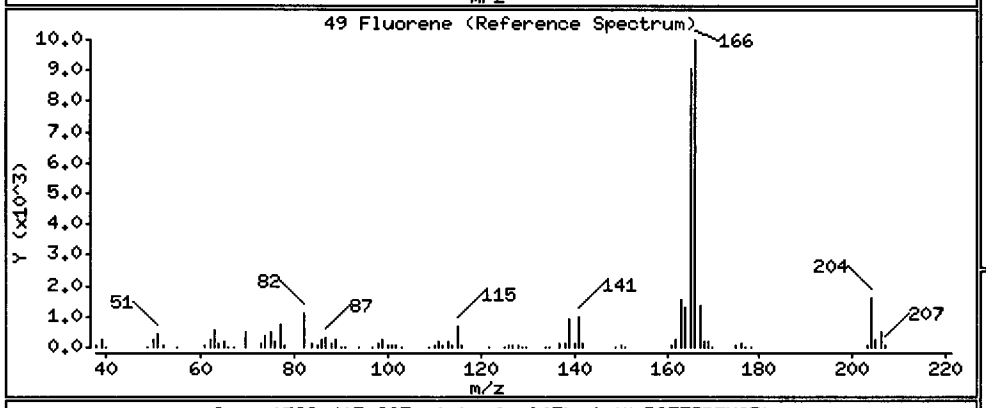
Column diameter: 0.25

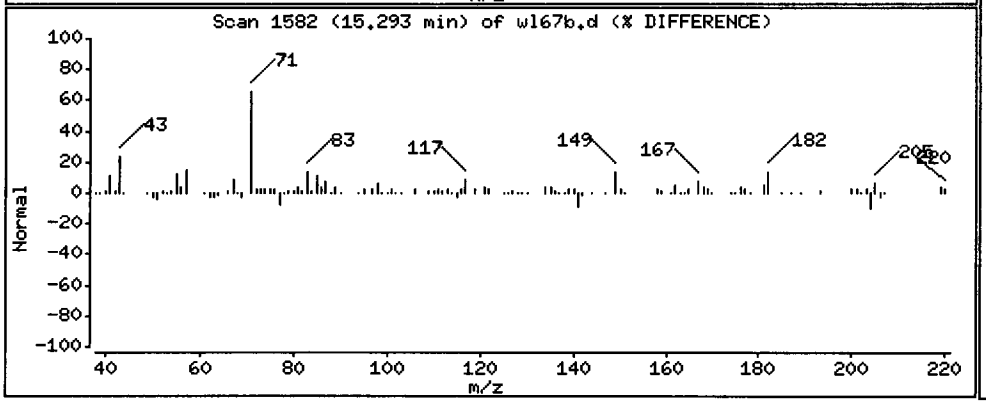
49 Fluorene

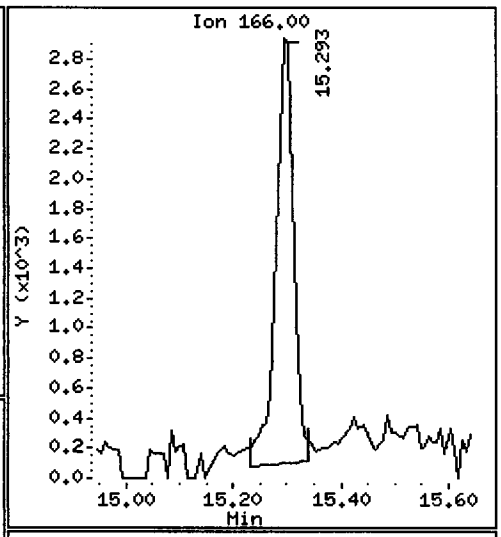
Concentration: 356.0 ug/kg

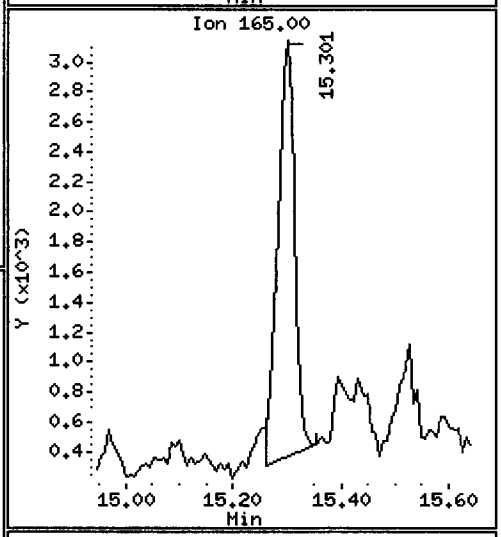


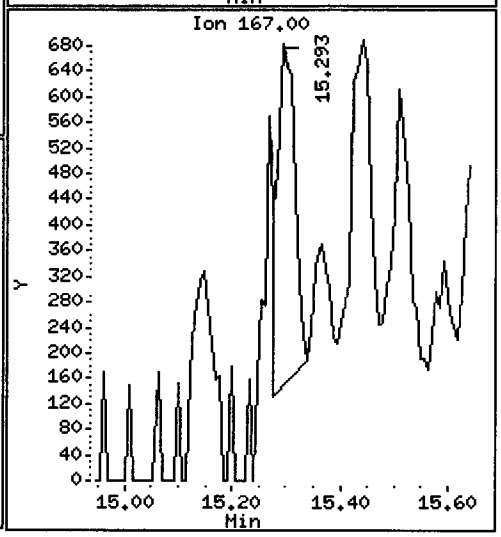












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

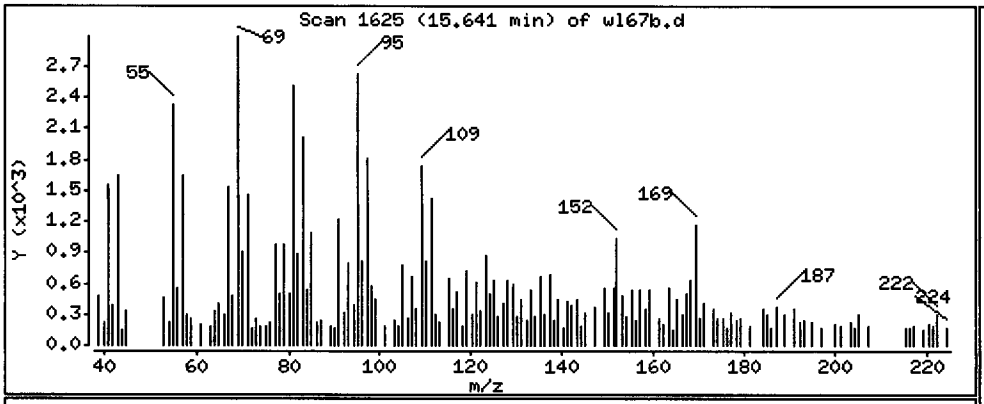
Operator: VTS/YZ

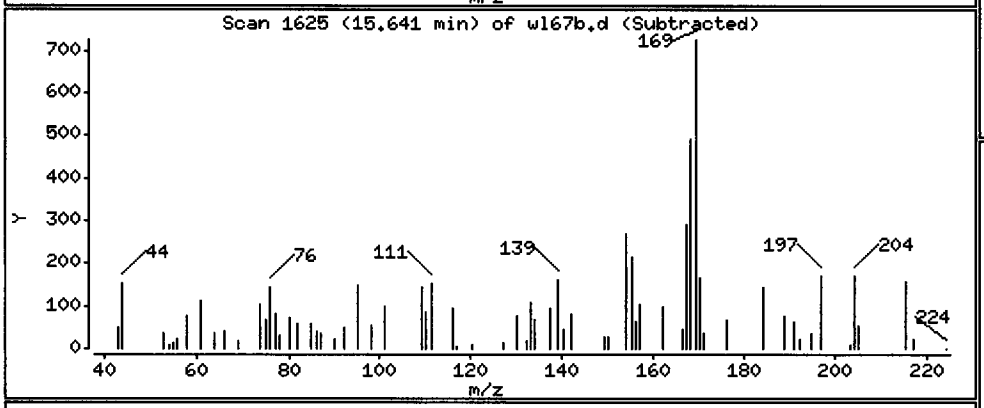
Column phase: ZB-5msi

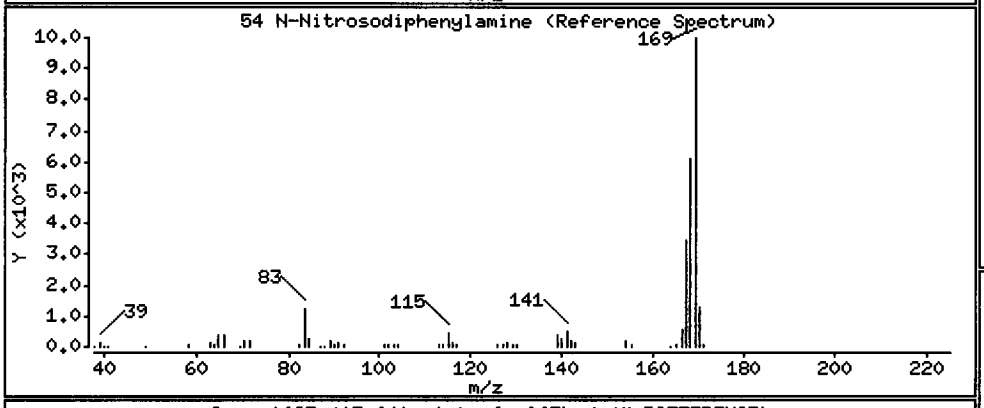
Column diameter: 0.25

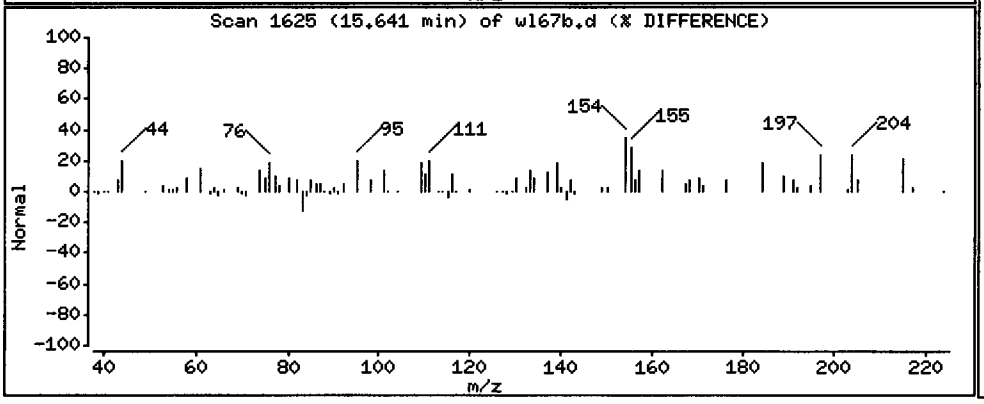
54 N-Nitrosodiphenylamine

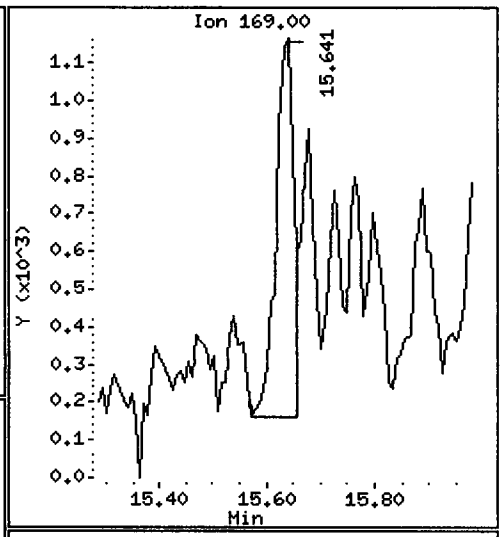
Concentration: 221.1 ug/kg

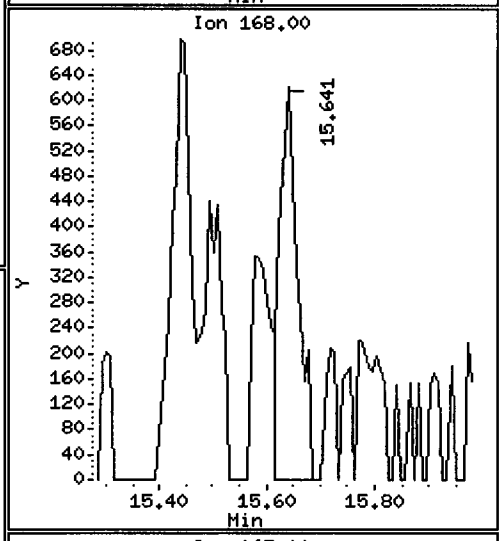


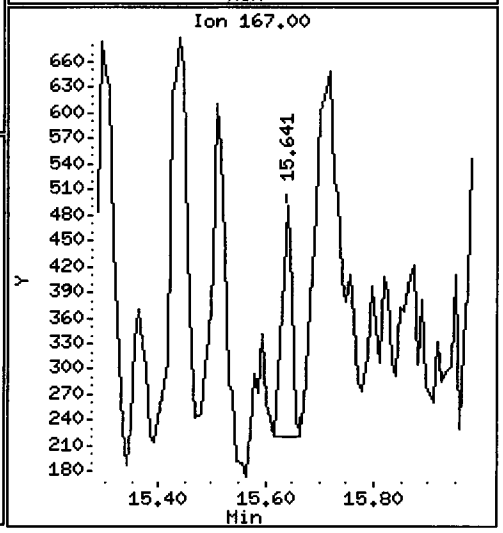












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

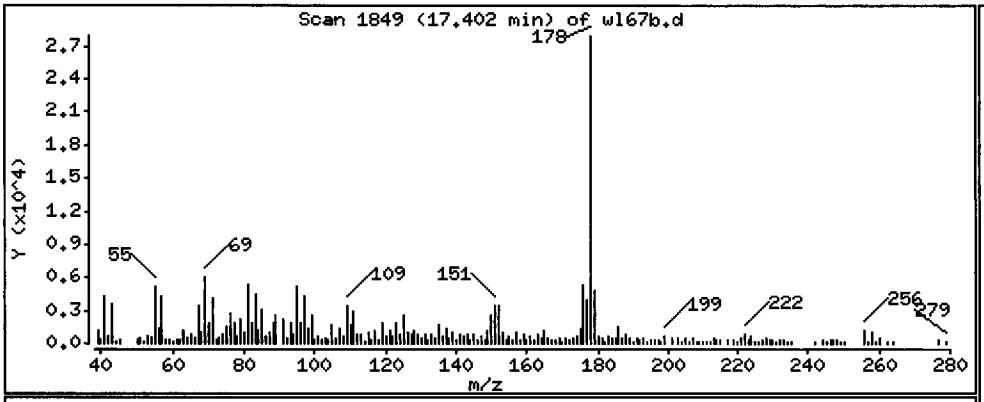
Operator: VTS/YZ

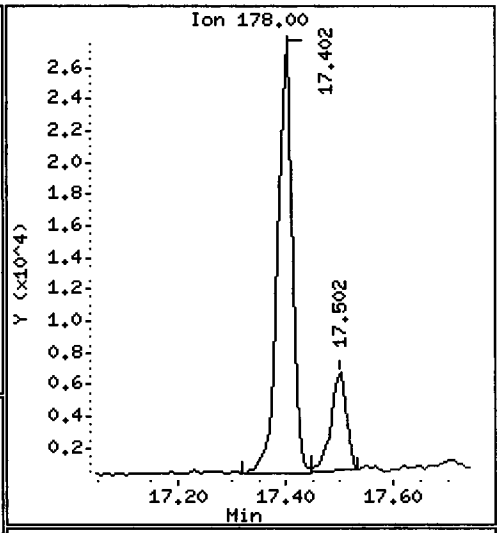
Column phase: ZB-5msi

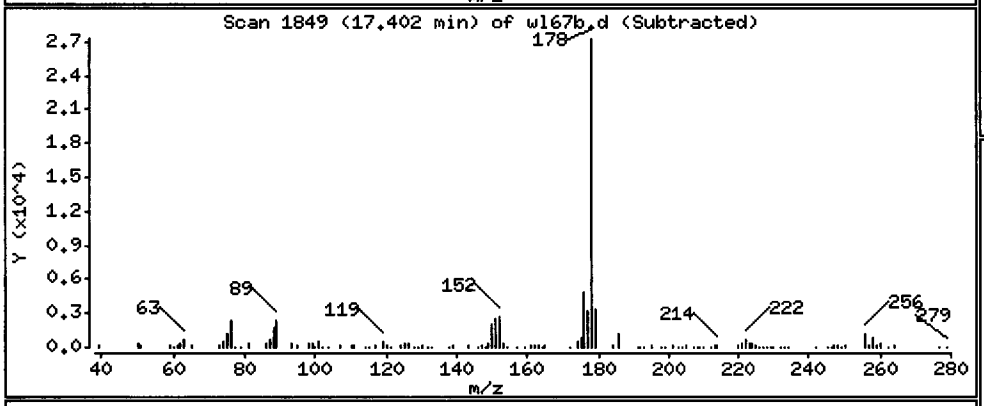
Column diameter: 0.25

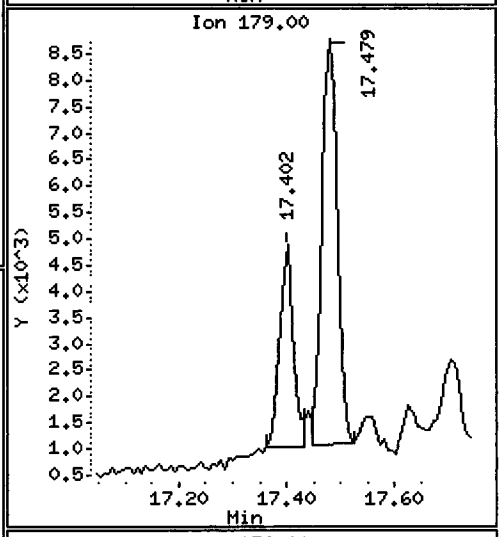
60 Phenanthrene

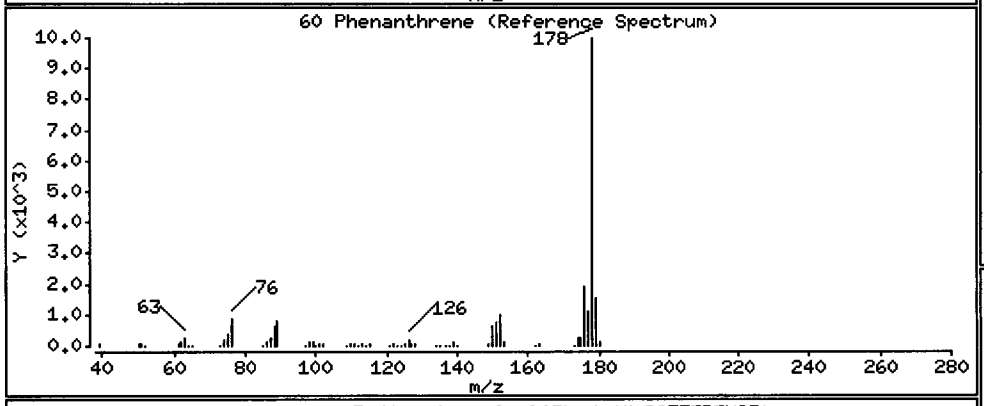
Concentration: 2249 ug/kg

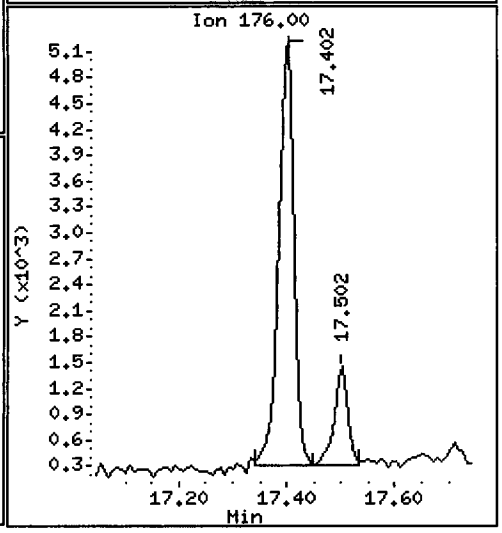


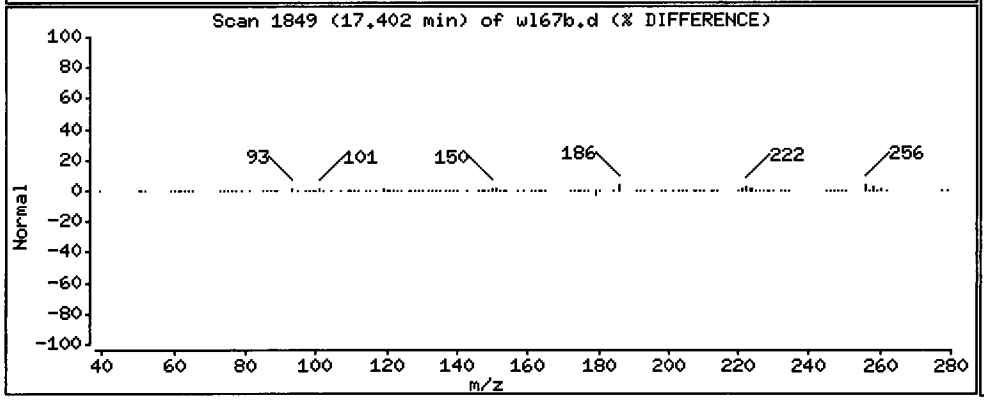












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

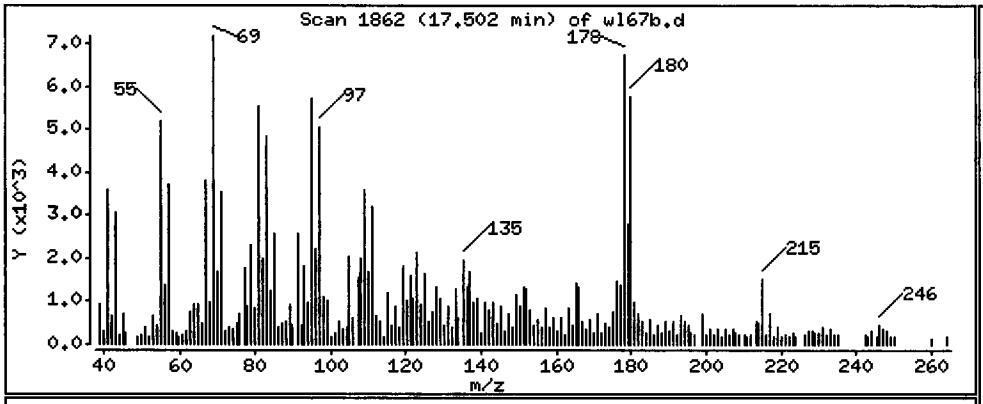
Operator: VTS/YZ

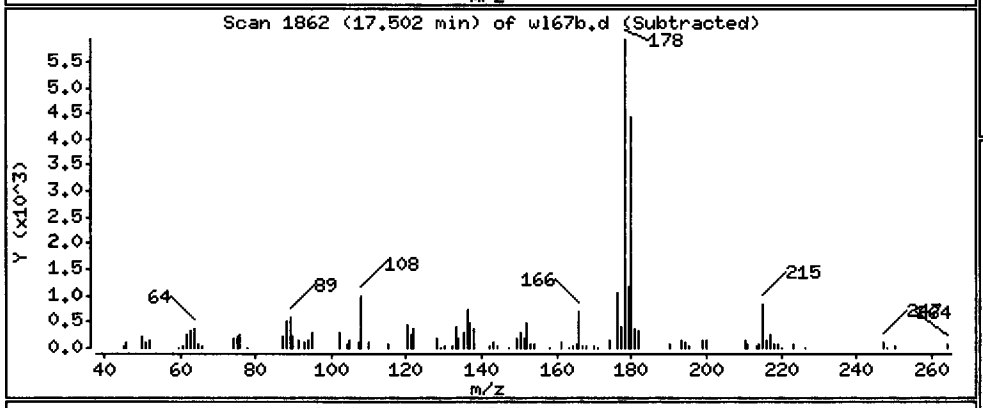
Column phase: ZB-5msi

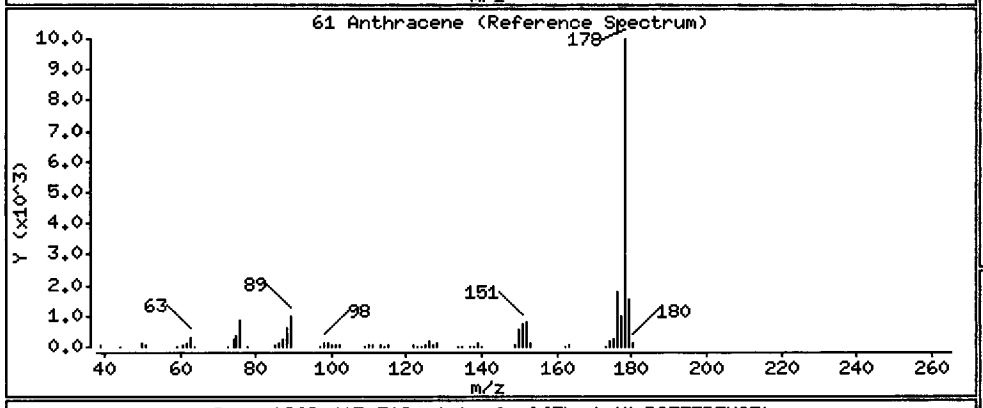
Column diameter: 0.25

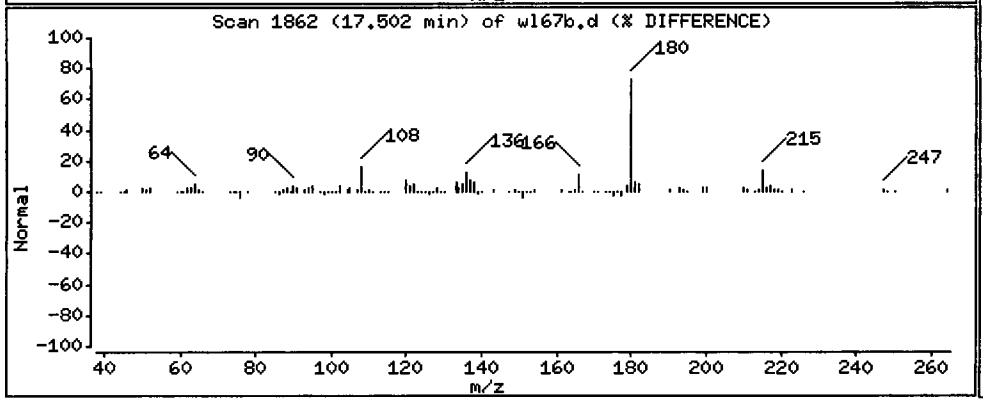
61 Anthracene

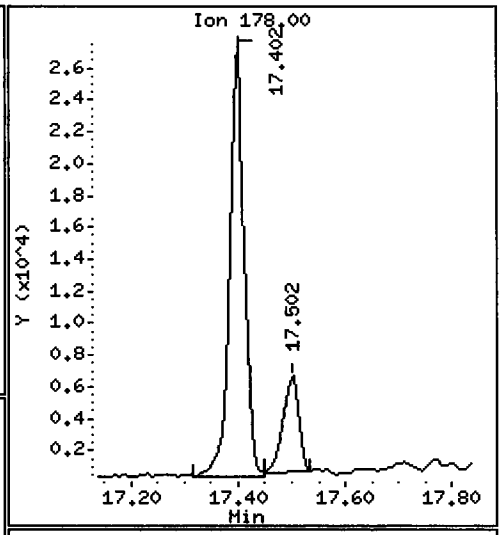
Concentration: 557.4 ug/kg

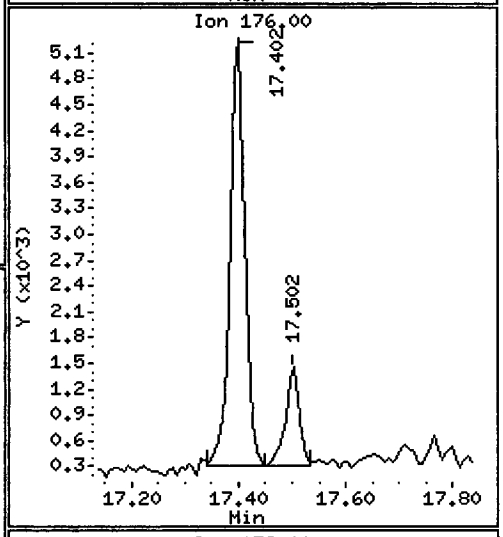


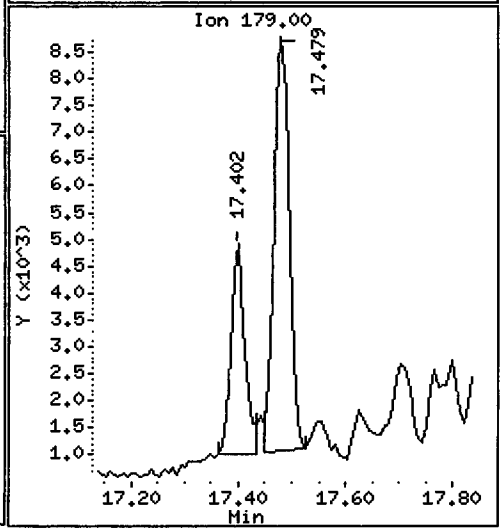












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

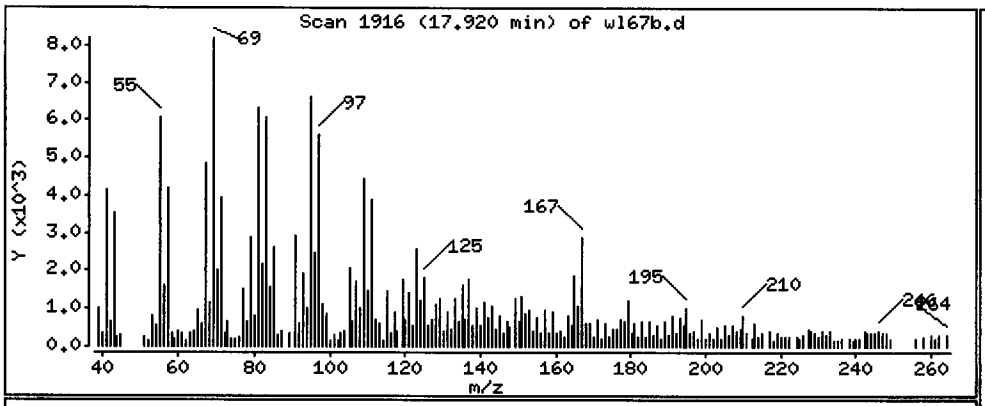
Operator: VTS/YZ

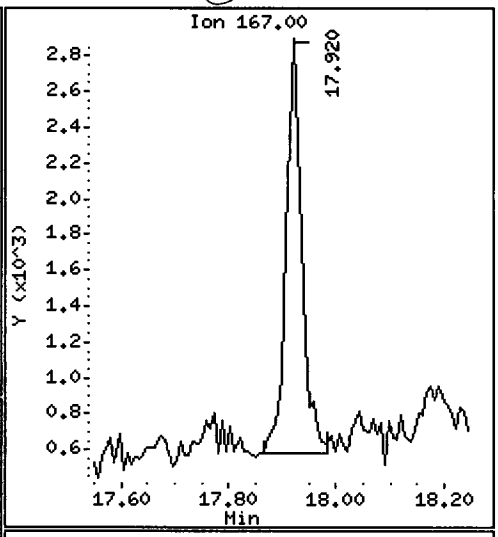
Column phase: ZB-5ms1

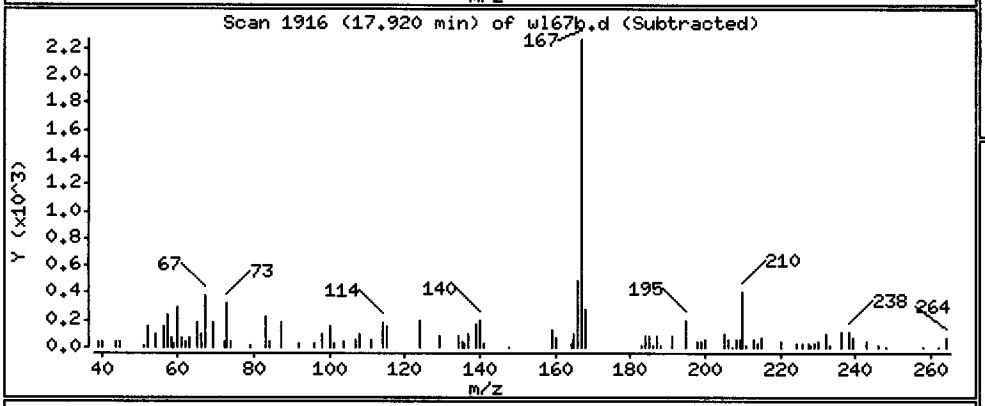
Column diameter: 0.25

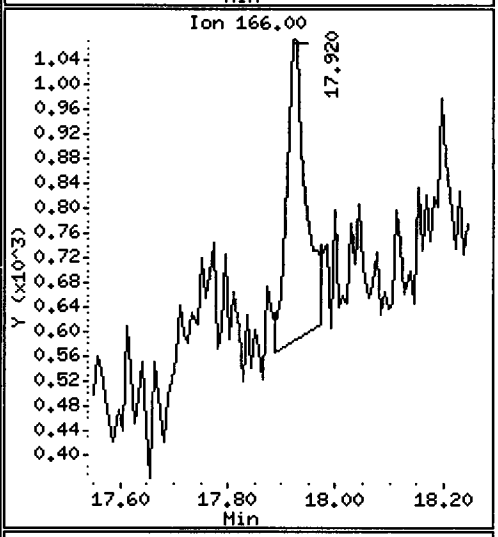
62 Carbazole

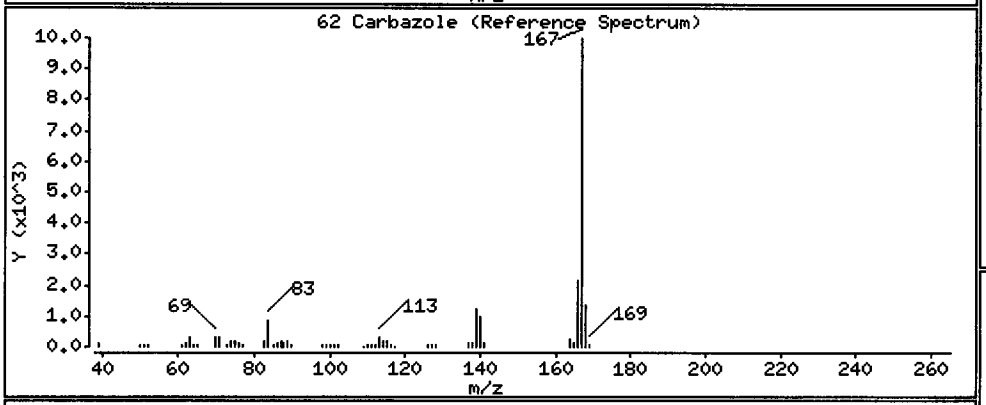
Concentration: 326.7 ug/kg

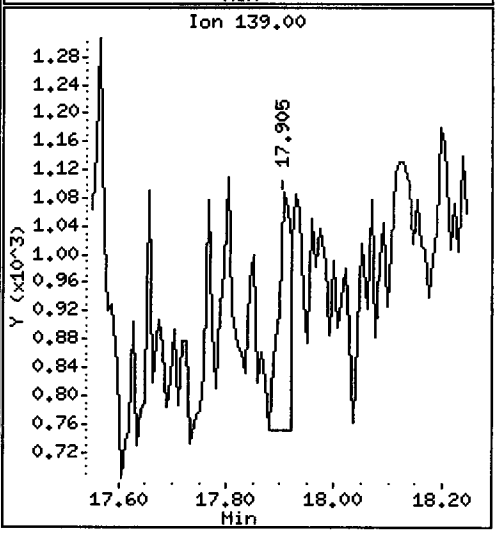


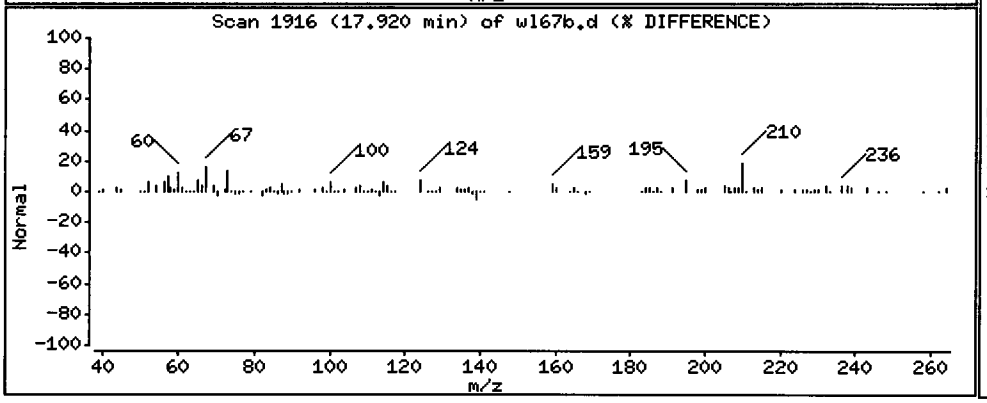












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

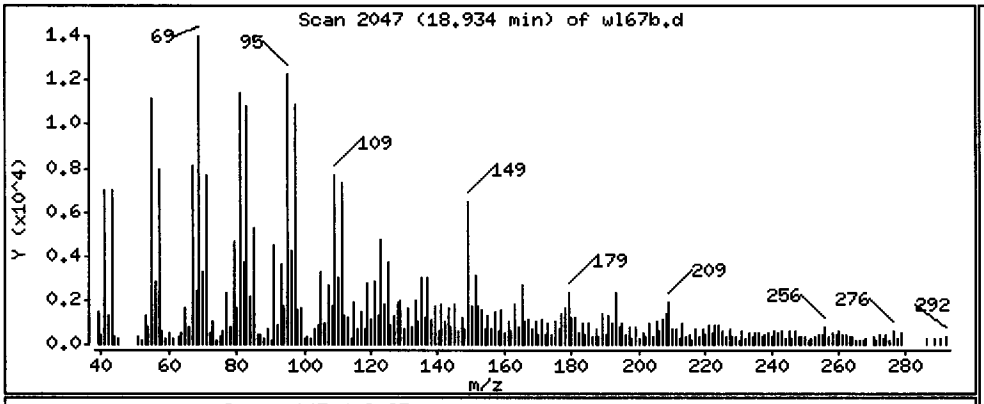
Operator: VTS/YZ

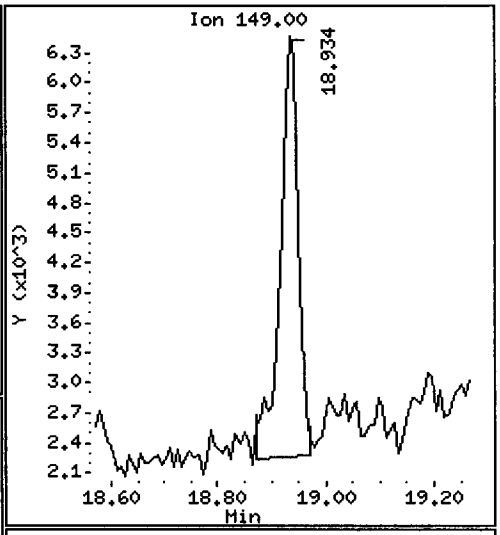
Column phase: ZB-5msi

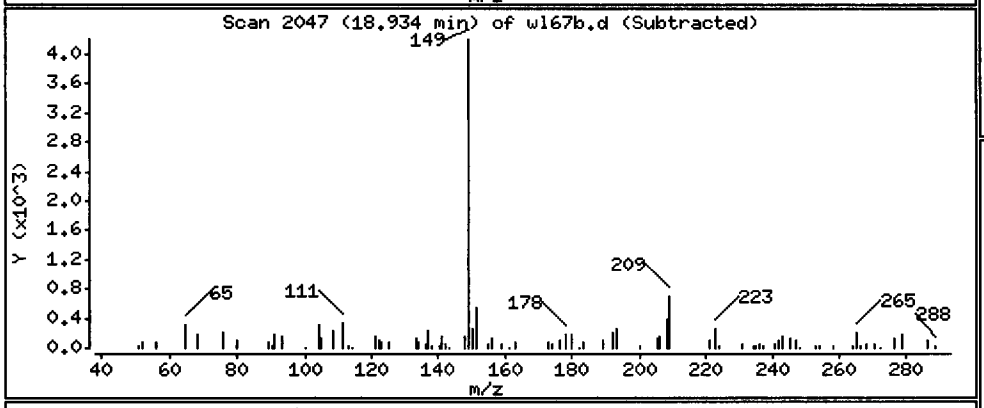
Column diameter: 0.25

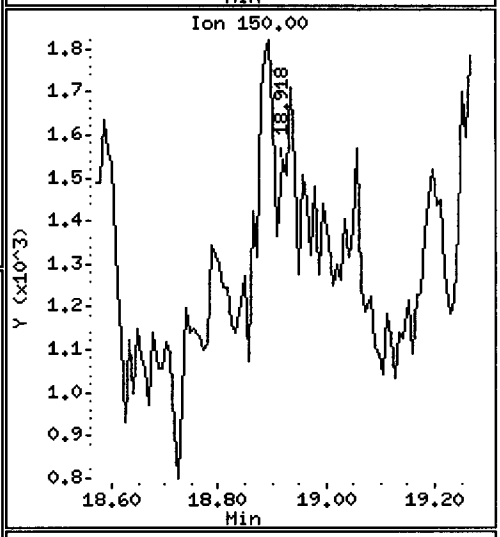
63 Di-n-butylphthalate

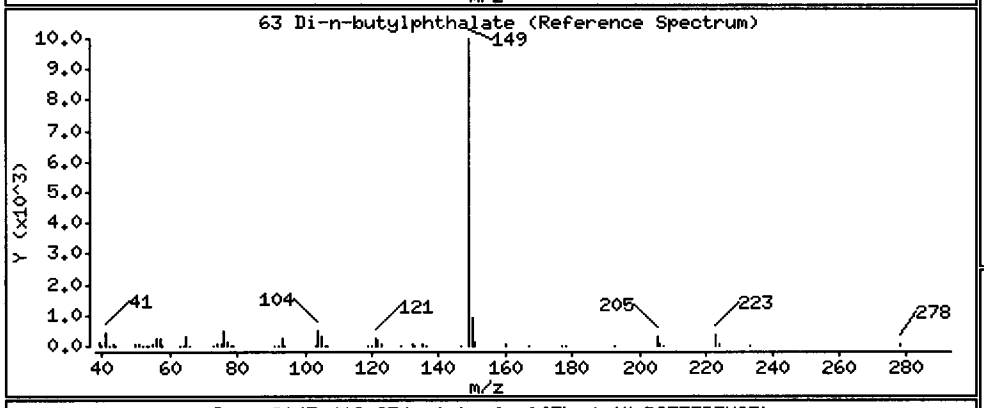
Concentration: 419.1 ug/kg

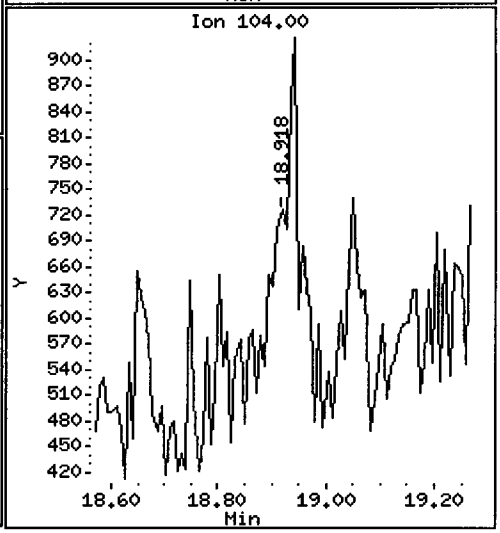


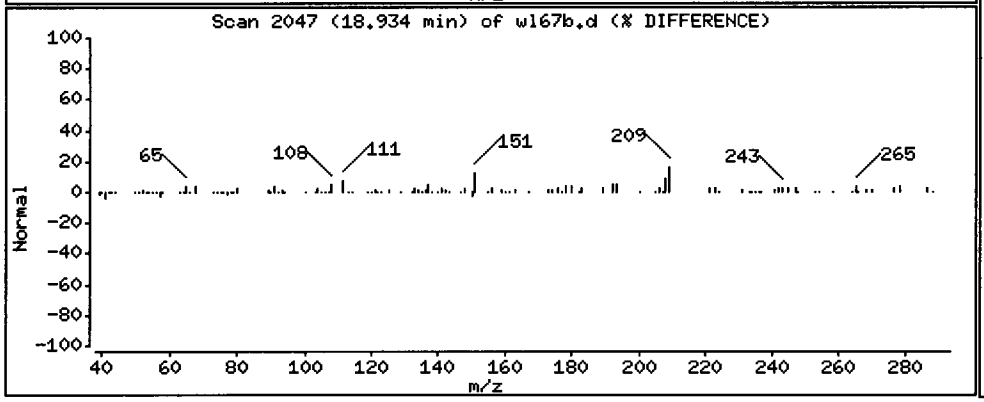












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

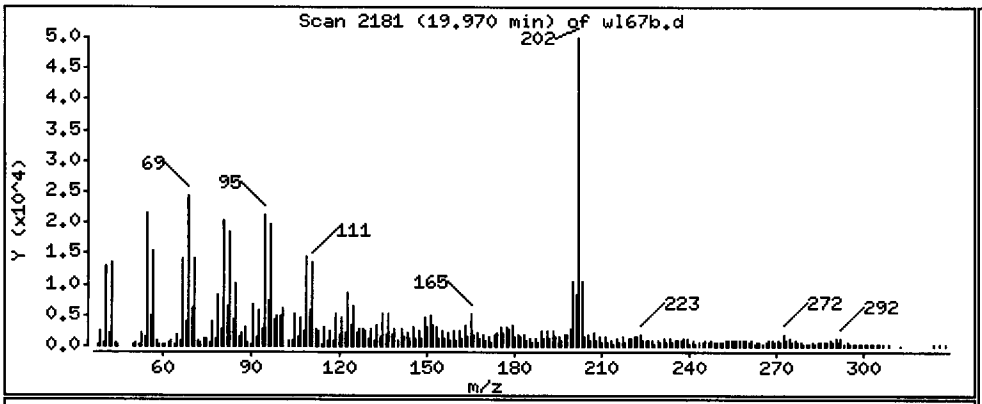
Operator: VTS/YZ

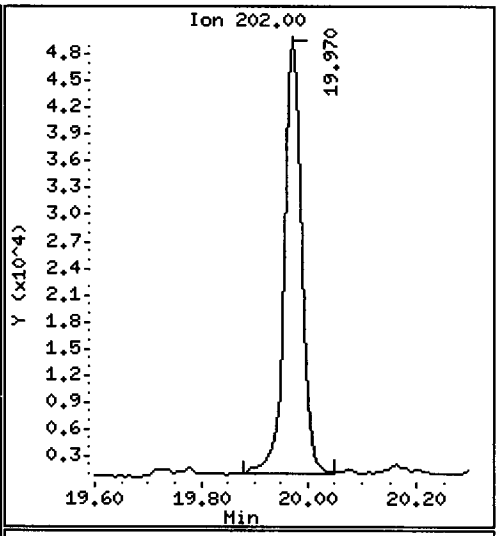
Column phase: ZB-5msi

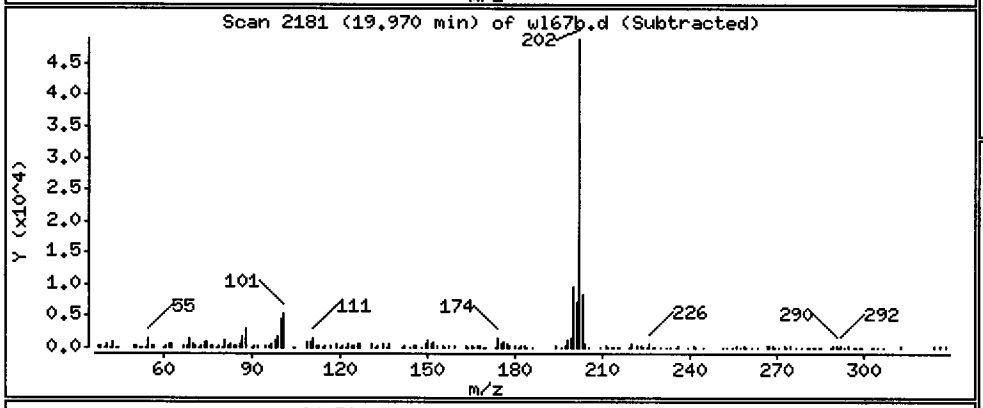
Column diameter: 0.25

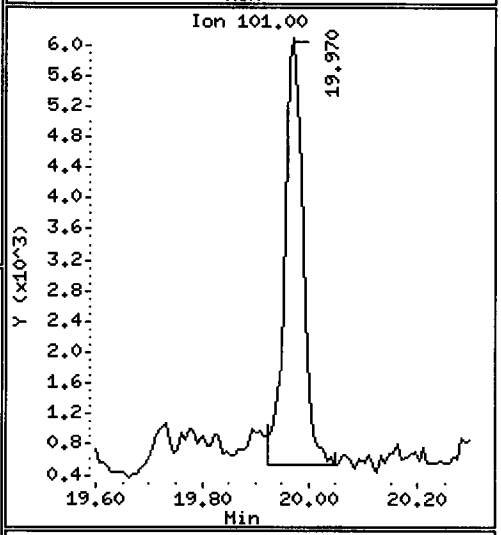
64 Fluoranthene

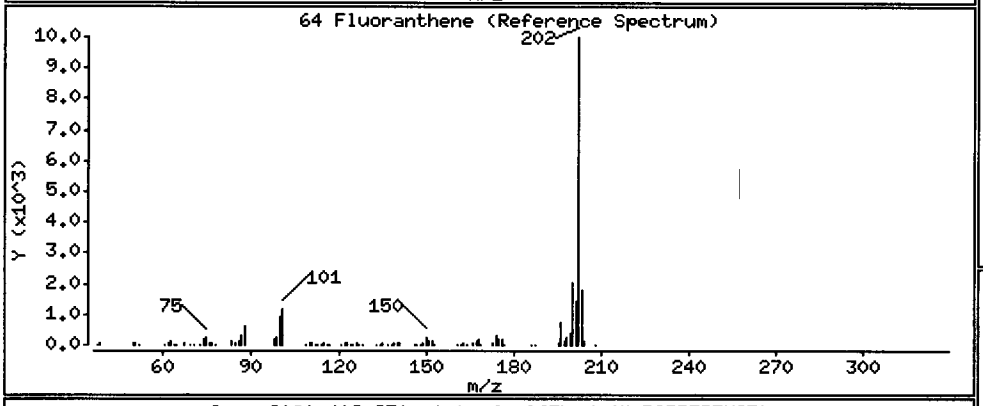
Concentration: 4430 ug/kg

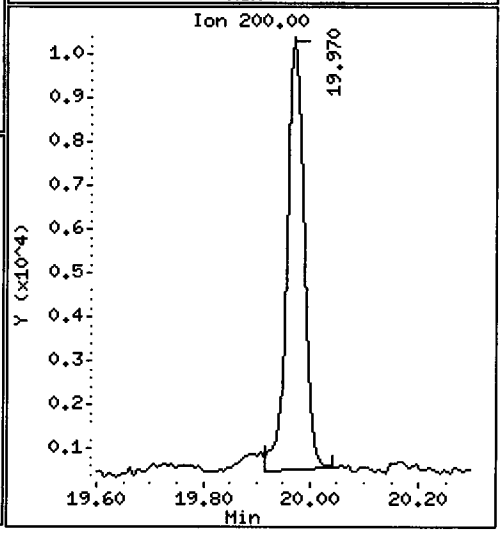


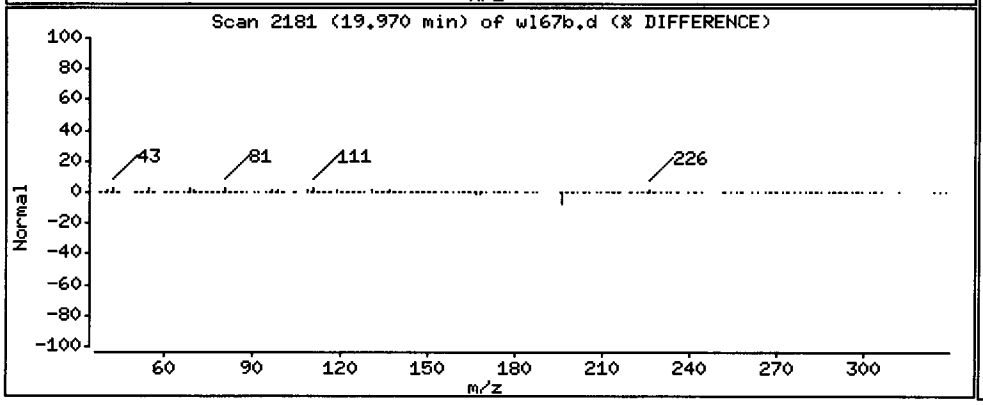












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

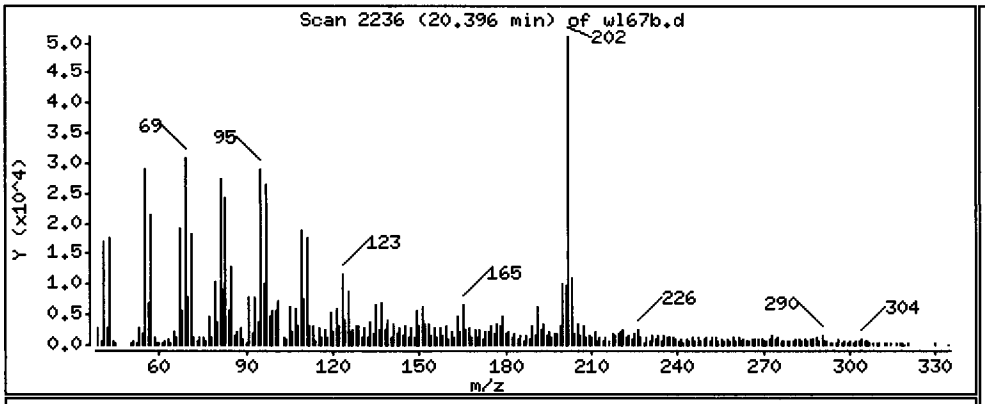
Operator: VTS/YZ

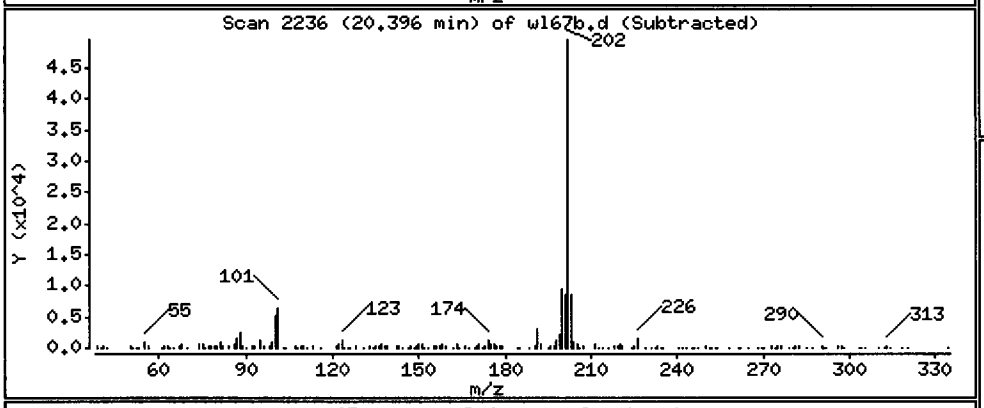
Column phase: ZB-5msi

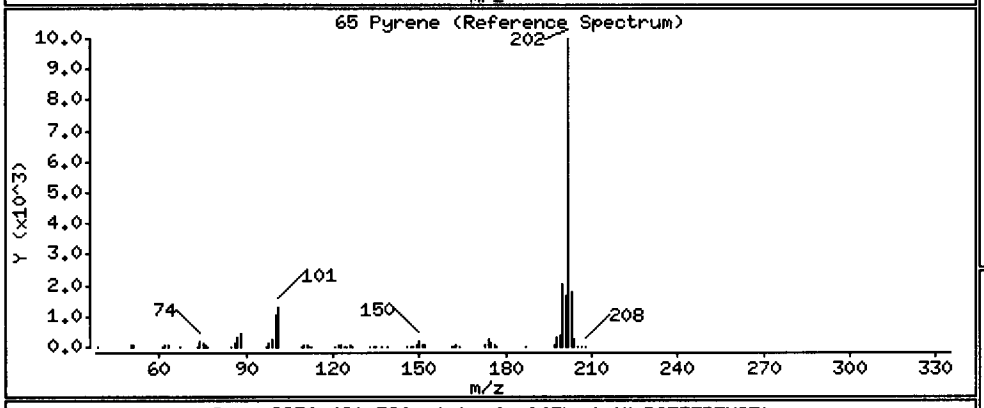
Column diameter: 0.25

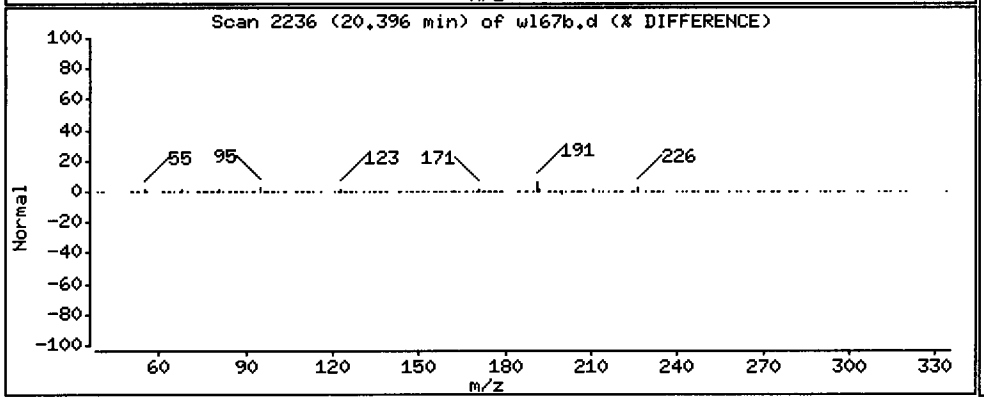
65 Pyrene

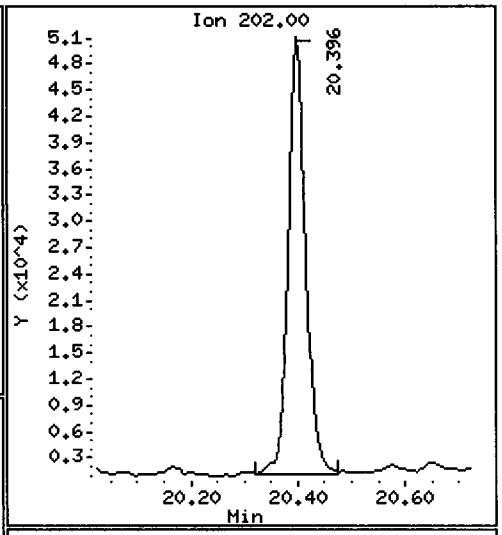
Concentration: 4161 ug/kg

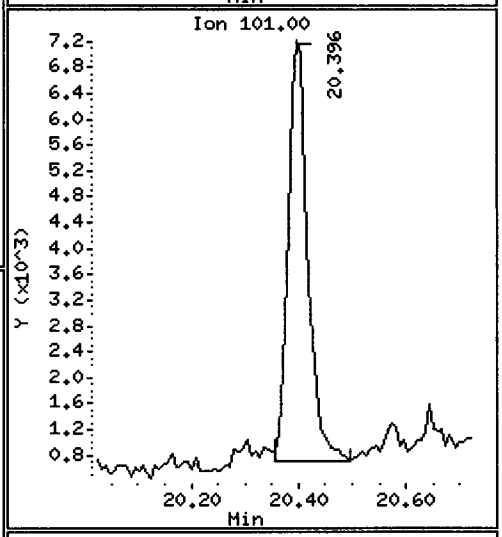


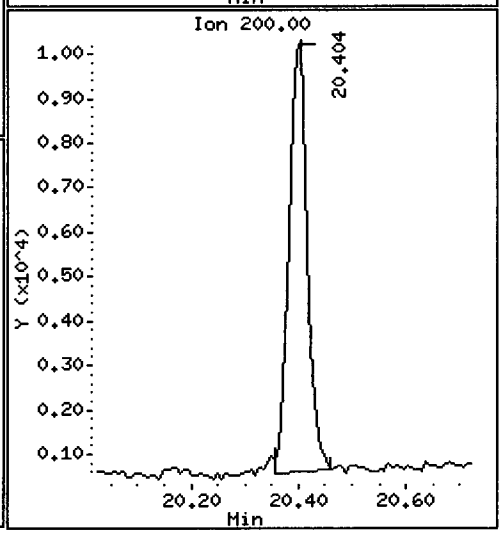












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

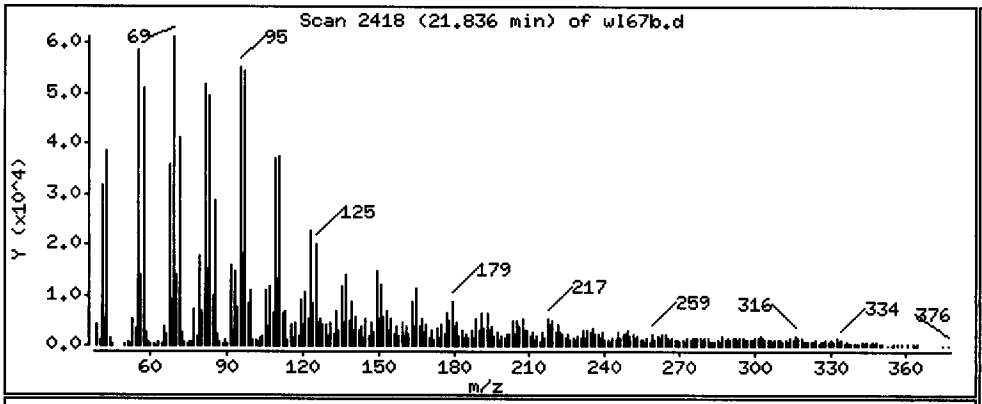
Operator: VTS/YZ

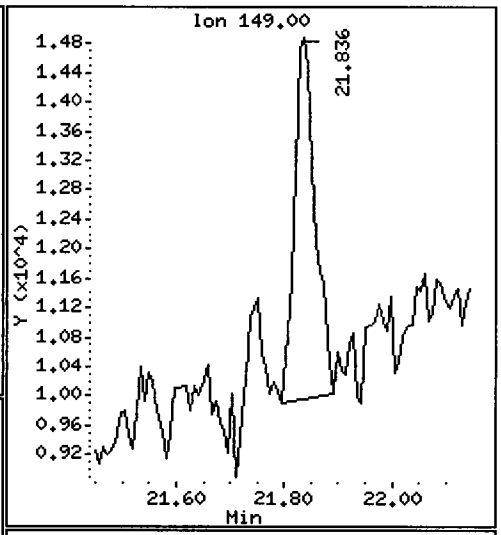
Column phase: ZB-5msi

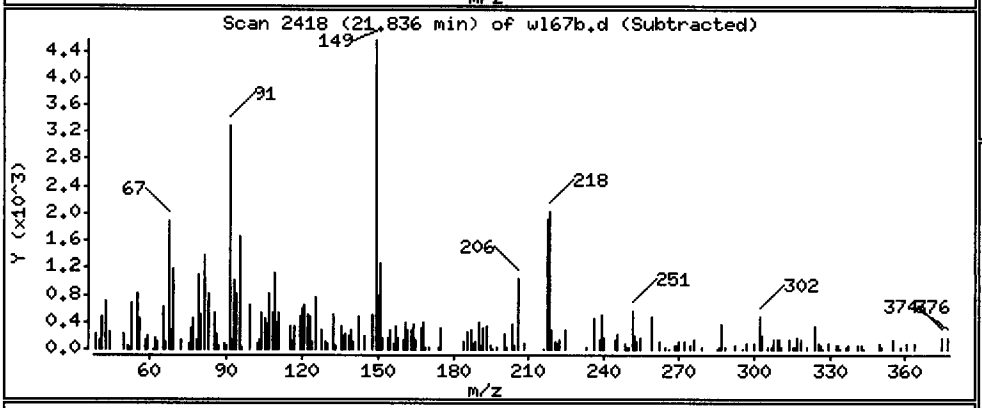
Column diameter: 0.25

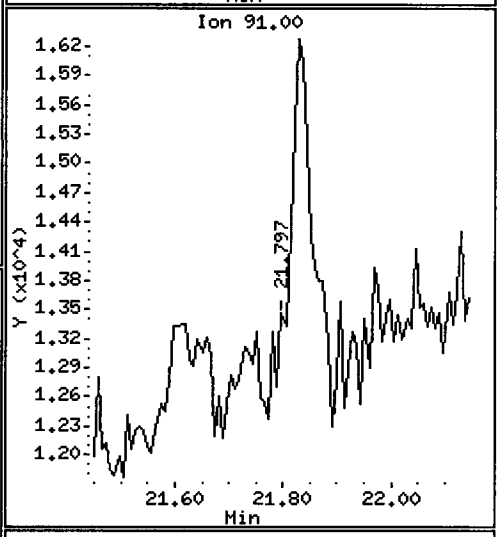
67 Butylbenzylphthalate

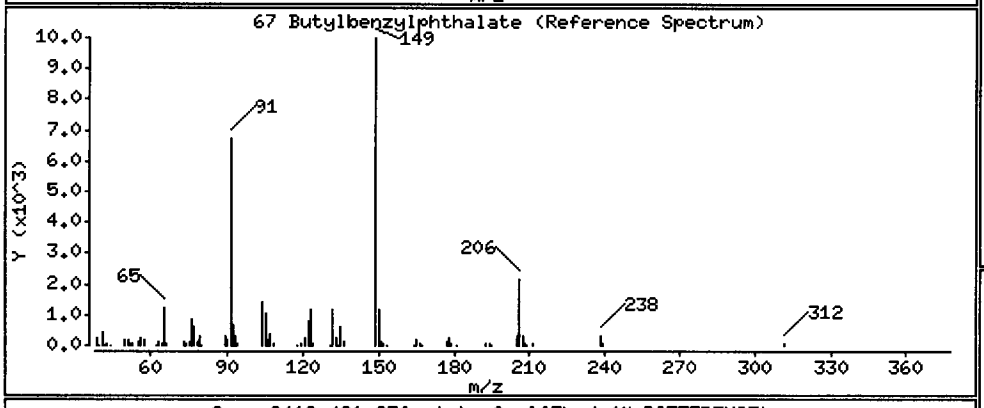
Concentration: 1320 ug/kg

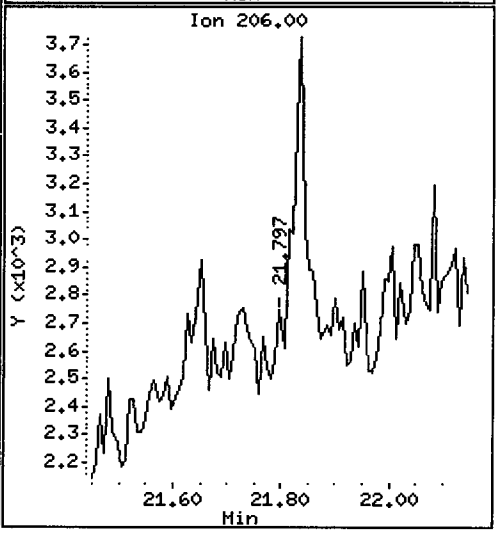


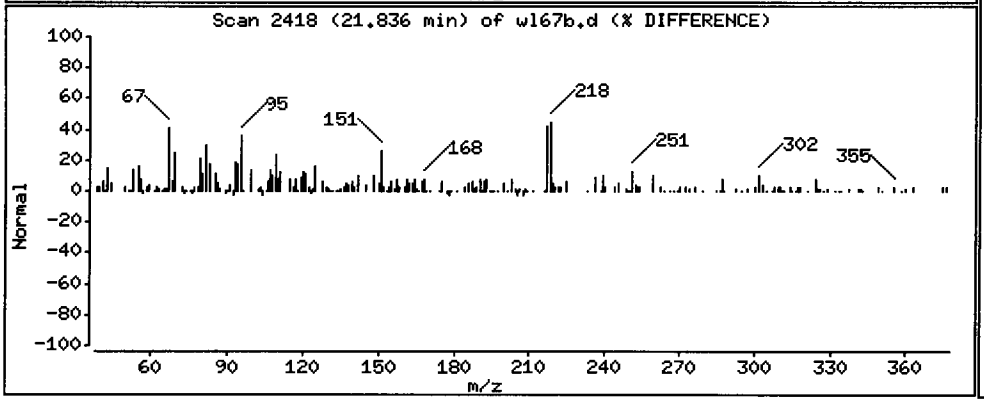












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

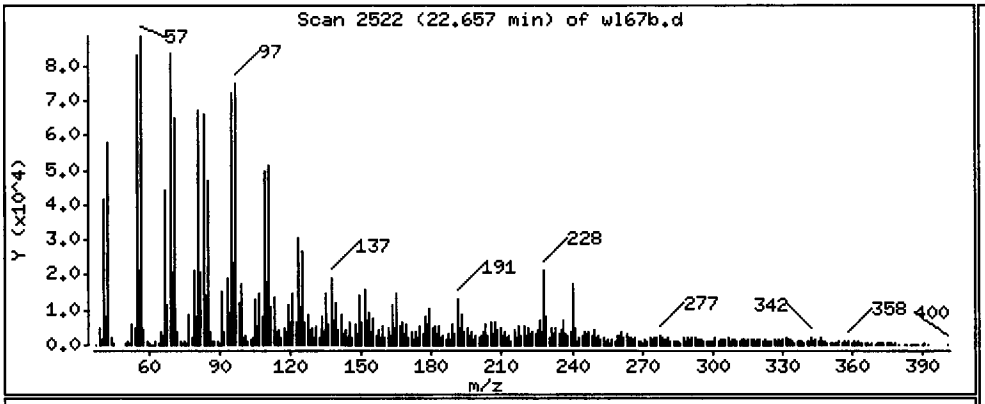
Operator: VTS/YZ

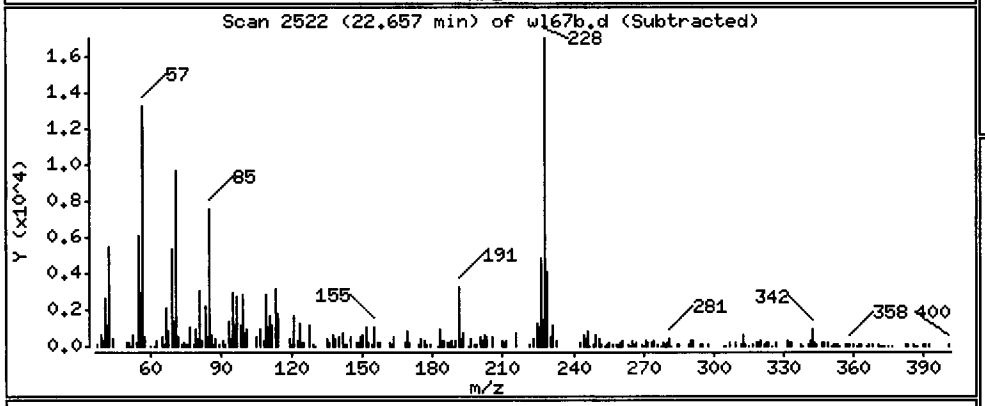
Column phase: ZB-5msi

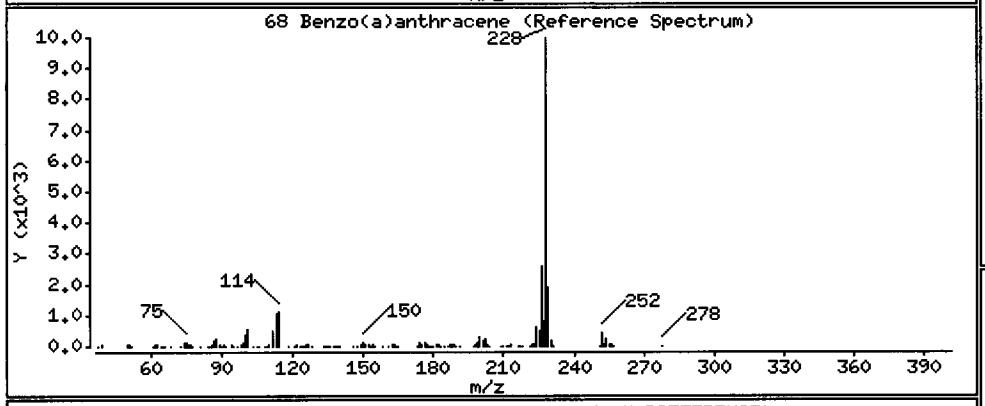
Column diameter: 0.25

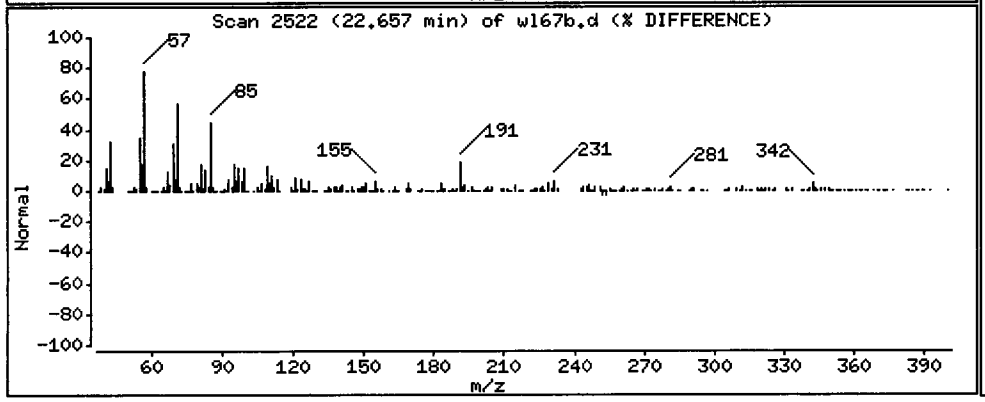
68 Benzo(a)anthracene

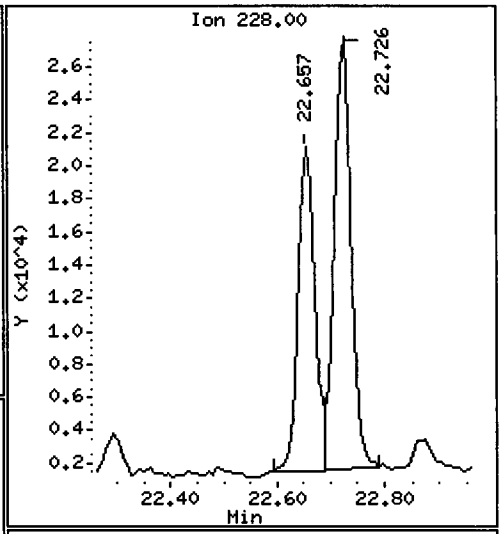
Concentration: 1635 ug/kg

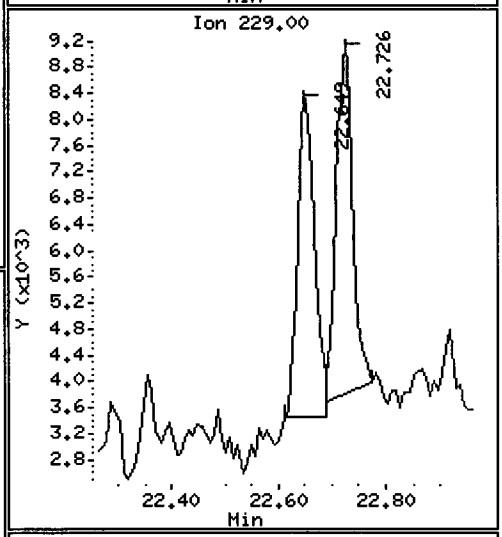


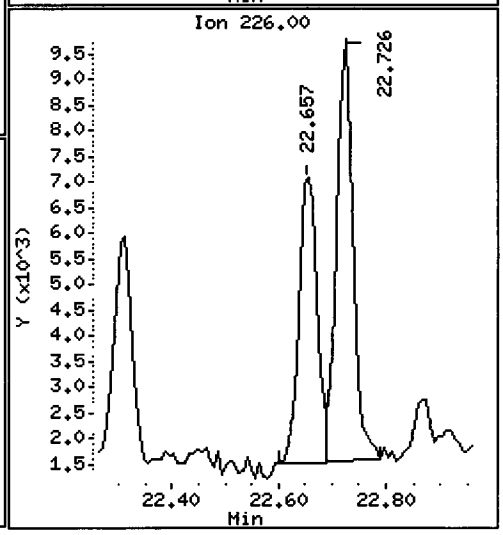












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

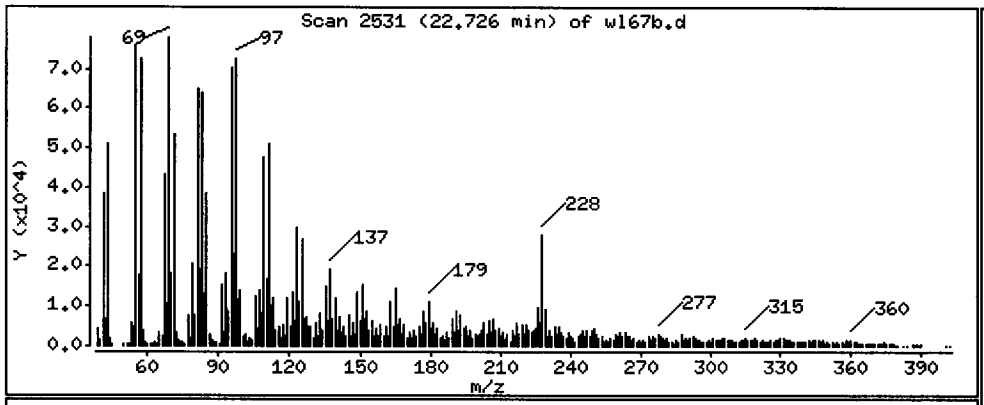
Operator: VTS/YZ

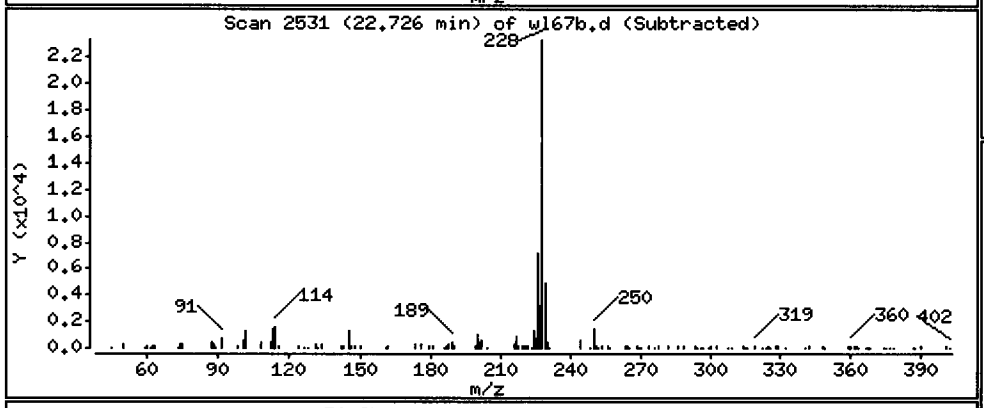
Column phase: ZB-5msi

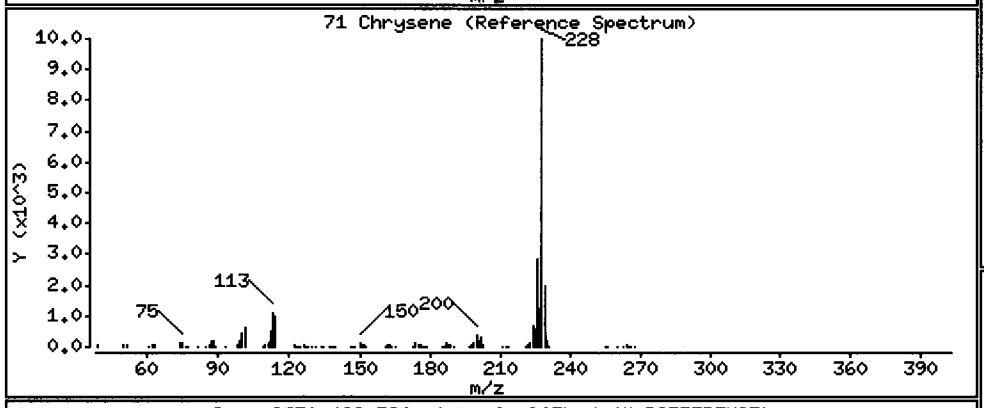
Column diameter: 0.25

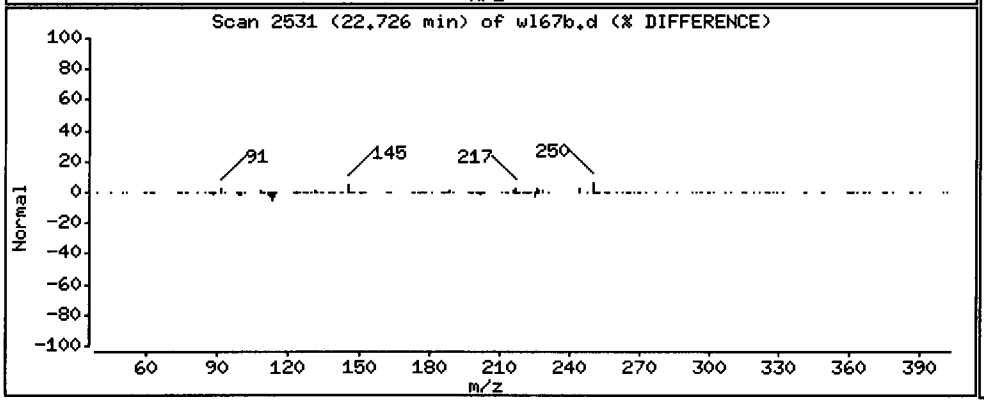
71 Chrysene

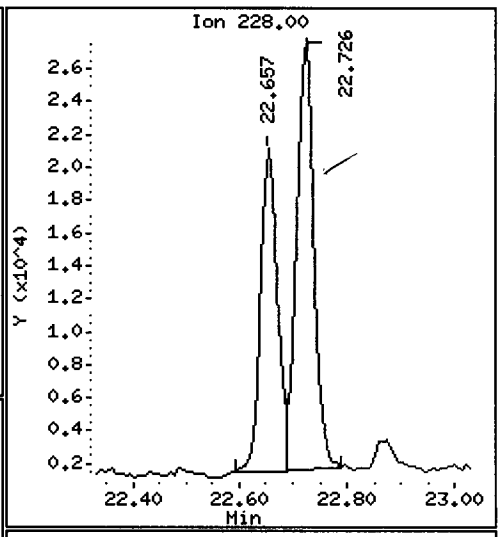
Concentration: 2453 ug/kg

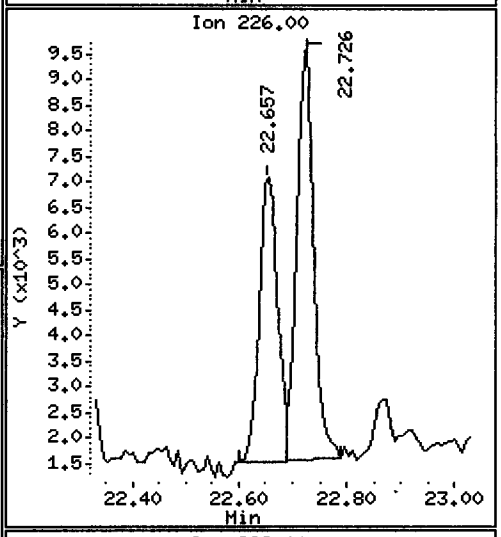


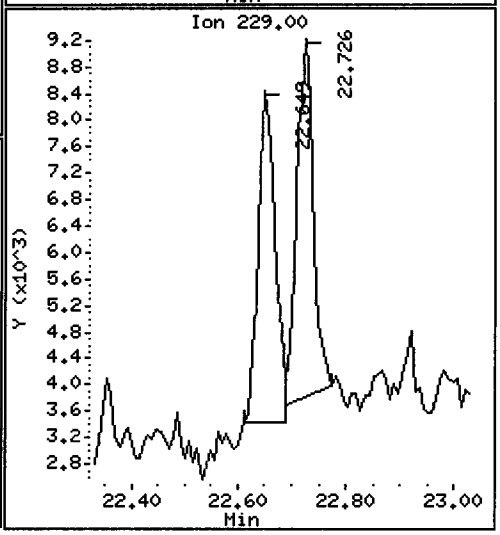












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

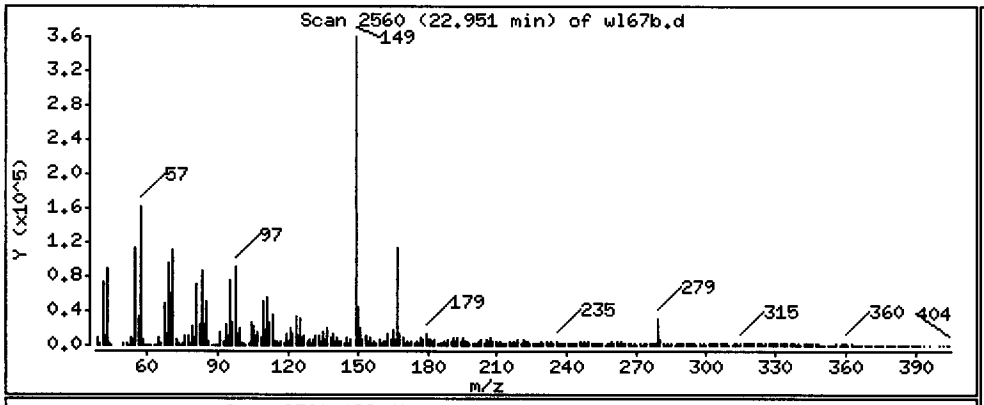
Operator: VTS/YZ

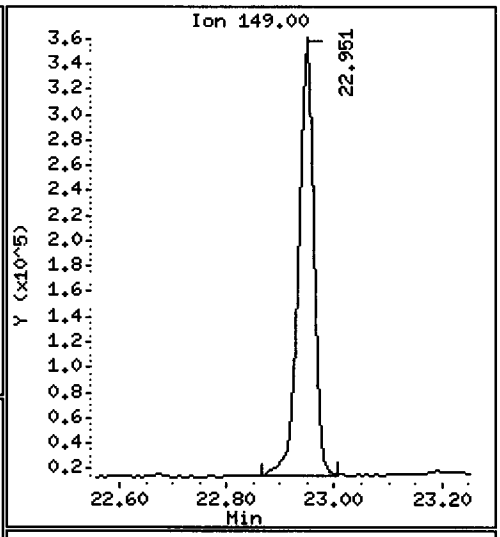
Column phase: ZB-5msi

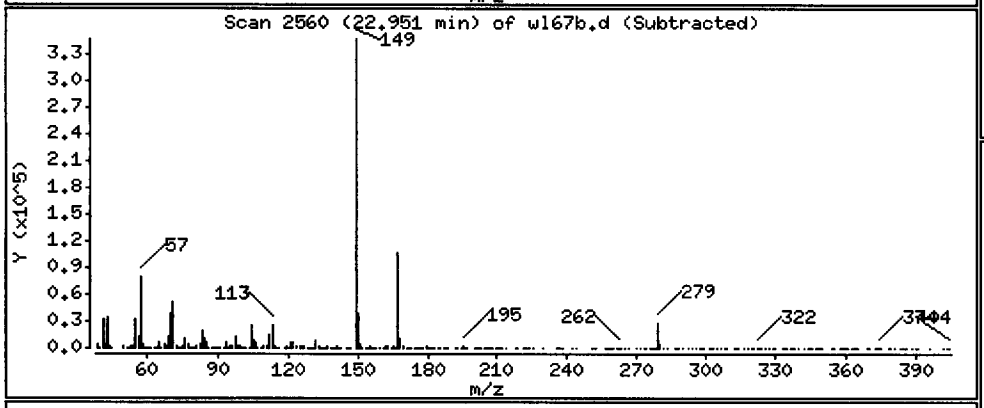
Column diameter: 0.25

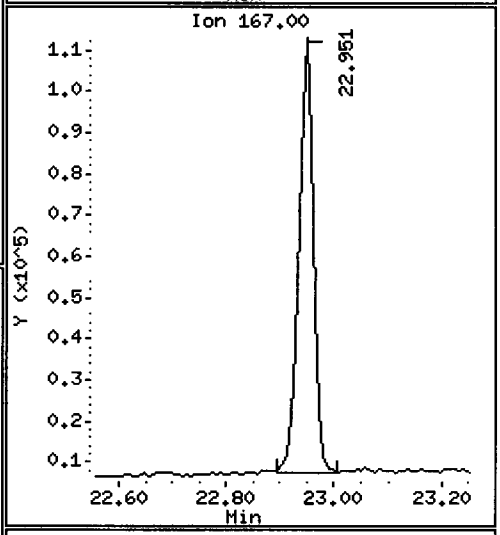
72 bis(2-Ethylhexyl)phthalate

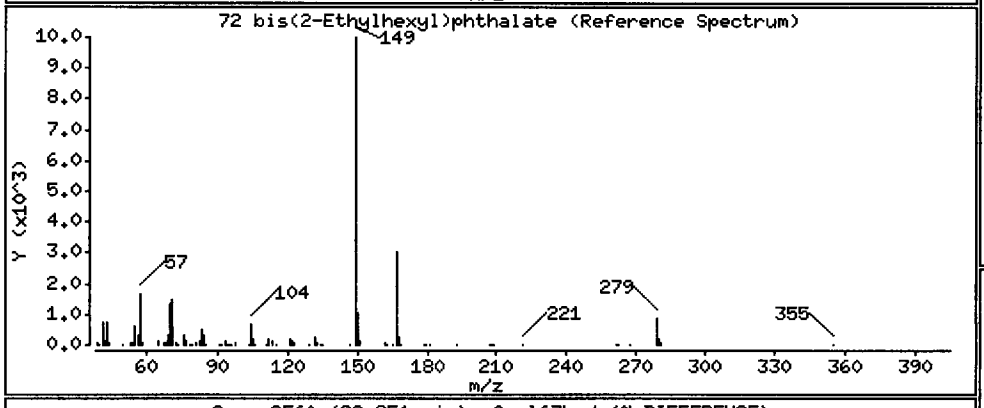
Concentration: 42800 ug/kg

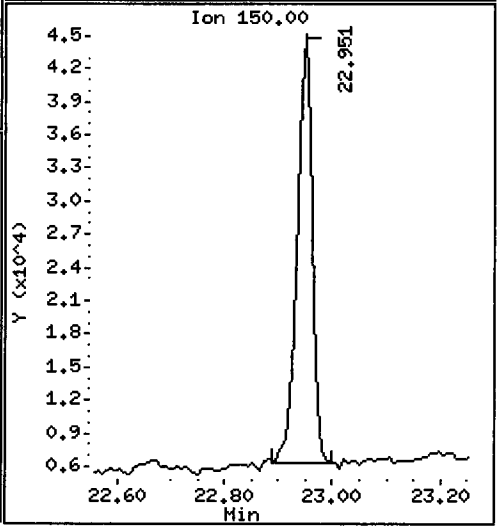


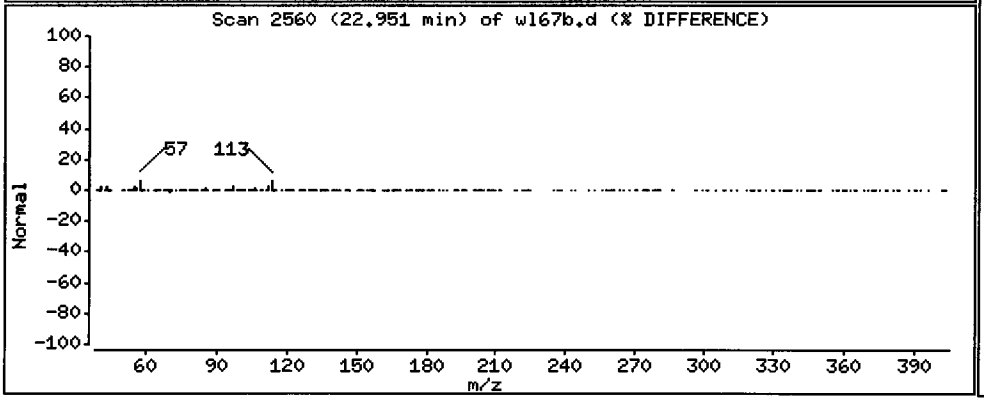












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

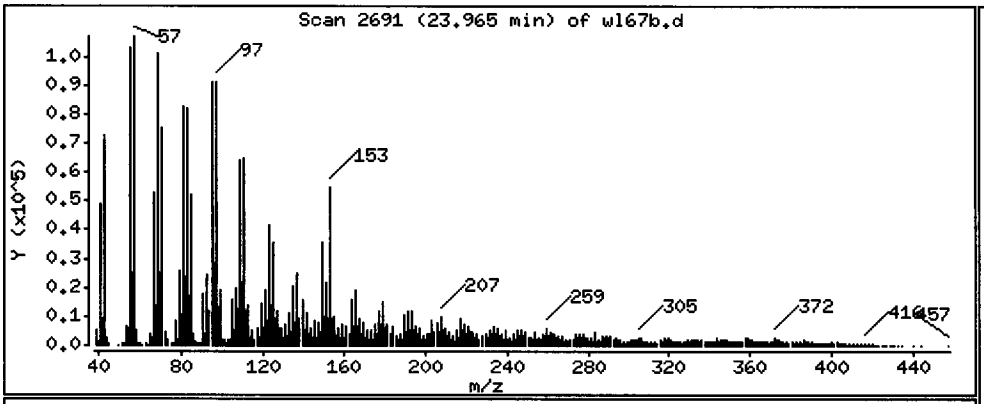
Operator: VTS/YZ

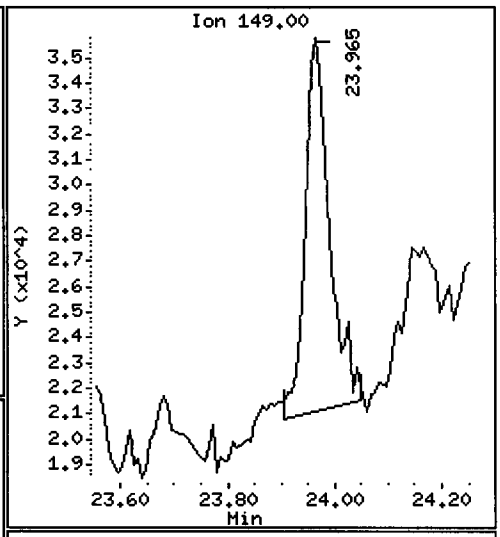
Column phase: ZB-5msi

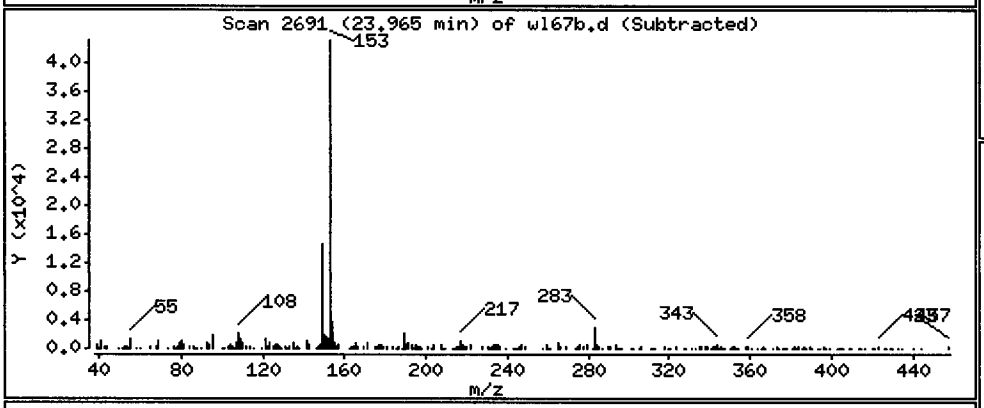
Column diameter: 0.25

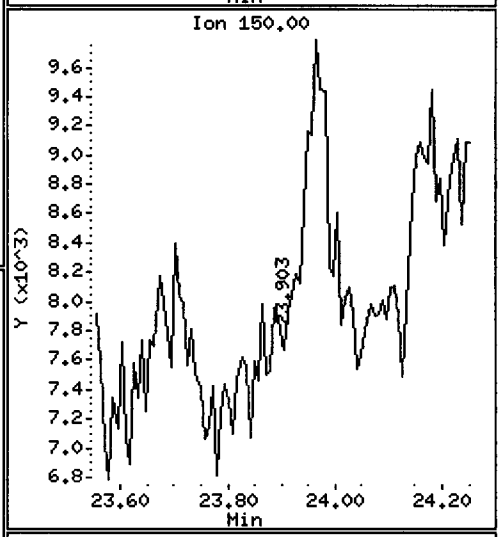
73 Di-n-octylphthalate

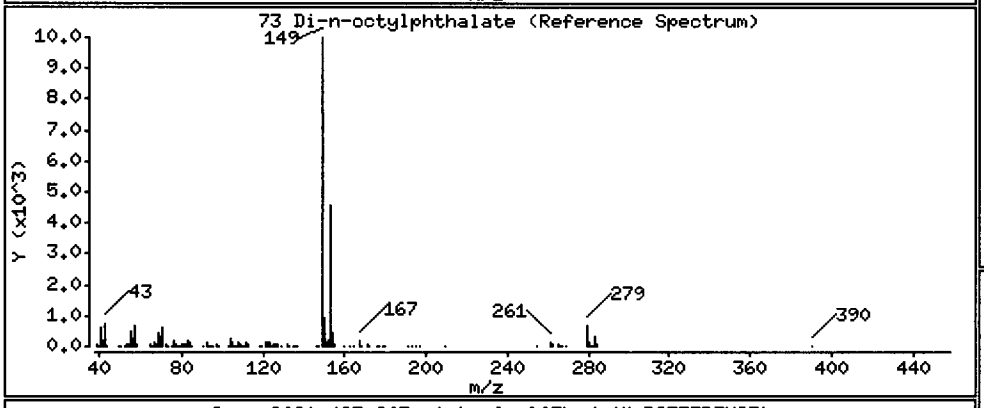
Concentration: 1537 ug/kg

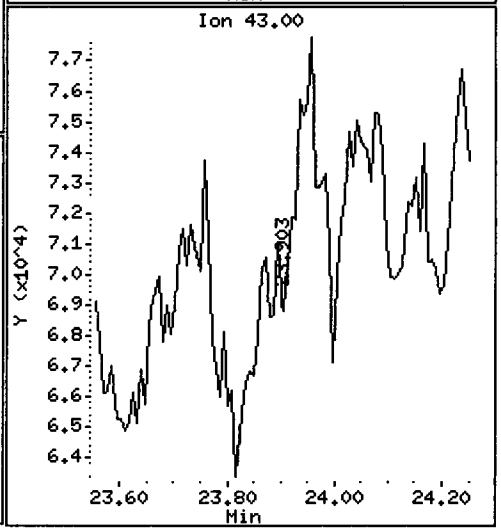


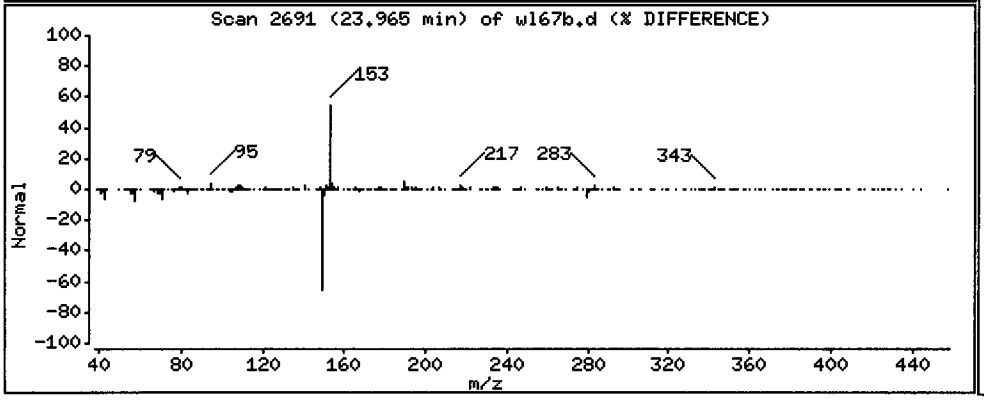












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

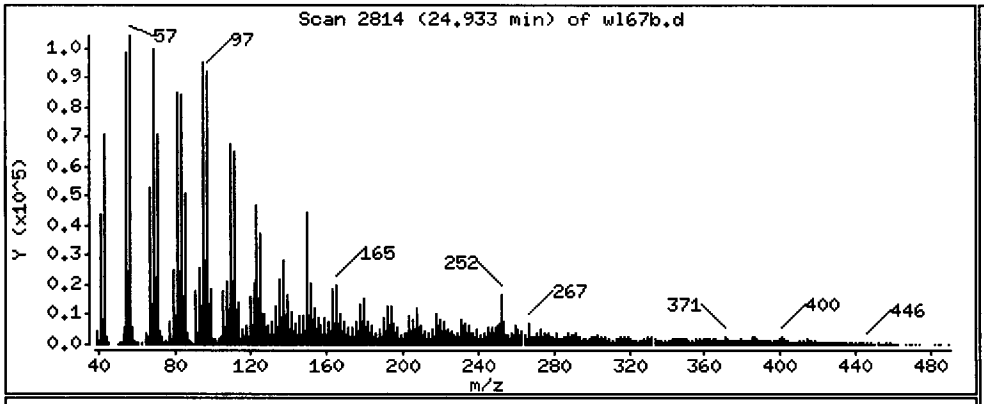
Operator: VTS/YZ

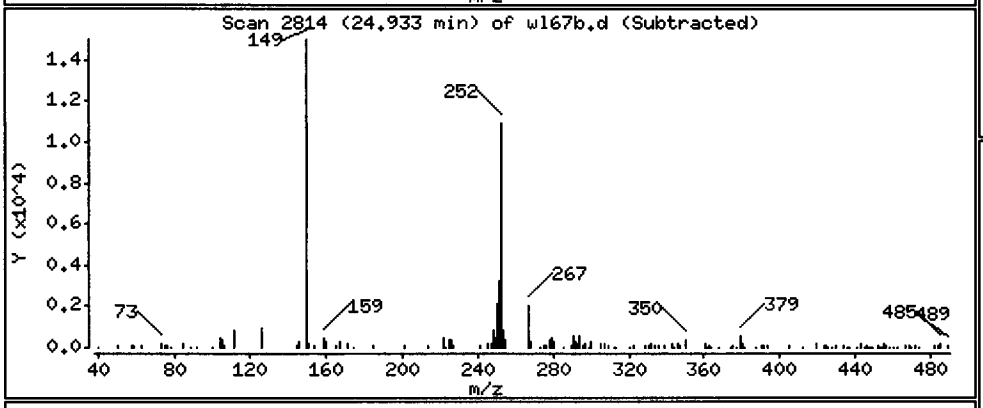
Column phase: ZB-5msi

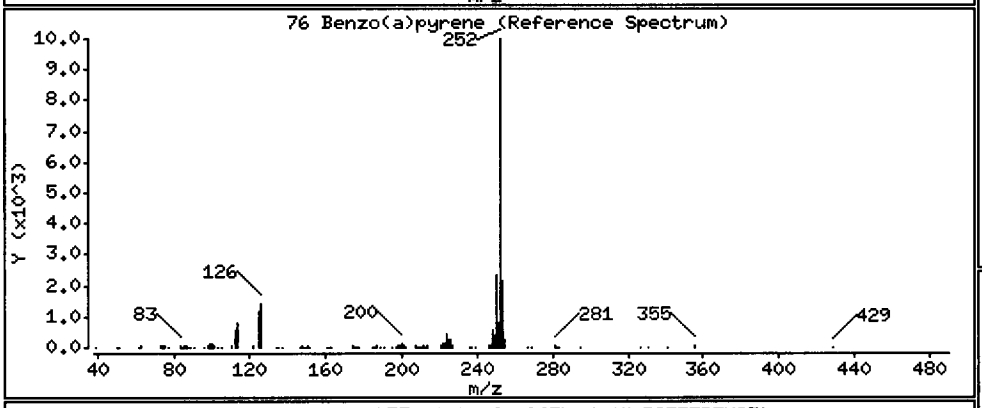
Column diameter: 0.25

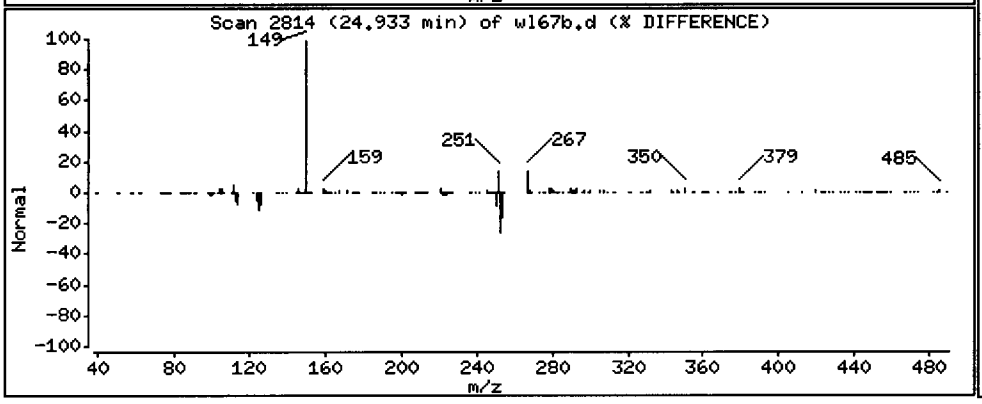
76 Benzo(a)pyrene

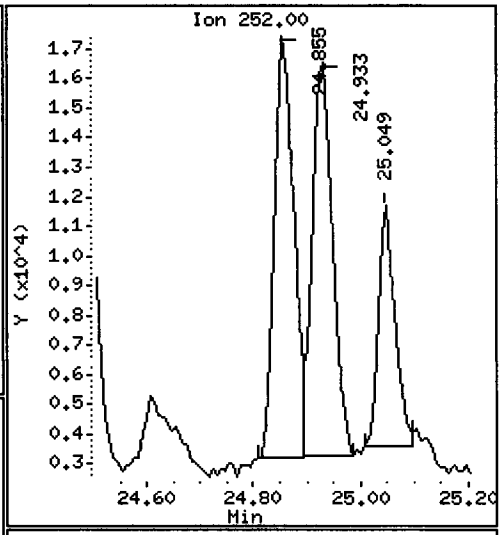
Concentration: 1439 ug/kg

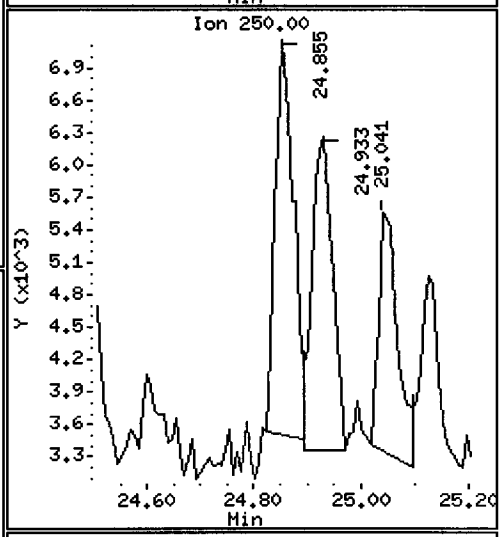


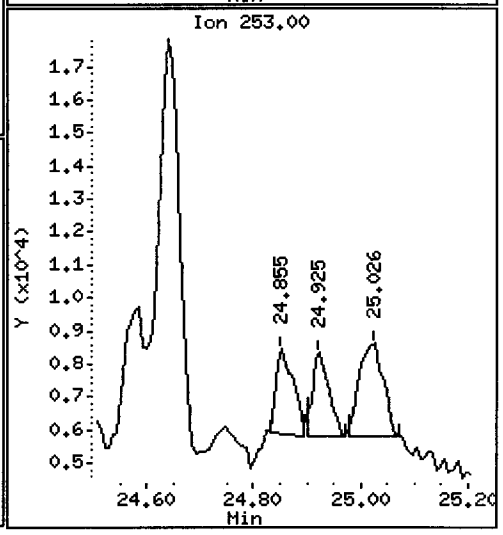












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

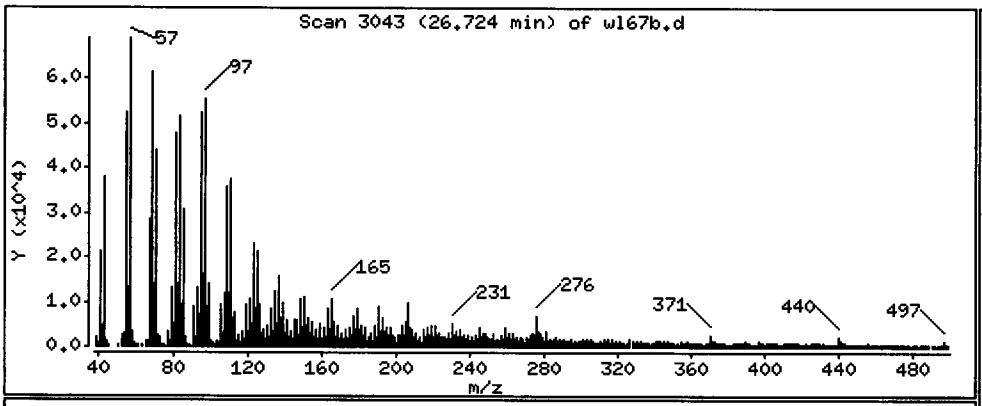
Operator: VTS/YZ

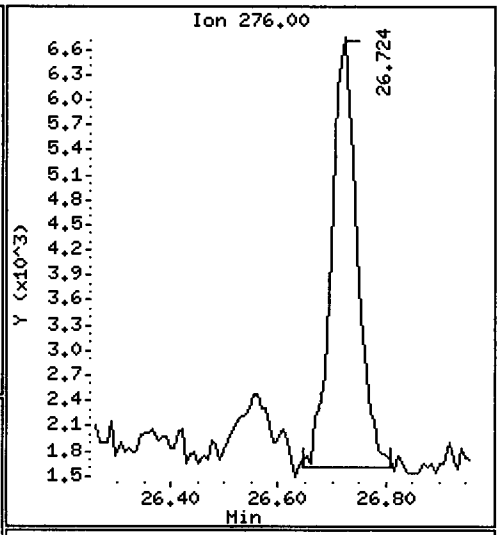
Column phase: ZB-5msi

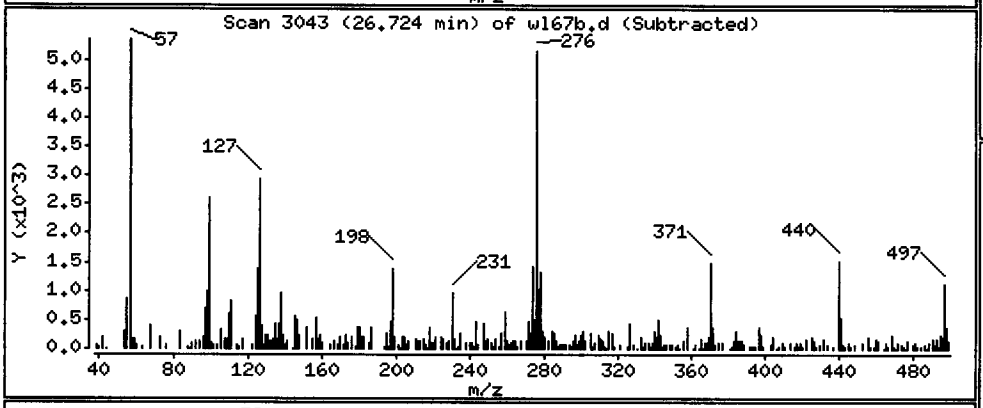
Column diameter: 0.25

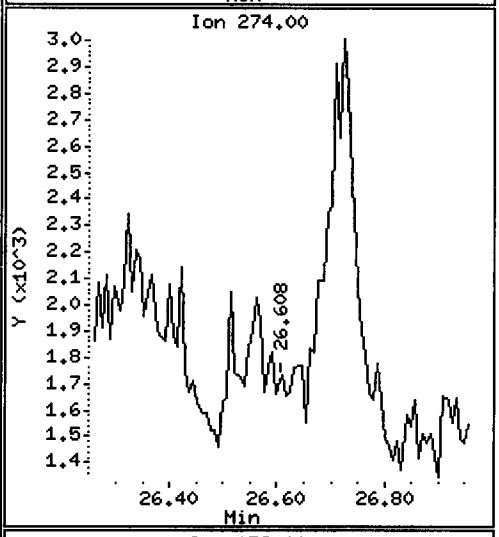
78 Indeno(1,2,3-cd)pyrene

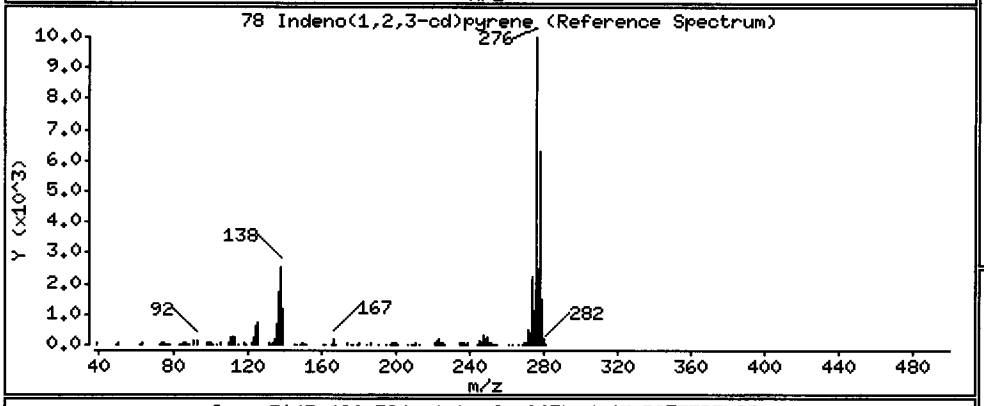
Concentration: 584.3 ug/kg

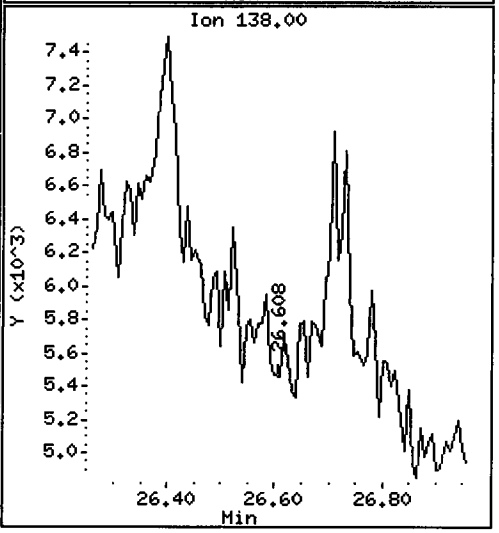


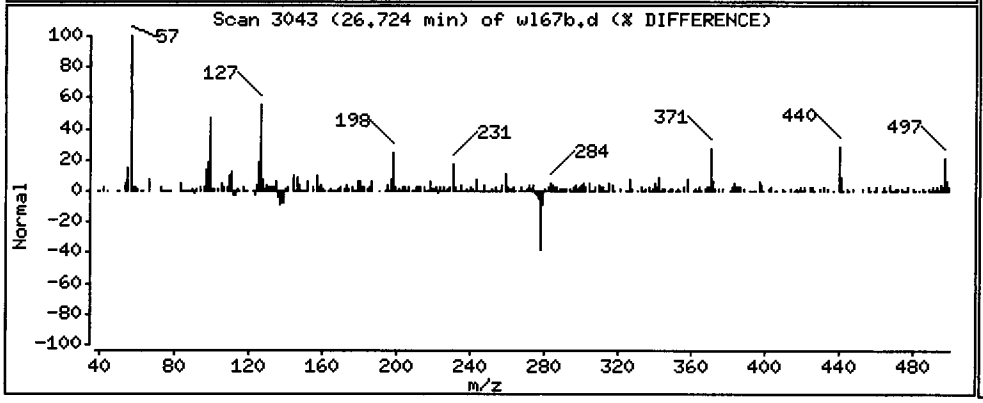












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

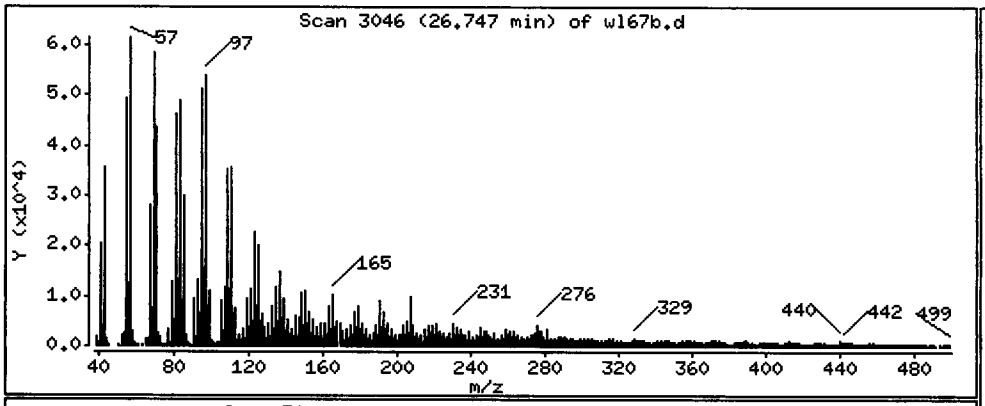
Operator: VTS/YZ

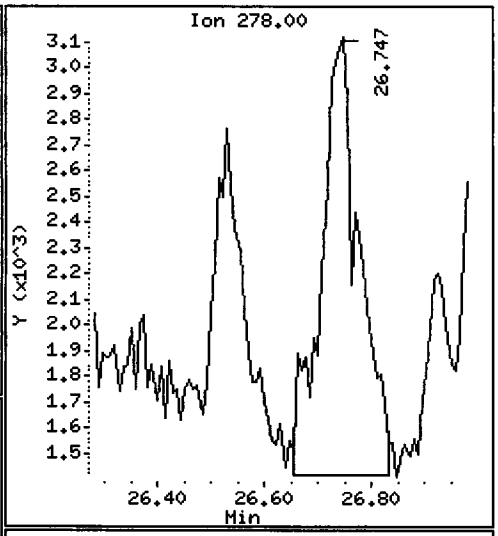
Column phase: ZB-5msi

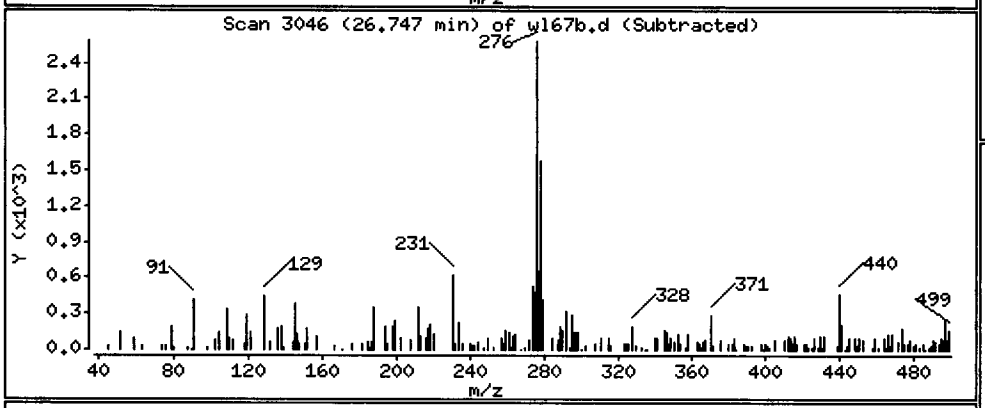
Column diameter: 0.25

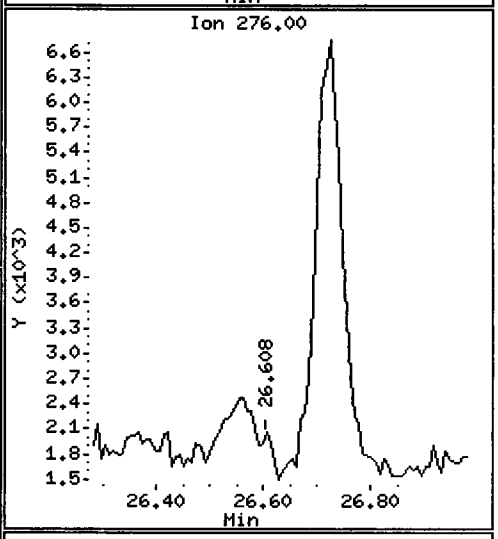
79 Dibenzo(a,h)anthracene

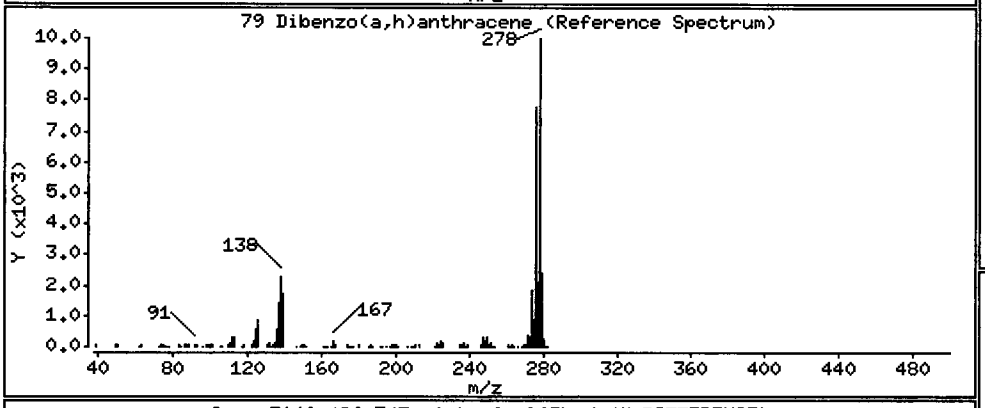
Concentration: 356.8 ug/kg

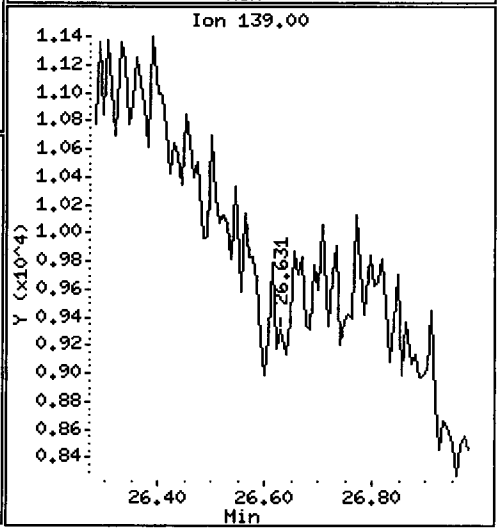


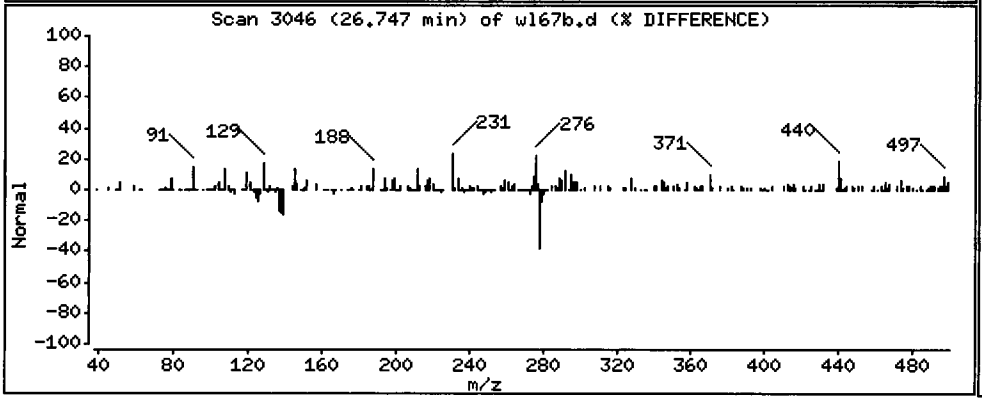












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

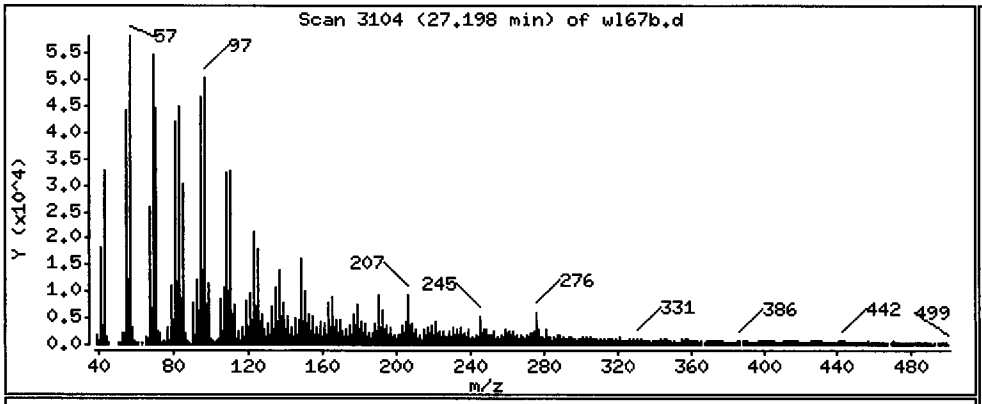
Operator: VTS/YZ

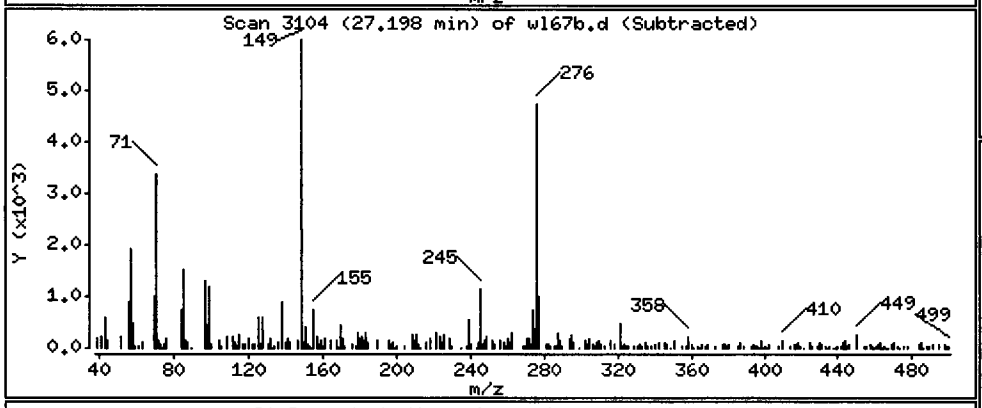
Column phase: ZB-5msi

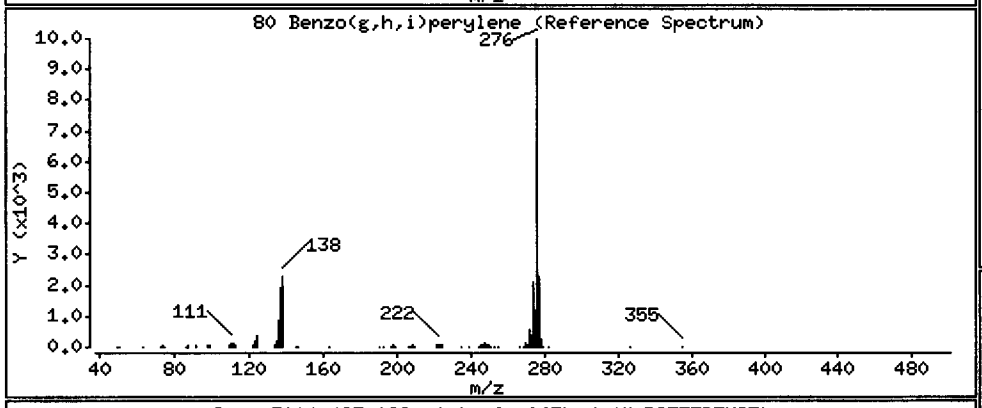
Column diameter: 0.25

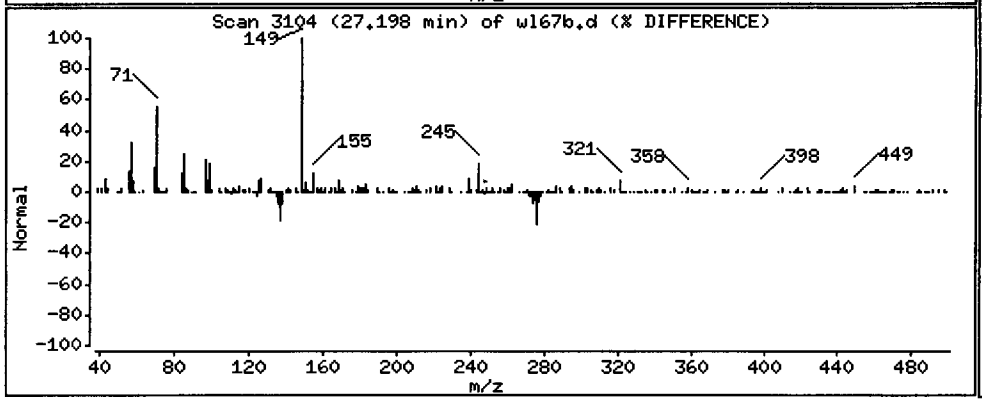
80 Benzo(g,h,i)perylene

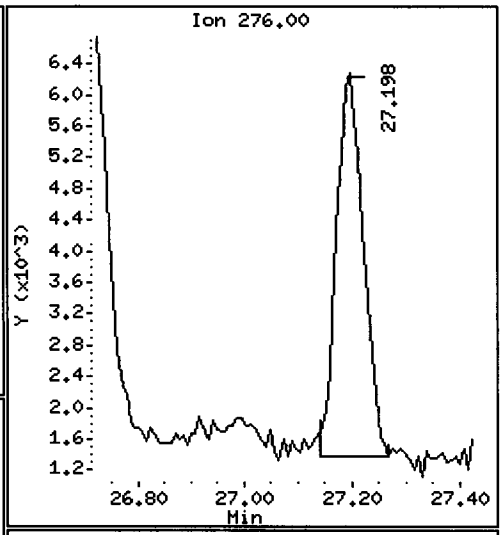
Concentration: 662.1 ug/kg

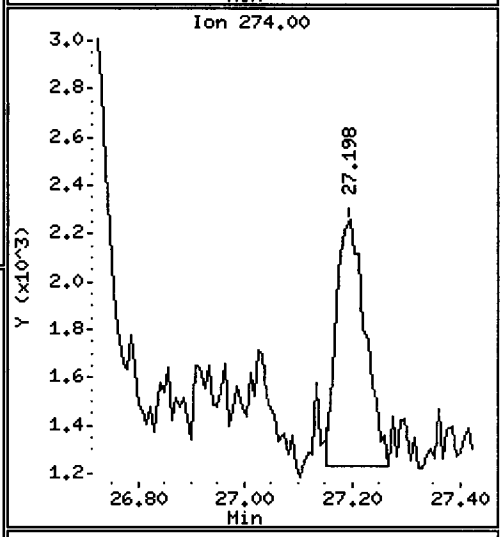


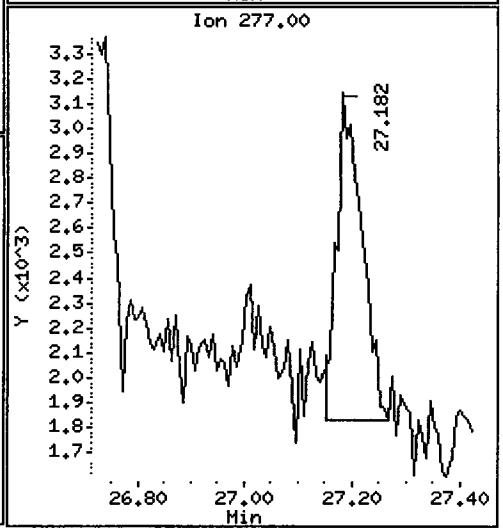












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

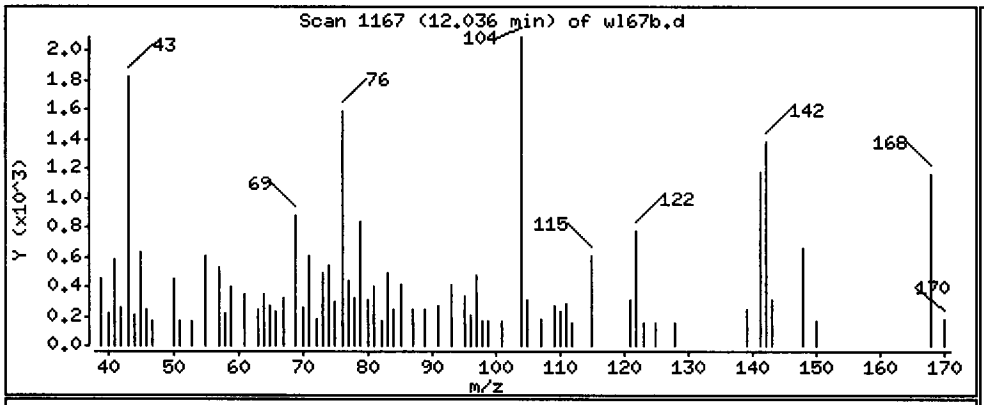
Operator: VTS/YZ

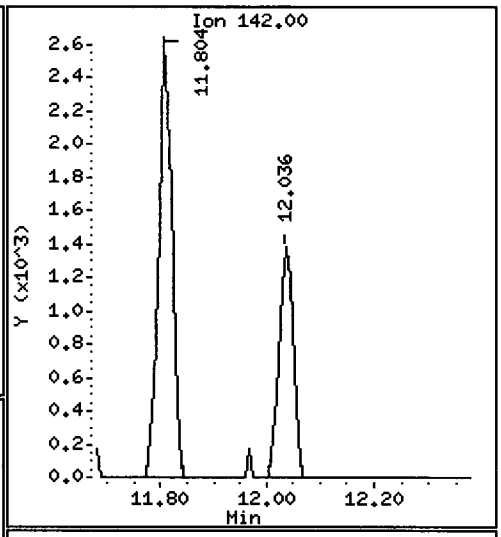
Column phase: ZB-5msi

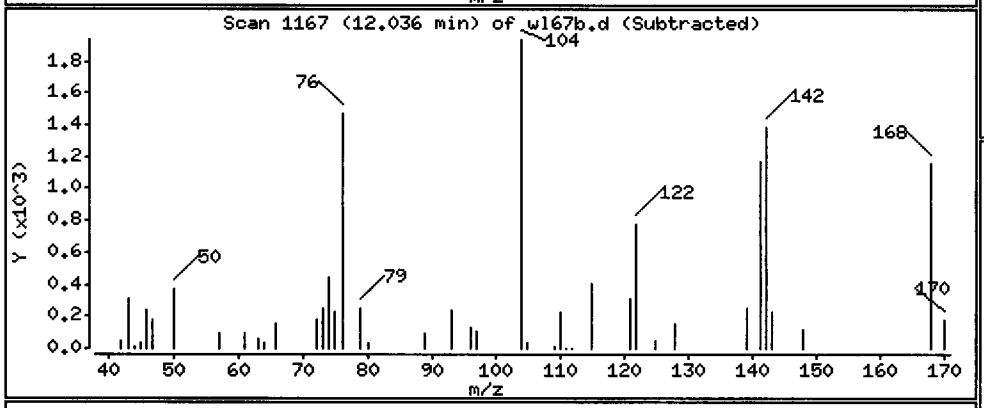
Column diameter: 0.25

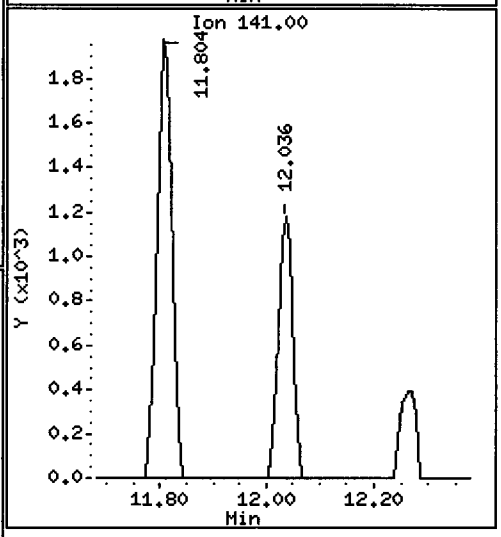
105 1-methylnaphthalene

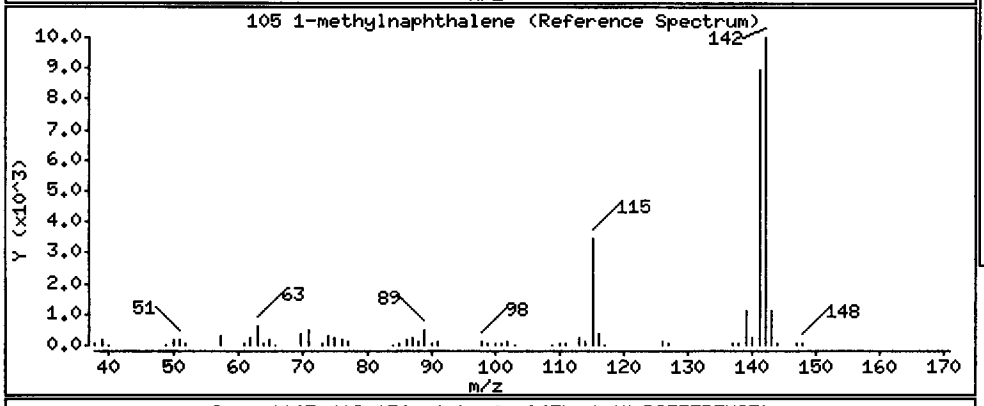
Concentration: 181.3 ug/kg

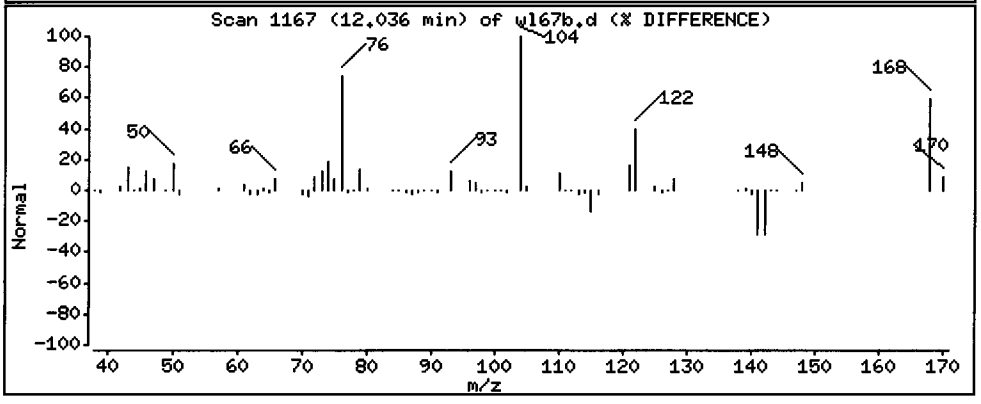












Data File: /chem1/nt10.i/20130424.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

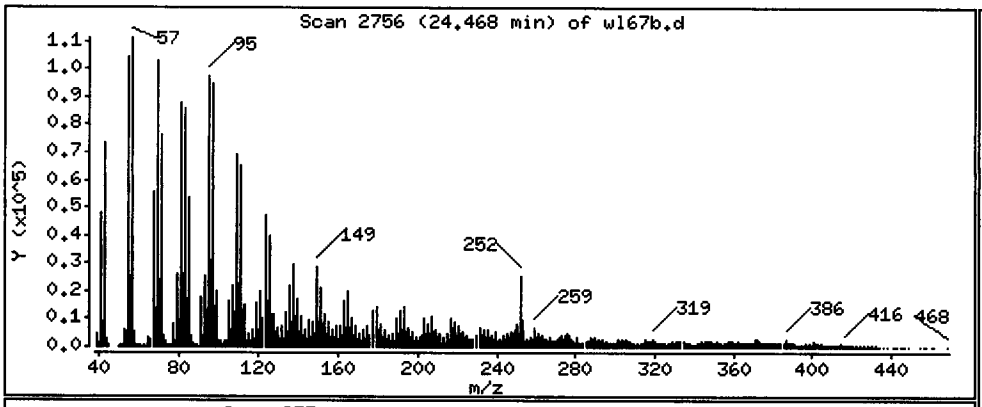
Operator: VTS/YZ

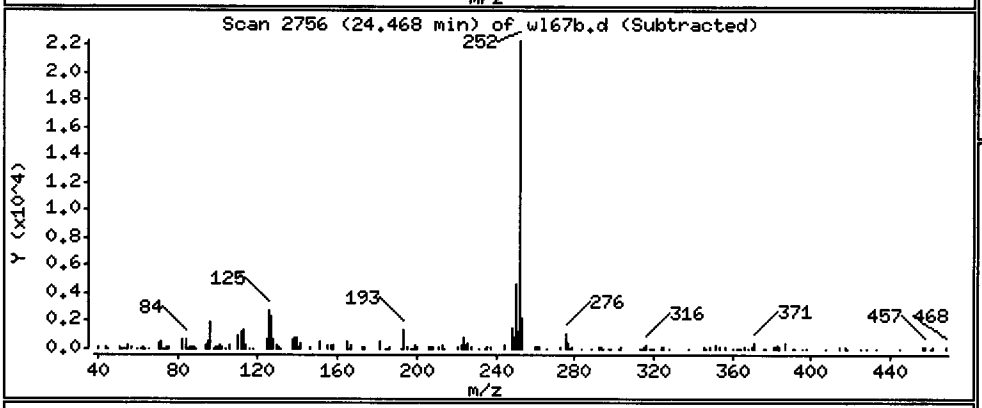
Column phase: ZB-5msi

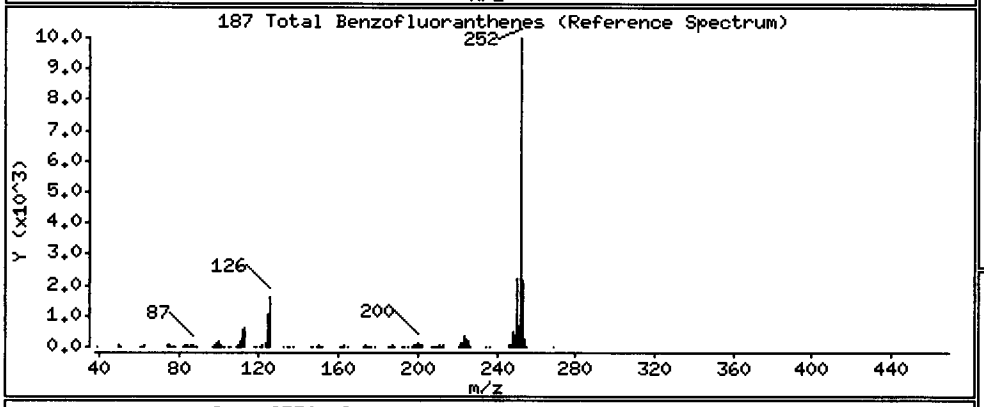
Column diameter: 0.25

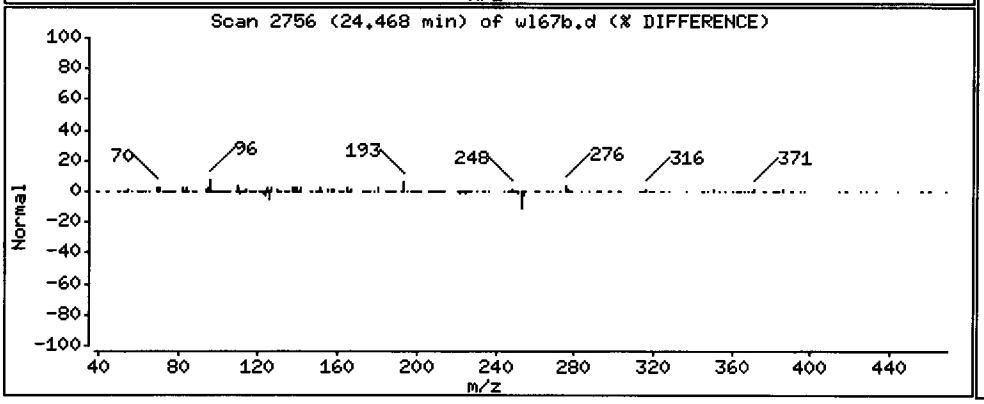
187 Total Benzofluoranthenes

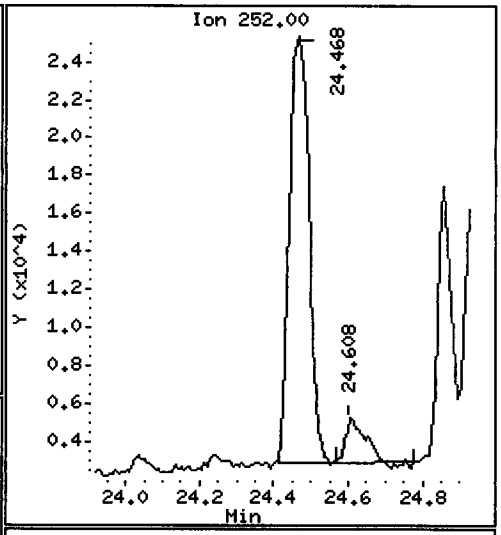
Concentration: 2958 ug/kg

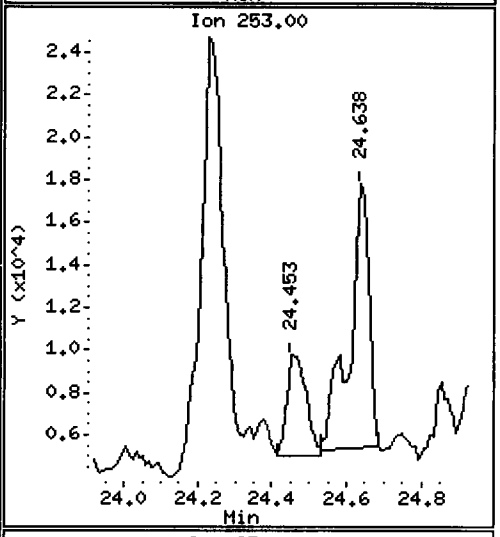


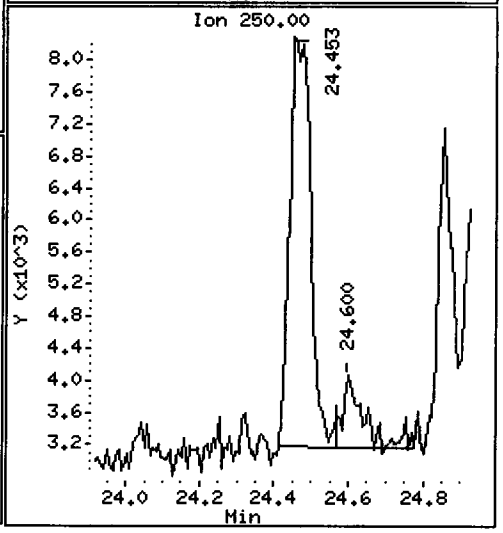






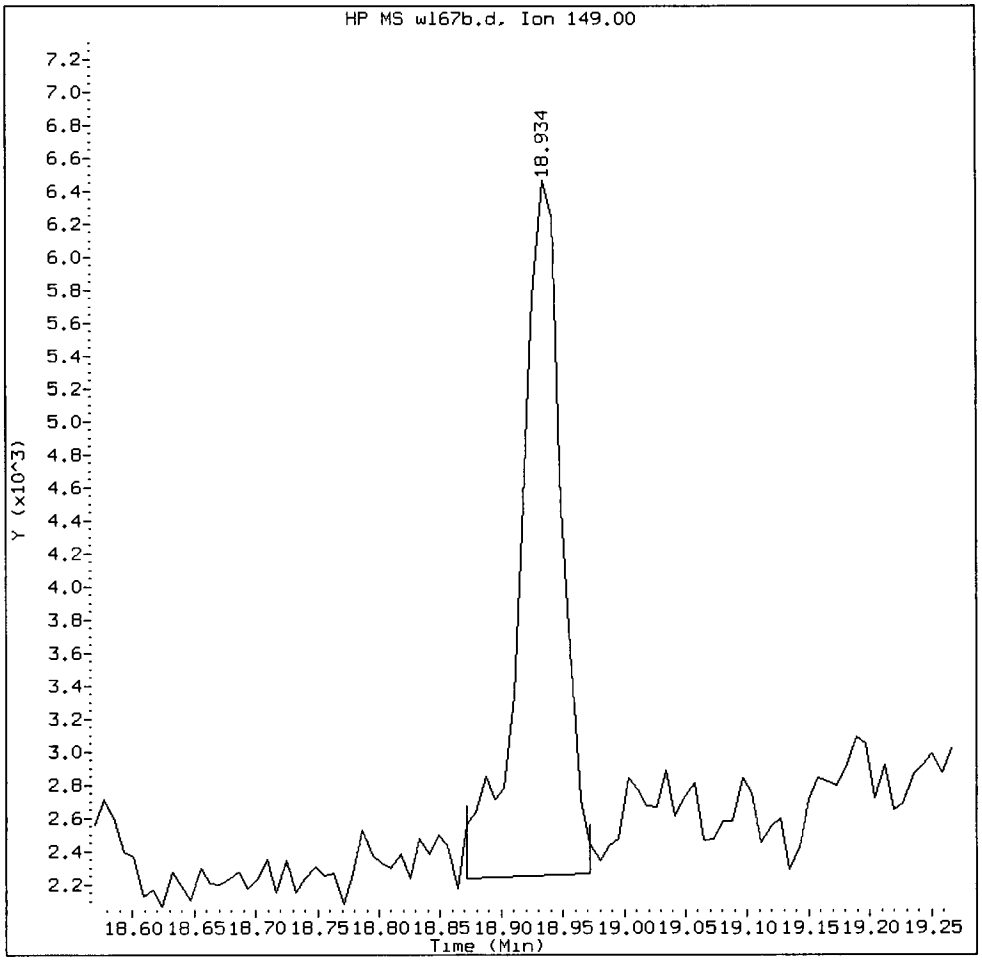






WL67B, /chem1/nt10.i/20130424.b/wl67b.d

Di-n-butylphthalate Amount: 0.23 Area: 9983



MANUAL INTEGRATION for Di-n-butylphthalate

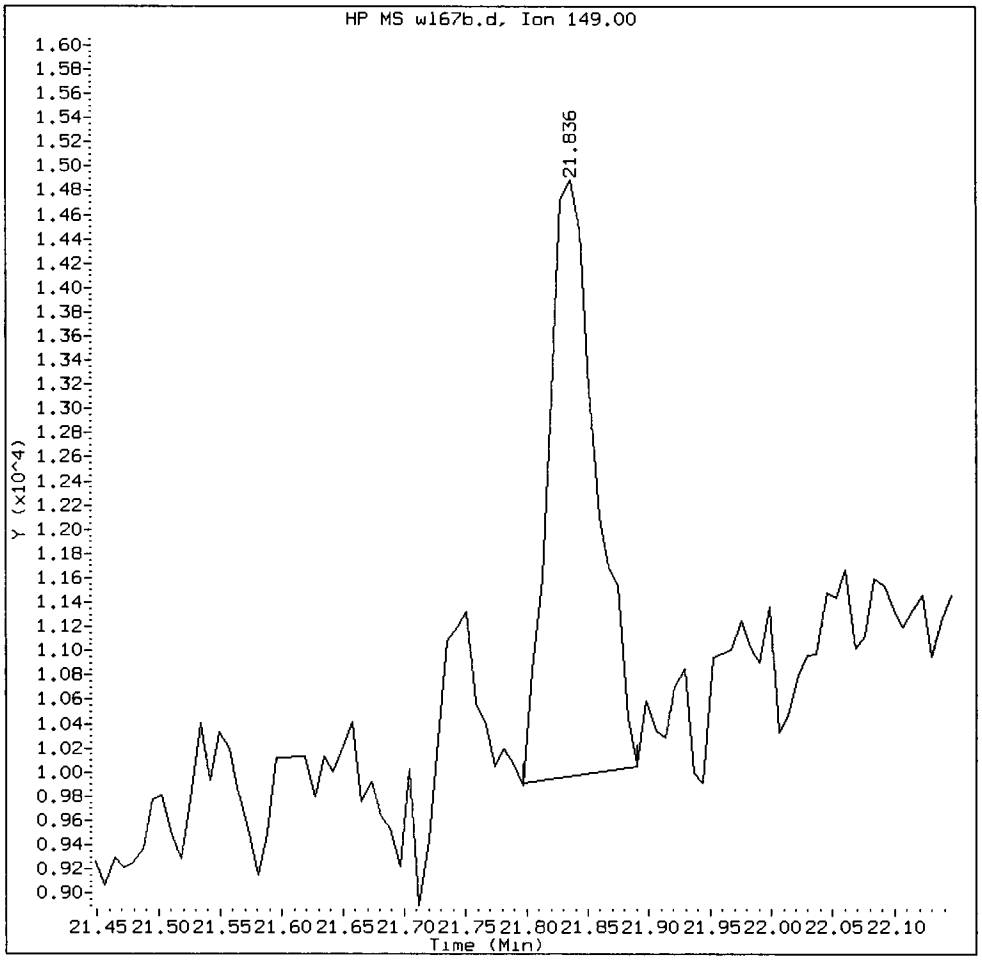
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL67B, /chem1/nt10.i/20130424.b/wl67b.d

Butylbenzylphthalate Amount: 0.73 Area: 13835



MANUAL INTEGRATION for Butylbenzylphthalate

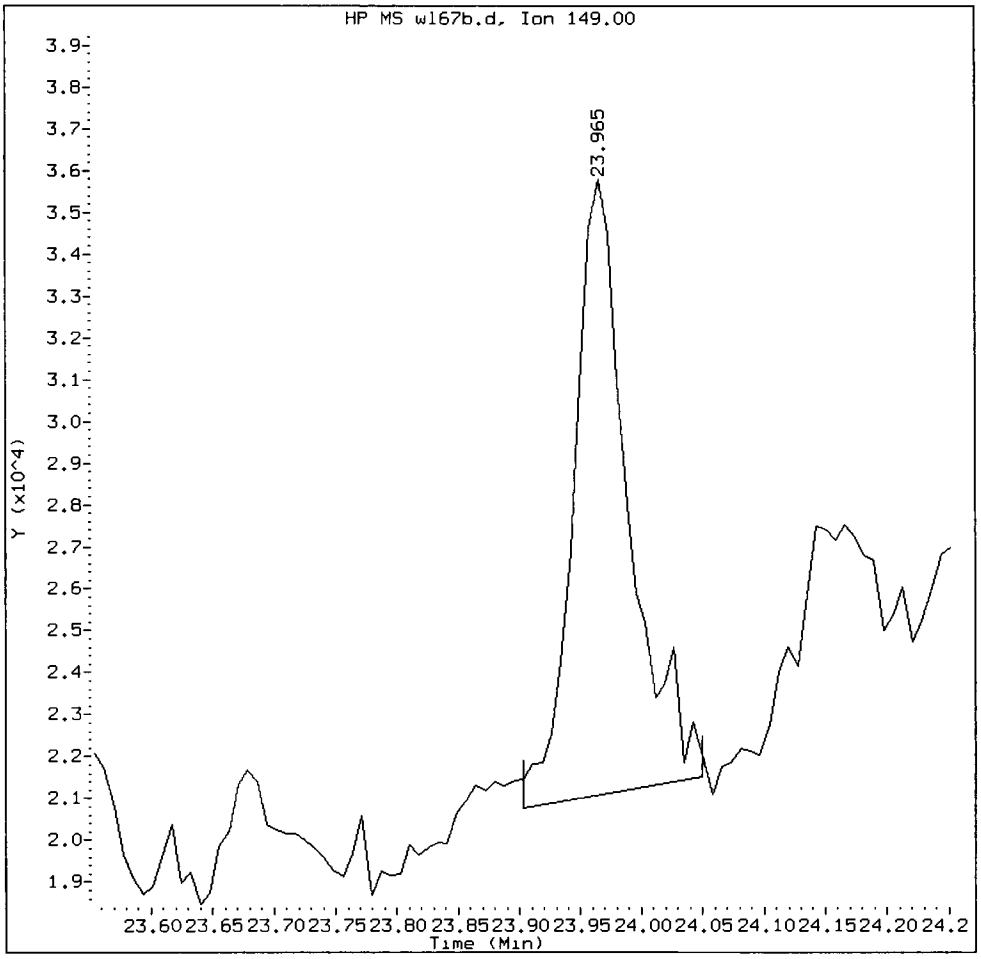
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL67B, /chem1/nt10.i/20130424.b/wl67b.d

Di-n-octylphthalate Amount: 0.85 Area: 46585



MANUAL INTEGRATION for Di-n-octylphthalate

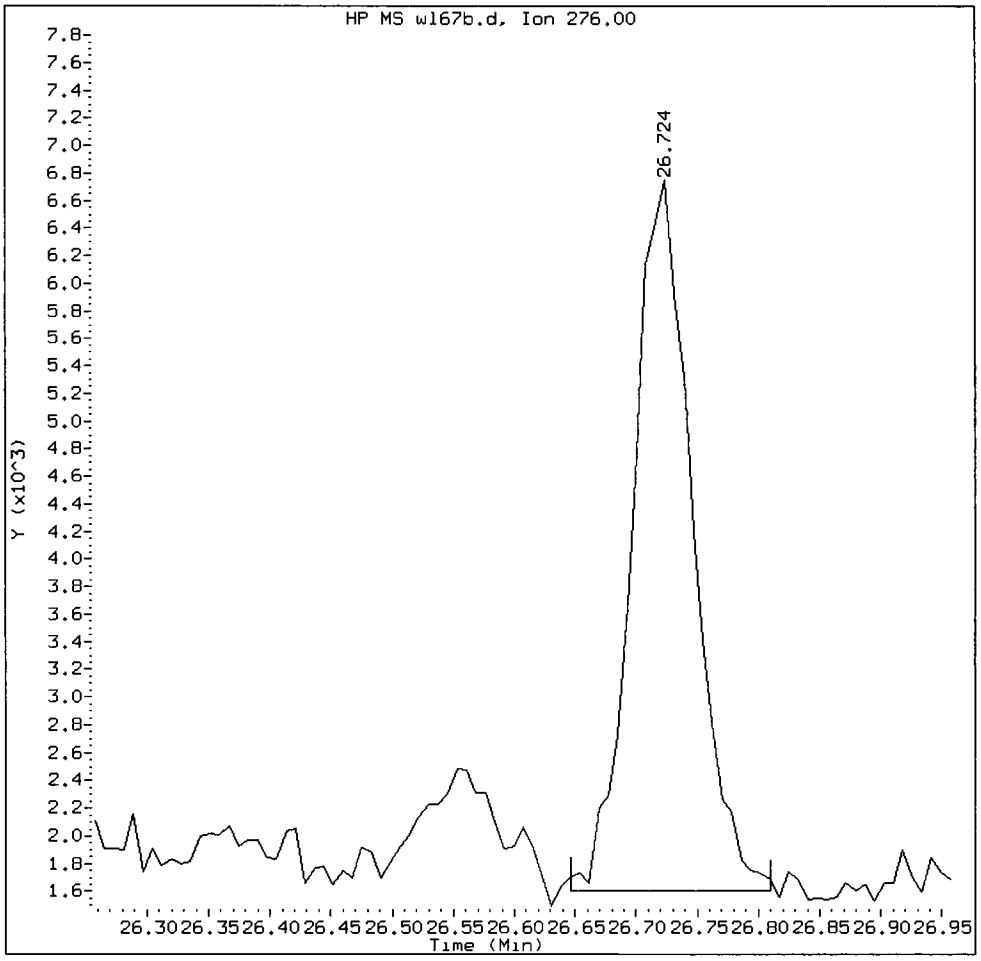
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KZ Date: 4/25/13

WL67B, /chem1/nt10.i/20130424.b/wl67b.d

Indeno(1,2,3-cd)pyrene Amount: 0.32 Area: 17658



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

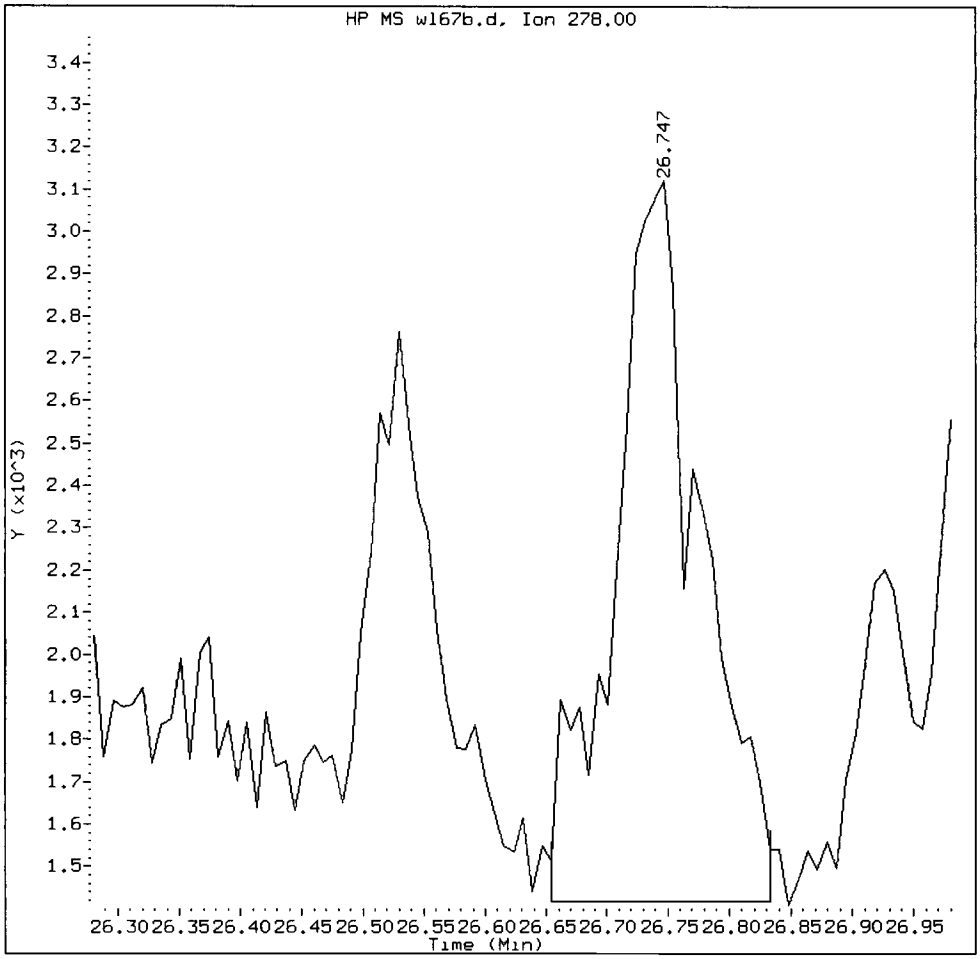
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL67B, /chem1/nt10.i/20130424.b/wl67b.d

Dibenzo(a,h)anthracene Amount: 0.20 Area: 8538



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: VJ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl67b.d

Lab ID: WL67B, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
24.468	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130425.b

Instrument: nt10.i Date: 25-APR-2013 Method: ABN.m

INITIAL CAL: 25-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 25-APR-2013

Compound	%D
Hexachlorocyclopentadiene	-34.4
2,4-Dinitrophenol	-20.2
Pentachlorophenol	-25.5
Benzidine	25.7
Retene	-100.0

Data File: /chem1/nt10.i/20130425.b/df0425.d

Date : 25-APR-2013 11:06

Client ID: DFTPP

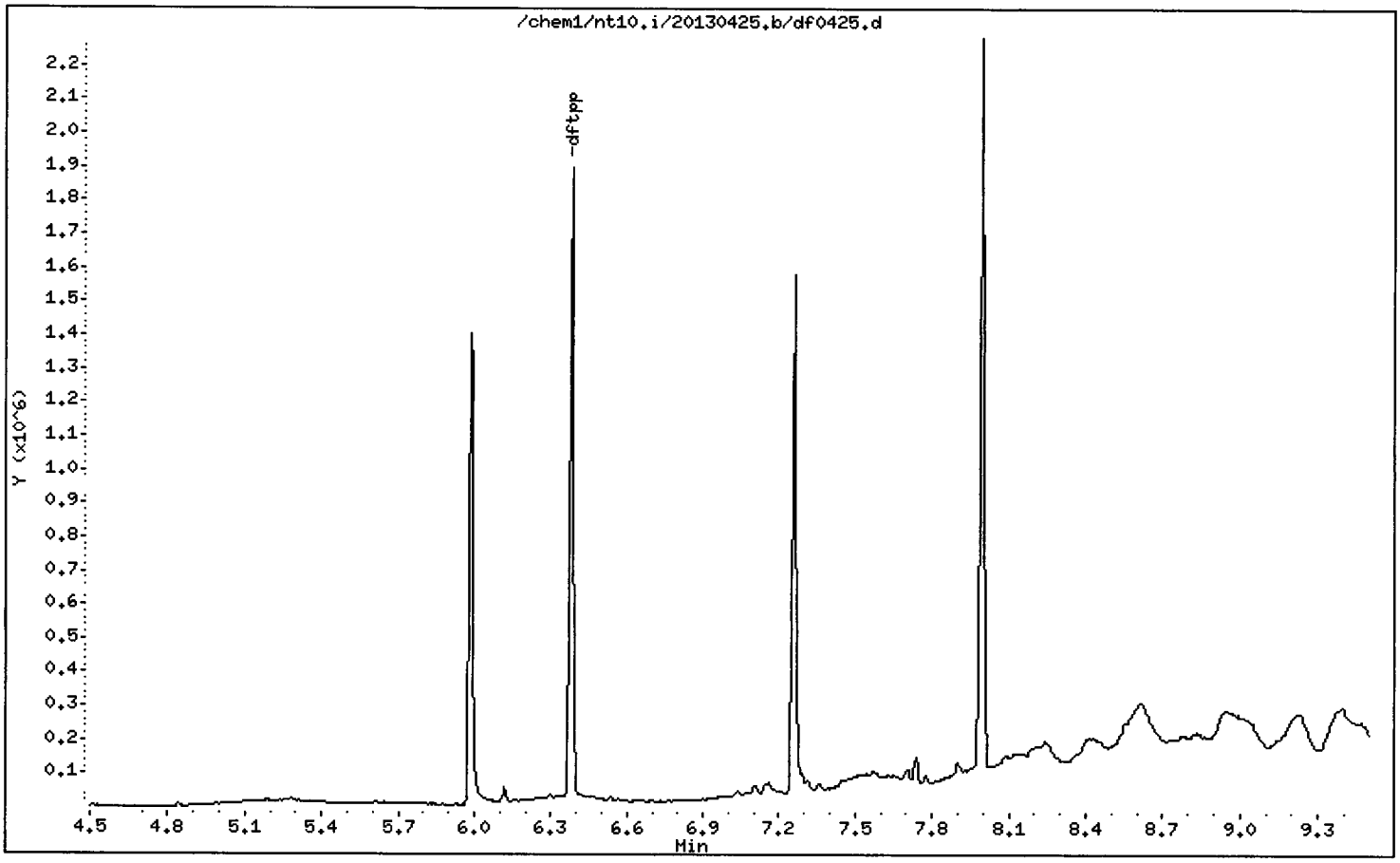
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130425.b/df0425.d

Date : 25-APR-2013 11:06

Client ID: DFTPP

Instrument: nt10.i

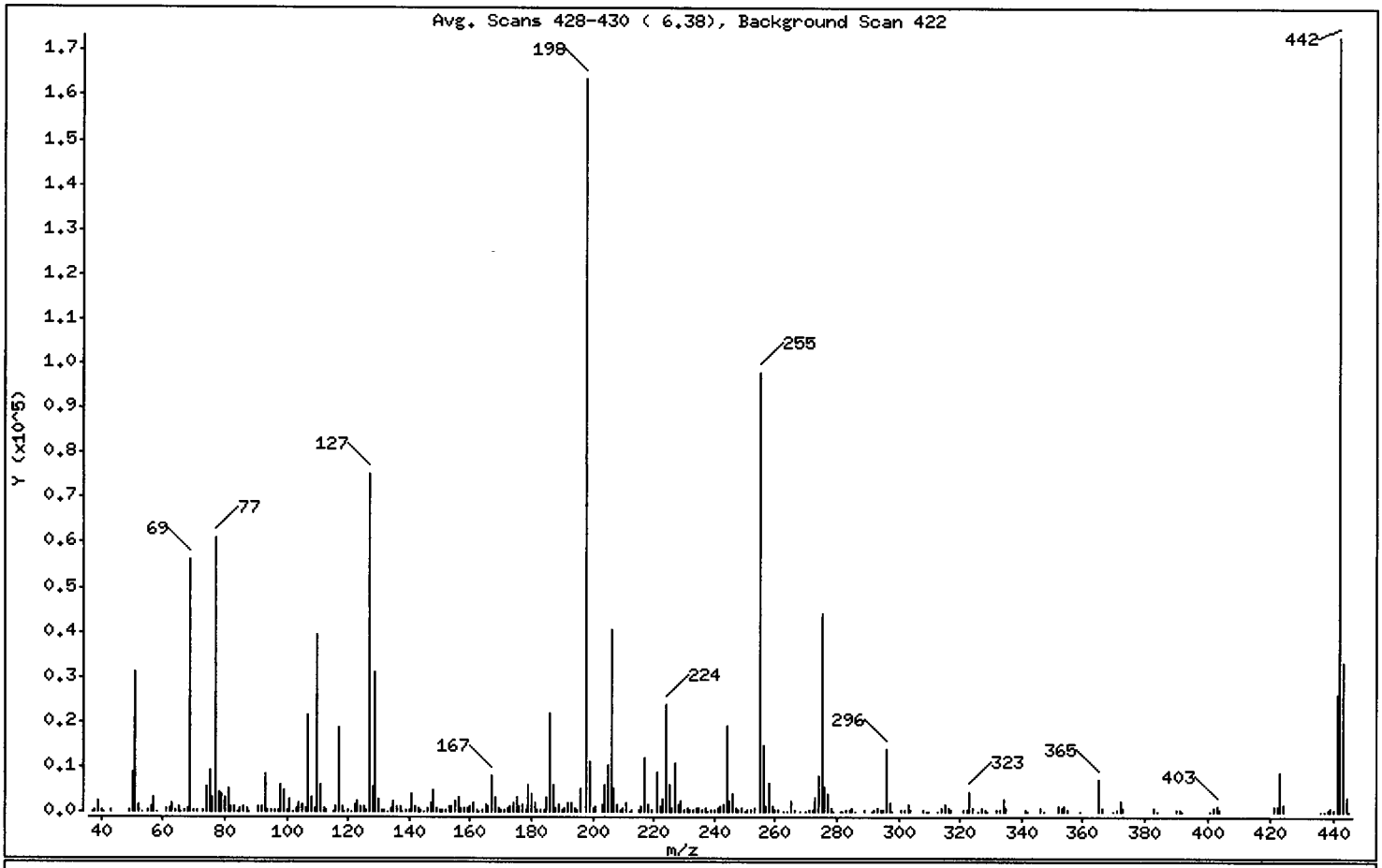
Sample Info: DFTPP

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	19.02
68	Less than 2.00% of mass 69	0.54 (1.58)
69	Mass 69 relative abundance	34.37
70	Less than 2.00% of mass 69	0.18 (0.53)
127	10.00 - 80.00% of mass 198	46.02
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.71
275	10.00 - 60.00% of mass 198	27.08
365	Greater than 1.00% of mass 198	4.34
441	0.01 - 24.00% of mass 442	16.17 (15.28)
442	50.00 - 200.00% of mass 198	105.82
443	15.00 - 24.00% of mass 442	20.35 (19.23)

Date : 25-APR-2013 11:06

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0425.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	109	126.00	285	204.00	6003	286.00	195
38.00	399	127.00	75368	205.00	10160	289.00	254
39.00	2426	128.00	5602	206.00	40576	290.00	137
40.00	269	129.00	31136	207.00	5189	291.00	107
41.00	37	130.00	2697	208.00	1500	292.00	268
43.00	244	131.00	574	209.00	420	293.00	885
49.00	262	132.00	309	210.00	856	294.00	240
50.00	8597	133.00	175	211.00	1837	295.00	342
51.00	31152	134.00	849	212.00	120	296.00	14042
52.00	1677	135.00	2480	213.00	249	297.00	1894
53.00	138	136.00	1119	214.00	54	298.00	72
55.00	363	137.00	1213	215.00	522	301.00	234
56.00	1261	138.00	191	216.00	1102	302.00	209
57.00	3269	139.00	225	217.00	11900	303.00	1653
58.00	169	140.00	431	218.00	1519	304.00	419
61.00	705	141.00	3813	219.00	269	308.00	283
62.00	660	142.00	1204	221.00	8767	309.00	54
63.00	2155	143.00	859	222.00	1289	310.00	192
64.00	299	144.00	292	223.00	2784	313.00	166
65.00	1153	145.00	198	224.00	24104	314.00	691
66.00	158	146.00	819	225.00	5811	315.00	1715
67.00	247	147.00	1968	226.00	741	316.00	905
68.00	888	148.00	4654	227.00	10804	317.00	225
69.00	56288	149.00	820	228.00	1561	321.00	464
70.00	301	150.00	328	229.00	2200	322.00	335
71.00	270	151.00	580	230.00	340	323.00	4263
73.00	470	152.00	446	231.00	967	324.00	825
74.00	5761	153.00	1394	232.00	208	326.00	54
75.00	9080	154.00	997	233.00	320	327.00	939
76.00	3011	155.00	2354	234.00	736	328.00	481
77.00	60776	156.00	3168	235.00	895	329.00	59
78.00	4216	157.00	696	236.00	593	332.00	343
79.00	3993	158.00	843	237.00	937	333.00	468
80.00	3282	159.00	703	238.00	157	334.00	2866
81.00	5005	160.00	1267	239.00	535	335.00	824

Date : 25-APR-2013 11:06

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0425.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 302

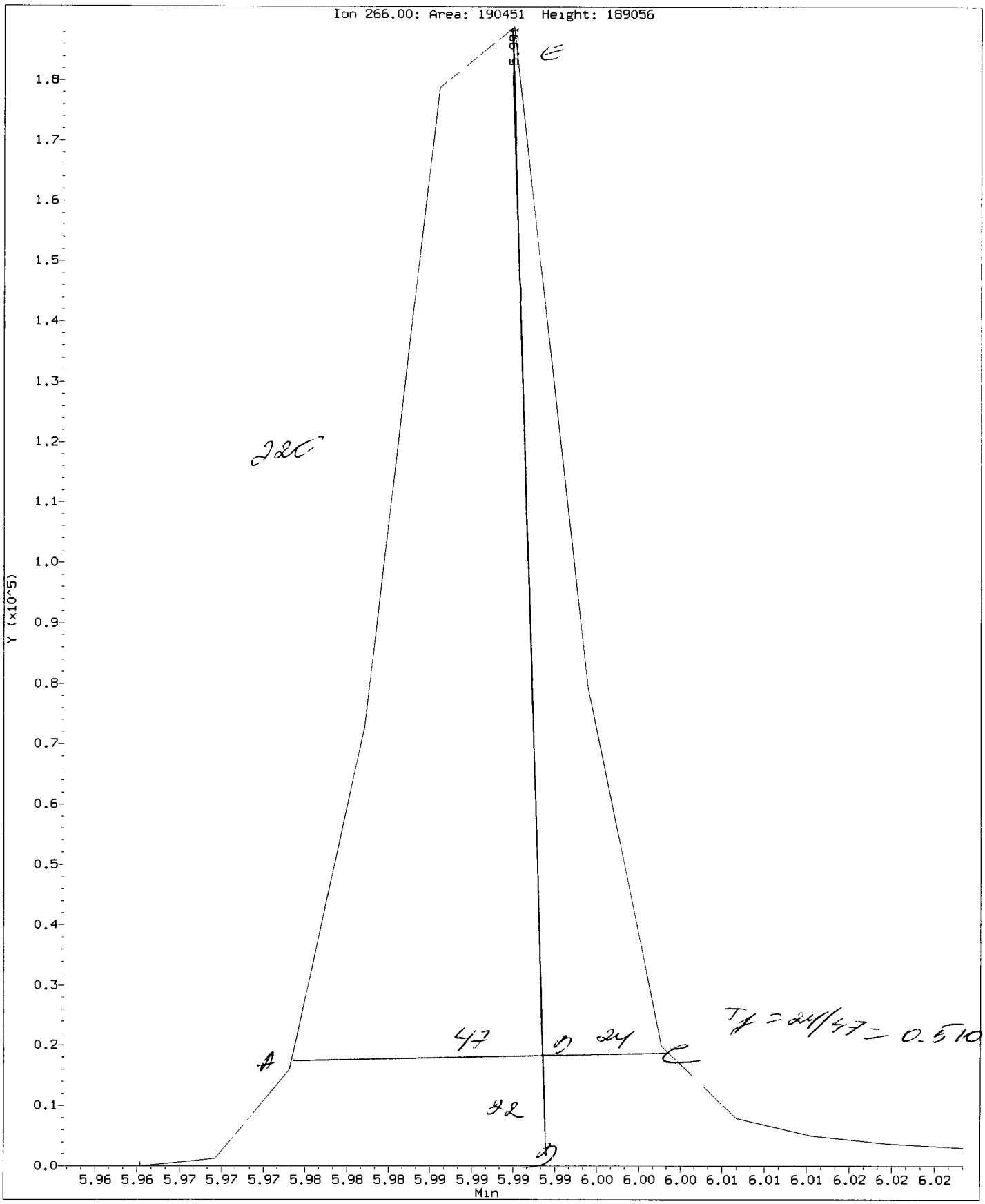
m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	1084	161.00	1879	240.00	369	341.00	580
83.00	1249	162.00	574	241.00	656	342.00	120
84.00	154	163.00	185	242.00	1380	346.00	993
85.00	881	164.00	358	243.00	1493	347.00	158
86.00	1386	165.00	1520	244.00	19040	352.00	1361
87.00	655	166.00	1332	245.00	2529	353.00	988
88.00	189	167.00	7797	246.00	3892	354.00	1300
91.00	1125	168.00	3187	247.00	931	355.00	295
92.00	1261	169.00	605	248.00	246	359.00	52
93.00	8191	170.00	265	249.00	780	365.00	7102
94.00	566	171.00	405	250.00	188	366.00	911
95.00	429	172.00	765	251.00	248	370.00	138
96.00	403	173.00	1028	252.00	260	371.00	394
97.00	385	174.00	1808	253.00	691	372.00	2318
98.00	6166	175.00	3047	255.00	97896	373.00	605
99.00	4626	176.00	1017	256.00	14796	383.00	732
100.00	423	177.00	1568	257.00	1184	384.00	137
101.00	2828	178.00	464	258.00	6323	390.00	357
102.00	151	179.00	6130	259.00	1098	391.00	235
103.00	906	180.00	4045	260.00	267	392.00	67
104.00	1851	181.00	1918	261.00	227	401.00	163
105.00	1666	182.00	361	263.00	197	402.00	942
106.00	715	183.00	289	264.00	139	403.00	1365
107.00	21648	184.00	588	265.00	2576	404.00	512
108.00	3370	185.00	3032	266.00	339	421.00	1290
109.00	843	186.00	21760	268.00	110	422.00	1167
110.00	39456	187.00	6119	270.00	88	423.00	8631
111.00	5887	188.00	669	271.00	294	424.00	1677
112.00	687	189.00	1422	272.00	365	425.00	74
113.00	241	190.00	354	273.00	3386	436.00	59
115.00	65	191.00	697	274.00	8044	437.00	167
116.00	1251	192.00	2048	275.00	44344	438.00	513
117.00	18712	193.00	2081	276.00	5715	439.00	777
118.00	1389	194.00	647	277.00	4058	440.00	315
119.00	148	195.00	357	278.00	686	441.00	26488

Data File: df0425.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	428	196.00	5052	279.00	194	442.00	173312
121.00	96	198.00	163776	281.00	177	443.00	33328
122.00	1483	199.00	10991	282.00	180	444.00	3120
123.00	2325	200.00	911	283.00	503	445.00	134
124.00	1023	201.00	1118	284.00	294		
125.00	1073	203.00	1446	285.00	707		

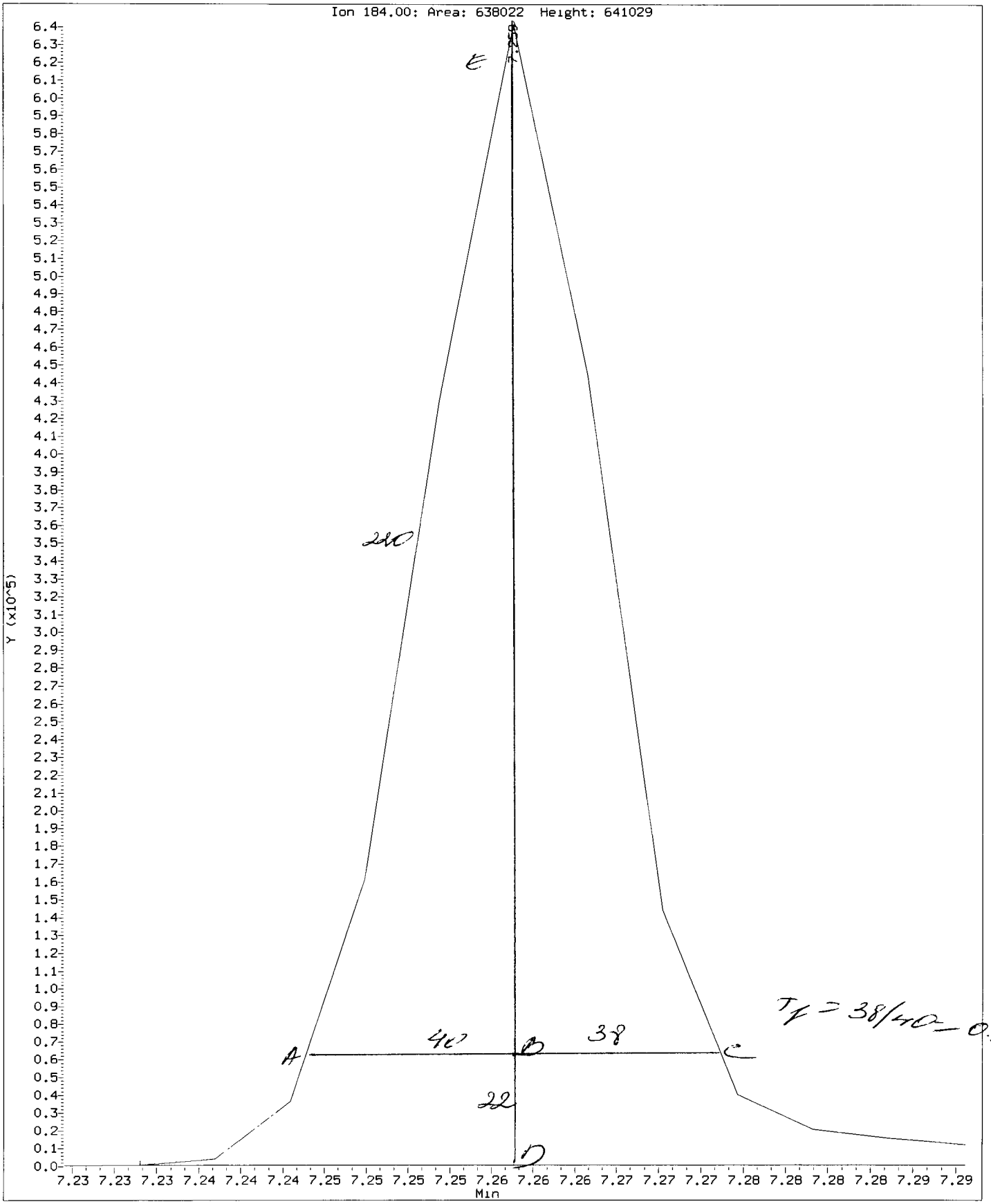
Data File: /chem1/nt10.1/20130425.b/ddt.b/df0425.d
Injection Date: 25-APR-2013 11:06
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130425.b/ddt.b/df0425.d
Injection Date: 25-APR-2013 11:06
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/20130425.b/ddt.b/df0425.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130425.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 25-APR-2013 11:06 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.991	190451
Benzidine	7.259	638022
4,4'-DDE	7.451	1722
4,4'-DDD	7.740	14944
4,4'-DDT	7.997	422951

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1722 + 14944) * 100}{(\ 1722 + 14944 + 422951)}$$

DDT Percent Breakdown = 3.8 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 25-APR-2013 11:21
Lab File ID: cc0425.d Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Analysis Type: Init. Cal. Times: 12:59 17:16
Lab Sample ID: CC0425 Quant Type: ISTD
Method: /chem1/nt10.i/20130425.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.27898	1.26845	1.26845	0.010	-0.82339	20.00000	Averaged	
$ 2 Phenol-d5	1.58709	1.58772	1.58772	0.010	0.03959	20.00000	Averaged	
3 Phenol	1.67046	1.66274	1.66274	0.100	-0.46247	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.37422	1.28962	1.28962	0.010	-6.15650	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.27098	1.20855	1.20855	0.700	-4.91139	20.00000	Averaged	
6 2-Chlorophenol	1.45366	1.35223	1.35223	0.800	-6.97753	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.58180	1.43136	1.43136	0.010	-9.51048	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.56627	1.42949	1.42949	0.010	-8.73274	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00989	0.94349	0.94349	0.010	-6.57501	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.50604	1.38485	1.38485	0.010	-8.04668	20.00000	Averaged	
11 Benzyl alcohol	0.79941	0.72477	0.72477	0.010	-9.33691	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	0.44716	0.41733	0.41733	0.010	-6.67225	20.00000	Averaged	
13 2-Methylphenol	1.26098	1.26038	1.26038	0.700	-0.04710	20.00000	Averaged	
17 Hexachloroethane	0.61907	0.60139	0.60139	0.300	-2.85625	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.84248	0.83065	0.83065	0.500	-1.40453	20.00000	Averaged	
15 4-Methylphenol	1.31137	1.29887	1.29887	0.600	-0.95294	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.36919	0.37498	0.37498	0.010	1.57036	20.00000	Averaged	
19 Nitrobenzene	0.35004	0.33793	0.33793	0.200	-3.45875	20.00000	Averaged	
20 Isophorone	0.61012	0.65272	0.65272	0.300	6.98259	20.00000	Averaged	
21 2-Nitrophenol	0.20568	0.21106	0.21106	0.100	2.61821	20.00000	Averaged	
22 2,4-Dimethylphenol	0.35058	0.36452	0.36452	0.200	3.97718	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.38425	0.38990	0.38990	0.050	1.47115	20.00000	Averaged	
24 Benzoic acid	17.21980	20.00000	0.25751	0.010	-13.90098	20.00000	Quadratic	
25 2,4-Dichlorophenol	0.30640	0.33450	0.33450	0.100	9.17175	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.34870	0.32022	0.32022	0.010	-8.16838	20.00000	Averaged	
28 Naphthalene	1.04083	0.96526	0.96526	0.100	-7.26135	20.00000	Averaged	
29 4-Chloroaniline	0.41889	0.39255	0.39255	0.010	-6.28655	20.00000	Averaged	
30 Hexachlorobutadiene	0.21732	0.20986	0.20986	0.010	-3.42909	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.29615	0.33772	0.33772	0.200	14.03987	20.00000	Averaged	
32 2-Methylnaphthalene	0.68720	0.68002	0.68002	0.300	-1.04534	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.45113	0.29614	0.29614	0.001	-34.35537	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.40085	0.39911	0.39911	0.200	-0.43468	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.42597	0.42816	0.42816	0.200	0.51355	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.37225	1.25702	1.25702	0.010	-8.39753	20.00000	Averaged	
37 2-Chloronaphthalene	1.10490	1.00683	1.00683	0.700	-8.87635	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0425.d
Analysis Type:
Lab Sample ID: CC0425
Method: /chem1/nt10.i/20130425.b/ABN.m

Injection Date: 25-APR-2013 11:21
Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Init. Cal. Times: 12:59 17:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.25914	0.28703	0.28703	0.010	10.76298	20.00000	Averaged	
39 Dimethylphthalate	1.20981	1.13409	1.13409	0.010	-6.25922	20.00000	Averaged	
40 Acenaphthylene	1.80186	1.66511	1.66511	0.900	-7.58932	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.27639	0.27485	0.27485	0.100	-0.55795	20.00000	Averaged	
43 3-Nitroaniline	0.25523	0.27116	0.27116	0.010	6.24118	20.00000	Averaged	
44 Acenaphthene	1.10485	1.05494	1.05494	0.100	-4.51771	20.00000	Averaged	
45 2,4-Dinitrophenol	15.95650	20.00000	0.19192	0.030	-20.21748	20.00000	Quadratic	<-
46 Dibenzofuran	1.53658	1.49730	1.49730	0.800	-2.55678	20.00000	Averaged	
47 4-Nitrophenol	8.78120	10.00000	0.15257	0.010	-12.18796	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.37372	0.37326	0.37326	0.200	-0.12202	20.00000	Averaged	
50 Diethylphthalate	1.26733	1.19699	1.19699	0.010	-5.55018	20.00000	Averaged	
49 Fluorene	1.30516	1.22721	1.22721	0.100	-5.97274	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.60824	0.56997	0.56997	0.100	-6.29207	20.00000	Averaged	
52 4-Nitroaniline	0.26944	0.26982	0.26982	0.010	0.14070	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	0.16018	0.16536	0.16536	0.001	3.23104	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.48183	0.42974	0.42974	0.010	-10.81101	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.25526	0.22547	0.22547	0.010	-11.67116	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22313	0.21350	0.21350	0.100	-4.31469	20.00000	Averaged	
57 Hexachlorobenzene	0.28001	0.25088	0.25088	0.100	-10.40405	20.00000	Averaged	
58 Pentachlorophenol	0.18673	0.13920	0.13920	0.010	-25.45493	20.00000	Averaged	<-
60 Phenanthrene	1.06632	1.00237	1.00237	0.700	-5.99659	20.00000	Averaged	
61 Anthracene	1.07365	1.02360	1.02360	0.700	-4.66140	20.00000	Averaged	
62 Carbazole	0.71710	0.81712	0.81712	0.010	13.94672	20.00000	Averaged	
63 Di-n-butylphthalate	1.14571	1.19233	1.19233	0.010	4.06849	20.00000	Averaged	
64 Fluoranthene	1.22799	1.19750	1.19750	0.600	-2.48318	20.00000	Averaged	
65 Pyrene	1.13938	1.22557	1.22557	0.600	7.56473	20.00000	Averaged	
$ 66 Terphenyl-d14	0.76828	0.75937	0.75937	0.010	-1.16003	20.00000	Averaged	
67 Butylbenzylphthalate	0.43214	0.45686	0.45686	0.010	5.72147	20.00000	Averaged	
68 Benzo(a)anthracene	1.11613	1.01021	1.01021	0.700	-9.48932	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.46632	0.52200	0.52200	0.010	11.93932	20.00000	Averaged	
71 Chrysene	1.01092	0.91934	0.91934	0.700	-9.05945	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.52819	0.51295	0.51295	0.010	-2.88594	20.00000	Averaged	
73 Di-n-octylphthalate	0.97573	0.83444	0.83444	0.010	-14.48071	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.15936	1.05318	1.05318	0.700	-9.15798	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25249	1.23475	1.23475	0.700	-1.41597	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 25-APR-2013 11:21
Lab File ID: cc0425.d Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Analysis Type: Init. Cal. Times: 12:59 17:16
Lab Sample ID: CC0425 Quant Type: ISTD
Method: /chem1/nt10.i/20130425.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.00265	0.95116	0.95116	0.700	-5.13472	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.23647	1.18140	1.18140	0.500	-4.45320	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.97912	0.95027	0.95027	0.400	-2.94668	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.06086	0.98453	0.98453	0.500	-7.19506	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.76098	0.66152	0.66152	0.010	-13.07082	20.00000	Averaged	
91 Aniline	3.60472	3.69213	3.69213	0.010	2.42481	20.00000	Averaged	
93 Benzidine	12.56776	10.00000	0.23684	0.010	25.67762	20.00000	Quadratic	<-
103 Pyridine	0.64909	0.57367	0.57367	0.010	-11.62029	20.00000	Averaged	
105 1-methylnaphthalene	0.63035	0.62649	0.62649	0.010	-0.61342	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.14954	1.12254	1.12254	0.010	-2.34852	20.00000	Averaged	
187 Total Benzofluoranthenes	1.14121	1.06646	1.06646	0.010	-6.55047	20.00000	Averaged	
99 Perylene	1.15229	1.08698	1.08698	0.010	-5.66829	20.00000	Averaged	
98 Retene	++++	++++	++++	0.010	++++	20.00000	Quadratic	<-
120 2,3,4,6-Tetrachlorophenol	0.37257	0.34558	0.34558	0.010	-7.24234	20.00000	Averaged	

YZ 4/25/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130425.b/cc0425.d
Lab Smp Id: CC0425
Inj Date : 25-APR-2013 11:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0425
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130425.b/ABN.m
Meth Date : 25-Apr-2013 15:09 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	5.444	5.444	(0.710)	55229	5.00000	4.959
$ 2	Phenol-d5	99	7.167	7.167	(0.935)	69130	5.00000	5.002
3	Phenol	94	7.190	7.190	(0.938)	72396	5.00000	4.977
$ 5	2-Chlorophenol-d4	132	7.314	7.314	(0.955)	56150	5.00000	4.692
4	Bis(2-Chloroethyl)ether	93	7.260	7.260	(0.947)	52621	5.00000	4.754
6	2-Chlorophenol	128	7.337	7.337	(0.958)	58876	5.00000	4.651
7	1,3-Dichlorobenzene	146	7.584	7.584	(0.990)	62322	5.00000	4.524
* 8	1,4-Dichlorobenzene-d4	152	7.662	7.662	(1.000)	34832	4.00000	
9	1,4-Dichlorobenzene	146	7.693	7.693	(1.004)	62241	5.00000	4.563
$ 10	1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.048)	41080	5.00000	4.671
12	1,2-Dichlorobenzene	146	8.058	8.058	(1.052)	60297	5.00000	4.598
11	Benzyl alcohol	108	8.027	8.027	(1.048)	31557	5.00000	4.533
14	2,2'-oxybis(1-Chloropropane)	121	8.337	8.337	(1.088)	18170	5.00000	4.666
13	2-Methylphenol	108	8.329	8.329	(1.087)	54877	5.00000	4.998
17	Hexachloroethane	117	8.663	8.663	(1.131)	26184	5.00000	4.857
16	N-Nitroso-di-n-propylamine	70	8.609	8.609	(1.124)	36166	5.00000	4.930
15	4-Methylphenol	108	8.632	8.632	(1.127)	56553	5.00000	4.952
$ 18	Nitrobenzene-d5	82	8.826	8.826	(0.860)	59804	5.00000	5.079
19	Nitrobenzene	77	8.857	8.857	(0.863)	53895	5.00000	4.827
20	Isophorone	82	9.354	9.354	(0.911)	104099	5.00000	5.349
21	2-Nitrophenol	139	9.532	9.532	(0.929)	33661	5.00000	5.131
22	2,4-Dimethylphenol	107	9.710	9.710	(0.946)	116273	10.0000	10.40
23	Bis(2-Chloroethoxy)methane	93	9.880	9.880	(0.962)	62183	5.00000	5.074
24	Benzoic acid	105	10.041	10.041	(0.978)	164275	20.0000	17.22
25	2,4-Dichlorophenol	162	10.049	10.049	(0.979)	106696	10.0000	10.92
26	1,2,4-Trichlorobenzene	180	10.196	10.196	(0.993)	51069	5.00000	4.592
* 27	Naphthalene-d8	136	10.265	10.265	(1.000)	127588	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	10.312	10.312	(1.004)	153944	5.00000	4.637
	29 4-Chloroaniline	127	10.520	10.520	(1.025)	125213	10.0000	9.371
	30 Hexachlorobutadiene	225	10.736	10.736	(1.046)	33470	5.00000	4.829
	31 4-Chloro-3-methylphenol	107	11.657	11.657	(1.136)	107724	10.0000	11.40
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	108453	5.00000	4.948
	33 Hexachlorocyclopentadiene	237	12.323	12.323	(0.873)	61701	10.0000	6.564
	34 2,4,6-Trichlorophenol	196	12.524	12.524	(0.888)	83154	10.0000	9.957
	35 2,4,5-Trichlorophenol	196	12.617	12.617	(0.894)	89207	10.0000	10.05
$	36 2-Fluorobiphenyl	172	12.686	12.686	(0.899)	130950	5.00000	4.580
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	104886	5.00000	4.556
	38 2-Nitroaniline	65	13.190	13.190	(0.935)	59802	10.0000	11.08
	39 Dimethylphthalate	163	13.708	13.708	(0.971)	118144	5.00000	4.687
	40 Acenaphthylene	152	13.762	13.762	(0.975)	173463	5.00000	4.621
	41 2,6-Dinitrotoluene	165	13.824	13.824	(0.980)	57264	10.0000	9.944
*	42 Acenaphthene-d10	164	14.110	14.110	(1.000)	83340	4.00000	
	43 3-Nitroaniline	138	14.110	14.110	(1.000)	56496	10.0000	10.62
	44 Acenaphthene	153	14.172	14.172	(1.004)	109898	5.00000	4.774
	45 2,4-Dinitrophenol	184	14.350	14.350	(1.017)	79975	20.0000	15.96
	46 Dibenzofuran	168	14.536	14.536	(1.030)	155981	5.00000	4.872
	47 4-Nitrophenol	109	14.628	14.628	(1.037)	31788	10.0000	8.781
	48 2,4-Dinitrotoluene	165	14.682	14.682	(1.041)	77768	10.0000	9.988
	50 Diethylphthalate	149	15.286	15.286	(1.083)	124696	5.00000	4.722
	49 Fluorene	166	15.293	15.293	(1.084)	127844	5.00000	4.701
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	59376	5.00000	4.685
	52 4-Nitroaniline	138	15.471	15.471	(1.096)	56217	10.0000	10.01
	53 4,6-Dinitro-2-methylphenol	198	15.579	15.579	(0.898)	121036	20.0000	20.65
	54 N-Nitrosodiphenylamine	169	15.633	15.633	(0.902)	78637	5.00000	4.459
$	55 2,4,6-Tribromophenol	330	15.880	15.880	(1.125)	23488	5.00000	4.416
	56 4-Bromophenyl-phenylether	248	16.412	16.412	(0.946)	39068	5.00000	4.784
	57 Hexachlorobenzene	284	16.697	16.697	(0.963)	45908	5.00000	4.480
	58 Pentachlorophenol	266	17.123	17.123	(0.988)	50942	10.0000	7.455
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	146392	4.00000	
	60 Phenanthrene	178	17.394	17.394	(1.003)	183424	5.00000	4.700
	61 Anthracene	178	17.495	17.495	(1.009)	187309	5.00000	4.767
	62 Carbazole	167	17.905	17.905	(1.033)	149524	5.00000	5.697
	63 Di-n-butylphthalate	149	18.918	18.918	(1.091)	218183	5.00000	5.203
	64 Fluoranthene	202	19.955	19.955	(1.151)	219130	5.00000	4.876
	65 Pyrene	202	20.380	20.380	(0.900)	217950	5.00000	5.378
$	66 Terphenyl-d14	244	20.783	20.783	(0.918)	135044	5.00000	4.942
	67 Butylbenzylphthalate	149	21.797	21.797	(0.963)	81247	5.00000	5.286
	68 Benzo(a)anthracene	228	22.618	22.618	(0.999)	179653	5.00000	4.526
*	69 Chrysene-d12	240	22.641	22.641	(1.000)	142269	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.641	22.641	(1.000)	185661	10.0000	11.19
	71 Chrysene	228	22.688	22.688	(1.002)	163491	5.00000	4.547
	72 bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	116178	5.00000	4.856
*	134 Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	181192	4.00000	
	73 Di-n-octylphthalate	149	23.903	23.903	(1.000)	188992	5.00000	4.276

	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	24.391	24.391	(0.978)	175642	5.00000	4.542
75	Benzo(k)fluoranthene	252	24.429	24.429	(0.979)	205924	5.00000	4.929
76	Benzo(a)pyrene	252	24.863	24.863	(0.997)	158628	5.00000	4.743
* 77	Perylene-d12	264	24.948	24.948	(1.000)	133418	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.615	26.615	(1.067)	197026	5.00000	4.777
79	Dibenzo(a,h)anthracene	278	26.638	26.638	(1.068)	158480	5.00000	4.853
80	Benzo(g,h,i)perylene	276	27.081	27.081	(1.085)	164192	5.00000	4.640
90	N-Nitrosodimethylamine	74	3.189	3.189	(0.416)	57605	10.0000	8.693
91	Aniline	93	7.128	7.128	(0.930)	160757	5.00000	5.121
93	Benzidine	184	20.288	20.288	(0.896)	84239	10.0000	12.57
103	Pyridine	79	3.189	3.189	(0.416)	49955	10.0000	8.838
105	1-methylnaphthalene	142	12.036	12.036	(1.173)	99915	5.00000	4.969
111	Azobenzene (1,2-DP-Hydrazine)	77	15.687	15.687	(1.112)	116940	5.00000	4.883
187	Total Benzofluoranthenes	252	24.429	24.429	(0.979)	355714	10.0000	9.345
99	Perylene	252	24.979	24.979	(1.001)	181278	5.00000	4.717
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	14.953	14.953	(1.060)	36001	5.00000	4.638

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0425.d
Lab Smp Id: CC0425
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130425.b/ABN.m
Misc Info:

Calibration Date: 25-APR-2013
Calibration Time: 11:21
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	34832	-25.29
27 Naphthalene-d8	176978	88489	353956	127588	-27.91
42 Acenaphthene-d10	110872	55436	221744	83340	-24.83
59 Phenanthrene-d10	188290	94145	376580	146392	-22.25
69 Chrysene-d12	213681	106840	427362	142269	-33.42
134 Di-n-octylphthala	264159	132080	528318	181192	-31.41
77 Perylene-d12	208584	104292	417168	133418	-36.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.95	24.45	25.45	24.95	0.00

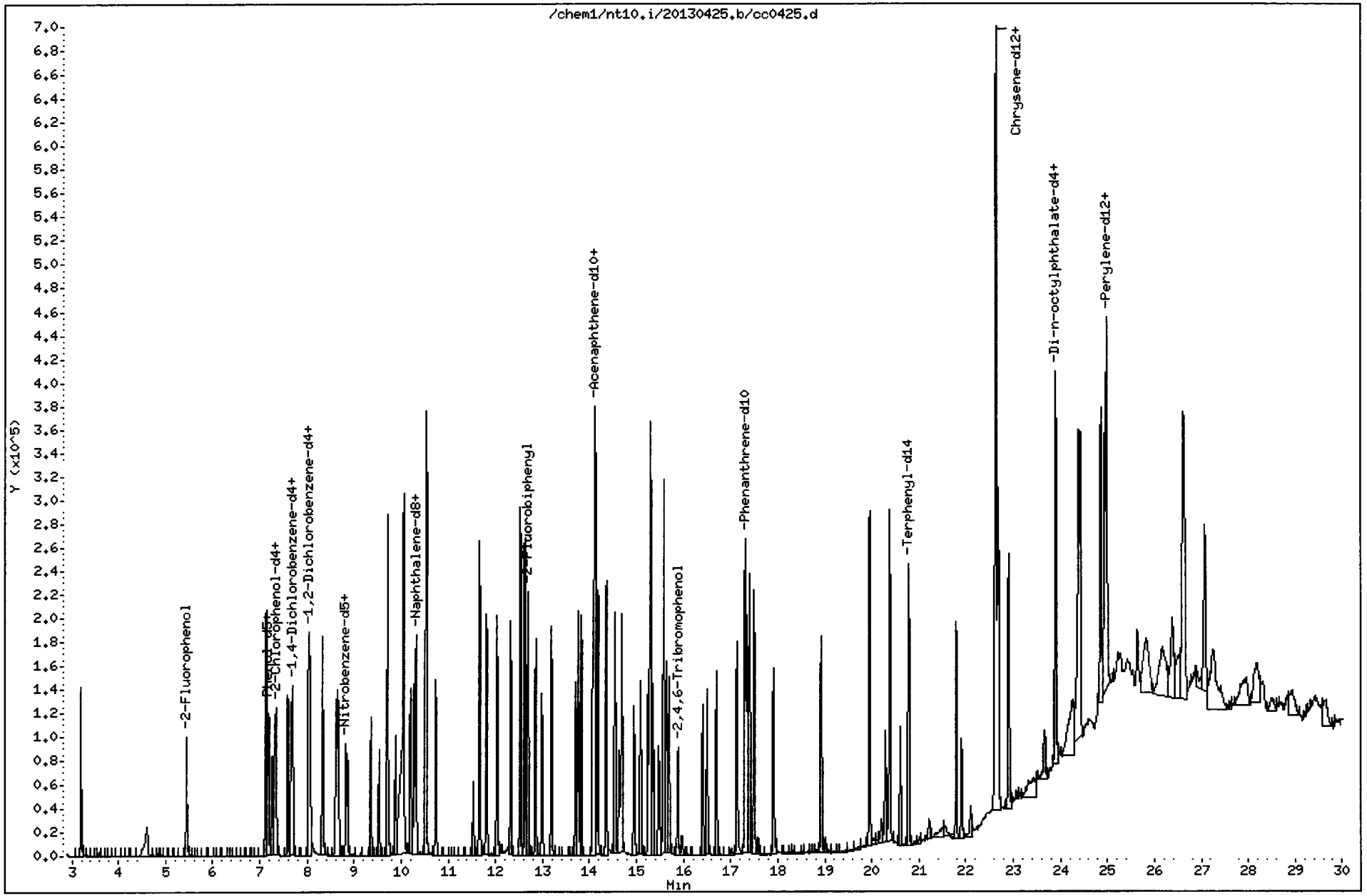
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130425.b/cc0425.d
Date : 25-APR-2013 11:21
Client ID:
Sample Info: CC0425

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0425.d

Lab ID: CC0425, Method: ABN.m, Instrument: nt10.i, Date: 25-APR-2013

RT	CO-ELUTION COMPOUNDS
14.110	Acenaphthene-d10 and 3-Nitroaniline
8.027	1,2-Dichlorobenzene-d4 and Benzyl alcohol

YZ 4/25/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130425.b/wl67b2.d
Lab Smp Id: WL67B Client Smp ID: GR-WS-05-20130411-S
Inj Date : 25-APR-2013 11:58
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL67B,6
Misc Info : 13-7792
Comment : 1ul Injection
Method : /chem1/nt10.i/20130425.b/ABN.m
Meth Date : 25-Apr-2013 15:09 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 4
Dil Factor: 6.00000
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	6.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.10000	Weight of sample extracted (g)
M	72.80000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.459	5.444	(0.712)	8725	0.55488	2007
$ 2	Phenol-d5	99	7.175	7.167	(0.936)	12837	0.65790	2379
3	Phenol	94	7.198	7.190	(0.939)	3592	0.17490	632.5
$ 5	2-Chlorophenol-d4	132	7.321	7.314	(0.956)	9316	0.55140	1994
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	7.662	7.662	(1.000)	49177	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.034	8.027	(1.049)	4137	0.33320	1205
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.826	8.826	(0.860)	3770	0.21249	768.4(R)
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	192232	4.00000	
	28 Naphthalene	128	10.311	10.312	(1.004)	5214	0.10424	376.9
	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	12.679	12.686	(0.899)	17396	0.42950	1553
	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	14.103	14.110	(1.000)	118062	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	15.879	15.880	(1.126)	2791	0.37045	1340(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	17.340	17.340	(1.000)	187598	4.00000	
	60 Phenanthrene	178	17.394	17.394	(1.003)	29181	0.58351	2110
	61 Anthracene	178	17.487	17.495	(1.008)	6995	0.13892	502.4
	62 Carbazole	167	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	63 Di-n-butylphthalate	149	18.918	18.918	(1.091)	5431	0.10107	365.5
	64 Fluoranthene	202	19.955	19.955	(1.151)	65676	1.14036	4124
	65 Pyrene	202	20.380	20.380	(0.900)	65124	1.19792	4332
$	66 Terphenyl-d14	244	20.791	20.783	(0.918)	15825	0.43169	1561
	67 Butylbenzylphthalate	149	21.812	21.797	(0.963)	8249	0.40006	1447 (M)
	68 Benzo(a)anthracene	228	22.633	22.618	(0.999)	24203	0.45447	1643
*	69 Chrysene-d12	240	22.656	22.641	(1.000)	190857	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.695	22.688	(1.002)	31283	0.64855	2345
	72 bis(2-Ethylhexyl)phthalate	149	22.920	22.904	(0.958)	374778	11.7039	42320
*	134 Di-n-octylphthalate-d4	153	23.918	23.895	(1.000)	242500	4.00000	
	73 Di-n-octylphthalate	149	23.934	23.903	(1.001)	21471	0.36297	1313 (M)
	74 Benzo(b)fluoranthene	252	24.422	24.391	(0.978)	43906	0.81625	2952
	75 Benzo(k)fluoranthene	252	24.422	24.429	(0.978)	43906	0.75556	2732
	76 Benzo(a)pyrene	252	24.894	24.863	(0.997)	19031	0.40910	1479
*	77 Perylene-d12	264	24.979	24.948	(1.000)	185585	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.662	26.615	(1.067)	12410	0.21632	782.3
	79 Dibenzo(a,h)anthracene	278	26.685	26.638	(1.068)	4991	0.10987	397.3 (M)
	80 Benzo(g,h,i)perylene	276	27.128	27.081	(1.086)	14464	0.29387	1063
	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	24.422	24.429	(0.978)	43636	0.82413	2980
	99 Perylene	252	25.010	24.979	(1.001)	10794	0.20190	730.1
	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: wl67b2.d
Lab Smp Id: WL67B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130425.b/ABN.m
Misc Info: 13-7792

Calibration Date: 25-APR-2013
Calibration Time: 11:21
Client Smp ID: GR-WS-05-2013041
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	46623	23312	93246	49177	5.48
27 Naphthalene-d8	176978	88489	353956	192232	8.62
42 Acenaphthene-d10	110872	55436	221744	118062	6.48
59 Phenanthrene-d10	188290	94145	376580	187598	-0.37
69 Chrysene-d12	213681	106840	427362	190857	-10.68
134 Di-n-octylphthala	264159	132080	528318	242500	-8.20
77 Perylene-d12	208584	104292	417168	185585	-11.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.10	-0.06
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.66	0.07
134 Di-n-octylphthala	23.90	23.40	24.40	23.92	0.10
77 Perylene-d12	24.95	24.45	25.45	24.98	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.

Analytical Resources, Inc.

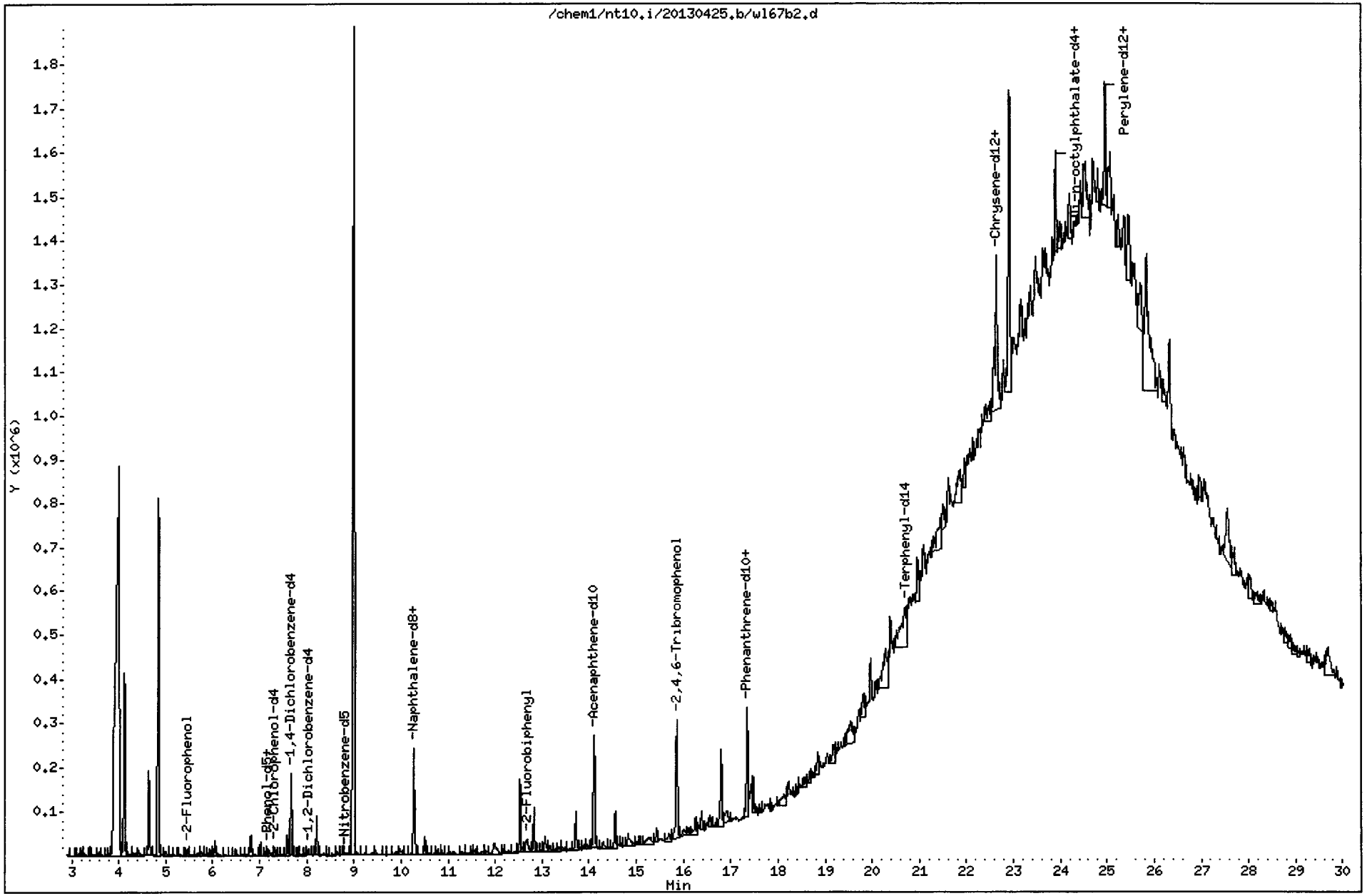
RECOVERY REPORT

Client Name: SAIC
Client SDG: WL67
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL67B
Client Smp ID: GR-WS-05-20130411-S
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130425.b/ABN.m
Misc Info: 13-7792

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	4520	2007	44.39	30-160
$ 2 Phenol-d5	4520	2379	52.63	30-160
$ 5 2-Chlorophenol-d4	4520	1994	44.11	30-160
$ 10 1,2-Dichlorobenzen	3014	1205	39.98	30-160
$ 18 Nitrobenzene-d5	3014	768.4	25.50*	30-160
$ 36 2-Fluorobiphenyl	3014	1553	51.54	30-160
$ 55 2,4,6-Tribromophen	4520	1340	29.64*	30-160
$ 66 Terphenyl-d14	3014	1561	51.80	30-160

Data File: /chem1/nt10.i/20130425.b/wl67b2.d
Date : 25-APR-2013 11:58
Client ID: GR-WS-05-20130411-S
Sample Info: WL67B,6
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

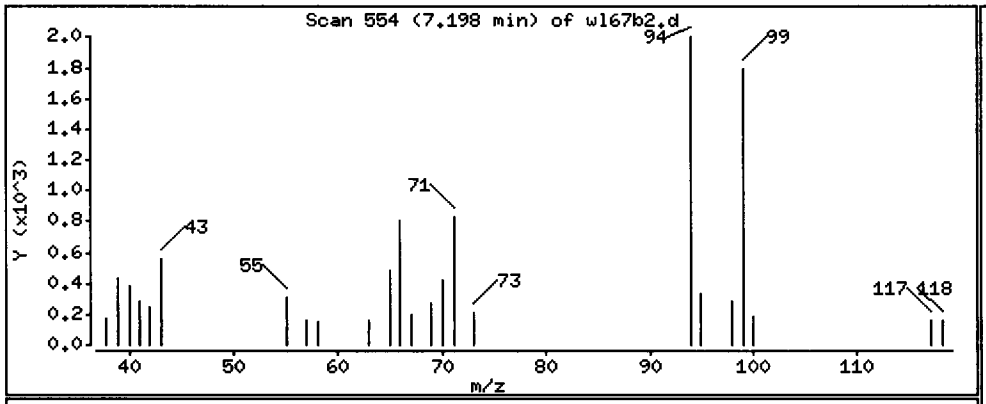
Operator: VTS/YZ

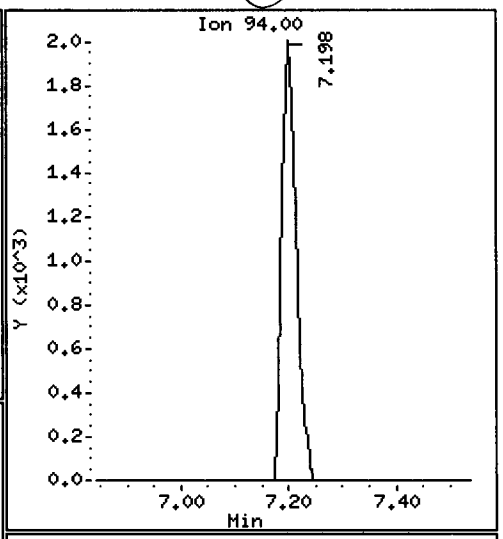
Column phase: ZB-5ms1

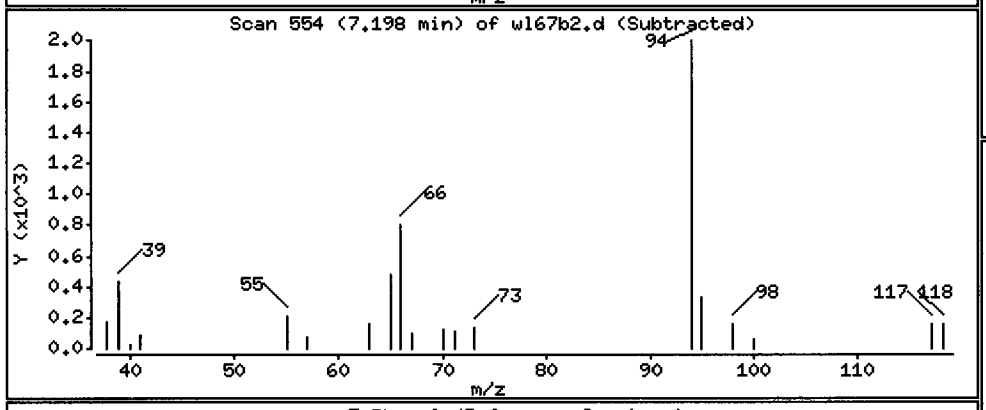
Column diameter: 0.25

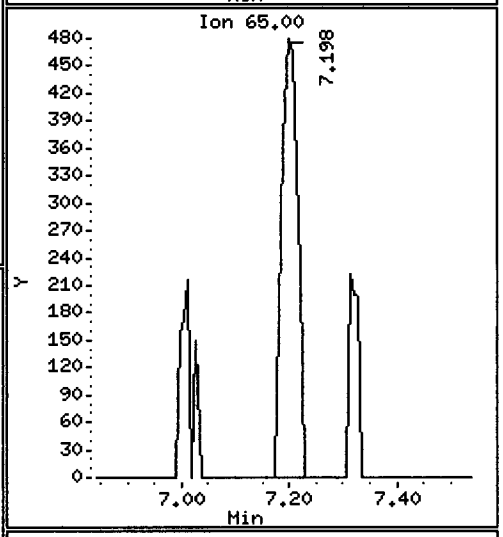
3 Phenol

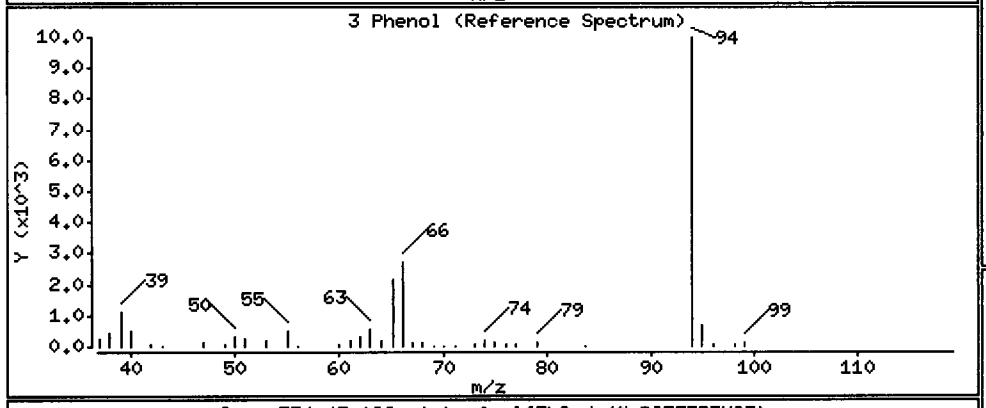
Concentration: 632.5 ug/kg

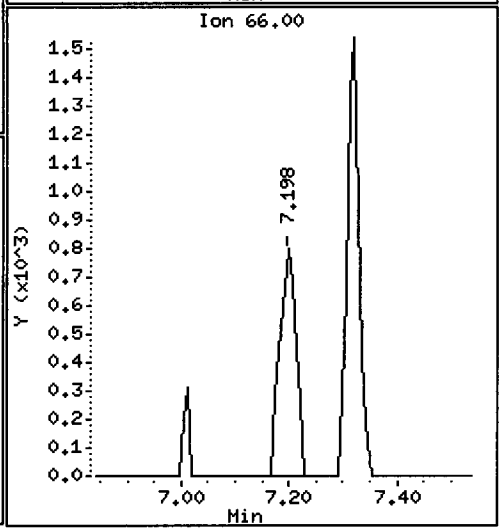


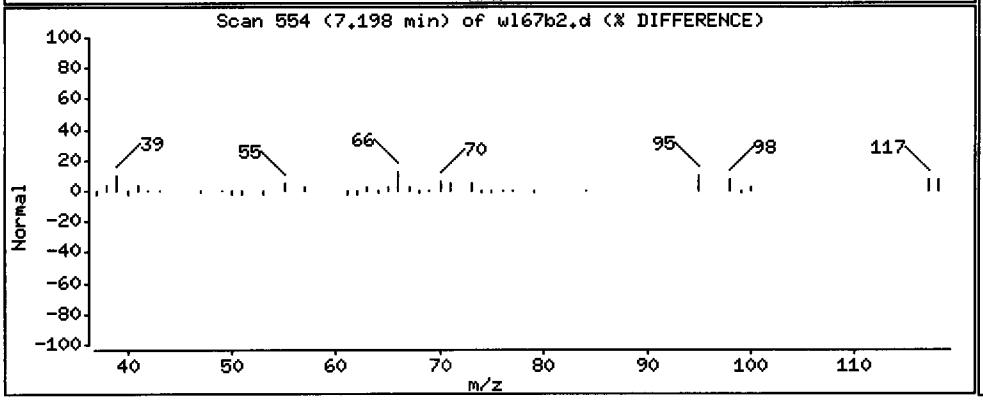












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

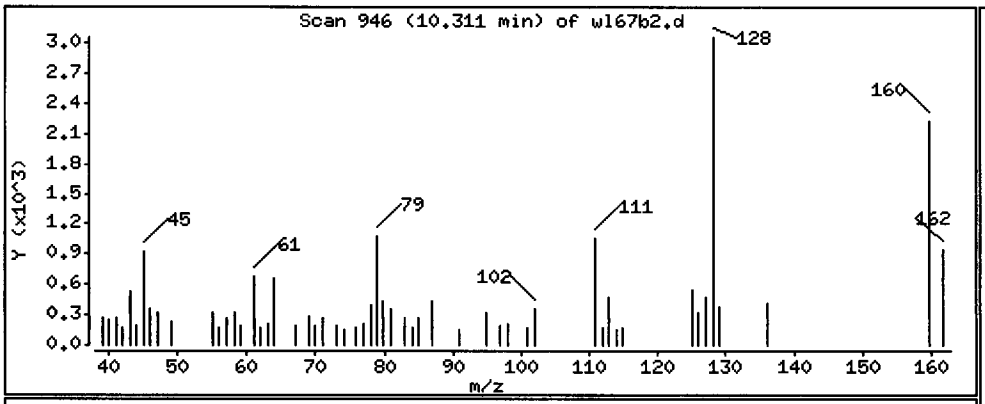
Operator: VTS/YZ

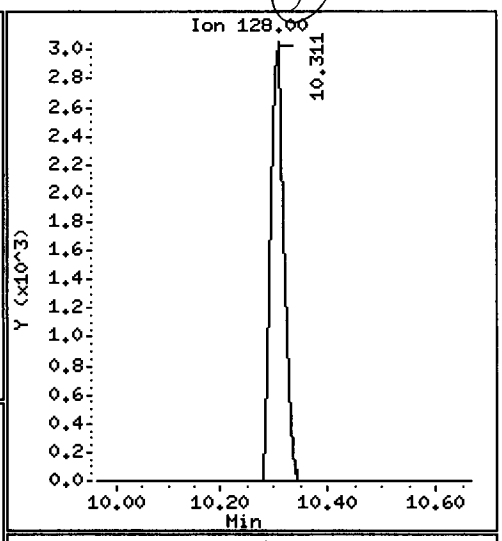
Column phase: ZB-5msi

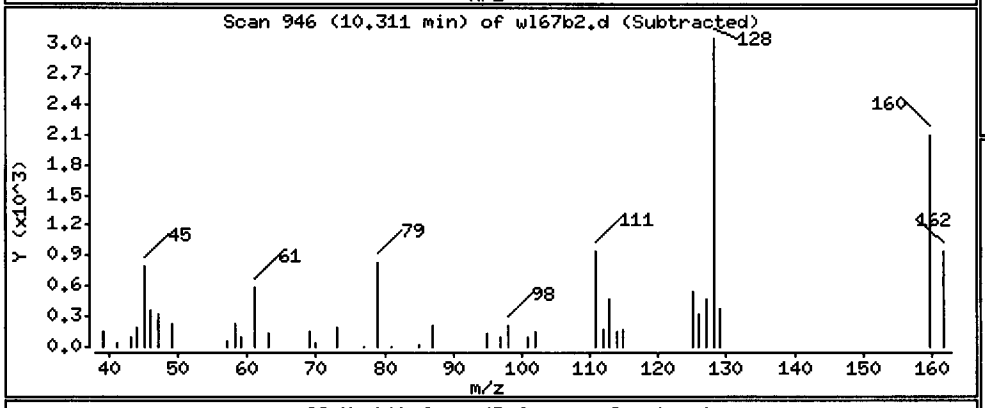
Column diameter: 0.25

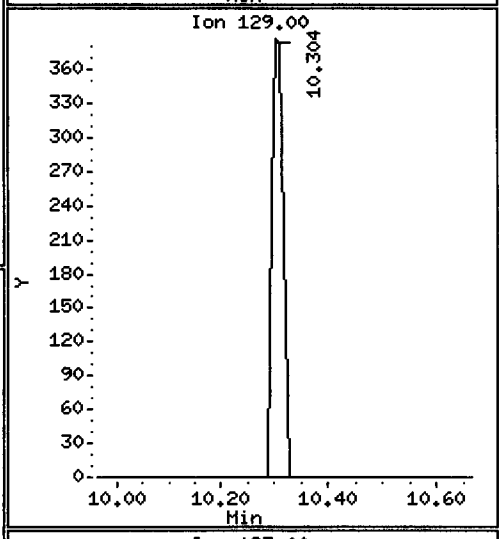
28 Naphthalene

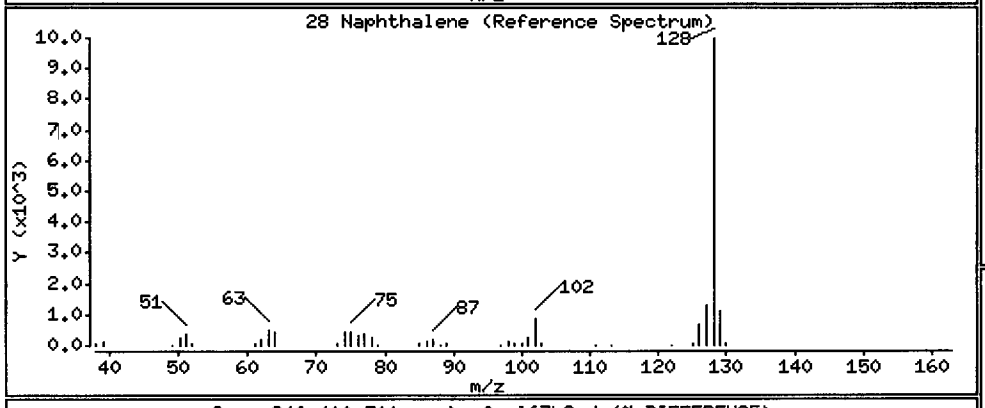
Concentration: 376.9 ug/kg

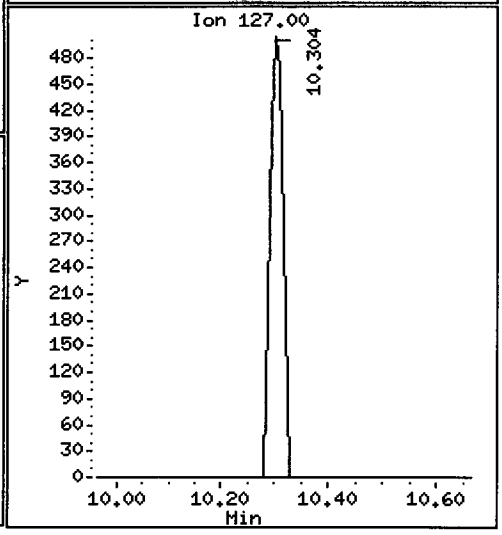


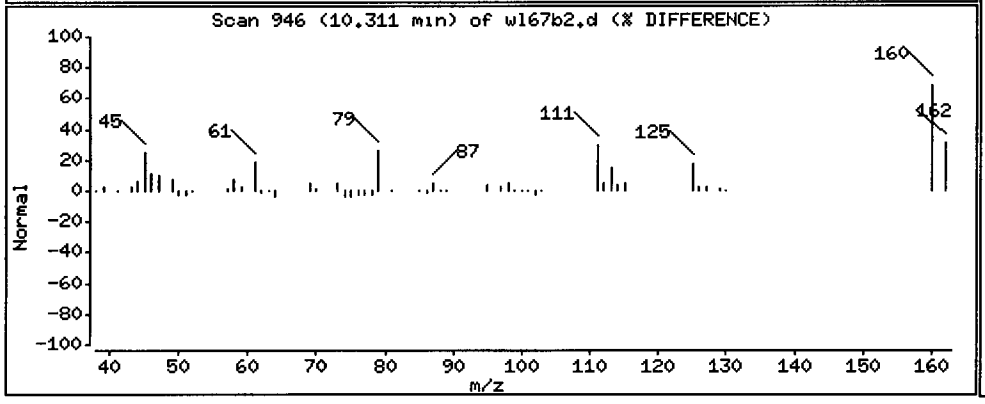












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

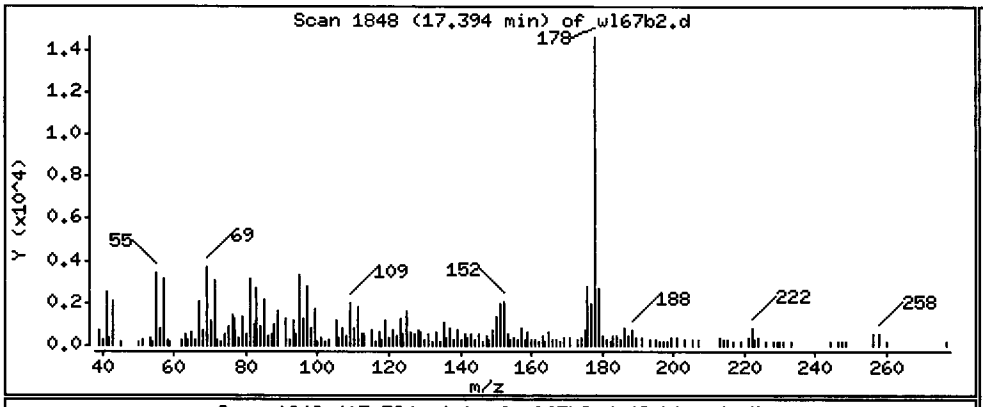
Operator: VTS/YZ

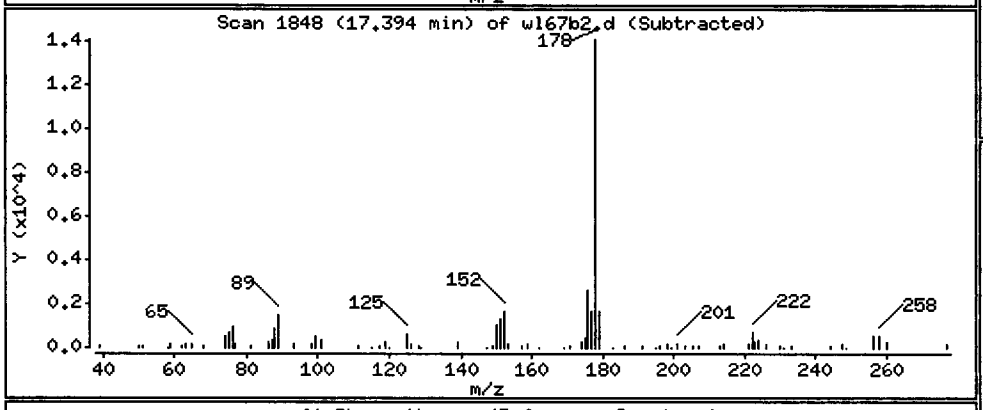
Column phase: ZB-5msi

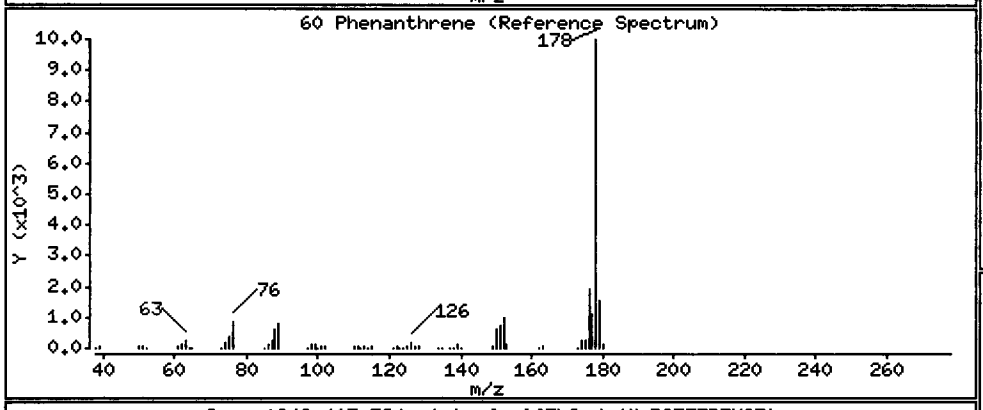
Column diameter: 0.25

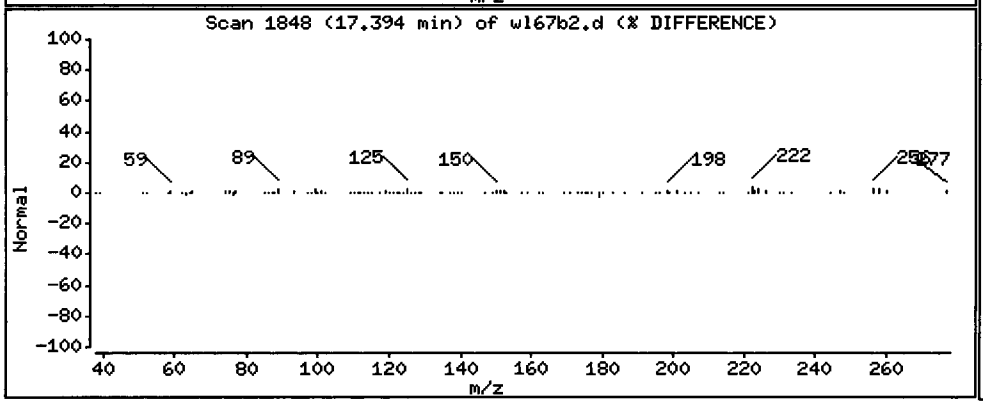
60 Phenanthrene

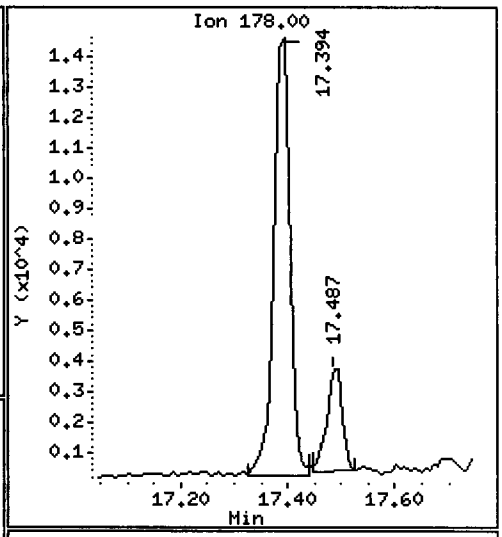
Concentration: 2110 ug/kg

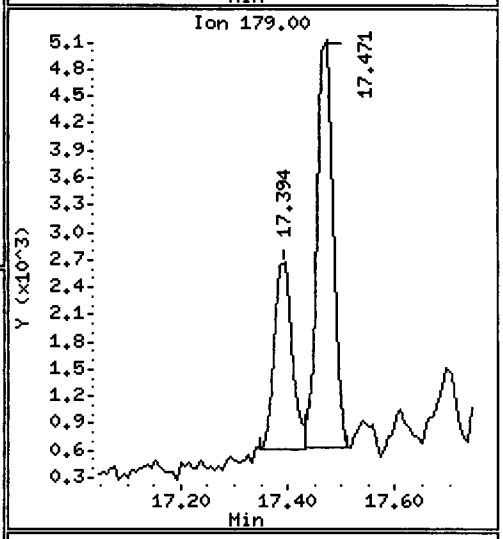


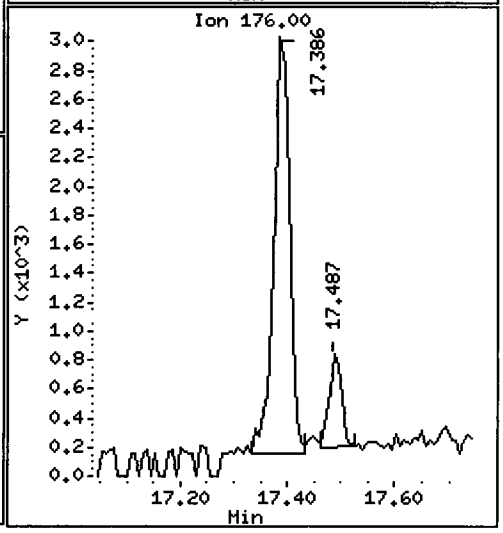












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

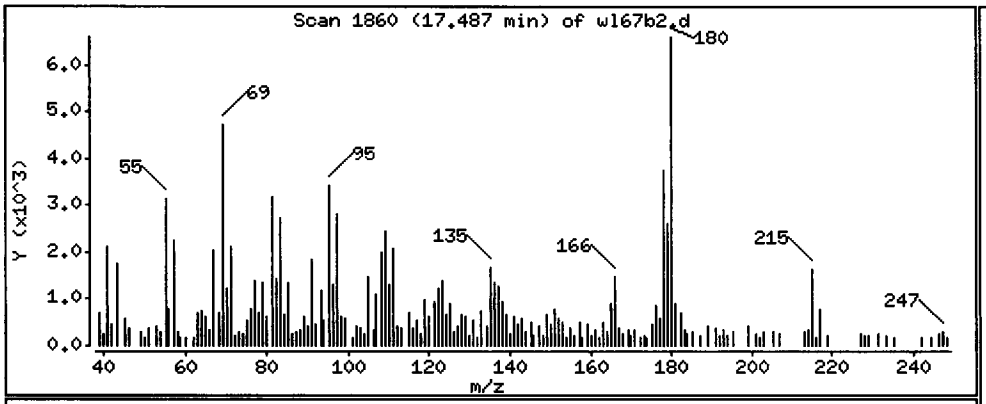
Operator: VTS/YZ

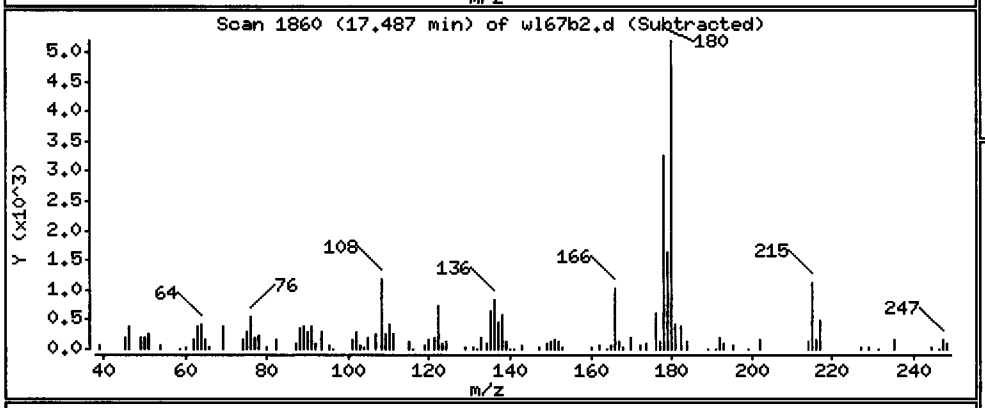
Column phase: ZB-5msi

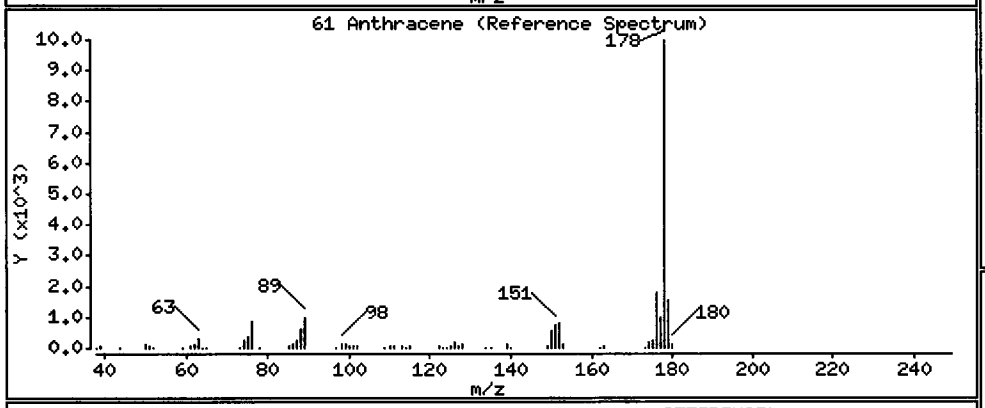
Column diameter: 0.25

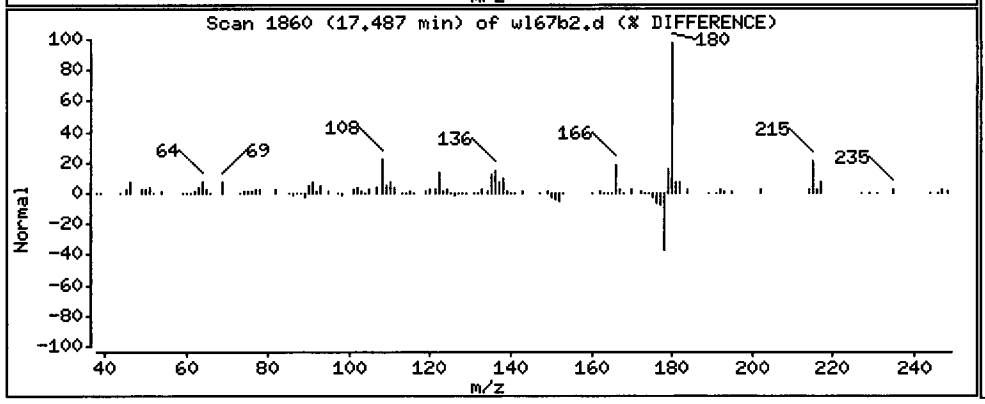
61 Anthracene

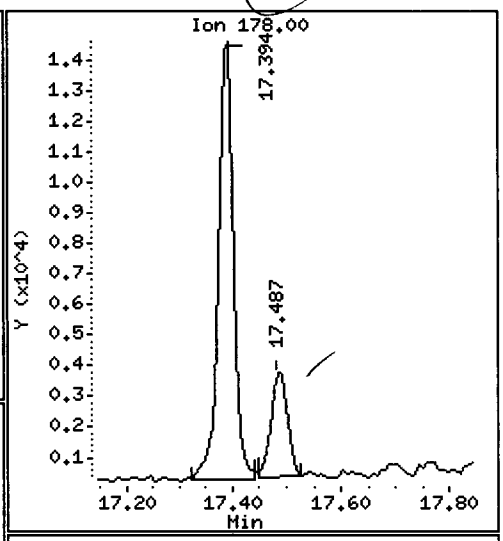
Concentration: 502.4 ug/kg

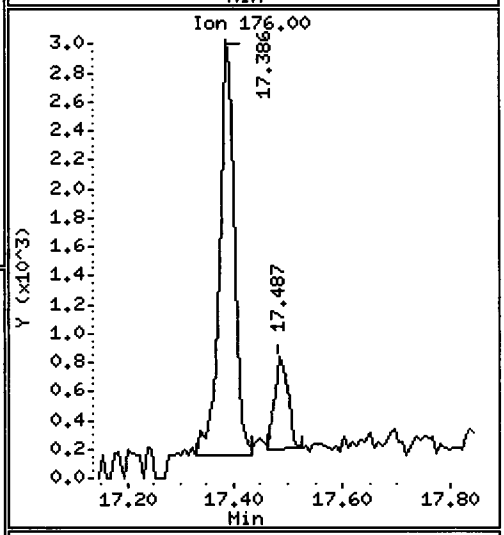


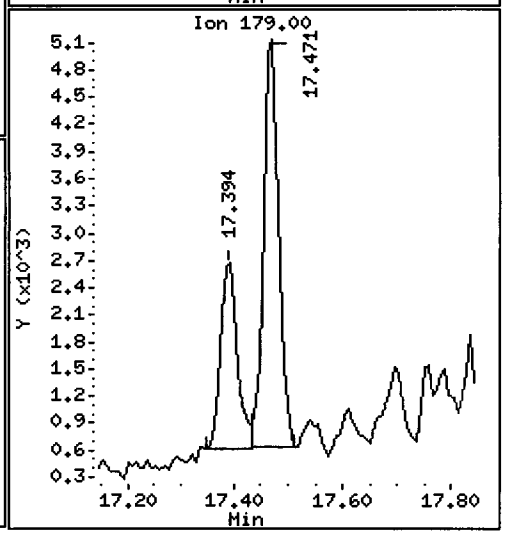












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

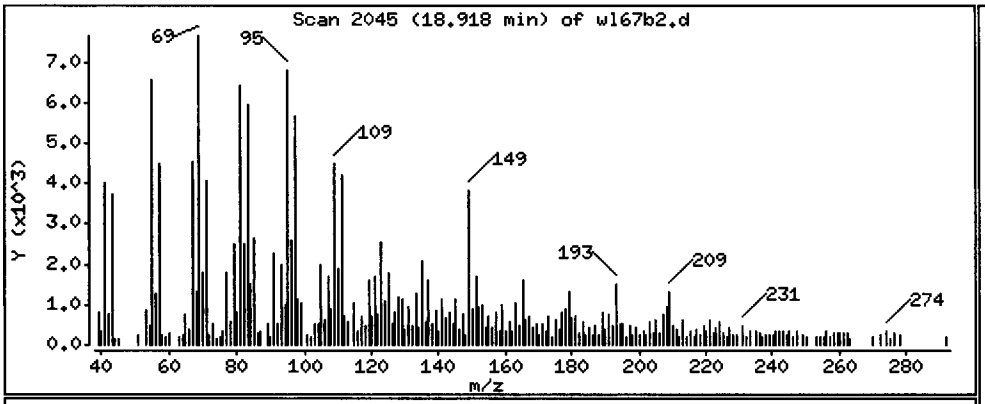
Operator: VTS/YZ

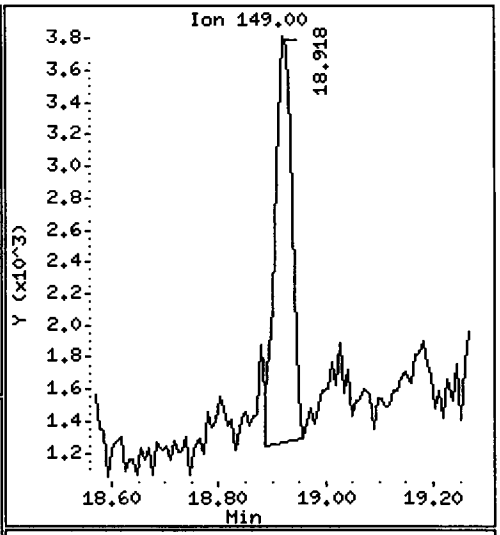
Column phase: ZB-5msi

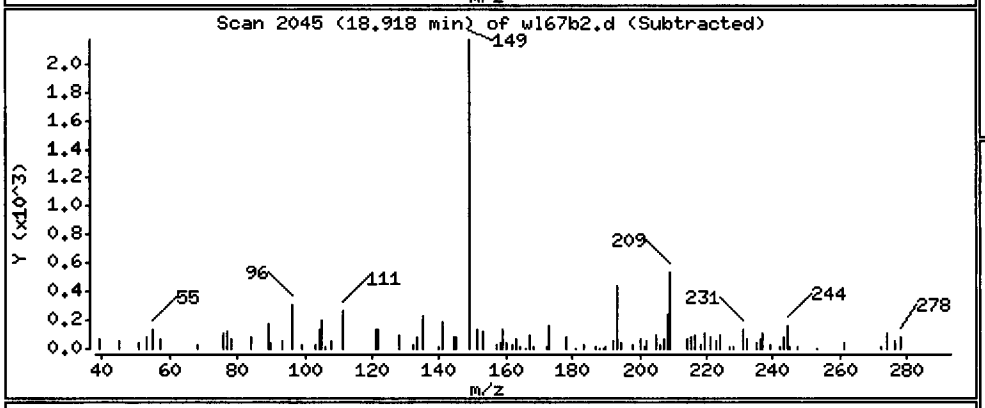
Column diameter: 0.25

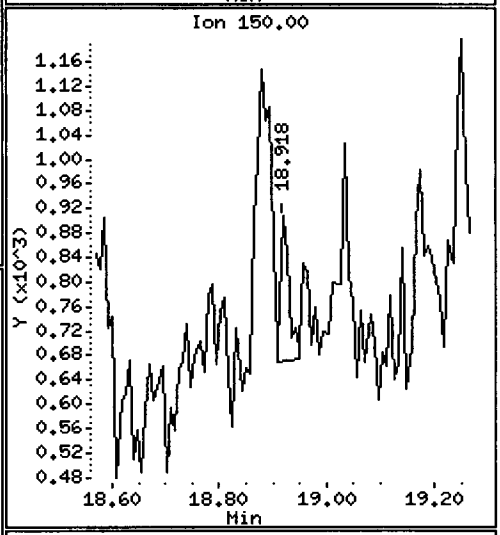
63 Di-n-butylphthalate

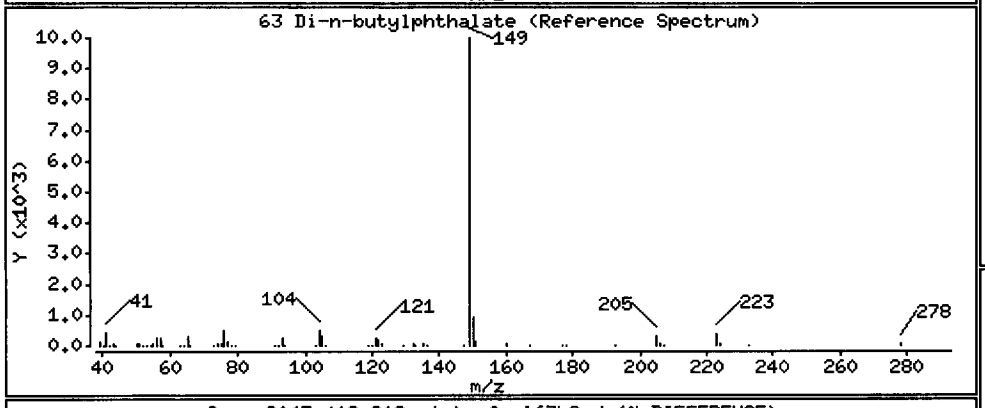
Concentration: 365.5 ug/kg

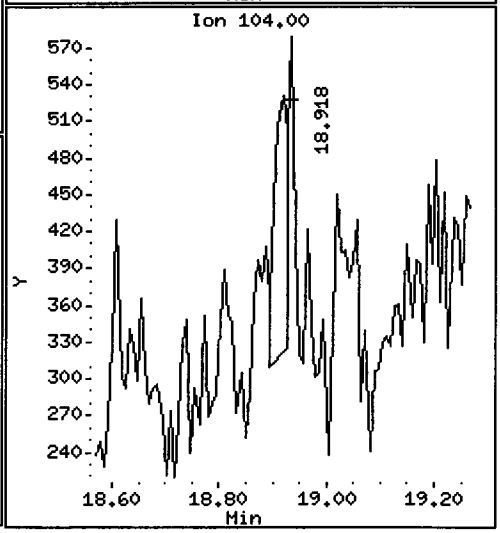


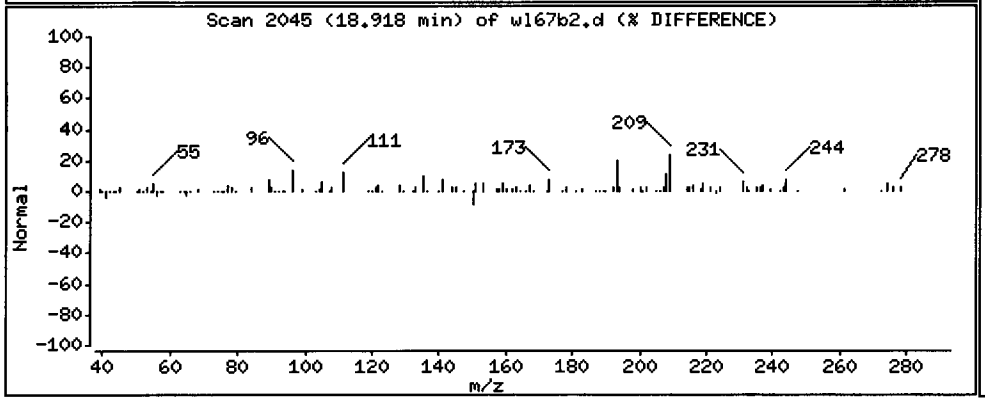












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

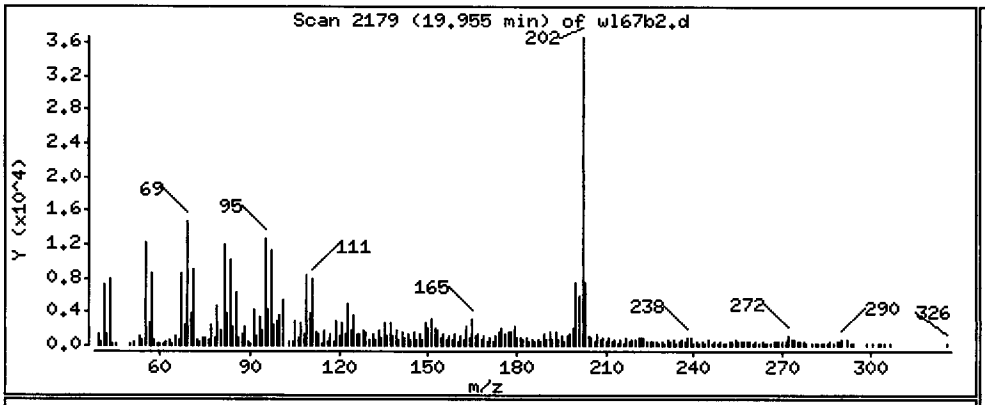
Operator: VTS/YZ

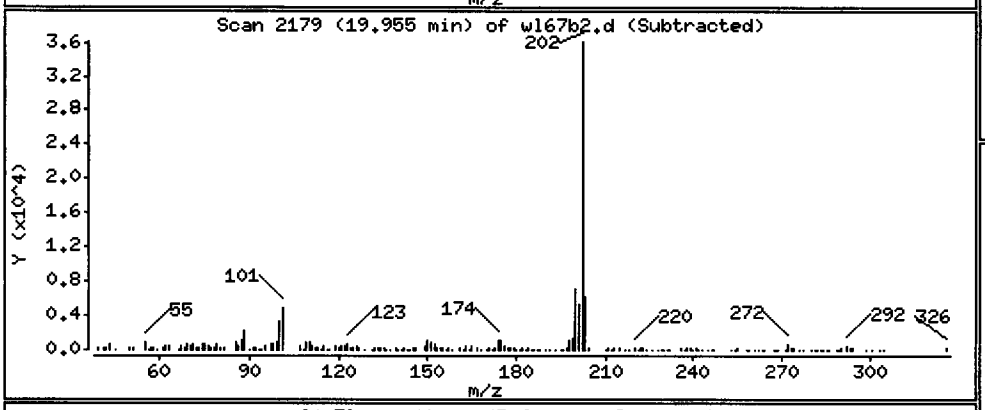
Column phase: ZB-5msi

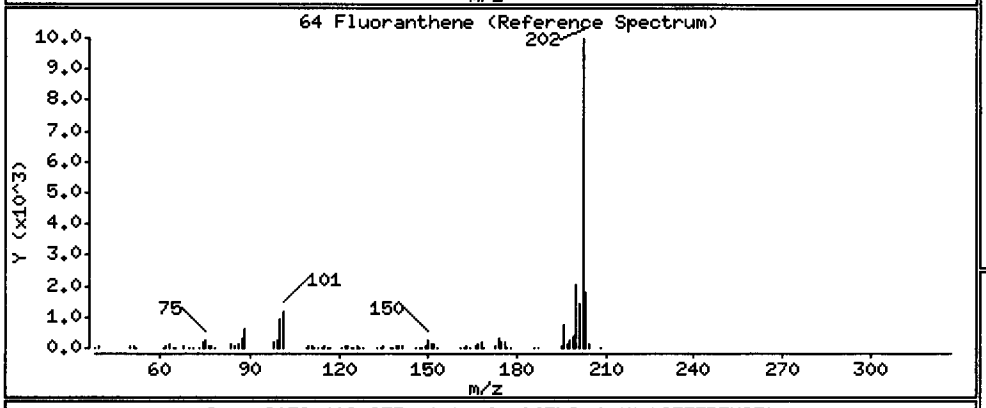
Column diameter: 0.25

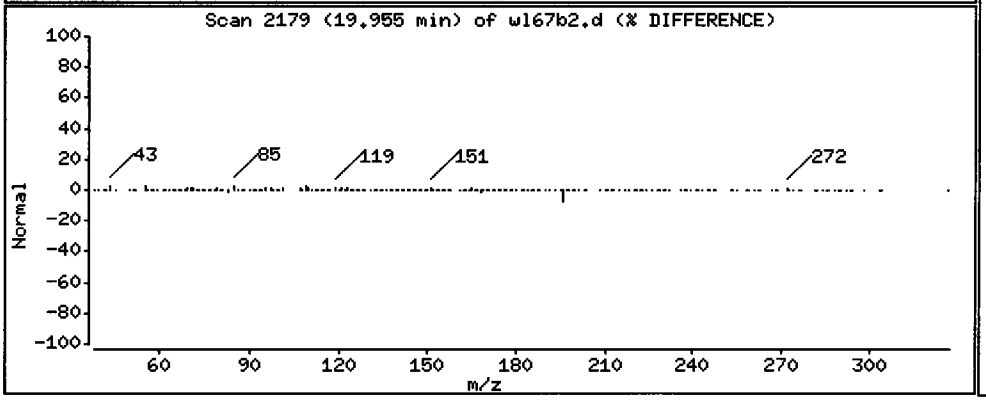
64 Fluoranthene

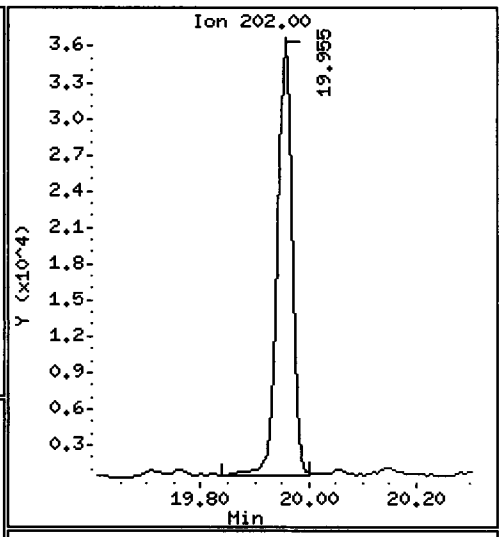
Concentration: 4124 ug/kg

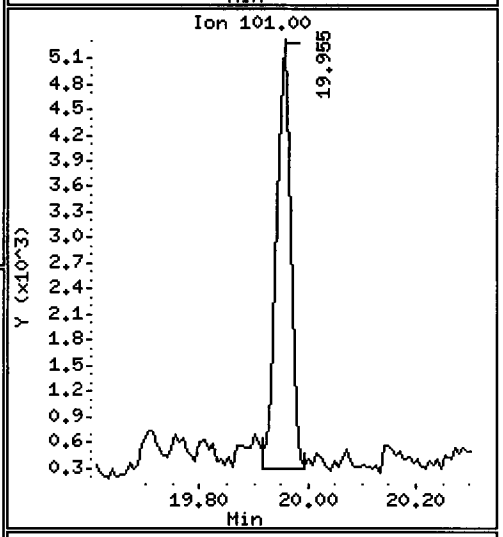


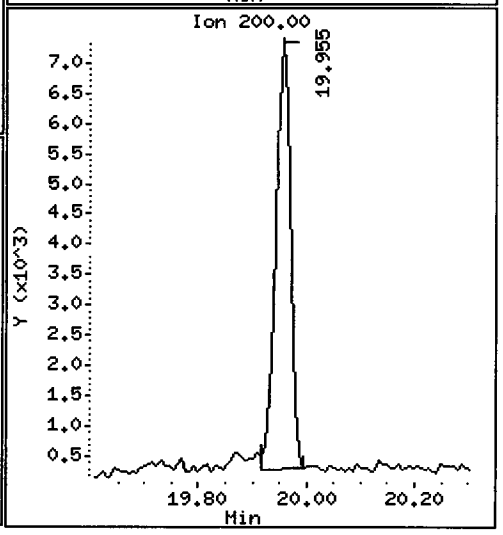












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

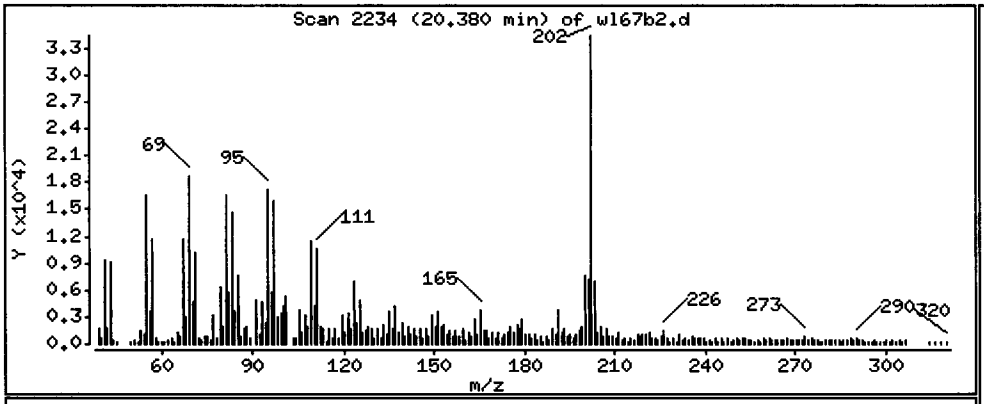
Operator: VTS/YZ

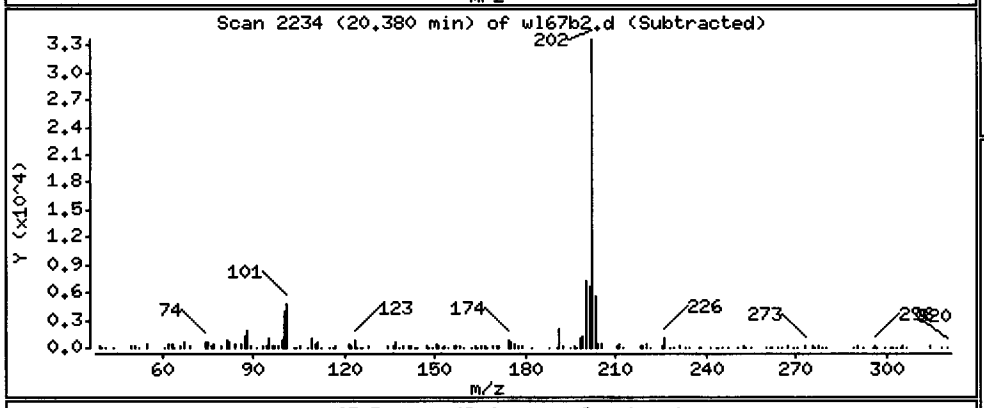
Column phase: ZB-5msi

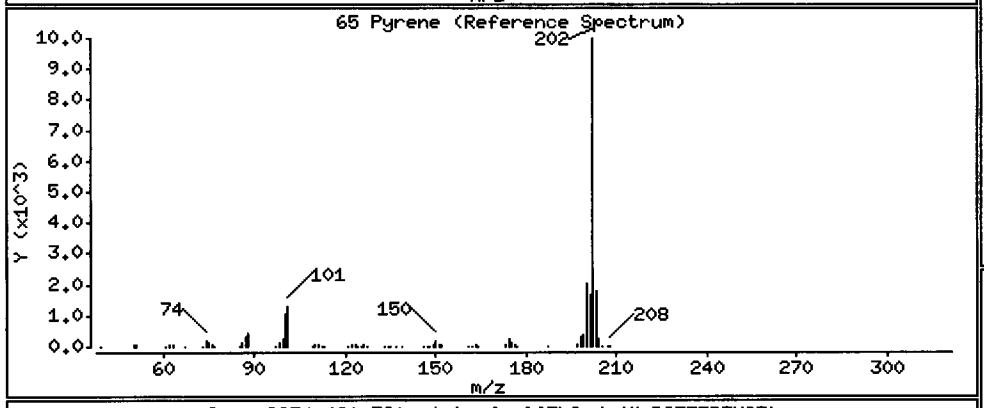
Column diameter: 0.25

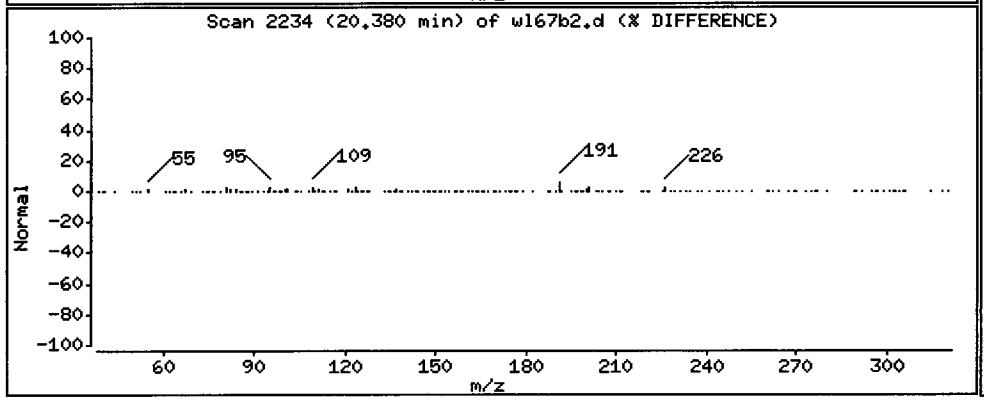
65 Pyrene

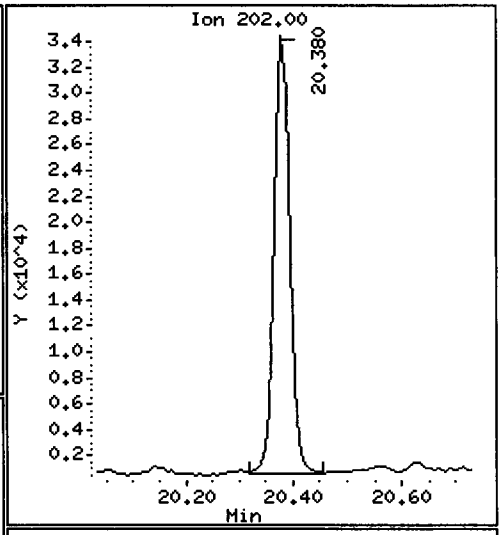
Concentration: 4332 ug/kg

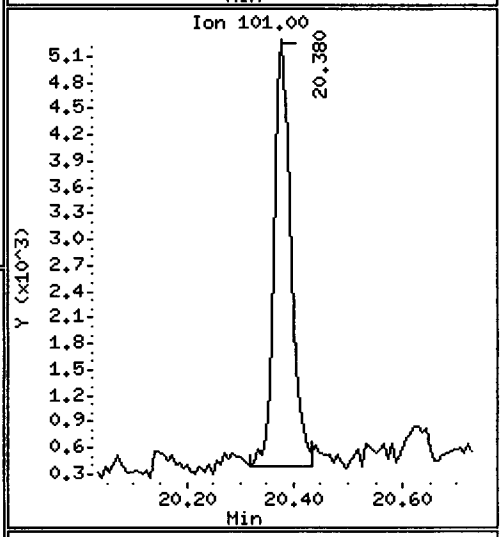


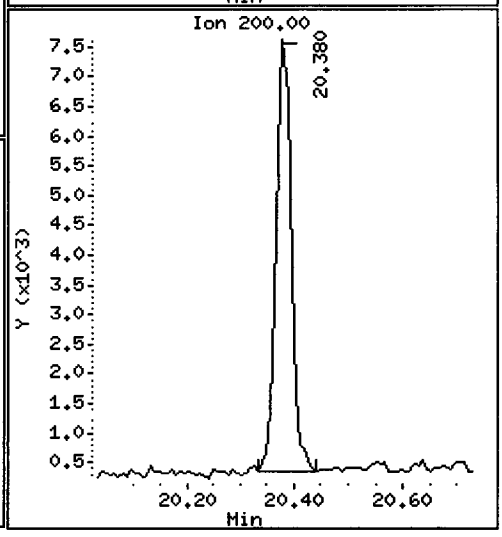












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

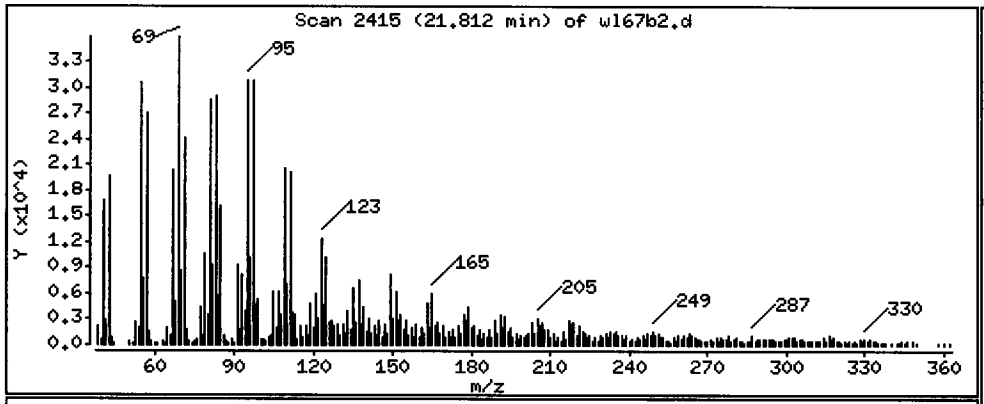
Operator: VTS/YZ

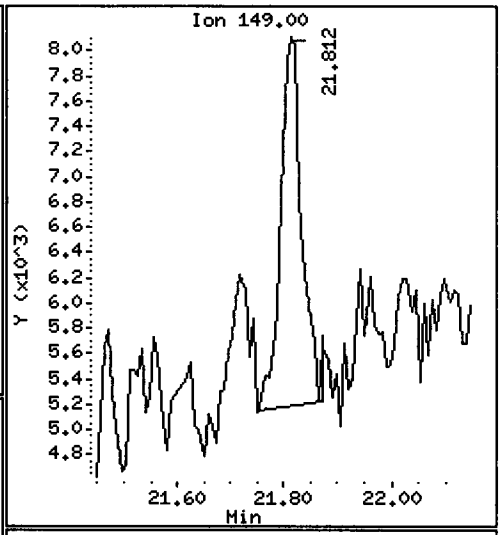
Column phase: ZB-5msi

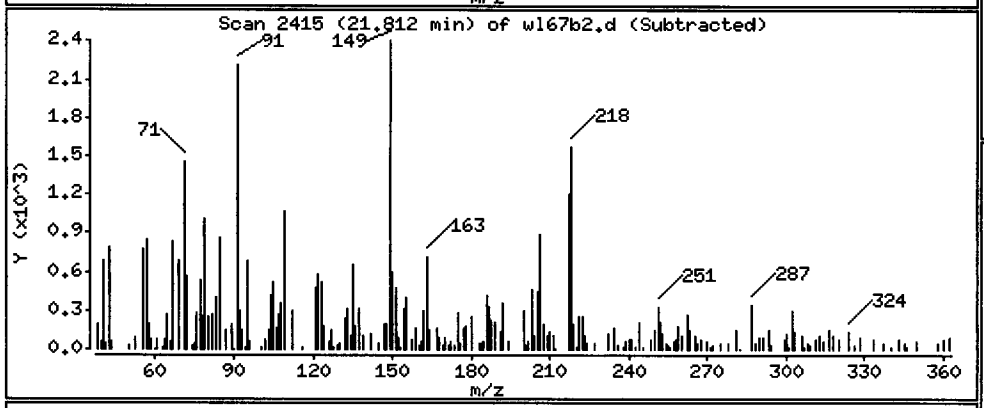
Column diameter: 0.25

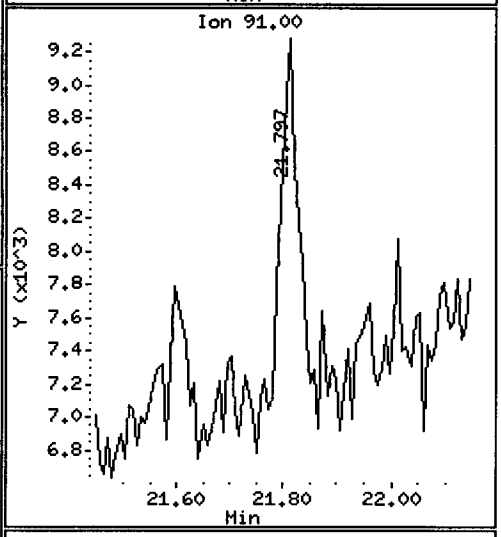
67 Butylbenzylphthalate

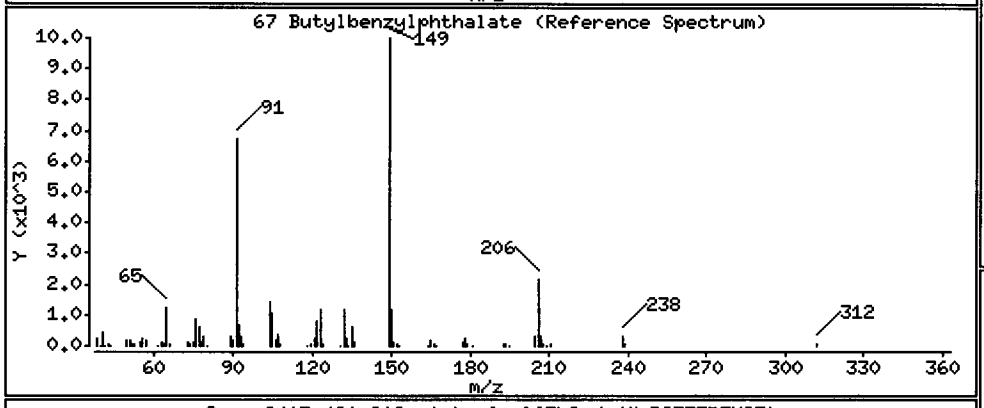
Concentration: 1447 ug/kg

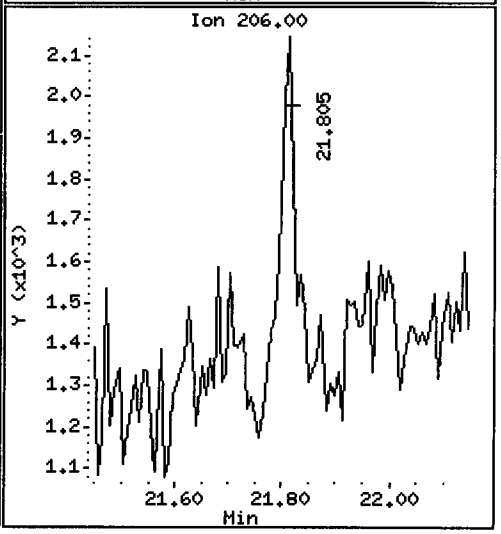


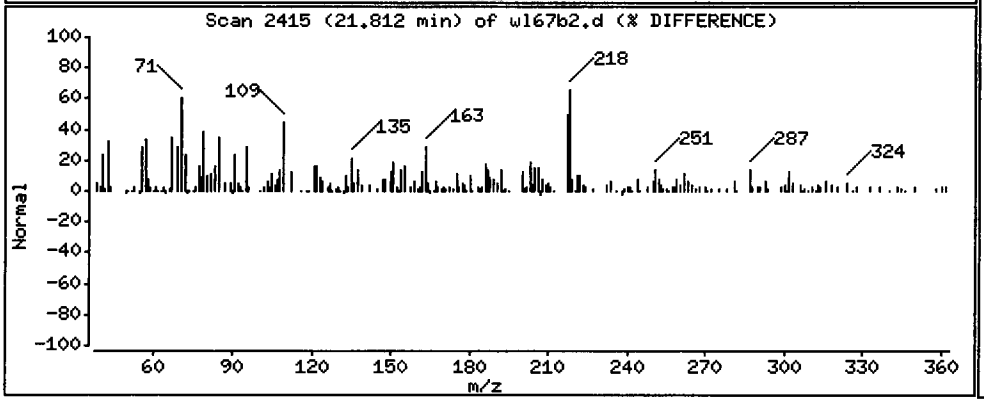












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

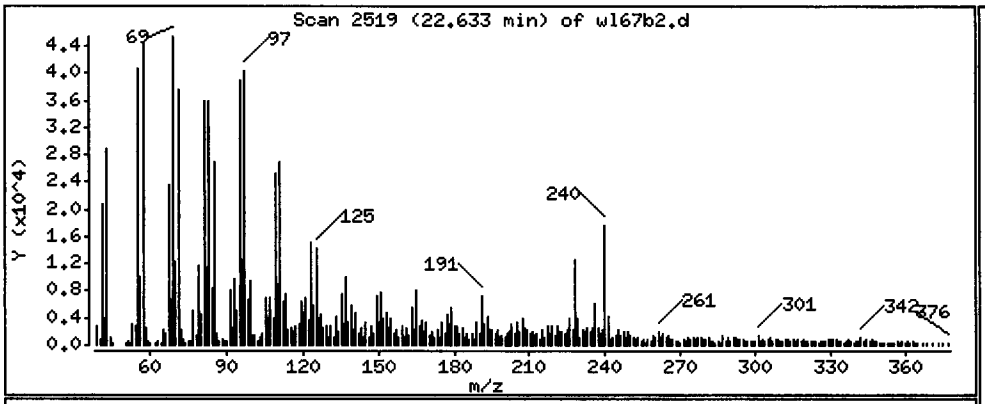
Operator: VTS/YZ

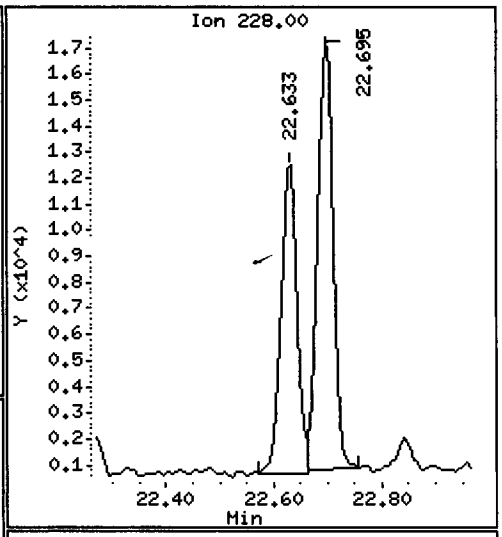
Column phase: ZB-5msi

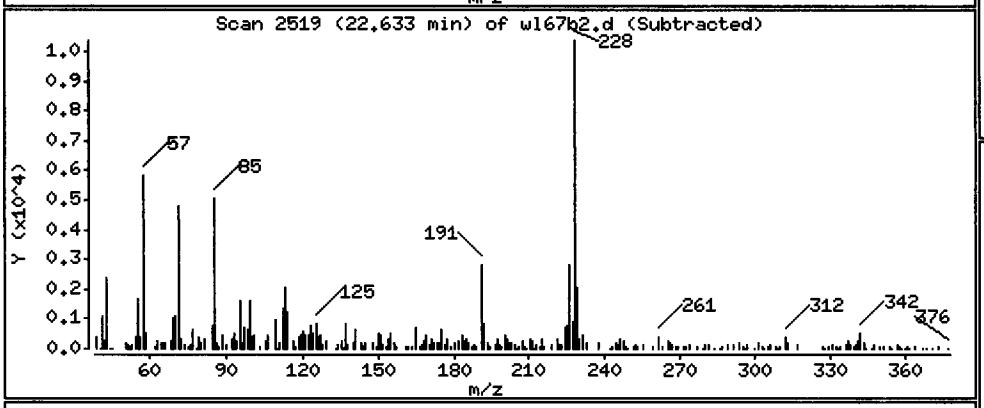
Column diameter: 0.25

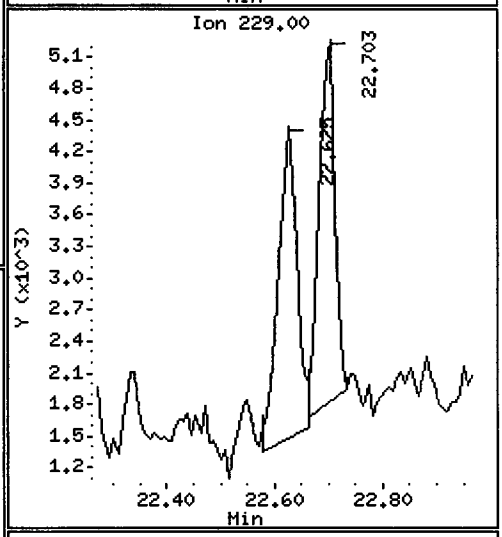
68 Benzo(a)anthracene

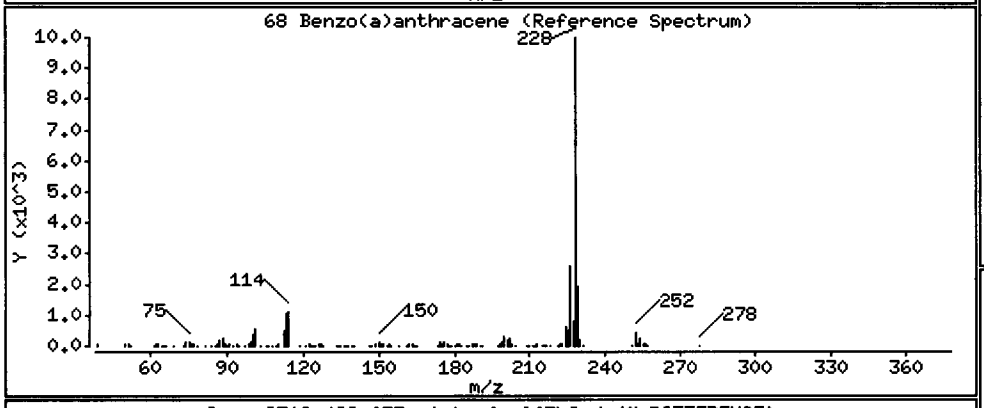
Concentration: 1643 ug/kg

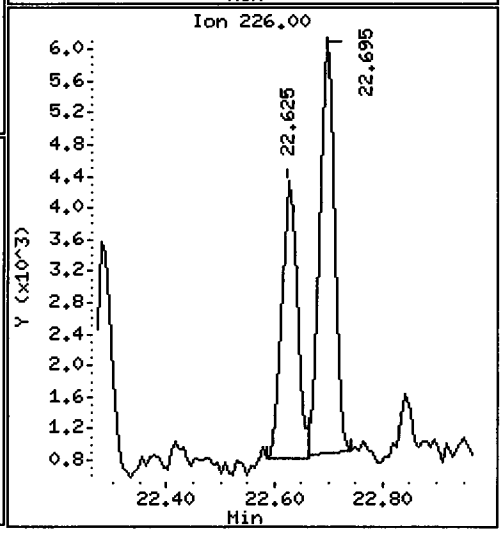


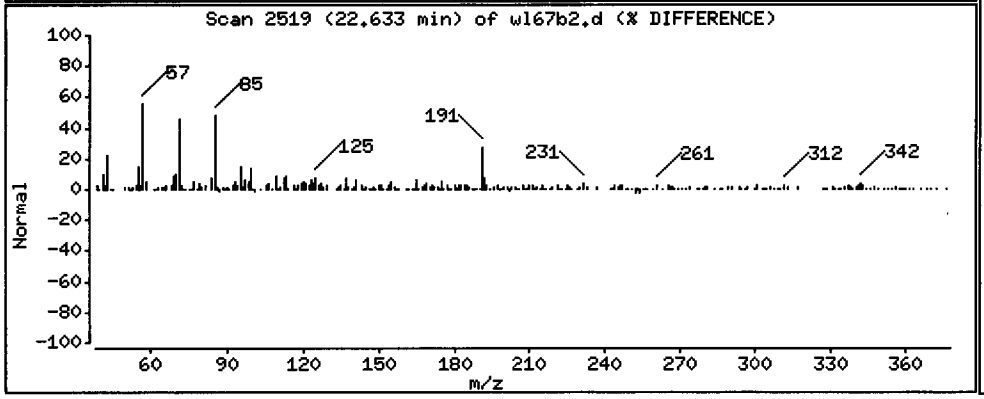












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

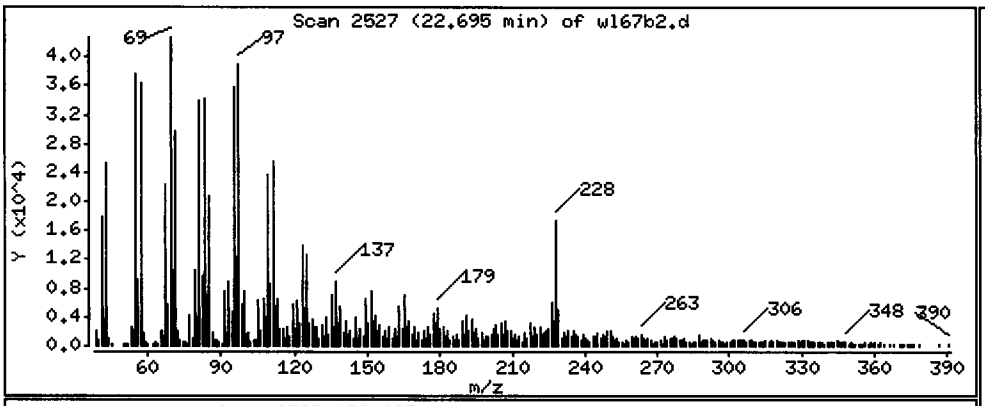
Operator: VTS/YZ

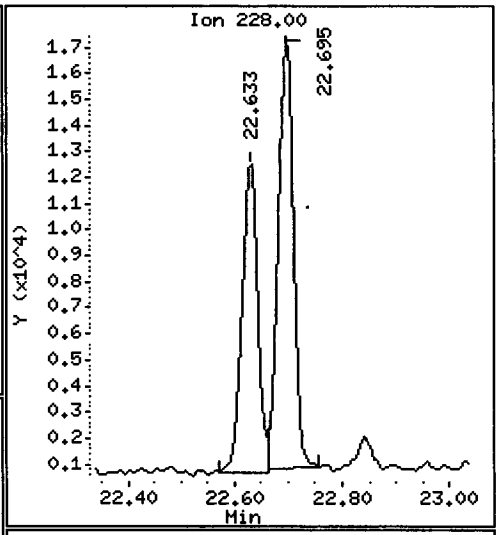
Column phase: ZB-5msi

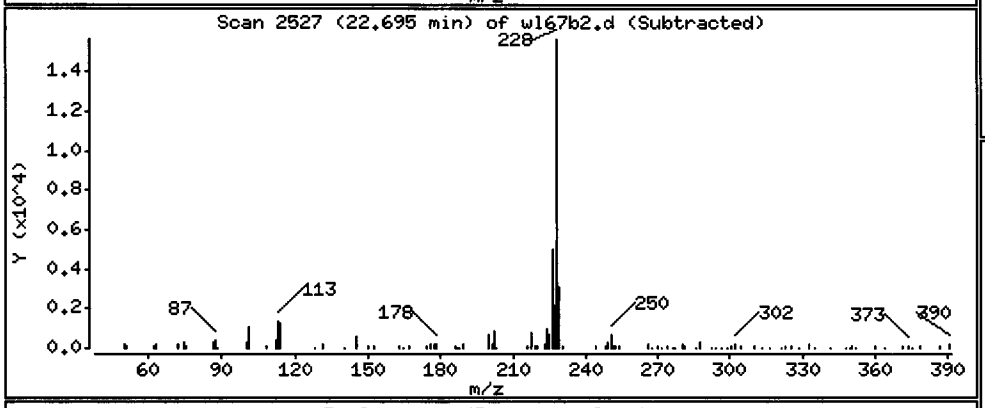
Column diameter: 0.25

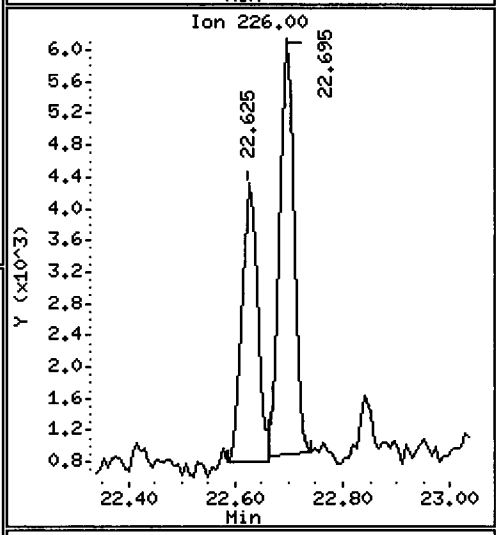
71 Chrysene

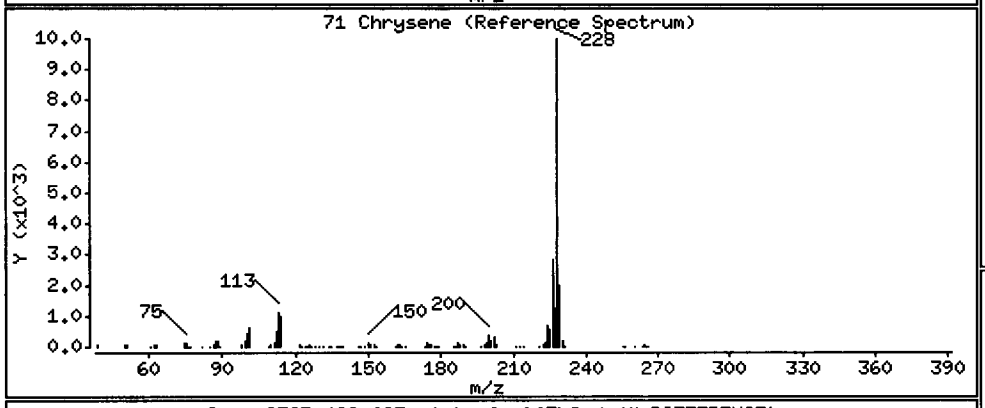
Concentration: 2345 ug/kg

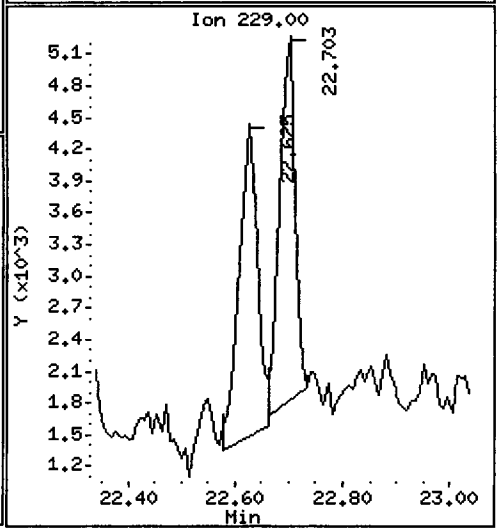


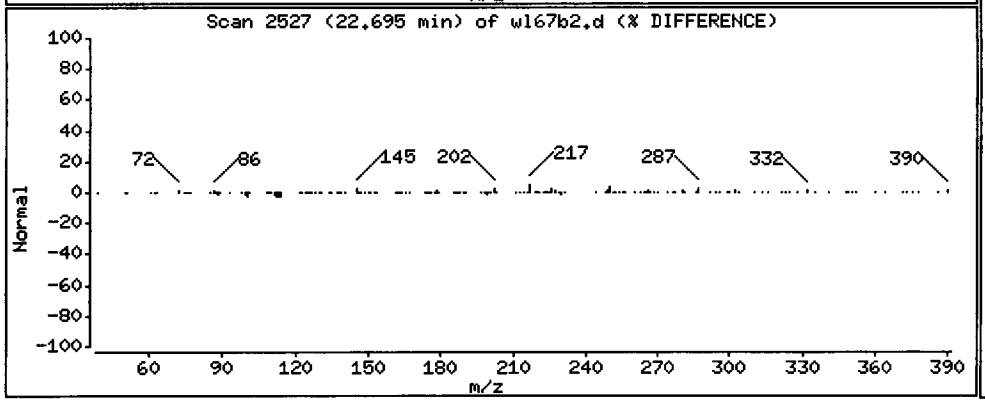












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

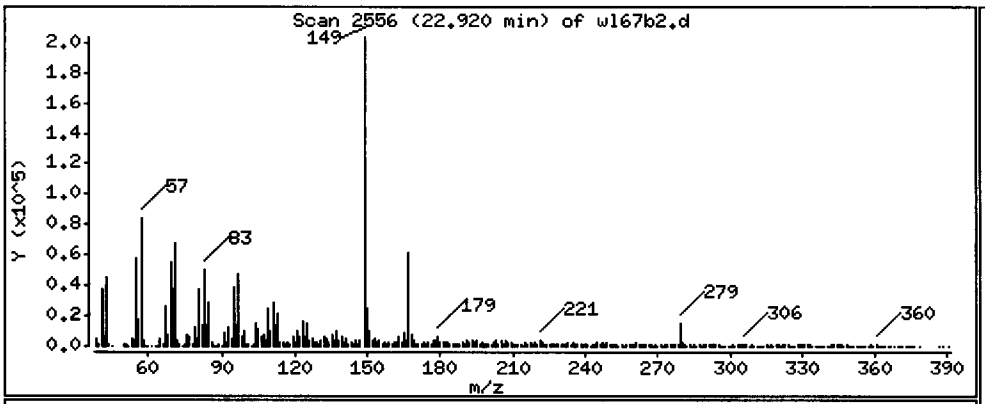
Operator: VTS/YZ

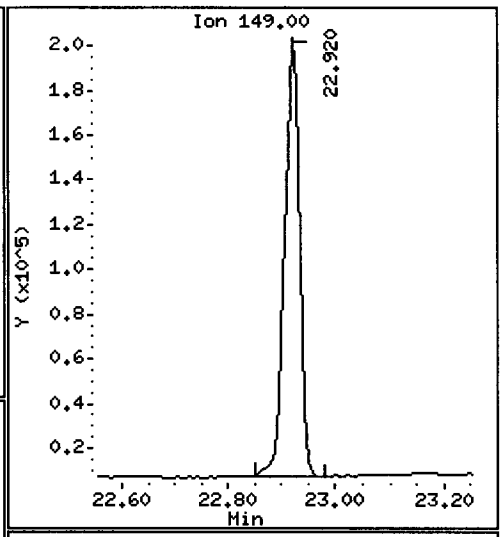
Column phase: ZB-5msi

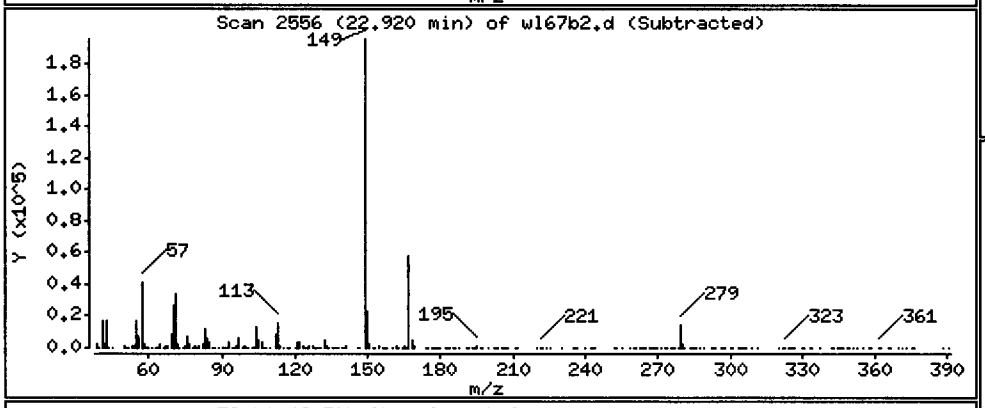
Column diameter: 0.25

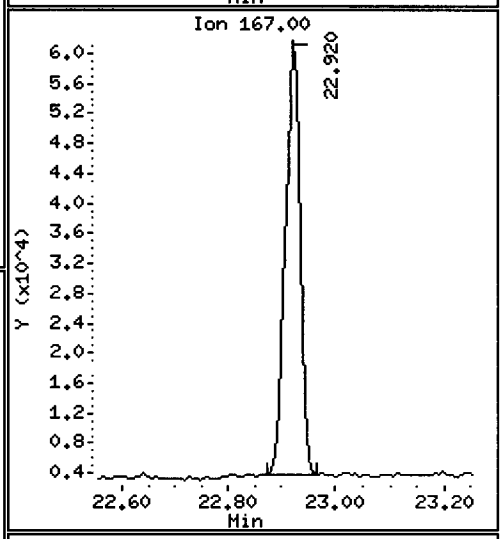
72 bis(2-Ethylhexyl)phthalate

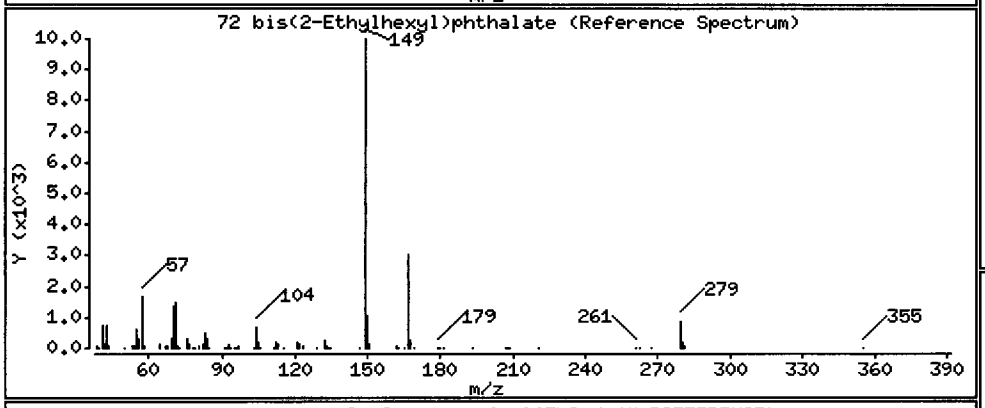
Concentration: 42320 ug/kg

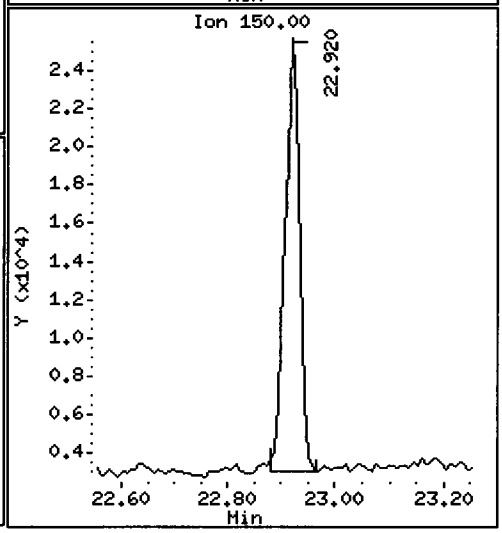


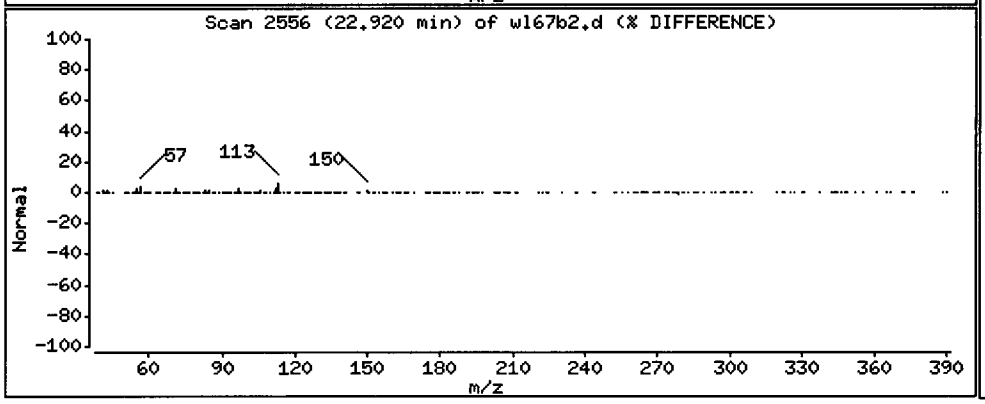












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

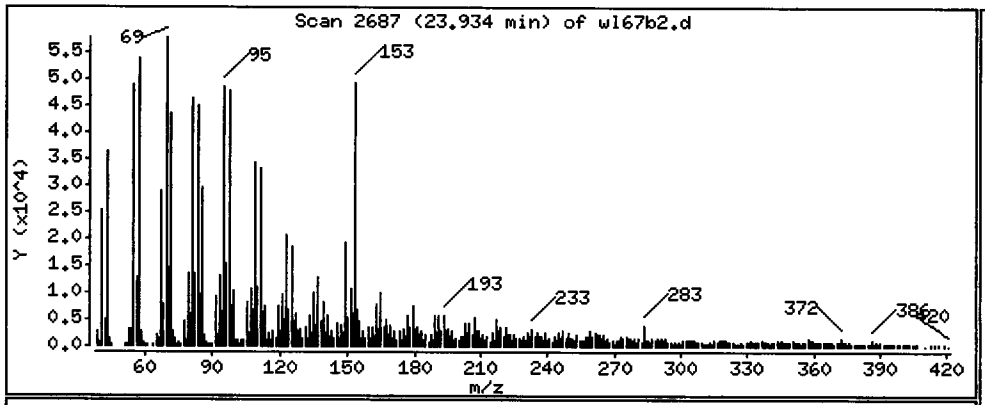
Operator: VTS/YZ

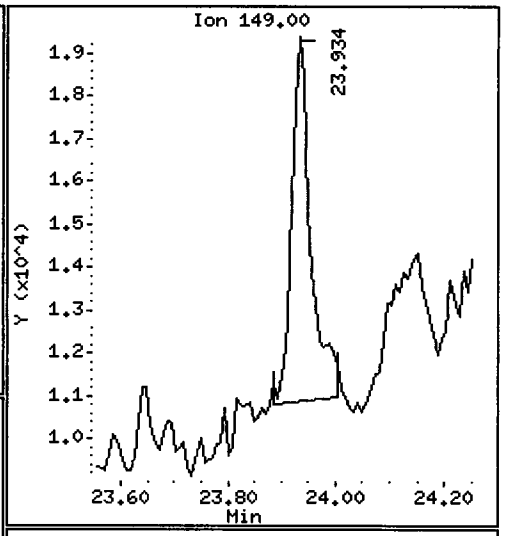
Column phase: ZB-5msi

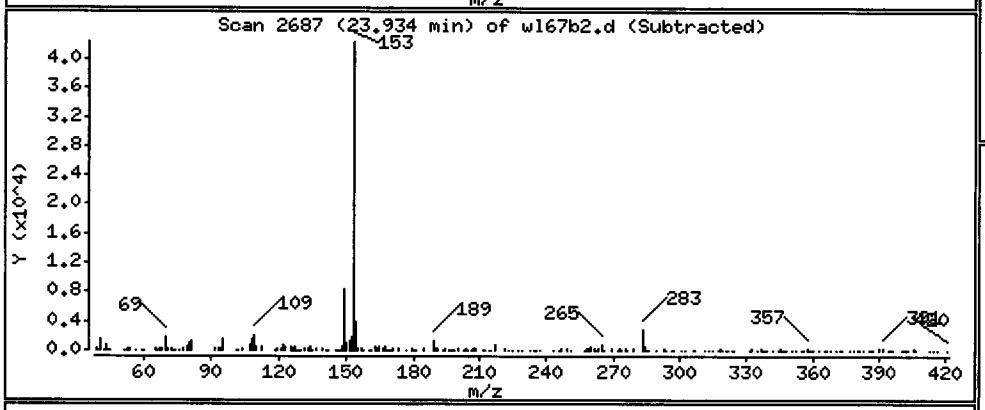
Column diameter: 0.25

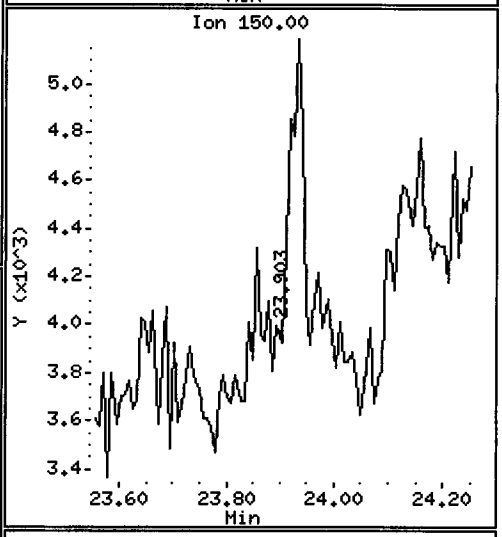
73 Di-n-octylphthalate

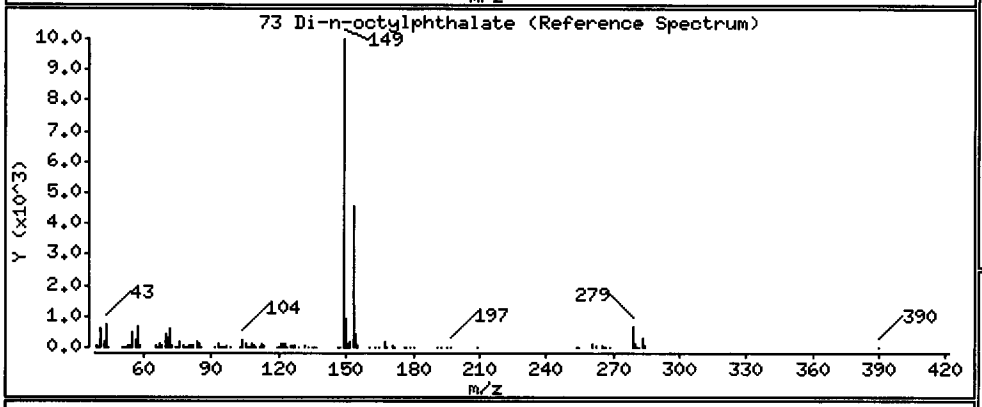
Concentration: 1313 ug/kg

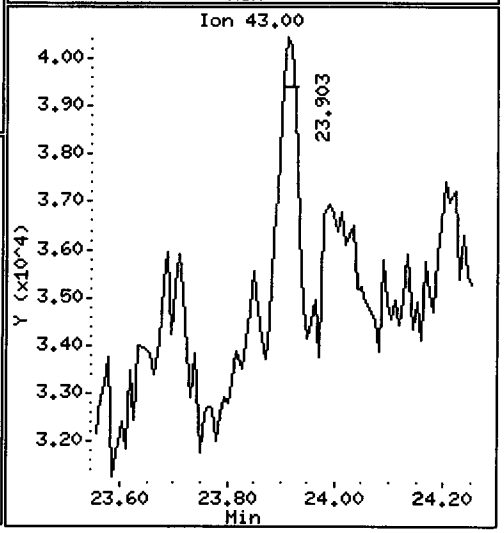


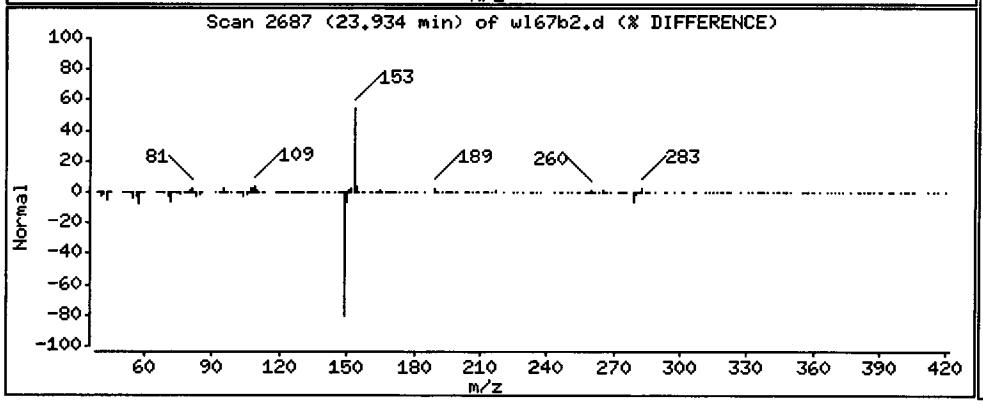












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

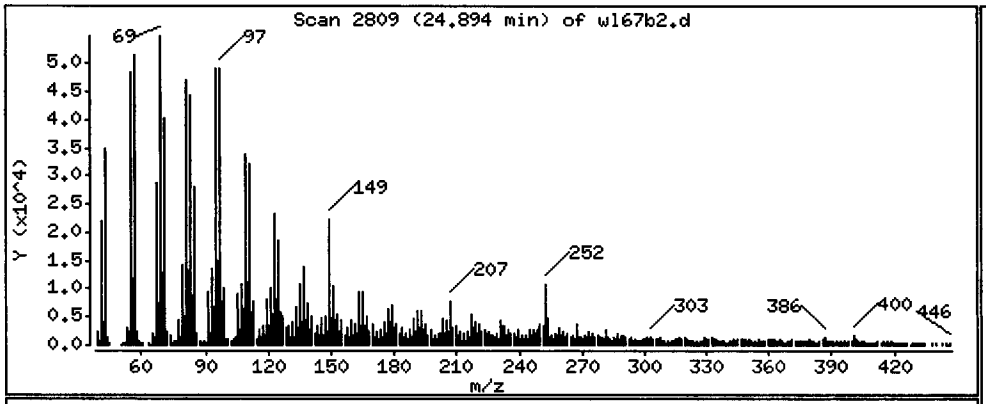
Operator: VTS/YZ

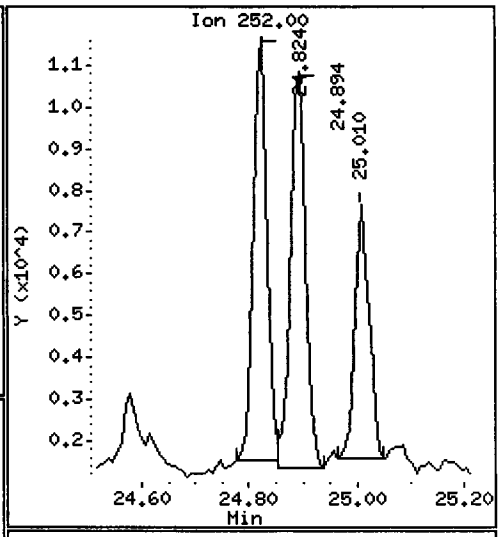
Column phase: ZB-5msi

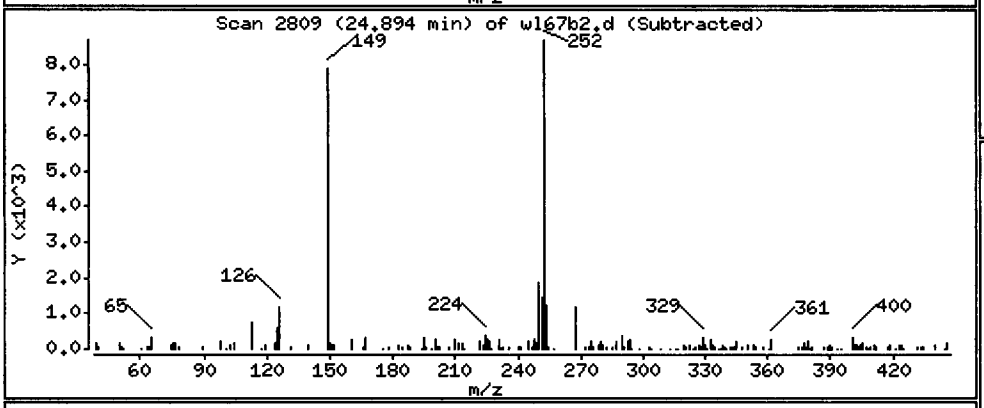
Column diameter: 0.25

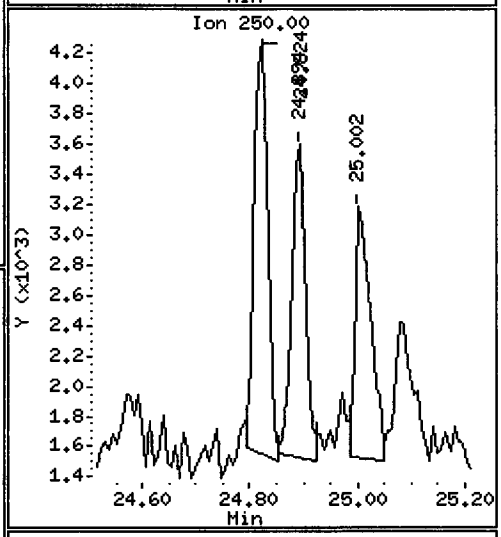
76 Benzo(a)pyrene

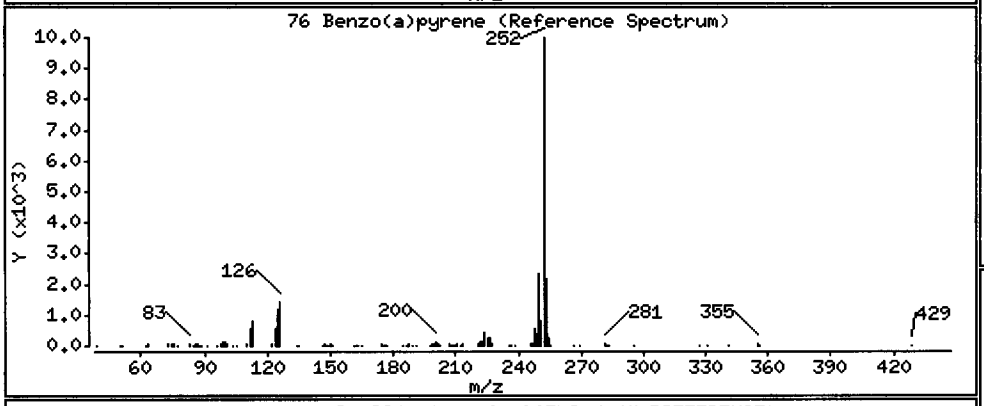
Concentration: 1479 ug/kg

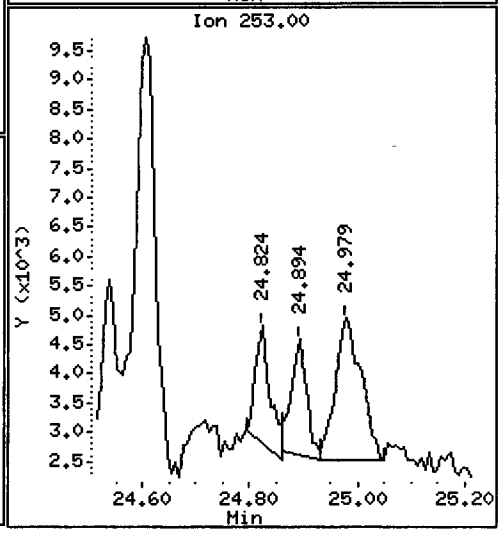


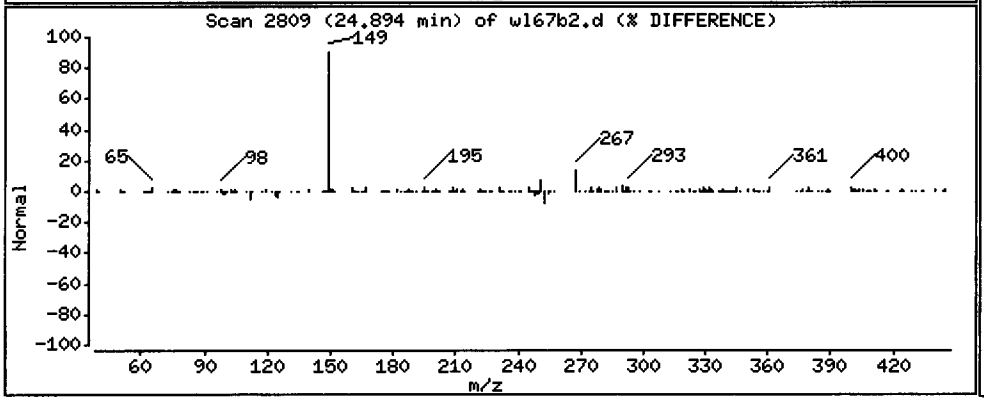












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

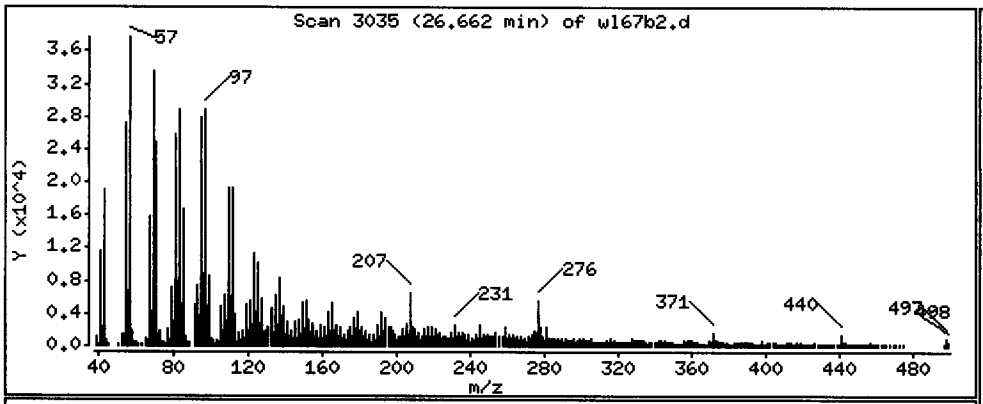
Operator: VTS/YZ

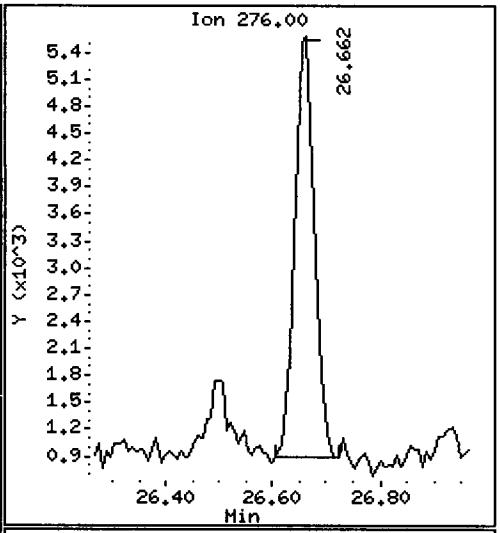
Column phase: ZB-5msi

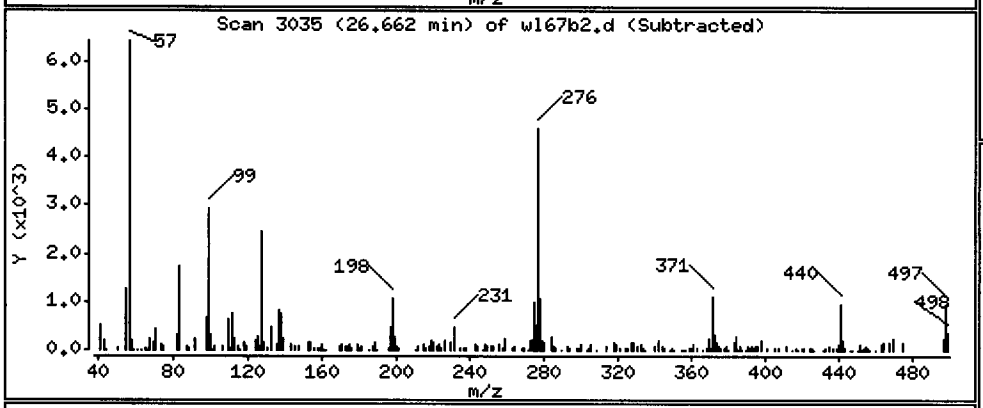
Column diameter: 0.25

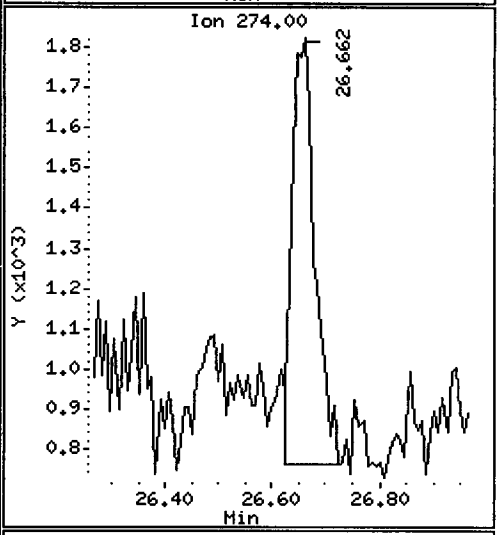
78 Indeno(1,2,3-cd)pyrene

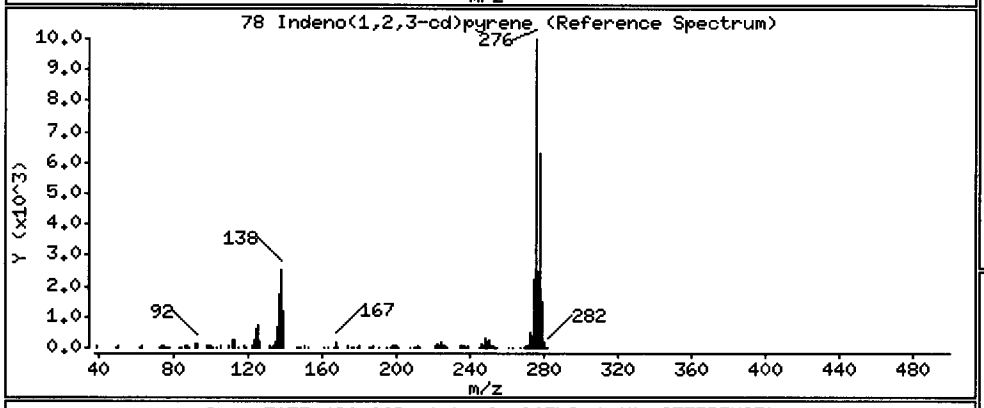
Concentration: 782.3 ug/kg

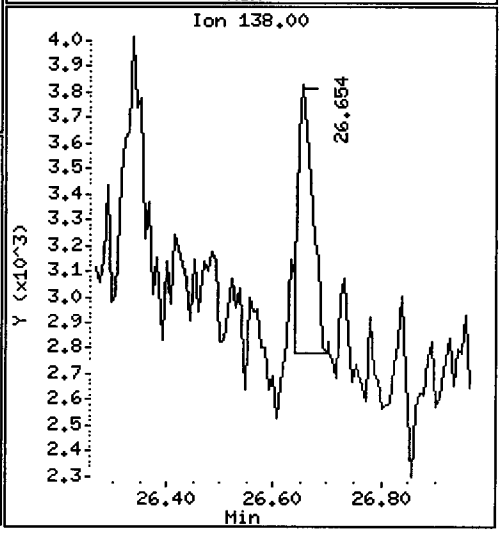


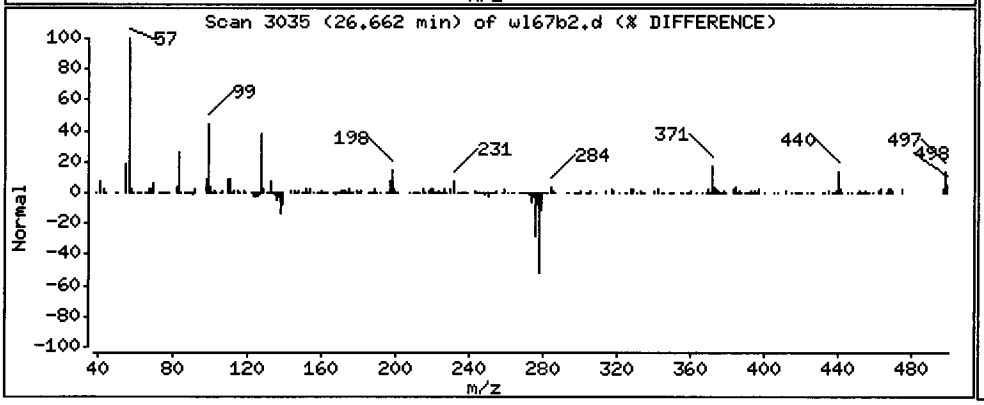












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

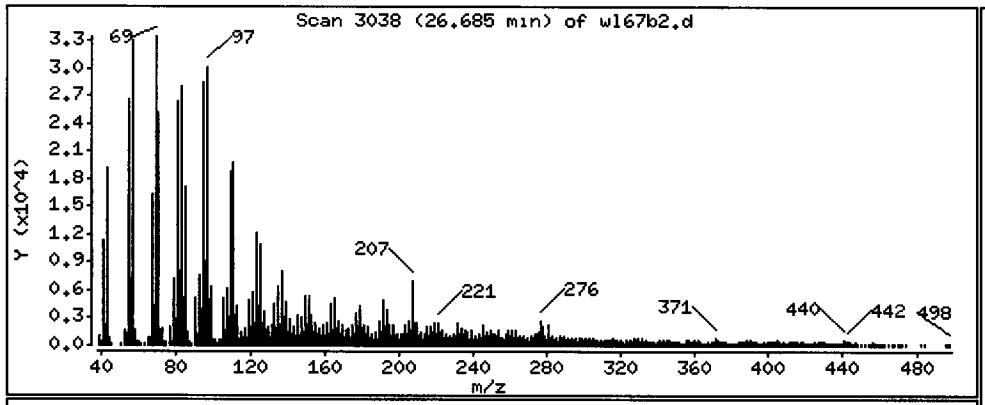
Operator: VTS/YZ

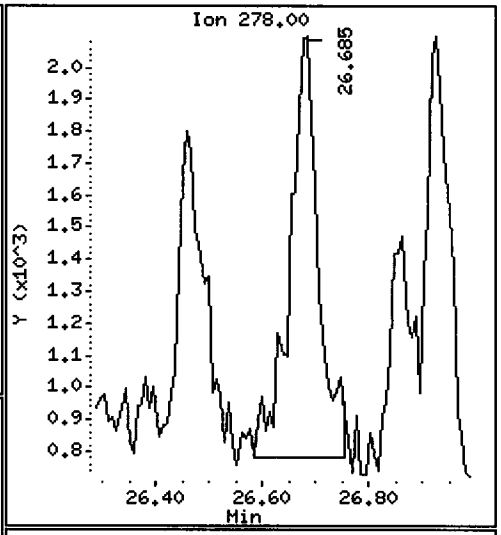
Column phase: ZB-5msi

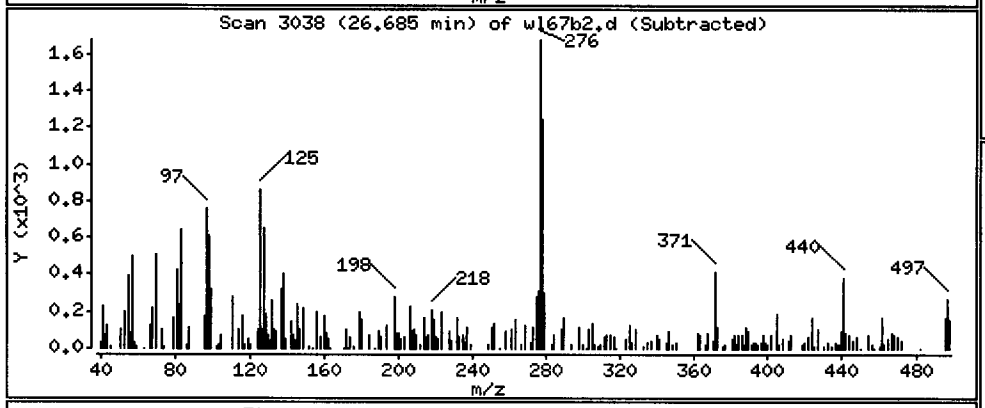
Column diameter: 0.25

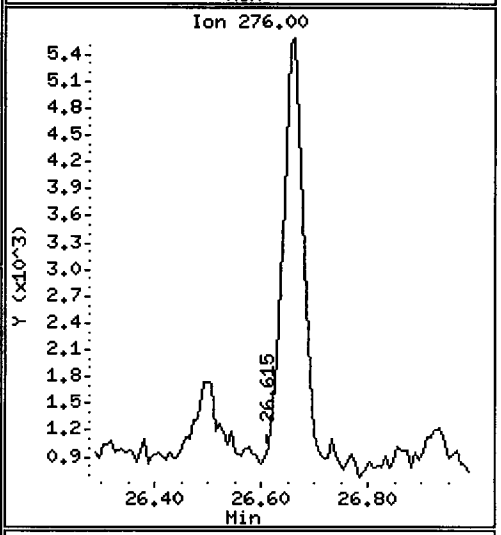
79 Dibenzo(a,h)anthracene

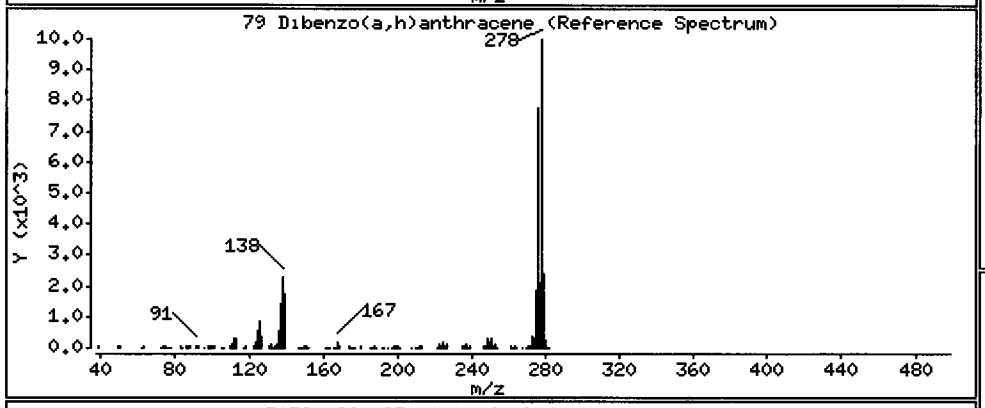
Concentration: 397.3 ug/kg

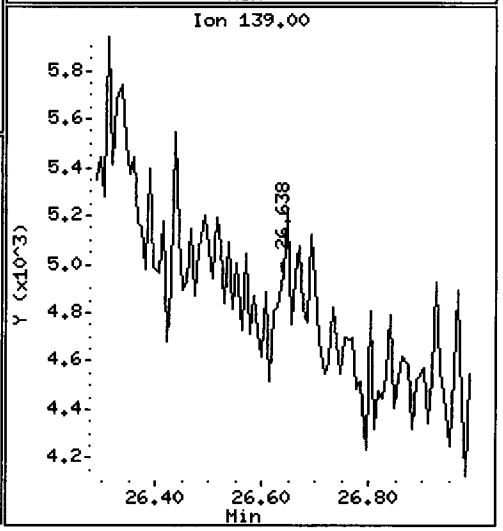


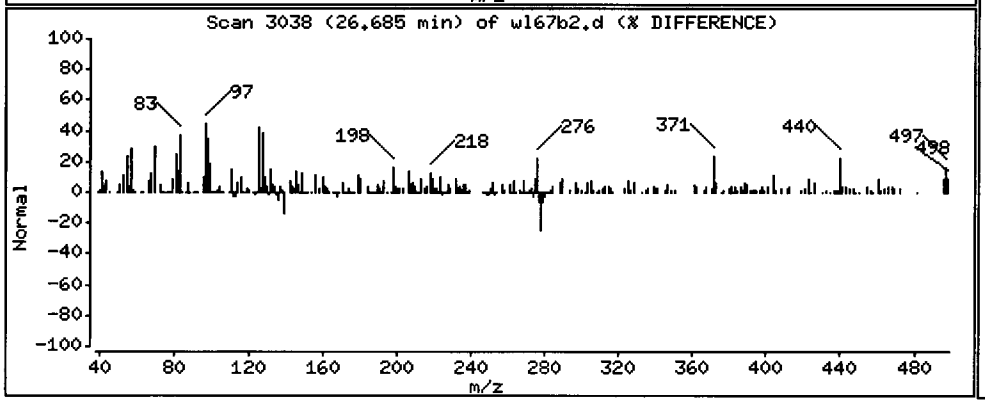












WL67 00007

Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

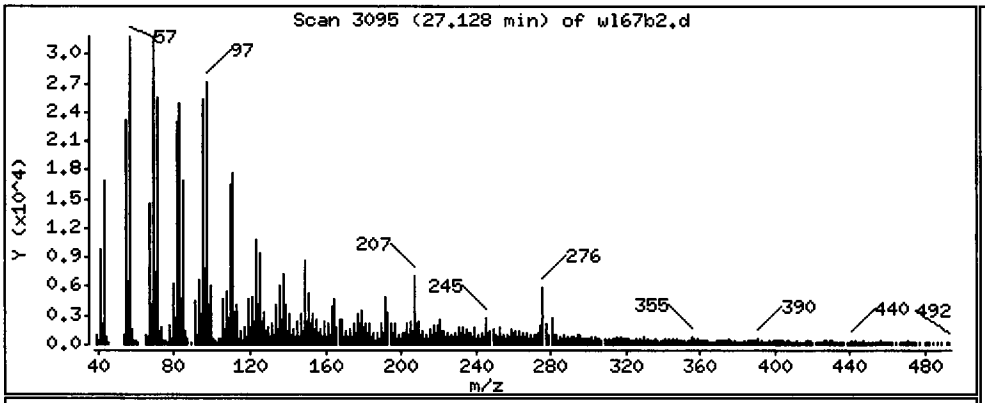
Operator: VTS/YZ

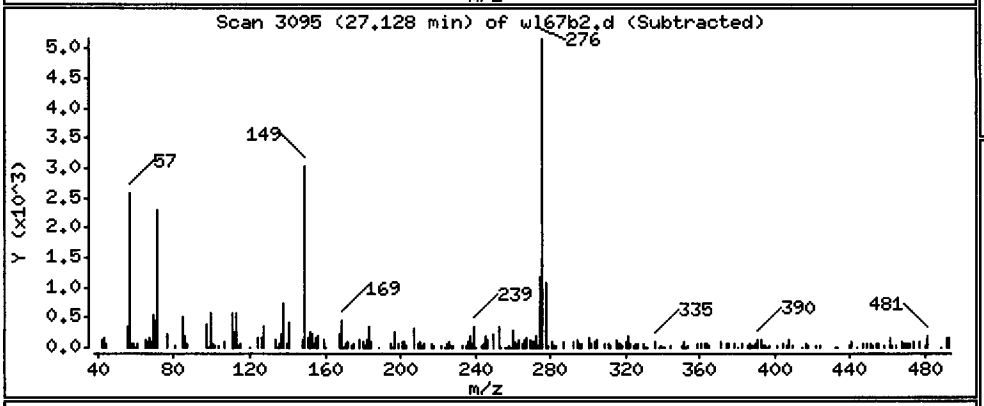
Column phase: ZB-5msi

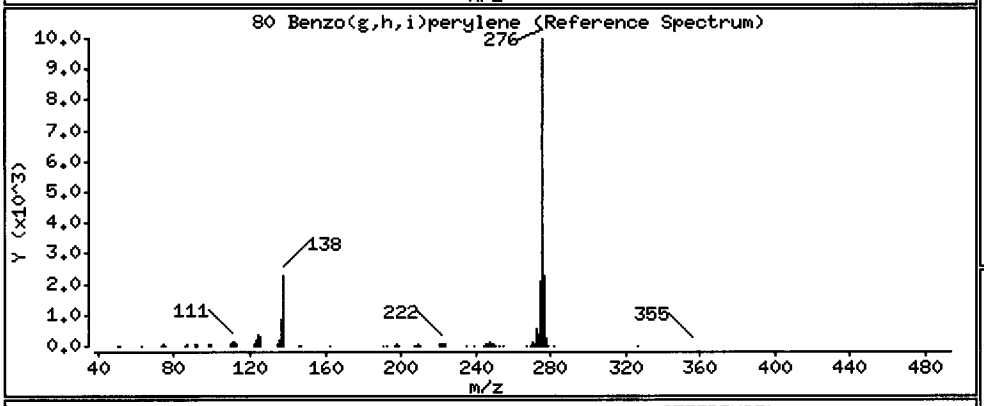
Column diameter: 0.25

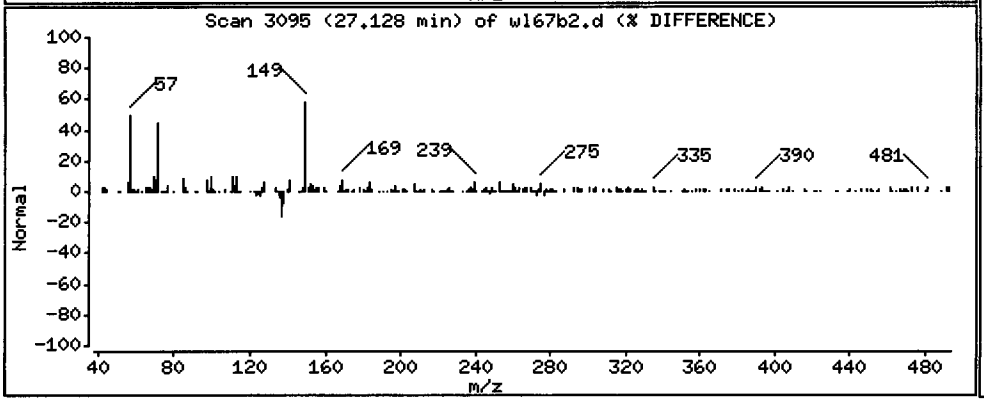
80 Benzo(g,h,i)perylene

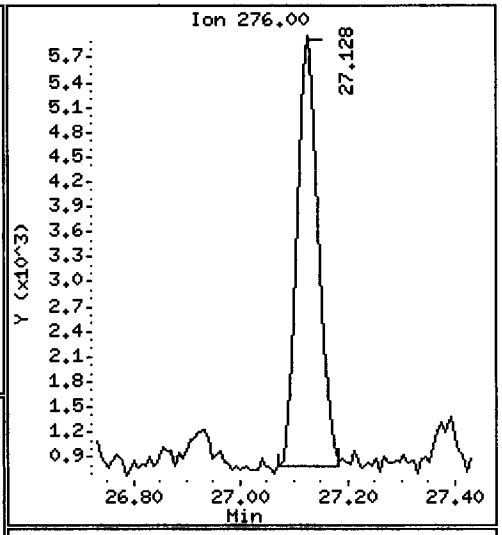
Concentration: 1063 ug/kg

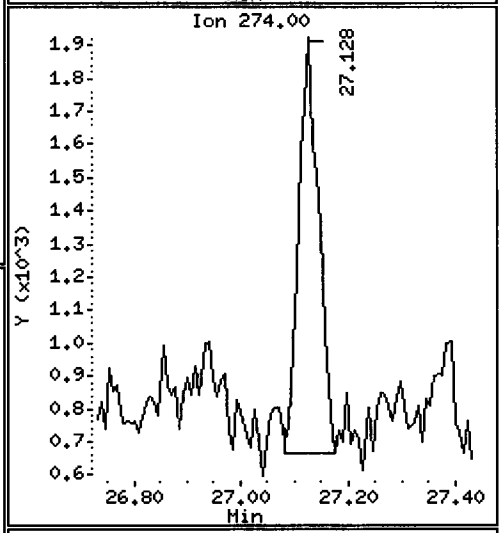


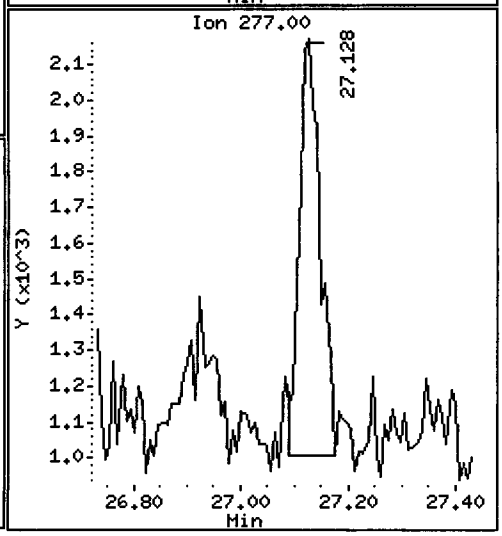












Data File: /chem1/nt10.i/20130425.b/wl67b2.d

Date : 25-APR-2013 11:58

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,6

Volume Injected (uL): 1.0

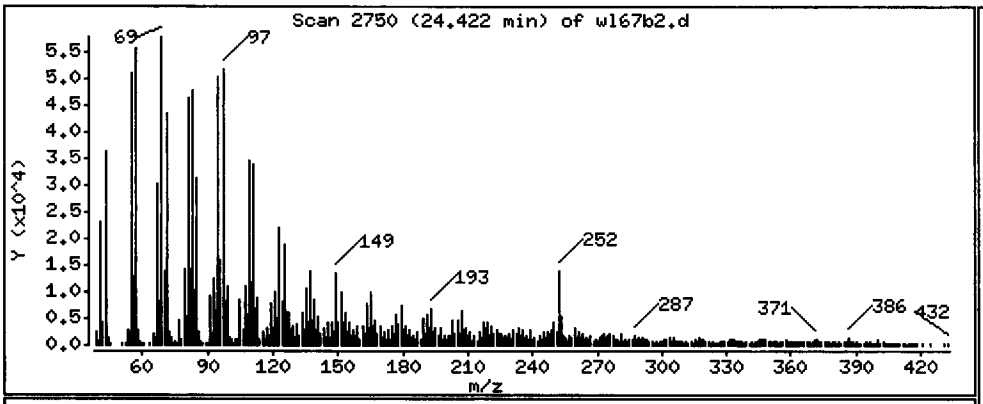
Operator: VTS/YZ

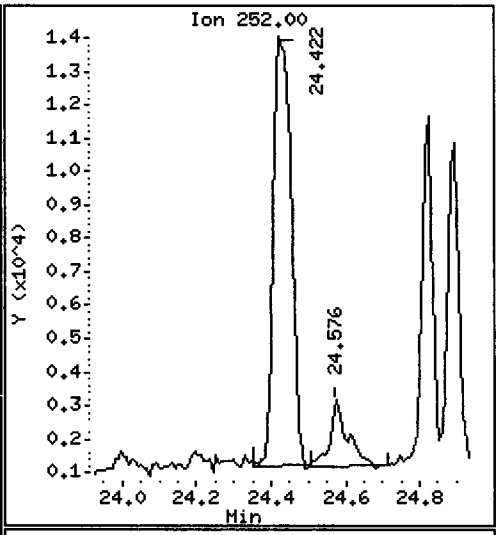
Column phase: ZB-5msi

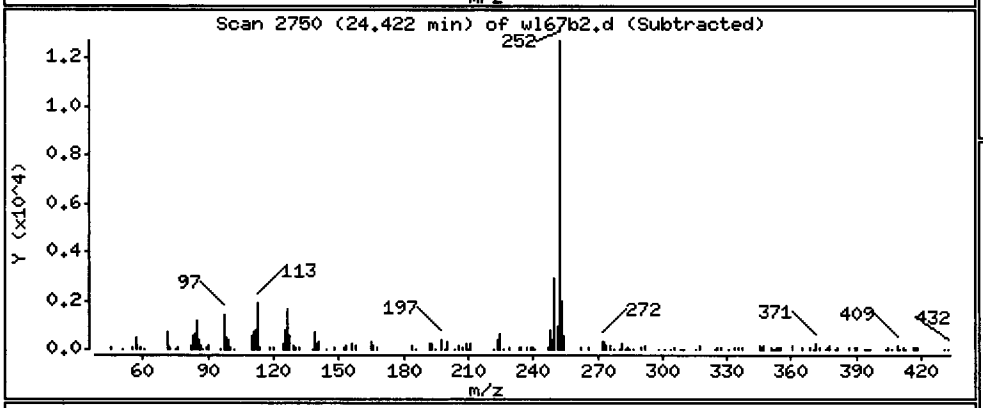
Column diameter: 0.25

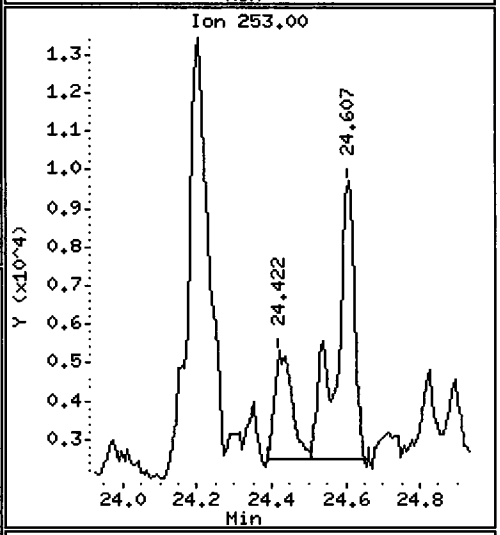
187 Total Benzofluoranthenes

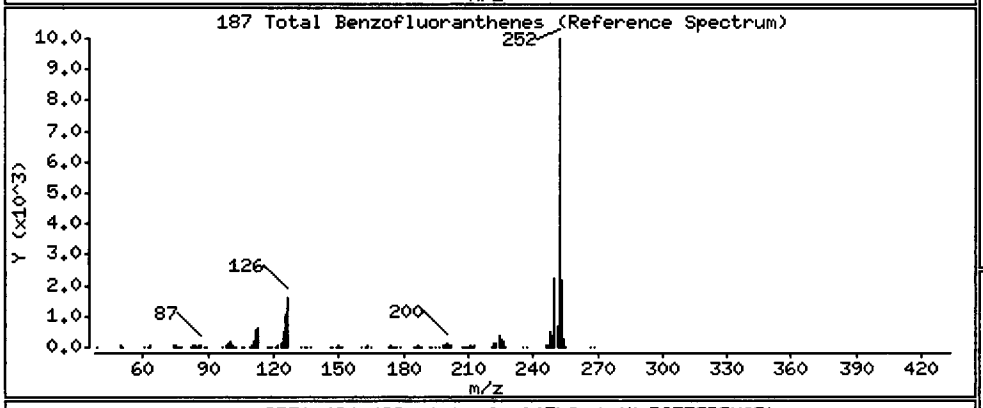
Concentration: 2980 ug/kg

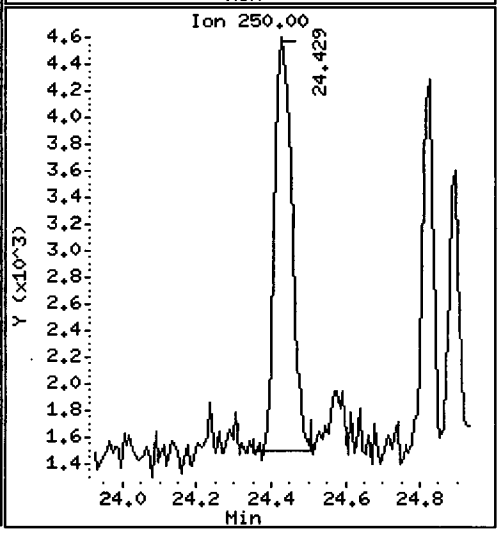


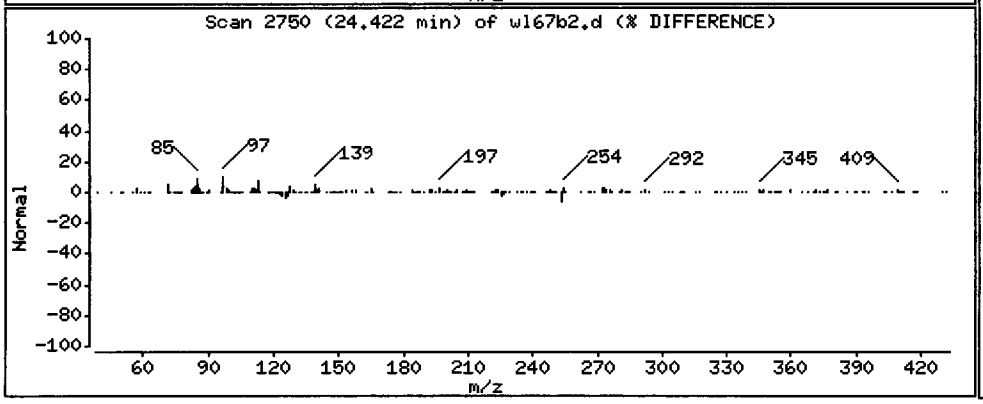






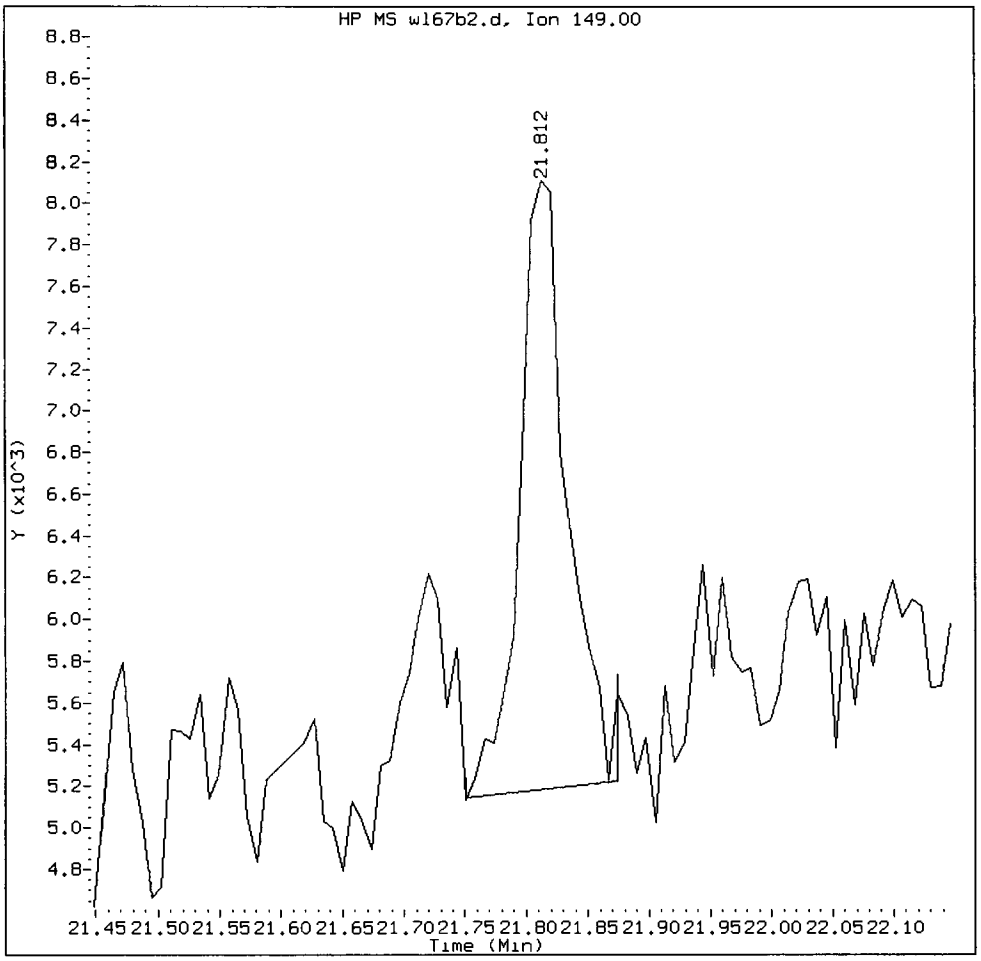






WL67B, /chem1/nt10.i/20130425.b/wl67b2.d

Butylbenzylphthalate Amount: 0.40 Area: 8249



MANUAL INTEGRATION for Butylbenzylphthalate

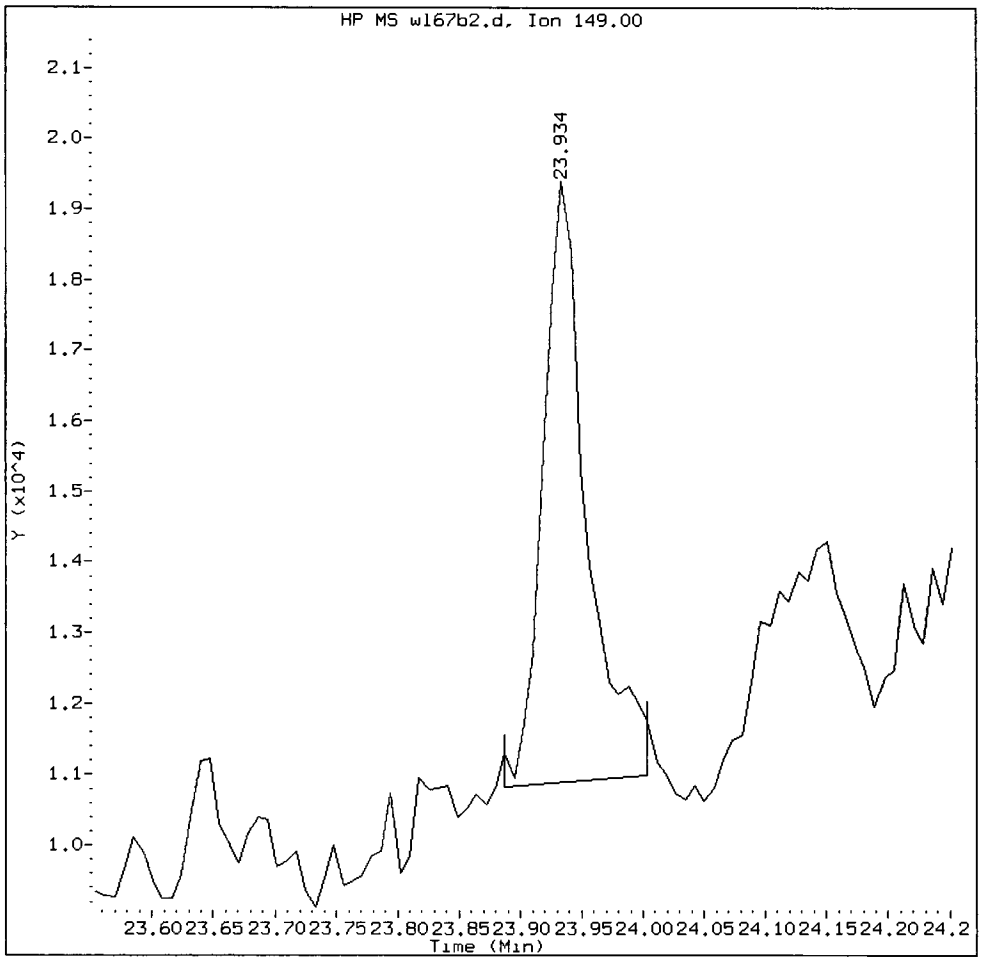
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL67B, /chem1/nt10.i/20130425.b/wl67b2.d

Di-n-octylphthalate Amount: 0.36 Area: 21471



MANUAL INTEGRATION for Di-n-octylphthalate

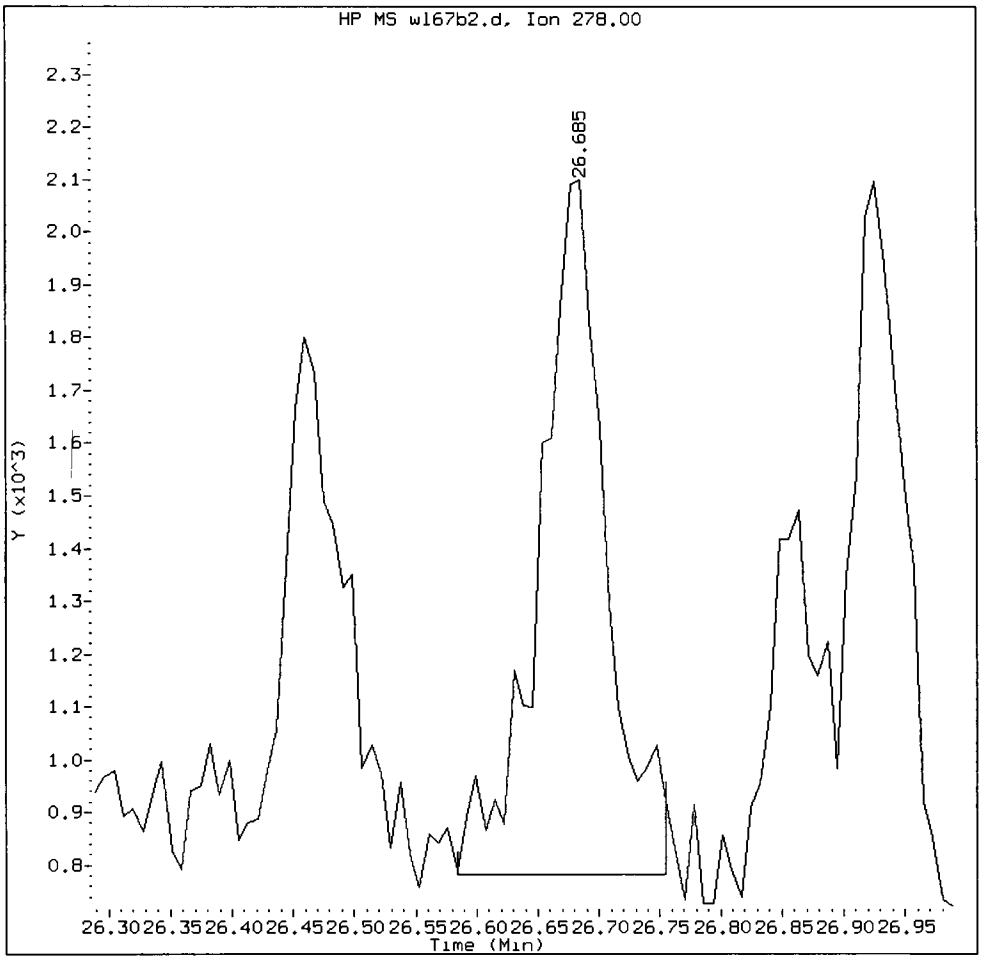
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 4/25/13

WL67B, /chem1/nt10.i/20130425.b/wl67b2.d

Dibenzo(a,h)anthracene Amount: 0.11 Area: 4991



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: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl67b2.d

Lab ID: WL67B, Method: ABN.m, Instrument: nt10.i, Date: 25-APR-2013

RT	CO-ELUTION COMPOUNDS
24.422	Benzo(k)fluoranthene and Benzo(b)fluoranthene

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL67

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) WL49, WL67 Page 1 of 1 Batch set up by: ~~JH~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or (2)	Final Effective Volume	Volume to Lab	Comments	Verify Client ID CT 4/18/13 Analyst/Date
	WL49 MBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 (2) 3 CT 4/18/13 Analyst/Date
	↓ SBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C 1 2 3 4 5 6 Analyst/Date 4/19/13
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 (2) 3 WW 4/19/13 Analyst/Date
7	WL49 F	2.03	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	
3	G	13.05	(1:1) (Y) / N	1mL	1mL		GPC Prep Filter (1:1) WW 4/19/13 Analyst/Date
3	GMS	13.05	(1:1) (Y) / N	1mL	1mL		
3	↓ GMSD	13.04	(1:1) (Y) / N	1mL	1mL		
8	WL67 A	8.06	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	Post GPC KD 80-85°C 1 2 3 4 5 6 Analyst/Date 4/22/13
8	↓ B	6.05	(1:1) (Y) / N	1mL	1mL	↓	
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 (2) 3 AC 4-22-13 Analyst/Date
Analyst/Date CT 4/18/13			WW 4/19/13	AC	AC		

4-22-13 4-22-13

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2084-3)	100/150µg/mL	50µL	7/02/13	CT	TH
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	CT	TH
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	CT	TH
Acid Spike	38(2074-1)	100/150µg/mL	50µL	7/31/13	CT	TH
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 13:48			Balance ID: B1466 2614			

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)

WL67 0075

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

SIM ABN

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): 01/25/13 Internal Standard ID 1998-2 Expiration 07/09/13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%? See	YES / NO
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%? fuel scan	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	2026-2	02/07/13	Ultra	see fuel scan curve.	
	2050-1	03/07/13			
	2050-2	3/10/13			
	2064-2	04/05/14			
	1998-4	07/09/13			

Detail problems, corrective actions and/or other pertinent information below:

- low point dropped for PCP.

Analyst: YZ Date: 02/09/13

Reviewer: WD Date: 2.6.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 2013/01/25 Analysis: ABN/SIM PAH Analyst: YZ

GC Program: ABN Column No: 247358 Column Type: 30m 5%

Instrument Tune (.U or .CT.): 12120414 EM Voltage: 1000

Calibration File: DF0125 Curve Date: 01/25/13 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2036-2	
	2050-1	
	2050-2	
	2044-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130125.b

	Time	Filename	LabID	ClientId	DF									
1	1241	df0125.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1259	ic0125a.d	IC0125A		1	9.09	52229	11.75	195391	15.66	112611	18.96	208917	24.01	237704	26.51	236168
3	1413	ic0125c.d	IC0125C		1	9.09	49909	11.75	185389	15.66	103172	18.96	190705	24.01	214940	26.51	207018
4	1527	ic0125e.d	IC0125E		1	9.09	53853	11.75	200106	15.66	112392	18.96	210710	24.01	240805	26.51	230834
5	1603	ic0125f.d	IC0125F		1	9.09	51752	11.75	191986	15.66	110315	18.96	205875	24.01	242832	26.51	234305
6	1640	ic0125g.d	IC0125G		1	9.09	51364	11.75	189071	15.66	102169	18.96	186717	24.01	216735	26.51	211470
7	1716	ic0125h.d	IC0125H		1	9.09	50086	11.75	188224	15.66	104416	18.96	198157	24.01	227335	26.51	219691
8	1753	ic0125i.d	IC0125I		1	9.08	52438	11.75	194519	15.66	105586	18.96	194974	24.01	224556	26.51	218858

YZ 02/01/13

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

SJ_67_6976

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0125a	ic0125c	ic0125e	ic0125f	ic0125g	ic0125h	ic0125i
INJ.DATE:	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013
INJ.TIME:	12:59	14:13	15:27	16:03	16:40	17:16	17:53

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.724	6.725	6.725	6.725	6.725	6.725	6.725	6.724	6.224-7.224	6.725	0.000
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.612	7.112-8.112	+++++	+++++
* 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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.196	29.696-30.696	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.852	23.352-24.352	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.862	27.362-28.362	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.855	19.355-20.355	+++++	+++++

Reviewer 1 YZ Date: 02/06/13
Reviewer 2 VD Date: 2.6.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.934	14.434-15.434	+++++	+++++
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	8.463	8.456	8.456	8.456	8.456	8.456	8.456	8.463	7.963-8.963	8.457	0.003
4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
7 1,3-Dichlorobenzene	9.020	9.012	9.012	9.020	9.012	9.013	9.012	9.020	8.520-9.520	9.015	0.004
* 8 1,4-Dichlorobenzene-d4	9.090	9.090	9.090	9.090	9.090	9.090	9.082	9.090	8.590-9.590	9.089	0.003
9 1,4-Dichlorobenzene	9.121	9.121	9.121	9.121	9.121	9.121	9.113	9.121	8.621-9.621	9.120	0.003
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
11 Benzyl alcohol	9.392	9.392	9.392	9.392	9.392	9.393	9.392	9.392	8.892-9.892	9.392	0.000
12 1,2-Dichlorobenzene	9.501	9.501	9.501	9.501	9.501	9.494	9.493	9.501	9.001-10.001	9.499	0.004
13 2-Methylphenol	9.648	9.649	9.649	9.648	9.649	9.649	9.649	9.648	9.148-10.148	9.649	0.000
14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.966	8.466-9.466	+++++	+++++
15 4-Methylphenol	9.943	9.944	9.944	9.943	9.944	9.936	9.936	9.943	9.443-10.443	9.941	0.004
16 N-Nitroso-di-n-propyla	10.005	9.998	9.998	9.998	9.998	9.998	9.998	10.005	9.505-10.505	9.999	0.003
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.274	8.774-9.774	+++++	+++++
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.618	8.118-9.118	+++++	+++++
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/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	11.068	11.068	11.068	11.068	11.068	11.068	11.068	11.068	10.568-11.568	11.068	0.000
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.248	9.748-10.748	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.669	11.669	11.669	11.669	11.669	11.669	11.669	11.669	11.169-12.169	11.669	0.000
*	27 Naphthalene-d8	11.754	11.754	11.754	11.754	11.754	11.754	11.754	11.754	11.254-12.254	11.754	0.000
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.480	8.980-9.980	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.209	12.210	12.210	12.209	12.210	12.210	12.210	12.209	11.709-12.709	12.210	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.301	9.801-10.801	+++++	+++++
	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	15.173	15.166	15.166	15.173	15.166	15.166	15.166	15.173	14.673-15.673	15.168	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.661	15.661	15.661	15.661	15.661	15.661	15.661	15.661	15.161-16.161	15.661	0.000
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.055	12.555-13.555	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.766	16.751	16.759	16.759	16.751	16.759	16.751	16.766	16.266-17.266	16.757	0.006
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.466	12.966-13.966	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.587	13.087-14.087	+++++	+++++
	54 N-Nitrosodiphenylamine	17.152	17.145	17.153	17.152	17.153	17.145	17.153	17.152	16.652-17.652	17.150	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	18.286	18.279	18.279	18.286	18.279	18.279	18.279	18.286	17.786-18.786	18.281	0.004
	58 Pentachlorophenol	18.681	18.674	18.674	18.673	18.674	18.674	18.674	18.681	18.181-19.181	18.675	0.003
*	59 Phenanthrene-d10	18.944	18.937	18.937	18.936	18.937	18.937	18.937	18.944	18.444-19.444	18.938	0.003
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.286	14.786-15.786	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.761	15.261-16.261	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.132	22.132	22.132	22.132	22.132	22.132	22.132	22.132	21.632-22.632	22.132	0.000
	67 Butylbenzylphthalate	23.076	23.077	23.077	23.077	23.077	23.077	23.077	23.076	22.576-23.576	23.077	0.000
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Report Date : 06-Feb-2013 11:08

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 69 Chrysene-d12	24.013	24.006	24.006	24.006	24.006	24.006	24.006	24.013	23.513-24.513	24.007	0.003
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.185	19.685-20.685	+++++	+++++
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.382	21.882-22.882	+++++	+++++
* 77 Perylene-d12	26.514	26.507	26.507	26.506	26.507	26.507	26.507	26.514	26.014-27.014	26.508	0.003
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
79 Dibenzo(a,h)anthracene	28.962	28.947	28.947	28.955	28.955	28.947	28.947	28.962	28.462-29.462	28.951	0.006
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.162	24.662-25.662	+++++	+++++
$ 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	4.447	4.455	4.447	4.439	4.462	4.447	4.455	4.447	3.947-4.947	4.450	0.008
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.897	7.397-8.397	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.833	21.333-22.333	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.896	14.396-15.396	+++++	+++++
$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.819	14.319-15.319	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.950	26.450-27.450	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Level 2: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Level 3: /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d
Level 4: /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Level 5: /chem1/nt10.i/20130125.b/SIM.b/ic0125e.d
Level 6: /chem1/nt10.i/20130125.b/SIM.b/ic0125f.d
Level 7: /chem1/nt10.i/20130125.b/SIM.b/ic0125a.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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	1.60112	1.52637	1.74838	1.60284	1.64321	1.57901	1.61268	1.61623	4.232
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
6 2-Chlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.69924 / 1.51223	1.64308	1.78325	1.62856	1.58654	1.50818	1.62301	6.095
9 1,4-Dichlorobenzene	1.69301 / 1.50526	1.66292	1.78004	1.62057	1.57859	1.50230	1.62039	6.249
11 Benzyl alcohol	0.90024 / 1.00311	0.89553	1.03348	0.93839	0.97606	0.95672	0.95765	5.338
12 1,2-Dichlorobenzene	1.59489 / 1.42882	1.56528	1.69108	1.52681	1.50484	1.42878	1.53436	6.090
13 2-Methylphenol	1.16190 / 1.22450	1.14268	1.33403	1.20848	1.24301	1.19836	1.21614	5.135
14 2,2'-oxybis(1-Chloropropane)	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.15567 / 1.30063	1.17320	1.37170	1.26247	1.28580	1.26635	1.25940	5.911
16 N-Nitroso-di-n-propylamine	0.76162 / 0.80155	0.75518	0.86197	0.78377	0.80174	0.77595	0.79168	4.521

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
17 Hexachloroethane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.31692 / 0.35080	0.31658	0.38216	0.34344	0.35756	0.34627	0.34482	6.669
23 Bis(2-Chloroethoxy)methane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.37531 / 0.33970	0.42340	0.40002	0.37262	0.35731	0.33826	0.37237	8.375

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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	0.23652	0.22579	0.24621	0.22237	0.22210	0.21458	0.22607	5.111
	0.21490							
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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
38 2-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.17609 / 1.20338	1.16303	1.33970	1.21060	1.23293	1.19830	1.21772	4.796
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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
48 2,4-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.31938 / 1.39419	1.46232	1.57851	1.40819	1.42654	1.36955	1.42267	5.767
51 4-Chlorophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.39457 / 0.47257	0.42221	0.51525	0.47679	0.49727	0.47639	0.46501	9.075
56 4-Bromophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.31360 / 0.28438	0.30650	0.32868	0.30824	0.29576	0.28022	0.30248	5.609

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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	+++++	0.12822	0.16890	0.16825	0.19297	0.20079	0.21278	0.17865	16.990
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Butylbenzylphthalate	0.32371	0.31511	0.40430	0.35715	0.40988	0.41311	0.45304	0.38233	13.412
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
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	0.87048 / 1.01114	0.83963	1.02783	0.94620	1.00403	0.97443	0.95339	7.630

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.75150	0.74984	0.81528	0.75422	0.74778	0.72923	0.76758	0.75935	3.573
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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 2-Fluorophenol	1.24134	1.21896	1.38853	1.25752	1.27874	1.24084	1.28235	1.27261	4.382
$ 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 : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 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	0.49609	0.58017	0.57746	0.51719	0.52937	0.50011	0.52003	0.53149	6.455
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125a.d
Report Date: 06-Feb-2013 11:08

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 2/6/13

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125a.d
Lab Smp Id: IC0125A
Inj Date : 25-JAN-2013 12:59 Inst ID: nt10.i
Operator : VTS/YZ
Smp Info : IC0125A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 12:59 Cal File: ic0125a.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	6.724	6.725	(0.740)	83720	5.00000	5.038
	3 Phenol	94	8.463	8.456	(0.931)	105286	5.00000	4.989
	7 1,3-Dichlorobenzene	146	9.020	9.012	(0.992)	98728	5.00000	4.659
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	52229	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	98273	5.00000	4.645
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	65489	5.00000	5.237
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	93282	5.00000	4.656
	13 2-Methylphenol	108	9.648	9.649	(1.061)	79943	5.00000	5.034
	15 4-Methylphenol	108	9.943	9.936	(1.094)	84913	5.00000	5.164
	16 N-Nitroso-di-n-propylamine	70	10.005	9.998	(1.101)	52330	5.00000	5.062
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	171357	10.0000	10.17
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	82967	5.00000	4.561
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	195391	4.00000	
	30 Hexachlorobutadiene	225	12.209	12.210	(1.039)	52488	5.00000	4.753
	39 Dimethylphthalate	163	15.173	15.166	(0.969)	169092	5.00000	4.941
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	112411	4.00000	
	50 Diethylphthalate	149	16.766	16.751	(1.071)	195903	5.00000	4.900
	54 N-Nitrosodiphenylamine	169	17.152	17.153	(0.905)	123410	5.00000	5.081
	57 Hexachlorobenzene	284	18.286	18.279	(0.965)	74264	5.00000	4.701
	58 Pentachlorophenol	266	18.681	18.674	(0.986)	111136	10.0000	9.992
*	59 Phenanthrene-d10	188	18.944	18.937	(1.000)	208917	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	154517	5.00000	4.892
	67 Butylbenzylphthalate	149	23.076	23.077	(0.961)	134613	5.00000	5.925
*	69 Chrysene-d12	240	24.013	24.006	(1.000)	237704	4.00000	
*	77 Perylene-d12	264	26.514	26.507	(1.000)	236168	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.962	28.947	(1.092)	298499	5.00000	5.303
	90 N-Nitrosodimethylamine	74	4.447	4.455	(0.489)	100225	10.0000	10.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125a.d
Lab Smp Id: IC0125A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	52229	-3.02
27 Naphthalene-d8	200104	100052	400208	195391	-2.36
42 Acenaphthene-d10	112392	56196	224784	112411	0.02
59 Phenanthrene-d10	210710	105355	421420	208917	-0.85
69 Chrysene-d12	240805	120402	481610	237704	-1.29
77 Perylene-d12	230834	115417	461668	236168	2.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.04
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.03
77 Perylene-d12	26.51	26.01	27.01	26.51	0.03

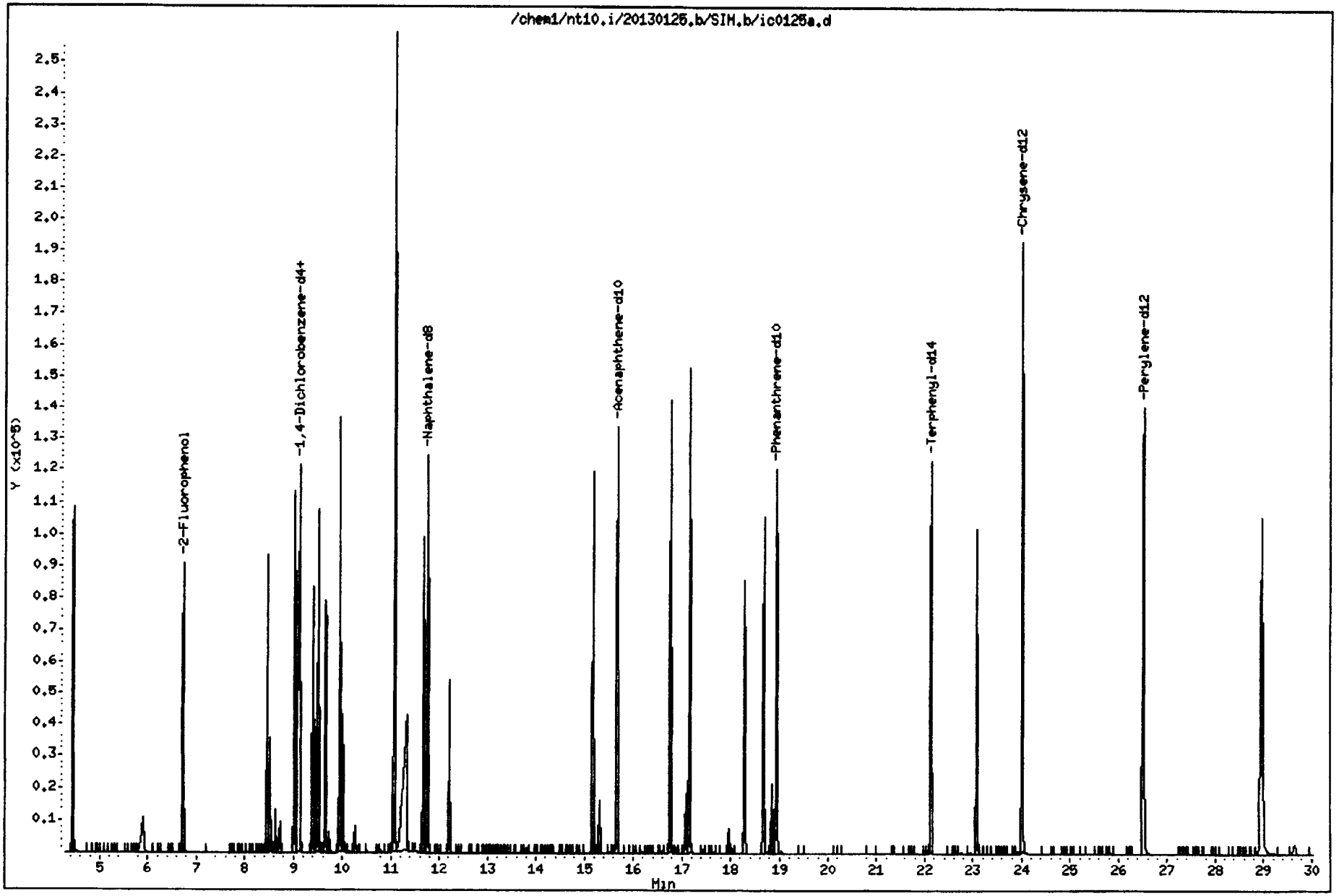
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125a.d
Date : 25-JAN-2013 12:59
Client ID:
Sample Info: IC0125A

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125a.d

Lab ID: IC0125A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 2/6/13

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d
Lab Smp Id: IC0125C
Inj Date : 25-JAN-2013 14:13
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 14:13 Cal File: ic0125c.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	6.725	6.725	(0.740)	3465	0.20000	0.2182
	3 Phenol	94	8.456	8.456	(0.930)	4363	0.20000	0.2164
	7 1,3-Dichlorobenzene	146	9.012	9.012	(0.991)	4450	0.20000	0.2197
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	49909	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	4442	0.20000	0.2197
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	2579	0.20000	0.2158
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	4220	0.20000	0.2204
	13 2-Methylphenol	108	9.649	9.649	(1.061)	3329	0.20000	0.2194
	15 4-Methylphenol	108	9.944	9.936	(1.094)	3423	0.20000	0.2178
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	2151	0.20000	0.2178(M)
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	7081	0.40000	0.4433
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	3706	0.20000	0.2149
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	185289	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	2281	0.20000	0.2178
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	6844	0.20000	0.2200
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	102172	4.00000	
	50 Diethylphthalate	149	16.751	16.751	(1.070)	8064	0.20000	0.2219
	54 N-Nitrosodiphenylamine	169	17.145	17.153	(0.905)	4913	0.20000	0.2216
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	3134	0.20000	0.2173
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	3221	0.40000	0.3573
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	190705	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	6206	0.20000	0.2173
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	4345	0.20000	0.2115
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	214940	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	207018	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	10639	0.20000	0.2156
	90 N-Nitrosodimethylamine	74	4.455	4.455	(0.490)	4069	0.40000	0.4295

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: ic0125c.d
Lab Smp Id: IC0125C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	49909	-7.32
27 Naphthalene-d8	200104	100052	400208	185289	-7.40
42 Acenaphthene-d10	112392	56196	224784	102172	-9.09
59 Phenanthrene-d10	210710	105355	421420	190705	-9.49
69 Chrysene-d12	240805	120402	481610	214940	-10.74
77 Perylene-d12	230834	115417	461668	207018	-10.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

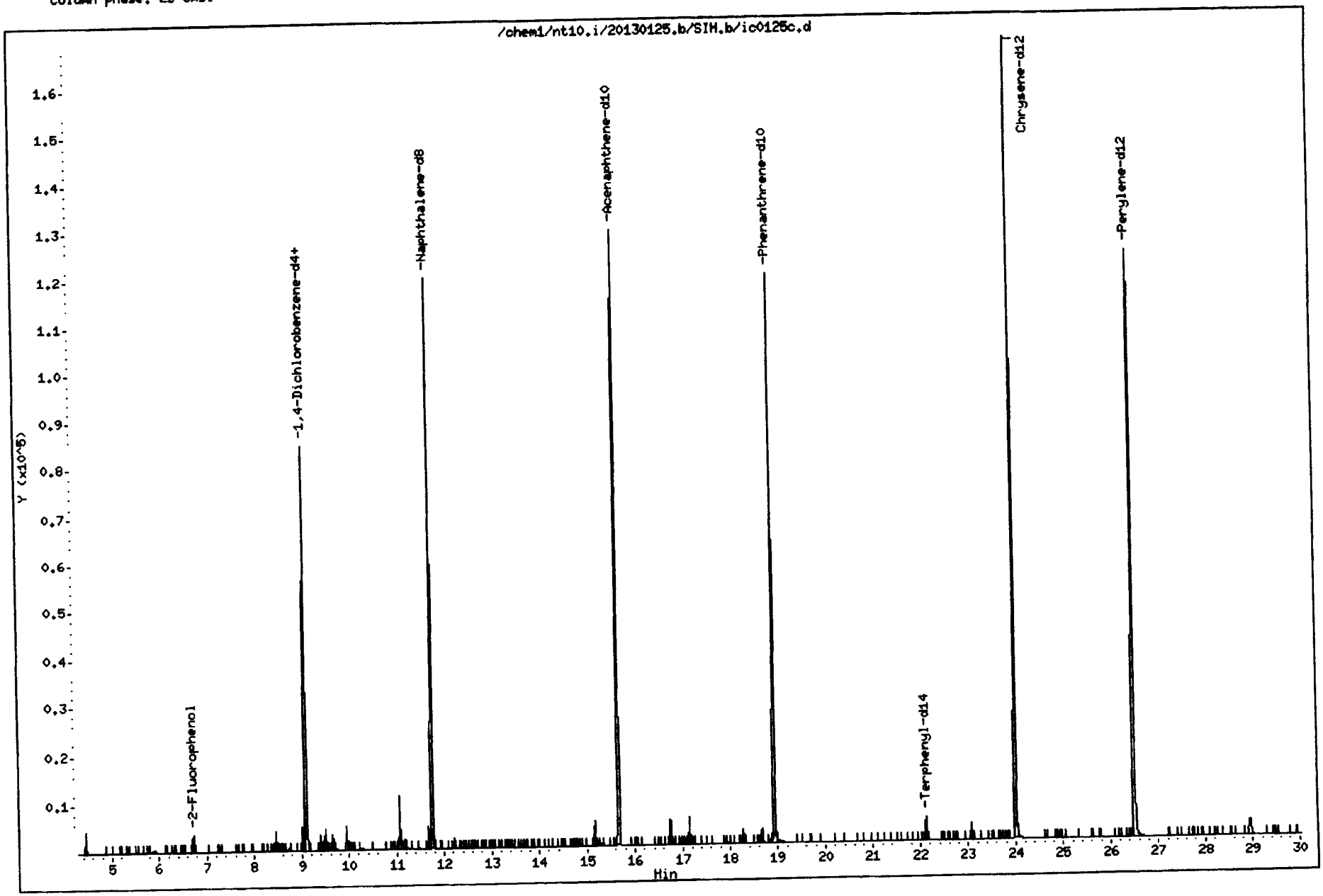
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d
Date : 25-JAN-2013 14:13
Client ID:
Sample Info: IC0125C

Instrument: nt10.i

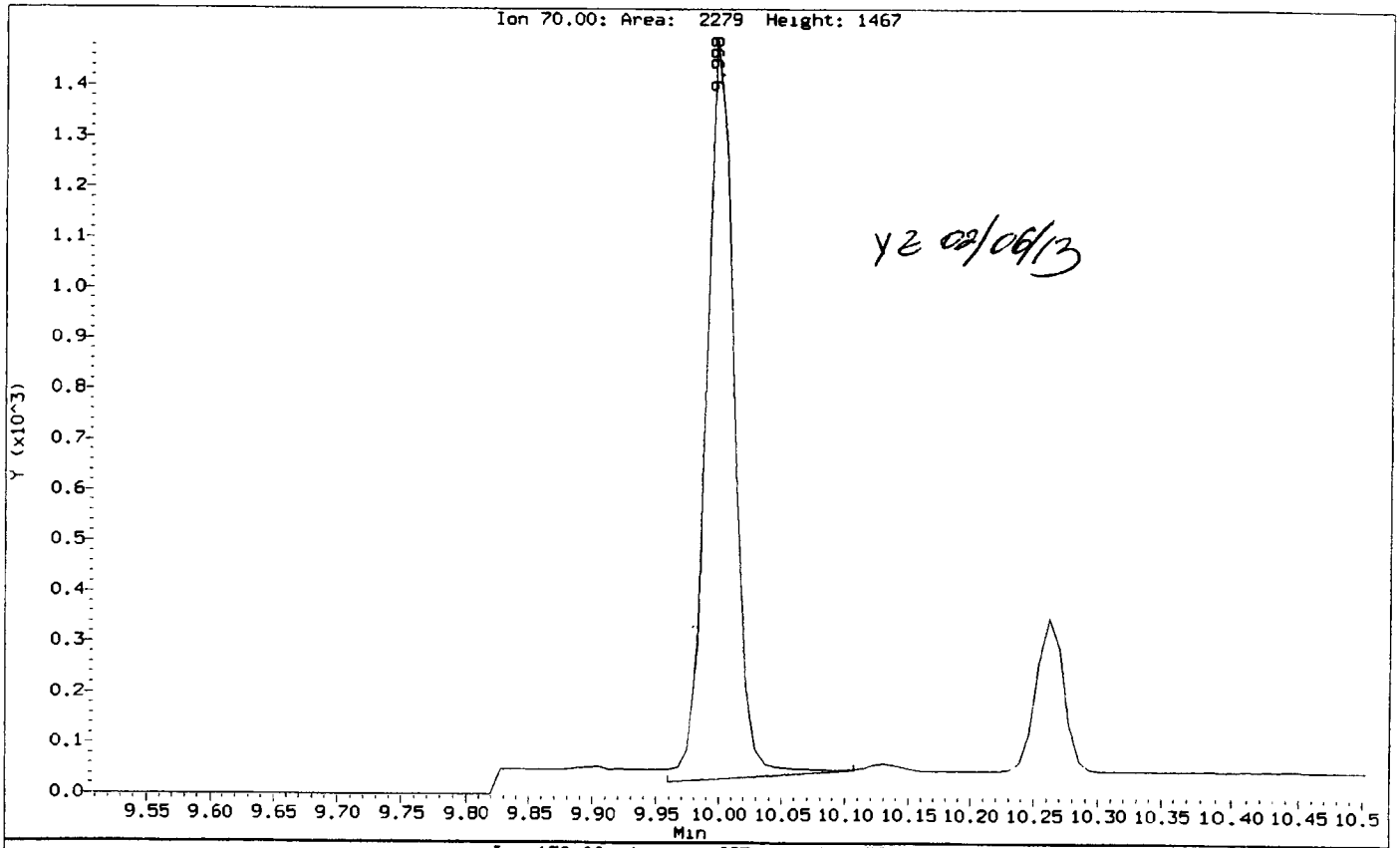
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi

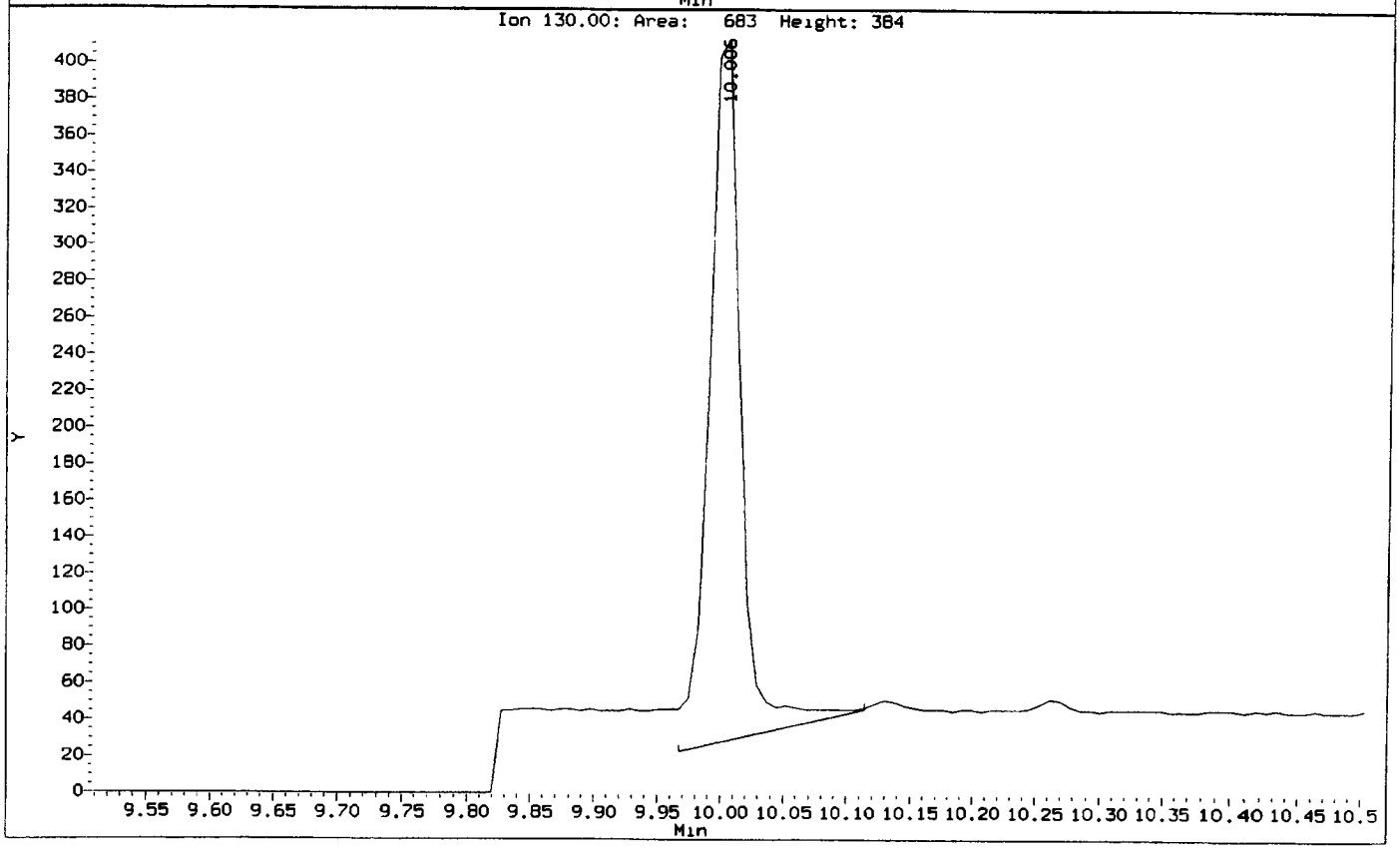


Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125c.d
Injection Date: 25-JAN-2013 14:13
Instrument: nt10.1
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7

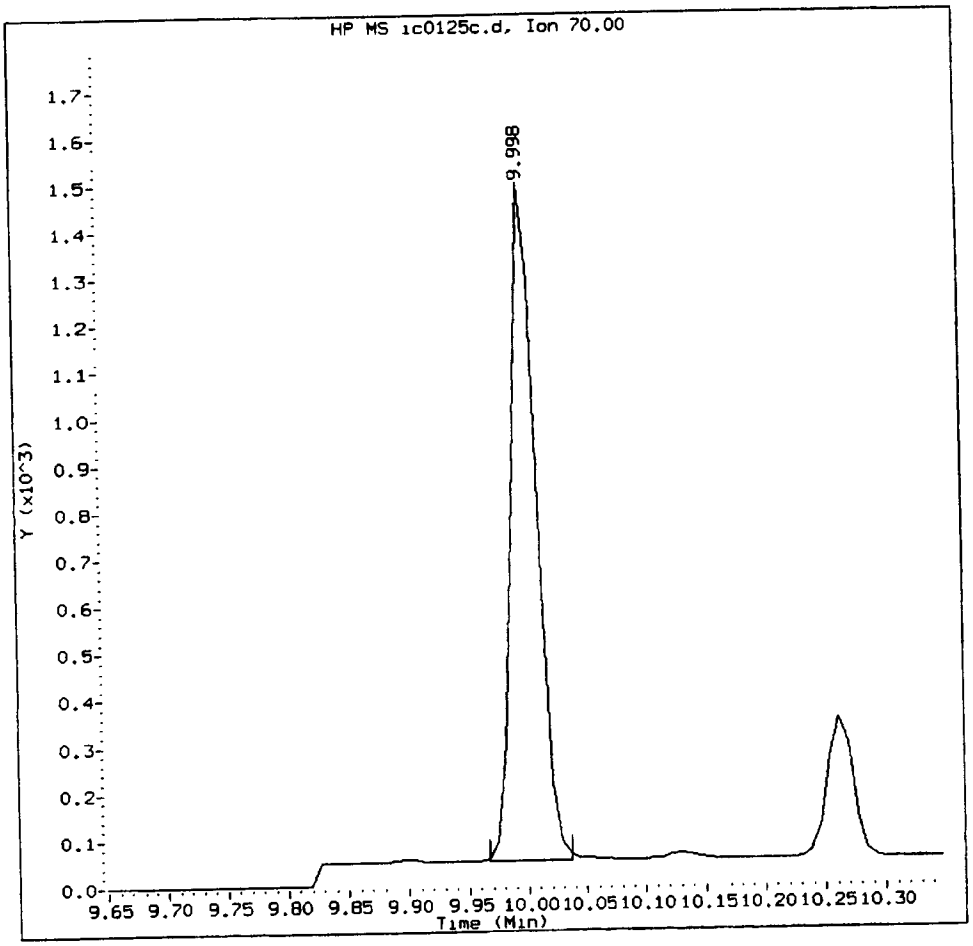


YZ 02/06/13



IC0125C, /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d

N-Nitroso-di-n-propylamine Amount: 0.22 Area: 2151



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: 02/06/13

CO-ELUTION SUMMARY FOR FILE - ic0125c.d

Lab ID: IC0125C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125e.d

YZ 02/06/13

Lab Smp Id: IC0125E
Inj Date : 25-JAN-2013 15:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125E
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 15:27 Cal File: ic0125e.d
Als bottle: 6 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)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.725	6.725	(0.740)	17216	1.00000	1.005
	3 Phenol	94	8.456	8.456	(0.930)	22123	1.00000	1.017
	7 1,3-Dichlorobenzene	146	9.012	9.012	(0.991)	21360	1.00000	0.9775
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	53853	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	21253	1.00000	0.9742
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	13141	1.00000	1.019
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	20260	1.00000	0.9808
	13 2-Methylphenol	108	9.649	9.649	(1.061)	16735	1.00000	1.022
	15 4-Methylphenol	108	9.944	9.936	(1.094)	17311	1.00000	1.021
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	10794	1.00000	1.013
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	35775	2.00000	2.074
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	17875	1.00000	0.9596
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	200104	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	11111	1.00000	0.9825
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	34643	1.00000	1.012
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	112392	4.00000	
	50 Diethylphthalate	149	16.759	16.751	(1.070)	40083	1.00000	1.003
	54 N-Nitrosodiphenylamine	169	17.153	17.153	(0.906)	26195	1.00000	1.069
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	15580	1.00000	0.9778
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	20330	2.00000	2.006
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	210710	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	31869	1.00000	0.9960
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	24675	1.00000	1.072
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	240805	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	230834	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	57941	1.00000	1.053
	90 N-Nitrosodimethylamine	74	4.447	4.455	(0.489)	20135	2.00000	1.970

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125e.d
Lab Smp Id: IC0125E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	53853	0.00
27 Naphthalene-d8	200104	100052	400208	200104	0.00
42 Acenaphthene-d10	112392	56196	224784	112392	0.00
59 Phenanthrene-d10	210710	105355	421420	210710	0.00
69 Chrysene-d12	240805	120402	481610	240805	0.00
77 Perylene-d12	230834	115417	461668	230834	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

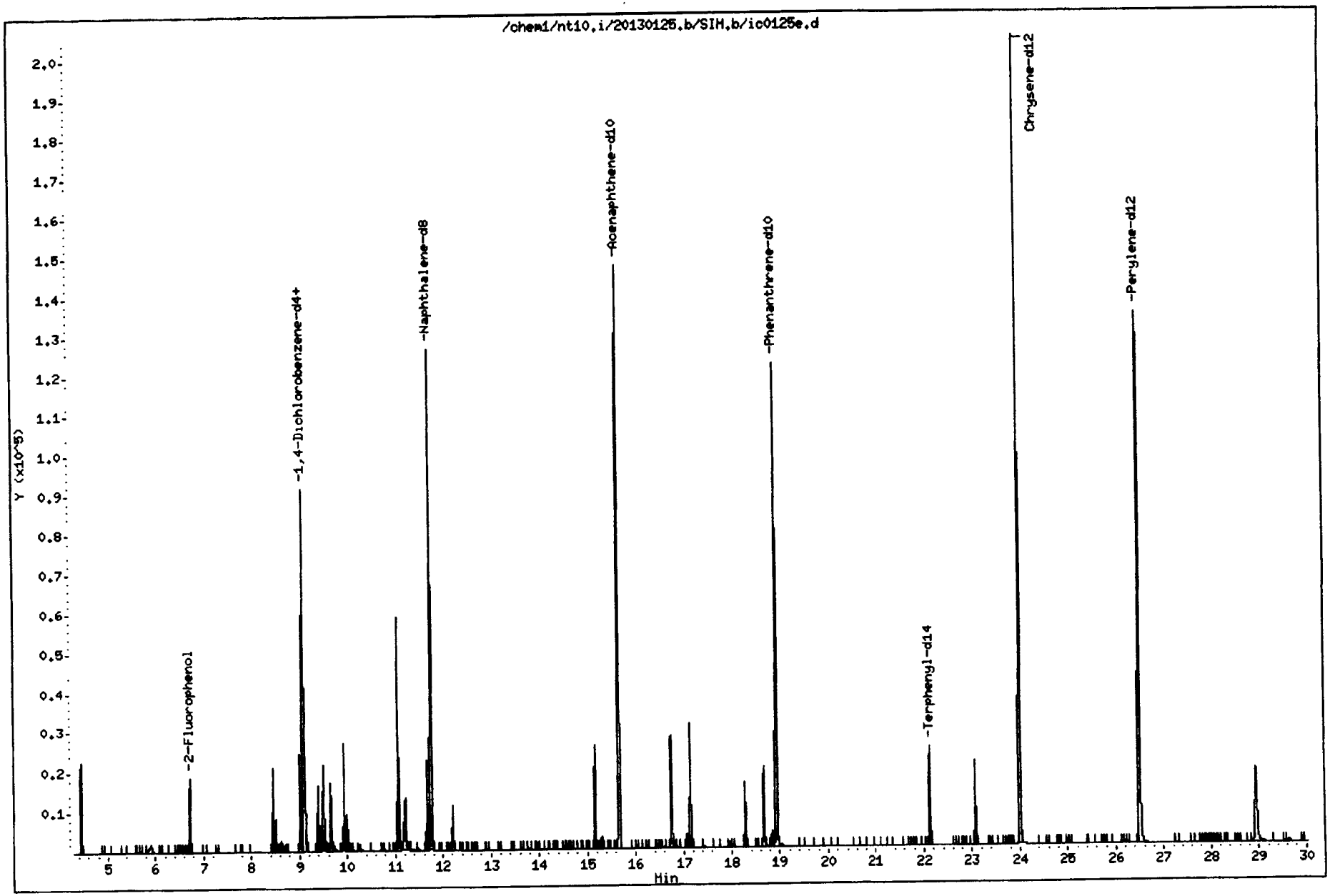
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125e.d
Date : 25-JAN-2013 15:27
Client ID:
Sample Info: IC0125E

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0125e.d

Lab ID: IC0125E, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 02/06/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125f.d
Lab Smp Id: IC0125F
Inj Date : 25-JAN-2013 16:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 16:03 Cal File: ic0125f.d
Als bottle: 7 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	6.725	6.725	(0.740)	40135	2.50000	2.438
	3 Phenol	94	8.456	8.456	(0.930)	51073	2.50000	2.442
	7 1,3-Dichlorobenzene	146	9.020	9.012	(0.992)	48782	2.50000	2.323
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	51752	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	48592	2.50000	2.318
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	30945	2.50000	2.498
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	46214	2.50000	2.328
	13 2-Methylphenol	108	9.648	9.649	(1.061)	38761	2.50000	2.463
	15 4-Methylphenol	108	9.943	9.936	(1.094)	40960	2.50000	2.514
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	25098	2.50000	2.450
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	83099	5.00000	5.021
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	40588	2.50000	2.271
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	191986	4.00000	
	30 Hexachlorobutadiene	225	12.209	12.210	(1.039)	25748	2.50000	2.373
	39 Dimethylphthalate	163	15.173	15.166	(0.969)	82619	2.50000	2.460
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	110315	4.00000	
	50 Diethylphthalate	149	16.759	16.751	(1.070)	94426	2.50000	2.407
	54 N-Nitrosodiphenylamine	169	17.152	17.153	(0.906)	61298	2.50000	2.561
	57 Hexachlorobenzene	284	18.286	18.279	(0.966)	36057	2.50000	2.316
	58 Pentachlorophenol	266	18.673	18.674	(0.986)	51671	5.00000	5.039
*	59 Phenanthrene-d10	188	18.936	18.937	(1.000)	205875	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	75902	2.50000	2.352
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	62698	2.50000	2.701
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	242832	4.00000	
*	77 Perylene-d12	264	26.506	26.507	(1.000)	234305	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.955	28.947	(1.092)	142696	2.50000	2.555
	90 N-Nitrosodimethylamine	74	4.439	4.455	(0.488)	47174	5.00000	4.802

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125f.d
Lab Smp Id: IC0125F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	51752	-3.90
27 Naphthalene-d8	200104	100052	400208	191986	-4.06
42 Acenaphthene-d10	112392	56196	224784	110315	-1.85
59 Phenanthrene-d10	210710	105355	421420	205875	-2.29
69 Chrysene-d12	240805	120402	481610	242832	0.84
77 Perylene-d12	230834	115417	461668	234305	1.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

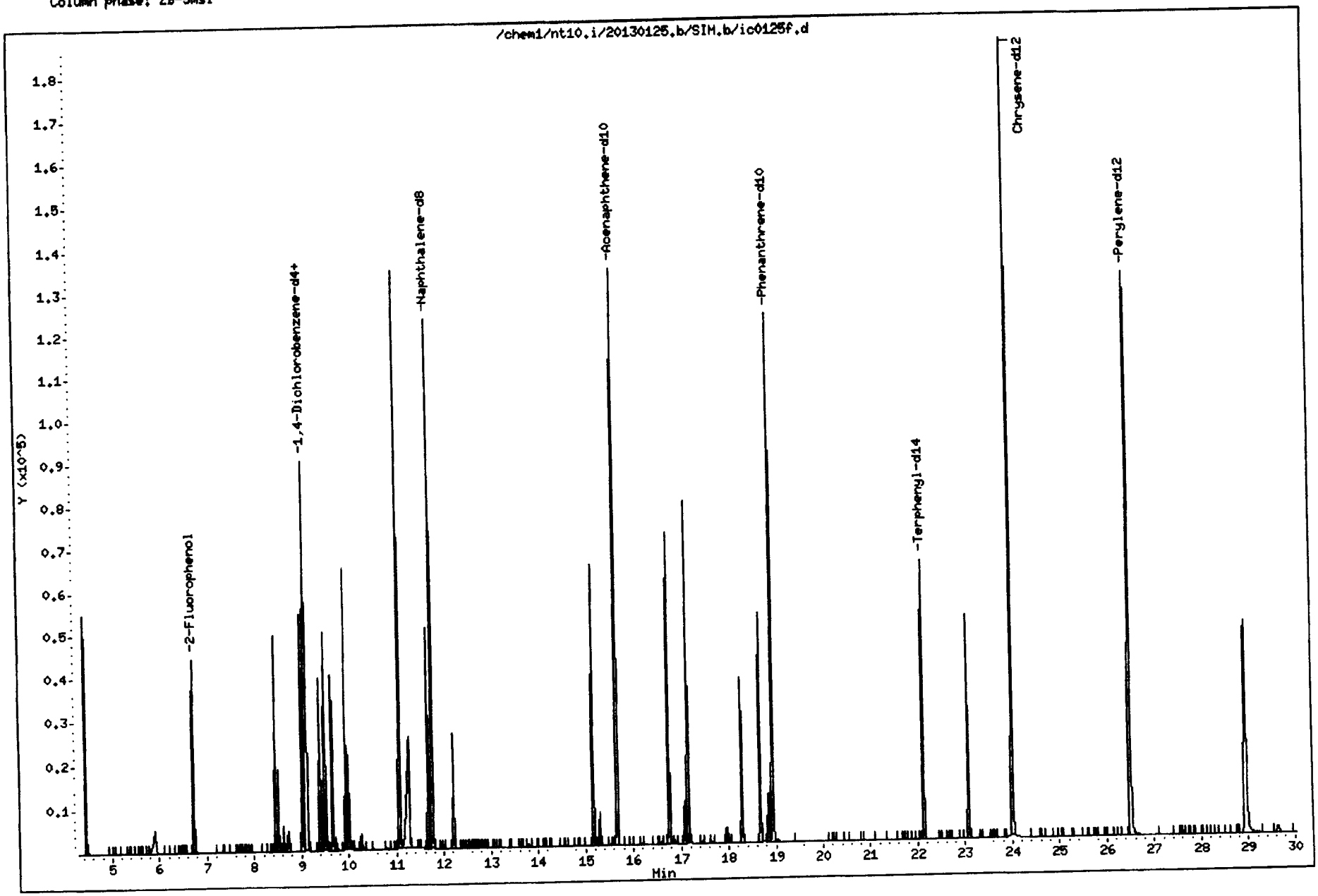
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125f.d
Date : 25-JAN-2013 16:03
Client ID:
Sample Info: IC0125F

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125f.d

Lab ID: IC0125F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Report Date: 06-Feb-2013 11:08

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d YZ 02/04/13
Lab Smp Id: IC0125G
Inj Date : 25-JAN-2013 16:40
Operator : YZ
Smp Info : IC0125G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev
Cal Date : 25-JAN-2013 16:40
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i
Quant Type: ISTD
Cal File: ic0125g.d
Calibration Sample, Level: 1
Compound Sublist: PSDDA.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.725	6.725	(0.740)	797	0.05000	0.04877 (M)
	3 Phenol	94	8.456	8.456	(0.930)	1028	0.05000	0.04953
	7 1,3-Dichlorobenzene	146	9.012	9.012	(0.991)	1091	0.05000	0.05235 (M)
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	51364	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	1087	0.05000	0.05224 (M)
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	578	0.05000	0.04700 (M)
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	1024	0.05000	0.05197
	13 2-Methylphenol	108	9.649	9.649	(1.061)	746	0.05000	0.04777
	15 4-Methylphenol	108	9.944	9.936	(1.094)	742	0.05000	0.04588
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	489	0.05000	0.04810 (M)
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	1498	0.10000	0.09191
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	887	0.05000	0.05039 (M)
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	189071	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	559	0.05000	0.05231
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	1502	0.05000	0.04829
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	102169	4.00000	
	50 Diethylphthalate	149	16.751	16.751	(1.070)	1685	0.05000	0.04637
	54 N-Nitrosodiphenylamine	169	17.153	17.153	(0.906)	921	0.05000	0.04243 (M)
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	732	0.05000	0.05184
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	524	0.10000	0.05954 (M)
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	186737	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	1344	0.05000	0.04667 (M)
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	877	0.05000	0.04233
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	216735	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	211470	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.955	28.947	(1.092)	2301	0.05000	0.04565 (M)
	90 N-Nitrosodimethylamine	74	4.462	4.455	(0.491)	965	0.10000	0.09897

QC Flag Legend

M - Compound response manually integrated.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125g.d
Lab Smp Id: IC0125G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	51364	-4.62
27 Naphthalene-d8	200104	100052	400208	189071	-5.51
42 Acenaphthene-d10	112392	56196	224784	102169	-9.10
59 Phenanthrene-d10	210710	105355	421420	186737	-11.38
69 Chrysene-d12	240805	120402	481610	216735	-10.00
77 Perylene-d12	230834	115417	461668	211470	-8.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

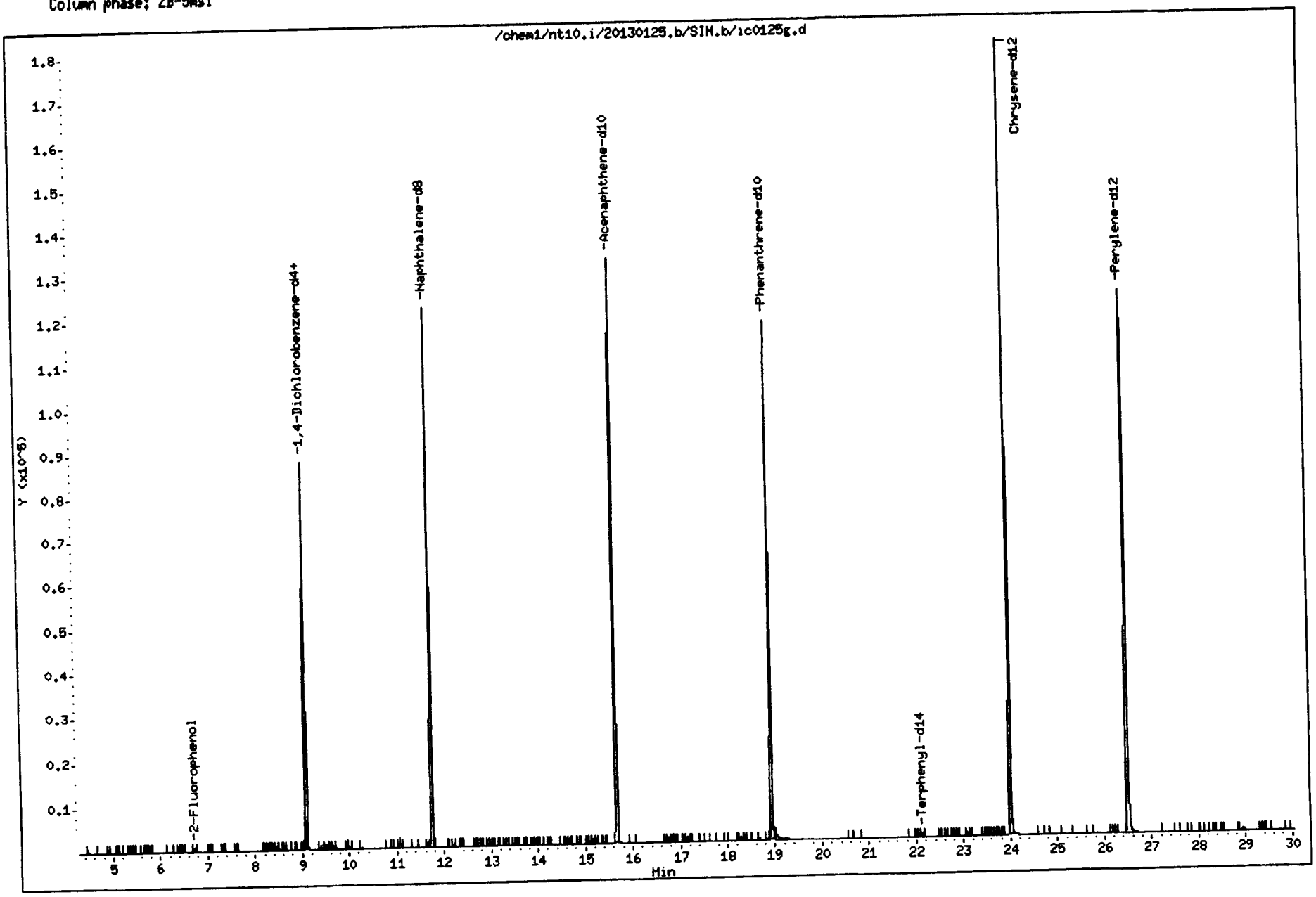
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Date : 25-JAN-2013 16:40
Client ID:
Sample Info: IC0125G

Instrument: nt10.i

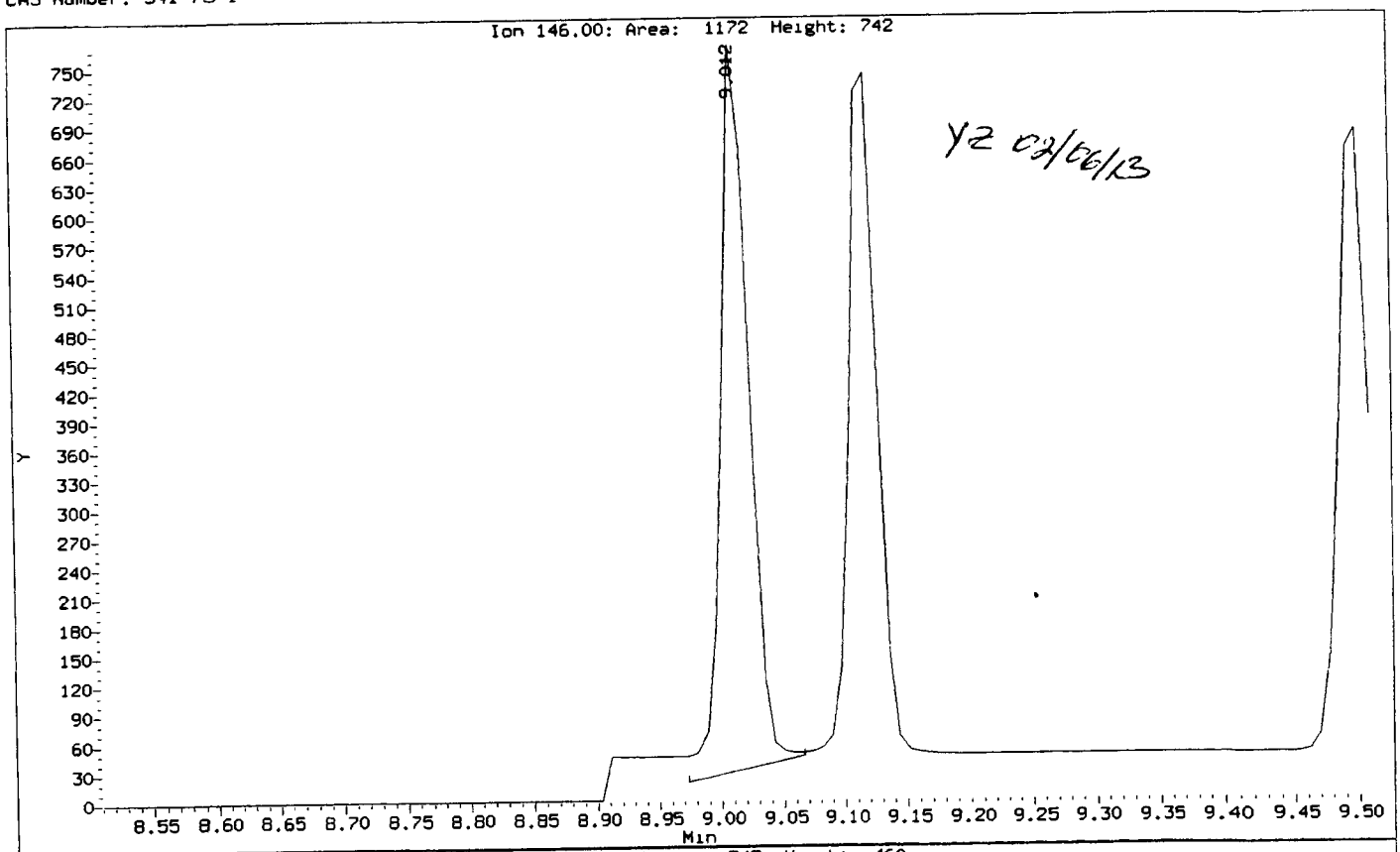
Operator: YZ
Column diameter: 0.25

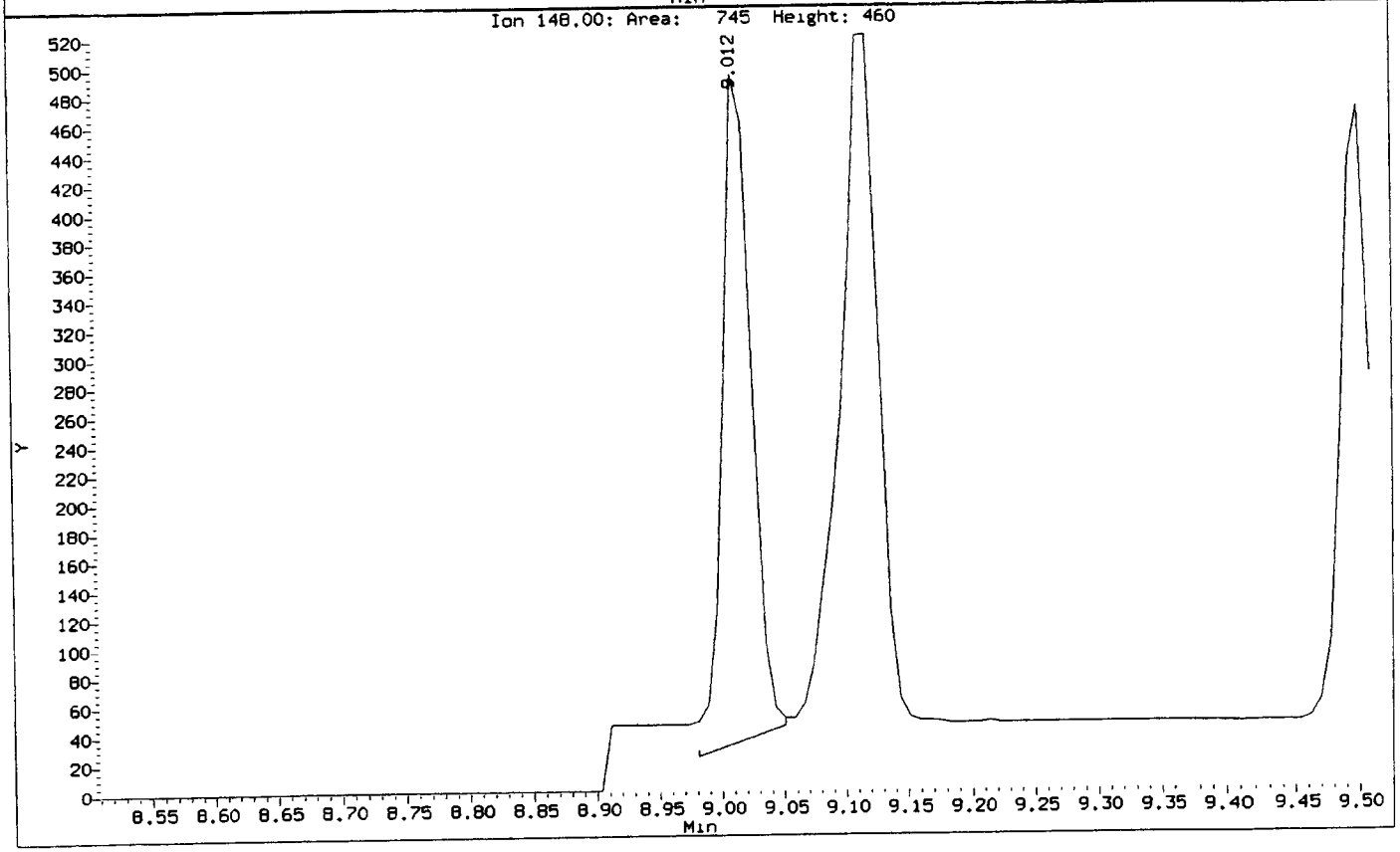
Column phase: ZB-5msi



Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

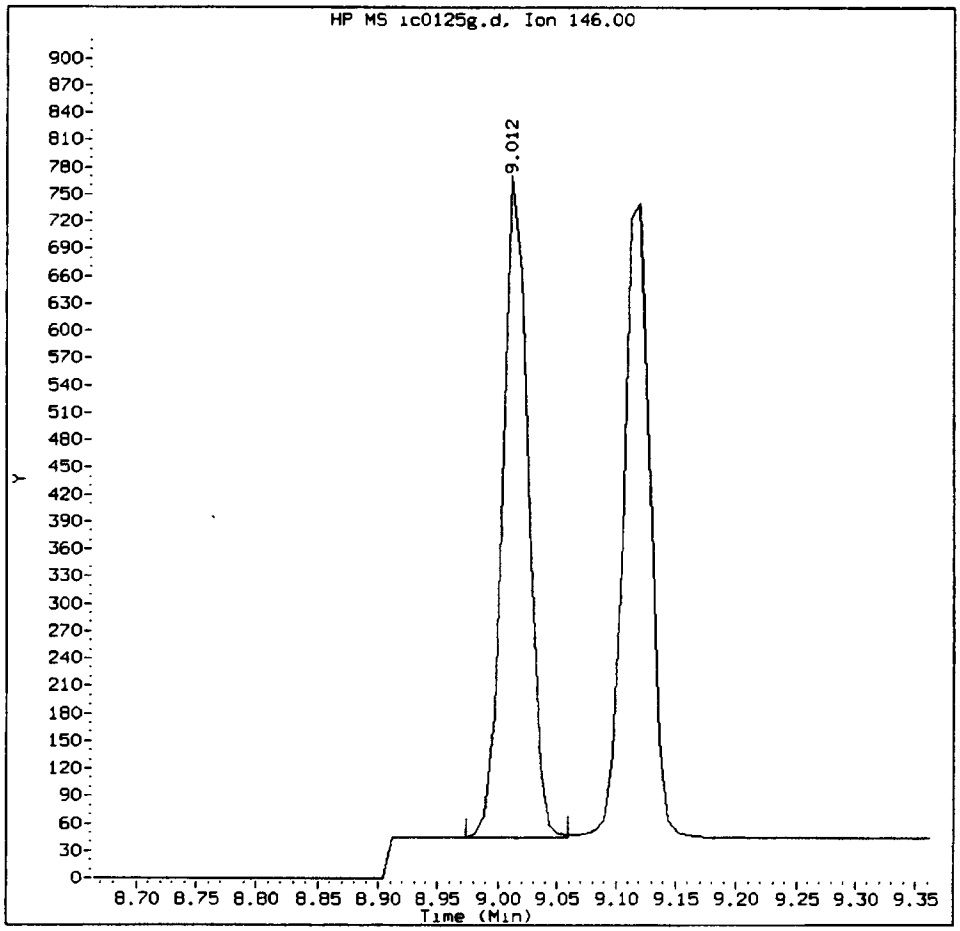
Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1





IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

1,3-Dichlorobenzene Amount: 0.05 Area: 1091



MANUAL INTEGRATION for 1,3-Dichlorobenzene

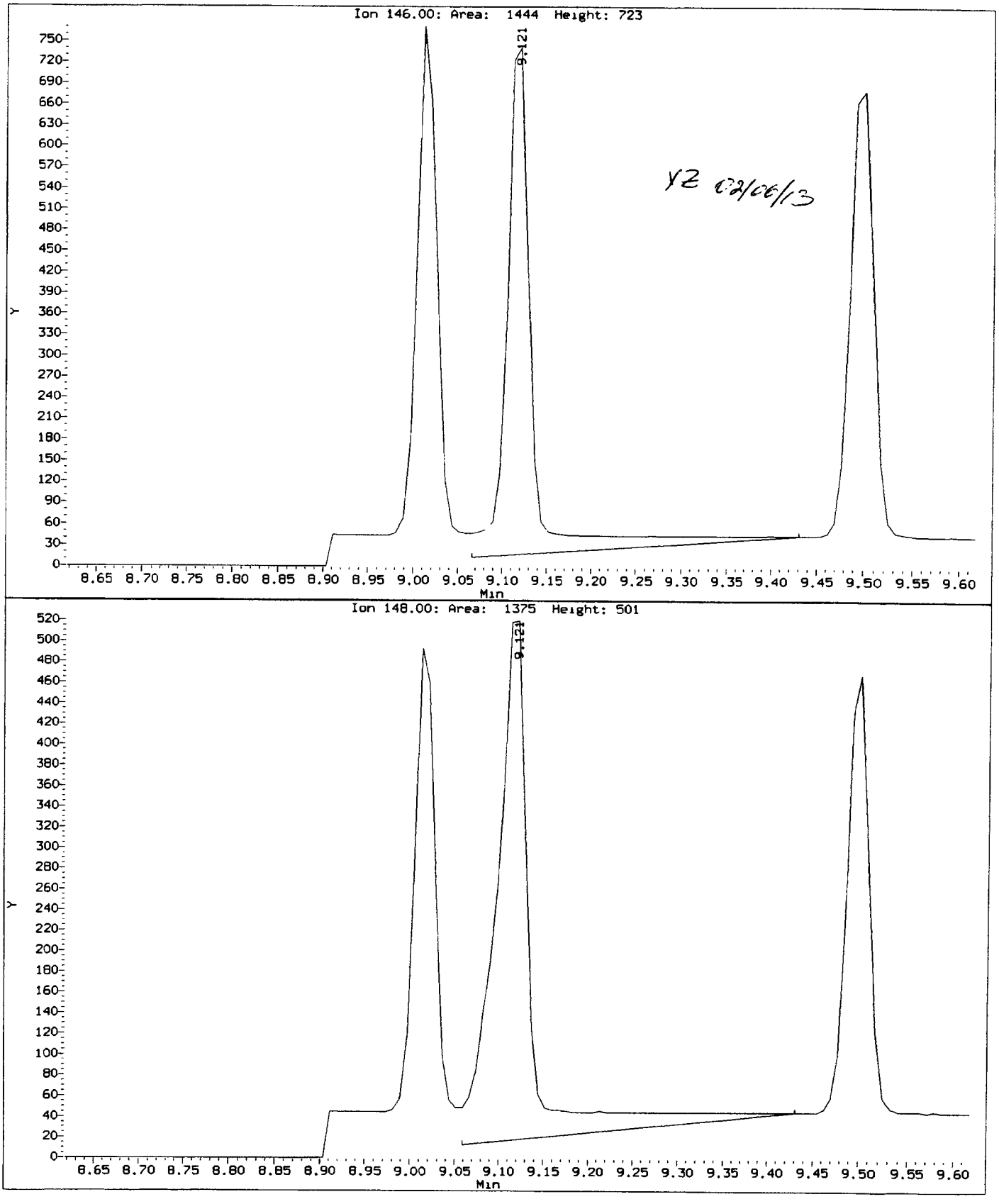
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

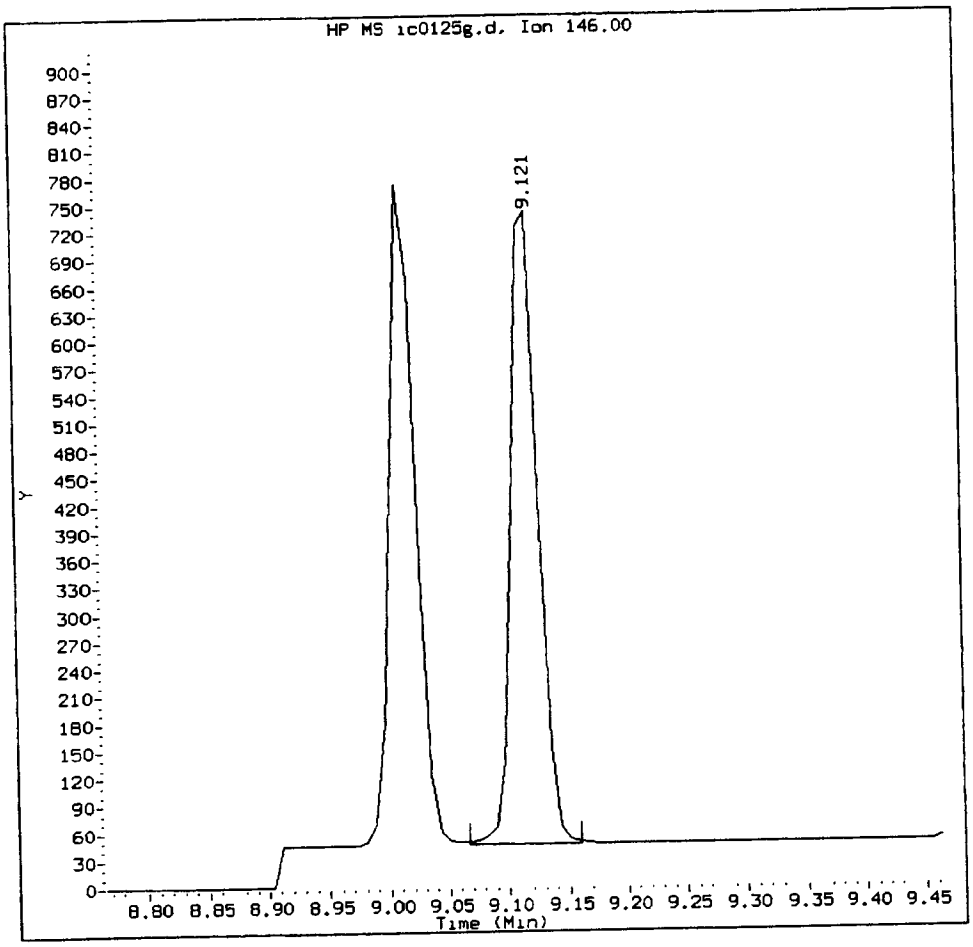
Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



YZ 02/06/13

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

1,4-Dichlorobenzene Amount: 0.05 Area: 1087



MANUAL INTEGRATION for 1,4-Dichlorobenzene

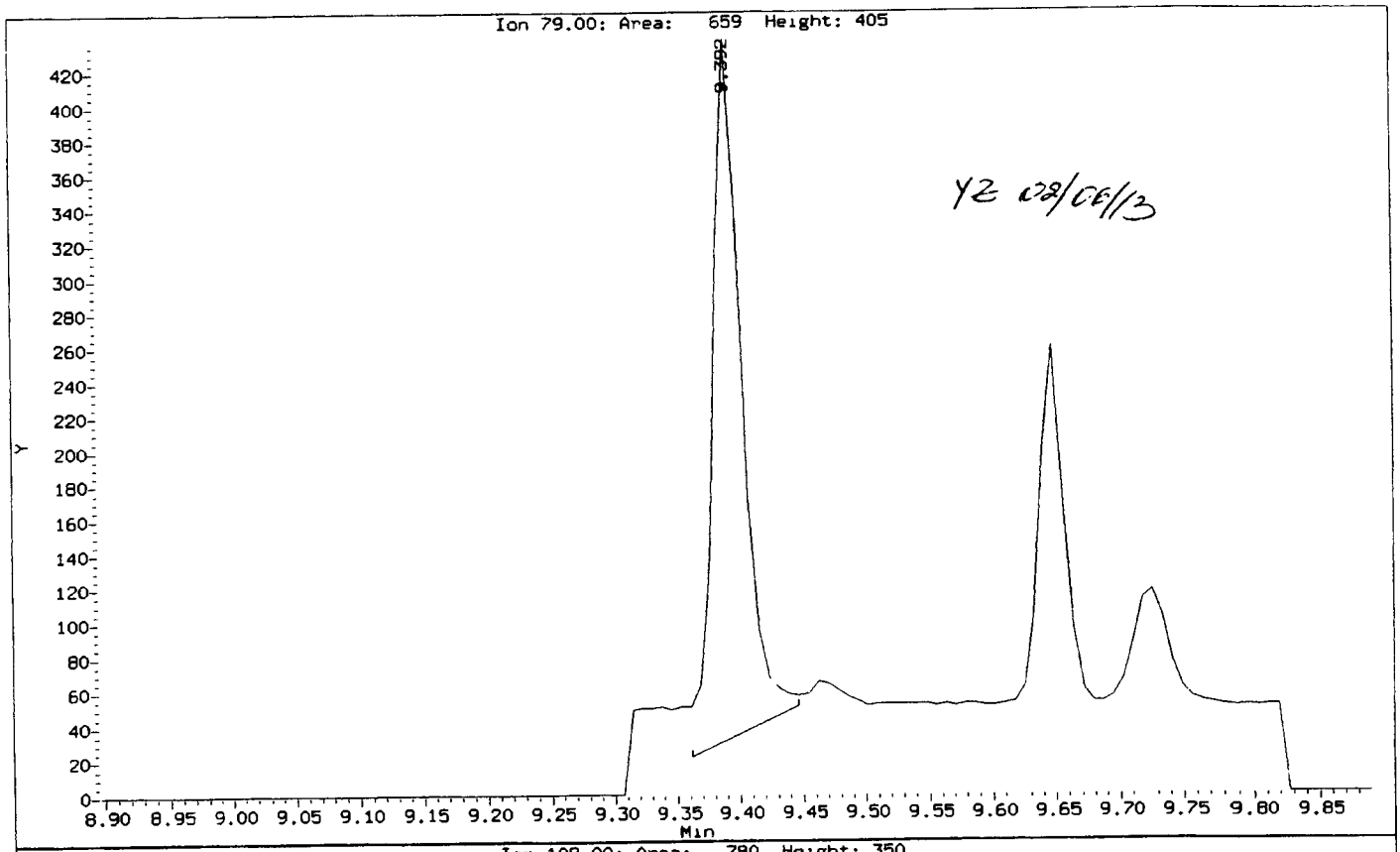
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

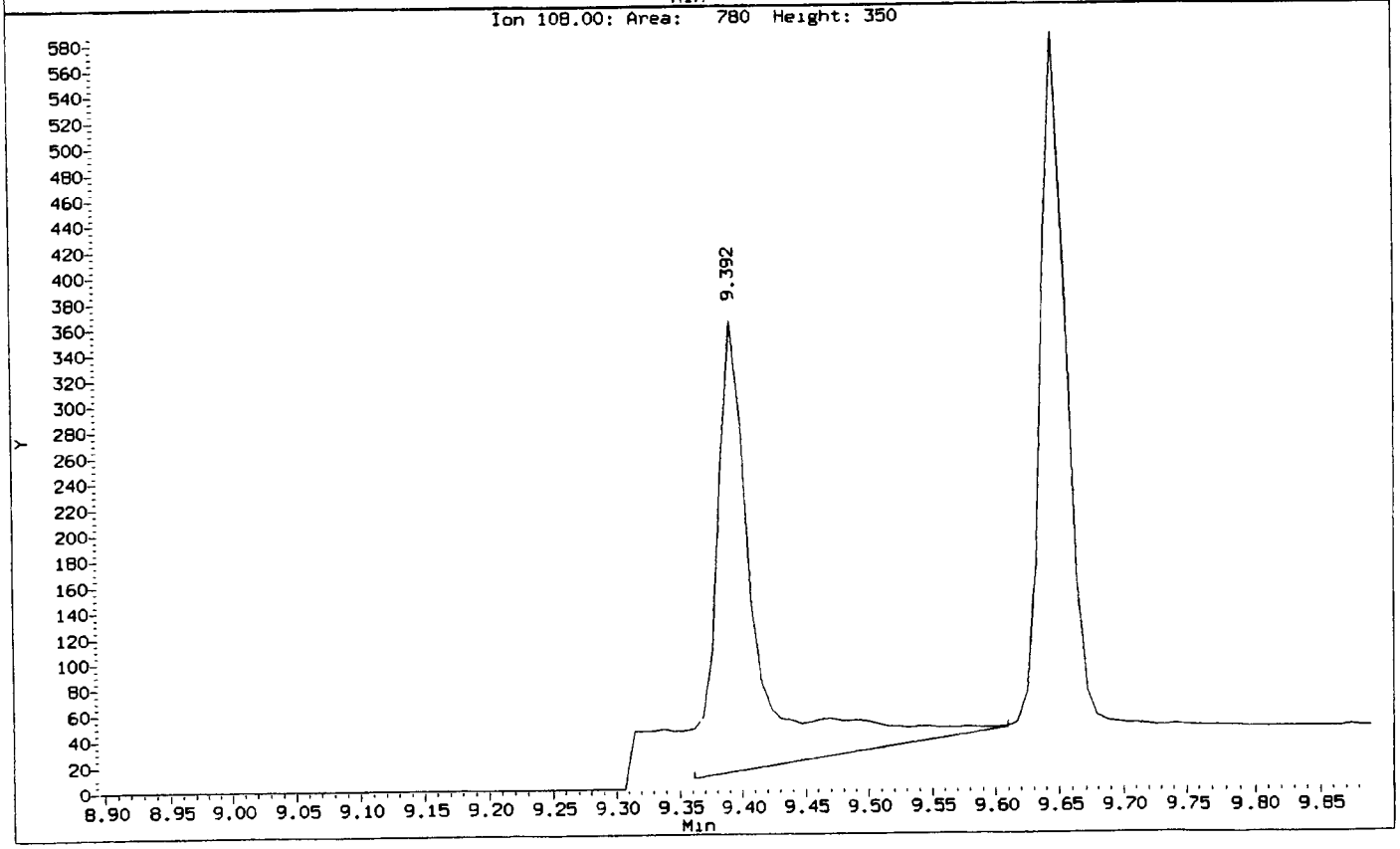
Analyst: VZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

Compound: Benzyl alcohol
CAS Number: 100-51-6

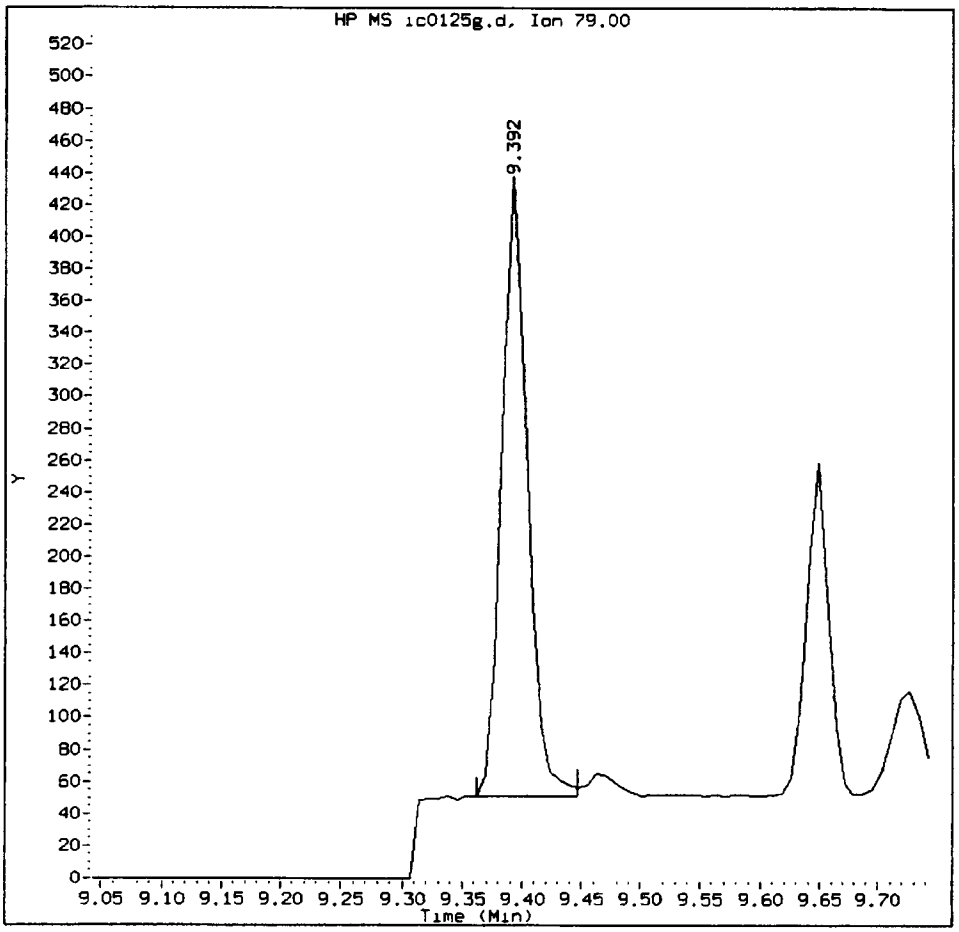


YZ 02/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Benzyl alcohol Amount: 0.05 Area: 578



MANUAL INTEGRATION for Benzyl alcohol

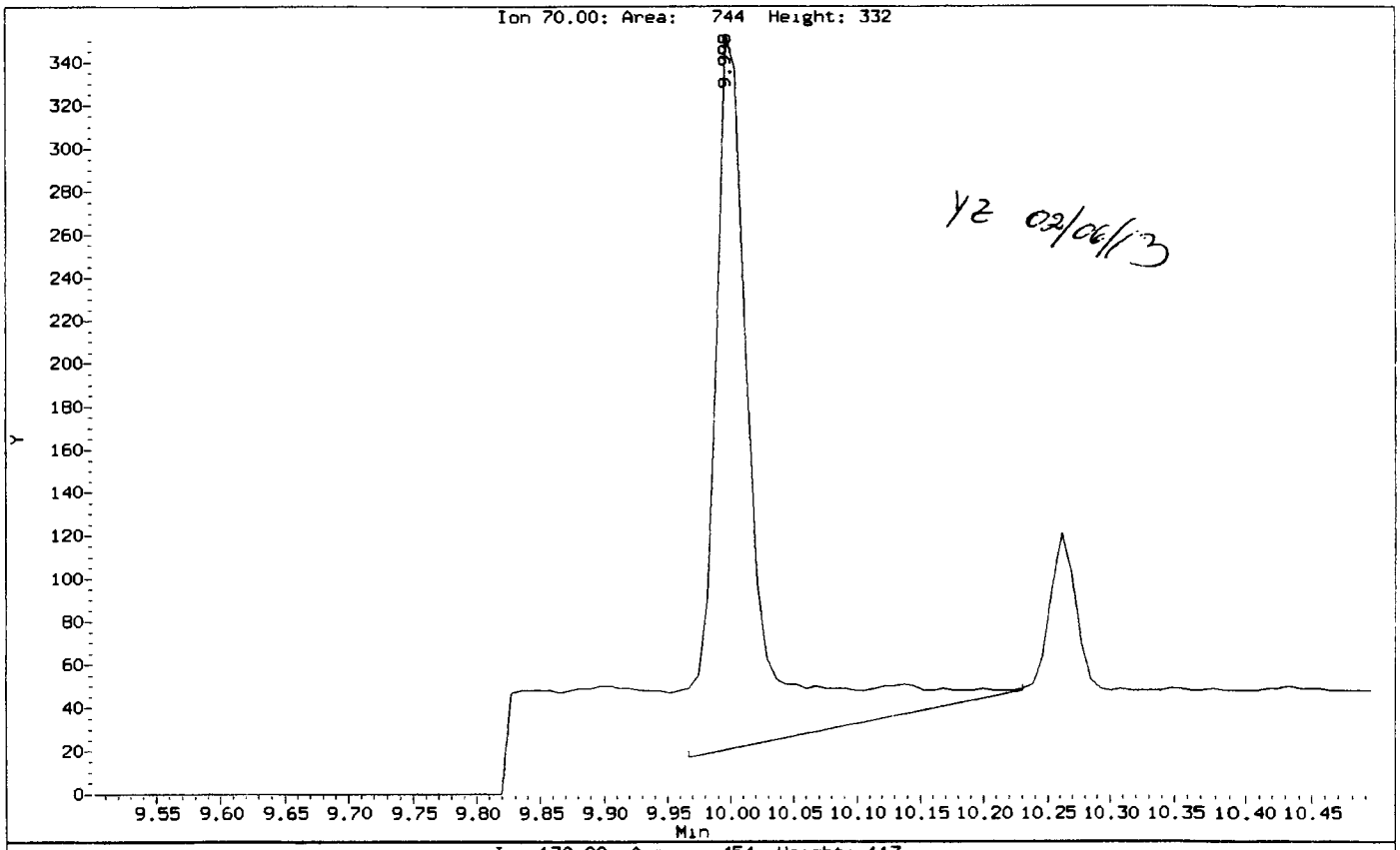
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

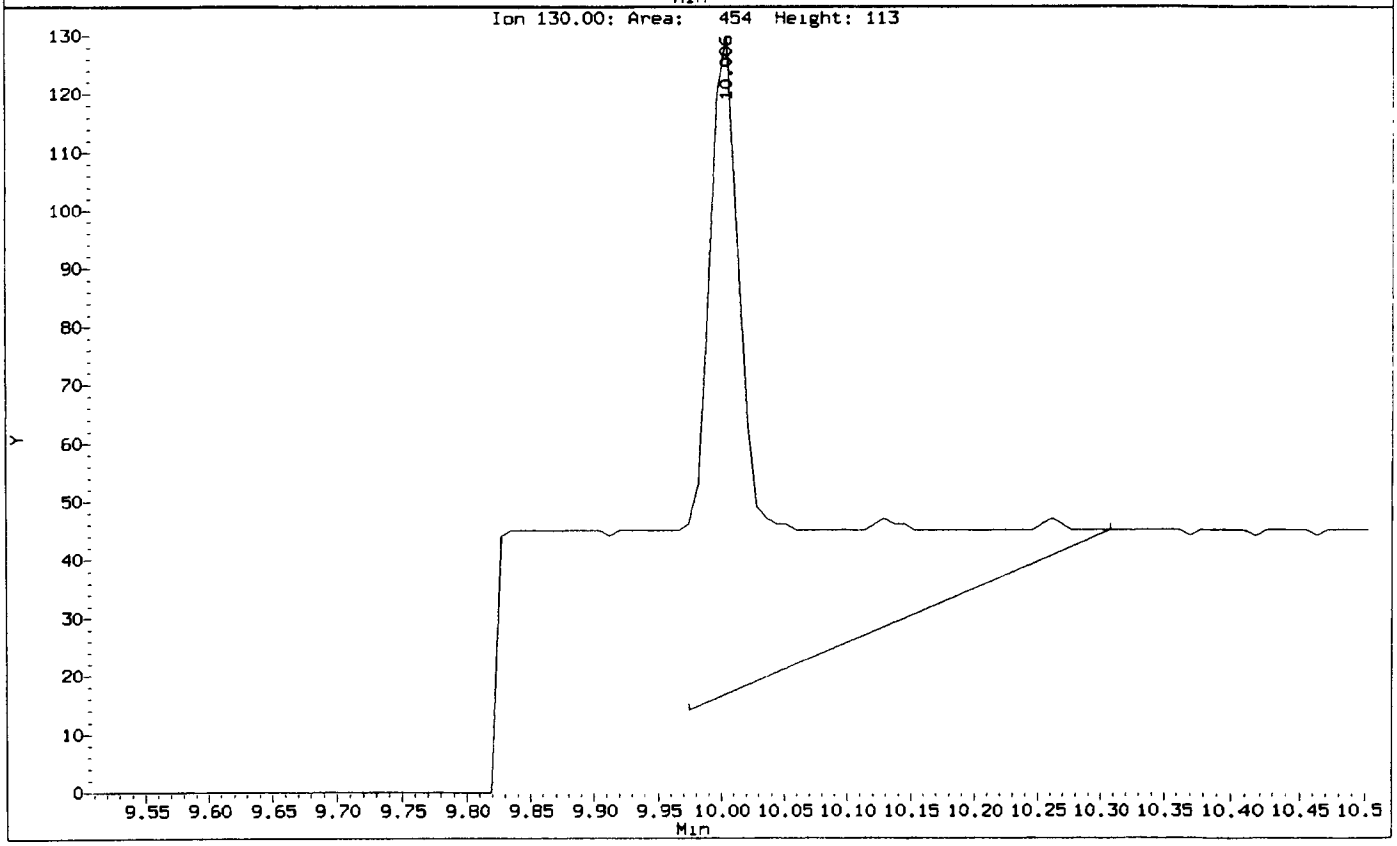
Analyst: VZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7

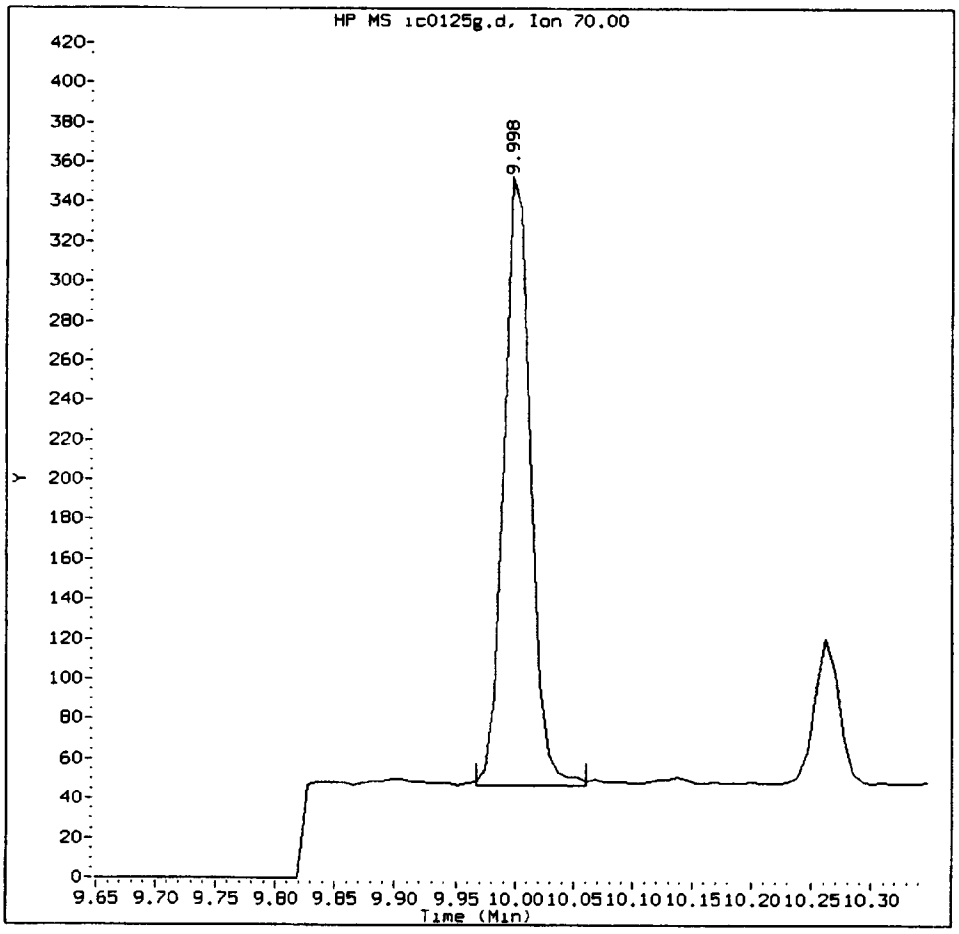


YZ 02/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

N-Nitroso-di-n-propylamine Amount: 0.05 Area: 489



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

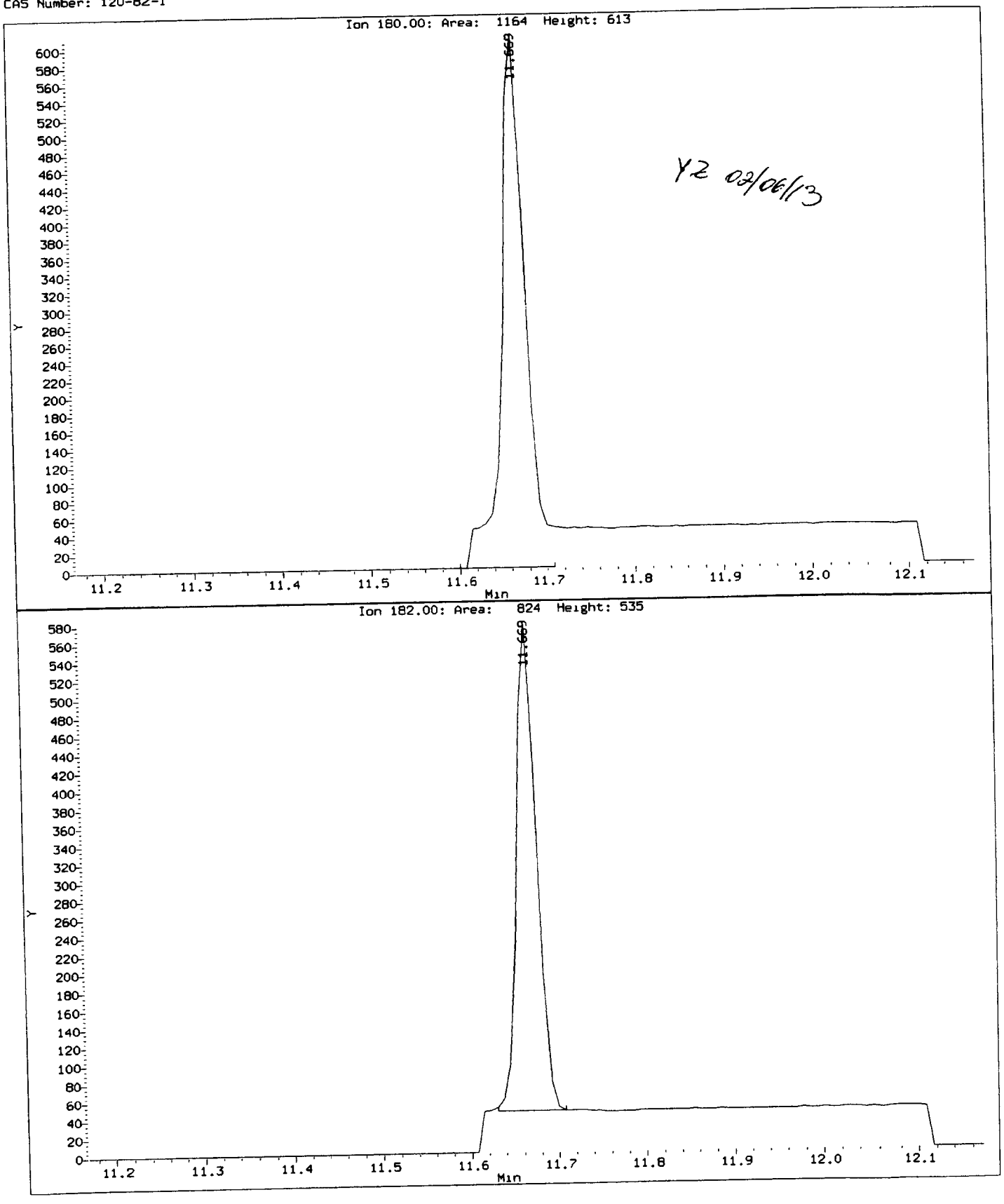
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

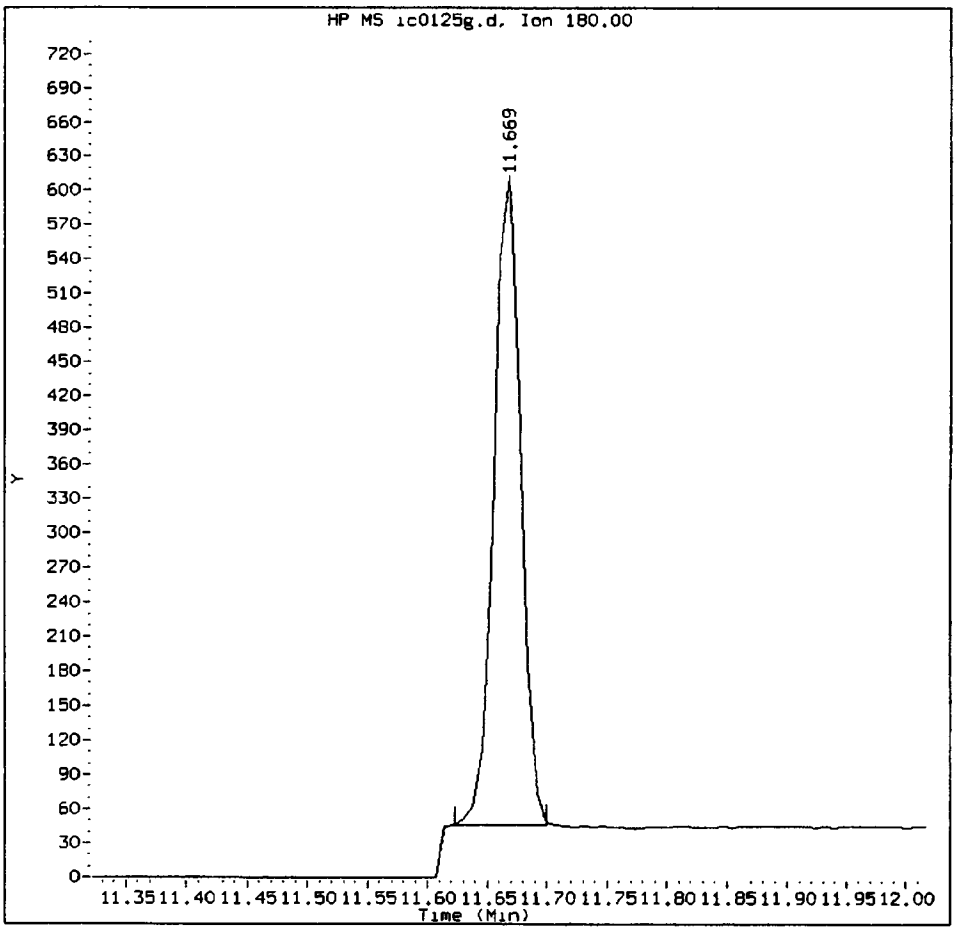
Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1



YZ 02/06/13

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

1,2,4-Trichlorobenzene Amount: 0.05 Area: 887



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

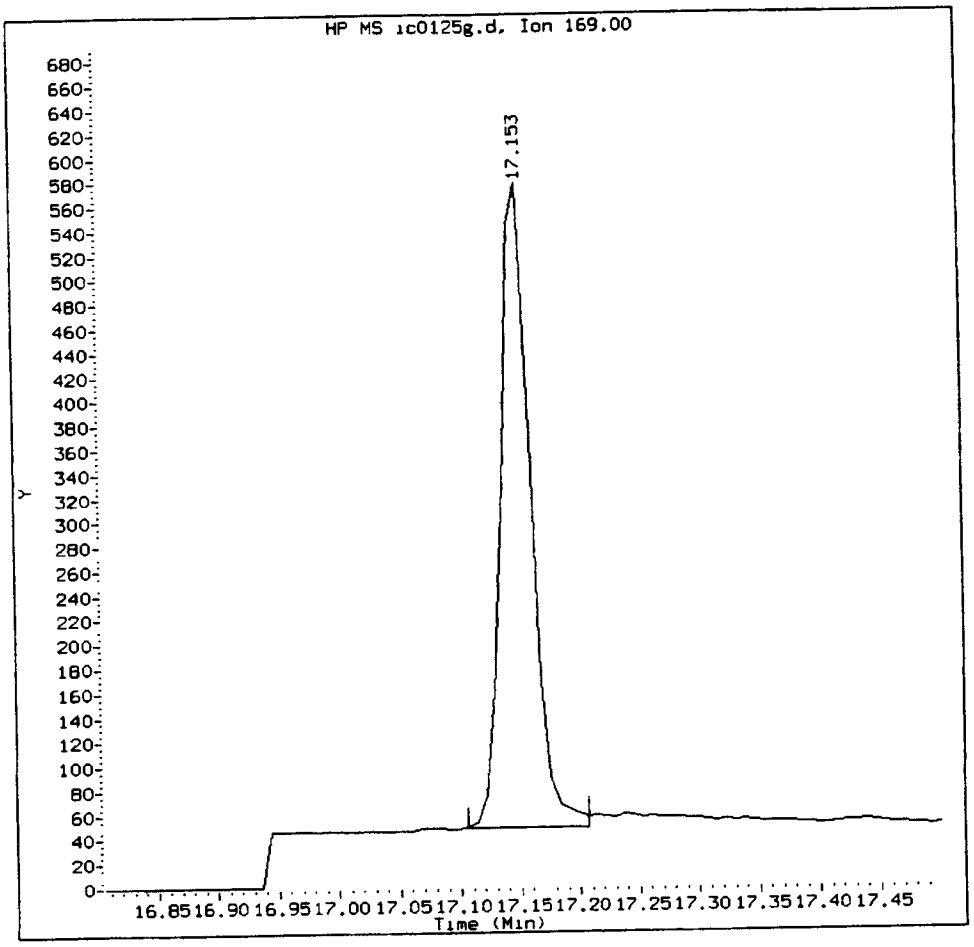
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 02/06/13

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 921



MANUAL INTEGRATION for N-Nitrosodiphenylamine

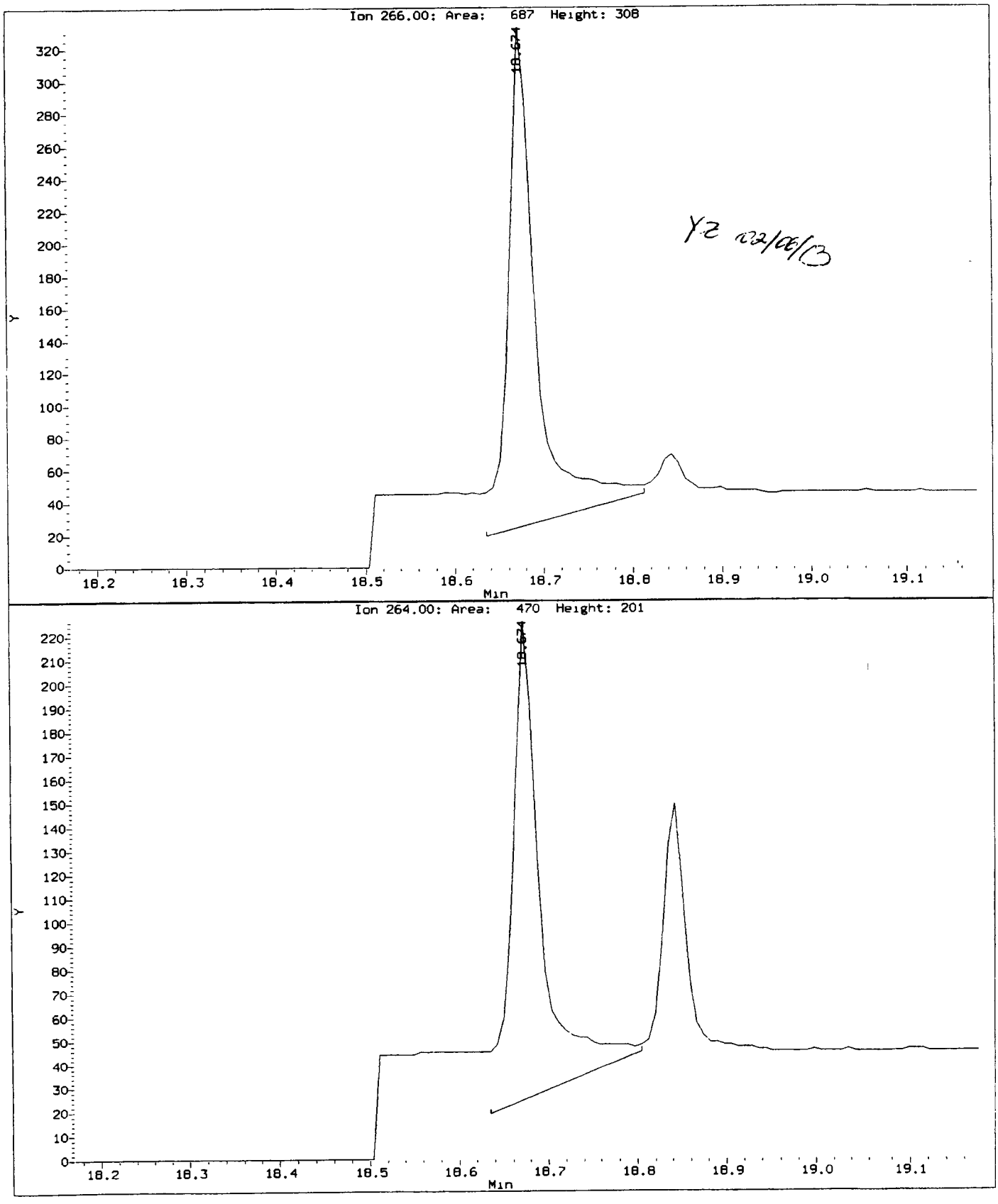
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

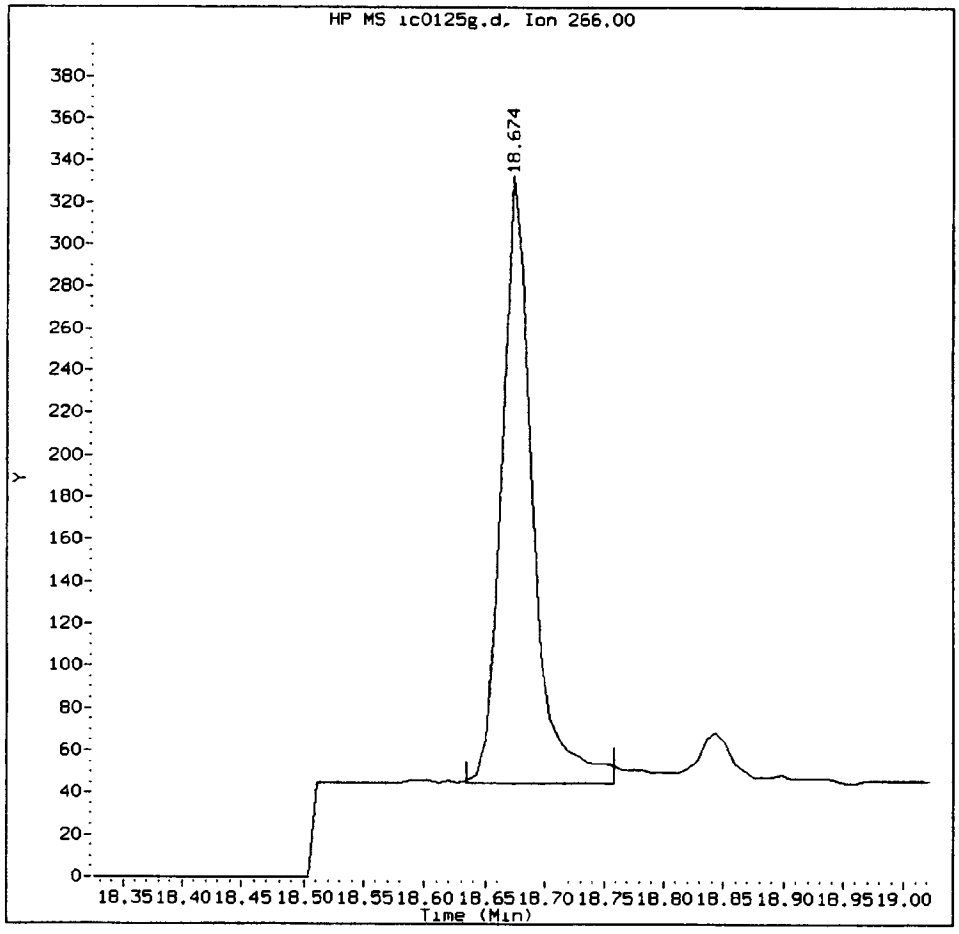
Compound: Pentachlorophenol
CAS Number: 87-86-5



YZ 02/06/13

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Pentachlorophenol **Amount:** 0.06 **Area:** 524



MANUAL INTEGRATION for Pentachlorophenol

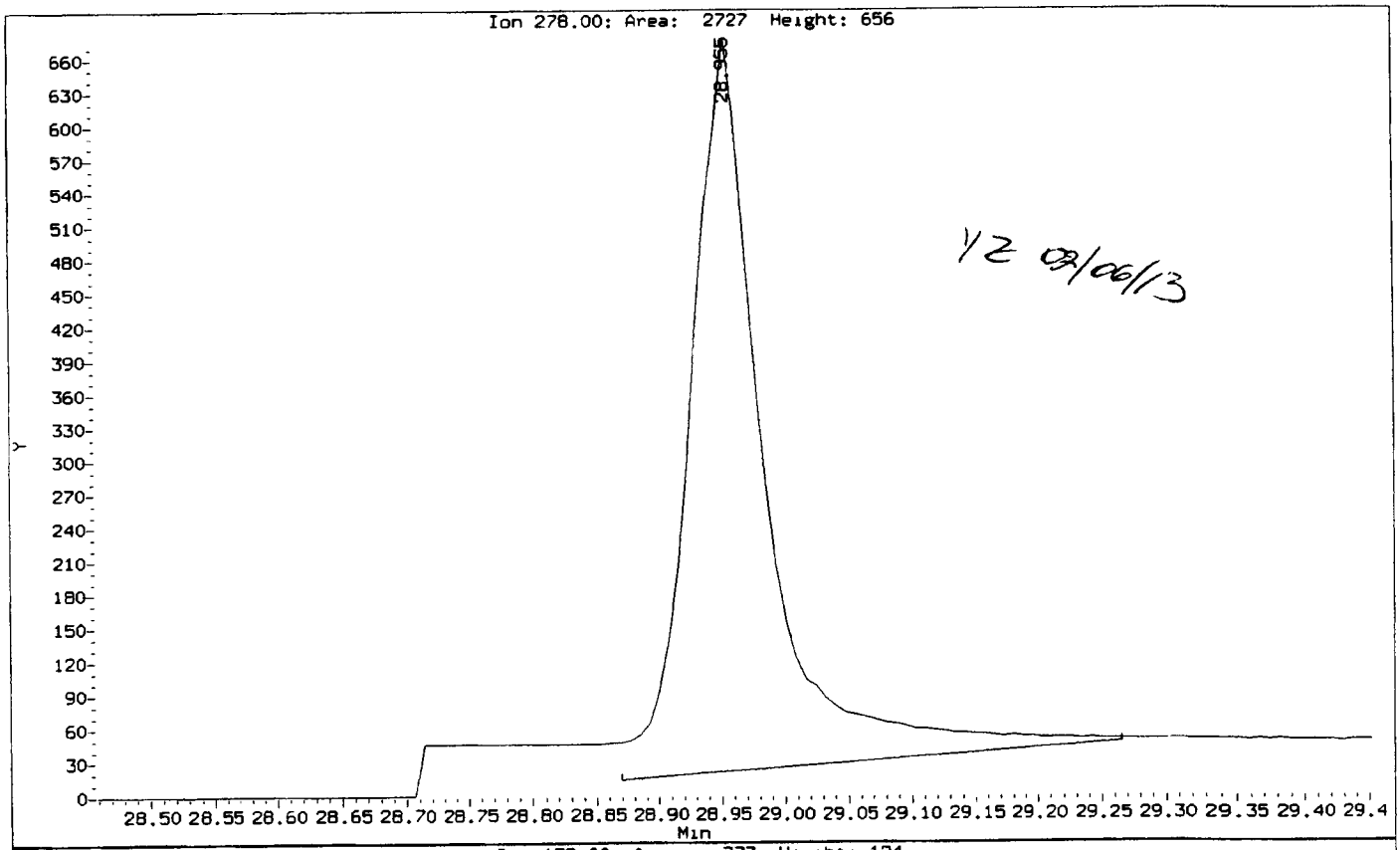
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

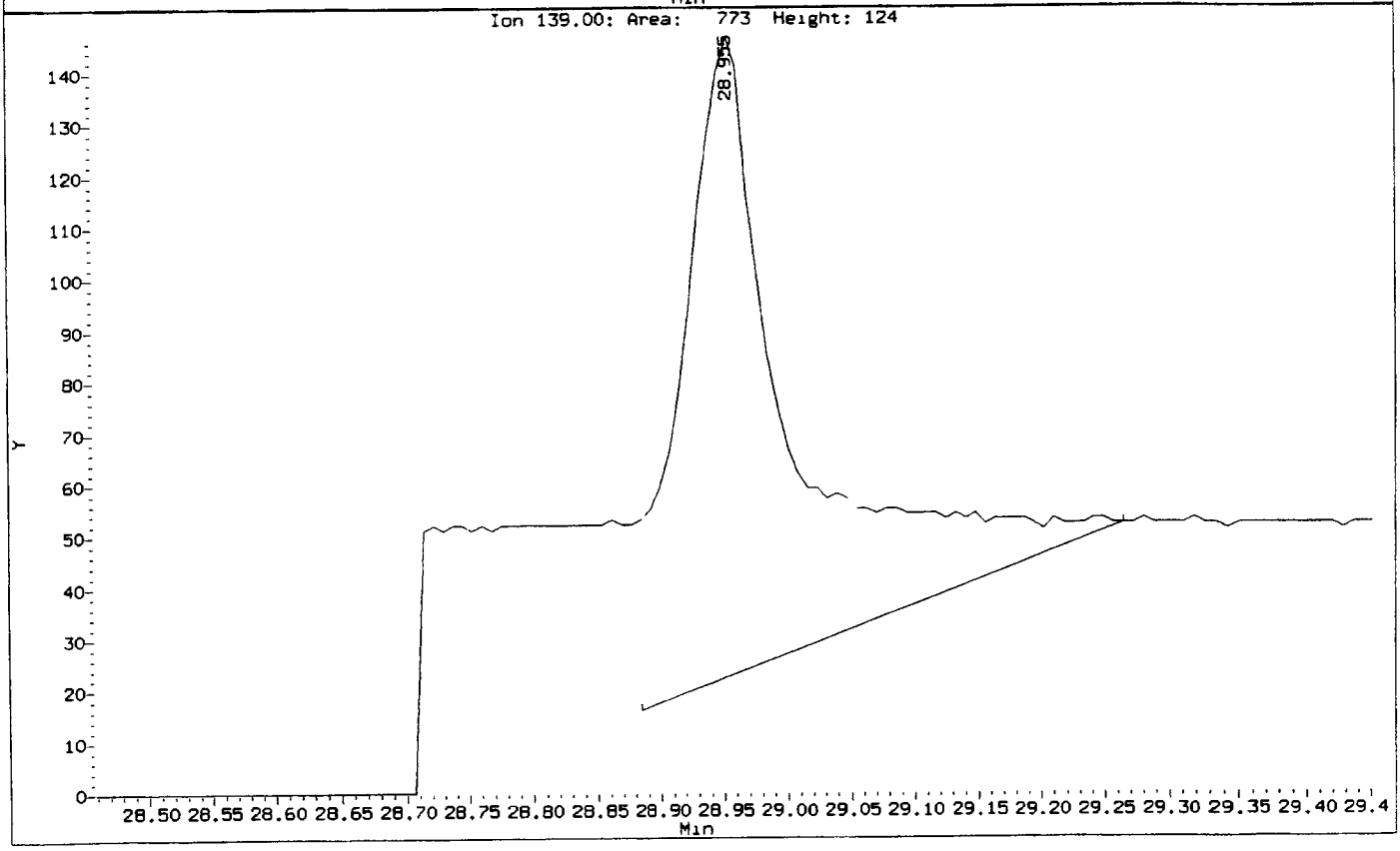
Analyst: YZ **Date:** 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3

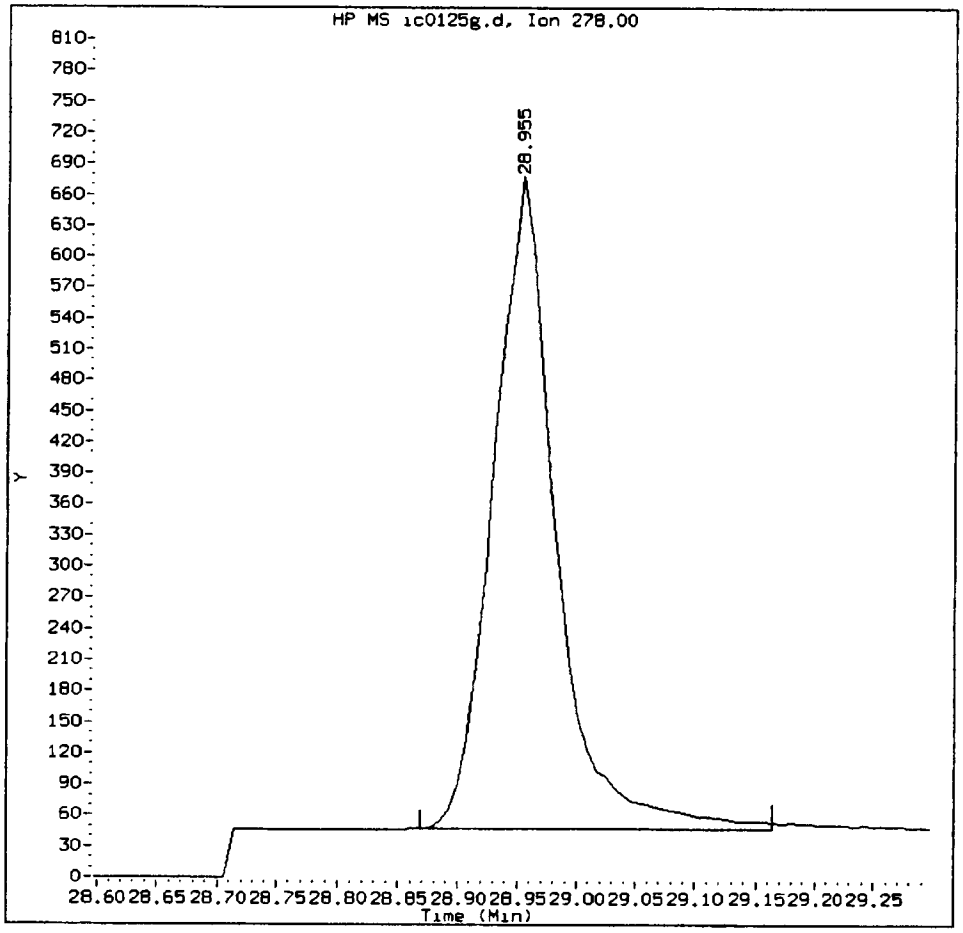


1/2 09/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Dibenzo(a,h)anthracene **Amount:** 0.05 **Area:** 2301



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

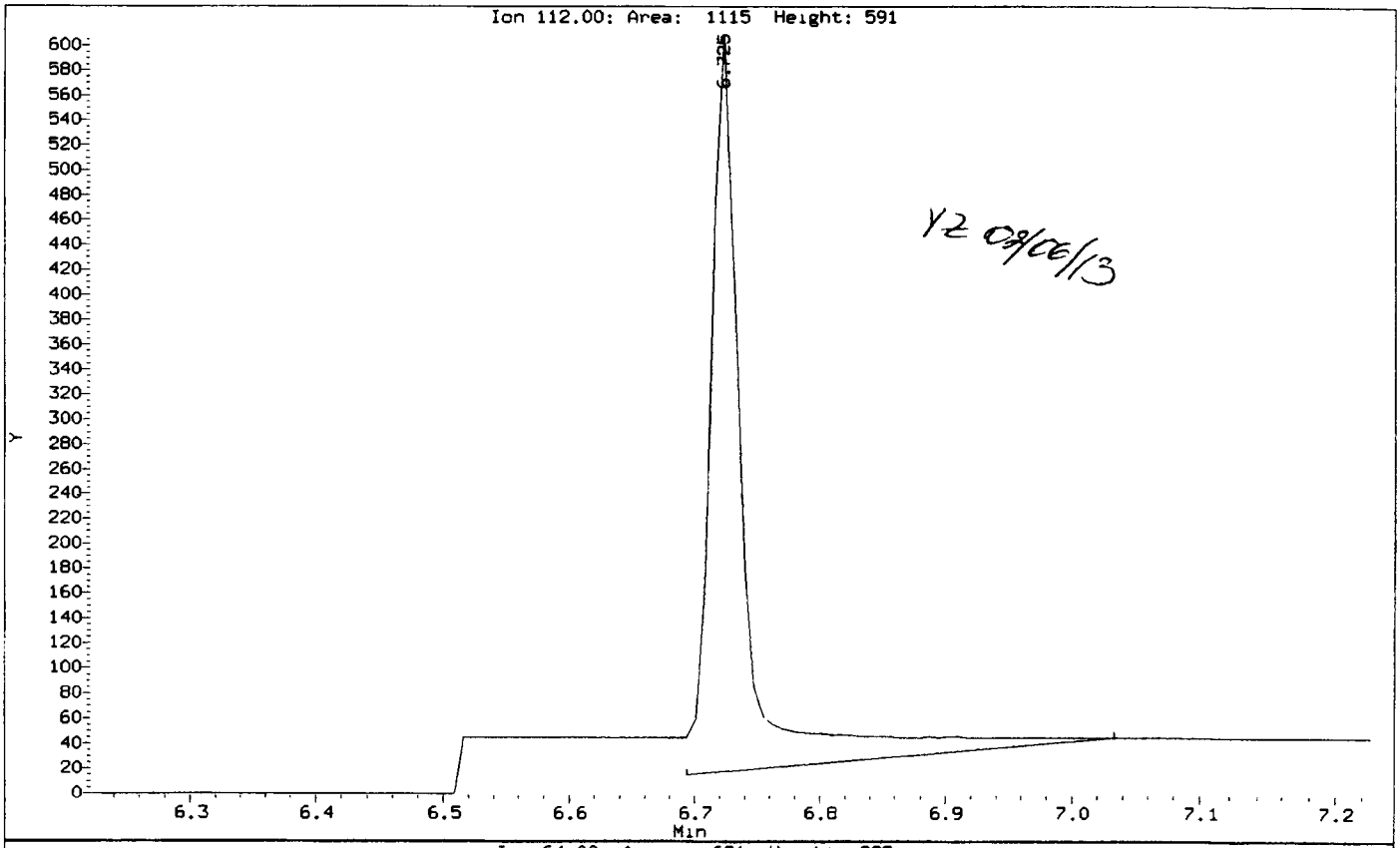
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

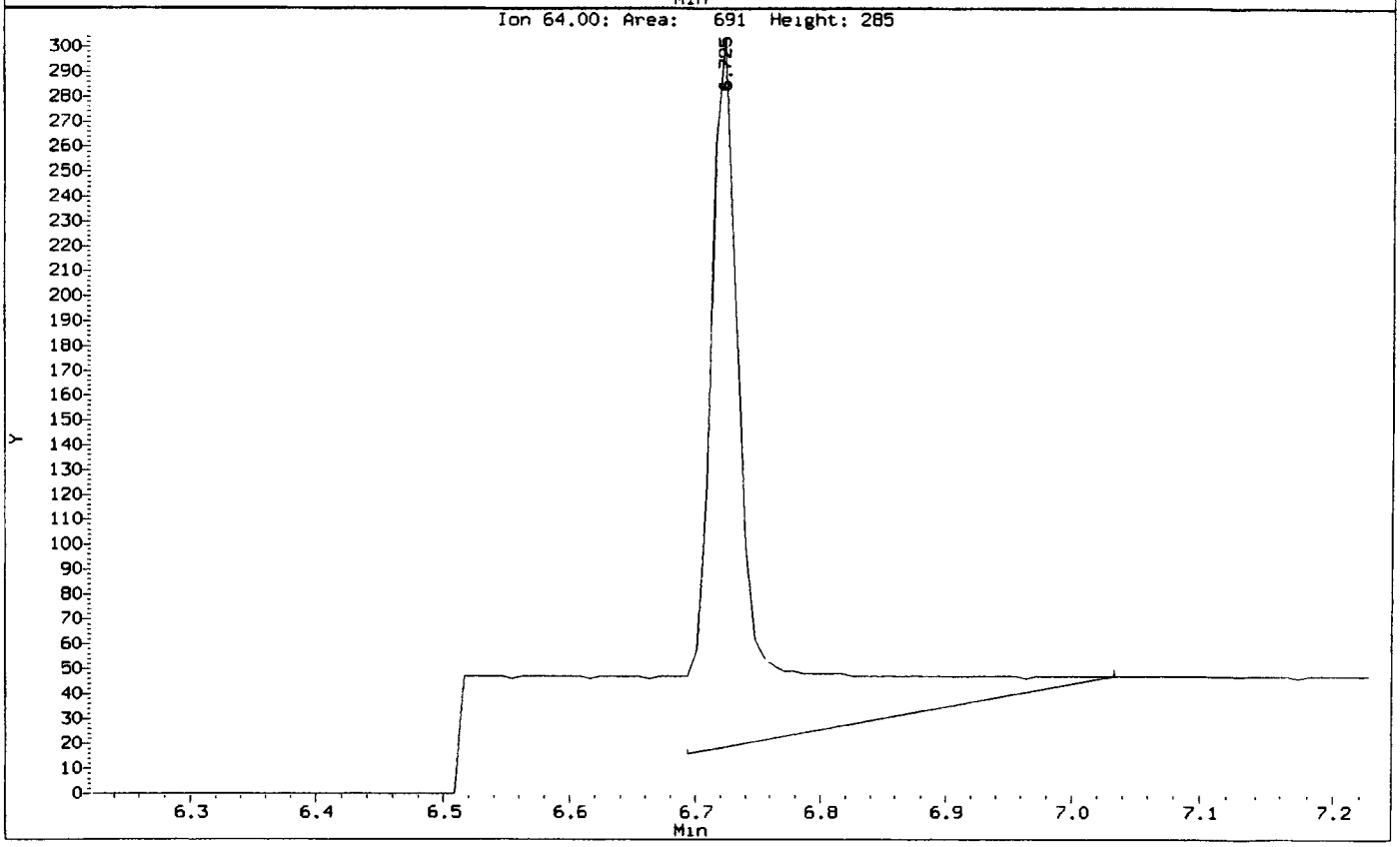
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

Compound: 2-Fluorophenol
CAS Number: 367-12-4

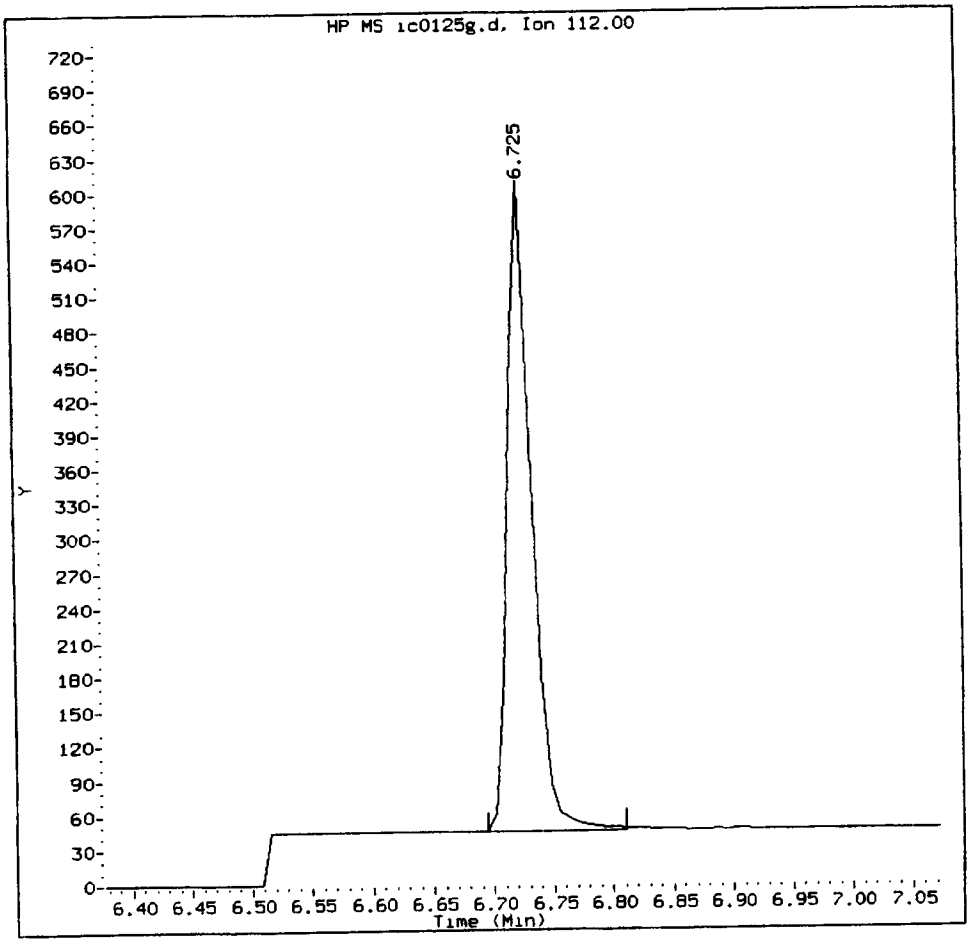


Y2 09/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

2-Fluorophenol Amount: 0.05 Area: 797



MANUAL INTEGRATION for 2-Fluorophenol

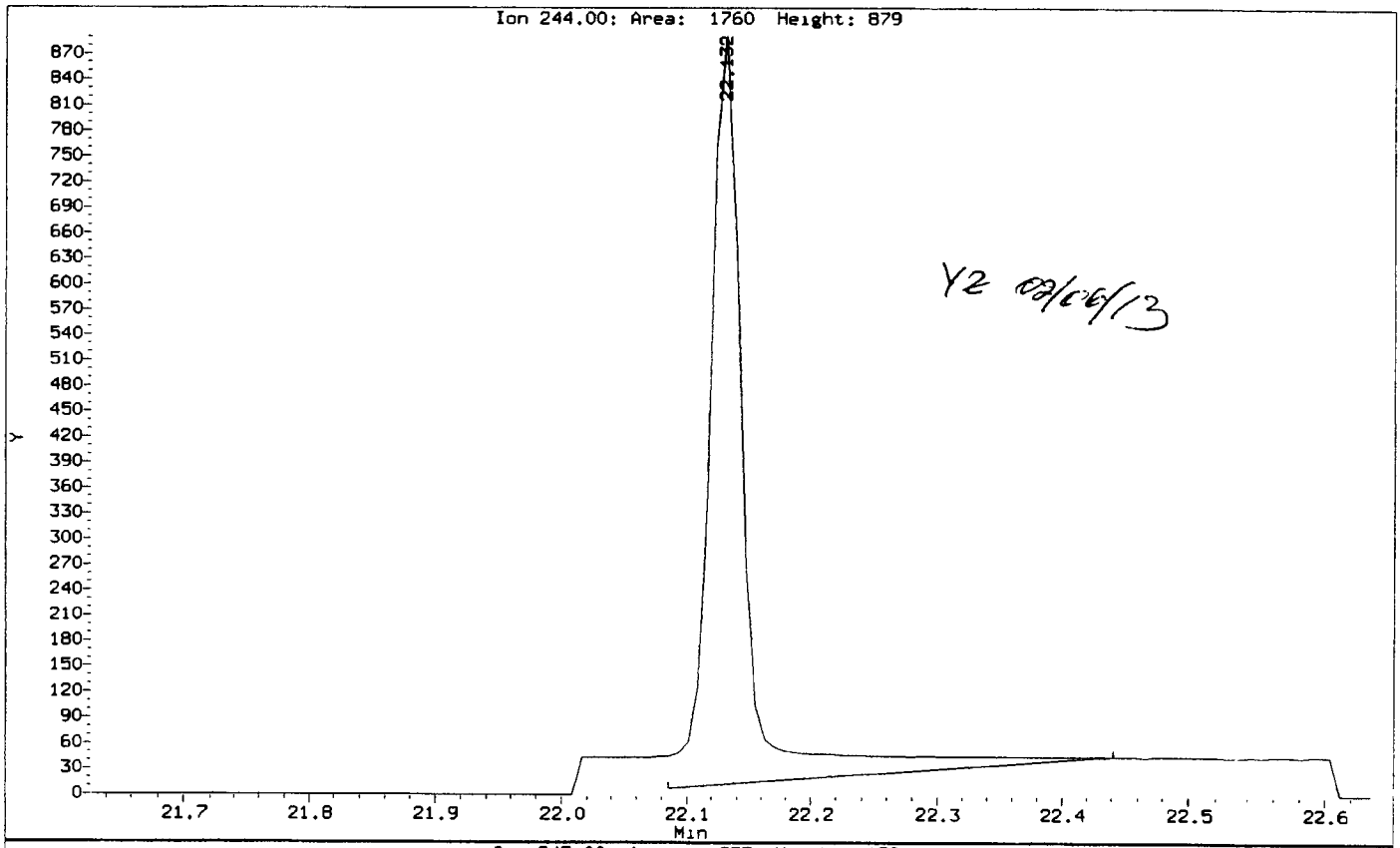
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

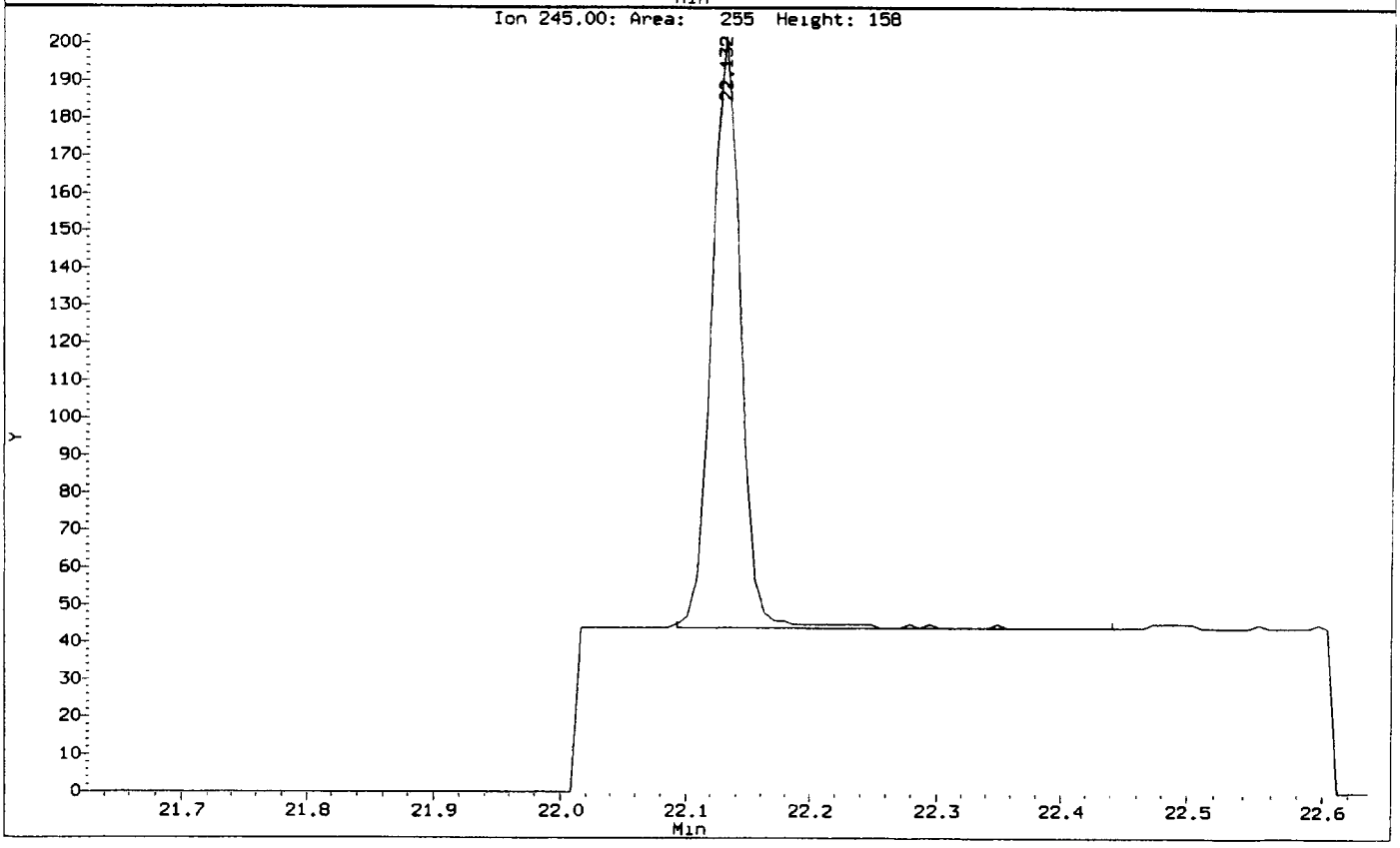
5. Other _____

Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

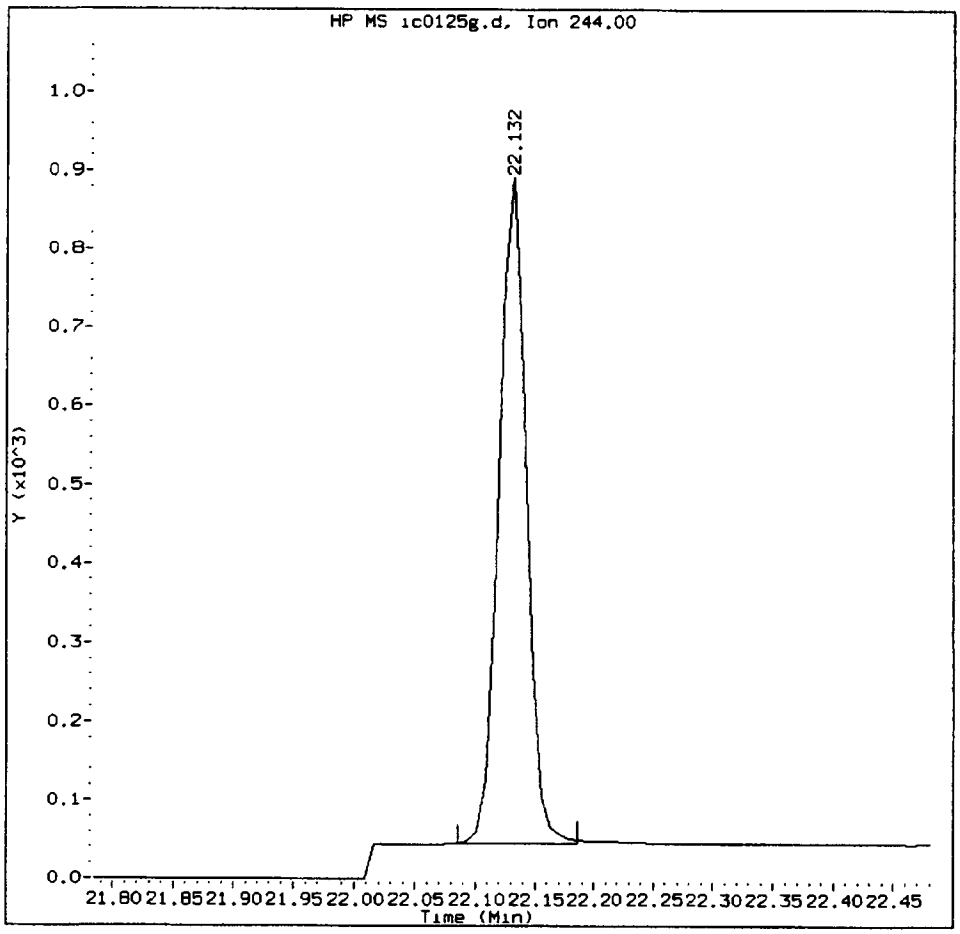
Compound: Terphenyl-d14
CAS Number:





IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Terphenyl-d14 Amount: 0.05 Area: 1344



MANUAL INTEGRATION for Terphenyl-d14

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

5. Other _____

Analyst: YZ Date: 02/06/13

CO-ELUTION SUMMARY FOR FILE - ic0125g.d

Lab ID: IC0125G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Report Date: 06-Feb-2013 11:08

Analytical Resources, Inc.

YZ 02/16/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Lab Smp Id: IC0125H
Inj Date : 25-JAN-2013 17:16 Inst ID: nt10.i
Operator : VTS/YZ
Smp Info : IC0125H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 9 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.725	6.725	(0.740)	7873	0.50000	0.4941
	3 Phenol	94	8.456	8.456	(0.930)	10035	0.50000	0.4959
	7 1,3-Dichlorobenzene	146	9.013	9.012	(0.991)	10196	0.50000	0.5017
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	50086	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	10146	0.50000	0.5001
	11 Benzyl alcohol	79	9.393	9.392	(1.033)	5875	0.50000	0.4899
	12 1,2-Dichlorobenzene	146	9.494	9.493	(1.044)	9559	0.50000	0.4975
	13 2-Methylphenol	108	9.649	9.649	(1.061)	7566	0.50000	0.4969
	15 4-Methylphenol	108	9.936	9.936	(1.093)	7904	0.50000	0.5012
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	4907	0.50000	0.4950
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	16161	1.00000	0.9960
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	8767	0.50000	0.5003
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	188224	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	5232	0.50000	0.4918
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	15801	0.50000	0.4971
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	104418	4.00000	
	50 Diethylphthalate	149	16.759	16.751	(1.070)	18380	0.50000	0.4949
	54 N-Nitrosodiphenylamine	169	17.145	17.153	(0.905)	11810	0.50000	0.5127
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	7635	0.50000	0.5095
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	8335	1.00000	0.8849
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	198157	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	14697	0.50000	0.4865
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	10149	0.50000	0.4671
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	227335	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	219691	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	25984	0.50000	0.4962
	90 N-Nitrosodimethylamine	74	4.447	4.455	(0.489)	9444	1.00000	0.9933

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125h.d
Lab Smp Id: IC0125H
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	50086	-6.99
27 Naphthalene-d8	200104	100052	400208	188224	-5.94
42 Acenaphthene-d10	112392	56196	224784	104418	-7.09
59 Phenanthrene-d10	210710	105355	421420	198157	-5.96
69 Chrysene-d12	240805	120402	481610	227335	-5.59
77 Perylene-d12	230834	115417	461668	219691	-4.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

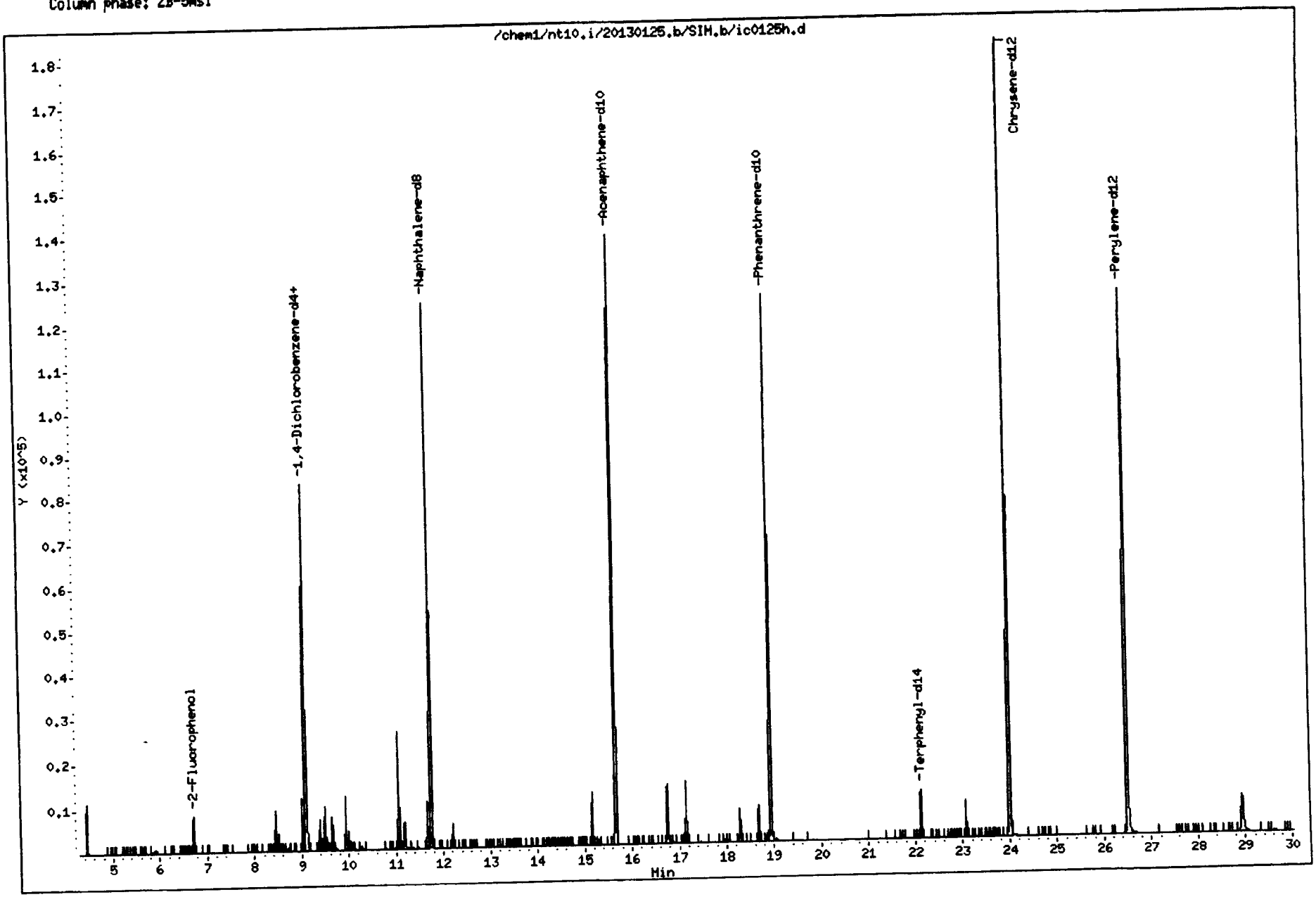
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Date : 25-JAN-2013 17:16
Client ID:
Sample Info: IC0125H

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0125H

CO-ELUTION SUMMARY FOR FILE - ic0125h.d

Lab ID: IC0125H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 02/04/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Lab Smp Id: IC0125I
Inj Date : 25-JAN-2013 17:53
Operator : YZ
Smp Info : IC0125I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev
Cal Date : 25-JAN-2013 17:53
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i
Quant Type: ISTD
Cal File: ic0125i.d
Calibration Sample, Level: 2
Compound Sublist: PSDDA.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.725	6.725	(0.740)	1598	0.10000	0.09578
	3 Phenol	94	8.456	8.456	(0.931)	2001	0.10000	0.09444
	7 1,3-Dichlorobenzene	146	9.012	9.012	(0.992)	2154	0.10000	0.1012
*	8 1,4-Dichlorobenzene-d4	152	9.082	9.082	(1.000)	52438	4.00000	
	9 1,4-Dichlorobenzene	146	9.113	9.113	(1.003)	2180	0.10000	0.1026
	11 Benzyl alcohol	79	9.392	9.392	(1.034)	1174	0.10000	0.09351(M)
	12 1,2-Dichlorobenzene	146	9.493	9.493	(1.045)	2052	0.10000	0.1020
	13 2-Methylphenol	108	9.649	9.649	(1.062)	1498	0.10000	0.09396
	15 4-Methylphenol	108	9.936	9.936	(1.094)	1538	0.10000	0.09316
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.101)	990	0.10000	0.09539(M)
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	3079	0.20000	0.1836
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	2059	0.10000	0.1137
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	194519	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	1098	0.10000	0.09988
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	3070	0.10000	0.09551(M)
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	105586	4.00000	
	50 Diethylphthalate	149	16.751	16.751	(1.070)	3860	0.10000	0.1028
	54 N-Nitrosodiphenylamine	169	17.153	17.153	(0.906)	2058	0.10000	0.09080
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	1494	0.10000	0.1013(M)
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	1250	0.20000	0.1359
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	194974	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	3257	0.10000	0.1092
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	1769	0.10000	0.08242
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	224554	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	218858	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	4594	0.10000	0.08807(M)
	90 N-Nitrosodimethylamine	74	4.455	4.455	(0.490)	1966	0.20000	0.1975

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Report Date: 06-Feb-2013 11:08

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125i.d
Lab Smp Id: IC0125I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	52438	-2.63
27 Naphthalene-d8	200104	100052	400208	194519	-2.79
42 Acenaphthene-d10	112392	56196	224784	105586	-6.06
59 Phenanthrene-d10	210710	105355	421420	194974	-7.47
69 Chrysene-d12	240805	120402	481610	224554	-6.75
77 Perylene-d12	230834	115417	461668	218858	-5.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.08	-0.09
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

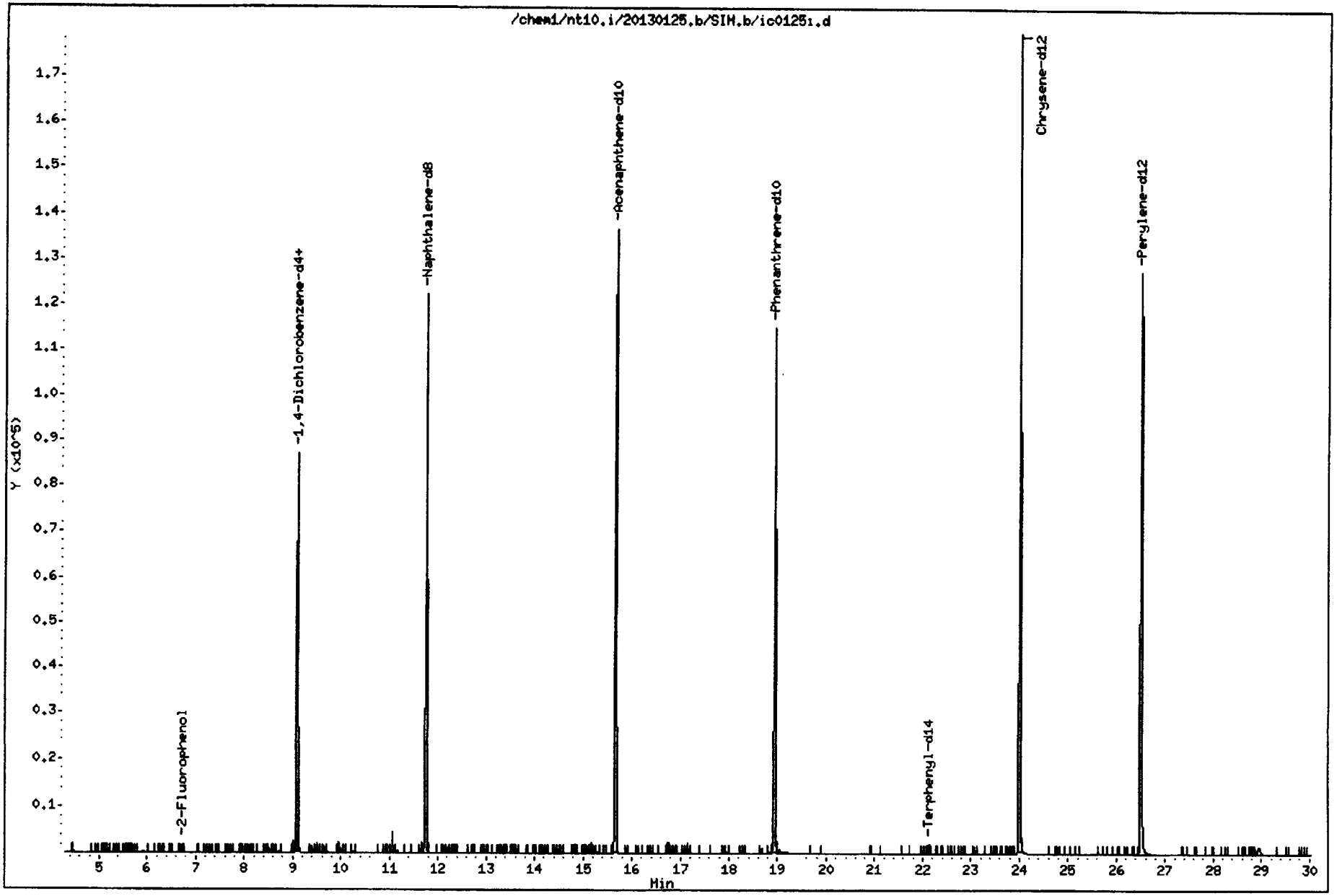
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Date : 25-JAN-2013 17:53
Client ID:
Sample Info: IC0125I

Instrument: nt10.i

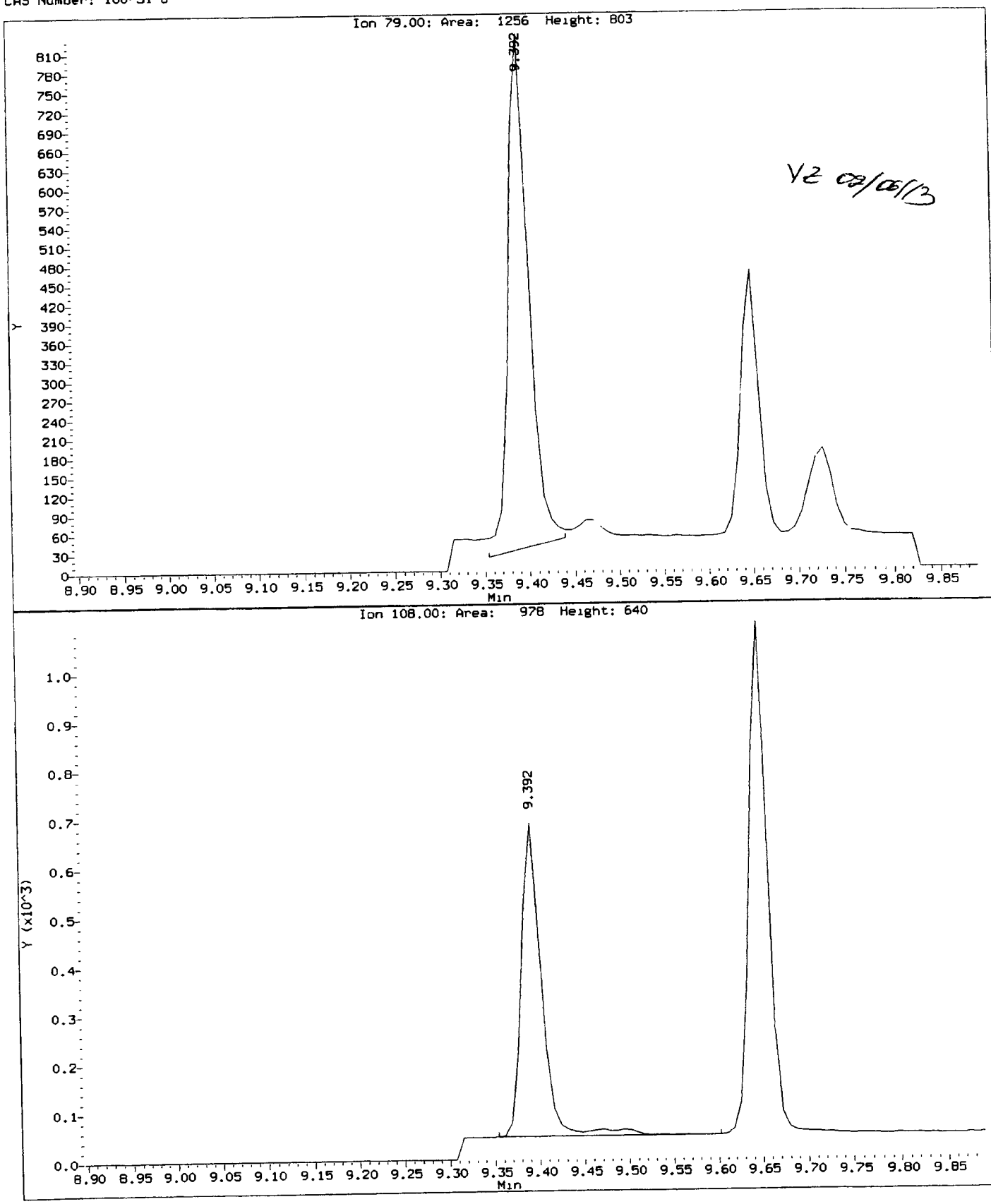
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125i.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: Benzyl alcohol
CAS Number: 100-51-6

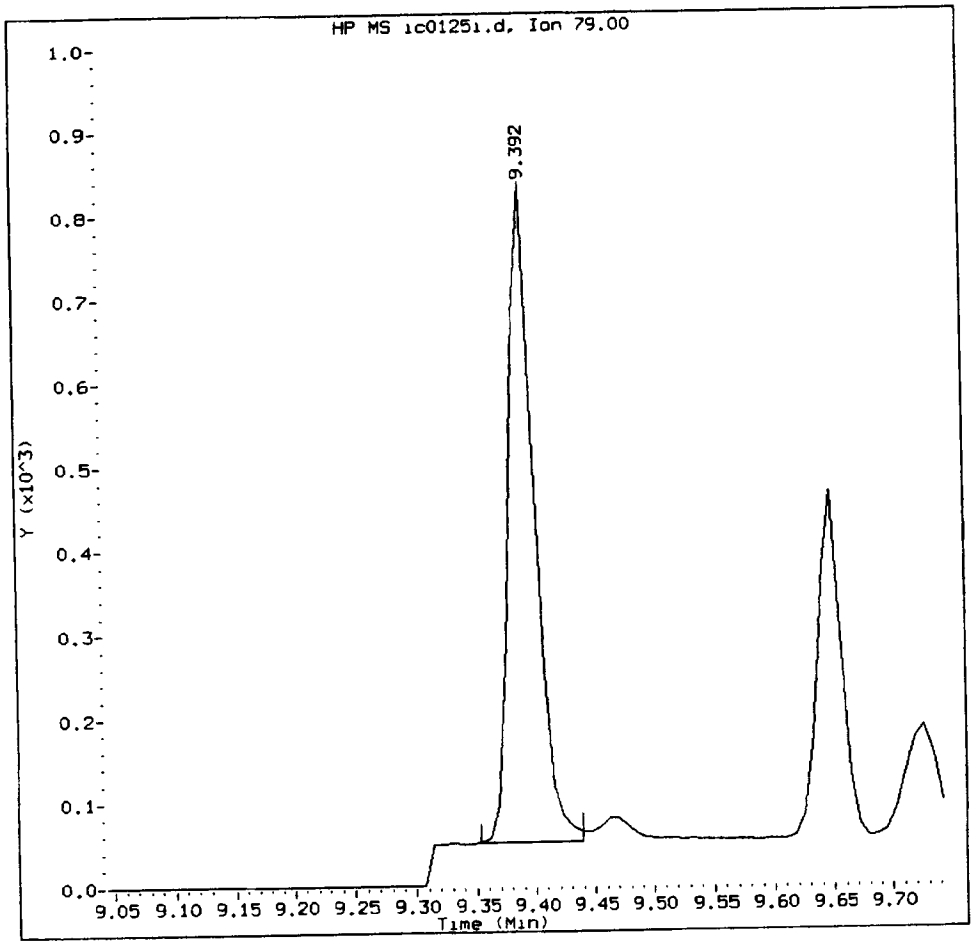


YZ 02/05/13

WLS7 0091?

IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Benzyl alcohol Amount: 0.09 Area: 1174



MANUAL INTEGRATION for Benzyl alcohol

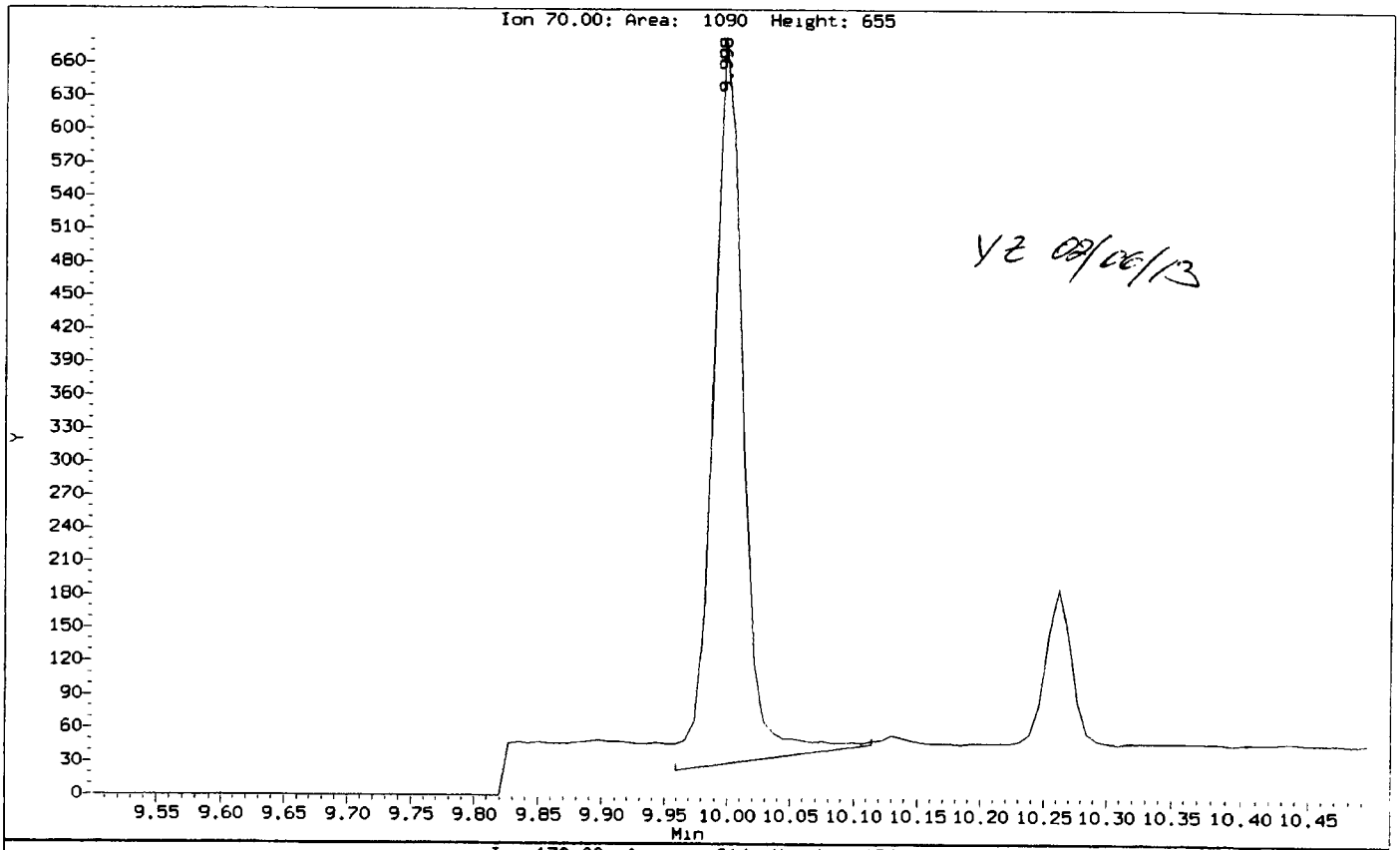
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

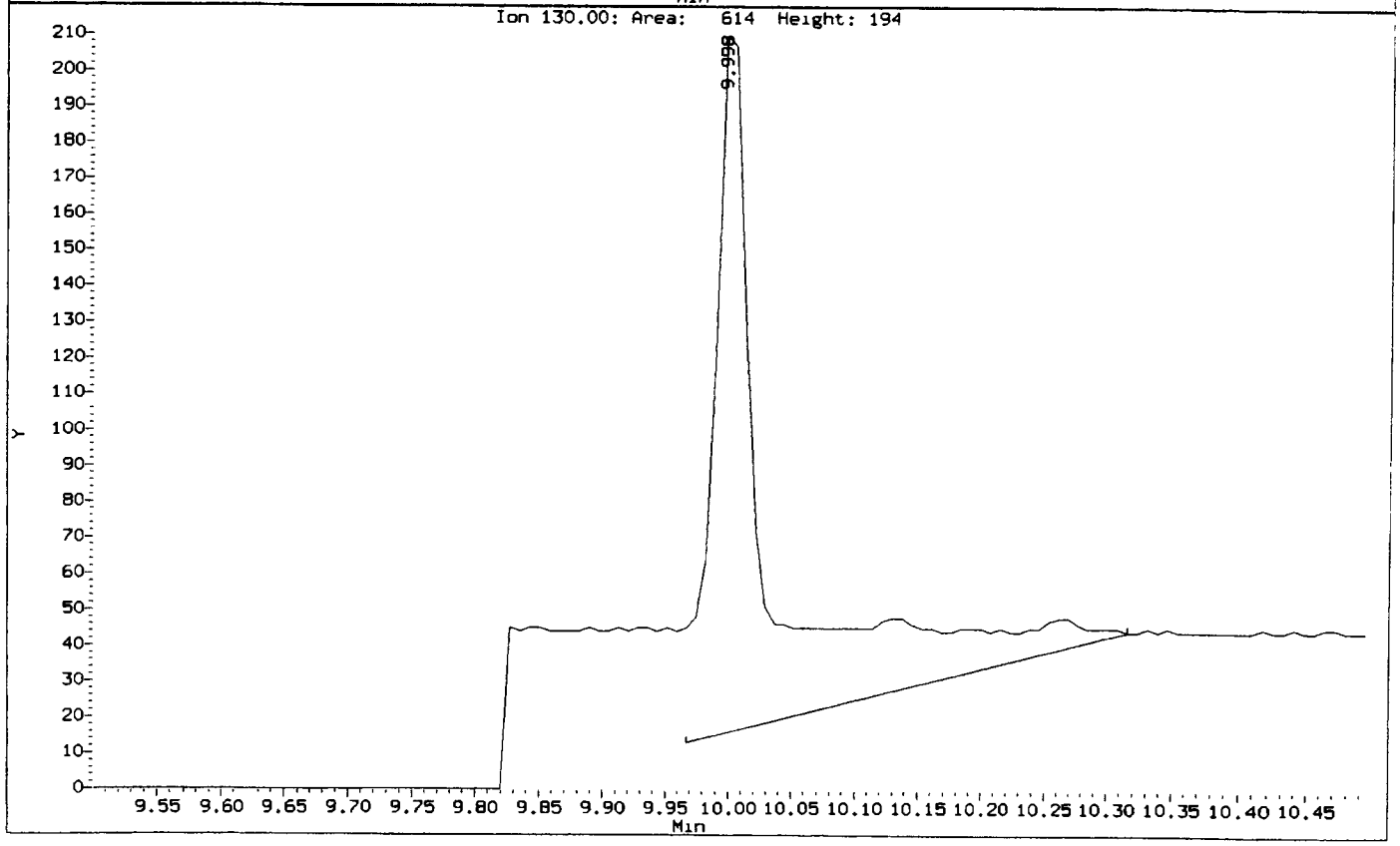
Analyst: VZ Date: 08/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/ic0125_1.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7

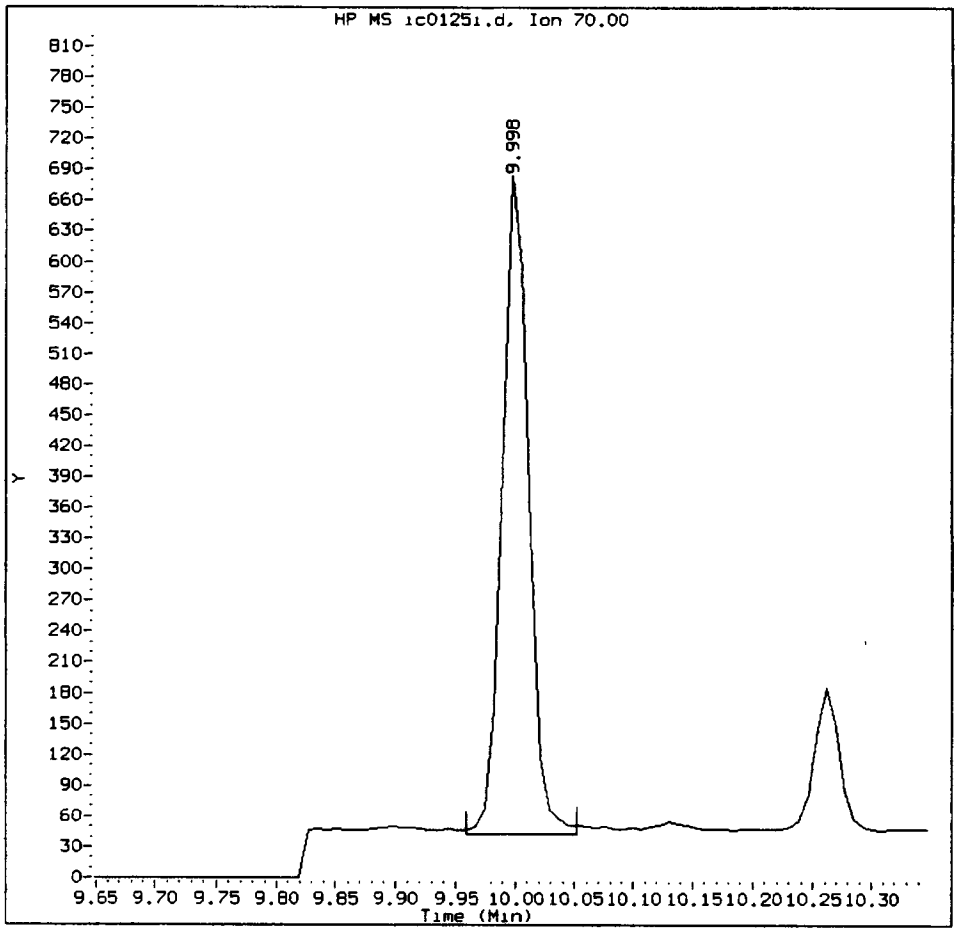


YZ 02/06/13



IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

N-Nitroso-di-n-propylamine Amount: 0.10 Area: 990



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

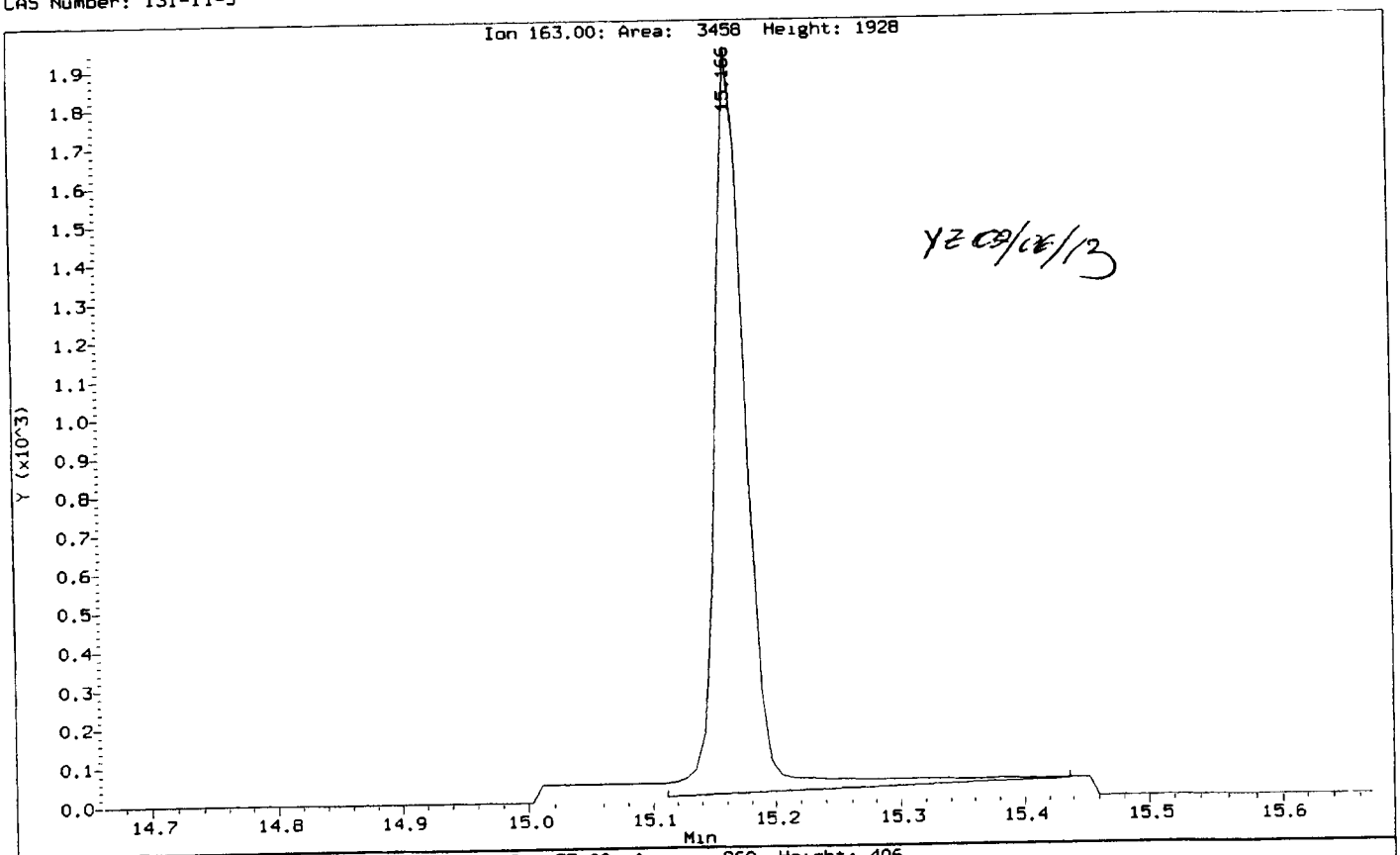
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

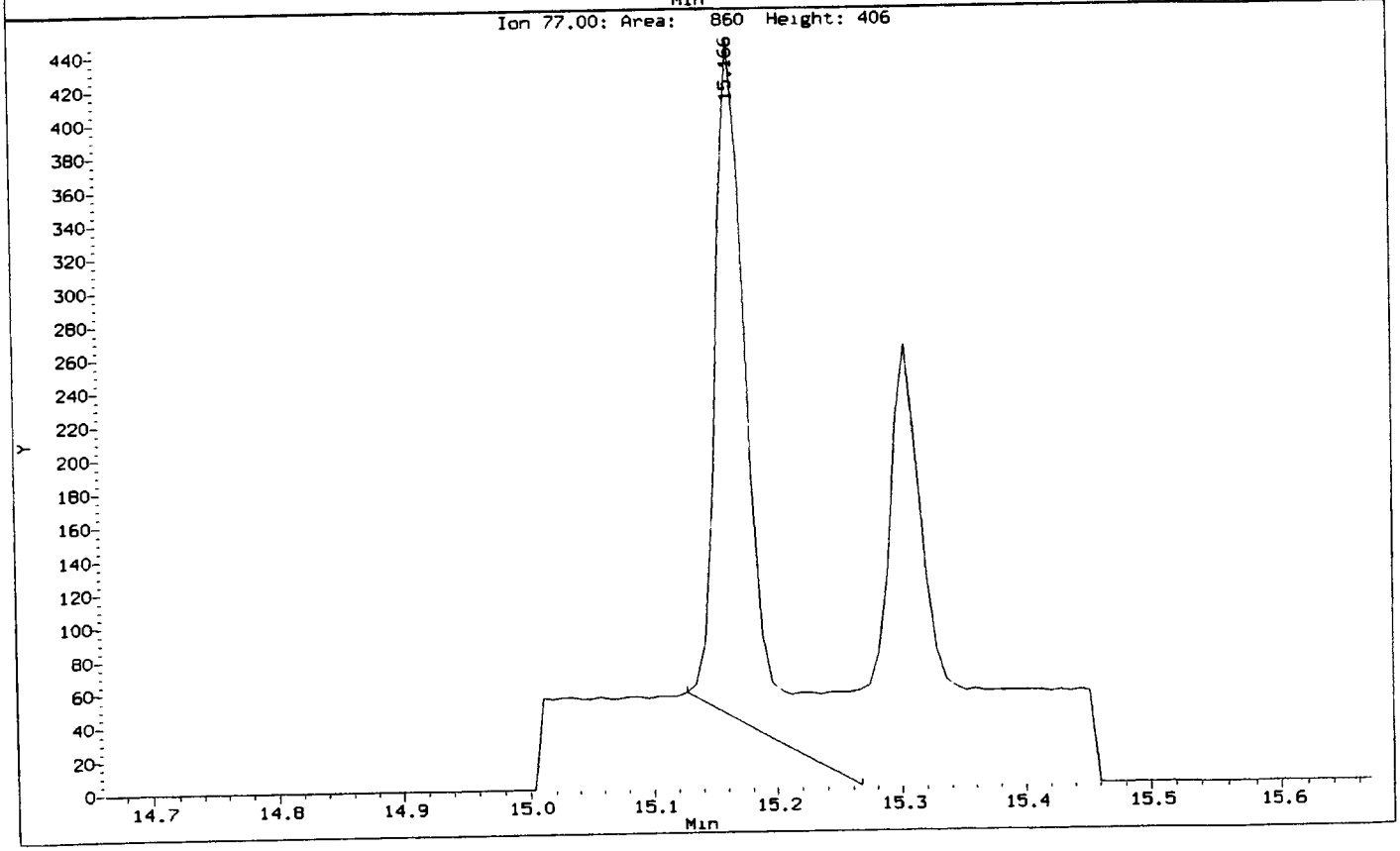
Analyst: YZ Date: 03/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c01251.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: Dimethylphthalate
CAS Number: 131-11-3

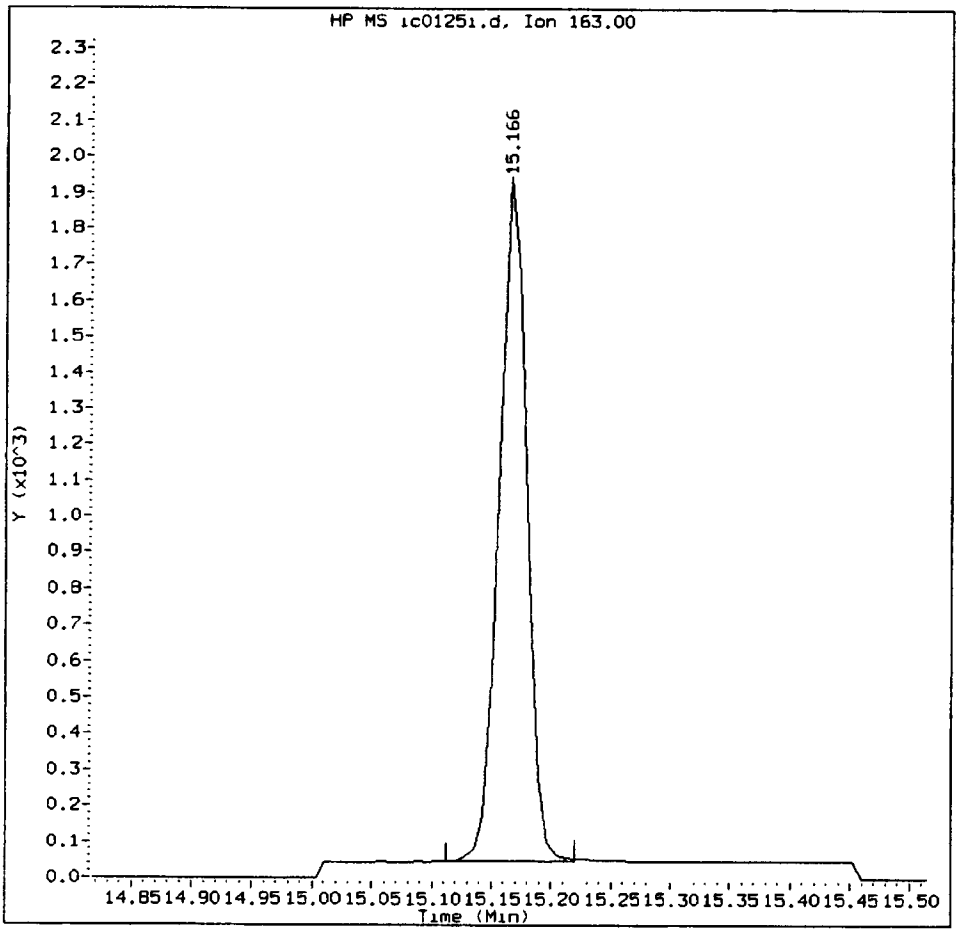


YZ 09/02/13



IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Dimethylphthalate Amount: 0.10 Area: 3070



MANUAL INTEGRATION for Dimethylphthalate

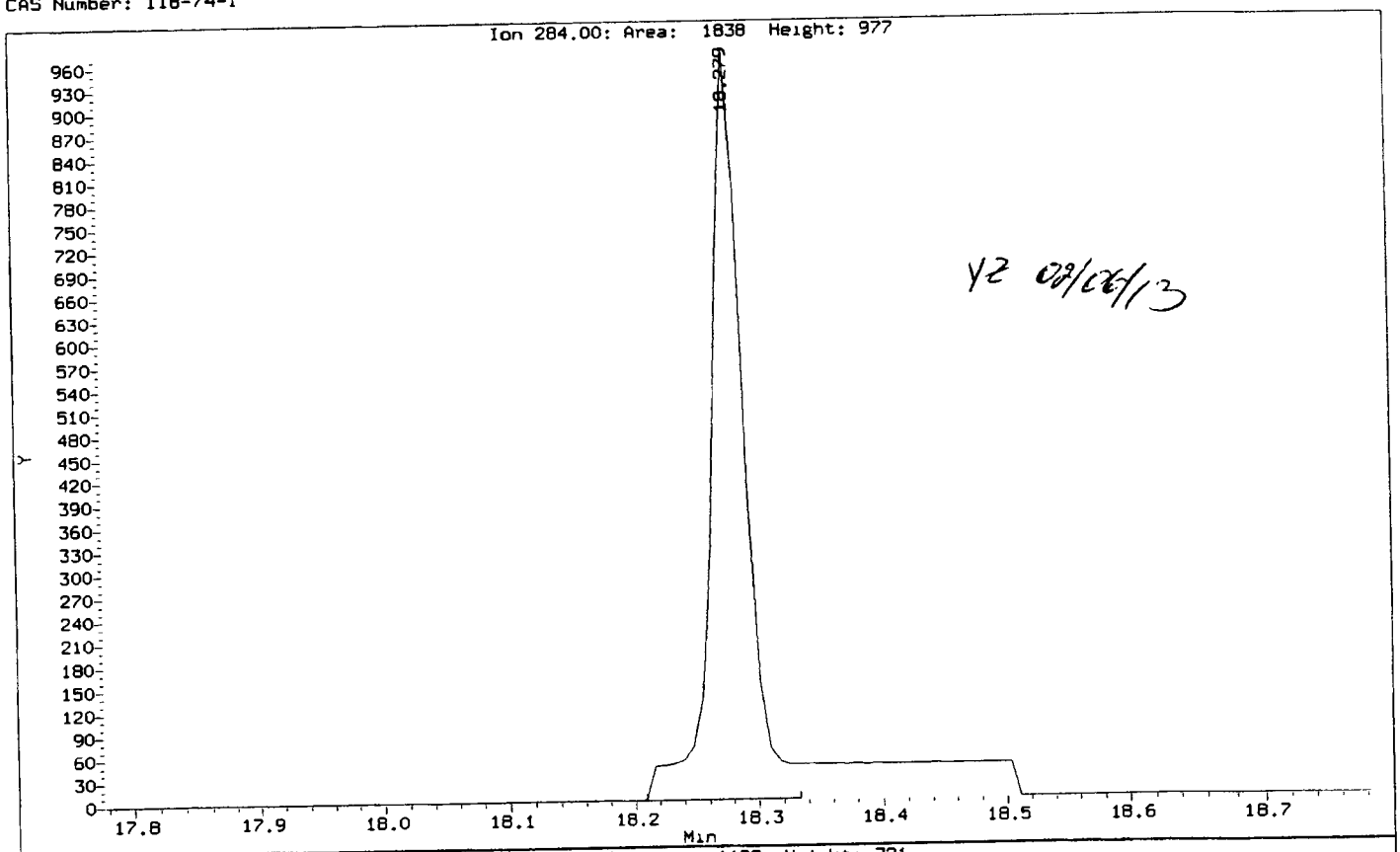
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

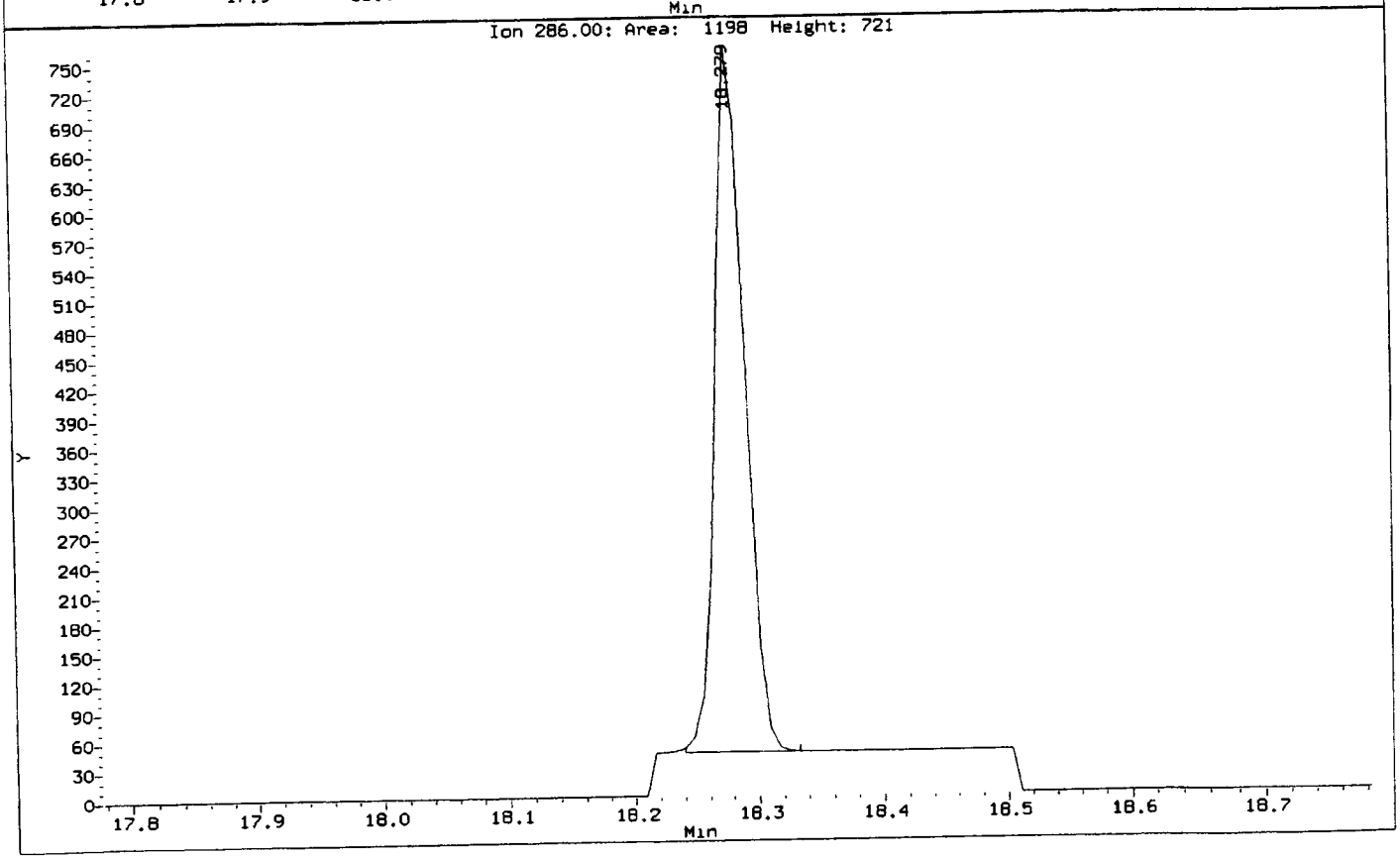
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125_1.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: Hexachlorobenzene
CAS Number: 118-74-1

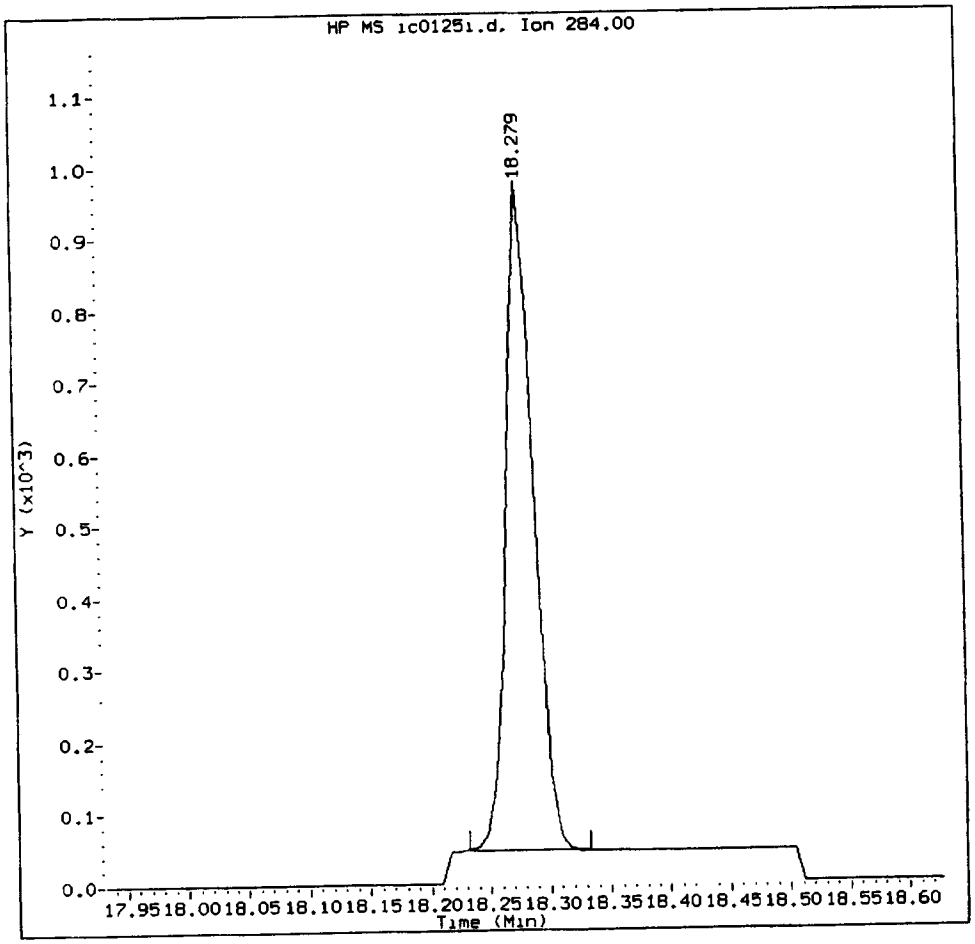


YZ 08/08/13



IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Hexachlorobenzene Amount: 0.10 Area: 1494



MANUAL INTEGRATION for Hexachlorobenzene

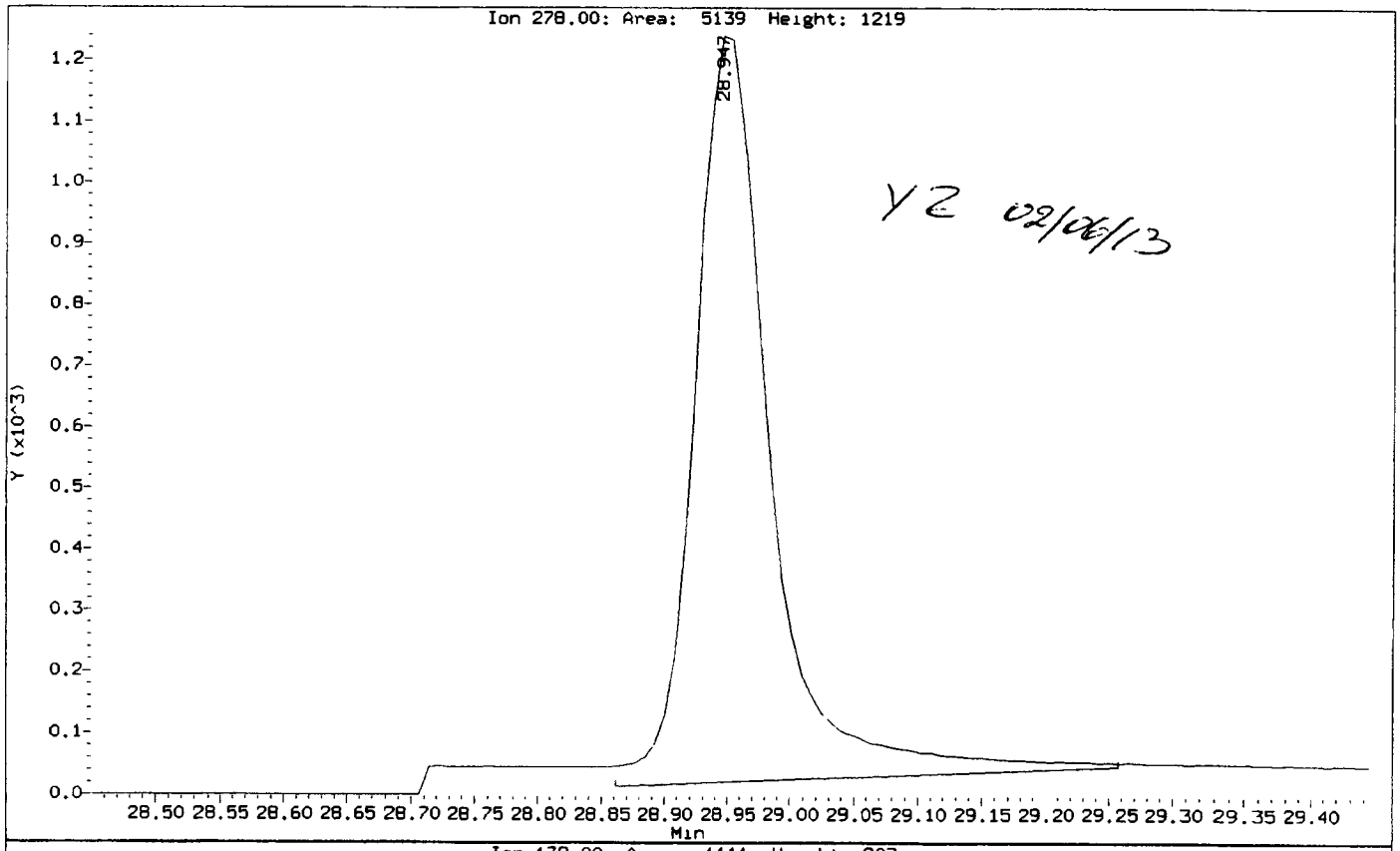
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

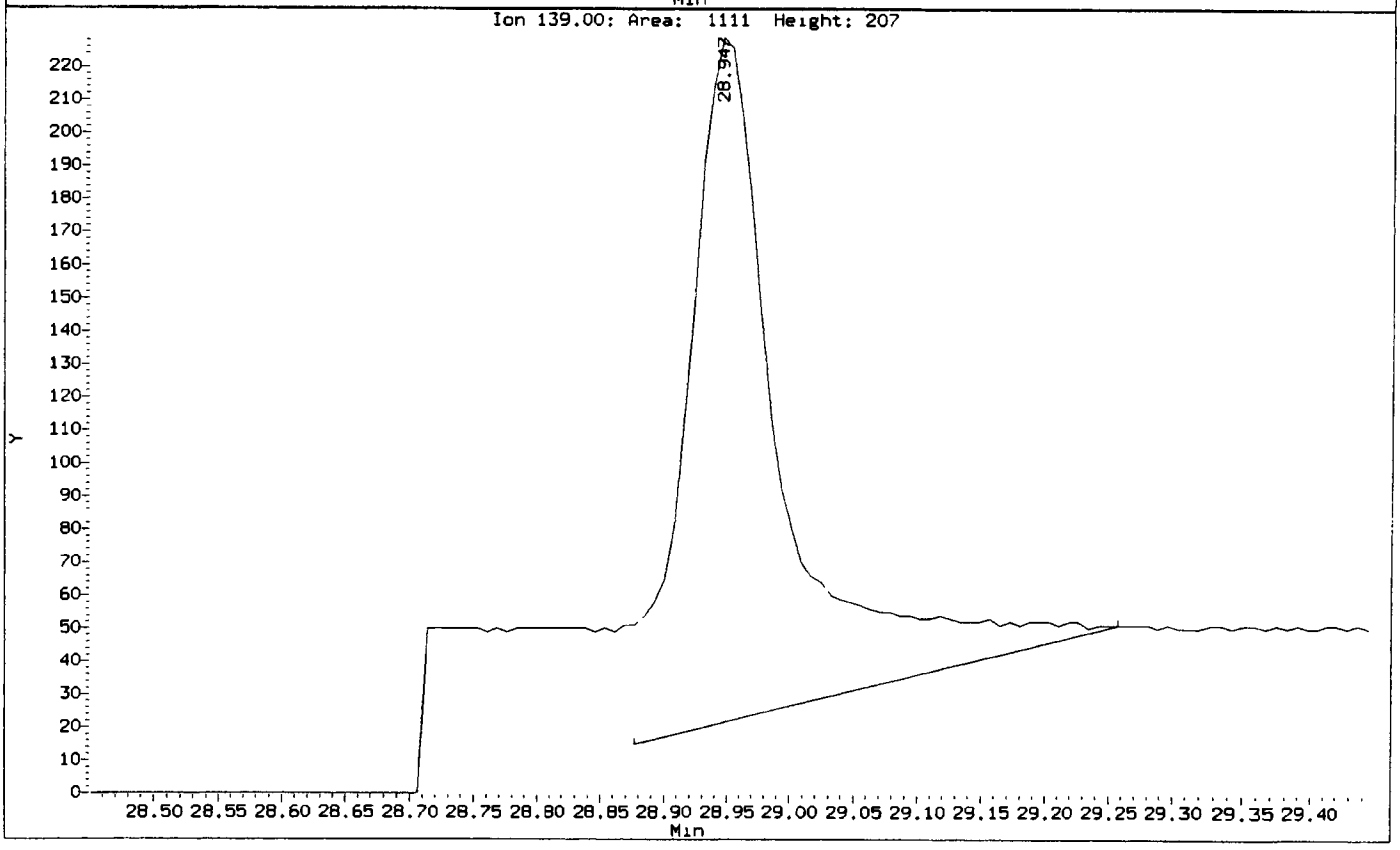
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125i.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3

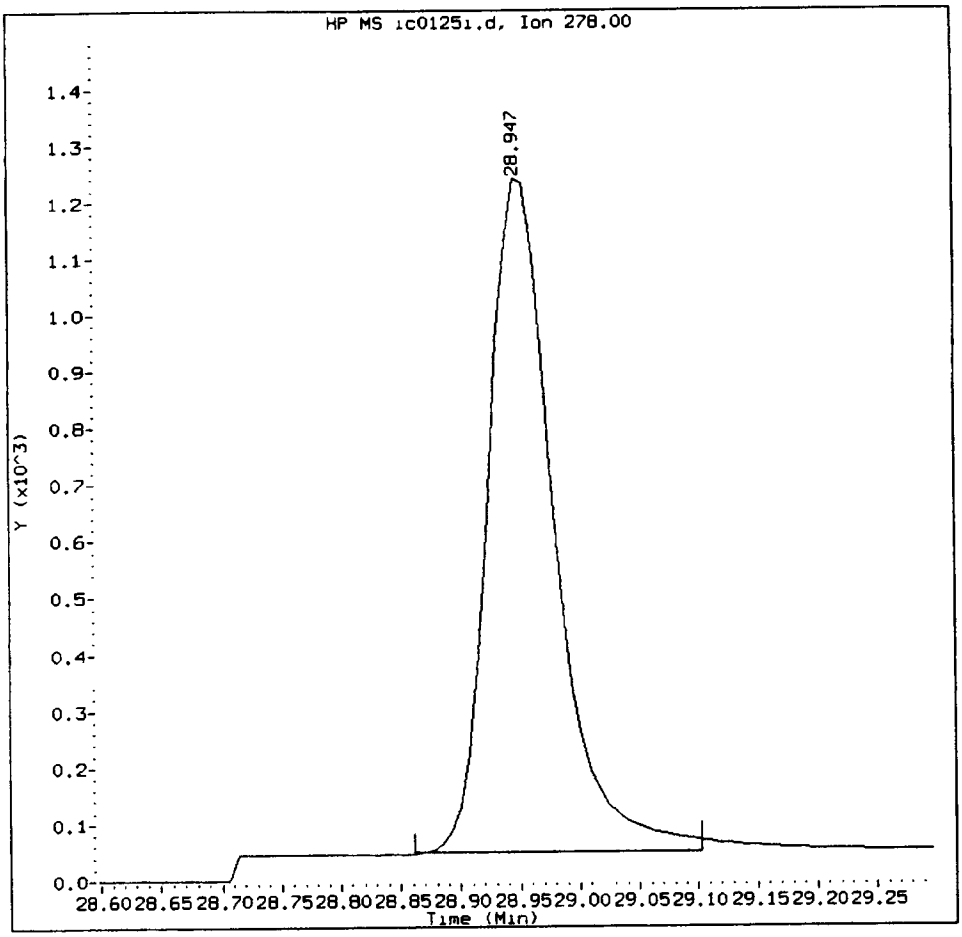


YZ 02/06/13



IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Dibenzo(a,h)anthracene Amount: 0.09 Area: 4594



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: 08/06/13

CO-ELUTION SUMMARY FOR FILE - ic0125i.d

Lab ID: IC0125I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

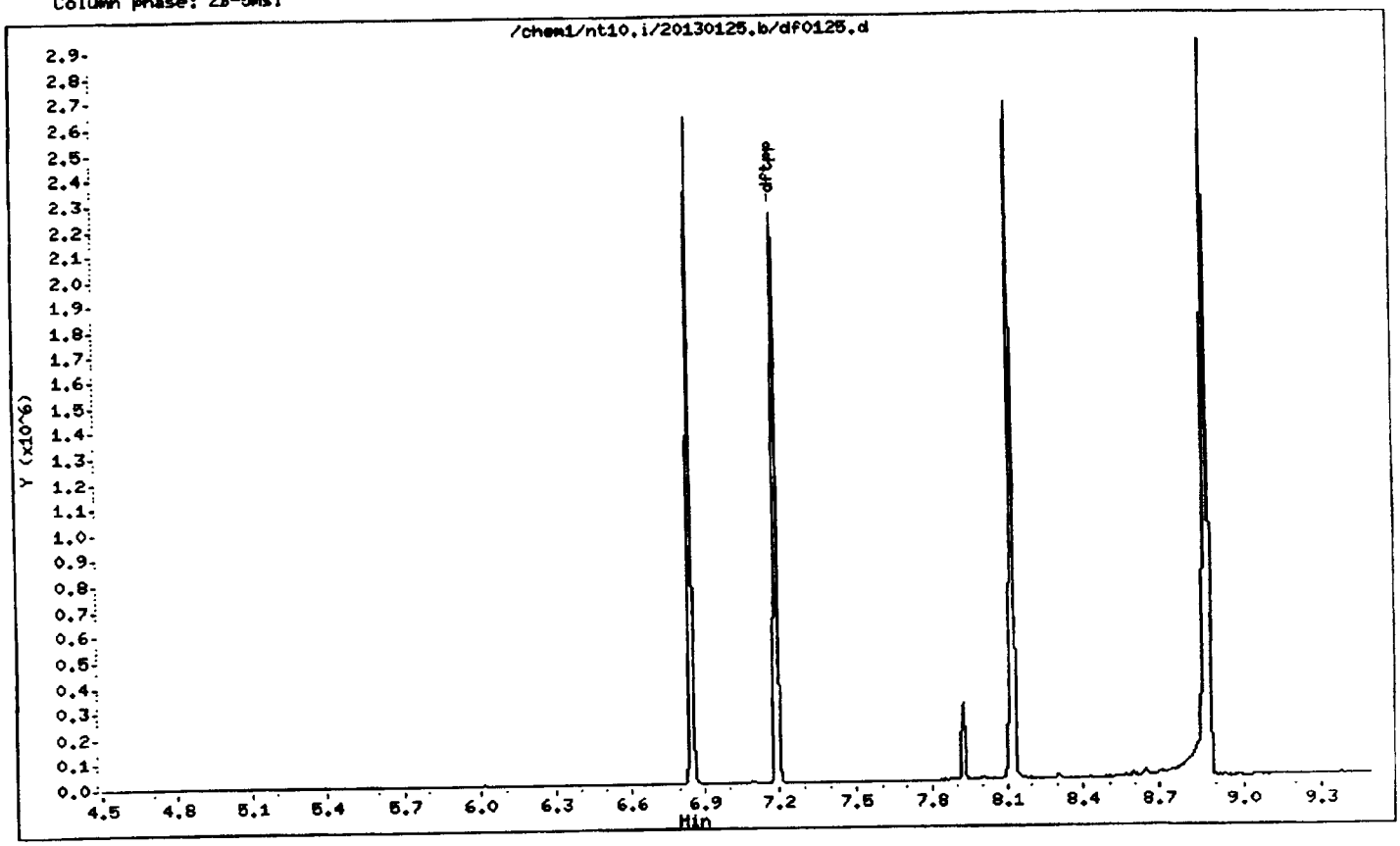
Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

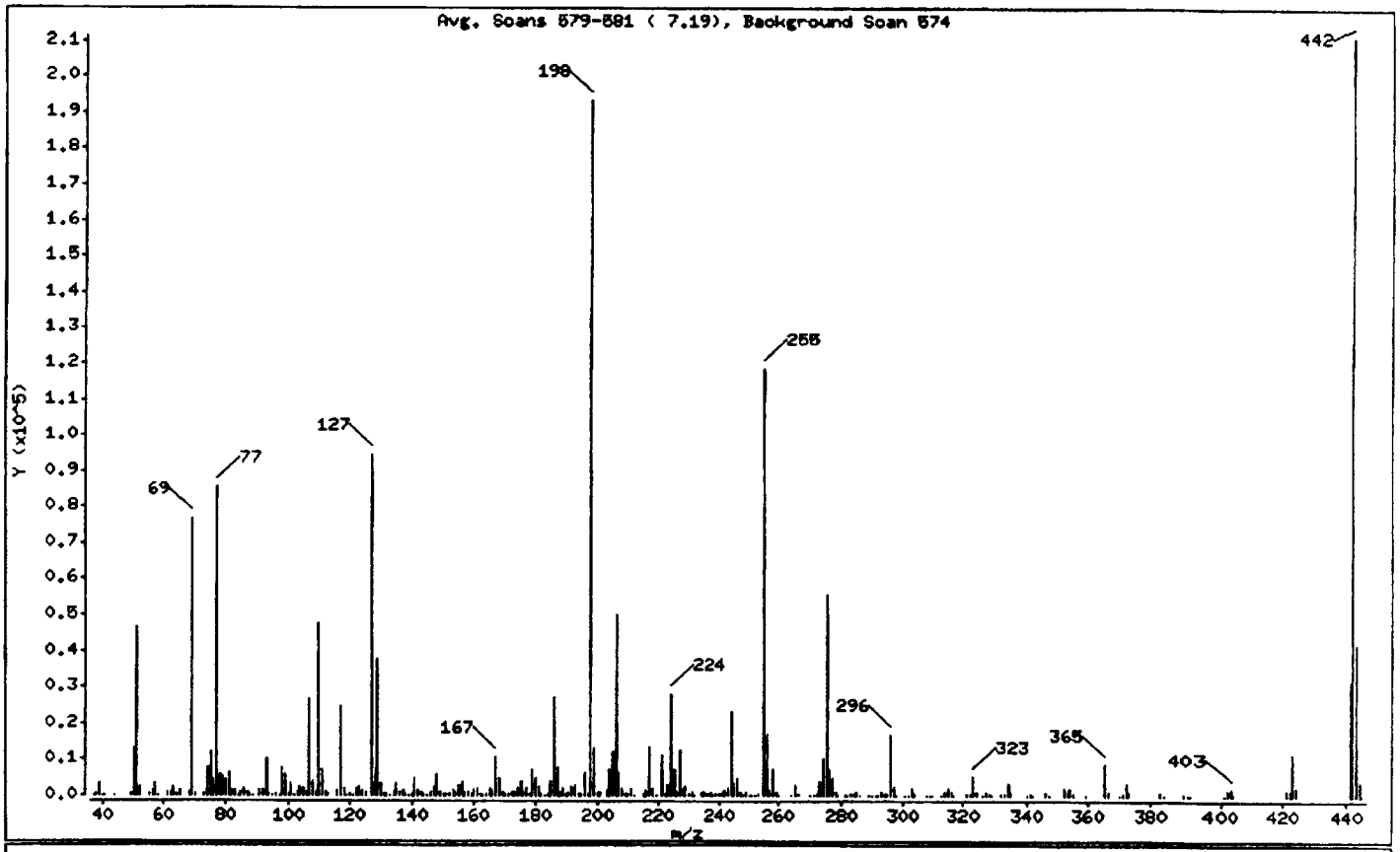
Sample Info: DFTPP

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	24.19
68	Less than 2.00% of mass 69	0.61 (1.54)
69	Mass 69 relative abundance	39.80
70	Less than 2.00% of mass 69	0.19 (0.49)
127	10.00 - 80.00% of mass 198	48.91
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	28.93
365	Greater than 1.00% of mass 198	4.43
441	0.01 - 24.00% of mass 442	16.45 (15.06)
442	50.00 - 200.00% of mass 198	109.23
443	15.00 - 24.00% of mass 442	21.82 (19.98)

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	197	129.00	37936	204.00	7247	290.00	134
38.00	705	130.00	3252	205.00	12071	291.00	73
39.00	3533	131.00	616	206.00	50152	292.00	193
40.00	113	132.00	309	207.00	6355	293.00	1040
41.00	57	133.00	201	208.00	1855	294.00	300
44.00	41	134.00	1063	209.00	685	295.00	432
49.00	407	135.00	3189	210.00	390	296.00	17168
50.00	12941	136.00	1177	211.00	2076	297.00	2409
51.00	46792	137.00	1570	212.00	126	298.00	117
52.00	2479	138.00	318	215.00	691	301.00	186
55.00	299	139.00	141	216.00	1249	302.00	228
56.00	1601	140.00	439	217.00	13670	303.00	1845
57.00	3595	141.00	5058	218.00	1710	304.00	531
58.00	186	142.00	1565	219.00	125	308.00	197
61.00	736	143.00	1108	221.00	10937	309.00	121
62.00	914	144.00	315	222.00	480	310.00	187
63.00	2618	145.00	214	223.00	3072	313.00	153
64.00	316	146.00	882	224.00	28320	314.00	792
65.00	1300	147.00	2615	225.00	7216	315.00	2023
68.00	1189	148.00	6026	226.00	852	316.00	1067
69.00	76976	149.00	1129	227.00	12743	317.00	159
70.00	375	150.00	301	228.00	1719	321.00	538
73.00	705	151.00	726	229.00	2389	322.00	299
74.00	7863	152.00	293	230.00	329	323.00	5388
75.00	12207	153.00	1577	231.00	1021	324.00	1013
76.00	4289	154.00	1181	232.00	167	326.00	50
77.00	85576	155.00	2757	233.00	188	327.00	1029
78.00	5655	156.00	4011	234.00	771	328.00	558
79.00	5556	157.00	812	235.00	861	329.00	60
80.00	4369	158.00	873	236.00	627	332.00	351
81.00	6233	159.00	710	237.00	1022	333.00	548
82.00	1534	160.00	1489	238.00	110	334.00	3620
83.00	1401	161.00	2161	239.00	541	335.00	964
84.00	112	162.00	649	240.00	417	340.00	51
85.00	1085	163.00	146	241.00	730	341.00	679

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d

Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574

Location of Maximum: 442.00

Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1703	164.00	290	242.00	1687	342.00	153
87.00	795	165.00	1882	243.00	1736	346.00	1164
88.00	279	166.00	1494	244.00	23312	347.00	162
89.00	81	167.00	10689	245.00	3158	352.00	1760
91.00	1338	168.00	4694	246.00	4620	353.00	1209
92.00	1519	169.00	848	247.00	978	354.00	1709
93.00	9994	170.00	329	248.00	181	355.00	309
94.00	645	171.00	378	249.00	862	359.00	64
95.00	134	172.00	865	250.00	149	365.00	8559
96.00	471	173.00	1141	251.00	169	366.00	1203
97.00	212	174.00	2025	252.00	221	370.00	156
98.00	7840	175.00	3911	253.00	585	371.00	436
99.00	5867	176.00	1174	255.00	118624	372.00	3166
100.00	531	177.00	1772	256.00	17216	373.00	730
101.00	3503	178.00	645	257.00	1329	383.00	830
102.00	180	179.00	7329	258.00	7275	384.00	228
103.00	1140	180.00	4831	259.00	1188	390.00	433
104.00	2300	181.00	2296	260.00	200	391.00	237
105.00	2067	182.00	354	261.00	142	392.00	163
106.00	732	183.00	241	264.00	186	401.00	177
107.00	26848	184.00	572	265.00	2938	402.00	1244
108.00	4043	185.00	3662	266.00	493	403.00	1787
109.00	744	186.00	27072	270.00	126	404.00	646
110.00	47768	187.00	7673	271.00	234	421.00	1637
111.00	7142	188.00	763	272.00	384	422.00	1574
112.00	909	189.00	1730	273.00	3889	423.00	11637
113.00	338	190.00	325	274.00	10079	424.00	2495
116.00	1403	191.00	859	275.00	55952	425.00	200
117.00	24664	192.00	2439	276.00	7415	437.00	50
118.00	1723	193.00	2782	277.00	4869	438.00	71
119.00	207	194.00	548	278.00	775	441.00	31824
120.00	344	195.00	439	279.00	140	442.00	211264
121.00	108	196.00	6210	281.00	108	443.00	42208
122.00	1841	197.00	402	282.00	139	444.00	4074
123.00	2656	198.00	193408	283.00	558	445.00	209

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

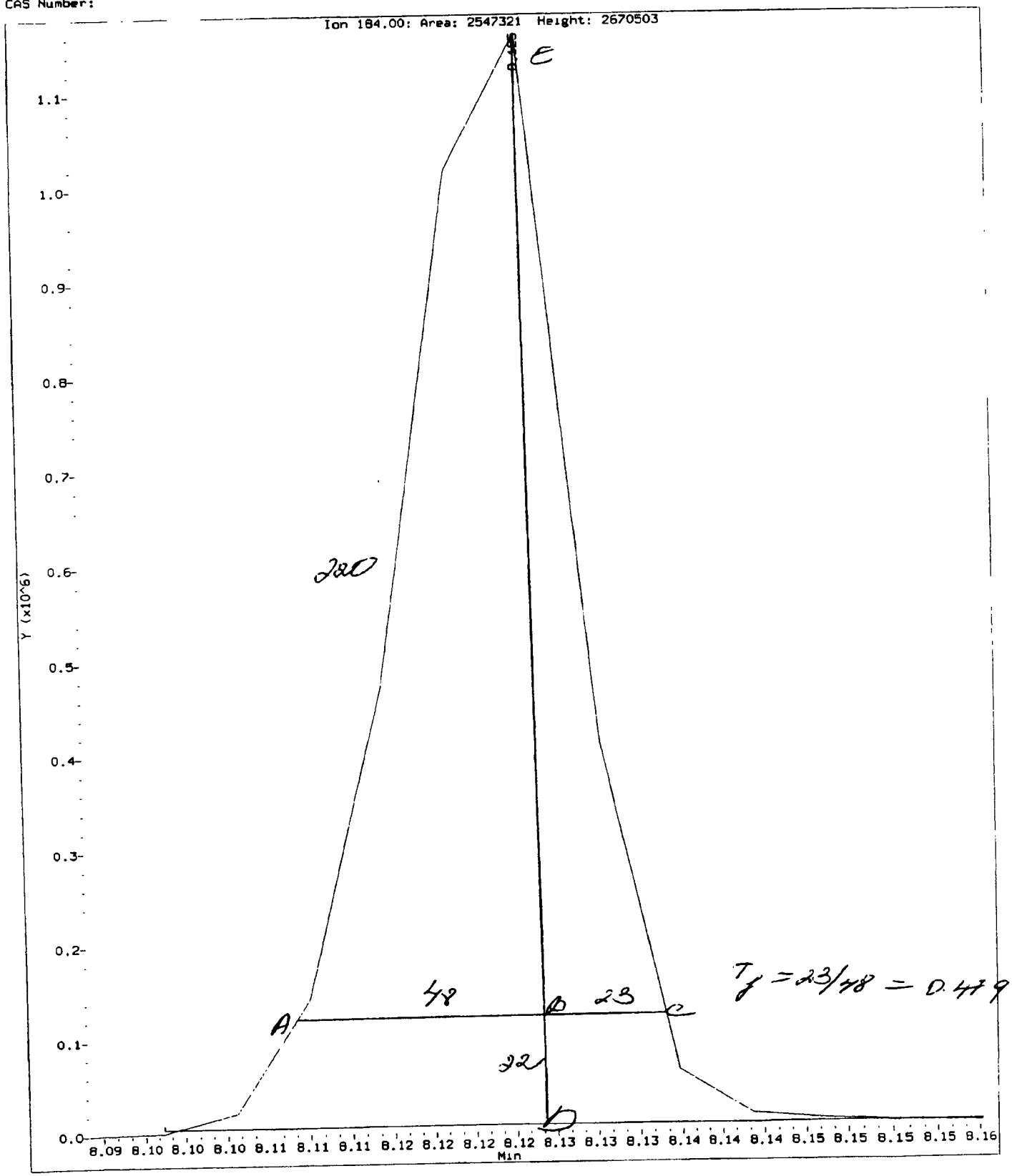
Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1219	199.00	12893	284.00	387		
125.00	1090	200.00	1075	285.00	813		
127.00	94600	201.00	925	286.00	126		
128.00	7116	203.00	1424	289.00	147		

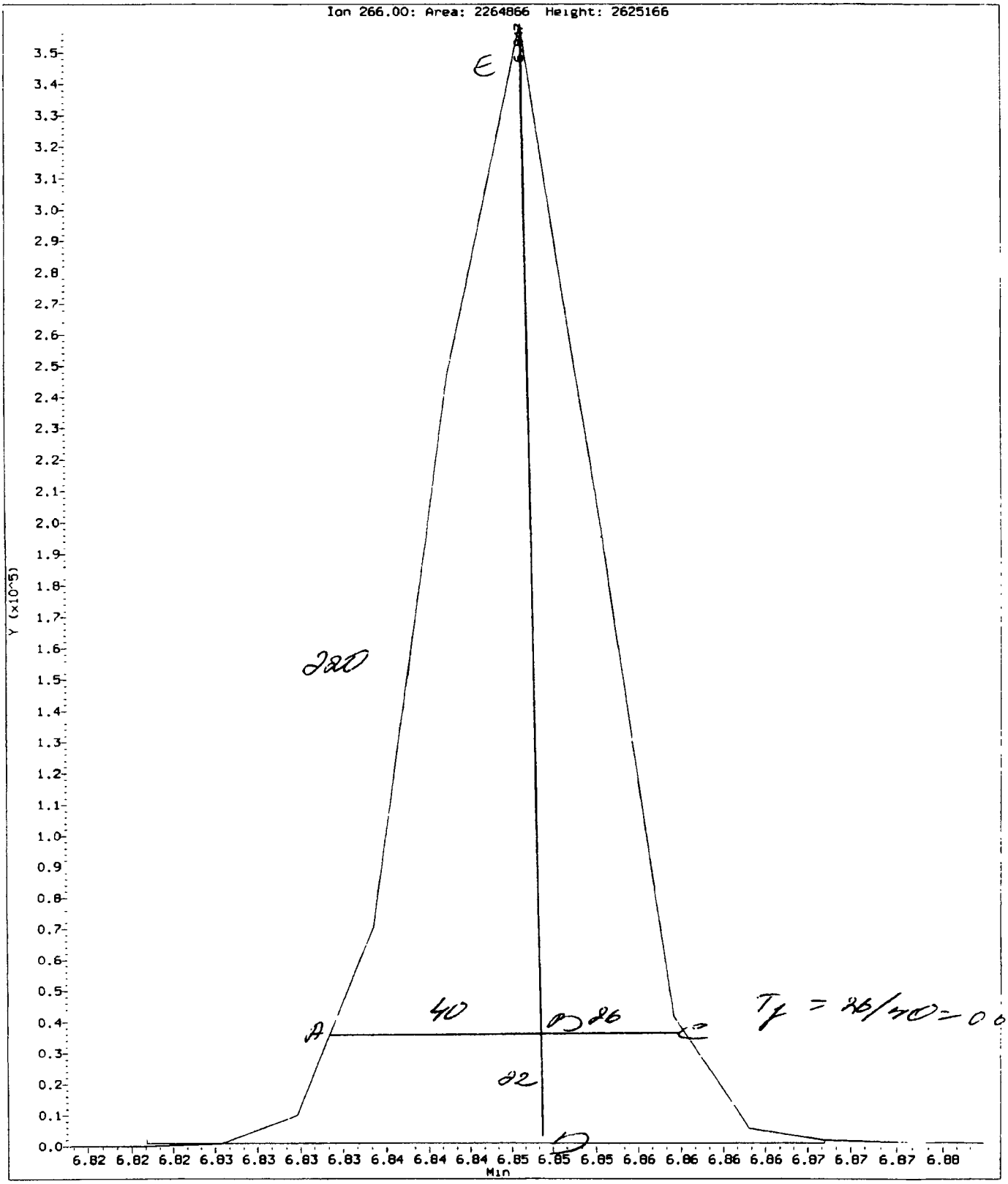
Data File: /chem1/nt10.1/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
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/20130125.b/ddt.b/df0125.d
Method: /chem1/nt10.i/20130125.b/ddt.b/sw846ddt.m
Analysis Date: 25-JAN-2013 12:43

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.847	2264865
Benzidine	8.125	2547321
4,4'-DDE	8.307	1813
4,4'-DDD	8.644	5130
4,4'-DDT	8.874	537797

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

$$\text{DDT Percent Breakdown} = \frac{(1813 + 5130) * 100}{(1813 + 5130 + 537797)}$$

DDT Percent Breakdown = 1.3 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL 67 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: 01/25/13 Analysis Start Date: 04/24/13

	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 / LCS only
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / Batch
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / xxx
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.

- both samples were run @ 3x dilution due to dark color of the extracts

(Review 1) Analyst: XZ **Date:** 4/29/13

(Review 2) Reviewer: [signature] **Date:** 4/25/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/24/13 Analysis: 8260/5035A/8260 Analyst: YZ

GC Program: 8260_2 Column No: 247358 Column Type: 30m 5ms

Instrument Tune (.U or .CT.): 130228.U EM Voltage: 1625

Calibration File: DF0424 Curve Date: 04/25/13 Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
1978-2	2036-2 2050-2	
	2061-2 1998-4	
	2068-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

	Time	Filename	LabID	ClientId	DF									
1	1730	df0424.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1823	cc0424a.d	CC0424A		1	7.66	64368	10.26	235264	14.11	134084	17.34	242738	22.64	250279	24.94	226945
3	1900	wl49mb.d	WL49MBS1	WL49MBS1	1	7.66	62056	10.26	235471	14.11	133819	17.34	241354	22.64	250567	24.94	221480
4	1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	7.66	53955	10.26	202366	14.11	120107	17.34	213856	22.64	229947	24.95	210603
5	2014	wl49f.d	WL49F	IM-CB-01-201	3	7.66	55621	10.27	199995	14.12	105965	17.36	184592	22.70	226727	25.02	224029
6	2051	wl49g.d	WL49G	IM-CB-02-201	1	7.66	45698	10.27	175549	14.11	98060	17.34	158125	22.65	188920	24.97	193290
7	2127	wl49gms.d	WL49GMS	IM-CB-02-201	1	7.66	48830	10.27	186600	14.11	105738	17.34	177609	22.65	210924	24.98	216411
8	2204	wl49gmsd.d	WL49GMSD	IM-CB-02-201	1	7.66	49791	10.27	192622	14.12	107090	17.34	175504	22.65	207051	24.98	197195
9	2241	wl67a.d	WL67A	GR-CB-07-201	3	7.67	57007	10.27	219195	14.12	123616	17.35	216207	22.69	239042	25.04	229899
10	2318	wl67b.d	WL67B	GR-WS-05-201	3	7.67	47798	10.27	181756	14.12	104571	17.35	173569	22.68	213736	25.02	206547

YZ 4/24/13

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 StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b/SIM.b

ARI Job No.: WL49 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 24-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1900	wl49mb.d	WL49MBS1	WL49MBS1	1	NO MANUAL INTEGRATION
1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	NO MANUAL INTEGRATION
2051	wl49g.d	WL49G	IM-CB-02-2	1	4-Methylphenol, Dimethylphthalate, Diethylphthalate, Butylbenzylphthalate, Dibenzo(a,h)anthracene,
2127	wl49gms.d	WL49GMS	IM-CB-02-2	1	NO MANUAL INTEGRATION
2204	wl49gmsd.d	WL49GMSD	IM-CB-02-2	1	NO MANUAL INTEGRATION
2241	wl67a.d	WL67A	GR-CB-07-2	3	Benzyl alcohol, Diethylphthalate,
2318	wl67b.d	WL67B	GR-WS-05-2	3	Dimethylphthalate, N-Nitrosodiphenylamine,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b/SIM.b

ARI Job No.: WL49 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 24-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1900	wl49mb.d	WL49MBS1	WL49MBS1	1	NO MANUAL INTEGRATION
1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	NO MANUAL INTEGRATION
2051	wl49g.d	WL49G	IM-CB-02-2	1	4-Methylphenol, Dimethylphthalate, Diethylphthalate, Butylbenzylphthalate, Dibenzo(a,h)anthracene,
2127	wl49gms.d	WL49GMS	IM-CB-02-2	1	NO MANUAL INTEGRATION
2204	wl49gmsd.d	WL49GMSD	IM-CB-02-2	1	NO MANUAL INTEGRATION
2241	wl67a.d	WL67A	GR-CB-07-2	3	Benzyl alcohol, Diethylphthalate,
2318	wl67b.d	WL67B	GR-WS-05-2	3	Dimethylphthalate, N-Nitrosodiphenylamine,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b/SIM.b

Instrument: nt10.i Date: 24-APR-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 25-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 24-APR-2013

Compound	%D
Benzyl alcohol	-25.1
Pentachlorophenol	-34.6
Butylbenzylphthalate	23.7

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

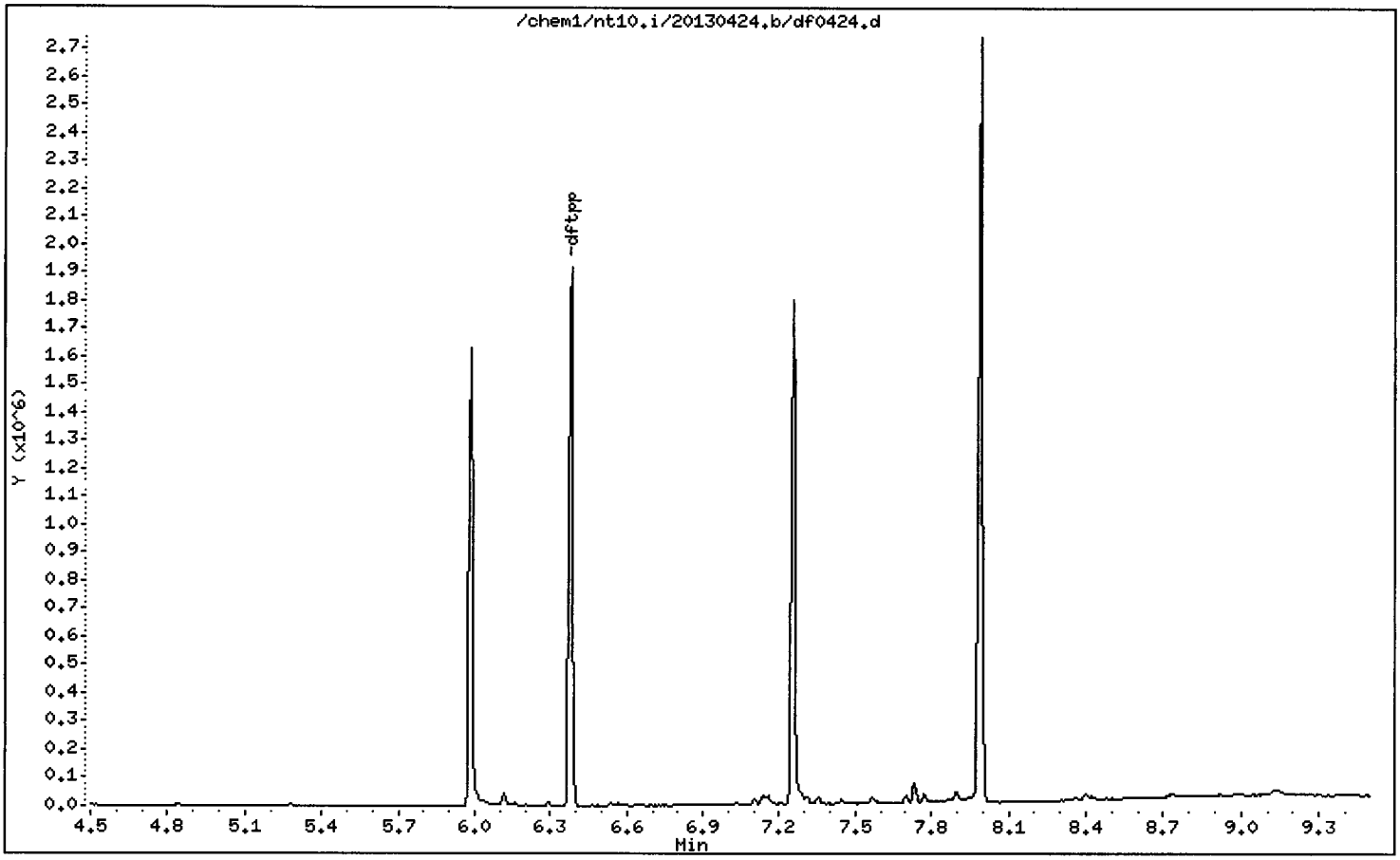
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

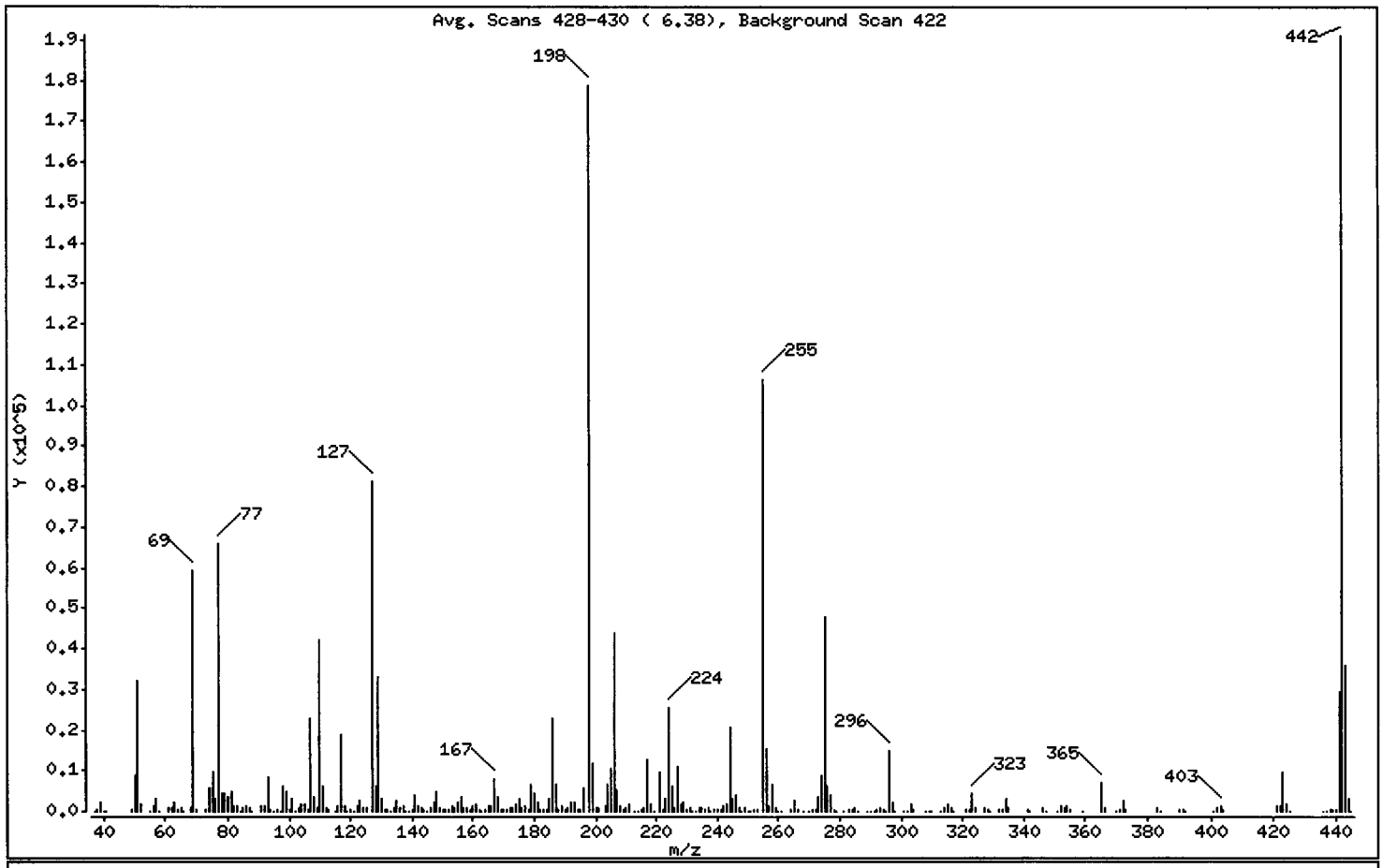
Sample Info: DFTPP

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	18.02
68	Less than 2.00% of mass 69	0.56 (1.68)
69	Mass 69 relative abundance	33.29
70	Less than 2.00% of mass 69	0.14 (0.44)
127	10.00 - 80.00% of mass 198	45.50
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.59
275	10.00 - 60.00% of mass 198	26.71
365	Greater than 1.00% of mass 198	3.93
441	0.01 - 24.00% of mass 442	16.43 (15.36)
442	50.00 - 200.00% of mass 198	106.98
443	15.00 - 24.00% of mass 442	20.26 (18.94)

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	62	129.00	32808	205.00	10718	290.00	51
38.00	420	130.00	2896	206.00	44136	291.00	54
39.00	2403	131.00	583	207.00	5430	292.00	222
40.00	124	132.00	275	208.00	1492	293.00	990
41.00	119	133.00	139	209.00	487	294.00	258
49.00	232	134.00	875	210.00	870	295.00	142
50.00	8942	135.00	2524	211.00	1733	296.00	14776
51.00	32216	136.00	990	213.00	137	297.00	2046
52.00	1767	137.00	1248	214.00	51	298.00	79
55.00	209	138.00	208	215.00	470	301.00	193
56.00	1373	139.00	131	216.00	1026	302.00	201
57.00	3288	140.00	385	217.00	12663	303.00	1630
58.00	125	141.00	4070	218.00	1617	304.00	406
61.00	732	142.00	1272	219.00	123	308.00	209
62.00	713	143.00	934	221.00	9746	309.00	118
63.00	2186	144.00	239	222.00	376	310.00	146
64.00	352	145.00	196	223.00	2876	313.00	120
65.00	1059	146.00	707	224.00	25448	314.00	746
66.00	55	147.00	2048	225.00	6292	315.00	1736
68.00	999	148.00	4742	226.00	710	316.00	874
69.00	59536	149.00	818	227.00	10853	317.00	86
70.00	259	150.00	258	228.00	1541	321.00	496
73.00	521	151.00	595	229.00	2340	322.00	312
74.00	5709	152.00	403	230.00	329	323.00	4532
75.00	9567	153.00	1361	231.00	983	324.00	924
76.00	3032	154.00	960	232.00	161	327.00	907
77.00	66016	155.00	2359	233.00	157	328.00	495
78.00	4326	156.00	3300	234.00	690	329.00	55
79.00	4544	157.00	722	235.00	824	332.00	410
80.00	3456	158.00	725	236.00	501	333.00	464
81.00	4912	159.00	585	237.00	800	334.00	2983
82.00	1250	160.00	1364	238.00	54	335.00	737
83.00	1243	161.00	1883	239.00	520	341.00	555
84.00	206	162.00	571	240.00	310	342.00	55
85.00	820	163.00	138	241.00	588	346.00	1033

Date : 24-APR-2013 17:30

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1326	164.00	270	242.00	1459	347.00	181
87.00	703	165.00	1532	243.00	1641	351.00	51
88.00	177	166.00	1277	244.00	20496	352.00	1489
91.00	1264	167.00	7974	245.00	2914	353.00	930
92.00	1216	168.00	3308	246.00	4015	354.00	1380
93.00	8379	169.00	651	247.00	869	355.00	264
94.00	617	170.00	234	248.00	153	359.00	143
95.00	125	171.00	352	249.00	707	365.00	7026
96.00	426	172.00	743	250.00	143	366.00	864
97.00	63	173.00	1004	251.00	215	370.00	61
98.00	6323	174.00	1678	252.00	244	371.00	407
99.00	4695	175.00	3145	253.00	592	372.00	2609
100.00	409	176.00	1010	255.00	106344	373.00	599
101.00	3009	177.00	1443	256.00	15303	383.00	669
102.00	160	178.00	550	257.00	1302	384.00	214
103.00	942	179.00	6588	258.00	6520	390.00	340
104.00	1960	180.00	4195	259.00	999	391.00	255
105.00	1831	181.00	2153	260.00	182	392.00	125
106.00	619	182.00	401	261.00	199	401.00	137
107.00	23016	183.00	228	264.00	283	402.00	1000
108.00	3453	184.00	507	265.00	2702	403.00	1513
109.00	678	185.00	3200	266.00	287	404.00	508
110.00	42288	186.00	22896	268.00	56	421.00	1378
111.00	6306	187.00	6675	270.00	185	422.00	1170
112.00	776	188.00	598	271.00	282	423.00	9532
113.00	262	189.00	1483	272.00	389	424.00	1837
115.00	58	190.00	274	273.00	3694	425.00	180
116.00	1306	191.00	747	274.00	8678	436.00	112
117.00	18768	192.00	2090	275.00	47760	437.00	156
118.00	1384	193.00	2239	276.00	6344	438.00	351
119.00	190	194.00	525	277.00	3970	439.00	457
120.00	264	195.00	249	278.00	627	440.00	251
121.00	65	196.00	5697	279.00	68	441.00	29376
122.00	1472	198.00	178816	281.00	58	442.00	191296
123.00	2448	199.00	11790	283.00	520	443.00	36224

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

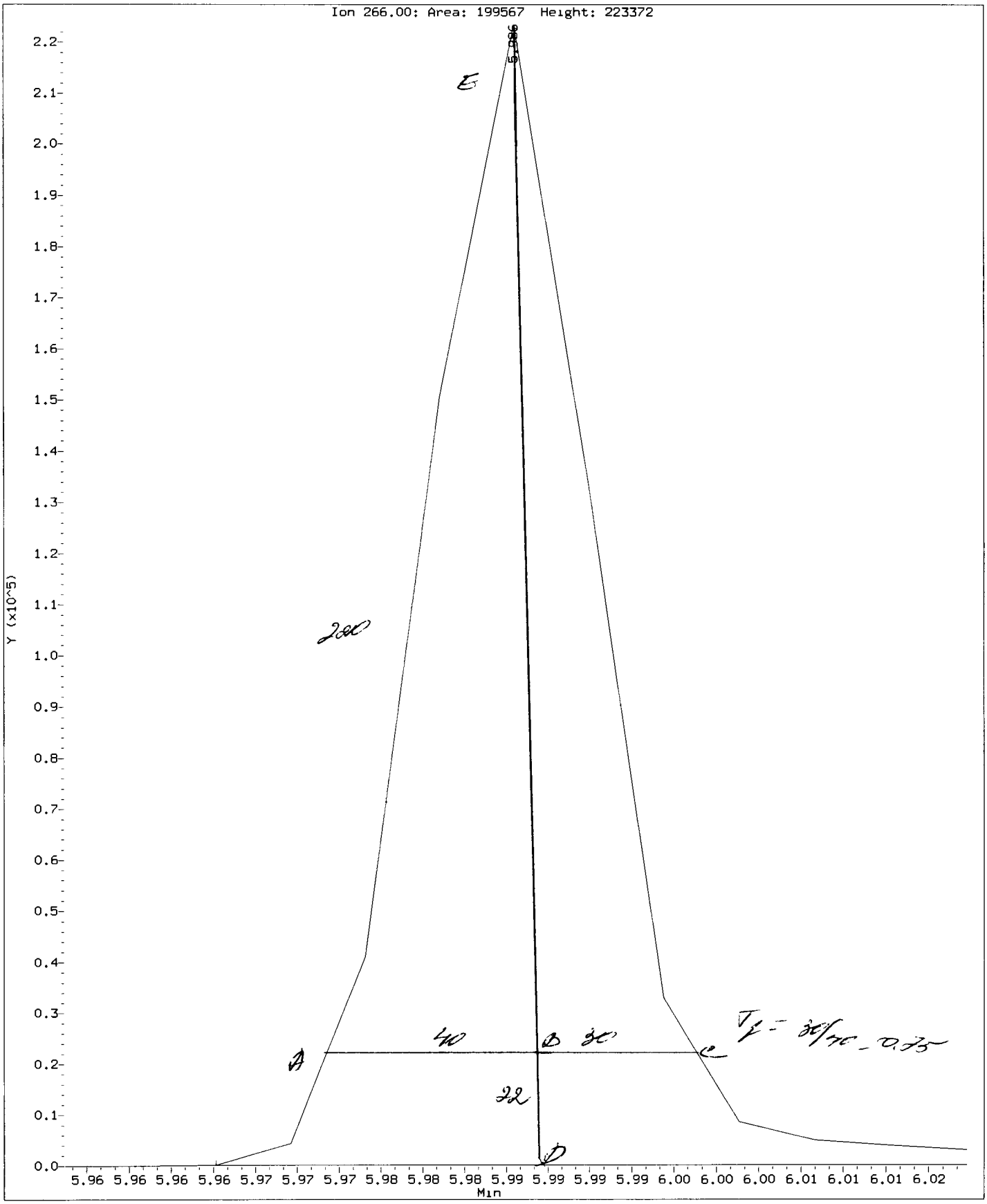
Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1020	200.00	934	284.00	341	444.00	3289
125.00	1068	201.00	969	285.00	759	445.00	129
127.00	81368	203.00	1335	286.00	60		
128.00	6094	204.00	6384	289.00	105		

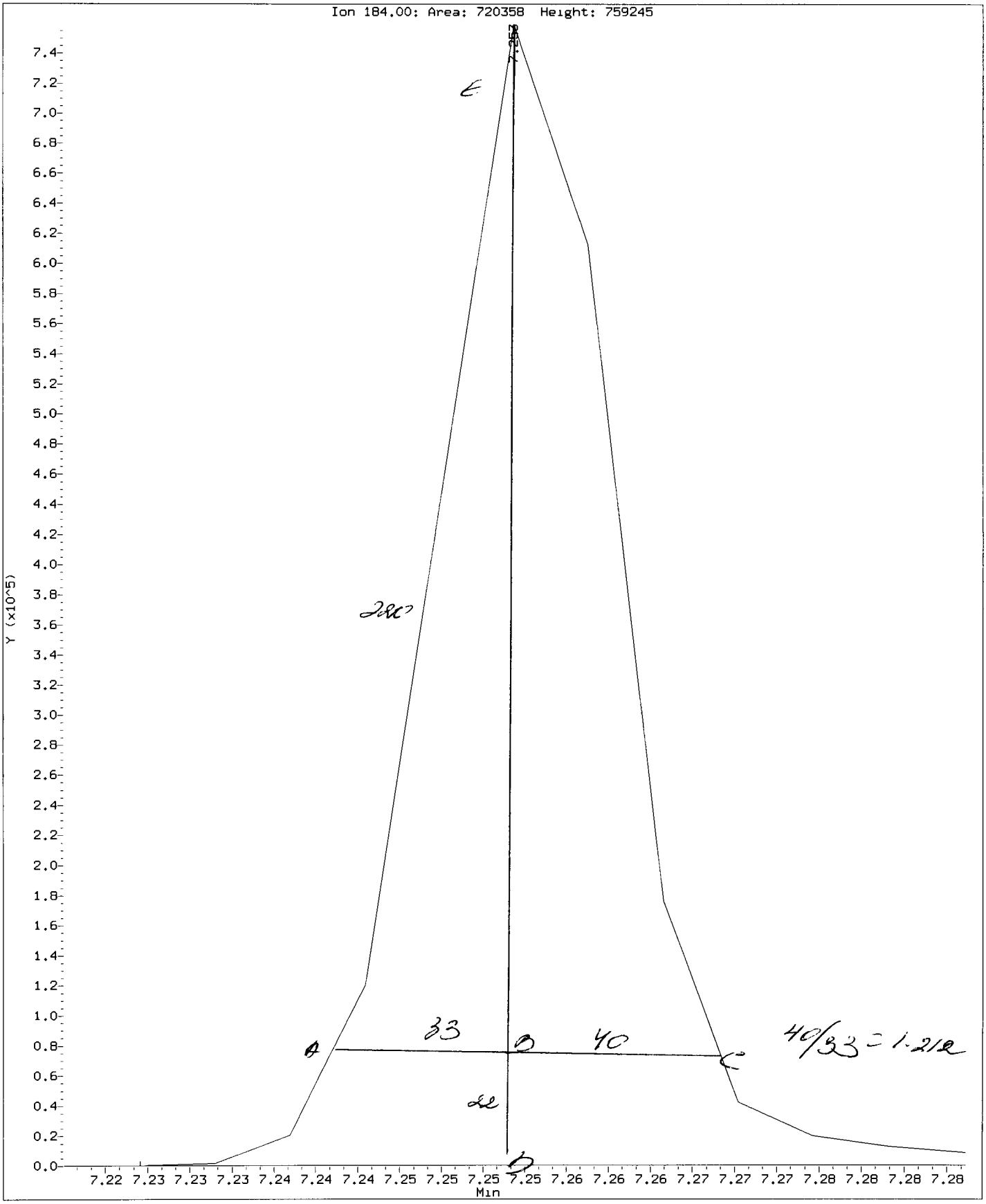
Data File: /chem1/nt10.1/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
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/20130424.b/ddt.b/df0424.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130424.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 24-APR-2013 17:30 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.986	199567
Benzidine	7.253	720358
4,4'-DDE	7.446	1704
4,4'-DDD	7.735	12189
4,4'-DDT	7.991	515480

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1704 + 12189) * 100}{(\ 1704 + 12189 + 515480)}$$

DDT Percent Breakdown = 2.6 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-APR-2013 18:23
Lab File ID: cc0424a.d Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Analysis Type: Init. Cal. Times: 12:59 17:53
Lab Sample ID: CC0424A Quant Type: ISTD
Method: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.27261	1.39610	0.010	9.70338	20.00000	Averaged	
3 Phenol	1.61623	1.88448	0.010	16.59691	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.62301	1.59104	0.010	-1.96997	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.62039	1.58775	0.010	-2.01438	20.00000	Averaged	
11 Benzyl alcohol	0.95765	0.71769	0.010	-25.05737	20.00000	Averaged	<-
12 1,2-Dichlorobenzene	1.53436	1.53449	0.010	0.00864	20.00000	Averaged	
13 2-Methylphenol	1.21614	1.28219	0.010	5.43123	20.00000	Averaged	
15 4-Methylphenol	1.25940	1.48179	0.010	17.65854	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.79168	0.84272	0.050	6.44640	20.00000	Averaged	
22 2,4-Dimethylphenol	0.34482	0.35853	0.010	3.97746	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.37237	0.37038	0.010	-0.53695	20.00000	Averaged	
30 Hexachlorobutadiene	0.22607	0.22740	0.010	0.59031	20.00000	Averaged	
39 Dimethylphthalate	1.21772	1.18672	0.010	-2.54583	20.00000	Averaged	
50 Diethylphthalate	1.42267	1.36309	0.010	-4.18809	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.46501	0.49746	0.010	6.97870	20.00000	Averaged	
57 Hexachlorobenzene	0.30248	0.28755	0.010	-4.93571	20.00000	Averaged	
58 Pentachlorophenol	0.17865	0.11686	0.005	-34.58862	20.00000	Averaged	<-
$ 66 Terphenyl-d14	0.53149	0.49898	0.010	-6.11708	20.00000	Averaged	
67 Butylbenzylphthalate	0.38233	0.47298	0.010	23.70916	20.00000	Averaged	<-
79 Dibenzo(a,h)anthracene	0.95339	0.93184	0.010	-2.26075	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.75935	0.75323	0.010	-0.80545	20.00000	Averaged	

YZ 4/25/13

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d
Lab Smp Id: CC0424A
Inj Date : 24-APR-2013 18:23
Operator : YZ Inst ID: nt10.i
Smp Info : CC0424A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.433	5.433	(0.709)	22466	1.00000	1.097
	3 Phenol	94	7.172	7.172	(0.936)	30325	1.00000	1.166(H)
	7 1,3-Dichlorobenzene	146	7.581	7.581	(0.990)	25603	1.00000	0.9803(H)
*	8 1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	64368	4.00000	
	9 1,4-Dichlorobenzene	146	7.690	7.690	(1.004)	25550	1.00000	0.9799
	11 Benzyl alcohol	79	8.101	8.101	(1.058)	11549	1.00000	0.7494
	12 1,2-Dichlorobenzene	146	8.055	8.055	(1.052)	24693	1.00000	1.000
	13 2-Methylphenol	108	8.319	8.319	(1.086)	20633	1.00000	1.054(M)
	15 4-Methylphenol	108	8.621	8.621	(1.126)	23845	1.00000	1.177
	16 N-Nitroso-di-n-propylamine	70	8.598	8.598	(1.123)	13561	1.00000	1.064(H)
	22 2,4-Dimethylphenol	107	9.707	9.707	(0.946)	42175	2.00000	2.080
	26 1,2,4-Trichlorobenzene	180	10.193	10.193	(0.993)	21784	1.00000	0.9946
*	27 Naphthalene-d8	136	10.262	10.262	(1.000)	235264	4.00000	
	30 Hexachlorobutadiene	225	10.741	10.741	(1.047)	13375	1.00000	1.006
	39 Dimethylphthalate	163	13.705	13.705	(0.971)	39780	1.00000	0.9745
*	42 Acenaphthene-d10	162	14.108	14.108	(1.000)	134084	4.00000	
	50 Diethylphthalate	149	15.283	15.283	(1.083)	45692	1.00000	0.9581
	54 N-Nitrosodiphenylamine	169	15.630	15.630	(0.902)	30188	1.00000	1.070
	57 Hexachlorobenzene	284	16.687	16.687	(0.962)	17450	1.00000	0.9506
	58 Pentachlorophenol	266	17.120	17.120	(0.988)	14183	2.00000	1.308
*	59 Phenanthrene-d10	188	17.337	17.337	(1.000)	242738	4.00000	
$	66 Terphenyl-d14	244	20.780	20.780	(0.918)	31221	1.00000	0.9388
	67 Butylbenzylphthalate	149	21.802	21.802	(0.963)	29594	1.00000	1.237
*	69 Chrysene-d12	240	22.638	22.638	(1.000)	250279	4.00000	
*	77 Perylene-d12	264	24.938	24.938	(1.000)	226945	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.628	26.628	(1.068)	52869	1.00000	0.9774
	90 N-Nitrosodimethylamine	74	3.178	3.178	(0.415)	24242	2.00000	1.984

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: cc0424a.d
Lab Smp Id: CC0424A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	64368	19.53
27 Naphthalene-d8	200104	100052	400208	235264	17.57
42 Acenaphthene-d10	112392	56196	224784	134084	19.30
59 Phenanthrene-d10	210710	105355	421420	242738	15.20
69 Chrysene-d12	240805	120402	481610	250279	3.93
77 Perylene-d12	230834	115417	461668	226945	-1.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

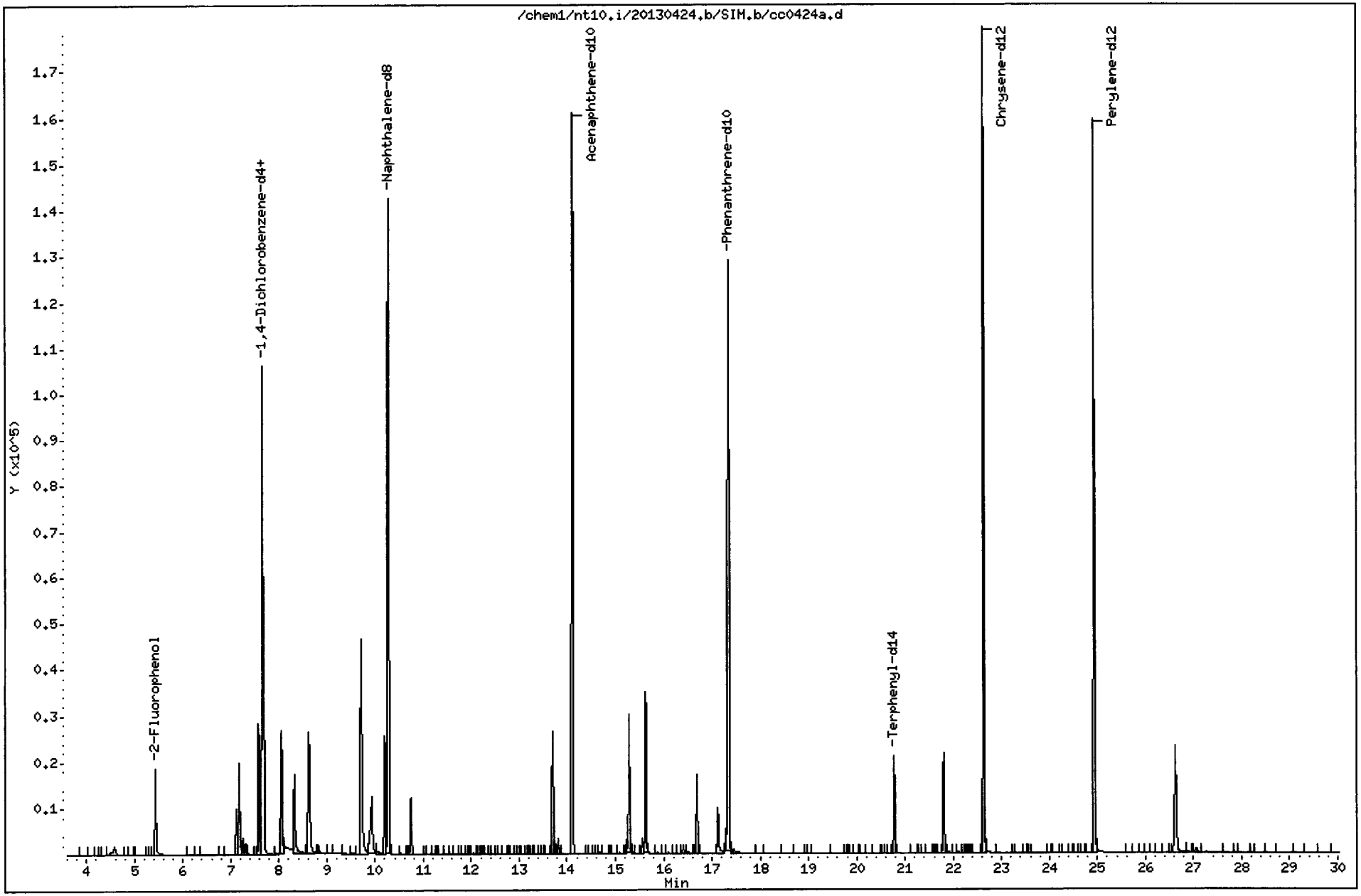
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d
Date : 24-APR-2013 18:23
Client ID:
Sample Info: CC0424A

Instrument: nt10.i

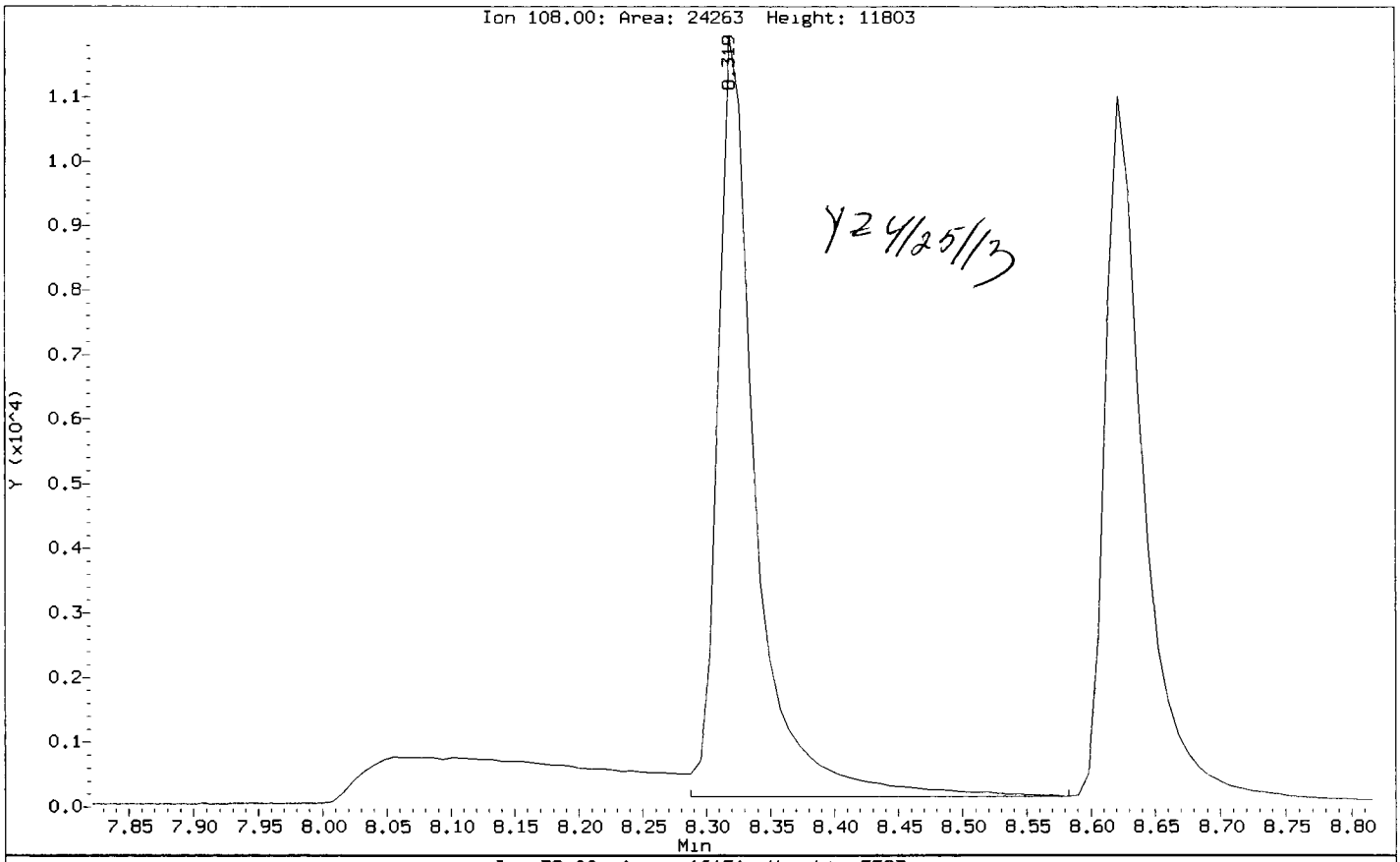
Operator: YZ
Column diameter: 0.25

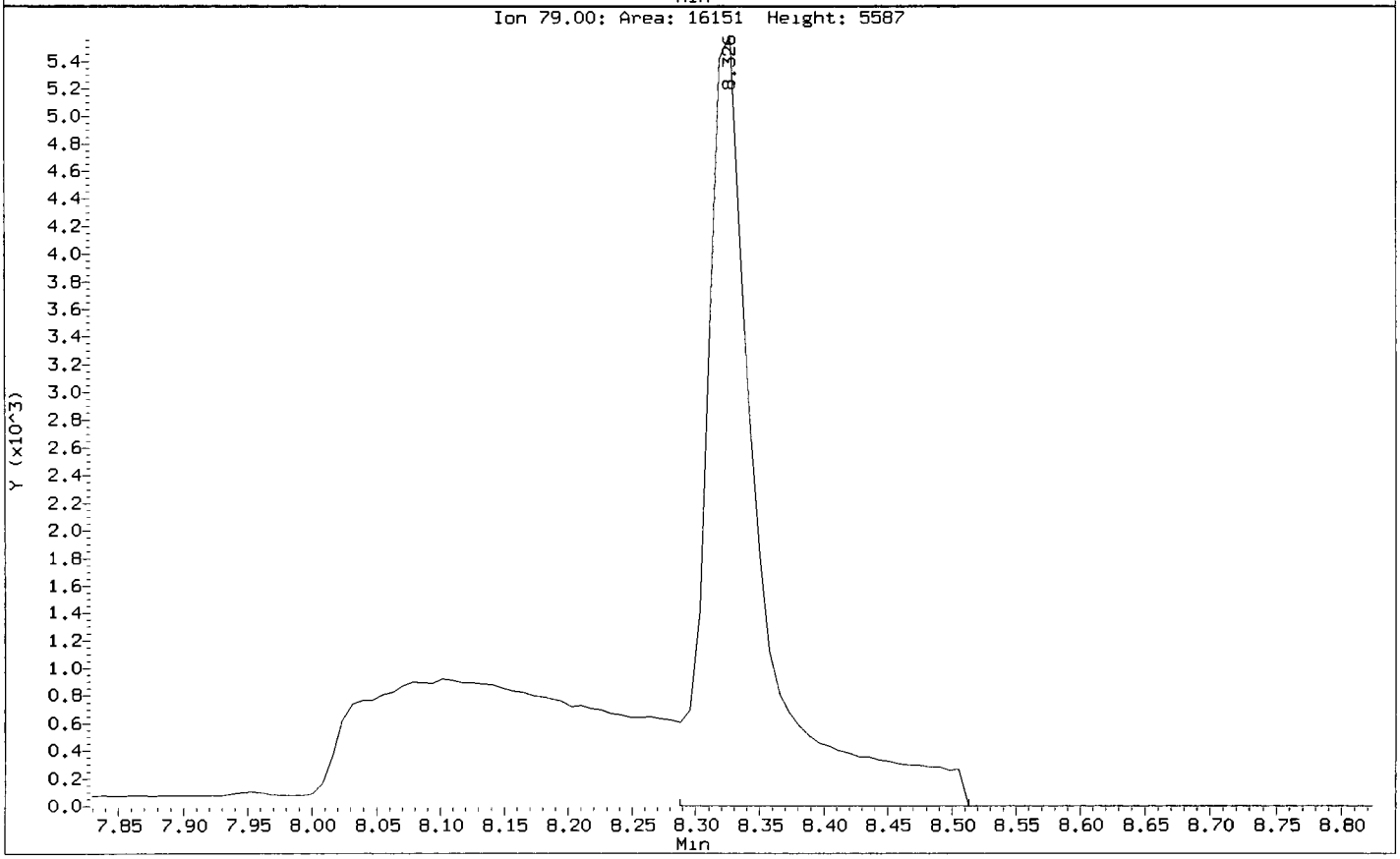
Column phase: ZB-5msi



Data File: /chem1/nt10.1/20130424.b/SIM.b/cc0424a.d
Injection Date: 24-APR-2013 18:23
Instrument: nt10.1
Client Sample ID:

Compound: 2-Methylphenol
CAS Number: 95-48-7

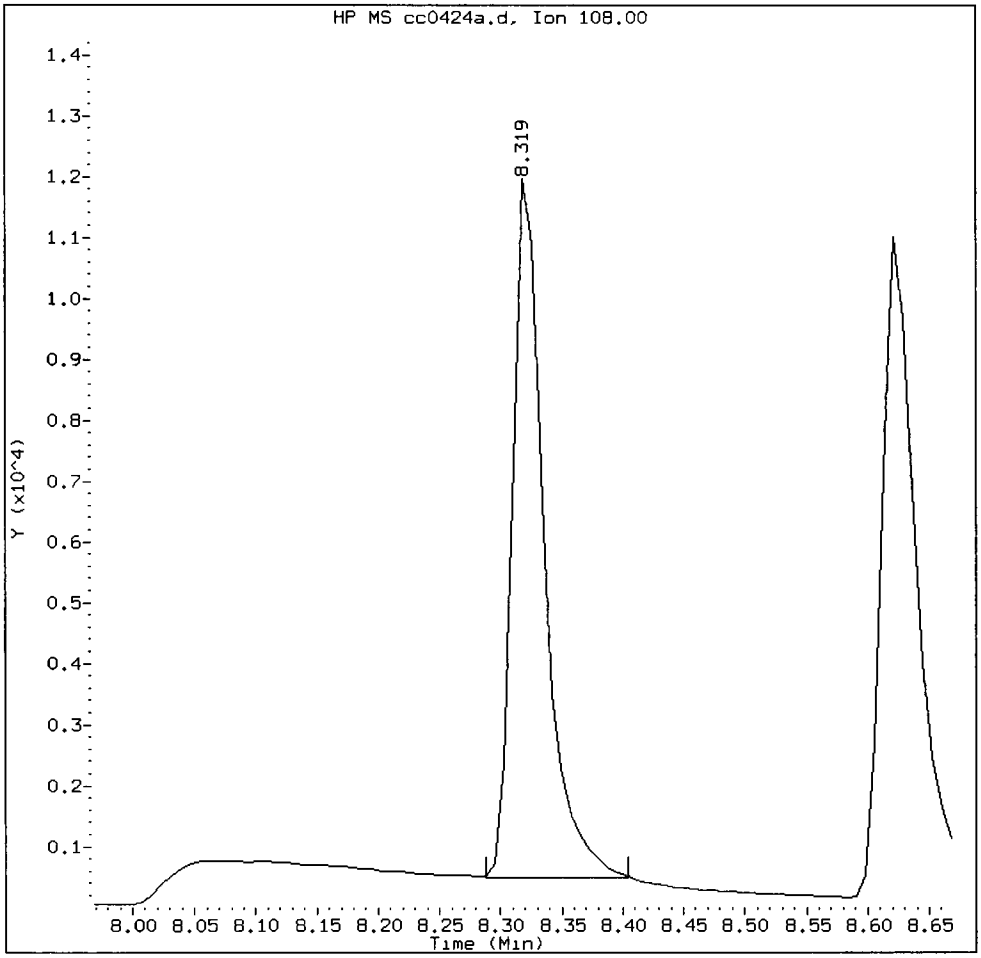




WLS7:0898E

CC0424A, /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d

2-Methylphenol Amount: 1.05 Area: 20633



MANUAL INTEGRATION for 2-Methylphenol

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

5. Other _____

Analyst: YZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - cc0424a.d

Lab ID: CC0424A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/29/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49mb.d
Lab Smp Id: WL49MBS1 Client Smp ID: WL49MBS1
Inj Date : 24-APR-2013 19:00
Operator : YZ Inst ID: nt10.i
Smp Info : WL49MBS1
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 5 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	5.433	5.433	(0.709)	82137	4.16025	416.0
	3	Phenol	94	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	62056	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	10.262	10.262	(1.000)	235471	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	14.108	14.108	(1.000)	133819	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.337	17.337	(1.000)	241354	4.00000	
$	66 Terphenyl-d14	244	20.780	20.780	(0.918)	99166	2.97854	297.9
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.638	22.638	(1.000)	250567	4.00000	
*	77 Perylene-d12	264	24.938	24.938	(1.000)	221480	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49mb.d
Lab Smp Id: WL49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: WL49MBS1
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	53853	26926	107706	62056	15.23
27 Naphthalene-d8	200104	100052	400208	235471	17.67
42 Acenaphthene-d10	112392	56196	224784	133819	19.06
59 Phenanthrene-d10	210710	105355	421420	241354	14.54
69 Chrysene-d12	240805	120402	481610	250567	4.05
77 Perylene-d12	230834	115417	461668	221480	-4.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	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

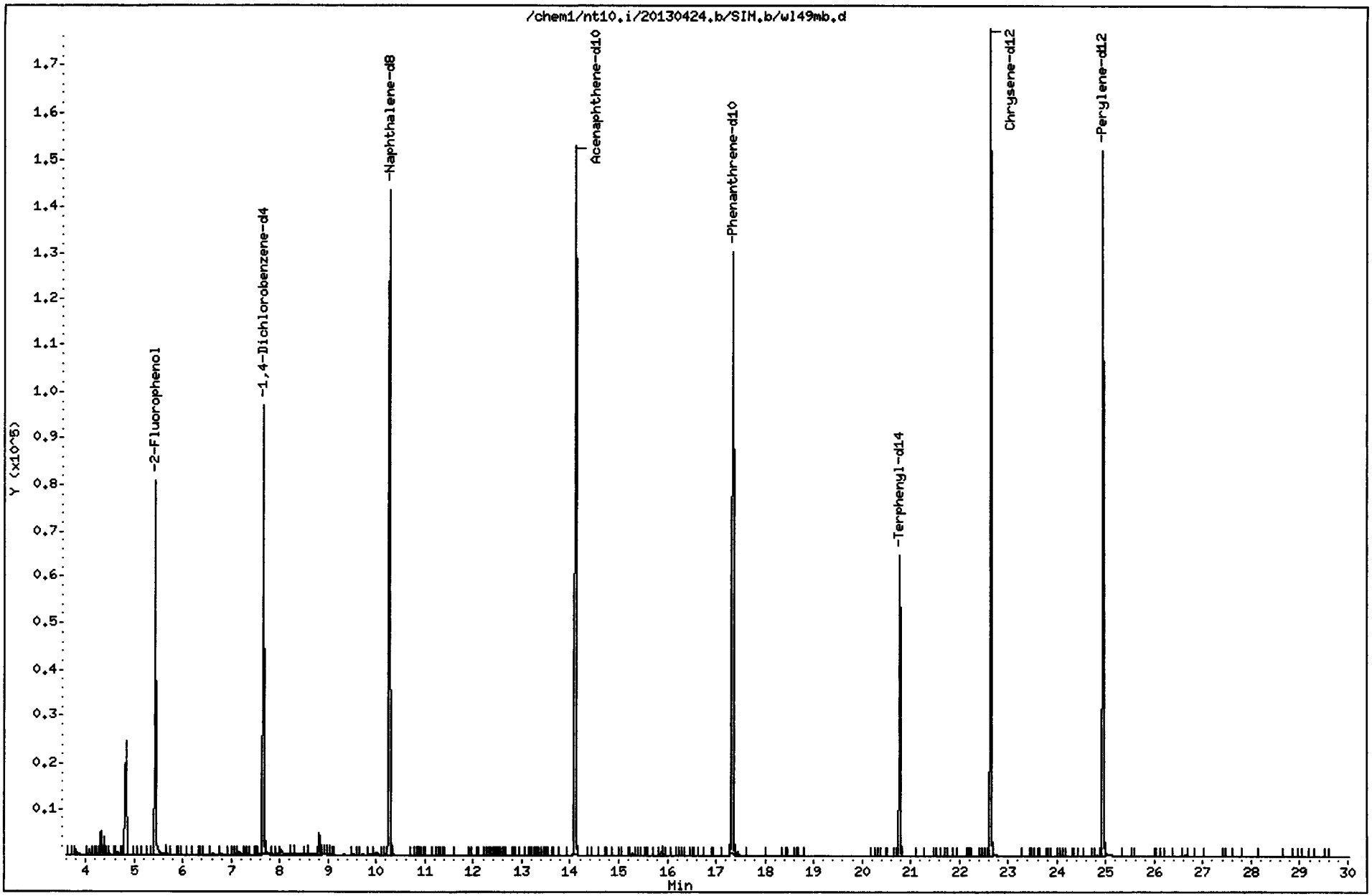
Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49MBS1
Client Smp ID: WL49MBS1
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

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	500.0	0.000	*	30-160
12 1,2-Dichlorobenze	500.0	0.000	*	30-160
13 2-Methylphenol	500.0	0.000	*	30-160
15 4-Methylphenol	1000	0.000	*	30-160
16 N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22 2,4-Dimethylphenol	1000	0.000	*	30-160
26 1,2,4-Trichlorobe	500.0	0.000	*	30-160
30 Hexachlorobutadie	500.0	0.000	*	30-160
39 Dimethylphthalate	500.0	0.000	*	30-160
50 Diethylphthalate	500.0	0.000	*	30-160
54 N-Nitrosodiphenyl	500.0	0.000	*	30-160
57 Hexachlorobenzene	500.0	0.000	*	30-160
58 Pentachlorophenol	1000	0.000	*	30-160
67 Butylbenzylphthal	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90 N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	416.0	55.47	30-160
$ 66 Terphenyl-d14	500.0	297.9	59.57	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49mb.d
Date : 24-APR-2013 19:00
Client ID: WL49MBS1
Sample Info: WL49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WL 07 00999

CO-ELUTION SUMMARY FOR FILE - wl49mb.d

Lab ID: WL49MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49sb.d
Lab Smp Id: WL49LCSS1 Client Smp ID: WL49LCSS1
Inj Date : 24-APR-2013 19:37
Operator : YZ Inst ID: nt10.i
Smp Info : WL49LCSS1
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 09:22 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 6 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	5.433	5.433	(0.709)	82789	4.82287	482.3
	3	Phenol	94	7.172	7.172	(0.936)	75824	3.47801	347.8
	7	1,3-Dichlorobenzene	146	7.582	7.581	(0.990)	60136	2.74689	274.7
*	8	1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	53955	4.00000	
	9	1,4-Dichlorobenzene	146	7.682	7.690	(1.003)	61136	2.79709	279.7
	11	Benzyl alcohol	79	8.016	8.101	(1.047)	34737	2.68915	268.9
	12	1,2-Dichlorobenzene	146	8.047	8.055	(1.051)	59672	2.88319	288.3
	13	2-Methylphenol	108	8.319	8.319	(1.086)	50753	3.09390	309.4
	15	4-Methylphenol	108	8.629	8.621	(1.127)	104732	6.16515	616.5
	16	N-Nitroso-di-n-propylamine	70	8.598	8.598	(1.123)	34007	3.18453	318.5
	22	2,4-Dimethylphenol	107	9.700	9.707	(0.945)	100990	5.78909	578.9
	26	1,2,4-Trichlorobenzene	180	10.193	10.193	(0.993)	53832	2.85748	285.7
*	27	Naphthalene-d8	136	10.262	10.262	(1.000)	202366	4.00000	
	30	Hexachlorobutadiene	225	10.734	10.741	(1.046)	32570	2.84772	284.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	13.705	13.705	(0.971)	115667	3.16340	316.3
*	42 Acenaphthene-d10	162	14.108	14.108	(1.000)	120107	4.00000	
	50 Diethylphthalate	149	15.291	15.283	(1.084)	131776	3.08478	308.5
	54 N-Nitrosodiphenylamine	169	15.638	15.630	(0.902)	83246	3.34844	334.8
	57 Hexachlorobenzene	284	16.695	16.687	(0.963)	44368	2.74352	274.4
	58 Pentachlorophenol	266	17.121	17.120	(0.988)	80317	8.40890	840.9
*	59 Phenanthrene-d10	188	17.337	17.337	(1.000)	213856	4.00000	
$	66 Terphenyl-d14	244	20.780	20.780	(0.918)	92418	3.02477	302.5
	67 Butylbenzylphthalate	149	21.802	21.802	(0.963)	95917	4.36406	436.4
*	69 Chrysene-d12	240	22.638	22.638	(1.000)	229947	4.00000	
*	77 Perylene-d12	264	24.946	24.938	(1.000)	210603	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.628	26.628	(1.067)	155071	3.08926	308.9
	90 N-Nitrosodimethylamine	74	3.186	3.178	(0.416)	87859	8.57776	857.8

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49sb.d
Lab Smp Id: WL49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: WL49LCSS1
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	53853	26926	107706	53955	0.19
27 Naphthalene-d8	200104	100052	400208	202366	1.13
42 Acenaphthene-d10	112392	56196	224784	120107	6.86
59 Phenanthrene-d10	210710	105355	421420	213856	1.49
69 Chrysene-d12	240805	120402	481610	229947	-4.51
77 Perylene-d12	230834	115417	461668	210603	-8.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
77 Perylene-d12	24.94	24.44	25.44	24.95	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

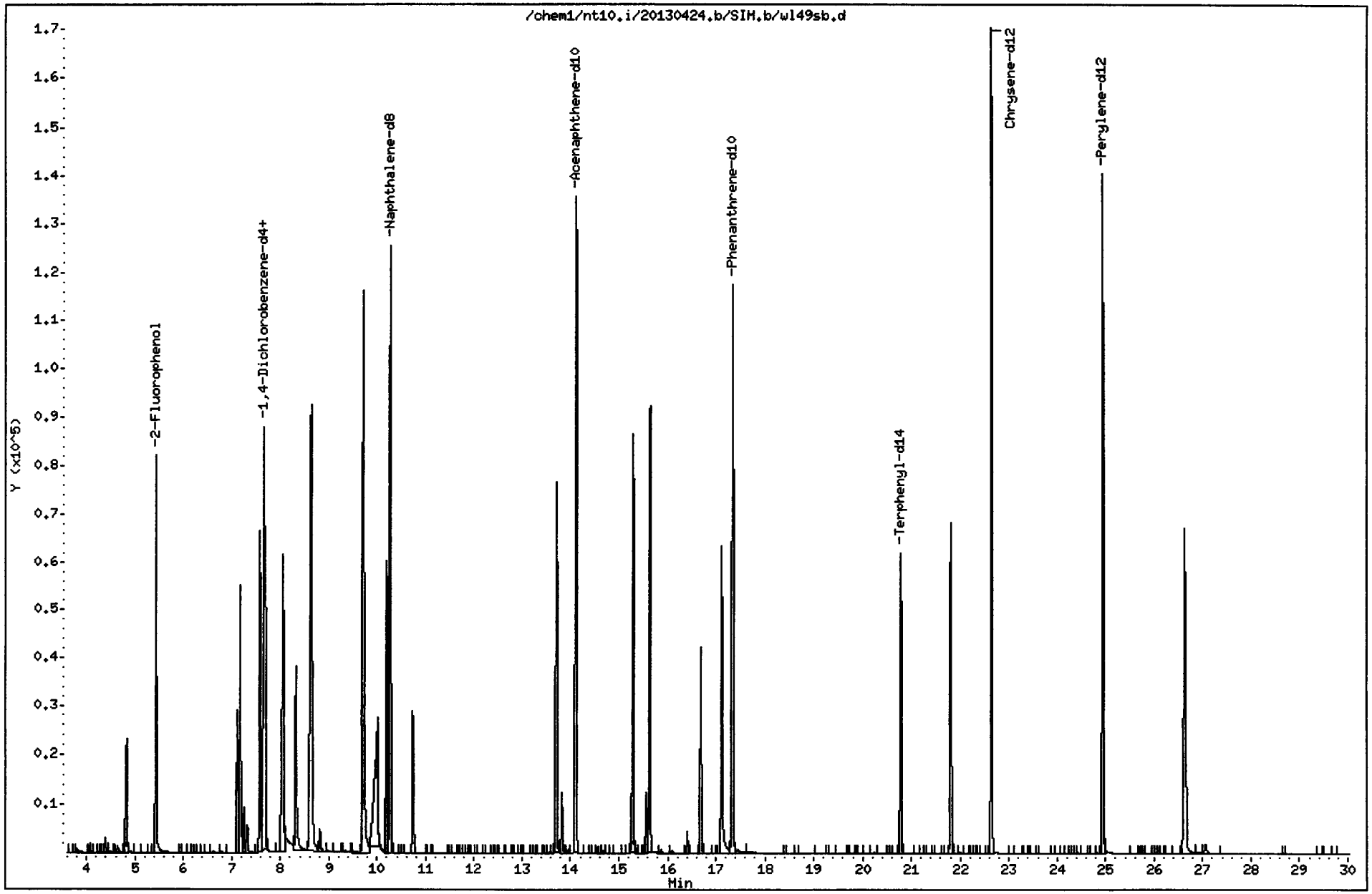
Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49LCSS1
Client Smp ID: WL49LCSS1
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	347.8	69.56	30-160
7	1,3-Dichlorobenzen	500.0	274.7	54.94	30-160
9	1,4-Dichlorobenzen	500.0	279.7	55.94	30-160
11	Benzyl alcohol	500.0	268.9	53.78	30-160
12	1,2-Dichlorobenzen	500.0	288.3	57.66	30-160
13	2-Methylphenol	500.0	309.4	61.88	30-160
15	4-Methylphenol	1000	616.5	61.65	30-160
16	N-Nitroso-di-n-pro	500.0	318.5	63.69	30-160
22	2,4-Dimethylphenol	1000	578.9	57.89	30-160
26	1,2,4-Trichloroben	500.0	285.7	57.15	30-160
30	Hexachlorobutadien	500.0	284.8	56.95	30-160
39	Dimethylphthalate	500.0	316.3	63.27	30-160
50	Diethylphthalate	500.0	308.5	61.70	30-160
54	N-Nitrosodiphenyla	500.0	334.8	66.97	30-160
57	Hexachlorobenzene	500.0	274.4	54.87	30-160
58	Pentachlorophenol	1000	840.9	84.09	30-160
67	Butylbenzylphthala	500.0	436.4	87.28	30-160
79	Dibenzo(a,h)anthra	500.0	308.9	61.79	30-160
90	N-Nitrosodimethyla	1000	857.8	85.78	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	482.3	64.30	30-160
$ 66	Terphenyl-d14	500.0	302.5	60.50	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49sb.d
Date : 24-APR-2013 19:37
Client ID: WL49LCSS1
Sample Info: WL49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49sb.d

Lab ID: WL49LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Y2 4/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl67a.d
Lab Smp Id: WL67A Client Smp ID: GR-CB-07-20130411-S
Inj Date : 24-APR-2013 22:41
Operator : YZ Inst ID: nt10.i
Smp Info : WL67A,3
Misc Info : 13-7791
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 11
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	8.07000	Weight of sample extracted (g)
M	59.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.487	5.433	(0.716)	21875	1.20610	1096
	3 Phenol	94	7.218	7.172	(0.941)	14415	0.62581	568.8
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.666	7.659	(1.000)	57007	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	8.109	8.101	(1.058)	2095	0.15350	139.5(M)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	8.350	8.319	(1.089)	1110	0.06404	58.21
	15 4-Methylphenol	108	8.660	8.621	(1.130)	5560	0.30977	281.6
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	9.722	9.707	(0.947)	1055	0.05583	50.75
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.270	10.262	(1.000)	219195	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	13.713	13.705	(0.971)	2678	0.07116	64.68
*	42 Acenaphthene-d10	162	14.115	14.108	(1.000)	123616	4.00000	
	50 Diethylphthalate	149	15.298	15.283	(1.084)	1412	0.03212	29.19(M)
	54 N-Nitrosodiphenylamine	169	15.645	15.630	(0.902)	2130	0.08474	77.03
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.352	17.337	(1.000)	216207	4.00000	
$	66 Terphenyl-d14	244	20.803	20.780	(0.917)	25228	0.79428	721.9
	67 Butylbenzylphthalate	149	21.840	21.802	(0.962)	23416	1.02485	931.5
*	69 Chrysene-d12	240	22.692	22.638	(1.000)	239042	4.00000	
*	77 Perylene-d12	264	25.038	24.938	(1.000)	229899	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.783	26.628	(1.070)	13885	0.25339	230.3(H)
	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: wl67a.d
Lab Smp Id: WL67A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7791

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: GR-CB-07-2013041
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	53853	26926	107706	57007	5.86
27 Naphthalene-d8	200104	100052	400208	219195	9.54
42 Acenaphthene-d10	112392	56196	224784	123616	9.99
59 Phenanthrene-d10	210710	105355	421420	216207	2.61
69 Chrysene-d12	240805	120402	481610	239042	-0.73
77 Perylene-d12	230834	115417	461668	229899	-0.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.67	0.10
27 Naphthalene-d8	10.26	9.76	10.76	10.27	0.07
42 Acenaphthene-d10	14.11	13.61	14.61	14.12	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.35	0.09
69 Chrysene-d12	22.64	22.14	23.14	22.69	0.24
77 Perylene-d12	24.94	24.44	25.44	25.04	0.40

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

Analytical Resources, Inc.

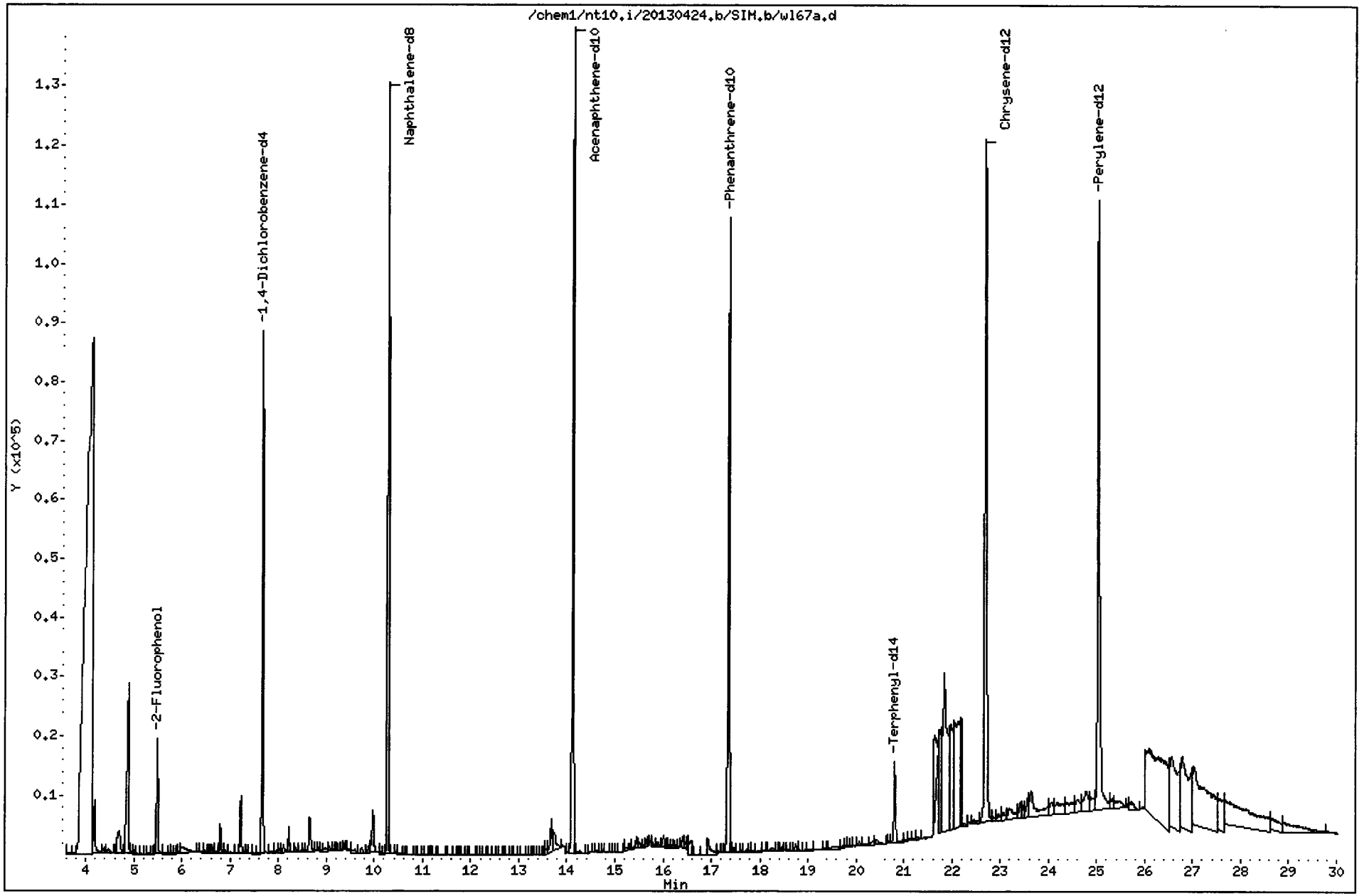
RECOVERY REPORT

Client Name: SAIC
Client SDG: WL67
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL67A
Client Smp ID: GR-CB-07-20130411-S
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7791

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	2272	1096	48.24	30-160
$ 66 Terphenyl-d14	1515	721.9	47.66	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d
Date : 24-APR-2013 22:41
Client ID: GR-CB-07-20130411-S
Sample Info: WL67A,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

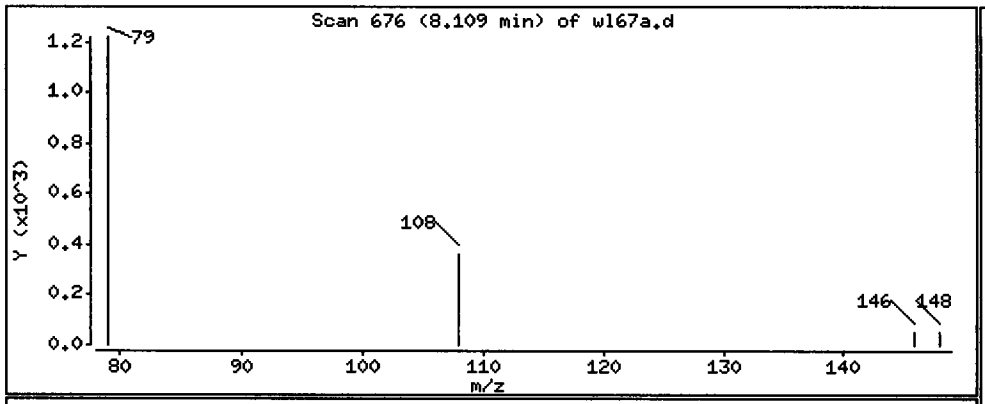
Operator: YZ

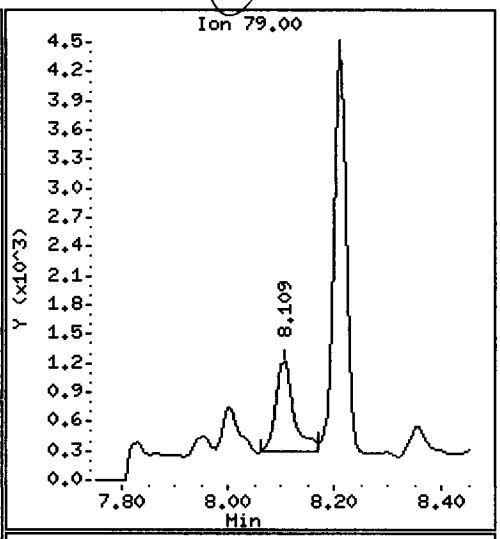
Column phase: ZB-5msi

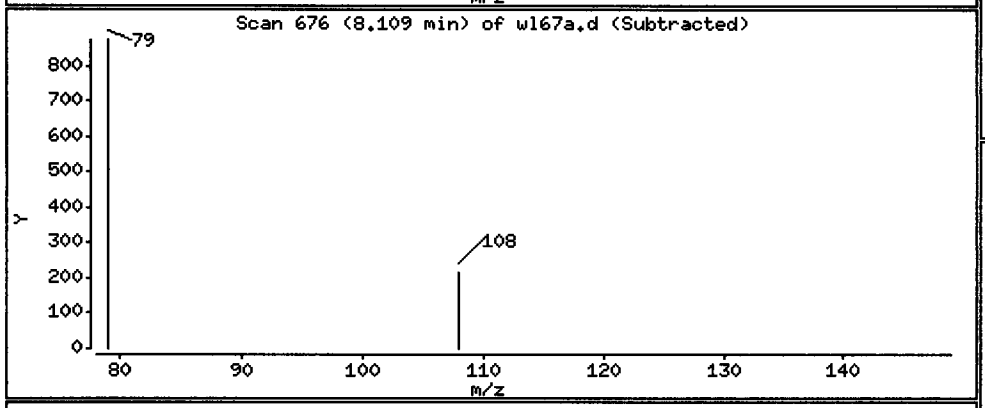
Column diameter: 0.25

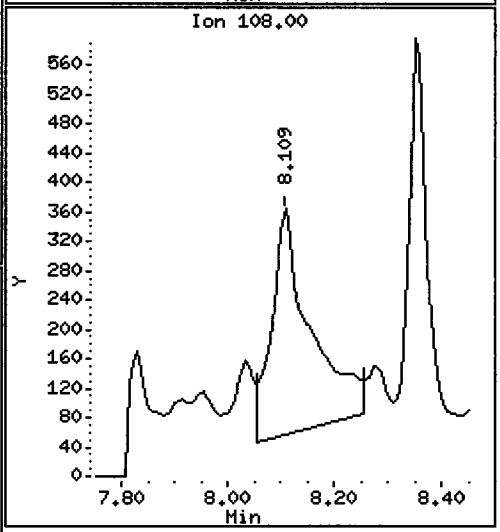
11 Benzyl alcohol

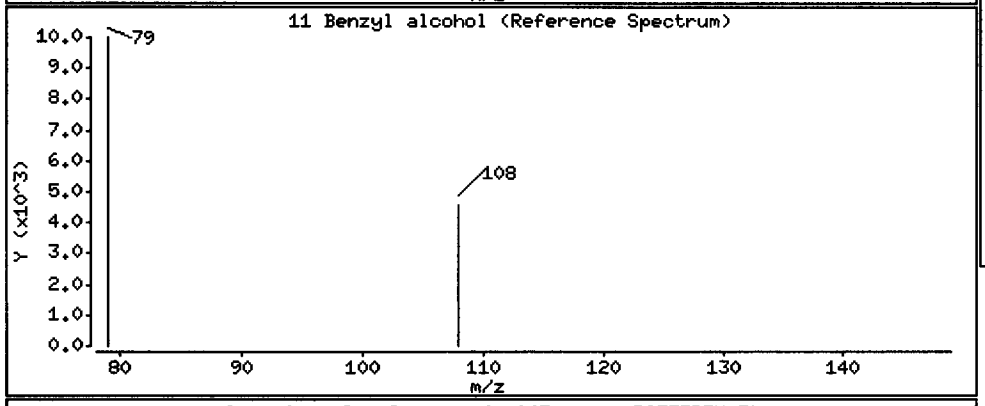
Concentration: 139.5 ug/kg

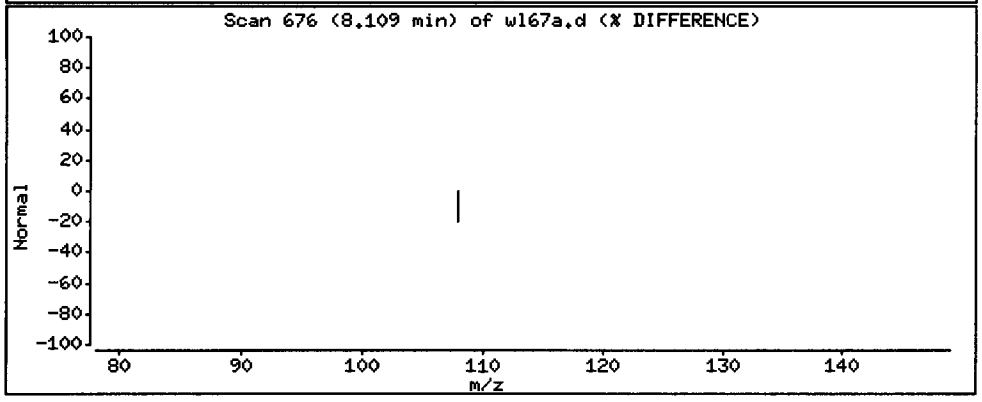












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

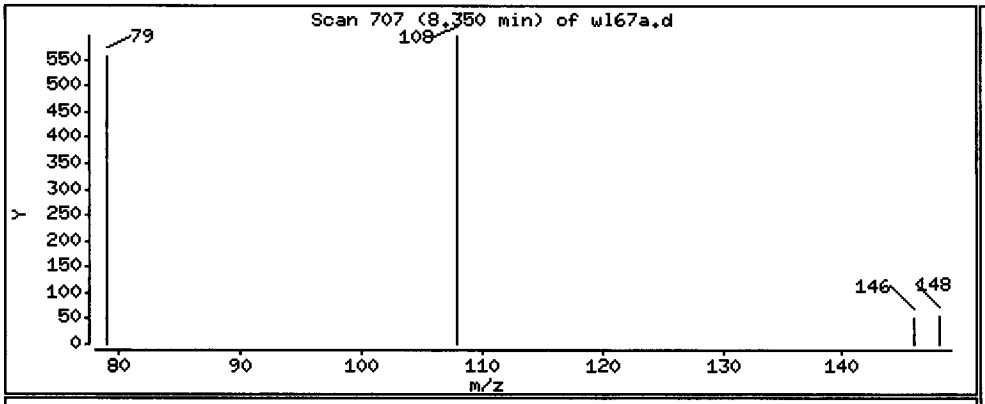
Operator: YZ

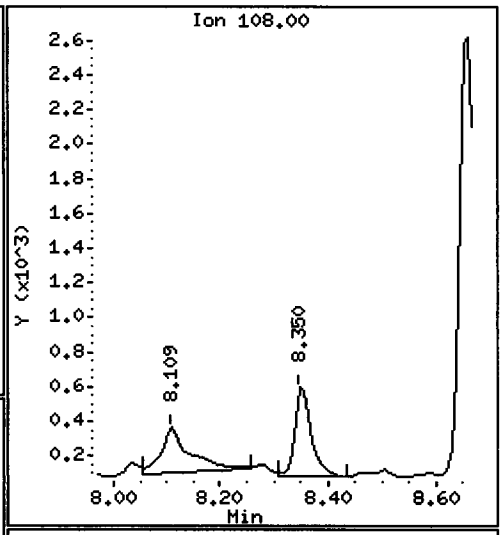
Column phase: ZB-5msi

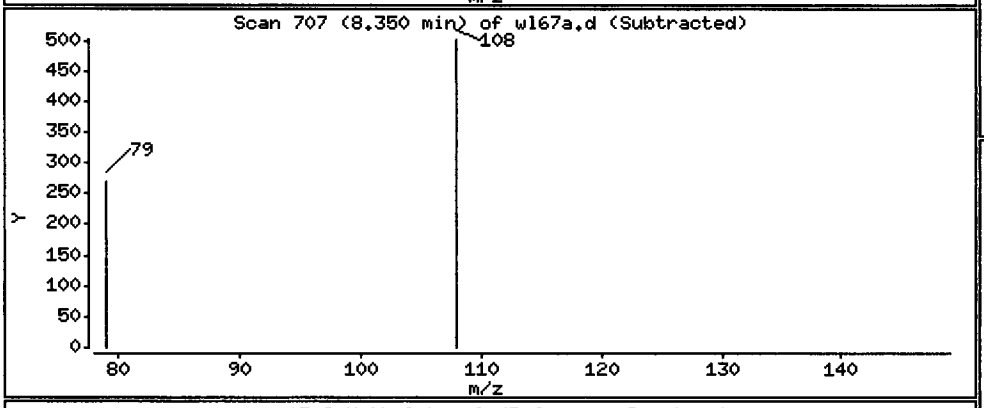
Column diameter: 0.25

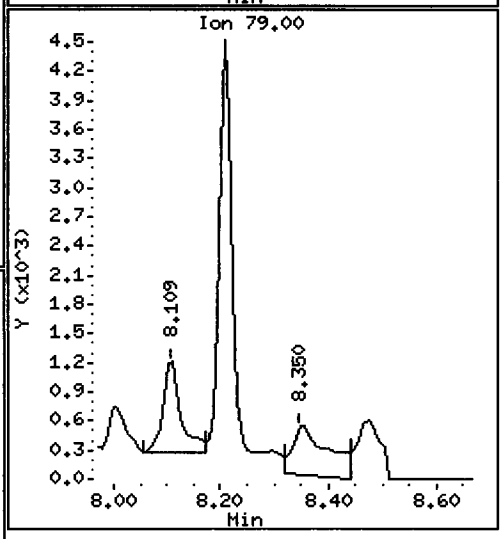
13 2-Methylphenol

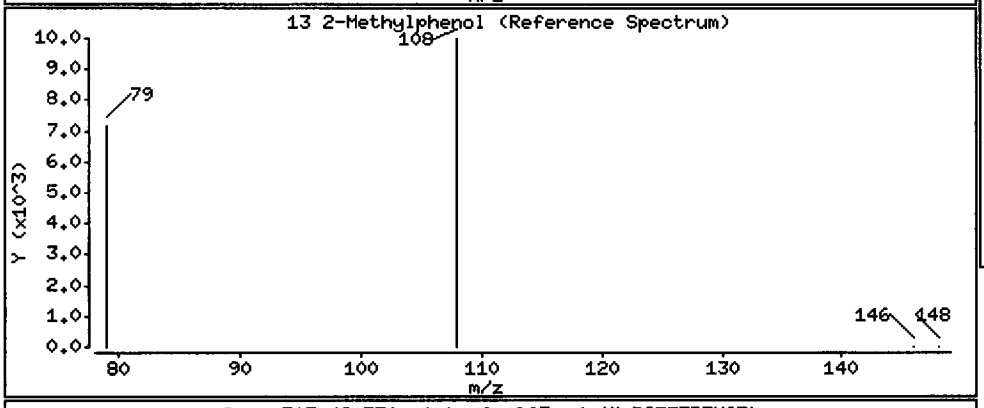
Concentration: 58.21 ug/kg

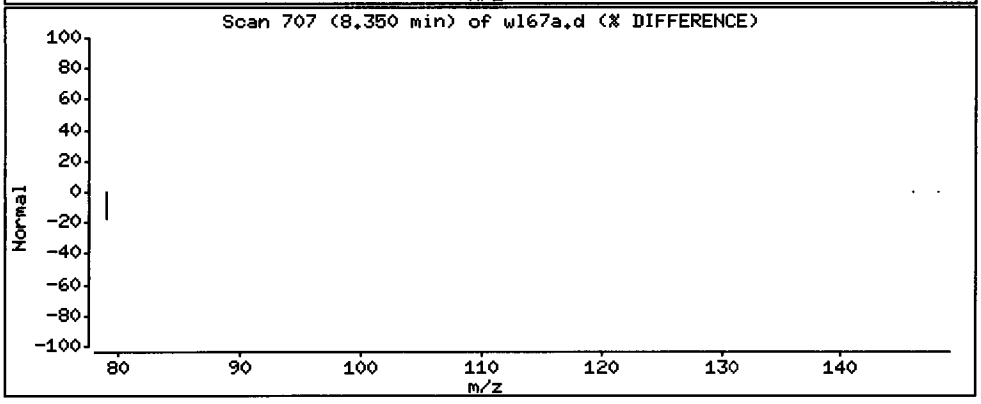












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

Operator: YZ

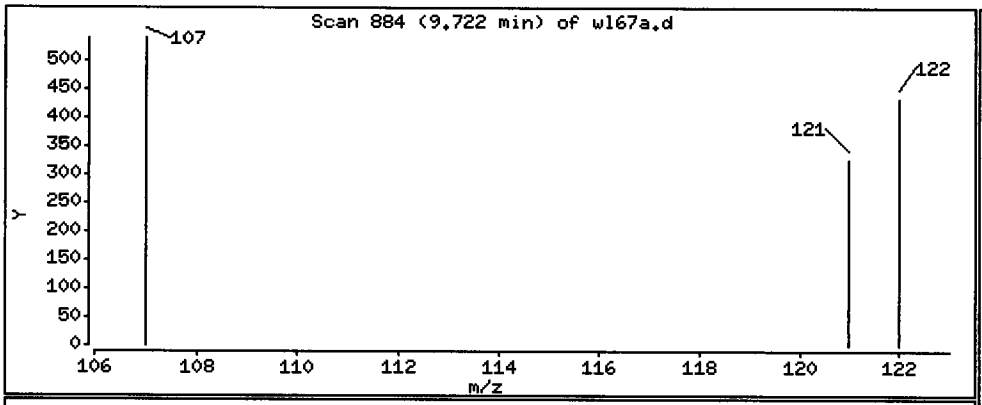
Column phase: ZB-5msi

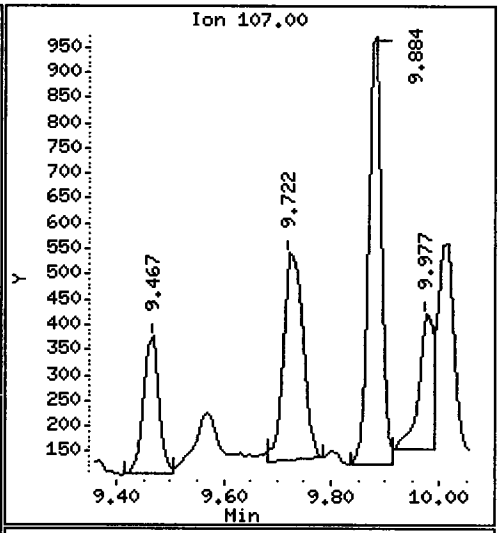
Column diameter: 0.25

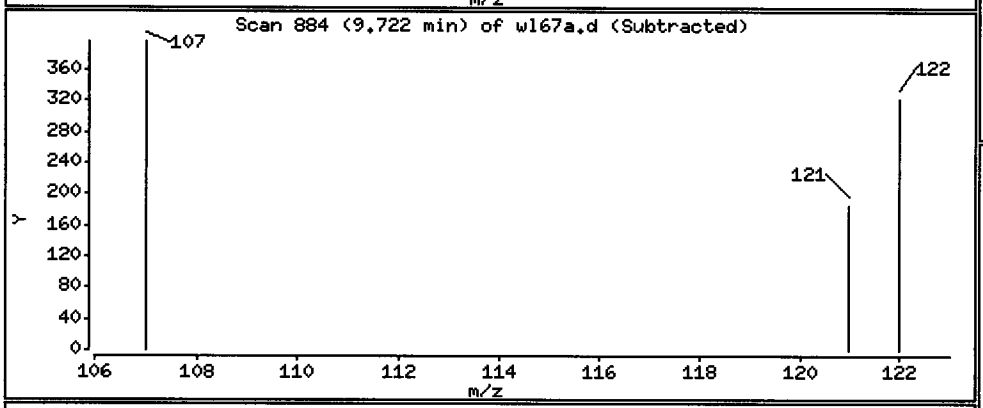
JUNK

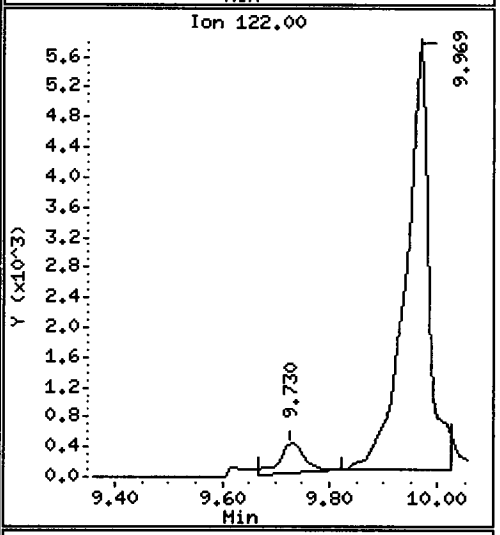
22 2,4-Dimethylphenol

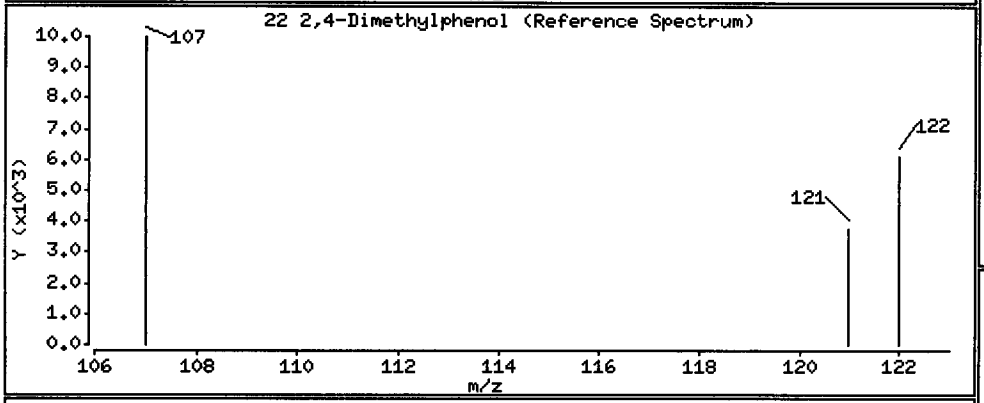
Concentration: 50.75 ug/kg

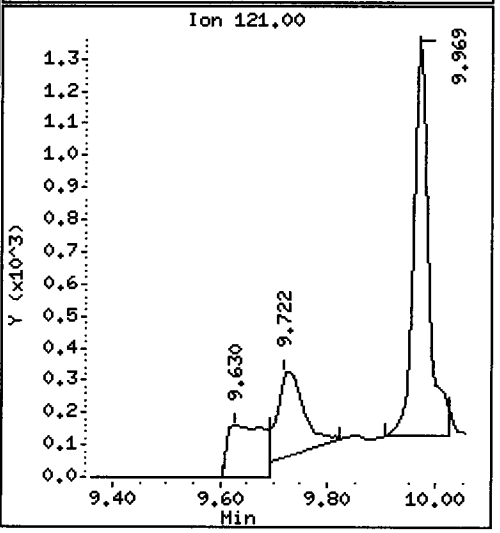


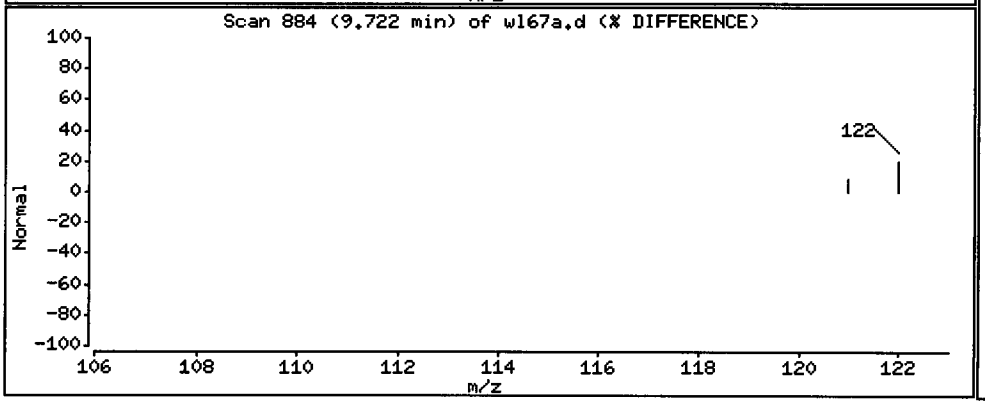












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

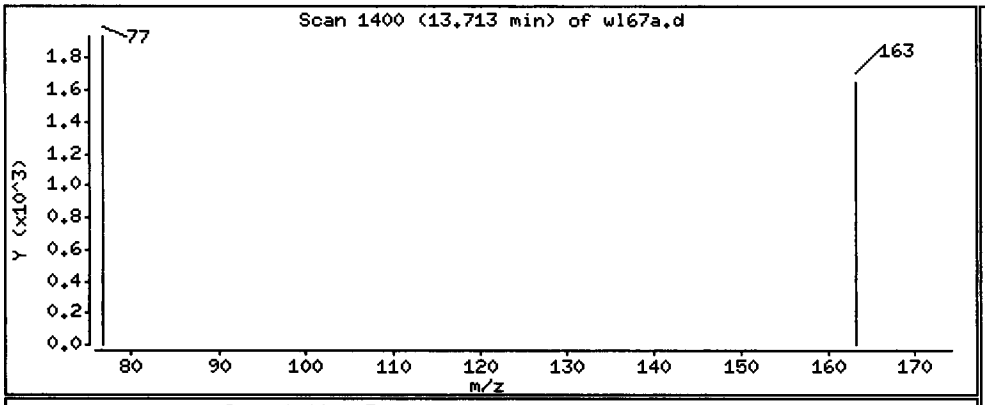
Operator: YZ

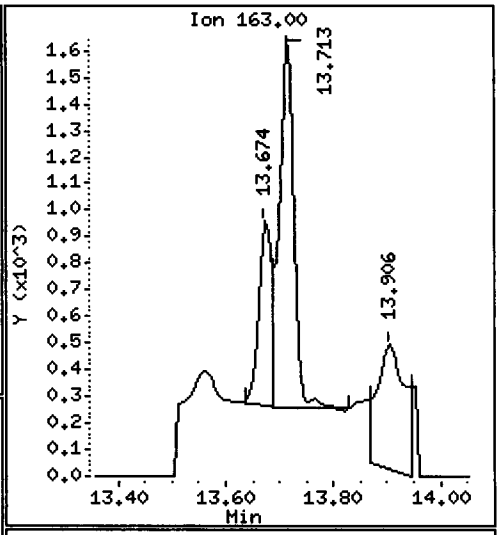
Column phase: ZB-5msi

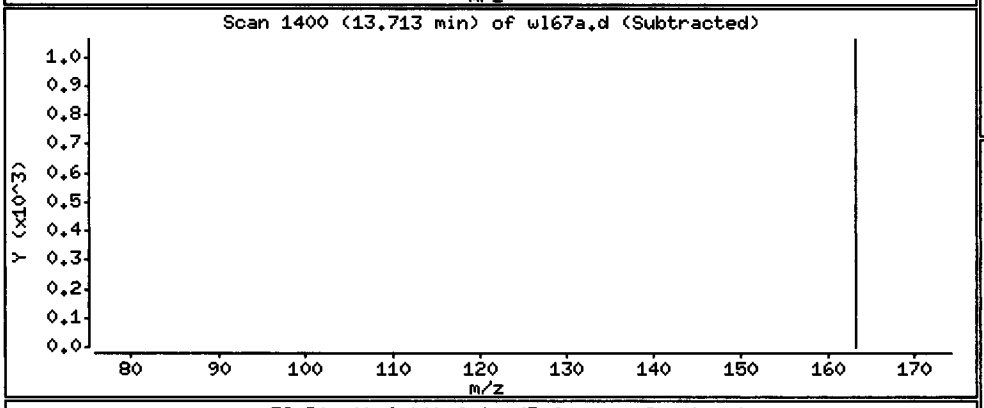
Column diameter: 0.25

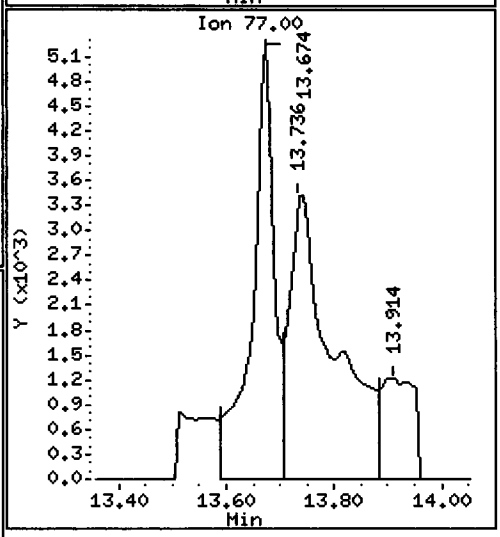
39 Dimethylphthalate

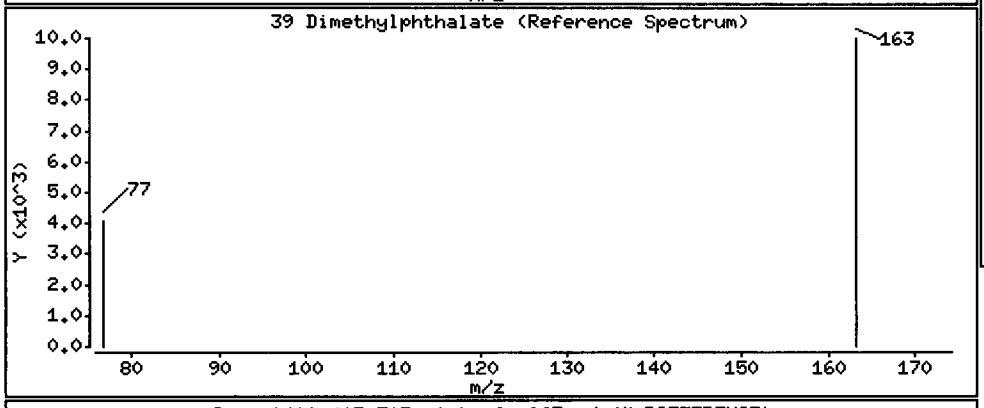
Concentration: 64.68 ug/kg

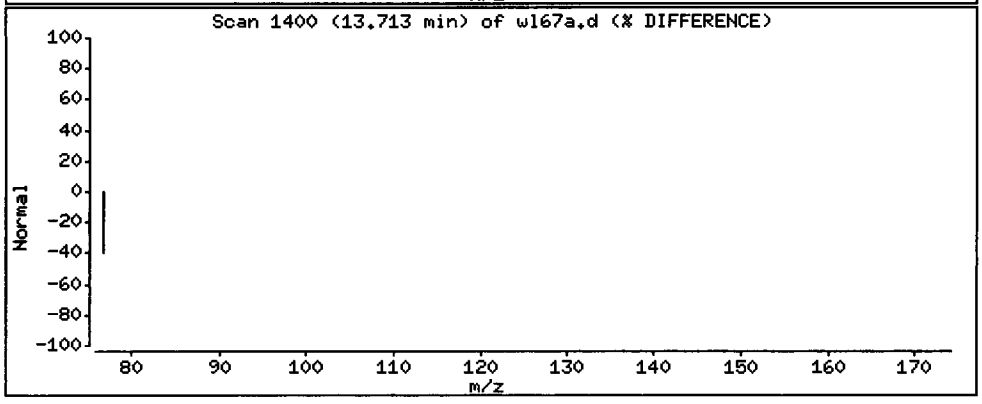












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

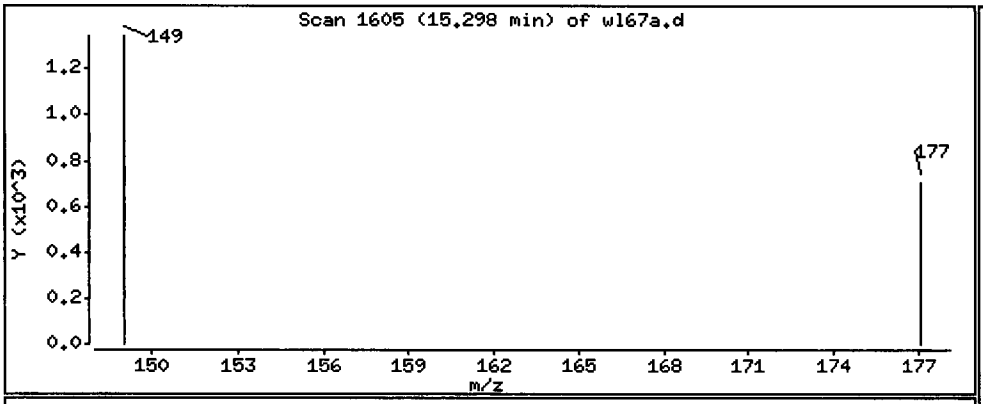
Operator: YZ

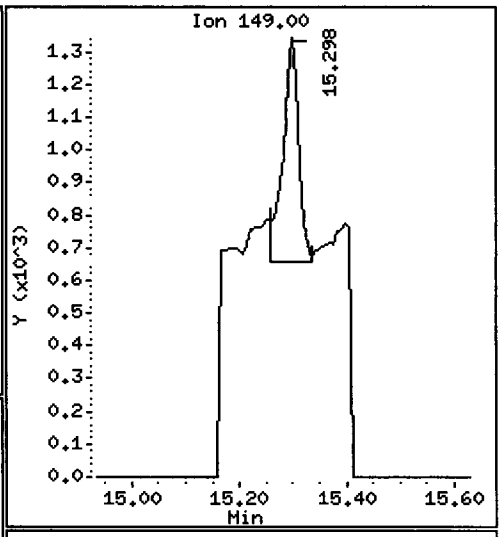
Column phase: ZB-5msi

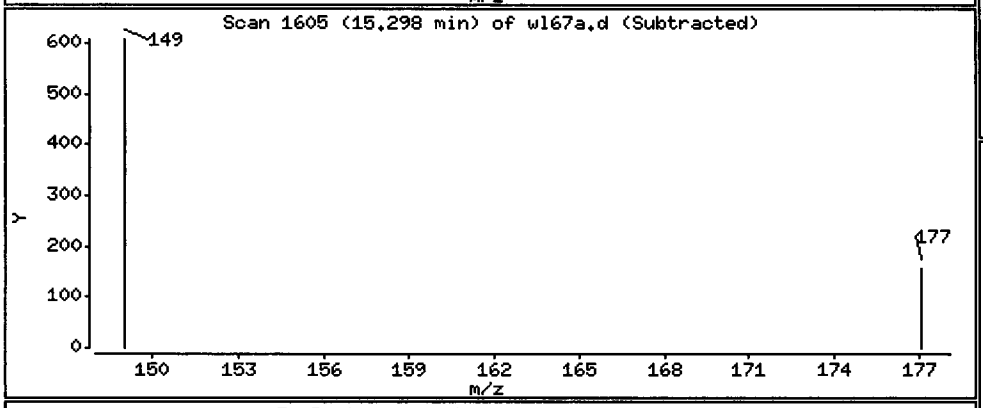
Column diameter: 0.25

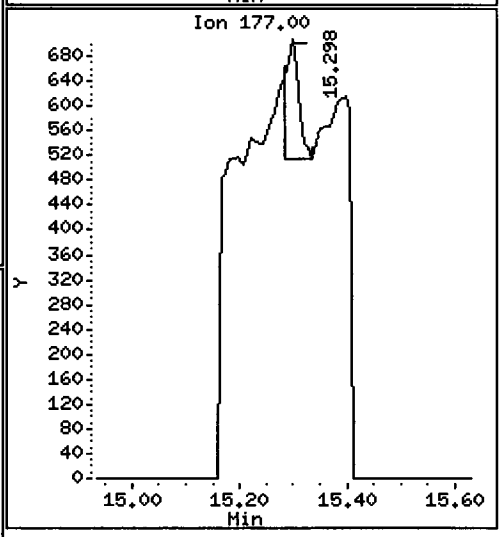
50 Diethylphthalate

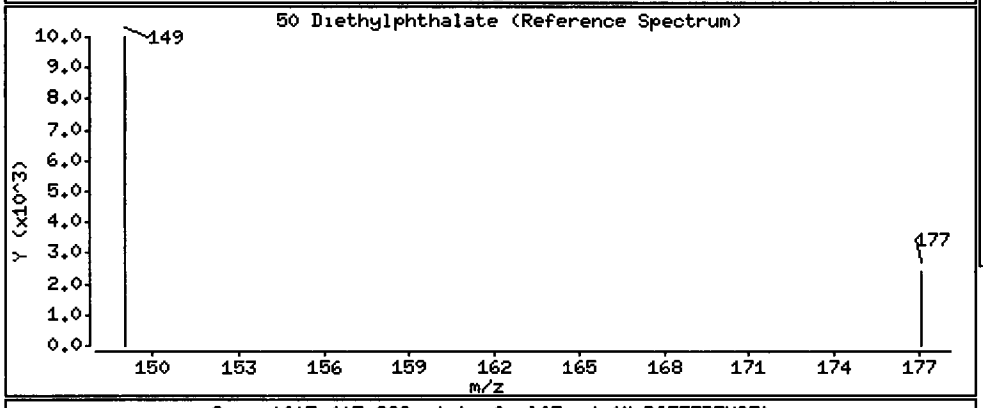
Concentration: 29.19 ug/kg

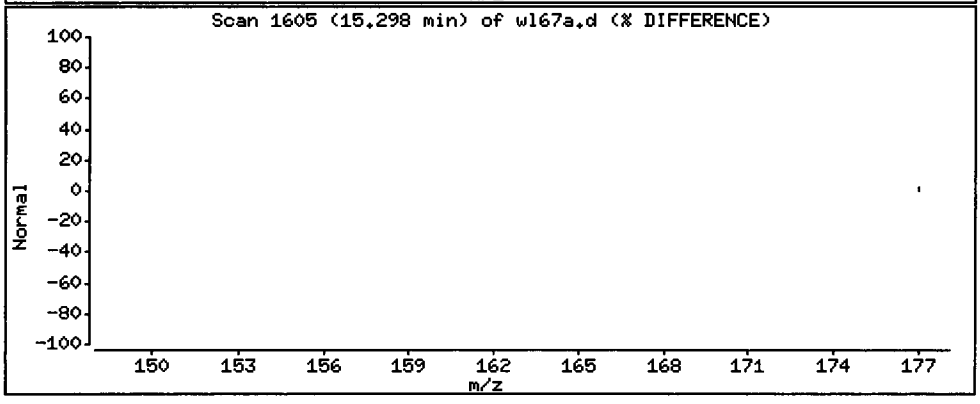












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

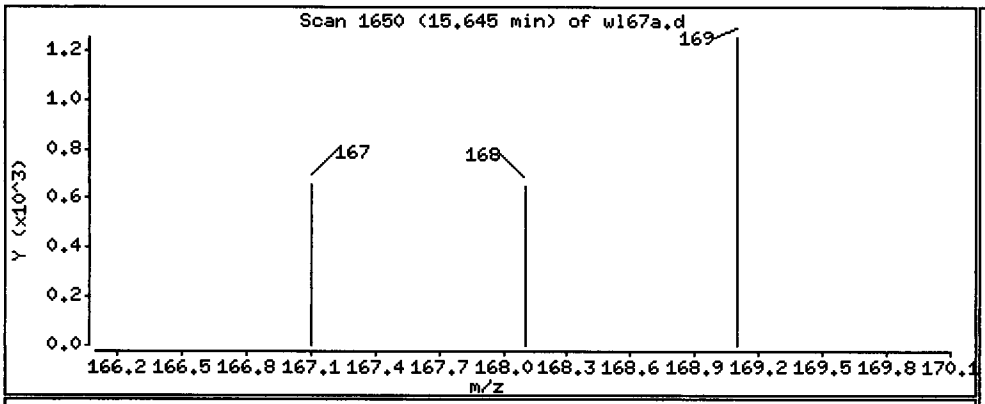
Operator: YZ

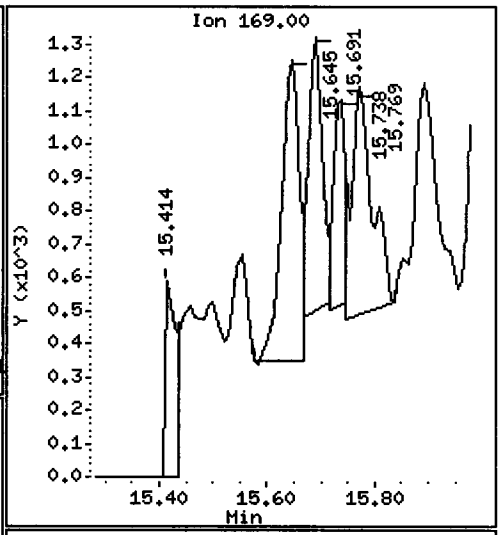
Column phase: ZB-5msi

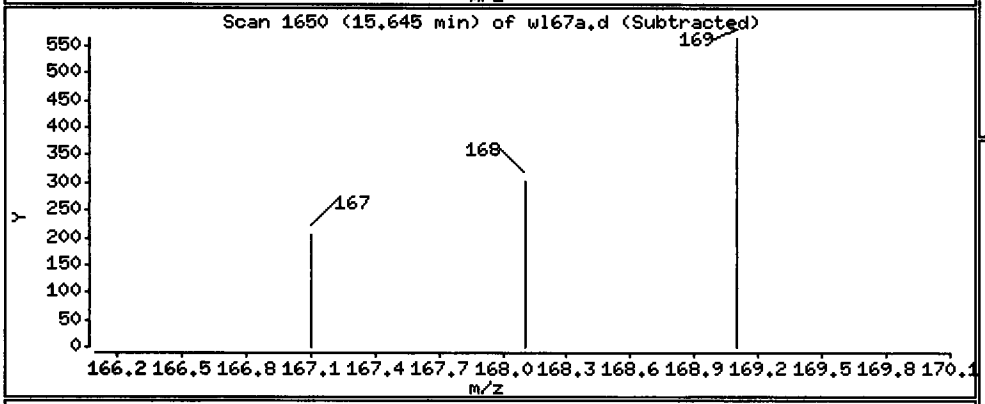
Column diameter: 0.25

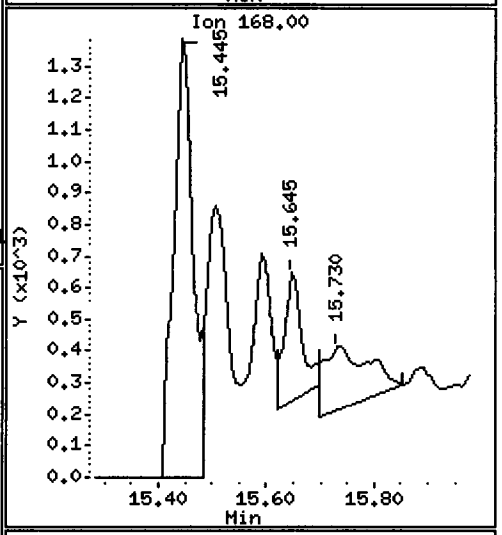
54 N-Nitrosodiphenylamine

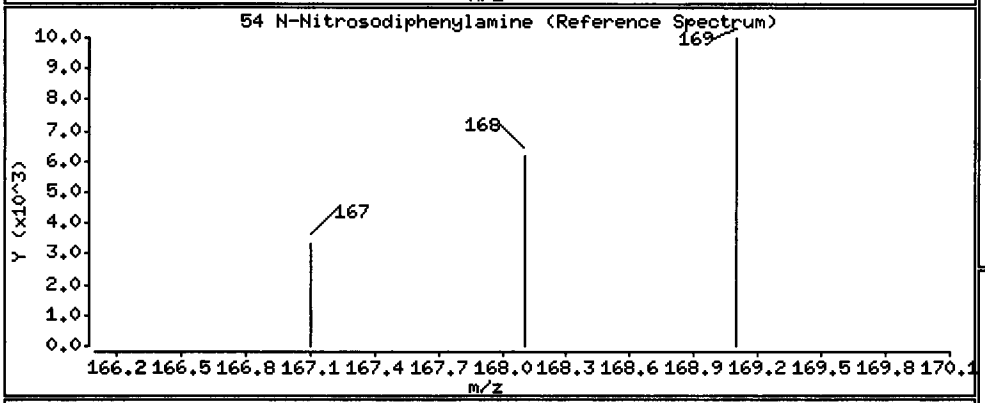
Concentration: 77.03 ug/kg

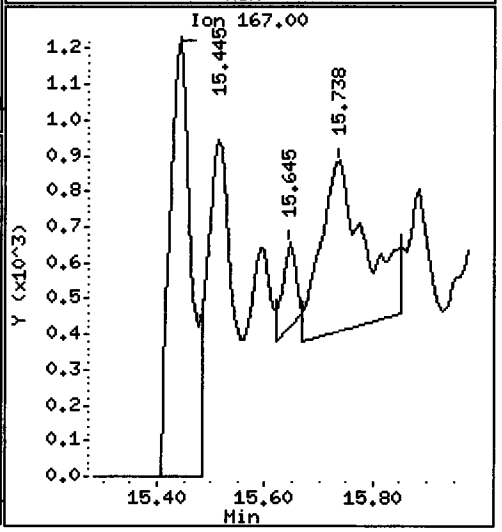


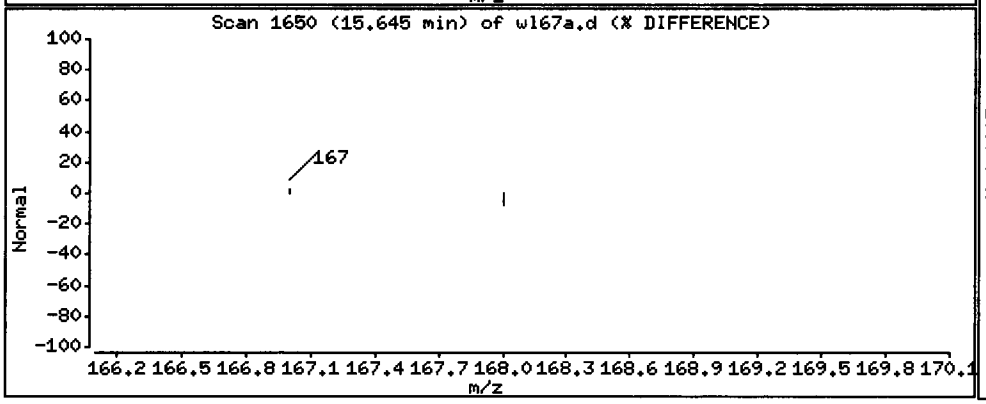












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

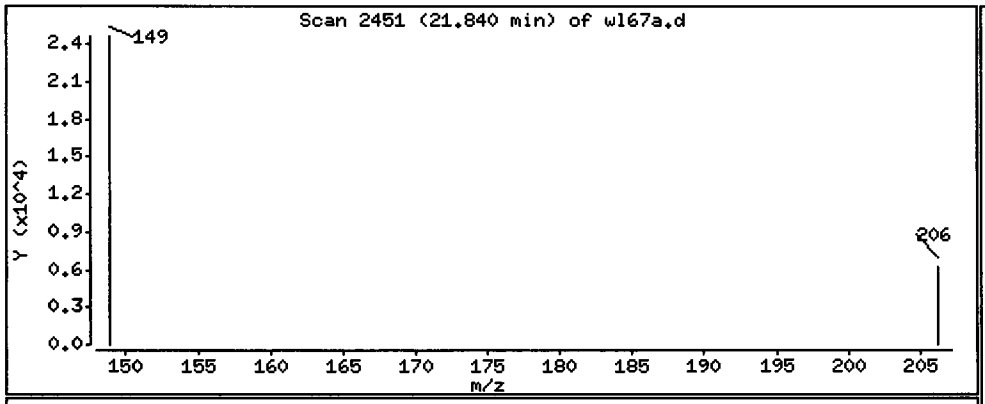
Operator: YZ

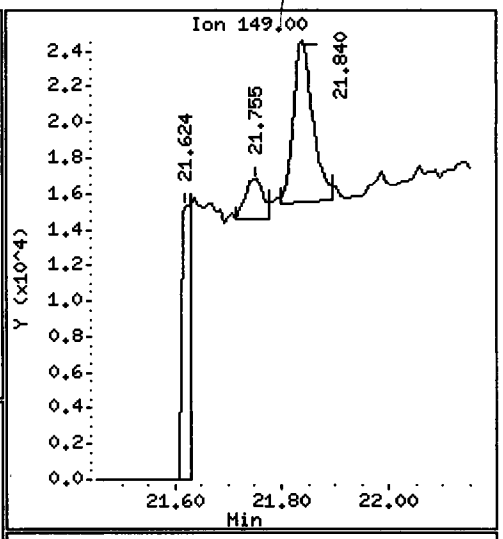
Column phase: ZB-5msi

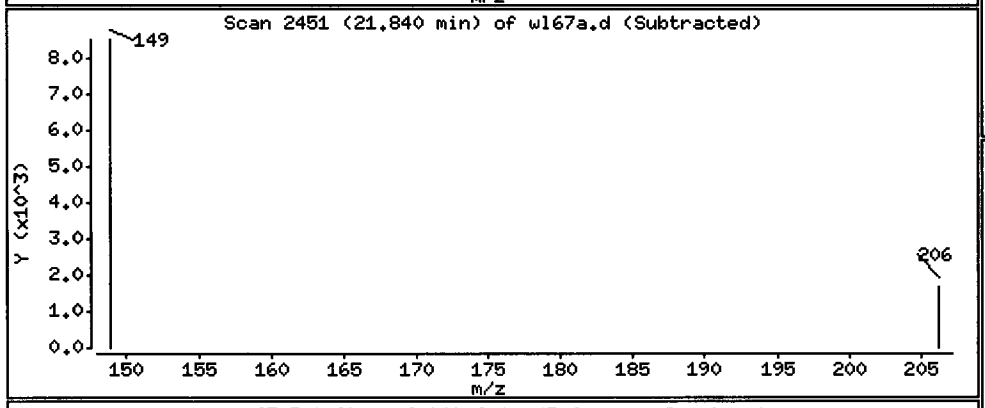
Column diameter: 0.25

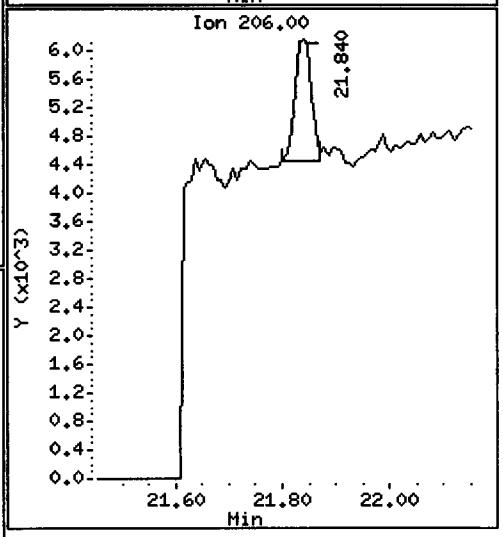
67 Butylbenzylphthalate

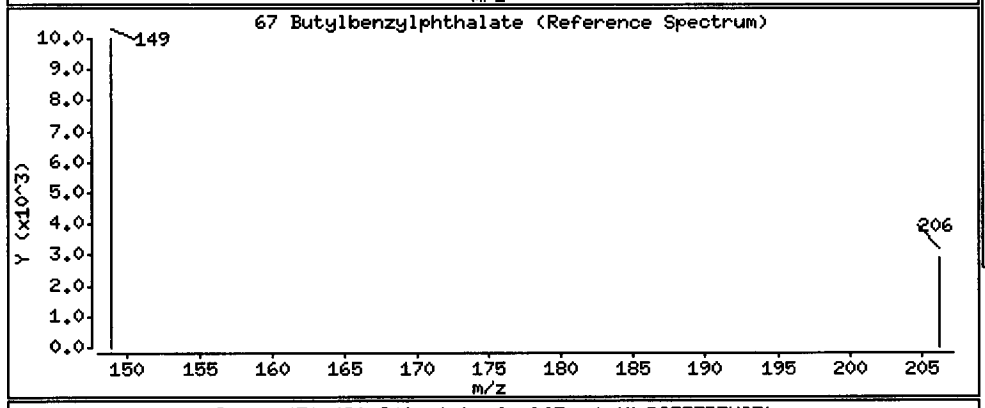
Concentration: 931.5 ug/kg

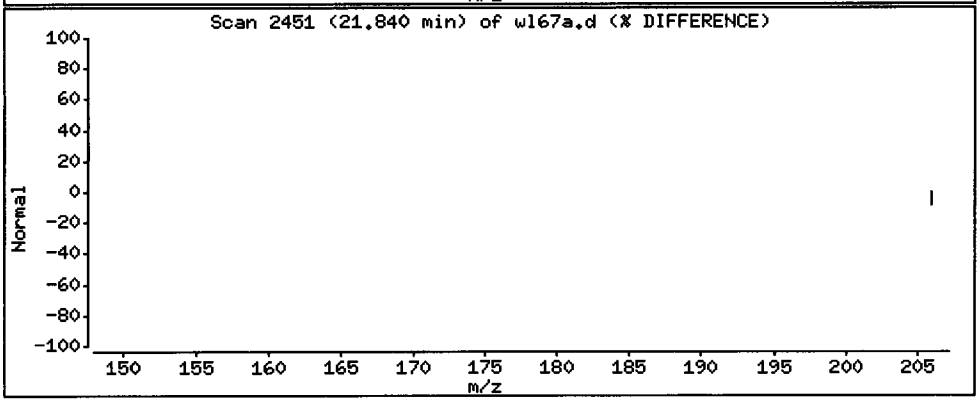












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Date : 24-APR-2013 22:41

Client ID: GR-CB-07-20130411-S

Instrument: nt10.i

Sample Info: WL67A,3

Volume Injected (uL): 1.0

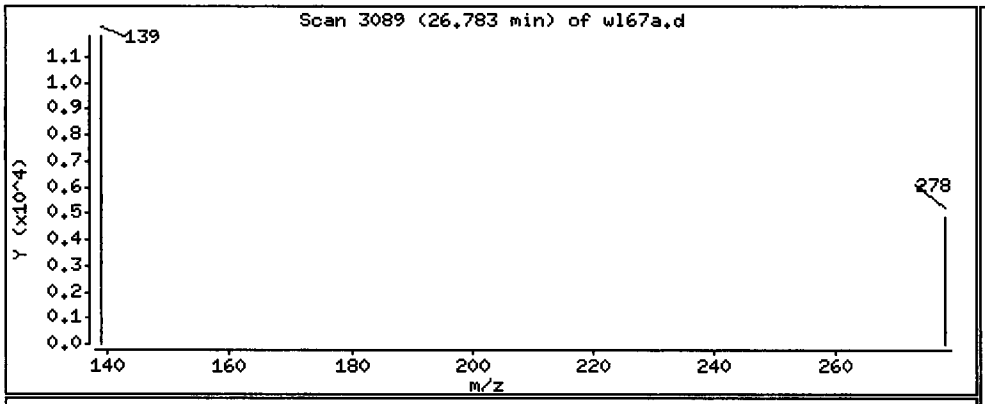
Operator: YZ

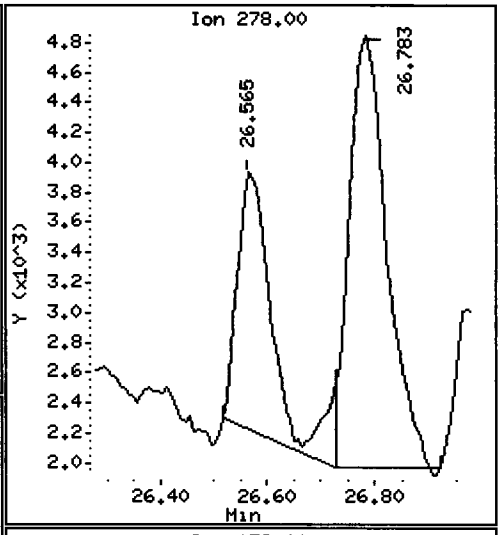
Column phase: ZB-5msi

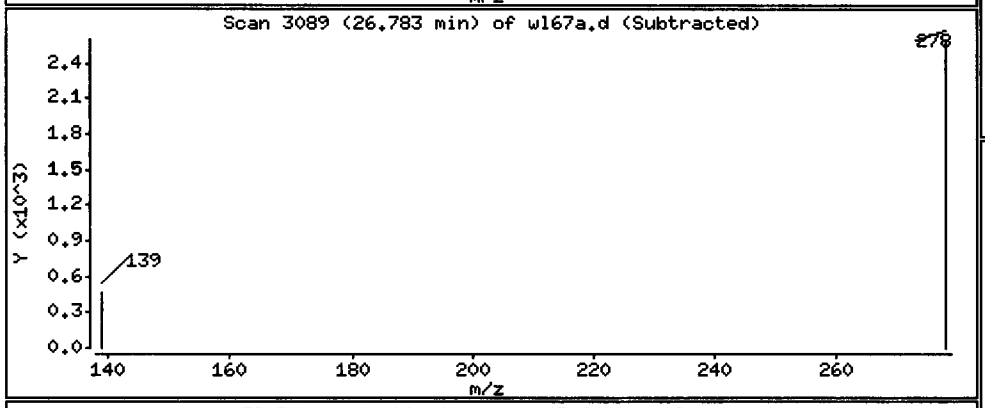
Column diameter: 0.25

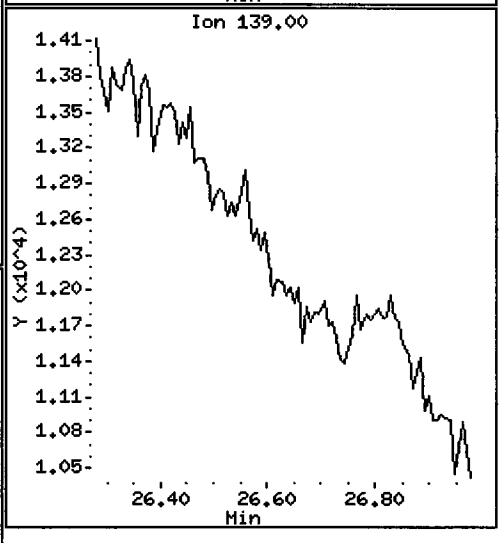
79 Dibenzo(a,h)anthracene

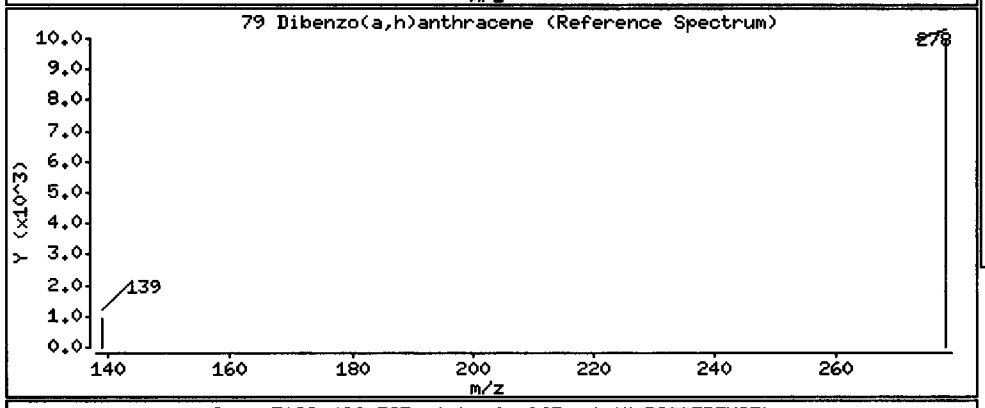
Concentration: 230.3 ug/kg

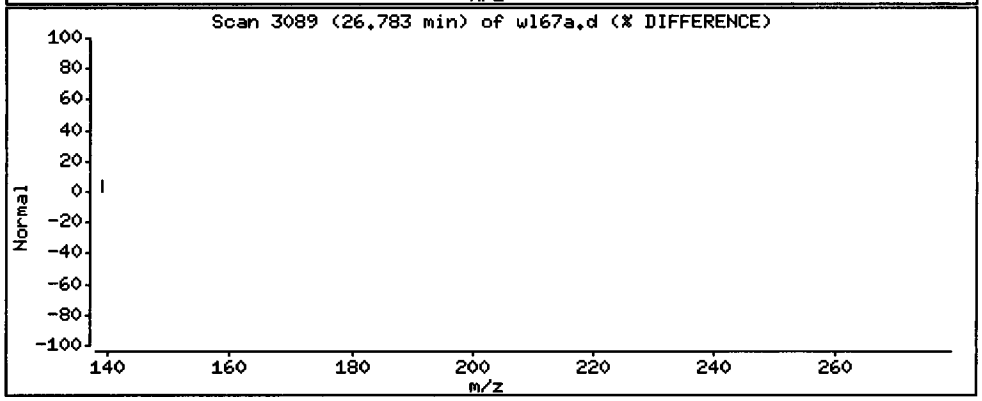






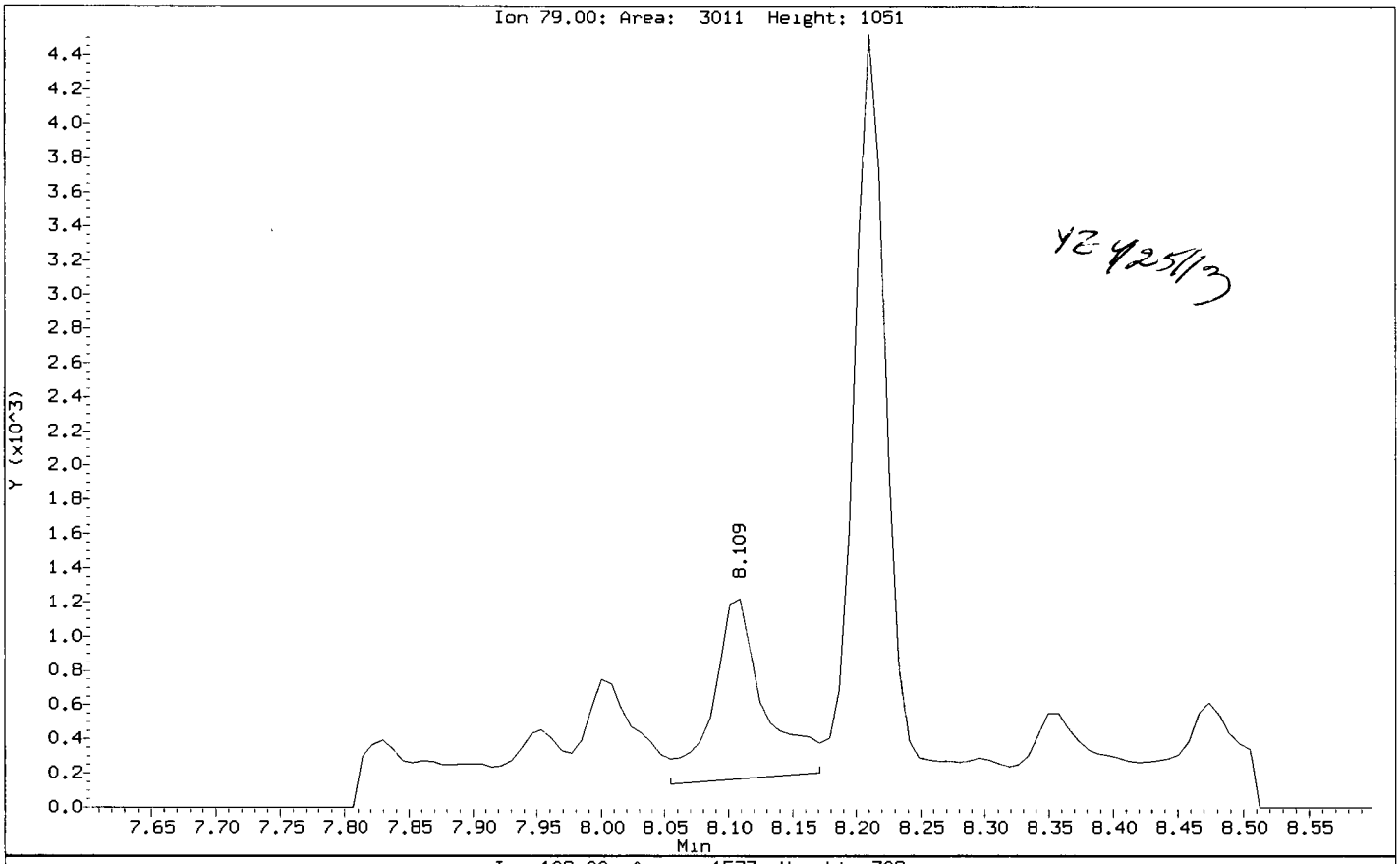




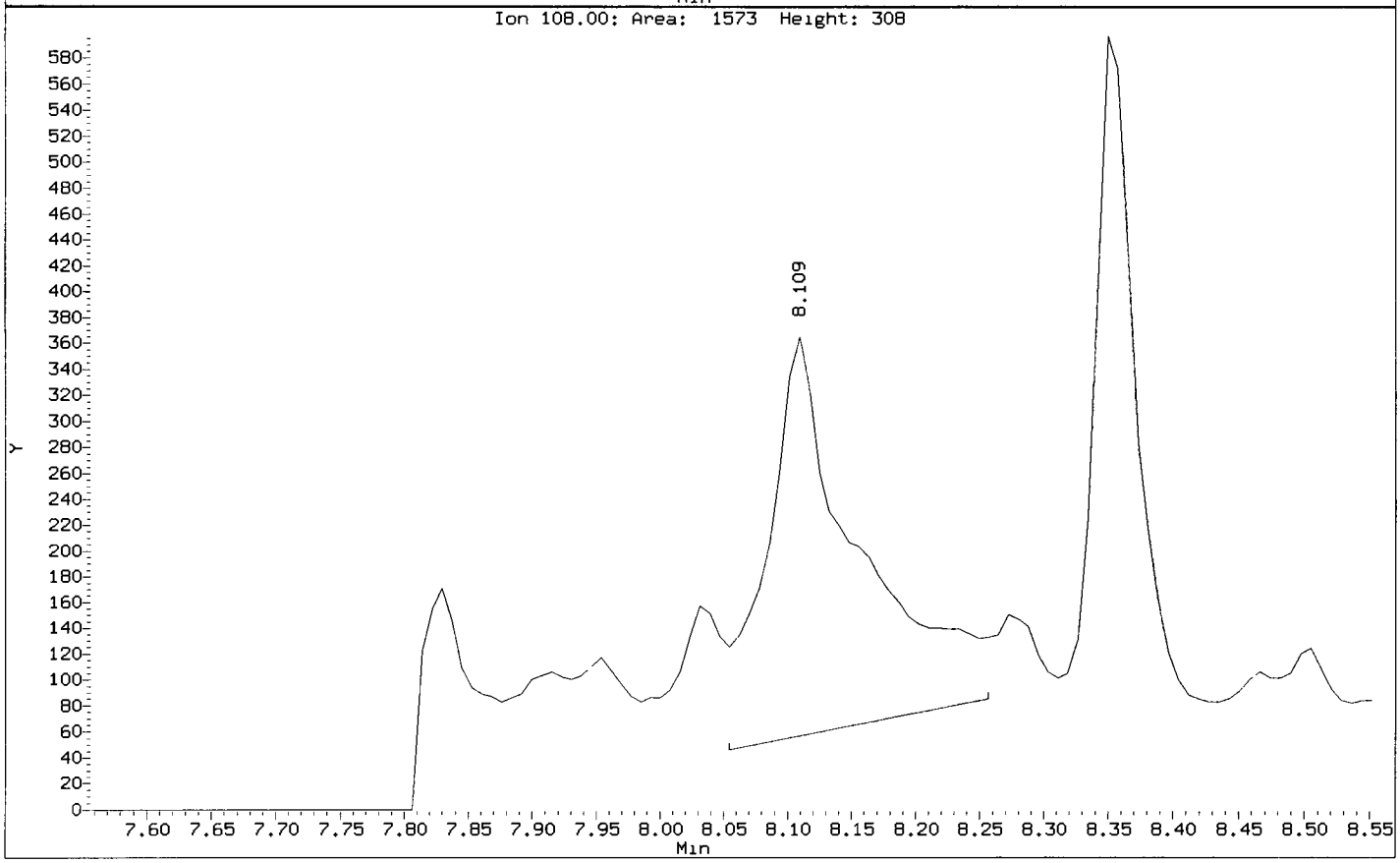


Data File: /chem1/nt10.1/20130424.b/SIM.b/w167a.d
Injection Date: 24-APR-2013 22:41
Instrument: nt10.1
Client Sample ID: GR-CB-07-20130411-S

Compound: Benzyl alcohol
CAS Number: 100-51-6

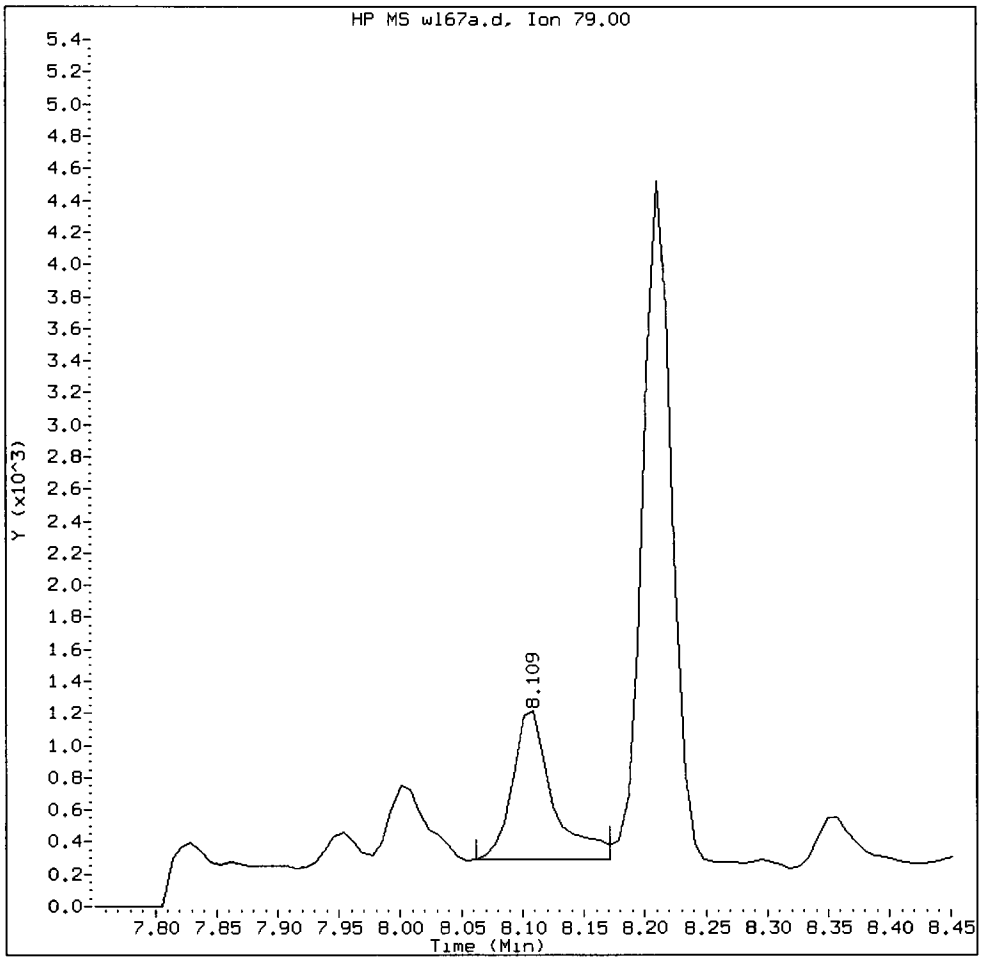


YZ 4/25/13



WL67A, /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Benzyl alcohol Amount: 0.15 Area: 2095



MANUAL INTEGRATION for Benzyl alcohol

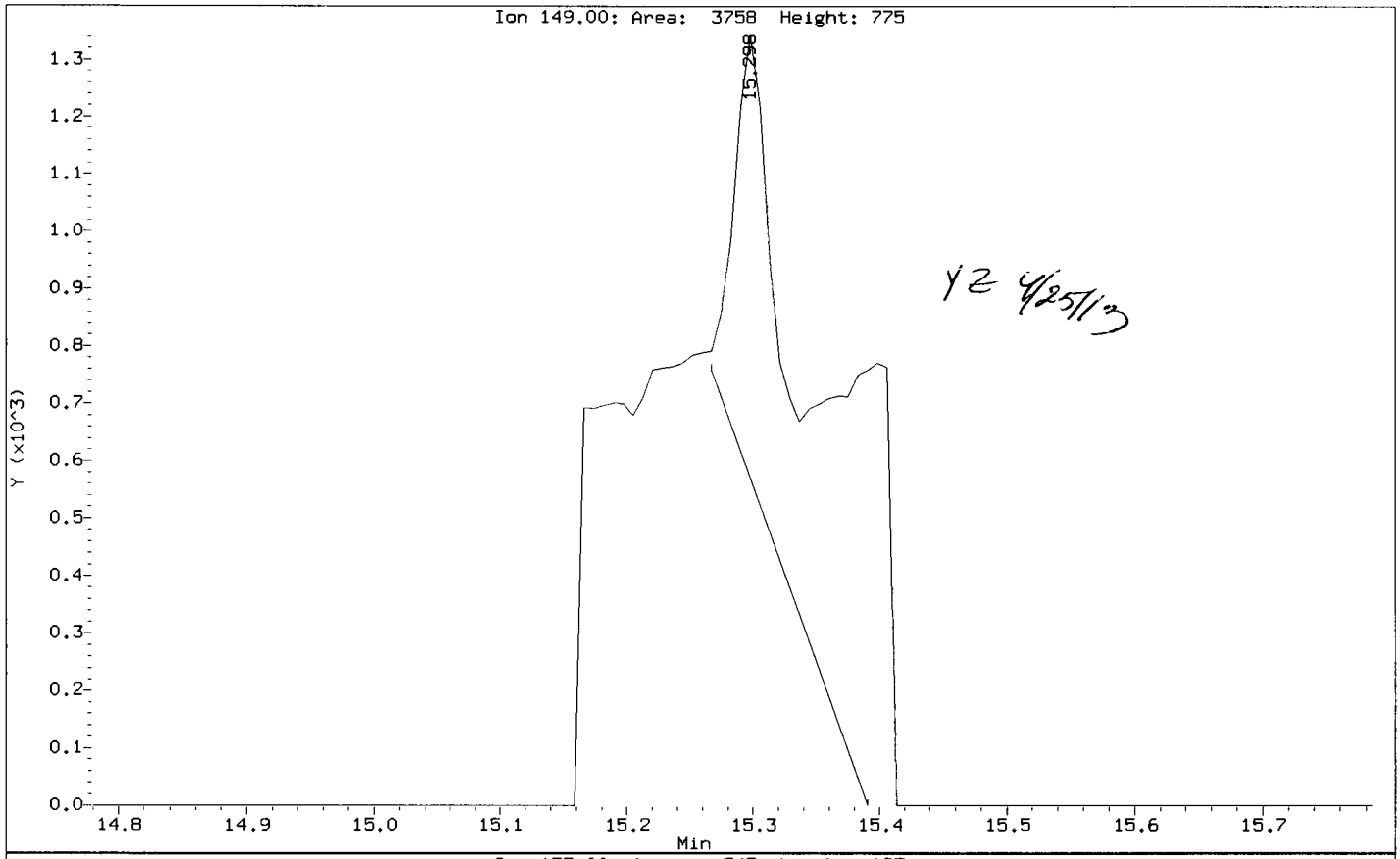
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

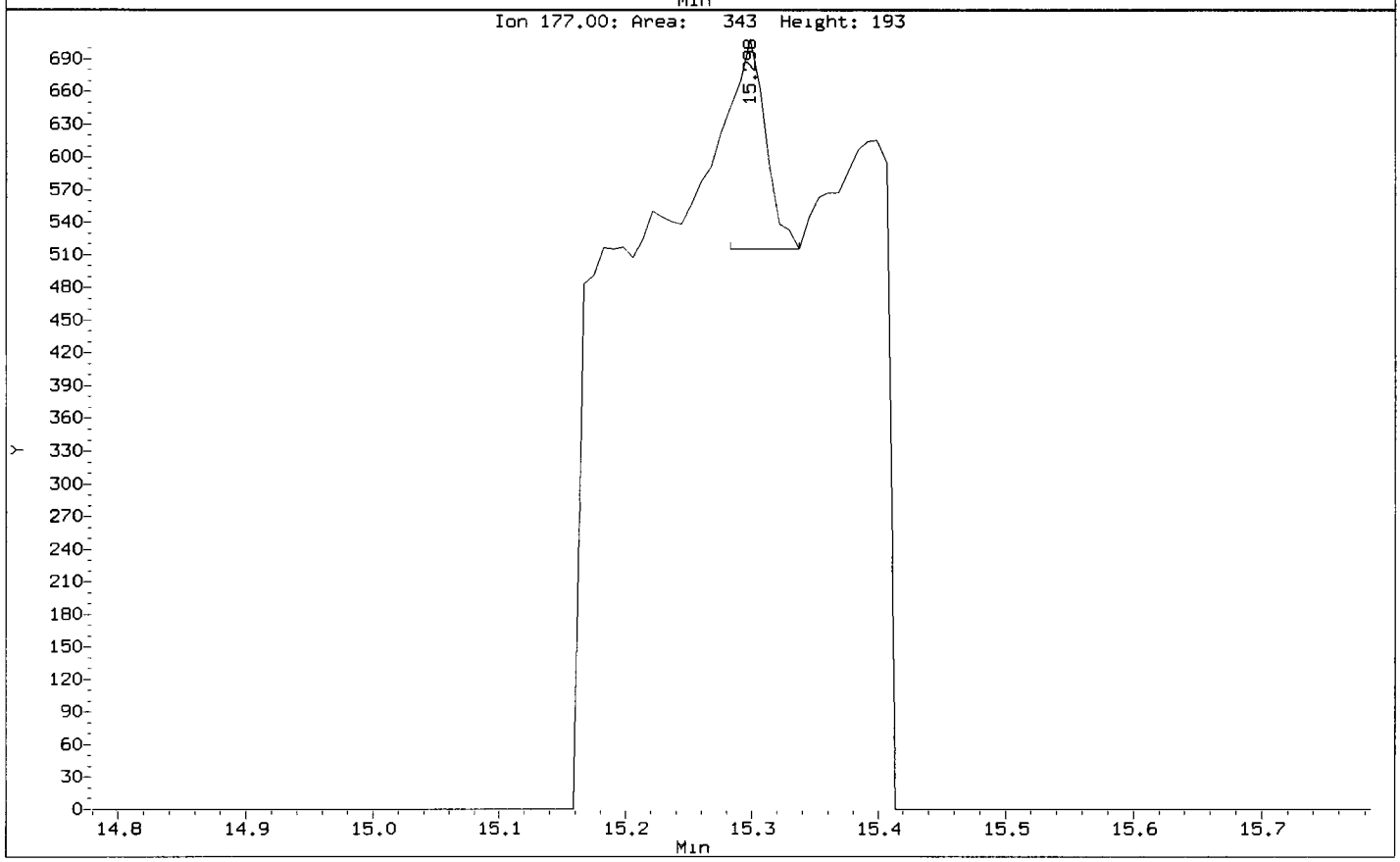
Analyst: YZ Date: 4/25/13

Data File: /chem1/nt10.1/20130424.b/SIM.b/w167a.d
Injection Date: 24-APR-2013 22:41
Instrument: nt10.1
Client Sample ID: GR-CB-07-20130411-S

Compound: Diethylphthalate
CAS Number: 84-66-2



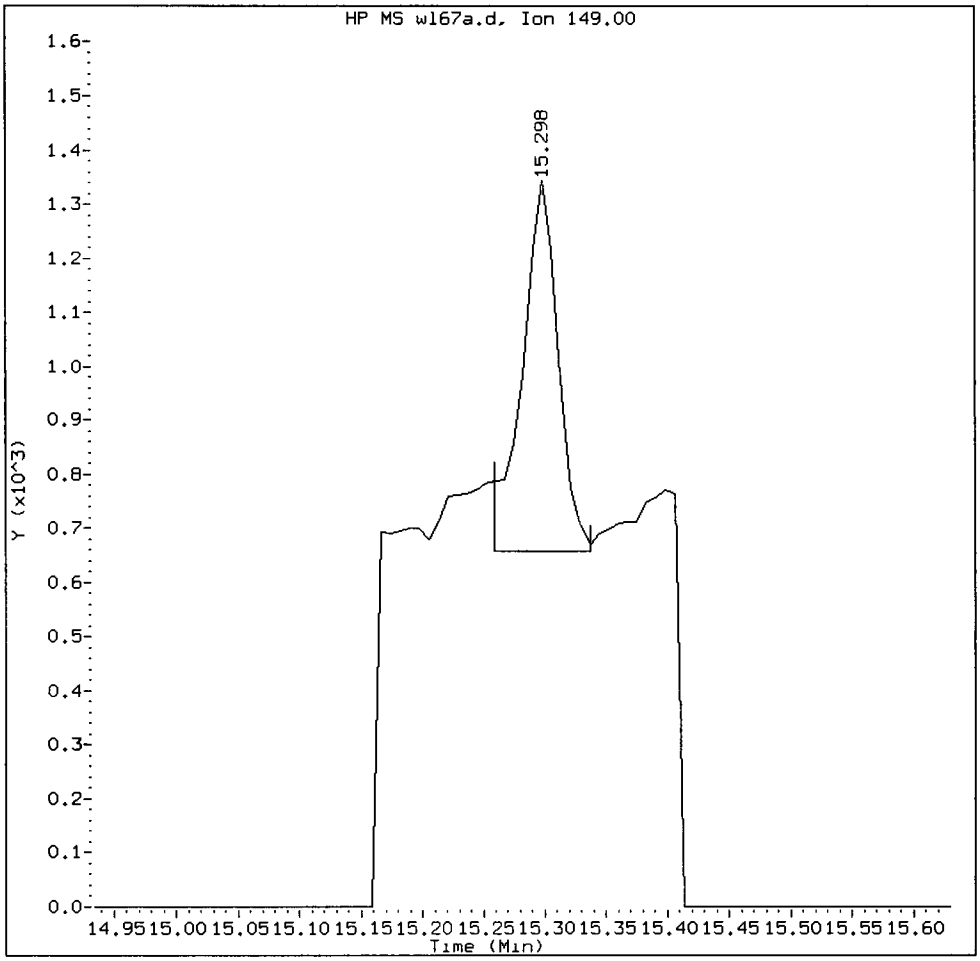
YZ 4/25/13



WL67-01015

WL67A, /chem1/nt10.i/20130424.b/SIM.b/wl67a.d

Diethylphthalate Amount: 0.03 Area: 1412



MANUAL INTEGRATION for Diethylphthalate

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

5. Other _____

Analyst: VZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl67a.d

Lab ID: WL67A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 4/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl67b.d
Lab Smp Id: WL67B Client Smp ID: GR-WS-05-20130411-S
Inj Date : 24-APR-2013 23:18
Operator : YZ Inst ID: nt10.i
Smp Info : WL67B,3
Misc Info : 13-7792
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 12
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.07000	Weight of sample extracted (g)
M	72.80000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.464	5.433	(0.713)	17407	1.14467	2080
3	Phenol	94	7.203	7.172	(0.939)	7537	0.39025	709.1
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	7.667	7.659	(1.000)	47798	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	79	8.102	8.101	(1.057)	644	0.05628	102.3
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
13	2-Methylphenol	108	8.350	8.319	(1.089)	748	0.05147	93.53
15	4-Methylphenol	108	8.645	8.621	(1.128)	7496	0.49810	905.1
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	9.738	9.707	(0.948)	1188	0.07582	137.8
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	10.270	10.262	(1.000)	181756	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	13.713	13.705	(0.971)	1605	0.05042	91.61(M)
*	42 Acenaphthene-d10	162	14.116	14.108	(1.000)	104571	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	15.638	15.630	(0.901)	2596	0.12866	233.8(M)
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.353	17.337	(1.000)	173569	4.00000	
$	66 Terphenyl-d14	244	20.803	20.780	(0.917)	20863	0.73462	1335
	67 Butylbenzylphthalate	149	21.833	21.802	(0.962)	14325	0.70120	1274
*	69 Chrysene-d12	240	22.685	22.638	(1.000)	213736	4.00000	
*	77 Perylene-d12	264	25.015	24.938	(1.000)	206547	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.737	26.628	(1.069)	9022	0.18326	333.0(H)
	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: wl67b.d
Lab Smp Id: WL67B
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7792

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: GR-WS-05-2013041
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	53853	26926	107706	47798	-11.24
27 Naphthalene-d8	200104	100052	400208	181756	-9.17
42 Acenaphthene-d10	112392	56196	224784	104571	-6.96
59 Phenanthrene-d10	210710	105355	421420	173569	-17.63
69 Chrysene-d12	240805	120402	481610	213736	-11.24
77 Perylene-d12	230834	115417	461668	206547	-10.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.67	0.10
27 Naphthalene-d8	10.26	9.76	10.76	10.27	0.08
42 Acenaphthene-d10	14.11	13.61	14.61	14.12	0.06
59 Phenanthrene-d10	17.34	16.84	17.84	17.35	0.09
69 Chrysene-d12	22.64	22.14	23.14	22.68	0.21
77 Perylene-d12	24.94	24.44	25.44	25.02	0.31

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

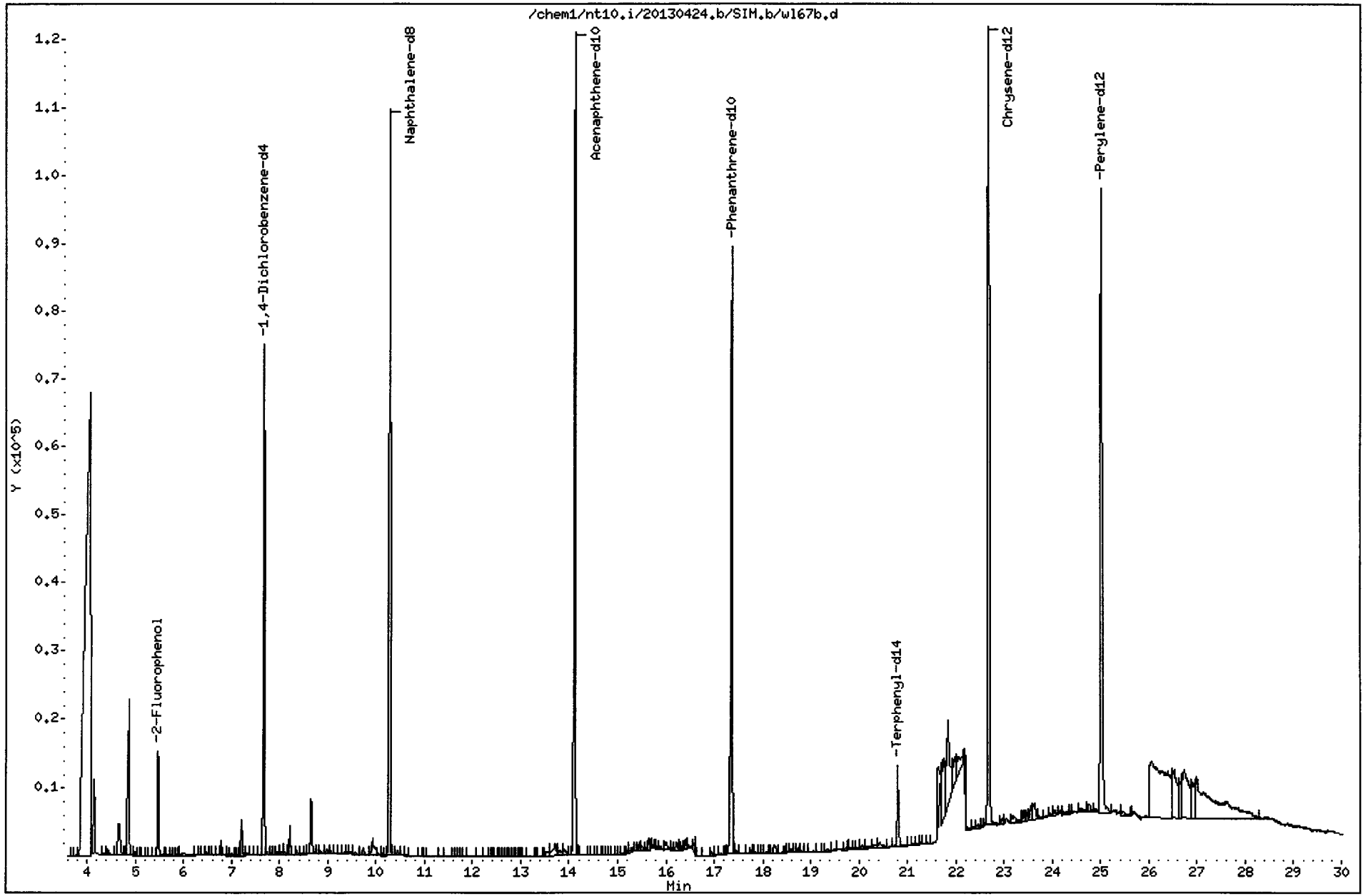
Client Name: SAIC
Client SDG: WL67
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL67B
Client Smp ID: GR-WS-05-20130411-S
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7792

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	4543	2080	45.79	30-160
$ 66 Terphenyl-d14	3028	1335	44.08	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d
Date : 24-APR-2013 23:18
Client ID: GR-WS-05-20130411-S
Sample Info: WL67B,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25

WL67.61022



Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

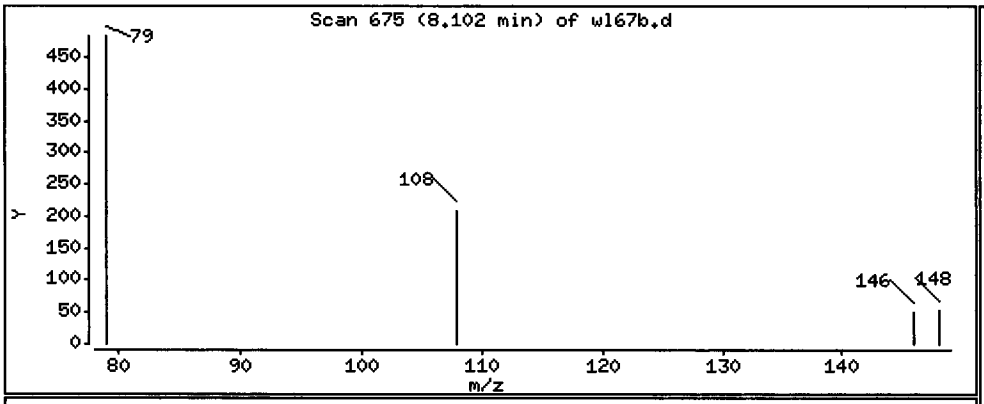
Operator: YZ

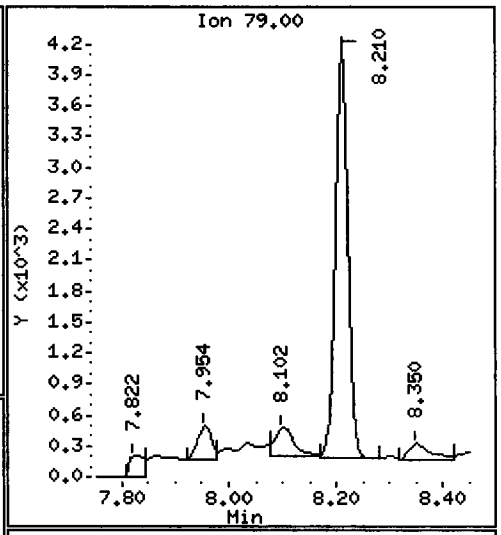
Column phase: ZB-5msi

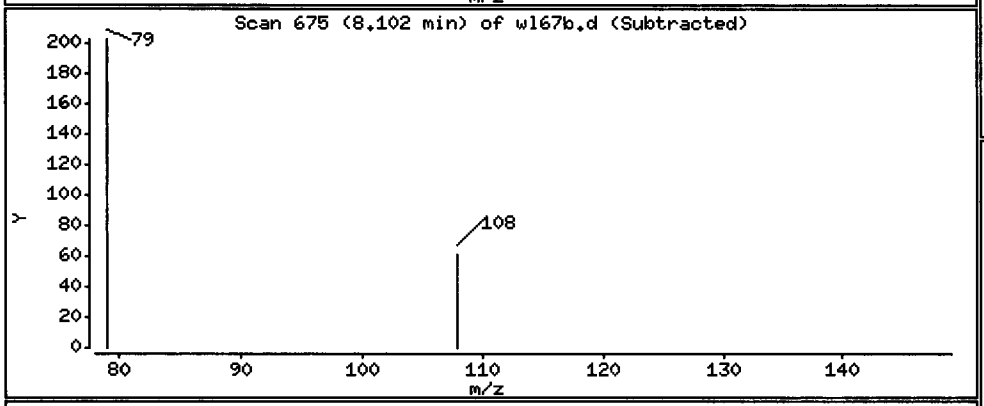
Column diameter: 0.25

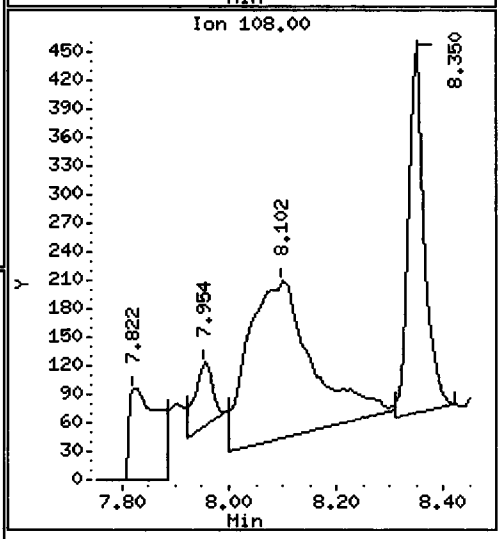
11 Benzyl alcohol

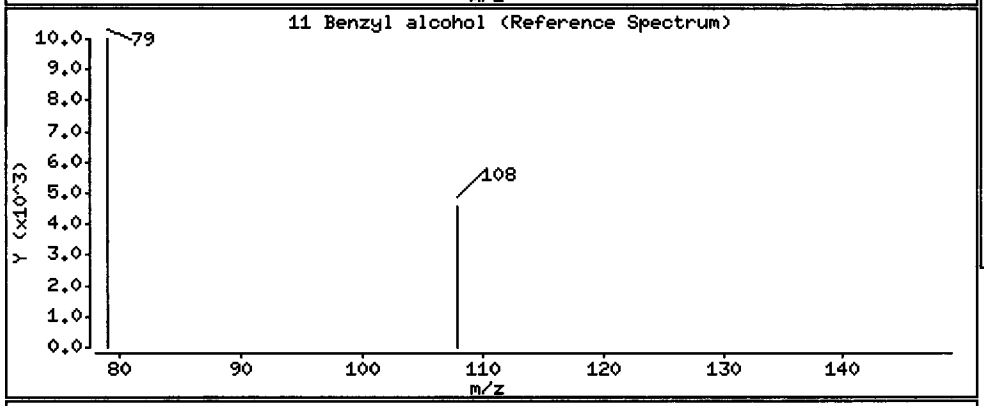
Concentration: 102.3 ug/kg

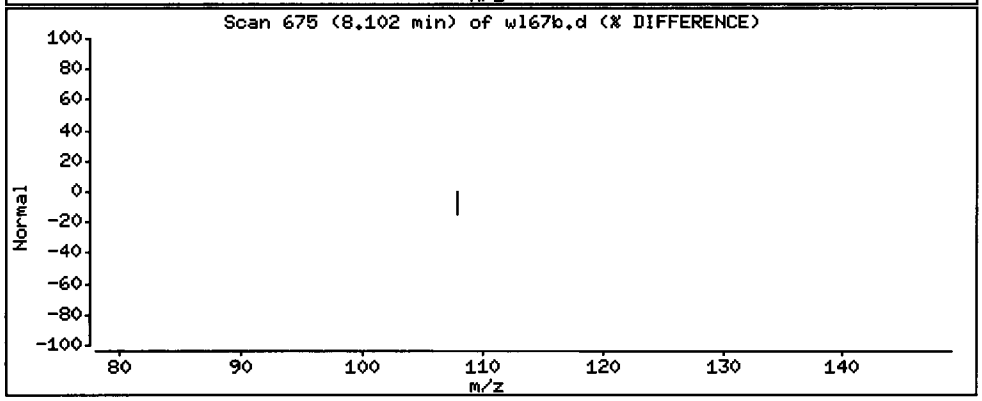












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

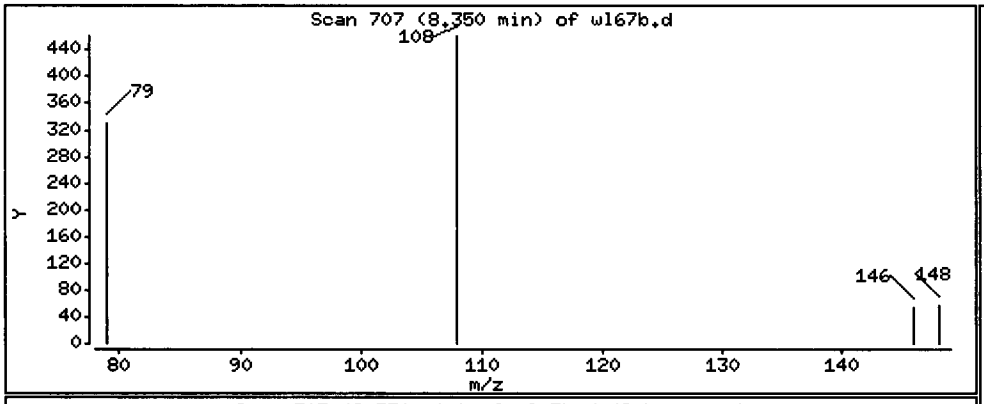
Operator: YZ

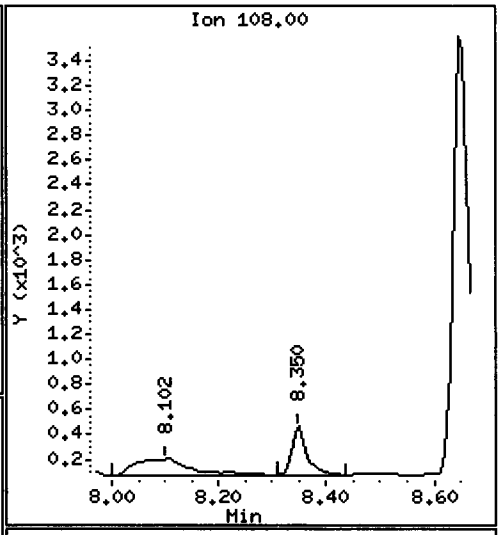
Column phase: ZB-5msi

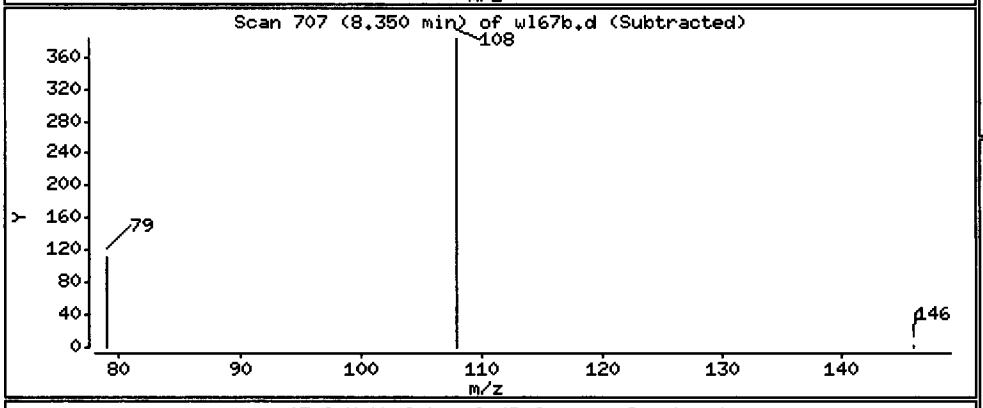
Column diameter: 0.25

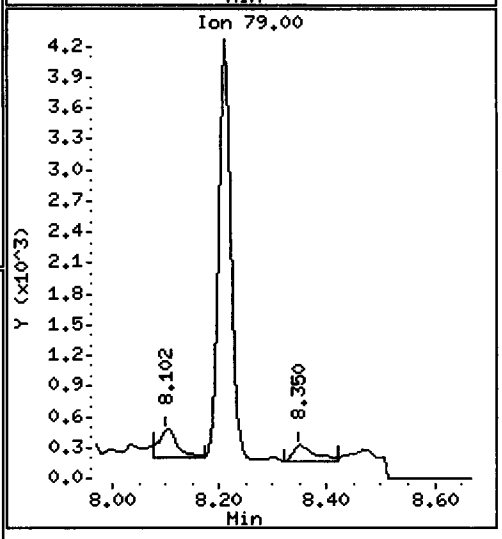
13 2-Methylphenol

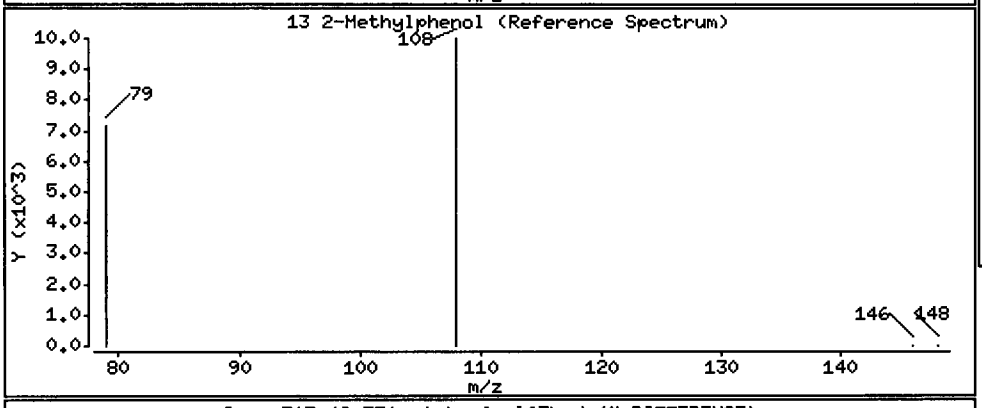
Concentration: 93.53 ug/kg

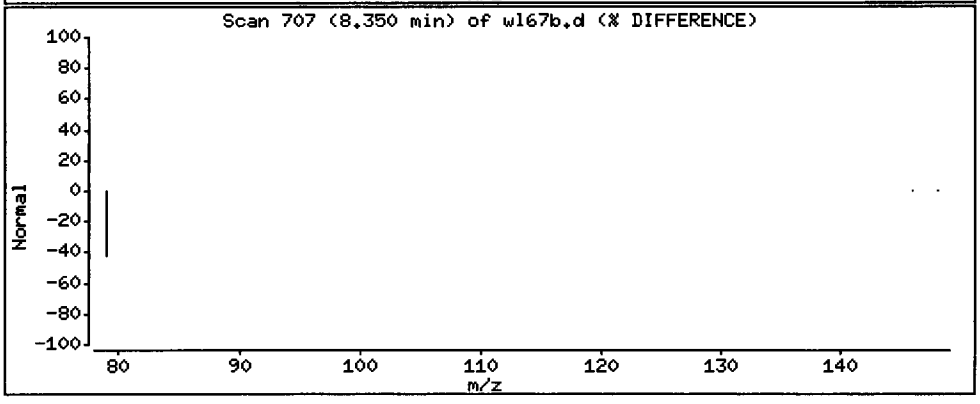












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

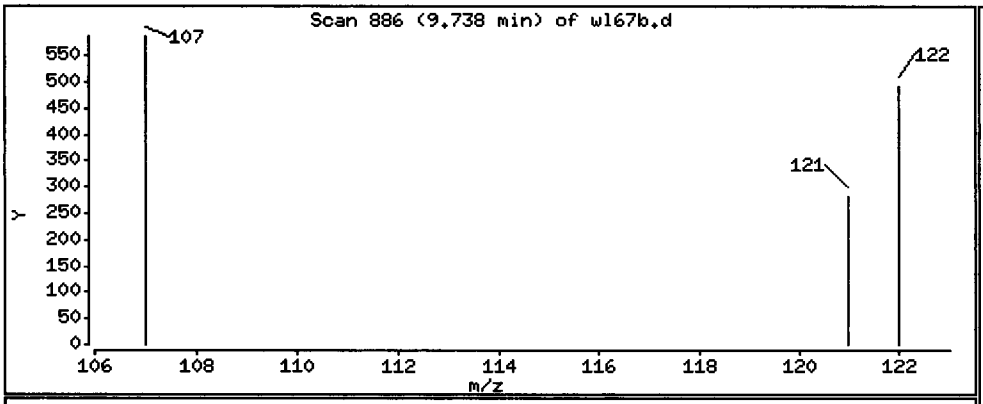
Operator: YZ

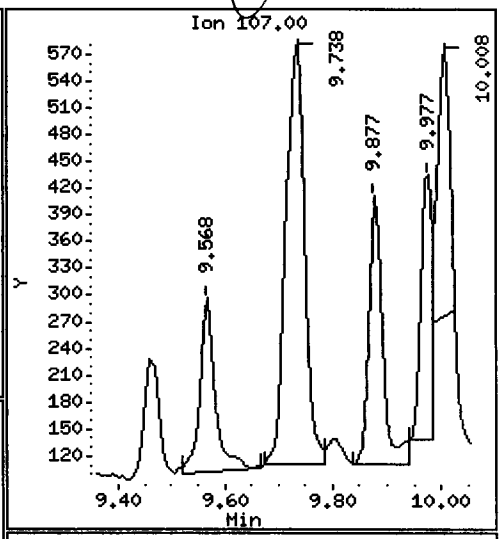
Column phase: ZB-5msi

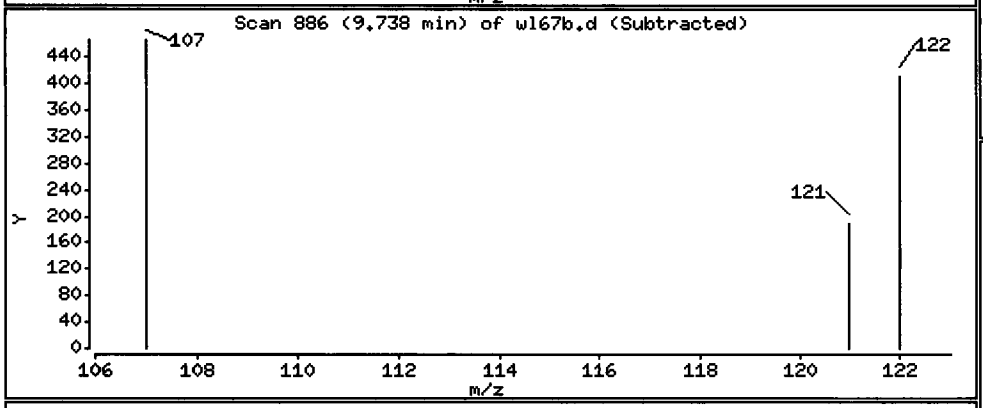
Column diameter: 0.25

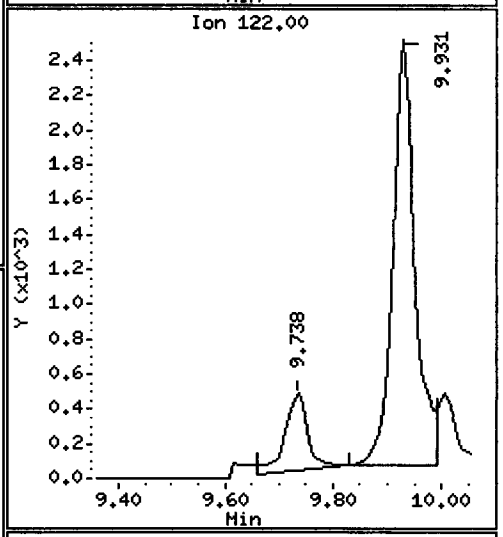
22 2,4-Dimethylphenol

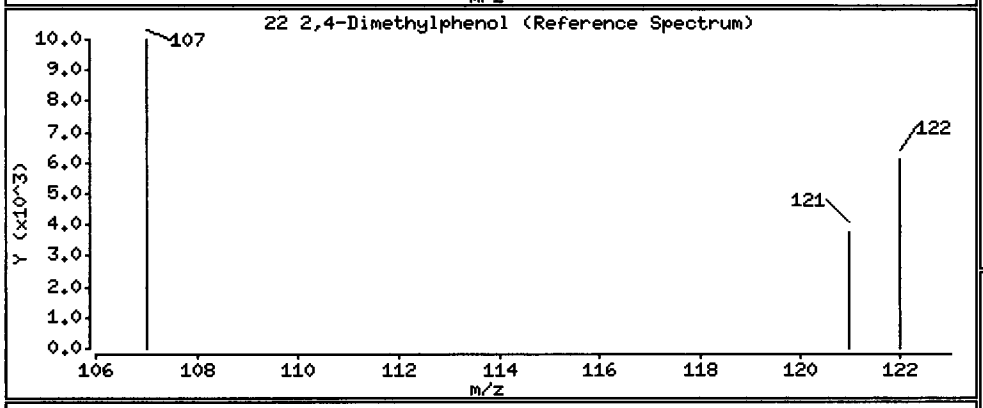
Concentration: 137.8 ug/kg

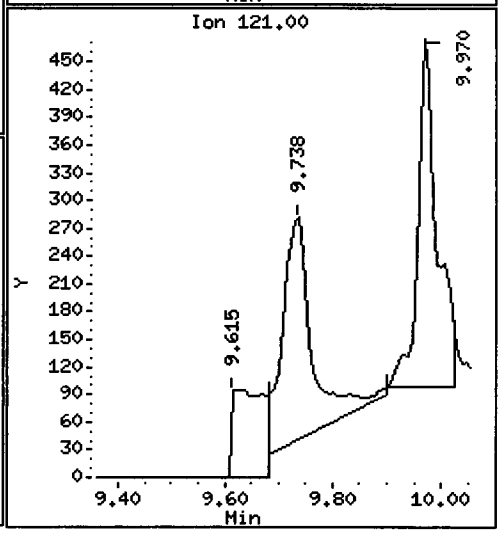


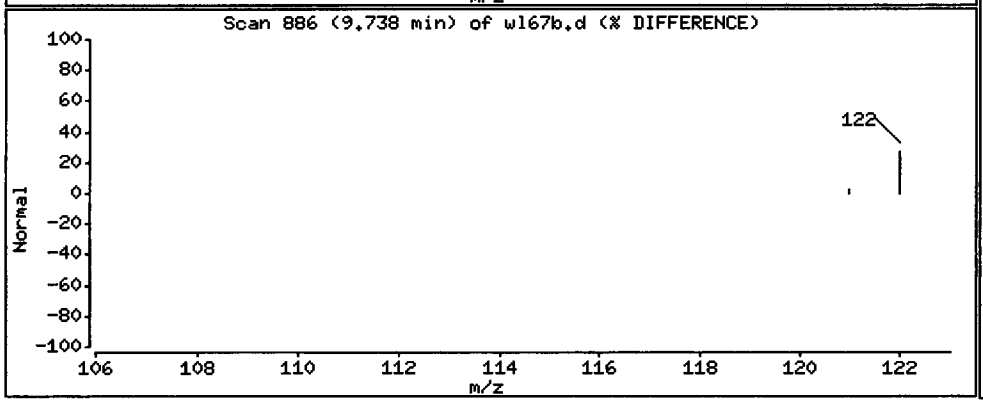












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

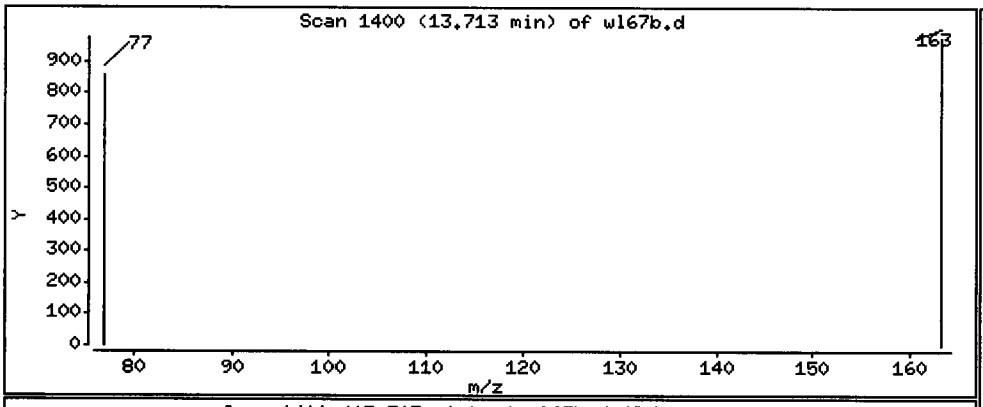
Operator: YZ

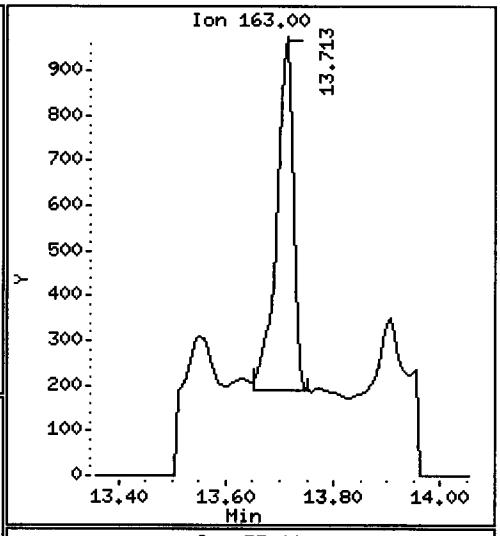
Column phase: ZB-5msi

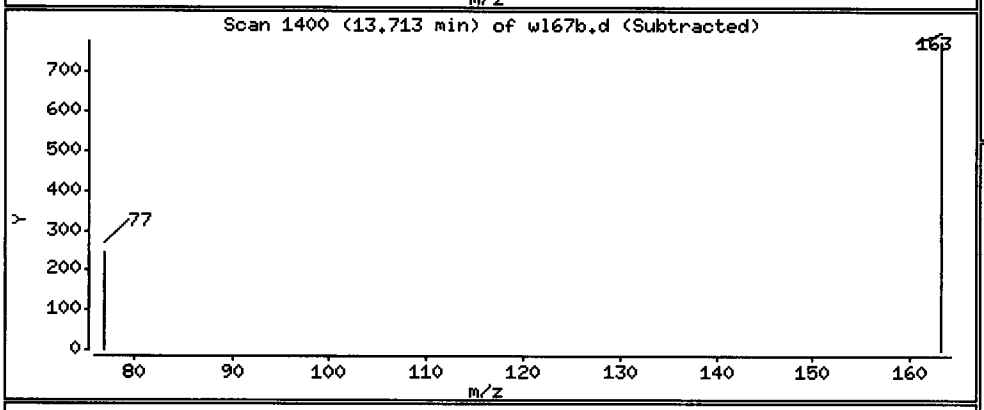
Column diameter: 0.25

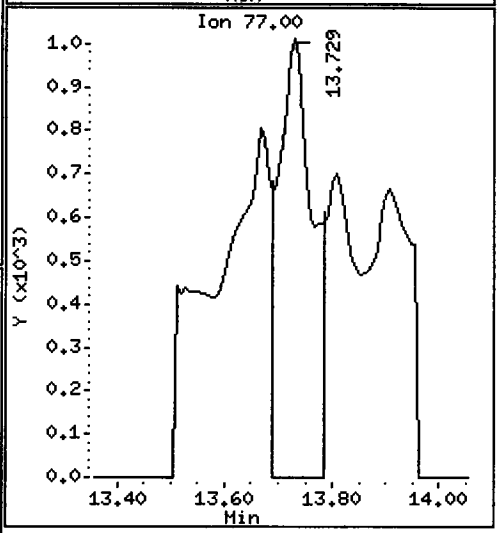
39 Dimethylphthalate

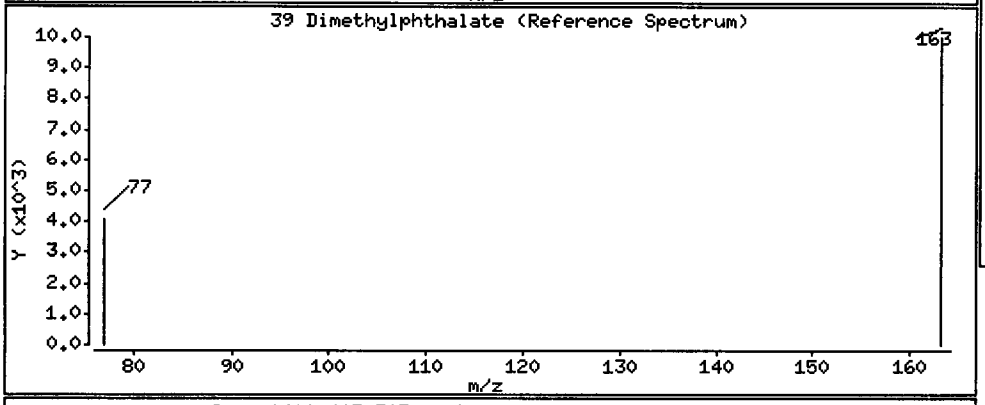
Concentration: 91.61 ug/kg

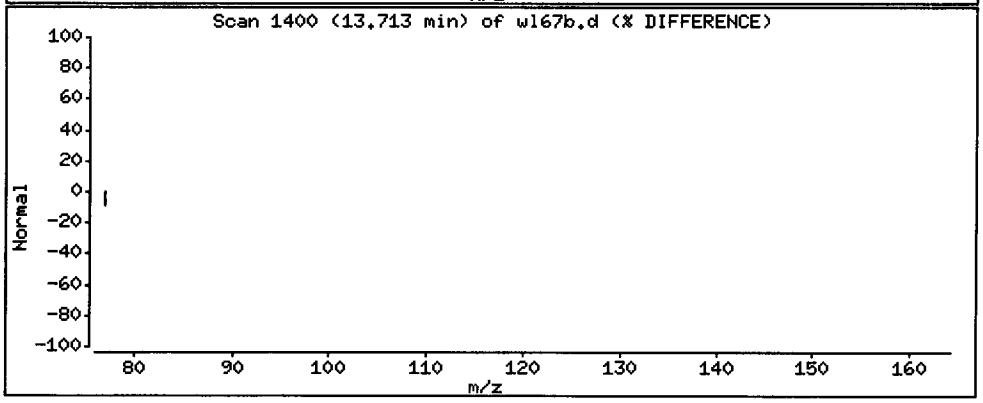












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

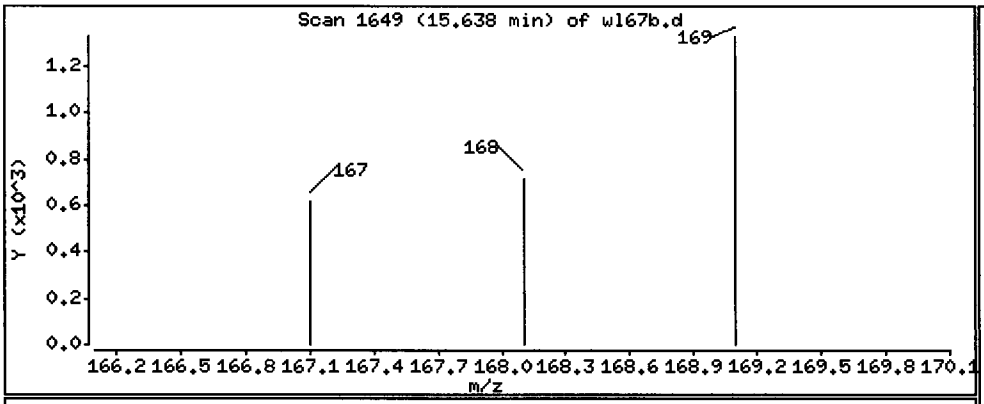
Operator: YZ

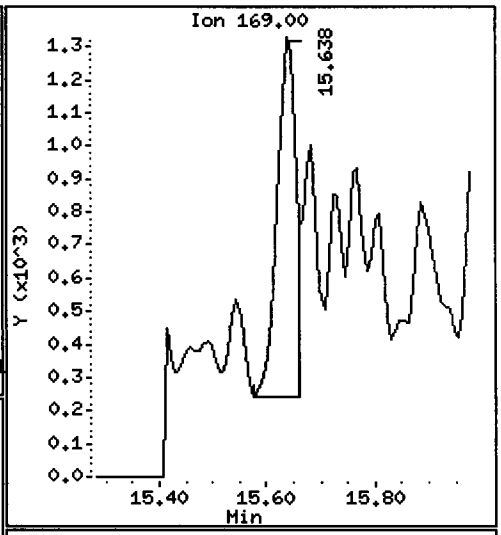
Column phase: ZB-5msi

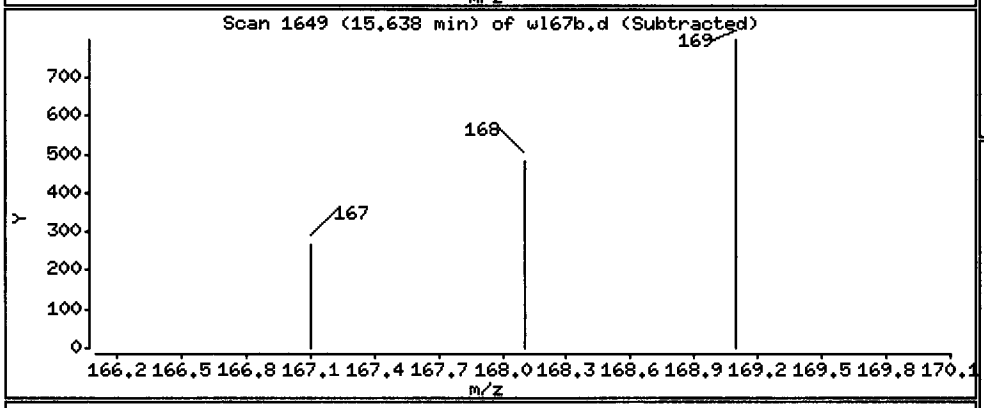
Column diameter: 0.25

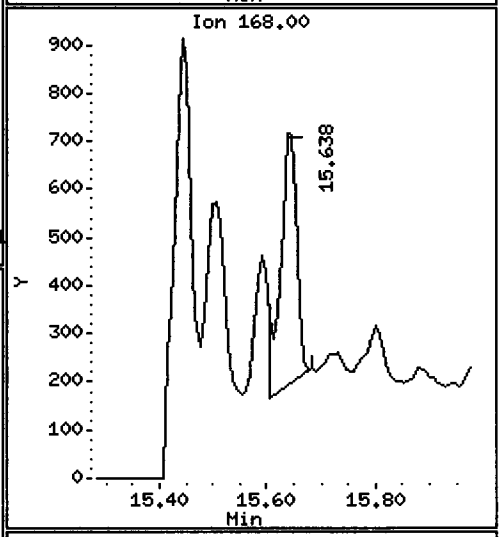
54 N-Nitrosodiphenylamine

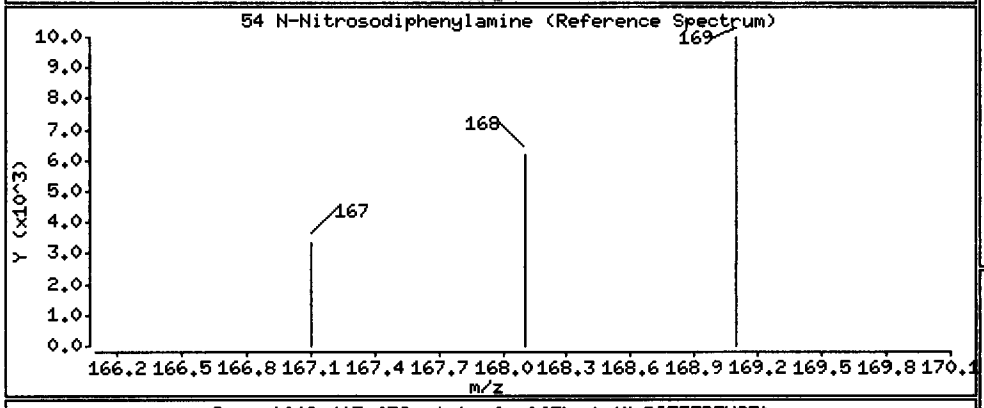
Concentration: 233.8 ug/kg

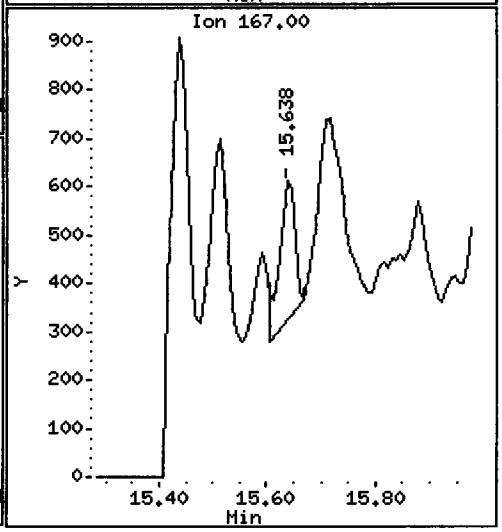


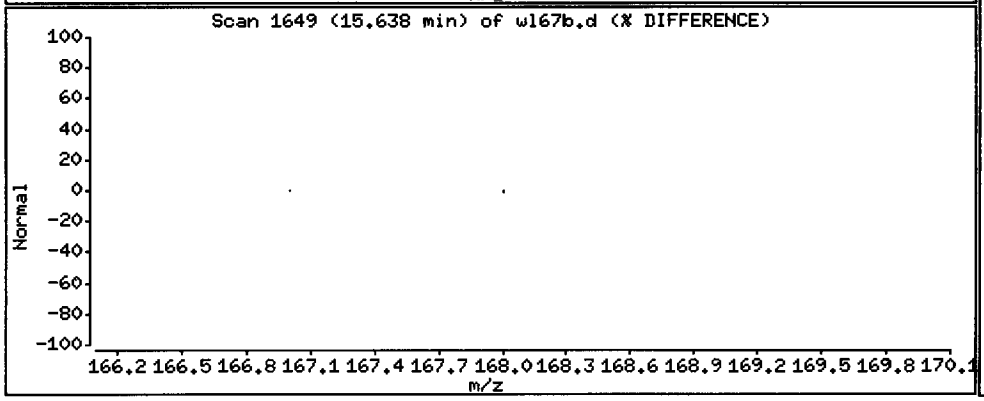












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

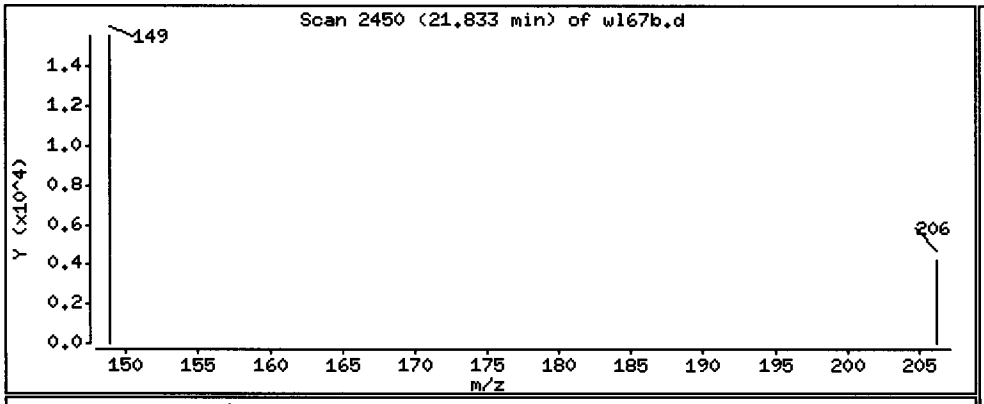
Operator: YZ

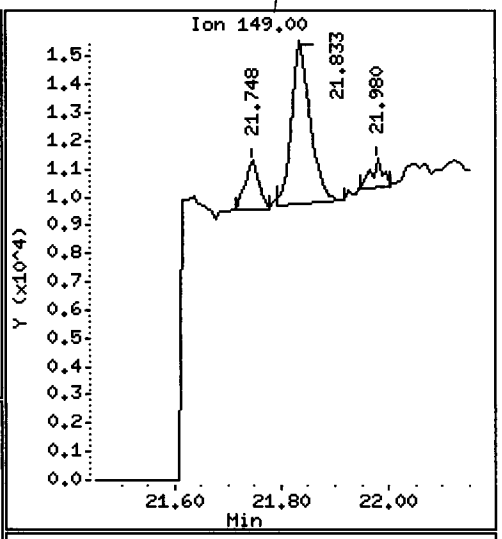
Column phase: ZB-5msi

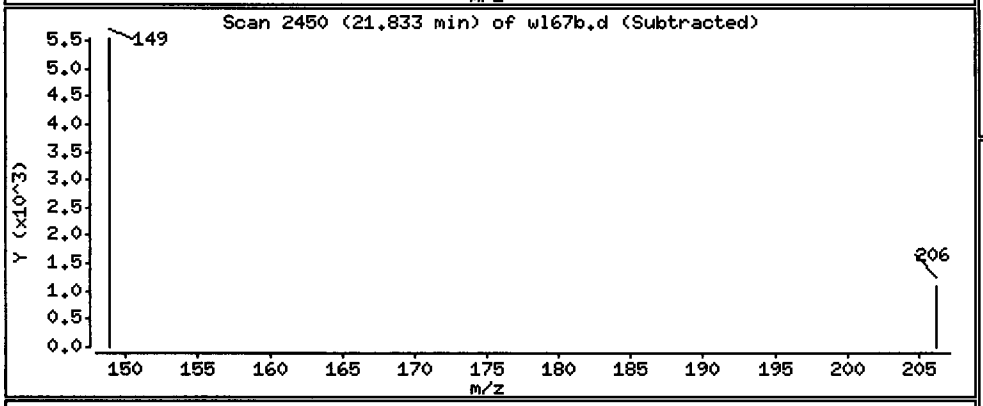
Column diameter: 0.25

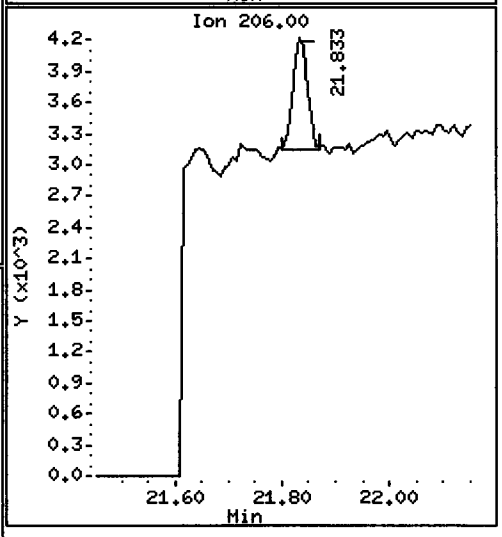
67 Butylbenzylphthalate

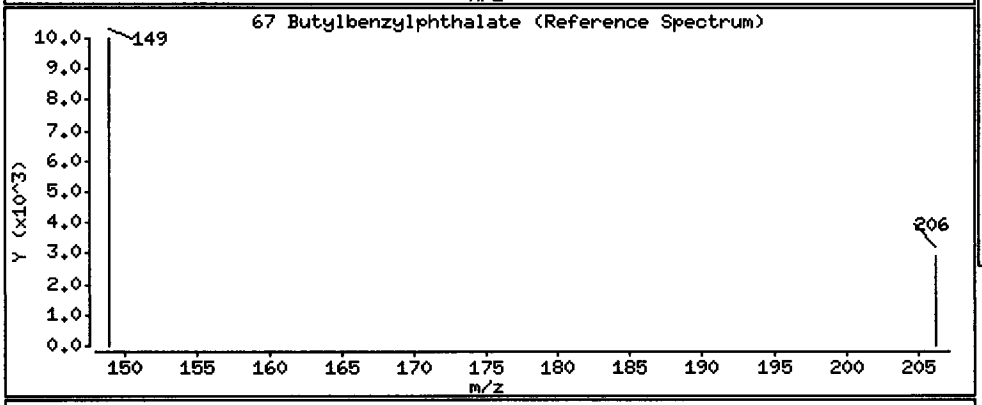
Concentration: 1274 ug/kg

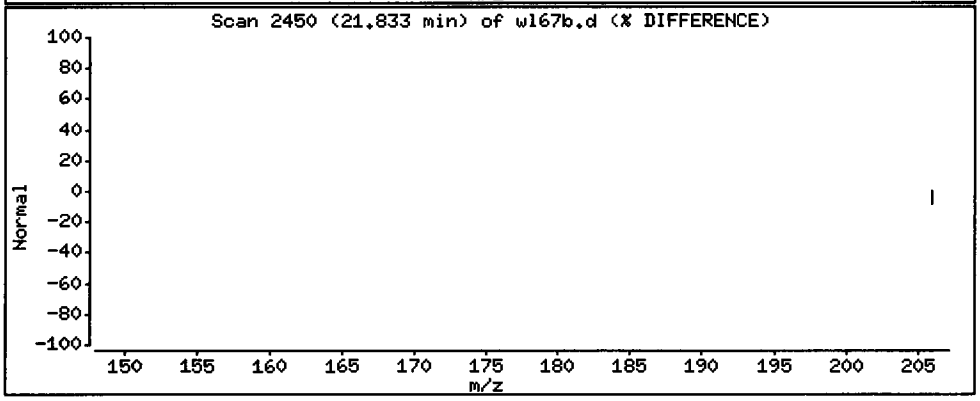












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Date : 24-APR-2013 23:18

Client ID: GR-WS-05-20130411-S

Instrument: nt10.i

Sample Info: WL67B,3

Volume Injected (uL): 1.0

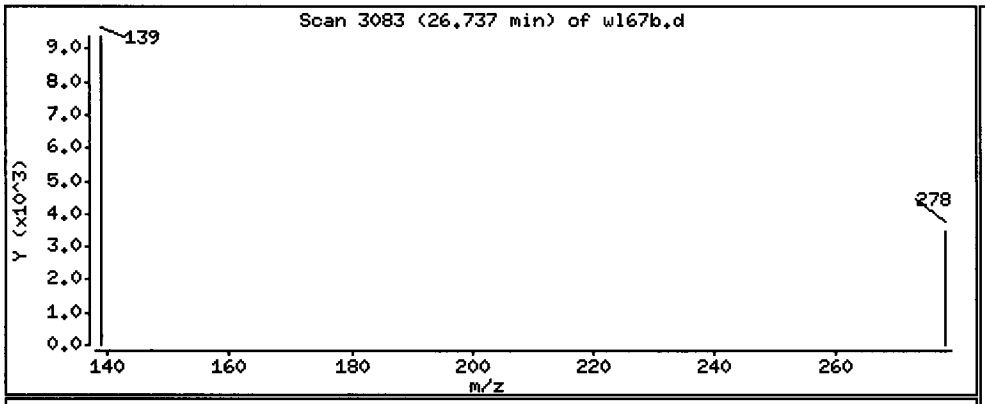
Operator: YZ

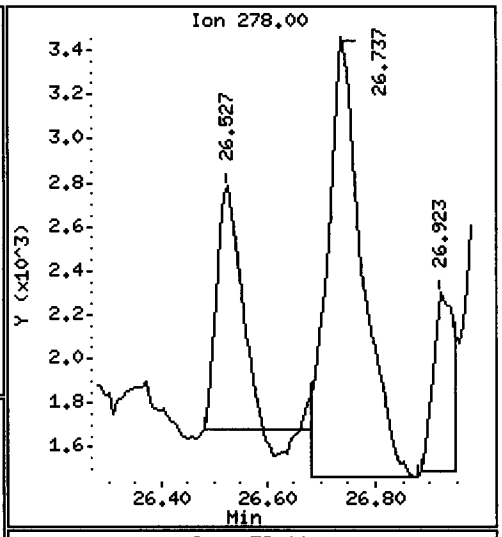
Column phase: ZB-5msi

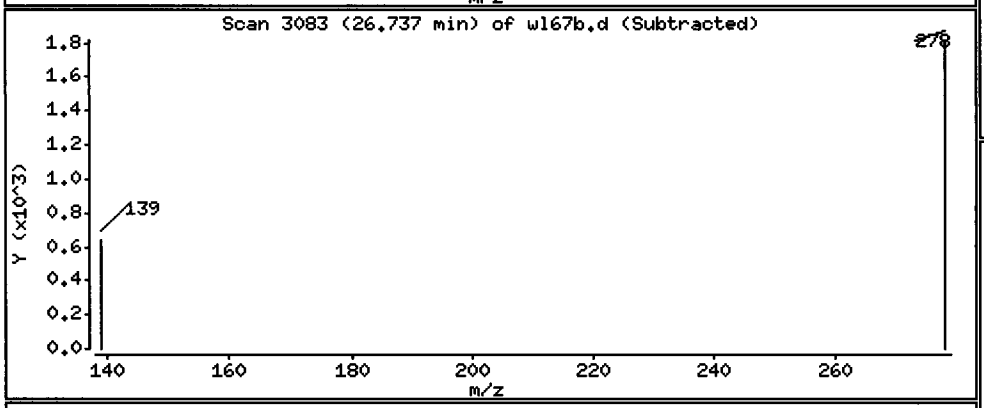
Column diameter: 0.25

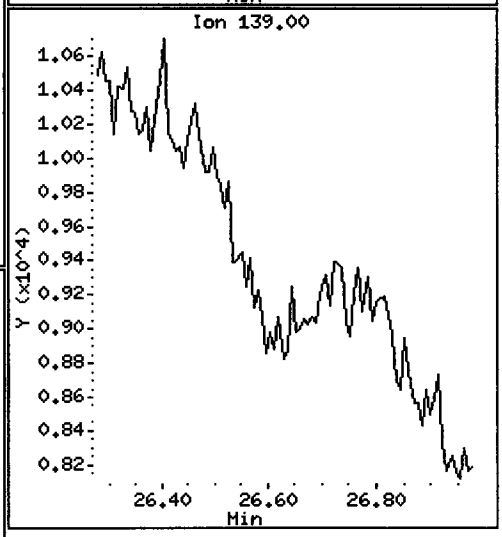
79 Dibenzo(a,h)anthracene

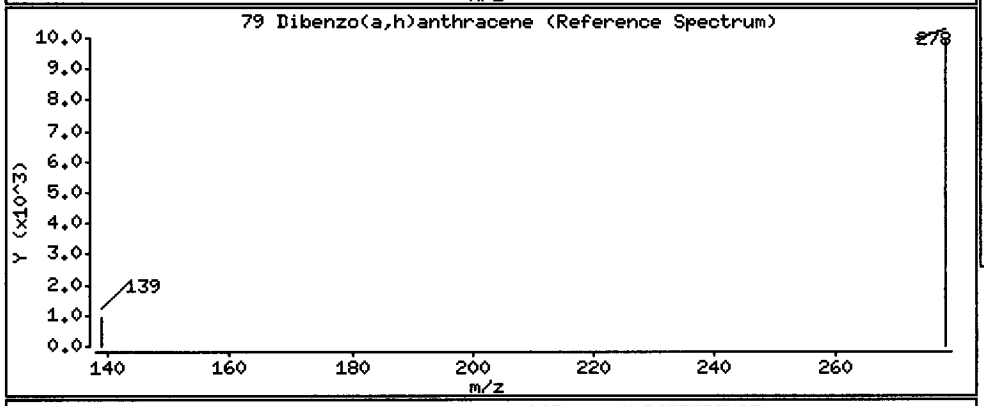
Concentration: 333.0 ug/kg

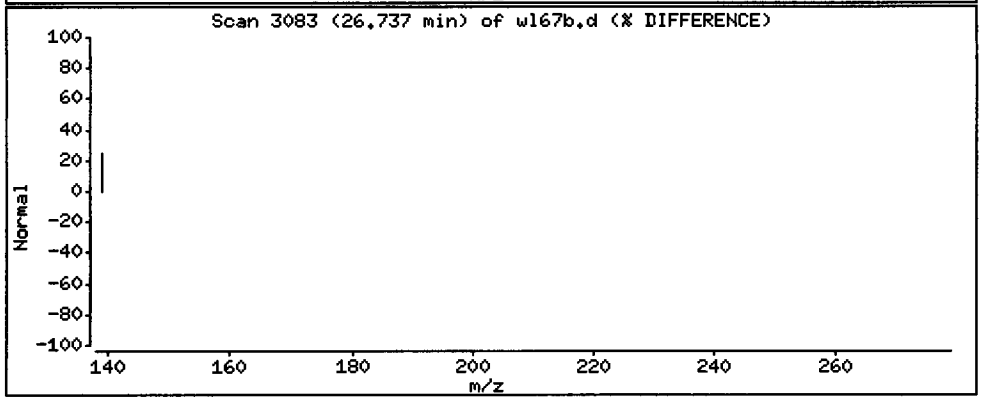






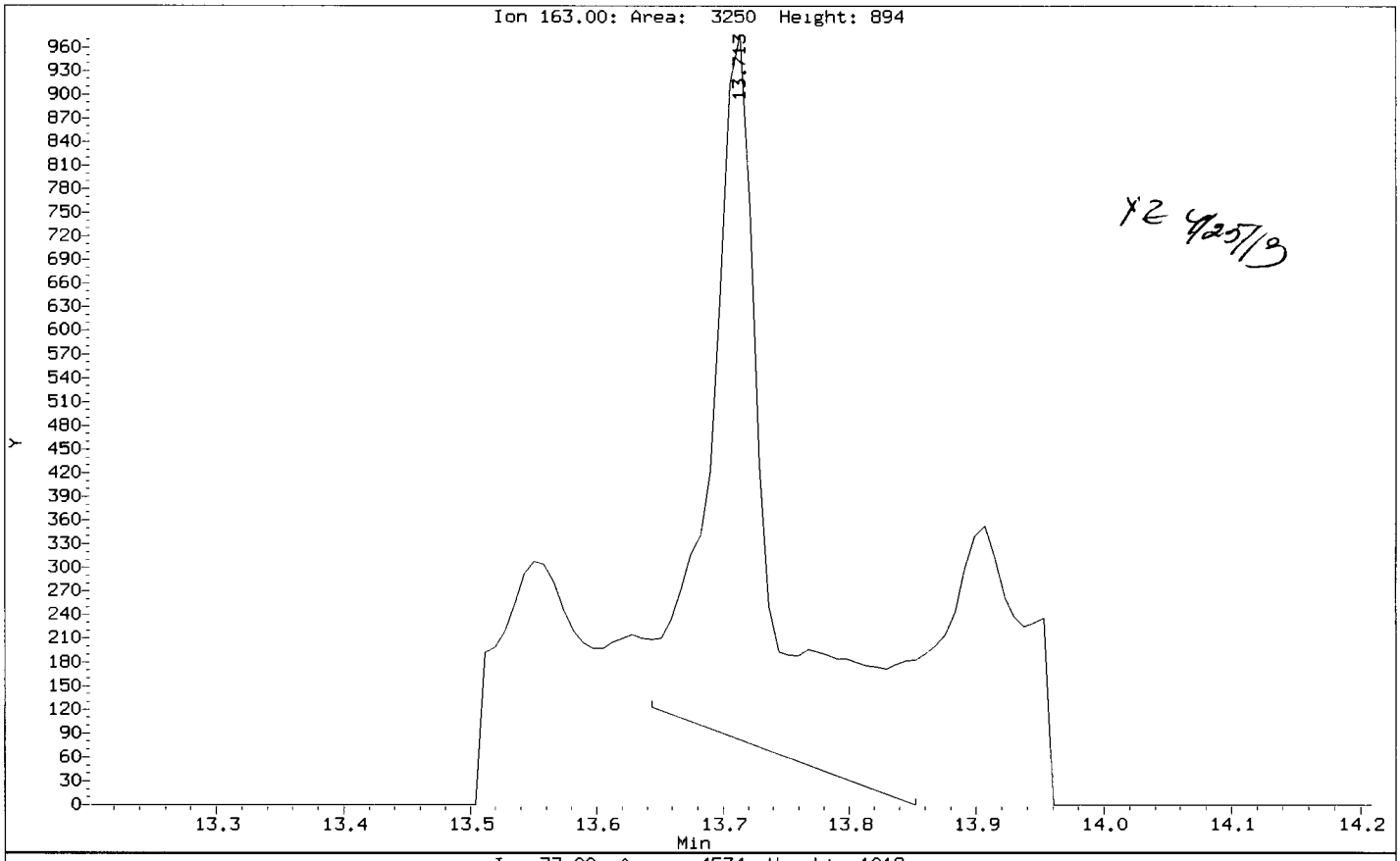




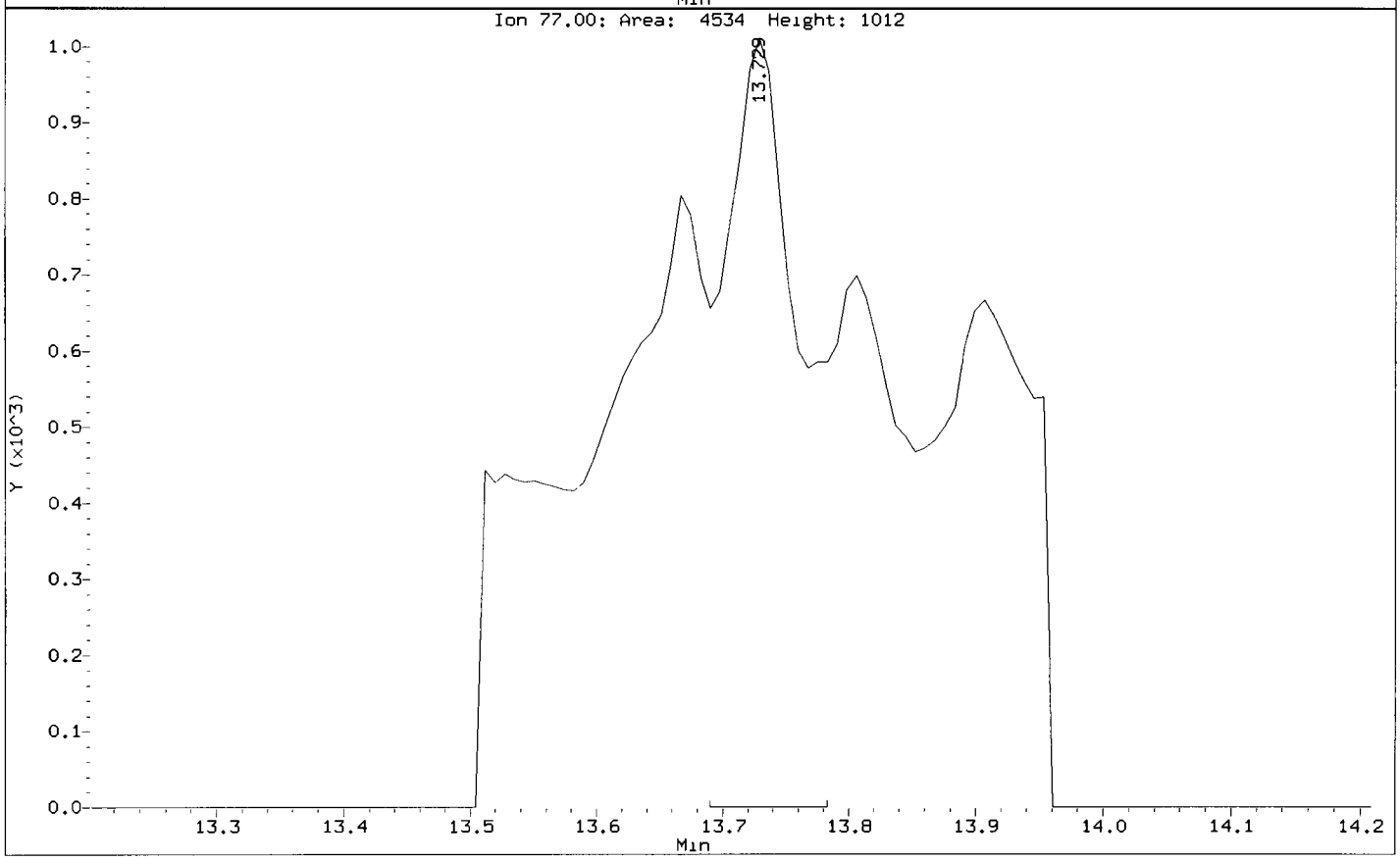


Data File: /chem1/nt10.1/20130424.b/SIM.b/w167b.d
Injection Date: 24-APR-2013 23:18
Instrument: nt10.1
Client Sample ID: GR-WS-05-20130411-S

Compound: Dimethylphthalate
CAS Number: 131-11-3

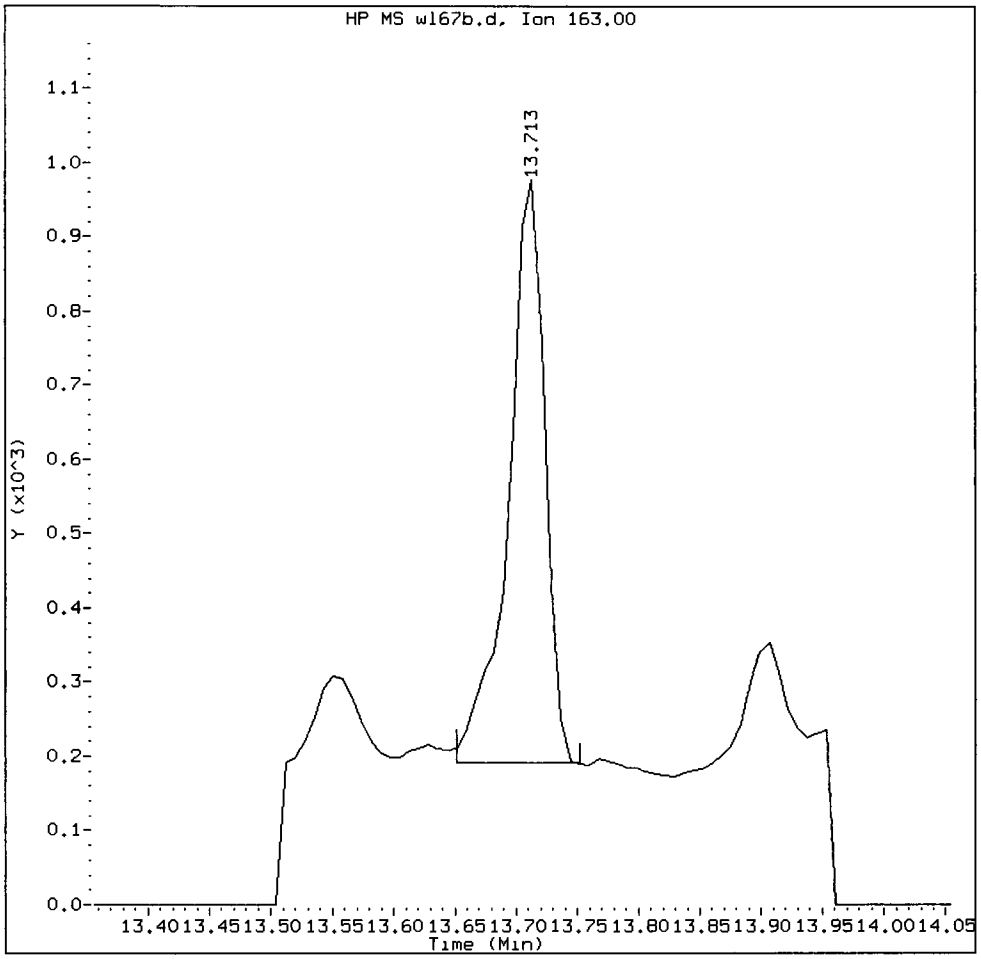


YZ 4/25/13



WL67B, /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

Dimethylphthalate Amount: 0.05 Area: 1605



MANUAL INTEGRATION for Dimethylphthalate

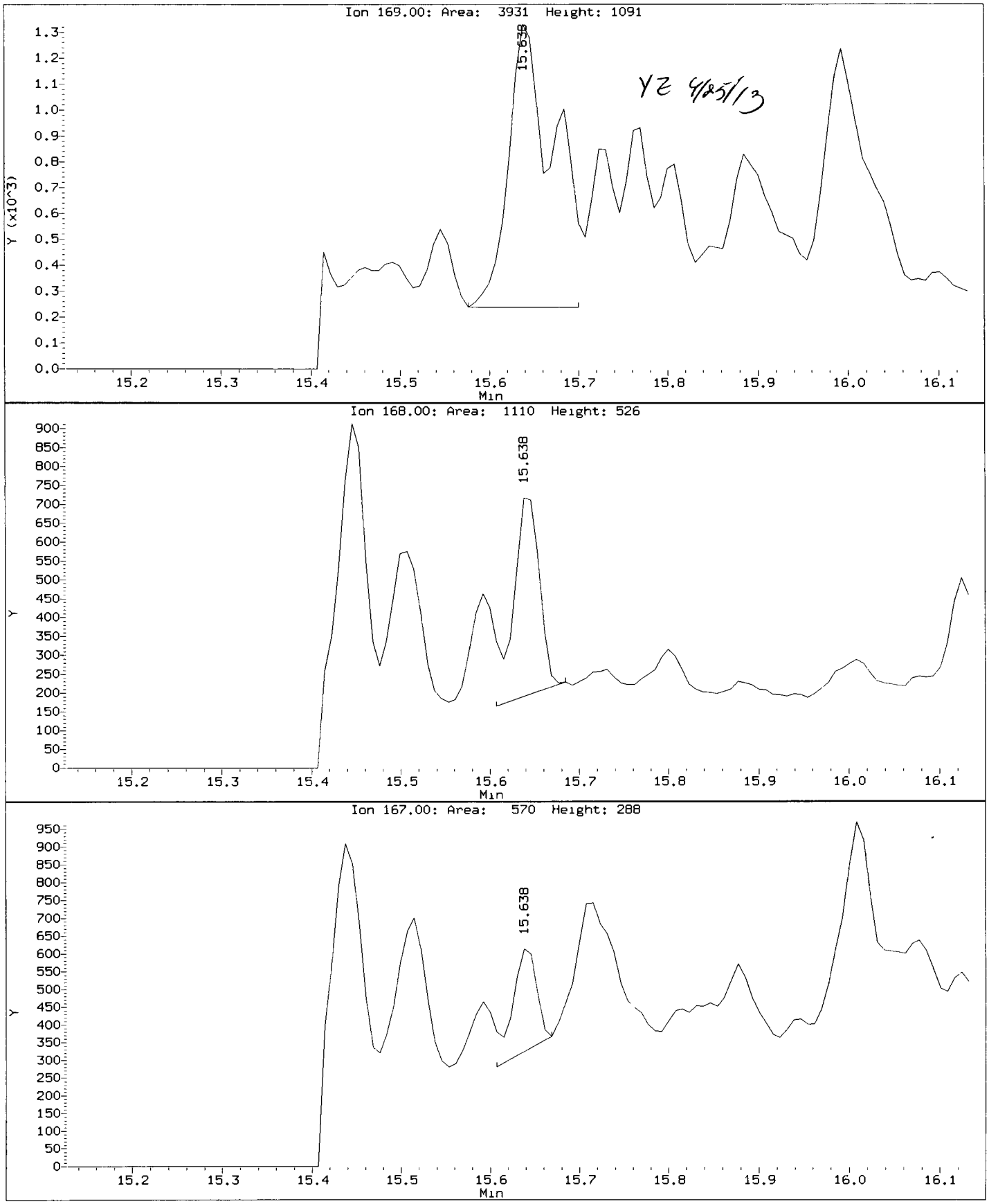
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

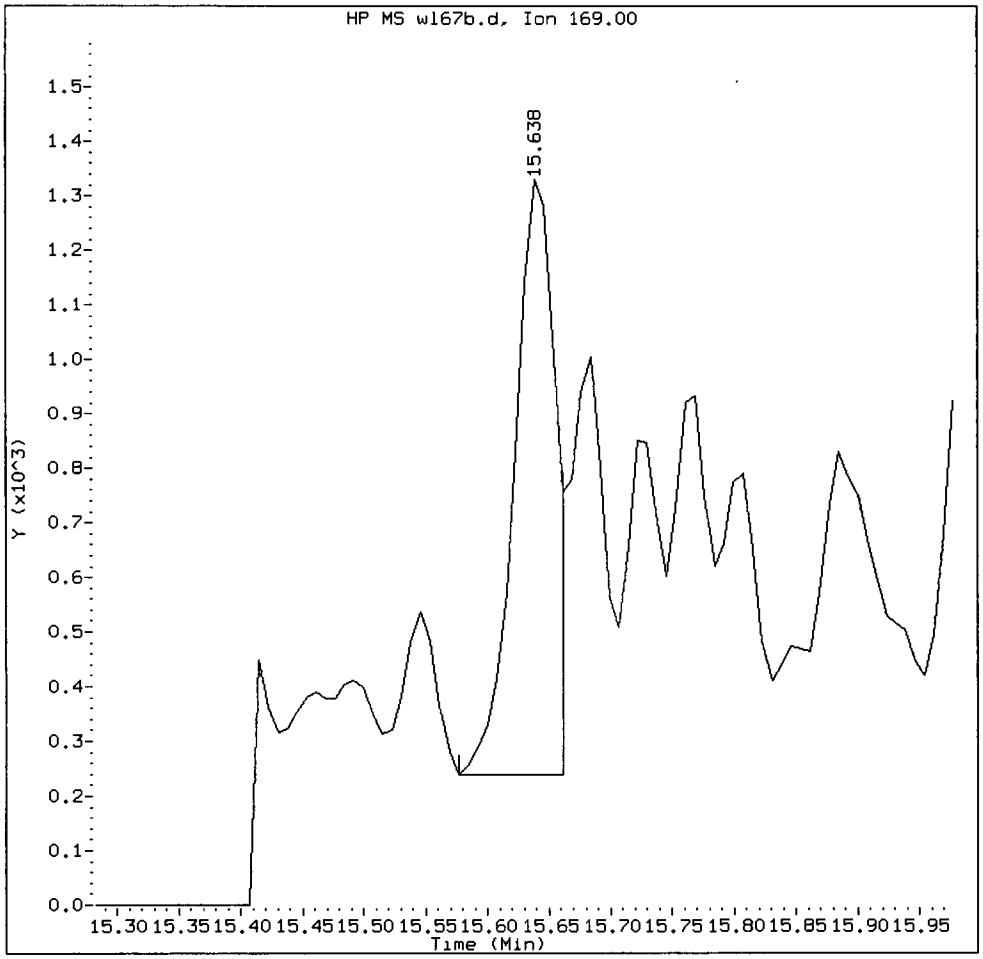
Data File: /chem1/nt10.1/20130424.b/SIM.b/w167b.d
Injection Date: 24-APR-2013 23:18
Instrument: nt10.1
Client Sample ID: GR-WS-05-20130411-S

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



WL67B, /chem1/nt10.i/20130424.b/SIM.b/wl67b.d

N-Nitrosodiphenylamine Amount: 0.13 Area: 2596



MANUAL INTEGRATION for N-Nitrosodiphenylamine

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

5. Other _____

Analyst: YZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl67b.d

Lab ID: WL67B, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Bench Sheet

(8081B) Pest PSDDA – Soil (Sed)
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 (PESSDMP)

PSDDA (1-2ppb)

ARI Job No(s) WL49, WL67 Page 1 of 1 Batch set up by: ~~SH~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 (3) very high sulfur	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID / Analyst/Date
	WL49 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave (1) 2 3
	↓ SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	YL 04/19/13 Analyst/Date
	~~SBS Dup.~~	~~12.5g~~	~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	WL49 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
7	F	12.55	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst Notes	
3	G	16.61	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
3	GMS	16.11	2.5mL	(1:2.5) 1mL	2.5mL	1mL		Analyst/Date 04/22/13
3	↓ GMSd	16.47	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups
8	WL67 A	31.12	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	↓ B	7.52	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst Notes	
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		CSZ 4/23/13 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	CSZ 4/23/13	
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
Analyst/Date TH 4/19/13			CSZ 4/23/13	CSZ 4/23/13	CSZ 4/23/13	CSZ 4/23/13		CSZ 4/23/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (2ϕ35-2)	2µg/mL	50µL	5/16/13	YL	TH
Spike	3 (2ϕ79-2)	0.5/1/5µg/mL	100µL	12/16/13	YL	TH
QLS Spike	10 (2ϕ46-2)	0.25-2.5µg/mL	25µL	12/16/13	YL	TH
Extraction Time: 12:40			Balance ID: B139298002			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 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~~ 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)

WL67 01035

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL67 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)= B= wet A= wet	AC 4-12-13
☐ Standing Water Decanted (Not shared)= A, B	
☐ Standing Water Homogenized (Shared samples)=	↓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= A= lots sticks	
☐ 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) reduced extraction weight for	
Sample 'B', based on Sample pre-screen.	JH 4/17/13

3056F

Revision 009
08/14/12

WL67:01997

Pesticide Raw Data
Initial Calibration

ARI Job ID: WL67

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): 04/05/13 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	2048-1	5/16/13	Ultra	2063-1	5/16/13
	2048-2	5/16/13		2064-1	01/17/14
	2067-1	5/16/13			
	2067-2	5/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: VZ **Date:** 4/8/13

Reviewer: VD **Date:** 4.19.13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 4/05/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1097966 Column Type:

Column 2 Serial No.: 1092392 Column Type:

GC Method: ICal Date:

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2.	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-APR-2013 11:46	0405a003.d	1	DS	
2	05-APR-2013 12:47	0405a004.d	1	INDAE	
3	05-APR-2013 13:05	0405a005.d	1	INDAA	
4	05-APR-2013 13:23	0405a006.d	1	INDAB	
5	05-APR-2013 13:41	0405a007.d	1	INDAC	
6	05-APR-2013 13:58	0405a008.d	1	INDAD	
7	05-APR-2013 14:17	0405a009.d	1	INDAF	
8	05-APR-2013 14:35	0405a010.d	1	INDAG	
9	05-APR-2013 14:53	0405a011.d	1	INDA ICV	
10	05-APR-2013 15:10	0405a012.d	1	DS	
11	05-APR-2013 15:28	0405a013.d	1	TOXAPHENE	
12	05-APR-2013 15:46	0405a014.d	1	WNDE	
13	05-APR-2013 16:04	0405a015.d	1	WNDA	
14	05-APR-2013 16:22	0405a016.d	1	WNDB	
15	05-APR-2013 16:40	0405a017.d	1	WNDC	
16	05-APR-2013 16:57	0405a018.d	1	WNDD	
17	05-APR-2013 17:15	0405a019.d	1	WNDF	
18	05-APR-2013 17:33	0405a020.d	1	WNDG	
19	05-APR-2013 17:51	0405a021.d	1	WNDICV	
20	05-APR-2013 18:09	0405a022.d	1	DS	
21	05-APR-2013 18:26	0405a023.d	1	INDAE	
22	05-APR-2013 18:44	0405a024.d	1	WNDE	
23	05-APR-2013 19:02	0405a025.d	1	TOXAPHENE	
24	05-APR-2013 19:20	0405a026.d	1	WI89F	W5
25	05-APR-2013 19:38	0405a027.d	1	WI89E	W4
26	05-APR-2013 19:55	0405a028.d	1	WI89D	W3-D
27	05-APR-2013 20:13	0405a029.d	1	WI89C	W3
28	05-APR-2013 20:31	0405a030.d	1	WI89BMSD	W2 MSD
29	05-APR-2013 20:49	0405a031.d	1	WI89BMS	W2 MS
30	05-APR-2013 21:07	0405a032.d	1	WI89B	W2
31	05-APR-2013 21:24	0405a033.d	1	WI89MBW1	WI89MBW1
32	05-APR-2013 21:42	0405a034.d	1	WI89LCSW1	WI89LCSW1
33	05-APR-2013 22:00	0405a035.d	1	WI89A	W1
34	05-APR-2013 22:18	0405a036.d	1	DS	
35	05-APR-2013 22:35	0405a037.d	1	INDAE	
36	05-APR-2013 22:53	0405a038.d	1	WNDE	
37	05-APR-2013 23:11	0405a039.d	1	TOXAPHENE	
38	05-APR-2013 23:29	0405a040.d	1	WJ10MBW1	
39	05-APR-2013 23:47	0405a041.d	1	WJ10LCSW1	
40	06-APR-2013 00:05	0405a042.d	1	WJ10LCSDW1	
41	06-APR-2013 00:22	0405a043.d	1	WJ10A	
42	06-APR-2013 00:40	0405a044.d	1	DS	
43	06-APR-2013 00:58	0405a045.d	1	INDAE	
44	06-APR-2013 01:16	0405a046.d	1	TOXAPHENE	

YZ 4/8/13

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: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a004	0405a005	0405a006	0405a007	0405a008	0405a009	0405a010
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	12:47	13:05	13:23	13:41	13:58	14:17	14:35

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.340	2.339	2.340	2.340	2.340	2.341	2.341	2.341	2.291-2.391	2.340	0.001
*	54 1Bromo-2nitrobenzene	3.165	3.164	3.164	3.165	3.165	3.165	3.165	3.165	3.115-3.215	3.165	0.000
*	58 Hexabromobiphenyl	8.980	8.979	8.979	8.979	8.979	8.980	8.980	8.979	8.929-9.029	8.979	0.001
$	2 Tetrachloro-m-xylene	3.837	3.835	3.836	3.836	3.836	3.837	3.836	3.836	3.786-3.886	3.836	0.001
	3 Hexachlorobenzene	4.181	4.178	4.179	4.179	4.179	4.180	4.179	4.179	4.129-4.229	4.179	0.001
	4 alpha-BHC	4.331	4.329	4.329	4.329	4.330	4.331	4.330	4.330	4.280-4.380	4.330	0.001
	5 gamma-BHC (Lindane)	4.617	4.614	4.615	4.615	4.615	4.616	4.615	4.615	4.565-4.665	4.615	0.001
	6 beta-BHC	4.689	4.686	4.687	4.687	4.687	4.688	4.687	4.687	4.637-4.737	4.687	0.001
	7 delta-BHC	4.860	4.858	4.858	4.859	4.858	4.859	4.858	4.858	4.808-4.908	4.859	0.001
	8 Heptachlor	5.067	5.064	5.065	5.065	5.065	5.066	5.065	5.065	5.015-5.115	5.065	0.001
	9 Aldrin	5.362	5.359	5.360	5.360	5.360	5.361	5.360	5.360	5.310-5.410	5.361	0.001
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	5.939	5.936	5.936	5.936	5.937	5.938	5.936	5.936	5.886-5.986	5.937	0.001
	12 gamma-Chlordane	6.057	6.054	6.055	6.055	6.055	6.056	6.055	6.055	6.005-6.105	6.055	0.001
	13 alpha-Chlordane	6.182	6.179	6.180	6.180	6.179	6.181	6.180	6.180	6.130-6.230	6.180	0.001
	14 Endosulfan I	6.316	6.314	6.314	6.314	6.314	6.315	6.315	6.315	6.265-6.365	6.315	0.001

Reviewer 1 YL Date: 4/8/13
Reviewer 2 _____ Date: _____

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Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.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	6.236	6.232	6.233	6.233	6.233	6.236	6.235	6.235	6.185-6.285	6.234	0.002
16 Dieldrin	6.539	6.537	6.537	6.537	6.537	6.538	6.537	6.537	6.487-6.587	6.537	0.001
17 Endrin	6.758	6.755	6.756	6.756	6.755	6.757	6.756	6.756	6.706-6.806	6.756	0.001
18 4,4'-DDD	6.792	6.789	6.790	6.790	6.790	6.792	6.791	6.791	6.741-6.841	6.791	0.001
19 Endosulfan II	6.962	6.961	6.961	6.961	6.960	6.962	6.961	6.961	6.911-7.011	6.961	0.001
20 4,4'-DDT	7.050	7.048	7.048	7.048	7.049	7.050	7.049	7.049	6.999-7.099	7.049	0.001
21 Endrin aldehyde	7.341	7.338	7.339	7.339	7.339	7.340	7.338	7.338	7.288-7.388	7.339	0.001
22 Methoxychlor	7.474	7.473	7.473	7.473	7.472	7.474	7.474	7.474	7.424-7.524	7.473	0.001
23 Endosulfan sulfate	7.731	7.729	7.729	7.729	7.729	7.731	7.729	7.729	7.679-7.779	7.730	0.001
24 Endrin ketone	7.986	7.985	7.985	7.985	7.985	7.986	7.985	7.985	7.935-8.035	7.985	0.001
$ 25 Decachlorobiphenyl	8.832	8.830	8.831	8.831	8.830	8.832	8.831	8.831	8.781-8.881	8.831	0.001
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.012	6.962-7.062	+++++	+++++
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.911	5.861-5.961	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a004	0405a005	0405a006	0405a007	0405a008	0405a009	0405a010
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	12:47	13:05	13:23	13:41	13:58	14:17	14:35

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.496	2.496	2.496	2.496	2.496	2.497	2.497	2.496	2.446-2.546	2.496	0.001
* 52 1Bromo-2nitrobenzene	3.333	3.333	3.333	3.333	3.334	3.333	3.333	3.333	3.283-3.383	3.333	0.000
* 55 Hexabromobiphenyl	10.368	10.366	10.367	10.367	10.368	10.368	10.367	10.368	10.318-10.418	10.367	0.001
$ 2 Tetrachloro-m-xylene	4.166	4.165	4.165	4.166	4.166	4.167	4.169	4.166	4.116-4.216	4.166	0.001
3 Hexachlorobenzene	4.629	4.628	4.628	4.628	4.629	4.630	4.629	4.629	4.579-4.679	4.629	0.001
4 alpha-BHC	4.756	4.754	4.755	4.755	4.755	4.756	4.756	4.756	4.706-4.806	4.755	0.001
5 gamma-BHC (Lindane)	5.116	5.114	5.114	5.115	5.115	5.116	5.116	5.116	5.066-5.166	5.115	0.001
6 beta-BHC	5.186	5.184	5.184	5.185	5.185	5.186	5.185	5.186	5.136-5.236	5.185	0.001
7 delta-BHC	5.499	5.497	5.498	5.498	5.498	5.499	5.499	5.499	5.449-5.549	5.498	0.001
8 Heptachlor	5.582	5.580	5.581	5.581	5.581	5.582	5.582	5.582	5.532-5.632	5.581	0.001
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.921	5.919	5.919	5.920	5.920	5.921	5.921	5.921	5.871-5.971	5.920	0.001
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.476	6.474	6.474	6.475	6.475	6.476	6.476	6.476	6.426-6.526	6.475	0.001
12 gamma-Chlordane	6.658	6.656	6.656	6.657	6.657	6.658	6.657	6.658	6.608-6.708	6.657	0.001
13 alpha-Chlordane	6.796	6.794	6.795	6.795	6.795	6.796	6.795	6.796	6.746-6.846	6.795	0.001
14 Endosulfan I	6.863	6.861	6.862	6.862	6.862	6.863	6.863	6.863	6.813-6.913	6.862	0.001

Reviewer 1 YZ Date: 4/8/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.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	6.921	6.918	6.919	6.919	6.920	6.921	6.920	6.921	6.871-6.971	6.920	0.001
	16 Dieldrin	7.121	7.119	7.120	7.120	7.120	7.121	7.121	7.121	7.071-7.171	7.120	0.001
	17 Endrin	7.411	7.409	7.409	7.410	7.409	7.411	7.410	7.411	7.361-7.461	7.410	0.001
	18 4,4'-DDD	7.458	7.456	7.456	7.457	7.457	7.458	7.458	7.458	7.408-7.508	7.457	0.001
	19 Endosulfan II	7.599	7.597	7.597	7.597	7.598	7.598	7.599	7.599	7.549-7.649	7.598	0.001
	20 4,4'-DDT	7.746	7.744	7.745	7.745	7.745	7.746	7.745	7.746	7.696-7.796	7.745	0.001
	21 Endrin aldehyde	7.896	7.895	7.895	7.896	7.895	7.896	7.895	7.896	7.846-7.946	7.895	0.001
	22 Endosulfan sulfate	8.141	8.139	8.140	8.140	8.140	8.141	8.140	8.141	8.091-8.191	8.140	0.001
	23 Methoxychlor	8.328	8.327	8.327	8.327	8.327	8.328	8.330	8.328	8.278-8.378	8.328	0.001
	24 Endrin ketone	8.633	8.632	8.632	8.632	8.632	8.633	8.633	8.633	8.583-8.683	8.632	0.001
$	25 Decachlorobiphenyl	9.796	9.794	9.795	9.795	9.794	9.795	9.795	9.796	9.746-9.846	9.795	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.131	7.081-7.181	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.432	6.382-6.482	+++++	+++++

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Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a014	0405a015	0405a016	0405a017	0405a018	0405a019	0405a020
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	15:46	16:04	16:22	16:40	16:57	17:15	17:33

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.341	2.291-2.391	+++++	+++++
*	54 1Bromo-2nitrobenzene	3.165	3.165	3.165	3.165	3.165	3.165	3.164	3.165	3.115-3.215	3.165	0.000
*	58 Hexabromobiphenyl	8.979	8.979	8.979	8.979	8.979	8.979	8.978	8.979	8.929-9.029	8.979	0.000
$	2 Tetrachloro-m-xylene	3.836	3.836	3.836	3.836	3.836	3.836	3.836	3.836	3.786-3.886	3.836	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.179	4.129-4.229	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.330	4.280-4.380	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.615	4.565-4.665	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.687	4.637-4.737	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.858	4.808-4.908	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.065	5.015-5.115	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.360	5.310-5.410	+++++	+++++
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.936	5.886-5.986	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.055	6.005-6.105	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.180	6.130-6.230	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.315	6.265-6.365	+++++	+++++

Reviewer 1 YZ Date: 4/8/13
Reviewer 2 _____ Date: _____

5130-15-15th

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.235	6.185-6.285	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.537	6.487-6.587	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.756	6.706-6.806	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.791	6.741-6.841	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.961	6.911-7.011	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.049	6.999-7.099	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.338	7.288-7.388	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.474	7.424-7.524	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.729	7.679-7.779	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.985	7.935-8.035	+++++	+++++
$	25 Decachlorobiphenyl	8.831	8.831	8.830	8.830	8.830	8.830	8.830	8.831	8.781-8.881	8.830	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.012	6.962-7.062	+++++	+++++
	39 2,4-DDE	5.911	5.911	5.911	5.911	5.910	5.911	5.911	5.911	5.861-5.961	5.911	0.000

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Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.398	6.398	6.398	6.398	6.397	6.398	6.397	6.397	6.347-6.447	6.398	0.000
41 2,4-DDT	6.637	6.637	6.638	6.637	6.637	6.637	6.636	6.636	6.586-6.686	6.637	0.000
42 Hexachloroethane	1.736	1.732	1.726	1.757	1.756	1.756	1.754	1.754	1.704-1.804	1.745	0.013
43 Oxychlordane	5.840	5.840	5.840	5.840	5.840	5.840	5.840	5.840	5.790-5.890	5.840	0.000
44 trans-Nonachlor	6.162	6.162	6.162	6.162	6.162	6.162	6.162	6.162	6.112-6.212	6.162	0.000
45 cis-Nonachlor	6.778	6.779	6.778	6.778	6.778	6.778	6.778	6.778	6.728-6.828	6.778	0.000
46 Mirex	7.653	7.653	7.653	7.653	7.653	7.653	7.653	7.653	7.603-7.703	7.653	0.000
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/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0405a014	0405a015	0405a016	0405a017	0405a018	0405a019	0405a020
INJ.DATE:	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013	05-APR-2013
INJ.TIME:	15:46	16:04	16:22	16:40	16:57	17:15	17:33

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.497	2.447-2.547	+++++	+++++
*	52 1Bromo-2nitrobenzene	3.334	3.333	3.333	3.333	3.333	3.333	3.332	3.334	3.284-3.384	3.333	0.000
*	55 Hexabromobiphenyl	10.366	10.367	10.368	10.367	10.366	10.366	10.366	10.366	10.316-10.416	10.366	0.001
$	2 Tetrachloro-m-xylene	4.166	4.165	4.166	4.165	4.166	4.166	4.167	4.169	4.119-4.219	4.166	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.629	4.579-4.679	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.756	4.706-4.806	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.116	5.066-5.166	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.185	5.135-5.235	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.499	5.449-5.549	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.582	5.532-5.632	+++++	+++++
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.921	5.871-5.971	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.476	6.426-6.526	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.657	6.607-6.707	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.795	6.745-6.845	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.863	6.813-6.913	+++++	+++++

Reviewer 1 yz Date: 4/8/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.920	6.870-6.970	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.121	7.071-7.171	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.410	7.360-7.460	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.458	7.408-7.508	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.599	7.549-7.649	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.696-7.795	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.895	7.845-7.945	+++++	+++++
	22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.140	8.090-8.190	+++++	+++++
	23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.330	8.280-8.380	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.633	8.583-8.683	+++++	+++++
$	25 Decachlorobiphenyl	9.794	9.794	9.796	9.794	9.794	9.794	9.795	9.795	9.745-9.845	9.794	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.344	7.294-7.394	+++++	+++++
	38 2,4-DDE	6.631	6.631	6.631	6.631	6.630	6.631	6.631	6.631	6.581-6.681	6.631	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.115	7.115	7.115	7.115	7.115	7.115	7.115	7.115	7.065-7.165	7.115	0.000
40 2,4-DDT	7.403	7.403	7.403	7.403	7.402	7.404	7.404	7.403	7.353-7.453	7.403	0.000
41 Hexachloroethane	1.731	1.734	1.734	1.737	1.735	1.732	1.732	1.731	1.681-1.781	1.734	0.002
42 Oxychlordane	6.385	6.384	6.384	6.384	6.384	6.385	6.385	6.385	6.335-6.435	6.384	0.000
43 trans-Nonachlor	6.741	6.741	6.741	6.741	6.740	6.741	6.741	6.741	6.691-6.791	6.741	0.000
44 cis-Nonachlor	7.465	7.465	7.465	7.464	7.464	7.465	7.465	7.465	7.415-7.515	7.465	0.000
45 Mirex	8.619	8.619	8.619	8.619	8.618	8.619	8.619	8.619	8.569-8.669	8.619	0.000
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 : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a015.d
Level 2: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a016.d
Level 3: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a017.d
Level 4: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a018.d
Level 5: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a014.d
Level 6: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a019.d
Level 7: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a020.d
Level 8: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a013.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.86412	1.76558	1.75954	1.71114	2.08197	1.99212		
	1.78783	+++++					1.85176	7.399
3 Hexachlorobenzene	1.38358	1.28363	1.24997	1.17654	1.38333	1.32436		
	1.17366	+++++					1.28215	6.849
4 alpha-BHC	1.58499	1.57280	1.64100	1.63674	2.03978	2.01414		
	1.82763	+++++					1.75958	11.425
5 gamma-BHC (Lindane)	1.45746	1.43950	1.49170	1.47883	1.82712	1.79783		
	1.62419	+++++					1.58809	10.372
6 beta-BHC	0.75156	0.70098	0.67868	0.64327	0.76675	0.73767		
	0.65579	+++++					0.70496	6.849
7 delta-BHC	1.41663	1.40250	1.46228	1.46046	1.82032	1.78467		
	1.61615	+++++					1.56614	11.241

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 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	1.47349	1.42706	1.45263	1.42228	1.73482	1.66896		
	1.47535	+++++					1.52208	8.275
9 Aldrin	1.40325	1.37786	1.40681	1.39200	1.72260	1.66943		
	1.48100	+++++					1.49328	9.585
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.39423	1.30165	1.30500	1.25720	1.53316	1.46726		
	1.29569	+++++					1.36488	7.545
12 gamma-Chlordane	1.36187	1.31575	1.31220	1.28261	1.58008	1.53695		
	1.37607	+++++					1.39508	8.361
13 alpha-Chlordane	1.35457	1.28201	1.27423	1.23035	1.50336	1.45331		
	1.29520	+++++					1.34186	7.541
14 Endosulfan I	1.27164	1.20775	1.19567	1.15176	1.40842	1.34368		
	1.18836	+++++					1.25247	7.468
15 4,4'-DDE	1.04917	1.00567	1.01136	0.98255	1.22472	1.19885		
	1.10321	+++++					1.08222	8.948

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 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	1.25469	1.23247	1.25397	1.22951	1.51636	1.45727		
	1.30179	+++++					1.32086	8.861
17 Endrin	1.22875	1.14838	1.17430	1.13567	1.42634	1.37547		
	1.19929	+++++					1.24117	9.212
18 4,4'-DDD	1.15755	1.09126	1.11675	1.07991	1.34305	1.32431		
	1.17095	+++++					1.18340	9.115
19 Endosulfan II	1.29578	1.20341	1.21232	1.15589	1.42367	1.39601		
	1.21493	+++++					1.27171	8.118
20 4,4'-DDT	1.17187	1.09730	1.11364	1.06913	1.33682	1.33220		
	1.18103	+++++					1.18600	9.179
21 Endrin aldehyde	1.09106	1.00151	0.99855	0.94279	1.15274	1.13516		
	0.98906	+++++					1.04441	7.767
22 Methoxychlor	0.62189	0.56482	0.55745	0.52922	0.65567	0.64731		
	0.58770	+++++					0.59487	8.074
23 Endosulfan sulfate	1.16358	1.06607	1.06515	1.00984	1.24528	1.22355		
	1.07475	+++++					1.12118	8.011
24 Endrin ketone	1.50306	1.35374	1.32941	1.25572	1.54293	1.52396		
	1.34556	+++++					1.40777	8.042

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 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)	+++++	+++++	+++++	+++++	0.05148	+++++		
	+++++	0.05148					0.05148	0.000
(2)	+++++	+++++	+++++	+++++	0.03504	+++++		
	+++++	+++++					0.03504	0.000
(3)	+++++	+++++	+++++	+++++	0.05882	+++++		
	+++++	+++++					0.05882	0.000
(4)	+++++	+++++	+++++	+++++	0.05933	+++++		
	+++++	+++++					0.05933	0.000
(5)	+++++	+++++	+++++	+++++	0.03915	+++++		
	+++++	+++++					0.03915	0.000
(6)	+++++	+++++	+++++	+++++	0.03361	+++++		
	+++++	+++++					0.03361	0.000
39 2,4-DDE	0.97037	0.94494	0.94800	0.97255	0.90349	1.01619		
	0.84262	+++++					0.94259	5.914
40 2,4-DDD	0.86428	0.82066	0.81941	0.83423	0.77745	0.89463		
	0.76053	+++++					0.82446	5.633
41 2,4-DDT	0.97762	0.93181	0.93450	0.95197	0.89630	1.03633		
	0.87037	+++++					0.94270	5.752

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.29181	1.24713	1.25548	1.27408	1.19753	1.36047		
	1.13536	+++++					1.25169	5.691
44 trans-Nonachlor	1.52831	1.46845	1.47524	1.51266	1.42527	1.63694		
	1.39053	+++++					1.49105	5.361
45 cis-Nonachlor	1.60364	1.52966	1.54573	1.59353	1.51117	1.75011		
	1.49805	+++++					1.57598	5.479
46 Mirex	1.06476	0.97851	0.94279	0.93019	0.85718	0.98037		
	0.83485	+++++					0.94124	8.308
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 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	1.22093	1.17519	1.17086	1.12023	1.33214	1.27457		
	1.13000	+++++					1.20342	6.446
$ 25 Decachlorobiphenyl	1.22712	1.39221	1.18347	1.03855	1.18904	1.14719		
	0.99666	+++++					1.16775	11.110

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a015.d
Level 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a016.d
Level 3: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a017.d
Level 4: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a018.d
Level 5: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a014.d
Level 6: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a019.d
Level 7: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a020.d
Level 8: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a013.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.68966	1.54770	1.52497	1.44719	1.51551	1.56884		
	1.43229	+++++					1.53231	5.583
3 Hexachlorobenzene	1.85432	1.77150	1.76373	1.68524	1.96131	1.87809		
	1.63888	+++++					1.79330	6.276
4 alpha-BHC	1.70138	1.75567	1.85342	1.87497	2.23583	2.20600		
	2.00018	+++++					1.94678	10.779
5 gamma-BHC (Lindane)	1.54386	1.55958	1.62894	1.63777	1.95411	1.92482		
	1.74555	+++++					1.71352	9.792
6 beta-BHC	0.75150	0.73780	0.73159	0.71129	0.83666	0.82054		
	0.72405	+++++					0.75906	6.493
7 delta-BHC	1.48508	1.50559	1.58354	1.59180	1.87744	1.86008		
	1.68038	+++++					1.65484	9.633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 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	1.53588	1.52969	1.56029	1.54097	1.79481	1.70711		
	1.45373	+++++					1.58893	7.450
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.37926	1.37037	1.39862	1.38737	1.64212	1.58534		
	1.37709	+++++					1.44860	7.893
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.27602	1.21672	1.22365	1.19040	1.39603	1.33591		
	1.14610	+++++					1.25497	6.928
12 gamma-Chlordane	1.23139	1.20522	1.21707	1.19590	1.40625	1.37528		
	1.20954	+++++					1.26295	7.003
13 alpha-Chlordane	1.15386	1.12660	1.12460	1.10005	1.29194	1.25884		
	1.10159	+++++					1.16535	6.683
14 Endosulfan I	1.07598	1.05971	1.06310	1.03937	1.21798	1.18434		
	1.01792	+++++					1.09406	6.957
15 4,4'-DDE	1.07231	1.07330	1.09778	1.07854	1.24866	1.20322		
	1.05591	+++++					1.11853	6.753

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 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	1.06871	1.06342	1.07850	1.05724	1.22625	1.17015		
	1.02268	+++++					1.09813	6.590
17 Endrin	2.17870	2.04807	2.09589	2.02185	2.57180	2.33640		
	1.95604	+++++					2.17268	9.894
18 4,4'-DDD	2.26082	2.14565	2.20459	2.13439	2.69106	2.51434		
	2.14488	+++++					2.29939	9.475
19 Endosulfan II	2.43748	2.28049	2.30366	2.19551	2.75928	2.56341		
	2.16454	+++++					2.38634	8.999
20 4,4'-DDT	2.05904	1.93083	1.97799	1.92012	2.39796	2.30287		
	2.02246	+++++					2.08733	9.013
21 Endrin aldehyde	1.93356	1.79284	1.80285	1.72269	2.16235	2.03164		
	1.72866	+++++					1.88208	8.858
22 Endosulfan sulfate	1.98303	1.84581	1.87837	1.81411	2.30559	2.17756		
	1.86710	+++++					1.98165	9.522
23 Methoxychlor	0.94203	0.85843	0.85236	0.79685	0.99291	0.93147		
	0.68248	+++++					0.86522	12.018
24 Endrin ketone	2.08253	1.92427	1.93089	1.84154	2.31127	2.19456		
	1.90367	+++++					2.02696	8.577

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.07348	+++++		
	+++++	+++++					0.07348	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 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)	+++++	+++++	+++++	+++++	0.10995	+++++		
	+++++	+++++					0.10995	0.000
(3)	+++++	+++++	+++++	+++++	0.11751	+++++		
	+++++	+++++					0.11751	0.000
(4)	+++++	+++++	+++++	+++++	0.08491	+++++		
	+++++	+++++					0.08491	0.000
(5)	+++++	+++++	+++++	+++++	0.10752	+++++		
	+++++	+++++					0.10752	0.000
38 2,4-DDE	0.81007	0.79245	0.77739	0.77920	0.72189	0.78749		
	0.64847	+++++					0.75957	7.385
39 2,4-DDD	1.72533	1.60231	1.59340	1.62587	1.55489	1.72186		
	1.43911	+++++					1.60897	6.144
40 2,4-DDT	1.78286	1.67947	1.68200	1.72632	1.65914	1.86011		
	1.56080	+++++					1.70724	5.589
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05125	1.04120	1.03502	1.04960	0.98900	1.10930		
	0.95840	+++++					1.03340	4.674

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 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	3.19206	3.05137	3.06372	3.12225	2.97977	3.28562		
	2.78344	+++++					3.06832	5.234
44 cis-Nonachlor	2.98886	2.83553	2.88674	2.93078	2.81218	3.13506		
	2.69727	+++++					2.89806	4.823
45 Mirex	1.50918	1.37059	1.31068	1.29630	1.22446	1.36347		
	1.17545	+++++					1.32145	8.226
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 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	1.45811	1.42532	1.42159	1.36019	1.57240	1.47902		
	1.18841	+++++					1.41501	8.423
$ 25 Decachlorobiphenyl	2.07956	1.87920	1.82822	1.70015	2.10612	1.97368		
	1.71032	+++++					1.89675	8.652

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a004.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a004.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 05-APR-2013 12:47
Report Date: 04/08/2013 11:23
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
3.165	0.001	5448520	3.333	0.001	21702340	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	2778447	4.756	0.000	12130669	23.1848	22.9695	0.9	alpha-BHC
4.689	0.002	1044408	5.186	0.001	4539393	21.7530	22.0447	1.3	beta-BHC
4.860	0.002	2479509	5.499	0.000	10186203	23.2458	22.6902	2.4	delta-BHC
4.617	0.002	2488780	5.116	0.000	10602173	23.0103	22.8081	0.9	gamma-BHC (Lindane)
5.067	0.002	2363050	5.582	0.000	9737910	22.7953	22.5915	0.9	Heptachlor
5.362	0.002	2346404	5.921	0.001	8909469	23.0714	22.5100	2.5	Aldrin
5.939	0.003	2088367	6.476	0.000	7574285	22.4658	20.8988	7.2	Heptachlor epoxide b
6.316	0.002	1918451	6.863	0.001	6608262	22.4903	20.9671	7.0	Endosulfan I
6.539	0.002	4130946	7.121	0.000	13306230	45.9201	42.4171	7.9	Dieldrin
6.236	0.001	3336461	6.921	0.000	13549372	45.2671	42.4999	6.3	4,4'-DDE
6.758	0.001	3428854	7.411	0.001	9877928	45.9676	46.5304	1.2	Endrin
6.962	0.002	3422424	7.599	0.000	10598036	44.7794	45.4490	1.5	Endosulfan II
6.792	0.002	3228623	7.458	0.000	10335979	45.3964	46.0101	1.3	4,4'-DDD
7.731	0.001	2993586	8.141	0.001	8855445	44.4276	45.7410	2.9	Endosulfan sulfate
7.050	0.001	3213661	7.746	0.001	9210229	45.0869	45.1669	0.2	4,4'-DDT
7.474	0.001	7880984	8.328	-0.002	19068155	220.4428	225.4457	2.2	Methoxychlor
7.986	0.001	3709123	8.633	0.001	8877278	43.8404	44.8222	2.2	Endrin ketone
7.341	0.002	2771127	7.896	0.001	8305275	44.1489	45.1600	2.3	Endrin aldehyde
6.057	0.002	2152268	6.658	0.001	7629720	22.6522	21.0220	7.5	gamma-Chlordane
6.182	0.002	2047773	6.796	0.001	7009508	22.4071	20.7377	7.7	alpha-Chlordane
2.340	-0.001	2835909	2.496	-0.001	8222529	22.4864	19.7808	12.8	Hexachlorobutadiene
4.181	0.001	1884279	4.629	0.000	10641250	21.5783	21.8738	1.4	Hexachlorobenzene
8.980	0.001	4807902	10.368	0.002	7681727	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.001	3629094	4.166	-0.002	17062390	44.2786	44.4493	0.4	Tetrachloro-m-xylen
8.832	0.001	2858402	9.796	0.000	8089313	40.7294	43.6315	6.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	110.7	111.1	110.7~	115- 0
Decachlorobiphenyl	101.8	109.1	101.8~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

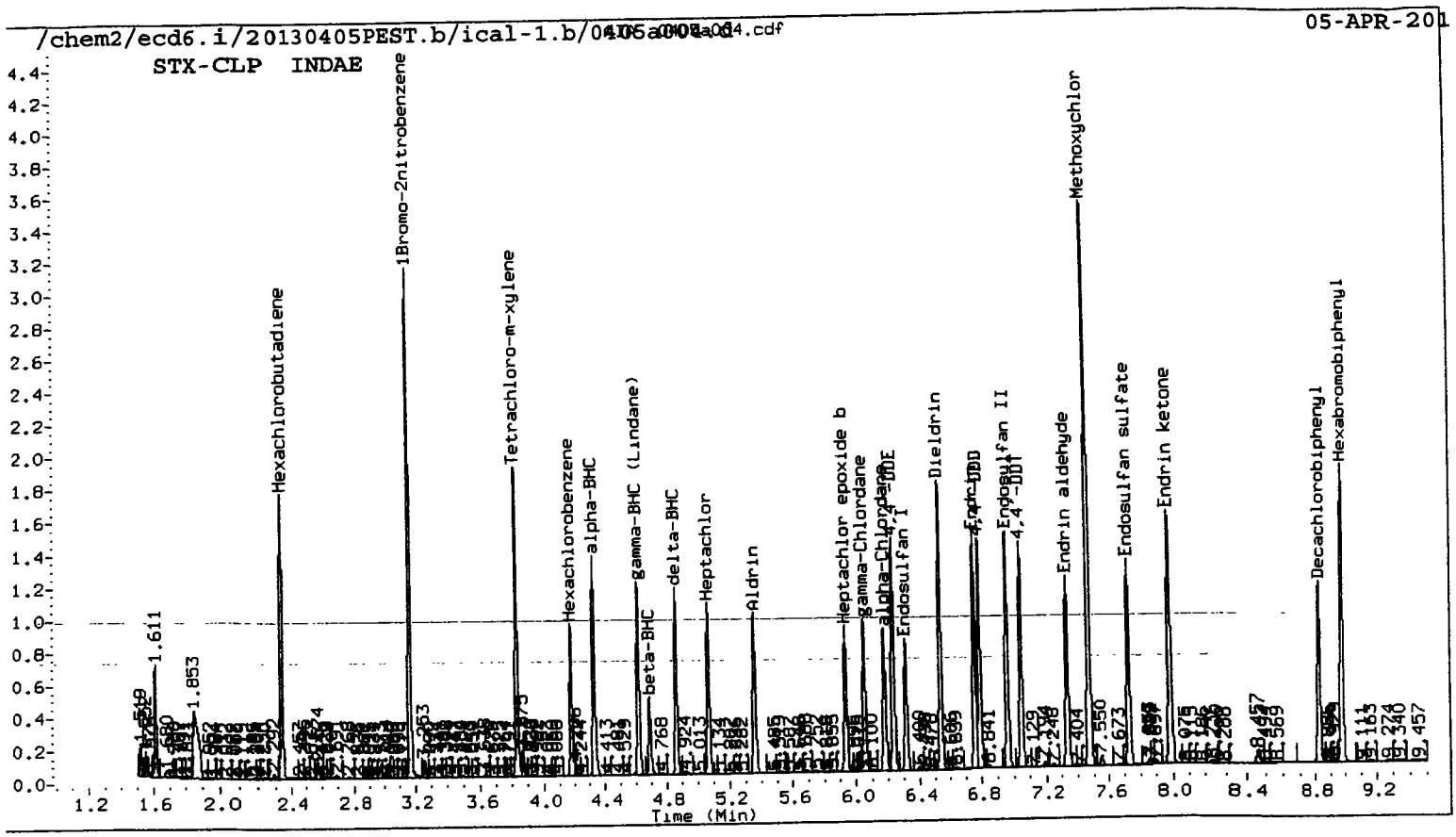
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5448520	0.0
Hexabromobiphenyl	4807902	4807902	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21702340	0.0
Hexabromobiphenyl	7681727	7681727	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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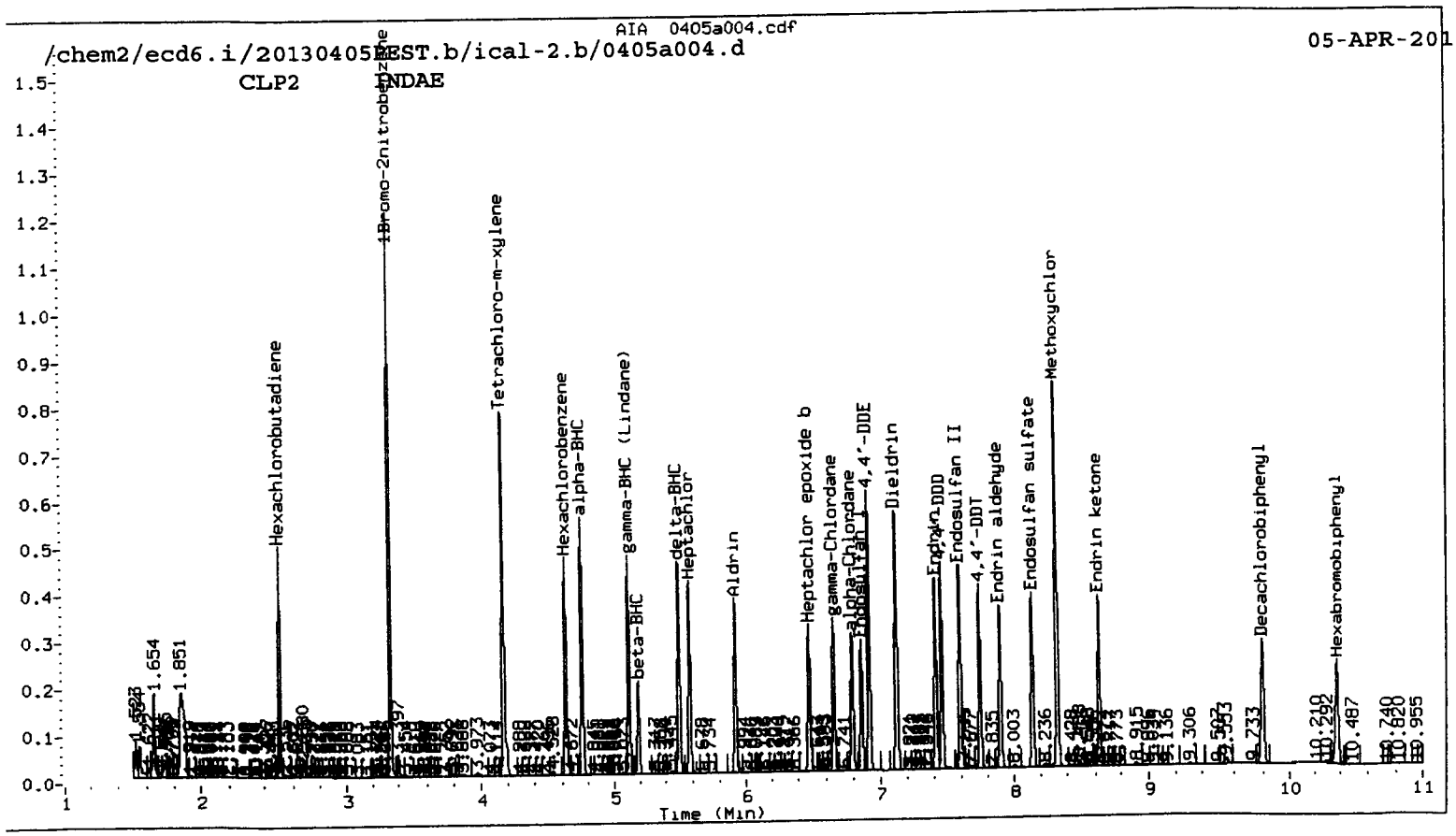
STX-CLP INDAE
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 INDAE
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 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

KZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a005.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a005.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 05-APR-2013 13:05
Compound Sublist: INDA
Report Date: 04/08/2013 11:23
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
3.164	0.000	6225835	3.333	0.000	24741508	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	-0.001	154186	4.754	-0.002	657731	1.1260	1.0924	3.0	alpha-BHC
4.686	-0.001	73111	5.184	-0.001	290520	1.3326	1.2376	7.4	beta-BHC
4.858	0.000	137808	5.497	-0.002	574112	1.1307	1.1218	0.8	delta-BHC
4.614	-0.001	141780	5.114	-0.002	596835	1.1472	1.1262	1.8	gamma-BHC (Lindane)
5.064	-0.001	143339	5.580	-0.002	593749	1.2101	1.2083	0.2	Heptachlor
5.359	-0.001	136506	5.919	-0.002	533203	1.1746	1.1854	0.9	Aldrin
5.936	-0.001	135629	6.474	-0.002	493292	1.2769	1.2253	4.1	Heptachlor epoxide b
6.314	-0.001	123703	6.861	-0.001	415960	1.2691	1.1880	6.6	Endosulfan I
6.537	-0.001	244110	7.119	-0.002	826294	2.3748	2.3655	0.4	Dieldrin
6.232	-0.003	204123	6.918	-0.002	829083	2.4236	2.3209	4.3	4,4'-DDE
6.755	-0.001	201263	7.409	-0.001	615395	2.4750	2.4740	0.0	Endrin
6.961	0.000	212243	7.597	-0.002	688490	2.5473	2.5200	1.1	Endosulfan II
6.789	-0.001	189602	7.456	-0.002	638590	2.4454	2.4259	0.8	4,4'-DDD
7.729	0.000	190589	8.139	-0.001	560125	2.5946	2.4692	5.0	Endosulfan sulfate
7.048	-0.001	191947	7.744	-0.001	581596	2.4702	2.4340	1.5	4,4'-DDT
7.473	-0.001	509312	8.327	-0.004	1330425	13.0678	13.4294	2.7	Methoxychlor
7.985	0.000	246195	8.632	-0.001	588230	2.6692	2.5350	5.2	Endrin ketone
7.338	0.000	178711	7.895	-0.001	546152	2.6117	2.5348	3.0	Endrin aldehyde
6.054	-0.001	132481	6.656	-0.001	476040	1.2202	1.1798	3.4	gamma-Chlordane
6.179	-0.001	131771	6.794	-0.001	446067	1.2618	1.1918	5.7	alpha-Chlordane
2.339	-0.001	181339	2.496	-0.002	653198	1.2583	1.3784	9.1	Hexachlorobutadiene
4.178	-0.001	134593	4.628	-0.002	716856	1.3489	1.2925	4.3	Hexachlorobenzene
8.979	-0.001	5241456	10.366	0.000	9038709	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	237541	4.165	-0.003	1127370	2.5364	2.5762	1.6	Tetrachloro-m-xylene
8.830	-0.001	200997	9.794	-0.001	587391	2.6271	2.7050	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.3	6.4	6.3~	115- 0
Decachlorobiphenyl	6.6	6.8	6.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

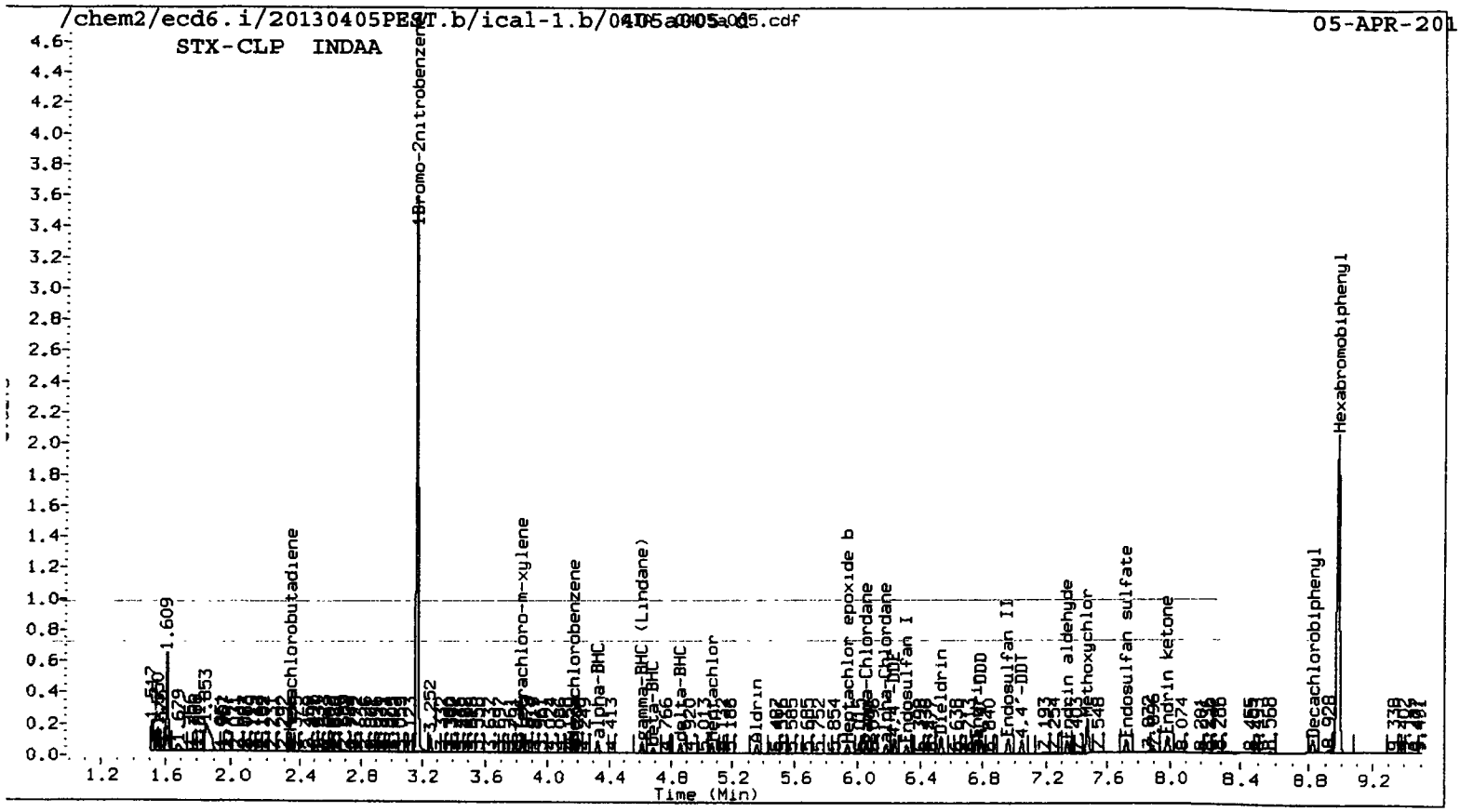
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6225835	14.3
Hexabromobiphenyl	4807902	5241456	9.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24741508	14.0
Hexabromobiphenyl	7681727	9038709	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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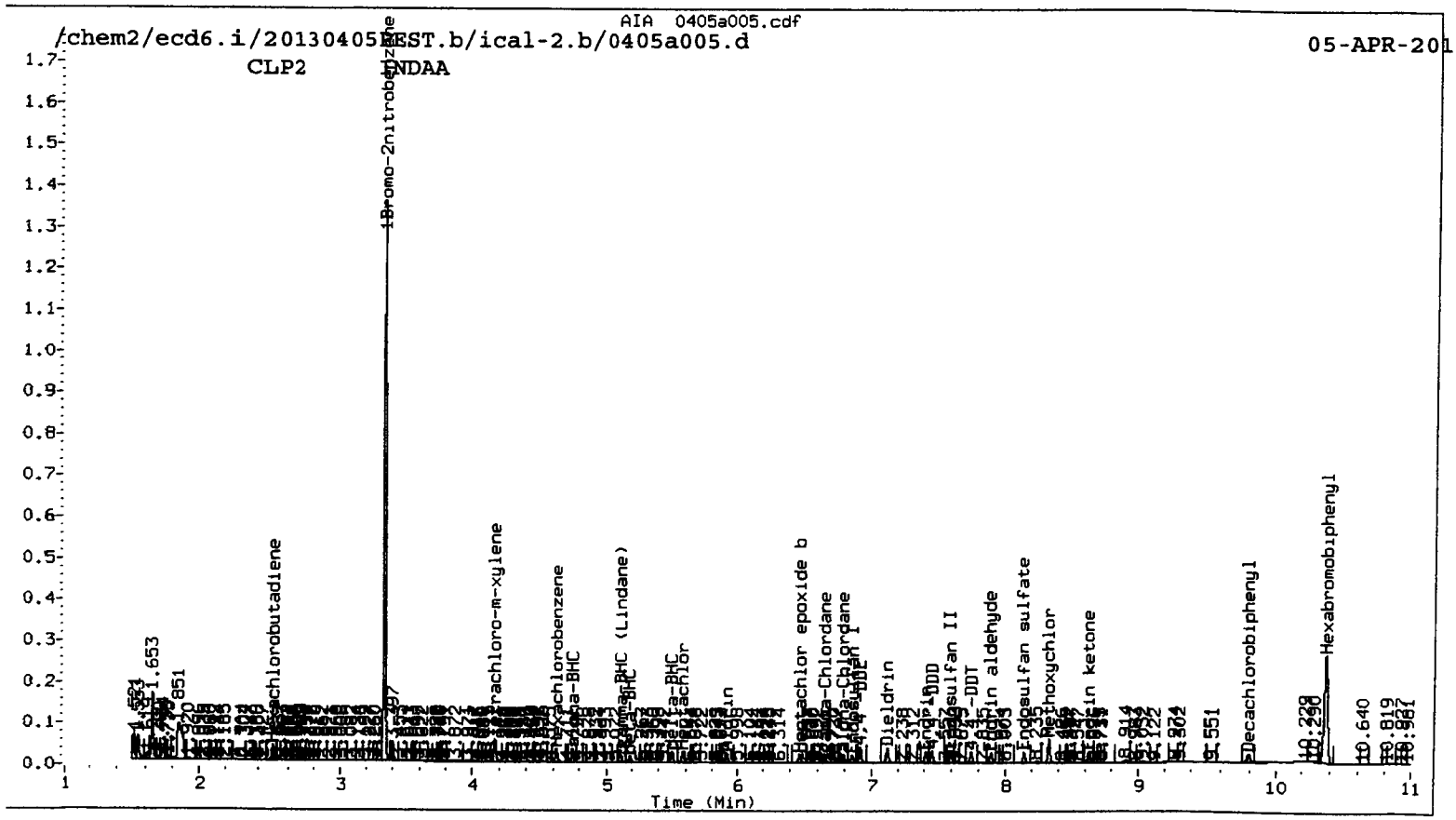
Hexachlorobutadiene
Pentachloro-m-xylene
Chlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxy-Chlordane
Trans-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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Hexachlorobutadiene
Pentachloro-m-xylene
Chlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Heptachlor epoxide b
Oxy-Chlordane
Trans-Chlordane
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

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a006.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 05-APR-2013 13:23
Compound Sublist: INDA
Report Date: 04/08/2013 11:23
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
3.164	0.000	6111022	3.333	0.000	25491655	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	-0.001	300357	4.755	-0.002	1398591	2.2346	2.2546	0.9	alpha-BHC
4.687	0.000	133866	5.184	-0.001	587741	2.4859	2.4300	2.3	beta-BHC
4.858	0.000	267835	5.498	-0.001	1199376	2.2388	2.2745	1.6	delta-BHC
4.615	0.000	274901	5.114	-0.002	1242383	2.2661	2.2754	0.4	gamma-BHC (Lindane)
5.065	0.000	272524	5.581	-0.001	1218574	2.3439	2.4068	2.6	Heptachlor
5.360	0.000	263130	5.919	-0.002	1091655	2.3068	2.3601	2.3	Aldrin
5.936	0.000	248575	6.474	-0.001	969258	2.3842	2.3846	0.0	Heptachlor epoxide b
6.314	-0.001	230643	6.862	-0.001	844183	2.4107	2.3789	1.3	Endosulfan I
6.537	0.000	470729	7.120	-0.001	1694276	4.6654	4.7748	2.3	Dieldrin
6.233	-0.002	384106	6.919	-0.002	1710014	4.6464	4.7027	1.2	4,4'-DDE
6.756	-0.001	384508	7.409	-0.001	1240005	4.6262	4.6716	1.0	Endrin
6.961	0.000	402934	7.597	-0.001	1380724	4.7315	4.7363	0.1	Endosulfan II
6.790	-0.001	365382	7.456	-0.001	1299090	4.6107	4.6244	0.3	4,4'-DDD
7.729	0.000	356948	8.140	-0.001	1117551	4.7543	4.6165	2.9	Endosulfan sulfate
7.048	-0.001	367403	7.745	-0.001	1169027	4.6260	4.5844	0.9	4,4'-DDT
7.473	-0.001	945576	8.327	-0.003	2598678	23.7372	24.5875	3.5	Methoxychlor
7.985	0.000	453268	8.632	0.000	1165050	4.8081	4.7053	2.2	Endrin ketone
7.339	0.000	335332	7.895	0.000	1085476	4.7946	4.7213	1.5	Endrin aldehyde
6.055	0.000	251268	6.656	-0.001	960096	2.3578	2.3448	0.6	gamma-Chlordane
6.180	0.000	244824	6.795	-0.001	897466	2.3885	2.3708	0.7	alpha-Chlordane
2.340	-0.001	337172	2.496	-0.002	1232920	2.3837	2.5251	5.8	Hexachlorobutadiene
4.179	-0.001	245134	4.628	-0.002	1411203	2.5029	2.4696	1.3	Hexachlorobenzene
8.979	-0.001	5357211	10.367	0.001	9687228	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	448849	4.165	-0.004	2270853	4.8827	5.0364	3.1	Tetrachloro-m-xylene
8.831	0.000	466148	9.795	-0.001	1137765	5.9611	4.9111	19.3	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	12.2	12.6	12.2~	115- 0
Decachlorobiphenyl	14.9	12.3	12.3~	115- 0

~ Indicates recovery outside QC Limits

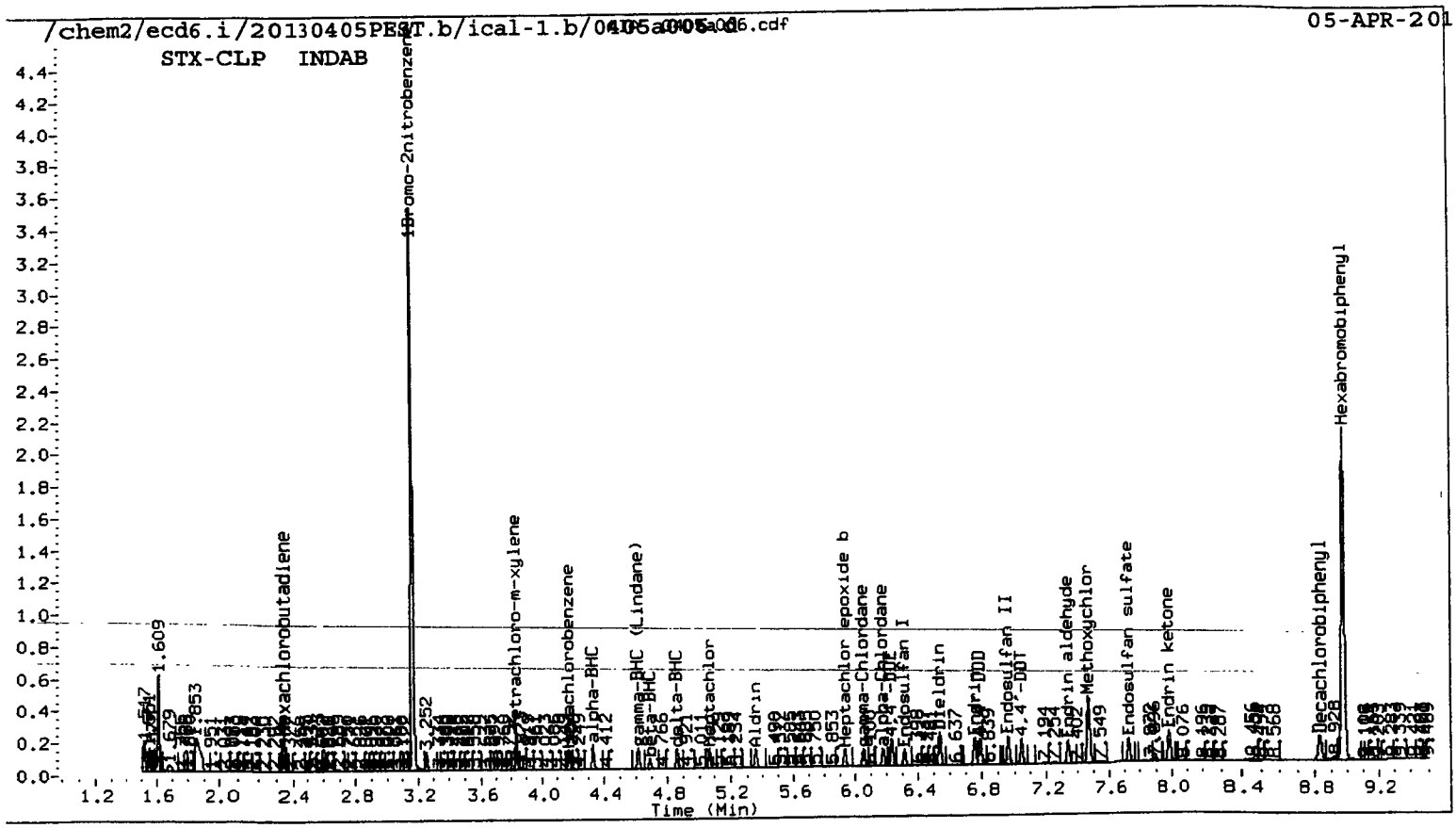
INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6111022	12.2
Hexabromobiphenyl	4807902	5357211	11.4

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25491655	17.5
Hexabromobiphenyl	7681727	9687228	26.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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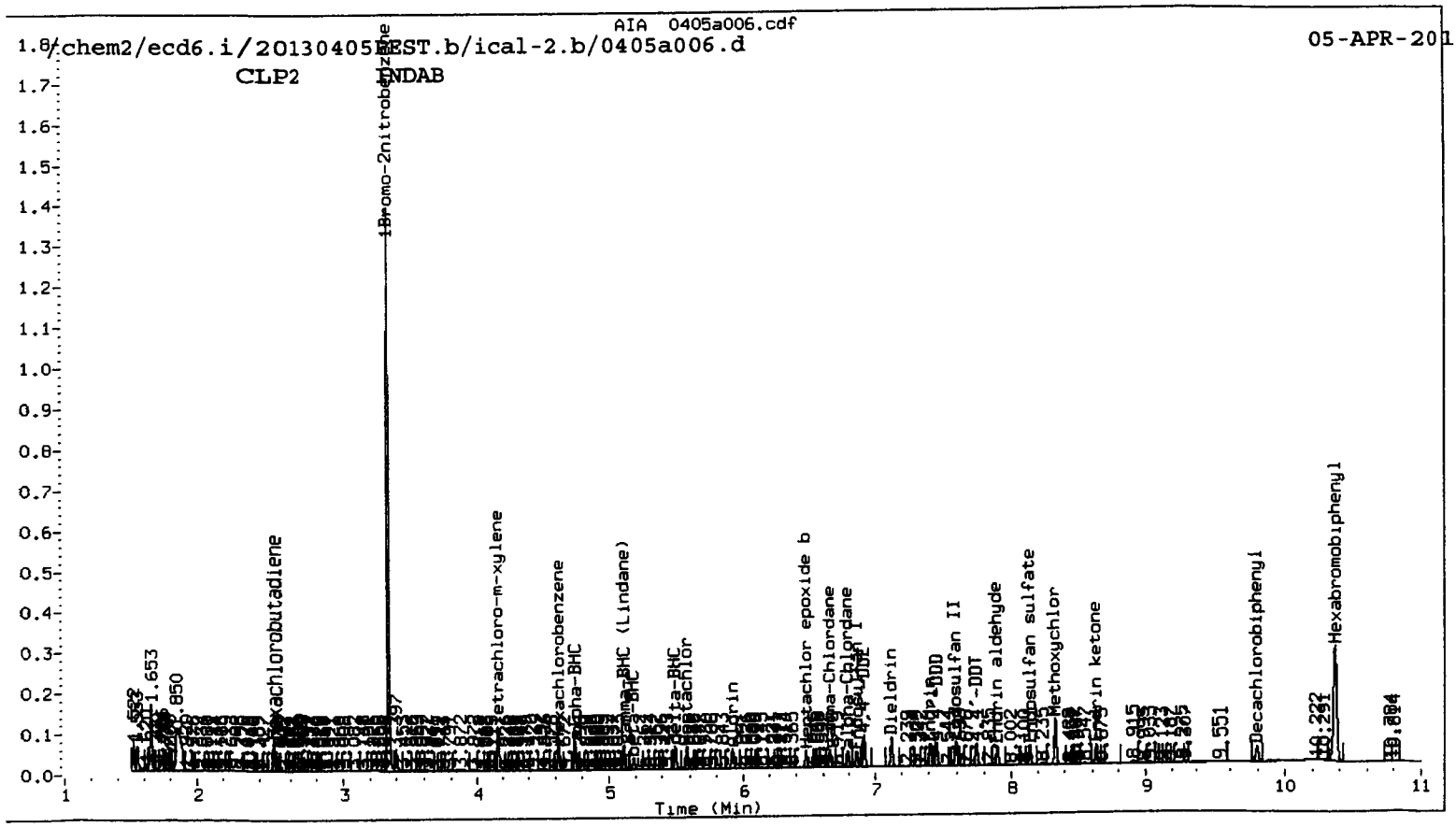
STX-CLP INDAB
1Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4,5-Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Pentachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAB
1Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4,5-Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Pentachlor
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
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/20130405PEST.b/ical-1.b/0405a007.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a007.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 13:41
Report Date: 04/08/2013 11:24
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
3.165	0.000	5854383	3.333	0.001	25508207	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	-0.001	600439	4.755	-0.001	2954834	4.6630	4.7602	2.1	alpha-BHC
4.687	0.000	248327	5.185	0.000	1166340	4.8136	4.8190	0.1	beta-BHC
4.859	0.000	535048	5.498	-0.001	2524585	4.6684	4.7846	2.5	delta-BHC
4.615	0.000	545812	5.115	-0.001	2596953	4.6965	4.7532	1.2	gamma-BHC (Lindane)
5.065	0.000	531516	5.581	-0.001	2487507	4.7718	4.9099	2.9	Heptachlor
5.360	0.000	514751	5.920	-0.001	2229774	4.7105	4.8235	2.4	Aldrin
5.936	0.000	477499	6.475	-0.001	1950819	4.7806	4.8463	1.4	Heptachlor epoxide b
6.314	0.000	437495	6.862	-0.001	1694863	4.7733	4.8203	1.0	Endosulfan I
6.537	0.000	917650	7.120	-0.001	3438814	9.4935	9.7651	2.8	Dieldrin
6.233	-0.002	740110	6.919	-0.001	3500313	9.3452	9.7318	4.1	4,4'-DDE
6.756	-0.001	753510	7.410	0.000	2508259	9.4612	9.5787	1.2	Endrin
6.961	0.000	777908	7.597	-0.001	2756905	9.5329	9.5862	0.6	Endosulfan II
6.790	0.000	716584	7.457	-0.001	2638349	9.4368	9.5201	0.9	4,4'-DDD
7.729	0.000	683477	8.140	0.000	2247948	9.5003	9.4125	0.9	Endosulfan sulfate
7.048	-0.001	714589	7.745	0.000	2367169	9.3899	9.4095	0.2	4,4'-DDT
7.473	-0.001	1788507	8.327	-0.003	5100317	46.8555	48.9178	4.3	Methoxychlor
7.985	0.000	853043	8.632	0.000	2310796	9.4434	9.4599	0.2	Endrin ketone
7.339	0.000	640738	7.896	0.000	2157565	9.5609	9.5124	0.5	Endrin aldehyde
6.055	0.000	480133	6.657	0.000	1940322	4.7030	4.7806	1.6	gamma-Chlordane
6.180	0.000	466238	6.795	0.000	1792907	4.7480	4.7849	0.8	alpha-Chlordane
2.340	-0.001	643814	2.496	-0.001	2431201	4.7510	4.9761	4.6	Hexachlorobutadiene
4.179	0.000	457361	4.628	-0.001	2811845	4.8745	4.9176	0.9	Hexachlorobenzene
8.979	0.000	5133358	10.367	0.001	9574018	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	856833	4.166	-0.003	4532780	9.7295	10.0465	3.2	Tetrachloro-m-xylene
8.831	0.000	759395	9.795	-0.001	2187923	10.1346	9.5731	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.3	25.1	24.3~	115- 0
Decachlorobiphenyl	25.3	23.9	23.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

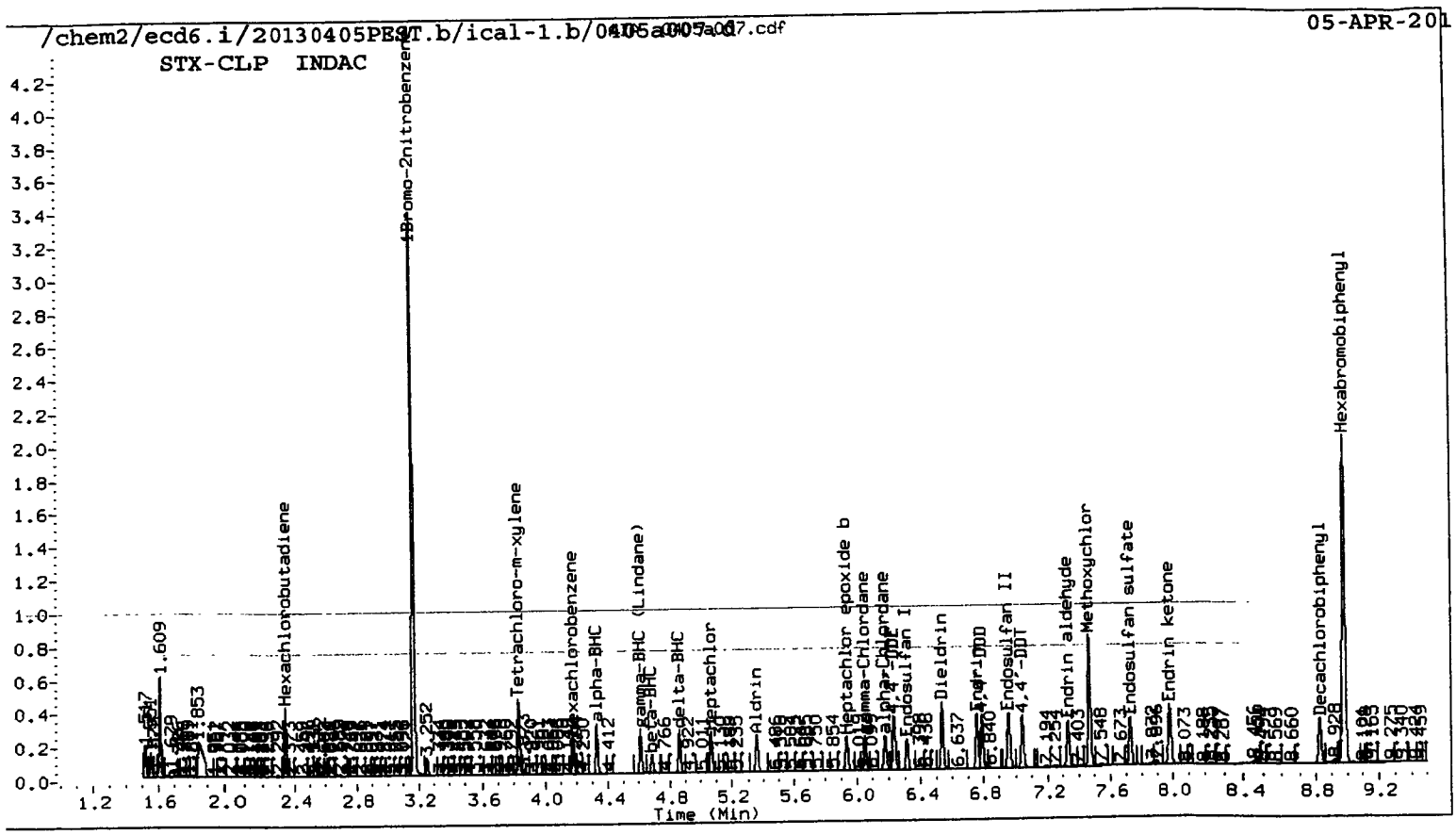
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5854383	7.4
Hexabromobiphenyl	4807902	5133358	6.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25508207	17.5
Hexabromobiphenyl	7681727	9574018	24.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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STX-CLP INDAC
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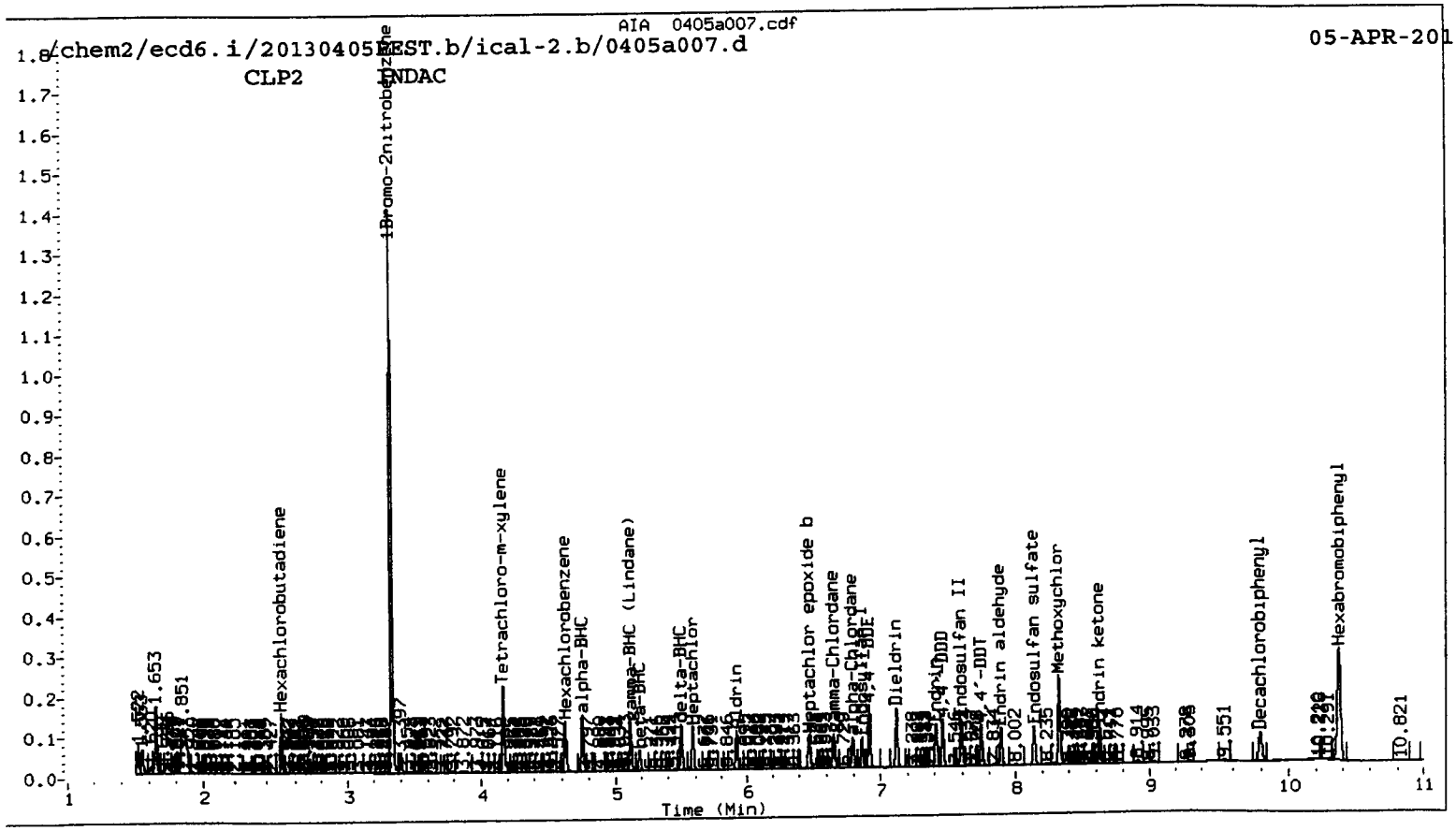
1,3-Dibromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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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
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a008.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a008.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 13:58
Compound Sublist: INDA Report Date: 04/08/2013 11:24
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
3.165	0.000	5880001	3.334	0.001	26036651	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	1203007	4.755	-0.001	6102248	9.3019	9.6311	3.5	alpha-BHC
4.687	0.000	472803	5.185	0.000	2314958	9.1250	9.3707	2.7	beta-BHC
4.858	0.000	1073436	5.498	-0.001	5180632	9.3252	9.6190	3.1	delta-BHC
4.615	0.000	1086941	5.115	-0.001	5330243	9.3120	9.5579	2.6	gamma-BHC (Lindane)
5.065	0.000	1045376	5.581	-0.001	5015211	9.3443	9.6982	3.7	Heptachlor
5.360	0.000	1023118	5.920	-0.001	4515314	9.3217	9.5756	2.7	Aldrin
5.937	0.000	924040	6.475	-0.001	3874240	9.2110	9.4673	2.7	Heptachlor epoxide b
6.314	-0.001	846542	6.862	0.000	3382705	9.1959	9.4753	3.0	Endosulfan I
6.537	-0.001	1807376	7.120	-0.001	6881739	18.6167	19.2231	3.2	Dieldrin
6.233	-0.002	1444344	6.920	-0.001	7020418	18.1580	19.2384	5.8	4,4'-DDE
6.755	-0.001	1484141	7.409	-0.001	5044378	18.2999	18.5844	1.5	Endrin
6.960	0.000	1510564	7.598	-0.001	5477668	18.1784	18.3738	1.1	Endosulfan II
6.790	-0.001	1411271	7.457	-0.001	5325162	18.2510	18.5370	1.6	4,4'-DDD
7.729	0.000	1319711	8.140	0.000	4526096	18.0140	18.2815	1.5	Endosulfan sulfate
7.049	0.000	1397194	7.745	-0.001	4790586	18.0293	18.3697	1.9	4,4'-DDT
7.472	-0.001	3458050	8.327	-0.003	9940461	88.9648	91.9723	3.3	Methoxychlor
7.985	0.000	1641030	8.632	0.000	4594528	17.8398	18.1433	1.7	Endrin ketone
7.339	0.000	1232075	7.895	0.000	4297995	18.0539	18.2792	1.2	Endrin aldehyde
6.055	0.000	942719	6.657	0.000	3892155	9.1938	9.4433	2.7	gamma-Chlordane
6.179	0.000	904304	6.795	0.000	3580213	9.1690	9.4137	2.6	alpha-Chlordane
2.340	-0.001	1257691	2.496	-0.001	4709994	9.2406	9.4445	2.2	Hexachlorobutadiene
4.179	0.000	864759	4.629	-0.001	5484749	9.1763	9.3974	2.4	Hexachlorobenzene
8.979	-0.001	5227384	10.368	0.001	9979752	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	1646740	4.166	-0.003	8853730	18.6175	19.2253	3.2	Tetrachloro-m-xylene
8.830	-0.001	1357228	9.794	-0.001	4241762	17.7872	17.9012	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.5	48.1	46.5~	115- 0
Decachlorobiphenyl	44.5	44.8	44.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

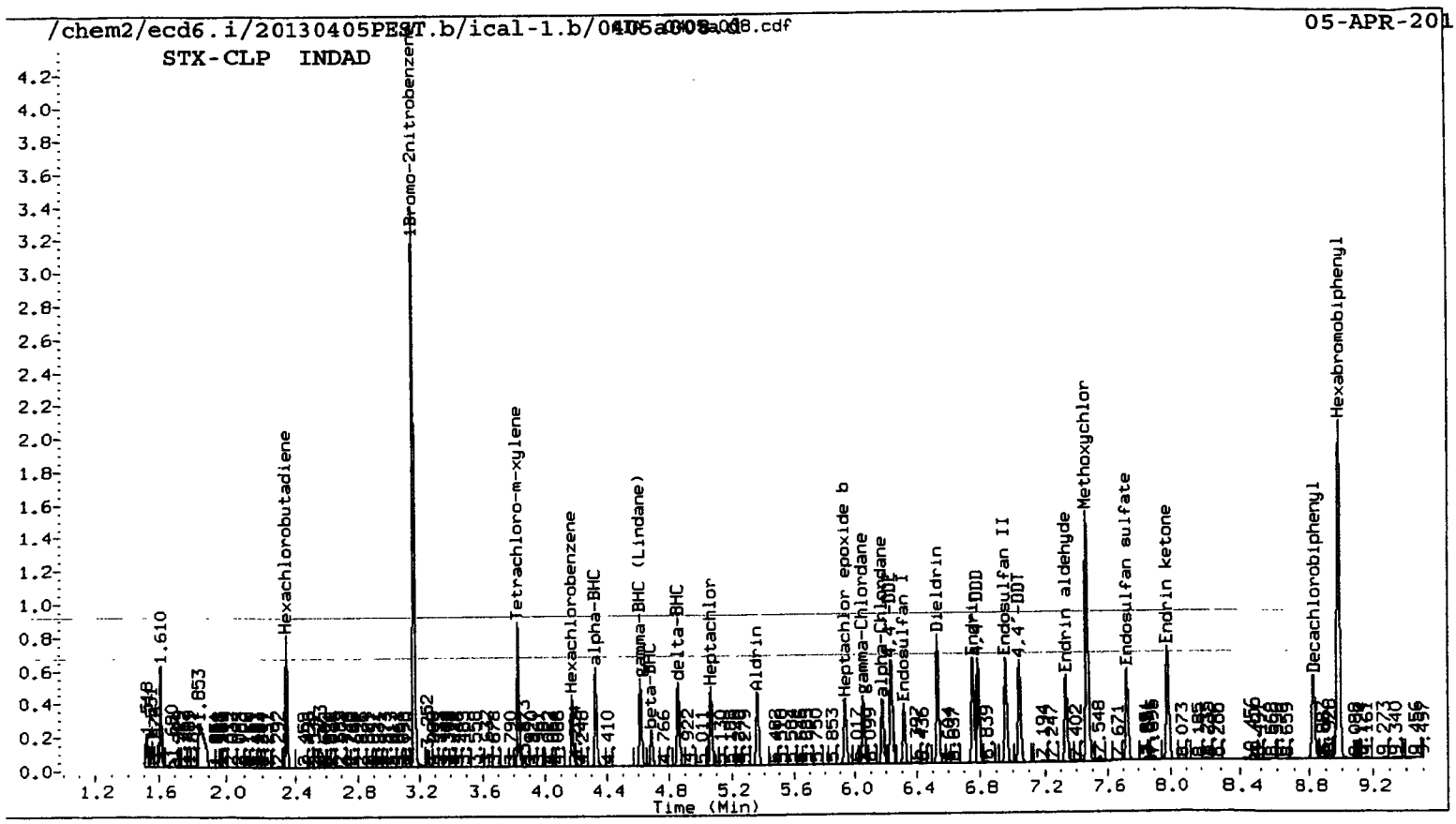
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5880001	7.9
Hexabromobiphenyl	4807902	5227384	8.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26036651	20.0
Hexabromobiphenyl	7681727	9979752	29.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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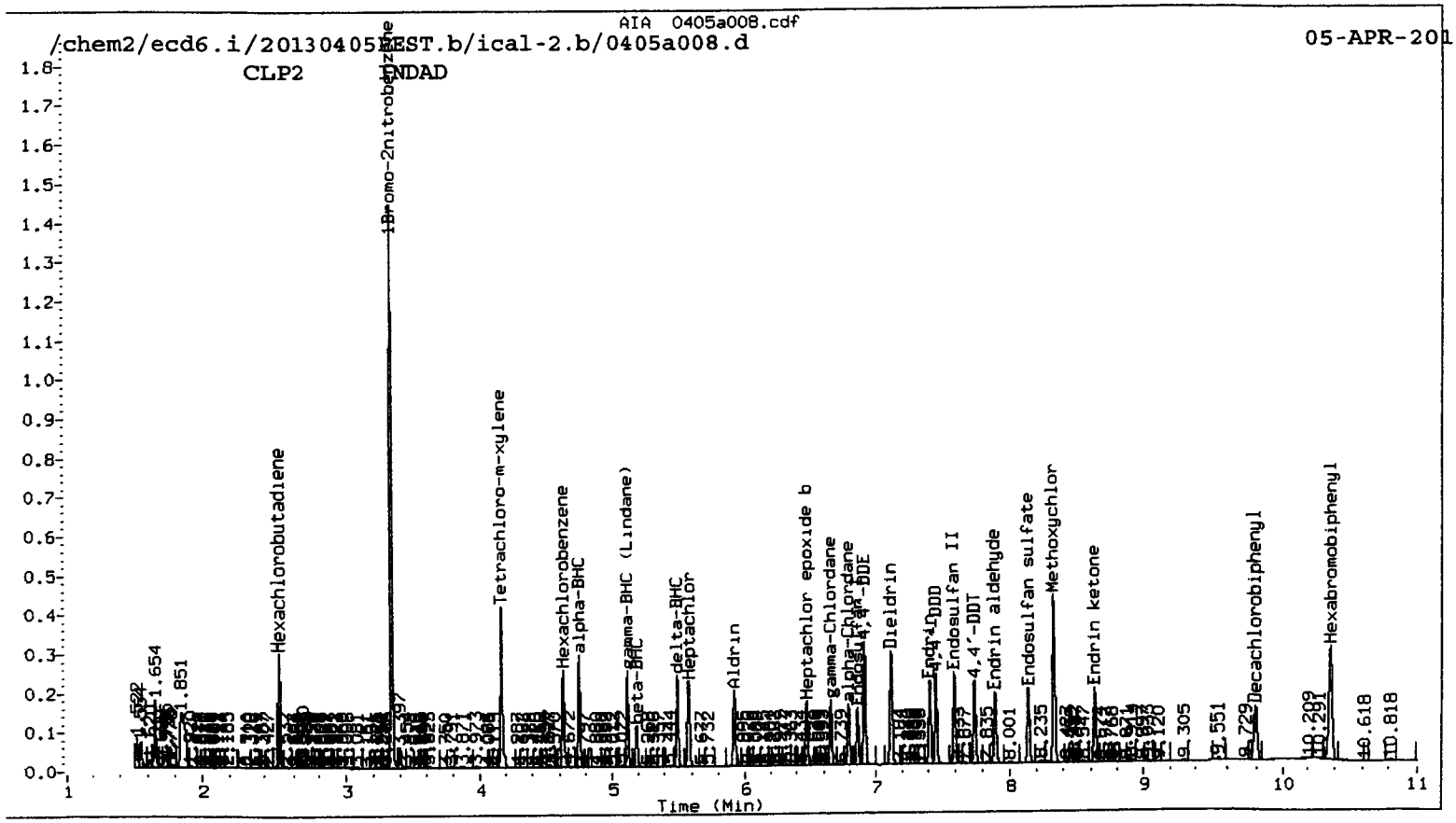
1.853
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAD
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1.851
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin 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/20130405PEST.b/ical-1.b/0405a009.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a009.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 14:17
Report Date: 04/08/2013 11:24
Matrix: NONE
Dilution Factor: 1.000

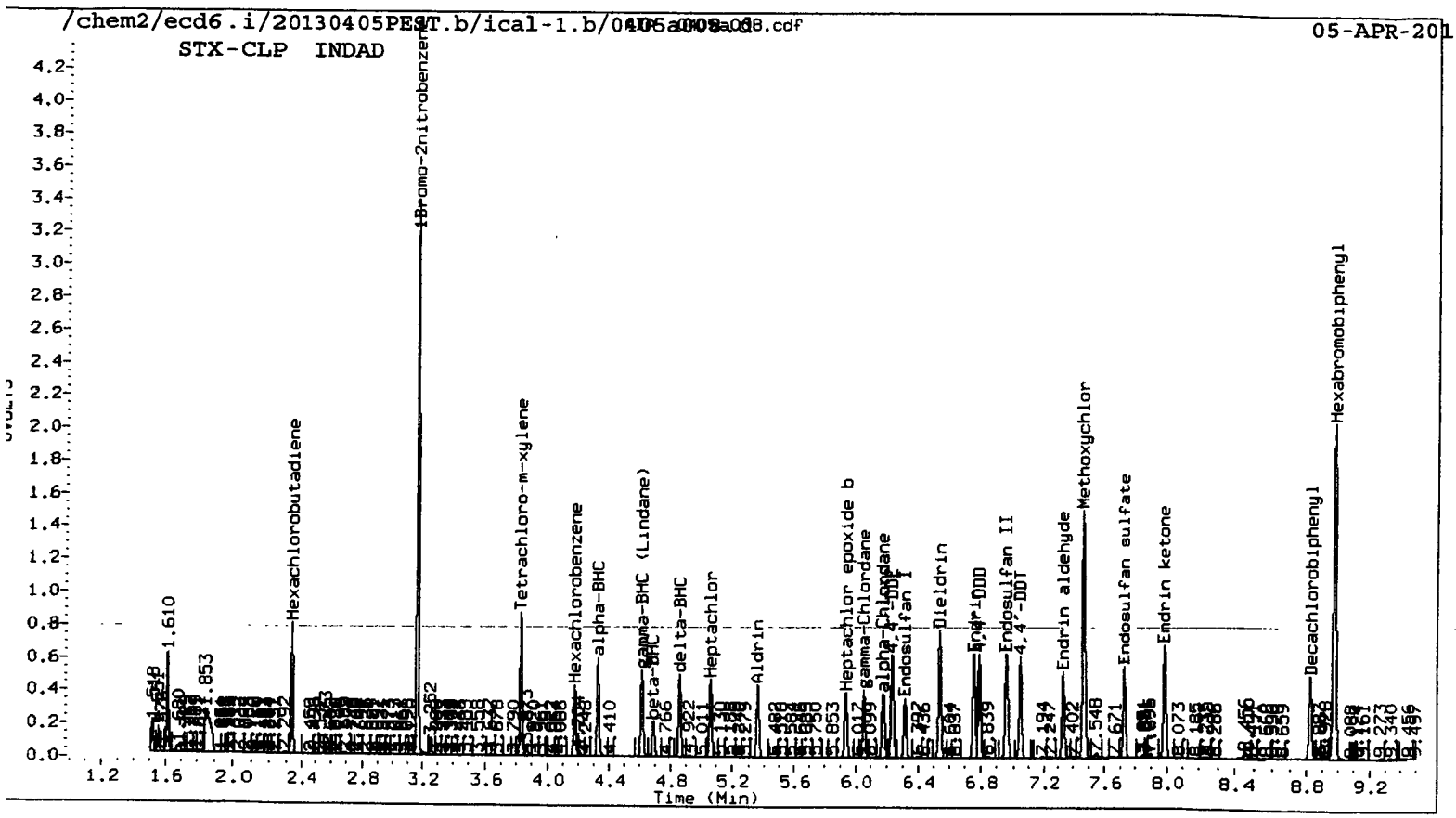
YZ 4/9/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.001	4847986	3.333	0.001	21952139	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	4882270	4.756	-0.000	24213251	45.7868	45.3262	1.0	alpha-BHC
4.688	0.001	1788098	5.186	0.001	9006341	41.8560	43.2399	3.3	beta-BHC
4.859	0.001	4326035	5.499	0.000	20416336	45.5813	44.9608	1.4	delta-BHC
4.616	0.001	4357933	5.116	0.000	21126929	45.2828	44.9326	0.8	gamma-BHC (Lindane)
5.066	0.001	4045551	5.582	0.001	18737396	43.8599	42.9753	2.0	Heptachlor
5.361	0.001	4046691	5.921	0.001	17400848	44.7185	43.7739	2.1	Aldrin
5.938	0.002	3556630	6.476	0.001	14663019	43.0003	42.5488	1.1	Heptachlor epoxide
6.315	0.001	3257082	6.863	0.000	12999406	42.9131	43.2643	0.8	Endosulfan I
6.538	0.001	7064822	7.121	0.000	25687238	88.2616	85.2031	3.5	Dieldrin
6.236	0.001	5812030	6.921	0.000	26413144	88.6220	85.9912	3.0	4,4'-DDE
6.757	0.000	5768551	7.411	0.001	18948053	88.6563	85.9650	3.1	Endrin
6.962	0.001	5854698	7.598	0.000	20789051	87.8191	85.8723	2.2	Endosulfan II
6.792	0.001	5553985	7.458	0.000	20391121	89.5259	87.4117	2.4	4,4'-DDD
7.731	0.001	5131416	8.141	0.000	17659867	87.3047	87.8410	0.6	Endosulfan sulfate
7.050	0.001	5587066	7.746	0.000	18676076	89.8615	88.1909	1.9	4,4'-DDT
7.474	0.001	13573752	8.328	-0.002	37770569	435.2666	430.3491	1.1	Methoxychlor
7.986	0.001	6391301	8.633	0.000	17797724	86.6029	86.5482	0.1	Endrin ketone
7.340	0.001	4760729	7.896	0.000	16476429	86.9514	86.2920	0.8	Endrin aldehyde
6.056	0.001	3725551	6.658	0.000	15095175	44.0678	43.5198	1.3	gamma-Chlordane
6.181	0.001	3522813	6.796	0.000	13817131	43.3222	43.1706	0.4	alpha-Chlordane
2.341	0.000	4828892	2.497	0.000	17219705	43.0320	40.9537	4.9	Hexachlorobutadiene
4.180	0.001	3210249	4.630	0.000	20614101	41.3169	41.8914	1.4	Hexachlorobenzene
8.980	0.001	4193877	10.368	0.002	8109922	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.001	6179076	4.167	-0.002	32467743	84.7298	83.6194	1.3	Tetrachloro-m-xylen
8.832	0.001	4811180	9.795	0.000	16006409	78.5916	83.1833	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	211.8	209.0	209.0~	115- 0
Decachlorobiphenyl	196.5	208.0	196.5~	115- 0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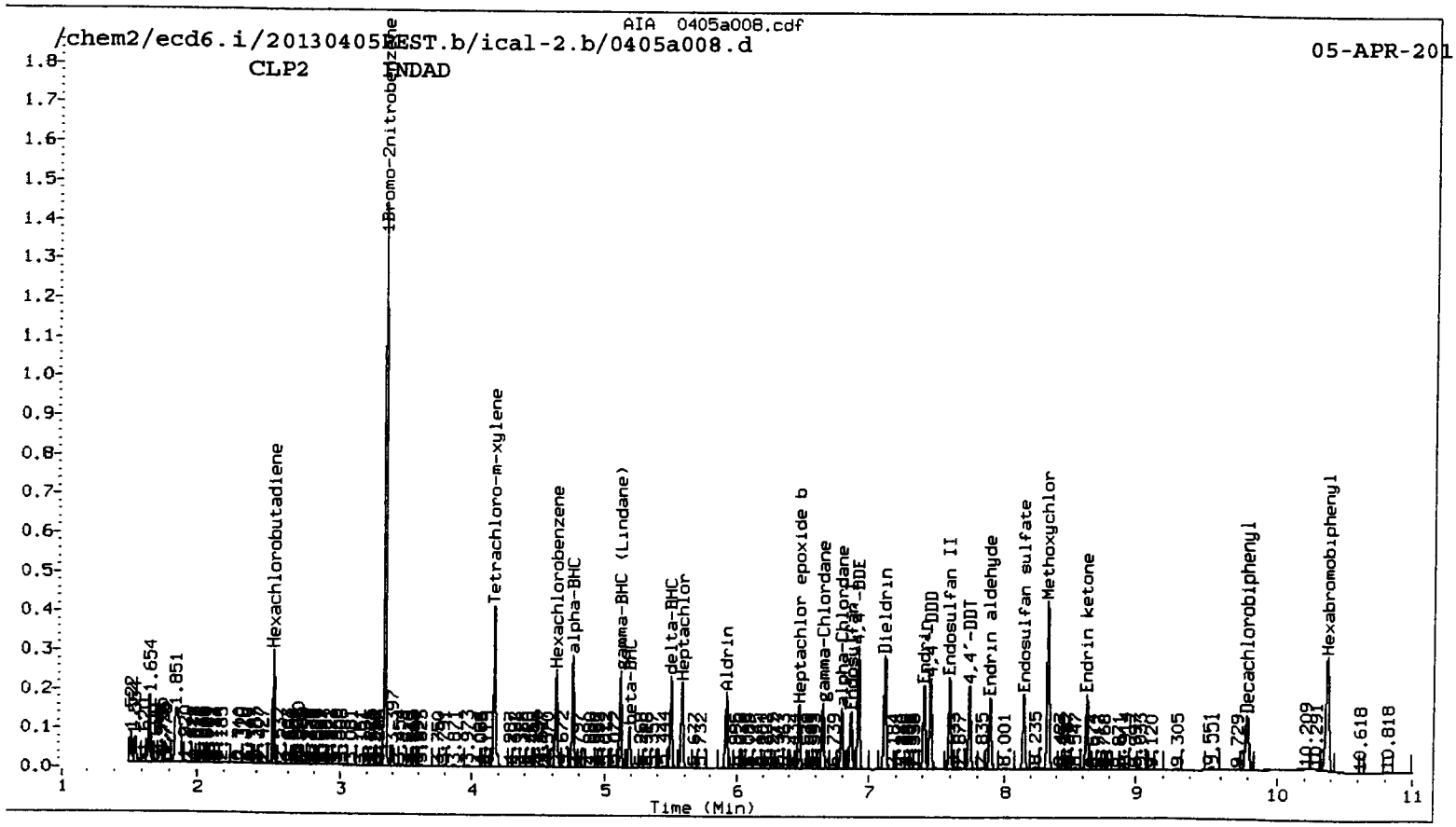
STX-CLP INDAD
1.610
1.853
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAD
1.654
1.851
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

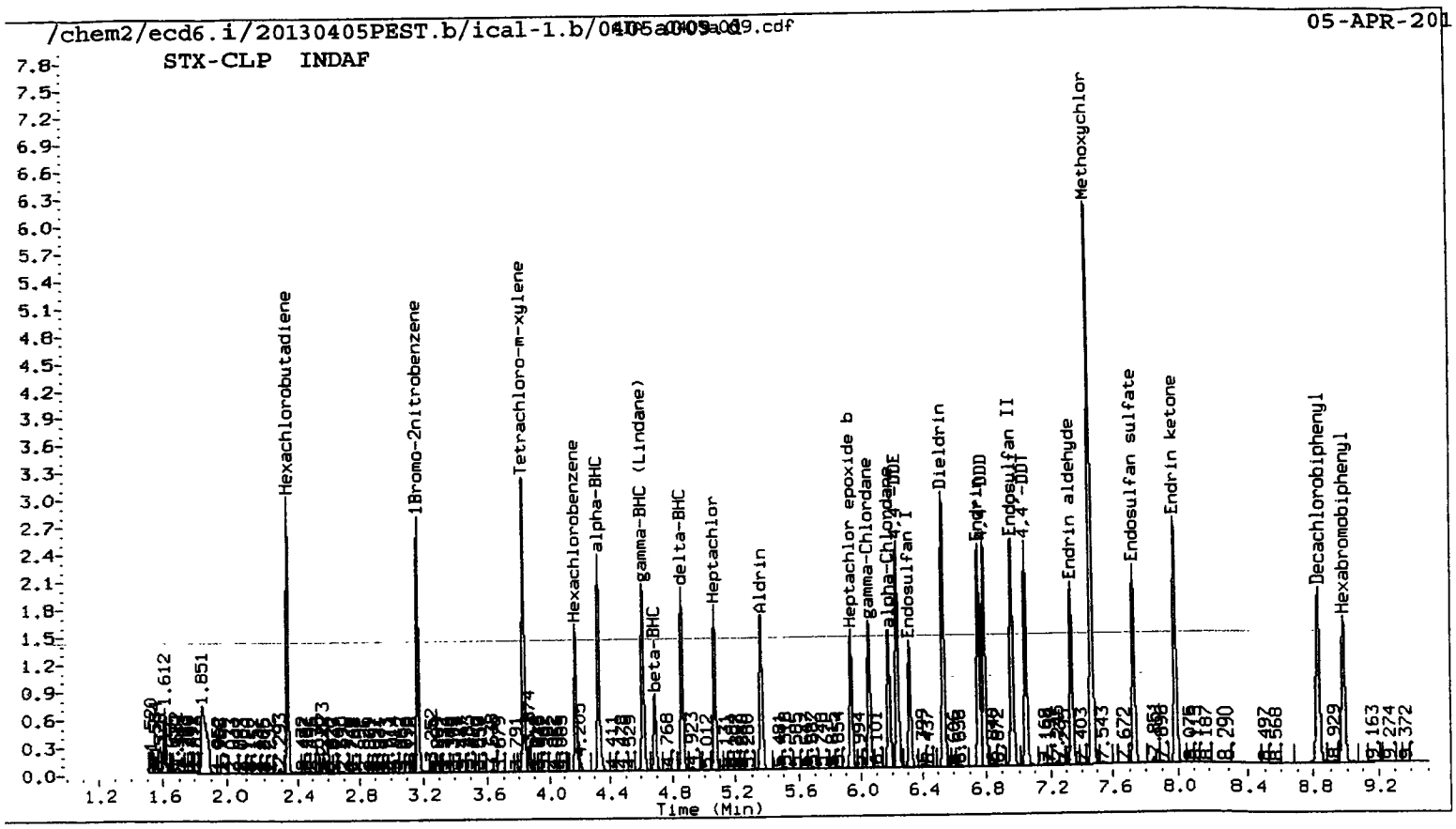
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4847986	-11.0
Hexabromobiphenyl	4807902	4193877	-12.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21952139	1.2
Hexabromobiphenyl	7681727	8109922	5.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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STX-CLP INDAF
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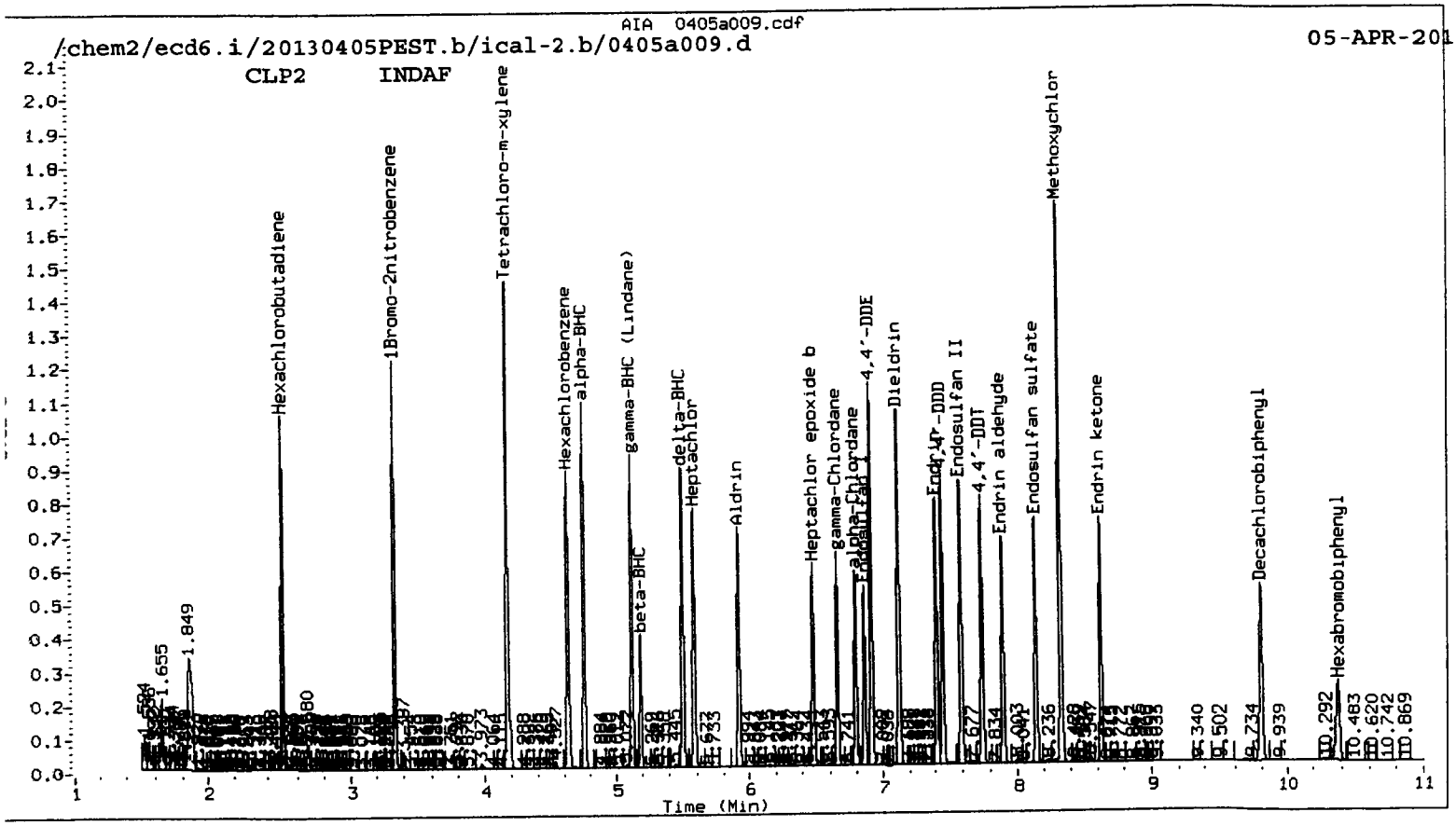
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 INDAF
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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 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a010.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a010.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 14:35
Report Date: 04/08/2013 11:24
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
3.165	0.000	5342959	3.333	0.001	24214609	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	9764956	4.756	0.000	48433656	83.0937	82.1946	1.1	alpha-BHC
4.687	0.000	3503869	5.185	0.000	17532492	74.4207	76.3096	2.5	beta-BHC
4.858	0.000	8634999	5.499	0.000	40689737	82.5541	81.2345	1.6	delta-BHC
4.615	0.000	8677966	5.116	0.000	42267854	81.8183	81.4956	0.4	gamma-BHC (Lindane)
5.065	0.000	7882743	5.582	0.000	35201577	77.5438	73.1932	5.8	Heptachlor
5.360	0.000	7912944	5.921	0.000	33345764	79.3424	76.0511	4.2	Aldrin
5.936	0.000	6922796	6.476	0.000	27752272	75.9441	73.0594	3.9	Heptachlor epoxide
6.315	0.000	6349384	6.863	0.000	24648435	75.9054	74.4323	2.0	Endosulfan I
6.537	0.000	13910769	7.121	0.000	49527352	157.6889	149.0055	5.7	Dieldrin
6.235	0.000	11788786	6.920	0.000	51136965	163.1031	151.0424	7.7	4,4'-DDE
6.756	0.000	11417629	7.410	0.000	36534149	154.6014	144.0467	7.1	Endrin
6.961	0.000	11566476	7.599	0.000	40428271	152.8553	145.1286	5.2	Endosulfan II
6.791	0.000	11147773	7.458	0.000	40061229	158.3168	149.2489	5.9	4,4'-DDD
7.729	0.000	10231992	8.140	0.000	34872841	153.3753	150.7507	1.7	Endosulfan sulfat
7.049	0.000	11243792	7.745	0.000	37774644	159.3300	155.0279	2.7	4,4'-DDT
7.474	0.000	27975334	8.330	0.000	63735142	790.3608	631.0353	22.4	Methoxychlor
7.985	0.000	12810113	8.633	0.000	35555890	152.9293	150.2678	1.8	Endrin ketone
7.338	0.000	9416182	7.895	0.000	32287177	151.5210	146.9573	3.1	Endrin aldehyde
6.055	0.000	7352296	6.657	0.000	29288582	78.9103	76.6169	2.9	gamma-Chlordane
6.180	0.000	6920208	6.795	0.000	26674608	77.2183	75.6227	2.1	alpha-Chlordane
2.341	0.000	9552315	2.497	0.000	34682314	77.2383	74.7781	3.2	Hexachlorobutadiene
4.179	0.000	6270804	4.629	0.000	39684942	73.2304	73.1115	0.2	Hexachlorobenzene
8.980	0.000	4760154	10.367	0.001	9338784	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	12075105	4.169	0.000	57553610	150.2392	134.3776	11.1	Tetrachloro-m-xyl
8.831	0.000	9488510	9.795	0.000	31944603	136.5580	144.2738	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	375.6	335.9	335.9~	115- 0
Decachlorobiphenyl	341.4	360.7	341.4~	115- 0

WL67:01093

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

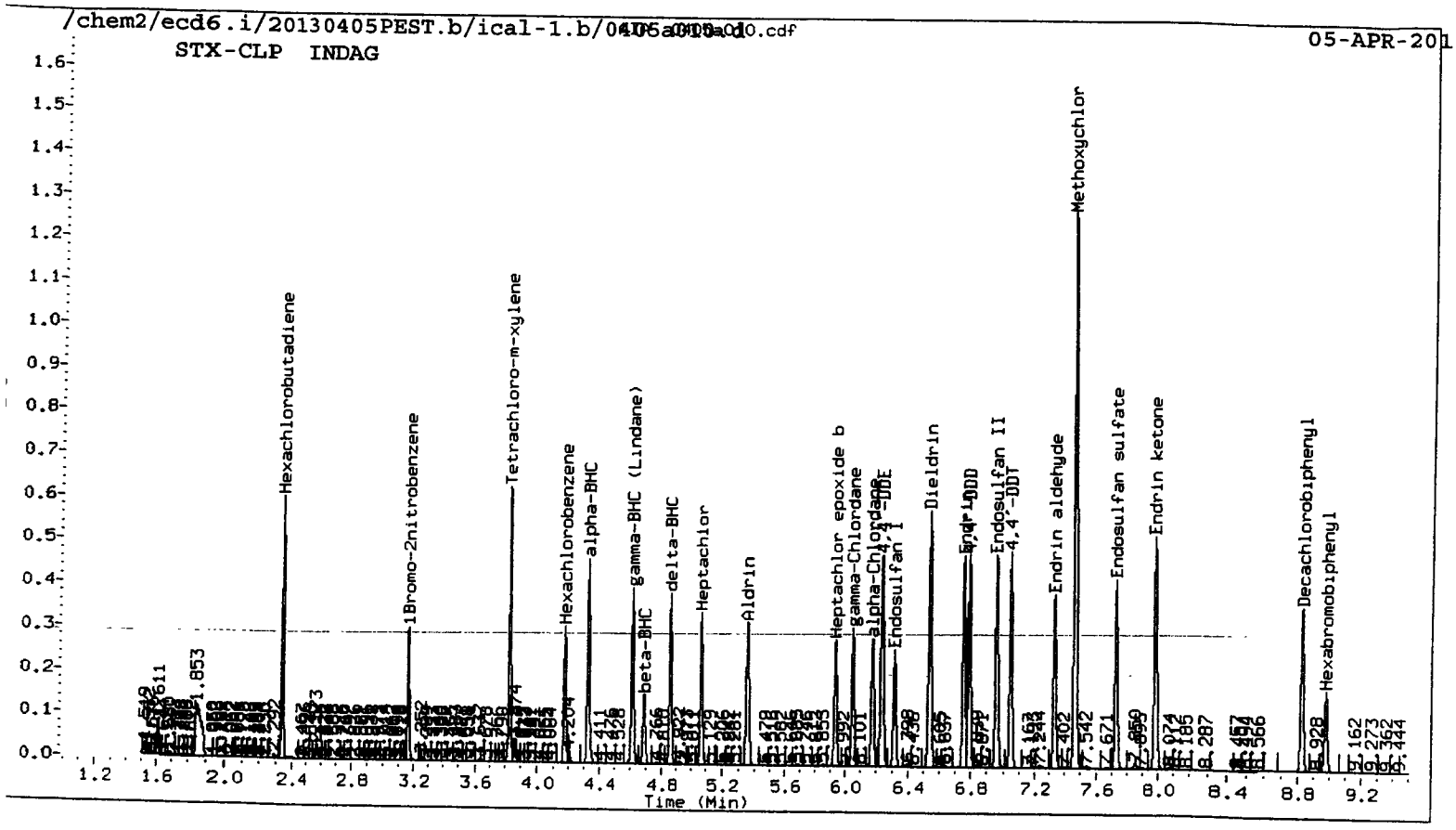
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5342959	-1.9
Hexabromobiphenyl	4807902	4760154	-1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24214609	11.6
Hexabromobiphenyl	7681727	9338784	21.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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05-APR-201
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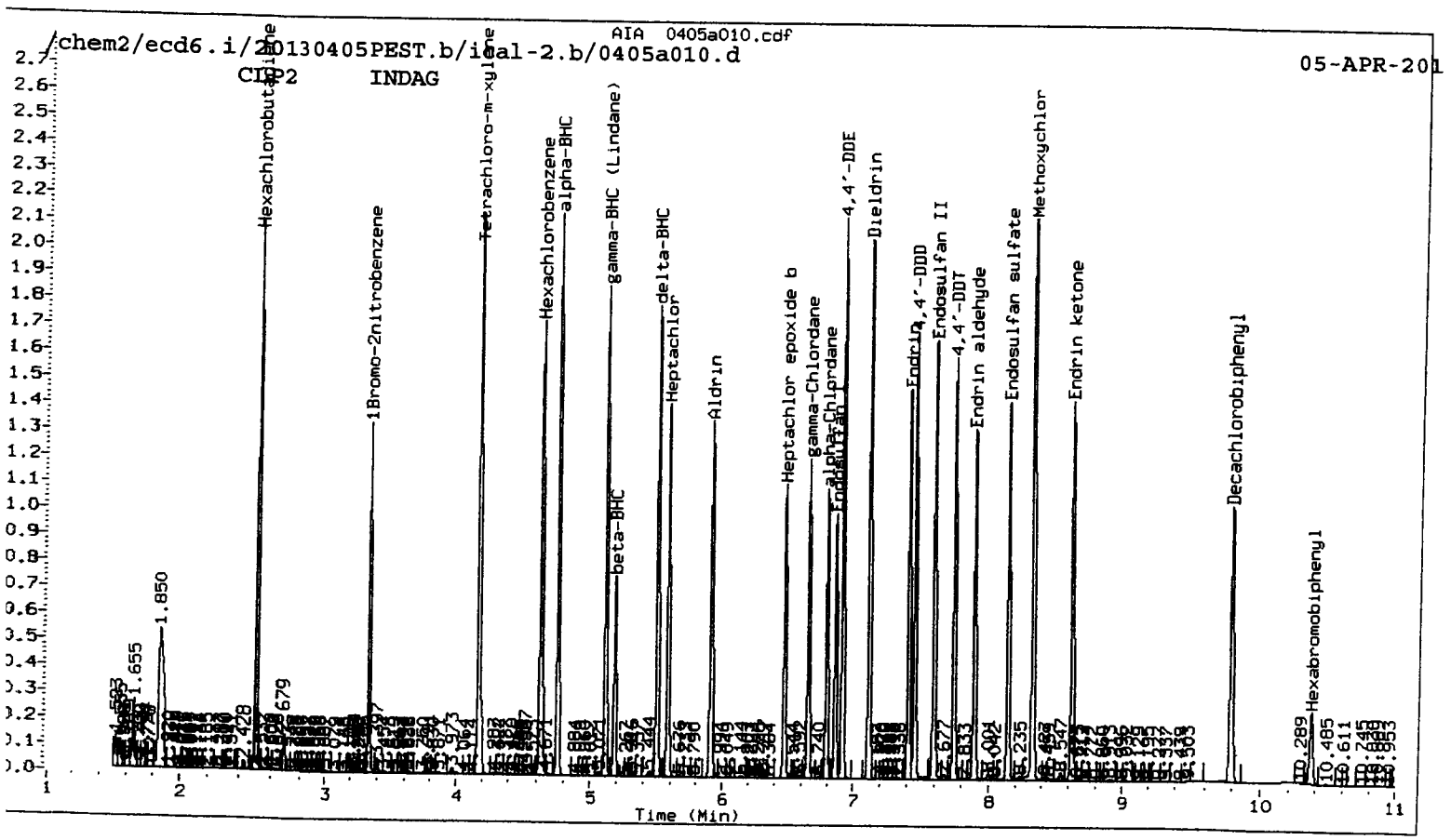
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.853
Time (Min)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CLP2 INDAG
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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
1.850
1.655
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a011.d ARI ID: INDA ICV
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a011.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 14:53
Compound Sublist: INDA Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 4/8/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.000	5329694	3.334	0.001	24310130	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	4957469	4.755	-0.001	24858262	42.2506	42.0201	0.5	alpha-BHC
4.687	-0.001	1835229	5.184	-0.001	9362031	39.0318	40.5878	3.9	beta-BHC
4.858	0.000	4372986	5.497	-0.001	20956726	41.9097	41.6744	0.6	delta-BHC
4.615	0.000	4418177	5.114	-0.002	21712055	41.7270	41.6980	0.1	gamma-BHC (Lindane)
5.065	0.000	4050373	5.581	-0.001	18980040	39.9454	39.3094	1.6	Heptachlor
5.360	-0.001	4169838	5.920	-0.001	18181341	41.9162	41.3029	1.5	Aldrin
5.936	-0.001	3584339	6.474	-0.001	15058099	39.4216	39.4855	0.2	Heptachlor epoxide
6.314	-0.001	3274958	6.862	-0.001	13157330	39.2532	39.5759	0.8	Endosulfan I
6.537	-0.001	3590038	7.119	-0.002	13680043	40.7991	40.9954	0.5	Dieldrin
6.233	-0.002	3472545	6.919	-0.001	13989044	48.1667	41.1569	15.7	4,4'-DDE
6.756	-0.001	2949699	7.409	-0.001	10138602	40.5754	40.2925	0.7	Endrin
6.960	-0.001	2920691	7.597	-0.002	10766476	39.2116	38.9567	0.7	Endosulfan II
6.790	-0.001	2827195	7.456	-0.002	10800406	40.7898	40.5572	0.6	4,4'-DDD
7.729	0.000	2607225	8.140	0.000	9199133	39.7044	40.0830	0.9	Endosulfan sulfate
7.048	-0.001	2795900	7.745	-0.001	9762061	40.2493	40.3824	0.3	4,4'-DDT
7.472	-0.001	1385297	8.327	-0.004	4150107	39.7608	41.4167	4.1	Methoxychlor
7.984	0.000	3106505	8.632	0.000	8944920	37.6777	38.1041	1.1	Endrin ketone
7.338	-0.001	2294051	7.895	-0.001	8273688	37.5027	37.9579	1.2	Endrin aldehyde
6.055	0.000	3731490	6.656	-0.001	15326034	40.1521	39.9343	0.5	gamma-Chlordane
6.179	-0.001	3571572	6.794	-0.001	14206594	39.9555	40.1176	0.4	alpha-Chlordane
2.326	-0.015	5417	2.503	0.006	42584	0.0439	0.0915	70.3*	Hexachlorobutadiene
4.179	0.000	41406	4.627	-0.002	2295	0.4845	0.0042	196.6*	Hexachlorobenzene
8.979	0.000	4682567	10.368	0.002	9265075	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	3201335	4.166	-0.003	17275690	39.9212	40.1772	0.6	Tetrachloro-m-xylen
8.831	0.000	2473088	9.795	-0.001	8366080	36.5166	38.0849	4.2	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	99.8	100.4	99.8~	115- 0
Decachlorobiphenyl	91.3	95.2	91.3~	115- 0

~ Indicates recovery outside QC Limits

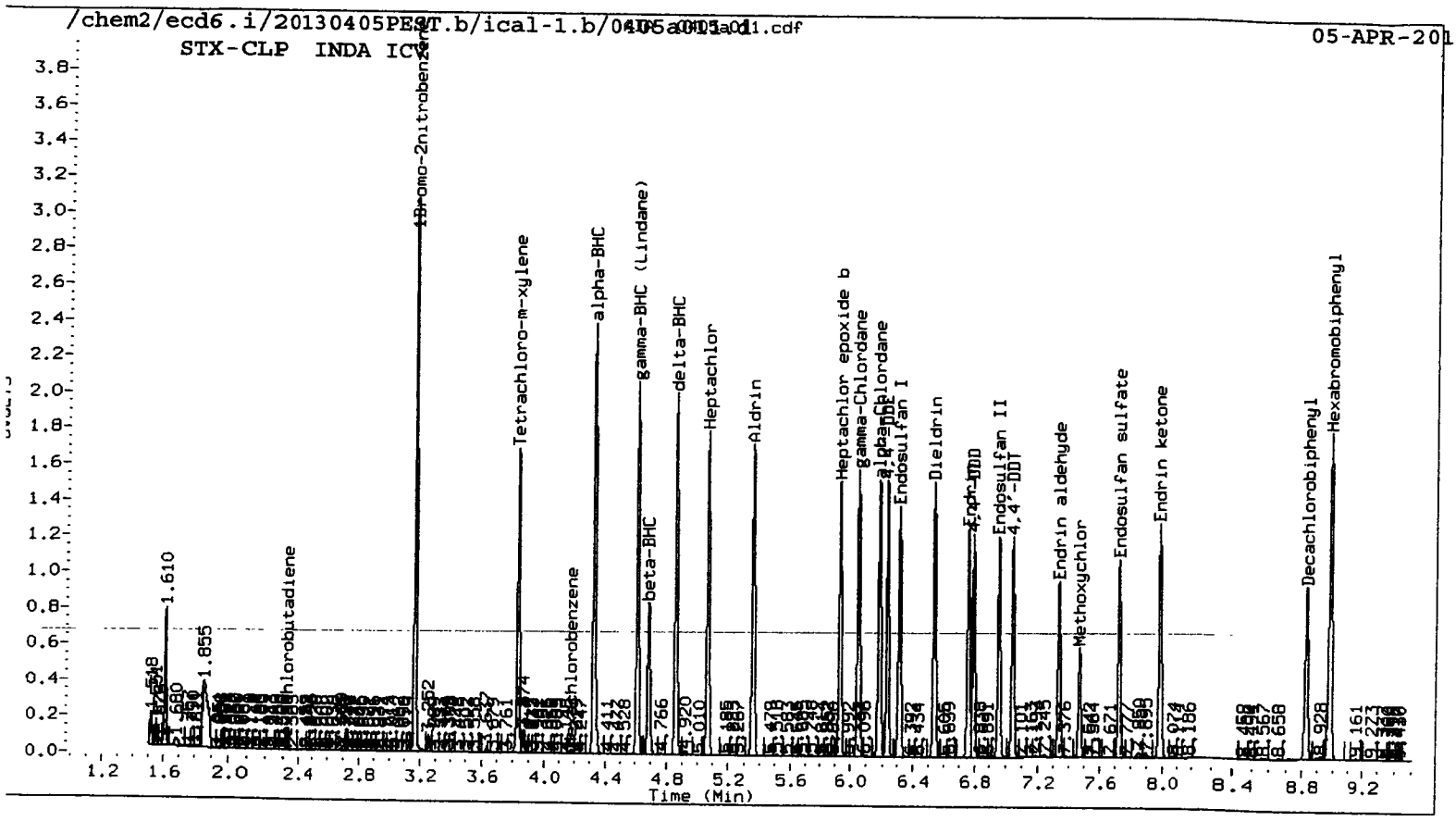
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5329694	-2.2
Hexabromobiphenyl	4807902	4682567	-2.6

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24310130	12.0
Hexabromobiphenyl	7681727	9265075	20.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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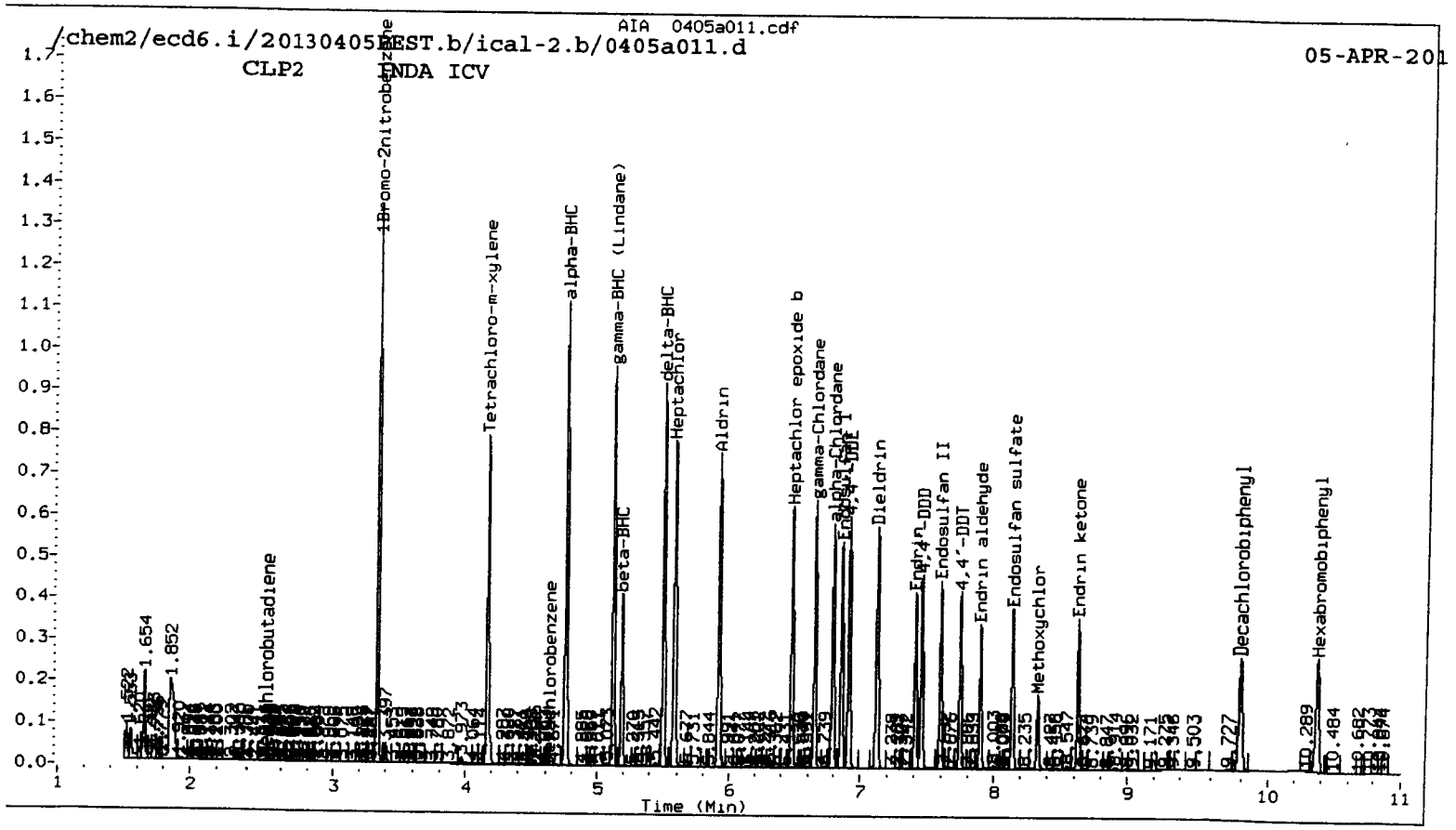
1.855
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDA ICV
05-APR-201
1.654
1.852
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a013.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a013.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 15:28
Report Date: 04/08/2013 11:10
Matrix: NONE
Dilution Factor: 1.000

YE 4/8/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.000	5312805	3.333	0.000	24507429	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.979	0.000	4975008	10.367	0.000	9646485	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	2913745	4.165	-0.003	15946767	36.4504	36.7880	0.9	Tetrachloro-m-xylen
8.831	0.000	2655233	9.794	-0.002	8560283	36.9014	37.4282	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	91.1	92.0	91.1~	150- 0
Decachlorobiphenyl	92.3	93.6	92.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5312805	-2.5
Hexabromobiphenyl	4807902	4975008	3.5

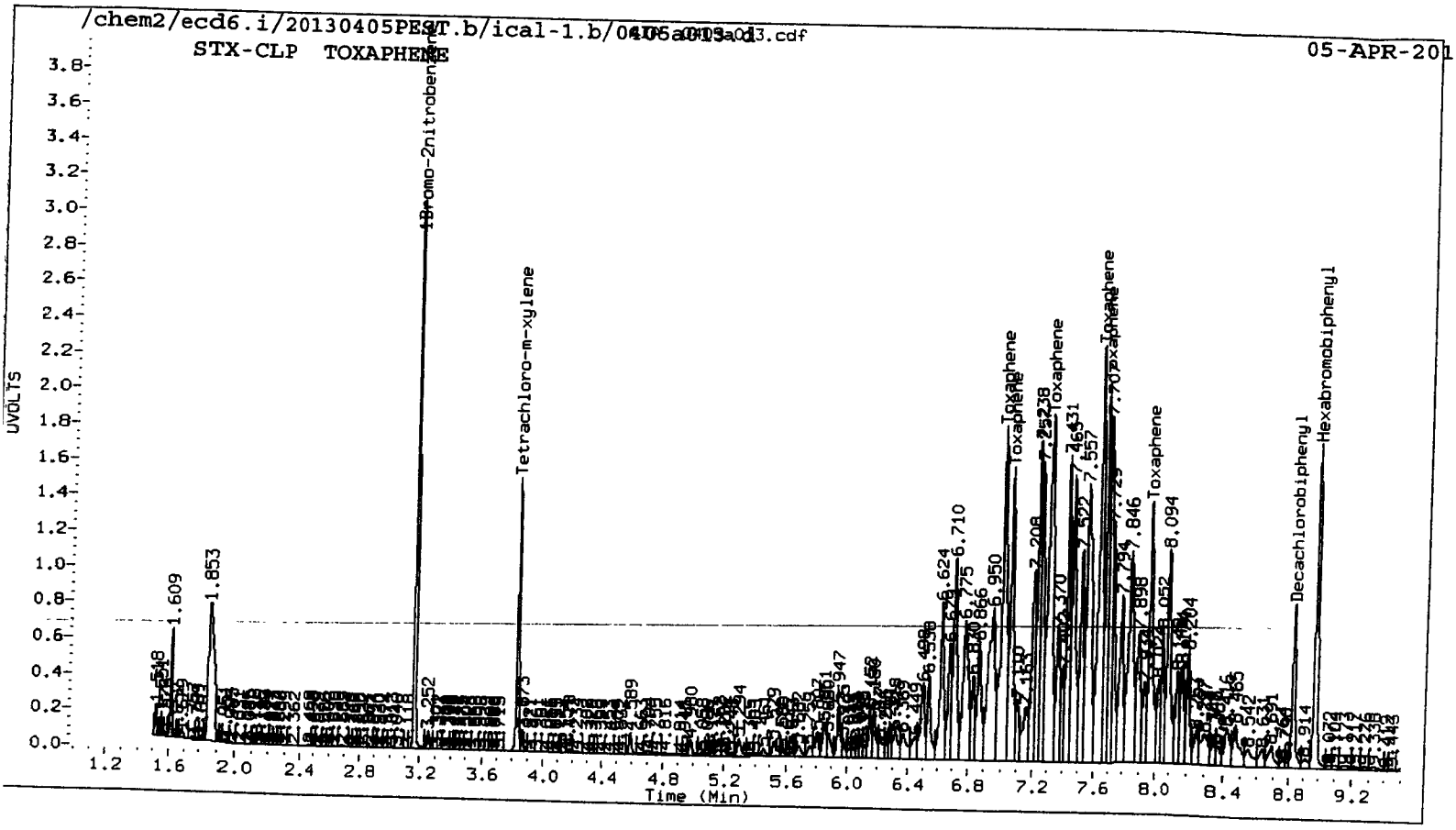
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24507429	12.9
Hexabromobiphenyl	7681727	9646485	25.6

WLS7:81999

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.012	0.000	8003846	2500.0	1	7.344	0.000	22151327	2500.0
Toxaphene	2	7.063	0.000	5446974	2500.0	2	7.668	0.000	33145977	2500.0
Toxaphene	3	7.320	0.000	9145159	2500.0	3	7.898	0.000	35423964	2500.0
Toxaphene	4	7.645	0.000	9223987	2500.0	4	8.366	0.000	25596960	2500.0
Toxaphene	5	7.684	0.000	6087258	2500.0	5	8.406	0.000	32412475	2500.0
						NS	---			----
	Total STX-CLPAve (6 peaks): 2500.000					Total CLP2Ave (5 peaks): 2500.000				RPD = 0
	Corrected Ave (6 peaks): 2500.000					Corrected Ave (5 peaks): 2500.000				RPD = 0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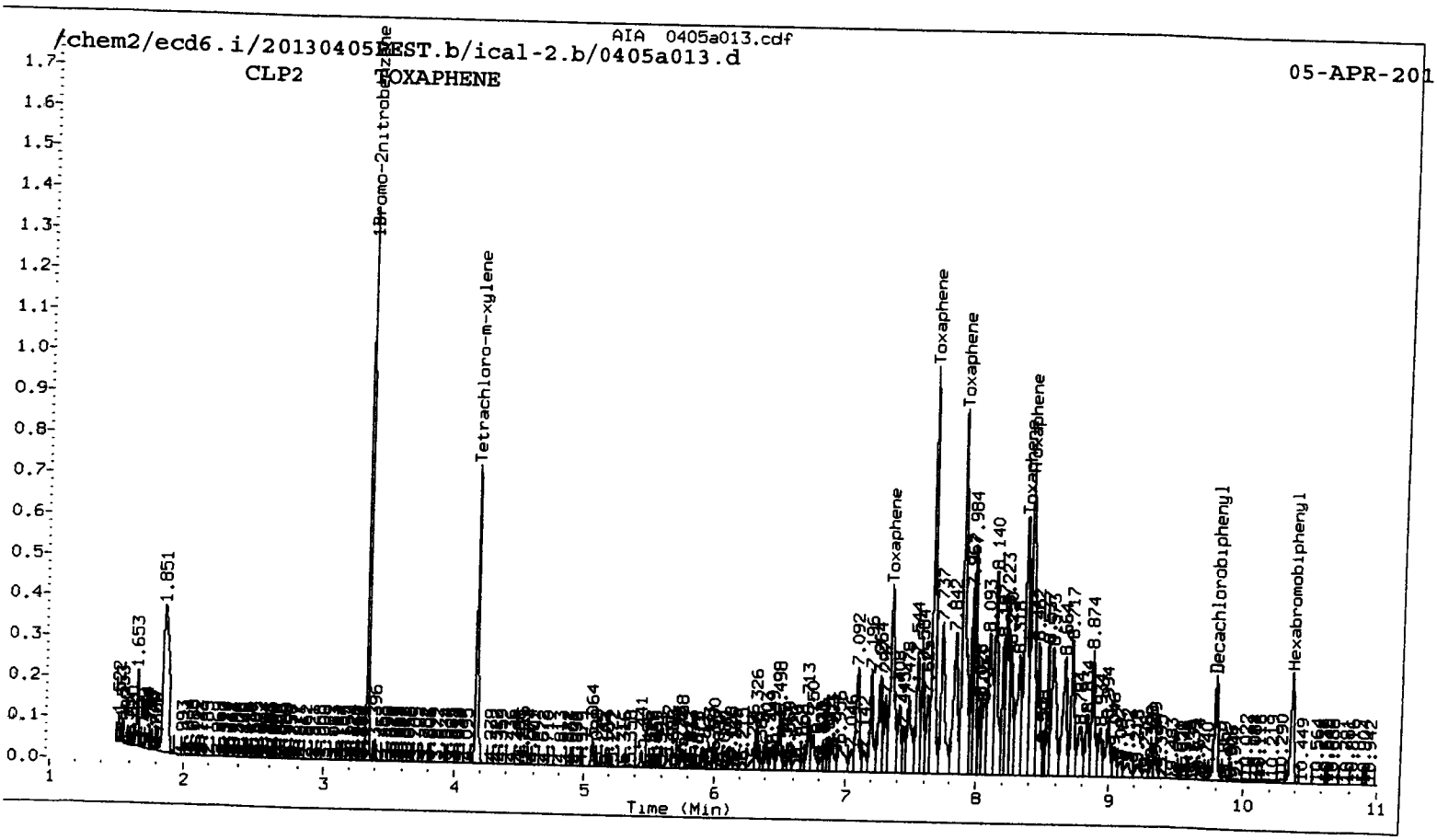
05-APR-201
UVOLTS
1.609
1.853
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 TOXAPHENE
05-APR-201
1.851
1.653
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YB 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a014.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a014.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 15:46
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.736	-0.018	283	1.731	-0.001	943789	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5486756	3.334	0.001	25352954	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	2855555	6.385	0.000	12537032	38.2690	38.2815	0.0	Oxychlordane MN
5.911	0.001	2154414	6.631	0.000	9150967	38.3407	38.0157	0.9	2,4-DDE MN
6.162	0.000	3398608	6.741	0.000	14261784	38.2352	38.8457	1.6	trans-Nonachlor MN
6.398	0.000	1853860	7.115	0.000	7441995	37.7193	38.6555	2.5	2,4-DDD MN
6.637	0.001	2137262	7.403	0.000	7940976	38.0311	38.8730	2.2	2,4-DDT MN
6.778	0.000	3603446	7.465	0.000	13459648	38.3550	38.8147	1.2	cis-Nonachlor MN
7.653	0.001	2043980	8.619	0.000	5860500	36.4278	37.0642	1.7	Mirex MN
8.979	0.000	4769081	10.366	0.000	9572394	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	3067703	4.166	-0.002	16849872	37.1597	37.5751	1.1	Tetrachloro-m-xylen
8.831	-0.001	2388328	9.794	-0.001	8191515	34.6253	36.0931	4.2	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	92.9	93.9	92.9~	150- 0
Decachlorobiphenyl	86.6	90.2	86.6~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

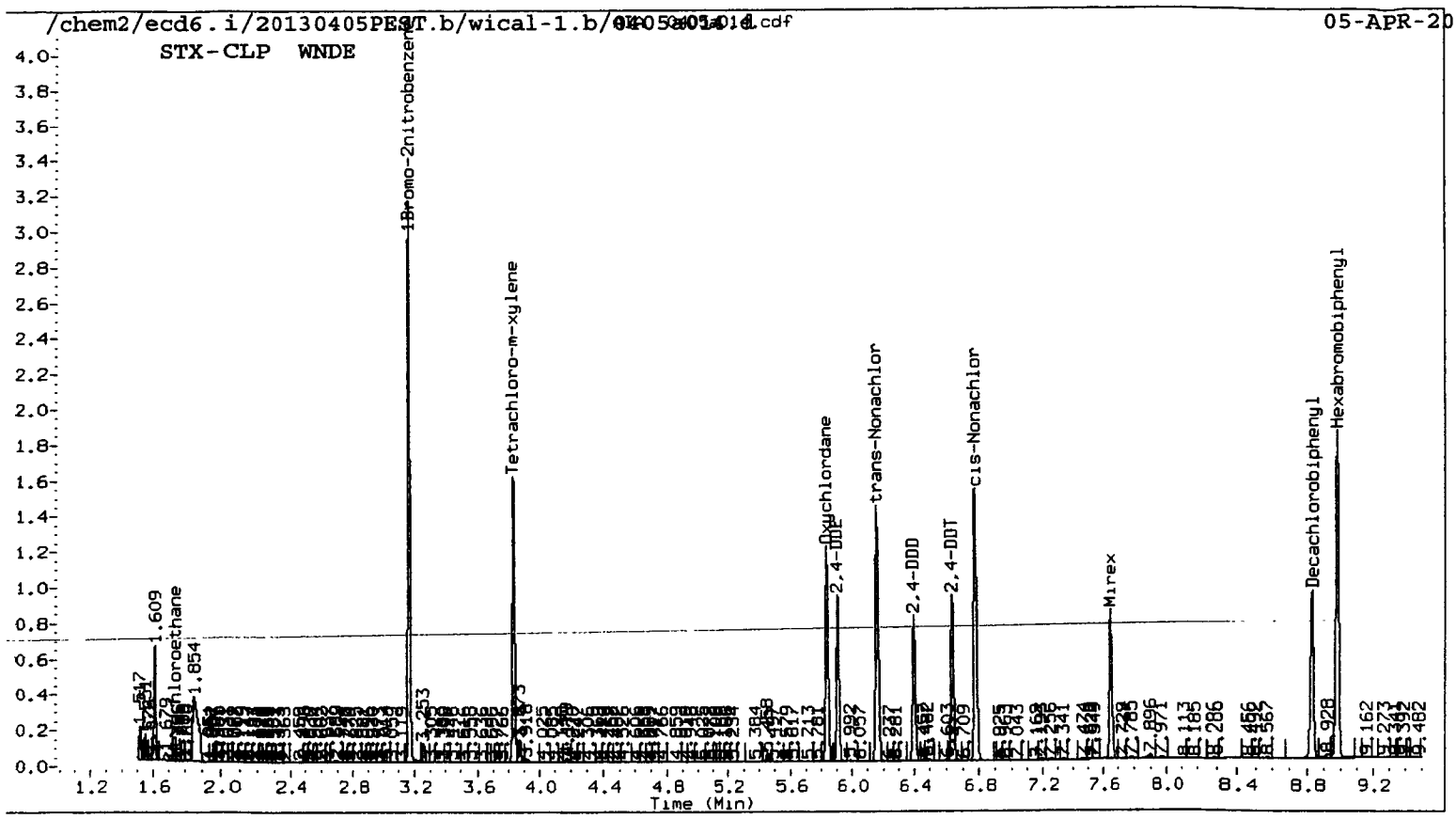
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5486756	0.7
Hexabromobiphenyl	4807902	4769081	-0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25352954	16.8
Hexabromobiphenyl	7681727	9572394	24.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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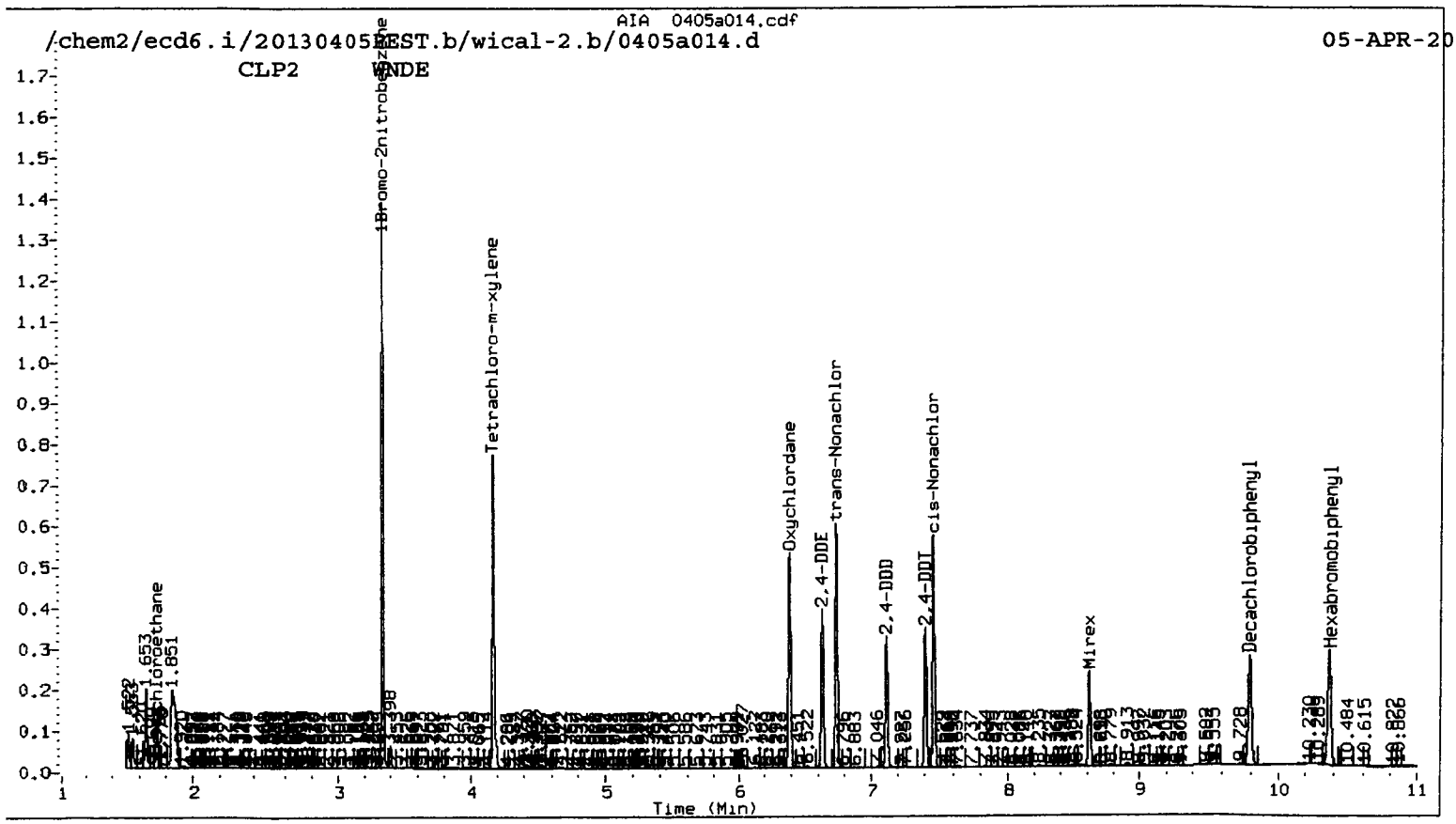
STX-CLP WNDE
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.609
1.854
Time (Min)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05-APR-20
CLP2 WNDE
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.653
1.851
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a015.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a015.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: WND
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 16:04
Report Date: 04/08/2013 11:10
Matrix: NONE
Dilution Factor: 1.000

YE 4/8/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.732	-0.022	445	1.734	0.002	572157	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5428471	3.333	0.001	25320828	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	193129	6.384	0.000	831832	2.5801	2.5432	1.4	Oxychlordane
5.911	0.001	145072	6.631	0.000	640991	2.5737	2.6662	3.5	2,4-DDE
6.162	0.001	228485	6.741	0.000	966266	2.5625	2.6008	1.5	trans-Nonachlor
6.398	0.001	129212	7.115	0.000	522273	2.6208	2.6808	2.3	2,4-DDD
6.637	0.001	146156	7.403	0.000	539689	2.5926	2.6107	0.7	2,4-DDT
6.779	0.001	239747	7.465	0.000	904756	2.5439	2.5783	1.3	cis-Nonachlor
7.653	0.001	159184	8.619	0.000	456842	2.8281	2.8552	1.0	Mirex
8.979	0.000	4784071	10.367	0.001	9686694	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	206775	4.165	-0.003	1151433	2.5316	2.5709	1.5	Tetrachloro-m-xylene
8.831	0.000	206837	9.794	-0.001	604802	2.9893	2.6334	12.7	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	6.3	6.4	6.3~	150- 0
Decachlorobiphenyl	7.5	6.6	6.6~	150- 0

~ Indicates recovery outside QC Limits

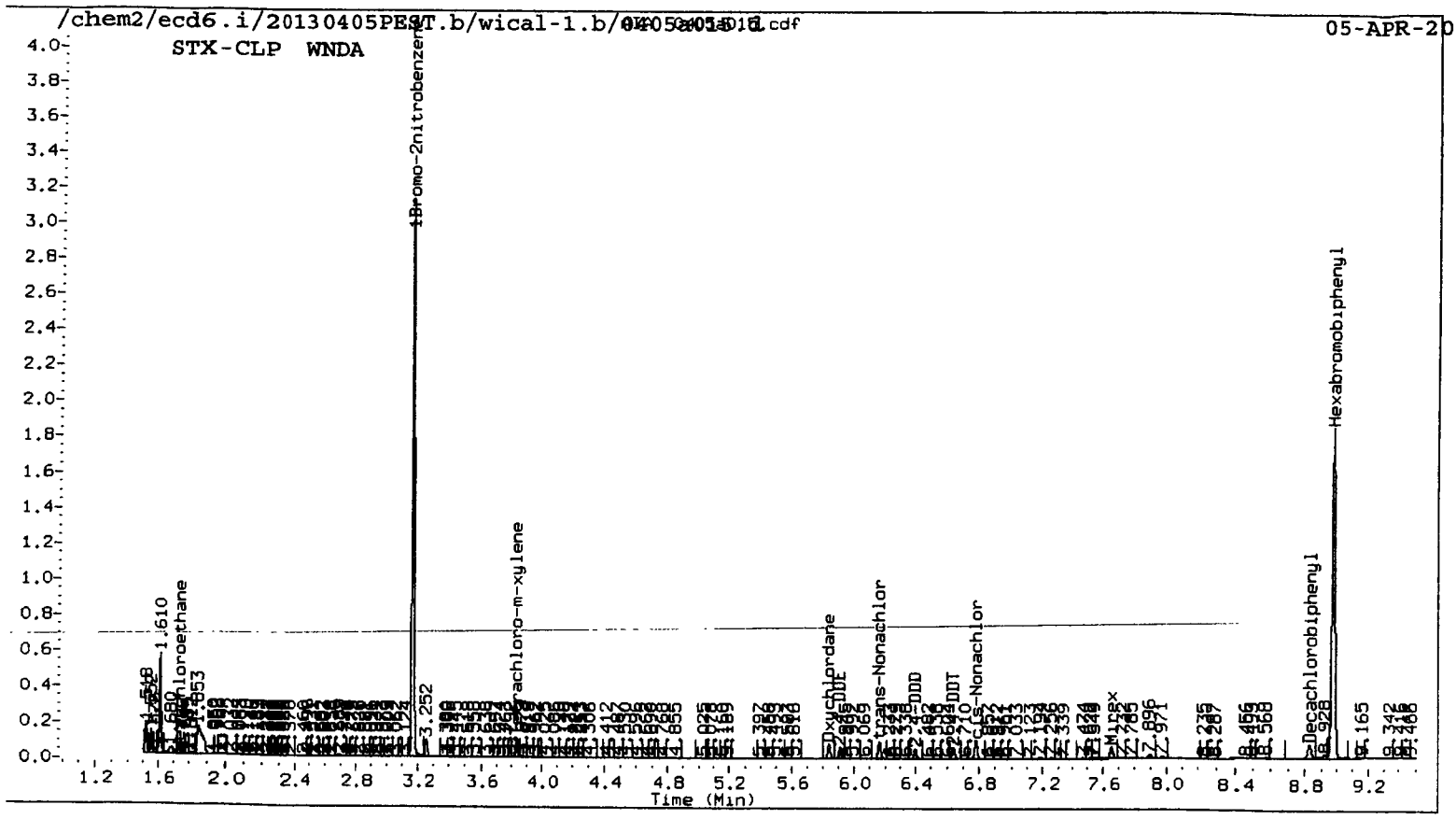
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5428471	-0.4
Hexabromobiphenyl	4807902	4784071	-0.5

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25320828	16.7
Hexabromobiphenyl	7681727	9686694	26.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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05-APR-20
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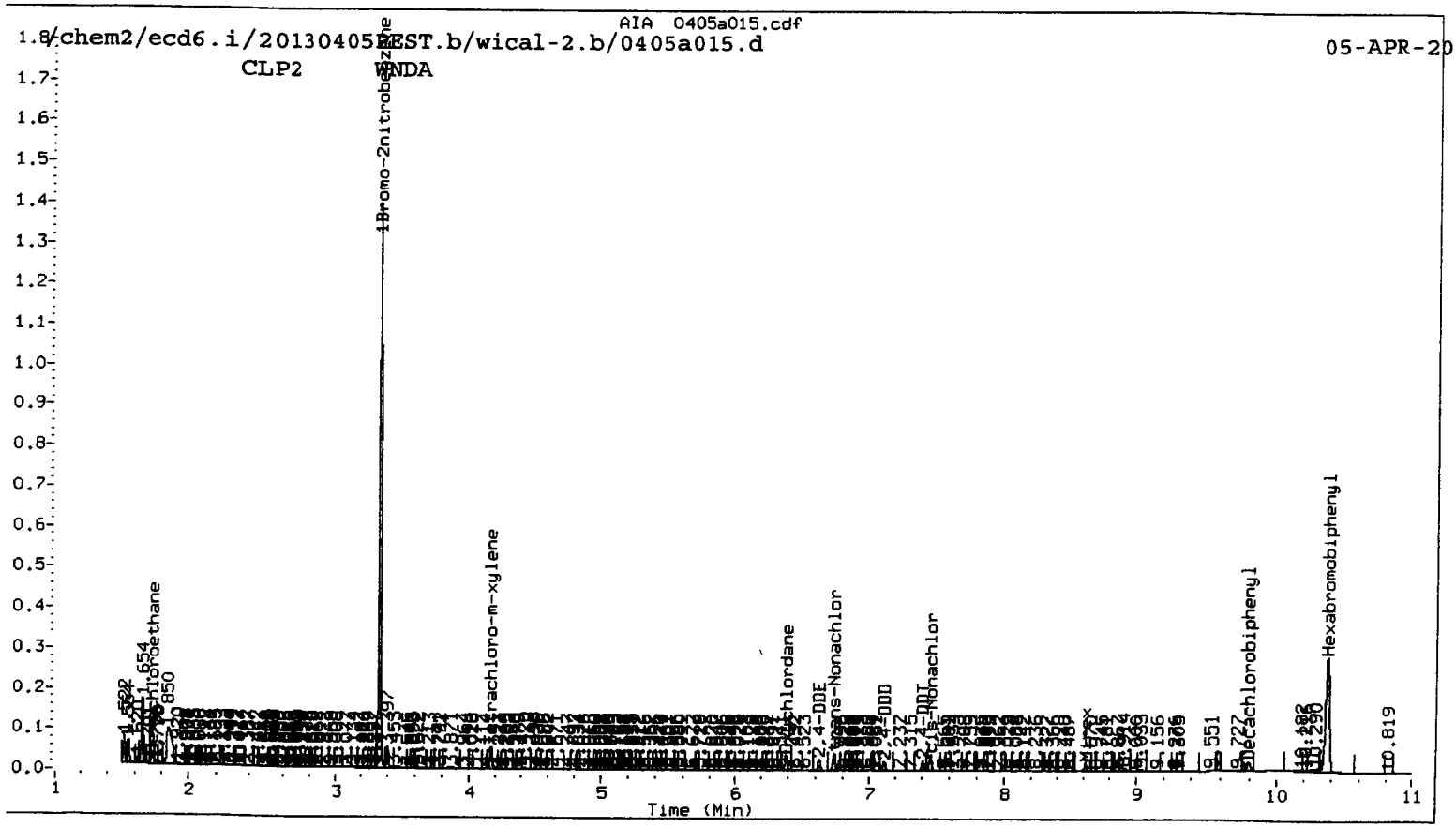
Hexachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDA
05-APR-20
1Bromo-2nitrobenzene
Hexachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a016.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a016.d Client ID: YE 4/8/13
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 16:22
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.726	-0.028	394	1.734	0.003	613547	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5559811	3.333	0.001	25893655	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	385940	6.384	-0.001	1685022	4.9818	5.0377	1.1	Oxychlordane
5.911	0.001	292424	6.631	0.000	1282471	5.0125	5.2165	4.0	2,4-DDE
6.162	0.001	454428	6.741	0.000	1945403	4.9242	4.9724	1.0	trans-Nonachlor
6.398	0.001	253964	7.115	0.000	1021556	4.9770	4.9793	0.0	2,4-DDD
6.638	0.001	288360	7.403	0.000	1070745	4.9422	4.9187	0.5	2,4-DDT
6.778	0.000	473373	7.465	0.000	1807794	4.8530	4.8921	0.8	cis-Nonachlor
7.653	0.000	302811	8.619	0.001	873819	5.1980	5.1859	0.2	Mirex
8.979	0.000	4951391	10.368	0.002	10200809	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	415118	4.166	-0.003	2338146	4.9623	5.1052	2.8	Tetrachloro-m-xylene
8.830	-0.001	375057	9.796	0.000	1181360	5.2373	4.8846	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	12.4	12.8	12.4~	150- 0
Decachlorobiphenyl	13.1	12.2	12.2~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

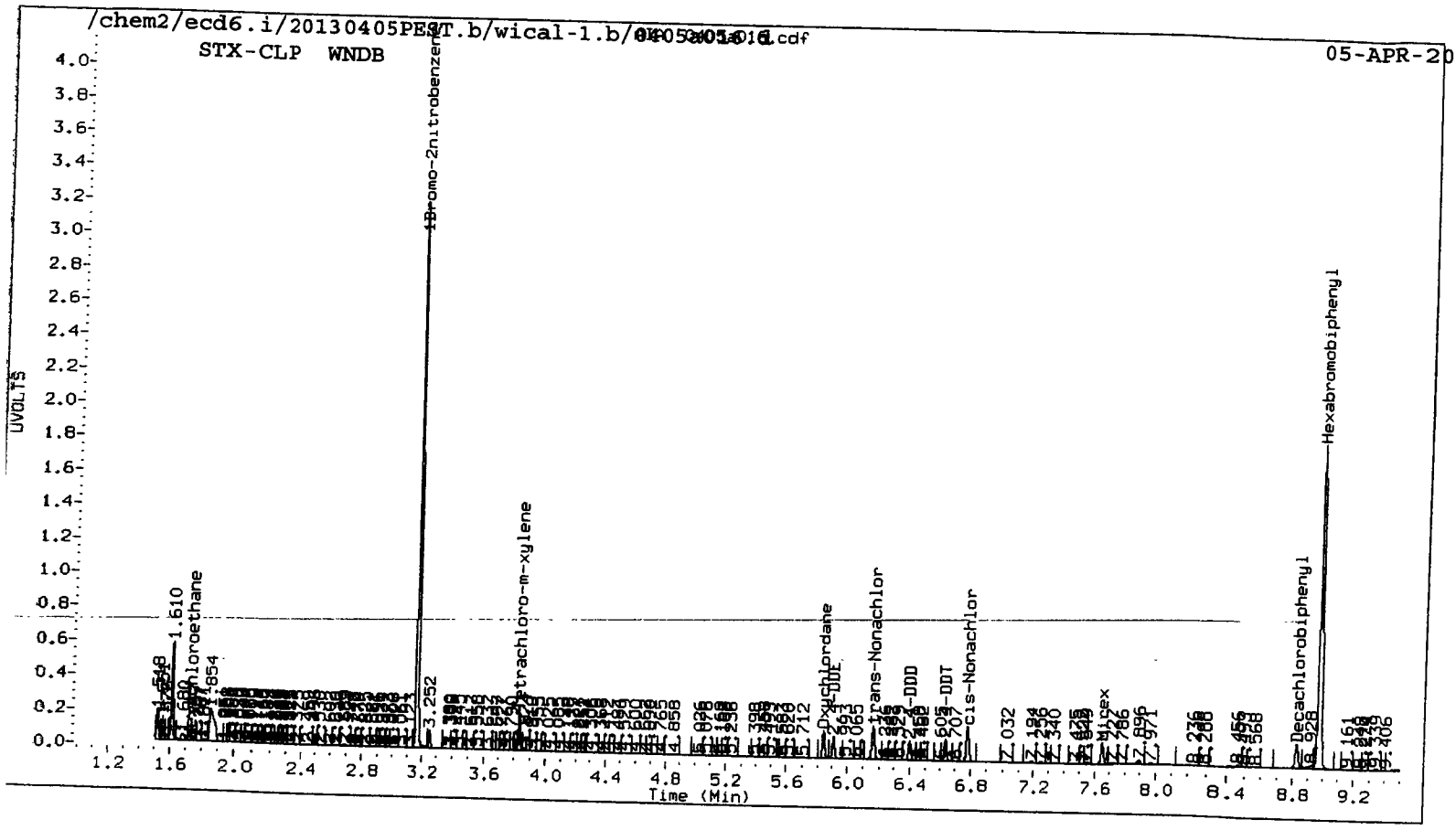
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5559811	2.0
Hexabromobiphenyl	4807902	4951391	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25893655	19.3
Hexabromobiphenyl	7681727	10200809	32.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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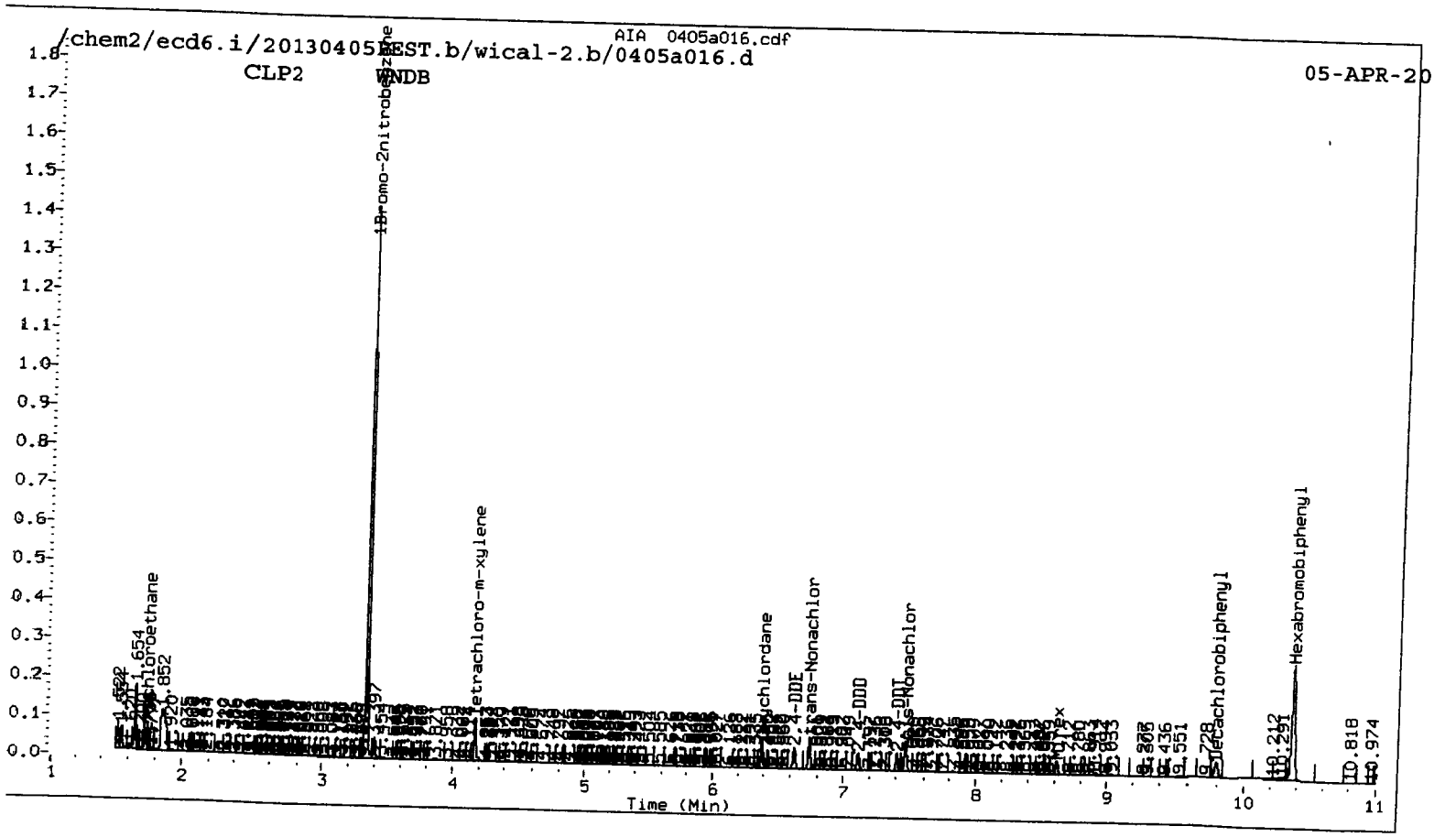
STX-CLP WNDB
05-APR-20
UVOLTS
4-Bromo-2nitrobenzene
1.610
1,1,1-Trichloroethane
1.654
3.252
Tetrachloro-m-xylene
Dieldrin
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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AIA 0405a016.cdf
CLP2 WNDB
05-APR-20
4-Bromo-2nitrobenzene
1,1,1-Trichloroethane
1.654
0.852
Tetrachloro-m-xylene
Dieldrin
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a017.d ARI ID: WNDC
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a017.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 16:40
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.757	0.003	337	1.737	0.005	641674	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5437070	3.333	0.001	25523423	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	744085	6.384	0.000	3302162	10.0303	10.0157	0.1	Oxychlordane
5.911	0.001	561847	6.631	0.000	2480201	10.0573	10.2346	1.7	2,4-DDE
6.162	0.001	874326	6.741	0.000	3786004	9.8939	9.9850	0.9	trans-Nonachlor
6.398	0.001	485638	7.115	0.000	1969056	9.9388	9.9033	0.4	2,4-DDD
6.637	0.001	553848	7.403	-0.001	2078537	9.9130	9.8521	0.6	2,4-DDT
6.778	0.000	916102	7.464	0.000	3567298	9.8080	9.9609	1.5	cis-Nonachlor
7.653	0.000	558764	8.619	0.000	1619675	10.0166	9.9185	1.0	Mirex
8.979	0.000	4741342	10.367	0.000	9886035	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	798694	4.165	-0.003	4570636	9.7632	10.1244	3.6	Tetrachloro-m-xylene
8.830	-0.001	675642	9.794	-0.002	2221004	9.8526	9.4756	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.4	25.3	24.4~	150- 0
Decachlorobiphenyl	24.6	23.7	23.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5437070	-0.2
Hexabromobiphenyl	4807902	4741342	-1.4

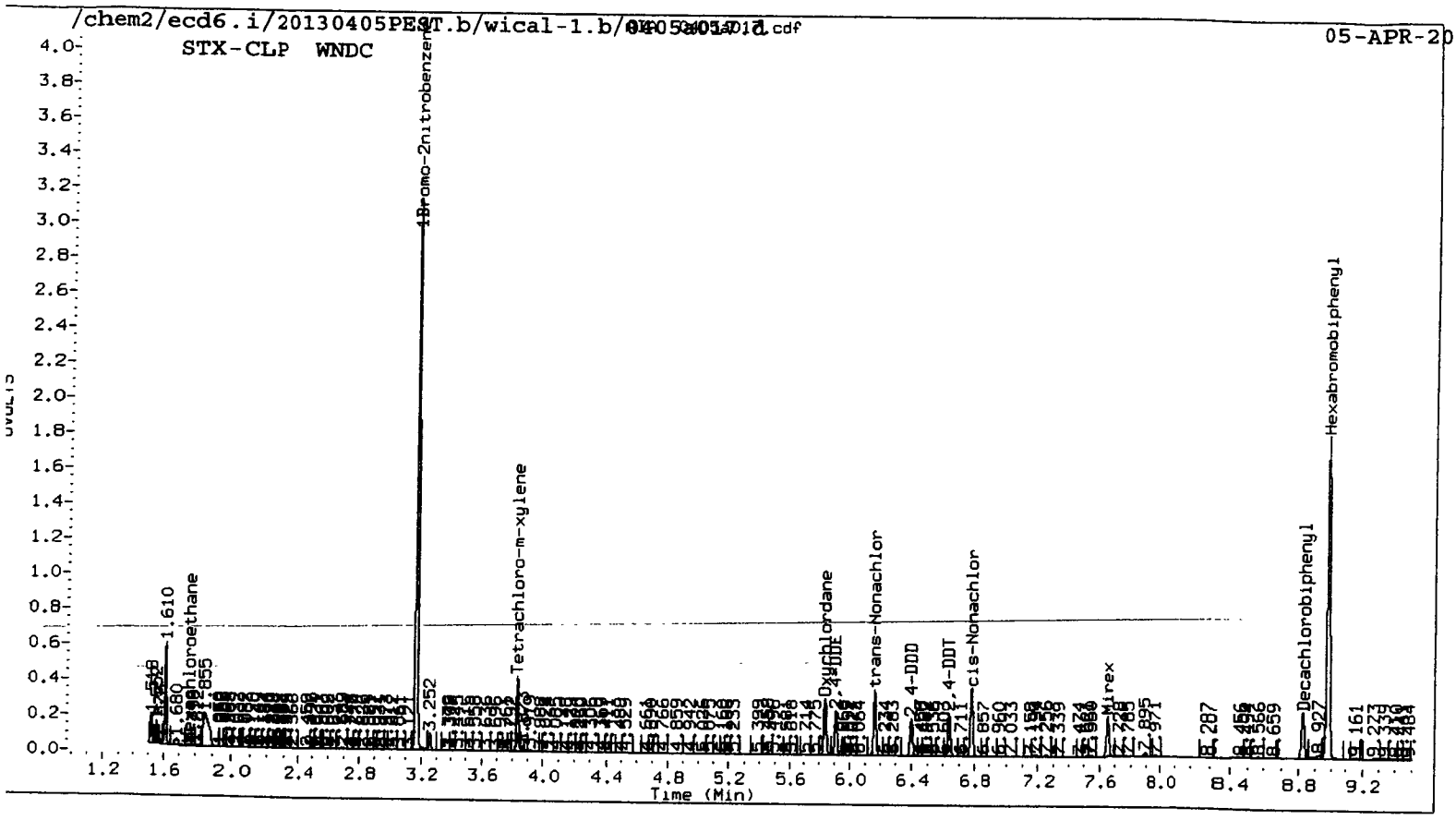
ULS7:04101

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25523423	17.6
Hexabromobiphenyl	7681727	9886035	28.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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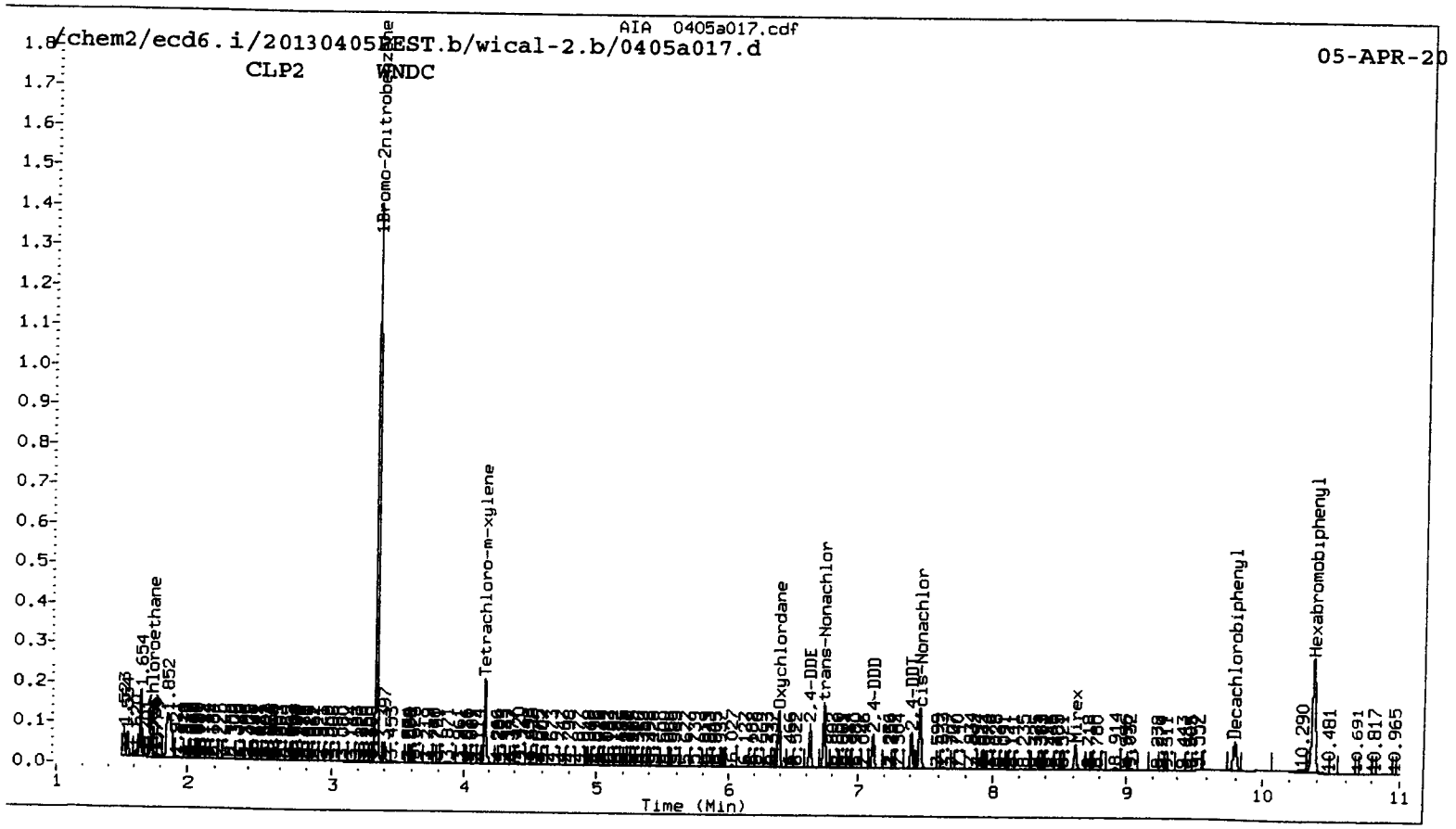
STX-CLP WNDC
05-APR-20
1-Bromo-2-nitrobenzene
1.610
Tetrachloroethane
3.252
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDC
05-APR-20
1-Bromo-2-nitrobenzene
Tetrachloroethane
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a018.d ARI ID: WNDD
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a018.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: WND
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 05-APR-2013 16:57
Report Date: 04/08/2013 11:11
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
1.756	0.002	498	1.735	0.004	710093	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5198393	3.333	0.001	24486263	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	1424810	6.384	-0.001	6425174	20.3576	20.3135	0.2	Oxychlordane
5.910	0.000	1087614	6.630	-0.001	4769894	20.6357	20.5169	0.6	2,4-DDE
6.162	0.000	1691615	6.740	-0.001	7349858	20.2897	20.3515	0.3	trans-Nonachlor
6.397	0.000	932929	7.115	0.000	3827353	20.2371	20.2102	0.1	2,4-DDD
6.637	0.000	1064601	7.402	-0.001	4063800	20.1968	20.2235	0.1	2,4-DDT
6.778	0.000	1782055	7.464	-0.001	6899143	20.2226	20.2258	0.0	cis-Nonachlor
7.653	0.000	1040241	8.618	0.000	3051531	19.7653	19.6194	0.7	Mirex
8.979	0.000	4473234	10.366	0.000	9416112	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	1538706	4.166	-0.003	8782737	19.6726	20.2786	3.0	Tetrachloro-m-xylene
8.830	-0.001	1223782	9.794	-0.002	4219817	18.9155	18.9018	0.1	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	49.2	50.7	49.2~	150- 0
Decachlorobiphenyl	47.3	47.3	47.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

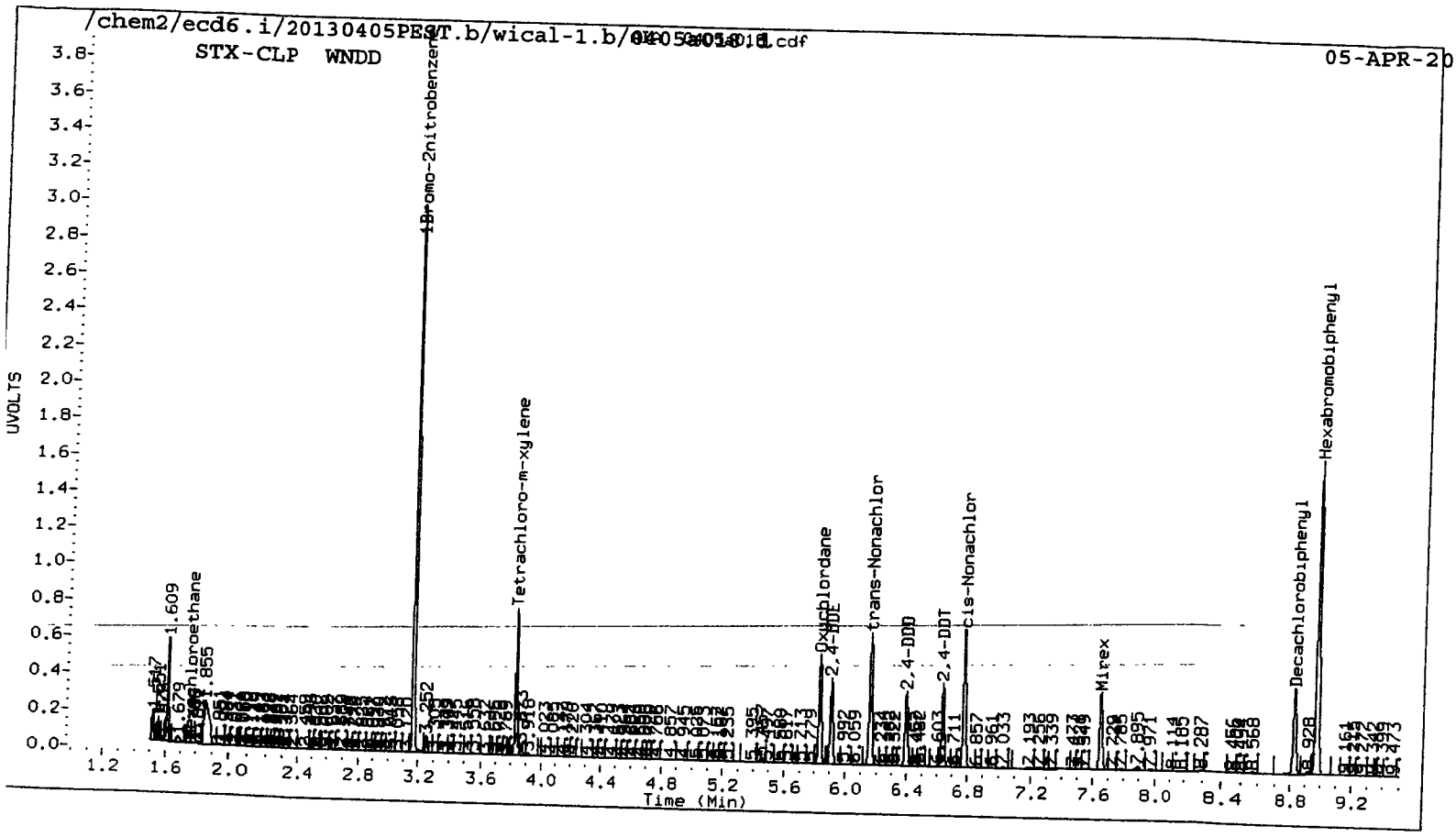
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5198393	-4.6
Hexabromobiphenyl	4807902	4473234	-7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24486263	12.8
Hexabromobiphenyl	7681727	9416112	22.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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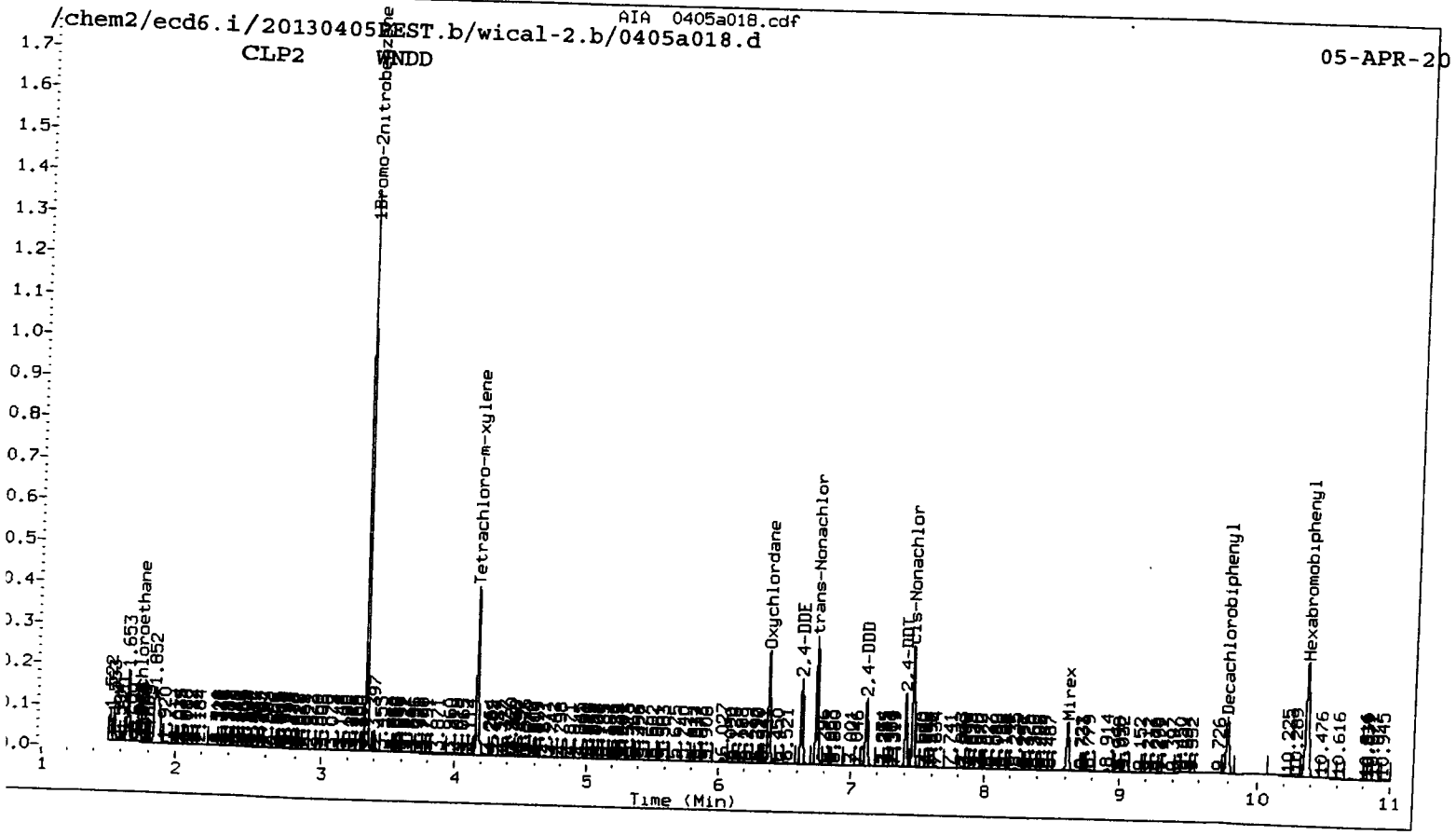
STX-CLP WNDD
05-APR-20
UVOLTS
Time (Min)
1,2-Dichloroethane
1.609
1.855
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
3.252
3.918
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a018.cdf
CLP2 WNDD
05-APR-20
Time (Min)
1,2-Dichloroethane
1.653
1.852
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a019.d ARI ID: WNDF
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a019.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 17:15
Compound Sublist: WND Report Date: 04/08/2013 11:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 4/9/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.756	0.002	2124	1.732	0.000	1217269	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	4612962	3.333	0.001	21937785	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	5434497	6.385	0.000	24335569	86.9522	85.8760	1.2	Oxychlordane
5.911	0.000	4059251	6.631	0.001	17275878	86.2463	82.9415	3.9	2,4-DDE
6.162	0.000	6538878	6.741	0.000	27536270	87.8272	85.6658	2.5	trans-Nonachlor
6.398	0.000	3573667	7.115	0.000	14430584	86.8091	85.6129	1.4	2,4-DDD
6.637	0.000	4139705	7.404	0.000	15589258	87.9458	87.1632	0.9	2,4-DDT
6.778	0.000	6990950	7.465	0.001	26274409	88.8391	86.5423	2.6	cis-Nonachlor
7.653	0.000	3916159	8.619	0.000	11427001	83.3261	82.5440	0.9	Mirex
8.979	0.000	3994575	10.366	0.000	8380834	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	5839913	4.166	-0.003	31976175	84.1398	82.4072	2.1	Tetrachloro-m-xylen
8.830	-0.001	4540430	9.794	-0.001	16079323	78.5888	80.9209	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	210.3	206.0	206.0~	150- 0
Decachlorobiphenyl	196.5	202.3	196.5~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

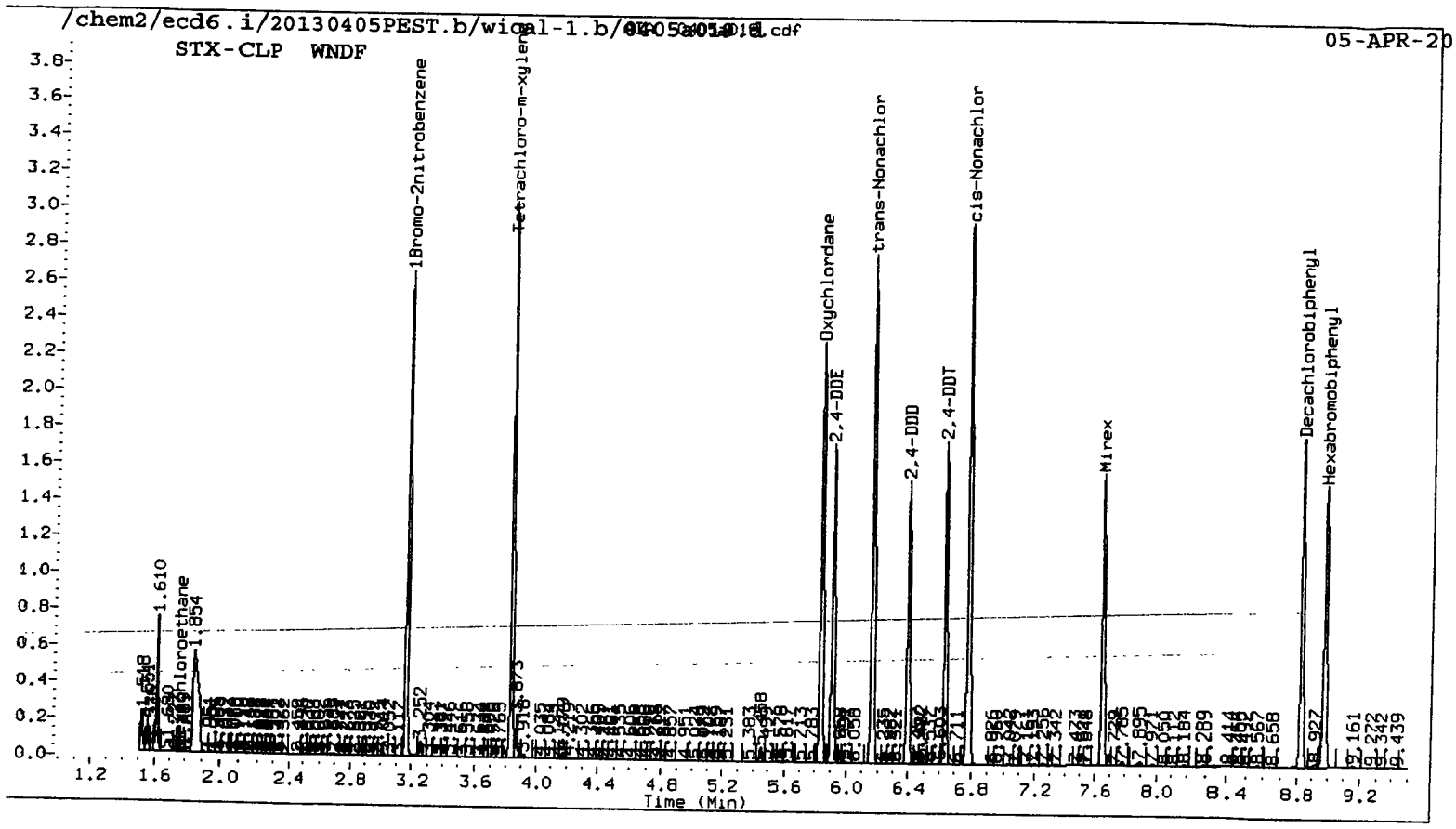
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4612962	-15.3
Hexabromobiphenyl	4807902	3994575	-16.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21937785	1.1
Hexabromobiphenyl	7681727	8380834	9.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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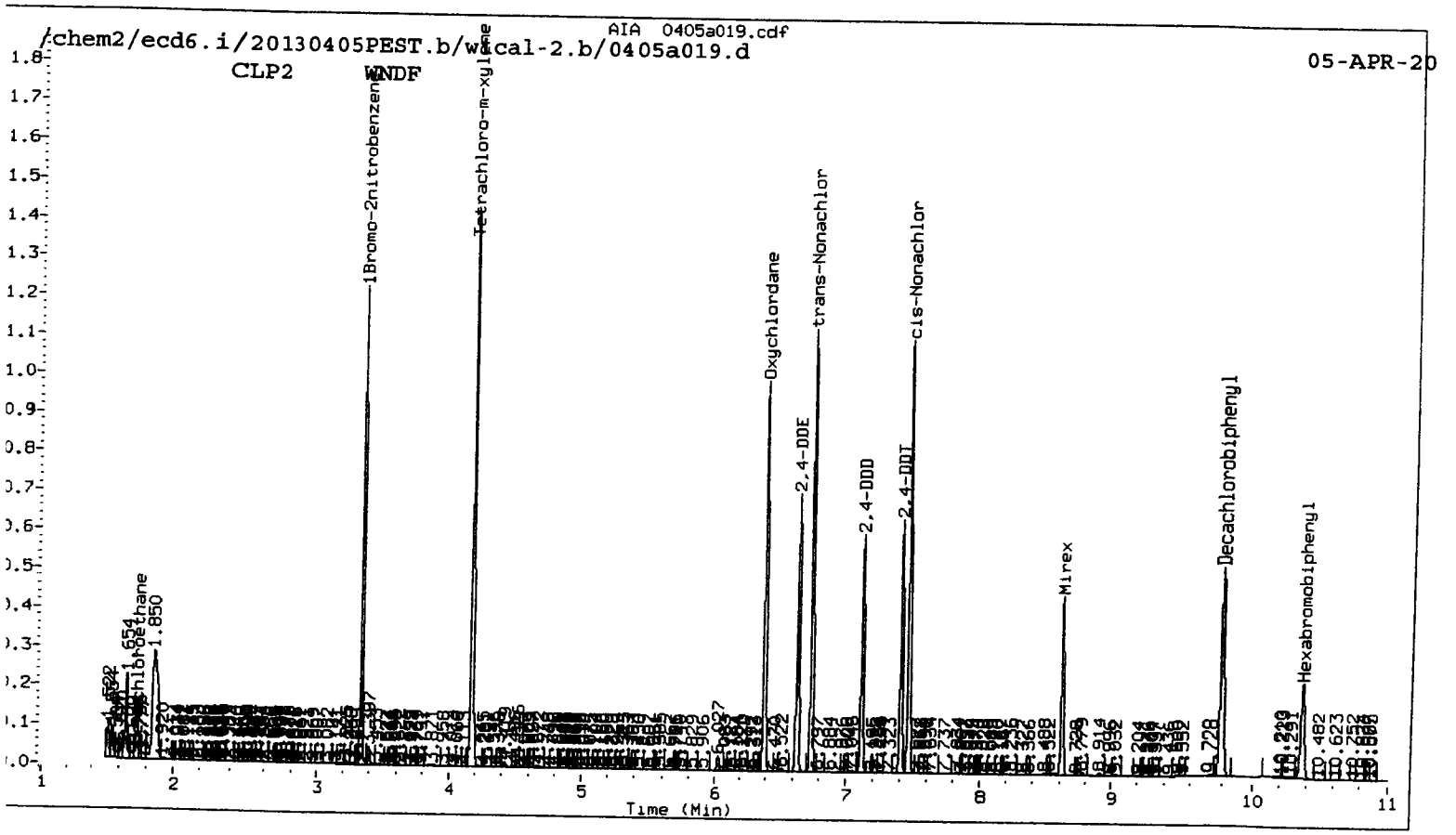
STX-CLP WNDF
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.610
1.854
Time (Min)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CLP2 WNDF
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.654
1.850
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a020.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a020.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 17:33
Compound Sublist: WND Report Date: 04/08/2013 11:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.754	0.000	3460	1.732	0.000	2685728	0.0000	0.0000	---	Hexachloroethane
3.164	-0.001	5195250	3.332	0.000	24391118	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	10298992	6.385	0.000	46753129	145.1289	148.3892	2.2	Oxychlordane
5.911	0.000	7643527	6.631	0.000	31633724	143.0297	136.5977	4.6	2,4-DDE
6.162	0.000	12613712	6.741	0.000	52659310	149.2130	145.1446	2.8	trans-Nonachlor
6.397	0.000	6898918	7.115	0.000	27226192	147.5945	143.1087	3.1	2,4-DDD
6.636	0.000	7895245	7.404	0.000	29528420	147.7234	146.2755	1.0	2,4-DDT
6.778	0.000	13589021	7.465	0.000	51029091	152.0877	148.9144	2.1	cis-Nonachlor
7.653	0.000	7573057	8.619	0.000	22238197	141.9155	142.3234	0.3	Mirex
8.978	-0.001	4535578	10.366	0.000	9459401	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	11025035	4.167	-0.002	56455397	141.0420	130.8595	7.5	Tetrachloro-m-xyl
8.830	-0.001	8738751	9.795	-0.001	31424440	133.2144	140.1148	5.0	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	352.6	327.1	327.1~	150- 0
Decachlorobiphenyl	333.0	350.3	333.0~	150- 0

~ Indicates recovery outside QC Limits

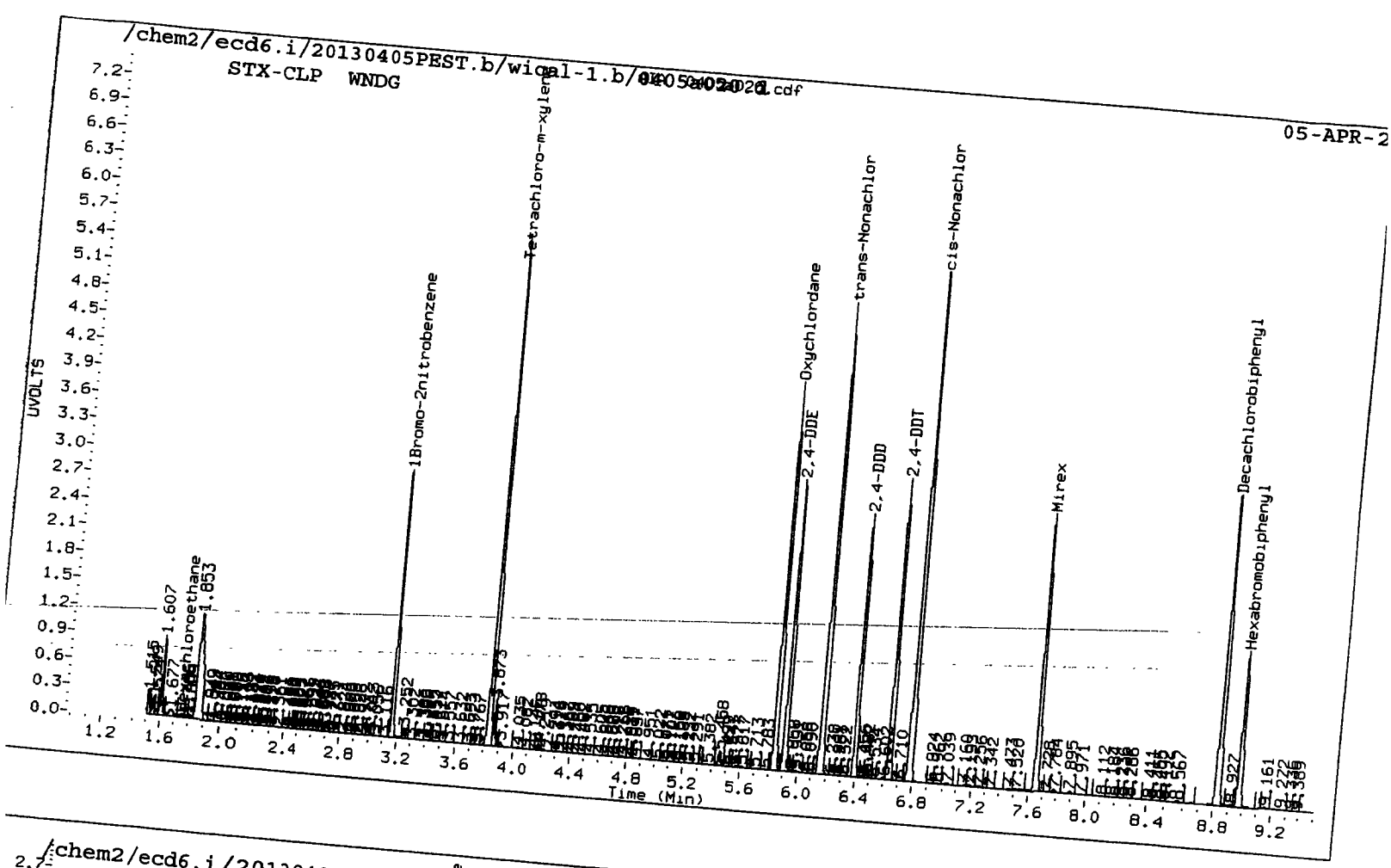
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5195250	-4.6
Hexabromobiphenyl	4807902	4535578	-5.7

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24391118	12.4
Hexabromobiphenyl	7681727	9459401	23.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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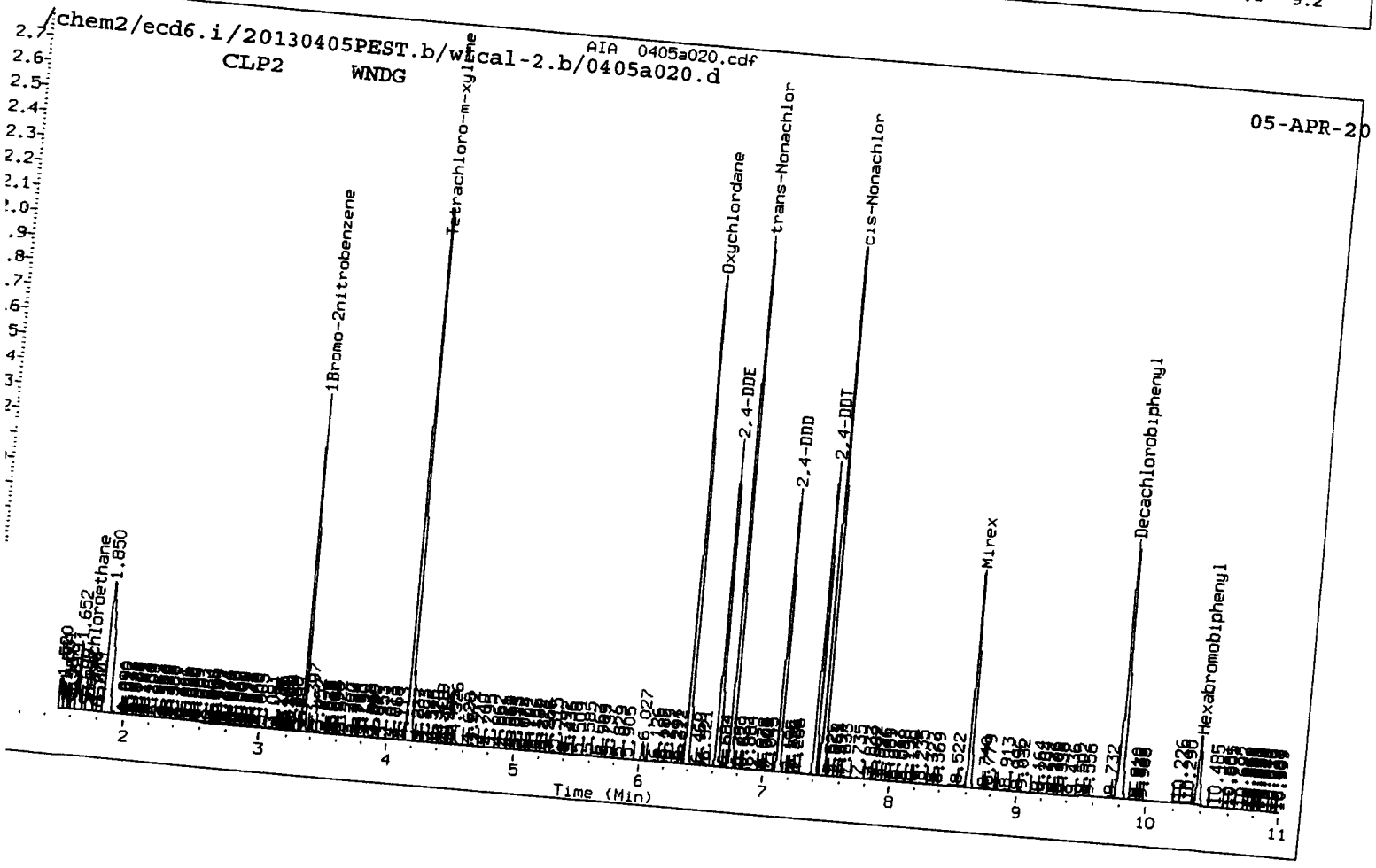
STX-CLP WNDG
AIA 0405a020.cdf
05-APR-2
UVOLTS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDG
AIA 0405a020.cdf
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a021.d ARI ID: WNDICV
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a021.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 17:51
Compound Sublist: WND Report Date: 04/08/2013 11:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.757	0.002	1668	1.734	0.002	1184573	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5135851	3.334	0.001	24444304	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	3462657	6.385	0.000	15600206	48.4809	49.4056	1.9	Oxychlordane
5.911	0.001	2512702	6.631	0.000	11057985	46.7170	47.6456	2.0	2,4-DDE
6.162	0.001	3991007	6.741	0.000	17158583	46.9081	47.4254	1.1	trans-Nonachlor
6.398	0.001	2224263	7.115	0.000	9088171	47.2800	47.9026	1.3	2,4-DDD
6.637	0.001	2602714	7.404	0.000	9968741	48.3851	49.5194	2.3	2,4-DDT
6.779	0.001	4114594	7.465	0.000	15732356	45.7546	46.0380	0.6	cis-Nonachlor
7.653	0.001	2454294	8.619	0.001	7311037	45.6969	46.9201	2.6	Mirex
8.979	0.000	4564895	10.366	0.000	9433225	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	2925232	4.166	-0.003	16541632	37.8550	38.2589	1.1	Tetrachloro-m-xylen
8.831	-0.001	2439138	9.794	-0.001	8060777	36.9437	36.0410	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.6	95.6	94.6~	150- 0
Decachlorobiphenyl	92.4	90.1	90.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5135851	-5.7
Hexabromobiphenyl	4807902	4564895	-5.1

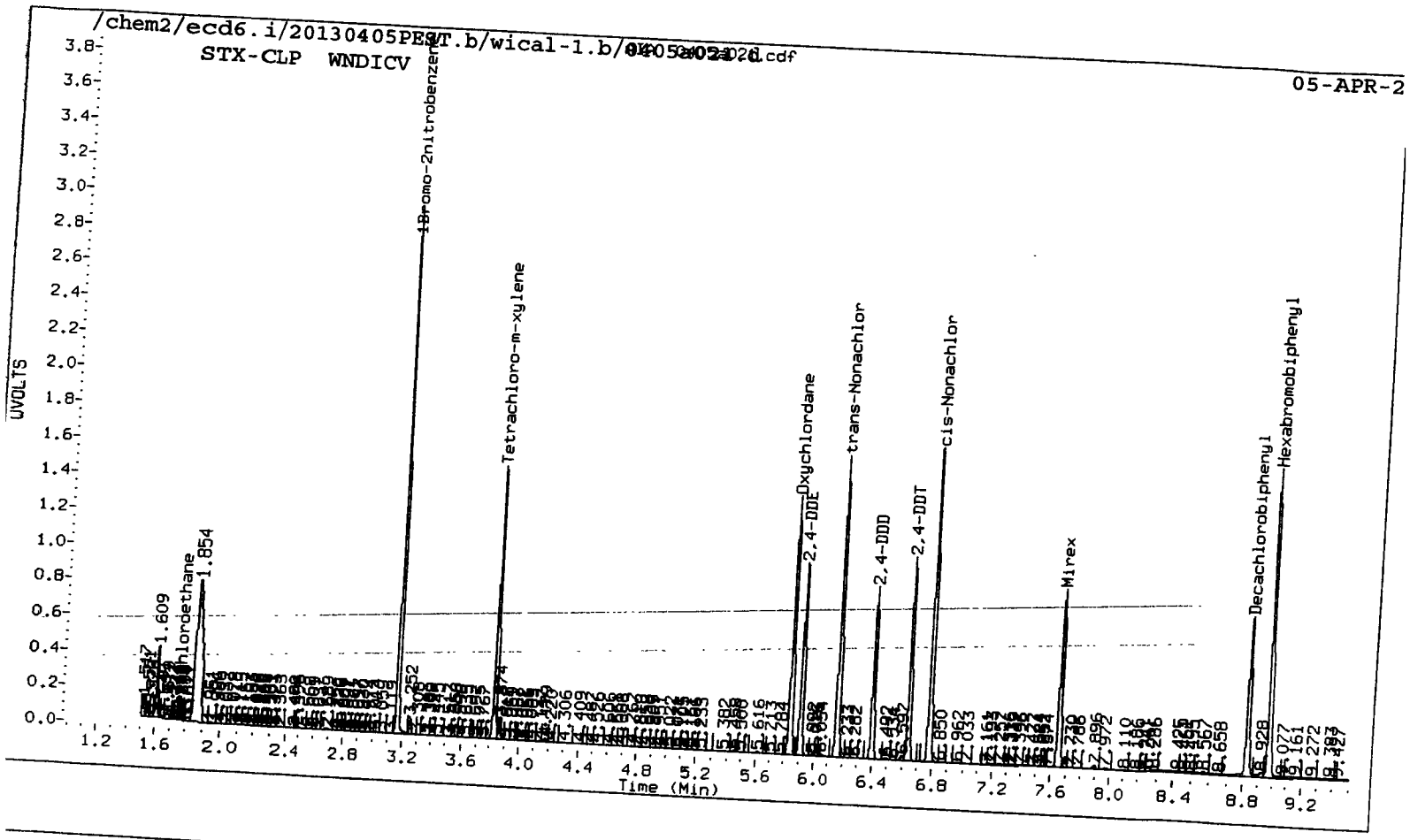
WLST:01112

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24444304	12.6
Hexabromobiphenyl	7681727	9433225	22.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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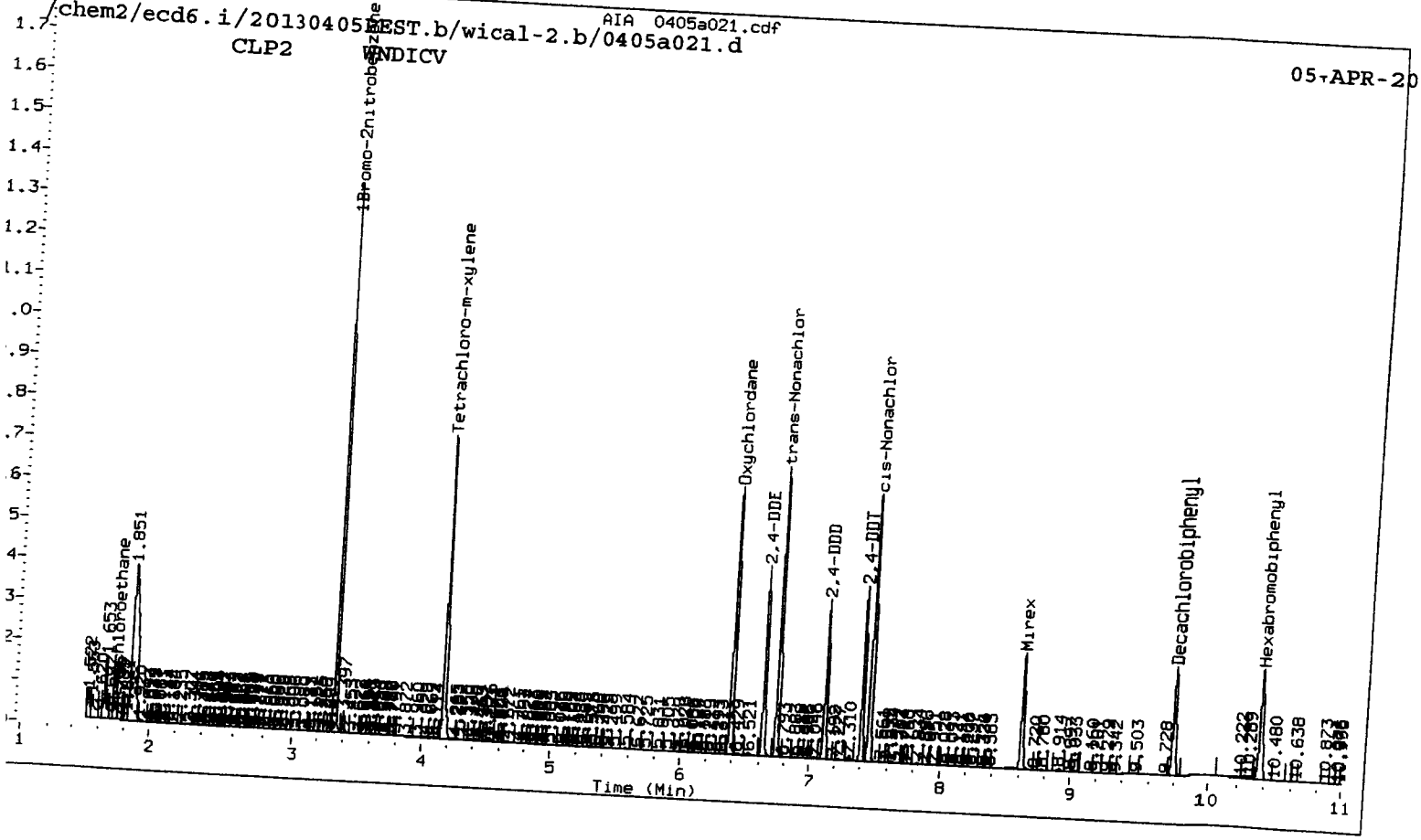
STX-CLP WNDICV
05-APR-2
UVOLTS
1.609
1.854
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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AIA 0405a021.cdf
CLP2 WNDICV
05-APR-20
1.851
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL49/WL67 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: 04/05/13 Analysis Start Date: 04/24/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / (N) 59% ✓	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 / (10x, 500x) ✓
Integration Summary?	Y / (N) / ✓	Special Analysis Request?	(Y) / N / ✓

Detail problems, corrective actions and/or other pertinent information below

- Samples were run @ 10x dilution, due to bad matrix, very dark color of the extract.
- Closing ccal failed, DDT breakdown 59%
- Samples were re-run @ 500x dilution on 04/25/13 for closing ccal - okay. Both runs reported.
- Some pesticides reported with 'Y' flag due to PCBs + matrix interference.

(Review 1) Analyst: YZ **Date:** 4/29/13

(Review 2) Reviewer: B **Date:** 4/29/13

WL67 0117

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 04/24/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1035684 Column Type: STX CLP1

Column 2 Serial No.: 1094709 Column Type: STX CLP2

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0424-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-APR-2013 13:40	0424a005.d	1	DS	
2	24-APR-2013 13:58	0424a006.d	1	INDAE	
3	24-APR-2013 14:16	0424a007.d	1	TOXAPH	
4	24-APR-2013 14:34	0424a008.d	1	WL49MBS1	WL49MBS1
5	24-APR-2013 14:54	0424a009.d	1	WL49LCSS1	WL49LCSS1
6	24-APR-2013 15:14	0424a010.d	1	WL49QLS	
7	24-APR-2013 15:33	0424a011.d	10	WL49F	IM-CB-01-20130410-S
8	24-APR-2013 15:53	0424a012.d	10	WL49G	IM-CB-02-20130410-S
9	24-APR-2013 16:13	0424a013.d	10	WL49GMS	IM-CB-02-201304 MS
10	24-APR-2013 16:33	0424a014.d	10	WL49GMSD	IM-CB-02-201304 MSD
11	24-APR-2013 16:53	0424a015.d	10	WL67A	GR-CB-07-20130411-S
12	24-APR-2013 17:13	0424a016.d	10	WL67B	GR-WS-05-20130411-S
13	24-APR-2013 17:31	0424a017.d	1	DS	
14	24-APR-2013 17:49	0424a018.d	1	INDAE	
15	24-APR-2013 18:07	0424a019.d	1	TOXAPH	

YZ 4/29/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 04/25/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085841 Column Type: STX CLP

Column 2 Serial No.: 1094709 Column Type: STX CLP

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0425-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
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2	25-APR-2013 12:17	0425a006.d	1	INDAE	
3	25-APR-2013 12:37	0425a007.d	1	TOXAPH	
4	25-APR-2013 12:56	0425a008.d	500	WL49F	IM-CB-01-20130410-S
5	25-APR-2013 13:14	0425a009.d	500	WL49G	IM-CB-02-20130410-S
6	25-APR-2013 13:31	0425a010.d	500	WL67A	GR-CB-07-20130411-S
7	25-APR-2013 13:49	0425a011.d	500	WL67B	GR-WS-05-20130411-S
8	25-APR-2013 14:08	0425a012.d	1	DS	
9	25-APR-2013 14:25	0425a013.d	1	INDAE	
10	25-APR-2013 14:43	0425a014.d	1	TOXAPH	

YZ 04/29/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 24-APR-2013 13:58
Compound Sublist: INDA
Report Date: 04/26/2013 15:10
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	5283698	3.332	-0.001	27378463	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2489862	4.752	-0.004	14372483	21.4248	21.5723	0.7	alpha-BHC
4.685	-0.002	901935	5.183	-0.002	5224919	19.3716	20.1133	3.8	beta-BHC
4.855	-0.003	2112064	5.496	-0.003	11854182	20.4187	20.9313	2.5	delta-BHC
4.610	-0.005	2228240	5.111	-0.005	12568422	21.2441	21.4325	0.9	gamma-BHC (Lindane)
5.060	-0.005	2121424	5.577	-0.005	11610218	21.1028	21.3510	1.2	Heptachlor
5.354	-0.006	2036489	5.916	-0.005	10616675	20.6487	21.4152	3.6	Aldrin
5.929	-0.007	1815774	6.470	-0.005	9261274	20.1427	21.5634	6.8	Heptachlor epoxide b
6.307	-0.008	1660770	6.858	-0.005	8215632	20.0768	21.9423	8.9	Endosulfan I
6.529	-0.008	3638918	7.115	-0.006	16196325	41.7125	43.0965	3.3	Dieldrin
6.228	-0.007	2852167	6.916	-0.005	16396835	39.9036	42.8344	7.1	4,4'-DDE
6.748	-0.008	3200312	7.405	-0.005	12994983	45.5755	40.1767	12.6	Endrin
6.953	-0.007	3013535	7.593	-0.006	12985224	41.8849	36.5521	13.6	Endosulfan II
6.785	-0.006	2972096	7.453	-0.005	12986311	44.3919	37.9374	15.7	4,4'-DDD
7.722	-0.008	2664046	8.135	-0.005	10352060	41.9990	35.0908	17.9	Endosulfan sulfate
7.043	-0.006	2963571	7.742	-0.004	10674401	44.1674	34.3517	25.0	4,4'-DDT
7.467	-0.007	6900698	8.323	-0.008	21500312	205.0430	166.9222	20.5	Methoxychlor
7.977	-0.008	3228697	8.627	-0.005	10053051	40.5384	33.3155	19.6	Endrin ketone
7.331	-0.008	2373247	7.890	-0.005	9603709	40.1645	34.2764	15.8	Endrin aldehyde
6.049	-0.006	1899763	6.652	-0.005	9333396	20.6183	21.5941	4.6	gamma-Chlordane
6.173	-0.007	1801962	6.790	-0.005	8662219	20.3325	21.7196	6.6	alpha-Chlordane
2.339	-0.001	2542420	2.497	-0.001	8103954	20.7881	15.4537	29.4	Hexachlorobutadiene
4.177	-0.003	1763131	4.626	-0.003	13454320	20.8208	21.9225	5.2	Hexachlorobenzene
8.975	-0.005	4526048	10.362	-0.004	11909558	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.003	3311247	4.165	-0.004	19095705	41.6608	39.4329	5.5	Tetrachloro-m-xylen
8.824	-0.007	2485908	9.789	-0.007	9672675	37.6276	34.2556	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	104.2	98.6	98.6~	115- 0
Decachlorobiphenyl	94.1	85.6	85.6~	115- 0

~ Indicates recovery outside QC Limits

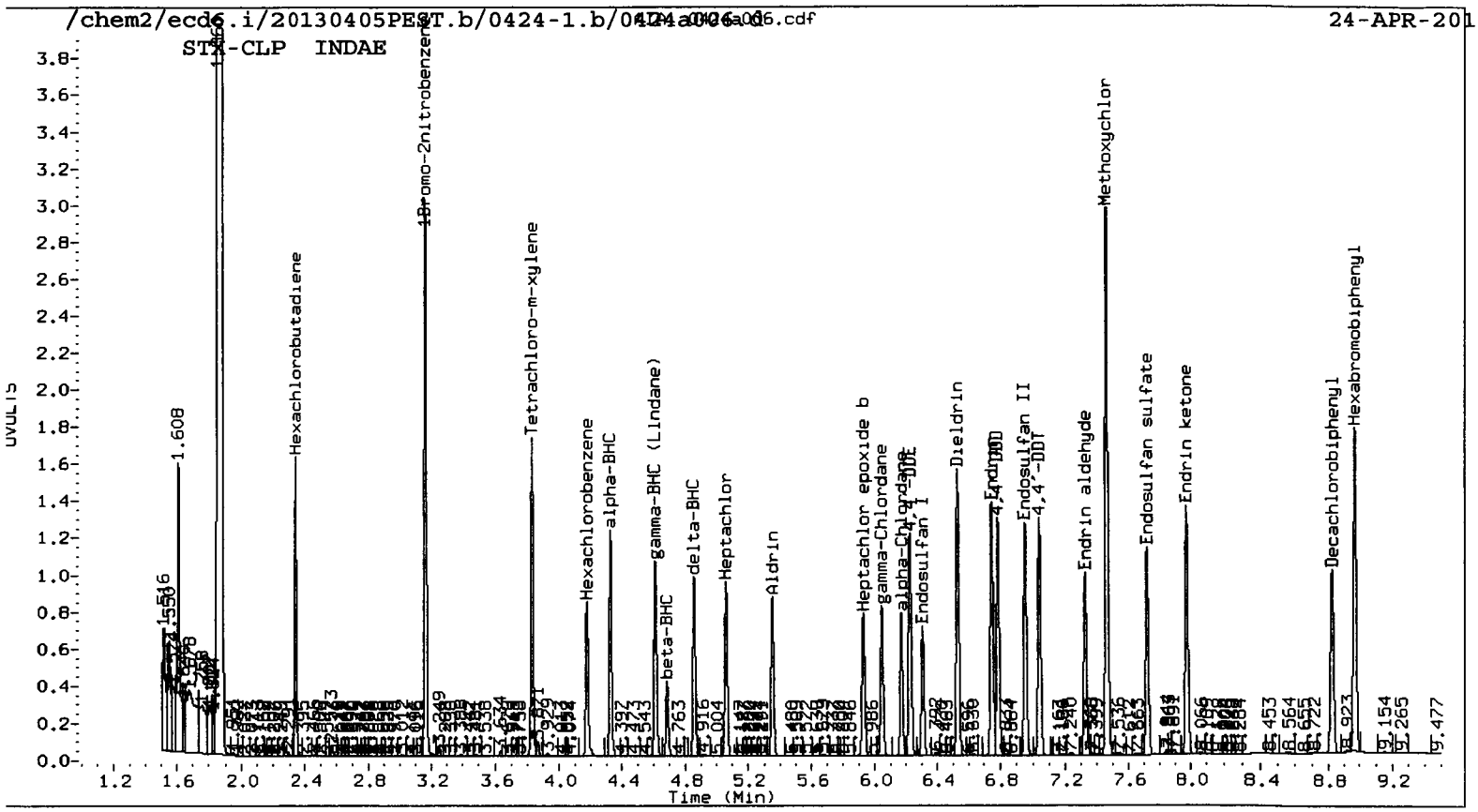
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	5283698	-3.0
Hexabromobiphenyl	4807902	4526048	-5.9

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	27378463	26.2
Hexabromobiphenyl	7681727	11909558	55.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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STX-CLP INDAE
UVOLTS
Time (Min)
1.608
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
Endosulfan II
4,4'-DDT
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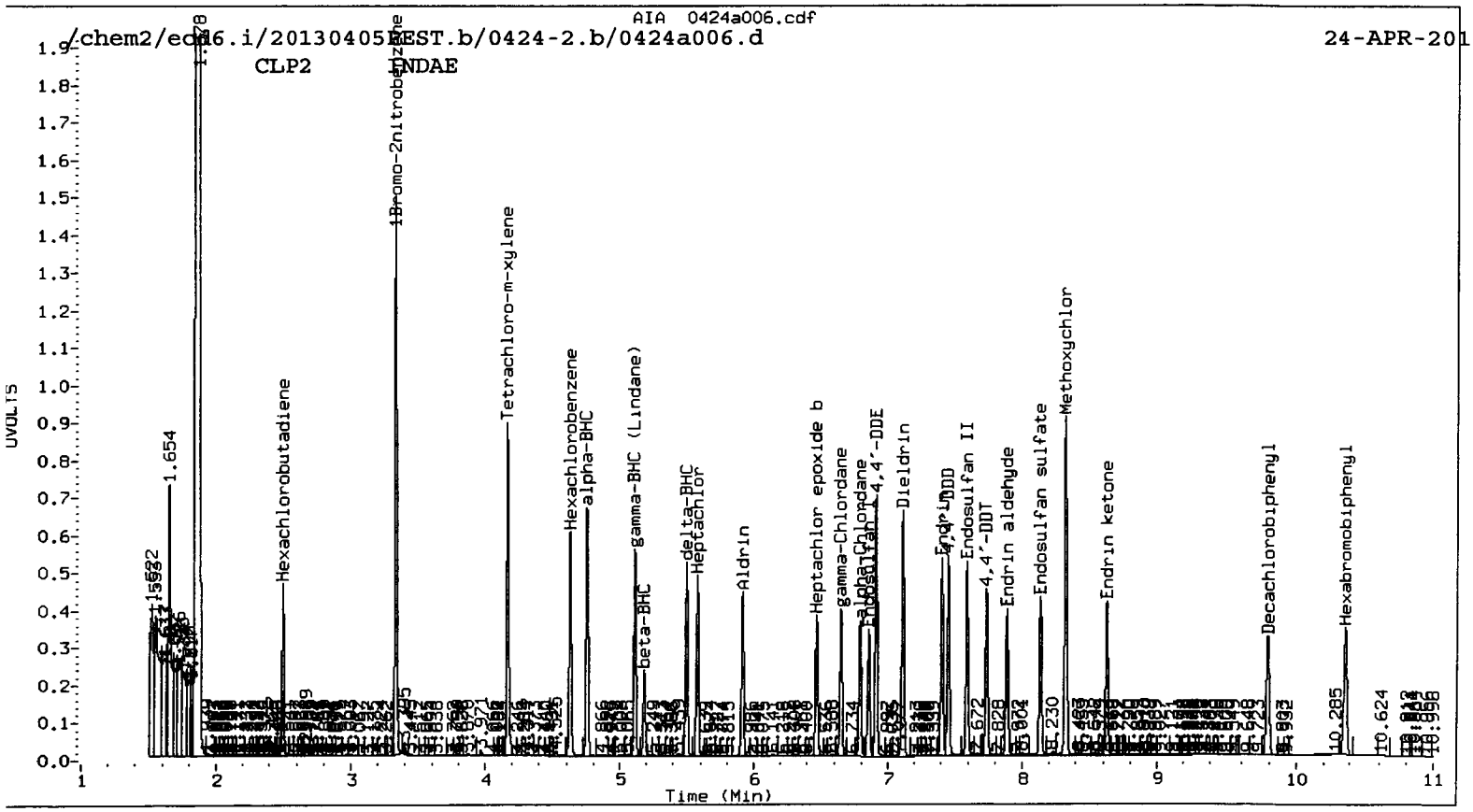
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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UVOLTS
Time (Min)
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Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a007.d Client ID:
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Injection Date: 24-APR-2013 14:16
Compound Sublist: TOXAPH
Report Date: 04/26/2013 15:10
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	-0.003	5712922	3.332	-0.001	30001246	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.975	-0.005	4986693	10.362	-0.004	12823922	80.0000	80.0000	0.0	Hexabromobiphenyl
3.833	-0.003	2949228	4.164	-0.004	17297592	34.3182	32.5970	5.1	Tetrachloro-m-xylen
8.824	-0.007	2362552	9.789	-0.006	9125460	32.4570	30.0133	7.8	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	85.8	81.5	81.5~	150- 0
Decachlorobiphenyl	81.1	75.0	75.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5712922	4.9
Hexabromobiphenyl	4807902	4986693	3.7

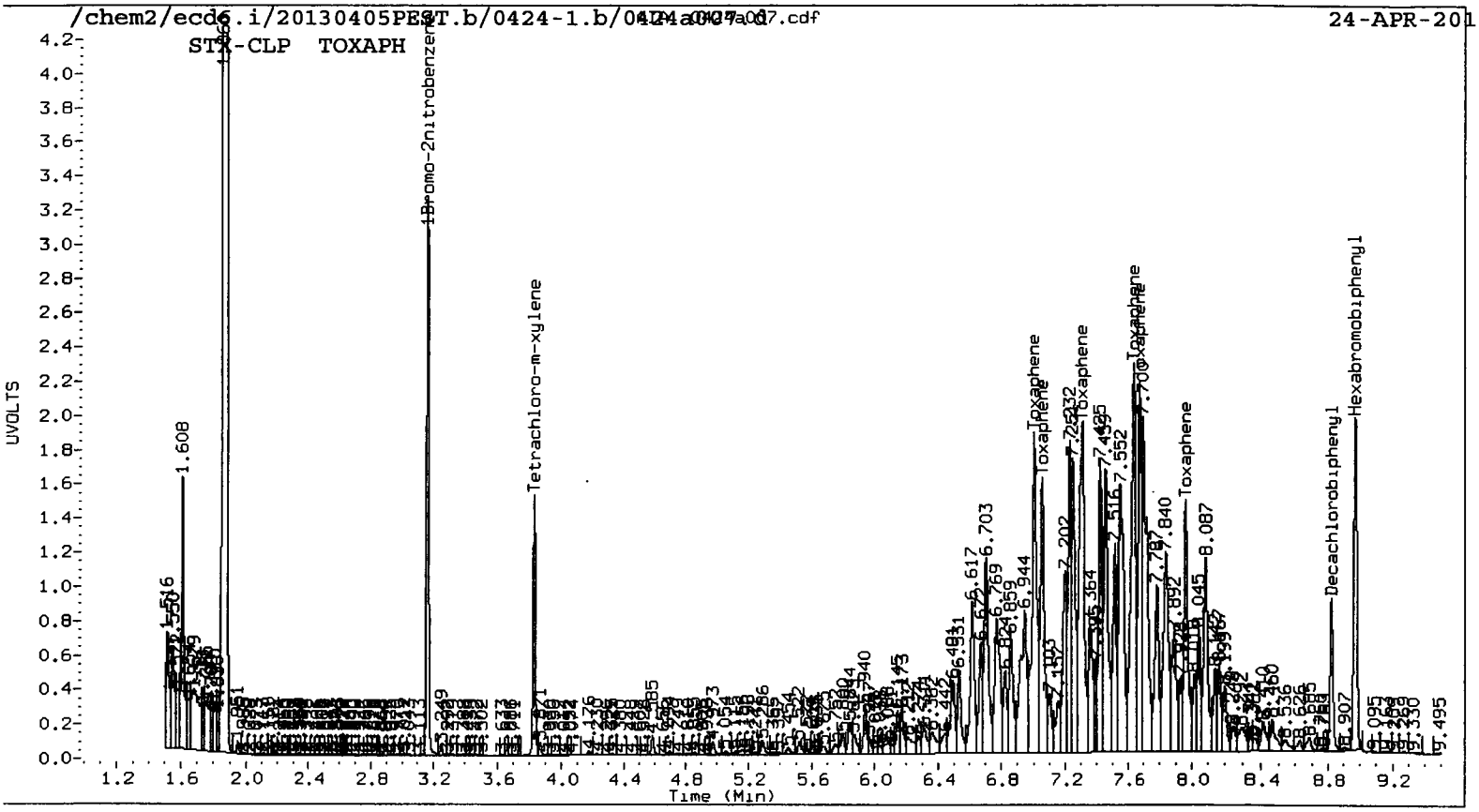
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	30001246	38.2
Hexabromobiphenyl	7681727	12823922	66.9

WG67-24132

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.005	-0.007	8119204	2530.1	1	7.340	-0.004	26271553	2230.4
Toxaphene	2	7.056	-0.007	5484063	2511.1	2	7.664	-0.004	37551197	2130.5
Toxaphene	3	7.313	-0.007	9140862	2493.0	3	7.894	-0.004	40138578	2130.9
Toxaphene	4	7.639	-0.006	9257765	2503.3	4	8.363	-0.004	27565762	2025.2
Toxaphene	5	7.678	-0.006	6189027	2535.8	5	8.402	-0.004	35213172	2043.1
Toxaphene	6	7.960	-0.006	5119901	2443.6	NS	---			----
Total STX-CLPAve (6 peaks): 2502.821						Total CLP2Ave (5 peaks): 2111.995				RPD = 17
Corrected Ave (6 peaks): 2502.821						Corrected Ave (5 peaks): 2111.995				RPD = 17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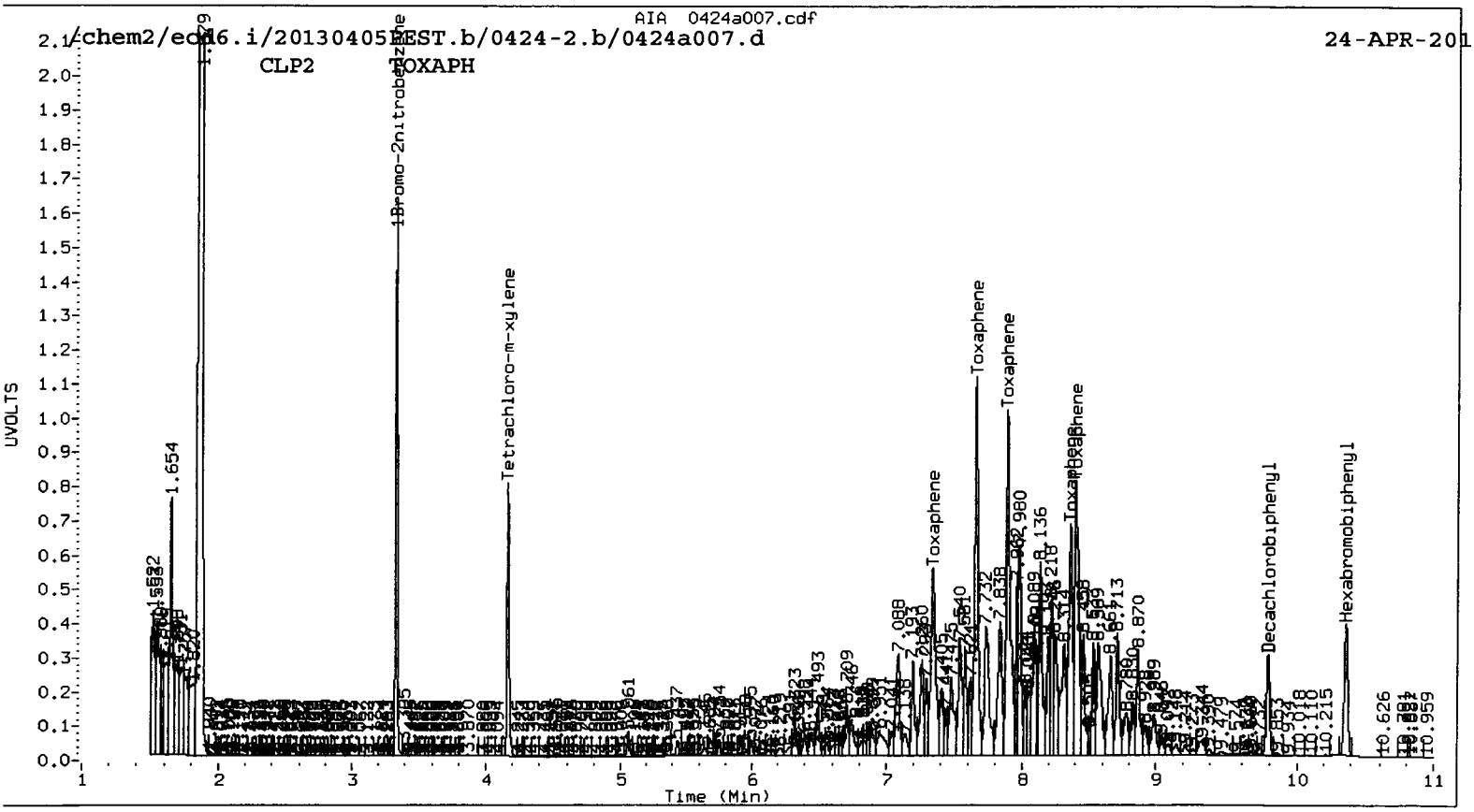
AIA 0424a007.cdf
24-APR-201
STX-CLP TOXAPH
1.608
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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24-APR-201
CLP2 TOXAPH
1.654
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a008.d ARI ID: WL49MBS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a008.d Client ID: WL49MBS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 14:34
Compound Sublist: wpest Report Date: 04/26/2013 15:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	5625864	3.332	-0.001	28518898	80.0000	80.0000 FS	0.0	1Bromo-2nitrobenzen
4.324	-0.006	3769	4.750	-0.006	103584	0.0305	0.1493	132.2*	alpha-BHC
4.683	-0.004	1959	5.168	-0.017	21091	0.0395	0.0779	65.4*	beta-BHC
4.865	0.006	5465	5.506	0.007	139645	0.0496	0.2367	130.7*	delta-BHC
4.609	-0.006	3512	5.131	0.015	16574	0.0314	0.0271	14.7	gamma-BHC (Lindane)
5.057	-0.008	8715	5.580	-0.002	49022	0.0814	0.0865	6.1	Heptachlor
5.367	0.006	10336	5.944	0.023	74575	0.0984	0.1444	37.9	Aldrin
5.931	-0.005	4404	6.481	0.006	58106	0.0459	0.1299	95.6*	Heptachlor epoxide b
6.299	-0.015	2560	6.849	-0.014	50079	0.0291	0.1284	126.2*	Endosulfan I
6.505	-0.032	3345	7.169	0.048	72893	0.0360	0.1862	135.2*	Dieldrin
6.228	-0.007	4980	6.914	-0.007	61405	0.0654	0.1540	80.7*	4,4'-DDE
6.757	0.000	4989	7.419	0.009	69918	0.0663	0.1993	100.1*	Endrin
6.972	0.011	5244	7.569	-0.030	132223	0.0680	0.3432	133.8*	Endosulfan II
6.798	0.007	10613	7.452	-0.006	54261	0.1480	0.1461	1.2	4,4'-DDD
7.725	-0.004	5428	8.136	-0.004	112155	0.0799	0.3505	125.8*	Endosulfan sulfate
7.019	-0.030	10593	7.754	0.009	135680	0.1474	0.4026	92.8*	4,4'-DDT
7.454	-0.019	5804	8.309	-0.021	250688	0.1610	1.7944	167.1*	Methoxychlor
7.968	-0.017	33241	8.632	-0.001	120890	0.3896	0.3694	5.3	Endrin ketone
7.324	-0.014	3504	7.883	-0.012	124243	0.0554	0.4088	152.3*	Endrin aldehyde
6.047	-0.008	7536	6.672	0.014	49436	0.0768	0.1098	35.4	gamma-Chlordane
6.174	-0.006	2992	6.791	-0.004	28761	0.0317	0.0692	74.4*	alpha-Chlordane
2.344	0.003	19805	2.502	0.005	115852	0.1521	0.2121	33.0	Hexachlorobutadiene
4.176	-0.003	47270	4.624	-0.006	140336	0.5243	0.2195	81.9*	Hexachlorobenzene
5.828	-0.012	5884	6.396	0.011	41676	0.0776	0.1131	37.3	Oxychlordane
----			6.635	0.004	31875	0.0000	0.1177	---	2,4-DDE
6.143	-0.019	2713	6.746	0.005	31799	0.0300	0.0642	72.5*	trans-Nonachlor
6.376	-0.021	1481	7.106	-0.009	105788	0.0296	0.4072	172.9*	2,4-DDD
6.659	0.022	3087	7.377	-0.027	86993	0.0540	0.3156	141.5*	2,4-DDT
----			7.499	0.034	70440	0.0000	0.1505	---	cis-Nonachlor
7.644	-0.009	2461	8.613	-0.005	135665	0.0431	0.6358	174.6*	Mirex
8.975	-0.005	4848327	10.362	-0.004	12917484	80.0000	80.0000 S	0.0	Hexabromobiphenyl
1.754	0.000	67836	1.721	-0.011	8817357	0.0000	0.0000	---	Hexachloroethane
6.596	0.015	3302	7.327	-0.009	17625	0.0000	0.0000	---	Kepone
3.834	-0.003	2374784	4.164	-0.004	13157966	28.0614	26.0848	7.3	Tetrachloro-m-xylen
8.825	-0.006	2324457	9.790	-0.005	9183423	32.8450	29.9852	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	70.2	65.2	65.2	42-112
Decachlorobiphenyl	82.1	75.0	75.0	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

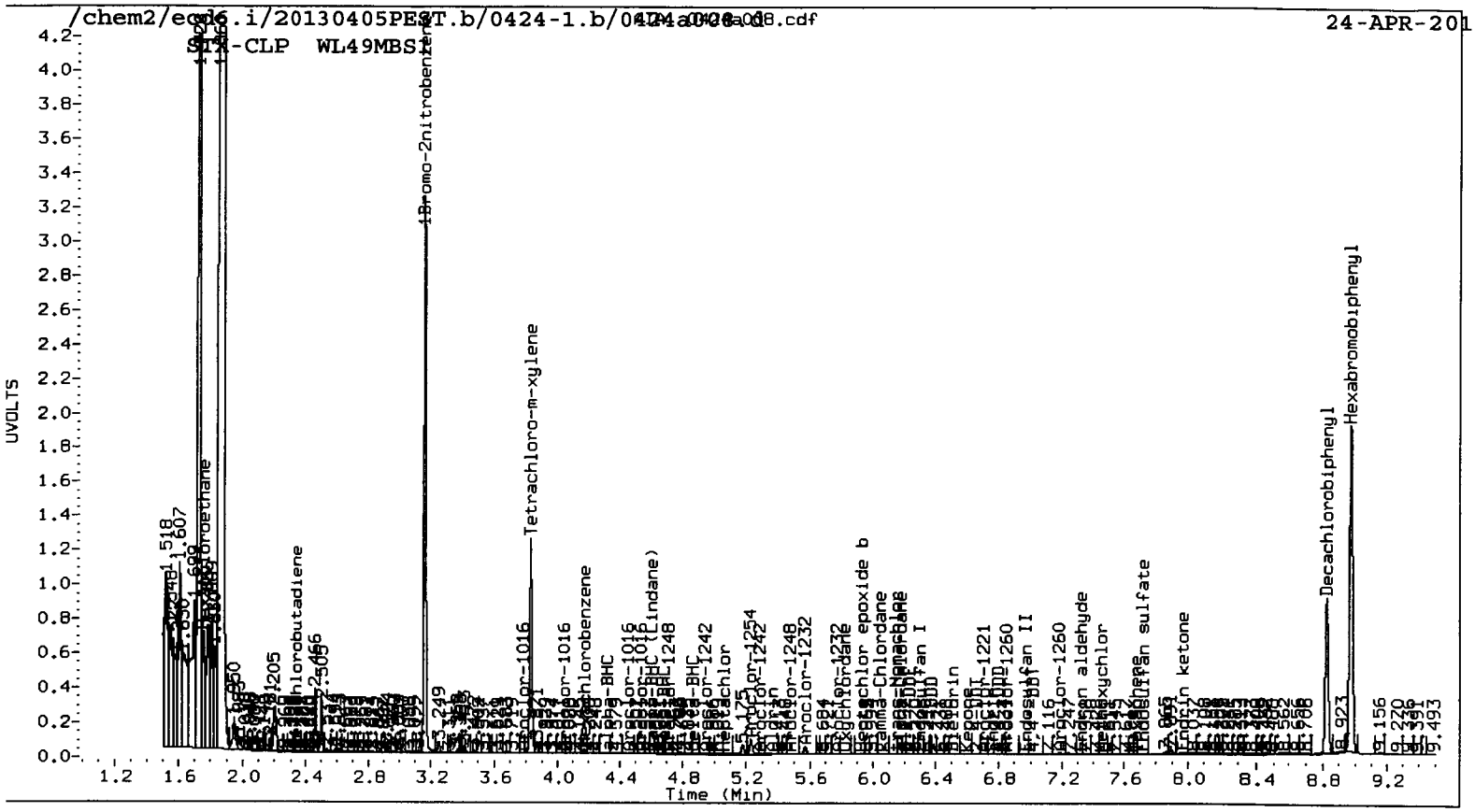
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5625864	3.3
Hexabromobiphenyl	4807902	4848327	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28518898	31.4
Hexabromobiphenyl	7681727	12917484	68.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.019	0.007	10593	3.4	1	7.327	-0.017	17625	1.5
Toxaphene	2	---			0.000	2	7.672	0.004	82986	4.7
Toxaphene	3	7.324	0.004	3504	1.0	3	7.883	-0.015	124243	6.5
Toxaphene	4	7.644	-0.001	2461	0.7	4	8.376	0.010	72085	5.3
Toxaphene	5	7.675	-0.009	2041	0.9	5	---			0.0
Toxaphene	6	7.968	0.002	33241	16.3	NS	---			----
Total STX-CLPAve (5 peaks): 4.448						Total CLP2Ave (4 peaks): 4.491			RPD = 1	
Corrected Ave (4 peaks): 1.481						Corrected Ave (4 peaks): 4.491			RPD = 101*	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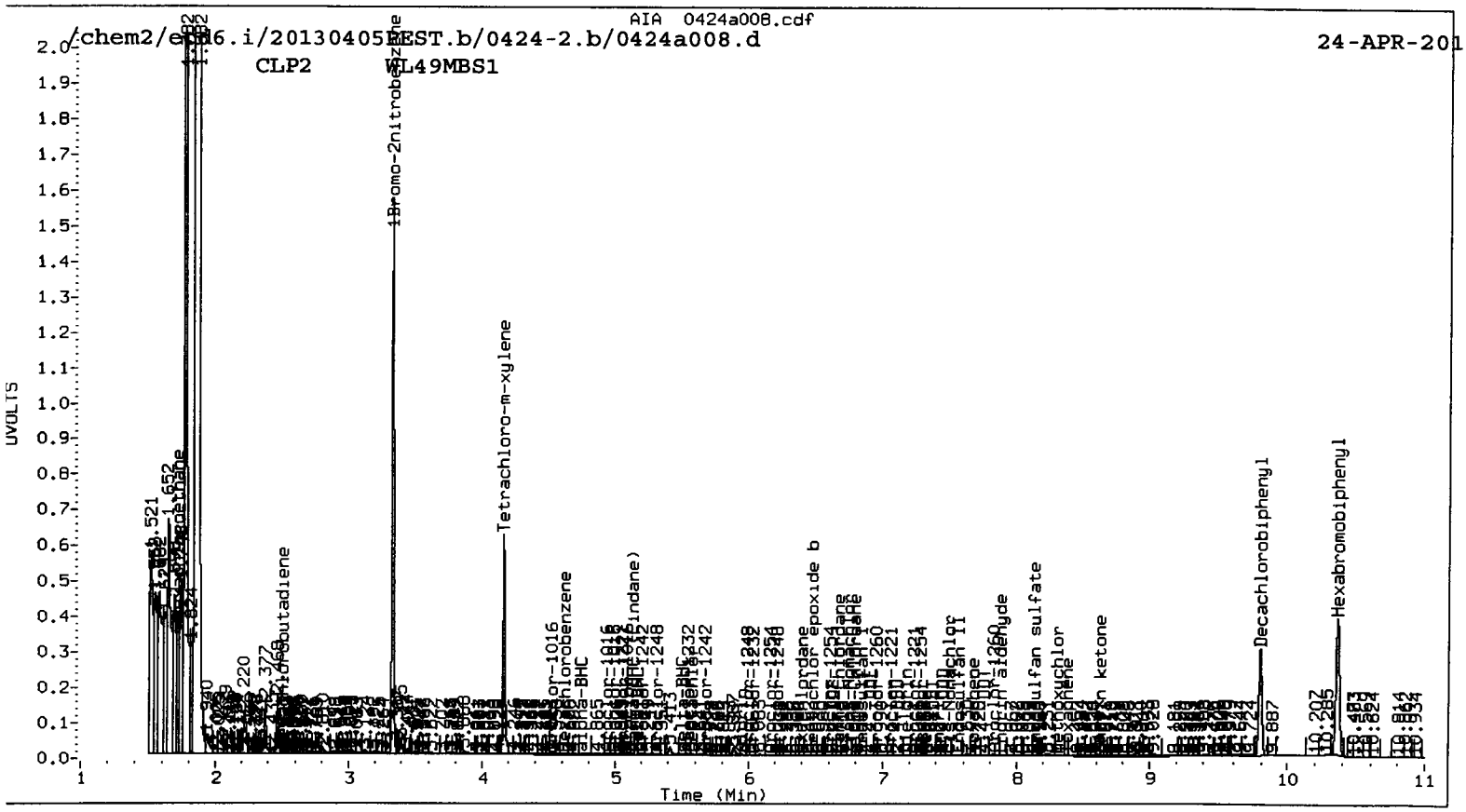
24-APR-201
SIX-CLP WL49MBS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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24-APR-201
CLP2 WL49MBS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a009.d ARI ID: WL49LCSS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a009.d Client ID: WL49LCSS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 14:54
Compound Sublist: wpest Report Date: 04/29/2013 10:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.164	-0.001	5855175	3.334	0.001	29363941	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	1945074	4.757	0.000	10754747	15.1034	15.0508	0.3	alpha-BHC
4.691	0.004	776043	5.187	0.002	4172840	15.0409	14.9772	0.4	beta-BHC
4.862	0.003	1889396	5.500	0.001	10029885	16.4832	16.5126	0.2	delta-BHC
4.616	0.001	1840301	5.115	-0.001	9264167	15.8330	14.7297	7.2	gamma-BHC (Lindane)
5.066	0.000	1717474	5.581	-0.001	8865300	15.4171	15.2008	1.4	Heptachlor
5.360	0.000	1562640	5.919	-0.002	8176587	14.2978	15.3780	7.3	Aldrin
5.935	-0.002	1601136	6.474	-0.002	7839519	16.0281	17.0188	6.0	Heptachlor epoxide b
6.312	-0.003	1498194	6.860	-0.002	6923073	16.3437	17.2399	5.3	Endosulfan I
6.534	-0.003	3250057	7.118	-0.003	14234310	33.6189	35.3148	4.9	Dieldrin N
6.233	-0.002	3023038	6.919	-0.002	13755330	38.1662	33.5041	13.0	4,4'-DDE
6.753	-0.003	2837056	7.407	-0.003	11402988	36.4588	31.7745	13.7	Endrin
6.958	-0.003	2786393	7.596	-0.003	10661954	34.9477	27.0496	25.5	Endosulfan II
6.790	-0.001	2672511	7.456	-0.002	11298626	36.0210	29.7487	19.1	4,4'-DDD
7.725	-0.004	2491380	8.138	-0.002	9632454	35.4432	29.4283	18.5	Endosulfan sulfate
7.047	-0.002	2655104	7.744	-0.002	10006619	35.7078	29.0237	20.7	4,4'-DDT
7.470	-0.003	6280472	8.325	-0.006	19761627	168.3990	138.2779	19.6	Methoxychlor
7.980	-0.005	3020491	8.629	-0.003	9197954	34.2225	27.4727	21.9	Endrin ketone
7.335	-0.004	1294809	7.893	-0.003	5181428	19.7743	16.6673	17.1	Endrin aldehyde
6.054	-0.001	1661136	6.655	-0.002	7897545	16.2689	17.0365	4.6	gamma-Chlordane
6.178	-0.002	1585426	6.793	-0.002	7188733	16.1432	16.8062	4.0	alpha-Chlordane
2.339	-0.002	1737859	2.496	-0.001	6876887	12.8227	12.2270	4.8	Hexachlorobutadiene
4.181	0.002	1432102	4.631	0.001	10119554	15.2610	15.3739	0.7	Hexachlorobenzene
5.851	0.011	12506	6.395	0.010	29172	0.1594	0.0769	69.8*	Oxychlordane
----			6.592	-0.039	63798	0.0000	0.2288	---	2,4-DDE
----			6.737	-0.003	41546	0.0000	0.0820	---	trans-Nonachlor
6.397	-0.001	28942	7.118	0.003	14234310	0.5599	53.5605	195.9*	2,4-DDD
6.635	-0.001	14983	----			0.2535	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.667	0.014	13361	8.580	-0.039	94971	0.2264	0.4351	63.1*	Mirex
8.977	-0.002	5015612	10.364	-0.002	13214015	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.002	36594	1.724	-0.007	22484613	0.0000	0.0000	---	Hexachloroethane
6.598	0.017	1642	7.338	0.002	57093	0.0000	0.0000	---	Kepone
3.838	0.001	2550024	4.168	-0.001	13918956	28.9520	26.7993	7.7	Tetrachloro-m-xylen
8.827	-0.004	2439974	9.791	-0.004	9593386	33.3274	30.6209	8.5	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	72.4	67.0	67.0	42-112
Decachlorobiphenyl	83.3	76.6	76.6	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1458352.6	1271.0	1271.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1428312.5	1160.9	1160.9~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

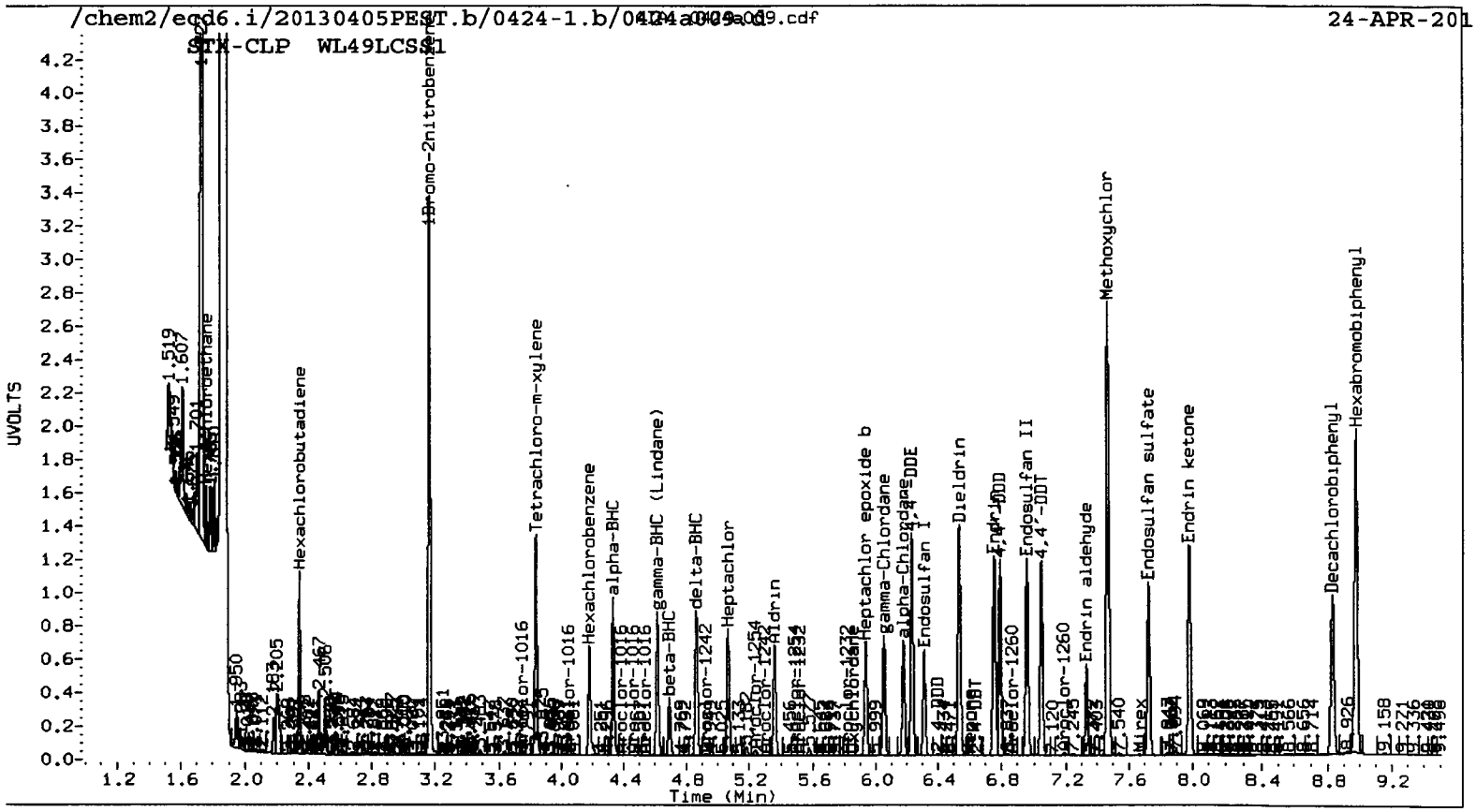
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5855175	7.5
Hexabromobiphenyl	4807902	5015612	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	29363941	35.3
Hexabromobiphenyl	7681727	13214015	72.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.047	0.035	2655104	822.6	1	7.338	-0.006	57093	4.7
Toxaphene	2	---			0.000	2	7.674	0.007	191229	10.5
Toxaphene	3	7.335	0.014	1294809	351.1	3	7.893	-0.006	5181428	266.9
Toxaphene	4	7.667	0.022	13361	3.6	4	8.325	-0.041	19761627	1409.0
Toxaphene	5	---			0.000	5	8.425	0.019	218702	12.3
Toxaphene	6	7.980	0.014	3020491	1433.3	NS	---			----
Total STX-CLPAve (4 peaks): 652.650						Total CLP2Ave (5 peaks): 340.698				RPD = 63*
Corrected Ave (3 peaks): 392.431						Corrected Ave (4 peaks): 73.624				RPD = 137*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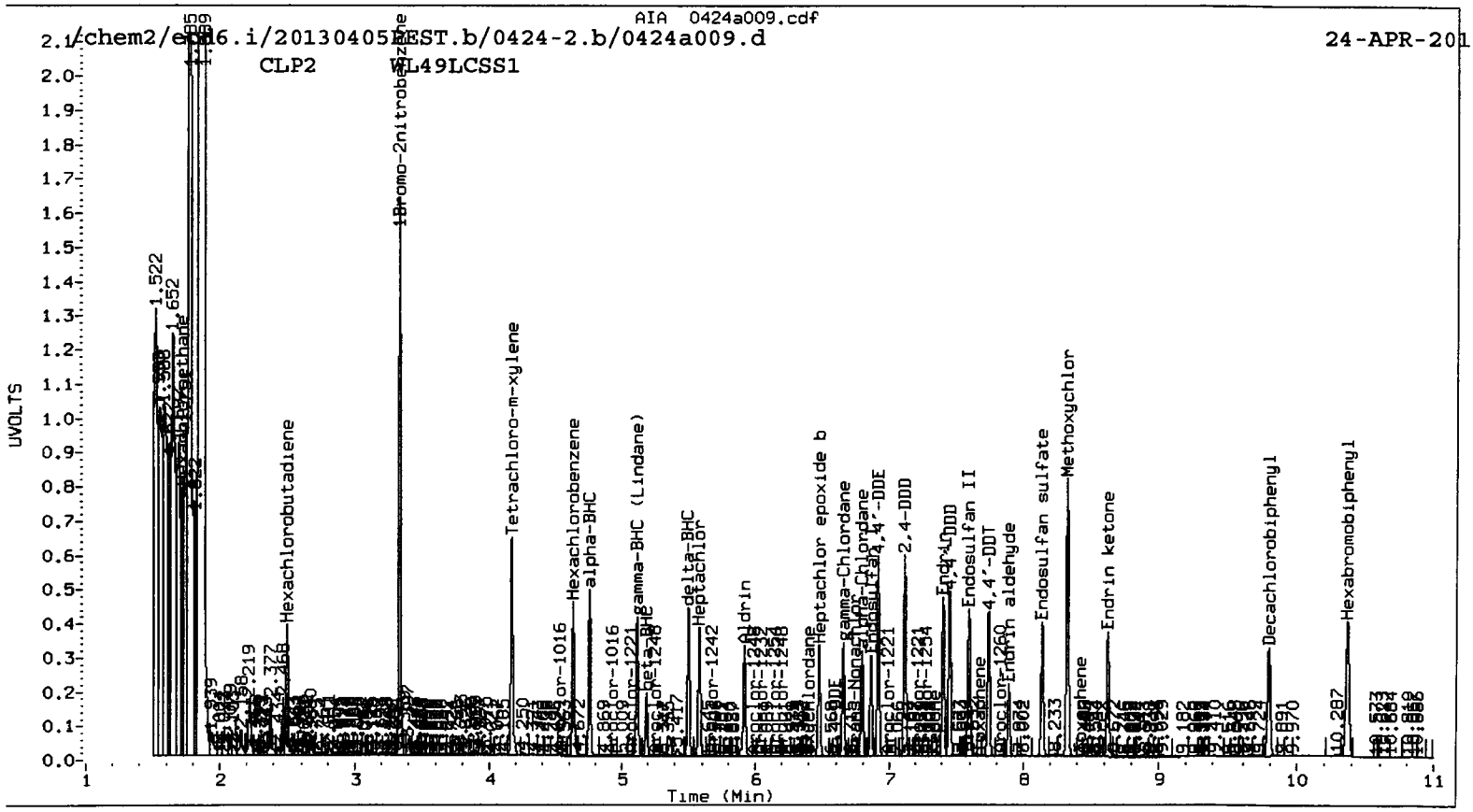
UVOLTS
Time (Min)
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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24-APR-201
CLP2 WL49LCSS1
UVOLTS
Time (Min)
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
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a015.d ARI ID: WL67A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a015.d Client ID: GR-CB-07-20130411-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 16:53
Compound Sublist: wpest Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.164	-0.001	5422038	3.333	0.000	20726145	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.340	0.010	277468	4.745	-0.011	798897	~~2.3266~~	~~1.5840~~	38.0	alpha-BHC
4.694	0.007	245016	5.160	-0.025	547602	5.1281	2.7846 Y	59.2*	beta-BHC
4.853	-0.006	2536033	5.508	0.009	896748	~~23.8919~~	~~2.0916~~	167.8*	delta-BHC
4.618	0.003	728061	5.110	-0.006	1457993	6.7643	3.2843 X	69.3*	gamma-BHC (Lindane)
5.054	-0.012	1949265	5.591	0.010	8102111	18.8956	19.6818 Y	4.1	Heptachlor
5.377	0.017	3251548	5.896	-0.025	2476490	32.1275	6.5987 Y	131.8*	Aldrin
5.979	0.043	5193822	6.457	-0.018	14359610	56.1460	44.1651 Y	23.9	Heptachlor epoxide
6.286	-0.029	746353	6.850	-0.012	597758	~~8.7923~~	~~2.1089~~	122.6*	Endosulfan I
6.526	-0.011	1605238	7.164	0.043	1137022	~~17.9312~~	~~3.9965~~	127.1*	Dieldrin
6.244	0.009	2294139	6.908	-0.013	3870371	31.2775	13.3560 Y	80.3*	4,4'-DDE
6.727	-0.029	296944	7.434	0.024	5828975	~~2.5972~~	~~21.1284~~	156.2*	Endrin
6.949	-0.012	189305	7.607	0.008	5352272	~~1.6160~~	~~17.6635~~	166.5*	Endosulfan II
6.793	0.002	4310371	----			~~39.5410~~	~~0.0000~~	---	4,4'-DDD
7.746	0.017	126969	8.112	-0.028	7913598	~~1.2294~~	~~31.4497~~	185.0*	Endosulfan sulfate
7.045	-0.004	4513954	7.769	0.023	11021524	41.3176	41.5836 Y	0.6	4,4'-DDT
7.448	-0.026	1577238	8.325	-0.005	7779093	~~28.7833~~	~~70.8067~~ Y	84.4*	Methoxychlor
7.979	-0.006	1467166	8.652	0.020	5135359	11.3139	19.9524 Y	55.3*	Endrin ketone
7.373	0.035	1346448	7.897	0.001	1122404	~~13.9953~~	~~4.6966~~	99.5*	Endrin aldehyde
6.059	0.004	155832	6.685	0.028	9635521	~~1.6481~~	~~29.4483~~	178.8*	gamma-Chlordane
6.202	0.022	1028677	6.798	0.003	159673	~~11.3110~~	~~0.5289~~	182.1*	alpha-Chlordane
2.321	-0.020	290502	2.506	0.009	283923	~~2.3147~~	~~0.7152~~	105.6*	Hexachlorobutadiene
4.182	0.003	382047	4.615	-0.015	4264387	4.3965	9.1786 Y	70.5*	Hexachlorobenzene
5.804	-0.036	2142177	6.411	0.026	8485633	~~18.5789~~	~~31.6949~~	52.2*	Oxychlordane
5.881	-0.029	88106	6.628	-0.003	6552615	1.0147	33.2982	188.2*	2,4-DDE
6.155	-0.006	151641	6.733	-0.008	4038482	1.1040	10.3655	161.5*	trans-Nonachlor
6.403	0.005	1052372	7.105	-0.010	2532103	13.8568	12.3938	11.1	2,4-DDD
6.617	-0.019	2040699	7.378	-0.026	1662465	23.5000	7.6688	101.6*	2,4-DDT
----			7.466	0.001	3342887	0.0000	9.0842	---	cis-Nonachlor
7.649	-0.003	1679181	8.605	-0.013	607312	~~19.3670~~	~~3.6194~~	137.0*	Mirex
9.035	0.056	7369319	10.405	0.039	10158261	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.757	0.003	73920	1.721	-0.010	1237763	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.570	-0.011	182348	7.344	0.008	359849	~~0.0000~~	~~0.0000~~	---	Kepone
3.846	0.009	525219	4.169	0.000	1804790	6.4395	4.9231	26.7	Tetrachloro-m-xylene
8.847	0.016	3209816	9.829	0.033	899862	29.8396	3.7363	155.5*	Decachlorobiphenyl

aa

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	16.1	12.3	12.3~	42-112
Decachlorobiphenyl	74.6	9.3	9.3~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

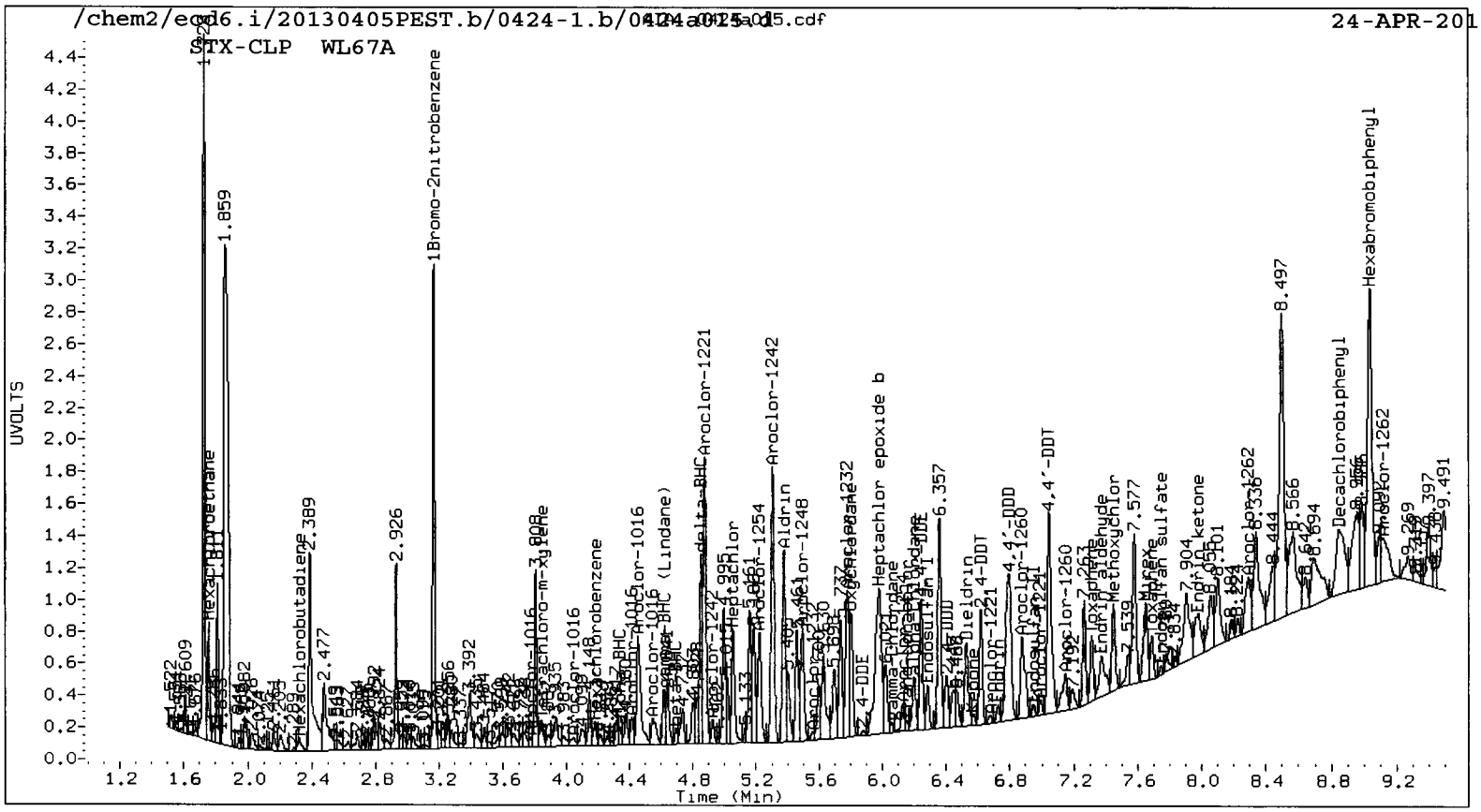
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5422038	-0.5
Hexabromobiphenyl	4807902	7369319	53.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	20726145	-4.5
Hexabromobiphenyl	7681727	10158261	32.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	-0.020	238505	50.3	1	7.344	0.000	359849	38.6
Toxaphene	2	7.045	-0.018	4513954	1398.6	2	7.671	0.003	1743760	124.9
Toxaphene	3	7.310	-0.010	1194553	220.5	3	7.897	-0.002	1122404	75.2
Toxaphene	4	7.649	0.005	1679181	307.2	4	8.391	0.025	4537054	420.8
Toxaphene	5	7.687	0.003	762091	211.3	5	---			0.0
Toxaphene	6	7.979	0.013	1467166	473.8	NS	---			----
Total STX-CLPAve (6 peaks): 443.631						Total CLP2Ave (4 peaks): 164.871				RPD = 92*
Corrected Ave (5 peaks): 252.627						Corrected Ave (3 peaks): 79.561				RPD = 104*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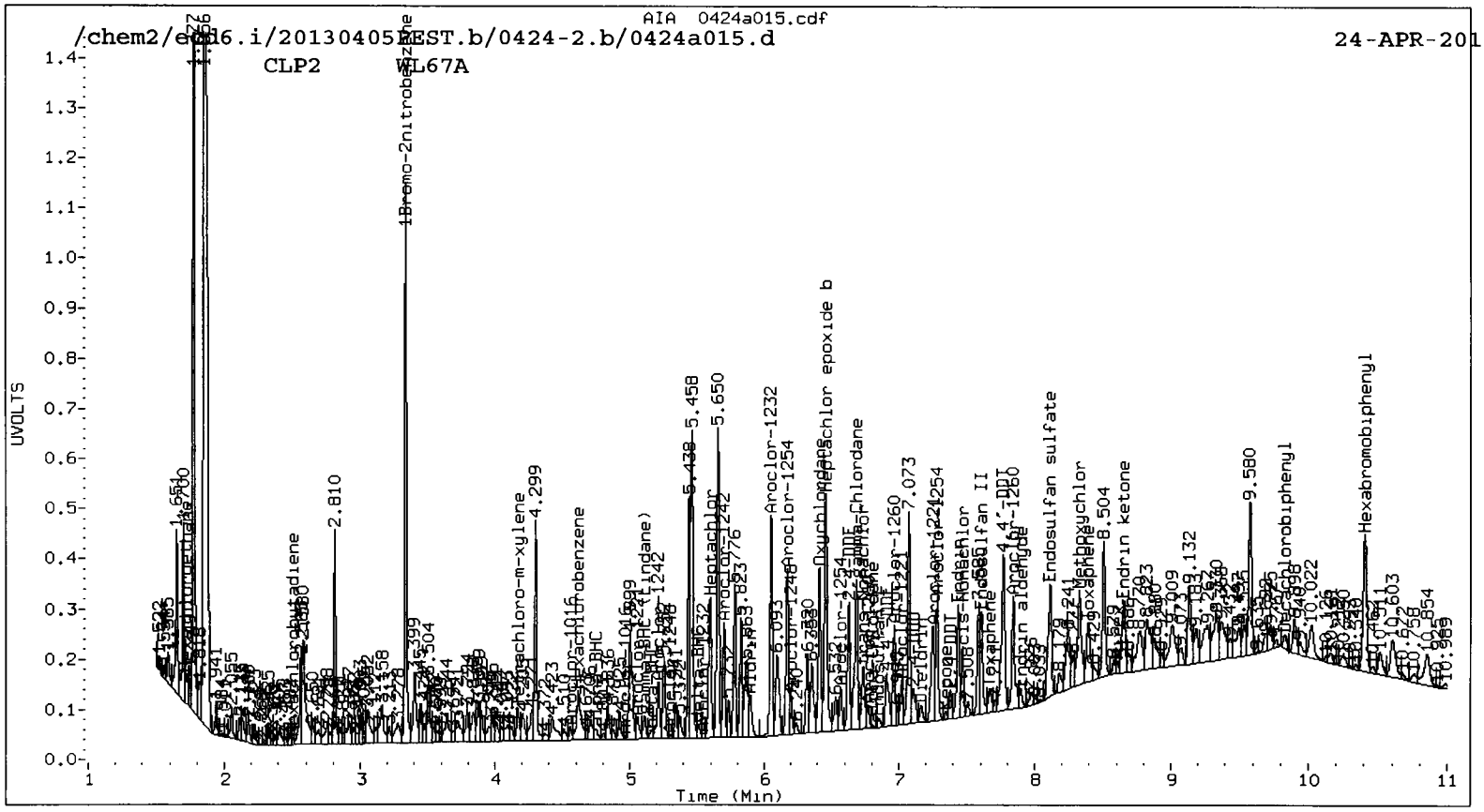
24-APR-201
STX-CLP WL67A
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Pentachloronitrobenzene
Tetrachloro-m-xylene
Dichlorobenzophenone
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxychlordane
Trans-Chlordane
Cis-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0424a015.cdf
24-APR-201
CLP2 WL67A
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Pentachloronitrobenzene
Tetrachloro-m-xylene
Dichlorobenzophenone
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxychlordane
Trans-Chlordane
Cis-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a016.d ARI ID: WL67B YZ 4/29/13
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a016.d Client ID: GR-WS-05-20130411-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 17:13
Compound Sublist: wpest Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.002	4888700	3.332	0.000	16124116	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.338	0.008	157574	4.748	-0.008	59075	1.4655	0.1506	162.7*	alpha-BHC
4.692	0.005	156060	5.210	0.025	2441387	3.6226	15.9578	126.0*	beta-BHC
4.850	-0.009	2319197	5.506	0.007	440492	24.2327	1.3207	179.3*	delta-BHC
4.616	0.001	676322	5.112	-0.004	809912	6.9691	2.3451	99.3*	gamma-BHC (Lindane)
5.051	-0.014	1559418	5.590	0.008	7085642	16.7657	22.1253 Y	27.6	Heptachlor RTs
5.373	0.012	2540332	5.891	-0.029	881399	27.8385	3.0188 Y	160.9*	Aldrin
5.971	0.035	3361681	6.454	-0.021	7358308	40.3049	29.0909 Y	32.3	Heptachlor epoxide b
6.278	-0.037	557268	6.845	-0.017	319790	7.2810	1.4502	133.6*	Endosulfan I
6.516	-0.021	1008863	7.097	-0.024	695145	12.4989	3.1408	119.7*	Dieldrin
6.236	0.001	1370364	6.902	-0.018	1970966	20.7213	8.7427 X	81.3*	4,4'-DDE
6.770	0.014	2034072	7.426	0.016	3043627	21.2565	11.5439 Y	59.2*	Endrin
6.981	0.020	321298	7.600	0.001	2738393	3.2770	9.4563	97.1*	Endosulfan II
----			7.460	0.002	920971	0.0000	3.3006	---	4,4'-DDD
7.727	-0.003	56933	8.170	0.030	688322	0.6586	2.8623	125.2*	Endosulfan sulfate
7.031	-0.017	2543559	7.760	-0.015	6675132	27.8173	26.3528 Y	5.4	4,4'-DDT RTs
7.520	0.047	525082	8.313	-0.017	3731073	11.4489	35.5357	102.5*	Methoxychlor
7.949	-0.036	619130	8.642	0.009	2351917	5.7044	9.5617 X	50.5*	Endrin ketone
7.360	0.021	425623	7.886	-0.010	538464	5.2858	2.3576	76.6*	Endrin aldehyde
6.052	-0.003	80233	6.680	0.023	5510880	0.9411	21.6495	183.3*	gamma-Chlordane
6.195	0.015	653793	6.793	-0.003	94446	7.9731	0.4021	180.8*	alpha-Chlordane
2.339	-0.002	15664	2.506	0.009	34118	0.1384	0.1105	22.5	Hexachlorobutadiene
4.178	-0.001	143231	4.613	-0.016	2397956	1.8281	6.6344	113.6*	Hexachlorobenzene
5.875	0.035	73871	6.407	0.022	5069185	0.7655	24.3380	187.8*	Oxychlordane
5.924	0.014	269090	6.622	-0.008	3984699	3.7028	26.0282	150.2*	2,4-DDE
6.147	-0.015	109702	6.762	0.021	375456	0.9543	1.0084	5.5	trans-Nonachlor
6.388	-0.009	456239	7.158	0.043	592426	7.1776	3.0342	81.1*	2,4-DDD
6.663	0.027	153013	----			2.1053	0.0000	---	2,4-DDT
----			7.500	0.035	55702	0.0000	0.1584	---	cis-Nonachlor
7.671	0.019	183691	8.595	-0.024	375302	2.5343	2.3404	7.8	Mirex
8.998	0.018	6167839	10.378	0.012	9708084	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.757	0.003	17646	1.721	-0.011	1187283	0.0000	0.0000	---	Hexachloroethane
6.606	0.025	1515702	7.369	0.033	1169351	0.0000	0.0000	---	Kepone
3.837	0.000	229637	4.167	-0.002	761577	3.1226	2.6704	15.6	Tetrachloro-m-xylene
8.841	0.010	1420546	9.805	0.009	1122404	15.7784	4.8764	105.6*	Decachlorobiphenyl

dpa

* 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	7.8	6.7	6.7~	42-112
Decachlorobiphenyl	39.4	12.2	12.2~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

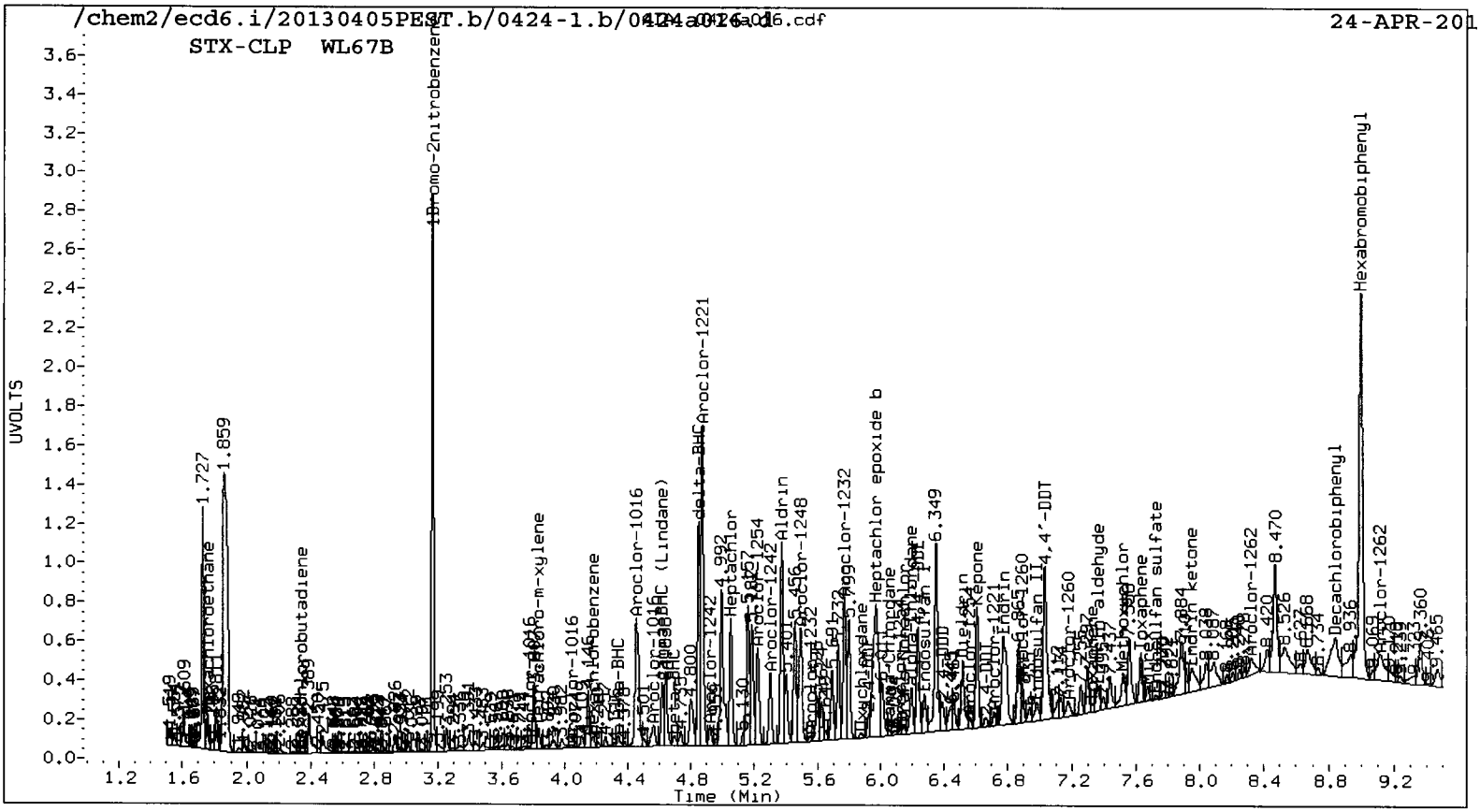
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4888700	-10.3
Hexabromobiphenyl	4807902	6167839	28.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	16124116	-25.7
Hexabromobiphenyl	7681727	9708084	26.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.031	0.020	2543559	640.8	1	7.369	0.025	1169351	131.1
Toxaphene	2	---			0.000	2	7.662	-0.006	640068	48.0
Toxaphene	3	7.328	0.008	90381	19.9	3	7.886	-0.012	538464	37.8
Toxaphene	4	7.631	-0.013	646700	141.4	4	8.376	0.010	2239241	217.3
Toxaphene	5	7.671	-0.013	183691	60.9	5	8.419	0.013	481781	36.9
Toxaphene	6	7.949	-0.018	619130	238.9	NS	---			----
Total STX-CLPAve (5 peaks): 220.380						Total CLP2Ave (5 peaks): 94.221				RPD = 80*
Corrected Ave (4 peaks): 115.267						Corrected Ave (4 peaks): 63.448				RPD = 58*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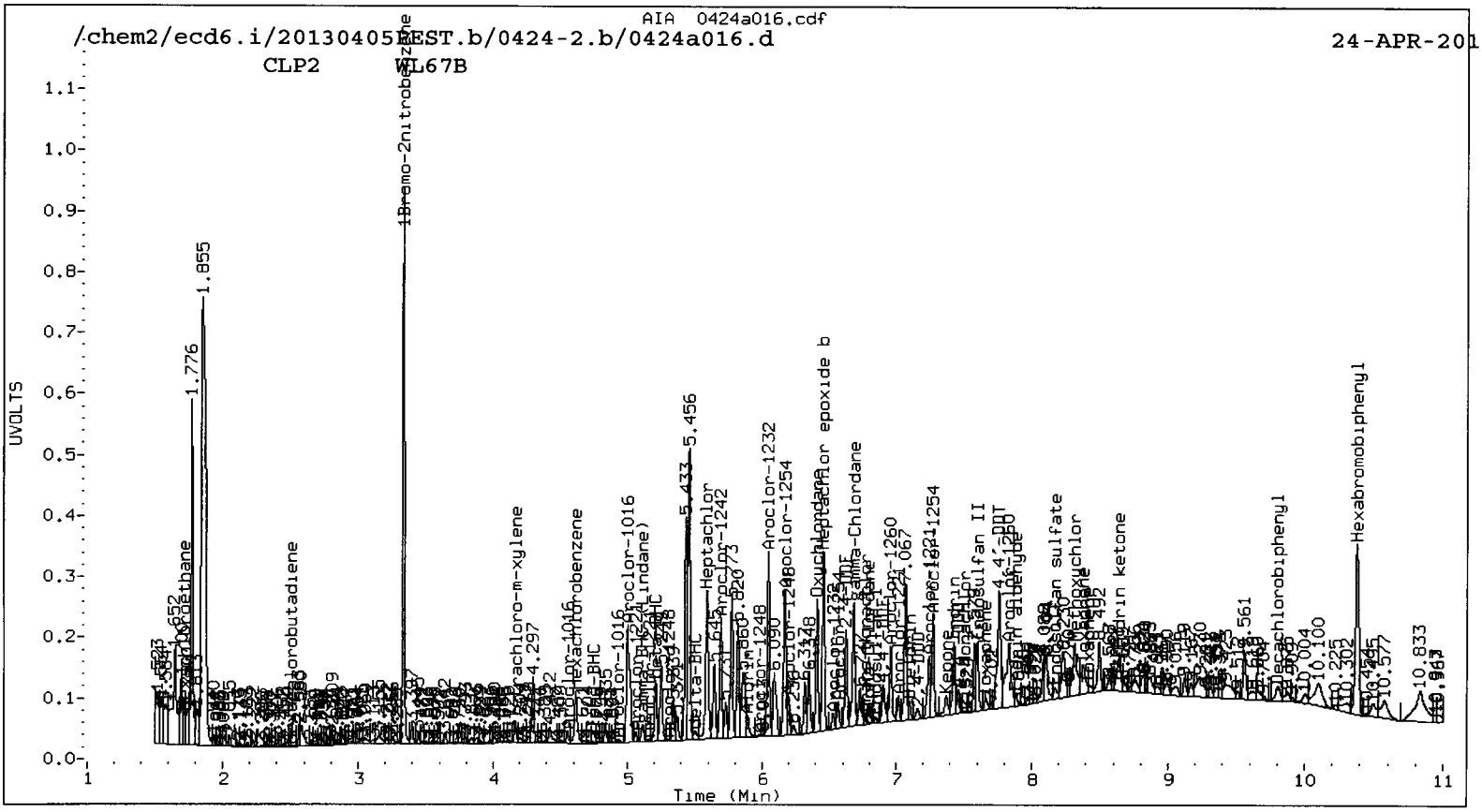
24-APR-201
STX-CLP WL67B
UVOLTS
Time (Min)
1.727
1.859
1Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichlorobenzene
Hexachloroethane
Isophorone
Nitrobenzene
Hexachloro-m-xylene
Naphthalene
2-Chloronaphthalene
Dimethylphthalate
Acenaphthylene
2,6-Dinitrotoluene
Acenaphthene
2,4-Dinitrotoluene
Fluorene
Diethylphthalate
4-Chlorophenyl-phenylether
Hexachlorobenzene
Aroclor-1016
Aroclor-1016 (Lindane)
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aroclor-1221
Aroclor-1242
Aldrin
Aroclor-1248
Aroclor-1254
Heptachlor epoxide b
Oxychlordane
Heptachlor epoxide a
Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDD
Endosulfan sulfate
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endrin ketone
Aroclor-1260
Toxaphene
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
Hexabromobiphenyl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24-APR-201
CLP2 WL67B
UVOLTS
Time (Min)
1.776
1.855
1Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichlorobenzene
Hexachloroethane
Isophorone
Nitrobenzene
Hexachloro-m-xylene
Naphthalene
2-Chloronaphthalene
Dimethylphthalate
Acenaphthylene
2,6-Dinitrotoluene
Acenaphthene
2,4-Dinitrotoluene
Fluorene
Diethylphthalate
4-Chlorophenyl-phenylether
Hexachlorobenzene
Aroclor-1016
Aroclor-1016 (Lindane)
alpha-BHC
beta-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aroclor-1221
Aroclor-1242
Aldrin
Aroclor-1248
Aroclor-1254
Heptachlor epoxide b
Oxychlordane
Heptachlor epoxide a
Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDD
Endosulfan sulfate
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endrin ketone
Aroclor-1260
Toxaphene
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a018.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a018.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 24-APR-2013 17:49
Report Date: 04/26/2013 15:11
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
3.162	-0.003	4870788	3.332	-0.001	25415091	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.326	-0.004	2194134	4.752	-0.004	10598585	20.4807	17.1368	17.8	alpha-BHC
4.686	-0.001	746187	5.184	-0.001	3559653	17.3851	14.7615	16.3	beta-BHC
4.857	-0.002	1782660	5.497	-0.002	8115137	18.6951	15.4361	19.1	delta-BHC
4.610	-0.005	1822407	5.112	-0.005	8510351	18.8478	15.6335	18.6	gamma-BHC (Lindane)
5.060	-0.005	1240751	5.577	-0.004	5588886	13.3887	11.0718	18.9	Heptachlor
5.355	-0.006	1685320	5.916	-0.005	6722702	18.5367	14.6081	23.7	Aldrin
5.930	-0.007	1455345	6.471	-0.005	5278858	17.5130	13.2405	27.8	Heptachlor epoxide b
6.307	-0.007	1364728	6.858	-0.005	4178195	17.8966	12.0212	39.3	Endosulfan I
6.530	-0.007	2865501	7.116	-0.005	9145829	35.6314	26.2160	30.4	Dieldrin
6.229	-0.006	2528382	6.916	-0.004	8662184	38.3724	24.3768	44.6*	4,4'-DDE
6.749	-0.007	2118418	7.405	-0.004	5563946	34.3955	23.7261	36.7	Endrin
6.955	-0.006	2341981	7.595	-0.004	8092773	37.1121	31.4198	16.6	Endosulfan II
6.786	-0.005	3088492	7.454	-0.004	8629808	52.5943	34.7717	40.8*	4,4'-DDD
7.723	-0.007	1986662	8.136	-0.004	5801635	35.7086	27.1244	27.3	Endosulfan sulfate
7.041	-0.008	901436	7.741	-0.004	1965921	15.3170	8.7260	54.8*	4,4'-DDT
7.468	-0.006	1746684	8.323	-0.007	4509302	59.1722	48.2861	20.3	Methoxychlor
7.978	-0.007	2164453	8.628	-0.005	5876137	30.9841	26.8587	14.3	Endrin ketone
7.332	-0.007	1746019	7.891	-0.005	4985947	33.6899	24.5441	31.4	Endrin aldehyde
6.049	-0.006	1506620	6.653	-0.004	4883927	17.7377	12.1725	37.2	gamma-Chlordane
6.173	-0.007	1429308	6.791	-0.004	4273169	17.4948	11.5422	41.0*	alpha-Chlordane
2.340	-0.001	2373897	2.497	0.000	7967544	21.0556	16.3673	25.1	Hexachlorobutadiene
4.177	-0.002	1589424	4.628	-0.002	10167565	20.3606	17.8469	13.2	Hexachlorobenzene
8.977	-0.003	3969794	10.364	-0.002	8634792	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2956345	4.165	-0.004	15943292	40.3487	35.4665	12.9	Tetrachloro-m-xylen
8.826	-0.005	2142605	9.791	-0.005	6495649	36.9755	31.7286	15.3	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	100.9	88.7	88.7~	115- 0
Decachlorobiphenyl	92.4	79.3	79.3~	115- 0

~ Indicates recovery outside QC Limits

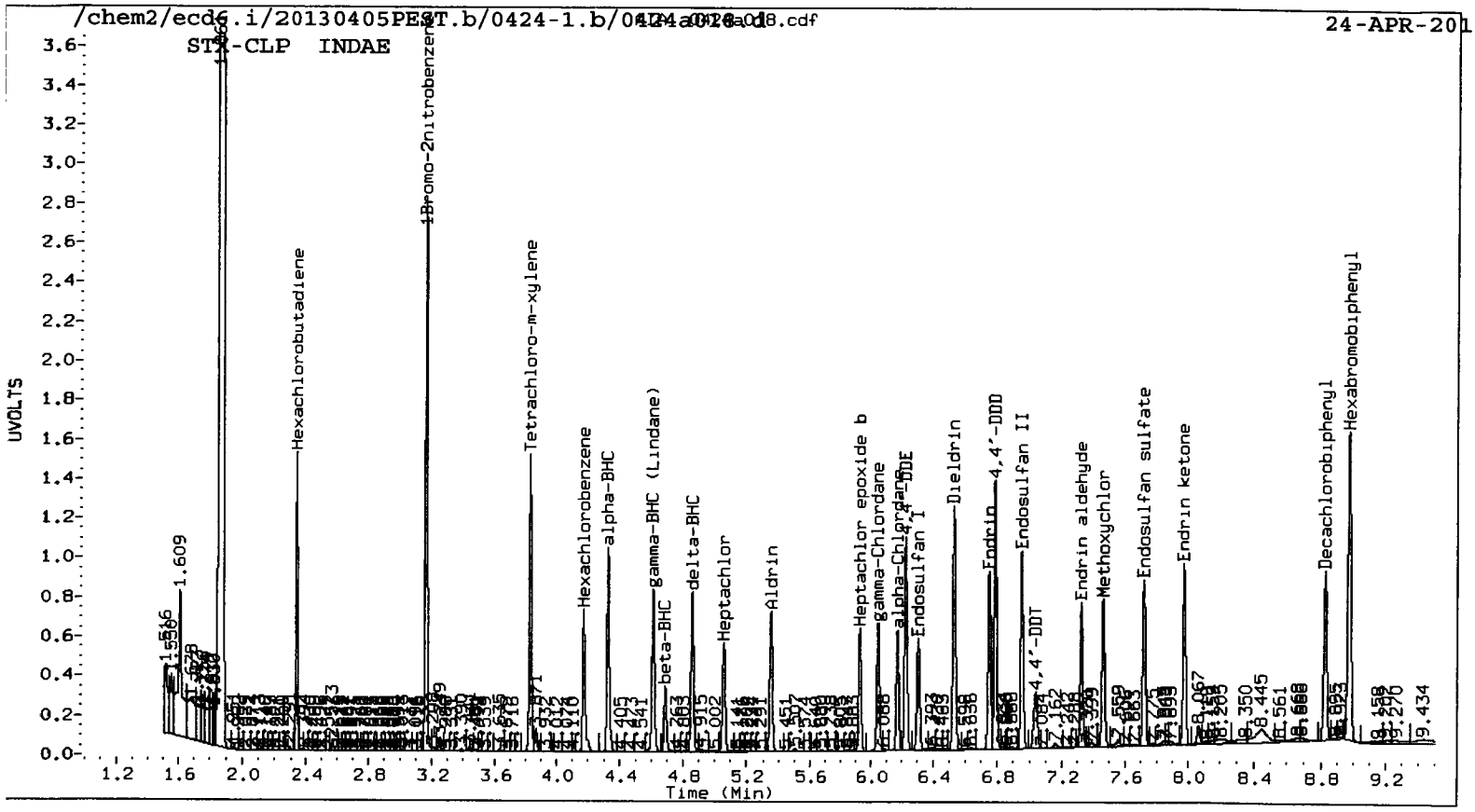
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5448520	4870788	-10.6
Hexabromobiphenyl	4807902	3969794	-17.4

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	21702340	25415091	17.1
Hexabromobiphenyl	7681727	8634792	12.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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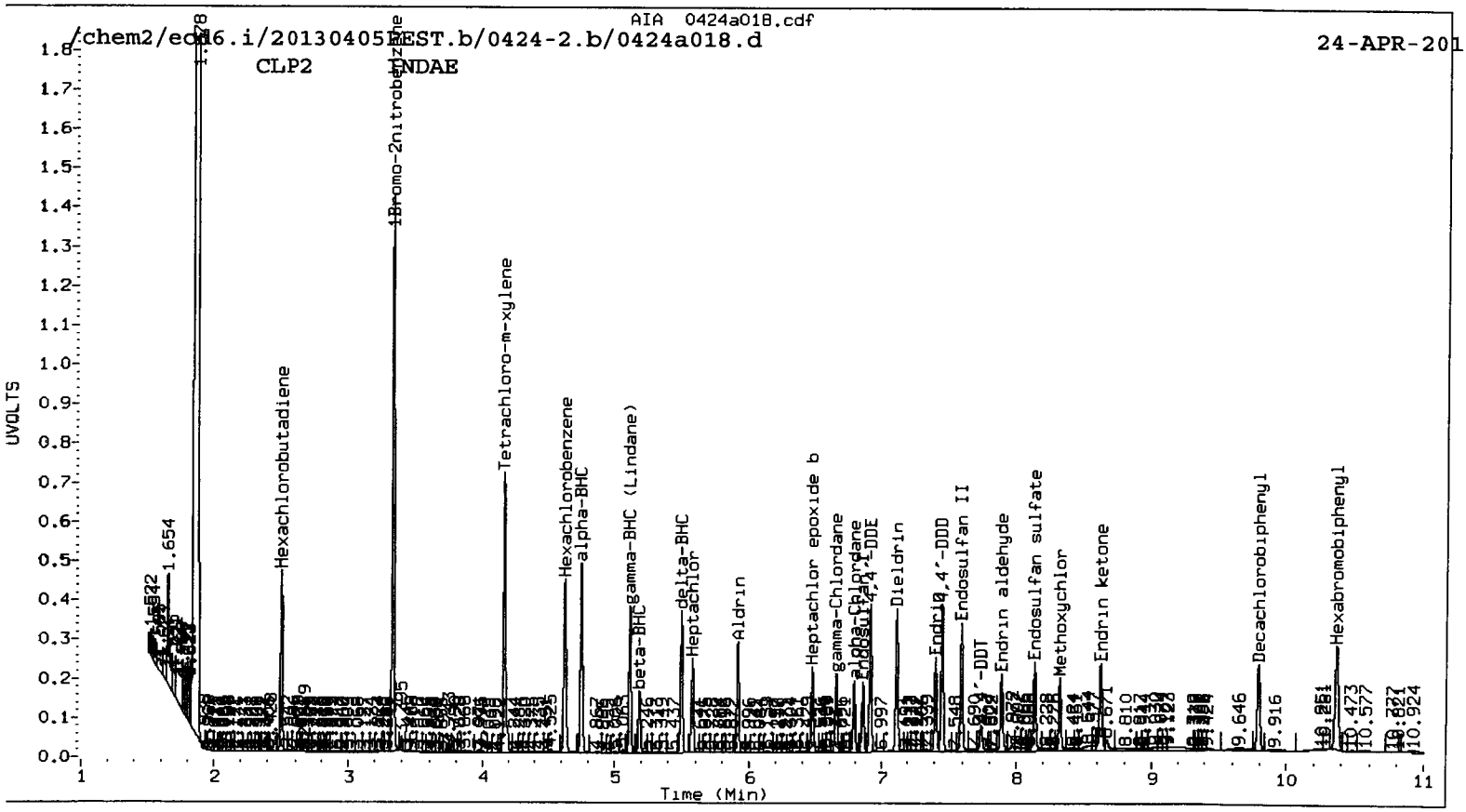
0424a018.cdf
24-APR-201
ST1-CLP INDAE
UVOLTS
Time (Min)
1,609
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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24-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1,654
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

VZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a019.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a019.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 18:07
Compound Sublist: TOXAPH Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	5355166	3.332	-0.001	27561322	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.977	-0.003	4498838	10.364	-0.002	9831517	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2688622	4.165	-0.004	16658069	33.3757	34.1709	2.4	Tetrachloro-m-xylen
8.826	-0.005	1996242	9.791	-0.004	6231173	30.3986	26.7319	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	83.4	85.4	83.4~	150- 0
Decachlorobiphenyl	76.0	66.8	66.8~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

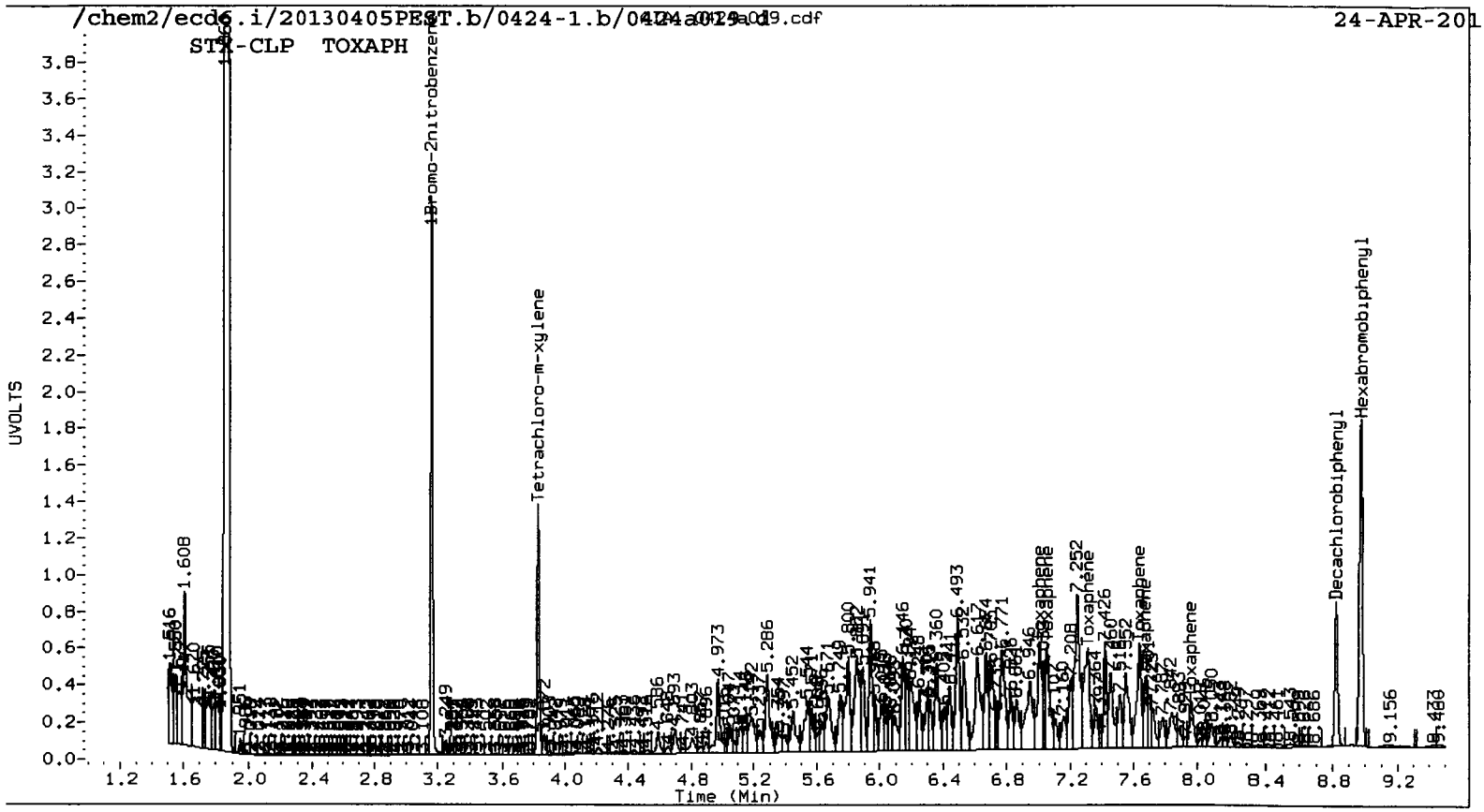
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5355166	-1.7
Hexabromobiphenyl	4807902	4498838	-6.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27561322	27.0
Hexabromobiphenyl	7681727	9831517	28.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	-0.006	2093543	723.1	1	7.340	-0.004	10300555	1140.6
Toxaphene	2	7.057	-0.007	2090125	1060.8	2	7.666	-0.002	12046664	891.5
Toxaphene	3	7.317	-0.004	2586528	781.9	3	7.894	-0.004	9297163	643.8
Toxaphene	4	7.642	-0.003	2257383	676.6	4	8.364	-0.002	4753382	455.5
Toxaphene	5	7.680	-0.005	1094916	497.3	5	8.403	-0.003	5118857	387.4
Toxaphene	6	7.962	-0.004	894251	473.1	NS	---			----
Total STX-CLPAve (6 peaks): 702.138						Total CLP2Ave (5 peaks): 703.768				RPD = 0
Corrected Ave (6 peaks): 702.138						Corrected Ave (5 peaks): 703.768				RPD = 0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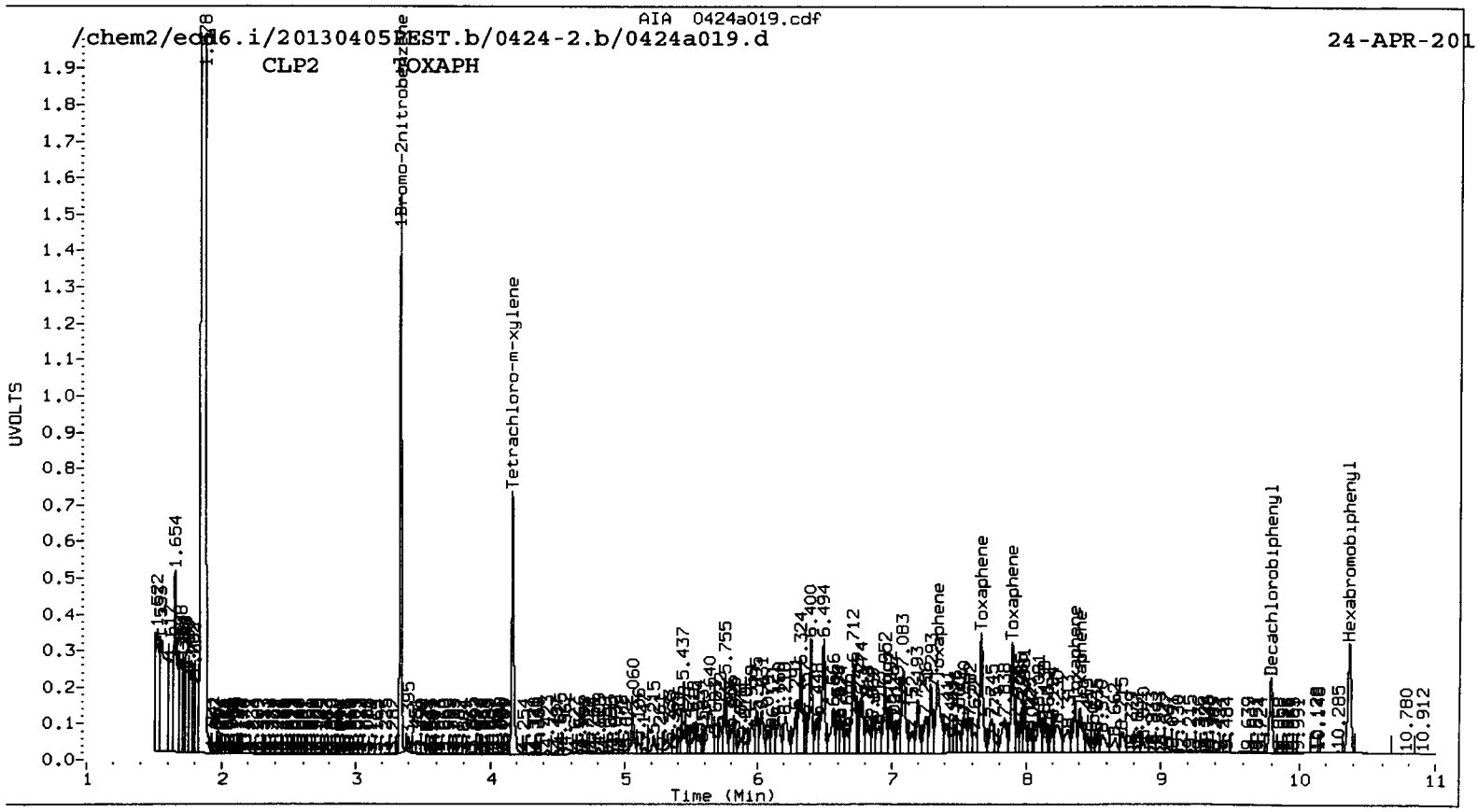
AIA 0424a019.cdf
24-APR-201
ST2-CLP TOXAPH
1.608
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
9.156
UVOLTS
Time (Min)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24-APR-201
CLP2 TOXAPH
1.654
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
10.780
10.912
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Y2 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 12:17
Compound Sublist: INDA Report Date: 04/26/2013 15:16
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	-0.003	4277863	3.332	-0.001	22469005	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.004	2012609	4.752	-0.004	11703874	21.3901	21.4052	0.1	alpha-BHC
4.686	-0.002	739711	5.183	-0.002	4269848	19.6229	20.0282	2.0	beta-BHC
4.856	-0.002	1753437	5.496	-0.003	9872399	20.9373	21.2408	1.4	delta-BHC
4.610	-0.005	1806613	5.111	-0.005	10254688	21.2742	21.3079	0.2	gamma-BHC (Lindane)
5.060	-0.006	1725385	5.577	-0.005	9560856	21.1988	21.4239	1.1	Heptachlor
5.354	-0.006	1672417	5.915	-0.005	8783040	20.9443	21.5875	3.0	Aldrin
5.929	-0.007	1493427	6.469	-0.006	7654708	20.4622	21.7170	6.0	Heptachlor epoxide b
6.307	-0.008	1381493	6.857	-0.006	6866743	20.6274	22.3469	8.0	Endosulfan I
6.529	-0.008	2985500	7.115	-0.006	13724272	42.2690	44.4980	5.1	Dieldrin
6.228	-0.007	2384191	6.915	-0.005	14020403	41.1992	44.6291	8.0	4,4'-DDE
6.748	-0.008	2500536	7.405	-0.005	9803187	43.8845	38.1470	14.0	Endrin
6.954	-0.007	2500832	7.593	-0.005	10431954	42.8355	36.9592	14.7	Endosulfan II
6.786	-0.005	2473583	7.453	-0.005	10428107	45.5309	38.3426	17.1	4,4'-DDD
7.722	-0.007	2149822	8.136	-0.005	8231199	41.7675	35.1175	17.3	Endosulfan sulfate
7.043	-0.006	2435499	7.742	-0.004	8509103	44.7315	34.4653	25.9	4,4'-DDT
7.468	-0.006	5613389	8.323	-0.007	17248193	205.5491	168.5415	19.8	Methoxychlor
7.978	-0.007	2626422	8.628	-0.005	7976022	40.6390	33.2682	19.9	Endrin ketone
7.331	-0.007	1997496	7.891	-0.005	7795370	41.6605	35.0176	17.3	Endrin aldehyde
6.049	-0.006	1549261	6.652	-0.005	7811058	20.7678	22.0206	5.9	gamma-Chlordane
6.173	-0.007	1487752	6.790	-0.005	7181157	20.7342	21.9403	5.7	alpha-Chlordane
2.340	-0.001	2089583	2.497	0.000	7030067	21.1027	16.3350	25.5	Hexachlorobutadiene
4.177	-0.002	1464770	4.627	-0.002	11225655	21.3645	22.2877	4.2	Hexachlorobenzene
8.976	-0.003	3672659	10.363	-0.003	9462408	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2745599	4.165	-0.004	16056568	42.6662	40.4018	5.5	Tetrachloro-m-xylen
8.825	-0.006	2024887	9.790	-0.006	7526237	37.7712	33.5472	11.8	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	106.7	101.0	101.0~	115- 0
Decachlorobiphenyl	94.4	83.9	83.9~	115- 0

~ Indicates recovery outside QC Limits

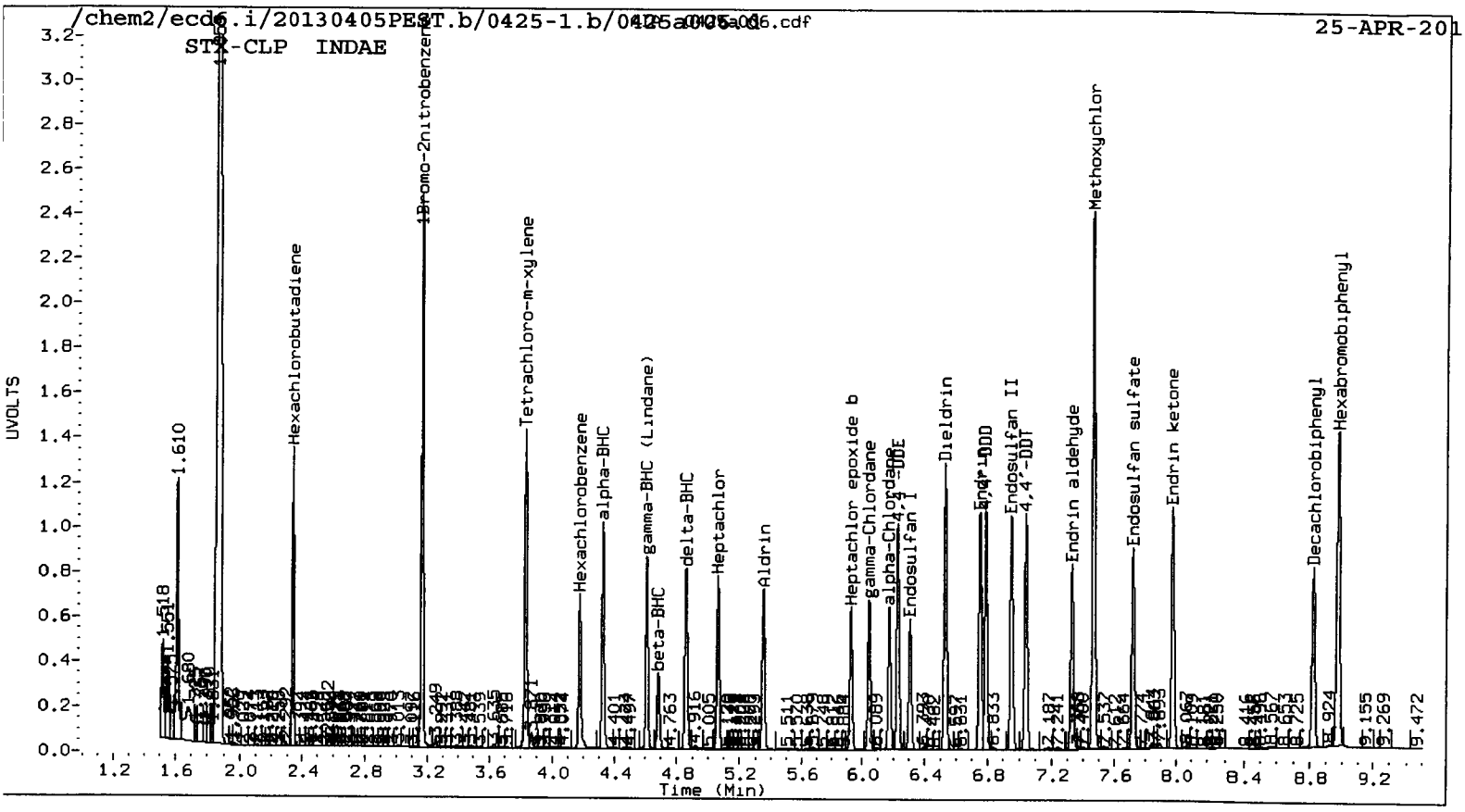
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5448520	4277863	-21.5
Hexabromobiphenyl	4807902	3672659	-23.6

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	21702340	22469005	3.5
Hexabromobiphenyl	7681727	9462408	23.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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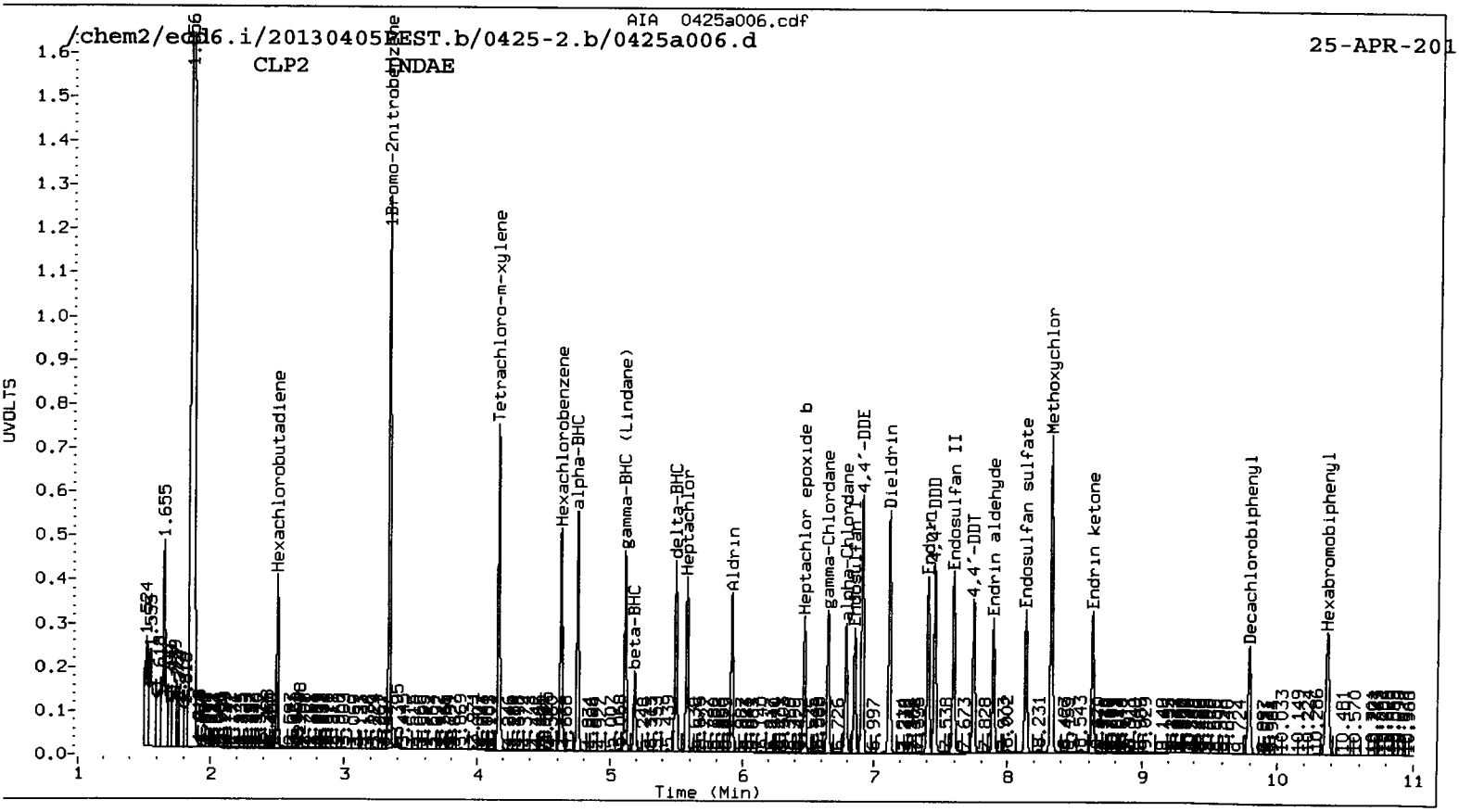
AIA 0425a006.cdf
25-APR-201
ST2-CLP INDAE
UVOLTS
Time (Min)
1.610
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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25-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1.655
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a007.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 12:37
Compound Sublist: TOXAPH Report Date: 04/26/2013 15:16
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
3.164	-0.001	4072392	3.333	0.001	21400279	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.980	0.000	3476416	10.365	-0.002	8850635	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.001	2145560	4.167	-0.001	12647127	35.0240	33.4121	4.7	Tetrachloro-m-xylen
8.829	-0.002	1662525	9.792	-0.003	6172059	32.7625	29.4128	10.8	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	87.6	83.5	83.5~	150- 0
Decachlorobiphenyl	81.9	73.5	73.5~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

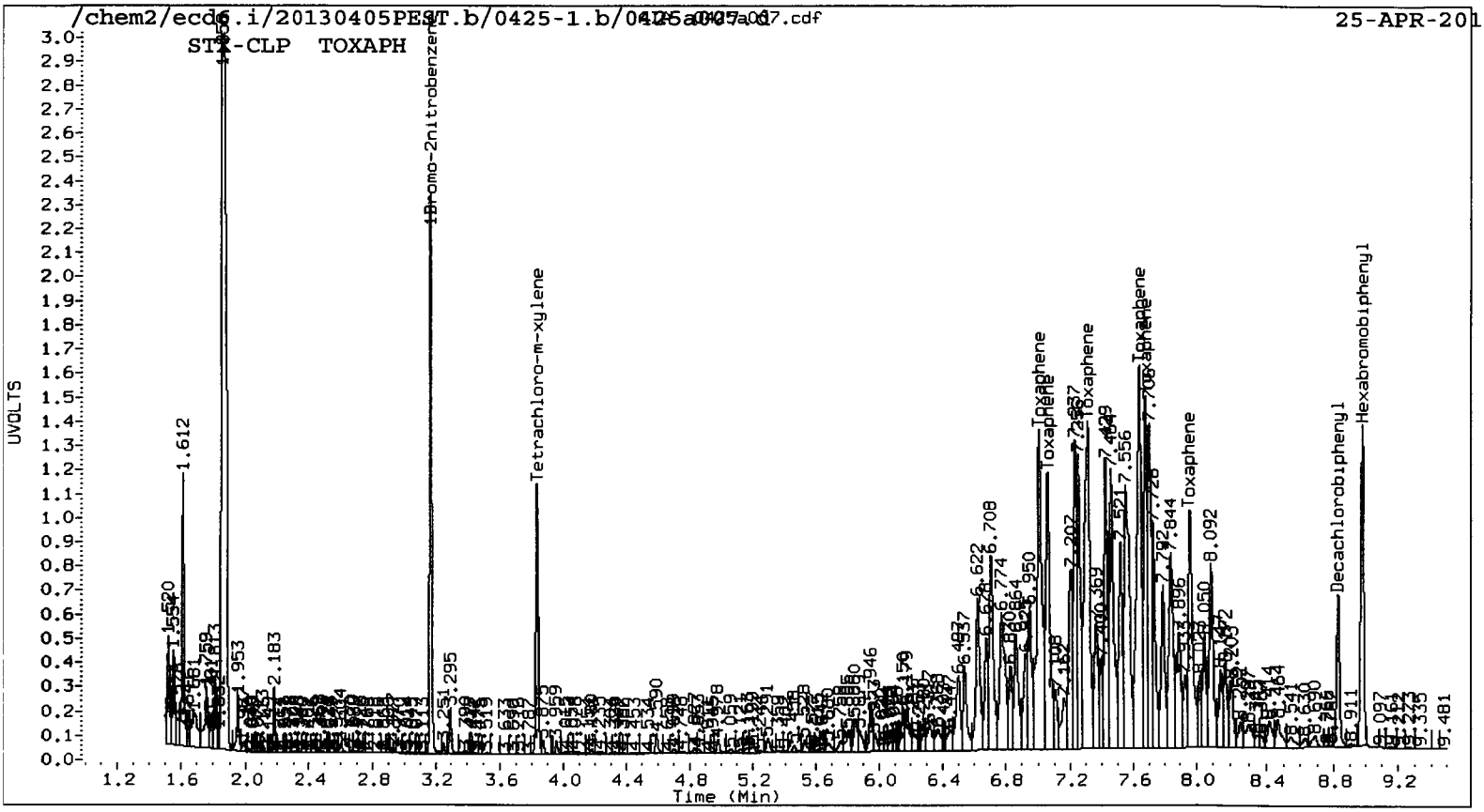
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4072392	-25.3
Hexabromobiphenyl	4807902	3476416	-27.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21400279	-1.4
Hexabromobiphenyl	7681727	8850635	15.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.010	-0.002	5763400	2576.2	1	7.343	-0.001	18406970	2264.2
Toxaphene	2	7.062	-0.001	3936732	2585.7	2	7.667	-0.001	25748615	2116.7
Toxaphene	3	7.319	-0.001	6509661	2546.6	3	7.897	-0.001	27323859	2101.7
Toxaphene	4	7.644	-0.001	6406854	2485.0	4	8.365	-0.001	18393845	1958.0
Toxaphene	5	7.683	-0.002	4248151	2496.8	5	8.404	-0.001	23553165	1980.0
Toxaphene	6	7.964	-0.002	3464424	2371.8	NS	---			----
Total STX-CLPAve (6 peaks): 2510.370						Total CLP2Ave (5 peaks): 2084.141				RPD = 19
Corrected Ave (6 peaks): 2510.370						Corrected Ave (5 peaks): 2084.141				RPD = 19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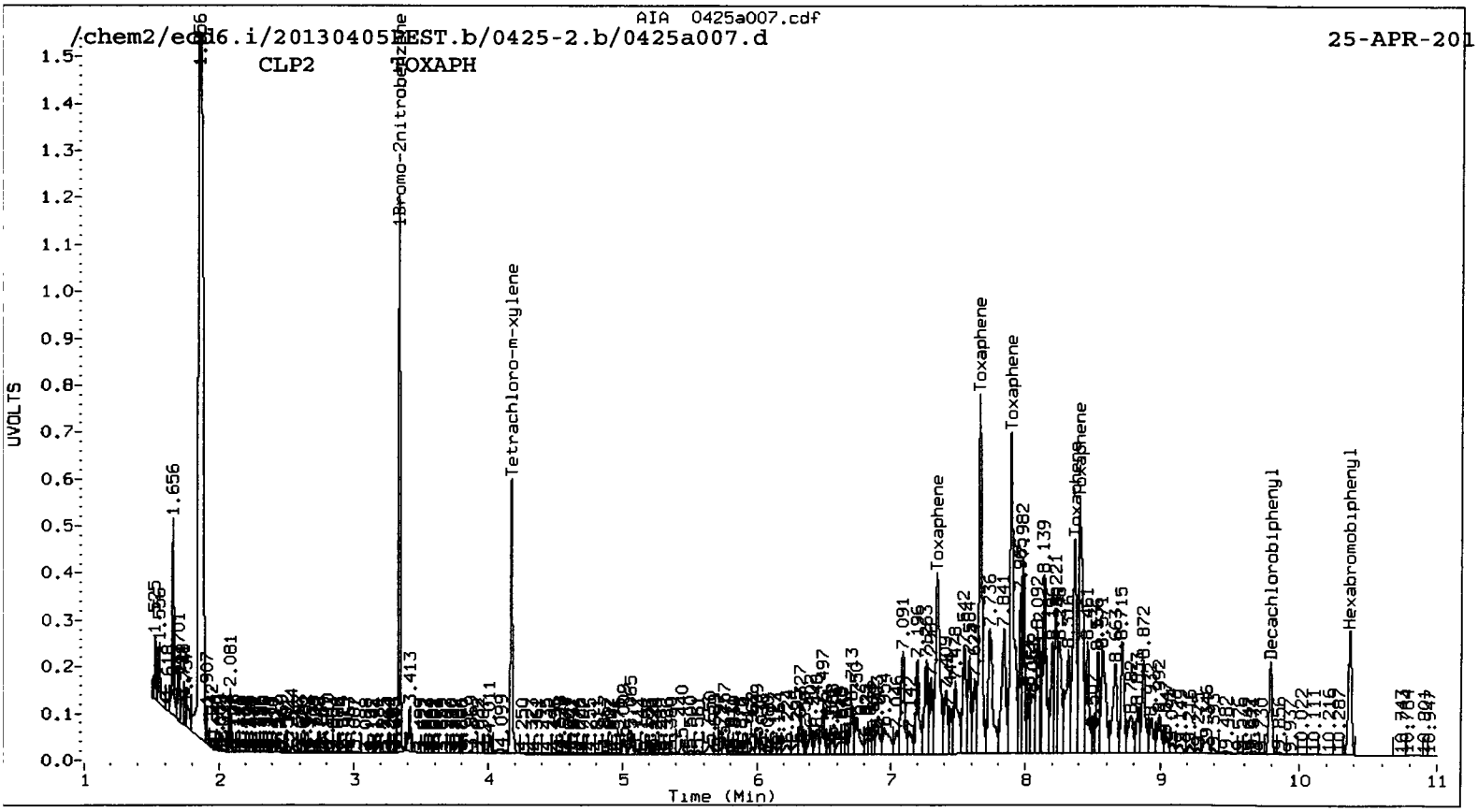
0425a007.cdf
25-APR-201
ST1-CLP TOXAPH
1.612
1.953
2.183
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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25-APR-201
CLP2 TOXAPH
1.656
2.081
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a010.d ARI ID: WL67A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a010.d Client ID: GR-CB-07-20130411-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 13:31
Compound Sublist: wpest Report Date: 04/26/2013 15:16
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 500.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.161	-0.003	5229453	3.331	-0.001	27347820	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.333	0.003	7366	4.741	-0.016	19660	0.0640	0.0295	73.7*	alpha-BHC
4.687	0.000	7376	5.205	0.020	120398	0.1601	0.4640	97.4*	beta-BHC
4.843	-0.015	75528	5.502	0.003	70636	0.7378	0.1249	142.1*	delta-BHC
4.610	-0.004	23834	5.106	-0.010	60009	0.2296	0.1024	76.6*	gamma-BHC (Lindane)
5.044	-0.021	54464	5.585	0.003	338083	0.5474	0.6224	12.8	Heptachlor
5.366	0.005	89899	5.943	0.022	11611	0.9210	0.0234	190.1*	Aldrin
5.961	0.024	136148	6.448	-0.028	555523	1.5260	1.2949	16.4	Heptachlor epoxide b
6.339	0.024	92363	6.838	-0.025	14218	1.1281	0.0380	187.0*	Endosulfan I
6.548	0.011	5256	7.153	0.032	42772	0.0609	0.1139	60.7*	Dieldrin
6.226	-0.009	57762	6.896	-0.024	126945	0.8165	0.3320	84.4*	4,4'-DDE
6.758	0.001	58982	7.418	0.008	201836	0.8697	0.7091	20.3	Endrin
6.968	0.008	7576	7.592	-0.006	145117	0.1090	0.4642	123.9*	Endosulfan II
----			7.452	-0.006	83605	0.0000	0.2776	---	4,4'-DDD
7.711	-0.018	4248	8.162	0.022	62416	0.0693	0.2404	110.5*	Endosulfan sulfate
7.020	-0.029	114974	7.753	0.007	409260	1.7741	1.4967	17.0	4,4'-DDT
7.507	0.034	16421	8.304	-0.026	286282	0.5052	2.5258	133.3*	Methoxychlor
7.967	-0.018	18751	8.633	0.001	217420	0.2438	0.8188	108.2*	Endrin ketone
7.348	0.009	26378	7.878	-0.017	58581	0.4622	0.2376	64.2*	Endrin aldehyde
6.045	-0.010	4907	6.675	0.017	331233	0.0538	0.7672	173.8*	gamma-Chlordane
6.185	0.006	32663	6.790	-0.006	17004	0.3724	0.0427	158.9*	alpha-Chlordane
2.339	-0.002	2550	2.504	0.007	23103	0.0211	0.0441	70.7*	Hexachlorobutadiene
4.177	-0.003	12253	4.610	-0.019	148903	0.1462	0.2429	49.7*	Hexachlorobenzene
5.867	0.027	2544	6.401	0.016	284375	0.0372	0.8050	182.3*	Oxychlordane
5.915	0.004	12748	6.616	-0.015	247849	0.2475	0.9545	117.6*	2,4-DDE
6.137	-0.024	5458	6.723	-0.018	134576	0.0670	0.3348	133.3*	trans-Nonachlor
6.384	-0.013	30253	7.091	-0.024	93592	0.6715	0.4440	40.8*	2,4-DDD
6.652	0.016	5818	7.361	-0.042	61777	0.1129	0.2762	83.9*	2,4-DDT
6.778	0.000	55456	7.493	0.028	18488	0.6440	0.0487	171.9*	cis-Nonachlor
7.660	0.007	19664	8.587	-0.032	56478	0.3823	0.3263	15.8	Mirex
8.976	-0.004	4371380	10.363	-0.003	10480048	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.002	3630	1.737	0.005	877721	0.0000	0.0000	---	Hexachloroethane
6.595	0.014	57159	7.331	-0.005	9126	0.0000	0.0000	---	Kepone
3.834	-0.002	16025	4.163	-0.005	43282	0.2037	0.0895	77.9*	Tetrachloro-m-xylene
8.819	-0.012	30636	9.790	-0.006	51816	0.4801	0.2085	78.9*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	0.5	0.2	0.2~	42-112
Decachlorobiphenyl	1.2	0.5	0.5~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

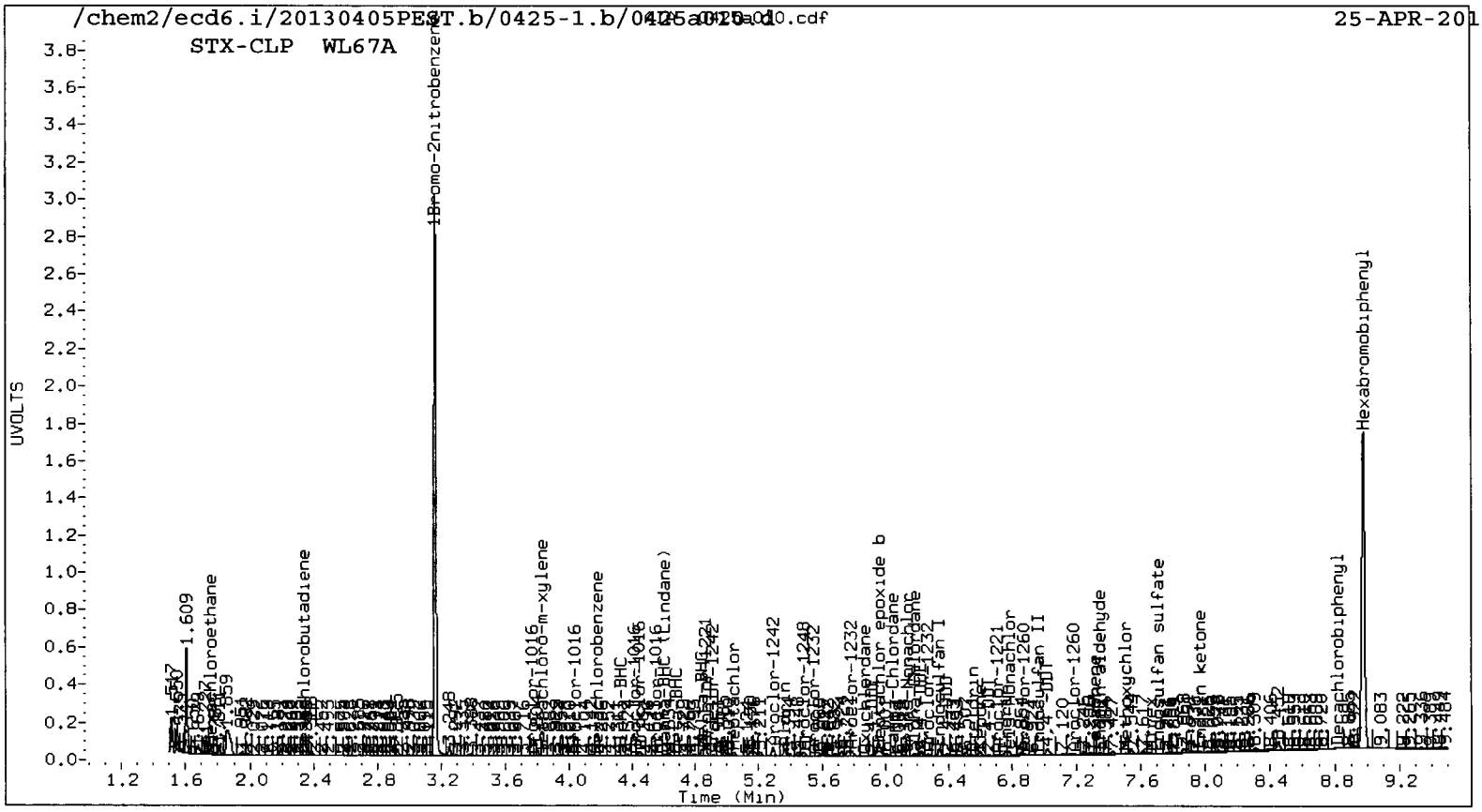
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5229453	-4.0
Hexabromobiphenyl	4807902	4371380	-9.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27347820	26.0
Hexabromobiphenyl	7681727	10480048	36.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.020	0.008	114974	40.9	1	7.331	-0.013	9126	0.9
Toxaphene	2	---			0.000	2	7.654	-0.014	46000	3.2
Toxaphene	3	7.316	-0.005	4029	1.3	3	7.878	-0.020	58581	3.8
Toxaphene	4	7.660	0.015	19664	6.1	4	8.371	0.004	280362	25.2
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.967	0.000	18751	10.2	NS	---			----
Total STX-CLPAve (4 peaks): 14.600						Total CLP2Ave (4 peaks): 8.288				RPD = 55*
Corrected Ave (3 peaks): 5.843						Corrected Ave (3 peaks): 2.649				RPD = 75*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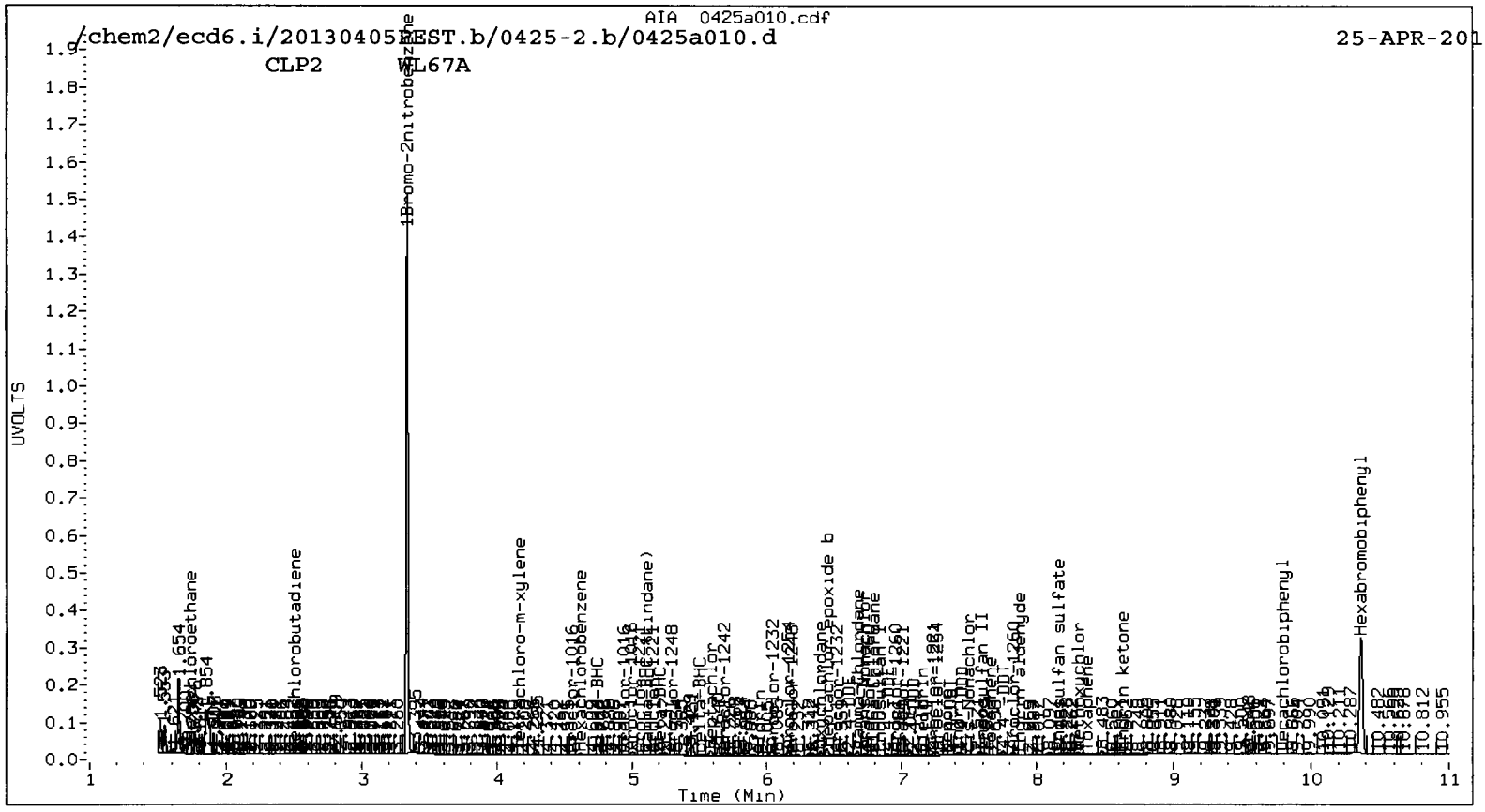
25-APR-201
STX-CLP WL67A
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexabromobiphenyl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AIA 0425a010.cdf
25-APR-201
CLP2 WL67A
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a011.d ARI ID: WL67B
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a011.d Client ID: GR-WS-05-20130411-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 13:49
Compound Sublist: wpest Report Date: 04/26/2013 15:17
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 500.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	4951352	3.332	-0.001	25771812	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.334	0.005	4958	4.744	-0.012	4022	0.0455	0.0064	150.6*	alpha-BHC
4.688	0.001	6203	5.206	0.021	135840	0.1422	0.5555	118.5*	beta-BHC
4.844	-0.014	78002	5.503	0.004	22985	0.8047	0.0431	179.7*	delta-BHC
4.611	-0.004	23620	5.108	-0.008	58838	0.2403	0.1066	77.1*	gamma-BHC (Lindane)
5.045	-0.020	49208	5.585	0.003	336090	0.5224	0.6566	22.8	Heptachlor
5.366	0.006	78139	5.950	0.029	8488	0.8455	0.0182	191.6*	Aldrin
5.962	0.025	108467	6.448	-0.027	380031	1.2840	0.9400	30.9	Heptachlor epoxide b
6.339	0.024	62218	6.838	-0.025	19077	0.8026	0.0541	174.7*	Endosulfan I
6.548	0.011	3810	7.154	0.033	29831	0.0466	0.0843	57.6*	Dieldrin
6.226	-0.009	39789	6.896	-0.024	74789	0.5940	0.2076	96.4*	4,4'-DDE
6.758	0.001	35929	7.418	0.008	133836	0.5583	0.4827	14.5	Endrin
6.969	0.008	10290	7.593	-0.006	110736	0.1561	0.3637	79.9*	Endosulfan II
----			7.452	-0.006	40025	0.0000	0.1364	---	4,4'-DDD
7.733	0.003	1783	8.163	0.022	72490	0.0307	0.2867	161.3*	Endosulfan sulfate
7.020	-0.029	76177	7.752	0.007	303955	1.2388	1.1412	8.2	4,4'-DDT
7.506	0.033	10901	8.304	-0.027	269859	0.3534	2.4442	149.5*	Methoxychlor
7.968	-0.017	15620	8.632	0.000	261440	0.2140	1.0108	130.1*	Endrin ketone
7.349	0.010	12694	7.879	-0.016	58738	0.2344	0.2446	4.2	Endrin aldehyde
6.038	-0.017	13112	6.674	0.017	246042	0.1519	0.6047	119.7*	gamma-Chlordane
6.186	0.006	22390	6.794	-0.001	22236	0.2696	0.0592	127.9*	alpha-Chlordane
2.340	0.000	1949	2.500	0.003	10992	0.0170	0.0223	26.8	Hexachlorobutadiene
4.177	-0.002	5200	4.610	-0.019	122533	0.0655	0.2121	105.6*	Hexachlorobenzene
5.866	0.026	2444	6.401	0.016	247563	0.0377	0.7436	180.7*	Oxychlordane
5.916	0.005	10185	6.616	-0.015	191165	0.2084	0.7812	115.8*	2,4-DDE
6.138	-0.024	6739	6.750	0.010	19405	0.0872	0.0496	55.0*	trans-Nonachlor
6.379	-0.018	12861	7.090	-0.025	36952	0.3009	0.1800	50.3*	2,4-DDD
6.652	0.015	5068	7.362	-0.042	50106	0.1037	0.2300	75.7*	2,4-DDT
6.776	-0.002	24973	7.491	0.026	7071	0.3056	0.0191	176.4*	cis-Nonachlor
7.660	0.007	5425	8.591	-0.028	140737	0.1112	0.8346	153.0*	Mirex
8.975	-0.005	4147776	10.362	-0.004	10208556	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.757	0.003	2676	1.737	0.005	657096	0.0000	0.0000	---	Hexachloroethane
6.595	0.014	45416	7.324	-0.012	5298	0.0000	0.0000	---	Kepone
3.834	-0.003	6976	4.164	-0.005	37116	0.0937	0.0814	14.0	Tetrachloro-m-xylene
8.823	-0.008	16020	9.791	-0.004	32701	0.2646	0.1351 SD	64.8*	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	0.2	0.2	0.2~	42-112
Decachlorobiphenyl	0.7	0.3	0.3~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

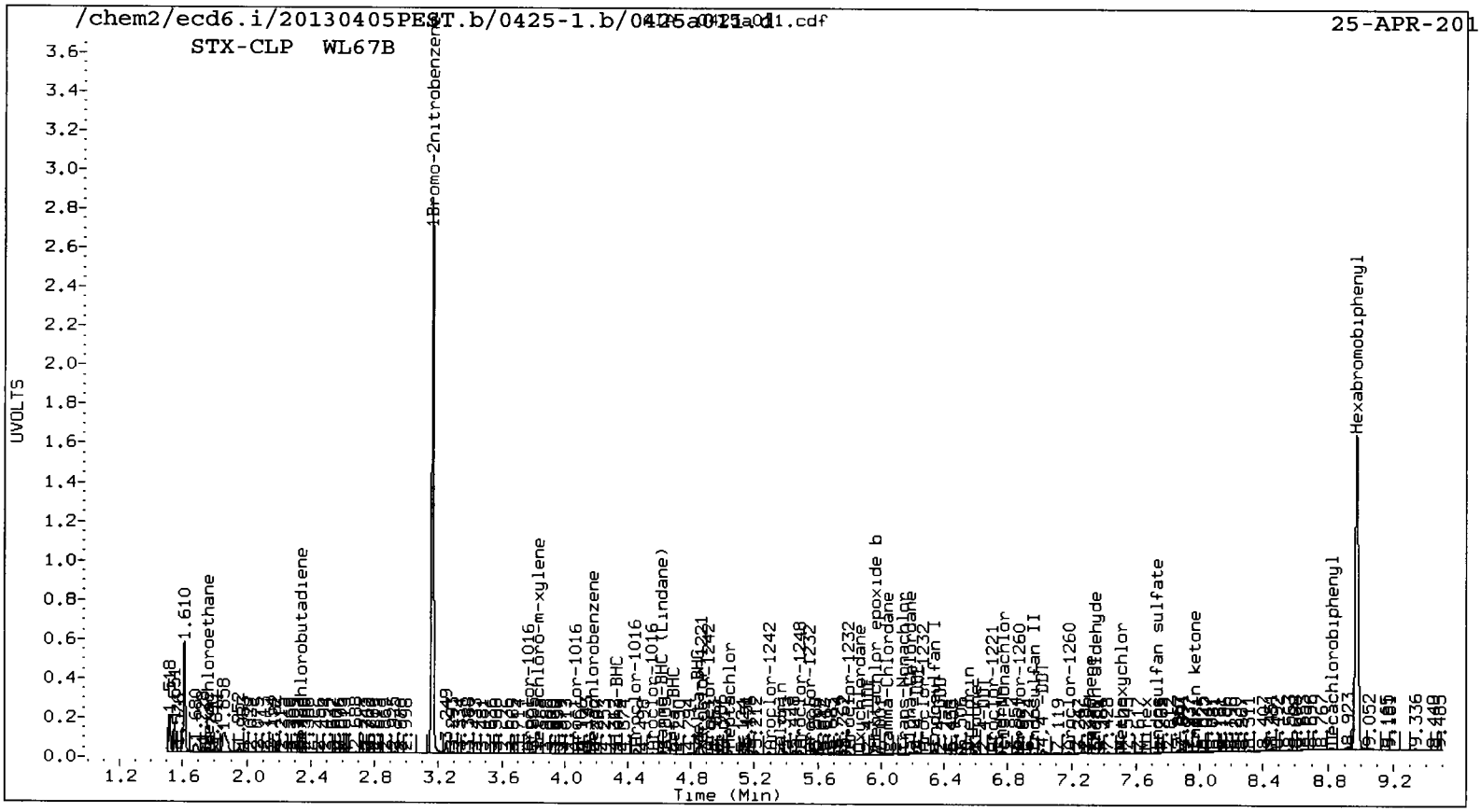
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4951352	-9.1
Hexabromobiphenyl	4807902	4147776	-13.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25771812	18.8
Hexabromobiphenyl	7681727	10208556	32.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	7.020	0.008	76177	28.5	1	7.362	0.018	50106	5.3
Toxaphene	2	---			0.000	2	7.630	-0.038	95652	6.8
Toxaphene	3	7.315	-0.005	3450	1.1	3	7.879	-0.019	58738	3.9
Toxaphene	4	7.660	0.015	5425	1.8	4	8.369	0.003	206310	19.0
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.968	0.002	15620	9.0	NS	---			----
Total STX-CLPAve (4 peaks): 10.099						Total CLP2Ave (4 peaks): 8.780				RPD = 14
Corrected Ave (3 peaks): 3.953						Corrected Ave (3 peaks): 5.359				RPD = 30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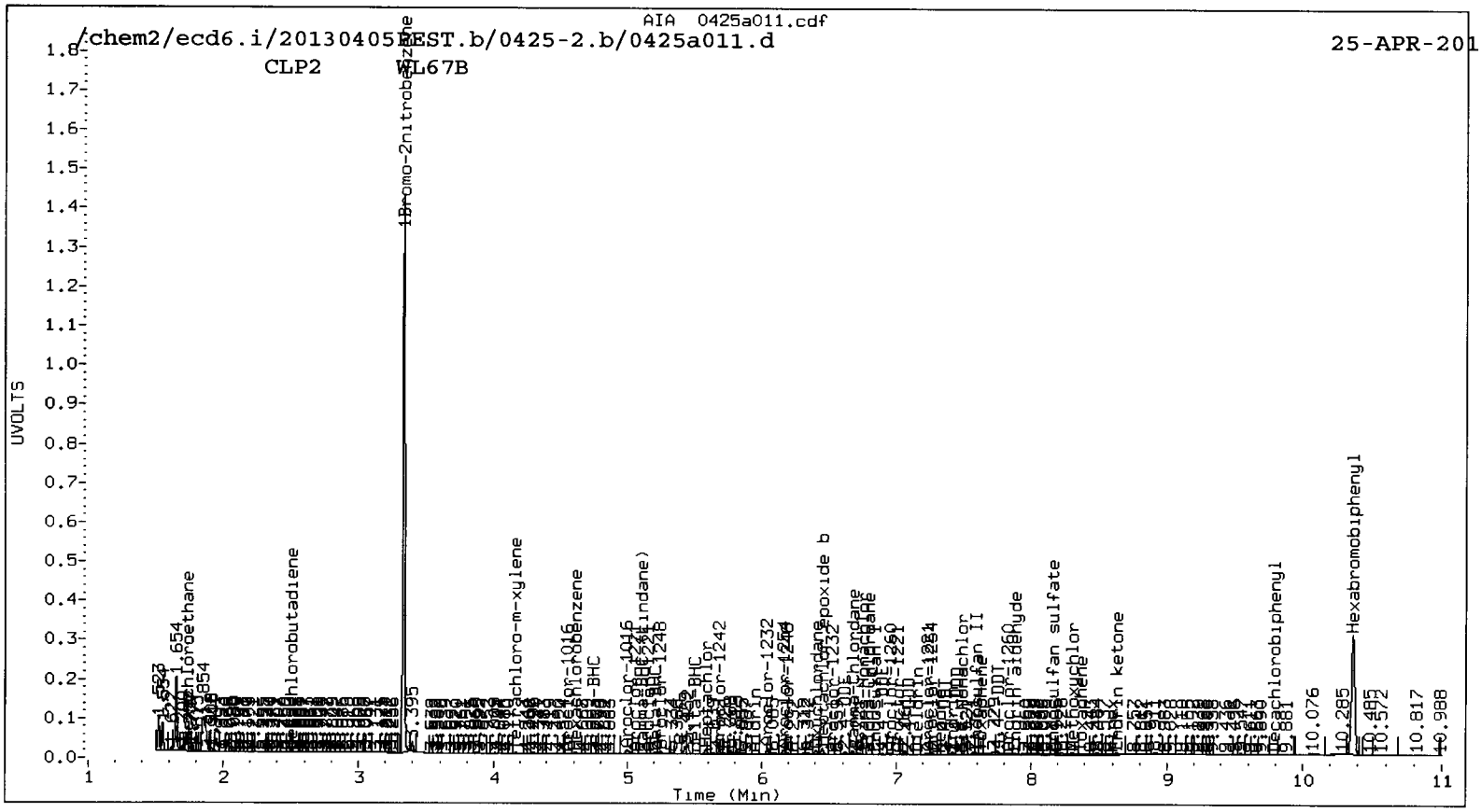
25-APR-201
STX-CLP WL67B
UVOLTS
Time (Min)
1.610
1Bromo-2nitrobenzene
Hexabromobiphenyl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25-APR-201
CLP2 WL67B
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a013.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a013.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 25-APR-2013 14:25
Compound Sublist: INDA
Report Date: 04/26/2013 15:17
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	-0.003	4243504	3.332	-0.001	22903981	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2002448	4.752	-0.004	11810304	21.4544	21.1896	1.2	alpha-BHC
4.686	-0.001	732658	5.184	-0.001	4298744	19.5932	19.7808	1.0	beta-BHC
4.857	-0.002	1723535	5.496	-0.003	9842731	20.7469	20.7748	0.1	delta-BHC
4.610	-0.005	1791251	5.111	-0.005	10325828	21.2641	21.0482	1.0	gamma-BHC (Lindane)
5.059	-0.006	1701971	5.577	-0.005	9534891	21.0804	20.9600	0.6	Heptachlor
5.354	-0.006	1651285	5.915	-0.005	8781709	20.8471	21.1744	1.6	Aldrin
5.929	-0.007	1469419	6.470	-0.006	7469868	20.2962	20.7901	2.4	Heptachlor epoxide b
6.307	-0.008	1354626	6.857	-0.006	6593060	20.3900	21.0487	3.2	Endosulfan I
6.530	-0.008	2903709	7.115	-0.006	13299335	41.4439	42.3013	2.0	Dieldrin
6.228	-0.007	2348340	6.915	-0.005	13436068	40.9083	41.9568	2.5	4,4'-DDE
6.748	-0.008	2465438	7.404	-0.006	9637874	44.6587	38.1179	15.8	Endrin
6.954	-0.007	2424950	7.593	-0.006	10511153	42.8703	37.8496	12.4	Endosulfan II
6.786	-0.005	2412960	7.454	-0.004	10231031	45.8420	38.2340	18.1	4,4'-DDD
7.722	-0.007	2096178	8.136	-0.005	7920171	42.0337	34.3439	20.1	Endosulfan sulfate
7.044	-0.005	2309259	7.742	-0.004	8321593	43.7756	34.2578	24.4	4,4'-DDT
7.468	-0.006	5410625	8.323	-0.008	16722167	204.4900	166.0773	20.7	Methoxychlor
7.977	-0.008	2568385	8.628	-0.005	7800127	41.0178	33.0673	21.5	Endrin ketone
7.332	-0.007	1889228	7.891	-0.005	7411565	40.6684	33.8387	18.3	Endrin aldehyde
6.049	-0.006	1519927	6.652	-0.005	7541600	20.5395	20.8572	1.5	gamma-Chlordane
6.173	-0.007	1458580	6.790	-0.005	6884448	20.4922	20.6343	0.7	alpha-Chlordane
2.339	-0.001	2080504	2.497	0.000	7081176	21.1812	16.1413	27.0	Hexachlorobutadiene
4.177	-0.002	1456060	4.627	-0.002	11414763	21.4094	22.2328	3.8	Hexachlorobenzene
8.976	-0.003	3558332	10.362	-0.004	9309949	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.003	2714528	4.165	-0.004	16303227	42.5250	40.2434	5.5	Tetrachloro-m-xylen
8.825	-0.006	1993928	9.789	-0.006	7464877	38.3887	33.8186	12.7	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	106.3	100.6	100.6~	115- 0
Decachlorobiphenyl	96.0	84.5	84.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

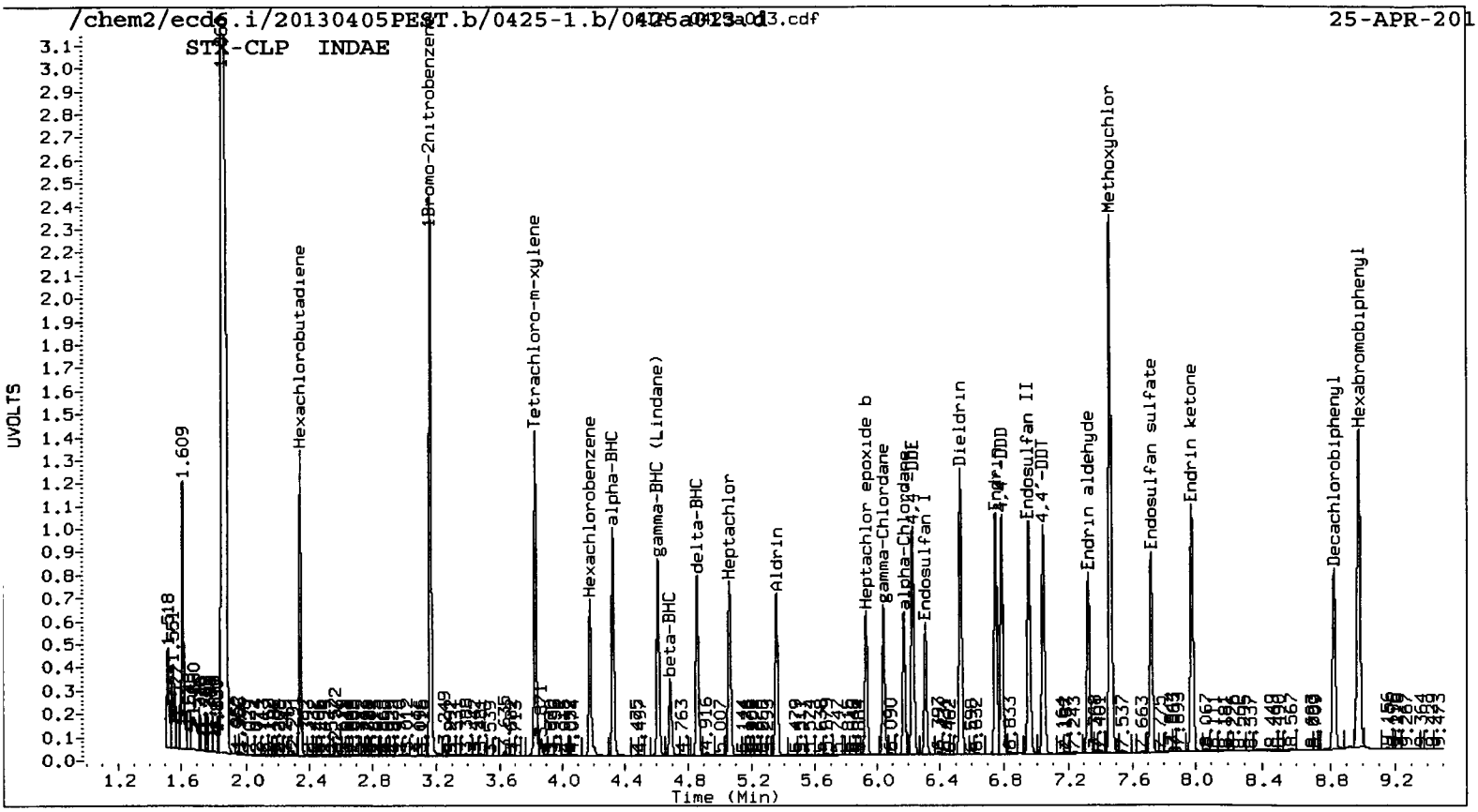
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4243504	-22.1
Hexabromobiphenyl	4807902	3558332	-26.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	22903981	5.5
Hexabromobiphenyl	7681727	9309949	21.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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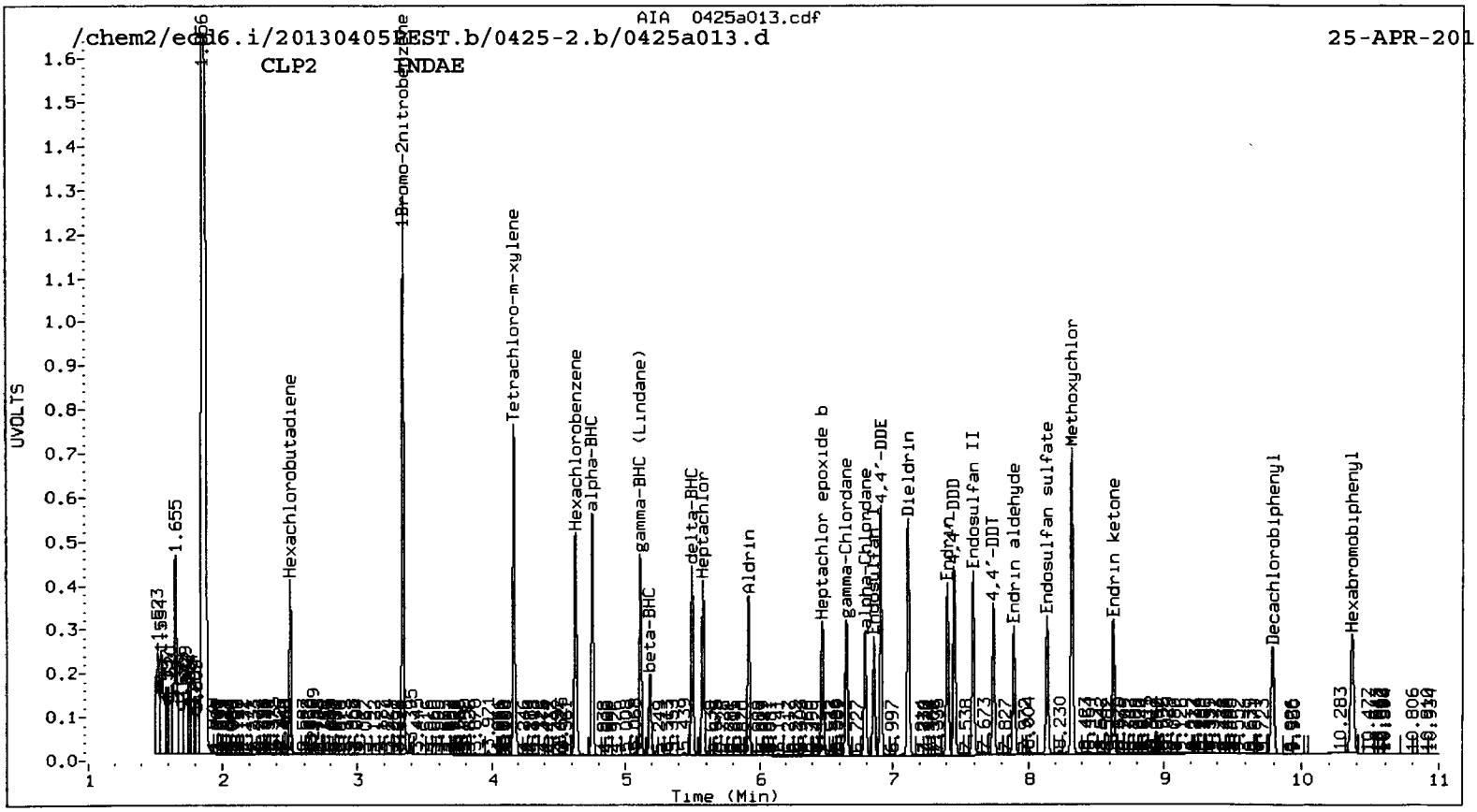
25-APR-201
ST1-CLP INDAE
UVOLTS
Time (Min)
1.609
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAE
UVOLTS
Time (Min)
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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

4/26/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a014.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a014.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 14:43
Compound Sublist: TOXAPH Report Date: 04/26/2013 15:17
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	-0.002	4091075	3.332	0.000	22111997	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.976	-0.003	3470518	10.362	-0.004	9045595	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2156920	4.165	-0.004	12867366	35.0486	32.8998	6.3	Tetrachloro-m-xylen
8.824	-0.007	1671354	9.789	-0.006	6293260	32.9924	29.3440	11.7	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	87.6	82.2	82.2~	150- 0
Decachlorobiphenyl	82.5	73.4	73.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

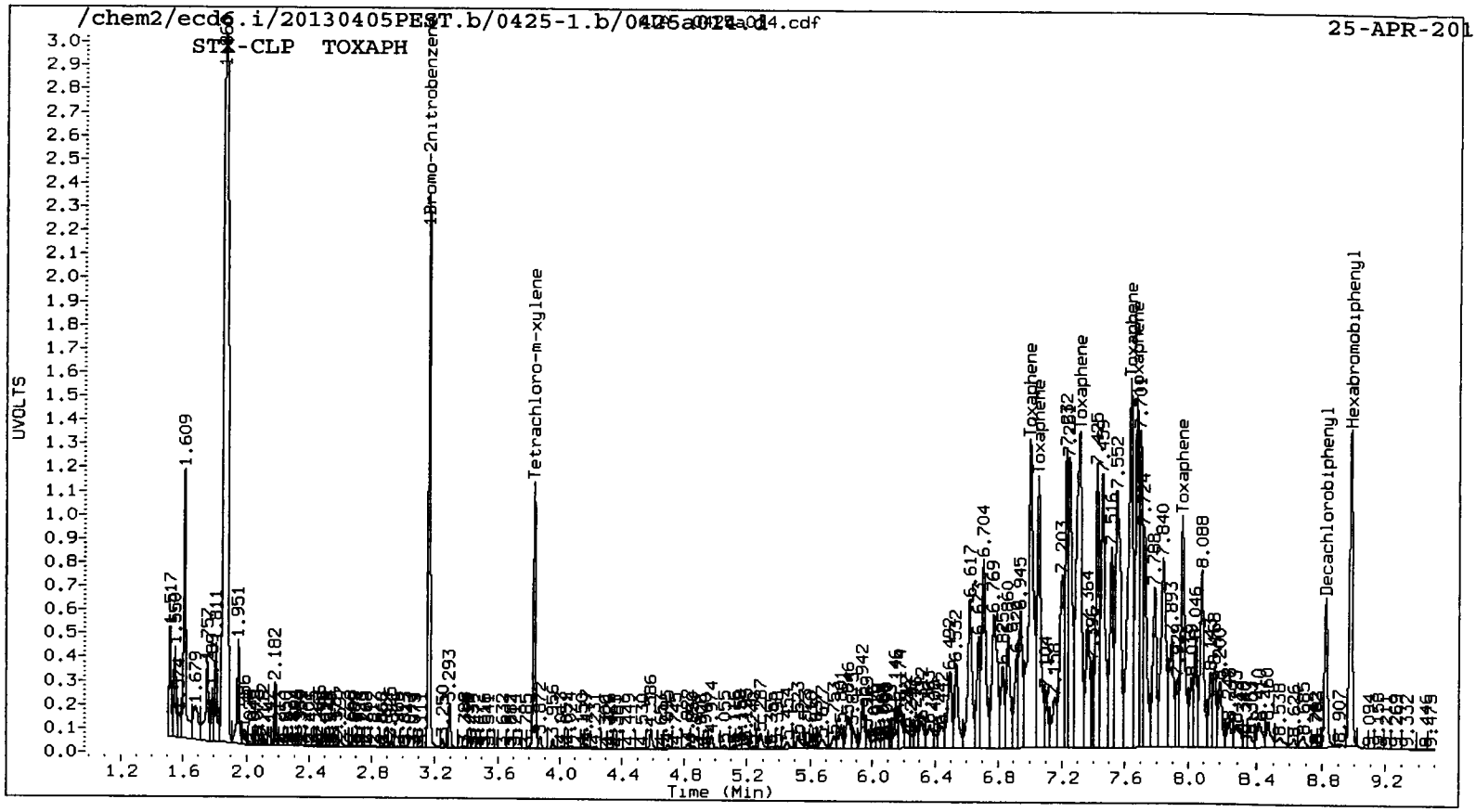
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4091075	-24.9
Hexabromobiphenyl	4807902	3470518	-27.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	22111997	1.9
Hexabromobiphenyl	7681727	9045595	17.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-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	-0.006	5738101	2569.3	1	7.340	-0.004	18746291	2256.3
Toxaphene	2	7.057	-0.006	3917993	2577.8	2	7.664	-0.004	26724828	2149.6
Toxaphene	3	7.315	-0.006	6400501	2508.2	3	7.895	-0.004	27806648	2092.8
Toxaphene	4	7.640	-0.005	6365770	2473.3	4	8.363	-0.003	18430575	1919.7
Toxaphene	5	7.678	-0.006	4231306	2491.1	5	8.402	-0.004	23836703	1960.7
Toxaphene	6	7.960	-0.006	3444075	2361.9	NS	---			----
Total STX-CLPAve (6 peaks): 2496.924						Total CLP2Ave (5 peaks): 2075.790				RPD = 18
Corrected Ave (6 peaks): 2496.924						Corrected Ave (5 peaks): 2075.790				RPD = 18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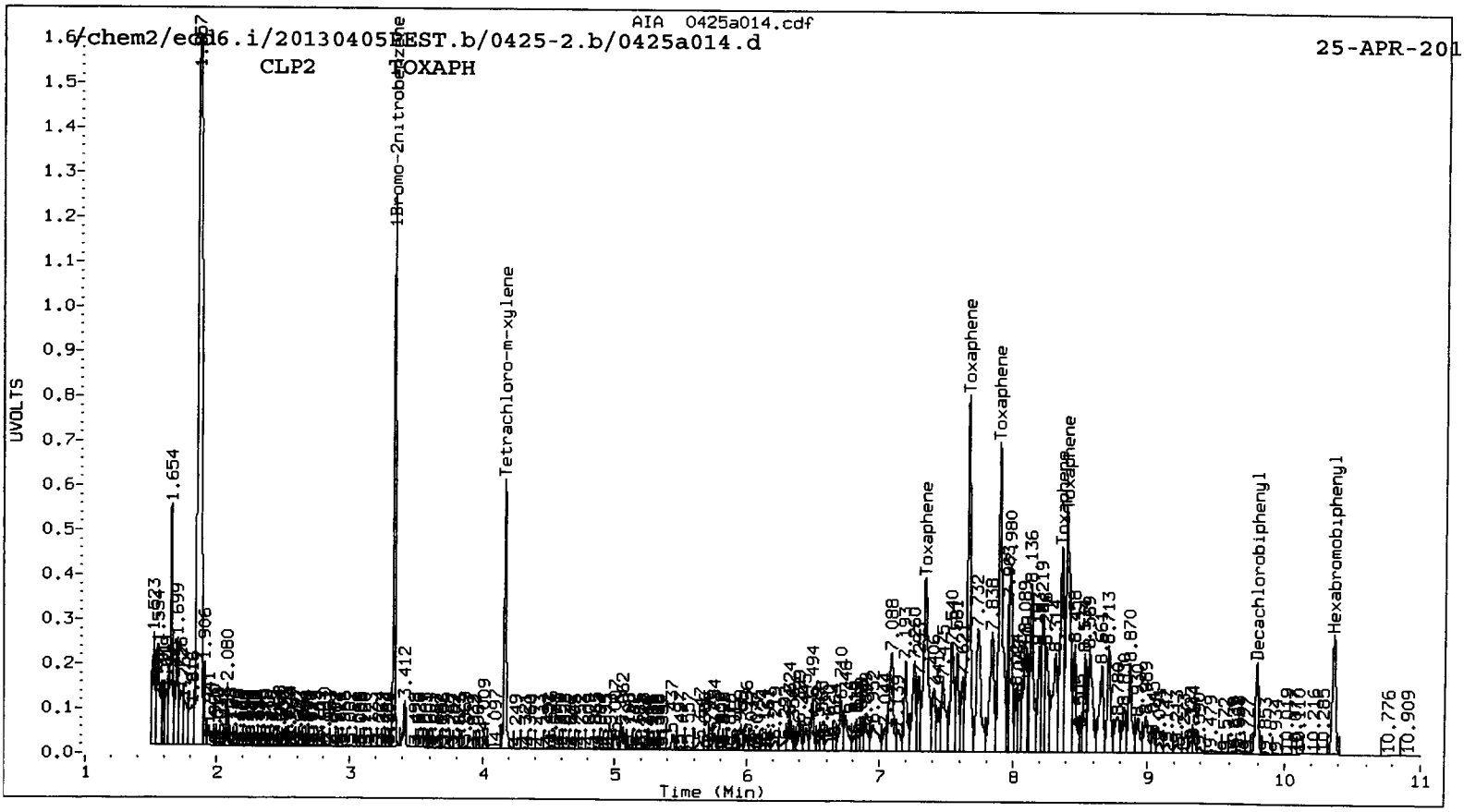
0425a014.cdf
25-APR-201
ST2-CLP TOXAPH
UVOLTS
Time (Min)
1.609
1.951
2.182
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0425a014.cdf
/chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a014.d
25-APR-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.654
2.080
3.412
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL67

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) WL49, WL67 Page 1 of 1 PSDDA (4ppb) Batch set up by: ~~JH~~

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 WL49	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	TH 4/19/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave (1) 2 3 YL 04/19/13 Analyst/Date
	~~SBSDup~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	QLS WL49	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	
3	F	12.57	2.5mL	2.5mL	1mL	2.5mL	1mL	See Analyst Notes	KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6 Analyst/Date
3	G	16.49	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	GMS	16.05	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	GMSd	16.39	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	WL67 A	31.55	2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups CJZ 4/23/13 Analyst/Date
8	B	7.58	2.5mL	2.5mL	1mL	2.5mL	1mL	See Analyst Notes	
			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 CJZ 4/23/13
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
Analyst/Date	TH 4/19/13		CJZ 4/23/13	CJZ 4/23/13	CJZ 4/23/13	CJZ 4/23/13	CJZ 4/23/13		CJZ 4/23/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(2035-2)	2µg/mL	50µL	5/16/13	YL	TH
Spike	1(2074-4)	20µg/mL	63µL	10/31/13	YL	TH
QLS Spike	5(2088-3)	2µg/mL	25µL	10/31/13	YL	TH

Extraction Time: 12:40 Balance ID: B13429800L

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 (~~Smaller~~ 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 Both Jobs

WLST:01163

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL67 Client ID: SAIC

Parameter: ~~SA Pest~~ PCB PSDDA (4ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= B=wet A=wet	HC 4-12-13
☐ Standing Water Decanted (Not shared)= A, B	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= Major stick	
☐ 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) reduced extraction weight for Sample 'B', based on Sample pre-screen.	JH 4/17/13

WL67 : 0116U

PCB Raw Data
Initial Calibration

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/16/13 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
1660	1980-1	5/16/13	1660	2009-2	5/16/13
1242	1980-4	5/16/13	1242	2009-5	
1248	1980-5	5/16/13	1248	2009-6	
1254	1980-6	5/16/13	1254	2009-7	
2162	1980-2	5/16/13	2162	2009-3	
3268	1980-3	5/16/13	3268	2009-4	
DDTs	FFI-2	1/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Man Int in 1660 low point on 2435 cal.

Analyst: [signature] **Date:** 4/17/13

Reviewer: [signature] **Date:** 4/27/13

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 4/16/13 Analysis: PCB Analyst: JL

Column 1 Serial No.: 213234 Column Type: ZB5

Column 2 Serial No.: 176568 Column Type: ZB35

GC Method: PCB ICal Date: 4/16/13 Injection Volume: 2 uL

IS	Ical/Ccal	ICV
2006-1	1950-1,2,3,4,5,6	2009-2,3,4,5,6,7

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130416.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	16-APR-2013 15:46	0416a001.d	1	IB	
2	16-APR-2013 16:06	0416a002.d	1	AR1660 .25	
3	16-APR-2013 16:27	0416a003.d	1	AR1660 .02	
4	16-APR-2013 16:47	0416a004.d	1	AR1660 .05	
5	16-APR-2013 17:08	0416a005.d	1	AR1660 1	
6	16-APR-2013 17:29	0416a006.d	1	AR1660 0.1	
7	16-APR-2013 17:49	0416a007.d	1	AR1660 0.5	
8	16-APR-2013 18:10	0416a008.d	1	AR1242	
9	16-APR-2013 18:30	0416a009.d	1	AR1248	
10	16-APR-2013 18:51	0416a010.d	1	AR1254	
11	16-APR-2013 19:11	0416a011.d	1	AR2162	
12	16-APR-2013 19:32	0416a012.d	1	AR3268	
13	16-APR-2013 19:53	0416a013.d	1	AR1660 ICV	
14	16-APR-2013 20:13	0416a014.d	1	AR1242 ICV	
15	16-APR-2013 20:34	0416a015.d	1	AR1248 ICV	
16	16-APR-2013 20:54	0416a016.d	1	AR1254 ICV	
17	16-APR-2013 21:15	0416a017.d	1	AR2162 ICV	
18	16-APR-2013 21:35	0416a018.d	1	AR3268 ICV	
19	16-APR-2013 21:56	0416a019.d	1	DDTS 0.1	
20	16-APR-2013 22:16	0416a020.d	1	DDT BD	

JL 4/18/13

New ZB5 column

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.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130416.b/ical-1.b/0416a003.d
Level 2: /chem2/ecd7.i/20130416.b/ical-1.b/0416a004.d
Level 3: /chem2/ecd7.i/20130416.b/ical-1.b/0416a006.d
Level 4: /chem2/ecd7.i/20130416.b/ical-1.b/0416a002.d
Level 5: /chem2/ecd7.i/20130416.b/ical-1.b/0416a007.d
Level 6: /chem2/ecd7.i/20130416.b/ical-1.b/0416a005.d
Level 7: /chem2/ecd7.i/20130416.b/ical-1.b/0416a012.d
Level 8: /chem2/ecd7.i/20130416.b/ical-1.b/0416a019.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00974	+++++	0.00974	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00736	+++++	0.00736	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02468	+++++	0.02468	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01845	+++++	0.01845	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06225	+++++	0.06225	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02456	+++++	0.02456	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
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)	+++++	+++++	+++++	+++++	+++++	+++++	0.02301	+++++	0.02301	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01635	+++++	0.01635	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00952	+++++	0.00952	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03181	+++++	0.03181	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01279	+++++	0.01279	0.000
7 Aroclor-1016(1)	0.02827	0.02492	0.02432	0.02292	0.02266	0.02188	+++++	+++++	0.02416	9.520
(2)	0.09210	0.08255	0.08218	0.07756	0.07757	0.07456	+++++	+++++	0.08109	7.644
(3)	0.03679	0.03319	0.03248	0.03037	0.03007	0.02889	+++++	+++++	0.03197	8.917
(4)	0.02131	0.01905	0.01872	0.01731	0.01709	0.01633	+++++	+++++	0.01830	9.820

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04360	+++++					0.04360	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02774	+++++					0.02774	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03854	+++++					0.03854	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05133	+++++					0.05133	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04767	+++++					0.04767	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02881	+++++					0.02881	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05688	+++++					0.05688	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06046	+++++					0.06046	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05707	+++++					0.05707	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
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)	0.05707	0.05119	0.04980	0.04729	0.04587	0.04394	+++++	+++++	0.04919	9.481
(2)	0.05705	0.05077	0.04968	0.04737	0.04631	0.04451	+++++	+++++	0.04928	8.982
(3)	0.13322	0.11983	0.11956	0.11604	0.11398	0.11054	+++++	+++++	0.11886	6.609
(4)	0.06385	0.06229	0.06267	0.06097	0.06047	0.05885	+++++	+++++	0.06152	2.894
(5)	0.03348	0.02994	0.02954	0.02841	0.02795	0.02706	+++++	+++++	0.02940	7.682
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05813	+++++	0.05813	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.15569	+++++	0.15569	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05024	+++++	0.05024	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05855	+++++	0.05855	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
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)	+++++	+++++	+++++	+++++	+++++	+++++	0.05133	+++++	0.05133	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.16806	+++++	0.16806	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.15680	+++++	0.15680	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.13284	+++++	0.13284	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.40564	+++++	0.40564	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	705	705	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	647	647	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	831	831	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1123	1123	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	904	904	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1052	1052	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.01155	0.96030	0.98858	0.98603	1.01674	1.00501	+++++	+++++	0.99470	2.095
$ 13 Decachlorobiphenyl	1.48082	1.27393	1.23901	1.14662	1.10897	1.06603	+++++	+++++	1.21923	12.314

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130416.b/ical-2.b/0416a003.d
Level 2: /chem2/ecd7.i/20130416.b/ical-2.b/0416a004.d
Level 3: /chem2/ecd7.i/20130416.b/ical-2.b/0416a006.d
Level 4: /chem2/ecd7.i/20130416.b/ical-2.b/0416a002.d
Level 5: /chem2/ecd7.i/20130416.b/ical-2.b/0416a007.d
Level 6: /chem2/ecd7.i/20130416.b/ical-2.b/0416a005.d
Level 7: /chem2/ecd7.i/20130416.b/ical-2.b/0416a012.d
Level 8: /chem2/ecd7.i/20130416.b/ical-2.b/0416a019.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)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01234	+++++					0.01234	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00787	+++++					0.00787	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02274	+++++					0.02274	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00781	+++++					0.00781	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01589	+++++					0.01589	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01754	+++++					0.01754	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
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)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03158	+++++					0.03158	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01028	+++++					0.01028	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01486	+++++					0.01486	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02966	+++++					0.02966	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05866	+++++					0.05866	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02035	+++++					0.02035	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01635	+++++					0.01635	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04205	+++++					0.04205	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02999	+++++					0.02999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
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)	+++++	+++++	+++++	+++++	+++++	+++++	0.04073	+++++	0.04073	0.000
7 Aroclor-1016(1)	0.02361	0.02119	0.01966	0.01701	0.01577	0.01461	+++++	+++++	0.01864	18.490
(2)	0.05401	0.04566	0.04191	0.03673	0.03468	0.03247	+++++	+++++	0.04091	19.640
(3)	0.10057	0.08654	0.08102	0.07251	0.07006	0.06783	+++++	+++++	0.07975	15.553
(4)	0.03180	0.02741	0.02574	0.02278	0.02193	0.02090	+++++	+++++	0.02509	16.298
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02578	+++++	0.02578	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03193	+++++	0.03193	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05208	+++++	0.05208	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05172	+++++	0.05172	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
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)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03841	+++++					0.03841	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06071	+++++					0.06071	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13995	+++++					0.13995	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05344	+++++					0.05344	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08764	+++++					0.08764	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04822	+++++					0.04822	0.000
9 Aroclor-1260(1)	0.08315	0.07181	0.06790	0.06246	0.05848	0.05676		
	+++++	+++++					0.06676	14.715
(2)	0.06254	0.05576	0.05356	0.04997	0.04679	0.04537		
	+++++	+++++					0.05233	12.154
(3)	0.12849	0.11287	0.10950	0.10275	0.09866	0.09801		
	+++++	+++++					0.10838	10.596

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
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)	0.08269	0.07553	0.07330	0.06918	0.06544	0.06400		
	*****	*****					0.07169	9.722
11 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****		
	0.14002	*****					0.14002	0.000
(2)	*****	*****	*****	*****	*****	*****		
	0.13287	*****					0.13287	0.000
(3)	*****	*****	*****	*****	*****	*****		
	0.10716	*****					0.10716	0.000
(4)	*****	*****	*****	*****	*****	*****		
	0.35159	*****					0.35159	0.000
41 2,4-DDE	*****	*****	*****	*****	*****	*****		
	*****	615					615	0.000
42 2,4-DDD	*****	*****	*****	*****	*****	*****		
	*****	975					975	0.000
44 4,4-DDE	*****	*****	*****	*****	*****	*****		
	*****	545					545	0.000
45 4,4-DDD/2,4-DDT	*****	*****	*****	*****	*****	*****		
	*****	433					433	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	891					891	0.000
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.28715	1.10735	1.06877	1.00266	0.99916	0.97665		
	+++++	+++++					1.07362	10.761
$ 13 Decachlorobiphenyl	0.90251	0.92126	0.94367	0.92656	0.90134	0.90784		
	+++++	+++++					0.91720	1.798

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a001.d
Data file 2: 20130416.b/ical-2.b/0416a001.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 16-APR-2013 15:46
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.722	0.006	2822703	5.391	-0.009	4342996	0.0	16071.4	----	Tetrachloro-m-xylene
14.595	0.003	2458500	14.650	0.001	2874864	0.0	0.0	----	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	0.0	40178.4
Decachlorobiphenyl	0.0	0.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	0	-100.0 <-
Hexabromobiphenyl	4375297	0	-100.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	20136	-99.8 <-
Hexabromobiphenyl	6077527	0	-100.0 <-

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-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	---			0.0	1	6.637	-0.024	11246	2396.6
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	9.481	0.063	13286	2103.7
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	6.221	-0.006	61850	19907.1
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	6.637	-0.024	11246	1965.0
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	6.637	-0.024	11246	3006.2
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	9.481	0.062	13286	2593.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a002.d
Data file 2: 20130416.b/ical-2.b/0416a002.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 .25
Client ID:
Injection Date: 16-APR-2013 16:06
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	1378308	5.399	-0.001	2137002	19.8	18.7	6.0	Tetrachloro-m-xylene
14.591	0.000	1254197	14.649	0.000	1407805	18.8	20.2	7.2	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	49.6	46.7
Decachlorobiphenyl	47.0	50.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5591339	0.0
Hexabromobiphenyl	4375297	4375297	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8525322	0.0
Hexabromobiphenyl	6077527	6077527	0.0

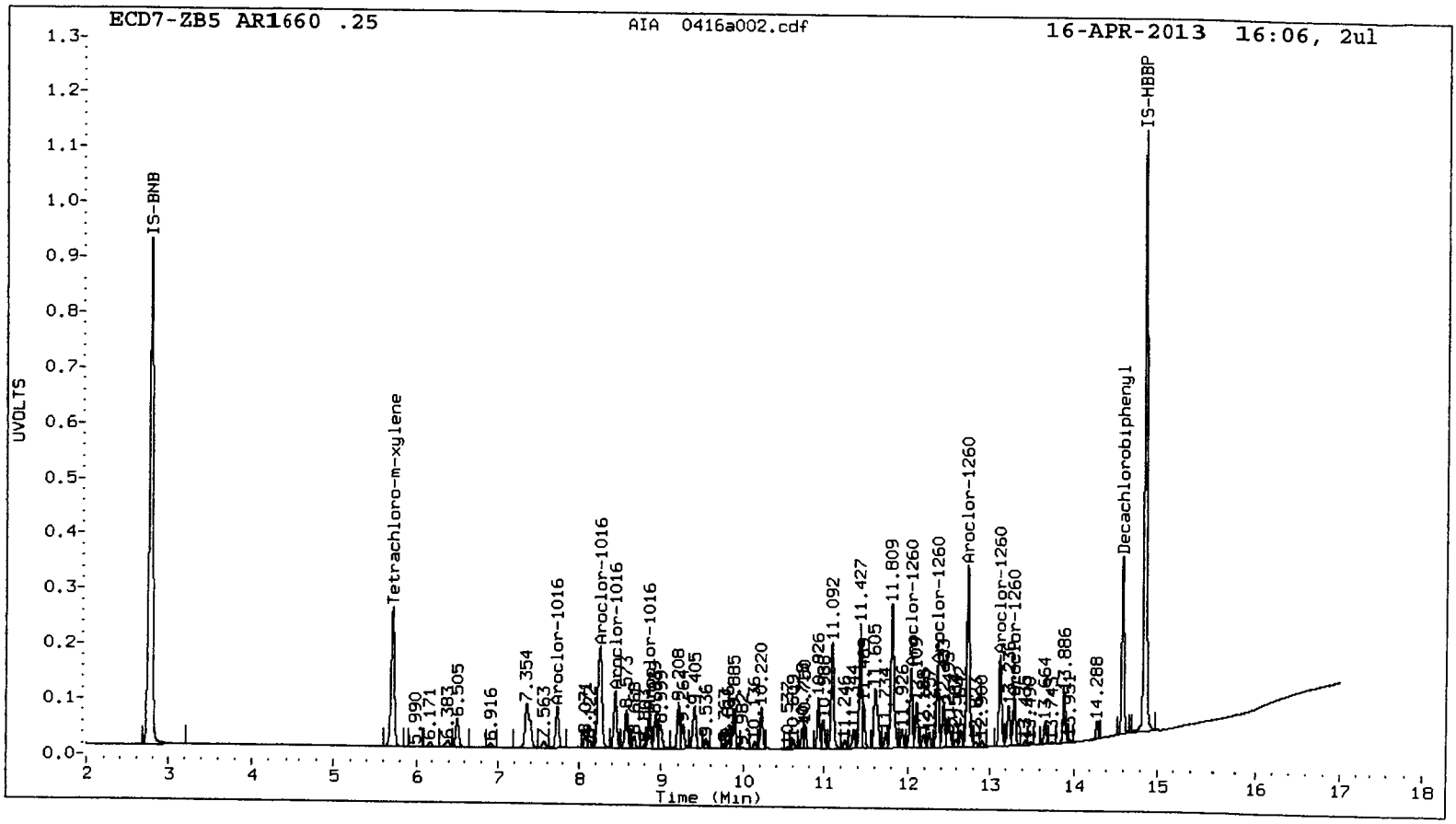
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.729	0.000	400549	237.2	1	6.661	0.000	453267	228.1
Aroclor-1016	2	8.252	0.000	1355141	239.1	2	7.542	0.001	978658	224.5
Aroclor-1016	3	8.438	0.000	530676	237.5	3	8.353	-0.001	1931731	227.3
Aroclor-1016	4	8.864	0.000	302372	236.4	4	9.419	0.001	606923	227.0
	Total Col1Ave (4 peaks):			237.6		Total Col2Ave (4 peaks):			226.7	RPD = 5
	Corrected Ave (3 peaks):			237.0		Corrected Ave (3 peaks):			226.2	RPD = 5
Aroclor-1260	1	12.040	0.000	646531	240.3	1	11.972	0.002	1186342	233.9
Aroclor-1260	2	12.358	0.000	647731	240.3	2	12.517	0.001	949040	238.7
Aroclor-1260	3	12.729	0.000	1586585	244.1	3	12.788	0.002	1951511	237.0
Aroclor-1260	4	13.127	0.000	833563	247.8	4	13.349	0.002	1313829	241.2
Aroclor-1260	5	13.305	0.000	388379	241.6	NS	---			----
	Total Col1Ave (5 peaks):			242.8		Total Col2Ave (4 peaks):			237.7	RPD = 2
	Corrected Ave (4 peaks):			241.6		Corrected Ave (3 peaks):			236.5	RPD = 2

Total PCB Area Col1 (5.816 - 14.491) = 19196403 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 25726136 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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16-APR-2013 16:06, 2ul
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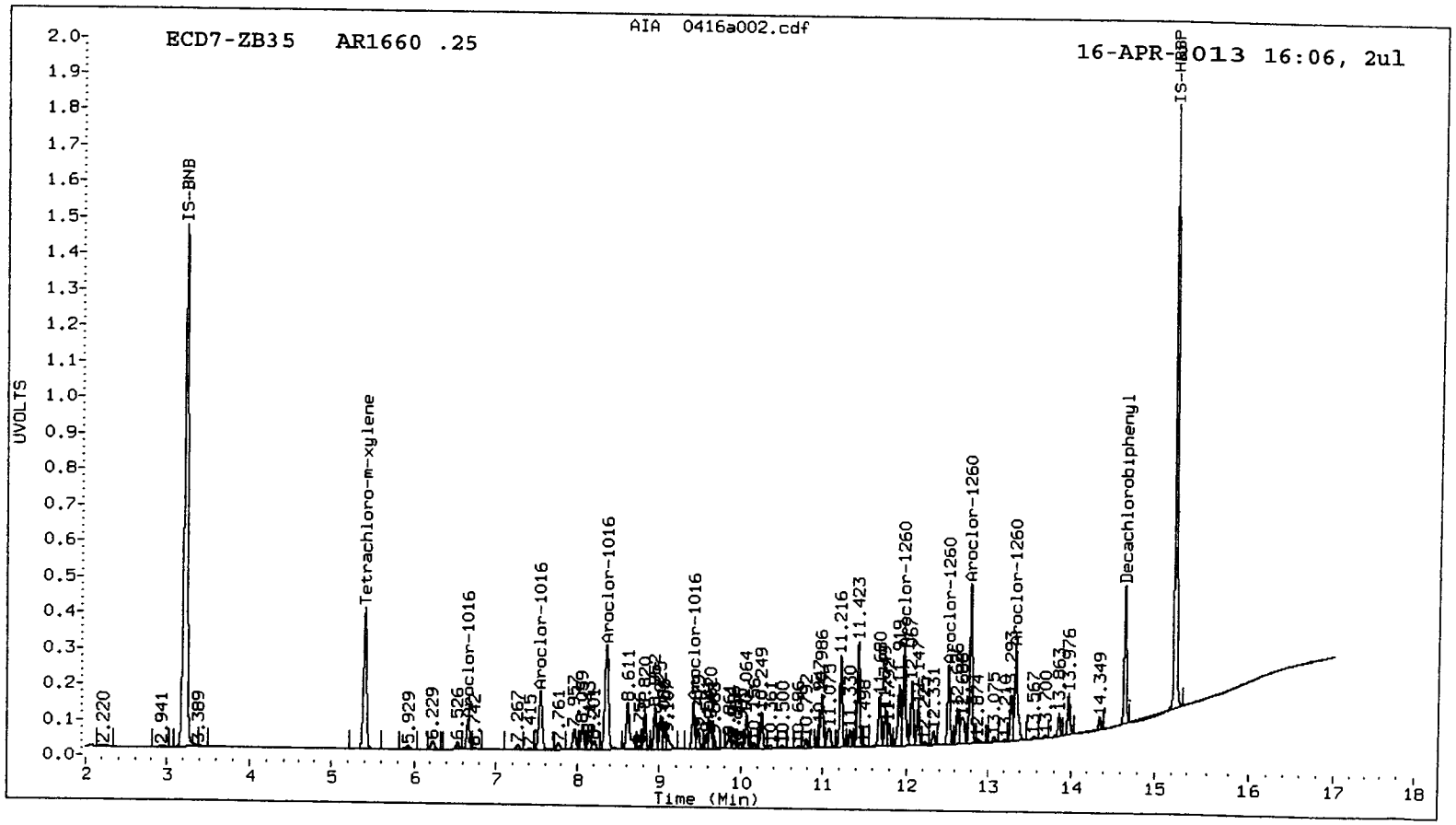
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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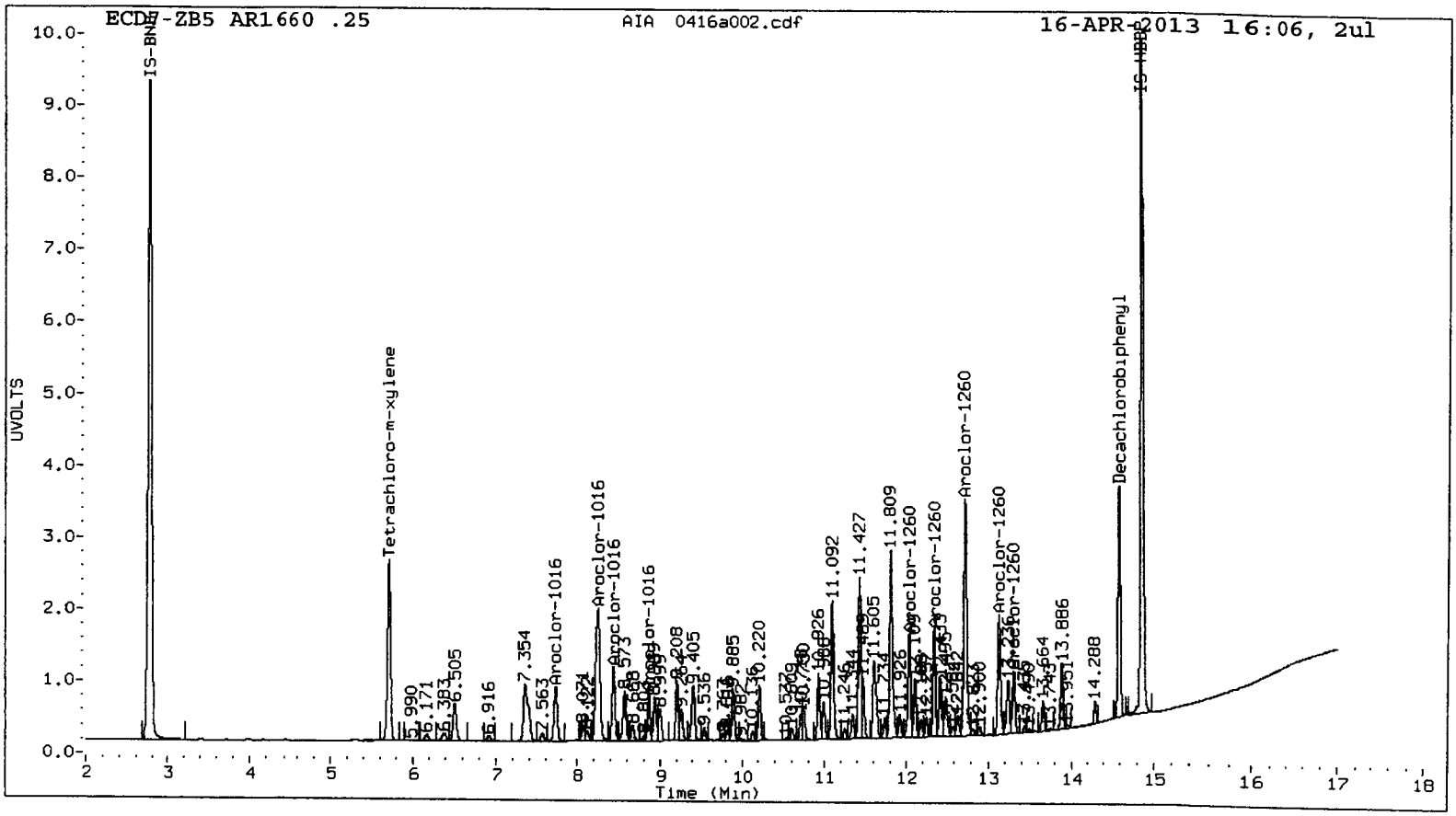
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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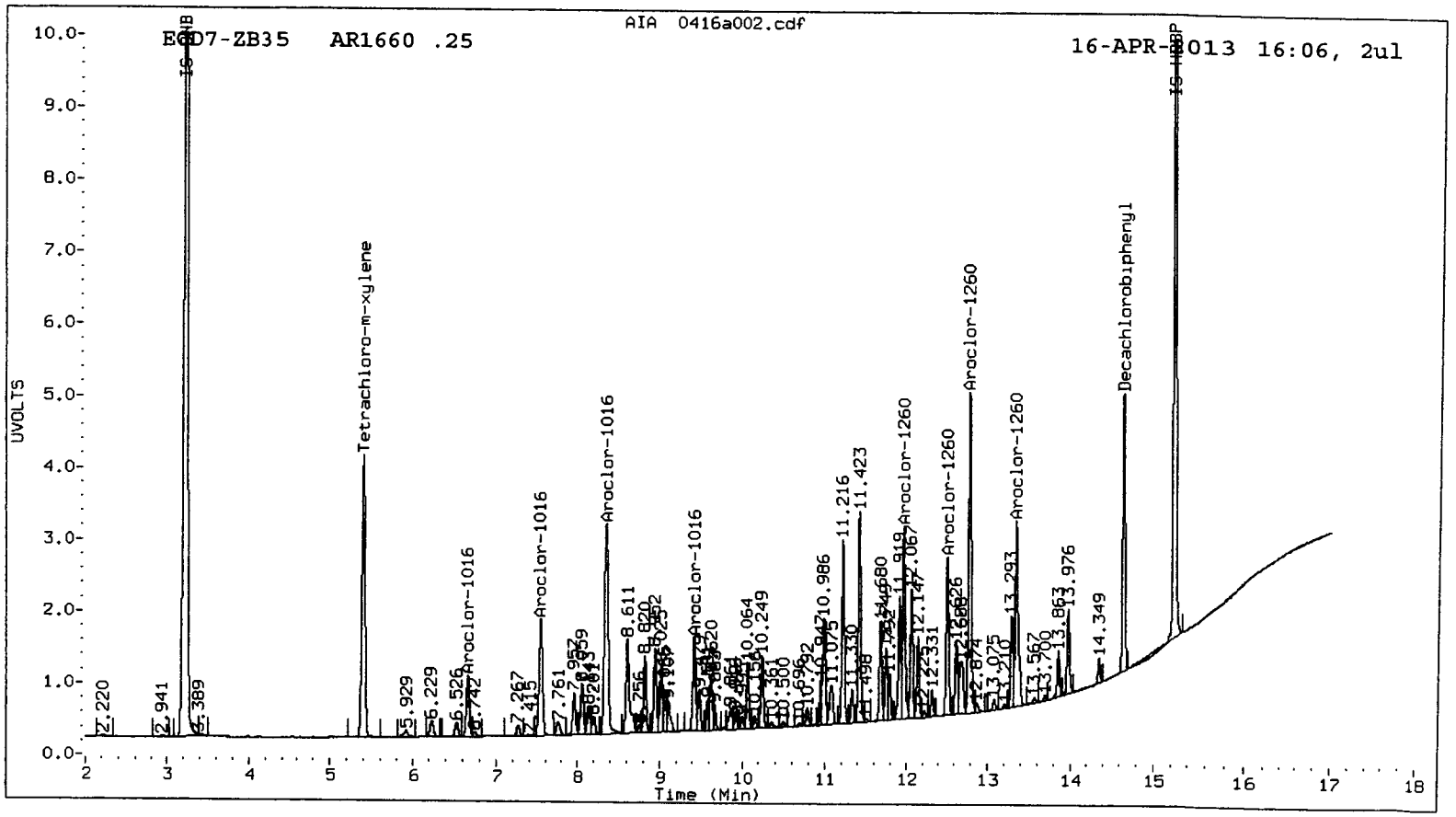
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB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AIA 0416a002.cdf
16-APR-2013 16:06, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a003.d
Data file 2: 20130416.b/ical-2.b/0416a003.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 .02
Client ID:
Injection Date: 16-APR-2013 16:27
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	0.000	113218	5.401	0.001	221343	1.6	1.9	16.4	Tetrachloro-m-xylene
14.593	0.002	128894	14.651	0.002	108030	1.9	1.6	21.0	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	4.1	4.8
Decachlorobiphenyl	4.9	3.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5596271	0.1
Hexabromobiphenyl	4375297	4352111	-0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8598192	0.9
Hexabromobiphenyl	6077527	5984997	-1.5

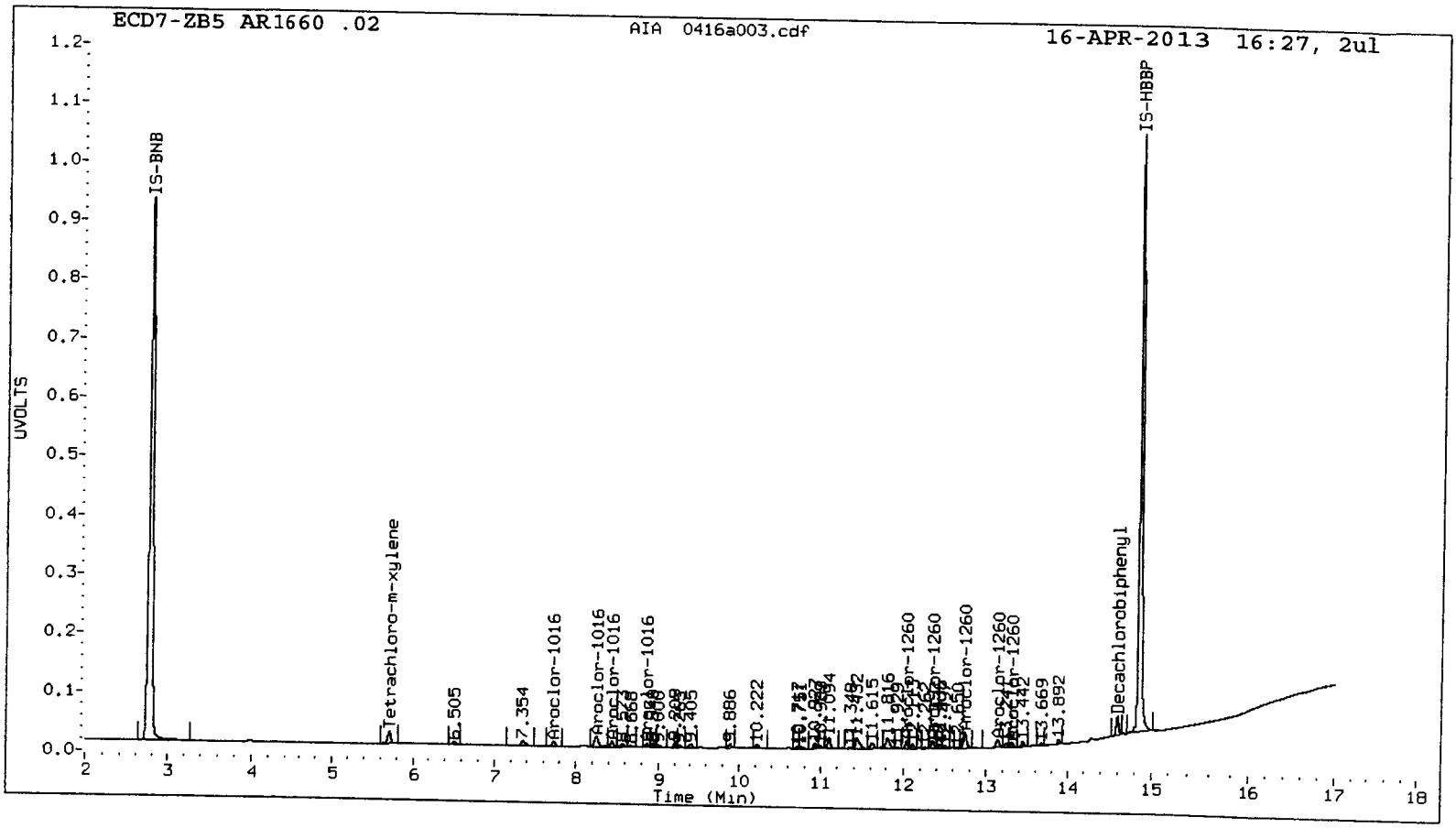
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	39547	23.4	1	6.662	0.001	50760	25.3
Aroclor-1016	2	8.249	-0.002	128857	22.7	2	7.543	0.002	116106	26.4
Aroclor-1016	3	8.438	0.000	51471	23.0	3	8.355	0.002	216173	25.2
Aroclor-1016	4	8.865	0.001	29811	23.3	4	9.421	0.003	68349	25.3
Total Col1Ave (4 peaks):					23.1	Total Col2Ave (4 peaks):				25.6 RPD = 10
Corrected Ave (3 peaks):					23.0	Corrected Ave (3 peaks):				25.3 RPD = 9
Aroclor-1260	1	12.043	0.003	62098	23.2	1	11.979	0.008	124418	24.9
Aroclor-1260	2	12.361	0.003	62072	23.2	2	12.521	0.005	93578	23.9
Aroclor-1260	3	12.738	0.009	144944	22.4	3	12.794	0.009	192253	23.7
Aroclor-1260	4	13.137	0.010	69466	20.8	4	13.354	0.006	123725	23.1
Aroclor-1260	5	13.310	0.005	36425	22.8	NS	---			---
Total Col1Ave (5 peaks):					22.5	Total Col2Ave (4 peaks):				23.9 RPD = 6
Corrected Ave (4 peaks):					22.3	Corrected Ave (3 peaks):				23.6 RPD = 6

Total PCB Area Col1 (5.816 - 14.491) = 1706078 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 2631784 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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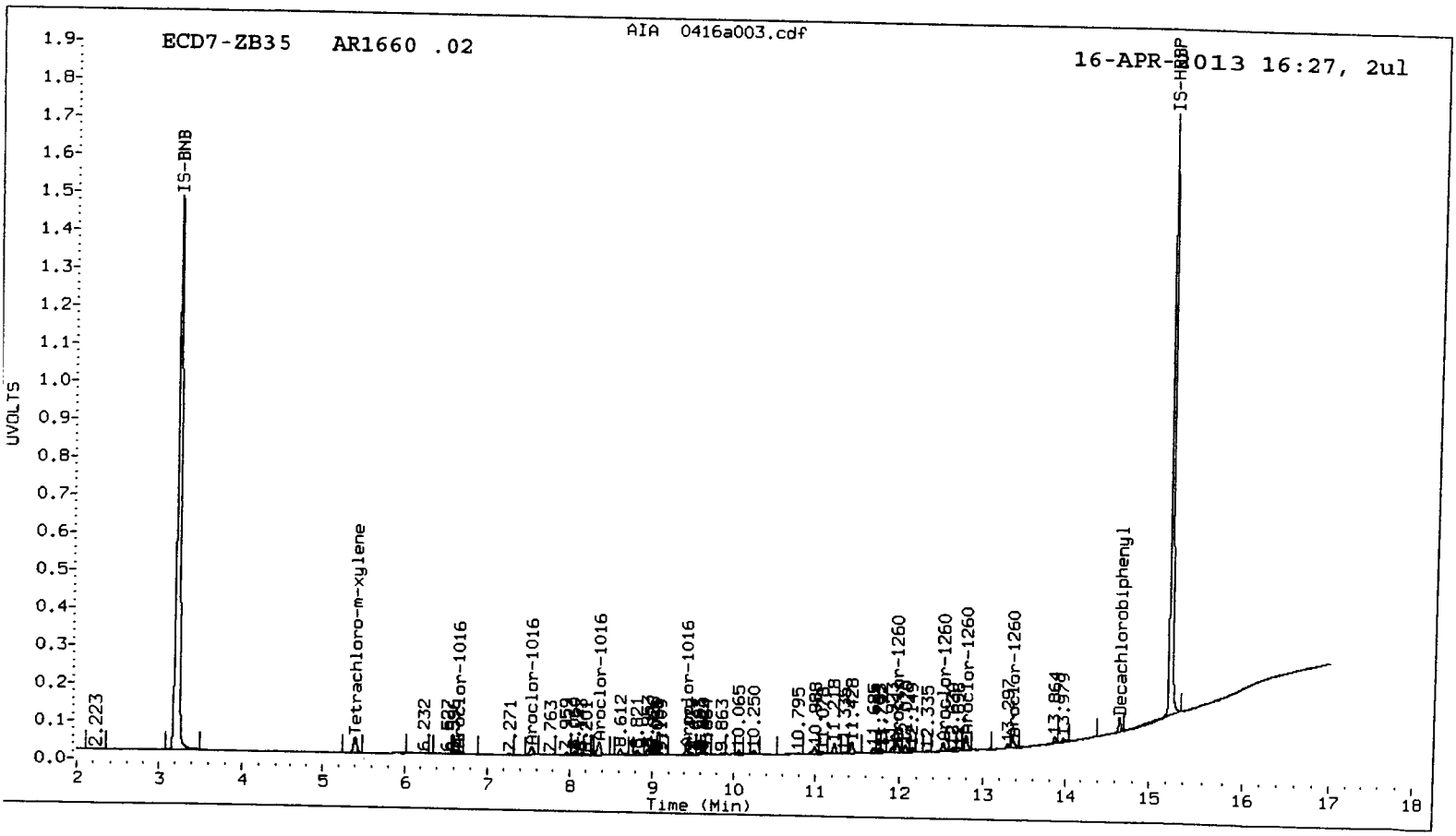
16-APR-2013 16:27, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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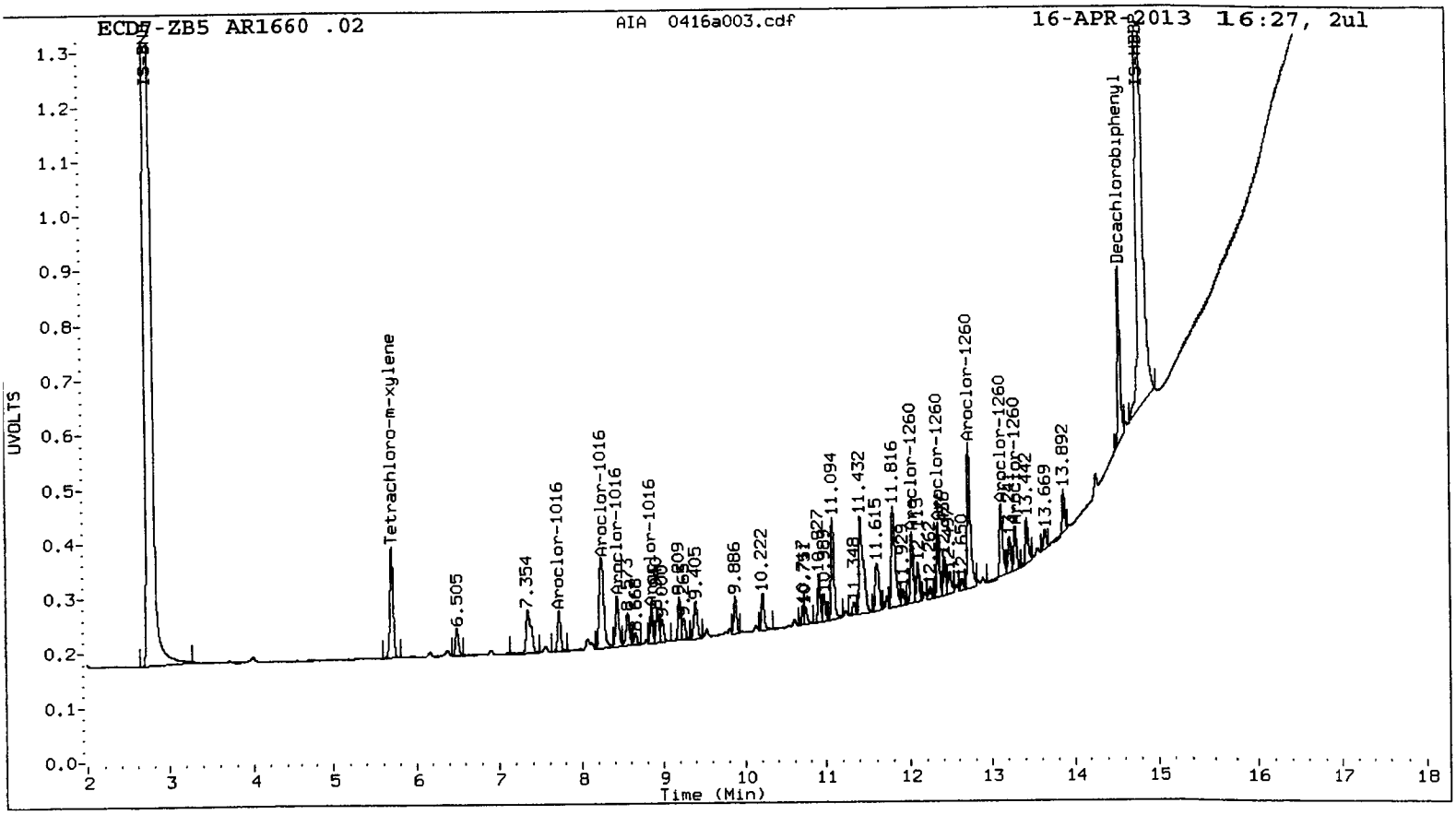
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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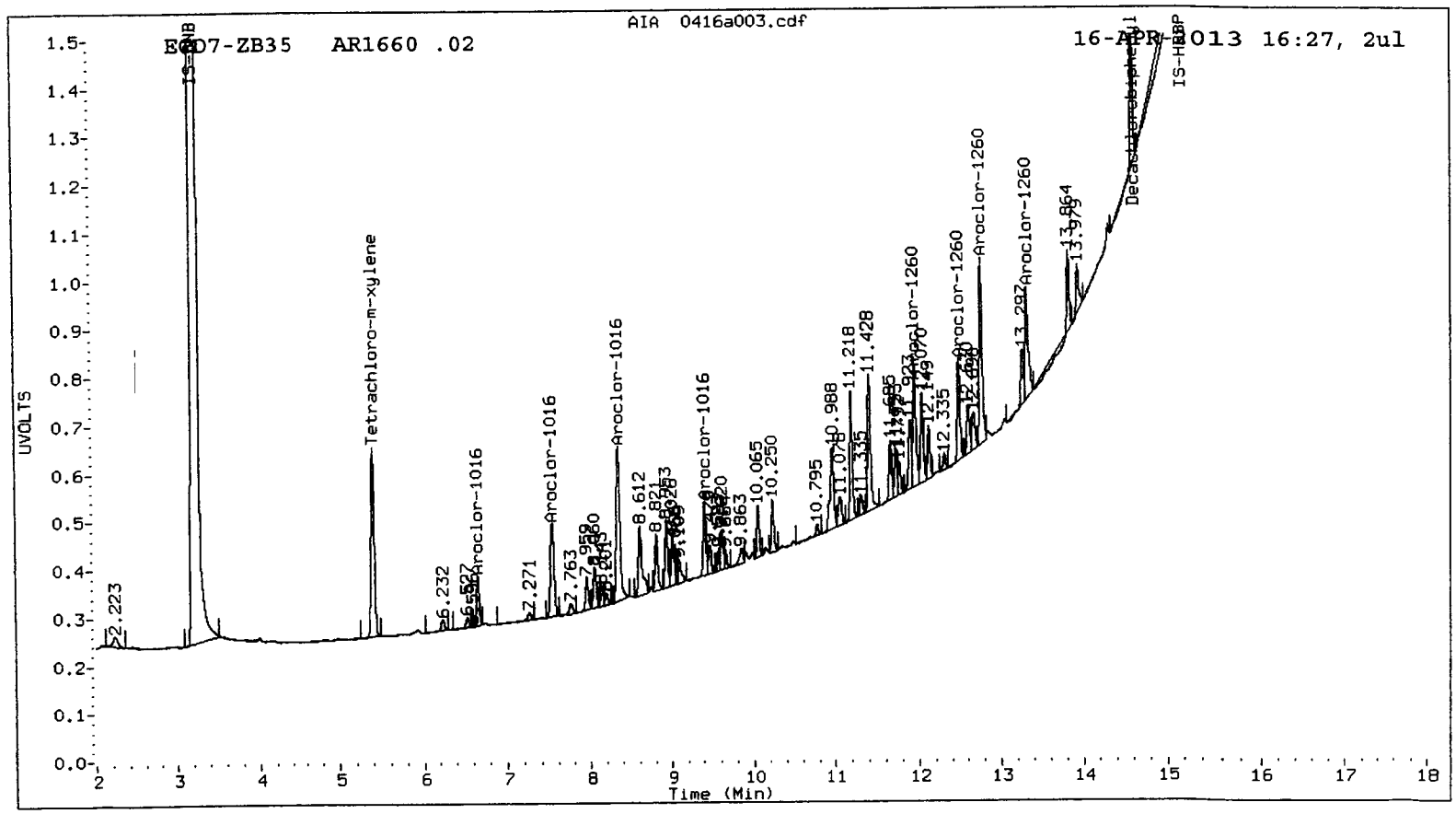
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB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ECD7-ZB35 AR1660 .02
16-APR-2013 16:27, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a004.d
Data file 2: 20130416.b/ical-2.b/0416a004.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 .05
Client ID:
Injection Date: 16-APR-2013 16:47
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.716	0.000	267955	5.400	0.001	475971	3.9	4.1	6.6	Tetrachloro-m-xylene
14.592	0.000	279910	14.650	0.001	280285	4.2	4.0	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	9.7	10.3
Decachlorobiphenyl	10.4	10.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5580646	-0.2
Hexabromobiphenyl	4375297	4394416	0.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8596607	0.8
Hexabromobiphenyl	6077527	6084847	0.1

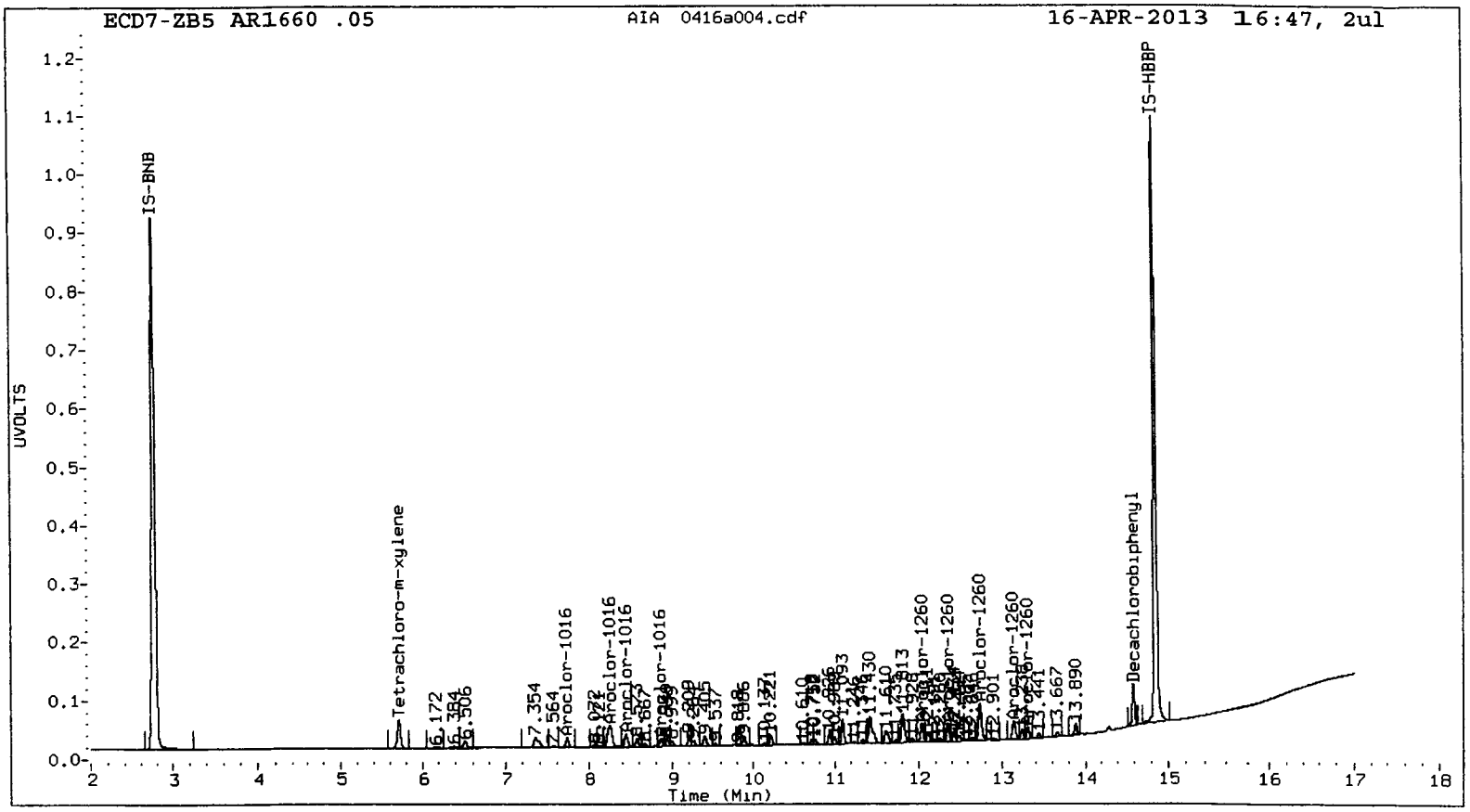
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	86928	51.6	1	6.662	0.001	113878	56.8
Aroclor-1016	2	8.250	-0.001	287925	50.9	2	7.543	0.002	245309	55.8
Aroclor-1016	3	8.438	0.000	115778	51.9	3	8.353	0.000	464943	54.3
Aroclor-1016	4	8.864	0.000	66446	52.1	4	9.419	0.001	147247	54.6
Total Col1Ave (4 peaks):					51.6	Total Col2Ave (4 peaks):				55.4 RPD = 7
Corrected Ave (3 peaks):					51.5	Corrected Ave (3 peaks):				54.9 RPD = 6
Aroclor-1260	1	12.042	0.001	140589	52.0	1	11.976	0.005	273107	53.8
Aroclor-1260	2	12.360	0.002	139431	51.5	2	12.519	0.003	212059	53.3
Aroclor-1260	3	12.734	0.005	329127	50.4	3	12.792	0.007	429235	52.1
Aroclor-1260	4	13.133	0.006	171067	50.6	4	13.352	0.005	287224	52.7
Aroclor-1260	5	13.308	0.003	82222	50.9	NS	---			---
Total Col1Ave (5 peaks):					51.1	Total Col2Ave (4 peaks):				53.0 RPD = 4
Corrected Ave (4 peaks):					50.9	Corrected Ave (3 peaks):				52.7 RPD = 3

Total PCB Area Col1 (5.816 - 14.491) = 4050197 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 5948763 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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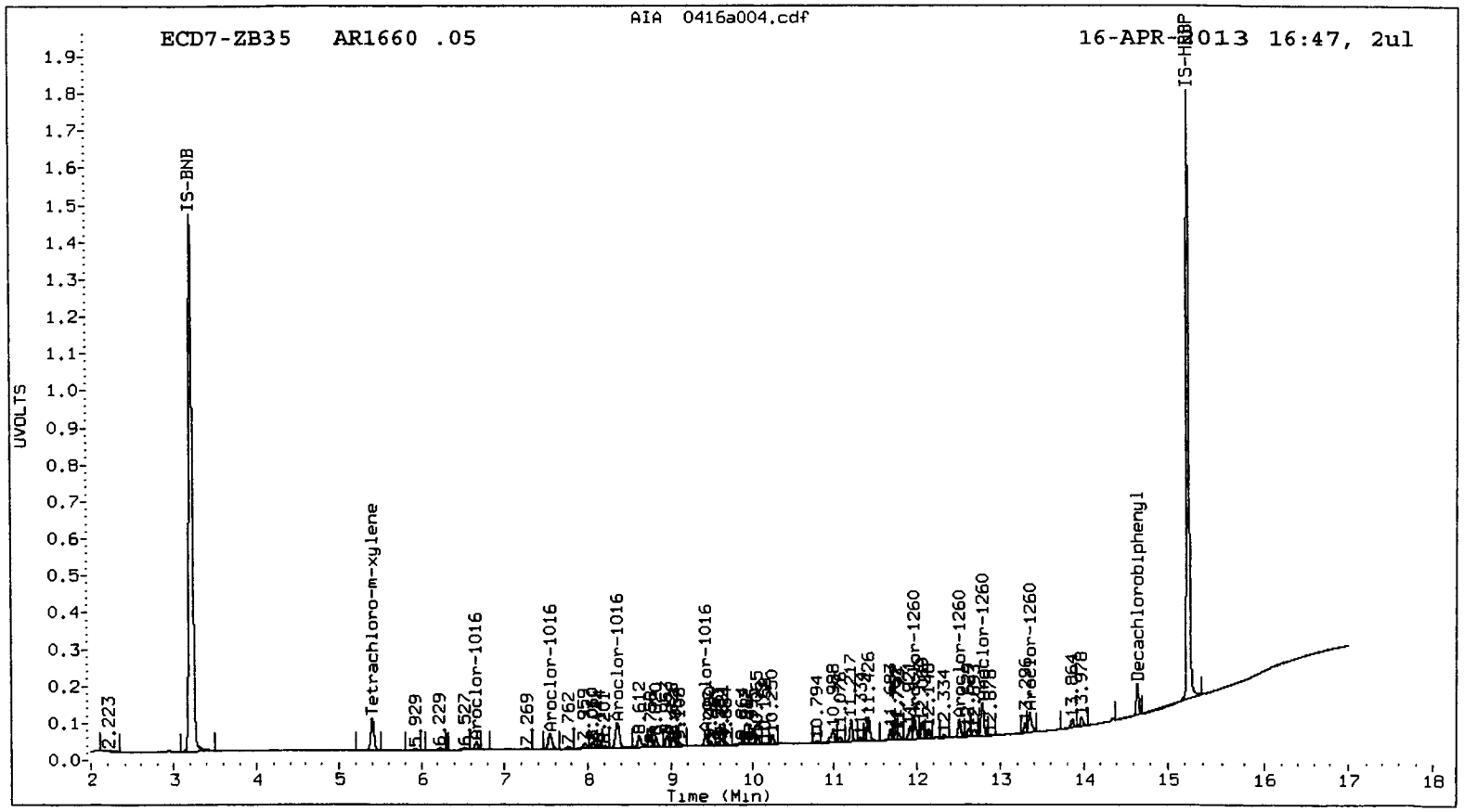
16-APR-2013 16:47, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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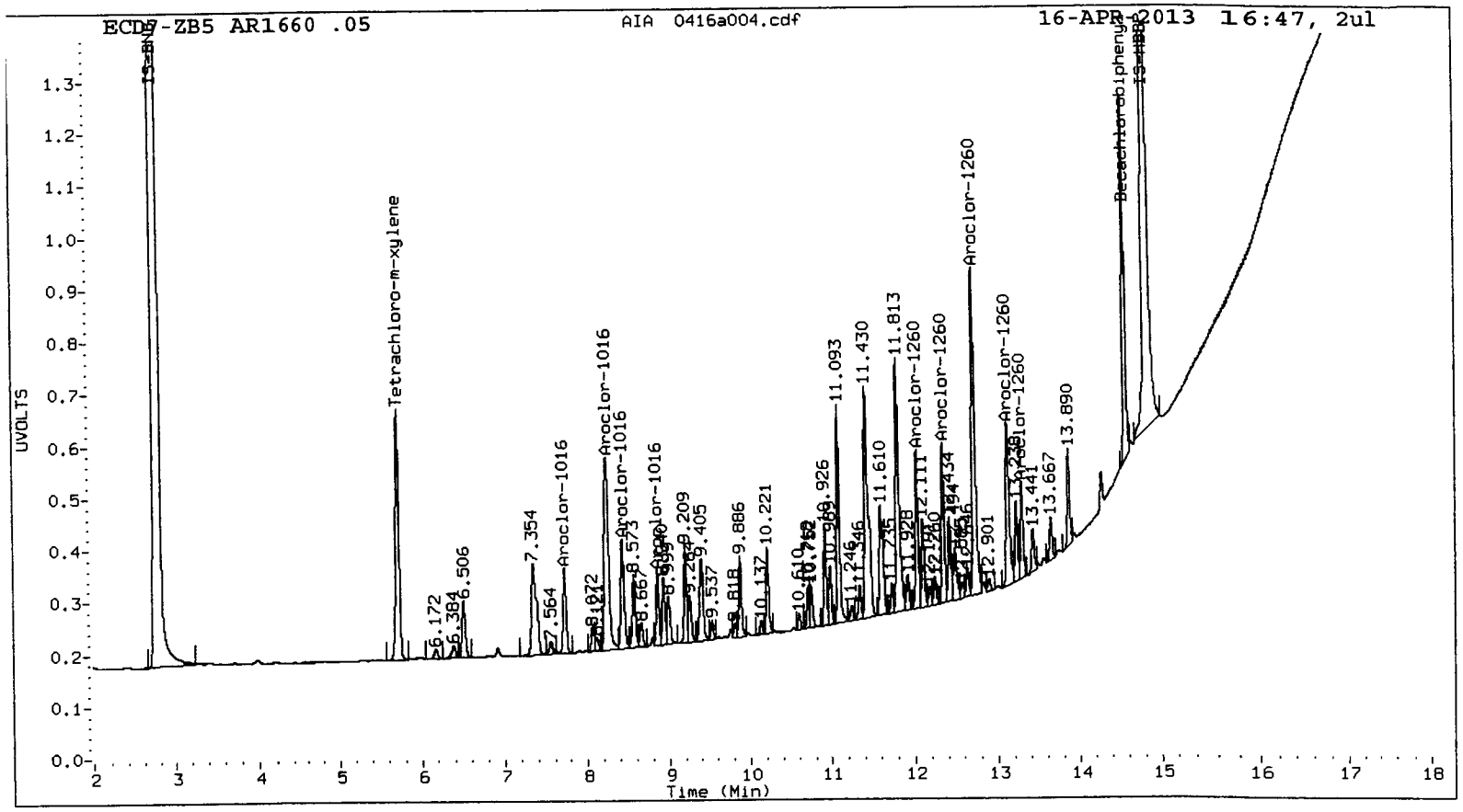
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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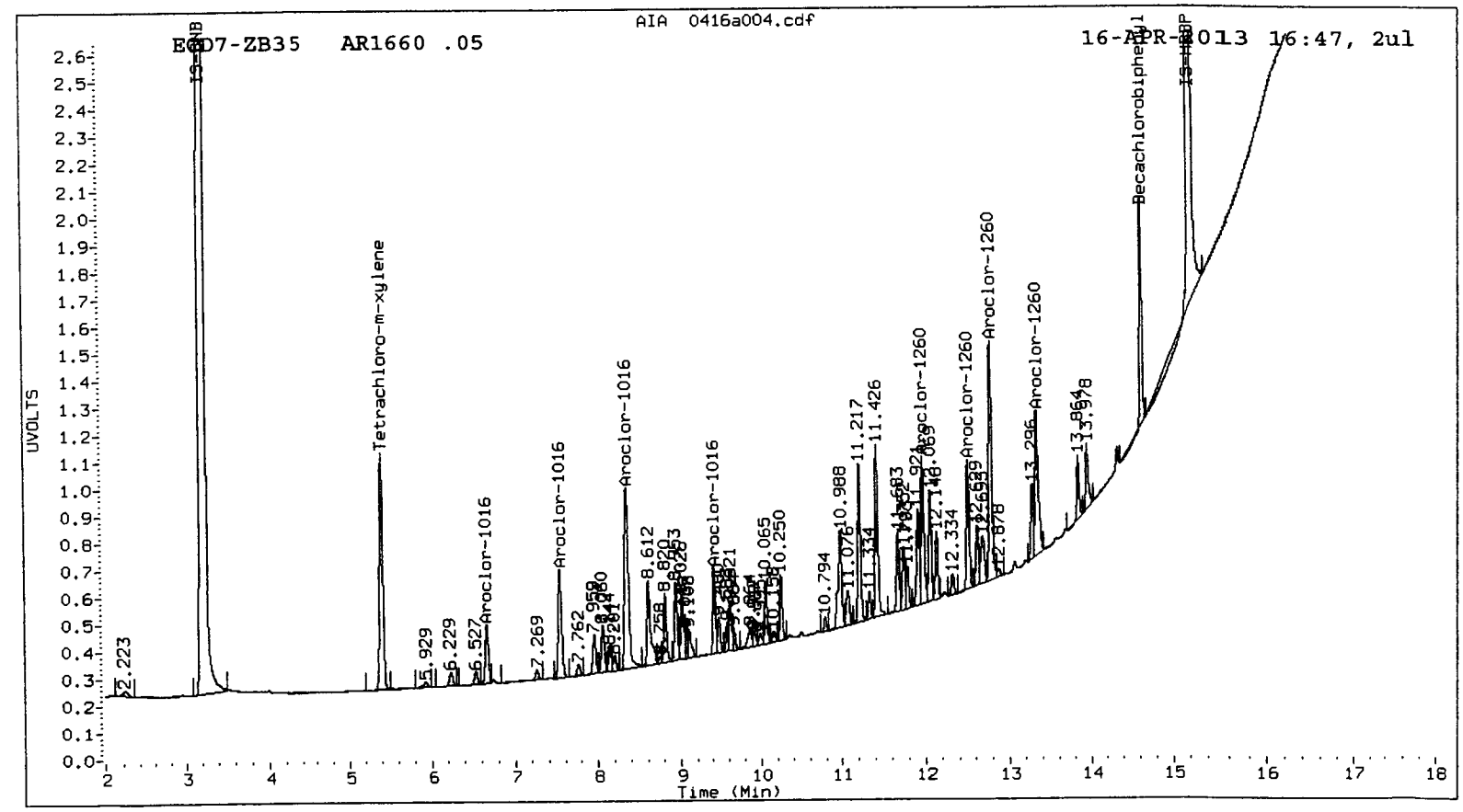
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a005.d
Data file 2: 20130416.b/ical-2.b/0416a005.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 1
Client ID:
Injection Date: 16-APR-2013 17:08
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	5525080	5.400	0.000	8343554	80.8	72.8	10.5	Tetrachloro-m-xylene
14.590	-0.001	4744455	14.648	-0.001	5817973	69.9	79.2	12.4	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	202.1	181.9
Decachlorobiphenyl	174.9	198.0

INTERNAL STANDARD SUMMARY

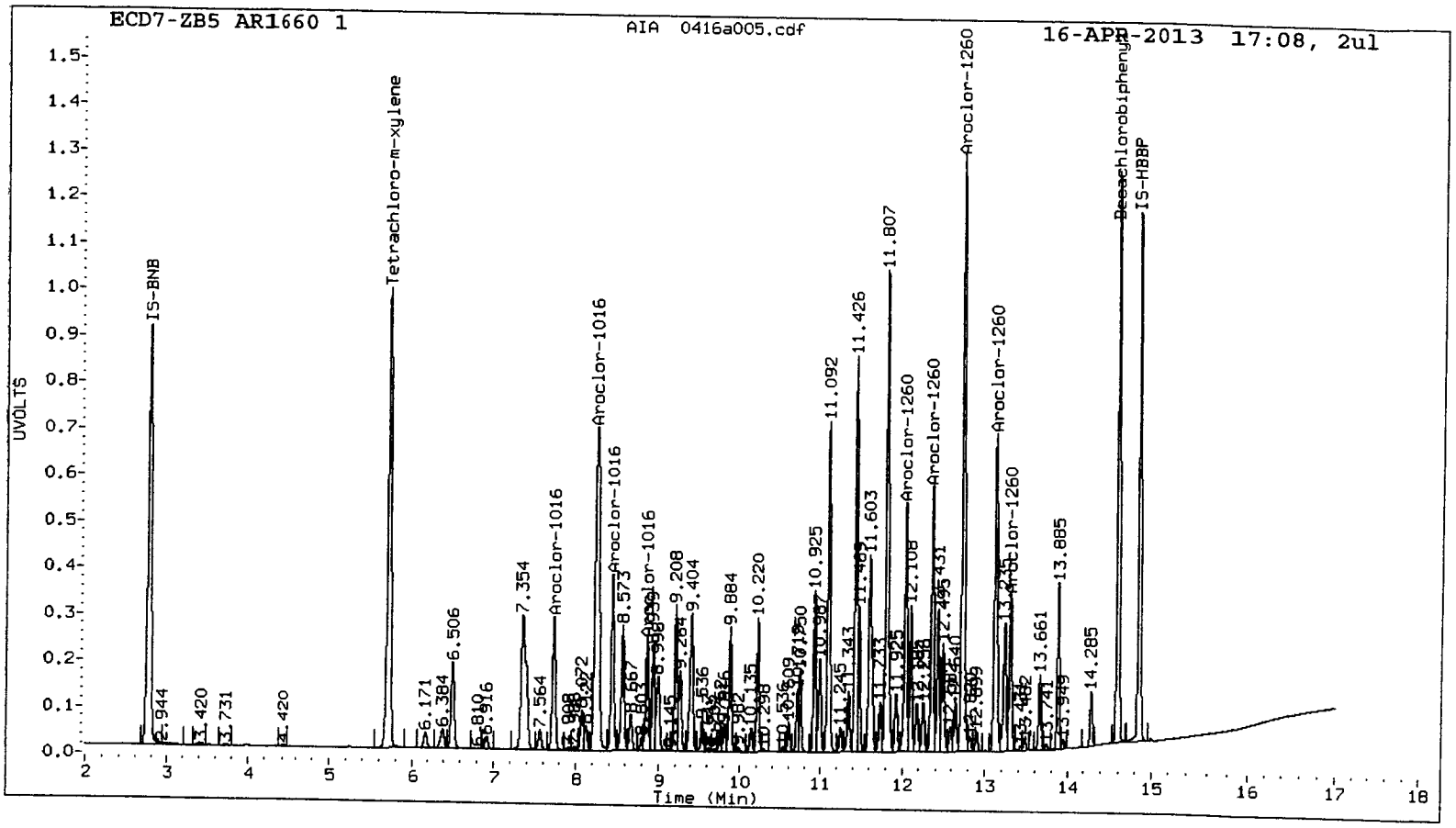
Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5497548	-1.7
Hexabromobiphenyl	4375297	4450563	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8542994	0.2
Hexabromobiphenyl	6077527	6408602	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)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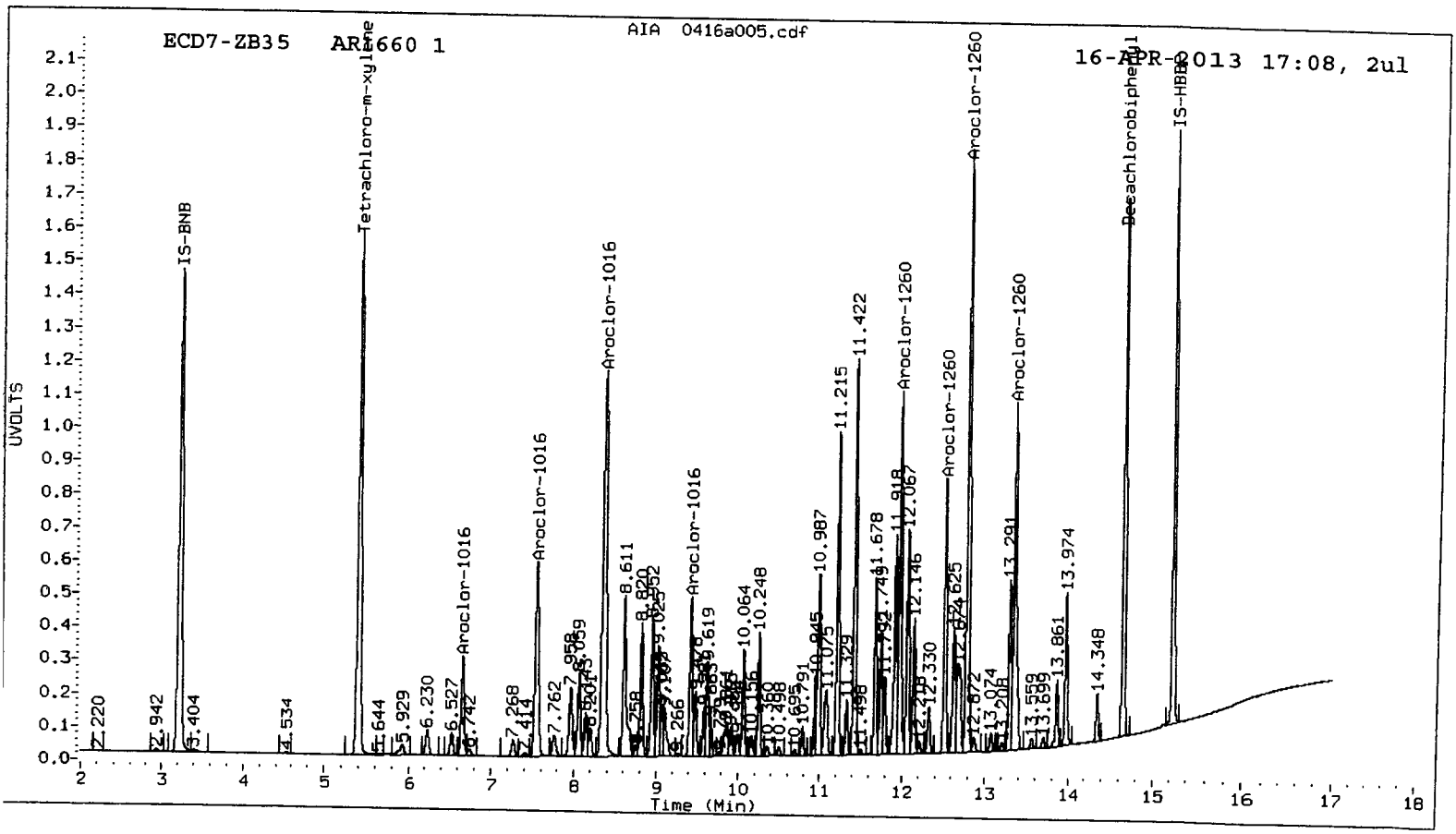
16-APR-2013 17:08, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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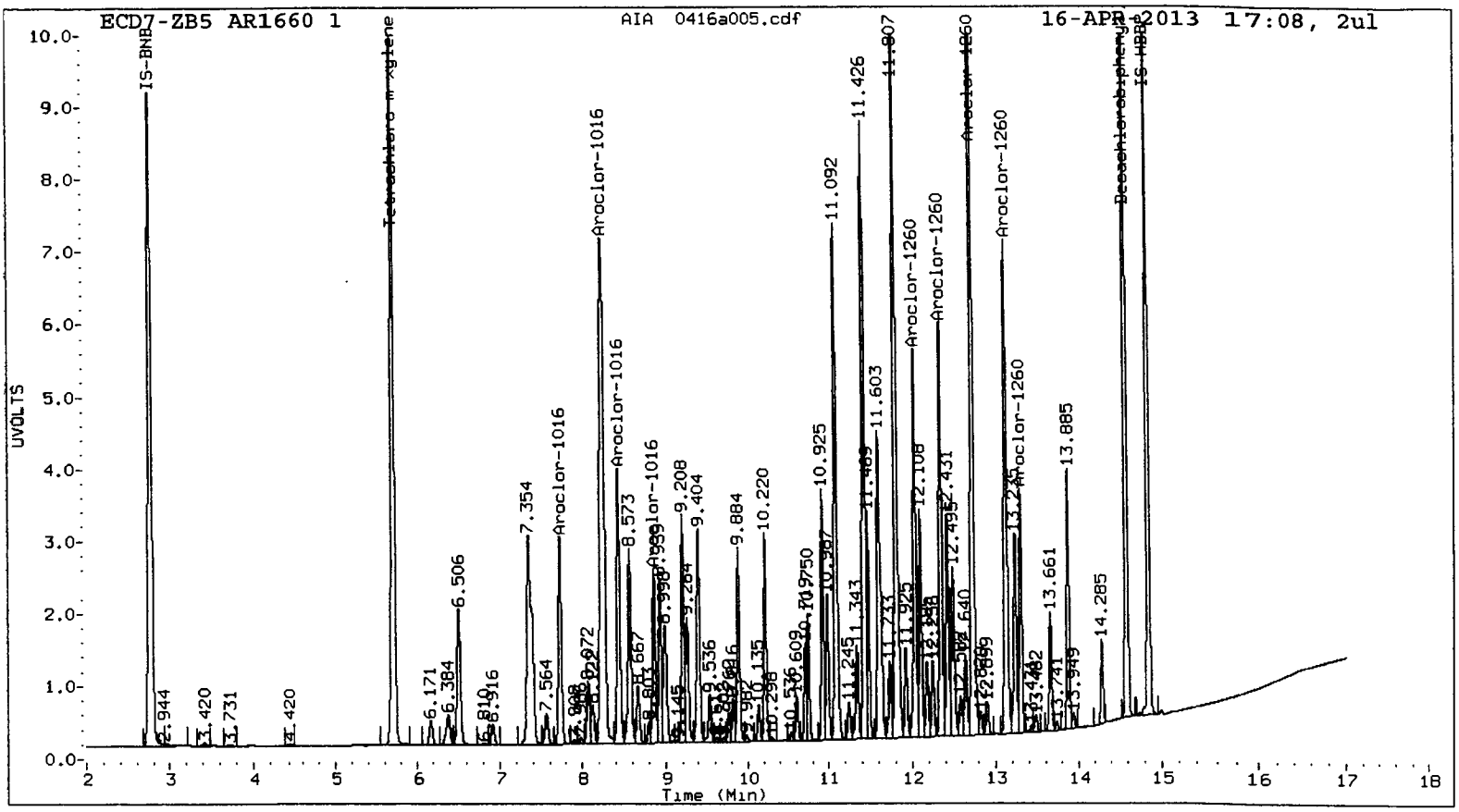
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.001	1503451	905.5	1	6.661	0.000	1559991	783.5
Aroclor-1016	2	8.248	-0.003	5123662	919.5	2	7.542	0.001	3467153	793.6
Aroclor-1016	3	8.437	0.000	1985453	903.9	3	8.354	0.001	7243674	850.5
Aroclor-1016	4	8.864	-0.001	1121914	892.1	4	9.419	0.001	2231739	832.9
Total Col1Ave (4 peaks):					905.2	Total Col2Ave (4 peaks):			815.1	RPD = 10
Corrected Ave (3 peaks):					900.5	Corrected Ave (3 peaks):			803.3	RPD = 11
Aroclor-1260	1	12.039	-0.001	2444434	893.2	1	11.972	0.001	4546815	850.2
Aroclor-1260	2	12.357	-0.001	2476008	903.1	2	12.516	0.000	3634745	867.0
Aroclor-1260	3	12.727	-0.002	6149643	930.0	3	12.786	0.000	7851531	904.3
Aroclor-1260	4	13.125	-0.002	3273980	956.7	4	13.346	-0.001	5126622	892.7
Aroclor-1260	5	13.304	-0.001	1505492	920.6	NS	---			----
Total Col1Ave (5 peaks):					920.7	Total Col2Ave (4 peaks):			878.6	RPD = 5
Corrected Ave (4 peaks):					911.7	Corrected Ave (3 peaks):			870.0	RPD = 5

Total PCB Area Col1 (5.816 - 14.491) = 73306500 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 95563051 Col2 Total PCB = 1.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical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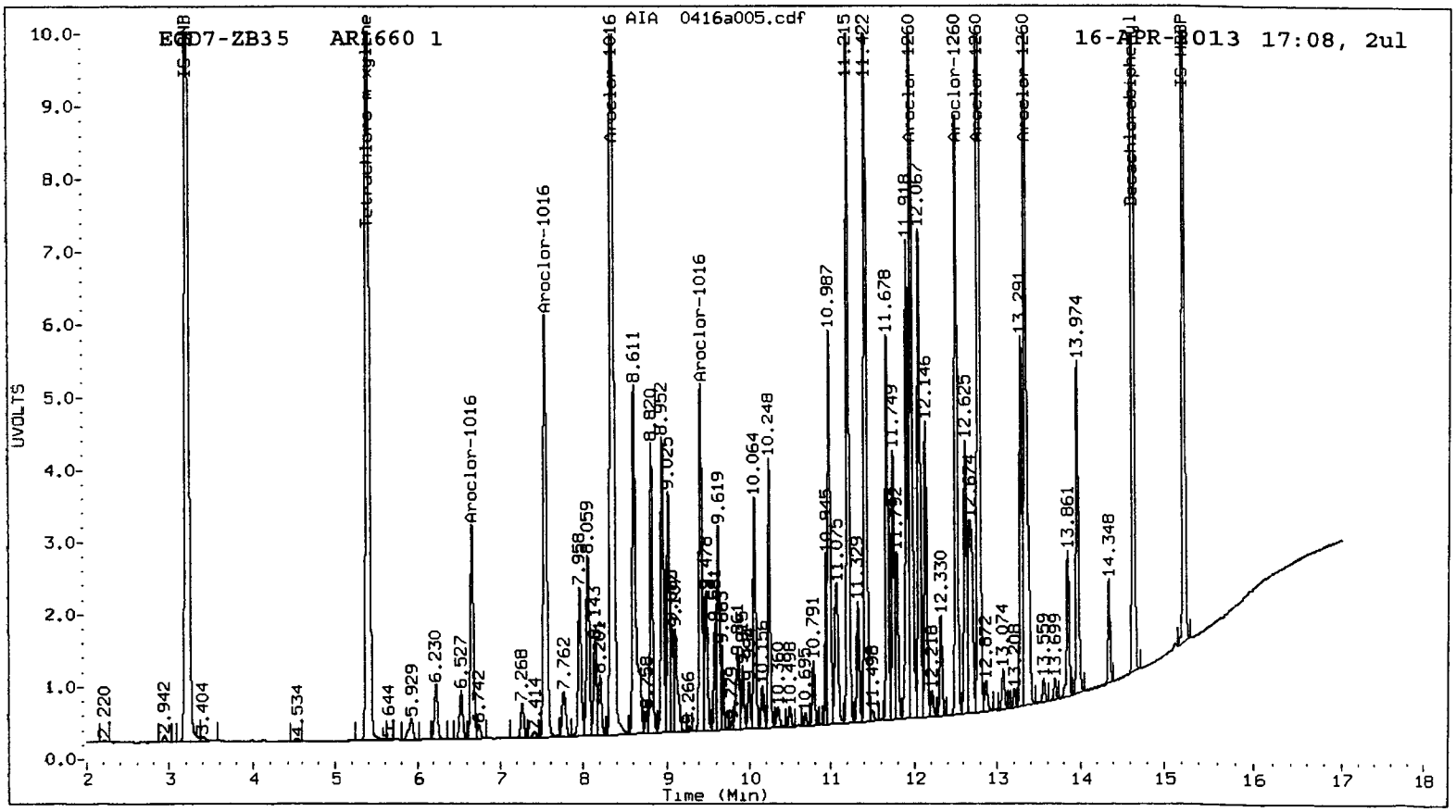
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB
UVOLTS
Time (Min)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AIA 0416a005.cdf
16-APR-2013 17:08, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a006.d
Data file 2: 20130416.b/ical-2.b/0416a006.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 0.1
Client ID:
Injection Date: 16-APR-2013 17:29
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	0.000	548455	5.400	0.001	917098	8.0	8.0	0.2	Tetrachloro-m-xylene
14.591	-0.001	551432	14.649	0.000	581160	8.1	8.2	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	19.9	19.9
Decachlorobiphenyl	20.3	20.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5547889	-0.8
Hexabromobiphenyl	4375297	4450577	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8580903	0.7
Hexabromobiphenyl	6077527	6158519	1.3

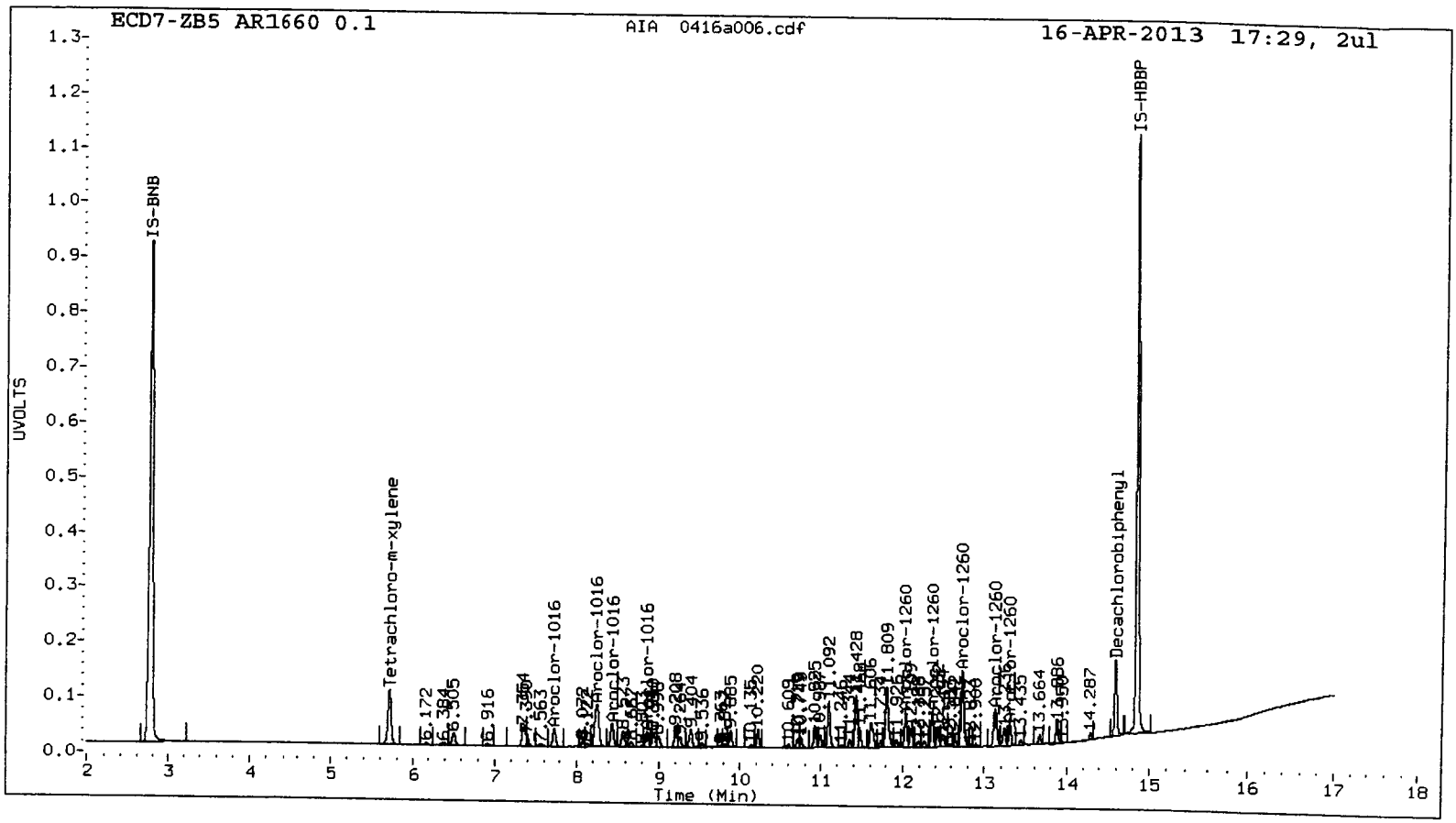
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	168682	100.7	1	6.661	0.000	210867	105.4
Aroclor-1016	2	8.248	-0.003	569896	101.3	2	7.541	0.000	449579	102.5
Aroclor-1016	3	8.437	-0.001	225228	101.6	3	8.353	-0.001	868993	101.6
Aroclor-1016	4	8.863	-0.001	129849	102.3	4	9.418	0.000	276079	102.6
Total Col1Ave (4 peaks):					101.5	Total Col2Ave (4 peaks):				103.0 RPD = 1
Corrected Ave (3 peaks):					101.2	Corrected Ave (3 peaks):				102.2 RPD = 1
Aroclor-1260	1	12.039	-0.001	277057	101.2	1	11.973	0.002	522740	101.7
Aroclor-1260	2	12.357	-0.001	276403	100.8	2	12.517	0.001	412347	102.4
Aroclor-1260	3	12.729	0.000	665122	100.6	3	12.788	0.003	842960	101.0
Aroclor-1260	4	13.128	0.001	348662	101.9	4	13.348	0.000	564281	102.2
Aroclor-1260	5	13.305	0.000	164340	100.5	NS	---			
Total Col1Ave (5 peaks):					101.0	Total Col2Ave (4 peaks):				101.8 RPD = 1
Corrected Ave (4 peaks):					100.8	Corrected Ave (3 peaks):				101.7 RPD = 1

Total PCB Area Col1 (5.816 - 14.491) = 8121404 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 11482608 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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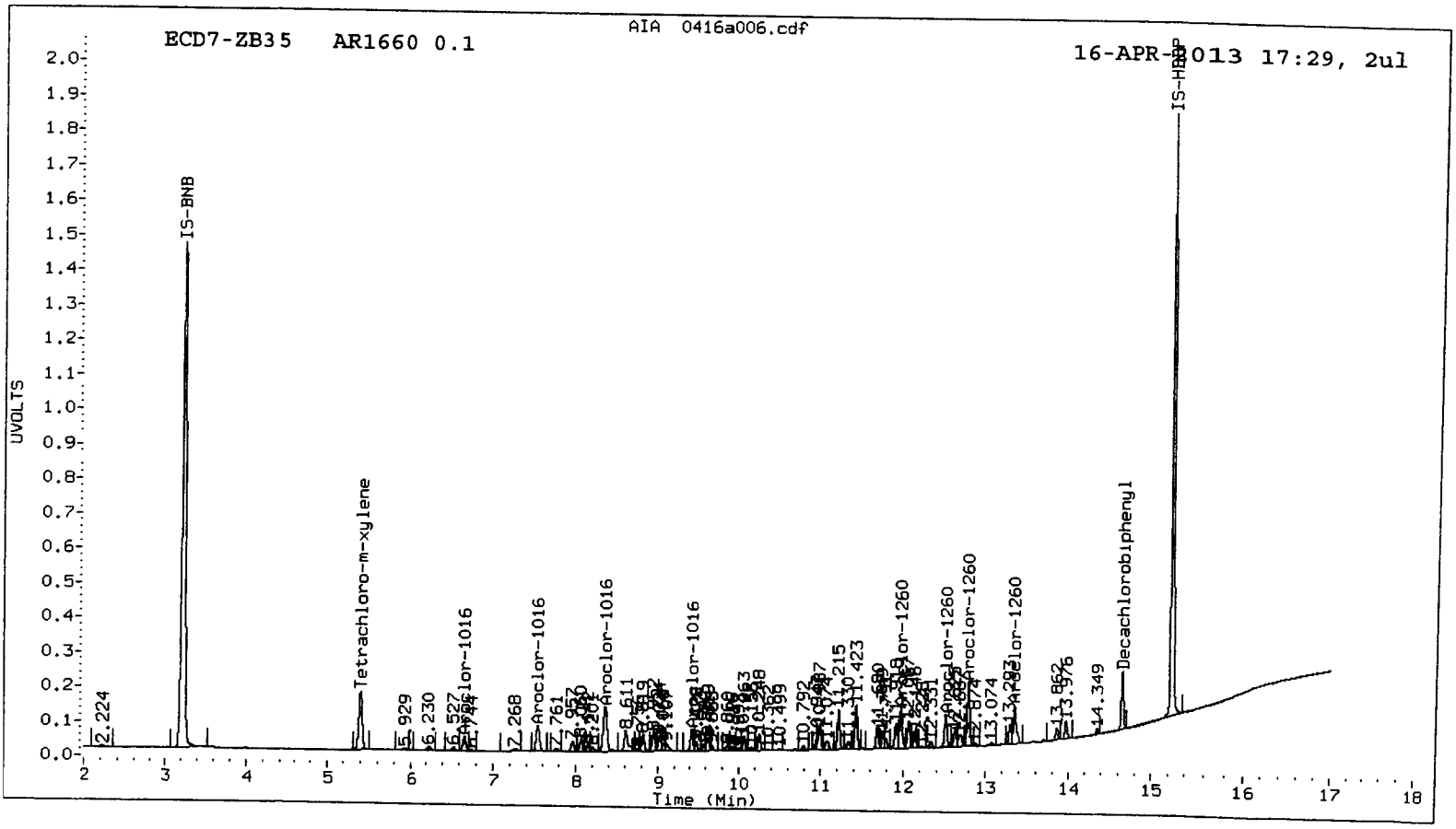
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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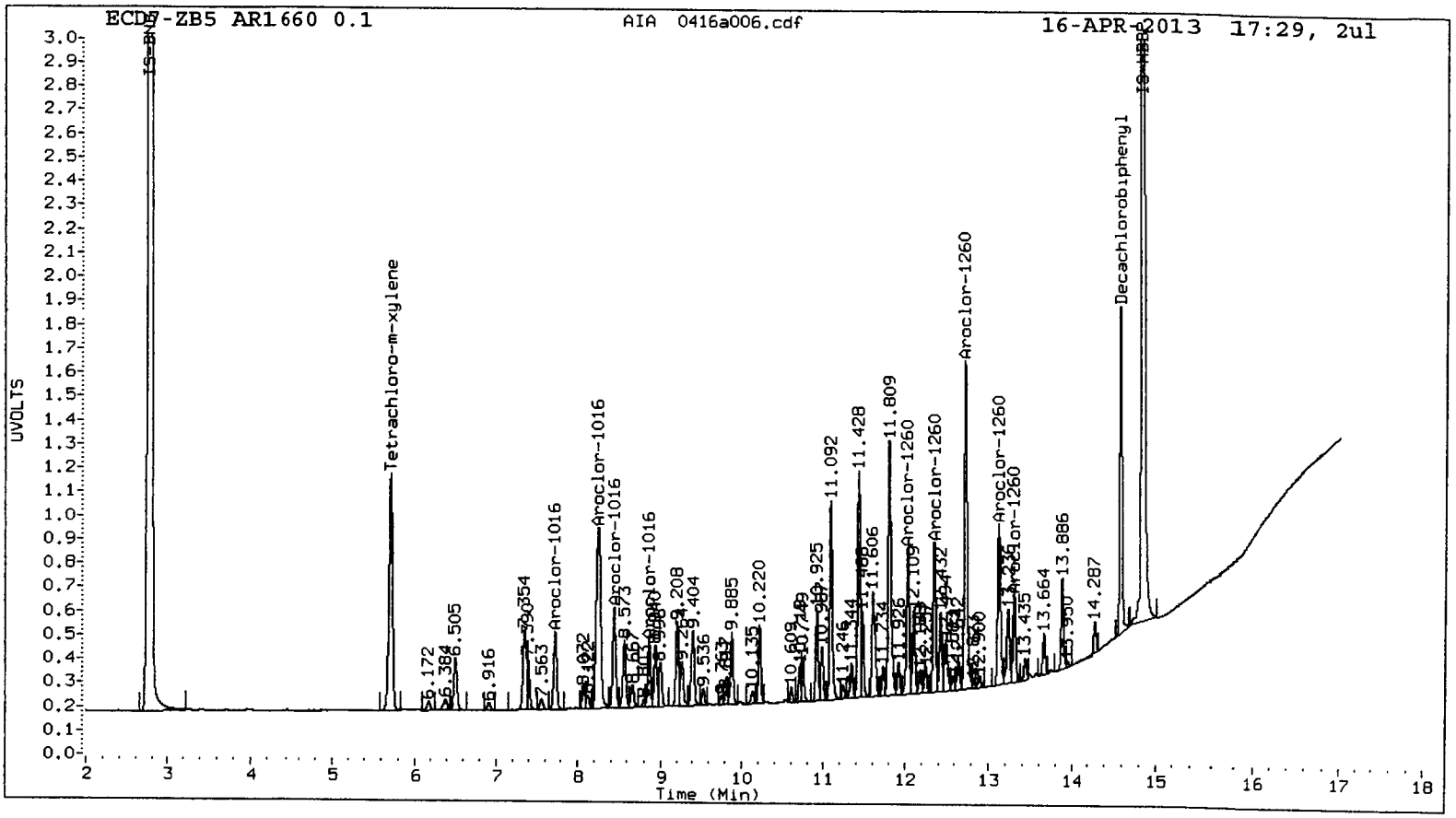
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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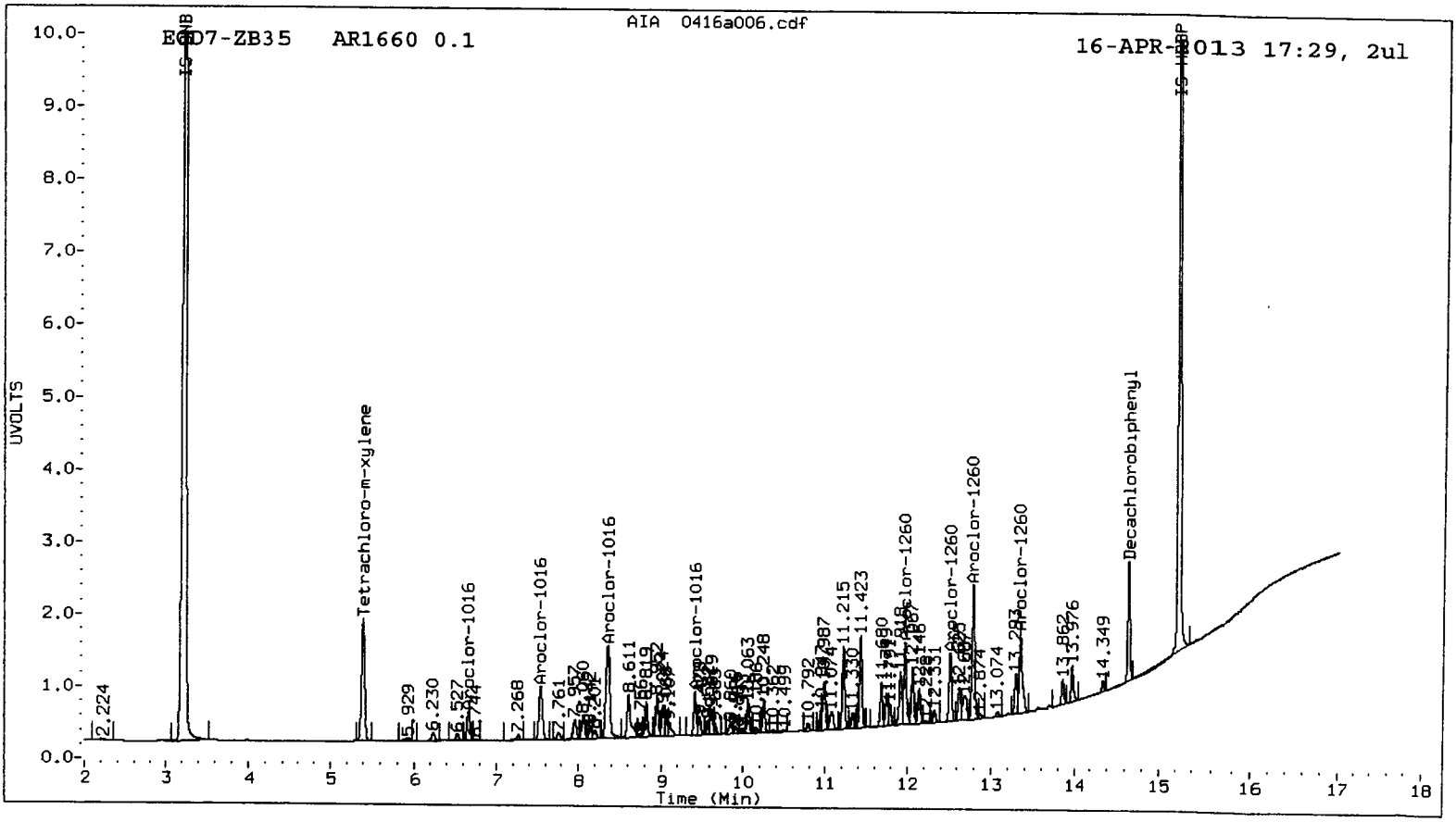
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD7-ZB35 AR1660 0.1
AIA 0416a006.cdf
16-APR-2013 17:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a007.d
Data file 2: 20130416.b/ical-2.b/0416a007.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 0.5
Client ID:
Injection Date: 16-APR-2013 17:49
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	-0.001	2796375	5.400	0.000	4240289	40.9	37.2	9.4	Tetrachloro-m-xylene
14.591	-0.001	2466631	14.649	0.000	2850108	36.4	39.3	7.7	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	102.2	93.1
Decachlorobiphenyl	91.0	98.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5500666	-1.6
Hexabromobiphenyl	4375297	4448503	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8487736	-0.4
Hexabromobiphenyl	6077527	6324175	4.1

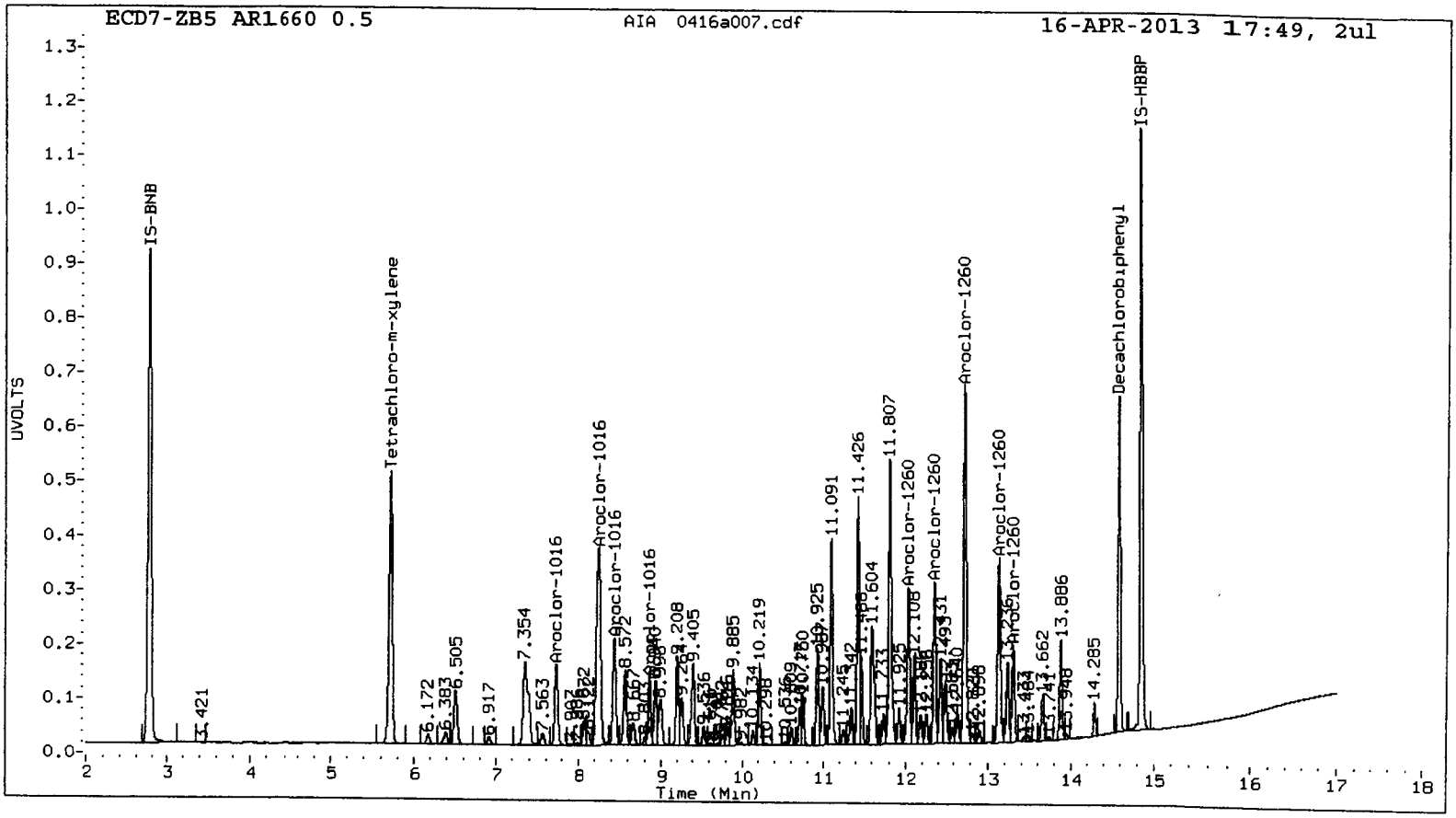
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.730	0.001	779033	468.9	1	6.661	0.000	836820	423.0
Aroclor-1016	2	8.250	-0.002	2666797	478.3	2	7.541	0.000	1839601	423.8
Aroclor-1016	3	8.437	-0.001	1033755	470.3	3	8.353	0.000	3716764	439.3
Aroclor-1016	4	8.864	-0.001	587423	466.8	4	9.418	0.000	1163537	437.1
Total Col1Ave (4 peaks):					471.1	Total Col2Ave (4 peaks):				430.8 RPD = 9
Corrected Ave (3 peaks):					468.7	Corrected Ave (3 peaks):				428.0 RPD = 9
Aroclor-1260	1	12.039	-0.001	1275279	466.2	1	11.971	0.000	2311541	438.0
Aroclor-1260	2	12.356	-0.002	1287606	469.9	2	12.516	0.000	1849259	447.0
Aroclor-1260	3	12.728	-0.001	3168940	479.5	3	12.785	0.000	3899627	455.2
Aroclor-1260	4	13.126	-0.001	1681382	491.5	4	13.347	0.000	2586591	456.4
Aroclor-1260	5	13.304	-0.001	777125	475.4	NS	---			----
Total Col1Ave (5 peaks):					476.5	Total Col2Ave (4 peaks):				449.1 RPD = 6
Corrected Ave (4 peaks):					472.7	Corrected Ave (3 peaks):				446.7 RPD = 6

Total PCB Area Col1 (5.816 - 14.491) = 38004762 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 49650226 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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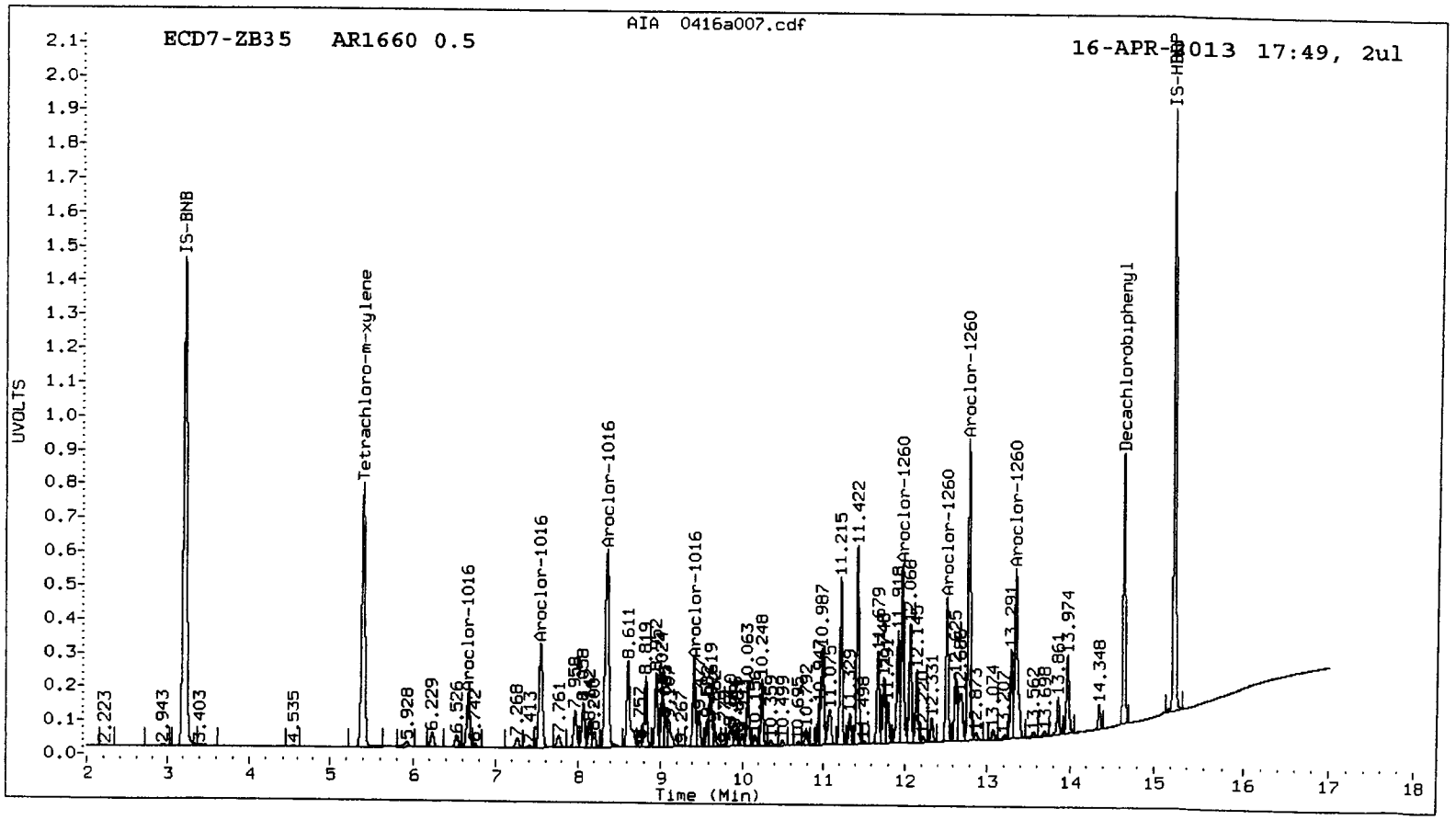
16-APR-2013 17:49, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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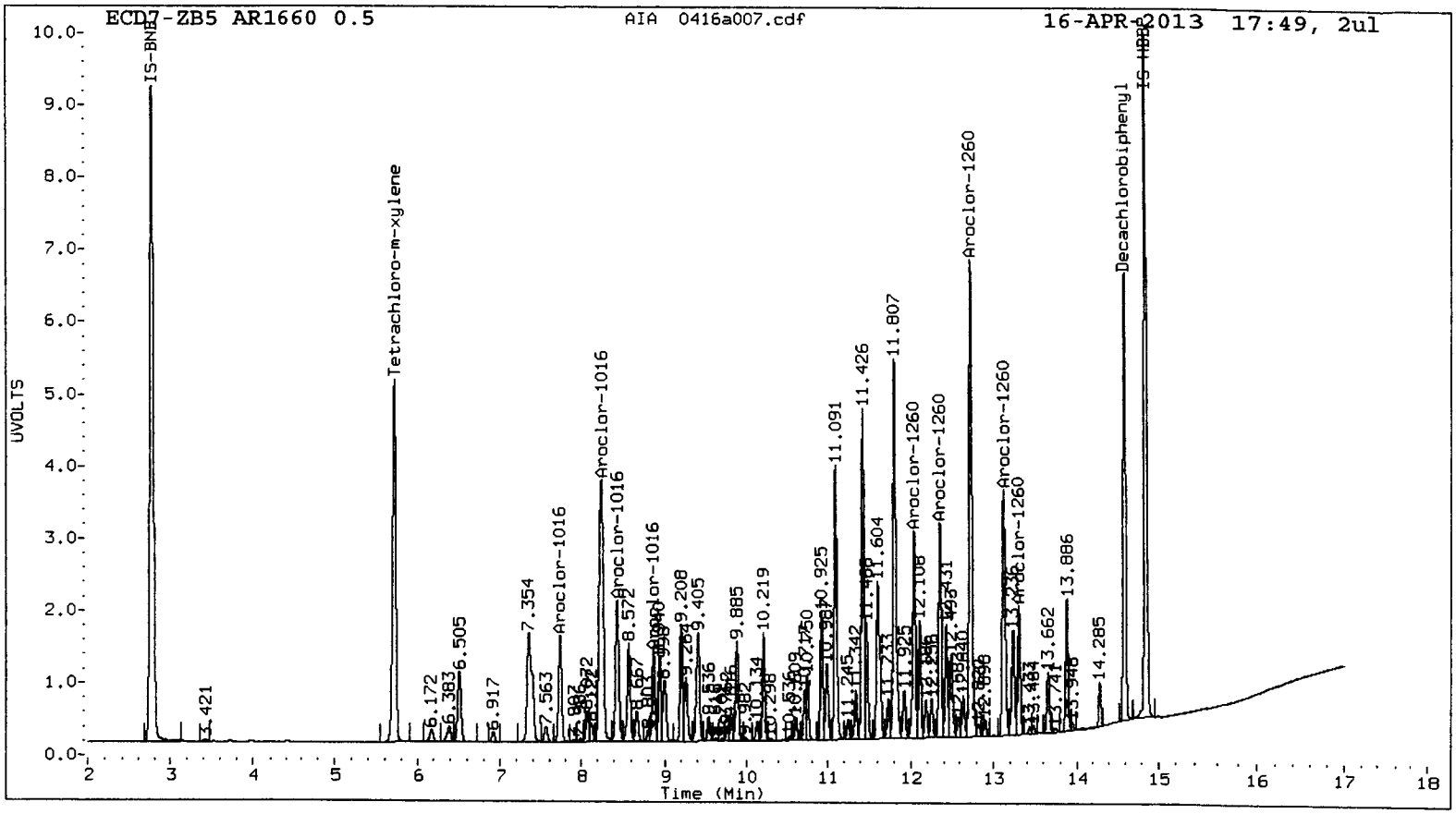
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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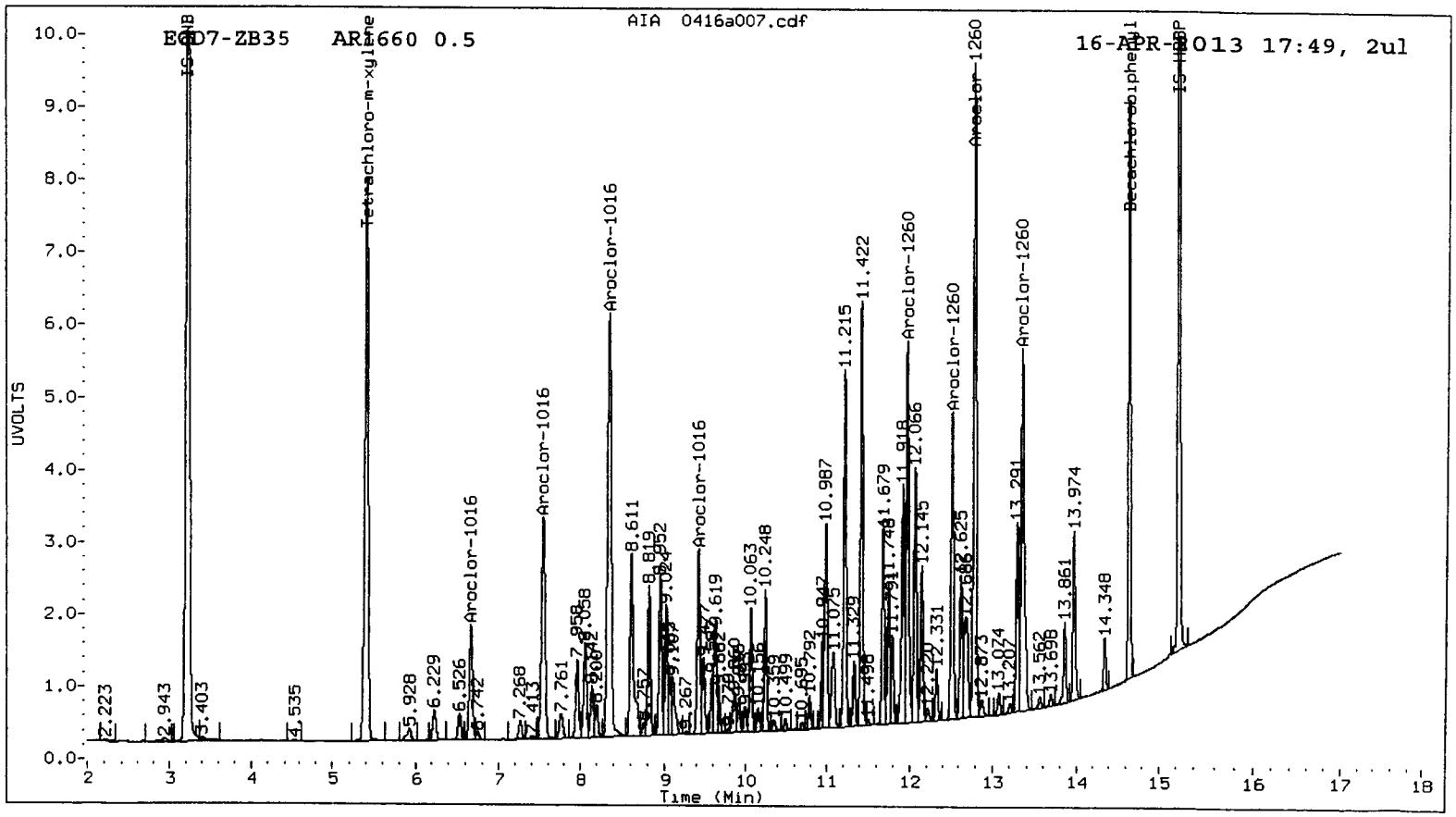
AIA 0416a007.cdf
16-APR-2013 17:49, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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AIA 0416a007.cdf
16-APR-2013 17:49, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a008.d
Data file 2: 20130416.b/ical-2.b/0416a008.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 16-APR-2013 18:10
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	1361990	5.400	0.000	2146438	20.2	19.1	5.7	Tetrachloro-m-xylene
14.591	-0.001	1253808	14.649	0.000	1244268	19.2	18.6	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	50.6	47.7
Decachlorobiphenyl	47.9	46.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5416449	-3.1
Hexabromobiphenyl	4375297	4295436	-1.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8375773	-1.8
Hexabromobiphenyl	6077527	5833847	-4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-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-1242	1	7.729	0.000	312320	250.0	1	6.661	0.000	389040	250.0
Aroclor-1242	2	8.249	0.000	1053656	250.0	2	7.541	0.000	776353	250.0
Aroclor-1242	3	8.437	0.000	415702	250.0	3	8.352	0.000	1535479	250.0
Aroclor-1242	4	9.404	0.000	389457	250.0	4	9.418	0.000	532676	250.0

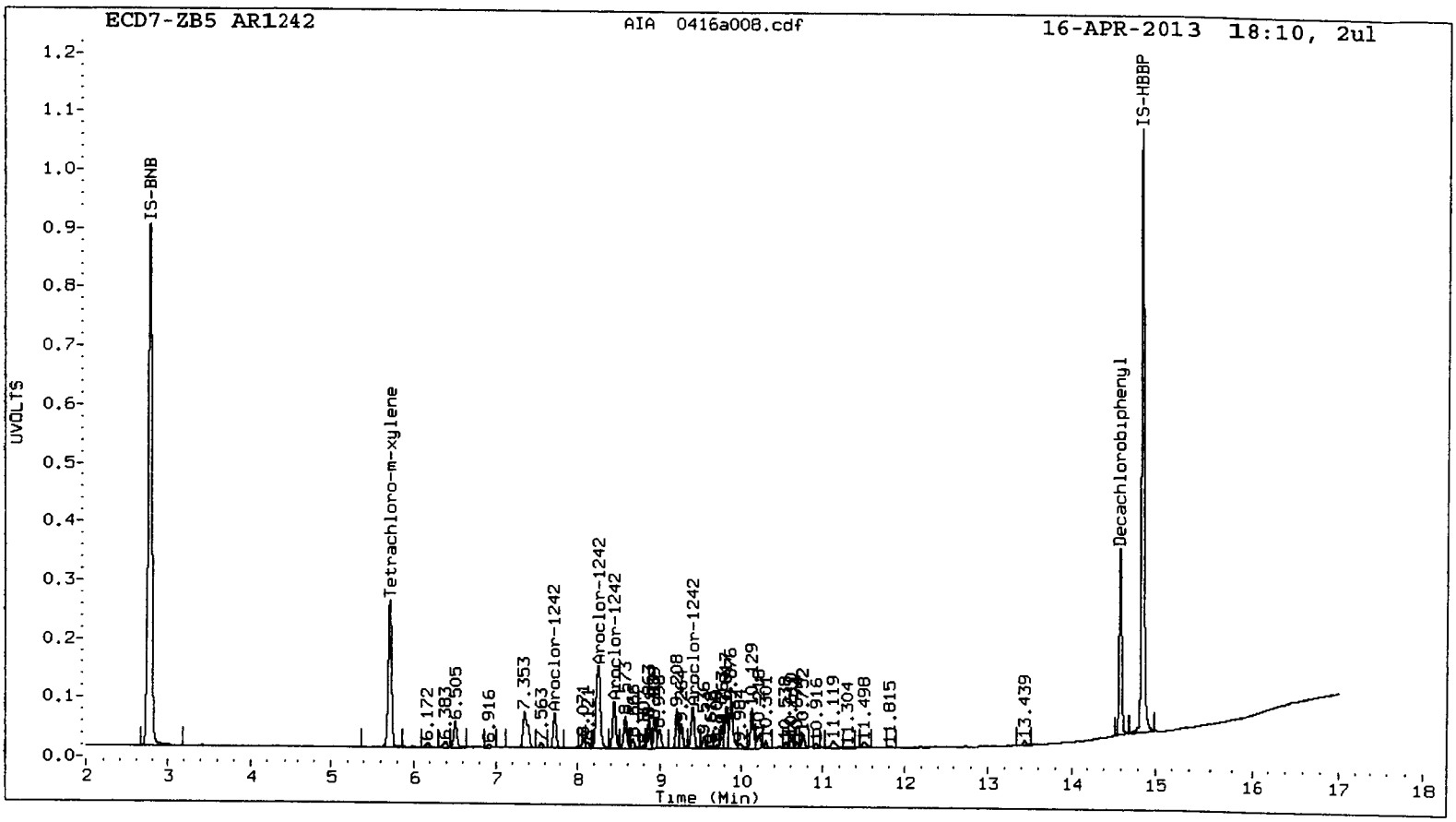
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 7028252 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 10755463 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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16-APR-2013 18:10, 2ul
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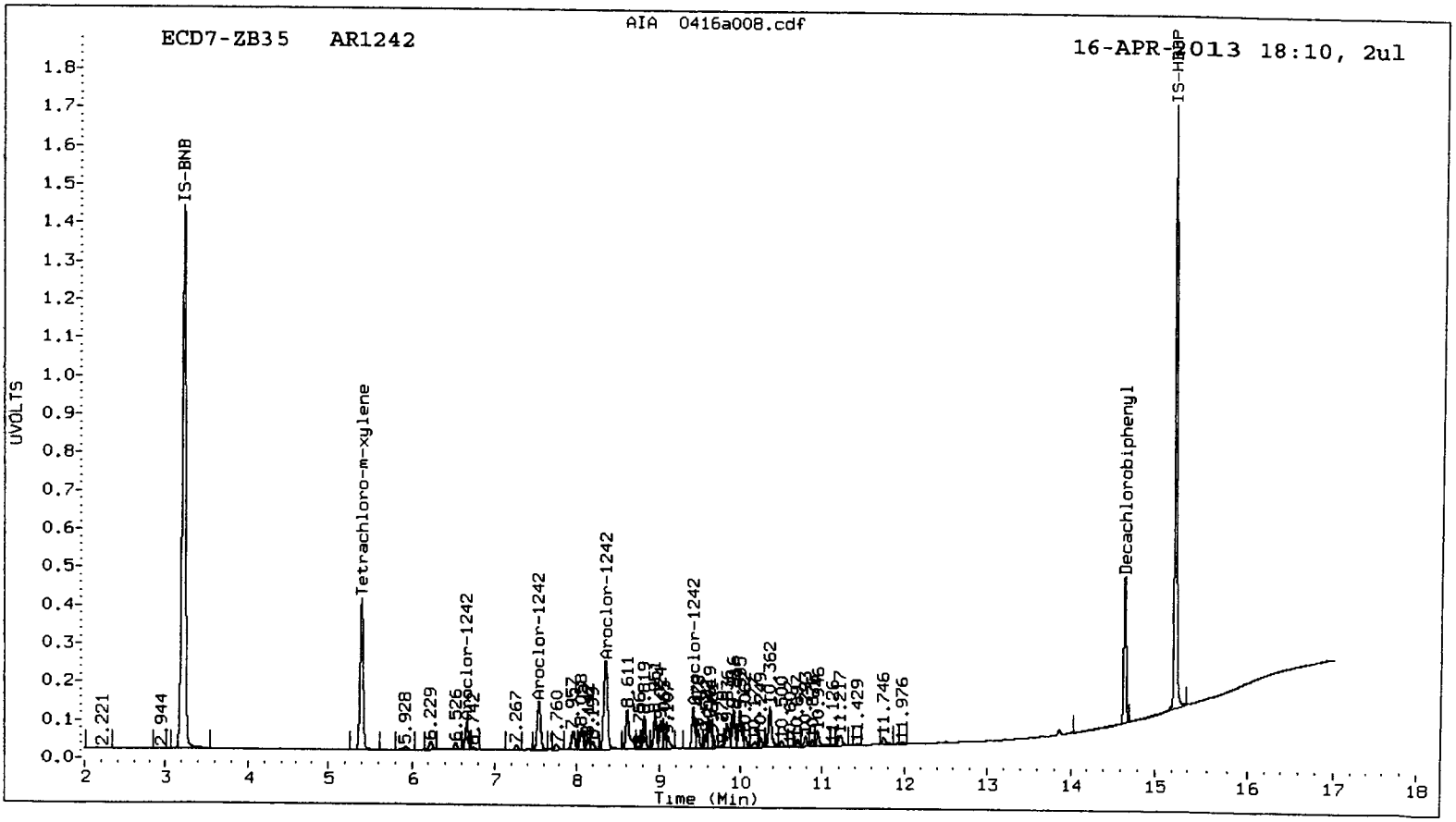
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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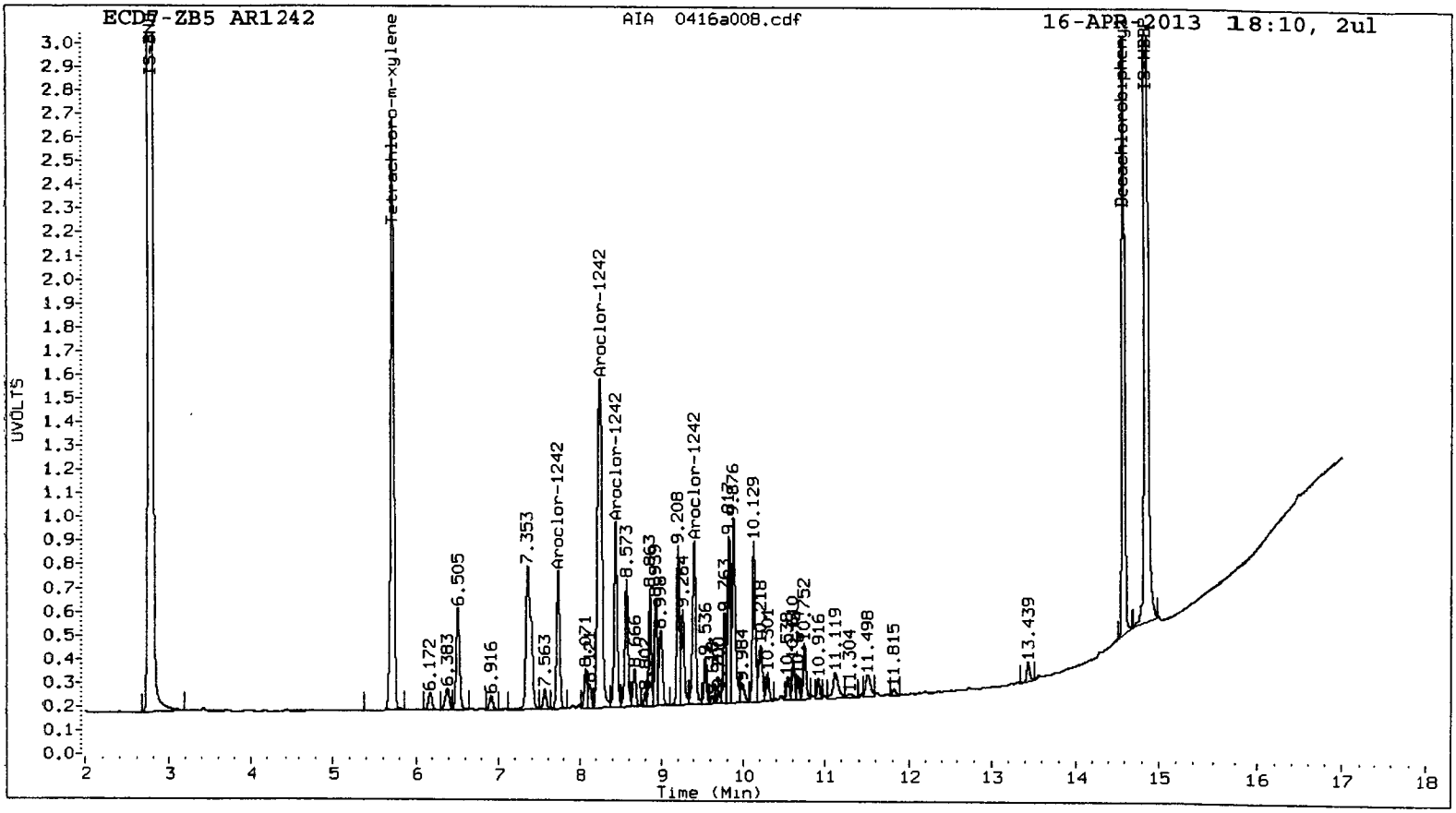
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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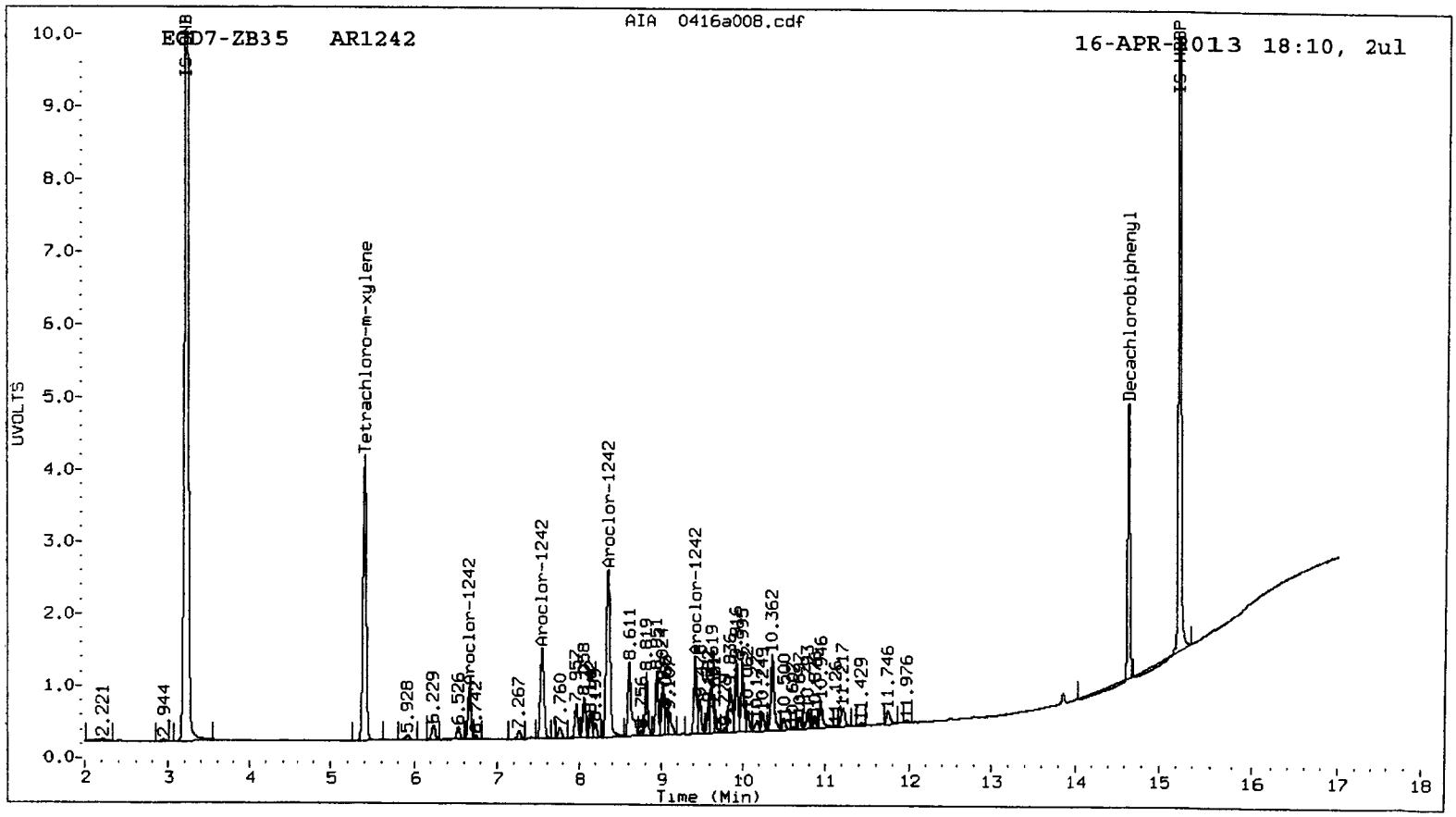
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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AIA 0416a008.cdf
16-APR-2013 18:10, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a009.d
Data file 2: 20130416.b/ical-2.b/0416a009.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 16-APR-2013 18:30
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.714	-0.001	1461294	5.399	-0.001	2300123	22.3	21.0	5.9	Tetrachloro-m-xylene
14.592	0.000	1347669	14.649	0.000	1386097	21.2	21.3	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	55.8	52.6
Decachlorobiphenyl	53.0	53.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5269055	-5.8
Hexabromobiphenyl	4375297	4171971	-4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8150106	-4.4
Hexabromobiphenyl	6077527	5682178	-6.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-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	8.244	0.000	717831	250.0	1	7.539	0.000	416310	250.0
Aroclor-1248	2	8.864	0.000	456771	250.0	2	8.348	0.000	1070897	250.0
Aroclor-1248	3	9.404	0.000	634638	250.0	3	8.950	0.000	763751	250.0
Aroclor-1248	4	9.876	0.000	845203	250.0	4	10.361	0.000	1037311	250.0

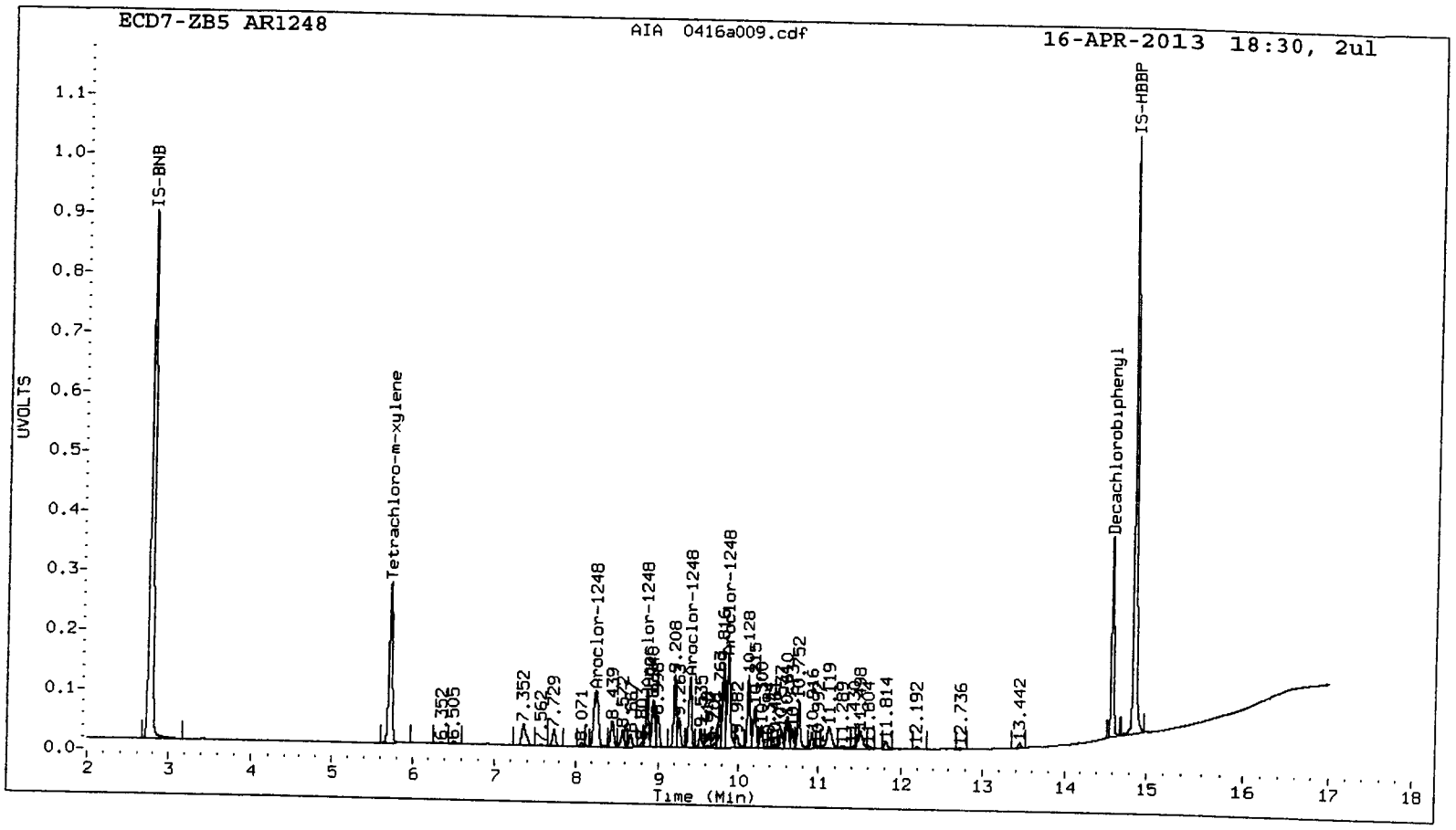
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 9555423 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 13838740 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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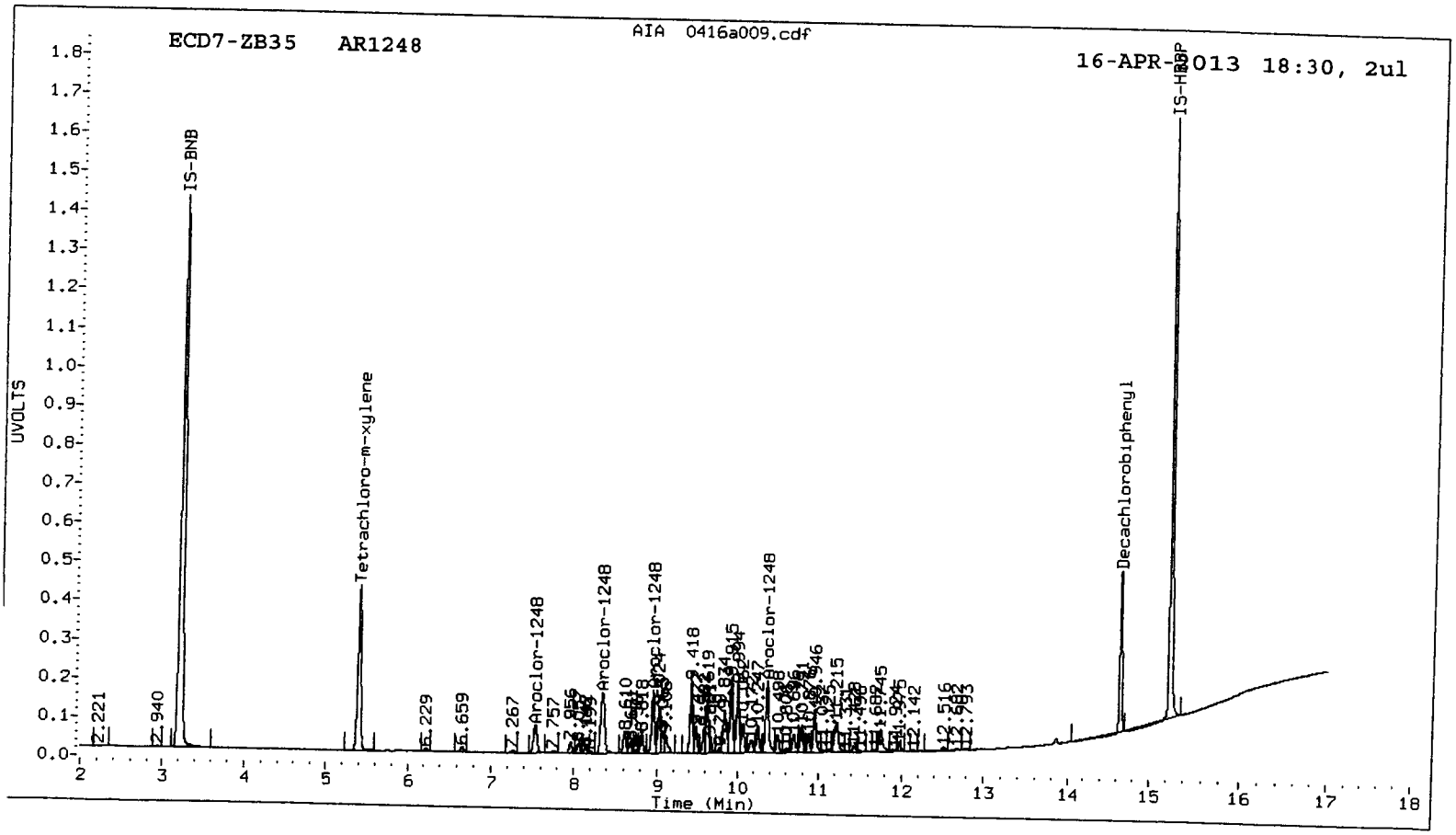
16-APR-2013 18:30, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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16-APR-2013 18:30, 2ul
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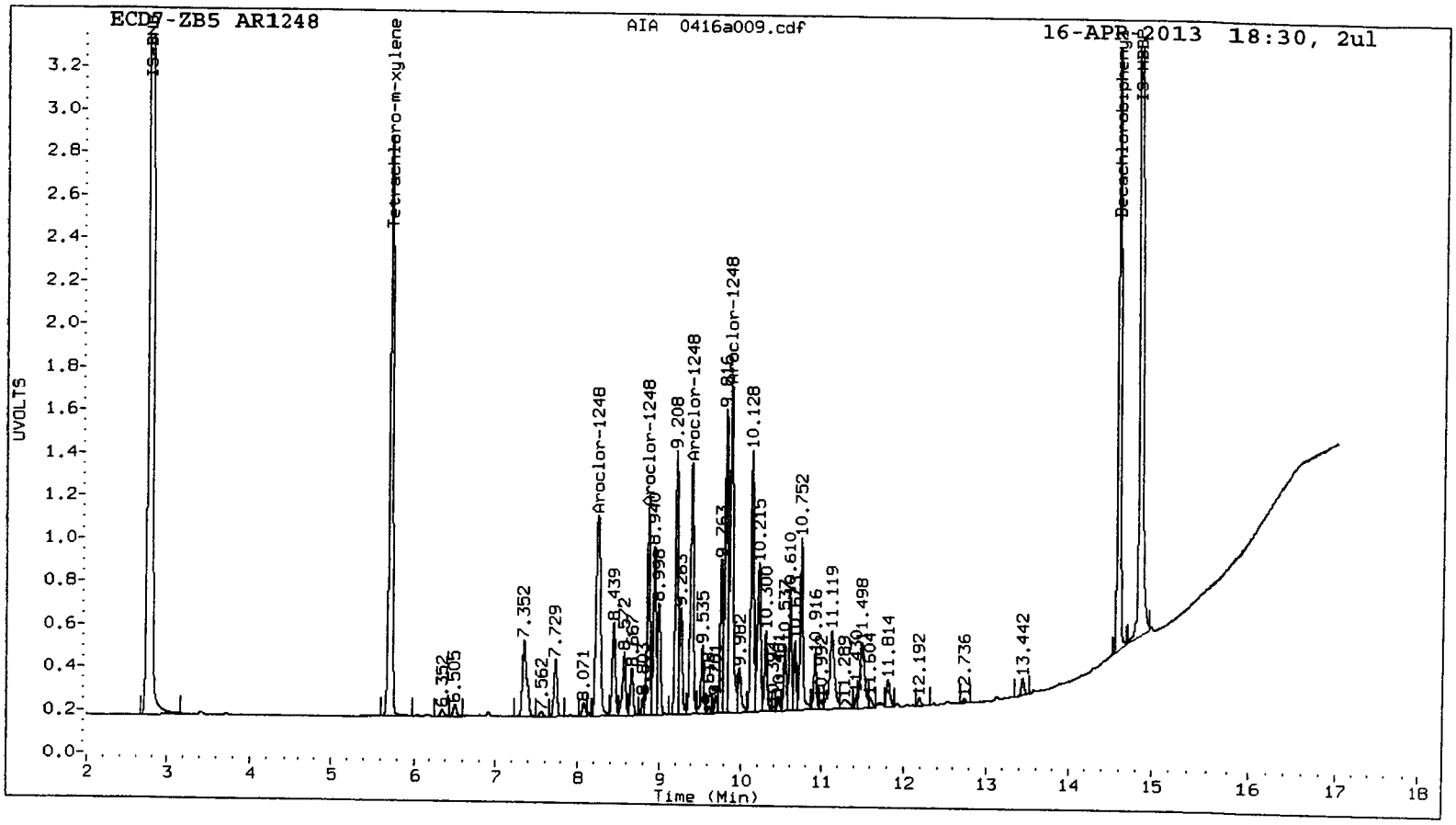
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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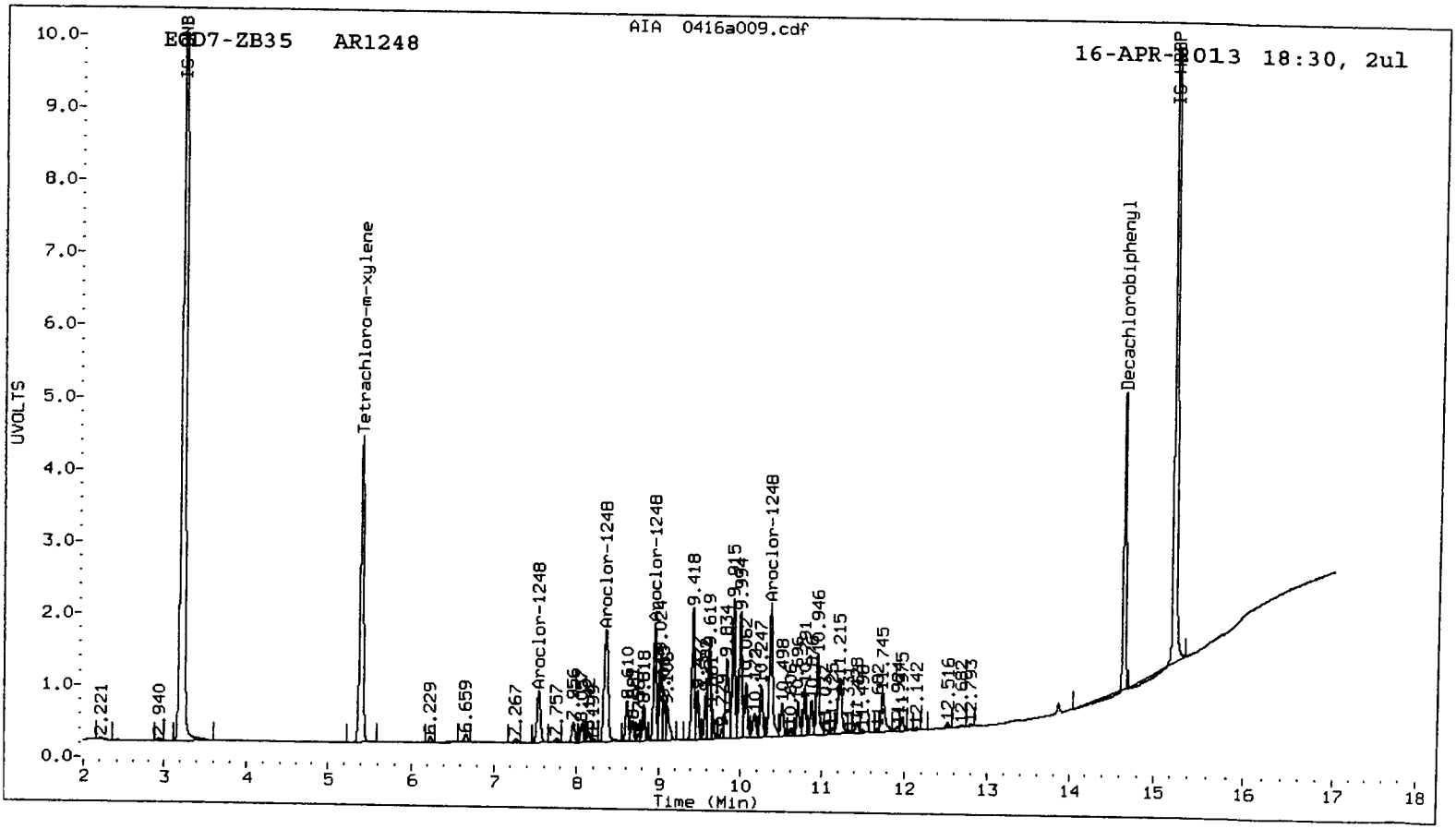
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)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AIA 0416a009.cdf
16-APR-2013 18:30, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a010.d
Data file 2: 20130416.b/ical-2.b/0416a010.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 16-APR-2013 18:51
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.712	-0.003	1373224	5.397	-0.003	2185516	20.1	19.3	4.3	Tetrachloro-m-xylene
14.591	0.000	1294137	14.648	-0.001	1422700	19.3	20.7	7.3	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	50.2	48.1
Decachlorobiphenyl	48.1	51.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5495311	-1.7
Hexabromobiphenyl	4375297	4409997	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8458741	-0.8
Hexabromobiphenyl	6077527	5993280	-1.4

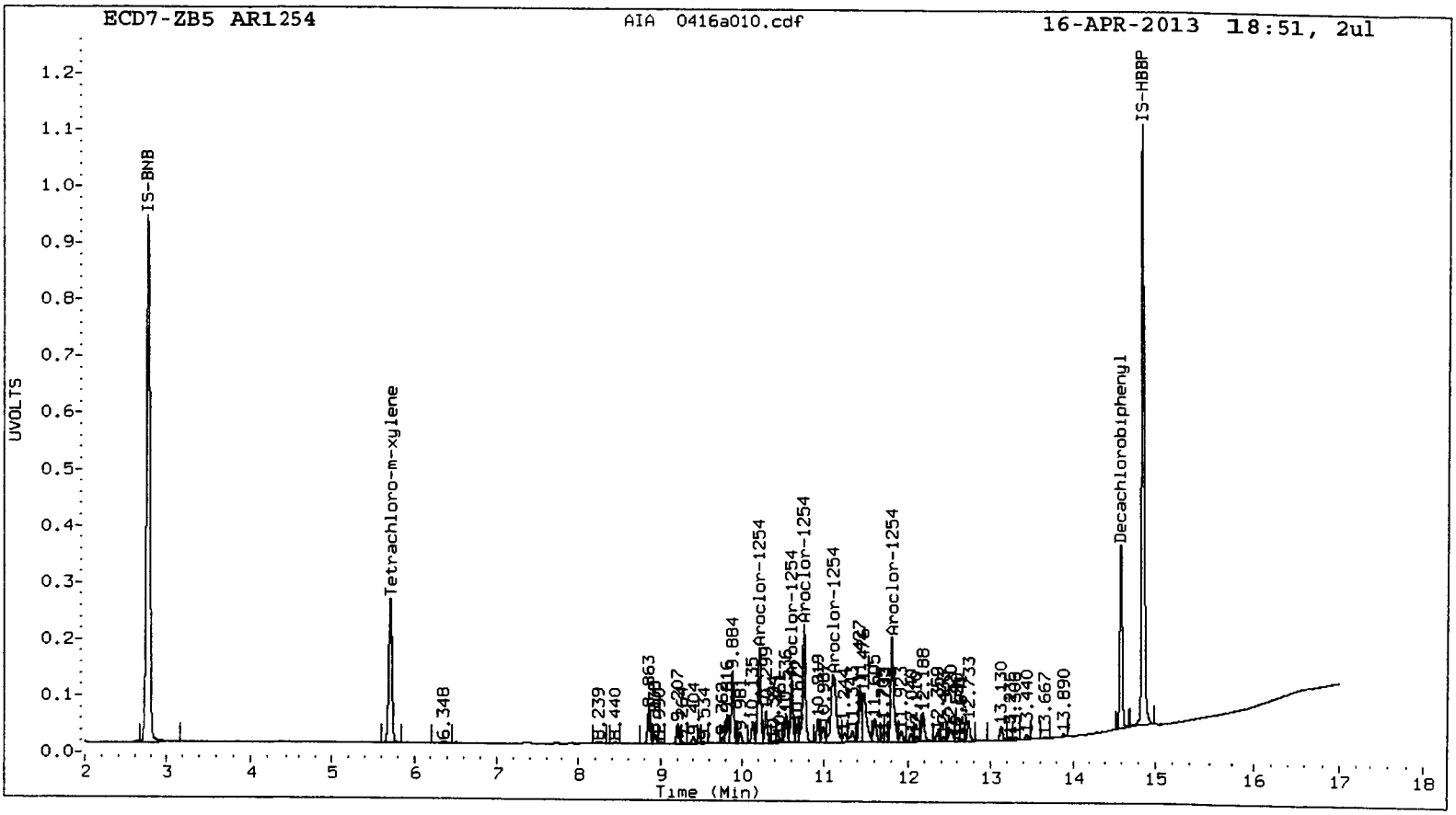
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	10.218	0.000	818688	250.0	1	10.062	0.000	681442	250.0
Aroclor-1254	2	10.609	0.000	494797	250.0	2	10.247	0.000	843973	250.0
Aroclor-1254	3	10.751	0.000	976748	250.0	3	10.945	0.000	1376606	250.0
Aroclor-1254	4	11.107	0.000	1038202	250.0	4	11.209	0.000	1367139	250.0
Aroclor-1254	5	11.810	0.000	979976	250.0	5	11.972	0.000	1015348	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 9795655 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 13285440 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
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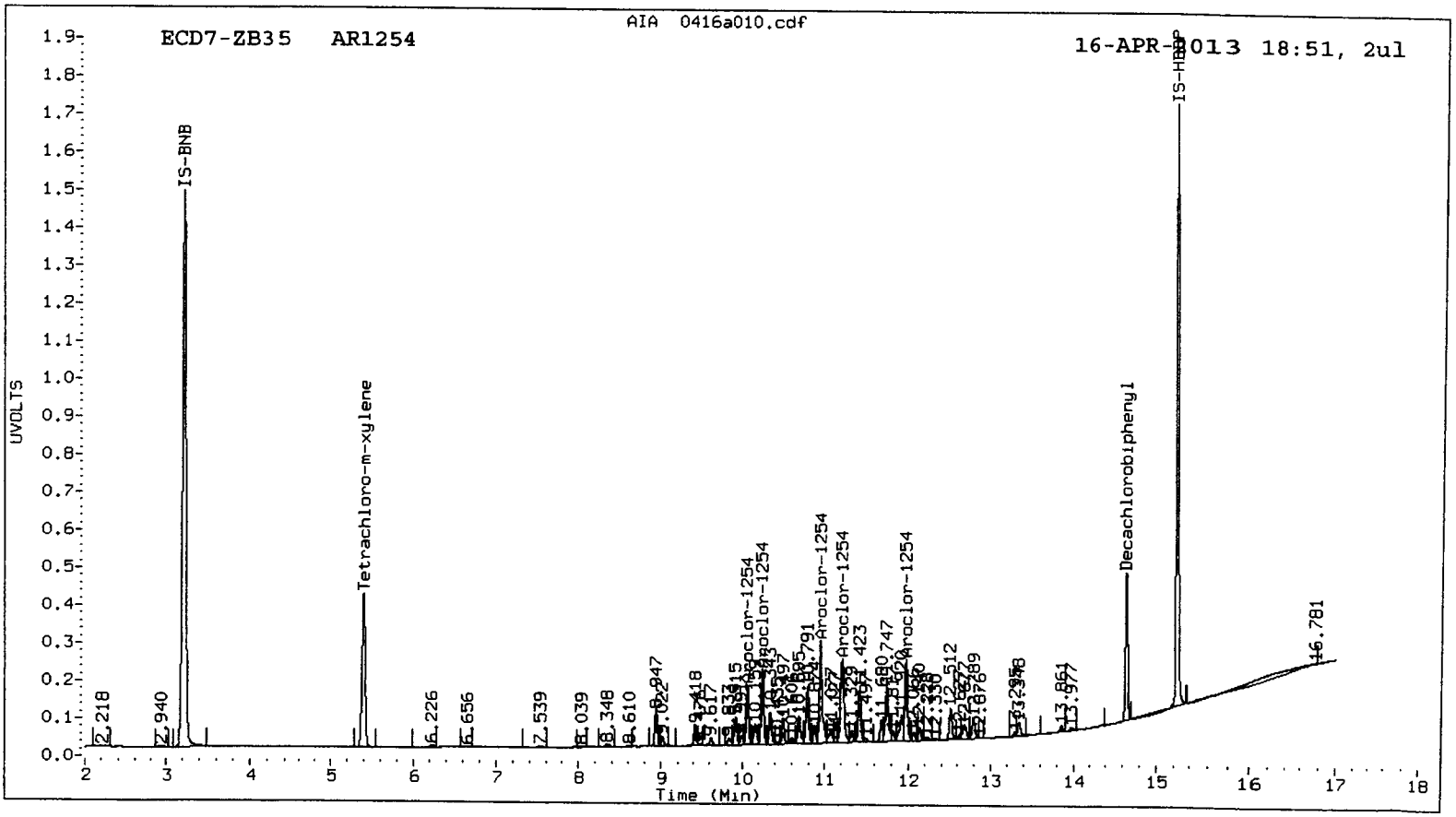
Tetrachloro-m-xylene
Aroclor-1254
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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16-APR-2013 18:51, 2ul
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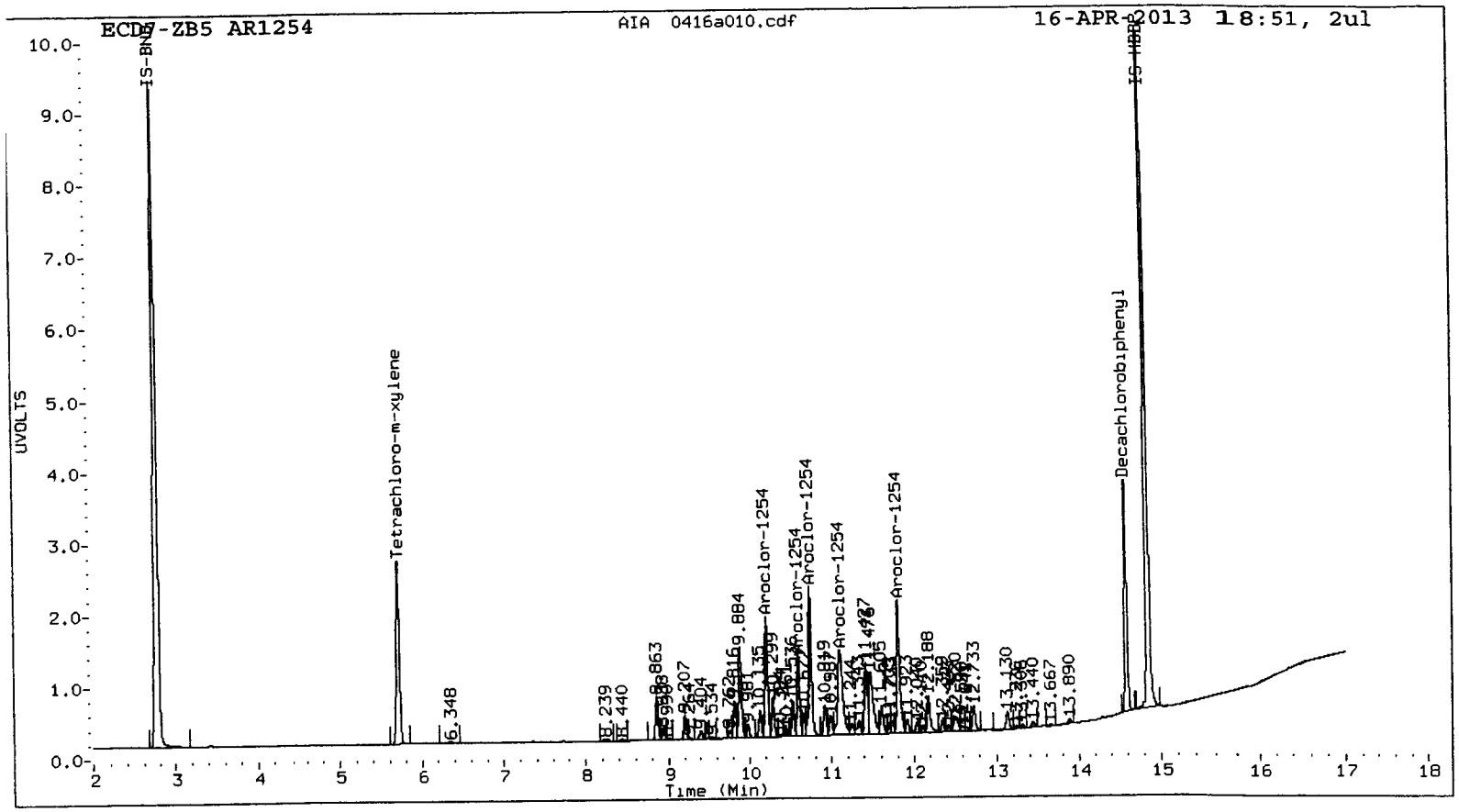
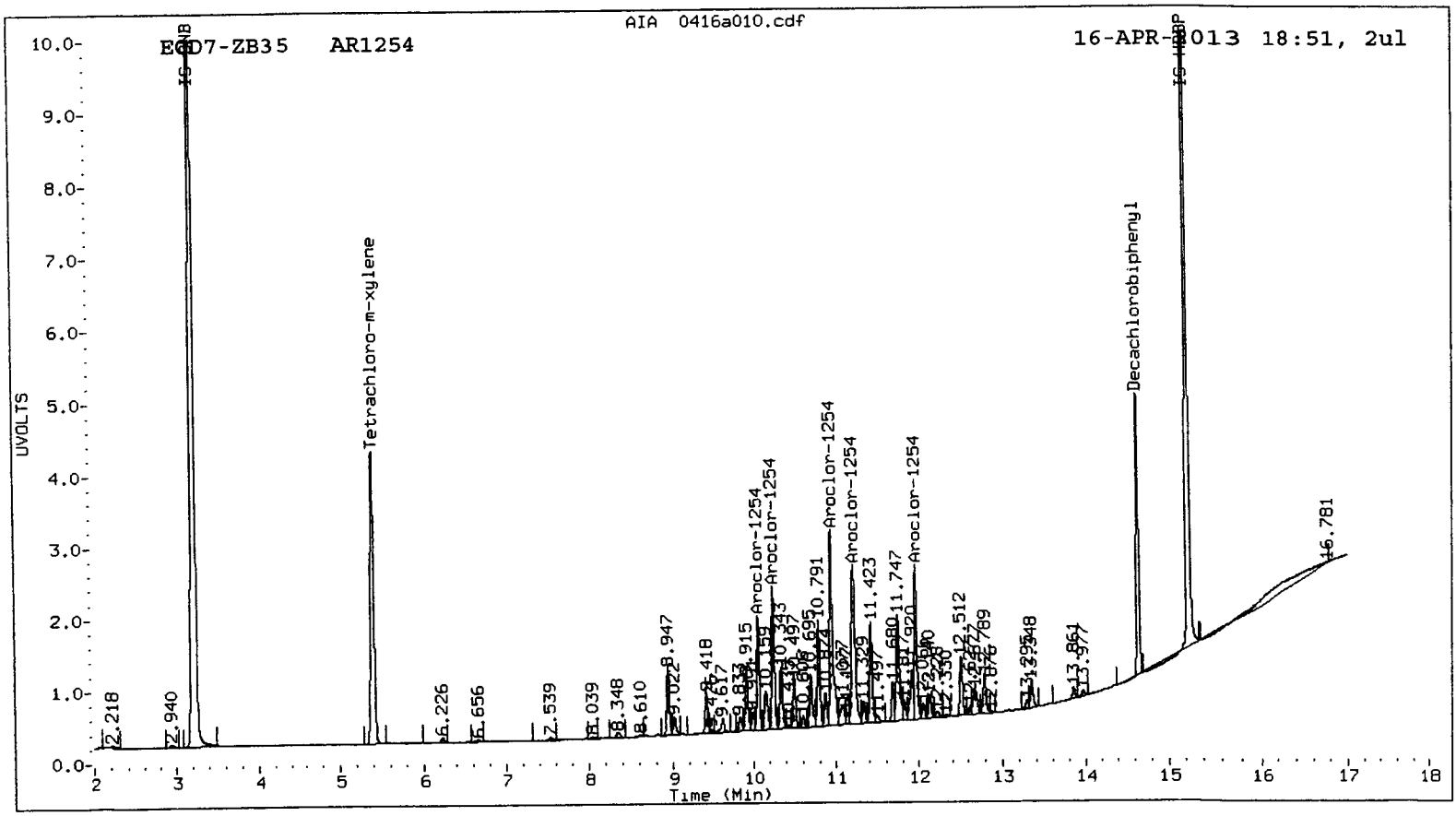
Tetrachloro-m-xylene
Aroclor-1254
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)


ECD7-ZB5 AR1254
AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
6.348
UVOLTS
Time (Min)


ECD7-ZB35 AR1254
AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
6.781
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a011.d
Data file 2: 20130416.b/ical-2.b/0416a011.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 16-APR-2013 19:11
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	0.000	1413072	5.400	0.000	2176569	20.9	19.3	7.6	Tetrachloro-m-xylene
14.591	-0.001	1292049	14.648	-0.001	1423783	19.3	21.1	8.8	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	52.2	48.4
Decachlorobiphenyl	48.2	52.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5446032	-2.6
Hexabromobiphenyl	4375297	4395558	0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8381800	-1.7
Hexabromobiphenyl	6077527	5896928	-3.0

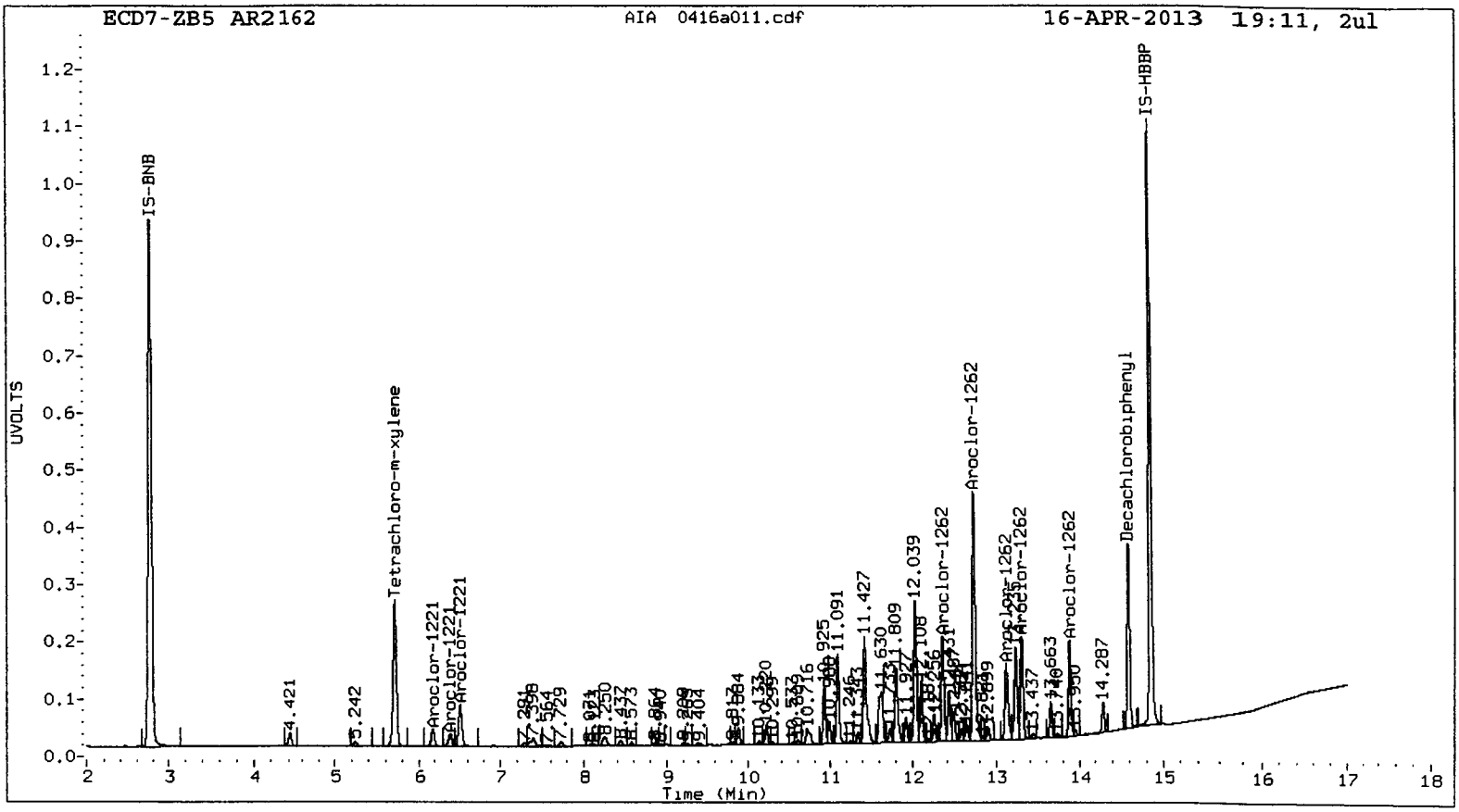
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	6.173	0.000	165839	250.0	1	6.227	0.000	323324	250.0
Aroclor-1221	2	6.384	0.000	125228	250.0	2	6.525	0.000	206087	250.0
Aroclor-1221	3	6.506	0.000	420069	250.0	3	6.661	0.000	595597	250.0
Aroclor-1221	NS	---			----	4	7.553	0.000	204551	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	12.357	0.000	798433	250.0	1	12.516	0.000	1118692	250.0
Aroclor-1262	2	12.729	0.000	2138598	250.0	2	12.786	0.000	2579025	250.0
Aroclor-1262	3	13.127	0.000	690165	250.0	3	13.291	0.000	984708	250.0
Aroclor-1262	4	13.305	0.000	804193	250.0	4	13.349	0.000	1615110	250.0
Aroclor-1262	5	13.887	0.000	705068	250.0	5	13.974	0.000	888575	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 15013569 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 19484859 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0416a011.cdf
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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
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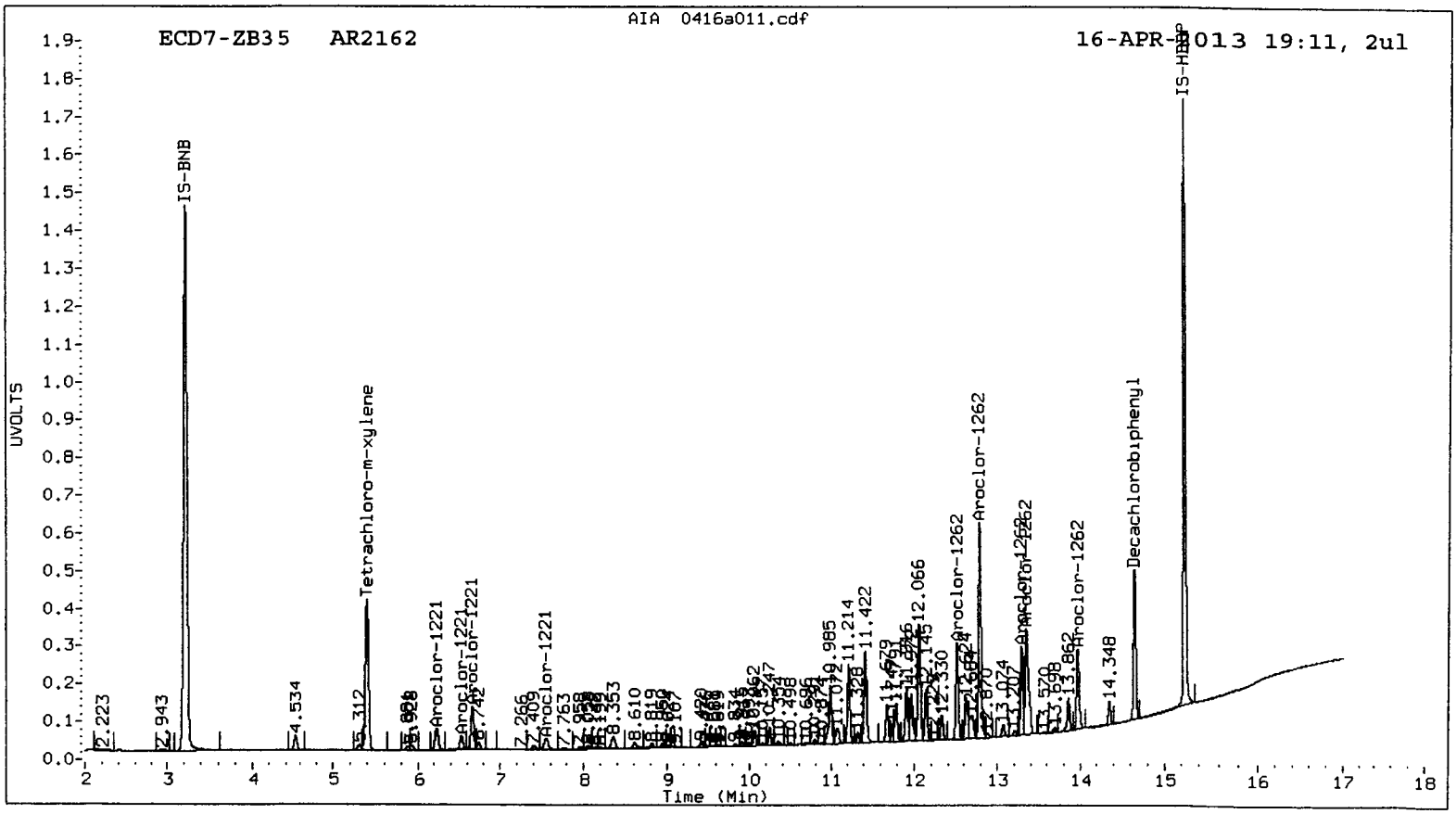
5.242
11.427
12.039
14.287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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
4.534
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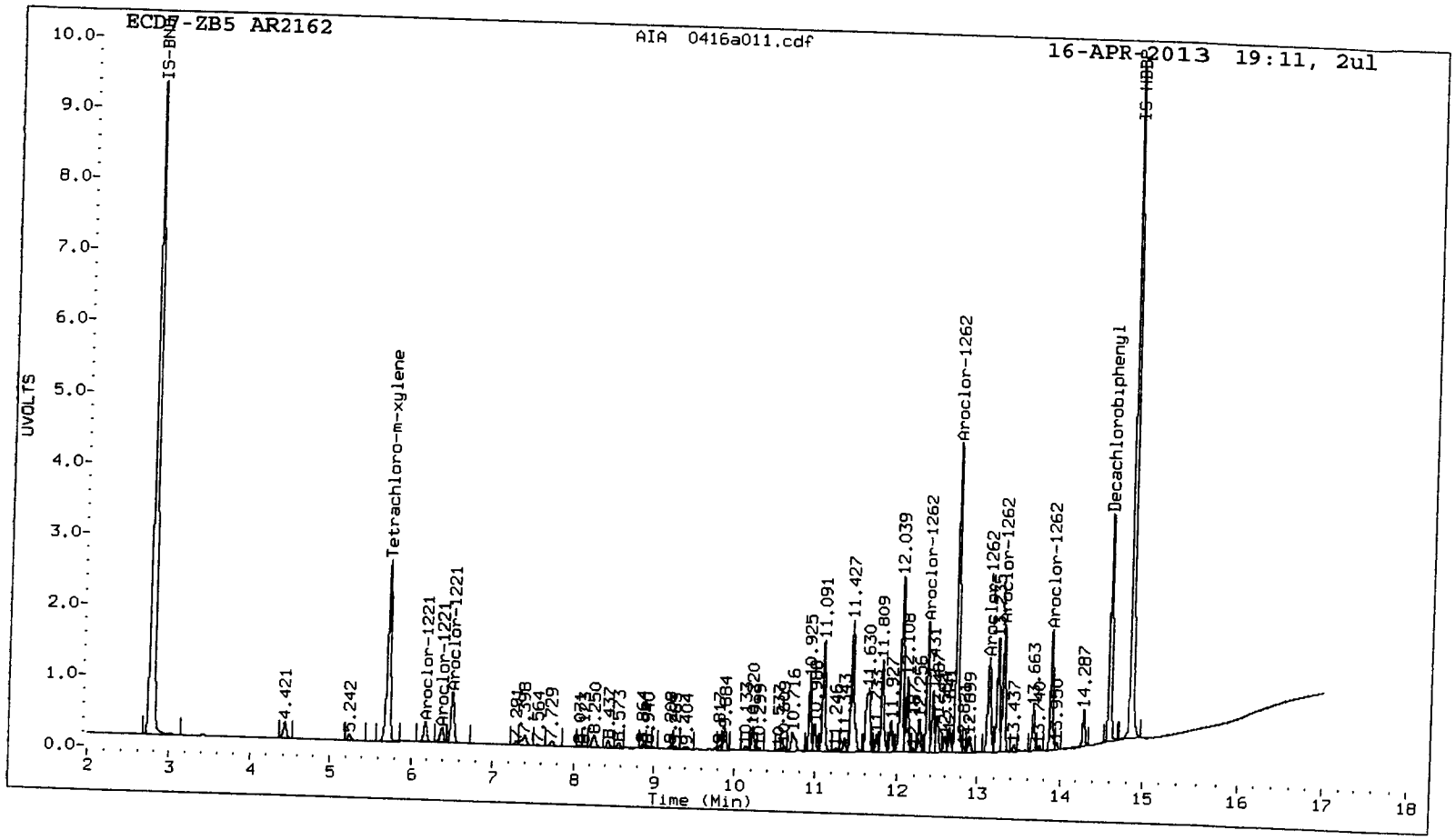
11.422
12.066
14.348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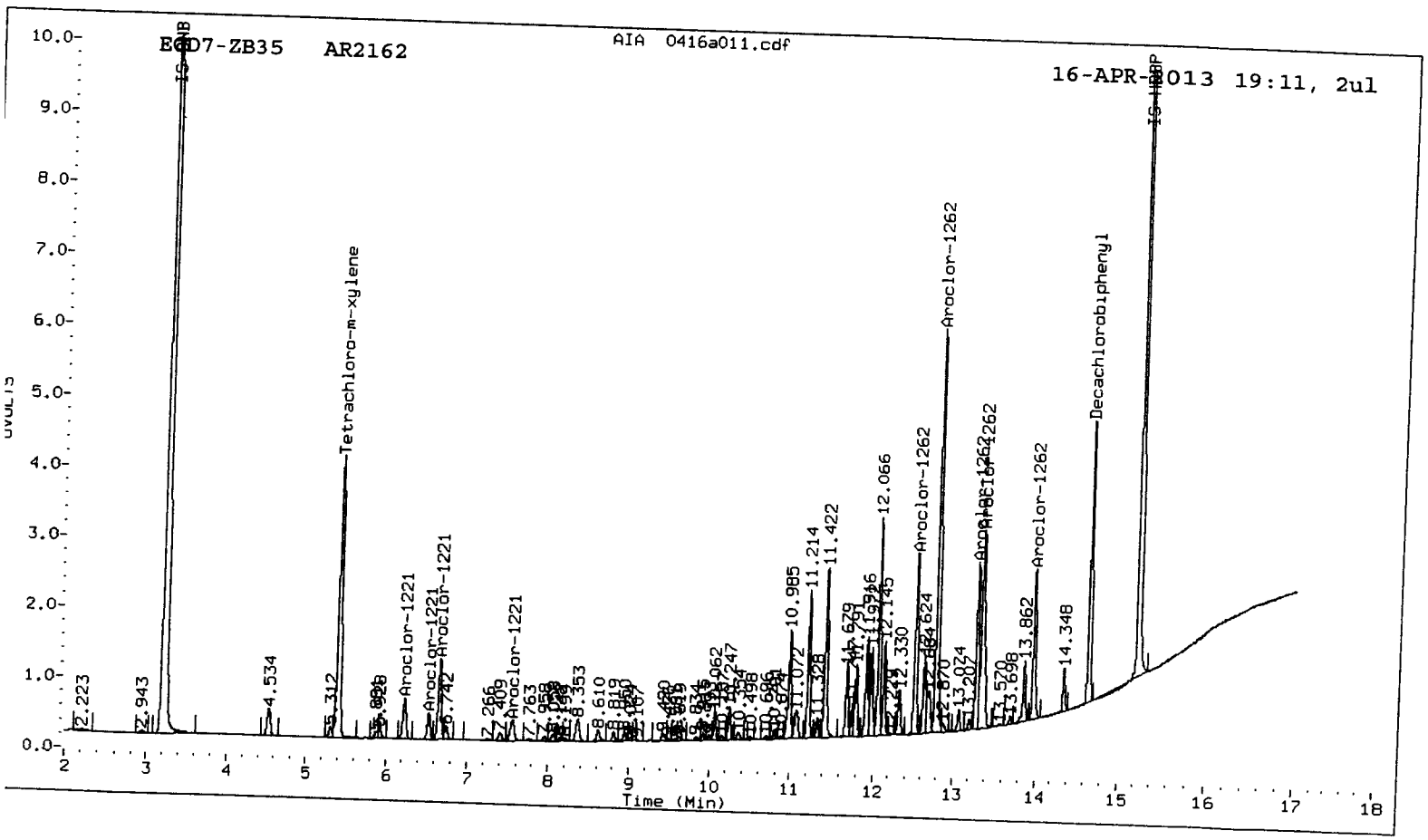
16-APR-2013 19:11, 2ul
IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-DBB
UVOLTS
Time (Min)


ECD7-ZB35 AR2162
AIA 0416a011.cdf
16-APR-2013 19:11, 2ul
IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-DBB
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a012.d
Data file 2: 20130416.b/ical-2.b/0416a012.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 16-APR-2013 19:32
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	0.000	1429119	5.398	-0.002	2210962	20.6	19.3	6.7	Tetrachloro-m-xylene
14.591	-0.001	2395915	14.648	-0.001	2713208	34.9	38.4	9.6	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	51.5	48.1
Decachlorobiphenyl	87.1	95.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5579954	-0.2
Hexabromobiphenyl	4375297	4509857	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8556043	0.4
Hexabromobiphenyl	6077527	6168153	1.5

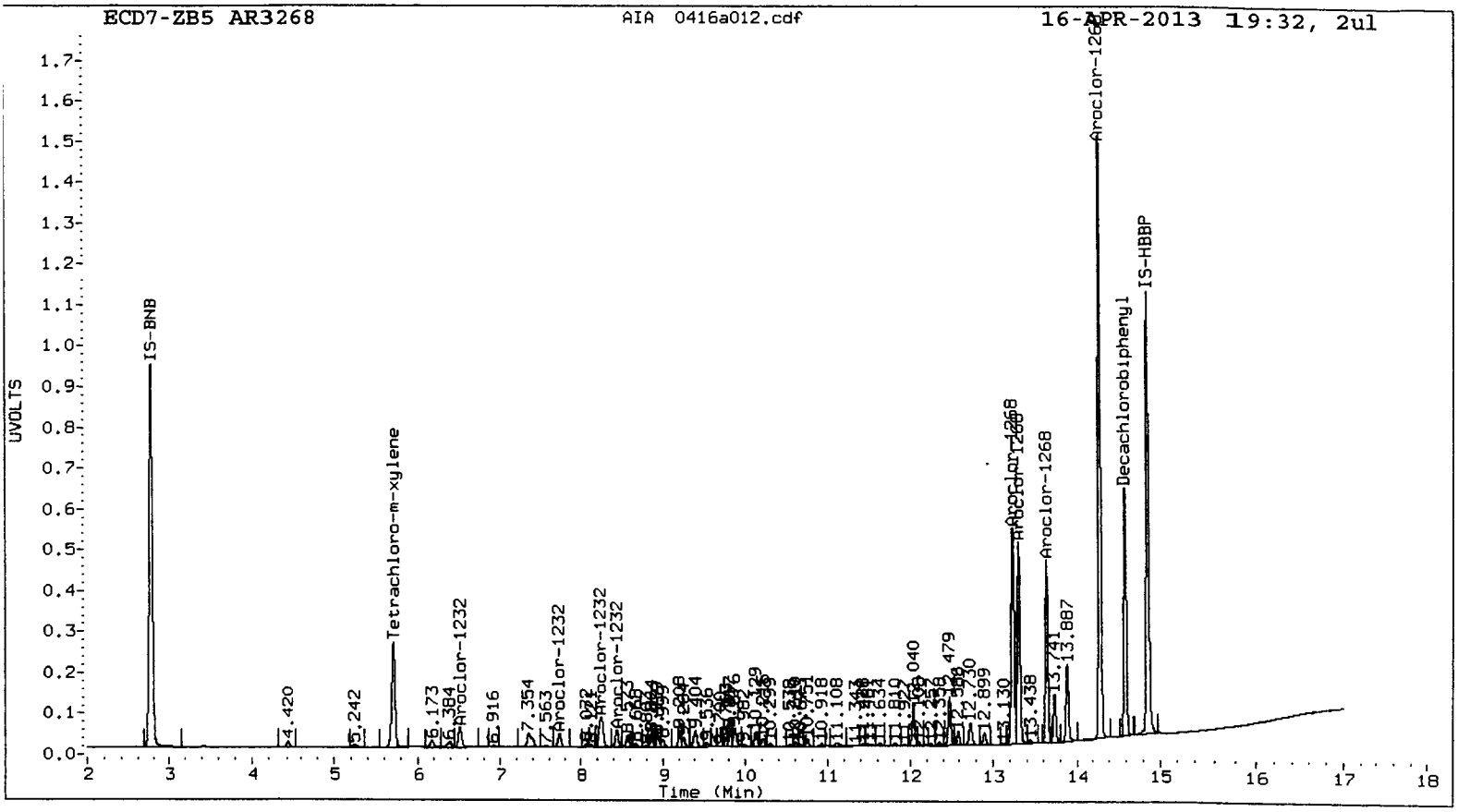
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.506	0.000	285035	250.0	1	6.660	0.000	424783	250.0
Aroclor-1232	2	7.729	0.000	165986	250.0	2	7.542	0.000	468947	250.0
Aroclor-1232	3	8.248	0.000	554649	250.0	3	8.351	0.000	844325	250.0
Aroclor-1232	4	8.437	0.000	222959	250.0	4	8.950	0.000	274873	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):			250.0	RPD = 0
Aroclor-1268	1	13.236	0.000	2368478	250.0	1	13.290	0.000	2698865	250.0
Aroclor-1268	2	13.302	0.000	2209885	250.0	2	13.352	0.000	2561176	250.0
Aroclor-1268	3	13.649	0.000	1872087	250.0	3	13.698	0.000	2065605	250.0
Aroclor-1268	4	14.286	0.000	5716813	250.0	4	14.348	0.000	6776978	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 19418273 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 24727186 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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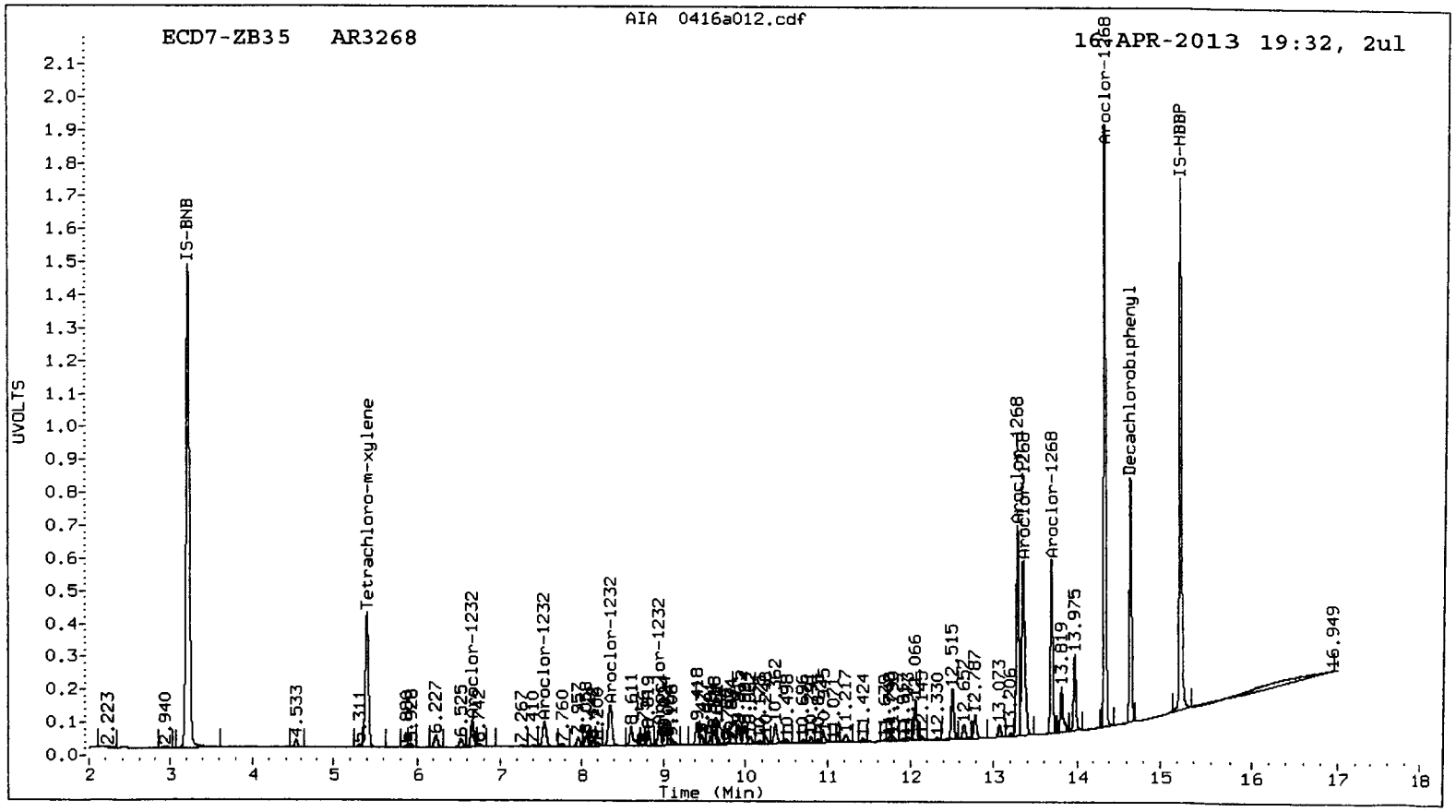
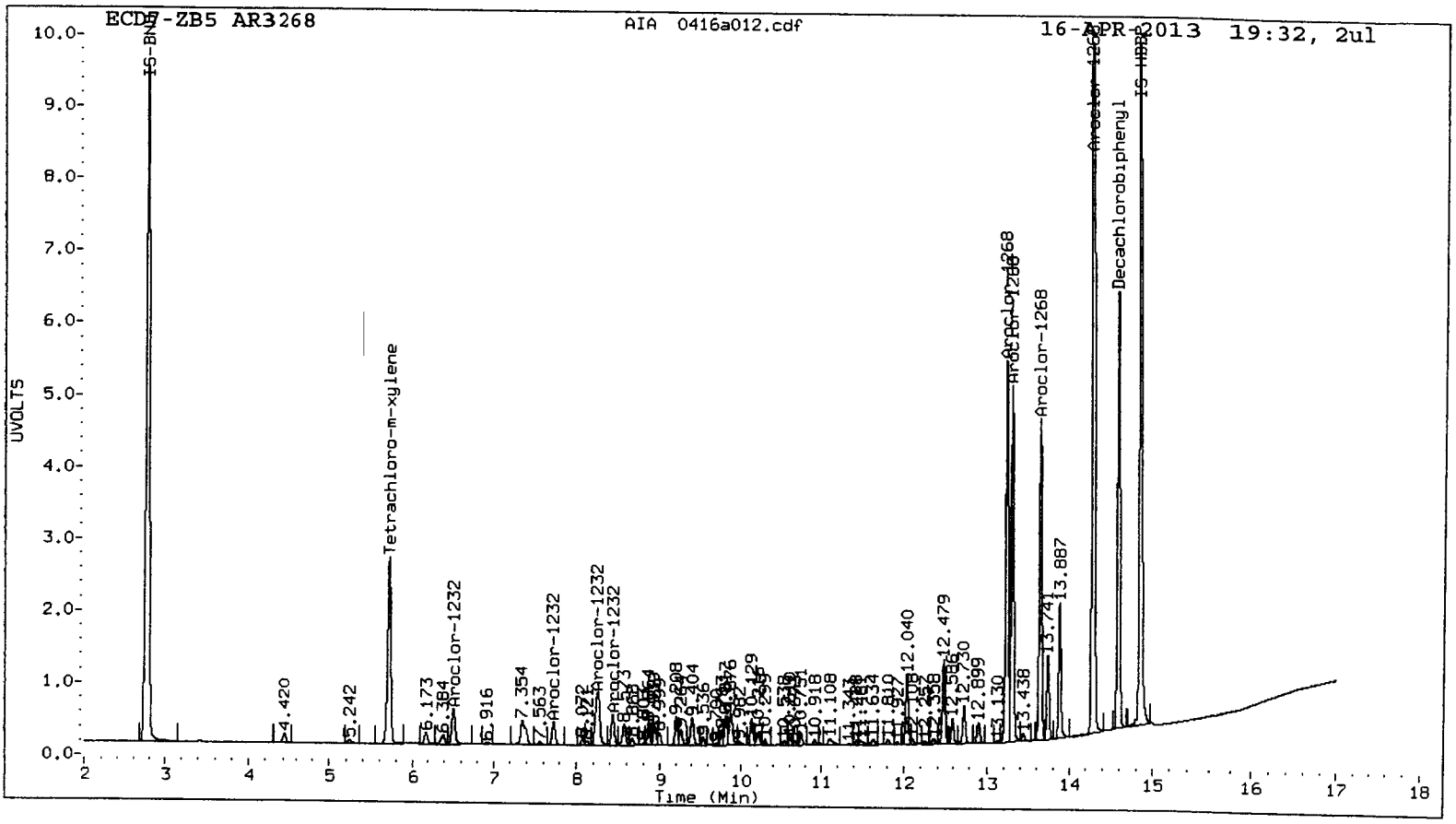
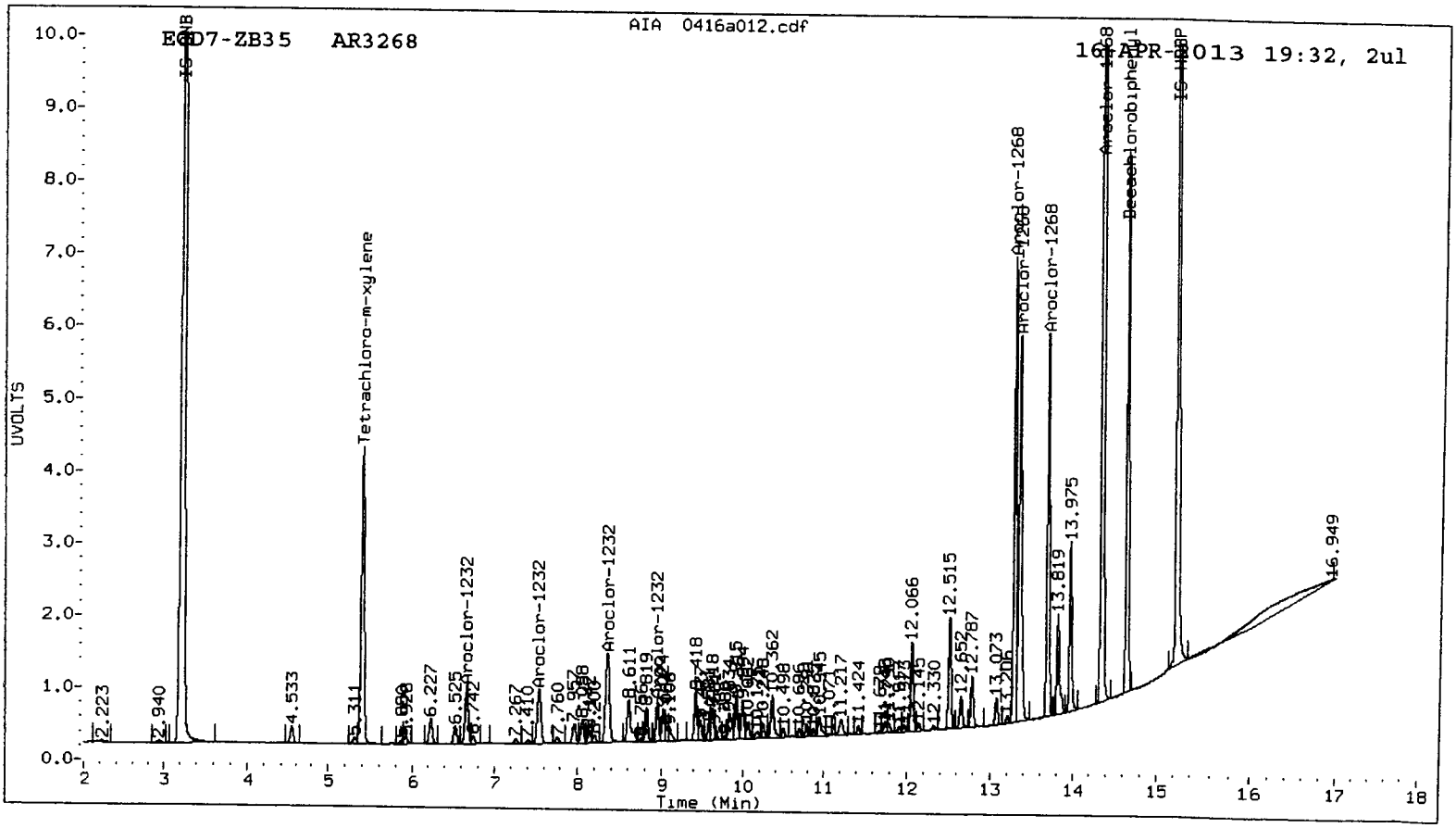
AIA 0416a012.cdf
16-APR-2013 19:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR3268
AIA 0416a012.cdf
16-APR-2013 19:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD7-ZB5 AR3268
AIA 0416a012.cdf
16-APR-2013 19:32, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
13.887
13.741
13.438
12.479
12.040
12.899
12.730
11.108
10.918
7.354
6.916
6.384
6.173
5.242
4.420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AIA 0416a012.cdf
16-APR-2013 19:32, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
16.949
13.975
13.819
12.515
12.066
8.611
6.525
6.227
4.533
2.940
2.223

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a013.d
Data file 2: 20130416.b/ical-2.b/0416a013.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 16-APR-2013 19:53
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	-0.001	1511141	5.398	-0.002	2330305	22.8	21.2	7.2	Tetrachloro-m-xylene
14.591	0.000	1402470	14.648	-0.001	1543934	21.3	23.2	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	57.1	53.1
Decachlorobiphenyl	53.3	58.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5325274	-4.8
Hexabromobiphenyl	4375297	4313581	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8177137	-4.1
Hexabromobiphenyl	6077527	5796454	-4.6

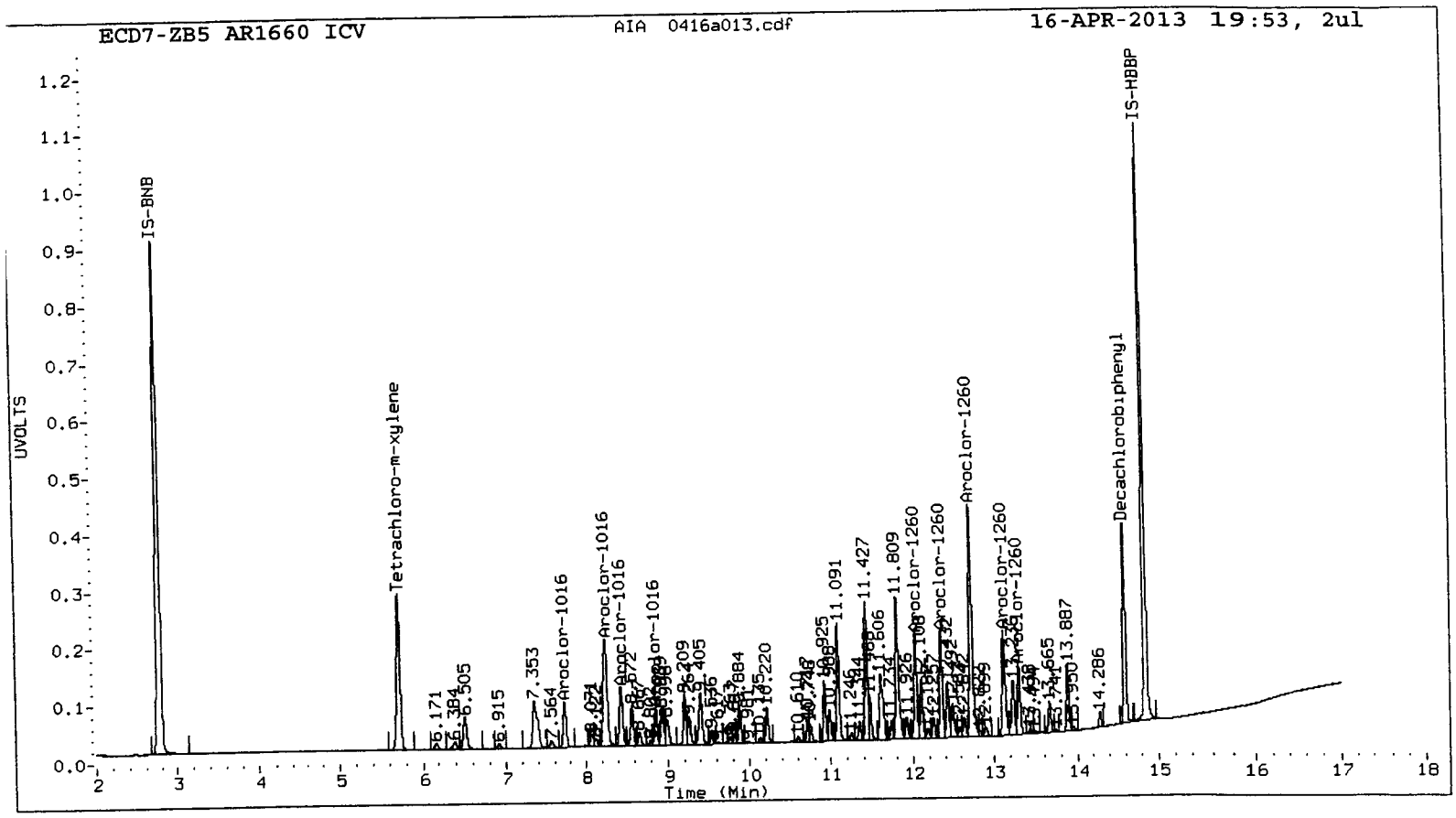
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	413544	257.1	1	6.659	-0.002	498998	261.8
Aroclor-1016	2	8.250	-0.001	1395198	258.5	2	7.541	0.000	1019540	243.8
Aroclor-1016	3	8.437	-0.001	554059	260.4	3	8.351	-0.002	2000333	245.4
Aroclor-1016	4	8.863	-0.001	308795	253.5	4	9.417	-0.001	653898	255.0
Total Col1Ave (4 peaks):					257.4	Total Col2Ave (4 peaks):				251.5 RPD = 2
Corrected Ave (3 peaks):					256.4	Corrected Ave (3 peaks):				248.0 RPD = 3
Aroclor-1260	1	12.040	-0.001	838362	316.1	1	11.972	0.001	1119062	231.3
Aroclor-1260	2	12.357	-0.001	816676	307.3	2	12.516	0.000	1120521	295.5
Aroclor-1260	3	12.730	0.001	1990658	310.6	3	12.787	0.002	2401954	305.9
Aroclor-1260	4	13.128	0.001	965587	291.1	4	13.347	0.000	1583097	304.8
Aroclor-1260	5	13.305	0.000	530848	334.9	NS	---			----
Total Col1Ave (5 peaks):					312.0	Total Col2Ave (4 peaks):				284.4 RPD = 9
Corrected Ave (4 peaks):					306.3	Corrected Ave (3 peaks):				277.2 RPD = 10

Total PCB Area Col1 (5.816 - 14.491) = 21203785 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 28196085 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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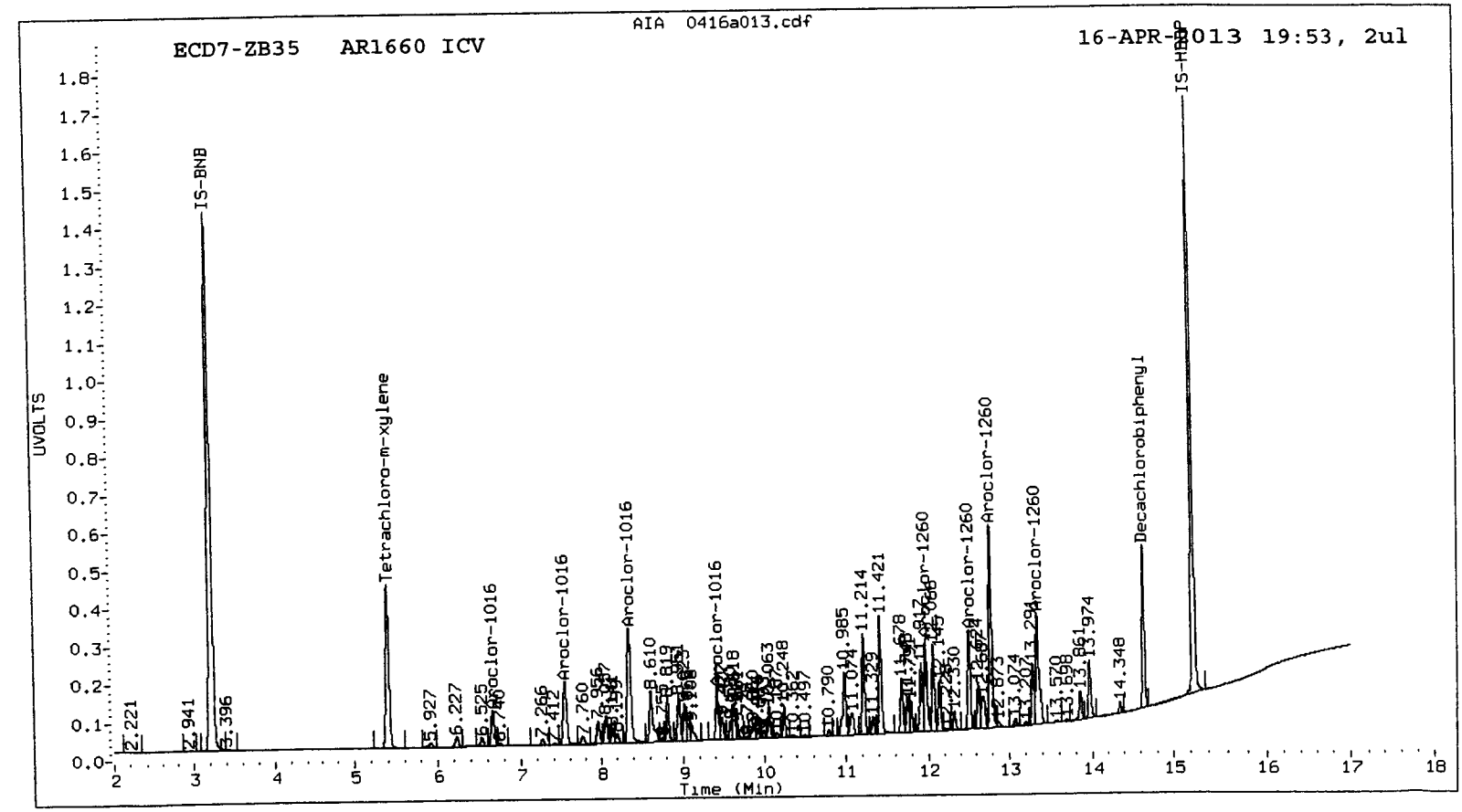
AIA 0416a013.cdf
16-APR-2013 19:53, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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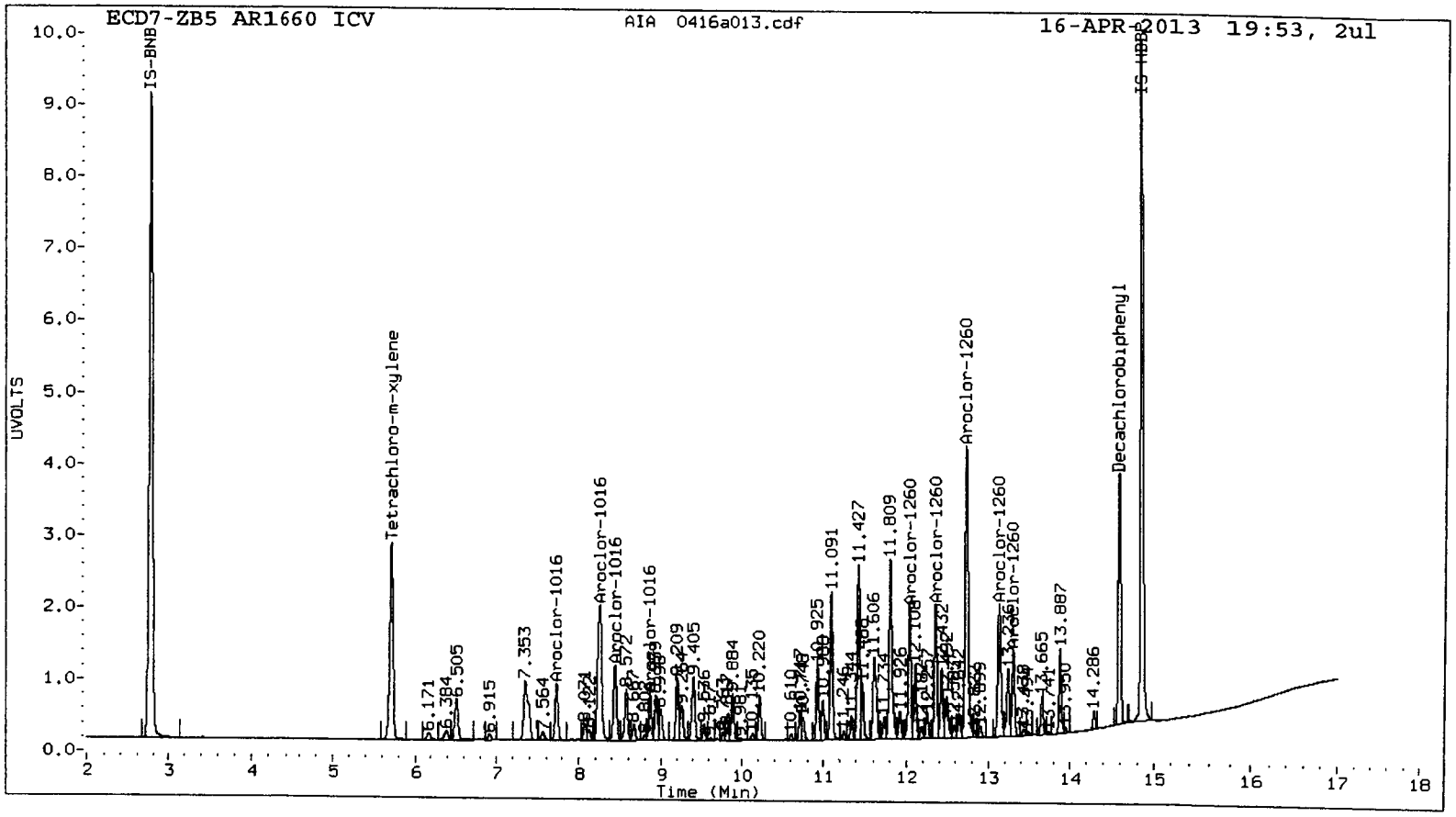
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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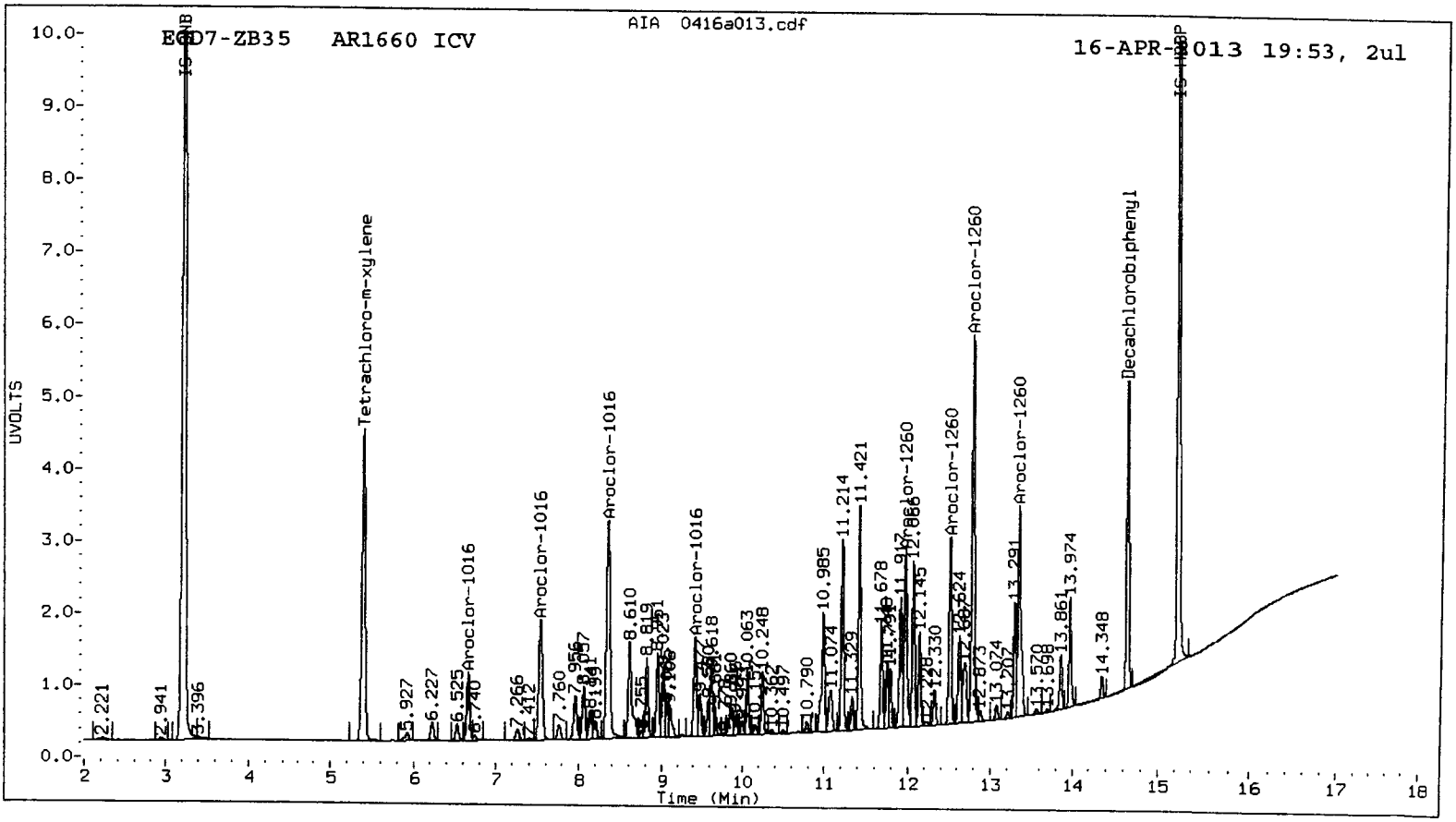
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD7-ZB35 AR1660 ICV
AIA 0416a013.cdf
16-APR-2013 19:53, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a014.d
Data file 2: 20130416.b/ical-2.b/0416a014.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 16-APR-2013 20:13
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.716	0.000	1496919	5.399	-0.001	2329305	21.9	20.5	6.2	Tetrachloro-m-xylene
14.591	-0.001	1382924	14.648	-0.001	1402454	20.5	20.8	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	54.6	51.3
Decachlorobiphenyl	51.3	52.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5508987	-1.5
Hexabromobiphenyl	4375297	4423479	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8450305	-0.9
Hexabromobiphenyl	6077527	5884105	-3.2

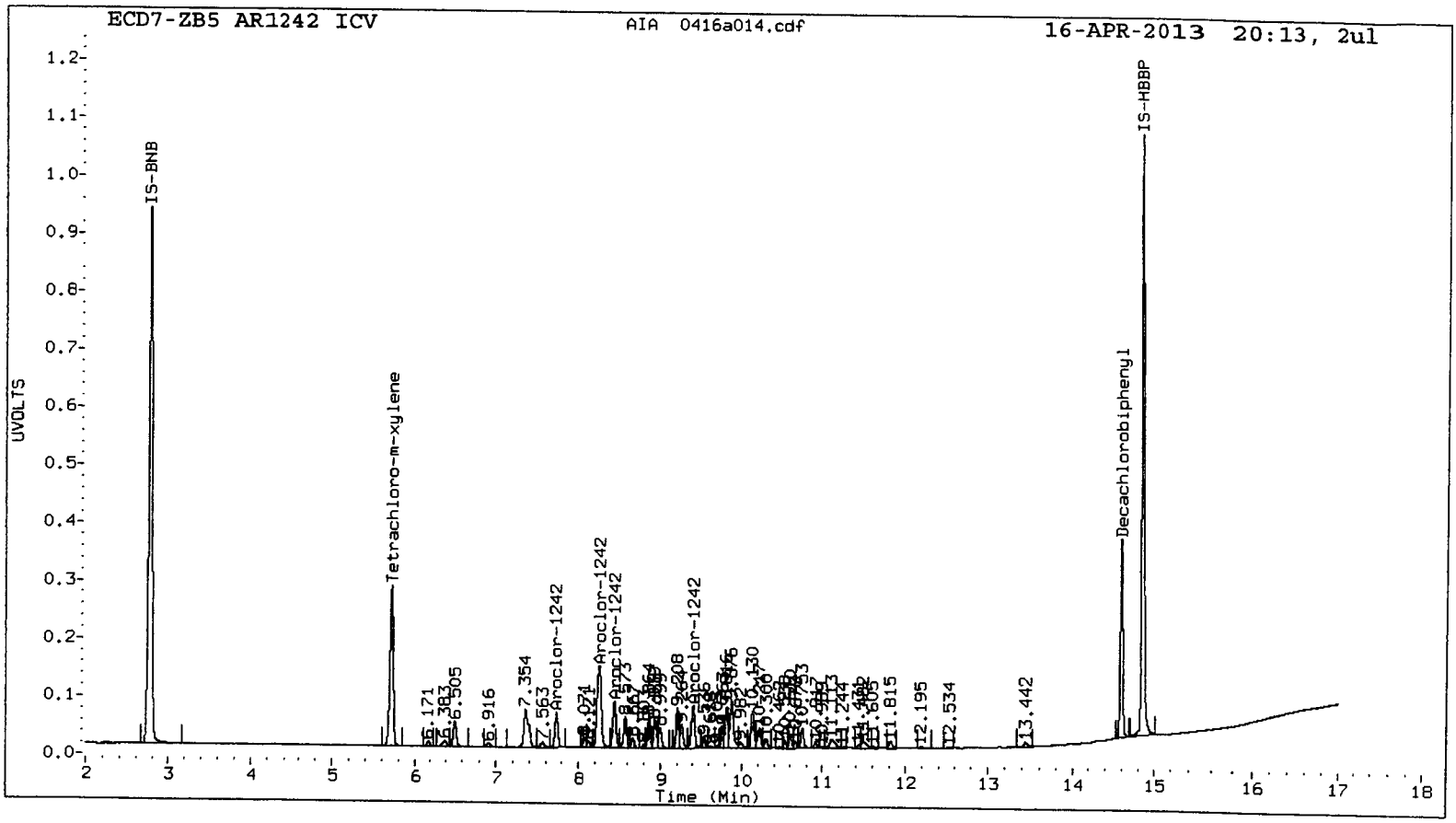
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

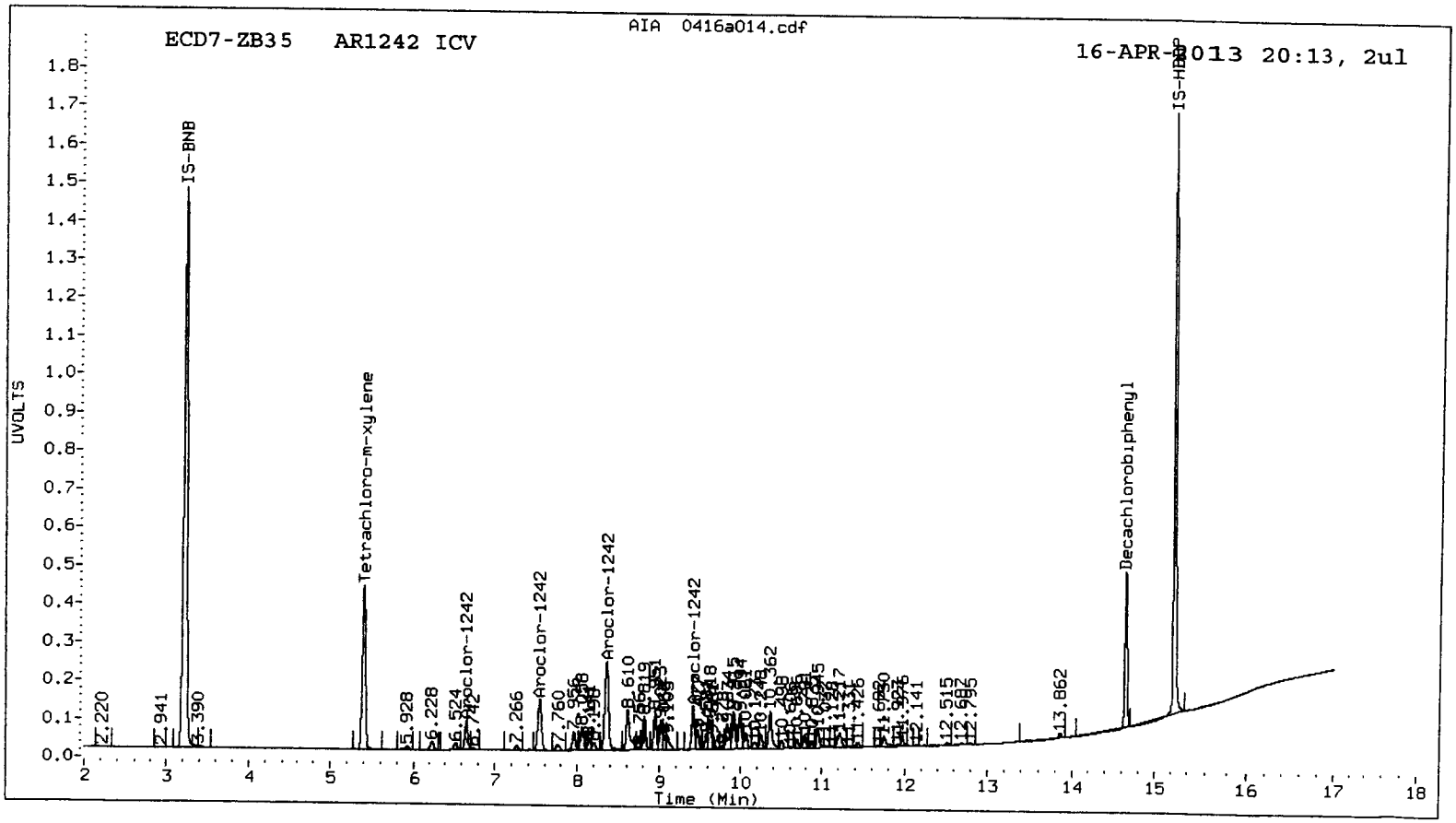
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	7.729	0.000	317750	250.1	1	6.659	-0.001	390962	249.0
Aroclor-1242	2	8.250	0.001	1070743	249.8	2	7.540	-0.001	803690	256.5
Aroclor-1242	3	8.437	0.000	424550	251.0	3	8.352	0.000	1561229	252.0
Aroclor-1242	4	9.405	0.000	402842	254.2	4	9.418	-0.001	544683	253.4
Total Col1Ave (4 peaks):					251.3	Total Col2Ave (4 peaks):				252.7 RPD = 1
Corrected Ave (3 peaks):					250.3	Corrected Ave (3 peaks):				251.5 RPD = 0

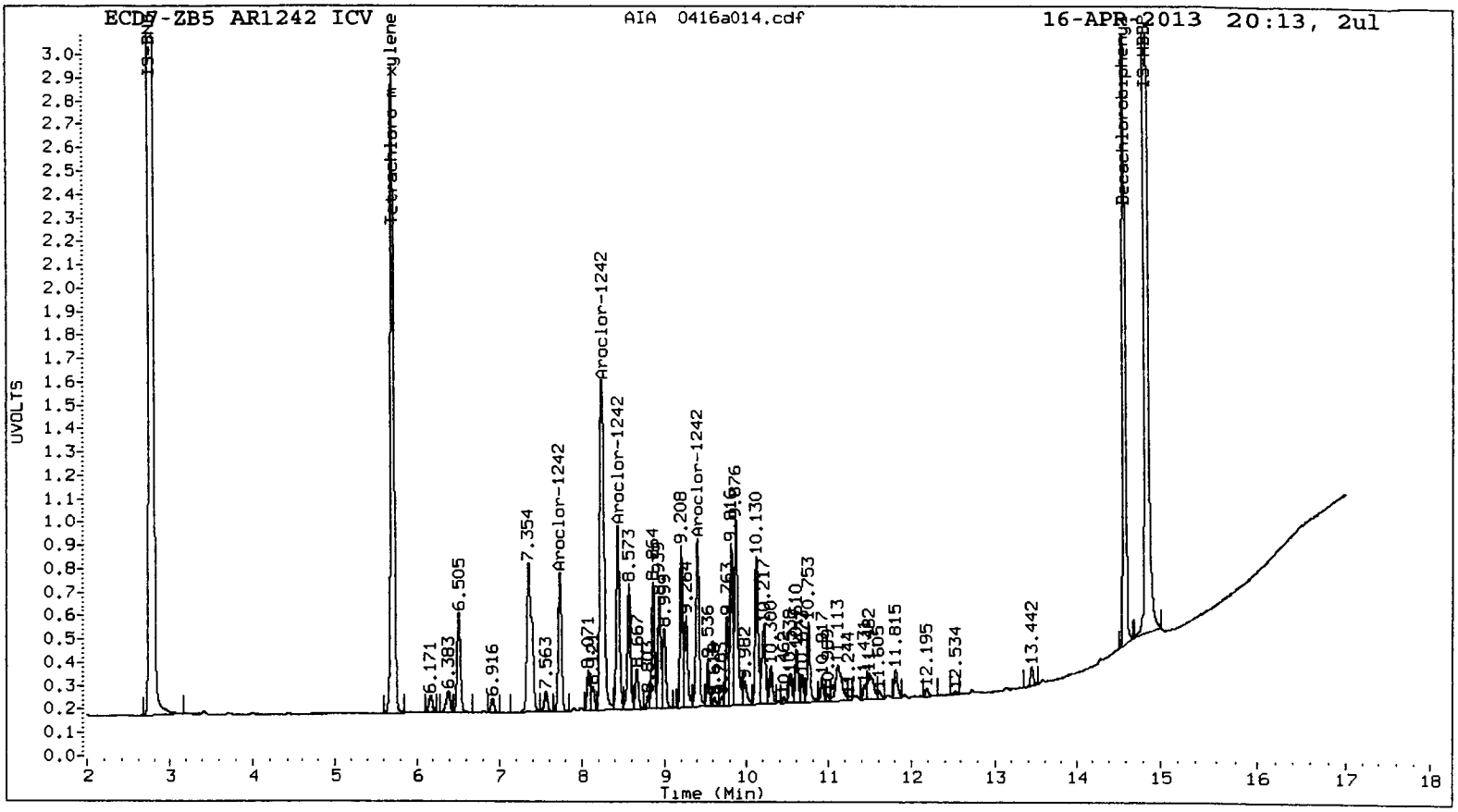
Total PCB Area Col1 (5.816 - 14.491) = 7582733 Col1 Total PCB = 0.2 ppm*

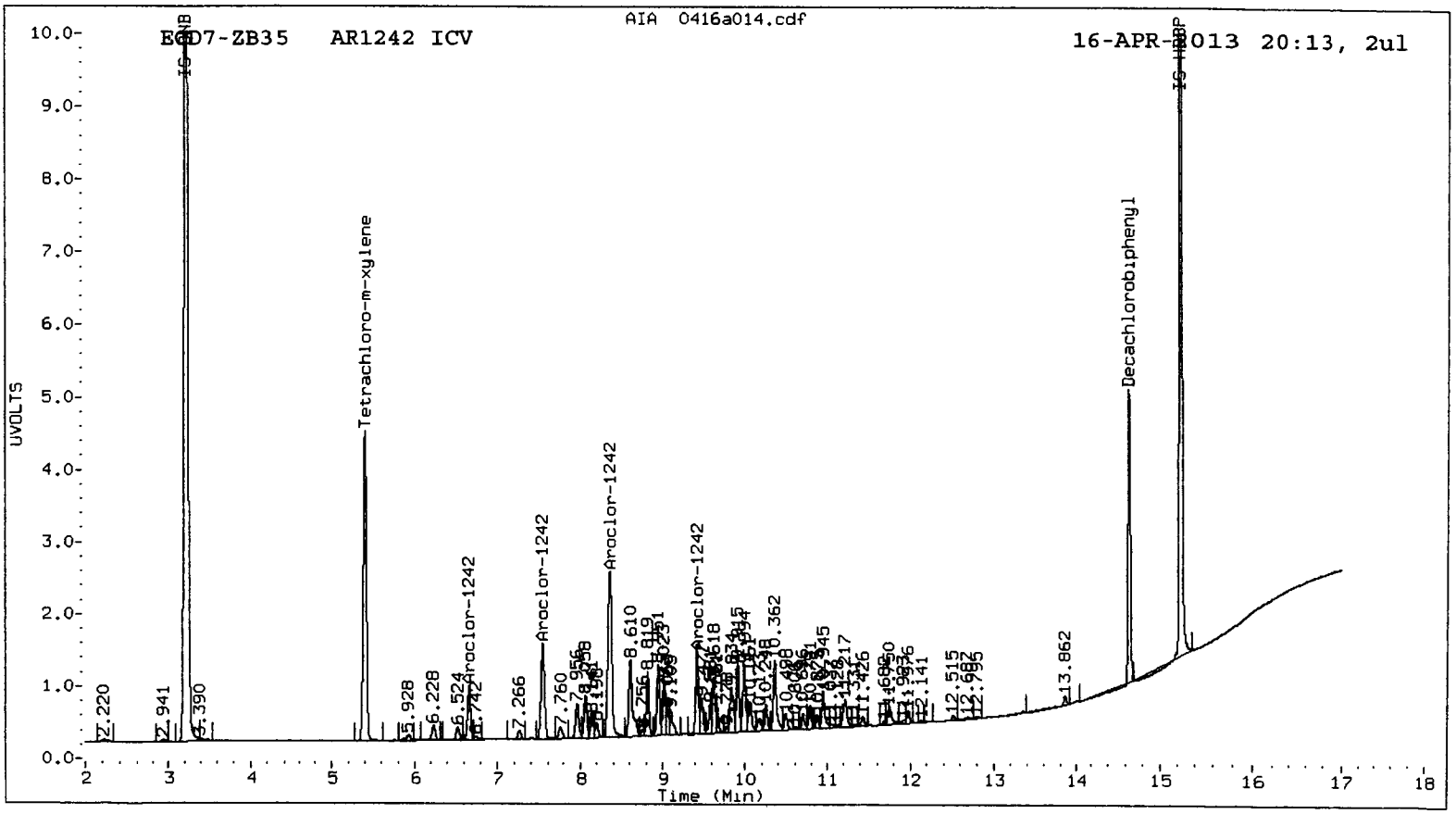
Total PCB Area Col2 (5.500 - 14.549) = 11666953 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD7-ZB5 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
IS-DNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
6.171
6.383
6.505
6.916
7.354
7.563
8.573
9.208
9.536
9.763
9.982
10.130
10.217
10.753
11.815
12.195
12.534
13.442
UVOLTS
Time (Min)


ECD7-ZB35 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
IS-DNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
2.220
2.941
3.390
5.928
6.228
6.524
7.266
7.760
8.610
10.362
12.515
13.862
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a015.d
Data file 2: 20130416.b/ical-2.b/0416a015.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 16-APR-2013 20:34
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	-0.001	1506819	5.399	-0.001	2369783	21.4	20.3	5.4	Tetrachloro-m-xylene
14.590	-0.001	1439319	14.648	-0.001	1551439	20.4	21.8	6.6	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	53.6	50.7
Decachlorobiphenyl	51.0	54.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5656162	1.2
Hexabromobiphenyl	4375297	4633321	5.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8702323	2.1
Hexabromobiphenyl	6077527	6212763	2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.243	-0.001	734390	238.3	1	7.538	-0.001	451068	253.7
Aroclor-1248	2	8.864	0.000	445820	227.3	2	8.348	-0.001	1090062	238.3
Aroclor-1248	3	9.404	0.000	599365	219.9	3	8.949	-0.001	741042	227.2
Aroclor-1248	4	9.877	0.001	790147	217.7	4	10.360	0.000	969860	218.9

Total Col1Ave (4 peaks): 225.8 Total Col2Ave (4 peaks): 234.5 RPD = 4

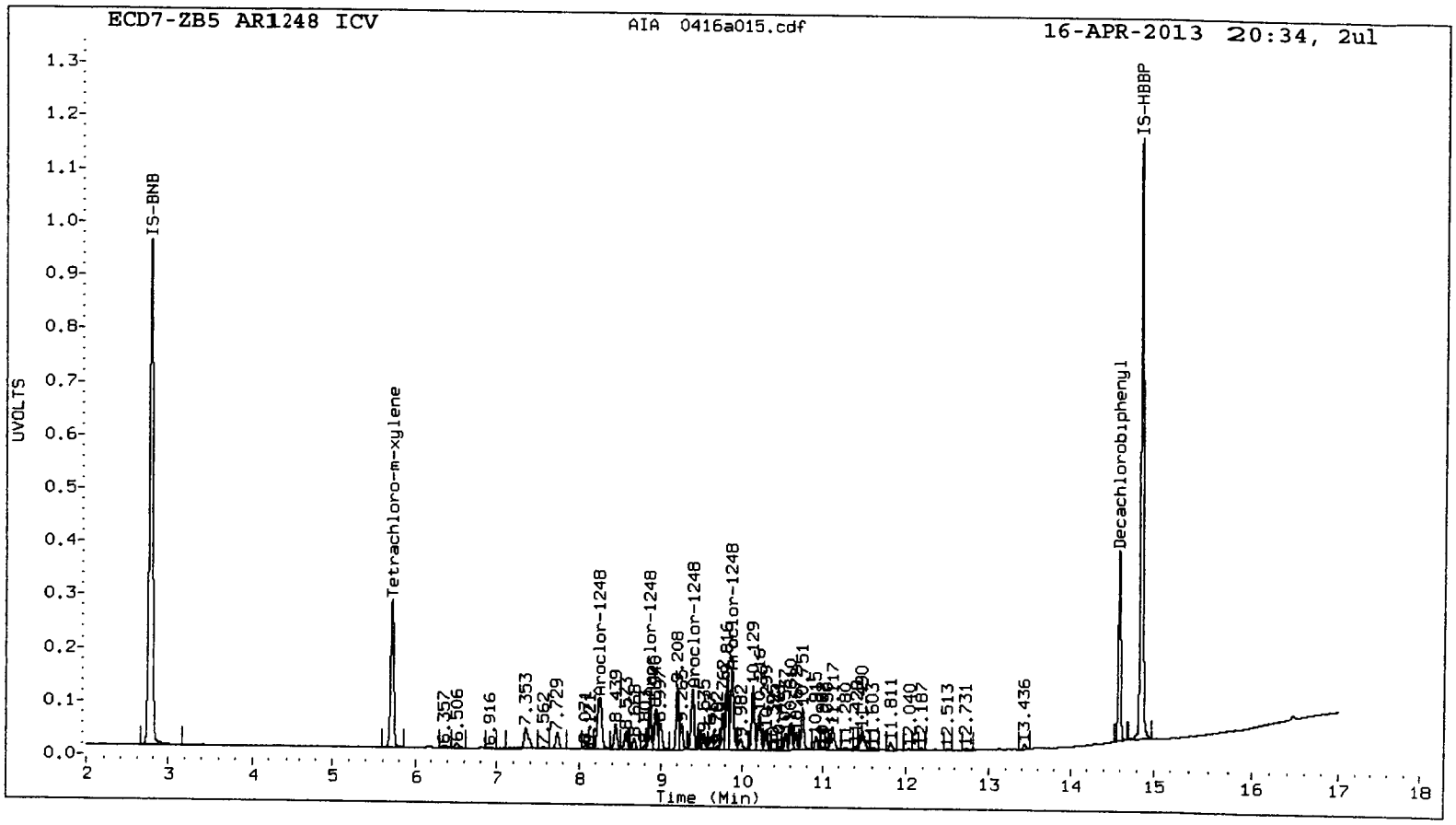
Corrected Ave (3 peaks): 221.7 Corrected Ave (3 peaks): 228.1 RPD = 3

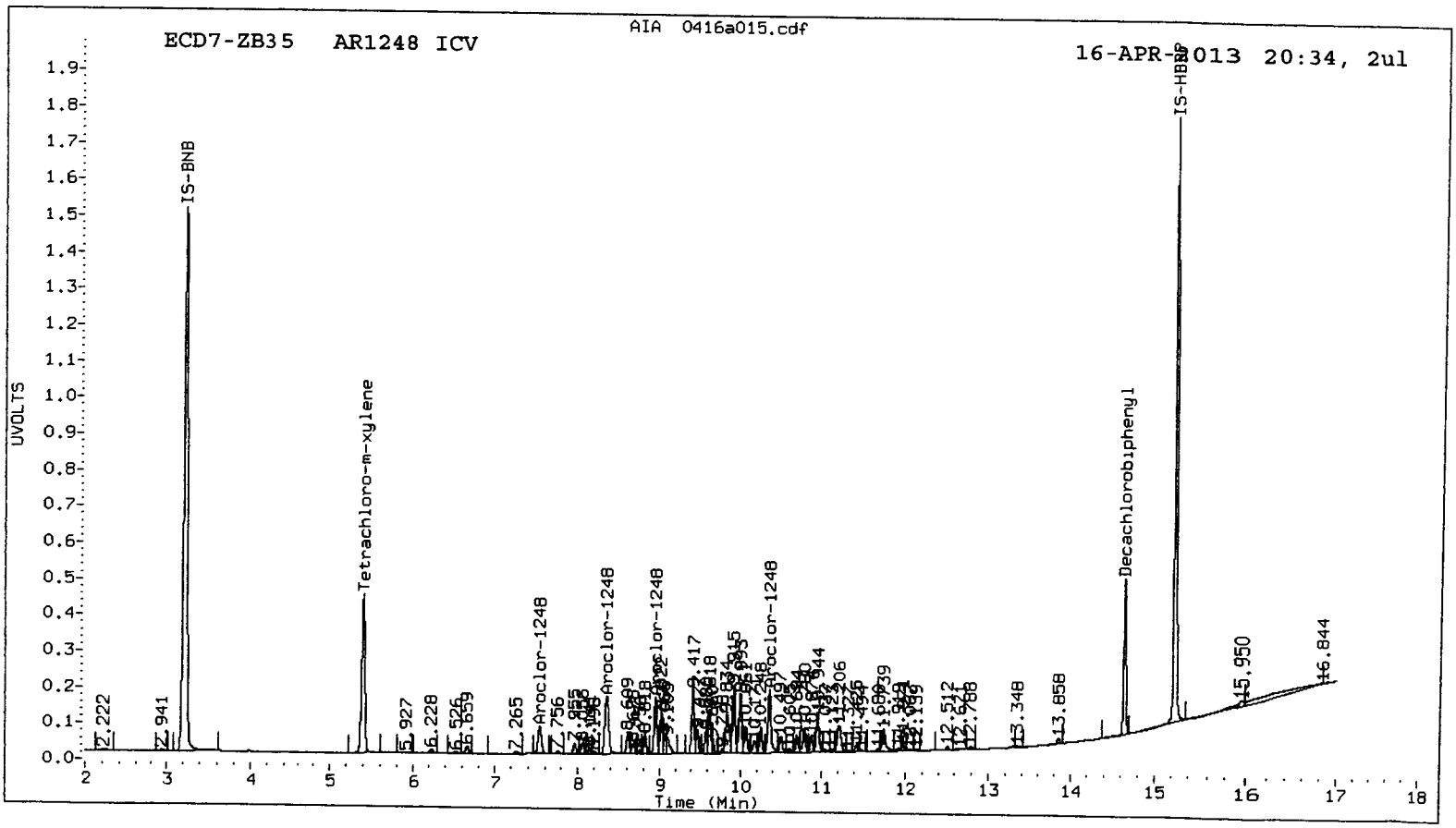
Total PCB Area Col1 (5.816 - 14.491) = 9372132 Col1 Total PCB = 0.2 ppm*

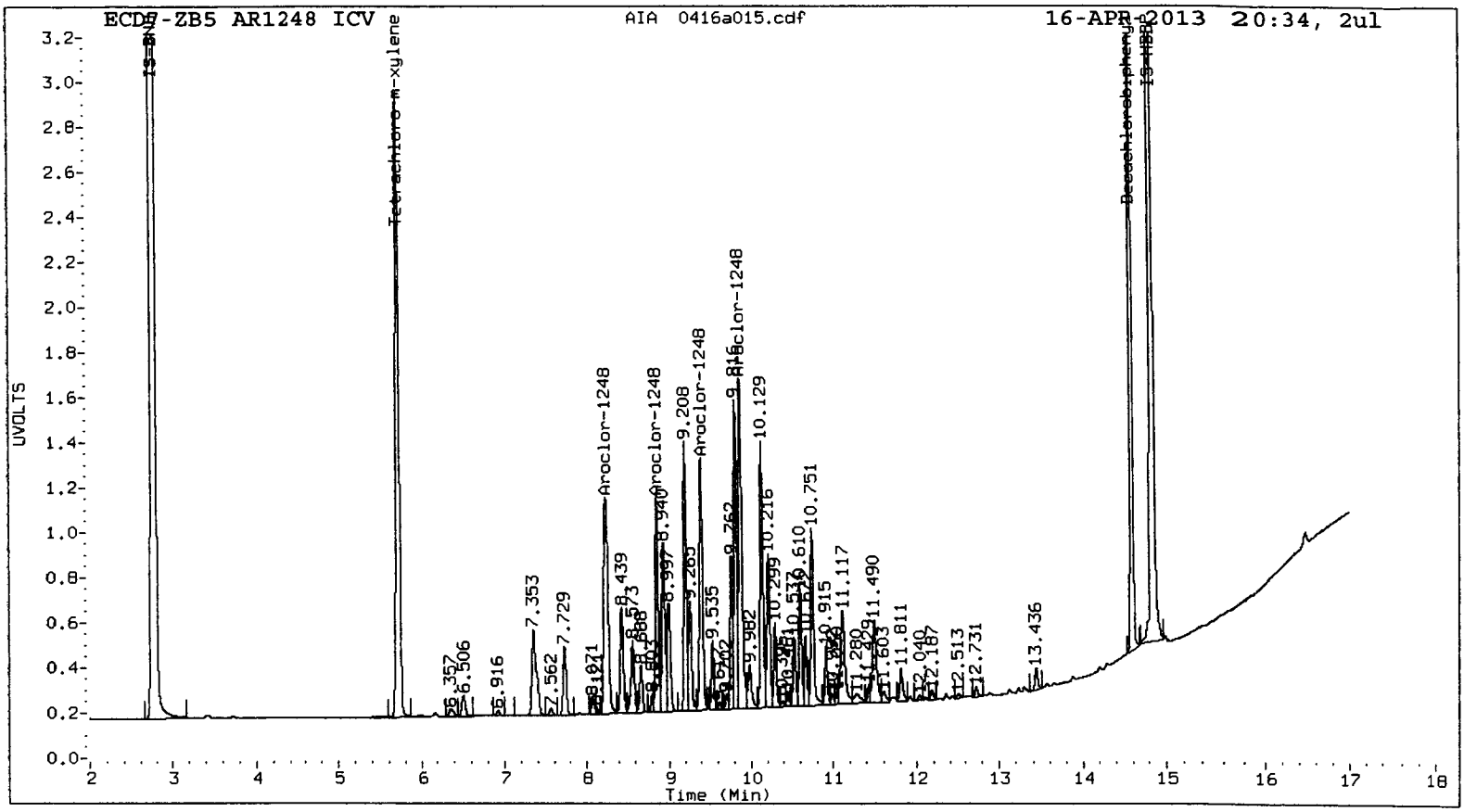
Total PCB Area Col2 (5.500 - 14.549) = 13673211 Col2 Total PCB = 0.3 ppm*

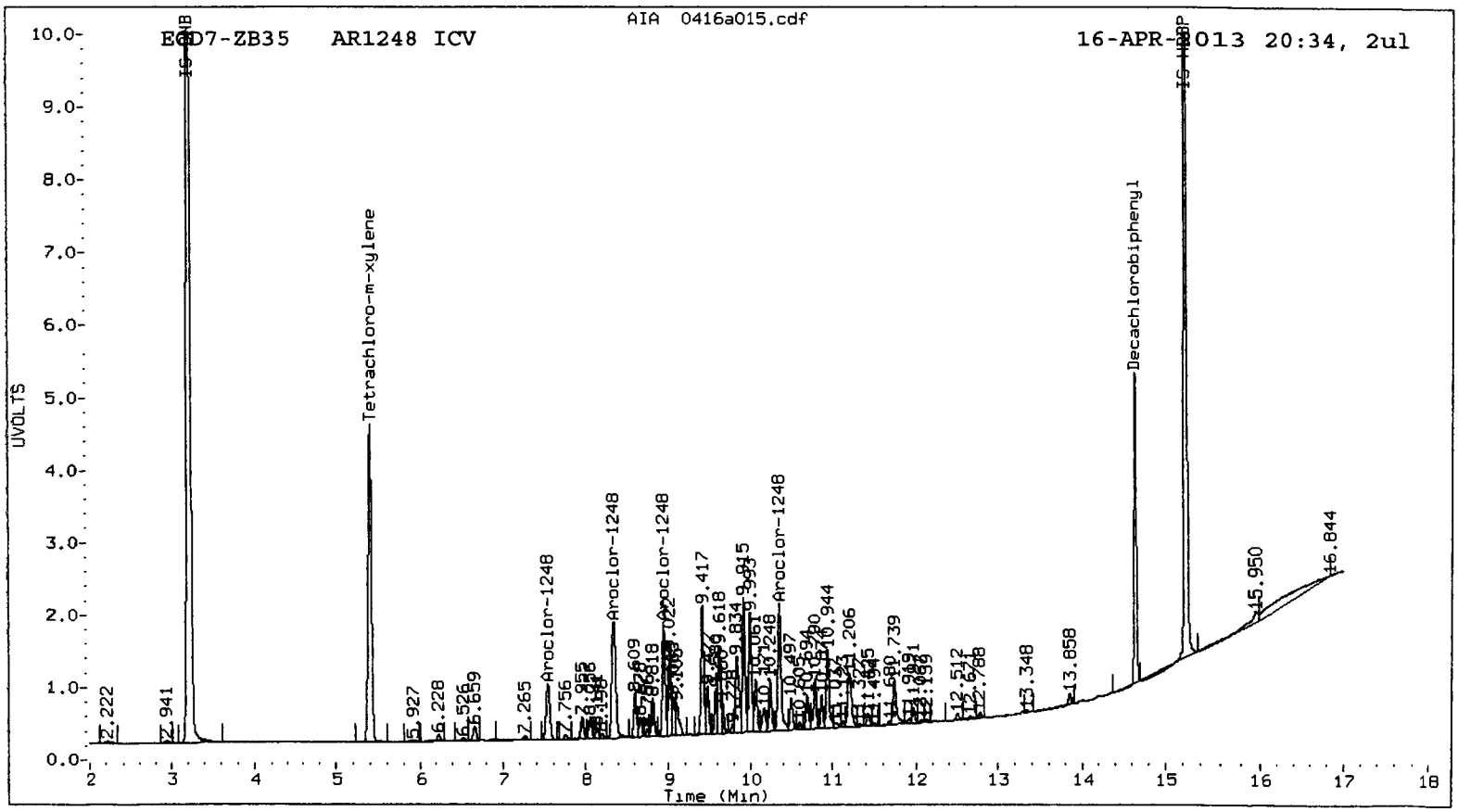
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB5 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)


ECD7-ZB35 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a016.d
Data file 2: 20130416.b/ical-2.b/0416a016.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 16-APR-2013 20:54
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.716	0.001	1491741	5.399	-0.001	2350574	20.9	19.9	4.8	Tetrachloro-m-xylene
14.591	0.000	1443473	14.649	0.000	1559217	20.2	21.8	7.9	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	52.1	49.7
Decachlorobiphenyl	50.4	54.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5751969	2.9
Hexabromobiphenyl	4375297	4697181	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8808751	3.3
Hexabromobiphenyl	6077527	6232306	2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.218	0.000	1021320	298.0	1	10.062	0.000	818499	288.4
Aroclor-1254	2	10.609	0.000	645047	311.4	2	10.247	0.000	1028657	292.6
Aroclor-1254	3	10.751	0.000	1205445	294.8	3	10.944	-0.001	1644767	286.8
Aroclor-1254	4	11.109	0.002	1317113	303.0	4	11.206	-0.003	1696414	297.9
Aroclor-1254	5	11.809	-0.001	1219415	297.2	5	11.971	-0.002	1230410	290.9

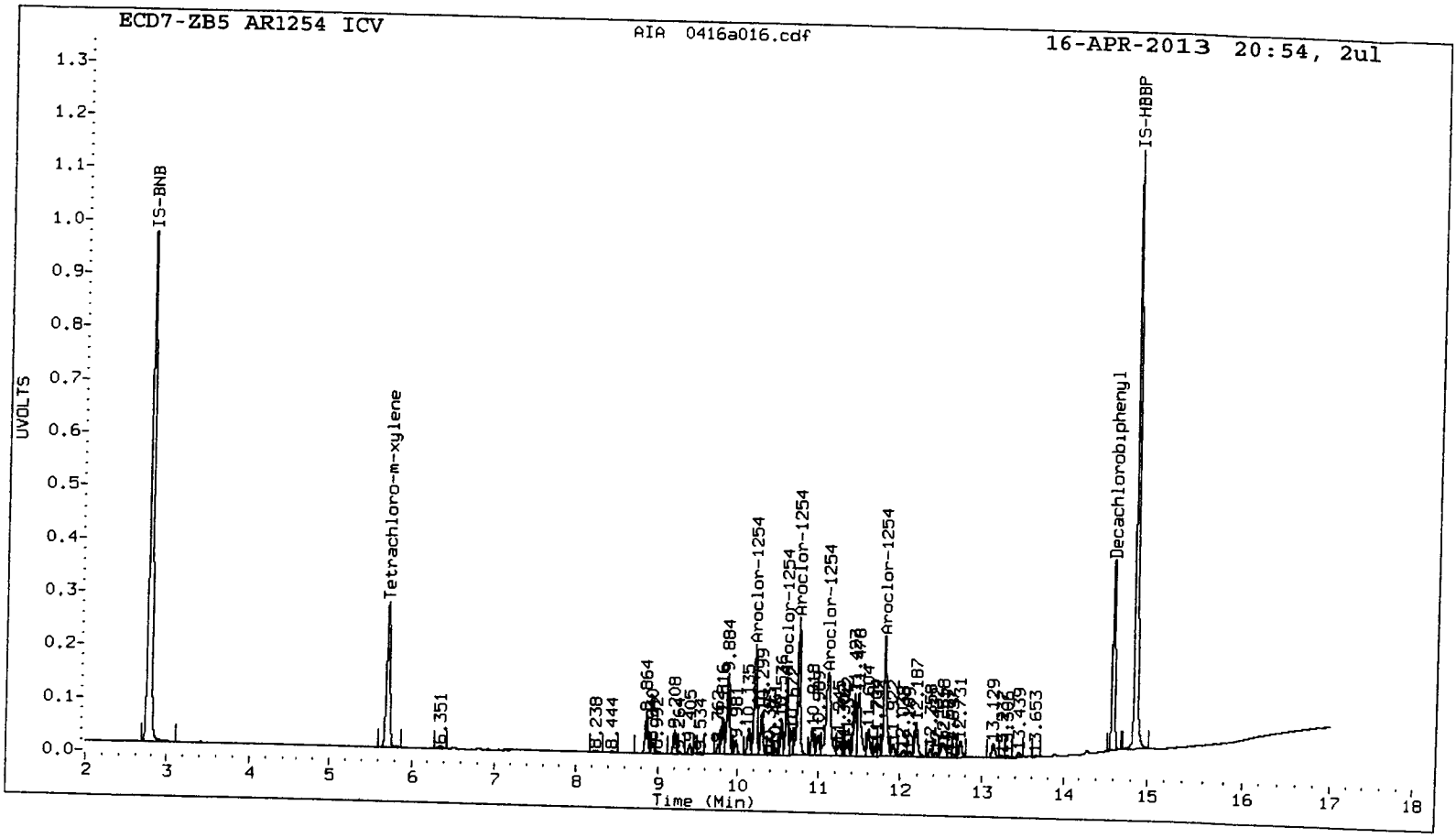
Total Col1Ave (5 peaks): 300.9 Total Col2Ave (5 peaks): 291.3 RPD = 3

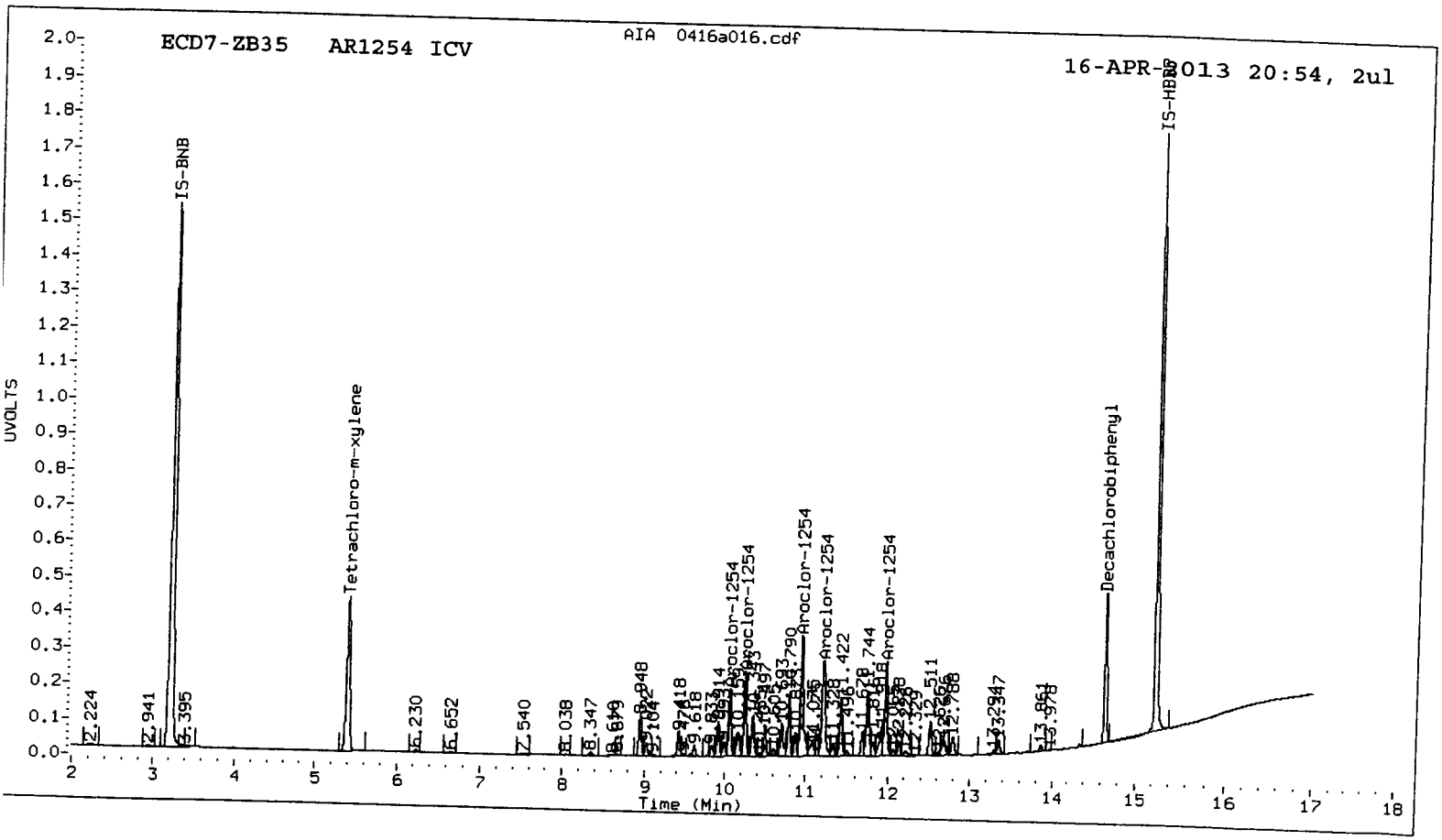
Corrected Ave (4 peaks): 298.2 Corrected Ave (4 peaks): 289.7 RPD = 3

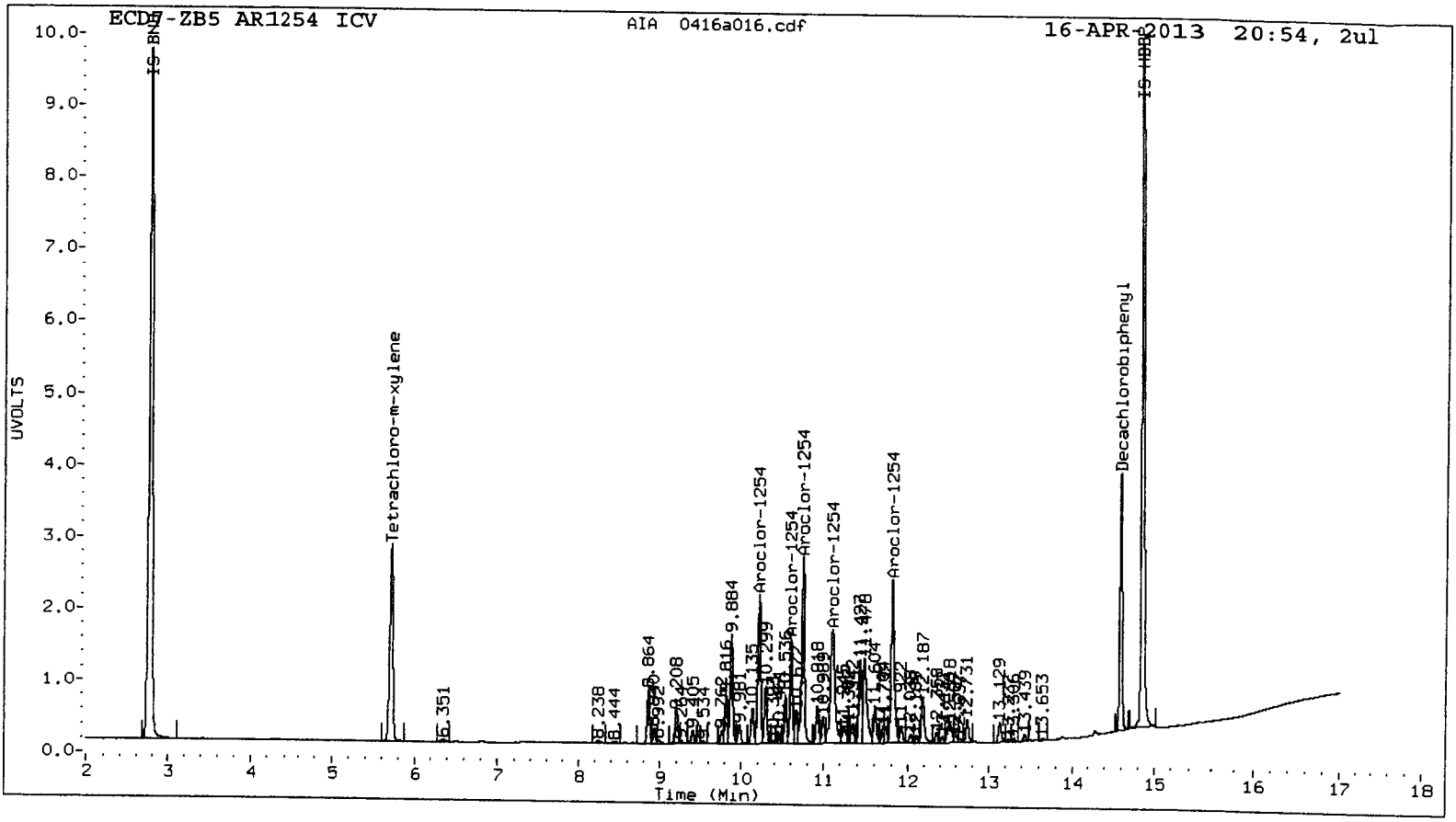
Total PCB Area Col1 (5.816 - 14.491) = 12369913 Col1 Total PCB = 0.3 ppm*

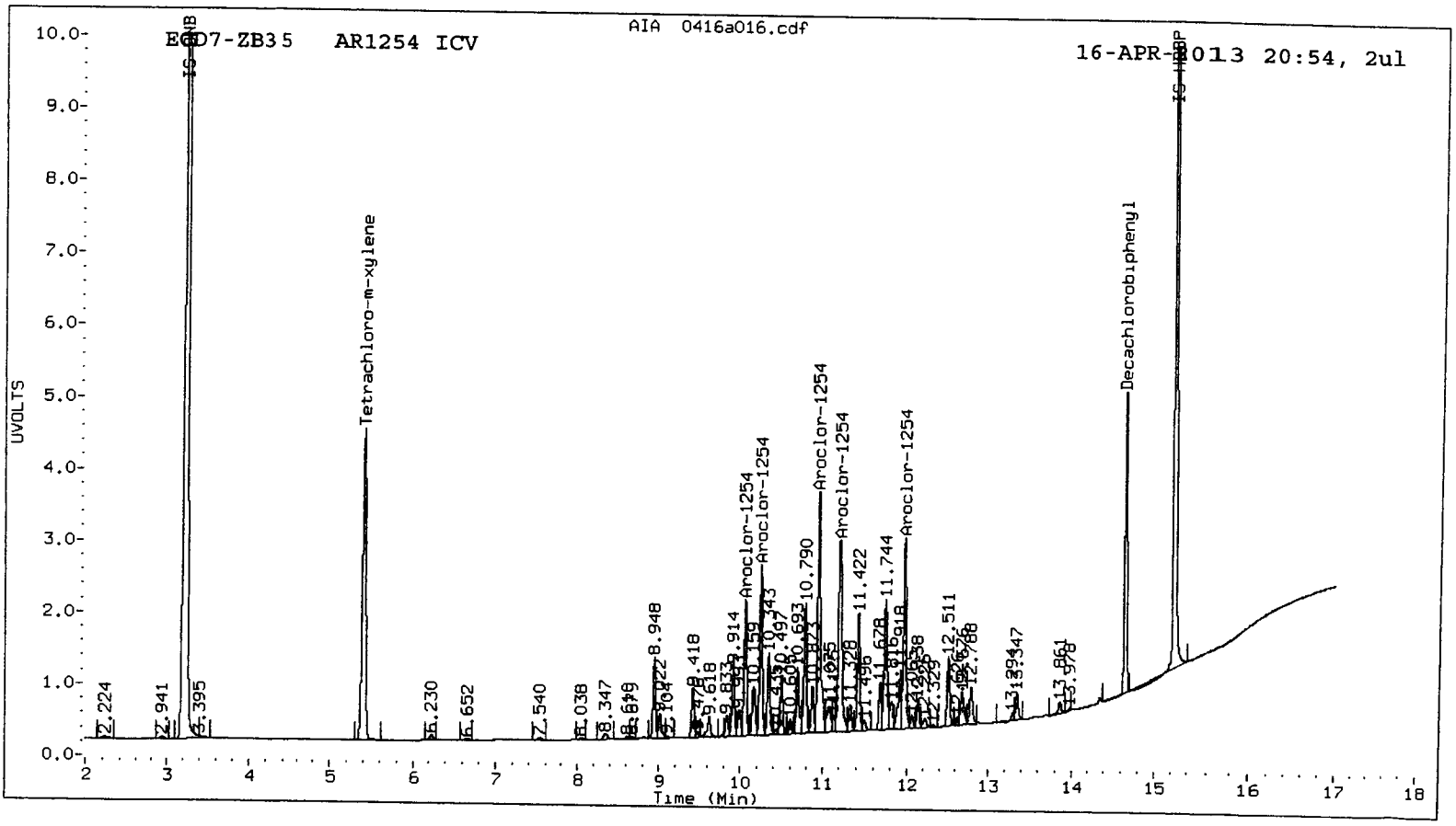
Total PCB Area Col2 (5.500 - 14.549) = 16362297 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
UVOLTS
Time (Min)


ECD7-ZB35 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a017.d
Data file 2: 20130416.b/ical-2.b/0416a017.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 16-APR-2013 21:15
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	-0.001	1549600	5.398	-0.002	2341597	21.5	19.7	8.7	Tetrachloro-m-xylene
14.590	-0.001	1421980	14.648	-0.001	1542704	19.7	21.4	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	53.7	49.2
Decachlorobiphenyl	49.2	53.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5806766	3.9
Hexabromobiphenyl	4375297	4739232	8.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8866116	4.0
Hexabromobiphenyl	6077527	6276279	3.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

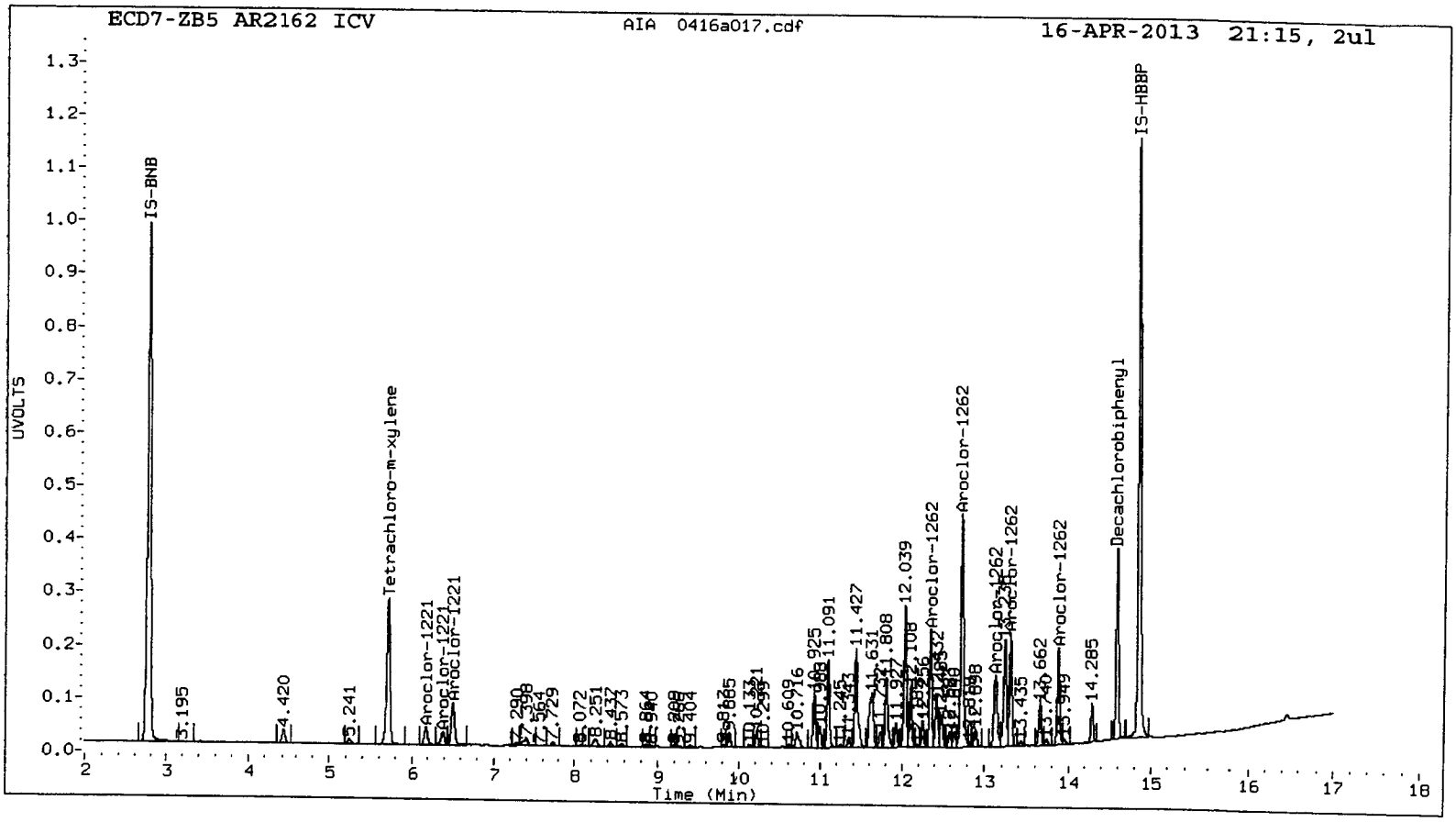
WL67 01242

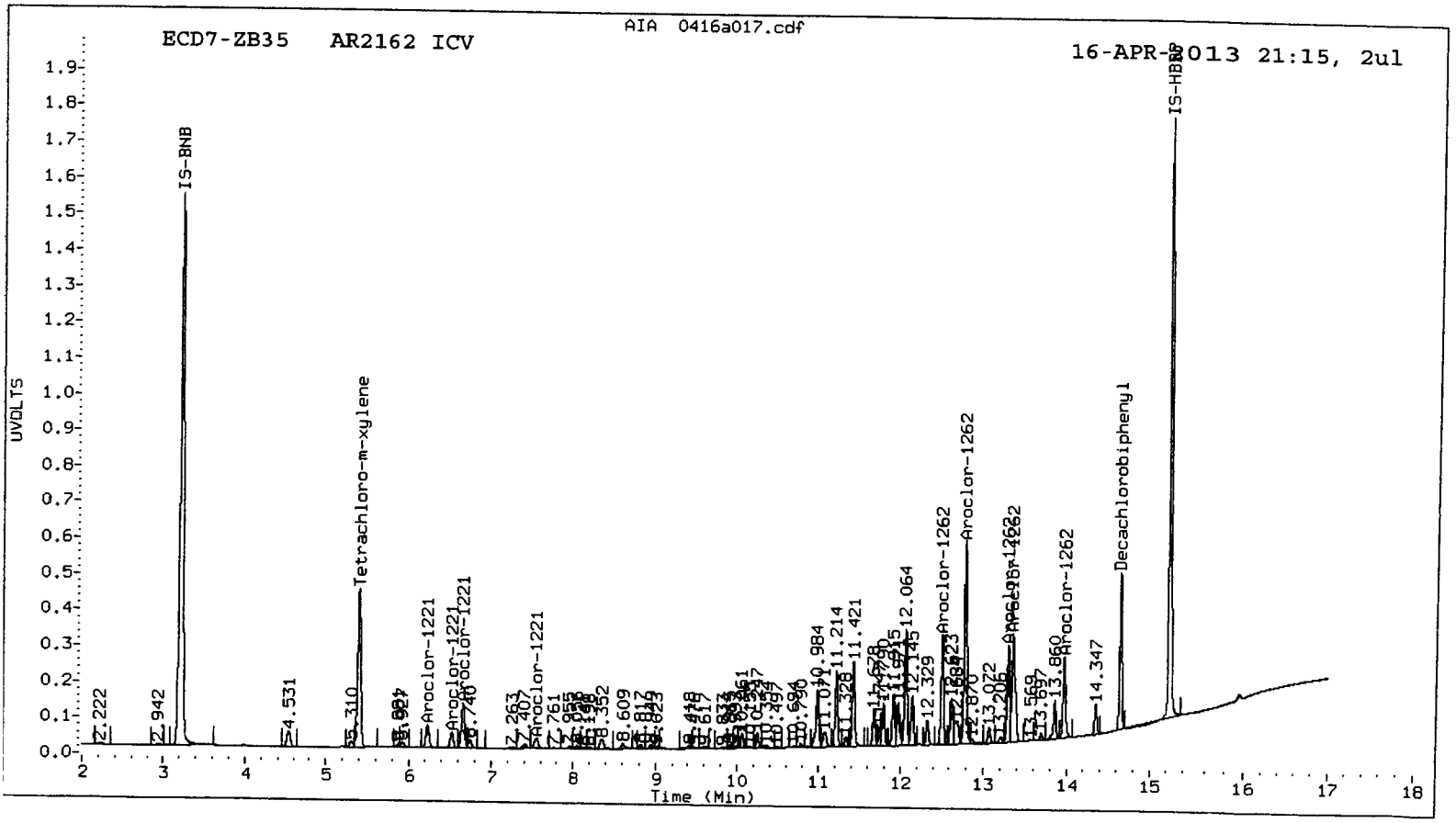
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	6.173	0.000	189611	268.1	1	6.226	-0.001	353375	258.3
Aroclor-1221	2	6.384	0.000	141818	265.5	2	6.524	-0.001	217710	249.7
Aroclor-1221	3	6.506	0.000	466975	260.7	3	6.659	-0.002	646822	256.7
Aroclor-1221	NS	---			----	4	7.552	-0.001	201327	232.6
	Total Col1Ave (3 peaks):				264.8	Total Col2Ave (4 peaks):			249.3	RPD = 6
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			246.3	
Aroclor-1262	1	12.357	-0.001	966688	280.7	1	12.515	-0.001	1325047	278.2
Aroclor-1262	2	12.728	-0.001	2170164	235.3	2	12.785	-0.002	2561342	233.3
Aroclor-1262	3	13.128	0.000	707081	237.6	3	13.289	-0.001	1170410	279.2
Aroclor-1262	4	13.303	-0.001	947678	273.2	4	13.348	-0.001	1763506	256.5
Aroclor-1262	5	13.886	-0.001	756749	248.9	5	13.974	-0.001	930473	246.0
	Total Col1Ave (5 peaks):				255.1	Total Col2Ave (5 peaks):			258.6	RPD = 1
	Corrected Ave (4 peaks):				248.7	Corrected Ave (4 peaks):			253.5	RPD = 2

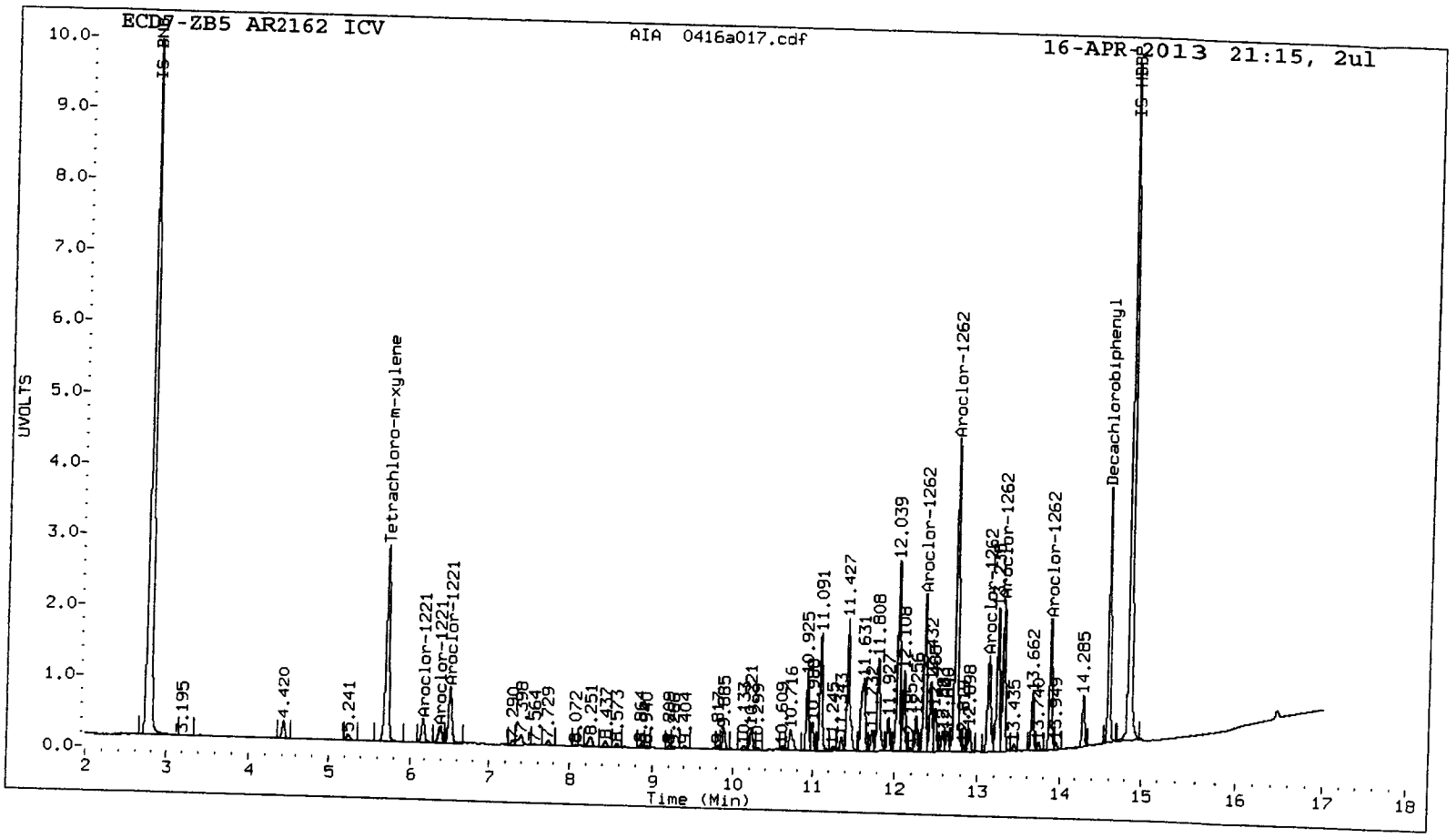
Total PCB Area Col1 (5.816 - 14.491) = 16252441 Col1 Total PCB = 0.4 ppm*

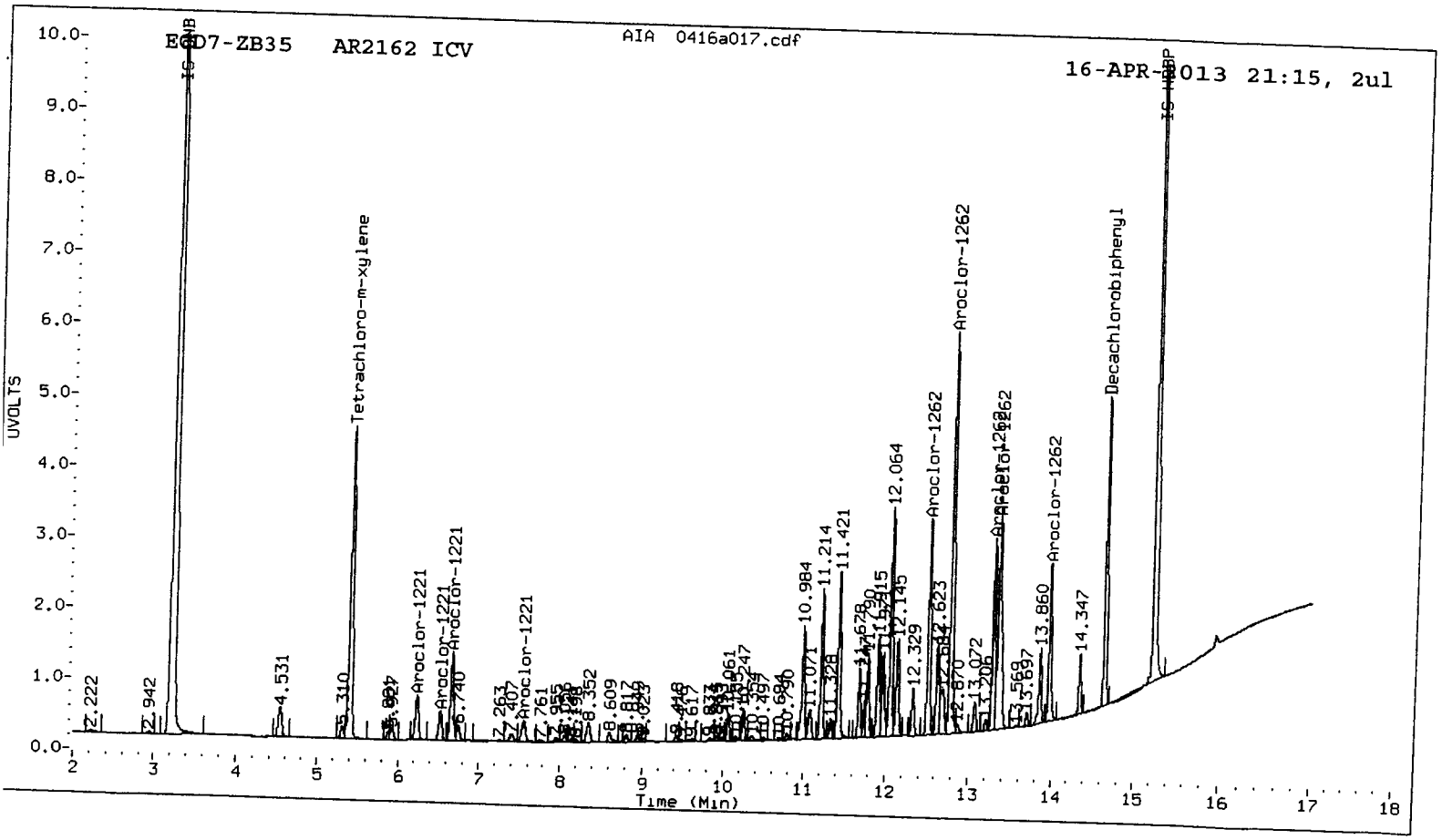
Total PCB Area Col2 (5.500 - 14.549) = 20578294 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
5.195
4.420
5.241
12.039
11.427
14.285


ECD7-ZB35 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
2.222
2.942
4.531
5.310
12.064
11.421
14.347


ECD7-ZB5 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl


ECD7-ZB35 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a018.d
Data file 2: 20130416.b/ical-2.b/0416a018.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 16-APR-2013 21:35
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	0.000	1544395	5.398	-0.002	2369259	21.9	20.4	6.8	Tetrachloro-m-xylene
14.590	-0.001	2328659	14.646	-0.003	2589635	33.0	37.3	12.2	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	54.7	51.1
Decachlorobiphenyl	82.6	93.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5678965	1.6
Hexabromobiphenyl	4375297	4626646	5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8638794	1.3
Hexabromobiphenyl	6077527	6054334	-0.4

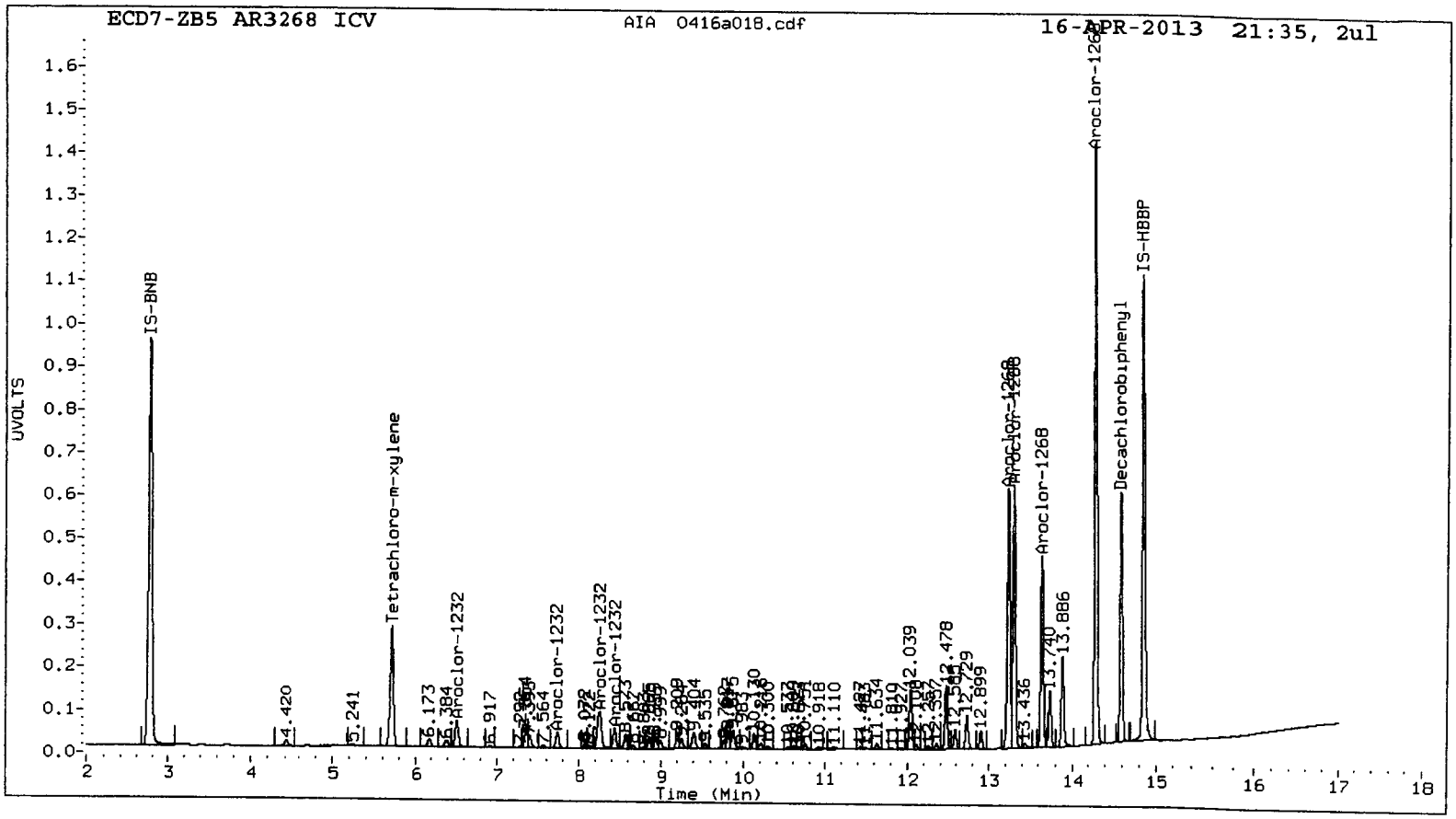
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.506	0.000	347554	299.5	1	6.659	-0.001	517513	301.7
Aroclor-1232	2	7.729	0.000	192801	285.3	2	7.540	-0.002	536257	283.1
Aroclor-1232	3	8.251	0.003	636348	281.8	3	8.352	0.001	953442	279.6
Aroclor-1232	4	8.437	0.000	255408	281.4	4	8.950	-0.001	257419	231.9
Total Col1Ave (4 peaks):					287.0	Total Col2Ave (4 peaks):				274.1 RPD = 5
Corrected Ave (3 peaks):					282.8	Corrected Ave (3 peaks):				264.9 RPD = 7
Aroclor-1268	1	13.235	-0.001	2677445	275.5	1	13.289	-0.002	3008694	283.9
Aroclor-1268	2	13.302	0.000	2739076	302.0	2	13.351	-0.001	3142092	312.5
Aroclor-1268	3	13.648	0.000	1894329	246.6	3	13.697	-0.002	2050022	252.8
Aroclor-1268	4	14.287	0.000	5458040	232.7	4	14.347	-0.001	6266962	235.5
Total Col1Ave (4 peaks):					264.2	Total Col2Ave (4 peaks):				271.2 RPD = 3
Corrected Ave (3 peaks):					251.6	Corrected Ave (3 peaks):				257.4 RPD = 2

Total PCB Area Col1 (5.816 - 14.491) = 20912941 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 26266615 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
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IS-HBBP
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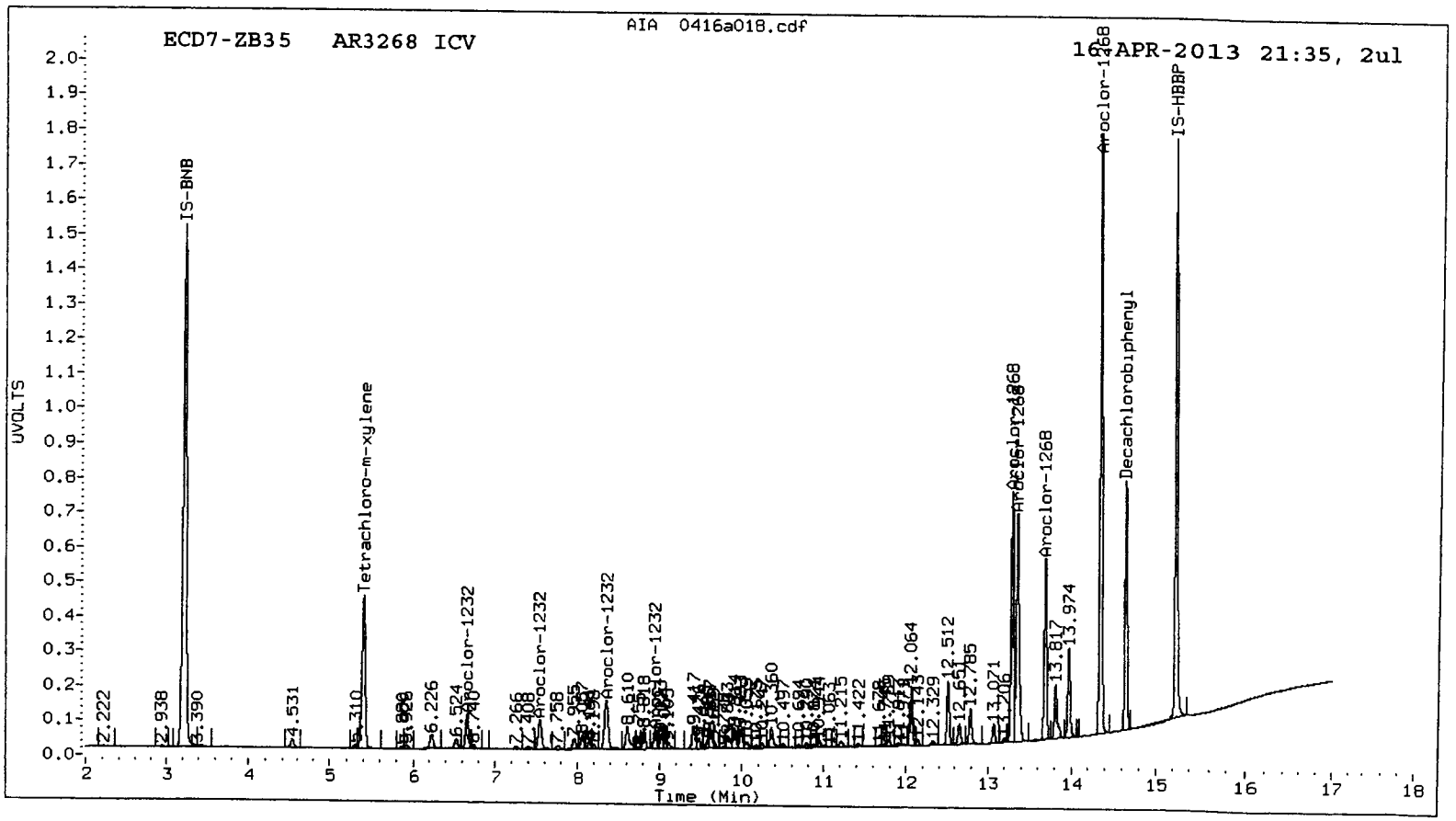
13.886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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
2.222
2.938
3.390
4.531
5.310
6.226
6.524
6.740
7.266
7.408
7.758
8.610
8.918
9.955
10.497
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12.329
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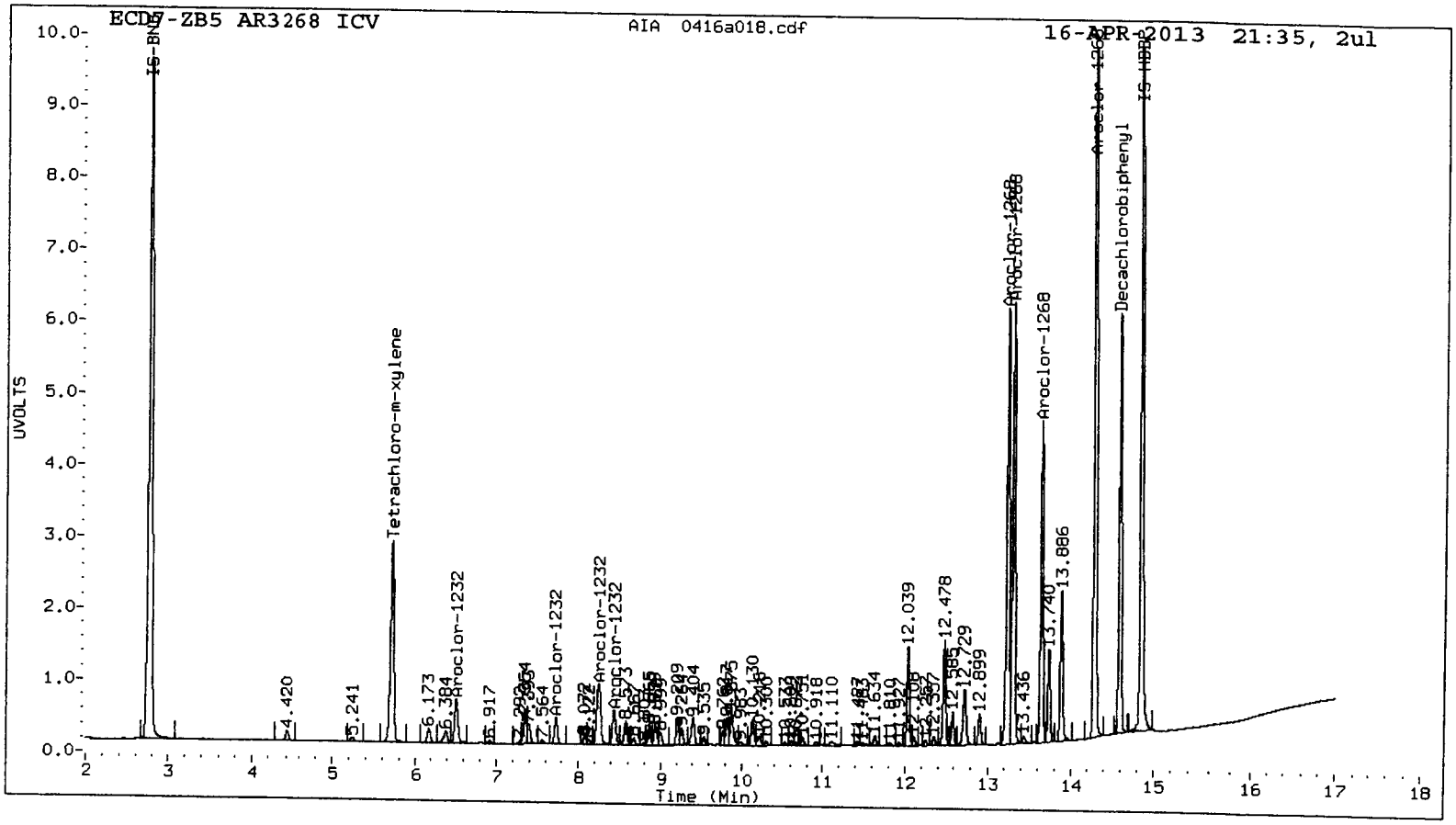
13.071
13.206
13.817
13.974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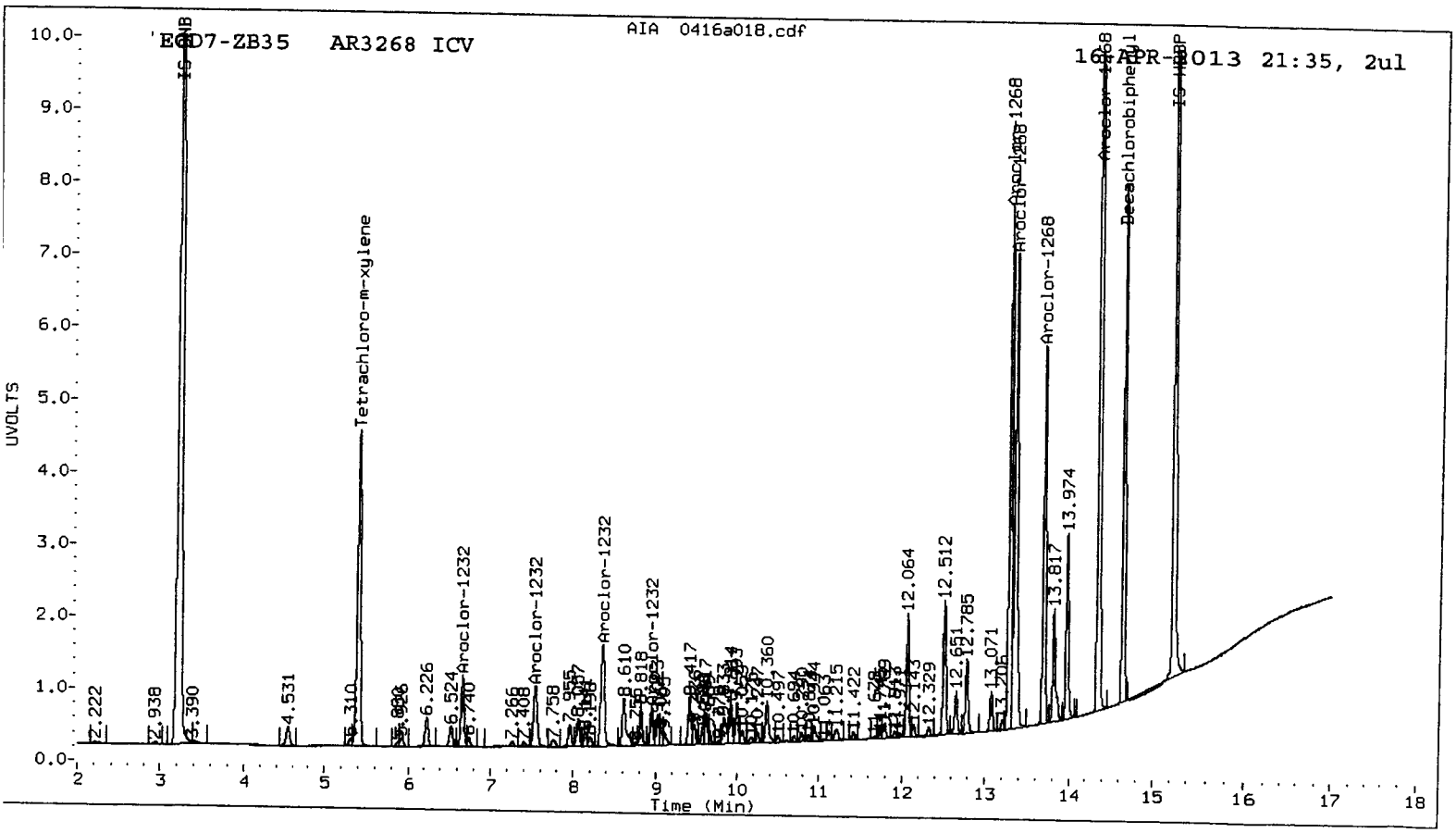
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
4.420
5.241
6.173
6.384
6.917
7.564
12.039
12.478
12.729
12.899
13.436
13.740
13.886
UVOLTS
Time (Min)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Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
2.222
2.938
3.390
4.531
6.226
6.524
6.740
8.610
12.064
12.512
12.651
12.785
13.071
13.817
13.974
UVOLTS
Time (Min)

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130416.b/ical-1.b/0416a019.d ARI ID: DDTS 0.1

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
10.182	0.000	4855760	10.338	0.000	6461008	0.100	0.100	0.0	2,4-DDE
10.758	0.000	4460663	10.737	0.000	10244505	0.100	0.100	0.0	2,4-DDD
11.277	0.000	5726542	11.516	0.000	9099887	0.100	0.200#	66.7*	2,4-DDT
10.634	0.000	7740183	11.046	0.000	5731712	0.100	0.100	0.0	4,4-DDE
11.224	0.000	6230195	11.516	0.000	9099887	0.100	0.200#	66.7*	4,4-DDD
11.744	0.000	7248048	11.954	0.000	9360726	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 16-APR-2013 22:16 Init. Calib. Date: 16-APR-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	10.638	18783
4,4-DDD	11.234	39306
4,4-DDT	11.745	7277827

Col 1: 4,4-DDT Percent Breakdown = 0.8 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.046	----
4,4-DDD/2,4-DDT	11.527	42740
4,4-DDT	11.954	9405760

Col 2: 4,4-DDT Percent Breakdown = 0.5 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL67/WL49 Client ID: NPDES sampling

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: 04/16/13 Analysis Start Date: 04/23/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / LCS only
Surrogate Recovery in Control? (Surr DIL in Sample)	Y / N / ✓ Extracts	MS / MSD Recovery in Control?	Y / N / Batch
Internal STD. within 50-200%?	NA / N / ✓	MS / MSD RPD ≤30%?	NA / Batch
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

surr rec. reported as NR is due to misc peak co-eluting skimmed baseline rise for sample WL49G. ms/msd spike inflates 48/54 quants in ms/msd - diluted samples to get on linear curve. went w/ best fit, samples might be a mix of 42/48. Sample WL49F looks more like 62 (or a 60/62 mix)

Surr Surrogate (some out 20X - 100X DIL) NO control Limits for DIL Runs advisory!

(Review 1) Analyst: JE **Date:** 04/24/13

(Review 2) Reviewer: CB **Date:** 4/24/13

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 04/23/13 Analysis: PCB Analyst: JL

Column 1 Serial No.: 213234 Column Type: ZB5

Column 2 Serial No.: 175388 Column Type: ZB35

GC Method: PCB ICal Date: 04/16/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
2006-1	1980-1,2,3,4,5,6	2009-2,3,4,5,6,7
~~2009~~ 1004/24/13		

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	23-APR-2013 16:26	0423a001.d	1	RINSE
2	23-APR-2013 16:48	0423a002.d	1	DDT BD
3	23-APR-2013 17:10	0423a003.d	1	AR1254
4	23-APR-2013 17:32	0423a004.d	1	AR1660
5	23-APR-2013 17:54	0423a005.d	1	WL49MBS1
6	23-APR-2013 18:16	0423a006.d	1	WL49LCSS1
7	23-APR-2013 18:38	0423a007.d	1	WL49QLS
8	23-APR-2013 18:59	0423a008.d	1	WL49F
9	23-APR-2013 19:21	0423a009.d	1	WL49G
10	23-APR-2013 19:43	0423a010.d	1	WL49GMS
11	23-APR-2013 20:05	0423a011.d	1	WL49GMSD
12	23-APR-2013 20:27	0423a012.d	1	WL67A
13	23-APR-2013 20:49	0423a013.d	1	WL67B
14	23-APR-2013 21:11	0423a014.d	20	WL49F
15	23-APR-2013 21:33	0423a015.d	20	WL67A
16	23-APR-2013 21:55	0423a016.d	20	WL67B
17	23-APR-2013 22:17	0423a017.d	1	WK62MBS1
18	23-APR-2013 22:39	0423a018.d	1	WK62A
19	23-APR-2013 23:01	0423a019.d	1	AR1248
20	23-APR-2013 23:23	0423a020.d	1	AR1660

1004/24/13

1

WL67:0125Y

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130416.b/0423-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd7.i Date: 23-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1626	0423a001.d	RINSE		1	NO MANUAL INTEGRATION
1648	0423a002.d	DDT BD		1	NO MANUAL INTEGRATION
1710	0423a003.d	AR1254		1	NO MANUAL INTEGRATION
1732	0423a004.d	AR1660		1	NO MANUAL INTEGRATION
1754	0423a005.d	WL49MBS1		1	NO MANUAL INTEGRATION
1816	0423a006.d	WL49LCSS1		1	NO MANUAL INTEGRATION
1838	0423a007.d	WL49QLS		1	NO MANUAL INTEGRATION
1859	0423a008.d	WL49F		1	NO MANUAL INTEGRATION
1921	0423a009.d	WL49G		1	NO MANUAL INTEGRATION
1943	0423a010.d	WL49GMS		1	NO MANUAL INTEGRATION
2005	0423a011.d	WL49GMSD		1	NO MANUAL INTEGRATION
2027	0423a012.d	WL67A		1	NO MANUAL INTEGRATION
2049	0423a013.d	WL67B		1	NO MANUAL INTEGRATION
2111	0423a014.d	WL49F		20	NO MANUAL INTEGRATION
2133	0423a015.d	WL67A		20	NO MANUAL INTEGRATION
2155	0423a016.d	WL67B		20	NO MANUAL INTEGRATION
2217	0423a017.d	WK62MBS1	WK62MBS1	1	NO MANUAL INTEGRATION
2239	0423a018.d	WK62A	LOD1	1	NO MANUAL INTEGRATION
2301	0423a019.d	AR1248		1	NO MANUAL INTEGRATION
2323	0423a020.d	AR1660		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a003.d
Data file 2: 20130416.b/0423-2.b/0423a003.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 23-APR-2013 17:10
Report Date: 04/24/2013 09:06
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.720	-0.009	1933493	5.387	-0.007	2660641	20.3	19.3	4.7	Tetrachloro-m-xylene
14.591	-0.001	1541036	14.640	0.001	1702081	16.8	20.8	21.2	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	50.6	48.3
Decachlorobiphenyl	42.0	51.9

JL 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7676793	37.3
Hexabromobiphenyl	4375297	6025884	37.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10259981	20.3
Hexabromobiphenyl	6077527	7152297	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.220	0.000	1163885	254.4	1	10.052	0.000	830566	251.2
Aroclor-1254	2	10.610	0.000	703818	254.6	2	10.237	0.000	1043253	254.8
Aroclor-1254	3	10.752	0.000	1383395	253.5	3	10.933	0.000	1691321	253.2
Aroclor-1254	4	11.111	0.000	1420025	244.8	4	11.187	0.000	1706504	257.3
Aroclor-1254	5	11.809	0.000	1347369	246.1	5	11.959	0.000	1215036	246.6

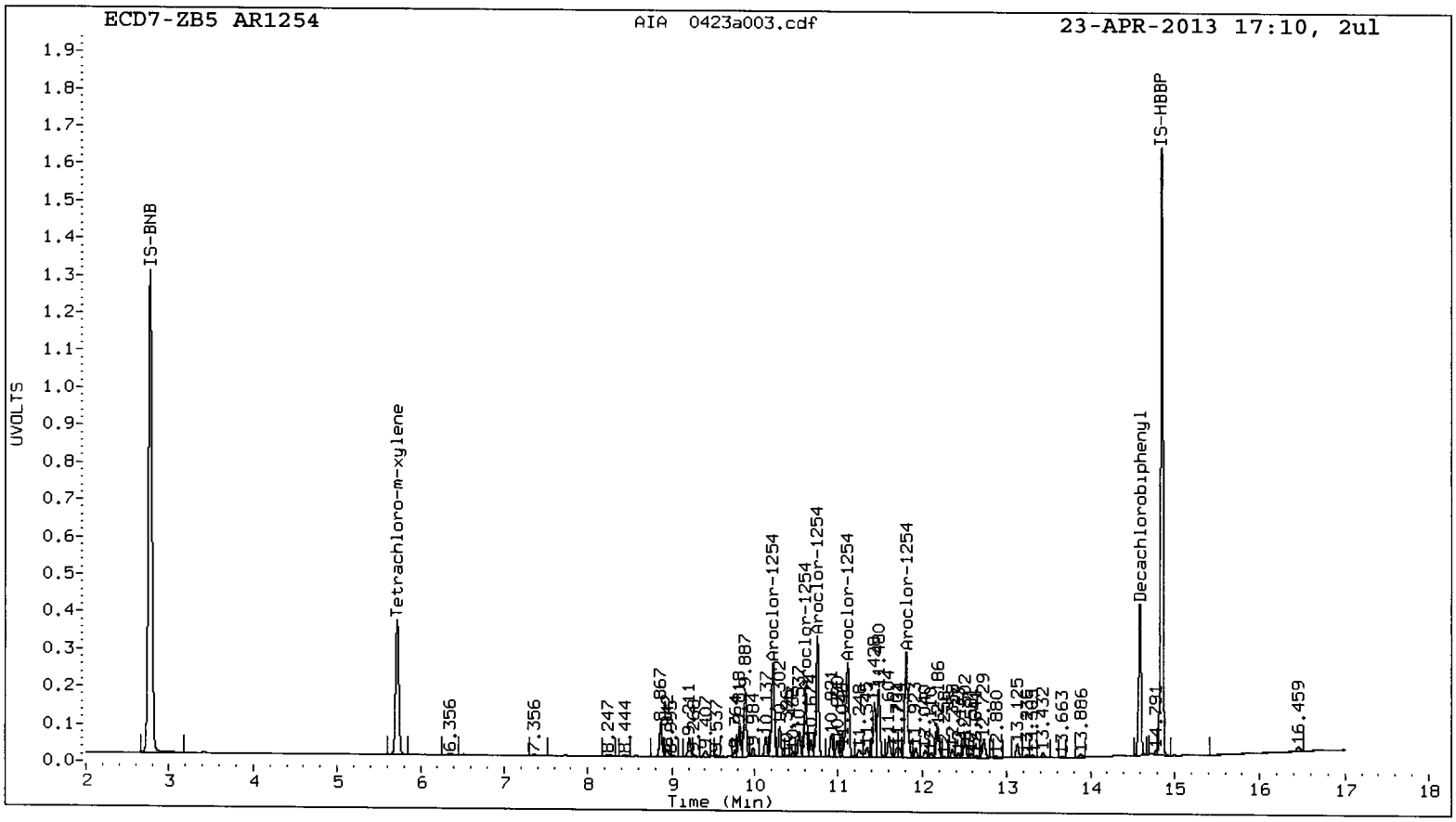
Total Col1Ave (5 peaks): 250.7 Total Col2Ave (5 peaks): 252.6 RPD = 1

Corrected Ave (4 peaks): 249.7 Corrected Ave (4 peaks): 251.5 RPD = 1

Total PCB Area Col1 (5.829 - 14.492) = 13656209 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 16812234 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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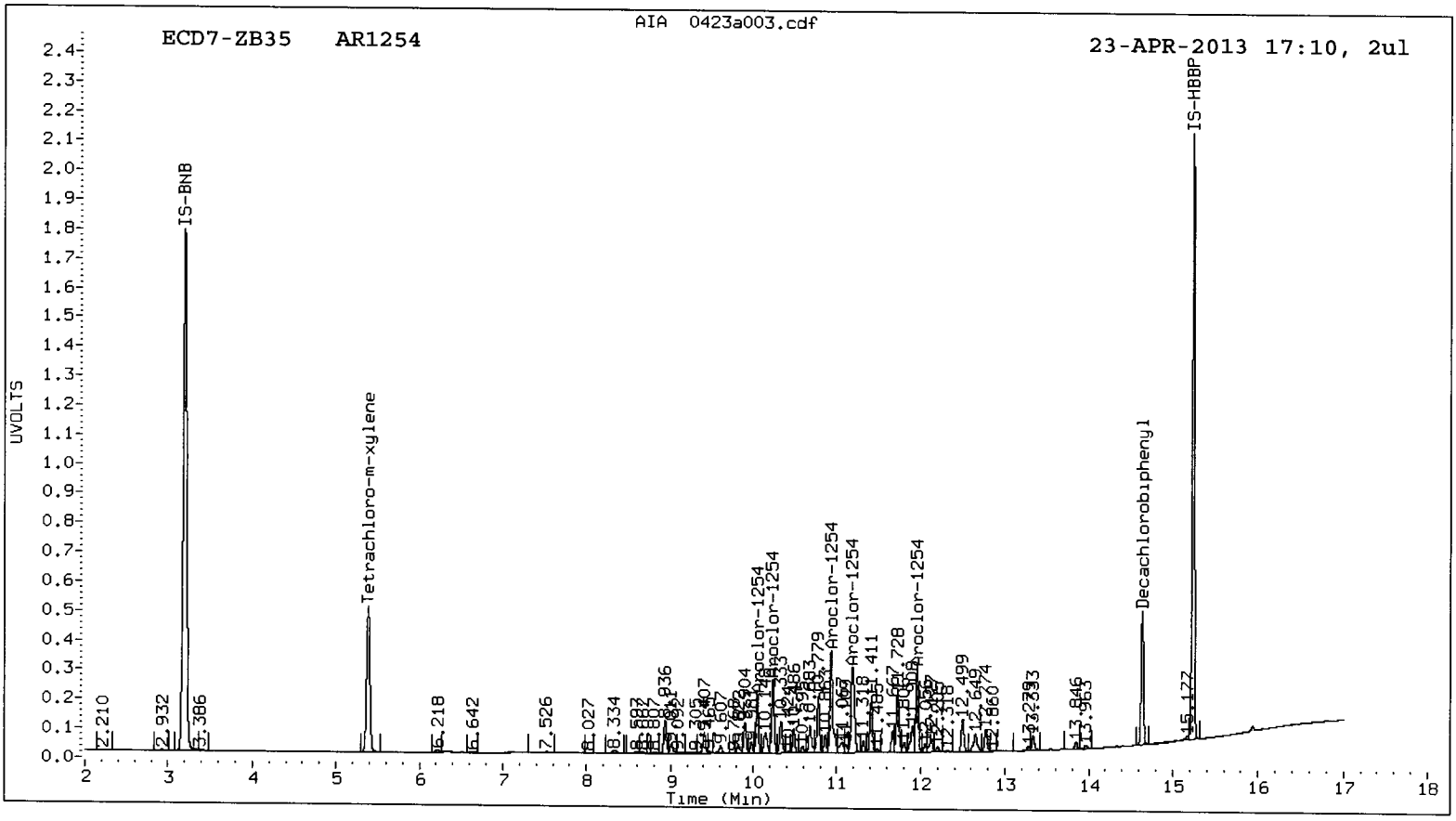
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a004.d
Data file 2: 20130416.b/0423-2.b/0423a004.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 23-APR-2013 17:32
Report Date: 04/24/2013 09:06
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.724	-0.005	1822855	5.392	-0.003	2495727	20.6	19.4	6.1	Tetrachloro-m-xylene
14.591	-0.001	1474622	14.639	0.000	1635720	17.0	21.1	21.6	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	51.4	48.4
Decachlorobiphenyl	42.5	52.7

JK 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7130069	27.5
Hexabromobiphenyl	4375297	5697247	30.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9610207	12.7
Hexabromobiphenyl	6077527	6765963	11.3

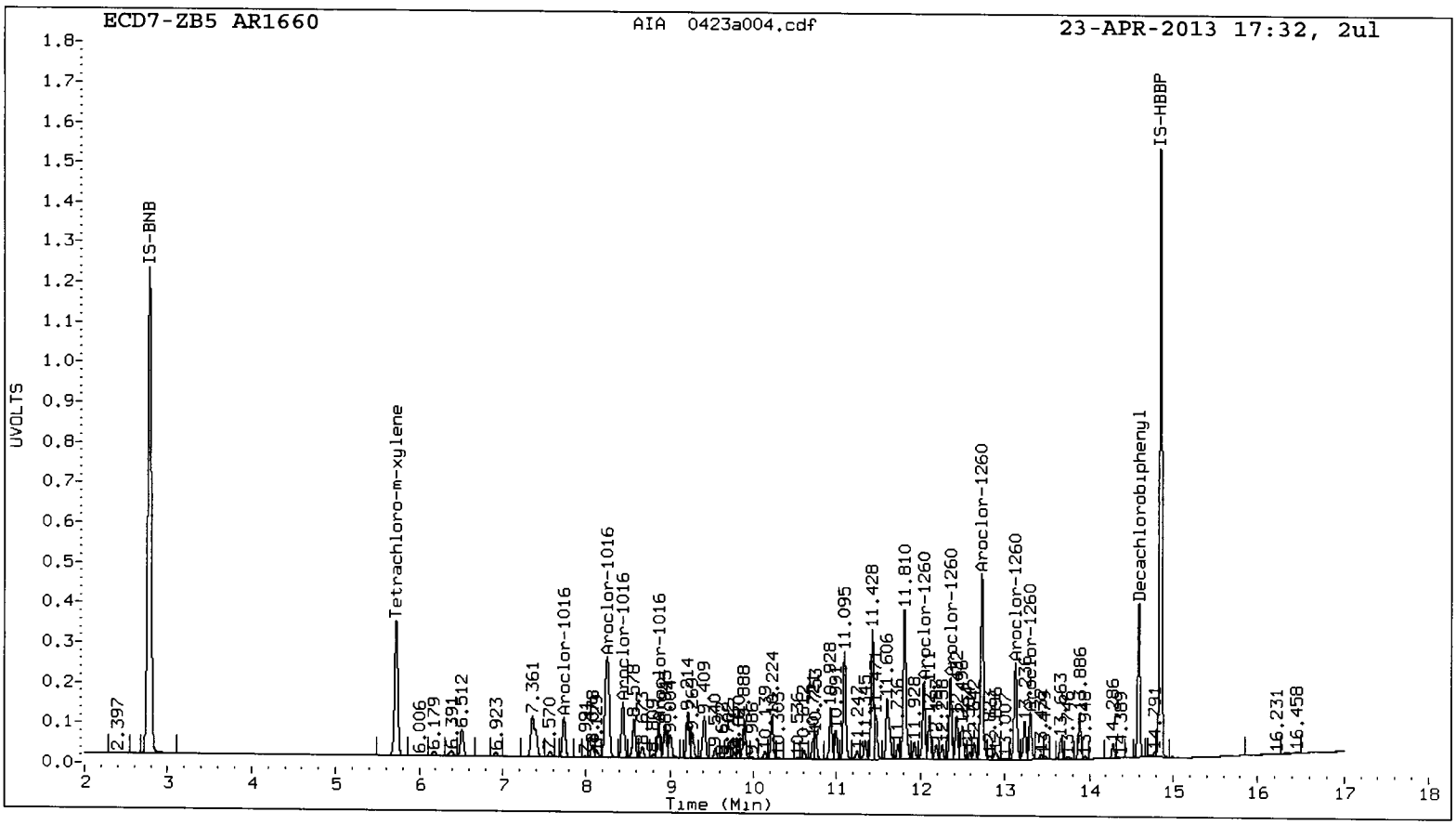
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.735	-0.005	515954	239.6	1	6.650	-0.002	524696	234.3
Aroclor-1016	2	8.255	-0.005	1793497	248.2	2	7.530	-0.001	1135460	231.0
Aroclor-1016	3	8.443	-0.003	691532	242.7	3	8.341	-0.001	2240999	233.9
Aroclor-1016	4	8.870	-0.004	395439	242.5	4	9.409	-0.001	780905	259.1
Total Col1Ave (4 peaks):					243.2	Total Col2Ave (4 peaks):				239.6 RPD = 2
Corrected Ave (3 peaks):					241.6	Corrected Ave (3 peaks):				233.1 RPD = 4
Aroclor-1260	1	12.042	-0.002	853029	243.5	1	11.960	0.000	1400561	248.0
Aroclor-1260	2	12.359	-0.002	867910	247.3	2	12.504	-0.001	1143064	258.3
Aroclor-1260	3	12.729	-0.002	2116980	250.1	3	12.773	-0.001	2286134	249.4
Aroclor-1260	4	13.127	0.000	1113496	254.2	4	13.335	0.002	1556766	256.8
Aroclor-1260	5	13.306	-0.002	488135	233.2	NS	---			----
Total Col1Ave (5 peaks):					245.6	Total Col2Ave (4 peaks):				253.1 RPD = 3
Corrected Ave (4 peaks):					243.5	Corrected Ave (3 peaks):				251.4 RPD = 3

Total PCB Area Col1 (5.829 - 14.492) = 25575057 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 31791722 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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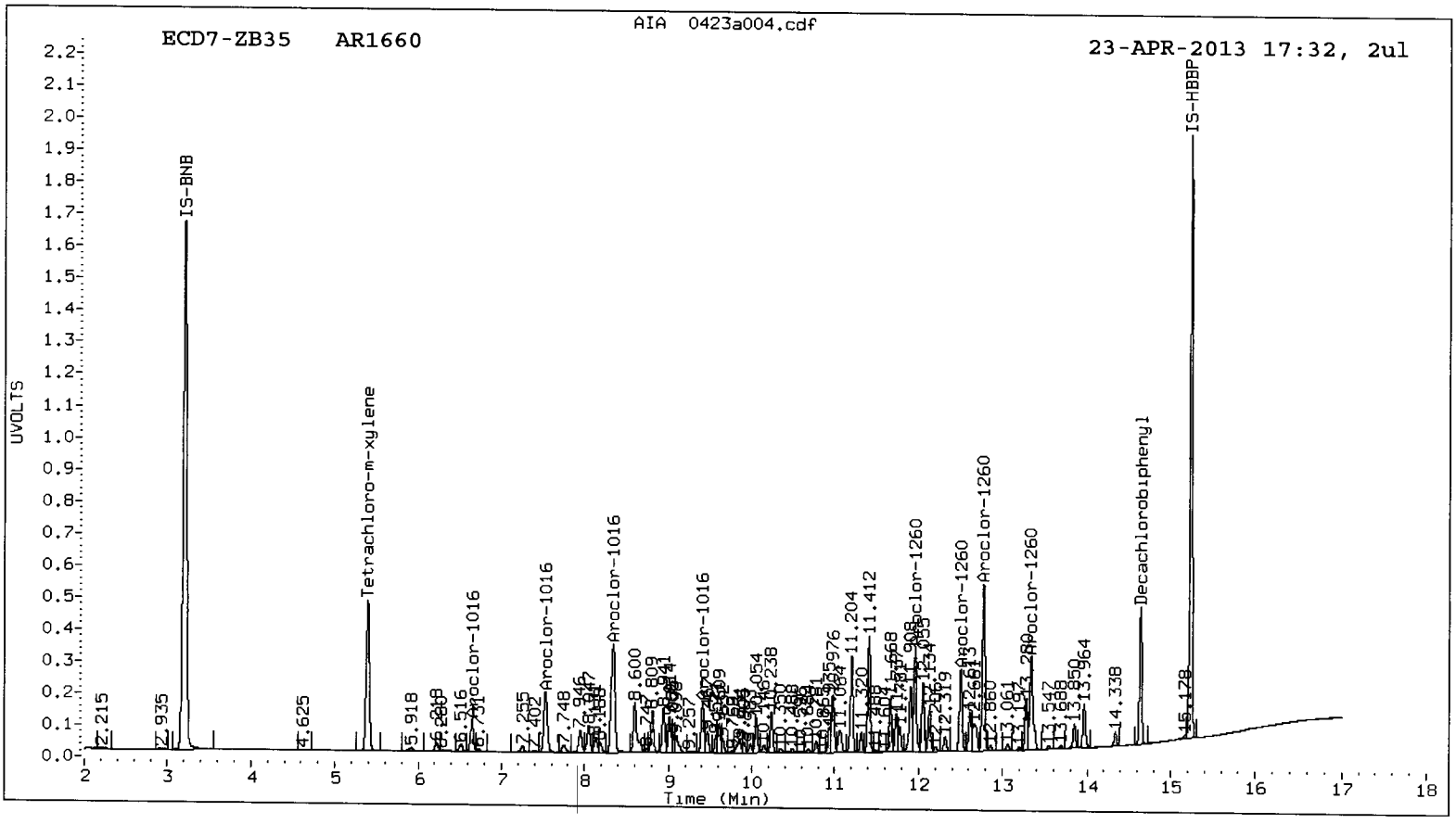
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a005.d
Data file 2: 20130416.b/0423-2.b/0423a005.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49MBS1
Client ID: WL49MBS1
Injection Date: 23-APR-2013 17:54
Report Date: 04/24/2013 09:06
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.725	-0.004	2805565	5.391	-0.003	3799706	29.8	27.5	7.8	Tetrachloro-m-xylene
14.591	-0.001	2877173	14.640	0.001	3146746	28.9	35.7	21.2	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	74.4	68.8
Decachlorobiphenyl	72.2	89.3

R 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7579277	35.6
Hexabromobiphenyl	4375297	6537300	49.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10284318	20.6
Hexabromobiphenyl	6077527	7683630	26.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

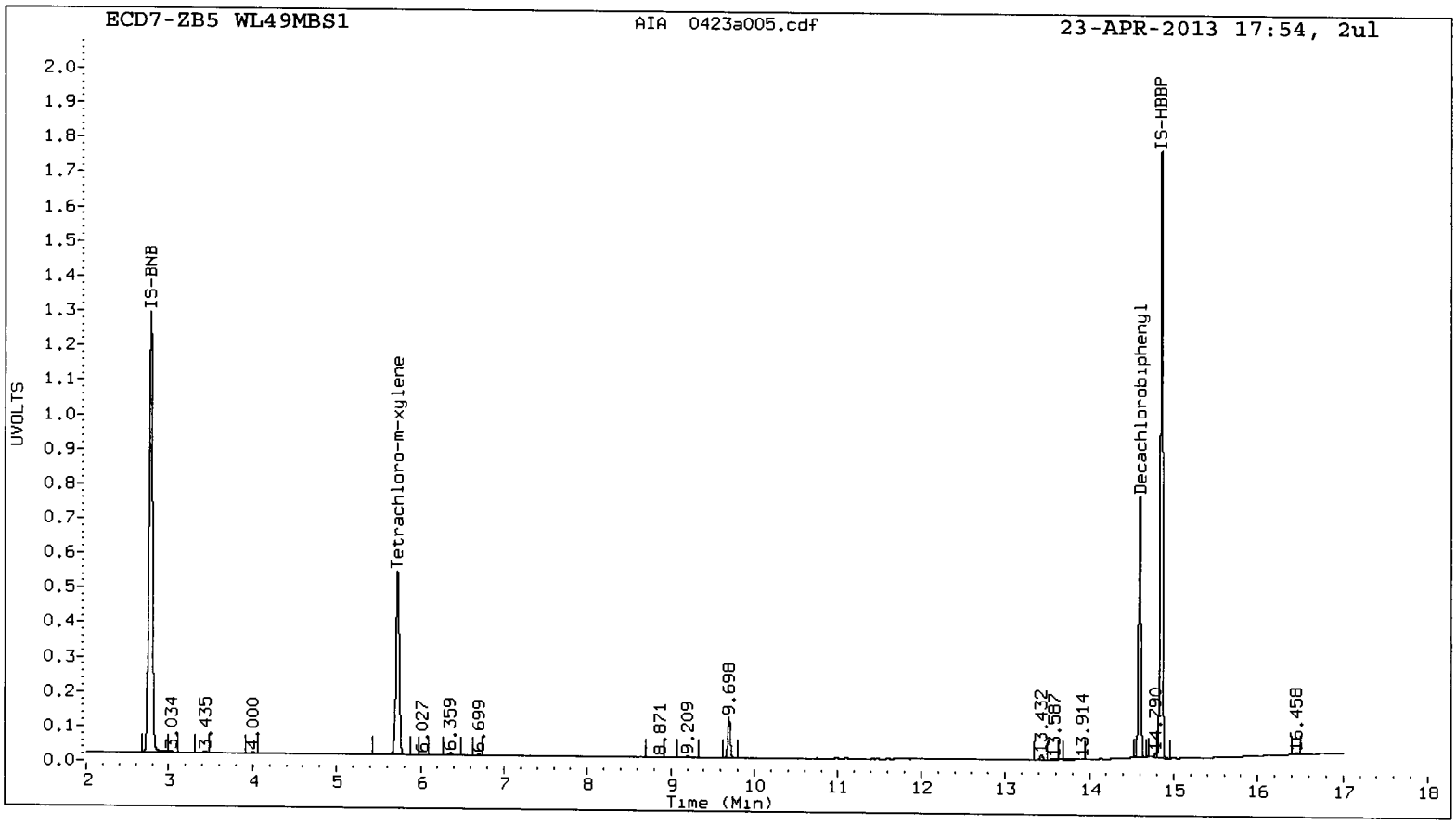
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	6.636	-0.015	14626	6.1
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	8.336	-0.006	17707	1.7
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	6.221	-0.006	54987	34.7
Aroclor-1221	2	---			0.0	2	6.523	-0.003	21103	20.9
Aroclor-1221	3	---			0.0	3	6.636	-0.025	14626	5.0
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: 20.2				
Aroclor-1232	1	---			0.0	1	6.636	-0.023	14626	7.2
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	8.336	-0.015	17707	4.4
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	6.636	-0.002	14626	7.7
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	8.336	0.003	17707	2.3
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	10.058	0.006	10858	3.3
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	11.195	0.008	10491	1.6
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	13.237	-0.054	12283	2.4
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	14.000	0.026	30881	6.7
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	13.237	-0.054	12283	0.9
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	13.680	-0.018	43594	4.2
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.829 - 14.492) = 642077 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 792139 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
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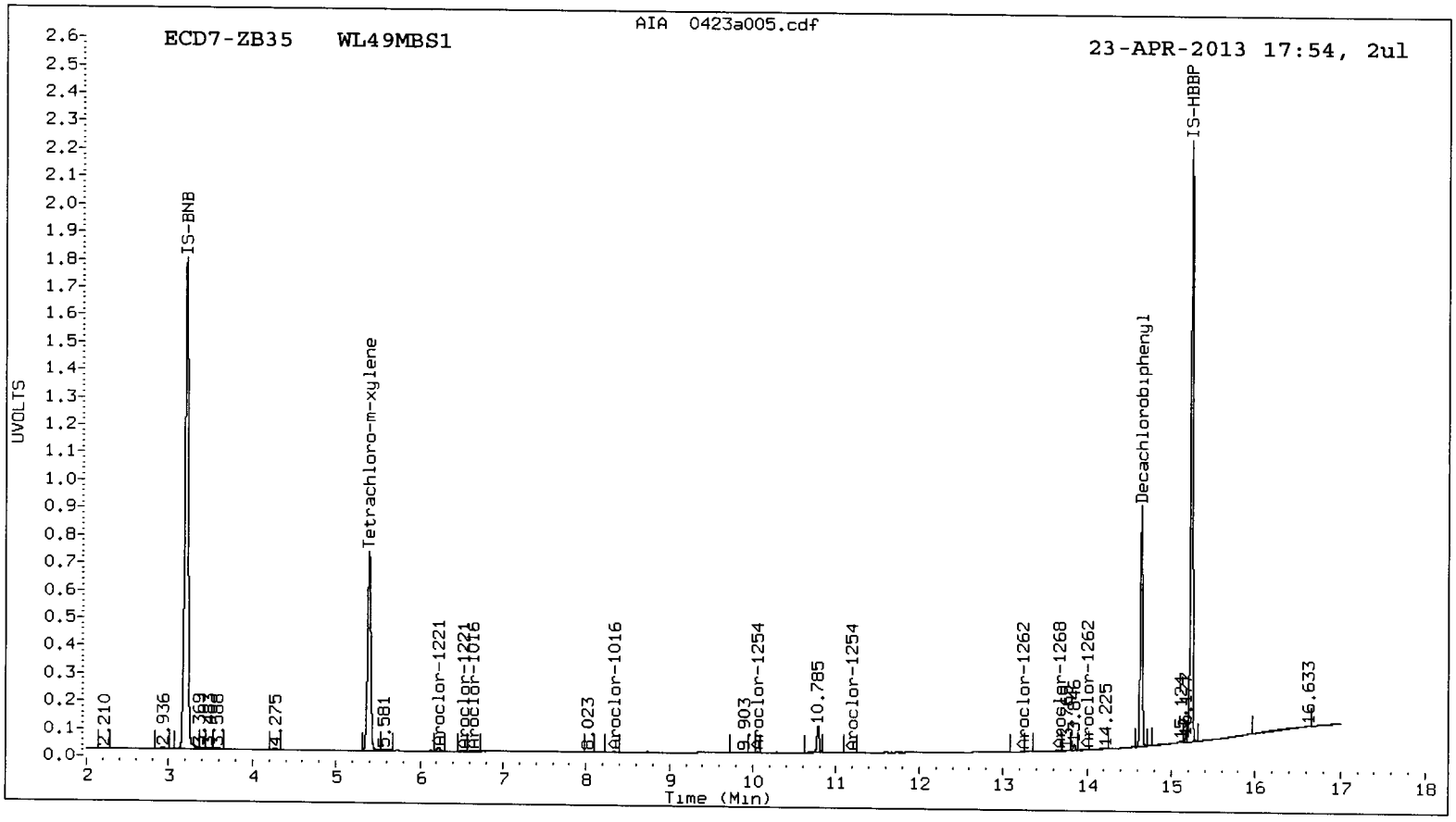
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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
2.210
2.936
4.275
5.581
Aroclor-1221
Aroclor-1221
Aroclor-1016
8.023
Aroclor-1016
9.903
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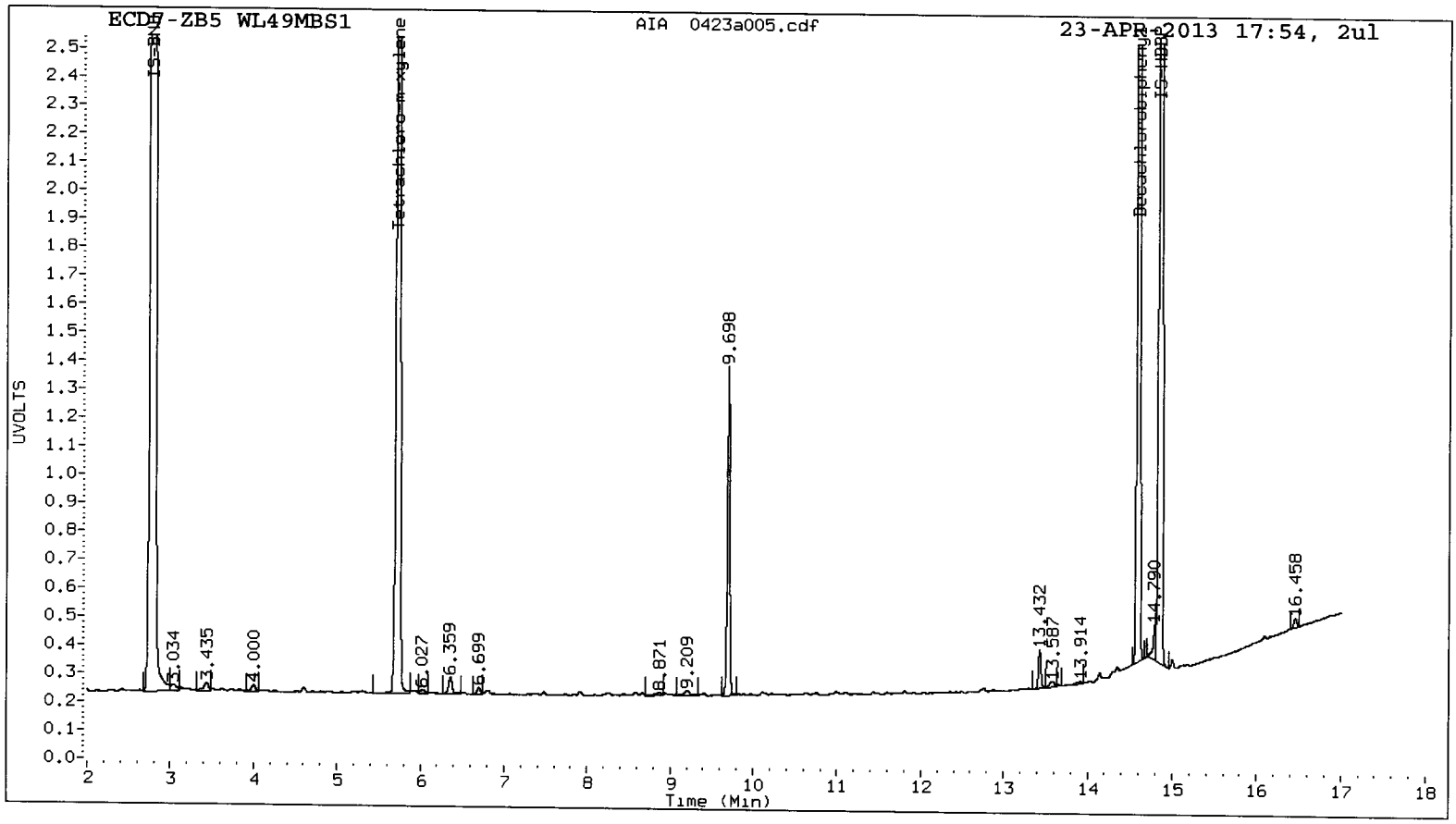
16.633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Decachlorobiphenyl
IS-HBB
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5.435
6.000
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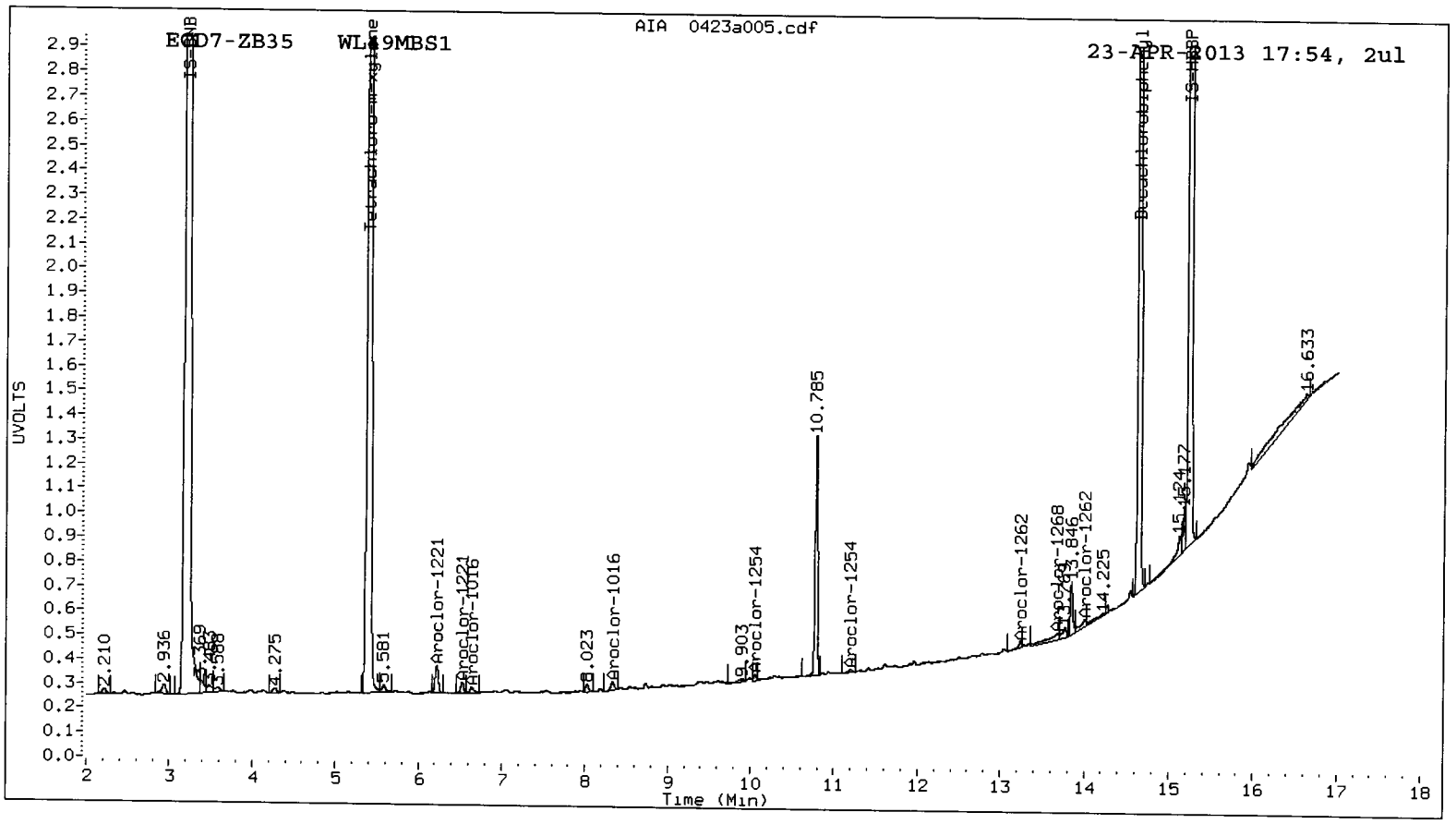
UVOLTS
Time (Min)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Decachlorobiphenyl
IS-HBB
2.210
2.936
4.275
5.581
Aroclor-1221
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Aroclor-1016
8.023
Aroclor-1016
9.903
Aroclor-1254
10.785
Aroclor-1254
Aroclor-1262
13.846
Aroclor-1262
14.225
15.424
16.633
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a006.d
Data file 2: 20130416.b/0423-2.b/0423a006.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49LCSS1
Client ID: WL49LCSS1
Injection Date: 23-APR-2013 18:16
Report Date: 04/24/2013 09:06
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
5.724	-0.005	2905140	5.391	-0.003	3887768	31.4	28.5	9.6	Tetrachloro-m-xylene
14.591	-0.001	3014311	14.639	0.001	3293065	30.6	38.0	21.5	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	78.4	71.2
Decachlorobiphenyl	76.5	94.9

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7448891	33.2
Hexabromobiphenyl	4375297	6465787	47.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10165748	19.2
Hexabromobiphenyl	6077527	7566852	24.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.734	-0.005	808202	359.2	1	6.649	-0.003	747374	315.5	
Aroclor-1016	2	8.256	-0.004	2879617	381.4	2	7.529	-0.003	1687550	324.6	
Aroclor-1016	3	8.441	-0.005	1123689	377.5	3	8.341	-0.001	3543840	349.7	
Aroclor-1016	4	8.868	-0.005	647595	380.1	4	9.408	-0.001	1212046	380.1	
	Total Col1Ave (4 peaks):				374.6		Total Col2Ave (4 peaks):			342.5	RPD = 9
	Corrected Ave (3 peaks):				372.3		Corrected Ave (3 peaks):			329.9	RPD = 12
Aroclor-1221	1	6.179	0.005	96050	105.9	1	6.218	-0.009	202575	129.1	
Aroclor-1221	2	6.390	0.006	145001	211.6	2	6.515	-0.010	189387	189.4	
Aroclor-1221	3	6.512	0.006	552296	240.3	3	6.649	-0.012	747374	258.7	
Aroclor-1221	NS	---			----	4	7.529	-0.025	1687550	1700.6	
	Total Col1Ave (3 peaks):				185.9		Total Col2Ave (4 peaks):			569.4	RPD = 102*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			192.4	
Aroclor-1232	1	6.512	0.006	552296	362.9	1	6.649	-0.011	747374	370.2	
Aroclor-1232	2	7.734	0.005	808202	911.9	2	7.529	-0.013	1687550	757.2	
Aroclor-1232	3	8.256	0.008	2879617	972.3	3	8.341	-0.010	3543840	883.2	
Aroclor-1232	4	8.441	0.004	1123689	943.8	4	8.941	-0.010	1023162	783.2	
	Total Col1Ave (4 peaks):				797.7		Total Col2Ave (4 peaks):			698.4	RPD = 13
	Corrected Ave (3 peaks):				739.5		Corrected Ave (3 peaks):			636.9	RPD = 15
Aroclor-1242	1	7.734	-0.003	808202	470.4	1	6.649	0.011	747374	395.7	
Aroclor-1242	2	8.256	-0.001	2879617	496.8	2	7.529	0.008	1687550	447.7	
Aroclor-1242	3	8.441	-0.003	1123689	491.4	3	8.341	0.008	3543840	475.4	
Aroclor-1242	4	9.408	-0.003	915102	427.1	4	9.408	0.004	1212046	468.7	
	Total Col1Ave (4 peaks):				471.4		Total Col2Ave (4 peaks):			446.9	RPD = 5
	Corrected Ave (3 peaks):				463.0		Corrected Ave (3 peaks):			437.4	RPD = 6
Aroclor-1248	1	8.256	0.007	2879617	709.4	1	7.529	0.001	1687550	812.5	
Aroclor-1248	2	8.868	-0.003	647595	250.7	2	8.341	0.003	3543840	663.3	
Aroclor-1248	3	9.408	-0.003	915102	255.0	3	8.941	-0.001	1023162	268.5	
Aroclor-1248	4	9.888	0.006	710031	148.6	4	10.349	-0.001	85166	16.5	
	Total Col1Ave (4 peaks):				340.9		Total Col2Ave (4 peaks):			440.2	RPD = 25
	Corrected Ave (3 peaks):				218.1		Corrected Ave (3 peaks):			316.1	RPD = 37
Aroclor-1254	1	10.223	0.003	753907	169.8	1	10.053	0.001	739688	225.8	
Aroclor-1254	2	10.612	0.001	157689	58.8	2	10.238	0.001	839336	206.9	
Aroclor-1254	3	10.751	-0.001	468325	88.4	3	10.936	0.003	458512	69.3	
Aroclor-1254	4	11.094	-0.017	2047692	363.8	4	11.204	0.017	2217238	337.4	
Aroclor-1254	5	11.809	0.000	3161359	595.0	5	11.959	0.000	2419078	495.6	
	Total Col1Ave (5 peaks):				255.2		Total Col2Ave (5 peaks):			267.0	RPD = 5
	Corrected Ave (4 peaks):				170.2		Corrected Ave (4 peaks):			209.8	RPD = 21
Aroclor-1260	1	12.040	-0.003	1512815	380.5	1	11.959	0.000	2419078	383.1	
Aroclor-1260	2	12.358	-0.003	1549830	389.1	2	12.504	0.000	1945635	393.1	
Aroclor-1260	3	12.728	-0.003	3826601	398.3	3	12.773	-0.001	4063072	396.3	
Aroclor-1260	4	13.125	-0.002	2021694	406.6	4	13.334	0.000	2709007	399.5	
Aroclor-1260	5	13.304	-0.003	890603	374.9	NS	---			----	
	Total Col1Ave (5 peaks):				389.9		Total Col2Ave (4 peaks):			393.0	RPD = 1
	Corrected Ave (4 peaks):				385.7		Corrected Ave (3 peaks):			390.8	RPD = 1
Aroclor-1262	1	12.358	0.001	1549830	329.9	1	12.504	-0.012	1945635	338.8	
Aroclor-1262	2	12.728	-0.001	3826601	304.1	2	12.773	-0.013	4063072	306.9	
Aroclor-1262	3	13.125	-0.002	2021694	497.8	3	13.280	-0.011	1146693	226.9	
Aroclor-1262	4	13.304	0.000	890603	188.2	4	13.334	-0.015	2709007	326.8	
Aroclor-1262	5	13.885	-0.002	860119	207.3	5	13.963	-0.012	1016027	222.8	
	Total Col1Ave (5 peaks):				305.5		Total Col2Ave (5 peaks):			284.4	RPD = 7
	Corrected Ave (4 peaks):				257.4		Corrected Ave (4 peaks):			270.8	RPD = 5
Aroclor-1268	1	13.235	0.000	768380	56.6	1	13.280	-0.011	1146693	86.6	

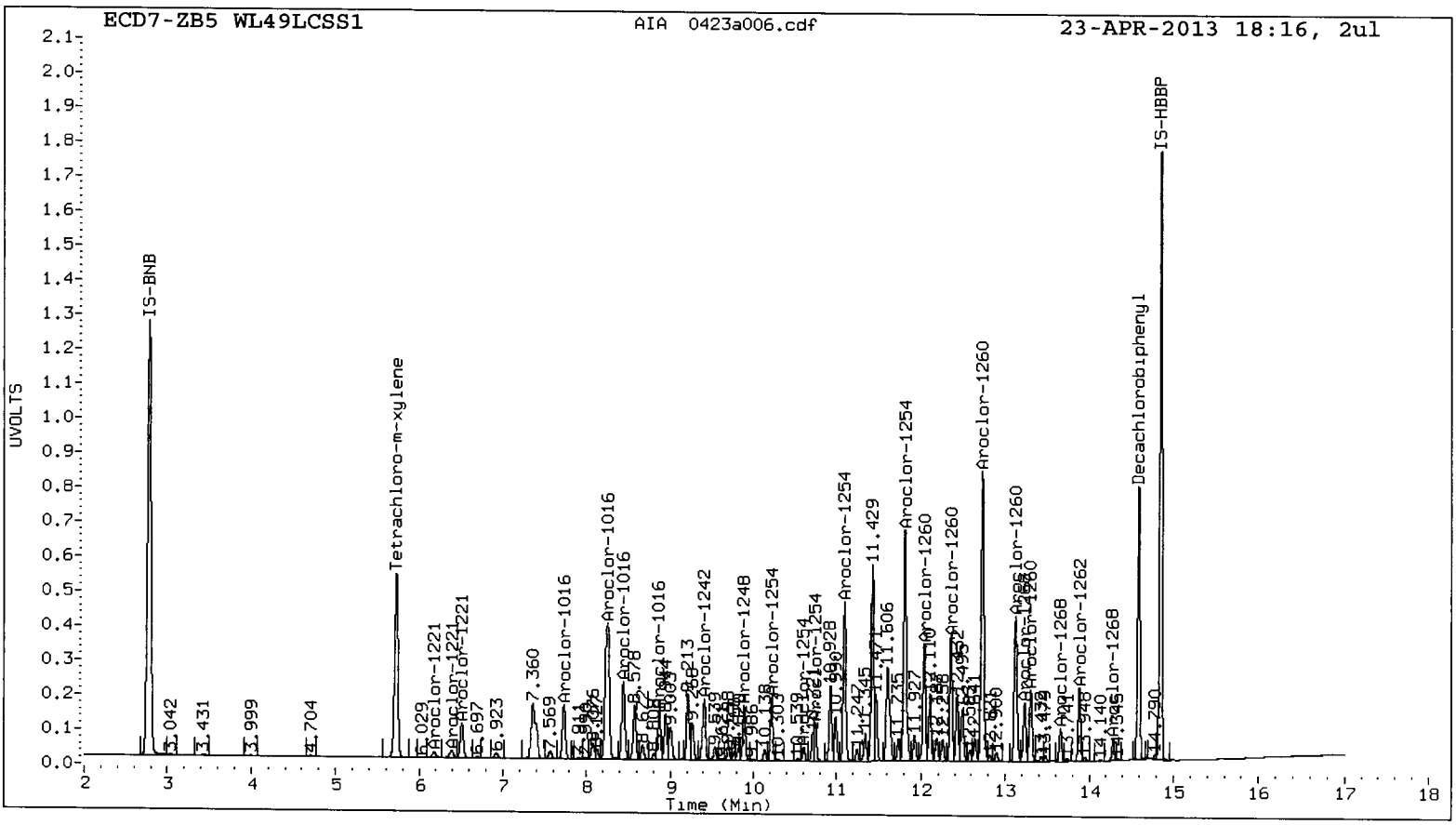
Aroclor-1268 2	13.304	0.002	890603	70.3	2	13.334	-0.018	2709007	215.6
Aroclor-1268 3	13.663	0.014	416503	38.8	3	13.688	-0.011	97310	9.6
Aroclor-1268 4	14.286	-0.001	252212	7.7	4	14.338	-0.010	291319	8.8
Total Col1Ave (4 peaks):				43.3	Total Col2Ave (4 peaks):			80.1	RPD = 60*
Corrected Ave (3 peaks):				34.4	Corrected Ave (3 peaks):			35.0	RPD = 2

Total PCB Area Col1 (5.829 - 14.492) = 43980463 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 51246672 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
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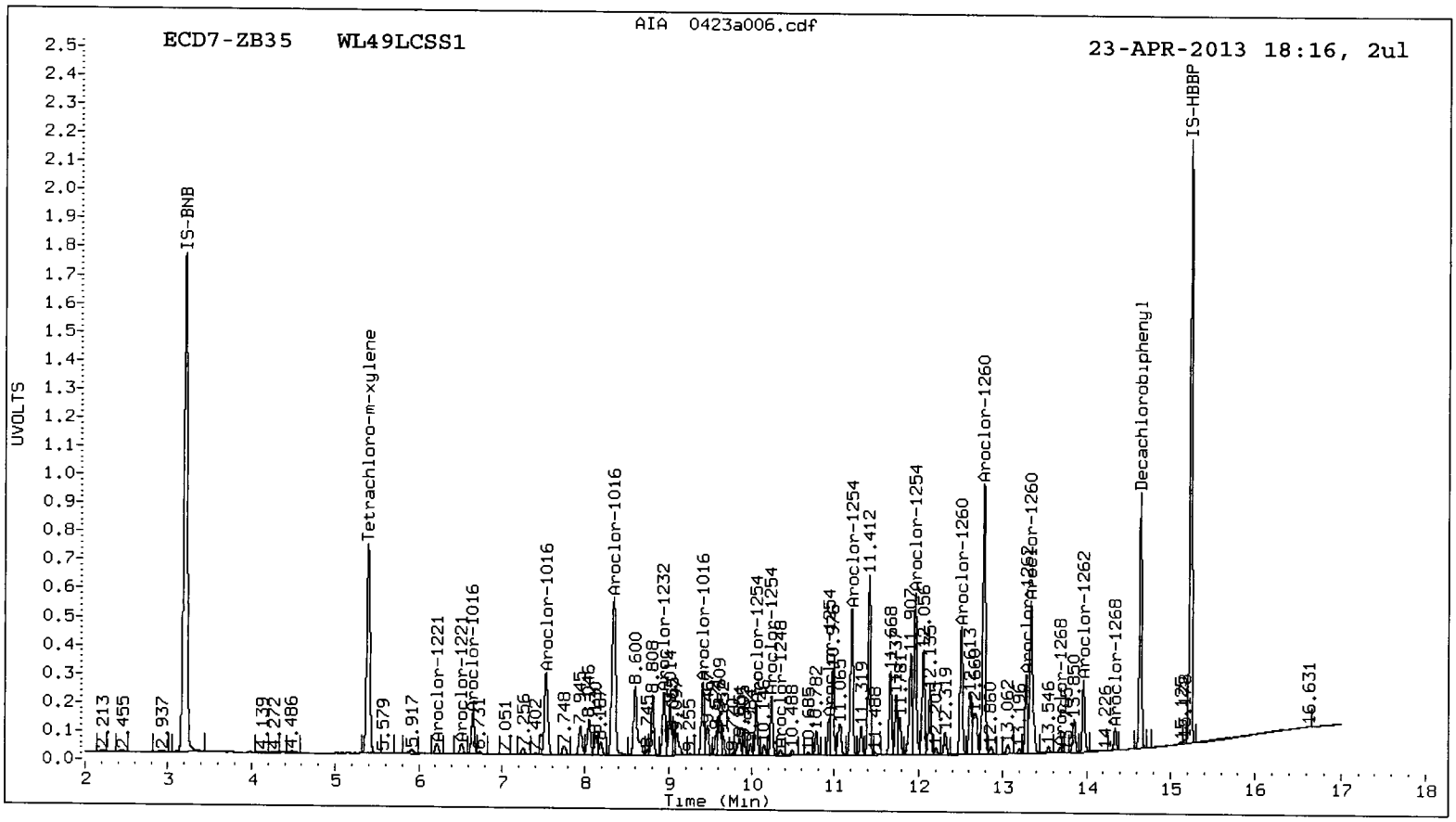
Aroclor-1260
Aroclor-1268
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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IS-BNB
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Aroclor-1016
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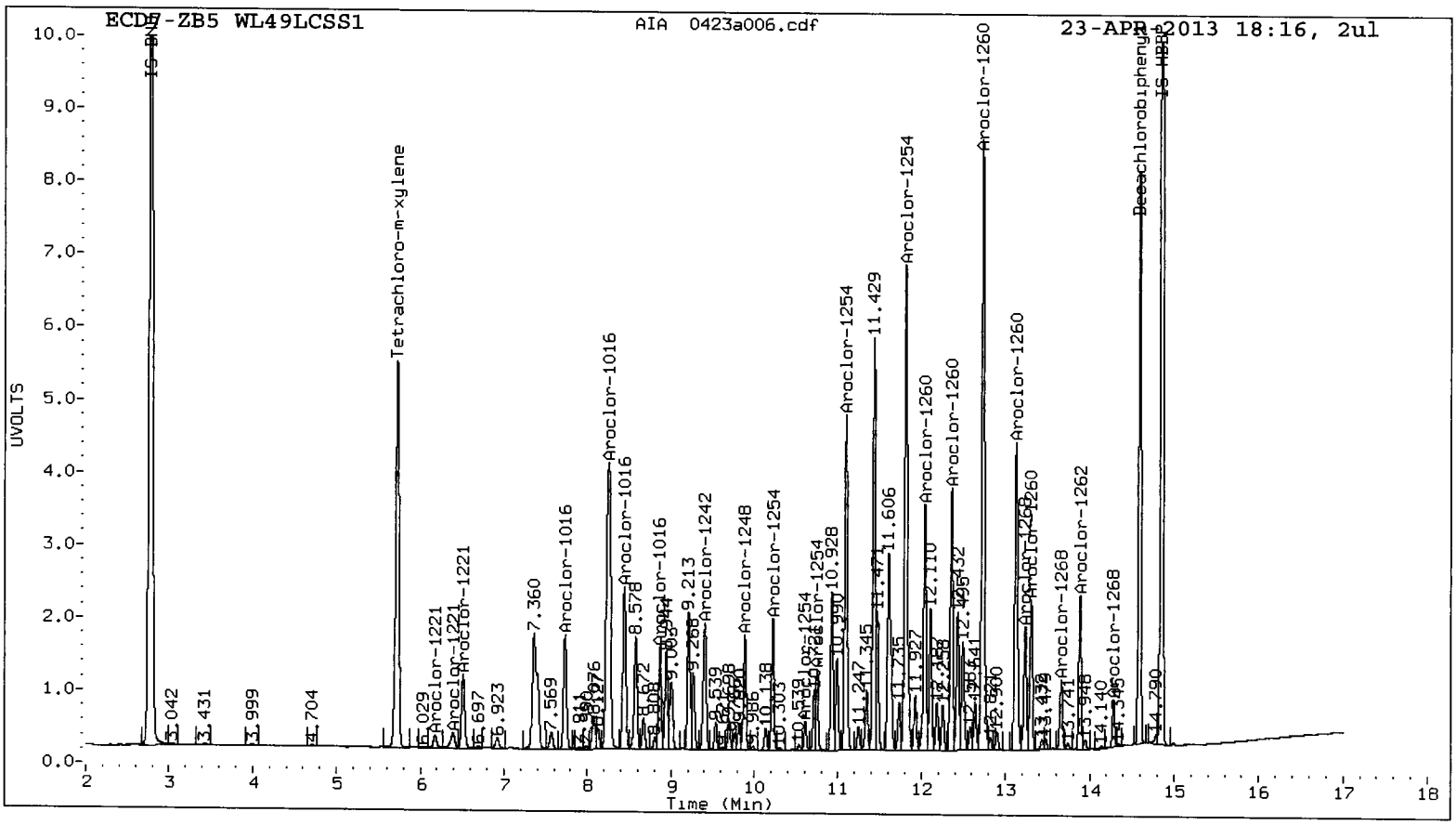
Decachlorobiphenyl
IS-HBBP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Decachlorobiphenyl
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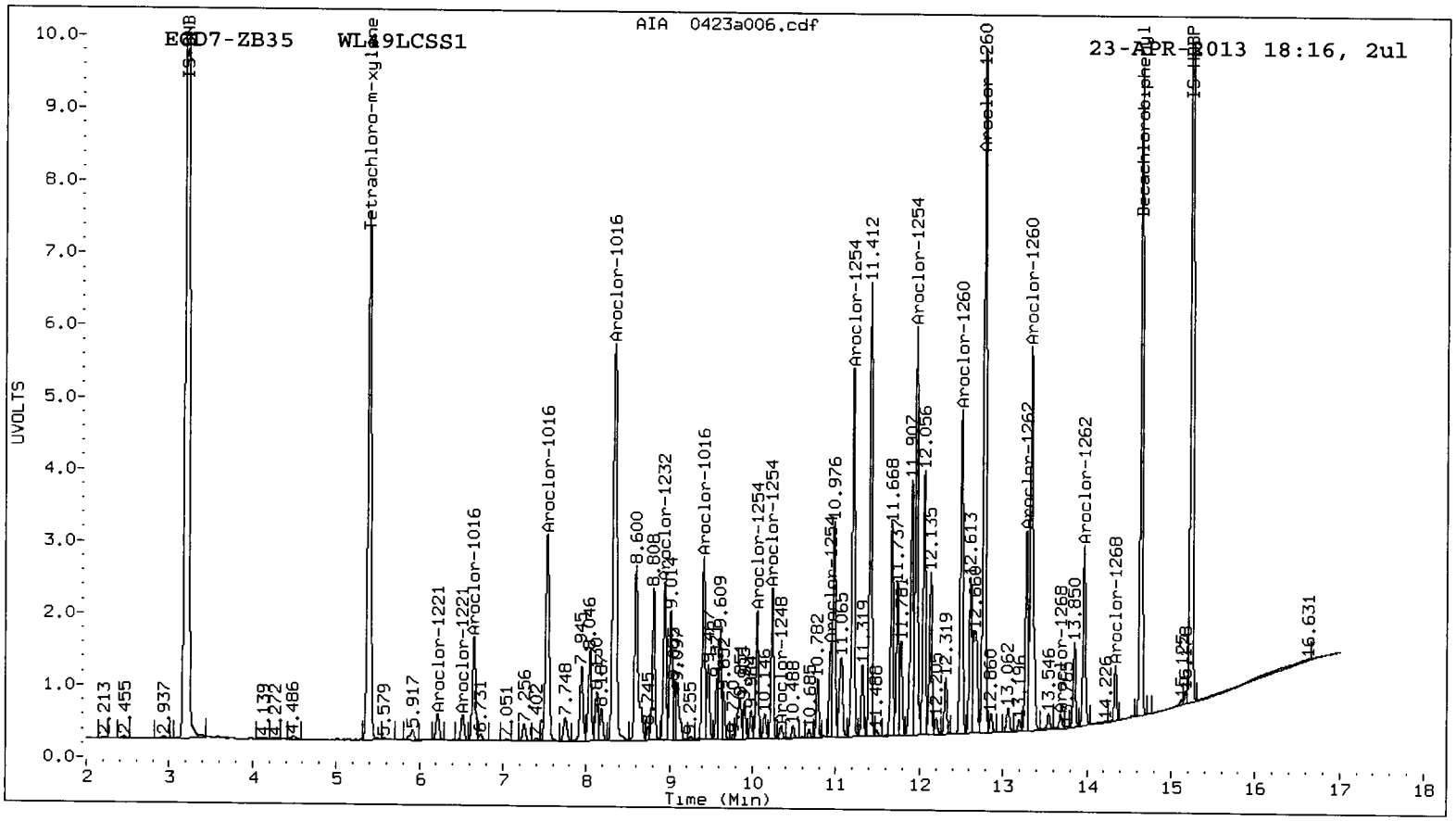
Aroclor-1262
Aroclor-1268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UVOLTS
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Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
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Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a016.d
Data file 2: 20130416.b/0423-2.b/0423a016.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL67B
Client ID: GR-WS-05-20130411-S
Injection Date: 23-APR-2013 21:55
Report Date: 04/24/2013 09:07
Matrix: SOIL
Dilution Factor: 20.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.729	-0.001	220336	5.394	0.000	297375	2.4	2.2	7.9	Tetrachloro-m-xylene
14.594	0.002	173373	14.641	0.002	235671	2.2	2.8	24.0	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	120.6 M	111.4
Decachlorobiphenyl	111.6	142.1 M

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7346497	31.4
Hexabromobiphenyl	4375297	5094891	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9943648	16.6
Hexabromobiphenyl	6077527	7233676	19.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-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	7.739	-0.001	1456219	656.3	1	6.652	0.001	816085	352.2
Aroclor-1016	2	8.263	0.003	5962219	800.7	2	7.532	0.001	2748973	540.6
Aroclor-1016	3	8.447	0.000	2027320	690.6	3	8.344	0.002	7596136	766.3
Aroclor-1016	4	8.873	-0.001	1645090	978.9	4	9.411	0.001	3350648	1074.3
Total Col1Ave (4 peaks):					781.6	Total Col2Ave (4 peaks):				683.3 RPD = 13
Corrected Ave (3 peaks):					715.9	Corrected Ave (3 peaks):				553.0 RPD = 26
Aroclor-1221	1	6.186	0.012	110161	123.1	1	6.220	-0.007	198907	129.6
Aroclor-1221	2	6.397	0.012	118418	175.2	2	6.521	-0.005	264348	270.3
Aroclor-1221	3	6.517	0.011	590013	260.3	3	6.652	-0.009	816085	288.7
Aroclor-1221	NS	---			---	4	7.532	-0.021	2748973	2832.0
Total Col1Ave (3 peaks):					186.2	Total Col2Ave (4 peaks):				880.2 RPD = 130*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				229.6
Aroclor-1232	1	6.517	0.011	590013	393.1	1	6.652	-0.007	816085	413.3
Aroclor-1232	2	7.739	0.010	1456219	1665.9	2	7.532	-0.010	2748973	1261.0
Aroclor-1232	3	8.263	0.014	5962219	2041.2	3	8.344	-0.007	7596136	1935.3
Aroclor-1232	4	8.447	0.010	2027320	1726.6	4	8.943	-0.008	2538179	1986.4
Total Col1Ave (4 peaks):					1456.7	Total Col2Ave (4 peaks):				1399.0 RPD = 4
Corrected Ave (3 peaks):					1261.8	Corrected Ave (3 peaks):				1203.2 RPD = 5
Aroclor-1242	1	7.739	0.002	1456219	859.4	1	6.652	0.014	816085	441.7
Aroclor-1242	2	8.263	0.005	5962219	1043.0	2	7.532	0.011	2748973	745.6
Aroclor-1242	3	8.447	0.003	2027320	898.9	3	8.344	0.012	7596136	1041.8
Aroclor-1242	4	9.413	0.002	2408210	1139.7	4	9.411	0.007	3350648	1324.6
Total Col1Ave (4 peaks):					985.3	Total Col2Ave (4 peaks):				888.4 RPD = 10
Corrected Ave (3 peaks):					933.8	Corrected Ave (3 peaks):				743.0 RPD = 23
Aroclor-1248	1	8.263	0.014	5962219	1489.3	1	7.532	0.004	2748973	1353.0
Aroclor-1248	2	8.873	0.001	1645090	645.8	2	8.344	0.006	7596136	1453.5
Aroclor-1248	3	9.413	0.002	2408210	680.4	3	8.943	0.002	2538179	681.0
Aroclor-1248	4	9.887	0.005	2403385	509.9	4	10.351	0.001	2182979	431.2
Total Col1Ave (4 peaks):					831.3	Total Col2Ave (4 peaks):				979.7 RPD = 16
Corrected Ave (3 peaks):					612.0	Corrected Ave (3 peaks):				821.7 RPD = 29
Aroclor-1254	1	10.226	0.006	1685945	385.1	1	10.055	0.003	1379168	430.4
Aroclor-1254	2	10.617	0.006	1134109	428.6	2	10.241	0.004	1635854	412.2
Aroclor-1254	3	10.758	0.006	2065126	395.4	3	10.937	0.004	2789636	431.0
Aroclor-1254	4	11.117	0.006	2162241	389.5	4	11.191	0.004	2913272	453.2
Aroclor-1254	5	11.814	0.005	2121147	404.8	5	11.962	0.003	2115967	443.2
Total Col1Ave (5 peaks):					400.7	Total Col2Ave (5 peaks):				434.0 RPD = 8
Corrected Ave (4 peaks):					393.7	Corrected Ave (4 peaks):				429.2 RPD = 9
Aroclor-1260	1	12.045	0.002	221438	70.7	1	11.962	0.002	2115967	350.5
Aroclor-1260	2	12.363	0.002	211213	67.3	2	12.502	-0.003	829806	175.4
Aroclor-1260	3	12.736	0.005	562390	74.3	3	12.777	0.003	781506	79.7
Aroclor-1260	4	13.129	0.002	403091	102.9	4	13.337	0.003	591327	91.2
Aroclor-1260	5	13.310	0.003	153690	82.1	NS	---			----
Total Col1Ave (5 peaks):					79.5	Total Col2Ave (4 peaks):				174.2 RPD = 75*
Corrected Ave (4 peaks):					73.6	Corrected Ave (3 peaks):				115.4 RPD = 44*
Aroclor-1262	1	12.363	0.006	211213	57.1	1	12.502	-0.014	829806	151.2
Aroclor-1262	2	12.736	0.006	562390	56.7	2	12.777	-0.009	781506	61.8
Aroclor-1262	3	13.129	0.001	403091	126.0	3	13.281	-0.010	201995	41.8
Aroclor-1262	4	13.310	0.005	153690	41.2	4	13.337	-0.012	591327	74.6
Aroclor-1262	5	13.883	-0.004	293237	89.7	5	13.964	-0.010	207351	47.6
Total Col1Ave (5 peaks):					74.1	Total Col2Ave (5 peaks):				75.4 RPD = 2
Corrected Ave (4 peaks):					61.2	Corrected Ave (4 peaks):				56.4 RPD = 8
Aroclor-1268	1	13.241	0.005	143590	13.4	1	13.281	-0.009	201995	16.0

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Aroclor-1268	2	13.310	0.008	153690	15.4	2	13.337	-0.015	591327	49.2
Aroclor-1268	3	13.665	0.016	71998	8.5	3	13.684	-0.014	191446	19.8
Aroclor-1268	4	14.289	0.002	117640	4.6	4	14.340	-0.009	132696	4.2

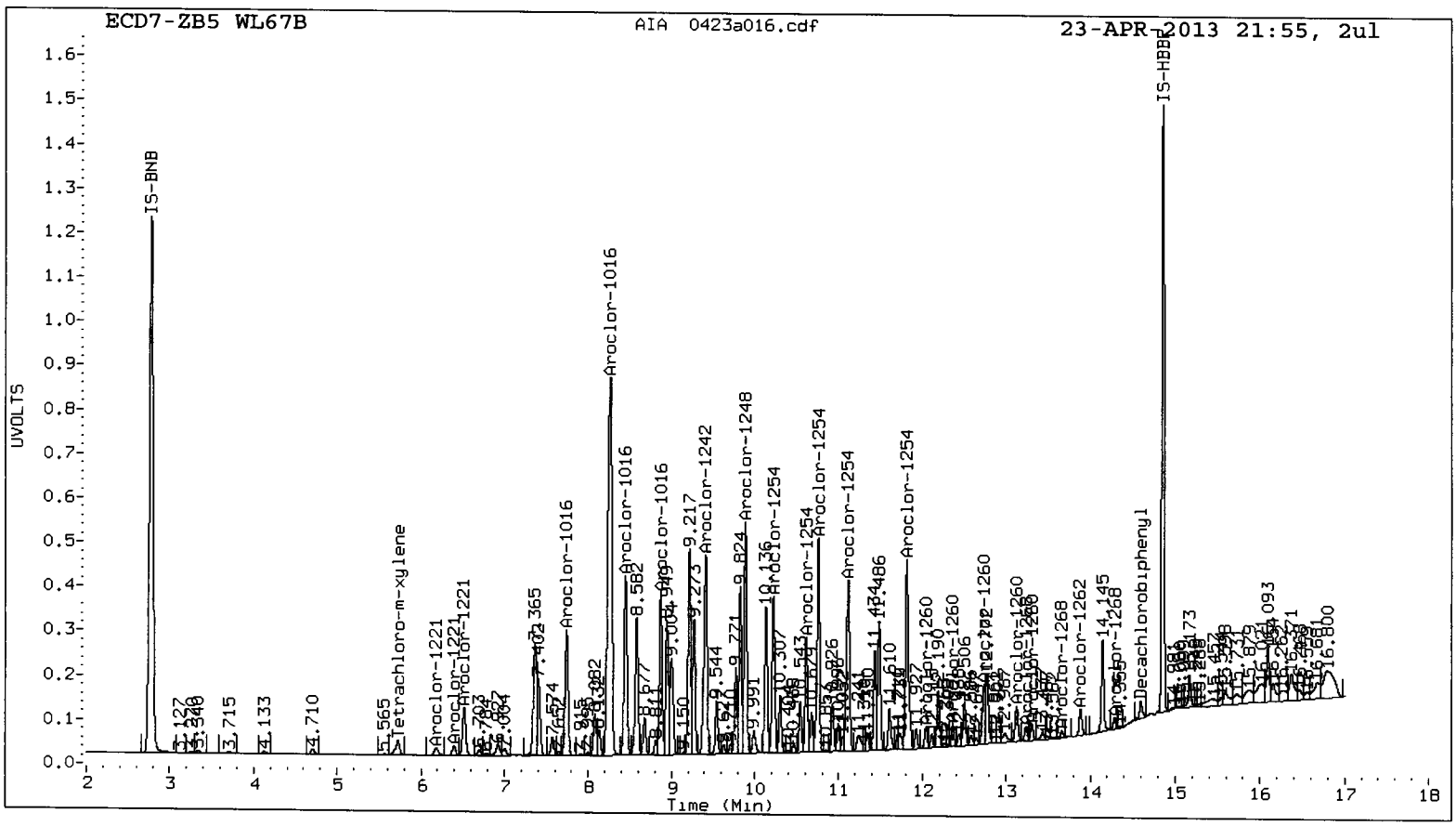
Total Col1Ave (4 peaks): 10.5 Total Col2Ave (4 peaks): 22.3 RPD = 72*

Corrected Ave (3 peaks): 8.8 Corrected Ave (3 peaks): 13.3 RPD = 40*

Total PCB Area Col1 (5.829 - 14.492) = 54187625 Col1 Total PCB = 1.1 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 68902618 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Aroclor-1242
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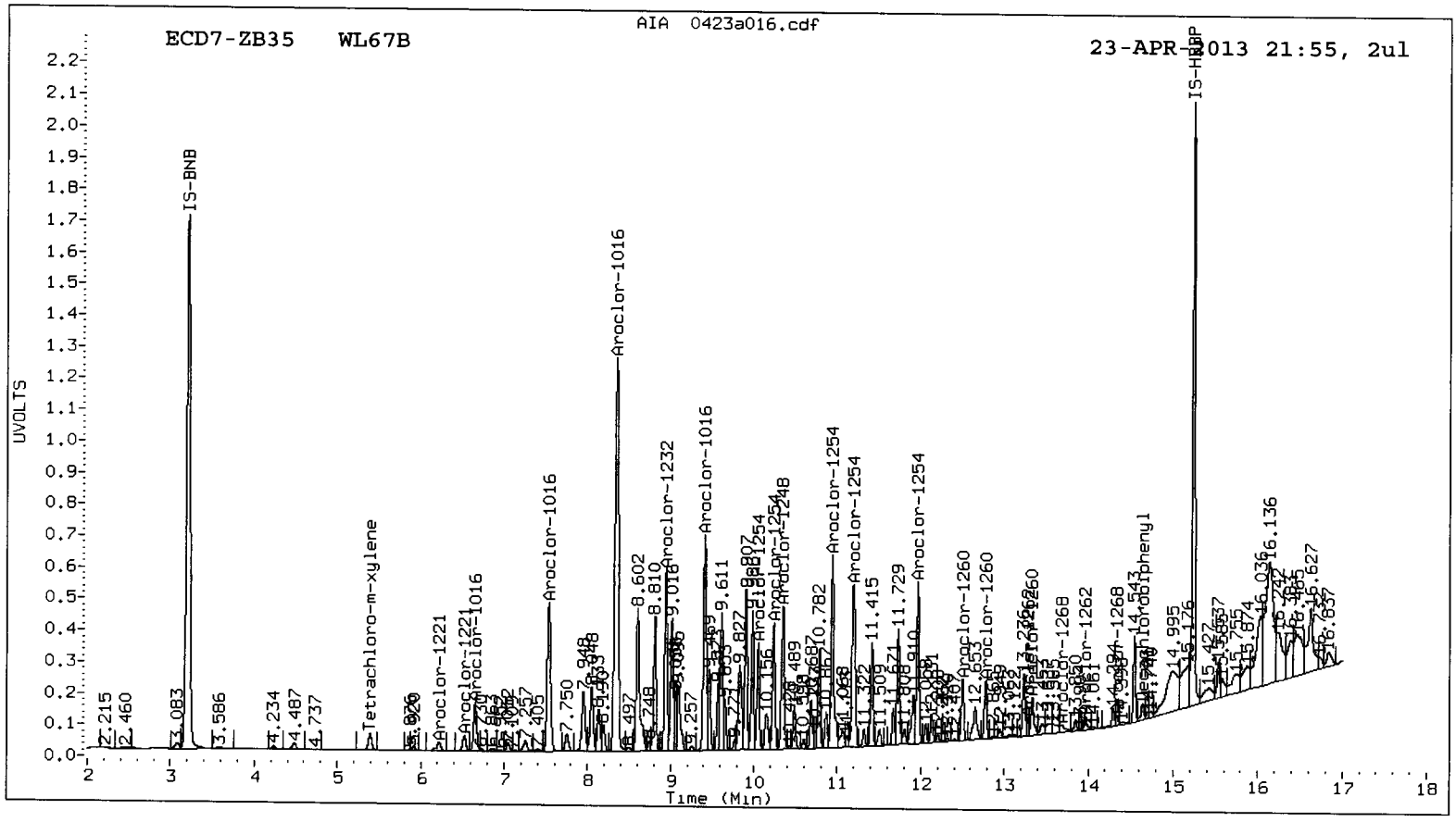
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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IS-BNB
Tetrachloro-m-xylene
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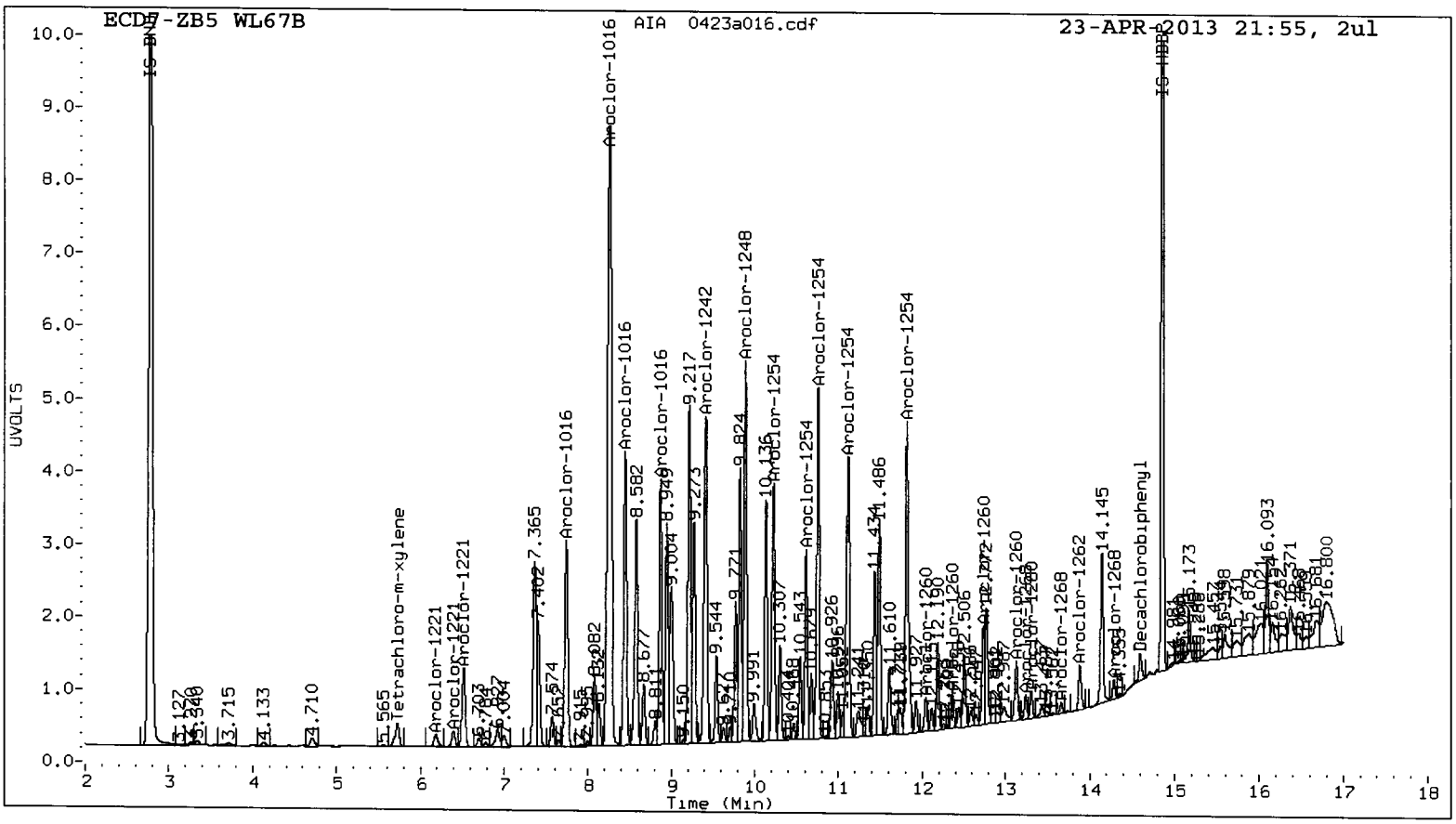
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

WL67-0423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UVOLTS
Time (Min)
IS-DBB
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1242
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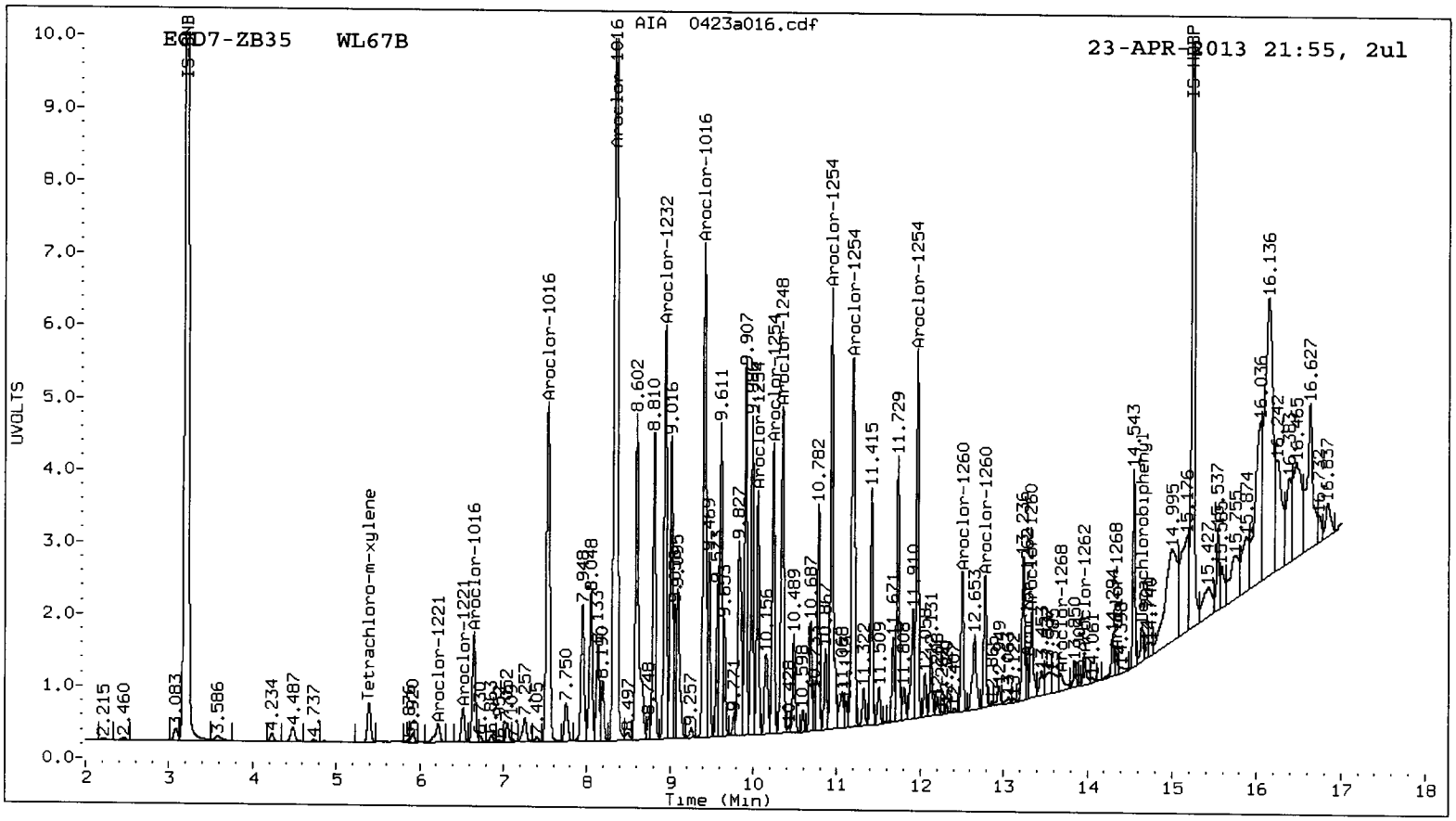
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-DBB
Tetrachloro-m-xylene
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Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a019.d
Data file 2: 20130416.b/0423-2.b/0423a019.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 23-APR-2013 23:01
Report Date: 04/24/2013 09:07
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.728	-0.002	2035991	5.393	-0.001	2830509	22.4	21.3	5.0	Tetrachloro-m-xylene
14.593	0.001	1388866	14.639	0.000	1814603	19.5	25.5	26.4	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	56.0	53.2
Decachlorobiphenyl	48.8	63.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7314104	30.8
Hexabromobiphenyl	4375297	4667881	6.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9906194	16.2
Hexabromobiphenyl	6077527	6215952	2.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-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	8.249	0.000	996770	250.1	1	7.528	0.000	502645	248.3
Aroclor-1248	2	8.871	0.000	636798	251.1	2	8.338	0.000	1316194	252.8
Aroclor-1248	3	9.411	0.000	884435	251.0	3	8.941	0.000	947620	255.2
Aroclor-1248	4	9.882	0.000	1119778	238.6	4	10.350	0.000	1246280	247.1

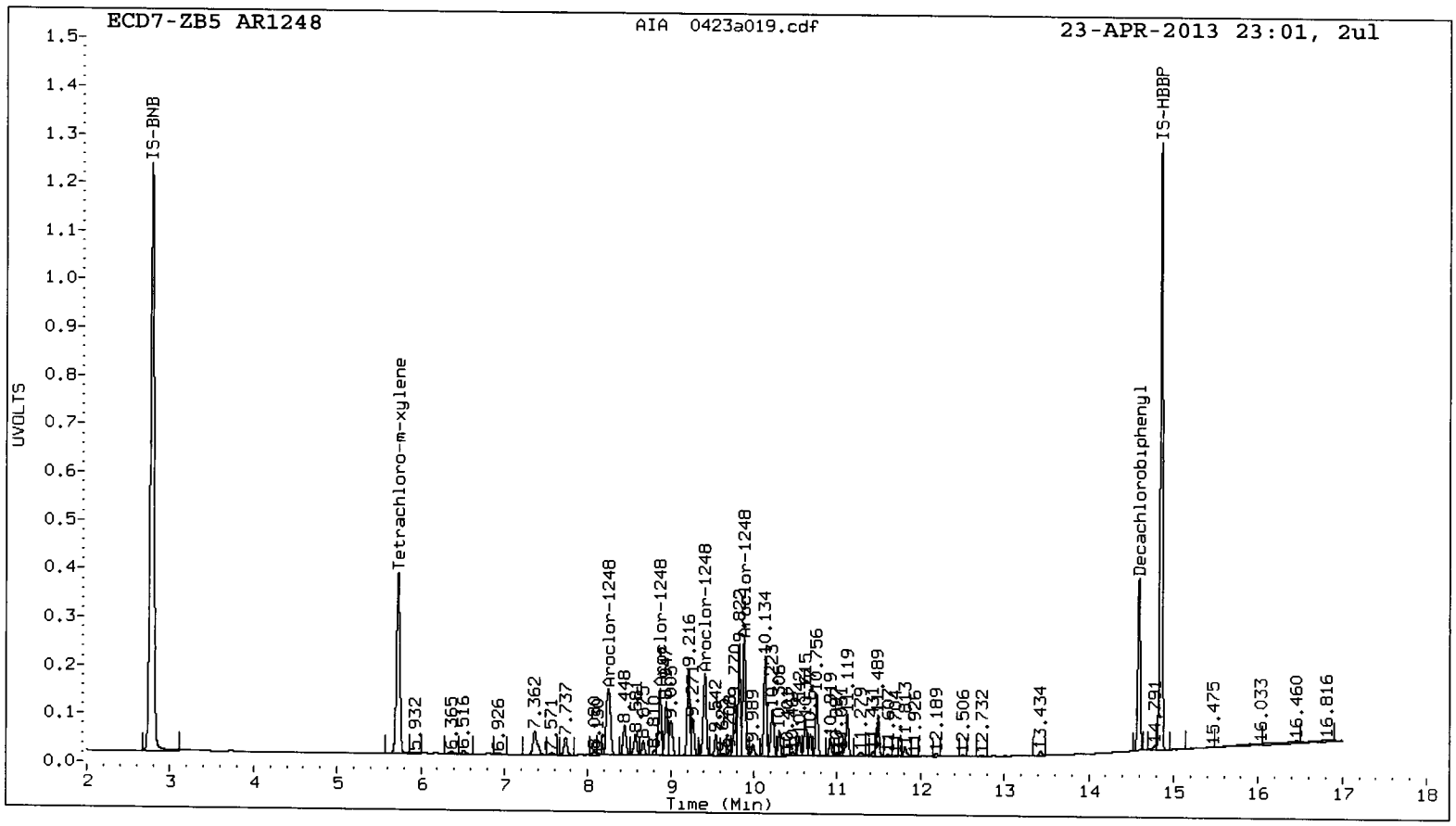
Total Col1Ave (4 peaks): 247.7 Total Col2Ave (4 peaks): 250.9 RPD = 1

Corrected Ave (3 peaks): 246.6 Corrected Ave (3 peaks): 249.4 RPD = 1

Total PCB Area Col1 (5.829 - 14.492) = 13116503 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 17269256 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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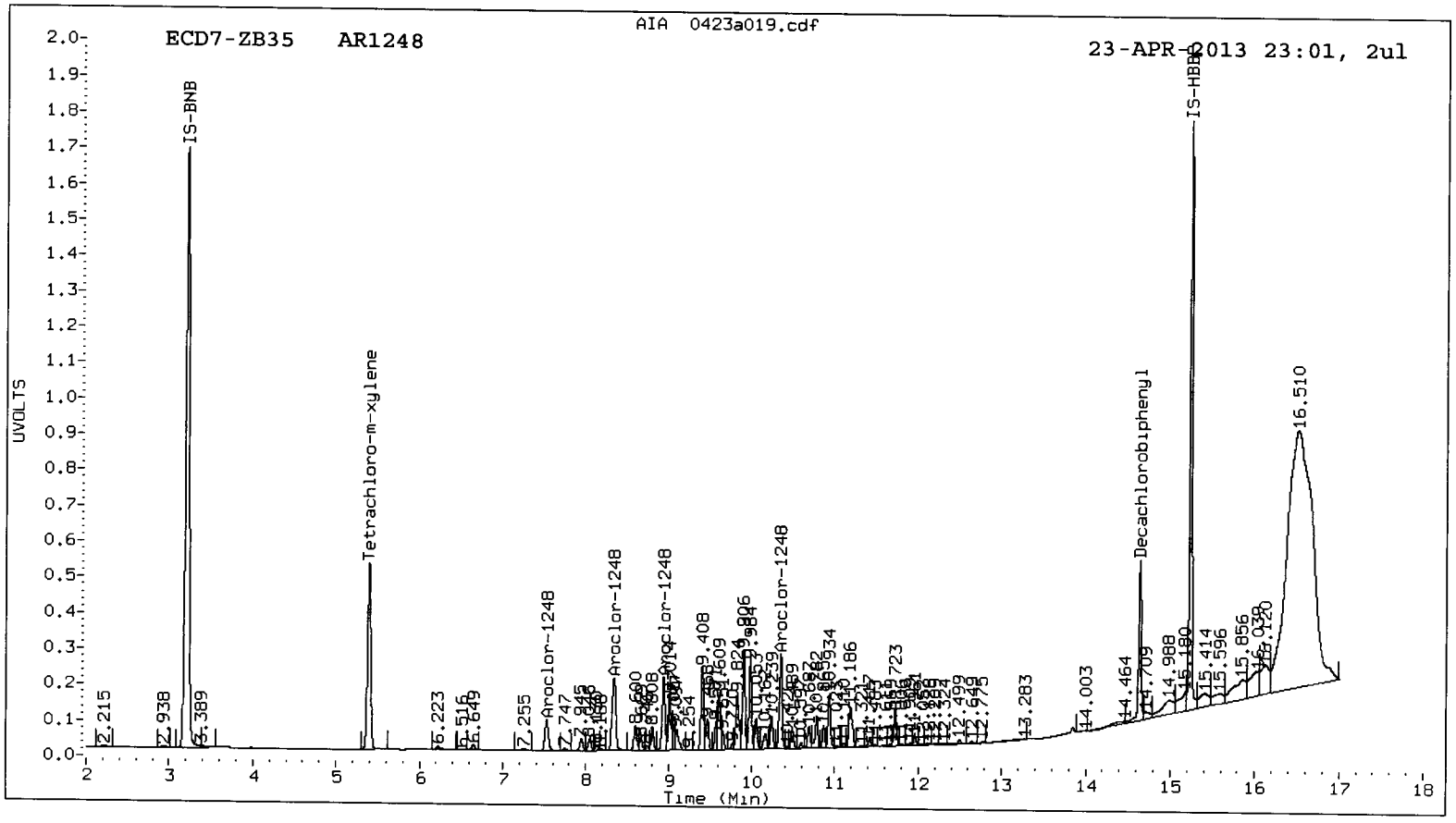
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
16.510
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a020.d
Data file 2: 20130416.b/0423-2.b/0423a020.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 23-APR-2013 23:23
Report Date: 04/24/2013 09:07
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.729	0.000	1892604	5.394	0.000	2583776	20.5	19.6	4.9	Tetrachloro-m-xylene
14.592	0.000	1309813	14.639	0.000	1593050	17.8	22.9	24.8	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	51.3	48.9
Decachlorobiphenyl	44.5	57.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7411382	32.6
Hexabromobiphenyl	4375297	4822919	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9841379	15.4
Hexabromobiphenyl	6077527	6076952	0.0

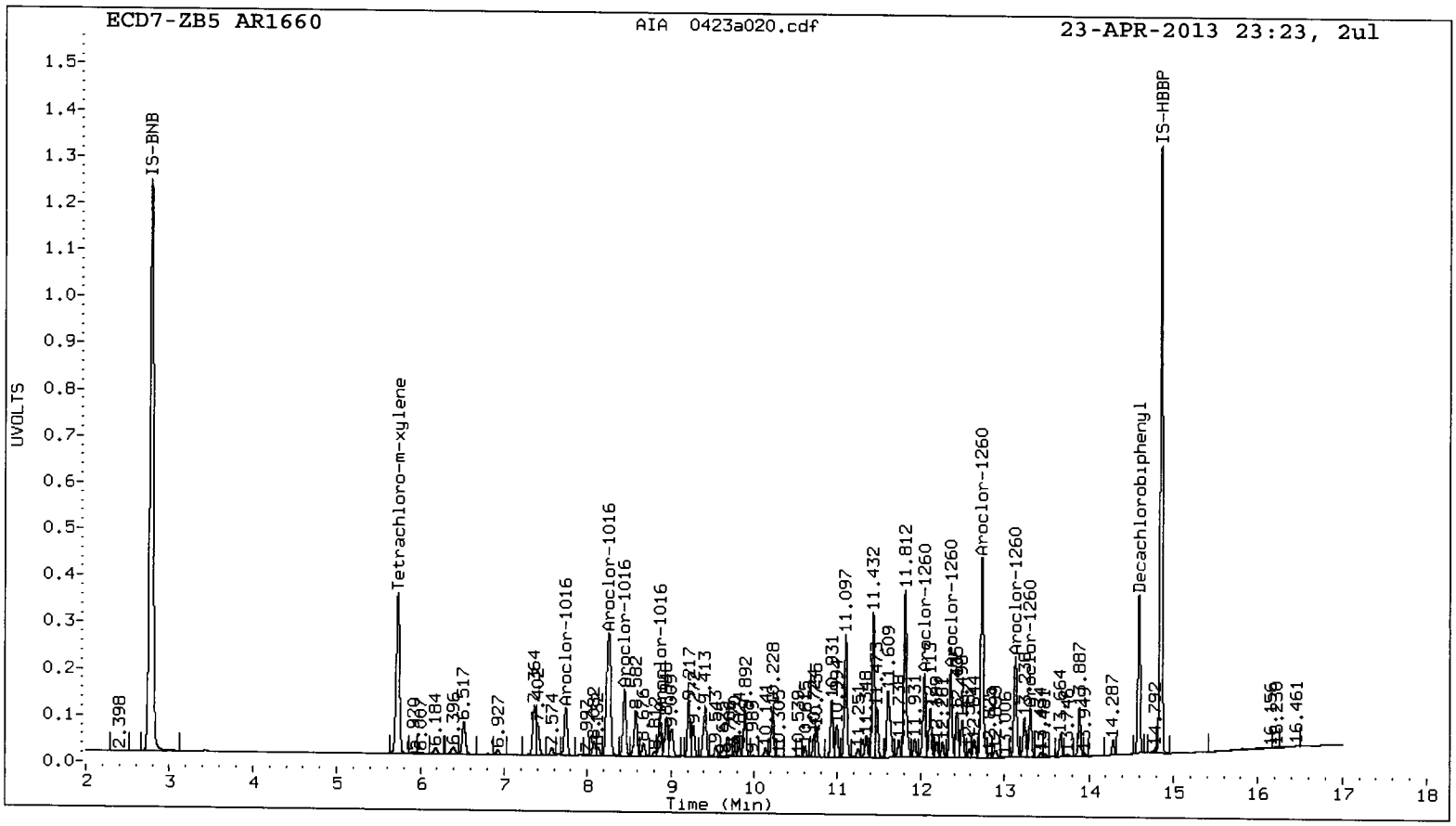
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.740	0.000	538004	240.3	1	6.651	0.000	539896	235.4
Aroclor-1016	2	8.260	0.000	1879660	250.2	2	7.532	0.000	1177283	233.9
Aroclor-1016	3	8.446	0.000	722629	244.0	3	8.342	0.000	2322775	236.8
Aroclor-1016	4	8.873	0.000	412928	243.6	4	9.410	0.000	815740	264.3
Total Col1Ave (4 peaks):					244.5	Total Col2Ave (4 peaks):				242.6 RPD = 1
Corrected Ave (3 peaks):					242.6	Corrected Ave (3 peaks):				235.4 RPD = 3
Aroclor-1260	1	12.044	0.000	810966	273.5	1	11.960	0.000	1406137	277.3
Aroclor-1260	2	12.361	0.000	814054	274.0	2	12.504	0.000	1129320	284.1
Aroclor-1260	3	12.731	0.000	1961476	273.7	3	12.774	0.000	2275823	276.4
Aroclor-1260	4	13.127	0.000	1021520	275.4	4	13.334	0.000	1513019	277.8
Aroclor-1260	5	13.307	0.000	446066	251.7	NS	---			----
Total Col1Ave (5 peaks):					269.7	Total Col2Ave (4 peaks):				278.9 RPD = 3
Corrected Ave (4 peaks):					268.2	Corrected Ave (3 peaks):				277.2 RPD = 3

Total PCB Area Col1 (5.829 - 14.492) = 25030010 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 31928263 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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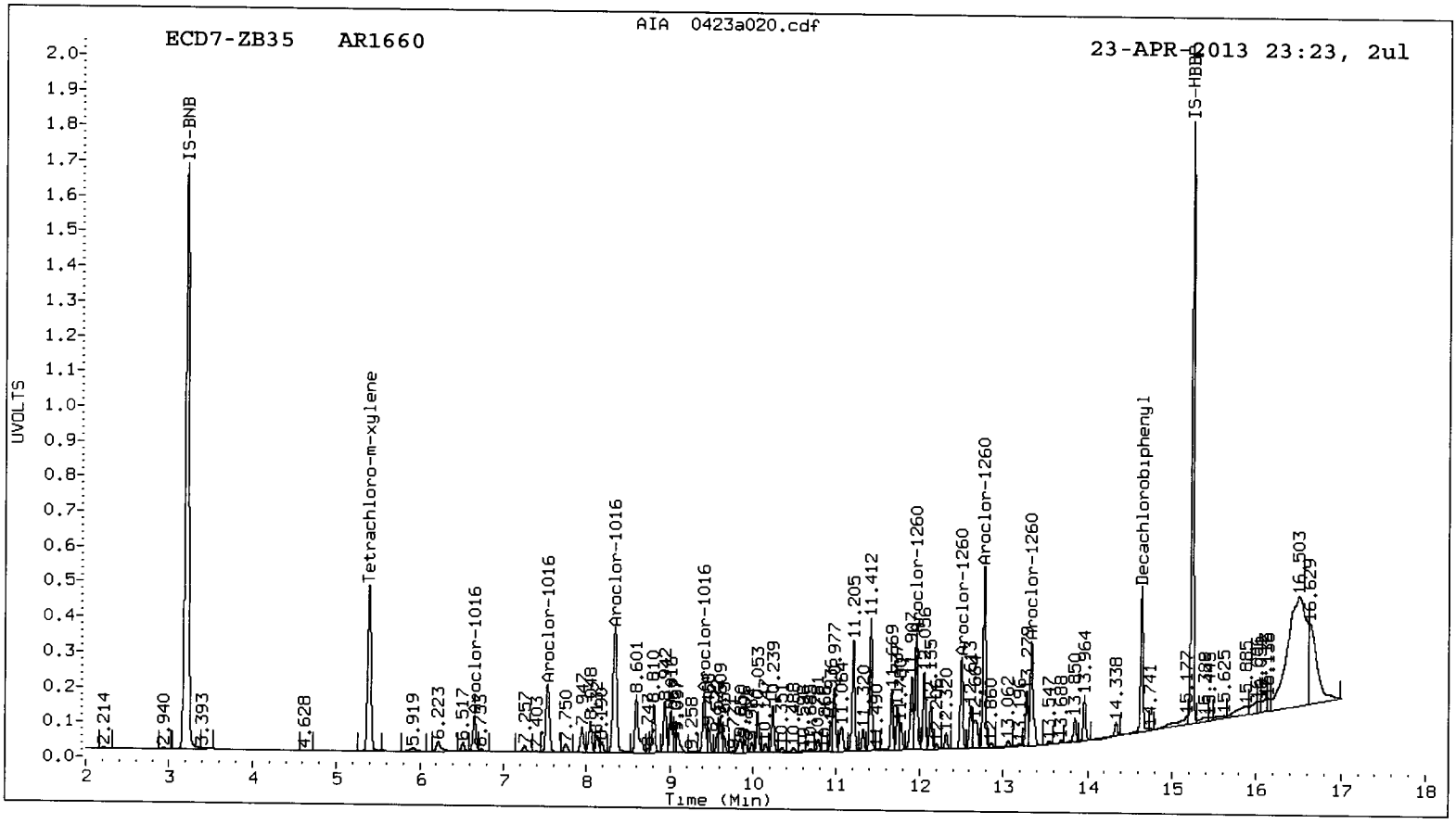
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 04/24/13 Analysis: PCB's Analyst: JR

Column 1 Serial No.: 213234 Column Type: ZB5

Column 2 Serial No.: 175388 Column Type: ZB35

GC Method: PCB ICal Date: 04/16/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
2006-1	1930-1,2,3,4,5,6,	2009-2,3,4,5,6,7

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	24-APR-2013 07:19	0424a001.d	1	RINSE
2	24-APR-2013 07:41	0424a002.d	1	DDT BD
3	24-APR-2013 08:03	0424a003.d	1	AR1242
4	24-APR-2013 08:25	0424a004.d	1	AR1660
5	24-APR-2013 08:46	0424a005.d	100	WL67A
6	24-APR-2013 09:08	0424a006.d	1	AR1248
7	24-APR-2013 09:30	0424a007.d	1	AR1660
8	24-APR-2013 13:38	0424a008.d	1	DDT BD
9	24-APR-2013 13:59	0424a009.d	1	AR1242
10	24-APR-2013 14:21	0424a010.d	1	AR1660
11	24-APR-2013 14:43	0424a011.d	1	WM16MBS1
12	24-APR-2013 15:05	0424a012.d	1	WM16LCSS1
13	24-APR-2013 15:27	0424a013.d	1	WM16LCSDS1
14	24-APR-2013 15:49	0424a014.d	1	WM16QLS
15	24-APR-2013 16:11	0424a015.d	1	WM16A
16	24-APR-2013 16:33	0424a016.d	1	WM16B
17	24-APR-2013 16:55	0424a017.d	1	WM16C
18	24-APR-2013 17:17	0424a018.d	1	WM16D
19	24-APR-2013 17:39	0424a019.d	1	WM08A
20	24-APR-2013 18:01	0424a020.d	1	WM08B
21	24-APR-2013 18:23	0424a021.d	1	AR1248
22	24-APR-2013 18:45	0424a022.d	1	AR1660
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24	24-APR-2013 19:29	0424a024.d	1	WM42LCSS1
25	24-APR-2013 19:51	0424a025.d	1	WM42LCSDS1
26	24-APR-2013 20:12	0424a026.d	1	WM42QLS
27	24-APR-2013 20:34	0424a027.d	1	WM42A
28	24-APR-2013 20:56	0424a028.d	1	AR1254
29	24-APR-2013 21:18	0424a029.d	1	AR1660

JR 04/25/13

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

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0424-1.b/0424a003.d
Data file 2: 20130416.b/0424-2.b/0424a003.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 24-APR-2013 08:03
Report Date: 05/01/2013 08:24
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.725	0.003	2296948	5.389	0.011	3101380	20.6	19.5	5.3	Tetrachloro-m-xylene
14.593	0.001	1622047	14.639	0.007	1851554	17.1	21.4	22.0	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	51.5	48.8
Decachlorobiphenyl	42.9	53.5

05/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	8972878	60.5
Hexabromobiphenyl	4375297	6206262	41.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	11831890	38.8
Hexabromobiphenyl	6077527	7553438	24.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

WLS7:91291

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1242	1	7.735	0.001	504805	243.9	1	6.647	0.006	538962	245.2
Aroclor-1242	2	8.257	0.003	1751843	250.9	2	7.528	0.006	1101741	251.1
Aroclor-1242	3	8.443	0.002	674096	244.7	3	8.339	0.006	2168427	249.9
Aroclor-1242	4	9.409	0.002	622292	241.1	4	9.407	0.006	888412	295.2

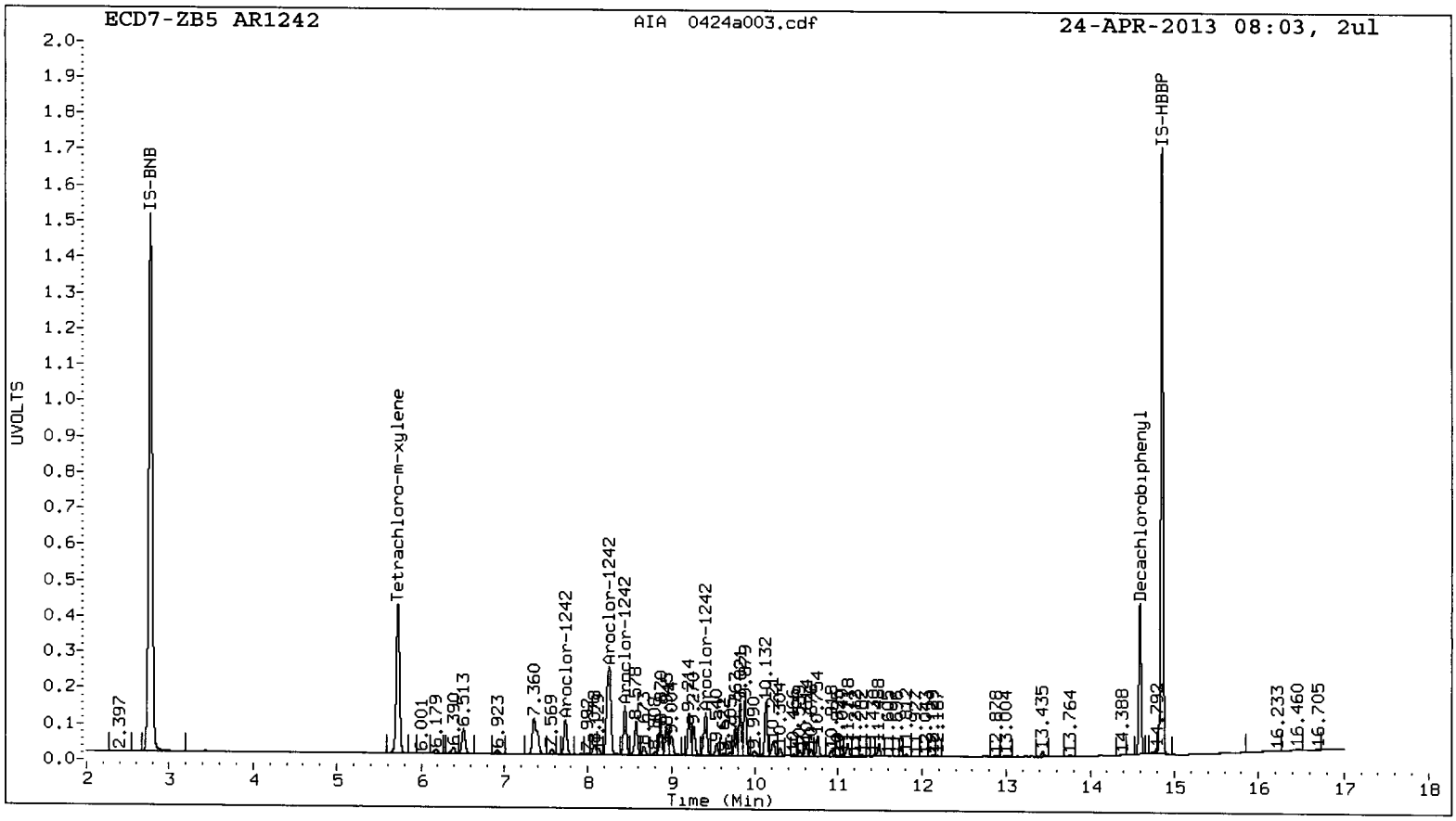
Total Col1Ave (4 peaks): 245.2 Total Col2Ave (4 peaks): 260.4 RPD = 6

Corrected Ave (3 peaks): 243.3 Corrected Ave (3 peaks): 248.7 RPD = 2

Total PCB Area Col1 (5.822 - 14.491) = 11950692 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.479 - 14.532) = 16645399 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Tetrachloro-m-xylene
Aroclor-1242
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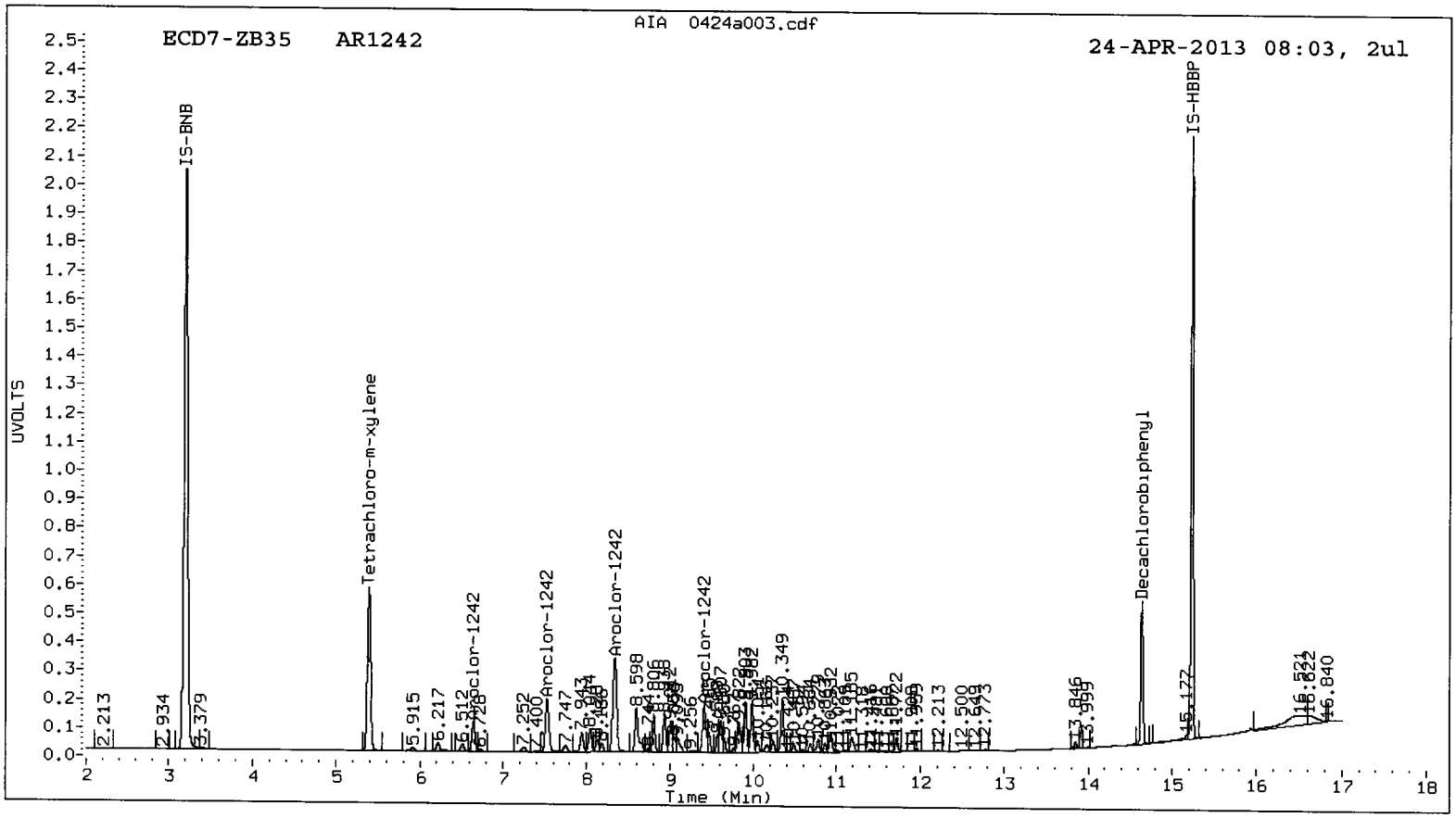
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0424-1.b/0424a004.d
Data file 2: 20130416.b/0424-2.b/0424a004.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 24-APR-2013 08:25
Report Date: 05/01/2013 08:24
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.725	0.003	1974676	5.390	0.011	2708273	20.5	19.6	4.6	Tetrachloro-m-xylene
14.592	0.001	1446501	14.639	0.007	1664879	17.5	21.7	21.6	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	51.2	49.0
Decachlorobiphenyl	43.7	54.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7747657	38.6
Hexabromobiphenyl	4375297	5432734	24.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10306550	20.9
Hexabromobiphenyl	6077527	6693134	10.1

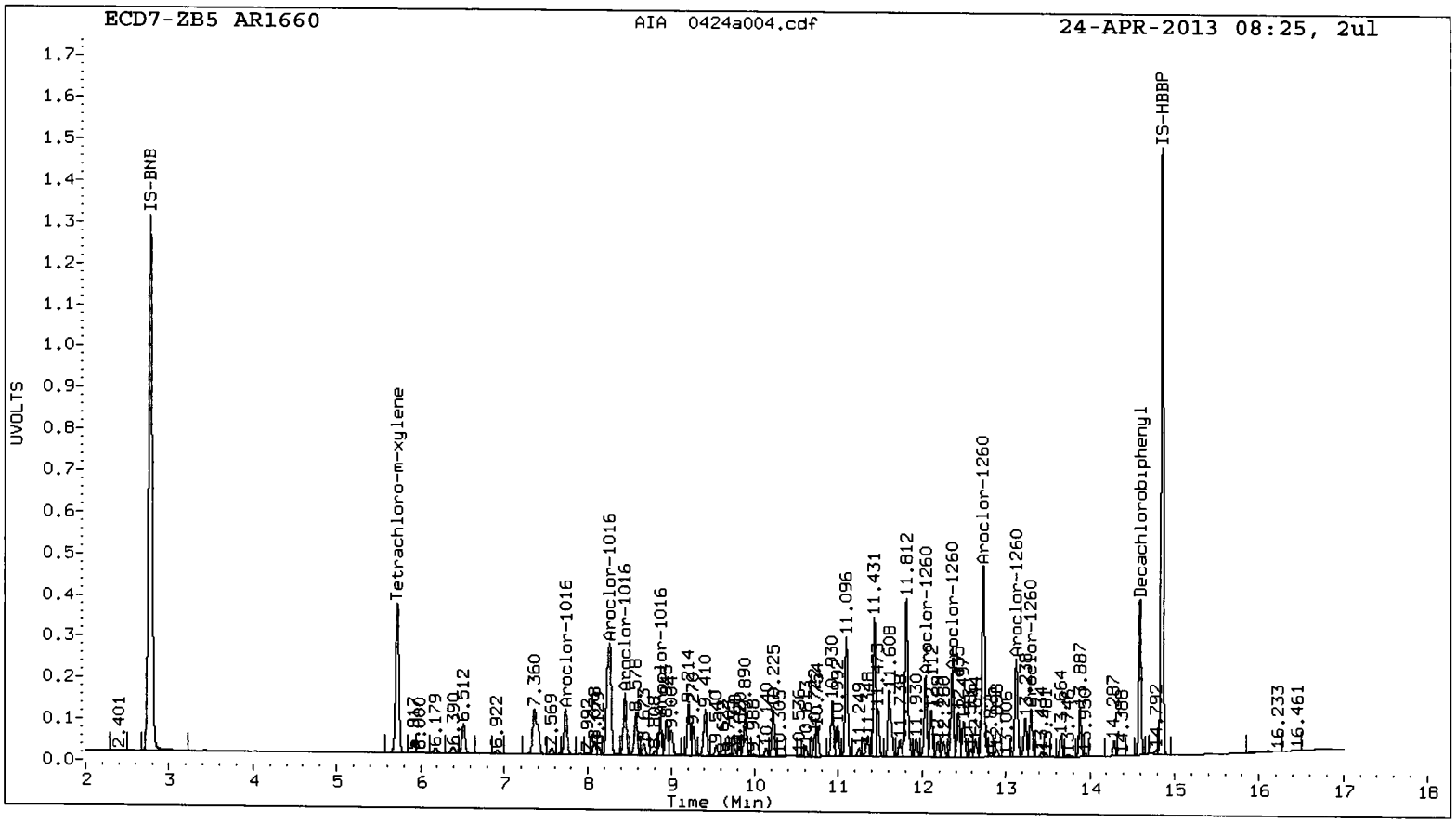
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.735	0.003	558587	238.7	1	6.645	0.010	562317	234.1
Aroclor-1016	2	8.256	0.002	1946049	247.8	2	7.528	0.012	1229777	233.3
Aroclor-1016	3	8.443	0.002	748713	241.9	3	8.338	0.012	2424813	236.0
Aroclor-1016	4	8.870	0.003	428734	241.9	4	9.407	0.010	850097	263.0
	Total Col1Ave (4 peaks):				242.6		Total Col2Ave (4 peaks):			241.6 RPD = 0
	Corrected Ave (3 peaks):				240.8		Corrected Ave (3 peaks):			234.5 RPD = 3
Aroclor-1260	1	12.043	0.002	883381	264.4	1	11.960	0.009	1519443	272.0
Aroclor-1260	2	12.360	0.001	889631	265.8	2	12.505	0.010	1231777	281.3
Aroclor-1260	3	12.731	0.002	2146881	266.0	3	12.774	0.009	2461830	271.5
Aroclor-1260	4	13.128	0.002	1124099	269.1	4	13.334	0.008	1653122	275.6
Aroclor-1260	5	13.307	0.001	493445	247.2	NS	---			----
	Total Col1Ave (5 peaks):				262.5		Total Col2Ave (4 peaks):			275.1 RPD = 5
	Corrected Ave (4 peaks):				260.9		Corrected Ave (3 peaks):			273.0 RPD = 5

Total PCB Area Col1 (5.822 - 14.491) = 26931031 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.479 - 14.532) = 34264651 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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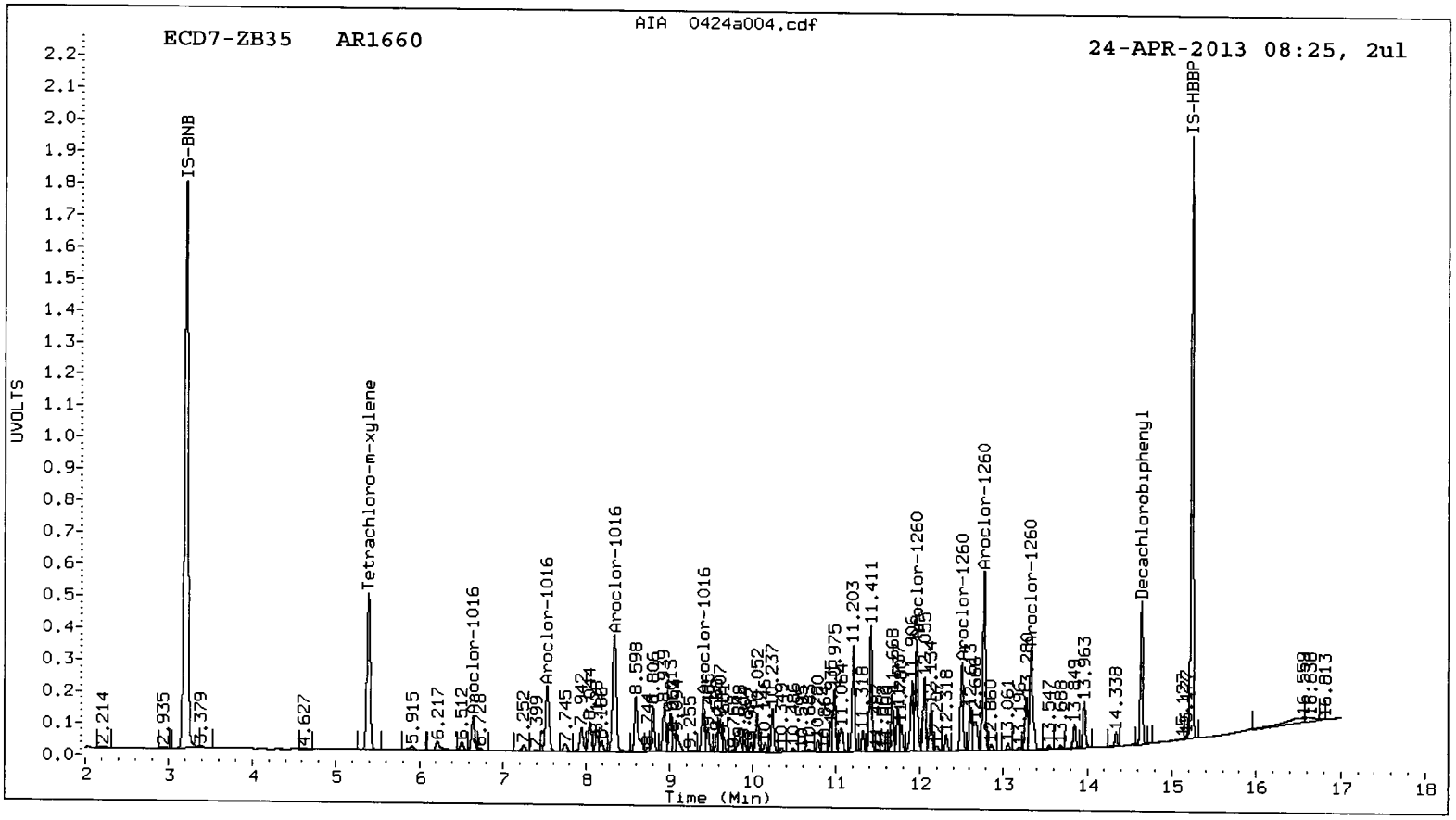
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0424-1.b/0424a005.d
Data file 2: 20130416.b/0424-2.b/0424a005.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL67A
Client ID: GR-CB-07-20130411-S
Injection Date: 24-APR-2013 08:46
Report Date: 04/24/2013 09:47
Matrix: SOIL
Dilution Factor: 100.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.726	0.001	49409	5.393	-0.001	71752	0.5	0.5	0.5	Tetrachloro-m-xylen
14.594	0.002	17255	14.637	-0.002	97010	0.2	1.1	143.3*	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	127.7	127.1
Decachlorobiphenyl	47.2	285.9

D

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7777239	39.1
Hexabromobiphenyl	4375297	5998151	37.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10517552	23.4
Hexabromobiphenyl	6077527	7399273	21.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.737	0.002	355912	151.5	1	6.651	0.006	249023	101.6	
Aroclor-1016	2	8.261	0.005	1541585	195.6	2	7.529	0.001	721596	134.2	
Aroclor-1016	3	8.445	0.003	539204	173.5	3	8.343	0.005	2002221	191.0	
Aroclor-1016	4	8.871	0.002	532179	299.1	4	9.409	0.002	1091647	330.9	
	Total Col1Ave (4 peaks):				204.9	Total Col2Ave (4 peaks):				189.4	RPD = 8
	Corrected Ave (3 peaks):				173.5	Corrected Ave (3 peaks):				142.2	RPD = 20
Aroclor-1221	1	6.182	0.009	27661	29.2	1	6.219	-0.008	55820	34.4	
Aroclor-1221	2	6.395	0.011	30362	42.4	2	6.520	-0.005	97016	93.8	
Aroclor-1221	3	6.515	0.009	138207	57.6	3	6.651	-0.009	249023	83.3	
Aroclor-1221	NS	---			----	4	7.529	-0.024	721596	702.8	
	Total Col1Ave (3 peaks):				43.1	Total Col2Ave (4 peaks):				228.6	RPD = 137*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				70.5	
Aroclor-1232	1	6.515	0.009	138207	87.0	1	6.651	-0.008	249023	119.2	
Aroclor-1232	2	7.737	0.008	355912	384.6	2	7.529	-0.013	721596	312.9	
Aroclor-1232	3	8.261	0.013	1541585	498.5	3	8.343	-0.008	2002221	482.3	
Aroclor-1232	4	8.445	0.008	539204	433.8	4	8.940	-0.010	842478	623.3	
	Total Col1Ave (4 peaks):				351.0	Total Col2Ave (4 peaks):				384.4	RPD = 9
	Corrected Ave (3 peaks):				301.8	Corrected Ave (3 peaks):				304.8	RPD = 1
Aroclor-1242	1	7.737	0.002	355912	198.4	1	6.651	0.004	249023	127.4	
Aroclor-1242	2	8.261	0.004	1541585	254.7	2	7.529	0.001	721596	185.0	
Aroclor-1242	3	8.445	0.002	539204	225.8	3	8.343	0.004	2002221	259.6	
Aroclor-1242	4	9.411	0.001	739963	330.8	4	9.409	0.002	1091647	408.0	
	Total Col1Ave (4 peaks):				252.5	Total Col2Ave (4 peaks):				245.0	RPD = 3
	Corrected Ave (3 peaks):				226.3	Corrected Ave (3 peaks):				190.7	RPD = 17
Aroclor-1248	1	8.261	0.012	1541585	363.7	1	7.529	0.001	721596	335.8	
Aroclor-1248	2	8.871	0.000	532179	197.3	2	8.343	0.004	2002221	362.2	
Aroclor-1248	3	9.411	-0.001	739963	197.5	3	8.940	-0.001	842478	213.7	
Aroclor-1248	4	9.885	0.003	863327	173.0	4	10.346	-0.005	807217	150.8	
	Total Col1Ave (4 peaks):				232.9	Total Col2Ave (4 peaks):				265.6	RPD = 13
	Corrected Ave (3 peaks):				189.3	Corrected Ave (3 peaks):				233.4	RPD = 21
Aroclor-1254	1	10.224	0.003	673088	145.2	1	10.053	0.001	566541	167.2	
Aroclor-1254	2	10.615	0.004	470112	167.8	2	10.239	0.002	649553	154.7	
Aroclor-1254	3	10.756	0.004	886678	160.4	3	10.935	0.002	1201996	175.6	
Aroclor-1254	4	11.113	0.002	863793	147.0	4	11.191	0.004	1185803	174.4	
Aroclor-1254	5	11.813	0.003	947141	170.7	5	11.960	0.001	972336	192.5	
	Total Col1Ave (5 peaks):				158.2	Total Col2Ave (5 peaks):				172.9	RPD = 9
	Corrected Ave (4 peaks):				155.1	Corrected Ave (4 peaks):				168.0	RPD = 8
Aroclor-1260	1	12.044	0.001	156249	42.4	1	11.960	0.000	972336	157.5	
Aroclor-1260	2	12.361	0.001	141545	38.3	2	12.501	-0.004	444653	91.9	
Aroclor-1260	3	12.735	0.004	301054	33.8	3	12.775	0.001	496100	49.5	
Aroclor-1260	4	13.127	-0.001	231943	50.3	4	13.335	0.001	363175	54.8	
Aroclor-1260	5	13.307	0.001	115908	52.6	NS	---			----	
	Total Col1Ave (5 peaks):				43.5	Total Col2Ave (4 peaks):				88.4	RPD = 68*
	Corrected Ave (4 peaks):				41.2	Corrected Ave (3 peaks):				85.4	RPD = 45*
Aroclor-1262	1	12.361	0.004	141545	32.5	1	12.501	-0.015	444653	79.2	
Aroclor-1262	2	12.735	0.006	301054	25.8	2	12.775	-0.012	496100	38.3	
Aroclor-1262	3	13.127	0.000	231943	61.6	3	13.278	-0.013	139600	28.2	
Aroclor-1262	4	13.307	0.003	115908	26.4	4	13.335	-0.014	363175	44.8	
Aroclor-1262	5	13.879	-0.008	311686	81.0	5	13.962	-0.012	162680	36.5	
	Total Col1Ave (5 peaks):				45.4	Total Col2Ave (5 peaks):				45.4	RPD = 0
	Corrected Ave (4 peaks):				36.6	Corrected Ave (4 peaks):				37.0	RPD = 1
Aroclor-1268	1	13.239	0.004	112619	8.9	1	13.278	-0.012	139600	10.8	

Aroclor-1268	2	13.307	0.005	115908	9.9	2	13.335	-0.017	363175	29.6
Aroclor-1268	3	13.664	0.015	52251	5.2	3	13.692	-0.007	24689	2.5
Aroclor-1268	4	14.288	0.001	69176	2.3	4	14.338	-0.011	71074	2.2

Total Col1Ave (4 peaks): 6.6 Total Col2Ave (4 peaks): 11.3 RPD = 52*

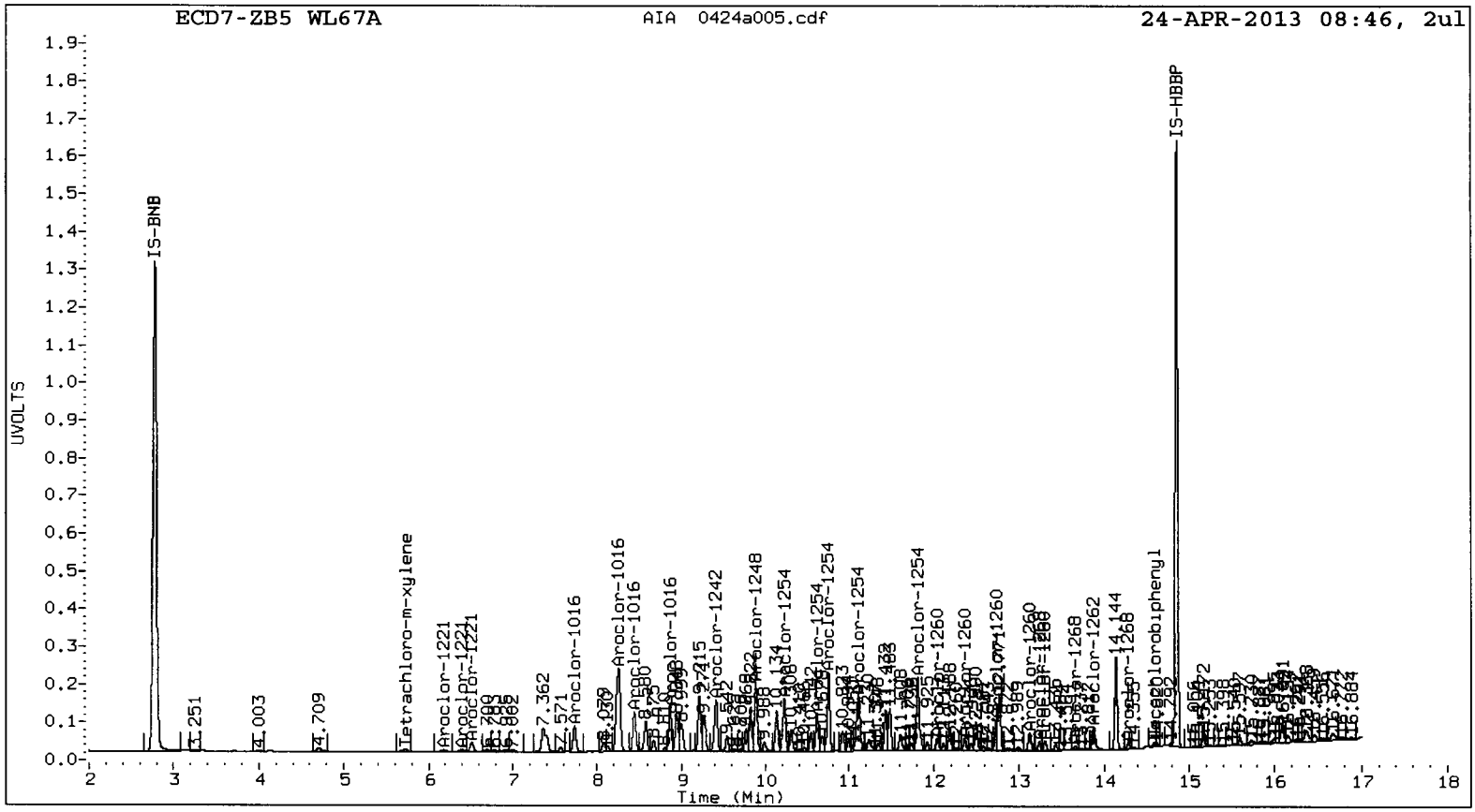
Corrected Ave (3 peaks): 5.5 Corrected Ave (3 peaks): 5.2 RPD = 6

Total PCB Area Col1 (5.825 - 14.492) = 20676718 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 26188015 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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UVOLTS
Time (Min)
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IS-HBBP
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
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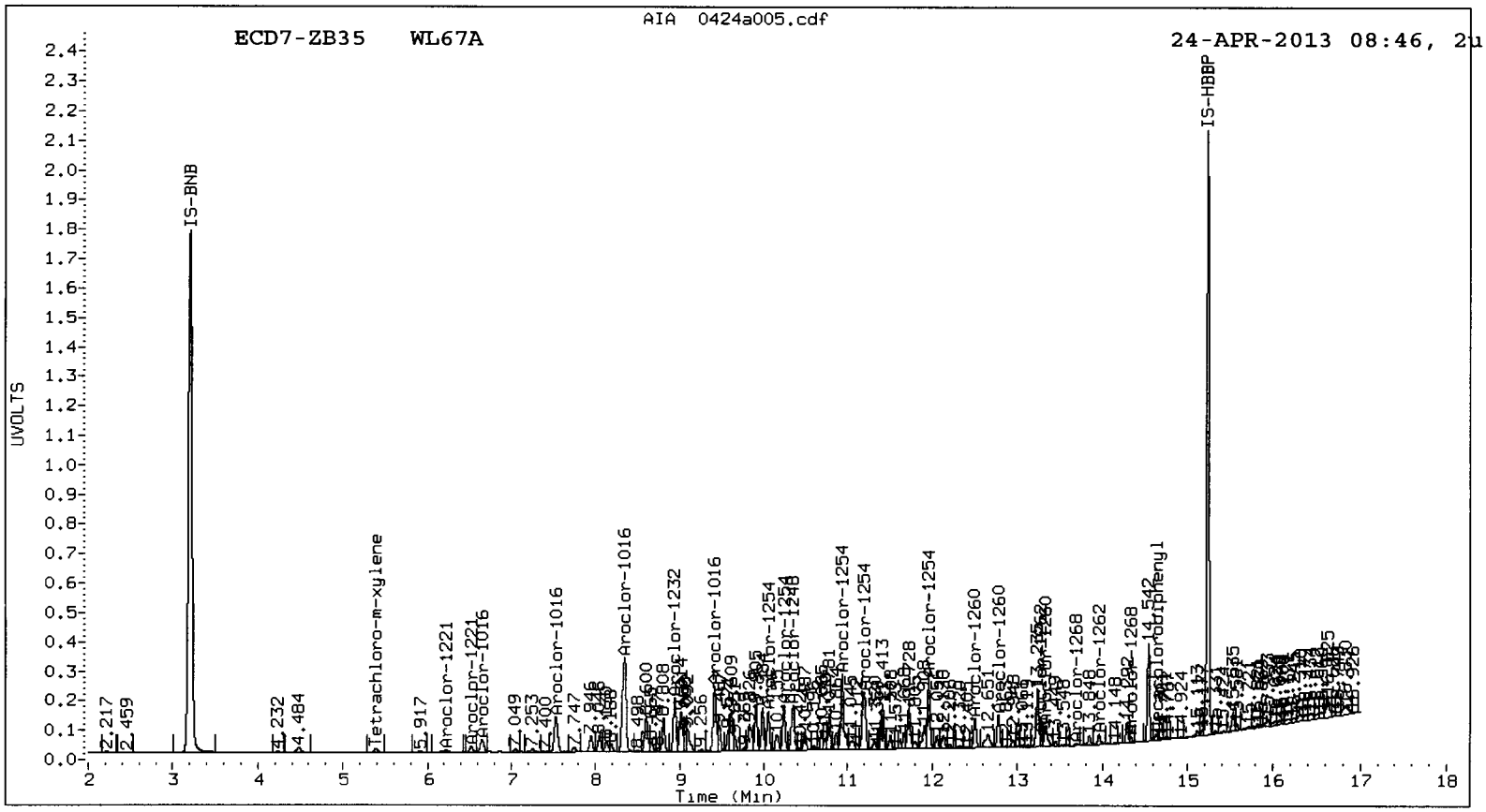
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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IS-HBBP
Tetrachloro-m-xylene
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Aroclor-1221
Aroclor-1232
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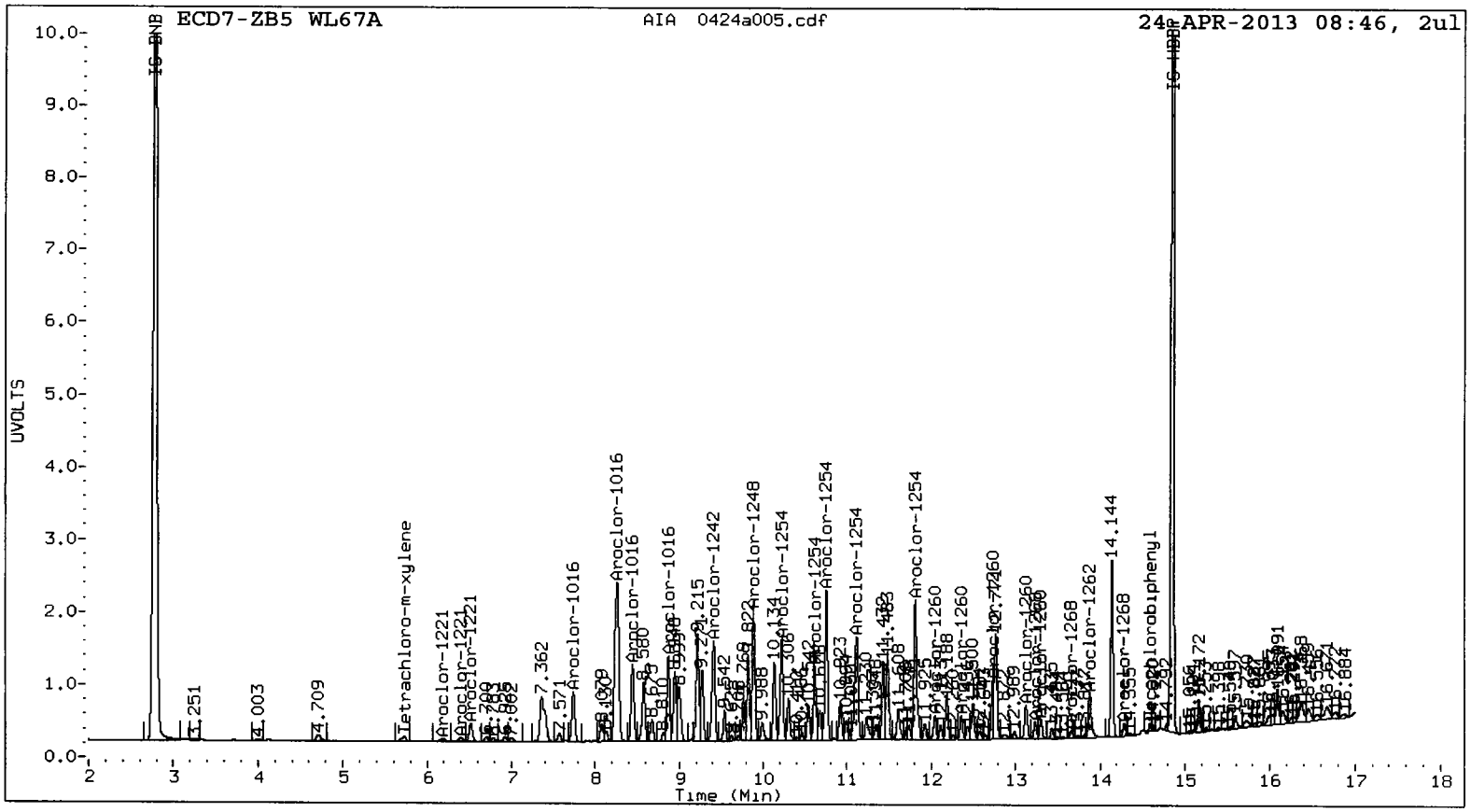
Aroclor-1268
Decachlorobiphenyl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Time (Min)
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Aroclor-1016
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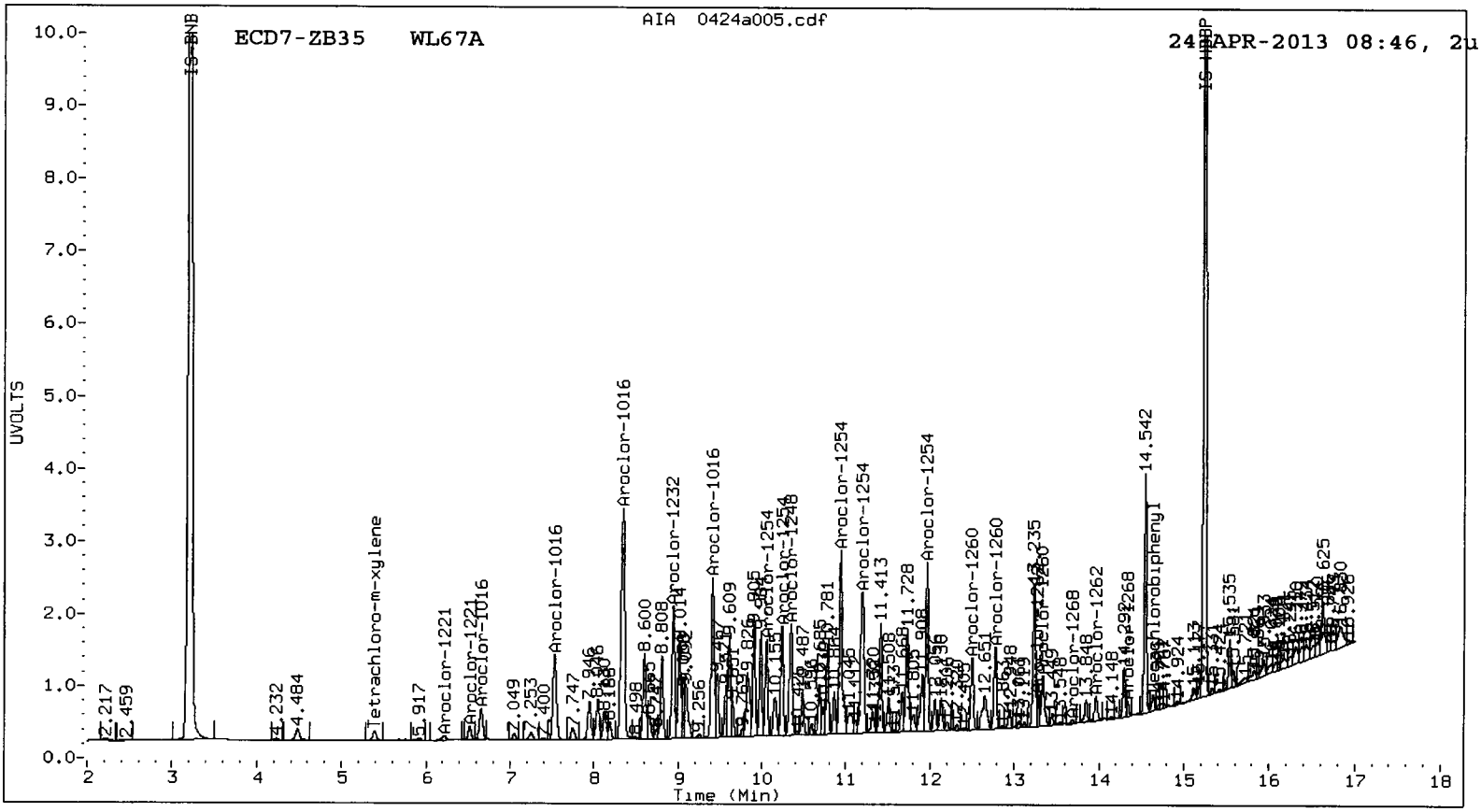
Decachlorobiphenyl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UVOLTS
Time (Min)
IS-DNB
IS-HBBP
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0424-1.b/0424a006.d
Data file 2: 20130416.b/0424-2.b/0424a006.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 24-APR-2013 09:08
Report Date: 05/01/2013 08:24
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.729	0.007	2055796	5.394	0.015	2897234	22.4	21.4	4.9	Tetrachloro-m-xylene
14.592	0.001	1490345	14.639	0.007	1725079	19.2	23.7	21.4	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	56.0	53.4
Decachlorobiphenyl	47.9	59.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7376855	31.9
Hexabromobiphenyl	4375297	5106171	16.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10111638	18.6
Hexabromobiphenyl	6077527	6337981	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-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	8.251	-0.003	995117	247.5	1	7.528	0.003	515924	249.7
Aroclor-1248	2	8.872	-0.002	636029	248.6	2	8.339	0.005	1344400	253.0
Aroclor-1248	3	9.412	-0.001	891839	250.9	3	8.941	0.005	969622	255.8
Aroclor-1248	4	9.882	-0.001	1153036	243.6	4	10.351	0.005	1308402	254.2

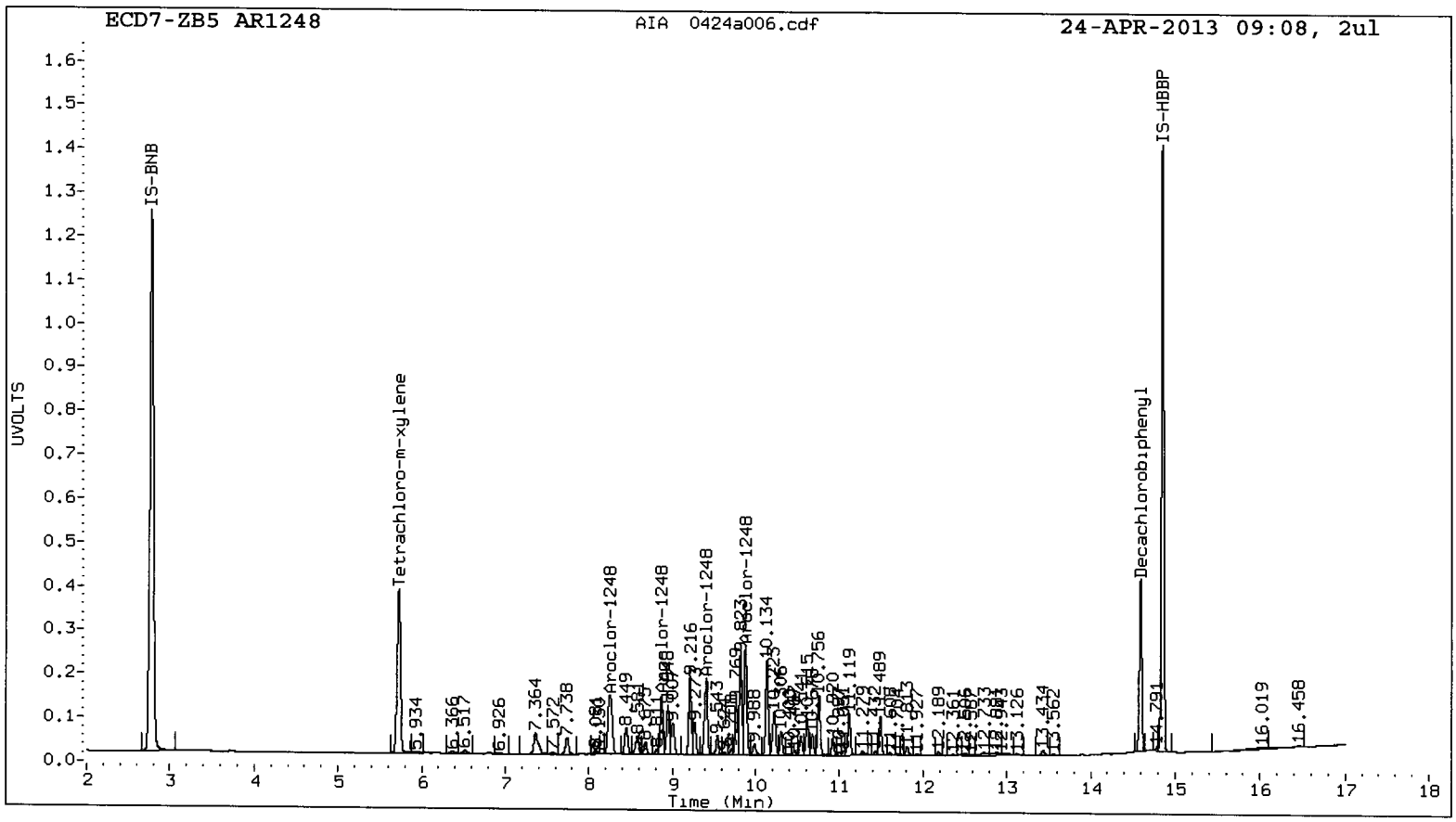
Total Col1Ave (4 peaks): 247.7 Total Col2Ave (4 peaks): 253.2 RPD = 2

Corrected Ave (3 peaks): 246.6 Corrected Ave (3 peaks): 252.3 RPD = 2

Total PCB Area Col1 (5.822 - 14.491) = 13712711 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.479 - 14.532) = 18274236 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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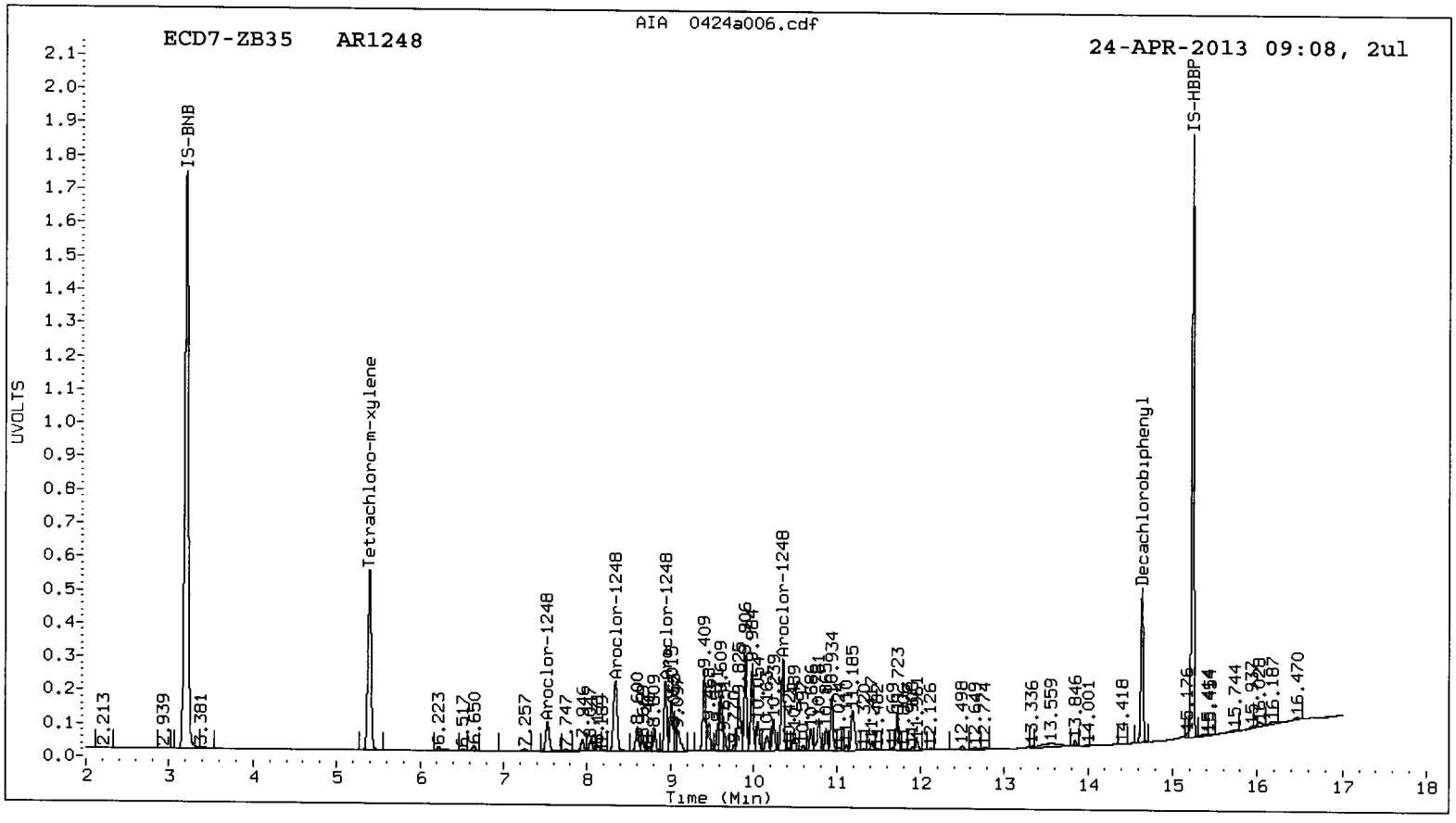
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0424-1.b/0424a007.d
Data file 2: 20130416.b/0424-2.b/0424a007.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 24-APR-2013 09:30
Report Date: 05/01/2013 08:24
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.729	0.007	1959309	5.393	0.014	2705294	20.5	19.5	5.3	Tetrachloro-m-xylene
14.592	0.001	1440117	14.638	0.007	1662416	17.6	21.9	21.9	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	51.3	48.7
Decachlorobiphenyl	43.9	54.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7673323	37.2
Hexabromobiphenyl	4375297	5376960	22.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10349906	21.4
Hexabromobiphenyl	6077527	6619803	8.9

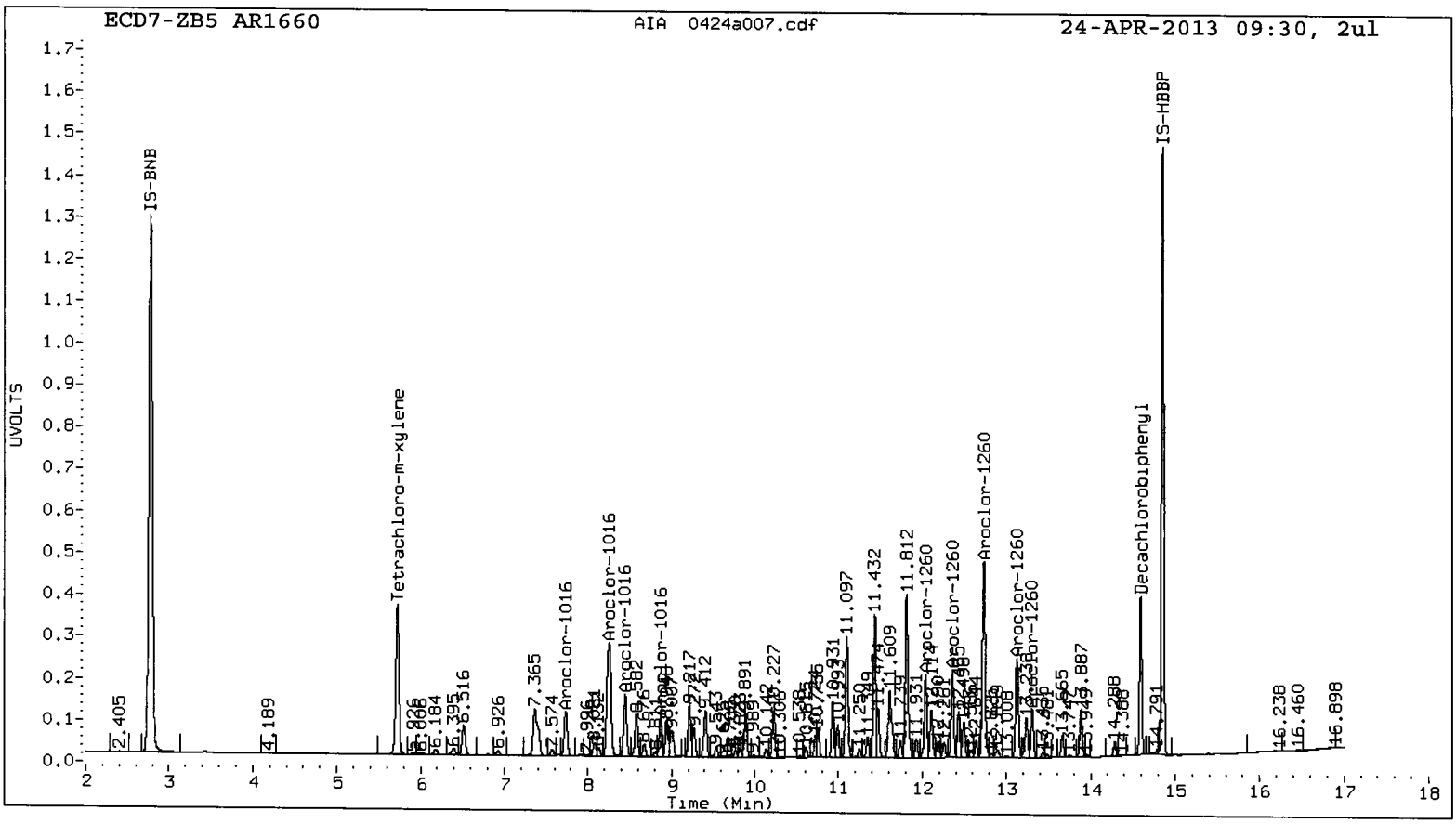
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.740	0.008	554126	239.1	1	6.651	0.015	562353	233.1
Aroclor-1016	2	8.259	0.005	1930058	248.2	2	7.531	0.015	1228717	232.1
Aroclor-1016	3	8.447	0.006	743029	242.3	3	8.341	0.015	2421891	234.7
Aroclor-1016	4	8.873	0.006	425392	242.4	4	9.409	0.012	848430	261.4
	Total Col1Ave (4 peaks):				243.0		Total Col2Ave (4 peaks):			240.3 RPD = 1
	Corrected Ave (3 peaks):				241.3		Corrected Ave (3 peaks):			233.3 RPD = 3
Aroclor-1260	1	12.044	0.003	887033	268.3	1	11.960	0.010	1519647	275.1
Aroclor-1260	2	12.361	0.002	894659	270.1	2	12.504	0.009	1228924	283.8
Aroclor-1260	3	12.732	0.003	2154833	269.7	3	12.773	0.009	2461713	274.5
Aroclor-1260	4	13.128	0.003	1124453	272.0	4	13.334	0.008	1670482	281.6
Aroclor-1260	5	13.307	0.002	491757	248.9	NS	---			----
	Total Col1Ave (5 peaks):				265.8		Total Col2Ave (4 peaks):			278.7 RPD = 5
	Corrected Ave (4 peaks):				264.3		Corrected Ave (3 peaks):			277.1 RPD = 5

Total PCB Area Col1 (5.822 - 14.491) = 26915630 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.479 - 14.532) = 34384393 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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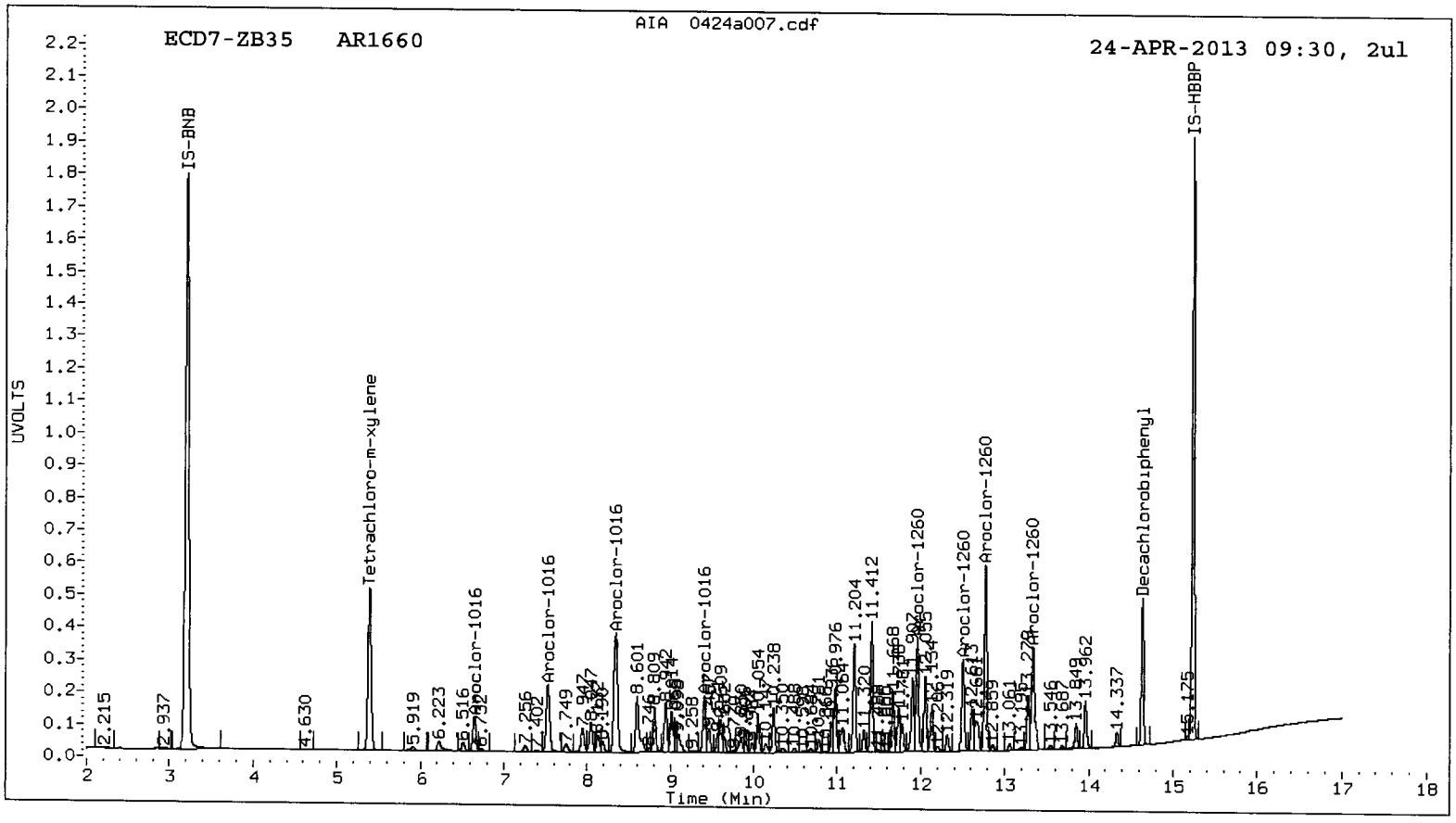
24-APR-2013 09:30, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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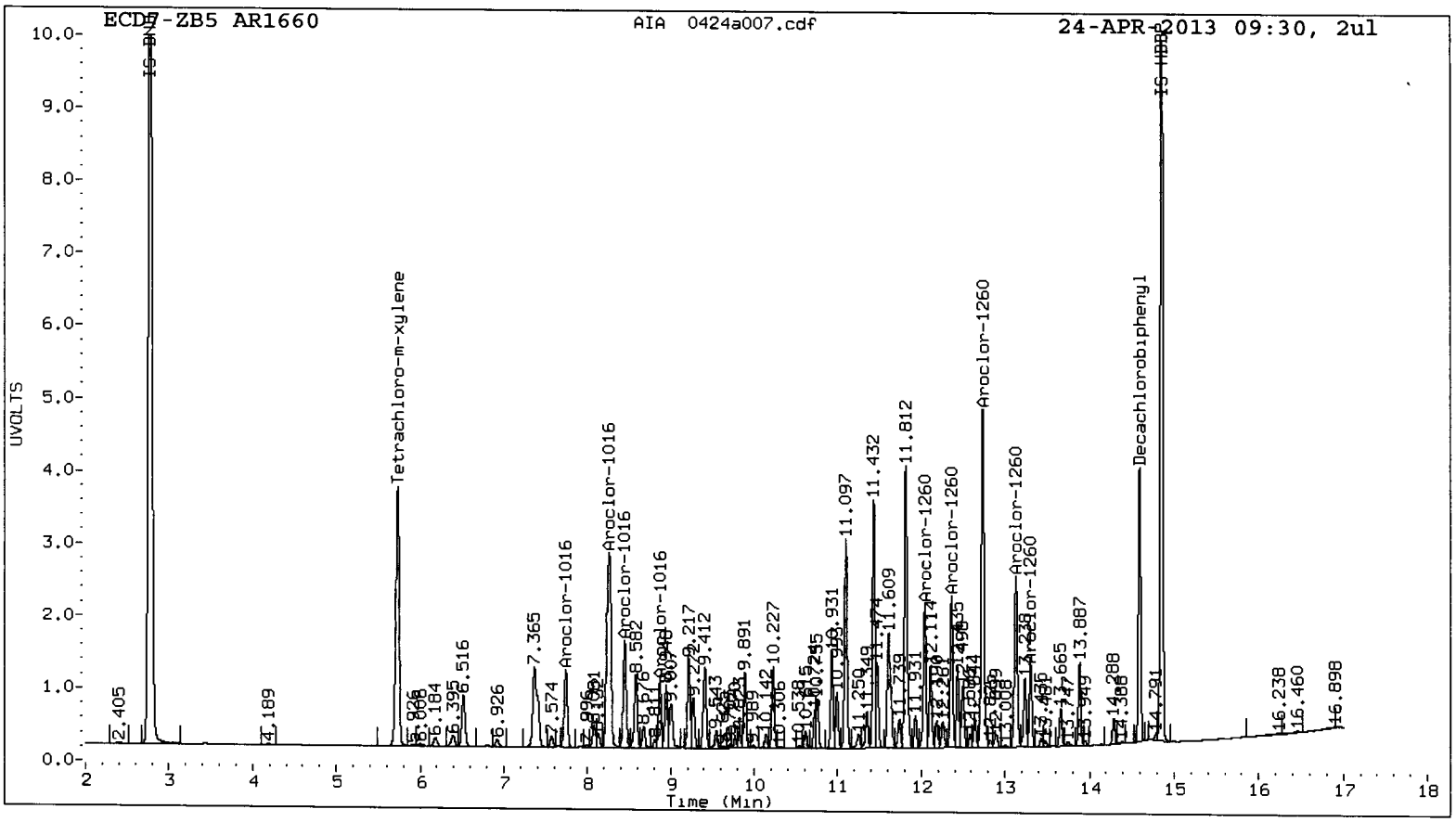
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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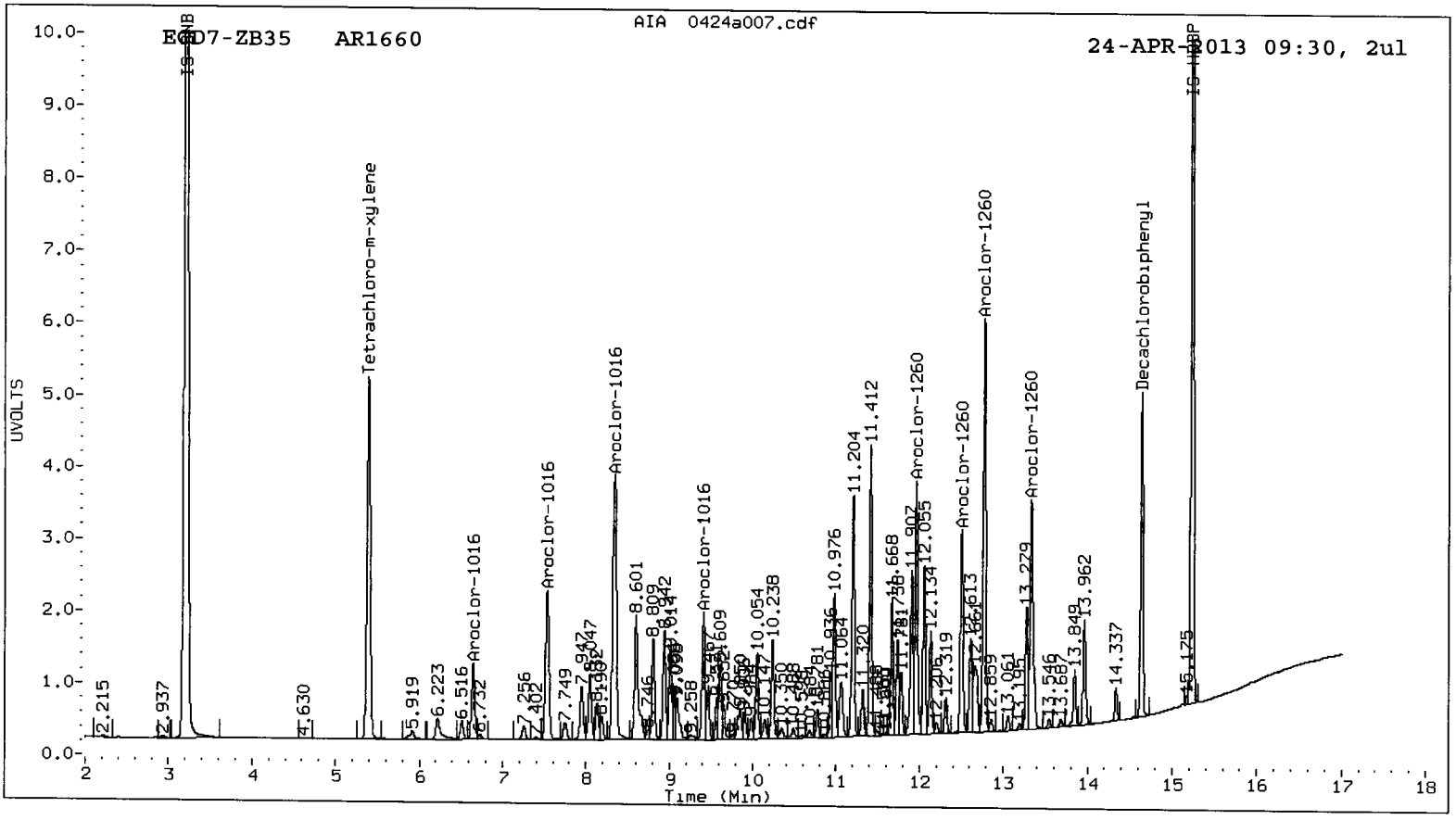
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL67

Analytical Resources, 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) WL67

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
	WL67 MBS	10.00g	(1:1) Y (N)	(1:1) Y (N)	1mL	1mL		YL 04/15/13
	↓ SBS	10.00g	(1:1) Y (N)	(1:1) Y (N)	1mL	1mL		
	~~SBS Dup.~~	~~10.00g~~	~~(1:1) Y / N~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~		Analyst/Date
	WL67 ~~QLS~~	~~10.00g~~	~~(1:1) Y (N)~~	~~(1:1) Y (N)~~	~~1mL~~	~~1mL~~		Microwave 1 2 (3)
8	A	10.02	(1:1) Y (N)	(1:1) Y (N)	1mL	1mL		YL/CT
8	Ams	10.04	(1:1) Y (N)	(1:1) Y (N)	1mL	1mL		
8	Amsd	10.03	(1:1) Y (N)	(1:1) Y (N)	1mL	1mL		04/15/13
8	↓ B	10.04	(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		TurboVap 1 2 3 Pre-Acid/Silica Clean
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL		CJZ 4/17/13
		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
		10.	(1:1) Y / N	(1:1) Y / N	1mL	1mL	CJZ 4/17/13	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		CJZ 4/17/13
Analyst/Date	YL 04/15/13			CJZ 4/17/13	CJZ 4/17/13			Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O1 (2082-5)	450µg/mL	**100µL**	11/19/13	YL	~~SH~~
Spike	11 (2028-3)	15000µg/mL	**100µL**	10/16/13	YL	~~SH~~
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time: 13:24				**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)

WL67 : 913393

Organic Extractions
Reagent and Solutions Identification

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WL67

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: YC 04/15/13	Microwave
Methylene Chloride: (I# ~~8468~~) 8174 4/4/13	YL/CT
Anhydrous Sodium Sulfate: (I# 8418 + jar date 4/4/13)	04/15/13
Neutral Glasswool: (I# 7198 + jar date 4/5/13)	
Vialing Station:	Vialing
Methylene Chloride: (I# 8174)	CSZ 4/17/13
Concentrated Sulfuric Acid: (I# N/A)	
Silica Gel (SPE) Darts: (I# N/A)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WL67 Client ID: SAIC
Analyst: JCW Date: 4/17/13

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
WL67A	100	DCM/I8174	400	5x	100	DCM/I8174	900	50x
↓ Ams	↓	↓	↓	↓	↓	↓	↓	↓
Amsd								
↓ B								

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL67

Client ID: SAIC

Parameter: TPHD

Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= B	YL 4/15/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 5-1% small ~~Rocks~~ rocks A, YL 4/15/13	YL 4/15/13
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= A, B	YL 4/15/13
☐ 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: WL67

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): 3/22/13 Internal Standard ID N/A Expiration N/A

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
Diesel/Ak102	2021-3	4/9/13	Diesel/Ak102	2043-1	10/20/13
~~Motor Oil~~	~~2041-4~~	~~11/2~~	~~Motor Oil~~	~~2043-2~~	
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:

Modi for IT Diesel (Cal Diesel)

Analyst: JW **Date:** 4/18/13

Reviewer: [signature] **Date:** 4/18/13

WLGT:01505

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130322.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0322b005	0322b006	0322b007	0322b008	0322b009	0322b010
INJ.DATE:	22-MAR-2013	22-MAR-2013	22-MAR-2013	22-MAR-2013	22-MAR-2013	22-MAR-2013
INJ.TIME:	12:48	13:07	13:27	13:46	14:05	14:25

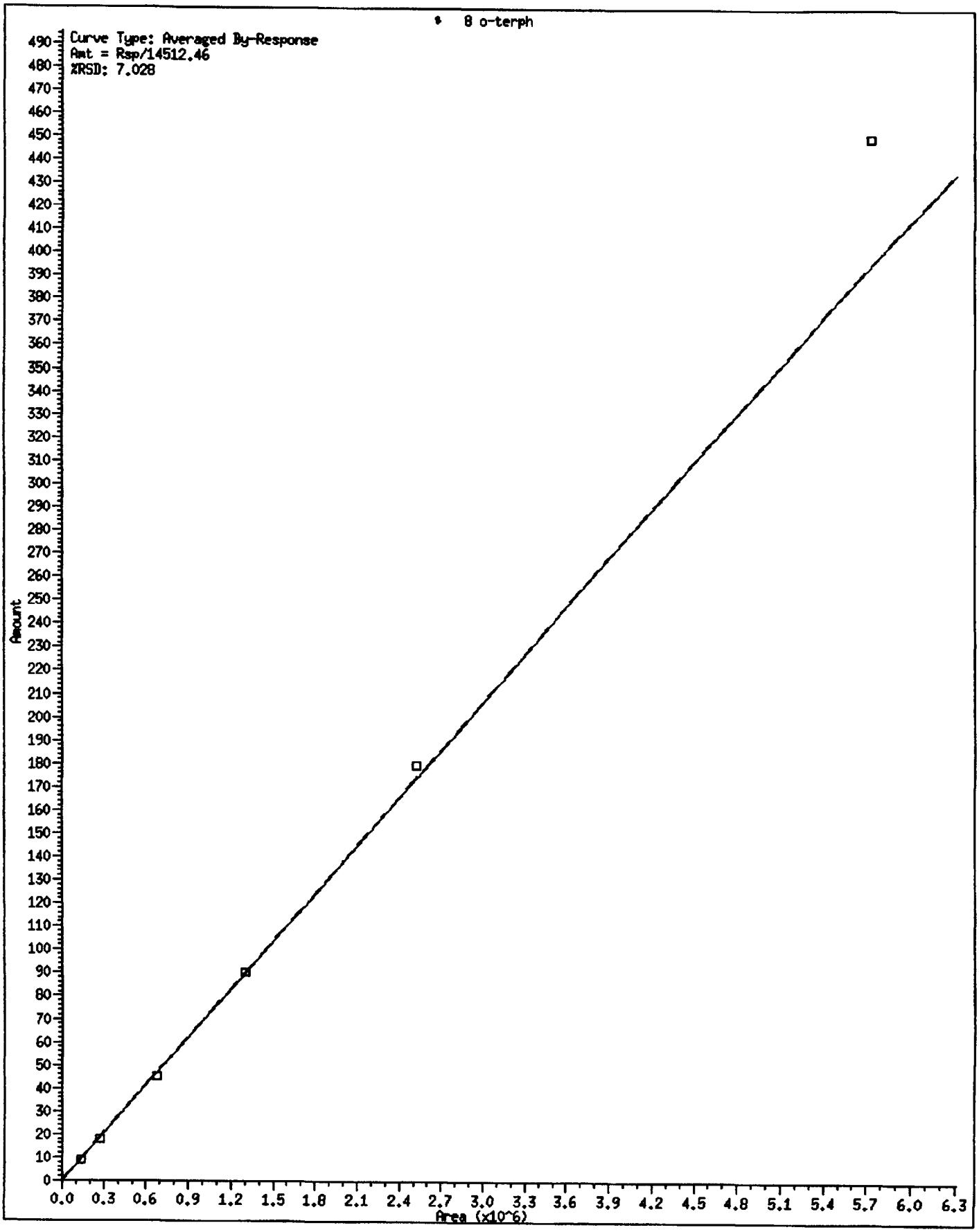
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	0.812	0.810	0.812	0.811	0.826	0.815	0.815	0.715-0.915	0.814	0.006
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2 C8	0.974	0.967	0.968	0.969	0.985	0.949	0.949	0.849-1.049	0.969	0.012
3 C10	2.334	2.336	2.337	2.339	2.339	2.347	2.347	2.297-2.397	2.339	0.005
4 C12	3.099	3.099	3.099	3.115	3.101	3.107	3.107	3.057-3.157	3.103	0.006
5 C14	3.689	3.687	3.688	3.691	3.690	3.685	3.685	3.635-3.735	3.688	0.002
6 C16	4.188	4.193	4.192	4.193	4.197	4.185	4.185	4.135-4.235	4.191	0.004
7 C18	4.648	4.647	4.649	4.652	4.652	4.639	4.639	4.589-4.689	4.648	0.005
$ 8 o-terph	4.736	4.737	4.744	4.750	4.759	4.778	4.778	4.728-4.828	4.751	0.016
9 C20	5.070	5.070	5.067	5.064	5.066	5.071	5.071	5.021-5.121	5.068	0.003
10 C22	5.468	5.467	5.467	5.464	5.461	5.465	5.465	5.415-5.515	5.465	0.003
11 C24	5.830	5.834	5.833	5.838	5.836	5.834	5.834	5.784-5.884	5.834	0.003
12 C25	6.004	6.010	6.007	6.015	6.017	6.010	6.010	5.960-6.060	6.011	0.005
13 C26	6.187	6.188	6.189	6.191	6.189	6.192	6.192	6.142-6.242	6.189	0.002
14 C28	6.508	6.506	6.497	6.497	6.497	6.500	6.500	6.450-6.550	6.501	0.005
$ 15 Triacon Surr	6.793	6.795	6.791	6.798	6.791	6.792	6.792	6.742-6.842	6.793	0.003
16 C32	7.044	7.048	7.042	7.047	7.045	7.053	7.053	7.003-7.103	7.047	0.004

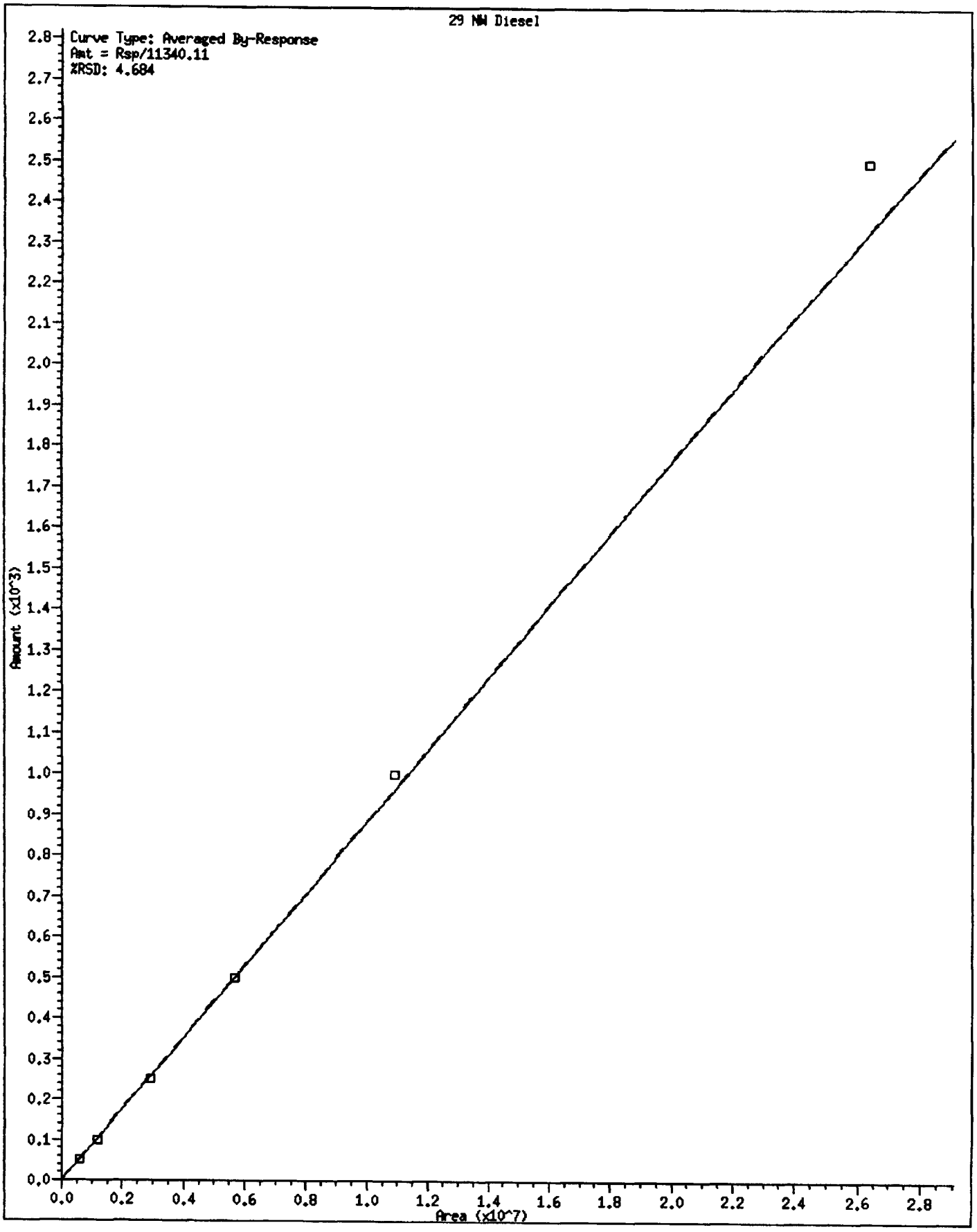
Reviewer 1 _____ Date: 3/25/13
Reviewer 2 _____ Date: 3/26/13

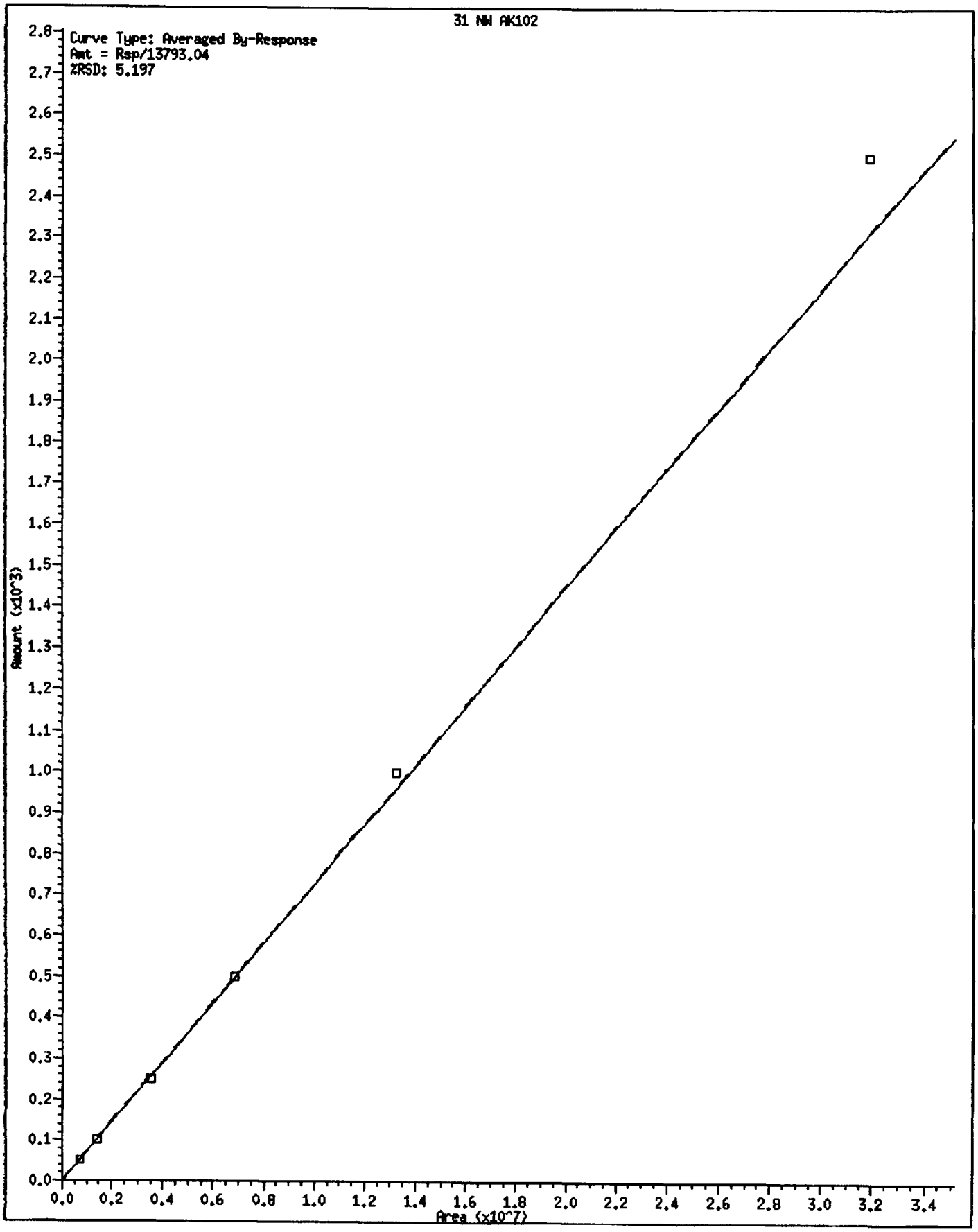
Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130322.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.282	7.283	7.284	7.281	7.285	7.282	7.282	7.232-7.332	7.283	0.001
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.500	7.499	7.501	7.499	7.503	7.497	7.497	7.447-7.547	7.500	0.002
20 C38	7.706	7.704	7.716	7.705	7.709	7.712	7.712	7.662-7.762	7.709	0.005
21 C40	7.899	7.902	7.899	7.901	7.898	7.903	7.903	7.853-7.953	7.900	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
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	+++++	+++++


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/14512.46
%RSD: 7.028
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
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/11340.11
%RSD: 4.684
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


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/13793.04
%RSD: 5.197
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
3.0
3.2
3.4

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: 20130322

Instrument: FID3B.I
Project:

Calibration Date: 22-MAR-2013
SDG No.: 20130322

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	11942	11745	11577	11280	10897	10565	11334	4.6
AK Diesel	14741	14402	14061	13657	13217	12780	13810	5.3
OR Diesel	14785	14452	14109	13705	13264	12828	13857	5.3
Cal Diesel	14721	14382	14041	13635	13196	12760	13789	5.3
o-Terph	15493	15300	15046	14446	14040	12750	14512	7.0

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

Quant Ranges :
WA Diesel C12-C24 (3.112-5.835)
AK Diesel C10-C25 (2.342-6.010)
OR Diesel C10-C28 (2.342-6.502)
Cal Diesel C10-C24 (2.342-5.835)

Calibration Files	Analysis Time
0322b005.d	22-MAR-2013 12:48
0322b006.d	22-MAR-2013 13:07
0322b007.d	22-MAR-2013 13:27
0322b008.d	22-MAR-2013 13:46
0322b009.d	22-MAR-2013 14:05
0322b010.d	22-MAR-2013 14:25

FORM VI-Diesel

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130322.b

ARI Job No.: RT03 Method: i/20130322.b/ftphfid3b.m Instrument: fid3b.i Date: 22-MAR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1209	0322b003.d	RT0322		1	Toluene,
1229	0322b004.d	IB0322		1	NO MANUAL INTEGRATION
1248	0322b005.d	DIESEL50		1	o-terph,
1307	0322b006.d	DIESEL100		1	o-terph,
1327	0322b007.d	DIESEL250		1	o-terph,
1346	0322b008.d	DIESEL500		1	o-terph,
1405	0322b009.d	DIESEL1000		1	o-terph,
1425	0322b010.d	DIESEL2500		1	o-terph,
1444	0322b011.d	DIESELICV250		1	o-terph,
1504	0322b012.d	MOIL100		1	Triacon Surr,
1523	0322b013.d	MOIL250		1	Triacon Surr,
1543	0322b014.d	MOIL500		1	Triacon Surr,
1602	0322b015.d	MOIL1000		1	Triacon Surr,
1622	0322b016.d	MOIL2500		1	Triacon Surr,
1641	0322b017.d	MOIL5000		1	Triacon Surr,
1701	0322b018.d	MOILICV500		1	Triacon Surr,

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ARI

SDG No.: 20130322 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: 4.76 TRIAC: 6.79

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	03/22/13	1131	4.76	6.80
02		RINSE	03/22/13	1150	4.76	6.80
03		RT0322	03/22/13	1209	4.76	6.79
04		IB0322	03/22/13	1229	4.75	6.78
05		DIESEL50	03/22/13	1248	4.74	6.79
06		DIESEL100	03/22/13	1307	4.74	6.79
07		DIESEL250	03/22/13	1327	4.74	6.79
08		DIESEL500	03/22/13	1346	4.75	6.80
09		DIESEL1000	03/22/13	1405	4.76	6.79
10		DIESEL2500	03/22/13	1425	4.78	6.79
11		DIESELICV250	03/22/13	1444	4.74	6.79
12		MOIL100	03/22/13	1504	4.78	6.78
13		MOIL250	03/22/13	1523	4.78	6.78
14		MOIL500	03/22/13	1543	4.78	6.78
15		MOIL1000	03/22/13	1602	4.77	6.79
16		MOIL2500	03/22/13	1622	4.78	6.81
17		MOIL5000	03/22/13	1641	4.78	6.83
18		MOILICV500	03/22/13	1701	4.78	6.79

	QC LIMITS
TERPH = o-terph	(+/- 0.05 MINUTES)
TRIAC = Triacon Surr	(+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 3/23/13 Analysis: TPHD Analyst: BJ

GC Program: TPHD3 Column No: 1022005 Column Type: RTX-1

Instrument Tune (.U or .CT.): ——— EM Voltage: ———

Calibration File: ——— Curve Date: 3/22/13

IS/SS	Ical/Ccal	LCS/ICV
	2043-3,4	2043-1,2
	2041-3	
	2041-4	

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130322.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	22-MAR-2013 11:31	0322b001.d	1	RINSE	
2	22-MAR-2013 11:50	0322b002.d	1	RINSE	
3	22-MAR-2013 12:09	0322b003.d	1	RT0322	
4	22-MAR-2013 12:29	0322b004.d	1	IB0322	
5	22-MAR-2013 12:48	0322b005.d	1	DIESEL50	
6	22-MAR-2013 13:07	0322b006.d	1	DIESEL100	
7	22-MAR-2013 13:27	0322b007.d	1	DIESEL250	
8	22-MAR-2013 13:46	0322b008.d	1	DIESEL500	
9	22-MAR-2013 14:05	0322b009.d	1	DIESEL1000	
10	22-MAR-2013 14:25	0322b010.d	1	DIESEL2500	
11	22-MAR-2013 14:44	0322b011.d	1	DIESELICV250	
12	22-MAR-2013 15:04	0322b012.d	1	MOIL100	
13	22-MAR-2013 15:23	0322b013.d	1	MOIL250	
14	22-MAR-2013 15:43	0322b014.d	1	MOIL500	
15	22-MAR-2013 16:02	0322b015.d	1	MOIL1000	
16	22-MAR-2013 16:22	0322b016.d	1	MOIL2500	
17	22-MAR-2013 16:41	0322b017.d	1	MOIL5000	
18	22-MAR-2013 17:01	0322b018.d	1	MOILICV500	
19	22-MAR-2013 17:20	0322b019.d	1	AK102#1	
20	22-MAR-2013 17:39	0322b020.d	1	WI13MBW1	
21	22-MAR-2013 17:59	0322b021.d	1	WI13LCSW1	
22	22-MAR-2013 18:18	0322b022.d	1	WI13LCSDW1	
23	22-MAR-2013 18:37	0322b023.d	1	WI13QLS	
24	22-MAR-2013 18:56	0322b024.d	1	WI13A	
25	22-MAR-2013 19:14	0322b025.d	1	WI13B	
26	22-MAR-2013 19:33	0322b026.d	1	WI13F	
27	22-MAR-2013 19:52	0322b027.d	1	AK102#1	

3/25/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

WLST : 01316

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b005.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL50
Client ID:
Injection: 22-MAR-2013 12:48
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.812	0.036	8469	6024	WATPHG	(Tol-C12)	368833	13.59
C8	0.974	0.003	4480	2040	WATPHD	(C12-C24)	597112	52.65
C10	2.334	-0.009	6325	4784	WATPHM	(C24-C38)	25770	2.92
C12	3.099	-0.013	10154	7771	AK102	(C10-C25)	737045	53.44 M
C14	3.689	-0.003	4355	1922	AK103	(C25-C36)	16093	2.20
C16	4.188	-0.004	4819	2921	OR.DIES	(C10-C28)	739262	48.06 M
C18	4.648	0.005	8928	7883				
C20	5.070	0.004	2627	1345				
C22	5.468	0.003	1277	987				
C24	5.830	-0.005	361	243				
C25	6.004	-0.006	185	121				
C26	6.187	0.001	235	186				
C28	6.508	0.006	27	9	IT.DIES	(C10-C24)	736025	53.38
C32	7.044	-0.001	154	63				
C34	7.282	0.000	300	203				
Filter Peak	----							
C36	7.500	0.000	494	126	BUNKERC	(C10-C38)	761795	155.32
o-terph	4.736	-0.023	260701	139434	JET-A	(C10-C18)	582561	40.46
Triacon Surr	6.793	0.000	79	9				

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	139434	9.6	21.4
Triacontane	9	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

WLST:81313

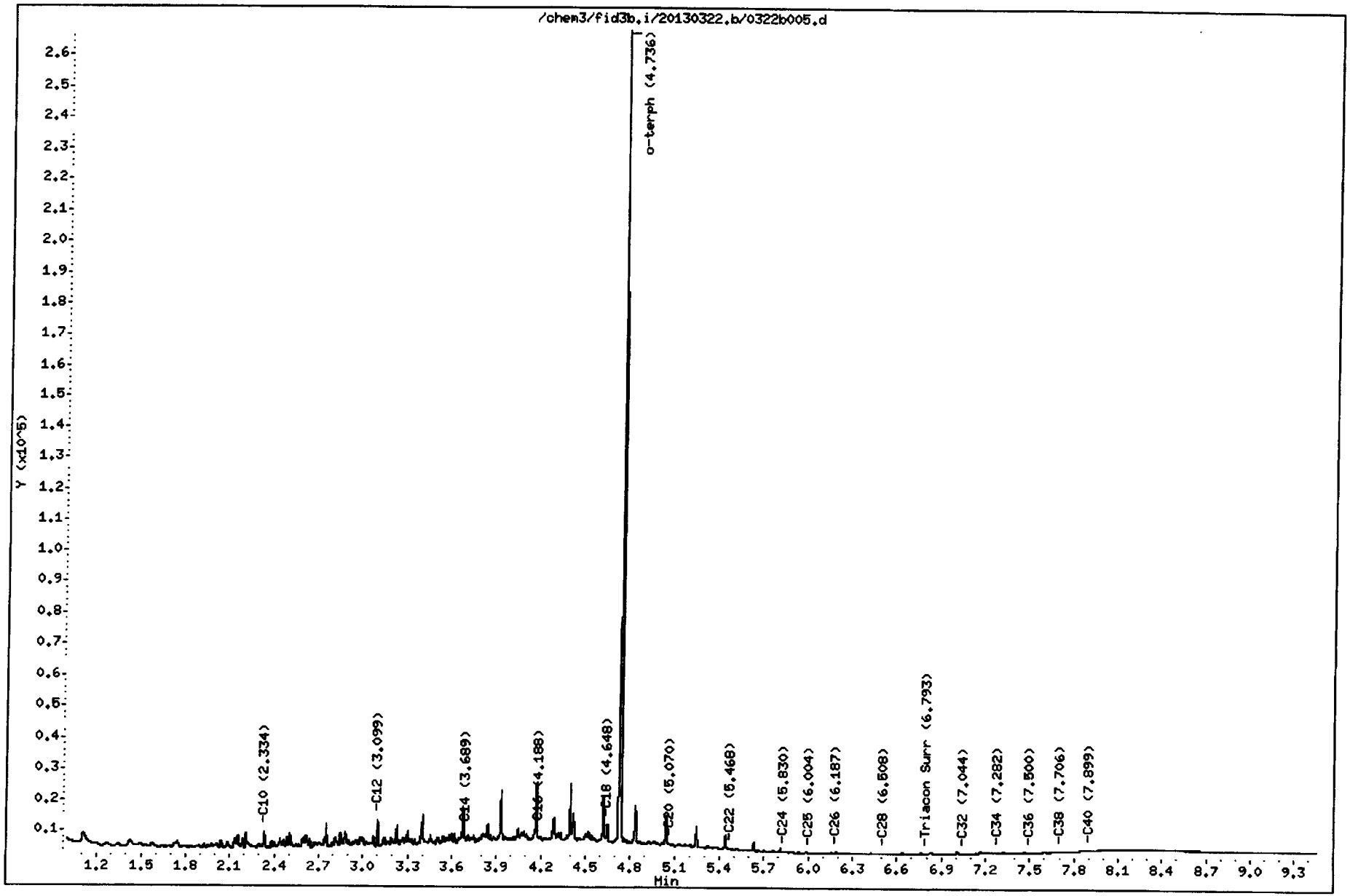
Data File: /chem3/fid3b.i/20130322.b/0322b005.d
Date : 22-MAR-2013 12:48
Client ID:
Sample Info: DIESEL50

Column phase: RTX-1

Instrument: fid3b.i

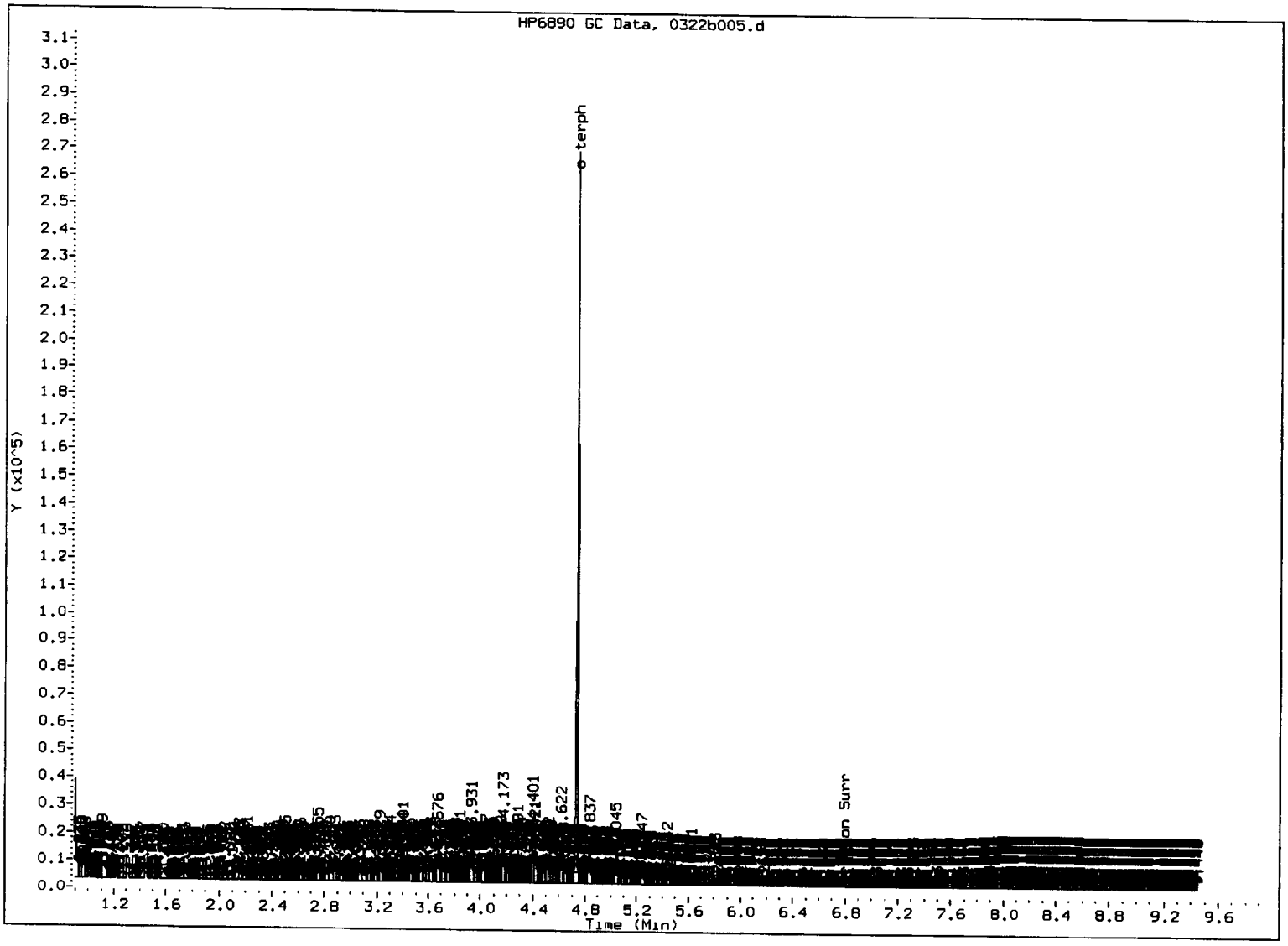
Operator: JW
Column diameter: 0.25

JW 4/18/13



FID:3B-2C/RTX-1 DIESEL50

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b006.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL100
Client ID:
Injection: 22-MAR-2013 13:07
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.810	0.034	9094	6093	WATPHG	(Tol-C12)	587046	21.64
C8	0.967	-0.004	5320	6783	WATPHD	(C12-C24)	1174474	103.57
C10	2.336	-0.007	12139	9924	WATPHM	(C24-C38)	28868	3.27
C12	3.099	-0.013	20472	14980	AK102	(C10-C25)	1440235	104.42 M
C14	3.687	-0.005	8884	5031	AK103	(C25-C36)	18604	2.54
C16	4.193	0.001	9776	6677	OR.DIES	(C10-C28)	1445192	93.95 M
C18	4.647	0.003	17109	17917				
C20	5.070	0.004	5110	1906				
C22	5.467	0.002	2542	1500				
C24	5.834	-0.001	731	572				
C25	6.010	0.000	377	427				
C26	6.188	0.002	485	438				
C28	6.506	0.004	33	6	IT.DIES	(C10-C24)	1438229	104.30
C32	7.048	0.003	135	31				
C34	7.283	0.001	270	128				
Filter Peak	----							
C36	7.499	0.000	471	181	BUNKERC	(C10-C38)	1467098	299.11
o-terph	4.737	-0.022	510693	275405	JET-A	(C10-C18)	1132431	78.65
Triacon Surr	6.795	0.002	74	21				

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	275405	19.0	42.2
Triacontane	21	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

JCW 4/18/13

WLST : 61322

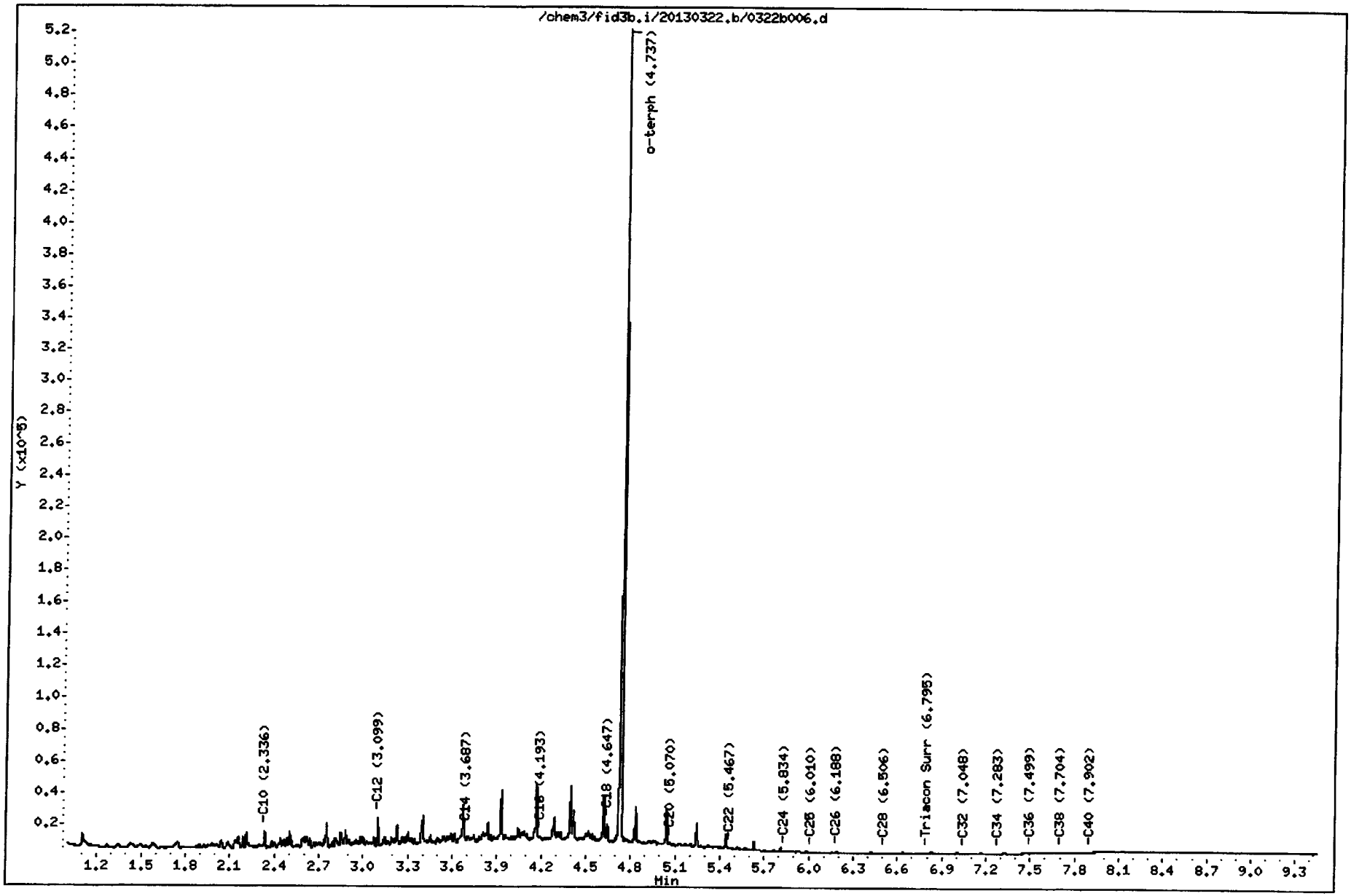
Data File: /chem3/fid3b.i/20130322.b/0322b006.d
Date : 22-MAR-2013 13:07
Client ID:
Sample Info: DIESEL100

Column phase: RTX-1

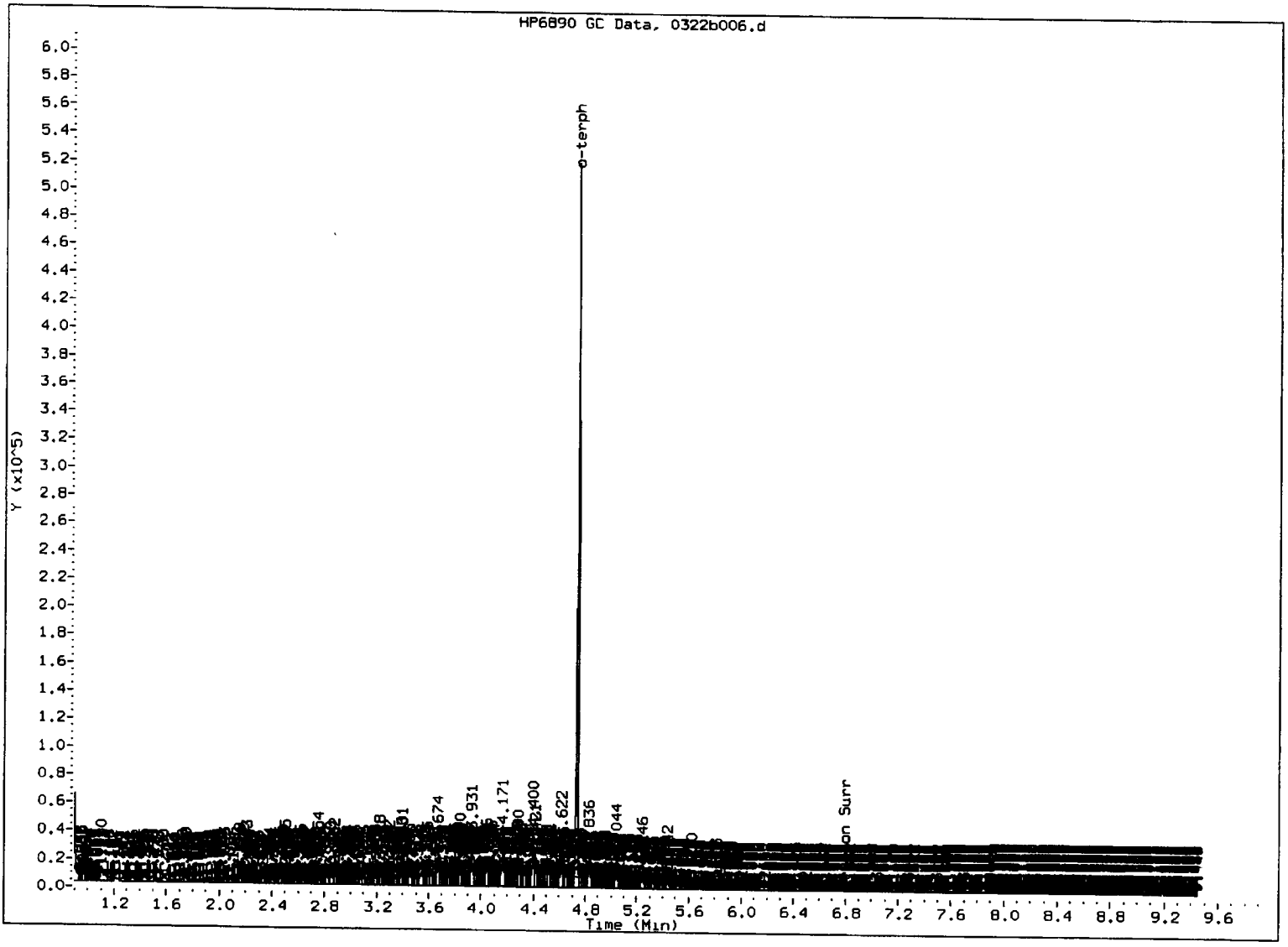
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/15/13



FID:3B-2C/RTX-1 DIESEL100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b007.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL250
Client ID:
Injection: 22-MAR-2013 13:27
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.812	0.036	10179	7141	WATPHG	(Tol-C12)	1217915	44.89	
C8	0.968	-0.003	6711	8383	WATPHD	(C12-C24)	2894312	255.23	
C10	2.337	-0.005	26098	22838	WATPHM	(C24-C38)	36063	4.08	
C12	3.099	-0.013	47515	36530	AK102	(C10-C25)	3515372	254.87	M
C14	3.688	-0.005	21568	11811	AK103	(C25-C36)	23437	3.20	
C16	4.192	0.000	24402	24894	OR.DIES	(C10-C28)	3527165	229.30	M
C18	4.649	0.005	40768	45572					
C20	5.067	0.001	13990	14480					
C22	5.467	0.002	6272	4062					
C24	5.833	-0.002	1780	754					
C25	6.007	-0.003	950	952					
C26	6.189	0.003	650	663					
C28	6.497	-0.005	120	80	IT.DIES	(C10-C24)	3510230	254.57	
C32	7.042	-0.002	98	28					
C34	7.284	0.001	227	35					
Filter Peak	----								
C36	7.501	0.002	406	54	BUNKERC	(C10-C38)	3546293	723.02	
o-terph	4.744	-0.015	1012058	677069	JET-A	(C10-C18)	2754868	191.32	
Triacon Surr	6.791	-0.002	45	7					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	677069	46.7	103.7
Triacontane	7	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

WLST: 81325

Data File: /chem3/fid3b.i/20130322.b/0322b007.d
Date : 22-MAR-2013 13:27
Client ID:
Sample Info: DIESEL250

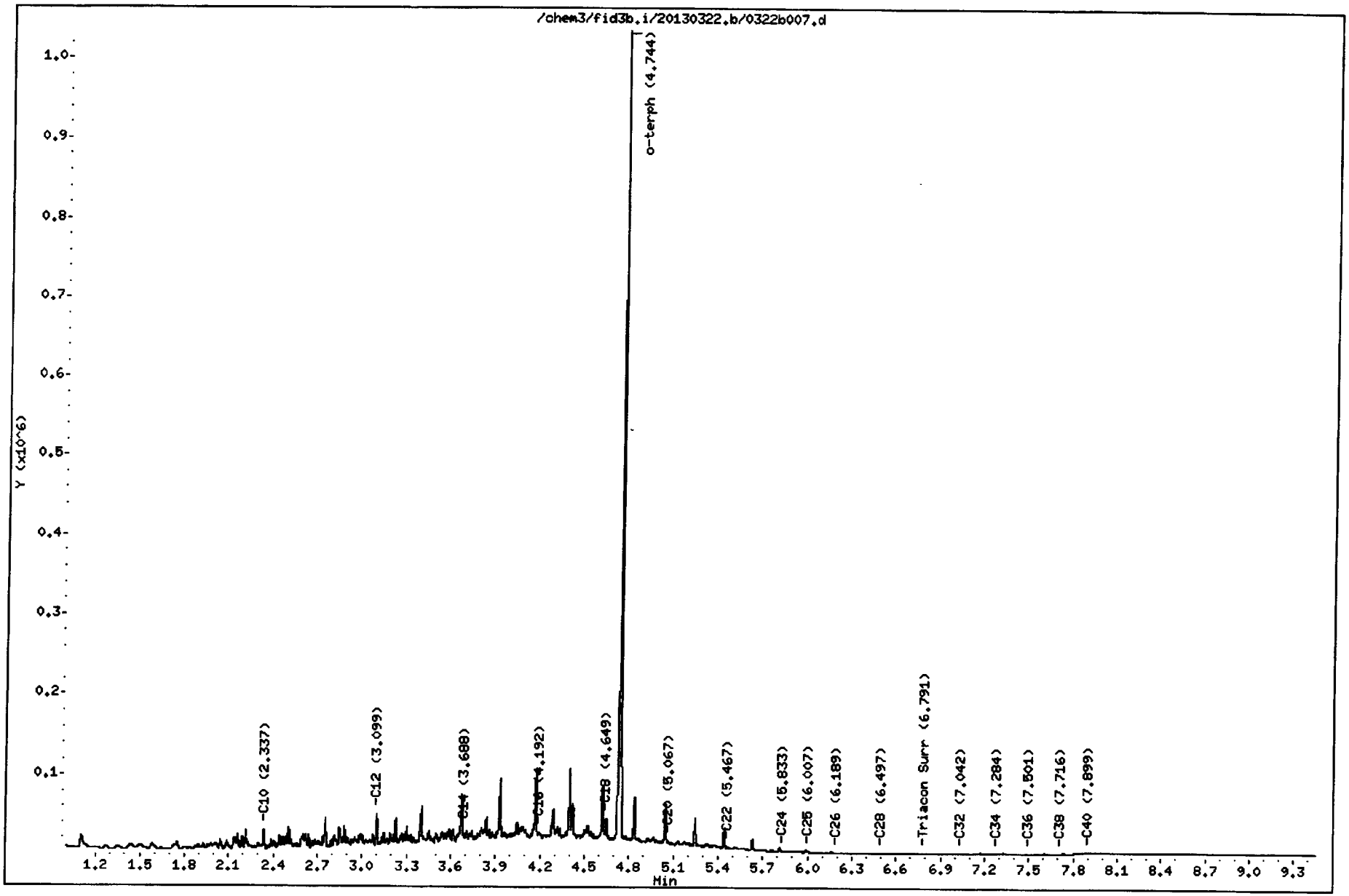
Column phase: RTX-1

Instrument: fid3b.i

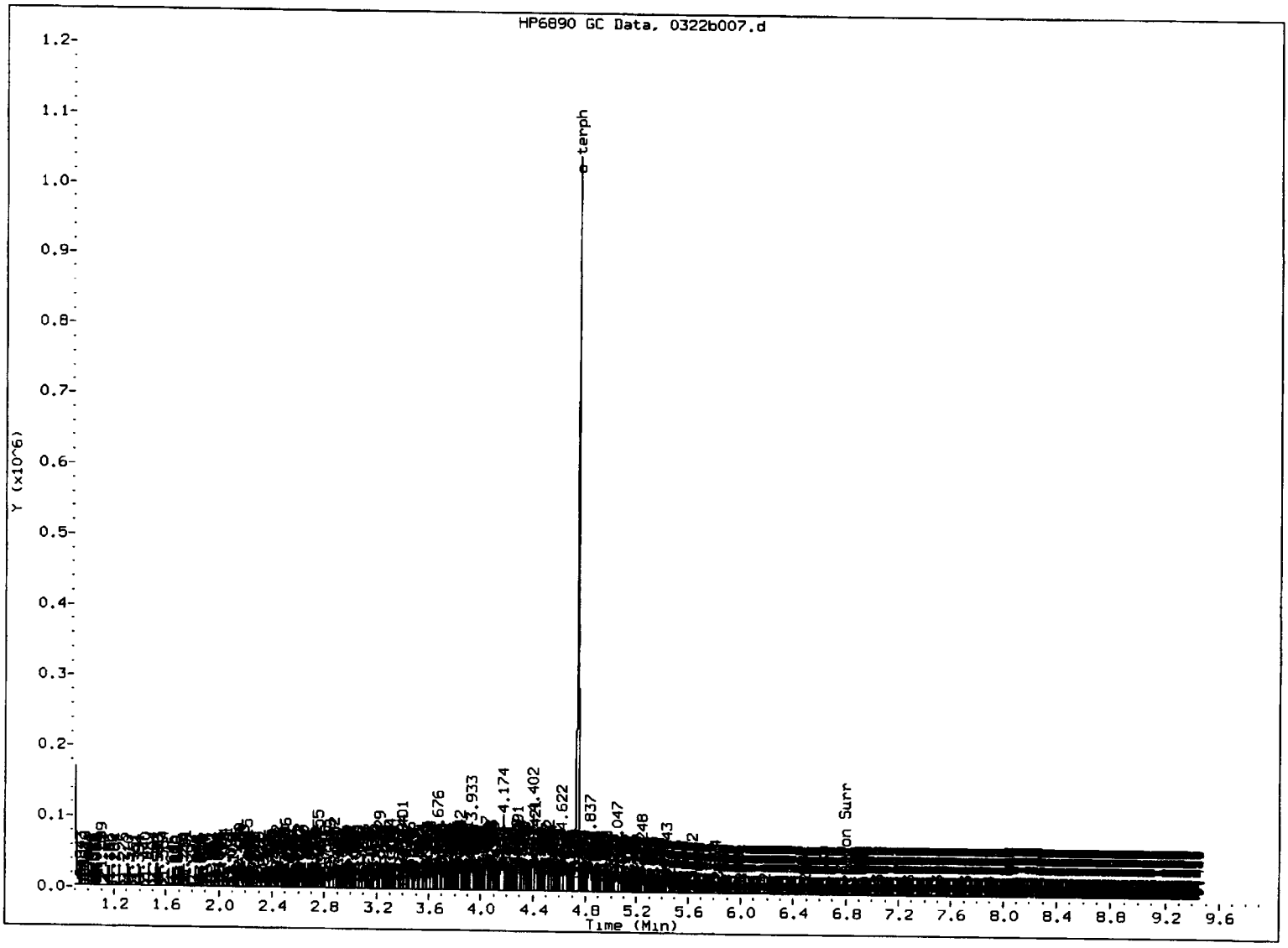
Operator: JW
Column diameter: 0.25

JW 4/16/13

WI_07_91220



FID:3B-2C/RTX-1 DIESEL250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 4/12/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b008.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL500
Client ID:
Injection: 22-MAR-2013 13:46
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.811	0.035	10071	3808	WATPHG	(Tol-C12)	2157871	79.54	
C8	0.969	-0.002	7355	5728	WATPHD	(C12-C24)	5640000	497.35	
C10	2.339	-0.003	52589	43823	WATPHM	(C24-C38)	53486	6.05	
C12	3.115	0.002	16767	7378	AK102	(C10-C25)	6828477	495.07	M
C14	3.691	-0.002	43626	22590	AK103	(C25-C36)	34929	4.77	
C16	4.193	0.000	44220	16366	OR.DIES	(C10-C28)	6852528	445.49	M
C18	4.652	0.008	77908	93875					
C20	5.064	-0.002	26885	18440					
C22	5.464	-0.001	12502	2919					
C24	5.838	0.003	3509	2068					
C25	6.015	0.005	1519	180					
C26	6.191	0.005	1164	1507					
C28	6.497	-0.005	232	154	IT.DIES	(C10-C24)	6817346	494.40	
C32	7.047	0.002	82	24					
C34	7.281	-0.002	215	78					
Filter Peak	----								
C36	7.499	-0.001	391	151	BUNKERC	(C10-C38)	6870833	1400.84	
o-terph	4.750	-0.009	1617105	1300158	JET-A	(C10-C18)	5337304	370.67	
Triacon Surr	6.798	0.005	44	7					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1300158	89.6	199.1
Triacontane	7	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

JW
4/18/13

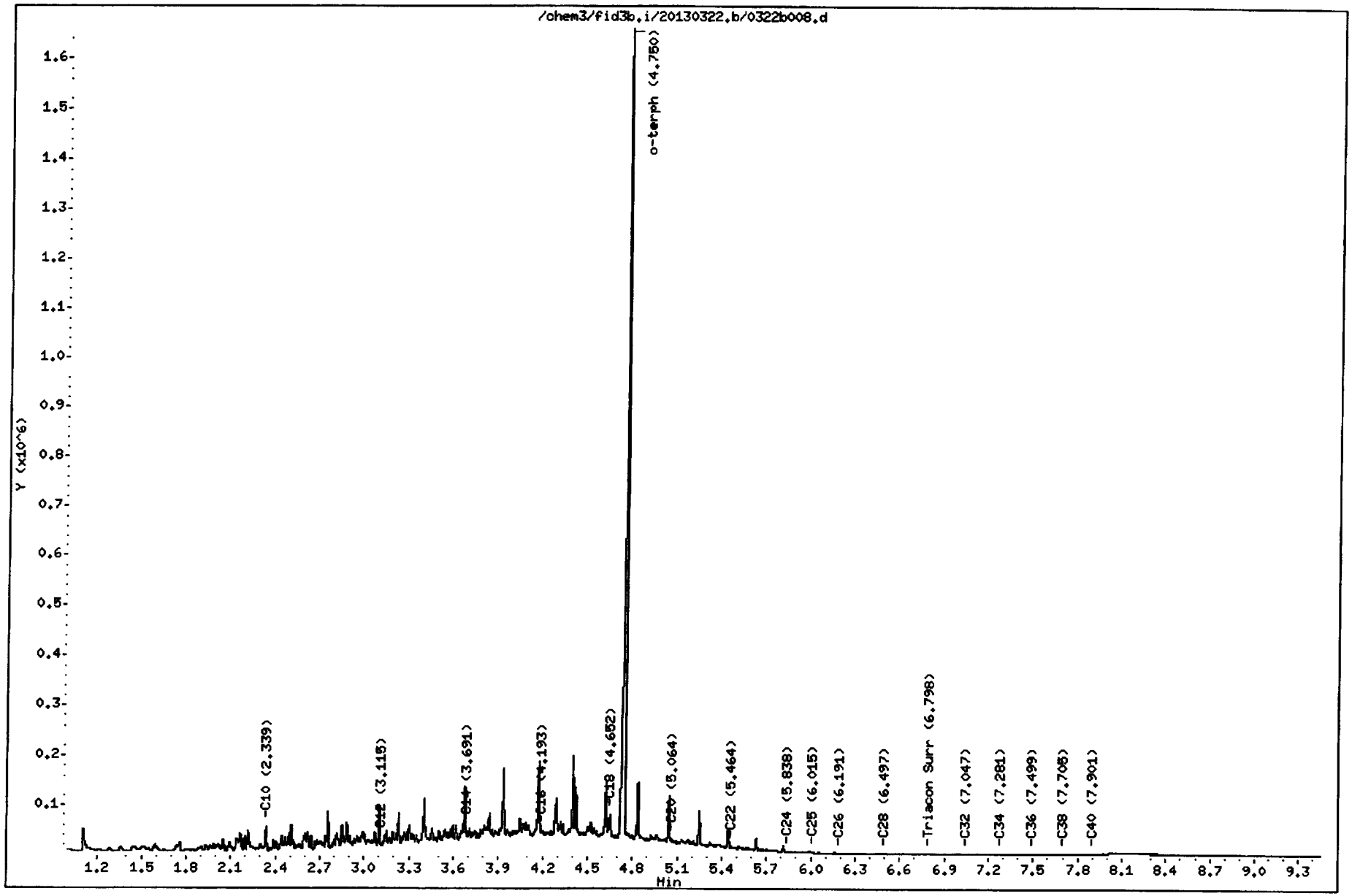
WL67:01326

Data File: /chem3/fid3b.i/20130322.b/0322b008.d
Date : 22-MAR-2013 13:46
Client ID:
Sample Info: DIESEL500

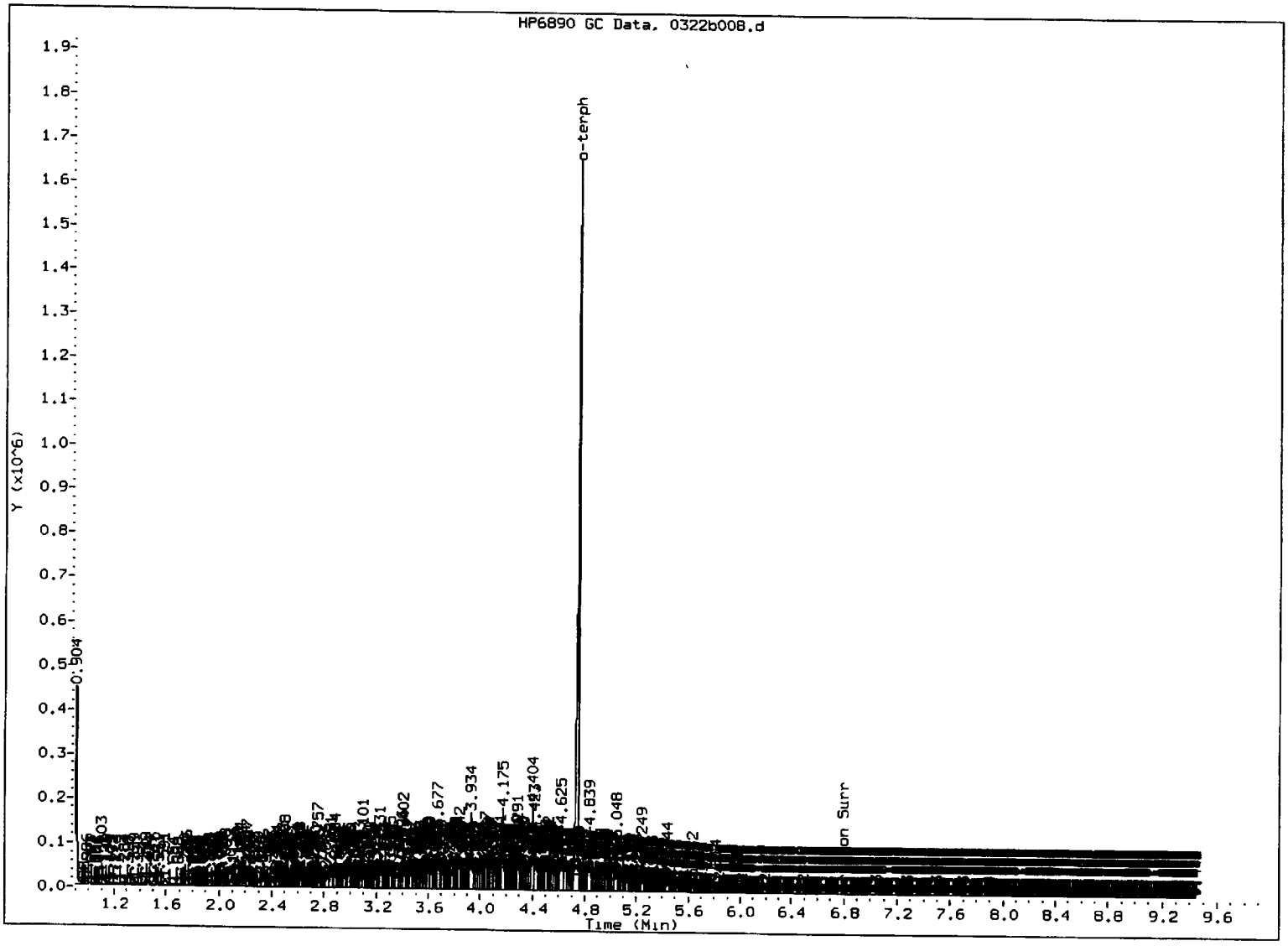
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 4/18/17

SLDT:01356

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b009.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL1000
Client ID:
Injection: 22-MAR-2013 14:05
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.826	0.050	12209	19674	WATPHG	(Tol-C12)	4168365	153.64	
C8	0.985	0.014	12369	27550	WATPHD	(C12-C24)	10897436	960.96	
C10	2.339	-0.004	102184	74669	WATPHM	(C24-C38)	87267	9.87	
C12	3.101	-0.011	173420	138132	AK102	(C10-C25)	13216784	958.22	M
C14	3.690	-0.002	82887	40878	AK103	(C25-C36)	59447	8.12	
C16	4.197	0.005	93667	75381	OR.DIES	(C10-C28)	13264224	862.32	M
C18	4.652	0.009	152597	128118					
C20	5.066	0.000	52869	55482					
C22	5.461	-0.004	24402	12548					
C24	5.836	0.001	6792	2132					
C25	6.017	0.007	2932	839					
C26	6.189	0.003	2095	2115					
C28	6.497	-0.005	461	346	IT.DIES	(C10-C24)	13196215	957.01	
C32	7.045	0.000	64	23					
C34	7.285	0.002	184	68					
Filter Peak	----								
C36	7.503	0.003	356	90	BUNKERC	(C10-C38)	13283482	2708.26	
o-terph	4.759	0.000	2297049	2527159	JET-A	(C10-C18)	10451409	725.84	
Triacon Surr	6.791	-0.002	31	3					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2527159	174.1	387.0
Triacontane	3	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

WL67:91331

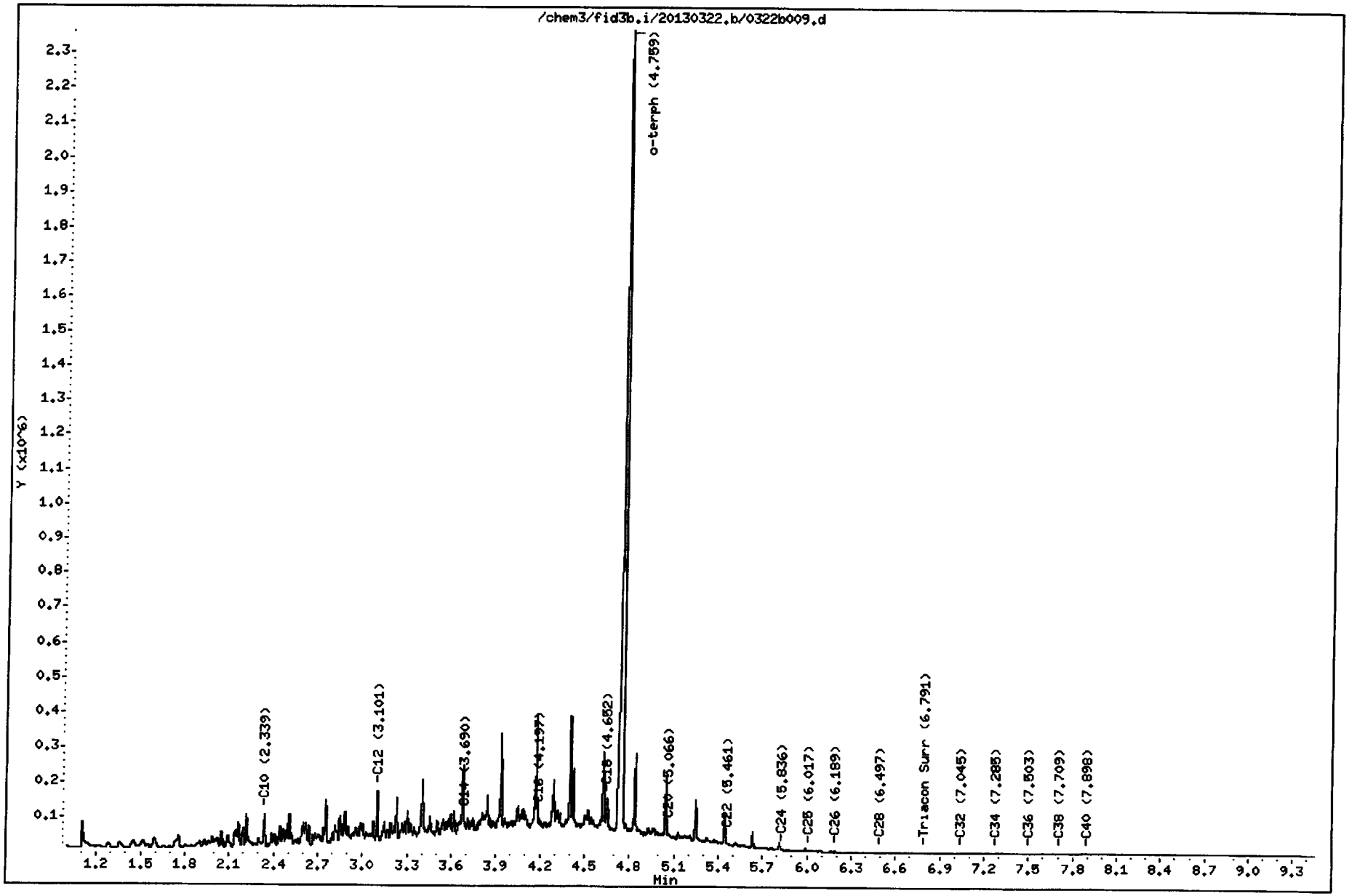
Data File: /chem3/fid3b.i/20130322.b/0322b009.d
Date : 22-MAR-2013 14:05
Client ID:
Sample Info: DIESEL1000

Column phase: RTX-1

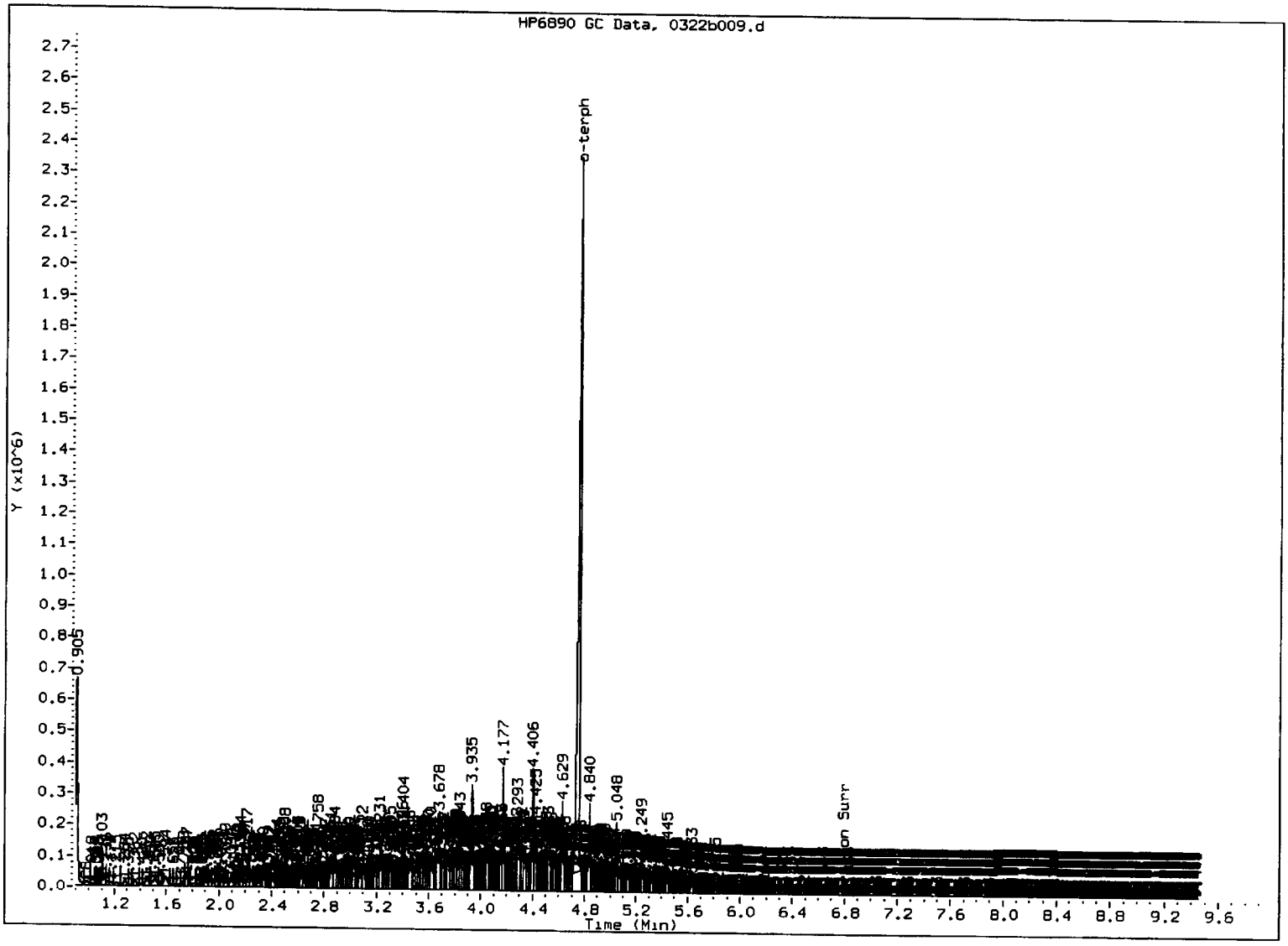
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/18/17



FID:3B-2C/RTX-1 DIESEL1000 FID:3B SIGNAL

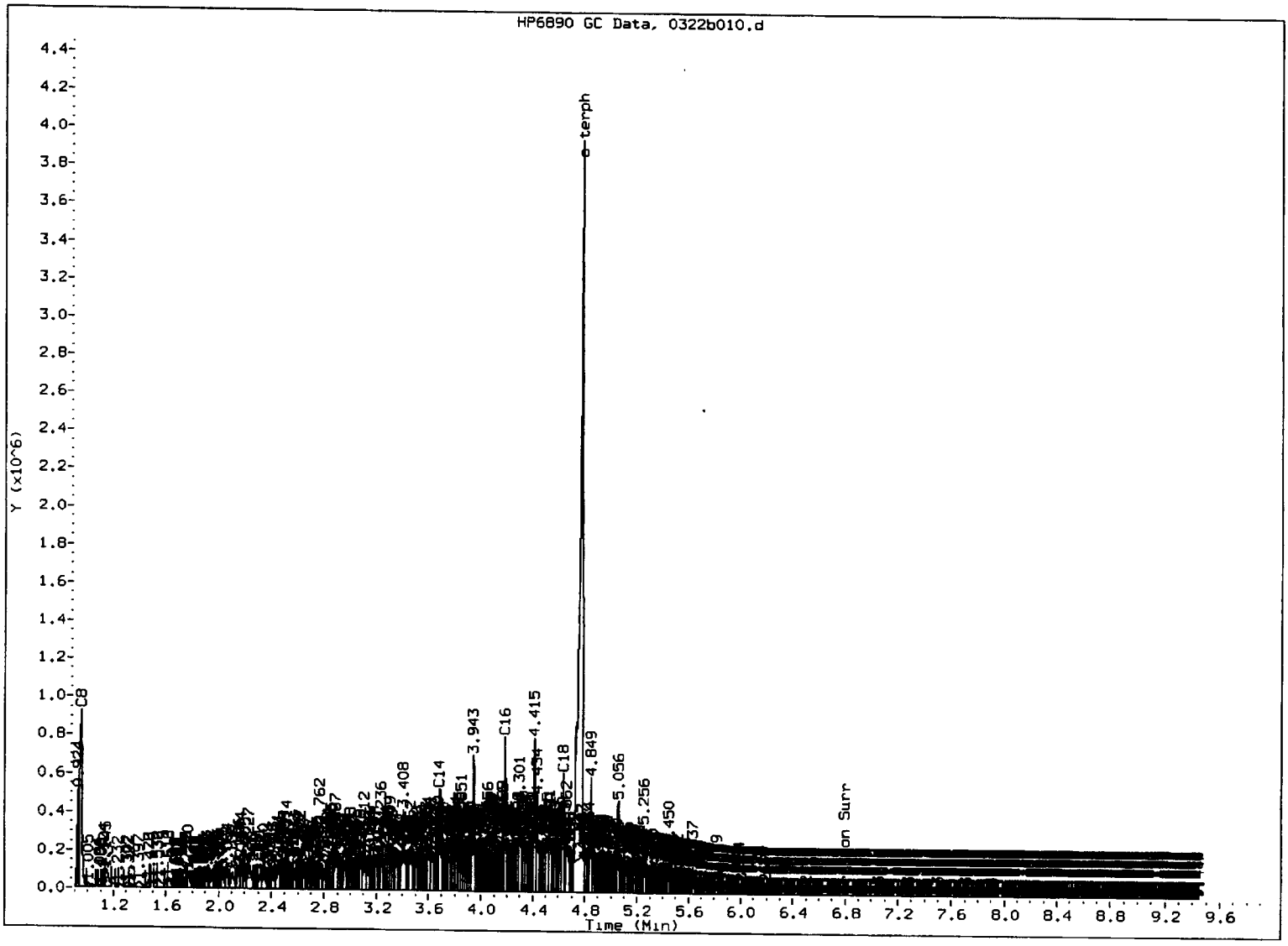


MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JD Date: 4/18/13

FID:3B-2C/RTX-1 DIESEL2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JCW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b010.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL2500
Client ID:
Injection: 22-MAR-2013 14:25
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.815	0.040	22846	17692	WATPHG	(Tol-C12)	9713796	358.04	
C8	0.949	-0.022	927267	1262122	WATPHD	(C12-C24)	26413051	2329.17	
C10	2.347	0.005	192206	202957	WATPHM	(C24-C38)	194367	21.99	
C12	3.107	-0.005	361109	340845	AK102	(C10-C25)	31949303	2316.34	M
C14	3.685	-0.007	529902	581793	AK103	(C25-C36)	138542	18.93	
C16	4.185	-0.007	808012	646100	OR.DIES	(C10-C28)	32069710	2084.89	M
C18	4.639	-0.005	621408	668347					
C20	5.071	0.005	120881	67422					
C22	5.465	0.001	59140	27761					
C24	5.834	-0.001	15688	2479					
C25	6.010	0.000	7983	4652					
C26	6.192	0.006	5056	4593					
C28	6.500	-0.002	1114	978	IT.DIES	(C10-C24)	31900437	2313.47	
C32	7.053	0.008	41	10					
C34	7.282	-0.001	199	131					
Filter Peak	----								
C36	7.497	-0.003	353	90	BUNKERC	(C10-C38)	32094804	6543.55	
o-terph	4.778	0.020	3751371	5737438	JET-A	(C10-C18)	25116064	1744.30	
Triacon Surr	6.792	-0.001	100	28					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5737438	395.3	878.5
Triacontane	28	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

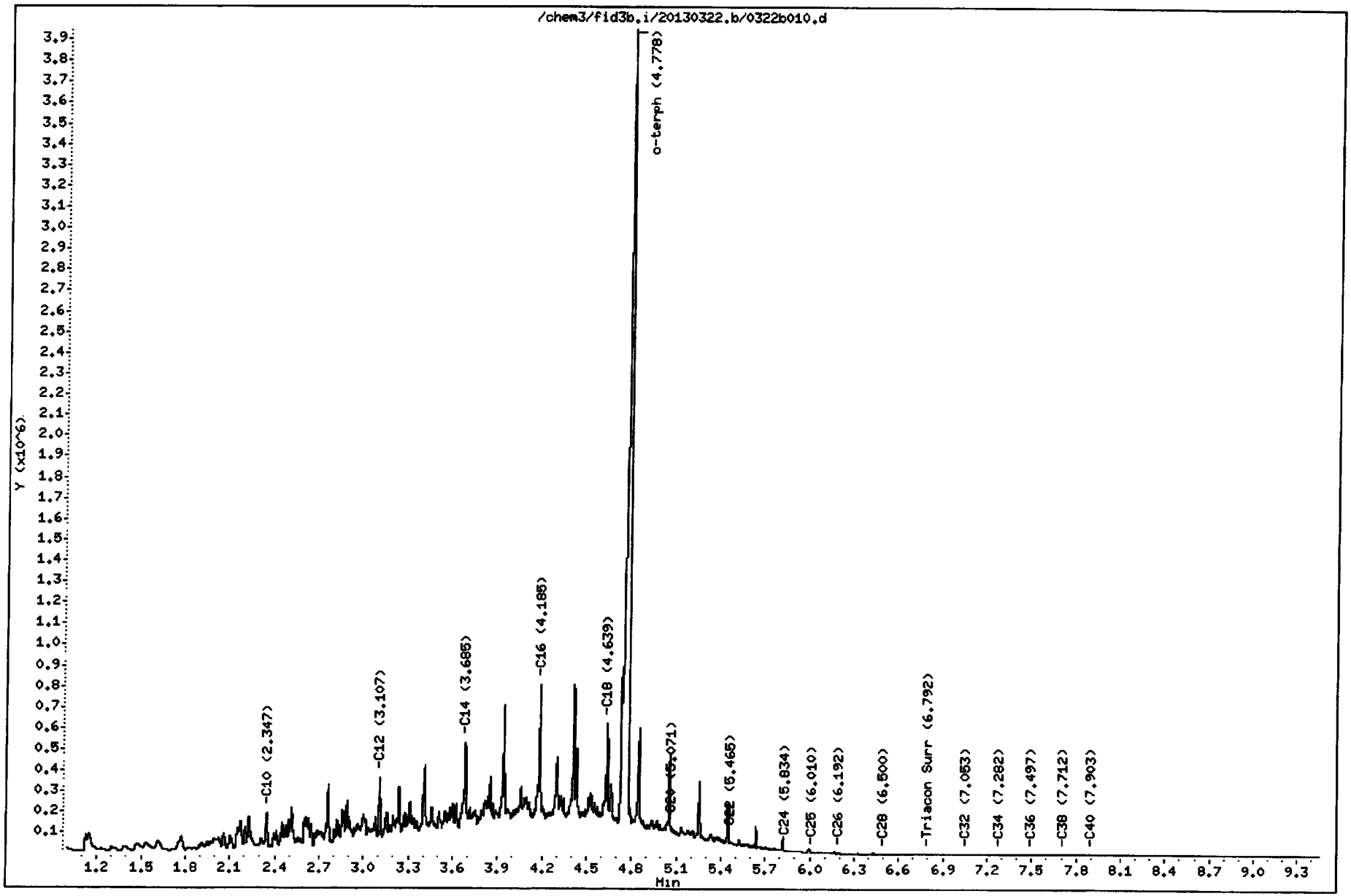
Data File: /chem3/fid3b.i/20130322.b/0322b010.d
Date : 22-MAR-2013 14:25
Client ID:
Sample Info: DIESEL2500

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/18/13



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b011.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESELICV250
Client ID:
Injection: 22-MAR-2013 14:44
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.812	0.037	11045	7627	WATPHG	(Tol-C12)	1295507	47.75	
C8	0.939	-0.032	7622	9371	WATPHD	(C12-C24)	2452034	216.23	
C10	2.340	-0.002	53807	43949	WATPHM	(C24-C38)	33149	3.75	
C12	3.101	-0.011	79598	48152	AK102	(C10-C25)	3294569	238.86	M
C14	3.677	-0.015	77460	64078	AK103	(C25-C36)	21853	2.99	
C16	4.176	-0.016	73037	56584	OR.DIES	(C10-C28)	3306914	214.99	M
C18	4.651	0.008	28584	27837					
C20	5.073	0.007	7745	3282					
C22	5.462	-0.003	3760	2081					
C24	5.836	0.001	1431	333					
C25	6.010	0.000	988	208					
C26	6.190	0.004	523	440					
C28	6.503	0.001	80	46	IT.DIES	(C10-C24)	3289989	238.60	
C32	7.052	0.007	93	41					
C34	7.284	0.001	215	39					
Filter Peak	----								
C36	7.498	-0.002	368	100	BUNKERC	(C10-C38)	3323138	677.53	
o-terph	4.745	-0.014	935337	641342	JET-A	(C10-C18)	2706999	188.00	
Triacon Surr	6.795	0.002	33	9					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	641342	44.2	98.2
Triacontane	9	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

4/18/13

WL67.0133T

Data File: /chem3/fid3b.i/20130322.b/0322b011.d
Date : 22-MAR-2013 14:44
Client ID:
Sample Info: DIESELICV250

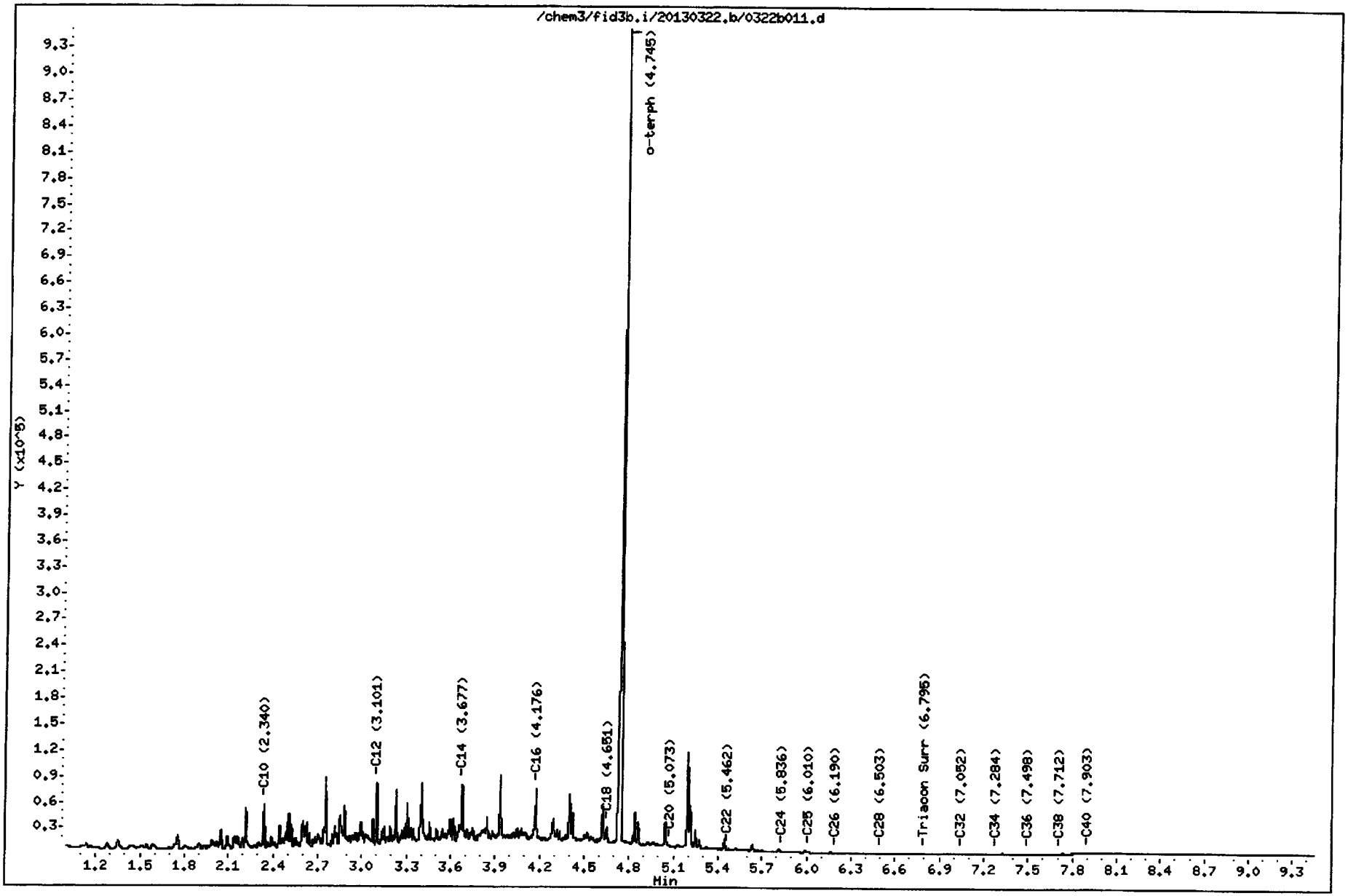
Column phase: RTX-1

Instrument: fid3b.i

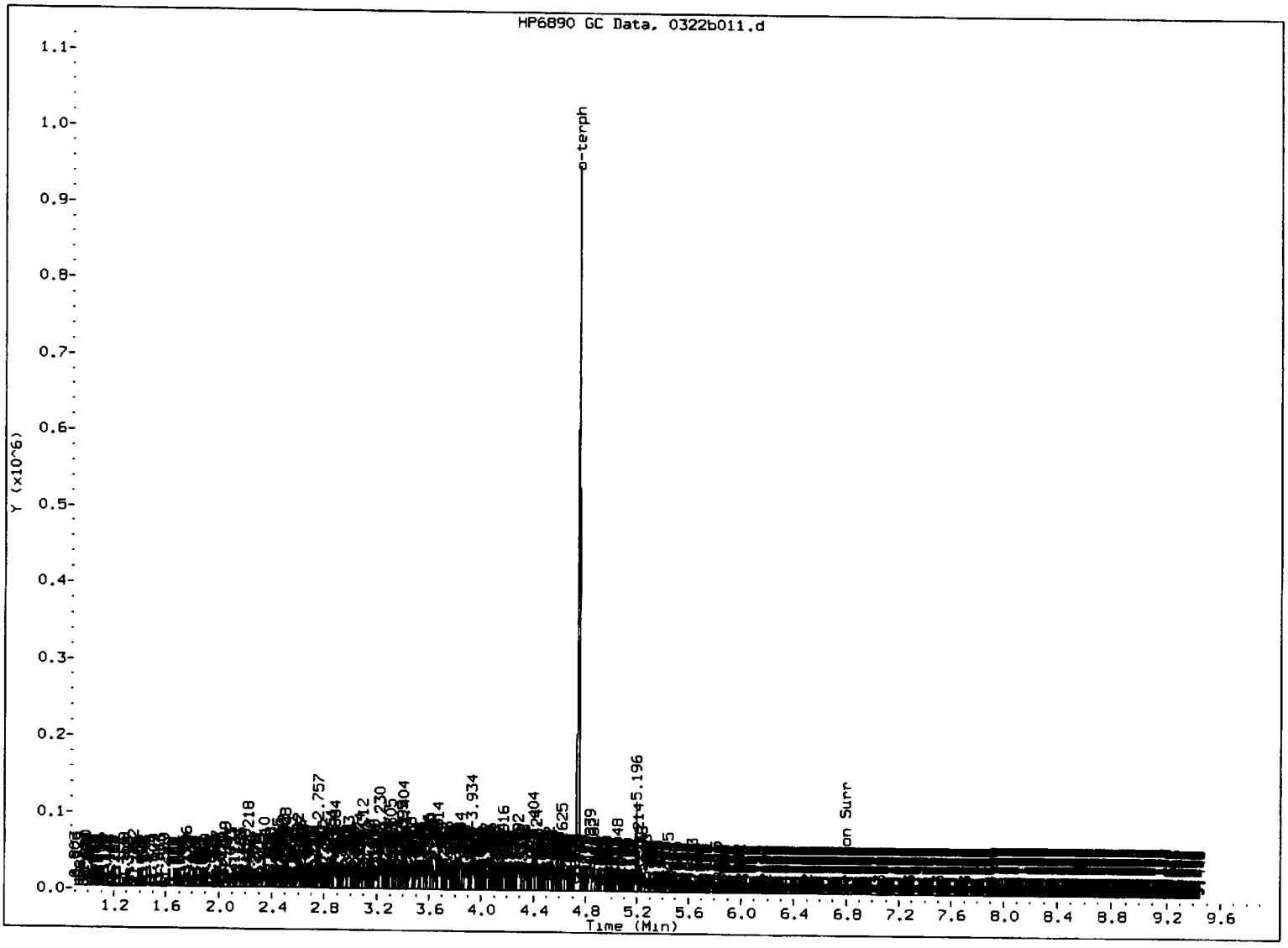
Operator: JW
Column diameter: 0.25

JW 4/18/13

WI-GT-914 5335



FID:3B-2C/RTX-1 DIESELICV250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/13

WLST.81339

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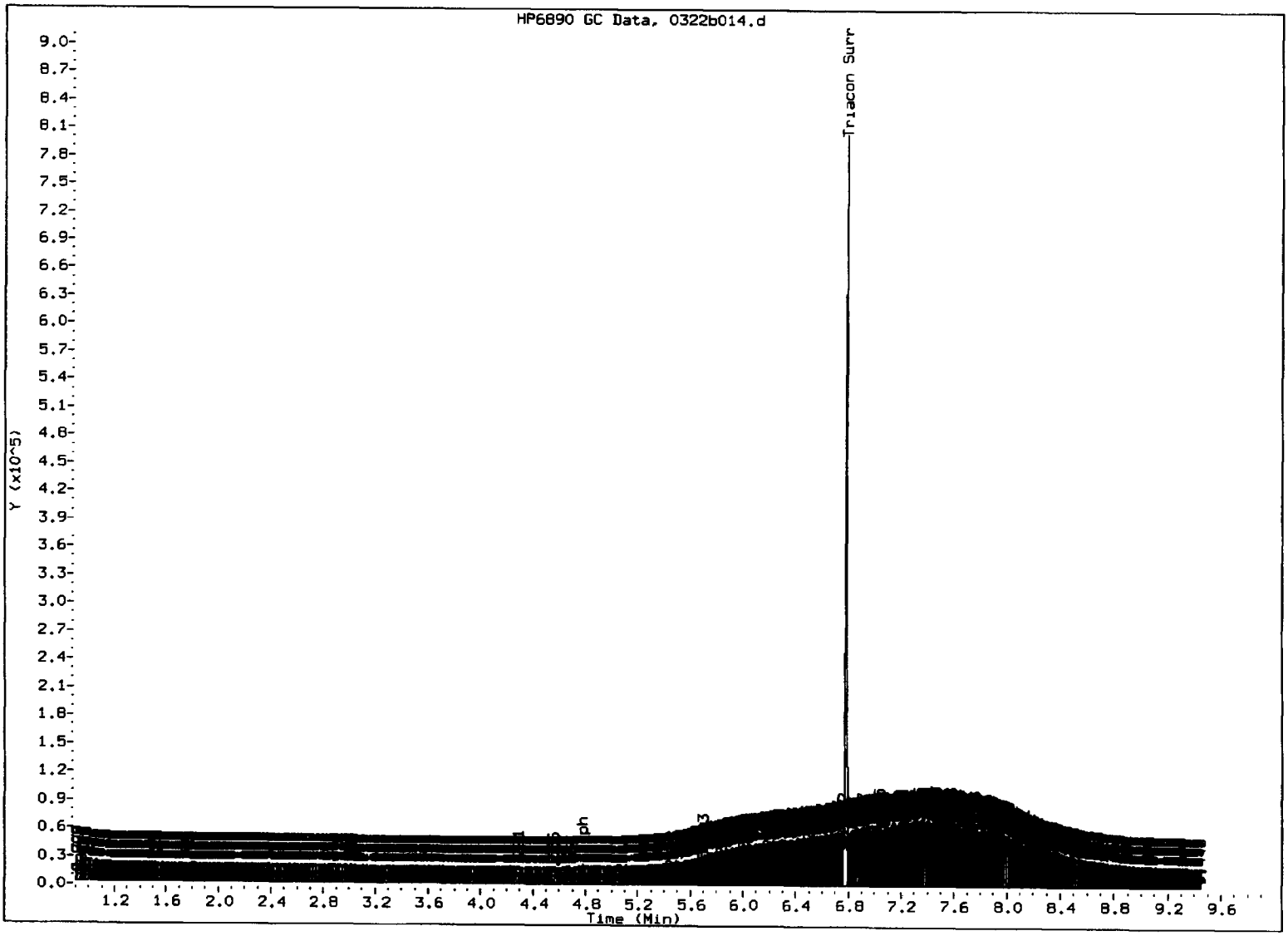
FID:3B-2C/RTX-1 MOIL500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 3/25/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b015.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 03/25/2013
Macro: FID:3B012413

ARI ID: MOIL1000
Client ID:
Injection: 22-MAR-2013 16:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.814	-0.005	21166	15048	WATPHG	(Tol-C12)	215940	7.96
C8	0.956	0.006	5677	4126	WATPHD	(C12-C24)	754506	66.53
C10	2.350	-0.007	843	526	WATPHM	(C24-C38)	8680063	981.90
C12	3.101	0.001	182	100	AK102	(C10-C25)	982146	71.21
C14	3.677	-0.001	148	100	AK103	(C25-C36)	7341743	1003.38 M
C16	4.195	0.004	49	9	OR.DIES	(C10-C28)	2864633	186.23
C18	4.641	-0.003	463	225				
C20	5.069	0.001	2549	1678				
C22	5.465	0.000	10882	7022				
C24	5.836	0.004	38520	20888				
C25	6.012	-0.001	45466	9786				
C26	6.191	-0.002	53219	19908				
C28	6.498	-0.002	67232	21476	IT.DIES	(C10-C24)	775406	42.41
C32	7.051	-0.001	94200	12778				
C34	7.287	0.003	102902	29751				
Filter Peak	----							
C36	7.495	-0.005	105836	58672	BUNKERC	(C10-C38)	9455470	1927.80
o-terph	4.773	-0.003	933	874	JET-A	(C10-C18)	44968	3.12
Triacon Surr	6.791	-0.040	1250887	1046650				

Range Times: NW Diesel(3.151 - 5.881) NW Gas(0.769 - 3.151) NW M.Oil(5.881 - 7.765)
AK102(2.307 - 5.962) AK103(5.962 - 7.550) Jet A(2.307 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	874	0.1	0.1
Triacontane	1046650	91.2	202.7

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW
3/25/13

Data File: /chem3/fid3b.i/20130322.b/0322b015.d

Date : 22-MAR-2013 16:02

Client ID:

Sample Info: MOIL1000

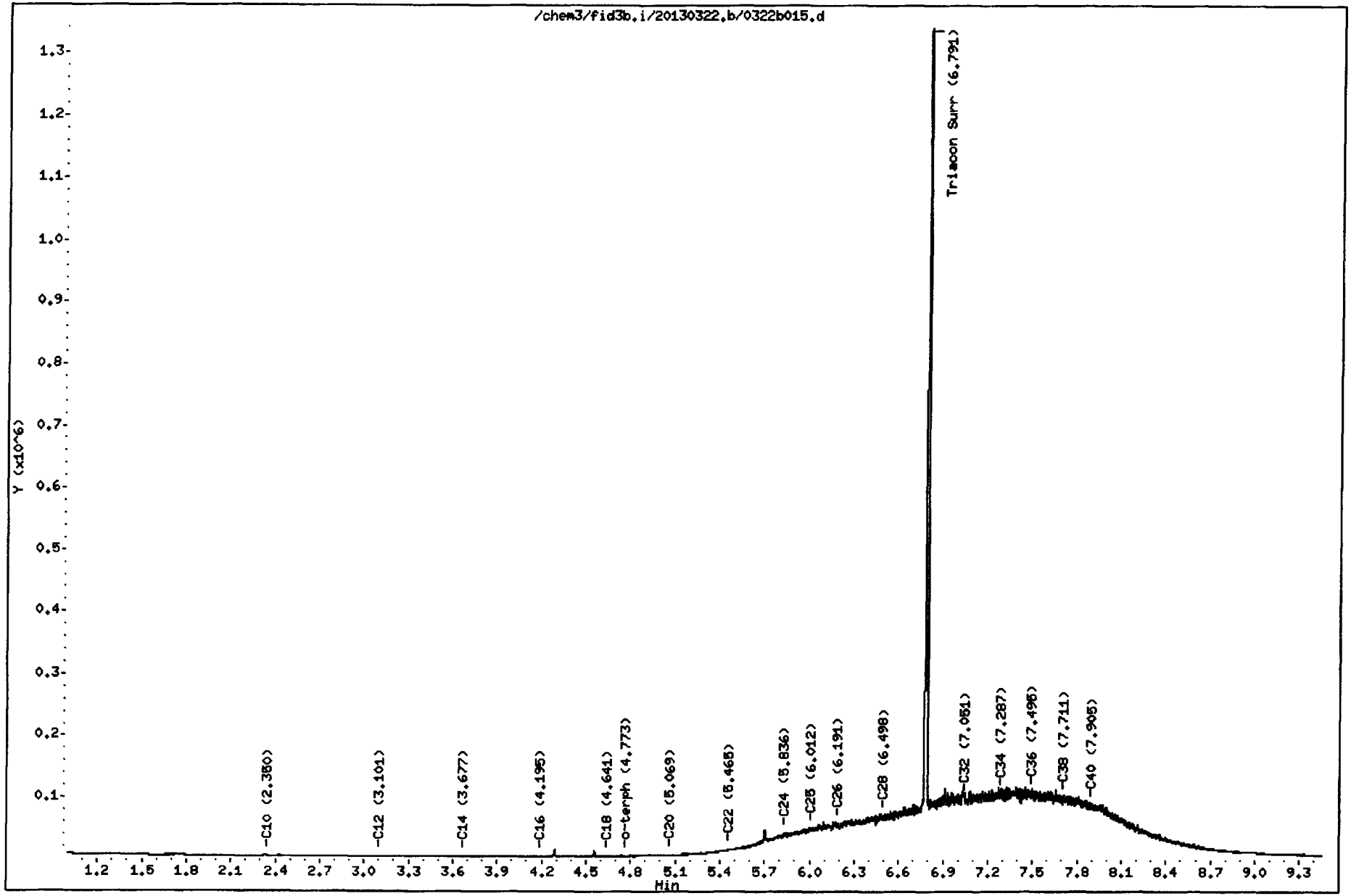
Column phase: RTX-1

Instrument: fid3b.i

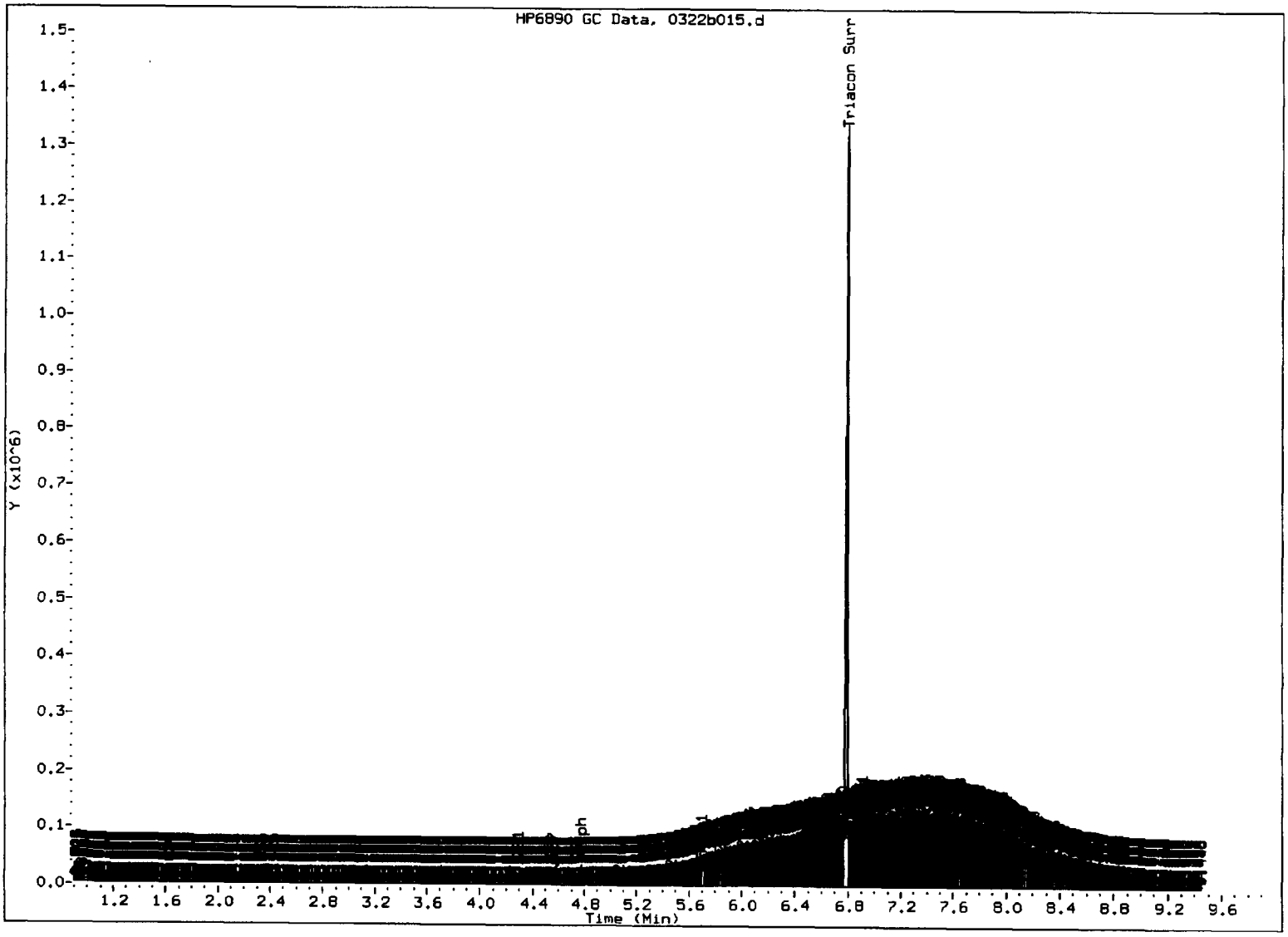
Operator: JW

Column diameter: 0.25

JW 5/25/13



FID:3B-2C/RTX-1 MOIL1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 3/25/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b016.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 03/25/2013
Macro: FID:3B012413

ARI ID: MOIL2500
Client ID:
Injection: 22-MAR-2013 16:22
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.817	-0.002	37818	5288	WATPHG	(Tol-C12)	247154	9.11	
C8	0.954	0.003	6555	4253	WATPHD	(C12-C24)	1927772	170.00	
C10	2.350	-0.007	1034	740	WATPHM	(C24-C38)	23017268	2603.75	
C12	3.101	0.000	172	139	AK102	(C10-C25)	2413651	174.99	
C14	3.683	0.006	162	84	AK103	(C25-C36)	19459162	2659.45	M
C16	4.190	-0.001	179	74	OR.DIES	(C10-C28)	7338312	477.07	
C18	4.645	0.001	1298	813					
C20	5.076	0.009	6660	4983					
C22	5.467	0.002	26063	5162					
C24	5.826	-0.006	93871	82873					
C25	6.013	0.000	118912	89225					
C26	6.188	-0.006	146046	98828					
C28	6.500	0.000	190050	68708	IT.DIES	(C10-C24)	1950198	106.66	
C32	7.054	0.003	256364	111233					
C34	7.279	-0.005	279097	116959					
Filter Peak	----								
C36	7.500	0.000	266310	131643	BUNKERC	(C10-C38)	24967467	5090.41	
o-terph	4.779	0.003	2618	609	JET-A	(C10-C18)	79440	5.52	
Triacon Surr	6.812	-0.019	2514304	2753562					

Range Times: NW Diesel(3.151 - 5.881) NW Gas(0.769 - 3.151) NW M.Oil(5.881 - 7.765)
AK102(2.307 - 5.962) AK103(5.962 - 7.550) Jet A(2.307 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	609	0.0	0.1
Triacontane	2753562	240.0	533.3

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW 3/25/13

Data File: /chem3/fid3b.i/20130322.b/0322b016.d

Date : 22-MAR-2013 16:22

Client ID:

Sample Info: MOIL2500

Column phase: RTX-1

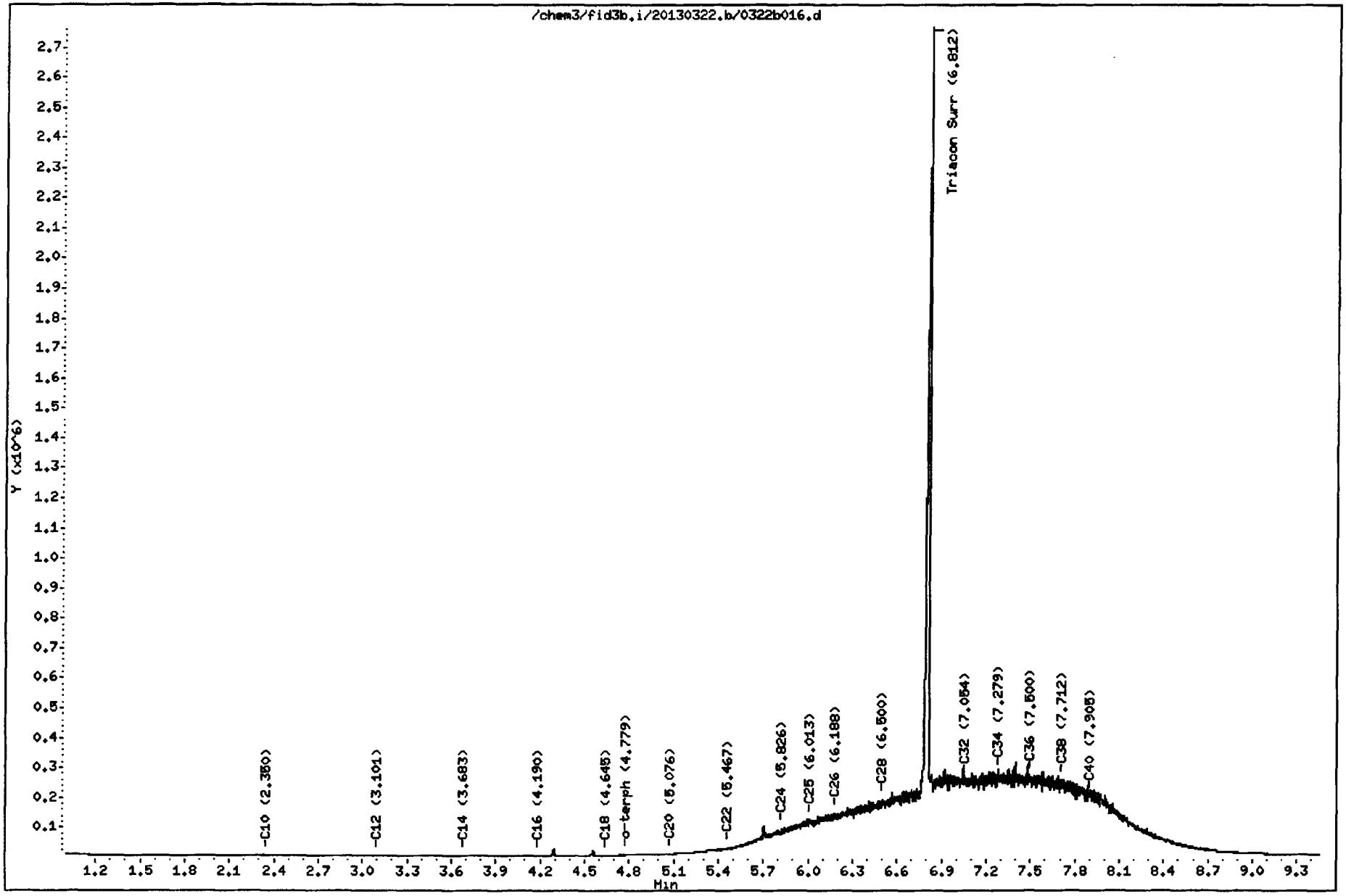
Instrument: fid3b.i

Operator: JW

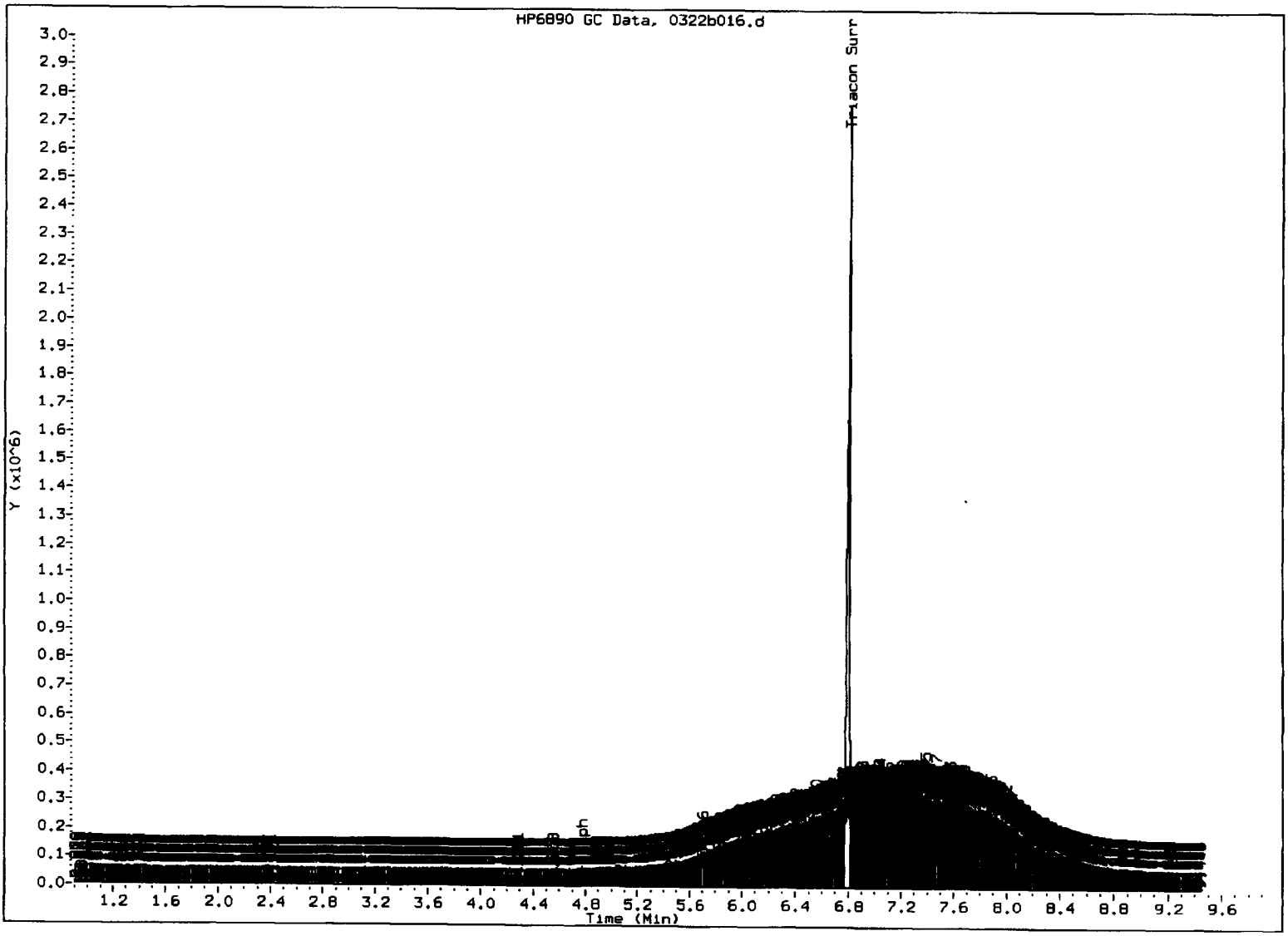
Column diameter: 0.25

JW 3/25/13

UL57.01366



FID:3B-2C/RTX-1 MOIL2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
8. Skimmed surrogate

Analyst: JW **Date:** 3/25/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b017.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 03/25/2013
Macro: FID:3B012413

ARI ID: MOIL5000
Client ID:
Injection: 22-MAR-2013 16:41
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.819	0.000	64579	25692	WATPHG	(Tol-C12)	264716	9.76
C8	0.951	0.000	5814	4384	WATPHD	(C12-C24)	3594837	317.00
C10	2.357	0.000	1039	670	WATPHM	(C24-C38)	47390179	5360.85
C12	3.101	0.000	205	116	AK102	(C10-C25)	4577432	331.87
C14	3.677	0.000	346	233	AK103	(C25-C36)	40226442	5497.67 M
C16	4.191	0.000	493	105	OR.DIES	(C10-C28)	15245892	991.15
C18	4.644	0.000	2636	1443				
C20	5.068	0.000	12046	7392				
C22	5.465	0.000	49188	19059				
C24	5.831	0.000	173993	43975				
C25	6.012	0.000	240931	46846				
C26	6.193	0.000	301405	102360				
C28	6.500	0.000	370265	232453	IT.DIES	(C10-C24)	3616379	197.79
C32	7.052	0.000	531053	125895				
C34	7.284	0.000	549821	128481				
Filter Peak	----							
C36	7.500	0.000	552708	309645	BUNKERC	(C10-C38)	51006558	10399.31
o-terph	4.776	0.000	5259	2705	JET-A	(C10-C18)	132797	9.22
Triacon Surr	6.831	0.000	3340029	5688204				

Range Times: NW Diesel(3.151 - 5.881) NW Gas(0.769 - 3.151) NW M.Oil(5.881 - 7.765)
AK102(2.307 - 5.962) AK103(5.962 - 7.550) Jet A(2.307 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2705	0.2	0.4
Triacontane	5688204	495.7	1101.6

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

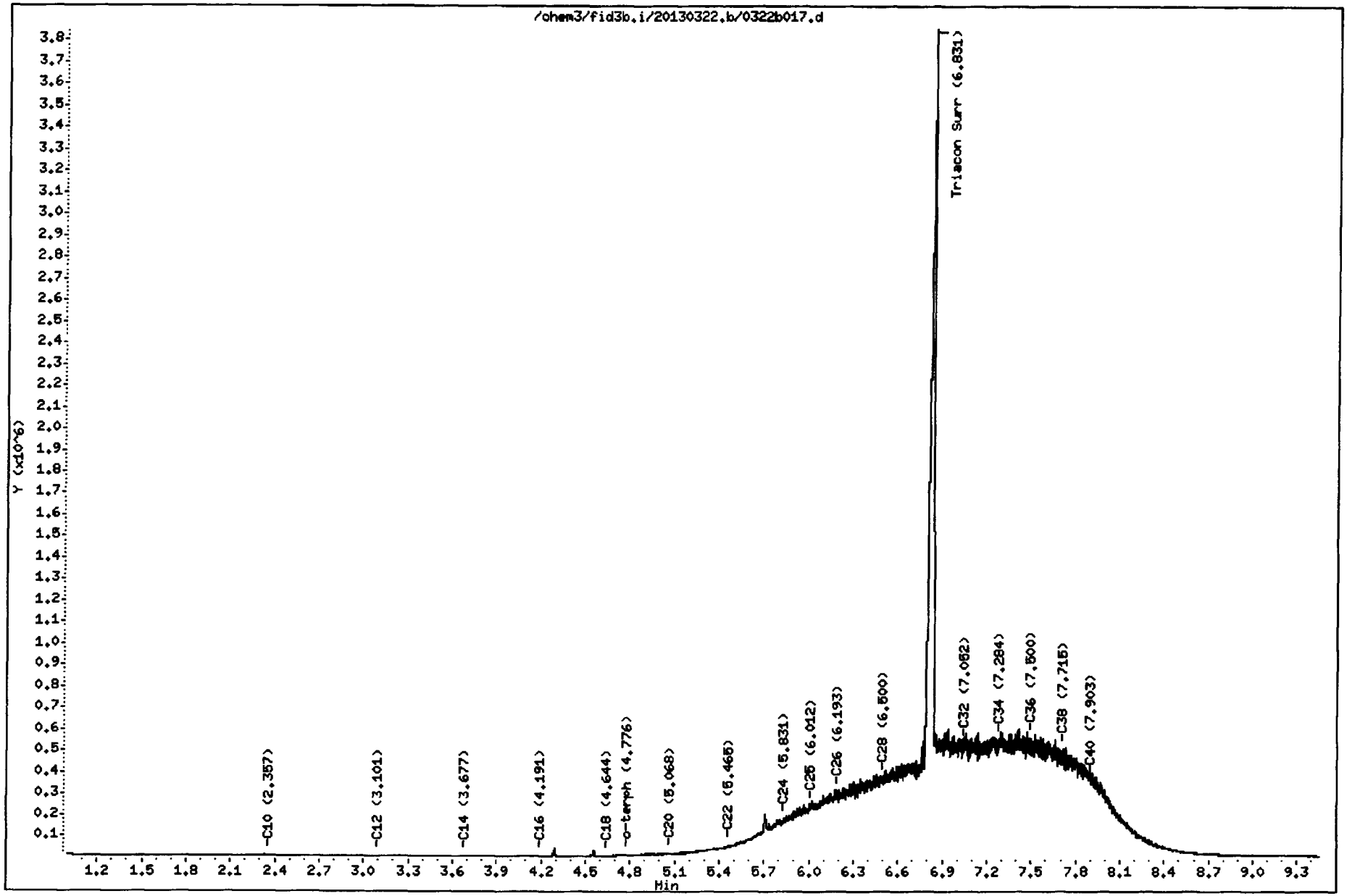
JW
3/25/13

Data File: /chem3/fid3b.i/20130322.b/0322b017.d
Date : 22-MAR-2013 16:41
Client ID:
Sample Info: MOIL5000

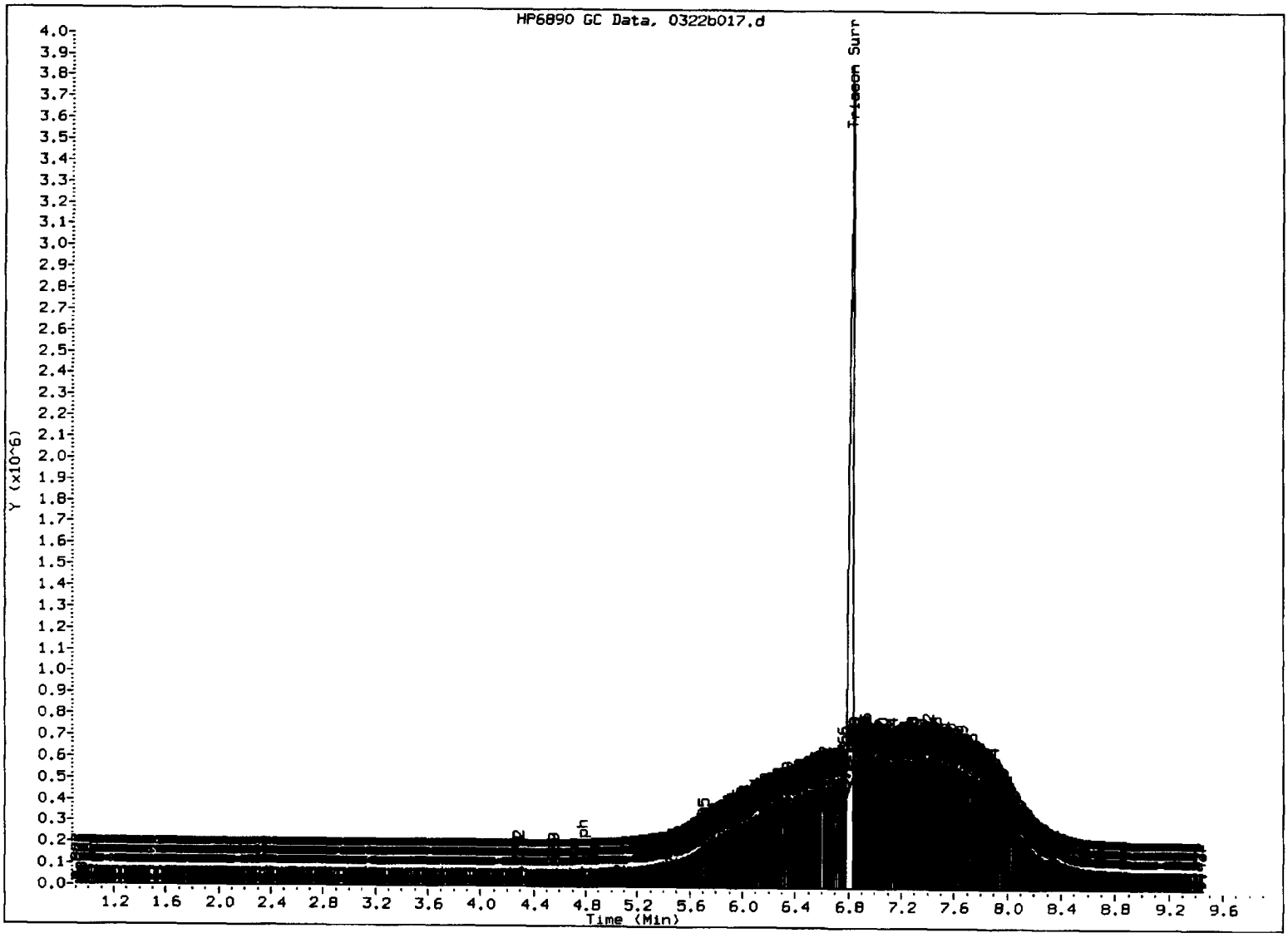
Instrument: fid3b.i

Operator: JW
Column phase: RTX-1
Column diameter: 0.25

JW 4/25/13



FID:3B-2C/RTX-1 MOIL5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 3/25/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b018.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 03/25/2013
Macro: FID:3B012413

ARI ID: MOILICV500
Client ID:
Injection: 22-MAR-2013 17:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.821	0.002	14785	5277	WATPHG	(Tol-C12)	178336	6.57
C8	0.950	0.000	5340	3669	WATPHD	(C12-C24)	477902	42.14
C10	2.356	-0.001	726	529	WATPHM	(C24-C38)	4167862	471.48
C12	3.099	-0.001	197	161	AK102	(C10-C25)	595444	43.17
C14	3.676	-0.001	98	17	AK103	(C25-C36)	3430252	468.81 M
C16	4.188	-0.003	105	44	OR.DIES	(C10-C28)	1481783	96.33
C18	4.644	0.000	259	68				
C20	5.067	-0.001	1412	590				
C22	5.464	0.000	7263	2794				
C24	5.834	0.002	19462	8059				
C25	6.012	0.000	24659	17958				
C26	6.195	0.002	24961	3913				
C28	6.496	-0.004	29468	18182	IT.DIES	(C10-C24)	498483	27.26
C32	7.054	0.002	42178	21143				
C34	7.276	-0.008	54020	44739				
Filter Peak	----							
C36	7.499	-0.001	51346	11057	BUNKERC	(C10-C38)	4666345	951.38
o-terph	4.777	0.001	512	216	JET-A	(C10-C18)	35866	2.49
Triacon Surr	6.785	-0.046	709115	484794				

Range Times: NW Diesel(3.151 - 5.881) NW Gas(0.769 - 3.151) NW M.Oil(5.881 - 7.765)
AK102(2.307 - 5.962) AK103(5.962 - 7.550) Jet A(2.307 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	216	0.0	0.0
Triacontane	484794	42.2	93.9

JW 3/25/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130322.b/0322b018.d

Date : 22-MAR-2013 17:01

Client ID:

Sample Info: HOILICV500

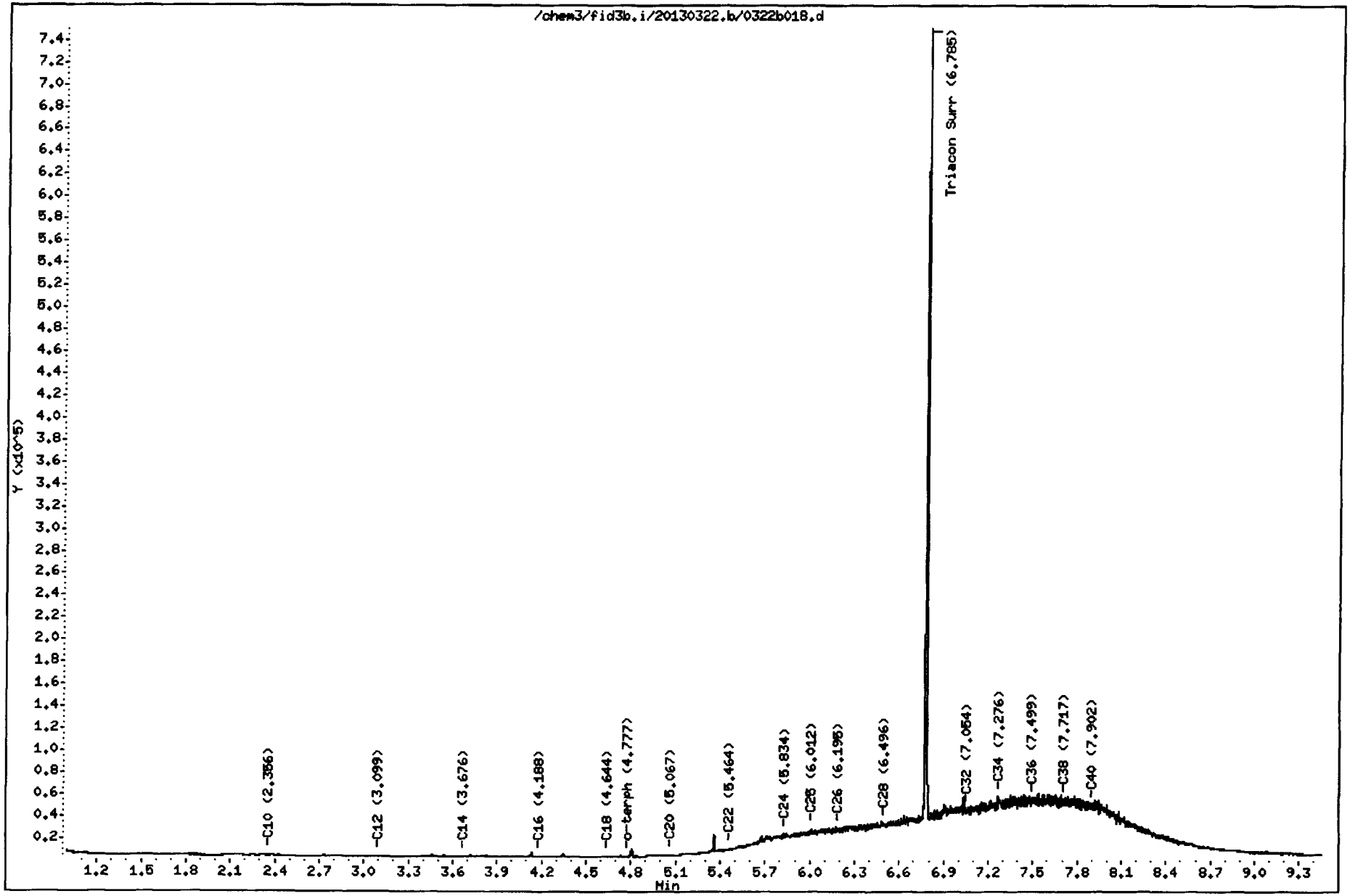
Column phase: RTX-1

Instrument: fid3b.i

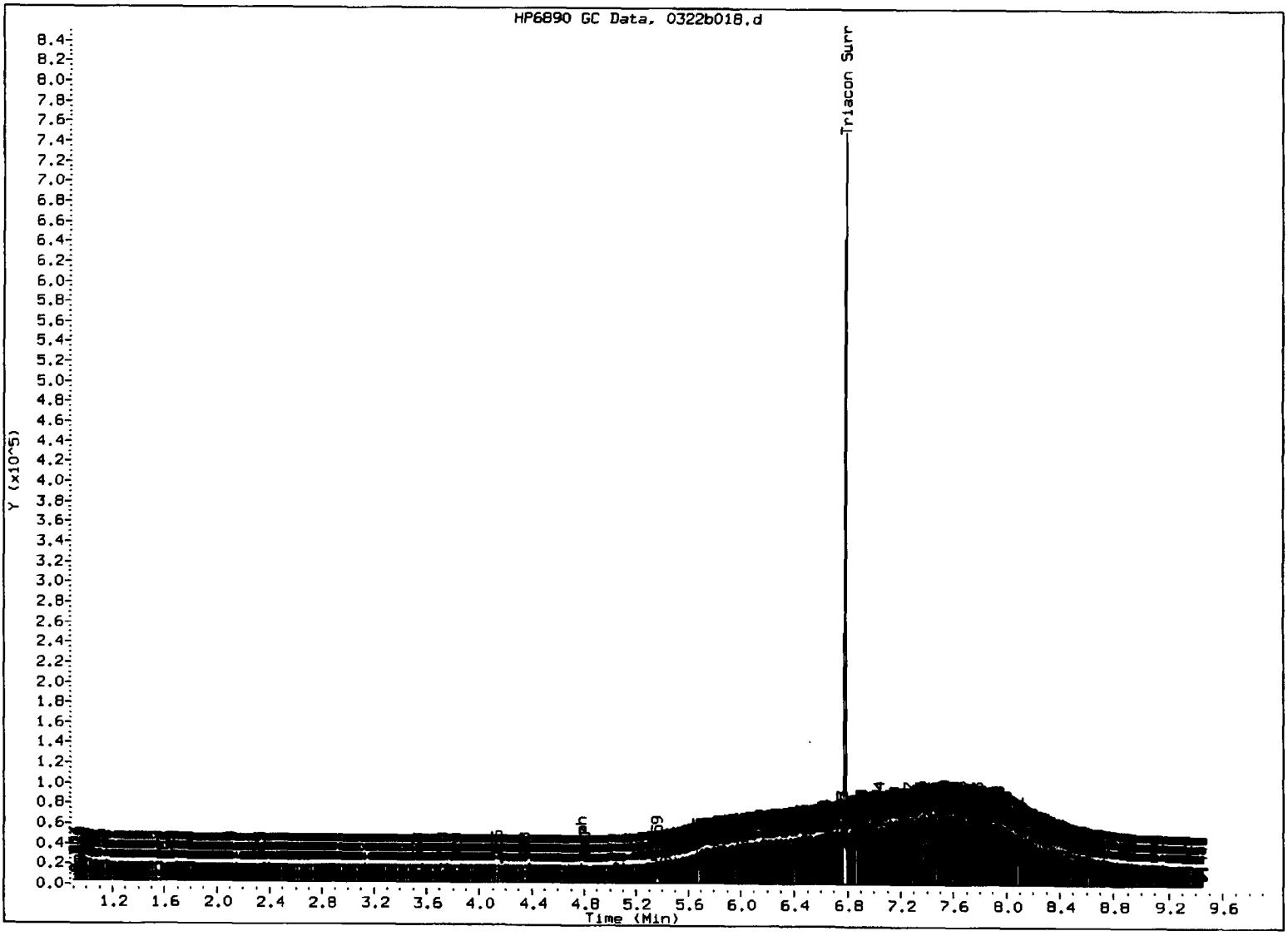
Operator: JW

Column diameter: 0.25

3/25/13



FID:3B-2C/RTX-1 MOILICV500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 3/25/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A **FID-3B** FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/13/13 Internal Standard ID N/A Expiration 11/~~27~~13

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
RT	2043-4	10/20/13	mail(valvoline)	2043-2	11/19/13
IB	2043-3	10/20/13			
mail(chevron)	2041-4	11/27/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JW **Date:** 4/15/13

Reviewer: [signature] **Date:** 4/15/13

WLS7:01371

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130413.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413b006	0413b007	0413b008	0413b009	0413b010	0413b011
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	11:55	12:13	12:32	12:51	13:11	13:30

	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	0.822	0.839	0.838	0.838	0.836	0.840	0.840	0.740-0.940	0.835	0.007
	3 C10	2.263	2.249	2.249	2.258	2.257	2.260	2.260	2.210-2.310	2.256	0.006
	4 C12	3.042	3.041	3.041	3.043	3.042	3.043	3.043	2.993-3.093	3.042	0.001
	5 C14	3.630	3.623	3.621	3.621	3.624	3.624	3.624	3.574-3.674	3.624	0.003
	6 C16	4.109	4.119	4.118	4.120	4.121	4.121	4.121	4.071-4.171	4.118	0.005
	7 C18	4.556	4.567	4.568	4.570	4.570	4.572	4.572	4.522-4.622	4.567	0.005
$	8 o-terph	4.679	4.683	4.686	4.676	4.675	4.675	4.675	4.625-4.725	4.679	0.005
	9 C20	4.981	4.991	4.985	4.988	4.985	4.987	4.987	4.937-5.037	4.986	0.003
	10 C22	5.383	5.387	5.390	5.385	5.389	5.389	5.389	5.339-5.439	5.387	0.003
	11 C24	5.763	5.760	5.760	5.759	5.760	5.755	5.755	5.705-5.805	5.759	0.003
	12 C25	5.939	5.940	5.935	5.939	5.939	5.939	5.939	5.889-5.989	5.939	0.002
	13 C26	6.111	6.115	6.119	6.115	6.117	6.119	6.119	6.069-6.169	6.116	0.003
	14 C28	6.430	6.434	6.425	6.433	6.432	6.431	6.431	6.381-6.481	6.431	0.003
$	15 Triacon Surr	6.716	6.723	6.729	6.740	6.758	6.765	6.765	6.715-6.815	6.738	0.020
	16 C32	6.977	6.974	6.981	6.981	6.983	6.975	6.975	6.925-7.025	6.978	0.004

Reviewer 1 JW Date: 4/15/13
Reviewer 2 Date: 4/15/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130413.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.218	7.216	7.216	7.218	7.216	7.218	7.218	7.168-7.268	7.217	0.001
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.438	7.442	7.436	7.435	7.433	7.440	7.440	7.390-7.490	7.437	0.003
20 C38	7.649	7.642	7.644	7.642	7.639	7.637	7.637	7.587-7.687	7.642	0.004
21 C40	7.835	7.833	7.835	7.836	7.832	7.835	7.835	7.785-7.885	7.835	0.001
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
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	+++++	+++++

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

Instrument: FID3B.I Project:

Calibration Date: 13-APR-2013 SDG No.: 20130413

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	11213	11384	11352	11114	10744	10361	11028	3.6
Triac Surr	15652	15497	15248	15442	15268	14582	15281	2.4

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

Calibration Files	Analysis Time
0413b006.d	13-APR-2013 11:55
0413b007.d	13-APR-2013 12:13
0413b008.d	13-APR-2013 12:32
0413b009.d	13-APR-2013 12:51
0413b010.d	13-APR-2013 13:11
0413b011.d	13-APR-2013 13:30

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130413.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-APR-2013 09:44	0413b001.d	1	RINSE	
2	13-APR-2013 10:02	0413b002.d	1	RT0413	
3	13-APR-2013 10:21	0413b003.d	1	IB0413	
4	13-APR-2013 10:40	0413b004.d	1	DIESEL#1	
5	13-APR-2013 10:59	0413b005.d	1	MOIL#1	
6	13-APR-2013 11:55	0413b006.d	1	MOIL100	
7	13-APR-2013 12:13	0413b007.d	1	MOIL250	
8	13-APR-2013 12:32	0413b008.d	1	MOIL500	
9	13-APR-2013 12:51	0413b009.d	1	MOIL1000	
10	13-APR-2013 13:11	0413b010.d	1	MOIL2500	
11	13-APR-2013 13:30	0413b011.d	1	MOIL5000	
12	13-APR-2013 13:49	0413b012.d	1	MOILICV500	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130413.b

ARI Job No.: RT04 Method: i/20130413.b/ftphfid3b.m Instrument: fid3b.i Date: 13-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1002	0413b002.d	RT0413		1	Toluene,
1021	0413b003.d	IB0413		1	NO MANUAL INTEGRATION
1155	0413b006.d	MOIL100		1	Triacon Surr,
1213	0413b007.d	MOIL250		1	Triacon Surr,
1232	0413b008.d	MOIL500		1	Triacon Surr,
1251	0413b009.d	MOIL1000		1	Triacon Surr,
1311	0413b010.d	MOIL2500		1	Triacon Surr,
1330	0413b011.d	MOIL5000		1	Triacon Surr,
1349	0413b012.d	MOILICV500		1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b002.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: RT0413
Client ID:
Injection: 13-APR-2013 10:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.660	0.000	226565	295835	WATPHG	(Tol-C12)	2776750	102.35 M
C8	0.836	0.000	186492	299072	WATPHD	(C12-C24)	2097769	184.99
C10	2.257	0.000	236238	207355	WATPHM	(C24-C38)	3102469	281.32
C12	3.043	0.000	418433	289020	AK102	(C10-C25)	2752449	199.55
C14	3.622	0.000	519586	314513	AK103	(C25-C36)	2718350	371.51
C16	4.120	0.000	503164	308307	OR.DIES	(C10-C28)	4365197	283.79
C18	4.569	0.000	381319	308690				
C20	4.989	0.000	404798	283635				
C22	5.389	0.000	398263	294091				
C24	5.761	0.000	432153	300046				
C25	5.936	0.000	381271	296430				
C26	6.115	0.000	1011494	547067				
C28	6.431	0.000	449053	318594	IT.DIES	(C10-C24)	2730717	149.35
C32	6.980	0.000	491363	334756				
C34	7.217	0.000	504125	338838				
Filter Peak	----							
C36	7.436	0.000	501994	342591	BUNKERC	(C10-C38)	5833186	1189.28
o-terph	4.681	0.000	980696	672571	JET-A	(C10-C18)	1639822	113.88
Triacon Surr	6.728	0.000	1034593	850158				

Range Times: NW Diesel(3.093 - 5.811) NW Gas(0.610 - 3.093) NW M.Oil(5.811 - 7.691)
AK102(2.207 - 5.886) AK103(5.886 - 7.486) Jet A(2.207 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	672571	46.3	103.0
Triacontane	850158	55.6	123.6

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b002.d

Date : 13-APR-2013 10:02

Client ID:

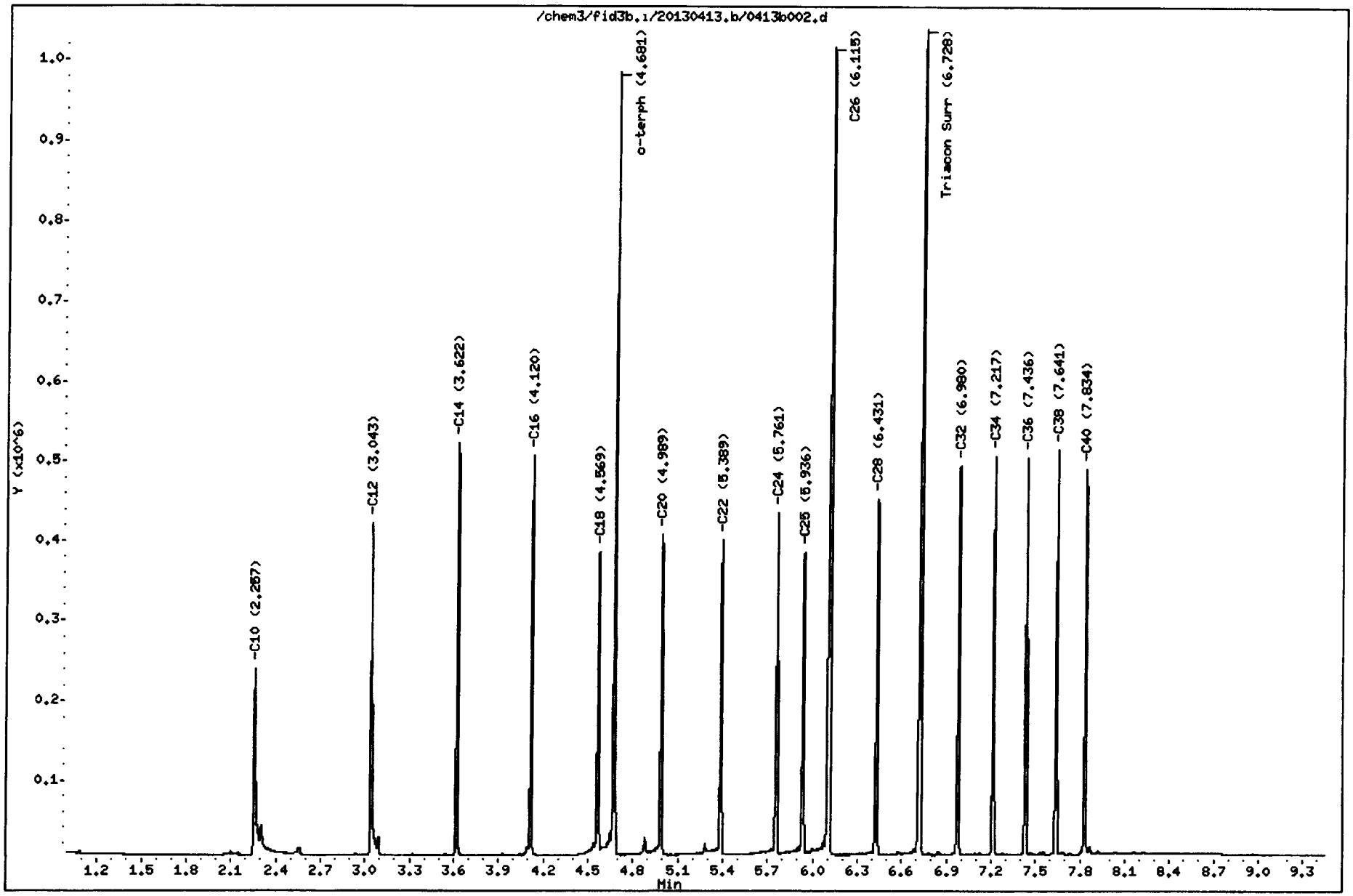
Sample Info: RT0413

Column phase: RTX-1

Instrument: fid3b.i

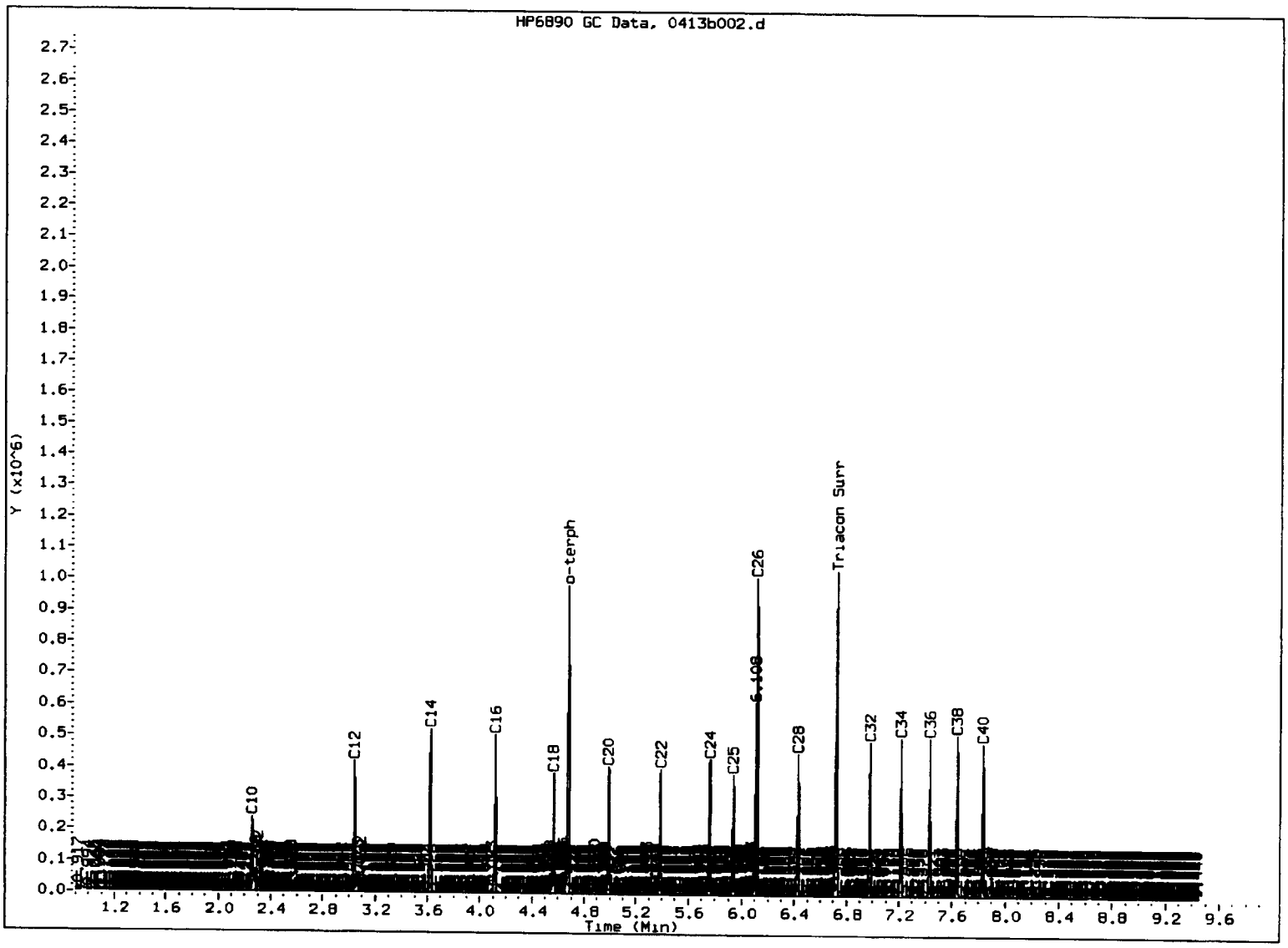
Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 RT0413

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JL

Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b003.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: IB0413
Client ID:
Injection: 13-APR-2013 10:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	45415	2
C8	0.830	-0.006	3045	7384	WATPHD	(C12-C24)	56215	4.96
C10	2.258	0.001	333	315	WATPHM	(C24-C38)	93171	8.45
C12	3.045	0.001	235	142	AK102	(C10-C25)	70518	5.11
C14	3.621	-0.001	235	159	AK103	(C25-C36)	72145	9.86
C16	4.118	-0.002	342	244	OR.DIES	(C10-C28)	77035	5.01
C18	4.571	0.002	531	256				
C20	4.987	-0.002	226	176				
C22	5.386	-0.003	123	122				
C24	5.758	-0.004	98	85				
C25	5.933	-0.003	64	34				
C26	6.101	-0.014	159	112				
C28	6.427	-0.004	791	802	IT.DIES	(C10-C24)	69761	3.82
C32	6.975	-0.005	8297	7477				
C34	7.222	0.005	567	353				
Filter Peak	----							
C36	7.444	0.008	924	562	BUNKERC	(C10-C38)	162932	33.22
o-terph	4.682	0.001	977333	711586	JET-A	(C10-C18)	34523	2.40
Triacon Surr	6.725	-0.003	913755	675138				

Range Times: NW Diesel(3.093 - 5.811) NW Gas(0.610 - 3.093) NW M.Oil(5.811 - 7.691)
AK102(2.207 - 5.886) AK103(5.886 - 7.486) Jet A(2.207 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	711586	49.0	109.0
Triacontane	675138	44.2	98.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW 4/15/13

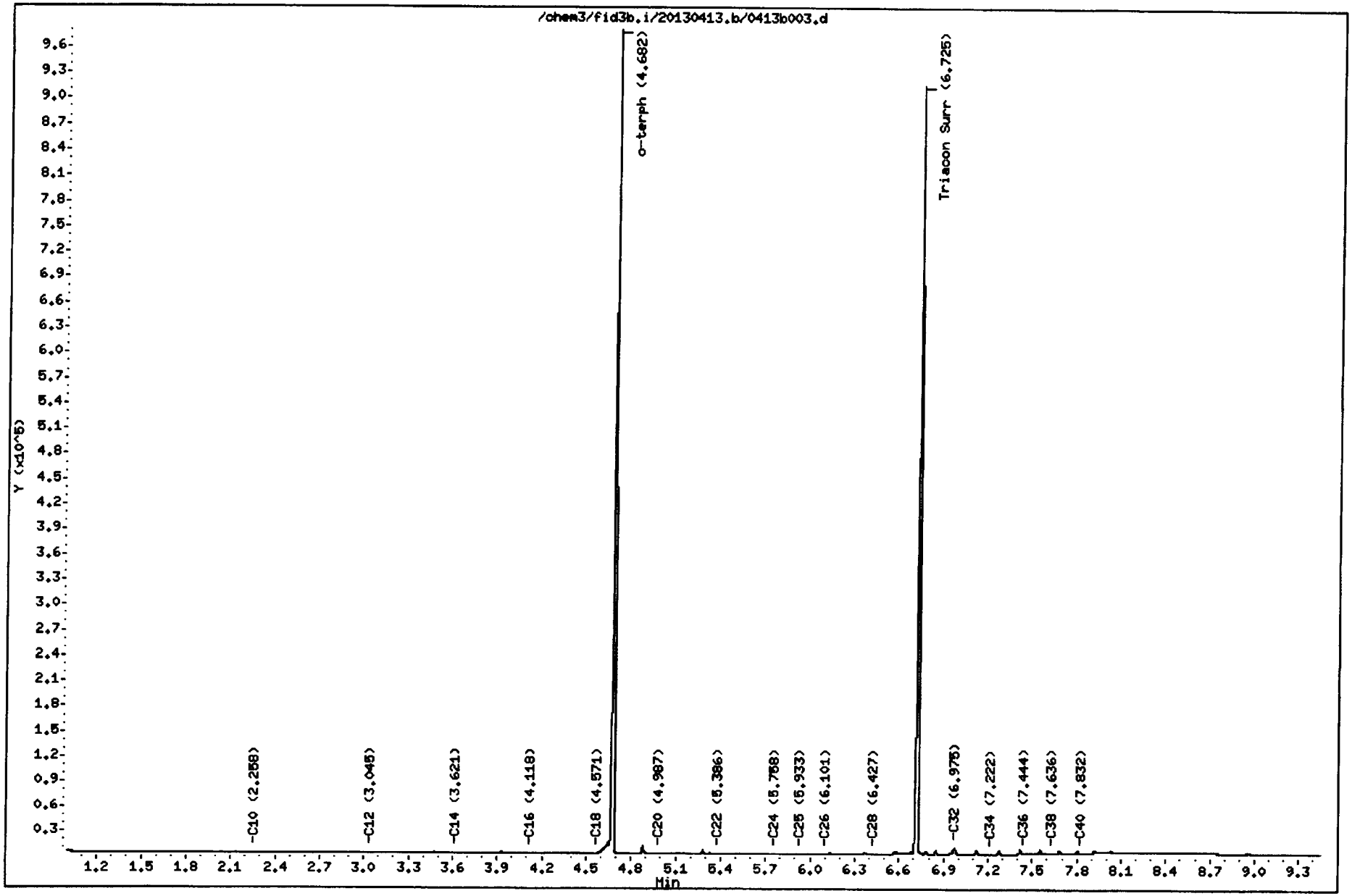
WLS7 01380

Data File: /chem3/fid3b.i/20130413.b/0413b003.d
Date : 13-APR-2013 10:21
Client ID:
Sample Info: IB0413

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b006.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL100
Client ID:
Injection: 13-APR-2013 11:55
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	179099	7	
C8	0.822	-0.019	3794	2334	WATPHD	(C12-C24)	498826	43.99	
C10	2.263	0.002	1358	161	WATPHM	(C24-C38)	1121259	101.67	
C12	3.042	-0.001	3034	3927	AK102	(C10-C25)	643130	46.63	
C14	3.630	0.007	2665	1659	AK103	(C25-C36)	948494	129.63	M
C16	4.109	-0.012	22370	14852	OR.DIES	(C10-C28)	903133	58.71	
C18	4.556	-0.015	12549	8291					
C20	4.981	-0.006	1400	1529					
C22	5.383	-0.005	1494	1443					
C24	5.763	0.008	4715	1840					
C25	5.939	0.000	6136	1186					
C26	6.111	-0.008	7441	4611					
C28	6.430	-0.001	9244	7750	IT.DIES	(C10-C24)	617292	33.76	
C32	6.977	0.002	12921	7586					
C34	7.218	0.001	12833	2990					
Filter Peak	----								
C36	7.438	-0.002	12431	3618	BUNKERC	(C10-C38)	1738551	354.46	
o-terph	4.679	0.005	1854	1341	JET-A	(C10-C18)	384172	26.68	
Triacon Surr	6.716	-0.049	220348	140870					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1341	0.1	0.2
Triacontane	140870	9.2	20.5

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW 4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b006.d
Date : 13-APR-2013 11:55
Client ID:
Sample Info: MOIL100

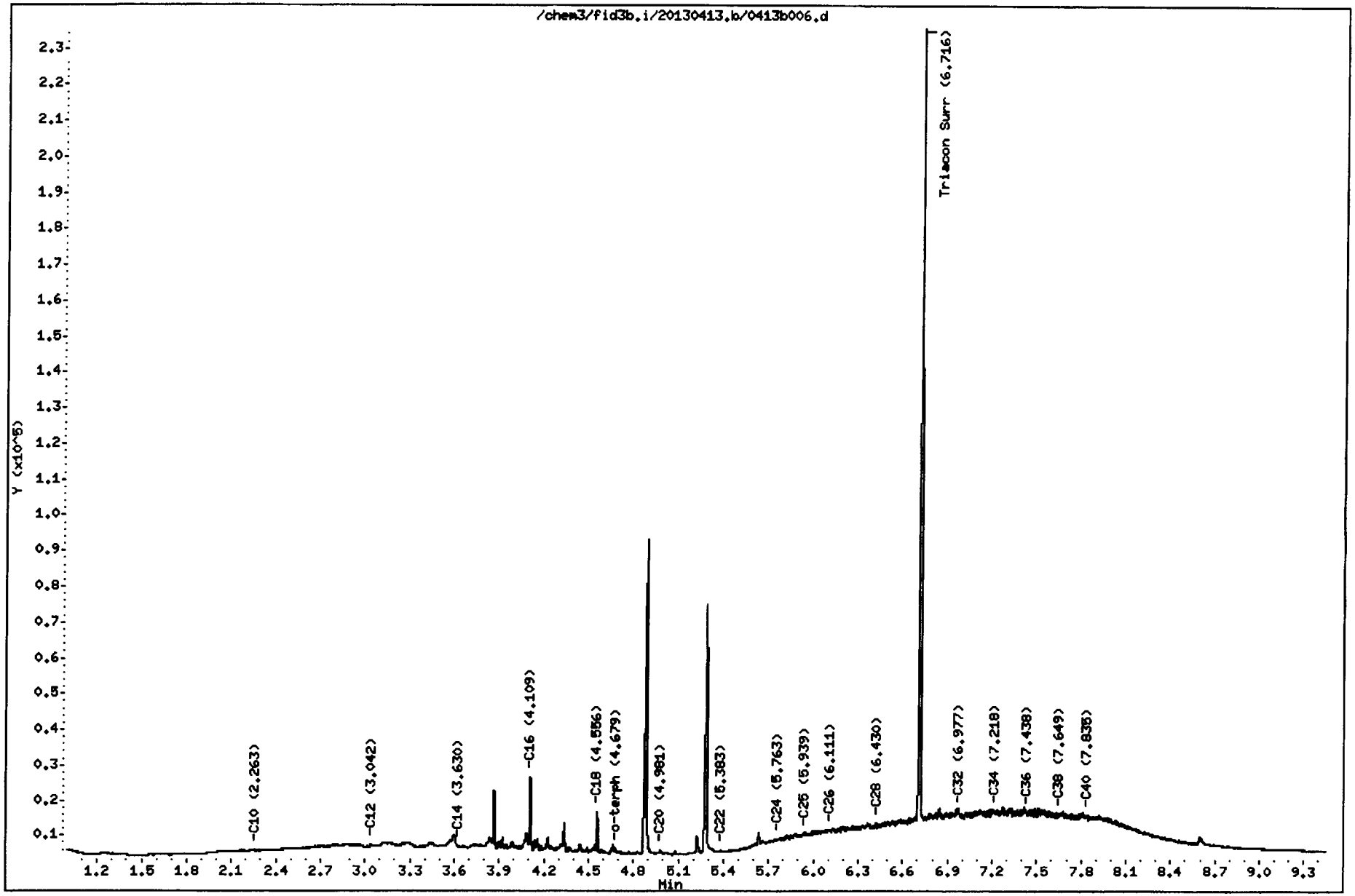
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1

JW 4/13/13

HL67 61995



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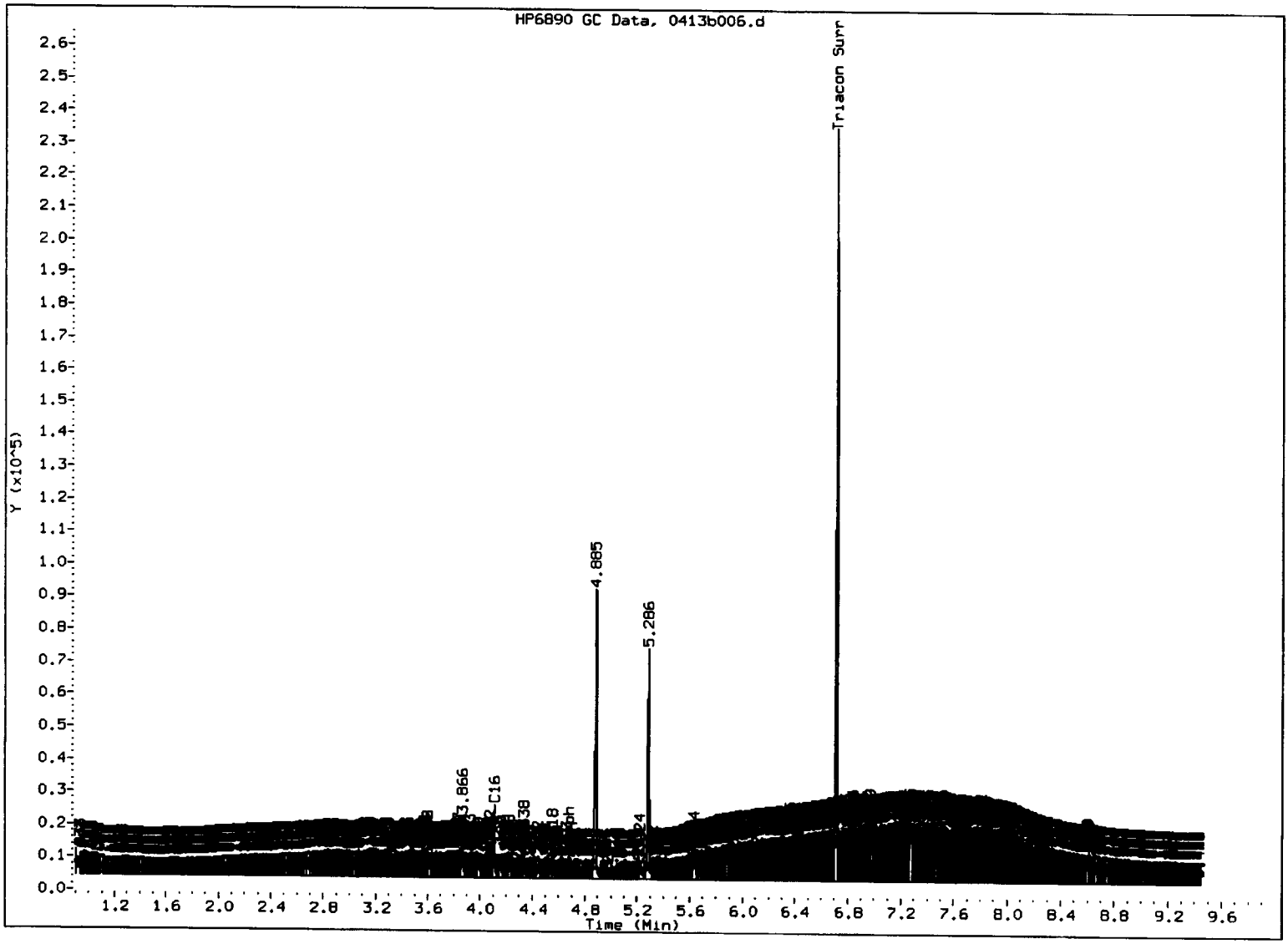


MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 4/18/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b007.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL250
Client ID:
Injection: 13-APR-2013 12:13
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	113393	4
C8	0.839	-0.001	4823	1057	WATPHD	(C12-C24)	261960	23.10
C10	2.249	-0.011	945	1076	WATPHM	(C24-C38)	2846056	258.07
C12	3.041	-0.002	1280	948	AK102	(C10-C25)	354889	25.73
C14	3.623	-0.001	139	93	AK103	(C25-C36)	2428871	331.95 M
C16	4.119	-0.002	132	106	OR.DIES	(C10-C28)	1039478	67.58
C18	4.567	-0.005	220	199				
C20	4.991	0.004	806	468				
C22	5.387	-0.002	3141	1716				
C24	5.760	0.006	12391	5470				
C25	5.940	0.001	16746	12064				
C26	6.115	-0.004	19346	3774				
C28	6.434	0.003	23847	12235	IT.DIES	(C10-C24)	282441	15.45
C32	6.974	-0.001	37110	27826				
C34	7.216	-0.001	32746	5788				
Filter Peak	----							
C36	7.442	0.002	30009	11696	BUNKERC	(C10-C38)	3128497	637.84
o-terph	4.683	0.008	322	176	JET-A	(C10-C18)	31879	2.21
Triacon Surr	6.723	-0.042	494554	348683				

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	176	0.0	0.0
Triacontane	348683	22.8	50.7

JW 4/15/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130413.b/0413b007.d

Date : 13-APR-2013 12:13

Client ID:

Sample Info: MOIL250

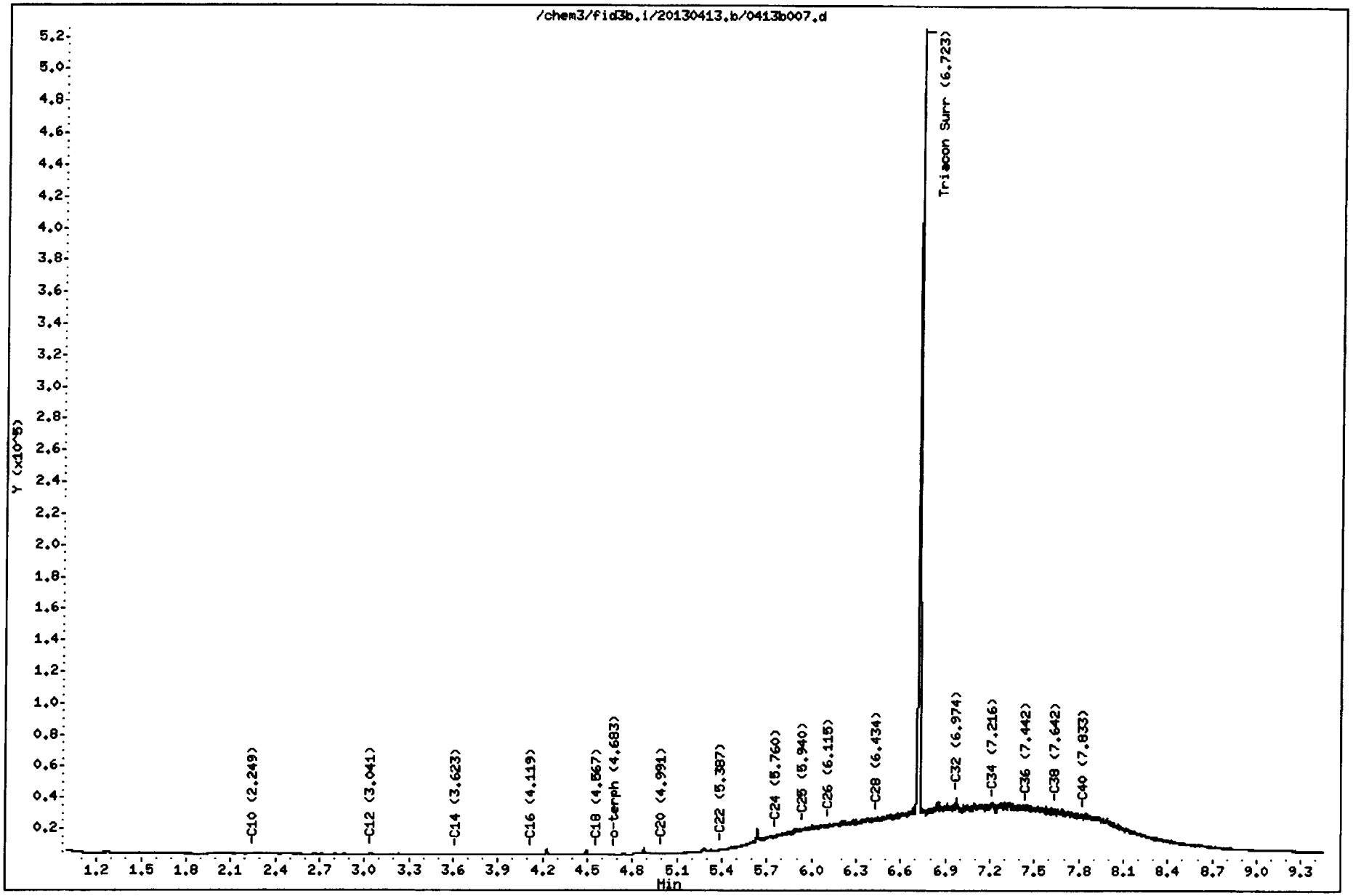
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

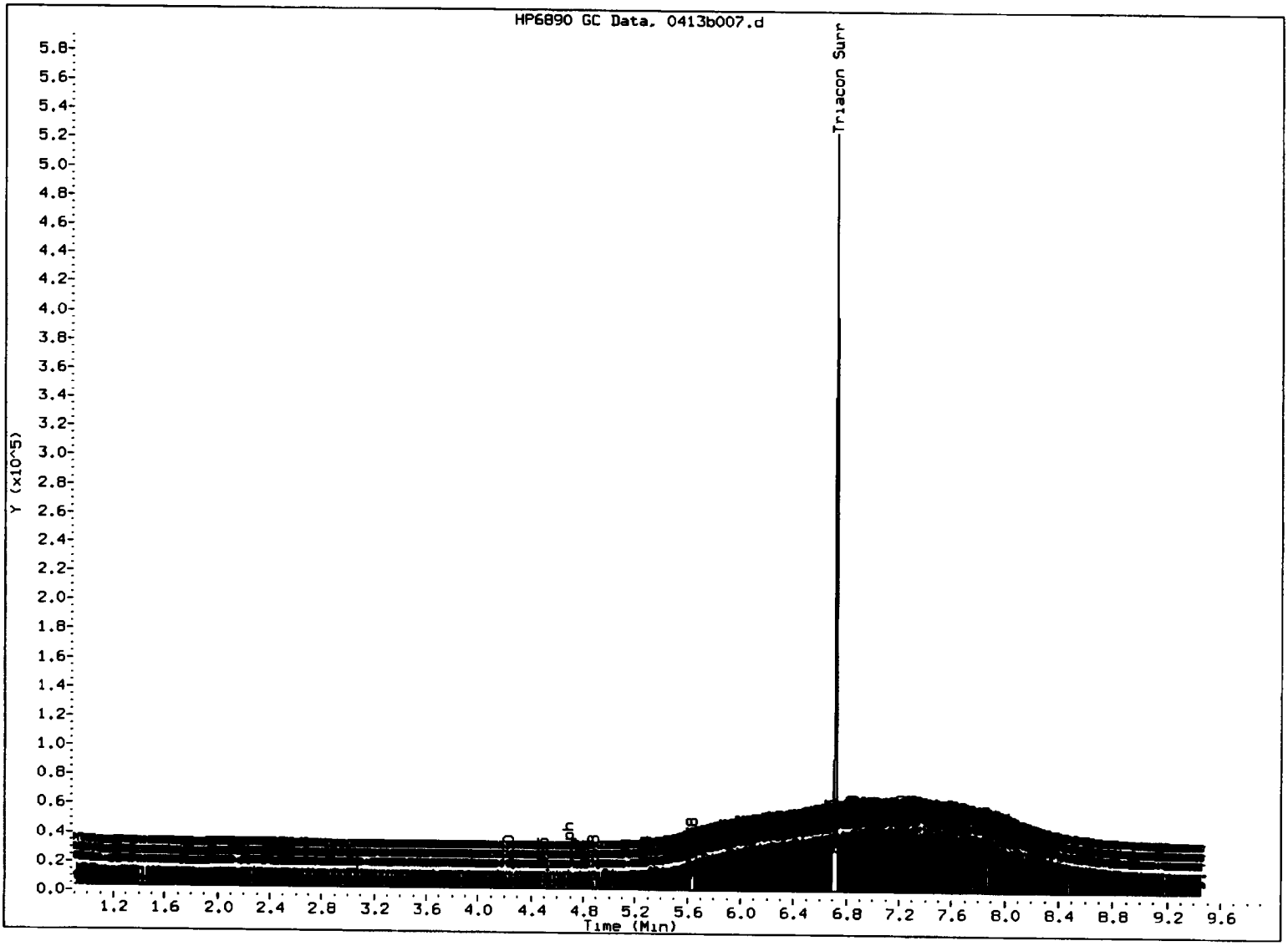
Column diameter: 0.25

4/15/13



FID:3B-2C/RTX-1 MOIL250

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 9/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b008.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL500
Client ID:
Injection: 13-APR-2013 12:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	103696	4	
C8	0.838	-0.002	6095	4246	WATPHD	(C12-C24)	516506	45.55	
C10	2.249	-0.011	870	1012	WATPHM	(C24-C38)	5676220	514.70	-
C12	3.041	-0.002	923	785	AK102	(C10-C25)	676631	49.06	
C14	3.621	-0.002	108	67	AK103	(C25-C36)	4849418	662.76	M
C16	4.118	-0.003	119	64	OR.DIES	(C10-C28)	2039978	132.62	
C18	4.568	-0.004	388	509					
C20	4.985	-0.002	1933	1590					
C22	5.390	0.001	6839	6071					
C24	5.760	0.005	25176	9580					
C25	5.935	-0.004	32093	10000					
C26	6.119	0.000	38484	11857					
C28	6.425	-0.007	47217	26600	IT.DIES	(C10-C24)	534531	29.23	
C32	6.981	0.006	67914	16845					
C34	7.216	-0.002	66838	46990					
Filter Peak	----								
C36	7.436	-0.004	62008	32447	BUNKERC	(C10-C38)	6210751	1266.26	
o-terph	4.686	0.012	562	350	JET-A	(C10-C18)	34658	2.41	
Triacon Surr	6.729	-0.036	878126	686173					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	350	0.0	0.1
Triacontane	686173	44.9	99.8

JCJ 4/15/13

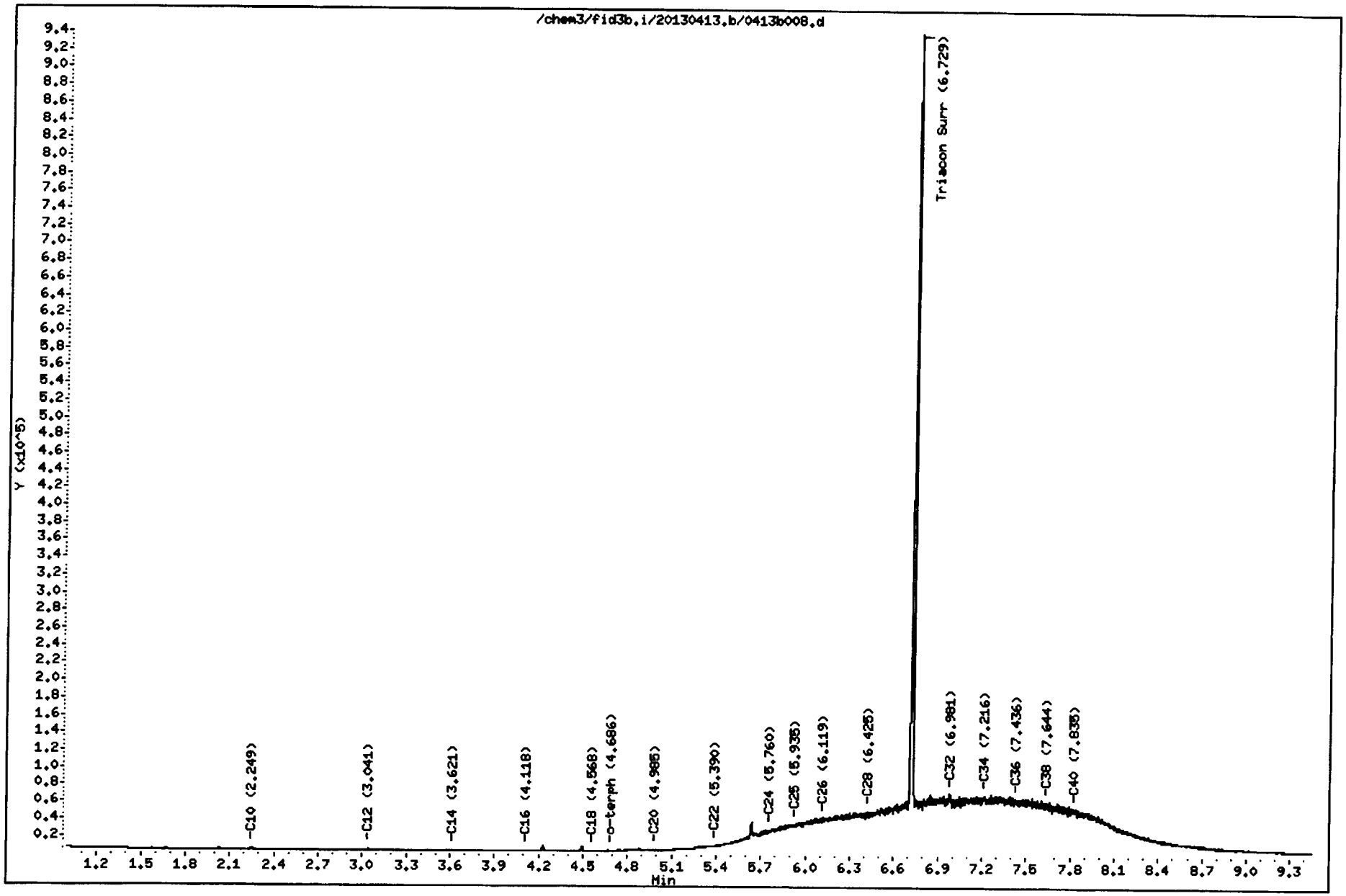
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130413.b/0413b008.d
Date : 13-APR-2013 12:32
Client ID:
Sample Info: MOIL500

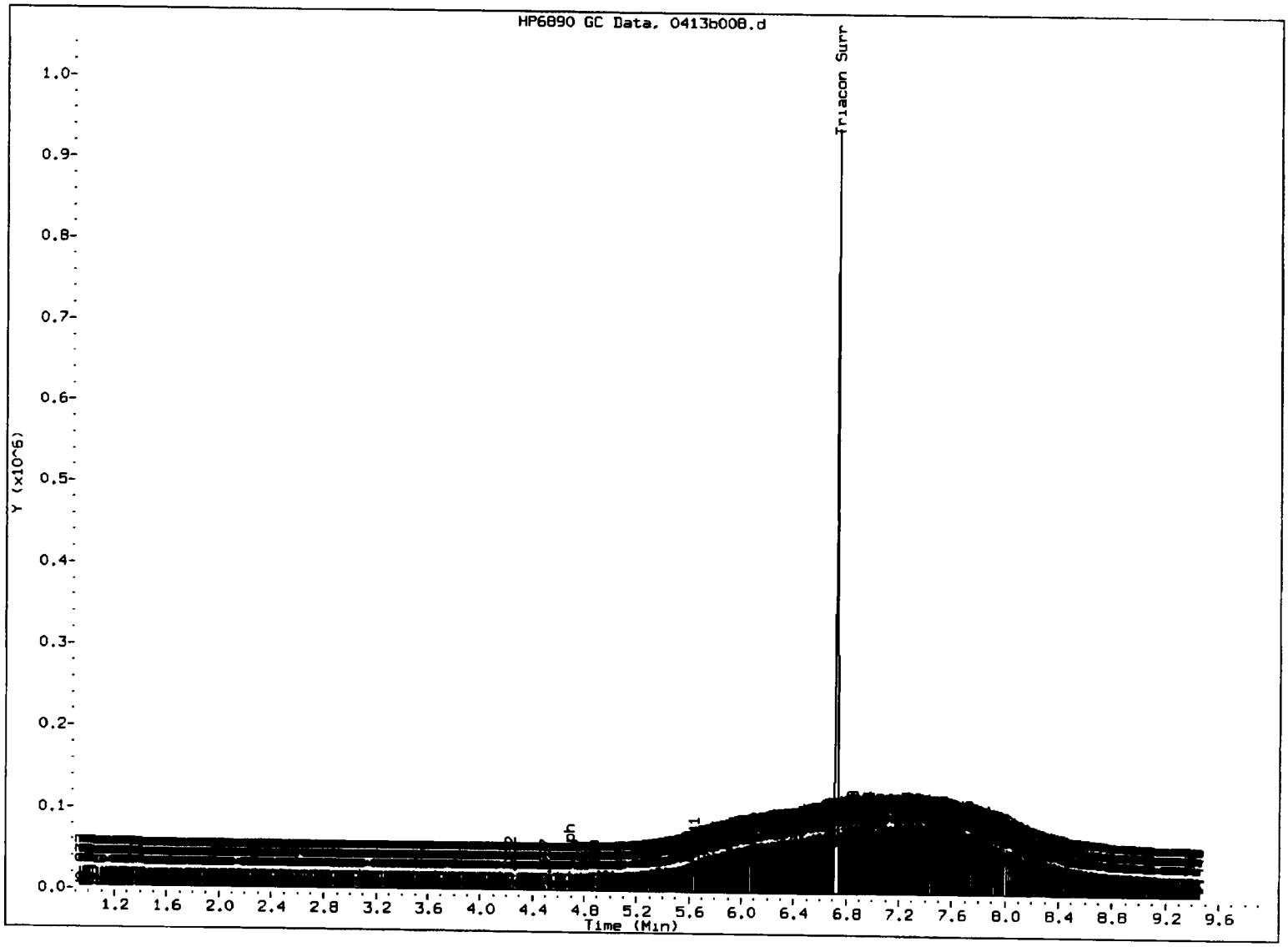
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: TV **Date:** 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b009.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL1000
Client ID:
Injection: 13-APR-2013 12:51
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	164198	6	
C8	0.838	-0.002	7679	4924	WATPHD	(C12-C24)	1032111	91.01	
C10	2.258	-0.002	1022	909	WATPHM	(C24-C38)	11113978	1007.78	—
C12	3.043	0.000	671	647	AK102	(C10-C25)	1314959	95.33	
C14	3.621	-0.003	103	65	AK103	(C25-C36)	9577376	1308.92	M
C16	4.120	-0.001	244	237	OR.DIES	(C10-C28)	3991753	259.51	
C18	4.570	-0.002	884	791					
C20	4.988	0.001	3697	2644					
C22	5.385	-0.004	13409	4443					
C24	5.759	0.005	49186	18060					
C25	5.939	-0.001	64363	43385					
C26	6.115	-0.004	78713	39786					
C28	6.433	0.001	88138	18975	IT.DIES	(C10-C24)	1052448	57.56	
C32	6.981	0.006	143289	87199					
C34	7.218	0.000	127909	17588					
Filter Peak	----								
C36	7.435	-0.005	124593	77124	BUNKERC	(C10-C38)	12166427	2480.51	
o-terph	4.676	0.001	1827	2741	JET-A	(C10-C18)	53497	3.72	
Triacon Surr	6.740	-0.025	1550090	1389738					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2741	0.2	0.4
Triacontane	1389738	90.9	202.1

JW
4/15/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130413.b/0413b009.d
Date : 13-APR-2013 12:51
Client ID:
Sample Info: MOIL1000

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JLC 7 : 61932

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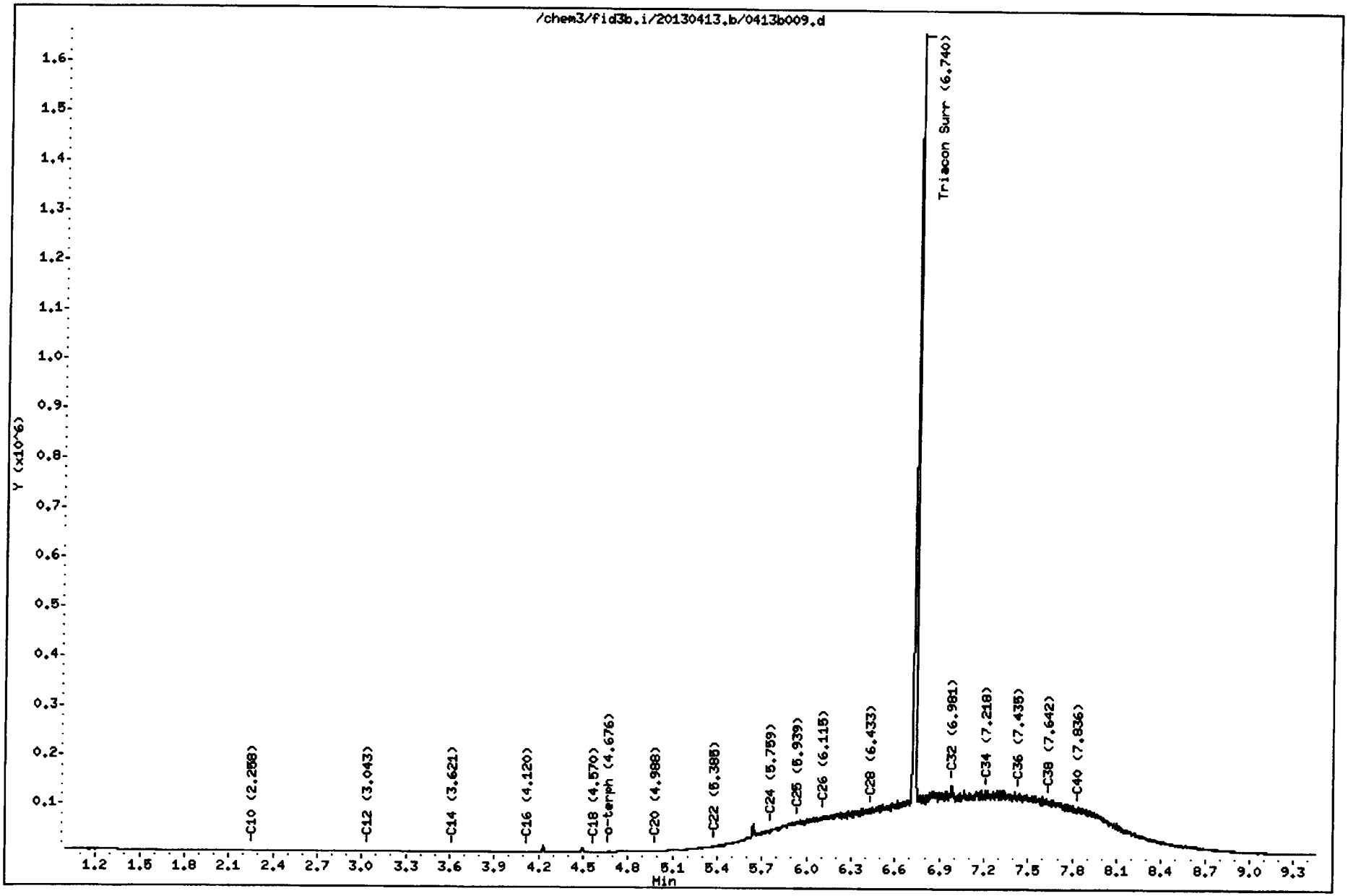
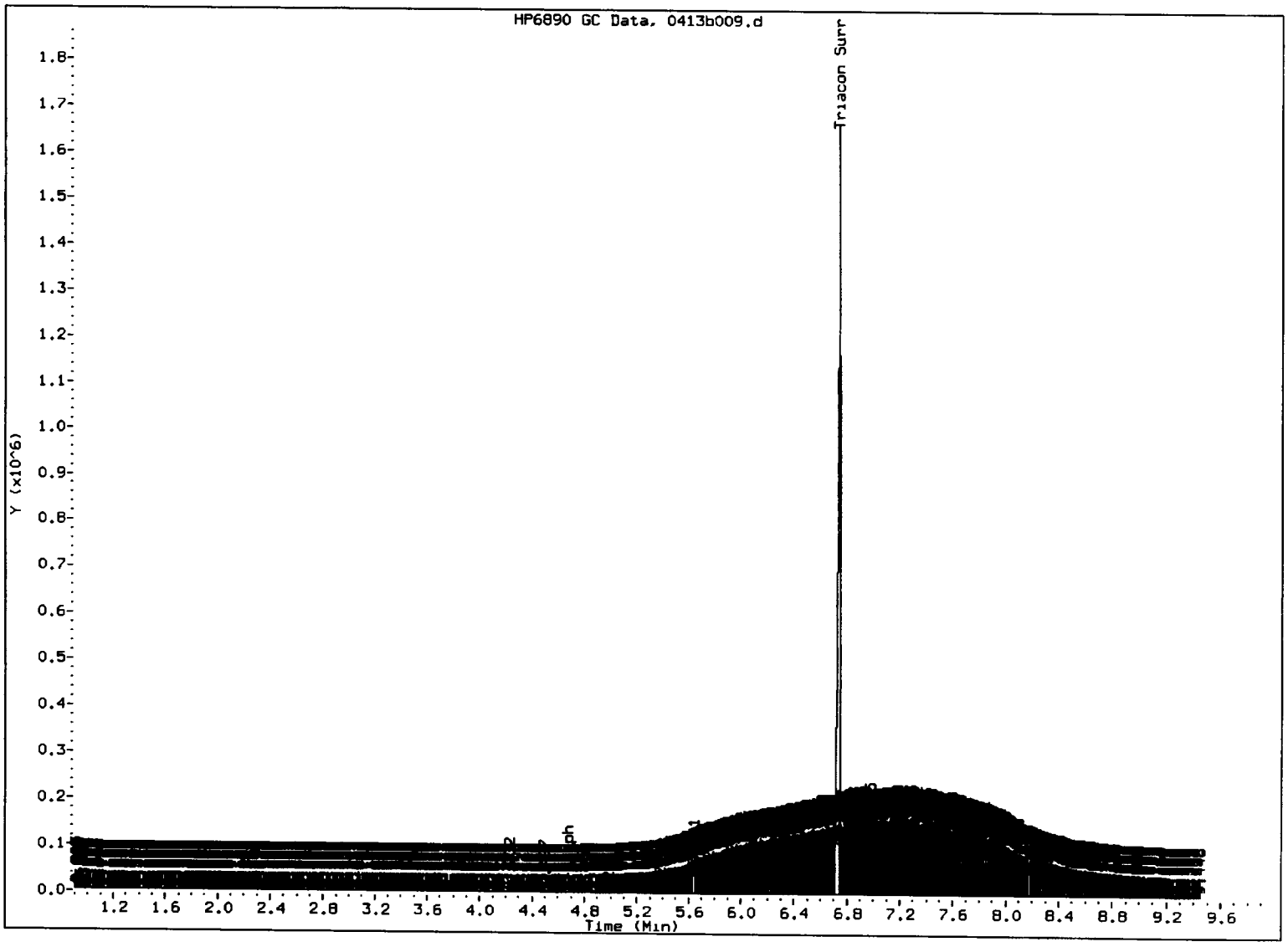


FID:3B-2C/RTX-1 MOIL1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b010.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL2500
Client ID:
Injection: 13-APR-2013 13:11
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	188819	7	
C8	0.836	-0.004	14740	9892	WATPHD	(C12-C24)	2510066	221.34	
C10	2.257	-0.003	1245	1720	WATPHM	(C24-C38)	26860369	2435.62	✓
C12	3.042	0.000	598	595	AK102	(C10-C25)	3193459	231.53	
C14	3.624	0.001	143	95	AK103	(C25-C36)	23046155	3149.67	M
C16	4.121	0.000	541	484	OR.DIES	(C10-C28)	9862804	641.19	
C18	4.570	-0.001	2275	1220					
C20	4.985	-0.002	9122	9850					
C22	5.389	0.001	31693	10496					
C24	5.760	0.006	115003	33488					
C25	5.939	0.000	153593	100225					
C26	6.117	-0.002	184336	103760					
C28	6.432	0.001	226090	56868	IT.DIES	(C10-C24)	2529770	138.36	
C32	6.983	0.008	293382	45657					
C34	7.216	-0.001	310401	124810					
Filter Peak	----								
C36	7.433	-0.007	284126	108325	BUNKERC	(C10-C38)	29390139	5992.12	
o-terph	4.675	0.001	4450	7316	JET-A	(C10-C18)	98718	6.86	
Triacon Surr	6.758	-0.007	1965018	3435299					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	7316	0.5	1.1	
Triacontane	3435299	224.8	499.6	✓

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

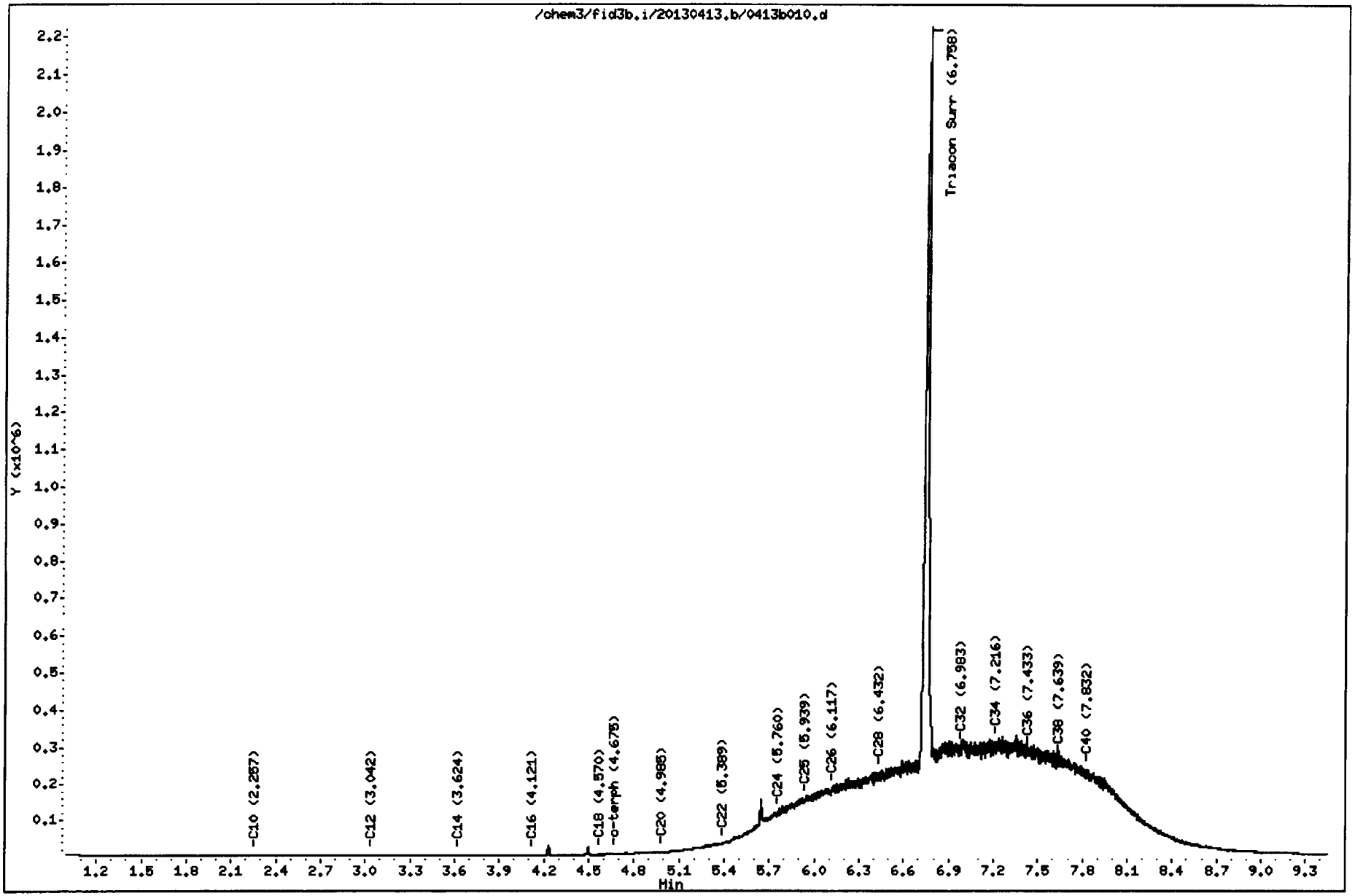
TW 4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b010.d
Date : 13-APR-2013 13:11
Client ID:
Sample Info: MOIL2500

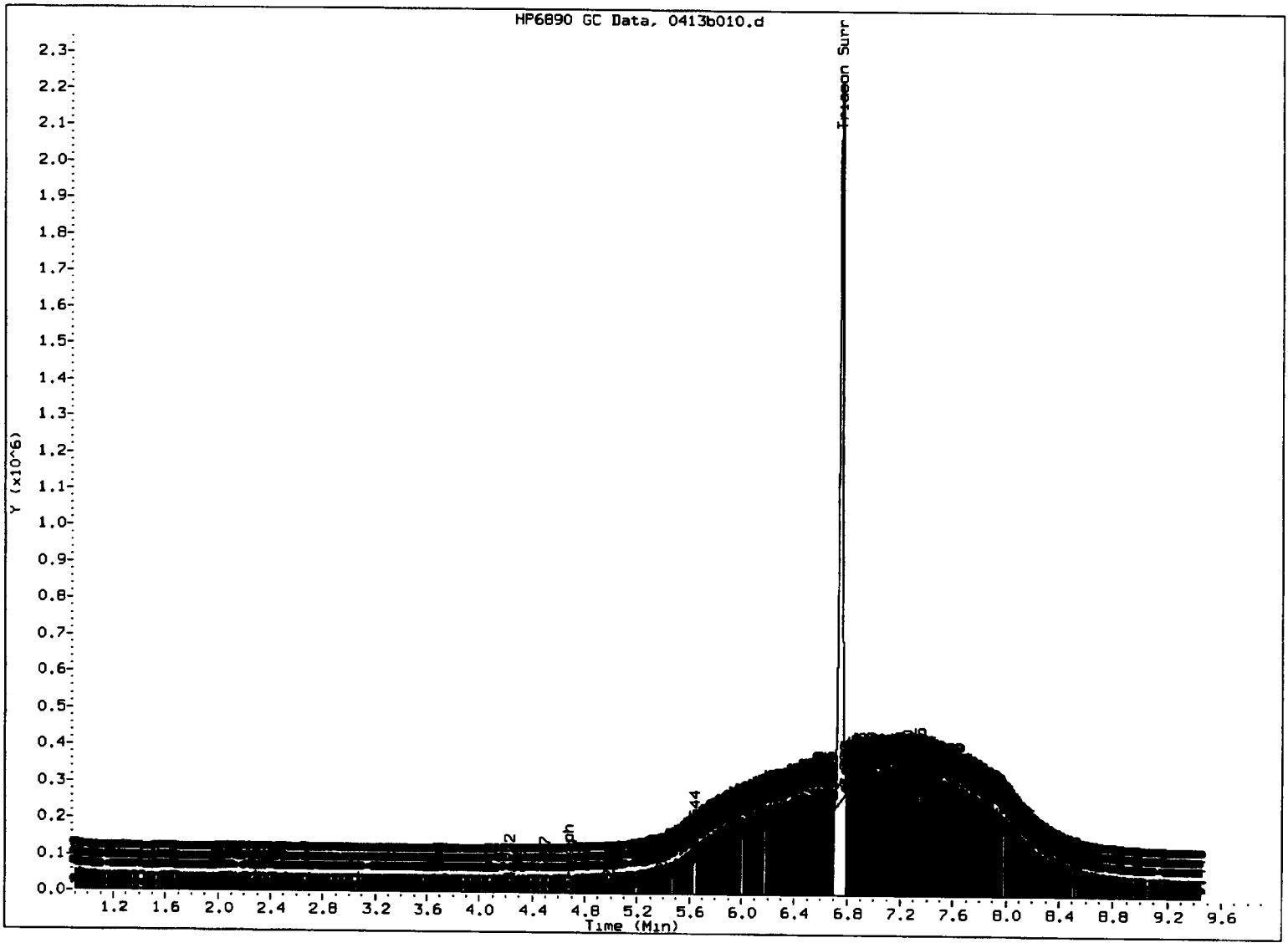
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JLU Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b011.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL5000
Client ID:
Injection: 13-APR-2013 13:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	105713	4	
C8	0.840	0.000	5401	1077	WATPHD	(C12-C24)	4859556	428.53	
C10	2.260	0.000	1725	1485	WATPHM	(C24-C38)	51806930	4697.71	
C12	3.043	0.000	687	537	AK102	(C10-C25)	6072860	440.28	
C14	3.624	0.000	355	316	AK103	(C25-C36)	44673811	6105.48	M
C16	4.121	0.000	1226	986	OR.DIES	(C10-C28)	18889195	1228.01	
C18	4.572	0.000	4797	7537					
C20	4.987	0.000	17116	13458					
C22	5.389	0.000	60731	15407					
C24	5.755	0.000	221070	176933					
C25	5.939	0.000	301599	128180					
C26	6.119	0.000	357361	83552					
C28	6.431	0.000	431904	101220	IT.DIES	(C10-C24)	4876971	266.73	
C32	6.975	0.000	595763	456190					
C34	7.218	0.000	602959	375599					
Filter Peak	----								
C36	7.440	0.000	590001	381640	BUNKERC	(C10-C38)	56683900	11556.82	
o-terph	4.675	0.000	9018	16008	JET-A	(C10-C18)	179225	12.45	
Triacon Surr	6.765	0.000	2140769	6561813					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	16008	1.1	2.5
Triacontane	6561813	429.4	954.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JLC 4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b011.d
Date : 13-APR-2013 13:30
Client ID:
Sample Info: MOIL5000

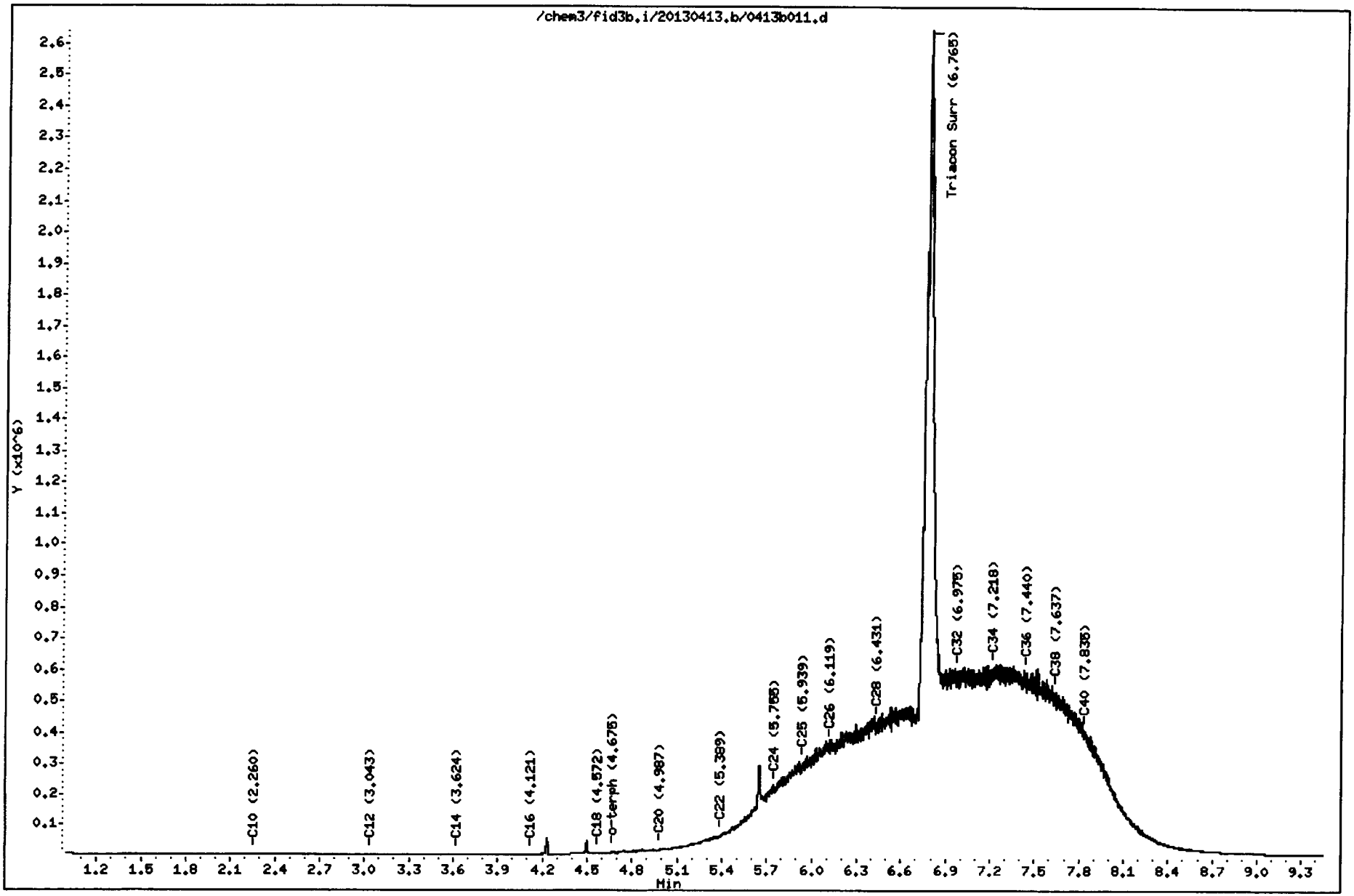
Column phase: RTX-1

Instrument: fid3b.i

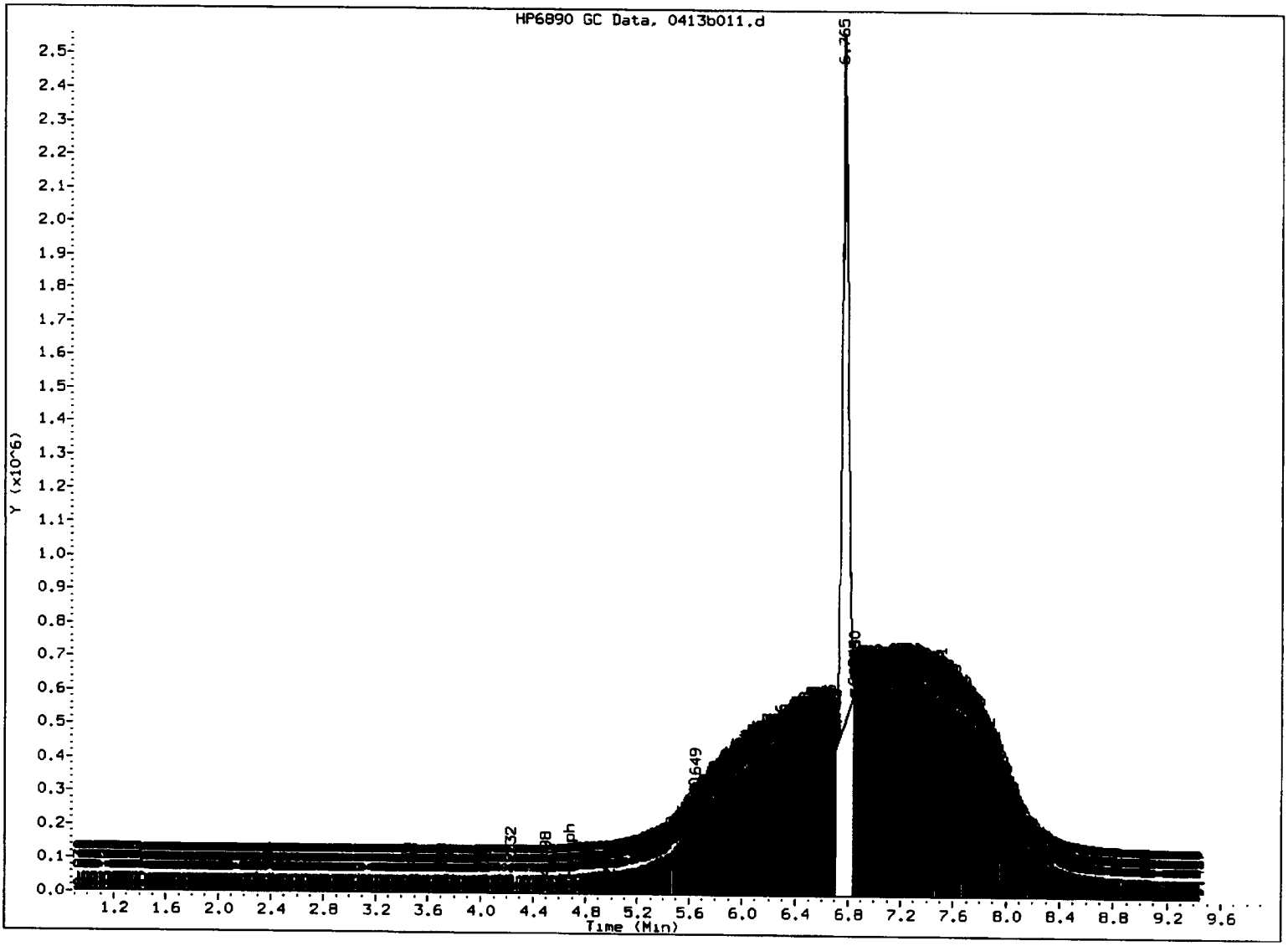
Operator: JW
Column diameter: 0.25

JW 4/15/13

EPL 07-01908



FID:3B-2C/RTX-1 MOIL5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JCI Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b012.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOILICV500
Client ID:
Injection: 13-APR-2013 13:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	141364	5	
C8	0.838	-0.002	6116	3749	WATPHD	(C12-C24)	615082	54.24	
C10	2.255	-0.005	1225	948	WATPHM	(C24-C38)	5408067	490.39	
C12	3.043	0.000	204	146	AK102	(C10-C25)	771562	55.94	
C14	3.623	-0.001	123	75	AK103	(C25-C36)	4593698	627.81	M
C16	4.118	-0.003	271	217	OR.DIES	(C10-C28)	2024424	131.61	
C18	4.568	-0.004	525	198					
C20	4.990	0.003	1813	2022					
C22	5.391	0.002	8744	4017					
C24	5.751	-0.003	25923	15048					
C25	5.939	0.000	30478	8312					
C26	6.117	-0.002	36591	12193					
C28	6.429	-0.002	42022	20272	IT.DIES	(C10-C24)	638391	34.92	
C32	6.972	-0.003	63398	23425					
C34	7.220	0.003	66596	45201					
Filter Peak	----								
C36	7.437	-0.003	62077	35598	BUNKERC	(C10-C38)	6046458	1232.76	
o-terph	4.675	0.000	884	1079	JET-A	(C10-C18)	39225	2.72	
Triacon Surr	6.729	-0.036	802375	597281					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1079	0.1	0.2
Triacontane	597281	39.1	86.9

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

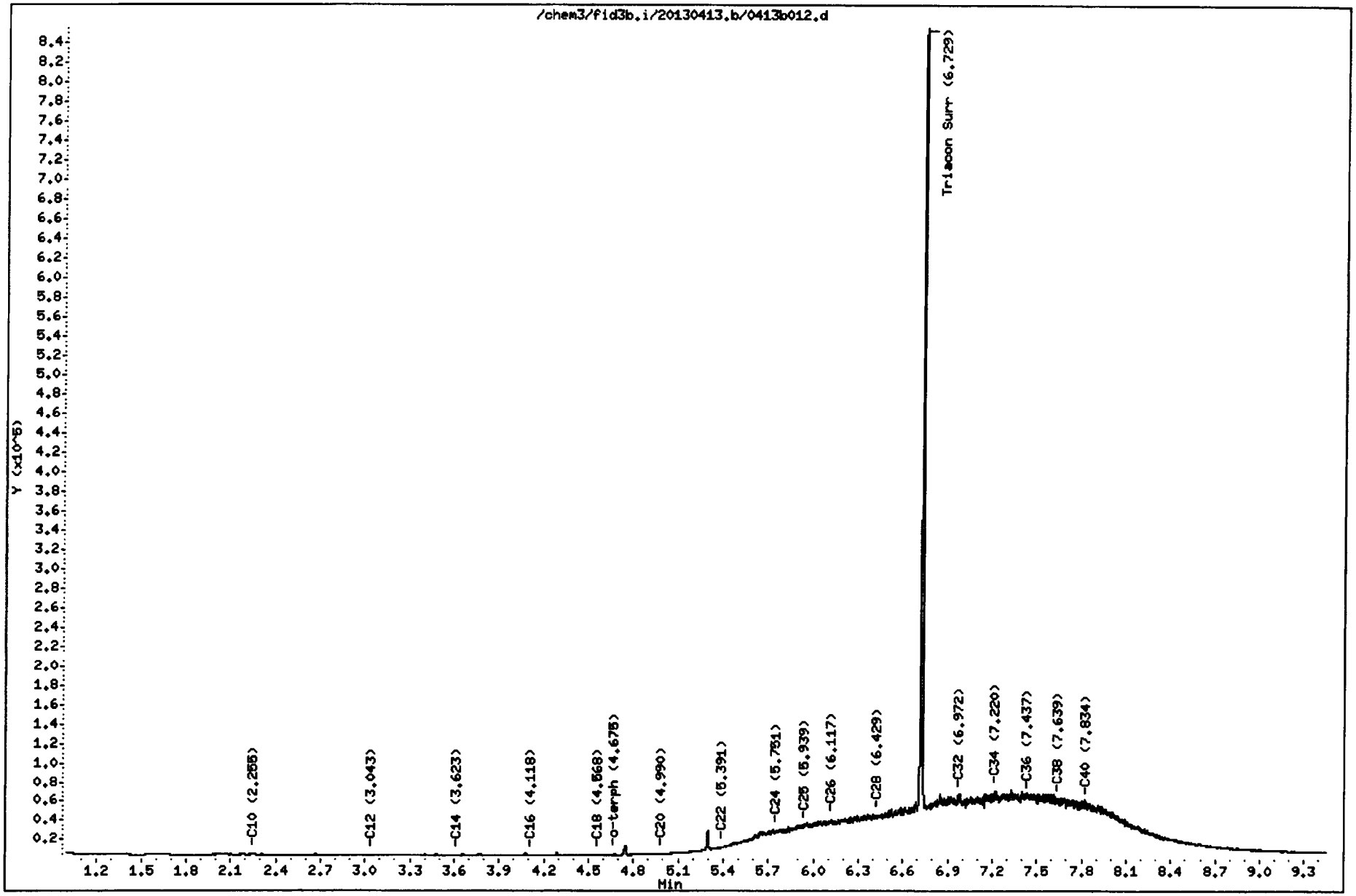
4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b012.d
Date : 13-APR-2013 13:49
Client ID:
Sample Info: MOILICV500

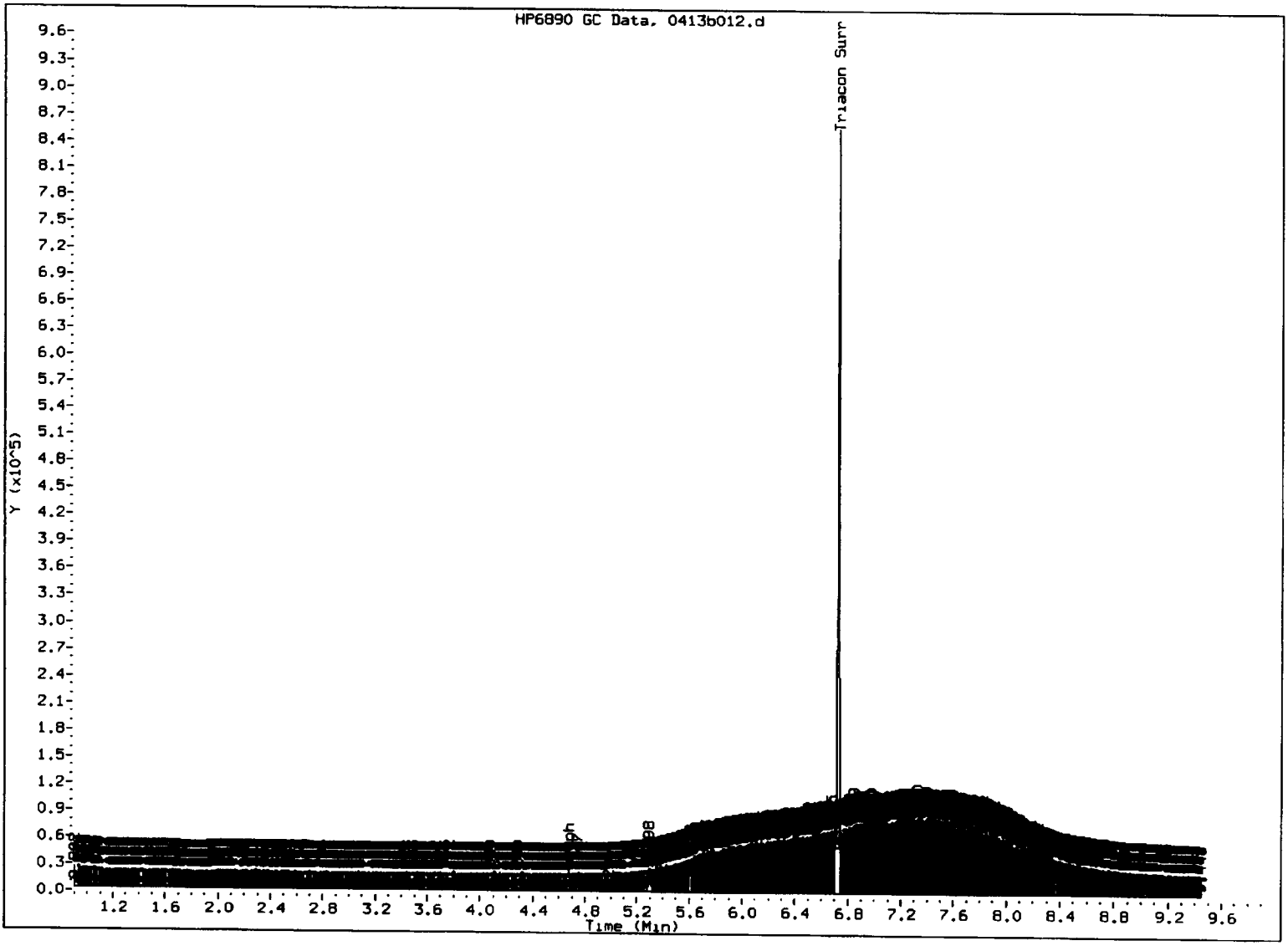
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOILICV500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/13/17

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ARI

SDG No.: 20130413 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: 4.67 TRIAC: 6.76

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0944	4.67	6.72
02		RT0413	04/13/13	1002	4.68	6.73
03		IB0413	04/13/13	1021	4.68	6.73
04		DIESEL#1	04/13/13	1040	4.68	6.73
05		MOIL#1	04/13/13	1059	4.67	6.73
06		MOIL100	04/13/13	1155	4.68	6.72
07		MOIL250	04/13/13	1213	4.68	6.72
08		MOIL500	04/13/13	1232	4.69	6.73
09		MOIL1000	04/13/13	1251	4.68	6.74
10		MOIL2500	04/13/13	1311	4.68	6.76
11		MOIL5000	04/13/13	1330	4.67	6.76
12		MOILICV500	04/13/13	1349	4.67	6.73

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL467 Client ID: SPDC

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: 3.22.13 4.13.13 Analysis Start Date: 4.17.13

	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

- Samples and ms/msd run @ 50x dilution

- final IV packet.

(Review 1) Analyst: VD **Date:** 4.20.13

(Review 2) Reviewer: [illegible] **Date:** 4/22

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 4/17/13 Analysis: TPHD Analyst: JW

GC Program: TPHD3 Column No: 1022005 Column Type: RTX-1

Instrument Tune (.U or .CT.): _____ EM Voltage: _____

Calibration File: _____ Curve Date: 3/22/17 & 4/17/13

IS/SS Ical/Ccal ~~Lcs/lcv~~

	Inject Date/Time	Filename	DF	LabID	ClientID	Ical/Ccal
1	17-APR-2013 09:49	0417b001.d	1	RINSE		
2	17-APR-2013 10:07	0417b002.d	1	RT0417		
3	17-APR-2013 10:26	0417b003.d	1	IB0417		
4	17-APR-2013 10:45	0417b004.d	1	DIESEL#1		2043-3,4
5	17-APR-2013 11:05	0417b005.d	1	MOIL#1		2041-4
6	17-APR-2013 11:38	0417b006.d	10	WK89I	IDW-SOIL	2041-6
7	17-APR-2013 11:58	0417b007.d	1	WL67MBS1	WL67MBS1	
8	17-APR-2013 12:17	0417b008.d	1	WL67LCSS1	WL67LCSS1	
9	17-APR-2013 12:37	0417b009.d	5	WL67A	GR-CB-07-20130411-S	
10	17-APR-2013 12:57	0417b010.d	5	WL67AMS	GR-CB-07-201304 MS	
11	17-APR-2013 13:17	0417b011.d	5	WL67AMSD	GR-CB-07-201304 MSD	
12	17-APR-2013 13:38	0417b012.d	50	WL67B	GR-WS-05-20130411-S	
13	17-APR-2013 13:58	0417b013.d	50	WL67A	GR-CB-07-20130411-S	
14	17-APR-2013 14:18	0417b014.d	50	WL67AMS	GR-CB-07-201304 MS	
15	17-APR-2013 14:38	0417b015.d	50	WL67AMSD	GR-CB-07-201304 MSD	
16	17-APR-2013 14:58	0417b016.d	1	DIESEL#2		
17	17-APR-2013 15:17	0417b017.d	1	MOIL#2		
18	17-APR-2013 15:37	0417b018.d	1	WL85MBS1	WL85MBS1	
19	17-APR-2013 15:57	0417b019.d	1	WL85LCSS1	WL85LCSS1	
20	17-APR-2013 16:17	0417b020.d	1	WL85LCSDS1	WL85LCSDS1	
21	17-APR-2013 16:36	0417b021.d	1	WL85QLS		
22	17-APR-2013 16:56	0417b022.d	5	WL85A	PCC-CAR01	
23	17-APR-2013 17:16	0417b023.d	1	WL85B	PCC-CAR02	
24	17-APR-2013 17:36	0417b024.d	1	WL85C	PCC-CAR03	
25	17-APR-2013 17:55	0417b025.d	1	DIESEL#3		
26	17-APR-2013 18:14	0417b026.d	1	MOIL#3		
27	17-APR-2013 18:34	0417b027.d	1	WL72MBW1	WL72MBW1	
28	17-APR-2013 18:53	0417b028.d	1	WL72LCSW1	WL72LCSW1	
29	17-APR-2013 19:13	0417b029.d	1	WL72LCSDW1	WL72LCSDW1	
30	17-APR-2013 19:32	0417b030.d	1	WL72A	LM13-02-0002	
31	17-APR-2013 19:52	0417b031.d	1	WL72B	LM13-02-0005	
32	17-APR-2013 20:11	0417b032.d	1	WL72C	LM13-02-0008	
33	17-APR-2013 20:30	0417b033.d	1	WL72D	LM13-02-0014	
34	17-APR-2013 20:49	0417b034.d	1	WL72E	LM13-02-0000	
35	17-APR-2013 21:08	0417b035.d	1	WL72F	LM13-02-0001	
36	17-APR-2013 21:27	0417b036.d	1	WL72G	LM13-02-0003	
37	17-APR-2013 21:46	0417b037.d	1	WL72H	LM13-02-0004	
38	17-APR-2013 22:05	0417b038.d	1	WL72I	LM13-02-0006	
39	17-APR-2013 22:24	0417b039.d	1	WL72J	LM13-02-0007	
40	17-APR-2013 22:43	0417b040.d	1	DIESEL#4		
41	17-APR-2013 23:02	0417b041.d	1	MOIL#4		
42	17-APR-2013 23:20	0417b042.d	1	WL72K	LM13-02-0009	
43	17-APR-2013 23:39	0417b043.d	1	WL72L	LM13-02-0010	
44	17-APR-2013 23:58	0417b044.d	1	WL72M	LM13-02-0011	
45	18-APR-2013 00:17	0417b045.d	1	WL72N	LM13-02-0012	
46	18-APR-2013 00:35	0417b046.d	1	WL72O	LM13-02-0013	
47	18-APR-2013 00:54	0417b047.d	1	WL72P	LM13-02-0015	
48	18-APR-2013 01:13	0417b048.d	1	WL72Q	LM13-02-0016	
49	18-APR-2013 01:31	0417b049.d	1	WL72R	LM13-02-0017	
50	18-APR-2013 01:50	0417b050.d	1	WL72S	LM13-02-0055	
51	18-APR-2013 02:09	0417b051.d	1	DIESEL#5		
52	18-APR-2013 02:27	0417b052.d	1	MOIL#5		
53	18-APR-2013 02:46	0417b053.d	1	WL62MBW1	WL62MBW1	
54	18-APR-2013 03:05	0417b054.d	1	WL62LCSW1	WL62LCSW1	
55	18-APR-2013 03:23	0417b055.d	1	WL62LCSDW1	WL62LCSDW1	
56	18-APR-2013 03:42	0417b056.d	1	WL62A	MW-05-130410	
57	18-APR-2013 04:00	0417b057.d	1	WL62B	MW-06-130410	
58	18-APR-2013 04:19	0417b058.d	1	WL62C	MW-07-130410	
59	18-APR-2013 04:37	0417b059.d	1	WL62D	MW-08-130410	
60	18-APR-2013 04:56	0417b060.d	1	WL62E	MW-09-130410	
61	18-APR-2013 05:14	0417b061.d	1	WL62F	MW-06-130410-DUP	
62	18-APR-2013 05:32	0417b062.d	1	DIESEL#6		
63	18-APR-2013 05:51	0417b063.d	1	MOIL#6		
64	18-APR-2013 06:09	0417b064.d	1	WL58A	FF1-13-04-340A	
65	18-APR-2013 06:28	0417b065.d	1	WL58B	FF1-13-04-343	
66	18-APR-2013 06:46	0417b066.d	1	WL58C	FF1-13-04-602	
67	18-APR-2013 07:05	0417b067.d	1	WL58D	FF1-13-04-331	
68	18-APR-2013 07:24	0417b068.d	1	WL58E	FF1-13-04-332	
69	18-APR-2013 07:43	0417b069.d	1	WL71A	NWES-MW11	
70	18-APR-2013 08:02	0417b070.d	1	WL71B	NWES-MW8	
71	18-APR-2013 08:22	0417b071.d	1	WL71C	NWES-MW20	
72	18-APR-2013 08:41	0417b072.d	1	WL71D	NWES-MW9	
73	18-APR-2013 09:01	0417b073.d	1	WL71E	NWES-MW4R	
74	18-APR-2013 09:21	0417b074.d	1	DIESEL#7		
75	18-APR-2013 09:40	0417b075.d	1	MOIL#7		

ment is in control): JW 4/18/13

art a new page for each QC period.

Revision 001
1/16/06

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130417.b

ARI Job No.: RINS Method: i/20130417.b/ftphfid3b.m Instrument: fid3b.i Date: 17-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0949	0417b001.d	RINSE		1	NO MANUAL INTEGRATION
1007	0417b002.d	RT0417		1	Toluene,
1026	0417b003.d	IB0417		1	NO MANUAL INTEGRATION
1045	0417b004.d	DIESEL#1		1	o-terph,
1105	0417b005.d	MOIL#1		1	Triacon Surr,
1138	0417b006.d	WK89I	IDW-SOIL	10	o-terph, Triacon Surr,
1158	0417b007.d	WL67MBS1	WL67MBS1	1	NO MANUAL INTEGRATION
1217	0417b008.d	WL67LCSS1	WL67LCSS1	1	o-terph,
1237	0417b009.d	WL67A	GR-CB-07-2	5	NO MANUAL INTEGRATION
1257	0417b010.d	WL67AMS	GR-CB-07-2	5	NO MANUAL INTEGRATION
1317	0417b011.d	WL67AMSD	GR-CB-07-2	5	NO MANUAL INTEGRATION
1338	0417b012.d	WL67B	GR-WS-05-2	50	o-terph,
1358	0417b013.d	WL67A	GR-CB-07-2	50	o-terph,
1418	0417b014.d	WL67AMS	GR-CB-07-2	50	o-terph,
1438	0417b015.d	WL67AMSD	GR-CB-07-2	50	o-terph,
1458	0417b016.d	DIESEL#2		1	o-terph,
1517	0417b017.d	MOIL#2		1	Triacon Surr,
1537	0417b018.d	WL85MBS1	WL85MBS1	1	NO MANUAL INTEGRATION
1557	0417b019.d	WL85LCSS1	WL85LCSS1	1	o-terph,
1617	0417b020.d	WL85LCSDS1	WL85LCSDS1	1	o-terph,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b002.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: RT0417
Client ID:
Injection: 17-APR-2013 10:07
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.678	0.000	19579	82818	WATPHG	(Tol-C12)	1324937	48.84	M
C8	0.828	0.000	200810	270470	WATPHD	(C12-C24)	1895120	167.12	
C10	2.260	0.000	362041	276399	WATPHM	(C24-C38)	3030805	274.82	
C12	3.048	0.000	484411	288152	AK102	(C10-C25)	2503312	181.49	
C14	3.626	0.000	532477	292762	AK103	(C25-C36)	2687704	367.32	
C16	4.124	0.000	457280	292068	OR.DIES	(C10-C28)	4081775	265.36	
C18	4.575	0.000	388156	285597					
C20	4.996	0.000	393427	276934					
C22	5.396	0.000	420905	289135					
C24	5.767	0.000	456950	301100					
C25	5.944	0.000	479768	296515					
C26	6.123	0.000	1026853	913719					
C28	6.438	0.000	475463	322865	IT.DIES	(C10-C24)	2492723	180.78	
C32	6.985	0.000	448257	335947					
C34	7.221	0.000	478563	334512					
Filter Peak	----								
C36	7.438	0.000	418071	314039	BUNKERC	(C10-C38)	5523529	1126.15	
o-terph	4.686	0.000	994880	657505	JET-A	(C10-C18)	1518096	105.43	
Triacon Surr	6.733	0.000	1052779	859375					

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	657505	45.3	100.7
Triacontane	859375	56.2	125.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

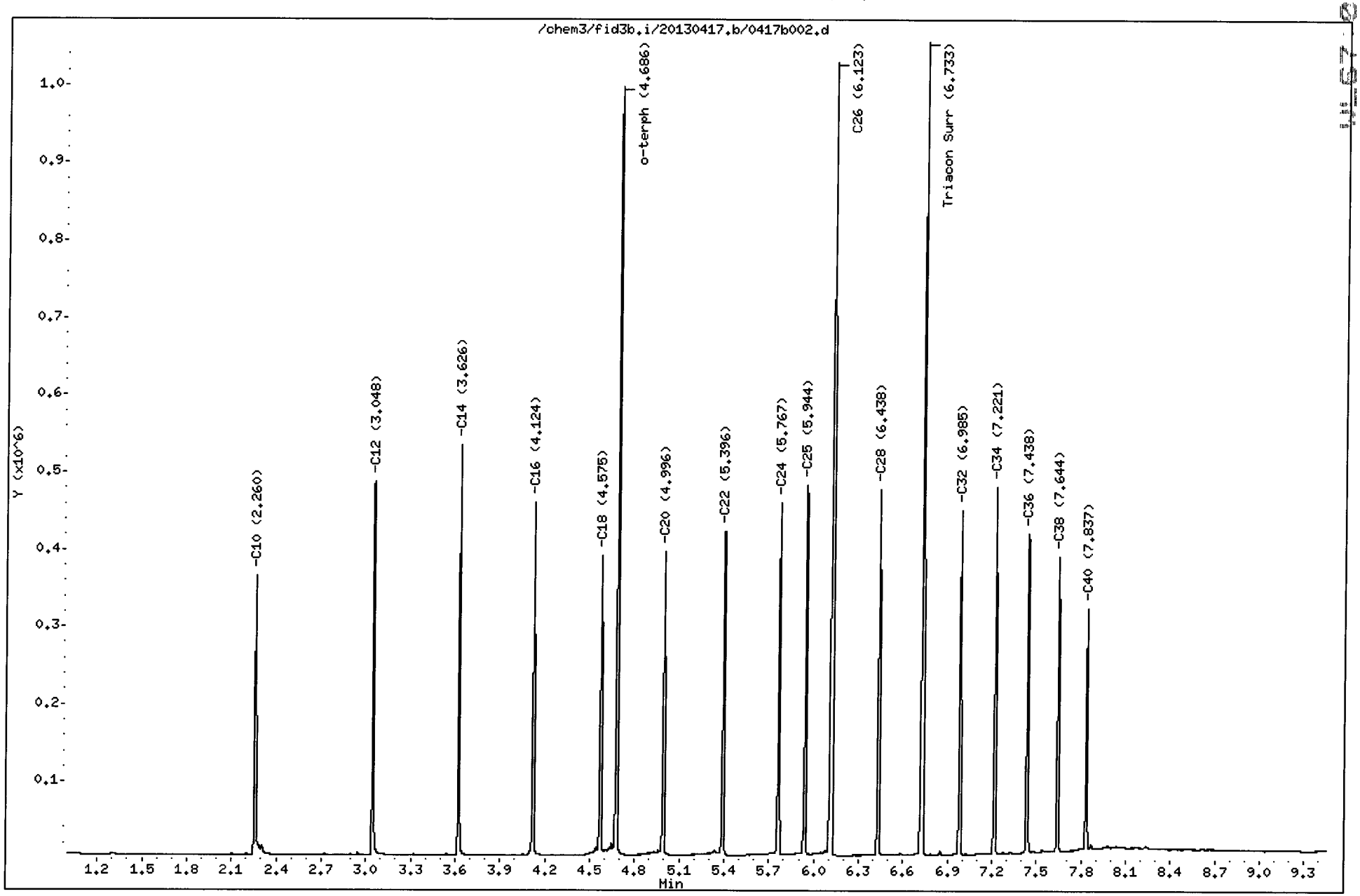
Data File: /chem3/fid3b.i/20130417.b/0417b002.d
Date : 17-APR-2013 10:07
Client ID:
Sample Info: RT0417

Column phase: RTX-1

Instrument: fid3b.i

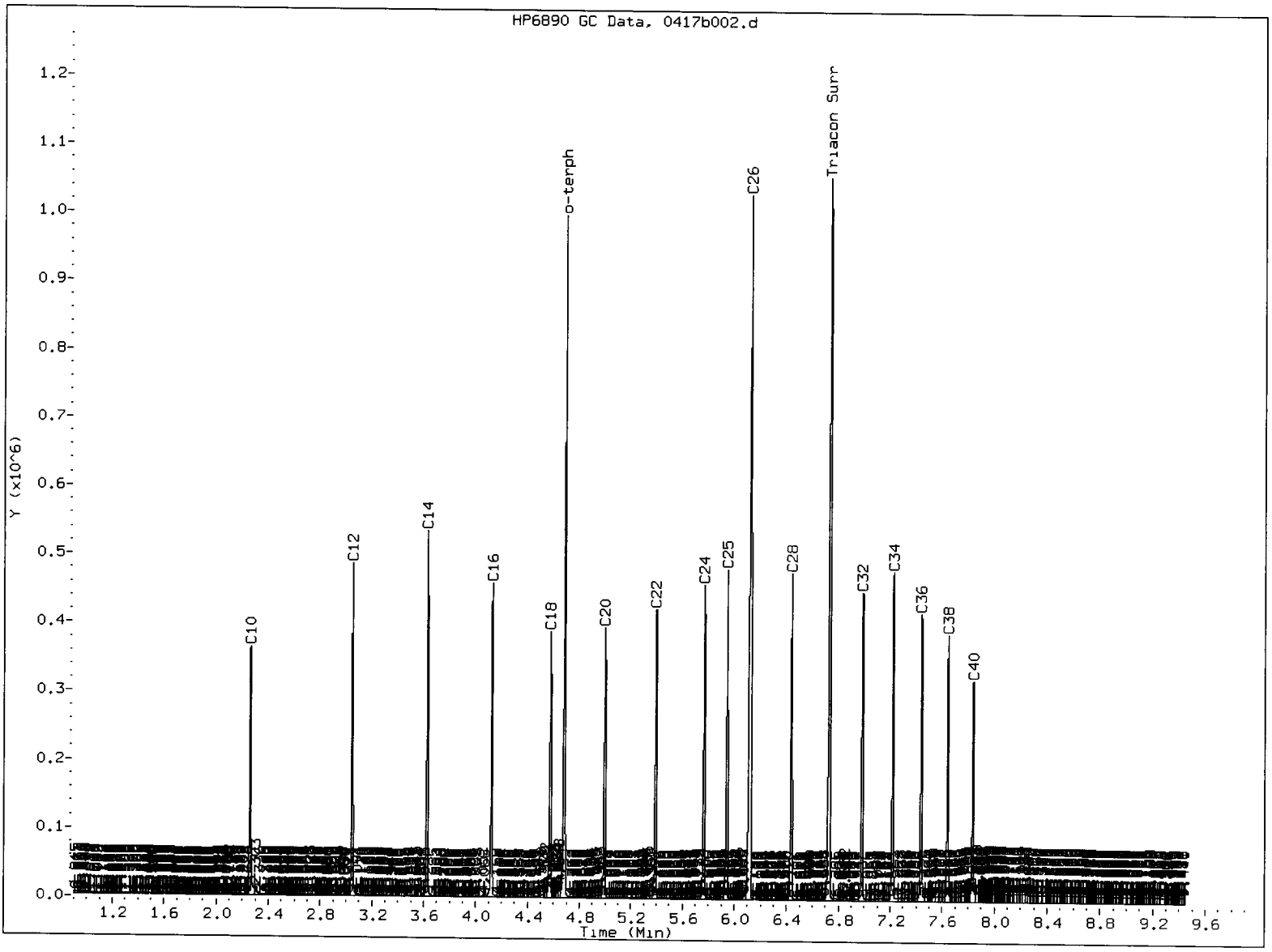
Operator: JW
Column diameter: 0.25

JW 4/18/17



FID:3B-2C/RTX-1 RT0417

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/17

WLET-21112

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b003.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: IB0417
Client ID:
Injection: 17-APR-2013 10:26
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	61818	2
C8	0.833	0.005	2777	2157	WATPHD	(C12-C24)	28476	2.51
C10	2.254	-0.006	585	392	WATPHM	(C24-C38)	143342	13.00
C12	3.046	-0.002	337	347	AK102	(C10-C25)	40326	2.92
C14	3.625	-0.001	269	241	AK103	(C25-C36)	96326	13.16
C16	4.122	-0.002	285	170	OR.DIES	(C10-C28)	48102	3.13
C18	4.571	-0.004	271	222				
C20	4.994	-0.002	315	240				
C22	5.391	-0.004	256	195				
C24	5.755	-0.013	1144	1019				
C25	5.939	-0.005	301	254				
C26	6.124	0.002	145	33				
C28	6.433	-0.006	1066	976	IT.DIES	(C10-C24)	39819	2.89
C32	6.980	-0.005	10677	9512				
C34	7.216	-0.005	1845	1883				
Filter Peak	----							
C36	7.447	0.009	2510	399	BUNKERC	(C10-C38)	183161	37.34
o-terph	4.687	0.001	1014620	716195	JET-A	(C10-C18)	21283	1.48
Triacon Surr	6.733	0.000	1004518	712385				

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	716195	49.4	109.7
Triacontane	712385	46.6	103.6

JW
4/18/13

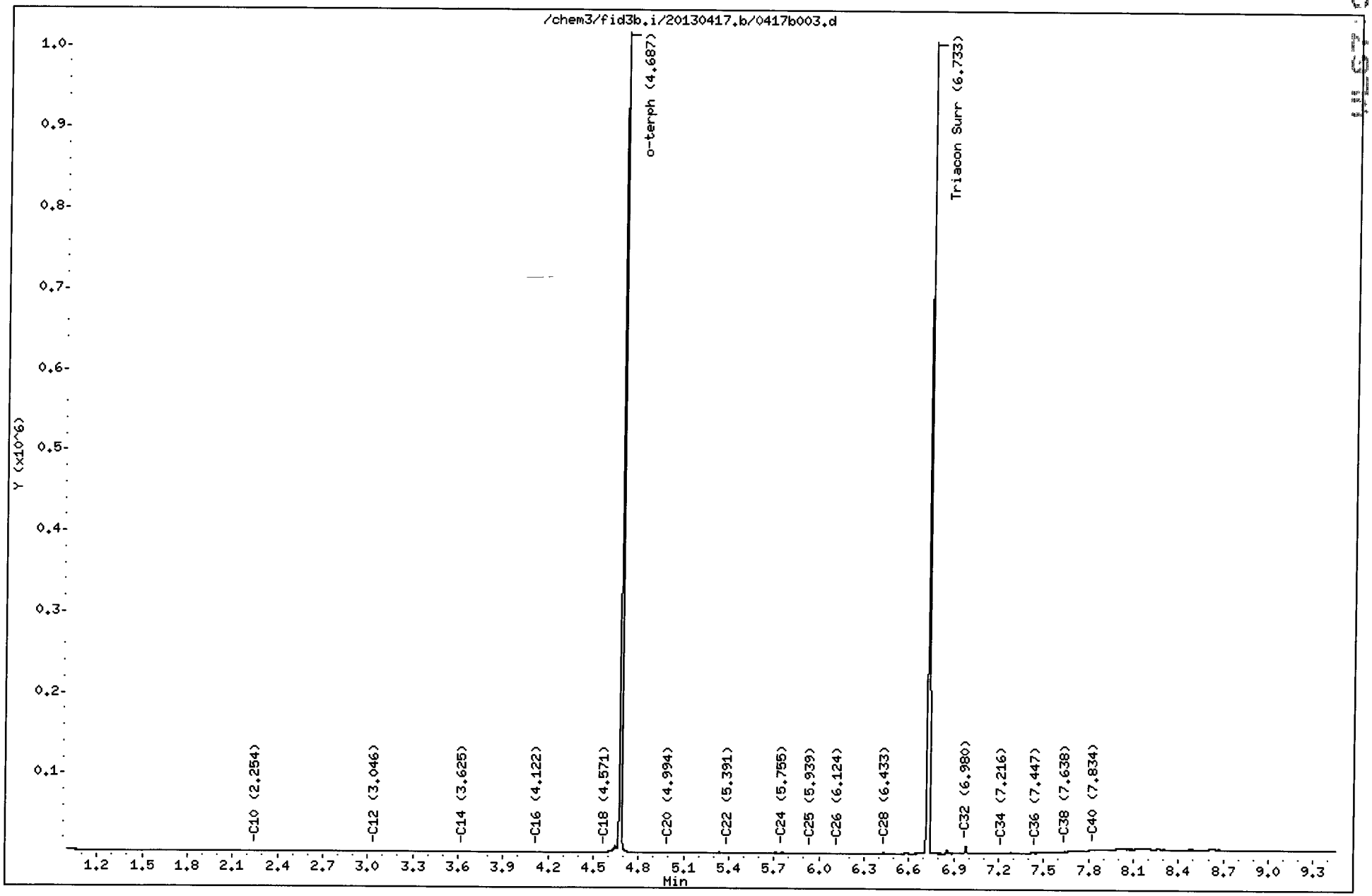
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130417.b/0417b003.d
Date : 17-APR-2013 10:26
Client ID:
Sample Info: IB0417

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b004.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL#1
Client ID:
Injection: 17-APR-2013 10:45
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	729581	27	
C8	0.838	0.010	4081	7057	WATPHD	(C12-C24)	2770415	244.30	
C10	2.262	0.002	20262	14713	WATPHM	(C24-C38)	98881	8.97	
C12	3.046	-0.002	37530	30509	AK102	(C10-C25)	3276685	237.56	M
C14	3.625	-0.002	64920	59855	AK103	(C25-C36)	59149	8.08	
C16	4.122	-0.002	100562	68696	OR.DIES	(C10-C28)	3291112	213.96	M
C18	4.572	-0.003	83892	70655					
C20	4.994	-0.002	56768	49039					
C22	5.392	-0.004	30908	25687					
C24	5.762	-0.006	8172	8184					
C25	5.939	-0.005	3478	2948					
C26	6.138	0.015	1021	1061					
C28	6.444	0.006	67	29	IT.DIES	(C10-C24)	3269661	178.83	
C32	6.991	0.006	492	171					
C34	7.225	0.004	1092	379					
Filter Peak	----								
C36	7.444	0.006	1629	550	BUNKERC	(C10-C38)	3368542	686.78	
o-terph	4.688	0.001	985325	707266	JET-A	(C10-C18)	2484186	172.53	
Triacon Surr	6.741	0.008	188	39					

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	707266	48.7	108.3
Triacontane	39	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

WLS7 04413

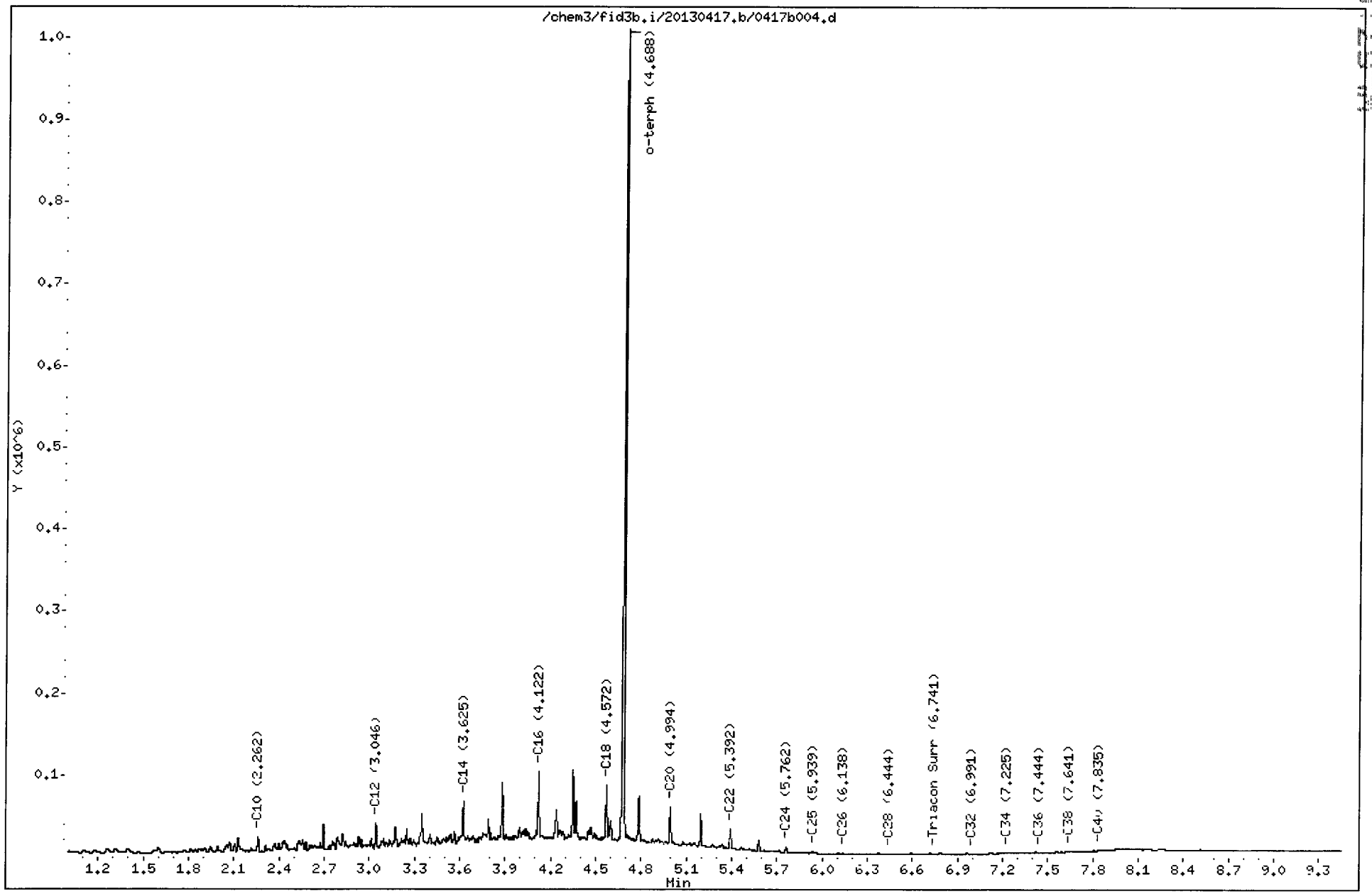
Data File: /chem3/fid3b.i/20130417.b/0417b004.d
Date : 17-APR-2013 10:45
Client ID:
Sample Info: DIESEL#1

Column phase: RTX-1

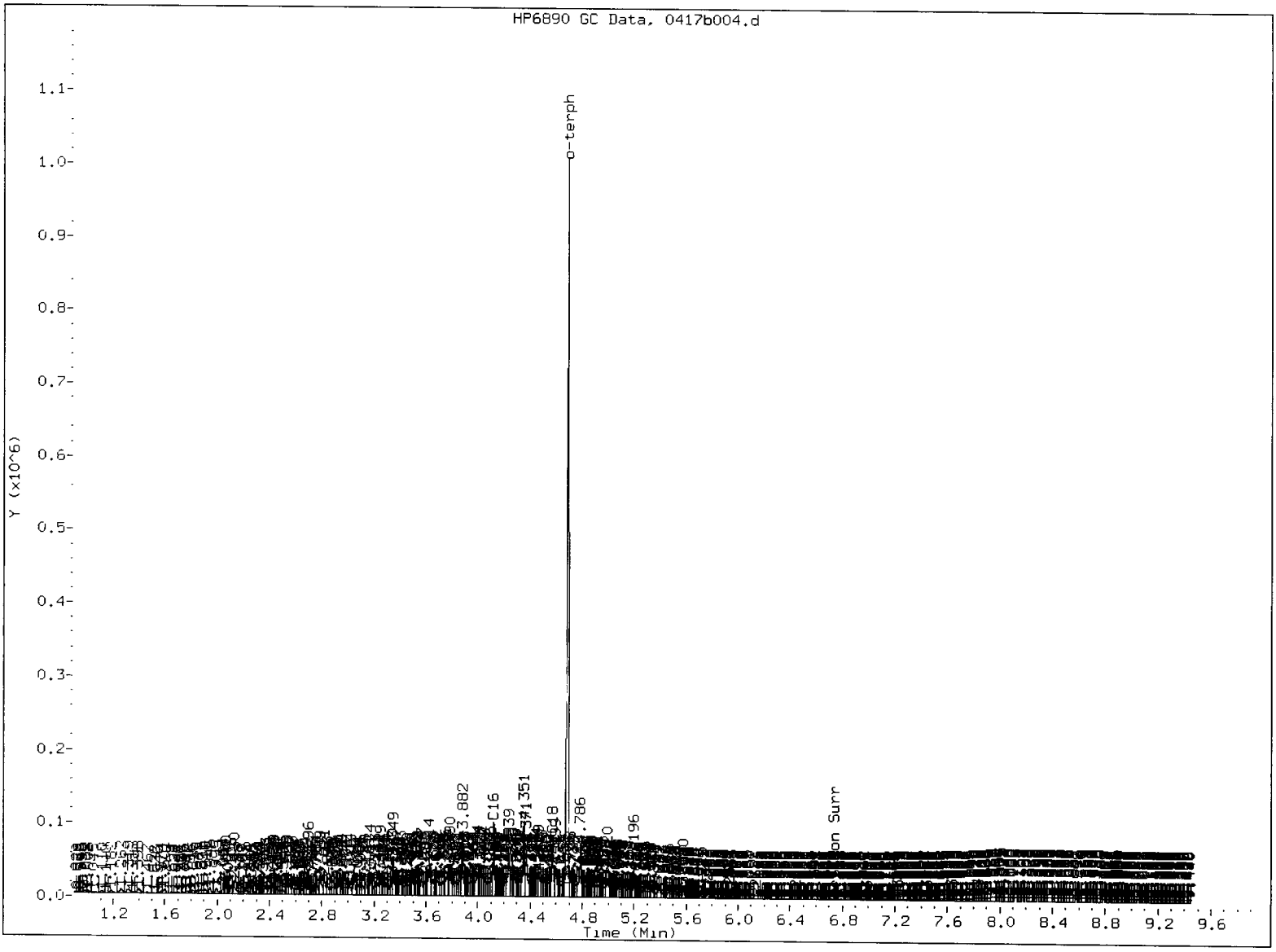
Instrument: fid3b.1

Operator: JW
Column diameter: 0.25

JC 4/17/13



FID:3B-2C/RTX-1 DIESEL#1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b005.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: MOIL#1
Client ID:
Injection: 17-APR-2013 11:05
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	52763	2
C8	0.833	0.005	2821	1971	WATPHD	(C12-C24)	471300	41.56
C10	2.258	-0.002	595	401	WATPHM	(C24-C38)	5012678	454.54
C12	3.046	-0.002	249	200	AK102	(C10-C25)	606570	43.98
C14	3.624	-0.002	201	157	AK103	(C25-C36)	4362255	596.18 M
C16	4.122	-0.002	268	189	OR.DIES	(C10-C28)	1890143	122.88
C18	4.572	-0.003	507	441				
C20	4.993	-0.003	1528	1440				
C22	5.399	0.003	5844	2144				
C24	5.766	-0.001	24051	9026				
C25	5.950	0.006	31949	16232				
C26	6.123	0.001	38300	37183				
C28	6.434	-0.004	42545	38994	IT.DIES	(C10-C24)	480410	26.27
C32	6.979	-0.006	64106	53375				
C34	7.218	-0.002	61777	28643				
Filter Peak	----							
C36	7.440	0.001	49618	16630	BUNKERC	(C10-C38)	5493088	1119.94
o-terph	4.693	0.007	871	673	JET-A	(C10-C18)	26692	1.85
Triacon Surr	6.733	0.000	921206	668011				

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	673	0.0	0.1
Triacontane	668011	43.7	97.1

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

WL67:02116

Data File: /chem3/fid3b.i/20130417.b/0417b005.d

Date : 17-APR-2013 11:05

Client ID:

Sample Info: MOIL#1

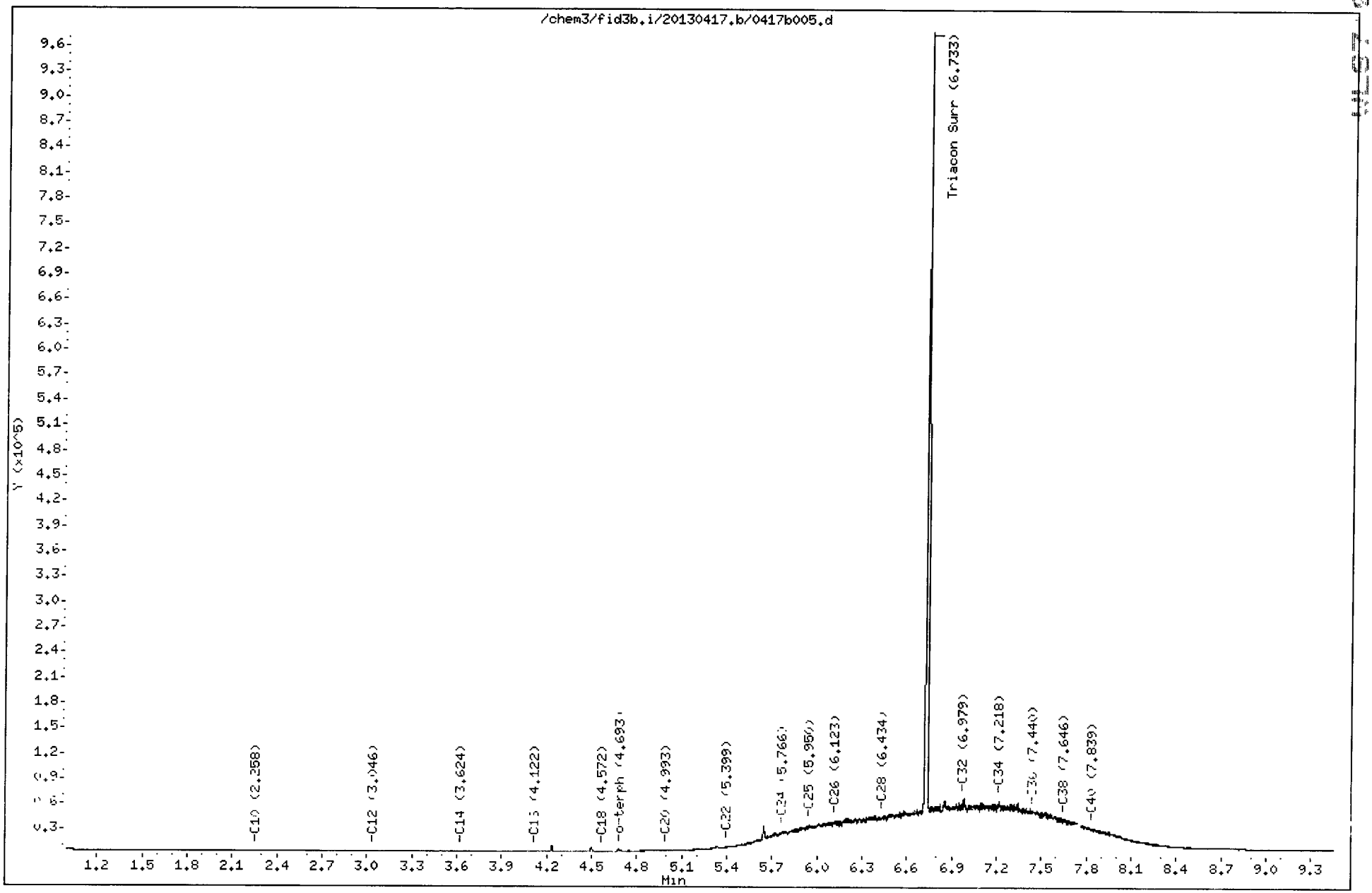
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25

JW 4/16/13



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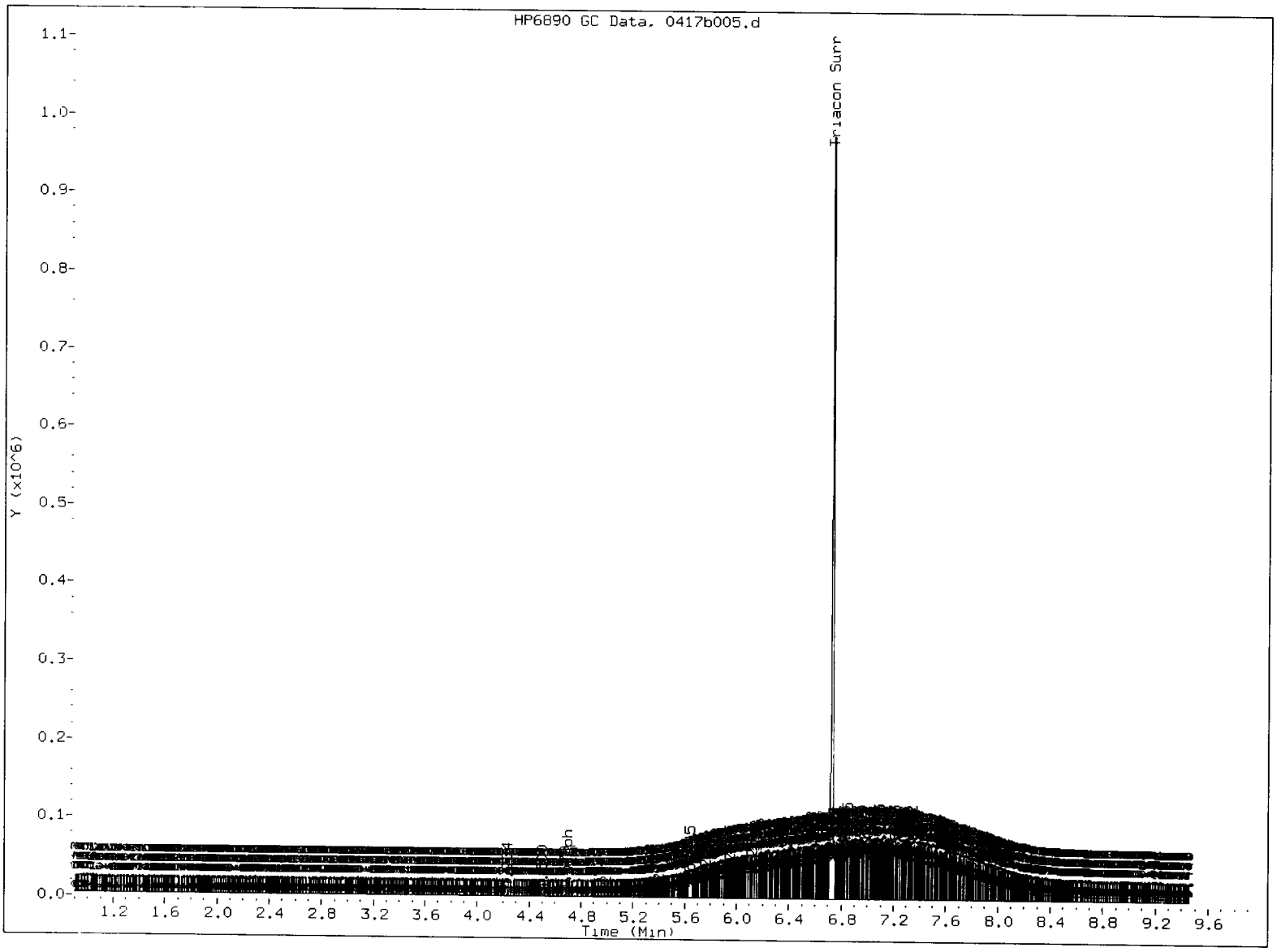
FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/13

WLSP 0119

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b007.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WL67MBS1
Client ID:
Injection: 17-APR-2013 11:58
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	67999	3
C8	0.834	0.005	3504	2659	WATPHD	(C12-C24)	36791	3.24
C10	2.255	-0.005	608	459	WATPHM	(C24-C38)	98537	8.94
C12	3.047	-0.001	178	120	AK102	(C10-C25)	47490	3.44
C14	3.626	-0.001	374	254	AK103	(C25-C36)	70941	9.70
C16	4.122	-0.003	285	193	OR.DIES	(C10-C28)	56607	3.68
C18	4.572	-0.003	278	170				
C20	4.994	-0.002	183	150				
C22	5.392	-0.004	245	215				
C24	5.780	0.012	165	28				
C25	5.939	-0.006	254	123				
C26	6.129	0.006	409	268				
C28	6.444	0.006	755	553	IT.DIES	(C10-C24)	46785	2.56
C32	6.978	-0.007	9087	7986				
C34	7.216	-0.004	1103	771				
Filter Peak	----							
C36	7.440	0.002	1524	332	BUNKERC	(C10-C38)	145322	29.63
o-terph	4.686	0.000	876729	623629	JET-A	(C10-C18)	29020	2.02
Triacon Surr	6.730	-0.003	876597	630248				

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

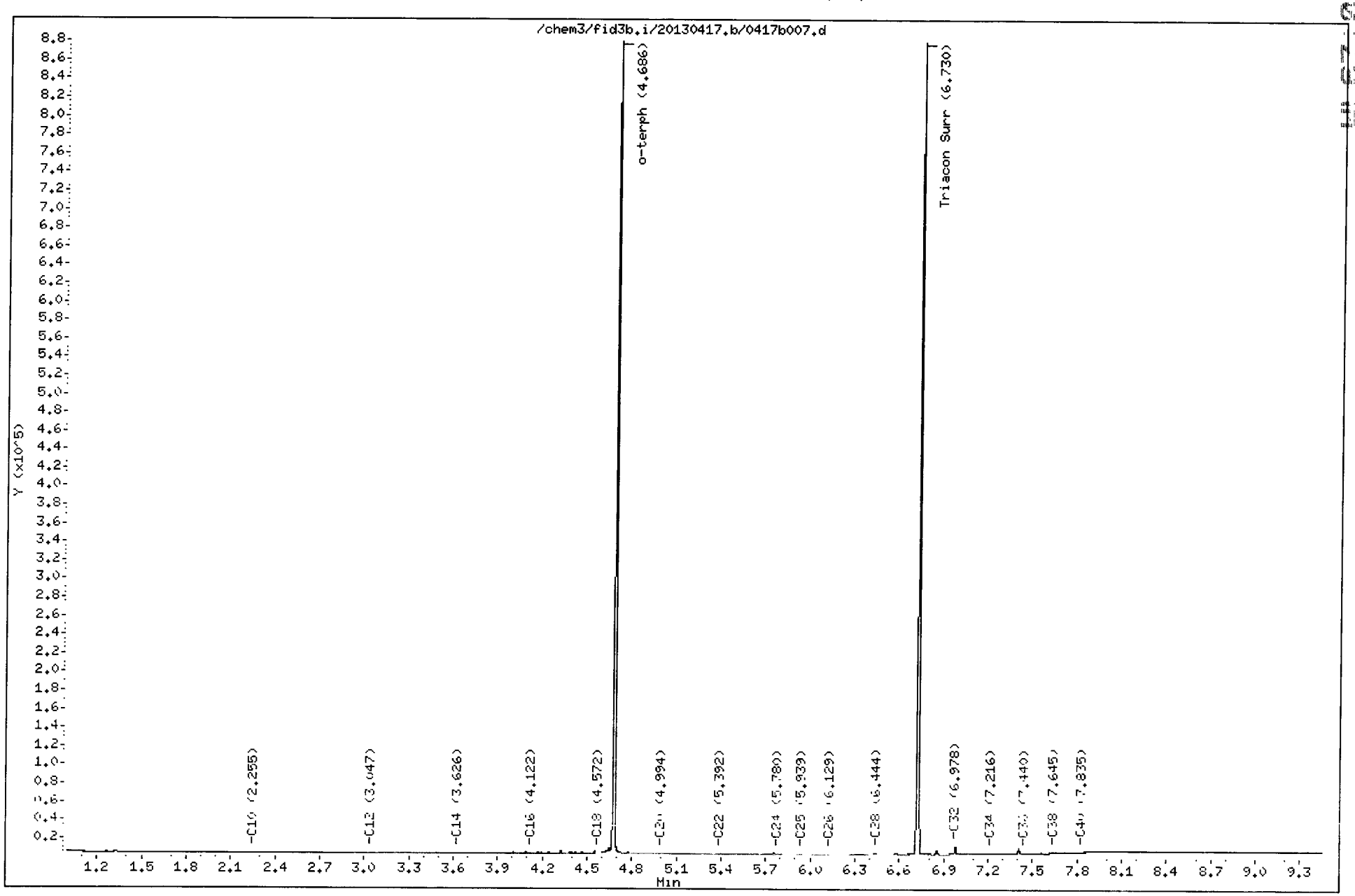
Surrogate	Area	Amount	%Rec
o-Terphenyl	623629	43.0	95.5
Triacontane	630248	41.2	91.7

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130417.b/0417b007.d
Date : 17-APR-2013 11:58
Client ID:
Sample Info: WL67MBS1

Instrument: fid3b.i
Operator: JW
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b008.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WL67LCSS1
Client ID:
Injection: 17-APR-2013 12:17
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	3273866	121
C8	0.845	0.017	7109	12548	WATPHD	(C12-C24)	13898531	1225.61
C10	2.263	0.003	106757	71659	WATPHM	(C24-C38)	200539	18.18
C12	3.047	0.000	157208	150556	AK102	(C10-C25)	16276660	1180.06 M
C14	3.628	0.002	279447	246898	AK103	(C25-C36)	145086	19.83
C16	4.126	0.002	431815	366273	OR.DIES	(C10-C28)	16366574	1064.01 M
C18	4.578	0.003	360573	348762				
C20	4.999	0.003	266976	255727				
C22	5.395	-0.001	151929	126741				
C24	5.763	-0.005	42945	37159				
C25	5.938	-0.006	18860	18513				
C26	6.124	0.002	2894	560				
C28	6.444	0.005	1794	1377	IT.DIES	(C10-C24)	16239373	888.17
C32	6.979	-0.006	8297	6368				
C34	7.219	-0.002	577	627				
Filter Peak	----							
C36	7.440	0.001	1015	343	BUNKERC	(C10-C38)	16439912	3351.80
o-terph	4.688	0.002	869054	546143	JET-A	(C10-C18)	12176349	845.64
Triacon Surr	6.730	-0.003	900313	583373				

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	546143	37.6	83.6
Triacontane	583373	38.2	84.8

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130417.b/0417b008.d

Date : 17-APR-2013 12:17

Client ID:

Sample Info: WL67LCSS1

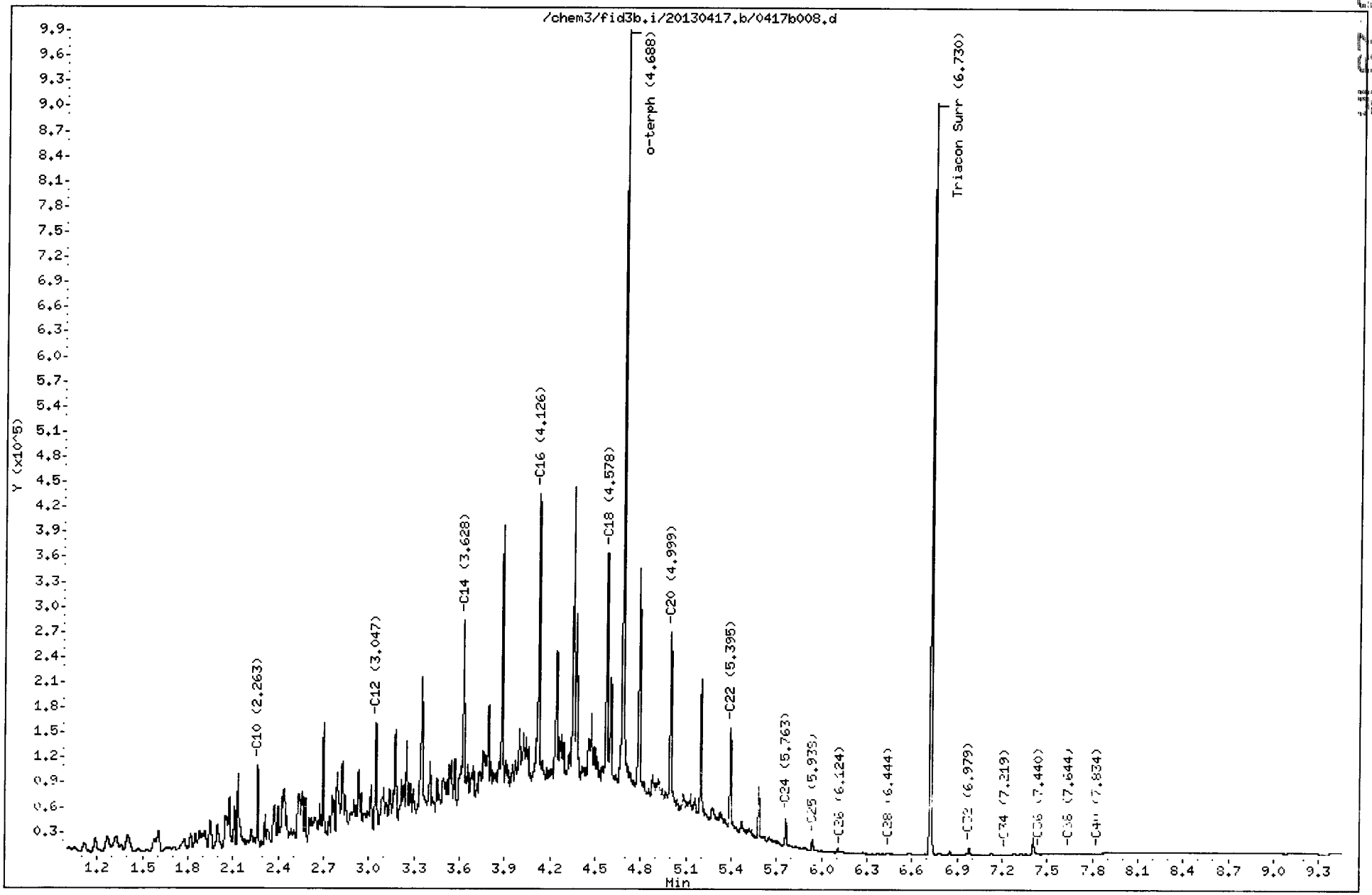
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

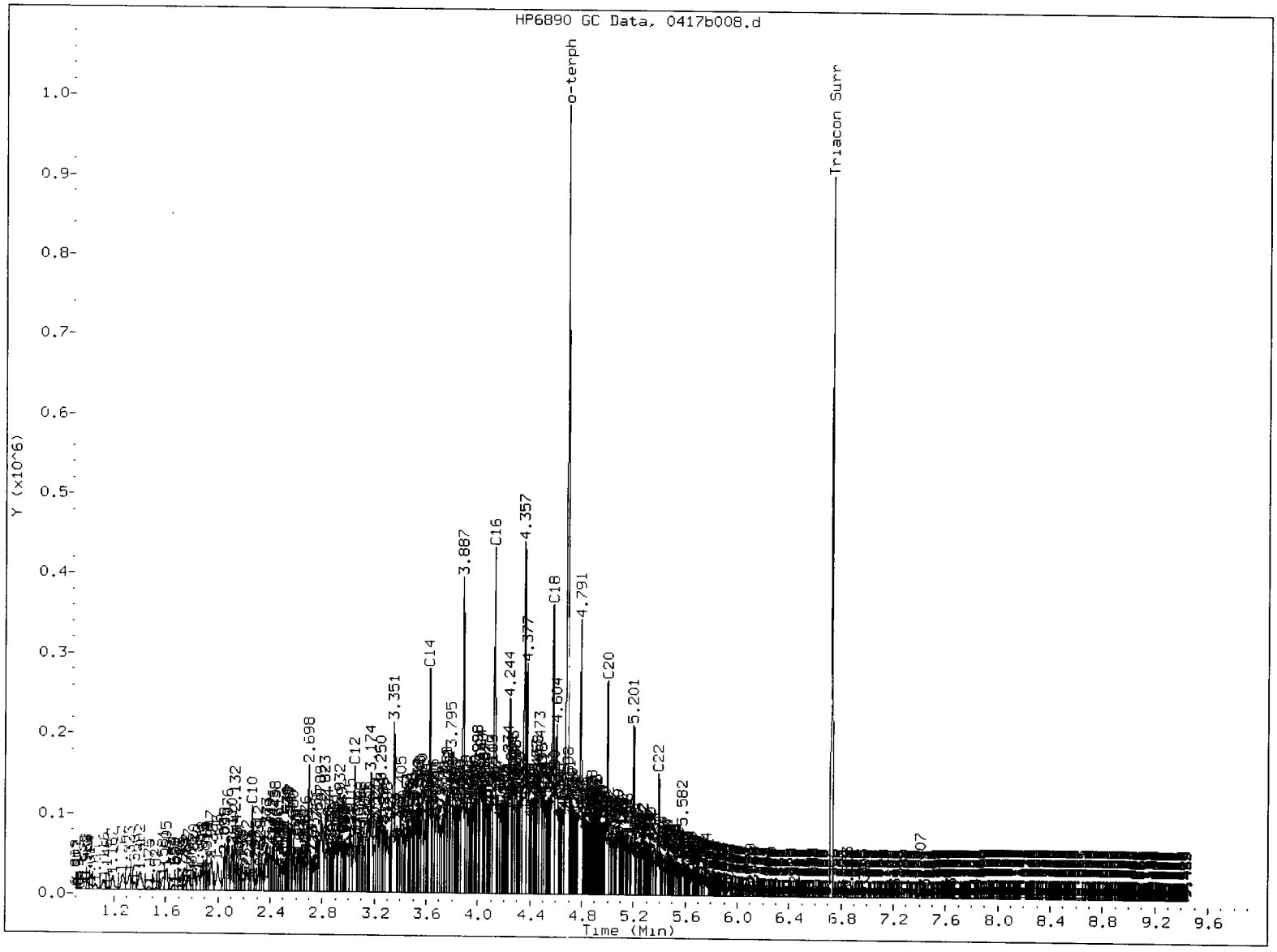
Column diameter: 0.25

JW 4/16/13



FID:3B-2C/RTX-1 WL67LCSS1

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 4/18/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b013.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WI67A
Client ID:
Injection: 17-APR-2013 13:58
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	90625	3	
C8	0.832	0.004	2737	1763	WATPHD	(C12-C24)	4333600	382.15	
C10	2.260	0.000	802	1048	WATPHM	(C24-C38)	14233236	1290.63	
C12	3.047	0.000	1229	1111	AK102	(C10-C25)	4851842	351.76	M
C14	3.625	-0.001	2663	2235	AK103	(C25-C36)	12940757	1768.59	
C16	4.122	-0.002	6014	5495	OR.DIES	(C10-C28)	9944932	646.53	M
C18	4.577	0.002	15289	4667					
C20	5.004	0.008	33464	18896					
C22	5.397	0.002	69608	25562					
C24	5.769	0.001	110780	44517					
C25	5.943	-0.001	127788	87781					
C26	6.122	0.000	139293	55023					
C28	6.438	0.000	169174	124834	IT.DIES	(C10-C24)	4376920	239.39	
C32	6.979	-0.006	141756	54489					
C34	7.221	0.001	114813	33464					
Filter Peak	----								
C36	7.440	0.002	84317	29843	BUNKERC	(C10-C38)	18610156	3794.27	
o-terph	4.682	-0.005	20583	10908	JET-A	(C10-C18)	493876	34.30	
Triacon Surr	----								

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	10908	0.8	83.5	D
Triacontane	0	0.0	0.0	D

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

WL67 · 04/18/13

Data File: /chem3/fid3b.i/20130417.b/0417b013.d
Date : 17-APR-2013 13:58
Client ID:
Sample Info: WL67A,50

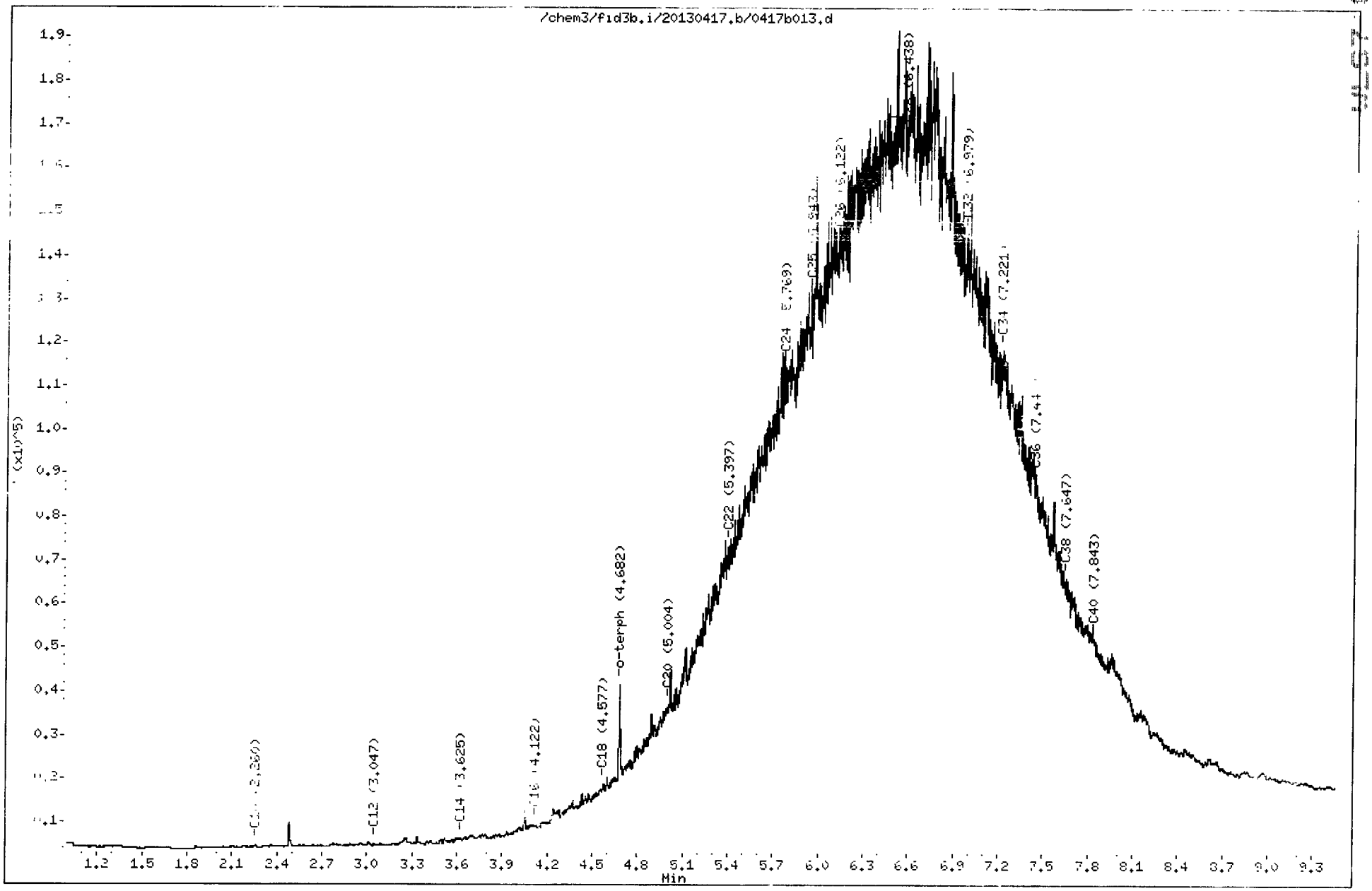
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1

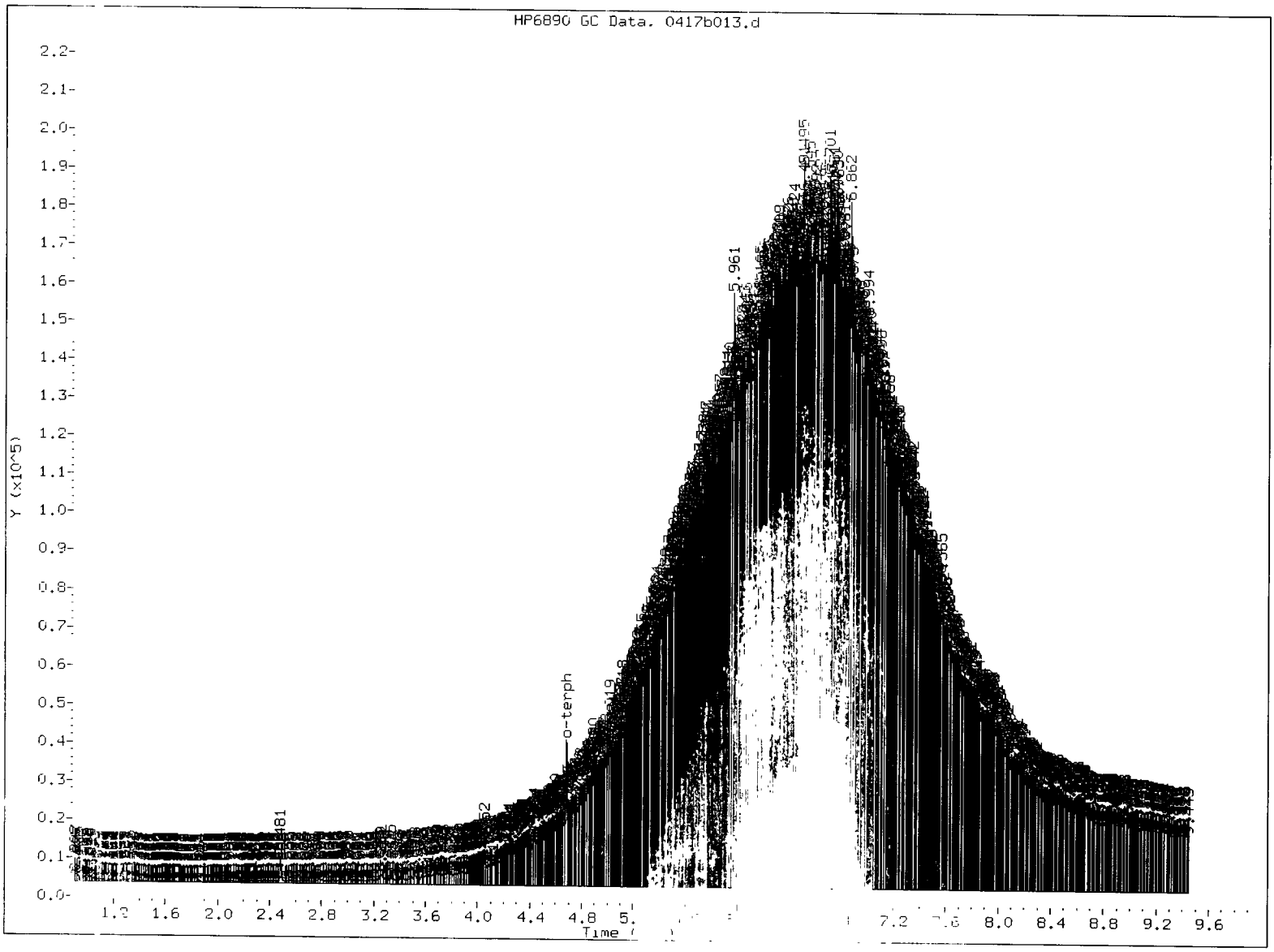
JW 4/18/13

WL67A 84125



FID:3B-2C/RTX-1 WL67A

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/13

WL67-01126

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b012.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WL67B
Client ID:
Injection: 17-APR-2013 13:38
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	77792	3	
C8	0.834	0.005	2764	2136	WATPHD	(C12-C24)	4306288	379.74	—
C10	2.260	-0.001	689	697	WATPHM	(C24-C38)	13622179	1235.22	—
C12	3.047	-0.001	1085	1116	AK102	(C10-C25)	4810254	348.75	M
C14	3.627	0.000	2405	2260	AK103	(C25-C36)	12326567	1684.65	
C16	4.123	-0.001	6689	7249	OR.DIES	(C10-C28)	9566803	621.95	M
C18	4.571	-0.004	15425	13029					
C20	4.997	0.001	35904	19770					
C22	5.397	0.001	68412	13496					
C24	5.771	0.003	105127	50612					
C25	5.945	0.000	123734	42633					
C26	6.124	0.001	133366	31112					
C28	6.436	-0.002	156923	94764	IT.DIES	(C10-C24)	4335976	237.15	
C32	6.987	0.001	137632	35086					
C34	7.222	0.001	117111	82834					
Filter Peak	----								
C36	7.438	-0.001	87351	39355	BUNKERC	(C10-C38)	17958155	3661.34	
o-terph	4.682	-0.005	18889	11122	JET-A	(C10-C18)	478190	33.21	
Triacon Surr	----								

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	11122	0.8	85.2	D
Triacontane	0	0.0	0.0	D

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW
4/18/13

Data File: /chem3/fid3b.i/20130417.b/0417b012.d

Date : 17-APR-2013 13:38

Client ID:

Sample Info: WL67B,50

Column phase: RTX-1

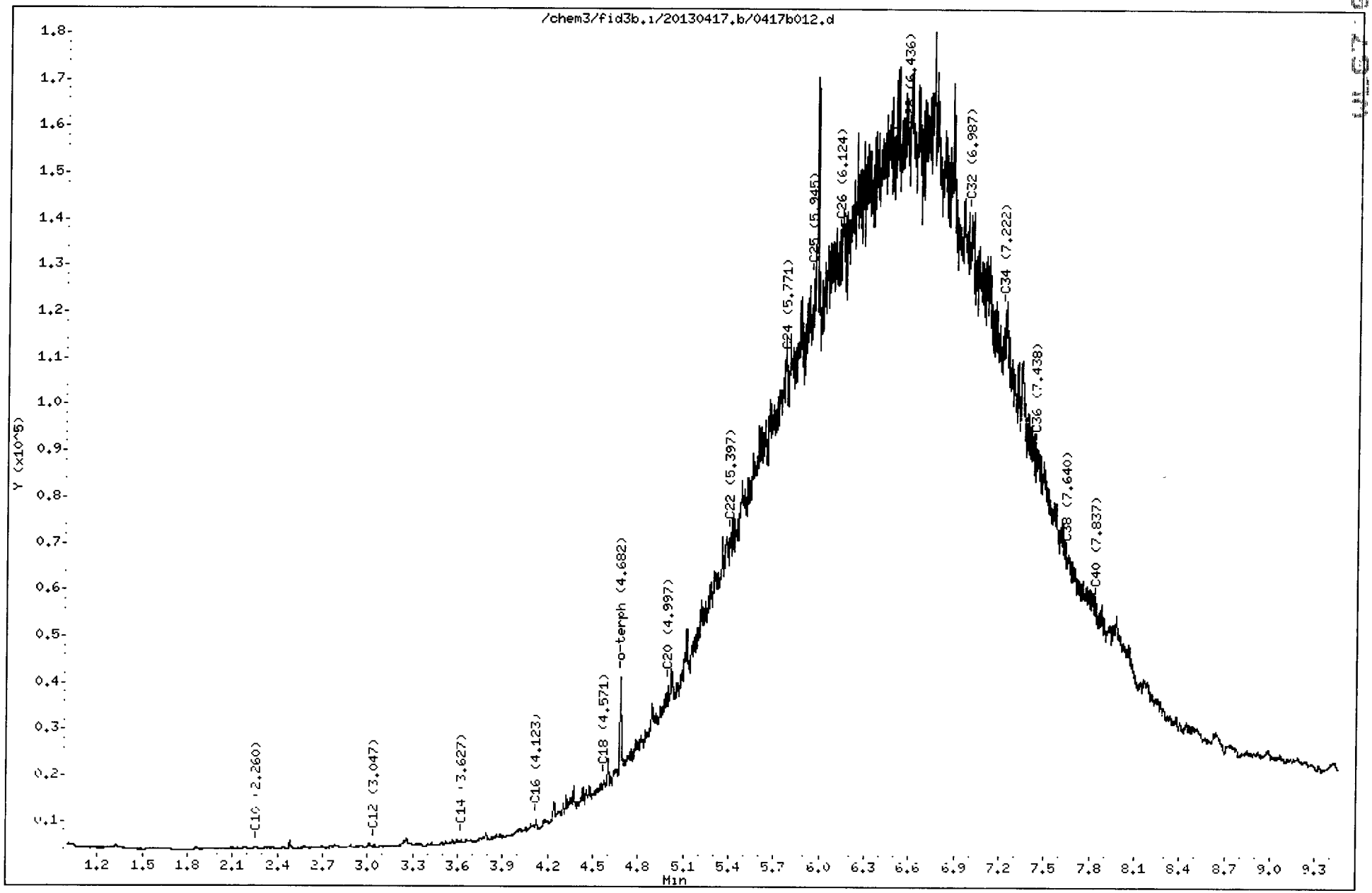
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25

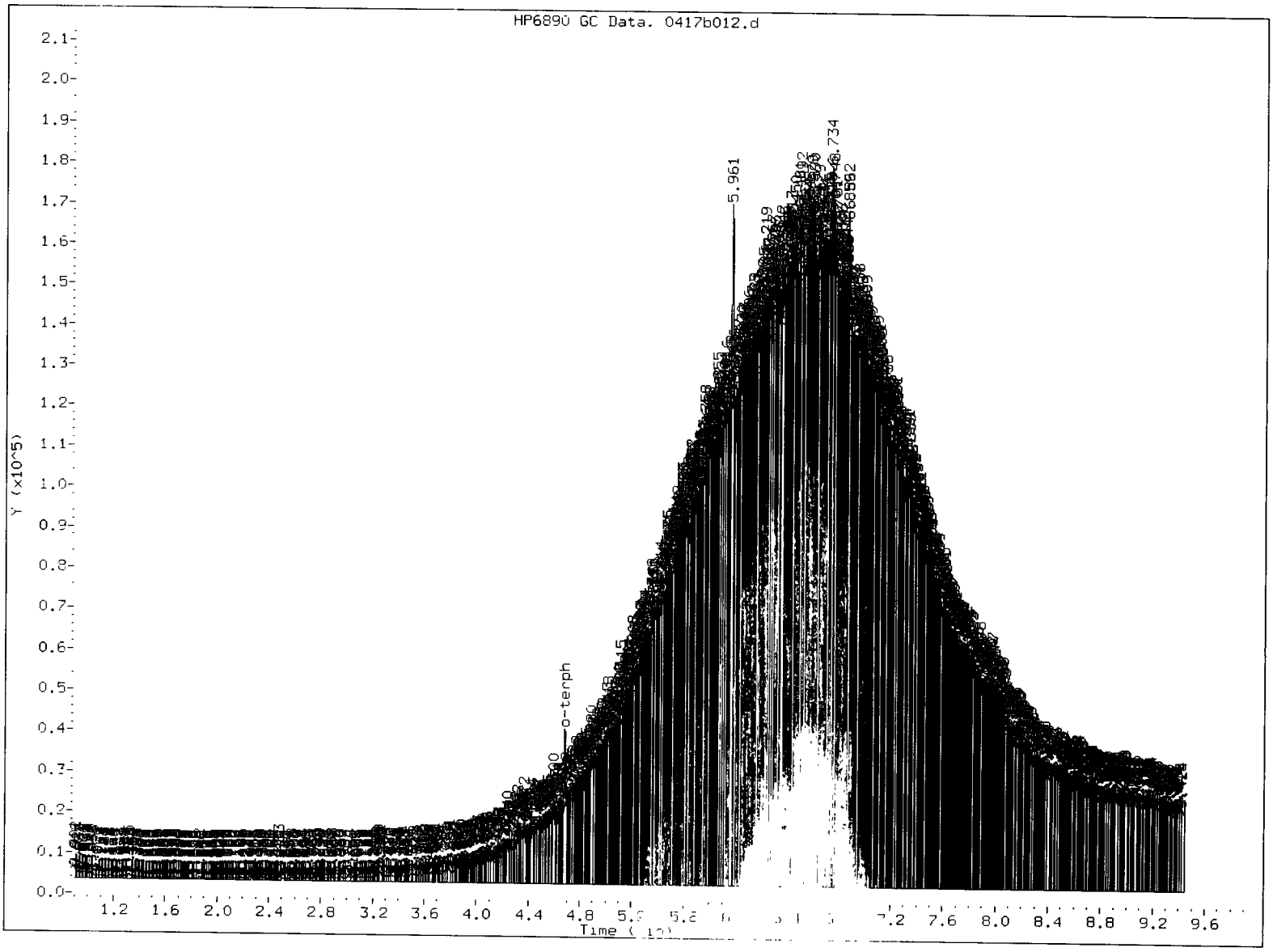
JW 11/18/13

WL67B 61 1:50



FID:3B-2C/RTX-1 WL67B

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: TJ Date: 4/18/03

Analytical Resources Inc.
TPH Quantitation Report

Data File: /chem3/fid3b.i/20130417.b/0417b014.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WI[illegible]AMS
Client ID:
Injection: 17-APR-2013 14:18
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	131047	5	
C8	0.833	0.005	2797	2004	WATPHD	(C12-C24)	4253327	375.07	
C10	2.264	0.004	2241	1778	WATPHM	(C24-C38)	12839963	1164.29	
C12	3.047	0.000	3978	4009	AK102	(C10-C[illegible])	4796905	347.78	M
C14	3.626	0.000	7844	9436	AK103	([illegible]-C36)	11673637	1595.41	
C16	4.124	0.000	14178	12649	OR.DIES	(C10-C28)	9391794	610.57	M
C18	4.573	-0.002	21110	24695					
C20	4.998	0.002	34149	28528					
C22	5.398	0.003	63776	22679					
C24	5.770	0.002	98235	38217					
C25	5.950	0.006	114549	41984					
C26	6.124	0.001	126120	42363					
C28	6.440	0.002	154801	66003	IT.DIES	(C10-C24)	4327027	236.66	
C32	6.983	-0.002	122785	26626					
C34	7.221	0.000	109267	95680					
Filter Peak	----								
C36	7.440	0.001	75706	17818	BUNKERC	([illegible]-C38)	17166990	3500.04	
o-terph	4.681	-0.005	20518	9912	JET-A	(C10-C18)	676230	46.96	
Triacon Surr	----								

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	9912	0.7	75.9	0
Triacontane	0	0.0	0.0	0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

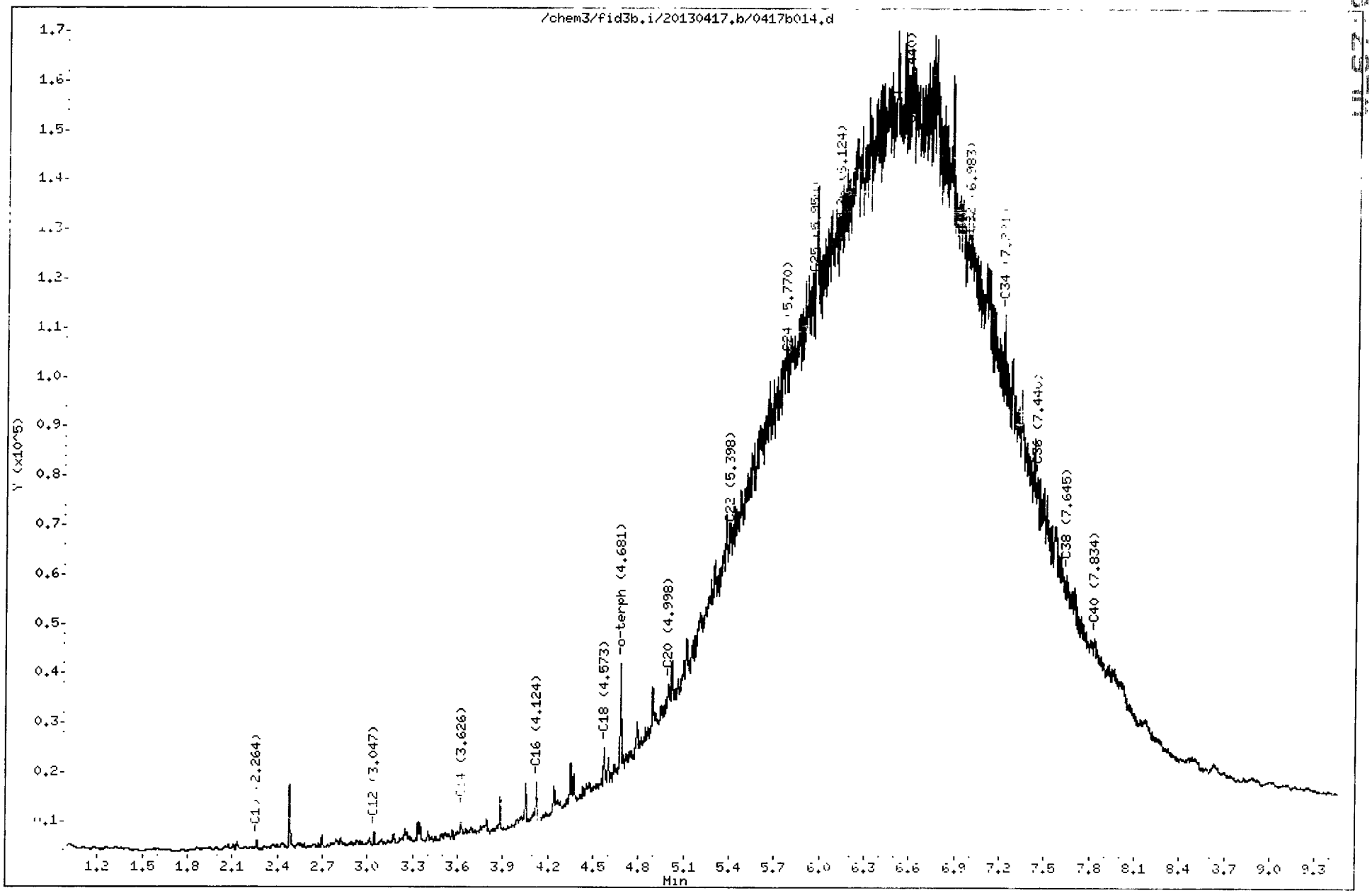
WL57:01U30

Data File: /chem3/fid3b.i/20130417.b/0417b014.d
Date : 17-APR-2013 14:18
Client ID:
Sample Info: WL67AMS,50

Column phase: RTX-1

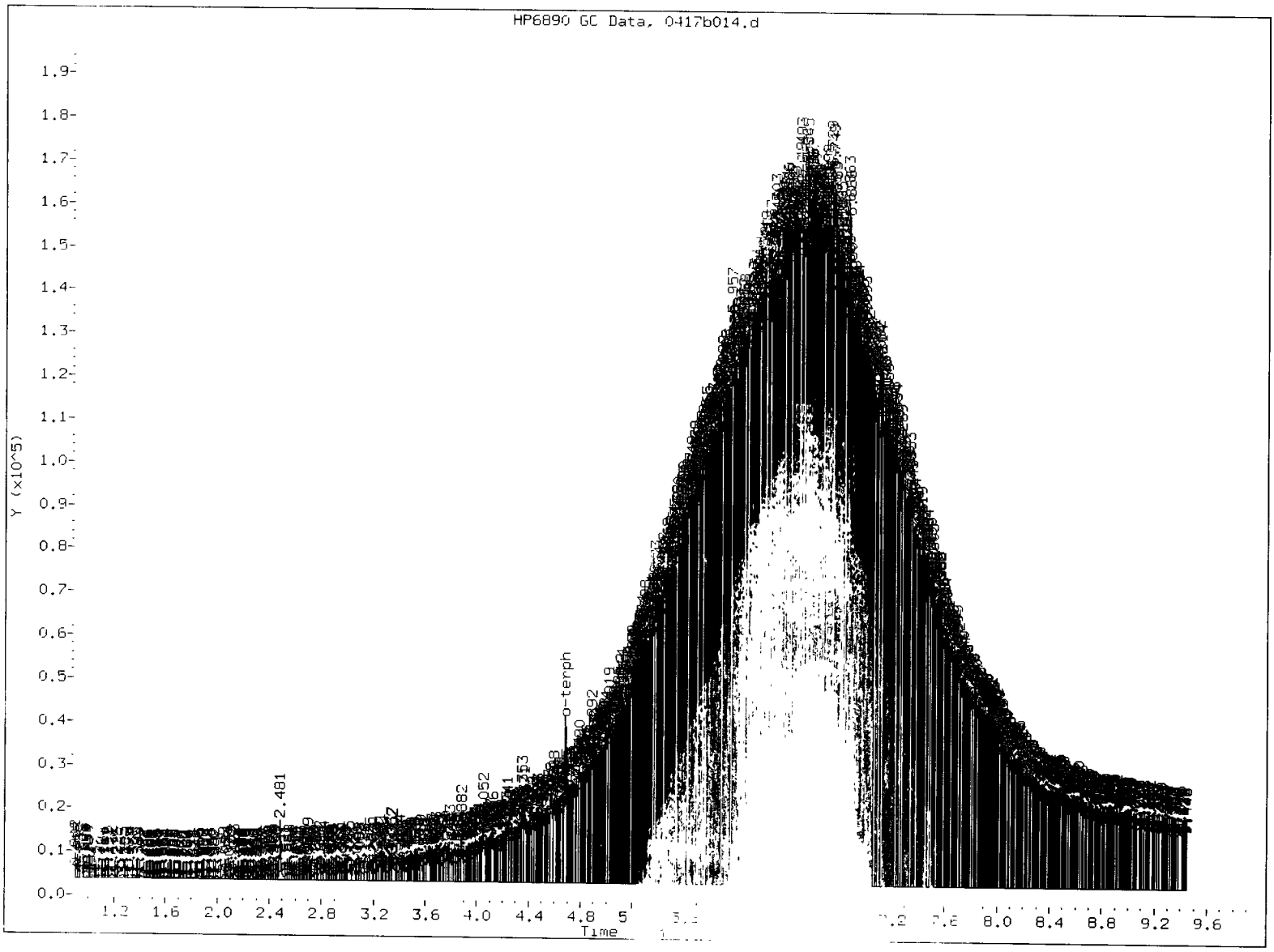
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 WL67AMS

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b015.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: WL67AMSD
Client ID:
Injection: 17-APR-2013 14:38
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(C6 - C12)	134198	5	
C8	0.832	0.004	2856	2094	WATPHD	(C12-C24)	4665456	411.41	
C10	2.263	0.003	2267	1855	WATPHM	(C24-C38)	13649186	1237.67	
C12	3.047	0.000	4178	4058	AK102	(C10-C25)	5195429	376.67	M
C14	3.626	-0.001	8422	7535	AK103	(C25 - C36)	12514871	1710.38	
C16	4.123	-0.001	14782	15408	OR.DIES	(C10-C28)	10220909	664.47	M
C18	4.573	-0.002	21693	32025					
C20	4.997	0.001	38493	28603					
C22	5.396	0.000	70295	17622					
C24	5.768	0.001	106465	31230					
C25	5.948	0.004	124247	38234					
C26	6.119	-0.004	137680	53693					
C28	6.437	-0.001	169484	107822	IT.DIES	(C10 - C24)	4742492	259.38	
C32	6.985	0.000	139782	94232					
C34	7.221	0.000	108141	35766					
Filter Peak	----								
C36	7.441	0.002	80315	50203	BUNKERC	(C10-C36)	18391679	3749.73	
o-terph	4.680	-0.007	19380	9993	JET-A	(C10-C18)	716316	49.75	
Triacon Surr	----								

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	9993	0.7	76.5	D
Triacontane	0	0.0	0.0	D

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

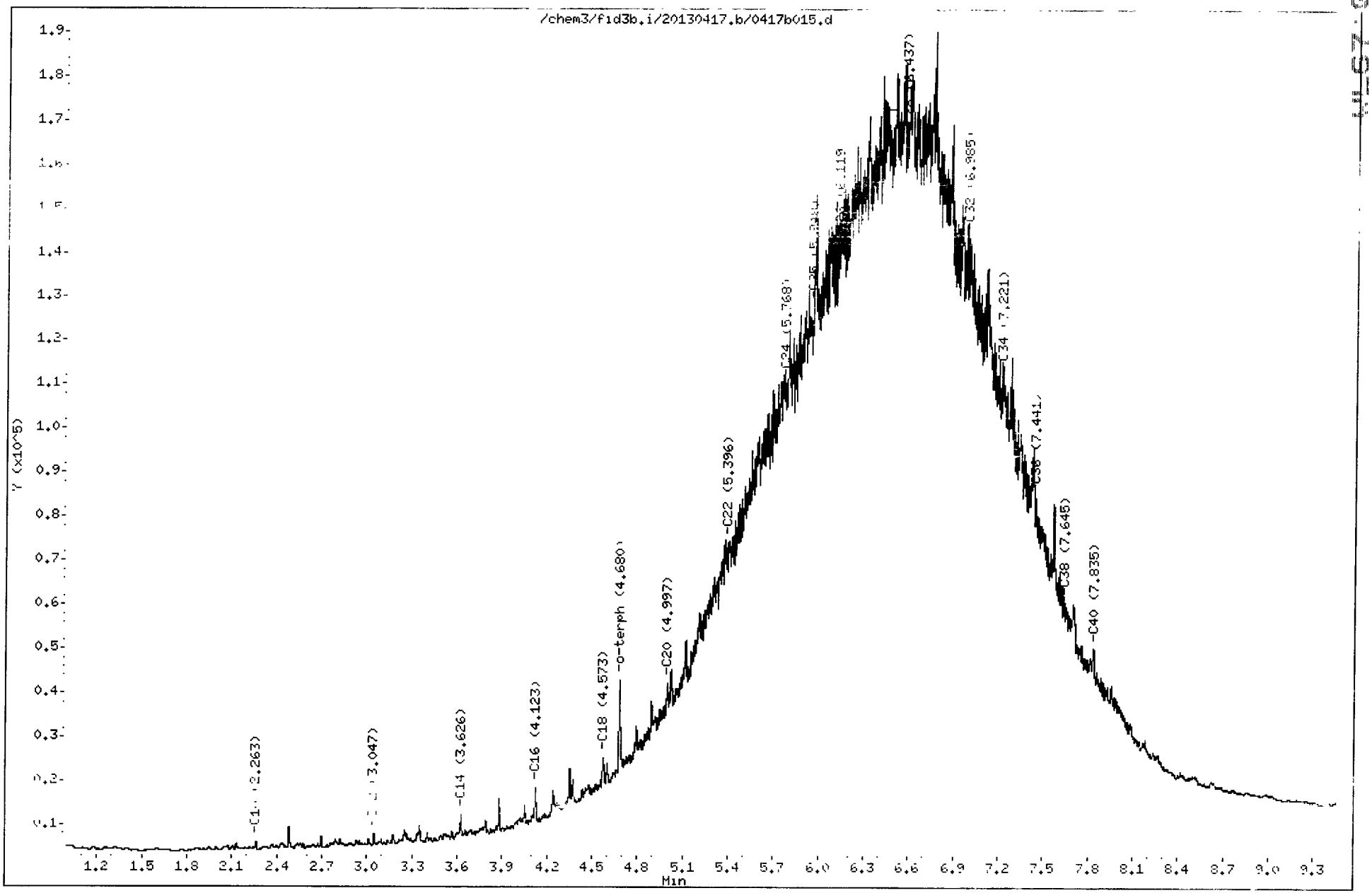
Data File: /chem3/fid3b.i/20130417.b/0417b015.d
Date : 17-APR-2013 14:38
Client ID:
Sample Info: WL67AMSD,50

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1

JW 4/18/13



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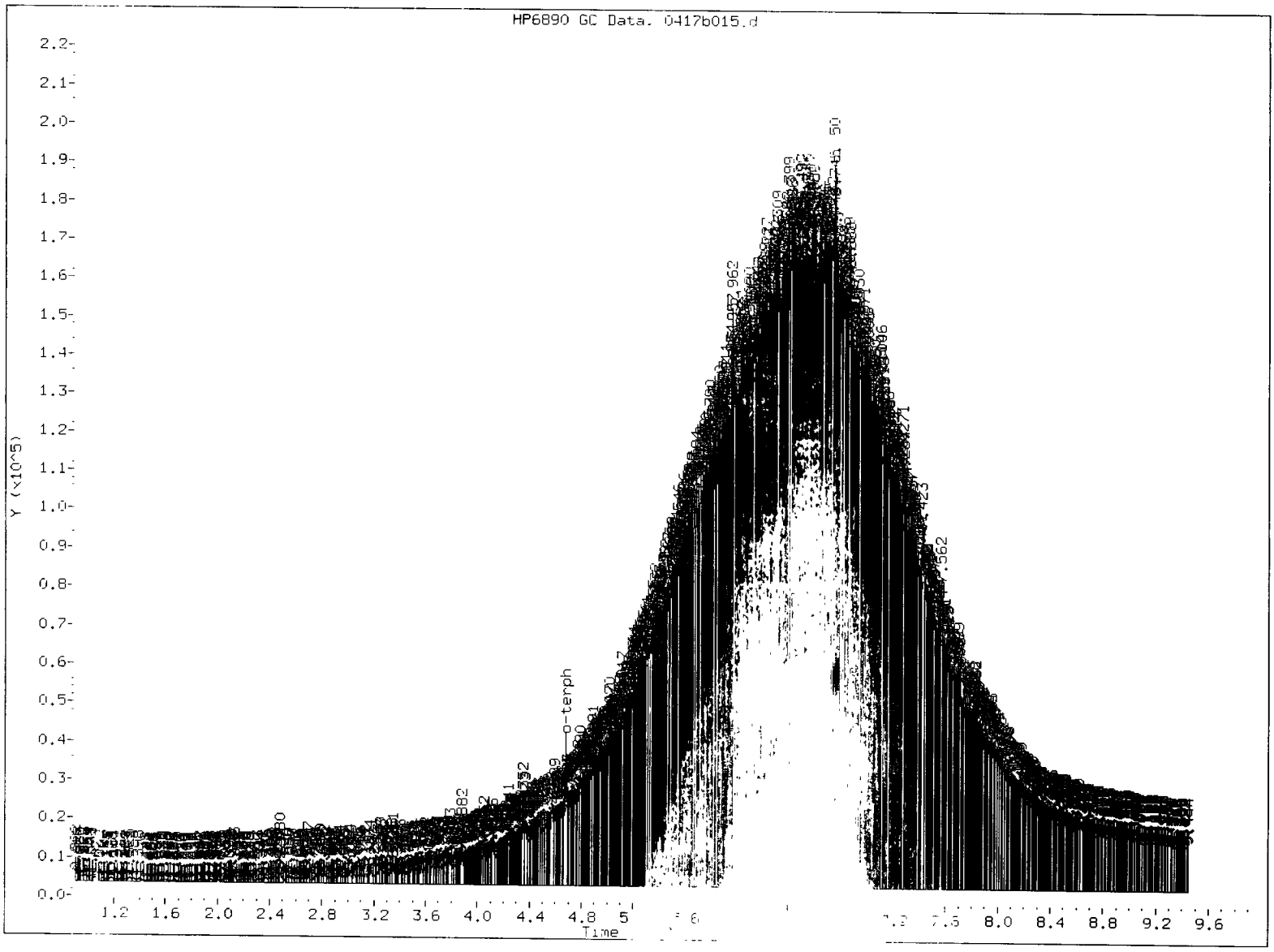


MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Shimmed surrogate

Analyst: JW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b016.d
Method: /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL#2
Client ID:
Injection: 17-APR-2013 14:58
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	712946	26
C8	0.829	0.001	3336	2001	WATPHD	(C12-C24)	2885895	254.49
C10	2.266	0.006	20804	14579	WATPHM	(C24-C38)	220239	19.97
C12	3.049	0.001	37494	31392	AK102	(C10-C25)	3386812	245.55 M
C14	3.626	0.000	67550	50729	AK103	(C25-C36)	135990	18.59
C16	4.125	0.001	95232	75951	OR.DIES	(C10-C28)	3410878	221.74 M
C18	4.575	0.000	88028	75799				
C20	4.996	0.000	57916	46845				
C22	5.394	-0.002	31051	26832				
C24	5.766	-0.002	8550	8598				
C25	5.942	-0.002	3685	3502				
C26	6.110	-0.012	1468	1659				
C28	6.436	-0.003	539	331	IT.DIES	(C10-C24)	3379646	184.84
C32	6.984	-0.001	1566	760				
C34	7.218	-0.002	2512	989				
Filter Peak	----							
C36	7.447	0.009	4244	1927	BUNKERC	(C10-C38)	3599865	733.95
o-terph	4.691	0.004	1058608	717187	JET-A	(C10-C18)	2537850	176.25
Triacon Surr	6.723	-0.010	2485	2742				

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	717187	49.4	109.8
Triacontane	2742	0.2	0.4

JW
4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JET A	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

WLS7:01:38

Data File: /chem3/fid3b.i/20130417.b/0417b016.d

Date : 17-APR-2013 14:58

Client ID:

Sample Info: DIESEL#2

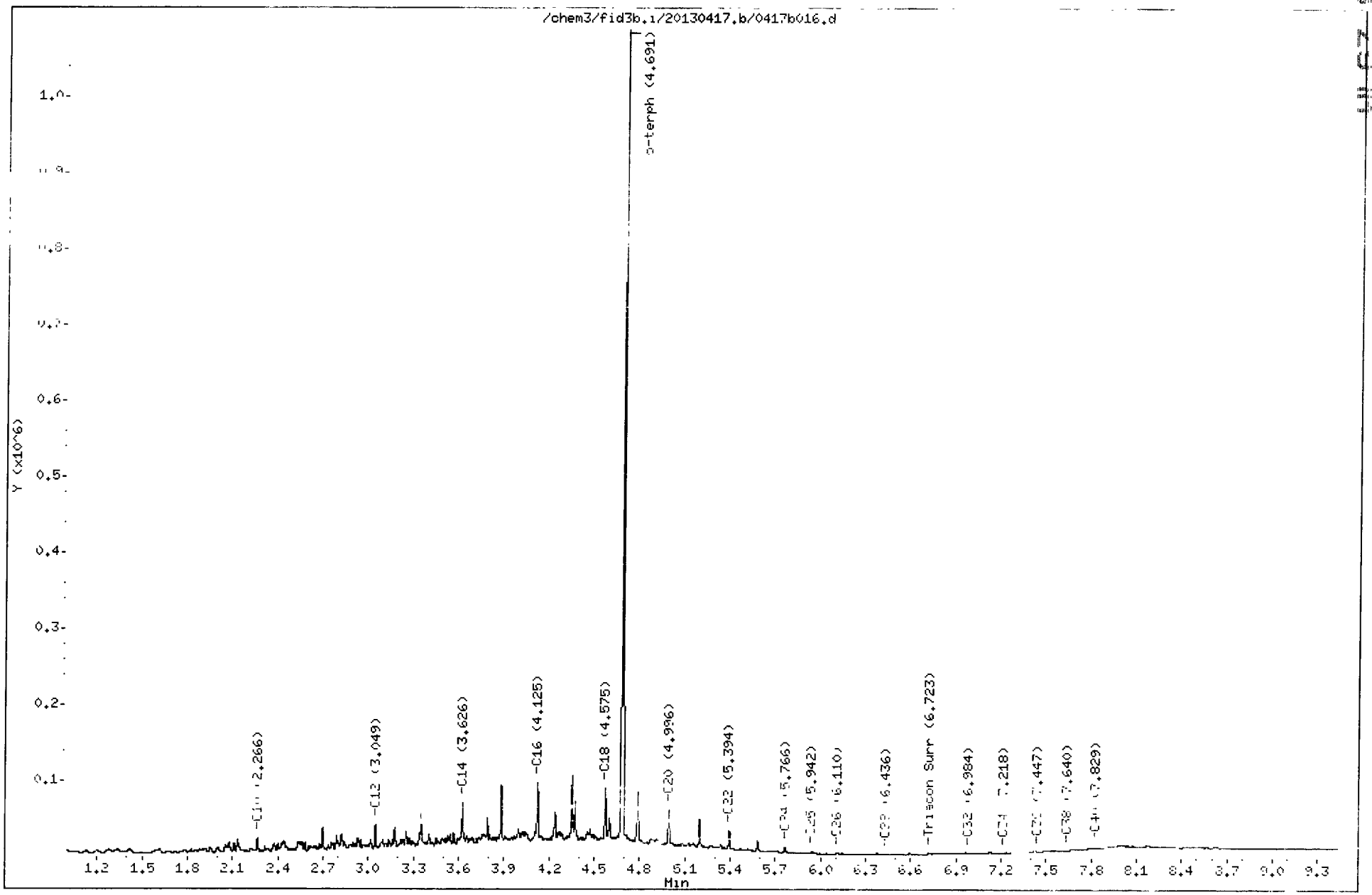
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

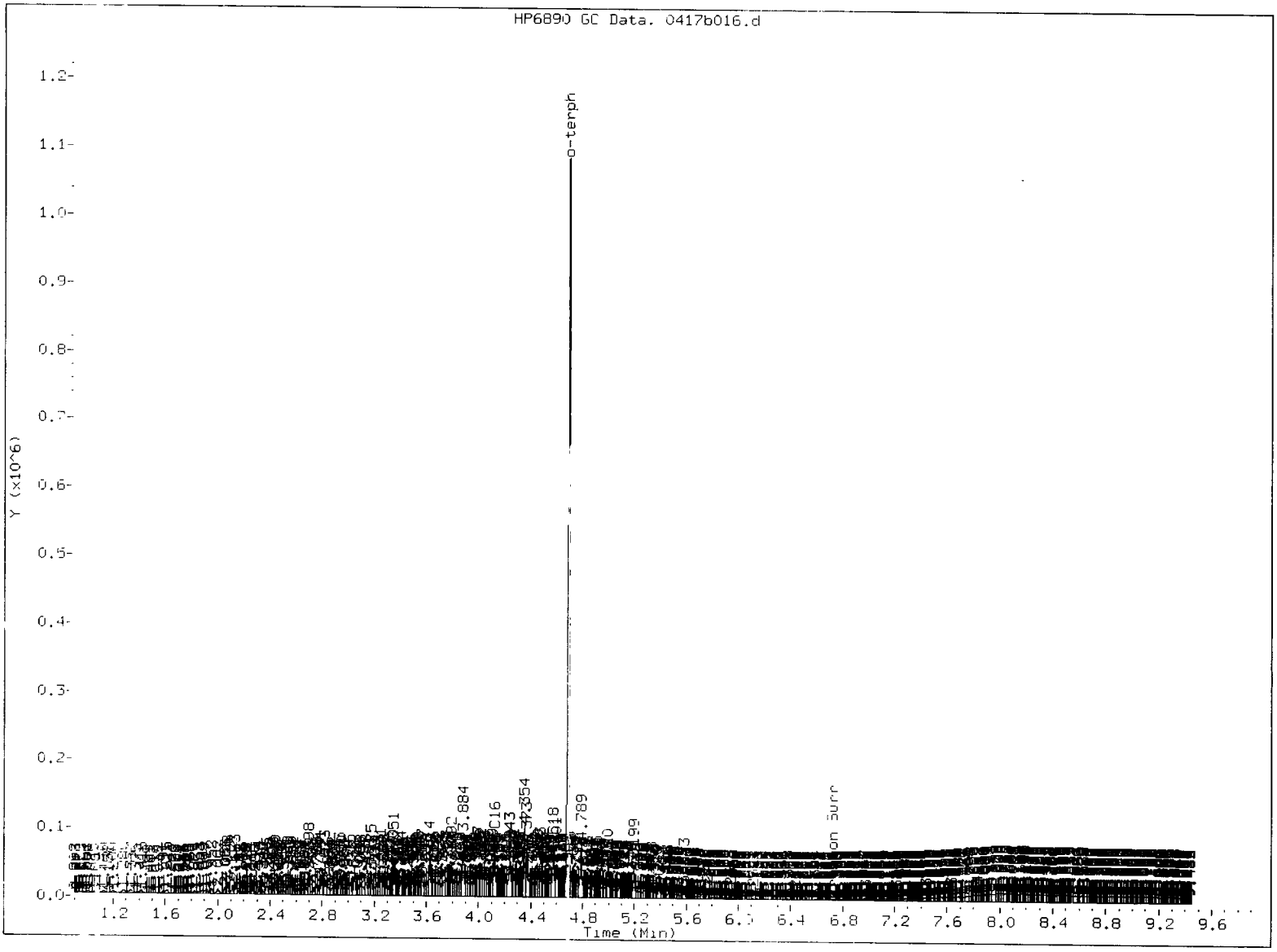
Column diameter: 0.25

JW 4/16/13



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: 4/18/13

WLS7:01498

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130417.b/0417b017.d
Method /chem3/fid3b.i/20130417.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro FID:3B041313

ARI ID: MOIL#2
Client ID:
Injection: 17-APR-2013 15:17
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	61020	2	
C8	0.825	-0.003	2895	1694	WATPHD	(C12-C24)	530467	46.78	
C10	2.258	-0.002	638	692	WATPHM	(C24-C38)	4826622	437.66	
C12	3.046	-0.001	356	301	AK102	(C10-C25)	667058	48.36	
C14	3.627	0.000	371	356	AK103	(C25-C36)	4279253	584.84	M
C16	4.124	0.000	462	427	OR.DIES	(C10-C28)	1997229	129.84	
C18	4.573	-0.002	801	950					
C20	4.997	0.001	1804	1380					
C22	5.393	-0.002	6154	1819					
C24	5.767	0.000	24306	9842					
C25	5.944	0.000	31393	5544					
C26	6.129	0.006	39369	30652					
C28	6.441	0.003	45669	14072	IT.DIES	(C10-C24)	543932	29.75	
C32	6.983	-0.002	66425	37290					
C34	7.220	-0.001	53826	27122					
Filter Peak	----								
C36	7.438	0.000	44628	26604	BUNKERC	(C10-C38)	5370555	1094.96	
o-terph	4.681	-0.006	3131	2151	JET-A	(C10-C18)	48769	3.39	
Triacon Surr	6.738	0.005	933171	681204					

Range Times: NW Diesel(3.098 - 5.817) NW Gas(0.628 - 3.098) NW M.Oil(5.817 - 7.694)
AK102(2.210 - 5.894) AK103(5.894 - 7.488) Jet A(2.210 - 4.625)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2151	0.1	0.3
Triacontane	681204	44.6	99.1

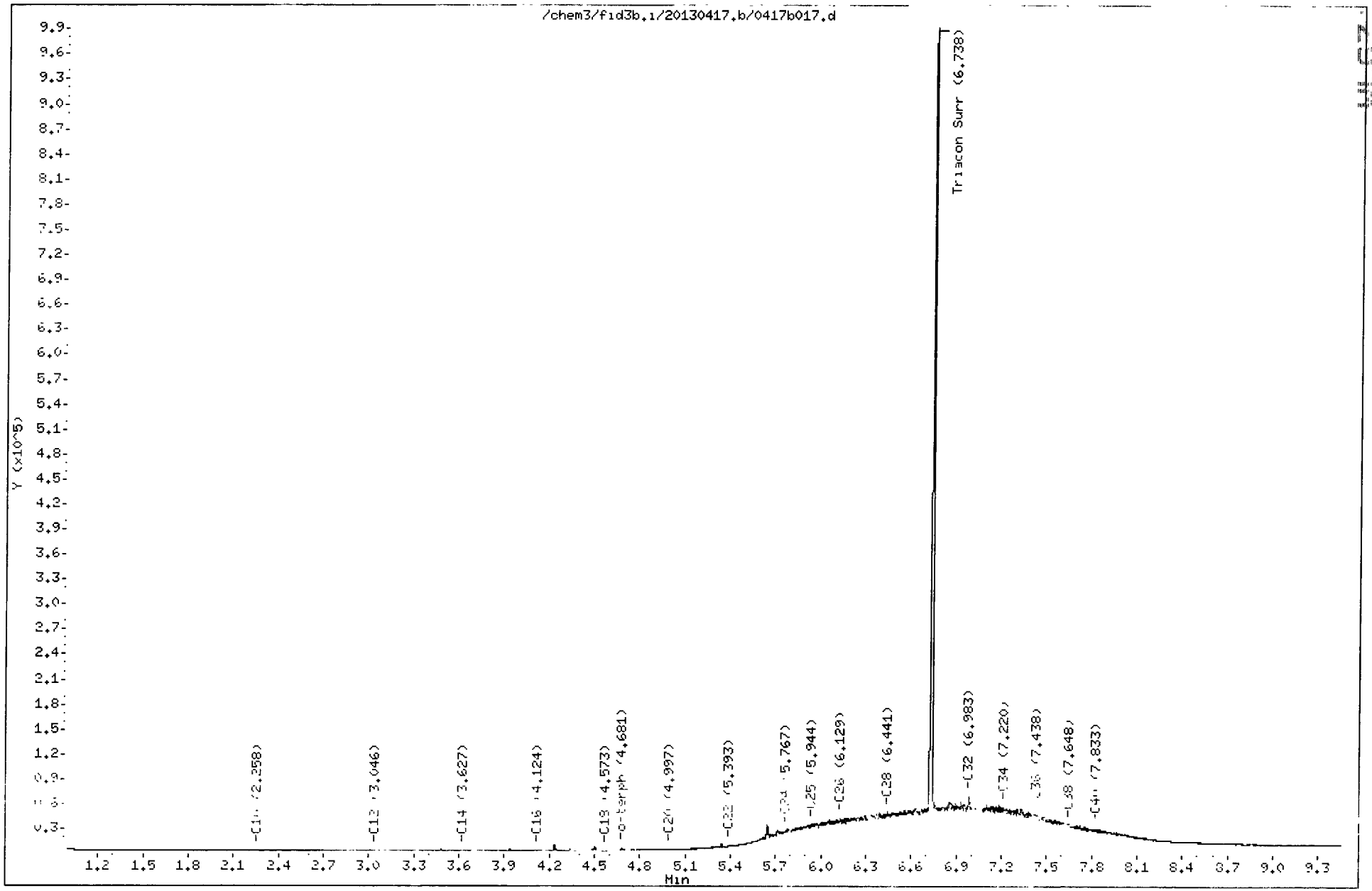
JW
4/18/13

Analyte	RF	Curve Date
o Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130417.b/0417b017.d
Date : 17-APR-2013 15:17
Client ID:
Sample Info: MOIL#2

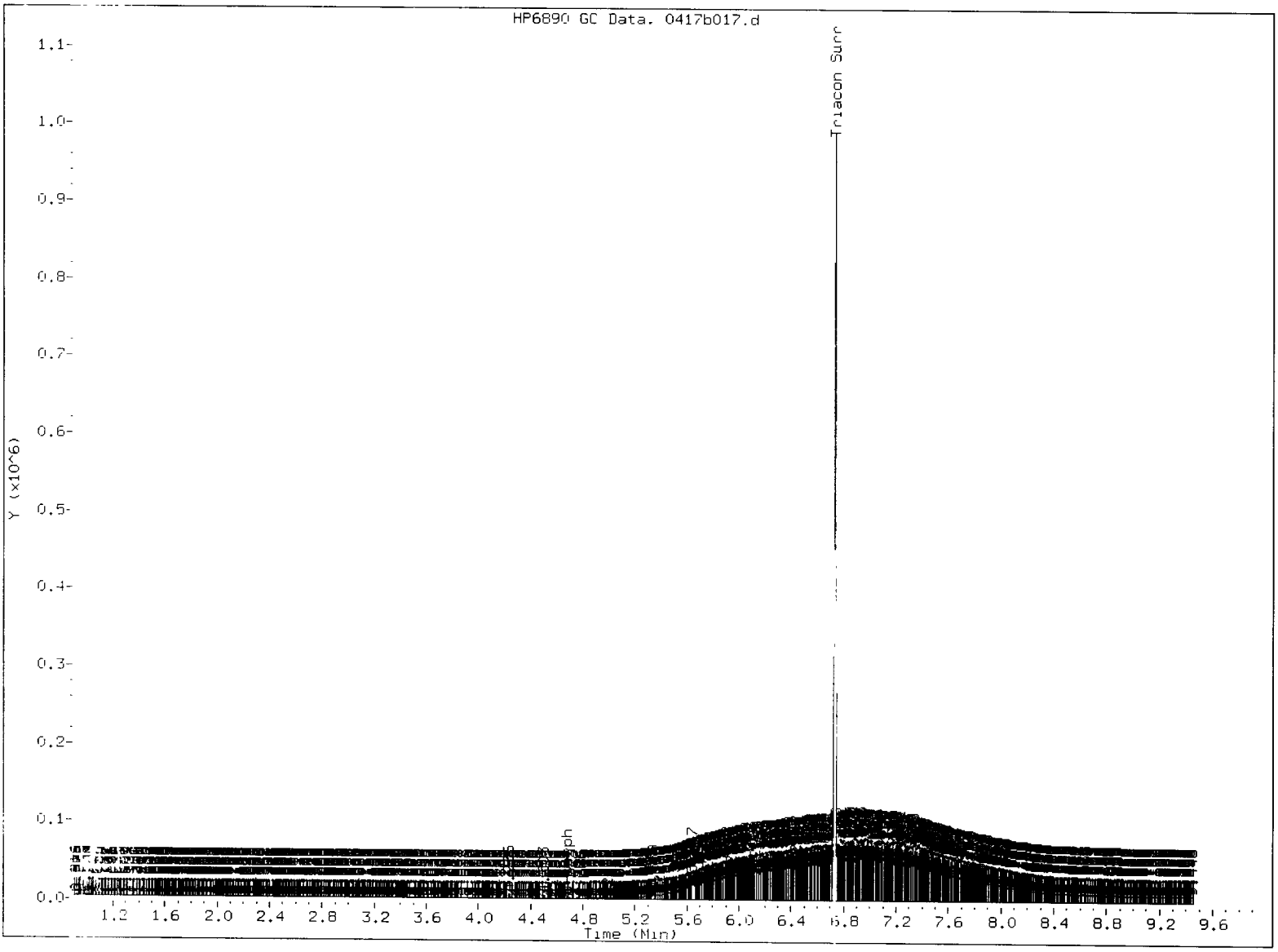
Instrument: fid3b.i
Operator: JW
Column phase: RTX-1
Column diameter: 0.25

JW 4/18/13



FID:3B-2C/RTX-1 MOIL#2

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/15/13

TPHG Raw Data
Preparation Log

ARI Job ID: WL67

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
		4/12/13		PC

	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 Spilt Volume (µL)	
1	WB58A	1		X	DE695	34.49	28.359				
2	B	2				32.52	28.045				
3	F	2				33.33	28.145				
4	G	2				33.86	28.129				
5	H	4				32.86	28.186				
6	I	2				33.46	28.136				
7	K	2				33.45	28.371				
8	WB71	3				34.94	28.171	5.769	5	900	
9	L R	3				33.80	28.073	5.727			
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WL67

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): 3/15/13 Internal Standard ID NA Expiration NA

BFB Tune Meets Criteria? (NA) 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
Restek	VW785-1	8/13/13	Ultra	VW765-1	3/13/13
Restek	VW772-3	5/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Calibration for BTEX and surrogates. Surrogates calibrated with BTEX to avoid hydrocarbon interference.
ICV mix expired 3/13/13, passes
PID configuration of BTEX detection questionable below 0.5- poor signal to noise ratio.
MTBE 0.25 level not used, below RL

Analyst: PL **Date:** 3/18/13

Reviewer: [illegible] **Date:** 3/18/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 3/15/13 Analysis: BTEX Calibration Analyst: PC

Column 1 Serial No.: 82/726 Column Type: RTX502.2

Column 2 Serial No.: — Column Type: —

GC Method: BTEX ICal Date: 3/15/13 Injection Volume: 5

IS	Ical/Ccal	ICV
VW785-1	VW772-3	VW765-1

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	1402	0315a001.d	RINSE				1
2	1431	0315a002.d	RT/BCAL 1				1
3	1501	0315a003.d	CCAL 1				1
4	1530	0315a004.d	LCS0315				1
5	1559	0315a005.d	LCSD0315				1
6	1643	0315a006.d	BTEX 200	BTEX 200			1
7	1712	0315a007.d	BTEX 100	BTEX 100			1
8	1742	0315a008.d	BTEX 50	BTEX 50			1
9	1811	0315a009.d	BTEX 25	BTEX 25			1
10	1840	0315a010.d	BTEX 5	BTEX 5			1
11	1909	0315a011.d	BTEX 1	BTEX 1			1
12	1939	0315a012.d	BTEX 0.5	BTEX 0.5			1
13	2008	0315a013.d	BTEX 0.25	BTEX 0.25			1
14	2037	0315a014.d	BTEX ICV 25				1

PC 3/18/13

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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130315-1.b/FID.m
Batch File: /chem3/pid1.i/20130315-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0315a006	0315a007	0315a008	0315a009	0315a010	0315a011	0315a012	0315a013	0315a014
INJ.DATE:	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013
INJ.TIME:	16:43	17:12	17:42	18:11	18:40	19:09	19:39	20:08	20:37

	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.277	4.207-4.347	+++++	+++++
6	MTBE	4.547	4.546	4.543	4.545	4.545	4.548	4.550	4.543	4.543	4.547	4.477-4.617	4.546	0.003
7	nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.772	4.702-4.842	+++++	+++++
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.807	6.737-6.877	+++++	+++++
9	BENZENE	7.015	7.011	7.009	7.009	7.011	7.010	7.013	7.008	7.008	7.015	6.945-7.085	7.010	0.002
$ 10	TFT(Surr)	7.845	7.841	7.840	7.841	7.841	7.841	7.840	7.842	7.840	7.845	7.775-7.915	7.841	0.002
11	nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.467	9.397-9.537	+++++	+++++
12	Toluene	9.874	9.868	9.867	9.868	9.868	9.867	9.867	9.867	9.866	9.874	9.804-9.944	9.868	0.002
13	nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.390	12.320-12.460	+++++	+++++
14	ETHYLBENZENE	12.768	12.762	12.759	12.760	12.760	12.762	12.760	12.760	12.758	12.768	12.698-12.838	12.761	0.003
15	M/P-XYLENE	12.933	12.924	12.921	12.920	12.919	12.919	12.920	12.918	12.919	12.933	12.863-13.003	12.921	0.005
16	O-XYLENE	13.876	13.870	13.869	13.868	13.868	13.868	13.867	13.863	13.867	13.876	13.806-13.946	13.868	0.003
17	nC10-Decane	15.203	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.203	15.133-15.273	15.203	0.000

Reviewer 1 PC Date: 3/18/13
Reviewer 2 Date: 3/18/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130315-1.b/FID.m
Batch File: /chem3/pid1.i/20130315-1.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)	15.382	15.379	15.379	15.380	15.379	15.379	15.380	15.380	15.378	15.382	15.312-15.452	15.380	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.101	16.031-16.171	+++++	+++++
21 nc11	16.702	16.700	16.698	16.698	16.699	16.699	16.698	+++++	16.698	16.702	16.632-16.772	16.699	0.001
22 nC12-Dodecane	+++++	17.793	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.794	17.724-17.864	17.793	0.000
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.600	18.530-18.670	+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.800	18.730-18.870	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130315-2.b/PIDB.m
Batch File: /chem3/pid1.i/20130315-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0315a006	0315a007	0315a008	0315a009	0315a010	0315a011	0315a012	0315a013	0315a014
INJ.DATE:	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013
INJ.TIME:	16:43	17:12	17:42	18:11	18:40	19:09	19:39	20:08	20:37

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.555	4.553	4.551	4.552	4.553	4.550	4.550	4.553	4.550	4.555	4.505-4.605	4.552	0.002
	2 Benzene	7.022	7.018	7.017	7.017	7.018	7.018	7.017	7.020	7.016	7.022	6.972-7.072	7.018	0.002
$	3 TFT(Surr)	7.853	7.849	7.848	7.849	7.849	7.849	7.850	7.850	7.848	7.853	7.803-7.903	7.849	0.001
	4 Toluene	9.882	9.876	9.875	9.876	9.876	9.876	9.873	9.877	9.874	9.882	9.832-9.932	9.876	0.002
	5 Ethylbenzene	12.776	12.770	12.768	12.768	12.768	12.769	12.767	12.763	12.767	12.776	12.726-12.826	12.769	0.003
	6 M/P-Xylene	12.941	12.933	12.930	12.928	12.928	12.928	12.927	12.927	12.927	12.941	12.891-12.991	12.930	0.005
	7 O-Xylene	13.885	13.879	13.877	13.877	13.877	13.876	13.873	13.883	13.876	13.885	13.855-13.915	13.878	0.004
$	8 BB(Surr)	15.389	15.387	15.387	15.387	15.387	15.386	15.387	15.387	15.386	15.389	15.339-15.439	15.387	0.001

Reviewer 1 _____ Date: 3/18/13
Reviewer 2 _____ Date: 3/18/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130315-1.b

ARI Job No.: BTEX Method: FID.m Instrument: pid1.i Date: 15-MAR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1643	0315a006.d	BTEX 200	BTEX 200	1	NO MANUAL INTEGRATION
1712	0315a007.d	BTEX 100	BTEX 100	1	NO MANUAL INTEGRATION
1742	0315a008.d	BTEX 50	BTEX 50	1	NO MANUAL INTEGRATION
1811	0315a009.d	BTEX 25	BTEX 25	1	NO MANUAL INTEGRATION
1840	0315a010.d	BTEX 5	BTEX 5	1	NO MANUAL INTEGRATION
1909	0315a011.d	BTEX 1	BTEX 1	1	NO MANUAL INTEGRATION
1939	0315a012.d	BTEX 0.5	BTEX 0.5	1	Toluene, MTBE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2008	0315a013.d	BTEX 0.25	BTEX 0.25	1	Toluene, MTBE, ETHYLBENZENE, O-XYLENE,
2037	0315a014.d	BTEX ICV 25		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130315-2.b

ARI Job No.: BTEX Method: PIDB.m Instrument: pid1.i Date: 15-MAR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1643	0315a006.d	BTEX 200	BTEX 200	1	NO MANUAL INTEGRATION
1712	0315a007.d	BTEX 100	BTEX 100	1	NO MANUAL INTEGRATION
1742	0315a008.d	BTEX 50	BTEX 50	1	NO MANUAL INTEGRATION
1811	0315a009.d	BTEX 25	BTEX 25	1	NO MANUAL INTEGRATION
1840	0315a010.d	BTEX 5	BTEX 5	1	NO MANUAL INTEGRATION
1909	0315a011.d	BTEX 1	BTEX 1	1	MTBE,
1939	0315a012.d	BTEX 0.5	BTEX 0.5	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2008	0315a013.d	BTEX 0.25	BTEX 0.25	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2037	0315a014.d	BTEX ICV 25	BTEX ICV 2	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-1.b/FID.m
Cal Date : 18-Mar-2013 09:20 paul
Curve Type : Average

Calibration File Names:
Level 2: /chem3/pid1.i/20130315-1.b/0315a013.d/0315a013.cdf
Level 3: /chem3/pid1.i/20130315-1.b/0315a012.d/0315a012.cdf
Level 4: /chem3/pid1.i/20130315-1.b/0315a011.d
Level 5: /chem3/pid1.i/20130315-1.b/0315a010.d
Level 6: /chem3/pid1.i/20130315-1.b/0315a009.d
Level 7: /chem3/pid1.i/20130315-1.b/0315a008.d
Level 8: /chem3/pid1.i/20130315-1.b/0315a007.d
Level 9: /chem3/pid1.i/20130315-1.b/0315a006.d

Compound	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	50.000 Level 7	100.000 Level 8	200.000 Level 9	___ RRF	% RSD
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
6 MTBE	804	982	943	889	833	805	765	746	846	9.995

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-1.b/FID.m
Cal Date : 18-Mar-2013 09:20 paul
Curve Type : Average

Compound	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	50.000 Level 7	RRF	% RSD
	100.000 Level 8	200.000 Level 9						
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 BENZENE	1852	1636	1579	1581	1485	1425		
	1353	1328					1530	11.242
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
12 Toluene	1568	1490	1611	1554	1450	1383		
	1319	1291					1458	8.142
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
14 ETHYLBENZENE	112	130	124	123	115	109		
	104	102					115	8.846
15 M/P-XYLENE	1620	1506	1544	1421	1338	1280		
	1218	1198					1391	11.294
16 O-XYLENE	1828	1516	1434	1514	1403	1334		
	1268	1239					1442	12.961

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-1.b/FID.m
Cal Date : 18-Mar-2013 09:20 paul
Curve Type : Average

Compound	0.25000 Level 2 / 100.000 Level 8	0.50000 Level 3 / 200.000 Level 9	1.000 Level 4	5.000 Level 5	25.000 Level 6	50.000 Level 7	RRF	% RSD
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					117	12.069
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					1.13000	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 10 TFT(Surr)	38.27273	39.72727	34.27273	33.85075	33.14000	33.12030		
	32.06742	33.04500					34.68702	7.973
$ 18 BB(Surr)	26.90909	26.90909	22.56818	22.22388	21.09000	21.29323		
	20.60112	20.99000					22.82308	11.408
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++ <-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-1.b/FID.m
Cal Date : 18-Mar-2013 09:20 paul
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.43682
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-2.b/PIDB.m
Cal Date : 18-Mar-2013 09:05 paul
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130315-2.b/0315a013.d/0315a013.cdf
Level 2: /chem3/pid1.i/20130315-2.b/0315a012.d/0315a012.cdf
Level 3: /chem3/pid1.i/20130315-2.b/0315a011.d/0315a011.cdf
Level 4: /chem3/pid1.i/20130315-2.b/0315a010.d
Level 5: /chem3/pid1.i/20130315-2.b/0315a009.d
Level 6: /chem3/pid1.i/20130315-2.b/0315a008.d
Level 7: /chem3/pid1.i/20130315-2.b/0315a007.d
Level 8: /chem3/pid1.i/20130315-2.b/0315a006.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	+++++	82.00000	79.00000	85.20000	86.12000	86.90000		
	84.76000	86.42500					84.34357	3.387
2 Benzene	224	240	229	250	248	246		
	239	244					240	3.823
4 Toluene	224	250	213	234	232	228		
	224	228					229	4.611
5 Ethylbenzene	176	188	186	202	203	200		
	196	198					194	4.860
6 M/P-Xylene	208	207	208	219	219	219		
	214	215					214	2.533
7 O-Xylene	160	162	166	175	178	177		
	173	174					171	4.073

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-2.b/PIDB.m
Cal Date : 18-Mar-2013 09:05 paul
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)	41.45455	42.90909	38.43182	38.55224	38.50000	39.07519		
	38.53371	40.10500					39.69520	4.222
$ 8 BB(Surr)	96.45455	97.72727	84.68182	85.23881	83.28000	85.38346		
	83.83708	86.57500					87.89725	6.566

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-2.b/PIDB.m
Cal Date : 18-Mar-2013 09:05 paul
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 4.26631
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a006.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a006.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 200
Client ID: BTEX 200
Injection Date: 15-MAR-2013 16:43
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.003	6609	82152	190.5	TFT(Surr)
15.382	0.002	4198	35055	183.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	1785407	4.986
8015C 2MP-TMB	(4.18 to 16.20)	723723	1829726	2.528
AK101 nC6-nC10	(4.67 to 15.10)	582885	1680132	2.882
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	1785407	4.760

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
7.853	0.003	8021	202.1	TFT(Surr)
15.389	0.003	17315	197.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.002	48887	203.65	Benzene
9.882	0.005	45551	198.91	Toluene
12.776	0.013	39512	204.11	Ethylbenzene
12.941	0.015	85834	401.94	M/P-Xylene
13.885	0.002	34809	204.03	O-Xylene
4.555	0.001	17285	204.94	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

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Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130315-1.b/0315a006.d
Lab Smp Id: BTEX 200 Client Smp ID: BTEX 200
Inj Date : 15-MAR-2013 16:43
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 200
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 16:43 Cal File: 0315a006.d
Als bottle: 1 Calibration Sample, Level: 9
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	4.547	4.543	0.004	149143	200.000	176.3
	9 BENZENE	7.015	7.008	0.007	265622	200.000	173.6
$	10 TFT(Surr)	7.845	7.842	0.003	6609	200.000	190.5
	12 Toluene	9.874	9.867	0.007	258200	200.000	177.1
	14 ETHYLBENZENE	12.768	12.760	0.008	20330	200.000	177.2
	15 M/P-XYLENE	12.933	12.918	0.015	479286	400.000	344.6
	16 O-XYLENE	13.876	13.863	0.013	247885	200.000	171.9
	17 nC10-Decane	15.203	15.203	0.000	41	200.000	
$	18 BB(Surr)	15.382	15.380	0.002	4198	200.000	183.9
	21 nc11	16.702	16.698	0.004	20502	200.000	

Data File: /chem3/pid1.i/20130315-1.b/0315a006.d

Date : 15-MAR-2013 16:43

Client ID: BTEX 200

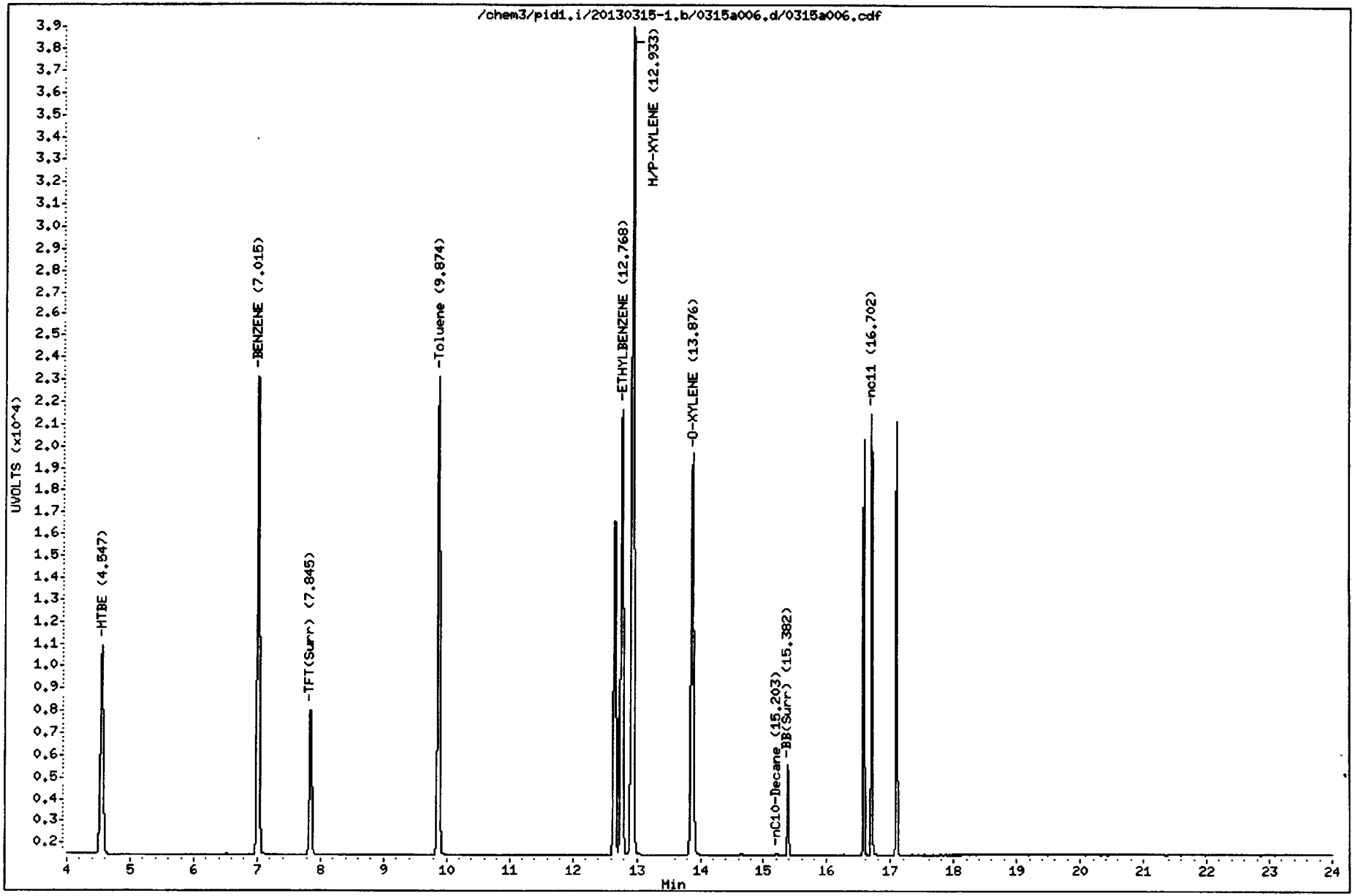
Sample Info: BTEX 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a006.d

Date : 15-MAR-2013 16:43

Client ID: BTEX 200

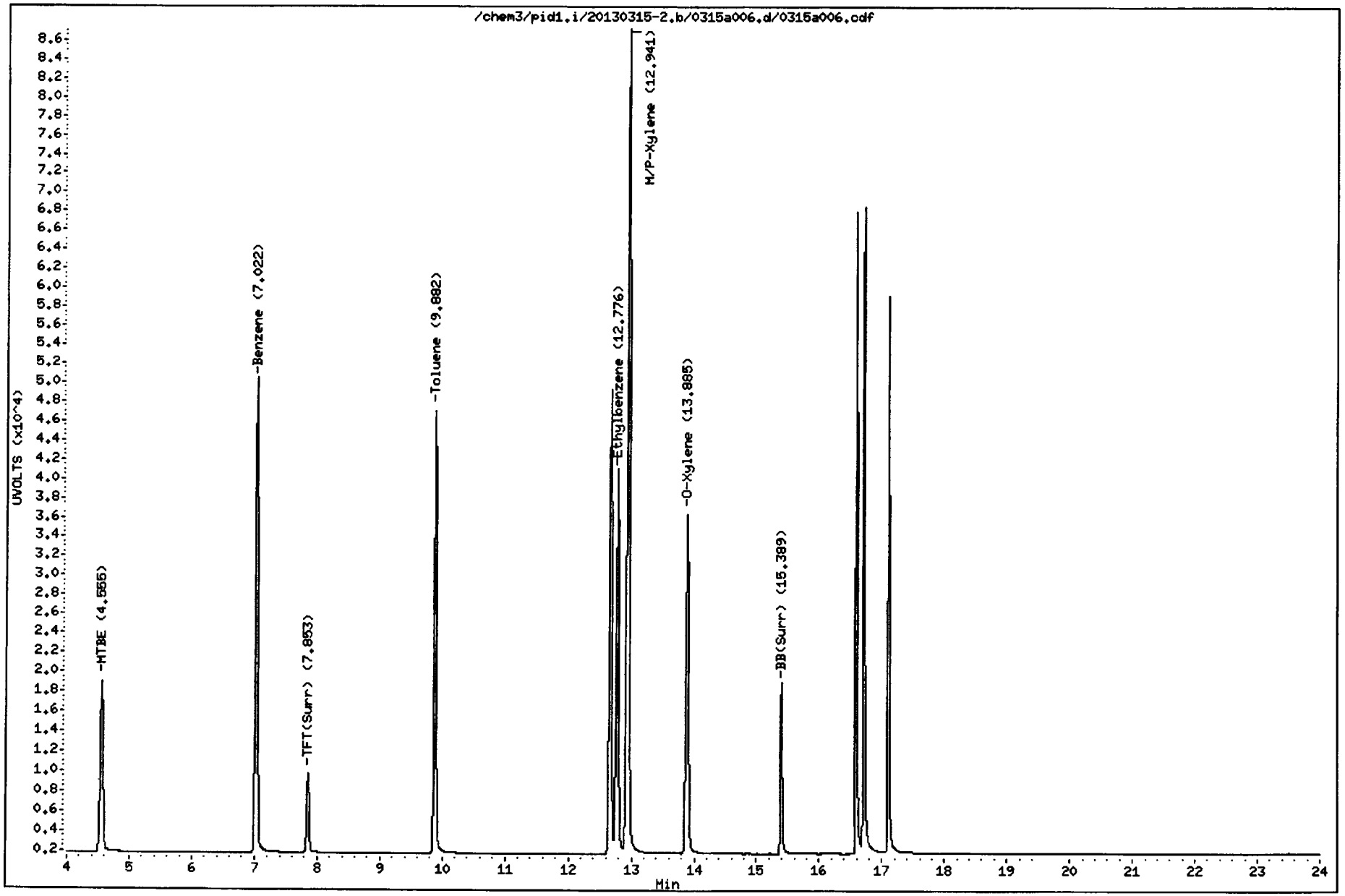
Sample Info: BTEX 200

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



PG 3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a007.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a007.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 100
Client ID: BTEX 100
Injection Date: 15-MAR-2013 17:12
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	-0.001	5708	71446	164.6	TFT(Surr)
15.379	-0.001	3667	30793	160.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	910832	2.543
8015C 2MP-TMB	(4.18 to 16.20)	723723	932787	1.289
AK101 nC6-nC10	(4.67 to 15.10)	582885	856273	1.469
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	911660	2.430

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	-0.001	6859	172.8	TFT(Surr)
15.387	0.000	14923	169.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	-0.002	23946	99.75	Benzene
9.876	0.000	22363	97.65	Toluene
12.770	0.007	19632	101.42	Ethylbenzene
12.933	0.006	42792	200.38	M/P-Xylene
13.879	-0.005	17309	101.46	O-Xylene
4.553	0.000	8476	100.49	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/20130315-1.b/0315a007.d
Lab Smp Id: BTEX 100 Client Smp ID: BTEX 100
Inj Date : 15-MAR-2013 17:12
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 100
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 17:12 Cal File: 0315a007.d
Als bottle: 1 Calibration Sample, Level: 8
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	4.546	4.543	0.003	76514	100.000	90.46
9	BENZENE	7.011	7.008	0.003	135311	100.000	88.44
$ 10	TFT(Surr)	7.841	7.842	-0.001	5708	178.000	164.6
12	Toluene	9.868	9.867	0.001	131887	100.000	90.44
14	ETHYLBENZENE	12.762	12.760	0.002	10368	100.000	90.35
15	M/P-XYLENE	12.924	12.918	0.006	243691	200.000	175.2
16	O-XYLENE	13.870	13.863	0.007	126761	100.000	87.91
$ 18	BB(Surr)	15.379	15.380	-0.001	3667	178.000	160.7
21	nc11	16.700	16.698	0.002	10274	100.000	
22	nC12-Dodecane	17.793	17.793	0.000	113	100.000	

Data File: /chem3/pid1.i/20130315-1.b/0315a007.d

Date : 15-MAR-2013 17:12

Client ID: BTEX 100

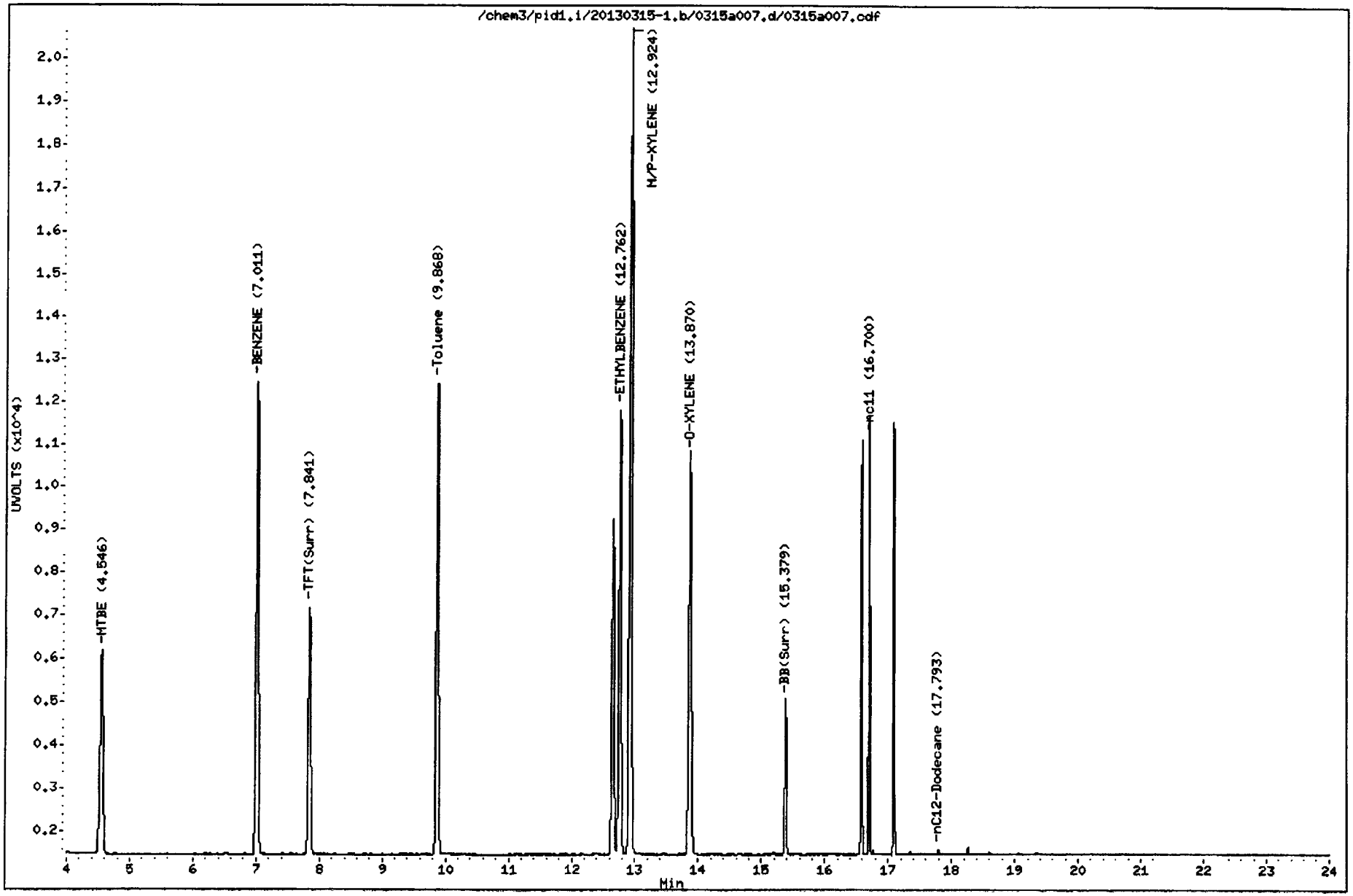
Sample Info: BTEX 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a007.d

Date : 15-MAR-2013 17:12

Client ID: BTEX 100

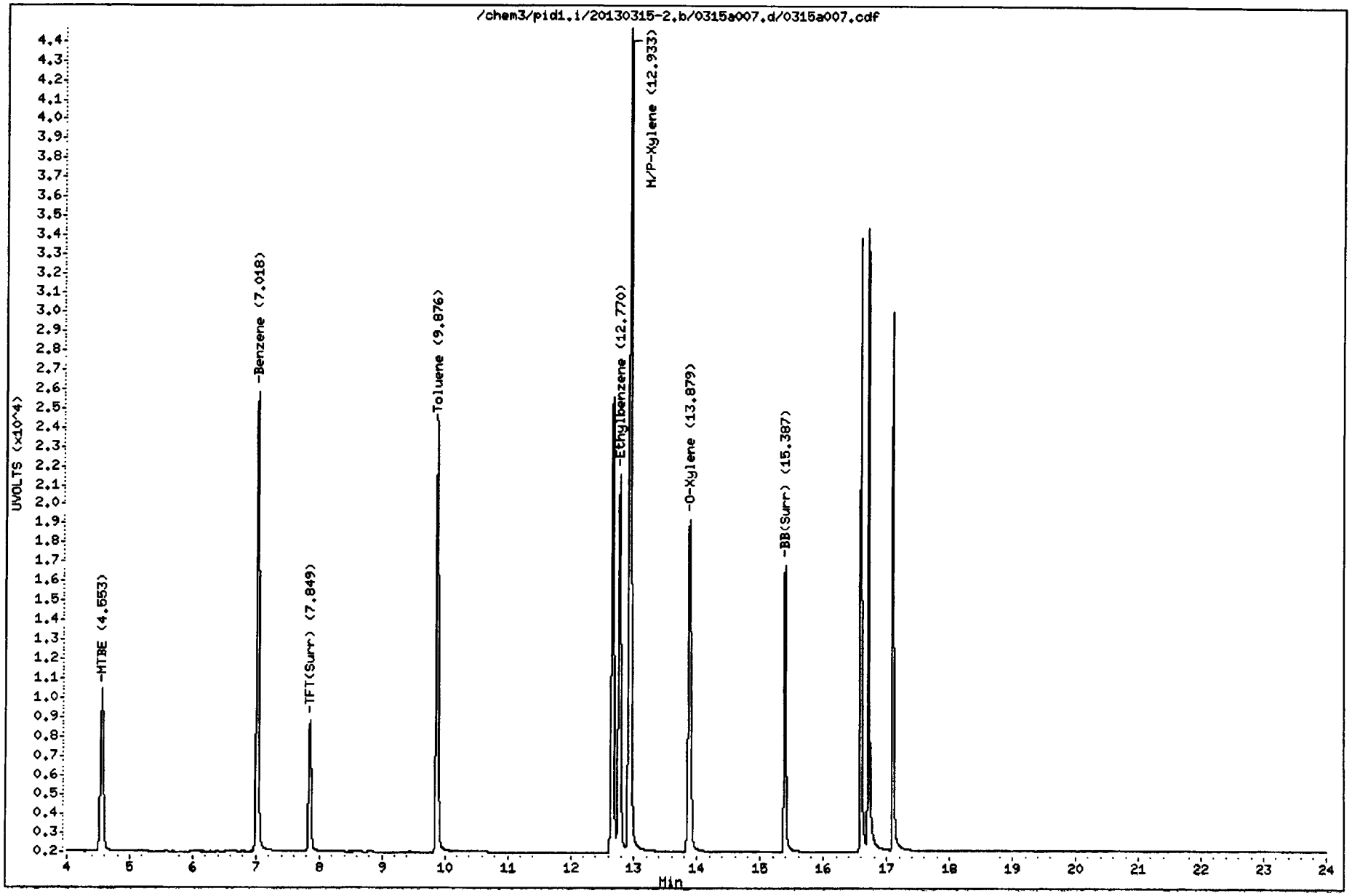
Sample Info: BTEX 100

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

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Data file 1: /chem3/pid1.i/20130315-1.b/0315a008.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a008.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 50
Client ID: BTEX 50
Injection Date: 15-MAR-2013 17:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.002	4405	55105	127.0	TFT(Surr)
15.379	-0.001	2832	23683	124.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	478314	1.336
8015C 2MP-TMB	(4.18 to 16.20)	723723	490467	0.678
AK101 nC6-nC10	(4.67 to 15.10)	582885	450238	0.772
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	478314	1.275

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	-0.002	5197	130.9	TFT(Surr)
15.387	0.000	11356	129.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.003	12285	51.18	Benzene
9.875	-0.001	11423	49.88	Toluene
12.768	0.005	9978	51.54	Ethylbenzene
12.930	0.003	21907	102.59	M/P-Xylene
13.877	-0.006	8837	51.80	O-Xylene
4.551	-0.003	4345	51.52	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

WLC7 01NC7

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130315-1.b/0315a008.d
Lab Smp Id: BTEX 50 Client Smp ID: BTEX 50
Inj Date : 15-MAR-2013 17:42
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 50
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 17:42 Cal File: 0315a008.d
Als bottle: 1 Calibration Sample, Level: 7
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	4.543	4.543	0.000	40228	50.0000	47.56
9	BENZENE	7.009	7.008	0.001	71259	50.0000	46.58
$ 10	TFT(Surr)	7.840	7.842	-0.002	4405	133.000	127.0
12	Toluene	9.867	9.867	0.000	69154	50.0000	47.42
14	ETHYLBENZENE	12.759	12.760	-0.001	5448	50.0000	47.47
15	M/P-XYLENE	12.921	12.918	0.003	127986	100.000	92.04
16	O-XYLENE	13.869	13.863	0.006	66691	50.0000	46.25
$ 18	BB(Surr)	15.379	15.380	-0.001	2832	133.000	124.1
21	nc11	16.698	16.698	0.000	5406	50.0000	

Data File: /chem3/pid1.i/20130315-1.b/0315a008.d

Date : 15-MAR-2013 17:42

Client ID: BTEX 50

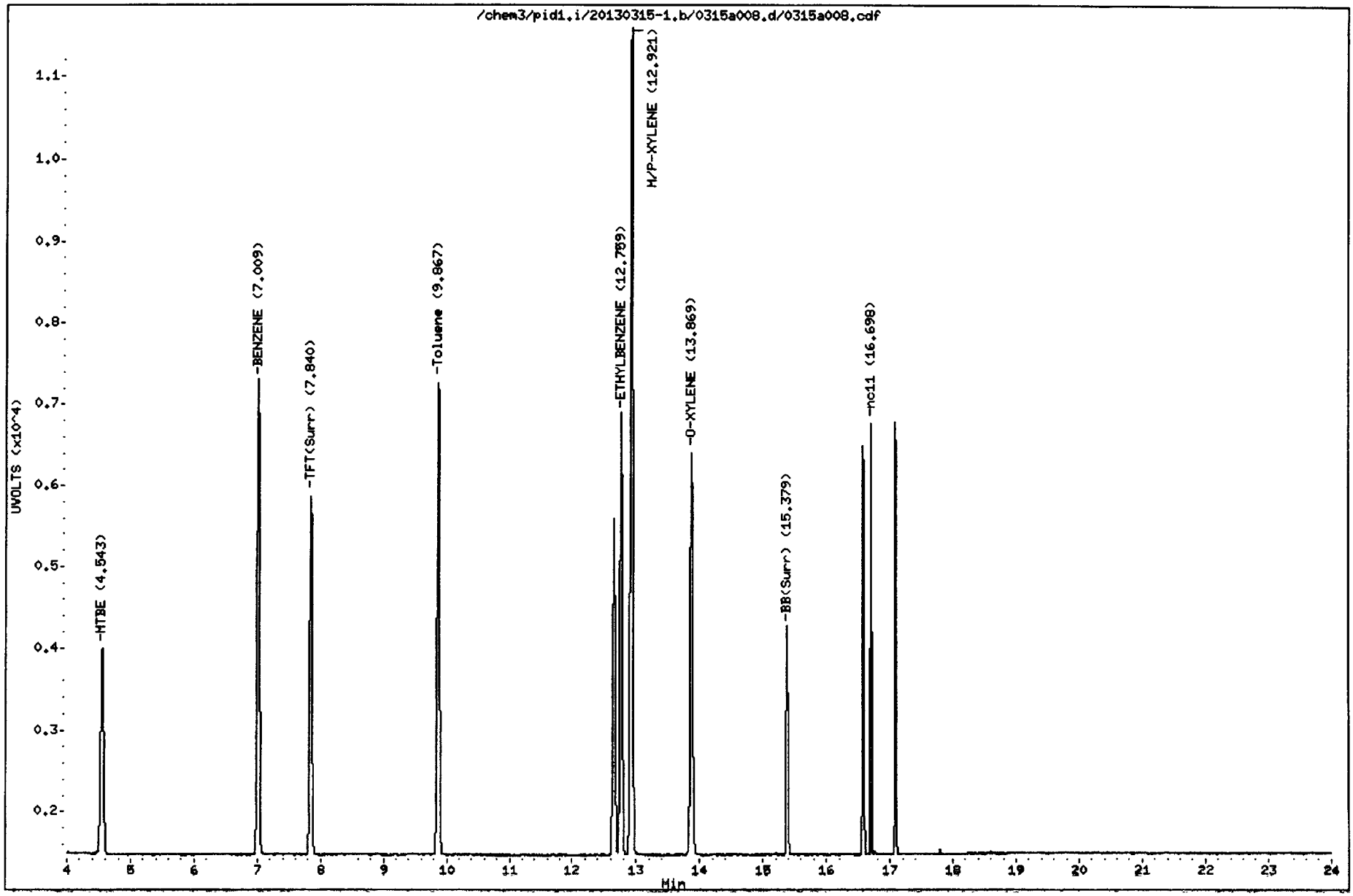
Sample Info: BTEX 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a008.d

Date : 15-MAR-2013 17:42

Client ID: BTEX 50

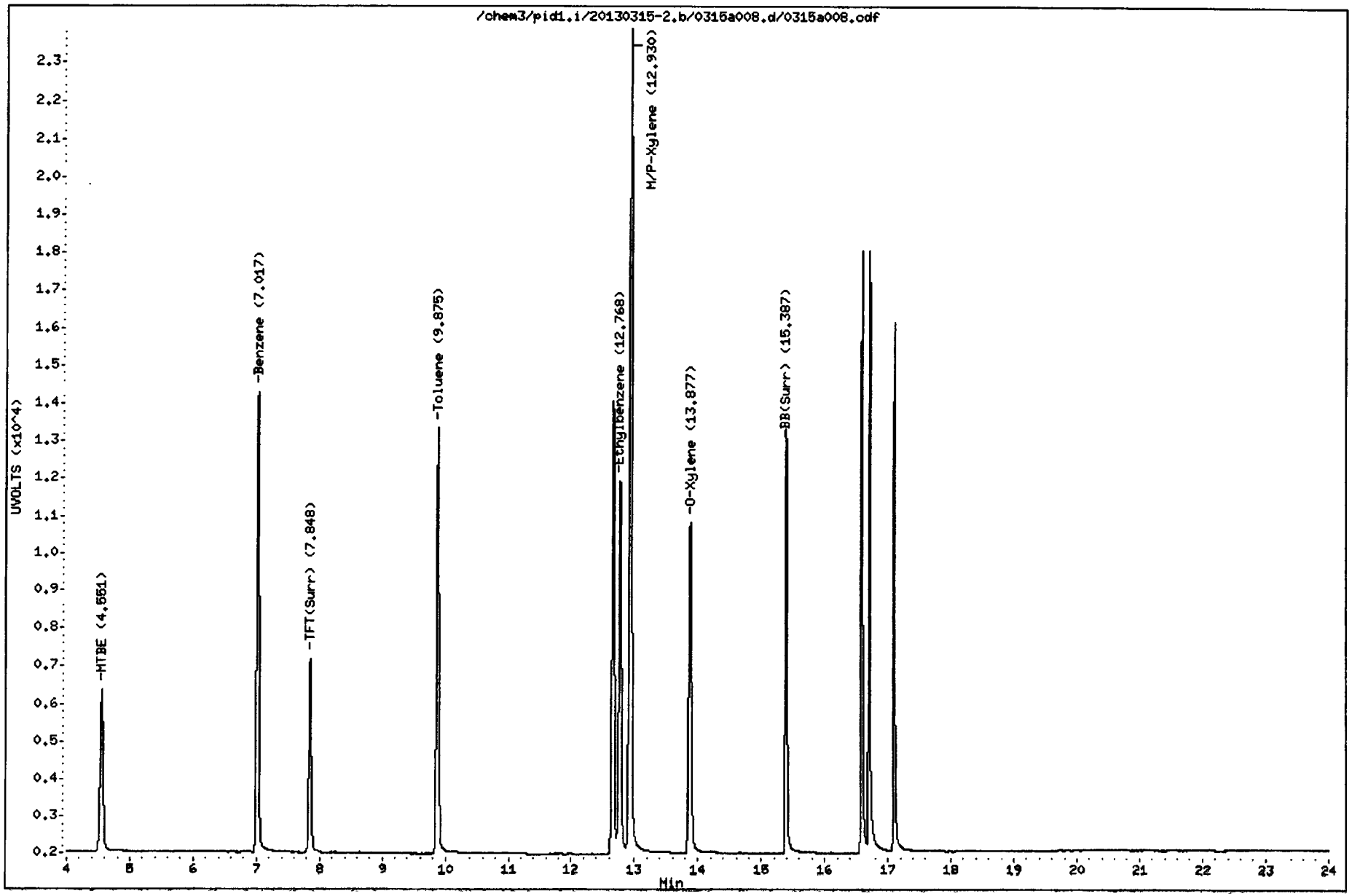
Sample Info: BTEX 50

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



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Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a009.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a009.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 25
Client ID: BTEX 25
Injection Date: 15-MAR-2013 18:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	-0.001	3314	41283	95.5	TFT(Surr)
15.380	0.000	2109	17986	92.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	250775	0.700
8015C 2MP-TMB	(4.18 to 16.20)	723723	256463	0.354
AK101 nC6-nC10	(4.67 to 15.10)	582885	235646	0.404
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	250775	0.669

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	-0.001	3850	97.0	TFT(Surr)
15.387	0.000	8328	94.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.003	6206	25.85	Benzene
9.876	-0.001	5790	25.28	Toluene
12.768	0.005	5070	26.19	Ethylbenzene
12.928	0.002	10974	51.39	M/P-Xylene
13.877	-0.007	4454	26.11	O-Xylene
4.552	-0.002	2153	25.53	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/20130315-1.b/0315a009.d
Lab Smp Id: BTEX 25 Client Smp ID: BTEX 25
Inj Date : 15-MAR-2013 18:11
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 18:11 Cal File: 0315a009.d
Als bottle: 1 Calibration Sample, Level: 6
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	4.545	4.543	0.002	20816	25.0000	24.61
	9 BENZENE	7.009	7.008	0.001	37130	25.0000	24.27
$	10 TFT(Surr)	7.841	7.842	-0.001	3314	100.000	95.54
	12 Toluene	9.868	9.867	0.001	36242	25.0000	24.85
	14 ETHYLBENZENE	12.760	12.760	0.000	2869	25.0000	25.00
	15 M/P-XYLENE	12.920	12.918	0.002	66907	50.0000	48.11
	16 O-XYLENE	13.868	13.863	0.005	35063	25.0000	24.32
$	18 BB(Surr)	15.380	15.380	0.000	2109	100.000	92.41
	21 nc11	16.698	16.698	0.000	2862	25.0000	

Data File: /chem3/pid1.i/20130315-1.b/0315a009.d

Date : 15-MAR-2013 18:11

Client ID: BTEX 25

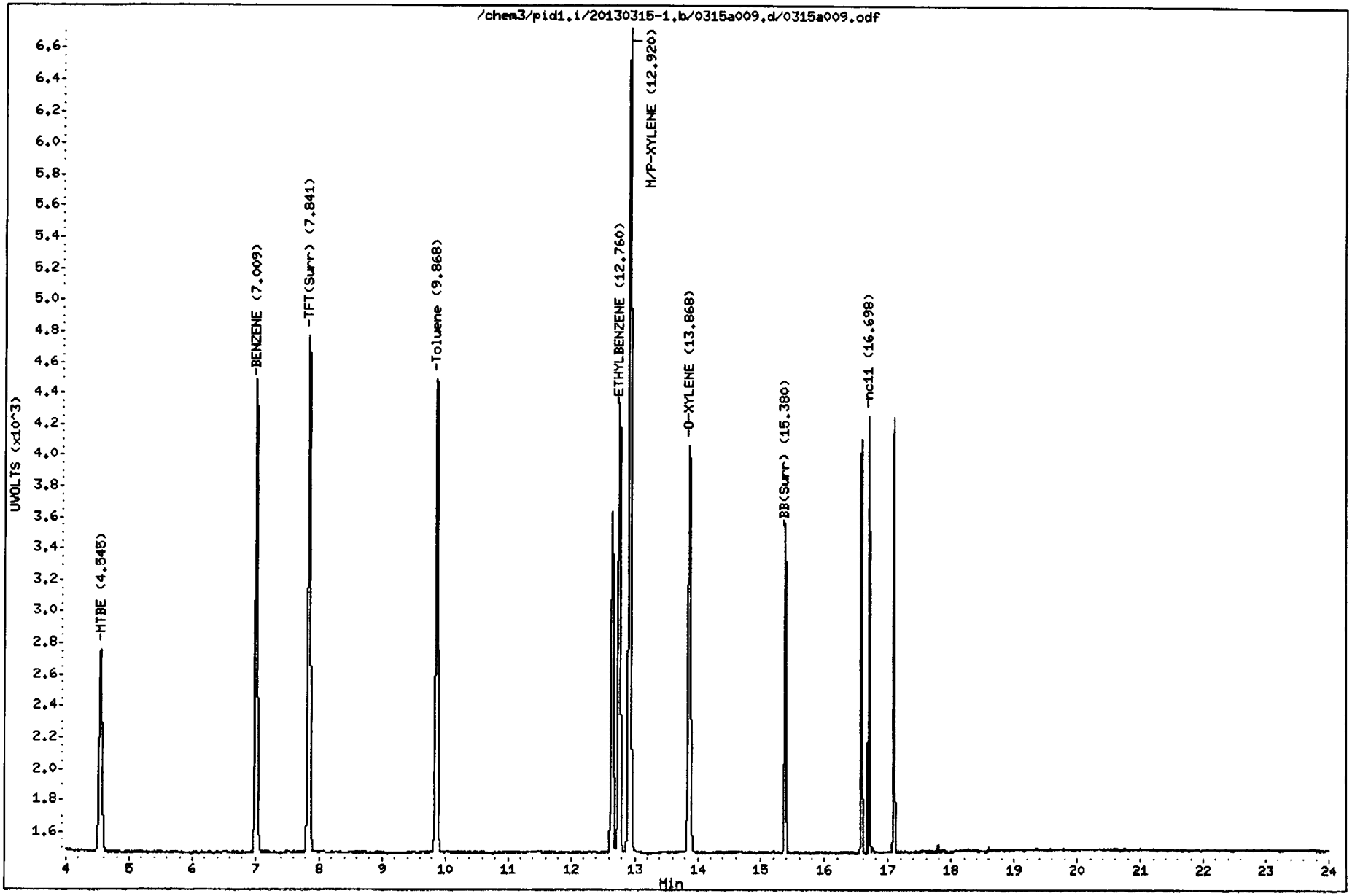
Sample Info: BTEX 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a009.d

Date : 15-MAR-2013 18:11

Client ID: BTEX 25

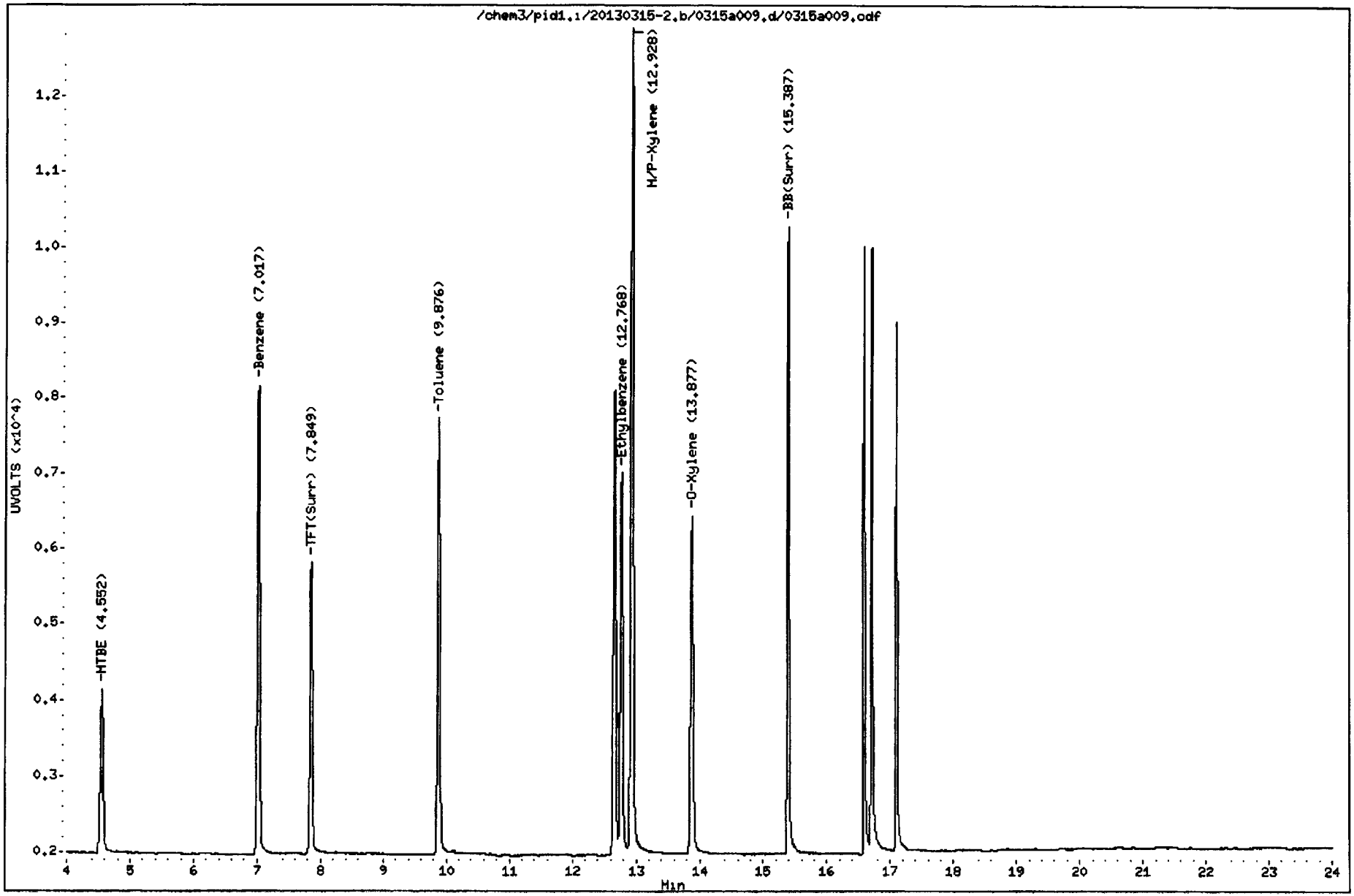
Sample Info: BTEX 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



PC
3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a010.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a010.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 5
Client ID: BTEX 5
Injection Date: 15-MAR-2013 18:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	-0.001	2268	28456	65.4	TFT(Surr)
15.379	-0.001	1489	12609	65.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	53589	0.150
8015C 2MP-TMB	(4.18 to 16.20)	723723	54562	0.075
AK101 nC6-nC10	(4.67 to 15.10)	582885	50116	0.086
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	53589	0.143

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	-0.001	2583	65.1	TFT(Surr)
15.387	0.000	5711	65.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	-0.002	1248	5.20	Benzene
9.876	-0.001	1168	5.10	Toluene
12.768	0.005	1012	5.23	Ethylbenzene
12.928	0.002	2188	10.25	M/P-Xylene
13.877	-0.007	874	5.12	O-Xylene
4.553	-0.001	426	5.05	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/20130315-1.b/0315a010.d
Lab Smp Id: BTEX 5 Client Smp ID: BTEX 5
Inj Date : 15-MAR-2013 18:40
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 18:40 Cal File: 0315a010.d
Als bottle: 1 Calibration Sample, Level: 5
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	4.545	4.543	0.002	4446	5.00000	5.26
	9 BENZENE	7.011	7.008	0.003	7904	5.00000	5.17
$	10 TFT(Surr)	7.841	7.842	-0.001	2268	67.0000	65.38
	12 Toluene	9.868	9.867	0.001	7770	5.00000	5.33
	14 ETHYLBENZENE	12.760	12.760	0.000	615	5.00000	5.36
	15 M/P-XYLENE	12.919	12.918	0.001	14208	10.0000	10.22
	16 O-XYLENE	13.868	13.863	0.005	7572	5.00000	5.25
$	18 BB(Surr)	15.379	15.380	-0.001	1489	67.0000	65.24
	21 nc11	16.699	16.698	0.001	607	5.00000	

Data File: /chem3/pid1.i/20130315-1.b/0315a010.d

Date : 15-MAR-2013 18:40

Client ID: BTEX 5

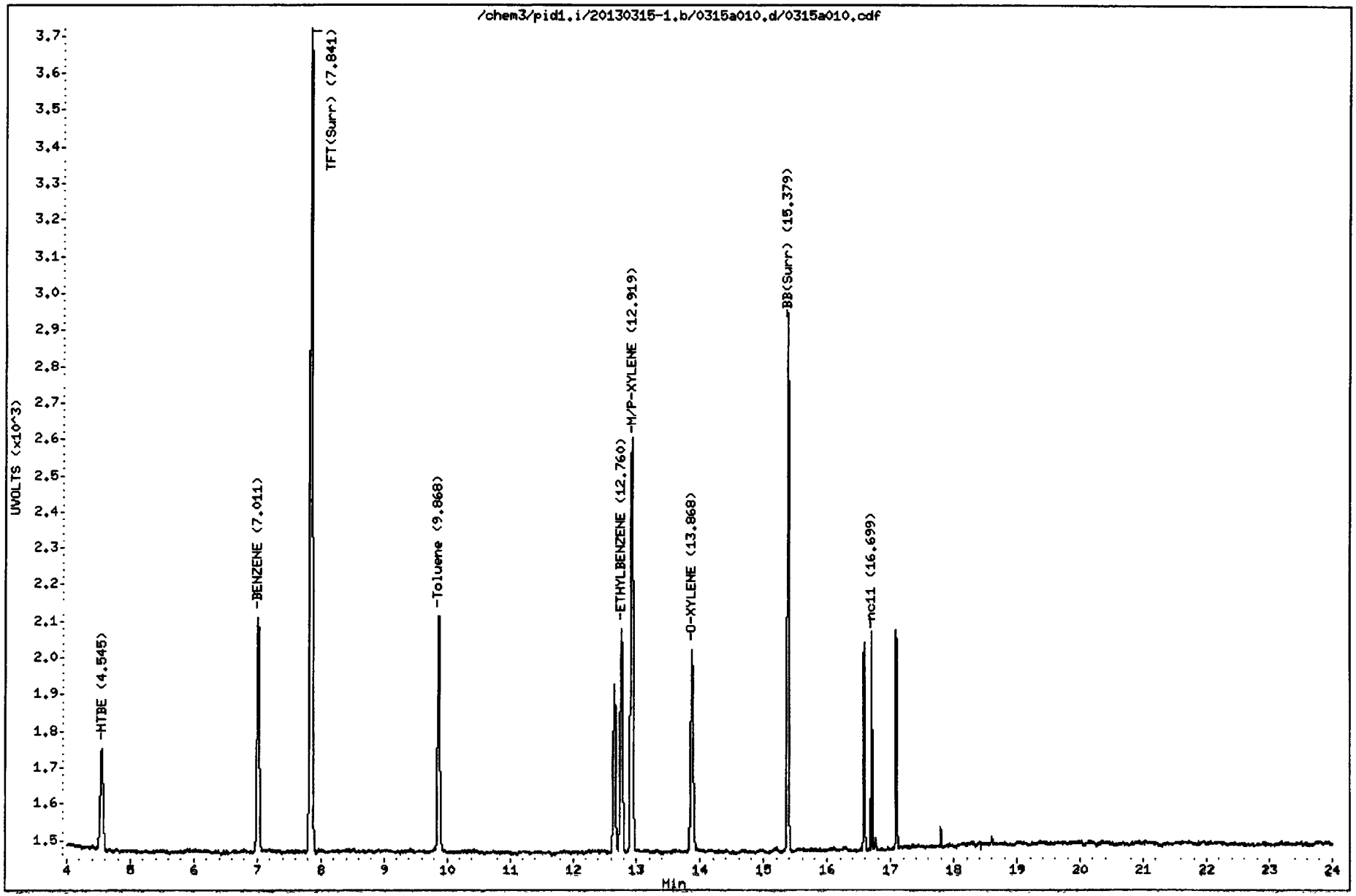
Sample Info: BTEX 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a010.d

Date : 15-MAR-2013 18:40

Client ID: BTEX 5

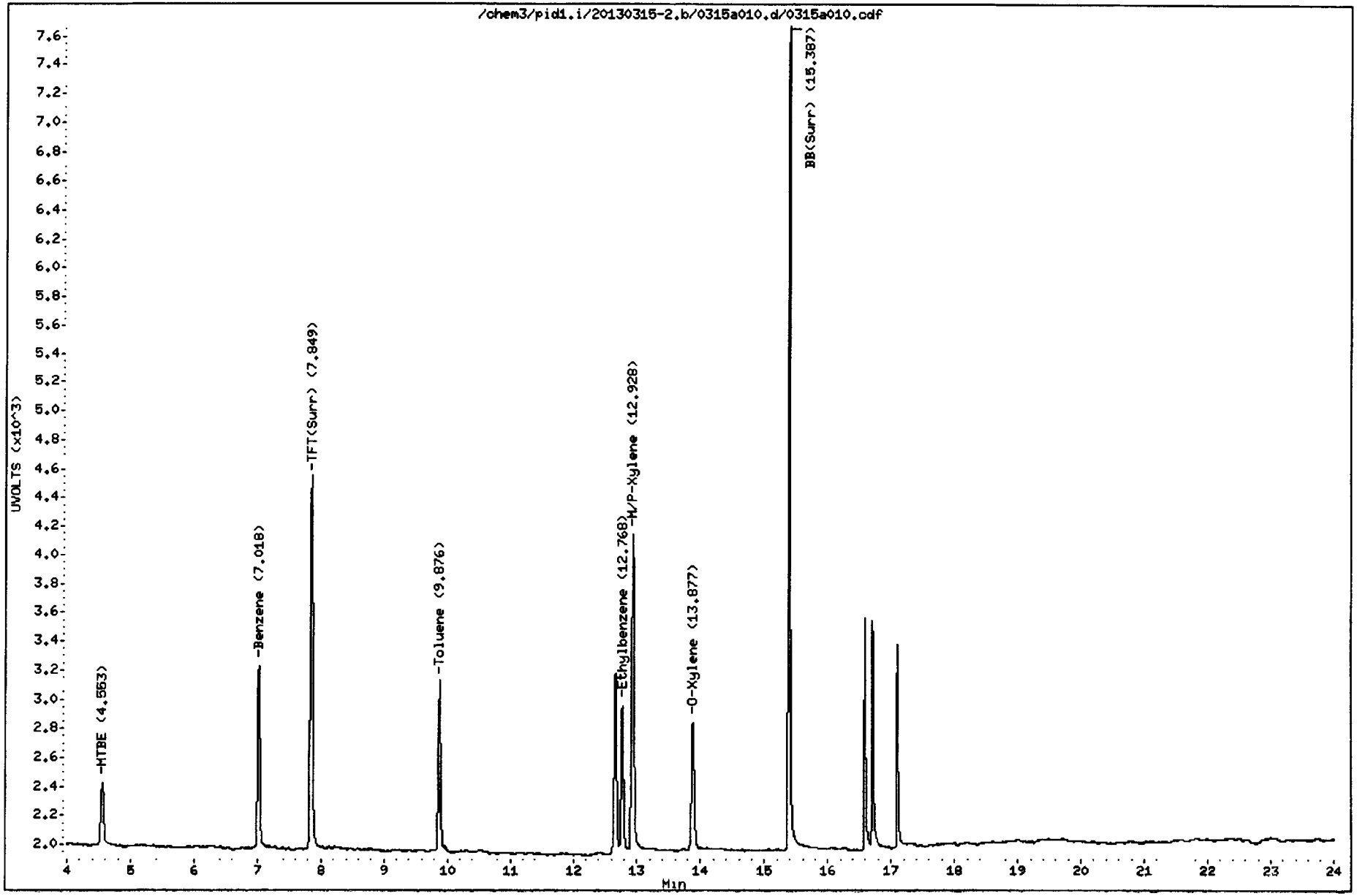
Sample Info: BTEX 5

Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 PID

Column diameter: 0.18



MG 3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a011.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a011.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 1
Client ID: BTEX 1
Injection Date: 15-MAR-2013 19:09
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	-0.001	1508	18779	43.5	TFT(Surr)
15.379	-0.001	993	8240	43.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	11073	0.031
8015C 2MP-TMB	(4.18 to 16.20)	723723	11257	0.016
AK101 nC6-nC10	(4.67 to 15.10)	582885	10313	0.018
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	11073	0.030

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	-0.001	1691	42.6	TFT(Surr)
15.386	0.000	3726	42.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	-0.002	229	0.95	Benzene
9.876	-0.001	213	0.93	Toluene
12.769	0.005	186	0.96	Ethylbenzene
12.928	0.001	415	1.94	M/P-Xylene
13.876	-0.008	166	0.97	O-Xylene
4.550	-0.003	79	0.94N	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/20130315-1.b/0315a011.d
Lab Smp Id: BTEX 1 Client Smp ID: BTEX 1
Inj Date : 15-MAR-2013 19:09
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 1
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 19:09 Cal File: 0315a011.d
Als bottle: 1 Calibration Sample, Level: 4
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	4.548	4.543	0.005	943	1.00000	1.11
	9 BENZENE	7.010	7.008	0.002	1579	1.00000	1.03
$	10 TFT(Surr)	7.841	7.842	-0.001	1508	44.0000	43.47
	12 Toluene	9.867	9.867	0.000	1611	1.00000	1.10
	14 ETHYLBENZENE	12.762	12.760	0.002	124	1.00000	1.08
	15 M/P-XYLENE	12.919	12.918	0.001	3087	2.00000	2.22
	16 O-XYLENE	13.868	13.863	0.005	1434	1.00000	0.994
$	18 BB(Surr)	15.379	15.380	-0.001	993	44.0000	43.51
	21 nc11	16.699	16.698	0.001	126	1.00000	

Data File: /chem3/pid1.i/20130315-1.b/0315a011.d

Date : 15-MAR-2013 19:09

Client ID: BTEX 1

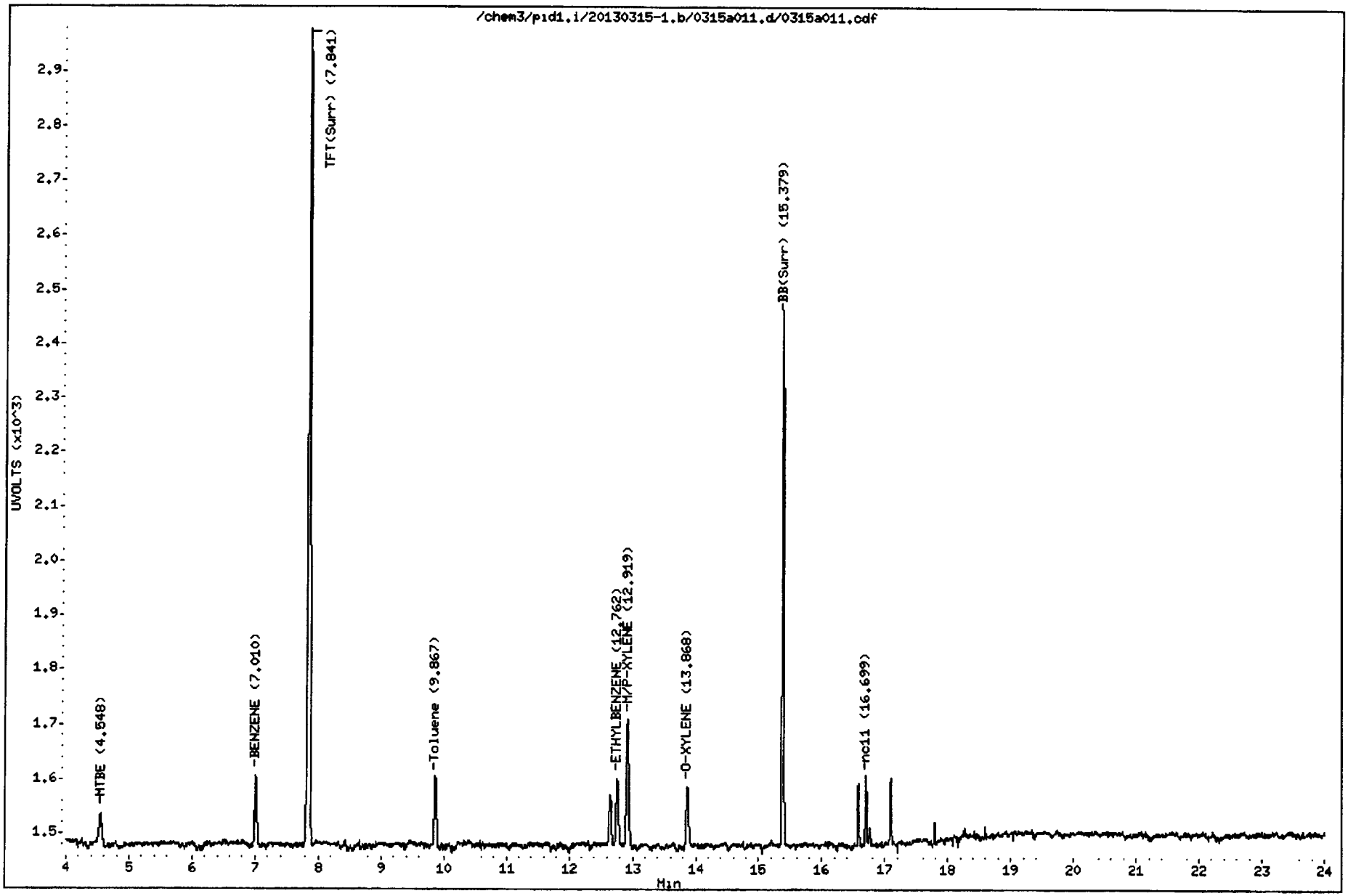
Sample Info: BTEX 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a011.d

Date : 15-MAR-2013 19:09

Client ID: BTEX 1

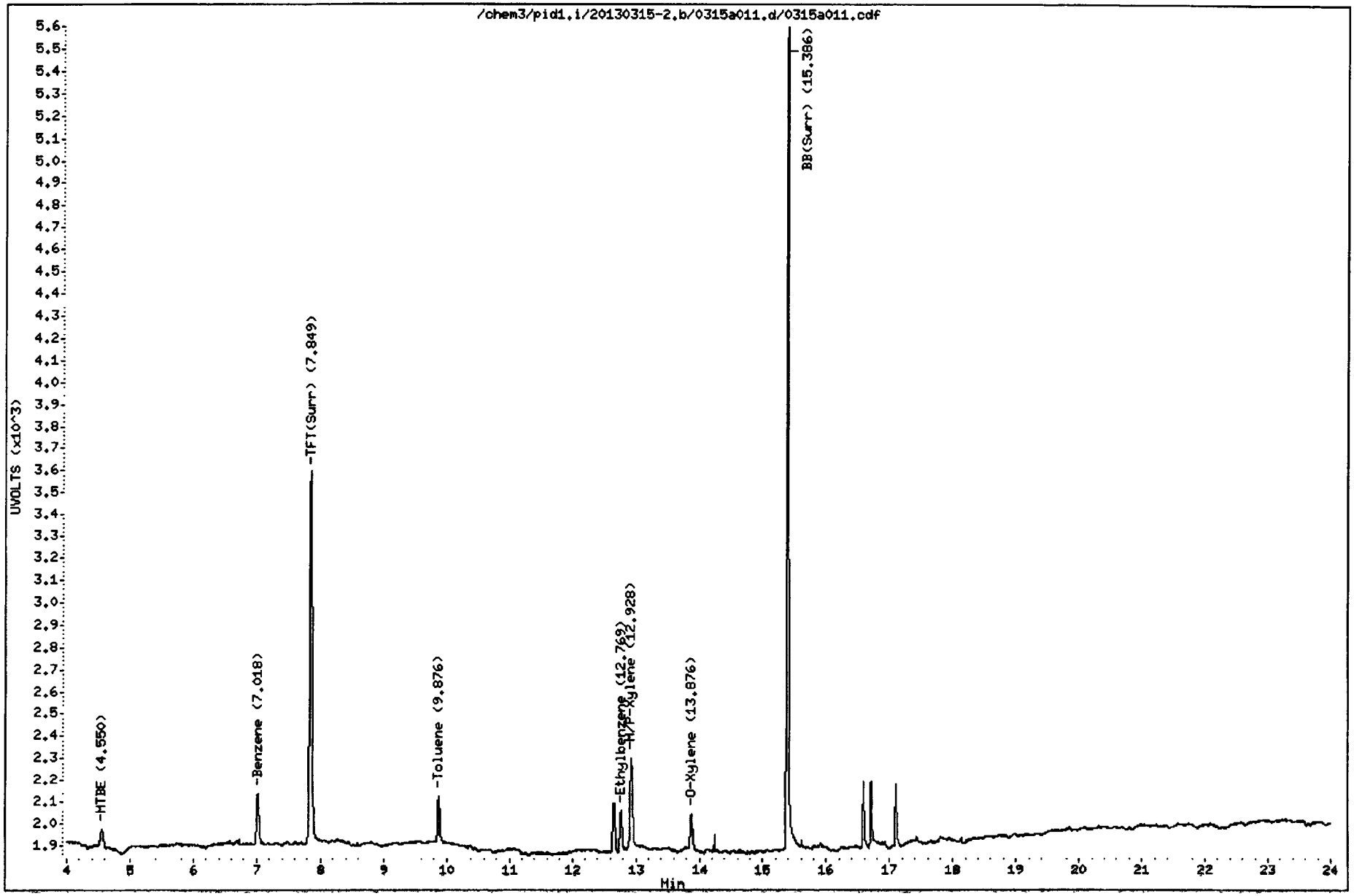
Sample Info: BTEX 1

Instrument: pid1.i

Operator: LH

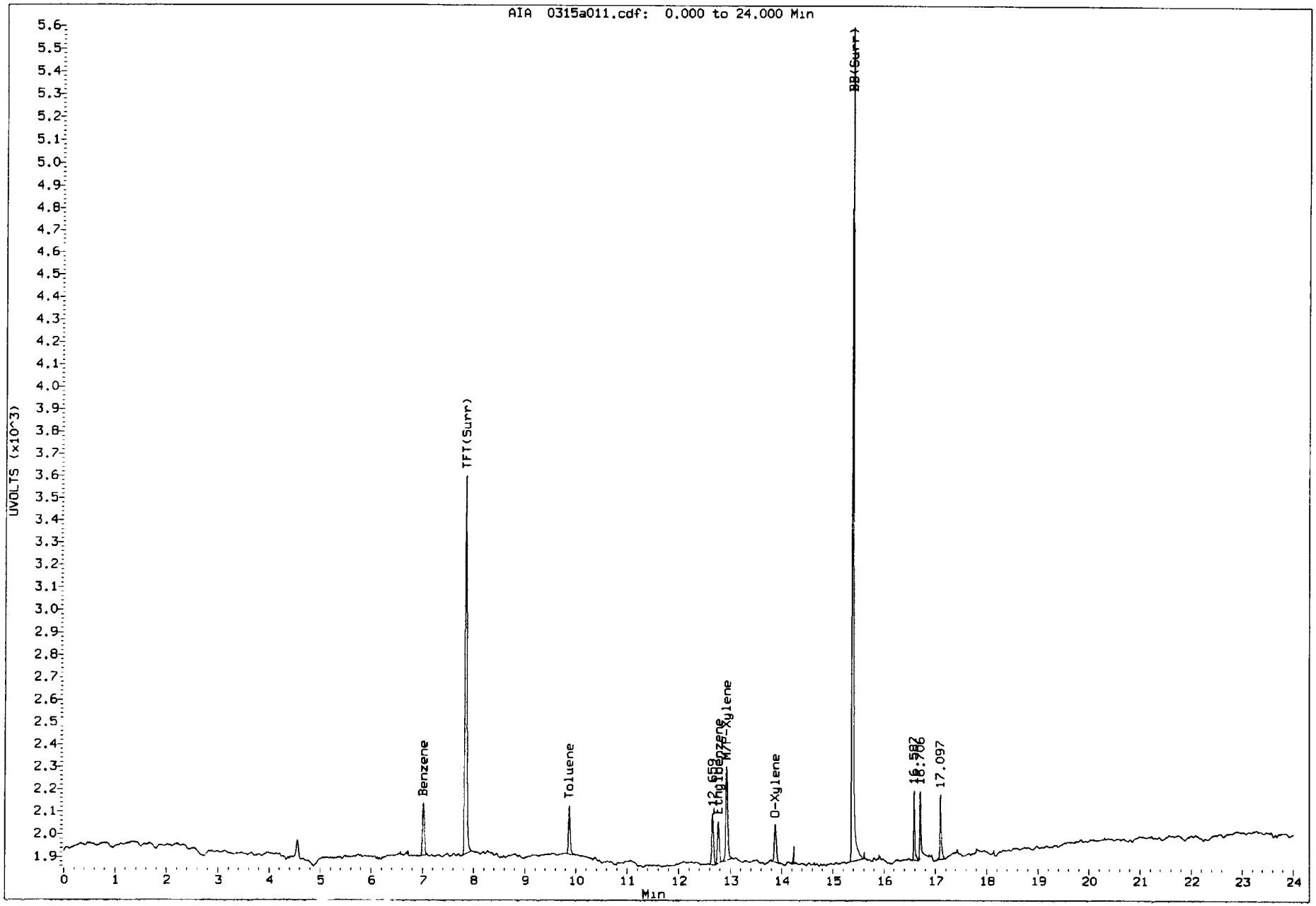
Column phase: RTX 502-2 PID

Column diameter: 0.18



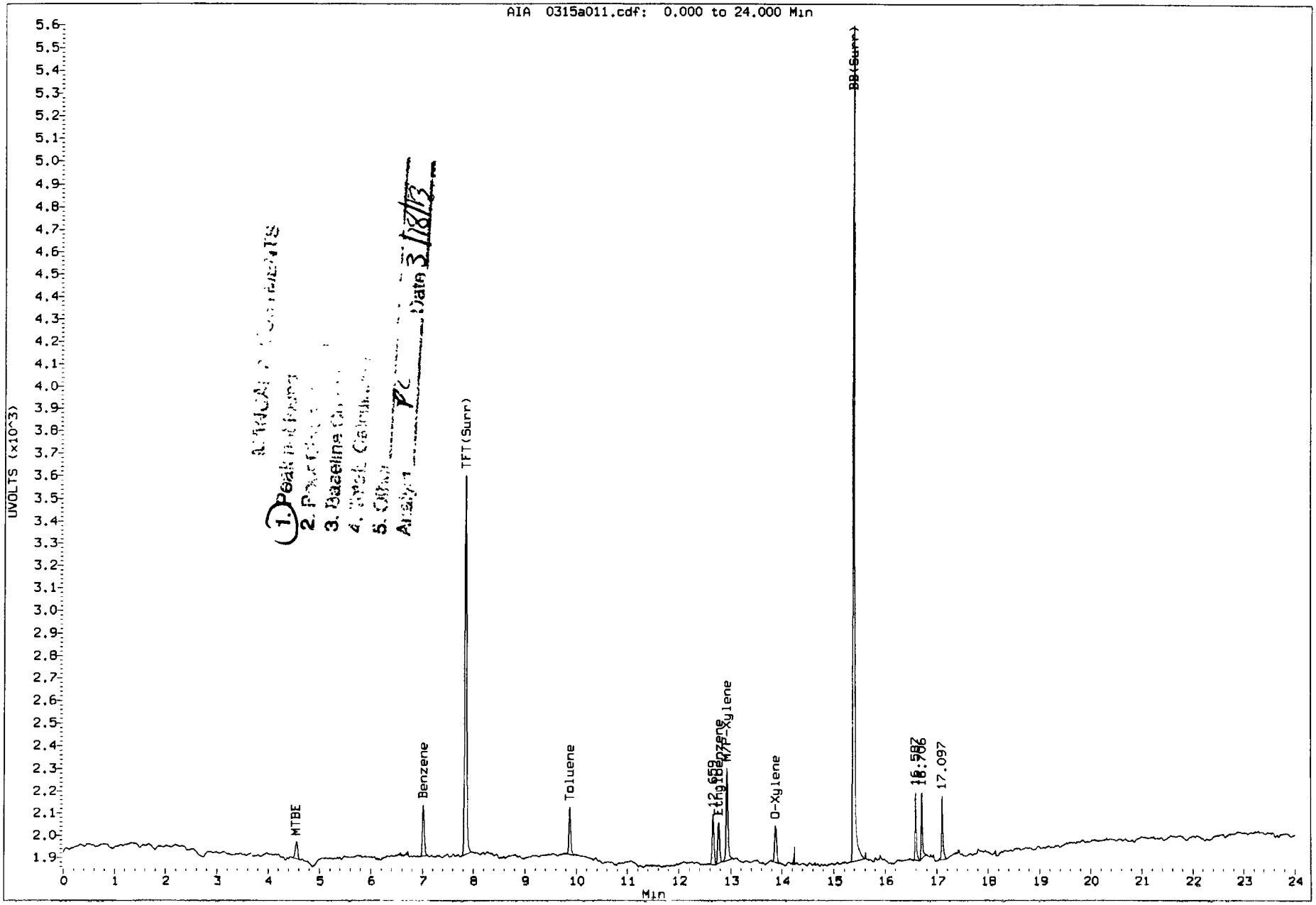
3/18/13

Data File: /chem3/pid1.1/20130315-2.b/0315a011.d/0315a011.cdf
Injection Date: 15-MAR-2013 19:09
Instrument: pid1.1
Client Sample ID: BTEX 1



FILE: 031503

Data File: /chem3/pid1.i/20130315-2.b/0315a011.d/0315a011.cdf
Injection Date: 15-MAR-2013 19:09
Instrument: pid1.i
Client Sample ID: BTEX 1



VC 3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a012.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a012.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 0.5
Client ID: BTEX 0.5
Injection Date: 15-MAR-2013 19:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.002	874	11084	25.2	TFT(Surr)
15.380	0.000	592	5049	25.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	4770	0.013 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	5110	0.007 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	4619	0.008 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	4770	0.013 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
7.850	0.000	944	23.8	TFT(Surr)
15.387	0.000	2150	24.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.003	120	0.50N	Benzene
9.873	-0.003	125	0.55N	Toluene
12.767	0.003	94	0.49N	Ethylbenzene
12.927	0.000	207	0.97N	M/P-Xylene
13.873	-0.010	81	0.47N	O-Xylene
4.550	-0.003	41	0.49N	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/20130315-1.b/0315a012.d
Lab Smp Id: BTEX 0.5 Client Smp ID: BTEX 0.5
Inj Date : 15-MAR-2013 19:39
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 0.5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 19:39 Cal File: 0315a012.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

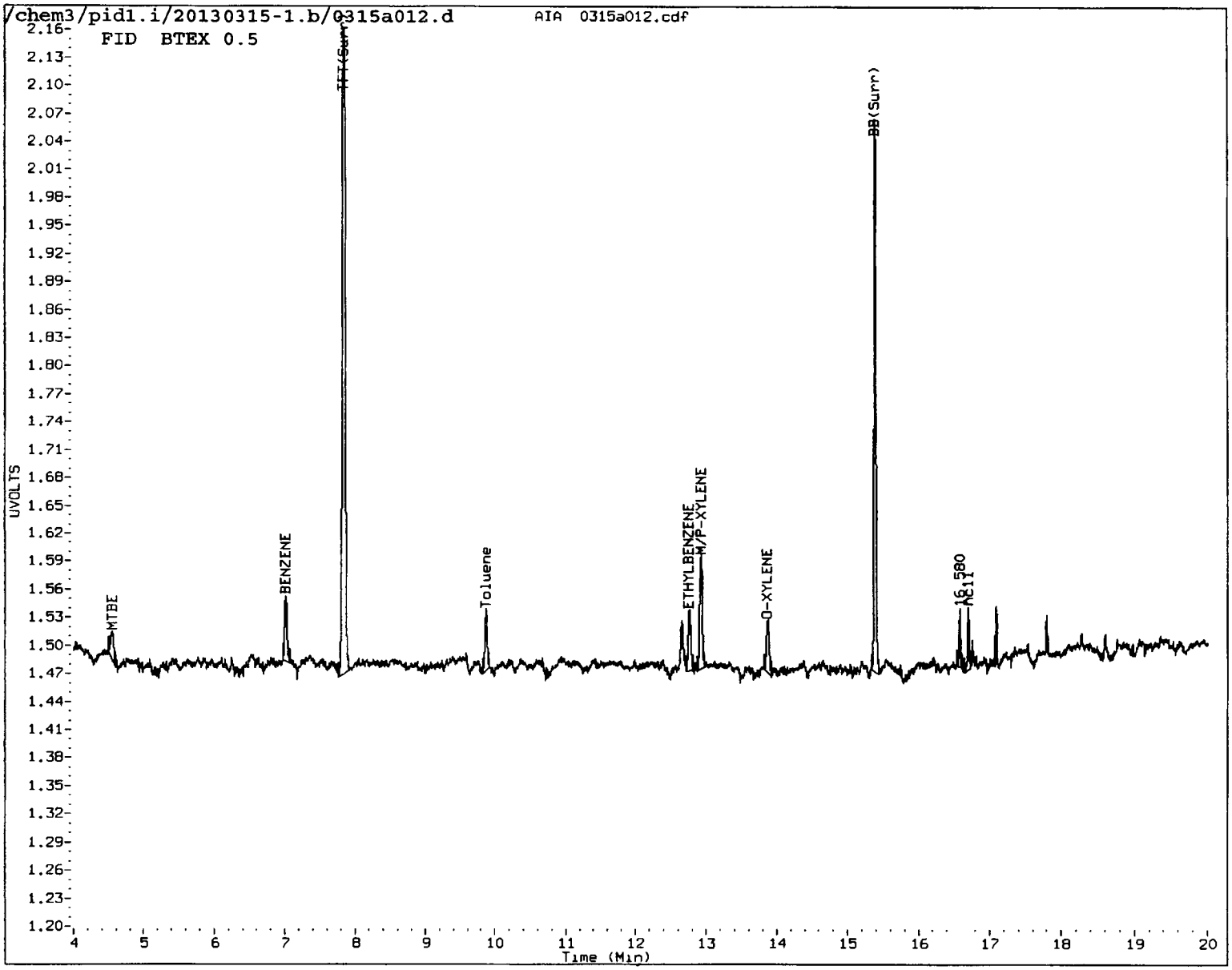
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.550	4.543	0.007	491	0.50000	0.580(M)
	9 BENZENE	7.013	7.008	0.005	818	0.50000	0.535
$	10 TFT(Surr)	7.840	7.842	-0.002	874	22.0000	25.20(M)
	12 Toluene	9.867	9.867	0.000	745	0.50000	0.511(M)
	14 ETHYLBENZENE	12.760	12.760	0.000	65	0.50000	0.566(M)
	15 M/P-XYLENE	12.920	12.918	0.002	1506	1.00000	1.08(M)
	16 O-XYLENE	13.867	13.863	0.004	758	0.50000	0.526(M)
$	18 BB(Surr)	15.380	15.380	0.000	592	22.0000	25.94(M)
	21 nc11	16.698	16.698	0.000	67	0.50000	

QC Flag Legend

M - Compound response manually integrated.



MANUAL INTEGRATION

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

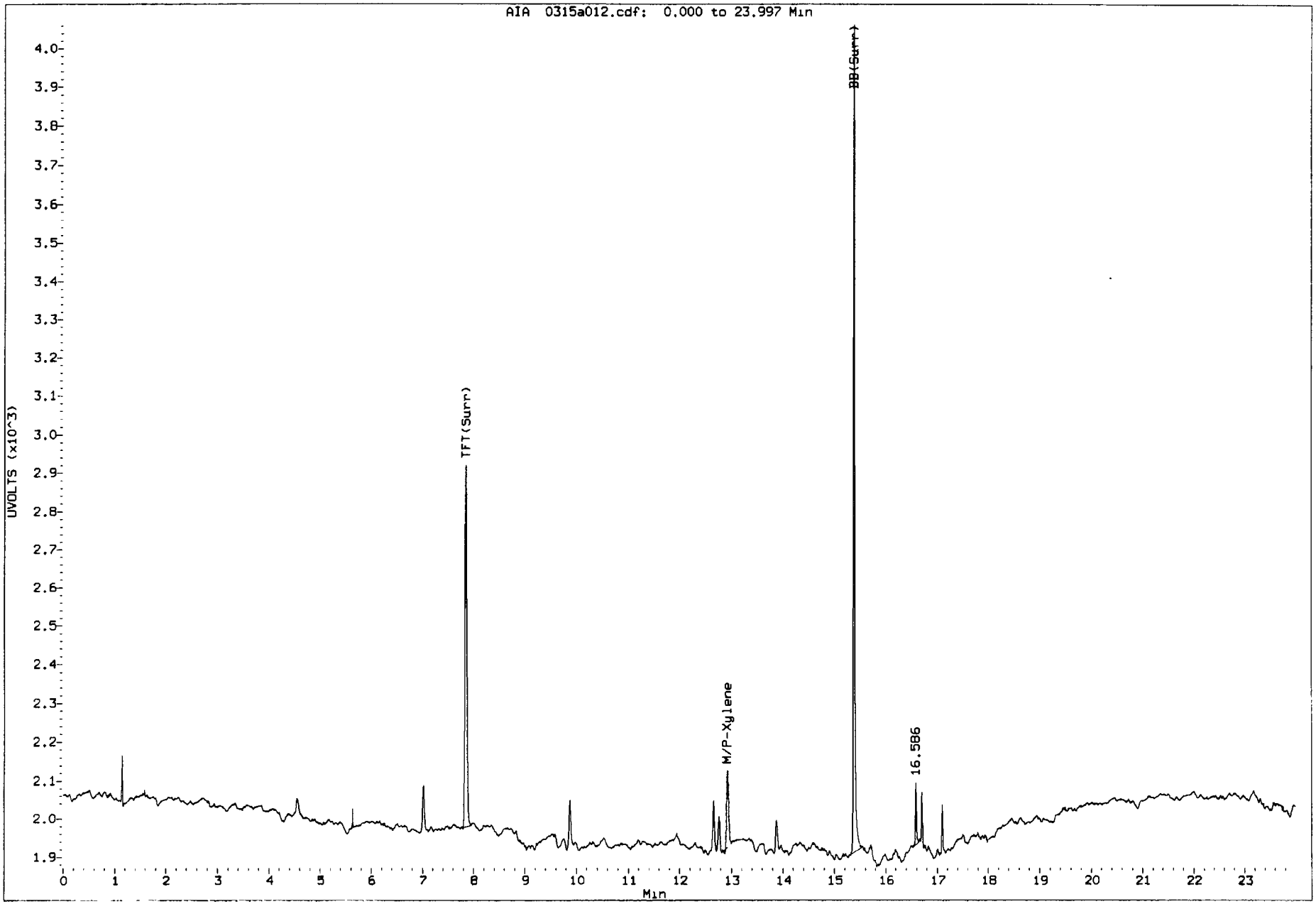
5. Other _____

Analyst: RC Date: 3/18/13

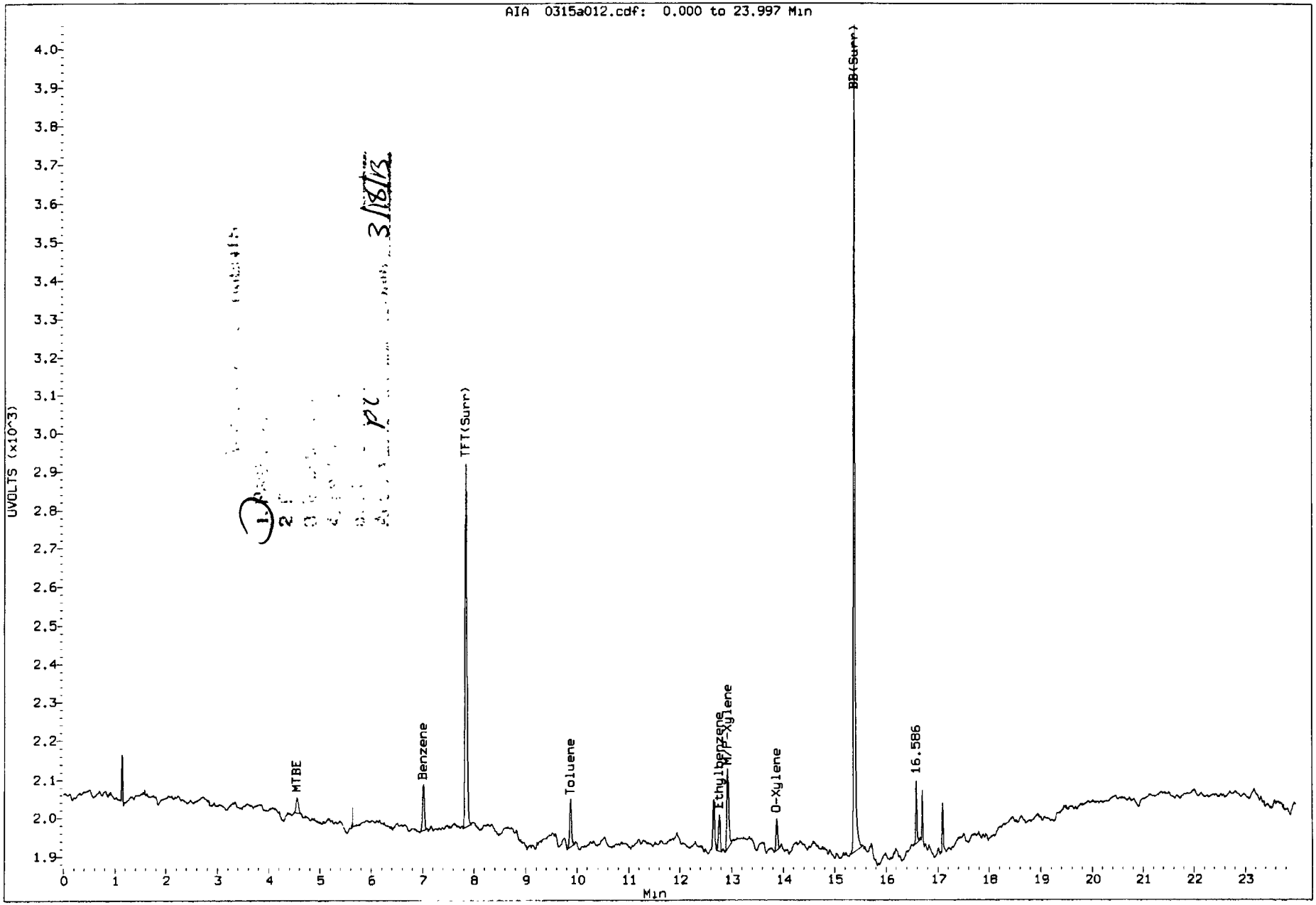
WLS7:01:07

3/18/13

Data File: /chem3/pid1.1/20130315-2.b/0315a012.d/0315a012.cdf
Injection Date: 15-MAR-2013 19:39
Instrument: pid1.1
Client Sample ID: BTEX 0.5



Data File: /chem3/pid1.i/20130315-2.b/0315a012.d/0315a012.cdf
Injection Date: 15-MAR-2013 19:39
Instrument: pid1.i
Client Sample ID: BTEX 0.5



3/18/13

ULC7 94198

Data File: /chem3/pid1.i/20130315-1.b/0315a012.d

Date : 15-MAR-2013 19:39

Client ID: BTEX 0.5

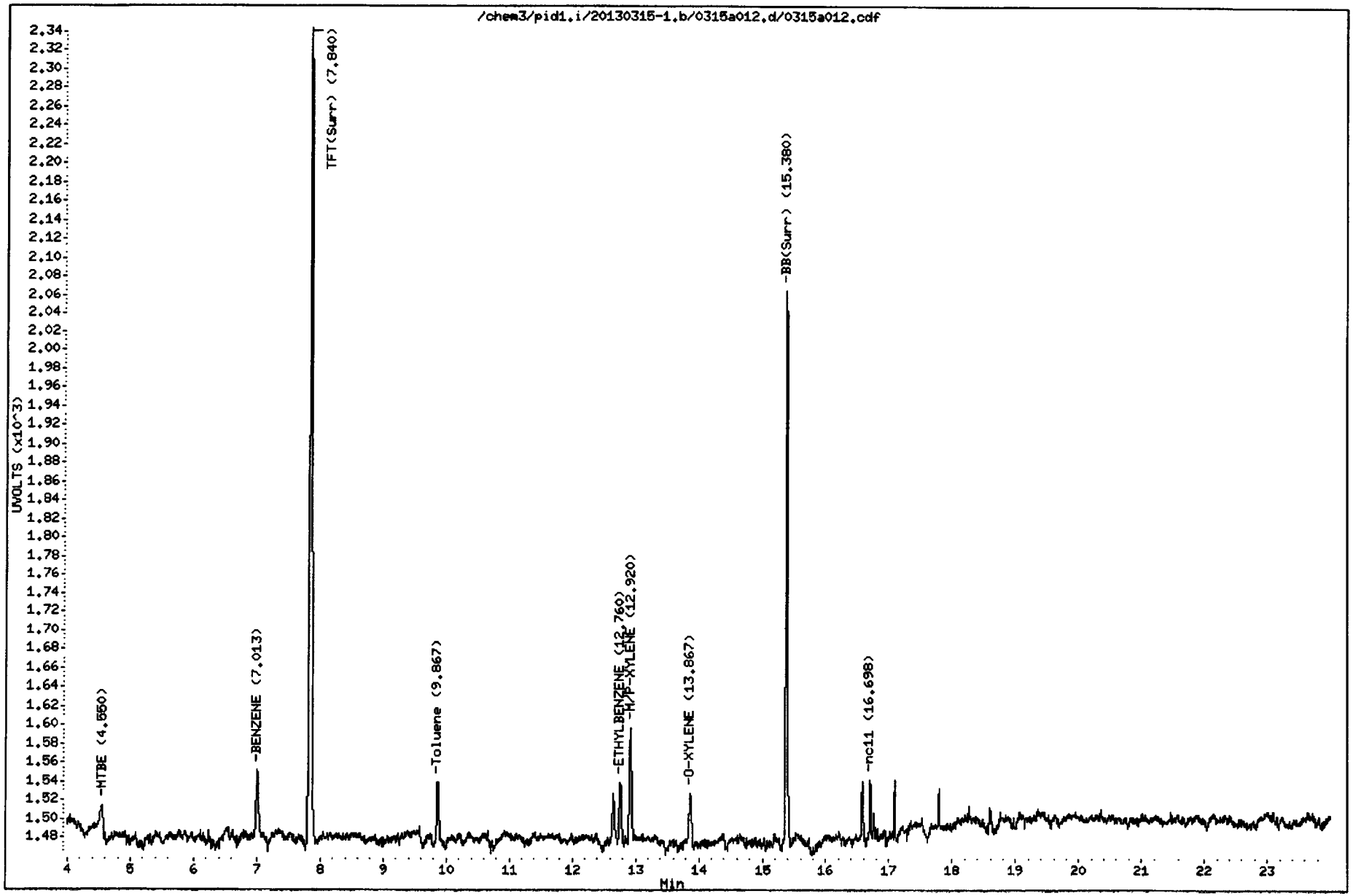
Sample Info: BTEX 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a012.d

Date : 15-MAR-2013 19:39

Client ID: BTEX 0.5

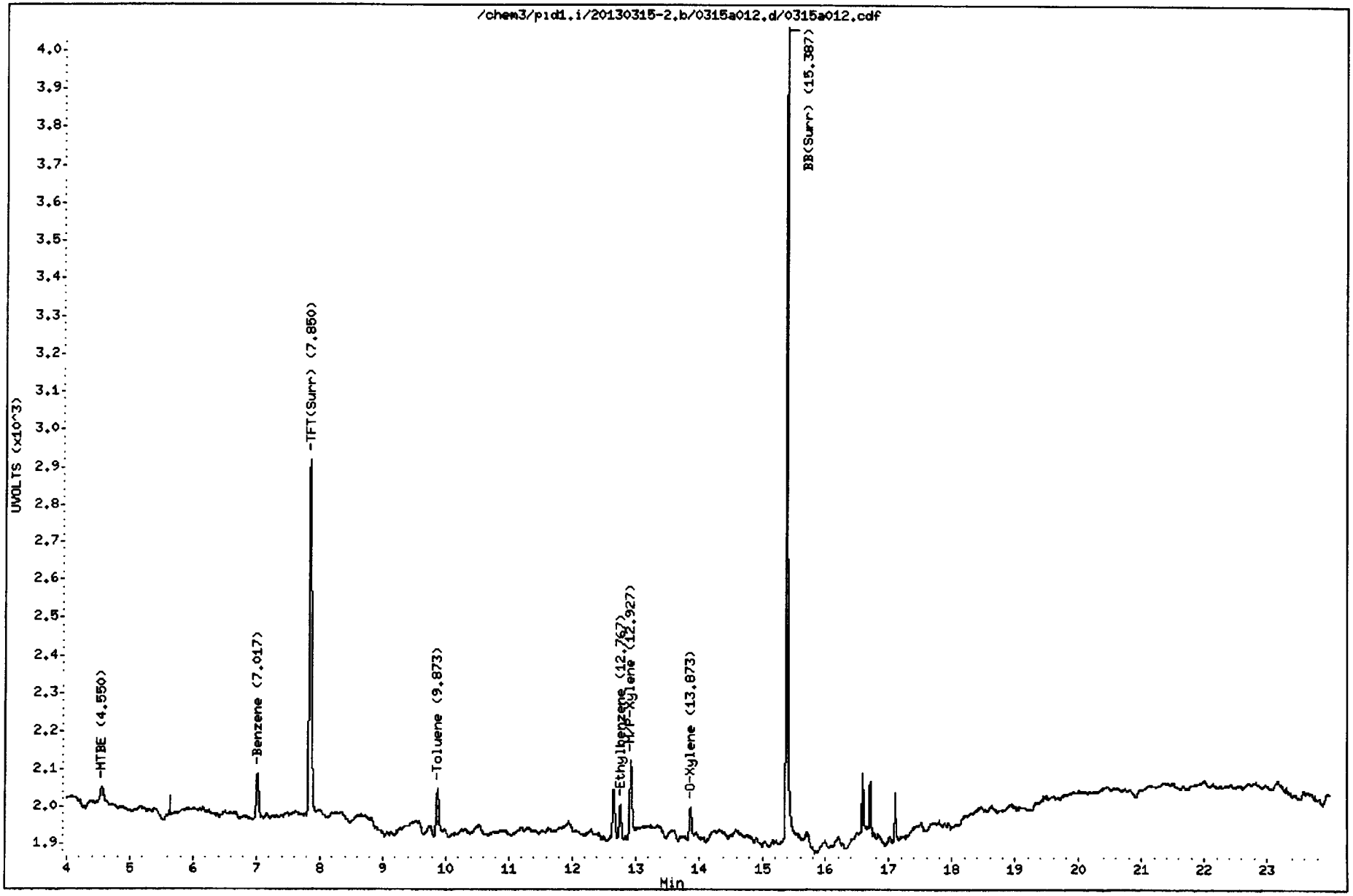
Sample Info: BTEX 0.5

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

PC 3/18/13

Data file 1: /chem3/pid1.i/20130315-1.b/0315a013.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a013.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 0.25
Client ID: BTEX 0.25
Injection Date: 15-MAR-2013 20:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.842	0.000	421	5172	12.1	TFT(Surr)
15.380	0.000	296	2337	13.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	1991	0.006 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	2657	0.004 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	2455	0.004 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	1991	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
7.850	0.000	456	11.5	TFT(Surr)
15.387	0.000	1061	12.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	0.000	56	0.23N	Benzene
9.877	0.000	56	0.24N	Toluene
12.763	0.000	44	0.23N	Ethylbenzene
12.927	0.000	104	0.49N	M/P-Xylene
13.883	0.000	40	0.23N	O-Xylene
4.553	0.000	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/20130315-1.b/0315a013.d
Lab Smp Id: BTEX 0.25 Client Smp ID: BTEX 0.25
Inj Date : 15-MAR-2013 20:08
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 0.25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 20:08 Cal File: 0315a013.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

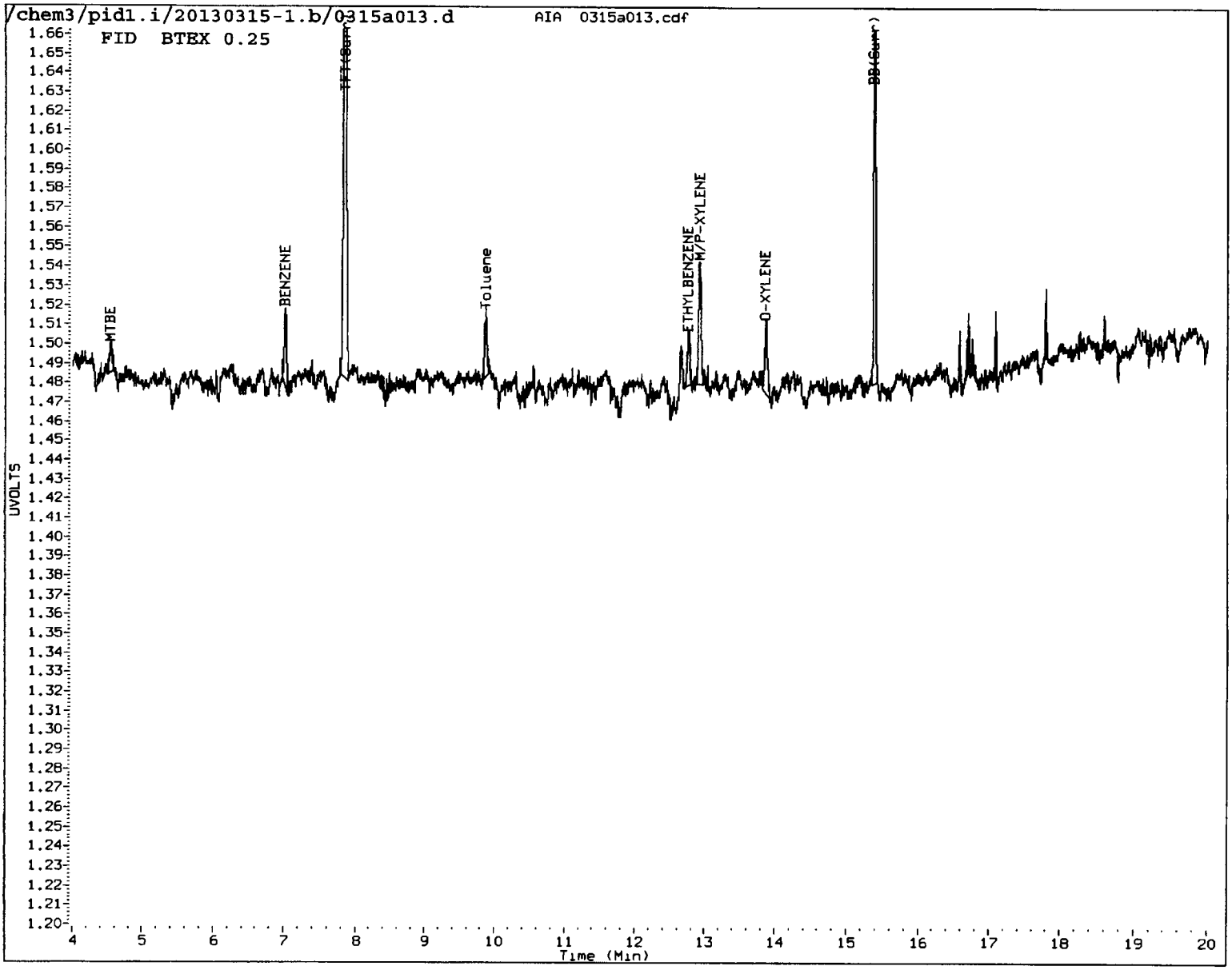
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
6	MTBE	4.543	4.543	0.000	201	0.25000	0.238(M)
9	BENZENE	7.008	7.008	0.000	463	0.25000	0.303
$ 10	TFT(Surr)	7.842	7.842	0.000	421	11.0000	12.14
12	Toluene	9.867	9.867	0.000	392	0.25000	0.269(M)
14	ETHYLBENZENE	12.760	12.760	0.000	28	0.25000	0.244(M)
15	M/P-XYLENE	12.918	12.918	0.000	810	0.50000	0.582
16	O-XYLENE	13.863	13.863	0.000	457	0.25000	0.317(M)
$ 18	BB(Surr)	15.380	15.380	0.000	296	11.0000	12.97

QC Flag Legend

M - Compound response manually integrated.



MANUAL INTEGRATION

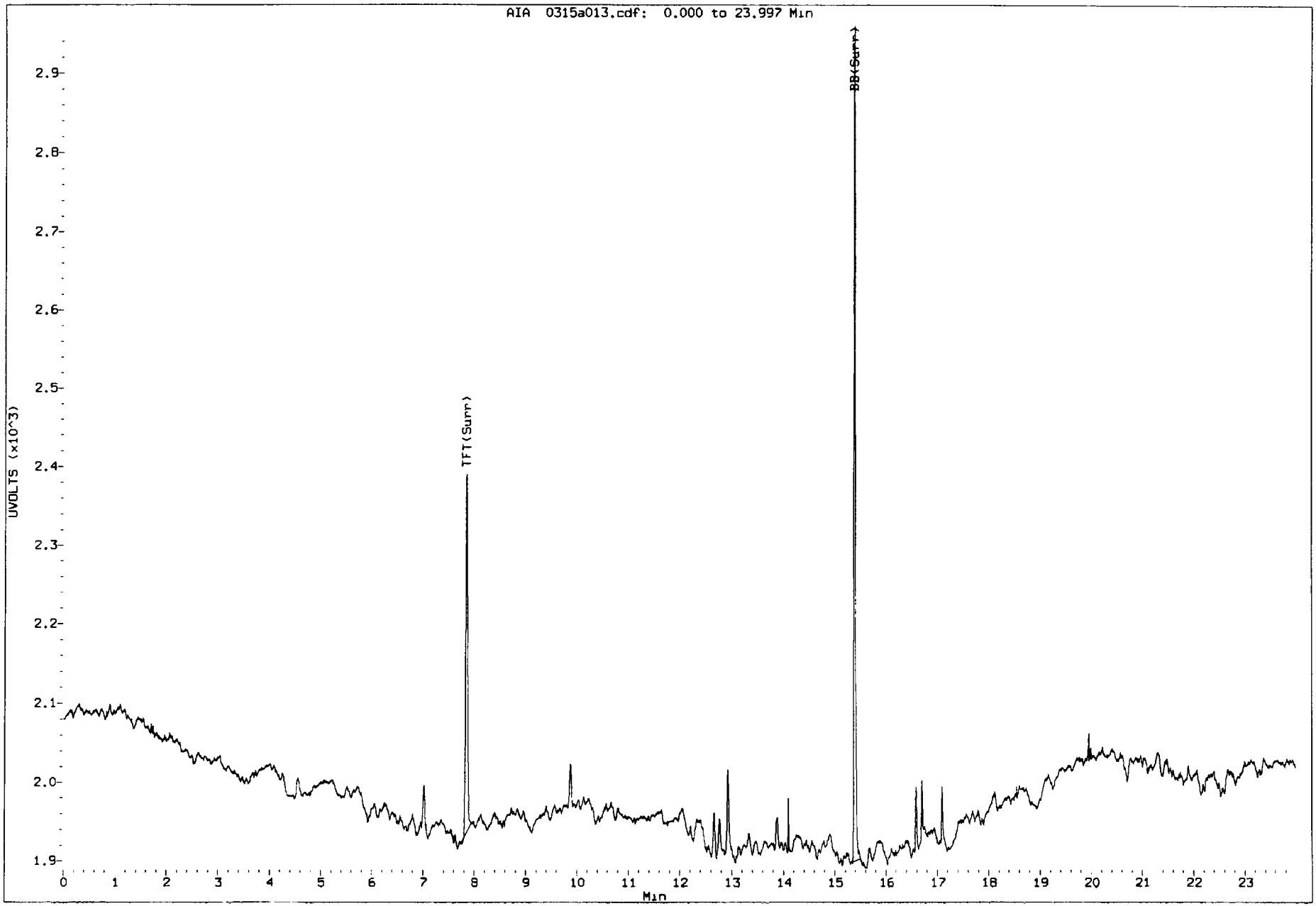
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

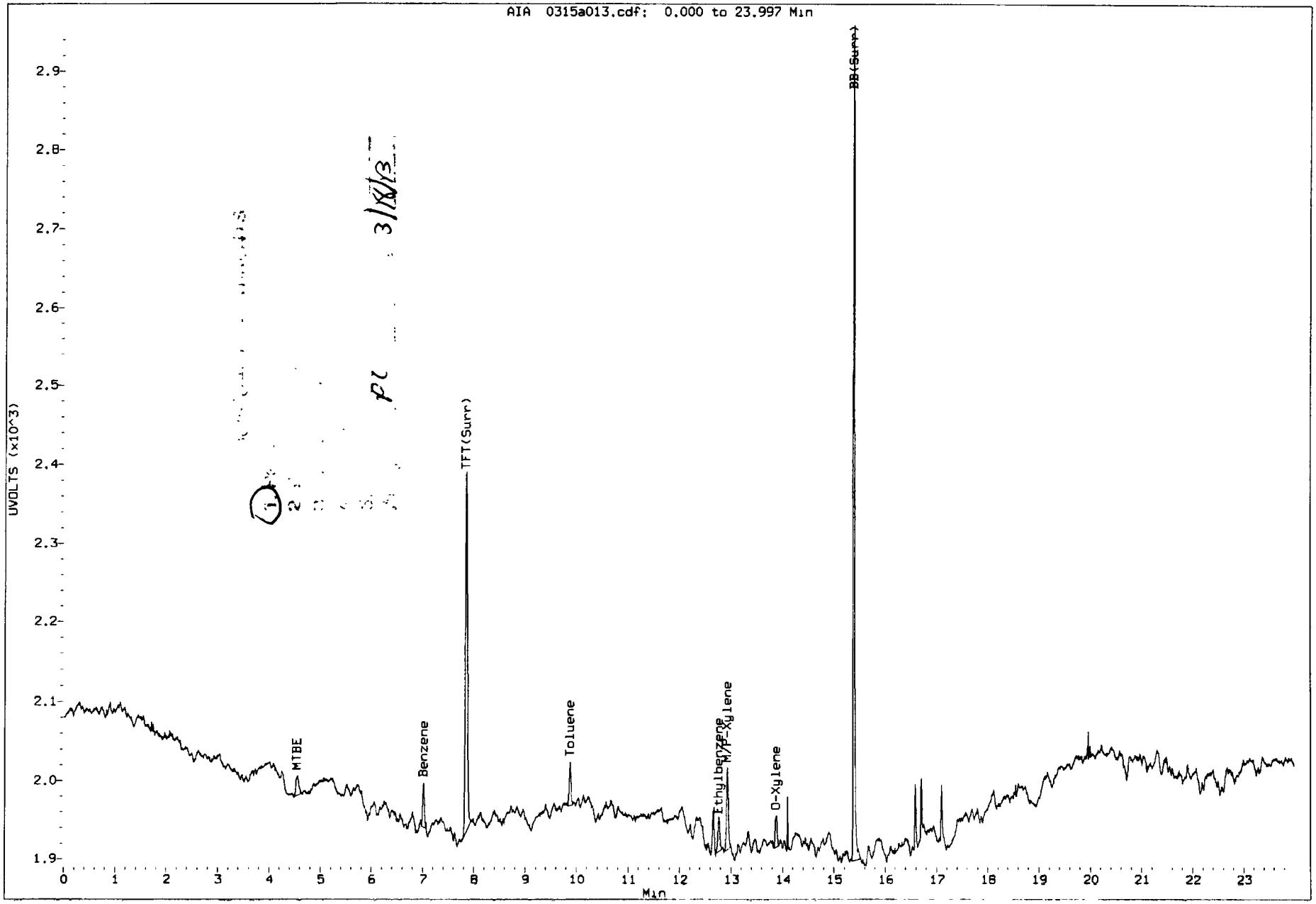
Analyst: YC Date: 3/18/13

3/18/15

Data File: /chem3/pid1.i/20130315-2.b/0315a013.d/0315a013.cdf
Injection Date: 15-MAR-2013 20:08
Instrument: pid1.i
Client Sample ID: BTEX 0.25



Data File: /chem3/pid1.i/20130315-2.b/0315a013.d/0315a013.cdf
Injection Date: 15-MAR-2013 20:08
Instrument: pid1.i
Client Sample ID: BTEX 0.25



Data File: /chem3/pid1.i/20130315-1.b/0315a013.d

Date : 15-MAR-2013 20:08

Client ID: BTEX 0.25

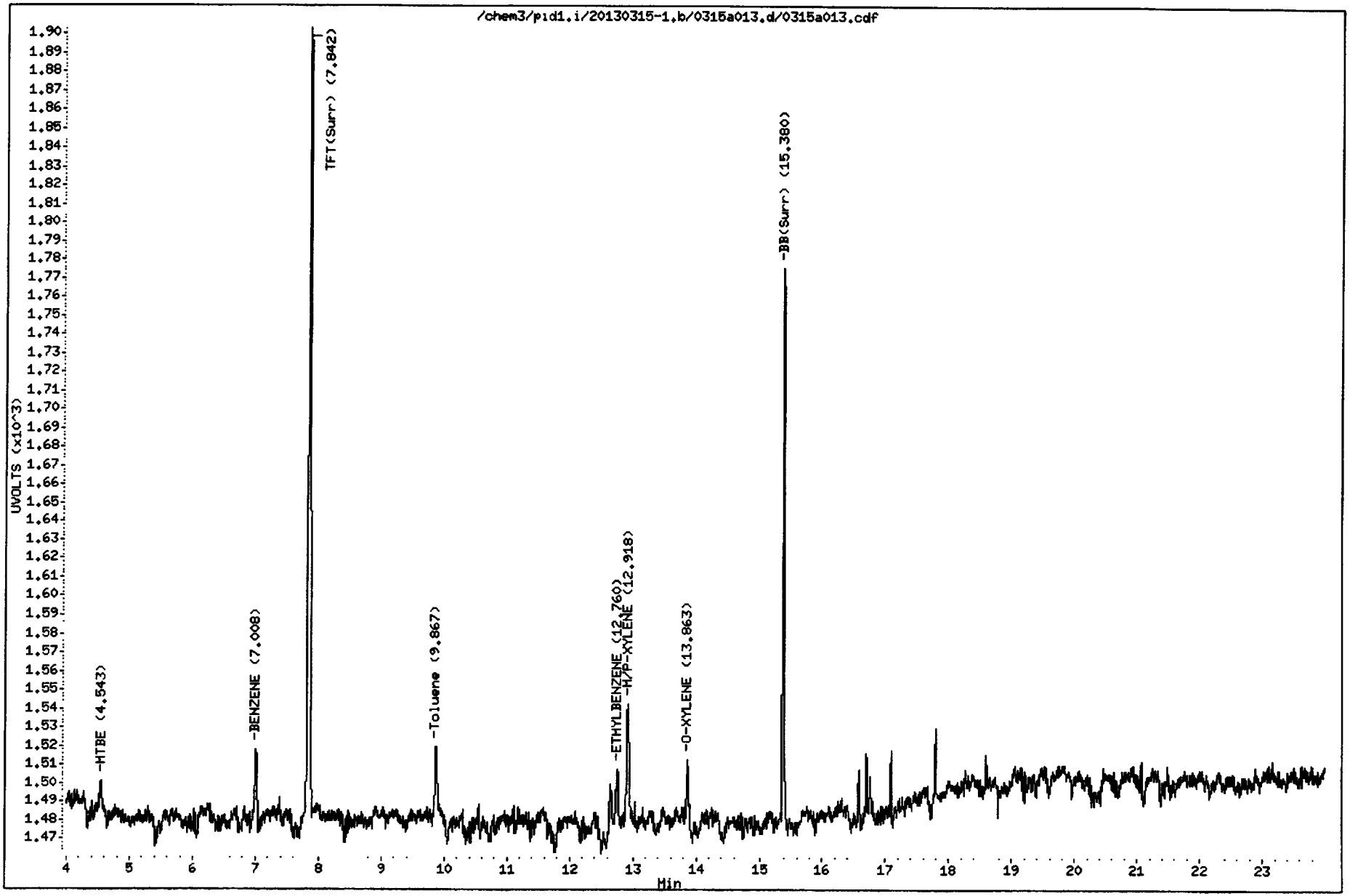
Sample Info: BTEX 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a013.d

Date : 15-MAR-2013 20:08

Client ID: BTEX 0.25

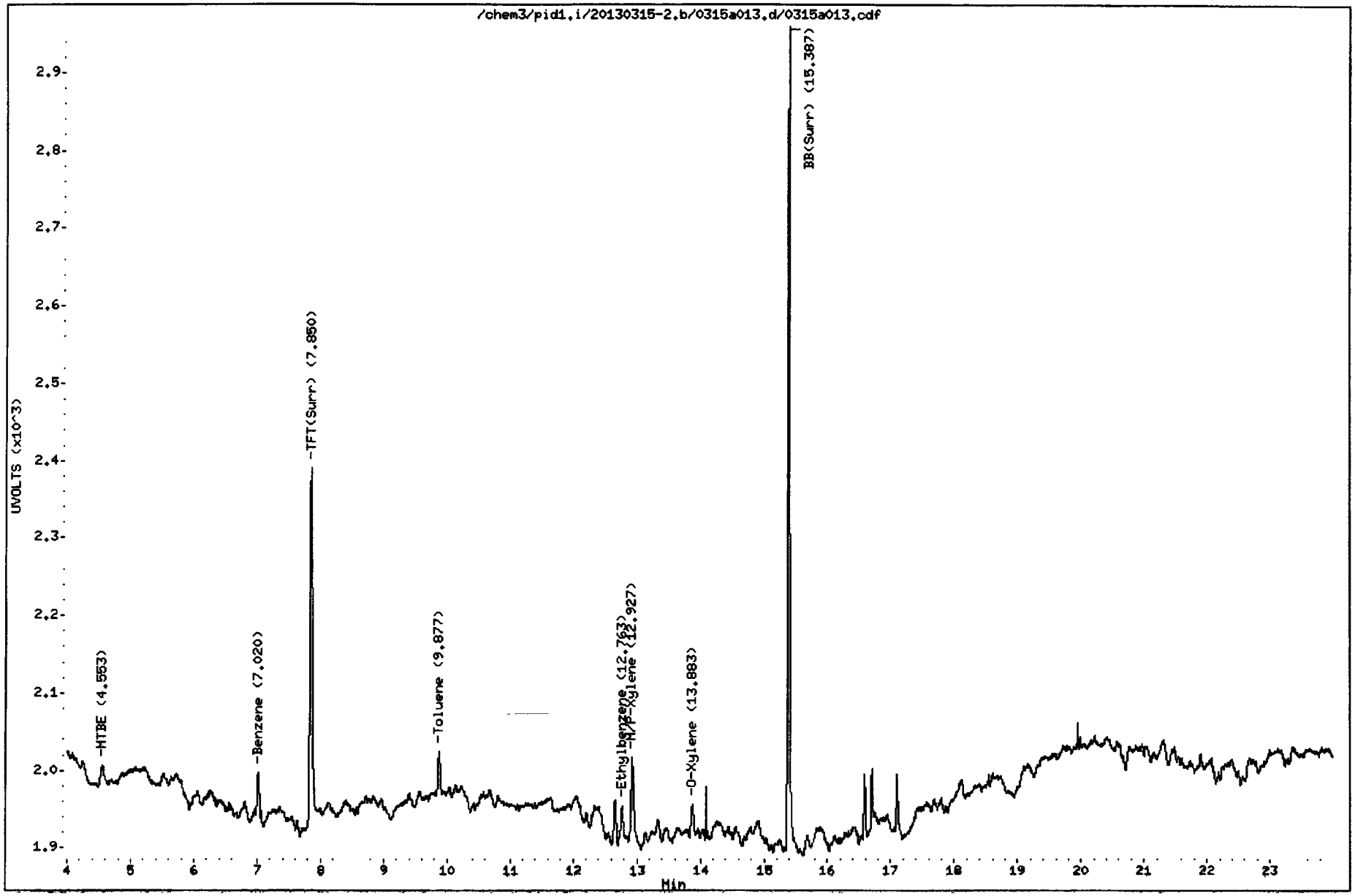
Sample Info: BTEX 0.25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a014.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a014.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX ICV 25
Client ID: BTEX ICV 25
Injection Date: 15-MAR-2013 20:37
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.003	3156	39299	91.0	TFT(Surr)
15.378	-0.002	2078	17374	91.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	243827	0.681
8015C 2MP-TMB	(4.18 to 16.20)	723723	249652	0.345
AK101 nC6-nC10	(4.67 to 15.10)	582885	229589	0.394
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	243827	0.650

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	-0.002	3663	92.3	TFT(Surr)
15.386	-0.001	8173	93.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	-0.004	6084	25.34	Benzene
9.874	-0.003	5655	24.69	Toluene
12.767	0.003	4924	25.44	Ethylbenzene
12.927	0.001	10616	49.71	M/P-Xylene
13.876	-0.008	4359	25.55	O-Xylene
4.550	-0.003	2099	24.89	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

WL67:01 U9

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130315-1.b/0315a014.d
Lab Smp Id: BTEX ICV 25
Inj Date : 15-MAR-2013 20:37
Operator : LH Inst ID: pid1.i
Smp Info : BTEX ICV 25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 20:08 Cal File: 0315a013.d
Als bottle: 1
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)	FINAL (ug/L)
	6 MTBE	4.543	4.543	0.000	20062	23.7201	23.72
	9 BENZENE	7.008	7.008	0.000	36234	23.6835	23.68
$	10 TFT(Surr)	7.840	7.842	-0.002	3156	90.9850	90.98
	12 Toluene	9.866	9.867	-0.001	35526	24.3629	24.36
	14 ETHYLBENZENE	12.758	12.760	-0.002	2789	24.3037	24.30
	15 M/P-XYLENE	12.919	12.918	0.001	64883	46.6576	46.66
	16 O-XYLENE	13.867	13.863	0.004	34123	23.6641	23.66
$	18 BB(Surr)	15.378	15.380	-0.002	2078	91.0482	91.05
	21 nc11	16.698	16.698	0.000	2729		

Data File: /chem3/pid1.i/20130315-1.b/0315a014.d

Date : 15-MAR-2013 20:37

Client ID:

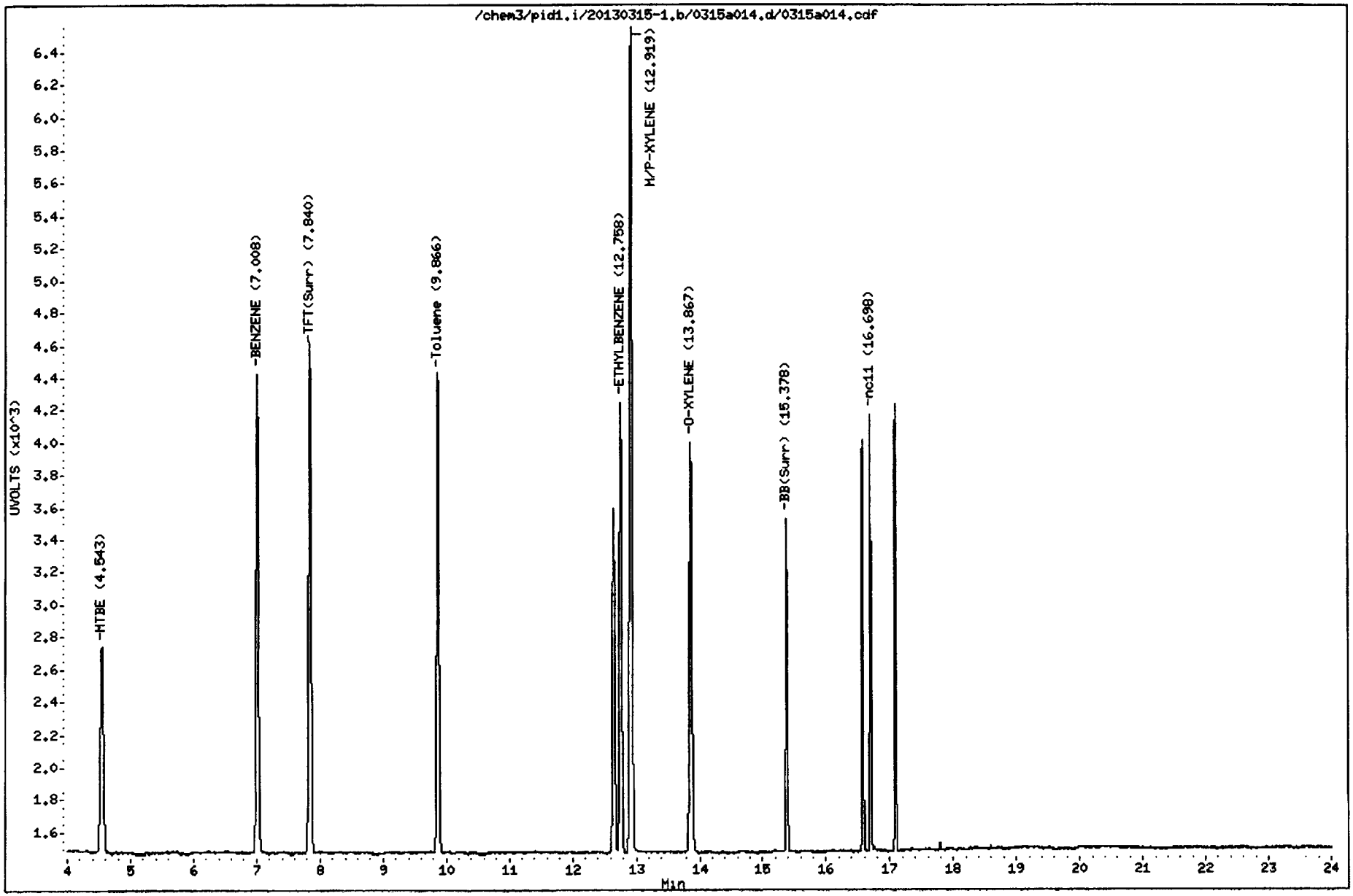
Sample Info: BTEX ICV 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a014.d

Date : 15-MAR-2013 20:37

Client ID: BTEX ICV 25

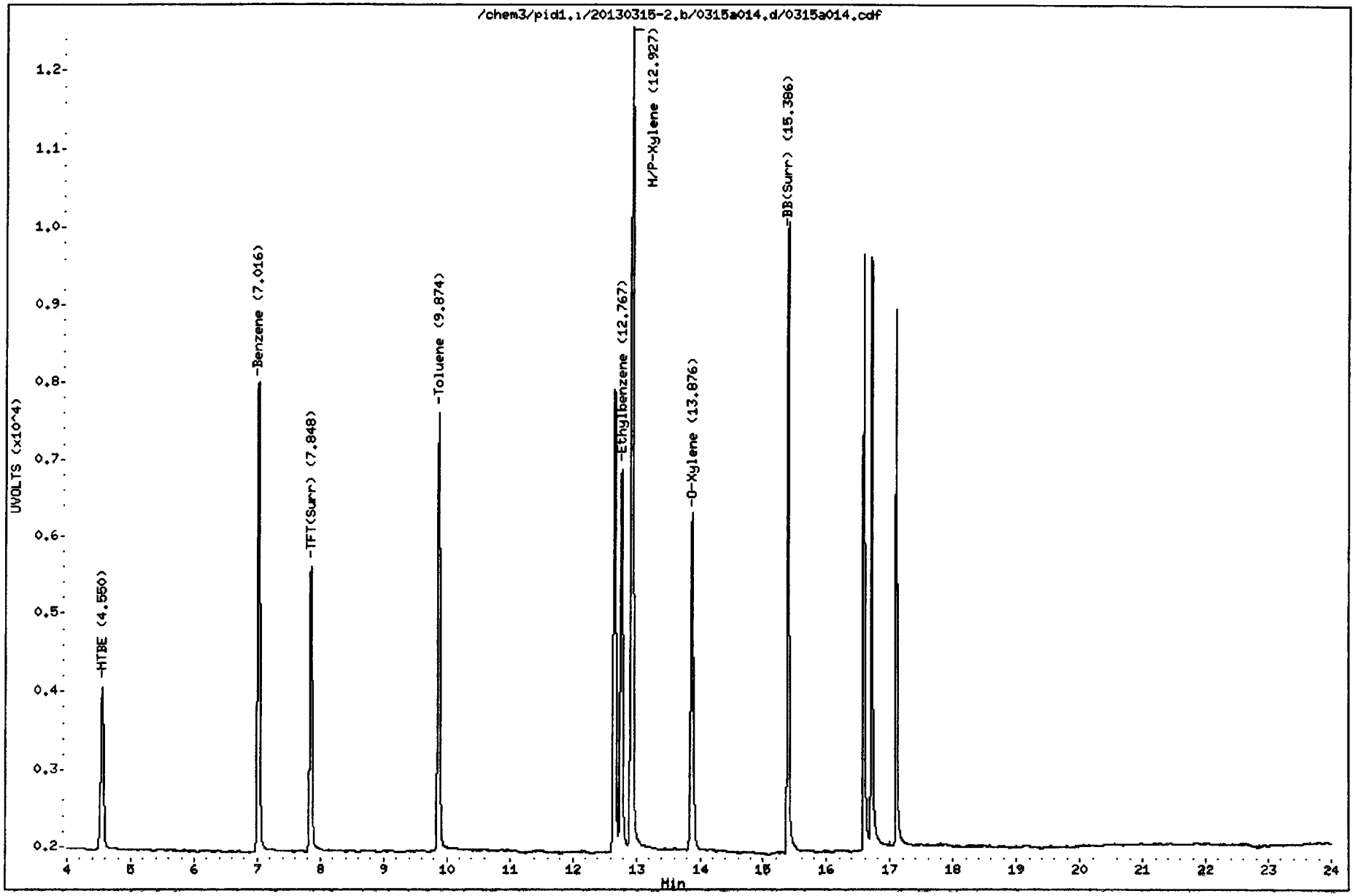
Sample Info: BTEX ICV 25

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	VW254	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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-2.b/1023a011.d
Level 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Level 3: /chem3/pid1.i/20121023-2.b/1023a009.d
Level 4: /chem3/pid1.i/20121023-2.b/1023a008.d
Level 5: /chem3/pid1.i/20121023-2.b/1023a007.d
Level 6: /chem3/pid1.i/20121023-2.b/1023a006.d
Level 7: /chem3/pid1.i/20121023-2.b/1023a005.d
Level 8: /chem3/pid1.i/20121023-2.b/1023a004.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	+++++	72.00000	75.40000	71.84000	72.14000		
	72.39000	68.24000					72.00167	3.161
2 Benzene	228	254	260	255	246	248		
	247	246					248	3.847
4 Toluene	256	234	210	224	220	219		
	220	216					225	6.342
5 Ethylbenzene	192	200	198	201	196	198		
	199	193					197	1.663
6 M/P-Xylene	216	208	212	220	215	217		
	218	215					215	1.653
7 O-Xylene	160	158	168	171	172	171		
	173	170					168	3.365

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	38.86364	37.09091	+++++	37.55224	37.30000	36.97744		
	38.10674	39.27500					37.88085	2.372
$ 8 BB(Surr)	81.36364	78.68182	+++++	80.38806	80.55000	80.24060		
	82.00562	79.97000					80.45710	1.310

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 2.96423
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Level 2: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Level 3: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Level 4: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Level 5: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Level 6: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Level 7: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Level 8: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf

Compound	0.000e+00 Level 1	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	
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	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Average %RSD Results.	
Calculated Average %RSD =	10.58832
Maximun Average %RSD =	20.00000
* Passed Average %RSD Test.	

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a004.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a004.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 200
Client ID:
Injection Date: 23-OCT-2012 17:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	6139	78345	194.1	TFT(Surr)
15.390	0.003	3786	32155	185.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1708650	4.771 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	1708791	2.361 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	1600978	2.747 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1713577	4.568 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.003	7855	207.4	TFT(Surr)
15.397	0.003	15994	198.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.001	49204	198.42	Benzene
9.910	0.003	43241	192.19N	Toluene
12.793	0.006	38665	196.10	Ethylbenzene
12.957	0.014	85891	399.48	M/P-Xylene
13.900	0.010	34089	203.10N	O-Xylene
4.650	-0.003	13648	189.55	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

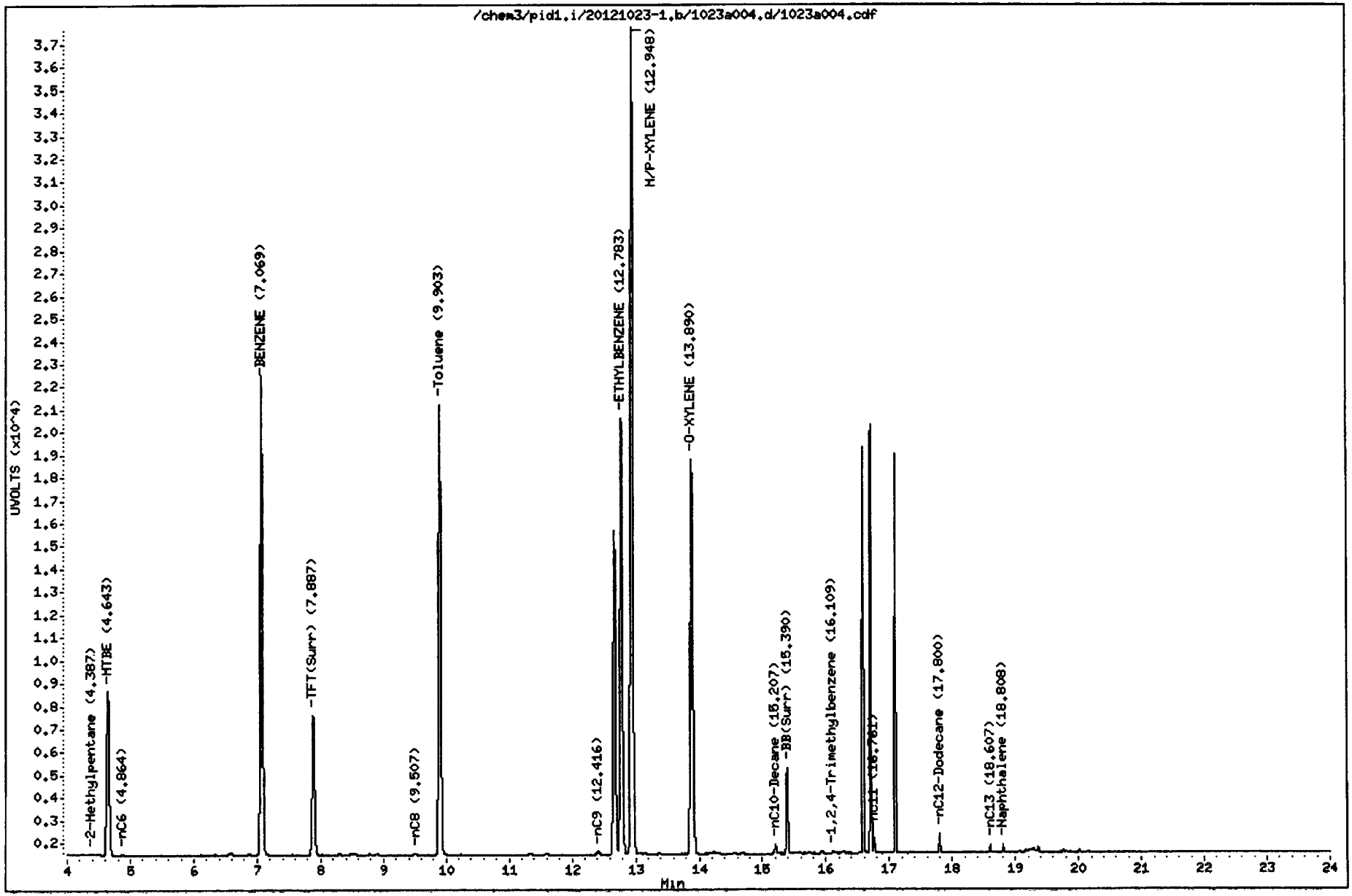
Sample Info: B 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

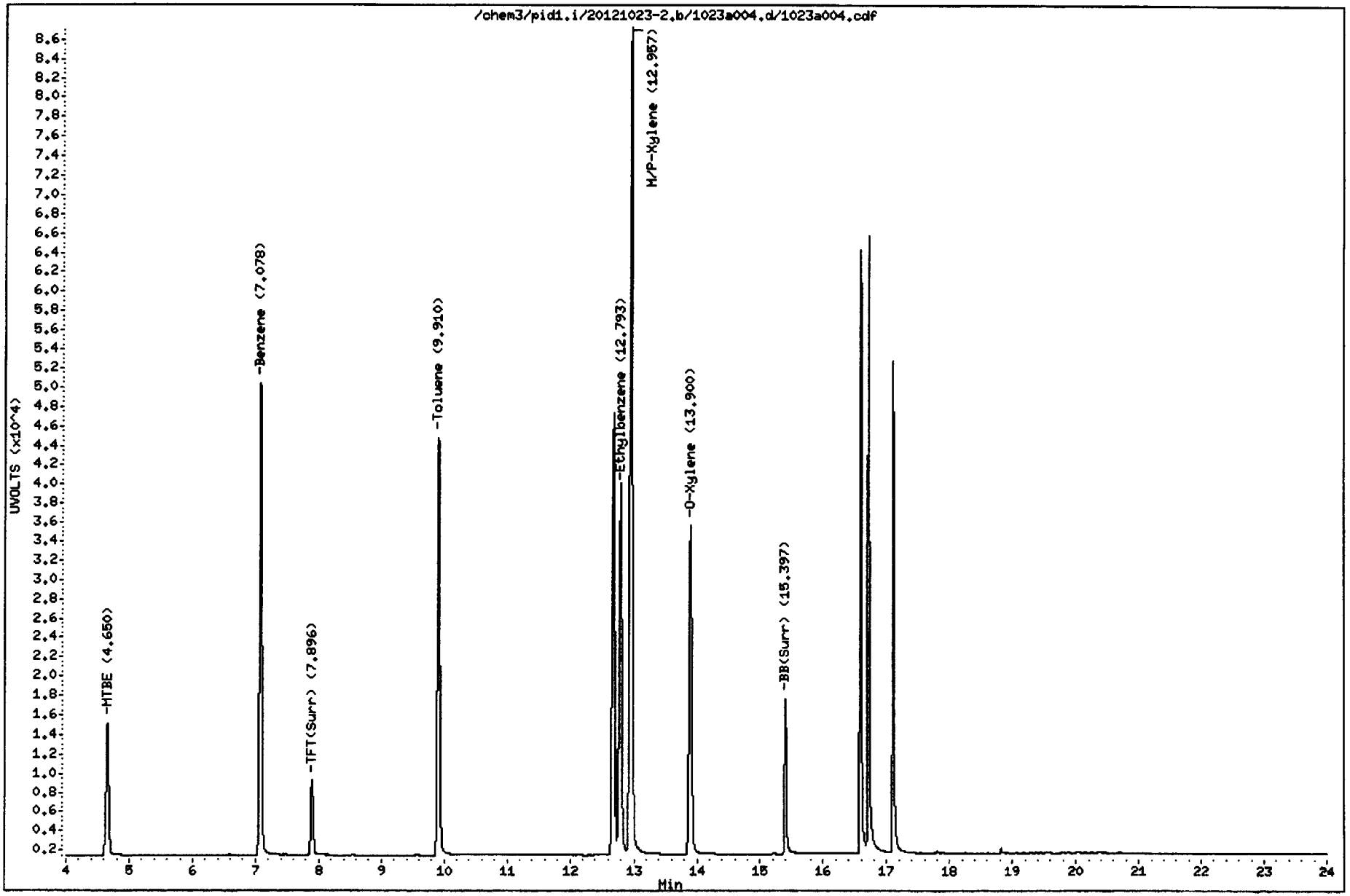
Sample Info: B 200

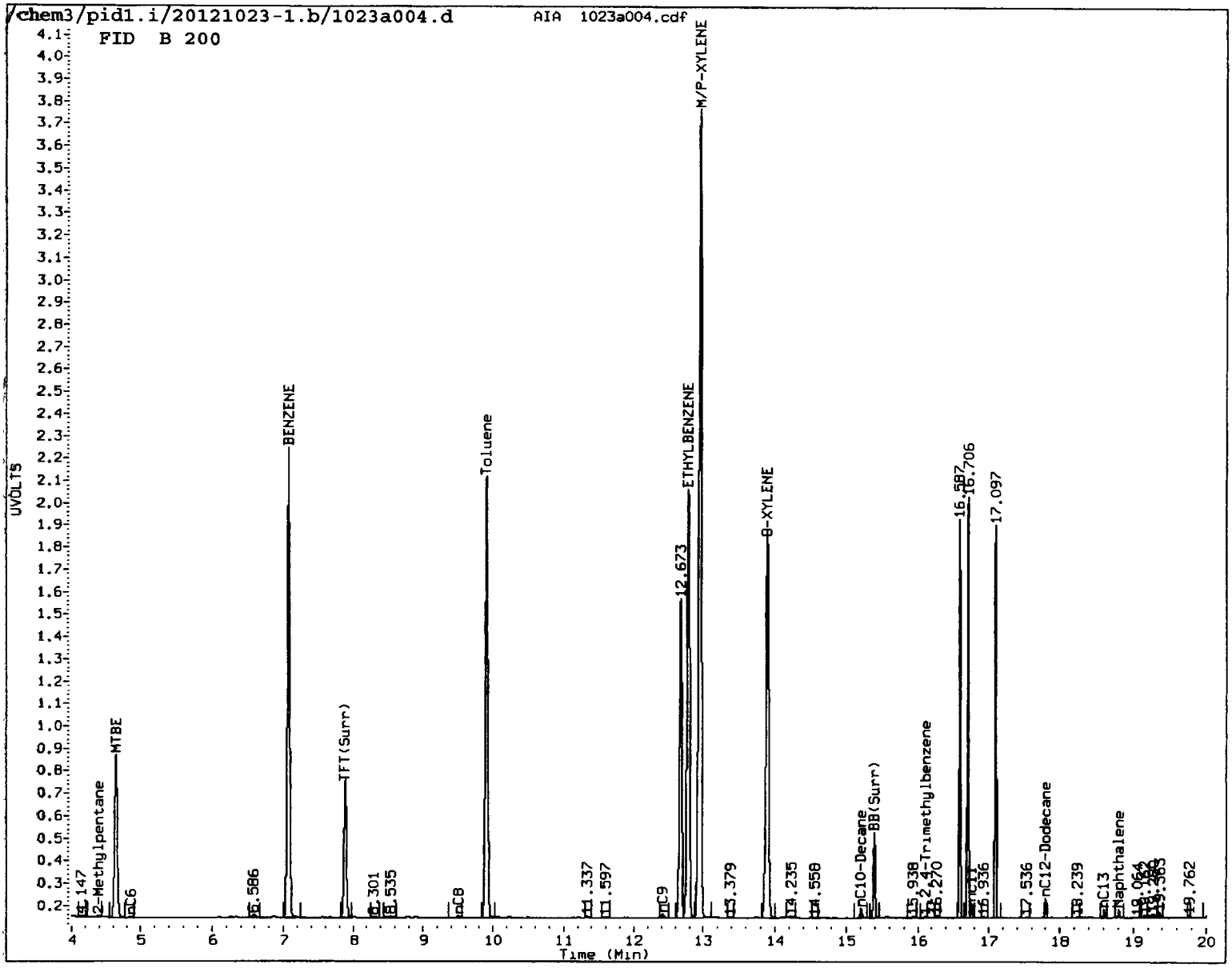
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

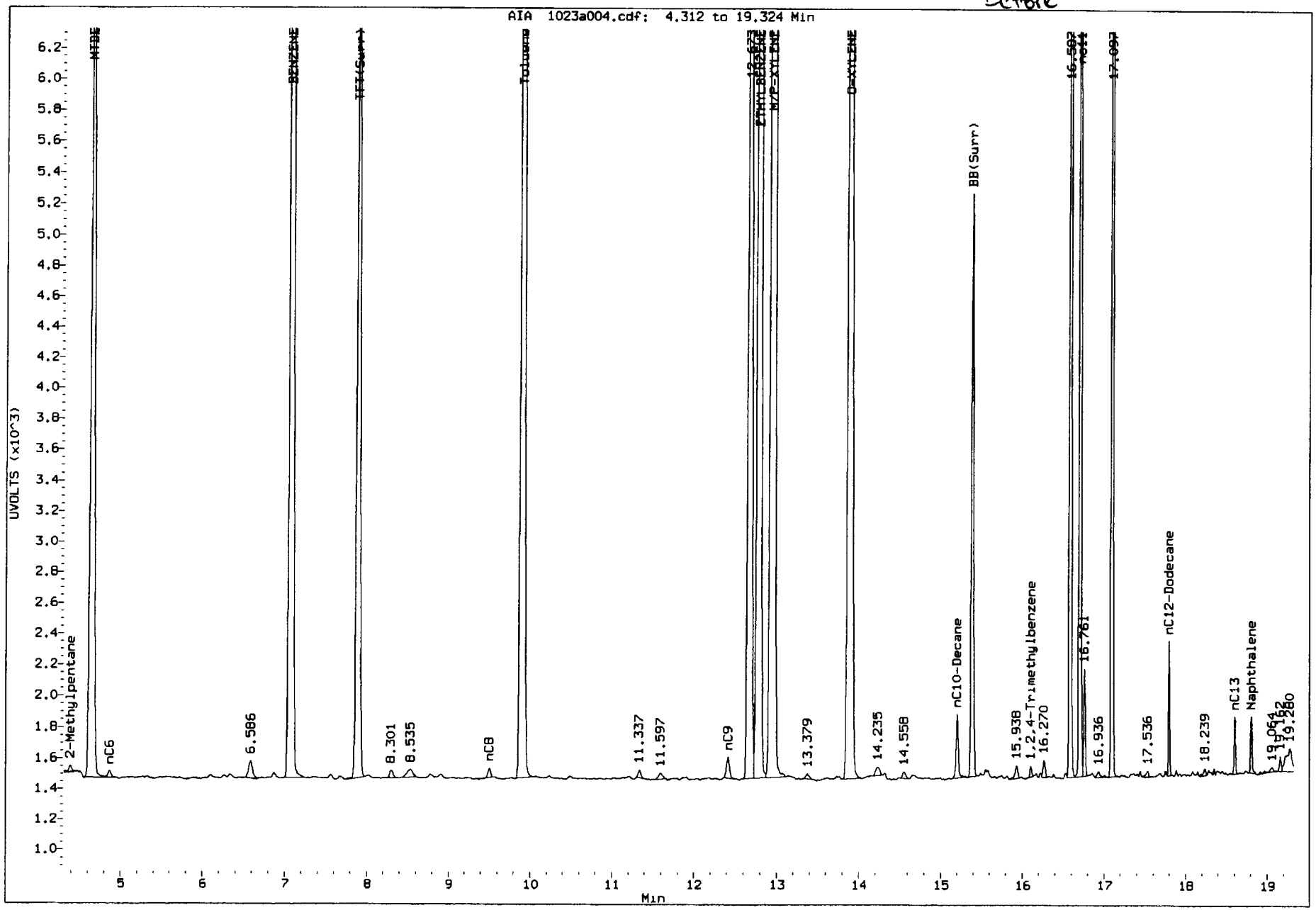
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

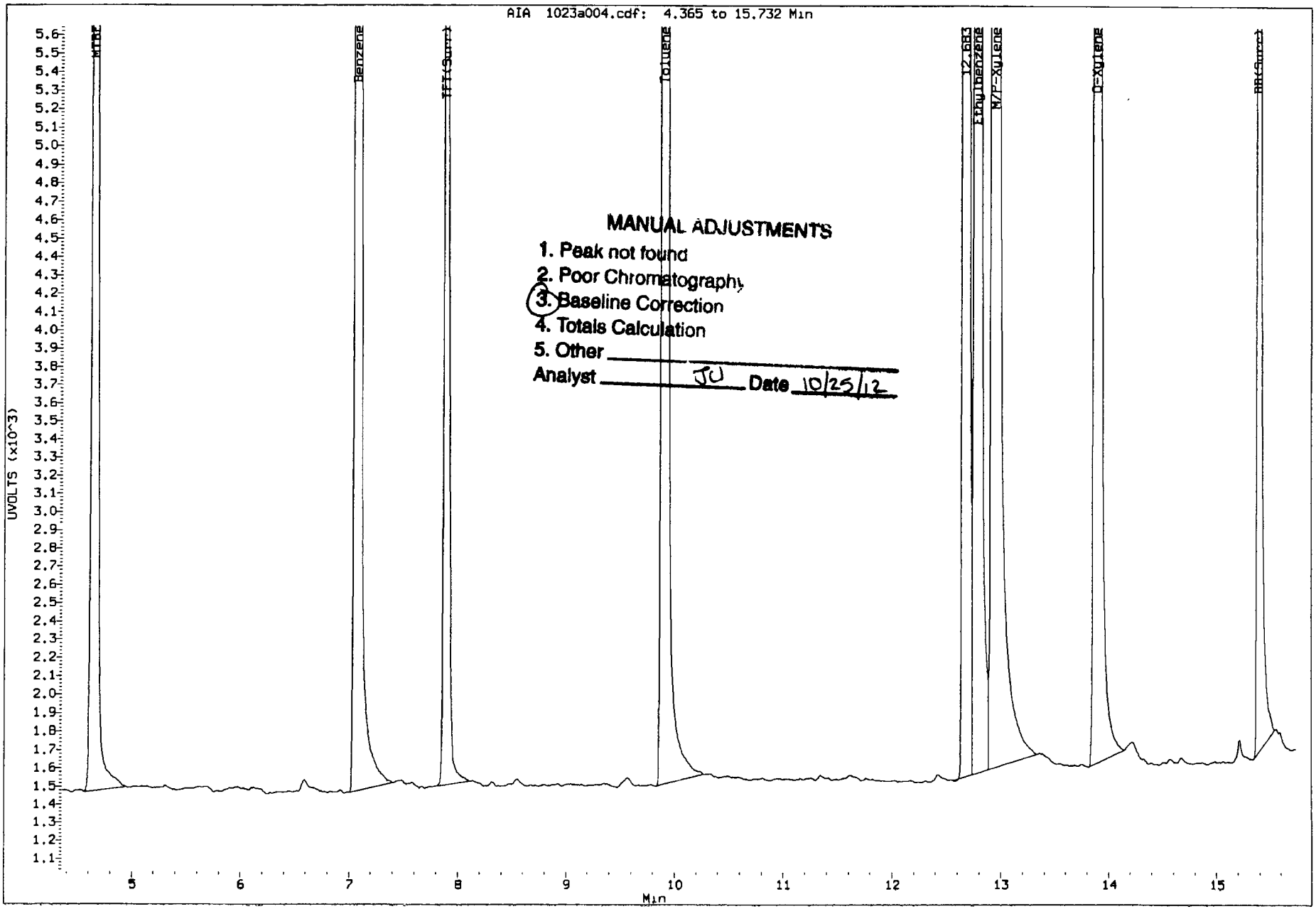
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before



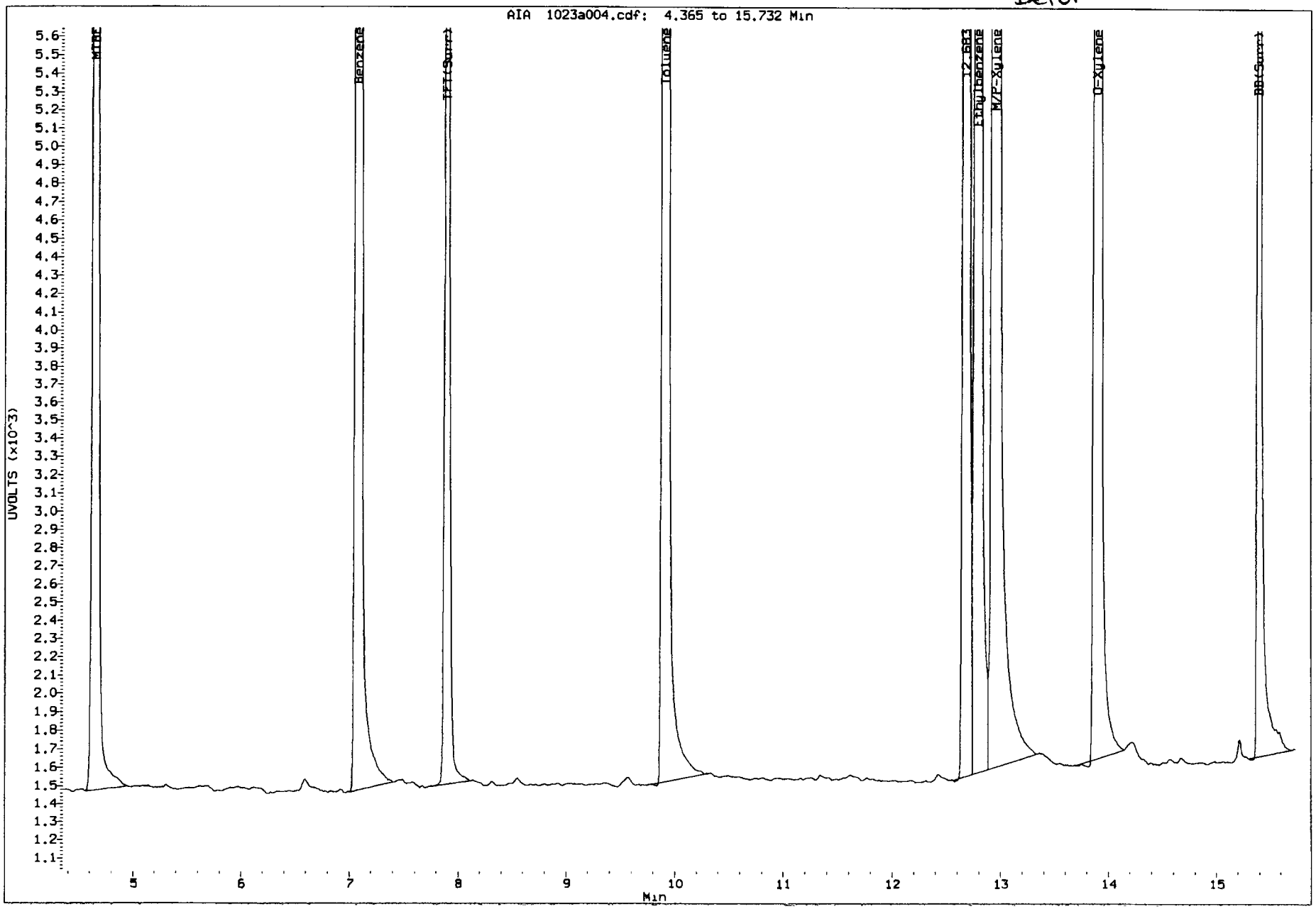
Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



UVOC7 04515

Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a005.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a005.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 100
Client ID:
Injection Date: 23-OCT-2012 18:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	5503	70111	174.0	TFT(Surr)
15.387	0.000	3532	29720	173.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	905684	2.529 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	901622	1.246 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	845537	1.451 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	906863	2.418 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	6783	179.1	TFT(Surr)
15.393	0.000	14597	181.4	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.073	-0.003	24688	99.56N	Benzene
9.903	-0.003	22030	97.92N	Toluene
12.785	-0.002	19930	101.08	Ethylbenzene
12.948	0.004	43574	202.66	M/P-Xylene
13.893	0.003	17274	102.92N	O-Xylene
4.650	-0.003	7239	100.54N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

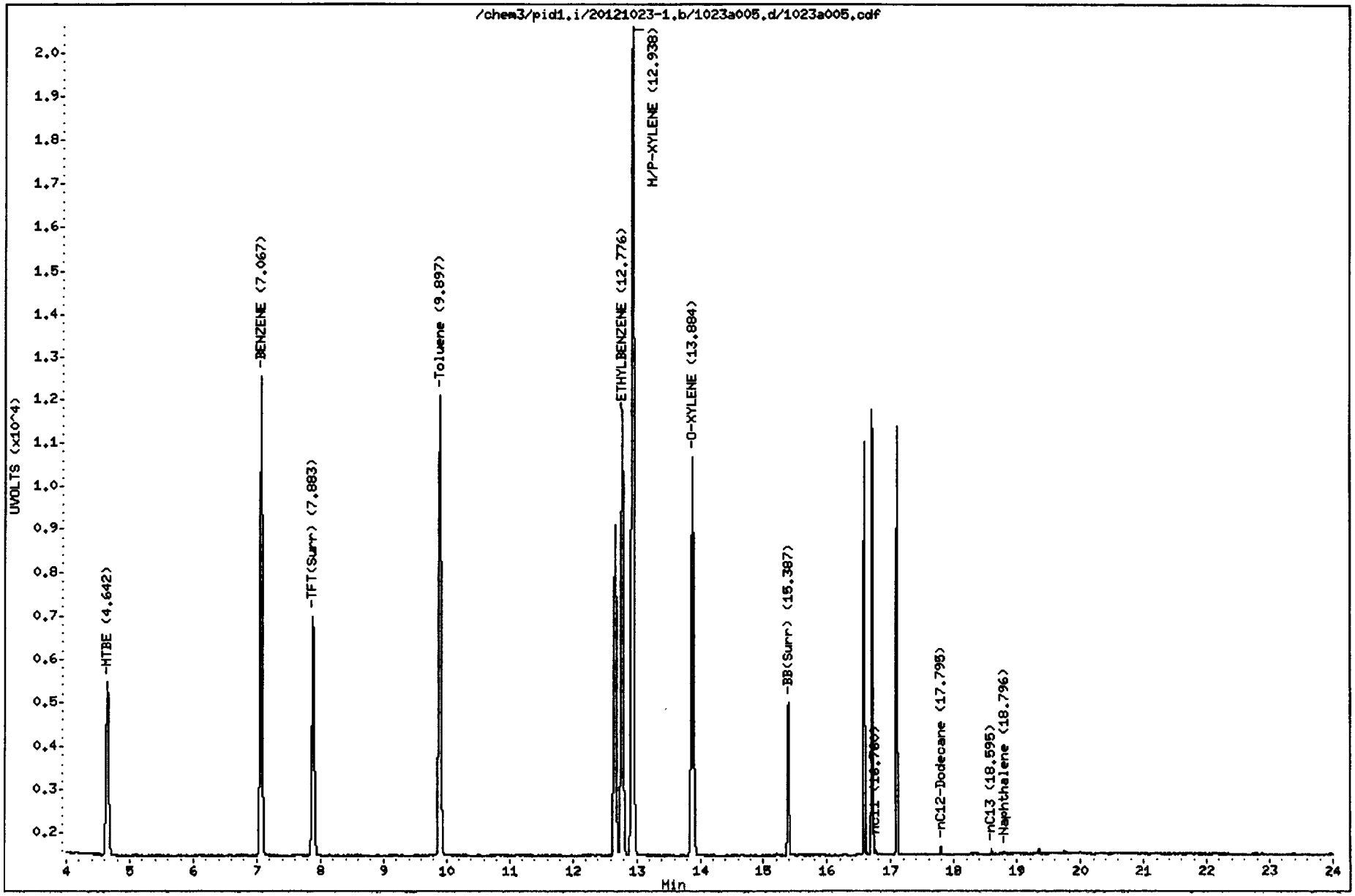
Sample Info: B 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

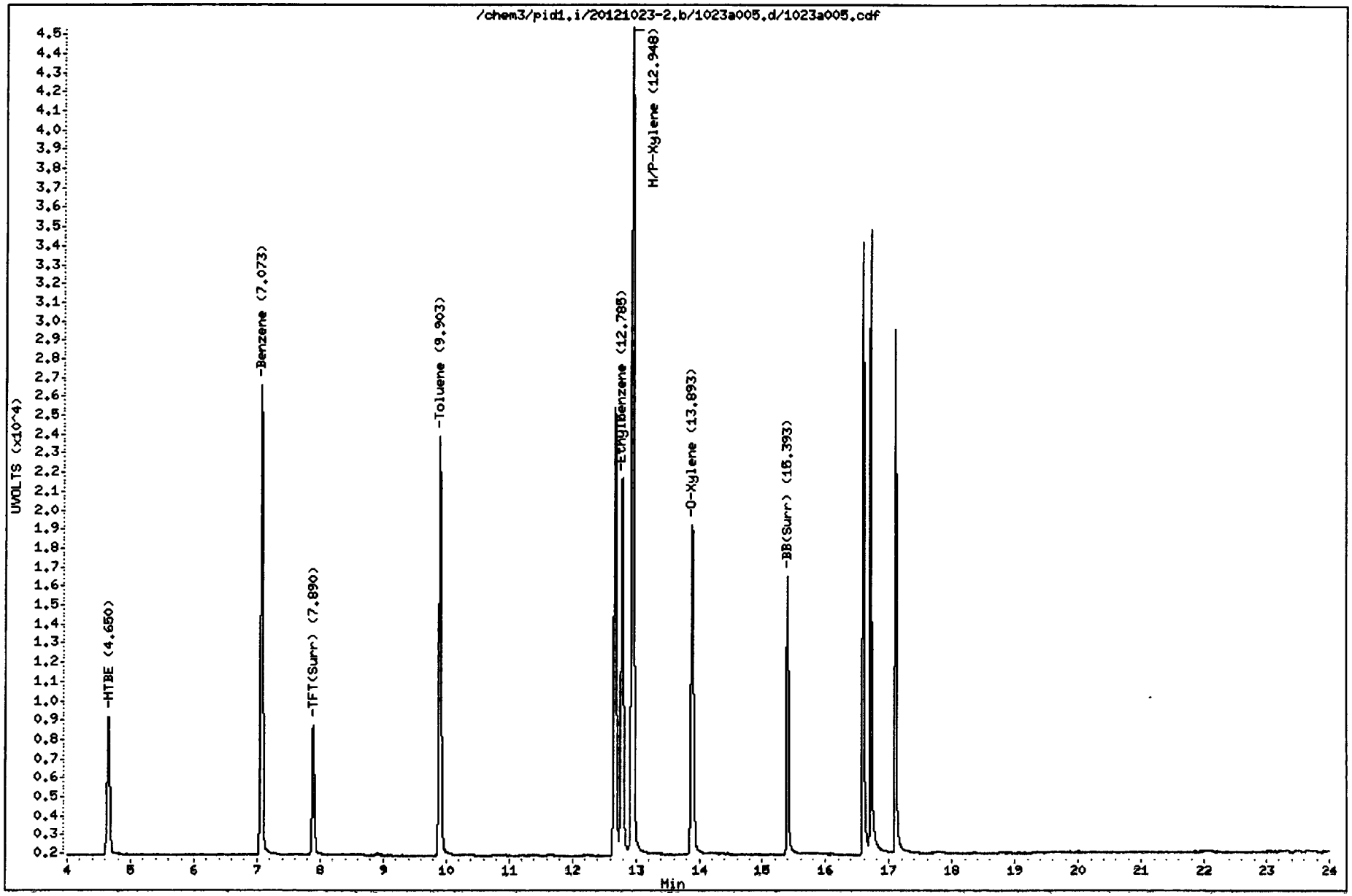
Sample Info: B 100

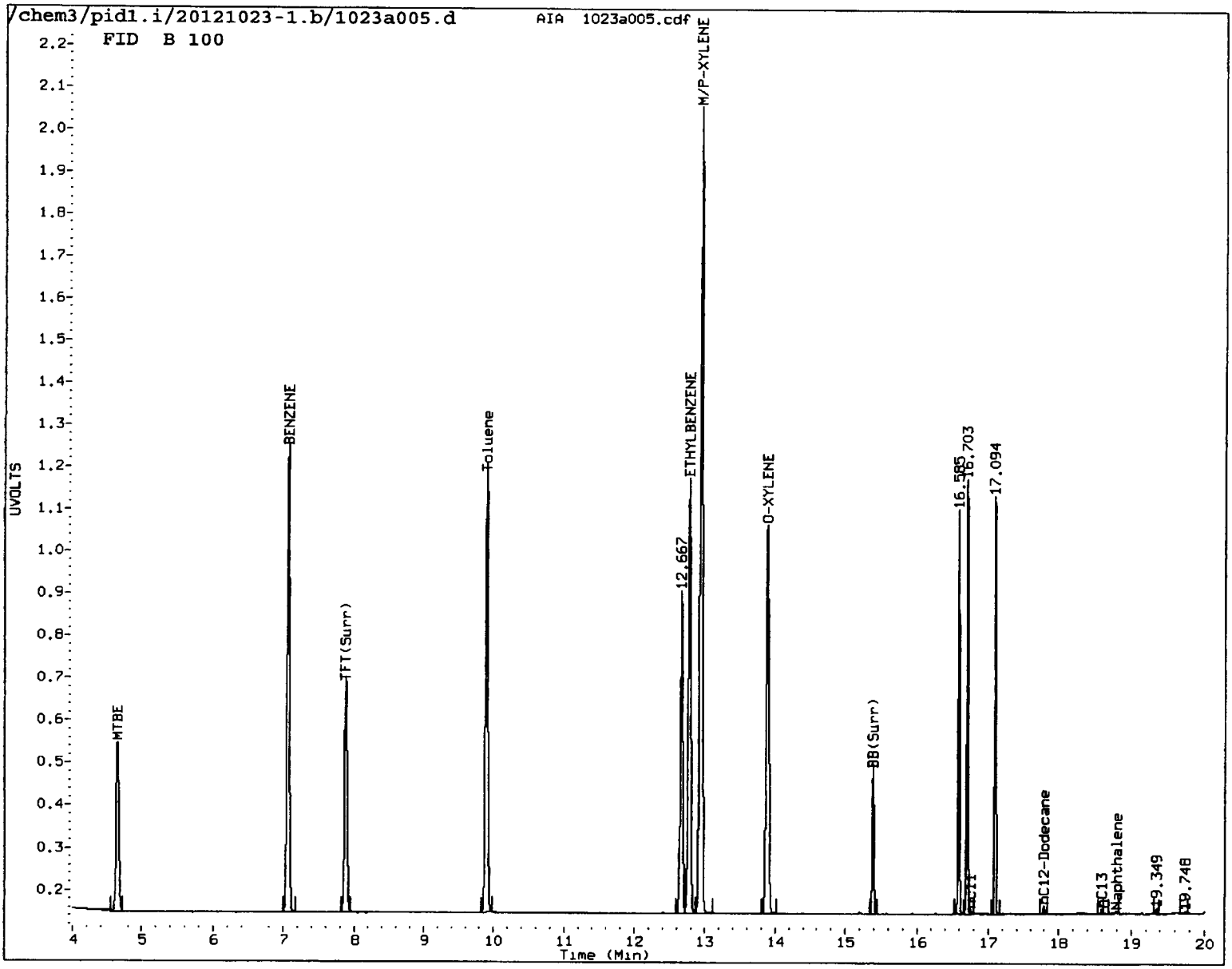
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

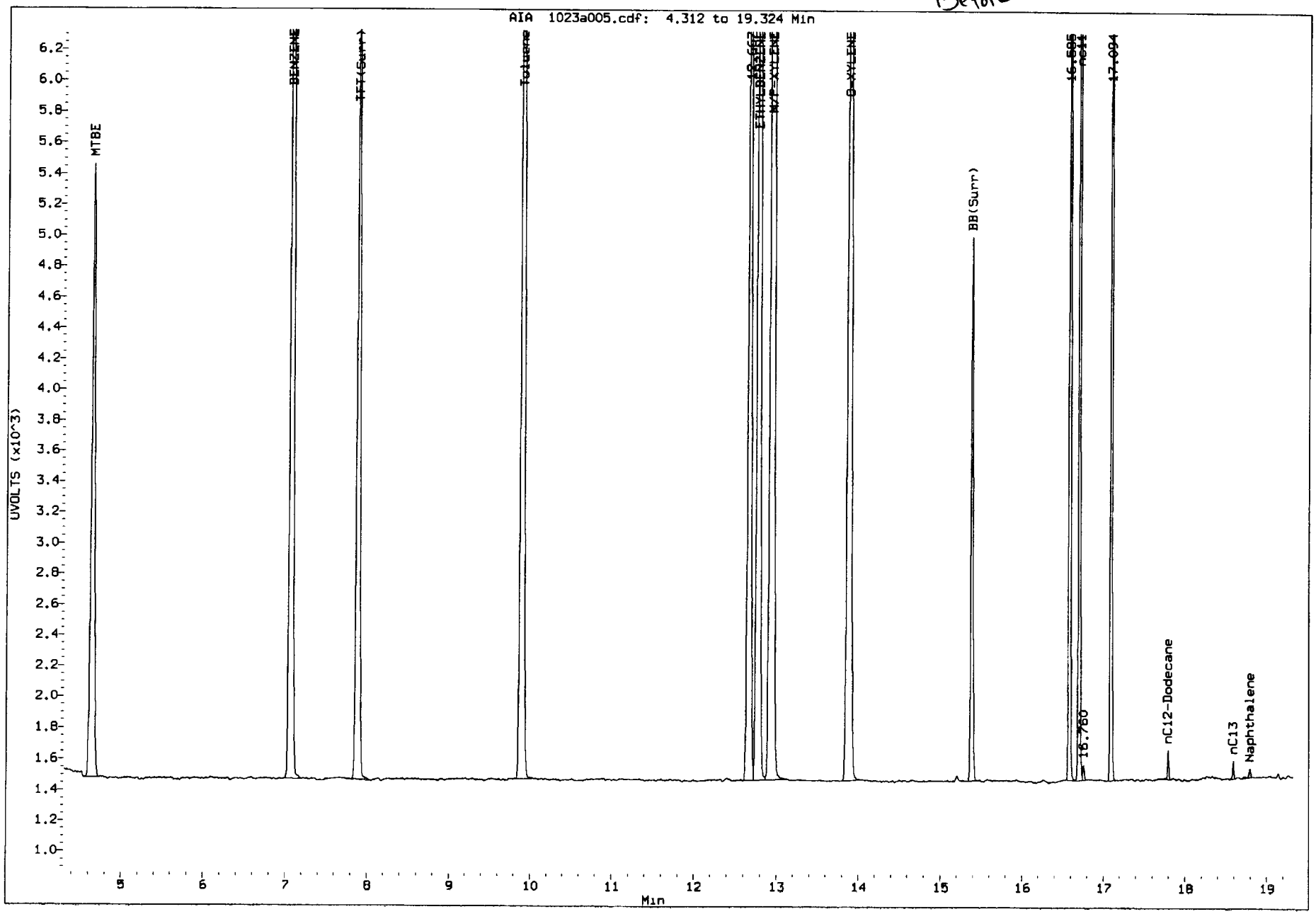
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

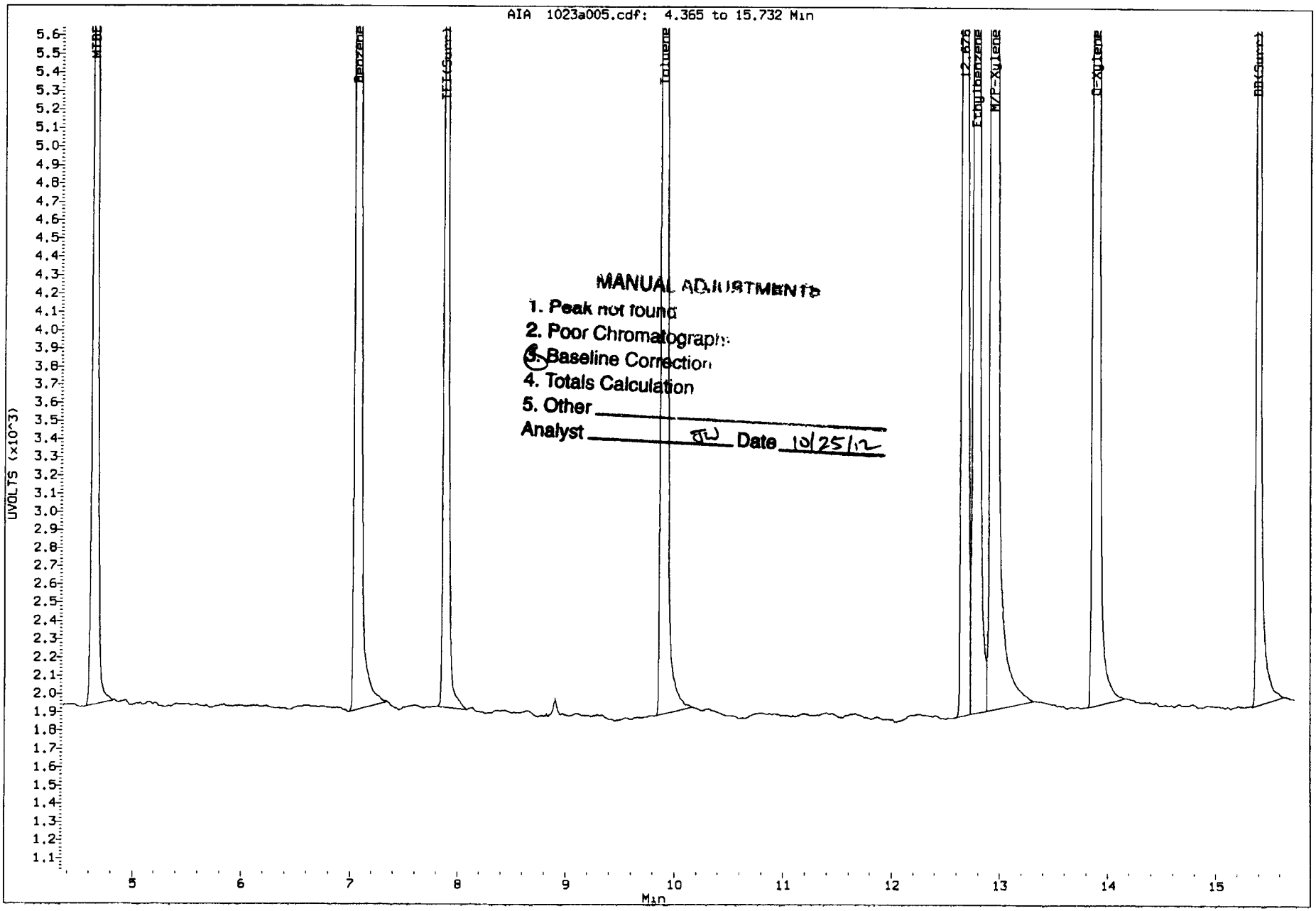
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

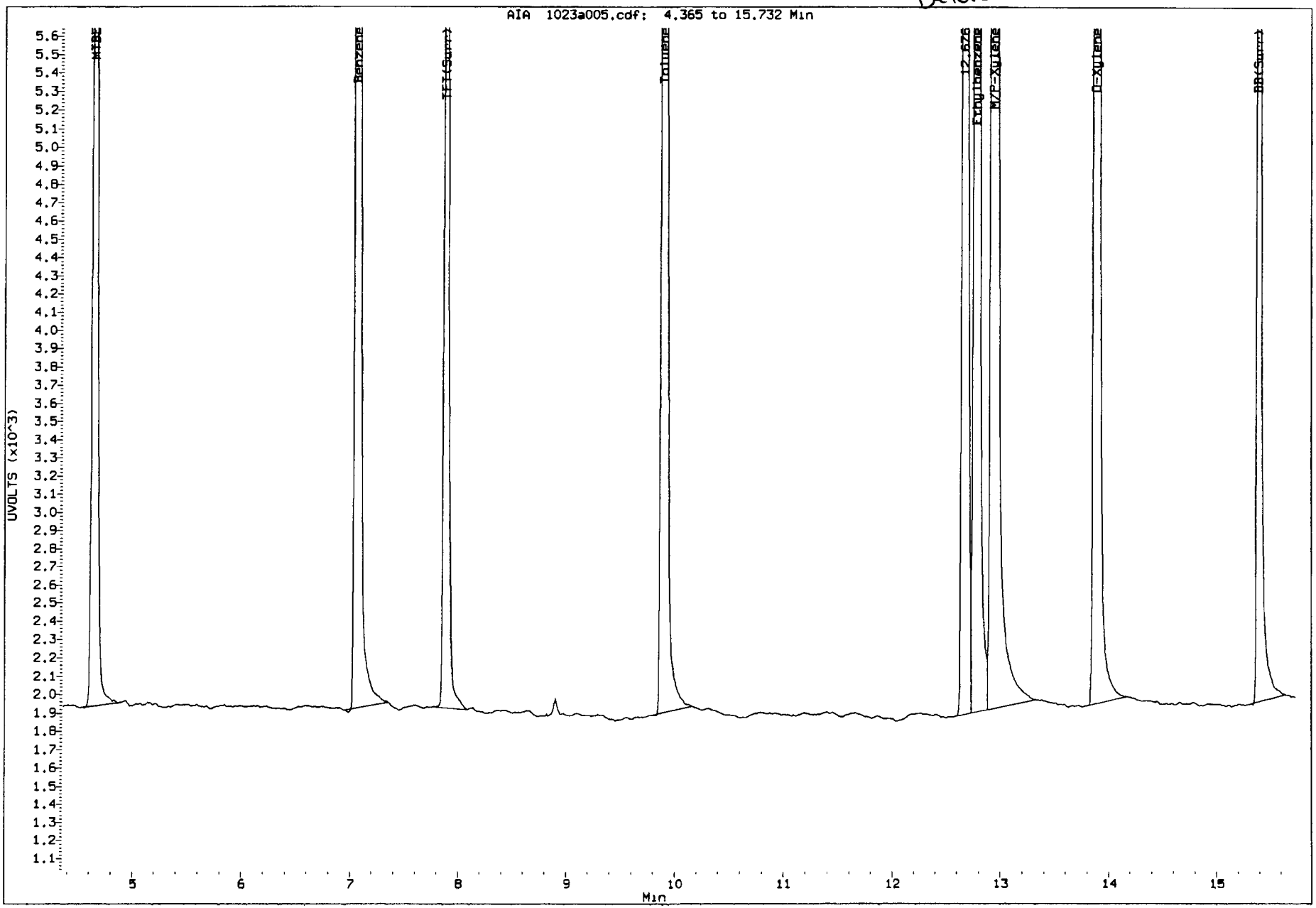


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a006.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a006.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 50
Client ID:
Injection Date: 23-OCT-2012 18:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	4094	52140	129.5	TFT(Surr)
15.387	0.000	2638	22027	129.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	466249	1.302 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	465082	0.643 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	436325	0.749 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	466249	1.243 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	4918	129.8	TFT(Surr)
15.393	0.000	10672	132.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	12380	49.92	Benzene
9.903	-0.003	10965	48.74N	Toluene
12.784	-0.003	9886	50.14	Ethylbenzene
12.946	0.002	21661	100.75	M/P-Xylene
13.890	0.000	8535	50.85N	O-Xylene
4.653	0.000	3607	50.10N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

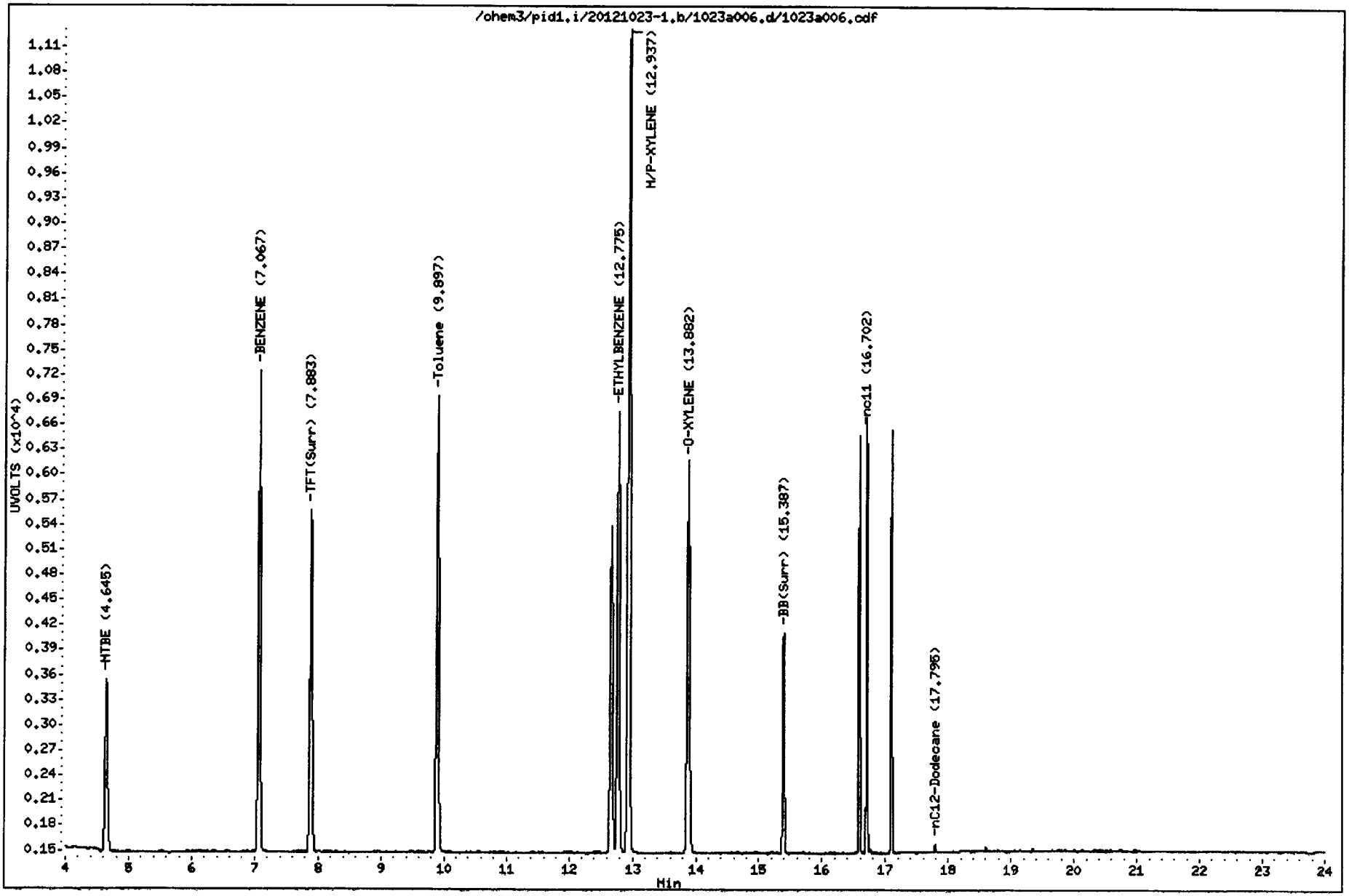
Sample Info: B 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

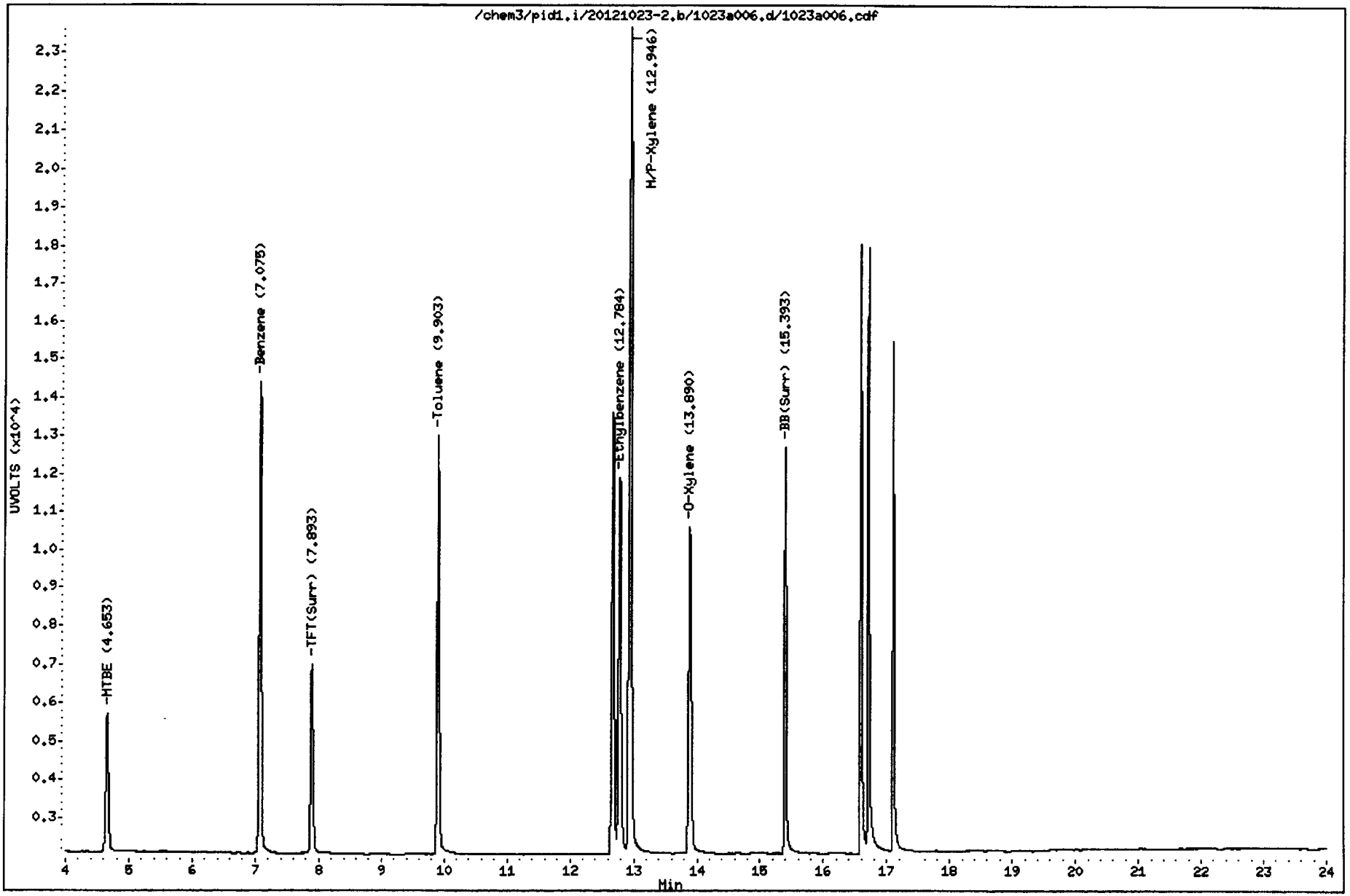
Sample Info: B 50

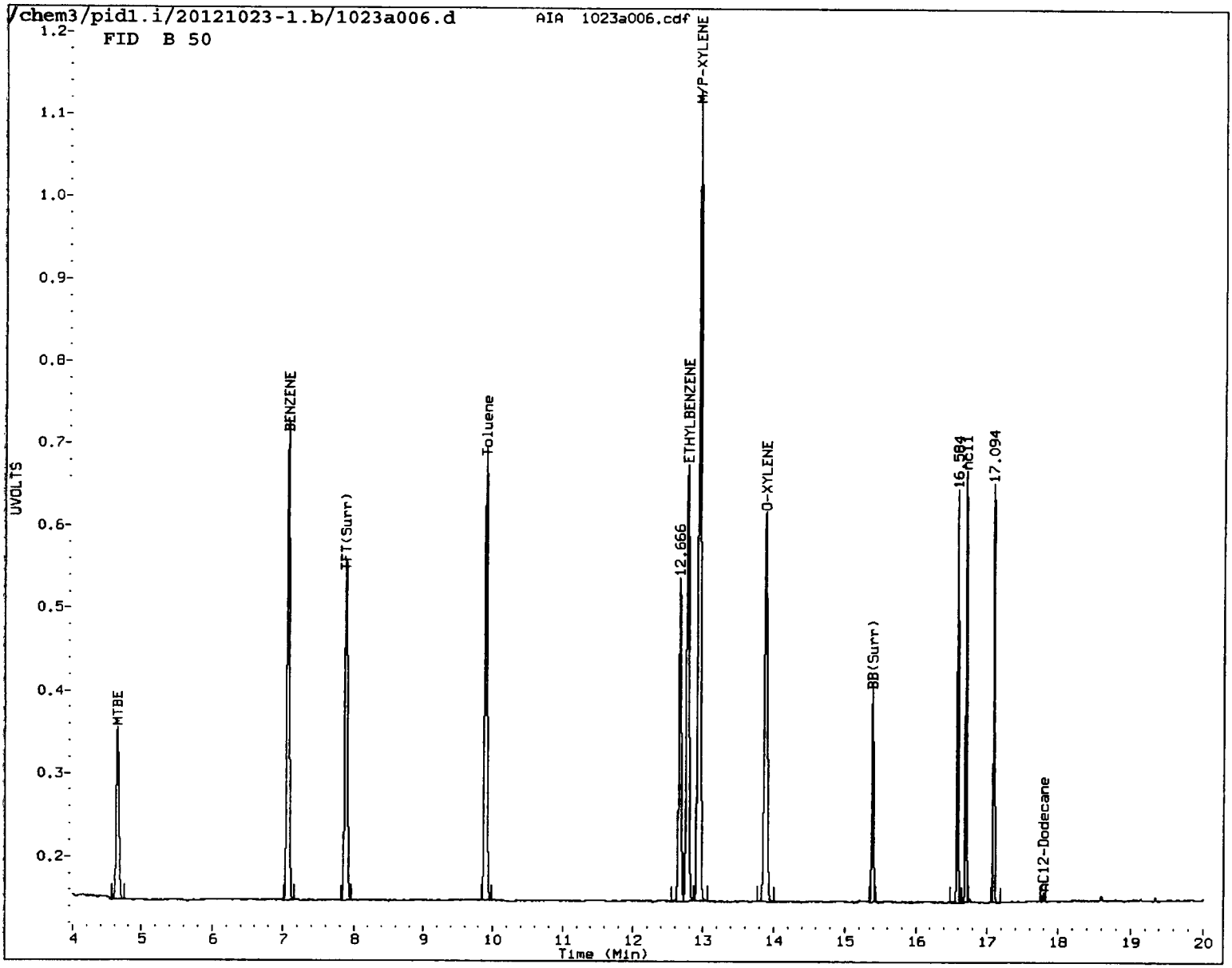
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

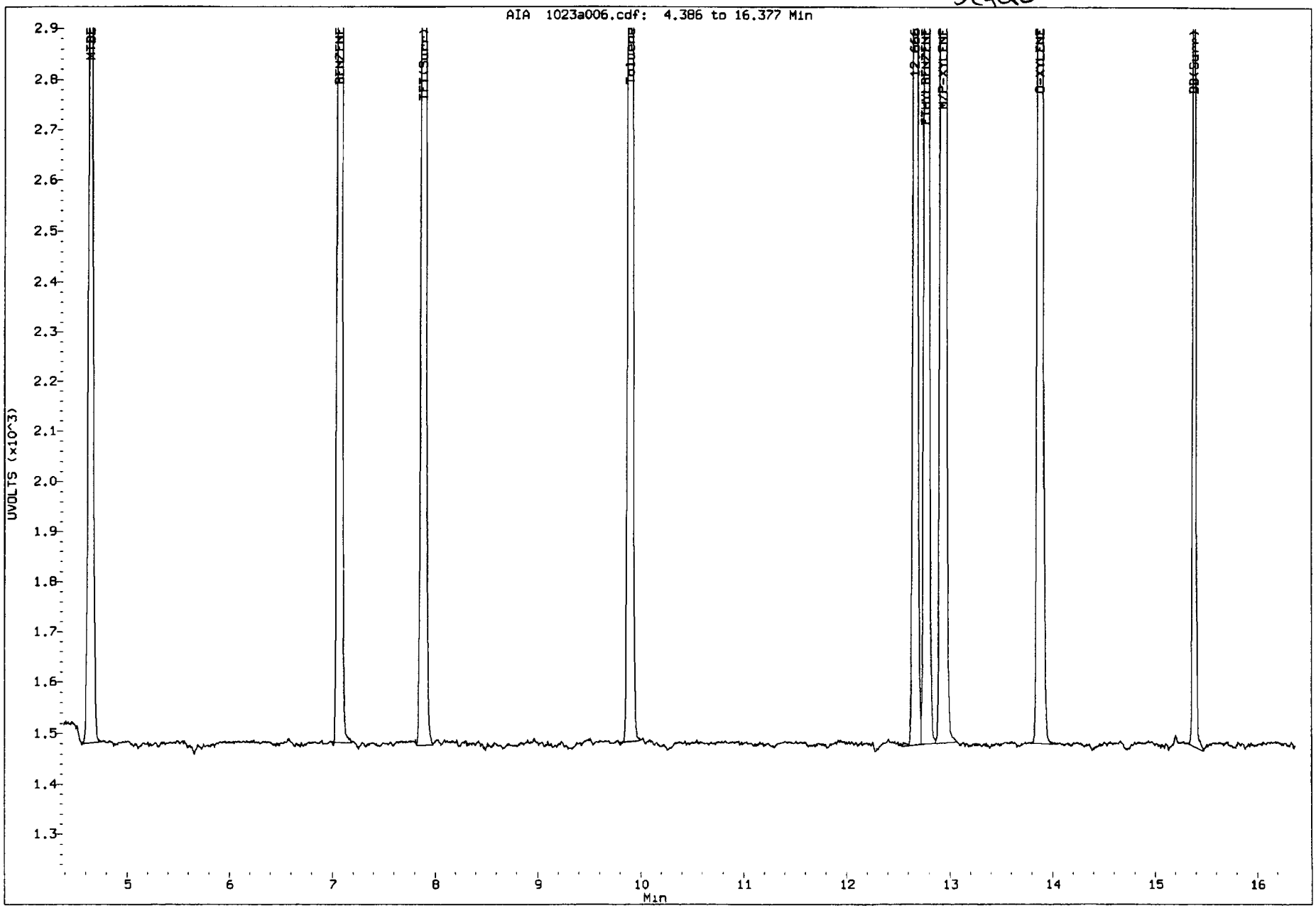
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

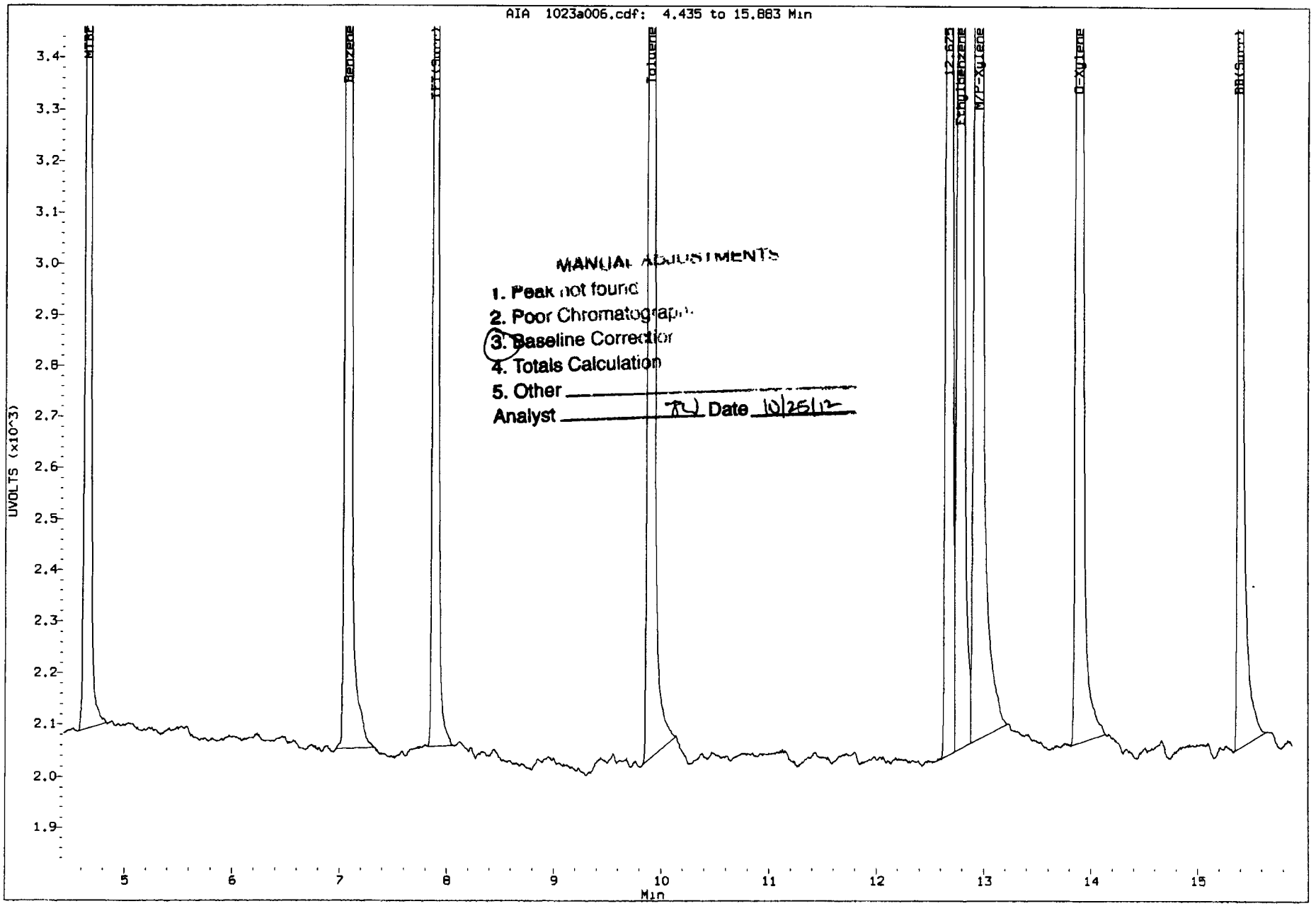
Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



EV 627 - 01520

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:



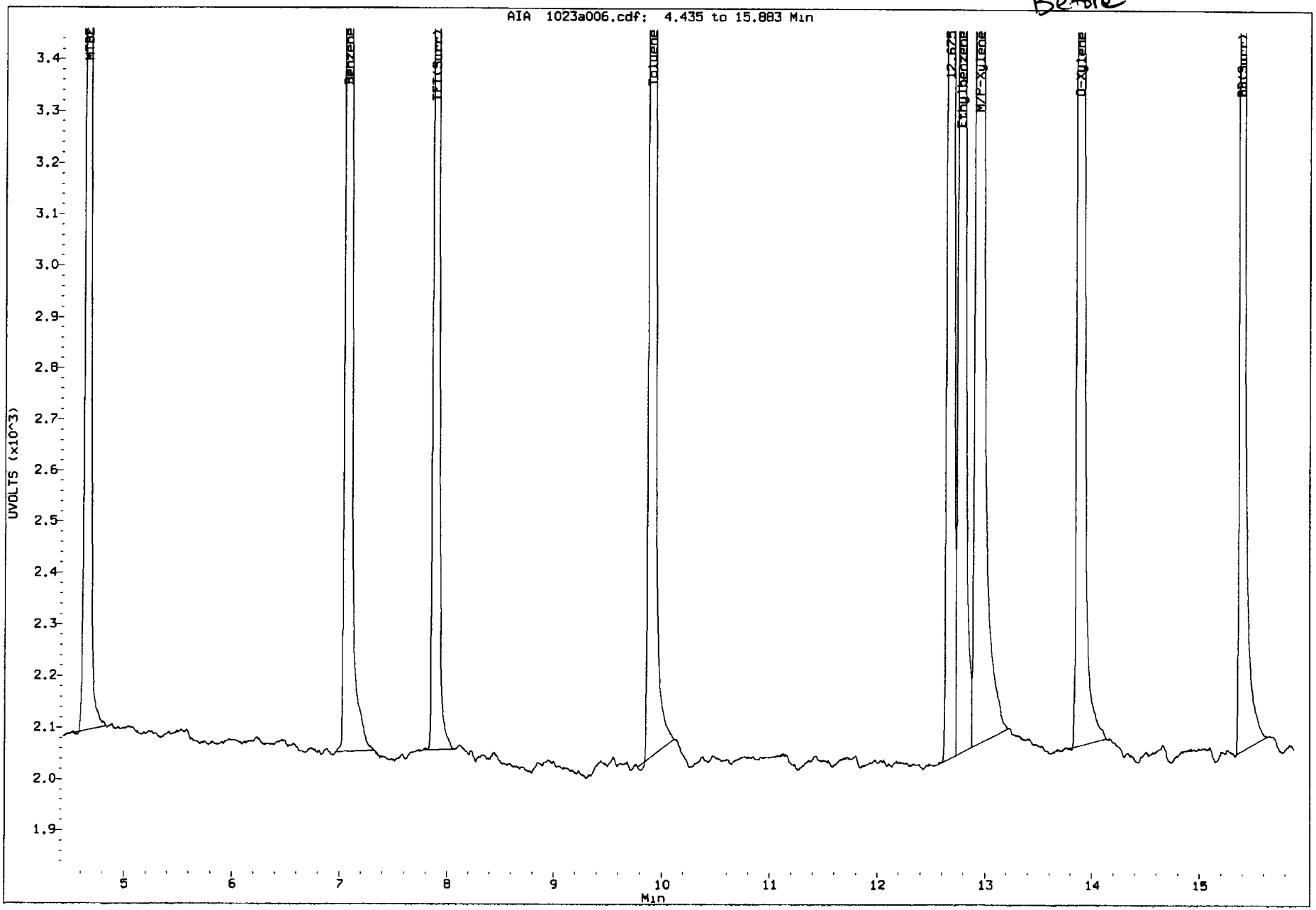
MANUAL ADJUSTMENTS

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/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

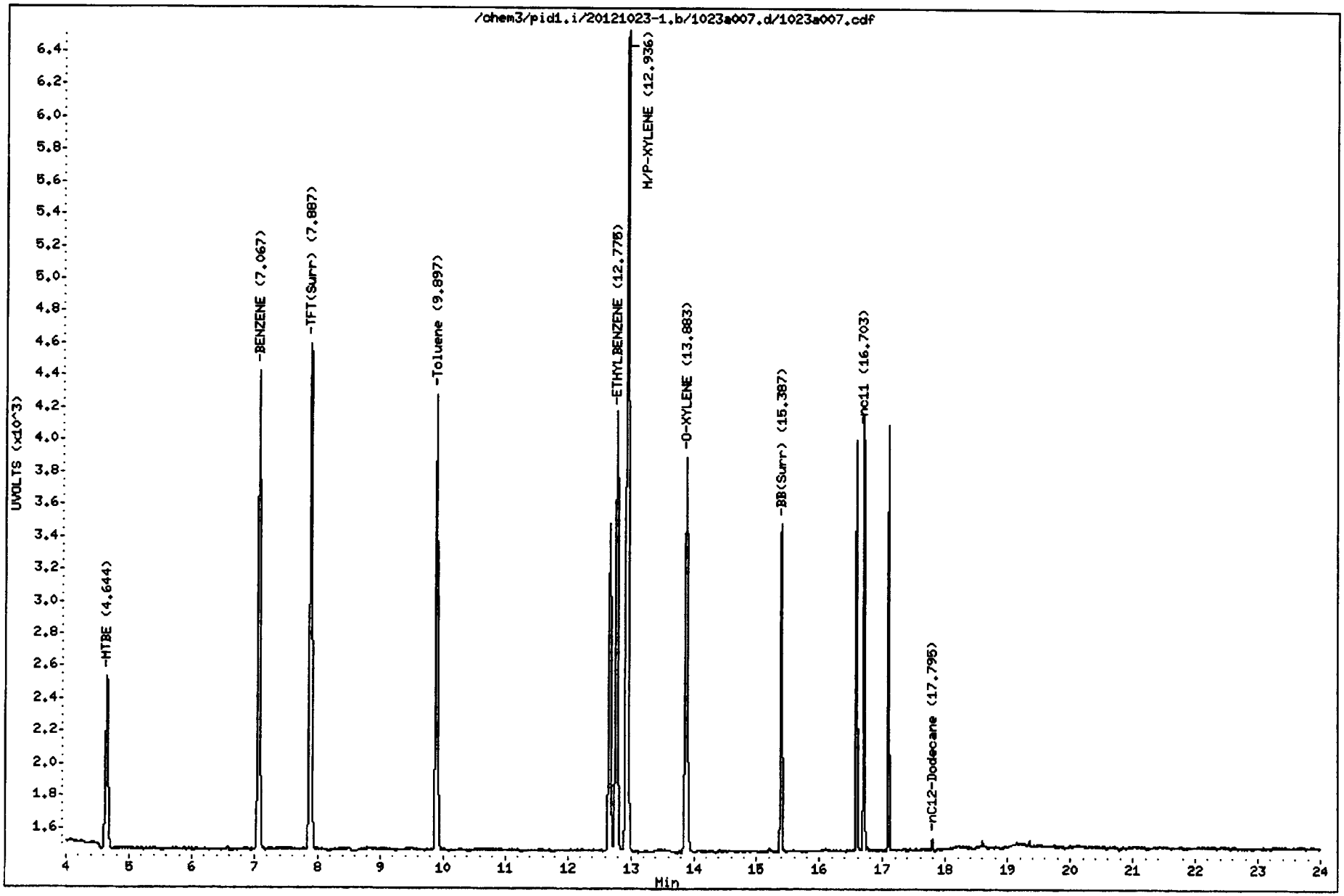
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18

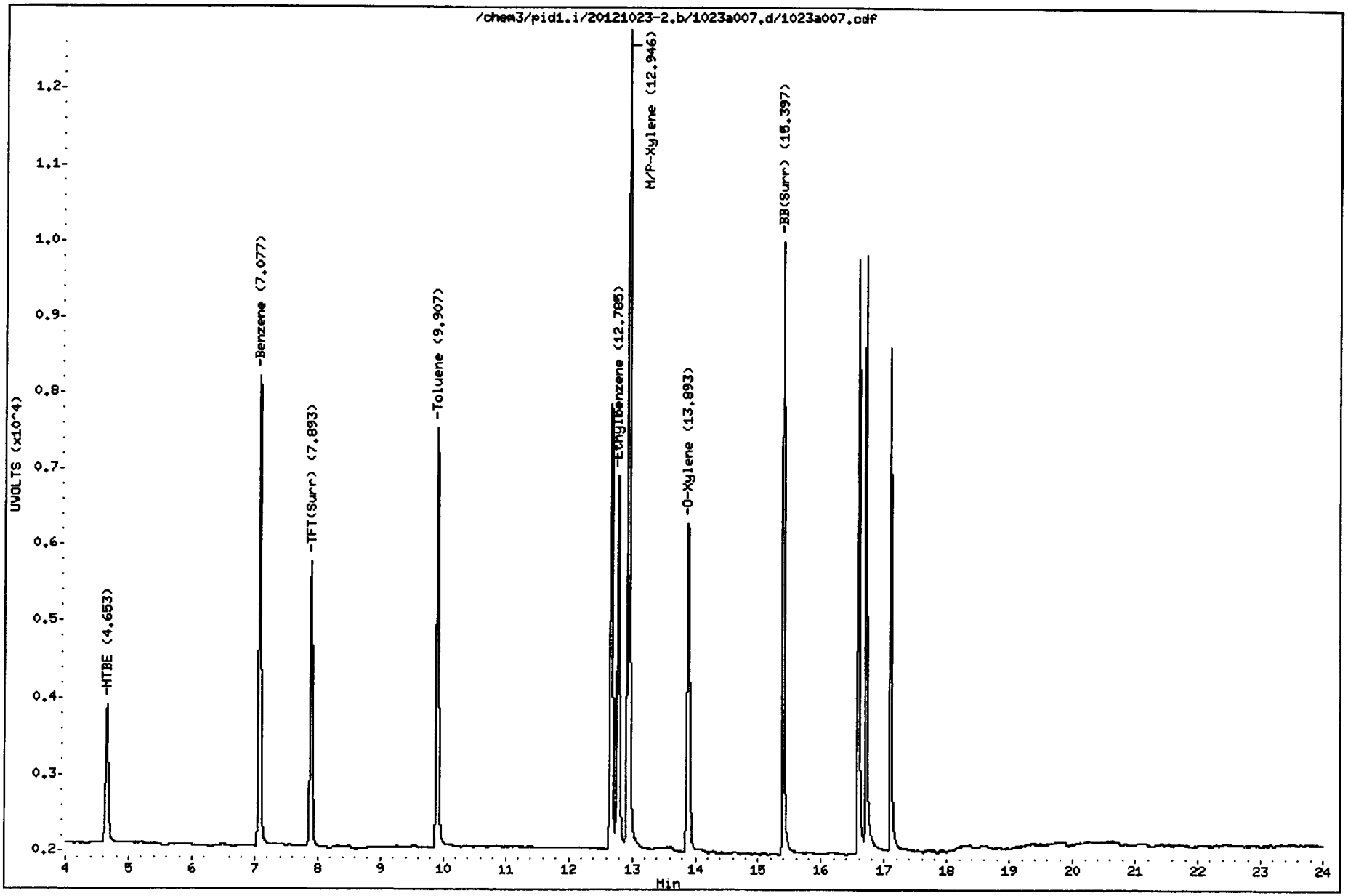


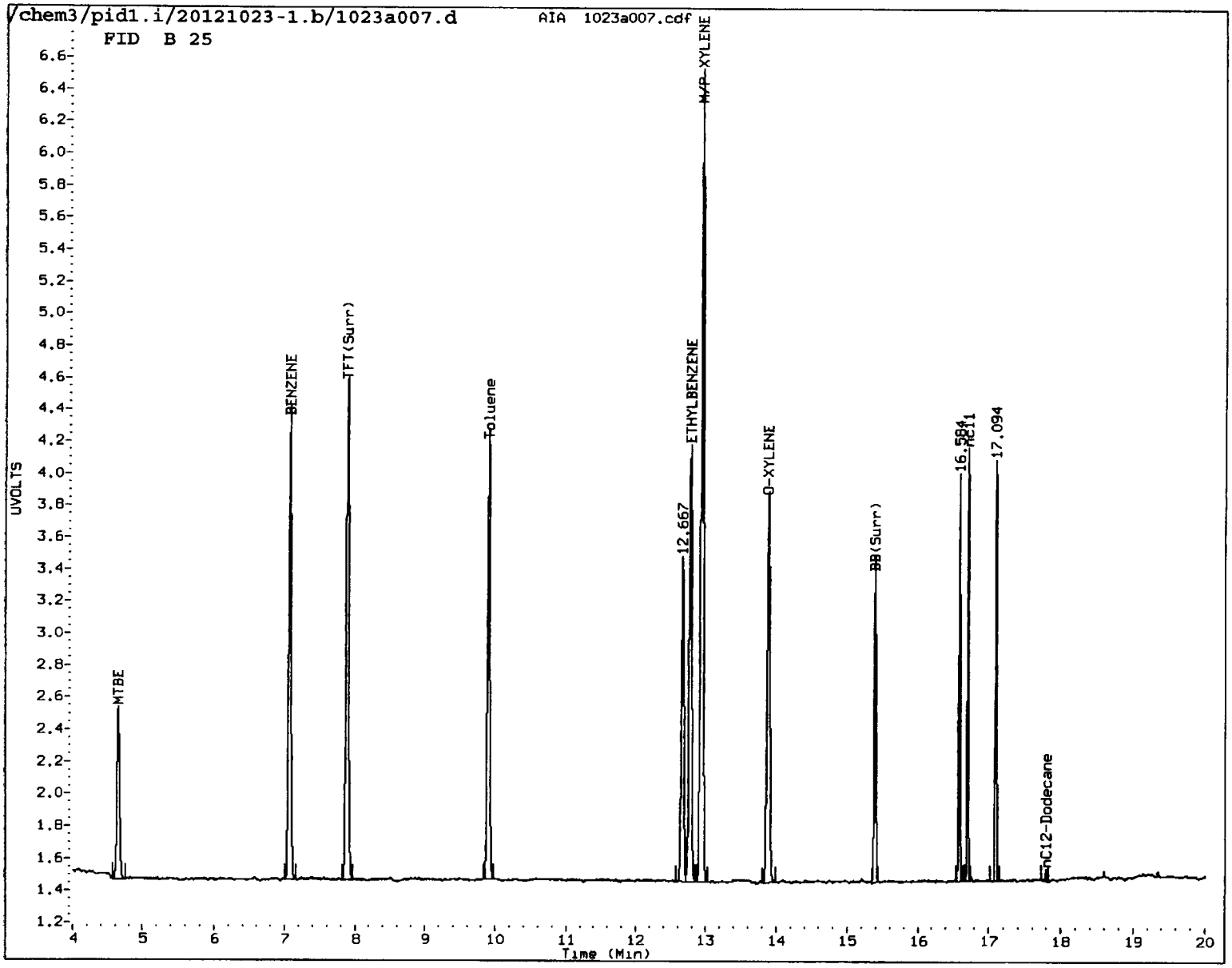
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

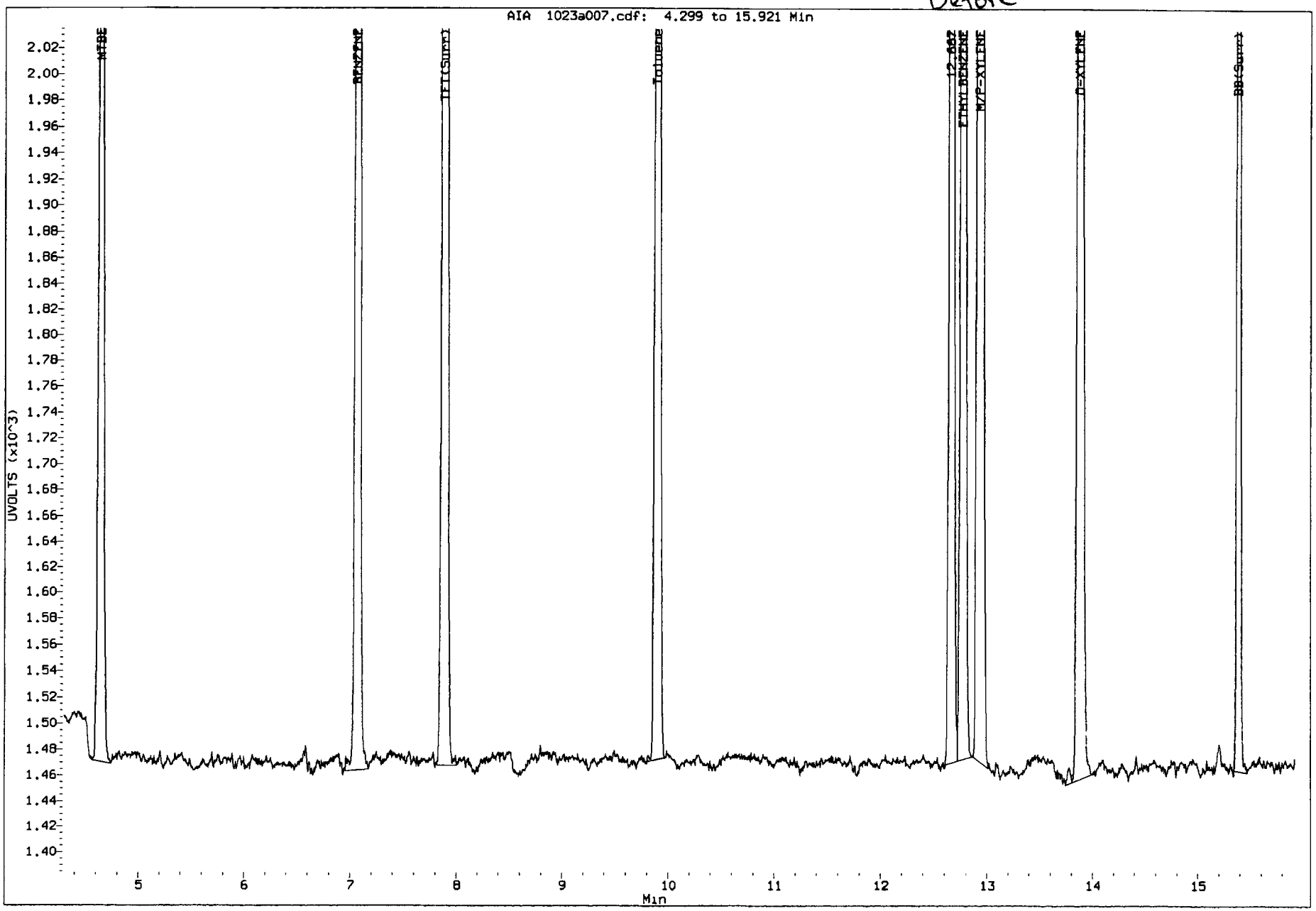
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

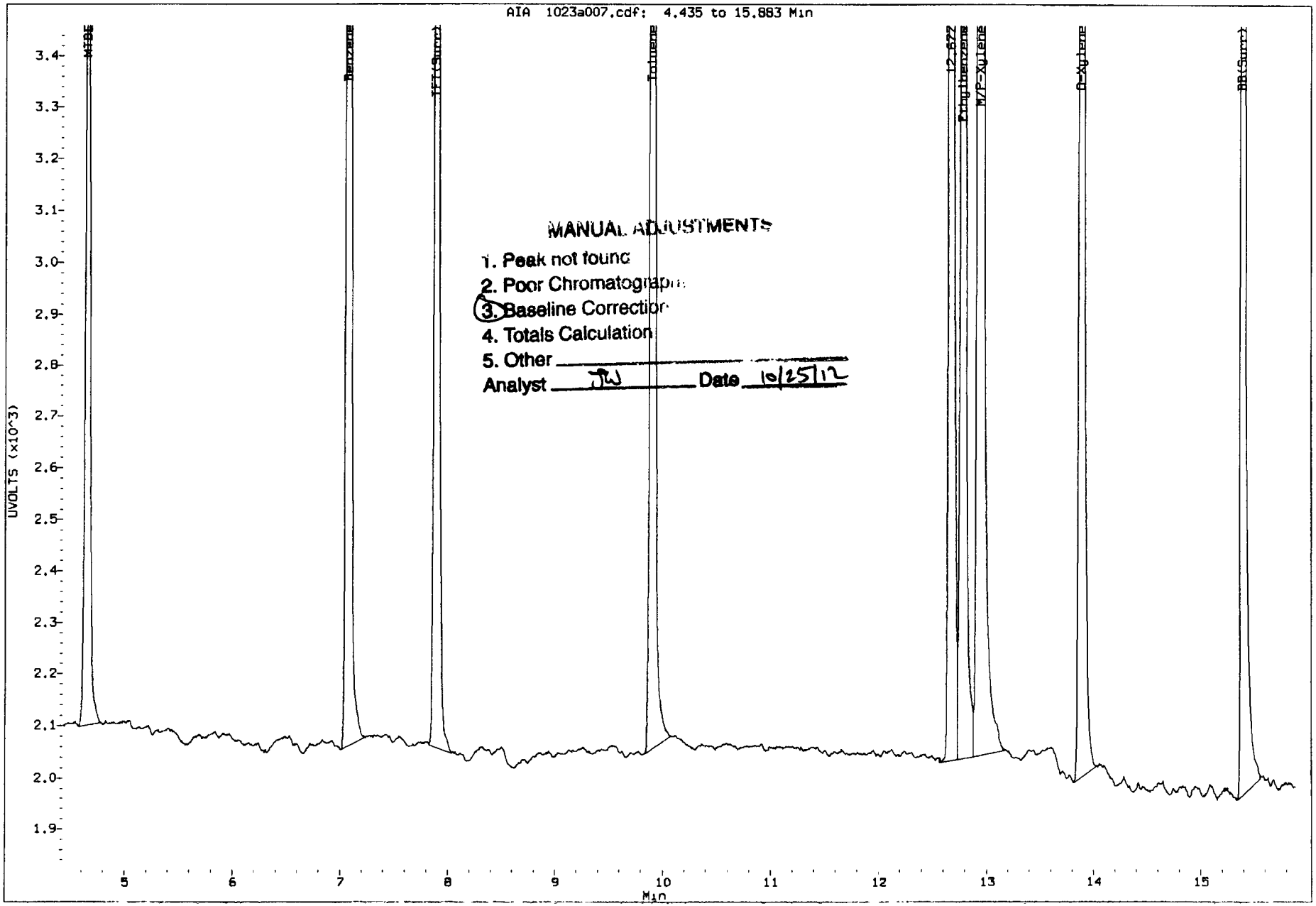
Analyst: JU Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before

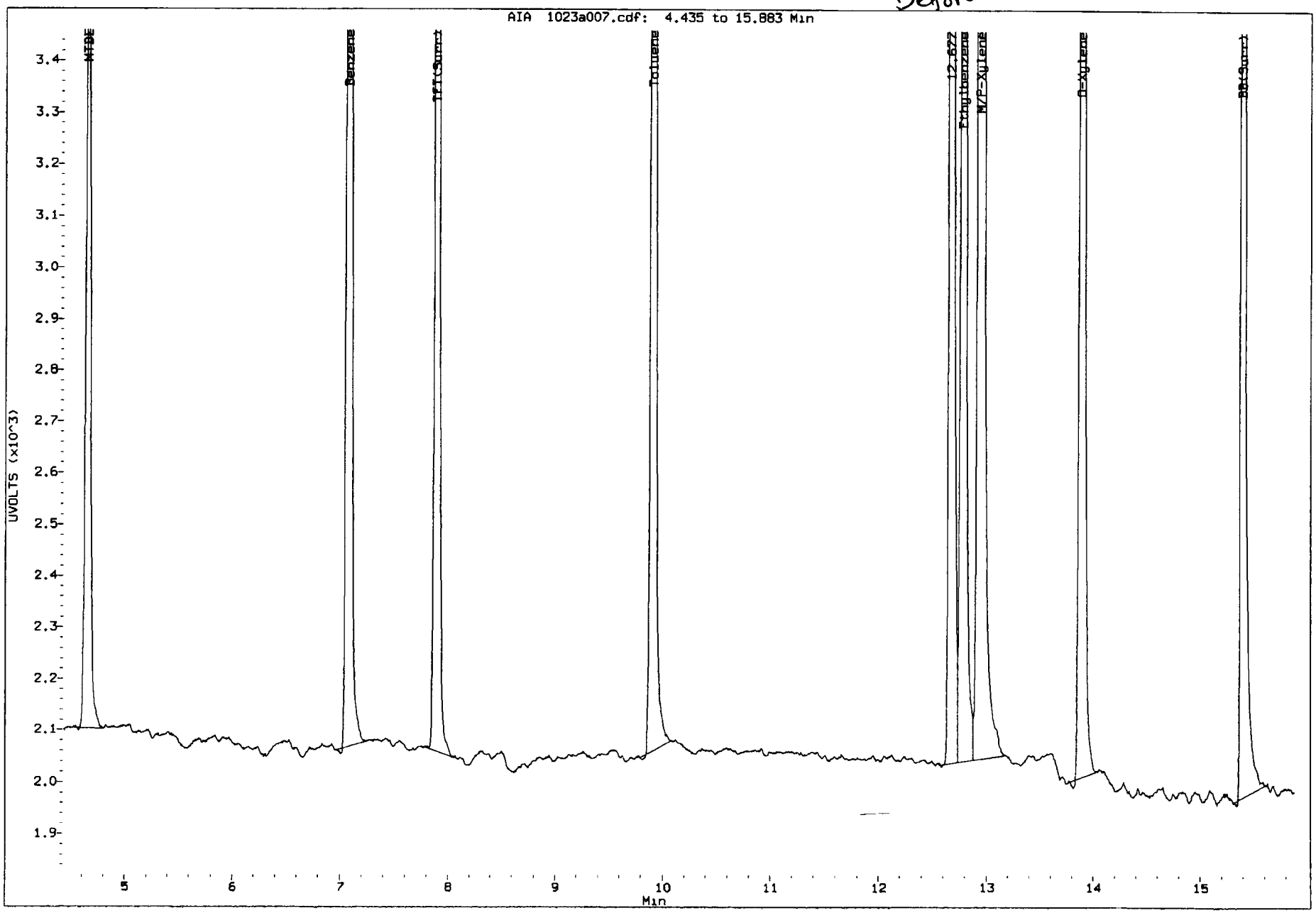


Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



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



DL57 04568

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a008.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a008.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 5
Client ID:
Injection Date: 23-OCT-2012 19:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	2118	27080	67.0	TFT(Surr)
15.387	0.000	1387	11721	68.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	52469	0.147 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	51824	0.072 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	48775	0.084 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	52469	0.140 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	2516	66.4	TFT(Surr)
15.393	0.000	5386	66.9	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	1275	5.14N	Benzene
9.903	-0.003	1121	4.98N	Toluene
12.785	-0.002	1007	5.11	Ethylbenzene
12.945	0.002	2196	10.21	M/P-Xylene
13.893	0.003	856	5.10N	O-Xylene
4.647	-0.007	377	5.24N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

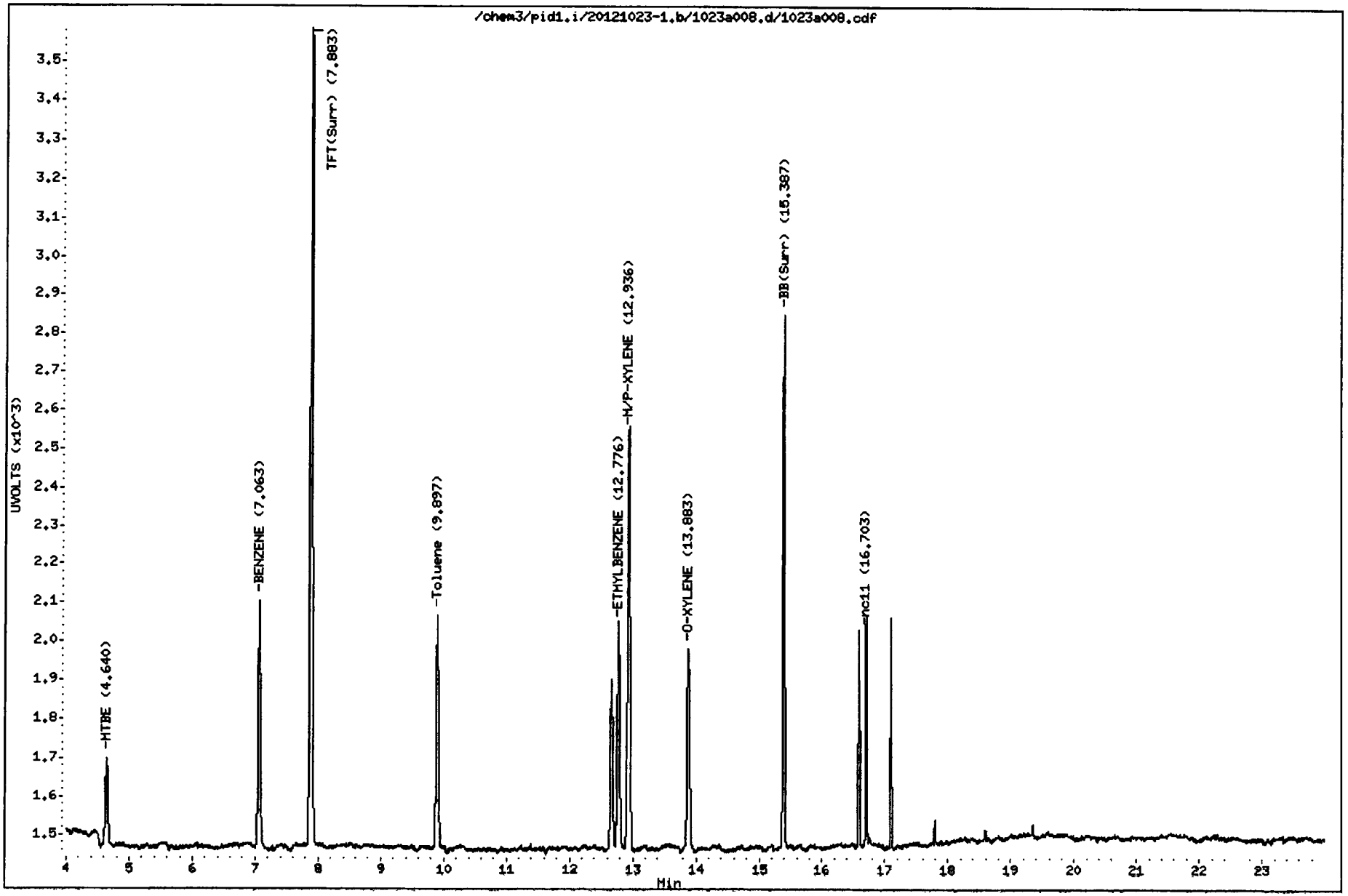
Sample Info: B 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

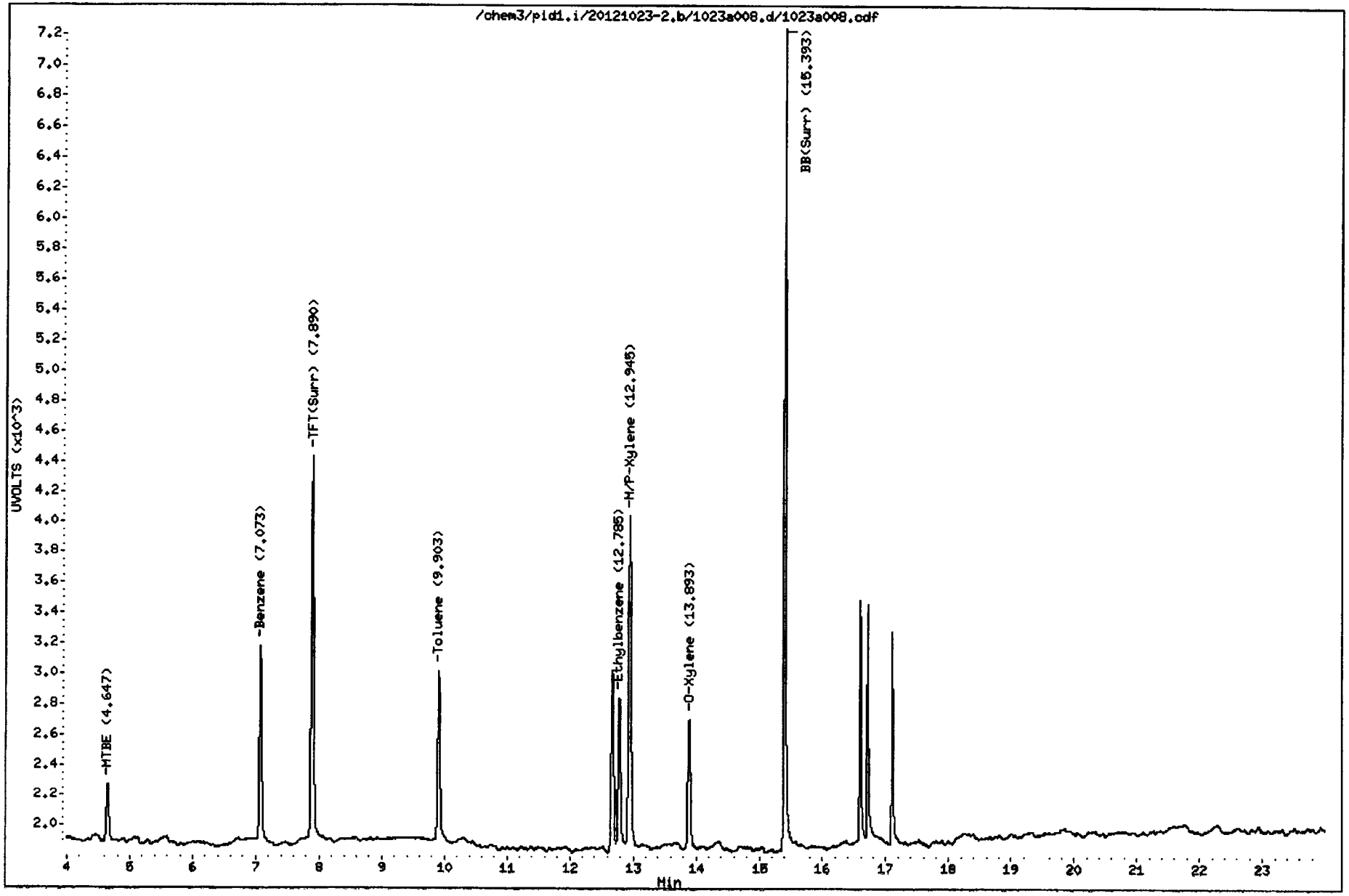
Sample Info: B 5

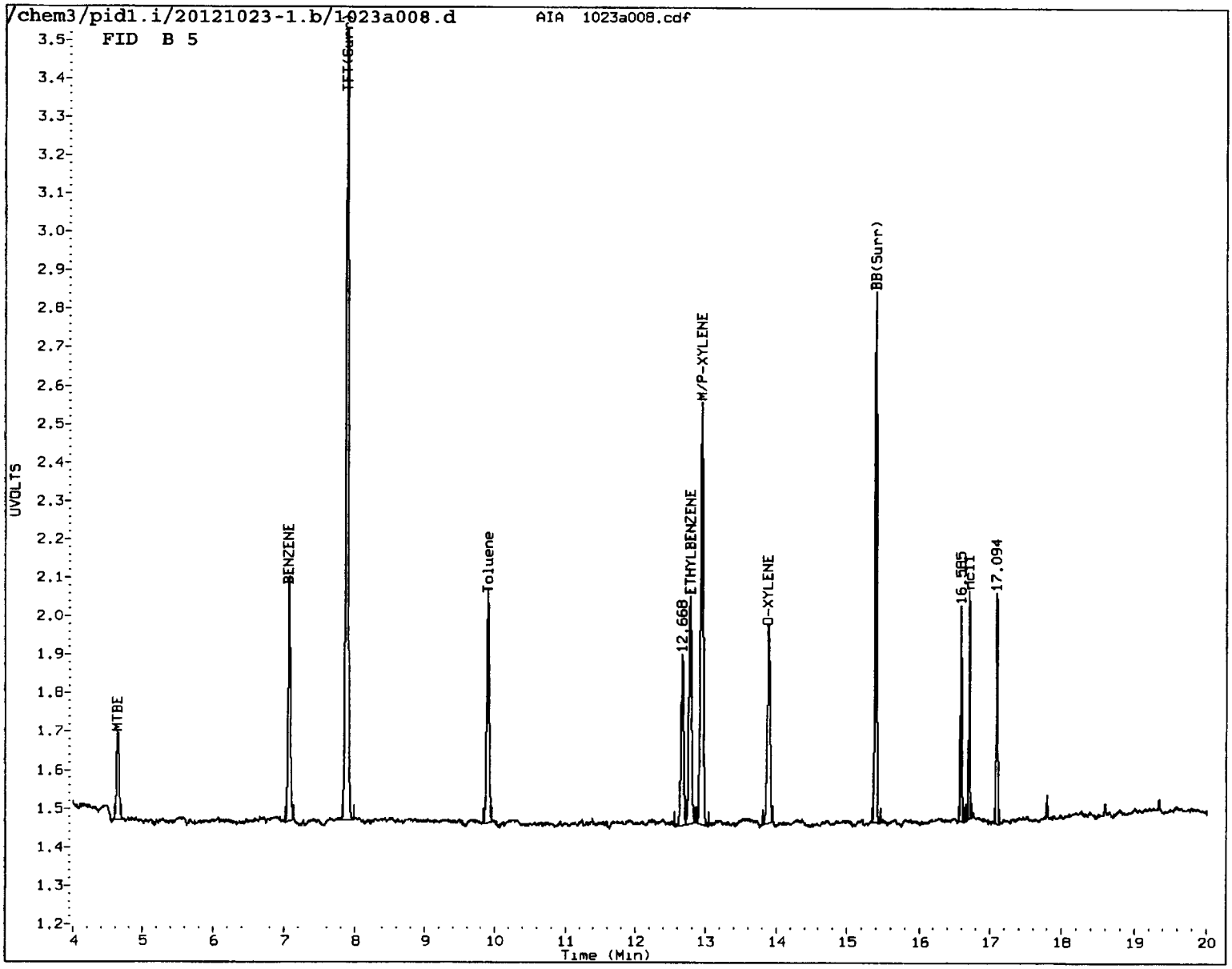
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

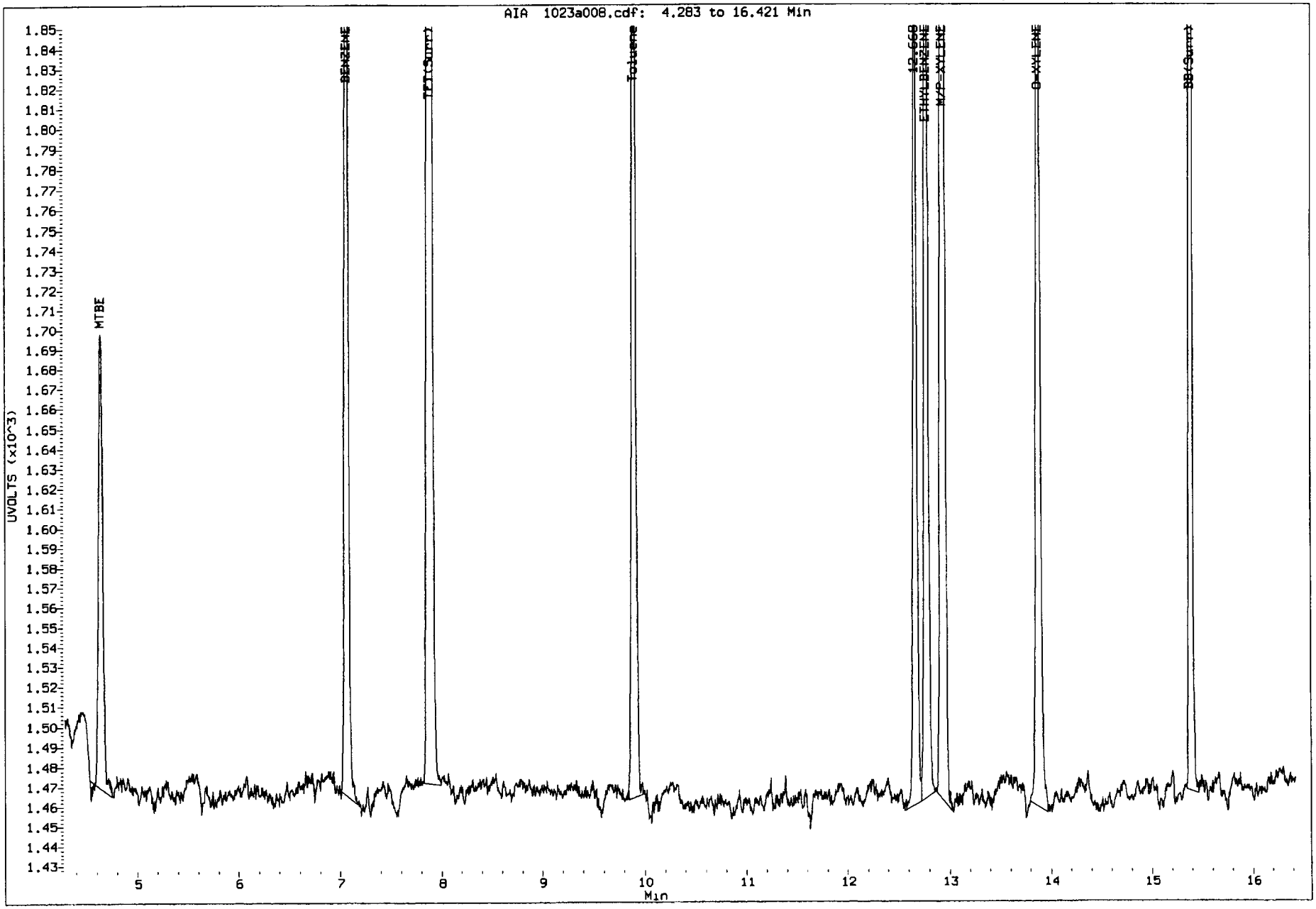
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

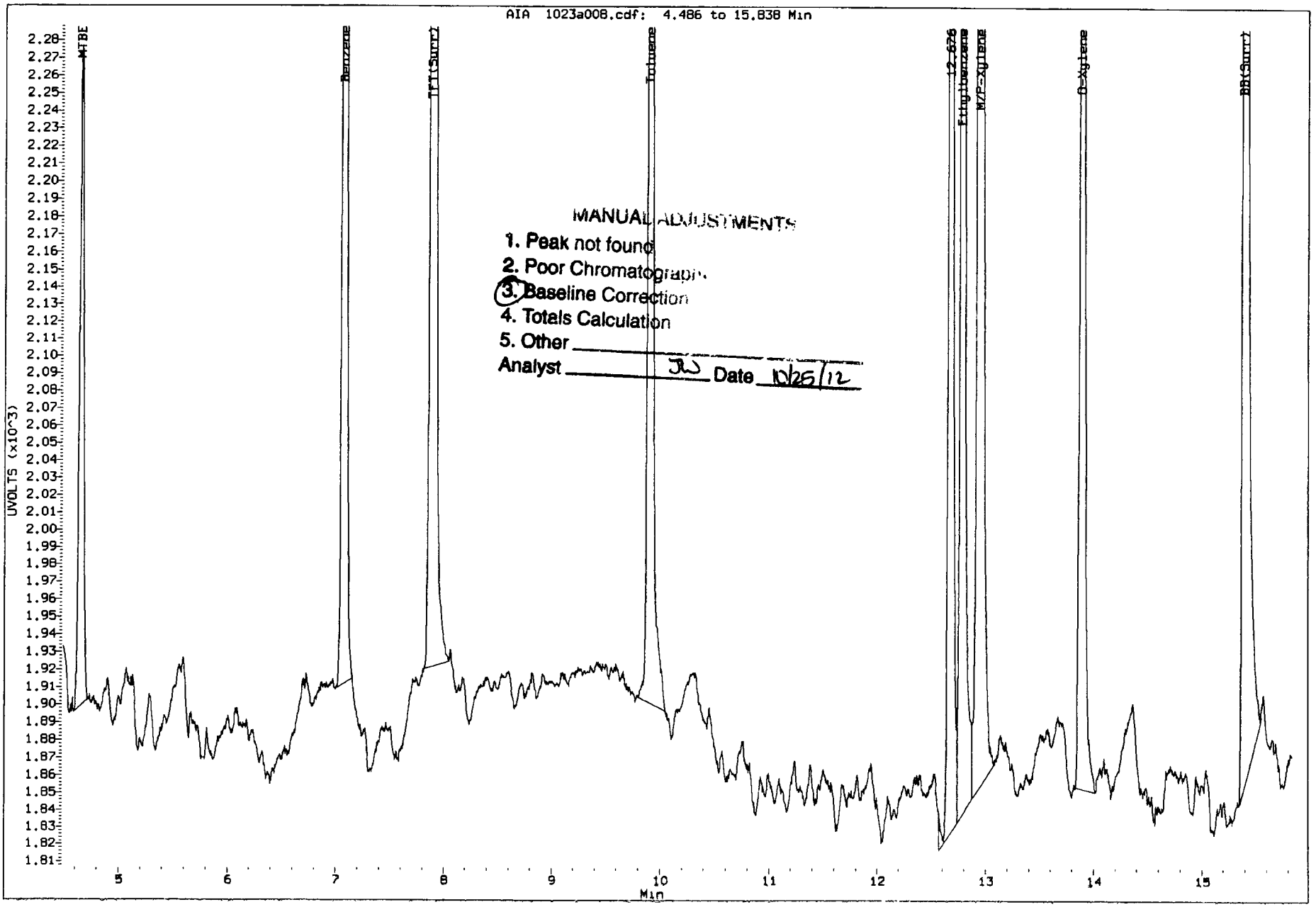
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.1
Client Sample ID:

Before

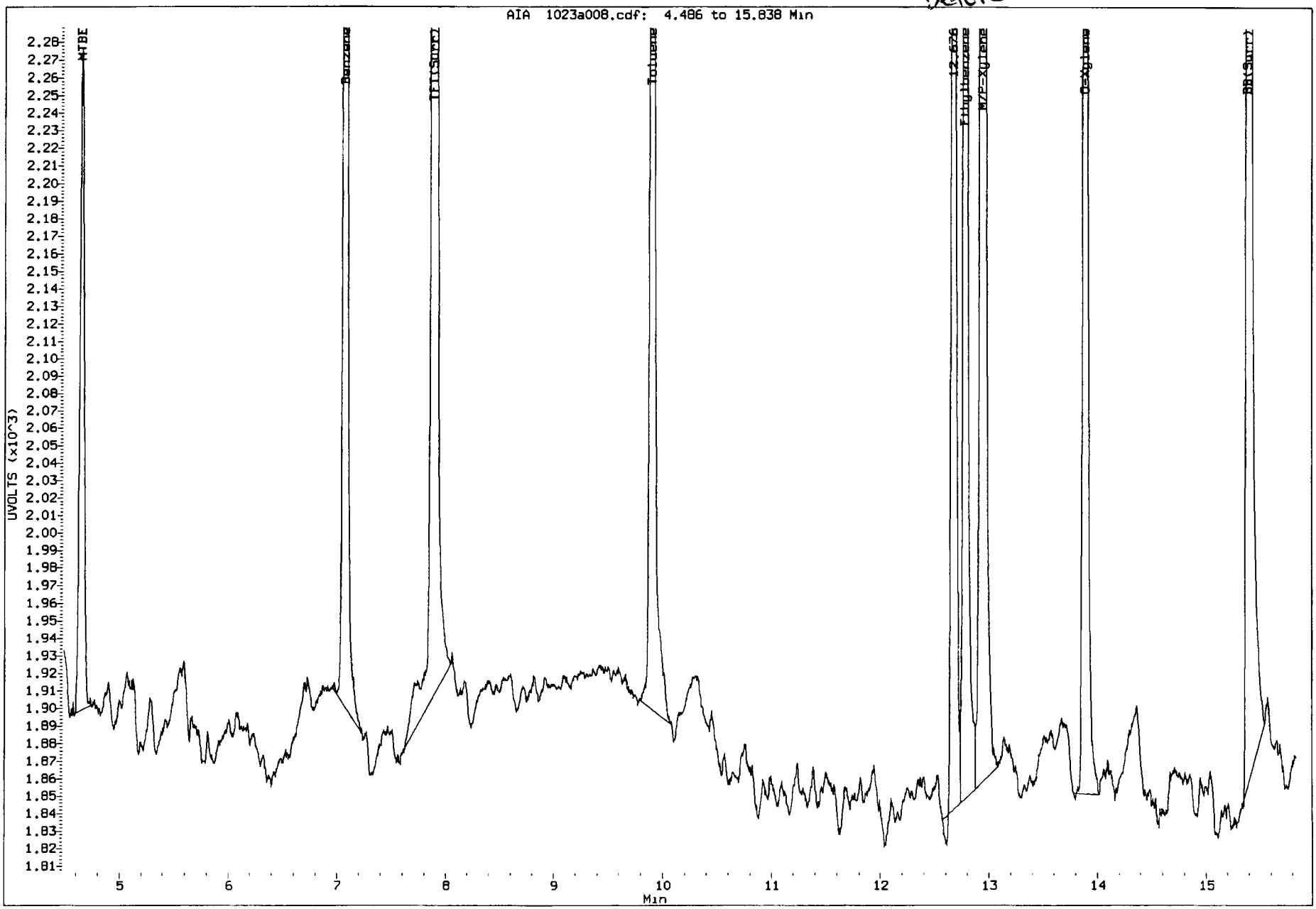


Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a009.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a009.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 1
Client ID:
Injection Date: 23-OCT-2012 20:16
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2094	27117	66.3	TFT(Surr)
15.387	0.000	1385	11445	68.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	10704	0.030 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	10312	0.014 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	9711	0.017 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	10704	0.029 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	2495	65.9	TFT(Surr)
15.393	0.000	5333	66.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	260	1.05N	Benzene
9.907	0.000	210	0.93N	Toluene
12.785	-0.001	198	1.00	Ethylbenzene
12.946	0.002	425	1.98	M/P-Xylene
13.893	0.003	168	1.00N	O-Xylene
4.647	-0.007	72	1.00N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

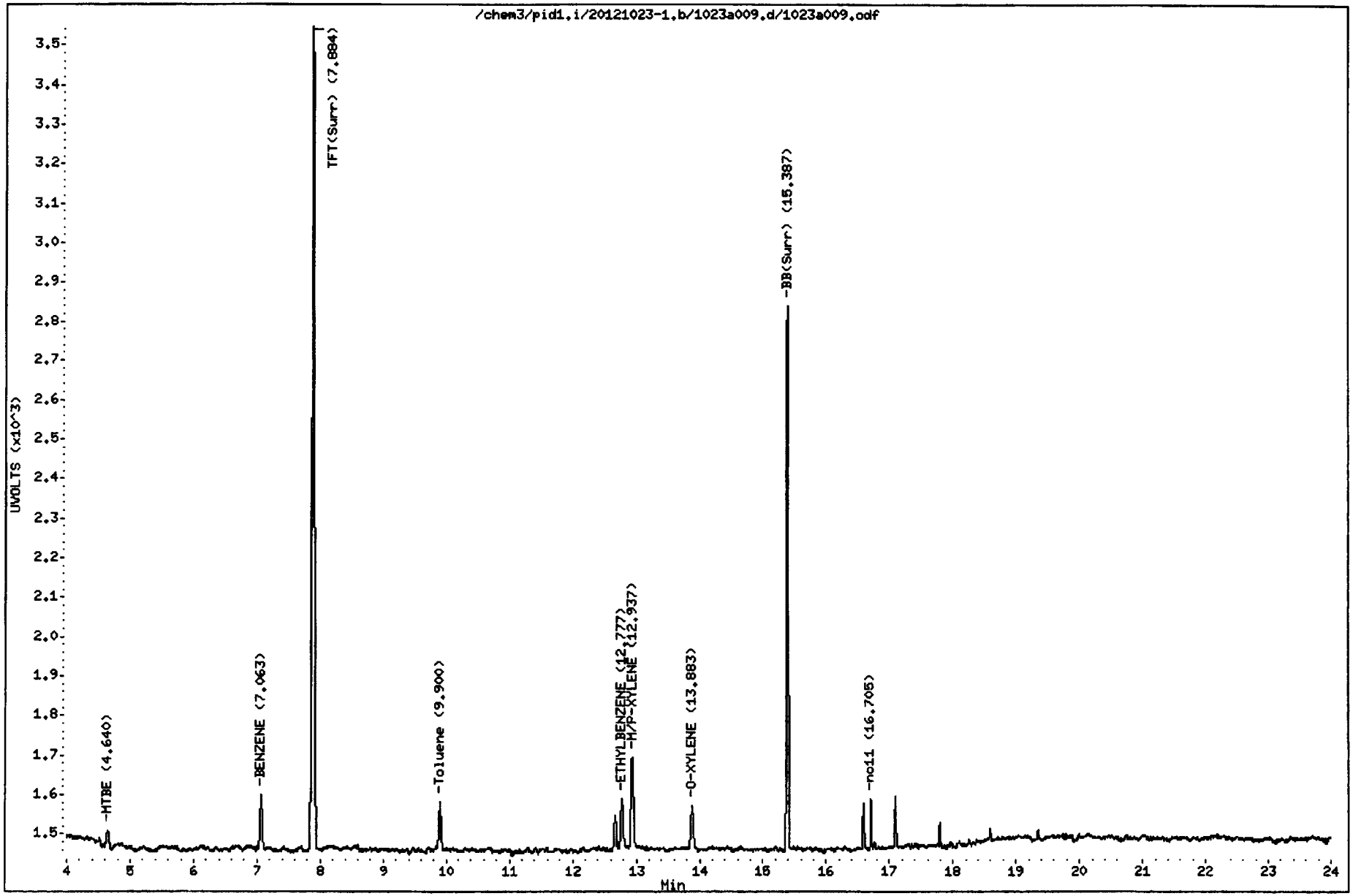
Sample Info: B 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

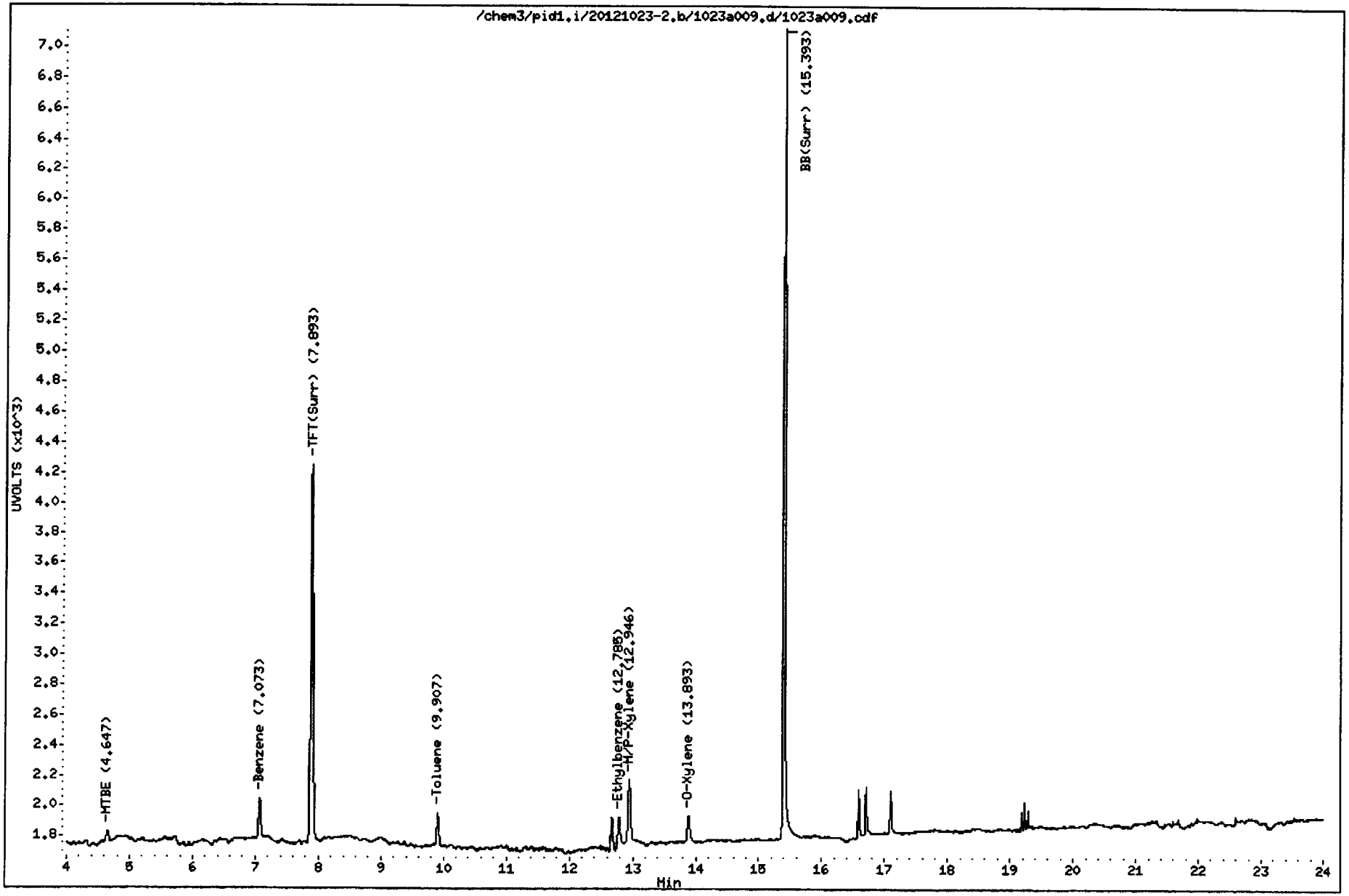
Sample Info: B 1

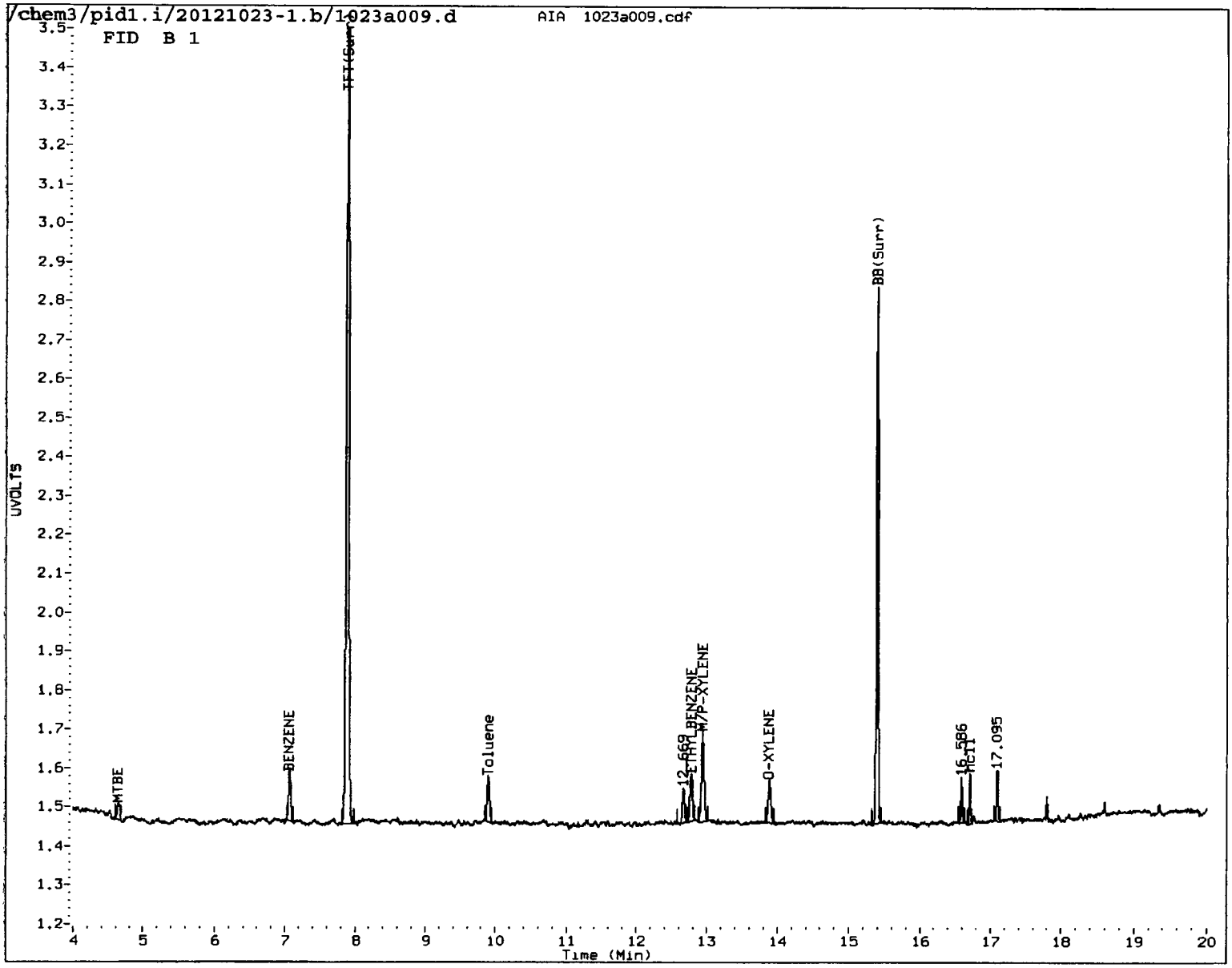
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

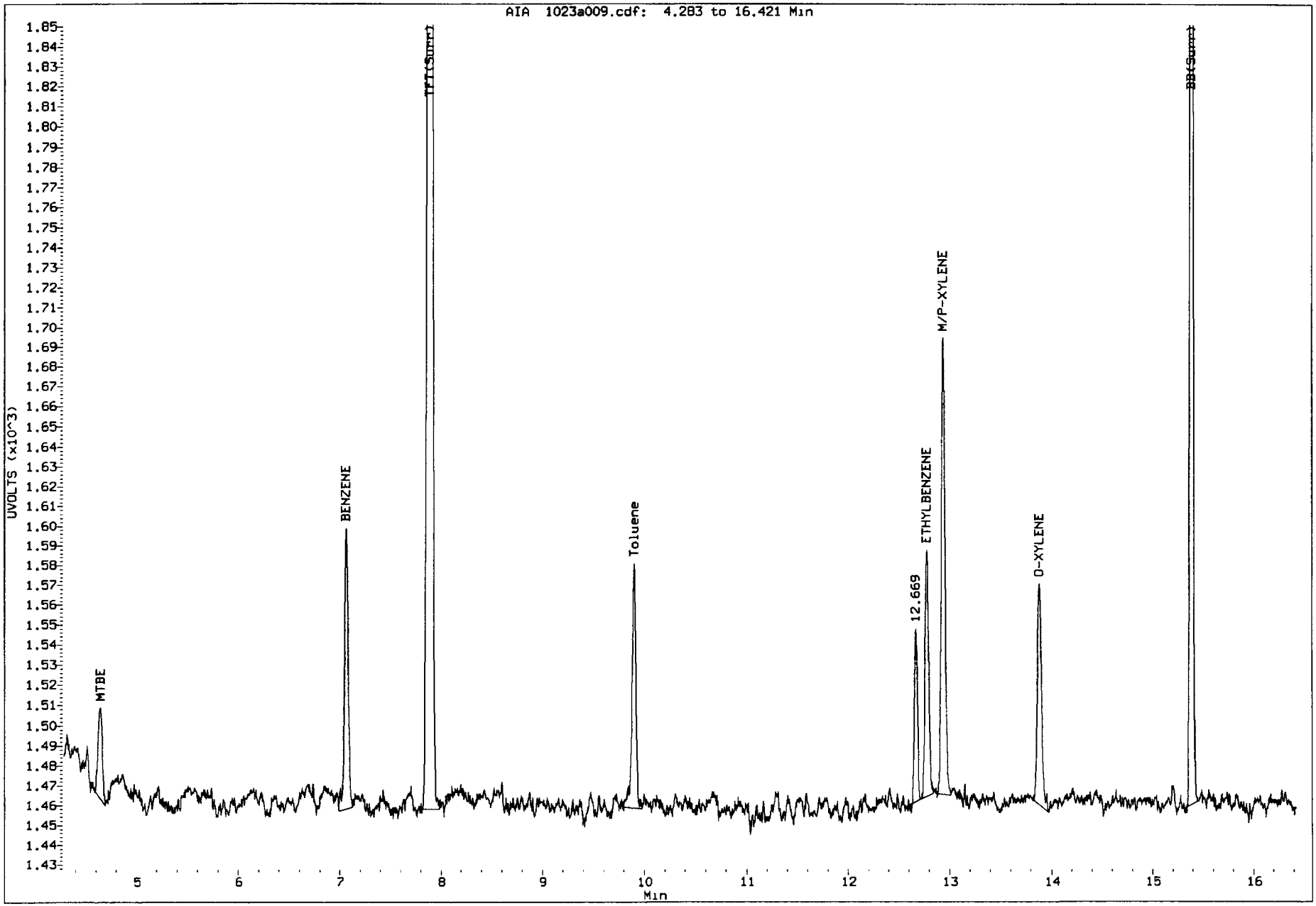
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

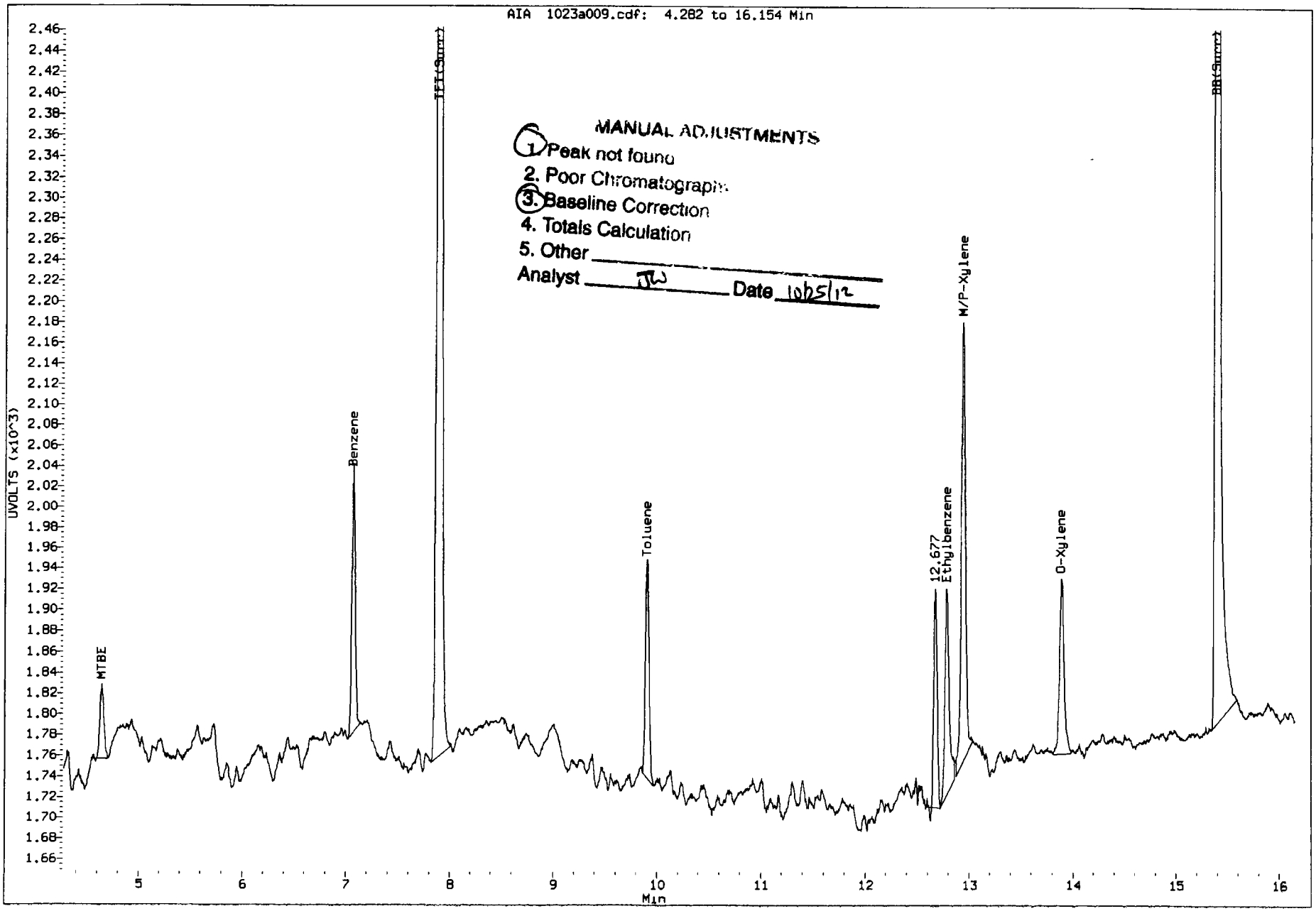
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before

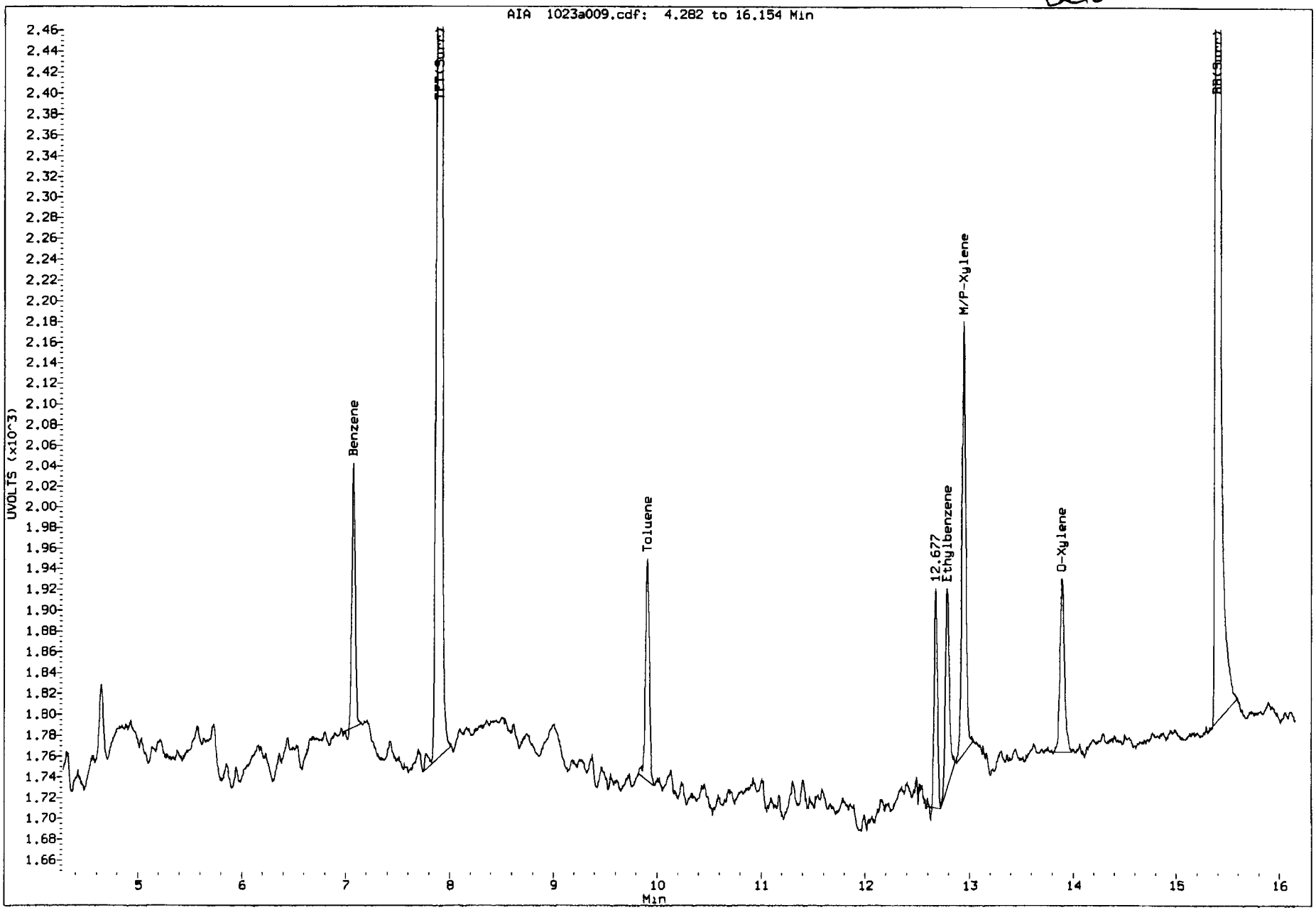


Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW
10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Page 1

Date : 23-OCT-2012 20:45

Client ID:

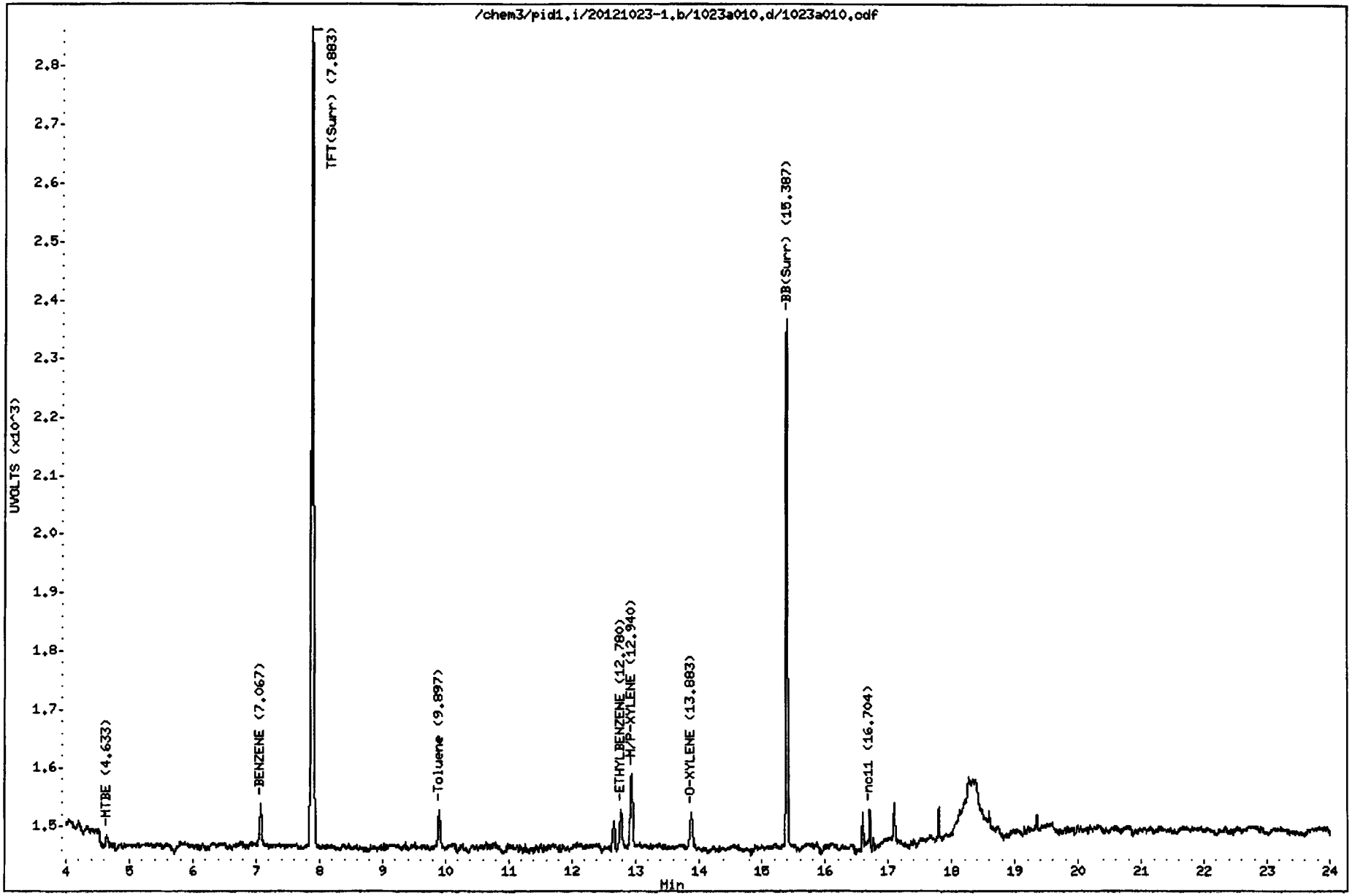
Instrument: pid1.i

Sample Info: B 0.5

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a010.d

Page 1

Date : 23-OCT-2012 20:45

Client ID:

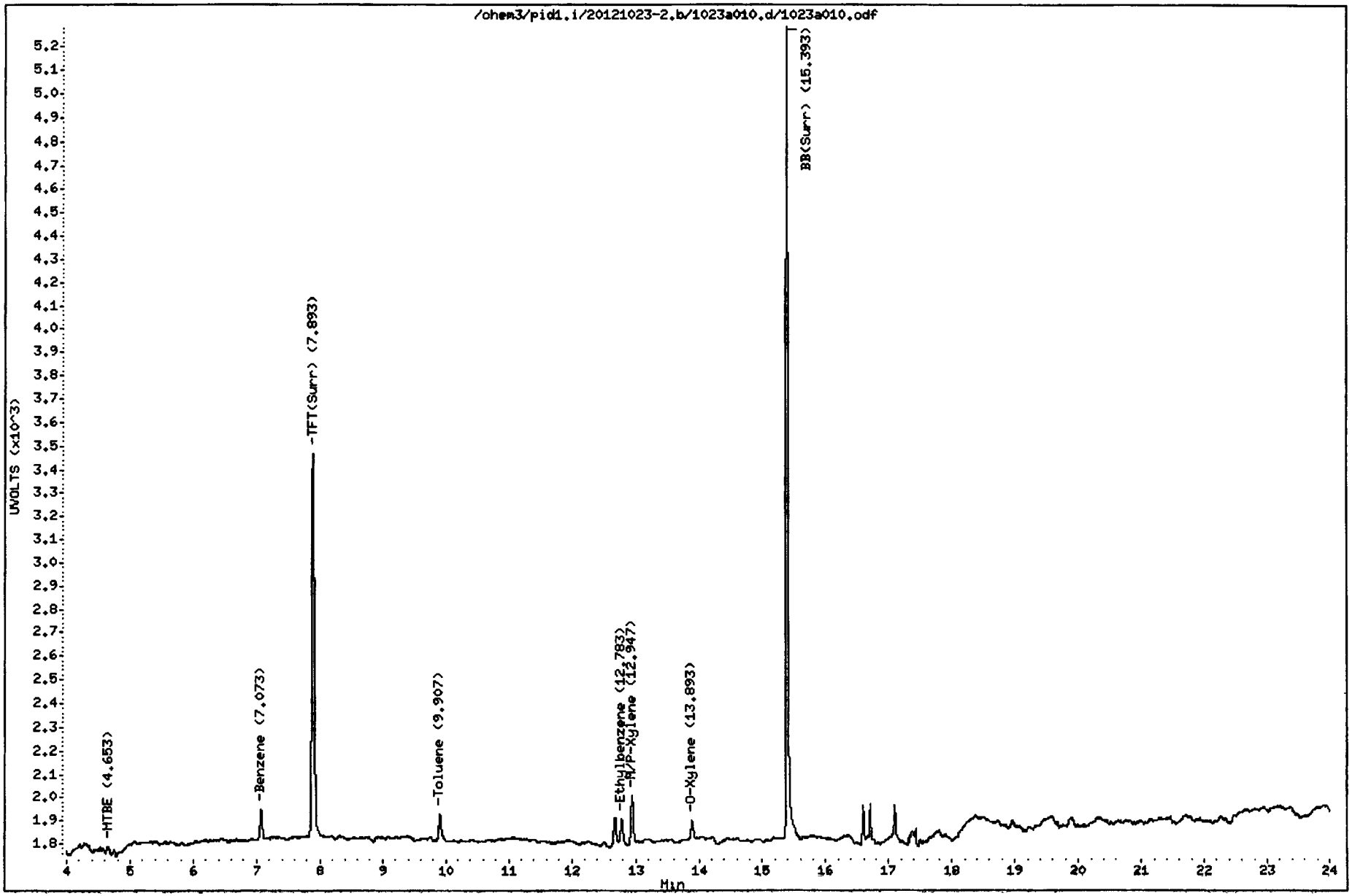
Instrument: pid1.i

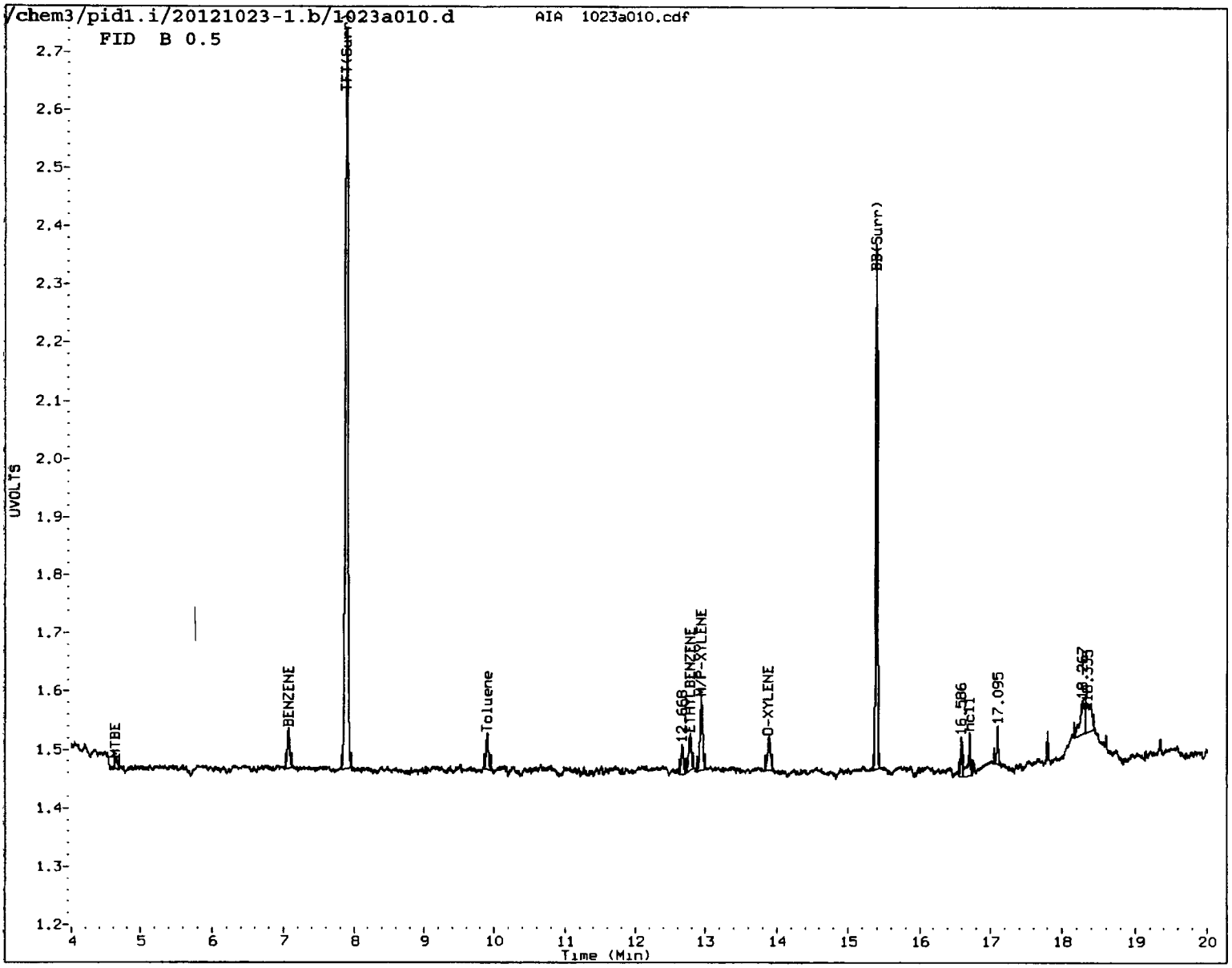
Sample Info: B 0.5

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18





MANUAL INTEGRATION

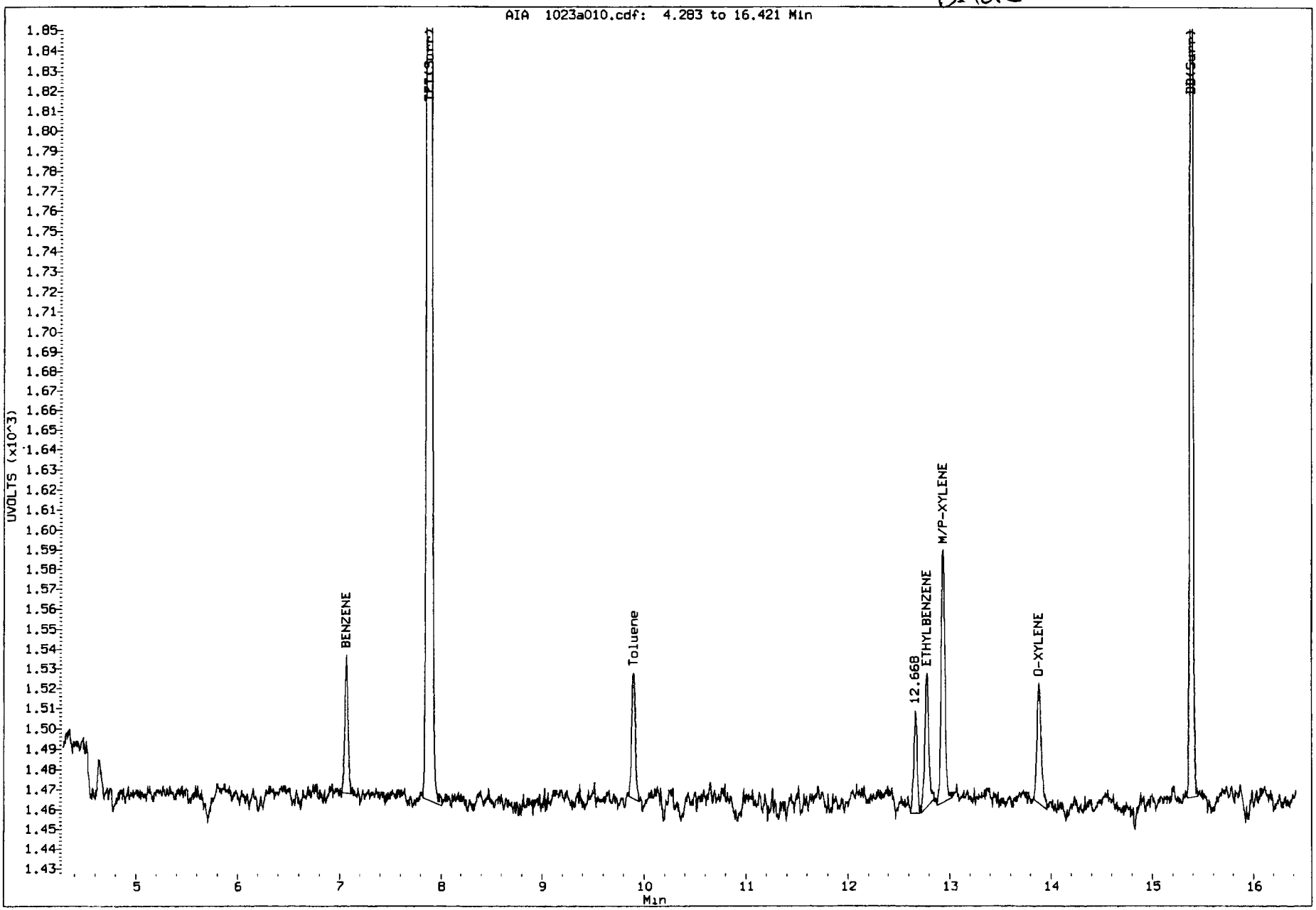
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

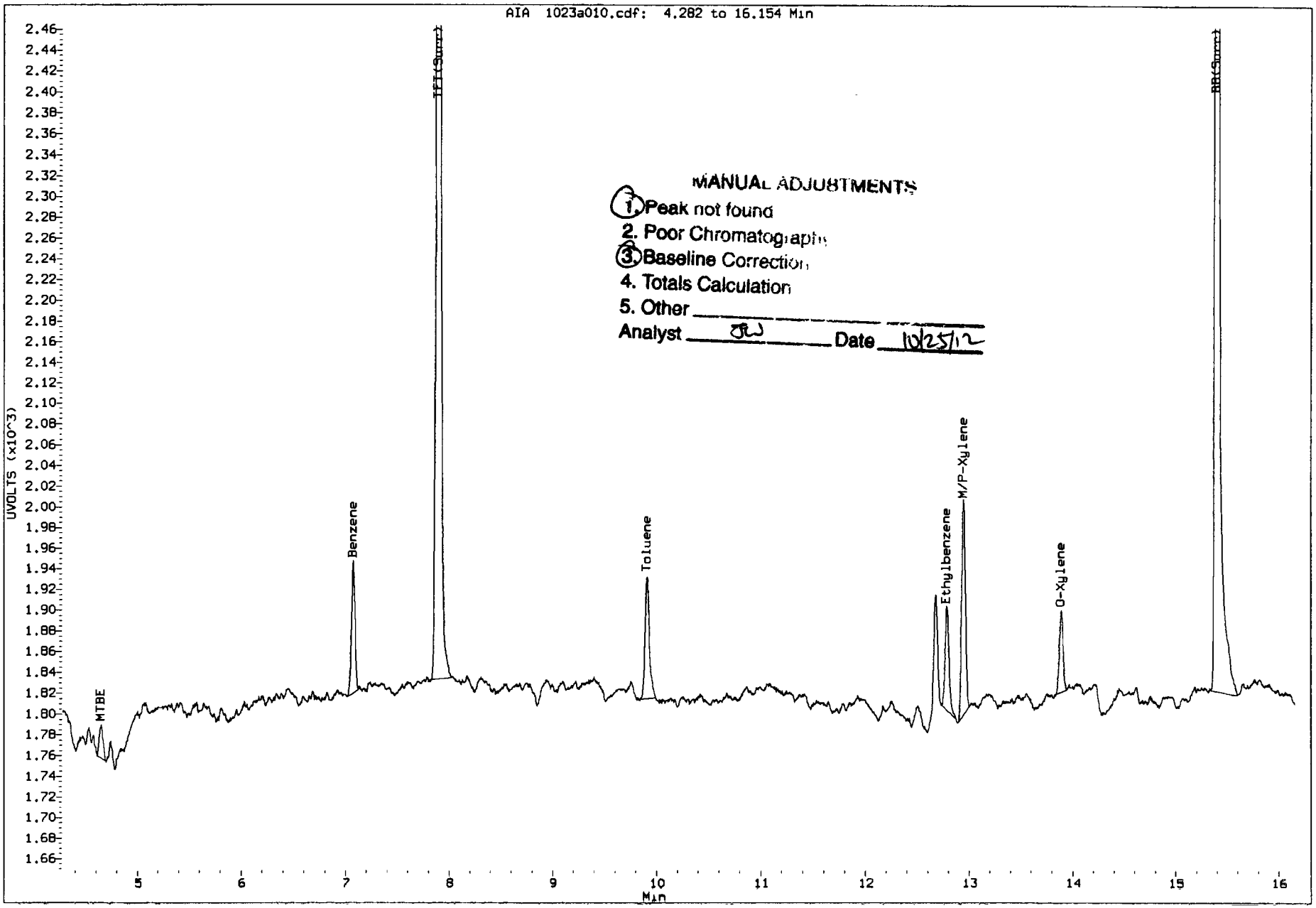
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/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:



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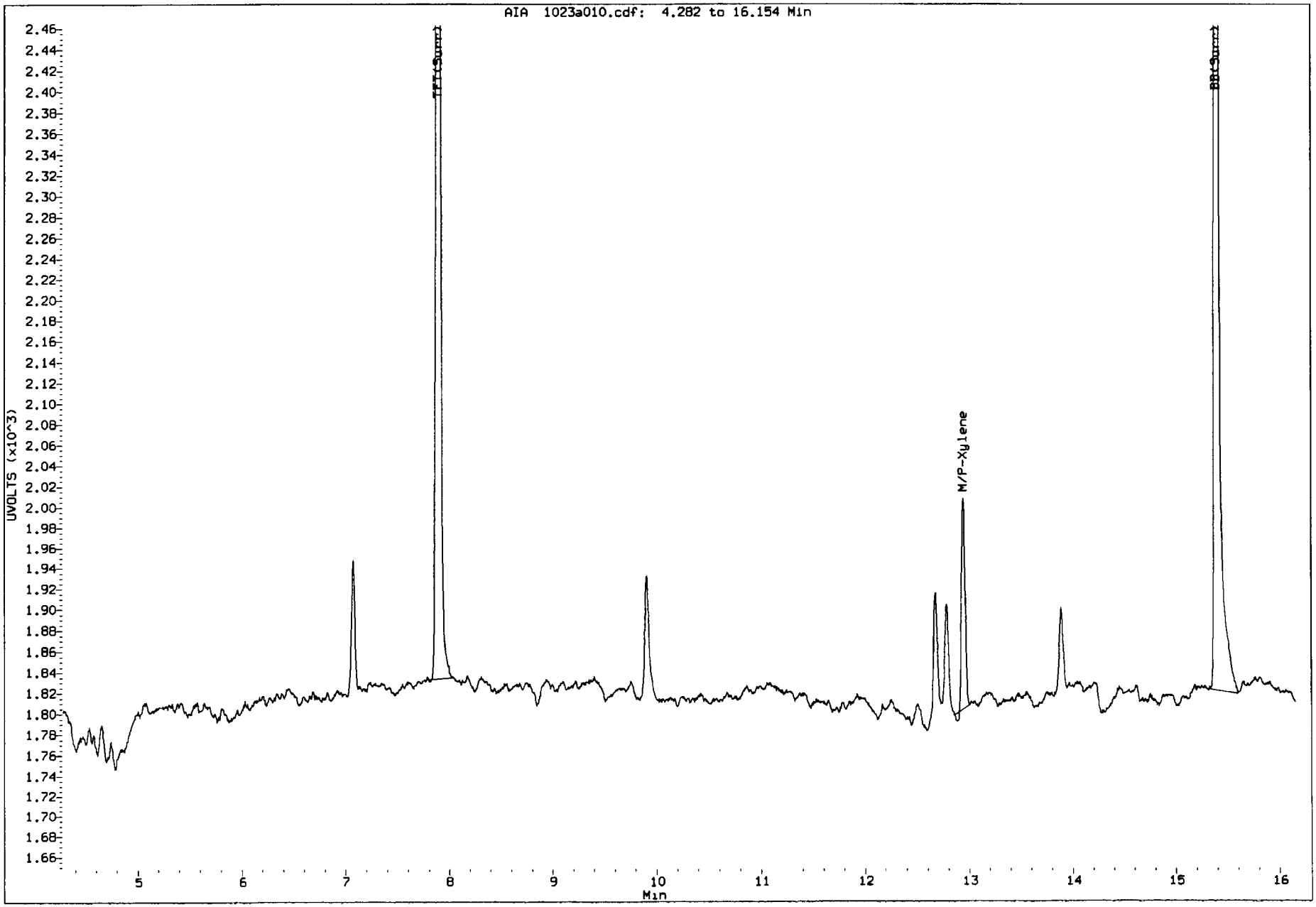
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



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:

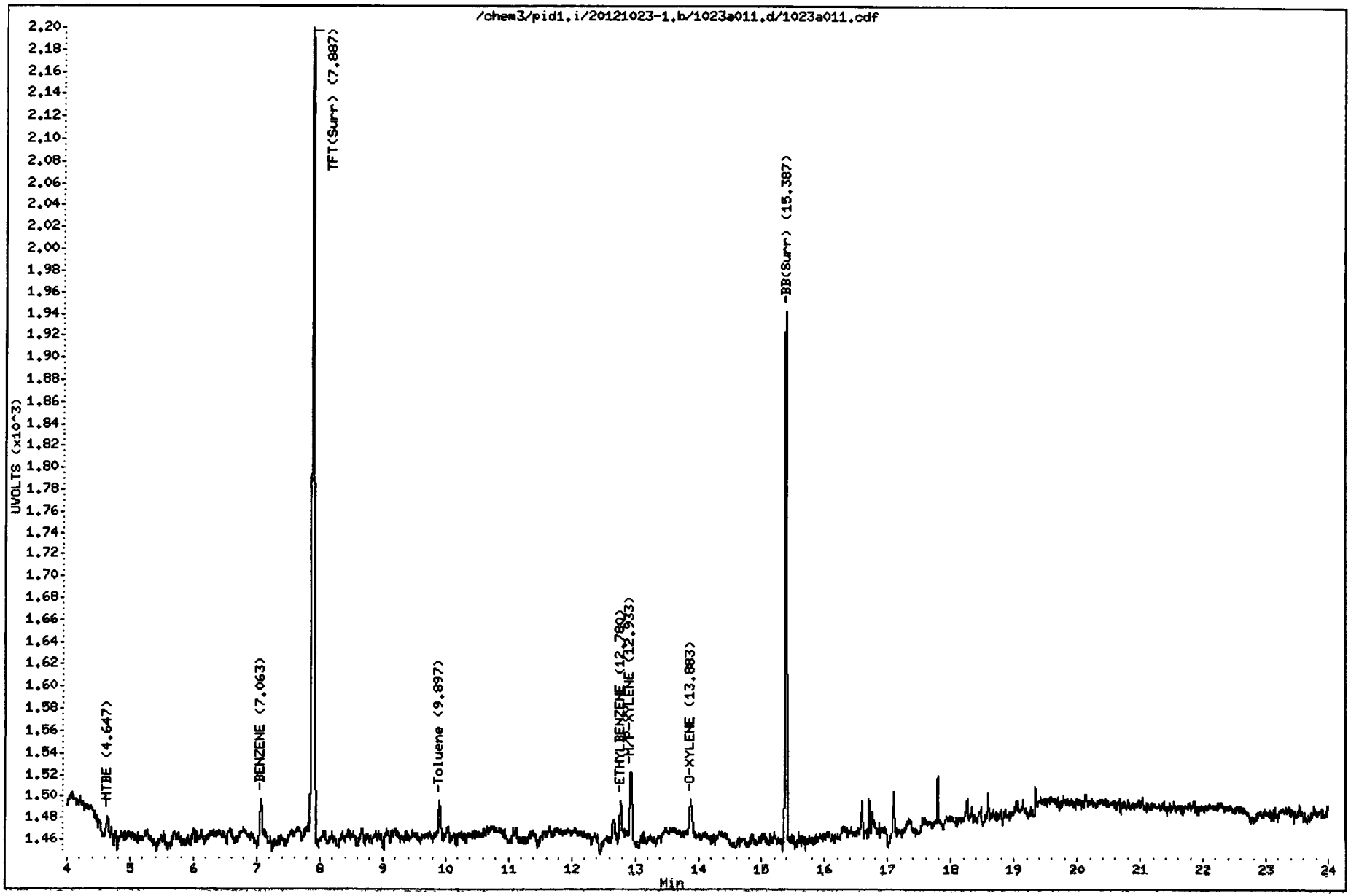
Sample Info: B 0.25

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:

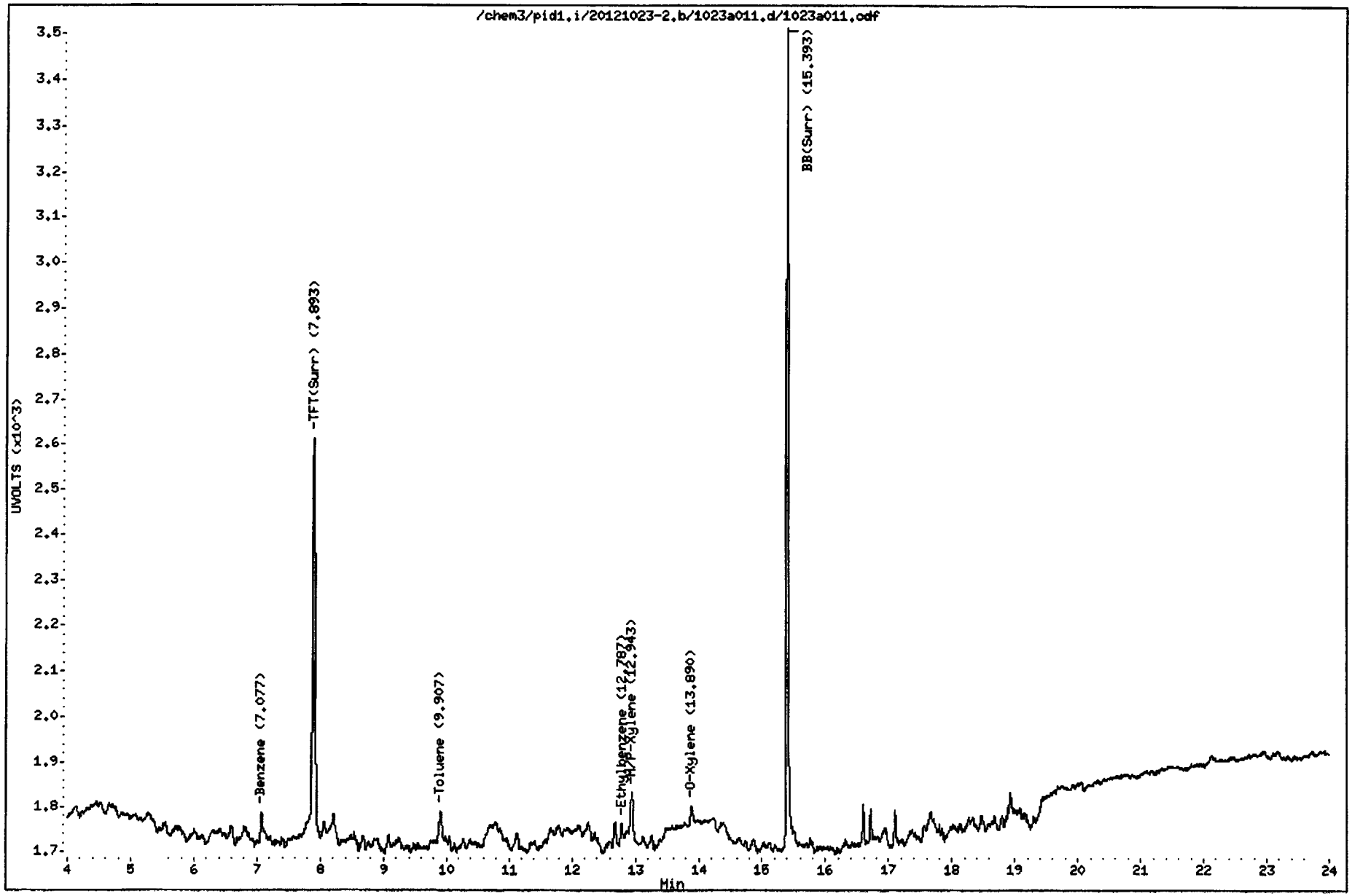
Sample Info: B 0.25

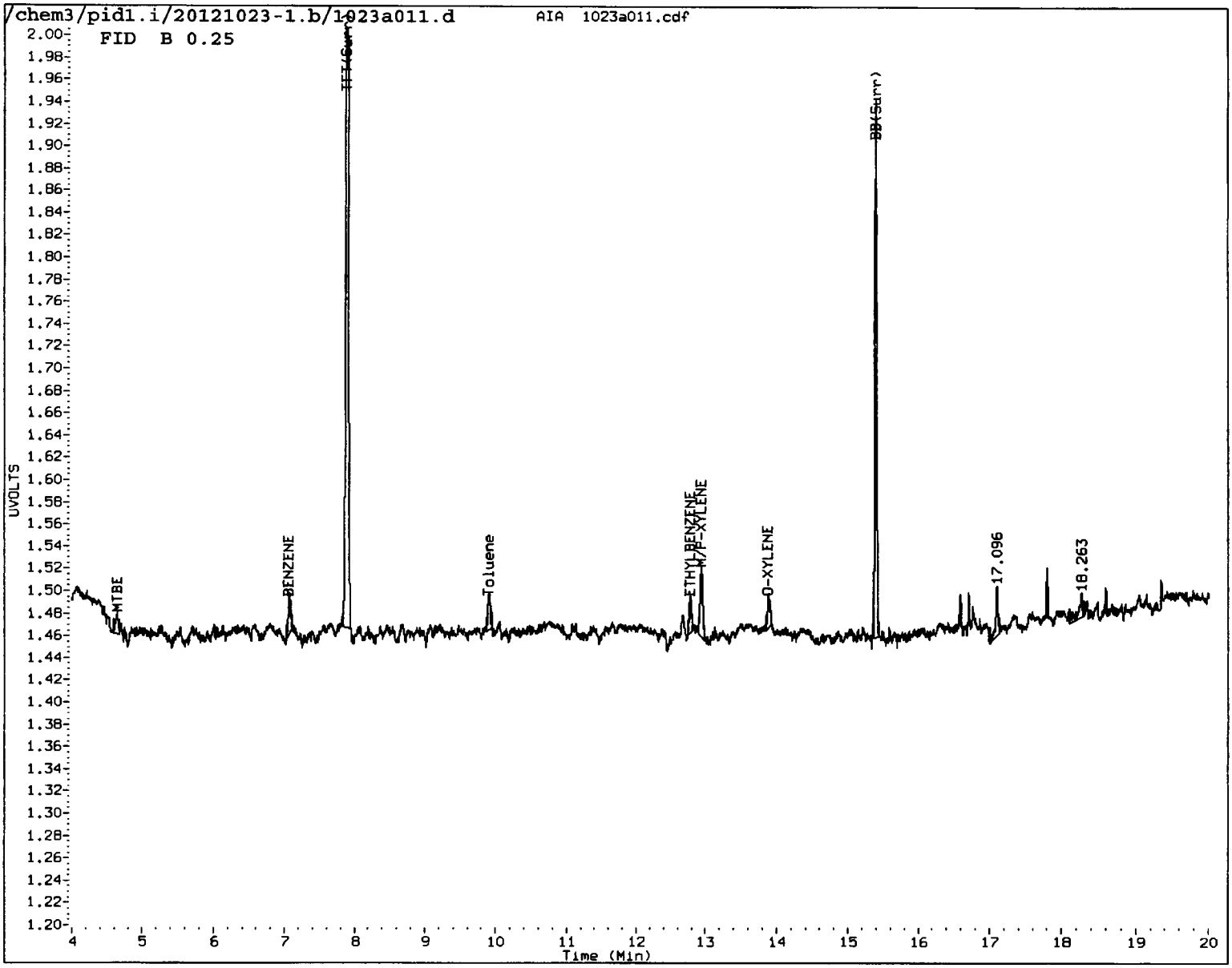
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

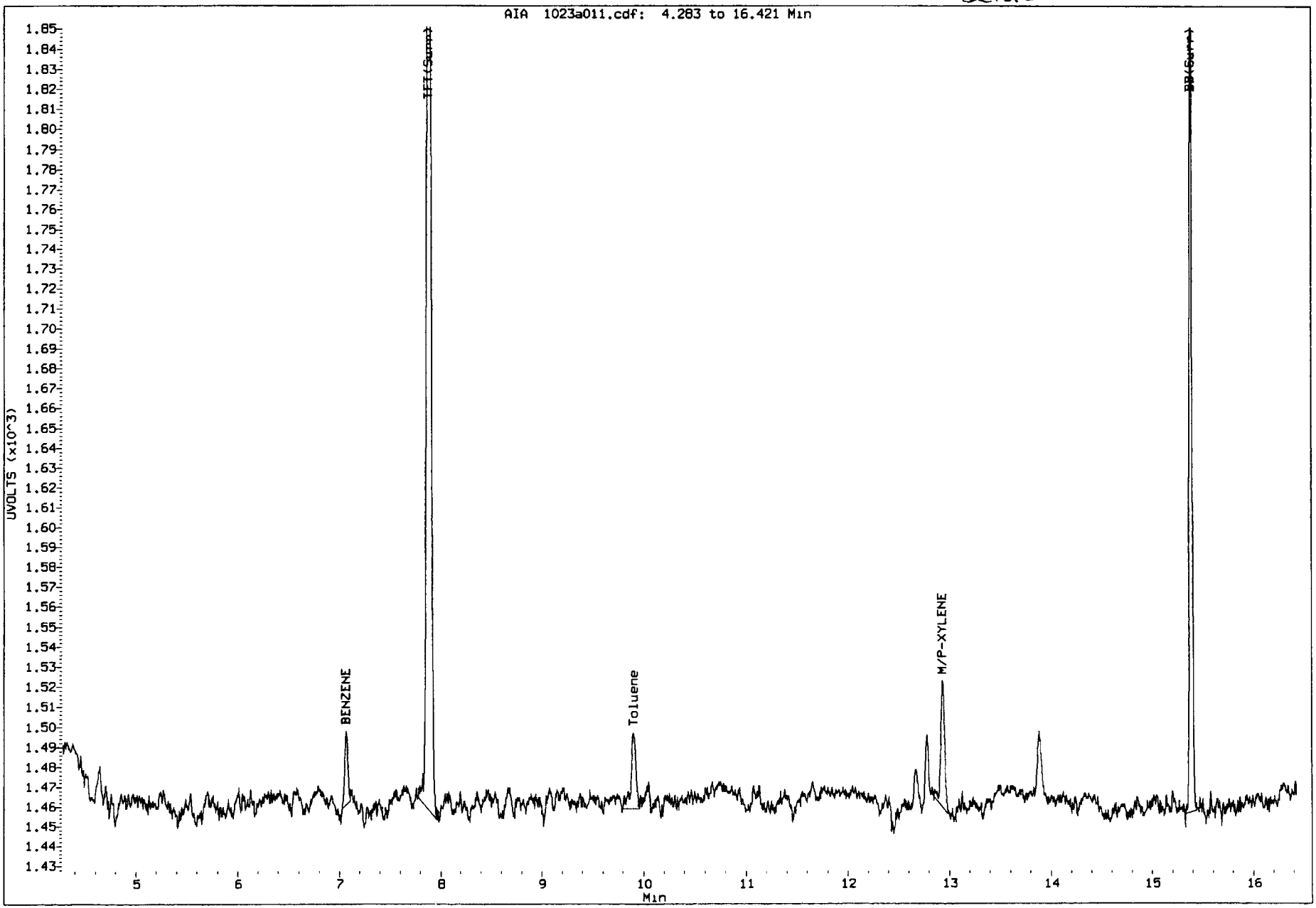
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

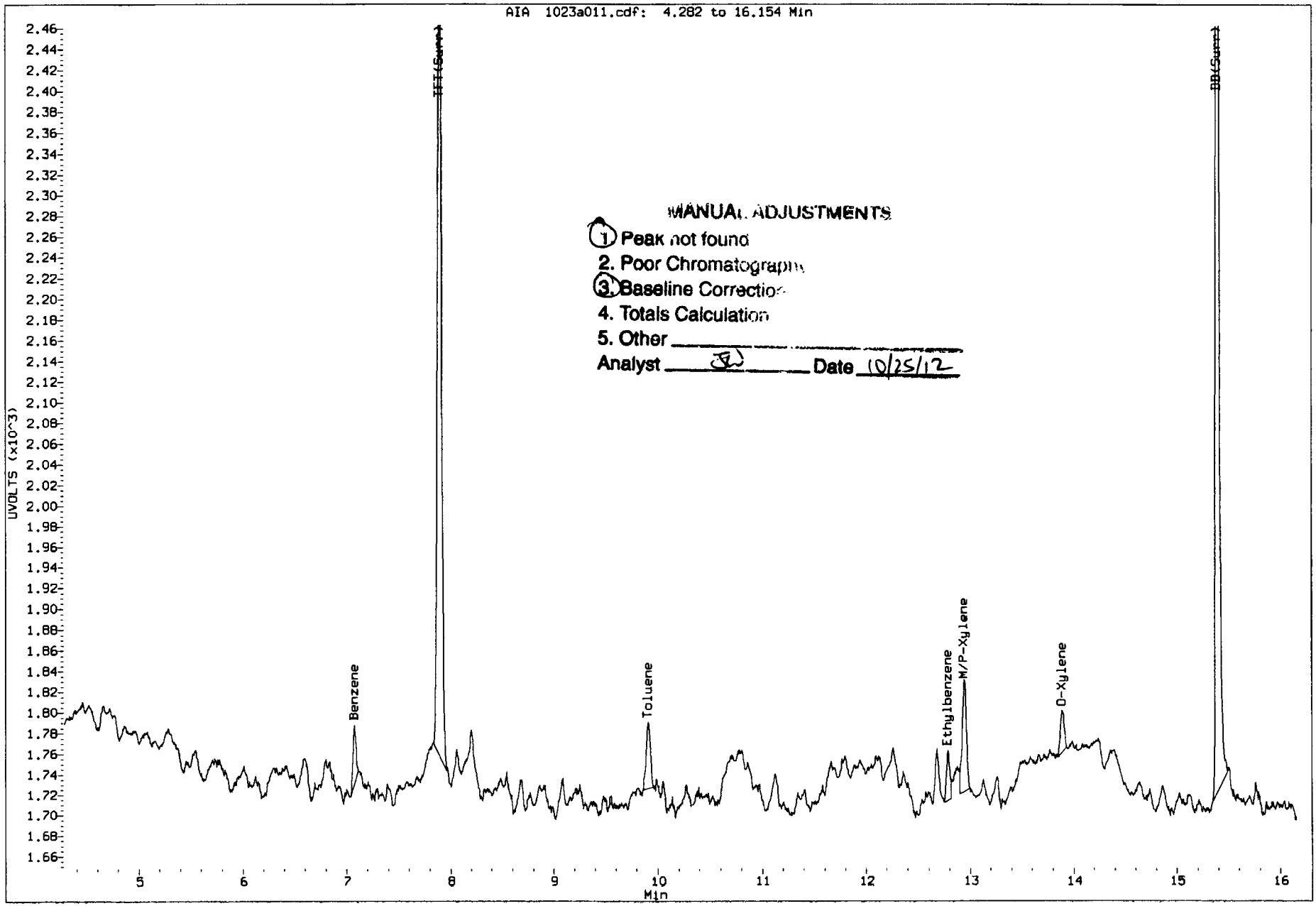
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before

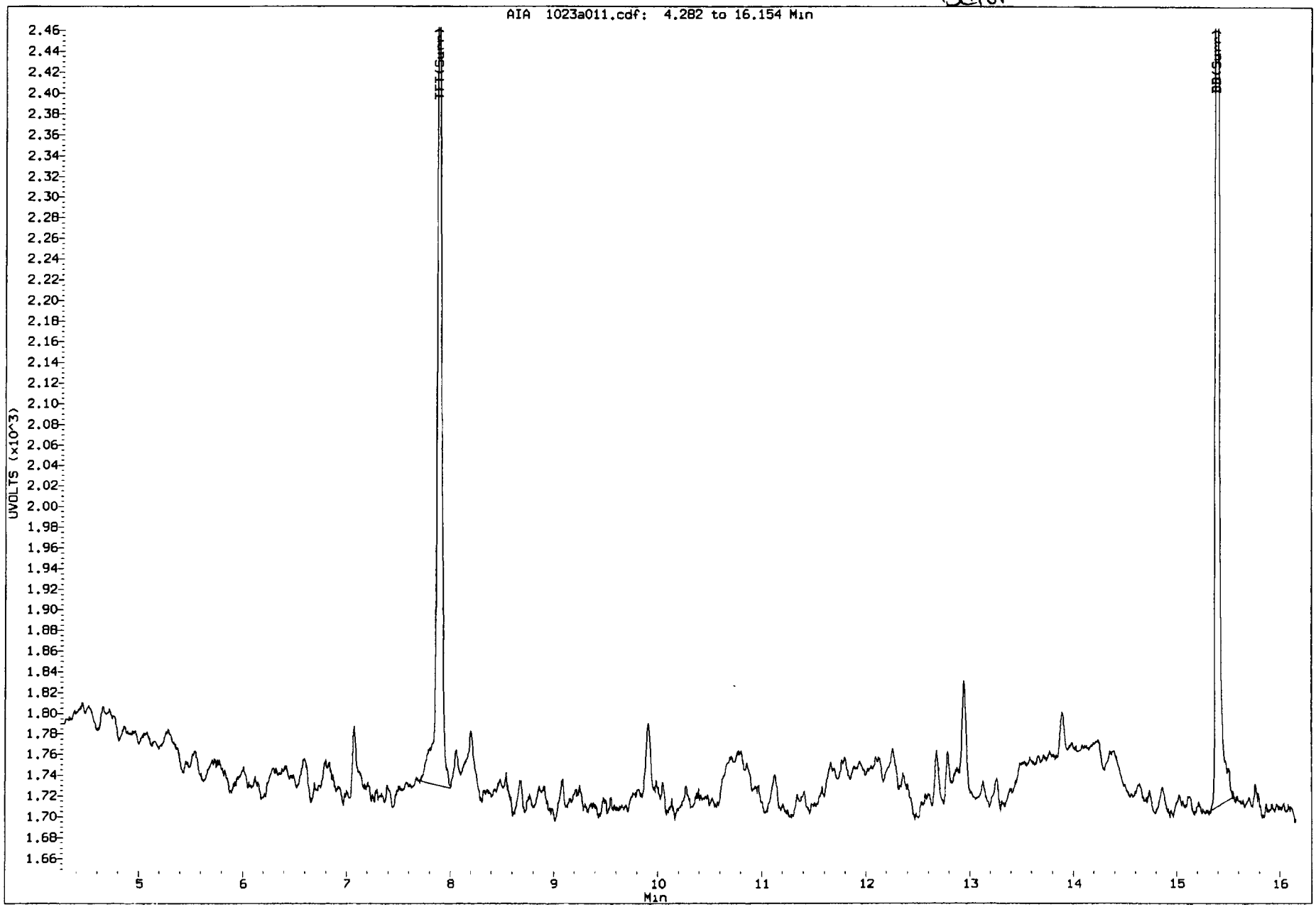


Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a012.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a012.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: BICV
Client ID:
Injection Date: 23-OCT-2012 21:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2989	38262	94.9	TFT(Surr)
15.387	0.000	1972	16638	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	256090	0.715
8015C 2MP-TMB	(4.29 to 16.21)	723723	256713	0.355
AK101 nC6-nC10	(4.76 to 15.11)	582885	241615	0.415
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	256090	0.683

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	3638	96.0	TFT(Surr)
15.395	0.002	7931	98.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.004	6699	27.01	Benzene
9.905	-0.001	5955	26.47	Toluene
12.785	-0.002	5351	27.14	Ethylbenzene
12.946	0.003	11682	54.33	M/P-Xylene
13.894	0.004	4726	28.16	O-Xylene
4.646	-0.008	1898	26.36	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

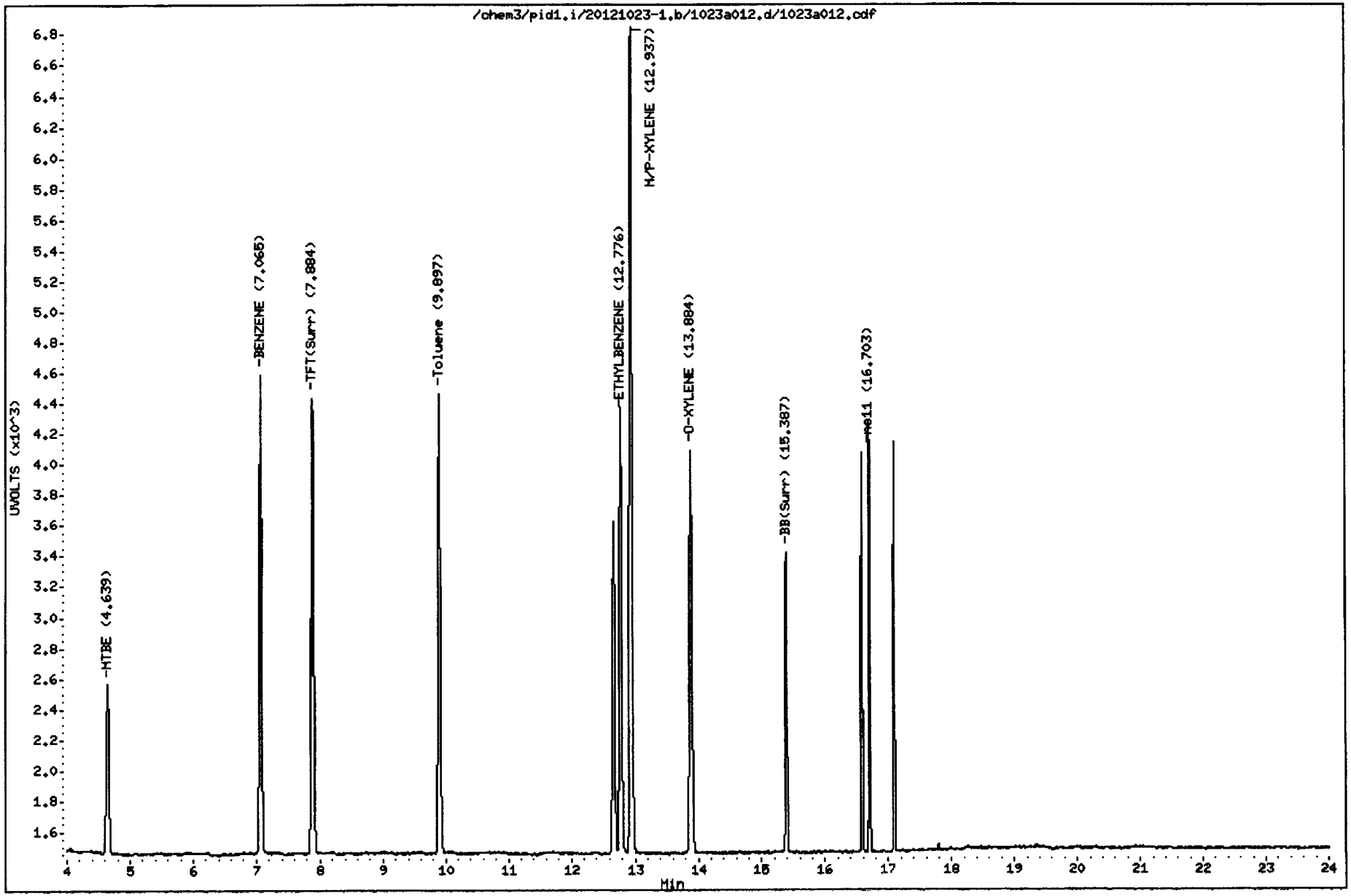
Sample Info: BICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

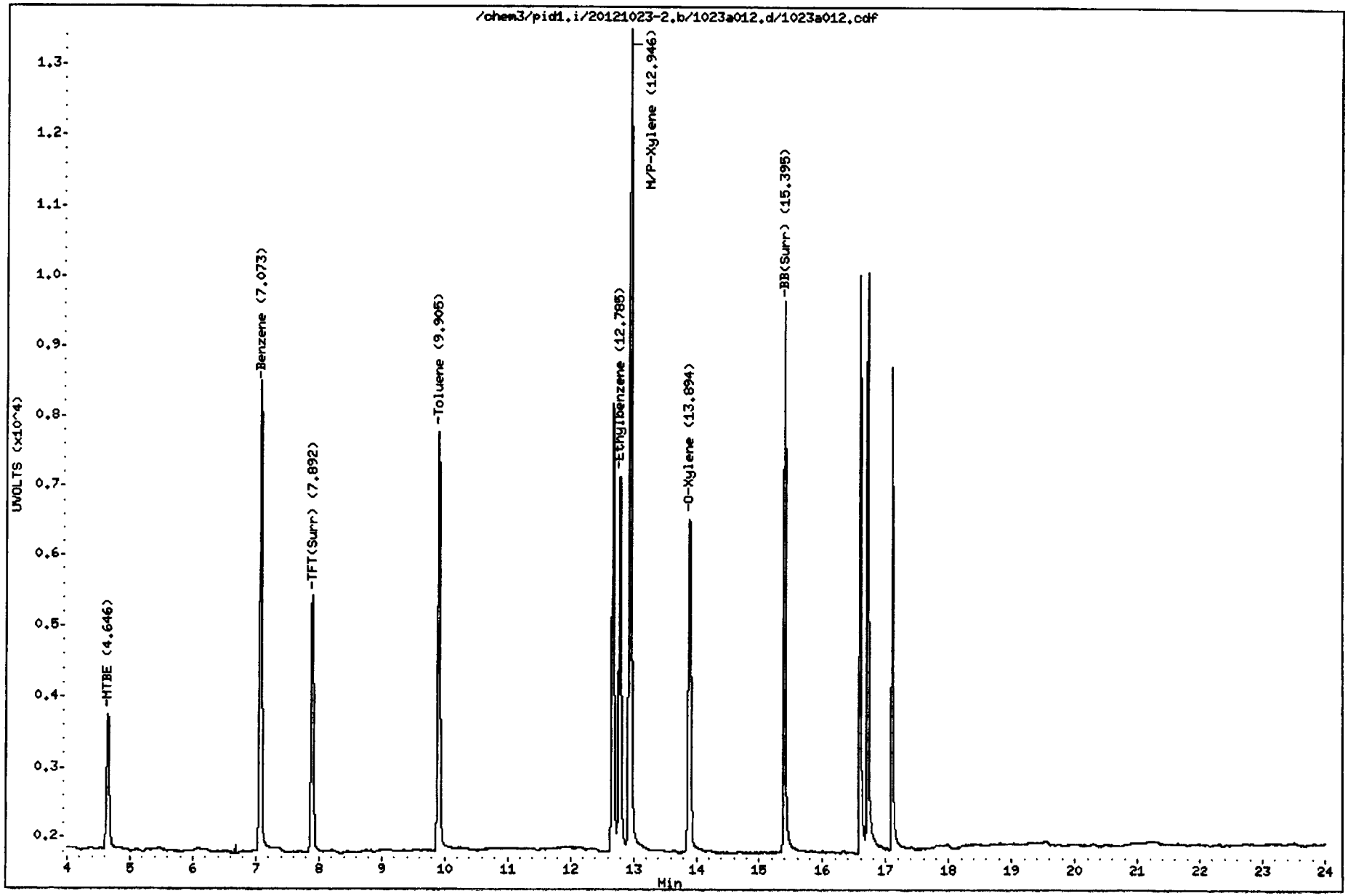
Sample Info: BICV

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.387	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.387	4.317-4.457	4.387	0.000
6	MTBE	4.643	4.642	4.645	4.644	4.640	4.640	4.633	4.647	4.643	4.573-4.713	4.642	0.004
7	nC6	4.864	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.864	4.794-4.934	4.864	0.000
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.864	6.794-6.934	+++++	+++++
9	BENZENE	7.069	7.067	7.067	7.067	7.063	7.063	7.067	7.063	7.069	6.999-7.139	7.066	0.002
$ 10	TFT(Surr)	7.887	7.883	7.883	7.887	7.883	7.884	7.883	7.887	7.887	7.817-7.957	7.885	0.002
11	nC8	9.507	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.507	9.437-9.577	9.507	0.000
12	Toluene	9.903	9.897	9.897	9.897	9.897	9.900	9.897	9.897	9.903	9.833-9.973	9.898	0.002
13	nC9	12.416	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.416	12.346-12.486	12.416	0.000
14	ETHYLBENZENE	12.783	12.776	12.775	12.775	12.776	12.777	12.780	12.780	12.783	12.713-12.853	12.778	0.003
15	M/P-XYLENE	12.948	12.938	12.937	12.936	12.936	12.937	12.940	12.933	12.948	12.878-13.018	12.938	0.004
16	O-XYLENE	13.890	13.884	13.882	13.883	13.883	13.883	13.883	13.883	13.890	13.820-13.960	13.884	0.002
17	nC10-Decane	15.207	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.207	15.137-15.277	15.207	0.000

Reviewer 1 _____ Date: 10/25/12

Reviewer 2 _____ Date: 10/26/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.390	15.387	15.387	15.387	15.387	15.387	15.387	15.387	15.390	15.320-15.460	15.387	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.109	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.109	16.039-16.179	16.109	0.000
21 nc11	16.761	16.760	16.702	16.703	16.703	16.705	16.704	+++++	16.761	16.691-16.831	16.720	0.028
22 nC12-Dodecane	17.800	17.795	17.795	17.795	+++++	+++++	+++++	+++++	17.800	17.730-17.870	17.796	0.003
23 nC13	18.607	18.595	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.537-18.677	18.601	0.008
24 Naphthalene	18.808	18.796	+++++	+++++	+++++	+++++	+++++	+++++	18.808	18.738-18.878	18.802	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
2	Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$ 3	TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
4	Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
5	Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
6	M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
7	O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$ 8	BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12
Reviewer 2 Date: 10/24/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20121023-1

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

Calibration Date: 23-OCT-2012 SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
Rel. Rec.	22	44	67	100	133	178		

<- 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:

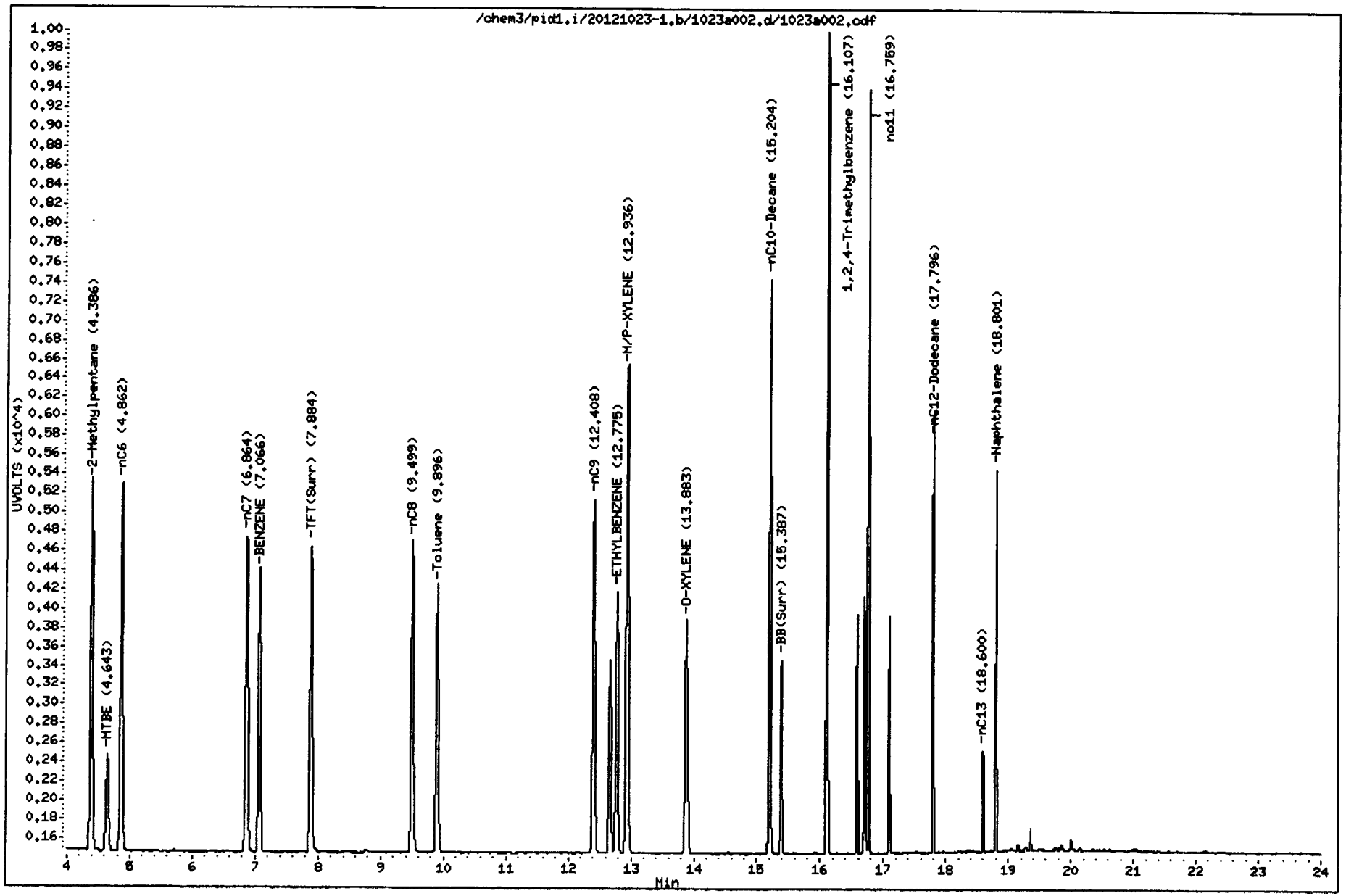
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

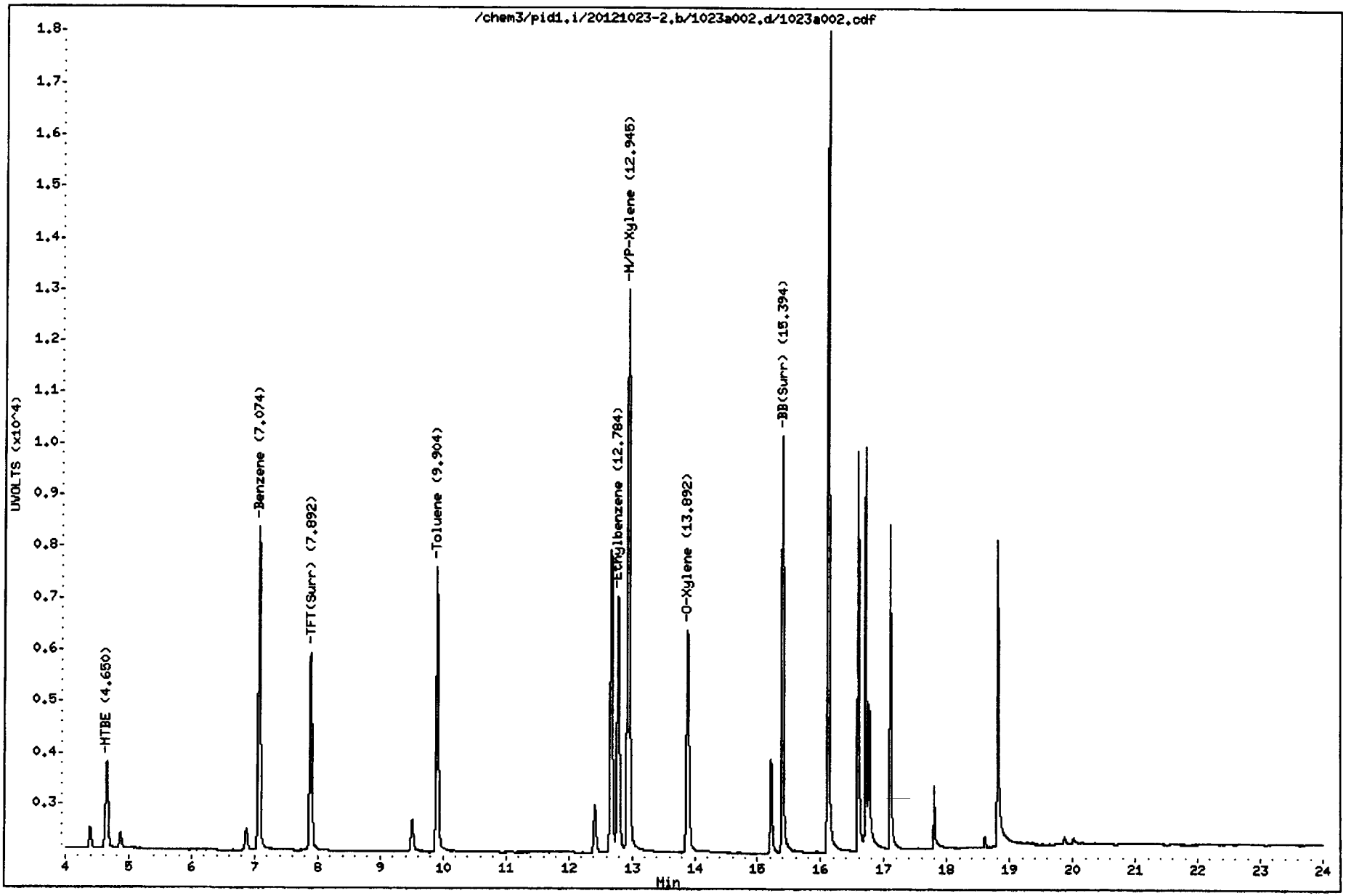


Data File: /chem3/pid1.i/20121023-2.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

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:

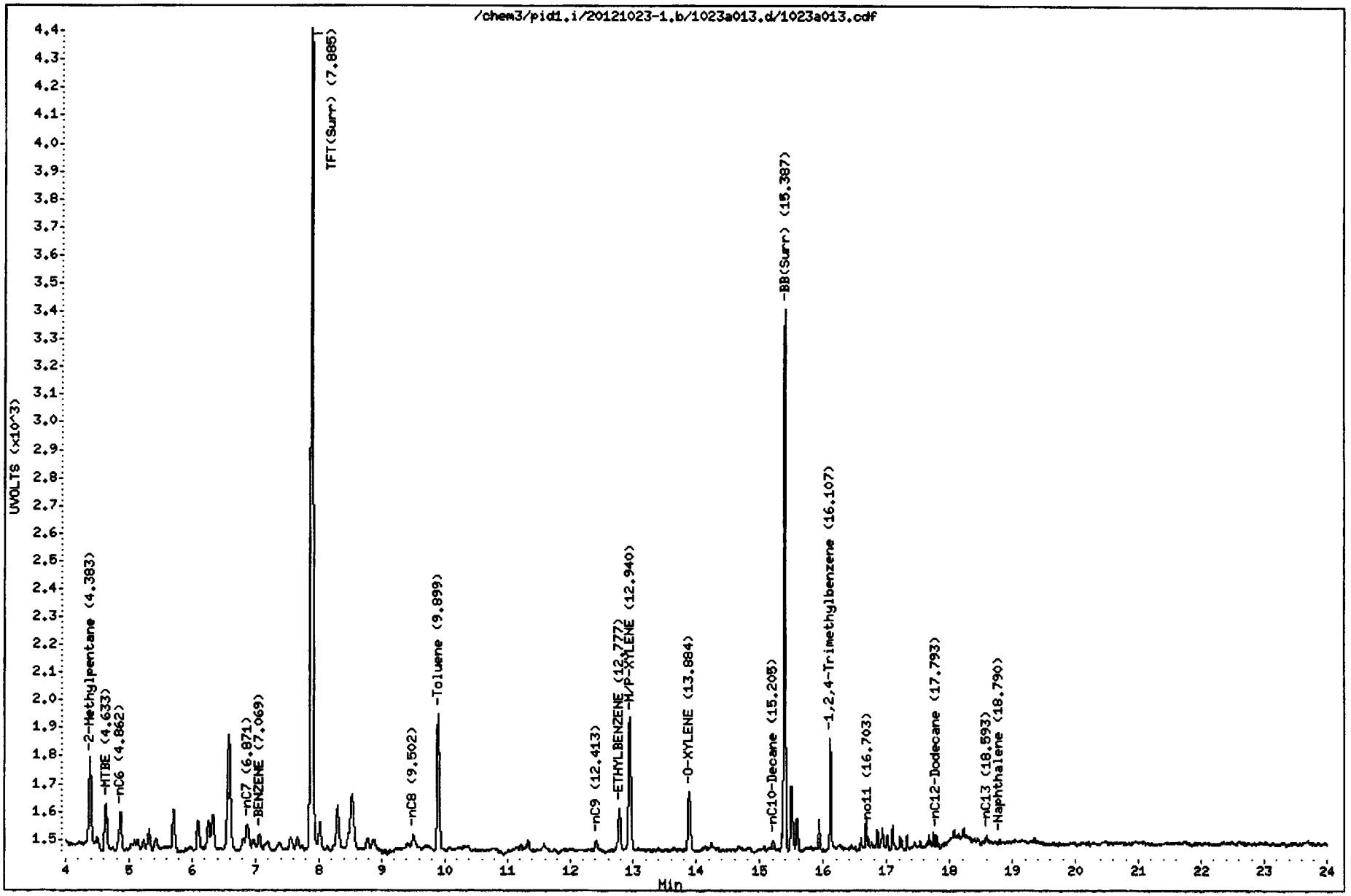
Sample Info: G 0.10

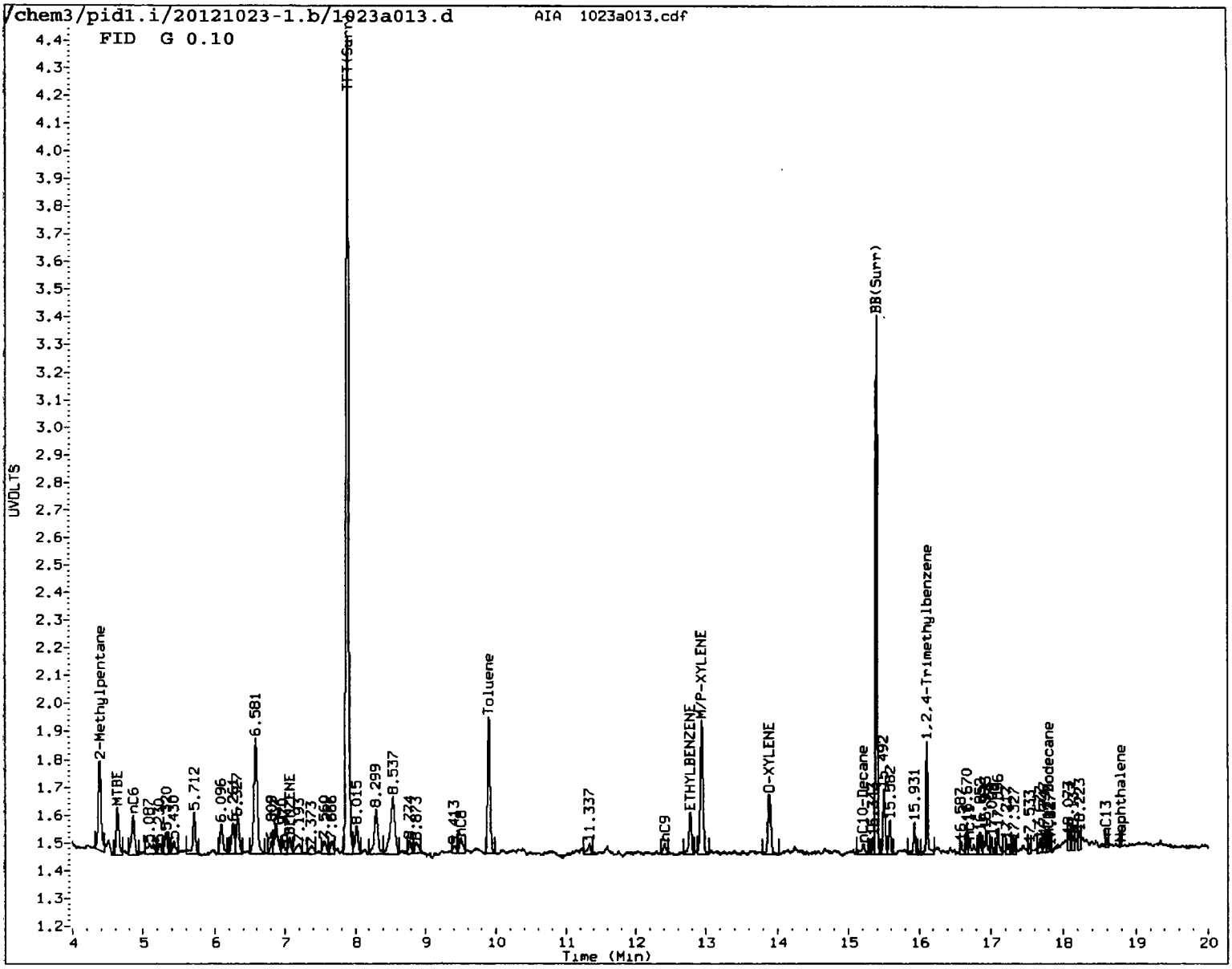
Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18





MANUAL INTEGRATION

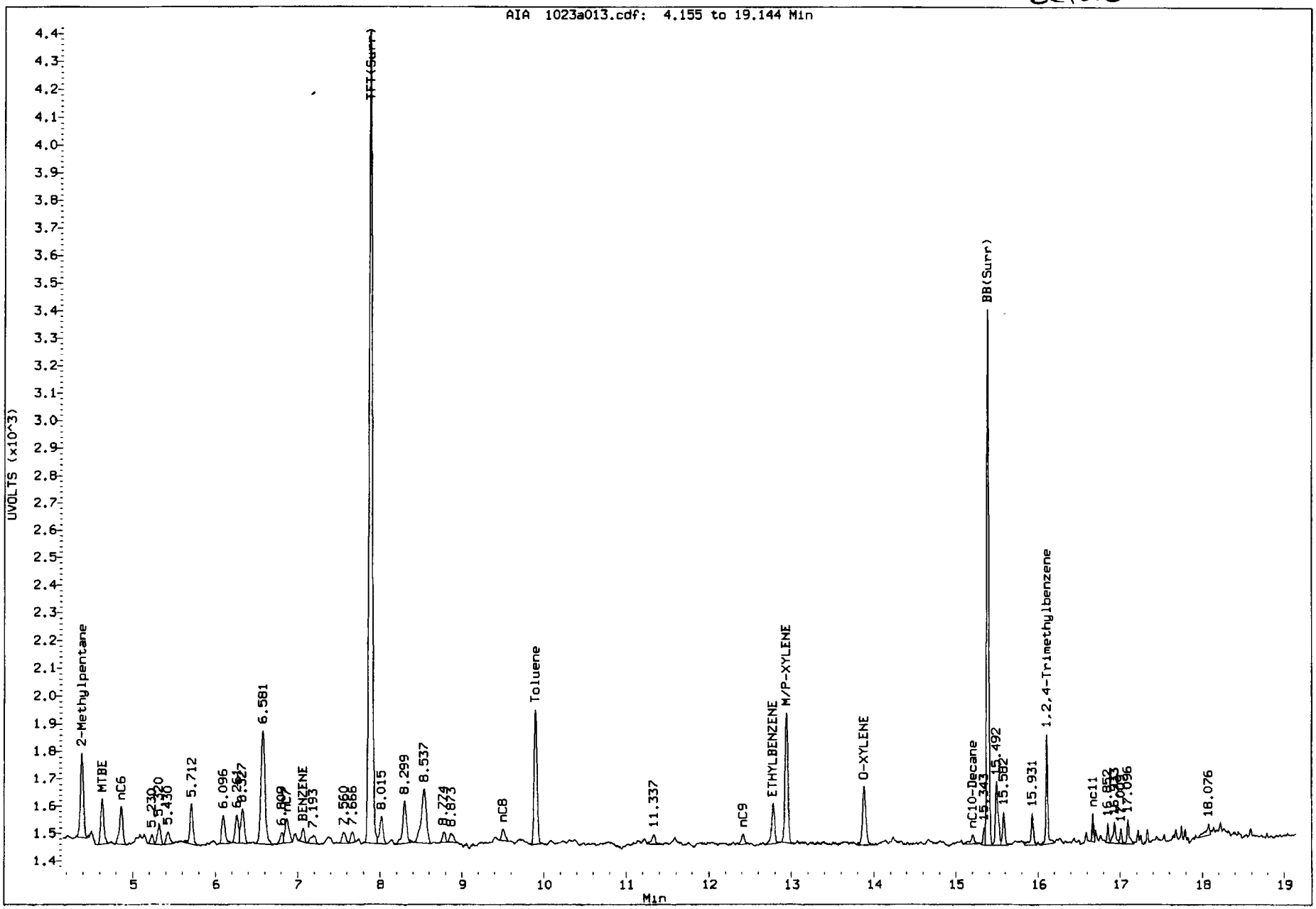
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d/1023a013.cdf
Injection Date: 23-OCT-2012 22:13
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d

Date : 23-OCT-2012 22:42

Client ID:

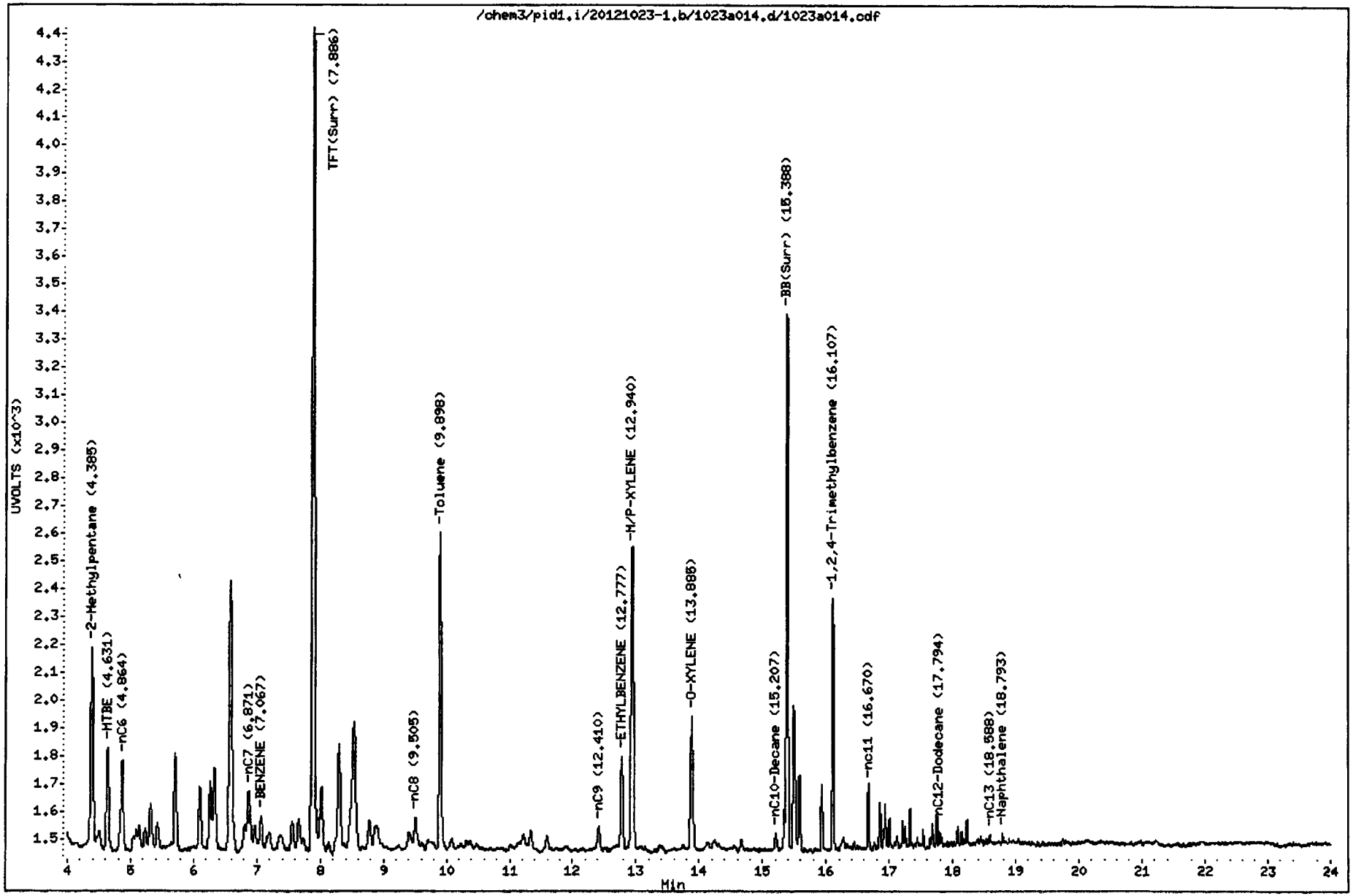
Sample Info: G 0.25

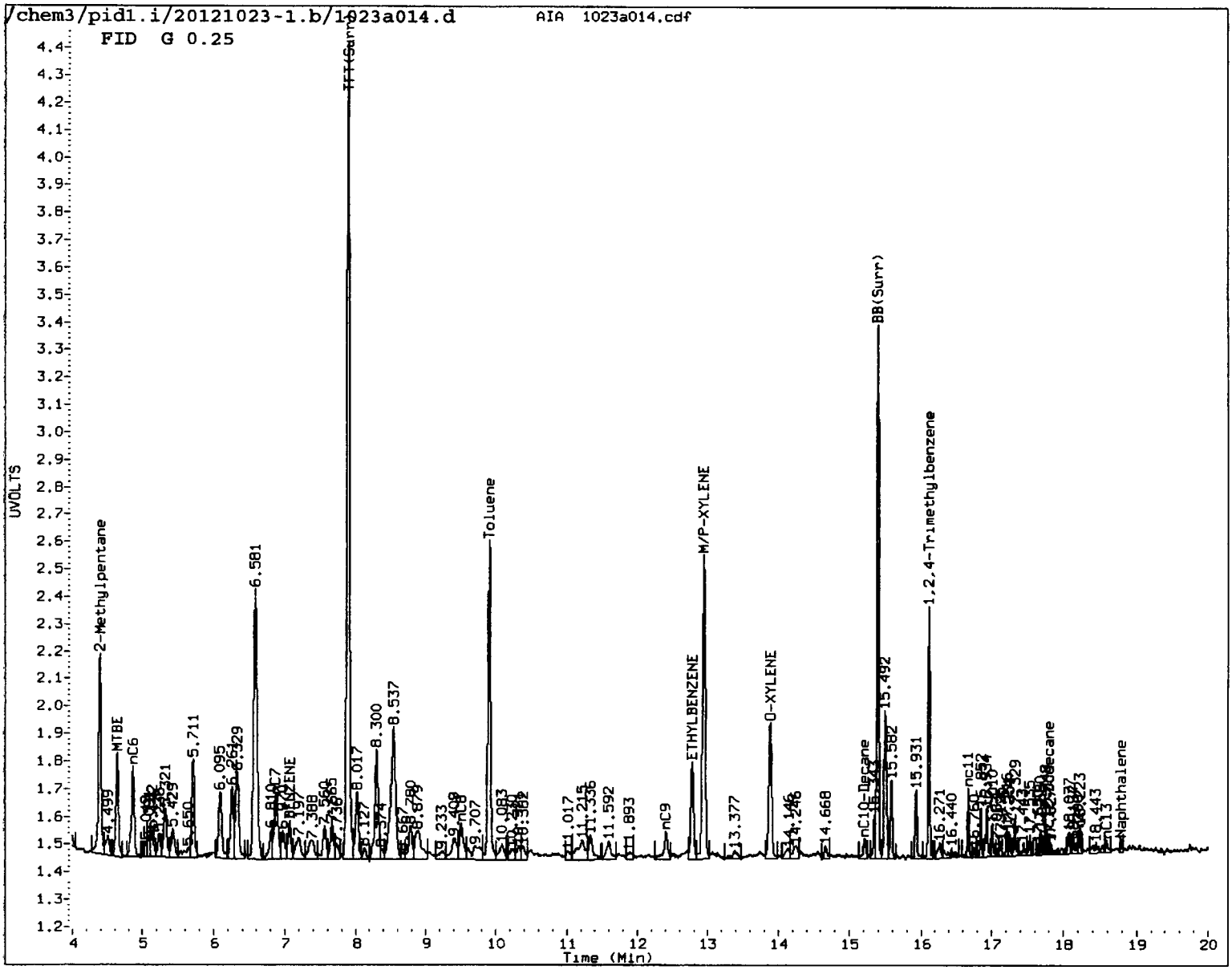
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

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

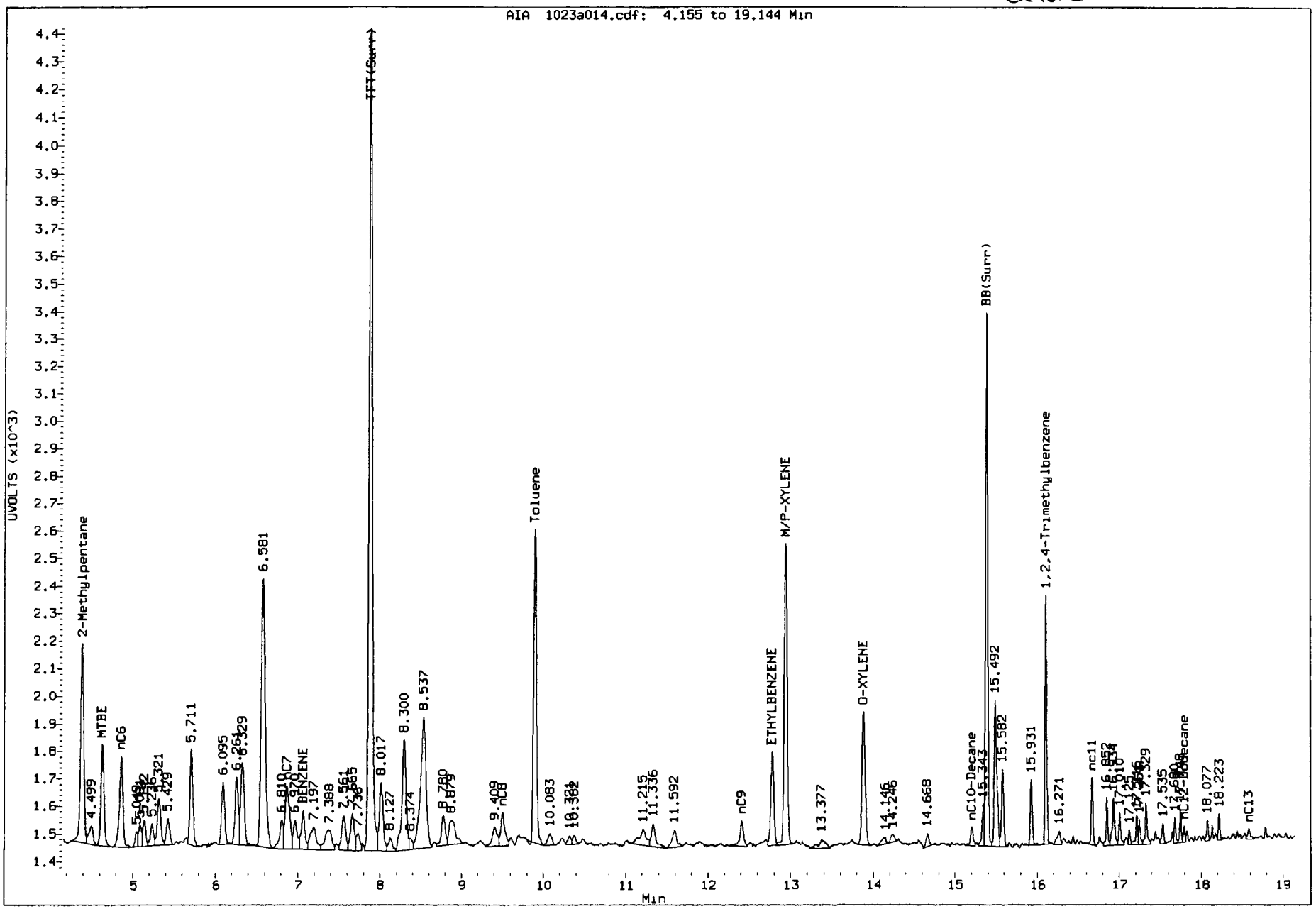
5. Other _____

Analyst: JW Date: 10/25/12

WLC7:01599

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:

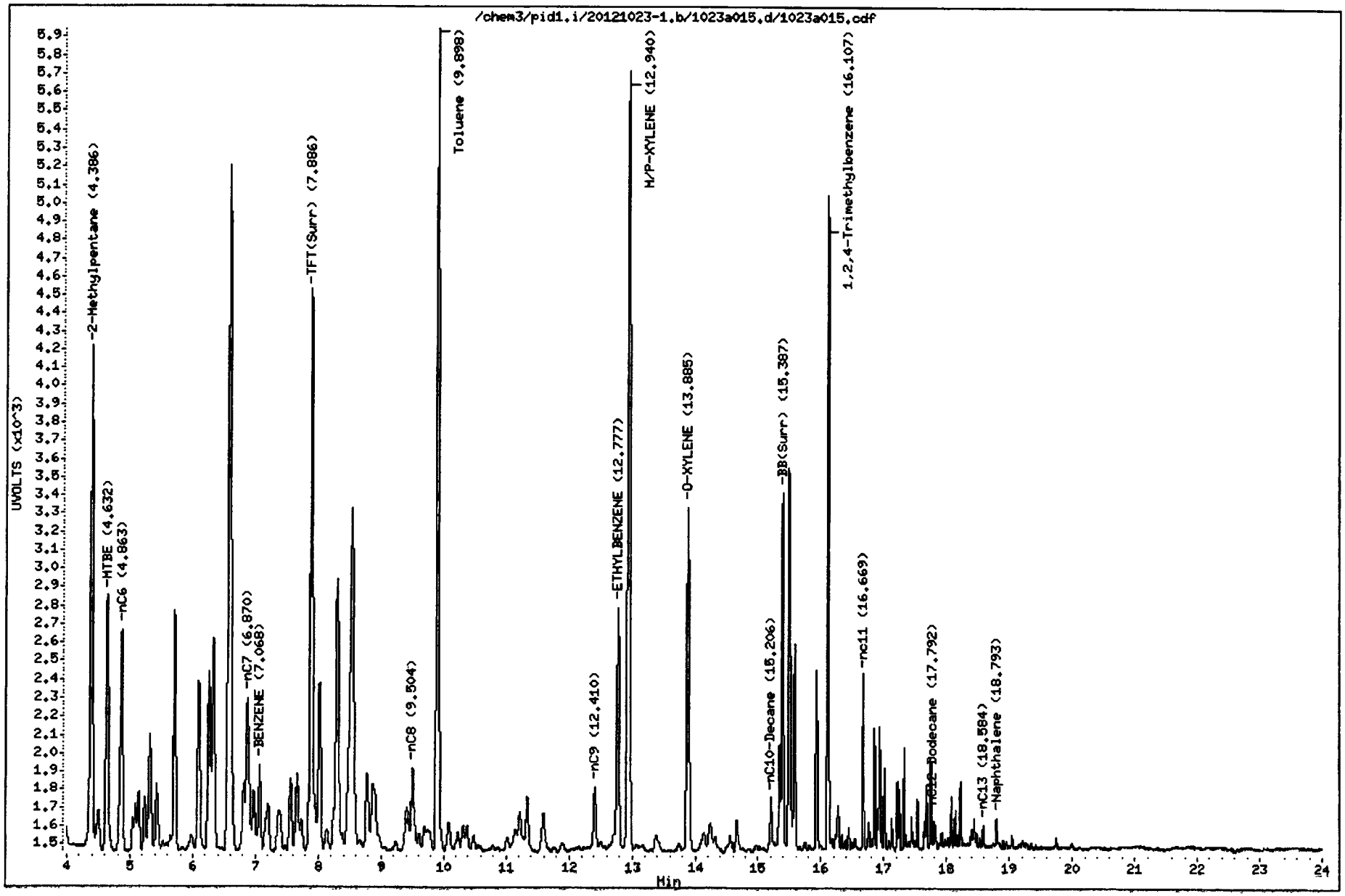
Sample Info: G 1.0

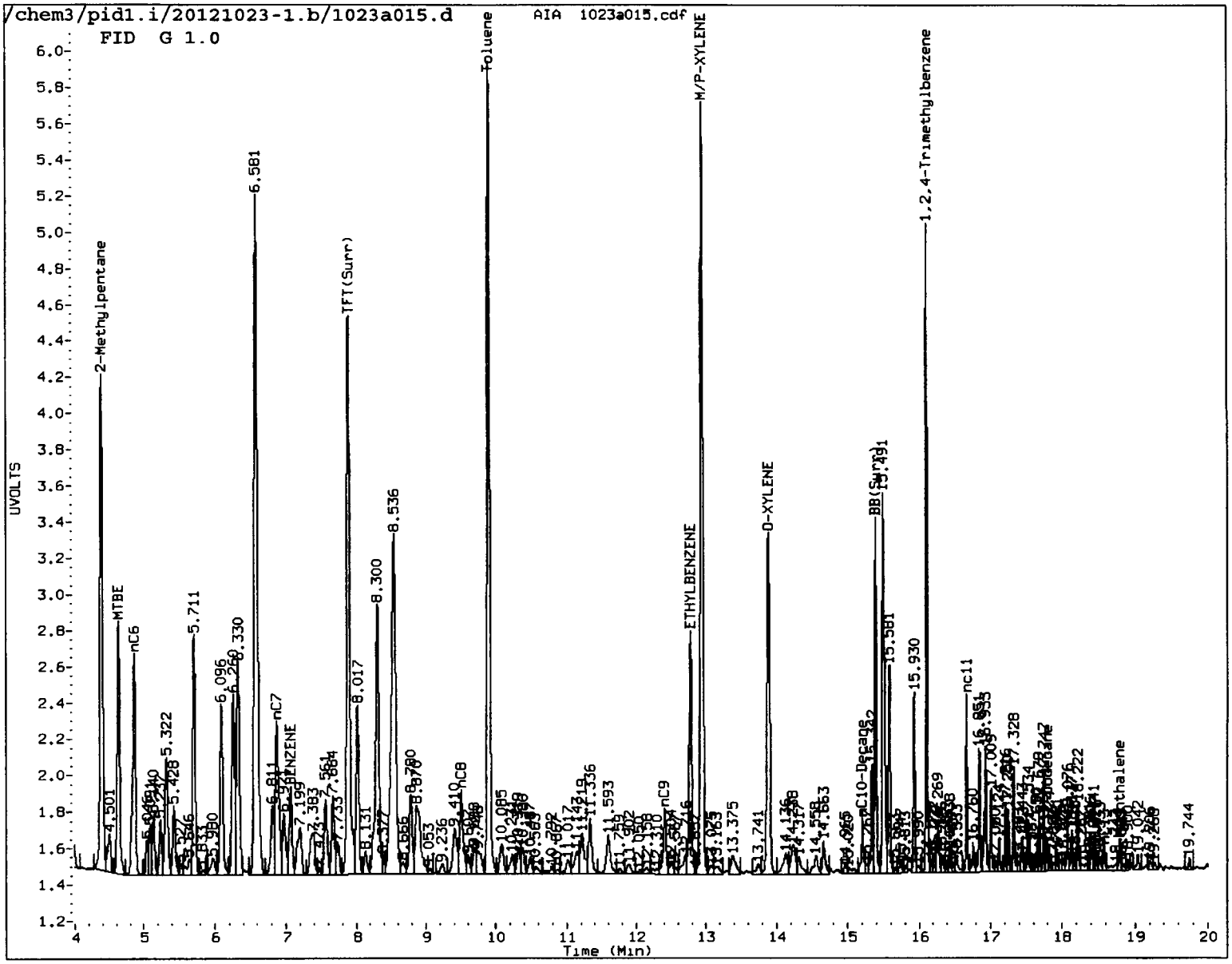
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



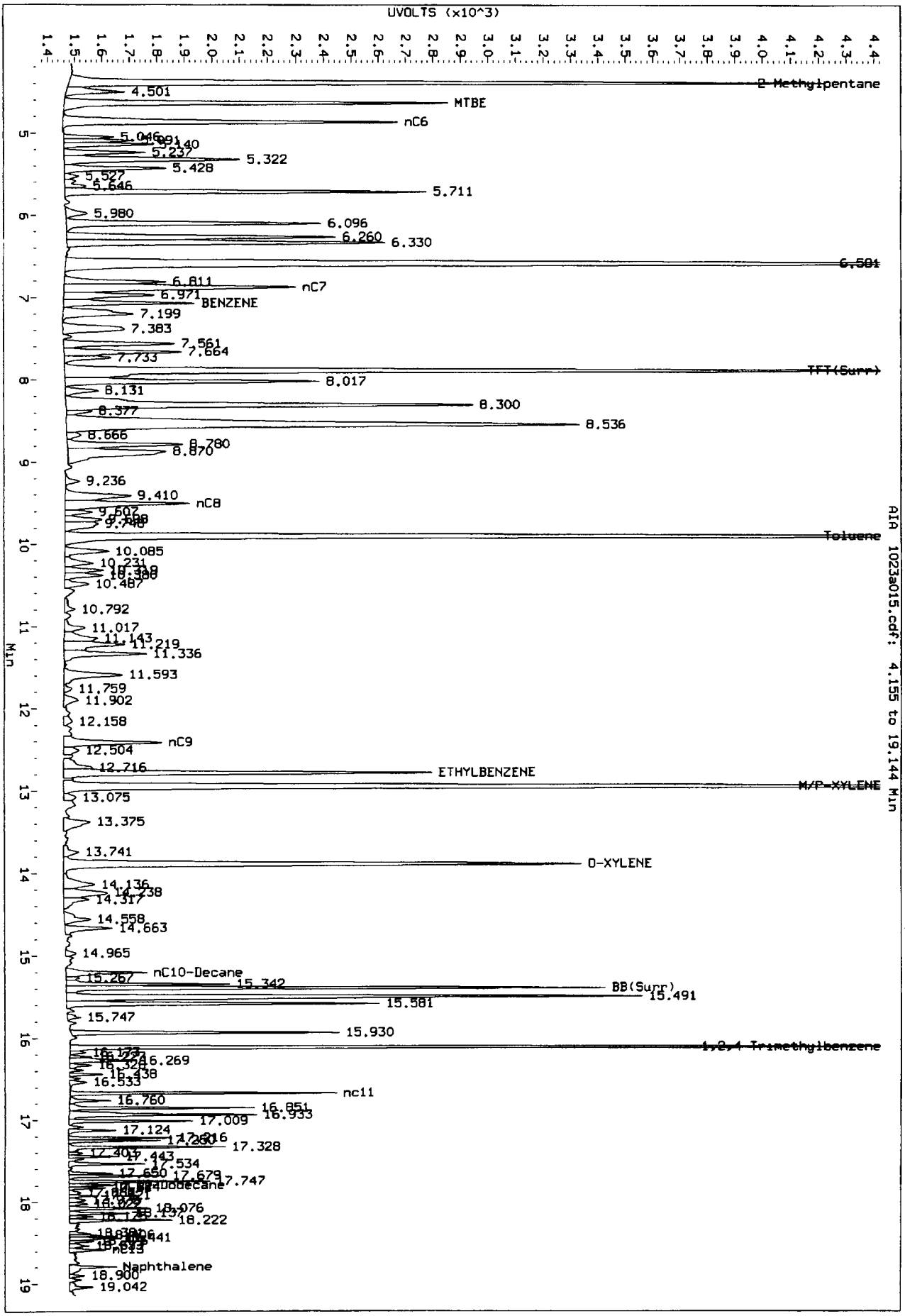


MANUAL INTEGRATION

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

5. Other _____

Analyst: JW Date: 10/25/12


Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.ccdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
Min
AIA 1023a015.ccdf: 4.155 to 19.144 Min
2-Methylpentane
4.501
MTBE
nC6
5.322
5.711
6.096
6.330
6.501
nC7
BENZENE
TFT(Surr)
8.017
8.300
8.536
nC8
Toluene
10.085
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
BB(Surr)
15.491
15.930
1,2,4-Trimethylbenzene
nc11
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:

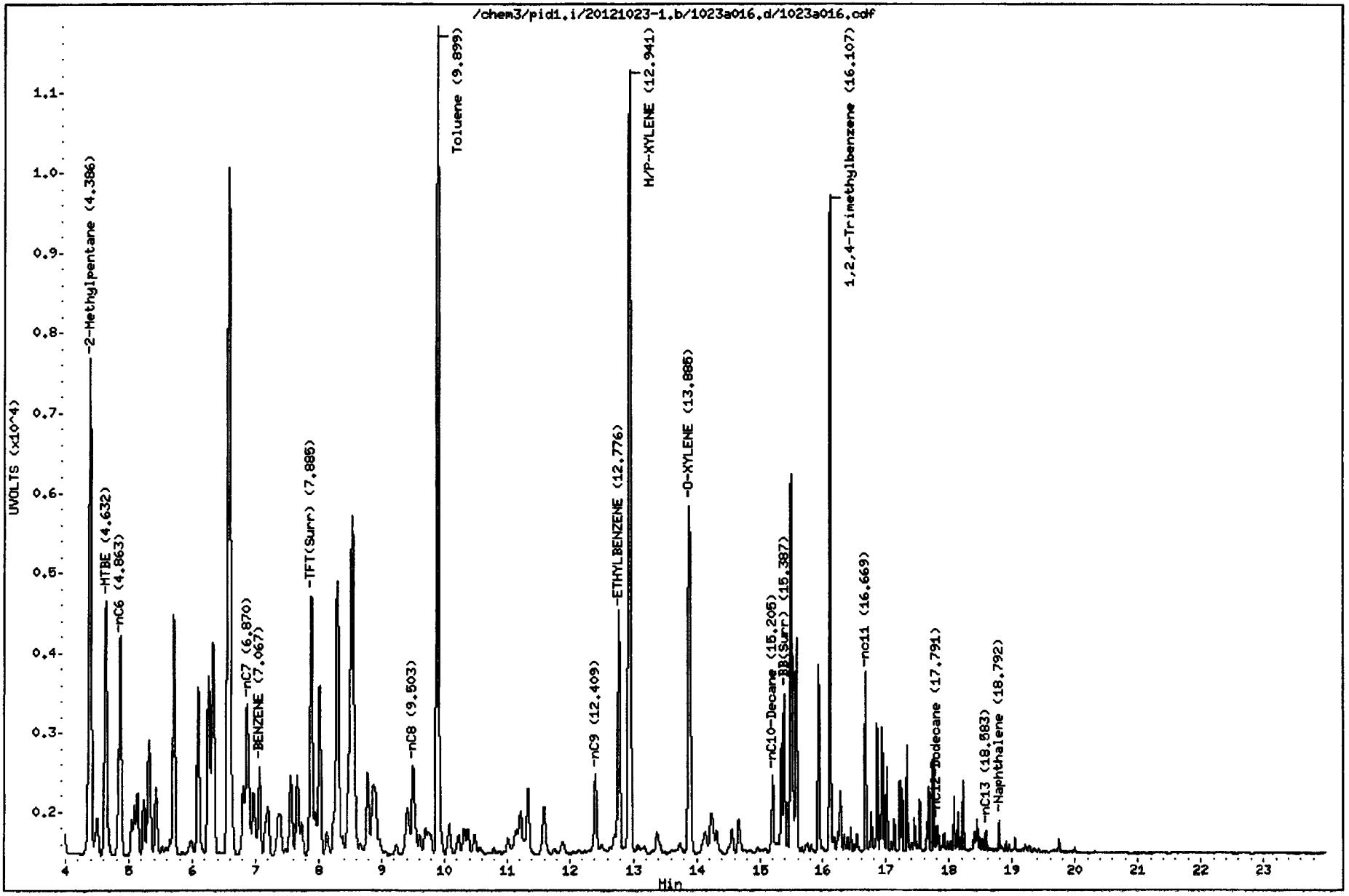
Sample Info: G 2.5

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:

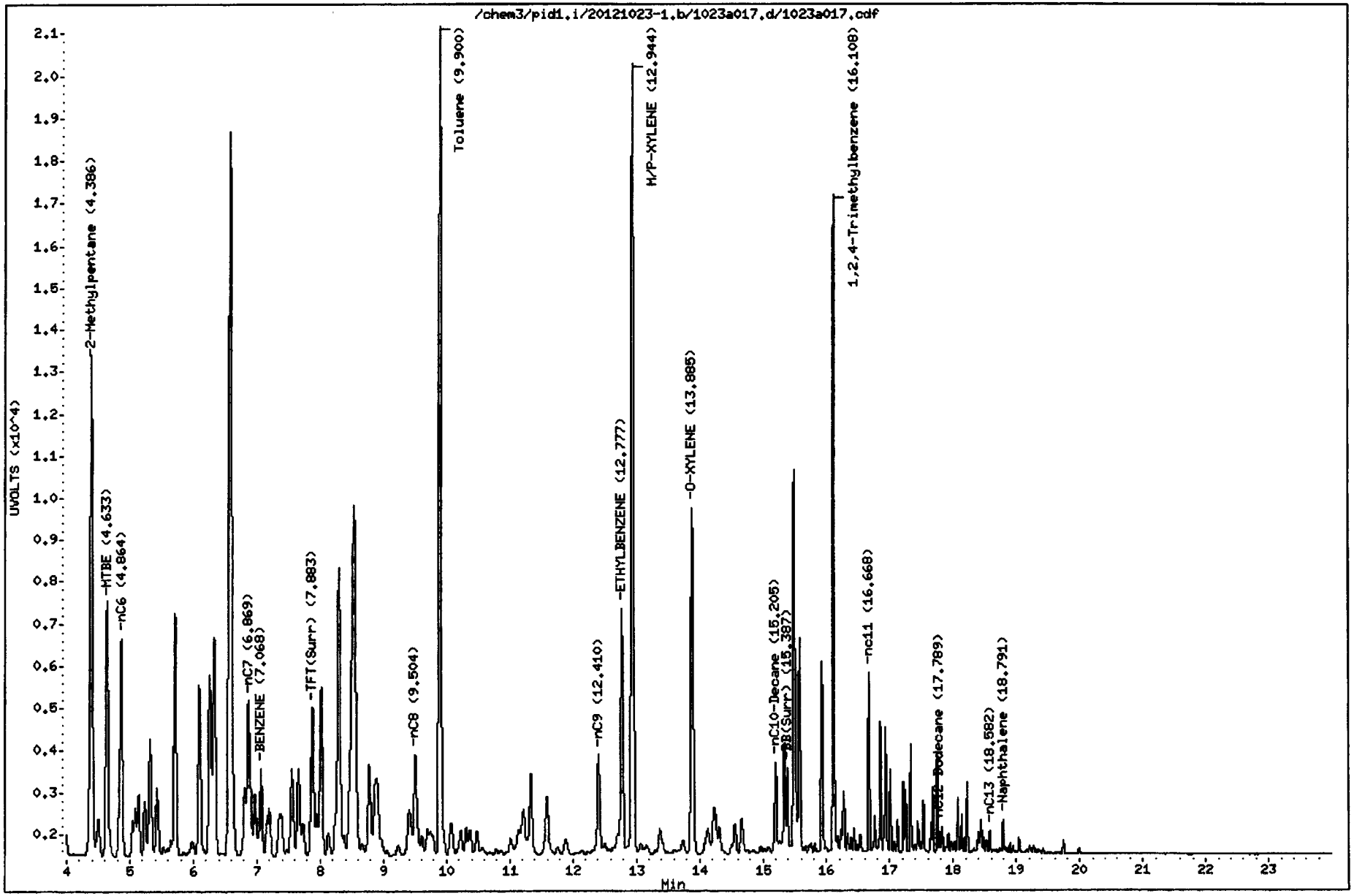
Sample Info: G 5.0

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)

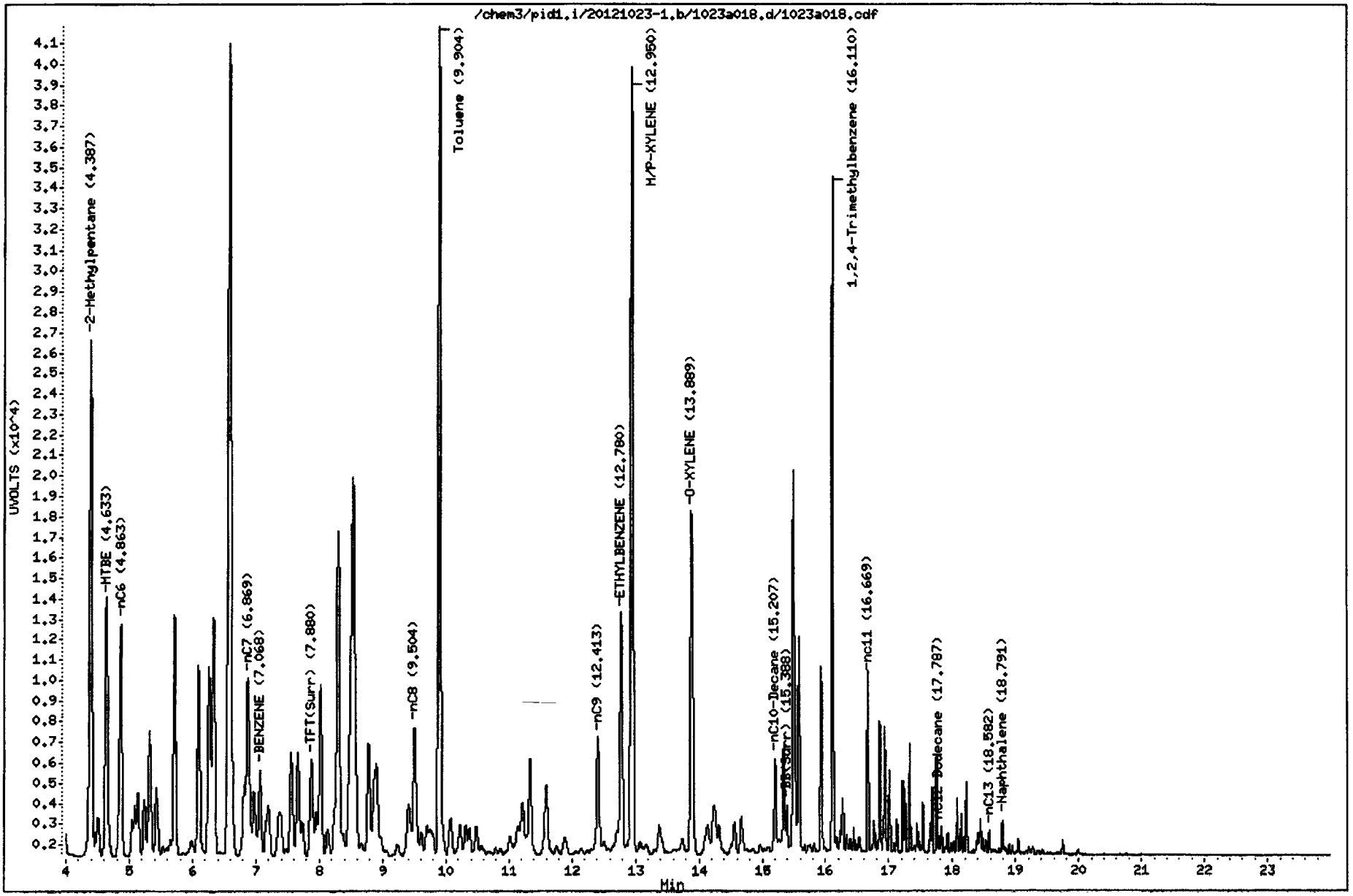
RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

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

Instrument: pid1.i
Operator: PC/JW
Column diameter: 0.18

Column phase: RTX 502-2 FID



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
M Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

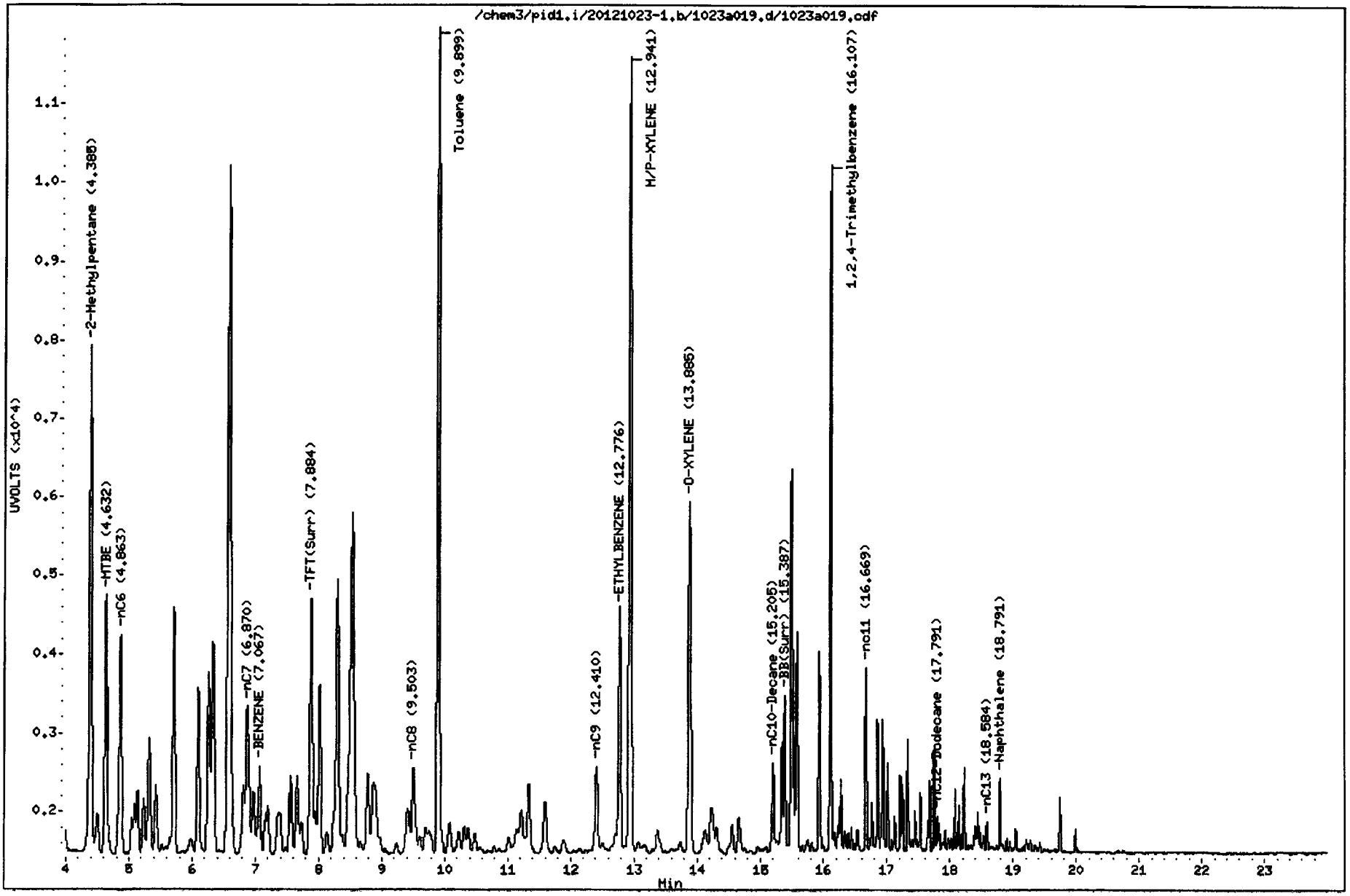
Sample Info: GICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.383	4.385	4.386	4.386	4.386	4.387	4.387	4.317-4.457	4.385	0.001
6	MTBE	4.633	4.631	4.632	4.632	4.633	4.633	4.647	4.577-4.717	4.632	0.001
7	nC6	4.862	4.864	4.863	4.863	4.864	4.863	4.864	4.794-4.934	4.863	0.001
8	nC7	6.871	6.871	6.870	6.870	6.869	6.869	6.864	6.794-6.934	6.870	0.001
9	BENZENE	7.069	7.067	7.068	7.067	7.068	7.068	7.063	6.993-7.133	7.068	0.001
$ 10	TFT(Surr)	7.885	7.886	7.886	7.885	7.883	7.880	7.887	7.817-7.957	7.884	0.002
11	nC8	9.502	9.505	9.504	9.503	9.504	9.504	9.507	9.437-9.577	9.504	0.001
12	Toluene	9.899	9.898	9.898	9.899	9.900	9.904	9.897	9.827-9.967	9.900	0.002
13	nC9	12.413	12.410	12.410	12.409	12.410	12.413	12.416	12.346-12.486	12.411	0.002
14	ETHYLBENZENE	12.777	12.777	12.777	12.776	12.777	12.780	12.780	12.710-12.850	12.777	0.001
15	M/P-XYLENE	12.940	12.940	12.940	12.941	12.944	12.950	12.933	12.863-13.003	12.942	0.004
16	O-XYLENE	13.884	13.885	13.885	13.885	13.885	13.889	13.883	13.813-13.953	13.885	0.002
17	nC10-Decane	15.205	15.207	15.206	15.205	15.205	15.207	15.207	15.137-15.277	15.206	0.001

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

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: WL67

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL67 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: 3/15/13 (10/23/12) Analysis Start Date: 4/12/13

	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 / 25%
ICAL Q flag applied?	NA / (Y) / N / ✓	MS / MSD Recovery Met?	(NA) / Y / N / NA
CCAL Q Flag applied	NA / (Y) / N / ✓	MS / MSD RPD ≤30%?	NA / NA
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	Y / (N) /
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) /

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

No QC indicated provided

(Review 1)Analyst: VC **Date:** 4/15/13

(Review 2)Reviewer: [signature] **Date:** 4/25/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 4/12/13 Analysis: NWTPH-G Analyst: PC

Column 1 Serial No.: 821726 Column Type: RTX502-2

Column 2 Serial No.: — Column Type: —

GC Method: BETX ICal Date: 10/23/12 3/15/13 Injection Volume: 5

IS	Ical/Ccal	ICV
LW795-2	LW791-2 LW772-3 LW787-1	LW787-1

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	1007	0412a001.d	RINSE				1
2	1037	0412a002 d	RT/BCAL 1				1
3	1106	0412a003 d	GCAL 1				1
4	1135	0412a004.d	LCS0412				1
5	1204	0412a005.d	LCSD0412				1
6	1234	0412a006 d	MB0412	PC 4/23/13			1
7	1336	0412a007.d	~~MW9R MS/MSD 5-10 5-15~~	Triplicate	2		1
8	1405	0412a008.d	WL39C	EAL 146433	2	1	10
9	1434	0412a009.d	WK89A	MW-10-9-10.5			1
10	1504	0412a010.d	WK89B	MW-10-14 5-16			1
11	1533	0412a011 d	WK89F	MW-7-15-15 5			1
12	1602	0412a012.d	WK89G	MW-6-15-17			1
13	1631	0412a013.d	GCAL 2				1
14	1701	0412a014.d	WK89H	MW-9-10-11.5			1
15	1730	0412a015.d	WK89I	IDW-SOIL			1
16	1759	0412a016 d	WK89K	MW-9-13.5-15			1
17	1828	0412a017.d	WL67A	GR-CB-07-20130411-S			1
18	1858	0412a018.d	WL67B	GR-WS-05-20130411-S			1
19	1927	0412a019.d	WL75A	EAL #146506	1	2	1
20	1956	0412a020 d	WL75B	EAL #146507	1		1
21	2026	0412a021.d	WL75C	EAL #146508	1		1
22	2055	0412a022 d	WL75D	EAL #146509	1		20
23	2124	0412a023.d	GCAL 3				1
24	2153	0412a024.d	WL71A	NWES-MW11	1	7	1
25	2223	0412a025.d	WL71B	NWES-MW8	1		1
26	2252	0412a026.d	WL71C	NWES-MW20	1		1
27	2321	0412a027.d	WL71D	NWES-MW9	2		1
28	2350	0412a028.d	WL71E	NWES-MW4R	1		1
29	0020	0412a029 d	GCAL 4				1

PC 4/25/13

Every ..... . Make all entries legible.

Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130412-1.b

ARI Job No.: RT/B Method: FID.m Instrument: pid1.i Date: 12-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1037	0412a002.d	RT/BCAL 1	RT/BCAL 1	1	NO MANUAL INTEGRATION
1106	0412a003.d	GCAL 1	NPDES SAMP	1	NO MANUAL INTEGRATION
1135	0412a004.d	LCS0412	LCS0412	1	NO MANUAL INTEGRATION
1204	0412a005.d	LCSD0412	LCSD0412	1	NO MANUAL INTEGRATION
1234	0412a006.d	MB0412	MB0412	1	NO MANUAL INTEGRATION
1631	0412a013.d	GCAL 2	NPDES SAMP	1	NO MANUAL INTEGRATION
1828	0412a017.d	WL67A	GR-CB-07-2	1	NO MANUAL INTEGRATION
1858	0412a018.d	WL67B	GR-WS-05-2	1	NO MANUAL INTEGRATION
2124	0412a023.d	GCAL 3	NPDES SAMP	1	O-XYLENE,

4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a002.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a002.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: RT/BCAL 1
Client ID:
Injection Date: 12-APR-2013 10:37
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.000	3231	40682	93.1	TFT(Surr)
15.380	0.000	2105	17712	92.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	424493	1.185
8015C 2MP-TMB	(4.18 to 16.20)	723723	547865	0.757
AK101 nC6-nC10	(4.68 to 15.10)	582885	381782	0.655
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	452126	1.205

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
7.851	0.000	3697	93.1	TFT(Surr)
15.388	0.000	8017	91.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	0.000	5881	24.50	Benzene
9.877	0.000	5428	23.70	Toluene
12.769	0.000	4655	24.05	Ethylbenzene
12.930	0.000	10071	47.16	M/P-Xylene
13.878	0.000	4121	24.16	O-Xylene
4.561	0.000	2003	23.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130412-1.b/0412a002.d

Date : 12-APR-2013 10:37

Client ID:

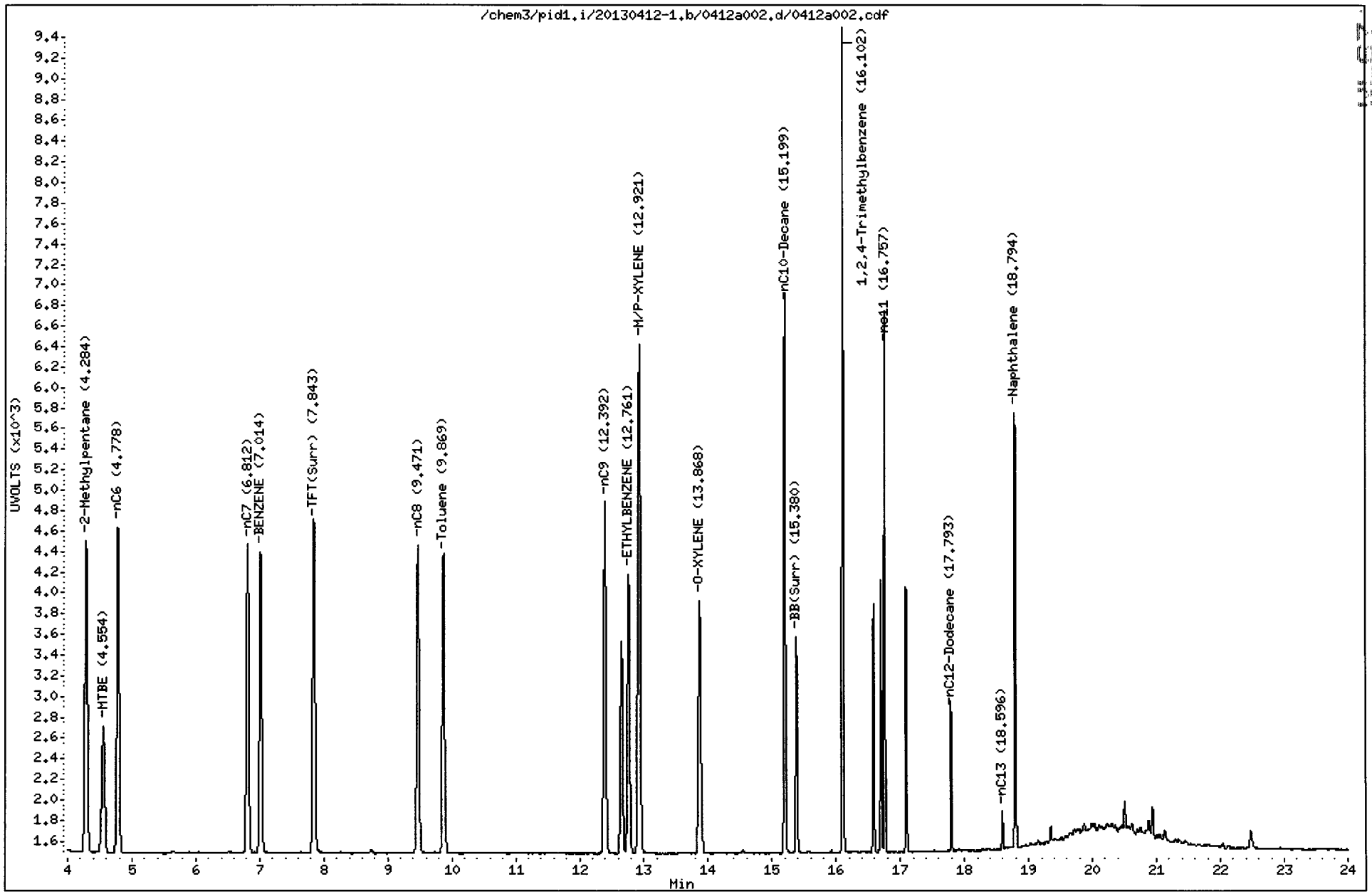
Sample Info: RT/BCAL 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



RG 4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a003.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a003.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: GCAL 1
Client ID:
Injection Date: 12-APR-2013 11:06
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.843	0.000	3428	47926	98.8	TFT(Surr)
15.382	0.001	2075	19420	90.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	858192	2.396 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	1705910	2.357 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1382449	2.372 M
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	895302	2.387 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
7.852	0.001	3745	94.3	TFT(Surr)
15.389	0.001	7959	90.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.001	2077	8.65	Benzene
9.879	0.002	21104	92.15	Toluene
12.771	0.001	5202	26.87	Ethylbenzene
12.935	0.005	20675	96.82	M/P-Xylene
13.880	0.002	7424	43.52	O-Xylene
4.545	-0.016	329	3.90	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130412-1.b/0412a003.d

Date : 12-APR-2013 11:06

Client ID:

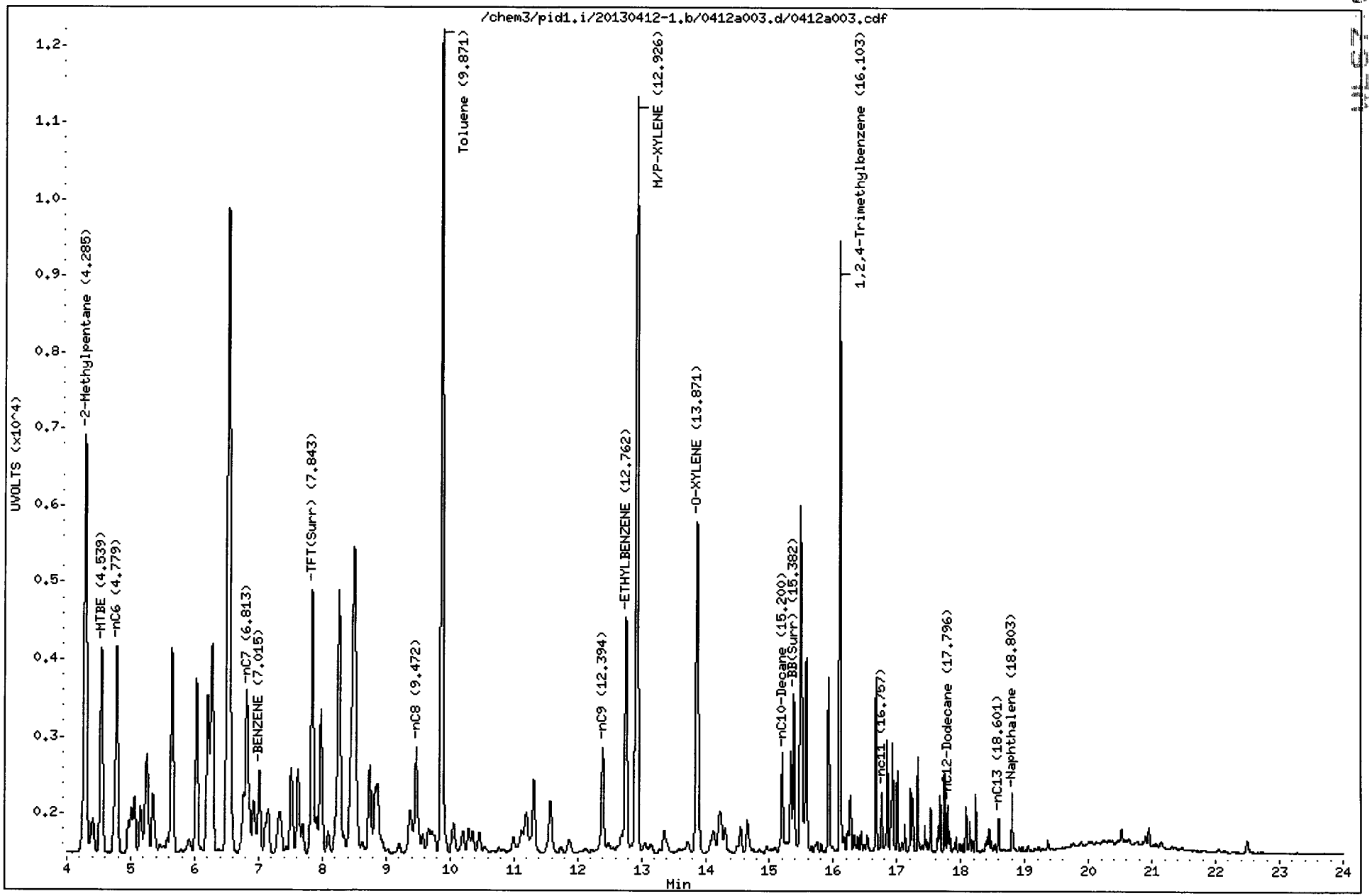
Sample Info: GCAL 1

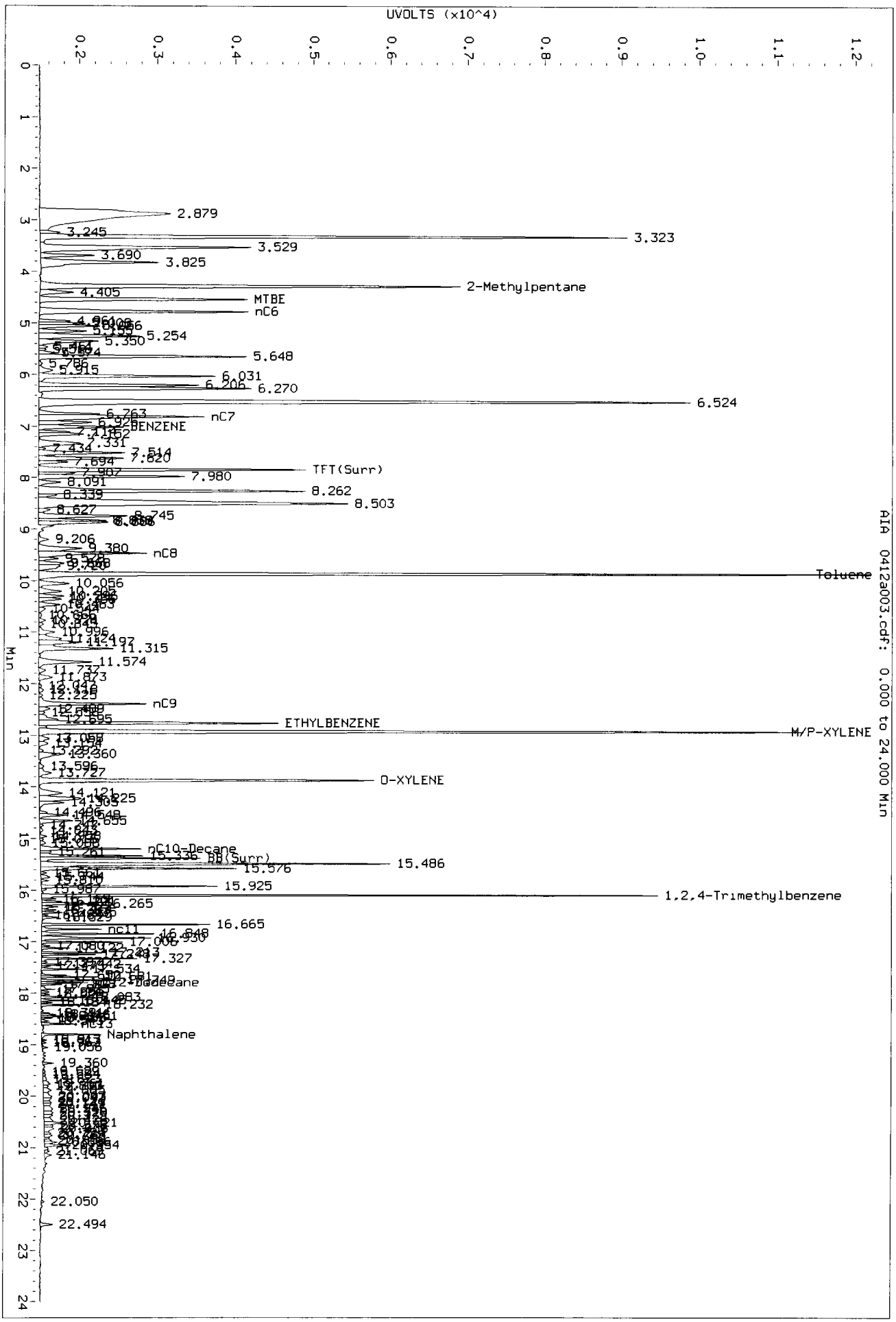
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

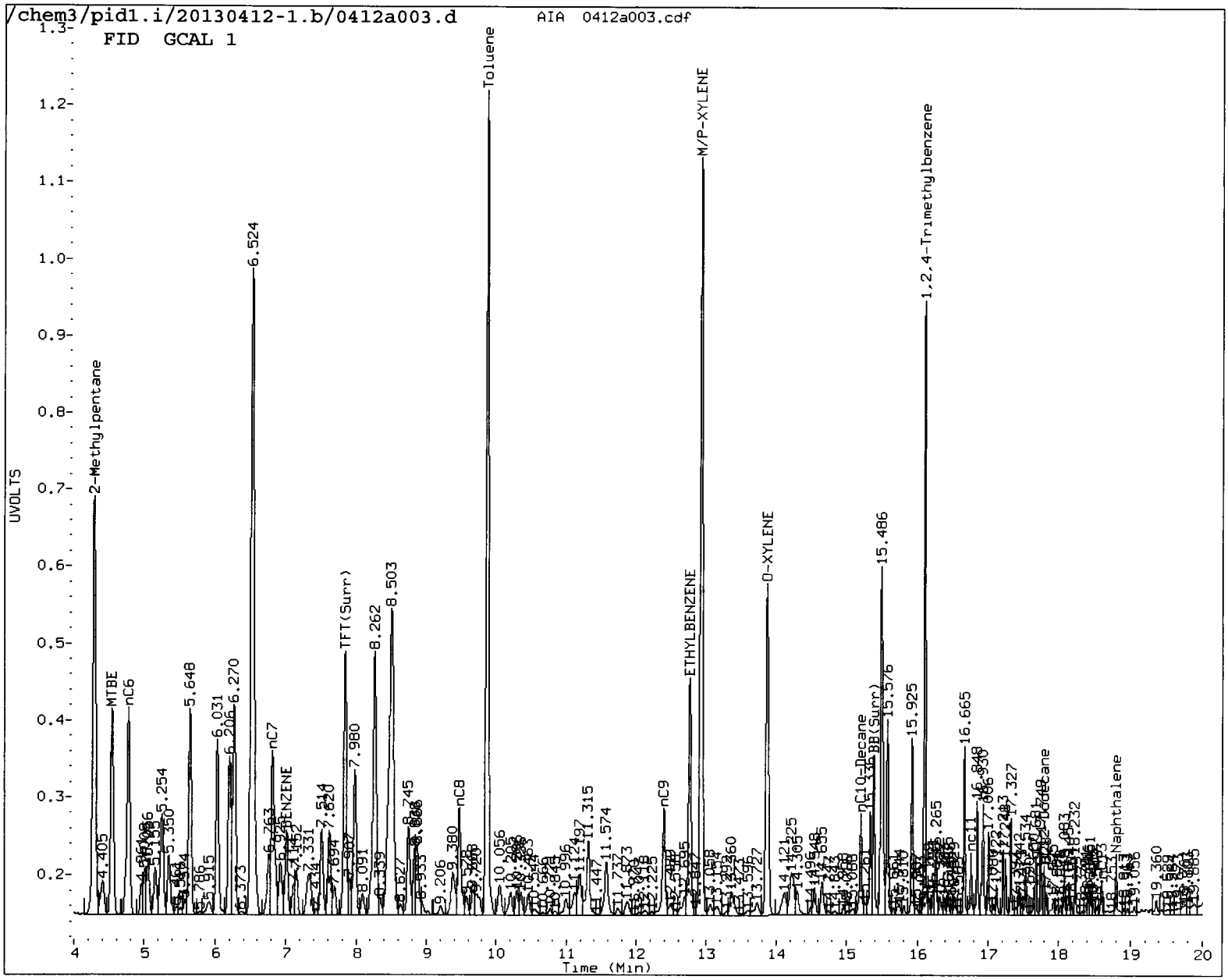
Column diameter: 0.18





Data File: /chem3/pid1.i/20130412-1.b/0412a003.d/0412a003.cdf
Injection Date: 12-APR-2013 11:06
Instrument: pid1.i
Client Sample ID:

4/15/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: VL Date: 4/25/13

WL07-01511

PC 4/15/15

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a004.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a004.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCS0412
Client ID:
Injection Date: 12-APR-2013 11:35
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.002	3188	44274	91.9	TFT(Surr)
15.382	0.001	1996	17672	87.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	333423	0.931 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	679761	0.939 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	548778	0.941 M
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	352050	0.939 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
7.854	0.002	3559	89.7	TFT(Surr)
15.390	0.002	7677	87.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.023	0.002	770	3.21	Benzene
9.880	0.002	7804	34.08	Toluene
12.771	0.002	1893	9.78	Ethylbenzene
12.934	0.004	7551	35.36	M/P-Xylene
13.881	0.003	2753	16.14	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
M Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130412-1.b/0412a004.d

Date : 12-APR-2013 11:35

Client ID:

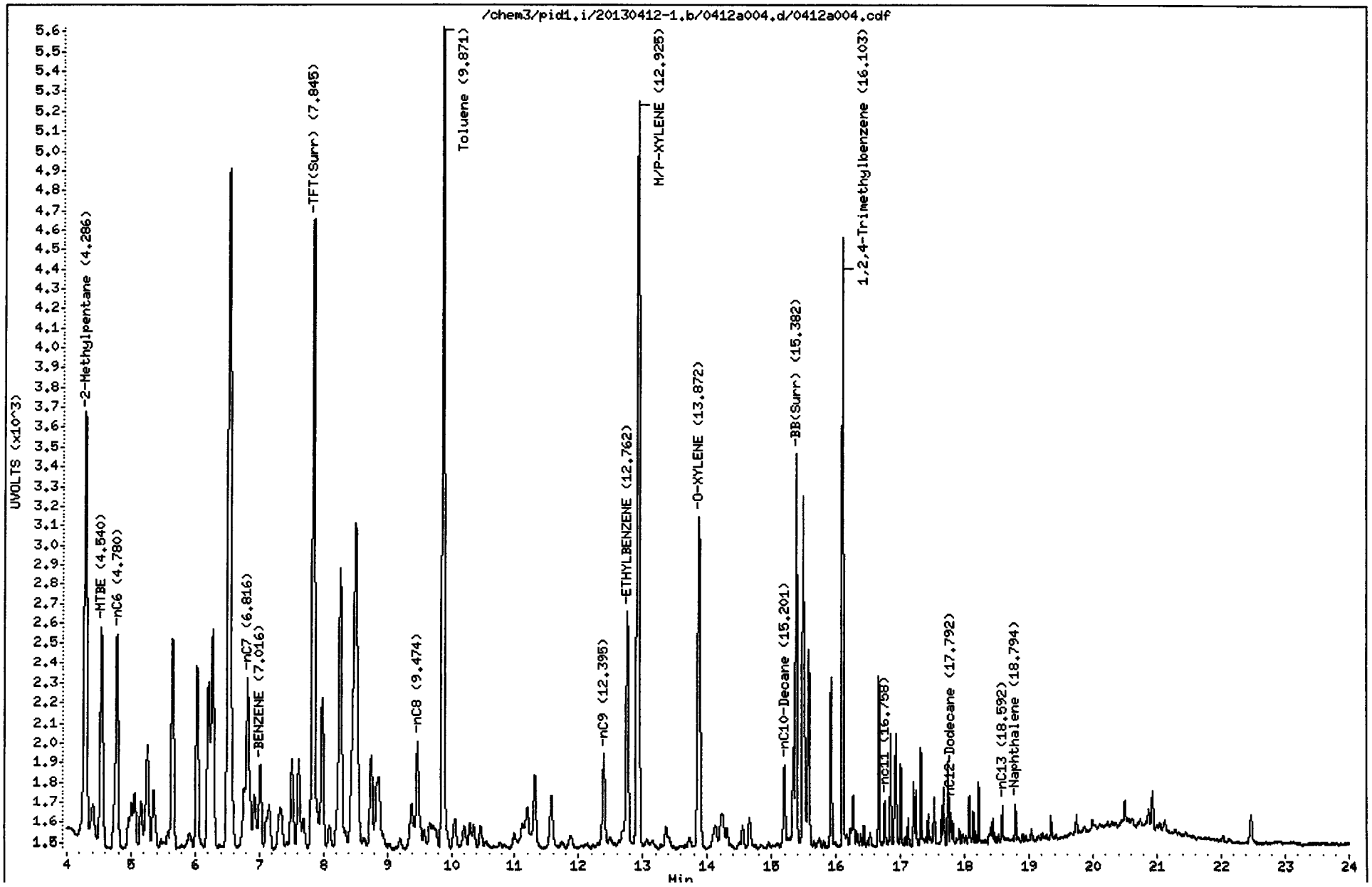
Sample Info: LCS0412

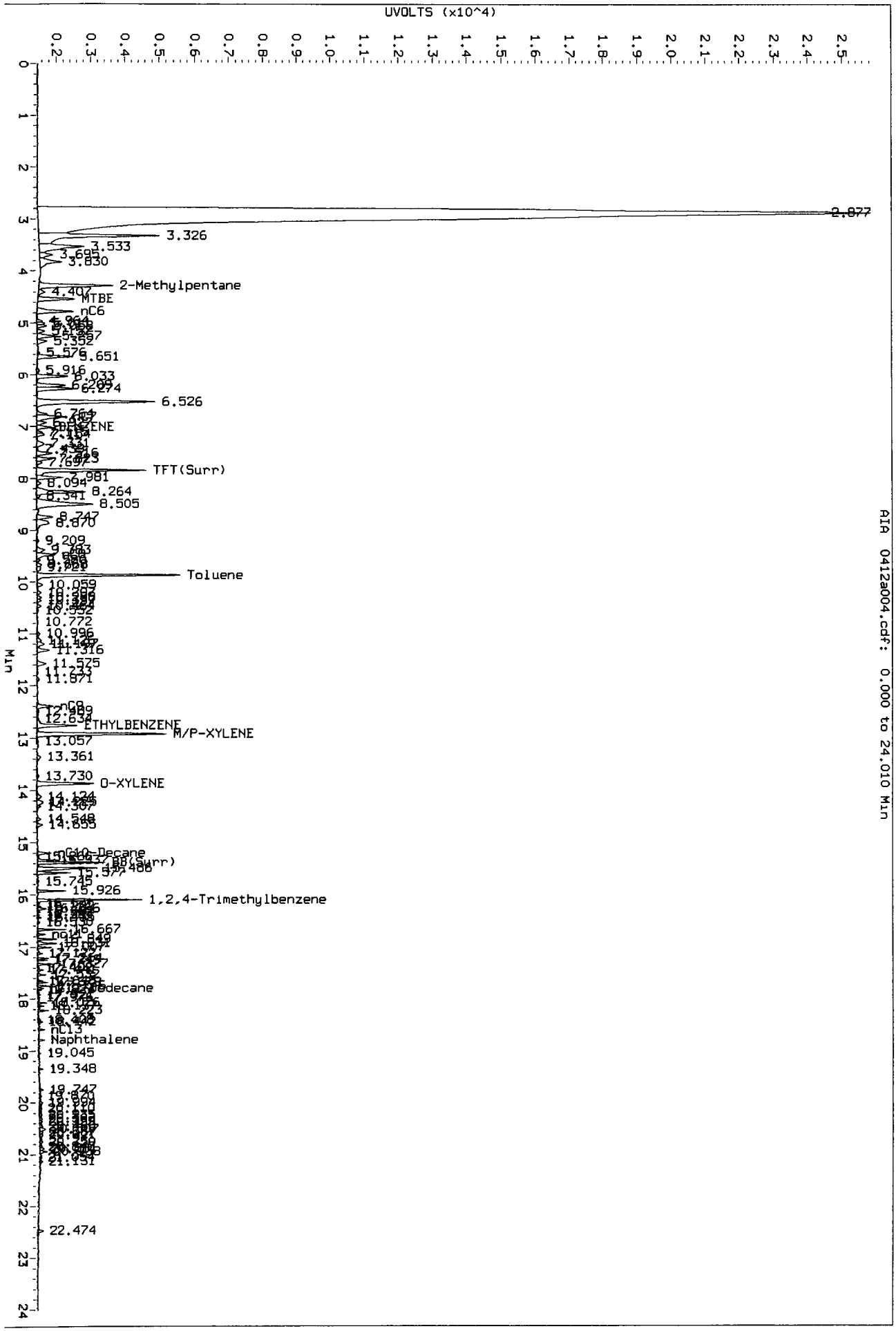
Instrument: pid1.i

Operator: PC

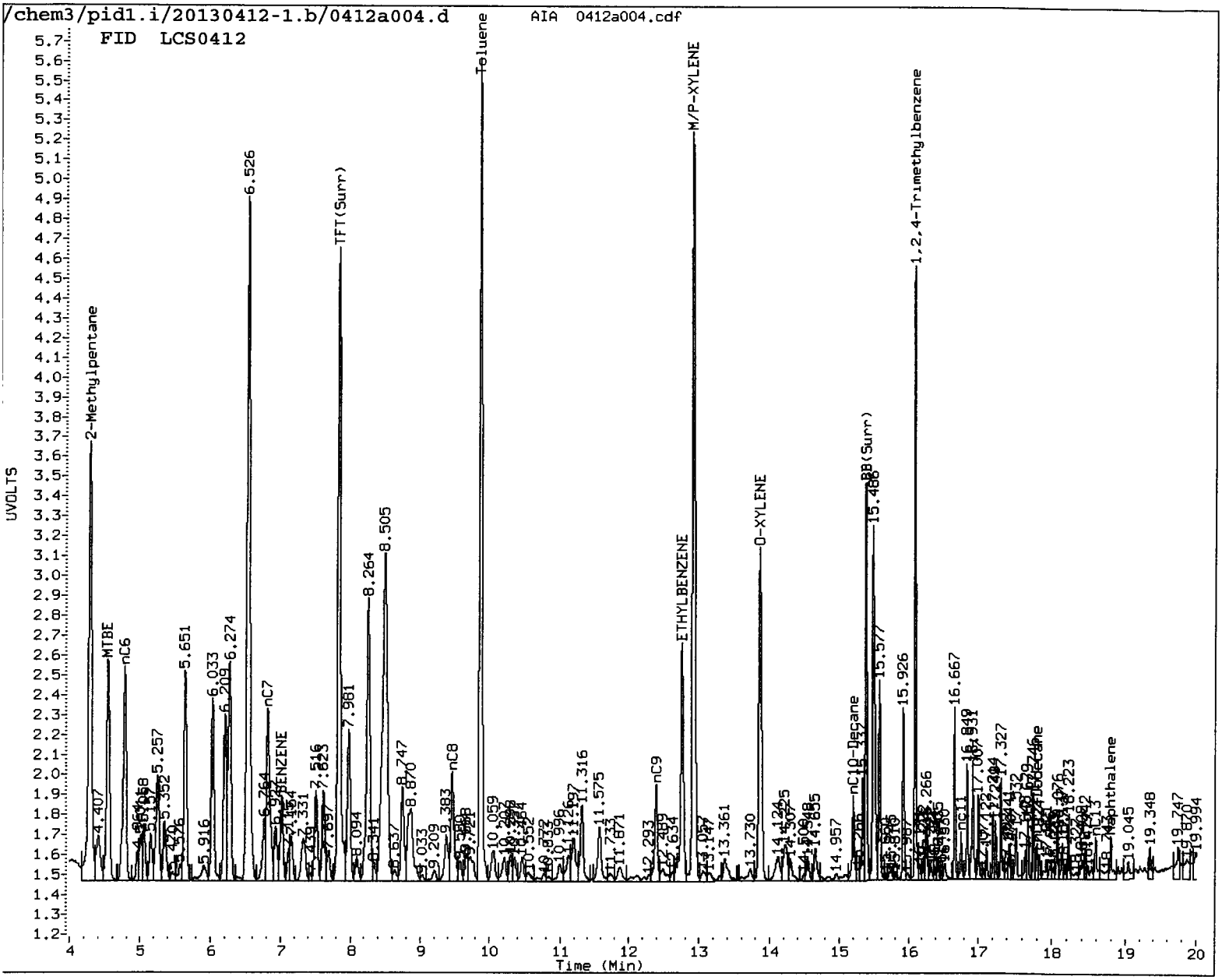
Column phase: RTX 502-2 FID

Column diameter: 0.18




UVOLTS (x10^4)
Min
2.877
3.326
3.533
3.695
3.830
2-Methylpentane
MTBE
nC6
5.576
5.651
5.916
6.033
6.274
6.526
TFT(Surr)
8.264
8.505
Toluene
10.772
11.316
11.575
nC8
ETHYLBENZENE
M/P-XYLENE
13.057
13.361
13.730
O-XYLENE
14.548
14.655
nC10-Decane
15.745
15.926
1,2,4-Trimethylbenzene
16.667
nC11-Undecane
nC12
Naphthalene
19.045
19.348
21.931
22.474
Data File: /chem3/pid1.i/20130412-1.b/0412a004.d/0412a004.cdf
Injection Date: 12-APR-2013 11:35
Instrument: pid1.i
Client Sample ID:
AIA 0412a004.cdf: 0.000 to 24.010 Min

4/15/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: PC Date: 4/15/15

4/15/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a005.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a005.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCSD0412
Client ID:
Injection Date: 12-APR-2013 12:04
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.001	3146	43775	90.7	TFT(Surr)
15.382	0.001	1988	17776	87.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	319451	0.892 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	655128	0.905 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	527904	0.906 M
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	335922	0.896 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
7.853	0.001	3515	88.5	TFT(Surr)
15.389	0.001	7669	87.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.001	762	3.17	Benzene
9.879	0.001	7734	33.77	Toluene
12.771	0.001	1873	9.68	Ethylbenzene
12.934	0.004	7504	35.14	M/P-Xylene
13.880	0.002	2743	16.08	O-Xylene
ND	---	---	---	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130412-1.b/0412a005.d

Date : 12-APR-2013 12:04

Client ID:

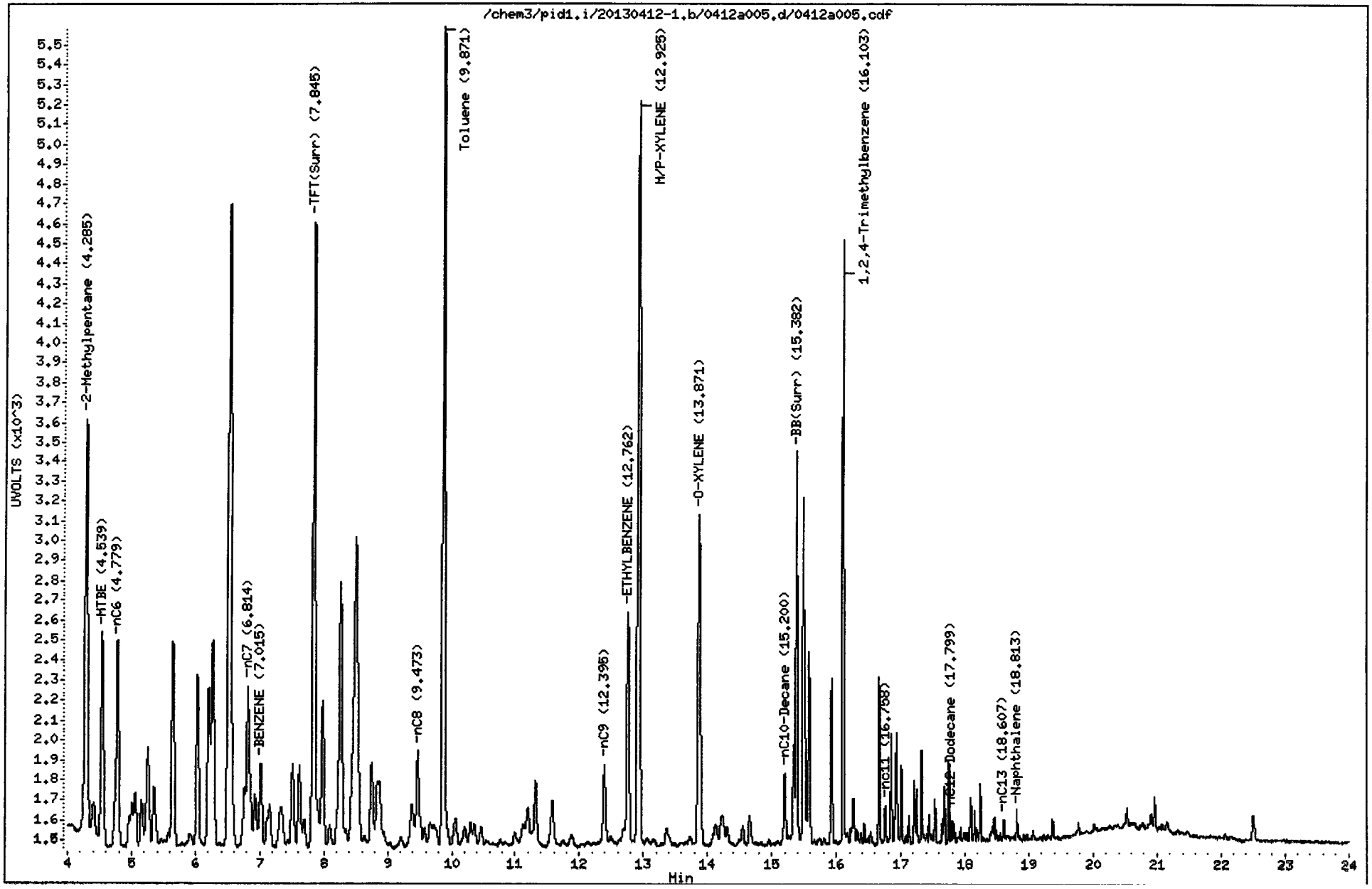
Sample Info: LCSD0412

Instrument: pid1.i

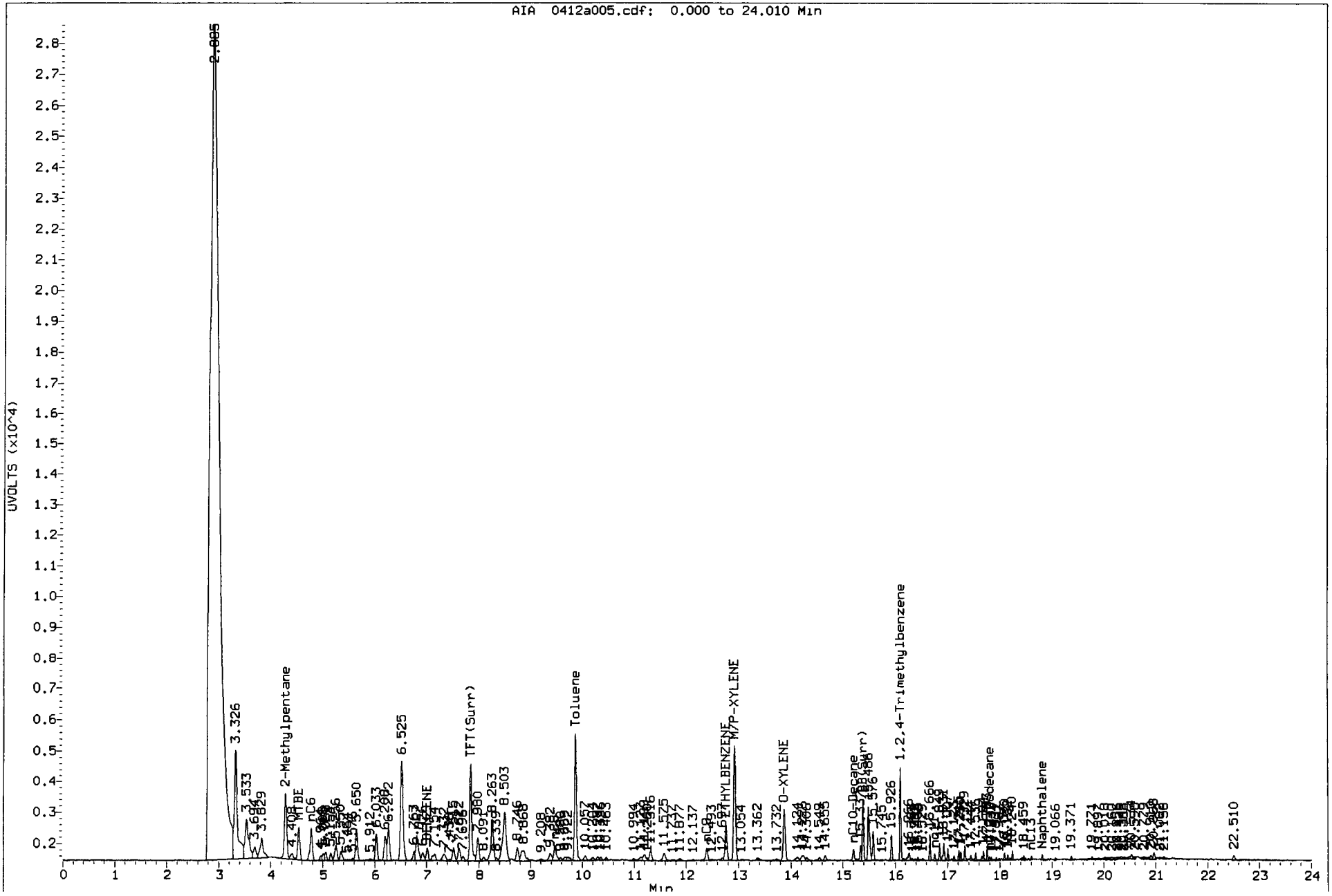
Operator: PC

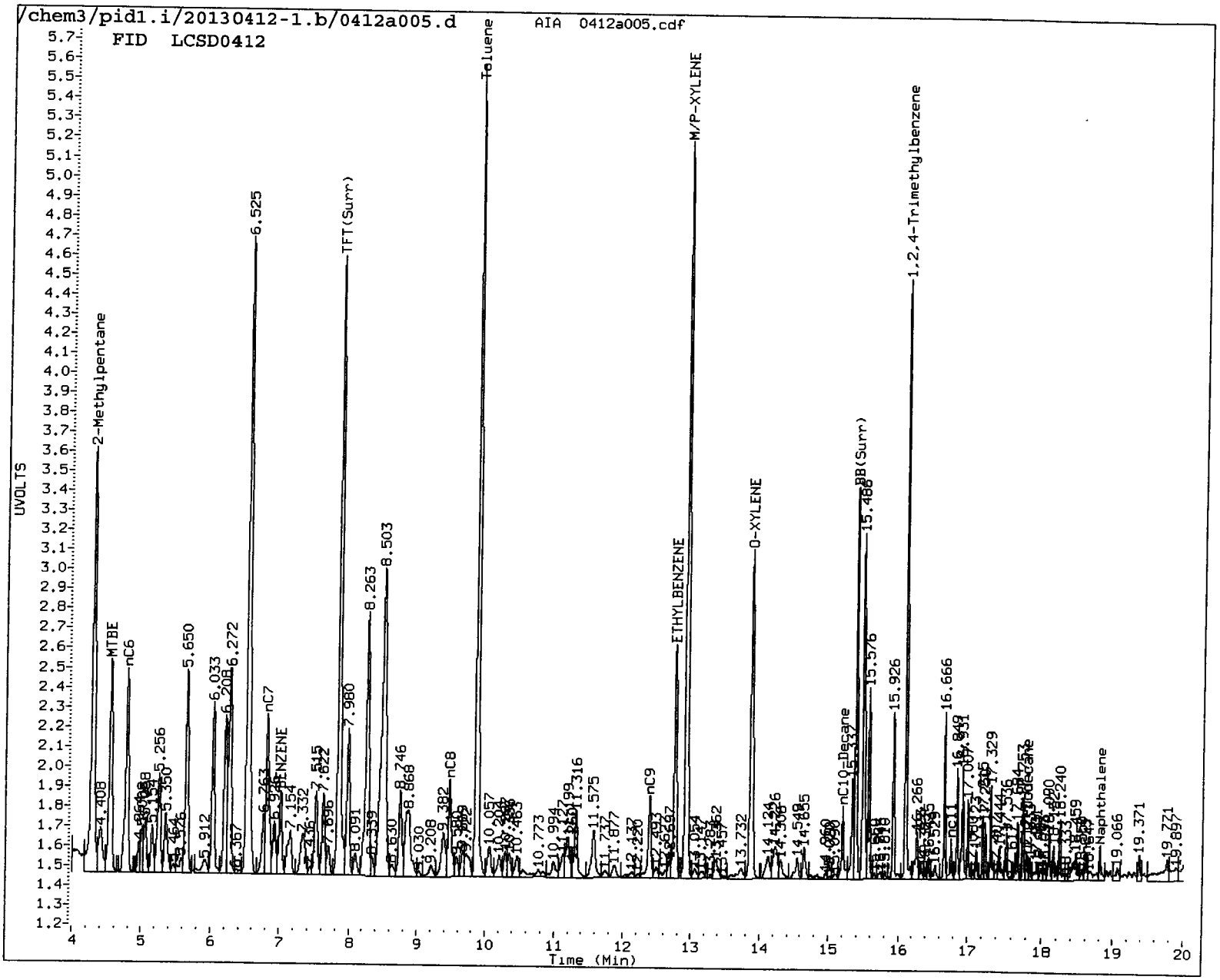
Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130412-1.b/0412a005.d/0412a005.cdf
Injection Date: 12-APR-2013 12:04
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

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

5. Other _____

Analyst: PL Date: 4/15/13

RG 4/15/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a006.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a006.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: MB0412
Client ID:
Injection Date: 12-APR-2013 12:34
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.002	3197	39868	92.2	TFT(Surr)
15.381	0.001	2078	17614	91.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	1275	0.004
8015C 2MP-TMB	(4.18 to 16.20)	723723	3824	0.005
AK101 nC6-nC10	(4.68 to 15.10)	582885	3180	0.005
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	1275	0.003

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
7.853	0.002	3625	91.3	TFT(Surr)
15.389	0.001	7959	90.5	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/20130412-1.b/0412a006.d

Date : 12-APR-2013 12:34

Client ID:

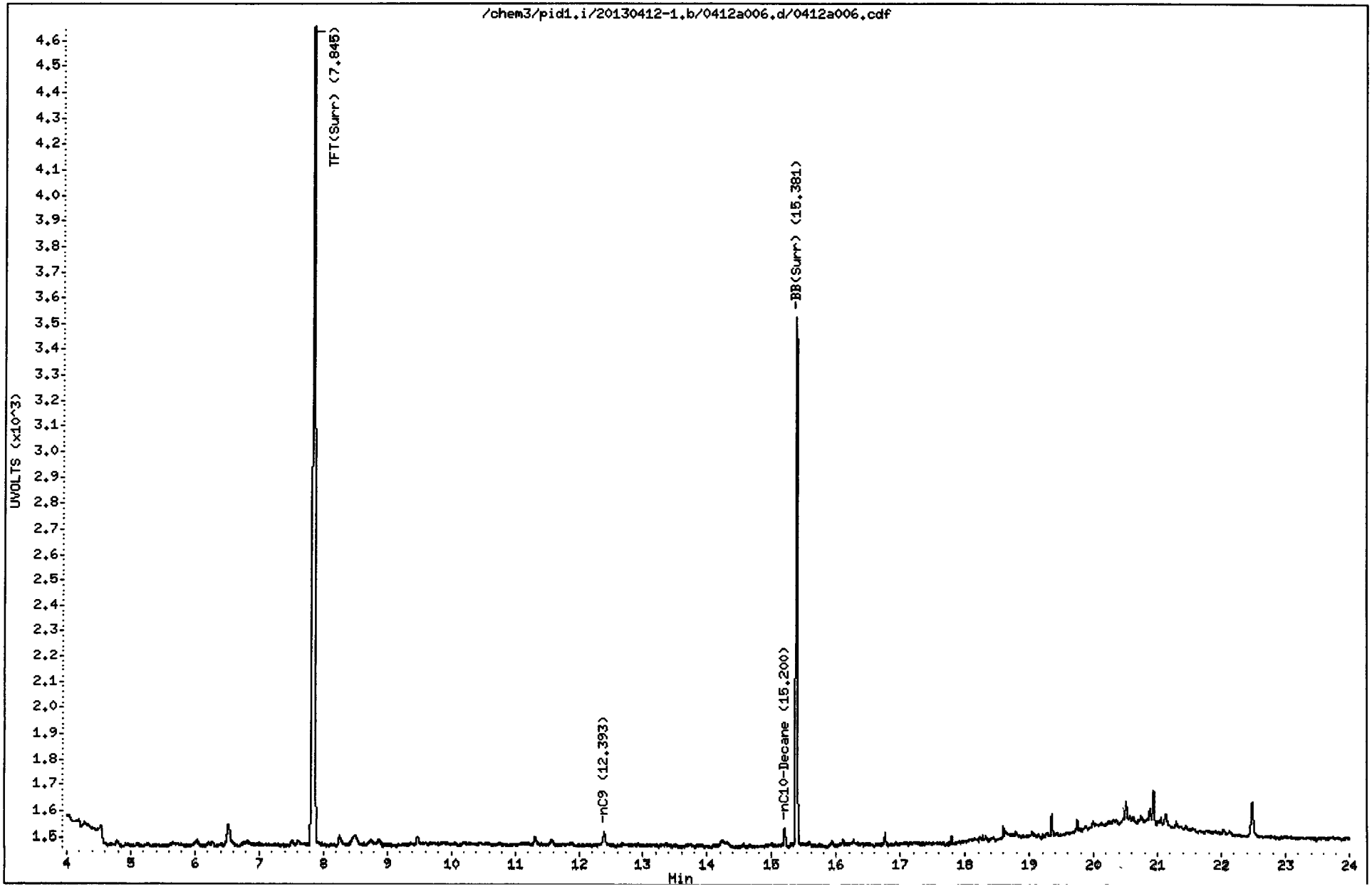
Sample Info: MB0412

Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



DC
4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a013.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a013.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: GCAL 2
Client ID:
Injection Date: 12-APR-2013 16:31
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.845	0.002	3497	49495	100.8	TFT(Surr)
15.383	0.003	2126	19613	93.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	871027	2.432 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	1758902	2.430 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1429882	2.453 M
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	907123	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
7.854	0.002	3812	96.0	TFT(Surr)
15.391	0.003	8039	91.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.024	0.002	2096	8.73	Benzene
9.881	0.004	21484	93.81	Toluene
12.774	0.004	5259	27.17	Ethylbenzene
12.937	0.008	20927	98.00	M/P-Xylene
13.883	0.005	7569	44.37	O-Xylene
4.547	-0.014	322	3.82	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

WLS7 01022

Data File: /chem3/pid1.i/20130412-1.b/0412a013.d

Date : 12-APR-2013 16:31

Client ID:

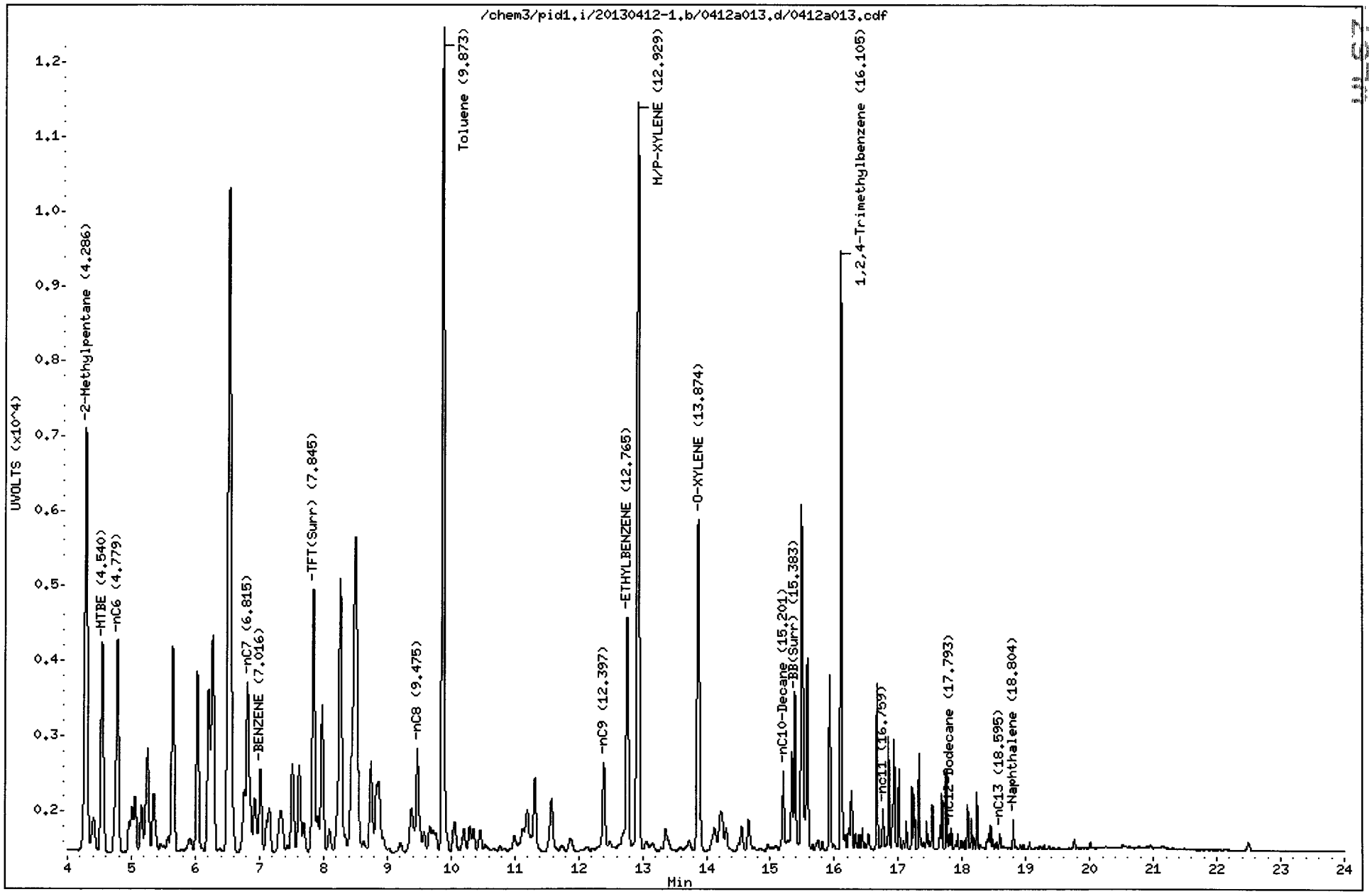
Sample Info: GCAL 2

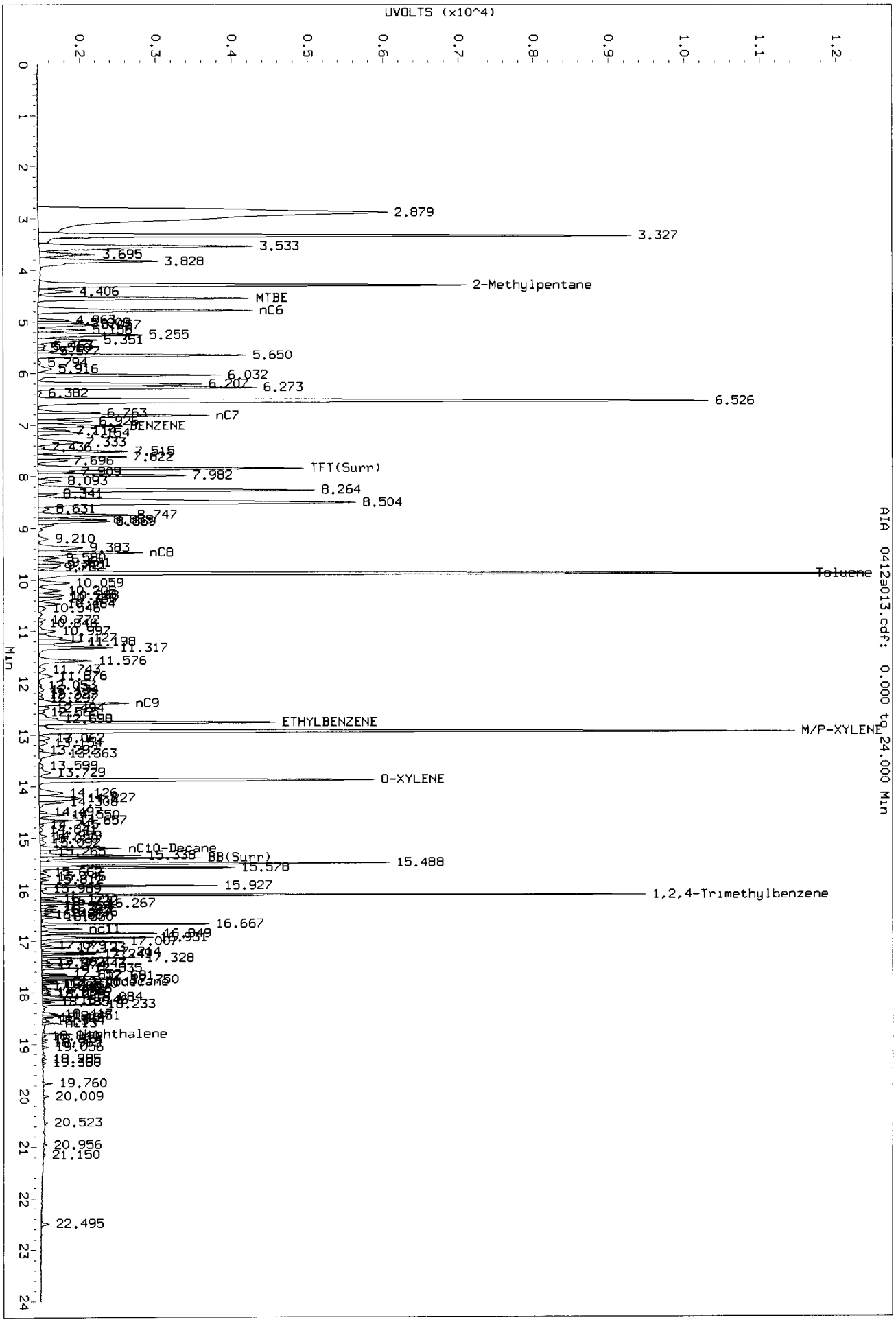
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

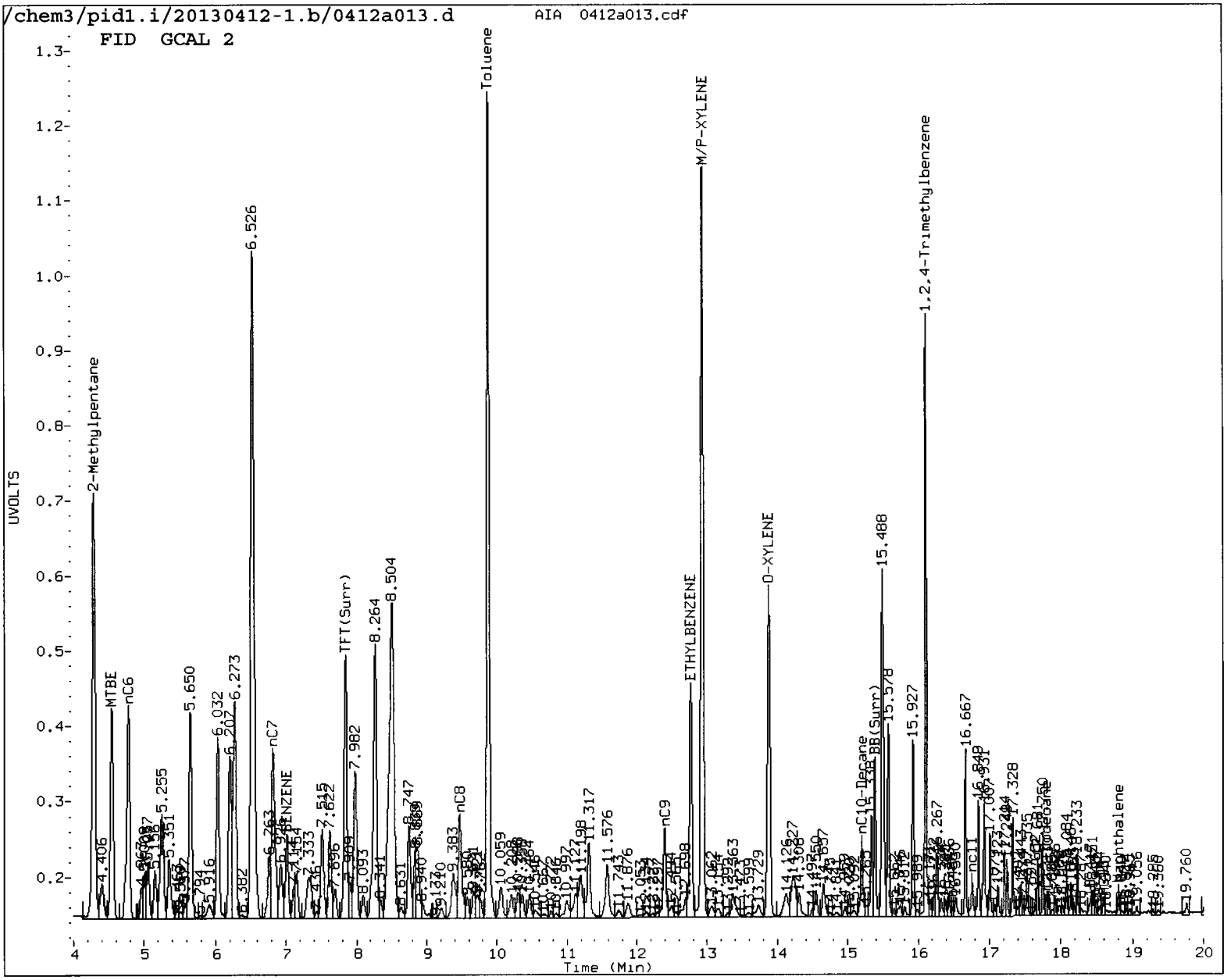
Column diameter: 0.18





Data File: /chem3/pid1.i/20130412-1.b/0412a013.d/0412a013.cdf
Injection Date: 12-APR-2013 16:31
Instrument: pid1.i
Client Sample ID:

4/25/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: YL Date: 4/25/13

MC 4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a017.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a017.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: WL67A
Client ID: GR-CB-07-20130411-S
Injection Date: 12-APR-2013 18:28
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.847	0.003	3026	37791	87.2	TFT(Surr)
15.383	0.003	2043	17065	89.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	5271	0.015
8015C 2MP-TMB	(4.18 to 16.20)	723723	4592	0.006
AK101 nC6-nC10	(4.68 to 15.10)	582885	4592	0.008
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	5918	0.016

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
7.855	0.004	3363	84.7	TFT(Surr)
15.392	0.004	7696	87.6	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/20130412-1.b/0412a017.d

Page 1

Date : 12-APR-2013 18:28

Client ID: GR-CB-07-20130411-S

Instrument: pid1.i

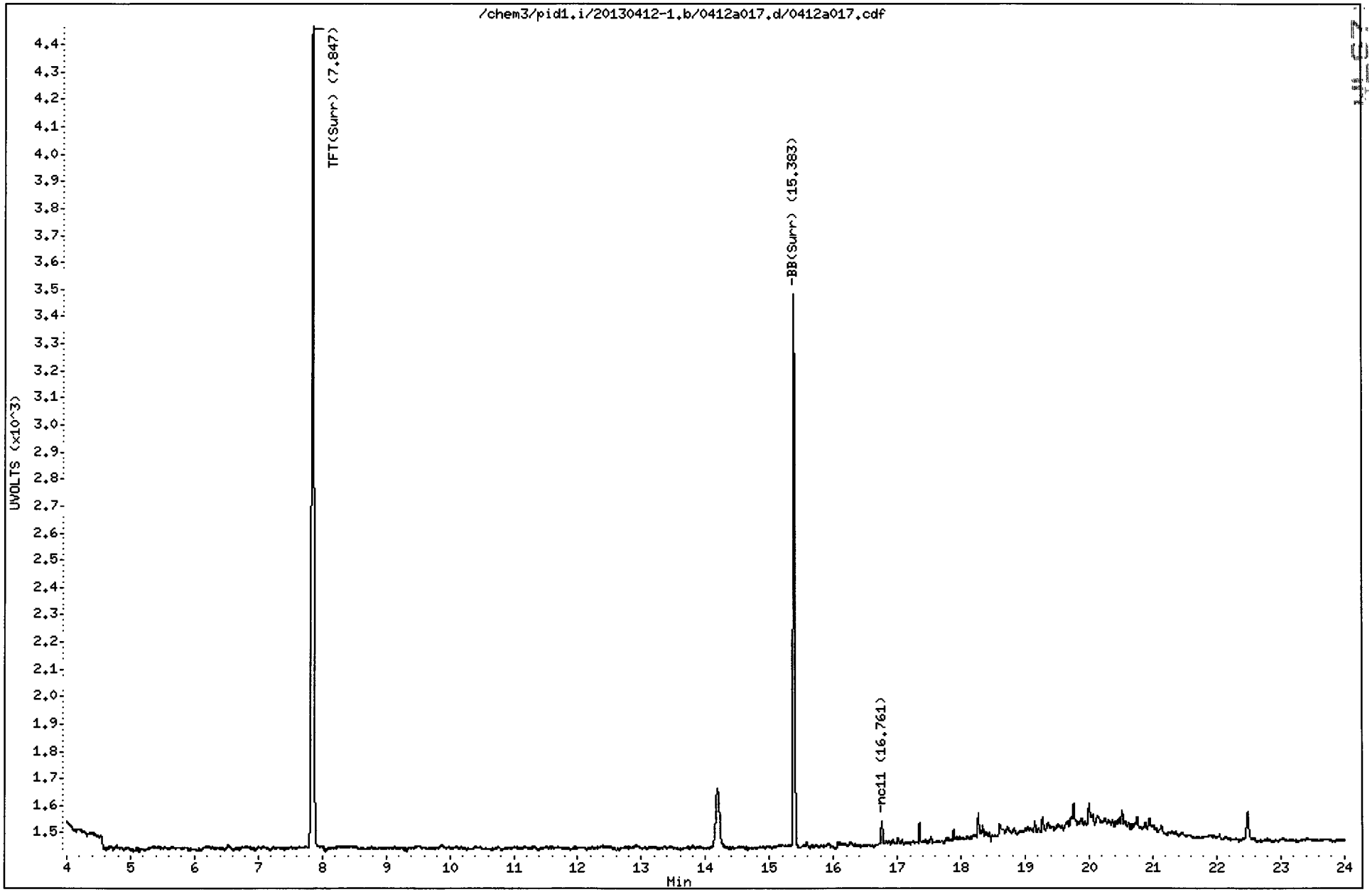
Sample Info: WL67A

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18

WL67 04537



PG 4/15/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a018.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a018.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: WL67B
Client ID: GR-WS-05-20130411-S
Injection Date: 12-APR-2013 18:58
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.005	3001	37484	86.5	TFT(Surr)
15.384	0.004	2013	17077	88.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	1704	0.005
8015C 2MP-TMB	(4.18 to 16.20)	723723	1705	0.002
AK101 nC6-nC10	(4.68 to 15.10)	582885	1259	0.002
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	2157	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
7.856	0.005	3332	83.9	TFT(Surr)
15.392	0.004	7563	86.0	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/20130412-1.b/0412a018.d

Page 1

Date : 12-APR-2013 18:58

Client ID: GR-WS-05-20130411-S

Instrument: pid1.i

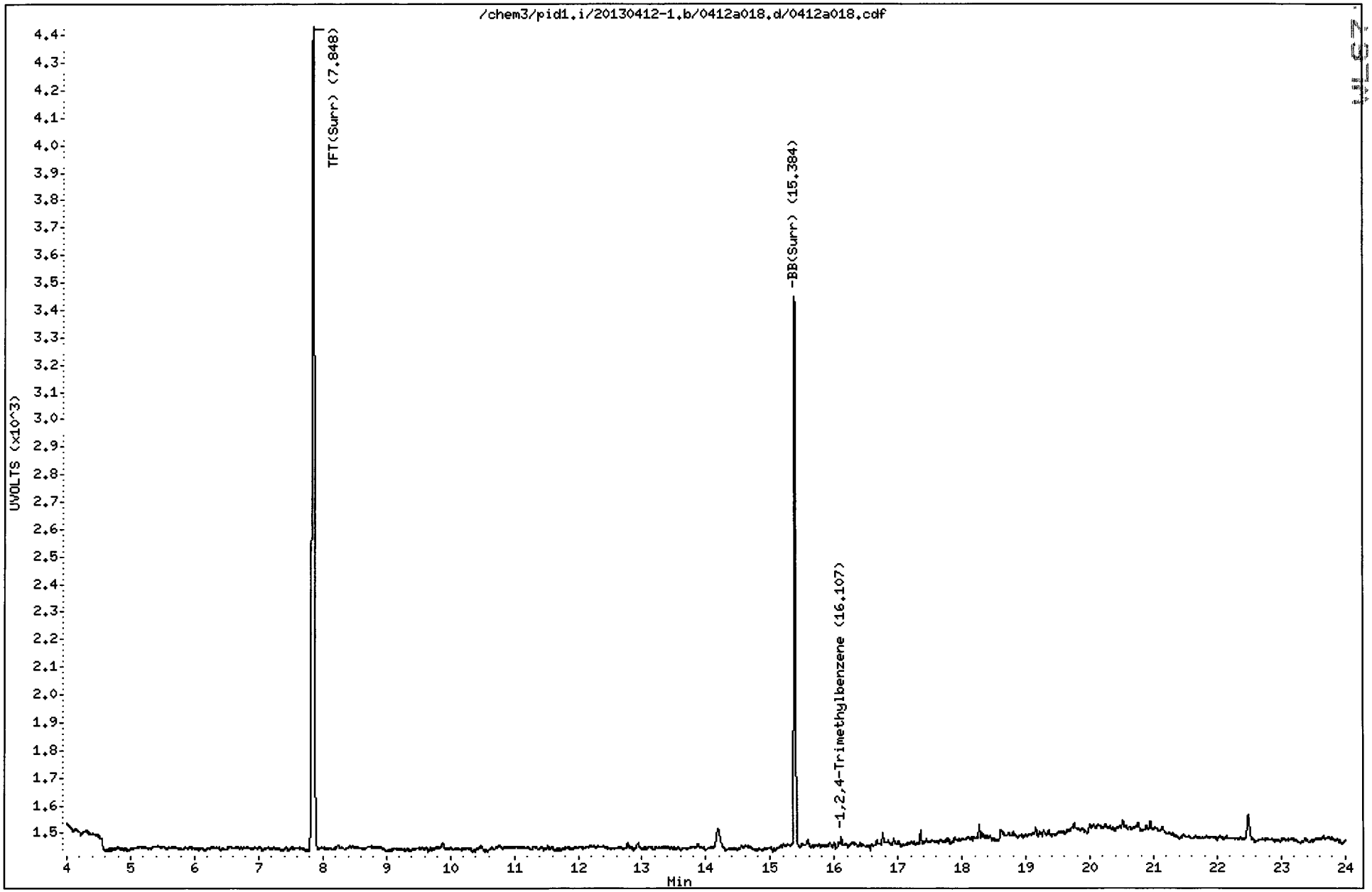
Sample Info: WL67B

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18

WL67B 61529



PG 4/15/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130412-1.b/0412a023.d
Data file 2: /chem3/pid1.i/20130412-2.b/0412a023.d
Method: /chem3/pid1.i/20130412-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: GCAL 3
Client ID:
Injection Date: 12-APR-2013 21:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.005	3265	46143	94.1	TFT(Surr)
15.385	0.004	2038	18894	89.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	802460	2.241 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	1562553	2.159 M
AK101 nC6-nC10	(4.68 to 15.10)	582885	1263564	2.168 M
NWTPHG Tol-Nap	(9.77 to 18.89)	375093	864084	2.304 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	0.006	3502	88.2	TFT(Surr)
15.392	0.004	7692	87.5	BB(Surr)

SW8021 (PID)

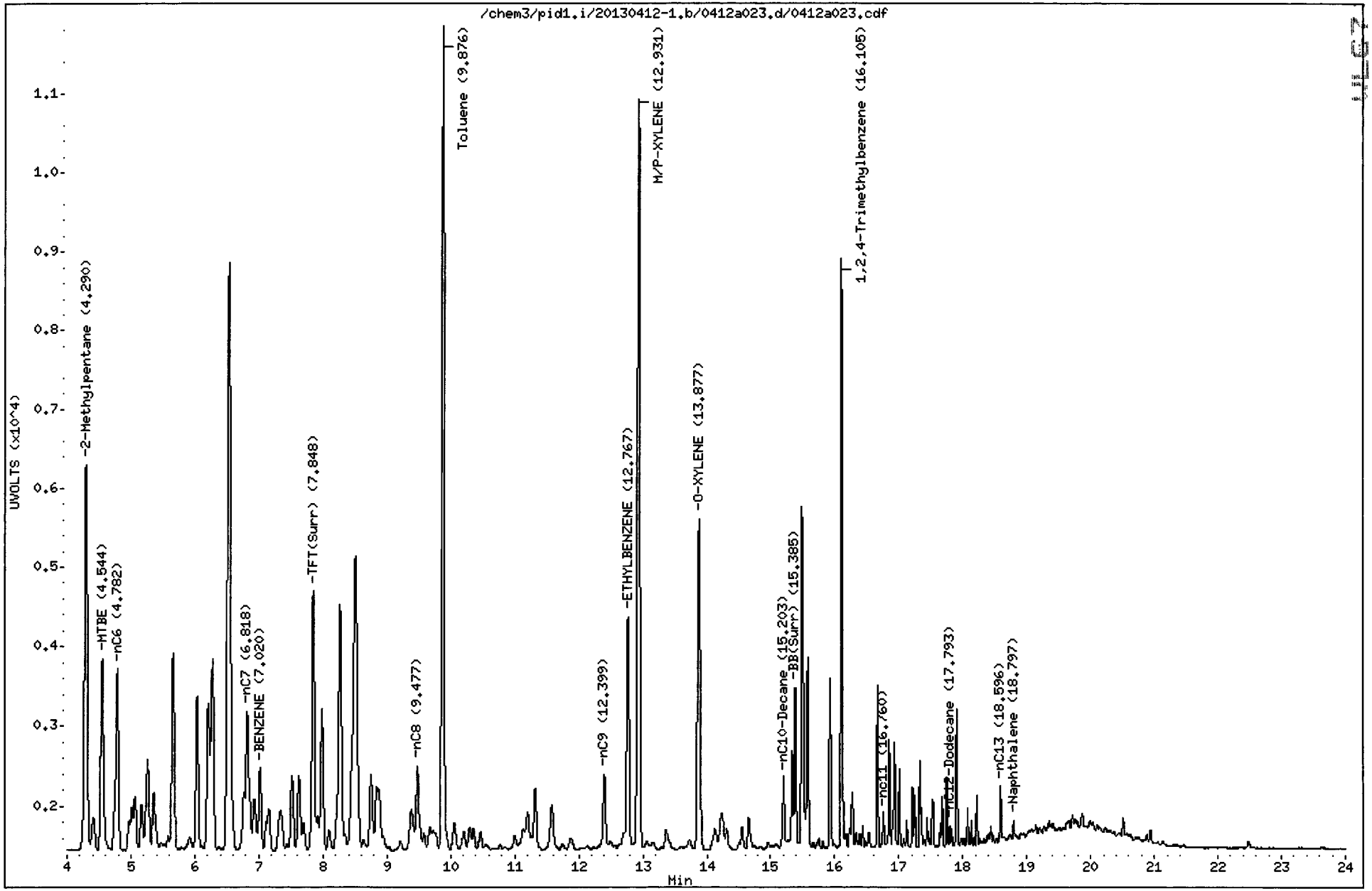
RT	Shift	Response	Amount	Compound
7.028	0.006	1982	8.26	Benzene
9.884	0.007	20075	87.66	Toluene
12.776	0.006	4828	24.94	Ethylbenzene
12.939	0.010	19421	90.94	M/P-Xylene
13.885	0.008	7008	41.08	O-Xylene
4.552	-0.009	269	3.19	MTBE

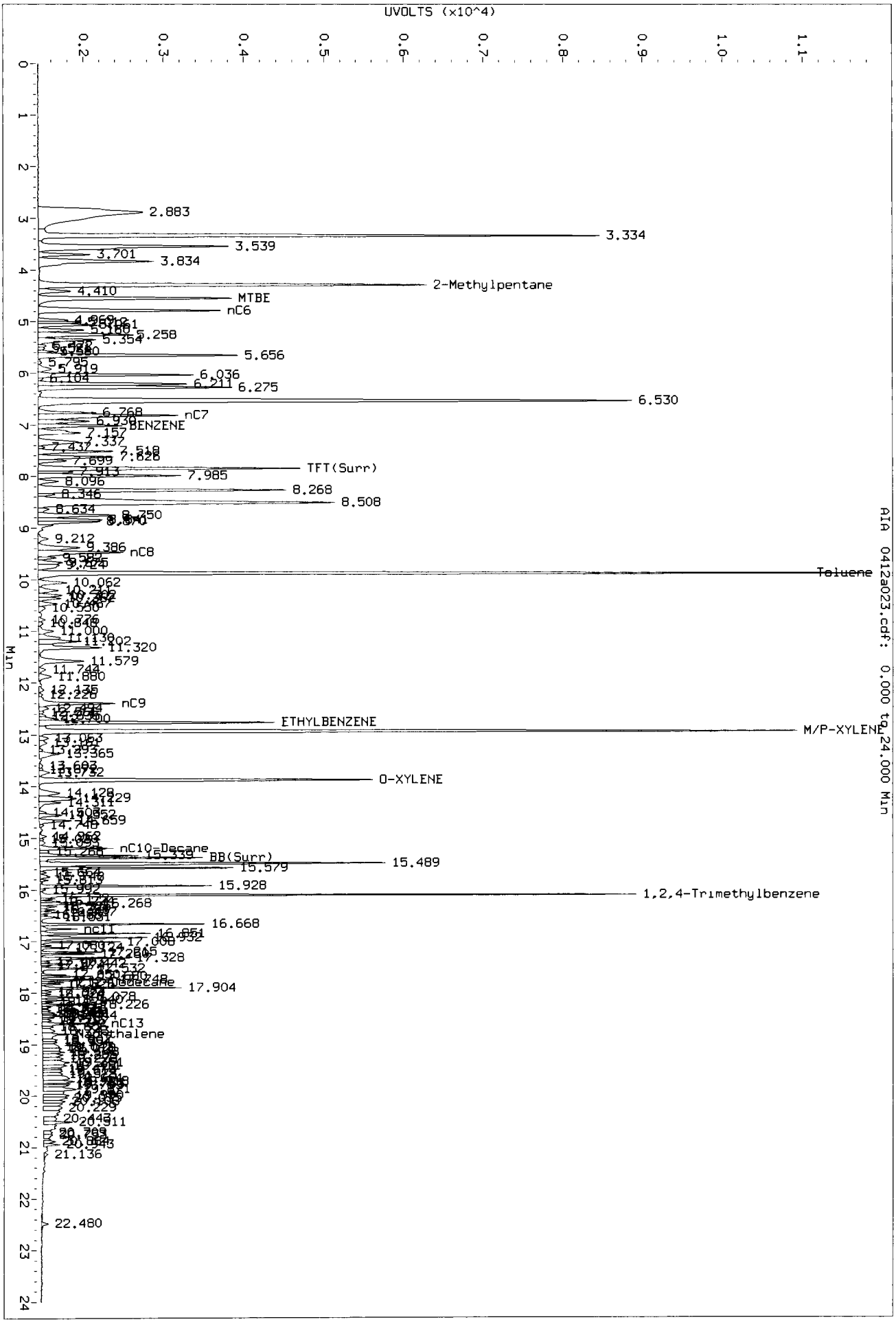
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130412-1.b/0412a023.d
Date : 12-APR-2013 21:24
Client ID:
Sample Info: GCAL 3

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

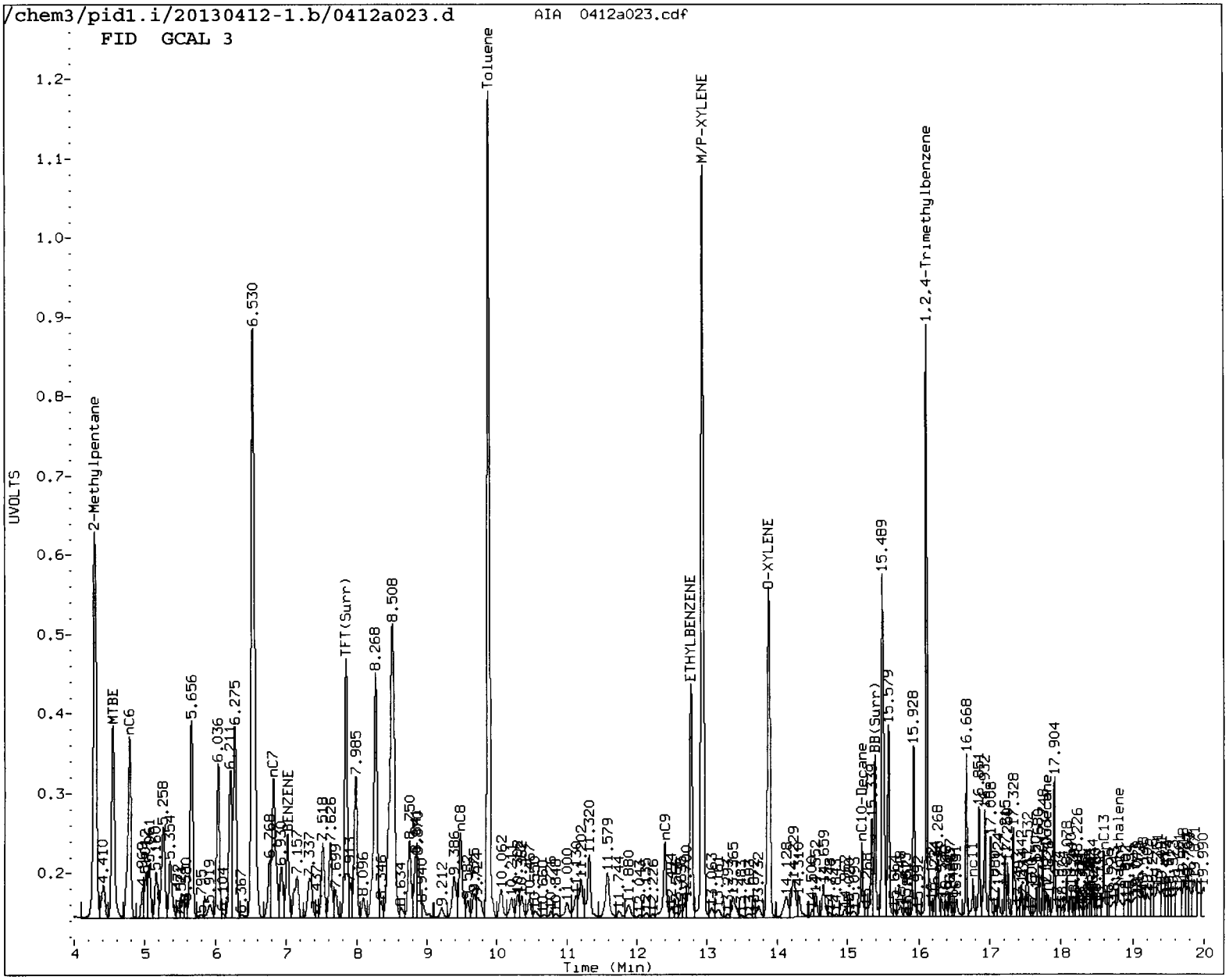
Column phase: RTX 502-2 FID





Data File: /chem3/pid1.i/20130412-1.b/0412a023.d/0412a023.cdf
Injection Date: 12-APR-2013 21:24
Instrument: pid1.i
Client Sample ID:

PC 4/15/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: RL Date: 4/25/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WL67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 4-15-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WL49 FSPK, MBSSPK
WL67 FSPK, MBSPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	3001-10		
	Vol Added (mL):	1.0		
	Ag	50		2.0
S	Al	200	200	
T	As	200		10
O	Ba	200	200	
C	Be	50 ↓	50	
K	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
C	Cr	50	50	
O	Cu	50 ↓	50	
N	Fe	200	200	
C	K	1000	1000	
E	Mg	1000	1000	
N	Mn	50	50	
T	Na	1000	1000	
R	Ni	50	50	
A	Pb	200		10
T	Se	200		10
I	Sr	50	50	
O	Tl	200		10
N	V	50	50	
	Zn	50 ↓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	3021-15	3001-1	
	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 ~~↓~~ CB		

4/15/13

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMM	CVA	1.0	0.05	3007-13
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:** 04-15-13 **Time:** 1055

Matrix: Soil **Block ID:** #2/#5 **Block Temp:** 95°C/95°C **Thermometer:** mp46/mp60

ARI Sample ID	Btl #	pH<2	Prep Code: SWE Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWE Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
WL74 B	3	-	1.037	50.0	1.049	50.0	
" C	3	-	1.056		1.075		
" D	3	-	1.042		1.047		
" E	3	-	1.022		1.043		
" F	3	-	1.046		1.060		
" G	3	-	1.028		1.001		
" H	3	-	* ~~1.03~~ 1.022		1.069		* CB 4/15/13
" I	2	-	1.026		1.065		
" J	3	-	1.045		1.028		
" JDup	3	-	1.049		1.029		
" JSpk	3	-	1.046		1.032		
" REF1	0053-54C	-	1.0009		1.003		
" MB1	-	-	-		-		
" MBSpk	-	-	-		-		
WL67 A	6	-	1.025		1.040		
" ADup	6	-	1.027		1.044		
" ASpk	6	-	1.026		1.036		
" B	6	-	1.057		1.009		
" MB1	-	-	-		-		
" MBSpk	-	-	-	50.0	-	50.0	

CB 4/15/13

Chemical/Reagent ID: HNO_3: MP2473I581169 H_2O_2: I7845 Tube lot #: mL27kk03

HCl: I7971

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM **Matrix:** Soil

Analyst: CB **Date:** 04-15-13

Bath Temp: 90°C **Start Time:** 1125 **End Time:** 1155

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WL74 B	3	~	0.225	50.0	4/23 1	Y	
" C	3	~	0.237		1		
" D	3	~	0.233		1		
" E	3	~	0.250		1		
" F	3	~	0.214		1		
" G	3	~	0.269		1		
" H	3	~	0.237		1		
" I	2	~	0.242		1		
" J	3	~	0.251		1		
" Jdup	3	~	0.251		1		
" JSpk	3	~	0.252		1		
" REF1	0053 540	~	0.202		1		
" mBl	~	~	~		1		
" mBlSpk	~	~	~		1		
WL67 A	6	~	0.211		4/25 1		
" B	6	~	0.216		1		
" Adup	6	~	0.216		1		
" ASpk	6	~	0.207		1		
" mBl	~	~	~		1		
" mBlSpk	~	~	~	50.0	1	Y	
				EB 4/15/13			

Chemical/Reagent ID:

HNO_3: I9169 **H_2SO_4:** I8044 **HCl:** ~

5% $K_2S_2O_8$: MP2439 **5% $KMnO_4$:** MP2445 **Digest Tube Lot:** MH21KK06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: ~~WL68~~ WL67

Unacceptable Blank: ☐

Date of Event: 4-8-13

Unacceptable Duplicate: ☐

Client ID:

Unacceptable Spike: ☑

Method/Element: ICPMS

Unacceptable Reference: ☐

Prep Code: SW3N

Details of Problem/Recommended Corrective Action:

Ag 45.6% R Sb 4.6% R in ASR
ABS 0%

Samples Affected:

Corrective Action Taken:

4/22/13

Analyst Initials: AL

Supervisor:

Date: 4-8-13

Date:

5049F

Revision 007
6/11/10

WL67:0138

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: WLG7

Unacceptable Blank: ☐

Date of Event: 4/19/13

Unacceptable Duplicate: ☐

Client ID:

Unacceptable Spike: ☒

Method/Element: Hg CVA

Unacceptable Reference: ☐

Prep Code: SmM

Details of Problem/Recommended Corrective Action:

1st Analysis: A - 5.61 ppb
APSK - 7.86 ppb %R = 227 High
STL

2nd Analysis: A - 5.54 ppb
APSK - 7.76 ppb %R = 222 High

Samples Affected: A, ADUP, APSK, MB, MBSK

Corrective Action Taken:

Sent
Approved 3

Analyst Initials: DM

Supervisor:

Date: 4-19-13

Date:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: WL67

Unacceptable Blank: ☐

Date of Event: 4-16-13

Unacceptable Duplicate: ☑

Client ID: SAIC

Unacceptable Spike: ☒ BA 4/16/13

Method/Element: ICP

Unacceptable Reference: ☐

Prep Code: [illegible]

Details of Problem/Recommended Corrective Action:

ADUP/A : Cu, Zn wide RPD (Numbers attached)

Samples Affected:

Corrective Action Taken:

Analyst Initials: BA

Supervisor: [signature]

Date: 4-16-13

Date: 4-17-13

5049F

Revision 007
6/11/10

WL67 · 0161[illegible]

WL67

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	1.027	1.025			SAMP WT	1.026	1.0250			
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	0.00018	0.0002	10.72		Be	0.2045	0.0002	0.2	102.1	
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	0.9961	1.295	26.28		Cu	1.618	1.295	0.20	160.9	STL
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	6.592	9.223	33.46		Zn	8.847	9.223	0.2	-192.5	STL

TABLE 6

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WL67

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 4-16-13

ICP 2	Analyst BA 4-17-13	Peer JQ 4-17-13	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	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	See log
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WL74
Matrix Duplicates	✓	✓	WL67
Method Blanks	✓	✓	
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysis Notes and CAFs	✓	✓	CAF - WL67, WL74

WL67 : 04SHC

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 1-22-13 Analysis Date: 4-16-13 Analyst: BA

LR Date: 1-22-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted. BA 4-16-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			3026-10
		2			3027-9
		3			-10
		4			-11
		5			-12
		ICV			3024-9
		ICB			Mo↑
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			Mo↑
		WL68 MB1	SWC	2	
	✓	B		↓	Fe > LR (BR 5x)
	✓	A-L		10	↑
	✓	A		2	Fe > LR (BR 10x)
	✓	ADUP			
	✓	ASPK			
zzz	✓	~~zzzzzz APOST~~			0.08 mL ICP SPK 3401-10
		REF1			
		MBSPK			
		CCV2			
		CCB2			
		WL68 B	SWC	5	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-16-13 Analyst: BA

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. BA 4-16-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WL68 A-L	SWC	50 ✓	
		A		10	
		ADUP		✓	
		ASPK		✓	Cu, Zn STL
		APST			0.08 mL ICP Spk 3001-10 Cu OK, Zn STL
		CCV3			
		CCB3			
		CRI			
		ICSA			
		ICSAB			
		CCV4			
		CCB4			End WL68
		WL74 MB1	SWC	2	
		B			
		C			
		J-L		10 ✓	
		J		2	
		JDUP		✓	
		JSPK		✓	Sb ↓ (CAF)
		JPOST		✓	0.08 mL ICP Spk 3001-10 0.016 mL 1000 ppm Sb 29338-7 Sb OK
		REF1		✓	
		MB1SPK		✓	
		CCV5			
		CCB5			

WL67:01515

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-16-13 Analyst: BA

LR Date: — Page: 3 of 4

All corrections made by analyst unless otherwise noted. BA 4-16-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WL74 D	SWC	2	
		E			
		F			
		G			
		H			
		I			
		CCV6			
		CCB6			
		CRI			
		ICSA			
		ICSAB			
		CCV7			
		CCB7			End WL74
		WL49 MB3	SWC	2	
		G		↓	
	✓	FDUP		5	FL>LR (RR 10x)
	✓	F			
	✓	FSPK			
zzz		~~FPOST~~ zzzzzz			0.08 mL ICP Spk 3401-10
		MB3SPK		2	
		CCV8			
		CCB8			
		WL67 MB1	SWC	2	
		B		5	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-16-13 Analyst: BA

LR Date: — Page: 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WL67 ADUP	SWC	5	Cu, Zn wide RPD
		A			CAF
		ASPK			Cu, Zn STL
		APOST			0.08 mL ICP Spk 3001-10 Cu OK Zn STL
		MBISPK		2	
		CCV9			
		CCB9			End WL67
		WL86 MB	TWC		
	✓	A		5	B > LR
		MBSPK			
		CCV10			
		CCB10			B↑ (C.O.)
		WL49 FDUP	SWC	10	
		F			
		FSPK			Cu, Zn STL
		FPOST			0.08 mL ICP Spk 3001-10 Cu OK Zn STL
		WL86 A	TWC		
		CCV11			B↑ (C.O.)
		CCB11			End Pkg (WL49)
		BA 4/16/13			

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

4/16/2013 8:05:46 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 2

Analysis Begun

Start Time: 4/16/2013 8:07:30 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/16/2013 7:17:05 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130416
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IE073012A.iec
Method Description: 12Axial Elements
Method Last Saved: 8/13/2012 7:13:22 AM
MSF File:

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
Sample ID: B1
Autosampler Location: 1
Date Collected: 4/16/2013 8:07:36 AM
Data Type: Original

Dilution: 1.000000X
User canceled analysis.

BA
4/16/13

Analysis Begun

Start Time: 4/16/2013 8:08:20 AM
Plasma On Time: 4/16/2013 7:17:05 AM

Analysis Begun

Start Time: 4/16/2013 8:40:18 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/16/2013 7:17:05 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130416
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: 4/16/2013 8:40:19 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2759629.4	9304.47	0.34%	100.0	%
ScR 361.383	384701.2	1904.98	0.50%	100.0	%
Ag 328.068†	-9.0	11.04	122.25%	[0.00]	mg/L
Al 308.215†	144.1	1.38	0.96%	[0.00]	mg/L
As 188.979†	-5.1	1.84	35.82%	[0.00]	mg/L
B 249.677†	-60.2	2.05	3.40%	[0.00]	mg/L
Ba 233.527†	-9.5	1.15	12.17%	[0.00]	mg/L
Be 313.042†	632.2	5.17	0.82%	[0.00]	mg/L
Ca 317.933†	37.4	11.56	30.93%	[0.00]	mg/L
Cd 228.802†	232.6	1.03	0.44%	[0.00]	mg/L
Co 228.616†	-125.3	2.82	2.26%	[0.00]	mg/L
Cr 267.716†	-106.4	5.39	5.06%	[0.00]	mg/L
Cu 324.752†	2378.1	18.38	0.77%	[0.00]	mg/L
Fe 273.955†	-31.5	2.78	8.83%	[0.00]	mg/L
K 766.490†	245.7	15.96	6.50%	[0.00]	mg/L
Mg 279.077†	142.2	4.97	3.49%	[0.00]	mg/L
Mn 257.610†	78.1	4.14	5.30%	[0.00]	mg/L
Mo 202.031†	72.2	1.26	1.74%	[0.00]	mg/L
Na 589.592†	-395.9	26.58	6.71%	[0.00]	mg/L
Na 330.237†	38.7	13.18	34.08%	[0.00]	mg/L
Ni 231.604†	22.1	2.60	11.76%	[0.00]	mg/L
Pb 220.353†	-44.9	5.94	13.25%	[0.00]	mg/L
Sb 206.836†	8.1	0.75	9.26%	[0.00]	mg/L
Se 196.026†	-56.6	0.46	0.82%	[0.00]	mg/L
Si 288.158†	56.4	2.05	3.64%	[0.00]	mg/L
Sn 189.927†	-19.4	1.19	6.14%	[0.00]	mg/L
Sr 421.552†	288.7	33.72	11.68%	[0.00]	mg/L
Ti 334.903†	14.6	12.31	84.40%	[0.00]	mg/L
Tl 190.801†	-27.2	1.54	5.68%	[0.00]	mg/L
V 292.402†	24.6	5.95	24.23%	[0.00]	mg/L
Zn 206.200†	-9.7	2.45	25.16%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 4/16/2013 8:44:36 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2741683.3	5623.82	0.21%	99.35	%
ScR 361.383	383201.3	275.45	0.07%	99.61	%
Ba 233.527†	62845.3	422.74	0.67%	[10]	mg/L
Cd 228.802†	225239.0	900.30	0.40%	[10]	mg/L
Co 228.616†	326470.0	389.03	0.12%	[10]	mg/L
Cr 267.716†	83971.3	152.89	0.18%	[10]	mg/L
Cu 324.752†	2638992.6	4668.22	0.18%	[10]	mg/L
Mn 257.610†	520607.3	1918.38	0.37%	[10]	mg/L
V 292.402†	1384848.2	5494.71	0.40%	[10]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: STD3 **Date Collected: 4/16/2013 8:46:39 AM**
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2744052.5	11360.70	0.41%	99.44	%
ScR 361.383	378476.1	2083.89	0.55%	98.38	%
Ag 328.068†	232276.2	1052.89	0.45%	[1.0]	mg/L
As 188.979†	13722.6	139.03	1.01%	[10]	mg/L
B 249.677†	66792.2	50.10	0.08%	[10]	mg/L
Be 313.042†	2878981.2	11448.33	0.40%	[5.0]	mg/L
Na 589.592†	622657.3	969.52	0.16%	[50]	mg/L
Ni 231.604†	37847.3	205.07	0.54%	[10]	mg/L
Pb 220.353†	79844.3	835.96	1.05%	[10]	mg/L
Se 196.026†	15176.2	134.13	0.88%	[10]	mg/L
Sr 421.552†	4815447.3	13090.11	0.27%	[5]	mg/L
Tl 190.801†	18147.1	202.44	1.12%	[10]	mg/L
Zn 206.200†	41050.5	127.19	0.31%	[10]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: STD4 **Date Collected: 4/16/2013 8:49:13 AM**
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2772112.7	9481.22	0.34%	100.5	%
ScR 361.383	383934.6	1900.44	0.49%	99.80	%
Mo 202.031†	187151.6	1948.05	1.04%	[10]	mg/L
Sb 206.836†	27505.5	207.51	0.75%	[10]	mg/L
Si 288.158†	15051.3	126.07	0.84%	[10]	mg/L
Sn 189.927†	48574.6	519.24	1.07%	[10]	mg/L
Ti 334.903†	260644.4	150.96	0.06%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 4/16/2013 8:51:29 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2606176.2	5028.58	0.19%	94.44	%
ScR 361.383	378600.2	1290.79	0.34%	98.41	%
Al 308.215†	36465.7	75.93	0.21%	[30]	mg/L
Ca 317.933†	315087.7	435.68	0.14%	[30]	mg/L
Fe 273.955†	124870.5	305.28	0.24%	[100]	mg/L
K 766.490†	211302.6	370.00	0.18%	[100]	mg/L
Mg 279.077†	28494.0	36.25	0.13%	[30]	mg/L
Na 330.237†	3247.1	4.38	0.13%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	232300	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1216	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1372	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6679	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	6285	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	575800	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10500	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22520	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	32650	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8397	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	263900	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1249	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2113	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	949.8	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	52060	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18720	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12450	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	32.47	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3785	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7984	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2751	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1518	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1505	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4857	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	963100	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	26060	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1815	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	138500	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4105	0.00000	1.000000	

Analysis Begun

Start Time: 4/16/2013 8:58:03 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/16/2013 7:17:05 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130416
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: 4/16/2013 8:58:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 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	2745164.9	99.48	%	0.544				0.55%
ScR 361.383	376251.9	97.80	%	0.177				0.18%
Ag 328.068†	232273.4	1.000	mg/L	0.0027	1.000	mg/L	0.0027	0.27%
Al 308.215†	2563.3	2.075	mg/L	0.0069	2.075	mg/L	0.0069	0.33%
As 188.979†	2734.7	2.024	mg/L	0.0125	2.024	mg/L	0.0125	0.62%
B 249.677†	6783.7	1.015	mg/L	0.0025	1.015	mg/L	0.0025	0.25%
Ba 233.527†	6523.0	1.037	mg/L	0.0055	1.037	mg/L	0.0055	0.53%
Be 313.042†	576386.9	1.001	mg/L	0.0047	1.001	mg/L	0.0047	0.47%
Ca 317.933†	21976.3	2.092	mg/L	0.0021	2.092	mg/L	0.0021	0.10%
Cd 228.802†	23661.2	1.040	mg/L	0.0069	1.040	mg/L	0.0069	0.66%
Co 228.616†	33201.7	1.015	mg/L	0.0059	1.015	mg/L	0.0059	0.58%
Cr 267.716†	8877.9	1.057	mg/L	0.0019	1.057	mg/L	0.0019	0.18%
Cu 324.752†	265535.8	1.006	mg/L	0.0019	1.006	mg/L	0.0019	0.19%
Fe 273.955†	2624.1	2.096	mg/L	0.0045	2.096	mg/L	0.0045	0.21%
K 766.490†	42624.2	20.17	mg/L	0.118	20.17	mg/L	0.118	0.58%
Mg 279.077†	1925.0	2.033	mg/L	0.0075	2.033	mg/L	0.0075	0.37%
Mn 257.610†	51672.6	0.9929	mg/L	0.00561	0.9929	mg/L	0.00561	0.57%
Mo 202.031†	18896.5	1.010	mg/L	0.0057	1.010	mg/L	0.0057	0.57%
Na 589.592†	627543.4	50.39	mg/L	0.300	50.39	mg/L	0.300	0.60%
Na 330.237†	1704.6	52.47	mg/L	0.278	52.47	mg/L	0.278	0.53%
Ni 231.604†	3846.4	1.016	mg/L	0.0027	1.016	mg/L	0.0027	0.26%
Pb 220.353†	16069.1	2.014	mg/L	0.0111	2.014	mg/L	0.0111	0.55%
Sb 206.836†	5678.5	2.062	mg/L	0.0144	2.062	mg/L	0.0144	0.70%
Se 196.026†	3040.1	2.002	mg/L	0.0098	2.002	mg/L	0.0098	0.49%
Si 288.158†	3012.4	1.997	mg/L	0.0120	1.997	mg/L	0.0120	0.60%
Sn 189.927†	4803.2	0.9903	mg/L	0.00236	0.9903	mg/L	0.00236	0.24%
Sr 421.552†	959703.9	0.9965	mg/L	0.00390	0.9965	mg/L	0.00390	0.39%
Ti 334.903†	26283.7	1.007	mg/L	0.0043	1.007	mg/L	0.0043	0.43%
Tl 190.801†	3775.4	2.072	mg/L	0.0142	2.072	mg/L	0.0142	0.69%
V 292.402†	135231.0	0.9811	mg/L	0.00239	0.9811	mg/L	0.00239	0.24%
Zn 206.200†	4168.5	1.016	mg/L	0.0003	1.016	mg/L	0.0003	0.03%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 4/16/2013 9:01:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 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	2750891.9	99.68	%	0.451				0.45%
ScR 361.383	384416.2	99.93	%	0.409				0.41%
Ag 328.068†	61.6	0.00027	mg/L	0.000133	0.00027	mg/L	0.000133	50.01%
Al 308.215†	0.7	0.00050	mg/L	0.004005	0.00050	mg/L	0.004005	800.91%
As 188.979†	-1.0	-0.00077	mg/L	0.001239	-0.00077	mg/L	0.001239	161.90%
B 249.677†	17.0	0.00255	mg/L	0.001804	0.00255	mg/L	0.001804	70.83%
Ba 233.527†	3.5	0.00056	mg/L	0.000329	0.00056	mg/L	0.000329	58.88%
Be 313.042†	51.0	0.00009	mg/L	0.000027	0.00009	mg/L	0.000027	30.31%
Ca 317.933†	10.7	0.00102	mg/L	0.000965	0.00102	mg/L	0.000965	94.69%
Cd 228.802†	6.3	0.00029	mg/L	0.000157	0.00029	mg/L	0.000157	54.98%
Co 228.616†	6.4	0.00020	mg/L	0.000212	0.00020	mg/L	0.000212	107.35%
Cr 267.716†	2.8	0.00033	mg/L	0.000430	0.00033	mg/L	0.000430	129.79%
Cu 324.752†	23.8	0.00009	mg/L	0.000151	0.00009	mg/L	0.000151	170.52%
Fe 273.955†	-0.4	-0.00031	mg/L	0.000543	-0.00031	mg/L	0.000543	174.68%
K 766.490†	25.3	0.01200	mg/L	0.013406	0.01200	mg/L	0.013406	111.75%
Mg 279.077†	-3.0	-0.00313	mg/L	0.006685	-0.00313	mg/L	0.006685	213.28%
Mn 257.610†	1.5	0.00003	mg/L	0.000057	0.00003	mg/L	0.000057	194.98%
Mo 202.031†	111.2	0.00594	mg/L	0.001115	0.00594	mg/L	0.001115	18.76%
Na 589.592†	49.6	0.00398	mg/L	0.003230	0.00398	mg/L	0.003230	81.06%
Na 330.237†	-4.7	-0.1451	mg/L	0.30556	-0.1451	mg/L	0.30556	210.63%
Ni 231.604†	2.8	0.00073	mg/L	0.001131	0.00073	mg/L	0.001131	155.07%
Pb 220.353†	9.6	0.00121	mg/L	0.000373	0.00121	mg/L	0.000373	30.87%
Sb 206.836†	19.6	0.00713	mg/L	0.001488	0.00713	mg/L	0.001488	20.86%
Se 196.026†	-1.5	-0.00100	mg/L	0.003358	-0.00100	mg/L	0.003358	335.64%
Si 288.158†	-7.0	-0.00463	mg/L	0.002168	-0.00463	mg/L	0.002168	46.79%
Sn 189.927†	5.7	0.00117	mg/L	0.000787	0.00117	mg/L	0.000787	67.41%
Sr 421.552†	-7.9	-0.00001	mg/L	0.000015	-0.00001	mg/L	0.000015	183.29%
Ti 334.903†	2.7	0.00010	mg/L	0.000523	0.00010	mg/L	0.000523	540.04%
Tl 190.801†	2.5	0.00136	mg/L	0.001717	0.00136	mg/L	0.001717	125.93%
V 292.402†	32.6	0.00024	mg/L	0.000330	0.00024	mg/L	0.000330	137.29%
Zn 206.200†	-0.1	-0.00003	mg/L	0.000198	-0.00003	mg/L	0.000198	748.58%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/16/2013 9:06:08 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2749306.6	99.63	%	0.694				0.70%
ScR 361.383	383739.1	99.75	%	0.814				0.82%
Ag 328.068†	761.9	0.00328	mg/L	0.000009	0.00328	mg/L	0.000009	0.28%
Al 308.215†	65.3	0.05359	mg/L	0.004070	0.05359	mg/L	0.004070	7.59%
As 188.979†	67.1	0.04907	mg/L	0.002795	0.04907	mg/L	0.002795	5.70%
B 249.677†	139.8	0.02093	mg/L	0.000890	0.02093	mg/L	0.000890	4.25%
Ba 233.527†	26.5	0.00420	mg/L	0.000014	0.00420	mg/L	0.000014	0.34%
Be 313.042†	589.2	0.00102	mg/L	0.000018	0.00102	mg/L	0.000018	1.78%
Ca 317.933†	701.0	0.06674	mg/L	0.002113	0.06674	mg/L	0.002113	3.17%
Cd 228.802†	55.3	0.00219	mg/L	0.000168	0.00219	mg/L	0.000168	7.66%
Co 228.616†	123.6	0.00378	mg/L	0.000103	0.00378	mg/L	0.000103	2.73%
Cr 267.716†	46.0	0.00547	mg/L	0.000487	0.00547	mg/L	0.000487	8.91%
Cu 324.752†	554.4	0.00210	mg/L	0.000119	0.00210	mg/L	0.000119	5.64%
Fe 273.955†	61.6	0.04935	mg/L	0.000988	0.04935	mg/L	0.000988	2.00%
K 766.490†	1087.0	0.5144	mg/L	0.00769	0.5144	mg/L	0.00769	1.49%
Mg 279.077†	50.1	0.05274	mg/L	0.007775	0.05274	mg/L	0.007775	14.74%
Mn 257.610†	58.8	0.00113	mg/L	0.000061	0.00113	mg/L	0.000061	5.37%
Mo 202.031†	109.8	0.00587	mg/L	0.000070	0.00587	mg/L	0.000070	1.20%
Na 589.592†	6161.3	0.4948	mg/L	0.00499	0.4948	mg/L	0.00499	1.01%
Na 330.237†	14.4	0.4423	mg/L	0.12473	0.4423	mg/L	0.12473	28.20%
Ni 231.604†	38.8	0.01026	mg/L	0.001936	0.01026	mg/L	0.001936	18.86%
Pb 220.353†	169.5	0.02125	mg/L	0.000541	0.02125	mg/L	0.000541	2.55%
Sb 206.836†	147.2	0.05352	mg/L	0.000535	0.05352	mg/L	0.000535	1.00%
Se 196.026†	78.0	0.05142	mg/L	0.000851	0.05142	mg/L	0.000851	1.65%
Si 288.158†	90.9	0.06029	mg/L	0.002689	0.06029	mg/L	0.002689	4.46%
Sn 189.927†	52.2	0.01078	mg/L	0.000774	0.01078	mg/L	0.000774	7.18%
Sr 421.552†	984.3	0.00102	mg/L	0.000024	0.00102	mg/L	0.000024	2.35%
Ti 334.903†	132.2	0.00506	mg/L	0.000526	0.00506	mg/L	0.000526	10.39%
Tl 190.801†	90.3	0.04971	mg/L	0.001668	0.04971	mg/L	0.001668	3.35%
V 292.402†	450.4	0.00327	mg/L	0.000049	0.00327	mg/L	0.000049	1.50%
Zn 206.200†	38.7	0.00943	mg/L	0.000385	0.00943	mg/L	0.000385	4.08%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/16/2013 9:10:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2636842.1	95.55	%	0.555				0.58%
ScR 361.383	367255.7	95.47	%	0.154				0.16%
Ag 328.068†	-276.5	-0.00051	mg/L	0.000111	-0.00051	mg/L	0.000111	21.87%
Al 308.215†	253389.2	208.5	mg/L	0.30	208.5	mg/L	0.30	0.14%
As 188.979†	59.0	0.03379	mg/L	0.000342	0.03379	mg/L	0.000342	1.01%
B 249.677†	99.7	0.01494	mg/L	0.001182	0.01494	mg/L	0.001182	7.91%
Ba 233.527†	160.9	-0.00296	mg/L	0.000341	-0.00296	mg/L	0.000341	11.53%
Be 313.042†	93.1	0.00016	mg/L	0.000012	0.00016	mg/L	0.000012	7.37%
Ca 317.933†	1103333.1	105.1	mg/L	1.19	105.1	mg/L	1.19	1.13%
Cd 228.802†	77.0	0.00318	mg/L	0.000303	0.00318	mg/L	0.000303	9.53%
Co 228.616†	66.3	0.00201	mg/L	0.000041	0.00201	mg/L	0.000041	2.02%
Cr 267.716†	9.4	-0.00441	mg/L	0.001274	-0.00441	mg/L	0.001274	28.90%
Cu 324.752†	-1887.0	0.00182	mg/L	0.000158	0.00182	mg/L	0.000158	8.68%
Fe 273.955†	242643.6	194.3	mg/L	1.42	194.3	mg/L	1.42	0.73%
K 766.490†	59.5	0.02817	mg/L	0.012125	0.02817	mg/L	0.012125	43.05%
Mg 279.077†	103391.4	108.7	mg/L	1.52	108.7	mg/L	1.52	1.39%
Mn 257.610†	93.6	0.00034	mg/L	0.000326	0.00034	mg/L	0.000326	94.87%
Mo 202.031†	112.6	0.00478	mg/L	0.000296	0.00478	mg/L	0.000296	6.18%
Na 589.592†	287.4	0.02307	mg/L	0.000576	0.02307	mg/L	0.000576	2.50%
Na 330.237†	-10.2	-0.3115	mg/L	0.15556	-0.3115	mg/L	0.15556	49.95%
Ni 231.604†	1.1	0.00029	mg/L	0.000774	0.00029	mg/L	0.000774	262.71%
Pb 220.353†	-473.4	-0.01326	mg/L	0.000961	-0.01326	mg/L	0.000961	7.24%
Sb 206.836†	-24.8	-0.00913	mg/L	0.001297	-0.00913	mg/L	0.001297	14.21%
Se 196.026†	11.7	-0.01628	mg/L	0.004379	-0.01628	mg/L	0.004379	26.90%
Si 288.158†	-18.6	0.00003	mg/L	0.004484	0.00003	mg/L	0.004484	>999.9%
Sn 189.927†	-91.9	-0.01013	mg/L	0.000682	-0.01013	mg/L	0.000682	6.73%
Sr 421.552†	4050.8	0.00421	mg/L	0.000115	0.00421	mg/L	0.000115	2.74%
Ti 334.903†	277.0	0.00438	mg/L	0.000352	0.00438	mg/L	0.000352	8.03%
Tl 190.801†	-19.5	0.01502	mg/L	0.001585	0.01502	mg/L	0.001585	10.55%
V 292.402†	1355.2	0.00004	mg/L	0.000486	0.00004	mg/L	0.000486	>999.9%
Zn 206.200†	-6.1	-0.00149	mg/L	0.000170	-0.00149	mg/L	0.000170	11.35%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/16/2013 9:14:42 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2688288.0	97.41	%	0.468				0.48%
ScR 361.383	368579.1	95.81	%	0.558				0.58%
Ag 328.068†	243029.6	1.047	mg/L	0.0044	1.047	mg/L	0.0044	0.42%
Al 308.215†	249766.9	205.5	mg/L	0.98	205.5	mg/L	0.98	0.48%
As 188.979†	1495.3	1.080	mg/L	0.0110	1.080	mg/L	0.0110	1.02%
B 249.677†	42.7	0.00408	mg/L	0.000896	0.00408	mg/L	0.000896	21.96%
Ba 233.527†	6784.7	1.051	mg/L	0.0095	1.051	mg/L	0.0095	0.91%
Be 313.042†	576298.9	1.001	mg/L	0.0065	1.001	mg/L	0.0065	0.65%
Ca 317.933†	1085230.7	103.3	mg/L	0.32	103.3	mg/L	0.32	0.31%
Cd 228.802†	24087.3	1.064	mg/L	0.0066	1.064	mg/L	0.0066	0.62%
Co 228.616†	32345.1	0.9905	mg/L	0.00465	0.9905	mg/L	0.00465	0.47%
Cr 267.716†	8902.1	1.055	mg/L	0.0048	1.055	mg/L	0.0048	0.45%
Cu 324.752†	270062.1	1.032	mg/L	0.0014	1.032	mg/L	0.0014	0.14%
Fe 273.955†	241301.9	193.2	mg/L	0.47	193.2	mg/L	0.47	0.24%
K 766.490†	61.8	0.02923	mg/L	0.005406	0.02923	mg/L	0.005406	18.50%
Mg 279.077†	97626.0	102.7	mg/L	0.47	102.7	mg/L	0.47	0.46%
Mn 257.610†	52013.1	0.9978	mg/L	0.00237	0.9978	mg/L	0.00237	0.24%
Mo 202.031†	117.0	0.00498	mg/L	0.000287	0.00498	mg/L	0.000287	5.77%
Na 589.592†	156.8	0.01260	mg/L	0.003114	0.01260	mg/L	0.003114	24.72%
Na 330.237†	-2.6	-0.3724	mg/L	0.08751	-0.3724	mg/L	0.08751	23.50%
Ni 231.604†	3783.9	0.9998	mg/L	0.00623	0.9998	mg/L	0.00623	0.62%
Pb 220.353†	7498.1	0.9850	mg/L	0.00747	0.9850	mg/L	0.00747	0.76%
Sb 206.836†	2825.7	1.016	mg/L	0.0049	1.016	mg/L	0.0049	0.48%
Se 196.026†	1559.2	1.003	mg/L	0.0145	1.003	mg/L	0.0145	1.44%
Si 288.158†	-31.4	-0.00565	mg/L	0.004790	-0.00565	mg/L	0.004790	84.79%
Sn 189.927†	-91.7	-0.00970	mg/L	0.000584	-0.00970	mg/L	0.000584	6.02%
Sr 421.552†	3915.7	0.00407	mg/L Cont.	0.000014	0.00407	mg/L	0.000014	0.33%
Ti 334.903†	276.9	0.00428	mg/L	0.000337	0.00428	mg/L	0.000337	7.88%
Tl 190.801†	1765.8	0.9887	mg/L	0.00555	0.9887	mg/L	0.00555	0.56%
V 292.402†	137172.0	0.9856	mg/L	0.00307	0.9856	mg/L	0.00307	0.31%
Zn 206.200†	4075.7	0.9931	mg/L	0.00359	0.9931	mg/L	0.00359	0.36%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 4/16/2013 9:18:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2712051.1	98.28	%	0.177				0.18%
ScR 361.383	376179.8	97.78	%	0.123				0.13%
Ag 328.068†	246195.0	1.060	mg/L	0.0047	1.060	mg/L	0.0047	0.44%
Al 308.215†	2607.3	2.110	mg/L	0.0081	2.110	mg/L	0.0081	0.39%
As 188.979†	2823.7	2.089	mg/L	0.0051	2.089	mg/L	0.0051	0.24%
B 249.677†	6879.7	1.029	mg/L	0.0049	1.029	mg/L	0.0049	0.47%
Ba 233.527†	6653.6	1.058	mg/L	0.0046	1.058	mg/L	0.0046	0.43%
Be 313.042†	585916.7	1.017	mg/L	0.0046	1.017	mg/L	0.0046	0.45%
Ca 317.933†	22502.7	2.143	mg/L	0.0078	2.143	mg/L	0.0078	0.36%
Cd 228.802†	24303.3	1.068	mg/L	0.0048	1.068	mg/L	0.0048	0.45%
Co 228.616†	34255.0	1.047	mg/L	0.0027	1.047	mg/L	0.0027	0.25%
Cr 267.716†	9079.4	1.081	mg/L	0.0026	1.081	mg/L	0.0026	0.24%
Cu 324.752†	279864.1	1.060	mg/L	0.0016	1.060	mg/L	0.0016	0.15%
Fe 273.955†	2687.0	2.146	mg/L	0.0093	2.146	mg/L	0.0093	0.43%
K 766.490†	43307.1	20.50	mg/L	0.045	20.50	mg/L	0.045	0.22%
Mg 279.077†	1969.5	2.080	mg/L	0.0020	2.080	mg/L	0.0020	0.10%
Mn 257.610†	52579.1	1.010	mg/L	0.0055	1.010	mg/L	0.0055	0.54%
Mo 202.031†	19422.4	1.038	mg/L	0.0024	1.038	mg/L	0.0024	0.23%
Na 589.592†	633479.8	50.87	mg/L	0.122	50.87	mg/L	0.122	0.24%
Na 330.237†	1733.1	53.35	mg/L	0.224	53.35	mg/L	0.224	0.42%
Ni 231.604†	3960.7	1.047	mg/L	0.0058	1.047	mg/L	0.0058	0.55%
Pb 220.353†	16585.0	2.078	mg/L	0.0047	2.078	mg/L	0.0047	0.22%
Sb 206.836†	5856.4	2.127	mg/L	0.0100	2.127	mg/L	0.0100	0.47%
Se 196.026†	3139.0	2.067	mg/L	0.0022	2.067	mg/L	0.0022	0.11%
Si 288.158†	3051.0	2.022	mg/L	0.0106	2.022	mg/L	0.0106	0.53%
Sn 189.927†	4961.1	1.023	mg/L	0.0019	1.023	mg/L	0.0019	0.19%
Sr 421.552†	971562.6	1.009	mg/L	0.0013	1.009	mg/L	0.0013	0.13%
Ti 334.903†	26679.3	1.022	mg/L	0.0018	1.022	mg/L	0.0018	0.17%
Tl 190.801†	3896.7	2.139	mg/L	0.0130	2.139	mg/L	0.0130	0.61%
V 292.402†	142041.0	1.030	mg/L	0.0052	1.030	mg/L	0.0052	0.50%
Zn 206.200†	4286.6	1.045	mg/L	0.0035	1.045	mg/L	0.0035	0.34%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/16/2013 9:22:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 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	2764108.4	100.2	%	0.12				0.12%
ScR 361.383	384200.7	99.87	%	0.524				0.52%
Ag 328.068†	34.2	0.00015	mg/L	0.000115	0.00015	mg/L	0.000115	78.05%
Al 308.215†	6.0	0.00481	mg/L	0.001784	0.00481	mg/L	0.001784	37.08%
As 188.979†	2.2	0.00160	mg/L	0.001640	0.00160	mg/L	0.001640	102.21%
B 249.677†	18.4	0.00276	mg/L	0.000700	0.00276	mg/L	0.000700	25.38%
Ba 233.527†	7.3	0.00116	mg/L	0.000372	0.00116	mg/L	0.000372	31.98%
Be 313.042†	47.9	0.00008	mg/L	0.000033	0.00008	mg/L	0.000033	39.77%
Ca 317.933†	30.4	0.00290	mg/L	0.001120	0.00290	mg/L	0.001120	38.62%
Cd 228.802†	7.3	0.00032	mg/L	0.000175	0.00032	mg/L	0.000175	55.37%
Co 228.616†	2.1	0.00006	mg/L	0.000162	0.00006	mg/L	0.000162	256.59%
Cr 267.716†	-8.2	-0.00098	mg/L	0.000375	-0.00098	mg/L	0.000375	38.37%
Cu 324.752†	90.5	0.00034	mg/L	0.000088	0.00034	mg/L	0.000088	25.83%
Fe 273.955†	2.4	0.00196	mg/L	0.000724	0.00196	mg/L	0.000724	36.95%
K 766.490†	7.7	0.00367	mg/L	0.004980	0.00367	mg/L	0.004980	135.87%
Mg 279.077†	4.0	0.00426	mg/L	0.005090	0.00426	mg/L	0.005090	119.50%
Mn 257.610†	2.4	0.00005	mg/L	0.000017	0.00005	mg/L	0.000017	37.53%
Mo 202.031†	95.4	0.00510	mg/L	0.000986	0.00510	mg/L	0.000986	19.35%
Na 589.592†	14.8	0.00119	mg/L	0.002920	0.00119	mg/L	0.002920	245.75%
Na 330.237†	-7.4	-0.2279	mg/L	0.28481	-0.2279	mg/L	0.28481	124.95%
Ni 231.604†	3.0	0.00080	mg/L	0.000502	0.00080	mg/L	0.000502	62.60%
Pb 220.353†	12.8	0.00160	mg/L	0.000524	0.00160	mg/L	0.000524	32.72%
Sb 206.836†	12.9	0.00472	mg/L	0.002370	0.00472	mg/L	0.002370	50.22%
Se 196.026†	-0.1	-0.00009	mg/L	0.000761	-0.00009	mg/L	0.000761	802.77%
Si 288.158†	-8.3	-0.00550	mg/L	0.003254	-0.00550	mg/L	0.003254	59.15%
Sn 189.927†	4.5	0.00093	mg/L	0.000551	0.00093	mg/L	0.000551	59.57%
Sr 421.552†	24.0	0.00002	mg/L	0.000010	0.00002	mg/L	0.000010	39.13%
Ti 334.903†	12.4	0.00047	mg/L	0.000820	0.00047	mg/L	0.000820	174.76%
Tl 190.801†	2.6	0.00143	mg/L	0.000693	0.00143	mg/L	0.000693	48.47%
V 292.402†	7.4	0.00005	mg/L	0.000092	0.00005	mg/L	0.000092	177.78%
Zn 206.200†	-1.4	-0.00033	mg/L	0.000361	-0.00033	mg/L	0.000361	108.45%

Sequence No.: 8
Sample ID: WL68 MB1 SWC

Autosampler Location: 304
Date Collected: 4/16/2013 9:26:50 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL68 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2752668.0	99.75	%	0.069				0.07%
ScR 361.383	385526.2	100.2	%	0.62				0.62%
Ag 328.068†	23.7	0.00010	mg/L	0.000082	0.00020	mg/L	0.000164	80.36%
Al 308.215†	15.7	0.01294	mg/L	0.001526	0.02588	mg/L	0.003051	11.79%
As 188.979†	0.5	0.00035	mg/L	0.000599	0.00071	mg/L	0.001198	169.21%
B 249.677†	7.2	0.00108	mg/L	0.000168	0.00216	mg/L	0.000335	15.51%
Ba 233.527†	4.9	0.00077	mg/L	0.000654	0.00154	mg/L	0.001309	85.16%
Be 313.042†	37.9	0.00007	mg/L	0.000007	0.00013	mg/L	0.000015	11.31%
Ca 317.933†	184.5	0.01757	mg/L	0.000764	0.03514	mg/L	0.001528	4.35%
Cd 228.802†	3.2	0.00014	mg/L	0.000048	0.00028	mg/L	0.000096	34.71%
Co 228.616†	3.2	0.00010	mg/L	0.000130	0.00020	mg/L	0.000260	132.03%
Cr 267.716†	1.4	0.00017	mg/L	0.001059	0.00034	mg/L	0.002119	632.03%
Cu 324.752†	204.0	0.00078	mg/L	0.000051	0.00155	mg/L	0.000101	6.53%
Fe 273.955†	52.0	0.04167	mg/L	0.003529	0.08333	mg/L	0.007058	8.47%
K 766.490†	4.0	0.00192	mg/L	0.018701	0.00383	mg/L	0.037401	976.33%
Mg 279.077†	4.7	0.00492	mg/L	0.005398	0.00985	mg/L	0.010797	109.66%
Mn 257.610†	66.9	0.00128	mg/L	0.000078	0.00257	mg/L	0.000157	6.09%
Mo 202.031†	13.7	0.00073	mg/L	0.000090	0.00146	mg/L	0.000180	12.32%
Na 589.592†	28.7	0.00231	mg/L	0.002425	0.00462	mg/L	0.004850	105.05%
Na 330.237†	5.8	0.1773	mg/L	0.29094	0.3547	mg/L	0.58189	164.07%
Ni 231.604†	-0.3	-0.00008	mg/L	0.001552	-0.00015	mg/L	0.003104	>999.9%
Pb 220.353†	7.9	0.00099	mg/L	0.000457	0.00198	mg/L	0.000913	46.11%
Sb 206.836†	5.2	0.00188	mg/L	0.001151	0.00375	mg/L	0.002301	61.37%
Se 196.026†	-2.1	-0.00140	mg/L	0.003420	-0.00281	mg/L	0.006841	243.59%
Si 288.158†	26.4	0.01757	mg/L	0.001421	0.03513	mg/L	0.002842	8.09%
Sn 189.927†	-1.8	-0.00037	mg/L	0.000468	-0.00074	mg/L	0.000935	125.78%
Sr 421.552†	19.0	0.00002	mg/L	0.000023	0.00004	mg/L	0.000046	116.67%
Ti 334.903†	-4.3	-0.00017	mg/L	0.001671	-0.00033	mg/L	0.003341	>999.9%
Tl 190.801†	0.5	0.00027	mg/L	0.000799	0.00053	mg/L	0.001598	300.68%
V 292.402†	24.1	0.00017	mg/L	0.000156	0.00035	mg/L	0.000312	89.77%
Zn 206.200†	6.3	0.00154	mg/L	0.000405	0.00308	mg/L	0.000809	26.27%

Sequence No.: 9
Sample ID: WL68 B SWC

Dilution: 2.000000X

Del

Autosampler Location: 305
Date Collected: 4/16/2013 9:31:07 AM
Data Type: Original

Nebulizer Parameters: WL68 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2769784.4	100.4	%	0.63				0.62%
ScR 361.383	384352.9	99.91	%	1.090				1.09%
Ag 328.068†	7559.7	0.03316	mg/L	0.000208	0.06631	mg/L	0.000417	0.63%
Al 308.215†	75783.2	62.33	mg/L	0.082	124.7	mg/L	0.16	0.13%
As 188.979†	-52.9	0.08599	mg/L	0.003378	0.1720	mg/L	0.00676	3.93%
B 249.677†	2018.0	0.3019	mg/L	0.00188	0.6037	mg/L	0.00376	0.62%
Ba 233.527†	11412.1	1.754	mg/L	0.0184	3.508	mg/L	0.0369	1.05%
Be 313.042†	160.7	0.00019	mg/L	0.000012	0.00038	mg/L	0.000025	6.63%
Ca 317.933†	878015.4	83.60	mg/L	0.828	167.2	mg/L	1.66	0.99%
Cd 228.802†	2384.0	0.1066	mg/L	0.00049	0.2133	mg/L	0.00099	0.46%
Co 228.616†	3669.7	0.1054	mg/L	0.00085	0.2107	mg/L	0.00170	0.81%
Cr 267.716†	5979.0	0.7210	mg/L	0.00374	1.442	mg/L	0.0075	0.52%
Cu 324.752†	1140318.2	4.341	mg/L	0.0118	8.682	mg/L	0.0237	0.27%
Fe 273.955†	526585.6	421.7	mg/L	2.86	843.4	mg/L	5.72	0.68%
K 766.490†	9785.2	4.631	mg/L	0.0196	9.262	mg/L	0.0392	0.42%
Mg 279.077†	24391.5	25.44	mg/L	0.134	50.88	mg/L	0.267	0.52%
Mn 257.610†	315981.2	6.070	mg/L	0.0369	12.14	mg/L	0.074	0.61%
Mo 202.031†	1721.8	0.09098	mg/L	0.000422	0.1820	mg/L	0.00084	0.46%
Na 589.592†	118324.4	9.502	mg/L	0.0631	19.00	mg/L	0.126	0.66%
Na 330.237†	648.0	9.766	mg/L	0.1834	19.53	mg/L	0.367	1.88%
Ni 231.604†	2536.1	0.6701	mg/L	0.00422	1.340	mg/L	0.0084	0.63%
Pb 220.353†	36647.1	4.580	mg/L	0.0146	9.160	mg/L	0.0292	0.32%
Sb 206.836†	208.7	0.07396	mg/L	0.001417	0.1479	mg/L	0.00283	1.92%
Se 196.026†	-14.5	-0.01689	mg/L	0.003715	-0.03378	mg/L	0.007431	22.00%
Si 288.158†	1306.2	0.8664	mg/L	0.01166	1.733	mg/L	0.0233	1.35%
Sn 189.927†	2608.0	0.5447	mg/L	0.00378	1.089	mg/L	0.0076	0.69%
Sr 421.552†	307517.6	0.3193	mg/L	0.00023	0.6386	mg/L	0.00046	0.07%
Ti 334.903†	100424.1	3.848	mg/L	0.0095	7.695	mg/L	0.0190	0.25%
Tl 190.801†	-70.6	0.01543	mg/L	0.005636	0.03087	mg/L	0.011273	36.52%
V 292.402†	30612.5	0.2017	mg/L	0.00124	0.4035	mg/L	0.00247	0.61%
Zn 206.200†	155623.3	37.91	mg/L	0.555	75.82	mg/L	1.111	1.46%

Sequence No.: 10
Sample ID: WL68 A-L SWC

Dilution: 10.000000X

Autosampler Location: 306
Date Collected: 4/16/2013 9:35:10 AM
Data Type: Original

Nebulizer Parameters: WL68 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2785846.9	101.0	%	0.54				0.53%
ScR 361.383	387695.7	100.8	%	0.88				0.88%
Ag 328.068†	518.5	0.00237	mg/L	0.000138	0.02368	mg/L	0.001379	5.82%
Al 308.215†	18546.3	15.25	mg/L	0.089	152.5	mg/L	0.89	0.59%
As 188.979†	-17.3	0.01907	mg/L	0.001614	0.1907	mg/L	0.01614	8.46%
B 249.677†	302.9	0.04527	mg/L	0.000732	0.4527	mg/L	0.00732	1.62%
Ba 233.527†	1880.6	0.2820	mg/L	0.00217	2.820	mg/L	0.0217	0.77%
Be 313.042†	106.9	0.00015	mg/L	0.000026	0.00153	mg/L	0.000263	17.18%
Ca 317.933†	169919.1	16.18	mg/L	0.021	161.8	mg/L	0.21	0.13%
Cd 228.802†	311.1	0.01401	mg/L	0.000349	0.1401	mg/L	0.00349	2.49%
Co 228.616†	855.2	0.02445	mg/L	0.000187	0.2445	mg/L	0.00187	0.76%
Cr 267.716†	2571.2	0.3084	mg/L	0.00186	3.084	mg/L	0.0186	0.60%
Cu 324.752†	183203.4	0.6997	mg/L	0.00257	6.997	mg/L	0.0257	0.37%
Fe 273.955†	145912.6	116.9	mg/L	0.46	1169	mg/L	4.55	0.39%
K 766.490†	2316.6	1.096	mg/L	0.0066	10.96	mg/L	0.066	0.60%
Mg 279.077†	9192.7	9.612	mg/L	0.0701	96.12	mg/L	0.701	0.73%
Mn 257.610†	187589.6	3.603	mg/L	0.0064	36.03	mg/L	0.064	0.18%
Mo 202.031†	483.6	0.02563	mg/L	0.000168	0.2563	mg/L	0.00168	0.65%
Na 589.592†	28210.5	2.265	mg/L	0.0151	22.65	mg/L	0.151	0.67%
Na 330.237†	106.6	2.174	mg/L	0.2631	21.74	mg/L	2.631	12.11%
Ni 231.604†	559.4	0.1478	mg/L	0.00124	1.478	mg/L	0.0124	0.84%
Pb 220.353†	6919.9	0.8642	mg/L	0.00752	8.642	mg/L	0.0752	0.87%
Sb 206.836†	34.6	0.01067	mg/L	0.001801	0.1067	mg/L	0.01801	16.88%
Se 196.026†	-2.6	-0.00354	mg/L	0.004501	-0.03545	mg/L	0.045006	126.97%
Si 288.158†	299.3	0.1987	mg/L	0.00732	1.987	mg/L	0.0732	3.68%
Sn 189.927†	757.5	0.1575	mg/L	0.00101	1.575	mg/L	0.0101	0.64%
Sr 421.552†	67570.4	0.07016	mg/L	0.000268	0.7016	mg/L	0.00268	0.38%
Ti 334.903†	25320.6	0.9704	mg/L	0.00185	9.704	mg/L	0.0185	0.19%
Tl 190.801†	-19.9	0.00396	mg/L	0.001076	0.03957	mg/L	0.010761	27.19%
V 292.402†	13502.3	0.09297	mg/L	0.000489	0.9297	mg/L	0.00489	0.53%
Zn 206.200†	19048.3	4.640	mg/L	0.0147	46.40	mg/L	0.147	0.32%

Sequence No.: 11
Sample ID: WL68 A SWC

Dilution: 2.000000X

Del

Autosampler Location: 307
Date Collected: 4/16/2013 9:39:11 AM
Data Type: Original

Nebulizer Parameters: WL68 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2772622.0	100.5	%	0.50				0.50%
ScR 361.383	383029.7	99.57	%	0.411				0.41%
Ag 328.068†	2515.3	0.01152	mg/L	0.000258	0.02304	mg/L	0.000517	2.24%
Al 308.215†	95254.5	78.35	mg/L	0.044	156.7	mg/L	0.09	0.06%
As 188.979†	-100.8	0.08723	mg/L	0.001057	0.1745	mg/L	0.00211	1.21%
B 249.677†	1531.0	0.2288	mg/L	0.00130	0.4576	mg/L	0.00259	0.57%
Ba 233.527†	9479.0	1.422	mg/L	0.0041	2.845	mg/L	0.0083	0.29%
Be 313.042†	312.3	0.00038	mg/L	0.000028	0.00075	mg/L	0.000056	7.48%
Ca 317.933†	867675.0	82.61	mg/L	0.338	165.2	mg/L	0.68	0.41%
Cd 228.802†	1550.5	0.06987	mg/L	0.000848	0.1397	mg/L	0.00170	1.21%
Co 228.616†	4135.9	0.1178	mg/L	0.00100	0.2356	mg/L	0.00200	0.85%
Cr 267.716†	12970.6	1.556	mg/L	0.0044	3.111	mg/L	0.0088	0.28%
Cu 324.752†	923444.2	3.527	mg/L	0.0047	7.053	mg/L	0.0095	0.13%
Fe 273.955†	728512.9	583.4	mg/L	5.45	1167	mg/L	10.90	0.93%
K 766.490†	12011.7	5.685	mg/L	0.0187	11.37	mg/L	0.037	0.33%
Mg 279.077†	44325.0	46.34	mg/L	0.173	92.68	mg/L	0.345	0.37%
Mn 257.610†	943658.1	18.13	mg/L	0.131	36.25	mg/L	0.262	0.72%
Mo 202.031†	2261.6	0.1198	mg/L	0.00104	0.2396	mg/L	0.00208	0.87%
Na 589.592†	144981.6	11.64	mg/L	0.051	23.28	mg/L	0.103	0.44%
Na 330.237†	567.6	11.98	mg/L	0.244	23.96	mg/L	0.488	2.04%
Ni 231.604†	2771.1	0.7322	mg/L	0.00231	1.464	mg/L	0.0046	0.32%
Pb 220.353†	33543.5	4.189	mg/L	0.0287	8.379	mg/L	0.0575	0.69%
Sb 206.836†	140.3	0.04141	mg/L	0.001263	0.08281	mg/L	0.002527	3.05%
Se 196.026†	-4.1	-0.01208	mg/L	0.001636	-0.02417	mg/L	0.003272	13.54%
Si 288.158†	1611.3	1.069	mg/L	0.0082	2.138	mg/L	0.0165	0.77%
Sn 189.927†	3825.9	0.7955	mg/L	0.00147	1.591	mg/L	0.0029	0.18%
Sr 421.552†	343285.1	0.3564	mg/L	0.00042	0.7129	mg/L	0.00083	0.12%
Ti 334.903†	128511.4	4.925	mg/L	0.0110	9.850	mg/L	0.0219	0.22%
Tl 190.801†	-114.8	0.01120	mg/L	0.005145	0.02240	mg/L	0.010290	45.94%
V 292.402†	67838.1	0.4673	mg/L	0.00144	0.9346	mg/L	0.00288	0.31%
Zn 206.200†	94961.8	23.13	mg/L	0.200	46.27	mg/L	0.401	0.87%

Sequence No.: 12
Sample ID: WL68 ADUP SWC

Dilution: 2.000000X

Autosampler Location: 308
Date Collected: 4/16/2013 9:43:14 AM
Data Type: Original

Nebulizer Parameters: WL68 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2763267.1	100.1	%	0.28				0.28%
ScR 361.383	387961.5	100.8	%	0.75				0.74%
Ag 328.068†	2150.3	0.00995	mg/L	0.000362	0.01991	mg/L	0.000724	3.64%
Al 308.215†	94069.6	77.37	mg/L	0.235	154.7	mg/L	0.47	0.30%
As 188.979†	-84.5	0.09030	mg/L	0.000498	0.1806	mg/L	0.00100	0.55%
B 249.677†	1268.3	0.1896	mg/L	0.00125	0.3791	mg/L	0.00251	0.66%
Ba 233.527†	9506.1	1.433	mg/L	0.0133	2.865	mg/L	0.0265	0.93%
Be 313.042†	367.5	0.00048	mg/L	0.000008	0.00097	mg/L	0.000016	1.69%
Ca 317.933†	894642.5	85.18	mg/L	0.305	170.4	mg/L	0.61	0.36%
Cd 228.802†	1499.3	0.06753	mg/L	0.000176	0.1351	mg/L	0.00035	0.26%
Co 228.616†	3986.2	0.1137	mg/L	0.00013	0.2273	mg/L	0.00027	0.12%
Cr 267.716†	9818.9	1.180	mg/L	0.0074	2.360	mg/L	0.0149	0.63%
Cu 324.752†	904222.9	3.452	mg/L	0.0098	6.904	mg/L	0.0195	0.28%
Fe 273.955†	678303.8	543.2	mg/L	2.27	1086	mg/L	4.55	0.42%
K 766.490†	11560.4	5.471	mg/L	0.0394	10.94	mg/L	0.079	0.72%
Mg 279.077†	39776.7	41.57	mg/L	0.173	83.14	mg/L	0.346	0.42%
Mn 257.610†	703304.1	13.51	mg/L	0.049	27.02	mg/L	0.098	0.36%
Mo 202.031†	2448.6	0.1298	mg/L	0.00127	0.2595	mg/L	0.00253	0.98%
Na 589.592†	138618.3	11.13	mg/L	0.036	22.26	mg/L	0.072	0.32%
Na 330.237†	539.4	11.27	mg/L	0.297	22.53	mg/L	0.594	2.64%
Ni 231.604†	2732.8	0.7221	mg/L	0.00381	1.444	mg/L	0.0076	0.53%
Pb 220.353†	29970.4	3.743	mg/L	0.0142	7.487	mg/L	0.0285	0.38%
Sb 206.836†	142.4	0.04753	mg/L	0.001016	0.09505	mg/L	0.002031	2.14%
Se 196.026†	1.1	-0.00849	mg/L	0.000772	-0.01699	mg/L	0.001544	9.09%
Si 288.158†	1703.0	1.129	mg/L	0.0107	2.258	mg/L	0.0214	0.95%
Sn 189.927†	4175.9	0.8677	mg/L	0.00417	1.735	mg/L	0.0083	0.48%
Sr 421.552†	328607.8	0.3412	mg/L	0.00071	0.6824	mg/L	0.00142	0.21%
Ti 334.903†	121702.1	4.664	mg/L	0.0120	9.328	mg/L	0.0241	0.26%
Tl 190.801†	-102.6	0.01292	mg/L	0.003648	0.02584	mg/L	0.007295	28.23%
V 292.402†	63190.3	0.4336	mg/L	0.00093	0.8671	mg/L	0.00185	0.21%
Zn 206.200†	91860.3	22.38	mg/L	0.120	44.76	mg/L	0.241	0.54%

Sequence No.: 13
Sample ID: WL68 ASPK SWC

Dilution: 2.000000X

Del

Autosampler Location: 309
Date Collected: 4/16/2013 9:47:17 AM
Data Type: Original

Nebulizer Parameters: WL68 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2763208.3	100.1	%	0.17				0.17%
ScR 361.383	381981.1	99.29	%	0.487				0.49%
Ag 328.068†	124161.0	0.5355	mg/L	0.00171	1.071	mg/L	0.0034	0.32%
Al 308.215†	97680.0	80.33	mg/L	0.284	160.7	mg/L	0.57	0.35%
As 188.979†	2851.5	2.232	mg/L	0.0189	4.464	mg/L	0.0378	0.85%
B 249.677†	1171.6	0.1739	mg/L	0.00223	0.3479	mg/L	0.00446	1.28%
Ba 233.527†	23070.0	3.578	mg/L	0.0259	7.156	mg/L	0.0517	0.72%
Be 313.042†	287082.9	0.4983	mg/L	0.00245	0.9966	mg/L	0.00491	0.49%
Ca 317.933†	1004374.3	95.63	mg/L	0.178	191.3	mg/L	0.36	0.19%
Cd 228.802†	14092.8	0.6151	mg/L	0.00196	1.230	mg/L	0.0039	0.32%
Co 228.616†	20807.5	0.6284	mg/L	0.00246	1.257	mg/L	0.0049	0.39%
Cr 267.716†	13934.2	1.671	mg/L	0.0141	3.343	mg/L	0.0282	0.84%
Cu 324.752†	1130147.6	4.312	mg/L	0.0073	8.625	mg/L	0.0146	0.17%
Fe 273.955†	787267.3	630.5	mg/L	4.38	1261	mg/L	8.75	0.69%
K 766.490†	33479.7	15.84	mg/L	0.099	31.69	mg/L	0.199	0.63%
Mg 279.077†	49409.9	51.66	mg/L	0.219	103.3	mg/L	0.44	0.42%
Mn 257.610†	735110.5	14.12	mg/L	0.055	28.24	mg/L	0.109	0.39%
Mo 202.031†	3092.3	0.1640	mg/L	0.00125	0.3280	mg/L	0.00250	0.76%
Na 589.592†	273748.8	21.98	mg/L	0.050	43.96	mg/L	0.101	0.23%
Na 330.237†	904.6	22.43	mg/L	0.217	44.87	mg/L	0.435	0.97%
Ni 231.604†	4864.7	1.285	mg/L	0.0140	2.569	mg/L	0.0280	1.09%
Pb 220.353†	48737.2	6.090	mg/L	0.0252	12.18	mg/L	0.050	0.41%
Sb 206.836†	155.0	0.04642	mg/L	0.003034	0.09284	mg/L	0.006069	6.54%
Se 196.026†	3230.3	2.118	mg/L	0.0158	4.237	mg/L	0.0317	0.75%
Si 288.158†	1760.0	1.171	mg/L	0.0082	2.342	mg/L	0.0164	0.70%
Sn 189.927†	3576.2	0.7452	mg/L	0.01157	1.490	mg/L	0.0231	1.55%
Sr 421.552†	835093.7	0.8671	mg/L	0.00183	1.734	mg/L	0.0037	0.21%
Ti 334.903†	124226.4	4.760	mg/L	0.0051	9.520	mg/L	0.0103	0.11%
Tl 190.801†	3436.4	1.970	mg/L	0.0088	3.939	mg/L	0.0177	0.45%
V 292.402†	131434.6	0.9242	mg/L	0.00203	1.848	mg/L	0.0041	0.22%
Zn 206.200†	93287.5	22.73	mg/L	0.085	45.45	mg/L	0.170	0.37%

Sequence No.: 14
Sample ID: ~~WL68 APOST SWC~~ ZZZZZZ
Dilution: 2.000000X BA 4/16/13

Autosampler Location: 310
Date Collected: 4/16/2013 9:50:23 AM
Data Type: Original

Nebulizer Parameters: WL68 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2770302.3	100.4	%	0.09				0.09%
ScR 361.383	381568.2	99.19	%	0.284				0.29%
Ag 328.068†	122191.6	0.5270	mg/L	0.00347	1.054	mg/L	0.0069	0.66%
Al 308.215†	98467.7	80.98	mg/L	0.234	162.0	mg/L	0.47	0.29%
As 188.979†	2839.0	2.229	mg/L	0.0094	4.458	mg/L	0.0189	0.42%
B 249.677†	1547.0	0.2300	mg/L	0.00316	0.4600	mg/L	0.00632	1.37%
Ba 233.527†	23269.5	3.616	mg/L	0.0189	7.233	mg/L	0.0379	0.52%
Be 313.042†	287533.5	0.4991	mg/L	0.00210	0.9982	mg/L	0.00419	0.42%
Ca 317.933†	985749.5	93.85	mg/L	0.401	187.7	mg/L	0.80	0.43%
Cd 228.802†	14043.0	0.6129	mg/L	0.00109	1.226	mg/L	0.0022	0.18%
Co 228.616†	20836.2	0.6290	mg/L	0.00144	1.258	mg/L	0.0029	0.23%
Cr 267.716†	17742.1	2.123	mg/L	0.0081	4.245	mg/L	0.0161	0.38%
Cu 324.752†	1065442.5	4.065	mg/L	0.0056	8.130	mg/L	0.0112	0.14%
Fe 273.955†	732168.7	586.3	mg/L	3.68	1173	mg/L	7.36	0.63%
K 766.490†	34331.2	16.25	mg/L	0.101	32.49	mg/L	0.203	0.62%
Mg 279.077†	54821.0	57.39	mg/L	0.295	114.8	mg/L	0.59	0.51%
Mn 257.610†	970753.1	18.65	mg/L	0.094	37.29	mg/L	0.188	0.50%
Mo 202.031†	2267.4	0.1199	mg/L	0.00032	0.2399	mg/L	0.00064	0.27%
Na 589.592†	276770.4	22.22	mg/L	0.008	44.45	mg/L	0.016	0.04%
Na 330.237†	938.5	23.14	mg/L	0.145	46.29	mg/L	0.291	0.63%
Ni 231.604†	4815.9	1.272	mg/L	0.0079	2.543	mg/L	0.0159	0.62%
Pb 220.353†	49798.5	6.226	mg/L	0.0165	12.45	mg/L	0.033	0.27%
Sb 206.836†	159.5	0.04244	mg/L	0.003573	0.08488	mg/L	0.007145	8.42%
Se 196.026†	3266.0	2.142	mg/L	0.0071	4.284	mg/L	0.0143	0.33%
Si 288.158†	1622.1	1.080	mg/L	0.0065	2.159	mg/L	0.0130	0.60%
Sn 189.927†	3772.7	0.7855	mg/L	0.00366	1.571	mg/L	0.0073	0.47%
Sr 421.552†	834262.3	0.8662	mg/L	0.00213	1.732	mg/L	0.0043	0.25%
Ti 334.903†	129114.5	4.948	mg/L	0.0168	9.895	mg/L	0.0335	0.34%
Tl 190.801†	3504.3	2.001	mg/L	0.0036	4.002	mg/L	0.0072	0.18%
V 292.402†	136215.5	0.9634	mg/L	0.00285	1.927	mg/L	0.0057	0.30%
Zn 206.200†	98649.9	24.03	mg/L	0.116	48.06	mg/L	0.233	0.48%

Sequence No.: 15
Sample ID: WL68 REF1 SWC

Autosampler Location: 311
Date Collected: 4/16/2013 9:53:29 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL68 REF1 SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2808816.2	101.8	%	0.45				0.45%
ScR 361.383	391414.1	101.7	%	0.13				0.13%
Ag 328.068†	258249.3	1.112	mg/L	0.0100	2.225	mg/L	0.0201	0.90%
Al 308.215†	117221.6	96.41	mg/L	0.091	192.8	mg/L	0.18	0.09%
As 188.979†	1826.5	1.405	mg/L	0.0125	2.811	mg/L	0.0251	0.89%
B 249.677†	7627.1	1.141	mg/L	0.0058	2.281	mg/L	0.0116	0.51%
Ba 233.527†	21375.4	3.379	mg/L	0.0332	6.758	mg/L	0.0664	0.98%
Be 313.042†	509969.5	0.8854	mg/L	0.00344	1.771	mg/L	0.0069	0.39%
Ca 317.933†	436100.3	41.52	mg/L	0.082	83.04	mg/L	0.164	0.20%
Cd 228.802†	16379.5	0.7201	mg/L	0.00366	1.440	mg/L	0.0073	0.51%
Co 228.616†	25224.4	0.7682	mg/L	0.00508	1.536	mg/L	0.0102	0.66%
Cr 267.716†	6516.5	0.7767	mg/L	0.00357	1.553	mg/L	0.0071	0.46%
Cu 324.752†	185647.5	0.7103	mg/L	0.00525	1.421	mg/L	0.0105	0.74%
Fe 273.955†	188759.2	151.2	mg/L	0.88	302.3	mg/L	1.77	0.58%
K 766.490†	77463.2	36.66	mg/L	0.145	73.32	mg/L	0.290	0.40%
Mg 279.077†	27833.1	29.22	mg/L	0.128	58.44	mg/L	0.256	0.44%
Mn 257.610†	240618.3	4.621	mg/L	0.0132	9.243	mg/L	0.0264	0.29%
Mo 202.031†	8831.7	0.4714	mg/L	0.00229	0.9427	mg/L	0.00458	0.49%
Na 589.592†	71763.9	5.763	mg/L	0.0268	11.53	mg/L	0.054	0.47%
Na 330.237†	175.8	5.500	mg/L	0.0723	11.00	mg/L	0.145	1.31%
Ni 231.604†	2182.8	0.5764	mg/L	0.00208	1.153	mg/L	0.0042	0.36%
Pb 220.353†	10416.5	1.323	mg/L	0.0070	2.646	mg/L	0.0141	0.53%
Sb 206.836†	1256.5	0.4640	mg/L	0.00499	0.9281	mg/L	0.00999	1.08%
Se 196.026†	2604.4	1.704	mg/L	0.0102	3.408	mg/L	0.0203	0.60%
Si 288.158†	4076.1	2.699	mg/L	0.0025	5.398	mg/L	0.0051	0.09%
Sn 189.927†	8258.9	1.704	mg/L	0.0047	3.409	mg/L	0.0094	0.28%
Sr 421.552†	533172.0	0.5536	mg/L	0.00045	1.107	mg/L	0.0009	0.08%
Ti 334.903†	60180.1	2.306	mg/L	0.0046	4.612	mg/L	0.0092	0.20%
Tl 190.801†	2453.0	1.365	mg/L	0.0129	2.729	mg/L	0.0258	0.95%
V 292.402†	119830.1	0.8607	mg/L	0.00799	1.721	mg/L	0.0160	0.93%
Zn 206.200†	7703.0	1.877	mg/L	0.0103	3.754	mg/L	0.0206	0.55%

Sequence No.: 16
Sample ID: WL68 MB1SPK SWC

Autosampler Location: 312
Date Collected: 4/16/2013 9:57:31 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL68 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2800426.5	101.5	%	0.86				0.85%
ScR 361.383	391109.2	101.7	%	0.64				0.63%
Ag 328.068†	126238.7	0.5437	mg/L	0.00509	1.087	mg/L	0.0102	0.94%
Al 308.215†	2659.1	2.180	mg/L	0.0205	4.360	mg/L	0.0409	0.94%
As 188.979†	2950.9	2.149	mg/L	0.0133	4.299	mg/L	0.0266	0.62%
B 249.677†	12.4	0.00064	mg/L	0.000601	0.00128	mg/L	0.001202	94.08%
Ba 233.527†	13161.5	2.094	mg/L	0.0072	4.188	mg/L	0.0144	0.34%
Be 313.042†	290174.5	0.5038	mg/L	0.00673	1.008	mg/L	0.0135	1.34%
Ca 317.933†	107867.6	10.27	mg/L	0.051	20.54	mg/L	0.101	0.49%
Cd 228.802†	12145.1	0.5276	mg/L	0.00561	1.055	mg/L	0.0112	1.06%
Co 228.616†	17005.9	0.5206	mg/L	0.00508	1.041	mg/L	0.0102	0.98%
Cr 267.716†	4566.0	0.5425	mg/L	0.00644	1.085	mg/L	0.0129	1.19%
Cu 324.752†	137008.6	0.5193	mg/L	0.00407	1.039	mg/L	0.0081	0.78%
Fe 273.955†	2770.7	2.216	mg/L	0.0194	4.432	mg/L	0.0389	0.88%
K 766.490†	21639.7	10.24	mg/L	0.062	20.48	mg/L	0.123	0.60%
Mg 279.077†	10203.7	10.74	mg/L	0.097	21.48	mg/L	0.193	0.90%
Mn 257.610†	26503.1	0.5094	mg/L	0.00391	1.019	mg/L	0.0078	0.77%
Mo 202.031†	72.8	0.00374	mg/L	0.000456	0.00748	mg/L	0.000911	12.19%
Na 589.592†	125427.1	10.07	mg/L	0.053	20.14	mg/L	0.106	0.53%
Na 330.237†	346.4	10.51	mg/L	0.082	21.03	mg/L	0.165	0.78%
Ni 231.604†	1999.4	0.5273	mg/L	0.00376	1.055	mg/L	0.0075	0.71%
Pb 220.353†	16689.4	2.091	mg/L	0.0167	4.182	mg/L	0.0335	0.80%
Sb 206.836†	26.5	0.00417	mg/L	0.001957	0.00834	mg/L	0.003914	46.91%
Se 196.026†	3231.5	2.129	mg/L	0.0174	4.257	mg/L	0.0348	0.82%
Si 288.158†	30.5	0.02327	mg/L	0.002734	0.04653	mg/L	0.005469	11.75%
Sn 189.927†	-9.1	-0.00102	mg/L	0.000503	-0.00203	mg/L	0.001005	49.43%
Sr 421.552†	481972.0	0.5004	mg/L	0.00219	1.001	mg/L	0.0044	0.44%
Ti 334.903†	100.8	0.00315	mg/L	0.000253	0.00630	mg/L	0.000506	8.04%
Tl 190.801†	3897.3	2.143	mg/L	0.0099	4.285	mg/L	0.0198	0.46%
V 292.402†	72112.1	0.5230	mg/L	0.00476	1.046	mg/L	0.0095	0.91%
Zn 206.200†	2148.1	0.5235	mg/L	0.00564	1.047	mg/L	0.0113	1.08%

Sequence No.: 17
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 4/16/2013 10:01:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 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	2763528.9	100.1	%	0.71				0.71%
ScR 361.383	378259.4	98.33	%	0.165				0.17%
Ag 328.068†	244845.3	1.054	mg/L	0.0047	1.054	mg/L	0.0047	0.44%
Al 308.215†	2598.1	2.102	mg/L	0.0083	2.102	mg/L	0.0083	0.39%
As 188.979†	2831.4	2.094	mg/L	0.0146	2.094	mg/L	0.0146	0.70%
B 249.677†	6890.3	1.030	mg/L	0.0043	1.030	mg/L	0.0043	0.41%
Ba 233.527†	6759.5	1.075	mg/L	0.0017	1.075	mg/L	0.0017	0.16%
Be 313.042†	580393.2	1.008	mg/L	0.0052	1.008	mg/L	0.0052	0.51%
Ca 317.933†	22572.6	2.149	mg/L	0.0062	2.149	mg/L	0.0062	0.29%
Cd 228.802†	24189.8	1.063	mg/L	0.0050	1.063	mg/L	0.0050	0.47%
Co 228.616†	34420.2	1.052	mg/L	0.0065	1.052	mg/L	0.0065	0.61%
Cr 267.716†	9095.5	1.083	mg/L	0.0057	1.083	mg/L	0.0057	0.52%
Cu 324.752†	276422.1	1.047	mg/L	0.0049	1.047	mg/L	0.0049	0.46%
Fe 273.955†	2666.6	2.130	mg/L	0.0188	2.130	mg/L	0.0188	0.88%
K 766.490†	43411.0	20.54	mg/L	0.051	20.54	mg/L	0.051	0.25%
Mg 279.077†	1979.6	2.091	mg/L	0.0243	2.091	mg/L	0.0243	1.16%
Mn 257.610†	52244.9	1.004	mg/L	0.0037	1.004	mg/L	0.0037	0.37%
Mo 202.031†	19393.9	1.036	mg/L	0.0078	1.036	mg/L	0.0078	0.75%
Na 589.592†	631037.6	50.67	mg/L	0.276	50.67	mg/L	0.276	0.55%
Na 330.237†	1730.3	53.26	mg/L	0.246	53.26	mg/L	0.246	0.46%
Ni 231.604†	3990.7	1.054	mg/L	0.0048	1.054	mg/L	0.0048	0.45%
Pb 220.353†	16651.9	2.087	mg/L	0.0128	2.087	mg/L	0.0128	0.61%
Sb 206.836†	5836.9	2.120	mg/L	0.0134	2.120	mg/L	0.0134	0.63%
Se 196.026†	3136.1	2.065	mg/L	0.0117	2.065	mg/L	0.0117	0.57%
Si 288.158†	3054.2	2.024	mg/L	0.0030	2.024	mg/L	0.0030	0.15%
Sn 189.927†	4959.9	1.023	mg/L	0.0078	1.023	mg/L	0.0078	0.76%
Sr 421.552†	964505.1	1.001	mg/L	0.0009	1.001	mg/L	0.0009	0.09%
Ti 334.903†	26563.5	1.018	mg/L	0.0019	1.018	mg/L	0.0019	0.18%
Tl 190.801†	3916.1	2.149	mg/L	0.0153	2.149	mg/L	0.0153	0.71%
V 292.402†	141228.7	1.025	mg/L	0.0062	1.025	mg/L	0.0062	0.60%
Zn 206.200†	4324.2	1.054	mg/L	0.0059	1.054	mg/L	0.0059	0.56%

Sequence No.: 18
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 4/16/2013 10:05:36 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 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	2786355.6	101.0	%	0.42				0.41%
ScR 361.383	386324.0	100.4	%	0.18				0.18%
Ag 328.068†	57.6	0.00025	mg/L	0.000107	0.00025	mg/L	0.000107	42.98%
Al 308.215†	5.6	0.00452	mg/L	0.001852	0.00452	mg/L	0.001852	40.93%
As 188.979†	-0.2	-0.00019	mg/L	0.001345	-0.00019	mg/L	0.001345	721.56%
B 249.677†	13.0	0.00195	mg/L	0.000942	0.00195	mg/L	0.000942	48.42%
Ba 233.527†	6.2	0.00099	mg/L	0.000588	0.00099	mg/L	0.000588	59.65%
Be 313.042†	63.5	0.00011	mg/L	0.000049	0.00011	mg/L	0.000049	44.43%
Ca 317.933†	13.3	0.00127	mg/L	0.000187	0.00127	mg/L	0.000187	14.76%
Cd 228.802†	4.1	0.00018	mg/L	0.000063	0.00018	mg/L	0.000063	34.54%
Co 228.616†	2.1	0.00006	mg/L	0.000096	0.00006	mg/L	0.000096	149.59%
Cr 267.716†	-4.6	-0.00055	mg/L	0.000380	-0.00055	mg/L	0.000380	68.80%
Cu 324.752†	63.8	0.00024	mg/L	0.000125	0.00024	mg/L	0.000125	52.10%
Fe 273.955†	6.0	0.00477	mg/L	0.000633	0.00477	mg/L	0.000633	13.26%
K 766.490†	5.1	0.00241	mg/L	0.012850	0.00241	mg/L	0.012850	532.98%
Mg 279.077†	-0.7	-0.00077	mg/L	0.008682	-0.00077	mg/L	0.008682	>999.9%
Mn 257.610†	9.5	0.00018	mg/L	0.000072	0.00018	mg/L	0.000072	39.16%
Mo 202.031†	90.4	0.00483	mg/L	0.000457	0.00483	mg/L	0.000457	9.46%
Na 589.592†	14.5	0.00116	mg/L	0.000953	0.00116	mg/L	0.000953	82.10%
Na 330.237†	-2.5	-0.07593	mg/L	0.307647	-0.07593	mg/L	0.307647	405.16%
Ni 231.604†	1.1	0.00028	mg/L	0.001667	0.00028	mg/L	0.001667	591.05%
Pb 220.353†	12.9	0.00161	mg/L	0.000611	0.00161	mg/L	0.000611	37.91%
Sb 206.836†	16.6	0.00606	mg/L	0.001077	0.00606	mg/L	0.001077	17.77%
Se 196.026†	1.5	0.00099	mg/L	0.001253	0.00099	mg/L	0.001253	126.46%
Si 288.158†	-6.8	-0.00451	mg/L	0.001706	-0.00451	mg/L	0.001706	37.78%
Sn 189.927†	5.2	0.00108	mg/L	0.000604	0.00108	mg/L	0.000604	55.94%
Sr 421.552†	37.6	0.00004	mg/L	0.000029	0.00004	mg/L	0.000029	74.20%
Ti 334.903†	5.3	0.00020	mg/L	0.000705	0.00020	mg/L	0.000705	356.76%
Tl 190.801†	3.3	0.00183	mg/L	0.003234	0.00183	mg/L	0.003234	176.58%
V 292.402†	12.7	0.00009	mg/L	0.000166	0.00009	mg/L	0.000166	180.27%
Zn 206.200†	2.4	0.00058	mg/L	0.000243	0.00058	mg/L	0.000243	41.77%

Sequence No.: 19
Sample ID: WL68 B SWC

Autosampler Location: 313
Date Collected: 4/16/2013 10:09:52 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL68 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2777999.4	100.7	%	0.28				0.28%
ScR 361.383	388796.7	101.1	%	0.69				0.68%
Ag 328.068†	3226.7	0.01415	mg/L	0.000151	0.07073	mg/L	0.000757	1.07%
Al 308.215†	32236.9	26.52	mg/L	0.248	132.6	mg/L	1.24	0.94%
As 188.979†	-15.1	0.04064	mg/L	0.002647	0.2032	mg/L	0.01324	6.51%
B 249.677†	836.1	0.1251	mg/L	0.00064	0.6253	mg/L	0.00321	0.51%
Ba 233.527†	4784.4	0.7353	mg/L	0.00836	3.677	mg/L	0.0418	1.14%
Be 313.042†	123.9	0.00018	mg/L	0.000007	0.00089	mg/L	0.000037	4.17%
Ca 317.933†	366073.0	34.85	mg/L	0.260	174.3	mg/L	1.30	0.74%
Cd 228.802†	1004.3	0.04489	mg/L	0.000306	0.2245	mg/L	0.00153	0.68%
Co 228.616†	1581.8	0.04553	mg/L	0.000141	0.2277	mg/L	0.00071	0.31%
Cr 267.716†	2474.8	0.2985	mg/L	0.00251	1.493	mg/L	0.0126	0.84%
Cu 324.752†	464267.9	1.768	mg/L	0.0080	8.838	mg/L	0.0401	0.45%
Fe 273.955†	220176.1	176.3	mg/L	0.87	881.6	mg/L	4.34	0.49%
K 766.490†	3961.7	1.875	mg/L	0.0215	9.374	mg/L	0.1075	1.15%
Mg 279.077†	10041.5	10.47	mg/L	0.096	52.36	mg/L	0.479	0.92%
Mn 257.610†	131337.8	2.523	mg/L	0.0171	12.61	mg/L	0.086	0.68%
Mo 202.031†	748.0	0.03954	mg/L	0.000353	0.1977	mg/L	0.00177	0.89%
Na 589.592†	48416.3	3.888	mg/L	0.0239	19.44	mg/L	0.119	0.61%
Na 330.237†	266.4	3.881	mg/L	0.3639	19.40	mg/L	1.820	9.38%
Ni 231.604†	1064.8	0.2814	mg/L	0.00379	1.407	mg/L	0.0190	1.35%
Pb 220.353†	15587.9	1.948	mg/L	0.0036	9.742	mg/L	0.0179	0.18%
Sb 206.836†	100.1	0.03562	mg/L	0.002645	0.1781	mg/L	0.01322	7.42%
Se 196.026†	-6.0	-0.00707	mg/L	0.006916	-0.03534	mg/L	0.034579	97.83%
Si 288.158†	528.2	0.3503	mg/L	0.00955	1.752	mg/L	0.0478	2.73%
Sn 189.927†	1083.9	0.2264	mg/L	0.00114	1.132	mg/L	0.0057	0.50%
Sr 421.552†	127040.3	0.1319	mg/L	0.00046	0.6595	mg/L	0.00228	0.35%
Ti 334.903†	41634.7	1.595	mg/L	0.0042	7.976	mg/L	0.0211	0.26%
Tl 190.801†	-19.2	0.01212	mg/L	0.002302	0.06062	mg/L	0.011511	18.99%
V 292.402†	12848.2	0.08470	mg/L	0.000239	0.4235	mg/L	0.00120	0.28%
Zn 206.200†	65857.1	16.04	mg/L	0.088	80.22	mg/L	0.442	0.55%

Sequence No.: 20
Sample ID: WL68 A-L SWC

Autosampler Location: 314
Date Collected: 4/16/2013 10:13:55 AM
Data Type: Original

Dilution: 50.000000X

Nebulizer Parameters: WL68 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 A-L SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2809839.2	101.8	%	0.62				0.61%
ScR 361.383	392176.5	101.9	%	0.41				0.40%
Ag 328.068†	144.7	0.00065	mg/L	0.000250	0.03243	mg/L	0.012502	38.56%
Al 308.215†	3646.4	2.999	mg/L	0.0138	150.0	mg/L	0.69	0.46%
As 188.979†	-3.1	0.00374	mg/L	0.001556	0.1872	mg/L	0.07778	41.56%
B 249.677†	61.4	0.00918	mg/L	0.001411	0.4590	mg/L	0.07055	15.37%
Ba 233.527†	363.9	0.05469	mg/L	0.000235	2.735	mg/L	0.0117	0.43%
Be 313.042†	70.1	0.00012	mg/L	0.000014	0.00577	mg/L	0.000705	12.20%
Ca 317.933†	31883.2	3.036	mg/L	0.0079	151.8	mg/L	0.39	0.26%
Cd 228.802†	65.1	0.00293	mg/L	0.000256	0.1465	mg/L	0.01282	8.75%
Co 228.616†	168.4	0.00483	mg/L	0.000163	0.2414	mg/L	0.00815	3.38%
Cr 267.716†	481.1	0.05769	mg/L	0.000250	2.885	mg/L	0.0125	0.43%
Cu 324.752†	34325.3	0.1311	mg/L	0.00085	6.555	mg/L	0.0425	0.65%
Fe 273.955†	27263.3	21.83	mg/L	0.179	1092	mg/L	8.97	0.82%
K 766.490†	450.0	0.2130	mg/L	0.01453	10.65	mg/L	0.727	6.82%
Mg 279.077†	1711.8	1.790	mg/L	0.0078	89.50	mg/L	0.389	0.43%
Mn 257.610†	35165.8	0.6755	mg/L	0.00260	33.77	mg/L	0.130	0.39%
Mo 202.031†	97.0	0.00514	mg/L	0.000054	0.2571	mg/L	0.00272	1.06%
Na 589.592†	5360.9	0.4305	mg/L	0.00162	21.52	mg/L	0.081	0.38%
Na 330.237†	17.5	0.3218	mg/L	0.10235	16.09	mg/L	5.118	31.81%
Ni 231.604†	110.5	0.02920	mg/L	0.000581	1.460	mg/L	0.0291	1.99%
Pb 220.353†	1344.8	0.1680	mg/L	0.00084	8.400	mg/L	0.0422	0.50%
Sb 206.836†	8.1	0.00259	mg/L	0.000311	0.1293	mg/L	0.01557	12.04%
Se 196.026†	3.2	0.00176	mg/L	0.002340	0.08820	mg/L	0.117021	132.67%
Si 288.158†	50.9	0.03377	mg/L	0.003686	1.689	mg/L	0.1843	10.91%
Sn 189.927†	148.3	0.03082	mg/L	0.000532	1.541	mg/L	0.0266	1.73%
Sr 421.552†	12914.2	0.01341	mg/L	0.000020	0.6705	mg/L	0.00098	0.15%
Ti 334.903†	4797.5	0.1839	mg/L	0.00117	9.193	mg/L	0.0586	0.64%
Tl 190.801†	-1.7	0.00183	mg/L	0.000712	0.09152	mg/L	0.035587	38.88%
V 292.402†	2583.3	0.01781	mg/L	0.000036	0.8904	mg/L	0.00179	0.20%
Zn 206.200†	3715.4	0.9051	mg/L	0.00507	45.26	mg/L	0.253	0.56%

Sequence No.: 21
Sample ID: WL68 A SWC

Autosampler Location: 315
Date Collected: 4/16/2013 10:17:55 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2795180.8	101.3	%	0.04				0.04%
ScR 361.383	391035.7	101.6	%	0.24				0.23%
Ag 328.068†	504.1	0.00230	mg/L	0.000087	0.02303	mg/L	0.000874	3.79%
Al 308.215†	18119.0	14.90	mg/L	0.053	149.0	mg/L	0.53	0.36%
As 188.979†	-16.7	0.01879	mg/L	0.003365	0.1879	mg/L	0.03365	17.91%
B 249.677†	294.0	0.04394	mg/L	0.001121	0.4394	mg/L	0.01121	2.55%
Ba 233.527†	1860.1	0.2793	mg/L	0.00134	2.793	mg/L	0.0134	0.48%
Be 313.042†	108.9	0.00016	mg/L	0.000005	0.00157	mg/L	0.000051	3.26%
Ca 317.933†	166527.5	15.86	mg/L	0.034	158.6	mg/L	0.34	0.21%
Cd 228.802†	308.3	0.01388	mg/L	0.000198	0.1388	mg/L	0.00198	1.43%
Co 228.616†	830.0	0.02371	mg/L	0.000144	0.2371	mg/L	0.00144	0.61%
Cr 267.716†	2507.5	0.3007	mg/L	0.00183	3.007	mg/L	0.0183	0.61%
Cu 324.752†	179675.4	0.6862	mg/L	0.00492	6.862	mg/L	0.0492	0.72%
Fe 273.955†	141774.4	113.5	mg/L	0.76	1135	mg/L	7.56	0.67%
K 766.490†	2301.8	1.089	mg/L	0.0020	10.89	mg/L	0.020	0.18%
Mg 279.077†	8964.8	9.374	mg/L	0.0418	93.74	mg/L	0.418	0.45%
Mn 257.610†	182908.0	3.513	mg/L	0.0184	35.13	mg/L	0.184	0.52%
Mo 202.031†	466.4	0.02472	mg/L	0.000262	0.2472	mg/L	0.00262	1.06%
Na 589.592†	27790.5	2.232	mg/L	0.0046	22.32	mg/L	0.046	0.21%
Na 330.237†	101.8	2.045	mg/L	0.2372	20.45	mg/L	2.372	11.60%
Ni 231.604†	545.8	0.1442	mg/L	0.00116	1.442	mg/L	0.0116	0.80%
Pb 220.353†	6781.0	0.8469	mg/L	0.00180	8.469	mg/L	0.0180	0.21%
Sb 206.836†	32.1	0.00981	mg/L	0.002410	0.09809	mg/L	0.024097	24.57%
Se 196.026†	-2.7	-0.00355	mg/L	0.002165	-0.03545	mg/L	0.021655	61.08%
Si 288.158†	296.4	0.1967	mg/L	0.00452	1.967	mg/L	0.0452	2.30%
Sn 189.927†	741.2	0.1541	mg/L	0.00114	1.541	mg/L	0.0114	0.74%
Sr 421.552†	66324.8	0.06887	mg/L	0.000232	0.6887	mg/L	0.00232	0.34%
Ti 334.903†	24764.2	0.9491	mg/L	0.00457	9.491	mg/L	0.0457	0.48%
Tl 190.801†	-14.0	0.00678	mg/L	0.003124	0.06781	mg/L	0.031238	46.07%
V 292.402†	13285.5	0.09154	mg/L	0.000815	0.9154	mg/L	0.00815	0.89%
Zn 206.200†	18700.5	4.556	mg/L	0.0288	45.56	mg/L	0.288	0.63%

Sequence No.: 22
Sample ID: WL68 ADUP SWC

Autosampler Location: 316
Date Collected: 4/16/2013 10:21:56 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WL68 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2776996.4	100.6	%	0.64				0.64%
ScR 361.383	392001.4	101.9	%	0.10				0.10%
Ag 328.068†	451.5	0.00208	mg/L	0.000094	0.02080	mg/L	0.000936	4.50%
Al 308.215†	18232.0	15.00	mg/L	0.028	150.0	mg/L	0.28	0.19%
As 188.979†	-15.7	0.01828	mg/L	0.001586	0.1828	mg/L	0.01586	8.68%
B 249.677†	251.2	0.03754	mg/L	0.001253	0.3754	mg/L	0.01253	3.34%
Ba 233.527†	1893.9	0.2856	mg/L	0.00080	2.856	mg/L	0.0080	0.28%
Be 313.042†	109.5	0.00016	mg/L	0.000009	0.00159	mg/L	0.000094	5.89%
Ca 317.933†	174234.5	16.59	mg/L	0.051	165.9	mg/L	0.51	0.31%
Cd 228.802†	310.2	0.01396	mg/L	0.000262	0.1396	mg/L	0.00262	1.87%
Co 228.616†	835.0	0.02392	mg/L	0.000135	0.2392	mg/L	0.00135	0.56%
Cr 267.716†	1955.1	0.2349	mg/L	0.00116	2.349	mg/L	0.0116	0.49%
Cu 324.752†	181638.0	0.6933	mg/L	0.00447	6.933	mg/L	0.0447	0.64%
Fe 273.955†	134067.0	107.4	mg/L	0.29	1074	mg/L	2.95	0.27%
K 766.490†	2255.8	1.068	mg/L	0.0129	10.68	mg/L	0.129	1.21%
Mg 279.077†	8175.6	8.547	mg/L	0.0145	85.47	mg/L	0.145	0.17%
Mn 257.610†	138214.3	2.655	mg/L	0.0045	26.55	mg/L	0.045	0.17%
Mo 202.031†	517.9	0.02747	mg/L	0.000098	0.2747	mg/L	0.00098	0.36%
Na 589.592†	27038.3	2.171	mg/L	0.0098	21.71	mg/L	0.098	0.45%
Na 330.237†	103.4	2.120	mg/L	0.0660	21.20	mg/L	0.660	3.12%
Ni 231.604†	550.7	0.1455	mg/L	0.00124	1.455	mg/L	0.0124	0.85%
Pb 220.353†	6022.5	0.7521	mg/L	0.00526	7.521	mg/L	0.0526	0.70%
Sb 206.836†	28.3	0.00944	mg/L	0.001144	0.09436	mg/L	0.011441	12.12%
Se 196.026†	-0.9	-0.00241	mg/L	0.004216	-0.02414	mg/L	0.042163	174.64%
Si 288.158†	326.7	0.2166	mg/L	0.00264	2.166	mg/L	0.0264	1.22%
Sn 189.927†	838.8	0.1743	mg/L	0.00306	1.743	mg/L	0.0306	1.76%
Sr 421.552†	64796.4	0.06728	mg/L	0.000114	0.6728	mg/L	0.00114	0.17%
Ti 334.903†	23837.8	0.9135	mg/L	0.00133	9.135	mg/L	0.0133	0.15%
Tl 190.801†	-16.8	0.00445	mg/L	0.002439	0.04450	mg/L	0.024386	54.80%
V 292.402†	12686.5	0.08713	mg/L	0.000732	0.8713	mg/L	0.00732	0.84%
Zn 206.200†	18226.9	4.440	mg/L	0.0121	44.40	mg/L	0.121	0.27%

Sequence No.: 23
Sample ID: WL68 ASPK SWC

Autosampler Location: 317
Date Collected: 4/16/2013 10:25:57 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 ASPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL68 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2792074.8	101.2	%	0.24				0.24%
ScR 361.383	392995.6	102.2	%	0.33				0.32%
Ag 328.068†	25102.9	0.1083	mg/L	0.00038	1.083	mg/L	0.0038	0.35%
Al 308.215†	19442.3	15.99	mg/L	0.058	159.9	mg/L	0.58	0.36%
As 188.979†	562.5	0.4402	mg/L	0.00331	4.402	mg/L	0.0331	0.75%
B 249.677†	222.3	0.03298	mg/L	0.000554	0.3298	mg/L	0.00554	1.68%
Ba 233.527†	4501.6	0.6979	mg/L	0.00407	6.979	mg/L	0.0407	0.58%
Be 313.042†	56400.7	0.09790	mg/L	0.000297	0.9790	mg/L	0.00297	0.30%
Ca 317.933†	196054.3	18.67	mg/L	0.071	186.7	mg/L	0.71	0.38%
Cd 228.802†	2788.6	0.1217	mg/L	0.00065	1.217	mg/L	0.0065	0.53%
Co 228.616†	4301.4	0.1300	mg/L	0.00057	1.300	mg/L	0.0057	0.44%
Cr 267.716†	2686.3	0.3222	mg/L	0.00113	3.222	mg/L	0.0113	0.35%
Cu 324.752†	224965.4	0.8584	mg/L	0.00302	8.584	mg/L	0.0302	0.35%
Fe 273.955†	155969.1	124.9	mg/L	1.04	1249	mg/L	10.37	0.83%
K 766.490†	6419.1	3.038	mg/L	0.0255	30.38	mg/L	0.255	0.84%
Mg 279.077†	9914.6	10.37	mg/L	0.054	103.7	mg/L	0.54	0.52%
Mn 257.610†	145104.4	2.787	mg/L	0.0145	27.87	mg/L	0.145	0.52%
Mo 202.031†	637.3	0.03382	mg/L	0.000281	0.3382	mg/L	0.00281	0.83%
Na 589.592†	52833.8	4.243	mg/L	0.0121	42.43	mg/L	0.121	0.28%
Na 330.237†	171.2	4.163	mg/L	0.0866	41.63	mg/L	0.866	2.08%
Ni 231.604†	958.0	0.2529	mg/L	0.00135	2.529	mg/L	0.0135	0.54%
Pb 220.353†	10026.2	1.253	mg/L	0.0055	12.53	mg/L	0.055	0.44%
Sb 206.836†	30.6	0.00931	mg/L	0.000887	0.09309	mg/L	0.008875	9.53%
Se 196.026†	635.2	0.4165	mg/L	0.01004	4.165	mg/L	0.1004	2.41%
Si 288.158†	329.8	0.2194	mg/L	0.00252	2.194	mg/L	0.0252	1.15%
Sn 189.927†	708.8	0.1477	mg/L	0.00107	1.477	mg/L	0.0107	0.73%
Sr 421.552†	163779.0	0.1701	mg/L	0.00043	1.701	mg/L	0.0043	0.25%
Ti 334.903†	24416.4	0.9356	mg/L	0.00249	9.356	mg/L	0.0249	0.27%
Tl 190.801†	731.9	0.4183	mg/L	0.00382	4.183	mg/L	0.0382	0.91%
V 292.402†	26762.3	0.1883	mg/L	0.00045	1.883	mg/L	0.0045	0.24%
Zn 206.200†	18916.9	4.608	mg/L	0.0269	46.08	mg/L	0.269	0.58%

Sequence No.: 24
Sample ID: WL68 APOST SWC

Autosampler Location: 318
Date Collected: 4/16/2013 10:29:58 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WL68 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767986.9	100.3	%	0.07				0.07%
ScR 361.383	386674.6	100.5	%	0.26				0.26%
Ag 328.068†	123092.4	0.5303	mg/L	0.00104	5.303	mg/L	0.0104	0.20%
Al 308.215†	22120.8	18.19	mg/L	0.045	181.9	mg/L	0.45	0.25%
As 188.979†	2904.6	2.148	mg/L	0.0019	21.48	mg/L	0.019	0.09%
B 249.677†	301.7	0.04387	mg/L	0.001084	0.4387	mg/L	0.01084	2.47%
Ba 233.527†	15339.4	2.423	mg/L	0.0051	24.23	mg/L	0.051	0.21%
Be 313.042†	281860.9	0.4894	mg/L	0.00458	4.894	mg/L	0.0458	0.94%
Ca 317.933†	279306.2	26.59	mg/L	0.118	265.9	mg/L	1.18	0.44%
Cd 228.802†	12629.8	0.5494	mg/L	0.00171	5.494	mg/L	0.0171	0.31%
Co 228.616†	17977.4	0.5486	mg/L	0.00030	5.486	mg/L	0.0030	0.05%
Cr 267.716†	7033.9	0.8385	mg/L	0.00324	8.385	mg/L	0.0324	0.39%
Cu 324.752†	325777.5	1.240	mg/L	0.0031	12.40	mg/L	0.031	0.25%
Fe 273.955†	146989.9	117.7	mg/L	0.67	1177	mg/L	6.68	0.57%
K 766.490†	23837.0	11.28	mg/L	0.029	112.8	mg/L	0.29	0.26%
Mg 279.077†	19288.8	20.24	mg/L	0.083	202.4	mg/L	0.83	0.41%
Mn 257.610†	212899.4	4.090	mg/L	0.0097	40.90	mg/L	0.097	0.24%
Mo 202.031†	501.4	0.02643	mg/L	0.000256	0.2643	mg/L	0.00256	0.97%
Na 589.592†	153784.8	12.35	mg/L	0.078	123.5	mg/L	0.78	0.63%
Na 330.237†	455.5	12.71	mg/L	0.036	127.1	mg/L	0.36	0.28%
Ni 231.604†	2516.1	0.6639	mg/L	0.00290	6.639	mg/L	0.0290	0.44%
Pb 220.353†	23706.7	2.968	mg/L	0.0059	29.68	mg/L	0.059	0.20%
Sb 206.836†	44.4	0.00891	mg/L	0.001881	0.08911	mg/L	0.018805	21.10%
Se 196.026†	3198.2	2.105	mg/L	0.0074	21.05	mg/L	0.074	0.35%
Si 288.158†	307.1	0.2068	mg/L	0.00225	2.068	mg/L	0.0225	1.09%
Sn 189.927†	752.9	0.1574	mg/L	0.00112	1.574	mg/L	0.0112	0.71%
Sr 421.552†	543563.5	0.5644	mg/L	0.00212	5.644	mg/L	0.0212	0.37%
Ti 334.903†	25612.2	0.9809	mg/L	0.00369	9.809	mg/L	0.0369	0.38%
Tl 190.801†	3767.0	2.086	mg/L	0.0023	20.86	mg/L	0.023	0.11%
V 292.402†	84881.6	0.6107	mg/L	0.00157	6.107	mg/L	0.0157	0.26%
Zn 206.200†	21957.8	5.349	mg/L	0.0275	53.49	mg/L	0.275	0.51%

Sequence No.: 25
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 4/16/2013 10:34:00 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 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	2778352.7	100.7	%	0.23				0.23%
ScR 361.383	382950.3	99.54	%	0.539				0.54%
Ag 328.068†	246587.1	1.062	mg/L	0.0056	1.062	mg/L	0.0056	0.53%
Al 308.215†	2564.9	2.075	mg/L	0.0162	2.075	mg/L	0.0162	0.78%
As 188.979†	2789.6	2.064	mg/L	0.0053	2.064	mg/L	0.0053	0.26%
B 249.677†	6810.9	1.019	mg/L	0.0053	1.019	mg/L	0.0053	0.53%
Ba 233.527†	6744.0	1.073	mg/L	0.0063	1.073	mg/L	0.0063	0.59%
Be 313.042†	574297.9	0.9971	mg/L	0.00323	0.9971	mg/L	0.00323	0.32%
Ca 317.933†	22415.8	2.134	mg/L	0.0156	2.134	mg/L	0.0156	0.73%
Cd 228.802†	23826.2	1.047	mg/L	0.0047	1.047	mg/L	0.0047	0.45%
Co 228.616†	34142.3	1.044	mg/L	0.0030	1.044	mg/L	0.0030	0.29%
Cr 267.716†	9025.0	1.074	mg/L	0.0061	1.074	mg/L	0.0061	0.57%
Cu 324.752†	276105.1	1.046	mg/L	0.0048	1.046	mg/L	0.0048	0.46%
Fe 273.955†	2614.2	2.088	mg/L	0.0190	2.088	mg/L	0.0190	0.91%
K 766.490†	43181.2	20.44	mg/L	0.037	20.44	mg/L	0.037	0.18%
Mg 279.077†	1965.2	2.076	mg/L	0.0144	2.076	mg/L	0.0144	0.70%
Mn 257.610†	51905.4	0.9974	mg/L	0.00413	0.9974	mg/L	0.00413	0.41%
Mo 202.031†	19145.6	1.023	mg/L	0.0043	1.023	mg/L	0.0043	0.42%
Na 589.592†	629498.9	50.55	mg/L	0.186	50.55	mg/L	0.186	0.37%
Na 330.237†	1703.6	52.44	mg/L	0.238	52.44	mg/L	0.238	0.45%
Ni 231.604†	3963.2	1.047	mg/L	0.0110	1.047	mg/L	0.0110	1.05%
Pb 220.353†	16454.3	2.062	mg/L	0.0067	2.062	mg/L	0.0067	0.32%
Sb 206.836†	5768.3	2.095	mg/L	0.0056	2.095	mg/L	0.0056	0.27%
Se 196.026†	3095.0	2.038	mg/L	0.0075	2.038	mg/L	0.0075	0.37%
Si 288.158†	3009.0	1.994	mg/L	0.0096	1.994	mg/L	0.0096	0.48%
Sn 189.927†	4870.5	1.004	mg/L	0.0033	1.004	mg/L	0.0033	0.33%
Sr 421.552†	960964.2	0.9978	mg/L	0.00311	0.9978	mg/L	0.00311	0.31%
Ti 334.903†	26480.9	1.015	mg/L	0.0046	1.015	mg/L	0.0046	0.45%
Tl 190.801†	3887.8	2.134	mg/L	0.0098	2.134	mg/L	0.0098	0.46%
V 292.402†	142023.7	1.030	mg/L	0.0035	1.030	mg/L	0.0035	0.34%
Zn 206.200†	4294.4	1.047	mg/L	0.0084	1.047	mg/L	0.0084	0.80%

Sequence No.: 26
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 4/16/2013 10:38:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 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	2800758.6	101.5	%	0.26				0.25%
ScR 361.383	388744.1	101.1	%	0.63				0.63%
Ag 328.068†	37.7	0.00016	mg/L	0.000085	0.00016	mg/L	0.000085	52.34%
Al 308.215†	2.5	0.00201	mg/L	0.005457	0.00201	mg/L	0.005457	271.58%
As 188.979†	2.8	0.00205	mg/L	0.002213	0.00205	mg/L	0.002213	107.97%
B 249.677†	5.2	0.00078	mg/L	0.000524	0.00078	mg/L	0.000524	67.25%
Ba 233.527†	7.5	0.00119	mg/L	0.000445	0.00119	mg/L	0.000445	37.55%
Be 313.042†	55.8	0.00010	mg/L	0.000028	0.00010	mg/L	0.000028	28.59%
Ca 317.933†	4.6	0.00043	mg/L	0.000110	0.00043	mg/L	0.000110	25.24%
Cd 228.802†	8.3	0.00036	mg/L	0.000135	0.00036	mg/L	0.000135	37.77%
Co 228.616†	3.5	0.00011	mg/L	0.000156	0.00011	mg/L	0.000156	148.13%
Cr 267.716†	-4.1	-0.00048	mg/L	0.000123	-0.00048	mg/L	0.000123	25.31%
Cu 324.752†	104.3	0.00039	mg/L	0.000115	0.00039	mg/L	0.000115	29.15%
Fe 273.955†	5.3	0.00424	mg/L	0.001496	0.00424	mg/L	0.001496	35.30%
K 766.490†	18.2	0.00862	mg/L	0.003700	0.00862	mg/L	0.003700	42.95%
Mg 279.077†	-1.0	-0.00107	mg/L	0.006284	-0.00107	mg/L	0.006284	587.07%
Mn 257.610†	6.6	0.00013	mg/L	0.000065	0.00013	mg/L	0.000065	51.08%
Mo 202.031†	88.8	0.00475	mg/L	0.000642	0.00475	mg/L	0.000642	13.53%
Na 589.592†	-1.5	-0.00012	mg/L	0.000669	-0.00012	mg/L	0.000669	540.54%
Na 330.237†	-11.9	-0.3661	mg/L	0.06143	-0.3661	mg/L	0.06143	16.78%
Ni 231.604†	3.4	0.00091	mg/L	0.000846	0.00091	mg/L	0.000846	92.94%
Pb 220.353†	5.1	0.00064	mg/L	0.000198	0.00064	mg/L	0.000198	31.13%
Sb 206.836†	12.7	0.00462	mg/L	0.000368	0.00462	mg/L	0.000368	7.97%
Se 196.026†	3.4	0.00225	mg/L	0.001856	0.00225	mg/L	0.001856	82.59%
Si 288.158†	-4.3	-0.00285	mg/L	0.005056	-0.00285	mg/L	0.005056	177.69%
Sn 189.927†	6.6	0.00136	mg/L	0.000491	0.00136	mg/L	0.000491	36.13%
Sr 421.552†	5.5	0.00001	mg/L	0.000033	0.00001	mg/L	0.000033	580.28%
Ti 334.903†	12.2	0.00046	mg/L	0.000504	0.00046	mg/L	0.000504	108.90%
Tl 190.801†	4.3	0.00239	mg/L	0.002304	0.00239	mg/L	0.002304	96.40%
V 292.402†	19.8	0.00014	mg/L	0.000125	0.00014	mg/L	0.000125	87.05%
Zn 206.200†	-1.4	-0.00035	mg/L	0.000664	-0.00035	mg/L	0.000664	191.46%

Sequence No.: 27
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/16/2013 10:42:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2790571.5	101.1	%	0.25				0.25%
ScR 361.383	388674.0	101.0	%	0.30				0.30%
Ag 328.068†	751.0	0.00323	mg/L	0.000117	0.00323	mg/L	0.000117	3.63%
Al 308.215†	71.7	0.05881	mg/L	0.005538	0.05881	mg/L	0.005538	9.42%
As 188.979†	70.1	0.05120	mg/L	0.001605	0.05120	mg/L	0.001605	3.13%
B 249.677†	135.2	0.02024	mg/L	0.000047	0.02024	mg/L	0.000047	0.23%
Ba 233.527†	27.1	0.00430	mg/L	0.000284	0.00430	mg/L	0.000284	6.61%
Be 313.042†	590.5	0.00102	mg/L	0.000015	0.00102	mg/L	0.000015	1.50%
Ca 317.933†	636.5	0.06060	mg/L	0.000267	0.06060	mg/L	0.000267	0.44%
Cd 228.802†	59.9	0.00238	mg/L	0.000132	0.00238	mg/L	0.000132	5.55%
Co 228.616†	115.7	0.00354	mg/L	0.000188	0.00354	mg/L	0.000188	5.32%
Cr 267.716†	42.1	0.00501	mg/L	0.000600	0.00501	mg/L	0.000600	11.98%
Cu 324.752†	635.5	0.00241	mg/L	0.000043	0.00241	mg/L	0.000043	1.80%
Fe 273.955†	63.5	0.05080	mg/L	0.002094	0.05080	mg/L	0.002094	4.12%
K 766.490†	1104.6	0.5228	mg/L	0.01821	0.5228	mg/L	0.01821	3.48%
Mg 279.077†	52.9	0.05571	mg/L	0.002280	0.05571	mg/L	0.002280	4.09%
Mn 257.610†	56.6	0.00109	mg/L	0.000088	0.00109	mg/L	0.000088	8.10%
Mo 202.031†	106.3	0.00568	mg/L	0.000159	0.00568	mg/L	0.000159	2.80%
Na 589.592†	6096.8	0.4896	mg/L	0.00247	0.4896	mg/L	0.00247	0.50%
Na 330.237†	10.3	0.3145	mg/L	0.15154	0.3145	mg/L	0.15154	48.19%
Ni 231.604†	43.4	0.01148	mg/L	0.000910	0.01148	mg/L	0.000910	7.93%
Pb 220.353†	173.5	0.02175	mg/L	0.000714	0.02175	mg/L	0.000714	3.28%
Sb 206.836†	148.0	0.05381	mg/L	0.001825	0.05381	mg/L	0.001825	3.39%
Se 196.026†	80.3	0.05290	mg/L	0.001301	0.05290	mg/L	0.001301	2.46%
Si 288.158†	83.7	0.05552	mg/L	0.001378	0.05552	mg/L	0.001378	2.48%
Sn 189.927†	49.8	0.01029	mg/L	0.000344	0.01029	mg/L	0.000344	3.34%
Sr 421.552†	1000.3	0.00104	mg/L	0.000026	0.00104	mg/L	0.000026	2.50%
Ti 334.903†	129.0	0.00494	mg/L	0.000640	0.00494	mg/L	0.000640	12.95%
Tl 190.801†	94.7	0.05215	mg/L	0.001684	0.05215	mg/L	0.001684	3.23%
V 292.402†	461.3	0.00335	mg/L	0.000074	0.00335	mg/L	0.000074	2.21%
Zn 206.200†	43.6	0.01063	mg/L	0.000348	0.01063	mg/L	0.000348	3.27%

Sequence No.: 28
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/16/2013 10:46:37 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 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	2701296.5	97.89	%	0.457				0.47%
ScR 361.383	378259.8	98.33	%	0.279				0.28%
Ag 328.068†	-264.0	-0.00046	mg/L	0.000091	-0.00046	mg/L	0.000091	19.77%
Al 308.215†	248028.4	204.1	mg/L	0.85	204.1	mg/L	0.85	0.42%
As 188.979†	56.5	0.03199	mg/L	0.002851	0.03199	mg/L	0.002851	8.91%
B 249.677†	94.2	0.01411	mg/L	0.002090	0.01411	mg/L	0.002090	14.81%
Ba 233.527†	152.4	-0.00357	mg/L	0.000494	-0.00357	mg/L	0.000494	13.85%
Be 313.042†	86.9	0.00015	mg/L	0.000026	0.00015	mg/L	0.000026	17.55%
Ca 317.933†	1092187.2	104.0	mg/L	0.58	104.0	mg/L	0.58	0.55%
Cd 228.802†	75.9	0.00314	mg/L	0.000270	0.00314	mg/L	0.000270	8.58%
Co 228.616†	64.8	0.00196	mg/L	0.000146	0.00196	mg/L	0.000146	7.43%
Cr 267.716†	11.9	-0.00415	mg/L	0.000692	-0.00415	mg/L	0.000692	16.66%
Cu 324.752†	-1850.9	0.00172	mg/L	0.000085	0.00172	mg/L	0.000085	4.98%
Fe 273.955†	236400.8	189.3	mg/L	1.32	189.3	mg/L	1.32	0.70%
K 766.490†	63.5	0.03004	mg/L	0.010719	0.03004	mg/L	0.010719	35.68%
Mg 279.077†	102427.4	107.7	mg/L	0.27	107.7	mg/L	0.27	0.25%
Mn 257.610†	93.0	0.00036	mg/L	0.000169	0.00036	mg/L	0.000169	47.18%
Mo 202.031†	116.7	0.00501	mg/L	0.000208	0.00501	mg/L	0.000208	4.15%
Na 589.592†	238.1	0.01912	mg/L	0.001841	0.01912	mg/L	0.001841	9.63%
Na 330.237†	-8.3	-0.2517	mg/L	0.21229	-0.2517	mg/L	0.21229	84.33%
Ni 231.604†	4.6	0.00122	mg/L	0.001069	0.00122	mg/L	0.001069	87.29%
Pb 220.353†	-464.7	-0.01310	mg/L	0.000630	-0.01310	mg/L	0.000630	4.81%
Sb 206.836†	-23.5	-0.00866	mg/L	0.002788	-0.00866	mg/L	0.002788	32.20%
Se 196.026†	0.2	-0.02334	mg/L	0.002953	-0.02334	mg/L	0.002953	12.65%
Si 288.158†	-20.3	-0.00122	mg/L	0.004353	-0.00122	mg/L	0.004353	358.24%
Sn 189.927†	-100.0	-0.01189	mg/L	0.001693	-0.01189	mg/L	0.001693	14.25%
Sr 421.552†	3943.0	0.00409	mg/L Cant.	0.000031	0.00409	mg/L	0.000031	0.75%
Ti 334.903†	263.3	0.00391	mg/L	0.000371	0.00391	mg/L	0.000371	9.48%
Tl 190.801†	-17.4	0.01552	mg/L	0.001290	0.01552	mg/L	0.001290	8.32%
V 292.402†	1173.3	-0.00103	mg/L	0.000289	-0.00103	mg/L	0.000289	28.14%
Zn 206.200†	-3.4	-0.00084	mg/L	0.001134	-0.00084	mg/L	0.001134	135.38%

Sequence No.: 29
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/16/2013 10:50:54 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2694479.3	97.64	%	0.402				0.41%
ScR 361.383	378540.9	98.40	%	0.113				0.12%
Ag 328.068†	255280.4	1.100	mg/L	0.0032	1.100	mg/L	0.0032	0.29%
Al 308.215†	247625.2	203.7	mg/L	0.85	203.7	mg/L	0.85	0.42%
As 188.979†	1504.0	1.086	mg/L	0.0062	1.086	mg/L	0.0062	0.57%
B 249.677†	22.7	0.00105	mg/L	0.000636	0.00105	mg/L	0.000636	60.64%
Ba 233.527†	6835.8	1.060	mg/L	0.0026	1.060	mg/L	0.0026	0.25%
Be 313.042†	569193.7	0.9883	mg/L	0.00700	0.9883	mg/L	0.00700	0.71%
Ca 317.933†	1088306.8	103.6	mg/L	0.34	103.6	mg/L	0.34	0.32%
Cd 228.802†	24121.2	1.066	mg/L	0.0014	1.066	mg/L	0.0014	0.13%
Co 228.616†	32865.8	1.006	mg/L	0.0038	1.006	mg/L	0.0038	0.38%
Cr 267.716†	8844.2	1.048	mg/L	0.0011	1.048	mg/L	0.0011	0.10%
Cu 324.752†	278280.9	1.063	mg/L	0.0077	1.063	mg/L	0.0077	0.73%
Fe 273.955†	236122.3	189.1	mg/L	1.71	189.1	mg/L	1.71	0.91%
K 766.490†	49.9	0.02362	mg/L	0.007035	0.02362	mg/L	0.007035	29.78%
Mg 279.077†	98100.3	103.2	mg/L	0.18	103.2	mg/L	0.18	0.17%
Mn 257.610†	51064.4	0.9796	mg/L	0.00737	0.9796	mg/L	0.00737	0.75%
Mo 202.031†	108.2	0.00450	mg/L	0.000265	0.00450	mg/L	0.000265	5.88%
Na 589.592†	137.7	0.01106	mg/L	0.001889	0.01106	mg/L	0.001889	17.08%
Na 330.237†	-1.9	-0.3497	mg/L	0.16238	-0.3497	mg/L	0.16238	46.43%
Ni 231.604†	3811.8	1.007	mg/L	0.0023	1.007	mg/L	0.0023	0.23%
Pb 220.353†	7573.8	0.9942	mg/L	0.00525	0.9942	mg/L	0.00525	0.53%
Sb 206.836†	2841.9	1.023	mg/L	0.0020	1.023	mg/L	0.0020	0.20%
Se 196.026†	1578.6	1.016	mg/L	0.0112	1.016	mg/L	0.0112	1.11%
Si 288.158†	-33.7	-0.00709	mg/L	0.004759	-0.00709	mg/L	0.004759	67.16%
Sn 189.927†	-104.1	-0.01222	mg/L	0.000785	-0.01222	mg/L	0.000785	6.43%
Sr 421.552†	3901.9	0.00405	mg/L Conf.	0.000031	0.00405	mg/L	0.000031	0.77%
Ti 334.903†	259.0	0.00357	mg/L	0.000270	0.00357	mg/L	0.000270	7.54%
Tl 190.801†	1799.1	1.006	mg/L	0.0056	1.006	mg/L	0.0056	0.56%
V 292.402†	141795.7	1.019	mg/L	0.0041	1.019	mg/L	0.0041	0.40%
Zn 206.200†	4079.7	0.9941	mg/L	0.00209	0.9941	mg/L	0.00209	0.21%

Sequence No.: 30
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 4/16/2013 10:54:57 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 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	2752184.5	99.73	%	0.073				0.07%
ScR 361.383	380381.8	98.88	%	0.611				0.62%
Ag 328.068†	250768.4	1.080	mg/L	0.0010	1.080	mg/L	0.0010	0.09%
Al 308.215†	2605.6	2.108	mg/L	0.0040	2.108	mg/L	0.0040	0.19%
As 188.979†	2841.7	2.102	mg/L	0.0069	2.102	mg/L	0.0069	0.33%
B 249.677†	6891.2	1.031	mg/L	0.0054	1.031	mg/L	0.0054	0.53%
Ba 233.527†	6855.3	1.090	mg/L	0.0048	1.090	mg/L	0.0048	0.44%
Be 313.042†	579859.1	1.007	mg/L	0.0021	1.007	mg/L	0.0021	0.21%
Ca 317.933†	22694.5	2.161	mg/L	0.0081	2.161	mg/L	0.0081	0.38%
Cd 228.802†	24181.7	1.063	mg/L	0.0044	1.063	mg/L	0.0044	0.42%
Co 228.616†	34779.1	1.063	mg/L	0.0052	1.063	mg/L	0.0052	0.49%
Cr 267.716†	9162.0	1.090	mg/L	0.0056	1.090	mg/L	0.0056	0.51%
Cu 324.752†	281314.7	1.066	mg/L	0.0013	1.066	mg/L	0.0013	0.13%
Fe 273.955†	2648.2	2.115	mg/L	0.0165	2.115	mg/L	0.0165	0.78%
K 766.490†	43588.5	20.63	mg/L	0.085	20.63	mg/L	0.085	0.41%
Mg 279.077†	1988.8	2.101	mg/L	0.0026	2.101	mg/L	0.0026	0.12%
Mn 257.610†	52279.8	1.005	mg/L	0.0042	1.005	mg/L	0.0042	0.42%
Mo 202.031†	19453.8	1.039	mg/L	0.0037	1.039	mg/L	0.0037	0.35%
Na 589.592†	637804.7	51.22	mg/L	0.171	51.22	mg/L	0.171	0.33%
Na 330.237†	1727.3	53.17	mg/L	0.201	53.17	mg/L	0.201	0.38%
Ni 231.604†	4023.5	1.063	mg/L	0.0060	1.063	mg/L	0.0060	0.56%
Pb 220.353†	16738.1	2.097	mg/L	0.0095	2.097	mg/L	0.0095	0.45%
Sb 206.836†	5879.6	2.135	mg/L	0.0110	2.135	mg/L	0.0110	0.52%
Se 196.026†	3146.1	2.072	mg/L	0.0130	2.072	mg/L	0.0130	0.63%
Si 288.158†	3042.3	2.016	mg/L	0.0121	2.016	mg/L	0.0121	0.60%
Sn 189.927†	4951.0	1.021	mg/L	0.0049	1.021	mg/L	0.0049	0.48%
Sr 421.552†	971384.5	1.009	mg/L	0.0009	1.009	mg/L	0.0009	0.09%
Ti 334.903†	26709.0	1.023	mg/L	0.0011	1.023	mg/L	0.0011	0.11%
Tl 190.801†	3954.0	2.170	mg/L	0.0136	2.170	mg/L	0.0136	0.63%
V 292.402†	144567.8	1.049	mg/L	0.0016	1.049	mg/L	0.0016	0.15%
Zn 206.200†	4346.3	1.059	mg/L	0.0047	1.059	mg/L	0.0047	0.45%

Sequence No.: 31
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/16/2013 10:59:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 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	2771587.8	100.4	%	0.43				0.43%
ScR 361.383	384747.8	100.0	%	0.44				0.44%
Ag 328.068†	91.4	0.00039	mg/L	0.000198	0.00039	mg/L	0.000198	50.20%
Al 308.215†	9.6	0.00777	mg/L	0.001665	0.00777	mg/L	0.001665	21.41%
As 188.979†	2.4	0.00172	mg/L	0.000972	0.00172	mg/L	0.000972	56.44%
B 249.677†	8.9	0.00134	mg/L	0.000725	0.00134	mg/L	0.000725	54.18%
Ba 233.527†	2.3	0.00036	mg/L	0.000447	0.00036	mg/L	0.000447	124.54%
Be 313.042†	103.4	0.00018	mg/L	0.000004	0.00018	mg/L	0.000004	2.30%
Ca 317.933†	28.3	0.00270	mg/L	0.000999	0.00270	mg/L	0.000999	37.06%
Cd 228.802†	11.1	0.00049	mg/L	0.000094	0.00049	mg/L	0.000094	19.43%
Co 228.616†	2.0	0.00006	mg/L	0.000180	0.00006	mg/L	0.000180	297.84%
Cr 267.716†	-4.2	-0.00050	mg/L	0.000679	-0.00050	mg/L	0.000679	134.57%
Cu 324.752†	158.5	0.00060	mg/L	0.000066	0.00060	mg/L	0.000066	11.03%
Fe 273.955†	3.6	0.00284	mg/L	0.001808	0.00284	mg/L	0.001808	63.54%
K 766.490†	28.5	0.01348	mg/L	0.011862	0.01348	mg/L	0.011862	88.00%
Mg 279.077†	6.6	0.00693	mg/L	0.003479	0.00693	mg/L	0.003479	50.16%
Mn 257.610†	10.6	0.00020	mg/L	0.000057	0.00020	mg/L	0.000057	28.21%
Mo 202.031†	91.5	0.00489	mg/L	0.000762	0.00489	mg/L	0.000762	15.58%
Na 589.592†	-4.8	-0.00038	mg/L	0.001402	-0.00038	mg/L	0.001402	366.23%
Na 330.237†	-0.6	-0.01834	mg/L	0.294044	-0.01834	mg/L	0.294044	>999.9%
Ni 231.604†	5.8	0.00154	mg/L	0.000311	0.00154	mg/L	0.000311	20.20%
Pb 220.353†	7.7	0.00097	mg/L	0.000185	0.00097	mg/L	0.000185	19.07%
Sb 206.836†	11.3	0.00412	mg/L	0.001408	0.00412	mg/L	0.001408	34.18%
Se 196.026†	2.5	0.00165	mg/L	0.003372	0.00165	mg/L	0.003372	204.31%
Si 288.158†	-5.1	-0.00340	mg/L	0.001745	-0.00340	mg/L	0.001745	51.35%
Sn 189.927†	2.3	0.00047	mg/L	0.000551	0.00047	mg/L	0.000551	116.72%
Sr 421.552†	62.4	0.00006	mg/L	0.000030	0.00006	mg/L	0.000030	46.00%
Ti 334.903†	7.3	0.00027	mg/L	0.000499	0.00027	mg/L	0.000499	182.46%
Tl 190.801†	4.8	0.00265	mg/L	0.001752	0.00265	mg/L	0.001752	65.98%
V 292.402†	31.6	0.00023	mg/L	0.000151	0.00023	mg/L	0.000151	66.31%
Zn 206.200†	-1.3	-0.00031	mg/L	0.000653	-0.00031	mg/L	0.000653	210.02%

Sequence No.: 32
Sample ID: WL74 MB1 SWC

Autosampler Location: 319
Date Collected: 4/16/2013 11:03:17 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 MB1 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL74 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2785762.0	100.9	%	0.69				0.69%
ScR 361.383	390495.6	101.5	%	0.51				0.50%
Ag 328.068†	59.2	0.00025	mg/L	0.000193	0.00051	mg/L	0.000386	75.81%
Al 308.215†	12.3	0.01010	mg/L	0.004276	0.02020	mg/L	0.008552	42.33%
As 188.979†	1.0	0.00071	mg/L	0.002025	0.00142	mg/L	0.004050	286.12%
B 249.677†	7.5	0.00112	mg/L	0.000600	0.00223	mg/L	0.001200	53.72%
Ba 233.527†	6.5	0.00103	mg/L	0.000553	0.00205	mg/L	0.001106	53.84%
Be 313.042†	58.7	0.00010	mg/L	0.000018	0.00020	mg/L	0.000037	17.97%
Ca 317.933†	139.6	0.01329	mg/L	0.000458	0.02658	mg/L	0.000917	3.45%
Cd 228.802†	6.1	0.00027	mg/L	0.000294	0.00053	mg/L	0.000588	110.21%
Co 228.616†	0.1	0.00000	mg/L	0.000024	0.00000	mg/L	0.000047	>999.9%
Cr 267.716†	0.1	0.00001	mg/L	0.000111	0.00003	mg/L	0.000222	858.32%
Cu 324.752†	151.8	0.00058	mg/L	0.000070	0.00115	mg/L	0.000141	12.24%
Fe 273.955†	11.3	0.00906	mg/L	0.002221	0.01812	mg/L	0.004443	24.52%
K 766.490†	7.0	0.00332	mg/L	0.002866	0.00663	mg/L	0.005732	86.43%
Mg 279.077†	-0.7	-0.00077	mg/L	0.002233	-0.00153	mg/L	0.004466	291.82%
Mn 257.610†	27.8	0.00053	mg/L	0.000053	0.00107	mg/L	0.000106	9.95%
Mo 202.031†	7.1	0.00038	mg/L	0.000222	0.00075	mg/L	0.000444	58.87%
Na 589.592†	-0.5	-0.00004	mg/L	0.003250	-0.00008	mg/L	0.006501	>999.9%
Na 330.237†	-18.3	-0.5643	mg/L	0.22020	-1.129	mg/L	0.4404	39.02%
Ni 231.604†	5.8	0.00153	mg/L	0.000437	0.00306	mg/L	0.000874	28.58%
Pb 220.353†	6.5	0.00082	mg/L	0.000568	0.00163	mg/L	0.001135	69.45%
Sb 206.836†	5.5	0.00202	mg/L	0.001850	0.00403	mg/L	0.003699	91.70%
Se 196.026†	-1.4	-0.00092	mg/L	0.001414	-0.00184	mg/L	0.002828	153.85%
Si 288.158†	20.3	0.01349	mg/L	0.002599	0.02698	mg/L	0.005197	19.26%
Sn 189.927†	0.6	0.00012	mg/L	0.000599	0.00025	mg/L	0.001199	482.12%
Sr 421.552†	45.0	0.00005	mg/L	0.000018	0.00009	mg/L	0.000036	38.72%
Ti 334.903†	1.0	0.00004	mg/L	0.000260	0.00008	mg/L	0.000520	689.66%
Tl 190.801†	0.7	0.00041	mg/L	0.001522	0.00082	mg/L	0.003044	369.57%
V 292.402†	-0.4	-0.00000	mg/L	0.000067	-0.00001	mg/L	0.000134	>999.9%
Zn 206.200†	3.0	0.00074	mg/L	0.000933	0.00148	mg/L	0.001865	125.85%

Sequence No.: 33
Sample ID: WL74 B SWC

Autosampler Location: 320
Date Collected: 4/16/2013 11:07:34 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2761665.5	100.1	%	0.52				0.52%
ScR 361.383	388132.3	100.9	%	0.39				0.38%
Ag 328.068†	-391.3	-0.00125	mg/L	0.000188	-0.00251	mg/L	0.000376	15.02%
Al 308.215†	92077.6	75.73	mg/L	0.103	151.5	mg/L	0.21	0.14%
As 188.979†	-270.7	-0.00742	mg/L	0.003218	-0.01484	mg/L	0.006435	43.36%
B 249.677†	34.0	0.00497	mg/L	0.001291	0.00994	mg/L	0.002581	25.97%
Ba 233.527†	1221.5	0.1776	mg/L	0.00052	0.3553	mg/L	0.00105	0.30%
Be 313.042†	612.3	0.00091	mg/L	0.000024	0.00182	mg/L	0.000049	2.69%
Ca 317.933†	489680.4	46.62	mg/L	0.013	93.25	mg/L	0.027	0.03%
Cd 228.802†	56.6	0.00368	mg/L	0.000180	0.00735	mg/L	0.000361	4.91%
Co 228.616†	1628.8	0.04000	mg/L	0.000289	0.08000	mg/L	0.000579	0.72%
Cr 267.716†	1278.7	0.1527	mg/L	0.00061	0.3055	mg/L	0.00123	0.40%
Cu 324.752†	33158.5	0.1300	mg/L	0.00165	0.2600	mg/L	0.00330	1.27%
Fe 273.955†	141481.2	113.3	mg/L	0.62	226.6	mg/L	1.24	0.55%
K 766.490†	12096.1	5.725	mg/L	0.0697	11.45	mg/L	0.139	1.22%
Mg 279.077†	22801.6	23.94	mg/L	0.028	47.88	mg/L	0.057	0.12%
Mn 257.610†	47688.0	0.9155	mg/L	0.00319	1.831	mg/L	0.0064	0.35%
Mo 202.031†	158.3	0.00790	mg/L	0.000283	0.01580	mg/L	0.000566	3.58%
Na 589.592†	93143.6	7.480	mg/L	0.0393	14.96	mg/L	0.079	0.53%
Na 330.237†	201.1	7.694	mg/L	0.0383	15.39	mg/L	0.077	0.50%
Ni 231.604†	381.7	0.1009	mg/L	0.00022	0.2017	mg/L	0.00043	0.21%
Pb 220.353†	168.6	0.03566	mg/L	0.001103	0.07133	mg/L	0.002205	3.09%
Sb 206.836†	-14.5	-0.00160	mg/L	0.001394	-0.00321	mg/L	0.002788	86.97%
Se 196.026†	-4.2	-0.01175	mg/L	0.003853	-0.02350	mg/L	0.007706	32.80%
Si 288.158†	2498.2	1.663	mg/L	0.0104	3.325	mg/L	0.0208	0.63%
Sn 189.927†	-57.7	-0.00692	mg/L	0.000158	-0.01385	mg/L	0.000317	2.29%
Sr 421.552†	377676.5	0.3922	mg/L	0.00130	0.7843	mg/L	0.00260	0.33%
Ti 334.903†	146255.0	5.608	mg/L	0.0058	11.22	mg/L	0.012	0.10%
Tl 190.801†	-4.9	0.01053	mg/L	0.002059	0.02106	mg/L	0.004118	19.55%
V 292.402†	56173.2	0.3975	mg/L	0.00411	0.7951	mg/L	0.00822	1.03%
Zn 206.200†	895.7	0.2185	mg/L	0.00126	0.4370	mg/L	0.00252	0.58%

Sequence No.: 34
Sample ID: WL74 C SWC

Autosampler Location: 321
Date Collected: 4/16/2013 11:11:35 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 C SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2784183.5	100.9	%	0.22				0.22%
ScR 361.383	391054.8	101.7	%	0.26				0.26%
Ag 328.068†	-423.6	-0.00135	mg/L	0.000179	-0.00269	mg/L	0.000358	13.29%
Al 308.215†	71486.2	58.79	mg/L	0.104	117.6	mg/L	0.21	0.18%
As 188.979†	-242.6	-0.00084	mg/L	0.002252	-0.00168	mg/L	0.004504	268.15%
B 249.677†	55.6	0.00819	mg/L	0.000842	0.01638	mg/L	0.001684	10.28%
Ba 233.527†	778.7	0.1078	mg/L	0.00107	0.2157	mg/L	0.00214	0.99%
Be 313.042†	574.6	0.00085	mg/L	0.000008	0.00170	mg/L	0.000016	0.94%
Ca 317.933†	570609.2	54.33	mg/L	0.084	108.7	mg/L	0.17	0.15%
Cd 228.802†	52.3	0.00336	mg/L	0.000120	0.00673	mg/L	0.000241	3.58%
Co 228.616†	1849.0	0.04743	mg/L	0.000280	0.09485	mg/L	0.000560	0.59%
Cr 267.716†	1015.7	0.1215	mg/L	0.00084	0.2430	mg/L	0.00169	0.70%
Cu 324.752†	27656.1	0.1090	mg/L	0.00016	0.2181	mg/L	0.00032	0.15%
Fe 273.955†	135857.9	108.8	mg/L	1.11	217.6	mg/L	2.22	1.02%
K 766.490†	10968.6	5.191	mg/L	0.0125	10.38	mg/L	0.025	0.24%
Mg 279.077†	19785.5	20.77	mg/L	0.052	41.53	mg/L	0.105	0.25%
Mn 257.610†	44721.0	0.8585	mg/L	0.00669	1.717	mg/L	0.0134	0.78%
Mo 202.031†	169.2	0.00840	mg/L	0.000291	0.01679	mg/L	0.000582	3.47%
Na 589.592†	99911.8	8.023	mg/L	0.0093	16.05	mg/L	0.019	0.12%
Na 330.237†	218.2	8.117	mg/L	0.1311	16.23	mg/L	0.262	1.61%
Ni 231.604†	344.8	0.09110	mg/L	0.000561	0.1822	mg/L	0.00112	0.62%
Pb 220.353†	-0.1	0.01016	mg/L	0.000103	0.02031	mg/L	0.000206	1.02%
Sb 206.836†	-14.0	-0.00131	mg/L	0.001603	-0.00261	mg/L	0.003206	122.76%
Se 196.026†	-11.4	-0.01455	mg/L	0.005050	-0.02909	mg/L	0.010099	34.71%
Si 288.158†	1841.4	1.226	mg/L	0.0076	2.452	mg/L	0.0153	0.62%
Sn 189.927†	-60.5	-0.00694	mg/L	0.000679	-0.01387	mg/L	0.001357	9.78%
Sr 421.552†	386727.3	0.4015	mg/L	0.00113	0.8031	mg/L	0.00226	0.28%
Ti 334.903†	136293.2	5.226	mg/L	0.0185	10.45	mg/L	0.037	0.35%
Tl 190.801†	-0.9	0.01215	mg/L	0.001414	0.02431	mg/L	0.002827	11.63%
V 292.402†	54925.8	0.3888	mg/L	0.00102	0.7777	mg/L	0.00205	0.26%
Zn 206.200†	815.7	0.1989	mg/L	0.00163	0.3979	mg/L	0.00326	0.82%

Sequence No.: 35
Sample ID: WL74 J-L SWC

Dilution: 10.000000X

Autosampler Location: 322
Date Collected: 4/16/2013 11:15:36 AM
Data Type: Original

Nebulizer Parameters: WL74 J-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 J-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2795333.9	101.3	%	0.01				0.01%
ScR 361.383	392244.9	102.0	%	0.49				0.48%
Ag 328.068†	-57.4	-0.00011	mg/L	0.000285	-0.00111	mg/L	0.002845	256.02%
Al 308.215†	14656.1	12.05	mg/L	0.077	120.5	mg/L	0.77	0.64%
As 188.979†	-32.4	0.00691	mg/L	0.002173	0.06908	mg/L	0.021729	31.46%
B 249.677†	18.6	0.00276	mg/L	0.000291	0.02757	mg/L	0.002909	10.55%
Ba 233.527†	161.3	0.02276	mg/L	0.000407	0.2276	mg/L	0.00407	1.79%
Be 313.042†	96.3	0.00014	mg/L	0.000034	0.00141	mg/L	0.000345	24.39%
Ca 317.933†	184764.4	17.59	mg/L	0.079	175.9	mg/L	0.79	0.45%
Cd 228.802†	14.7	0.00079	mg/L	0.000048	0.00794	mg/L	0.000480	6.04%
Co 228.616†	324.8	0.00831	mg/L	0.000123	0.08314	mg/L	0.001230	1.48%
Cr 267.716†	193.3	0.02297	mg/L	0.000641	0.2297	mg/L	0.00641	2.79%
Cu 324.752†	4868.0	0.01921	mg/L	0.000219	0.1921	mg/L	0.00219	1.14%
Fe 273.955†	24584.7	19.69	mg/L	0.359	196.9	mg/L	3.59	1.83%
K 766.490†	2301.2	1.089	mg/L	0.0072	10.89	mg/L	0.072	0.66%
Mg 279.077†	4131.8	4.337	mg/L	0.0516	43.37	mg/L	0.516	1.19%
Mn 257.610†	8270.7	0.1587	mg/L	0.00223	1.587	mg/L	0.0223	1.40%
Mo 202.031†	49.6	0.00244	mg/L	0.000268	0.02443	mg/L	0.002678	10.96%
Na 589.592†	34694.5	2.786	mg/L	0.0110	27.86	mg/L	0.110	0.40%
Na 330.237†	65.4	2.263	mg/L	0.2115	22.63	mg/L	2.115	9.34%
Ni 231.604†	60.3	0.01594	mg/L	0.000889	0.1594	mg/L	0.00889	5.58%
Pb 220.353†	-4.6	0.00165	mg/L	0.000442	0.01650	mg/L	0.004416	26.76%
Sb 206.836†	-3.6	-0.00067	mg/L	0.000915	-0.00674	mg/L	0.009148	135.82%
Se 196.026†	-7.1	-0.00608	mg/L	0.003636	-0.06082	mg/L	0.036358	59.78%
Si 288.158†	354.7	0.2362	mg/L	0.00961	2.362	mg/L	0.0961	4.07%
Sn 189.927†	-28.8	-0.00429	mg/L	0.000446	-0.04293	mg/L	0.004465	10.40%
Sr 421.552†	94210.5	0.09782	mg/L	0.000306	0.9782	mg/L	0.00306	0.31%
Ti 334.903†	24187.3	0.9269	mg/L	0.00228	9.269	mg/L	0.0228	0.25%
Tl 190.801†	8.6	0.00704	mg/L	0.001946	0.07040	mg/L	0.019463	27.65%
V 292.402†	9683.5	0.06853	mg/L	0.000332	0.6853	mg/L	0.00332	0.48%
Zn 206.200†	146.2	0.03567	mg/L	0.001208	0.3567	mg/L	0.01208	3.39%

Sequence No.: 36
Sample ID: WL74 J SWC

Autosampler Location: 323
Date Collected: 4/16/2013 11:19:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 J SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2761818.2	100.1	%	0.07				0.07%
ScR 361.383	387826.3	100.8	%	0.48				0.47%
Ag 328.068†	-453.3	-0.00126	mg/L	0.000081	-0.00251	mg/L	0.000162	6.45%
Al 308.215†	74191.7	61.02	mg/L	0.188	122.0	mg/L	0.38	0.31%
As 188.979†	-206.9	0.00479	mg/L	0.004605	0.00958	mg/L	0.009211	96.15%
B 249.677†	87.3	0.01296	mg/L	0.000690	0.02592	mg/L	0.001380	5.33%
Ba 233.527†	791.7	0.1116	mg/L	0.00098	0.2232	mg/L	0.00195	0.87%
Be 313.042†	525.6	0.00078	mg/L	0.000004	0.00156	mg/L	0.000007	0.45%
Ca 317.933†	947091.1	90.17	mg/L	0.145	180.3	mg/L	0.29	0.16%
Cd 228.802†	48.9	0.00306	mg/L	0.000186	0.00612	mg/L	0.000372	6.07%
Co 228.616†	1585.8	0.04023	mg/L	0.000142	0.08047	mg/L	0.000283	0.35%
Cr 267.716†	995.5	0.1182	mg/L	0.00129	0.2364	mg/L	0.00258	1.09%
Cu 324.752†	24813.1	0.09779	mg/L	0.000504	0.1956	mg/L	0.00101	0.51%
Fe 273.955†	121647.6	97.42	mg/L	0.390	194.8	mg/L	0.78	0.40%
K 766.490†	11578.8	5.480	mg/L	0.0354	10.96	mg/L	0.071	0.65%
Mg 279.077†	20842.1	21.88	mg/L	0.048	43.76	mg/L	0.097	0.22%
Mn 257.610†	40907.9	0.7851	mg/L	0.00170	1.570	mg/L	0.0034	0.22%
Mo 202.031†	150.3	0.00696	mg/L	0.000321	0.01392	mg/L	0.000642	4.61%
Na 589.592†	177489.9	14.25	mg/L	0.057	28.51	mg/L	0.114	0.40%
Na 330.237†	440.9	14.84	mg/L	0.078	29.69	mg/L	0.155	0.52%
Ni 231.604†	307.1	0.08114	mg/L	0.001239	0.1623	mg/L	0.00248	1.53%
Pb 220.353†	-38.7	0.00654	mg/L	0.000588	0.01309	mg/L	0.001176	8.99%
Sb 206.836†	-8.5	0.00016	mg/L	0.001025	0.00032	mg/L	0.002049	647.24%
Se 196.026†	-11.6	-0.01486	mg/L	0.000741	-0.02973	mg/L	0.001481	4.98%
Si 288.158†	1928.3	1.284	mg/L	0.0107	2.568	mg/L	0.0214	0.83%
Sn 189.927†	-69.2	-0.00581	mg/L	0.001848	-0.01161	mg/L	0.003695	31.81%
Sr 421.552†	477926.3	0.4962	mg/L	0.00125	0.9925	mg/L	0.00249	0.25%
Ti 334.903†	123407.1	4.729	mg/L	0.0102	9.459	mg/L	0.0204	0.22%
Tl 190.801†	9.7	0.01665	mg/L	0.002133	0.03330	mg/L	0.004267	12.81%
V 292.402†	49244.1	0.3486	mg/L	0.00213	0.6973	mg/L	0.00426	0.61%
Zn 206.200†	719.5	0.1755	mg/L	0.00049	0.3510	mg/L	0.00098	0.28%

Sequence No.: 37
Sample ID: WL74 JDUP SWC

Autosampler Location: 324
Date Collected: 4/16/2013 11:23:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 JDUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 JDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2805497.1	101.7	%	0.80				0.79%
ScR 361.383	391813.1	101.8	%	0.42				0.41%
Ag 328.068†	-408.1	-0.00132	mg/L	0.000066	-0.00264	mg/L	0.000132	5.01%
Al 308.215†	77414.8	63.67	mg/L	0.237	127.3	mg/L	0.47	0.37%
As 188.979†	-292.1	-0.01288	mg/L	0.004857	-0.02576	mg/L	0.009715	37.72%
B 249.677†	98.6	0.01463	mg/L	0.000757	0.02926	mg/L	0.001514	5.17%
Ba 233.527†	776.7	0.1077	mg/L	0.00194	0.2155	mg/L	0.00388	1.80%
Be 313.042†	504.8	0.00073	mg/L	0.000019	0.00145	mg/L	0.000037	2.57%
Ca 317.933†	513504.9	48.89	mg/L	0.242	97.78	mg/L	0.483	0.49%
Cd 228.802†	43.5	0.00317	mg/L	0.000135	0.00635	mg/L	0.000270	4.25%
Co 228.616†	1840.2	0.04596	mg/L	0.000548	0.09192	mg/L	0.001096	1.19%
Cr 267.716†	1077.3	0.1285	mg/L	0.00078	0.2571	mg/L	0.00155	0.60%
Cu 324.752†	25128.9	0.09924	mg/L	0.000939	0.1985	mg/L	0.00188	0.95%
Fe 273.955†	133968.5	107.3	mg/L	0.68	214.6	mg/L	1.36	0.63%
K 766.490†	11414.4	5.402	mg/L	0.0164	10.80	mg/L	0.033	0.30%
Mg 279.077†	23011.1	24.16	mg/L	0.174	48.33	mg/L	0.348	0.72%
Mn 257.610†	43396.9	0.8331	mg/L	0.00355	1.666	mg/L	0.0071	0.43%
Mo 202.031†	128.5	0.00628	mg/L	0.000546	0.01256	mg/L	0.001091	8.69%
Na 589.592†	184441.1	14.81	mg/L	0.007	29.62	mg/L	0.015	0.05%
Na 330.237†	444.6	15.28	mg/L	0.406	30.56	mg/L	0.812	2.66%
Ni 231.604†	346.1	0.09144	mg/L	0.000189	0.1829	mg/L	0.00038	0.21%
Pb 220.353†	-44.5	0.00603	mg/L	0.000471	0.01206	mg/L	0.000942	7.81%
Sb 206.836†	-13.5	-0.00078	mg/L	0.002306	-0.00157	mg/L	0.004611	294.47%
Se 196.026†	-10.8	-0.01466	mg/L	0.004708	-0.02931	mg/L	0.009416	32.12%
Si 288.158†	2113.5	1.407	mg/L	0.0099	2.814	mg/L	0.0199	0.71%
Sn 189.927†	-59.1	-0.00697	mg/L	0.000862	-0.01394	mg/L	0.001725	12.38%
Sr 421.552†	383307.1	0.3980	mg/L	0.00054	0.7960	mg/L	0.00108	0.14%
Ti 334.903†	154025.7	5.906	mg/L	0.0220	11.81	mg/L	0.044	0.37%
Tl 190.801†	3.3	0.01432	mg/L	0.001591	0.02864	mg/L	0.003182	11.11%
V 292.402†	52636.5	0.3720	mg/L	0.00283	0.7440	mg/L	0.00566	0.76%
Zn 206.200†	793.6	0.1936	mg/L	0.00285	0.3871	mg/L	0.00571	1.47%

Sequence No.: 38
Sample ID: WL74 JSPK SWC

Autosampler Location: 325
Date Collected: 4/16/2013 11:27:54 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 JSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 JSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2776439.8	100.6	%	0.49				0.49%
ScR 361.383	386530.4	100.5	%	0.42				0.42%
Ag 328.068†	124652.0	0.5373	mg/L	0.00468	1.075	mg/L	0.0094	0.87%
Al 308.215†	80257.8	66.01	mg/L	0.091	132.0	mg/L	0.18	0.14%
As 188.979†	2716.4	2.132	mg/L	0.0140	4.264	mg/L	0.0281	0.66%
B 249.677†	88.3	0.01189	mg/L	0.000660	0.02378	mg/L	0.001321	5.55%
Ba 233.527†	14335.3	2.267	mg/L	0.0135	4.534	mg/L	0.0270	0.60%
Be 313.042†	289313.3	0.5022	mg/L	0.00147	1.004	mg/L	0.0029	0.29%
Ca 317.933†	671497.3	63.93	mg/L	0.141	127.9	mg/L	0.28	0.22%
Cd 228.802†	12439.5	0.5416	mg/L	0.00311	1.083	mg/L	0.0062	0.57%
Co 228.616†	18499.9	0.5583	mg/L	0.00261	1.117	mg/L	0.0052	0.47%
Cr 267.716†	5450.6	0.6477	mg/L	0.00348	1.295	mg/L	0.0070	0.54%
Cu 324.752†	165586.1	0.6312	mg/L	0.00606	1.262	mg/L	0.0121	0.96%
Fe 273.955†	119715.5	95.87	mg/L	0.541	191.7	mg/L	1.08	0.56%
K 766.490†	34148.4	16.16	mg/L	0.103	32.32	mg/L	0.206	0.64%
Mg 279.077†	32364.3	34.02	mg/L	0.126	68.03	mg/L	0.252	0.37%
Mn 257.610†	64161.5	1.232	mg/L	0.0055	2.464	mg/L	0.0110	0.45%
Mo 202.031†	140.0	0.00670	mg/L	0.000171	0.01339	mg/L	0.000343	2.56%
Na 589.592†	317998.7	25.54	mg/L	0.067	51.07	mg/L	0.134	0.26%
Na 330.237†	806.7	25.92	mg/L	0.113	51.84	mg/L	0.226	0.44%
Ni 231.604†	2267.6	0.5986	mg/L	0.00430	1.197	mg/L	0.0086	0.72%
Pb 220.353†	16604.1	2.093	mg/L	0.0123	4.185	mg/L	0.0245	0.59%
Sb 206.836†	2244.2	0.8137	mg/L	0.00812	1.627	mg/L	0.0162	1.00%
Se 196.026†	3182.6	2.089	mg/L	0.0129	4.178	mg/L	0.0259	0.62%
Si 288.158†	2161.5	1.442	mg/L	0.0165	2.884	mg/L	0.0330	1.15%
Sn 189.927†	-69.3	-0.00764	mg/L	0.000777	-0.01527	mg/L	0.001553	10.17%
Sr 421.552†	941047.9	0.9771	mg/L	0.00151	1.954	mg/L	0.0030	0.15%
Ti 334.903†	119506.5	4.581	mg/L	0.0052	9.162	mg/L	0.0103	0.11%
Tl 190.801†	3766.0	2.081	mg/L	0.0124	4.163	mg/L	0.0248	0.59%
V 292.402†	118105.0	0.8484	mg/L	0.00855	1.697	mg/L	0.0171	1.01%
Zn 206.200†	2814.6	0.6861	mg/L	0.00388	1.372	mg/L	0.0078	0.57%

Sequence No.: 39
Sample ID: WL74 JPOST SWC

Autosampler Location: 326
Date Collected: 4/16/2013 11:31:58 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 JPOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 JPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2755527.4	99.85	%	0.576				0.58%
ScR 361.383	381555.4	99.18	%	0.220				0.22%
Ag 328.068†	125540.8	0.5414	mg/L	0.00281	1.083	mg/L	0.0056	0.52%
Al 308.215†	78113.3	64.24	mg/L	0.155	128.5	mg/L	0.31	0.24%
As 188.979†	2795.4	2.194	mg/L	0.0138	4.388	mg/L	0.0277	0.63%
B 249.677†	95.0	0.01289	mg/L	0.000784	0.02577	mg/L	0.001569	6.09%
Ba 233.527†	14670.3	2.319	mg/L	0.0028	4.639	mg/L	0.0055	0.12%
Be 313.042†	291002.4	0.5051	mg/L	0.00295	1.010	mg/L	0.0059	0.58%
Ca 317.933†	1070306.9	101.9	mg/L	0.50	203.8	mg/L	1.00	0.49%
Cd 228.802†	12594.9	0.5482	mg/L	0.00304	1.096	mg/L	0.0061	0.55%
Co 228.616†	18769.5	0.5661	mg/L	0.00300	1.132	mg/L	0.0060	0.53%
Cr 267.716†	5617.0	0.6671	mg/L	0.00138	1.334	mg/L	0.0028	0.21%
Cu 324.752†	168849.5	0.6438	mg/L	0.00493	1.288	mg/L	0.0099	0.77%
Fe 273.955†	126000.1	100.9	mg/L	0.51	201.8	mg/L	1.03	0.51%
K 766.490†	34532.8	16.34	mg/L	0.045	32.69	mg/L	0.090	0.28%
Mg 279.077†	32904.0	34.58	mg/L	0.043	69.16	mg/L	0.087	0.13%
Mn 257.610†	68276.0	1.311	mg/L	0.0065	2.622	mg/L	0.0130	0.49%
Mo 202.031†	161.1	0.00737	mg/L	0.000193	0.01474	mg/L	0.000385	2.61%
Na 589.592†	312345.0	25.08	mg/L	0.060	50.16	mg/L	0.120	0.24%
Na 330.237†	801.9	25.83	mg/L	0.144	51.65	mg/L	0.287	0.56%
Ni 231.604†	2311.8	0.6110	mg/L	0.00108	1.222	mg/L	0.0022	0.18%
Pb 220.353†	16737.2	2.109	mg/L	0.0135	4.217	mg/L	0.0269	0.64%
Sb 206.836†	6465.7	2.348	mg/L	0.0098	4.697	mg/L	0.0197	0.42%
Se 196.026†	3272.6	2.148	mg/L	0.0193	4.296	mg/L	0.0387	0.90%
Si 288.158†	1943.6	1.297	mg/L	0.0111	2.594	mg/L	0.0221	0.85%
Sn 189.927†	-77.6	-0.00533	mg/L	0.001297	-0.01066	mg/L	0.002594	24.35%
Sr 421.552†	984895.7	1.023	mg/L	0.0012	2.045	mg/L	0.0024	0.12%
Ti 334.903†	125250.0	4.799	mg/L	0.0155	9.598	mg/L	0.0311	0.32%
Tl 190.801†	3816.5	2.110	mg/L	0.0134	4.219	mg/L	0.0269	0.64%
V 292.402†	122377.8	0.8790	mg/L	0.00586	1.758	mg/L	0.0117	0.67%
Zn 206.200†	2877.1	0.7013	mg/L	0.00241	1.403	mg/L	0.0048	0.34%

Sequence No.: 40
Sample ID: WL74 REF1 SWC

Autosampler Location: 327
Date Collected: 4/16/2013 11:36:02 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 REF1 SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2783916.1	100.9	%	0.16				0.16%
ScR 361.383	393113.3	102.2	%	0.28				0.27%
Ag 328.068†	259369.3	1.117	mg/L	0.0014	2.234	mg/L	0.0028	0.13%
Al 308.215†	116391.9	95.73	mg/L	0.123	191.5	mg/L	0.25	0.13%
As 188.979†	1780.3	1.373	mg/L	0.0084	2.747	mg/L	0.0169	0.61%
B 249.677†	7484.8	1.119	mg/L	0.0072	2.239	mg/L	0.0145	0.65%
Ba 233.527†	20985.4	3.317	mg/L	0.0144	6.635	mg/L	0.0287	0.43%
Be 313.042†	502291.3	0.8721	mg/L	0.00035	1.744	mg/L	0.0007	0.04%
Ca 317.933†	434003.2	41.32	mg/L	0.132	82.64	mg/L	0.264	0.32%
Cd 228.802†	16353.1	0.7191	mg/L	0.00206	1.438	mg/L	0.0041	0.29%
Co 228.616†	24905.7	0.7584	mg/L	0.00166	1.517	mg/L	0.0033	0.22%
Cr 267.716†	6387.8	0.7613	mg/L	0.00460	1.523	mg/L	0.0092	0.60%
Cu 324.752†	183407.1	0.7017	mg/L	0.00137	1.403	mg/L	0.0027	0.20%
Fe 273.955†	184806.1	148.0	mg/L	0.75	296.0	mg/L	1.50	0.51%
K 766.490†	78238.2	37.03	mg/L	0.152	74.05	mg/L	0.305	0.41%
Mg 279.077†	27697.1	29.08	mg/L	0.159	58.16	mg/L	0.319	0.55%
Mn 257.610†	235170.4	4.517	mg/L	0.0180	9.034	mg/L	0.0360	0.40%
Mo 202.031†	8692.7	0.4640	mg/L	0.00162	0.9279	mg/L	0.00323	0.35%
Na 589.592†	71684.6	5.756	mg/L	0.0278	11.51	mg/L	0.056	0.48%
Na 330.237†	172.7	5.437	mg/L	0.1473	10.87	mg/L	0.295	2.71%
Ni 231.604†	2133.8	0.5634	mg/L	0.00275	1.127	mg/L	0.0055	0.49%
Pb 220.353†	10405.2	1.322	mg/L	0.0040	2.643	mg/L	0.0081	0.31%
Sb 206.836†	1259.5	0.4651	mg/L	0.00311	0.9301	mg/L	0.00622	0.67%
Se 196.026†	2547.7	1.667	mg/L	0.0092	3.334	mg/L	0.0184	0.55%
Si 288.158†	4303.1	2.850	mg/L	0.0211	5.701	mg/L	0.0422	0.74%
Sn 189.927†	8058.1	1.663	mg/L	0.0064	3.326	mg/L	0.0128	0.39%
Sr 421.552†	525875.4	0.5460	mg/L	0.00098	1.092	mg/L	0.0020	0.18%
Ti 334.903†	61521.4	2.357	mg/L	0.0027	4.715	mg/L	0.0053	0.11%
Tl 190.801†	2443.7	1.359	mg/L	0.0070	2.718	mg/L	0.0141	0.52%
V 292.402†	119421.3	0.8578	mg/L	0.00309	1.716	mg/L	0.0062	0.36%
Zn 206.200†	7448.1	1.815	mg/L	0.0102	3.630	mg/L	0.0204	0.56%

Sequence No.: 41
Sample ID: WL74 MB1SPK SWC

Autosampler Location: 328
Date Collected: 4/16/2013 11:40:04 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 MB1SPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL74 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2774882.4	100.6	%	0.43				0.43%
ScR 361.383	389133.7	101.2	%	0.13				0.13%
Ag 328.068†	128727.4	0.5544	mg/L	0.00174	1.109	mg/L	0.0035	0.31%
Al 308.215†	2659.2	2.180	mg/L	0.0079	4.360	mg/L	0.0159	0.36%
As 188.979†	3030.7	2.207	mg/L	0.0141	4.415	mg/L	0.0282	0.64%
B 249.677†	15.7	0.00113	mg/L	0.000459	0.00225	mg/L	0.000918	40.80%
Ba 233.527†	13394.7	2.131	mg/L	0.0217	4.262	mg/L	0.0433	1.02%
Be 313.042†	292088.0	0.5072	mg/L	0.00370	1.014	mg/L	0.0074	0.73%
Ca 317.933†	109155.9	10.39	mg/L	0.039	20.79	mg/L	0.077	0.37%
Cd 228.802†	12374.6	0.5374	mg/L	0.00167	1.075	mg/L	0.0033	0.31%
Co 228.616†	17280.7	0.5290	mg/L	0.00194	1.058	mg/L	0.0039	0.37%
Cr 267.716†	4635.1	0.5507	mg/L	0.00099	1.101	mg/L	0.0020	0.18%
Cu 324.752†	139687.0	0.5295	mg/L	0.00190	1.059	mg/L	0.0038	0.36%
Fe 273.955†	2689.9	2.151	mg/L	0.0017	4.302	mg/L	0.0034	0.08%
K 766.490†	22077.4	10.45	mg/L	0.078	20.90	mg/L	0.156	0.75%
Mg 279.077†	10333.5	10.88	mg/L	0.029	21.76	mg/L	0.058	0.26%
Mn 257.610†	26653.1	0.5123	mg/L	0.00232	1.025	mg/L	0.0046	0.45%
Mo 202.031†	66.0	0.00338	mg/L	0.000255	0.00676	mg/L	0.000509	7.54%
Na 589.592†	129169.1	10.37	mg/L	0.027	20.74	mg/L	0.054	0.26%
Na 330.237†	351.5	10.67	mg/L	0.144	21.34	mg/L	0.288	1.35%
Ni 231.604†	2029.3	0.5362	mg/L	0.00313	1.072	mg/L	0.0063	0.58%
Pb 220.353†	16996.8	2.130	mg/L	0.0130	4.259	mg/L	0.0260	0.61%
Sb 206.836†	5909.9	2.143	mg/L	0.0102	4.286	mg/L	0.0203	0.47%
Se 196.026†	3298.8	2.173	mg/L	0.0041	4.346	mg/L	0.0082	0.19%
Si 288.158†	20.1	0.01642	mg/L	0.002983	0.03284	mg/L	0.005966	18.17%
Sn 189.927†	-21.8	-0.00252	mg/L	0.000525	-0.00503	mg/L	0.001049	20.85%
Sr 421.552†	492586.4	0.5115	mg/L	0.00116	1.023	mg/L	0.0023	0.23%
Ti 334.903†	69.7	0.00195	mg/L	0.000249	0.00390	mg/L	0.000499	12.79%
Tl 190.801†	4003.5	2.201	mg/L	0.0092	4.402	mg/L	0.0184	0.42%
V 292.402†	73505.4	0.5331	mg/L	0.00235	1.066	mg/L	0.0047	0.44%
Zn 206.200†	2163.3	0.5272	mg/L	0.00083	1.054	mg/L	0.0017	0.16%

Sequence No.: 42
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 4/16/2013 11:44:05 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 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	2763933.6	100.2	%	0.73				0.73%
ScR 361.383	384095.9	99.84	%	0.690				0.69%
Ag 328.068†	247314.7	1.065	mg/L	0.0049	1.065	mg/L	0.0049	0.46%
Al 308.215†	2564.7	2.075	mg/L	0.0172	2.075	mg/L	0.0172	0.83%
As 188.979†	2824.5	2.089	mg/L	0.0146	2.089	mg/L	0.0146	0.70%
B 249.677†	6797.2	1.017	mg/L	0.0067	1.017	mg/L	0.0067	0.66%
Ba 233.527†	6666.4	1.060	mg/L	0.0119	1.060	mg/L	0.0119	1.12%
Be 313.042†	573872.9	0.9964	mg/L	0.00680	0.9964	mg/L	0.00680	0.68%
Ca 317.933†	22277.8	2.121	mg/L	0.0159	2.121	mg/L	0.0159	0.75%
Cd 228.802†	24151.5	1.061	mg/L	0.0054	1.061	mg/L	0.0054	0.51%
Co 228.616†	34438.5	1.053	mg/L	0.0067	1.053	mg/L	0.0067	0.64%
Cr 267.716†	8994.5	1.070	mg/L	0.0089	1.070	mg/L	0.0089	0.83%
Cu 324.752†	278196.2	1.054	mg/L	0.0064	1.054	mg/L	0.0064	0.61%
Fe 273.955†	2614.2	2.088	mg/L	0.0151	2.088	mg/L	0.0151	0.72%
K 766.490†	43304.0	20.49	mg/L	0.077	20.49	mg/L	0.077	0.38%
Mg 279.077†	1946.9	2.056	mg/L	0.0093	2.056	mg/L	0.0093	0.45%
Mn 257.610†	51853.3	0.9964	mg/L	0.00613	0.9964	mg/L	0.00613	0.62%
Mo 202.031†	19350.8	1.034	mg/L	0.0066	1.034	mg/L	0.0066	0.64%
Na 589.592†	633856.8	50.90	mg/L	0.151	50.90	mg/L	0.151	0.30%
Na 330.237†	1703.0	52.42	mg/L	0.544	52.42	mg/L	0.544	1.04%
Ni 231.604†	3949.0	1.043	mg/L	0.0104	1.043	mg/L	0.0104	1.00%
Pb 220.353†	16603.2	2.081	mg/L	0.0120	2.081	mg/L	0.0120	0.58%
Sb 206.836†	5875.9	2.134	mg/L	0.0143	2.134	mg/L	0.0143	0.67%
Se 196.026†	3124.4	2.057	mg/L	0.0148	2.057	mg/L	0.0148	0.72%
Si 288.158†	2998.0	1.987	mg/L	0.0087	1.987	mg/L	0.0087	0.44%
Sn 189.927†	4937.2	1.018	mg/L	0.0087	1.018	mg/L	0.0087	0.86%
Sr 421.552†	964103.4	1.001	mg/L	0.0034	1.001	mg/L	0.0034	0.34%
Ti 334.903†	26456.9	1.014	mg/L	0.0030	1.014	mg/L	0.0030	0.29%
Tl 190.801†	3919.7	2.151	mg/L	0.0131	2.151	mg/L	0.0131	0.61%
V 292.402†	142549.0	1.034	mg/L	0.0043	1.034	mg/L	0.0043	0.41%
Zn 206.200†	4255.7	1.037	mg/L	0.0083	1.037	mg/L	0.0083	0.80%

Sequence No.: 43
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 4/16/2013 11:48:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 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	2797507.9	101.4	%	0.56				0.55%
ScR 361.383	391408.5	101.7	%	0.28				0.28%
Ag 328.068†	61.9	0.00027	mg/L	0.000169	0.00027	mg/L	0.000169	63.32%
Al 308.215†	12.3	0.01004	mg/L	0.006195	0.01004	mg/L	0.006195	61.70%
As 188.979†	1.4	0.00107	mg/L	0.002124	0.00107	mg/L	0.002124	197.96%
B 249.677†	9.6	0.00144	mg/L	0.001103	0.00144	mg/L	0.001103	76.82%
Ba 233.527†	2.4	0.00038	mg/L	0.000364	0.00038	mg/L	0.000364	95.81%
Be 313.042†	93.1	0.00016	mg/L	0.000039	0.00016	mg/L	0.000039	24.30%
Ca 317.933†	12.2	0.00116	mg/L	0.000141	0.00116	mg/L	0.000141	12.11%
Cd 228.802†	5.7	0.00025	mg/L	0.000076	0.00025	mg/L	0.000076	30.65%
Co 228.616†	7.8	0.00024	mg/L	0.000344	0.00024	mg/L	0.000344	145.47%
Cr 267.716†	-5.4	-0.00064	mg/L	0.000281	-0.00064	mg/L	0.000281	44.06%
Cu 324.752†	74.4	0.00028	mg/L	0.000051	0.00028	mg/L	0.000051	18.04%
Fe 273.955†	4.0	0.00321	mg/L	0.002513	0.00321	mg/L	0.002513	78.24%
K 766.490†	37.4	0.01771	mg/L	0.006380	0.01771	mg/L	0.006380	36.03%
Mg 279.077†	-5.8	-0.00606	mg/L	0.005386	-0.00606	mg/L	0.005386	88.87%
Mn 257.610†	3.5	0.00007	mg/L	0.000040	0.00007	mg/L	0.000040	59.51%
Mo 202.031†	86.8	0.00464	mg/L	0.000876	0.00464	mg/L	0.000876	18.89%
Na 589.592†	52.9	0.00424	mg/L	0.000803	0.00424	mg/L	0.000803	18.93%
Na 330.237†	-5.1	-0.1562	mg/L	0.40328	-0.1562	mg/L	0.40328	258.25%
Ni 231.604†	0.9	0.00025	mg/L	0.000671	0.00025	mg/L	0.000671	272.64%
Pb 220.353†	7.3	0.00091	mg/L	0.000579	0.00091	mg/L	0.000579	63.63%
Sb 206.836†	26.6	0.00968	mg/L	0.000849	0.00968	mg/L	0.000849	8.77%
Se 196.026†	3.5	0.00232	mg/L	0.001260	0.00232	mg/L	0.001260	54.27%
Si 288.158†	-7.6	-0.00503	mg/L	0.003639	-0.00503	mg/L	0.003639	72.36%
Sn 189.927†	4.9	0.00102	mg/L	0.000690	0.00102	mg/L	0.000690	67.47%
Sr 421.552†	74.1	0.00008	mg/L	0.000023	0.00008	mg/L	0.000023	29.74%
Ti 334.903†	28.6	0.00109	mg/L	0.000985	0.00109	mg/L	0.000985	90.24%
Tl 190.801†	5.4	0.00300	mg/L	0.000998	0.00300	mg/L	0.000998	33.25%
V 292.402†	22.5	0.00016	mg/L	0.000176	0.00016	mg/L	0.000176	108.74%
Zn 206.200†	-2.2	-0.00055	mg/L	0.000603	-0.00055	mg/L	0.000603	110.20%

Sequence No.: 44
Sample ID: WL74 D SWC

Autosampler Location: 329
Date Collected: 4/16/2013 11:52:25 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2776142.0	100.6	%	0.33				0.33%
ScR 361.383	391062.6	101.7	%	0.32				0.31%
Ag 328.068†	-366.9	-0.00123	mg/L	0.000181	-0.00246	mg/L	0.000362	14.73%
Al 308.215†	60799.5	50.00	mg/L	0.073	100.0	mg/L	0.15	0.15%
As 188.979†	-229.3	-0.01003	mg/L	0.002565	-0.02006	mg/L	0.005129	25.57%
B 249.677†	94.4	0.01403	mg/L	0.001004	0.02806	mg/L	0.002008	7.16%
Ba 233.527†	750.7	0.1055	mg/L	0.00105	0.2110	mg/L	0.00211	1.00%
Be 313.042†	501.5	0.00074	mg/L	0.000016	0.00148	mg/L	0.000032	2.13%
Ca 317.933†	390736.3	37.20	mg/L	0.048	74.41	mg/L	0.097	0.13%
Cd 228.802†	44.3	0.00293	mg/L	0.000139	0.00587	mg/L	0.000278	4.73%
Co 228.616†	1419.3	0.03530	mg/L	0.000300	0.07061	mg/L	0.000601	0.85%
Cr 267.716†	843.2	0.1009	mg/L	0.00028	0.2019	mg/L	0.00056	0.28%
Cu 324.752†	22324.4	0.08825	mg/L	0.000437	0.1765	mg/L	0.00087	0.50%
Fe 273.955†	118061.6	94.55	mg/L	0.336	189.1	mg/L	0.67	0.36%
K 766.490†	11652.9	5.515	mg/L	0.0235	11.03	mg/L	0.047	0.43%
Mg 279.077†	17869.1	18.76	mg/L	0.073	37.51	mg/L	0.147	0.39%
Mn 257.610†	36332.1	0.6975	mg/L	0.00143	1.395	mg/L	0.0029	0.21%
Mo 202.031†	118.4	0.00588	mg/L	0.000255	0.01176	mg/L	0.000511	4.34%
Na 589.592†	120859.8	9.705	mg/L	0.0223	19.41	mg/L	0.045	0.23%
Na 330.237†	288.5	10.13	mg/L	0.020	20.26	mg/L	0.041	0.20%
Ni 231.604†	251.9	0.06657	mg/L	0.000725	0.1331	mg/L	0.00145	1.09%
Pb 220.353†	-13.5	0.00685	mg/L	0.000684	0.01371	mg/L	0.001369	9.98%
Sb 206.836†	-0.6	0.00319	mg/L	0.002065	0.00637	mg/L	0.004129	64.80%
Se 196.026†	-5.7	-0.00973	mg/L	0.002616	-0.01947	mg/L	0.005232	26.87%
Si 288.158†	1947.0	1.296	mg/L	0.0043	2.592	mg/L	0.0087	0.33%
Sn 189.927†	-52.0	-0.00672	mg/L	0.000796	-0.01343	mg/L	0.001593	11.86%
Sr 421.552†	343632.3	0.3568	mg/L	0.00045	0.7136	mg/L	0.00089	0.13%
Ti 334.903†	120900.6	4.636	mg/L	0.0084	9.273	mg/L	0.0169	0.18%
Tl 190.801†	1.4	0.01179	mg/L	0.000959	0.02357	mg/L	0.001918	8.14%
V 292.402†	48012.3	0.3398	mg/L	0.00243	0.6797	mg/L	0.00485	0.71%
Zn 206.200†	660.5	0.1611	mg/L	0.00020	0.3223	mg/L	0.00040	0.12%

Sequence No.: 45
Sample ID: WL74 E SWC

Autosampler Location: 330
Date Collected: 4/16/2013 11:56:28 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 E SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2778295.9	100.7	%	0.09				0.09%
ScR 361.383	392606.5	102.1	%	0.27				0.27%
Ag 328.068†	-410.1	-0.00134	mg/L	0.000097	-0.00268	mg/L	0.000193	7.22%
Al 308.215†	93497.7	76.90	mg/L	0.185	153.8	mg/L	0.37	0.24%
As 188.979†	-277.8	-0.01368	mg/L	0.001000	-0.02737	mg/L	0.002001	7.31%
B 249.677†	27.8	0.00401	mg/L	0.000369	0.00801	mg/L	0.000738	9.21%
Ba 233.527†	2143.9	0.3235	mg/L	0.00167	0.6471	mg/L	0.00335	0.52%
Be 313.042†	727.0	0.00112	mg/L	0.000012	0.00223	mg/L	0.000025	1.10%
Ca 317.933†	496830.0	47.30	mg/L	0.113	94.61	mg/L	0.226	0.24%
Cd 228.802†	52.4	0.00354	mg/L	0.000165	0.00709	mg/L	0.000329	4.65%
Co 228.616†	2034.7	0.05246	mg/L	0.000172	0.1049	mg/L	0.00034	0.33%
Cr 267.716†	1229.3	0.1466	mg/L	0.00072	0.2931	mg/L	0.00145	0.49%
Cu 324.752†	28240.1	0.1117	mg/L	0.00043	0.2233	mg/L	0.00087	0.39%
Fe 273.955†	148926.8	119.3	mg/L	0.29	238.5	mg/L	0.58	0.24%
K 766.490†	9351.9	4.426	mg/L	0.0109	8.852	mg/L	0.0219	0.25%
Mg 279.077†	27135.8	28.50	mg/L	0.023	57.00	mg/L	0.046	0.08%
Mn 257.610†	67557.1	1.297	mg/L	0.0042	2.594	mg/L	0.0085	0.33%
Mo 202.031†	110.6	0.00534	mg/L	0.000128	0.01069	mg/L	0.000256	2.40%
Na 589.592†	61491.2	4.938	mg/L	0.0043	9.876	mg/L	0.0087	0.09%
Na 330.237†	113.4	4.971	mg/L	0.3145	9.942	mg/L	0.6291	6.33%
Ni 231.604†	469.8	0.1241	mg/L	0.00071	0.2483	mg/L	0.00142	0.57%
Pb 220.353†	-8.5	0.01349	mg/L	0.000706	0.02699	mg/L	0.001413	5.24%
Sb 206.836†	-8.3	0.00061	mg/L	0.002136	0.00122	mg/L	0.004272	349.88%
Se 196.026†	-1.9	-0.01036	mg/L	0.004740	-0.02073	mg/L	0.009481	45.74%
Si 288.158†	2188.2	1.457	mg/L	0.0026	2.914	mg/L	0.0052	0.18%
Sn 189.927†	-55.1	-0.00635	mg/L	0.000679	-0.01269	mg/L	0.001358	10.70%
Sr 421.552†	419313.2	0.4354	mg/L	0.00098	0.8708	mg/L	0.00196	0.23%
Ti 334.903†	145491.7	5.579	mg/L	0.0156	11.16	mg/L	0.031	0.28%
Tl 190.801†	-10.1	0.00848	mg/L	0.004757	0.01696	mg/L	0.009513	56.10%
V 292.402†	52434.3	0.3703	mg/L	0.00042	0.7406	mg/L	0.00084	0.11%
Zn 206.200†	1086.2	0.2649	mg/L	0.00054	0.5297	mg/L	0.00108	0.20%

Sequence No.: 46
Sample ID: WL74 F SWC

Autosampler Location: 331
Date Collected: 4/16/2013 12:00:30 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 F SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2775298.2	100.6	%	0.35				0.35%
ScR 361.383	390581.3	101.5	%	0.60				0.59%
Ag 328.068†	-515.1	-0.00148	mg/L	0.000121	-0.00295	mg/L	0.000243	8.22%
Al 308.215†	62274.2	51.22	mg/L	0.019	102.4	mg/L	0.04	0.04%
As 188.979†	-223.7	-0.00268	mg/L	0.001803	-0.00537	mg/L	0.003605	67.17%
B 249.677†	27.4	0.00398	mg/L	0.000499	0.00797	mg/L	0.000997	12.52%
Ba 233.527†	778.4	0.1098	mg/L	0.00061	0.2196	mg/L	0.00122	0.56%
Be 313.042†	528.6	0.00078	mg/L	0.000024	0.00155	mg/L	0.000048	3.07%
Ca 317.933†	1000657.2	95.27	mg/L	0.233	190.5	mg/L	0.47	0.24%
Cd 228.802†	46.7	0.00302	mg/L	0.000193	0.00604	mg/L	0.000385	6.38%
Co 228.616†	1689.8	0.04315	mg/L	0.000283	0.08631	mg/L	0.000567	0.66%
Cr 267.716†	1008.0	0.1197	mg/L	0.00117	0.2395	mg/L	0.00235	0.98%
Cu 324.752†	24903.5	0.09800	mg/L	0.000381	0.1960	mg/L	0.00076	0.39%
Fe 273.955†	118640.9	95.01	mg/L	0.385	190.0	mg/L	0.77	0.41%
K 766.490†	7910.6	3.744	mg/L	0.0154	7.487	mg/L	0.0307	0.41%
Mg 279.077†	18658.1	19.58	mg/L	0.023	39.16	mg/L	0.045	0.12%
Mn 257.610†	38271.9	0.7345	mg/L	0.00175	1.469	mg/L	0.0035	0.24%
Mo 202.031†	135.3	0.00610	mg/L	0.000258	0.01220	mg/L	0.000515	4.22%
Na 589.592†	84122.2	6.755	mg/L	0.0314	13.51	mg/L	0.063	0.46%
Na 330.237†	177.3	6.771	mg/L	0.0611	13.54	mg/L	0.122	0.90%
Ni 231.604†	279.4	0.07383	mg/L	0.000184	0.1477	mg/L	0.00037	0.25%
Pb 220.353†	-30.2	0.00509	mg/L	0.000808	0.01019	mg/L	0.001616	15.86%
Sb 206.836†	-3.4	0.00225	mg/L	0.001518	0.00450	mg/L	0.003035	67.40%
Se 196.026†	-9.5	-0.01239	mg/L	0.007225	-0.02479	mg/L	0.014451	58.30%
Si 288.158†	2097.3	1.396	mg/L	0.0091	2.792	mg/L	0.0183	0.65%
Sn 189.927†	-65.1	-0.00451	mg/L	0.000911	-0.00902	mg/L	0.001822	20.21%
Sr 421.552†	580688.8	0.6029	mg/L	0.00058	1.206	mg/L	0.0012	0.10%
Ti 334.903†	127339.0	4.880	mg/L	0.0046	9.760	mg/L	0.0092	0.09%
Tl 190.801†	14.9	0.01906	mg/L	0.002183	0.03812	mg/L	0.004367	11.46%
V 292.402†	53981.9	0.3829	mg/L	0.00190	0.7658	mg/L	0.00380	0.50%
Zn 206.200†	709.9	0.1732	mg/L	0.00168	0.3464	mg/L	0.00337	0.97%

Sequence No.: 47
Sample ID: WL74 G SWC

Autosampler Location: 332
Date Collected: 4/16/2013 12:04:32 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 G SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2765575.2	100.2	%	0.27				0.27%
ScR 361.383	392664.8	102.1	%	0.58				0.56%
Ag 328.068†	-375.0	-0.00124	mg/L	0.000251	-0.00248	mg/L	0.000502	20.21%
Al 308.215†	55976.9	46.04	mg/L	0.120	92.08	mg/L	0.240	0.26%
As 188.979†	-207.4	-0.00816	mg/L	0.002116	-0.01631	mg/L	0.004232	25.95%
B 249.677†	69.2	0.01027	mg/L	0.000608	0.02053	mg/L	0.001216	5.92%
Ba 233.527†	608.6	0.08513	mg/L	0.000816	0.1703	mg/L	0.00163	0.96%
Be 313.042†	435.5	0.00064	mg/L	0.000011	0.00128	mg/L	0.000022	1.74%
Ca 317.933†	443200.4	42.20	mg/L	0.168	84.40	mg/L	0.335	0.40%
Cd 228.802†	40.6	0.00268	mg/L	0.000144	0.00536	mg/L	0.000288	5.36%
Co 228.616†	1334.2	0.03339	mg/L	0.000126	0.06679	mg/L	0.000251	0.38%
Cr 267.716†	814.1	0.09706	mg/L	0.001236	0.1941	mg/L	0.00247	1.27%
Cu 324.752†	22545.6	0.08842	mg/L	0.000782	0.1768	mg/L	0.00156	0.88%
Fe 273.955†	98861.2	79.17	mg/L	0.358	158.3	mg/L	0.72	0.45%
K 766.490†	9085.2	4.300	mg/L	0.0070	8.599	mg/L	0.0141	0.16%
Mg 279.077†	16778.7	17.62	mg/L	0.086	35.23	mg/L	0.171	0.49%
Mn 257.610†	27012.6	0.5185	mg/L	0.00196	1.037	mg/L	0.0039	0.38%
Mo 202.031†	114.0	0.00559	mg/L	0.000083	0.01117	mg/L	0.000167	1.49%
Na 589.592†	216890.0	17.42	mg/L	0.039	34.83	mg/L	0.078	0.22%
Na 330.237†	553.9	18.20	mg/L	0.040	36.40	mg/L	0.079	0.22%
Ni 231.604†	236.1	0.06238	mg/L	0.000911	0.1248	mg/L	0.00182	1.46%
Pb 220.353†	-30.8	0.00443	mg/L	0.000476	0.00885	mg/L	0.000953	10.76%
Sb 206.836†	-6.6	0.00063	mg/L	0.002129	0.00126	mg/L	0.004258	336.78%
Se 196.026†	-7.9	-0.01073	mg/L	0.001500	-0.02146	mg/L	0.003000	13.98%
Si 288.158†	1957.4	1.303	mg/L	0.0070	2.605	mg/L	0.0140	0.54%
Sn 189.927†	-53.3	-0.00665	mg/L	0.000657	-0.01330	mg/L	0.001313	9.87%
Sr 421.552†	298609.6	0.3101	mg/L	0.00035	0.6201	mg/L	0.00069	0.11%
Ti 334.903†	110613.1	4.241	mg/L	0.0099	8.483	mg/L	0.0197	0.23%
Tl 190.801†	4.2	0.01139	mg/L	0.002490	0.02278	mg/L	0.004981	21.86%
V 292.402†	43334.7	0.3070	mg/L	0.00239	0.6140	mg/L	0.00477	0.78%
Zn 206.200†	602.1	0.1469	mg/L	0.00101	0.2938	mg/L	0.00202	0.69%

Sequence No.: 48
Sample ID: WL74 H SWC

Autosampler Location: 333
Date Collected: 4/16/2013 12:08:33 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 H SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL74 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2798311.2	101.4	%	0.32				0.31%
ScR 361.383	392959.5	102.1	%	0.22				0.21%
Ag 328.068†	-312.8	-0.00094	mg/L	0.000125	-0.00188	mg/L	0.000249	13.22%
Al 308.215†	63484.2	52.21	mg/L	0.135	104.4	mg/L	0.27	0.26%
As 188.979†	-213.3	-0.00317	mg/L	0.003350	-0.00635	mg/L	0.006699	105.50%
B 249.677†	101.1	0.01504	mg/L	0.000476	0.03007	mg/L	0.000953	3.17%
Ba 233.527†	661.0	0.09200	mg/L	0.000588	0.1840	mg/L	0.00118	0.64%
Be 313.042†	505.1	0.00075	mg/L	0.000019	0.00151	mg/L	0.000038	2.52%
Ca 317.933†	488027.2	46.47	mg/L	0.236	92.93	mg/L	0.471	0.51%
Cd 228.802†	44.6	0.00289	mg/L	0.000064	0.00577	mg/L	0.000128	2.22%
Co 228.616†	1475.4	0.03722	mg/L	0.000131	0.07445	mg/L	0.000262	0.35%
Cr 267.716†	843.6	0.1006	mg/L	0.00106	0.2012	mg/L	0.00212	1.06%
Cu 324.752†	23452.4	0.09228	mg/L	0.000372	0.1846	mg/L	0.00074	0.40%
Fe 273.955†	111443.8	89.25	mg/L	0.254	178.5	mg/L	0.51	0.28%
K 766.490†	10936.2	5.176	mg/L	0.0160	10.35	mg/L	0.032	0.31%
Mg 279.077†	19123.9	20.08	mg/L	0.055	40.16	mg/L	0.110	0.27%
Mn 257.610†	37042.6	0.7111	mg/L	0.00183	1.422	mg/L	0.0037	0.26%
Mo 202.031†	142.3	0.00705	mg/L	0.000167	0.01410	mg/L	0.000334	2.37%
Na 589.592†	193247.4	15.52	mg/L	0.093	31.04	mg/L	0.185	0.60%
Na 330.237†	486.1	16.18	mg/L	0.229	32.37	mg/L	0.458	1.41%
Ni 231.604†	267.8	0.07076	mg/L	0.001036	0.1415	mg/L	0.00207	1.46%
Pb 220.353†	-23.1	0.00653	mg/L	0.000189	0.01306	mg/L	0.000378	2.90%
Sb 206.836†	-4.2	0.00172	mg/L	0.004709	0.00343	mg/L	0.009418	274.21%
Se 196.026†	-4.6	-0.00925	mg/L	0.002936	-0.01851	mg/L	0.005872	31.73%
Si 288.158†	2037.0	1.356	mg/L	0.0122	2.711	mg/L	0.0244	0.90%
Sn 189.927†	-56.0	-0.00680	mg/L	0.000364	-0.01360	mg/L	0.000729	5.36%
Sr 421.552†	372266.5	0.3865	mg/L	0.00093	0.7731	mg/L	0.00187	0.24%
Ti 334.903†	117905.2	4.521	mg/L	0.0127	9.042	mg/L	0.0254	0.28%
Tl 190.801†	10.0	0.01585	mg/L	0.001375	0.03171	mg/L	0.002750	8.67%
V 292.402†	45098.8	0.3191	mg/L	0.00166	0.6383	mg/L	0.00332	0.52%
Zn 206.200†	652.1	0.1591	mg/L	0.00045	0.3182	mg/L	0.00091	0.28%

Sequence No.: 49
Sample ID: WL74 I SWC

Autosampler Location: 334
Date Collected: 4/16/2013 12:12:34 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2783800.2	100.9	%	0.31				0.31%
ScR 361.383	394416.1	102.5	%	0.43				0.42%
Ag 328.068†	-383.1	-0.00120	mg/L	0.000198	-0.00241	mg/L	0.000396	16.46%
Al 308.215†	66967.7	55.08	mg/L	0.223	110.2	mg/L	0.45	0.41%
As 188.979†	-212.5	-0.00269	mg/L	0.001856	-0.00538	mg/L	0.003711	68.97%
B 249.677†	91.9	0.01365	mg/L	0.000883	0.02729	mg/L	0.001766	6.47%
Ba 233.527†	666.7	0.09268	mg/L	0.000953	0.1854	mg/L	0.00191	1.03%
Be 313.042†	469.4	0.00069	mg/L	0.000044	0.00138	mg/L	0.000089	6.43%
Ca 317.933†	553626.0	52.71	mg/L	0.247	105.4	mg/L	0.49	0.47%
Cd 228.802†	41.7	0.00276	mg/L	0.000005	0.00551	mg/L	0.000010	0.18%
Co 228.616†	1487.2	0.03756	mg/L	0.000245	0.07512	mg/L	0.000491	0.65%
Cr 267.716†	875.5	0.1043	mg/L	0.00098	0.2086	mg/L	0.00196	0.94%
Cu 324.752†	23417.4	0.09222	mg/L	0.000307	0.1844	mg/L	0.00061	0.33%
Fe 273.955†	113379.1	90.80	mg/L	0.101	181.6	mg/L	0.20	0.11%
K 766.490†	10929.9	5.173	mg/L	0.0500	10.35	mg/L	0.100	0.97%
Mg 279.077†	19581.3	20.56	mg/L	0.078	41.12	mg/L	0.157	0.38%
Mn 257.610†	38065.7	0.7307	mg/L	0.00152	1.461	mg/L	0.0030	0.21%
Mo 202.031†	151.5	0.00747	mg/L	0.000095	0.01494	mg/L	0.000190	1.27%
Na 589.592†	204135.7	16.39	mg/L	0.062	32.78	mg/L	0.124	0.38%
Na 330.237†	508.5	16.88	mg/L	0.262	33.75	mg/L	0.523	1.55%
Ni 231.604†	274.9	0.07263	mg/L	0.000546	0.1453	mg/L	0.00109	0.75%
Pb 220.353†	-28.5	0.00655	mg/L	0.000060	0.01311	mg/L	0.000120	0.91%
Sb 206.836†	-15.7	-0.00252	mg/L	0.001207	-0.00503	mg/L	0.002415	47.97%
Se 196.026†	-6.8	-0.01103	mg/L	0.002989	-0.02206	mg/L	0.005978	27.10%
Si 288.158†	1975.4	1.315	mg/L	0.0053	2.630	mg/L	0.0105	0.40%
Sn 189.927†	-61.1	-0.00732	mg/L	0.000959	-0.01464	mg/L	0.001917	13.10%
Sr 421.552†	440506.7	0.4574	mg/L	0.00187	0.9148	mg/L	0.00374	0.41%
Ti 334.903†	118265.2	4.534	mg/L	0.0151	9.069	mg/L	0.0302	0.33%
Tl 190.801†	7.6	0.01472	mg/L	0.001847	0.02945	mg/L	0.003694	12.55%
V 292.402†	45571.9	0.3225	mg/L	0.00144	0.6450	mg/L	0.00288	0.45%
Zn 206.200†	672.3	0.1640	mg/L	0.00152	0.3280	mg/L	0.00304	0.93%

Sequence No.: 50
Sample ID: CV 6
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 4/16/2013 12:16:35 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 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	2769299.6	100.4	%	0.40				0.40%
ScR 361.383	384568.5	99.97	%	0.399				0.40%
Ag 328.068†	247897.3	1.068	mg/L	0.0028	1.068	mg/L	0.0028	0.26%
Al 308.215†	2590.8	2.096	mg/L	0.0105	2.096	mg/L	0.0105	0.50%
As 188.979†	2861.6	2.117	mg/L	0.0044	2.117	mg/L	0.0044	0.21%
B 249.677†	6868.8	1.027	mg/L	0.0061	1.027	mg/L	0.0061	0.60%
Ba 233.527†	6731.8	1.071	mg/L	0.0010	1.071	mg/L	0.0010	0.09%
Be 313.042†	587668.4	1.020	mg/L	0.0101	1.020	mg/L	0.0101	0.99%
Ca 317.933†	22646.0	2.156	mg/L	0.0096	2.156	mg/L	0.0096	0.45%
Cd 228.802†	24324.3	1.069	mg/L	0.0056	1.069	mg/L	0.0056	0.52%
Co 228.616†	34696.0	1.061	mg/L	0.0042	1.061	mg/L	0.0042	0.40%
Cr 267.716†	9109.3	1.084	mg/L	0.0065	1.084	mg/L	0.0065	0.60%
Cu 324.752†	278744.0	1.056	mg/L	0.0049	1.056	mg/L	0.0049	0.46%
Fe 273.955†	2666.1	2.129	mg/L	0.0170	2.129	mg/L	0.0170	0.80%
K 766.490†	43543.3	20.61	mg/L	0.075	20.61	mg/L	0.075	0.37%
Mg 279.077†	1976.3	2.087	mg/L	0.0162	2.087	mg/L	0.0162	0.78%
Mn 257.610†	52266.0	1.004	mg/L	0.0048	1.004	mg/L	0.0048	0.48%
Mo 202.031†	19512.2	1.043	mg/L	0.0042	1.043	mg/L	0.0042	0.40%
Na 589.592†	640260.8	51.41	mg/L	0.341	51.41	mg/L	0.341	0.66%
Na 330.237†	1723.6	53.05	mg/L	0.235	53.05	mg/L	0.235	0.44%
Ni 231.604†	3992.0	1.055	mg/L	0.0070	1.055	mg/L	0.0070	0.67%
Pb 220.353†	16765.6	2.101	mg/L	0.0097	2.101	mg/L	0.0097	0.46%
Sb 206.836†	5883.5	2.137	mg/L	0.0089	2.137	mg/L	0.0089	0.42%
Se 196.026†	3166.9	2.085	mg/L	0.0104	2.085	mg/L	0.0104	0.50%
Si 288.158†	3032.7	2.010	mg/L	0.0163	2.010	mg/L	0.0163	0.81%
Sn 189.927†	4971.9	1.025	mg/L	0.0076	1.025	mg/L	0.0076	0.74%
Sr 421.552†	972866.6	1.010	mg/L	0.0034	1.010	mg/L	0.0034	0.34%
Ti 334.903†	26739.7	1.024	mg/L	0.0053	1.024	mg/L	0.0053	0.51%
Tl 190.801†	3947.5	2.167	mg/L	0.0073	2.167	mg/L	0.0073	0.34%
V 292.402†	143365.1	1.040	mg/L	0.0028	1.040	mg/L	0.0028	0.27%
Zn 206.200†	4333.2	1.056	mg/L	0.0059	1.056	mg/L	0.0059	0.56%

Sequence No.: 51
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 4/16/2013 12:20:39 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 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	2817156.1	102.1	%	0.28				0.27%
ScR 361.383	391988.1	101.9	%	0.22				0.22%
Ag 328.068†	60.6	0.00026	mg/L	0.000028	0.00026	mg/L	0.000028	10.59%
Al 308.215†	8.3	0.00671	mg/L	0.005005	0.00671	mg/L	0.005005	74.62%
As 188.979†	1.0	0.00076	mg/L	0.001700	0.00076	mg/L	0.001700	224.62%
B 249.677†	13.1	0.00197	mg/L	0.000856	0.00197	mg/L	0.000856	43.45%
Ba 233.527†	4.2	0.00067	mg/L	0.000878	0.00067	mg/L	0.000878	130.95%
Be 313.042†	83.7	0.00015	mg/L	0.000025	0.00015	mg/L	0.000025	17.17%
Ca 317.933†	23.1	0.00220	mg/L	0.000602	0.00220	mg/L	0.000602	27.38%
Cd 228.802†	7.6	0.00034	mg/L	0.000220	0.00034	mg/L	0.000220	65.56%
Co 228.616†	3.2	0.00010	mg/L	0.000038	0.00010	mg/L	0.000038	38.40%
Cr 267.716†	-5.3	-0.00063	mg/L	0.000593	-0.00063	mg/L	0.000593	94.63%
Cu 324.752†	36.6	0.00014	mg/L	0.000054	0.00014	mg/L	0.000054	39.49%
Fe 273.955†	3.1	0.00248	mg/L	0.003043	0.00248	mg/L	0.003043	122.73%
K 766.490†	-0.7	-0.00032	mg/L	0.008976	-0.00032	mg/L	0.008976	>999.9%
Mg 279.077†	1.0	0.00105	mg/L	0.004821	0.00105	mg/L	0.004821	460.80%
Mn 257.610†	1.3	0.00003	mg/L	0.000076	0.00003	mg/L	0.000076	301.06%
Mo 202.031†	89.9	0.00480	mg/L	0.000657	0.00480	mg/L	0.000657	13.69%
Na 589.592†	27.7	0.00223	mg/L	0.002289	0.00223	mg/L	0.002289	102.79%
Na 330.237†	-2.3	-0.06948	mg/L	0.108770	-0.06948	mg/L	0.108770	156.55%
Ni 231.604†	-0.4	-0.00011	mg/L	0.000887	-0.00011	mg/L	0.000887	837.21%
Pb 220.353†	8.1	0.00101	mg/L	0.000258	0.00101	mg/L	0.000258	25.61%
Sb 206.836†	14.2	0.00517	mg/L	0.000589	0.00517	mg/L	0.000589	11.40%
Se 196.026†	3.9	0.00257	mg/L	0.001878	0.00257	mg/L	0.001878	73.17%
Si 288.158†	-4.0	-0.00269	mg/L	0.002959	-0.00269	mg/L	0.002959	110.11%
Sn 189.927†	5.8	0.00121	mg/L	0.000350	0.00121	mg/L	0.000350	29.00%
Sr 421.552†	64.3	0.00007	mg/L	0.000021	0.00007	mg/L	0.000021	31.48%
Ti 334.903†	5.4	0.00020	mg/L	0.000146	0.00020	mg/L	0.000146	72.69%
Tl 190.801†	5.6	0.00307	mg/L	0.000538	0.00307	mg/L	0.000538	17.50%
V 292.402†	31.8	0.00023	mg/L	0.000212	0.00023	mg/L	0.000212	92.58%
Zn 206.200†	-0.9	-0.00022	mg/L	0.000245	-0.00022	mg/L	0.000245	111.03%

Sequence No.: 52
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/16/2013 12:24:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
A11	220.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2816445.2	102.1	%	0.33				0.32%
ScR 361.383	393322.8	102.2	%	0.66				0.65%
Ag 328.068†	797.3	0.00343	mg/L	0.000132	0.00343	mg/L	0.000132	3.84%
Al 308.215†	70.1	0.05750	mg/L	0.002626	0.05750	mg/L	0.002626	4.57%
As 188.979†	72.3	0.05282	mg/L	0.002837	0.05282	mg/L	0.002837	5.37%
B 249.677†	140.4	0.02101	mg/L	0.000818	0.02101	mg/L	0.000818	3.89%
Ba 233.527†	24.3	0.00385	mg/L	0.000643	0.00385	mg/L	0.000643	16.70%
Be 313.042†	594.7	0.00103	mg/L	0.000024	0.00103	mg/L	0.000024	2.30%
Ca 317.933†	557.4	0.05307	mg/L	0.000445	0.05307	mg/L	0.000445	0.84%
Cd 228.802†	60.3	0.00239	mg/L	0.000154	0.00239	mg/L	0.000154	6.43%
Co 228.616†	117.3	0.00358	mg/L	0.000081	0.00358	mg/L	0.000081	2.25%
Cr 267.716†	42.5	0.00506	mg/L	0.000322	0.00506	mg/L	0.000322	6.38%
Cu 324.752†	562.3	0.00213	mg/L	0.000081	0.00213	mg/L	0.000081	3.78%
Fe 273.955†	66.2	0.05302	mg/L	0.001533	0.05302	mg/L	0.001533	2.89%
K 766.490†	1054.9	0.4992	mg/L	0.01918	0.4992	mg/L	0.01918	3.84%
Mg 279.077†	52.9	0.05571	mg/L	0.002115	0.05571	mg/L	0.002115	3.80%
Mn 257.610†	49.2	0.00095	mg/L	0.000043	0.00095	mg/L	0.000043	4.56%
Mo 202.031†	103.1	0.00551	mg/L	0.000194	0.00551	mg/L	0.000194	3.52%
Na 589.592†	6113.1	0.4909	mg/L	0.00051	0.4909	mg/L	0.00051	0.10%
Na 330.237†	15.8	0.4863	mg/L	0.25395	0.4863	mg/L	0.25395	52.22%
Ni 231.604†	45.3	0.01198	mg/L	0.000557	0.01198	mg/L	0.000557	4.65%
Pb 220.353†	174.9	0.02193	mg/L	0.000741	0.02193	mg/L	0.000741	3.38%
Sb 206.836†	147.3	0.05356	mg/L	0.001639	0.05356	mg/L	0.001639	3.06%
Se 196.026†	77.3	0.05092	mg/L	0.001019	0.05092	mg/L	0.001019	2.00%
Si 288.158†	88.6	0.05882	mg/L	0.007295	0.05882	mg/L	0.007295	12.40%
Sn 189.927†	48.5	0.01002	mg/L	0.000626	0.01002	mg/L	0.000626	6.24%
Sr 421.552†	947.5	0.00098	mg/L	0.000009	0.00098	mg/L	0.000009	0.91%
Ti 334.903†	131.8	0.00505	mg/L	0.001098	0.00505	mg/L	0.001098	21.75%
Tl 190.801†	93.9	0.05172	mg/L	0.004033	0.05172	mg/L	0.004033	7.80%
V 292.402†	456.9	0.00332	mg/L	0.000078	0.00332	mg/L	0.000078	2.35%
Zn 206.200†	39.7	0.00967	mg/L	0.000783	0.00967	mg/L	0.000783	8.10%

Sequence No.: 53
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/16/2013 12:29:12 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2740971.9	99.32	%	0.266				0.27%
ScR 361.383	388291.5	100.9	%	0.33				0.33%
Ag 328.068†	-307.1	-0.00065	mg/L	0.000093	-0.00065	mg/L	0.000093	14.37%
Al 308.215†	244515.7	201.2	mg/L	0.38	201.2	mg/L	0.38	0.19%
As 188.979†	57.6	0.03286	mg/L	0.003939	0.03286	mg/L	0.003939	11.99%
B 249.677†	94.5	0.01415	mg/L	0.001134	0.01415	mg/L	0.001134	8.01%
Ba 233.527†	152.5	-0.00373	mg/L	0.000157	-0.00373	mg/L	0.000157	4.20%
Be 313.042†	74.5	0.00013	mg/L	0.000008	0.00013	mg/L	0.000008	6.10%
Ca 317.933†	1088944.1	103.7	mg/L	0.60	103.7	mg/L	0.60	0.58%
Cd 228.802†	76.7	0.00317	mg/L	0.000082	0.00317	mg/L	0.000082	2.58%
Co 228.616†	65.3	0.00198	mg/L	0.000233	0.00198	mg/L	0.000233	11.75%
Cr 267.716†	12.7	-0.00389	mg/L	0.000912	-0.00389	mg/L	0.000912	23.46%
Cu 324.752†	-1922.2	0.00151	mg/L	0.000096	0.00151	mg/L	0.000096	6.34%
Fe 273.955†	237945.2	190.6	mg/L	0.84	190.6	mg/L	0.84	0.44%
K 766.490†	31.0	0.01465	mg/L	0.007379	0.01465	mg/L	0.007379	50.37%
Mg 279.077†	101111.6	106.3	mg/L	0.05	106.3	mg/L	0.05	0.04%
Mn 257.610†	83.9	0.00020	mg/L	0.000026	0.00020	mg/L	0.000026	12.91%
Mo 202.031†	115.5	0.00495	mg/L	0.000608	0.00495	mg/L	0.000608	12.28%
Na 589.592†	203.0	0.01630	mg/L	0.001497	0.01630	mg/L	0.001497	9.19%
Na 330.237†	-2.7	-0.07945	mg/L	0.308260	-0.07945	mg/L	0.308260	387.97%
Ni 231.604†	2.6	0.00068	mg/L	0.000373	0.00068	mg/L	0.000373	54.88%
Pb 220.353†	-473.5	-0.01505	mg/L	0.000442	-0.01505	mg/L	0.000442	2.93%
Sb 206.836†	-26.9	-0.00991	mg/L	0.004007	-0.00991	mg/L	0.004007	40.42%
Se 196.026†	-1.4	-0.02403	mg/L	0.005156	-0.02403	mg/L	0.005156	21.45%
Si 288.158†	-22.2	-0.00265	mg/L	0.001633	-0.00265	mg/L	0.001633	61.72%
Sn 189.927†	-98.4	-0.01157	mg/L	0.001096	-0.01157	mg/L	0.001096	9.47%
Sr 421.552†	3858.1	0.00401	mg/L	0.000019	0.00401	mg/L	0.000019	0.47%
Ti 334.903†	267.7	0.00410	mg/L	0.000285	0.00410	mg/L	0.000285	6.96%
Tl 190.801†	-22.1	0.01307	mg/L	0.001790	0.01307	mg/L	0.001790	13.69%
V 292.402†	1233.1	-0.00066	mg/L	0.000316	-0.00066	mg/L	0.000316	48.21%
Zn 206.200†	-6.9	-0.00170	mg/L	0.000739	-0.00170	mg/L	0.000739	43.50%

Cont.

Sequence No.: 54
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/16/2013 12:33:28 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2745138.7	99.47	%	0.174				0.17%
ScR 361.383	383414.2	99.67	%	0.048				0.05%
Ag 328.068†	248656.5	1.072	mg/L	0.0049	1.072	mg/L	0.0049	0.46%
Al 308.215†	245245.6	201.7	mg/L	0.15	201.7	mg/L	0.15	0.08%
As 188.979†	1503.0	1.086	mg/L	0.0039	1.086	mg/L	0.0039	0.36%
B 249.677†	38.5	0.00344	mg/L	0.000635	0.00344	mg/L	0.000635	18.44%
Ba 233.527†	6733.4	1.043	mg/L	0.0065	1.043	mg/L	0.0065	0.62%
Be 313.042†	576449.5	1.001	mg/L	0.0019	1.001	mg/L	0.0019	0.19%
Ca 317.933†	1090095.6	103.8	mg/L	0.28	103.8	mg/L	0.28	0.27%
Cd 228.802†	23417.9	1.034	mg/L	0.0040	1.034	mg/L	0.0040	0.39%
Co 228.616†	32468.5	0.9943	mg/L	0.00406	0.9943	mg/L	0.00406	0.41%
Cr 267.716†	8908.0	1.055	mg/L	0.0022	1.055	mg/L	0.0022	0.21%
Cu 324.752†	274485.8	1.049	mg/L	0.0024	1.049	mg/L	0.0024	0.23%
Fe 273.955†	239035.8	191.4	mg/L	0.73	191.4	mg/L	0.73	0.38%
K 766.490†	-69.5	-0.03290	mg/L	0.018909	-0.03290	mg/L	0.018909	57.47%
Mg 279.077†	97651.9	102.7	mg/L	0.28	102.7	mg/L	0.28	0.28%
Mn 257.610†	51404.8	0.9862	mg/L	0.00372	0.9862	mg/L	0.00372	0.38%
Mo 202.031†	112.1	0.00471	mg/L	0.000430	0.00471	mg/L	0.000430	9.11%
Na 589.592†	137.3	0.01103	mg/L	0.001943	0.01103	mg/L	0.001943	17.61%
Na 330.237†	0.0	-0.2943	mg/L	0.21730	-0.2943	mg/L	0.21730	73.83%
Ni 231.604†	3814.8	1.008	mg/L	0.0021	1.008	mg/L	0.0021	0.21%
Pb 220.353†	7539.6	0.9893	mg/L	0.00522	0.9893	mg/L	0.00522	0.53%
Sb 206.836†	2821.4	1.015	mg/L	0.0064	1.015	mg/L	0.0064	0.63%
Se 196.026†	1584.5	1.020	mg/L	0.0098	1.020	mg/L	0.0098	0.96%
Si 288.158†	-34.4	-0.00771	mg/L	0.002492	-0.00771	mg/L	0.002492	32.33%
Sn 189.927†	-93.4	-0.01000	mg/L	0.000194	-0.01000	mg/L	0.000194	1.94%
Sr 421.552†	3903.9	0.00405	mg/L Cont.	0.000027	0.00405	mg/L	0.000027	0.67%
Ti 334.903†	268.0	0.00391	mg/L	0.000465	0.00391	mg/L	0.000465	11.91%
Tl 190.801†	1768.1	0.9897	mg/L	0.00529	0.9897	mg/L	0.00529	0.53%
V 292.402†	139137.4	0.9998	mg/L	0.00465	0.9998	mg/L	0.00465	0.47%
Zn 206.200†	4124.8	1.005	mg/L	0.0025	1.005	mg/L	0.0025	0.25%

Sequence No.: 55
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 4/16/2013 12:37:31 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 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	2815399.4	102.0	%	0.63				0.61%
ScR 361.383	391043.3	101.6	%	0.18				0.18%
Ag 328.068†	243714.1	1.050	mg/L	0.0084	1.050	mg/L	0.0084	0.80%
Al 308.215†	2568.6	2.078	mg/L	0.0054	2.078	mg/L	0.0054	0.26%
As 188.979†	2838.7	2.100	mg/L	0.0055	2.100	mg/L	0.0055	0.26%
B 249.677†	6800.0	1.017	mg/L	0.0025	1.017	mg/L	0.0025	0.24%
Ba 233.527†	6614.9	1.052	mg/L	0.0079	1.052	mg/L	0.0079	0.75%
Be 313.042†	584887.7	1.016	mg/L	0.0079	1.016	mg/L	0.0079	0.78%
Ca 317.933†	22511.6	2.143	mg/L	0.0068	2.143	mg/L	0.0068	0.32%
Cd 228.802†	24145.3	1.061	mg/L	0.0075	1.061	mg/L	0.0075	0.71%
Co 228.616†	34254.7	1.047	mg/L	0.0063	1.047	mg/L	0.0063	0.60%
Cr 267.716†	9056.8	1.078	mg/L	0.0020	1.078	mg/L	0.0020	0.18%
Cu 324.752†	275361.0	1.043	mg/L	0.0095	1.043	mg/L	0.0095	0.91%
Fe 273.955†	2675.7	2.137	mg/L	0.0116	2.137	mg/L	0.0116	0.54%
K 766.490†	43255.9	20.47	mg/L	0.074	20.47	mg/L	0.074	0.36%
Mg 279.077†	1959.7	2.070	mg/L	0.0139	2.070	mg/L	0.0139	0.67%
Mn 257.610†	52416.6	1.007	mg/L	0.0071	1.007	mg/L	0.0071	0.70%
Mo 202.031†	19328.8	1.033	mg/L	0.0068	1.033	mg/L	0.0068	0.66%
Na 589.592†	631610.5	50.72	mg/L	0.177	50.72	mg/L	0.177	0.35%
Na 330.237†	1699.8	52.32	mg/L	0.206	52.32	mg/L	0.206	0.39%
Ni 231.604†	3954.7	1.045	mg/L	0.0041	1.045	mg/L	0.0041	0.40%
Pb 220.353†	16616.8	2.082	mg/L	0.0126	2.082	mg/L	0.0126	0.60%
Sb 206.836†	5831.7	2.118	mg/L	0.0135	2.118	mg/L	0.0135	0.64%
Se 196.026†	3160.4	2.081	mg/L	0.0156	2.081	mg/L	0.0156	0.75%
Si 288.158†	3010.5	1.995	mg/L	0.0051	1.995	mg/L	0.0051	0.26%
Sn 189.927†	4967.0	1.024	mg/L	0.0088	1.024	mg/L	0.0088	0.86%
Sr 421.552†	963333.6	1.000	mg/L	0.0040	1.000	mg/L	0.0040	0.40%
Ti 334.903†	26475.1	1.014	mg/L	0.0051	1.014	mg/L	0.0051	0.51%
Tl 190.801†	3896.6	2.139	mg/L	0.0076	2.139	mg/L	0.0076	0.35%
V 292.402†	141228.0	1.025	mg/L	0.0083	1.025	mg/L	0.0083	0.81%
Zn 206.200†	4310.2	1.050	mg/L	0.0020	1.050	mg/L	0.0020	0.19%

Sequence No.: 56
Sample ID: CB 7

Autosampler Location: 1
Date Collected: 4/16/2013 12:41:35 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 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	2837907.3	102.8	%	0.28				0.28%
ScR 361.383	394189.1	102.5	%	0.21				0.20%
Ag 328.068†	71.2	0.00031	mg/L	0.000134	0.00031	mg/L	0.000134	43.84%
Al 308.215†	13.6	0.01107	mg/L	0.003960	0.01107	mg/L	0.003960	35.77%
As 188.979†	1.4	0.00098	mg/L	0.001903	0.00098	mg/L	0.001903	193.78%
B 249.677†	10.9	0.00164	mg/L	0.000593	0.00164	mg/L	0.000593	36.10%
Ba 233.527†	3.3	0.00053	mg/L	0.000470	0.00053	mg/L	0.000470	88.98%
Be 313.042†	110.8	0.00019	mg/L	0.000034	0.00019	mg/L	0.000034	17.49%
Ca 317.933†	29.4	0.00280	mg/L	0.000890	0.00280	mg/L	0.000890	31.73%
Cd 228.802†	4.7	0.00020	mg/L	0.000344	0.00020	mg/L	0.000344	169.14%
Co 228.616†	9.3	0.00028	mg/L	0.000076	0.00028	mg/L	0.000076	26.86%
Cr 267.716†	-1.7	-0.00020	mg/L	0.000572	-0.00020	mg/L	0.000572	282.98%
Cu 324.752†	13.8	0.00005	mg/L	0.000027	0.00005	mg/L	0.000027	53.17%
Fe 273.955†	3.1	0.00252	mg/L	0.002142	0.00252	mg/L	0.002142	85.17%
K 766.490†	21.0	0.00993	mg/L	0.012626	0.00993	mg/L	0.012626	127.11%
Mg 279.077†	4.3	0.00454	mg/L	0.004378	0.00454	mg/L	0.004378	96.34%
Mn 257.610†	7.7	0.00015	mg/L	0.000111	0.00015	mg/L	0.000111	74.62%
Mo 202.031†	88.2	0.00471	mg/L	0.000793	0.00471	mg/L	0.000793	16.84%
Na 589.592†	27.5	0.00221	mg/L	0.001667	0.00221	mg/L	0.001667	75.40%
Na 330.237†	-9.1	-0.2787	mg/L	0.27795	-0.2787	mg/L	0.27795	99.72%
Ni 231.604†	3.7	0.00099	mg/L	0.000126	0.00099	mg/L	0.000126	12.76%
Pb 220.353†	7.2	0.00090	mg/L	0.000841	0.00090	mg/L	0.000841	93.30%
Sb 206.836†	17.2	0.00625	mg/L	0.001684	0.00625	mg/L	0.001684	26.94%
Se 196.026†	1.8	0.00117	mg/L	0.001904	0.00117	mg/L	0.001904	162.47%
Si 288.158†	-5.1	-0.00339	mg/L	0.005438	-0.00339	mg/L	0.005438	160.45%
Sn 189.927†	4.2	0.00086	mg/L	0.000040	0.00086	mg/L	0.000040	4.71%
Sr 421.552†	87.2	0.00009	mg/L	0.000042	0.00009	mg/L	0.000042	46.04%
Ti 334.903†	9.8	0.00037	mg/L	0.000945	0.00037	mg/L	0.000945	255.35%
Tl 190.801†	8.1	0.00447	mg/L	0.001297	0.00447	mg/L	0.001297	29.04%
V 292.402†	25.7	0.00019	mg/L	0.000182	0.00019	mg/L	0.000182	96.89%
Zn 206.200†	-0.9	-0.00021	mg/L	0.000258	-0.00021	mg/L	0.000258	122.63%

Sequence No.: 57
Sample ID: WL49 MB3 SWC

Autosampler Location: 335
Date Collected: 4/16/2013 12:45:51 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL49 MB3 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 MB3 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2844663.6	103.1	%	0.43				0.41%
ScR 361.383	398959.3	103.7	%	0.36				0.35%
Ag 328.068†	15.4	0.00007	mg/L	0.000139	0.00013	mg/L	0.000277	209.00%
Al 308.215†	11.4	0.00934	mg/L	0.002115	0.01869	mg/L	0.004229	22.63%
As 188.979†	-0.6	-0.00045	mg/L	0.000495	-0.00089	mg/L	0.000990	110.93%
B 249.677†	5.5	0.00083	mg/L	0.000535	0.00166	mg/L	0.001070	64.48%
Ba 233.527†	5.6	0.00089	mg/L	0.000929	0.00177	mg/L	0.001859	104.83%
Be 313.042†	25.1	0.00004	mg/L	0.000014	0.00009	mg/L	0.000028	32.67%
Ca 317.933†	193.7	0.01845	mg/L	0.000965	0.03689	mg/L	0.001930	5.23%
Cd 228.802†	-0.3	-0.00001	mg/L	0.000112	-0.00002	mg/L	0.000224	899.79%
Co 228.616†	2.1	0.00006	mg/L	0.000073	0.00013	mg/L	0.000146	113.64%
Cr 267.716†	-4.4	-0.00053	mg/L	0.000495	-0.00105	mg/L	0.000990	94.11%
Cu 324.752†	21.6	0.00008	mg/L	0.000183	0.00016	mg/L	0.000365	222.42%
Fe 273.955†	11.3	0.00908	mg/L	0.001706	0.01816	mg/L	0.003412	18.79%
K 766.490†	-9.9	-0.00468	mg/L	0.012235	-0.00937	mg/L	0.024470	261.19%
Mg 279.077†	8.1	0.00857	mg/L	0.005253	0.01714	mg/L	0.010506	61.31%
Mn 257.610†	13.3	0.00026	mg/L	0.000111	0.00051	mg/L	0.000221	43.30%
Mo 202.031†	5.5	0.00029	mg/L	0.000231	0.00058	mg/L	0.000462	79.24%
Na 589.592†	1.2	0.00010	mg/L	0.001951	0.00019	mg/L	0.003902	>999.9%
Na 330.237†	-7.8	-0.2390	mg/L	0.13622	-0.4780	mg/L	0.27244	57.00%
Ni 231.604†	1.5	0.00039	mg/L	0.000633	0.00079	mg/L	0.001266	160.58%
Pb 220.353†	5.8	0.00073	mg/L	0.000270	0.00146	mg/L	0.000539	36.88%
Sb 206.836†	4.5	0.00167	mg/L	0.001403	0.00333	mg/L	0.002806	84.21%
Se 196.026†	1.5	0.00099	mg/L	0.000706	0.00198	mg/L	0.001412	71.20%
Si 288.158†	23.0	0.01529	mg/L	0.004601	0.03057	mg/L	0.009202	30.10%
Sn 189.927†	4.2	0.00086	mg/L	0.000491	0.00172	mg/L	0.000983	57.31%
Sr 421.552†	-8.1	-0.00001	mg/L	0.000036	-0.00002	mg/L	0.000072	425.48%
Ti 334.903†	-3.9	-0.00015	mg/L	0.001059	-0.00030	mg/L	0.002118	699.98%
Tl 190.801†	1.7	0.00092	mg/L	0.001135	0.00183	mg/L	0.002270	123.89%
V 292.402†	-1.8	-0.00002	mg/L	0.000025	-0.00003	mg/L	0.000051	164.26%
Zn 206.200†	2.4	0.00060	mg/L	0.000142	0.00120	mg/L	0.000284	23.75%

Sequence No.: 58
Sample ID: WL49 G SWC

Autosampler Location: 336
Date Collected: 4/16/2013 12:50:08 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL49 G SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2770612.3	100.4	%	0.11				0.11%
ScR 361.383	388200.7	100.9	%	0.76				0.75%
Ag 328.068†	-363.3	-0.00056	mg/L	0.000196	-0.00112	mg/L	0.000391	35.07%
Al 308.215†	150556.6	123.8	mg/L	0.21	247.7	mg/L	0.43	0.17%
As 188.979†	-318.4	0.01108	mg/L	0.001110	0.02216	mg/L	0.002220	10.02%
B 249.677†	134.4	0.01991	mg/L	0.001521	0.03983	mg/L	0.003042	7.64%
Ba 233.527†	2798.2	0.4198	mg/L	0.00204	0.8395	mg/L	0.00408	0.49%
Be 313.042†	811.1	0.00124	mg/L	0.000013	0.00248	mg/L	0.000025	1.01%
Ca 317.933†	1430853.9	136.2	mg/L	0.20	272.5	mg/L	0.40	0.15%
Cd 228.802†	122.7	0.00695	mg/L	0.000345	0.01390	mg/L	0.000690	4.96%
Co 228.616†	2516.8	0.06402	mg/L	0.000290	0.1280	mg/L	0.00058	0.45%
Cr 267.716†	2848.5	0.3384	mg/L	0.00286	0.6768	mg/L	0.00573	0.85%
Cu 324.752†	113239.0	0.4360	mg/L	0.00197	0.8719	mg/L	0.00393	0.45%
Fe 273.955†	215798.9	172.8	mg/L	1.29	345.6	mg/L	2.58	0.75%
K 766.490†	14061.0	6.654	mg/L	0.0315	13.31	mg/L	0.063	0.47%
Mg 279.077†	41164.8	43.23	mg/L	0.088	86.46	mg/L	0.177	0.20%
Mn 257.610†	150591.1	2.891	mg/L	0.0146	5.783	mg/L	0.0291	0.50%
Mo 202.031†	313.4	0.01513	mg/L	0.000153	0.03025	mg/L	0.000306	1.01%
Na 589.592†	282326.3	22.67	mg/L	0.138	45.34	mg/L	0.276	0.61%
Na 330.237†	713.7	23.37	mg/L	0.099	46.73	mg/L	0.199	0.42%
Ni 231.604†	989.4	0.2614	mg/L	0.00125	0.5228	mg/L	0.00250	0.48%
Pb 220.353†	1588.1	0.2232	mg/L	0.00201	0.4465	mg/L	0.00401	0.90%
Sb 206.836†	-11.7	-0.00151	mg/L	0.001647	-0.00302	mg/L	0.003295	109.09%
Se 196.026†	-0.3	-0.01472	mg/L	0.001394	-0.02944	mg/L	0.002787	9.47%
Si 288.158†	1592.6	1.063	mg/L	0.0082	2.125	mg/L	0.0165	0.77%
Sn 189.927†	140.5	0.04171	mg/L	0.000341	0.08342	mg/L	0.000682	0.82%
Sr 421.552†	414243.7	0.4301	mg/L	0.00114	0.8602	mg/L	0.00227	0.26%
Ti 334.903†	192725.7	7.386	mg/L	0.0052	14.77	mg/L	0.010	0.07%
Tl 190.801†	-4.7	0.01835	mg/L	0.003996	0.03669	mg/L	0.007991	21.78%
V 292.402†	54533.6	0.3828	mg/L	0.00149	0.7656	mg/L	0.00299	0.39%
Zn 206.200†	9311.8	2.269	mg/L	0.0138	4.537	mg/L	0.0277	0.61%

Sequence No.: 59
Sample ID: WL49 FDUP SWC

Dil

Dilution: 5.000000X

Autosampler Location: 337
Date Collected: 4/16/2013 12:54:12 PM
Data Type: Original

Nebulizer Parameters: WL49 FDUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 FDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2814144.4	102.0	%	0.32				0.31%
ScR 361.383	395342.9	102.8	%	0.57				0.56%
Ag 328.068†	736.3	0.00363	mg/L	0.000220	0.01816	mg/L	0.001101	6.06%
Al 308.215†	45817.2	37.68	mg/L	0.170	188.4	mg/L	0.85	0.45%
As 188.979†	-44.5	0.04863	mg/L	0.004329	0.2431	mg/L	0.02165	8.90%
B 249.677†	1087.6	0.1627	mg/L	0.00053	0.8135	mg/L	0.00267	0.33%
Ba 233.527†	8769.2	1.356	mg/L	0.0152	6.781	mg/L	0.0758	1.12%
Be 313.042†	288.9	0.00044	mg/L	0.000009	0.00221	mg/L	0.000045	2.03%
Ca 317.933†	673680.8	64.14	mg/L	0.182	320.7	mg/L	0.91	0.28%
Cd 228.802†	1117.3	0.05016	mg/L	0.000188	0.2508	mg/L	0.00094	0.37%
Co 228.616†	1902.0	0.05360	mg/L	0.000098	0.2680	mg/L	0.00049	0.18%
Cr 267.716†	4286.7	0.5160	mg/L	0.00206	2.580	mg/L	0.0103	0.40%
Cu 324.752†	462336.0	1.764	mg/L	0.0033	8.822	mg/L	0.0165	0.19%
Fe 273.955†	332843.2	266.6	mg/L	0.79	1333	mg/L	3.96	0.30%
K 766.490†	6247.5	2.957	mg/L	0.0080	14.78	mg/L	0.040	0.27%
Mg 279.077†	16413.5	17.13	mg/L	0.056	85.64	mg/L	0.281	0.33%
Mn 257.610†	137704.0	2.645	mg/L	0.0056	13.23	mg/L	0.028	0.21%
Mo 202.031†	1324.8	0.07000	mg/L	0.000384	0.3500	mg/L	0.00192	0.55%
Na 589.592†	54298.7	4.360	mg/L	0.0033	21.80	mg/L	0.017	0.08%
Na 330.237†	276.8	4.295	mg/L	0.0797	21.48	mg/L	0.399	1.86%
Ni 231.604†	1606.0	0.4244	mg/L	0.00141	2.122	mg/L	0.0070	0.33%
Pb 220.353†	31147.3	3.896	mg/L	0.0092	19.48	mg/L	0.046	0.24%
Sb 206.836†	137.3	0.04593	mg/L	0.002488	0.2297	mg/L	0.01244	5.42%
Se 196.026†	-13.8	-0.01356	mg/L	0.003567	-0.06782	mg/L	0.017837	26.30%
Si 288.158†	782.7	0.5215	mg/L	0.00633	2.608	mg/L	0.0316	1.21%
Sn 189.927†	334.7	0.07477	mg/L	0.000322	0.3738	mg/L	0.00161	0.43%
Sr 421.552†	294414.0	0.3057	mg/L	0.00103	1.528	mg/L	0.0052	0.34%
Ti 334.903†	66119.9	2.533	mg/L	0.0050	12.66	mg/L	0.025	0.20%
Tl 190.801†	-29.0	0.01840	mg/L	0.002955	0.09201	mg/L	0.014774	16.06%
V 292.402†	20533.8	0.1361	mg/L	0.00052	0.6805	mg/L	0.00261	0.38%
Zn 206.200†	68209.1	16.62	mg/L	0.035	83.08	mg/L	0.175	0.21%

Sequence No.: 60
Sample ID: WL49 F SWC

Dilution: 5.000000X

Autosampler Location: 338
Date Collected: 4/16/2013 12:58:14 PM
Data Type: Original

Nebulizer Parameters: WL49 F SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2772264.4	100.5	%	0.18				0.18%
ScR 361.383	389840.1	101.3	%	0.56				0.56%
Ag 328.068†	833.9	0.00405	mg/L	0.000133	0.02026	mg/L	0.000663	3.27%
Al 308.215†	46716.3	38.42	mg/L	0.114	192.1	mg/L	0.57	0.30%
As 188.979†	-49.0	0.04735	mg/L	0.000827	0.2368	mg/L	0.00414	1.75%
B 249.677†	1083.3	0.1621	mg/L	0.00049	0.8103	mg/L	0.00246	0.30%
Ba 233.527†	9275.9	1.437	mg/L	0.0104	7.186	mg/L	0.0522	0.73%
Be 313.042†	284.7	0.00043	mg/L	0.000019	0.00216	mg/L	0.000094	4.34%
Ca 317.933†	673556.1	64.13	mg/L	0.095	320.7	mg/L	0.47	0.15%
Cd 228.802†	1147.8	0.05156	mg/L	0.000275	0.2578	mg/L	0.00138	0.53%
Co 228.616†	1927.1	0.05426	mg/L	0.000057	0.2713	mg/L	0.00029	0.11%
Cr 267.716†	3851.3	0.4641	mg/L	0.00235	2.320	mg/L	0.0118	0.51%
Cu 324.752†	467873.2	1.785	mg/L	0.0024	8.926	mg/L	0.0121	0.14%
Fe 273.955†	328594.0	263.1	mg/L	2.03	1316	mg/L	10.16	0.77%
K 766.490†	6393.9	3.026	mg/L	0.0313	15.13	mg/L	0.157	1.03%
Mg 279.077†	16278.6	16.99	mg/L	0.118	84.94	mg/L	0.588	0.69%
Mn 257.610†	135966.1	2.612	mg/L	0.0113	13.06	mg/L	0.057	0.43%
Mo 202.031†	1390.7	0.07353	mg/L	0.000320	0.3677	mg/L	0.00160	0.43%
Na 589.592†	55350.5	4.445	mg/L	0.0034	22.22	mg/L	0.017	0.08%
Na 330.237†	265.7	4.128	mg/L	0.2375	20.64	mg/L	1.188	5.75%
Ni 231.604†	1706.6	0.4510	mg/L	0.00542	2.255	mg/L	0.0271	1.20%
Pb 220.353†	32181.8	4.025	mg/L	0.0049	20.13	mg/L	0.025	0.12%
Sb 206.836†	134.5	0.04569	mg/L	0.001528	0.2285	mg/L	0.00764	3.34%
Se 196.026†	-7.5	-0.00949	mg/L	0.006496	-0.04747	mg/L	0.032481	68.42%
Si 288.158†	802.3	0.5346	mg/L	0.01013	2.673	mg/L	0.0507	1.90%
Sn 189.927†	322.3	0.07224	mg/L	0.001781	0.3612	mg/L	0.00891	2.47%
Sr 421.552†	299607.0	0.3111	mg/L	0.00014	1.555	mg/L	0.0007	0.05%
Ti 334.903†	67597.7	2.590	mg/L	0.0010	12.95	mg/L	0.005	0.04%
Tl 190.801†	-32.9	0.01582	mg/L	0.003745	0.07908	mg/L	0.018725	23.68%
V 292.402†	20930.3	0.1389	mg/L	0.00056	0.6944	mg/L	0.00281	0.41%
Zn 206.200†	65984.1	16.07	mg/L	0.048	80.37	mg/L	0.239	0.30%

Sequence No.: 61
Sample ID: WL49 FSPK SWC

Dilution: 5.000000X

Del

Autosampler Location: 339
Date Collected: 4/16/2013 1:02:16 PM
Data Type: Original

Nebulizer Parameters: WL49 FSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 FSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767403.4	100.3	%	0.29				0.29%
ScR 361.383	391796.7	101.8	%	0.51				0.50%
Ag 328.068†	49282.7	0.2127	mg/L	0.00068	1.064	mg/L	0.0034	0.32%
Al 308.215†	46944.6	38.61	mg/L	0.149	193.0	mg/L	0.74	0.39%
As 188.979†	1130.4	0.8997	mg/L	0.00654	4.498	mg/L	0.0327	0.73%
B 249.677†	1249.7	0.1865	mg/L	0.00154	0.9325	mg/L	0.00770	0.83%
Ba 233.527†	15558.1	2.438	mg/L	0.0182	12.19	mg/L	0.091	0.75%
Be 313.042†	114392.7	0.1986	mg/L	0.00098	0.9928	mg/L	0.00491	0.50%
Ca 317.933†	714440.9	68.02	mg/L	0.210	340.1	mg/L	1.05	0.31%
Cd 228.802†	6066.3	0.2652	mg/L	0.00107	1.326	mg/L	0.0054	0.41%
Co 228.616†	8657.2	0.2606	mg/L	0.00042	1.303	mg/L	0.0021	0.16%
Cr 267.716†	5403.9	0.6483	mg/L	0.00564	3.241	mg/L	0.0282	0.87%
Cu 324.752†	527685.6	2.012	mg/L	0.0039	10.06	mg/L	0.020	0.19%
Fe 273.955†	318790.7	255.3	mg/L	1.58	1276	mg/L	7.90	0.62%
K 766.490†	14614.3	6.916	mg/L	0.0370	34.58	mg/L	0.185	0.53%
Mg 279.077†	20029.0	20.94	mg/L	0.194	104.7	mg/L	0.97	0.93%
Mn 257.610†	140736.1	2.704	mg/L	0.0126	13.52	mg/L	0.063	0.47%
Mo 202.031†	1361.7	0.07192	mg/L	0.000009	0.3596	mg/L	0.00005	0.01%
Na 589.592†	105907.2	8.504	mg/L	0.0591	42.52	mg/L	0.295	0.69%
Na 330.237†	413.6	8.535	mg/L	0.2059	42.67	mg/L	1.030	2.41%
Ni 231.604†	2388.8	0.6309	mg/L	0.00517	3.154	mg/L	0.0259	0.82%
Pb 220.353†	39389.8	4.929	mg/L	0.0085	24.64	mg/L	0.042	0.17%
Sb 206.836†	264.8	0.09114	mg/L	0.001730	0.4557	mg/L	0.00865	1.90%
Se 196.026†	1274.6	0.8351	mg/L	0.00150	4.176	mg/L	0.0075	0.18%
Si 288.158†	804.2	0.5369	mg/L	0.00360	2.685	mg/L	0.0180	0.67%
Sn 189.927†	353.4	0.07895	mg/L	0.000549	0.3947	mg/L	0.00275	0.70%
Sr 421.552†	489693.8	0.5085	mg/L	0.00155	2.542	mg/L	0.0078	0.31%
Ti 334.903†	62506.4	2.394	mg/L	0.0078	11.97	mg/L	0.039	0.33%
Tl 190.801†	1424.8	0.8160	mg/L	0.00487	4.080	mg/L	0.0243	0.60%
V 292.402†	47487.5	0.3320	mg/L	0.00085	1.660	mg/L	0.0043	0.26%
Zn 206.200†	67295.9	16.39	mg/L	0.046	81.97	mg/L	0.232	0.28%

Sequence No.: 62
Sample ID: ~~WL49 FPOST SWC~~ 222222
BA 4/16/13
Dilution: 5.000000X

Autosampler Location: 340
Date Collected: 4/16/2013 1:06:19 PM
Data Type: Original

Nebulizer Parameters: WL49 FPOST SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 FPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2758073.6	99.94	%	0.378				0.38%
ScR 361.383	388932.3	101.1	%	0.89				0.88%
Ag 328.068†	125769.2	0.5422	mg/L	0.00194	2.711	mg/L	0.0097	0.36%
Al 308.215†	50755.9	41.74	mg/L	0.189	208.7	mg/L	0.94	0.45%
As 188.979†	2998.8	2.269	mg/L	0.0097	11.35	mg/L	0.048	0.43%
B 249.677†	1122.9	0.1668	mg/L	0.00276	0.8338	mg/L	0.01378	1.65%
Ba 233.527†	23109.4	3.638	mg/L	0.0407	18.19	mg/L	0.204	1.12%
Be 313.042†	294746.6	0.5117	mg/L	0.00467	2.559	mg/L	0.0234	0.91%
Ca 317.933†	799280.8	76.10	mg/L	0.680	380.5	mg/L	3.40	0.89%
Cd 228.802†	13941.8	0.6075	mg/L	0.00372	3.038	mg/L	0.0186	0.61%
Co 228.616†	19346.4	0.5874	mg/L	0.00316	2.937	mg/L	0.0158	0.54%
Cr 267.716†	8596.3	1.028	mg/L	0.0104	5.140	mg/L	0.0519	1.01%
Cu 324.752†	619537.1	2.360	mg/L	0.0017	11.80	mg/L	0.009	0.07%
Fe 273.955†	335783.4	268.9	mg/L	2.93	1345	mg/L	14.65	1.09%
K 766.490†	29253.7	13.84	mg/L	0.066	69.22	mg/L	0.332	0.48%
Mg 279.077†	27101.6	28.38	mg/L	0.321	141.9	mg/L	1.61	1.13%
Mn 257.610†	165685.1	3.183	mg/L	0.0279	15.92	mg/L	0.140	0.88%
Mo 202.031†	1396.4	0.07366	mg/L	0.000264	0.3683	mg/L	0.00132	0.36%
Na 589.592†	189629.9	15.23	mg/L	0.027	76.14	mg/L	0.136	0.18%
Na 330.237†	638.7	15.36	mg/L	0.202	76.81	mg/L	1.011	1.32%
Ni 231.604†	3762.3	0.9932	mg/L	0.01068	4.966	mg/L	0.0534	1.08%
Pb 220.353†	49079.4	6.143	mg/L	0.0073	30.71	mg/L	0.036	0.12%
Sb 206.836†	150.4	0.04578	mg/L	0.001760	0.2289	mg/L	0.00880	3.84%
Se 196.026†	3352.7	2.204	mg/L	0.0081	11.02	mg/L	0.041	0.37%
Si 288.158†	810.2	0.5430	mg/L	0.01206	2.715	mg/L	0.0603	2.22%
Sn 189.927†	315.5	0.07186	mg/L	0.001559	0.3593	mg/L	0.00779	2.17%
Sr 421.552†	807635.4	0.8386	mg/L	0.00283	4.193	mg/L	0.0142	0.34%
Ti 334.903†	69354.5	2.656	mg/L	0.0120	13.28	mg/L	0.060	0.45%
Tl 190.801†	3783.1	2.114	mg/L	0.0190	10.57	mg/L	0.095	0.90%
V 292.402†	93711.0	0.6666	mg/L	0.00171	3.333	mg/L	0.0085	0.26%
Zn 206.200†	69756.7	16.99	mg/L	0.114	84.97	mg/L	0.570	0.67%

Sequence No.: 63
Sample ID: WL49 MB3SPK SWC

Autosampler Location: 341
Date Collected: 4/16/2013 1:10:24 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL49 MB3SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 MB3SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2801194.4	101.5	%	0.06				0.06%
ScR 361.383	392147.3	101.9	%	0.38				0.37%
Ag 328.068†	128221.5	0.5523	mg/L	0.00100	1.105	mg/L	0.0020	0.18%
Al 308.215†	2652.5	2.174	mg/L	0.0094	4.349	mg/L	0.0187	0.43%
As 188.979†	3037.7	2.213	mg/L	0.0080	4.425	mg/L	0.0159	0.36%
B 249.677†	11.3	0.00045	mg/L	0.000675	0.00090	mg/L	0.001350	150.62%
Ba 233.527†	13301.0	2.116	mg/L	0.0089	4.232	mg/L	0.0178	0.42%
Be 313.042†	297466.6	0.5165	mg/L	0.00257	1.033	mg/L	0.0051	0.50%
Ca 317.933†	110078.7	10.48	mg/L	0.035	20.96	mg/L	0.071	0.34%
Cd 228.802†	12421.0	0.5395	mg/L	0.00185	1.079	mg/L	0.0037	0.34%
Co 228.616†	17362.9	0.5315	mg/L	0.00053	1.063	mg/L	0.0011	0.10%
Cr 267.716†	4676.4	0.5556	mg/L	0.00206	1.111	mg/L	0.0041	0.37%
Cu 324.752†	139666.8	0.5294	mg/L	0.00149	1.059	mg/L	0.0030	0.28%
Fe 273.955†	2772.2	2.217	mg/L	0.0033	4.434	mg/L	0.0066	0.15%
K 766.490†	22151.3	10.48	mg/L	0.047	20.97	mg/L	0.094	0.45%
Mg 279.077†	10401.7	10.95	mg/L	0.033	21.90	mg/L	0.065	0.30%
Mn 257.610†	27011.0	0.5192	mg/L	0.00337	1.038	mg/L	0.0067	0.65%
Mo 202.031†	34.2	0.00168	mg/L	0.000152	0.00335	mg/L	0.000303	9.04%
Na 589.592†	129407.9	10.39	mg/L	0.016	20.78	mg/L	0.031	0.15%
Na 330.237†	352.4	10.69	mg/L	0.191	21.39	mg/L	0.383	1.79%
Ni 231.604†	2050.0	0.5407	mg/L	0.00073	1.081	mg/L	0.0015	0.13%
Pb 220.353†	17091.0	2.141	mg/L	0.0032	4.283	mg/L	0.0064	0.15%
Sb 206.836†	16.6	0.00039	mg/L	0.001768	0.00078	mg/L	0.003535	454.47%
Se 196.026†	3316.2	2.184	mg/L	0.0173	4.369	mg/L	0.0346	0.79%
Si 288.158†	21.7	0.01751	mg/L	0.004854	0.03503	mg/L	0.009709	27.72%
Sn 189.927†	-22.8	-0.00382	mg/L	0.000355	-0.00764	mg/L	0.000711	9.30%
Sr 421.552†	493414.4	0.5123	mg/L	0.00112	1.025	mg/L	0.0022	0.22%
Ti 334.903†	80.1	0.00234	mg/L	0.000235	0.00468	mg/L	0.000471	10.04%
Tl 190.801†	3998.1	2.198	mg/L	0.0119	4.396	mg/L	0.0239	0.54%
V 292.402†	73544.6	0.5334	mg/L	0.00022	1.067	mg/L	0.0004	0.04%
Zn 206.200†	2202.2	0.5367	mg/L	0.00169	1.073	mg/L	0.0034	0.31%

Sequence No.: 64
Sample ID: CV 8
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 4/16/2013 1:14:25 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 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	2777377.9	100.6	%	0.42				0.42%
ScR 361.383	387843.0	100.8	%	0.30				0.30%
Ag 328.068†	248689.8	1.071	mg/L	0.0044	1.071	mg/L	0.0044	0.41%
Al 308.215†	2591.0	2.096	mg/L	0.0089	2.096	mg/L	0.0089	0.42%
As 188.979†	2879.9	2.130	mg/L	0.0094	2.130	mg/L	0.0094	0.44%
B 249.677†	6884.8	1.030	mg/L	0.0010	1.030	mg/L	0.0010	0.09%
Ba 233.527†	6674.5	1.062	mg/L	0.0014	1.062	mg/L	0.0014	0.13%
Be 313.042†	594599.4	1.032	mg/L	0.0011	1.032	mg/L	0.0011	0.11%
Ca 317.933†	22744.2	2.166	mg/L	0.0036	2.166	mg/L	0.0036	0.17%
Cd 228.802†	23895.7	1.050	mg/L	0.0060	1.050	mg/L	0.0060	0.57%
Co 228.616†	34855.8	1.066	mg/L	0.0030	1.066	mg/L	0.0030	0.28%
Cr 267.716†	9172.9	1.092	mg/L	0.0007	1.092	mg/L	0.0007	0.07%
Cu 324.752†	280108.7	1.061	mg/L	0.0047	1.061	mg/L	0.0047	0.44%
Fe 273.955†	2703.0	2.159	mg/L	0.0009	2.159	mg/L	0.0009	0.04%
K 766.490†	44040.1	20.84	mg/L	0.044	20.84	mg/L	0.044	0.21%
Mg 279.077†	1981.2	2.093	mg/L	0.0068	2.093	mg/L	0.0068	0.32%
Mn 257.610†	53424.3	1.027	mg/L	0.0025	1.027	mg/L	0.0025	0.25%
Mo 202.031†	19616.6	1.048	mg/L	0.0048	1.048	mg/L	0.0048	0.46%
Na 589.592†	642661.3	51.61	mg/L	0.038	51.61	mg/L	0.038	0.07%
Na 330.237†	1724.6	53.08	mg/L	0.240	53.08	mg/L	0.240	0.45%
Ni 231.604†	4016.1	1.061	mg/L	0.0041	1.061	mg/L	0.0041	0.39%
Pb 220.353†	16849.4	2.111	mg/L	0.0078	2.111	mg/L	0.0078	0.37%
Sb 206.836†	5907.7	2.145	mg/L	0.0097	2.145	mg/L	0.0097	0.45%
Se 196.026†	3202.7	2.109	mg/L	0.0163	2.109	mg/L	0.0163	0.77%
Si 288.158†	3040.6	2.015	mg/L	0.0042	2.015	mg/L	0.0042	0.21%
Sn 189.927†	5027.4	1.036	mg/L	0.0057	1.036	mg/L	0.0057	0.55%
Sr 421.552†	981069.3	1.019	mg/L	0.0016	1.019	mg/L	0.0016	0.15%
Ti 334.903†	26974.9	1.033	mg/L	0.0042	1.033	mg/L	0.0042	0.41%
Tl 190.801†	3965.6	2.177	mg/L	0.0095	2.177	mg/L	0.0095	0.44%
V 292.402†	143790.6	1.043	mg/L	0.0032	1.043	mg/L	0.0032	0.30%
Zn 206.200†	4374.2	1.066	mg/L	0.0009	1.066	mg/L	0.0009	0.09%

Sequence No.: 65
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/16/2013 1:18:29 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 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	2820895.4	102.2	%	0.49				0.48%
ScR 361.383	394683.0	102.6	%	0.44				0.43%
Ag 328.068†	43.5	0.00019	mg/L	0.000209	0.00019	mg/L	0.000209	111.51%
Al 308.215†	6.7	0.00546	mg/L	0.001830	0.00546	mg/L	0.001830	33.50%
As 188.979†	4.4	0.00322	mg/L	0.001562	0.00322	mg/L	0.001562	48.57%
B 249.677†	13.2	0.00198	mg/L	0.000327	0.00198	mg/L	0.000327	16.55%
Ba 233.527†	2.7	0.00043	mg/L	0.000289	0.00043	mg/L	0.000289	67.60%
Be 313.042†	80.6	0.00014	mg/L	0.000016	0.00014	mg/L	0.000016	11.66%
Ca 317.933†	21.1	0.00201	mg/L	0.000661	0.00201	mg/L	0.000661	32.88%
Cd 228.802†	9.9	0.00042	mg/L	0.000108	0.00042	mg/L	0.000108	25.54%
Co 228.616†	6.2	0.00019	mg/L	0.000070	0.00019	mg/L	0.000070	37.01%
Cr 267.716†	-3.3	-0.00040	mg/L	0.000180	-0.00040	mg/L	0.000180	45.22%
Cu 324.752†	71.7	0.00027	mg/L	0.000057	0.00027	mg/L	0.000057	21.17%
Fe 273.955†	3.9	0.00312	mg/L	0.000291	0.00312	mg/L	0.000291	9.33%
K 766.490†	57.5	0.02720	mg/L	0.005769	0.02720	mg/L	0.005769	21.21%
Mg 279.077†	2.0	0.00212	mg/L	0.002332	0.00212	mg/L	0.002332	110.11%
Mn 257.610†	6.8	0.00013	mg/L	0.000029	0.00013	mg/L	0.000029	22.19%
Mo 202.031†	89.3	0.00477	mg/L	0.000669	0.00477	mg/L	0.000669	14.01%
Na 589.592†	35.5	0.00285	mg/L	0.001831	0.00285	mg/L	0.001831	64.32%
Na 330.237†	-6.6	-0.2024	mg/L	0.27061	-0.2024	mg/L	0.27061	133.70%
Ni 231.604†	5.4	0.00144	mg/L	0.000189	0.00144	mg/L	0.000189	13.20%
Pb 220.353†	15.4	0.00193	mg/L	0.000735	0.00193	mg/L	0.000735	38.15%
Sb 206.836†	17.6	0.00641	mg/L	0.001437	0.00641	mg/L	0.001437	22.41%
Se 196.026†	-2.7	-0.00177	mg/L	0.000779	-0.00177	mg/L	0.000779	43.92%
Si 288.158†	-10.6	-0.00702	mg/L	0.004335	-0.00702	mg/L	0.004335	61.73%
Sn 189.927†	3.6	0.00074	mg/L	0.000185	0.00074	mg/L	0.000185	24.95%
Sr 421.552†	63.9	0.00007	mg/L	0.000020	0.00007	mg/L	0.000020	29.73%
Ti 334.903†	18.8	0.00071	mg/L	0.000594	0.00071	mg/L	0.000594	83.17%
Tl 190.801†	5.9	0.00325	mg/L	0.000426	0.00325	mg/L	0.000426	13.13%
V 292.402†	32.6	0.00024	mg/L	0.000016	0.00024	mg/L	0.000016	6.82%
Zn 206.200†	0.9	0.00022	mg/L	0.000175	0.00022	mg/L	0.000175	79.78%

Sequence No.: 66
Sample ID: WL67 MB1 SWC

Autosampler Location: 342
Date Collected: 4/16/2013 1:22:45 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL67 MB1 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL67 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	Sample RSD
ScA 357.253	2832488.2	102.6	%	0.44				0.43%
ScR 361.383	399717.6	103.9	%	0.54				0.52%
Ag 328.068†	51.2	0.00022	mg/L	0.000169	0.00044	mg/L	0.000339	76.81%
Al 308.215†	11.4	0.00941	mg/L	0.002344	0.01882	mg/L	0.004688	24.91%
As 188.979†	0.5	0.00037	mg/L	0.000919	0.00073	mg/L	0.001838	251.73%
B 249.677†	1.2	0.00018	mg/L	0.000672	0.00036	mg/L	0.001344	369.97%
Ba 233.527†	2.3	0.00037	mg/L	0.000443	0.00073	mg/L	0.000885	120.55%
Be 313.042†	39.3	0.00007	mg/L	0.000040	0.00014	mg/L	0.000079	58.02%
Ca 317.933†	130.6	0.01243	mg/L	0.001308	0.02486	mg/L	0.002617	10.53%
Cd 228.802†	4.7	0.00021	mg/L	0.000096	0.00042	mg/L	0.000193	46.21%
Co 228.616†	3.8	0.00012	mg/L	0.000058	0.00024	mg/L	0.000116	49.25%
Cr 267.716†	-3.0	-0.00036	mg/L	0.000276	-0.00072	mg/L	0.000553	76.98%
Cu 324.752†	22.1	0.00008	mg/L	0.000104	0.00017	mg/L	0.000208	123.42%
Fe 273.955†	13.3	0.01062	mg/L	0.001035	0.02124	mg/L	0.002070	9.75%
K 766.490†	3.9	0.00183	mg/L	0.008263	0.00366	mg/L	0.016525	451.95%
Mg 279.077†	-1.8	-0.00190	mg/L	0.003540	-0.00381	mg/L	0.007081	185.91%
Mn 257.610†	9.3	0.00018	mg/L	0.000032	0.00036	mg/L	0.000064	17.67%
Mo 202.031†	4.6	0.00025	mg/L	0.000079	0.00049	mg/L	0.000157	31.90%
Na 589.592†	1.8	0.00015	mg/L	0.002466	0.00030	mg/L	0.004931	>999.9%
Na 330.237†	-3.9	-0.1210	mg/L	0.27932	-0.2420	mg/L	0.55864	230.82%
Ni 231.604†	1.6	0.00042	mg/L	0.001344	0.00084	mg/L	0.002688	318.28%
Pb 220.353†	14.0	0.00175	mg/L	0.000347	0.00350	mg/L	0.000695	19.86%
Sb 206.836†	6.3	0.00229	mg/L	0.000460	0.00457	mg/L	0.000920	20.10%
Se 196.026†	-1.1	-0.00069	mg/L	0.000594	-0.00139	mg/L	0.001187	85.61%
Si 288.158†	12.9	0.00857	mg/L	0.000542	0.01714	mg/L	0.001085	6.33%
Sn 189.927†	4.2	0.00088	mg/L	0.000286	0.00175	mg/L	0.000572	32.63%
Sr 421.552†	11.0	0.00001	mg/L	0.000021	0.00002	mg/L	0.000041	181.84%
Ti 334.903†	-1.5	-0.00006	mg/L	0.000168	-0.00012	mg/L	0.000336	291.39%
Tl 190.801†	2.1	0.00114	mg/L	0.002623	0.00228	mg/L	0.005247	229.83%
V 292.402†	-0.8	-0.00001	mg/L	0.000030	-0.00002	mg/L	0.000059	370.68%
Zn 206.200†	1.8	0.00045	mg/L	0.000493	0.00089	mg/L	0.000986	110.27%

Sequence No.: 67
Sample ID: WL67 B SWC

Autosampler Location: 343
Date Collected: 4/16/2013 1:27:02 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL67 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2814542.1	102.0	%	0.41				0.41%
ScR 361.383	395928.1	102.9	%	0.40				0.39%
Ag 328.068†	1627.9	0.00724	mg/L	0.000161	0.03620	mg/L	0.000806	2.23%
Al 308.215†	30536.8	25.12	mg/L	0.092	125.6	mg/L	0.46	0.37%
As 188.979†	-12.0	0.04112	mg/L	0.002463	0.2056	mg/L	0.01232	5.99%
B 249.677†	703.4	0.1052	mg/L	0.00136	0.5261	mg/L	0.00682	1.30%
Ba 233.527†	4326.2	0.6648	mg/L	0.00376	3.324	mg/L	0.0188	0.56%
Be 313.042†	90.5	0.00012	mg/L	0.000010	0.00061	mg/L	0.000049	7.97%
Ca 317.933†	334947.4	31.89	mg/L	0.044	159.5	mg/L	0.22	0.14%
Cd 228.802†	960.8	0.04294	mg/L	0.000318	0.2147	mg/L	0.00159	0.74%
Co 228.616†	1479.0	0.04250	mg/L	0.000053	0.2125	mg/L	0.00027	0.13%
Cr 267.716†	2194.9	0.2648	mg/L	0.00046	1.324	mg/L	0.0023	0.18%
Cu 324.752†	437655.5	1.666	mg/L	0.0017	8.330	mg/L	0.0084	0.10%
Fe 273.955†	200121.8	160.3	mg/L	0.10	801.3	mg/L	0.49	0.06%
K 766.490†	3882.4	1.837	mg/L	0.0123	9.187	mg/L	0.0617	0.67%
Mg 279.077†	9348.2	9.751	mg/L	0.0473	48.75	mg/L	0.236	0.48%
Mn 257.610†	114069.0	2.191	mg/L	0.0017	10.96	mg/L	0.008	0.08%
Mo 202.031†	687.1	0.03633	mg/L	0.000538	0.1816	mg/L	0.00269	1.48%
Na 589.592†	44679.4	3.588	mg/L	0.0074	17.94	mg/L	0.037	0.21%
Na 330.237†	245.1	3.408	mg/L	0.1308	17.04	mg/L	0.654	3.84%
Ni 231.604†	999.4	0.2641	mg/L	0.00086	1.320	mg/L	0.0043	0.32%
Pb 220.353†	14254.0	1.782	mg/L	0.0090	8.909	mg/L	0.0451	0.51%
Sb 206.836†	92.8	0.03318	mg/L	0.003212	0.1659	mg/L	0.01606	9.68%
Se 196.026†	-4.9	-0.00621	mg/L	0.005492	-0.03105	mg/L	0.027462	88.45%
Si 288.158†	553.1	0.3670	mg/L	0.00410	1.835	mg/L	0.0205	1.12%
Sn 189.927†	980.4	0.2048	mg/L	0.00115	1.024	mg/L	0.0057	0.56%
Sr 421.552†	118756.5	0.1233	mg/L	0.00012	0.6165	mg/L	0.00061	0.10%
Ti 334.903†	40066.1	1.535	mg/L	0.0014	7.676	mg/L	0.0070	0.09%
Tl 190.801†	-19.2	0.01007	mg/L	0.002839	0.05036	mg/L	0.014193	28.18%
V 292.402†	11535.7	0.07586	mg/L	0.000170	0.3793	mg/L	0.00085	0.22%
Zn 206.200†	63096.9	15.37	mg/L	0.023	76.85	mg/L	0.115	0.15%

Sequence No.: 68
Sample ID: WL67 ADUP SWC

Autosampler Location: 344
Date Collected: 4/16/2013 1:31:03 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 ADUP SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL67 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2816181.0	102.0	%	0.26				0.26%
ScR 361.383	399744.7	103.9	%	0.30				0.29%
Ag 328.068†	617.7	0.00284	mg/L	0.000190	0.01421	mg/L	0.000949	6.68%
Al 308.215†	27331.2	22.48	mg/L	0.132	112.4	mg/L	0.66	0.59%
As 188.979†	-23.2	0.02593	mg/L	0.001106	0.1297	mg/L	0.00553	4.26%
B 249.677†	370.0	0.05531	mg/L	0.000055	0.2765	mg/L	0.00028	0.10%
Ba 233.527†	2568.8	0.3852	mg/L	0.00209	1.926	mg/L	0.0105	0.54%
Be 313.042†	130.8	0.00018	mg/L	0.000012	0.00092	mg/L	0.000062	6.80%
Ca 317.933†	230047.1	21.90	mg/L	0.065	109.5	mg/L	0.32	0.29%
Cd 228.802†	489.5	0.02199	mg/L	0.000157	0.1100	mg/L	0.00078	0.71%
Co 228.616†	1147.9	0.03280	mg/L	0.000111	0.1640	mg/L	0.00056	0.34%
Cr 267.716†	2450.5	0.2951	mg/L	0.00193	1.475	mg/L	0.0096	0.65%
Cu 324.752†	260875.7	0.9961	mg/L	0.00222	4.980	mg/L	0.0111	0.22%
Fe 273.955†	199657.0	159.9	mg/L	0.33	799.5	mg/L	1.66	0.21%
K 766.490†	3412.9	1.615	mg/L	0.0043	8.076	mg/L	0.0214	0.27%
Mg 279.077†	10674.8	11.15	mg/L	0.063	55.74	mg/L	0.317	0.57%
Mn 257.610†	190210.2	3.654	mg/L	0.0046	18.27	mg/L	0.023	0.13%
Mo 202.031†	643.0	0.03408	mg/L	0.000238	0.1704	mg/L	0.00119	0.70%
Na 589.592†	38987.4	3.131	mg/L	0.0040	15.65	mg/L	0.020	0.13%
Na 330.237†	147.8	2.958	mg/L	0.0682	14.79	mg/L	0.341	2.30%
Ni 231.604†	746.6	0.1973	mg/L	0.00209	0.9864	mg/L	0.01045	1.06%
Pb 220.353†	9362.3	1.169	mg/L	0.0005	5.847	mg/L	0.0024	0.04%
Sb 206.836†	38.5	0.01308	mg/L	0.001878	0.06540	mg/L	0.009391	14.36%
Se 196.026†	-5.4	-0.00620	mg/L	0.002497	-0.03101	mg/L	0.012485	40.26%
Si 288.158†	644.3	0.4276	mg/L	0.00145	2.138	mg/L	0.0073	0.34%
Sn 189.927†	1030.3	0.2142	mg/L	0.00106	1.071	mg/L	0.0053	0.50%
Sr 421.552†	97186.1	0.1009	mg/L	0.00018	0.5046	mg/L	0.00089	0.18%
Ti 334.903†	34156.8	1.309	mg/L	0.0014	6.545	mg/L	0.0070	0.11%
Tl 190.801†	-23.3	0.00762	mg/L	0.001654	0.03809	mg/L	0.008268	21.71%
V 292.402†	17927.4	0.1225	mg/L	0.00059	0.6126	mg/L	0.00295	0.48%
Zn 206.200†	27058.2	6.592	mg/L	0.0431	32.96	mg/L	0.216	0.65%

Sequence No.: 69
Sample ID: WL67 A SWC

Autosampler Location: 345
Date Collected: 4/16/2013 1:35:04 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 A SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL67 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2816356.9	102.1	%	0.11				0.11%
ScR 361.383	397429.1	103.3	%	0.62				0.60%
Ag 328.068†	1094.6	0.00494	mg/L	0.000077	0.02472	mg/L	0.000387	1.56%
Al 308.215†	33186.0	27.30	mg/L	0.137	136.5	mg/L	0.69	0.50%
As 188.979†	-23.2	0.03496	mg/L	0.002621	0.1748	mg/L	0.01311	7.50%
B 249.677†	399.0	0.05961	mg/L	0.000504	0.2981	mg/L	0.00252	0.85%
Ba 233.527†	3455.5	0.5191	mg/L	0.00143	2.596	mg/L	0.0071	0.28%
Be 313.042†	147.5	0.00020	mg/L	0.000010	0.00100	mg/L	0.000048	4.74%
Ca 317.933†	290879.1	27.70	mg/L	0.100	138.5	mg/L	0.50	0.36%
Cd 228.802†	612.7	0.02752	mg/L	0.000135	0.1376	mg/L	0.00068	0.49%
Co 228.616†	1520.0	0.04368	mg/L	0.000079	0.2184	mg/L	0.00039	0.18%
Cr 267.716†	3799.8	0.4568	mg/L	0.00210	2.284	mg/L	0.0105	0.46%
Cu 324.752†	339013.8	1.295	mg/L	0.0029	6.473	mg/L	0.0143	0.22%
Fe 273.955†	260591.9	208.7	mg/L	3.09	1043	mg/L	15.44	1.48%
K 766.490†	4098.8	1.940	mg/L	0.0344	9.699	mg/L	0.1718	1.77%
Mg 279.077†	13846.7	14.46	mg/L	0.066	72.30	mg/L	0.329	0.46%
Mn 257.610†	260365.9	5.001	mg/L	0.0576	25.01	mg/L	0.288	1.15%
Mo 202.031†	883.2	0.04684	mg/L	0.000277	0.2342	mg/L	0.00138	0.59%
Na 589.592†	49728.8	3.993	mg/L	0.0175	19.97	mg/L	0.087	0.44%
Na 330.237†	193.1	3.650	mg/L	0.1533	18.25	mg/L	0.766	4.20%
Ni 231.604†	1006.9	0.2661	mg/L	0.00183	1.330	mg/L	0.0091	0.69%
Pb 220.353†	13693.7	1.710	mg/L	0.0136	8.552	mg/L	0.0679	0.79%
Sb 206.836†	55.3	0.01800	mg/L	0.000806	0.09000	mg/L	0.004032	4.48%
Se 196.026†	-7.3	-0.00810	mg/L	0.001641	-0.04050	mg/L	0.008206	20.26%
Si 288.158†	594.7	0.3943	mg/L	0.00375	1.971	mg/L	0.0187	0.95%
Sn 189.927†	1454.3	0.3020	mg/L	0.00177	1.510	mg/L	0.0089	0.59%
Sr 421.552†	111712.4	0.1160	mg/L	0.00057	0.5800	mg/L	0.00287	0.49%
Ti 334.903†	41533.3	1.592	mg/L	0.0094	7.959	mg/L	0.0468	0.59%
Tl 190.801†	-28.8	0.01081	mg/L	0.002266	0.05404	mg/L	0.011329	20.97%
V 292.402†	23015.0	0.1576	mg/L	0.00100	0.7878	mg/L	0.00502	0.64%
Zn 206.200†	37860.0	9.223	mg/L	0.0383	46.12	mg/L	0.192	0.42%

Sequence No.: 70
Sample ID: WL67 ASPK SWC

Autosampler Location: 346
Date Collected: 4/16/2013 1:39:05 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL67 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2794059.3	101.2	%	0.12				0.12%
ScR 361.383	396305.0	103.0	%	0.31				0.30%
Ag 328.068†	50045.8	0.2158	mg/L	0.00059	1.079	mg/L	0.0029	0.27%
Al 308.215†	35146.3	28.90	mg/L	0.110	144.5	mg/L	0.55	0.38%
As 188.979†	1157.8	0.8979	mg/L	0.00354	4.489	mg/L	0.0177	0.39%
B 249.677†	435.2	0.06454	mg/L	0.001045	0.3227	mg/L	0.00522	1.62%
Ba 233.527†	9368.2	1.460	mg/L	0.0095	7.299	mg/L	0.0476	0.65%
Be 313.042†	117808.3	0.2045	mg/L	0.00089	1.022	mg/L	0.0045	0.44%
Ca 317.933†	361709.7	34.44	mg/L	0.128	172.2	mg/L	0.64	0.37%
Cd 228.802†	5663.5	0.2471	mg/L	0.00064	1.236	mg/L	0.0032	0.26%
Co 228.616†	8410.8	0.2545	mg/L	0.00034	1.272	mg/L	0.0017	0.13%
Cr 267.716†	5138.5	0.6156	mg/L	0.00131	3.078	mg/L	0.0065	0.21%
Cu 324.752†	424509.0	1.618	mg/L	0.0045	8.092	mg/L	0.0227	0.28%
Fe 273.955†	260887.3	208.9	mg/L	0.74	1045	mg/L	3.68	0.35%
K 766.490†	12750.8	6.034	mg/L	0.0363	30.17	mg/L	0.182	0.60%
Mg 279.077†	17958.7	18.79	mg/L	0.067	93.95	mg/L	0.335	0.36%
Mn 257.610†	273843.2	5.260	mg/L	0.0140	26.30	mg/L	0.070	0.27%
Mo 202.031†	806.2	0.04264	mg/L	0.000039	0.2132	mg/L	0.00020	0.09%
Na 589.592†	106185.9	8.527	mg/L	0.0445	42.63	mg/L	0.222	0.52%
Na 330.237†	341.1	8.345	mg/L	0.3284	41.72	mg/L	1.642	3.94%
Ni 231.604†	1808.4	0.4775	mg/L	0.00089	2.387	mg/L	0.0045	0.19%
Pb 220.353†	18348.5	2.294	mg/L	0.0079	11.47	mg/L	0.040	0.34%
Sb 206.836†	54.6	0.01627	mg/L	0.001968	0.08137	mg/L	0.009838	12.09%
Se 196.026†	1283.0	0.8418	mg/L	0.00679	4.209	mg/L	0.0340	0.81%
Si 288.158†	677.4	0.4505	mg/L	0.00097	2.253	mg/L	0.0049	0.22%
Sn 189.927†	1371.4	0.2855	mg/L	0.00125	1.428	mg/L	0.0062	0.44%
Sr 421.552†	314415.1	0.3265	mg/L	0.00063	1.632	mg/L	0.0031	0.19%
Ti 334.903†	43727.4	1.675	mg/L	0.0028	8.377	mg/L	0.0139	0.17%
Tl 190.801†	1460.5	0.8295	mg/L	0.00553	4.147	mg/L	0.0276	0.67%
V 292.402†	50737.9	0.3584	mg/L	0.00110	1.792	mg/L	0.0055	0.31%
Zn 206.200†	36314.4	8.847	mg/L	0.0389	44.23	mg/L	0.195	0.44%

Sequence No.: 71
Sample ID: WL67 APOST SWC

Autosampler Location: 347
Date Collected: 4/16/2013 1:43:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 APOST SWC

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: WL67 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2784267.5	100.9	%	0.73				0.72%
ScR 361.383	394783.8	102.6	%	0.44				0.43%
Ag 328.068†	124959.4	0.5385	mg/L	0.00286	2.692	mg/L	0.0143	0.53%
Al 308.215†	36854.2	30.31	mg/L	0.111	151.5	mg/L	0.56	0.37%
As 188.979†	2980.7	2.224	mg/L	0.0162	11.12	mg/L	0.081	0.73%
B 249.677†	421.9	0.06180	mg/L	0.001640	0.3090	mg/L	0.00820	2.65%
Ba 233.527†	16898.7	2.657	mg/L	0.0195	13.28	mg/L	0.098	0.73%
Be 313.042†	294299.9	0.5109	mg/L	0.00145	2.555	mg/L	0.0072	0.28%
Ca 317.933†	409898.9	39.03	mg/L	0.174	195.1	mg/L	0.87	0.45%
Cd 228.802†	13269.5	0.5776	mg/L	0.00443	2.888	mg/L	0.0222	0.77%
Co 228.616†	18837.9	0.5738	mg/L	0.00589	2.869	mg/L	0.0295	1.03%
Cr 267.716†	8472.8	1.012	mg/L	0.0048	5.060	mg/L	0.0240	0.47%
Cu 324.752†	488718.3	1.862	mg/L	0.0043	9.311	mg/L	0.0215	0.23%
Fe 273.955†	270483.9	216.6	mg/L	1.11	1083	mg/L	5.56	0.51%
K 766.490†	26357.1	12.47	mg/L	0.028	62.37	mg/L	0.142	0.23%
Mg 279.077†	24529.1	25.70	mg/L	0.113	128.5	mg/L	0.57	0.44%
Mn 257.610†	294040.4	5.648	mg/L	0.0214	28.24	mg/L	0.107	0.38%
Mo 202.031†	924.5	0.04889	mg/L	0.000469	0.2444	mg/L	0.00234	0.96%
Na 589.592†	180762.2	14.52	mg/L	0.028	72.58	mg/L	0.138	0.19%
Na 330.237†	555.0	14.58	mg/L	0.048	72.90	mg/L	0.241	0.33%
Ni 231.604†	3012.5	0.7951	mg/L	0.00449	3.975	mg/L	0.0225	0.57%
Pb 220.353†	31317.6	3.918	mg/L	0.0341	19.59	mg/L	0.171	0.87%
Sb 206.836†	69.1	0.01748	mg/L	0.002294	0.08741	mg/L	0.011469	13.12%
Se 196.026†	3324.7	2.187	mg/L	0.0131	10.93	mg/L	0.065	0.60%
Si 288.158†	617.5	0.4125	mg/L	0.00626	2.062	mg/L	0.0313	1.52%
Sn 189.927†	1480.6	0.3084	mg/L	0.00078	1.542	mg/L	0.0039	0.25%
Sr 421.552†	602598.3	0.6257	mg/L	0.00038	3.128	mg/L	0.0019	0.06%
Ti 334.903†	42615.5	1.632	mg/L	0.0018	8.162	mg/L	0.0090	0.11%
Tl 190.801†	3754.3	2.091	mg/L	0.0162	10.46	mg/L	0.081	0.77%
V 292.402†	95741.7	0.6848	mg/L	0.00500	3.424	mg/L	0.0250	0.73%
Zn 206.200†	41011.0	9.991	mg/L	0.0462	49.95	mg/L	0.231	0.46%

Sequence No.: 72
Sample ID: WL67 MB1SPK SWC

Autosampler Location: 348
Date Collected: 4/16/2013 1:47:09 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL67 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL67 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2816175.8	102.0	%	0.64				0.62%
ScR 361.383	394175.7	102.5	%	0.53				0.51%
Ag 328.068†	127533.3	0.5493	mg/L	0.00176	1.099	mg/L	0.0035	0.32%
Al 308.215†	2636.9	2.162	mg/L	0.0164	4.323	mg/L	0.0329	0.76%
As 188.979†	3047.4	2.220	mg/L	0.0131	4.439	mg/L	0.0262	0.59%
B 249.677†	9.5	0.00019	mg/L	0.001266	0.00038	mg/L	0.002531	669.58%
Ba 233.527†	13090.4	2.083	mg/L	0.0070	4.165	mg/L	0.0139	0.33%
Be 313.042†	295212.8	0.5126	mg/L	0.00429	1.025	mg/L	0.0086	0.84%
Ca 317.933†	109152.3	10.39	mg/L	0.032	20.79	mg/L	0.064	0.31%
Cd 228.802†	12393.1	0.5382	mg/L	0.00139	1.076	mg/L	0.0028	0.26%
Co 228.616†	17298.4	0.5296	mg/L	0.00018	1.059	mg/L	0.0004	0.03%
Cr 267.716†	4644.9	0.5518	mg/L	0.00250	1.104	mg/L	0.0050	0.45%
Cu 324.752†	139118.0	0.5273	mg/L	0.00144	1.055	mg/L	0.0029	0.27%
Fe 273.955†	2753.0	2.202	mg/L	0.0133	4.403	mg/L	0.0265	0.60%
K 766.490†	22129.2	10.47	mg/L	0.054	20.95	mg/L	0.108	0.52%
Mg 279.077†	10321.2	10.87	mg/L	0.045	21.73	mg/L	0.091	0.42%
Mn 257.610†	26908.7	0.5172	mg/L	0.00156	1.034	mg/L	0.0031	0.30%
Mo 202.031†	30.9	0.00150	mg/L	0.000251	0.00300	mg/L	0.000502	16.73%
Na 589.592†	129862.5	10.43	mg/L	0.052	20.86	mg/L	0.105	0.50%
Na 330.237†	351.6	10.67	mg/L	0.171	21.34	mg/L	0.341	1.60%
Ni 231.604†	2037.3	0.5374	mg/L	0.00276	1.075	mg/L	0.0055	0.51%
Pb 220.353†	17106.3	2.143	mg/L	0.0085	4.287	mg/L	0.0170	0.40%
Sb 206.836†	12.7	-0.00097	mg/L	0.001264	-0.00194	mg/L	0.002528	130.37%
Se 196.026†	3333.3	2.196	mg/L	0.0155	4.391	mg/L	0.0310	0.71%
Si 288.158†	12.3	0.01123	mg/L	0.005572	0.02246	mg/L	0.011144	49.62%
Sn 189.927†	-20.8	-0.00341	mg/L	0.000304	-0.00682	mg/L	0.000607	8.90%
Sr 421.552†	491845.7	0.5107	mg/L	0.00098	1.021	mg/L	0.0020	0.19%
Ti 334.903†	55.6	0.00141	mg/L	0.000220	0.00282	mg/L	0.000439	15.58%
Tl 190.801†	3957.3	2.176	mg/L	0.0181	4.351	mg/L	0.0361	0.83%
V 292.402†	73471.6	0.5329	mg/L	0.00170	1.066	mg/L	0.0034	0.32%
Zn 206.200†	2192.1	0.5342	mg/L	0.00385	1.068	mg/L	0.0077	0.72%

Sequence No.: 73
Sample ID: CV 9

Autosampler Location: 7
Date Collected: 4/16/2013 1:51:10 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 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	2764071.2	100.2	%	0.37				0.37%
ScR 361.383	387517.4	100.7	%	0.41				0.40%
Ag 328.068†	248328.8	1.069	mg/L	0.0042	1.069	mg/L	0.0042	0.39%
Al 308.215†	2595.2	2.099	mg/L	0.0168	2.099	mg/L	0.0168	0.80%
As 188.979†	2887.3	2.136	mg/L	0.0136	2.136	mg/L	0.0136	0.64%
B 249.677†	6888.0	1.030	mg/L	0.0092	1.030	mg/L	0.0092	0.90%
Ba 233.527†	6708.7	1.067	mg/L	0.0081	1.067	mg/L	0.0081	0.76%
Be 313.042†	595525.9	1.034	mg/L	0.0032	1.034	mg/L	0.0032	0.31%
Ca 317.933†	22779.3	2.169	mg/L	0.0168	2.169	mg/L	0.0168	0.77%
Cd 228.802†	24001.6	1.055	mg/L	0.0057	1.055	mg/L	0.0057	0.54%
Co 228.616†	34836.6	1.065	mg/L	0.0062	1.065	mg/L	0.0062	0.59%
Cr 267.716†	9187.6	1.093	mg/L	0.0104	1.093	mg/L	0.0104	0.95%
Cu 324.752†	281016.3	1.065	mg/L	0.0065	1.065	mg/L	0.0065	0.61%
Fe 273.955†	2711.7	2.166	mg/L	0.0169	2.166	mg/L	0.0169	0.78%
K 766.490†	44337.6	20.98	mg/L	0.009	20.98	mg/L	0.009	0.04%
Mg 279.077†	1986.9	2.099	mg/L	0.0218	2.099	mg/L	0.0218	1.04%
Mn 257.610†	53286.1	1.024	mg/L	0.0016	1.024	mg/L	0.0016	0.15%
Mo 202.031†	19641.9	1.049	mg/L	0.0071	1.049	mg/L	0.0071	0.68%
Na 589.592†	651146.3	52.29	mg/L	0.193	52.29	mg/L	0.193	0.37%
Na 330.237†	1730.6	53.27	mg/L	0.375	53.27	mg/L	0.375	0.70%
Ni 231.604†	4011.0	1.060	mg/L	0.0135	1.060	mg/L	0.0135	1.27%
Pb 220.353†	16849.5	2.111	mg/L	0.0146	2.111	mg/L	0.0146	0.69%
Sb 206.836†	5927.3	2.153	mg/L	0.0175	2.153	mg/L	0.0175	0.81%
Se 196.026†	3209.9	2.114	mg/L	0.0086	2.114	mg/L	0.0086	0.41%
Si 288.158†	3047.5	2.020	mg/L	0.0163	2.020	mg/L	0.0163	0.81%
Sn 189.927†	5034.2	1.038	mg/L	0.0083	1.038	mg/L	0.0083	0.80%
Sr 421.552†	985973.5	1.024	mg/L	0.0010	1.024	mg/L	0.0010	0.10%
Ti 334.903†	26957.4	1.033	mg/L	0.0010	1.033	mg/L	0.0010	0.10%
Tl 190.801†	3955.1	2.171	mg/L	0.0157	2.171	mg/L	0.0157	0.72%
V 292.402†	143886.3	1.044	mg/L	0.0041	1.044	mg/L	0.0041	0.40%
Zn 206.200†	4382.1	1.068	mg/L	0.0093	1.068	mg/L	0.0093	0.87%

Sequence No.: 74
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/16/2013 1:55:14 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 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	2808451.6	101.8	%	0.21				0.21%
ScR 361.383	391198.8	101.7	%	0.91				0.89%
Ag 328.068†	57.7	0.00025	mg/L	0.000146	0.00025	mg/L	0.000146	58.94%
Al 308.215†	12.2	0.00997	mg/L	0.001602	0.00997	mg/L	0.001602	16.08%
As 188.979†	2.1	0.00155	mg/L	0.000834	0.00155	mg/L	0.000834	53.94%
B 249.677†	8.9	0.00134	mg/L	0.001441	0.00134	mg/L	0.001441	107.79%
Ba 233.527†	7.4	0.00118	mg/L	0.001152	0.00118	mg/L	0.001152	97.20%
Be 313.042†	114.7	0.00020	mg/L	0.000025	0.00020	mg/L	0.000025	12.50%
Ca 317.933†	13.0	0.00123	mg/L	0.000627	0.00123	mg/L	0.000627	50.74%
Cd 228.802†	5.3	0.00023	mg/L	0.000201	0.00023	mg/L	0.000201	88.21%
Co 228.616†	9.4	0.00029	mg/L	0.000060	0.00029	mg/L	0.000060	20.95%
Cr 267.716†	-4.4	-0.00053	mg/L	0.000384	-0.00053	mg/L	0.000384	72.36%
Cu 324.752†	37.5	0.00014	mg/L	0.000081	0.00014	mg/L	0.000081	57.24%
Fe 273.955†	3.9	0.00310	mg/L	0.001176	0.00310	mg/L	0.001176	37.92%
K 766.490†	9.0	0.00426	mg/L	0.007005	0.00426	mg/L	0.007005	164.53%
Mg 279.077†	1.5	0.00162	mg/L	0.005543	0.00162	mg/L	0.005543	341.22%
Mn 257.610†	10.1	0.00019	mg/L	0.000056	0.00019	mg/L	0.000056	28.77%
Mo 202.031†	85.6	0.00457	mg/L	0.000832	0.00457	mg/L	0.000832	18.18%
Na 589.592†	22.3	0.00179	mg/L	0.002326	0.00179	mg/L	0.002326	129.85%
Na 330.237†	-0.4	-0.01241	mg/L	0.332442	-0.01241	mg/L	0.332442	>999.9%
Ni 231.604†	-0.9	-0.00023	mg/L	0.000838	-0.00023	mg/L	0.000838	358.17%
Pb 220.353†	10.6	0.00133	mg/L	0.000509	0.00133	mg/L	0.000509	38.35%
Sb 206.836†	14.7	0.00536	mg/L	0.000545	0.00536	mg/L	0.000545	10.18%
Se 196.026†	0.4	0.00026	mg/L	0.000324	0.00026	mg/L	0.000324	126.04%
Si 288.158†	-6.1	-0.00405	mg/L	0.002126	-0.00405	mg/L	0.002126	52.44%
Sn 189.927†	5.0	0.00103	mg/L	0.000335	0.00103	mg/L	0.000335	32.41%
Sr 421.552†	50.4	0.00005	mg/L	0.000042	0.00005	mg/L	0.000042	81.02%
Ti 334.903†	7.1	0.00027	mg/L	0.000493	0.00027	mg/L	0.000493	183.76%
Tl 190.801†	6.4	0.00353	mg/L	0.001671	0.00353	mg/L	0.001671	47.28%
V 292.402†	19.4	0.00014	mg/L	0.000103	0.00014	mg/L	0.000103	73.73%
Zn 206.200†	1.6	0.00038	mg/L	0.000345	0.00038	mg/L	0.000345	89.85%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4-18-13

M2 Norton std.	Analyst 4-19	Peer 4-22-13	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	✓	✓	
Internal Standards	✓	✓	See Log
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	See Log
Matrix Spikes	✓	✓	WL49 WL67 WL68
Matrix Duplicates	✓	✓	WL49 WL68
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst Notes/Flags/AF's	✓		CAF WL49 WL68 WL67

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** KL **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted. KL 4-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3027-13
		1			3025-12
		2			3028-6
		3			3028-7
		4			3027-16
		5			3028-8
		Rinse Sample			
		ICV			Tl sl high 3023-5
		ICB			
		CCV1			
		CCB1			
ZZ		ZZZZZZ			NO sample in place
		Low check			
		ICSA			
		ICSAB			MO ↑
		LR 200			^{82}Se, MO, ^{107}Ag, ^{121}Sb ↑
		LR 300			MO, ^{137}Ba ↑
		B1			
		CCV2			
		CCB2			
		WL49 MB1	REN	2	RR Se
	✓	ADup			Re all Be(Li4) many high RSD
		A			CAF
		ASpk			(Be, Zn low BR)

RESet

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** NT **Page:** 2 of 4

All corrections made by analyst unless otherwise noted. NT 4-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WL49 CDup	REN	2	RR Be, Se
		C			
		Cspk			Li
		B			RR Cu Zn Cr Pb As, Se
		D			RR Se
		MB1spk			
		CCV3			Mo ^{82}Se
		CCB3			Th
		WL49 MB2	REN	2	RR Se
		MB3	SWN	20	
		G			
		FDup			RR Pb Ag, Sb high RPD
		F			CAL
		Fspk			Ni high % R Sb low % R
		FPost			0.06mL Spk #2 1/10 0.06mL Spk #1 1/10 Sb Ni
		WL68 B			RR Pb
		WL49 MB3spk			
		b MB2spk	REN	2	
		CCV4			Mo ^{82}Se
		CCB4			Th
		WL68 MB1	SWN	20	RR Se
		WL68 B		50	Pb
		WL67 B		50	Pb
		B		20	NO Pb RR Se

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** AK **Page:** 3 of 4

All corrections made by analyst unless otherwise noted. AK 4-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WL68 A-L	SWN	100	RRPb
		A		20	CAF Cr high
		ADup			Cr high RPD
		Aspk			Cr Ag Sb low %R
		APost			0.06 mL Spk #2 1/10 Cr Ag Sb Cr high 0.06 mL Spk #1 1/10 %R
		MBlspk			RR As (high)
		CCV5			82Se high Mo high
		CCB5			Th A
		WL67 MBl	SWN	20	RLSe
		ADup		5	Pb
		A			
		Aspk			
		ADup		20	RLSe
		A		20	RLSe CAF
		Aspk			Sb Ag, Cr low %R
		APost			0.06 mL Spk #2 1/10 0.06 mL Spk #1 1/10 Ag As Sb
		WL68 Ref1		50	
		WL67 MBlspk		20	also As
		CCV6			Mo 82Se U A
		CCB6			Mo A
		WL68 A-L	SWN	500	Pb
		A		100	
		ADup			
		Aspk			SR

4/19/13

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** AT **Page:** 4 of 4

AT 4-18-13 4-19-13

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
zzz		zzzzzz	SUN	100	
		WL49 ADup			✓ Pb
		F			
		F5pk			5%
		WL49 B	REP	20	Cu Zn, As
		B		5	RR Se Mo Be Cr Tl Pb
		CCV 7			^{82}Se Mo Tl U
		CCB7			Mo
		WL49 ADup	REP	5	✓ Be Zn
		A			
		~~A5pk zzzzz~~			✓
zzz		~~APost~~			
		ADup		2	No Be Zn As Se
		C Dup		5	✓ Be
		C			
		C5pk			✓
zzz		~~zzzzzz CPost~~			
		CCV8			Se Mo U
		CCB8			
		Rinse/DI			
		A 4/19/13			

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, April 18, 2013 08:14:11
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C \NexION Data\Dataset\Default\Daily Performance Check.1965
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	3771.3	3771.253	83.086	2.2	Standard
	Mg	24.0	36302.2	36302.239	365.760	1.0	Standard
	In	114.9	71392.5	71392.510	174.340	0.2	Standard
	Pb	208.0	33463.2	33463.188	229.909	0.7	Standard
	U	238.1	56794.9	56794.899	597.814	1.1	Standard
⌈	CeO	155.9	873.0	0.011	0.000	4.3	Standard
| >	Ce	139.9	76392.8	76392.822	144.543	0.2	Standard
⌊	Ce++	70.0	691.4	0.009	0.000	3.3	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
1.04	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
-1862.00	Analog Stage Voltage
1300.00	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

SmartTune Wizard - Details

)ptimization Details

;martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

)ptimization Status

;tart Time: 4/18/2013 8:14:10 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): 3771.25
Obtained Intensity (Mg 23.985): 36302.24
Obtained Intensity (In 114.904): 71392.51
Obtained Intensity (Pb 207.977): 33463.19
Obtained Intensity (U 238.05): 56794.90
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (CeO 155.9 / Ce 139.905): 0.011 (=873.05 / 76392.82)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=691.36 / 76392.82)
[Passed] Optimum value(s): N/A

:nd Time: 4/18/2013 8:16:46 AM

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/18/2013 8:19:12 AM
nd Time: 4/18/2013 8:20:23 AM

orch Alignment - [Passed]

Vertical	Horizontal	Intensity
-1.28 mm	1.70 mm	92114.30

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/18/2013 8:20:30 AM
nd Time: 4/18/2013 8:22:41 AM

lass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.699)
Target/Obtained mass (23.985/23.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.705)

SmartTune Wizard - Summary

)ptimization Summary

›martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

›tart Time: 4/18/2013 8:23:00 AM
:nd Time: 4/18/2013 8:27:10 AM

\utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.997; Intercept = -12.36

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, April 18, 2013 08:30:48
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C \NexION Data\Dataset\Default\Daily Performance Check.1971
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	4161.3	4161.306	78.909	1.9	Standard
	Mg	24.0	44730.3	44730.276	574.454	1.3	Standard
	In	114.9	86032.0	86031.952	452.521	0.5	Standard
	Pb	208.0	40090.3	40090.340	305.402	0.8	Standard
	U	238.1	68616.4	68616.359	731.657	1.1	Standard
⌈	CeO	155.9	1049.2	0.012	0.000	1.4	Standard
| >	Ce	139.9	87244.1	87244.077	800.812	0.9	Standard
⌊	Ce++	70.0	851.4	0.010	0.000	2.9	Standard
	Bkgd	220.0	0.1	0.100	0.224	223.6	Standard

Current Conditions File Data

Current Value	Description
1.03	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
-1862.00	Analog Stage Voltage
1300.00	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

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/18/2013 8:30:47 AM
nd Time: 4/18/2013 8:33:22 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4161.31
Obtained Intensity (Mg 23.985): 44730.28
Obtained Intensity (In 114.904): 86031.95
Obtained Intensity (Pb 207.977): 40090.34
Obtained Intensity (U 238.05): 68616.36
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=1049.20 / 87244.08)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.010 (=851.38 / 87244.08)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:04:29
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				1164625	1
	Be	9		ug/L				11	15
	C	13		ug/L				104879	1
	Cl	37		ug/L				4277164	1
>	Sc	45		ug/L				1025260	1
	V	51		ug/L				5531	2
	V-1	51		ug/L				509	4
	Cr	52		ug/L				16367	2
	Cr	53		ug/L				243	5
	Mn	55		ug/L				685	3
	Co	59		ug/L				119	8
>	Ge	72		ug/L				592402	1
	Ni	60		ug/L				86	6
	Ni	62		ug/L				63	14
	Cu	63		ug/L				91	4
	Cu	65		ug/L				47	13
	Zn	66		ug/L				191	16
	Zn	67		ug/L				37	13
	Zn	68		ug/L				353	3
	As	75		ug/L				548	2
	As-1	75		ug/L				7252	0
	Se	82		ug/L				-19	57
	Se	78		ug/L				7320	0
	Mo	98		ug/L				10	48
	Y	89		ug/L				394786	3
	Kr	83		ug/L				872	0
>	In	115		ug/L				1077756	0
	Ag	107		ug/L				26	6
	Cd	111		ug/L				127	12
	Cd	114		ug/L				19	20
	Sb	121		ug/L				152	23
	Sb	123		ug/L				115	26
	Ba	135		ug/L				7	41
	Ba	137		ug/L				20	7
>	Tb	159		ug/L				1262684	1
	Tl	205		ug/L				290	3
	Pb	208		ug/L				247	5
	Bi	209		ug/L				3225208	0
	Th	232		ug/L				157	40
	U	238		ug/L				3	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:08:37
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1203245	2
	Be	9	0.200	ug/L	0.011	5	11	662	4
	C	13		ug/L			104879	108390	2
	Cl	37		ug/L			4277164	4167713	1
>	Sc	45		ug/L			1025260	1016780	0
	V	51	0.200	ug/L	0.010	5	5531	9447	1
	V-1	51	0.200	ug/L	0.004	1	509	4358	1
	Cr	52	0.500	ug/L	0.032	6	16367	24923	1
	Cr	53	0.500	ug/L	0.024	4	243	1189	3
	Mn	55	0.500	ug/L	0.024	4	685	11788	3
	Co	59	0.200	ug/L	0.002	0	119	3627	0
>	Ge	72		ug/L			592402	595913	1
	Ni	60	0.500	ug/L	0.010	2	86	1987	1
	Ni	62	0.500	ug/L	0.012	2	63	337	1
	Cu	63	0.500	ug/L	0.002	0	91	4334	0
	Cu	65	0.500	ug/L	0.004	0	47	1870	0
	Zn	66	4.000	ug/L	0.100	2	191	8597	1
	Zn	67	4.000	ug/L	0.080	2	37	1272	1
	Zn	68	4.000	ug/L	0.082	2	353	6017	1
	As	75	0.200	ug/L	0.009	4	548	971	2
	As-1	75	0.200	ug/L	0.063	31	7252	7677	0
	Se	82	0.500	ug/L	0.046	9	-19	100	10
	Se	78	0.500	ug/L	0.262	52	7320	7620	0
	Mo	98	0.200	ug/L	0.006	2	10	1100	2
	Y	89		ug/L			394786	395223	1
	Kr	83		ug/L			872	862	2
>	In	115		ug/L			1077756	1075166	0
	Ag	107	0.200	ug/L	0.002	0	26	2870	1
	Cd	111	0.100	ug/L	0.003	2	127	651	2
	Cd	114	0.100	ug/L	0.007	7	19	1324	7
	Sb	121	0.200	ug/L	0.005	2	152	3098	1
	Sb	123	0.200	ug/L	0.008	4	115	2401	3
	Ba	135	0.500	ug/L	0.022	4	7	2285	3
	Ba	137	0.500	ug/L	0.008	1	20	3957	1
>	Tb	159		ug/L			1262684	1264914	1
	Tl	205	0.200	ug/L	0.004	2	290	8512	0
	Pb	208	0.100	ug/L	0.003	2	247	6143	1
	Bi	209		ug/L			3225208	3254965	0
	Th	232	0.200	ug/L	0.013	6	157	7600	7
	U	238	0.200	ug/L	0.005	2	3	10356	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:12:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1184423	3
	Be	9	10.000	ug/L	0.314	3	11	31055	1
	C	13		ug/L			104879	108014	3
	Cl	37		ug/L			4277164	4235968	0
>	Sc	45		ug/L			1025260	1020668	0
	V	51	10.000	ug/L	0.280	2	5531	193042	2
	V-1	51	10.000	ug/L	0.144	1	509	187701	1
	Cr	52	9.998	ug/L	0.321	3	16367	179823	2
	Cr	53	9.999	ug/L	0.193	1	243	18611	1
	Mn	55	10.000	ug/L	0.121	1	685	223349	0
	Co	59	10.000	ug/L	0.155	1	119	166531	0
>	Ge	72		ug/L			592402	584746	1
	Ni	60	10.000	ug/L	0.020	0	86	36708	1
	Ni	62	9.998	ug/L	0.325	3	63	5127	2
	Cu	63	9.999	ug/L	0.432	4	91	80086	3
	Cu	65	10.000	ug/L	0.184	1	47	36189	1
	Zn	66	10.022	ug/L	0.325	3	191	21139	2
	Zn	67	10.156	ug/L	0.258	2	37	3444	3
	Zn	68	10.069	ug/L	0.504	5	353	14962	3
	As	75	10.000	ug/L	0.121	1	548	20139	0
	As-1	75	10.000	ug/L	0.182	1	7252	26172	1
	Se	82	9.998	ug/L	0.072	0	-19	2134	0
	Se	78	9.999	ug/L	0.267	2	7320	12136	0
	Mo	98	10.000	ug/L	0.010	0	10	54563	1
	Y	89		ug/L			394786	391539	1
	Kr	83		ug/L			872	891	3
>	In	115		ug/L			1077756	1065346	1
	Ag	107	10.000	ug/L	0.091	0	26	138902	1
	Cd	111	10.000	ug/L	0.032	0	127	50584	0
	Cd	114	10.000	ug/L	0.115	1	19	124617	0
	Sb	121	10.000	ug/L	0.053	0	152	152426	0
	Sb	123	10.000	ug/L	0.065	0	115	115082	0
	Ba	135	10.000	ug/L	0.073	0	7	45570	0
	Ba	137	10.000	ug/L	0.178	1	20	79182	1
>	Tb	159		ug/L			1262684	1248360	1
	Tl	205	10.000	ug/L	0 130	1	290	415495	0
	Pb	208	10.000	ug/L	0.075	0	247	549443	0
	Bi	209		ug/L			3225208	3223786	0
	Th	232	10.001	ug/L	0.085	0	157	473869	1
	U	238	10.000	ug/L	0.161	1	3	509927	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:17:09
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			1164625	1186490	1
⌊	Be	9	20.030	ug/L	0.729	3	11	62697	3
	C	13		ug/L			104879	110981	2
	Cl	37		ug/L			4277164	4226682	1
⌈>	Sc	45		ug/L			1025260	1023584	1
|	V	51	20.028	ug/L	0.608	3	5531	384285	2
|	V-1	51	20.056	ug/L	0.561	2	509	381209	1
|	Cr	52	19.962	ug/L	0.422	2	16367	341301	1
|	Cr	53	20.054	ug/L	0.384	1	243	37583	0
|	Mn	55	19.943	ug/L	0.401	2	685	441005	2
⌊	Co	59	20.003	ug/L	0.255	1	119	334157	0
⌈>	Ge	72		ug/L			592402	595259	1
|	Ni	60	19.935	ug/L	0.372	1	86	73442	0
|	Ni	62	19.890	ug/L	0.281	1	63	10100	0
|	Cu	63	19.934	ug/L	0.119	0	91	160368	1
|	Cu	65	19.831	ug/L	0.543	2	47	70617	1
|	Zn	66	19.694	ug/L	0.127	0	191	40007	1
|	Zn	67	20.006	ug/L	0.518	2	37	6874	1
|	Zn	68	19.915	ug/L	0.223	1	353	29359	1
|	As	75	19.943	ug/L	0.183	0	548	39888	1
|	As-1	75	19.914	ug/L	0.210	1	7252	45179	1
|	Se	82	19.932	ug/L	0.384	1	-19	4292	0
|	Se	78	19.805	ug/L	0.530	2	7320	16886	0
⌊	Mo	98	19.962	ug/L	0.265	1	10	110014	0
	Y	89		ug/L			394786	393695	2
	Kr	83		ug/L			872	899	0
⌈>	In	115		ug/L			1077756	1052344	1
|	Ag	107	20.036	ug/L	0.329	1	26	276812	1
|	Cd	111	20.034	ug/L	0.351	1	127	100647	0
|	Cd	114	20.087	ug/L	0.334	1	19	251631	1
|	Sb	121	20.029	ug/L	0.177	0	152	303136	1
|	Sb	123	20.085	ug/L	0.280	1	115	232120	0
|	Ba	135	20.103	ug/L	0.364	1	7	92363	1
⌊	Ba	137	20.048	ug/L	0.515	2	20	158290	1
⌈>	Tb	159		ug/L			1262684	1255516	1
|	Tl	205	19.985	ug/L	0.164	0	290	832331	0
|	Pb	208	19.962	ug/L	0.176	0	247	1094582	0
|	Bi	209		ug/L			3225208	3206290	0
|	Th	232	20.122	ug/L	0.161	0	157	982730	1
⌊	U	238	19.977	ug/L	0.261	1	3	1019754	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:21:41
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1166304	1
	Be	9	49.686	ug/L	1.269	2	11	148215	1
	C	13		ug/L			104879	110340	4
	Cl	37		ug/L			4277164	4290793	2
>	Sc	45		ug/L			1025260	1003423	1
	V	51	50.039	ug/L	1.328	2	5531	936712	1
	V-1	51	50.053	ug/L	1.458	2	509	936916	1
	Cr	52	49.969	ug/L	0.208	0	16367	811155	1
	Cr	53	50.019	ug/L	0.669	1	243	91725	1
	Mn	55	49.782	ug/L	0.533	1	685	1055255	2
	Co	59	50.000	ug/L	1.246	2	119	818675	2
>	Ge	72		ug/L			592402	577950	0
	Ni	60	49.827	ug/L	0.901	1	86	175118	2
	Ni	62	50.073	ug/L	2.169	4	63	24773	3
	Cu	63	49.799	ug/L	2.023	4	91	381159	3
	Cu	65	50.095	ug/L	0.193	0	47	174838	0
	Zn	66	49.769	ug/L	0.538	1	191	95743	0
	Zn	67	49.939	ug/L	0.594	1	37	16514	1
	Zn	68	49.794	ug/L	0.339	0	353	69383	0
	As	75	49.916	ug/L	1.076	2	548	95342	1
	As-1	75	49.945	ug/L	1.214	2	7252	98848	1
	Se	82	49.772	ug/L	0 846	1	-19	10204	1
	Se	78	49.869	ug/L	1.327	2	7320	30146	1
	Mo	98	50.016	ug/L	0.215	0	10	268091	0
	Y	89		ug/L			394786	386104	0
	Kr	83		ug/L			872	929	1
>	In	115		ug/L			1077756	1031207	1
	Ag	107	49.895	ug/L	0.643	1	26	668500	1
	Cd	111	49.827	ug/L	0.662	1	127	240969	0
	Cd	114	49.768	ug/L	0.767	1	19	597072	0
	Sb	121	50.002	ug/L	0.404	0	152	741500	1
	Sb	123	49.932	ug/L	0.660	1	115	561503	0
	Ba	135	50.091	ug/L	1 139	2	7	227566	1
	Ba	137	49.951	ug/L	0 370	0	20	384612	0
>	Tb	159		ug/L			1262684	1248822	1
	Tl	205	49.927	ug/L	4.055	8	290	2051853	6
	Pb	208	49.721	ug/L	0.509	1	247	2637681	0
	Bi	209		ug/L			3225208	3040915	0
	Th	232	50.867	ug/L	0.896	1	157	2704944	1
	U	238	50.540	ug/L	0.669	1	3	2712522	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:27:53
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1160868	3
	Be	9	100.093	ug/L	2.255	2	11	298051	2
	C	13		ug/L			104879	115679	3
	Cl	37		ug/L			4277164	4394145	2
>	Sc	45		ug/L			1025260	1008815	2
	V	51	100.167	ug/L	4.953	4	5531	1889002	2
	V-1	51	100.009	ug/L	4.840	4	509	1880990	2
	Cr	52	100.115	ug/L	4.180	4	16367	1622783	1
	Cr	53	99.590	ug/L	3.647	3	243	180812	1
	Mn	55	101.795	ug/L	2.767	2	685	2305892	2
	Co	59	99.194	ug/L	2.663	2	119	1589690	1
>	Ge	72		ug/L			592402	573339	1
	Ni	60	100.095	ug/L	2.436	2	86	349909	1
	Ni	62	99.723	ug/L	0.946	0	63	48442	1
	Cu	63	99.711	ug/L	2.946	2	91	749852	2
	Cu	65	99.894	ug/L	0.374	0	47	344583	1
	Zn	66	99.885	ug/L	2.020	2	191	189719	2
	Zn	67	99.801	ug/L	1.700	1	37	32484	1
	Zn	68	100.102	ug/L	0.848	0	353	138494	1
	As	75	100.178	ug/L	0.961	0	548	190401	0
	As-1	75	100.120	ug/L	1.344	1	7252	190240	0
	Se	82	100.019	ug/L	0.304	0	-19	20375	1
	Se	78	99.732	ug/L	1.869	1	7320	52316	0
	Mo	98	100.204	ug/L	0.840	0	10	536442	1
	Y	89		ug/L			394786	382877	0
	Kr	83		ug/L			872	922	2
>	In	115		ug/L			1077756	1009619	1
	Ag	107	99.530	ug/L	1.003	1	26	1285528	1
	Cd	111	100.027	ug/L	0.805	0	127	473948	0
	Cd	114	100.025	ug/L	0.252	0	19	1175989	1
	Sb	121	100.312	ug/L	1.784	1	152	1471431	0
	Sb	123	100.041	ug/L	0 300	0	115	1102956	1
	Ba	135	99.823	ug/L	0.468	0	7	441501	1
	Ba	137	100.573	ug/L	0 940	0	20	772959	1
>	Tb	159		ug/L			1262684	1261336	2
	Tl	205	100.929	ug/L	1.440	1	290	4324581	1
	Pb	208	100.251	ug/L	2.160	2	247	5415007	0
	Bi	209		ug/L			3225208	2979360	0
	Th	232	99.637	ug/L	2.799	2	157	5285379	0
	U	238	99.563	ug/L	3.098	3	3	5317406	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:34:45
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1176000	1
[	Be	9	0.002	ug/L	0.002	84	11	16	28
	C	13		ug/L			104879	109489	1
	Cl	37		ug/L			4277164	4316805	1
[>	Sc	45		ug/L			1025260	1030340	0
[	V	51	-0.005	ug/L	0.010	216	5531	5468	4
[	V-1	51	-0.007	ug/L	0.001	21	509	385	7
[	Cr	52	-0.010	ug/L	0.019	194	16367	16291	2
[	Cr	53	-0.016	ug/L	0.011	68	243	215	9
[	Mn	55	0.001	ug/L	0.004	478	685	706	12
[	Co	59	0.002	ug/L	0.002	98	119	148	19
[>	Ge	72		ug/L			592402	613348	1
[	Ni	60	0.027	ug/L	0.005	20	86	190	12
[	Ni	62	0.034	ug/L	0.003	8	63	83	2
[	Cu	63	0.011	ug/L	0.001	6	91	179	4
[	Cu	65	0.009	ug/L	0.002	22	47	82	10
[	Zn	66	0.112	ug/L	0.008	7	191	426	4
[	Zn	67	0.094	ug/L	0.007	7	37	71	2
[	Zn	68	0.111	ug/L	0.017	15	353	530	5
[	As	75	0.005	ug/L	0.025	490	548	578	7
[	As-1	75	-0.120	ug/L	0.045	37	7252	7272	0
[	Se	82	0.074	ug/L	0.106	143	-19	-4	509
[	Se	78	-0.476	ug/L	0.180	37	7320	7346	0
[	Mo	98	0.024	ug/L	0.005	21	10	145	19
	Y	89		ug/L			394786	394269	0
	Kr	83		ug/L			872	868	2
[>	In	115		ug/L			1077756	1069363	1
[	Ag	107	0.004	ug/L	0 002	41	26	84	29
[	Cd	111	-0.000	ug/L	0.002	671	127	124	8
[	Cd	114	0.003	ug/L	0.002	72	19	55	48
[	Sb	121	0.155	ug/L	0.031	20	152	2558	18
[	Sb	123	0.161	ug/L	0.031	19	115	1986	17
[	Ba	135	0.004	ug/L	0.002	49	7	27	36
[	Ba	137	0.005	ug/L	0.002	44	20	63	31
[>	Tb	159		ug/L			1262684	1248421	1
[	Tl	205	0.004	ug/L	0.001	34	290	454	12
[	Pb	208	0.004	ug/L	0.001	31	247	470	15
[	Bi	209		ug/L			3225208	3218118	0
[	Th	232	0.244	ug/L	0.010	4	157	12976	3
[	U	238	0.006	ug/L	0.001	22	3	320	22

Sample Information

Sample Date/Time: Thursday, April 18, 2013 09:27:53
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\041813.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**	0.019	0.20	10	20	50	100
V-1	51	**1.0000**	0.019	0.20	10	20	50	100
Cr	52	**1.0000**	0.016	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**0.9995**	0.022	0.50	10	20	50	100
Co	59	**0.9999**	0.016	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**	0.013	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.003	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.002	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**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**1.0000**	0.013	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**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**0.9999**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.034	0.20	10	20	50	100
Pb	208	**1.0000**	0.043	0.10	10	20	50	100
Bi	209							
Th	232	**0.9998**	0.042	0.20	10	20	50	100
U	238	**0.9999**	0.042	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:41:38
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1189861	2
[	Be	9	50.710	ug/L	0.929	1	11	154800	1
	C	13		ug/L			104879	113017	3
	Cl	37		ug/L			4277164	4347482	1
[>	Sc	45		ug/L			1025260	1061642	1
[	V	51	48.433	ug/L	2.139	4	5531	964722	3
[	V-1	51	48.454	ug/L	2.462	5	509	959839	4
[	Cr	52	47.910	ug/L	0.868	1	16367	826532	0
[	Cr	53	47.980	ug/L	1.675	3	243	91836	2
[	Mn	55	47.171	ug/L	1.823	3	685	1124876	2
[	Co	59	49.706	ug/L	0.914	1	119	838547	0
[>	Ge	72		ug/L			592402	596118	0
[	Ni	60	49.473	ug/L	0.937	1	86	179900	1
[	Ni	62	50.142	ug/L	0.756	1	63	25358	1
[	Cu	63	50.058	ug/L	1.556	3	91	391498	3
[	Cu	65	50.494	ug/L	1.087	2	47	181129	2
[	Zn	66	50.103	ug/L	1.808	3	191	99034	3
[	Zn	67	49.332	ug/L	0.656	1	37	16715	0
[	Zn	68	49.500	ug/L	0.835	1	353	71385	1
[	As	75	49.962	ug/L	0.335	0	548	99015	0
[	As-1	75	49.366	ug/L	0.412	0	7252	101237	0
[	Se	82	76.750	ug/L	0.431	0	-19	15859	0
[	Se	78	76.032	ug/L	0.427	0	7320	43214	1
[	Mo	98	48.258	ug/L	0.723	1	10	268616	1
	Y	89		ug/L			394786	390758	1
	Kr	83		ug/L			872	913	3
[>	In	115		ug/L			1077756	1053244	1
[	Ag	107	50.068	ug/L	0.555	1	26	674592	0
[	Cd	111	48.332	ug/L	0.297	0	127	238968	0
[	Cd	114	48.585	ug/L	1.171	2	19	595832	1
[	Sb	121	49.888	ug/L	0.270	0	152	763562	0
[	Sb	123	50.052	ug/L	0.080	0	115	575714	0
[	Ba	135	48.920	ug/L	0.822	1	7	225687	0
[	Ba	137	49.179	ug/L	0.899	1	20	394291	1
[>	Tb	159		ug/L			1262684	1276020	1
[	Tl	205	49.763	ug/L	3.796	7	290	2156229	6
[	Pb	208	49.038	ug/L	0.501	1	247	2680466	0
[	Bi	209		ug/L			3225208	3101467	0
[	Th	232	50.593	ug/L	0.814	1	157	2715996	0
[	U	238	50.908	ug/L	0.153	0	3	2751918	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:48:29
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1179804	1
	Be	9	0.001	ug/L	0.000	11	11	15	3
	C	13		ug/L			104879	110628	3
	Cl	37		ug/L			4277164	4136435	1
>	Sc	45		ug/L			1025260	1028784	2
	V	51	0.005	ug/L	0.012	255	5531	5637	2
	V-1	51	-0.005	ug/L	0.003	61	509	414	12
	Cr	52	0.013	ug/L	0.032	247	16367	16628	1
	Cr	53	-0.019	ug/L	0.010	54	243	208	8
	Mn	55	0.002	ug/L	0.002	82	685	736	3
	Co	59	0.003	ug/L	0.003	93	119	171	26
>	Ge	72		ug/L			592402	608089	1
	Ni	60	0.045	ug/L	0.003	6	86	255	2
	Ni	62	0.035	ug/L	0.020	58	63	83	10
	Cu	63	0.013	ug/L	0.004	27	91	195	12
	Cu	65	0.011	ug/L	0.001	13	47	86	4
	Zn	66	0.169	ug/L	0.021	12	191	536	9
	Zn	67	0.147	ug/L	0.057	38	37	89	21
	Zn	68	0.178	ug/L	0.021	11	353	623	3
	As	75	0.009	ug/L	0.010	106	548	581	4
	As-1	75	-0.045	ug/L	0.099	222	7252	7355	0
	Se	82	0.015	ug/L	0.066	454	-19	-17	79
	Se	78	-0.173	ug/L	0.376	217	7320	7428	0
	Mo	98	0.013	ug/L	0.002	13	10	84	10
	Y	89		ug/L			394786	389235	2
	Kr	83		ug/L			872	912	1
>	In	115		ug/L			1077756	1075757	0
	Ag	107	0.002	ug/L	0.002	98	26	58	54
	Cd	111	0.001	ug/L	0 002	303	127	130	7
	Cd	114	0.003	ug/L	0.002	52	19	59	35
	Sb	121	0.042	ug/L	0.010	23	152	802	19
	Sb	123	0.044	ug/L	0.008	18	115	634	15
	Ba	135	0.005	ug/L	0.002	38	7	31	29
	Ba	137	0.004	ug/L	0.002	41	20	55	26
>	Tb	159		ug/L			1262684	1263339	1
	Tl	205	0.004	ug/L	0 003	69	290	473	24
	Pb	208	0.005	ug/L	0.002	42	247	523	20
	Bi	209		ug/L			3225208	3236181	0
	Th	232	0.129	ug/L	0.008	5	157	7017	4
	U	238	0.005	ug/L	0.002	53	3	247	50

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:52:37
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1166435	1
[	Be	9	50.463	ug/L	1.501	2	11	151047	3
	C	13		ug/L			104879	114081	3
	Cl	37		ug/L			4277164	4283786	1
[>	Sc	45		ug/L			1025260	1023506	1
[	V	51	48.775	ug/L	0.898	1	5531	936868	2
[	V-1	51	48.728	ug/L	0.681	1	509	930812	1
[	Cr	52	49.007	ug/L	0.523	1	16367	814751	0
[	Cr	53	48.851	ug/L	2.286	4	243	90130	3
[	Mn	55	48.036	ug/L	1.242	2	685	1104621	2
[	Co	59	49.012	ug/L	0.932	1	119	797146	1
[>	Ge	72		ug/L			592402	574195	2
[	Ni	60	50.479	ug/L	1.334	2	86	176729	1
[	Ni	62	51.146	ug/L	2.701	5	63	24910	5
[	Cu	63	50.789	ug/L	1.181	2	91	382419	0
[	Cu	65	50.482	ug/L	1.045	2	47	174373	1
[	Zn	66	49.541	ug/L	0.677	1	191	94353	4
[	Zn	67	49.537	ug/L	0.304	0	37	16168	3
[	Zn	68	48.852	ug/L	0.686	1	353	67852	2
[	As	75	49.502	ug/L	1.386	2	548	94451	0
[	As-1	75	49.825	ug/L	1.517	3	7252	98304	0
[	Se	82	50.196	ug/L	1.264	2	-19	9981	2
[	Se	78	50.277	ug/L	1.272	2	7320	29917	1
[	Mo	98	49.199	ug/L	1.999	4	10	263595	1
	Y	89		ug/L			394786	383668	0
	Kr	83		ug/L			872	920	8
[>	In	115		ug/L			1077756	1034255	1
[	Ag	107	50.574	ug/L	1.066	2	26	669008	0
[	Cd	111	49.658	ug/L	1.225	2	127	241034	0
[	Cd	114	49.760	ug/L	1.129	2	19	599175	0
[	Sb	121	49.065	ug/L	1.018	2	152	737270	0
[	Sb	123	49.469	ug/L	1.078	2	115	558623	0
[	Ba	135	49.313	ug/L	0.843	1	7	223377	0
[	Ba	137	49.687	ug/L	0.965	1	20	391100	0
[>	Tb	159		ug/L			1262684	1235636	1
[	Tl	205	50.975	ug/L	2.813	5	290	2141176	6
[	Pb	208	49.603	ug/L	0.802	1	247	2625497	0
[	Bi	209		ug/L			3225208	3083173	0
[	Th	232	52.391	ug/L	1.088	2	157	2723486	0
[	U	238	52.683	ug/L	1.098	2	3	2757357	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:59:10
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1186410	1
[	Be	9	0.000	ug/L	0.001	3150	11	11	30
	C	13		ug/L			104879	108114	3
	Cl	37		ug/L			4277164	4210696	2
[>	Sc	45		ug/L			1025260	1039256	1
[	V	51	-0.001	ug/L	0.008	1327	5531	5592	1
[	V-1	51	-0.008	ug/L	0.001	11	509	355	7
[	Cr	52	0.005	ug/L	0 036	658	16367	16674	1
[	Cr	53	-0.020	ug/L	0.006	27	243	209	3
[	Mn	55	-0.003	ug/L	0.002	75	685	619	7
[	Co	59	0.002	ug/L	0.001	41	119	146	9
[>	Ge	72		ug/L			592402	604780	1
[	Ni	60	0.048	ug/L	0.001	2	86	265	2
[	Ni	62	0.033	ug/L	0 015	46	63	82	7
[	Cu	63	0.011	ug/L	0.001	9	91	177	6
[	Cu	65	0.008	ug/L	0.001	14	47	78	3
[	Zn	66	0.136	ug/L	0.005	3	191	467	3
[	Zn	67	0.064	ug/L	0 006	9	37	60	3
[	Zn	68	0.120	ug/L	0.004	3	353	536	2
[	As	75	-0.028	ug/L	0 104	366	548	501	39
[	As-1	75	-0.028	ug/L	0.042	147	7252	7348	0
[	Se	82	0.010	ug/L	0.082	782	-19	-17	95
[	Se	78	-0.098	ug/L	0.170	173	7320	7425	0
[	Mo	98	0.010	ug/L	0.000	3	10	68	1
	Y	89		ug/L			394786	390771	3
	Kr	83		ug/L			872	818	33
[>	In	115		ug/L			1077756	1071888	0
[	Ag	107	0.002	ug/L	0.001	37	26	46	17
[	Cd	111	-0.001	ug/L	0 002	117	127	119	6
[	Cd	114	0.002	ug/L	0.000	10	19	49	6
[	Sb	121	0.074	ug/L	0.016	21	152	1310	19
[	Sb	123	0.077	ug/L	0.020	25	115	1012	23
[	Ba	135	0.005	ug/L	0.001	15	7	28	11
[	Ba	137	0.002	ug/L	0.000	18	20	38	8
[>	Tb	159		ug/L			1262684	1246718	1
[	Tl	205	0.004	ug/L	0.002	40	290	456	14
[	Pb	208	0.003	ug/L	0.000	10	247	412	4
[	Bi	209		ug/L			3225208	3225891	0
[	Th	232	0.147	ug/L	0.011	7	157	7846	6
[	U	238	0.004	ug/L	0.001	37	3	201	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~LOW CHECK~~ zzzzzz
Sample Dil Factor:
Comments: H 4-18-13 AR
Sample Date/Time: Thursday, April 18, 2013 10:03:17
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1854235	9
[	Be	9	0.000	ug/L	0.003	2161	11	17	68
	C	13		ug/L			104879	74205	17
	Cl	37		ug/L			4277164	1999370	12
[>	Sc	45		ug/L			1025260	1540582	10
[	V	51	-0.205	ug/L	0.005	2	5531	2438	14
[	V-1	51	-0.015	ug/L	0.003	18	509	333	15
[	Cr	52	-0.712	ug/L	0.019	2	16367	7167	16
[	Cr	53	-0.083	ug/L	0.002	2	243	136	15
[	Mn	55	-0.007	ug/L	0.001	14	685	785	13
[	Co	59	0.002	ug/L	0.002	128	119	216	12
[>	Ge	72		ug/L			592402	907306	11
[	Ni	60	0.009	ug/L	0.008	92	86	177	17
[	Ni	62	-0.051	ug/L	0.008	15	63	57	1
[	Cu	63	-0.003	ug/L	0.002	82	91	105	27
[	Cu	65	-0.006	ug/L	0.001	21	47	37	18
[	Zn	66	-0.048	ug/L	0.009	18	191	146	15
[	Zn	67	-0.065	ug/L	0.007	10	37	24	7
[	Zn	68	-0.112	ug/L	0.012	10	353	298	19
[	As	75	-0.082	ug/L	0.103	124	548	613	57
[	As-1	75	-1.849	ug/L	0.025	1	7252	5756	12
[	Se	82	0.069	ug/L	0.028	40	-19	-9	108
[	Se	78	-7.597	ug/L	0.110	1	7320	5764	12
[	Mo	98	0.003	ug/L	0.002	78	10	37	38
	Y	89		ug/L			394786	597173	12
	Kr	83		ug/L			872	838	57
[>	In	115		ug/L			1077756	1821648	11
[	Ag	107	0.001	ug/L	0 001	148	26	66	55
[	Cd	111	-0.011	ug/L	0.003	31	127	121	22
[	Cd	114	0.002	ug/L	0.002	96	19	73	50
[	Sb	121	0.002	ug/L	0.007	332	152	309	58
[	Sb	123	0.002	ug/L	0 007	296	115	236	52
[	Ba	135	0.002	ug/L	0.002	106	7	23	42
[	Ba	137	0.001	ug/L	0.002	241	20	45	61
[>	Tb	159		ug/L			1262684	2493686	5
[	Tl	205	0.000	ug/L	0.002	434	290	608	26
[	Pb	208	0.007	ug/L	0.009	128	247	1239	73
[	Bi	209		ug/L			3225208	5720416	3
[	Th	232	0.128	ug/L	0.151	117	157	13165	111
[	U	238	0.001	ug/L	0.001	77	3	150	75

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:10:21
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1199852	1
	Be	9	0.204	ug/L	0.008	4	11	639	3
	C	13		ug/L			104879	114117	2
	Cl	37		ug/L			4277164	4189505	0
>	Sc	45		ug/L			1025260	1014733	2
	V	51	0.205	ug/L	0.012	5	5531	9352	0
	V-1	51	0.197	ug/L	0.003	1	509	4240	3
	Cr	52	0.530	ug/L	0.064	12	16367	24738	1
	Cr	53	0.505	ug/L	0.022	4	243	1160	0
	Mn	55	0.486	ug/L	0.018	3	685	11744	1
	Co	59	0.213	ug/L	0.007	3	119	3555	1
>	Ge	72		ug/L			592402	597161	1
	Ni	60	0.532	ug/L	0.025	4	86	2025	5
	Ni	62	0.520	ug/L	0.044	8	63	326	5
	Cu	63	0.518	ug/L	0.013	2	91	4149	3
	Cu	65	0.499	ug/L	0.009	1	47	1839	2
	Zn	66	4.022	ug/L	0.088	2	191	8141	2
	Zn	67	3.578	ug/L	0.029	0	37	1249	1
	Zn	68	3.768	ug/L	0.055	1	353	5772	1
	As	75	0.107	ug/L	0.013	11	548	764	3
	As-1	75	0.169	ug/L	0.065	38	7252	7631	1
	Se	82	0.604	ug/L	0.021	3	-19	105	3
	Se	78	0.363	ug/L	0.218	60	7320	7549	1
	Mo	98	0.201	ug/L	0.013	6	10	1128	5
	Y	89		ug/L			394786	394732	1
	Kr	83		ug/L			872	555	8
>	In	115		ug/L			1077756	1065712	2
	Ag	107	0.217	ug/L	0.012	5	26	2981	3
	Cd	111	0.105	ug/L	0.008	7	127	652	4
	Cd	114	0.107	ug/L	0.001	1	19	1350	1
	Sb	121	0.201	ug/L	0.014	6	152	3258	3
	Sb	123	0.201	ug/L	0.007	3	115	2451	2
	Ba	135	0.480	ug/L	0.021	4	7	2246	3
	Ba	137	0.483	ug/L	0.008	1	20	3937	1
>	Tb	159		ug/L			1262684	1255880	1
	Tl	205	0.197	ug/L	0.004	2	290	8689	1
	Pb	208	0.104	ug/L	0.002	2	247	5842	0
	Bi	209		ug/L			3225208	3221081	1
	Th	232	0.142	ug/L	0.008	5	157	7679	6
	U	238	0.195	ug/L	0.005	2	3	10385	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:14:28
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1164625	1188628	1
	Be	9	-0.001	ug/L	0.001	167	11	9	32
	C	13		ug/L			104879	196844	1
	Cl	37		ug/L			4277164	11847008	0
>	Sc	45		ug/L			1025260	1001994	2
	V	51	0.112	ug/L	0.003	2	5531	7494	2
	V-1	51	0.433	ug/L	0.039	9	509	8576	6
	Cr	52	0.487	ug/L	0.017	3	16367	23772	3
	Cr	53	1.552	ug/L	0.122	7	243	3032	5
	Mn	55	0.068	ug/L	0.002	2	685	2194	1
	Co	59	0.023	ug/L	0.001	4	119	483	3
>	Ge	72		ug/L			592402	555202	0
	Ni	60	0.351	ug/L	0.017	4	86	1268	3
	Ni	62	1.682	ug/L	0.070	4	63	850	4
	Cu	63	0.726	ug/L	0.027	3	91	5371	3
	Cu	65	0.321	ug/L	0.009	2	47	1117	3
	Zn	66	0.875	ug/L	0.037	4	191	1787	4
	Zn	67	4.303	ug/L	0.185	4	37	1390	3
	Zn	68	0.375	ug/L	0.012	3	353	832	1
	As	75	-0.020	ug/L	0.059	292	548	476	22
	As-1	75	0.297	ug/L	0.092	31	7252	7322	1
	Se	82	-0.114	ug/L	0.039	34	-19	-40	18
	Se	78	0.893	ug/L	0.171	19	7320	7252	0
	Mo	98	475.326	ug/L	18.179	3	10	2463672	3
	Y	89		ug/L			394786	390594	2
	Kr	83		ug/L			872	674	6
>	In	115		ug/L			1077756	1002070	1
	Ag	107	0.019	ug/L	0.001	4	26	263	5
	Cd	111	0.083	ug/L	0.003	4	127	509	1
	Cd	114	0.253	ug/L	0.006	2	19	2964	3
	Sb	121	0.060	ug/L	0.007	12	152	1020	9
	Sb	123	0.063	ug/L	0.003	4	115	792	4
	Ba	135	0.046	ug/L	0.005	11	7	207	9
	Ba	137	0.039	ug/L	0.004	9	20	317	8
>	Tb	159		ug/L			1262684	1248825	0
	Tl	205	0.031	ug/L	0.001	3	290	1597	3
	Pb	208	0.033	ug/L	0.000	1	247	2031	1
	Bi	209		ug/L			3225208	2856072	0
	Th	232	0.052	ug/L	0.001	2	157	2864	2
	U	238	0.001	ug/L	0.000	46	3	41	43

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:20:59
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1164625	1233303	3
	Be	9	0.001	ug/L	0.001	47	11	15	9
	C	13		ug/L			104879	189539	3
	Cl	37		ug/L			4277164	12268717	3
>	Sc	45		ug/L			1025260	986819	1
	V	51	-0.100	ug/L	0.122	122	5531	3458	63
	V-1	51	0.451	ug/L	0.020	4	509	8792	4
	Cr	52	19.180	ug/L	0.712	3	16367	316914	1
	Cr	53	21.012	ug/L	0.320	1	243	37517	0
	Mn	55	18.261	ug/L	0.418	2	685	405154	0
	Co	59	19.603	ug/L	0.715	3	119	307369	1
>	Ge	72		ug/L			592402	548363	3
	Ni	60	19.699	ug/L	0.684	3	86	65895	2
	Ni	62	21.084	ug/L	0.668	3	63	9834	0
	Cu	63	20.487	ug/L	0.308	1	91	147387	2
	Cu	65	19.295	ug/L	0.231	1	47	63674	2
	Zn	66	19.601	ug/L	0.829	4	191	35712	1
	Zn	67	21.094	ug/L	0.584	2	37	6590	1
	Zn	68	18.178	ug/L	0.738	4	353	24298	0
	As	75	18.737	ug/L	0.620	3	548	34447	1
	As-1	75	19.650	ug/L	0.776	3	7252	41075	1
	Se	82	-0.201	ug/L	0.117	58	-19	-56	37
	Se	78	0.721	ug/L	0.597	82	7320	7081	0
	Mo	98	499.012	ug/L	24 859	4	10	2551785	1
	Y	89		ug/L			394786	402497	1
	Kr	83		ug/L			872	783	5
>	In	115		ug/L			1077756	1016684	0
	Ag	107	20.658	ug/L	0.305	1	26	268679	0
	Cd	111	19.981	ug/L	0.438	2	127	95425	1
	Cd	114	20.135	ug/L	0.324	1	19	238383	1
	Sb	121	0.064	ug/L	0.001	1	152	1087	0
	Sb	123	0.064	ug/L	0.004	6	115	819	5
	Ba	135	0.050	ug/L	0.007	13	7	228	11
	Ba	137	0.041	ug/L	0.005	11	20	333	11
>	Tb	159		ug/L			1262684	1248950	1
	Tl	205	0.027	ug/L	0.000	1	290	1445	1
	Pb	208	0.032	ug/L	0.001	2	247	1942	2
	Bi	209		ug/L			3225208	2862221	0
	Th	232	0.023	ug/L	0.001	5	157	1382	4
	U	238	0.001	ug/L	0.000	21	3	32	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:27:51
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1143703	3
[	Be	9	202.727	ug/L	9.958	4	11	594440	3
	C	13		ug/L			104879	114748	3
	Cl	37		ug/L			4277164	4259084	2
[>	Sc	45		ug/L			1025260	943957	3
[	V	51	215.240	ug/L	5.349	2	5531	3793617	2
[	V-1	51	211.681	ug/L	6.347	2	509	3725826	2
[	Cr	52	208.120	ug/L	3.704	1	16367	3141281	2
[	Cr	53	196.311	ug/L	7.090	3	243	333285	2
[	Mn	55	198.648	ug/L	7.549	3	685	4207143	0
[	Co	59	215.982	ug/L	3.682	1	119	3238908	2
[>	Ge	72		ug/L			592402	520335	3
[	Ni	60	204.202	ug/L	3.391	1	86	647778	2
[	Ni	62	203.984	ug/L	3.021	1	63	89855	2
[	Cu	63	201.514	ug/L	5.727	2	91	1374573	0
[	Cu	65	193.032	ug/L	3.151	1	47	604087	1
[	Zn	66	198.792	ug/L	7.067	3	191	342346	2
[	Zn	67	193.871	ug/L	8.577	4	37	57196	2
[	Zn	68	193.972	ug/L	3.774	1	353	243174	1
[	As	75	206.111	ug/L	1.253	0	548	355013	2
[	As-1	75	202.577	ug/L	1.137	0	7252	342831	2
[	Se	82	223.075	ug/L	3.301	1	-19	40257	1
[	Se	78	204.902	ug/L	3.059	1	7320	90731	1
[	Mo	98	233.892	ug/L	5.728	2	10	1135849	1
	Y	89		ug/L			394786	384243	2
	Kr	83		ug/L			872	795	5
[>	In	115		ug/L			1077756	988444	1
[	Ag	107	231.608	ug/L	1.553	0	26	2928512	1
[	Cd	111	197.560	ug/L	3.858	1	127	916232	1
[	Cd	114	218.458	ug/L	3.660	1	19	2514172	1
[	Sb	121	217.640	ug/L	2.357	1	152	3125508	1
[	Sb	123	223.998	ug/L	1.694	0	115	2417443	0
[	Ba	135	204.140	ug/L	2.248	1	7	883803	0
[	Ba	137	199.042	ug/L	3.844	1	20	1497330	1
[>	Tb	159		ug/L			1262684	1233569	1
[	Tl	205	196.975	ug/L	2.547	1	290	8255143	1
[	Pb	208	203.959	ug/L	2.070	1	247	10777026	0
[	Bi	209		ug/L			3225208	2776246	1
[	Th	232	193.610	ug/L	2.439	1	157	10047746	0
[	U	238	193.164	ug/L	1.720	0	3	10094449	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:34:42
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1164625	1089241	2
	Be	9	299.057	ug/L	4.384	1	11	835682	1
	C	13		ug/L			104879	111871	6
	Cl	37		ug/L			4277164	4241404	1
>	Sc	45		ug/L			1025260	925906	2
	V	51	318.222	ug/L	6.711	2	5531	5500561	1
	V-1	51	312.457	ug/L	7.422	2	509	5395370	1
	Cr	52	310.865	ug/L	4.358	1	16367	4597077	3
	Cr	53	291.739	ug/L	7.085	2	243	485830	0
	Mn	55	288.831	ug/L	4.028	1	685	6005539	2
	Co	59	307.453	ug/L	12.064	3	119	4522462	3
>	Ge	72		ug/L			592402	497149	2
	Ni	60	299.502	ug/L	8.077	2	86	908133	4
	Ni	62	304.865	ug/L	3.232	1	63	128296	1
	Cu	63	295.882	ug/L	8.433	2	91	1928645	1
	Cu	65	294.428	ug/L	5.069	1	47	880432	1
	Zn	66	285.866	ug/L	7.241	2	191	470336	0
	Zn	67	292.495	ug/L	5.402	1	37	82483	1
	Zn	68	289.120	ug/L	2.991	1	353	346245	1
	As	75	309.567	ug/L	4.425	1	548	509148	0
	As-1	75	304.899	ug/L	3.730	1	7252	489875	1
	Se	82	326.863	ug/L	6.057	1	-19	56368	1
	Se	78	301.465	ug/L	2.435	0	7320	124667	1
	Mo	98	353.891	ug/L	4.167	1	10	1642763	2
	Y	89		ug/L			394786	364588	2
	Kr	83		ug/L			872	904	2
>	In	115		ug/L			1077756	967452	0
	Ag	107	325.281	ug/L	6.879	2	26	4025748	1
	Cd	111	290.891	ug/L	6.136	2	127	1320532	1
	Cd	114	316.565	ug/L	5.650	1	19	3566329	1
	Sb	121	323.019	ug/L	1.912	0	152	4540630	0
	Sb	123	327.549	ug/L	5 594	1	115	3460073	1
	Ba	135	298.662	ug/L	6.498	2	7	1265659	1
	Ba	137	330.168	ug/L	7.075	2	20	2431361	1
>	Tb	159		ug/L			1262684	1208610	1
	Tl	205	287.267	ug/L	7.607	2	290	11793170	1
	Pb	208	295.855	ug/L	4.127	1	247	15315445	0
	Bi	209		ug/L			3225208	2604864	1
	Th	232	284.222	ug/L	4.374	1	157	14450811	0
	U	238	278.671	ug/L	2.590	0	3	14267151	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:41:33
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	**Li**	**6**		ug/L			1164625	1161734	2
[	**Be**	**9**	**0.007**	ug/L	0.003	44	11	32	27
	C	**13**		ug/L			104879	113513	2
	Cl	**37**		ug/L			4277164	4187934	0
[>	**Sc**	**45**		ug/L			1025260	970242	1
[	**V**	**51**	**0.000**	ug/L	0.006	1774	5531	5239	0
[	**V-1**	**51**	**-0.005**	ug/L	0.001	29	509	394	5
[	**Cr**	**52**	**0.012**	ug/L	0.023	185	16367	15676	0
[	**Cr**	**53**	**-0.005**	ug/L	0.007	144	243	222	4
[	**Mn**	**55**	**0.015**	ug/L	0.001	5	685	984	2
[	**Co**	**59**	**0.004**	ug/L	0.001	34	119	167	12
[>	**Ge**	**72**		ug/L			592402	558112	1
[	**Ni**	**60**	**0.036**	ug/L	0.004	10	86	204	4
[	**Ni**	**62**	**0.066**	ug/L	0.009	13	63	91	6
[	**Cu**	**63**	**0.030**	ug/L	0.002	8	91	308	3
[	**Cu**	**65**	**0.021**	ug/L	0.005	23	47	115	12
[	**Zn**	**66**	**1.601**	ug/L	0.086	5	191	3135	3
[	**Zn**	**67**	**1.361**	ug/L	0 087	6	37	466	7
[	**Zn**	**68**	**1.552**	ug/L	0.128	8	353	2416	6
[	**As**	**75**	**-0.066**	ug/L	0.019	28	548	395	6
[	**As-1**	**75**	**0.135**	ug/L	0.117	86	7252	7070	1
[	**Se**	**82**	**0.063**	ug/L	0.046	73	-19	-6	135
[	**Se**	**78**	**0.528**	ug/L	0.457	86	7320	7127	1
[	**Mo**	**98**	**0.057**	ug/L	0.004	7	10	305	5
	Y	**89**		ug/L			394786	389224	1
	Kr	**83**		ug/L			872	621	1
[>	**In**	**115**		ug/L			1077756	1052045	1
[	**Ag**	**107**	**0.008**	ug/L	0.003	34	26	131	29
[	**Cd**	**111**	**0.005**	ug/L	0.002	43	127	147	8
[	**Cd**	**114**	**0.007**	ug/L	0.002	28	19	102	24
[	**Sb**	**121**	**0.404**	ug/L	0.061	15	152	6309	13
[	**Sb**	**123**	**0.407**	ug/L	0.056	13	115	4783	12
[	**Ba**	**135**	**0.021**	ug/L	0.003	12	7	103	12
[	**Ba**	**137**	**0.019**	ug/L	0.002	12	20	172	11
[>	**Tb**	**159**		ug/L			1262684	1248667	0
[	**Tl**	**205**	**0.023**	ug/L	0.001	5	290	1257	4
[	**Pb**	**208**	**0.022**	ug/L	0.000	1	247	1403	1
[	**Bi**	**209**		ug/L			3225208	3180757	1
[	**Th**	**232**	**0.286**	ug/L	0.011	4	157	15177	3
[	**U**	**238**	**0.011**	ug/L	0.002	19	3	581	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:47:36
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1198669	2
	Be	9	49.352	ug/L	1.925	3	11	151741	2
	C	13		ug/L			104879	113305	1
	Cl	37		ug/L			4277164	4293150	0
>	Sc	45		ug/L			1025260	977100	1
	V	51	48.407	ug/L	1.548	3	5531	887295	1
	V-1	51	48.847	ug/L	1.491	3	509	890524	1
	Cr	52	49.160	ug/L	1.443	2	16367	779964	0
	Cr	53	50.621	ug/L	1.410	2	243	89168	2
	Mn	55	48.426	ug/L	1.606	3	685	1062650	1
	Co	59	50.902	ug/L	1.268	2	119	790173	0
>	Ge	72		ug/L			592402	564810	1
	Ni	60	49.847	ug/L	0.446	0	86	171727	0
	Ni	62	49.940	ug/L	1.237	2	63	23924	1
	Cu	63	50.332	ug/L	1.903	3	91	372801	2
	Cu	65	49.177	ug/L	0.432	0	47	167139	1
	Zn	66	50.664	ug/L	1.213	2	191	94880	2
	Zn	67	48.938	ug/L	1.737	3	37	15705	1
	Zn	68	50.658	ug/L	0.832	1	353	69199	0
	As	75	50.240	ug/L	0.660	1	548	94323	0
	As-1	75	50.062	ug/L	0.598	1	7252	97165	0
	Se	82	53.535	ug/L	1.068	1	-19	10473	0
	Se	78	51.321	ug/L	1.132	2	7320	29900	0
	Mo	98	51.937	ug/L	0.912	1	10	273875	1
	Y	89		ug/L			394786	383912	0
	Kr	83		ug/L			872	593	3
>	In	115		ug/L			1077756	1042551	0
	Ag	107	51.765	ug/L	0.360	0	26	690428	0
	Cd	111	49.699	ug/L	0.151	0	127	243237	0
	Cd	114	49.556	ug/L	0.281	0	19	601645	0
	Sb	121	49.097	ug/L	0.342	0	152	743856	0
	Sb	123	49.916	ug/L	0.196	0	115	568332	0
	Ba	135	49.481	ug/L	0.025	0	7	225977	0
	Ba	137	48.846	ug/L	0.559	1	20	387658	1
>	Tb	159		ug/L			1262684	1247253	0
	Tl	205	46.005	ug/L	0.102	0	290	1949791	0
	Pb	208	48.902	ug/L	0.329	0	247	2613006	0
	Bi	209		ug/L			3225208	3052548	0
	Th	232	51.722	ug/L	1.063	2	157	2714400	2
	U	238	51.787	ug/L	0.718	1	3	2736265	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:54:28
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1177071	0
	Be	9	0.004	ug/L	0.002	54	11	22	26
	C	13		ug/L			104879	110981	3
	Cl	37		ug/L			4277164	4141625	1
>	Sc	45		ug/L			1025260	997135	2
	V	51	-0.011	ug/L	0.012	110	5531	5170	2
	V-1	51	-0.010	ug/L	0.001	6	509	316	3
	Cr	52	-0.029	ug/L	0.046	160	16367	15449	2
	Cr	53	-0.024	ug/L	0.008	31	243	193	4
	Mn	55	0.002	ug/L	0.000	13	685	715	2
	Co	59	0.001	ug/L	0.000	32	119	135	6
>	Ge	72		ug/L			592402	578759	2
	Ni	60	0.008	ug/L	0.003	37	86	111	7
	Ni	62	-0.004	ug/L	0.017	476	63	60	13
	Cu	63	0.013	ug/L	0.002	15	91	187	5
	Cu	65	0.008	ug/L	0.001	17	47	73	8
	Zn	66	0.121	ug/L	0.010	8	191	418	5
	Zn	67	0.077	ug/L	0.018	23	37	62	8
	Zn	68	0.105	ug/L	0.022	20	353	491	3
	As	75	-0.084	ug/L	0.013	15	548	375	6
	As-1	75	0.018	ug/L	0.110	599	7252	7115	0
	Se	82	0.078	ug/L	0.037	47	-19	-3	210
	Se	78	0.063	ug/L	0.459	726	7320	7176	0
	Mo	98	0.016	ug/L	0.005	29	10	98	23
	Y	89		ug/L			394786	388339	2
	Kr	83		ug/L			872	593	2
>	In	115		ug/L			1077756	1049293	0
	Ag	107	0.003	ug/L	0.002	55	26	72	36
	Cd	111	-0.001	ug/L	0.002	328	127	120	9
	Cd	114	0.003	ug/L	0.001	38	19	56	25
	Sb	121	0.115	ug/L	0.021	17	152	1908	17
	Sb	123	0.121	ug/L	0.024	19	115	1503	18
	Ba	135	0.005	ug/L	0.001	26	7	30	20
	Ba	137	0.004	ug/L	0.002	46	20	51	29
>	Tb	159		ug/L			1262684	1242591	0
	Tl	205	0.009	ug/L	0.003	31	290	685	17
	Pb	208	0.004	ug/L	0.001	20	247	443	8
	Bi	209		ug/L			3225208	3223002	1
	Th	232	0.182	ug/L	0 012	6	157	9654	6
	U	238	0.004	ug/L	0.001	32	3	217	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:02:18
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1221709	0
	Be	9	0.003	ug/L	0.002	69	11	21	31
	C	13		ug/L			104879	125606	3
	Cl	37		ug/L			4277164	4229377	1
>	Sc	45		ug/L			1025260	1007890	2
	V	51	0.022	ug/L	0.006	27	5531	5848	2
	V-1	51	-0.004	ug/L	0.002	44	509	422	5
	Cr	52	0.084	ug/L	0.017	19	16367	17442	2
	Cr	53	-0.002	ug/L	0.006	331	243	235	3
	Mn	55	0.062	ug/L	0.001	1	685	2067	1
	Co	59	0.002	ug/L	0.001	50	119	154	10
>	Ge	72		ug/L			592402	589975	1
	Ni	60	0.033	ug/L	0.001	4	86	204	2
	Ni	62	0.024	ug/L	0.011	44	63	75	7
	Cu	63	0.057	ug/L	0.008	13	91	534	10
	Cu	65	0.052	ug/L	0.002	4	47	231	4
	Zn	66	0.732	ug/L	0.019	2	191	1620	2
	Zn	67	0.638	ug/L	0.055	8	37	250	6
	Zn	68	0.682	ug/L	0.017	2	353	1320	0
	As	75	-0.081	ug/L	0.002	3	548	387	2
	As-1	75	0.038	ug/L	0.015	38	7252	7294	1
	Se	82	0.110	ug/L	0.012	10	-19	2	85
	Se	78	0.152	ug/L	0.084	55	7320	7360	0
	Mo	98	0.018	ug/L	0.005	27	10	107	26
	Y	89		ug/L			394786	392268	3
	Kr	83		ug/L			872	595	1
>	In	115		ug/L			1077756	1074131	0
	Ag	107	0.002	ug/L	0.001	39	26	56	21
	Cd	111	-0.002	ug/L	0.000	28	127	118	2
	Cd	114	0.003	ug/L	0.000	16	19	51	10
	Sb	121	0.049	ug/L	0.011	21	152	909	17
	Sb	123	0.051	ug/L	0.010	19	115	711	15
	Ba	135	0.024	ug/L	0.003	11	7	118	10
	Ba	137	0.024	ug/L	0 003	12	20	214	12
>	Tb	159		ug/L			1262684	1270880	0
	Tl	205	0.012	ug/L	0.004	38	290	795	24
	Pb	208	0.069	ug/L	0.001	0	247	4012	0
	Bi	209		ug/L			3225208	3247791	0
	Th	232	0.091	ug/L	0 011	11	157	5029	11
	U	238	0.002	ug/L	0.000	30	3	88	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:06:25
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1404473	3
	Be	9	0.055	ug/L	0.006	10	11	210	7
	C	13		ug/L			104879	153319	2
	Cl	37		ug/L			4277164	6442782	2
>	Sc	45		ug/L			1025260	961101	2
	V	51	0.713	ug/L	0.038	5	5531	17969	4
	V-1	51	0.751	ug/L	0.018	2	509	13935	0
	Cr	52	2.087	ug/L	0.119	5	16367	47262	3
	Cr	53	2.213	ug/L	0.137	6	243	4050	3
	Mn	55	1023.264	ug/L	17.813	1	685	22081454	2
	Co	59	4.690	ug/L	0.082	1	119	71725	2
>	Ge	72		ug/L			592402	512303	0
	Ni	60	49.616	ug/L	1.302	2	86	155041	2
	Ni	62	51.121	ug/L	0.586	1	63	22216	0
	Cu	63	24.727	ug/L	0 621	2	91	166217	2
	Cu	65	22.349	ug/L	0.525	2	47	68914	1
	Zn	66	338.044	ug/L	9.383	2	191	573290	2
	Zn	67	300.521	ug/L	5.707	1	37	87344	1
	Zn	68	326.931	ug/L	9.426	2	353	403447	2
	As	75	1.847	ug/L	0.049	2	548	3603	2
	As-1	75	1.582	ug/L	0.053	3	7252	8858	0
	Se	82	3.295	ug/L	0.158	4	-19	568	5
	Se	78	2.295	ug/L	0.265	11	7320	7259	1
	Mo	98	6.766	ug/L	0.129	1	10	32376	2
	Y	89		ug/L			394786	407979	1
	Kr	83		ug/L			872	731	6
>	In	115		ug/L			1077756	975902	1
	Ag	107	0.061	ug/L	0.001	1	26	790	0
	Cd	111	0.703	ug/L	0.021	3	127	3334	1
	Cd	114	0.697	ug/L	0.004	0	19	7936	0
	Sb	121	4.817	ug/L	0.052	1	152	68432	1
	Sb	123	4.887	ug/L	0.140	2	115	52172	2
	Ba	135	46.074	ug/L	1.153	2	7	196930	1
	Ba	137	45.282	ug/L	0.434	0	20	336369	0
>	Tb	159		ug/L			1262684	1243685	2
	Tl	205	0.275	ug/L	0.006	2	290	11902	2
	Pb	208	18.352	ug/L	0.294	1	247	977731	1
	Bi	209		ug/L			3225208	2570075	1
	Th	232	0.095	ug/L	0.032	33	157	5100	30
	U	238	0.011	ug/L	0 000	4	3	556	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:10:33
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1418936	2
[	Be	9	0.003	ug/L	0.001	38	11	23	19
	C	13		ug/L			104879	146788	2
	Cl	37		ug/L			4277164	6182839	1
[>	Sc	45		ug/L			1025260	970096	0
[	V	51	0.467	ug/L	0.031	6	5531	13680	4
[	V-1	51	0.518	ug/L	0.012	2	509	9861	2
[	Cr	52	0.925	ug/L	0.008	0	16367	29769	0
[	Cr	53	1.096	ug/L	0.068	6	243	2142	5
[	Mn	55	929.876	ug/L	10.447	1	685	20254578	0
[	Co	59	3.596	ug/L	0.080	2	119	55545	1
[>	Ge	72		ug/L			592402	504089	2
[	Ni	60	28.226	ug/L	1.446	5	86	86760	3
[	Ni	62	29.547	ug/L	0.177	0	63	12657	2
[	Cu	63	18.450	ug/L	0.591	3	91	122004	1
[	Cu	65	17.021	ug/L	0.441	2	47	51634	0
[	Zn	66	280.170	ug/L	8.522	3	191	467354	0
[	Zn	67	251.487	ug/L	6.951	2	37	71896	0
[	Zn	68	268.311	ug/L	6.069	2	353	325759	0
[	As	75	1.647	ug/L	0.053	3	548	3210	3
[	As-1	75	1.330	ug/L	0.138	10	7252	8308	0
[	Se	82	3.365	ug/L	0.084	2	-19	572	3
[	Se	78	2.215	ug/L	0.554	24	7320	7108	0
[	Mo	98	6.711	ug/L	0.176	2	10	31585	0
	Y	89		ug/L			394786	421687	1
	Kr	83		ug/L			872	727	4
[>	In	115		ug/L			1077756	991820	1
[	Ag	107	0.015	ug/L	0.000	1	26	219	2
[	Cd	111	0.530	ug/L	0.004	0	127	2584	0
[	Cd	114	0.542	ug/L	0.023	4	19	6277	2
[	Sb	121	4.467	ug/L	0.003	0	152	64509	1
[	Sb	123	4.530	ug/L	0.064	1	115	49161	0
[	Ba	135	41.946	ug/L	0.920	2	7	182211	1
[	Ba	137	42.301	ug/L	0 601	1	20	319342	1
[>	Tb	159		ug/L			1262684	1257217	1
[	Tl	205	0.030	ug/L	0.001	2	290	1579	2
[	Pb	208	16.698	ug/L	0.289	1	247	899397	0
[	Bi	209		ug/L			3225208	2587419	1
[	Th	232	0.025	ug/L	0.002	6	157	1497	4
[	U	238	0.008	ug/L	0.000	4	3	435	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:14:40
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1431791	2
	Be	9	18.507	ug/L	0.451	2	11	67982	0
	C	13		ug/L			104879	147231	2
	Cl	37		ug/L			4277164	6206802	2
>	Sc	45		ug/L			1025260	958626	1
	V	51	23.339	ug/L	0.356	1	5531	422500	0
	V-1	51	23.412	ug/L	0.370	1	509	419085	1
	Cr	52	23.122	ug/L	0.562	2	16367	368060	0
	Cr	53	23.362	ug/L	0.387	1	243	40498	1
	Mn	55	943.824	ug/L	9.023	0	685	20317666	2
	Co	59	26.046	ug/L	0.319	1	119	396815	0
>	Ge	72		ug/L			592402	500670	0
	Ni	60	52.275	ug/L	0 801	1	86	159645	1
	Ni	62	52.833	ug/L	0 032	0	63	22438	0
	Cu	63	42.802	ug/L	0.429	1	91	281149	0
	Cu	65	40.268	ug/L	0.890	2	47	121325	2
	Zn	66	347.496	ug/L	7.210	2	191	575986	2
	Zn	67	302.688	ug/L	7.624	2	37	85977	2
	Zn	68	333.836	ug/L	2 749	0	353	402636	0
	As	75	32.497	ug/L	0 407	1	548	54254	1
	As-1	75	27.161	ug/L	0.332	1	7252	49538	1
	Se	82	93.676	ug/L	1.093	1	-19	16261	1
	Se	78	78.267	ug/L	0.819	1	7320	37179	0
	Mo	98	39.683	ug/L	0.338	0	10	185527	1
	Y	89		ug/L			394786	422019	1
	Kr	83		ug/L			872	733	1
>	In	115		ug/L			1077756	989468	0
	Ag	107	21.807	ug/L	0.331	1	26	276049	1
	Cd	111	24.196	ug/L	0.330	1	127	112451	1
	Cd	114	23.783	ug/L	0.264	1	19	274040	0
	Sb	121	28.936	ug/L	0.350	1	152	416123	0
	Sb	123	29.375	ug/L	0.405	1	115	317460	0
	Ba	135	65.950	ug/L	0.291	0	7	285853	0
	Ba	137	65.669	ug/L	1.233	1	20	494590	1
>	Tb	159		ug/L			1262684	1264147	0
	Tl	205	20.552	ug/L	0.065	0	290	882988	0
	Pb	208	37.176	ug/L	0.493	1	247	2013304	0
	Bi	209		ug/L			3225208	2588361	1
	Th	232	16.626	ug/L	0.365	2	157	884401	1
	U	238	22.042	ug/L	0.198	0	3	1180416	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:18:47
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\041813.cal

Rh Be, Sc

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1386998	1
	Be	**9**	**0.003**	ug/L	0.001	36	11	24	16
	C	**13**		ug/L			104879	147585	4
	Cl	**37**		ug/L			4277164	6248336	1
>	**Sc**	**45**		ug/L			1025260	960118	2
	V	**51**	**0.365**	ug/L	0.023	6	5531	11717	1
	V-1	**51**	**0.413**	ug/L	0.014	3	509	7864	1
	Cr	**52**	**0.630**	ug/L	0.055	8	16367	24940	1
	Cr	**53**	**0.787**	ug/L	0.018	2	243	1586	1
	Mn	**55**	**910.718**	ug/L	9 874	1	685	19631127	1
	Co	**59**	**3.277**	ug/L	0.054	1	119	50089	0
>	**Ge**	**72**		ug/L			592402	507025	1
	Ni	**60**	**27.696**	ug/L	0.710	2	86	85676	2
	Ni	**62**	**29.241**	ug/L	0.950	3	63	12596	1
	Cu	**63**	**2.822**	ug/L	0.025	0	91	18842	2
	Cu	**65**	**1.529**	ug/L	0.056	3	47	4702	1
	Zn	**66**	**82.560**	ug/L	1.136	1	191	138684	0
	Zn	**67**	**74.701**	ug/L	1.786	2	37	21507	1
	Zn	**68**	**79.590**	ug/L	1.841	2	353	97416	0
	As	**75**	**1.342**	ug/L	0.048	3	548	2718	1
	As-1	**75**	**1.155**	ug/L	0.116	10	7252	8074	0
	Se	**82**	**3.096**	ug/L	0 235	7	-19	527	6
	Se	**78**	**2.467**	ug/L	0.465	18	7320	7252	0
	Mo	**98**	**5.956**	ug/L	0.068	1	10	28201	1
	Y	**89**		ug/L			394786	425834	1
	Kr	**83**		ug/L			872	726	6
>	**In**	**115**		ug/L			1077756	998004	0
	Ag	**107**	**0.008**	ug/L	0.002	29	26	120	22
	Cd	**111**	**0.151**	ug/L	0.003	1	127	826	1
	Cd	**114**	**0.150**	ug/L	0.007	4	19	1765	3
	Sb	**121**	**4.377**	ug/L	0.046	1	152	63611	0
	Sb	**123**	**4.392**	ug/L	0.094	2	115	47959	1
	Ba	**135**	**41.161**	ug/L	0.709	1	7	179934	0
	Ba	**137**	**41.239**	ug/L	0.419	1	20	313280	0
>	**Tb**	**159**		ug/L			1262684	1267036	0
	Tl	**205**	**0.015**	ug/L	0.001	9	290	939	6
	Pb	**208**	**4.584**	ug/L	0.023	0	247	249041	0
	Bi	**209**		ug/L			3225208	2652025	0
	Th	**232**	**0.086**	ug/L	0.015	17	157	4755	17
	U	**238**	**0.013**	ug/L	0.001	7	3	713	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:22:55
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			1164625	1399175	0
[	Be	9	0.002	ug/L	0.002	89	11	21	34
	C	13		ug/L			104879	145693	2
	Cl	37		ug/L			4277164	6132926	4
[>	Sc	45		ug/L			1025260	973319	1
[	V	51	0.363	ug/L	0.013	3	5531	11846	0
[	V-1	51	0.391	ug/L	0.011	2	509	7587	1
[	Cr	52	0.536	ug/L	0.050	9	16367	23826	1
[	Cr	53	0.629	ug/L	0.038	5	243	1330	3
[	Mn	55	872.609	ug/L	15.142	1	685	19067999	1
[	Co	59	3.175	ug/L	0.068	2	119	49199	0
[>	Ge	72		ug/L			592402	502113	1
[	Ni	60	27.513	ug/L	0.145	0	86	84305	1
[	Ni	62	28.200	ug/L	0.619	2	63	12034	0
[	Cu	63	2.676	ug/L	0.029	1	91	17699	0
[	Cu	65	1.384	ug/L	0.030	2	47	4220	0
[	Zn	66	76.475	ug/L	0.512	0	191	127247	0
[	Zn	67	70.633	ug/L	1.266	1	37	20145	2
[	Zn	68	75.460	ug/L	1.765	2	353	91493	1
[	As	75	1.307	ug/L	0.020	1	548	2634	1
[	As-1	75	1.120	ug/L	0.101	9	7252	7940	0
[	Se	82	3.018	ug/L	0.066	2	-19	509	1
[	Se	78	2.401	ug/L	0.391	16	7320	7156	0
[	Mo	98	5.952	ug/L	0.041	0	10	27911	0
	Y	89		ug/L			394786	422816	1
	Kr	83		ug/L			872	729	2
[>	In	115		ug/L			1077756	1006813	0
[	Ag	107	0.003	ug/L	0.000	9	26	67	6
[	Cd	111	0.132	ug/L	0.006	4	127	742	4
[	Cd	114	0.140	ug/L	0.004	2	19	1658	2
[	Sb	121	4.198	ug/L	0.040	0	152	61551	0
[	Sb	123	4.271	ug/L	0.041	0	115	47061	0
[	Ba	135	39.813	ug/L	0.300	0	7	175588	0
[	Ba	137	40.113	ug/L	0.593	1	20	307447	1
[>	Tb	159		ug/L			1262684	1274177	0
[	Tl	205	0.009	ug/L	0.004	37	290	696	23
[	Pb	208	4.439	ug/L	0.058	1	247	242541	0
[	Bi	209		ug/L			3225208	2628227	1
[	Th	232	0.022	ug/L	0.002	7	157	1330	6
[	U	238	0.007	ug/L	0.002	23	3	401	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:27:02
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1430125	2
	Be	9	19.033	ug/L	0.358	1	11	69835	1
	C	13		ug/L			104879	144488	1
	Cl	37		ug/L			4277164	6337058	0
>	Sc	45		ug/L			1025260	991403	2
	V	51	24.136	ug/L	1.038	4	5531	451404	1
	V-1	51	24.157	ug/L	0.882	3	509	446964	1
	Cr	52	23.549	ug/L	0.779	3	16367	387250	0
	Cr	53	23.620	ug/L	0.291	1	243	42339	1
	Mn	55	930.208	ug/L	40.894	4	685	20691441	1
	Co	59	26.401	ug/L	0.524	1	119	415884	0
>	Ge	72		ug/L			592402	504171	1
	Ni	60	54.153	ug/L	0.437	0	86	166529	0
	Ni	62	53.242	ug/L	0.693	1	63	22768	1
	Cu	63	27.645	ug/L	0.430	1	91	182859	0
	Cu	65	25.848	ug/L	0.602	2	47	78419	0
	Zn	66	153.781	ug/L	6.880	4	191	256653	2
	Zn	67	138.042	ug/L	3.481	2	37	39493	1
	Zn	68	145.149	ug/L	4.601	3	353	176404	1
	As	75	33.760	ug/L	0 306	0	548	56734	0
	As-1	75	27.787	ug/L	0.483	1	7252	50892	1
	Se	82	100.542	ug/L	1.359	1	-19	17574	0
	Se	78	83.193	ug/L	1.419	1	7320	39400	1
	Mo	98	40.382	ug/L	0.385	0	10	190098	1
	Y	89		ug/L			394786	425322	0
	Kr	83		ug/L			872	745	3
>	In	115		ug/L			1077756	1012390	0
	Ag	107	23.784	ug/L	0.126	0	26	308055	0
	Cd	111	24.249	ug/L	0.097	0	127	115305	0
	Cd	114	24.105	ug/L	0.270	1	19	284176	0
	Sb	121	29.407	ug/L	0 195	0	152	432686	0
	Sb	123	29.929	ug/L	0.365	1	115	330928	0
	Ba	135	67.233	ug/L	0.759	1	7	298152	0
	Ba	137	66.232	ug/L	0.906	1	20	510374	0
>	Tb	159		ug/L			1262684	1294407	0
	Tl	205	21.147	ug/L	0.240	1	290	930271	0
	Pb	208	25.990	ug/L	0.269	1	247	1441281	0
	Bi	209		ug/L			3225208	2608169	0
	Th	232	20.071	ug/L	0.302	1	157	1093174	0
	U	238	22.511	ug/L	0.053	0	3	1234440	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:31:09
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1076978	2
[	Be	9	1.933	ug/L	0.066	3	11	5349	1
	C	13		ug/L			104879	152012	2
	Cl	37		ug/L			4277164	4094562	1
[>	Sc	45		ug/L			1025260	1590469	1
[	V	51	191.717	ug/L	3.173	1	5531	5696260	0
[	V-1	51	189.055	ug/L	3.453	1	509	5609002	0
[	Cr	52	132.127	ug/L	2.488	1	16367	3370127	0
[	Cr	53	123.285	ug/L	3.885	3	243	352919	2
[	Mn	55	1539.939	ug/L	20.313	1	685	54990427	0
[	Co	59	47.084	ug/L	0.476	1	119	1190044	0
[>	Ge	72		ug/L			592402	392783	0
[	Ni	60	268.462	ug/L	2.210	0	86	643010	1
[	Ni	62	286.877	ug/L	2.485	0	63	95394	0
[	Cu	63	840.446	ug/L	1.593	0	91	4329906	0
[	Cu	65	753.836	ug/L	6.940	0	47	1781353	1
[	Zn	66	2195.593	ug/L	13.308	0	191	2854337	0
[	Zn	67	1837.926	ug/L	29.582	1	37	409417	1
[	Zn	68	1915.503	ug/L	26.668	1	353	1811239	0
[	As	75	90.259	ug/L	0.682	0	548	117565	0
[	As-1	75	93.183	ug/L	0.686	0	7252	121643	0
[	Se	82	-8.125	ug/L	0.412	5	-19	-1121	5
[	Se	78	2.767	ug/L	0.261	9	7320	5713	1
[	Mo	98	16.310	ug/L	0.359	2	10	59828	2
	Y	89		ug/L			394786	1370151	0
	Kr	83		ug/L			872	5685	3
[>	In	115		ug/L			1077756	885212	0
[	Ag	107	1.051	ug/L	0.016	1	26	11919	1
[	Cd	111	5.378	ug/L	0.023	0	127	22441	0
[	Cd	114	5.171	ug/L	0.046	0	19	53313	0
[	Sb	121	3.678	ug/L	0.049	1	152	47432	0
[	Sb	123	3.608	ug/L	0.025	0	115	34962	0
[	Ba	135	1001.258	ug/L	12.534	1	7	3882306	0
[	Ba	137	1010.813	ug/L	9.400	0	20	6810858	0
[>	Tb	159		ug/L			1262684	1134239	0
[	Tl	205	0.332	ug/L	0 001	0	290	13041	0
[	Pb	208	558.692	ug/L	6.176	1	247	27145054	0
[	Bi	209		ug/L			3225208	1669460	1
[	Th	232	5.082	ug/L	0.089	1	157	242645	1
[	U	238	3.289	ug/L	0.056	1	3	158012	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:35:16
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1185737	3
	Be	9	0.000	ug/L	0.001	616	11	11	24
	C	13		ug/L			104879	126208	0
	Cl	37		ug/L			4277164	4357446	2
>	Sc	45		ug/L			1025260	978842	2
	V	51	13.278	ug/L	0.297	2	5531	247717	3
	V-1	51	13.414	ug/L	0 056	0	509	245401	2
	Cr	52	19.784	ug/L	0.659	3	16367	323767	2
	Cr	53	20.238	ug/L	0.532	2	243	35845	2
	Mn	55	0.835	ug/L	0.075	8	685	18994	8
	Co	59	0.192	ug/L	0.016	8	119	3093	5
>	Ge	72		ug/L			592402	530802	1
	Ni	60	1.038	ug/L	0.011	1	86	3436	1
	Ni	62	1.122	ug/L	0.039	3	63	561	4
	Cu	63	7.155	ug/L	0.110	1	91	49885	0
	Cu	65	6.768	ug/L	0.112	1	47	21650	0
	Zn	66	1.158	ug/L	0.025	2	191	2205	1
	Zn	67	1.616	ug/L	0 074	4	37	520	3
	Zn	68	1.929	ug/L	0 039	2	353	2782	2
	As	75	10.400	ug/L	0.132	1	548	18739	1
	As-1	75	10.976	ug/L	0.212	1	7252	25093	0
	Se	82	0.486	ug/L	0.103	21	-19	71	26
	Se	78	1.213	ug/L	0.354	29	7320	7066	0
	Mo	98	10.256	ug/L	0.253	2	10	50829	1
	Y	89		ug/L			394786	404460	2
	Kr	83		ug/L			872	699	4
>	In	115		ug/L			1077756	1041658	0
	Ag	107	0.004	ug/L	0 001	18	26	77	12
	Cd	111	0.003	ug/L	0.004	156	127	135	14
	Cd	114	0.009	ug/L	0.001	11	19	129	9
	Sb	121	20.268	ug/L	0.072	0	152	306893	0
	Sb	123	20.583	ug/L	0.313	1	115	234220	1
	Ba	135	6.576	ug/L	0.138	2	7	30011	2
	Ba	137	6.530	ug/L	0.092	1	20	51796	1
>	Tb	159		ug/L			1262684	1263154	0
	Tl	205	-0.001	ug/L	0.000	45	290	253	6
	Pb	208	0.213	ug/L	0.040	18	247	11761	19
	Bi	209		ug/L			3225208	3021351	1
	Th	232	0.027	ug/L	0.002	8	157	1584	8
	U	238	0.188	ug/L	0.006	2	3	10068	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:39:24
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1230899	1
	Be	9	25.531	ug/L	0.433	1	11	80636	0
	C	13		ug/L			104879	126426	0
	Cl	37		ug/L			4277164	4397795	1
>	Sc	45		ug/L			1025260	965478	1
	V	51	24.901	ug/L	0.505	2	5531	453680	2
	V-1	51	24.931	ug/L	0.293	1	509	449514	2
	Cr	52	24.697	ug/L	0.683	2	16367	394892	1
	Cr	53	24.798	ug/L	0.680	2	243	43290	3
	Mn	55	23.795	ug/L	0.555	2	685	516392	1
	Co	59	24.850	ug/L	0.636	2	119	381273	1
>	Ge	72		ug/L			592402	533378	1
	Ni	60	26.034	ug/L	0.290	1	86	84730	0
	Ni	62	25.553	ug/L	0.418	1	63	11589	1
	Cu	63	26.684	ug/L	0 935	3	91	186675	1
	Cu	65	26.075	ug/L	0.756	2	47	83682	1
	Zn	66	82.375	ug/L	2.654	3	191	145532	1
	Zn	67	73.677	ug/L	0 665	0	37	22319	1
	Zn	68	80.342	ug/L	1.503	1	353	103450	0
	As	75	29.917	ug/L	0.909	3	548	53229	1
	As-1	75	25.755	ug/L	0.737	2	7252	50366	0
	Se	82	91.089	ug/L	2.316	2	-19	16839	1
	Se	78	80.332	ug/L	1.647	2	7320	40471	0
	Mo	98	29.766	ug/L	0.914	3	10	148196	1
	Y	89		ug/L			394786	403280	2
	Kr	83		ug/L			872	702	6
>	In	115		ug/L			1077756	1069275	0
	Ag	107	26.847	ug/L	0.526	1	26	367256	1
	Cd	111	25.636	ug/L	0.220	0	127	128740	0
	Cd	114	25.248	ug/L	0.205	0	19	314400	1
	Sb	121	25.167	ug/L	0.152	0	152	391138	0
	Sb	123	25.590	ug/L	0.326	1	115	298886	1
	Ba	135	24.739	ug/L	0.240	0	7	115883	1
	Ba	137	24.826	ug/L	0.238	0	20	202080	0
>	Tb	159		ug/L			1262684	1280146	1
	Tl	205	23.692	ug/L	0.310	1	290	1030643	0
	Pb	208	25.276	ug/L	0.348	1	247	1386153	0
	Bi	209		ug/L			3225208	3213566	0
	Th	232	21.100	ug/L	0.050	0	157	1136644	1
	U	238	24.099	ug/L	0.814	3	3	1306563	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:44:37
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	**Li**	**6**		ug/L			1164625	1195871	0
	Be	**9**	**50.941**	ug/L	2.039	4	11	156319	3
	C	**13**		ug/L			104879	112470	2
	Cl	**37**		ug/L			4277164	4365655	1
>	**Sc**	**45**		ug/L			1025260	958487	1
	V	**51**	**47.429**	ug/L	1.013	2	5531	853079	0
	V-1	**51**	**47.318**	ug/L	0.820	1	509	846376	0
	Cr	**52**	**48.286**	ug/L	1.143	2	16367	751900	1
	Cr	**53**	**47.920**	ug/L	0.835	1	243	82821	1
	Mn	**55**	**45.670**	ug/L	1.259	2	685	983292	1
	Co	**59**	**48.555**	ug/L	0.765	1	119	739516	0
>	**Ge**	**72**		ug/L			592402	518960	1
	Ni	**60**	**50.318**	ug/L	0.789	1	86	159261	0
	Ni	**62**	**50.044**	ug/L	1.201	2	63	22027	1
	Cu	**63**	**51.220**	ug/L	1.686	3	91	348584	1
	Cu	**65**	**50.294**	ug/L	0.811	1	47	157042	1
	Zn	**66**	**51.969**	ug/L	1 491	2	191	89400	1
	Zn	**67**	**51.790**	ug/L	0.503	0	37	15275	2
	Zn	**68**	**52.055**	ug/L	1.758	3	353	65323	2
	As	**75**	**52.724**	ug/L	0.928	1	548	90924	1
	As-1	**75**	**51.792**	ug/L	0.878	1	7252	92139	0
	Se	**82**	**58.533**	ug/L	0.887	1	-19	10523	0
	Se	**78**	**53.820**	ug/L	0.821	1	7320	28499	0
	Mo	**98**	**56.876**	ug/L	0.817	1	10	275567	0
	Y	**89**		ug/L			394786	377451	2
	Kr	**83**		ug/L			872	710	2
>	**In**	**115**		ug/L			1077756	1026292	0
	Ag	**107**	**52.683**	ug/L	0.651	1	26	691711	1
	Cd	**111**	**50.950**	ug/L	0.686	1	127	245476	1
	Cd	**114**	**50.913**	ug/L	1.065	2	19	608433	1
	Sb	**121**	**49.557**	ug/L	0.254	0	152	739123	1
	Sb	**123**	**50.568**	ug/L	0.248	0	115	566758	0
	Ba	**135**	**50.476**	ug/L	0.223	0	7	226922	0
	Ba	**137**	**49.821**	ug/L	0.250	0	20	389217	0
>	**Tb**	**159**		ug/L			1262684	1258149	1
	Tl	**205**	**46.019**	ug/L	0.703	1	290	1967206	0
	Pb	**208**	**48.464**	ug/L	0.616	1	247	2611974	0
	Bi	**209**		ug/L			3225208	3099251	0
	Th	**232**	**51.583**	ug/L	1.434	2	157	2730157	1
	U	**238**	**52.112**	ug/L	1.583	3	3	2776905	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:51:29
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1227058	1
[	Be	9	0.000	ug/L	0.001	405	11	12	24
	C	13		ug/L			104879	109830	4
	Cl	37		ug/L			4277164	4425531	3
[>	Sc	45		ug/L			1025260	935469	1
[	V	51	-0.012	ug/L	0.010	86	5531	4837	2
[	V-1	51	-0.011	ug/L	0.001	10	509	278	5
[	Cr	52	-0.040	ug/L	0.029	73	16367	14338	1
[	Cr	53	-0.036	ug/L	0.010	26	243	162	9
[	Mn	55	0.017	ug/L	0.006	35	685	975	11
[	Co	59	0.002	ug/L	0.002	111	119	138	22
[>	Ge	72		ug/L			592402	519558	1
[	Ni	60	-0.009	ug/L	0.001	14	86	47	7
[	Ni	62	0.048	ug/L	0.018	38	63	77	11
[	Cu	63	0.015	ug/L	0.005	32	91	183	17
[	Cu	65	0.014	ug/L	0.003	22	47	83	10
[	Zn	66	0.123	ug/L	0.020	16	191	379	7
[	Zn	67	0.086	ug/L	0.014	16	37	58	7
[	Zn	68	0.127	ug/L	0.018	13	353	469	4
[	As	75	-0.029	ug/L	0.028	94	548	430	11
[	As-1	75	0.263	ug/L	0.079	30	7252	6796	1
[	Se	82	0.038	ug/L	0.144	376	-19	-10	251
[	Se	78	1.093	ug/L	0.305	27	7320	6868	1
[	Mo	98	0.014	ug/L	0.003	25	10	74	21
	Y	89		ug/L			394786	377187	0
	Kr	83		ug/L			872	696	3
[>	In	115		ug/L			1077756	1054024	0
[	Ag	107	0.002	ug/L	0.000	19	26	51	9
[	Cd	111	0.004	ug/L	0.003	88	127	143	11
[	Cd	114	0.002	ug/L	0.000	25	19	42	13
[	Sb	121	0.092	ug/L	0.010	10	152	1560	10
[	Sb	123	0.094	ug/L	0.016	17	115	1192	16
[	Ba	135	0.006	ug/L	0.004	62	7	34	49
[	Ba	137	0.005	ug/L	0.002	43	20	58	28
[>	Tb	159		ug/L			1262684	1237397	0
[	Tl	205	0.002	ug/L	0 001	45	290	388	12
[	Pb	208	0.006	ug/L	0.002	36	247	559	20
[	Bi	209		ug/L			3225208	3189090	0
[	Th	232	0.202	ug/L	0.015	7	157	10680	7
[	U	238	0.003	ug/L	0.001	22	3	173	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:57:07
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1221345	0
	Be	9	0.005	ug/L	0.004	68	11	27	39
	C	13		ug/L			104879	123113	2
	Cl	37		ug/L			4277164	4439792	1
>	Sc	45		ug/L			1025260	961689	0
	V	51	0.043	ug/L	0.021	47	5531	5960	6
	V-1	51	0.033	ug/L	0.001	2	509	1070	1
	Cr	52	0.064	ug/L	0.054	85	16367	16327	4
	Cr	53	0.031	ug/L	0.013	43	243	281	8
	Mn	55	0.155	ug/L	0.002	1	685	3984	0
	Co	59	0.009	ug/L	0.001	5	119	246	2
>	Ge	72		ug/L			592402	530348	0
	Ni	60	0.119	ug/L	0.011	9	86	460	8
	Ni	62	0.137	ug/L	0.037	26	63	118	14
	Cu	63	0.050	ug/L	0.003	5	91	429	5
	Cu	65	0.046	ug/L	0.004	9	47	190	8
	Zn	66	0.877	ug/L	0.018	2	191	1710	2
	Zn	67	0.755	ug/L	0.071	9	37	260	7
	Zn	68	0.833	ug/L	0.028	3	353	1379	1
	As	75	-0.007	ug/L	0.032	481	548	479	10
	As-1	75	0.250	ug/L	0.082	32	7252	6915	1
	Se	82	0.072	ug/L	0.056	78	-19	-4	228
	Se	78	0.984	ug/L	0.281	28	7320	6965	1
	Mo	98	0.008	ug/L	0.003	35	10	51	28
	Y	89		ug/L			394786	386336	0
	Kr	83		ug/L			872	712	3
>	In	115		ug/L			1077756	1070136	1
	Ag	107	0.002	ug/L	0.000	16	26	57	9
	Cd	111	0.004	ug/L	0.002	46	127	147	7
	Cd	114	0.003	ug/L	0.000	18	19	50	10
	Sb	121	0.027	ug/L	0.008	29	152	578	21
	Sb	123	0.028	ug/L	0.006	22	115	444	16
	Ba	135	0.241	ug/L	0.005	1	7	1137	1
	Ba	137	0.231	ug/L	0 010	4	20	1897	3
>	Tb	159		ug/L			1262684	1265153	0
	Tl	205	0.006	ug/L	0.002	24	290	568	11
	Pb	208	0.058	ug/L	0.000	0	247	3366	0
	Bi	209		ug/L			3225208	3236024	0
	Th	232	0.097	ug/L	0.017	17	157	5342	17
	U	238	0.003	ug/L	0.001	22	3	145	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:01:14
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1234010	2
[	Be	9	-0.000	ug/L	0.001	633	11	11	18
	C	13		ug/L			104879	120569	3
	Cl	37		ug/L			4277164	4335424	2
[>	Sc	45		ug/L			1025260	942663	1
[	V	51	0.003	ug/L	0.001	36	5531	5139	1
[	V-1	51	-0.012	ug/L	0.001	8	509	250	9
[	Cr	52	0.011	ug/L	0.009	80	16367	15210	0
[	Cr	53	-0.040	ug/L	0.004	10	243	155	3
[	Mn	55	0.010	ug/L	0.003	26	685	839	7
[	Co	59	0.002	ug/L	0.000	12	119	147	2
[>	Ge	72		ug/L			592402	549900	0
[	Ni	60	-0.011	ug/L	0.001	10	86	43	10
[	Ni	62	0.008	ug/L	0.022	265	63	63	17
[	Cu	63	0.012	ug/L	0.001	11	91	174	5
[	Cu	65	0.008	ug/L	0.002	22	47	71	8
[	Zn	66	0.263	ug/L	0.009	3	191	656	3
[	Zn	67	0.203	ug/L	0.016	7	37	98	5
[	Zn	68	0.250	ug/L	0.021	8	353	659	4
[	As	75	-0.034	ug/L	0.003	9	548	447	2
[	As-1	75	0.059	ug/L	0.038	64	7252	6835	1
[	Se	82	0.003	ug/L	0.047	1861	-19	-17	51
[	Se	78	0.231	ug/L	0.146	63	7320	6895	1
[	Mo	98	0.002	ug/L	0 001	57	10	22	31
	Y	89		ug/L			394786	387708	2
	Kr	83		ug/L			872	726	4
[>	In	115		ug/L			1077756	1063862	2
[	Ag	107	0.001	ug/L	0.001	71	26	43	28
[	Cd	111	0.001	ug/L	0.001	78	127	129	2
[	Cd	114	0.001	ug/L	0.000	37	19	32	15
[	Sb	121	0.007	ug/L	0.006	84	152	261	35
[	Sb	123	0.008	ug/L	0.006	81	115	202	35
[	Ba	135	0.007	ug/L	0.001	12	7	37	9
[	Ba	137	0.006	ug/L	0.001	10	20	65	7
[>	Tb	159		ug/L			1262684	1269160	1
[	Tl	205	-0.004	ug/L	0.000	6	290	131	7
[	Pb	208	0.010	ug/L	0.000	3	247	796	4
[	Bi	209		ug/L			3225208	3223791	0
[	Th	232	0.020	ug/L	0.001	7	157	1231	4
[	U	238	0.001	ug/L	0.000	29	3	38	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:05:21
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\041813.cal

RLs

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1215820	2
[	Be	9	0.211	ug/L	0.012	5	11	669	3
	C	13		ug/L			104879	145918	8
	Cl	37		ug/L			4277164	4323827	1
[>	Sc	45		ug/L			1025260	1017008	2
[	V	51	37.465	ug/L	1.861	4	5531	715775	2
[	V-1	51	37.500	ug/L	2.043	5	509	711364	3
[	Cr	52	18.720	ug/L	0.303	1	16367	319238	1
[	Cr	53	18.833	ug/L	0.880	4	243	34663	2
[	Mn	55	289.519	ug/L	4.195	1	685	6612379	2
[	Co	59	6.851	ug/L	0.311	4	119	110755	2
[>	Ge	72		ug/L			592402	536533	1
[	Ni	60	27.856	ug/L	0.255	0	86	91194	0
[	Ni	62	30.627	ug/L	0.712	2	63	13961	1
[	Cu	63	50.157	ug/L	0.749	1	91	352996	0
[	Cu	65	49.346	ug/L	0.722	1	47	159307	1
[	Zn	66	89.612	ug/L	1.102	1	191	159282	0
[	Zn	67	86.205	ug/L	2.695	3	37	26257	1
[	Zn	68	87.788	ug/L	1 849	2	353	113677	0
[	As	75	3.497	ug/L	0.065	1	548	6697	0
[	As-1	75	3.665	ug/L	0.151	4	7252	12843	0
[	Se	82	-0.018	ug/L	0.119	666	-19	-21	104
[	Se	78	0.334	ug/L	0.324	97	7320	6769	0
[	Mo	98	0.796	ug/L	0.008	1	10	3994	1
	Y	89		ug/L			394786	516209	2
	Kr	83		ug/L			872	884	4
[>	In	115		ug/L			1077756	1029888	0
[	Ag	107	0.063	ug/L	0.003	5	26	856	5
[	Cd	111	0.271	ug/L	0.012	4	127	1431	4
[	Cd	114	0.193	ug/L	0.007	3	19	2335	3
[	Sb	121	0.041	ug/L	0.004	9	152	754	7
[	Sb	123	0.041	ug/L	0.007	16	115	572	13
[	Ba	135	46.479	ug/L	0.565	1	7	209692	1
[	Ba	137	46.749	ug/L	0.547	1	20	366498	1
[>	Tb	159		ug/L			1262684	1271157	0
[	Tl	205	0.026	ug/L	0.001	2	290	1435	2
[	Pb	208	18.745	ug/L	0.079	0	247	1020964	0
[	Bi	209		ug/L			3225208	3018918	0
[	Th	232	0.854	ug/L	0.015	1	157	45836	1
[	U	238	0.182	ug/L	0.001	0	3	9830	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:09:29
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\041813.cal

RL 5%

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1293459	1
	Be	9	0.169	ug/L	0.004	2	11	574	3
	C	13		ug/L			104879	196138	2
	Cl	37		ug/L			4277164	4331235	0
>	Sc	45		ug/L			1025260	988967	1
	V	51	33.799	ug/L	1.392	4	5531	628745	3
	V-1	51	33.460	ug/L	0.845	2	509	617673	2
	Cr	52	96.956	ug/L	1.961	2	16367	1541989	1
	Cr	53	95.848	ug/L	0.211	0	243	170704	1
	Mn	55	639.131	ug/L	14.455	2	685	14189534	0
	Co	59	12.492	ug/L	0.215	1	119	196440	2
>	Ge	72		ug/L			592402	528062	1
	Ni	60	101.206	ug/L	1.715	1	86	325965	2
	Ni	62	104.729	ug/L	3.222	3	63	46848	2
	Cu	63	515.214	ug/L	8.219	1	91	3568148	0
	Cu	65	447.612	ug/L	14.176	3	47	1421654	2
	Zn	66	4515.843	ug/L	166.049	3	191	7890311	2
	Zn	67	3603.439	ug/L	87.925	2	37	1079066	1
	Zn	68	4184.342	ug/L	91.215	2	353	5318341	1
	As	75	10.985	ug/L	0.208	1	548	19664	0
	As-1	75	11.362	ug/L	0 276	2	7252	25613	0
	Se	82	0.291	ug/L	0.051	17	-19	35	25
	Se	78	0.244	ug/L	0.290	118	7320	6625	0
	Mo	98	16.399	ug/L	0.260	1	10	80858	0
	Y	89		ug/L			394786	489843	1
	Kr	83		ug/L			872	767	1
>	In	115		ug/L			1077756	997342	1
	Ag	107	1.293	ug/L	0.018	1	26	16517	1
	Cd	111	11.477	ug/L	0.046	0	127	53824	1
	Cd	114	11.369	ug/L	0.355	3	19	132021	1
	Sb	121	2.227	ug/L	0.028	1	152	32402	0
	Sb	123	2.190	ug/L	0.012	0	115	23955	1
	Ba	135	366.187	ug/L	7.790	2	7	1599481	0
	Ba	137	405.243	ug/L	3.316	0	20	3076258	0
>	Tb	159		ug/L			1262684	1270643	1
	Tl	205	0.052	ug/L	0.002	3	290	2544	2
	Pb	208	1071.202	ug/L	10.913	1	247	58302679	0
	Bi	209		ug/L			3225208	2985357	1
	Th	232	0.755	ug/L	0.008	1	157	40532	0
	U	238	0.289	ug/L	0.005	1	3	15563	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:13:36
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\041813.cal

RRPb, Sl

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			1164625	1253905	2
[	**Be**	**9**	**0.178**	ug/L	0.008	4	11	585	5
	C	**13**		ug/L			104879	189095	2
	Cl	**37**		ug/L			4277164	4316589	2
[>	**Sc**	**45**		ug/L			1025260	987845	0
[	**V**	**51**	**31.617**	ug/L	1.139	3	5531	587927	3
[	**V-1**	**51**	**31.550**	ug/L	0.657	2	509	581827	1
[	**Cr**	**52**	**94.344**	ug/L	0.430	0	16367	1499359	0
[	**Cr**	**53**	**94.137**	ug/L	1.279	1	243	167476	1
[	**Mn**	**55**	**621.137**	ug/L	10.140	1	685	13778707	2
[	**Co**	**59**	**13.095**	ug/L	0.055	0	119	205670	0
[>	**Ge**	**72**		ug/L			592402	522702	0
[	**Ni**	**60**	**103.417**	ug/L	1.428	1	86	329693	2
[	**Ni**	**62**	**107.109**	ug/L	0.562	0	63	47435	1
[	**Cu**	**63**	**543.618**	ug/L	9.207	1	91	3726687	0
[	**Cu**	**65**	**486.906**	ug/L	4.706	0	47	1531044	0
[	**Zn**	**66**	**4243.345**	ug/L	56.597	1	191	7340818	1
[	**Zn**	**67**	**3520.730**	ug/L	63.675	1	37	1043652	1
[	**Zn**	**68**	**3984.837**	ug/L	133.849	3	353	5013260	2
[	**As**	**75**	**10.717**	ug/L	0.062	0	548	19004	0
[	**As-1**	**75**	**11.110**	ug/L	0.087	0	7252	24936	0
[	**Se**	**82**	**0.298**	ug/L	0.117	39	-19	36	57
[	**Se**	**78**	**0.278**	ug/L	0.258	92	7320	6573	0
[	**Mo**	**98**	**16.650**	ug/L	0.286	1	10	81270	1
	Y	**89**		ug/L			394786	493018	0
	Kr	**83**		ug/L			872	719	4
[>	**In**	**115**		ug/L			1077756	1000057	0
[	**Ag**	**107**	**1.748**	ug/L	0.018	1	26	22385	1
[	**Cd**	**111**	**11.376**	ug/L	0.063	0	127	53496	0
[	**Cd**	**114**	**11.552**	ug/L	0.132	1	19	134554	1
[	**Sb**	**121**	**1.810**	ug/L	0.021	1	152	26439	1
[	**Sb**	**123**	**1.795**	ug/L	0.006	0	115	19711	0
[	**Ba**	**135**	**361.157**	ug/L	4.228	1	7	1582127	1
[	**Ba**	**137**	**395.957**	ug/L	3.859	0	20	3014094	0
[>	**Tb**	**159**		ug/L			1262684	1275772	0
[	**Tl**	**205**	**0.049**	ug/L	0.001	2	290	2397	2
[	**Pb**	**208**	**1015.229**	ug/L	1.462	0	247	55483214	0
[	**Bi**	**209**		ug/L			3225208	2992983	1
[	**Th**	**232**	**0.828**	ug/L	0.016	1	157	44586	2
[	**U**	**238**	**0.404**	ug/L	0.007	1	3	21859	1

WL67 DATE

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:17:43
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\041813.cal

ppb Se

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1246408	1
[	Be	9	24.698	ug/L	0.457	1	11	78985	0
	C	13		ug/L			104879	179143	2
	Cl	37		ug/L			4277164	4242267	0
[>	Sc	45		ug/L			1025260	966097	0
[	V	51	55.199	ug/L	1.661	3	5531	1000130	3
[	V-1	51	56.190	ug/L	1.534	2	509	1013178	3
[	Cr	52	119.866	ug/L	0.900	0	16367	1858885	1
[	Cr	53	123.169	ug/L	0.852	0	243	214226	0
[	Mn	55	694.976	ug/L	18.372	2	685	15077227	2
[	Co	59	36.530	ug/L	0.408	1	119	560911	1
[>	Ge	72		ug/L			592402	518697	1
[	Ni	60	147.213	ug/L	3.208	2	86	465521	0
[	Ni	62	148.611	ug/L	1.059	0	63	65291	2
[	Cu	63	575.462	ug/L	7.469	1	91	3914509	0
[	Cu	65	510.644	ug/L	2.108	0	47	1593524	2
[	Zn	66	4636.809	ug/L	60.508	1	191	7959811	1
[	Zn	67	3707.729	ug/L	60.401	1	37	1090554	1
[	Zn	68	4237.574	ug/L	74.615	1	353	5290260	0
[	As	75	36.784	ug/L	0.167	0	548	63558	1
[	As-1	75	35.490	ug/L	0.405	1	7252	65108	1
[	Se	82	76.257	ug/L	0.454	0	-19	13709	1
[	Se	78	74.476	ug/L	1.549	2	7320	36956	0
[	Mo	98	40.743	ug/L	1.222	2	10	197265	1
	Y	89		ug/L			394786	480979	2
	Kr	83		ug/L			872	748	3
[>	In	115		ug/L			1077756	993595	0
[	Ag	107	23.295	ug/L	0.278	1	26	296112	0
[	Cd	111	36.276	ug/L	0.143	0	127	169235	0
[	Cd	114	37.110	ug/L	0.145	0	19	429392	0
[	Sb	121	2.745	ug/L	0.029	1	152	39770	0
[	Sb	123	2.763	ug/L	0.021	0	115	30085	1
[	Ba	135	390.848	ug/L	7.393	1	7	1701181	2
[	Ba	137	434.714	ug/L	1 818	0	20	3287865	0
[>	Tb	159		ug/L			1262684	1261708	0
[	Tl	205	21.939	ug/L	0.271	1	290	940717	0
[	Pb	208	1096.962	ug/L	4.560	0	247	59287838	0
[	Bi	209		ug/L			3225208	2947106	1
[	Th	232	22.544	ug/L	0.257	1	157	1196837	0
[	U	238	22.543	ug/L	0.467	2	3	1204827	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FPOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:21:50
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1164625	1253204	1
	Be	9	25.149	ug/L	0.750	2	11	80858	1
	C	13		ug/L			104879	193682	2
	Cl	37		ug/L			4277164	4252693	1
>	Sc	45		ug/L			1025260	988308	1
	V	51	54.447	ug/L	2.866	5	5531	1008722	4
	V-1	51	54.932	ug/L	2.155	3	509	1012921	3
	Cr	52	117.209	ug/L	3.817	3	16367	1859196	1
	Cr	53	118.832	ug/L	0.586	0	243	211432	1
	Mn	55	642.242	ug/L	9.006	1	685	14251406	1
	Co	59	37.164	ug/L	1.126	3	119	583669	2
>	Ge	72		ug/L			592402	514112	0
	Ni	60	131.976	ug/L	2.515	1	86	413748	1
	Ni	62	132.749	ug/L	3.492	2	63	57813	3
	Cu	63	571.481	ug/L	4.319	0	91	3853710	1
	Cu	65	510.316	ug/L	12.121	2	47	1578414	2
	Zn	66	4470.282	ug/L	49.413	1	191	7606344	0
	Zn	67	3620.515	ug/L	63.137	1	37	1055697	1
	Zn	68	4099.356	ug/L	113.001	2	353	5073148	2
	As	75	38.524	ug/L	0.305	0	548	65953	0
	As-1	75	36.745	ug/L	0.158	0	7252	66599	0
	Se	82	84.545	ug/L	0.233	0	-19	15068	0
	Se	78	81.562	ug/L	0 980	1	7320	39519	1
	Mo	98	43.256	ug/L	0.385	0	10	207662	1
	Y	89		ug/L			394786	481047	1
	Kr	83		ug/L			872	765	3
>	In	115		ug/L			1077756	1000314	0
	Ag	107	25.845	ug/L	0.291	1	26	330741	0
	Cd	111	35.999	ug/L	0.336	0	127	169074	0
	Cd	114	36.381	ug/L	0.262	0	19	423799	0
	Sb	121	25.896	ug/L	0.228	0	152	376498	0
	Sb	123	25.775	ug/L	0.407	1	115	281621	1
	Ba	135	388.244	ug/L	1.571	0	7	1701194	0
	Ba	137	425.995	ug/L	2.605	0	20	3243690	1
>	Tb	159		ug/L			1262684	1269192	1
	Tl	205	22.580	ug/L	0.383	1	290	973865	0
	Pb	208	1040.765	ug/L	6.405	0	247	56582871	0
	Bi	209		ug/L			3225208	2937836	1
	Th	232	22.905	ug/L	0.081	0	157	1223285	0
	U	238	22.944	ug/L	0.122	0	3	1233596	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:25:58
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\041813.cal

RPD 1 SD

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1237815	2
	Be	**9**	**0.166**	ug/L	0.014	8	11	540	7
	C	**13**		ug/L			104879	147102	3
	Cl	**37**		ug/L			4277164	4208340	2
>	**Sc**	**45**		ug/L			1025260	919420	0
	V	**51**	**17.564**	ug/L	0.567	3	5531	306178	2
	V-1	**51**	**17.348**	ug/L	0.556	3	509	297945	2
	Cr	**52**	**61.799**	ug/L	0.812	1	16367	919127	0
	Cr	**53**	**61.093**	ug/L	0.718	1	243	101228	0
	Mn	**55**	**541.924**	ug/L	14.776	2	685	11187139	2
	Co	**59**	**9.144**	ug/L	0.261	2	119	133683	2
>	**Ge**	**72**		ug/L			592402	516047	1
	Ni	**60**	**69.294**	ug/L	1.002	1	86	218082	0
	Ni	**62**	**70.899**	ug/L	1.270	1	63	31019	2
	Cu	**63**	**445.126**	ug/L	12.249	2	91	3012396	1
	Cu	**65**	**376.627**	ug/L	4.127	1	47	1169185	0
	Zn	**66**	**4011.596**	ug/L	110.337	2	191	6851458	2
	Zn	**67**	**3180.938**	ug/L	19.094	0	37	930957	0
	Zn	**68**	**3692.525**	ug/L	133.023	3	353	4586338	2
	As	**75**	**8.363**	ug/L	0.106	1	548	14744	1
	As-1	**75**	**8.719**	ug/L	0.103	1	7252	20681	1
	Se	**82**	**0.620**	ug/L	0.099	16	-19	93	19
	Se	**78**	**0.800**	ug/L	0.123	15	7320	6703	1
	Mo	**98**	**8.183**	ug/L	0.036	0	10	39441	1
	Y	**89**		ug/L			394786	393867	3
	Kr	**83**		ug/L			872	694	2
>	**In**	**115**		ug/L			1077756	1010884	0
	Ag	**107**	**1.599**	ug/L	0.025	1	26	20704	1
	Cd	**111**	**8.979**	ug/L	0.126	1	127	42710	1
	Cd	**114**	**9.022**	ug/L	0.075	0	19	106223	1
	Sb	**121**	**1.929**	ug/L	0.012	0	152	28478	0
	Sb	**123**	**1.912**	ug/L	0.032	1	115	21215	1
	Ba	**135**	**146.768**	ug/L	1.247	0	7	649918	1
	Ba	**137**	**147.933**	ug/L	0.534	0	20	1138327	0
>	**Tb**	**159**		ug/L			1262684	1223266	0
	Tl	**205**	**0.088**	ug/L	0 003	2	290	3925	2
	Pb	**208**	**445.311**	ug/L	6.475	1	247	23333926	0
	Bi	**209**		ug/L			3225208	3050438	1
	Th	**232**	**0.613**	ug/L	0.025	4	157	31722	3
	U	**238**	**0.296**	ug/L	0.025	8	3	15352	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:31:09
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1192606	0
[	Be	9	25.366	ug/L	0.737	2	11	77629	2
	C	13		ug/L			104879	121860	3
	Cl	37		ug/L			4277164	4068011	0
[>	Sc	45		ug/L			1025260	914454	1
[	V	51	24.850	ug/L	0.724	2	5531	428722	1
[	V-1	51	24.857	ug/L	0.488	1	509	424376	0
[	Cr	52	24.623	ug/L	0.751	3	16367	372910	1
[	Cr	53	24.647	ug/L	0.388	1	243	40749	2
[	Mn	55	23.993	ug/L	0.324	1	685	493184	0
[	Co	59	24.929	ug/L	0.470	1	119	362260	0
[>	Ge	72		ug/L			592402	521606	1
[	Ni	60	25.720	ug/L	0.286	1	86	81869	1
[	Ni	62	25.032	ug/L	0.331	1	63	11105	1
[	Cu	63	25.726	ug/L	1.216	4	91	176051	4
[	Cu	65	25.202	ug/L	0.719	2	47	79104	1
[	Zn	66	84.122	ug/L	3.581	4	191	145348	3
[	Zn	67	75.810	ug/L	0.020	0	37	22459	1
[	Zn	68	79.824	ug/L	0.721	0	353	100535	1
[	As	75	29.707	ug/L	0.457	1	548	51705	0
[	As-1	75	25.842	ug/L	0.548	2	7252	49407	0
[	Se	82	90.775	ug/L	1.599	1	-19	16414	1
[	Se	78	81.218	ug/L	1.950	2	7320	39945	0
[	Mo	98	27.953	ug/L	0.607	2	10	136145	2
	Y	89		ug/L			394786	374031	2
	Kr	83		ug/L			872	692	1
[>	In	115		ug/L			1077756	1033664	1
[	Ag	107	26.975	ug/L	0.484	1	26	356666	0
[	Cd	111	25.517	ug/L	0.443	1	127	123855	0
[	Cd	114	26.034	ug/L	0.317	1	19	313337	0
[	Sb	121	25.161	ug/L	0.488	1	152	377968	1
[	Sb	123	25.680	ug/L	0.369	1	115	289893	0
[	Ba	135	25.037	ug/L	0.537	2	7	113349	1
[	Ba	137	24.860	ug/L	0.178	0	20	195613	1
[>	Tb	159		ug/L			1262684	1211498	0
[	Tl	205	24.030	ug/L	0.290	1	290	989385	1
[	Pb	208	25.260	ug/L	0.118	0	247	1311162	0
[	Bi	209		ug/L			3225208	3136570	0
[	Th	232	22.018	ug/L	0.246	1	157	1122533	1
[	U	238	23.867	ug/L	0.110	0	3	1224993	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:35:16
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			1164625	1220549	1
[	Be	9	23.704	ug/L	0.354	1	11	74243	1
	C	13		ug/L			104879	125037	3
	Cl	37		ug/L			4277164	4060943	0
[>	Sc	45		ug/L			1025260	919331	2
[	V	51	23.590	ug/L	0.582	2	5531	409538	3
[	V-1	51	23.686	ug/L	0.608	2	509	406636	3
[	Cr	52	23.276	ug/L	0.786	3	16367	355131	0
[	Cr	53	23.594	ug/L	0.968	4	243	39202	1
[	Mn	55	22.727	ug/L	0.984	4	685	469476	2
[	Co	59	23.795	ug/L	1.072	4	119	347564	3
[>	Ge	72		ug/L			592402	524012	1
[	Ni	60	24.254	ug/L	0.502	2	86	77550	1
[	Ni	62	24.304	ug/L	0.358	1	63	10832	1
[	Cu	63	24.401	ug/L	1.003	4	91	167716	2
[	Cu	65	24.462	ug/L	0.530	2	47	77146	2
[	Zn	66	77.561	ug/L	2.002	2	191	134643	1
[	Zn	67	71.499	ug/L	2.117	2	37	21274	1
[	Zn	68	73.798	ug/L	1.341	1	353	93384	0
[	As	75	26.758	ug/L	0.560	2	548	46828	0
[	As-1	75	23.911	ug/L	0.261	1	7252	46408	1
[	Se	82	79.798	ug/L	1.965	2	-19	14491	1
[	Se	78	73.506	ug/L	0.790	1	7320	36935	1
[	Mo	98	27.942	ug/L	0.761	2	10	136677	0
	Y	89		ug/L			394786	372947	1
	Kr	83		ug/L			872	697	2
[>	In	115		ug/L			1077756	1040133	2
[	Ag	107	25.377	ug/L	0.798	3	26	337540	0
[	Cd	111	23.808	ug/L	0.585	2	127	116269	0
[	Cd	114	23.942	ug/L	0.104	0	19	289991	1
[	Sb	121	24.731	ug/L	0.379	1	152	373811	0
[	Sb	123	25.135	ug/L	0.459	1	115	285494	0
[	Ba	135	23.970	ug/L	0.137	0	7	109212	1
[	Ba	137	23.576	ug/L	0.463	1	20	186625	0
[>	Tb	159		ug/L			1262684	1224363	1
[	Tl	205	22.606	ug/L	0.289	1	290	940589	0
[	Pb	208	23.762	ug/L	0.122	0	247	1246469	1
[	Bi	209		ug/L			3225208	3129424	1
[	Th	232	20.395	ug/L	0.227	1	157	1050716	0
[	U	238	22.833	ug/L	0.275	1	3	1184188	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:39:25
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1183842	3
	Be	9	50.861	ug/L	0.606	1	11	154471	2
	C	13		ug/L			104879	114552	1
	Cl	37		ug/L			4277164	4174074	1
>	Sc	45		ug/L			1025260	892304	1
	V	51	48.399	ug/L	1.261	2	5531	810290	1
	V-1	51	48.748	ug/L	1.162	2	509	811690	1
	Cr	52	49.091	ug/L	0.574	1	16367	711519	1
	Cr	53	50.251	ug/L	0.082	0	243	80849	1
	Mn	55	45.783	ug/L	0.327	0	685	917836	0
	Co	59	49.059	ug/L	2.116	4	119	695436	2
>	Ge	72		ug/L			592402	496025	1
	Ni	60	50.857	ug/L	0.528	1	86	153864	0
	Ni	62	50.468	ug/L	0.161	0	63	21237	1
	Cu	63	50.143	ug/L	1.432	2	91	326215	1
	Cu	65	48.865	ug/L	0.649	1	47	145838	1
	Zn	66	50.975	ug/L	1.903	3	191	83814	2
	Zn	67	50.331	ug/L	1.110	2	37	14188	1
	Zn	68	51.093	ug/L	0.071	0	353	61304	1
	As	75	52.660	ug/L	0.989	1	548	86799	0
	As-1	75	51.740	ug/L	0.810	1	7252	87984	0
	Se	82	58.292	ug/L	1.316	2	-19	10016	1
	Se	78	53.597	ug/L	0.633	1	7320	27153	0
	Mo	98	56.578	ug/L	0.516	0	10	262026	0
	Y	89		ug/L			394786	355072	0
	Kr	83		ug/L			872	673	2
>	In	115		ug/L			1077756	1003309	0
	Ag	107	52.152	ug/L	1.125	2	26	669326	1
	Cd	111	50.783	ug/L	1.064	2	127	239153	1
	Cd	114	50.757	ug/L	1.275	2	19	592951	1
	Sb	121	49.975	ug/L	1.380	2	152	728524	1
	Sb	123	50.886	ug/L	0.488	0	115	557530	0
	Ba	135	50.221	ug/L	0.835	1	7	220707	1
	Ba	137	49.454	ug/L	0.522	1	20	377697	1
>	Tb	159		ug/L			1262684	1217822	0
	Tl	205	45.647	ug/L	0.522	1	290	1888920	0
	Pb	208	48.163	ug/L	0.338	0	247	2512761	0
	Bi	209		ug/L			3225208	2960738	0
	Th	232	52.784	ug/L	1.071	2	157	2704475	1
	U	238	51.839	ug/L	0.165	0	3	2674474	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:46:17
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1185031	0
	Be	9	0.004	ug/L	0.006	148	11	23	76
	C	13		ug/L			104879	116700	4
	Cl	37		ug/L			4277164	4046328	0
>	Sc	45		ug/L			1025260	888380	0
	V	51	0.004	ug/L	0.013	347	5531	4853	3
	V-1	51	-0.015	ug/L	0.005	36	509	199	44
	Cr	52	0.013	ug/L	0.039	312	16367	14357	3
	Cr	53	-0.048	ug/L	0.012	25	243	134	15
	Mn	55	0.031	ug/L	0.014	45	685	1217	23
	Co	59	0.004	ug/L	0.004	99	119	156	33
>	Ge	72		ug/L			592402	515444	1
	Ni	60	-0.006	ug/L	0.004	66	86	56	24
	Ni	62	-0.007	ug/L	0.026	362	63	52	23
	Cu	63	0.024	ug/L	0.007	30	91	240	22
	Cu	65	0.018	ug/L	0.006	31	47	96	19
	Zn	66	0.349	ug/L	0.076	21	191	763	18
	Zn	67	0.320	ug/L	0.061	18	37	126	15
	Zn	68	0.358	ug/L	0.093	26	353	753	17
	As	75	-0.024	ug/L	0.031	129	548	436	13
	As-1	75	0.089	ug/L	0.086	96	7252	6455	0
	Se	82	0.070	ug/L	0.141	202	-19	-4	549
	Se	78	0.354	ug/L	0.381	107	7320	6511	0
	Mo	98	0.012	ug/L	0.002	14	10	67	14
	Y	89		ug/L			394786	354531	0
	Kr	83		ug/L			872	663	6
>	In	115		ug/L			1077756	1010373	1
	Ag	107	0.002	ug/L	0.002	84	26	53	45
	Cd	111	0.000	ug/L	0.003	793	127	120	9
	Cd	114	0.004	ug/L	0.003	80	19	60	56
	Sb	121	0.096	ug/L	0.016	16	152	1552	14
	Sb	123	0.097	ug/L	0.017	17	115	1178	16
	Ba	135	0.026	ug/L	0.036	136	7	122	128
	Ba	137	0.028	ug/L	0.041	147	20	230	134
>	Tb	159		ug/L			1262684	1196641	1
	Tl	205	0.010	ug/L	0.013	134	290	675	79
	Pb	208	0.043	ug/L	0.056	129	247	2464	117
	Bi	209		ug/L			3225208	3103965	0
	Th	232	0.274	ug/L	0.029	10	157	13930	10
	U	238	0.008	ug/L	0 007	90	3	385	90

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:53:07
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1201599	0
	Be	9	0.003	ug/L	0.001	40	11	22	19
	C	13		ug/L			104879	118515	1
	Cl	37		ug/L			4277164	3995999	0
>	Sc	45		ug/L			1025260	928209	1
	V	51	0.000	ug/L	0.009	2842	5531	5012	3
	V-1	51	-0.011	ug/L	0.001	10	509	276	8
	Cr	52	0.013	ug/L	0.036	276	16367	15009	3
	Cr	53	-0.023	ug/L	0.009	37	243	181	6
	Mn	55	0.177	ug/L	0.008	4	685	4306	3
	Co	59	0.005	ug/L	0.001	18	119	188	8
>	Ge	72		ug/L			592402	515728	0
	Ni	60	0.016	ug/L	0.005	33	86	123	13
	Ni	62	0.029	ug/L	0.016	55	63	68	10
	Cu	63	0.085	ug/L	0.005	6	91	656	5
	Cu	65	0.076	ug/L	0.006	7	47	277	6
	Zn	66	0.928	ug/L	0.019	2	191	1750	2
	Zn	67	0.832	ug/L	0.056	6	37	276	5
	Zn	68	0.886	ug/L	0.025	2	353	1408	2
	As	75	-0.025	ug/L	0.014	55	548	434	5
	As-1	75	0.144	ug/L	0.018	12	7252	6549	0
	Se	82	-0.004	ug/L	0.087	2355	-19	-17	87
	Se	78	0.535	ug/L	0.034	6	7320	6590	0
	Mo	98	0.010	ug/L	0.001	8	10	55	7
	Y	89		ug/L			394786	362263	1
	Kr	83		ug/L			872	685	7
>	In	115		ug/L			1077756	1035743	0
	Ag	107	0.001	ug/L	0.000	18	26	44	7
	Cd	111	0.001	ug/L	0 002	150	127	127	6
	Cd	114	0.005	ug/L	0 001	28	19	76	22
	Sb	121	0.023	ug/L	0.006	25	152	490	18
	Sb	123	0.023	ug/L	0.007	31	115	375	22
	Ba	135	0.036	ug/L	0.002	4	7	169	4
	Ba	137	0.034	ug/L	0.002	6	20	290	6
>	Tb	159		ug/L			1262684	1221518	0
	Tl	205	0.001	ug/L	0.000	18	290	320	1
	Pb	208	0.083	ug/L	0.002	2	247	4600	1
	Bi	209		ug/L			3225208	3147400	1
	Th	232	0.098	ug/L	0.004	3	157	5211	3
	U	238	0.004	ug/L	0 000	11	3	192	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 B SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:57:14
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1225885	0
[	Be	9	0.041	ug/L	0.006	13	11	142	13
	C	13		ug/L			104879	127550	0
	Cl	37		ug/L			4277164	4212698	0
[>	Sc	45		ug/L			1025260	937594	1
[	V	51	7.206	ug/L	0.438	6	5531	131051	4
[	V-1	51	7.115	ug/L	0.253	3	509	124859	2
[	Cr	52	24.841	ug/L	1 183	4	16367	385545	3
[	Cr	53	24.542	ug/L	0.830	3	243	41586	1
[	Mn	55	230.481	ug/L	3.029	1	685	4853254	2
[	Co	59	3.711	ug/L	0.081	2	119	55379	0
[>	Ge	72		ug/L			592402	516140	0
[	Ni	60	28.956	ug/L	0.752	2	86	91189	1
[	Ni	62	29.345	ug/L	0.617	2	63	12871	1
[	Cu	63	165.241	ug/L	2.409	1	91	1118657	0
[	Cu	65	163.978	ug/L	1.439	0	47	509223	1
[	Zn	66	1713.635	ug/L	10.373	0	191	2927427	0
[	Zn	67	1414.079	ug/L	12.411	0	37	413949	0
[	Zn	68	1507.685	ug/L	18.887	1	353	1873445	0
[	As	75	3.526	ug/L	0.095	2	548	6493	1
[	As-1	75	3.770	ug/L	0.099	2	7252	12529	0
[	Se	82	0.217	ug/L	0.035	16	-19	21	28
[	Se	78	0.599	ug/L	0.074	12	7320	6622	0
[	Mo	98	3.477	ug/L	0.054	1	10	16765	0
	Y	89		ug/L			394786	382680	0
	Kr	83		ug/L			872	698	2
[>	In	115		ug/L			1077756	1031972	0
[	Ag	107	0.693	ug/L	0.021	2	26	9174	2
[	Cd	111	3.767	ug/L	0.035	0	127	18359	0
[	Cd	114	3.775	ug/L	0.042	1	19	45387	1
[	Sb	121	0.784	ug/L	0.023	2	152	11895	2
[	Sb	123	0.787	ug/L	0.016	2	115	8977	1
[	Ba	135	61.303	ug/L	2.035	3	7	277100	2
[	Ba	137	60.752	ug/L	1.147	1	20	477227	1
[>	Tb	159		ug/L			1262684	1223402	1
[	Tl	205	0.023	ug/L	0.001	3	290	1258	4
[	Pb	208	186.155	ug/L	2.649	1	247	9754586	0
[	Bi	209		ug/L			3225208	3127826	1
[	Th	232	0.251	ug/L	0.003	1	157	13084	0
[	U	238	0.095	ug/L	0.002	2	3	4909	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 B SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:01:21
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1226210	3
[	Be	9	0.041	ug/L	0.004	10	11	142	10
	C	13		ug/L			104879	136675	1
	Cl	37		ug/L			4277164	4258884	3
[>	Sc	45		ug/L			1025260	937525	2
[	V	51	6.838	ug/L	0.305	4	5531	124620	3
[	V-1	51	6.902	ug/L	0.171	2	509	121128	0
[	Cr	52	22.464	ug/L	0.744	3	16367	350140	2
[	Cr	53	22.681	ug/L	0.641	2	243	38449	1
[	Mn	55	201.336	ug/L	3.113	1	685	4238250	1
[	Co	59	3.423	ug/L	0.066	1	119	51096	0
[>	Ge	72		ug/L			592402	512181	0
[	Ni	60	24.686	ug/L	0.369	1	86	77163	1
[	Ni	62	24.183	ug/L	0.581	2	63	10535	2
[	Cu	63	157.360	ug/L	0.860	0	91	1057222	1
[	Cu	65	152.056	ug/L	1.556	1	47	468542	0
[	Zn	66	1655.286	ug/L	5.300	0	191	2806184	1
[	Zn	67	1306.518	ug/L	10.670	0	37	379545	1
[	Zn	68	1406.585	ug/L	19.135	1	353	1734636	2
[	As	75	3.349	ug/L	0.016	0	548	6144	0
[	As-1	75	3.653	ug/L	0.012	0	7252	12243	0
[	Se	82	0.249	ug/L	0.083	33	-19	27	54
[	Se	78	0.929	ug/L	0.053	5	7320	6705	0
[	Mo	98	3.111	ug/L	0.020	0	10	14889	1
	Y	89		ug/L			394786	387451	3
	Kr	83		ug/L			872	706	2
[>	In	115		ug/L			1077756	1023609	0
[	Ag	107	0.609	ug/L	0.012	1	26	8002	1
[	Cd	111	3.639	ug/L	0.019	0	127	17597	0
[	Cd	114	3.584	ug/L	0.043	1	19	42738	1
[	Sb	121	1.166	ug/L	0.001	0	152	17482	1
[	Sb	123	1.168	ug/L	0.007	0	115	13162	0
[	Ba	135	53.254	ug/L	0.762	1	7	238769	0
[	Ba	137	53.194	ug/L	1.456	2	20	414425	2
[>	Tb	159		ug/L			1262684	1228255	0
[	Tl	205	0.020	ug/L	0.001	5	290	1110	3
[	Pb	208	170.524	ug/L	1.177	0	247	8972357	0
[	Bi	209		ug/L			3225208	3108286	0
[	Th	232	0.222	ug/L	0.005	2	157	11621	2
[	U	238	0.091	ug/L	0.001	1	3	4731	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:05:28
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\041813.cal

RSD, Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1250210	1
[	Be	9	0.104	ug/L	0.012	11	11	345	10
	C	13		ug/L			104879	158265	3
	Cl	37		ug/L			4277164	4246794	0
[>	Sc	45		ug/L			1025260	969752	1
[	V	51	16.347	ug/L	0.585	3	5531	300890	2
[	V-1	51	15.883	ug/L	0.176	1	509	287787	0
[	Cr	52	52.563	ug/L	2.710	5	16367	826613	4
[	Cr	53	51.034	ug/L	1.415	2	243	89217	1
[	Mn	55	467.786	ug/L	15.722	3	685	10184031	2
[	Co	59	7.942	ug/L	0.189	2	119	122478	1
[>	Ge	72		ug/L			592402	524044	3
[	Ni	60	54.904	ug/L	1.129	2	86	175431	1
[	Ni	62	56.723	ug/L	0 900	1	63	25209	3
[	Cu	63	399.404	ug/L	18.185	4	91	2742779	1
[	Cu	65	354.049	ug/L	1.433	0	47	1116165	2
[	Zn	66	3649.882	ug/L	173.574	4	191	6324341	1
[	Zn	67	2979.427	ug/L	47.650	1	37	885280	1
[	Zn	68	3415.107	ug/L	17.587	0	353	4308859	3
[	As	75	7.692	ug/L	0.083	1	548	13809	2
[	As-1	75	8.012	ug/L	0.184	2	7252	19812	1
[	Se	82	0.534	ug/L	0.131	24	-19	79	30
[	Se	78	0.667	ug/L	0.424	63	7320	6748	0
[	Mo	98	7.222	ug/L	0.216	2	10	35324	0
	Y	89		ug/L			394786	409441	0
	Kr	83		ug/L			872	712	6
[>	In	115		ug/L			1077756	1029477	1
[	Ag	107	1.415	ug/L	0.016	1	26	18668	2
[	Cd	111	8.425	ug/L	0.080	0	127	40814	1
[	Cd	114	8.382	ug/L	0.267	3	19	100469	2
[	Sb	121	2.688	ug/L	0.019	0	152	40353	0
[	Sb	123	2.735	ug/L	0.019	0	115	30857	1
[	Ba	135	125.279	ug/L	2.288	1	7	564855	0
[	Ba	137	123.337	ug/L	2.579	2	20	966321	0
[>	Tb	159		ug/L			1262684	1240550	0
[	Tl	205	0.057	ug/L	0.001	1	290	2667	1
[	Pb	208	407.707	ug/L	6.853	1	247	21664977	1
[	Bi	209		ug/L			3225208	3114665	0
[	Th	232	0.522	ug/L	0.005	1	157	27417	0
[	U	238	0.224	ug/L	0.003	1	3	11780	0

WL67 : 01786

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:09:36
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\041813.cal

prep 4

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1220862	1
	Be	9	0.029	ug/L	0.001	5	11	102	3
	C	13		ug/L			104879	121105	1
	Cl	37		ug/L			4277164	4143134	0
>	Sc	45		ug/L			1025260	923603	1
	V	51	8.834	ug/L	0.357	4	5531	157165	3
	V-1	51	8.742	ug/L	0.214	2	509	151082	3
	Cr	52	26.654	ug/L	0.426	1	16367	406560	0
	Cr	53	26.354	ug/L	0.309	1	243	43995	2
	Mn	55	497.108	ug/L	12.904	2	685	10306724	1
	Co	59	1.973	ug/L	0.044	2	119	29063	2
>	Ge	72		ug/L			592402	512905	1
	Ni	60	13.592	ug/L	0.394	2	86	42580	3
	Ni	62	13.622	ug/L	0.286	2	63	5967	1
	Cu	63	69.484	ug/L	2.203	3	91	467389	1
	Cu	65	70.523	ug/L	1.894	2	47	217602	1
	Zn	66	443.780	ug/L	10.135	2	191	753391	1
	Zn	67	397.915	ug/L	7.735	1	37	115781	2
	Zn	68	430.908	ug/L	7.131	1	353	532258	0
	As	75	1.953	ug/L	0.029	1	548	3786	0
	As-1	75	2.170	ug/L	0.115	5	7252	9830	0
	Se	82	0.165	ug/L	0.025	14	-19	12	36
	Se	78	0.604	ug/L	0.318	52	7320	6581	0
	Mo	98	2.410	ug/L	0.097	4	10	11548	3
	Y	89		ug/L			394786	373904	1
	Kr	83		ug/L			872	665	4
>	In	115		ug/L			1077756	1021771	1
	Ag	107	0.217	ug/L	0.007	3	26	2862	1
	Cd	111	1.199	ug/L	0.043	3	127	5865	1
	Cd	114	1.165	ug/L	0.051	4	19	13877	3
	Sb	121	0.099	ug/L	0.007	7	152	1607	5
	Sb	123	0.097	ug/L	0.006	6	115	1192	6
	Ba	135	29.343	ug/L	0.599	2	7	131317	1
	Ba	137	28.917	ug/L	0.836	2	20	224857	1
>	Tb	159		ug/L			1262684	1235048	0
	Tl	205	0.014	ug/L	0.001	4	290	884	2
	Pb	208	69.431	ug/L	0.439	0	247	3673505	0
	Bi	209		ug/L			3225208	3111715	0
	Th	232	0.126	ug/L	0.003	2	157	6717	1
	U	238	0.066	ug/L	0.001	1	3	3446	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:13:43
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\041813.cal

Se
PbPb 1

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1164625	1252251	1
	Be	9	0.148	ug/L	0.007	4	11	486	3
	C	13		ug/L			104879	159268	3
	Cl	37		ug/L			4277164	4287636	0
>	Sc	45		ug/L			1025260	961662	1
	V	51	42.745	ug/L	2.356	5	5531	771834	4
	V-1	51	43.288	ug/L	1.391	3	509	776777	1
	Cr	52	134.056	ug/L	8.474	6	16367	2067455	6
	Cr	53	135.877	ug/L	2.765	2	243	235203	2
	Mn	55	2404.602	ug/L	58.865	2	685	51918063	2
	Co	59	9.776	ug/L	0.358	3	119	149455	2
>	Ge	72		ug/L			592402	521323	1
	Ni	60	68.473	ug/L	1 194	1	86	217691	0
	Ni	62	70.796	ug/L	2.293	3	63	31279	1
	Cu	63	390.856	ug/L	11.882	3	91	2672921	3
	Cu	65	347.704	ug/L	8.430	2	47	1090306	1
	Zn	66	2380.627	ug/L	63.002	2	191	4106763	1
	Zn	67	1889.966	ug/L	38.058	2	37	558729	0
	Zn	68	2217.606	ug/L	83.701	3	353	2782297	2
	As	75	9.868	ug/L	0 136	1	548	17488	0
	As-1	75	10.202	ug/L	0.204	1	7252	23357	0
	Se	82	0.559	ug/L	0.039	7	-19	83	8
	Se	78	0.387	ug/L	0.307	79	7320	6600	0
	Mo	98	12.036	ug/L	0.214	1	10	58590	1
	Y	89		ug/L			394786	416208	0
	Kr	83		ug/L			872	680	4
>	In	115		ug/L			1077756	1019527	0
	Ag	107	1.056	ug/L	0.031	2	26	13795	3
	Cd	111	5.803	ug/L	0.112	1	127	27879	1
	Cd	114	5.857	ug/L	0 171	2	19	69550	2
	Sb	121	0.460	ug/L	0.003	0	152	6955	0
	Sb	123	0.466	ug/L	0.009	1	115	5292	1
	Ba	135	148.706	ug/L	1.400	0	7	664124	1
	Ba	137	146.676	ug/L	0 318	0	20	1138319	0
>	Tb	159		ug/L			1262684	1244745	0
	Tl	205	0.080	ug/L	0.003	3	290	3654	2
	Pb	208	398.207	ug/L	1.068	0	247	21233074	0
	Bi	209		ug/L			3225208	3000055	1
	Th	232	0.646	ug/L	0.004	0	157	33966	0
	U	238	0.338	ug/L	0 003	0	3	17806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:17:50
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\041813.cal

Ref Sc

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1209155	2
[	Be	9	0.145	ug/L	0.005	3	11	461	2
	C	13		ug/L			104879	146138	0
	Cl	37		ug/L			4277164	4242960	3
[>	Sc	45		ug/L			1025260	937143	1
[	V	51	39.694	ug/L	0.745	1	5531	698871	0
[	V-1	51	40.218	ug/L	0.559	1	509	703422	0
[	Cr	52	93.482	ug/L	2.341	2	16367	1409188	1
[	Cr	53	95.232	ug/L	1.834	1	243	160693	1
[	Mn	55	1300.246	ug/L	31.988	2	685	27353951	1
[	Co	59	9.754	ug/L	0.110	1	119	145340	0
[>	Ge	72		ug/L			592402	503832	0
[	Ni	60	68.206	ug/L	1.374	2	86	209602	2
[	Ni	62	69.301	ug/L	1.706	2	63	29604	3
[	Cu	63	398.722	ug/L	9.032	2	91	2635184	2
[	Cu	65	343.312	ug/L	10.355	3	47	1040503	2
[	Zn	66	2495.637	ug/L	33.030	1	191	4161533	0
[	Zn	67	1955.310	ug/L	7 002	0	37	558744	0
[	Zn	68	2321.123	ug/L	40.707	1	353	2815309	1
[	As	75	9.310	ug/L	0.104	1	548	15974	0
[	As-1	75	9.715	ug/L	0.115	1	7252	21792	0
[	Se	82	0.444	ug/L	0.137	30	-19	60	38
[	Se	78	0.741	ug/L	0 177	23	7320	6520	0
[	Mo	98	12.128	ug/L	0 103	0	10	57060	0
	Y	89		ug/L			394786	404807	1
	Kr	83		ug/L			872	718	4
[>	In	115		ug/L			1077756	1003741	0
[	Ag	107	1.205	ug/L	0.025	2	26	15492	1
[	Cd	111	6.001	ug/L	0.046	0	127	28378	1
[	Cd	114	5.953	ug/L	0.058	0	19	69595	0
[	Sb	121	0.490	ug/L	0.010	2	152	7281	2
[	Sb	123	0.494	ug/L	0.007	1	115	5516	1
[	Ba	135	135.563	ug/L	1.904	1	7	596001	0
[	Ba	137	134.421	ug/L	3.797	2	20	1026867	1
[>	Tb	159		ug/L			1262684	1241593	0
[	Tl	205	0.072	ug/L	0.004	4	290	3343	4
[	Pb	208	412.969	ug/L	3.258	0	247	21964358	0
[	Bi	209		ug/L			3225208	3025431	0
[	Th	232	0.557	ug/L	0.005	0	157	29259	0
[	U	238	0.295	ug/L	0.005	1	3	15527	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:21:57
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1226166	0
[	Be	9	25.993	ug/L	0.393	1	11	81788	1
	C	13		ug/L			104879	147594	3
	Cl	37		ug/L			4277164	4191646	1
[>	Sc	45		ug/L			1025260	937960	2
[	V	51	65.416	ug/L	1.627	2	5531	1149403	2
[	V-1	51	66.085	ug/L	1.083	1	509	1156536	1
[	Cr	52	128.416	ug/L	3.509	2	16367	1931591	1
[	Cr	53	130.652	ug/L	1.988	1	243	220550	1
[	Mn	55	1449.179	ug/L	31.592	2	685	30511263	1
[	Co	59	34.138	ug/L	0.144	0	119	508879	2
[>	Ge	72		ug/L			592402	506626	1
[	Ni	60	95.630	ug/L	2.384	2	86	295431	1
[	Ni	62	96.297	ug/L	4.001	4	63	41327	3
[	Cu	63	411.922	ug/L	18.899	4	91	2736353	3
[	Cu	65	358.278	ug/L	12.878	3	47	1091705	2
[	Zn	66	2574.110	ug/L	83.289	3	191	4316091	3
[	Zn	67	2012.912	ug/L	51.080	2	37	578285	1
[	Zn	68	2322.036	ug/L	39.194	1	353	2831954	1
[	As	75	38.216	ug/L	0.585	1	548	64470	0
[	As-1	75	36.032	ug/L	0.804	2	7252	64467	1
[	Se	82	85.586	ug/L	1.547	1	-19	15030	1
[	Se	78	81.071	ug/L	2.040	2	7320	38740	1
[	Mo	98	43.383	ug/L	0.254	0	10	205226	0
	Y	89		ug/L			394786	414852	1
	Kr	83		ug/L			872	721	4
[>	In	115		ug/L			1077756	1005757	1
[	Ag	107	11.340	ug/L	0.088	0	26	145924	0
[	Cd	111	31.550	ug/L	0.784	2	127	148973	1
[	Cd	114	31.844	ug/L	0.501	1	19	372920	0
[	Sb	121	2.133	ug/L	0.053	2	152	31303	1
[	Sb	123	2.102	ug/L	0.045	2	115	23182	0
[	Ba	135	167.857	ug/L	4.132	2	7	739362	1
[	Ba	137	169.068	ug/L	2.396	1	20	1294473	2
[>	Tb	159		ug/L			1262684	1240129	2
[	Tl	205	22.759	ug/L	0 624	2	290	958847	0
[	Pb	208	496.523	ug/L	12.651	2	247	26367519	0
[	Bi	209		ug/L			3225208	3006426	0
[	Th	232	23.268	ug/L	0.590	2	157	1213785	0
[	U	238	23.565	ug/L	0.563	2	3	1237610	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:26:04
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			1164625	1221918	3
[	Be	9	25.709	ug/L	0.394	1	11	80608	2
	C	13		ug/L			104879	156204	2
	Cl	37		ug/L			4277164	4313524	1
[>	Sc	45		ug/L			1025260	927019	0
[	V	51	69.241	ug/L	3.289	4	5531	1202281	4
[	V-1	51	65.508	ug/L	1.919	2	509	1133140	2
[	Cr	52	165.664	ug/L	3.310	1	16367	2459305	1
[	Cr	53	153.305	ug/L	3.388	2	243	255790	2
[	Mn	55	2418.721	ug/L	41.682	1	685	50342734	1
[	Co	59	33.566	ug/L	0.382	1	119	494573	1
[>	Ge	72		ug/L			592402	499652	1
[	Ni	60	92.143	ug/L	2.386	2	86	280738	1
[	Ni	62	95.366	ug/L	1.574	1	63	40378	2
[	Cu	63	404.433	ug/L	9 877	2	91	2650237	1
[	Cu	65	363.518	ug/L	4.722	1	47	1092622	0
[	Zn	66	2453.739	ug/L	38.784	1	191	4058315	2
[	Zn	67	1954.927	ug/L	28.063	1	37	553969	1
[	Zn	68	2274.558	ug/L	15.104	0	353	2736185	1
[	As	75	38.198	ug/L	0.359	0	548	63561	1
[	As-1	75	36.027	ug/L	0.306	0	7252	63579	1
[	Se	82	87.840	ug/L	0.957	1	-19	15215	0
[	Se	78	83.665	ug/L	1.354	1	7320	39233	0
[	Mo	98	39.498	ug/L	0.916	2	10	184255	1
	Y	89		ug/L			394786	406110	2
	Kr	83		ug/L			872	724	3
[>	In	115		ug/L			1077756	987241	0
[	Ag	107	26.202	ug/L	0.340	1	26	330937	1
[	Cd	111	30.866	ug/L	0.332	1	127	143094	1
[	Cd	114	30.940	ug/L	0.360	1	19	355719	1
[	Sb	121	24.744	ug/L	0.244	0	152	355061	0
[	Sb	123	24.746	ug/L	0.182	0	115	266859	0
[	Ba	135	167.424	ug/L	1.237	0	7	724040	0
[	Ba	137	168.613	ug/L	1.818	1	20	1267092	0
[>	Tb	159		ug/L			1262684	1214181	0
[	Tl	205	22.912	ug/L	0.420	1	290	945391	1
[	Pb	208	410.869	ug/L	5.988	1	247	21368866	0
[	Bi	209		ug/L			3225208	3006837	0
[	Th	232	23.540	ug/L	0.158	0	157	1202697	0
[	U	238	23.734	ug/L	0.273	1	3	1220748	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:30:12
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\041813.cal

RPHS 5

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1193177	0
[	Be	9	25.519	ug/L	0.309	1	11	78138	1
	C	13		ug/L			104879	117116	3
	Cl	37		ug/L			4277164	4118586	0
[>	Sc	45		ug/L			1025260	902848	2
[	V	51	24.446	ug/L	0.836	3	5531	416353	0
[	V-1	51	24.734	ug/L	0.745	3	509	416765	0
[	Cr	52	24.215	ug/L	0.783	3	16367	362216	0
[	Cr	53	25.169	ug/L	0.836	3	243	41061	2
[	Mn	55	23.964	ug/L	1.228	5	685	485949	2
[	Co	59	25.244	ug/L	0.267	1	119	362208	2
[>	Ge	72		ug/L			592402	504495	1
[	Ni	60	25.356	ug/L	0.256	1	86	78063	0
[	Ni	62	25.560	ug/L	0.459	1	63	10967	2
[	Cu	63	25.697	ug/L	0.811	3	91	170076	2
[	Cu	65	26.145	ug/L	0.655	2	47	79385	2
[	Zn	66	82.827	ug/L	1.632	1	191	138443	1
[	Zn	67	76.964	ug/L	1.753	2	37	22049	1
[	Zn	68	79.985	ug/L	3.079	3	353	97411	2
[	As	75	30.720	ug/L	0.425	1	548	51703	1
[	As-1	75	26.339	ug/L	0.124	0	7252	48593	0
[	Se	82	94.833	ug/L	1.509	1	-19	16587	1
[	Se	78	83.591	ug/L	0.387	0	7320	39588	1
[	Mo	98	30.399	ug/L	0 268	0	10	143218	1
	Y	89		ug/L			394786	369955	3
	Kr	83		ug/L			872	706	3
[>	In	115		ug/L			1077756	1013038	0
[	Ag	107	27.886	ug/L	0.154	0	26	361414	0
[	Cd	111	26.267	ug/L	0.257	0	127	124970	0
[	Cd	114	26.256	ug/L	0.269	1	19	309739	0
[	Sb	121	26.241	ug/L	0.441	1	152	386353	0
[	Sb	123	26.606	ug/L	0.422	1	115	294410	1
[	Ba	135	25.383	ug/L	0.506	1	7	112644	1
[	Ba	137	25.069	ug/L	0.417	1	20	193326	1
[>	Tb	159		ug/L			1262684	1191847	2
[	Tl	205	23.840	ug/L	0.470	1	290	965379	0
[	Pb	208	25.289	ug/L	0.486	1	247	1290985	0
[	Bi	209		ug/L			3225208	3100535	0
[	Th	232	22.462	ug/L	0.210	0	157	1126463	1
[	U	238	24.205	ug/L	0.926	3	3	1221483	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:35:24
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1175278	1
[	Be	9	51.790	ug/L	1.937	3	11	156135	2
	C	13		ug/L			104879	117746	2
	Cl	37		ug/L			4277164	4095840	1
[>	Sc	45		ug/L			1025260	876461	1
[	V	51	49.665	ug/L	0.532	1	5531	816837	2
[	V-1	51	49.845	ug/L	0.453	0	509	815375	1
[	Cr	52	49.825	ug/L	0.703	1	16367	709222	2
[	Cr	53	50.421	ug/L	0.694	1	243	79674	0
[	Mn	55	48.377	ug/L	0.553	1	685	952598	1
[	Co	59	51.461	ug/L	0.539	1	119	716762	0
[>	Ge	72		ug/L			592402	501669	2
[	Ni	60	49.660	ug/L	1.386	2	86	151929	2
[	Ni	62	50.136	ug/L	0.709	1	63	21333	0
[	Cu	63	49.625	ug/L	1.262	2	91	326480	0
[	Cu	65	48.042	ug/L	1.236	2	47	144988	1
[	Zn	66	50.622	ug/L	1.271	2	191	84181	0
[	Zn	67	49.743	ug/L	2.119	4	37	14178	3
[	Zn	68	50.870	ug/L	1.318	2	353	61712	1
[	As	75	52.179	ug/L	1.449	2	548	86974	1
[	As-1	75	50.718	ug/L	1.211	2	7252	87334	0
[	Se	82	58.935	ug/L	2 110	3	-19	10239	1
[	Se	78	52.249	ug/L	1.538	2	7320	26921	0
[	Mo	98	57.953	ug/L	2.510	4	10	271311	2
	Y	89		ug/L			394786	360306	0
	Kr	83		ug/L			872	702	2
[>	In	115		ug/L			1077756	998260	1
[	Ag	107	53.354	ug/L	0.824	1	26	681276	0
[	Cd	111	50.814	ug/L	0.576	1	127	238102	1
[	Cd	114	51.197	ug/L	1.183	2	19	595003	0
[	Sb	121	50.095	ug/L	1.232	2	152	726527	1
[	Sb	123	50.669	ug/L	1.059	2	115	552256	0
[	Ba	135	50.609	ug/L	1.043	2	7	221257	0
[	Ba	137	49.628	ug/L	1.375	2	20	377021	1
[>	Tb	159		ug/L			1262684	1195487	1
[	Tl	205	45.438	ug/L	0.310	0	290	1845742	1
[	Pb	208	48.294	ug/L	0.524	1	247	2473190	0
[	Bi	209		ug/L			3225208	2958476	1
[	Th	232	54.020	ug/L	1.524	2	157	2716575	1
[	U	238	53.402	ug/L	0.420	0	3	2704559	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:42:17
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1214560	2
	Be	9	0.001	ug/L	0.001	80	11	14	12
	C	13		ug/L			104879	115714	0
	Cl	37		ug/L			4277164	4024767	0
>	Sc	45		ug/L			1025260	900805	1
	V	51	-0.007	ug/L	0.018	269	5531	4748	5
	V-1	51	-0.019	ug/L	0.001	4	509	132	10
	Cr	52	-0.016	ug/L	0.052	325	16367	14145	4
	Cr	53	-0.057	ug/L	0.005	7	243	122	7
	Mn	55	0.014	ug/L	0.004	27	685	881	7
	Co	59	0.003	ug/L	0.000	15	119	143	5
>	Ge	72		ug/L			592402	510389	1
	Ni	60	-0.012	ug/L	0.004	31	86	36	31
	Ni	62	-0.016	ug/L	0.031	198	63	48	28
	Cu	63	0.015	ug/L	0.000	1	91	177	1
	Cu	65	0.008	ug/L	0.003	40	47	64	15
	Zn	66	0.125	ug/L	0.009	6	191	375	3
	Zn	67	0.095	ug/L	0.007	6	37	60	4
	Zn	68	0.116	ug/L	0 010	8	353	447	2
	As	75	-0.029	ug/L	0.015	53	548	424	5
	As-1	75	0.123	ug/L	0 019	15	7252	6448	1
	Se	82	0.017	ug/L	0.093	537	-19	-13	118
	Se	78	0.472	ug/L	0.044	9	7320	6496	1
	Mo	98	0.012	ug/L	0.003	22	10	64	19
	Y	89		ug/L			394786	357574	2
	Kr	83		ug/L			872	668	2
>	In	115		ug/L			1077756	1014683	0
	Ag	107	0.002	ug/L	0.000	23	26	51	12
	Cd	111	-0.002	ug/L	0.002	93	127	110	7
	Cd	114	0.001	ug/L	0.001	48	19	35	24
	Sb	121	0.089	ug/L	0.015	16	152	1453	14
	Sb	123	0.091	ug/L	0.015	16	115	1112	14
	Ba	135	0.004	ug/L	0.001	23	7	25	17
	Ba	137	0.003	ug/L	0.002	65	20	40	34
>	Tb	159		ug/L			1262684	1173734	1
	Tl	205	0.003	ug/L	0.001	44	290	398	13
	Pb	208	0.006	ug/L	0.001	12	247	554	7
	Bi	209		ug/L			3225208	3086967	0
	Th	232	0.249	ug/L	0.018	7	157	12465	7
	U	238	0.003	ug/L	0.001	22	3	172	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:48:48
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\041813.cal

RRS

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			1164625	1218195	1
[	Be	9	0.001	ug/L	0 001	41	11	16	10
	C	13		ug/L			104879	132924	3
	Cl	37		ug/L			4277164	4049670	0
[>	Sc	45		ug/L			1025260	904539	0
[	V	51	0.010	ug/L	0.007	68	5531	5046	1
[	V-1	51	-0.014	ug/L	0.001	3	509	219	3
[	Cr	52	0.037	ug/L	0.017	46	16367	14975	0
[	Cr	53	-0.041	ug/L	0.005	13	243	148	6
[	Mn	55	0.159	ug/L	0.005	3	685	3825	1
[	Co	59	0.002	ug/L	0.001	43	119	134	8
[>	Ge	72		ug/L			592402	517904	0
[	Ni	60	0.010	ug/L	0.004	38	86	106	11
[	Ni	62	0.015	ug/L	0.013	88	63	62	9
[	Cu	63	0.071	ug/L	0.001	1	91	561	1
[	Cu	65	0.069	ug/L	0.002	3	47	257	2
[	Zn	66	1.404	ug/L	0.019	1	191	2574	1
[	Zn	67	1.221	ug/L	0.017	1	37	391	1
[	Zn	68	1.344	ug/L	0.032	2	353	1984	1
[	As	75	-0.041	ug/L	0.015	37	548	409	6
[	As-1	75	0.097	ug/L	0.042	43	7252	6499	0
[	Se	82	0.005	ug/L	0.026	551	-19	-16	28
[	Se	78	0.416	ug/L	0.140	33	7320	6569	0
[	Mo	98	0.006	ug/L	0.002	40	10	38	31
	Y	89		ug/L			394786	358160	1
	Kr	83		ug/L			872	685	2
[>	In	115		ug/L			1077756	1031639	1
[	Ag	107	0.001	ug/L	0.001	64	26	43	28
[	Cd	111	-0.003	ug/L	0.001	30	127	106	5
[	Cd	114	0.003	ug/L	0.001	30	19	57	21
[	Sb	121	0.022	ug/L	0.005	23	152	477	16
[	Sb	123	0.024	ug/L	0.008	31	115	377	23
[	Ba	135	0.033	ug/L	0.002	5	7	156	3
[	Ba	137	0.037	ug/L	0.001	3	20	308	4
[>	Tb	159		ug/L			1262684	1195755	0
[	Tl	205	-0.001	ug/L	0.001	104	290	238	16
[	Pb	208	0.076	ug/L	0.002	2	247	4110	2
[	Bi	209		ug/L			3225208	3114301	0
[	Th	232	0.111	ug/L	0.008	7	157	5716	6
[	U	238	0.001	ug/L	0.001	55	3	61	52

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ADUP SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:52:55
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1219742	2
[	Be	9	0.054	ug/L	0.006	10	11	180	7
	C	13		ug/L			104879	134215	4
	Cl	37		ug/L			4277164	4147693	1
[>	Sc	45		ug/L			1025260	923796	1
[	V	51	15.843	ug/L	0.542	3	5531	277961	2
[	V-1	51	15.868	ug/L	0.170	1	509	273892	1
[	Cr	52	39.418	ug/L	0.659	1	16367	594378	1
[	Cr	53	39.508	ug/L	0.624	1	243	65863	2
[	Mn	55	492.296	ug/L	17.513	3	685	10214365	4
[	Co	59	3.794	ug/L	0.080	2	119	55782	0
[>	Ge	72		ug/L			592402	506388	0
[	Ni	60	25.784	ug/L	0.417	1	86	79684	1
[	Ni	62	26.381	ug/L	0.319	1	63	11359	1
[	Cu	63	124.718	ug/L	0.754	0	91	828441	1
[	Cu	65	124.519	ug/L	3.159	2	47	379408	3
[	Zn	66	871.774	ug/L	5.654	0	191	1461294	1
[	Zn	67	762.312	ug/L	19 502	2	37	218989	3
[	Zn	68	840.987	ug/L	13.697	1	353	1025523	2
[	As	75	3.580	ug/L	0.016	0	548	6462	0
[	As-1	75	3.909	ug/L	0.046	1	7252	12517	0
[	Se	82	0.181	ug/L	0.065	35	-19	14	76
[	Se	78	0.916	ug/L	0 181	19	7320	6623	0
[	Mo	98	5.210	ug/L	0.201	3	10	24638	3
	Y	89		ug/L			394786	381791	1
	Kr	83		ug/L			872	698	3
[>	In	115		ug/L			1077756	1016707	1
[	Ag	107	0.433	ug/L	0.005	1	26	5656	1
[	Cd	111	2.242	ug/L	0.037	1	127	10811	0
[	Cd	114	2.172	ug/L	0 029	1	19	25731	0
[	Sb	121	0.194	ug/L	0.002	1	152	3009	2
[	Sb	123	0.199	ug/L	0.003	1	115	2321	3
[	Ba	135	50.264	ug/L	0.456	0	7	223845	0
[	Ba	137	50.172	ug/L	0.252	0	20	388294	1
[>	Tb	159		ug/L			1262684	1210314	0
[	Tl	205	0.028	ug/L	0.001	2	290	1417	2
[	Pb	208	147.817	ug/L	0.746	0	247	7664037	0
[	Bi	209		ug/L			3225208	3069305	0
[	Th	232	0.264	ug/L	0.003	1	157	13604	0
[	U	238	0.121	ug/L	0.001	0	3	6218	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 A SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:57:02
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1185880	1
[	Be	9	0.045	ug/L	0.002	5	11	149	3
	C	13		ug/L			104879	130430	3
	Cl	37		ug/L			4277164	4156102	0
[>	Sc	45		ug/L			1025260	910425	0
[	V	51	14.685	ug/L	0.248	1	5531	254338	1
[	V-1	51	14.822	ug/L	0.120	0	509	252179	1
[	Cr	52	35.376	ug/L	0.817	2	16367	527196	1
[	Cr	53	35.834	ug/L	0.524	1	243	58882	0
[	Mn	55	465.084	ug/L	13.001	2	685	9508590	3
[	Co	59	3.651	ug/L	0.099	2	119	52915	2
[>	Ge	72		ug/L			592402	506873	1
[	Ni	60	25.126	ug/L	0.807	3	86	77731	3
[	Ni	62	25.420	ug/L	0.891	3	63	10959	4
[	Cu	63	132.175	ug/L	2.350	1	91	878774	1
[	Cu	65	129.371	ug/L	1.133	0	47	394533	1
[	Zn	66	822.043	ug/L	23.346	2	191	1379054	2
[	Zn	67	733.453	ug/L	7.528	1	37	210871	1
[	Zn	68	795.646	ug/L	19.383	2	353	970982	1
[	As	75	3.230	ug/L	0.028	0	548	5881	1
[	As-1	75	3.563	ug/L	0.048	1	7252	11970	1
[	Se	82	0.152	ug/L	0.025	16	-19	9	46
[	Se	78	0.978	ug/L	0.082	8	7320	6655	1
[	Mo	98	4.233	ug/L	0.078	1	10	20042	0
	Y	89		ug/L			394786	371015	0
	Kr	83		ug/L			872	711	0
[>	In	115		ug/L			1077756	1006491	0
[	Ag	107	0.429	ug/L	0.009	2	26	5551	2
[	Cd	111	2.181	ug/L	0.022	0	127	10417	1
[	Cd	114	2.147	ug/L	0.023	1	19	25180	0
[	Sb	121	0.163	ug/L	0.005	3	152	2527	2
[	Sb	123	0.160	ug/L	0.003	1	115	1864	0
[	Ba	135	50.007	ug/L	1.002	2	7	220460	1
[	Ba	137	49.606	ug/L	1.261	2	20	380008	1
[>	Tb	159		ug/L			1262684	1185023	1
[	Tl	205	0.026	ug/L	0.001	1	290	1333	2
[	Pb	208	153.916	ug/L	2.677	1	247	7811826	0
[	Bi	209		ug/L			3225208	3059694	1
[	Th	232	0.221	ug/L	0.004	1	157	11170	2
[	U	238	0.108	ug/L	0.002	1	3	5400	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ASPK SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:01:09
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1207433	1
	Be	9	10.453	ug/L	0.381	3	11	32384	2
	C	13		ug/L			104879	133037	2
	Cl	37		ug/L			4277164	4261456	2
>	Sc	45		ug/L			1025260	921629	1
	V	51	24.986	ug/L	0.413	1	5531	434635	3
	V-1	51	25.281	ug/L	0.678	2	509	434967	1
	Cr	52	44.891	ug/L	1.475	3	16367	673591	5
	Cr	53	45.874	ug/L	1.415	3	243	76222	1
	Mn	55	481.569	ug/L	8.087	1	685	9965169	1
	Co	59	13.712	ug/L	0.280	2	119	200861	0
>	Ge	72		ug/L			592402	504713	2
	Ni	60	36.121	ug/L	0.427	1	86	111208	1
	Ni	62	36.729	ug/L	1.620	4	63	15732	2
	Cu	63	136.669	ug/L	3.654	2	91	904448	0
	Cu	65	136.080	ug/L	0.660	0	47	413190	1
	Zn	66	907.581	ug/L	52.052	5	191	1515255	4
	Zn	67	771.186	ug/L	33.993	4	37	220772	4
	Zn	68	854.022	ug/L	35.281	4	353	1037235	1
	As	75	15.109	ug/L	0.158	1	548	25677	2
	As-1	75	14.247	ug/L	0.239	1	7252	29128	1
	Se	82	34.634	ug/L	0.444	1	-19	6048	1
	Se	78	32.869	ug/L	0.843	2	7320	19352	0
	Mo	98	15.201	ug/L	0 572	3	10	71615	2
	Y	89		ug/L			394786	380495	2
	Kr	83		ug/L			872	696	4
>	In	115		ug/L			1077756	999057	1
	Ag	107	5.318	ug/L	0.072	1	26	67999	2
	Cd	111	12.598	ug/L	0.189	1	127	59169	1
	Cd	114	12.796	ug/L	0.108	0	19	148900	2
	Sb	121	0.643	ug/L	0.004	0	152	9478	0
	Sb	123	0.643	ug/L	0.009	1	115	7124	0
	Ba	135	63.014	ug/L	0.596	0	7	275754	0
	Ba	137	62.887	ug/L	0.507	0	20	478253	1
>	Tb	159		ug/L			1262684	1195167	1
	Tl	205	9.262	ug/L	0.135	1	290	376343	0
	Pb	208	162.745	ug/L	1.662	1	247	8331921	0
	Bi	209		ug/L			3225208	3053799	0
	Th	232	9.602	ug/L	0 096	0	157	482953	0
	U	238	9.697	ug/L	0.060	0	3	490982	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:05:16
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\041813.cal

PASS

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1216296	2
[	Be	9	0.126	ug/L	0.002	1	11	404	3
	C	13		ug/L			104879	155119	2
	Cl	37		ug/L			4277164	4218427	0
[>	Sc	45		ug/L			1025260	927731	1
[	V	51	37.771	ug/L	0.669	1	5531	658633	1
[	V-1	51	38.346	ug/L	0.456	1	509	664000	0
[	Cr	52	94.097	ug/L	2.439	2	16367	1404172	1
[	Cr	53	96.018	ug/L	2.120	2	243	160387	1
[	Mn	55	1193.972	ug/L	43.525	3	685	24865078	2
[	Co	59	9.310	ug/L	0.405	4	119	137300	3
[>	Ge	72		ug/L			592402	505252	1
[	Ni	60	62.210	ug/L	1.975	3	86	191690	2
[	Ni	62	65.647	ug/L	1.826	2	63	28118	1
[	Cu	63	332.742	ug/L	31.455	9	91	2203867	8
[	Cu	65	303.802	ug/L	9.393	3	47	923263	2
[	Zn	66	2329.396	ug/L	41.999	1	191	3894949	0
[	Zn	67	1839.239	ug/L	16.533	0	37	527042	0
[	Zn	68	2157.590	ug/L	76.094	3	353	2623966	2
[	As	75	8.649	ug/L	0 149	1	548	14913	0
[	As-1	75	9.041	ug/L	0.209	2	7252	20765	0
[	Se	82	0.414	ug/L	0.080	19	-19	55	24
[	Se	78	0.740	ug/L	0.240	32	7320	6538	0
[	Mo	98	13.003	ug/L	0.276	2	10	61348	1
	Y	89		ug/L			394786	406689	0
	Kr	83		ug/L			872	714	2
[>	In	115		ug/L			1077756	977279	1
[	Ag	107	1.055	ug/L	0.024	2	26	13210	2
[	Cd	111	5.403	ug/L	0.119	2	127	24889	1
[	Cd	114	5.464	ug/L	0.075	1	19	62190	0
[	Sb	121	0.478	ug/L	0.012	2	152	6931	1
[	Sb	123	0.486	ug/L	0.006	1	115	5294	0
[	Ba	135	124.338	ug/L	1.402	1	7	532269	1
[	Ba	137	125.230	ug/L	2.436	1	20	931502	1
[>	Tb	159		ug/L			1262684	1201184	1
[	Tl	205	0.076	ug/L	0 001	0	290	3387	1
[	Pb	208	386.044	ug/L	2.859	0	247	19863225	0
[	Bi	209		ug/L			3225208	2996011	0
[	Th	232	0.645	ug/L	0.007	1	157	32734	2
[	U	238	0.308	ug/L	0.009	3	3	15659	2

USE DX

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:09:23
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
[>	**Li**	**6**		ug/L			1164625	1197734	1
[	**Be**	**9**	**0.116**	ug/L	0.003	2	11	367	1
	C	**13**		ug/L			104879	160958	1
	Cl	**37**		ug/L			4277164	4187226	1
[>	**Sc**	**45**		ug/L			1025260	922418	1
[	**V**	**51**	**36.043**	ug/L	0.735	2	5531	625246	2
[	**V-1**	**51**	**35.942**	ug/L	0.354	0	509	618929	1
[	**Cr**	**52**	**88.138**	ug/L	2.080	2	16367	1308953	2
[	**Cr**	**53**	**87.816**	ug/L	0.893	1	243	145891	1
[	**Mn**	**55**	**1158.706**	ug/L	19.717	1	685	23997150	1
[	**Co**	**59**	**9.031**	ug/L	0.153	1	119	132482	2
[>	**Ge**	**72**		ug/L			592402	498900	1
[	**Ni**	**60**	**61.326**	ug/L	0.910	1	86	186631	2
[	**Ni**	**62**	**62.755**	ug/L	1.171	1	63	26542	0
[	**Cu**	**63**	**373.626**	ug/L	11.507	3	91	2444047	1
[	**Cu**	**65**	**325.038**	ug/L	3.934	1	47	975471	1
[	**Zn**	**66**	**2274.444**	ug/L	4.590	0	191	3755644	1
[	**Zn**	**67**	**1825.685**	ug/L	38 726	2	37	516480	1
[	**Zn**	**68**	**2082.440**	ug/L	71.748	3	353	2500108	1
[	**As**	**75**	**8.160**	ug/L	0.171	2	548	13917	0
[	**As-1**	**75**	**8.568**	ug/L	0.251	2	7252	19747	0
[	**Se**	**82**	**0.399**	ug/L	0.014	3	-19	52	5
[	**Se**	**78**	**0.891**	ug/L	0.312	35	7320	6514	0
[	**Mo**	**98**	**10.897**	ug/L	0.085	0	10	50767	1
	Y	**89**		ug/L			394786	404014	1
	Kr	**83**		ug/L			872	721	4
[>	**In**	**115**		ug/L			1077756	986002	1
[	**Ag**	**107**	**1.057**	ug/L	0.036	3	26	13354	2
[	**Cd**	**111**	**5.474**	ug/L	0.131	2	127	25437	1
[	**Cd**	**114**	**5.397**	ug/L	0.090	1	19	61975	1
[	**Sb**	**121**	**0.405**	ug/L	0.008	2	152	5935	2
[	**Sb**	**123**	**0.409**	ug/L	0 009	2	115	4502	1
[	**Ba**	**135**	**126.391**	ug/L	2 654	2	7	545806	0
[	**Ba**	**137**	**126.530**	ug/L	1.424	1	20	949590	0
[>	**Tb**	**159**		ug/L			1262684	1207170	0
[	**Tl**	**205**	**0.068**	ug/L	0.002	2	290	3073	2
[	**Pb**	**208**	**400.434**	ug/L	4.906	1	247	20706698	0
[	**Bi**	**209**		ug/L			3225208	2993334	0
[	**Th**	**232**	**0.516**	ug/L	0.002	0	157	26365	0
[	**U**	**238**	**0.274**	ug/L	0.004	1	3	13998	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:13:30
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1164625	1200518	2
	Be	9	25.339	ug/L	0.415	1	11	78072	3
	C	13		ug/L			104879	151677	4
	Cl	37		ug/L			4277164	4166528	1
>	Sc	45		ug/L			1025260	926584	2
	V	51	63.110	ug/L	1.031	1	5531	1095617	1
	V-1	51	62.985	ug/L	1.819	2	509	1088631	1
	Cr	52	111.796	ug/L	2.178	1	16367	1663261	0
	Cr	53	111.392	ug/L	4.770	4	243	185714	2
	Mn	55	1183.503	ug/L	18.493	1	685	24620349	2
	Co	59	32.213	ug/L	1.553	4	119	474093	3
>	Ge	72		ug/L			592402	502087	1
	Ni	60	90.155	ug/L	0.439	0	86	276061	1
	Ni	62	92.775	ug/L	2.213	2	63	39482	3
	Cu	63	377.923	ug/L	12.733	3	91	2488623	3
	Cu	65	324.153	ug/L	6.849	2	47	979049	2
	Zn	66	2327.032	ug/L	18.542	0	191	3867072	1
	Zn	67	1883.937	ug/L	32.973	1	37	536391	0
	Zn	68	2190.276	ug/L	22.654	1	353	2647402	1
	As	75	36.437	ug/L	0 651	1	548	60936	0
	As-1	75	33.957	ug/L	0 352	1	7252	60567	0
	Se	82	80.889	ug/L	1.734	2	-19	14075	0
	Se	78	74.894	ug/L	0.646	0	7320	35943	1
	Mo	98	37.100	ug/L	0.534	1	10	173912	0
	Y	89		ug/L			394786	412104	1
	Kr	83		ug/L			872	711	2
>	In	115		ug/L			1077756	987579	0
	Ag	107	12.453	ug/L	0.136	1	26	157359	1
	Cd	111	30.574	ug/L	0 067	0	127	141791	0
	Cd	114	30.771	ug/L	0.378	1	19	353873	0
	Sb	121	1.553	ug/L	0.020	1	152	22428	0
	Sb	123	1.538	ug/L	0.023	1	115	16693	2
	Ba	135	153.639	ug/L	0.717	0	7	664653	0
	Ba	137	153.197	ug/L	1.068	0	20	1151663	0
>	Tb	159		ug/L			1262684	1197986	0
	Tl	205	22.623	ug/L	0.116	0	290	921089	0
	Pb	208	416.675	ug/L	4.679	1	247	21381995	0
	Bi	209		ug/L			3225208	2995868	0
	Th	232	23.422	ug/L	0.402	1	157	1180628	0
	U	238	23.566	ug/L	0.206	0	3	1196020	1

WL67 : 041801

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:17:38
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1218586	4
	Be	9	25.764	ug/L	0.683	2	11	80514	2
	C	13		ug/L			104879	156576	3
	Cl	37		ug/L			4277164	4146461	1
>	Sc	45		ug/L			1025260	924995	1
	V	51	56.892	ug/L	0.959	1	5531	986891	3
	V-1	51	57.380	ug/L	0.674	1	509	990677	2
	Cr	52	107.577	ug/L	1.429	1	16367	1598595	0
	Cr	53	109.208	ug/L	1.947	1	243	181851	0
	Mn	55	1130.245	ug/L	16.783	1	685	23472729	1
	Co	59	33.688	ug/L	0.118	0	119	495285	1
>	Ge	72		ug/L			592402	500838	0
	Ni	60	84.922	ug/L	0.759	0	86	259397	1
	Ni	62	86.207	ug/L	0.742	0	63	36590	1
	Cu	63	389.244	ug/L	9.332	2	91	2557105	2
	Cu	65	329.212	ug/L	4 735	1	47	992011	2
	Zn	66	2292.656	ug/L	41.603	1	191	3800826	2
	Zn	67	1786.111	ug/L	52.871	2	37	507295	2
	Zn	68	2093.922	ug/L	59.930	2	353	2525094	3
	As	75	36.910	ug/L	0.207	0	548	61580	1
	As-1	75	34.140	ug/L	0.147	0	7252	60715	1
	Se	82	88.846	ug/L	0.454	0	-19	15427	1
	Se	78	82.551	ug/L	0.409	0	7320	38890	1
	Mo	98	37.589	ug/L	0.624	1	10	175794	1
	Y	89		ug/L			394786	395396	0
	Kr	83		ug/L			872	721	4
>	In	115		ug/L			1077756	991643	1
	Ag	107	26.293	ug/L	0.280	1	26	333532	1
	Cd	111	29.810	ug/L	0.653	2	127	138781	0
	Cd	114	30.163	ug/L	0.320	1	19	348285	1
	Sb	121	24.489	ug/L	0.155	0	152	352953	1
	Sb	123	24.603	ug/L	0.316	1	115	266464	1
	Ba	135	145.087	ug/L	2.805	1	7	630114	1
	Ba	137	144.511	ug/L	5.074	3	20	1090339	1
>	Tb	159		ug/L			1262684	1206117	1
	Tl	205	22.812	ug/L	0.225	0	290	934991	0
	Pb	208	409.494	ug/L	3.258	0	247	21155805	0
	Bi	209		ug/L			3225208	2994257	2
	Th	232	23.311	ug/L	0.161	0	157	1183095	1
	U	238	23.209	ug/L	0.327	1	3	1185896	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 REF1 SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:21:45
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1188576	1
[	Be	9	37.384	ug/L	1.749	4	11	113972	3
	C	13		ug/L			104879	118471	2
	Cl	37		ug/L			4277164	4007519	2
[>	Sc	45		ug/L			1025260	893674	2
[	V	51	28.865	ug/L	0.604	2	5531	485868	0
[	V-1	51	28.926	ug/L	0.885	3	509	482391	0
[	Cr	52	27.160	ug/L	0.391	1	16367	400752	4
[	Cr	53	27.364	ug/L	0.667	2	243	44173	1
[	Mn	55	178.544	ug/L	3.273	1	685	3582416	1
[	Co	59	28.900	ug/L	0.605	2	119	410350	0
[>	Ge	72		ug/L			592402	492046	1
[	Ni	60	22.842	ug/L	0.767	3	86	68598	3
[	Ni	62	22.785	ug/L	0.617	2	63	9538	1
[	Cu	63	27.104	ug/L	0.098	0	91	174993	1
[	Cu	65	26.546	ug/L	0.282	1	47	78611	0
[	Zn	66	74.248	ug/L	1.055	1	191	121083	2
[	Zn	67	75.067	ug/L	0.672	0	37	20979	1
[	Zn	68	77.886	ug/L	0.103	0	353	92545	1
[	As	75	54.635	ug/L	0.654	1	548	89322	0
[	As-1	75	52.299	ug/L	0.460	0	7252	88165	0
[	Se	82	76.783	ug/L	1.584	2	-19	13094	1
[	Se	78	68.345	ug/L	0.356	0	7320	32676	0
[	Mo	98	16.957	ug/L	0.532	3	10	77895	1
	Y	89		ug/L			394786	443435	1
	Kr	83		ug/L			872	724	6
[>	In	115		ug/L			1077756	1001443	0
[	Ag	107	31.633	ug/L	0.051	0	26	405287	1
[	Cd	111	27.824	ug/L	0.331	1	127	130849	0
[	Cd	114	27.650	ug/L	0.503	1	19	322437	0
[	Sb	121	2.385	ug/L	0.035	1	152	34849	1
[	Sb	123	2.459	ug/L	0.040	1	115	26992	1
[	Ba	135	125.872	ug/L	0.733	0	7	552163	0
[	Ba	137	125.265	ug/L	1.021	0	20	954897	1
[>	Tb	159		ug/L			1262684	1186916	0
[	Tl	205	47.370	ug/L	0.301	0	290	1910568	0
[	Pb	208	49.343	ug/L	0.860	1	247	2508962	1
[	Bi	209		ug/L			3225208	3025939	0
[	Th	232	3.721	ug/L	0.061	1	157	185978	1
[	U	238	0.493	ug/L	0.005	0	3	24816	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:25:52
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\041813.cal

RR As, Se

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			1164625	1230894	2
[	**Be**	**9**	**25.964**	ug/L	0.652	2	11	81988	1
	C	**13**		ug/L			104879	120655	2
	Cl	**37**		ug/L			4277164	3954541	0
[>	**Sc**	**45**		ug/L			1025260	904751	1
[	**V**	**51**	**25.247**	ug/L	0.939	3	5531	430841	2
[	**V-1**	**51**	**25.389**	ug/L	0.751	2	509	428800	1
[	**Cr**	**52**	**24.674**	ug/L	0.649	2	16367	369713	0
[	**Cr**	**53**	**25.144**	ug/L	0.052	0	243	41124	1
[	**Mn**	**55**	**25.289**	ug/L	0.550	2	685	514238	0
[	**Co**	**59**	**25.577**	ug/L	0.592	2	119	367722	1
[>	**Ge**	**72**		ug/L			592402	504324	1
[	**Ni**	**60**	**26.000**	ug/L	0.599	2	86	80030	3
[	**Ni**	**62**	**26.544**	ug/L	0.716	2	63	11382	3
[	**Cu**	**63**	**26.777**	ug/L	0.346	1	91	177185	0
[	**Cu**	**65**	**26.765**	ug/L	0.342	1	47	81255	2
[	**Zn**	**66**	**85.455**	ug/L	1.334	1	191	142798	2
[	**Zn**	**67**	**78.247**	ug/L	1.828	2	37	22416	3
[	**Zn**	**68**	**83.852**	ug/L	1.293	1	353	102086	1
[	**As**	**75**	**30.813**	ug/L	0.248	0	548	51837	0
[	**As-1**	**75**	**26.471**	ug/L	0.295	1	7252	48793	2
[	**Se**	**82**	**95.298**	ug/L	2.036	2	-19	16660	0
[	**Se**	**78**	**84.192**	ug/L	0.731	0	7320	39812	1
[	**Mo**	**98**	**29.572**	ug/L	0.803	2	10	139225	1
	Y	**89**		ug/L			394786	358974	1
	Kr	**83**		ug/L			872	673	2
[>	**In**	**115**		ug/L			1077756	1002435	1
[	**Ag**	**107**	**28.045**	ug/L	0.449	1	26	359607	0
[	**Cd**	**111**	**26.450**	ug/L	0.469	1	127	124499	0
[	**Cd**	**114**	**26.577**	ug/L	0.802	3	19	310141	1
[	**Sb**	**121**	**26.241**	ug/L	0.620	2	152	382225	0
[	**Sb**	**123**	**26.444**	ug/L	0.481	1	115	289485	0
[	**Ba**	**135**	**25.793**	ug/L	0.560	2	7	113237	0
[	**Ba**	**137**	**25.659**	ug/L	0.740	2	20	195733	0
[>	**Tb**	**159**		ug/L			1262684	1180765	0
[	**Tl**	**205**	**23.879**	ug/L	0.330	1	290	958205	1
[	**Pb**	**208**	**25.601**	ug/L	0.224	0	247	1295143	0
[	**Bi**	**209**		ug/L			3225208	3098767	1
[	**Th**	**232**	**22.778**	ug/L	0.267	1	157	1131775	1
[	**U**	**238**	**24.292**	ug/L	0.283	1	3	1215177	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:31:05
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1190511	3
	Be	9	51.816	ug/L	1.136	2	11	158224	1
	C	13		ug/L			104879	116977	3
	Cl	37		ug/L			4277164	4123037	1
>	Sc	45		ug/L			1025260	879626	3
	V	51	49.903	ug/L	1.573	3	5531	823096	0
	V-1	51	50.142	ug/L	1.939	3	509	822506	0
	Cr	52	49.777	ug/L	1.340	2	16367	710730	2
	Cr	53	50.570	ug/L	2.371	4	243	80124	1
	Mn	55	47.955	ug/L	0.797	1	685	947415	1
	Co	59	49.386	ug/L	1.307	2	119	690008	1
>	Ge	72		ug/L			592402	483506	0
	Ni	60	50.715	ug/L	0.720	1	86	149568	0
	Ni	62	51.430	ug/L	0.880	1	63	21096	2
	Cu	63	51.148	ug/L	1.068	2	91	324407	1
	Cu	65	50.345	ug/L	0.743	1	47	146489	2
	Zn	66	52.886	ug/L	1.159	2	191	84777	1
	Zn	67	51.191	ug/L	0.966	1	37	14066	1
	Zn	68	52.290	ug/L	1.168	2	353	61143	1
	As	75	53.813	ug/L	0.515	0	548	86468	1
	As-1	75	52.718	ug/L	0.507	0	7252	87289	1
	Se	82	59.810	ug/L	0.554	0	-19	10020	0
	Se	78	54.547	ug/L	0.739	1	7320	26832	0
	Mo	98	59.030	ug/L	0.743	1	10	266494	0
	Y	89		ug/L			394786	357792	1
	Kr	83		ug/L			872	715	3
>	In	115		ug/L			1077756	975920	1
	Ag	107	53.161	ug/L	1.167	2	26	663609	1
	Cd	111	51.366	ug/L	0.759	1	127	235290	0
	Cd	114	52.102	ug/L	0.819	1	19	592045	0
	Sb	121	50.862	ug/L	0.839	1	152	721215	0
	Sb	123	51.591	ug/L	0.355	0	115	549819	0
	Ba	135	51.018	ug/L	0.705	1	7	218082	0
	Ba	137	50.180	ug/L	1.257	2	20	372695	1
>	Tb	159		ug/L			1262684	1173898	0
	Tl	205	45.571	ug/L	0.314	0	290	1817758	0
	Pb	208	47.997	ug/L	0.471	0	247	2413690	0
	Bi	209		ug/L			3225208	2942979	0
	Th	232	54.961	ug/L	0 677	1	157	2714555	0
	U	238	55.359	ug/L	0.562	1	3	2752948	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:37:57
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\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1182563	2
	Be	9	0.004	ug/L	0.004	94	11	23	51
	C	13		ug/L			104879	113687	2
	Cl	37		ug/L			4277164	3890922	1
>	Sc	45		ug/L			1025260	880926	1
	V	51	-0.002	ug/L	0 014	702	5531	4717	3
	V-1	51	-0.017	ug/L	0.002	14	509	157	24
	Cr	52	-0.003	ug/L	0.034	1244	16367	14020	2
	Cr	53	-0.052	ug/L	0.013	24	243	126	16
	Mn	55	0.013	ug/L	0.007	49	685	853	14
	Co	59	0.005	ug/L	0.004	79	119	168	30
>	Ge	72		ug/L			592402	493730	0
	Ni	60	-0.010	ug/L	0.004	44	86	42	30
	Ni	62	-0.007	ug/L	0.024	332	63	50	19
	Cu	63	0.018	ug/L	0.001	7	91	189	3
	Cu	65	0.007	ug/L	0.004	47	47	61	16
	Zn	66	0.139	ug/L	0.006	4	191	387	3
	Zn	67	0.084	ug/L	0.021	25	37	55	11
	Zn	68	0.130	ug/L	0.016	12	353	449	3
	As	75	-0.011	ug/L	0.017	153	548	439	7
	As-1	75	0.245	ug/L	0.033	13	7252	6430	1
	Se	82	0.014	ug/L	0.090	625	-19	-13	109
	Se	78	0.952	ug/L	0.109	11	7320	6472	1
	Mo	98	0.015	ug/L	0.001	4	10	77	3
	Y	89		ug/L			394786	346745	4
	Kr	83		ug/L			872	679	4
>	In	115		ug/L			1077756	996182	2
	Ag	107	0.006	ug/L	0.007	120	26	97	89
	Cd	111	0.002	ug/L	0.012	592	127	126	40
	Cd	114	0.011	ug/L	0.014	129	19	138	112
	Sb	121	0.097	ug/L	0.005	5	152	1539	6
	Sb	123	0.096	ug/L	0.009	8	115	1152	7
	Ba	135	0.010	ug/L	0.012	112	7	51	96
	Ba	137	0.007	ug/L	0.008	121	20	68	86
>	Tb	159		ug/L			1262684	1160708	0
	Tl	205	0.007	ug/L	0.004	58	290	526	28
	Pb	208	0.010	ug/L	0.007	67	247	707	45
	Bi	209		ug/L			3225208	3052746	0
	Th	232	0.247	ug/L	0.011	4	157	12200	5
	U	238	0.006	ug/L	0.003	57	3	286	55

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (CP-MS) GFA CVA **Analysis Date:** 4-19-13

MR Nexion SD	Analyst #4-22-13	Peer 4-22-13	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	✓	✓	See Log
ICB/CCB	✓	✓	See Log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysis Notes and CAR's:	—	—	

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-19-13 **Analyst:** M **Page:** 1 of 5

All corrections made by analyst unless otherwise noted. ** 4-19-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
zzz		zzzzzz			Air
		STD 0			
		1			
		2			
		3			
		4			
		5			
		Rinse Sample			** poor fit
		Dual Det Cal			
		STD 0			3027-13 (Sb Th high int c.o.)
		1			3025-12
		2			3028-6
		3			3028-7
		4			3027-16
		5			3028-8
		Rinse Sample			
		ICV			3023-5
		ICB			
		CCV1			
		CCB1			
		Low check			Sb low (NR)
		ICSA			
		ICSAB			
		~~CCV~~ B1			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-19-13 **Analyst:** MK **Page:** 2 **of** 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCV2			
		CCB2			
		WL49 MB1	REN	2	Se
		ADup			As, Se
		A			
		Aspk			
		CDup			Se
		C			
		Cspk			
		B		10	As, Se
		D		2	Se
		MB1spk			
		CCV3			Ag
		CCB3			
		WL49 MB2	REN	2	Se
		MB3	SWN	20	
		G			
		FDup			
		F			
		Fspk			
		WL74 D	SWN	20	
		E			
		WL49 MB3spk			Se
		MB2spk	REN	2	

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-9-13 **Analyst:** M **Page:** 3 **of** 5

All corrections made by analyst unless otherwise noted. 4-9-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCV4			
		CCB4			
		WL68 MB1	SWN	20	As Se
		A-L		100 ✓	
		A		20	
		ADup		✓	
		ASpk		✓	
ZZZ		ZZZ ~~ABOUT~~			
		B			
		WL74 B			
✓		WL68 Ref1		50 ✓	Se
		MBSpk		20	As, Se
		CCV5			
		CCB5			
		WL67 MB1	SWN	20	Se As
		ADup		✓	
		A			
		ASpk		✓	
		B			
		WL74 F			
		G			
		H			
		I			
		WL67 MB1Spk			As Se

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-9-13 **Analyst:** MK **Page:** 4 **of** 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCV6			
		CCB6			
		WL74 MB1	SWN	20	
		J-L		100	
		J		20	
		JDup			
		JSpk			
ZZZ		~~ZZZZZ~~ JPost			
		C			
OIL		Ref1		50	
		MBspk		20	
		CCV7			
		CCB7			
		WM23 MB	REN	2	
		WM32 MB			
		A			
		WM23 ADup			
		A			
		Aspk			
		MBspk			
		WM32MBspk			
		CCV8			
		CCB8			
DIL		WM47 MB	SWN	20	

AM 4-22-13

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, April 19, 2013 08:28:04
Sample Description:
Method File: C \NexIONData\Method\Daily Performancenew mth
Dataset File C.\NexIONData\Dataset\Default\Daily Performance Check.1972
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	3568.8	3568.831	90.582	2.5	Standard
	Mg	24.0	38879.6	38879.621	1196.829	3.1	Standard
	In	114.9	71437.9	71437.860	817.012	1.1	Standard
	Pb	208.0	31649.3	31649.254	149.914	0.5	Standard
	U	238.1	53959.1	53959.141	443.582	0.8	Standard
⌈	CeO	155.9	805.9	0.011	0.000	1.7	Standard
\>	Ce	139.9	75534.7	75534.719	1192.311	1.6	Standard
⌊	Ce++	70.0	610.6	0.008	0.000	4.4	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.03	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
-1862.00	Analog Stage Voltage
1300.00	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

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/19/2013 8:28:03 AM
nd Time: 4/19/2013 8:30:39 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3568.83
Obtained Intensity (Mg 23.985): 38879.62
Obtained Intensity (In 114.904): 71437.86
Obtained Intensity (Pb 207.977): 31649.25
Obtained Intensity (U 238.05): 53959.14
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (CeO 155.9 / Ce 139.905): 0.011 (=805.91 / 75534.72)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.008 (=610.56 / 75534.72)

SmartTune Wizard - Summary

ɔtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/19/2013 8:31:37 AM
ıd Time: 4/19/2013 8:32:35 AM

ɔrch Alignment - [Passed]

Vertical	Horizontal	Intensity
-1.32 mm	1.78 mm	83930.54

SmartTune Wizard - Summary

ɪtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 4/19/2013 8:32:50 AM
ıd Time: 4/19/2013 8:35:01 AM

ıss Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.714)
Target/Obtained mass (23.985/24.075), Target/Obtained resolution (0.7/0.687)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.697)

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 4/19/2013 8:35:37 AM
d Time: 4/19/2013 8:39:47 AM

toLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.992; Intercept = -10.55

SmartTune Wizard - Details

)ptimization Details

;martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

)ptimization Status

;tart Time: 4/19/2013 8:39:54 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): 5007.77
Obtained Intensity (Mg 23.985): 47112.21
Obtained Intensity (In 114.904): 84543.25
Obtained Intensity (Pb 207.977): 36250.28
Obtained Intensity (U 238.05): 63078.64
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=1022.53 / 87100.10)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=1001.06 / 87100.10)
[Passed] Optimum value(s): N/A

End Time: 4/19/2013 8:42:28 AM

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, April 19, 2013 10:14:07
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1987
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	5616.2	5616.225	57.496	1.0	Standard
	Mg	24.0	52852.7	52852.683	421.010	0.8	Standard
	In	114.9	100985.4	100985.353	690.387	0.7	Standard
	Pb	208.0	44222.4	44222.443	588.088	1.3	Standard
	U	238.1	78411.5	78411.452	486.813	0.6	Standard
⌈	CeO	155.9	1230.5	0.012	0.000	2.0	Standard
| >	Ce	139.9	100392.8	100392.779	469.147	0.5	Standard
⌊	Ce++	70.0	1234.8	0.012	0.000	1.9	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.03	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
-1862.00	Analog Stage Voltage
1400.00	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

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:21:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	13		ug/L				129716	1
	Cl	37		ug/L				4359635	3
>	Ge	72		ug/L				754356	3
	Ni	60		ug/L				83	11
	Ni	62		ug/L				89	10
	Cu	63		ug/L				257	8
	Cu	65		ug/L				102	11
	Zn	66		ug/L				202	4
	Zn	67		ug/L				32	30
	Zn	68		ug/L				485	5
	As	75		ug/L				431	5
	As-1	75		ug/L				9696	0
	Se	82		ug/L				4	162
	Se	78		ug/L				9817	0
	Y	89		ug/L				452367	1
	Kr	83		ug/L				721	1
>	In	115		ug/L				1192772	1
	Ag	107		ug/L				83	16
	Cd	111		ug/L				153	1
	Cd	114		ug/L				68	10
	Sb	121		ug/L				2040	7
	Sb	123		ug/L				1508	10
>	Tb	159		ug/L				1408020	1
	Tl	205		ug/L				698	1
	Pb	208		ug/L				726	4
	Bi	209		ug/L				3188747	0
	Th	232		ug/L				3367	6
	U	238		ug/L				106	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:25:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	**13**		ug/L			129716	133461	3
	Cl	**37**		ug/L			4359635	4256101	2
>	**Ge**	**72**		ug/L			754356	745364	0
	Ni	**60**	**0.500**	ug/L	0.010	1	83	2337	2
	Ni	**62**	**0.500**	ug/L	0.041	8	89	405	6
	Cu	**63**	**0.500**	ug/L	0.016	3	257	5357	3
	Cu	**65**	**0.500**	ug/L	0.028	5	102	2416	4
	Zn	**66**	**4.000**	ug/L	0.207	5	202	10925	4
	Zn	**67**	**4.000**	ug/L	0.120	3	32	1691	2
	Zn	**68**	**4.000**	ug/L	0.072	1	485	7980	1
	As	**75**	**0.200**	ug/L	0.021	10	431	921	5
	As-1	**75**	**0.200**	ug/L	0.053	26	9696	10210	1
	Se	**82**	**0.500**	ug/L	0.039	7	4	136	7
	Se	**78**	**0.500**	ug/L	0.131	26	9817	10153	0
	Y	**89**		ug/L			452367	454230	2
	Kr	**83**		ug/L			721	696	2
>	**In**	**115**		ug/L			1192772	1183942	2
	Ag	**107**	**0.200**	ug/L	0.002	0	83	2777	2
	Cd	**111**	**0.100**	ug/L	0.009	9	153	739	4
	Cd	**114**	**0.100**	ug/L	0.004	3	68	1527	1
	Sb	**121**	**0.200**	ug/L	0.014	6	2040	4502	3
	Sb	**123**	**0.200**	ug/L	0.022	11	1508	3405	3
>	**Tb**	**159**		ug/L			1408020	1419840	1
	Tl	**205**	**0.200**	ug/L	0.006	2	698	9951	1
	Pb	**208**	**0.100**	ug/L	0.002	2	726	6875	0
	Bi	**209**		ug/L			3188747	3180985	0
	Th	**232**	**0.200**	ug/L	0.023	11	3367	9955	7
	U	**238**	**0.200**	ug/L	0.003	1	106	11568	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:28:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	13		ug/L			129716	132208	4
	Cl	37		ug/L			4359635	4235053	2
>	Ge	72		ug/L			754356	759971	1
	Ni	60	10.000	ug/L	0.356	3	83	46380	3
	Ni	62	10.000	ug/L	0.138	1	89	6620	2
	Cu	63	9.999	ug/L	0.150	1	257	100864	0
	Cu	65	10.000	ug/L	0.435	4	102	47311	4
	Zn	66	10.022	ug/L	0.140	1	202	27985	1
	Zn	67	10.127	ug/L	0.262	2	32	4684	1
	Zn	68	10.077	ug/L	0.350	3	485	20735	3
	As	75	10.000	ug/L	0.164	1	431	25676	1
	As-1	75	9.999	ug/L	0.093	0	9696	35071	0
	Se	82	9.999	ug/L	0.317	3	4	2615	2
	Se	78	9.990	ug/L	0.347	3	9817	16549	1
	Y	89		ug/L			452367	454159	3
	Kr	83		ug/L			721	687	4
>	In	115		ug/L			1192772	1174192	1
	Ag	107	10.000	ug/L	0.244	2	83	129185	2
	Cd	111	10.000	ug/L	0.196	1	153	56545	0
	Cd	114	10.000	ug/L	0.249	2	68	145539	1
	Sb	121	10.001	ug/L	0.256	2	2040	172641	1
	Sb	123	10.001	ug/L	0.246	2	1508	132854	1
>	Tb	159		ug/L			1408020	1421709	0
	Tl	205	10.000	ug/L	0.216	2	698	464982	2
	Pb	208	10.000	ug/L	0.139	1	726	603837	0
	Bi	209		ug/L			3188747	3173139	1
	Th	232	10.002	ug/L	0 084	0	3367	552730	1
	U	238	10.000	ug/L	0.105	1	106	580870	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:32:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	13		ug/L			129716	130123	3
	Cl	37		ug/L			4359635	4365020	4
>	Ge	72		ug/L			754356	760643	2
	Ni	60	19.949	ug/L	0.605	3	83	91548	1
	Ni	62	20.050	ug/L	0.305	1	89	13324	1
	Cu	63	20.090	ug/L	1.011	5	257	206214	4
	Cu	65	19.946	ug/L	0.529	2	102	93319	1
	Zn	66	19.838	ug/L	0.772	3	202	53715	1
	Zn	67	19.862	ug/L	0.583	2	32	8949	1
	Zn	68	19.870	ug/L	0.615	3	485	39553	2
	As	75	20.003	ug/L	0.510	2	431	50987	2
	As-1	75	20.011	ug/L	0.547	2	9696	60553	1
	Se	82	19.949	ug/L	0.494	2	4	5164	1
	Se	78	19.986	ug/L	0.970	4	9817	23186	0
	Y	89		ug/L			452367	461357	0
	Kr	83		ug/L			721	678	3
>	In	115		ug/L			1192772	1183638	0
	Ag	107	20.024	ug/L	0.516	2	83	261948	2
	Cd	111	19.962	ug/L	0.073	0	153	112801	0
	Cd	114	19.968	ug/L	0.556	2	68	291028	2
	Sb	121	20.010	ug/L	0.255	1	2040	346967	1
	Sb	123	19.957	ug/L	0.060	0	1508	263558	0
>	Tb	159		ug/L			1408020	1385271	2
	Tl	205	20.109	ug/L	0.274	1	698	930507	2
	Pb	208	20.100	ug/L	0.435	2	726	1205626	0
	Bi	209		ug/L			3188747	3103882	0
	Th	232	20.230	ug/L	0.354	1	3367	1137863	1
	U	238	20.057	ug/L	0.514	2	106	1147878	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:36:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	13		ug/L			129716	127823	2
	Cl	37		ug/L			4359635	4358358	1
>	Ge	72		ug/L			754356	753020	1
	Ni	60	49.899	ug/L	1.358	2	83	224370	1
	Ni	62	49.920	ug/L	0.727	1	89	32455	1
	Cu	63	49.727	ug/L	1.874	3	257	491779	4
	Cu	65	49.765	ug/L	1.118	2	102	225107	1
	Zn	66	49.835	ug/L	1.156	2	202	131251	1
	Zn	67	49.965	ug/L	2.599	5	32	22162	4
	Zn	68	49.877	ug/L	1.245	2	485	96434	1
	As	75	49.868	ug/L	1.484	2	431	123562	1
	As-1	75	49.888	ug/L	1.795	3	9696	133607	1
	Se	82	49.696	ug/L	0.830	1	4	12356	0
	Se	78	49.802	ug/L	1.954	3	9817	41954	1
	Y	89		ug/L			452367	449195	2
	Kr	83		ug/L			721	710	1
>	In	115		ug/L			1192772	1149003	1
	Ag	107	49.924	ug/L	1.050	2	83	629081	2
	Cd	111	49.992	ug/L	0 438	0	153	273763	0
	Cd	114	49.833	ug/L	0.908	1	68	693390	1
	Sb	121	50.145	ug/L	1.238	2	2040	853338	2
	Sb	123	50.166	ug/L	1.174	2	1508	651603	1
>	Tb	159		ug/L			1408020	1407475	1
	Tl	205	50.010	ug/L	1.192	2	698	2352132	1
	Pb	208	49.783	ug/L	0.698	1	726	2968879	0
	Bi	209		ug/L			3188747	3074076	1
	Th	232	50.292	ug/L	0 598	1	3367	2955444	0
	U	238	49.957	ug/L	0.929	1	106	2892896	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:42:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	13		ug/L			129716	132163	1
	Cl	37		ug/L			4359635	4219205	0
>	Ge	72		ug/L			754356	720747	2
	Ni	60	100.236	ug/L	1.680	1	83	434757	1
	Ni	62	99.732	ug/L	2.493	2	89	61414	1
	Cu	63	100.191	ug/L	2.033	2	257	953788	0
	Cu	65	99.944	ug/L	3.019	3	102	431850	3
	Zn	66	100.046	ug/L	4.363	4	202	252319	2
	Zn	67	99.799	ug/L	1.507	1	32	42068	1
	Zn	68	99.374	ug/L	2.408	2	485	179690	0
	As	75	100.406	ug/L	3.361	3	431	240923	1
	As-1	75	100.441	ug/L	3.189	3	9696	251632	0
	Se	82	100.157	ug/L	3.298	3	4	23950	1
	Se	78	100.339	ug/L	2.505	2	9817	72099	0
	Y	89		ug/L			452367	441015	1
	Kr	83		ug/L			721	757	1
>	In	115		ug/L			1192772	1130542	1
	Ag	107	99.786	ug/L	2.988	2	83	1227980	2
	Cd	111	99.619	ug/L	1.286	1	153	529859	0
	Cd	114	99.773	ug/L	1.295	1	68	1355605	0
	Sb	121	100.154	ug/L	2.071	2	2040	1683532	0
	Sb	123	99.647	ug/L	2.876	2	1508	1257163	1
>	Tb	159		ug/L			1408020	1379195	1
	Tl	205	99.693	ug/L	1.851	1	698	4547880	1
	Pb	208	99.875	ug/L	1.374	1	726	5811384	0
	Bi	209		ug/L			3188747	2924754	1
	Th	232	99.724	ug/L	1.461	1	3367	5687588	2
	U	238	99.578	ug/L	1.755	1	106	5571892	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:48:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.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
	C	13		ug/L			129716	125814	1
	Cl	37		ug/L			4359635	4242962	0
>	Ge	72		ug/L			754356	751772	0
	Ni	60	0.000	ug/L	0.003	1841	83	84	13
	Ni	62	-0.025	ug/L	0.029	116	89	73	25
	Cu	63	-0.004	ug/L	0.002	46	257	221	7
	Cu	65	-0.002	ug/L	0.002	72	102	92	6
	Zn	66	-0.001	ug/L	0.003	447	202	200	3
	Zn	67	0.018	ug/L	0.024	137	32	40	26
	Zn	68	-0.018	ug/L	0.008	44	485	449	3
	As	75	-0.007	ug/L	0.006	91	431	412	3
	As-1	75	-0.011	ug/L	0.042	370	9696	9635	0
	Se	82	0.041	ug/L	0.026	64	4	15	43
	Se	78	-0.034	ug/L	0.146	436	9817	9761	0
	Y	89		ug/L			452367	448656	2
	Kr	83		ug/L			721	672	2
>	In	115		ug/L			1192772	1175671	1
	Ag	107	-0.001	ug/L	0.001	42	83	63	11
	Cd	111	-0.004	ug/L	0.001	28	153	131	3
	Cd	114	0.000	ug/L	0.001	1635	68	68	17
	Sb	121	0.082	ug/L	0.027	32	2040	3436	13
	Sb	123	0.083	ug/L	0.032	38	1508	2575	16
>	Tb	159		ug/L			1408020	1394510	0
	Tl	205	0.002	ug/L	0.002	90	698	770	8
	Pb	208	-0.001	ug/L	0.000	25	726	640	3
	Bi	209		ug/L			3188747	3165160	0
	Th	232	0.194	ug/L	0.013	6	3367	14506	5
	U	238	0.002	ug/L	0.000	21	106	204	9

Sample Information

Sample Date/Time: Friday, April 19, 2013 10:42:07
Method File: C:\NexION Data\Method\200.8GFA+.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
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**	0.013	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.003	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	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	**1.0000**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**1.0000**	0.011	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**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.033	0.20	10	20	50	100
Pb	208	**1.0000**	0.042	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.041	0.20	10	20	50	100
U	238	**1.0000**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:54:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	132407	2
	Cl	37		ug/L			4359635	4216667	4
>	Ge	72		ug/L			754356	752326	1
	Ni	60	49.164	ug/L	0.864	1	83	222648	1
	Ni	62	49.912	ug/L	0.660	1	89	32133	0
	Cu	63	50.648	ug/L	1.697	3	257	503464	2
	Cu	65	51.126	ug/L	1.506	2	102	230607	2
	Zn	66	49.097	ug/L	1.221	2	202	129399	1
	Zn	67	48.726	ug/L	1.214	2	32	21459	2
	Zn	68	49.201	ug/L	0.409	0	485	93147	1
	As	75	49.080	ug/L	0.768	1	431	123200	1
	As-1	75	49.249	ug/L	0.757	1	9696	133769	1
	Se	82	77.316	ug/L	1.534	1	4	18978	0
	Se	78	75.871	ug/L	1.323	1	9817	59296	0
	Y	89		ug/L			452367	453742	1
	Kr	83		ug/L			721	710	4
>	In	115		ug/L			1192772	1158620	0
	Ag	107	49.259	ug/L	1.547	3	83	621337	2
	Cd	111	48.618	ug/L	0.598	1	153	265118	1
	Cd	114	48.754	ug/L	0.555	1	68	679001	1
	Sb	121	49.596	ug/L	0.823	1	2040	855489	0
	Sb	123	50.325	ug/L	0.323	0	1508	651579	0
>	Tb	159		ug/L			1408020	1405419	1
	Tl	205	49.861	ug/L	0.336	0	698	2318404	1
	Pb	208	50.230	ug/L	0.476	0	726	2978817	0
	Bi	209		ug/L			3188747	3067689	0
	Th	232	50.126	ug/L	0.701	1	3367	2914717	1
	U	238	50.172	ug/L	1 210	2	106	2860654	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:00:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	128847	2
	Cl	37		ug/L			4359635	4162354	1
>	Ge	72		ug/L			754356	738241	2
	Ni	60	-0.003	ug/L	0.003	81	83	67	15
	Ni	62	-0.026	ug/L	0.008	31	89	70	5
	Cu	63	-0.003	ug/L	0.001	40	257	217	4
	Cu	65	-0.001	ug/L	0.003	181	102	93	12
	Zn	66	-0.006	ug/L	0.003	52	202	183	2
	Zn	67	-0.012	ug/L	0.016	133	32	27	25
	Zn	68	-0.005	ug/L	0.013	268	485	466	6
	As	75	0.002	ug/L	0.016	800	431	426	9
	As-1	75	0.056	ug/L	0.099	177	9696	9623	0
	Se	82	0.024	ug/L	0.041	171	4	10	94
	Se	78	0.223	ug/L	0.366	164	9817	9746	0
	Y	89		ug/L			452367	452088	0
	Kr	83		ug/L			721	701	1
>	In	115		ug/L			1192772	1169917	2
	Ag	107	-0.002	ug/L	0.001	22	83	50	13
	Cd	111	-0.006	ug/L	0.002	42	153	119	12
	Cd	114	-0.001	ug/L	0.001	61	68	52	18
	Sb	121	-0.037	ug/L	0.011	31	2040	1359	13
	Sb	123	-0.035	ug/L	0.012	34	1508	1027	14
>	Tb	159		ug/L			1408020	1393612	0
	Tl	205	-0.001	ug/L	0.003	263	698	647	18
	Pb	208	-0.001	ug/L	0.002	300	726	676	19
	Bi	209		ug/L			3188747	3168462	1
	Th	232	0.084	ug/L	0.007	8	3367	8189	4
	U	238	0.001	ug/L	0.001	124	106	156	40

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:04:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	128230	1
	Cl	37		ug/L			4359635	4173447	1
>	Ge	72		ug/L			754356	741657	1
	Ni	60	49.879	ug/L	3.563	7	83	222525	5
	Ni	62	50.369	ug/L	0.382	0	89	31973	2
	Cu	63	50.054	ug/L	1.449	2	257	490429	1
	Cu	65	50.821	ug/L	0.450	0	102	226045	2
	Zn	66	51.305	ug/L	1.323	2	202	133267	0
	Zn	67	50.798	ug/L	1.571	3	32	22048	1
	Zn	68	52.125	ug/L	2.533	4	485	97204	3
	As	75	49.628	ug/L	0.828	1	431	122783	0
	As-1	75	49.680	ug/L	1.077	2	9696	132913	0
	Se	82	50.370	ug/L	0.775	1	4	12191	2
	Se	78	49.726	ug/L	1.448	2	9817	41631	0
	Y	89		ug/L			452367	456053	2
	Kr	83		ug/L			721	724	3
>	In	115		ug/L			1192772	1151835	1
	Ag	107	49.848	ug/L	1 327	2	83	625021	1
	Cd	111	50.083	ug/L	1.070	2	153	271464	1
	Cd	114	49.687	ug/L	0.755	1	68	687908	1
	Sb	121	49.500	ug/L	0.855	1	2040	848777	0
	Sb	123	49.802	ug/L	0.606	1	1508	641005	0
>	Tb	159		ug/L			1408020	1388133	2
	Tl	205	50.637	ug/L	0.791	1	698	2324869	1
	Pb	208	50.101	ug/L	1.777	3	726	2932942	0
	Bi	209		ug/L			3188747	3035266	0
	Th	232	50.523	ug/L	1 081	2	3367	2901107	2
	U	238	50.646	ug/L	1.510	2	106	2851230	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:10:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	**13**		ug/L			129716	123955	1
	Cl	**37**		ug/L			4359635	4018524	1
>	**Ge**	**72**		ug/L			754356	752495	1
	Ni	**60**	**0.001**	ug/L	0.009	1816	83	85	47
	Ni	**62**	**-0.033**	ug/L	0.010	28	89	67	9
	Cu	**63**	**-0.001**	ug/L	0.005	589	257	247	19
	Cu	**65**	**0.000**	ug/L	0.006	1673	102	103	23
	Zn	**66**	**0.000**	ug/L	0.007	1890	202	202	8
	Zn	**67**	**0.000**	ug/L	0.011	3640	32	32	12
	Zn	**68**	**-0.015**	ug/L	0.013	85	485	456	3
	As	**75**	**0.008**	ug/L	0.002	30	431	449	1
	As-1	**75**	**0.042**	ug/L	0.109	262	9696	9775	1
	Se	**82**	**0.048**	ug/L	0.068	143	4	16	102
	Se	**78**	**0.134**	ug/L	0.423	316	9817	9877	1
	Y	**89**		ug/L			452367	452401	1
	Kr	**83**		ug/L			721	685	6
>	**In**	**115**		ug/L			1192772	1169110	1
	Ag	**107**	**-0.002**	ug/L	0.001	52	83	59	19
	Cd	**111**	**-0.006**	ug/L	0.001	16	153	119	3
	Cd	**114**	**-0.001**	ug/L	0.001	51	68	51	14
	Sb	**121**	**-0.014**	ug/L	0.018	132	2040	1757	16
	Sb	**123**	**-0.009**	ug/L	0.018	202	1508	1358	16
>	**Tb**	**159**		ug/L			1408020	1397222	0
	Tl	**205**	**0.001**	ug/L	0 001	109	698	728	5
	Pb	**208**	**-0.000**	ug/L	0.003	861	726	699	27
	Bi	**209**		ug/L			3188747	3179969	0
	Th	**232**	**0.120**	ug/L	0.013	10	3367	10271	7
	U	**238**	**0.004**	ug/L	0.007	159	106	349	111

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:14:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	135684	1
	Cl	37		ug/L			4359635	4072729	1
>	Ge	72		ug/L			754356	759413	0
	Ni	60	0.485	ug/L	0.015	3	83	2298	3
	Ni	62	0.495	ug/L	0.033	6	89	410	4
	Cu	63	0.496	ug/L	0.023	4	257	5233	4
	Cu	65	0.492	ug/L	0.023	4	102	2341	3
	Zn	66	3.948	ug/L	0.022	0	202	10691	0
	Zn	67	3.666	ug/L	0.189	5	32	1660	5
	Zn	68	3.913	ug/L	0.110	2	485	7925	1
	As	75	0.185	ug/L	0.025	13	431	901	6
	As-1	75	0.145	ug/L	0.014	9	9696	10130	0
	Se	82	0.512	ug/L	0.098	19	4	131	17
	Se	78	0.317	ug/L	0.060	19	9817	10091	0
	Y	89		ug/L			452367	450012	4
	Kr	83		ug/L			721	707	2
>	In	115		ug/L			1192772	1177306	1
	Ag	107	0.200	ug/L	0.003	1	83	2651	0
	Cd	111	0.099	ug/L	0.001	1	153	700	0
	Cd	114	0.103	ug/L	0.000	0	68	1522	1
	Sb	121	0.114	ug/L	0.010	8	2040	4009	4
	Sb	123	0.120	ug/L	0.009	7	1508	3064	3
>	Tb	159		ug/L			1408020	1387809	1
	Tl	205	0.194	ug/L	0.000	0	698	9603	1
	Pb	208	0.098	ug/L	0.002	2	726	6446	0
	Bi	209		ug/L			3188747	3146359	0
	Th	232	0.138	ug/L	0.014	9	3367	11255	6
	U	238	0.199	ug/L	0.002	0	106	11310	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:17:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	216398	4
	Cl	37		ug/L			4359635	11566154	7
>	Ge	72		ug/L			754356	711442	5
	Ni	60	0.335	ug/L	0.030	8	83	1507	3
	Ni	62	1.786	ug/L	0.091	5	89	1167	3
	Cu	63	0.787	ug/L	0.044	5	257	7625	1
	Cu	65	0.334	ug/L	0.029	8	102	1518	3
	Zn	66	0.912	ug/L	0.057	6	202	2456	1
	Zn	67	4.877	ug/L	0.292	5	32	2055	2
	Zn	68	0.411	ug/L	0.026	6	485	1187	1
	As	75	0.110	ug/L	0.027	24	431	667	9
	As-1	75	0.233	ug/L	0.227	97	9696	9681	0
	Se	82	-0.191	ug/L	0.036	19	4	-39	25
	Se	78	0.557	ug/L	0.911	163	9817	9582	0
	Y	89		ug/L			452367	433875	1
	Kr	83		ug/L			721	886	1
>	In	115		ug/L			1192772	1117335	1
	Ag	107	0.015	ug/L	0.001	5	83	263	3
	Cd	111	0.114	ug/L	0.017	14	153	744	13
	Cd	114	0.240	ug/L	0.006	2	68	3283	3
	Sb	121	-0.027	ug/L	0.003	10	2040	1469	4
	Sb	123	-0.020	ug/L	0.005	27	1508	1166	6
>	Tb	159		ug/L			1408020	1368795	1
	Tl	205	0.027	ug/L	0.003	9	698	1883	5
	Pb	208	0.027	ug/L	0.001	4	726	2283	2
	Bi	209		ug/L			3188747	2837898	1
	Th	232	0.104	ug/L	0.051	49	3367	9180	31
	U	238	-0.001	ug/L	0.000	66	106	74	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:23:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	219387	3
	Cl	37		ug/L			4359635	11996628	1
>	Ge	72		ug/L			754356	710336	3
	Ni	60	19.935	ug/L	0.700	3	83	85239	1
	Ni	62	21.720	ug/L	0.224	1	89	13254	4
	Cu	63	20.168	ug/L	0.295	1	257	189421	2
	Cu	65	19.973	ug/L	0.835	4	102	85062	1
	Zn	66	19.265	ug/L	0.948	4	202	48018	2
	Zn	67	21.604	ug/L	1.020	4	32	8992	1
	Zn	68	18.054	ug/L	0.353	1	485	32547	1
	As	75	19.425	ug/L	0.701	3	431	46251	0
	As-1	75	19.366	ug/L	0.812	4	9696	55167	0
	Se	82	-0.153	ug/L	0.093	60	4	-30	68
	Se	78	0.398	ug/L	0.440	110	9817	9483	0
	Y	89		ug/L			452367	422164	1
	Kr	83		ug/L			721	854	3
>	In	115		ug/L			1192772	1124532	0
	Ag	107	21.138	ug/L	0.695	3	83	258880	3
	Cd	111	19.940	ug/L	0.165	0	153	105621	0
	Cd	114	19.918	ug/L	0.418	2	68	269237	1
	Sb	121	-0.021	ug/L	0.006	27	2040	1579	6
	Sb	123	-0.019	ug/L	0.005	23	1508	1181	4
>	Tb	159		ug/L			1408020	1382246	1
	Tl	205	0.022	ug/L	0.001	4	698	1702	3
	Pb	208	0.027	ug/L	0.001	2	726	2262	1
	Bi	209		ug/L			3188747	2861115	1
	Th	232	0.003	ug/L	0.007	212	3367	3504	12
	U	238	-0.001	ug/L	0.000	5	106	46	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:29:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	**13**		ug/L			129716	135321	1
	Cl	**37**		ug/L			4359635	4067667	1
>	**Ge**	**72**		ug/L			754356	745749	1
	Ni	**60**	**0.051**	ug/L	0.003	5	83	311	3
	Ni	**62**	**0.003**	ug/L	0.020	630	89	90	14
	Cu	**63**	**0.017**	ug/L	0.002	14	257	419	4
	Cu	**65**	**0.018**	ug/L	0.003	18	102	182	7
	Zn	**66**	**0.790**	ug/L	0.034	4	202	2259	2
	Zn	**67**	**0.722**	ug/L	0.044	6	32	347	4
	Zn	**68**	**0.756**	ug/L	0.018	2	485	1890	1
	As	**75**	**-0.004**	ug/L	0.002	64	431	417	1
	As-1	**75**	**-0.037**	ug/L	0.091	246	9696	9492	1
	Se	**82**	**0.007**	ug/L	0.034	471	4	6	125
	Se	**78**	**-0.159**	ug/L	0.351	220	9817	9600	1
	Y	**89**		ug/L			452367	446698	0
	Kr	**83**		ug/L			721	682	1
>	**In**	**115**		ug/L			1192772	1191884	1
	Ag	**107**	**-0.002**	ug/L	0.000	13	83	56	5
	Cd	**111**	**-0.010**	ug/L	0.000	4	153	97	2
	Cd	**114**	**-0.001**	ug/L	0.000	31	68	47	12
	Sb	**121**	**-0.094**	ug/L	0.003	3	2040	369	15
	Sb	**123**	**-0.093**	ug/L	0.003	3	1508	274	15
>	**Tb**	**159**		ug/L			1408020	1409700	1
	Tl	**205**	**-0.002**	ug/L	0 001	52	698	595	10
	Pb	**208**	**0.019**	ug/L	0.001	2	726	1864	1
	Bi	**209**		ug/L			3188747	3180566	1
	Th	**232**	**-0.050**	ug/L	0.001	1	3367	458	11
	U	**238**	**-0.001**	ug/L	0.000	3	106	28	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:34:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	124541	4
	Cl	37		ug/L			4359635	4220436	2
>	Ge	72		ug/L			754356	741491	1
	Ni	60	49.109	ug/L	1.274	2	83	219193	2
	Ni	62	49.708	ug/L	0.390	0	89	31545	1
	Cu	63	50.116	ug/L	1.060	2	257	491140	3
	Cu	65	49.666	ug/L	0.865	1	102	220807	0
	Zn	66	48.885	ug/L	2.029	4	202	126961	2
	Zn	67	50.526	ug/L	1.773	3	32	21925	2
	Zn	68	49.196	ug/L	0.793	1	485	91789	1
	As	75	48.664	ug/L	1 264	2	431	120378	1
	As-1	75	48.748	ug/L	1.220	2	9696	130574	0
	Se	82	49.942	ug/L	1.026	2	4	12083	0
	Se	78	49.434	ug/L	1.057	2	9817	41439	0
	Y	89		ug/L			452367	440745	0
	Kr	83		ug/L			721	742	6
>	In	115		ug/L			1192772	1160101	1
	Ag	107	50.998	ug/L	1.344	2	83	644144	2
	Cd	111	50.931	ug/L	0.803	1	153	278110	2
	Cd	114	50.016	ug/L	0.496	0	68	697493	2
	Sb	121	49.450	ug/L	0.951	1	2040	854019	1
	Sb	123	49.963	ug/L	1.104	2	1508	647657	1
>	Tb	159		ug/L			1408020	1399539	0
	Tl	205	50.595	ug/L	0.820	1	698	2342470	0
	Pb	208	50.244	ug/L	0 570	1	726	2967207	0
	Bi	209		ug/L			3188747	3043525	1
	Th	232	49.939	ug/L	1.064	2	3367	2891548	1
	U	238	50.127	ug/L	0 792	1	106	2846472	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:40:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	129732	2
	Cl	37		ug/L			4359635	4169677	3
>	Ge	72		ug/L			754356	742154	3
	Ni	60	-0.007	ug/L	0.002	33	83	52	16
	Ni	62	-0.049	ug/L	0.006	11	89	56	9
	Cu	63	-0.010	ug/L	0.002	16	257	157	6
	Cu	65	-0.006	ug/L	0.002	28	102	72	9
	Zn	66	0.025	ug/L	0.010	41	202	263	7
	Zn	67	0.021	ug/L	0.012	55	32	41	10
	Zn	68	0.001	ug/L	0.010	707	485	480	3
	As	75	-0.007	ug/L	0.006	95	431	407	7
	As-1	75	0.048	ug/L	0.123	253	9696	9653	0
	Se	82	0.031	ug/L	0.015	47	4	12	27
	Se	78	0.209	ug/L	0.519	248	9817	9784	0
	Y	89		ug/L			452367	441774	1
	Kr	83		ug/L			721	683	1
>	In	115		ug/L			1192772	1181918	0
	Ag	107	-0.002	ug/L	0.001	33	83	52	20
	Cd	111	-0.009	ug/L	0.001	13	153	103	5
	Cd	114	-0.002	ug/L	0.000	7	68	43	3
	Sb	121	-0.019	ug/L	0.014	72	2040	1683	14
	Sb	123	-0.016	ug/L	0.013	82	1508	1284	12
>	Tb	159		ug/L			1408020	1403922	1
	Tl	205	-0.003	ug/L	0.001	28	698	551	6
	Pb	208	-0.001	ug/L	0.000	11	726	637	1
	Bi	209		ug/L			3188747	3170182	0
	Th	232	0.116	ug/L	0.012	10	3367	10064	8
	U	238	-0.000	ug/L	0.000	3313	106	105	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:46:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	138336	2
	Cl	37		ug/L			4359635	4097886	0
>	Ge	72		ug/L			754356	763218	0
	Ni	60	0.004	ug/L	0.004	104	83	100	16
	Ni	62	-0.023	ug/L	0.010	45	89	75	8
	Cu	63	0.028	ug/L	0 002	7	257	541	3
	Cu	65	0.029	ug/L	0.002	7	102	236	3
	Zn	66	0.217	ug/L	0.018	8	202	783	5
	Zn	67	0.195	ug/L	0.037	18	32	120	13
	Zn	68	0.198	ug/L	0 007	3	485	868	0
	As	75	0.004	ug/L	0.005	123	431	446	2
	As-1	75	-0.008	ug/L	0.015	179	9696	9789	0
	Se	82	-0.027	ug/L	0.056	206	4	11	120
	Se	78	-0.039	ug/L	0.040	103	9817	9906	0
	Y	89		ug/L			452367	468921	2
	Kr	83		ug/L			721	716	2
>	In	115		ug/L			1192772	1214850	0
	Ag	107	-0.003	ug/L	0.001	17	83	43	16
	Cd	111	-0.008	ug/L	0.002	22	153	109	9
	Cd	114	-0.002	ug/L	0.000	23	68	43	15
	Sb	121	-0.079	ug/L	0.006	7	2040	648	15
	Sb	123	-0.076	ug/L	0.003	4	1508	507	7
>	Tb	159		ug/L			1408020	1440567	1
	Tl	205	-0.010	ug/L	0 000	2	698	262	5
	Pb	208	0.049	ug/L	0.001	1	726	3738	0
	Bi	209		ug/L			3188747	3259881	1
	Th	232	0.021	ug/L	0.011	53	3367	4684	15
	U	238	-0.001	ug/L	0.000	5	106	38	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:49:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	171075	4
	Cl	37		ug/L			4359635	6319800	1
>	Ge	72		ug/L			754356	660393	1
	Ni	60	29.712	ug/L	0.723	2	83	118174	3
	Ni	62	32.153	ug/L	1.448	4	89	18205	5
	Cu	63	21.978	ug/L	0.452	2	257	191952	3
	Cu	65	20.486	ug/L	0.154	0	102	81176	1
	Zn	66	285.840	ug/L	8.240	2	202	660313	1
	Zn	67	253.008	ug/L	6.222	2	32	97671	1
	Zn	68	276.189	ug/L	7.525	2	485	456875	1
	As	75	1.393	ug/L	0.029	2	431	3436	3
	As-1	75	1.046	ug/L	0.044	4	9696	10800	1
	Se	82	2.405	ug/L	0.052	2	4	522	3
	Se	78	1.129	ug/L	0.235	20	9817	9239	1
	Y	89		ug/L			452367	409645	2
	Kr	83		ug/L			721	725	3
>	In	115		ug/L			1192772	1123636	2
	Ag	107	0.014	ug/L	0.002	13	83	244	9
	Cd	111	0.536	ug/L	0.013	2	153	2979	1
	Cd	114	0.540	ug/L	0.010	1	68	7350	2
	Sb	121	4.402	ug/L	0.112	2	2040	75381	1
	Sb	123	4.452	ug/L	0.064	1	1508	57183	0
>	Tb	159		ug/L			1408020	1373250	1
	Tl	205	0.023	ug/L	0.000	1	698	1731	1
	Pb	208	18.354	ug/L	0.229	1	726	1063918	0
	Bi	209		ug/L			3188747	2643833	1
	Th	232	0.023	ug/L	0.024	103	3367	4564	27
	U	238	0.007	ug/L	0.000	1	106	484	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:53:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
	C	13		ug/L			129716	165607	0
	Cl	37		ug/L			4359635	6291612	4
>	Ge	72		ug/L			754356	650206	1
	Ni	60	28.426	ug/L	1.109	3	83	111282	3
	Ni	62	29.609	ug/L	0.513	1	89	16510	3
	Cu	63	18.617	ug/L	0.059	0	257	160115	1
	Cu	65	17.380	ug/L	0.523	3	102	67800	1
	Zn	66	280.550	ug/L	10.777	3	202	638043	2
	Zn	67	251.644	ug/L	7.213	2	32	95661	2
	Zn	68	267.229	ug/L	6.312	2	485	435258	0
	As	75	1.415	ug/L	0.052	3	431	3429	2
	As-1	75	1.049	ug/L	0.159	15	9696	10639	1
	Se	82	2.392	ug/L	0.075	3	4	511	2
	Se	78	1.072	ug/L	0.510	47	9817	9063	1
	Y	89		ug/L			452367	408870	3
	Kr	83		ug/L			721	732	2
>	In	115		ug/L			1192772	1124962	1
	Ag	107	0.014	ug/L	0.001	5	83	247	2
	Cd	111	0.533	ug/L	0.021	3	153	2966	2
	Cd	114	0.523	ug/L	0.011	2	68	7132	2
	Sb	121	4.350	ug/L	0.121	2	2040	74591	1
	Sb	123	4.310	ug/L	0.108	2	1508	55474	0
>	Tb	159		ug/L			1408020	1369229	1
	Tl	205	0.023	ug/L	0.001	5	698	1737	3
	Pb	208	17.797	ug/L	0.356	2	726	1028623	0
	Bi	209		ug/L			3188747	2691006	1
	Th	232	-0.028	ug/L	0.002	8	3367	1677	7
	U	238	0.007	ug/L	0.000	2	106	481	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:57:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	164934	5
	Cl	37		ug/L			4359635	6415948	5
>	Ge	72		ug/L			754356	668385	1
	Ni	60	51.413	ug/L	1.769	3	83	206839	3
	Ni	62	52.754	ug/L	1.689	3	89	30161	1
	Cu	63	42.092	ug/L	0.440	1	257	371836	1
	Cu	65	40.517	ug/L	0.590	1	102	162385	0
	Zn	66	328.359	ug/L	7.607	2	202	767745	0
	Zn	67	302.149	ug/L	14.150	4	32	118031	3
	Zn	68	324.271	ug/L	8.114	2	485	542886	1
	As	75	24.668	ug/L	0.707	2	431	55186	1
	As-1	75	24.654	ug/L	0.754	3	9696	63771	1
	Se	82	71.584	ug/L	1.834	2	4	15609	0
	Se	78	69.160	ug/L	1.665	2	9817	48785	1
	Y	89		ug/L			452367	416749	1
	Kr	83		ug/L			721	742	3
>	In	115		ug/L			1192772	1144644	1
	Ag	107	20.352	ug/L	0.733	3	83	253602	2
	Cd	111	23.712	ug/L	0.601	2	153	127782	0
	Cd	114	23.433	ug/L	0.687	2	68	322346	1
	Sb	121	28.318	ug/L	1.021	3	2040	483265	2
	Sb	123	28.792	ug/L	0.837	2	1508	368780	1
>	Tb	159		ug/L			1408020	1395140	0
	Tl	205	22.777	ug/L	0.211	0	698	1051643	0
	Pb	208	40.067	ug/L	0.580	1	726	2358901	0
	Bi	209		ug/L			3188747	2733951	0
	Th	232	18.586	ug/L	0 057	0	3367	1075035	1
	U	238	24.222	ug/L	0 555	2	106	1371150	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:00:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	172909	1
	Cl	37		ug/L			4359635	6485016	6
>	Ge	72		ug/L			754356	663804	1
	Ni	60	26.582	ug/L	0.560	2	83	106276	3
	Ni	62	27.907	ug/L	0.783	2	89	15887	2
	Cu	63	2.816	ug/L	0.057	2	257	24912	0
	Cu	65	1.408	ug/L	0.071	5	102	5688	3
	Zn	66	73.578	ug/L	2.833	3	202	170989	2
	Zn	67	69.210	ug/L	1.660	2	32	26880	2
	Zn	68	72.616	ug/L	1.464	2	485	121119	3
	As	75	1.075	ug/L	0.057	5	431	2751	2
	As-1	75	0.707	ug/L	0.086	12	9696	10103	0
	Se	82	2.268	ug/L	0.140	6	4	495	4
	Se	78	0.885	ug/L	0.256	28	9817	9146	0
	Y	89		ug/L			452367	409151	2
	Kr	83		ug/L			721	711	1
>	In	115		ug/L			1192772	1116709	2
	Ag	107	0.001	ug/L	0.001	79	83	89	9
	Cd	111	0.139	ug/L	0.005	3	153	876	2
	Cd	114	0.140	ug/L	0.005	3	68	1944	1
	Sb	121	4.126	ug/L	0.141	3	2040	70315	0
	Sb	123	4.220	ug/L	0.130	3	1508	53923	0
>	Tb	159		ug/L			1408020	1413860	0
	Tl	205	0.001	ug/L	0.001	54	698	749	4
	Pb	208	4.668	ug/L	0.052	1	726	279170	0
	Bi	209		ug/L			3188747	2740516	0
	Th	232	0.038	ug/L	0.017	45	3367	5606	17
	U	238	0.010	ug/L	0.002	19	106	703	16

WL57:0191

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:04:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	**13**		ug/L			129716	171217	1
	Cl	**37**		ug/L			4359635	5973104	3
>	**Ge**	**72**		ug/L			754356	660222	2
	Ni	**60**	**26.691**	ug/L	1.120	4	83	106085	3
	Ni	**62**	**28.062**	ug/L	0.732	2	89	15886	2
	Cu	**63**	**2.888**	ug/L	0.199	6	257	25376	4
	Cu	**65**	**1.455**	ug/L	0.097	6	102	5839	4
	Zn	**66**	**73.595**	ug/L	3.046	4	202	170031	1
	Zn	**67**	**68.880**	ug/L	0.784	1	32	26613	3
	Zn	**68**	**72.429**	ug/L	2.740	3	485	120083	3
	As	**75**	**1.086**	ug/L	0.078	7	431	2757	4
	As-1	**75**	**0.735**	ug/L	0.091	12	9696	10108	0
	Se	**82**	**2.219**	ug/L	0.258	11	4	481	9
	Se	**78**	**0.937**	ug/L	0.326	34	9817	9125	0
	Y	**89**		ug/L			452367	417007	2
	Kr	**83**		ug/L			721	730	1
>	**In**	**115**		ug/L			1192772	1128175	1
	Ag	**107**	**-0.001**	ug/L	0.001	125	83	70	15
	Cd	**111**	**0.135**	ug/L	0.008	6	153	863	5
	Cd	**114**	**0.139**	ug/L	0.006	4	68	1955	5
	Sb	**121**	**4.076**	ug/L	0.095	2	2040	70216	0
	Sb	**123**	**4.128**	ug/L	0.114	2	1508	53344	1
>	**Tb**	**159**		ug/L			1408020	1455057	1
	Tl	**205**	**-0.000**	ug/L	0.001	349	698	712	4
	Pb	**208**	**4.592**	ug/L	0.112	2	726	282541	0
	Bi	**209**		ug/L			3188747	2780661	1
	Th	**232**	**-0.029**	ug/L	0.001	4	3367	1715	4
	U	**238**	**0.005**	ug/L	0.001	11	106	388	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:07:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	165286	1
	Cl	37		ug/L			4359635	6122472	1
>	Ge	72		ug/L			754356	653831	1
	Ni	60	52.806	ug/L	2.682	5	83	207742	3
	Ni	62	54.083	ug/L	1.212	2	89	30249	0
	Cu	63	27.329	ug/L	1.074	3	257	236225	3
	Cu	65	26.371	ug/L	0.220	0	102	103439	2
	Zn	66	151.642	ug/L	4.907	3	202	346896	1
	Zn	67	137.287	ug/L	4.376	3	32	52483	2
	Zn	68	148.957	ug/L	2.244	1	485	244178	0
	As	75	25.214	ug/L	0.565	2	431	55179	1
	As-1	75	25.753	ug/L	0 739	2	9696	64788	1
	Se	82	75.126	ug/L	0.835	1	4	16027	0
	Se	78	74.711	ug/L	1.529	2	9817	50871	0
	Y	89		ug/L			452367	413791	4
	Kr	83		ug/L			721	745	1
>	In	115		ug/L			1192772	1140077	1
	Ag	107	23.930	ug/L	0.469	1	83	297104	2
	Cd	111	24.271	ug/L	0.255	1	153	130312	2
	Cd	114	23.617	ug/L	0.126	0	68	323659	1
	Sb	121	28.983	ug/L	0.393	1	2040	492713	0
	Sb	123	29.222	ug/L	0.677	2	1508	372817	1
>	Tb	159		ug/L			1408020	1423837	1
	Tl	205	23.207	ug/L	0.572	2	698	1093288	0
	Pb	208	27.957	ug/L	0.435	1	726	1679844	0
	Bi	209		ug/L			3188747	2751200	1
	Th	232	22.338	ug/L	0.269	1	3367	1317707	0
	U	238	24.297	ug/L	0.748	3	106	1403448	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 B REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Friday, April 19, 2013 12:11:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas Intens.	Intens RSD
	C	13		ug/L			129716	134789	3
	Cl	37		ug/L			4359635	4421764	1
>	Ge	72		ug/L			754356	671054	1
	Ni	60	55.008	ug/L	3.714	6	83	222279	7
	Ni	62	58.644	ug/L	0.736	1	89	33669	2
	Cu	63	162.793	ug/L	4.193	2	257	1443419	3
	Cu	65	166.383	ug/L	1.507	0	102	669315	1
	Zn	66	468.641	ug/L	4.900	1	202	1100243	0
	Zn	67	442.524	ug/L	16.491	3	32	173575	2
	Zn	68	467.907	ug/L	7 188	1	485	786469	2
	As	75	19.710	ug/L	0.149	0	431	44361	1
	As-1	75	19.553	ug/L	0.198	1	9696	52574	1
	Se	82	-0.091	ug/L	0.049	54	4	-15	70
	Se	78	U 0.662	ug/L	0.263	39	9817	9117	1
	Y	89		ug/L			452367	717496	2
	Kr	83		ug/L			721	1229	1
>	In	115		ug/L			1192772	1135508	0
	Ag	107	0.286	ug/L	0.004	1	83	3615	1
	Cd	111	1.302	ug/L	0.019	1	153	7103	2
	Cd	114	1.253	ug/L	0.012	0	68	17165	1
	Sb	121	0.732	ug/L	0.041	5	2040	14294	4
	Sb	123	0.734	ug/L	0.033	4	1508	10724	4
>	Tb	159		ug/L			1408020	1406587	1
	Tl	205	0.086	ug/L	0.002	2	698	4689	2
	Pb	208	139.255	ug/L	2.708	1	726	8263182	0
	Bi	209		ug/L			3188747	2849534	1
	Th	232	1.501	ug/L	0.026	1	3367	90608	1
	U	238	0.833	ug/L	0.016	1	106	47655	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:14:43
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	145200	1
	Cl	37		ug/L			4359635	4640109	1
>	Ge	72		ug/L			754356	733626	2
	Ni	60	0.814	ug/L	0.035	4	83	3672	2
	Ni	62	0.650	ug/L	0.012	1	89	493	2
	Cu	63	7.075	ug/L	0.088	1	257	68801	2
	Cu	65	6.547	ug/L	0.111	1	102	28886	2
	Zn	66	1.081	ug/L	0.037	3	202	2969	2
	Zn	67	1.647	ug/L	0.163	9	32	736	7
	Zn	68	1.917	ug/L	0.101	5	485	3989	2
	As	75	10.384	ug/L	0.379	3	431	25733	1
	As-1	75	10.289	ug/L	0.474	4	9696	34693	1
	Se	82	0.372	ug/L	0.080	21	4	93	21
	Se	78	0.295	ug/L	0.412	139	9817	9730	0
	Y	89		ug/L			452367	433728	2
	Kr	83		ug/L			721	711	6
>	In	115		ug/L			1192772	1194916	1
	Ag	107	-0.001	ug/L	0.001	77	83	72	10
	Cd	111	-0.001	ug/L	0.003	223	153	146	13
	Cd	114	0.006	ug/L	0 000	5	68	153	2
	Sb	121	20.021	ug/L	0.222	1	2040	357362	1
	Sb	123	20.341	ug/L	0.464	2	1508	272469	1
>	Tb	159		ug/L			1408020	1466035	1
	Tl	205	-0.007	ug/L	0.000	4	698	392	5
	Pb	208	0.191	ug/L	0.005	2	726	12565	0
	Bi	209		ug/L			3188747	3205951	1
	Th	232	-0.016	ug/L	0.001	4	3367	2532	3
	U	238	0.195	ug/L	0.009	4	106	11716	4

WL67 : 01915

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:18:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	142466	2
	Cl	37		ug/L			4359635	4474969	3
>	Ge	72		ug/L			754356	750254	1
	Ni	60	24.967	ug/L	0.172	0	83	112806	1
	Ni	62	25.692	ug/L	0.718	2	89	16543	4
	Cu	63	25.352	ug/L	0.423	1	257	251476	1
	Cu	65	25.294	ug/L	0.950	3	102	113807	2
	Zn	66	76.579	ug/L	1.929	2	202	201143	1
	Zn	67	71.327	ug/L	1.278	1	32	31316	2
	Zn	68	76.262	ug/L	1.868	2	485	143720	3
	As	75	22.972	ug/L	1.110	4	431	57709	3
	As-1	75	23.629	ug/L	0.998	4	9696	68998	2
	Se	82	73.786	ug/L	1.806	2	4	18061	1
	Se	78	73.654	ug/L	1.352	1	9817	57688	0
	Y	89		ug/L			452367	443116	0
	Kr	83		ug/L			721	717	9
>	In	115		ug/L			1192772	1236218	0
	Ag	107	28.024	ug/L	0.592	2	83	377208	1
	Cd	111	25.057	ug/L	0.539	2	153	145858	1
	Cd	114	24.572	ug/L	0.264	1	68	365135	0
	Sb	121	24.869	ug/L	0.382	1	2040	458744	0
	Sb	123	25.431	ug/L	0.344	1	1508	352078	0
>	Tb	159		ug/L			1408020	1482237	1
	Tl	205	24.962	ug/L	0.301	1	698	1224322	0
	Pb	208	25.565	ug/L	0.557	2	726	1599126	0
	Bi	209		ug/L			3188747	3349738	1
	Th	232	22.134	ug/L	0.428	1	3367	1359327	1
	U	238	25.104	ug/L	0.873	3	106	1509838	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 12:22:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	129668	2
	Cl	37		ug/L			4359635	4406301	2
>	Ge	72		ug/L			754356	719711	2
	Ni	60	49.368	ug/L	2.804	5	83	213752	3
	Ni	62	50.091	ug/L	1.698	3	89	30846	2
	Cu	63	48.005	ug/L	1.011	2	257	456462	0
	Cu	65	49.431	ug/L	1.550	3	102	213364	4
	Zn	66	49.698	ug/L	1.670	3	202	125258	1
	Zn	67	50.039	ug/L	1.929	3	32	21070	1
	Zn	68	51.534	ug/L	3.164	6	485	93241	4
	As	75	48.268	ug/L	1.778	3	431	115865	2
	As-1	75	48.290	ug/L	2 123	4	9696	125589	2
	Se	82	49.792	ug/L	1.156	2	4	11692	0
	Se	78	49.071	ug/L	3.025	6	9817	39973	2
	Y	89		ug/L			452367	424378	1
	Kr	83		ug/L			721	743	4
>	In	115		ug/L			1192772	1174881	1
	Ag	107	55.667	ug/L	1.055	1	83	712049	1
	Cd	111	50.715	ug/L	1.772	3	153	280380	2
	Cd	114	50.007	ug/L	0.411	0	68	706178	0
	Sb	121	49.631	ug/L	1.424	2	2040	868006	1
	Sb	123	50.417	ug/L	1.351	2	1508	661814	1
>	Tb	159		ug/L			1408020	1448954	2
	Tl	205	50.242	ug/L	0 917	1	698	2407935	0
	Pb	208	50.147	ug/L	1.632	3	726	3064957	1
	Bi	209		ug/L			3188747	3128548	1
	Th	232	49.369	ug/L	1.004	2	3367	2959111	0
	U	238	49.663	ug/L	0.995	2	106	2919154	0

WLS7-01817

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 12:29:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	126732	4
	Cl	37		ug/L			4359635	4329032	1
>	Ge	72		ug/L			754356	718920	1
	Ni	60	-0.009	ug/L	0.001	15	83	42	15
	Ni	62	-0.013	ug/L	0.013	102	89	77	11
	Cu	63	-0.010	ug/L	0.001	9	257	149	4
	Cu	65	-0.006	ug/L	0.001	17	102	71	4
	Zn	66	0.016	ug/L	0.004	22	202	234	3
	Zn	67	0.016	ug/L	0.003	21	32	37	3
	Zn	68	-0.004	ug/L	0.017	469	485	456	5
	As	75	-0.001	ug/L	0.003	406	431	408	1
	As-1	75	0.005	ug/L	0.062	1288	9696	9251	0
	Se	82	0.012	ug/L	0.026	210	4	7	81
	Se	78	0.048	ug/L	0.264	555	9817	9383	0
	Y	89		ug/L			452367	434469	1
	Kr	83		ug/L			721	698	3
>	In	115		ug/L			1192772	1190347	1
	Ag	107	-0.002	ug/L	0.001	22	83	54	11
	Cd	111	-0.005	ug/L	0.002	29	153	122	8
	Cd	114	-0.002	ug/L	0.000	14	68	39	11
	Sb	121	-0.009	ug/L	0.022	257	2040	1881	20
	Sb	123	-0.003	ug/L	0.023	721	1508	1461	20
>	Tb	159		ug/L			1408020	1439075	1
	Tl	205	-0.005	ug/L	0.001	17	698	486	9
	Pb	208	-0.005	ug/L	0.000	6	726	466	4
	Bi	209		ug/L			3188747	3276238	1
	Th	232	0.139	ug/L	0.013	9	3367	11691	6
	U	238	0.000	ug/L	0.000	6441	106	109	14

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:32:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	144075	2
	Cl	37		ug/L			4359635	4358558	0
>	Ge	72		ug/L			754356	745532	3
	Ni	60	0.008	ug/L	0.004	46	83	119	11
	Ni	62	-0.004	ug/L	0.006	154	89	86	5
	Cu	63	0.016	ug/L	0.001	6	257	411	5
	Cu	65	0.018	ug/L	0 003	14	102	181	9
	Zn	66	0.350	ug/L	0.013	3	202	1113	5
	Zn	67	0.335	ug/L	0.021	6	32	178	5
	Zn	68	0.330	ug/L	0.015	4	485	1095	2
	As	75	0.002	ug/L	0.009	472	431	431	8
	As-1	75	-0.006	ug/L	0.142	2198	9696	9559	1
	Se	82	-0.023	ug/L	0.059	260	4	0	3179
	Se	78	-0.016	ug/L	0.573	3489	9817	9683	0
	Y	89		ug/L			452367	452229	2
	Kr	83		ug/L			721	742	3
>	In	115		ug/L			1192772	1240965	2
	Ag	107	-0.003	ug/L	0.001	27	83	47	20
	Cd	111	-0.004	ug/L	0.001	28	153	136	6
	Cd	114	-0.002	ug/L	0.000	20	68	41	13
	Sb	121	-0.080	ug/L	0.008	10	2040	654	22
	Sb	123	-0.076	ug/L	0.008	10	1508	512	21
>	Tb	159		ug/L			1408020	1489051	1
	Tl	205	-0.006	ug/L	0.001	14	698	441	11
	Pb	208	0.036	ug/L	0.000	0	726	3045	1
	Bi	209		ug/L			3188747	3326861	1
	Th	232	0.062	ug/L	0.021	34	3367	7374	17
	U	238	0.000	ug/L	0.000	5	106	138	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:36:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	137619	2
	Cl	37		ug/L			4359635	4325970	2
>	Ge	72		ug/L			754356	752556	2
	Ni	60	0.030	ug/L	0.003	10	83	217	5
	Ni	62	0.009	ug/L	0.004	39	89	95	4
	Cu	63	0.005	ug/L	0.001	27	257	306	6
	Cu	65	0.009	ug/L	0.002	20	102	141	6
	Zn	66	0.541	ug/L	0.030	5	202	1623	2
	Zn	67	0.489	ug/L	0.025	5	32	247	2
	Zn	68	0.477	ug/L	0.012	2	485	1383	1
	As	75	0.002	ug/L	0.011	697	431	433	4
	As-1	75	-0.119	ug/L	0.128	107	9696	9368	1
	Se	82	-0.006	ug/L	0.027	487	4	3	196
	Se	78	-0.472	ug/L	0.466	98	9817	9480	1
	Y	89		ug/L			452367	452866	3
	Kr	83		ug/L			721	718	1
>	In	115		ug/L			1192772	1218740	0
	Ag	107	-0.003	ug/L	0.000	16	83	45	14
	Cd	111	-0.003	ug/L	0 001	40	153	137	6
	Cd	114	-0.001	ug/L	0.001	51	68	55	14
	Sb	121	-0.095	ug/L	0 004	4	2040	373	20
	Sb	123	-0.094	ug/L	0.004	4	1508	268	20
>	Tb	159		ug/L			1408020	1463277	1
	Tl	205	-0.007	ug/L	0.000	3	698	372	2
	Pb	208	0.010	ug/L	0.000	4	726	1346	3
	Bi	209		ug/L			3188747	3302417	1
	Th	232	-0.026	ug/L	0.001	4	3367	1926	3
	U	238	-0.001	ug/L	0.000	14	106	45	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:39:50
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8GFA+.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	167299	1
	Cl	37		ug/L			4359635	4448659	2
>	Ge	72		ug/L			754356	749099	2
	Ni	60	27.714	ug/L	0.764	2	83	125018	3
	Ni	62	30.520	ug/L	0.669	2	89	19595	0
	Cu	63	49.035	ug/L	0.931	1	257	485353	1
	Cu	65	49.404	ug/L	3.007	6	102	221752	4
	Zn	66	84.351	ug/L	3.906	4	202	221141	3
	Zn	67	85.333	ug/L	2.453	2	32	37385	1
	Zn	68	85.233	ug/L	2.677	3	485	160311	3
	As	75	3.502	ug/L	0.132	3	431	9146	1
	As-1	75	3.327	ug/L	0.189	5	9696	17969	0
	Se	82	0.001	ug/L	0.069	8406	4	4	352
	Se	78	-0.360	ug/L	0.271	75	9817	9512	0
	Y	89		ug/L			452367	595545	0
	Kr	83		ug/L			721	894	4
>	In	115		ug/L			1192772	1182872	1
	Ag	107	0.063	ug/L	0.002	2	83	895	2
	Cd	111	0.247	ug/L	0.003	1	153	1524	1
	Cd	114	0.184	ug/L	0.004	2	68	2683	0
	Sb	121	-0.064	ug/L	0.005	7	2040	902	8
	Sb	123	-0.059	ug/L	0.007	12	1508	713	12
>	Tb	159		ug/L			1408020	1461659	1
	Tl	205	0.024	ug/L	0.001	5	698	1882	3
	Pb	208	19.184	ug/L	0.062	0	726	1183739	0
	Bi	209		ug/L			3188747	3171734	0
	Th	232	0.816	ug/L	0.023	2	3367	52771	2
	U	238	0.192	ug/L	0 005	2	106	11490	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:43:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	223163	3
	Cl	37		ug/L			4359635	4545576	2
>	Ge	72		ug/L			754356	736402	1
	Ni	60	100.697	ug/L	1.136	1	83	446340	1
	Ni	62	102.705	ug/L	2.658	2	89	64630	2
	Cu	63	460.693	ug/L	3.705	0	257	4481733	2
	Cu	65	466.888	ug/L	7.996	1	102	2061156	2
	Zn	66	4079.083	ug/L	92.489	2	202	10506885	1
	Zn	67	3642.032	ug/L	204.452	5	32	1566930	4
	Zn	68	3719.952	ug/L	126.801	3	485	6855652	2
	As	75	11.051	ug/L	0.084	0	431	27478	1
	As-1	75	10.802	ug/L	0.190	1	9696	36107	0
	Se	82	0.202	ug/L	0.108	53	4	53	47
	Se	78	0.301	ug/L	0.445	147	9817	9388	1
	Y	89		ug/L			452367	591771	3
	Kr	83		ug/L			721	827	7
>	In	115		ug/L			1192772	1141887	0
	Ag	107	1.331	ug/L	0.039	2	83	16620	2
	Cd	111	11.169	ug/L	0.173	1	153	60144	2
	Cd	114	11.081	ug/L	0.156	1	68	152144	1
	Sb	121	2.156	ug/L	0.034	1	2040	38524	1
	Sb	123	2.110	ug/L	0.033	1	1508	28309	0
>	Tb	159		ug/L			1408020	1420134	0
	Tl	205	0.052	ug/L	0.001	1	698	3162	2
	Pb	208	1040.454	ug/L	8.147	0	726	62336191	0
	Bi	209		ug/L			3188747	3094035	1
	Th	232	0.755	ug/L	0.007	0	3367	47694	0
	U	238	0.312	ug/L	0.006	1	106	18080	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:46:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	**13**		ug/L			129716	223715	3
	Cl	**37**		ug/L			4359635	4426795	3
>	**Ge**	**72**		ug/L			754356	719201	1
	Ni	**60**	**105.837**	ug/L	4.447	4	83	458003	3
	Ni	**62**	**108.528**	ug/L	3.222	2	89	66712	3
	Cu	**63**	**507.623**	ug/L	10.064	1	257	4821814	0
	Cu	**65**	**523.682**	ug/L	14.736	2	102	2257120	1
	Zn	**66**	**3965.149**	ug/L	113.492	2	202	9974169	1
	Zn	**67**	**3609.264**	ug/L	132.445	3	32	1517017	2
	Zn	**68**	**3611.813**	ug/L	95.271	2	485	6504340	3
	As	**75**	**11.019**	ug/L	0.220	1	431	26758	0
	As-1	**75**	**10.764**	ug/L	0.261	2	9696	35170	0
	Se	**82**	**0.272**	ug/L	0.020	7	4	68	8
	Se	**78**	**-0.265**	ug/L	0.161	60	9817	9193	0
	Y	**89**		ug/L			452367	591197	0
	Kr	**83**		ug/L			721	804	2
>	**In**	**115**		ug/L			1192772	1152595	1
	Ag	**107**	**1.863**	ug/L	0.054	2	83	23452	2
	Cd	**111**	**11.525**	ug/L	0.329	2	153	62623	2
	Cd	**114**	**11.309**	ug/L	0.209	1	68	156723	2
	Sb	**121**	**1.771**	ug/L	0.036	2	2040	32283	1
	Sb	**123**	**1.768**	ug/L	0.053	2	1508	24167	1
>	**Tb**	**159**		ug/L			1408020	1423030	0
	Tl	**205**	**0.051**	ug/L	0 002	3	698	3128	2
	Pb	**208**	**1016.964**	ug/L	12.305	1	726	61053118	0
	Bi	**209**		ug/L			3188747	3130223	0
	Th	**232**	**0.868**	ug/L	0.007	0	3367	54476	0
	U	**238**	**0.453**	ug/L	0.007	1	106	26249	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:50:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens	Intens RSD
	C	13		ug/L			129716	211877	5
	Cl	37		ug/L			4359635	4417133	2
>	Ge	72		ug/L			754356	739065	3
	Ni	60	142.899	ug/L	4.179	2	83	635333	2
	Ni	62	149.037	ug/L	5.086	3	89	94034	2
	Cu	63	527.633	ug/L	19.432	3	257	5147839	3
	Cu	65	539.218	ug/L	31.832	5	102	2385373	2
	Zn	66	4122.095	ug/L	261.721	6	202	10641291	2
	Zn	67	3704.729	ug/L	181.419	4	32	1598557	1
	Zn	68	3797.285	ug/L	154.456	4	485	7019223	1
	As	75	33.817	ug/L	1.916	5	431	83407	1
	As-1	75	33.797	ug/L	1.928	5	9696	93043	1
	Se	82	72.749	ug/L	3.436	4	4	17524	1
	Se	78	70.499	ug/L	3.398	4	9817	54758	0
	Y	89		ug/L			452367	604757	3
	Kr	83		ug/L			721	818	5
>	In	115		ug/L			1192772	1136899	0
	Ag	107	24.214	ug/L	0.731	3	83	299734	2
	Cd	111	36.128	ug/L	0.419	1	153	193346	0
	Cd	114	36.783	ug/L	0.552	1	68	502657	1
	Sb	121	2.719	ug/L	0.064	2	2040	47854	1
	Sb	123	2.740	ug/L	0.054	1	1508	36171	1
>	Tb	159		ug/L			1408020	1417156	1
	Tl	205	24.223	ug/L	0 251	1	698	1136074	1
	Pb	208	1088.356	ug/L	17.149	1	726	65060373	0
	Bi	209		ug/L			3188747	3096869	1
	Th	232	24.888	ug/L	0.344	1	3367	1460813	0
	U	238	25.047	ug/L	0.978	3	106	1439807	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:53:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	151939	2
	Cl	37		ug/L			4359635	4282643	3
>	Ge	72		ug/L			754356	727806	2
	Ni	60	6.920	ug/L	0.246	3	83	30367	0
	Ni	62	7.936	ug/L	0.227	2	89	5017	5
	Cu	63	8.510	ug/L	0.170	1	257	82029	1
	Cu	65	8.537	ug/L	0.175	2	102	37333	2
	Zn	66	17.418	ug/L	1.691	9	202	44458	6
	Zn	67	18.213	ug/L	0.981	5	32	7772	3
	Zn	68	17.443	ug/L	1.033	5	485	32210	2
	As	75	1.403	ug/L	0.062	4	431	3807	1
	As-1	75	1.327	ug/L	0.190	14	9696	12581	0
	Se	82	ω 0.128	ug/L	0.065	51	4	34	42
	Se	78	-0.086	ug/L	0.544	634	9817	9410	1
	Y	89		ug/L			452367	535684	0
	Kr	83		ug/L			721	732	5
>	In	115		ug/L			1192772	1184018	0
	Ag	107	0.022	ug/L	0.002	8	83	365	6
	Cd	111	0.056	ug/L	0.007	11	153	466	8
	Cd	114	0.039	ug/L	0.002	5	68	619	4
	Sb	121	-0.095	ug/L	0.003	2	2040	351	12
	Sb	123	-0.092	ug/L	0.005	5	1508	278	23
>	Tb	159		ug/L			1408020	1438438	0
	Tl	205	0.038	ug/L	0.005	13	698	2520	10
	Pb	208	1.707	ug/L	0.324	19	726	104385	19
	Bi	209		ug/L			3188747	3187953	0
	Th	232	0.861	ug/L	0.009	1	3367	54616	1
	U	238	0.181	ug/L	0.003	1	106	10645	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:57:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	165490	4
	Cl	37		ug/L			4359635	4302383	2
>	Ge	72		ug/L			754356	726714	2
	Ni	60	11.315	ug/L	0.148	1	83	49554	1
	Ni	62	12.750	ug/L	0.414	3	89	7997	5
	Cu	63	11.900	ug/L	0.319	2	257	114430	1
	Cu	65	11.944	ug/L	0.424	3	102	52092	1
	Zn	66	26.050	ug/L	1.653	6	202	66353	4
	Zn	67	27.366	ug/L	0.471	1	32	11656	3
	Zn	68	26.292	ug/L	0.172	0	485	48292	2
	As	75	1.538	ug/L	0.080	5	431	4127	2
	As-1	75	1.459	ug/L	0.150	10	9696	12887	0
	Se	82	0.047	ug/L	0.051	109	4	15	76
	Se	78	-0.099	ug/L	0.357	361	9817	9391	0
	Y	89		ug/L			452367	570998	1
	Kr	83		ug/L			721	786	1
>	In	115		ug/L			1192772	1177160	1
	Ag	107	0.025	ug/L	0.003	12	83	398	8
	Cd	111	0.081	ug/L	0.004	4	153	598	2
	Cd	114	0.042	ug/L	0.005	10	68	660	8
	Sb	121	-0.100	ug/L	0.002	1	2040	268	9
	Sb	123	-0.098	ug/L	0.002	2	1508	197	13
>	Tb	159		ug/L			1408020	1432061	0
	Tl	205	0.033	ug/L	0.001	3	698	2283	2
	Pb	208	1.994	ug/L	0.014	0	726	121209	0
	Bi	209		ug/L			3188747	3174918	1
	Th	232	0.868	ug/L	0.009	1	3367	54803	1
	U	238	0.171	ug/L	0.004	2	106	10026	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:01:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	134178	1
	Cl	37		ug/L			4359635	4231468	4
>	Ge	72		ug/L			754356	730041	2
	Ni	60	24.679	ug/L	0.845	3	83	108453	1
	Ni	62	25.113	ug/L	0.045	0	89	15733	2
	Cu	63	24.999	ug/L	0.224	0	257	241287	1
	Cu	65	25.476	ug/L	0.776	3	102	111534	1
	Zn	66	80.082	ug/L	3.415	4	202	204599	2
	Zn	67	72.656	ug/L	3.853	5	32	31015	3
	Zn	68	78.580	ug/L	1.204	1	485	144070	2
	As	75	23.662	ug/L	1.050	4	431	57819	2
	As-1	75	24.029	ug/L	1.070	4	9696	68102	1
	Se	82	77.312	ug/L	2.726	3	4	18409	1
	Se	78	75.939	ug/L	2.650	3	9817	57564	0
	Y	89		ug/L			452367	444706	2
	Kr	83		ug/L			721	708	2
>	In	115		ug/L			1192772	1200679	0
	Ag	107	26.312	ug/L	0.664	2	83	344017	2
	Cd	111	24.750	ug/L	0.181	0	153	139939	0
	Cd	114	24.872	ug/L	0.609	2	68	358959	2
	Sb	121	23.880	ug/L	0.220	0	2040	427955	1
	Sb	123	24.166	ug/L	0.321	1	1508	325028	0
>	Tb	159		ug/L			1408020	1445445	1
	Tl	205	24.283	ug/L	0.731	3	698	1161337	1
	Pb	208	24.798	ug/L	0.251	1	726	1512838	0
	Bi	209		ug/L			3188747	3270763	0
	Th	232	23.019	ug/L	0.642	2	3367	1378409	2
	U	238	24.601	ug/L	0.041	0	106	1442929	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 13:04:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens	Intens RSD
	C	13		ug/L			129716	141521	1
	Cl	37		ug/L			4359635	4259332	8
>	Ge	72		ug/L			754356	721754	0
	Ni	60	24.506	ug/L	1.116	4	83	106523	4
	Ni	62	24.537	ug/L	0.913	3	89	15198	3
	Cu	63	24.876	ug/L	0.463	1	257	237389	1
	Cu	65	25.149	ug/L	0.235	0	102	108899	1
	Zn	66	73.890	ug/L	0.714	0	202	186765	1
	Zn	67	68.342	ug/L	3.346	4	32	28866	5
	Zn	68	73.772	ug/L	3.225	4	485	133737	4
	As	75	22.811	ug/L	0.529	2	431	55153	2
	As-1	75	23.227	ug/L	0.176	0	9696	65429	0
	Se	82	71.912	ug/L	1.170	1	4	16937	1
	Se	78	70.879	ug/L	1.801	2	9817	53767	2
	Y	89		ug/L			452367	447961	2
	Kr	83		ug/L			721	646	2
>	In	115		ug/L			1192772	1205276	1
	Ag	107	25.532	ug/L	0.547	2	83	335058	1
	Cd	111	23.945	ug/L	0.520	2	153	135895	1
	Cd	114	23.577	ug/L	0.227	0	68	341587	0
	Sb	121	24.712	ug/L	0 473	1	2040	444434	0
	Sb	123	24.885	ug/L	0.553	2	1508	335895	0
>	Tb	159		ug/L			1408020	1453093	1
	Tl	205	23.801	ug/L	0.169	0	698	1144538	1
	Pb	208	24.212	ug/L	0.562	2	726	1484739	0
	Bi	209		ug/L			3188747	3303398	2
	Th	232	21.722	ug/L	0.480	2	3367	1307775	1
	U	238	24.137	ug/L	0.625	2	106	1422837	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 13:09:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	131397	1
	Cl	37		ug/L			4359635	4236623	1
>	Ge	72		ug/L			754356	698402	1
	Ni	60	49.975	ug/L	1.675	3	83	210058	2
	Ni	62	50.233	ug/L	0.355	0	89	30023	1
	Cu	63	49.790	ug/L	0.576	1	257	459507	0
	Cu	65	50.273	ug/L	1.035	2	102	210511	0
	Zn	66	50.589	ug/L	2.048	4	202	123740	2
	Zn	67	51.140	ug/L	1.572	3	32	20903	2
	Zn	68	50.955	ug/L	0.879	1	485	89524	1
	As	75	49.457	ug/L	1.096	2	431	115225	0
	As-1	75	49.663	ug/L	1.308	2	9696	125126	1
	Se	82	50.764	ug/L	0.247	0	4	11570	1
	Se	78	50.723	ug/L	1.005	1	9817	39811	0
	Y	89		ug/L			452367	420020	1
	Kr	83		ug/L			721	706	6
>	In	115		ug/L			1192772	1153917	0
	Ag	107	53.420	ug/L	1.101	2	83	671225	2
	Cd	111	50.465	ug/L	1.227	2	153	274041	1
	Cd	114	50.297	ug/L	1.043	2	68	697552	1
	Sb	121	49.990	ug/L	0.483	0	2040	858825	1
	Sb	123	50.507	ug/L	0.385	0	1508	651263	0
>	Tb	159		ug/L			1408020	1419797	1
	Tl	205	50.509	ug/L	1.116	2	698	2372181	1
	Pb	208	49.717	ug/L	0.410	0	726	2978672	0
	Bi	209		ug/L			3188747	3114719	1
	Th	232	49.987	ug/L	0.903	1	3367	2936462	1
	U	238	50.444	ug/L	1.422	2	106	2905566	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 13:15:31
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8GFA+.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	133188	2
	Cl	37		ug/L			4359635	4072745	2
>	Ge	72		ug/L			754356	714772	2
	Ni	60	-0.006	ug/L	0.004	62	83	52	33
	Ni	62	-0.041	ug/L	0.008	20	89	59	6
	Cu	63	-0.004	ug/L	0.005	124	257	205	24
	Cu	65	-0.002	ug/L	0.003	104	102	86	13
	Zn	66	0.045	ug/L	0.021	47	202	304	18
	Zn	67	0.031	ug/L	0.026	83	32	44	23
	Zn	68	0.024	ug/L	0.035	148	485	502	13
	As	75	-0.005	ug/L	0.010	183	431	395	3
	As-1	75	0.030	ug/L	0.125	411	9696	9256	1
	Se	82	-0.001	ug/L	0.071	8525	4	4	388
	Se	78	0.127	ug/L	0.488	382	9817	9376	1
	Y	89		ug/L			452367	433486	1
	Kr	83		ug/L			721	676	5
>	In	115		ug/L			1192772	1171264	1
	Ag	107	0.001	ug/L	0.003	441	83	92	47
	Cd	111	-0.005	ug/L	0.002	48	153	122	10
	Cd	114	0.001	ug/L	0.002	313	68	77	41
	Sb	121	-0.008	ug/L	0.025	322	2040	1868	23
	Sb	123	-0.003	ug/L	0.029	967	1508	1442	26
>	Tb	159		ug/L			1408020	1394851	1
	Tl	205	-0.003	ug/L	0.002	88	698	576	18
	Pb	208	0.003	ug/L	0.007	233	726	899	47
	Bi	209		ug/L			3188747	3190821	1
	Th	232	0.180	ug/L	0.029	16	3367	13706	11
	U	238	0.002	ug/L	0.002	86	106	223	46

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:23:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
	C	13		ug/L			129716	134285	3
	Cl	37		ug/L			4359635	4133874	2
>	Ge	72		ug/L			754356	722102	3
	Ni	60	0.029	ug/L	0.003	9	83	206	2
	Ni	62	-0.002	ug/L	0.006	295	89	84	6
	Cu	63	0.004	ug/L	0.001	27	257	287	1
	Cu	65	0.005	ug/L	0.004	81	102	120	12
	Zn	66	0.509	ug/L	0.043	8	202	1477	5
	Zn	67	0.445	ug/L	0.062	13	32	218	8
	Zn	68	0.488	ug/L	0.014	2	485	1347	5
	As	75	0.004	ug/L	0.005	119	431	421	3
	As-1	75	0.075	ug/L	0.168	223	9696	9454	1
	Se	82	0.009	ug/L	0.047	502	4	6	166
	Se	78	0.284	ug/L	0.664	234	9817	9565	1
	Y	89		ug/L			452367	429796	2
	Kr	83		ug/L			721	691	3
>	In	115		ug/L			1192772	1185318	1
	Ag	107	-0.003	ug/L	0 001	19	83	45	16
	Cd	111	-0.008	ug/L	0.002	28	153	109	12
	Cd	114	-0.002	ug/L	0.001	88	68	44	45
	Sb	121	-0.079	ug/L	0 008	9	2040	639	21
	Sb	123	-0.077	ug/L	0.008	10	1508	481	23
>	Tb	159		ug/L			1408020	1411153	1
	Tl	205	-0.006	ug/L	0.001	10	698	436	5
	Pb	208	0.006	ug/L	0.000	6	726	1079	1
	Bi	209		ug/L			3188747	3230962	0
	Th	232	0.013	ug/L	0.003	20	3367	4157	2
	U	238	-0.001	ug/L	0.000	3	106	31	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Friday, April 19, 2013 13:26:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	143638	4
	Cl	37		ug/L			4359635	4264887	0
>	Ge	72		ug/L			754356	715249	3
	Ni	60	13.134	ug/L	0.721	5	83	56548	2
	Ni	62	13.734	ug/L	0.637	4	89	8460	1
	Cu	63	68.451	ug/L	0.056	0	257	646941	3
	Cu	65	69.829	ug/L	1.390	1	102	299391	2
	Zn	66	424.088	ug/L	16.808	3	202	1060630	2
	Zn	67	382.496	ug/L	25.119	6	32	159741	3
	Zn	68	413.482	ug/L	25.826	6	485	739856	3
	As	75	1.969	ug/L	0.076	3	431	5088	0
	As-1	75	1.951	ug/L	0.240	12	9696	13856	1
	Se	82	0.133	ug/L	0.059	43	4	35	35
	Se	78	0.088	ug/L	0.683	777	9817	9354	1
	Y	89		ug/L			452367	440436	2
	Kr	83		ug/L			721	666	4
>	In	115		ug/L			1192772	1168873	1
	Ag	107	0.216	ug/L	0.004	1	83	2826	0
	Cd	111	1.170	ug/L	0.031	2	153	6582	1
	Cd	114	1.146	ug/L	0.006	0	68	16174	2
	Sb	121	-0.010	ug/L	0.005	50	2040	1832	3
	Sb	123	-0.007	ug/L	0.005	68	1508	1385	4
>	Tb	159		ug/L			1408020	1416530	1
	Tl	205	0.012	ug/L	0.001	9	698	1267	4
	Pb	208	73.484	ug/L	2.784	3	726	4390706	2
	Bi	209		ug/L			3188747	3201718	2
	Th	232	0.105	ug/L	0.002	1	3367	9547	2
	U	238	0.066	ug/L	0.002	2	106	3886	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:30:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	179515	2
	Cl	37		ug/L			4359635	4433796	1
>	Ge	72		ug/L			754356	718000	3
	Ni	60	**68.954**	ug/L	2.797	4	83	297764	1
	Ni	62	**70.908**	ug/L	0.259	0	89	43539	3
	Cu	63	**374.215**	ug/L	10.819	2	257	3547307	1
	Cu	65	**357.479**	ug/L	5.130	1	102	1538573	3
	Zn	66	**2212.650**	ug/L	104.790	4	202	5552146	1
	Zn	67	**1973.016**	ug/L	81.208	4	32	827376	0
	Zn	68	**2046.604**	ug/L	102.576	5	485	3674904	1
	As	75	**10.344**	ug/L	0.367	3	431	25087	0
	As-1	75	**10.280**	ug/L	0.496	4	9696	33926	0
	Se	82	**0.406**	ug/L	0.086	21	4	99	18
	Se	78	**0.523**	ug/L	0.563	107	9817	9662	0
	Y	89		ug/L			452367	505130	0
	Kr	83		ug/L			721	759	3
>	In	115		ug/L			1192772	1138774	0
	Ag	107	**1.074**	ug/L	0.011	1	83	13394	0
	Cd	111	**5.908**	ug/L	0.021	0	153	31792	0
	Cd	114	**5.725**	ug/L	0.113	1	68	78423	1
	Sb	121	**0.374**	ug/L	0.010	2	2040	8280	1
	Sb	123	**0.377**	ug/L	0.007	1	1508	6233	1
>	Tb	159		ug/L			1408020	1388363	1
	Tl	205	**0.084**	ug/L	0.002	2	698	4538	0
	Pb	208	**388.009**	ug/L	5.005	1	726	22724708	0
	Bi	209		ug/L			3188747	3099126	1
	Th	232	**0.656**	ug/L	0.021	3	3367	40960	1
	U	238	**0.362**	ug/L	0.008	2	106	20517	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:33:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	169059	2
	Cl	37		ug/L			4359635	4300198	4
>	Ge	72		ug/L			754356	710844	3
	Ni	60	67.370	ug/L	3.422	5	83	288002	2
	Ni	62	67.833	ug/L	0 203	0	89	41235	2
	Cu	63	362.802	ug/L	9.139	2	257	3406957	4
	Cu	65	356.731	ug/L	12.912	3	102	1518906	0
	Zn	66	2215.142	ug/L	106.739	4	202	5503176	1
	Zn	67	2013.186	ug/L	108.478	5	32	835731	3
	Zn	68	2022.752	ug/L	66.744	3	485	3597855	2
	As	75	9.391	ug/L	0.312	3	431	22586	0
	As-1	75	9.291	ug/L	0.413	4	9696	31238	0
	Se	82	0.418	ug/L	0.088	21	4	101	18
	Se	78	0.347	ug/L	0.480	138	9817	9458	1
	Y	89		ug/L			452367	497405	1
	Kr	83		ug/L			721	732	2
>	In	115		ug/L			1192772	1143693	1
	Ag	107	1.196	ug/L	0 070	5	83	14960	4
	Cd	111	5.899	ug/L	0.069	1	153	31887	2
	Cd	114	5.713	ug/L	0.179	3	68	78618	4
	Sb	121	0.409	ug/L	0.006	1	2040	8907	0
	Sb	123	0.412	ug/L	0.002	0	1508	6694	0
>	Tb	159		ug/L			1408020	1392740	0
	Tl	205	0.075	ug/L	0.001	1	698	4167	1
	Pb	208	396.075	ug/L	3.874	0	726	23273118	0
	Bi	209		ug/L			3188747	3119440	1
	Th	232	0.563	ug/L	0.006	1	3367	35746	1
	U	238	0.315	ug/L	0.005	1	106	17914	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:37:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	170875	1
	Cl	37		ug/L			4359635	4346218	2
>	Ge	72		ug/L			754356	696880	1
	Ni	60	94.195	ug/L	1.929	2	83	395057	1
	Ni	62	95.098	ug/L	0.705	0	89	56645	1
	Cu	63	380.372	ug/L	11.081	2	257	3501824	3
	Cu	65	363.355	ug/L	6.121	1	102	1517796	1
	Zn	66	2325.292	ug/L	66.757	2	202	5668962	3
	Zn	67	2036.952	ug/L	21.346	1	32	829740	0
	Zn	68	2090.640	ug/L	34.164	1	485	3647743	2
	As	75	34.286	ug/L	0.963	2	431	79841	2
	As-1	75	34.942	ug/L	1.103	3	9696	90515	2
	Se	82	77.709	ug/L	0.806	1	4	17672	1
	Se	78	77.840	ug/L	1.277	1	9817	56122	1
	Y	89		ug/L			452367	495610	2
	Kr	83		ug/L			721	760	2
>	In	115		ug/L			1192772	1130080	1
	Ag	107	12.474	ug/L	0.109	0	83	153563	2
	Cd	111	31.313	ug/L	0.761	2	153	166567	1
	Cd	114	31.043	ug/L	1 123	3	68	421568	2
	Sb	121	2.275	ug/L	0.011	0	2040	40127	1
	Sb	123	2.249	ug/L	0 047	2	1508	29761	1
>	Tb	159		ug/L			1408020	1397101	1
	Tl	205	24.358	ug/L	0.373	1	698	1126111	0
	Pb	208	472.474	ug/L	8.018	1	726	27846143	0
	Bi	209		ug/L			3188747	3089299	1
	Th	232	24.840	ug/L	0.514	2	3367	1437518	1
	U	238	25.444	ug/L	0.550	2	106	1442355	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WL68 APOST SWN~~ 222222
Sample Dil Factor: 20
Comments: 4-19-13
Sample Date/Time: Friday, April 19, 2013 13:40:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	170979	0
	Cl	37		ug/L			4359635	4347818	2
>	Ge	72		ug/L			754356	705904	1
	Ni	60	**89.685**	ug/L	3.340	3	83	381067	3
	Ni	62	**91.701**	ug/L	1.426	1	89	55327	1
	Cu	63	**381.165**	ug/L	6.713	1	257	3553789	0
	Cu	65	**363.686**	ug/L	10.427	2	102	1538957	3
	Zn	66	**2217.315**	ug/L	19.833	0	202	5475524	0
	Zn	67	**1944.158**	ug/L	13.738	0	32	802270	1
	Zn	68	**2000.152**	ug/L	24.219	1	485	3534548	0
	As	75	**34.571**	ug/L	0.567	1	431	81549	2
	As-1	75	**34.745**	ug/L	0.306	0	9696	91228	1
	Se	82	**80.774**	ug/L	1.186	1	4	18605	1
	Se	78	**78.844**	ug/L	0.366	0	9817	57462	0
	Y	89		ug/L			452367	496182	3
	Kr	83		ug/L			721	711	7
>	In	115		ug/L			1192772	1149802	1
	Ag	107	**25.248**	ug/L	0.278	1	83	316152	2
	Cd	111	**29.982**	ug/L	0.545	1	153	162287	0
	Cd	114	**30.278**	ug/L	0.554	1	68	418479	2
	Sb	121	**0.349**	ug/L	0.020	5	2040	7930	3
	Sb	123	**0.350**	ug/L	0.014	4	1508	5944	1
>	Tb	159		ug/L			1408020	1396774	0
	Tl	205	**24.781**	ug/L	0.038	0	698	1145516	0
	Pb	208	**392.801**	ug/L	6.382	1	726	23146452	0
	Bi	209		ug/L			3188747	3125098	1
	Th	232	**25.060**	ug/L	0.453	1	3367	1450069	2
	U	238	**25.123**	ug/L	0.256	1	106	1424009	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:44:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	170489	3
	Cl	37		ug/L			4359635	4160353	2
>	Ge	72		ug/L			754356	694841	1
	Ni	60	70.330	ug/L	3.559	5	83	294052	3
	Ni	62	72.607	ug/L	0.886	1	89	43142	2
	Cu	63	425.273	ug/L	8.299	1	257	3903896	3
	Cu	65	412.292	ug/L	7.117	1	102	1717401	2
	Zn	66	3744.793	ug/L	113.287	3	202	9100594	1
	Zn	67	3330.801	ug/L	100.517	3	32	1352575	1
	Zn	68	3426.078	ug/L	37.101	1	485	5959169	0
	As	75	8.918	ug/L	0.082	0	431	21000	0
	As-1	75	8.840	ug/L	0.179	2	9696	29501	0
	Se	82	0.519	ug/L	0.019	3	4	121	2
	Se	78	0.544	ug/L	0.382	70	9817	9368	1
	Y	89		ug/L			452367	473015	1
	Kr	83		ug/L			721	741	1
>	In	115		ug/L			1192772	1130197	0
	Ag	107	1.669	ug/L	0.015	0	83	20617	0
	Cd	111	9.507	ug/L	0 096	1	153	50689	0
	Cd	114	9.256	ug/L	0.040	0	68	125792	0
	Sb	121	2.000	ug/L	0.009	0	2040	35510	0
	Sb	123	2.021	ug/L	0.010	0	1508	26898	0
>	Tb	159		ug/L			1408020	1383958	0
	Tl	205	0.070	ug/L	0.002	2	698	3882	1
	Pb	208	441.671	ug/L	5.352	1	726	25787158	0
	Bi	209		ug/L			3188747	3099594	2
	Th	232	0.566	ug/L	0.014	2	3367	35671	2
	U	238	0.269	ug/L	0.005	1	106	15232	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:47:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	154745	1
	Cl	37		ug/L			4359635	4124011	2
>	Ge	72		ug/L			754356	719648	2
	Ni	60	10.271	ug/L	0.596	5	83	44524	3
	Ni	62	11.128	ug/L	0.224	2	89	6919	2
	Cu	63	13.050	ug/L	0.242	1	257	124326	4
	Cu	65	13.195	ug/L	0.325	2	102	57000	2
	Zn	66	24.648	ug/L	1.378	5	202	62195	3
	Zn	67	25.800	ug/L	0.850	3	32	10879	1
	Zn	68	25.580	ug/L	0.491	1	485	46531	0
	As	75	2.450	ug/L	0.064	2	431	6271	0
	As-1	75	2.392	ug/L	0.201	8	9696	15009	1
	Se	82	-0.019	ug/L	0.021	107	4	0	4465
	Se	78	-0.028	ug/L	0.542	1931	9817	9342	1
	Y	89		ug/L			452367	555081	2
	Kr	83		ug/L			721	803	3
>	In	115		ug/L			1192772	1158618	0
	Ag	107	0.029	ug/L	0.002	5	83	448	5
	Cd	111	0.072	ug/L	0.005	6	153	542	4
	Cd	114	0.038	ug/L	0.002	6	68	596	4
	Sb	121	-0.097	ug/L	0.003	2	2040	318	13
	Sb	123	-0.095	ug/L	0.002	1	1508	233	9
>	Tb	159		ug/L			1408020	1426785	0
	Tl	205	0.036	ug/L	0.001	3	698	2397	2
	Pb	208	3.775	ug/L	0.048	1	726	227953	0
	Bi	209		ug/L			3188747	3130608	0
	Th	232	0.840	ug/L	0.009	1	3367	52914	0
	U	238	0.291	ug/L	0.007	2	106	16977	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 REF1 SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, April 19, 2013 13:51:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	136794	3
	Cl	37		ug/L			4359635	3958902	1
>	Ge	72		ug/L			754356	707100	4
	Ni	60	22.326	ug/L	1.604	7	83	94899	3
	Ni	62	22.954	ug/L	0.575	2	89	13927	2
	Cu	63	26.359	ug/L	0.541	2	257	246332	3
	Cu	65	27.228	ug/L	1.206	4	102	115369	2
	Zn	66	69.514	ug/L	2.868	4	202	171968	1
	Zn	67	73.066	ug/L	6.017	8	32	30164	4
	Zn	68	75.437	ug/L	4.186	5	485	133785	1
	As	75	50.061	ug/L	2.749	5	431	117933	1
	As-1	75	50.214	ug/L	3.492	6	9696	127789	2
	Se	82	65.166	ug/L	2.290	3	4	15024	1
	Se	78	64.275	ug/L	5.250	8	9817	48535	2
	Y	89		ug/L			452367	530552	2
	Kr	83		ug/L			721	702	3
>	In	115		ug/L			1192772	1163984	1
	Ag	107	31.641	ug/L	0.637	2	83	401001	1
	Cd	111	27.583	ug/L	0.850	3	153	151157	2
	Cd	114	27.438	ug/L	0.108	0	68	383916	1
	Sb	121	2.778	ug/L	0.037	1	2040	50023	0
	Sb	123	2.776	ug/L	0.044	1	1508	37496	1
>	Tb	159		ug/L			1408020	1402419	0
	Tl	205	53.435	ug/L	1.018	1	698	2479163	1
	Pb	208	51.562	ug/L	0.404	0	726	3051530	0
	Bi	209		ug/L			3188747	3144392	0
	Th	232	3.751	ug/L	0.067	1	3367	220765	1
	U	238	0.508	ug/L	0.001	0	106	29005	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:55:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
	C	13		ug/L			129716	138010	5
	Cl	37		ug/L			4359635	4068790	3
>	Ge	72		ug/L			754356	714858	2
	Ni	60	24.105	ug/L	1.316	5	83	103704	3
	Ni	62	24.325	ug/L	1.041	4	89	14915	1
	Cu	63	24.489	ug/L	0.162	0	257	231497	3
	Cu	65	24.901	ug/L	0.764	3	102	106755	2
	Zn	66	78.142	ug/L	3.566	4	202	195463	2
	Zn	67	72.196	ug/L	3.625	5	32	30173	2
	Zn	68	75.917	ug/L	2.827	3	485	136229	1
	As	75	23.396	ug/L	0.944	4	431	55985	2
	As-1	75	23.458	ug/L	1.083	4	9696	65313	1
	Se	82	77.266	ug/L	2.103	2	4	18016	0
	Se	78	74.692	ug/L	2.937	3	9817	55588	0
	Y	89		ug/L			452367	425803	1
	Kr	83		ug/L			721	675	0
>	In	115		ug/L			1192772	1166161	1
	Ag	107	25.328	ug/L	0 664	2	83	321592	1
	Cd	111	24.689	ug/L	0.645	2	153	135556	1
	Cd	114	24.671	ug/L	0.126	0	68	345866	1
	Sb	121	24.500	ug/L	0.566	2	2040	426334	1
	Sb	123	25.036	ug/L	0.612	2	1508	326945	1
>	Tb	159		ug/L			1408020	1392058	1
	Tl	205	24.513	ug/L	0.007	0	698	1129292	1
	Pb	208	24.604	ug/L	0.722	2	726	1445181	1
	Bi	209		ug/L			3188747	3175628	1
	Th	232	23.119	ug/L	0.061	0	3367	1333454	2
	U	238	24.265	ug/L	0.373	1	106	1370439	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 13:59:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	130791	4
	Cl	37		ug/L			4359635	4134520	4
>	Ge	72		ug/L			754356	702690	2
	Ni	60	48.910	ug/L	2.417	4	83	206724	2
	Ni	62	49.783	ug/L	1.794	3	89	29922	1
	Cu	63	49.321	ug/L	0.451	0	257	457975	2
	Cu	65	49.234	ug/L	0.683	1	102	207468	3
	Zn	66	48.639	ug/L	1.558	3	202	119687	1
	Zn	67	49.251	ug/L	1.800	3	32	20248	1
	Zn	68	50.384	ug/L	2.464	4	485	89005	2
	As	75	48.521	ug/L	1.388	2	431	113714	0
	As-1	75	48.488	ug/L	1.644	3	9696	123087	0
	Se	82	49.982	ug/L	0.721	1	4	11460	1
	Se	78	48.975	ug/L	1.604	3	9817	38978	0
	Y	89		ug/L			452367	426237	2
	Kr	83		ug/L			721	670	2
>	In	115		ug/L			1192772	1135807	0
	Ag	107	51.625	ug/L	1.120	2	83	638488	2
	Cd	111	50.509	ug/L	0 644	1	153	270007	1
	Cd	114	50.593	ug/L	1.104	2	68	690675	1
	Sb	121	49.961	ug/L	0.422	0	2040	844875	1
	Sb	123	49.713	ug/L	0.749	1	1508	631003	1
>	Tb	159		ug/L			1408020	1378659	1
	Tl	205	51.363	ug/L	1.076	2	698	2342257	0
	Pb	208	50.254	ug/L	1.240	2	726	2922946	0
	Bi	209		ug/L			3188747	3029766	2
	Th	232	51.294	ug/L	1.028	2	3367	2925572	1
	U	238	50.939	ug/L	0.649	1	106	2849264	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 14:05:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	131421	1
	Cl	37		ug/L			4359635	4093224	0
>	Ge	72		ug/L			754356	685976	2
	Ni	60	-0.009	ug/L	0.001	6	83	40	8
	Ni	62	-0.045	ug/L	0.016	36	89	55	15
	Cu	63	-0.006	ug/L	0.002	29	257	176	11
	Cu	65	-0.007	ug/L	0.001	17	102	66	6
	Zn	66	0.048	ug/L	0.007	14	202	298	3
	Zn	67	0.052	ug/L	0.011	20	32	50	6
	Zn	68	0.044	ug/L	0.026	59	485	517	7
	As	75	-0.002	ug/L	0.019	1053	431	388	13
	As-1	75	0.098	ug/L	0.129	131	9696	9038	1
	Se	82	0.018	ug/L	0.097	537	4	8	252
	Se	78	0.403	ug/L	0.523	129	9817	9161	1
	Y	89		ug/L			452367	418325	5
	Kr	83		ug/L			721	657	4
>	In	115		ug/L			1192772	1124627	1
	Ag	107	-0.002	ug/L	0.001	64	83	51	34
	Cd	111	-0.008	ug/L	0 004	45	153	100	20
	Cd	114	-0.001	ug/L	0 002	176	68	48	59
	Sb	121	-0.017	ug/L	0.020	117	2040	1638	20
	Sb	123	-0.014	ug/L	0.022	156	1508	1244	22
>	Tb	159		ug/L			1408020	1365520	0
	Tl	205	-0.003	ug/L	0.001	39	698	521	11
	Pb	208	0.002	ug/L	0.002	83	726	828	12
	Bi	209		ug/L			3188747	3165520	1
	Th	232	0.177	ug/L	0.025	13	3367	13264	10
	U	238	0.000	ug/L	0.001	1535	106	105	27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:09:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	149607	4
	Cl	37		ug/L			4359635	4024340	2
>	Ge	72		ug/L			754356	720379	2
	Ni	60	0.031	ug/L	0.003	9	83	212	7
	Ni	62	-0.007	ug/L	0.018	253	89	81	13
	Cu	63	0.020	ug/L	0.003	12	257	435	3
	Cu	65	0.022	ug/L	0.005	21	102	191	12
	Zn	66	0.592	ug/L	0.038	6	202	1683	4
	Zn	67	0.595	ug/L	0.016	2	32	281	4
	Zn	68	0.574	ug/L	0.042	7	485	1498	3
	As	75	0.001	ug/L	0.014	1083	431	415	9
	As-1	75	0.023	ug/L	0.062	270	9696	9313	1
	Sc	82	0.055	ug/L	0.031	56	4	17	43
	Se	78	0.080	ug/L	0.232	288	9817	9422	1
	Y	89		ug/L			452367	438939	3
	Kr	83		ug/L			721	645	3
>	In	115		ug/L			1192772	1168737	1
	Ag	107	-0.002	ug/L	0.001	50	83	58	21
	Cd	111	-0.009	ug/L	0.002	21	153	102	10
	Cd	114	-0.000	ug/L	0.002	9465	68	66	39
	Sb	121	-0.087	ug/L	0.007	7	2040	495	23
	Sb	123	-0.084	ug/L	0.007	7	1508	376	22
>	Tb	159		ug/L			1408020	1402345	1
	Tl	205	-0.003	ug/L	0.001	48	698	566	11
	Pb	208	0.013	ug/L	0.000	1	726	1466	2
	Bi	209		ug/L			3188747	3195824	1
	Th	232	0.045	ug/L	0.010	22	3367	5961	9
	U	238	-0.001	ug/L	0.000	43	106	67	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:13:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	180009	2
	Cl	37		ug/L			4359635	4270072	3
>	Ge	72		ug/L			754356	719195	2
	Ni	60	64.122	ug/L	1.676	2	83	277529	1
	Ni	62	64.939	ug/L	1.250	1	89	39934	0
	Cu	63	320.629	ug/L	2.012	0	257	3046370	2
	Cu	65	311.924	ug/L	6.024	1	102	1344700	2
	Zn	66	2071.153	ug/L	59.353	2	202	5209082	0
	Zn	67	1860.161	ug/L	65.413	3	32	781712	1
	Zn	68	1924.328	ug/L	87.202	4	485	3463577	3
	As	75	8.829	ug/L	0.295	3	431	21515	1
	As-1	75	8.675	ug/L	0.368	4	9696	30132	1
	Se	82	0.449	ug/L	0.049	10	4	109	10
	Se	78	0.121	ug/L	0.409	338	9817	9431	0
	Y	89		ug/L			452367	483087	2
	Kr	83		ug/L			721	715	2
>	In	115		ug/L			1192772	1128442	0
	Ag	107	1.062	ug/L	0.017	1	83	13125	0
	Cd	111	5.593	ug/L	0.022	0	153	29834	1
	Cd	114	5.384	ug/L	0 032	0	68	73087	1
	Sb	121	0.395	ug/L	0.003	0	2040	8558	0
	Sb	123	0.411	ug/L	0.019	4	1508	6602	2
>	Tb	159		ug/L			1408020	1376193	0
	Tl	205	0.077	ug/L	0.001	0	698	4192	0
	Pb	208	379.179	ug/L	2.878	0	726	22015637	0
	Bi	209		ug/L			3188747	3090901	1
	Th	232	0.603	ug/L	0.006	1	3367	37610	1
	U	238	0.330	ug/L	0 010	2	106	18548	2

WL67-0187

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:16:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	187938	4
	Cl	37		ug/L			4359635	4289659	1
>	Ge	72		ug/L			754356	709252	2
	Ni	60	**61.214**	ug/L	1.417	2	83	261357	3
	Ni	62	**63.043**	ug/L	0.797	1	89	38252	3
	Cu	63	**328.344**	ug/L	16.597	5	257	3073652	2
	Cu	65	**330.314**	ug/L	16.646	5	102	1403147	2
	Zn	66	**2019.505**	ug/L	73.424	3	202	5007860	1
	Zn	67	**1807.252**	ug/L	14.348	0	32	749404	3
	Zn	68	**1829.009**	ug/L	30.918	1	485	3246846	0
	As	75	**8.222**	ug/L	0.210	2	431	19787	0
	As-1	75	**8.132**	ug/L	0.258	3	9696	28424	0
	Se	82	**0.379**	ug/L	0.035	9	4	92	6
	Se	78	**0.318**	ug/L	0.212	66	9817	9423	1
	Y	89		ug/L			452367	482395	2
	Kr	83		ug/L			721	736	4
>	In	115		ug/L			1192772	1125326	2
	Ag	107	**1.027**	ug/L	0.026	2	83	12650	0
	Cd	111	**5.454**	ug/L	0.171	3	153	29010	2
	Cd	114	**5.288**	ug/L	0.057	1	68	71580	1
	Sb	121	**0.318**	ug/L	0.019	5	2040	7242	2
	Sb	123	**0.320**	ug/L	0.017	5	1508	5439	2
>	Tb	159		ug/L			1408020	1364907	1
	Tl	205	**0.069**	ug/L	0.001	1	698	3782	1
	Pb	208	**389.458**	ug/L	9.997	2	726	22420421	0
	Bi	209		ug/L			3188747	3075254	0
	Th	232	**0.502**	ug/L	0.004	0	3367	31571	2
	U	238	**0.292**	ug/L	0.011	3	106	16242	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:20:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	166675	1
	Cl	37		ug/L			4359635	4316230	3
>	Ge	72		ug/L			754356	698453	2
	Ni	60	88.571	ug/L	1.947	2	83	372279	2
	Ni	62	90.340	ug/L	1.172	1	89	53935	3
	Cu	63	338.729	ug/L	4.325	1	257	3125507	3
	Cu	65	332.332	ug/L	15.835	4	102	1390467	3
	Zn	66	2043.786	ug/L	44.841	2	202	4992063	0
	Zn	67	1843.181	ug/L	68.842	3	32	752138	2
	Zn	68	1946.191	ug/L	29.511	1	485	3402290	1
	As	75	32.040	ug/L	1.471	4	431	74751	2
	As-1	75	32.389	ug/L	1.411	4	9696	84694	1
	Se	82	72.429	ug/L	2.358	3	4	16500	1
	Se	78	71.502	ug/L	2.070	2	9817	52386	0
	Y	89		ug/L			452367	483552	3
	Kr	83		ug/L			721	722	4
>	In	115		ug/L			1192772	1116396	2
	Ag	107	12.260	ug/L	0.150	1	83	149068	1
	Cd	111	30.190	ug/L	0.938	3	153	158624	1
	Cd	114	30.188	ug/L	1 011	3	68	404937	1
	Sb	121	1.493	ug/L	0.032	2	2040	26656	1
	Sb	123	1.484	ug/L	0.043	2	1508	19875	0
>	Tb	159		ug/L			1408020	1357472	0
	Tl	205	24.216	ug/L	0.247	1	698	1087953	1
	Pb	208	393.859	ug/L	6.270	1	726	22555694	0
	Bi	209		ug/L			3188747	3071824	0
	Th	232	24.795	ug/L	0.287	1	3367	1394273	0
	U	238	24.941	ug/L	0.278	1	106	1373856	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:23:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	184032	3
	Cl	37		ug/L			4359635	4172508	1
>	Ge	72		ug/L			754356	700144	0
	Ni	60	**58.139**	ug/L	2.551	4	83	245005	3
	Ni	62	**59.509**	ug/L	1.451	2	89	35639	1
	Cu	63	**386.884**	ug/L	7.808	2	257	3577924	1
	Cu	65	**381.016**	ug/L	15.121	3	102	1599266	4
	Zn	66	**3500.619**	ug/L	55.783	1	202	8574248	1
	Zn	67	**3040.000**	ug/L	11.577	0	32	1244205	0
	Zn	68	**3185.648**	ug/L	181.195	5	485	5582724	5
	As	75	**8.159**	ug/L	0.027	0	431	19395	0
	As-1	75	**8.087**	ug/L	0.056	0	9696	27964	0
	Se	82	**0.457**	ug/L	0.108	23	4	108	23
	Se	78	**0.458**	ug/L	0.257	56	9817	9388	1
	Y	89		ug/L			452367	478938	0
	Kr	83		ug/L			721	724	5
>	In	115		ug/L			1192772	1143379	1
	Ag	107	**1.489**	ug/L	0.064	4	83	18600	2
	Cd	111	**8.751**	ug/L	0.193	2	153	47202	0
	Cd	114	**8.592**	ug/L	0.029	0	68	118139	1
	Sb	121	**2.746**	ug/L	0.064	2	2040	48585	1
	Sb	123	**2.775**	ug/L	0.084	3	1508	36810	1
>	Tb	159		ug/L			1408020	1389649	0
	Tl	205	**0.058**	ug/L	0.004	7	698	3335	4
	Pb	208	**407.704**	ug/L	6.799	1	726	23902441	1
	Bi	209		ug/L			3188747	3177362	1
	Th	232	**0.561**	ug/L	0.006	1	3367	35521	1
	U	238	**0.240**	ug/L	0.004	1	106	13647	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:27:11
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8GFA+.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	154421	4
	Cl	37		ug/L			4359635	4190987	4
>	Ge	72		ug/L			754356	693102	0
	Ni	60	**7.912**	ug/L	0.215	2	83	33078	3
	Ni	62	**8.687**	ug/L	0.252	2	89	5221	3
	Cu	63	**10.491**	ug/L	0.047	0	257	96283	1
	Cu	65	**10.540**	ug/L	0.147	1	102	43880	0
	Zn	66	**20.454**	ug/L	0.808	3	202	49772	3
	Zn	67	**21.199**	ug/L	1.024	4	32	8617	4
	Zn	68	**19.589**	ug/L	0.152	0	485	34434	1
	As	75	**1.392**	ug/L	0.043	3	431	3604	2
	As-1	75	**1.426**	ug/L	0.076	5	9696	12219	0
	Se	82	**0.082**	ug/L	0.103	124	4	23	101
	Se	78	**0.329**	ug/L	0.116	35	9817	9217	0
	Y	89		ug/L			452367	544665	4
	Kr	83		ug/L			721	724	4
>	In	115		ug/L			1192772	1129397	0
	Ag	107	**0.020**	ug/L	0.002	8	83	320	5
	Cd	111	**0.065**	ug/L	0.013	19	153	489	12
	Cd	114	**0.033**	ug/L	0.001	4	68	519	3
	Sb	121	**-0.096**	ug/L	0.005	5	2040	325	26
	Sb	123	**-0.095**	ug/L	0.003	3	1508	236	19
>	Tb	159		ug/L			1408020	1379875	1
	Tl	205	**0.027**	ug/L	0.001	3	698	1895	1
	Pb	208	**1.409**	ug/L	0.024	1	726	82711	0
	Bi	209		ug/L			3188747	3073736	2
	Th	232	**0.851**	ug/L	0.019	2	3367	51833	0
	U	238	**0.148**	ug/L	0.005	3	106	8408	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:30:43
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	153606	1
	Cl	37		ug/L			4359635	4092839	3
>	Ge	72		ug/L			754356	706877	1
	Ni	60	**6.016**	ug/L	0.166	2	83	25666	1
	Ni	62	**6.849**	ug/L	0.112	1	89	4215	2
	Cu	63	**8.485**	ug/L	0.171	2	257	79467	2
	Cu	65	**8.673**	ug/L	0.216	2	102	36848	3
	Zn	66	**15.136**	ug/L	0.644	4	202	37610	3
	Zn	67	**15.802**	ug/L	0.652	4	32	6558	3
	Zn	68	**15.069**	ug/L	0 527	3	485	27114	2
	As	75	**1.213**	ug/L	0.025	2	431	3253	1
	As-1	75	**1.206**	ug/L	0.061	5	9696	11940	0
	Se	82	**0.043**	ug/L	0.039	90	4	14	62
	Se	78	**0.120**	ug/L	0.190	158	9817	9271	0
	Y	89		ug/L			452367	514274	2
	Kr	83		ug/L			721	731	4
>	In	115		ug/L			1192772	1137033	1
	Ag	107	**0.016**	ug/L	0.001	6	83	275	4
	Cd	111	**0.056**	ug/L	0.002	3	153	448	1
	Cd	114	**0.031**	ug/L	0.004	13	68	483	11
	Sb	121	**-0.103**	ug/L	0.002	2	2040	204	18
	Sb	123	**-0.101**	ug/L	0.002	1	1508	154	13
>	Tb	159		ug/L			1408020	1376613	1
	Tl	205	**0.084**	ug/L	0.002	2	698	4505	0
	Pb	208	**0.949**	ug/L	0.016	1	726	55843	0
	Bi	209		ug/L			3188747	3114192	1
	Th	232	**0.700**	ug/L	0.017	2	3367	43081	1
	U	238	**0.195**	ug/L	0.007	3	106	11001	1

WL67 G1878

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:34:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	161983	2
	Cl	37		ug/L			4359635	4059913	3
>	Ge	72		ug/L			754356	715062	3
	Ni	60	**6.995**	ug/L	0.335	4	83	30161	3
	Ni	62	**7.896**	ug/L	0.088	1	89	4904	3
	Cu	63	**9.353**	ug/L	0.371	3	257	88516	1
	Cu	65	**9.345**	ug/L	0.557	5	102	40103	2
	Zn	66	**15.589**	ug/L	1.097	7	202	39134	4
	Zn	67	**16.706**	ug/L	0.624	3	32	7010	3
	Zn	68	**15.740**	ug/L	0.300	1	485	28625	1
	As	75	**1.531**	ug/L	0.082	5	431	4044	1
	As-1	75	**1.467**	ug/L	0.174	11	9696	12698	0
	Se	82	**0.074**	ug/L	0.022	30	4	21	25
	Se	78	Q **-0.077**	ug/L	0.386	504	9817	9253	0
	Y	89		ug/L			452367	533237	0
	Kr	83		ug/L			721	726	3
>	In	115		ug/L			1192772	1150847	2
	Ag	107	**0.018**	ug/L	0.003	14	83	306	12
	Cd	111	**0.053**	ug/L	0.010	19	153	432	10
	Cd	114	**0.023**	ug/L	0.001	5	68	380	5
	Sb	121	**-0.105**	ug/L	0.002	1	2040	169	18
	Sb	123	**-0.103**	ug/L	0.002	1	1508	136	16
>	Tb	159		ug/L			1408020	1392120	0
	Tl	205	**0.034**	ug/L	0.001	1	698	2256	1
	Pb	208	**1.030**	ug/L	0.003	0	726	61205	0
	Bi	209		ug/L			3188747	3121323	0
	Th	232	**0.717**	ug/L	0.014	1	3367	44596	1
	U	238	**0.288**	ug/L	0.004	1	106	16374	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:37:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	174147	3
	Cl	37		ug/L			4359635	4028063	2
>	Ge	72		ug/L			754356	717879	2
	Ni	60	7.224	ug/L	0.320	4	83	31265	2
	Ni	62	8.341	ug/L	0.251	3	89	5193	2
	Cu	63	8.832	ug/L	0.194	2	257	83996	3
	Cu	65	8.894	ug/L	0.298	3	102	38342	0
	Zn	66	16.716	ug/L	0.842	5	202	42133	2
	Zn	67	17.414	ug/L	0.659	3	32	7333	1
	Zn	68	16.547	ug/L	0.324	1	485	30185	1
	As	75	1.492	ug/L	0.071	4	431	3967	1
	As-1	75	1.416	ug/L	0.241	17	9696	12622	1
	Se	82	0.053	ug/L	0.085	158	4	17	117
	Se	78	-0.129	ug/L	0.680	526	9817	9253	1
	Y	89		ug/L			452367	540516	2
	Kr	83		ug/L			721	740	4
>	In	115		ug/L			1192772	1147295	1
	Ag	107	0.016	ug/L	0.002	12	83	284	9
	Cd	111	0.053	ug/L	0.005	9	153	435	5
	Cd	114	0.026	ug/L	0.002	6	68	430	4
	Sb	121	-0.105	ug/L	0.002	2	2040	167	21
	Sb	123	-0.103	ug/L	0.002	1	1508	134	13
>	Tb	159		ug/L			1408020	1389099	1
	Tl	205	0.034	ug/L	0.000	1	698	2267	0
	Pb	208	1.097	ug/L	0.012	1	726	65021	1
	Bi	209		ug/L			3188747	3138616	0
	Th	232	0.715	ug/L	0.008	1	3367	44385	0
	U	238	0.294	ug/L	0.004	1	106	16682	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 14:41:20
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	133698	4
	Cl	37		ug/L			4359635	4000337	2
>	Ge	72		ug/L			754356	704131	3
	Ni	60	25.299	ug/L	1.168	4	83	107161	1
	Ni	62	25.293	ug/L	0.512	2	89	15276	1
	Cu	63	26.200	ug/L	0.229	0	257	243897	3
	Cu	65	25.974	ug/L	1.063	4	102	109608	0
	Zn	66	79.798	ug/L	4.674	5	202	196470	2
	Zn	67	74.287	ug/L	4.746	6	32	30566	3
	Zn	68	79.476	ug/L	2.280	2	485	140445	1
	As	75	24.803	ug/L	0.673	2	431	58439	1
	As-1	75	25.027	ug/L	0.965	3	9696	68024	1
	Se	82	80.404	ug/L	2.184	2	4	18463	1
	Se	78	78.351	ug/L	3.397	4	9817	56967	0
	Y	89		ug/L			452367	420512	1
	Kr	83		ug/L			721	662	6
>	In	115		ug/L			1192772	1127783	1
	Ag	107	26.755	ug/L	0.795	2	83	328468	1
	Cd	111	26.288	ug/L	0.485	1	153	139586	1
	Cd	114	26.320	ug/L	0.575	2	68	356787	2
	Sb	121	25.597	ug/L	0.468	1	2040	430640	0
	Sb	123	26.082	ug/L	0.617	2	1508	329313	0
>	Tb	159		ug/L			1408020	1365466	1
	Tl	205	25.217	ug/L	0 423	1	698	1139414	0
	Pb	208	25.769	ug/L	0.174	0	726	1485164	0
	Bi	209		ug/L			3188747	3124107	0
	Th	232	24.140	ug/L	0.416	1	3367	1365621	2
	U	238	25.641	ug/L	1.093	4	106	1420392	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 14:45:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	127473	4
	Cl	37		ug/L			4359635	4129843	1
>	Ge	72		ug/L			754356	684218	2
	Ni	60	49.971	ug/L	2.724	5	83	205643	2
	Ni	62	50.257	ug/L	1.544	3	89	29413	0
	Cu	63	51.175	ug/L	0.952	1	257	462687	2
	Cu	65	50.315	ug/L	0.774	1	102	206477	3
	Zn	66	49.941	ug/L	1.508	3	202	119665	1
	Zn	67	50.390	ug/L	1.726	3	32	20171	0
	Zn	68	50.237	ug/L	2.401	4	485	86424	2
	As	75	49.586	ug/L	1.042	2	431	113169	1
	As-1	75	49.648	ug/L	1.288	2	9696	122531	1
	Se	82	51.129	ug/L	1.213	2	4	11413	0
	Se	78	50.493	ug/L	2.383	4	9817	38847	0
	Y	89		ug/L			452367	415537	2
	Kr	83		ug/L			721	672	4
>	In	115		ug/L			1192772	1118312	1
	Ag	107	52.537	ug/L	1.417	2	83	639582	1
	Cd	111	50.737	ug/L	0.853	1	153	267029	1
	Cd	114	50.447	ug/L	1.031	2	68	678104	2
	Sb	121	49.747	ug/L	1.524	3	2040	828122	1
	Sb	123	50.313	ug/L	0.499	0	1508	628730	0
>	Tb	159		ug/L			1408020	1334217	1
	Tl	205	52.339	ug/L	0.685	1	698	2309974	0
	Pb	208	50.943	ug/L	0.663	1	726	2867871	0
	Bi	209		ug/L			3188747	3036779	0
	Th	232	52.208	ug/L	0.864	1	3367	2881780	1
	U	238	52.761	ug/L	0.954	1	106	2855944	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 14:52:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	130095	0
	Cl	37		ug/L			4359635	4022124	2
>	Ge	72		ug/L			754356	704252	1
	Ni	60	-0.010	ug/L	0.000	3	83	34	4
	Ni	62	-0.056	ug/L	0.006	10	89	49	6
	Cu	63	-0.005	ug/L	0.002	41	257	189	12
	Cu	65	-0.004	ug/L	0.002	35	102	76	9
	Zn	66	0.047	ug/L	0.007	14	202	303	5
	Zn	67	0.034	ug/L	0.011	33	32	44	9
	Zn	68	0.027	ug/L	0.013	49	485	500	3
	As	75	0.007	ug/L	0.016	236	431	417	7
	As-1	75	0.025	ug/L	0.095	374	9696	9110	1
	Se	82	0.026	ug/L	0.025	93	4	10	52
	Se	78	0.070	ug/L	0.358	513	9817	9205	1
	Y	89		ug/L			452367	410609	1
	Kr	83		ug/L			721	652	1
>	In	115		ug/L			1192772	1157031	0
	Ag	107	-0.003	ug/L	0.000	8	83	46	5
	Cd	111	-0.011	ug/L	0.001	11	153	88	7
	Cd	114	-0.001	ug/L	0.001	59	68	45	27
	Sb	121	-0.011	ug/L	0.016	152	2040	1796	14
	Sb	123	-0.006	ug/L	0.020	359	1508	1390	17
>	Tb	159		ug/L			1408020	1362023	1
	Tl	205	-0.004	ug/L	0.001	11	698	484	6
	Pb	208	0.000	ug/L	0.001	455	726	714	6
	Bi	209		ug/L			3188747	3126064	0
	Th	232	0.165	ug/L	0.023	13	3367	12570	11
	U	238	0.000	ug/L	0.000	174	106	110	11

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4·19·13

	Analyst 4·19 DM	Peer 4-22-13	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			
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	√	/	SEE RUN LOG
Matrix Duplicates	√	/	SEE RUN LOG
Method Blanks	√	/	
Data Distribution			
Requested elements/isotope identified	√	/	
Correct samples identified for distribution	√	/	
Raw data match distributed data	√	/	
Data filename correct	√	/	
Narrative	√	/	SEE CAF 3

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

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ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments (DM 4-19-13)
STD 0.0	5MM	1X		
" 0.1				
" 0.5				
" 1.0				
" 2.0				
" 5.0				
" 10.0				
ICV			8.20	Begin CLP %R=103 ✓
ICB			-0.02	✓
CCV1			4.11	%R=103 ✓
CCB1			0.01	✓
CRA			0.11	✓
WM16 MB1			0.01	✓
" MB1SPK			2.20	%R=110 ✓
" MB1SPD			2.19	%R=110 ✓
" A			0.04	
" ADUP			0.05	NO RPD: Undetected ✓
" ASPK			1.20	%R=120 ✓
" B				
" C				
" D				
CCV2			4.10	%R=103 ✓
CCB2			0.00	✓
WL49 MB3			0.00	✓
" MB3SPK			2.K	%R=108 ✓
" F			7.93	
" FDUP			9.50	RPD=18.0 ✓
" FSPK			9.53	%R=160 High X
" G				
WLCB MB1	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2496

Standard ID:

Standard: 3027-14

ICV/CCV: 59.6

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

Page: 2 of 26

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments (DM 4-19-13)	
WLL8 MBISPK	SMM	1X	2.21	%R=111	✓
" REF		5X	6.85	8.39 mg/kg	✓
" A		1X	8.33		
CCV3			4.04	%R=101	✓
CCB3			0.00		✓
WLL8 AOUP			7.09	RPD=7.99	✓
" AOPK			8.68	%R=35 LOW	X
" B					
WM28 MB1			-0.03		✓
" MB1SPK			2.09	%R=105	✓
" A			0.25		
" AOUP			0.38	DIFF > 0.1	X
" AOPK			1.28	%R=103	✓
" B					
" C					
CCV4			4.05	%R=101	✓
CCB4			0.00		✓
WM28 D					
" E					
CCV5			4.05	%R=101	✓
CCB5			-0.00		✓
WL49 F			7.87		
" FOUP			9.44	RPD=18.1	✓
" FSPK			9.45	%R=158 High	X
WLL8 A			8.10		
" AOUP			7.45	RPD=8.8C	✓
" AOPK			8.42	%R=32 LOW	X
WM28 A			0.22		
" AOUP			0.37	DIFF>0.1	X
" ASPK			1.2C	%R=104	✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2436

Standard ID:
Standard: 3027-14

ICV/CCV: 59-6

Mercury Analysis Log

Analyst: TDM

Instrument: CETAC

Date: 4-19-13

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ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments (on 4-19-13)	
CCV6	5mm	1X	4.01	%R=100	√
CCB6			0.01		√
WL74 MB1			0.00		√
" MB1SPK		↓	2.09	%R=105	√
" REF1		5X	6.69	8.27mg/kg	√
" B		1X			
" C					
" D					
" E					
" F					
" G					
" H					
CCV7			4.02	%R=101	√
CCB7			-0.00		√
WL74 I					
" J			0.05		
" JDUP			0.04	NO RPD: Undetected	√
" JSPK			1.12	%R=112	√
WL67 MB1			-0.00		√
" MB1SPK			1.99	%R=100	√
" A			5.61		
" ADUP			6.54	RPD=15.3	√
" ASPK			7.88	%R=227 High	X
" B					
CCV8			3.99	%R=100	√
CCB8			-0.01	ENDCLP	√
WM08 MB1			0.00		√
" MB1SPK			2.07	%R=104	√
" A			0.12		
" ADUP	↓	↓	0.09		√

Chemical/Reagent ID:

10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2436

Standard ID:

Standard: 3027-14

ICV/CCV: E9-6

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

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ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments (DM 4-19-13)
Insert WM08 B → 5mm DM 4-22-13					
WM08	PEPK	5mm	1X	1.18	%R=106 ✓
WL85	MB			-0.00	✓
"	MBSPK			2.01	%R=101 ✓
"	A			0.03	
"	ADUP			0.04	No RPD: Undetected ✓
CCV				4.01	%R=100 ✓
CCB				-0.00	✓
WL85	ASPK			1.10	%R=110 ✓
"	B				
"	C				
WK89	MB			-0.00	✓
"	MBSPK			1.93	%R=97 ✓
"	I			0.12	
"	IDUP			0.14	✓
"	ISPK			1.23	%R=111 ✓
WM42	MB			-0.00	✓
"	MBSPK			2.04	%R=102 ✓
CCV				4.01	%R=100 ✓
CCB				0.01	✓
WM42	A			0.09	
"	ADUP			0.10	✓
"	APSK			1.20	%R=120 ✓
WM36	MB			0.00	✓
"	MBSPK			2.09	%R=105 ✓
"	A			0.16	
"	ADUP			0.18	✓
"	APSK			1.31	%R=115 ✓
WM46	MB			0.02	✓
"	MBSPK			2.12	%R=106 ✓
CCV		↓	↓	4.00	%R=100 ✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2436

Standard ID:

Standard: 3027-14

ICV/CCV: 59-C

WL67 : 81809

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

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ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	DM 4-19-13 Comments	
CCB		5mm	1x	-0.01		✓
WM46	A			0.04		
"	ADUP			0.07	NO RPD: Undetected	✓
"	APSK			1.15	%R=115	✓
"	B					
"	C					
CCV				3.99	%R=100	✓
CCB				-0.01		✓
NLG7	A			5.54		
"	AOUP			6.41	RPD=14.56	✓
"	MSPK			7.76	%R=222 High	x
CCV				3.97	%R=99	✓
CCB		↓		-0.01		✓
STD	0.0	TWM				
"	0.1					
"	0.5					
"	1.0					
"	2.0					
"	50					
"	10.0					
ICV			4-22-13	7.86	%R=98	✓
ICB				-0.02		✓
CCV				4.02	%R=101	✓
CCB				-0.01		✓
CRA				0.09		✓
WM39	MB			-0.01		✓
"	MBSPK			1.97	%R=99	✓
"	A			-0.01		
"	AOUP			-0.00	NO RPD: Undetected	✓
"	ASPK	↓	↓	0.92	%R=92	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2436

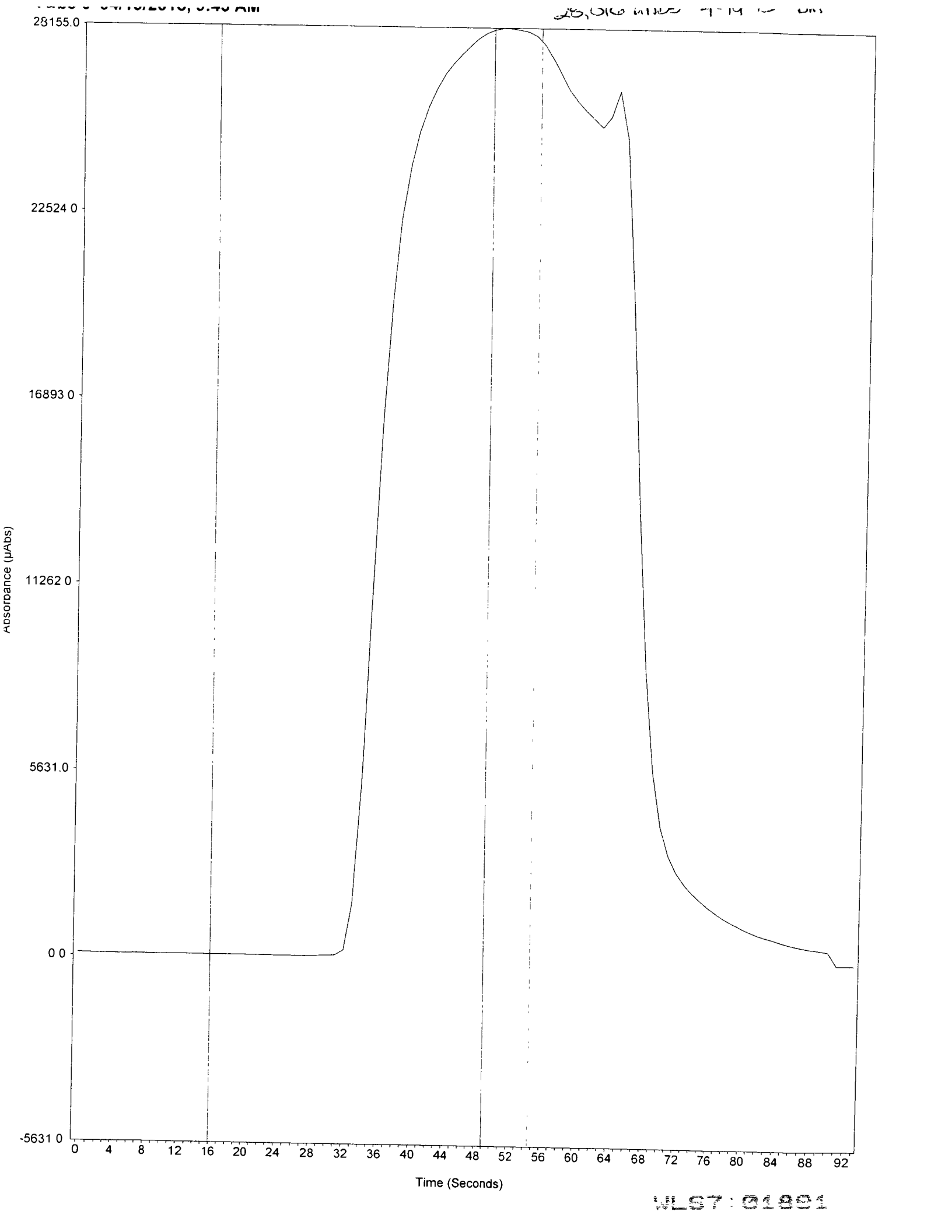
Standard ID:

Standard: 3027-14 (5mm)

3027-8 (TWM)

ICV/CCV: 59.6

WLG7 01999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48
52
56
60
64
68
72
76
80
84
88
92
Time (Seconds)

CETAC Hg Analysis Report - 13041900.DB - Friday, April 19, 2013, 2:16:07 PM

Analyst
Date Started Friday, April 19, 2013, 09.42:11
Worksheet ARI 10ppb CALIB
Comment

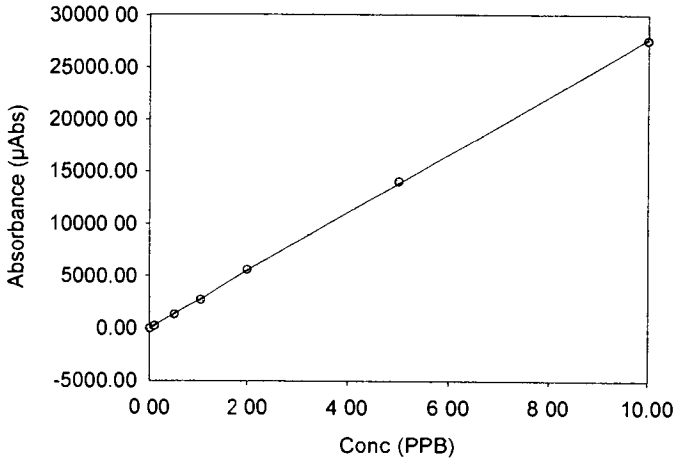
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	19-Apr-2013, 09:42	10.00	0.29	28000 00	1.00	

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	19-Apr-2013, 09:45	0.00	8.72	-37.30	1.00	
Standard #1	19-Apr-2013, 09:47	0.10	1 76	225.00	1.00	
Standard #2	19-Apr-2013, 09.48	0.50	0.23	1310.00	1.00	
Standard #3	19-Apr-2013, 09:50	1.00	0.43	2740.00	1.00	
Standard #4	19-Apr-2013, 09:51	2 00	0.42	5600.00	1.00	
Standard #5	19-Apr-2013, 09.53	5.00	0.27	14100.00	1.00	
Standard #6	19-Apr-2013, 09:55	10 00	0.30	27600 00	1 00	

SMM

Calibration Data



Int.	0.000
Slope	2768.570
Correlation	0 99993

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	19-Apr-2013, 09:58	8.20	0.40	22700 00	1 00	
ICB	19-Apr-2013, 09.59	-0.02	15.80	-43.40	1 00	

Big CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10:01	4.11	0.32	11400 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 10:03	0.01	15.40	21 80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	19-Apr-2013, 10:04	0.11	0.45	312.00	1 00	
WM16 MB1 SMM	19-Apr-2013, 10:06	0.01	29.40	14 60	1 00	
WM16 MB1SPK SMM	19-Apr-2013, 10:07	2.20	0.34	6100 00	1 00	
WM16 MB1SPD SMM	19-Apr-2013, 10:09	2.19	0 20	6060 00	1.00	
WM16 A SMM	19-Apr-2013, 10:11	0.04	1.81	120.00	1 00	
WM16 ADUP SMM	19-Apr-2013, 10:12	0.05	3.94	147.00	1.00	
WM16 ASPK SMM	19-Apr-2013, 10.14	1.20	0 46	3320 00	1.00	
WM16 B SMM	19-Apr-2013, 10:16	0.05	3.69	135.00	1.00	
WM16 C SMM	19-Apr-2013, 10:17	0.16	0.97	448.00	1.00	
WM16 D SMM	19-Apr-2013, 10:19	0.09	3.63	241.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10.20	4.10	0.69	11400 00	1.00	

CETAC Hg Analysis Report - 13041900.DB - Friday, April 19, 2013, 2:16:08 PM

Analyst
Date Started Friday, April 19, 2013, 10:22:37
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 10:22	0.00	125.00	3.27	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL49 MB3 SMM	19-Apr-2013, 10:24	0.00	19.00	9.77	1.00	
WL49 MB3SPK SMM	19-Apr-2013, 10:25	2 16	0.54	5970.00	1.00	
WL49 F SMM	19-Apr-2013, 10 27	7.93	0.44	22000.00	1 00	
WL49 FDUP SMM	19-Apr-2013, 10:29	9.50	0.34	26300.00	1.00	
WL49 FSPK SMM	19-Apr-2013, 10:30	9.53	0.41	26400 00	1 00	- H. %R
WL49 G SMM	19-Apr-2013, 10:32	0.08	0.99	223.00	1.00	
WL68 MB1 SMM	19-Apr-2013, 10:33	0.00	29.90	10 10	1.00	
WL68 MB1SPK SMM	19-Apr-2013, 10:35	2.21	0.28	6120.00	1 00	
WL68 REF1 SMM	19-Apr-2013, 10.37	6.85	0.22	19000.00	5.00	
WL68 A SMM	19-Apr-2013, 10:38	8.33	0.40	23100 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10:40	4.04	0.16	11200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 10.42	0.00	28 80	6 64	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL68 ADUP SMM	19-Apr-2013, 10:43	7.69	0.39	21300.00	1.00	
WL68 ASPK SMM	19-Apr-2013, 10:45	8.68	0.18	24000.00	1 00	- LOW %R
WL68 B SMM	19-Apr-2013, 10:46	7 84	0.45	21700.00	1.00	
WM28 MB1 SMM	19-Apr-2013, 10:48	-0.03	9.58	-71.00	1.00	
WM28 MB1SPK SMM	19-Apr-2013, 10:50	2.09	0 16	5790.00	1.00	
WM28 A SMM	19-Apr-2013, 10:51	0.25	1.43	689.00	1 00	
WM28 ADUP SMM	19-Apr-2013, 10:53	0.38	0.51	1060.00	1.00	- D. %R > 0.1
WM28 ASPK SMM	19-Apr-2013, 10:55	1.28	0.11	3540.00	1 00	
WM28 B SMM	19-Apr-2013, 10:56	0.36	0.42	1010.00	1.00	
WM28 C SMM	19-Apr-2013, 10:58	0.27	0.58	743.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10.59	4.05	0 25	11200 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11 01	0 00	192.00	3 80	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM28 D SMM	19-Apr-2013, 11:03	0.36	0.19	1010.00	1.00	
WM28 E SMM	19-Apr-2013, 11:04	0 17	0.86	477.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 11:06	4.05	0.29	11200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11.08	-0 00	267.00	-2 44	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL49 F SMM	19-Apr-2013, 11:10	7.87	0 39	21800.00	1.00	
WL49 FDUP SMM	19-Apr-2013, 11:11	9.44	0 43	26100.00	1 00	
WL49 FSPK SMM	19-Apr-2013, 11:13	9.45	0.41	26200.00	1.00	- H. %R
WL68 A SMM	19-Apr-2013, 11.14	8.10	0.45	22400.00	1.00	
WL68 ADUP SMM	19-Apr-2013, 11.16	7.45	0.48	20600.00	1.00	
WL68 ASPK SMM	19-Apr-2013, 11.18	8.42	0.21	23300 00	1 00	- LOW %R
WM28 A SMM	19-Apr-2013, 11:19	0.22	1 33	602.00	1.00	
WM28 ADUP SMM	19-Apr-2013, 11:21	0.37	0 92	1020.00	1.00	- D. %R > 0.1
WM28 ASPK SMM	19-Apr-2013, 11:22	1.26	0 56	3490.00	1 00	

WL68 : 01899

Analyst
Date Started Friday, April 19, 2013, 11.24.32
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 11:24	4.01	0.20	11100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11:26	0.01	20.00	21.10	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL74 MB1 SMM	19-Apr-2013, 11:28	0.00	30.10	7.30	1.00	
WL74 MB1SPK SMM	19-Apr-2013, 11:29	2.09	0.31	5780 00	1 00	
WL74 REF1 SMM	19-Apr-2013, 11:31	6.69	0.36	18500 00	5.00	
WL74 B SMM	19-Apr-2013, 11:32	0.03	0.71	95.50	1 00	
WL74 C SMM	19-Apr-2013, 11.34	0.02	3.63	67 30	1.00	
WL74 D SMM	19-Apr-2013, 11 36	0 04	3 50	98.20	1 00	
WL74 E SMM	19-Apr-2013, 11:37	0.09	2.42	241 00	1 00	
WL74 F SMM	19-Apr-2013, 11 39	0.04	0 89	110.00	1 00	
WL74 G SMM	19-Apr-2013, 11:40	0.04	2.13	100.00	1.00	
WL74 H SMM	19-Apr-2013, 11:42	0.03	6.60	81.20	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 11.44	4.02	0.29	11100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11:45	-0 00	214 00	-2.35	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL74 I SMM	19-Apr-2013, 11:47	0.04	6.77	109.00	1.00	
WL74 J SMM	19-Apr-2013, 11 49	0.05	7.07	128.00	1 00	
WL74 JDUP SMM	19-Apr-2013, 11.50	0.04	2 70	102 00	1 00	
WL74 JSPK SMM	19-Apr-2013, 11:52	1.12	0.52	3100.00	1.00	
WL67 MB1 SMM	19-Apr-2013, 11:53	-0 00	454.00	-2.52	1.00	
WL67 MB1SPK SMM	19-Apr-2013, 11:55	1.99	1.15	5520.00	1.00	
WL67 A SMM	19-Apr-2013, 11:57	5.61	0.21	15500.00	1.00	
WL67 ADUP SMM	19-Apr-2013, 11:58	6.54	0.30	18100.00	1.00	
WL67 ASPK SMM	19-Apr-2013, 12:00	7.88	0.54	21800 00	1 00	H, 9,R
WL67 B SMM	19-Apr-2013, 12.01	7.21	0.37	20000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 12.03	3.99	0.26	11100 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 12:05	-0.01	8.41	-20.00	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM08 MB1 SMM	19-Apr-2013, 12:06	0.00	86 20	1.54	1 00	
WM08 MB1SPK SMM	19-Apr-2013, 12:08	2.07	0.44	5740 00	1.00	
WM08 A SMM	19-Apr-2013, 12:10	0.12	1.10	333 00	1.00	
WM08 ADUP SMM	19-Apr-2013, 12.11	0.09	2 82	253.00	1.00	
WM08 ASPK SMM	19-Apr-2013, 12:13	1.18	0.42	3280.00	1.00	
WM08 B SMM	19-Apr-2013, 12:15	0.09	0.99	255 00	1 00	
WL85 MB SMM	19-Apr-2013, 12:16	-0.00	62.60	-7.54	1 00	
WL85 MBSPK SMM	19-Apr-2013, 12.18	2.01	0.39	5560.00	1 00	
WL85 A SMM	19-Apr-2013, 12:19	0.03	4 15	80.60	1 00	
WL85 ADUP SMM	19-Apr-2013, 12:21	0.04	6.06	100 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 12:23	4.01	0.29	11100.00	1.00	

Analyst
Date Started Friday, April 19, 2013, 12:24:49
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 12:24	-0.00	616.00	-1 16	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL85 ASPK SMM	19-Apr-2013, 12:26	1 10	0.49	3050.00	1 00	
WL85 B SMM	19-Apr-2013, 12:28	0.05	2.88	144 00	1.00	
WL85 C SMM	19-Apr-2013, 12:29	0.03	2.72	85.00	1.00	
WK89 MB SMM	19-Apr-2013, 12.31	-0.00	97.70	-2.61	1.00	
WK89 MBSPK SMM	19-Apr-2013, 12:32	1.93	0.40	5330 00	1 00	
WK89 I SMM	19-Apr-2013, 12:34	0.12	0.70	337.00	1 00	
WK89 IDUP SMM	19-Apr-2013, 12:36	0.14	0.82	382.00	1.00	
WK89 ISPK SMM	19-Apr-2013, 12:37	1.23	0.34	3410.00	1.00	
WM42 MB SMM	19-Apr-2013, 12:39	-0.00	198.00	-2.79	1.00	
WM42 MBSPK SMM	19-Apr-2013, 12:41	2.04	0.56	5650 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 12.42	4.01	0.30	11100 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 12.44	0.01	25 30	15 20	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM42 A SMM	19-Apr-2013, 12.46	0.09	0.63	243.00	1.00	
WM42 ADUP SMM	19-Apr-2013, 12:47	0.10	0.73	274 00	1.00	
WM42 ASPK SMM	19-Apr-2013, 12.49	1.20	0.34	3320 00	1.00	
WM36 MB SMM	19-Apr-2013, 12:50	0.00	60.90	10.30	1.00	
WM36 MBSPK SMM	19-Apr-2013, 12:52	2.09	0.37	5780.00	1.00	
WM36 A SMM	19-Apr-2013, 12:54	0.16	0.41	456.00	1 00	
WM36 ADUP SMM	19-Apr-2013, 12:55	0.18	0 51	497.00	1.00	
WM36 ASPK SMM	19-Apr-2013, 12 57	1 31	0.48	3620.00	1.00	
WM46 MB SMM	19-Apr-2013, 12.59	0.02	9.99	58 60	1 00	
WM46 MBSPK SMM	19-Apr-2013, 13 00	2.12	0.47	5880.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 13:02	4 00	0.30	11100.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 13:04	-0.01	4.35	-35.70	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM46 A SMM	19-Apr-2013, 13:05	0.04	4.65	121 00	1.00	
WM46 ADUP SMM	19-Apr-2013, 13:07	0.07	0.75	201.00	1 00	
WM46 ASPK SMM	19-Apr-2013, 13:08	1.15	0 48	3190.00	1 00	
WM46 B SMM	19-Apr-2013, 13:10	0.11	1.58	295.00	1.00	
WM46 C SMM	19-Apr-2013, 13.12	0 29	0.31	807 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 13.13	3.99	0.19	11100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 13:15	-0.01	15.40	-23.40	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL67 A SMM	19-Apr-2013, 13:17	5.54	0.42	15300.00	1.00	
WL67 ADUP SMM	19-Apr-2013, 13:18	6.41	0.38	17800 00	1.00	
WL67 ASPK SMM	19-Apr-2013, 13:20	7.76	0.36	21500 00	1.00 ~ H: % R	

Analyst
Date Started Friday, April 19, 2013, 13:22:07
Worksheet ARI 10ppb CALIB
Comment

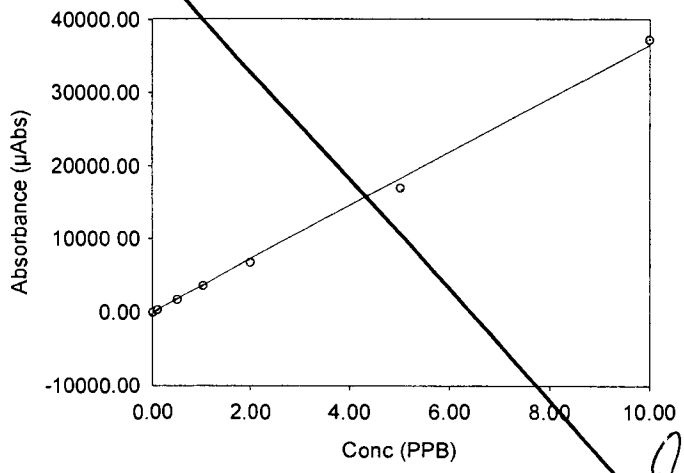
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 13:22	3.97	0.56	11000 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 13.23	-0.01	9.49	-26.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	19-Apr-2013, 13:25	0.00	46.70	-19 80	1.00	
Standard #1	19-Apr-2013, 13:27	0.10	1.43	330.00	1.00	
Standard #2	19-Apr-2013, 13:28	0.50	0.63	1710.00	1 00	
Standard #3	19-Apr-2013, 13:30	1.00	0.70	3590.00	1.00	
Standard #4	19-Apr-2013, 13:32	2.00	0.34	6780.00	1.00	
Standard #5	19-Apr-2013, 13:33	5.00	0.45	17000.00	1 00	
Standard #6	19-Apr-2013, 13:35	10.00	0.38	37300 00	1.00	

TWM

Calibration Data



Int.	0.000
Slope	3651.905
Correlation	0.99888

4-22-13

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	19-Apr-2013, 13.39	7.86	0.91	28700.00	1.00	
ICB	19-Apr-2013, 13:40	-0.02	14.50	-73 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 13:42	4.02	0.33	14700 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 13:44	-0.01	6.47	-21 40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	19-Apr-2013, 13:45	0.09	1 39	330 00	1.00	
WM39 MB TWM	19-Apr-2013, 13 47	-0.01	9.37	-20 30	1.00	
WM39 MBSPK TWM	19-Apr-2013, 13:49	1.97	0 61	7210 00	1.00	
WM39 A TWM	19-Apr-2013, 13:50	-0 01	20.60	-24.20	1.00	
WM39 ADUP TWM	19-Apr-2013, 13:52	-0.00	36.50	-8.50	1 00	
WM39 ASPK TWM	19-Apr-2013, 13:53	0 92	0.47	3360.00	1.00	
WL18 MB3 LEM	19-Apr-2013, 13:55	0.01	7.77	33.30	1.00	
WL18 Bt LEM	19-Apr-2013, 13 57	0.00	143.00	4.34	1.00	
WL18 BtDUP LEM	19-Apr-2013, 13.58	0.00	12.40	12.30	1 00	
WL18 BtSPK LEM	19-Apr-2013, 14.00	1.00	0.19	3650.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 14:02	4.05	0.53	14800.00	1.00	

CETAC Hg Analysis Report - 13041900.DB - Friday, April 19, 2013, 2:16:10 PM

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

Digested 20.0 mL

Prep Code: TWM Instrument: CETAC

Analyst: NB Date: 04-12-13

Bath Temp: 90°C Start Time: 1442 End Time: 1642

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1 3 NB 4-12-13
STD1	3027-8	0.01		0.1	1
STD2		0.05		0.5	1
STD3		0.10		1.0	1
STD4		0.20		2.0	1
STD5		0.50		5.0	1
STD6		1.00		10.0	1
CRA	↓	0.01		0.1	1
ICB/CCB	—	0.00		0.0	1
ICV/LCS	59-6	0.16	↓	8.0	1
CCV	↓	0.08	100.0	4.0	1

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: —

5% $K_2S_2O_8$: MP2439 5% $KMnO_4$: MP2445

Prep Code: SMM Instrument: CETAC

Analyst: CB Date: 04-15-13

Bath Temp: 90°C Start Time: 1355 End Time: 1425

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	3022-14	0.01		0.1	2
STD2		0.05		0.5	2
STD3		0.10		1.0	2
STD4		0.20		2.0	2
STD5		0.50		5.0	2
STD6		1.00		10.0	2
CRA	↓	0.01		0.1	1
ICB/CCB	—	0.00		0.0	3
ICV/LCS	59-6	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: —

5% $K_2S_2O_8$: MP2462 5% $KMnO_4$: MP2445

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM **Matrix:** Soil

Analyst: CB **Date:** 04-15-13

Bath Temp: 90°C **Start Time:** 1125 **End Time:** 1155

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WL74 B	3	~	0.225	50.0	4/23 1	Y	
" C	3	~	0.237		1		
" D	3	~	0.233		1		
" E	3	~	0.250		1		
" F	3	~	0.214		1		
" G	3	~	0.269		1		
" H	3	~	0.237		1		
" I	2	~	0.242		1		
" J	3	~	0.251		1		
" Jdup	3	~	0.251		1		
" JSpk	3	~	0.252		1		
" REF1	0053-540	~	0.202		1		
" mBl	~	~	~		1		
" mBlSpk	~	~	~		1		
WL67 A	6	~	0.211		4/25 1		
" B	6	~	0.216		1		
" Adup	6	~	0.216		1		
" ASpk	6	~	0.207		1		
" mBl	~	~	~		1		
" mBlSpk	~	~	~	50.0	1	Y	
				EB 4/15/13			

Chemical/Reagent ID:

HNO_3: I9169 **H_2SO_4:** I8044 **HCl:** ~

5% $K_2S_2O_8$: MP2439 **5% $KMnO_4$:** MP2445 **Digest Tube Lot:** MH21KK06

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WL67

TOC Solids Prep Log

DATE: 4/12/2013

ANALYST: KE 14:02

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID: _____

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID: _____

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1351		13.1353	0.2 mg	
WL49 F5		++-	13.0783	19.7008	17.0537	60.03%	
WL49 F5 dup		++-	13.0469	18.8180	16.5395	60.52%	RPD = 0.81%
WL49 F5 trip		++-	13.2204	19.8275	17.0905	58.57%	RSD = 1.69%
WL49 G1		++-	13.1679	18.6015	18.0366	89.60%	
WL67 A7		++-	13.0464	18.7110	15.3334	40.37%	
WL67 B7		++-	13.1006	18.2388	14.6389	29.94%	
WL68 A6		++-	13.0654	19.4869	15.6067	39.57%	
WL68 A6 dup		++-	13.1144	18.8088	15.3829	39.84%	RPD = 0.66%
WL68 A6 trip		++-	13.1581	19.9793	16.0361	42.19%	RSD = 3.56%
WL68 B6		++-	13.1614	17.6754	14.5614	31.01%	
WL69 A1		-	13.0775	19.9054	15.4868	35.29%	
WL69 B1		-	13.1507	19.0865	14.5369	23.35%	

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(1) 4-12-13 (2)

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 (1) 14:02 Date 4-12-13

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.1351	0	13.1353		
WL49 F5		++-	13.0783	19.2008	17.0537		Oily Sediment Mixture
" F5		++-	13.0469	18.8180	16.5395		"
" F5		++-	13.2204	19.8275	17.0905		"
" G1		++-	13.1679	18.6095	18.0866		Wet Sand + Rocks
WL67 A7		++-	13.0464	18.7110	15.3334		Oily Sediment + Rocks
" B7		++-	13.1006	18.2388	14.6389		
WL68 A6		++-	13.0654	19.4869	15.6067		
" A6		++-	13.1144	18.8088	15.3829		
" A6		++-	13.1581	19.9793	16.0361		
" B6		++-	13.1614	17.6754	14.5614		
WL69 A1		-	13.0725	19.9054		15.4868	
" B1		-	13.1507	19.0865		14.5369	

-13
4-17 (1)

4-15-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

DATE: 4/12/2013 (B)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

ANALYST: KE/RR 13:58

Instrumentation ***Drying Ovens:*** 12 ***Muffle Furnace:*** N/A ***Analytical Balance:*** 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

4/12/2013 13:58 date/time in oven KE

4/13/2013 11:25 date/time out RR

elapsed hrs = 21.5

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	4/12/13 13:34	4/12/13 12:46	4/13/13 11:40										
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)	(%)
Blank		0.0000	1.0908	1.0908			0.00							
~~WL46 A1~~		~~7.8439~~	~~1.1129~~				-	-				-	-	-
~~WL46 A1 dup~~		~~7.8346~~	~~1.0847~~				-	-				-	-	-
							~~RPD =~~	~~NA~~				~~RPD =~~	~~NA~~	
WL46 B1		6.5552	1.1303	6.1983			5.07	93.42%						
WL46 C1		6.9584	1.1085	6.3143			5.21	88.99%						
WL46 D1		8.6676	1.1067	6.6203			5.51	72.92%						
WL46 E1		6.7315	1.0993	5.3863			4.29	76.12%						
WL49 F5		8.0019	1.0945	4.8808			3.79	54.82%						
WL49 F5 dup		8.4960	1.1063	5.0478			3.94	53.34%						
							RPD =	2.73%				RPD =	NA	
WL49 F5 trp		8.6709	1.0884	5.1441			4.06	53.49%						
							RSD =	1.51%				RSD =	NA	
WL49 G1		7.6602	1.0888	6.6485			5.56	84.60%						
WL67 A7		6.4581	1.1015	2.9283			1.83	34.10%						
WL67 B7		6.6702	1.0696	2.4742			1.40	25.08%						
WL68 A6		6.2384	1.0708	2.8504			1.78	34.44%						
WL68 A6 dup		6.0612	1.1091	2.7510			1.64	33.16%						
							RPD =	3.79%				RPD =	NA	
WL68 A6 trp		6.5280	1.0655	2.9770			1.91	34.99%						
							RSD =	2.76%				RSD =	NA	
WL68 B6		6.2864	1.0915	2.3177			1.23	23.60%						
WL69 A1		6.7728	1.1221	3.0246			1.90	33.67%						
WL69 B1		6.5781	1.1025	2.2850			1.18	21.60%						

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analyst: (D)	Date: 4-12-13 13:58	Oven ID: 012	Balance ID: 1123230597
Time in Oven:	Time Out of Oven: 4/13/13 11:25	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:		4-12-13 13:34	4-12-13 17:46	4/13/13 11:40						
Cal Weight (10.0000):		10.0000 (D)	10.0000 (W)	10.0000						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.0908	1.0908						
~~WL46 A1~~	2	~~7.8439~~	~~1.1129~~	~~7.1~~	lost tin		Rerun on 4-15-13 (D)			
~~WA1~~	3	~~7.8348~~	~~1.0847~~	~~7.2587~~						
B1	4	6.5552	1.1303	6.1983						
C1	5	6.9584	1.1085	6.3143						
D1	6	8.6676	1.1067	6.6203						
E1	7	6.7315	1.0993	5.3863						
WL49 E5	8	8.0019	1.0945	4.8808						
↓ F5	9	8.4960	1.1063	5.0478						
↓ F5	10	8.6709	1.0884	5.1441						
↓ G1	11	7.6602	1.0888	6.6185						
WL67 A7	12	6.4581	1.1015	2.9283						
↓ B7	13	6.6702	1.0696	2.4742						
WL68 A6	14	6.2384 (2)	~~1.0708~~	2.8504						
~~WA6~~	15	~~6.0612~~	~~1.1091~~	~~2.9770~~	2.7510					
~~WA6~~	16	~~6.5280~~	~~1.0635~~	~~2.9870~~						
B6	17	6.2864	1.0915	~~2.9510~~	2.3177					
WL69 A1	18	6.7738	1.1221	~~2.9970~~	3.0246					
↓ B1	19	6.5781	1.1025	2.2850						
					4-12-13 (D)					

6053F (2) 1.0708 4-12-13 (D)

W
4-22-13

TOC, Solids Data Analysis

DATE: 4/18/2013
ANALYST: KE 7:14
Balance ID:

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*

Calibration Data

Cal Curve ID: 4/16/2013 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00136-09 *Curve Date:* 04/16/13
CalFact: 1.364E+05 *intercept:* 283170 *r2 :* 0.99719
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
9.6	17.3	14.7				13.9	28.3%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	970	970	97.00%
Blank				1.00		40.0	-43.08	-43	Blank OK
NIST 1941B				1.00		1.7	27700	27,700	92.64%
Silica Blanks 1				1.00		48.4	9.59	10	Low Scale
Silica Blanks 2				1.00		48.8	17.29	17	Low Scale
Silica Blanks 3				1.00		52.1	14.72	15	Low Scale
~~WL49 F5~~	~~17.9~~	~~176.1~~	~~89.84%~~	~~9.84~~		~~1.6~~	~~11604~~	~~114,037~~	~~Range OK!~~
~~WL49 F5 dup~~	~~17.6~~	~~175.4~~	~~89.97%~~	~~9.97~~		~~1.4~~	~~15787~~	~~167,207~~	~~RPD=31.8%~~
~~WL49 F5 trp~~	~~16.4~~	~~162.4~~	~~89.90%~~	~~9.90~~		~~1.4~~	~~8872~~	~~87,731~~	~~RSD=29.3%~~
~~WL49 F5~~	~~17.9~~	~~176.1~~	~~89.84%~~	~~9.84~~		~~2.2~~	~~8463~~	~~83,136~~	~~Range OK!~~
WL49 F5 dup	17.6	175.4	89.97%	9.97		2.1	10650	106,013	RPD=4.9%
WL49 F5 trp	16.4	162.1	89.88%	9.88		2.3	12756	125,959	RSD=9.1%
WL49 F5	17.9	176.1	89.84%	9.84		2.2	11330	111,342	Range OK!
WL49 F5 ms	17.9	176.1	89.84%	9.84	10	2.3	21315	209,574	Range OK!
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*106,935*	*ppm*		*92%*	
CCV				1.00		40.0	1030	1,030	103.00%
Blank				1.00		40.0	-44.99	-45	Blank OK
WL49 G1				1.00		1.5	10300	10,300	Range OK!
WL67 A7				1.00		0.9	79985	79,985	Range OK!
WL67 B7				1.00		0.9	79041	79,041	Range OK!
WL69 A1				1.00		1.3	34354	34,354	Range OK!
WL69 B1				1.00		1.5	39923	39,923	Range OK!
NIST 1941B				1.00		1.5	25670	25,670	85.85%
CCV				1.00		40.0	1000	1,000	100.00%
Blank				1.00		40.0	-47.42	-47	Blank OK

WL67 01985

(1) 4-18-13 (2)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst:	(2)
Calibration:	ARI – 00136-09	5000	Date:	7:14 4-18-13
Verification:	ERA -0409-12-01	5000 to 1000 for CVS	Time:	7:14
SRM:	NBS (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:				

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941B			1.7			
SB 1			48.4			
2			48.8			
3			52.1			
WL49 FS	17.9	176.1	1.6			
FS	17.6	175.4	1.4			
FS	16.4	162.1	1.4			Sample Homogeneity Issue Per Lab Manager Review
FS	17.9	176.1	(1) 2.2			
DUP FS	17.6	175.4	2.1			
DUP FS	16.4	162.1	2.3			
FS	17.9	176.1	2.2			
MS FS	17.9	176.1	2.3	2500	10	
CCV MS FS (1)			40			
CCB			40			
WL49 G1			1.5			
WL67 A7			0.9			
B7			0.9			
WL69 A1			1.3			
B1			1.5			
NBS 1941B			1.5			
CCV			40			
CCB			40			
			4-18-13 (2)			

4-18-13 W

Detailed Analysis Report Print Date/Time: 2013/04/18 13:21:06

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180612
Timestamp: 2013/04/18 06:20
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	969.8969	38.7959	5575536	22.100	23.099	157

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180633
Timestamp: 2013/04/18 06:37
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-43.0802	-1.7232	48097	22.124	22.200	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180647
Timestamp: 2013/04/18 06:53
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27699.5977	47.0893	6706891	22.029	23.029	258

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180718
Timestamp: 2013/04/18 07:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.5931	0.4643	63339	22.307	23.302	49

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180729
Timestamp: 2013/04/18 07:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17.2896	0.8437	115098	21.931	22.927	58

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180750
Timestamp: 2013/04/18 07:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14.7245	0.7671	104651	22.051	23.046	56

4-18-13 W

Sample ID: WL49 F5
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180803
Timestamp: 2013/04/18 08:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

WL67 · 01997

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11603.6504	18.5658	2532672	21.929	22.929	103

Sample ID: WL49 F5 Mode: TOC
Method: Boat Sampler Filename: 04180842
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 08:59
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15787.3076	22.1022	3015091	23.791	24.789	118

Sample ID: WL49 F5 DUP Mode: TOC
Method: Boat Sampler Filename: 04180904
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:09
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8872.4658	12.4215	1694481	24.064	25.057	94

Sample ID: WL49 F5 Mode: TOC
Method: Boat Sampler Filename: 04180922
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:25
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8463.3984	18.6195	2539989	24.128	25.128	106

Sample ID: WL49 F5 DUP Mode: TOC
Method: Boat Sampler Filename: 04180930
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:40
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10650.4209	22.3659	3051057	24.346	25.341	106

Sample ID: WL49 F5 TRIP Mode: TOC
Method: Boat Sampler Filename: 04180946
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:53
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12756.1230	29.3391	4002311	24.403	25.402	123

Sample ID: WL49 F5 ~~TRIP~~ Original Mode: TOC
Method: Boat Sampler Filename: 04181002
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 10:05
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11330.0508	24.9261	3400313	24.518	25.518	114

Sample ID: WL49 F5 ~~TRIP~~ DUP Mode: TOC
Method: Boat Sampler Filename: 04181011
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 10:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21314.7695	49.0240	6687639	24.795	25.795	126

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181029
Timestamp: 2013/04/18 10:33
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1030.1005	41.2040	5904045	24.543	25.540	153

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181104
Timestamp: 2013/04/18 11:09
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-44.9948	-1.7998	37650	24.215	24.194	120

Last Message: Low Sample Detected

Sample ID: WG49 G1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181127
Timestamp: 2013/04/18 11:30
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10299.8818	15.4498	2107598	24.058	25.054	120

Sample ID: WL67 A2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181200
Timestamp: 2013/04/18 12:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	79984.9375	71.9864	9820080	24.079	25.078	232

Sample ID: WL67 B7
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181213
Timestamp: 2013/04/18 12:23
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	79040.8359	71.1368	9704169	24.732	25.730	252

Sample ID: WL69 A1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181230
Timestamp: 2013/04/18 12:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34353.6445	44.6597	6092289	26.111	27.107	176

Sample ID: WL69 B1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04181242
Timestamp: 2013/04/18 12:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	39922.6016	59.8839	8169103	27.372	28.369	213

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181256
Timestamp: 2013/04/18 13:04
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25669.9238	38.5049	5535840	28.933	29.931	222

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181305
Timestamp: 2013/04/18 13:11
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1000.3041	40.0122	5741457	29.378	30.377	193

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181312
Timestamp: 2013/04/18 13:16
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-47.4220	-1.8969	24405	29.632	29.645	120

Last Message: Low Sample Detected

Calibration Report Print Date/Time: 2013/04/16 13:28:35

Cal. Curve ID: 041613 BOAT CAL
Created: 2013/04/16 13:28
Calibration Factor (m): 1.364e+05
Y Intercept (b): 283170
r-squared: 0.99719

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	30947	0.000	-1.849	Low Sample De	2013/04/16 11:57
200 ppm	1289927	8.000	7.380		2013/04/16 12:08
500 ppm	3068066	20.000	20.415		2013/04/16 12:22
1000 ppm	6214396	40.000	43.479	Max Integrati	2013/04/16 12:57
2500 ppm	13730347	100.000	98.575	Max Integrati	2013/04/16 13:27

Detailed Analysis Report Print Date/Time: 2013/04/16 13:42:05

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161147
Timestamp: 2013/04/16 11:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			20761	29.379	29.279	120
2			48615	29.188	29.234	120
3			23464	29.319	29.351	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 30947 Std Dev: 15361 RSD: 49.64

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161159
Timestamp: 2013/04/16 12:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1353145	29.481	30.480	97
2			1276437	29.655	30.655	100
3			1240200	29.890	30.886	102

<<<Statistics>>> Mean: 1289927 Std Dev: 57668 RSD: 4.47

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161209
Timestamp: 2013/04/16 12:22
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2972064	30.477	31.476	150
2			3043364	31.094	32.093	147
3			3188769	31.696	32.696	202

<<<Statistics>>> Mean: 3068066 Std Dev: 110444 RSD: 3.60

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161223
Timestamp: 2013/04/16 12:34
Sample Type: TOC Standard

Canceled 4/16/13

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6028195	32.752	34.573	301
2			-10861519	144.712	37.341	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -2416662 Std Dev: 11942831 RSD: -494.19

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161235
Timestamp: 2013/04/16 12:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6153702	36.612	38.838	300
2			6228680	39.843	41.810	300
3			6260806	41.504	43.301	301

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 6214396 Std Dev: 54962 RSD: 0.88

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161300
Timestamp: 2013/04/16 13:27
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			13471712	43.807	45.798	300
2			13847641	46.690	48.258	301
3			13871687	47.866	50.704	300

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 13730347 Std Dev: 224307 RSD: 1.63

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161329
Timestamp: 2013/04/16 13:35
Sample Type: Cal. Verification

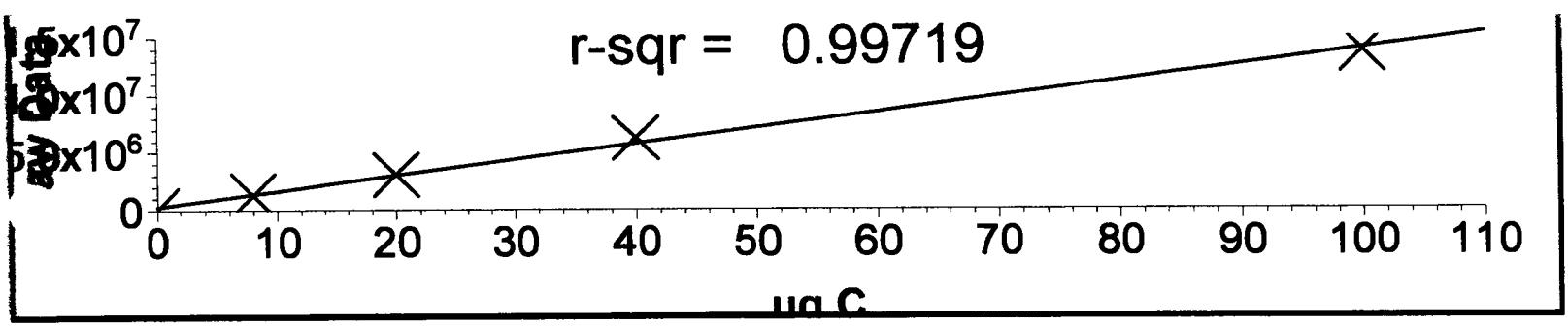
Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1069.2297	42.7692	6117558	49.225	51.488	300

Last Message: Max Integration Time Reached

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161336
Timestamp: 2013/04/16 13:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.7771	0.1911	309237	50.289	51.285	104



Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WL67

Sample: GR-CB-07-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67A.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: 4/25/2013 2:55:19PM
Reported: 4/25/2013 3:23:47PM
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: 109 / 74 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	76.3	0.6	117.79834
917.3	0.125	75.7	0.6	104.98789
866.0	0.208	75.2	0.6	93.57055
817.5	0.291	74.6	0.6	83.39484
771.8	0.374	74.0	0.6	74.32573
728.6	0.457	73.4	0.6	66.24288
687.9	0.540	72.9	0.6	59.03903
649.4	0.623	72.3	0.6	52.61859
613.1	0.706	71.7	0.6	46.89637
578.8	0.789	71.2	0.6	41.79643
546.4	0.872	70.6	0.6	37.25111
515.8	0.955	70.0	0.6	33.20008
487.0	1.038	69.4	0.6	29.58961
459.7	1.121	68.9	0.6	26.37176
434.0	1.204	68.3	0.6	23.50386
409.7	1.287	67.7	0.6	20.94784
386.8	1.370	67.2	0.6	18.66978
365.2	1.453	66.6	0.6	16.63946
344.7	1.536	66.0	0.6	14.82993
325.5	1.619	65.5	0.6	13.21719
307.3	1.702	64.9	0.6	11.77983
290.1	1.786	64.3	0.6	10.49879
273.8	1.869	63.8	0.6	9.35706
258.5	1.952	63.2	0.6	8.33948
244.1	2.035	62.7	0.5	7.43257
230.4	2.118	62.2	0.5	6.62429
217.5	2.201	61.7	0.5	5.90390
205.4	2.284	61.2	0.5	5.26186
193.9	2.367	60.8	0.4	4.68964
183.0	2.450	60.4	0.4	4.17964
172.8	2.533	60.0	0.4	3.72511
163.1	2.616	59.6	0.4	3.32001
154.0	2.699	59.3	0.4	2.95896
145.4	2.782	58.9	0.4	2.63718
137.2	2.865	58.5	0.4	2.35039
129.6	2.948	58.1	0.4	2.09478
122.3	3.031	57.8	0.4	1.86698
115.5	3.114	57.3	0.4	1.66395
109.0	3.197	56.9	0.4	1.48299
102.9	3.280	56.5	0.4	1.32172

Sample: GR-CB-07-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67A.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: 4/25/2013 2:55:19PM
Reported: 4/25/2013 3:23:47PM
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: 109 / 74 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	56.0	0.4	1.17798
91.73	3.447	55.6	0.4	1.04988
86.60	3.530	55.2	0.4	0.93571
81.75	3.613	54.8	0.4	0.83395
77.18	3.696	54.5	0.3	0.74326
72.86	3.779	54.2	0.3	0.66243
68.79	3.862	54.1	0.2	0.59039
64.94	3.945	53.9	0.1	0.52619
61.31	4.028	53.9	0.0	0.46896
57.88	4.111	53.9	0.0	0.41796
54.64	4.194	53.9	0.0	0.37251
51.58	4.277	53.9	0.0	0.33200
48.70	4.360	53.9	0.0	0.29590
45.97	4.443	53.9	0.0	0.26372
43.40	4.526	54.0	0.0	0.23504
40.97	4.609	54.0	0.0	0.20948
38.68	4.692	53.9	0.0	0.18670
36.52	4.775	53.8	0.2	0.16639
34.47	4.858	53.4	0.3	0.14830
32.55	4.941	52.9	0.6	0.13217
30.73	5.024	51.9	0.9	0.11780
29.01	5.107	50.5	1.4	0.10499
27.38	5.191	48.5	2.0	0.09357
25.85	5.274	45.8	2.7	0.08339
24.41	5.357	42.4	3.4	0.07433
23.04	5.440	38.3	4.0	0.06624
21.75	5.523	33.9	4.4	0.05904
20.54	5.606	29.4	4.5	0.05262
19.39	5.689	25.2	4.2	0.04690
18.30	5.772	21.6	3.6	0.04180
17.28	5.855	18.7	2.9	0.03725
16.31	5.938	16.6	2.1	0.03320
15.40	6.021	15.1	1.5	0.02959
14.54	6.104	14.1	1.0	0.02637
13.72	6.187	13.5	0.6	0.02350
12.96	6.270	13.1	0.4	0.02095
12.23	6.353	12.7	0.3	0.01867
11.55	6.436	12.5	0.3	0.01664
10.90	6.519	12.2	0.3	0.01483
10.29	6.602	11.9	0.3	0.01322

Sample: GR-CB-07-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67A.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: 4/25/2013 2:55:19PM
Reported: 4/25/2013 3:23:47PM
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: 109 / 74 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	11.7	0.3	0.01178
9.173	6.768	11.3	0.3	0.01050
8.660	6.851	10.9	0.4	0.00936
8.175	6.935	10.6	0.4	0.00834
7.718	7.018	10.2	0.4	0.00743
7.286	7.101	9.9	0.3	0.00662
6.879	7.184	9.7	0.2	0.00590
6.494	7.267	9.5	0.2	0.00526
6.131	7.350	9.3	0.1	0.00469
5.788	7.433	9.2	0.1	0.00418
5.464	7.516	9.1	0.2	0.00373
5.158	7.599	8.9	0.2	0.00332
4.870	7.682	8.7	0.2	0.00296
4.597	7.765	8.5	0.2	0.00264
4.340	7.848	8.4	0.2	0.00235
4.097	7.931	8.2	0.1	0.00209
3.868	8.014	8.1	0.1	0.00187
3.652	8.097	8.0	0.1	0.00166
3.447	8.180	7.8	0.2	0.00148
3.255	8.263	7.6	0.2	0.00132
3.073	8.346	7.3	0.2	0.00118
2.901	8.429	7.1	0.2	0.00105
2.738	8.512	6.9	0.2	0.00094
2.585	8.595	6.7	0.2	0.00083
2.441	8.679	6.6	0.2	0.00074
2.304	8.762	6.4	0.2	0.00066
2.175	8.845	6.3	0.1	0.00059
2.054	8.928	6.1	0.2	0.00053
1.939	9.011	5.9	0.2	0.00047
1.830	9.094	5.7	0.2	0.00042
1.728	9.177	5.5	0.2	0.00037
1.631	9.260	5.2	0.3	0.00033
1.540	9.343	4.9	0.3	0.00030
1.454	9.426	4.6	0.3	0.00026
1.372	9.509	4.3	0.3	0.00024
1.296	9.592	4.0	0.3	0.00021
1.223	9.675	3.8	0.3	0.00019
1.155	9.758	3.4	0.3	0.00017
1.090	9.841	3.0	0.4	0.00015
1.029	9.924	2.4	0.6	0.00013

Sample: GR-CB-07-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67A.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: 4/25/2013 2:55:19PM
Reported: 4/25/2013 3:23:47PM
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: 109 / 74 kCnts/s
Reynolds Number: 0.42

Report by Size Table

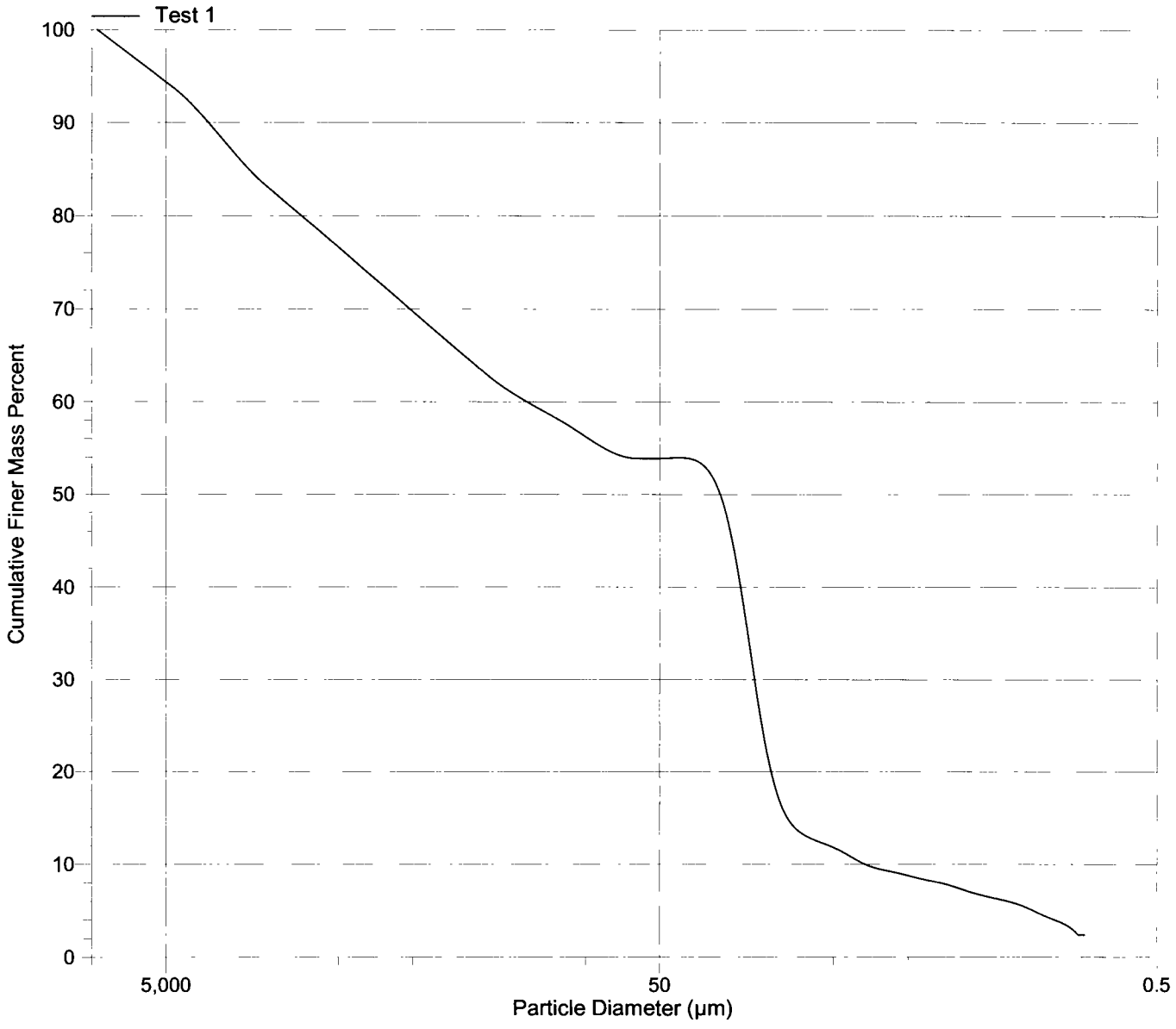
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	53.9	4.0
4750	93.9	6.1	31.00	52.1	1.8
2000	83.3	10.6	15.60	15.4	36.7
1000	76.6	6.7	7.800	10.3	5.1
500.0	69.7	6.9	3.900	8.1	2.1
250.0	62.9	6.8	2.000	6.0	2.1
125.0	57.9	5.0	1.000	2.4	3.7

Sample: GR-CB-07-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67A.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: 4/25/2013 2:55:19PM
Reported: 4/25/2013 3:23:47PM
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: 109 / 74 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample: GR-WS-05-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67B8.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: 4/26/2013 9:56:17AM
Reported: 4/26/2013 10:07:14AM
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: 110 / 74 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	89.5	0.4	117.77100
917.3	0.125	89.2	0.3	104.96351
866.0	0.208	88.8	0.3	93.54883
817.5	0.291	88.5	0.3	83.37548
771.8	0.374	88.2	0.3	74.30848
728.6	0.457	87.9	0.3	66.22750
687.9	0.540	87.7	0.3	59.02532
649.4	0.623	87.4	0.3	52.60637
613.1	0.706	87.1	0.3	46.88548
578.8	0.789	86.9	0.3	41.78673
546.4	0.872	86.6	0.3	37.24246
515.8	0.955	86.3	0.3	33.19238
487.0	1.038	86.1	0.3	29.58274
459.7	1.121	85.9	0.2	26.36564
434.0	1.204	85.8	0.1	23.49840
409.7	1.287	85.8	0.0	20.94297
386.8	1.370	85.8	0.0	18.66545
365.2	1.453	85.8	0.0	16.63560
344.7	1.536	85.8	0.0	14.82649
325.5	1.619	85.8	0.0	13.21412
307.3	1.702	85.7	0.1	11.77710
290.1	1.786	85.6	0.1	10.49635
273.8	1.869	85.4	0.2	9.35488
258.5	1.952	85.1	0.3	8.33755
244.1	2.035	84.7	0.4	7.43085
230.4	2.118	84.2	0.5	6.62275
217.5	2.201	83.7	0.6	5.90253
205.4	2.284	83.1	0.6	5.26064
193.9	2.367	82.4	0.7	4.68855
183.0	2.450	81.7	0.7	4.17867
172.8	2.533	81.0	0.7	3.72425
163.1	2.616	80.3	0.7	3.31924
154.0	2.699	79.6	0.7	2.95827
145.4	2.782	78.9	0.7	2.63656
137.2	2.865	78.3	0.7	2.34984
129.6	2.948	77.7	0.6	2.09430
122.3	3.031	77.1	0.6	1.86654
115.5	3.114	76.5	0.6	1.66356
109.0	3.197	75.9	0.6	1.48265
102.9	3.280	75.3	0.6	1.32141

Sample: GR-WS-05-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67B8.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: 4/26/2013 9:56:17AM
Reported: 4/26/2013 10:07:14AM
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: 110 / 74 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	74.7	0.6	1.17771
91.73	3.447	74.1	0.6	1.04964
86.60	3.530	73.5	0.6	0.93549
81.75	3.613	73.0	0.5	0.83375
77.18	3.696	72.5	0.5	0.74308
72.86	3.779	72.0	0.4	0.66228
68.79	3.862	71.7	0.4	0.59025
64.94	3.945	71.4	0.3	0.52606
61.31	4.028	71.1	0.2	0.46885
57.88	4.111	71.0	0.2	0.41787
54.64	4.194	70.8	0.2	0.37242
51.58	4.277	70.6	0.2	0.33192
48.70	4.360	70.4	0.2	0.29583
45.97	4.443	70.2	0.2	0.26366
43.40	4.526	70.0	0.2	0.23498
40.97	4.609	69.7	0.3	0.20943
38.68	4.692	69.4	0.3	0.18665
36.52	4.775	69.1	0.3	0.16636
34.47	4.858	68.9	0.3	0.14826
32.55	4.941	68.5	0.3	0.13214
30.73	5.024	68.0	0.5	0.11777
29.01	5.107	67.4	0.7	0.10496
27.38	5.191	66.4	1.0	0.09355
25.85	5.274	65.1	1.4	0.08338
24.41	5.357	63.1	1.9	0.07431
23.04	5.440	60.6	2.6	0.06623
21.75	5.523	57.2	3.4	0.05903
20.54	5.606	53.0	4.2	0.05261
19.39	5.689	48.1	4.9	0.04689
18.30	5.772	42.6	5.5	0.04179
17.28	5.855	37.0	5.6	0.03724
16.31	5.938	31.7	5.3	0.03319
15.40	6.021	27.0	4.6	0.02958
14.54	6.104	23.3	3.7	0.02637
13.72	6.187	20.6	2.7	0.02350
12.96	6.270	18.7	1.9	0.02094
12.23	6.353	17.4	1.3	0.01867
11.55	6.436	16.4	1.0	0.01664
10.90	6.519	15.7	0.8	0.01483
10.29	6.602	15.0	0.6	0.01321

Sample: GR-WS-05-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67B8.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: 4/26/2013 9:56:17AM
Reported: 4/26/2013 10:07:14AM
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: 110 / 74 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	14.5	0.5	0.01178
9.173	6.768	14.0	0.5	0.01050
8.660	6.851	13.7	0.4	0.00935
8.175	6.935	13.3	0.3	0.00834
7.718	7.018	13.0	0.3	0.00743
7.286	7.101	12.7	0.3	0.00662
6.879	7.184	12.3	0.4	0.00590
6.494	7.267	11.9	0.4	0.00526
6.131	7.350	11.5	0.4	0.00469
5.788	7.433	11.1	0.4	0.00418
5.464	7.516	10.8	0.3	0.00372
5.158	7.599	10.5	0.3	0.00332
4.870	7.682	10.3	0.2	0.00296
4.597	7.765	10.1	0.2	0.00264
4.340	7.848	10.0	0.1	0.00235
4.097	7.931	9.9	0.1	0.00209
3.868	8.014	9.8	0.1	0.00187
3.652	8.097	9.8	0.1	0.00166
3.447	8.180	9.7	0.1	0.00148
3.255	8.263	9.6	0.1	0.00132
3.073	8.346	9.4	0.2	0.00118
2.901	8.429	9.2	0.2	0.00105
2.738	8.512	9.0	0.2	0.00094
2.585	8.595	8.7	0.3	0.00083
2.441	8.679	8.4	0.3	0.00074
2.304	8.762	8.1	0.3	0.00066
2.175	8.845	7.8	0.3	0.00059
2.054	8.928	7.5	0.3	0.00053
1.939	9.011	7.3	0.3	0.00047
1.830	9.094	7.0	0.2	0.00042
1.728	9.177	6.8	0.2	0.00037
1.631	9.260	6.7	0.2	0.00033
1.540	9.343	6.5	0.1	0.00030
1.454	9.426	6.4	0.1	0.00026
1.372	9.509	6.3	0.1	0.00023
1.296	9.592	6.2	0.2	0.00021
1.223	9.675	5.9	0.3	0.00019
1.155	9.758	5.4	0.5	0.00017
1.090	9.841	4.7	0.7	0.00015
1.029	9.924	3.7	1.0	0.00013

Sample: GR-WS-05-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67B8.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: 4/26/2013 9:56:17AM
Reported: 4/26/2013 10:07:14AM
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: 110 / 74 kCnts/s
Reynolds Number: 0.42

Report by Size Table

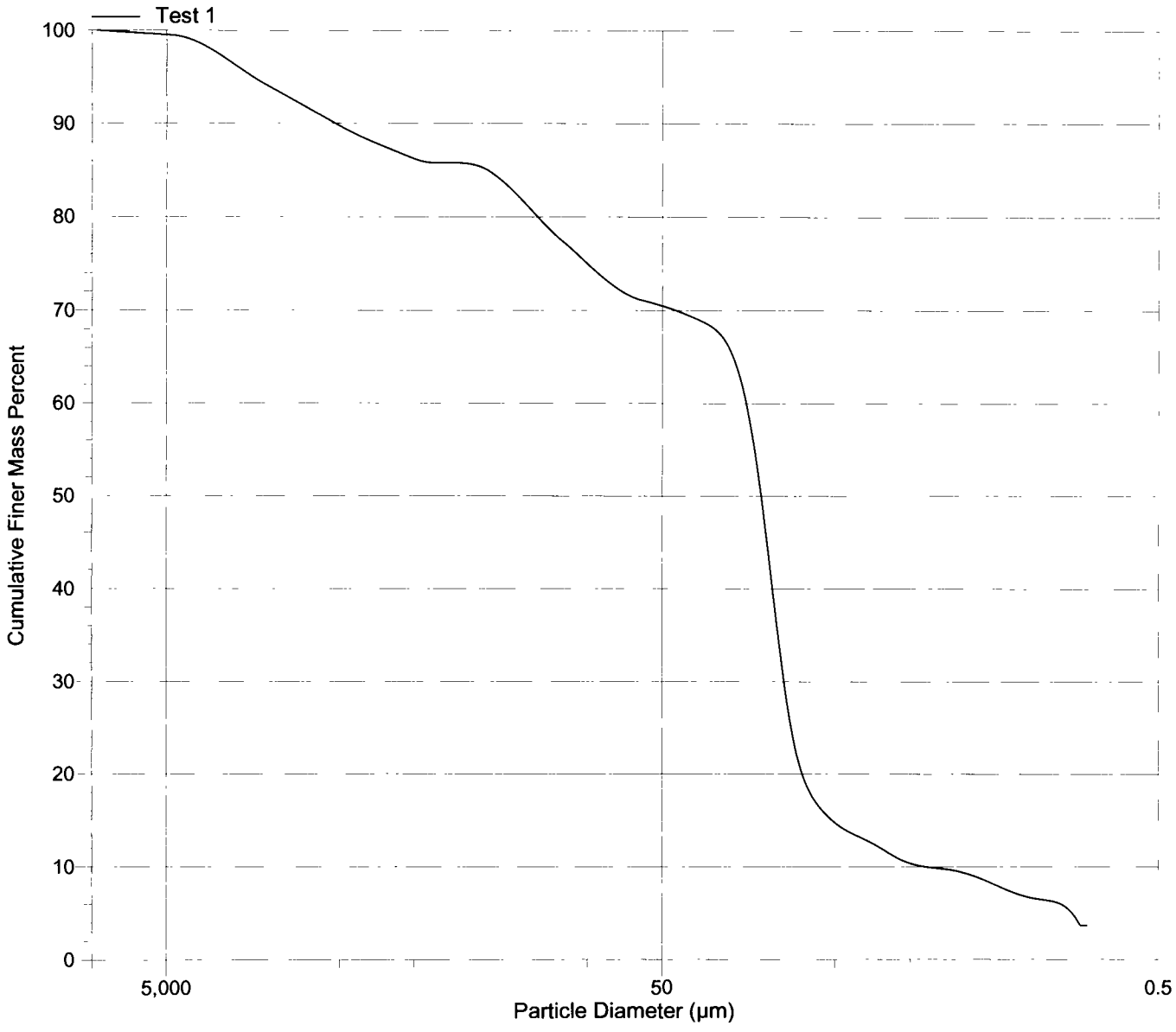
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	71.2	6.1
4750	99.5	0.5	31.00	68.1	3.1
2000	94.2	5.3	15.60	28.0	40.1
1000	89.7	4.5	7.800	13.1	14.9
500.0	86.2	3.5	3.900	9.9	3.2
250.0	84.9	1.3	2.000	7.4	2.5
125.0	77.3	7.6	1.000	3.7	3.7

Sample: GR-WS-05-20130411-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL67\WL67B8.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: 4/26/2013 9:56:17AM
Reported: 4/26/2013 10:07:14AM
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: 110 / 74 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WL67 ARI Sample No. A Client Sample No. GB-CB-07-20130411

Set-up Date: 4.22.13 Sample Description: SILT, ORGANIC DEBRIS, FINES, FUEL-LIKE ODOR & SHEEN

Sieve Set # 1 Date Sieved: 4/23/13

SOLIDS CONTENT

Moisture Content	Initials ey
Container No.	140
Tare Weight	1.4624
Wet Weight + Tare	56.4237
Dry Weight + Tare	26.8776

Test Sample	Initials ey
Container No.	140
Tare Weight	51.1934
Wet Weight + Tare	93.2367
Dry Weight + Tare	60.9023

SIEVE ANALYSIS
Initials JCA

Sieve Size	Weight Retained
Tare	51.2052
4	52.3930
10	54.4560
18	55.7577
35	57.0870
60	58.4239
120	59.3966
230	60.1619
PAN	0.5780

SEDIGRAPH ANALYSIS
Initials ey
Date Sedigraphed 4.25.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	102

SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WLG7 ARI Sample No. B Client Sample No. GR-WS-05-20130411-S

Set-up Date: 4.22.13 Sample Description: SILT, ORGANIC DEBRIS, FINES, BLUE-LIKE SHEEN

Sieve Set # 1 Date Sieved: 4/23/13

SOLIDS CONTENT

Moisture Content	Initials ey
Container No.	198
Tare Weight	1.4684
Wet Weight + Tare	41.4046
Dry Weight + Tare	11.3299

Test Sample	Initials ey
Container No.	198
Tare Weight	50.6149
Wet Weight + Tare	934.0178
Dry Weight + Tare	54.9078

SIEVE ANALYSIS
Initials JC

Sieve Size	Weight Retained
Tare	50.623
4	50.6796
10	51.2393
18	51.7316
35	52.1040
60	52.5236 JC
120	53.0570
230	53.7068
PAN	1.0383

SEDIGRAPH ANALYSIS
Initials ey
Date Sedigraphed 4.25.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	103

Sample ID: GR-MH-01-20130404-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:	1.26 L	Sample ID:	A5781_11228_PCB_002-D5	Date Extracted:	13-Aug-2013
Date Collected:	04-Apr-2013	pH	7	QC Batch No.:	11228	Date Analyzed:	15-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	4.64			J	ES PCB-1	58
PCB-81 344'5-TeCB	ND	2.72			ES PCB-3	62.4
PCB-105 233'44'-PeCB	EMPC		8.1		ES PCB-4	66.1
PCB-114 2344'5-PeCB	ND	1.84			ES PCB-15	82.9
PCB-118 23'44'5-PeCB	17.4				ES PCB-19	79.9
PCB-123 23'44'5'-PeCB	ND	1.72			ES PCB-37	87.7
PCB-126 33'44'5-PeCB	ND	2.22			ES PCB-54	91.1
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	2.44		C	ES PCB-77	90.8
PCB-167 23'44'55'-HxCB	ND	1.85			ES PCB-81	87.7
PCB-169 33'44'55'-HxCB	ND	2.12			ES PCB-104	96
PCB-189 233'44'55'-HpCB	ND	1.76			ES PCB-105	93.2
					ES PCB-114	93.5
TEQs (WHO M/H)					ES PCB-118	95
					ES PCB-123	93.4
ND = 0	0.000985		0.00123		ES PCB-126	96.3
ND = 0.5 x DL	0.144		0.145		ES PCB-153	87.6
ND = DL	0.288		0.288		ES PCB-155	88
					ES PCB-156/157	83.5
Totals					ES PCB-167	82.8
Mono-CBs	ND	2.44			ES PCB-169	83.8
Di-CBs	1,940				ES PCB-170	92.7
Tri-CBs	7,050				ES PCB-180	92.5
Tetra-CBs	2,140		2,150		ES PCB-188	97.7
Penta-CBs	203		248		ES PCB-189	89.3
Hexa-CBs	32.7		43.5		ES PCB-202	97.3
Hepta-CBs	4.38				ES PCB-205	85.5
Octa-CBs	ND	1.93			ES PCB-206	90.1
Nona-CBs	ND	4.53			ES PCB-208	96
Deca-CB	ND	1.4			ES PCB-209	86.5
					CS PCB-28	89.9
Total PCB (Mono-Deca)	11,400		11,400		CS PCB-111	96.6
					CS PCB-178	101

Checkcode: 300-995-WCY

SGS AP PCB 2013 Rev. 2.0

Report Created: 19-Aug-2013 12:33 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

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www.us.sgs.com

Sample ID: GR-MH-01-20130404-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:	1.26 L	Sample ID:	A5781_11228_PCB_002-D5	Date Extracted:	13-Aug-2013
Date Collected:	04-Apr-2013	pH	7	QC Batch No.:	11228	Date Analyzed:	15-Aug-2013
		Units	pg/L	Checkcode:	300-995-WCY	Time Analyzed:	16:55:31

Mono	**Conc.**	**Qualifiers**	**Tri**	**Conc.**	**Qualifiers**	**Tetra**	**Conc.**	**Qualifiers**	**Tetra**	**Conc.**	**Qualifiers**
PCB-1	(2.25)		PCB-19	369		PCB-54	3.07	J	PCB-72	(2.47)	
PCB-2	(2.52)		PCB-30/18	2,120	C	PCB-50/53	117	C	PCB-68	(2.33)	
PCB-3	(2.62)		PCB-17	766		PCB-45	135		PCB-57	(2.57)	
			PCB-27	152		PCB-51	27	B	PCB-58	(2.55)	
Conc.	0		PCB-24	24.2		PCB-46	61.2		PCB-67	4.79	J
EMPC	0		PCB-16	1,300		PCB-52	400		PCB-63	2.98	J
			PCB-32	519		PCB-73	(2.07)		PCB-61/70/74/76	161	C
Di	**Conc.**	**Qualifiers**	PCB-34	(3.73)		PCB-43	20.7		PCB-66	68.3	
PCB-4	1,400		PCB-23	(3.66)		PCB-69/49	161	C	PCB-55	(2.7)	
PCB-10	40.4		PCB-26/29	172	C	PCB-48	90.5		PCB-56	30.7	
PCB-9	(6.02)		PCB-25	40.7		PCB-44/47/65	369	C	PCB-60	[17.6]	EMPC
PCB-7	(5.3)		PCB-31	694		PCB-59/62/75	36.1	C	PCB-80	(2.3)	
PCB-6	(5.67)		PCB-28/20	703	C	PCB-42	89.4		PCB-79	(2.3)	
PCB-5	(5.7)		PCB-21/33	13.3	J C	PCB-41	52.6		PCB-78	(2.84)	
PCB-8	(5.45)		PCB-22	32.6		PCB-71/40	180	C	PCB-81	(2.72)	
PCB-14	(4.77)		PCB-36	(3.57)		PCB-64	123		PCB-77	4.64	J
PCB-11	14.5	B	PCB-39	(3.43)							
PCB-13/12	7.21	J C	PCB-38	(3.86)							
PCB-15	483		PCB-35	(3.98)							
			PCB-37	141							
Conc.	1,940		**Conc.**	7,050					**Conc.**	2,140	
EMPC	1,940		**EMPC**	7,050					**EMPC**	2,150	

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Totals	**Conc.**	**EMPC**
Mono-Tri	8,990	8,990
Tetra-Hexa	2,370	2,450
Hepta-Deca	4.38	4.38
Mono-Deca	11,400	11,400

Sample ID: GR-MH-01-20130404-W

Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.55)		PCB-109/119/86/97/125/87	29.5	J C	PCB-155	(1.24)		PCB-165	(1.56)	
PCB-96	(1.84)		PCB-117	(2.21)		PCB-152	(1.33)		PCB-146	(1.81)	
PCB-103	(2.18)		PCB-116/85	4.56	J C	PCB-150	(1.33)		PCB-161	(1.47)	
PCB-94	(2.55)		PCB-110	51.9		PCB-136	(1.45)		PCB-153/168	[8.54]	J B EMPC C
PCB-95	59.5		PCB-115	(1.71)		PCB-145	(1.43)		PCB-141	[2.26]	J EMPC
PCB-100/93	(2.39)	C	PCB-82	[4.68]	J EMPC	PCB-148	(1.86)		PCB-130	(2.28)	
PCB-102	(2.05)		PCB-111	(1.73)		PCB-151/135	4.81	J C	PCB-137	(1.94)	
PCB-98	(2.71)		PCB-120	(1.74)		PCB-154	(1.67)		PCB-164	(1.44)	
PCB-88	(3.08)		PCB-108/124	(1.92)	C	PCB-144	(1.87)		PCB-163/138/129	13.3	J C
PCB-91	5.88	J	PCB-107	(1.85)		PCB-147/149	10.4	J B C	PCB-160	(1.62)	
PCB-84	[17.3]	EMPC	PCB-123	(1.72)		PCB-134	(2.27)		PCB-158	(1.4)	
PCB-89	(2.67)		PCB-106	(1.97)		PCB-143	(2.03)		PCB-128/166	(2.32)	C
PCB-121	(1.75)		PCB-118	17.4		PCB-139/140	(1.85)	C	PCB-159	(1.99)	
PCB-92	[4.64]	J EMPC	PCB-122	(2.21)		PCB-131	(2.16)		PCB-162	(1.99)	
PCB-113/90/101	33.9	C	PCB-114	(1.84)		PCB-142	(2.19)		PCB-167	(1.85)	
PCB-83	(2.87)		PCB-105	[8.1]	EMPC	PCB-132	4.18	J	PCB-156/157	(2.44)	C
PCB-99	[11.1]	EMPC	PCB-127	(2.1)		PCB-133	(2.02)		PCB-169	(2.12)	
PCB-112	(1.8)		PCB-126	(2.22)							
			Conc.	203					**Conc.**	32.7	
			EMPC	248					**EMPC**	43.5	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.53)		PCB-174	(2.7)		PCB-202	(1.94)		PCB-208	(3.52)	
PCB-179	(1.68)		PCB-177	(2.84)		PCB-201	(1.73)		PCB-207	(3.44)	
PCB-184	(1.7)		PCB-181	(2.47)		PCB-204	(1.82)		PCB-206	(5.53)	
PCB-176	(1.55)		PCB-171/173	(2.81)	C	PCB-197	(1.67)				
PCB-186	(1.65)		PCB-172	(2.74)		PCB-200	(1.83)		**Conc.**	0	
PCB-178	(2.3)		PCB-192	(2.1)		PCB-198/199	(2.55)	C	**EMPC**	0	
PCB-175	(2.35)		PCB-180/193	4.38	J B C	PCB-196	(2.45)				
PCB-187	(2.31)		PCB-191	(2.01)		PCB-203	(2.33)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.25)		PCB-170	(2.96)		PCB-195	(2.64)		PCB-209	(1.4)	
PCB-183	(2.29)		PCB-190	(2.18)		PCB-194	(2.39)				
PCB-185	(2.47)		PCB-189	(1.76)		PCB-205	(1.92)				
			Conc.	4.38		**Conc.**	0				
			EMPC	4.38		**EMPC**	0				