Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

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

Prepared by

18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

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Appendix F
Emerald Services

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

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

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F-1 Introduction and Background

Facility Name	**Emerald Services**
Address	7343 East Marginal Way S Seattle, WA 98108
NPDES Permit Type	Industrial Stormwater General Permit
NPDES Permit No.	WAR002641
Permit Monitoring Requirements	Turbidity, pH, total zinc, total copper, oil sheen
Industry Specific requirements	Five day biochemical oxygen demand, nitrate/nitrite, and total phosphorus
SIC Code	2875: Fertilizers, Mixing Only
Inspection Date	April 24, 2013
Grab Samples	1 Water Sample, 1 Solids Sample
Sample ID(s)	ES-TS-INF-20130424-S ES-MH-001-20130424-W
Water Sample Analytes	PCB Congeners, SVOCs (including phthalates and PAHs), pesticides, metals, mercury, pH, specific conductance, anions, alkalinity, TOC/DOC, TSS
Solids Sample Analytes	Dioxins/furans, PCB Aroclors, SVOCs (including phthalates and PAHs), pesticides, TPH-Diesel and Motor Oil, TPH-Gasoline, VOCs, metals, mercury, TOC, total solids, grain size
Split Samples with Facility	Yes

The Emerald Services corporate office and main yard are located at 7343 East Marginal Way S, adjacent to Slip 4 of the Lower Duwamish Waterway (LDW). Emerald Services is a transporter and transfer facility for both non-regulated wastes such as oil and oily water, as well as dangerous/hazardous wastes. Vehicles, equipment, and food waste containers are washed regularly and washwater is discharged to the King County sanitary sewer. The facility's warehouse is used to store equipment, recycled antifreeze, and solvents prior to distribution to customers (Emerald Services 2010).

F-1.1 Stormwater Conveyance and Treatment System

The facility's stormwater conveyance system consists of 14 catch basins, drain pipes, and vaults. Stormwater is conveyed by gravity flow to the below ground stormwater treatment system located at the northwestern portion of the site. Roof drainage is collected separately from around the perimeter of the main building and is conveyed directly to the manhole immediately downstream of the treatment system. The treatment system can process up to 315 gallons per minute of stormwater and consists of 21 passive filtration cartridges installed in a baffled vault. The treatment system is designed to remove total suspended solids (TSS), selected heavy metals, nutrients, and organic compounds. In the event the storm flow exceeds treatment system

capacity, stormwater bypasses the treatment system through an overflow weir and discharges directly to LDW Slip 4 (Emerald Services 2010).

A stormwater gate valve is in place above the overflow weir. The stormwater gate valve remains closed during normal operation and non-rain events. The stormwater gate valve is designed to provide suitable secondary containment in the event of spills to the parking areas. If ponding occurs, the accumulated stormwater is inspected for clarity and sheen prior to being conveyed to the stormwater treatment system and discharge to the LDW (Emerald Services 2010). A facility map is presented in Figure F-1.

F-1.2 Recent Compliance History

Ecology previously conducted a compliance inspection at Emerald Services on October 2, 2010. Ecology identified corrective actions that included an update of the facility's site map and Stormwater Pollution Prevention Plan (SWPPP), secondary containment and cover for liquid, chemical products, and wastes stored outside, and development of a source control plan for the wash pad area (Ecology 2010).

Emerald Services exceeded the biochemical oxygen demand (BOD) benchmark during the 2nd quarter of 2012, triggering a Level One Corrective Action. In response, the facility implemented operational best management practices (BMPs) including increased cleaning frequency of the food waste bin storage area and wash shack. The facility did not exceed the BOD benchmark during the 3rd and 4th quarters of 2012 (Emerald Services 2013).

F-2 Inspection and Sampling

F-2.1 April 2013 Stormwater Compliance Inspection

On April 24, 2013, Ecology conducted a stormwater compliance inspection at Emerald Services. 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 F-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments F-1 and F-2, respectively.

The field team inspected the following stormwater conveyance structures at Emerald Services (Figure F-2): catch basin 1 (CB-1), catch basin 2 (CB-2), catch basin 4 (CB-4), catch basin 5 (CB-5), manhole 1 (MH-1), and the stormwater treatment system (TS). Catch basin filters were installed at locations CB-2, CB-1, CB-4, and CB-5. The catch basins did not contain sufficient sampleable material. The solids buildup on top of the stormwater filter cartridges located in the facility's treatment system vault contained sufficient sampleable material to collect a grab sample. The water sample was collected from MH-1, located downstream of the treatment system.

F-2.2 Stormwater Conveyance System Sampling

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

F-2.2.1 Water Sample

Water sample ES-MH-001-20130424-W was collected from MH-1 located directly downstream of the facility's stormwater treatment system (Figure F-2, Attachment F-1). MH-1 is located at the northern portion of the facility and also receives discharge from the facility's roof drains. The discharge from the roof drains is untreated. The sample location is representative of stormwater discharge from Emerald Services to LDW Slip 4. Discharge from the treatment system did not occur during sample collection.

F-2.2.2 Solids Sample

Solids sample ES-TS-INF-20130424-S was collected from the top of the filter cartridges located in the facility's stormwater treatment vault (Figure F-2, Attachment F-1). The treatment vault is located at the northwestern corner of the facility and receives discharge from the majority of the property, with the exception of the facility's roof drains. Stormwater is discharged to the LDW following treatment. The sample is representative of storm drain solids at Emerald Services. The

sample consisted of dark brown silt, fine-grained sand, and organic matter. A strong hydrogen sulfide odor was detected during sample collection. After multiple grab attempts, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

F-3 Results

F-3.1 Chemical Analysis

Ecology collected one water sample and one solids sample during the April 24, 2013 stormwater compliance inspection at Emerald Services. Analytical methods, chemical results and regulatory criteria are presented in Tables F-1 through F-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).

F-3.2 Inspection Results and Permit Compliance Requirements

Ecology made the following observations and recommendations during the April 2013 inspection (Ecology 2013a):

- Update the facility SWPPP to include the operation and maintenance information for the truck wash pad.
- Develop a better system to prevent birds from spreading food wastes from trucks parked at the facility.
- Sample and analyze roof run-off to confirm that pollutants are not transported to the river without treatment.

In order to maintain permit compliance, Ecology required the facility to update the site map in the SWPPP to meet permit condition S3 (Ecology 2013a).

Based on available DMR data, Emerald Services exceeded the benchmark for total nitrate and nitrite during the 1st and 2nd quarter of 2013. The facility exceeded the benchmark for turbidity in the 1st quarter of 2013 and for copper in the 2nd quarter 2013 (Ecology 2013b).

F-4 References

Ecology (Washington Department of Ecology). Stormwater Compliance Inspection Report, Emerald Services. November 11, 2010.

Ecology. 2013a. Stormwater Compliance Inspection Report, Emerald Services. July 3, 2013.

Ecology. 2013b. Water Quality Permitting and Reporting Information System, Emerald Services. November 11, 2013.

Emerald Services. 2010. Stormwater Pollution Prevention Plan, Emerald Services, Inc., Seattle, Washington. July 2010.

Emerald Services. 2013. Industrial Stormwater General Permit, Annual Report Form, Emerald Services, Permit No. WAR-002641. May 16, 2013.

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

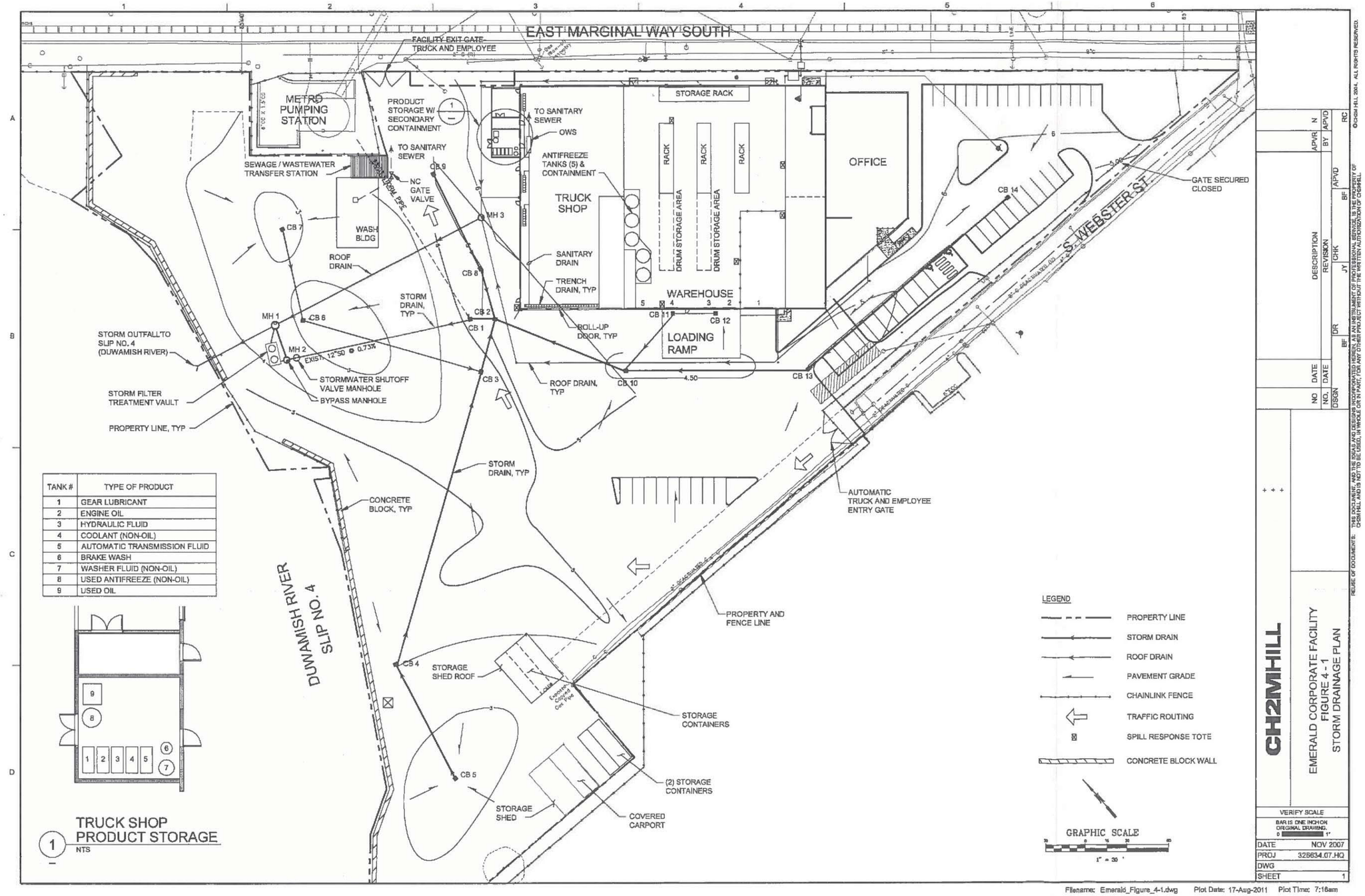
EPA, Office of Emergency and Remedial Response. June 2008. *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Data Review*. EPA-540-R-08-01. Washington, DC.

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

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

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

Figures



Source: Emerald Services 2010 [10439]

Figure F–1. Emerald Services Facility SWPPP Map

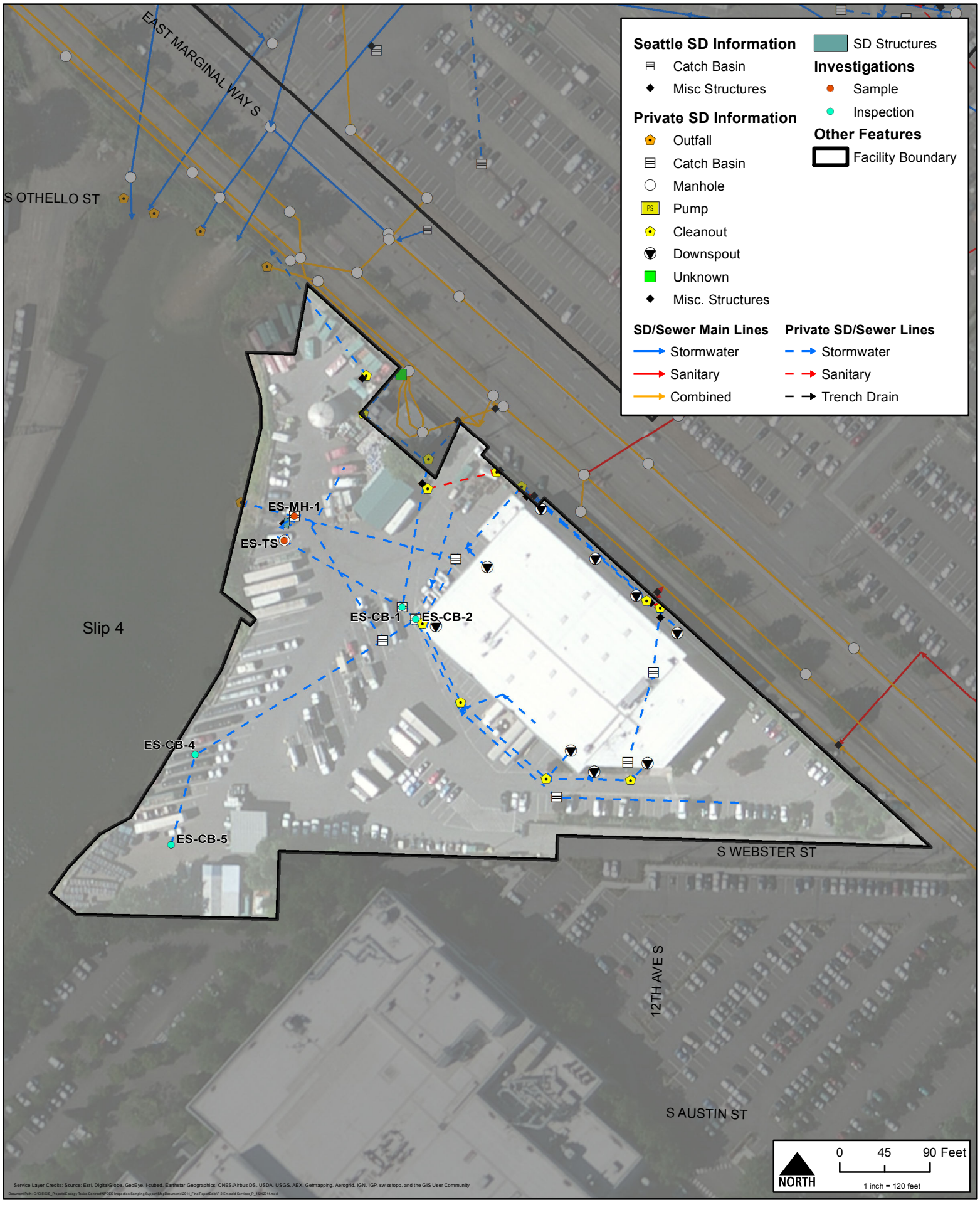


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Figure F–2. Emerald Services Inspection and Sample Locations

DEPARTMENT OF ECOLOGY State of Washington

Tables

Table F-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date		ES-MH-001
Analyte	**Units**	**4/24/2013**
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 F-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date		ES-MH-001
Analyte	**Units**	**4/24/2013**
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
3,3'-Dichlorobenzidine	µg/L	SW8270D
3-Nitroaniline	µg/L	SW8270D

Table F-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date		ES-MH-001
Analyte	**Units**	**4/24/2013**
4-Bromophenyl-phenylether	µg/L	SW8270D
4-Chloroaniline	µg/L	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D
4-Nitroaniline	µg/L	SW8270D
Aniline	µg/L	SW8270D
Azobenzene	µg/L	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	na
PCB Aroclors		
PCB Aroclors	µg/L	na
PCB Congeners		
PCB Congeners	pg/L	1668C
Pesticides		
Pesticides	µg/L	SW8081B
Conventionals		
Alkalinity	mg/L CaCO3	SM2320
Bicarbonate	mg/L CaCO3	SM2320
Carbonate	mg/L CaCO3	SM2320
Chloride	mg/L	EPA300.0
Conductivity	µmhos/cm	EPA120.1
Dissolved Organic Carbon	mg/L	SM5310B
Hydroxide	mg/L CaCO3	SM2320
Nitrate + Nitrite	mg-N/L	na
N-Nitrate	mg-N/L	EPA300.0
N-Nitrite	mg-N/L	na
pH	std units	SM4500H
Sulfate	mg/L	EPA300.0
Total Organic Carbon	mg/L	SM5310B
Total Suspended Solids	mg/L	SM2540D

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

Table F-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date		ES-MH-001
Analyte	Units	4/24/2013

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

Table F-2. Water Quality Data
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-MH-001
Collection Date			4/24/2013
Analyte	**WA NPDES ISGP**	**Unit**	**Result**
Field Parameters			
Flow	--	Yes/No	No
pH	5.0 to 9.0	std units	5.95
Conductivity	--	mS/cm	1,420
Temperature	--	degrees C	12.4
Total Dissolved Solids	--	g/L	0.9
Turbidity	25	NTU	**56**
Oil & Grease	No visible sheen	Yes/No	No
Dissolved Oxygen	--	mg/L	8.9

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 F-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Emerald Services

Location ID						ES-MH-001				
Collection Date						4/24/2013				
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	--	--	--	--	--	0.6				
Arsenic	150	36	69	--	--	0.7				
Beryllium	--	--	--	--	--	< 0.2 U				
Cadmium	2.1	9.4	42	--	--	< 0.1 U				
Chromium	--	--	--	--	--	< 0.5 U				
Copper	14	3.7	5.8	--	--	**4.2**	1.1			
Lead	81.6	8.5	221	--	--	0.8				
Mercury	1.4	0.025	2.1	--	--	< 0.02 U				
Nickel	--	8.3	75	--	--	1.5				
Selenium	5	71	291	--	--	< 2.0 U				
Silver	3.8	--	2.2	--	--	< 0.2 U				
Thallium	--	--	--	--	--	< 0.2 U				
Zinc	117	86	95	--	--	19				
Dissolved Metals (µg/L)										
Antimony		--	--	4,300	640	0.6				
Arsenic		36	69	--	--	< 0.5 U				
Beryllium		--	--	--	--	< 0.2 U				
Cadmium		9.3	42	--	--	< 0.1 U				
Chromium		--	--	--	--	< 0.5 U				
Copper		3.1	4.8	--	--	2.7				
Lead		8.1	210	--	--	0.5				
Mercury		0.025	1.8	0.15	--	< 0.02 U				
Nickel		8.2	74	4,600	4,600	1.2				
Selenium		71	290	--	4,200	< 2.0 U				
Silver		--	1.9	--	--	< 0.2 U				
Thallium		--	--	6.3	0.47	< 0.2 U				
Zinc		81	90	--	26,000	12				
PAHs (µg/L)										
1-Methylnaphthalene		--	--	--	--	0.016				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U				
2-Methylnaphthalene		--	--	--	--	0.029				
Acenaphthene		--	--	--	990	< 0.01 U				
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		--	--	--	--	< 0.01 U				
Fluoranthene		--	--	370	140	< 0.01 U				
Fluorene		--	--	14,000	5,300	0.021				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	< 0.01 U				
Naphthalene		--	--	--	--	< 0.077 U				
Phenanthrene		--	--	--	--	< 0.01 U				
Pyrene		--	--	11,000	4,000	< 0.01 U				
Total Benzofluoranthenes		--	--	--	--	< 0.02 U				
Total HPAHs		--	--	--	--	< 0.02 U				
Total LPAHs		--	--	--	--	0.021				
Total PAHs		--	--	--	--	0.021				
cPAHs, nd RL*0		--	--	--	--	< 0 U				
cPAHs, nd RL*0.5		--	--	--	--	< 0.0076 U				
cPAHs, nd RL*1		--	--	--	--	< 0.015 U				

Table F-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Emerald Services

Location ID						ES-MH-001				
Collection Date						4/24/2013				
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
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		--	--	--	--	6.7				
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		--	--	--	--	< 2.0 U				
4-Nitrophenol		--	--	--	--	< 10 U				
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**				
Phenol		--	--	4,600,000	860,000	< 1.0 U				
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				

Table F-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Emerald Services

Location ID						ES-MH-001				
Collection Date						4/24/2013				
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
PCB Aroclors (µg/L)										
Aroclor 1016		--	--	--	--	na				
Aroclor 1221		--	--	--	--	na				
Aroclor 1232		--	--	--	--	na				
Aroclor 1242		--	--	--	--	na				
Aroclor 1248		--	--	--	--	na				
Aroclor 1254		--	--	--	--	na				
Aroclor 1260		--	--	--	--	na				
Aroclor 1262		--	--	--	--	na				
Aroclor 1268		--	--	--	--	na				
Total PCB Aroclors		0.03	10	0.00017	0.000064	na				
Pesticides (µg/L)										
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**				
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**				
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**				
Total DDTs		0.001	0.13	--	--	**< 0.1 U**				
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**				
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**				
beta-BHC		--	--	0.046	0.017	**< 0.05 U**				
cis-Chlordane		--	--	--	--	< 0.05 U				
delta-BHC		--	--	--	--	< 0.05 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.

< - 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 F-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Emerald Services

Location ID					ES-MH-001					
Collection Date					4/24/2013					
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	0.000175	CJ			1.03	2.7
Total PCB Congeners (pg/L)[a]					175	CJ				
Congeners (pg/L)[b]					338	CJ				
Total Monochlorobiphenyl (pg/L)[a]					< 2.42	U				
Estimated Total Monochlorobiphenyl (pg/L)[b]					< 2.42	U				
PCB-1					< 2.20	U				
PCB-2					< 2.53	U				
PCB-3					< 2.65	U				
Total Dichlorobiphenyl (pg/L)[a]					< 12.1	U				
Estimated Total Dichlorobiphenyl (pg/L)[b]					< 12.1	U				
PCB-4					< 6.92	U				
PCB-5					< 6.26	U				
PCB-6					< 6.23	U				
PCB-7					< 5.91	U				
PCB-8					< 6.01	U				
PCB-9					< 6.67	U				
PCB-10					< 4.41	U				
PCB-11					< 12.1	U				
PCB-12/13					< 6.14	CU				
PCB-14					< 5.29	U				
PCB-15					< 5.85	U				
(pg/L)[a]					48.6					
Estimated Total Trichlorobiphenyl (pg/L)[b]					48.7					
PCB-16					< 6.24	U				
PCB-17					< 4.76	U				
PCB-18/30					< 4.09	CU				
PCB-19					28.0					
PCB-20/28					< 4.29	CU				
PCB-21/33					< 4.17	CU				
PCB-22					< 4.54	U				
PCB-23					< 4.26	U				
PCB-24					< 3.74	U				
PCB-25					< 4.15	U				
PCB-26/29					< 4.23	CU				
PCB-27					14.3					
PCB-31					< 4.01	U				
PCB-32					6.32	J				
PCB-34					< 4.33	U				
PCB-35					< 4.59	U				
PCB-36					< 4.16	U				
PCB-37					< 4.54	U				
PCB-38					< 4.45	U				
PCB-39					< 3.97	U				
Total Tetrachlorobiphenyl (pg/L)[a]					52.6					
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					92.7	J				
PCB-40/71					7.38	CJ				
PCB-41					< 6.42	U				
PCB-42					< 5.48	U				
PCB-43					< 6.13	U				
PCB-44/47/65					< 12.3	CU				
PCB-45					< 5.49	U				

Table F-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Emerald Services

Location ID					ES-MH-001					
Collection Date					4/24/2013					
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
	Chronic	Acute	Organism	Organism						
PCB-46					< 6.07	U				
PCB-48					< 5.00	U				
PCB-49/69					7.54	CJ				
PCB-50/53					33.1	C				
PCB-51					< 4.95	U				
PCB-52					< 22.2	U				
PCB-54					< 2.86	U				
PCB-55					< 3.61	U				
PCB-56					< 3.72	U				
PCB-57					< 3.54	U				
PCB-58					< 3.47	U				
PCB-59/62/75					< 3.66	CU				
PCB-60					< 3.62	U				
PCB-61/70/74/76					< 5.66	U				
PCB-63					< 3.18	U				
PCB-64					4.58	J				
PCB-66					< 3.79	U				
PCB-67					< 3.29	U				
PCB-68					< 3.22	U				
PCB-72					< 3.42	U				
PCB-73					< 3.74	U				
PCB-77					< 3.22	U				
PCB-78					< 3.82	U				
PCB-79					< 3.21	U				
PCB-80					< 3.13	U				
PCB-81					< 3.66	U				
Total Pentachlorobiphenyl (pg/L)[a]					43.0					
Estimated Total Pentachlorobiphenyl (pg/L)[b]					92.2	J				
PCB-82					< 3.46	U				
PCB-83					< 3.45	U				
PCB-84					7.10	J				
PCB-85/116					< 2.56	CU				
PCB-86/87/97/109/119/125					9.90	CJ				
PCB-88					< 3.07	U				
PCB-89					< 3.13	U				
PCB-90/101/113					< 15.4	CU				
PCB-91					< 2.59	U				
PCB-92					< 2.97	U				
PCB-93/100					< 2.74	CU				
PCB-94					< 3.05	U				
PCB-95					26.0					
PCB-96					< 1.87	U				
PCB-98					< 2.98	U				
PCB-99					< 3.93	U				
PCB-102					< 2.71	U				
PCB-103					< 2.61	U				
PCB-104					< 1.58	U				
PCB-105					< 3.05	U				
PCB-106					< 2.22	U				
PCB-107					< 2.12	U				
PCB-108/124					< 2.24	CU				

Table F-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Emerald Services

Location ID					ES-MH-001					
Collection Date					4/24/2013					
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
	Chronic	Acute	Organism	Organism						
PCB-110					< 20.4	U				
PCB-111					< 2.03	U				
PCB-112					< 2.06	U				
PCB-114					< 1.96	U				
PCB-115					< 2.19	U				
PCB-117					< 2.19	U				
PCB-118					< 6.51	U				
PCB-120					< 2.02	U				
PCB-121					< 2.06	U				
PCB-122					< 2.34	U				
PCB-123					< 1.99	U				
PCB-126					< 2.53	U				
PCB-127					< 2.23	U				
Total Hexachlorobiphenyl (pg/L)[a]					27.5					
Estimated Total Hexachlorobiphenyl (pg/L)[b]					66.6	J				
PCB-128/166					2.41	CJ				
PCB-129/138/163					< 17.8	U				
PCB-130					< 2.51	U				
PCB-131					< 2.45	U				
PCB-132					< 5.86	U				
PCB-133					< 2.24	U				
PCB-134					< 2.61	U				
PCB-135/151					6.80	CJ				
PCB-136					< 2.40	U				
PCB-137					< 1.94	U				
PCB-139/140					< 2.05	CU				
PCB-141					2.92	J				
PCB-142					< 2.42	U				
PCB-143					< 2.18	U				
PCB-144					< 2.10	U				
PCB-145					< 1.44	U				
PCB-146					< 2.05	U				
PCB-147/149					15.4	CJ				
PCB-148					< 2.09	U				
PCB-150					< 1.36	U				
PCB-152					< 1.38	U				
PCB-153/168					< 13.1	CU				
PCB-154					< 1.88	U				
PCB-155					< 1.26	U				
PCB-156/157					< 2.41	CU				
PCB-158					< 1.56	U				
PCB-159					< 1.83	U				
PCB-160					< 1.76	U				
PCB-161					< 1.62	U				
PCB-162					< 1.84	U				
PCB-164					< 1.76	U				
PCB-165					< 1.75	U				
PCB-167					< 1.73	U				
PCB-169					< 2.00	U				

Table F-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Emerald Services

Location ID					ES-MH-001					
Collection Date					4/24/2013					
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Heptachlorobiphenyl (pg/L)[a]					3.66					
Estimated Total Heptachlorobiphenyl (pg/L)[b]					25.3	J				
PCB-170					< 3.13	U				
PCB-171/173					< 2.81	CU				
PCB-172					< 2.72	U				
PCB-174					< 5.10	U				
PCB-175					< 2.47	U				
PCB-176					< 1.70	U				
PCB-177					< 2.82	U				
PCB-178					< 2.50	U				
PCB-179					< 1.84	U				
PCB-180/193					< 8.33	U				
PCB-181					< 2.45	U				
PCB-182					< 2.24	U				
PCB-183					3.66	J				
PCB-184					< 1.87	U				
PCB-185					< 2.46	U				
PCB-186					< 1.80	U				
PCB-187					< 5.33	U				
PCB-188					< 1.67	U				
PCB-189					< 2.29	U				
PCB-190					< 2.29	U				
PCB-191					< 1.97	U				
PCB-192					< 2.07	U				
Total Octachlorobiphenyl (pg/L)[a]					< 1.90	U				
Estimated Total Octachlorobiphenyl (pg/L)[b]					< 1.90	U				
PCB-194					< 2.60	U				
PCB-195					< 2.85	U				
PCB-196					< 2.23	U				
PCB-197					< 1.50	U				
PCB-198/199					< 2.31	CU				
PCB-200					< 1.66	U				
PCB-201					< 1.55	U				
PCB-202					< 1.74	U				
PCB-203					< 2.12	U				
PCB-204					< 1.64	U				
PCB-205					< 2.06	U				
Total Nonachlorobiphenyl (pg/L)[a]					< 3.19	U				
Estimated Total Nonachlorobiphenyl (pg/L)[b]					< 3.19	U				
PCB-206					< 3.82	U				
PCB-207					< 2.47	U				
PCB-208					< 2.55	U				
Decachlorobiphenyl (pg/L)					< 1.4	U				
PCB-209					< 1.4	U				
PCB TEQ, nd SDL*0					< 0	U				
PCB TEQ, nd SDL*0.5					< 0.158	U				
PCB TEQ, nd SDL*1					< 0.315	U				

Table F-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Emerald Services

Location ID					ES-MH-001				
Collection Date					4/24/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO

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

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

< - not detected
µg/L - micrograms per liter
C - coelution
EMPC - estimated maximum possible 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 F-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-MH-001
Collection Date			4/24/2013
Analyte	WA NPDES ISGP	Unit	Result
Conventionals			
Alkalinity	--	mg/L CaCO3	45
Bicarbonate	--	mg/L CaCO3	45
Carbonate	--	mg/L CaCO3	< 1.0 U
Chloride	--	mg/L	316
Conductivity	--	µmhos/cm	1,220
Dissolved Organic Carbon	--	mg/L	4.94
Hydroxide	--	mg/L CaCO3	< 1.0 U
N-Nitrate	--	mg-N/L	0.3
pH	5-9	std units	6.66
Sulfate	--	mg/L	49.5
Total Organic Carbon	--	mg/L	5.61
Total Suspended Solids	--	mg/L	12.1

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 F-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date	ES-TS-INF
Analyte	**4/24/2013**
Metals (Total) (mg/kg)	
Antimony	EPA200.8
Arsenic	EPA200.8
Beryllium	SW6010C
Cadmium	EPA200.8
Chromium	EPA200.8
Copper	SW6010C
Lead	EPA200.8
Mercury	SW7471A
Nickel	EPA200.8
Selenium	EPA200.8
Silver	EPA200.8
Thallium	EPA200.8
Zinc	SW6010C
PAHs (µg/kg)	
1-Methylnaphthalene	SW8270D
2-Chloronaphthalene	SW8270D
2-Methylnaphthalene	SW8270D
Acenaphthene	SW8270D
Acenaphthylene	SW8270D
Anthracene	SW8270D
Benzo(a)anthracene	SW8270D
Benzo(a)pyrene	SW8270D
Benzo(g,h,i)perylene	SW8270D
Chrysene	SW8270D
Dibenz(a,h)anthracene	SW8270DSIM
Dibenzofuran	SW8270D
Fluoranthene	SW8270D
Fluorene	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D
Naphthalene	SW8270D
Phenanthrene	SW8270D
Pyrene	SW8270D
Total Benzofluoranthenes	SW8270D
Total HPAHs	SW8270DSIM
Total LPAHs	SW8270D
Total PAHs	SW8270DSIM
cPAHs, nd RL*0	SW8270DSIM
cPAHs, nd RL*0.5	SW8270DSIM
cPAHs, nd RL*1	SW8270DSIM
Phthalates (µg/kg)	
bis(2-Ethylhexyl)phthalate	SW8270D
Butylbenzylphthalate	SW8270DSIM
Di-n-Butylphthalate	SW8270D
Diethylphthalate	SW8270DSIM

Table F-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date	ES-TS-INF
Analyte	**4/24/2013**
Dimethylphthalate	SW8270DSIM
Di-n-Octyl phthalate	SW8270D
Phenols (µg/kg)	
2,4,5-Trichlorophenol	SW8270D
2,4,6-Trichlorophenol	SW8270D
2,4-Dichlorophenol	SW8270D
2,4-Dimethylphenol	SW8270DSIM
2,4-Dinitrophenol	SW8270D
2-Chlorophenol	SW8270D
2-Methylphenol	SW8270DSIM
2-Nitrophenol	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D
4-Chloro-3-methylphenol	SW8270D
4-Methylphenol	SW8270D
4-Nitrophenol	SW8270D
Pentachlorophenol	SW8270DSIM
Phenol	SW8270D
Other SVOCs (µg/kg)	
1,2,4-Trichlorobenzene	SW8270DSIM
1,2-Dichlorobenzene	SW8270DSIM
1,3-Dichlorobenzene	SW8270DSIM
1,4-Dichlorobenzene	SW8270DSIM
2,4-Dinitrotoluene	SW8270D
2,6-Dinitrotoluene	SW8270D
2-Nitroaniline	SW8270D
3,3'-Dichlorobenzidine	SW8270D
3-Nitroaniline	SW8270D
4-Bromophenyl-phenylether	SW8270D
4-Chloroaniline	SW8270D
4-Chlorophenyl-phenylether	SW8270D
4-Nitroaniline	SW8270D
Aniline	SW8270D
Benzoic Acid	SW8270D
Benzyl Alcohol	SW8270DSIM
2,2'-Oxybis(1-Chloropropane)	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D
Carbazole	SW8270D
Hexachlorobenzene	SW8081B
Hexachlorobutadiene	SW8081B
Hexachlorocyclopentadiene	SW8270D
Hexachloroethane	SW8270D
Isophorone	SW8270D
Nitrobenzene	SW8270D
N-Nitrosodimethylamine	SW8270DSIM

Table F-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Emerald Services

Location ID / Collection Date	ES-TS-INF
Analyte	**4/24/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM
N-Nitrosodiphenylamine	SW8270D
PCB Aroclors (µg/kg)	
PCB Aroclors	SW8082A
Pesticides (µg/kg)	
Pesticides	SW8081B
VOCs (µg/kg)	
VOCs	SW8260C
TPHs (mg/kg)	
Gasoline-Range Hydrocarbons	NWTPHG
Diesel-Range Hydrocarbons	NWTPHD
Motor Oil-Range Hydrocarbons	NWTPHD
Dioxins and Furans (ng/kg)	
Dioxins and Furans	EPA 1613B
Grain size (%)	
Grain size	PSEP-PS
Conventionals (%)	
Total Organic Carbon	PLUMB81TC
Total Solids	SM2540B

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

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

Table F-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-TS-INF		
Collection Date			4/24/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)					
Antimony	--	--	0.6 J		
Arsenic	57	93	7.4		
Beryllium	--	--	< 0.2 U		
Cadmium	5.1	6.7	2.3 J		
Chromium	260	270	76		
Copper	390	390	173		
Lead	450	530	88.7		
Mercury	0.41	0.59	0.19		
Nickel	--	--	46		
Selenium	--	--	< 1.0 U		
Silver	6.1	6.1	0.6		
Thallium	--	--	< 0.5 U		
Zinc	410	960	**984**	2.4	1.0
PAHs (µg/kg)					
1-Methylnaphthalene	--	--	< 500 U		
2-Chloronaphthalene	--	--	< 500 U		
2-Methylnaphthalene	670	1,400	300 J		
Acenaphthene	500	730	< 500 U		
Acenaphthylene	1,300	1,300	< 500 U		
Anthracene	960	4,400	< 500 U		
Benzo(a)anthracene	1,300	1,600	500		
Benzo(a)pyrene	1,600	3,000	500		
Benzo(g,h,i)perylene	670	720	**780**	1.2	1.1
Chrysene	1,400	2,800	**1,500**	1.1	
Dibenz(a,h)anthracene	230	540	140		
Dibenzofuran	540	700	< 500 U		
Fluoranthene	1,700	2,500	**1,800**	1.1	
Fluorene	540	1,000	< 500 U		
Indeno(1,2,3-cd)pyrene	600	690	350 J		
Naphthalene	2,100	2,400	< 500 U		
Phenanthrene	1,500	5,400	1,200		
Pyrene	2,600	3,300	2,600		
Total Benzofluoranthenes	3,200	3,600	1,500		
Total HPAHs	12,000	17,000	9,700 J		
Total LPAHs	5,200	13,000	1,200		
Total PAHs	--	--	11,000 J		
cPAHs, nd RL*0	1,000	--	760 J		
cPAHs, nd RL*0.5	1,000	--	760 J		
cPAHs, nd RL*1	1,000	--	760 J		
Phthalates (µg/kg)					
bis(2-Ethylhexyl)phthalate	1,300	1,900	**130,000**	100	68
Butylbenzylphthalate	63	900	**2,000**	32	2.2
Di-n-Butylphthalate	1,400	5,100	550		
Diethylphthalate	200	1,200	< 95 U		
Dimethylphthalate	71	160	**1,500**	21	9.4
Di-n-Octyl phthalate	6,200	--	4,200 JN		
Phenols (µg/kg)					
2,4,5-Trichlorophenol	--	--	< 2,500 U		
2,4,6-Trichlorophenol	--	--	< 2,500 U		

Table F-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-TS-INF		
Collection Date			4/24/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
2,4-Dichlorophenol	--	--	< 5,000 U		
2,4-Dimethylphenol	29	29	**< 500 U**		
2,4-Dinitrophenol	--	--	< 21,000 U		
2-Chlorophenol	--	--	< 500 U		
2-Methylphenol	63	63	**< 120 U**		
2-Nitrophenol	--	--	< 2,500 U		
4,6-Dinitro-2-Methylphenol	--	--	< 5,000 U		
4-Chloro-3-methylphenol	--	--	< 2,500 U		
4-Methylphenol	670	670	**15,000**	22	22
4-Nitrophenol	--	--	< 2500 U		
Pentachlorophenol	360	690	**< 1,200 UJ**		
Phenol	420	1,200	**2,400**	5.7	2.0
Other SVOCs (µg/kg)					
1,2,4-Trichlorobenzene	31	51	**< 120 U**		
1,2-Dichlorobenzene	35	50	**< 120 U**		
1,3-Dichlorobenzene	--	--	< 120 U		
1,4-Dichlorobenzene	110	120	**< 120 U**		
2,4-Dinitrotoluene	--	--	< 2,500 U		
2,6-Dinitrotoluene	--	--	< 2,500 U		
2-Nitroaniline	--	--	< 2,500 U		
3,3'-Dichlorobenzidine	--	--	< 3,800 U		
3-Nitroaniline	--	--	< 2,500 U		
4-Bromophenyl-phenylether	--	--	< 500 U		
4-Chloroaniline	--	--	< 6,800 U		
4-Chlorophenyl-phenylether	--	--	< 500 U		
4-Nitroaniline	--	--	< 2,500 U		
Aniline	--	--	< 14,000 U		
Benzoic Acid	650	650	**< 10,000 UJ**		
Benzyl Alcohol	57	73	**760**	13	10
2,2'-Oxybis(1-Chloropropane)	--	--	< 500 U		
bis(2-Chloroethoxy) Methane	--	--	< 500 U		
Bis-(2-Chloroethyl) Ether	--	--	< 500 U		
Carbazole	--	--	< 500 U		
Hexachlorobenzene	22	70	< 20 U		
Hexachlorobutadiene	11	120	**< 20 U**		
Hexachlorocyclopentadiene	--	--	< 10,000 U		
Hexachloroethane	--	--	< 500 U		
Isophorone	--	--	< 500 U		
Nitrobenzene	--	--	< 500 U		
N-Nitrosodimethylamine	--	--	< 620 U		
N-Nitroso-Di-N-Propylamine	--	--	< 300 U		
N-Nitrosodiphenylamine	28	40	**450 J**	16	11
PCB Aroclors (µg/kg)					
Aroclor 1016	--	--	< 20 U		
Aroclor 1221	--	--	< 20 U		
Aroclor 1232	--	--	< 20 U		
Aroclor 1242	--	--	< 20 U		
Aroclor 1248	--	--	50		
Aroclor 1254	--	--	97		
Aroclor 1260	--	--	50		

Table F-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-TS-INF		
Collection Date			4/24/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Aroclor 1262	--	--	< 20 U		
Aroclor 1268	--	--	< 20 U		
Total PCB Aroclors	130	1,000	**200**	1.5	
Pesticides (µg/kg)					
4,4'-DDD	--	--	< 20 UJ		
4,4'-DDE	--	--	< 57 UJ		
4,4'-DDT	--	--	< 20 UJ		
Total DDTs	--	--	< 57 UJ		
Aldrin	--	--	< 9.8 U		
alpha-BHC	--	--	< 9.8 U		
beta-BHC	--	--	< 19 U		
cis-Chlordane	--	--	< 9.8 U		
delta-BHC	--	--	< 9.8 U		
Dieldrin	--	--	< 20 U		
Endosulfan I	--	--	< 9.8 U		
Endosulfan II	--	--	< 20 U		
Endosulfan Sulfate	--	--	< 20 UJ		
Endrin	--	--	< 20 UJ		
Endrin Aldehyde	--	--	< 20 UJ		
Endrin Ketone	--	--	< 20 UJ		
Heptachlor	--	--	< 9.8 UJ		
Heptachlor Epoxide	--	--	< 230 U		
gamma-BHC (Lindane)	--	--	< 9.8 U		
Methoxychlor	--	--	< 98 UJ		
Toxaphene	--	--	< 2,000 UJ		
trans-Chlordane	--	--	< 9.8 U		
Total aldrin/dieldrin	--	--	< 20 U		
Total Chlordane	--	--	< 9.8 U		
VOCs (µg/kg)					
1,1,1,2-Tetrachloroethane	--	--	< 180 U		
1,1,1-Trichloroethane	--	--	< 180 U		
1,1,2,2-Tetrachloroethane	--	--	< 180 U		
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	< 360 U		
1,1,2-Trichloroethane	--	--	< 180 U		
1,1-Dichloroethane	--	--	< 180 U		
1,1-Dichloroethene	--	--	< 180 U		
1,1-Dichloropropene	--	--	< 180 U		
1,2,3-Trichlorobenzene	--	--	< 900 U		
1,2,3-Trichloropropane	--	--	< 360 U		
1,2,4-Trimethylbenzene	--	--	< 180 U		
1,2-Dibromo-3-chloropropane	--	--	< 900 U		
1,2-Dibromoethane	--	--	< 180 U		
1,2-Dichloroethane	--	--	< 180 U		
1,2-Dichloropropane	--	--	< 180 U		
1,3,5-Trimethylbenzene	--	--	< 180 U		
1,3-Dichloropropane	--	--	< 180 U		
2,2-Dichloropropane	--	--	< 180 U		
2-Chloroethylvinylether	--	--	< 900 U		
2-Chlorotoluene	--	--	< 180 U		
2-Hexanone	--	--	< 900 U		

Table F-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-TS-INF		
Collection Date			4/24/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
4-Chlorotoluene	--	--	< 180 U		
Acetone	--	--	< 900 U		
Acrolein	--	--	< 9,000 UJ		
Acrylonitrile	--	--	< 900 U		
Benzene	--	--	< 180 U		
Bromobenzene	--	--	< 180 U		
Bromochloromethane	--	--	< 180 U		
Bromoethane	--	--	< 360 U		
Bromoform	--	--	< 180 U		
Bromomethane	--	--	< 180 U		
Carbon Disulfide	--	--	< 180 U		
Carbon Tetrachloride	--	--	< 180 U		
Chlorobenzene	--	--	< 180 U		
Dibromochloromethane	--	--	< 180 U		
Chloroethane	--	--	< 180 U		
Chloroform	--	--	< 180 U		
Chloromethane	--	--	< 180 U		
cis-1,2-Dichloroethene	--	--	< 180 U		
cis-1,3-Dichloropropene	--	--	< 180 U		
Dibromomethane	--	--	< 180 U		
Bromodichloromethane	--	--	< 180 U		
Dichlorodifluoromethane	--	--	< 180 U		
Ethylbenzene	--	--	< 180 U		
Isopropylbenzene	--	--	< 180 U		
m,p-Xylene	--	--	< 180 U		
2-Butanone	--	--	< 900 U		
Iodomethane	--	--	< 180 U		
4-Methyl-2-Pentanone (MIBK)	--	--	< 900 U		
Methyl tert-Butyl Ether	--	--	< 180 U		
Methylene Chloride	--	--	< 360 U		
n-Butylbenzene	--	--	< 180 U		
n-Propylbenzene	--	--	< 180 U		
o-Xylene	--	--	< 180 U		
4-Isopropyltoluene	--	--	< 180 U		
sec-Butylbenzene	--	--	< 180 U		
Styrene	--	--	< 180 U		
tert-Butylbenzene	--	--	< 180 U		
Tetrachloroethene	--	--	< 180 U		
Toluene	--	--	5,200		
Total Xylenes	--	--	< 180 U		
trans-1,2-Dichloroethene	--	--	< 180 U		
trans-1,3-Dichloropropene	--	--	< 180 U		
trans-1,4-Dichloro-2-butene	--	--	< 900 UJ		
Trichloroethene	--	--	< 180 U		
Trichlorofluoromethane	--	--	230		
Vinyl Acetate	--	--	< 900 UJ		
Vinyl Chloride	--	--	< 180 U		
TPH (mg/kg)					
Gasoline-Range Hydrocarbons	30/100	--	< 18 U		
Diesel-Range Hydrocarbons	2,000	--	**12,000**	6.0	

Table F-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-TS-INF		
Collection Date			4/24/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Motor Oil-Range Hydrocarbons	2,000	--	**30,000**	15	
Dioxins and Furans (ng/kg)					
2,3,7,8-TCDD	--	--	1.29		
1,2,3,7,8-PeCDD	--	--	9.03		
1,2,3,4,7,8-HxCDD	--	--	10.4		
1,2,3,6,7,8-HxCDD	--	--	23.9		
1,2,3,7,8,9-HxCDD	--	--	21.6		
1,2,3,4,6,7,8-HpCDD	--	--	586		
OCDD	--	--	6,210 J		
2,3,7,8-TCDF	--	--	3.81		
1,2,3,7,8-PeCDF	--	--	2.51 J		
2,3,4,7,8-PeCDF	--	--	4.01		
1,2,3,4,7,8-HxCDF	--	--	6.74		
1,2,3,6,7,8-HxCDF	--	--	6.71		
1,2,3,7,8,9-HxCDF	--	--	2.12		
2,3,4,6,7,8-HxCDF	--	--	9.27		
1,2,3,4,6,7,8-HpCDF	--	--	96.8		
1,2,3,4,7,8,9-HpCDF	--	--	5.93		
OCDF	--	--	238		
Dioxin/Furan TEQ, nd SDL*0	25	--	**28.9 J**	1.2	
Dioxin/Furan TEQ, nd SDL*0.5	25	--	**28.9 J**	1.2	
Dioxin/Furan TEQ, nd SDL*1	25	--	**28.9 J**	1.2	
Total TCDD	--	--	30.9 J		
Total TCDF	--	--	87 J		
Total PeCDD	--	--	63.7 J		
Total PeCDF	--	--	130 J		
Total HxCDD	--	--	274 J		
Total HxCDF	--	--	169 J		
Total HpCDD	--	--	1,460		
Total HpCDF	--	--	244 J		
Grain size (%)					
> 10 Phi Clay	--	--	6.7		
8-9 Phi Clay	--	--	< 0.1 UJ		
9-10 Phi Clay	--	--	< 0.1 UJ		
Very Fine Silt	--	--	1.8		
Fine Silt	--	--	1.5		
Medium Silt	--	--	40.6		
Coarse Silt	--	--	2.3 J		
Total Fines	--	--	52.7		
Very Fine Sand	--	--	11.6		
Fine Sand	--	--	12.3		
Medium Sand	--	--	9.2		
Coarse Sand	--	--	10.1		
Very Coarse Sand	--	--	3.5		
Gravel	--	--	0.8		
Conventionals (%)					
Total Organic Carbon	--	--	19.6		
Total Solids	--	--	37.96		

Table F-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs NPDES Inspection Sampling Support: Emerald Services

Location ID			ES-TS-INF		
Collection Date			4/24/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET

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

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

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

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

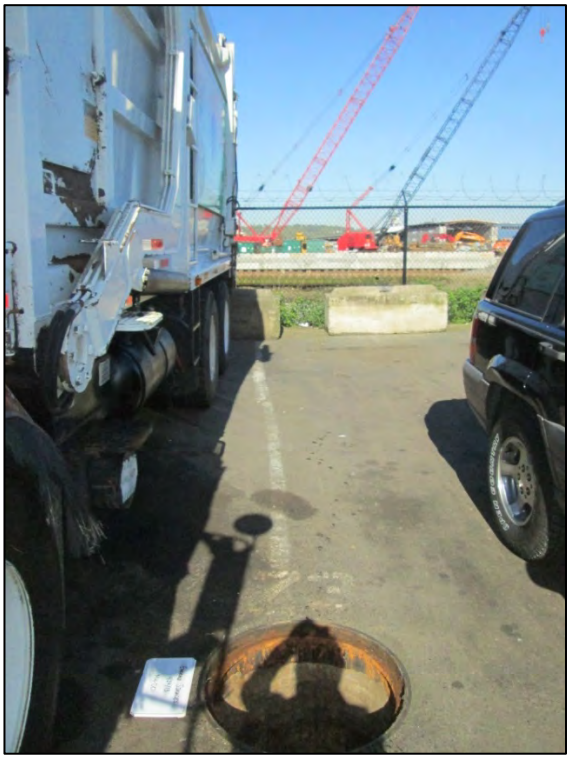
EFs are presented for detected concentrations that exceed the SMS/AET criteria, LDW RALs, or MTCA Method A cleanup levels for soil only.

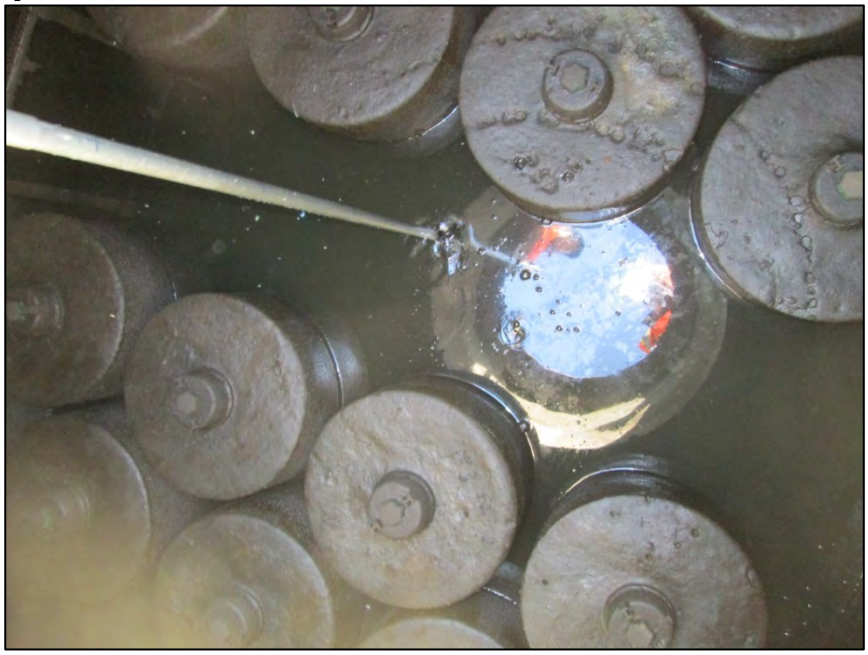
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the SMS criteria or LDW RALs.

% - percent
< - not detected
2LAET - Second Lowest Apparent Effects Threshold
AET - Apparent Effects Threshold
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
CSL - Cleanup Screening Level
EF - exceedance factor (sample result/criteria value)
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
J - estimated concentration
LAET - Lowest Apparent Effects Threshold
LDW - Lower Duwamish Waterway
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
MTCA - Model Toxics Control Act
na - not analyzed
nc - not calculated
nd - non-detect
ng/kg - nanograms per kilogram
NPDES - National Pollutant Discharge Elimination System
OC - organic carbon
PCBs - polychlorinated biphenyls
R - Rejected completely during data validation review
RAL - Remedial Action Levels
RL - reporting limit
SDL - sample detection limit
SMS - Washington State Sediment Management Standards
SQS - Sediment Quality Standard
SVOCs - semivolatile organic compounds
TEQ - toxic equivalency
TPH - total petroleum hydrocarbons
U - not detected
VOCs - volatile organic compounds

Attachment F-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: ES-CB-2	**N↗** 
Structure Type: Catch Basin	
General Location: Central portion of facility near main building	
Characteristics: Catch basin insert and filter sock 7 feet to bottom of structure	
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:	
Stormwater is conveyed to ES-CB-2 from stormwater conveyance system lines draining the north, south, east, and west portion of the site. Stormwater is conveyed north from ES-CB-2 to the facility's stormwater treatment system.	**N↗** 

Conveyance Structure Information	
Structure Identification Number: ES-MH-001	**N➔** 
Structure Type: Manhole	
General Location: Northeastern portion of facility	
Characteristics: 10 feet to bottom of structure	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Sealed manhole cover	
Volume Gauge: No	
Sample ID: ES-MH-001-20130424-W	
Drainage Information:	
ES-MH-001 receives all stormwater from the facility including stormwater treatment system effluent and roof drains. Stormwater from ES-MH-001 is discharged to Slip 4 of the LDW.	**N➔** 

Conveyance Structure Information	
Structure Identification Number: ES-TS-INF	**N↓** 
Structure Type: Below Ground Stormwater Treatment System	
General Location: Northeastern portion of facility	
Characteristics: 6.5 feet to bottom of structure 21 passive filtration cartridges Removes TSS, metals, nutrients, and organic compounds	
Pump Capacity (gpm): 315 gpm	
Design Storm: --	
Access: Manhole	
Volume Gauge: No	
Sample ID: ES-TS-INF-20130424-S	
Drainage Information	
Runoff from the entire site flows to ES-TS-INF. Stormwater in the chamber is treated by 21 passive stormwater filter cartridges. Stormwater is conveyed to ES-MH-001 following treatment and discharged to Slip 4 of the LDW.	**N↑** 

Attachment F-2
Field Documentation

SAIC
From Science to Solutions

SURFACE WATER SAMPLING FORM

Client: Department of Ecology

Site: Emerald Services

Job #: 209977

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
ES-MH-001-20130424-W	1131	4/24/13	No	5.95	1.42 ☐ S/cm	12.4	0.9 g/L	56	No	DO - 8.94 mg/L
					☐ S/cm					
					☐ S/cm					
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					☐ S/cm					

Sample Date: 4 / 24 /2013

SAIC
From Science to Solutions

Sediment Collection Form

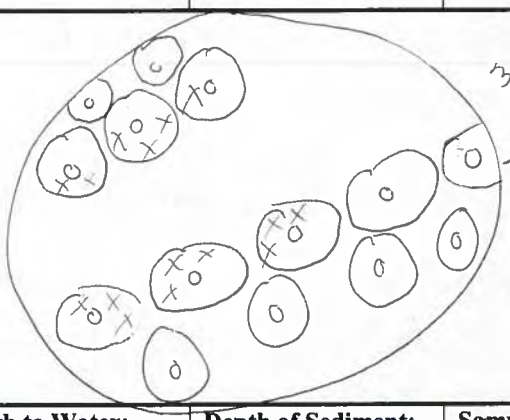
Project: NPDES Sampling Support **Location ID:** ES-TS-INF

Facility Name: Emerald Services **Sample ID:** ES-TS-INF-20130424-S

Sampled By: CW CN **Date:** 4 / 24 / 2013 **Time:** 1053

Structure Type: Manhole for Treatment System	**Dimensions:** 30" dia **W**____ **L**____	**Standing Water:** (Y) / N	**Flow:** Y / (N)

Conveyance System Sketch ↑N



Depth to Bottom: 6.5 ft	**Depth to Water:** 4.5 ft	**Depth of Sediment:** 1-2 in	**Sampled:** (Y) / N **Discrete** / **Composite** *(circle one)*
Sediment type:	***Sediment color:***	***Sediment Odor:***	***Comments:***
Cobble Gravel Sand C M (F) Silt/clay ~~Organic matter~~ Debris	Drab olive Brown Dark Brown surface Gray Black Tan	None Slight ~~Moderate~~ Strong Overwhelming H_2S Petroleum	~~X~~ Marks grab locations Photo ID(s): TMT-INF GPS ID: ES-TS-INF

NOTES: Grab Samples Collected from top of Contech Filter Units. Units are above the water line

All analytes including Dioxin/Furans

Recorded By/Date: _____ **Reviewed By/Date:** _____

Version2 -030311

4/24/13 Emerald Services Sunny 4/24/13

0620 CW arrive at field office and begin prep for duty

0648 CW arrive Field office
load truck
MOB to Home Depot
MOB to Emerald Services

0759 arrive onsite. Met w/ Michelle
Reviewed site plans
Note - New SWPPP
Roof - Stormwater Contech Tmt Vault
Plg lot - Qty pressure washing + vacuum

0825 Load up dolly w/ cones
Noted CB-004, CB-005 covered/equip-Rqst to move. truck/bin.

0831 MOB to CB-002

DTB = 7' bgs hard bottom
WC = 2.75' no flow
Filter insert for seds, O/W filter bags
visible sheen

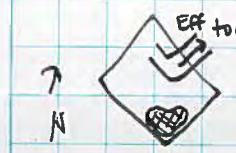
0847 MOB to CB-001

DTB = 7' bgs hard bottom
WC = 2.75' no flow
Filter CB insert for seds, O/W filter bags

0856 MOB to CB-004. Inclucas moved.

DTB = 4.5' bgs hard bottom
WC = 2.0' no flow
Filter CB insert, O/W filter bags

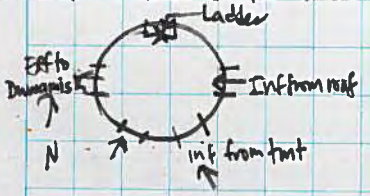
0907 MOB to CB-005 Container moved upon rearrival



DTB = 4.5' bgs 80% hard bottom
WC = 3.75' no flow
Lots of organics, tree debris
Southern corner contains small amt of sediments < than 2 jars (40z.)

CB Filter insert + bag were replaced immediately

0919 MOB to treatment / MH-001



DTB = 10' bgs hard bottom
WC = ~2.0' no flow
MH-001 receives all discharge for Emerald including Tmt effluent and roof runoff

4/24/13 Emerald Services Sunny, Clear

0939 MOB to Tmt-INF upgradient of MH-001

DTB = 6.5' bgs min. sed son bottom, lgamt on top of filters

WC = 2.0'

Filters for solids, metals

0948 Bob/Michele MOB to office to meet w/Sheila Smith (Env Coordinator)
Set up Sample equipment.

1020 Begin sample collection
1027 Sample collected:
ES-TS-INF-20130424-S
all parameters collected
1108 Sample completed
1111 MOB to MH-001 for water sample
1118 GPS MH-001, label bottles w/time
1122 Sheila (ES) & Bob returned to check in
-Continued on site tour

1131 Begin collection of water sample
ES-MH-001-20130424-W
Sample collection complete.

Sunny, Clear Emerald Services 4/24/13

Water Quality Parameters collected

pH = 5.43 & 5.95
Cond = 1.42 mS/cm
Turb = 54 NTU
DO = 8.94
Temp = 12.4°c
Sal = 0.1 %
TDS = 0.9 g/L
ORP = 58 mV

Break down workspace, prepare COC's (Site + SAIC), Load truck.

Daniel.Gossett@EmeraldNW.com
206-437-5689

1231 Release split samples to facility.
1239 Mtg w/Bob to discuss future sampling schedule.
1253 MOB offsite to ARI
1326 Arrive @ ARI Labs
1337 MOB to Field office
1349 Stop for lunch
1417 Continue MOB to field office
~1420 Arrive @ Field office

Attachment F-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 1305	Turn-around Requested: ~~Std 15 Day~~ 15 Day	Date: 4/24/13
ARI Client Company: **SAIC**	Phone: **206.300.2144**	Page: 1 of 1
	nancarrowc@saic.com	
Client Contact: **Christine Nancarrow**		No. of Coolers: 1 Cooler Temps: 9.4, 10.6
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)/PAHs	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DX)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments: TPH-Gas (NWTPH-Gx)
					Analysis Requested (Sediment Sample)											
ES-TS-INF-20130424-S	4/24/13	1027	Sediment	11	X	X	X	X	X	X	X	X	X	X	X	X

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Please do not dispose of samples without written consent from SAIC PM.	Printed Name: CNANCARROW	Printed Name: Jennifer Miller	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 4/24/13 @ 1328	Date & Time: 4/24/13 1328	Date & Time:	Date & Time:

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

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WAS1	Turn-around Requested: 15 DAY	Date: 4/24/13	
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: 9.4, 10.0
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No. Containers	SVOCs (EPA 8270/SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: TPH-Dx/S (NWTPH-Dx)	Notes/Comments: VOCs EPA 8260D	
ES-MH-001-20130424-W	4/24/13	1131	Water	14	X	X	X	X	X	X	X	X	X	X	X	X			
	CW			12 CW 4/24/13															
ES-TB-001-20130424-W	4/24/13	1200	Water	2													X	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
*Requires filtration upon laboratory receipt. NOTE: Do not dispose of samples w/o prior written approval from SAIC PM.	Printed Name: C NANCARROW	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 4/24/13 @ 1328	Date & Time: 4/24/13 1328	Date & Time:	Date & Time:

Attachment F-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 WN31, WN35

Client: SAIC

Project: 209977 NPDES Sampling Support

Signature

May-08-2013
Date

Table of Contents: ARI Job WN31, WN35

Client: SAIC

Project: 209977 NPDES Sampling Support

BC

Signature

May-08-2013

Date

Table of Contents: ARI Job WN31, WN35

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

May-08-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 15, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job Nos.: WN31 & WN35

Dear Christine:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WN31_WN35

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WN31, WN35

Chain of Custody Record & Laboratory Analysis Request

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

ARI Assigned Number: WNS | Turn-around Requested: ~~24 Hr~~ 5 Day 15 Day

Date: 4/24/13

ARI Client Company: **SAIC** | Phone: **206.300.2144** | **nancarrowc@saic.com**

Page: 1 of 1

Client Contact: **Christine Nancarrow**

No. of Coolers: 1 | Cooler Temps: 9.4; 10.6

Client Project Name: **NPDES Sampling Support**

Client Project #: **209977** | Samplers:

Sample ID	Date	Time	Matrix	No Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 / EPA 8270-SIM)/PAHs	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DX)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments: TPH-Gas (NWTPH-Gx)
ES-TS-INF-20130424-S	4/24/13	1027	Sediment	11	X	X	X	X	X	X	X	X	X	X	X	X

Analysis Requested (Sediment Sample)

Comments/Special Instructions: Please do not dispose of samples without written consent from SAIC PM.

	Relinquished by	Received by	Relinquished by	Received by
(Signature)	C Nancarrow	Jennifer Miller		
Printed Name	C NANCARROW	Jennifer Miller		
Company	SAIC	ARI		
Date & Time	4/24/13 @ 1328	4/24/13 1328		

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: WN31	Turn-around Requested: 15 DAY	Date: 4/24/13	
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: 9.4, 10.6	
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No Containers	SVOCs /PAHs (EPA 8270/EPA 8270-SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: TPH-Gas (NWTPH-Gx)	Notes/Comments: VOCs EPA 8260	Notes/Comments:
ES-MH-001-20130424-W	4/24/13	1131	Water	~~14~~ 12 CW 4/24/13	X	X	X	X	X[1]	X	X	X	X	X	X	X			
ES-TB-001-20130424-W	4/24/13	1200	Water	2													X	X	

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
[1]Requires filtration upon laboratory receipt NOTE Do not dispose of samples w/o prior written approval from SAIC PM.	Printed Name: C NANCARROW	Printed Name: Jennifer Millsap	Printed Name	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 4/24/13 @ 1328	Date & Time: 4/24/13 1328	Date & Time	Date & Time

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client SAIC
Project Name NPDES Sampling Support
COC No(s) (NA)
Delivered by Fed-Ex UPS Courier (Hand Delivered) Other
Assigned ARI Job No WN31
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)	9.4 10.6	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#	90877952

Cooler Accepted by JM Date 4/24/13 Time 1328

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	3/15/13	

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

Samples Logged by JM Date 4/24/13 Time 1417

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
ES-MH-001-20130424-W	ES-MH-001-20140424-W		

Additional Notes, Discrepancies, & Resolutions:

By AV Date 4/26/13

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

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

PRESERVATION VERIFICATION 04/24/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WN31**

Inquiry Number: NONE
Analysis Requested: 04/24/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

PC: Cheronne
VTSR: 04/24/13

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

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-8694 **WN31B**	3 ES-MH-001-20140424-W						TOT pass					Fail										
13-8695 **WN31C**	3 ES-MH-001-20140424-W						DIS Fail									N		pH	<2	MP2452	2.0mL	04-24-13/NB

TOC + DOC in same bottle
TOC needs preserved
DOC needs filtered + preserved.

Sample C filtered & preserved in lab.
-NB 04-24-13

Checked By JM Date 4/24/13

PRESERVATION VERIFICATION 04/24/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WN31**

Inquiry Number: NONE
Analysis Requested: 04/24/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

PC: Cheronne
VTSR: 04/24/13

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

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-8694 **WN31B**	3 ES-MH-001-20140424-W						TOT pass					fail						~~TOC~~ DOC				
13-8695 **WN31C**	3 ES-MH-001-20140424-W						DIS fail									N		TOC	<2	ARIH 0406C 9N 4-24	1ml	4-24-13

- TOC + DOC in same bottle
TOC Needs preserved
DOC needs filtered + preserved.

DOC filtered & preserved JM

Checked By JM Date 4/24/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client SAIC

Project Name NPDES Sampling Support

COC No(s) (NA)

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

Assigned ARI Job No ~~WN3S~~ WN3S

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)	9.4 10.6	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID# 90877952	

Cooler Accepted by JM Date 4/24/13 Time 1328

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) JM	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 3/18/13	

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

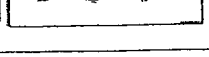
Samples Logged by JM Date 4/24/13 Time 1417

***** 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"

PRESERVATION VERIFICATION 04/24/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WN35**

PC: Cheronne
VTSR: 04/24/13

Inquiry Number: NONE
Analysis Requested: 04/24/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

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

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-8725 **WN35A**	3 ea ES-MH-001-20130424-W						TOT															
13-8726 **WN35B**	3 ea ES-MH-001-20130424-W						DIS									N		pH	<2	MP252	2.0mL	04-24-13/NB

Sample B filtered & preserved in lab.
-NB 04-24-13

55555 - TENM

Checked By JM Date 4/24/13

Subject: RE: WN31 Sample IDs
From: "Mitchell, Marina I." <MARINA.I.MITCHELL@saic.com>
Date: 4/26/2013 3:42 PM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>, "Nancarrow, Christine F." <CHRISTINE.F.NANCARROW@saic.com>
CC: "MITCHELL, MARINA I." <MARINA.I.MITCHELL@saic.com>, <cransom@ecochem.net>

Yes it should be, the COC lists the sample ID in error. Please report the sample ID as you suggested below. Thanks for the catch!

Marina I. Mitchell | SAIC
Senior Environmental Chemist
Engineering Solutions
office: 425.482.3310 | mobile: 425.443.1399
email: marina.i.mitchell@saic.com

From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Friday, April 26, 2013 3:27 PM
To: Mitchell, Marina I.; Nancarrow, Christine F.
Subject: WN31 Sample IDs

Marina and Christine,

It was noted that one of the samples from ARI job WN31 references the year 2014 in the sample ID instead of 2013.

Should sample ES-MH-001-20140424-W really be ES-MH-001-**2013**0424?

-Cheronne

--
Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com
(206)-695-6214

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WN31, WN35

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job Nos.: WN31 & WN35

Sample Receipt

One sediment sample and two water samples were received on April 24, 2013 under ARI jobs WN31 and WK51. The cooler temperatures measured by IR thermometer following ARI SOP were 9.4 and 10.6°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles by SW8260C

The samples were analyzed within the recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Methylene Chloride and trans-1,2-Dichloroethene. 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.

Acetone was present in the solid method blank at a level that was greater than the reporting limit. 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 in the water method blank at low levels. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

Semivolatiles by SW8270D

The samples were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 5/7/13 fell outside the 20% control limit low for Benzoic Acid, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, and Pentachlorophenol. The CCAL was outside the control limit high for 3-Nitroaniline and 4-Nitroaniline. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 5/8/13 was outside the 20% control limit high for Carbazole and 3,3'-Dichlorobenzidine. Associated sample results were undetected for these compounds. No corrective action was taken.

The CCAL on 5/1/13 fell outside the 20% control limit low for 2,2'-Oxybis(1-Chloropropane, Benzoic Acid, N-Nitrosodimethylamine, and Aniline. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Bis(2-Ethylhexyl)phthalate was present in **MB-050113** at a level that was greater than the reporting limit. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCSD percent recovery of 4-Chloroaniline and the LCS/LCSD percent recoveries of 3-Nitroaniline were outside control limits high for **LCS-050113**. All other percent recoveries were within control limits. No corrective action was taken.

SIM Semivolatiles by SW78270-SIM

The sample was extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration fell outside the control limits low for 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.

Diethylphthalate was present in **MB-050113** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

Low-Level PAHs by SW8270D-SIM

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

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

The surrogate percent recoveries were within control limits.

Naphthalene was present in **MB-043013** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries were within control limits.

Dioxin/Furans by SW1613B

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

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

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

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

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

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

Select results have has been flagged with an "X" on the Form I's due to indication of a co-eluting PDBE.

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

Pesticides by SW8081

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

Initial calibrations were within method requirements.

The sediment sample was initially analyzed at a ten-fold dilution due to the dark color of the extract. The initial continuing calibration (CCAL) on 5/8/13 at 01:53 fell outside the 20% control limit low for Methoxylchlor on the first column but was within the control limit on the second column. The Toxaphene CCAL on 5/8/13 at 02:11 was outside the 20% control limit high on the first column, but was within the control limit on the second column. The closing CCAL on 5/8/13 at 06:20 fell outside the 20% control limit for several compounds on both columns. The closing Toxaphene CCAL on 5/8/13 was not analyzed due to an instrument injection failure. The associated closing Endrin breakdown was outside control limits on both columns. The sample was re-analyzed at a one-hundred fold dilution. The re-analysis CCALs at 17:32 and 19:01 fell outside the 20% control limit low for several compounds on the second column but were within the control limit for all compounds on the first column. Both Toxaphene CCALs at 17:50 and 19:19 were outside the control limit high on the first column but were within the control limit on the second column. Both sets of data have been reported. No further corrective action was taken.

Both water CCALs on 5/1/13 at 14:33 and 19:44 fell outside the 20% control limit low for Methoxychlor on the second column, but both were within the control limit on the first column. No corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recovery of Decachlorobiphenyl was outside the control limits high for sample **ES-TS-INF-20130424-S**. The sample was re-analyzed at a dilution and surrogate percent recoveries were diluted. No further corrective action was taken.

The method blanks were clean at the reporting limits.

Several LCSD percent recoveries fell outside the control limits low with wide RPDs for **LCS-050313**. All LCS percent recoveries were within control limits. No corrective action was taken.

Aroclor PCBs by SW8082

The sample was extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 5/6/13 at 22:43 fell outside the 20% control limit low for Aroclor 1248 on both columns. The CCAL on 5/6/13 at 23:03 fell outside the control limit low for Aroclor 1016 and was outside the control limit high for Aroclor 1260 on the second column, but both Aroclors were within the control limits on the first column. The associated sample was re-analyzed at a dilution on 5/8/13. The closing CCAL on 5/8/13 at 06:51 fell outside the control limit low for Aroclor 1260 on the first column, but was within the control limit on the second column. Both sets of data have been reported. No further corrective action was taken.

The internal standard areas of Hexabromobiphenyl fell outside the control limits low on both columns for the closing Aroclor 1260 CCAL on 5/6/13. The associated sample was re-analyzed at a dilution an all internal standard areas were within control limits. No further corrective action was taken.

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.

NWTPH-Dx

The sample was 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.

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 blanks were clean at the reporting limits. 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 recovery of antimony fell outside the control limits low for sample **ES-TS-INF-20130424-S**. A post digestion spike was performed and the recovery was within control limits. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPD of cadmium was outside the control limit for sample **ES-TS-INF-20130424-S**. All relevant data have been flagged with a "*" qualifier on the appropriate Form VI. No further corrective action was taken.

The duplicate RPDs of antimony, lead, and zinc were outside the control limit for sample **ES-MH-001-20130424-W**. All relevant data have been flagged with a "*"qualifier on the appropriate Form VI. No further corrective action was taken.

Low-Level Mercury

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

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

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

General Chemistry

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

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

The SRM percent recoveries were within limits.

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

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WN31
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. One sample was submitted for analysis on April 24, 2013.
2. The sample was submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The sample was run in a single batch and one sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the sample to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. The sample contained a large percentage of organic material. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis.
6. The sample appeared to be highly contaminated. The sample contained a fuel/oil-like sheen, residue and foul odor. The sample immediately flocculated after homogenization. This most likely contributed to the negative value reported. The sample was rerun three times and no report could be generated without negative values.
7. The data is provided in summary tables and plots.
8. There were no other noted anomalies in the sample or methods on this project.

Released by: _____ Date: May 13, 2013
Technician

Reviewed by: _____ Date: 5/13/13
Geotechnical Laboratory Manager

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WN31
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	ES-TS-INF-20130424-S	WN31A	13-8693	Sediment	04/24/13 10:27	04/24/13 13:28
2.	ES-MH-001-20130424-W	WN31B	13-8694	Water	04/24/13 11:31	04/24/13 13:28
3.	ES-MH-001-20130424-W	WN31C	13-8695	Water	04/24/13 11:31	04/24/13 13:28
4.	ES-TB-001-20130424-W	WN31D	13-8696	Water	04/24/13	04/24/13 13:28

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WN35
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	ES-MH-001-20130424-W	WN35A	13-8725	Water	04/24/13 11:31	04/24/13 13:28
2.	ES-MH-001-20130424-W	WN35B	13-8726	Water	04/24/13 11:31	04/24/13 13:28

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 for VOA Analysis of Water 10 mL Purge Volume (EPA Method 8260C)					
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
Chloromethane	0.095	0.25	**0.5**	77 – 122	≤ 40
Vinyl Chloride	0.057	0.1	**0.2**	74 – 123	≤ 40
Bromomethane	0.252	0.5	**1.0**	68 – 130	≤ 40
Chloroethane	0.086	0.1	**0.2**	68 – 133	≤ 40
Trichlorofluoromethane	0.037	0.1	**0.2**	74 – 135	≤ 40
Acrolein	2.476	2.5	**5.0**	60 – 124	≤ 40
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.043	0.1	**0.2**	76 – 124	≤ 40
Acetone	2.057	2.5	**5.0**	64 – 125	≤ 40
1,1-Dichloroethene	0.054	0.1	**0.2**	74 – 120	≤ 40
Bromoethane	0.041	0.1	**0.2**	77 – 122	≤ 40
Iodomethane (Methyl Iodide)	0.227	0.5	**1.0**	76 – 123	≤ 40
Methylene Chloride	0.485	0.5	**1.0**	71 – 125	≤ 40
Acrylonitrile	0.604	1.0	**1.0**	76 – 123	≤ 40
Carbon Disulfide	0.037	0.1	**0.2**	77 – 124	≤ 40
trans-1,2-Dichloroethene	0.048	0.1	**0.2**	75 – 120	≤ 40
Vinyl Acetate	0.069	0.1	**0.2**	74 – **120**	≤ 40
1,1-Dichloroethane	0.053	0.1	**0.2**	80 – 120	≤ 40
2-Butanone	0.814	2.5	**5.0**	73 – 123	≤ 40
2,2-Dichloropropane	0.052	0.1	**0.2**	72 – 133	≤ 40
cis-1,2-Dichloroethene	0.043	0.1	**0.2**	78 – 120	≤ 40
Chloroform	0.027	0.1	**0.2**	**80 – 120**	≤ 40
Bromochloromethane	0.061	0.1	**0.2**	**80 – 120**	≤ 40
1,1,1-Trichloroethane	0.041	0.1	**0.2**	79 – 124	≤ 40
1,1-Dichloropropene	0.034	0.1	**0.2**	**80 – 120**	≤ 40
Carbon Tetrachloride	0.044	0.1	**0.2**	71 – 139	≤ 40
1,2-Dichloroethane	0.072	0.1	**0.2**	**80** – 121	≤ 40
Benzene	0.027	0.1	**0.2**	**80 – 120**	≤ 40
Trichloroethene	0.049	0.1	**0.2**	**80 – 120**	≤ 40
1,2-Dichloropropane	0.035	0.1	**0.2**	**80 – 120**	≤ 40
Bromodichloromethane	0.051	0.1	**0.2**	**80** – 122	≤ 40
Dibromomethane	0.145	0.2	**0.2**	**80 – 120**	≤ 40
2-Chloroethylvinyl Ether	0.250	0.5	**1.0**	62 – 130	≤ 40
4-Methyl-2-Pentanone	0.974	2.5	**5.0**	**80** – 125	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary for VOA Analysis of Water 10 mL Purge Volume (EPA Method 8260C)					
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
cis 1,3-dichloropropene	0.061	0.1	**0.2**	**80 – 127**	≤ 40
Toluene	0.040	0.1	**0.2**	**80 – 120**	≤ 40
trans 1,3-Dichloropropene	0.081	0.1	**0.2**	79 – 132	≤ 40
2-Hexanone	0.902	2.5	**5.0**	80 – 129	≤ 40
1,1,2-Trichloroethane	0.129	0.2	**0.2**	**80 – 120**	≤ 40
1,3-Dichloropropane	0.062	0.1	**0.2**	**80 – 120**	≤ 40
Tetrachloroethene	0.047	0.1	**0.2**	**80 – 120**	≤ 40
Dibromochloromethane	0.048	0.1	**0.2**	**80** – 120	≤ 40
1,2-Dibromoethane (Ethylene Dibromide)	0.075	0.1	**0.2**	**80 – 120**	≤ 40
Chlorobenzene	0.023	0.1	**0.2**	**80 – 120**	≤ 40
Ethyl Benzene	0.037	0.1	**0.2**	**80 – 120**	≤ 40
1,1,1,2-Tetrachloroethane	0.040	0.1	**0.2**	**80** – 128	≤ 40
m,p-xylene	0.052	0.2	**0.4**	**80 – 120**	≤ 40
o-Xylene	0.035	0.1	**0.2**	**80** – 120	≤ 40
Styrene	0.045	0.1	**0.2**	**80** – 121	≤ 40
Bromoform	0.062	0.1	**0.2**	62 – 149	≤ 40
1,1,2,2-Tetrachloroethane	0.060	0.1	**0.2**	**80 – 120**	≤ 40
1,2,3-Trichloropropane	0.131	0.25	**0.5**	**80 – 120**	≤ 40
trans-1,4-Dichloro 2-Butene	0.324	0.5	**1.0**	47 – 147	≤ 40
n-Propyl Benzene	0.023	0.1	**0.2**	**80 – 120**	≤ 40
Bromobenzene	0.060	0.1	**0.2**	**80 – 120**	≤ 40
iso-propyl Benzene	0.021	0.1	**0.2**	**80 – 120**	≤ 40
2-Chloro Toluene	0.024	0.1	**0.2**	**80 – 120**	≤ 40
4-Chloro Toluene	0.016	0.1	**0.2**	**80 – 120**	≤ 40
tert-Butyl Benzene	0.026	0.1	**0.2**	**80** – 121	≤ 40
1,3,5-Trimethyl Benzene	0.015	0.1	**0.2**	**80 – 120**	≤ 40
1,2,4-Trimethylbenzene	0.024	0.1	**0.2**	**80** – 122	≤ 40
sec-Butyl Benzene	0.024	0.1	**0.2**	**80** – 121	≤ 40
4-Isopropyl Toluene	0.026	0.1	**0.2**	**80** – 124	≤ 40
1,3-Dichlorobenzene	0.036	0.1	**0.2**	**80 – 120**	≤ 40
1,4-Dichlorobenzene	0.040	0.1	**0.2**	**80 – 120**	≤ 40
n-Butyl Benzene	0.025	0.1	**0.2**	**80** – 125	≤ 40
1,2-Dichlorobenzene	0.036	0.1	**0.2**	**80 – 120**	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary for VOA Analysis of Water 10 mL Purge Volume (EPA Method 8260C)					
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
1,2-Dibromo 3-Chloropropane	0.366	0.5	**0.5**	79 – 129	≤ 40
1,2,4-Trichlorobenzene	0.107	0.25	**0.5**	77 – 127	≤ 40
Hexachloro-1,3-Butadiene	0.073	0.25	**0.5**	80 – 135	≤ 40
Naphthalene	0.118	0.25	**0.5**	**80** – 128	≤ 40
1,2,3-Trichlorobenzene	0.110	0.25	**0.5**	**80** - 125	≤ 40
Dichlorodifluoromethane	0.052	0.1	**0.2**	68 – 133	≤ 40
Methyl-*tert*-butyl ether	0.073	0.25	**0.5**	79 – 121	≤ 40
[redacted]					
1,2-Dichloroethane-d_4			**80 – 120**	**80** – 130	≤ 40
1,2-Dichlorobenzene-d_4			**80 – 120**	**80 – 120**	≤ 40
Toluene-d_8			**80 – 120**	**80 – 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.

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

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

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

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

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

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

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

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

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

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

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

LOD Spike level = LOQ (unless otherwise noted)

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

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

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

LOD Spike level = LOQ (unless otherwise noted)

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

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

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

LOD Spike level = LOQ (unless otherwise noted)

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

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

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

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									
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)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) Method specified control limits.

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

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

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

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

LOD Spike level = LOQ Concentration

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

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

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

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

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

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

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

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

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

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

Analytical Resources, Incorporated
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Quality Control Criteria
Total Petroleum Hydrocarbons
(Diesel & Motor Oil)

Analysis Code	Analyte[5]	DL[1] ppm	LOD[1] ppm	LOQ[2] ppm	Spike % Recovery Control Limits[3]			RPD[4]
					LCS	MB/LCS Surrogate	Sample Surrogate	
HCIWVX	NWTPH-HCID – Water Samples	--	--	0.50 [7]	--	--	50-150	≤ 40
HCISVX	NWTPH-HCID – Solid Samples	--	--	50 [7]	--	--	50-150	
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.022	0.05	0.1	64-112	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.022	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.044	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [9]	0.1	0.2	60-120 [6]	60-120	50-150	
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.039	0.05	0.1	61-104	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.042	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.010	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [8]	0.1	0.2	60-120 [6]	60-120	50-150	
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.35	2.5	5	62-119	50-150	50-150	≤ 40
DIESMI	DRO – NWTPH-Dext Jet A	2.22 [11]	2.5	5	60 – 130 [8]	50-150	50-150	
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.43	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	2.48	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [9]	5	10	60-120 [6]	60-120	50-150	
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

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

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

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

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Quality Control Criteria
Gasoline and BTEX

Method	Analyte	DL[1]	LOD[1]	LOQ[1]	Spike % Recovery Control Limits			RPD[3]
					LCS	MB/LCS Surrogate	Sample Surrogate	
NWTPH-G	Toluene – Naphthalene	0.057	0.125	0.25	**80 – 120**	--	--	
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**	
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: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: ES-TS-INF-20130424-S**
 SAMPLE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/29/13 16:55

Sample Amount: 27.9 mg-dry-wt
Purge Volume: 5.0 mL
Moisture: 60.6%

CAS Number	Analyte	MDL	RL	Result
74-87-3	Chloromethane	89	180	< 180 U
74-83-9	Bromomethane	180	180	< 180 U
75-01-4	Vinyl Chloride	90	180	< 180 U
75-00-3	Chloroethane	110	180	< 180 U
75-09-2	Methylene Chloride	130	360	< 360 U
67-64-1	Acetone	840	900	< 900 U
75-15-0	Carbon Disulfide	56	180	< 180 U
75-35-4	1,1-Dichloroethene	92	180	< 180 U
75-34-3	1,1-Dichloroethane	82	180	< 180 U
156-60-5	trans-1,2-Dichloroethene	86	180	< 180 U
156-59-2	cis-1,2-Dichloroethene	84	180	< 180 U
67-66-3	Chloroform	69	180	< 180 U
107-06-2	1,2-Dichloroethane	70	180	< 180 U
78-93-3	2-Butanone	380	900	< 900 U
71-55-6	1,1,1-Trichloroethane	54	180	< 180 U
56-23-5	Carbon Tetrachloride	88	180	< 180 U
108-05-4	Vinyl Acetate	85	900	< 900 U
75-27-4	Bromodichloromethane	87	180	< 180 U
78-87-5	1,2-Dichloropropane	92	180	< 180 U
10061-01-5	cis-1,3-Dichloropropene	96	180	< 180 U
79-01-6	Trichloroethene	60	180	< 180 U
124-48-1	Dibromochloromethane	91	180	< 180 U
79-00-5	1,1,2-Trichloroethane	82	180	< 180 U
71-43-2	Benzene	64	180	< 180 U
10061-02-6	trans-1,3-Dichloropropene	100	180	< 180 U
110-75-8	2-Chloroethylvinylether	300	900	< 900 U
75-25-2	Bromoform	98	180	< 180 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	770	900	< 900 U
591-78-6	2-Hexanone	95	900	< 900 U
127-18-4	Tetrachloroethene	82	180	< 180 U
79-34-5	1,1,2,2-Tetrachloroethane	97	180	< 180 U
108-88-3	**Toluene**	**160**	**180**	**5,200**
108-90-7	Chlorobenzene	85	180	< 180 U
100-41-4	Ethylbenzene	83	180	< 180 U
100-42-5	Styrene	110	180	< 180 U
75-69-4	**Trichlorofluoromethane**	**69**	**180**	**230**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	87	360	< 360 U
179601-23-1	m,p-Xylene	99	180	< 180 U
95-47-6	o-Xylene	100	180	< 180 U
95-50-1	1,2-Dichlorobenzene	97	180	< 180 U
541-73-1	1,3-Dichlorobenzene	120	180	< 180 U
106-46-7	1,4-Dichlorobenzene	130	180	< 180 U
107-02-8	Acrolein	530	9000	< 9,000 U

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Date Analyzed: 04/29/13 16:55

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	MDL	RL	Result
74-88-4	Iodomethane	110	180	< 180 U
74-96-4	Bromoethane	54	360	< 360 U
107-13-1	Acrylonitrile	67	900	< 900 U
563-58-6	1,1-Dichloropropene	120	180	< 180 U
74-95-3	Dibromomethane	130	180	< 180 U
630-20-6	1,1,1,2-Tetrachloroethane	130	180	< 180 U
96-12-8	1,2-Dibromo-3-chloropropane	290	900	< 900 U
96-18-4	1,2,3-Trichloropropane	360	360	< 360 U
110-57-6	trans-1,4-Dichloro-2-butene	18	900	< 900 U
108-67-8	1,3,5-Trimethylbenzene	130	180	< 180 U
95-63-6	1,2,4-Trimethylbenzene	110	180	< 180 U
87-68-3	Hexachlorobutadiene	210	900	< 900 U
106-93-4	1,2-Dibromoethane	100	180	< 180 U
74-97-5	Bromochloromethane	86	180	< 180 U
75-71-8	Dichlorodifluoromethane	110	180	< 180 U
594-20-7	2,2-Dichloropropane	140	180	< 180 U
142-28-9	1,3-Dichloropropane	120	180	< 180 U
98-82-8	Isopropylbenzene	110	180	< 180 U
103-65-1	n-Propylbenzene	120	180	< 180 U
108-86-1	Bromobenzene	59	180	< 180 U
95-49-8	2-Chlorotoluene	130	180	< 180 U
106-43-4	4-Chlorotoluene	140	180	< 180 U
98-06-6	tert-Butylbenzene	120	180	< 180 U
135-98-8	sec-Butylbenzene	140	180	< 180 U
99-87-6	4-Isopropyltoluene	140	180	< 180 U
104-51-8	n-Butylbenzene	160	180	< 180 U
120-82-1	1,2,4-Trichlorobenzene	250	900	< 900 U
91-20-3	Naphthalene	210	900	< 900 U
87-61-6	1,2,3-Trichlorobenzene	220	900	< 900 U
1634-04-4	Methyl tert-Butyl Ether	110	180	< 180 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

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

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: ES-TB-001-20130424-W**
 SAMPLE

Lab Sample ID: WN31D
LIMS ID: 13-8696
Matrix: Water
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/29/13 16:31

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**0.9 J**
67-64-1	**Acetone**	**3.0**	**10**	**5.8 J**
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

Lab Sample ID: WN31D
LIMS ID: 13-8696
Matrix: Water
Date Analyzed: 04/29/13 16:31

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.34	5.0	< 5.0 U
91-20-3	**Naphthalene**	**0.23**	**5.0**	**1.5 J**
87-61-6	1,2,3-Trichlorobenzene	0.32	5.0	< 5.0 U
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	102%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	102%

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

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

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-042913A	Method Blank	Med	110%	102%	101%	104%	0
LCS-042913A	Lab Control	Med	106%	102%	101%	101%	0
LCSD-042913A	Lab Control Dup	Med	106%	101%	98.9%	102%	0
WN31A	ES-TS-INF-20130424-S	Med	110%	102%	102%	101%	0

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

Log Number Range: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-042913A	Method Blank	5	110%	102%	101%	104%	0
LCS-042913A	Lab Control	5	106%	102%	101%	101%	0
LCSD-042913A	Lab Control Dup	5	106%	101%	98.9%	102%	0
WN31D	ES-TB-001-20130424-W	5	108%	102%	99.7%	102%	0

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

Prep Method: SW5030B
Log Number Range: 13-8696 to 13-8696

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-042913A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-042913A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 04/29/13 12:41
LCSD: 04/29/13 13:05

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

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	2500		2500	100%	2410		2500	96.4%	3.7%
Bromomethane	2590		2500	104%	2500		2500	100%	3.5%
Vinyl Chloride	2590		2500	104%	2510		2500	100%	3.1%
Chloroethane	2560		2500	102%	2650		2500	106%	3.5%
Methylene Chloride	3140	Q	2500	126%	3080	Q	2500	123%	1.9%
Acetone	14500	B	12500	116%	13200	B	12500	106%	9.4%
Carbon Disulfide	2330		2500	93.2%	2000		2500	80.0%	15.2%
1,1-Dichloroethene	2310		2500	92.4%	2040		2500	81.6%	12.4%
1,1-Dichloroethane	2440		2500	97.6%	2440		2500	97.6%	0.0%
trans-1,2-Dichloroethene	2970	Q	2500	119%	2960	Q	2500	118%	0.3%
cis-1,2-Dichloroethene	2430		2500	97.2%	2380		2500	95.2%	2.1%
Chloroform	2430		2500	97.2%	2390		2500	95.6%	1.7%
1,2-Dichloroethane	2260		2500	90.4%	2200		2500	88.0%	2.7%
2-Butanone	13000		12500	104%	13500		12500	108%	3.8%
1,1,1-Trichloroethane	2420		2500	96.8%	2410		2500	96.4%	0.4%
Carbon Tetrachloride	2300		2500	92.0%	2260		2500	90.4%	1.8%
Vinyl Acetate	2560		2500	102%	2560		2500	102%	0.0%
Bromodichloromethane	2280		2500	91.2%	2240		2500	89.6%	1.8%
1,2-Dichloropropane	2310		2500	92.4%	2240		2500	89.6%	3.1%
cis-1,3-Dichloropropene	2380		2500	95.2%	2290		2500	91.6%	3.9%
Trichloroethene	2280		2500	91.2%	2240		2500	89.6%	1.8%
Dibromochloromethane	2290		2500	91.6%	2250		2500	90.0%	1.8%
1,1,2-Trichloroethane	2340		2500	93.6%	2310		2500	92.4%	1.3%
Benzene	2340		2500	93.6%	2300		2500	92.0%	1.7%
trans-1,3-Dichloropropene	2390		2500	95.6%	2310		2500	92.4%	3.4%
2-Chloroethylvinylether	2480		2500	99.2%	2400		2500	96.0%	3.3%
Bromoform	2260		2500	90.4%	2360		2500	94.4%	4.3%
4-Methyl-2-Pentanone (MIBK)	12400		12500	99.2%	12800		12500	102%	3.2%
2-Hexanone	12100		12500	96.8%	12900		12500	103%	6.4%
Tetrachloroethene	2230		2500	89.2%	2230		2500	89.2%	0.0%
1,1,2,2-Tetrachloroethane	2250		2500	90.0%	2360		2500	94.4%	4.8%
Toluene	2300		2500	92.0%	2260		2500	90.4%	1.8%
Chlorobenzene	2270		2500	90.8%	2260		2500	90.4%	0.4%
Ethylbenzene	2340		2500	93.6%	2360		2500	94.4%	0.9%
Styrene	2380		2500	95.2%	2360		2500	94.4%	0.8%
Trichlorofluoromethane	2480		2500	99.2%	2380		2500	95.2%	4.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	2290		2500	91.6%	2100		2500	84.0%	8.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-042913A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-042913A QC Report No: WN31-SAIC
LIMS ID: 13-8693 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	4690	5000	93.8%	4710	5000	94.2%	0.4%
o-Xylene	2330	2500	93.2%	2310	2500	92.4%	0.9%
1,2-Dichlorobenzene	2210	2500	88.4%	2260	2500	90.4%	2.2%
1,3-Dichlorobenzene	2260	2500	90.4%	2300	2500	92.0%	1.8%
1,4-Dichlorobenzene	2230	2500	89.2%	2280	2500	91.2%	2.2%
Acrolein	13700	12500	110%	15900	12500	127%	14.9%
Iodomethane	2500	2500	100%	2970	2500	119%	17.2%
Bromoethane	2360	2500	94.4%	2880	2500	115%	19.8%
Acrylonitrile	2540	2500	102%	2710	2500	108%	6.5%
1,1-Dichloropropene	2240	2500	89.6%	2200	2500	88.0%	1.8%
Dibromomethane	2290	2500	91.6%	2250	2500	90.0%	1.8%
1,1,1,2-Tetrachloroethane	2270	2500	90.8%	2250	2500	90.0%	0.9%
1,2-Dibromo-3-chloropropane	2160	2500	86.4%	2440	2500	97.6%	12.2%
1,2,3-Trichloropropane	2220	2500	88.8%	2400	2500	96.0%	7.8%
trans-1,4-Dichloro-2-butene	2340	2500	93.6%	2440	2500	97.6%	4.2%
1,3,5-Trimethylbenzene	2320	2500	92.8%	2380	2500	95.2%	2.6%
1,2,4-Trimethylbenzene	2350	2500	94.0%	2410	2500	96.4%	2.5%
Hexachlorobutadiene	2260	2500	90.4%	2310	2500	92.4%	2.2%
1,2-Dibromoethane	2330	2500	93.2%	2310	2500	92.4%	0.9%
Bromochloromethane	2380	2500	95.2%	2370	2500	94.8%	0.4%
Dichlorodifluoromethane	2520	2500	101%	2510	2500	100%	0.4%
2,2-Dichloropropane	2430	2500	97.2%	2410	2500	96.4%	0.8%
1,3-Dichloropropane	2290	2500	91.6%	2250	2500	90.0%	1.8%
Isopropylbenzene	2330	2500	93.2%	2410	2500	96.4%	3.4%
n-Propylbenzene	2350	2500	94.0%	2420	2500	96.8%	2.9%
Bromobenzene	2200	2500	88.0%	2260	2500	90.4%	2.7%
2-Chlorotoluene	2260	2500	90.4%	2330	2500	93.2%	3.1%
4-Chlorotoluene	2290	2500	91.6%	2360	2500	94.4%	3.0%
tert-Butylbenzene	2320	2500	92.8%	2390	2500	95.6%	3.0%
sec-Butylbenzene	2360	2500	94.4%	2440	2500	97.6%	3.3%
4-Isopropyltoluene	2400	2500	96.0%	2460	2500	98.4%	2.5%
n-Butylbenzene	2400	2500	96.0%	2450	2500	98.0%	2.1%
1,2,4-Trichlorobenzene	2310	2500	92.4%	2320	2500	92.8%	0.4%
Naphthalene	2140	2500	85.6%	2320	2500	92.8%	8.1%
1,2,3-Trichlorobenzene	2230	2500	89.2%	2300	2500	92.0%	3.1%
Methyl tert-Butyl Ether	2530	2500	101%	2460	2500	98.4%	2.8%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	106%	106%
d8-Toluene	102%	101%
Bromofluorobenzene	101%	98.9%
d4-1,2-Dichlorobenzene	101%	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-042913A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-042913A
LIMS ID: 13-8696
Matrix: Water
Data Release Authorized: MW
Reported: 05/01/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 04/29/13 12:41
LCSD: 04/29/13 13:05

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	50.0	50.0	100%	48.2	50.0	96.4%	3.7%
Bromomethane	51.9	50.0	104%	49.9	50.0	99.8%	3.9%
Vinyl Chloride	51.8	50.0	104%	50.1	50.0	100%	3.3%
Chloroethane	51.3	50.0	103%	52.9	50.0	106%	3.1%
Methylene Chloride	62.8 QB	50.0	126%	61.5 QB	50.0	123%	2.1%
Acetone	291 B	250	116%	263 B	250	105%	10.1%
Carbon Disulfide	46.7	50.0	93.4%	39.9	50.0	79.8%	15.7%
1,1-Dichloroethene	46.1	50.0	92.2%	40.8	50.0	81.6%	12.2%
1,1-Dichloroethane	48.7	50.0	97.4%	48.7	50.0	97.4%	0.0%
trans-1,2-Dichloroethene	59.4 Q	50.0	119%	59.2 Q	50.0	118%	0.3%
cis-1,2-Dichloroethene	48.6	50.0	97.2%	47.6	50.0	95.2%	2.1%
Chloroform	48.7	50.0	97.4%	47.9	50.0	95.8%	1.7%
1,2-Dichloroethane	45.1	50.0	90.2%	44.1	50.0	88.2%	2.2%
2-Butanone	259	250	104%	269	250	108%	3.8%
1,1,1-Trichloroethane	48.5	50.0	97.0%	48.1	50.0	96.2%	0.8%
Carbon Tetrachloride	46.1	50.0	92.2%	45.1	50.0	90.2%	2.2%
Vinyl Acetate	51.2	50.0	102%	51.2	50.0	102%	0.0%
Bromodichloromethane	45.7	50.0	91.4%	44.8	50.0	89.6%	2.0%
1,2-Dichloropropane	46.2	50.0	92.4%	44.9	50.0	89.8%	2.9%
cis-1,3-Dichloropropene	47.5	50.0	95.0%	45.8	50.0	91.6%	3.6%
Trichloroethene	45.5	50.0	91.0%	44.7	50.0	89.4%	1.8%
Dibromochloromethane	45.7	50.0	91.4%	45.0	50.0	90.0%	1.5%
1,1,2-Trichloroethane	46.7	50.0	93.4%	46.1	50.0	92.2%	1.3%
Benzene	46.8	50.0	93.6%	45.9	50.0	91.8%	1.9%
trans-1,3-Dichloropropene	47.8	50.0	95.6%	46.2	50.0	92.4%	3.4%
2-Chloroethylvinylether	49.5	50.0	99.0%	48.0	50.0	96.0%	3.1%
Bromoform	45.2	50.0	90.4%	47.1	50.0	94.2%	4.1%
4-Methyl-2-Pentanone (MIBK)	249	250	99.6%	257	250	103%	3.2%
2-Hexanone	241	250	96.4%	258	250	103%	6.8%
Tetrachloroethene	44.7	50.0	89.4%	44.6	50.0	89.2%	0.2%
1,1,2,2-Tetrachloroethane	45.0	50.0	90.0%	47.1	50.0	94.2%	4.6%
Toluene	46.0	50.0	92.0%	45.2	50.0	90.4%	1.8%
Chlorobenzene	45.3	50.0	90.6%	45.2	50.0	90.4%	0.2%
Ethylbenzene	46.8	50.0	93.6%	47.1	50.0	94.2%	0.6%
Styrene	47.7	50.0	95.4%	47.2	50.0	94.4%	1.1%
Trichlorofluoromethane	49.7	50.0	99.4%	47.5	50.0	95.0%	4.5%
1,1,2-Trichloro-1,2,2-trifluoroetha	45.7	50.0	91.4%	42.1	50.0	84.2%	8.2%
m,p-Xylene	93.8	100	93.8%	94.1	100	94.1%	0.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-042913A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-042913A QC Report No: WN31-SAIC
LIMS ID: 13-8696 Project: NPDES Sampling Support
Matrix: Water 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	46.5	50.0	93.0%	46.2	50.0	92.4%	0.6%
1,2-Dichlorobenzene	44.2	50.0	88.4%	45.2	50.0	90.4%	2.2%
1,3-Dichlorobenzene	45.1	50.0	90.2%	46.1	50.0	92.2%	2.2%
1,4-Dichlorobenzene	44.6	50.0	89.2%	45.5	50.0	91.0%	2.0%
Acrolein	274	250	110%	319	250	128%	15.2%
Iodomethane	50.0	50.0	100%	59.4	50.0	119%	17.2%
Bromoethane	47.1	50.0	94.2%	57.5	50.0	115%	19.9%
Acrylonitrile	50.9	50.0	102%	54.2	50.0	108%	6.3%
1,1-Dichloropropene	44.9	50.0	89.8%	44.0	50.0	88.0%	2.0%
Dibromomethane	45.8	50.0	91.6%	45.0	50.0	90.0%	1.8%
1,1,1,2-Tetrachloroethane	45.4	50.0	90.8%	45.1	50.0	90.2%	0.7%
1,2-Dibromo-3-chloropropane	43.2	50.0	86.4%	48.9	50.0	97.8%	12.4%
1,2,3-Trichloropropane	44.4	50.0	88.8%	48.0	50.0	96.0%	7.8%
trans-1,4-Dichloro-2-butene	46.7	50.0	93.4%	48.7	50.0	97.4%	4.2%
1,3,5-Trimethylbenzene	46.3	50.0	92.6%	47.7	50.0	95.4%	3.0%
1,2,4-Trimethylbenzene	47.0	50.0	94.0%	48.2	50.0	96.4%	2.5%
Hexachlorobutadiene	45.2	50.0	90.4%	46.1	50.0	92.2%	2.0%
1,2-Dibromoethane	46.7	50.0	93.4%	46.2	50.0	92.4%	1.1%
Bromochloromethane	47.6	50.0	95.2%	47.4	50.0	94.8%	0.4%
Dichlorodifluoromethane	50.4	50.0	101%	50.3	50.0	101%	0.2%
2,2-Dichloropropane	48.7	50.0	97.4%	48.1	50.0	96.2%	1.2%
1,3-Dichloropropane	45.7	50.0	91.4%	45.0	50.0	90.0%	1.5%
Isopropylbenzene	46.7	50.0	93.4%	48.3	50.0	96.6%	3.4%
n-Propylbenzene	47.0	50.0	94.0%	48.4	50.0	96.8%	2.9%
Bromobenzene	44.1	50.0	88.2%	45.2	50.0	90.4%	2.5%
2-Chlorotoluene	45.1	50.0	90.2%	46.6	50.0	93.2%	3.3%
4-Chlorotoluene	45.8	50.0	91.6%	47.2	50.0	94.4%	3.0%
tert-Butylbenzene	46.3	50.0	92.6%	47.8	50.0	95.6%	3.2%
sec-Butylbenzene	47.1	50.0	94.2%	48.8	50.0	97.6%	3.5%
4-Isopropyltoluene	48.0	50.0	96.0%	49.2	50.0	98.4%	2.5%
n-Butylbenzene	48.0	50.0	96.0%	48.9	50.0	97.8%	1.9%
1,2,4-Trichlorobenzene	46.2	50.0	92.4%	46.5	50.0	93.0%	0.6%
Naphthalene	42.7 B	50.0	85.4%	46.3 B	50.0	92.6%	8.1%
1,2,3-Trichlorobenzene	44.6	50.0	89.2%	46.1	50.0	92.2%	3.3%
Methyl tert-Butyl Ether	50.5	50.0	101%	49.1	50.0	98.2%	2.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	106%	106%
d8-Toluene	102%	101%
Bromofluorobenzene	101%	98.9%
d4-1,2-Dichlorobenzene	101%	102%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0429

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WN31

Project: NPDES SAMPLING SUPPORT

Lab File ID: MB04291

Lab Sample ID: MB0429

Date Analyzed: 04/29/13

Time Analyzed: 1329

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	LCS0429	LCS0429	LCS0429	1241
02	LCS0429	LCS0429	LCS0429A	1305
03	ES-TB-001-20	WN31D	WN31D	1631
04	ES-TS-INF-20	WN31A	WN31A3	1655
05				
06				
07				
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-042913A**
 METHOD BLANK

Lab Sample ID: MB-042913A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/29/13 13:29

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

CAS Number	Analyte	MDL	RL	Result
74-87-3	Chloromethane	25	50	< 50 U
74-83-9	Bromomethane	50	50	< 50 U
75-01-4	Vinyl Chloride	25	50	< 50 U
75-00-3	Chloroethane	30	50	< 50 U
75-09-2	Methylene Chloride	36	100	< 100 U
67-64-1	**Acetone**	**230**	**250**	**320**
75-15-0	Carbon Disulfide	16	50	< 50 U
75-35-4	1,1-Dichloroethene	26	50	< 50 U
75-34-3	1,1-Dichloroethane	23	50	< 50 U
156-60-5	trans-1,2-Dichloroethene	24	50	< 50 U
156-59-2	cis-1,2-Dichloroethene	23	50	< 50 U
67-66-3	Chloroform	19	50	< 50 U
107-06-2	1,2-Dichloroethane	19	50	< 50 U
78-93-3	2-Butanone	110	250	< 250 U
71-55-6	1,1,1-Trichloroethane	15	50	< 50 U
56-23-5	Carbon Tetrachloride	24	50	< 50 U
108-05-4	Vinyl Acetate	24	250	< 250 U
75-27-4	Bromodichloromethane	24	50	< 50 U
78-87-5	1,2-Dichloropropane	26	50	< 50 U
10061-01-5	cis-1,3-Dichloropropene	27	50	< 50 U
79-01-6	Trichloroethene	17	50	< 50 U
124-48-1	Dibromochloromethane	25	50	< 50 U
79-00-5	1,1,2-Trichloroethane	23	50	< 50 U
71-43-2	Benzene	18	50	< 50 U
10061-02-6	trans-1,3-Dichloropropene	28	50	< 50 U
110-75-8	2-Chloroethylvinylether	84	250	< 250 U
75-25-2	Bromoform	27	50	< 50 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	210	250	< 250 U
591-78-6	2-Hexanone	26	250	< 250 U
127-18-4	Tetrachloroethene	23	50	< 50 U
79-34-5	1,1,2,2-Tetrachloroethane	27	50	< 50 U
108-88-3	Toluene	46	50	< 50 U
108-90-7	Chlorobenzene	24	50	< 50 U
100-41-4	Ethylbenzene	23	50	< 50 U
100-42-5	Styrene	31	50	< 50 U
75-69-4	Trichlorofluoromethane	19	50	< 50 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	24	100	< 100 U
179601-23-1	m,p-Xylene	28	50	< 50 U
95-47-6	o-Xylene	28	50	< 50 U
95-50-1	1,2-Dichlorobenzene	27	50	< 50 U
541-73-1	1,3-Dichlorobenzene	33	50	< 50 U
106-46-7	1,4-Dichlorobenzene	36	50	< 50 U
107-02-8	Acrolein	150	2500	< 2,500 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-042913A**
 METHOD BLANK

Lab Sample ID: MB-042913A QC Report No: WN31-SAIC
LIMS ID: 13-8693 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 04/29/13 13:29

CAS Number	Analyte	MDL	RL	Result
74-88-4	Iodomethane	29	50	< 50 U
74-96-4	Bromoethane	15	100	< 100 U
107-13-1	Acrylonitrile	19	250	< 250 U
563-58-6	1,1-Dichloropropene	35	50	< 50 U
74-95-3	Dibromomethane	37	50	< 50 U
630-20-6	1,1,1,2-Tetrachloroethane	36	50	< 50 U
96-12-8	1,2-Dibromo-3-chloropropane	81	250	< 250 U
96-18-4	1,2,3-Trichloropropane	100	100	< 100 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	250	< 250 U
108-67-8	1,3,5-Trimethylbenzene	36	50	< 50 U
95-63-6	1,2,4-Trimethylbenzene	30	50	< 50 U
87-68-3	Hexachlorobutadiene	58	250	< 250 U
106-93-4	1,2-Dibromoethane	28	50	< 50 U
74-97-5	Bromochloromethane	24	50	< 50 U
75-71-8	Dichlorodifluoromethane	31	50	< 50 U
594-20-7	2,2-Dichloropropane	39	50	< 50 U
142-28-9	1,3-Dichloropropane	32	50	< 50 U
98-82-8	Isopropylbenzene	30	50	< 50 U
103-65-1	n-Propylbenzene	32	50	< 50 U
108-86-1	Bromobenzene	17	50	< 50 U
95-49-8	2-Chlorotoluene	35	50	< 50 U
106-43-4	4-Chlorotoluene	40	50	< 50 U
98-06-6	tert-Butylbenzene	34	50	< 50 U
135-98-8	sec-Butylbenzene	38	50	< 50 U
99-87-6	4-Isopropyltoluene	38	50	< 50 U
104-51-8	n-Butylbenzene	45	50	< 50 U
120-82-1	1,2,4-Trichlorobenzene	69	250	< 250 U
91-20-3	Naphthalene	59	250	< 250 U
87-61-6	1,2,3-Trichlorobenzene	61	250	< 250 U
1634-04-4	Methyl tert-Butyl Ether	31	50	< 50 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	110%
d8-Toluene	102%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-042913A**
 METHOD BLANK

Lab Sample ID: MB-042913A
LIMS ID: 13-8696
Matrix: Water
Data Release Authorized:
Reported: 05/01/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 04/29/13 13:29

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**0.9 J**
67-64-1	**Acetone**	**3.0**	**10**	**6.4 J**
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-042913A**
 METHOD BLANK

Lab Sample ID: MB-042913A QC Report No: WN31-SAIC
LIMS ID: 13-8696 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 04/29/13 13:29

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

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	110%
d8-Toluene	102%
Bromofluorobenzene	101%
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.: WN31

Lab File ID: BFB0426 BFB Injection Date: 04/26/13

Instrument ID: NT5 BFB Injection Time: 0845

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	46.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	50.0 - 101.0% of mass 95	83.6
175	4.0 - 9.0% of mass 174	5.9 (7.1)1
176	95.0 - 101.0% of mass 174	81.7 (97.7)1
177	5.0 - 9.0% of mass 176	5.0 (6.2)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	IC0426	0010426	04/26/13	0925
02	VSTD200	IC0426	2000426	04/26/13	0949
03	VSTD150	IC0426	1500426	04/26/13	1012
04	VSTD100	IC0426	1000426	04/26/13	1036
05	VSTD50	IC0426	0500426	04/26/13	1100
06	VSTD10	IC0426	0100426	04/26/13	1124
07	VSTD5	IC0426	0050426	04/26/13	1148
08	VSTD2	IC0426	0020426	04/26/13	1212
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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.: WN31

Lab File ID: BFB0429 BFB Injection Date: 04/29/13

Instrument ID: NT5 BFB Injection Time: 1020

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	20.4
75	30.0 - 66.0% of mass 95	46.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	83.8
175	4.0 - 9.0% of mass 174	6.0 (7.1)1
176	95.0 - 101.0% of mass 174	81.9 (97.8)1
177	5.0 - 9.0% of mass 176	5.2 (6.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	CC0429	CC0429A	04/29/13	1218
02	LCS0429	LCS0429	LCS0429	04/29/13	1241
03	LCS0429	LCS0429	LCS0429A	04/29/13	1305
04	MB0429	MB0429	MB04291	04/29/13	1329
05	ES-TB-001-201304	WN31D	WN31D	04/29/13	1631
06	ES-TS-INF-201304	WN31A	WN31A3	04/29/13	1655
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

LAB FILE ID: RF1: 0010426 RF2: 0020426 RF5: 0050426
RF10: 0100426 RF50: 0500426

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	0.671	0.650	0.748	0.720	0.606
Vinyl Chloride	0.796	0.724	0.783	0.729	0.774
Bromomethane	0.364	0.410	0.398	0.401	0.344
Chloroethane	0.498	0.443	0.453	0.437	0.386
Trichlorofluoromethane	0.793	0.792	0.887	0.887	0.738
Acrolein	0.126	0.128	0.107	0.078	0.116
112Trichloro122Trifluoroetha	0.486	0.453	0.500	0.463	0.434
Acetone	0.109	0.095	0.089	0.126	0.066
1,1-Dichloroethene	0.506	0.518	0.537	0.526	0.481
Bromoethane	0.363	0.330	0.327	0.315	0.327
Iodomethane	0.506	0.459	0.428	0.378	0.458
Methylene Chloride		0.693	0.627	0.422	0.504
Acrylonitrile	0.239	0.276	0.291	0.297	0.253
Carbon Disulfide	1.833	1.749	1.855	1.824	1.611
Trans-1,2-Dichloroethene	0.598	0.589	0.629	0.534	0.486
Vinyl Acetate	1.462	1.587	1.714	1.743	1.504
1,1-Dichloroethane	1.183	1.180	1.291	1.327	1.079
2-Butanone	0.066	0.082	0.087	0.086	0.076
2,2-Dichloropropane	0.902	0.894	0.964	1.000	0.816
Cis-1,2-Dichloroethene	0.619	0.642	0.690	0.692	0.570
Chloroform	1.069	1.042	1.125	1.166	0.887
Bromochloromethane	0.289	0.270	0.289	0.303	0.256
1,1,1-Trichloroethane	0.920	0.954	1.023	1.063	0.860
1,1-Dichloropropene	0.408	0.402	0.428	0.463	0.367
Carbon Tetrachloride	0.361	0.363	0.401	0.409	0.303
1,2-Dichloroethane	0.412	0.413	0.445	0.446	0.378
Benzene	1.167	1.202	1.302	1.330	1.104
Trichloroethene	0.279	0.278	0.306	0.314	0.260
1,2-Dichloropropane	0.320	0.322	0.340	0.361	0.302
Bromodichloromethane	0.371	0.360	0.397	0.412	0.349
Dibromomethane	0.151	0.159	0.172	0.174	0.152
2-Chloroethyl Vinyl Ether	0.158	0.173	0.202	0.215	0.199
4-Methyl-2-Pentanone	0.116	0.133	0.154	0.159	0.144
Cis 1,3-dichloropropene	0.426	0.458	0.514	0.526	0.458
Toluene	0.786	0.757	0.830	0.840	0.692
Trans 1,3-Dichloropropene	0.402	0.418	0.465	0.477	0.426
2-Hexanone	0.211	0.230	0.258	0.268	0.235

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

LAB FILE ID: RF1: 0010426 RF2: 0020426 RF5: 0050426
RF10: 0100426 RF50: 0500426

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.218	0.236	0.258	0.268	0.232
1,3-Dichloropropane	0.409	0.436	0.459	0.471	0.412
Tetrachloroethene	0.300	0.292	0.297	0.315	0.258
Chlorodibromomethane	0.244	0.256	0.279	0.284	0.251
1,2-Dibromoethane	0.206	0.234	0.260	0.258	0.228
Chlorobenzene	0.748	0.766	0.810	0.831	0.687
Ethyl Benzene	1.321	1.319	1.424	1.488	1.228
1,1,1,2-Tetrachloroethane	0.252	0.248	0.277	0.290	0.246
m,p-xylene	0.474	0.476	0.527	0.556	0.465
o-Xylene	0.432	0.446	0.495	0.524	0.451
Styrene	0.722	0.751	0.829	0.895	0.772
Bromoform	0.330	0.341	0.379	0.376	0.344
1,1,2,2-Tetrachloroethane	0.557	0.612	0.626	0.624	0.563
1,2,3-Trichloropropane	0.174	0.192	0.198	0.196	0.173
Trans-1,4-Dichloro 2-Butene	0.235	0.230	0.241	0.245	0.227
N-Propyl Benzene	2.858	2.684	2.932	3.000	2.535
Bromobenzene	0.592	0.591	0.612	0.614	0.529
Isopropyl Benzene	2.254	2.174	2.444	2.544	2.151
2-Chloro Toluene	1.726	1.675	1.790	1.822	1.551
4-Chloro Toluene	1.744	1.722	1.873	1.862	1.608
T-Butyl Benzene	1.537	1.572	1.797	1.876	1.573
1,3,5-Trimethyl Benzene	1.872	1.816	2.030	2.134	1.793
1,2,4-Trimethylbenzene	1.769	1.784	2.002	2.074	1.790
S-Butyl Benzene	2.386	2.426	2.679	2.753	2.298
4-Isopropyl Toluene	1.928	1.870	2.108	2.212	1.905
1,3-Dichlorobenzene	1.146	1.079	1.148	1.157	0.996
1,4-Dichlorobenzene	1.258	1.170	1.205	1.187	1.014
N-Butyl Benzene	1.994	1.817	1.985	2.100	1.780
1,2-Dichlorobenzene	1.153	1.090	1.160	1.139	0.971
1,2-Dibromo 3-Chloropropane	0.119	0.125	0.130	0.123	0.110
1,2,4-Trichlorobenzene	0.879	0.714	0.757	0.761	0.680
Hexachloro 1,3-Butadiene	0.488	0.439	0.497	0.482	0.390
Naphthalene	2.484	2.033	2.045	2.003	1.762
1,2,3-Trichlorobenzene	0.803	0.698	0.767	0.751	0.650
Dichlorodifluoromethane	0.558	0.495	0.515	0.490	0.471
Methyl tert butyl ether	1.705	1.820	2.002	2.004	1.606

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

LAB FILE ID: RF1: 0010426 RF2: 0020426 RF5: 0050426
RF10: 0100426 RF50: 0500426

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	0.789	0.815	0.822	0.790	0.789
d8-Toluene	1.343	1.343	1.354	1.348	1.335
4-Bromofluorobenzene	0.526	0.532	0.536	0.533	0.530
d4-1,2-Dichlorobenzene	0.956	0.960	0.962	0.937	0.944
Dibromofluoromethane	0.702	0.722	0.724	0.716	0.714

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

LAB FILE ID: RF100: 1000426 RF150: 1500426 RF200: 2000426

COMPOUND	RF100	RF150	RF200
Chloromethane	0.766	0.777	0.750
Vinyl Chloride	0.800	0.903	0.953
Bromomethane	0.392	0.368	0.336
Chloroethane	0.456	0.400	0.401
Trichlorofluoromethane	0.895	0.886	0.896
Acrolein			
112Trichloro122Trifluoroetha	0.492	0.464	0.399
Acetone	0.073		
1,1-Dichloroethene	0.558	0.523	0.438
Bromoethane	0.326	0.300	0.260
Iodomethane	0.490	0.440	0.450
Methylene Chloride	0.425	0.360	
Acrylonitrile	0.284	0.274	0.272
Carbon Disulfide	1.896	1.734	1.346
Trans-1,2-Dichloroethene	0.480	0.416	0.341
Vinyl Acetate	1.687	1.640	1.569
1,1-Dichloroethane	1.289	1.284	1.283
2-Butanone	0.084	0.082	0.081
2,2-Dichloropropane	0.987	0.992	1.012
Cis-1,2-Dichloroethene	0.676	0.681	0.680
Chloroform	1.131	1.131	1.129
Bromochloromethane	0.296	0.293	0.325
1,1,1-Trichloroethane	1.057	1.055	1.080
1,1-Dichloropropene	0.450	0.452	0.468
Carbon Tetrachloride	0.410	0.413	0.430
1,2-Dichloroethane	0.430	0.425	0.416
Benzene	1.289	1.259	1.220
Trichloroethene	0.314	0.319	0.329
1,2-Dichloropropane	0.358	0.359	0.359
Bromodichloromethane	0.410	0.412	0.409
Dibromomethane	0.174	0.173	0.172
2-Chloroethyl Vinyl Ether	0.228	0.225	0.224
4-Methyl-2-Pentanone	0.158	0.152	0.148
Cis 1,3-dichloropropene	0.533	0.531	0.525
Toluene	0.820	0.812	0.805
Trans 1,3-Dichloropropene	0.492	0.488	0.478
2-Hexanone	0.249	0.238	0.231

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

LAB FILE ID: RF100: 1000426 RF150: 1500426 RF200: 2000426

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.265	0.264	0.260
1,3-Dichloropropane	0.467	0.462	0.449
Tetrachloroethene	0.313	0.321	0.334
Chlorodibromomethane	0.288	0.289	0.284
1,2-Dibromoethane	0.258	0.256	0.252
Chlorobenzene	0.796	0.784	0.768
Ethyl Benzene	1.415	1.346	1.267
1,1,1,2-Tetrachloroethane	0.289	0.291	0.288
m,p-xylene	0.543	0.527	0.504
o-Xylene	0.533	0.533	0.532
Styrene	0.902	0.882	0.845
Bromoform	0.395	0.394	0.382
1,1,2,2-Tetrachloroethane	0.629	0.618	0.606
1,2,3-Trichloropropane	0.196	0.190	0.187
Trans-1,4-Dichloro 2-Butene	0.251	0.239	0.241
N-Propyl Benzene	2.947	2.796	2.564
Bromobenzene	0.630	0.632	0.624
Isopropyl Benzene	2.555	2.454	2.289
2-Chloro Toluene	1.851	1.816	1.744
4-Chloro Toluene	1.917	1.879	1.802
T-Butyl Benzene	1.904	1.865	1.800
1,3,5-Trimethyl Benzene	2.144	2.091	1.994
1,2,4-Trimethylbenzene	2.115	2.055	1.945
S-Butyl Benzene	2.726	2.612	2.424
4-Isopropyl Toluene	2.282	2.219	2.076
1,3-Dichlorobenzene	1.184	1.175	1.146
1,4-Dichlorobenzene	1.197	1.183	1.158
N-Butyl Benzene	2.145	2.111	1.997
1,2-Dichlorobenzene	1.119	1.102	1.080
1,2-Dibromo 3-Chloropropane	0.120	0.121	0.120
1,2,4-Trichlorobenzene	0.796	0.841	0.850
Hexachloro 1,3-Butadiene	0.481	0.492	0.496
Naphthalene	1.931	1.872	1.783
1,2,3-Trichlorobenzene	0.745	0.770	0.774
Dichlorodifluoromethane	0.589	0.522	0.528
Methyl tert butyl ether	1.922	1.869	1.823

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

LAB FILE ID: RF100: 1000426 RF150: 1500426 RF200: 2000426

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	0.799	0.788	0.778
d8-Toluene	1.340	1.344	1.341
4-Bromofluorobenzene	0.522	0.520	0.516
d4-1,2-Dichlorobenzene	0.938	0.934	0.935
Dibromofluoromethane	0.722	0.724	0.710

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	0.711	8.7
Vinyl Chloride	AVRG	0.808	10.0
Bromomethane	AVRG	0.377	7.4
Chloroethane	AVRG	0.434	8.6
Trichlorofluoromethane	AVRG	0.847	7.4
Acrolein	AVRG	0.111	18.5
112Trichloro122Trifluoroetha	AVRG	0.461	7.2
Acetone	LINR		0.9905
1,1-Dichloroethene	AVRG	0.511	7.2
Bromoethane	AVRG	0.318	9.3
Iodomethane	AVRG	0.451	8.7
Methylene Chloride	2ORDR		0.9986
Acrylonitrile	AVRG	0.273	7.0
Carbon Disulfide	AVRG	1.731	10.3
Trans-1,2-Dichloroethene	AVRG	0.509	19.2
Vinyl Acetate	AVRG	1.613	6.2
1,1-Dichloroethane	AVRG	1.240	6.8
2-Butanone	AVRG	0.080	8.6
2,2-Dichloropropane	AVRG	0.946	7.3
Cis-1,2-Dichloroethene	AVRG	0.656	6.6
Chloroform	AVRG	1.085	8.2
Bromochloromethane	AVRG	0.290	7.2
1,1,1-Trichloroethane	AVRG	1.002	8.0
1,1-Dichloropropene	AVRG	0.430	8.2
Carbon Tetrachloride	AVRG	0.386	10.7
1,2-Dichloroethane	AVRG	0.421	5.2
Benzene	AVRG	1.234	6.1
Trichloroethene	AVRG	0.300	8.1
1,2-Dichloropropane	AVRG	0.340	6.7
Bromodichloromethane	AVRG	0.390	6.7
Dibromomethane	AVRG	0.166	6.1
2-Chloroethyl Vinyl Ether	AVRG	0.203	12.7
4-Methyl-2-Pentanone	AVRG	0.146	10.1
Cis 1,3-dichloropropene	AVRG	0.496	8.5
Toluene	AVRG	0.793	6.1
Trans 1,3-Dichloropropene	AVRG	0.456	7.7
2-Hexanone	AVRG	0.240	7.4

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

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.250	7.5
1,3-Dichloropropane	AVRG	0.446	5.4
Tetrachloroethene	AVRG	0.304	7.5
Chlorodibromomethane	AVRG	0.272	6.7
1,2-Dibromoethane	AVRG	0.244	8.0
Chlorobenzene	AVRG	0.774	5.7
Ethyl Benzene	AVRG	1.351	6.4
1,1,1,2-Tetrachloroethane	AVRG	0.273	7.5
m,p-xylene	AVRG	0.509	6.7
o-Xylene	AVRG	0.493	8.9
Styrene	AVRG	0.825	8.4
Bromoform	AVRG	0.368	6.9
1,1,2,2-Tetrachloroethane	AVRG	0.604	4.7
1,2,3-Trichloropropane	AVRG	0.188	5.2
Trans-1,4-Dichloro 2-Butene	AVRG	0.239	3.4
N-Propyl Benzene	AVRG	2.790	6.4
Bromobenzene	AVRG	0.603	5.6
Isopropyl Benzene	AVRG	2.358	6.8
2-Chloro Toluene	AVRG	1.747	5.6
4-Chloro Toluene	AVRG	1.801	5.8
T-Butyl Benzene	AVRG	1.740	8.8
1,3,5-Trimethyl Benzene	AVRG	1.984	7.1
1,2,4-Trimethylbenzene	AVRG	1.942	7.3
S-Butyl Benzene	AVRG	2.538	6.9
4-Isopropyl Toluene	AVRG	2.075	7.6
1,3-Dichlorobenzene	AVRG	1.129	5.5
1,4-Dichlorobenzene	AVRG	1.171	6.0
N-Butyl Benzene	AVRG	1.991	6.7
1,2-Dichlorobenzene	AVRG	1.102	5.4
1,2-Dibromo 3-Chloropropane	AVRG	0.121	4.6
1,2,4-Trichlorobenzene	AVRG	0.785	8.8
Hexachloro 1,3-Butadiene	AVRG	0.471	8.0
Naphthalene	AVRG	1.989	11.4
1,2,3-Trichlorobenzene	AVRG	0.745	6.5
Dichlorodifluoromethane	AVRG	0.521	7.4
Methyl tert butyl ether	AVRG	1.844	7.5

<- 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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 04/26/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	0.796	1.9
d8-Toluene	AVRG	1.344	0.4
4-Bromofluorobenzene	AVRG	0.527	1.3
d4-1,2-Dichlorobenzene	AVRG	0.946	1.2
Dibromofluoromethane	AVRG	0.717	1.1

<- 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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/29/13

Init. Calib. Date: 04/26/13 Cont. Calib. Time: 1218

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.711	0.7535	0.100	AVRG	6.0	
Vinyl Chloride	0.808	0.8341	0.010	AVRG	3.2	
Bromomethane	0.377	0.4184	0.010	AVRG	11.0	
Chloroethane	0.434	0.4933	0.010	AVRG	13.7	
Trichlorofluoromethane	0.847	0.9018	0.010	AVRG	6.5	
Acrolein	0.111	0.1280	0.010	AVRG	15.3	
112Trichloro122Trifluoroetha	0.461	0.4522	0.010	AVRG	-1.9	
Acetone	250.00	272.86	0.010	LINR	9.1	
1,1-Dichloroethene	0.511	0.4958	0.010	AVRG	-3.0	
Bromoethane	0.318	0.3313	0.010	AVRG	4.2	
Iodomethane	0.451	0.4799	0.010	AVRG	6.4	
Methylene Chloride	50.000	66.263	0.010	2ORDR	32.5	<-
Acrylonitrile	0.273	0.2782	0.010	AVRG	1.9	
Carbon Disulfide	1.731	1.6912	0.010	AVRG	-2.3	
Trans-1,2-Dichloroethene	0.509	0.6428	0.010	AVRG	26.3	<-
Vinyl Acetate	1.613	1.6831	0.010	AVRG	4.3	
1,1-Dichloroethane	1.240	1.2831	0.100	AVRG	3.5	
2-Butanone	0.080	0.0834	0.010	AVRG	4.2	
2,2-Dichloropropane	0.946	1.0069	0.010	AVRG	6.4	
Cis-1,2-Dichloroethene	0.656	0.6731	0.010	AVRG	2.6	
Chloroform	1.085	1.1013	0.010	AVRG	1.5	
Bromochloromethane	0.290	0.3208	0.010	AVRG	10.6	
1,1,1-Trichloroethane	1.002	1.0268	0.010	AVRG	2.5	
1,1-Dichloropropene	0.430	0.4104	0.010	AVRG	-4.6	
Carbon Tetrachloride	0.386	0.3724	0.010	AVRG	-3.5	
1,2-Dichloroethane	0.421	0.3842	0.010	AVRG	-8.7	
Benzene	1.234	1.1991	0.010	AVRG	-2.8	
Trichloroethene	0.300	0.2874	0.010	AVRG	-4.2	
1,2-Dichloropropane	0.340	0.3239	0.010	AVRG	-4.7	
Bromodichloromethane	0.390	0.3664	0.010	AVRG	-6.0	
Dibromomethane	0.166	0.1540	0.010	AVRG	-7.2	
2-Chloroethyl Vinyl Ether	0.203	0.2003	0.010	AVRG	-1.3	
4-Methyl-2-Pentanone	0.146	0.1419	0.010	AVRG	-2.8	
Cis 1,3-dichloropropene	0.496	0.4830	0.010	AVRG	-2.6	
Toluene	0.793	0.7577	0.010	AVRG	-4.4	
Trans 1,3-Dichloropropene	0.456	0.4436	0.010	AVRG	-2.7	
2-Hexanone	0.240	0.2326	0.010	AVRG	-3.1	

<- 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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/29/13

Init. Calib. Date: 04/26/13 Cont. Calib. Time: 1218

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.250	0.2371	0.010	AVRG	-5.2
1,3-Dichloropropane	0.446	0.4128	0.010	AVRG	-7.4
Tetrachloroethene	0.304	0.2912	0.010	AVRG	-4.2
Chlorodibromomethane	0.272	0.2552	0.010	AVRG	-6.2
1,2-Dibromoethane	0.244	0.2326	0.010	AVRG	-4.7
Chlorobenzene	0.774	0.7396	0.300	AVRG	-4.4
Ethyl Benzene	1.351	1.3438	0.010	AVRG	-0.5
1,1,1,2-Tetrachloroethane	0.273	0.2576	0.010	AVRG	-5.6
m,p-xylene	0.509	0.5059	0.010	AVRG	-0.6
o-Xylene	0.493	0.4841	0.010	AVRG	-1.8
Styrene	0.825	0.8219	0.010	AVRG	-0.4
Bromoform	0.368	0.3426	0.100	AVRG	-6.9
1,1,2,2-Tetrachloroethane	0.604	0.5568	0.300	AVRG	-7.8
1,2,3-Trichloropropane	0.188	0.1696	0.010	AVRG	-9.8
Trans-1,4-Dichloro 2-Butene	0.239	0.2319	0.010	AVRG	-3.0
N-Propyl Benzene	2.790	2.8417	0.010	AVRG	1.8
Bromobenzene	0.603	0.5610	0.010	AVRG	-7.0
Isopropyl Benzene	2.358	2.3608	0.010	AVRG	0.1
2-Chloro Toluene	1.747	1.6976	0.010	AVRG	-2.8
4-Chloro Toluene	1.801	1.7771	0.010	AVRG	-1.3
T-Butyl Benzene	1.740	1.7308	0.010	AVRG	-0.5
1,3,5-Trimethyl Benzene	1.984	1.9882	0.010	AVRG	0.2
1,2,4-Trimethylbenzene	1.942	1.9676	0.010	AVRG	1.3
S-Butyl Benzene	2.538	2.5953	0.010	AVRG	2.2
4-Isopropyl Toluene	2.075	2.1658	0.010	AVRG	4.4
1,3-Dichlorobenzene	1.129	1.1025	0.010	AVRG	-2.3
1,4-Dichlorobenzene	1.172	1.1206	0.010	AVRG	-4.4
N-Butyl Benzene	1.991	2.1034	0.010	AVRG	5.6
1,2-Dichlorobenzene	1.102	1.0411	0.010	AVRG	-5.5
1,2-Dibromo 3-Chloropropane	0.121	0.1066	0.010	AVRG	-11.9
1,2,4-Trichlorobenzene	0.785	0.7930	0.010	AVRG	1.0
Hexachloro 1,3-Butadiene	0.471	0.4640	0.010	AVRG	-1.5
Naphthalene	1.989	1.8053	0.010	AVRG	-9.2
1,2,3-Trichlorobenzene	0.745	0.7291	0.010	AVRG	-2.1
Dichlorodifluoromethane	0.521	0.5600	0.010	AVRG	7.5
Methyl tert butyl ether	1.844	1.8992	0.010	AVRG	3.0

<- 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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 04/29/13

Init. Calib. Date: 04/26/13 Cont. Calib. Time: 1218

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.796	0.8529	0.010	AVRG	7.1
d8-Toluene	1.344	1.3662	0.010	AVRG	1.6
4-Bromofluorobenzene	0.527	0.5266	0.010	AVRG	-0.1
d4-1,2-Dichlorobenzene	0.946	0.9622	0.010	AVRG	1.7
Dibromofluoromethane	0.717	0.8033	0.010	AVRG	12.0

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

FORM VII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WN31 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100426 | Ical Date: 04/26/13

Instrument ID: NT5 | Project Run Date: 04/29/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	643244	4.67	1400609	5.12	1457079	7.61
	UPPER LIMIT	1286488	5.17	2801218	5.62	2914158	8.11
	LOWER LIMIT	321622	4.17	700304	4.62	728540	7.11
	Sample ID						
01	LCS0429	588940	4.67	1364770	5.12	1454651	7.61
02	LCS0429	563971	4.67	1317747	5.12	1375261	7.61
03	MB0429	580577	4.67	1363752	5.12	1438655	7.61
04	ES-TB-001-20	566804	4.67	1332759	5.12	1415729	7.61
05	ES-TS-INF-20	582218	4.67	1375058	5.12	1468491	7.61
06							
07							
08							
09							
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16							
17							
18							
19							
20							
21							
22							

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

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WN31 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100426 | Ical Date: 04/26/13

Instrument ID: NT5 | Project Run Date: 04/29/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	792287	9.69				
	UPPER LIMIT	1584574	10.19				
	LOWER LIMIT	396144	9.19				
	Sample ID						
01	LCS0429	786182	9.69				
02	LCS0429	720340	9.69				
03	MB0429	746987	9.69				
04	ES-TB-001-20	749043	9.69				
05	ES-TS-INF-20	787882	9.69				
06							
07							
08							
09							
10							
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19							
20							
21							
22							

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

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

* Values outside of QC limits.

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: ES-TS-INF-20130424-S
SAMPLE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized: MM
Reported: 08/19/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 21:06
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.20 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 60.3%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**220**	**500**	**2,400**
111-44-4	Bis-(2-Chloroethyl) Ether	84	500	< 500 U
95-57-8	2-Chlorophenol	66	500	< 500 U
541-73-1	1,3-Dichlorobenzene	66	500	< 500 U
106-46-7	1,4-Dichlorobenzene	72	500	< 500 U
100-51-6	**Benzyl Alcohol**	**150**	**500**	**680**
95-50-1	1,2-Dichlorobenzene	62	500	< 500 U
95-48-7	2-Methylphenol	130	500	< 500 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	94	500	< 500 U
106-44-5	**4-Methylphenol**	**170**	**500**	**15,000**
621-64-7	N-Nitroso-Di-N-Propylamine	84	500	< 500 U
67-72-1	Hexachloroethane	74	500	< 500 U
98-95-3	Nitrobenzene	100	500	< 500 U
78-59-1	Isophorone	72	500	< 500 U
88-75-5	2-Nitrophenol	970	2,500	< 2,500 U
105-67-9	2,4-Dimethylphenol	86	1,000	< 1,000 U
65-85-0	Benzoic Acid	2500	10,000	< 10,000 U
111-91-1	bis(2-Chloroethoxy) Methane	50	500	< 500 U
120-83-2	2,4-Dichlorophenol	540	5,000	< 5,000 U
120-82-1	1,2,4-Trichlorobenzene	87	500	< 500 U
91-20-3	Naphthalene	69	500	< 500 U
106-47-8	4-Chloroaniline	560	6,800	< 6,800 U
87-68-3	Hexachlorobutadiene	110	500	< 500 U
59-50-7	4-Chloro-3-methylphenol	380	2,500	< 2,500 U
91-57-6	**2-Methylnaphthalene**	**76**	**500**	**300 J**
77-47-4	Hexachlorocyclopentadiene	1700	10,000	< 10,000 U
88-06-2	2,4,6-Trichlorophenol	560	2,500	< 2,500 U
95-95-4	2,4,5-Trichlorophenol	540	2,500	< 2,500 U
91-58-7	2-Chloronaphthalene	66	500	< 500 U
88-74-4	2-Nitroaniline	460	2,500	< 2,500 U
131-11-3	**Dimethylphthalate**	**72**	**500**	**1,300**
208-96-8	Acenaphthylene	140	500	< 500 U
99-09-2	3-Nitroaniline	560	2,500	< 2,500 U
83-32-9	Acenaphthene	82	500	< 500 U
51-28-5	2,4-Dinitrophenol	2800	21,000	< 21,000 U
100-02-7	4-Nitrophenol	870	2,500	< 2,500 U
132-64-9	Dibenzofuran	100	500	< 500 U
606-20-2	2,6-Dinitrotoluene	760	2,500	< 2,500 U
121-14-2	2,4-Dinitrotoluene	490	2,500	< 2,500 U
84-66-2	Diethylphthalate	920	1,200	< 1,200 U
7005-72-3	4-Chlorophenyl-phenylether	130	500	< 500 U
86-73-7	Fluorene	110	500	< 500 U
100-01-6	4-Nitroaniline	950	2,500	< 2,500 U

BL 8/19/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: ES-TS-INF-20130424-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WN31A QC Report No: WN31-SAIC
LIMS ID: 13-8693 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 05/07/13 21:06

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	530	5,000	< 5,000 U
86-30-6	**N-Nitrosodiphenylamine**	**130**	**500**	**450 J**
101-55-3	4-Bromophenyl-phenylether	130	500	< 500 U
118-74-1	Hexachlorobenzene	110	500	< 500 U
87-86-5	Pentachlorophenol	1200	5,000	< 5,000 U
85-01-8	**Phenanthrene**	**91**	**500**	**1,200**
86-74-8	Carbazole	67	500	< 500 U
120-12-7	Anthracene	110	500	< 500 U
84-74-2	**Di-n-Butylphthalate**	**200**	**500**	**550**
206-44-0	**Fluoranthene**	**73**	**500**	**1,800**
129-00-0	**Pyrene**	**48**	**500**	**2,600**
85-68-7	**Butylbenzylphthalate**	**150**	**500**	**1,700**
91-94-1	3,3'-Dichlorobenzidine	440	3,800	< 3,800 U
56-55-3	**Benzo(a)anthracene**	**82**	**500**	**500**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**360**	**620**	**120,000 EB**
218-01-9	**Chrysene**	**94**	**500**	**1,500**
117-84-0	**Di-n-Octyl phthalate**	**150**	**500**	**4,200 M**
50-32-8	**Benzo(a)pyrene**	**140**	**500**	**500**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**120**	**500**	**350 J**
53-70-3	Dibenz(a,h)anthracene	110	500	< 500 U
191-24-2	**Benzo(g,h,i)perylene**	**110**	**500**	**780**
62-53-3	Aniline	1000	14,000	< 14,000 U
62-75-9	N-Nitrosodimethylamine	350	2,500	< 2,500 U
90-12-0	1-Methylnaphthalene	67	500	< 500 U
TOTBFA	**Total Benzofluoranthenes**	**69**	**1,000**	**1,500**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.6%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	68.4%	d4-1,2-Dichlorobenzene	60.6%
d5-Phenol	62.0%	2-Fluorophenol	57.6%
2,4,6-Tribromophenol	70.0%	d4-2-Chlorophenol	63.6%

BL 8/19/13

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: ES-TS-INF-20130424-S
DILUTION

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized: MAD
Reported: 08/19/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/01/13
Date Analyzed: 05/08/13 16:03
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.20 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 9.00
Percent Moisture: 60.3%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**650**	**1,500**	**2,300**
111-44-4	Bis-(2-Chloroethyl) Ether	250	1,500	< 1,500 U
95-57-8	2-Chlorophenol	200	1,500	< 1,500 U
541-73-1	1,3-Dichlorobenzene	200	1,500	< 1,500 U
106-46-7	1,4-Dichlorobenzene	210	1,500	< 1,500 U
100-51-6	Benzyl Alcohol	460	1,500	< 1,500 U
95-50-1	1,2-Dichlorobenzene	190	1,500	< 1,500 U
95-48-7	2-Methylphenol	390	1,500	< 1,500 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	280	1,500	< 1,500 U
106-44-5	**4-Methylphenol**	**500**	**1,500**	**14,000**
621-64-7	N-Nitroso-Di-N-Propylamine	250	1,500	< 1,500 U
67-72-1	Hexachloroethane	220	1,500	< 1,500 U
98-95-3	Nitrobenzene	300	1,500	< 1,500 U
78-59-1	Isophorone	210	1,500	< 1,500 U
88-75-5	2-Nitrophenol	2900	7,500	< 7,500 U
105-67-9	2,4-Dimethylphenol	260	3,000	< 3,000 U
65-85-0	Benzoic Acid	7600	30,000	< 30,000 U
111-91-1	bis(2-Chloroethoxy) Methane	150	1,500	< 1,500 U
120-83-2	2,4-Dichlorophenol	1600	15,000	< 15,000 U
120-82-1	1,2,4-Trichlorobenzene	260	1,500	< 1,500 U
91-20-3	Naphthalene	210	1,500	< 1,500 U
106-47-8	4-Chloroaniline	1700	20,000	< 20,000 U
87-68-3	Hexachlorobutadiene	340	1,500	< 1,500 U
59-50-7	4-Chloro-3-methylphenol	1100	7,500	< 7,500 U
91-57-6	2-Methylnaphthalene	230	1,500	< 1,500 U
77-47-4	Hexachlorocyclopentadiene	5000	30,000	< 30,000 U
88-06-2	2,4,6-Trichlorophenol	1700	7,500	< 7,500 U
95-95-4	2,4,5-Trichlorophenol	1600	7,500	< 7,500 U
91-58-7	2-Chloronaphthalene	200	1,500	< 1,500 U
88-74-4	2-Nitroaniline	1400	7,500	< 7,500 U
131-11-3	**Dimethylphthalate**	**220**	**1,500**	**1,600**
208-96-8	Acenaphthylene	430	1,500	< 1,500 U
99-09-2	3-Nitroaniline	1700	7,500	< 7,500 U
83-32-9	Acenaphthene	250	1,500	< 1,500 U
51-28-5	2,4-Dinitrophenol	8300	64,000	< 64,000 U
100-02-7	4-Nitrophenol	2600	7,500	< 7,500 U
132-64-9	Dibenzofuran	310	1,500	< 1,500 U
606-20-2	2,6-Dinitrotoluene	2300	7,500	< 7,500 U
121-14-2	2,4-Dinitrotoluene	1500	7,500	< 7,500 U
84-66-2	Diethylphthalate	2700	3,800	< 3,800 U
7005-72-3	4-Chlorophenyl-phenylether	400	1,500	< 1,500 U
86-73-7	Fluorene	330	1,500	< 1,500 U
100-01-6	4-Nitroaniline	2800	7,500	< 7,500 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
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Sample ID: ES-TS-INF-20130424-S
DILUTION

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Date Analyzed: 05/08/13 16:03

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	1600	15,000	< 15,000 U
86-30-6	N-Nitrosodiphenylamine	400	1,500	< 1,500 U
101-55-3	4-Bromophenyl-phenylether	380	1,500	< 1,500 U
118-74-1	Hexachlorobenzene	320	1,500	< 1,500 U
87-86-5	Pentachlorophenol	3600	15,000	< 15,000 U
85-01-8	**Phenanthrene**	**270**	**1,500**	**1,300 J**
86-74-8	Carbazole	200	1,500	< 1,500 U
120-12-7	Anthracene	340	1,500	< 1,500 U
84-74-2	Di-n-Butylphthalate	610	1,500	< 1,500 U
206-44-0	**Fluoranthene**	**220**	**1,500**	**2,000**
129-00-0	**Pyrene**	**150**	**1,500**	**2,800**
85-68-7	**Butylbenzylphthalate**	**460**	**1,500**	**1,600**
91-94-1	3,3'-Dichlorobenzidine	1300	11,000	< 11,000 U
56-55-3	Benzo(a)anthracene	250	1,500	< 1,500 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1100**	**1,900**	**130,000 B**
218-01-9	**Chrysene**	**280**	**1,500**	**1,500**
117-84-0	**Di-n-Octyl phthalate**	**440**	**1,500**	**5,300 M**
50-32-8	Benzo(a)pyrene	410	1,500	< 1,500 U
193-39-5	Indeno(1,2,3-cd)pyrene	350	1,500	< 1,500 U
53-70-3	Dibenz(a,h)anthracene	320	1,500	< 1,500 U
191-24-2	**Benzo(g,h,i)perylene**	**330**	**1,500**	**1,400 J**
62-53-3	Aniline	3000	40,000	< 40,000 U
62-75-9	N-Nitrosodimethylamine	1100	7,500	< 7,500 U
90-12-0	1-Methylnaphthalene	200	1,500	< 1,500 U
TOTBFA	**Total Benzofluoranthenes**	**210**	**3,000**	**1,600 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.0%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	86.4%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	62.4%	2-Fluorophenol	58.8%
2,4,6-Tribromophenol	69.6%	d4-2-Chlorophenol	63.6%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-050113	56.8%	57.0%	71.0%	59.4%	57.3%	55.7%	56.4%	58.8%	0
LCS-050113	57.8%	57.0%	75.2%	56.8%	62.0%	58.8%	67.2%	59.2%	0
LCSD-050113	66.6%	65.4%	74.4%	65.8%	71.7%	68.3%	73.1%	68.0%	0
ES-TS-INF-20130424	60.6%	68.4%	68.4%	60.6%	62.0%	57.6%	70.0%	63.6%	0
ES-TS-INF-20130424 DL	63.0%	68.4%	86.4%	61.2%	62.4%	58.8%	69.6%	63.6%	0

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

Prep Method: SW3546
Log Number Range: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: ES-MH-001-20130424-W
SAMPLE

Lab Sample ID: WN31B
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/15/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 04/29/13
Date Analyzed: 05/01/13 22:46
Instrument/Analyst: NT6/JZ

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

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

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: ES-MH-001-20130424-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WN31B QC Report No: WN31-SAIC
LIMS ID: 13-8694 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 05/01/13 22:46

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.29	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	Fluorene	0.31	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.34	1.0	< 1.0 U
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.34	1.0	< 1.0 U
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	**Di-n-Octyl phthalate**	**0.33**	**1.0**	**6.7**
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	74.4%	2-Fluorobiphenyl	76.0%
d14-p-Terphenyl	83.2%	d4-1,2-Dichlorobenzene	72.8%
d5-Phenol	37.1%	2-Fluorophenol	49.9%
2,4,6-Tribromophenol	103%	d4-2-Chlorophenol	77.6%

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

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-042913	72.8%	70.8%	80.8%	70.4%	37.3%	50.4%	93.6%	75.2%	0
LCS-042913	74.0%	80.4%	98.0%	68.0%	39.5%	51.7%	116%	77.1%	0
LCSD-042913	73.6%	79.2%	95.6%	66.8%	37.6%	48.8%	113%	74.1%	0
ES-MH-001-20130424	74.4%	76.0%	83.2%	72.8%	37.1%	49.9%	103%	77.6%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(50-100)	(34-101)
(FBP) = 2-Fluorobiphenyl	(51-100)	(38-100)
(TPH) = d14-p-Terphenyl	(54-117)	(27-122)
(DCB) = d4-1,2-Dichlorobenzene	(40-100)	(27-100)
(PHL) = d5-Phenol	(15-121)	(16-106)
(2FP) = 2-Fluorophenol	(33-100)	(23-100)
(TBP) = 2,4,6-Tribromophenol	(46-125)	(31-128)
(2CP) = d4-2-Chlorophenol	(46-102)	(33-100)

Prep Method: SW3510C
Log Number Range: 13-8694 to 13-8694

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-050113
LCS/LCSD

Lab Sample ID: LCS-050113
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 08/15/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted LCS/LCSD: 05/01/13

Date Analyzed LCS: 05/07/13 17:27
LCSD: 05/07/13 18:03
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
GPC Cleanup: Yes

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

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Phenol	320		500	64.0%	374		500	74.8%	15.6%
Bis-(2-Chloroethyl) Ether	303		500	60.6%	357		500	71.4%	16.4%
2-Chlorophenol	258		500	51.6%	304		500	60.8%	16.4%
1,3-Dichlorobenzene	284		500	56.8%	325		500	65.0%	13.5%
1,4-Dichlorobenzene	287		500	57.4%	343		500	68.6%	17.8%
Benzyl Alcohol	325		500	65.0%	382		500	76.4%	16.1%
1,2-Dichlorobenzene	289		500	57.8%	343		500	68.6%	17.1%
2-Methylphenol	251		500	50.2%	290		500	58.0%	14.4%
2,2'-Oxybis(1-Chloropropane)	296		500	59.2%	368		500	73.6%	21.7%
4-Methylphenol	524		1000	52.4%	641		1000	64.1%	20.1%
N-Nitroso-Di-N-Propylamine	308		500	61.6%	350		500	70.0%	12.8%
Hexachloroethane	288		500	57.6%	339		500	67.8%	16.3%
Nitrobenzene	302		500	60.4%	351		500	70.2%	15.0%
Isophorone	287		500	57.4%	339		500	67.8%	16.6%
2-Nitrophenol	255		500	51.0%	353		500	70.6%	32.2%
2,4-Dimethylphenol	683		1500	45.5%	857		1500	57.1%	22.6%
Benzoic Acid	951	Q	2750	34.6%	1100	Q	2750	40.0%	14.5%
bis(2-Chloroethoxy) Methane	316		500	63.2%	377		500	75.4%	17.6%
2,4-Dichlorophenol	774		1500	51.6%	996		1500	66.4%	25.1%
1,2,4-Trichlorobenzene	289		500	57.8%	339		500	67.8%	15.9%
Naphthalene	267		500	53.4%	324		500	64.8%	19.3%
4-Chloroaniline	669		1500	44.6%	759		1500	50.6%	12.6%
Hexachlorobutadiene	283		500	56.6%	346		500	69.2%	20.0%
4-Chloro-3-methylphenol	1020		1500	68.0%	1180		1500	78.7%	14.5%
2-Methylnaphthalene	287		500	57.4%	352		500	70.4%	20.3%
Hexachlorocyclopentadiene	604		1500	40.3%	742		1500	49.5%	20.5%
2,4,6-Trichlorophenol	874		1500	58.3%	1020		1500	68.0%	15.4%
2,4,5-Trichlorophenol	944		1500	62.9%	1070		1500	71.3%	12.5%
2-Chloronaphthalene	303		500	60.6%	359		500	71.8%	16.9%
2-Nitroaniline	1200		1500	80.0%	1320		1500	88.0%	9.5%
Dimethylphthalate	379		500	75.8%	405		500	81.0%	6.6%
Acenaphthylene	275		500	55.0%	324		500	64.8%	16.4%
3-Nitroaniline	1200	Q	1500	80.0%	1250	Q	1500	83.3%	4.1%
Acenaphthene	285		500	57.0%	334		500	66.8%	15.8%

WN31: SAR BC 8/14/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCSD-050113
LCS/LCSD

Lab Sample ID: LCS-050113
LIMS ID: 13-8693
Matrix: Sediment
Date Analyzed LCS: 05/07/13 17:27
LCSD: 05/07/13 18:03

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	891 Q	2750	32.4%	950 Q	2750	34.5%	6.4%
4-Nitrophenol	1040	1500	69.3%	1100	1500	73.3%	5.6%
Dibenzofuran	303	500	60.6%	363	500	72.6%	18.0%
2,6-Dinitrotoluene	1120	1500	74.7%	1220	1500	81.3%	8.5%
2,4-Dinitrotoluene	1220	1500	81.3%	1300	1500	86.7%	6.3%
Diethylphthalate	387	500	77.4%	405	500	81.0%	4.5%
4-Chlorophenyl-phenylether	306	500	61.2%	351	500	70.2%	13.7%
Fluorene	296	500	59.2%	340	500	68.0%	13.8%
4-Nitroaniline	1410 Q	1500	94.0%	1440 Q	1500	96.0%	2.1%
4,6-Dinitro-2-Methylphenol	1330 Q	2750	48.4%	1380 Q	2750	50.2%	3.7%
N-Nitrosodiphenylamine	379	500	75.8%	405	500	81.0%	6.6%
4-Bromophenyl-phenylether	337	500	67.4%	377	500	75.4%	11.2%
Hexachlorobenzene	296	500	59.2%	328	500	65.6%	10.3%
Pentachlorophenol	742 Q	1500	49.5%	798 Q	1500	53.2%	7.3%
Phenanthrene	342	500	68.4%	368	500	73.6%	7.3%
Carbazole	529	500	106%	549	500	110%	3.7%
Anthracene	317	500	63.4%	336	500	67.2%	5.8%
Di-n-Butylphthalate	420	500	84.0%	434	500	86.8%	3.3%
Fluoranthene	369	500	73.8%	388	500	77.6%	5.0%
Pyrene	356	500	71.2%	368	500	73.6%	3.3%
Butylbenzylphthalate	453	500	90.6%	474	500	94.8%	4.5%
3,3'-Dichlorobenzidine	759	1500	50.6%	767	1500	51.1%	1.0%
Benzo(a)anthracene	364	500	72.8%	371	500	74.2%	1.9%
bis(2-Ethylhexyl)phthalate	402 B	500	80.4%	409 B	500	81.8%	1.7%
Chrysene	337	500	67.4%	345	500	69.0%	2.3%
Di-n-Octyl phthalate	381	500	76.2%	401	500	80.2%	5.1%
Benzo(a)pyrene	341	500	68.2%	363	500	72.6%	6.2%
Indeno(1,2,3-cd)pyrene	337	500	67.4%	349	500	69.8%	3.5%
Dibenz(a,h)anthracene	342	500	68.4%	348	500	69.6%	1.7%
Benzo(g,h,i)perylene	304	500	60.8%	312	500	62.4%	2.6%
Aniline	288 J	1500	19.2%	318 J	1500	21.2%	9.9%
N-Nitrosodimethylamine	790	1500	52.7%	925	1500	61.7%	15.7%
1-Methylnaphthalene	305	500	61.0%	369	500	73.8%	19.0%
Total Benzofluoranthenes	703	1000	70.3%	744	1000	74.4%	5.7%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	57.8%	66.6%
2-Fluorobiphenyl	57.0%	65.4%
d14-p-Terphenyl	75.2%	74.4%
d4-1,2-Dichlorobenzene	56.8%	65.8%
d5-Phenol	62.0%	71.7%
2-Fluorophenol	58.8%	68.3%
2,4,6-Tribromophenol	67.2%	73.1%
d4-2-Chlorophenol	59.2%	68.0%

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

WN31:90R BC 8/14/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-042913
LCS/LCSD

Lab Sample ID: LCS-042913
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted LCS/LCSD: 04/29/13

Date Analyzed LCS: 05/01/13 21:04
LCSD: 05/01/13 21:38
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	10.0	25.0	40.0%	9.7	25.0	38.8%	3.0%
Bis-(2-Chloroethyl) Ether	16.5	25.0	66.0%	16.4	25.0	65.6%	0.6%
2-Chlorophenol	19.3	25.0	77.2%	19.2	25.0	76.8%	0.5%
1,3-Dichlorobenzene	15.5	25.0	62.0%	15.5	25.0	62.0%	0.0%
1,4-Dichlorobenzene	16.0	25.0	64.0%	16.1	25.0	64.4%	0.6%
Benzyl Alcohol	18.3	25.0	73.2%	18.3	25.0	73.2%	0.0%
1,2-Dichlorobenzene	16.1	25.0	64.4%	16.0	25.0	64.0%	0.6%
2-Methylphenol	16.9	25.0	67.6%	17.1	25.0	68.4%	1.2%
2,2'-Oxybis(1-Chloropropane)	15.4 Q	25.0	61.6%	15.4 Q	25.0	61.6%	0.0%
4-Methylphenol	34.5	50.0	69.0%	34.5	50.0	69.0%	0.0%
N-Nitroso-Di-N-Propylamine	17.0	25.0	68.0%	17.3	25.0	69.2%	1.7%
Hexachloroethane	13.9	25.0	55.6%	13.5	25.0	54.0%	2.9%
Nitrobenzene	18.5	25.0	74.0%	19.0	25.0	76.0%	2.7%
Isophorone	19.0	25.0	76.0%	19.5	25.0	78.0%	2.6%
2-Nitrophenol	21.0	25.0	84.0%	21.8	25.0	87.2%	3.7%
2,4-Dimethylphenol	47.6	75.0	63.5%	49.9	75.0	66.5%	4.7%
Benzoic Acid	46.7 Q	138	33.8%	47.8 Q	138	34.6%	2.3%
bis(2-Chloroethoxy) Methane	17.2	25.0	68.8%	17.6	25.0	70.4%	2.3%
2,4-Dichlorophenol	60.2	75.0	80.3%	61.2	75.0	81.6%	1.6%
1,2,4-Trichlorobenzene	16.5	25.0	66.0%	16.7	25.0	66.8%	1.2%
Naphthalene	18.9	25.0	75.6%	19.2	25.0	76.8%	1.6%
4-Chloroaniline	138	75.0	184%	139	75.0	185%	0.7%
Hexachlorobutadiene	15.4	25.0	61.6%	15.9	25.0	63.6%	3.2%
4-Chloro-3-methylphenol	63.3	75.0	84.4%	64.6	75.0	86.1%	2.0%
2-Methylnaphthalene	20.4	25.0	81.6%	20.6	25.0	82.4%	1.0%
Hexachlorocyclopentadiene	17.3	75.0	23.1%	23.8	75.0	31.7%	31.6%
2,4,6-Trichlorophenol	63.9	75.0	85.2%	65.5	75.0	87.3%	2.5%
2,4,5-Trichlorophenol	69.1	75.0	92.1%	70.6	75.0	94.1%	2.1%
2-Chloronaphthalene	23.8	25.0	95.2%	24.1	25.0	96.4%	1.3%
2-Nitroaniline	72.9	75.0	97.2%	74.1	75.0	98.8%	1.6%
Dimethylphthalate	21.2	25.0	84.8%	21.9	25.0	87.6%	3.2%
Acenaphthylene	22.2	25.0	88.8%	22.9	25.0	91.6%	3.1%
3-Nitroaniline	189	75.0	252%	194	75.0	259%	2.6%
Acenaphthene	21.1	25.0	84.4%	21.4	25.0	85.6%	1.4%
2,4-Dinitrophenol	98.7	138	71.5%	103	138	74.6%	4.3%
4-Nitrophenol	44.3	75.0	59.1%	41.0	75.0	54.7%	7.7%
Dibenzofuran	24.0	25.0	96.0%	24.6	25.0	98.4%	2.5%
2,6-Dinitrotoluene	68.7	75.0	91.6%	70.0	75.0	93.3%	1.9%
2,4-Dinitrotoluene	70.7	75.0	94.3%	72.0	75.0	96.0%	1.8%
Diethylphthalate	24.1	25.0	96.4%	24.4	25.0	97.6%	1.2%
4-Chlorophenyl-phenylether	22.6	25.0	90.4%	22.9	25.0	91.6%	1.3%
Fluorene	25.8	25.0	103%	26.7	25.0	107%	3.4%
4-Nitroaniline	105	75.0	140%	107	75.0	143%	1.9%
4,6-Dinitro-2-Methylphenol	96.8	138	70.1%	98.9	138	71.7%	2.1%
N-Nitrosodiphenylamine	20.2	25.0	80.8%	20.2	25.0	80.8%	0.0%

Lab Sample ID: LCS-042913 QC Report No: WN31-SAIC
LIMS ID: 13-8694 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed LCS: 05/01/13 21:04
LCSD: 05/01/13 21:38

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	19.6	25.0	78.4%	19.8	25.0	79.2%	1.0%
Hexachlorobenzene	18.7	25.0	74.8%	18.6	25.0	74.4%	0.5%
Pentachlorophenol	66.0	75.0	88.0%	66.3	75.0	88.4%	0.5%
Phenanthrene	21.1	25.0	84.4%	21.2	25.0	84.8%	0.5%
Carbazole	29.3	25.0	117%	29.4	25.0	118%	0.3%
Anthracene	20.4	25.0	81.6%	20.7	25.0	82.8%	1.5%
Di-n-Butylphthalate	20.4	25.0	81.6%	20.3	25.0	81.2%	0.5%
Fluoranthene	23.3	25.0	93.2%	23.4	25.0	93.6%	0.4%
Pyrene	24.0	25.0	96.0%	24.5	25.0	98.0%	2.1%
Butylbenzylphthalate	23.0	25.0	92.0%	23.3	25.0	93.2%	1.3%
3,3'-Dichlorobenzidine	86.6	75.0	115%	87.7	75.0	117%	1.3%
Benzo(a)anthracene	25.8	25.0	103%	26.0	25.0	104%	0.8%
bis(2-Ethylhexyl)phthalate	21.4	25.0	85.6%	21.6	25.0	86.4%	0.9%
Chrysene	23.6	25.0	94.4%	23.6	25.0	94.4%	0.0%
Di-n-Octyl phthalate	21.4	25.0	85.6%	21.6	25.0	86.4%	0.9%
Benzo(a)pyrene	22.0	25.0	88.0%	22.5	25.0	90.0%	2.2%
Indeno(1,2,3-cd)pyrene	21.6	25.0	86.4%	22.0	25.0	88.0%	1.8%
Dibenz(a,h)anthracene	21.9	25.0	87.6%	22.2	25.0	88.8%	1.4%
Benzo(g,h,i)perylene	20.0	25.0	80.0%	20.6	25.0	82.4%	3.0%
Aniline	52.8 Q	75.0	70.4%	51.9 Q	75.0	69.2%	1.7%
1,2-Diphenylhydrazine	20.7	25.0	82.8%	21.1	25.0	84.4%	1.9%
N-Nitrosodimethylamine	31.5 Q	75.0	42.0%	31.3 Q	75.0	41.7%	0.6%
Azobenzene	20.7	25.0	82.8%	21.1	25.0	84.4%	1.9%
2,3,4,6-Tetrachlorophenol	25.9	25.0	104%	26.9	25.0	108%	3.8%
1-Methylnaphthalene	20.4	25.0	81.6%	20.6	25.0	82.4%	1.0%
Total Benzofluoranthenes	43.7	50.0	87.4%	43.9	50.0	87.8%	0.5%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	74.0%	73.6%
2-Fluorobiphenyl	80.4%	79.2%
d14-p-Terphenyl	98.0%	95.6%
d4-1,2-Dichlorobenzene	68.0%	66.8%
d5-Phenol	39.5%	37.6%
2-Fluorophenol	51.7%	48.8%
2,4,6-Tribromophenol	116%	113%
d4-2-Chlorophenol	77.1%	74.1%

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

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WN30MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: WN31

Project: JELD-WEN

Lab File ID: WN30MBS1

Date Extracted: 05/01/13

Instrument ID: NT10

Date Analyzed: 05/07/13

Matrix: SOLID

Time Analyzed: 1650

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WN30LCSS1	WN30LCSS1	WN30LCSS1	05/07/13
02	WN30LCSDS1	WN30LCSDS1	WN30LCSDS1	05/07/13
03	CG-MH-010-201304	WN27A	WN27A	05/07/13
04	CG-MH-010-20130	WN27AMS	WN27AMS	05/07/13
05	CG-MH-010-20130	WN27AMSD	WN27AMSD	05/07/13
06	ES-TS-INF-201304	WN31A	WN31A	05/07/13
07	CG-MH-010-201304	WN27A	WN27A9	05/08/13
08	ES-TS-INF-201304	WN31A	WN31A9	05/08/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-050113**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-050113 QC Report No: WN31-SAIC
LIMS ID: 13-8693 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: MDD Date Sampled: NA
Reported: 08/19/13 Date Received: NA

Date Extracted: 05/01/13 Sample Amount: 10.0 g
Date Analyzed: 05/07/13 16:50 Final Extract Volume: 1.0 mL
Instrument/Analyst: NT10/YZ Dilution Factor: 1.00
GPC Cleanup: Yes 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	2.6	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

BE 8/14/13
WN31 : 00094R

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-050113**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-050113 QC Report No: WN31-SAIC
LIMS ID: 13-8693 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 05/07/13 16:50

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**	**100**
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	56.8%	2-Fluorobiphenyl	57.0%
d14-p-Terphenyl	71.0%	d4-1,2-Dichlorobenzene	59.4%
d5-Phenol	57.3%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	56.4%	d4-2-Chlorophenol	58.8%

BC 8/14/13

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WN31MBW1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPO

Lab File ID: 05011310 Date Extracted: 04/29/13

Instrument ID: NT6 Date Analyzed: 05/01/13

Matrix: LIQUID Time Analyzed: 2030

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WN31LCSW1	WN31LCSW1	05011311	05/01/13
02	WN31LCSDW1	WN31LCSDW1	05011312	05/01/13
03	ES-MH-001-201304	WN31B	05011314	05/01/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-042913**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-042913
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/15/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/29/13
Date Analyzed: 05/01/13 20:30
Instrument/Analyst: NT6/JZ

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

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-042913**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-042913 QC Report No: WN31-SAIC
LIMS ID: 13-8694 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 05/01/13 20:30

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

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.8%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	70.4%
d5-Phenol	37.3%	2-Fluorophenol	50.4%
2,4,6-Tribromophenol	93.6%	d4-2-Chlorophenol	75.2%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT6 Project: NPDES SAMPLING SUPPORT

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

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

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

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

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

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT6 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 05/01/13 DFTPP Injection Time: 1522

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.1
68	Less than 2.0% of mass 69	0.3 (0.7)1
69	Mass 69 relative abundance	36.9
70	Less than 2.0% of mass 69	0.6 (1.7)1
127	10.0 - 80.0% of mass 198	46.3
197	Less than 2.0% of mass 198	0.1
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	24.4
365	Greater than 1.0% of mass 198	3.18
441	0.0 - 24.0% of mass 442	11.4 (13.8)2
442	50.0 - 200.0% of mass 198	82.4
443	15.0 - 24.0% of mass 442	16.5 (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	CC0501	CC0501	05011301	05/01/13	1522
02	WN31MBW1	WN31MBW1	05011310	05/01/13	2030
03	WN31LCSW1	WN31LCSW1	05011311	05/01/13	2104
04	WN31LCSDW1	WN31LCSDW1	05011312	05/01/13	2138
05	ES-MH-001-201304	WN31B	05011314	05/01/13	2246
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

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

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

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429B	IC0429B	04/29/13	1730
03		IC0429C	IC0429C	04/29/13	1807
04		IC0429D	IC0429D	04/29/13	1844
05		IC0429E	IC0429E	04/29/13	1921
06		IC0429G	IC0429G	04/29/13	2034
07		IC0429I	IC0429I	04/29/13	2147
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FORM V SV

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: 05/07/13 DFTPP Injection Time: 1219

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Mass 69 relative abundance	32.6
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	10.0 - 80.0% of mass 198	44.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1.0% of mass 198	3.85
441	0.0 - 24.0% of mass 442	16.4 (15.3)2
442	50.0 - 200.0% of mass 198	107.3
443	15.0 - 24.0% of mass 442	20.5 (19.1)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		CC0507	CC0507	05/07/13	1234
02	WN30MBS1	WN30MBS1	WN30MBS1	05/07/13	1650
03	WN30LCSS1	WN30LCSS1	WN30LCSS1	05/07/13	1727
04	WN30LCSDS1	WN30LCSDS1	WN30LCSDS1	05/07/13	1803
05	CG-MH-010-201304	WN27A	WN27A	05/07/13	1916
06	CG-MH-010-20130	WN27AMS	WN27AMS	05/07/13	1953
07	CG-MH-010-20130	WN27AMSD	WN27AMSD	05/07/13	2030
08	ES-TS-INF-201304	WN31A	WN31A	05/07/13	2106
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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: 05/08/13 DFTPP Injection Time: 1435

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.6
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	33.2
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	45.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	27.8
365	Greater than 1.0% of mass 198	4.13
441	0.0 - 24.0% of mass 442	17.2 (15.3)2
442	50.0 - 200.0% of mass 198	112.9
443	15.0 - 24.0% of mass 442	21.7 (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		CC0508	CC0508	05/08/13	1450
02	CG-MH-010-201304	WN27A	WN27A9	05/08/13	1527
03	ES-TS-INF-201304	WN31A	WN31A9	05/08/13	1603
04					
05					
06					
07					
08					
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17					
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20					
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be seperated from Diphenylamine

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

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VI SV-3

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VI SV-1

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be seperated from Diphenylamine

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

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

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

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

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

FORM VI SV-3

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/07/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1234

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.068	2.291	0.800	AVRG	10.8	
Bis(2-Chloroethyl)ether	1.487	1.387	0.700	AVRG	-6.7	
2-Chlorophenol	1.595	1.470	0.800	AVRG	-7.8	
1,3-Dichlorobenzene	1.600	1.560	0.010	AVRG	-2.5	
1,4-Dichlorobenzene	1.577	1.532	0.010	AVRG	-2.8	
1,2-Dichlorobenzene	1.510	1.473	0.010	AVRG	-2.4	
Benzyl alcohol	0.870	0.936	0.010	AVRG	7.6	
2,2'-oxybis(1-Chloropropane)	0.459	0.445	0.010	AVRG	-3.0	
2-Methylphenol	1.488	1.448	0.700	AVRG	-2.7	
Hexachloroethane	0.660	0.643	0.300	AVRG	-2.6	
N-Nitroso-di-n-propylamine	0.929	0.906	0.500	AVRG	-2.5	
4-Methylphenol	1.517	1.513	0.600	AVRG	-0.3	
Nitrobenzene	0.390	0.388	0.200	AVRG	-0.5	
Isophorone	0.733	0.715	0.400	AVRG	-2.4	
2-Nitrophenol	0.218	0.238	0.100	AVRG	9.2	
2,4-Dimethylphenol	0.401	0.438	0.200	AVRG	9.2	
Bis(2-Chloroethoxy)methane	0.432	0.435	0.300	AVRG	0.7	
2,4-Dichlorophenol	0.370	0.362	0.200	AVRG	-2.2	
1,2,4-Trichlorobenzene	0.361	0.349	0.010	AVRG	-3.3	
Naphthalene	1.065	1.034	0.700	AVRG	-2.9	
Benzoic acid	20.00	14.27	0.010	2ORDR	-28.6	<-
4-Chloroaniline	0.416	0.440	0.010	AVRG	5.8	
Hexachlorobutadiene	0.214	0.216	0.010	AVRG	0.9	
4-Chloro-3-methylphenol	0.325	0.357	0.200	AVRG	9.8	
2-Methylnaphthalene	0.707	0.708	0.400	AVRG	0.1	
Hexachlorocyclopentadiene	0.440	0.394	0.050	AVRG	-10.4	
2,4,6-Trichlorophenol	0.421	0.417	0.200	AVRG	-1.0	
2,4,5-Trichlorophenol	0.434	0.466	0.200	AVRG	7.4	
2-Chloronaphthalene	1.112	1.111	0.800	AVRG	-0.1	
2-Nitroaniline	0.268	0.317	0.010	AVRG	18.3	
Acenaphthylene	1.885	1.843	0.900	AVRG	-2.2	
Dimethylphthalate	1.201	1.227	0.010	AVRG	2.2	
2,6-Dinitrotoluene	0.281	0.297	0.200	AVRG	5.7	
Acenaphthene	1.136	1.135	0.900	AVRG	-0.1	
3-Nitroaniline	0.232	0.284	0.010	AVRG	22.4	<-
2,4-Dinitrophenol	20.00	12.28	0.010	2ORDR	-38.6	<-
Dibenzofuran	1.553	1.562	0.800	AVRG	0.6	

<- 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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/07/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1234

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	9.505	0.010	2ORDR	-5.0	
2,4-Dinitrotoluene	0.363	0.397	0.200	AVRG	9.4	
Fluorene	1.325	1.299	0.900	AVRG	-2.0	
4-Chlorophenyl-phenylether	0.652	0.676	0.400	AVRG	3.7	
Diethylphthalate	1.206	1.341	0.010	AVRG	11.2	
4-Nitroaniline	0.241	0.290	0.010	AVRG	20.3	<-
4,6-Dinitro-2-methylphenol	20.00	13.26	0.010	2ORDR	-33.7	<-
N-Nitrosodiphenylamine(1)	0.463	0.459	0.010	AVRG	-0.9	
4-Bromophenyl-phenylether	0.226	0.226	0.100	AVRG	0.0	
Hexachlorobenzene	0.270	0.254	0.100	AVRG	-5.9	
Pentachlorophenol	0.189	0.130	0.050	AVRG	-31.2	<-
Phenanthrene	1.091	1.046	0.700	AVRG	-4.1	
Anthracene	1.118	1.099	0.700	AVRG	-1.7	
Carbazole	0.679	0.696	0.010	AVRG	2.5	
Di-n-butylphthalate	1.154	1.211	0.010	AVRG	4.9	
Fluoranthene	1.284	1.316	0.600	AVRG	2.5	
Pyrene	1.238	1.240	0.600	AVRG	0.2	
Butylbenzylphthalate	0.422	0.473	0.010	AVRG	12.1	
Benzo(a)anthracene	1.120	1.135	0.800	AVRG	1.3	
3,3'-Dichlorobenzidine	0.426	0.418	0.010	AVRG	-1.9	
Chrysene	1.013	0.976	0.700	AVRG	-3.6	
bis(2-Ethylhexyl)phthalate	0.532	0.522	0.010	AVRG	-1.9	
Di-n-octylphthalate	0.921	0.870	0.010	AVRG	-5.5	
Benzo(b)fluoranthene	1.188	1.199	0.700	AVRG	0.9	
Benzo(k)fluoranthene	1.251	1.332	0.700	AVRG	6.5	
Benzo(a)pyrene	1.014	1.062	0.700	AVRG	4.7	
Indeno(1,2,3-cd)pyrene	1.169	1.048	0.500	AVRG	-10.4	
Dibenzo(a,h)anthracene	0.897	0.966	0.400	AVRG	7.7	
Benzo(g,h,i)perylene	1.012	1.048	0.500	AVRG	3.6	
N-Nitrosodimethylamine	0.911	0.882	0.010	AVRG	-3.2	
Aniline	4.012	4.233	0.010	AVRG	5.5	
Benzidine	10.00	9.920	0.010	2ORDR	-0.8	
Retene	0.468	0.483	0.010	AVRG	3.2	
Perylene	1.160	1.105	0.010	AVRG	-4.7	
Pyridine	0.801	0.777	0.010	AVRG	-3.0	
1-methylnaphthalene	0.648	0.641	0.010	AVRG	-1.1	

(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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/07/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1234

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.196	0.010	AVRG	-3.3
2,3,4,6-Tetrachlorophenol	0.323	0.342	0.010	AVRG	5.9
Total Benzofluoranthenes	1.153	1.174	0.010	AVRG	1.8
2-Fluorophenol	1.428	1.432	0.010	AVRG	0.3
Phenol-d5	1.847	1.916	0.010	AVRG	3.7
2-Chlorophenol-d4	1.402	1.382	0.010	AVRG	-1.4
1,2-Dichlorobenzene-d4	1.009	0.997	0.010	AVRG	-1.2
Nitrobenzene-d5	0.422	0.421	0.010	AVRG	-0.2
2-Fluorobiphenyl	1.396	1.366	0.010	AVRG	-2.1
2,4,6-Tribromophenol	0.212	0.209	0.010	AVRG	-1.4
Terphenyl-d14	0.778	0.752	0.010	AVRG	-3.3

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

FORM VII SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/08/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1450

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	2.068	2.188	0.800	AVRG	5.8
Bis(2-Chloroethyl)ether	1.487	1.395	0.700	AVRG	-6.2
2-Chlorophenol	1.595	1.476	0.800	AVRG	-7.5
1,3-Dichlorobenzene	1.600	1.572	0.010	AVRG	-1.8
1,4-Dichlorobenzene	1.577	1.534	0.010	AVRG	-2.7
1,2-Dichlorobenzene	1.510	1.480	0.010	AVRG	-2.0
Benzyl alcohol	0.870	0.889	0.010	AVRG	2.2
2,2'-oxybis(1-Chloropropane)	0.459	0.473	0.010	AVRG	3.0
2-Methylphenol	1.488	1.440	0.700	AVRG	-3.2
Hexachloroethane	0.660	0.645	0.300	AVRG	-2.3
N-Nitroso-di-n-propylamine	0.929	0.921	0.500	AVRG	-0.9
4-Methylphenol	1.517	1.466	0.600	AVRG	-3.4
Nitrobenzene	0.390	0.369	0.200	AVRG	-5.4
Isophorone	0.733	0.722	0.400	AVRG	-1.5
2-Nitrophenol	0.218	0.223	0.100	AVRG	2.3
2,4-Dimethylphenol	0.401	0.435	0.200	AVRG	8.5
Bis(2-Chloroethoxy)methane	0.432	0.434	0.300	AVRG	0.5
2,4-Dichlorophenol	0.370	0.324	0.200	AVRG	-12.4
1,2,4-Trichlorobenzene	0.361	0.408	0.010	AVRG	13.0
Naphthalene	1.065	1.051	0.700	AVRG	-1.3
Benzoic acid	20.00	16.60	0.010	2ORDR	-17.0
4-Chloroaniline	0.416	0.429	0.010	AVRG	3.1
Hexachlorobutadiene	0.214	0.217	0.010	AVRG	1.4
4-Chloro-3-methylphenol	0.325	0.360	0.200	AVRG	10.8
2-Methylnaphthalene	0.707	0.708	0.400	AVRG	0.1
Hexachlorocyclopentadiene	0.440	0.392	0.050	AVRG	-10.9
2,4,6-Trichlorophenol	0.421	0.424	0.200	AVRG	0.7
2,4,5-Trichlorophenol	0.434	0.453	0.200	AVRG	4.4
2-Chloronaphthalene	1.112	1.092	0.800	AVRG	-1.8
2-Nitroaniline	0.268	0.302	0.010	AVRG	12.7
Acenaphthylene	1.885	1.796	0.900	AVRG	-4.7
Dimethylphthalate	1.201	1.188	0.010	AVRG	-1.1
2,6-Dinitrotoluene	0.281	0.293	0.200	AVRG	4.3
Acenaphthene	1.136	1.086	0.900	AVRG	-4.4
3-Nitroaniline	0.232	0.276	0.010	AVRG	19.0
2,4-Dinitrophenol	20.00	17.31	0.010	2ORDR	-13.4
Dibenzofuran	1.553	1.531	0.800	AVRG	-1.4

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

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/08/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1450

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	9.215	0.010	2ORDR	-7.8	
2,4-Dinitrotoluene	0.363	0.397	0.200	AVRG	9.4	
Fluorene	1.325	1.293	0.900	AVRG	-2.4	
4-Chlorophenyl-phenylether	0.652	0.590	0.400	AVRG	-9.5	
Diethylphthalate	1.206	1.373	0.010	AVRG	13.8	
4-Nitroaniline	0.241	0.256	0.010	AVRG	6.2	
4,6-Dinitro-2-methylphenol	20.00	17.79	0.010	2ORDR	-11.0	
N-Nitrosodiphenylamine(1)	0.463	0.468	0.010	AVRG	1.1	
4-Bromophenyl-phenylether	0.226	0.226	0.100	AVRG	0.0	
Hexachlorobenzene	0.270	0.305	0.100	AVRG	13.0	
Pentachlorophenol	0.189	0.154	0.050	AVRG	-18.5	
Phenanthrene	1.091	1.060	0.700	AVRG	-2.8	
Anthracene	1.118	1.105	0.700	AVRG	-1.2	
Carbazole	0.679	0.817	0.010	AVRG	20.3	<-
Di-n-butylphthalate	1.154	1.219	0.010	AVRG	5.6	
Fluoranthene	1.284	1.300	0.600	AVRG	1.2	
Pyrene	1.238	1.299	0.600	AVRG	4.9	
Butylbenzylphthalate	0.422	0.475	0.010	AVRG	12.6	
Benzo(a)anthracene	1.120	1.141	0.800	AVRG	1.9	
3,3'-Dichlorobenzidine	0.426	0.523	0.010	AVRG	22.8	<-
Chrysene	1.013	0.972	0.700	AVRG	-4.0	
bis(2-Ethylhexyl)phthalate	0.532	0.515	0.010	AVRG	-3.2	
Di-n-octylphthalate	0.921	0.884	0.010	AVRG	-4.0	
Benzo(b)fluoranthene	1.188	1.176	0.700	AVRG	-1.0	
Benzo(k)fluoranthene	1.251	1.292	0.700	AVRG	3.3	
Benzo(a)pyrene	1.014	1.025	0.700	AVRG	1.1	
Indeno(1,2,3-cd)pyrene	1.169	1.045	0.500	AVRG	-10.6	
Dibenzo(a,h)anthracene	0.897	0.980	0.400	AVRG	9.2	
Benzo(g,h,i)perylene	1.012	1.045	0.500	AVRG	3.3	
N-Nitrosodimethylamine	0.911	0.867	0.010	AVRG	-4.8	
Aniline	4.012	4.107	0.010	AVRG	2.4	
Benzidine	10.00	9.679	0.010	2ORDR	-3.2	
Retene	0.468	0.502	0.010	AVRG	7.3	
Perylene	1.160	1.119	0.010	AVRG	-3.5	
Pyridine	0.801	0.740	0.010	AVRG	-7.6	
1-methylnaphthalene	0.648	0.654	0.010	AVRG	0.9	

(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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/08/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1450

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.169	0.010	AVRG	-5.5
2,3,4,6-Tetrachlorophenol	0.323	0.372	0.010	AVRG	15.2
Total Benzofluoranthenes	1.153	1.136	0.010	AVRG	-1.5
2-Fluorophenol	1.428	1.423	0.010	AVRG	-0.4
Phenol-d5	1.847	1.830	0.010	AVRG	-0.9
2-Chlorophenol-d4	1.402	1.394	0.010	AVRG	-0.6
1,2-Dichlorobenzene-d4	1.009	1.011	0.010	AVRG	0.2
Nitrobenzene-d5	0.422	0.410	0.010	AVRG	-2.8
2-Fluorobiphenyl	1.396	1.341	0.010	AVRG	-3.9
2,4,6-Tribromophenol	0.212	0.223	0.010	AVRG	5.2
Terphenyl-d14	0.778	0.856	0.010	AVRG	10.0

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

FORM VII SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 05/01/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1522

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.597	1.456	0.800	AVRG	-8.8	
Bis(2-Chloroethyl)ether	1.387	1.143	0.700	AVRG	-17.6	
2-Chlorophenol	1.278	1.160	0.800	AVRG	-9.2	
1,3-Dichlorobenzene	1.492	1.397	0.010	AVRG	-6.4	
1,4-Dichlorobenzene	1.453	1.371	0.010	AVRG	-5.6	
1,2-Dichlorobenzene	1.389	1.257	0.010	AVRG	-9.5	
Benzyl alcohol	0.870	0.729	0.010	AVRG	-16.2	
2,2'-oxybis(1-Chloropropane)	2.204	1.743	0.010	AVRG	-20.9	<-
2-Methylphenol	1.211	1.086	0.700	AVRG	-10.3	
Hexachloroethane	0.588	0.509	0.300	AVRG	-13.4	
N-Nitroso-di-n-propylamine	1.041	0.925	0.500	AVRG	-11.1	
4-Methylphenol	1.198	1.123	0.600	AVRG	-6.3	
Nitrobenzene	0.384	0.356	0.200	AVRG	-7.3	
Isophorone	0.670	0.561	0.400	AVRG	-16.3	
2-Nitrophenol	0.178	0.170	0.100	AVRG	-4.5	
2,4-Dimethylphenol	0.336	0.307	0.200	AVRG	-8.6	
Bis(2-Chloroethoxy)methane	0.439	0.376	0.300	AVRG	-14.4	
2,4-Dichlorophenol	0.259	0.256	0.200	AVRG	-1.2	
1,2,4-Trichlorobenzene	0.322	0.301	0.010	AVRG	-6.5	
Naphthalene	25.00	24.21	0.700	2ORDR	-3.2	
Benzoic acid	0.291	0.226	0.010	AVRG	-22.3	<-
4-Chloroaniline	25.00	23.79	0.010	2ORDR	-4.8	
Hexachlorobutadiene	0.196	0.187	0.010	AVRG	-4.6	
4-Chloro-3-methylphenol	0.275	0.270	0.200	AVRG	-1.8	
2-Methylnaphthalene	0.486	0.456	0.400	AVRG	-6.2	
Hexachlorocyclopentadiene	0.321	0.301	0.050	AVRG	-6.2	
2,4,6-Trichlorophenol	0.336	0.310	0.200	AVRG	-7.7	
2,4,5-Trichlorophenol	0.332	0.325	0.200	AVRG	-2.1	
2-Chloronaphthalene	25.00	25.98	0.800	2ORDR	3.9	
2-Nitroaniline	0.296	0.276	0.010	AVRG	-6.8	
Acenaphthylene	1.578	1.421	0.900	AVRG	-9.9	
Dimethylphthalate	1.204	1.072	0.010	AVRG	-11.0	
2,6-Dinitrotoluene	0.257	0.262	0.200	AVRG	1.9	
Acenaphthene	1.021	0.897	0.900	AVRG	-12.1	*
3-Nitroaniline	25.00	22.34	0.010	2ORDR	-10.6	
2,4-Dinitrophenol	0.184	0.157	0.010	AVRG	-14.7	
Dibenzofuran	1.336	1.233	0.800	AVRG	-7.7	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 05/01/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1522

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.130	0.155	0.010	AVRG	19.2	
2,4-Dinitrotoluene	0.348	0.359	0.200	AVRG	3.2	
Fluorene	25.00	26.18	0.900	2ORDR	4.7	
4-Chlorophenyl-phenylether	0.586	0.574	0.400	AVRG	-2.0	
Diethylphthalate	1.115	1.076	0.010	AVRG	-3.5	
4-Nitroaniline	0.196	0.171	0.010	AVRG	-12.8	
4,6-Dinitro-2-methylphenol	0.144	0.129	0.010	AVRG	-10.4	
N-Nitrosodiphenylamine(1)	0.544	0.454	0.010	AVRG	-16.5	
4-Bromophenyl-phenylether	0.219	0.188	0.100	AVRG	-14.2	
Hexachlorobenzene	0.226	0.195	0.100	AVRG	-13.7	
Pentachlorophenol	0.134	0.109	0.050	AVRG	-18.6	
Phenanthrene	0.989	0.837	0.700	AVRG	-15.4	
Anthracene	0.991	0.817	0.700	AVRG	-17.6	
Carbazole	25.00	22.81	0.010	2ORDR	-8.8	
Di-n-butylphthalate	1.249	1.028	0.010	AVRG	-17.7	
Fluoranthene	1.041	0.937	0.600	AVRG	-10.0	
Pyrene	1.092	0.944	0.600	AVRG	-13.6	
Butylbenzylphthalate	0.534	0.471	0.010	AVRG	-11.8	
Benzo(a)anthracene	0.912	0.875	0.800	AVRG	-4.0	
3,3'-Dichlorobenzidine	0.251	0.238	0.010	AVRG	-5.2	
Chrysene	0.931	0.811	0.700	AVRG	-12.9	
bis(2-Ethylhexyl)phthalate	0.589	0.516	0.010	AVRG	-12.4	
Di-n-octylphthalate	0.944	0.826	0.010	AVRG	-12.5	
Benzo(b)fluoranthene	25.00	25.09	0.700	2ORDR	0.4	
Benzo(k)fluoranthene	25.00	22.06	0.700	2ORDR	-11.8	
Benzo(a)pyrene	0.855	0.786	0.700	AVRG	-8.1	
Indeno(1,2,3-cd)pyrene	1.029	0.932	0.500	AVRG	-9.4	
Dibenzo(a,h)anthracene	0.810	0.770	0.400	AVRG	-4.9	
Benzo(g,h,i)perylene	0.880	0.805	0.500	AVRG	-8.5	
N-Nitrosodimethylamine	0.942	0.731	0.010	AVRG	-22.4	<-
Aniline	1.770	1.362	0.010	AVRG	-23.0	<-
Benzidine	0.097	0.016	0.010	AVRG	-83.5	<-
Pyridine	1.494	1.237	0.010	AVRG	-17.2	
1-methylnaphthalene	0.494	0.462	0.010	AVRG	-6.5	
Azobenzene (1,2-DP-Hydrazine	1.267	1.108	0.010	AVRG	-12.5	
2,3,4,6-Tetrachlorophenol	0.285	0.278	0.010	AVRG	-2.4	

(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: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 05/01/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1522

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,2,4,5-Tetrachlorobenzene	0.488	0.422	0.010	AVRG	-13.5
Total Benzofluoranthenes	0.921	0.822	0.010	AVRG	-10.7
2-Fluorophenol	1.296	1.091	0.010	AVRG	-15.8
Phenol-d5	1.517	1.387	0.010	AVRG	-8.6
2-Chlorophenol-d4	1.282	1.137	0.010	AVRG	-11.3
1,2-Dichlorobenzene-d4	0.902	0.774	0.010	AVRG	-14.2
Nitrobenzene-d5	0.401	0.334	0.010	AVRG	-16.7
2-Fluorobiphenyl	1.262	1.024	0.010	AVRG	-18.8
2,4,6-Tribromophenol	0.158	0.161	0.010	AVRG	1.9
Terphenyl-d14	0.702	0.579	0.010	AVRG	-17.5

<- 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: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 05/01/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	458117	8.39	1718341	10.42	1010041	13.29
	UPPER LIMIT	916234		3436682		2020082	
	LOWER LIMIT	229058		859170		505020	
	CCAL	527879	7.79	2035865	9.82	1284118	12.67
	UPPER LIMIT		8.29		10.32		13.17
	LOWER LIMIT		7.29		9.32		12.17
01	WN31MBW1	438393	7.79	1622467	9.82	1004491	12.66
02	WN31LCSW1	471562	7.79	1791265	9.83	1052777	12.67
03	WN31LCSDW1	466859	7.79	1742998	9.82	1026251	12.67
04	ES-MH-001-20	417582	7.79	1567959	9.82	978692	12.66
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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: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 05/01/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1666734	15.66	1675752	19.98	1637524	22.14
	UPPER LIMIT	3333468		3351504		3275048	
	LOWER LIMIT	833367		837876		818762	
	CCAL	2335966	15.02	2407623	19.30	2398007	21.43
	UPPER LIMIT		15.52		19.80		21.93
	LOWER LIMIT		14.52		18.80		20.93
01	WN31MBW1	1734958	15.01	1859186	19.29	1820013	21.43
02	WN31LCSW1	1961936	15.02	1876341	19.29	2065559	21.43
03	WN31LCSDW1	1930755	15.02	1805635	19.29	1994543	21.43
04	ES-MH-001-20	1694592	15.01	1879526	19.29	1929304	21.43
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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: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 05/01/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	2026355	21.09				
	UPPER LIMIT	4052710					
	LOWER LIMIT	1013178					
	CCAL	3025624	20.45				
	UPPER LIMIT		20.95				
	LOWER LIMIT		19.95				
01	WN31MBW1	2478391	20.45				
02	WN31LCSW1	2566961	20.45				
03	WN31LCSDW1	2458367	20.45				
04	ES-MH-001-20	2330220	20.46				
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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: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 05/07/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	53304	8.13	196084	10.74	123166	14.57
	UPPER LIMIT		8.63		11.24		15.07
	LOWER LIMIT		7.63		10.24		14.07
01	WN30MBS1	45490	8.12	177750	10.73	109384	14.56
02	WN30LCSS1	43320	8.12	164232	10.73	103234	14.56
03	WN30LCSDS1	41011	8.12	153177	10.73	97637	14.56
04	CG-MH-010-20	37725	8.12	153422	10.73	98941	14.56
05	CG-MH-010-20	41218	8.12	160389	10.73	104861	14.56
06	CG-MH-010-20	36925	8.12	147667	10.73	96968	14.56
07	ES-TS-INF-20	40105	8.12	157068	10.73	95378	14.56
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 05/07/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	216894	17.79	236097	22.99	207013	25.27
	UPPER LIMIT		18.29		23.49		25.77
	LOWER LIMIT		17.29		22.49		24.77
01	WN30MBS1	187454	17.79	194527	22.97	165936	25.26
02	WN30LCSS1	179602	17.79	195115	22.97	172204	25.26
03	WN30LCSDS1	169618	17.79	188414	22.97	167622	25.26
04	CG-MH-010-20	165938	17.79	151066	23.01	149092	25.33
05	CG-MH-010-20	174739	17.79	166399	23.02	160390	25.34
06	CG-MH-010-20	163337	17.79	155420	23.00	139410	25.32
07	ES-TS-INF-20	153652	17.79	165029	23.00	157251	25.31
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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: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 05/07/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	290407	24.16				
	UPPER LIMIT		24.66				
	LOWER LIMIT		23.66				
01	WN30MBS1	232557	24.16				
02	WN30LCSS1	236239	24.16				
03	WN30LCSDS1	228678	24.16				
04	CG-MH-010-20	194771	24.19				
05	CG-MH-010-20	214048	24.22				
06	CG-MH-010-20	195600	24.19				
07	ES-TS-INF-20	206574	24.18				
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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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 05/08/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	54414	8.11	200917	10.70	129691	14.53
	UPPER LIMIT		8.61		11.20		15.03
	LOWER LIMIT		7.61		10.20		14.03
01	CG-MH-010-20	46508	8.10	180924	10.70	111784	14.53
02	ES-TS-INF-20	47698	8.10	177198	10.70	107487	14.52
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 05/08/13

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	ICAL MIDPT	179783		18.82		192841		23.90		184310		26.35	
	UPPER LIMIT	359566				385682				368620			
	LOWER LIMIT	89892				96420				92155			
	CCAL	221407		17.76		226704		22.94		203438		25.22	
	UPPER LIMIT			18.26				23.44				25.72	
	LOWER LIMIT			17.26				22.44				24.72	
01	CG-MH-010-20	188992		17.75		172453		22.94		166740		25.23	
02	ES-TS-INF-20	162964		17.75		168170		22.93		167173		25.22	
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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: WN31

Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A

Ical Date: 04/29/13

Instrument ID: NT10

Cont. Cal Date: 05/08/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	281343	24.11				
	UPPER LIMIT		24.61				
	LOWER LIMIT		23.61				
01	CG-MH-010-20	218441	24.12				
02	ES-TS-INF-20	220595	24.11				
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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: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: ES-TS-INF-20130424-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 21:06
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.20 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 60.3 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**50**	**120**	**140**
106-46-7	1,4-Dichlorobenzene	30	120	< 120 U
120-82-1	1,2,4-Trichlorobenzene	46	120	< 120 U
118-74-1	Hexachlorobenzene	32	120	< 120 U
87-68-3	Hexachlorobutadiene	24	120	< 120 U
131-11-3	**Dimethylphthalate**	**34**	**120**	**1,500**
84-66-2	**Diethylphthalate**	**82**	**120**	**95 JB**
85-68-7	**Butylbenzylphthalate**	**72**	**120**	**2,000**
95-48-7	2-Methylphenol	45	120	< 120 U
105-67-9	2,4-Dimethylphenol	72	500	< 500 U
86-30-6	**N-Nitrosodiphenylamine**	**34**	**500**	**430 J**
100-51-6	**Benzyl Alcohol**	**180**	**500**	**760**
87-86-5	Pentachlorophenol	360	1,200	< 1,200 U
95-50-1	1,2-Dichlorobenzene	28	120	< 120 U
541-73-1	1,3-Dichlorobenzene	33	120	< 120 U
621-64-7	N-Nitroso-Di-N-Propylamine	240	300	< 300 U
62-75-9	N-Nitrosodimethylamine	79	620	< 620 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	58.4%
d14-p-Terphenyl	79.2%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977

Client ID	FPH	TER	TOT OUT
MB-050113	55.7%	69.8%	0
LCS-050113	58.0%	73.4%	0
LCSD-050113	67.1%	74.0%	0
ES-TS-INF-20130424-S	58.4%	79.2%	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: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-050113**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-050113
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/10/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 05/01/13

Sample Amount LCS: 10.00 g-dry-wt
LCSD: 10.00 g-dry-wt
Date Analyzed LCS: 05/07/13 17:27
LCSD: 05/07/13 18:03
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	344	500	68.8%	356	500	71.2%	3.4%
1,4-Dichlorobenzene	269	500	53.8%	321	500	64.2%	17.6%
1,2,4-Trichlorobenzene	278	500	55.6%	331	500	66.2%	17.4%
Hexachlorobenzene	283	500	56.6%	316	500	63.2%	11.0%
Hexachlorobutadiene	274	500	54.8%	326	500	65.2%	17.3%
Dimethylphthalate	372	500	74.4%	394	500	78.8%	5.7%
Diethylphthalate	386 B	500	77.2%	405 B	500	81.0%	4.8%
Butylbenzylphthalate	485	500	97.0%	506	500	101%	4.2%
2-Methylphenol	248	500	49.6%	296	500	59.2%	17.6%
2,4-Dimethylphenol	623	1500	41.5%	760	1500	50.7%	19.8%
N-Nitrosodiphenylamine	394	500	78.8%	427	500	85.4%	8.0%
Benzyl Alcohol	332	500	66.4%	394	500	78.8%	17.1%
Pentachlorophenol	906 Q	1500	60.4%	940 Q	1500	62.7%	3.7%
1,2-Dichlorobenzene	272	500	54.4%	324	500	64.8%	17.4%
1,3-Dichlorobenzene	268	500	53.6%	317	500	63.4%	16.8%
N-Nitroso-Di-N-Propylamine	294	500	58.8%	348	500	69.6%	16.8%
N-Nitrosodimethylamine	770	1500	51.3%	912	1500	60.8%	16.9%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
2-Fluorophenol	58.0%	67.1%
d14-p-Terphenyl	73.4%	74.0%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WN30MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: WN31

Project: JELD-WEN

Lab File ID: WN30MBS1

Date Extracted: 05/01/13

Instrument ID: NT10

Date Analyzed: 05/07/13

Matrix: SOLID

Time Analyzed: 1650

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WN30LCSS1	WN30LCSS1	WN30LCSS1	05/07/13
02	WN30LCSDS1	WN30LCSDS1	WN30LCSDS1	05/07/13
03	CG-MH-010-201304	WN27A	WN27A	05/07/13
04	CG-MH-010-20130	WN27AMS	WN27AMS	05/07/13
05	CG-MH-010-20130	WN27AMSD	WN27AMSD	05/07/13
06	ES-TS-INF-201304	WN31A	WN31A	05/07/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-050113**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-050113
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/10/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 05/01/13
Date Analyzed: 05/07/13 16:50
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**	**14**
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	55.7%
d14-p-Terphenyl	69.8%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

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

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

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0429A	IC0429A	04/29/13	1653
02		IC0429C	IC0429C	04/29/13	1807
03		IC0429D	IC0429D	04/29/13	1844
04		IC0429F	IC0429F	04/29/13	1957
05		IC0429G	IC0429G	04/29/13	2034
06		IC0429H	IC0429H	04/29/13	2111
07		IC0429I	IC0429I	04/29/13	2147
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FORM V SV

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: 05/07/13 DFTPP Injection Time: 1219

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.5
68	Less than 2.0% of mass 69	0.5 (1.7)1
69	Mass 69 relative abundance	32.6
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	10.0 - 80.0% of mass 198	44.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1.0% of mass 198	3.85
441	0.0 - 24.0% of mass 442	16.4 (15.3)2
442	50.0 - 200.0% of mass 198	107.3
443	15.0 - 24.0% of mass 442	20.5 (19.1)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		CC0507A	CC0507A	05/07/13	1310
02	WN30MBS1	WN30MBS1	WN30MBS1	05/07/13	1650
03	WN30LCSS1	WN30LCSS1	WN30LCSS1	05/07/13	1727
04	WN30LCSDS1	WN30LCSDS1	WN30LCSDS1	05/07/13	1803
05	CG-MH-010-201304	WN27A	WN27A	05/07/13	1916
06	CG-MH-010-20130	WN27AMS	WN27AMS	05/07/13	1953
07	CG-MH-010-20130	WN27AMSD	WN27AMSD	05/07/13	2030
08	ES-TS-INF-201304	WN31A	WN31A	05/07/13	2106
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6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

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

LAB FILE ID: RRF0.05=IC0429F RRF0.1=IC0429H RRF0.2=IC0429C
RRF0.5=IC0429I RRF1 =IC0429D RRF2.5=IC0429G
RRF5 =IC0429A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	$\overline{RRF}$	%RSD /R^2
Phenol	2.193	1.937	2.061	1.929	1.947	2.088	1.982	2.020	4.9
1,3-Dichlorobenzene	1.876	1.752	1.728	1.588	1.573	1.595	1.539	1.664	7.4
1,4-Dichlorobenzene	1.919	1.703	1.739	1.578	1.552	1.578	1.529	1.657	8.5
1,2-Dichlorobenzene	1.801	1.618	1.674	1.494	1.476	1.511	1.447	1.574	8.2
Benzyl alcohol	1.014	0.924	0.960	0.916	0.949	1.024	0.993	0.968	4.4
2-Methylphenol	1.595	1.392	1.487	1.364	1.397	1.471	1.401	1.444	5.6
N-Nitroso-di-n-propylamine	0.914	0.806	0.850	0.799	0.801	0.850	0.783	0.829	5.5
4-Methylphenol	1.588	1.377	1.517	1.385	1.444	1.521	1.461	1.470	5.2
2,4-Dimethylphenol	0.406	0.356	0.404	0.372	0.385	0.404	0.385	0.387	4.8
1,2,4-Trichlorobenzene	0.443	0.394	0.409	0.363	0.361	0.366	0.347	0.383	8.8
Hexachlorobutadiene	0.272	0.237	0.244	0.221	0.219	0.226	0.215	0.233	8.5
Dimethylphthalate	1.295	1.185	1.226	1.063	1.108	1.111	1.090	1.154	7.3
Diethylphthalate	1.489	1.226	1.394	1.181	1.282	1.302	1.275	1.307	8.0
N-Nitrosodiphenylamine (1)	0.394	0.383	0.485	0.433	0.463	0.459	0.453	0.438	8.5
Hexachlorobenzene	0.376	0.301	0.330	0.268	0.276	0.273	0.274	0.300	13.4
Pentachlorophenol	0.145	0.138	0.182	0.166	0.190	0.205	0.220	0.178	17.1
Butylbenzylphthalate	0.361	0.291	0.415	0.320	0.389	0.402	0.419	0.371	13.3
Dibenzo(a,h)anthracene	0.974	0.783	0.989	0.789	0.879	0.896	0.932	0.892	9.2
N-Nitrosodimethylamine	0.902	0.860	0.851	0.863	0.840	0.902	0.815	0.862	3.7
2-Fluorophenol	1.520	1.352	1.446	1.312	1.367	1.434	1.396	1.404	4.9
Terphenyl-d14	0.565	0.465	0.538	0.444	0.480	0.471	0.478	0.492	8.8

(1) Cannot be seperated from Diphenylamine

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 05/07/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1310

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.020	2.250	0.800	AVRG	11.4	
1,3-Dichlorobenzene	1.664	1.554	0.010	AVRG	-6.6	
1,4-Dichlorobenzene	1.657	1.553	0.010	AVRG	-6.3	
1,2-Dichlorobenzene	1.574	1.468	0.010	AVRG	-6.7	
Benzyl alcohol	0.968	1.009	0.010	AVRG	4.2	
2-Methylphenol	1.444	1.422	0.700	AVRG	-1.5	
N-Nitroso-di-n-propylamine	0.829	0.798	0.500	AVRG	-3.7	
4-Methylphenol	1.470	1.468	0.600	AVRG	-0.1	
2,4-Dimethylphenol	0.387	0.384	0.200	AVRG	-0.8	
1,2,4-Trichlorobenzene	0.383	0.361	0.010	AVRG	-5.7	
Hexachlorobutadiene	0.233	0.217	0.010	AVRG	-6.9	
Dimethylphthalate	1.154	1.137	0.010	AVRG	-1.5	
Diethylphthalate	1.307	1.324	0.010	AVRG	1.3	
N-Nitrosodiphenylamine(1)	0.438	0.469	0.010	AVRG	7.1	
Hexachlorobenzene	0.300	0.274	0.100	AVRG	-8.7	
Pentachlorophenol	0.178	0.068	0.050	AVRG	-61.8	<-
Butylbenzylphthalate	0.371	0.425	0.010	AVRG	14.6	
Dibenzo(a,h)anthracene	0.892	0.940	0.400	AVRG	5.4	
N-Nitrosodimethylamine	0.862	0.768	0.010	AVRG	-10.9	
2-Fluorophenol	1.405	1.323	0.010	AVRG	-5.8	
Terphenyl-d14	0.492	0.484	0.010	AVRG	-1.6	

(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: WN31 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429D Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 05/07/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	52658	8.98	192325	11.65	109274	15.54
	UPPER LIMIT	105316		384650		218548	
	LOWER LIMIT	26329		96162		54637	
	CCAL	56926	8.13	209171	10.73	117080	14.56
	UPPER LIMIT		8.63		11.23		15.06
	LOWER LIMIT		7.63		10.23		14.06
01	WN30MBS1	53803	8.13	206635	10.73	117783	14.56
02	WN30LCSS1	51689	8.12	189427	10.73	111234	14.56
03	WN30LCSDS1	48500	8.12	178583	10.72	105548	14.56
04	CG-MH-010-20	44455	8.13	180083	10.73	105963	14.56
05	CG-MH-010-20	48313	8.12	187744	10.73	112730	14.56
06	CG-MH-010-20	44166	8.13	171247	10.73	102716	14.56
07	ES-TS-INF-20	47115	8.13	182293	10.72	101406	14.56
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429D Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 05/07/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	203933	18.82	223647	23.90	211919	26.35
	UPPER LIMIT	407866		447294		423838	
	LOWER LIMIT	101966		111824		105960	
	CCAL	224897	17.79	250780	22.98	223069	25.26
	UPPER LIMIT		18.29		23.48		25.76
	LOWER LIMIT		17.29		22.48		24.76
01	WN30MBS1	224711	17.79	238578	22.98	204177	25.26
02	WN30LCSS1	212909	17.79	239074	22.98	211700	25.26
03	WN30LCSDS1	200471	17.79	226844	22.98	205354	25.26
04	CG-MH-010-20	194098	17.79	183569	23.01	179016	25.32
05	CG-MH-010-20	205606	17.80	199913	23.02	205001	25.35
06	CG-MH-010-20	190403	17.79	185948	23.01	172442	25.32
07	ES-TS-INF-20	175865	17.79	198466	23.01	192962	25.31
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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.

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: ES-MH-001-20130424-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WN31B
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/07/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 04/30/13
Date Analyzed: 05/04/13 16:29
Instrument/Analyst: NT11/VTS

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

CAS Number	Analyte	DL	LOQ	Result
91-20-3	**Naphthalene**	**0.00085**	**0.010**	**0.077 B**
91-57-6	**2-Methylnaphthalene**	**0.00072**	**0.010**	**0.029**
90-12-0	**1-Methylnaphthalene**	**0.00088**	**0.010**	**0.016**
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	**Fluorene**	**0.0014**	**0.010**	**0.021**
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	84.3%
d10-2-Methylnaphthalene	77.7%
d14-Dibenzo(a,h)anthracen	76.3%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	FLN	MNP	DBA	TOT OUT
MB-043013	84.0%	73.0%	78.3%	0
LCS-043013	84.7%	77.7%	75.0%	0
LCSD-043013	87.7%	80.7%	75.7%	0
ES-MH-001-20130424-W	84.3%	77.7%	76.3%	0

	LCS/MB LIMITS	QC LIMITS
(FLN) = d10-Fluoranthene	(30-160)	(30-150)
(MNP) = d10-2-Methylnaphthalene	(40-93)	(35-94)
(DBA) = d14-Dibenzo(a,h)anthracene	(31-115)	(26-115)

Prep Method: SW3510C
Log Number Range: 13-8694 to 13-8694

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-043013**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-043013
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/07/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/30/13

Date Analyzed LCS: 05/04/13 15:31
LCSD: 05/04/13 16:00
Instrument/Analyst LCS: NT11/VTS
LCSD: NT11/VTS

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	0.281 B	0.300	93.7%	0.299 B	0.300	99.7%	6.2%
2-Methylnaphthalene	0.221	0.300	73.7%	0.237	0.300	79.0%	7.0%
1-Methylnaphthalene	0.220	0.300	73.3%	0.236	0.300	78.7%	7.0%
Acenaphthylene	0.232	0.300	77.3%	0.245	0.300	81.7%	5.5%
Acenaphthene	0.224	0.300	74.7%	0.240	0.300	80.0%	6.9%
Fluorene	0.232	0.300	77.3%	0.251	0.300	83.7%	7.9%
Phenanthrene	0.223	0.300	74.3%	0.244	0.300	81.3%	9.0%
Anthracene	0.212	0.300	70.7%	0.226	0.300	75.3%	6.4%
Fluoranthene	0.234	0.300	78.0%	0.252	0.300	84.0%	7.4%
Pyrene	0.233	0.300	77.7%	0.244	0.300	81.3%	4.6%
Benzo(a)anthracene	0.234	0.300	78.0%	0.246	0.300	82.0%	5.0%
Chrysene	0.230	0.300	76.7%	0.246	0.300	82.0%	6.7%
Benzo(b)fluoranthene	0.213	0.300	71.0%	0.229	0.300	76.3%	7.2%
Benzo(k)fluoranthene	0.231	0.300	77.0%	0.251	0.300	83.7%	8.3%
Benzo(a)pyrene	0.199	0.300	66.3%	0.206	0.300	68.7%	3.5%
Indeno(1,2,3-cd)pyrene	0.226	0.300	75.3%	0.240	0.300	80.0%	6.0%
Dibenz(a,h)anthracene	0.203	0.300	67.7%	0.214	0.300	71.3%	5.3%
Benzo(g,h,i)perylene	0.219	0.300	73.0%	0.230	0.300	76.7%	4.9%
Dibenzofuran	0.222	0.300	74.0%	0.237	0.300	79.0%	6.5%
Total Benzofluoranthenes	0.663	0.900	73.7%	0.715	0.900	79.4%	7.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	84.7%	87.7%
d10-2-Methylnaphthalene	77.7%	80.7%
d14-Dibenzo(a,h)anthracene	75.0%	75.7%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WN31MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WN31

Project: NPDES SAMPLING SUPPO

Lab File ID: WN31MB

Date Extracted: 04/30/13

Instrument ID: NT11

Date Analyzed: 05/04/13

Matrix: LIQUID

Time Analyzed: 1502

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WN31LCSW1	WN31LCSW1	WN31SB	05/04/13
02	WN31LCSDW1	WN31LCSDW1	WN31SBD	05/04/13
03	ES-MH-001-201304	WN31B	WN31B	05/04/13
04				
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-043013**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-043013
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/07/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/30/13
Date Analyzed: 05/04/13 15:02
Instrument/Analyst: NT11/VTS

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

CAS Number	Analyte	DL	LOQ	Result
91-20-3	**Naphthalene**	**0.00085**	**0.010**	**0.066**
91-57-6	2-Methylnaphthalene	0.00072	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	Fluorene	0.0014	0.010	< 0.010 U
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	84.0%
d10-2-Methylnaphthalene	73.0%
d14-Dibenzo(a,h)anthracen	78.3%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 02/23/13 DFTPP Injection Time: 0936

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.1
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	23.6
365	Greater than 1.0% of mass 198	2.90
441	0.0 - 24.0% of mass 442	13.0 (14.7)2
442	50.0 - 200.0% of mass 198	88.6
443	15.0 - 24.0% of mass 442	17.0 (19.1)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	IC0223A	02/23/13	0951
02		SIM 1000	IC0223B	02/23/13	1020
03		SIM 10	IC0223C	02/23/13	1050
04		SIM 500	IC0223D	02/23/13	1119
05		SIM 50	IC0223E	02/23/13	1148
06		SIM 100	IC0223F	02/23/13	1217
07					
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 05/04/13 DFTPP Injection Time: 1107

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.4
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	47.9
197	Less than 2.0% of mass 198	0.1
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	24.9
365	Greater than 1.0% of mass 198	2.92
441	0.0 - 24.0% of mass 442	14.8 (14.6)2
442	50.0 - 200.0% of mass 198	101.1
443	15.0 - 24.0% of mass 442	19.3 (19.1)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	CC0504	05/04/13	1122
02	WN31MBW1	WN31MBW1	WN31MB	05/04/13	1502
03	WN31LCSW1	WN31LCSW1	WN31SB	05/04/13	1531
04	WN31LCSDW1	WN31LCSDW1	WN31SBD	05/04/13	1600
05	ES-MH-001-201304	WN31B	WN31B	05/04/13	1629
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING

Instrument ID: NT11 Calibration Date: 02/23/13

LAB FILE ID: RRF10 =IC0223C RRF50 =IC0223E RRF100=IC0223F
RRF250=IC0223A RRF500=IC0223D RRF1000=IC0223B

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.180	1.070	1.122	1.072	1.056	1.070	1.095	4.3
2-Methylnaphthalene	0.700	0.654	0.700	0.688	0.678	0.691	0.685	2.5
Acenaphthylene	1.840	1.680	1.755	1.786	1.782	1.871	1.786	3.7
Acenaphthene	1.228	1.136	1.199	1.164	1.165	1.180	1.179	2.7
Dibenzofuran	1.818	1.675	1.786	1.661	1.669	1.694	1.717	3.9
Fluorene	1.337	1.223	1.283	1.270	1.271	1.306	1.282	3.0
Phenanthrene	1.291	1.191	1.283	1.207	1.215	1.224	1.235	3.4
Anthracene	1.162	1.072	1.181	1.160	1.159	1.219	1.159	4.2
Fluoranthene	1.216	1.137	1.251	1.236	1.236	1.252	1.221	3.6
Pyrene	1.744	1.537	1.695	1.674	1.700	1.699	1.675	4.3
Benzo(a)anthracene	1.430	1.292	1.401	1.399	1.379	1.402	1.384	3.4
Chrysene	1.514	1.356	1.486	1.406	1.411	1.408	1.430	4.1
Benzo(b)fluoranthene	1.639	1.535	1.649	1.505	1.610	1.572	1.585	3.6
Benzo(k)fluoranthene	1.829	1.548	1.664	1.774	1.758	1.769	1.724	5.9
Benzo(j)fluoranthene	1.711	1.801	1.886	1.701	1.704	1.693	1.749	4.5
Benzo(a)pyrene	1.375	1.251	1.359	1.348	1.342	1.352	1.338	3.3
Indeno(1,2,3-cd)pyrene	1.643	1.524	1.703	1.647	1.676	1.686	1.646	3.9
Dibenzo(a,h)anthracene	1.423	1.201	1.366	1.301	1.324	1.329	1.324	5.6
Benzo(g,h,i)perylene	1.637	1.395	1.504	1.428	1.448	1.427	1.473	6.0
1-methylnaphthalene	0.740	0.654	0.700	0.684	0.672	0.684	0.689	4.3
Perylene	1.606	1.450	1.575	1.502	1.503	1.508	1.524	3.7
2-Methylnaphthalene-d10	0.630	0.616	0.649	0.635	0.629	0.638	0.633	1.7
Dibenzo(a,h)anthracene-d14	1.083	1.081	1.180	1.163	1.172	1.179	1.143	4.2
Fluoranthene-d10	0.998	0.959	1.044	1.065	1.060	1.094	1.037	4.7

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING

Instrument ID: NT11 Cont. Calib. Date: 05/04/13

Init. Calib. Date: 02/23/13 Cont. Calib. Time: 1122

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.095	1.058	0.700	AVRG	-3.4
2-Methylnaphthalene	0.685	0.665	0.400	AVRG	-2.9
Acenaphthylene	1.786	1.752	0.900	AVRG	-1.9
Acenaphthene	1.179	1.145	0.900	AVRG	-2.9
Dibenzofuran	1.717	1.637	0.800	AVRG	-4.6
Fluorene	1.282	1.223	0.900	AVRG	-4.6
Phenanthrene	1.235	1.156	0.700	AVRG	-6.4
Anthracene	1.159	1.112	0.700	AVRG	-4.0
Fluoranthene	1.221	1.177	0.600	AVRG	-3.6
Pyrene	1.675	1.536	0.600	AVRG	-8.3
Benzo(a)anthracene	1.384	1.295	0.800	AVRG	-6.4
Chrysene	1.430	1.319	0.700	AVRG	-7.8
Benzo(b)fluoranthene	1.585	1.332	0.700	AVRG	-16.0
Benzo(k)fluoranthene	1.724	1.645	0.700	AVRG	-4.6
Benzo(j)fluoranthene	1.749	1.617	0.010	AVRG	-7.5
Benzo(a)pyrene	1.338	1.237	0.700	AVRG	-7.5
Indeno(1,2,3-cd)pyrene	1.646	1.547	0.500	AVRG	-6.0
Dibenzo(a,h)anthracene	1.324	1.203	0.400	AVRG	-9.1
Benzo(g,h,i)perylene	1.473	1.354	0.500	AVRG	-8.1
1-methylnaphthalene	0.689	0.660	0.010	AVRG	-4.2
Perylene	1.524	1.396	0.010	AVRG	-8.4
2-Methylnaphthalene-d10	0.633	0.618	0.010	AVRG	-2.4
Dibenzo(a,h)anthracene-d14	1.143	1.066	0.010	AVRG	-6.7
Fluoranthene-d10	1.037	1.008	0.010	AVRG	-2.8

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING

Ical Midpoint ID: IC0223A Ical Date: 02/23/13

Instrument ID: NT11 Cont. Cal Date: 05/04/13

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	255285	6.13	142891	9.11	220853	11.76
	UPPER LIMIT	510570		285782		441706	
	LOWER LIMIT	127642		71446		110426	
	CCAL	200996	6.08	112455	9.05	175490	11.70
	UPPER LIMIT		6.58		9.55		12.20
	LOWER LIMIT		5.58		8.55		11.20
01	WN31MBW1	220114	6.08	127326	9.05	200561	11.70
02	WN31LCSW1	212766	6.08	121608	9.05	194550	11.70
03	WN31LCSDW1	209498	6.08	119415	9.05	188878	11.70
04	ES-MH-001-20	209125	6.08	120946	9.05	191894	11.70
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IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WN31 Project: NPDES SAMPLING

Ical Midpoint ID: IC0223A Ical Date: 02/23/13

Instrument ID: NT11 Cont. Cal Date: 05/04/13

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	162525	16.47	139028	19.06		
	UPPER LIMIT	325050		278056			
	LOWER LIMIT	81262		69514			
	CCAL	131978	16.39	115819	18.96		
	UPPER LIMIT		16.89		19.46		
	LOWER LIMIT		15.89		18.46		
01	WN31MBW1	148928	16.39	135780	18.96		
02	WN31LCSW1	141893	16.39	128822	18.96		
03	WN31LCSDW1	140504	16.39	124339	18.96		
04	ES-MH-001-20	134837	16.39	134780	18.97		
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IS4 = Chrysene-d12
IS5 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: ES-TS-INF-20130424-S**

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/15/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 04/29/13
Date Analyzed: 05/08/13 00:24
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.76	0.65-0.89		0.998	3.81	
2,3,7,8-TCDD	0.80	0.65-0.89		0.998	1.29	
1,2,3,7,8-PeCDF	1.41	1.32-1.78		0.998	2.51	X
2,3,4,7,8-PeCDF	1.52	1.32-1.78		0.998	4.01	
1,2,3,7,8-PeCDD	1.53	1.32-1.78		0.998	9.03	
1,2,3,4,7,8-HxCDF	1.21	1.05-1.43		0.998	6.74	
1,2,3,6,7,8-HxCDF	1.23	1.05-1.43		0.998	6.71	
2,3,4,6,7,8-HxCDF	1.22	1.05-1.43		0.998	9.27	
1,2,3,7,8,9-HxCDF	1.19	1.05-1.43		0.998	2.12	
1,2,3,4,7,8-HxCDD	1.23	1.05-1.43		0.998	10.4	
1,2,3,6,7,8-HxCDD	1.20	1.05-1.43		0.998	23.9	
1,2,3,7,8,9-HxCDD	1.29	1.05-1.43		0.998	21.6	
1,2,3,4,6,7,8-HpCDF	1.06	0.88-1.20		0.998	96.8	
1,2,3,4,7,8,9-HpCDF	1.10	0.88-1.20		0.998	5.93	
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		0.998	586	
OCDF	0.90	0.76-1.02		2.00	238	
OCDD	0.88	0.76-1.02		2.00	6,210	E

Homologue Group	EDL	RL	Result	
Total TCDF		0.998	87.0	EMPC
Total TCDD		0.998	30.9	EMPC
Total PeCDF		2.00	130	EMPC
Total PeCDD		0.998	63.7	EMPC
Total HxCDF		2.00	169	EMPC
Total HxCDD		2.00	274	EMPC
Total HpCDF		2.00	244	EMPC
Total HpCDD		2.00	1,460	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 28.9

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 28.9

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: ES-TS-INF-20130424-S**
Page 1 of 1

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 04/29/13
Date Analyzed: 05/08/13 00:24
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	61.7	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	62.9	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	61.9	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	51.5	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	61.1	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	73.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	69.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	64.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	66.9	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	69.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	67.9	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.46	0.37-0.51	52.4	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	52.1	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	53.6	23-140	
13C-OCDD	0.89	0.76-1.02	31.9	17-157	
37Cl4-2,3,7,8-TCDD			81.5	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: OPR-042913

Lab Sample ID: OPR-042913
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 17:25
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.77	0.65-0.89	0.200	25.8
2,3,7,8-TCDD	0.75	0.65-0.89	0.200	21.7
1,2,3,7,8-PeCDF	1.48	1.32-1.78	1.00	113
2,3,4,7,8-PeCDF	1.53	1.32-1.78	1.00	113
1,2,3,7,8-PeCDD	1.51	1.32-1.78	1.00	107
1,2,3,4,7,8-HxCDF	1.22	1.05-1.43	1.00	107
1,2,3,6,7,8-HxCDF	1.23	1.05-1.43	1.00	108
2,3,4,6,7,8-HxCDF	1.25	1.05-1.43	1.00	112
1,2,3,7,8,9-HxCDF	1.26	1.05-1.43	1.00	110
1,2,3,4,7,8-HxCDD	1.23	1.05-1.43	1.00	105
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	1.00	100
1,2,3,7,8,9-HxCDD	1.25	1.05-1.43	1.00	104
1,2,3,4,6,7,8-HpCDF	1.03	0.88-1.20	1.00	132
1,2,3,4,7,8,9-HpCDF	1.02	0.88-1.20	1.00	108
1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20	1.00	106
OCDF	0.89	0.76-1.02	2.00	219
OCDD	0.88	0.76-1.02	2.00	203

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	29.9	EMPC
Total TCDD		1.00	22.5	
Total PeCDF		2.00	237	EMPC
Total PeCDD		1.00	108	EMPC
Total HxCDF		2.00	441	EMPC
Total HxCDD		2.00	310	EMPC
Total HpCDF		2.00	242	
Total HpCDD		2.00	109	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-042913**
Page 1 of 1

Lab Sample ID: OPR-042913
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 17:25
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	100	22-152	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	82.8	20-175	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	85.8	21-192	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	81.0	13-328	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	77.4	21-227	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	88.7	19-202	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	92.6	21-159	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	86.2	22-176	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	86.4	17-205	
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	85.8	21-193	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	88.8	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	82.5	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	84.6	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	85.8	26-166	
13C-OCDD	0.90	0.76-1.02	65.6	13-198	
37Cl4-2,3,7,8-TCDD			90.4	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: OPR-042913

Lab Sample ID: OPR-042913
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 17:25
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	25.8	20.0	129	75-158
2,3,7,8-TCDD	21.7	20.0	108	67-158
1,2,3,7,8-PeCDF	113	100	113	80-134
2,3,4,7,8-PeCDF	113	100	113	68-160
1,2,3,7,8-PeCDD	107	100	107	70-142
1,2,3,4,7,8-HxCDF	107	100	107	72-134
1,2,3,6,7,8-HxCDF	108	100	108	84-130
2,3,4,6,7,8-HxCDF	112	100	112	70-156
1,2,3,7,8,9-HxCDF	110	100	110	78-130
1,2,3,4,7,8-HxCDD	105	100	105	70-164
1,2,3,6,7,8-HxCDD	100	100	100	76-134
1,2,3,7,8,9-HxCDD	104	100	104	64-162
1,2,3,4,6,7,8-HpCDF	132	100	132	82-132
1,2,3,4,7,8,9-HpCDF	108	100	108	78-138
1,2,3,4,6,7,8-HpCDD	106	100	106	70-140
OCDF	219	200	110	63-170
OCDD	203	200	102	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
WN27MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WN27 Project: NPDES

Matrix: (Soil/Water/Ash/Tissue/Oil) SOIL Lab Sample ID: WN27MBS

Sample wt/vol: 10 (g/ml) g Lab File ID: 13050704

Water Sample Prep: (sep/spe) Date Received: 23-APR-13

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 29-APR-13

Instrument ID: AUTOSPEC1 Date Analyzed: 07-MAY-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WN27OPR	WN27OPR	13050705	05/07/13
CG-MH-010-20130423-S	WN27A	13050712	05/07/13
ES-TS-INF-20130424-S	WN31A	13050713	05/08/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-042913**

Lab Sample ID: MB-042913
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/15/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 16:33
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.69	0.65-0.89		1.00	0.0780	J
2,3,7,8-TCDD	0.18	0.65-0.89		1.00	0.174	JEMPC
1,2,3,7,8-PeCDF	1.26	1.32-1.78		1.00	0.0820	JEMPC
2,3,4,7,8-PeCDF	0.57	1.32-1.78		1.00	0.0740	JEMPC
1,2,3,7,8-PeCDD	0.89	1.32-1.78		1.00	0.0420	JEMPC
1,2,3,4,7,8-HxCDF	1.94	1.05-1.43		1.00	0.0560	JEMPC
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0260	1.00	< 0.0260	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0320	1.00	< 0.0320	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0400	1.00	< 0.0400	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0400	1.00	< 0.0400	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0400	1.00	< 0.0400	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0420	1.00	< 0.0420	U
1,2,3,4,6,7,8-HpCDF		0.88-1.20	0.0440	1.00	< 0.0440	U
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0700	1.00	< 0.0700	U
1,2,3,4,6,7,8-HpCDD	0.69	0.88-1.20		1.00	0.208	JEMPC
OCDF	0.39	0.76-1.02		2.00	0.118	JEMPC
OCDD	0.96	0.76-1.02		2.00	2.08	

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	0.0776	
Total TCDD		1.00	0.175	EMPC
Total PeCDF		2.00	0.186	EMPC
Total PeCDD		1.00	0.127	EMPC
Total HxCDF		2.00	0.0558	EMPC
Total HxCDD	0.0420	2.00	0.176	EMPC
Total HpCDF	0.0700	2.00	0.120	
Total HpCDD		2.00	0.361	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.26

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.27

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: MB-042913

Lab Sample ID: MB-042913
LIMS ID: 13-8552
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WN27-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/29/13
Date Analyzed: 05/07/13 16:33
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	94.0	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	84.4	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	85.8	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	81.7	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	78.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	88.7	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	94.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	86.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	87.4	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	87.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.28	1.05-1.43	89.2	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	83.5	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	82.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	87.0	23-140	
13C-OCDD	0.90	0.76-1.02	64.2	17-157	
37Cl4-2,3,7,8-TCDD			92.0	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WN27 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13050702

Instrument ID: AUTOSPEC1 Date Analyzed: 07-MAY-13

Time Analyzed: 1444

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	23.52	26.96
TCDF	22.25	27.21
PeCDD	28.73	31.86
PeCDF	27.06	32.23
HxCDD	33.95	36.66
HxCDF	33.15	37.11
HpCDD	39.70	40.93
HpCDF	39.16	41.80

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.
TETRA ISC

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WN27	Project:	NPDES
GC Column:	RTX-DIOXIN2 ID: .25 mm	Lab File ID:	13050703
Instrument:	AUTOSPEC1	Date Analyzed:	07-MAY-13
		Time Analyzed:	1543

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 14.1

Quality Control (QC) Limits:
Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 14.1

QC Limits:
Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WN27 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 12-MAR-13

Init: Calib. Times: 15:01 to 19:20

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	13050702	05/07/13	1444
ISC01	ISC	13050703	05/07/13	1543
WN27MB	WN27MBS	13050704	05/07/13	1633
WN27OPR	WN27OPR	13050705	05/07/13	1725
CG-MH-010-20130423-S	WN27A	13050712	05/07/13	2332
ES-TS-INF-20130424-S	WN31A	13050713	05/08/13	0024
CS3	CS3	13050714	05/08/13	0116

6DFA - Form VI-HR CDD-1

CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WN27	Case No.:	NPDES
TO No..		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	12-Mar-13	Init.Calib.Time CSL:	15:01:10
Init.Calib.Date CS1:	12-Mar-13	Init.Calib.Time CS1:	15:57:32
Init Calib.Date CS2:	12-Mar-13	Init.Calib.Time CS2:	16:46:52
Init.Calib.Date CS3	12-Mar-13	Init.Calib.Time CS3:	17:38:09
Init Calib.Date CS4:	12-Mar-13	Init.Calib Time CS4:	18:29:32
Init.Calib.Date CS5:	12-Mar-13	Init.Calib Time CS5:	19:20:50

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	1.08	0.93	0.97	0.96	0.96	0.97	0.98	5.4	20.0
2378-TCDF	0.75	0.73	0.75	0.79	0.77	0.79	0.76	3.2	20.0
12378-PeCDF	0.84	0.83	0.82	0.82	0.85	0.85	0.84	1.8	20.0
12378-PeCDD	0.96	0.90	0.94	0.94	0.97	0.96	0.95	2.5	20.0
23478-PeCDF	0.81	0.85	0.85	0.86	0.87	0.87	0.85	2.6	20.0
123478-HxCDF	1.00	1.00	1.01	1.01	1.03	1.05	1.02	1.9	20.0
123678-HxCDF	1.00	1.04	1.03	1.01	0.99	1.01	1.01	1.6	20.0
123478-HxCDD	0.94	0.96	0.93	0.93	0.93	0.96	0.94	1.8	20.0
123678-HxCDD	0.91	0 87	0.88	0.86	0.91	0.88	0.88	2.5	20.0
123789-HxCDD[2]	0.90	0.86	0.90	0.83	0.85	0.87	0.87	3.0	20.0
234678-HxCDF	1.06	0.99	0.99	1.08	1.03	1.01	1 03	3.4	20.0
123789-HxCDF	0.85	0.93	0.92	0.93	0.98	0.97	0.93	5.0	20.0
1234678-HpCDF	1.09	1.10	1.15	1.16	1.20	1.21	1.15	4.2	20.0
1234678-HpCDD	1.04	0.92	0.92	0.91	0.93	0.96	0.95	5.3	20.0
1234789-HpCDF	1.17	1.09	1.13	1.15	1.17	1.18	1.15	3.0	20.0
OCDD	1.09	0.96	0.93	0.91	0.96	0.97	0.97	6.4	20.0
OCDF[1]	0.87	0.95	0.96	0.95	1.02	1.03	0.96	6.1	20.0
37CL-2378-TCDD	0.97	0.94	0.98	1.00	1.02	1.09	1.00	5.0	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.
(2) The RR is calculated based on the labeled analog of OCDD

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.95	0.97	0.93	0.95	0.95	1.02	0.96	3.0	35.0
13C-12378-PeCDD	0.68	0.68	0.69	0.69	0.70	0 79	0.70	6.1	35.0
13C-123478-HxCDD	1.01	0.97	1.00	1.05	1.04	1.03	1.02	2.7	35.0
13C-123678-HxCDD	1.12	1.07	1.08	1.17	1.08	1.07	1.10	3.5	35.0
13C-1234678-HpCDD	0.80	0.83	0.86	0.84	0.82	0.82	0.83	2 7	35.0
13C-OCDD	0.72	0.77	0.81	0.74	0.75	0.83	0.77	5.3	35.0
13C-2378-TCDF	1.31	1.37	1.29	1.26	1.32	1.36	1.32	3.2	35.0
13C-12378-PeCDF	0.98	1.01	0.99	1.02	1.01	1.14	1.03	5.6	35.0
13C-23478-PeCDF	0.90	0.95	0.94	0.94	0.98	1.08	0.97	6.4	35.0
13C-123478-HxCDF	1.11	1.08	1.13	1.18	1.13	1.11	1.12	3.1	35.0
13C-123678-HxCDF	1.24	1.16	1.20	1.26	1.25	1.19	1.22	3.3	35.0
13C-234678-HxCDF	1.09	1.09	1.13	1.08	1.13	1.11	1.11	1.9	35.0
13C-123789-HxCDF	0.96	0.99	1.02	1.01	0.99	1.00	0.99	2.1	35.0
13C-1234678-HpCDF	0.89	0.89	0.91	0.91	0.89	0.89	0.90	1.2	35.0
13C-1234789-HpCDF	0.66	0.70	0.73	0.67	0.69	0.72	0.69	4.0	35.0

6DFB - Form VI-HR CDD-2

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WN27	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	12-Mar-13	Init.Calib.Time CSL:	15:01:10
Init.Calib.Date CS1:	12-Mar-13	Init.Calib.Time CS1:	15:57:32
Init.Calib.Date CS2:	12-Mar-13	Init.Calib.Time CS2:	16:46:52
Init.Calib Date CS3:	12-Mar-13	Init.Calib.Time CS3:	17:38:09
Init.Calib.Date CS4:	12-Mar-13	Init Calib.Time CS4:	18:29:32
Init Calib.Date CS5:	12-Mar-13	Init.Calib.Time CS5:	19:20:50

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.74	0.73	0.79	0.75	0.77	0.78		0.65 - 0.89
2378-TCDF	304/306	0.80	0.66	0.73	0.70	0.72	0.71		0.65 - 0.89
12378-PeCDF	340/342	1.59	1.46	1.48	1.48	1.47	1.49		1.32 - 1.78
12378-PeCDD	356/358	1.44	1 55	1.55	1.56	1.48	1.54		1.32 - 1.78
23478-PeCDF	340/342	1.44	1.45	1.47	1.49	1.46	1.48		1.32 - 1.78
123478-HxCDF	374/376	1.06	1.10	1.19	1.20	1.17	1.17		1.05 - 1.43
123678-HxCDF	374/376	1.23	1.12	1.17	1.13	1.15	1.18		1.05 - 1.43
123478-HxCDD	390/392	1.18	1.18	1.19	1.26	1.23	1.23		1.05 - 1.43
123678-HxCDD	390/392	1.21	1.23	1.23	1.24	1.24	1.23		1.05 - 1.43
123789-HxCDD	390/392	1.35	1.25	1.25	1.17	1.25	1.22		1.05 - 1.43
234678-HxCDF	374/376	1.25	1.12	1.17	1 18	1.19	1.18		1.05 - 1.43
123789-HxCDF	374/376	1.10	1.12	1.18	1 17	1.15	1.19		1.05 - 1.43
1234678-HpCDF	408/410	1.08	0.97	1.05	0.96	1.00	0.98		0.89 - 1.21
1234678-HpCDD	424/426	0.95	1.03	1.02	1.05	1.03	1.03		0.89 - 1.21
1234789-HpCDF	408/410	0.94	1.00	0.93	0.98	0.94	0.98		0.89 - 1.21
OCDD	458/460	0.81	0.88	0.84	0.88	0.86	0.85		0.76 - 1.02
OCDF	442/444	0.86	0.90	0.84	0.85	0.84	0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.77	0.77	0.76	0 78	0.76	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.58	1.59	1.57	1.52	1.53	1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.28	1.25	1.26	1.30	1.26	1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.24	1.23	1.25	1.20	1.22	1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0 99	1.02	1.07	1.05	1.01	1.03		0.89 - 1.21
13C-OCDD	470/472	0.89	0.88	0.91	0.88	0.91	0.90		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0.76	0.77	0.77	0.78	0.77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.54	1.58	1.57	1.53	1.54	1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	1.55	1.49	1.51	1.53	1.55	1.54		1.32 - 1.78
13C-123478-HxCDF	384/386	0.51	0.51	0.51	0.51	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.50	0.52	0.51	0.52	0.50	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.53	0.51	0.52	0.52	0.51	0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.52	0.52	0.51	0.50	0.52	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.43	0.44	0.45	0.45	0.44	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.45	0.44	0.45	0.43	0.44	0.44		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.78	0.78	0.77	0.76	0.77	0.77		0.65 - 0.89
13C-123789-HxCDD	402/404	1.25	1.25	1.25	1.22	1.24	1.23		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract.	SAIC
Lab Code:	WN27	Case No	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13050702
Date Analysed	07-May-13	Time Analysed	14:44:08
Init.Calib.Date:	12-MAR-13	Init.Calib Time.	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.04	0 98	6.2		0.74		0.65 - 0.89
2378-TCDF	304/306	0.90	0.76	18.0		0.76		0.65 - 0.89
12378-PeCDF	340/342	0.90	0.84	7.8		1.54		1.32 - 1.78
12378-PeCDD	356/358	0.98	0.95	3.0		1.56		1.32 - 1.78
23478-PeCDF	340/342	0.93	0.85	9.4		1.53		1.32 - 1.78
123478-HxCDF	374/376	1.08	1 02	6.5		1.23		1.05 - 1.43
123678-HxCDF	374/376	1.06	1.01	4.3		1.22		1.05 - 1.43
123478-HxCDD	390/392	0.97	0.94	3.0		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.89	0.88	0.2		1.24		1.05 - 1.43
123789-HxCDD	390/392	0.90	0.87	3 0		1.18		1.05 - 1.43
234678-HxCDF	374/376	1.11	1.03	8.2		1.25		1.05 - 1.43
123789-HxCDF	374/376	1.00	0.93	7.5		1.22		1.05 - 1.43
1234678-HpCDF	408/410	1.22	1.15	5.7		1.00		0 89 - 1.21
1234678-HpCDD	424/426	0.99	0.95	4.8		1 04		0 89 - 1.21
1234789-HpCDF	408/410	1.23	1 15	6.6		1.01		0.89 - 1.21
OCDD	458/460	0.97	0.97	-0.1		0 89		0 76 - 1 02
OCDF	442/444	1.15	0.96	19 2		0.91		0 76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0 97	0 96	1.1		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0 71	0 70	1.3		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	1.00	1.02	-1.4		1.29		1.05 - 1.43
13C-123678-HxCDD	402/404	1 13	1.10	3.2		1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.85	0.83	2.7		1.05		0.89 - 1.21
13C-OCDD	470/472	0 75	0.77	-2.4		0.88		0.76 - 1.02
13C-2378-TCDF	316/318	1.51	1 32	14.3		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.15	1.03	12.1		1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	1.09	0.97	12.8		1.55		1.32 - 1.78
13C-123478-HxCDF	384/386	1.24	1.12	10.2		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.38	1.22	13.5		0.50		0.43 - 0.59
13C-234678-HxCDF	384/386	1.21	1.11	9.0		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	1.15	0.99	15.8		0.53		0.43 - 0 59
13C-1234678-HpCDF	418/420	1.04	0.90	15.9		0.44		0.37 - 0 51
13C-1234789-HpCDF	418/420	0.79	0.69	13.5		0.43		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.07	1.00	6.9		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.25		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WN27	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13050702
Date Analysed	07-May-13	Time Analysed	14:44:08
Init.Calib.Date:	12-MAR-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.36
2378-TCDF	1.00	25.73
12378-PeCDF	1.00	29.85
12378-PeCDD	1.00	31.46
23478-PeCDF	1.00	31.20
123478-HxCDF	1.00	34.87
123678-HxCDF	1.00	35.02
123478-HxCDD	1.00	36.10
123678-HxCDD	1.00	36.23
123789-HxCDD	1.01	36.66
234678-HxCDF	1.00	35.97
123789-HxCDF	1.00	37.11
1234678-HpCDF	1 00	39.16
1234678-HpCDD	1.00	40 93
1234789-HpCDF	1.00	41.80
OCDD	1.00	46 71
OCDF	1 01	46 97

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.35
13C-12378-PeCDD	1.23	31.44
13C-123478-HxCDD	0.99	36.09
13C-123678-HxCDD	0.99	36.21
13C-1234678-HpCDD	1.12	40 91
13C-OCDD	1.27	46.69
13C-2378-TCDF	1.01	25.70
13C-12378-PeCDF	1.17	29.84
13C-23478-PeCDF	1.22	31 19
13C-123478-HxCDF	0.95	34.85
13C-123678-HxCDF	0.96	35.00
13C-234678-HxCDF	0.98	35.95
13C-123789-HxCDF	1.01	37.10
13C-1234678-HpCDF	1.07	39 15
13C-1234789-HpCDF	1.14	41 78

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26 36

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.54
13C-123789-HxCDD	0.00	36.64

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name.	ARI	Contract:	SAIC
Lab Code:	WN27	Case No :	NPDES
TO No :		SDG No.:	
GC Column.	RTX-DIOXIN2	ID (mm):	.25
Instrument ID·	AUTOSPEC1	Lab File ID·	13050714
Date Analysed	08-May-13	Time Analysed	01:16:42
Init.Calib Date:	12-MAR-13	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.06	0.98	7.7		0.79		0 65 - 0.89
2378-TCDF	304/306	0.94	0.76	23 5	*	0.77		0.65 - 0.89
12378-PeCDF	340/342	0.94	0.84	12.4		1.56		1.32 - 1 78
12378-PeCDD	356/358	0.99	0.95	4.8		1.54		1.32 - 1.78
23478-PeCDF	340/342	0.96	0.85	12.8		1.54		1.32 - 1.78
123478-HxCDF	374/376	1.10	1 02	7 7		1.24		1.05 - 1.43
123678-HxCDF	374/376	1.07	1.01	5.6		1.24		1.05 - 1.43
123478-HxCDD	390/392	0.97	0.94	3 5		1.27		1.05 - 1.43
123678-HxCDD	390/392	0.90	0.88	1.4		1.21		1.05 - 1.43
123789-HxCDD	390/392	0.94	0.87	8.2		1.22		1.05 - 1.43
234678-HxCDF	374/376	1.14	1.03	11.2		1.24		1.05 - 1.43
123789-HxCDF	374/376	1.00	0.93	7.5		1.23		1.05 - 1.43
1234678-HpCDF	408/410	1.24	1 15	7.8		1.03		0.89 - 1.21
1234678-HpCDD	424/426	0.99	0.95	4.9		1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.23	1 15	6 9		1.03		0.89 - 1.21
OCDD	458/460	0.98	0.97	0.8		0.89		0.76 - 1.02
OCDF	442/444	1.14	0.96	18.6		0.91		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.99	0.96	3.3		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.84	0.70	19 1		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	1.00	1.02	-1 8		1.27		1.05 - 1.43
13C-123678-HxCDD	402/404	1.05	1.10	-4 1		1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.79	0.83	-4.4		1.04		0.89 - 1.21
13C-OCDD	470/472	0.63	0.77	-18.0		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.52	1.32	15.7		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.29	1.03	25.8		1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.27	0.97	31.1	*	1.58		1.32 - 1.78
13C-123478-HxCDF	384/386	1 20	1 12	6.5		0 52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.25	1 22	3.2		0.53		0.43 - 0.59
13C-234678-HxCDF	384/386	1 14	1.11	3 1		0 53		0.43 - 0.59
13C-123789-HxCDF	384/386	1 13	0.99	13.3		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	0 91	0.90	1.6		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.72	0.69	3.9		0 45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1 10	1.00	10.4		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.80		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.23		1.05 - 1 43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ARI	Contract:	SAIC
Lab Code:	WN27	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13050714
Date Analysed	08-May-13	Time Analysed	01:16:42
Init.Calib.Date:	12-MAR-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.35
2378-TCDF	1.00	25.70
12378-PeCDF	1.00	29.84
12378-PeCDD	1.00	31.45
23478-PeCDF	1.00	31.19
123478-HxCDF	1.00	34.86
123678-HxCDF	1.00	35.01
123478-HxCDD	1 00	36.10
123678-HxCDD	1 00	36.22
123789-HxCDD	1 01	36.65
234678-HxCDF	1.00	35.96
123789-HxCDF	1.00	37 11
1234678-HpCDF	1.00	39.16
1234678-HpCDD	1.00	40.93
1234789-HpCDF	1.00	41.80
OCDD	1.00	46.71
OCDF	1.01	46.97

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.33
13C-12378-PeCDD	1.23	31.43
13C-123478-HxCDD	0.98	36.08
13C-123678-HxCDD	0.99	36.21
13C-1234678-HpCDD	1.12	40.91
13C-OCDD	1.27	46.68
13C-2378-TCDF	1 01	25.69
13C-12378-PeCDF	1.17	29.83
13C-23478-PeCDF	1 22	31.18
13C-123478-HxCDF	0.95	34.85
13C-123678-HxCDF	0 96	34.99
13C-234678-HxCDF	0 98	35.95
13C-123789-HxCDF	1 01	37.09
13C-1234678-HpCDF	1 07	39.15
13C-1234789-HpCDF	1 14	41.78

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.35

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25 51
13C-123789-HxCDD	0.00	36.64

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: ES-TS-INF-20130424-S
SAMPLE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/13/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/03/13
Date Analyzed: 05/08/13 04:33
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 60.3%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	1.6	9.8	< 9.8 U
319-85-7	beta-BHC	2.7	19	< 19 Y
319-86-8	delta-BHC	1.6	9.8	< 9.8 U
58-89-9	gamma-BHC (Lindane)	0.94	9.8	< 9.8 U
76-44-8	Heptachlor	2.6	9.8	< 9.8 U
309-00-2	Aldrin	1.1	9.8	< 9.8 U
1024-57-3	Heptachlor Epoxide	1.7	230	< 230 Y
959-98-8	Endosulfan I	1.4	9.8	< 9.8 U
60-57-1	Dieldrin	2.0	20	< 20 U
72-55-9	4,4'-DDE	2.4	57	< 57 Y
72-20-8	Endrin	4.3	20	< 20 U
33213-65-9	Endosulfan II	2.3	20	< 20 U
72-54-8	4,4'-DDD	2.7	20	< 20 U
1031-07-8	Endosulfan Sulfate	3.8	20	< 20 U
50-29-3	4,4'-DDT	3.8	20	< 20 U
72-43-5	Methoxychlor	14	98	< 98 U
53494-70-5	Endrin Ketone	2.3	20	< 20 U
7421-93-4	Endrin Aldehyde	4.3	20	< 20 U
5103-74-2	trans-Chlordane	1.5	9.8	< 9.8 U
5103-71-9	cis-Chlordane	1.0	9.8	< 9.8 U
8001-35-2	Toxaphene	680	2000	< 2,000 U
118-74-1	Hexachlorobenzene	1.8	20	< 20 U
87-68-3	Hexachlorobutadiene	2.7	20	< 20 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	138%
Tetrachlorometaxylene	116%

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
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Sample ID: ES-TS-INF-20130424-S
DILUTION

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/13/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/03/13
Date Analyzed: 05/08/13 18:26
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 200
Silica Gel: Yes

Percent Moisture: 60.3%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	32	200	< 200 U
319-85-7	beta-BHC	55	200	< 200 U
319-86-8	delta-BHC	32	200	< 200 U
58-89-9	gamma-BHC (Lindane)	19	200	< 200 U
76-44-8	Heptachlor	52	200	< 200 U
309-00-2	Aldrin	22	200	< 200 U
1024-57-3	Heptachlor Epoxide	33	390	< 390 U
959-98-8	Endosulfan I	28	200	< 200 U
60-57-1	Dieldrin	39	390	< 390 U
72-55-9	4,4'-DDE	49	390	< 390 U
72-20-8	Endrin	85	390	< 390 U
33213-65-9	Endosulfan II	46	390	< 390 U
72-54-8	4,4'-DDD	53	390	< 390 U
1031-07-8	Endosulfan Sulfate	76	390	< 390 U
50-29-3	4,4'-DDT	76	390	< 390 U
72-43-5	Methoxychlor	270	2000	< 2,000 U
53494-70-5	Endrin Ketone	47	390	< 390 U
7421-93-4	Endrin Aldehyde	86	390	< 390 U
5103-74-2	trans-Chlordane	30	200	< 200 U
5103-71-9	cis-Chlordane	20	200	< 200 U
8001-35-2	Toxaphene	14000	39000	< 39,000 U
118-74-1	Hexachlorobenzene	37	390	< 390 U
87-68-3	Hexachlorobutadiene	54	390	< 390 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-050313	89.5%	80.2%	0
LCS-050313	101%	84.8%	0
LCSD-050313	81.5%	73.8%	0
ES-TS-INF-20130424-S	138%*	116%	1
ES-TS-INF-20130424-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: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: ES-MH-001-20130424-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WN31B
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/06/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 04/26/13
Date Analyzed: 05/01/13 18:48
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

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

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.8%
Tetrachlorometaxylene	59.0%

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

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

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-042613	61.8%	71.2%	0
LCS-042613	66.8%	63.5%	0
LCSD-042613	60.2%	68.5%	0
ES-MH-001-20130424-W	72.8%	59.0%	0

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

Prep Method: SW3510C
Log Number Range: 13-8694 to 13-8694

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-050313
LCS/LCSD

Lab Sample ID: LCS-050313
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/13/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted LCS/LCSD: 05/03/13

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt

Date Analyzed LCS: 05/08/13 02:46
LCSD: 05/08/13 05:27

Final Extract Volume LCS: 2.5 mL
LCSD: 2.5 mL

Instrument/Analyst LCS: ECD6/YZ
LCSD: ECD6/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	3.64	4.00	91.0%	3.02	4.00	75.5%	18.6%
beta-BHC	3.72	4.00	93.0%	2.80	4.00	70.0%	28.2%
delta-BHC	3.94	4.00	98.5%	3.00	4.00	75.0%	27.1%
gamma-BHC (Lindane)	3.88	4.00	97.0%	2.90	4.00	72.5%	28.9%
Heptachlor	3.80	4.00	95.0%	1.87	4.00	46.8%	68.1%
Aldrin	3.92	4.00	98.0%	2.82	4.00	70.5%	32.6%
Heptachlor Epoxide	4.26	4.00	106%	3.00	4.00	75.0%	34.7%
Endosulfan I	4.46	4.00	112%	3.12	4.00	78.0%	35.4%
Dieldrin	9.26	8.00	116%	6.28	8.00	78.5%	38.4%
4,4'-DDE	9.70	8.00	121%	7.46 P	8.00	93.2%	26.1%
Endrin	8.08	8.00	101%	4.64	8.00	58.0%	54.1%
Endosulfan II	7.96	8.00	99.5%	6.14	8.00	76.8%	25.8%
4,4'-DDD	8.24	8.00	103%	8.62	8.00	108%	4.5%
Endosulfan Sulfate	7.84	8.00	98.0%	5.52	8.00	69.0%	34.7%
4,4'-DDT	8.02	8.00	100%	2.56 P	8.00	32.0%	103%
Methoxychlor	36.6	40.0	91.5%	7.24	40.0	18.1%	134%
Endrin Ketone	7.74	8.00	96.8%	4.82	8.00	60.2%	46.5%
Endrin Aldehyde	5.98	8.00	74.8%	4.10	8.00	51.2%	37.3%
trans-Chlordane	4.34	4.00	108%	3.04	4.00	76.0%	35.2%
cis-Chlordane	4.34	4.00	108%	3.00	4.00	75.0%	36.5%
Hexachlorobenzene	3.50	4.00	87.5%	2.98	4.00	74.5%	16.0%
Hexachlorobutadiene	2.86	4.00	71.5%	2.76	4.00	69.0%	3.6%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	101%	81.5%
Tetrachlorometaxylene	84.8%	73.8%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-042613**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-042613 QC Report No: WN31-SAIC
LIMS ID: 13-8694 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: 04/24/13
Reported: 05/06/13 Date Received: 04/24/13

Date Extracted LCS/LCSD: 04/26/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 05/01/13 17:51 Final Extract Volume LCS: 5.0 mL
LCSD: 05/01/13 18:11 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/JGR Dilution Factor LCS: 1.00
LCSD: ECD6/JGR LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: Yes
Florisil Cleanup: No Silica Gel: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.151	0.200	75.5%	0.165	0.200	82.5%	8.9%
beta-BHC	0.140	0.200	70.0%	0.153	0.200	76.5%	8.9%
delta-BHC	0.148	0.200	74.0%	0.162	0.200	81.0%	9.0%
gamma-BHC (Lindane)	0.155	0.200	77.5%	0.169	0.200	84.5%	8.6%
Heptachlor	0.140	0.200	70.0%	0.154	0.200	77.0%	9.5%
Aldrin	0.123	0.200	61.5%	0.134	0.200	67.0%	8.6%
Heptachlor Epoxide	0.153	0.200	76.5%	0.165	0.200	82.5%	7.5%
Endosulfan I	0.156	0.200	78.0%	0.168	0.200	84.0%	7.4%
Dieldrin	0.307	0.400	76.8%	0.337	0.400	84.2%	9.3%
4,4'-DDE	0.358	0.400	89.5%	0.385	0.400	96.2%	7.3%
Endrin	0.330	0.400	82.5%	0.341	0.400	85.2%	3.3%
Endosulfan II	0.314	0.400	78.5%	0.325	0.400	81.2%	3.4%
4,4'-DDD	0.331	0.400	82.8%	0.342	0.400	85.5%	3.3%
Endosulfan Sulfate	0.290	0.400	72.5%	0.308	0.400	77.0%	6.0%
4,4'-DDT	0.318	0.400	79.5%	0.334	0.400	83.5%	4.9%
Methoxychlor	1.54	2.00	77.0%	1.59	2.00	79.5%	3.2%
Endrin Ketone	0.293	0.400	73.2%	0.307	0.400	76.8%	4.7%
Endrin Aldehyde	0.246	0.400	61.5%	0.212	0.400	53.0%	14.8%
trans-Chlordane	0.152	0.200	76.0%	0.167	0.200	83.5%	9.4%
cis-Chlordane	0.152	0.200	76.0%	0.165	0.200	82.5%	8.2%
Hexachlorobenzene	0.131	0.200	65.5%	0.160	0.200	80.0%	19.9%
Hexachlorobutadiene	0.0810	0.200	40.5%	0.0880	0.200	44.0%	8.3%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	66.8%	60.2%
Tetrachlorometaxylene	63.5%	68.5%

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

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WN27MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WN27
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WN27MBS1
Lab File ID: 0507A052

Date Extracted: 05/03/13
Matrix: SOLID

Date Analyzed: 05/08/13
Instrument ID: ECD6

Time Analyzed: 0228
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	WN27LCSS1	WN27LCSS1	05/08/13
02	CG-MH-010-20130423-	WN27A	05/08/13
03	CG-MH-010-20130 MS	WN27AMS	05/08/13
04	CG-MH-010-20130 MSD	WN27AMSD	05/08/13
05	ES-TS-INF-20130424-	WN31A	05/08/13
06	WN27LCSDS1	WN27LCSDS1	05/08/13
07	CG-MH-010-20130423-	WN27A	05/08/13
08	ES-TS-INF-20130424-	WN31A	05/08/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: MB-050313**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-050313 QC Report No: WN31-SAIC
LIMS ID: 13-8693 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: MW Date Sampled: NA
Reported: 05/13/13 Date Received: NA

Date Extracted: 05/03/13 Sample Amount: 12.5 g
Date Analyzed: 05/08/13 02:28 Final Extract Volume: 2.5 mL
Instrument/Analyst: ECD6/YZ Dilution Factor: 1.00
GPC Cleanup: No Silica Gel: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No 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	89.5%
Tetrachlorometaxylene	80.2%

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WN31MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WN31
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WN31MBW1
Lab File ID: 0501A015

Date Extracted: 04/26/13
Matrix: LIQUID

Date Analyzed: 05/01/13
Instrument ID: ECD6

Time Analyzed: 1731
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	WN31LCSW1	WN31LCSW1	05/01/13
02	WN31LCSDW1	WN31LCSDW1	05/01/13
03	ES-MH-001-20130424-	WN31B	05/01/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-042613**
Extraction Method: SW3510C **METHOD BLANK**

Page 1 of 1
Lab Sample ID: MB-042613 QC Report No: WN31-SAIC
LIMS ID: 13-8694 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 05/06/13 Date Received: NA

Date Extracted: 04/26/13 Sample Amount: 500 mL
Date Analyzed: 05/01/13 17:31 Final Extract Volume: 5.0 mL
Instrument/Analyst: ECD6/JGR Dilution Factor: 1.00
GPC Cleanup: No Silica Gel: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

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

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	61.8%
Tetrachlorometaxylene	71.2%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.75	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.: WN27 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5850	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

FORM VI PEST-2

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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.: WN27 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

FORM VI PEST-4C

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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

FORM VI PEST-4C

Breakdown

808 WN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.235	127721
Endrin	6.748	6720234
4,4'-DDD	6.791	563753
4,4'-DDT	7.046	6423580
Endrin ketone	7.977	359836
Endrin aldehyde	7.332	264369

DDT Percent Breakdown = 9.7 %
((127721+563753) * 100)/(127721+563753+6423580)

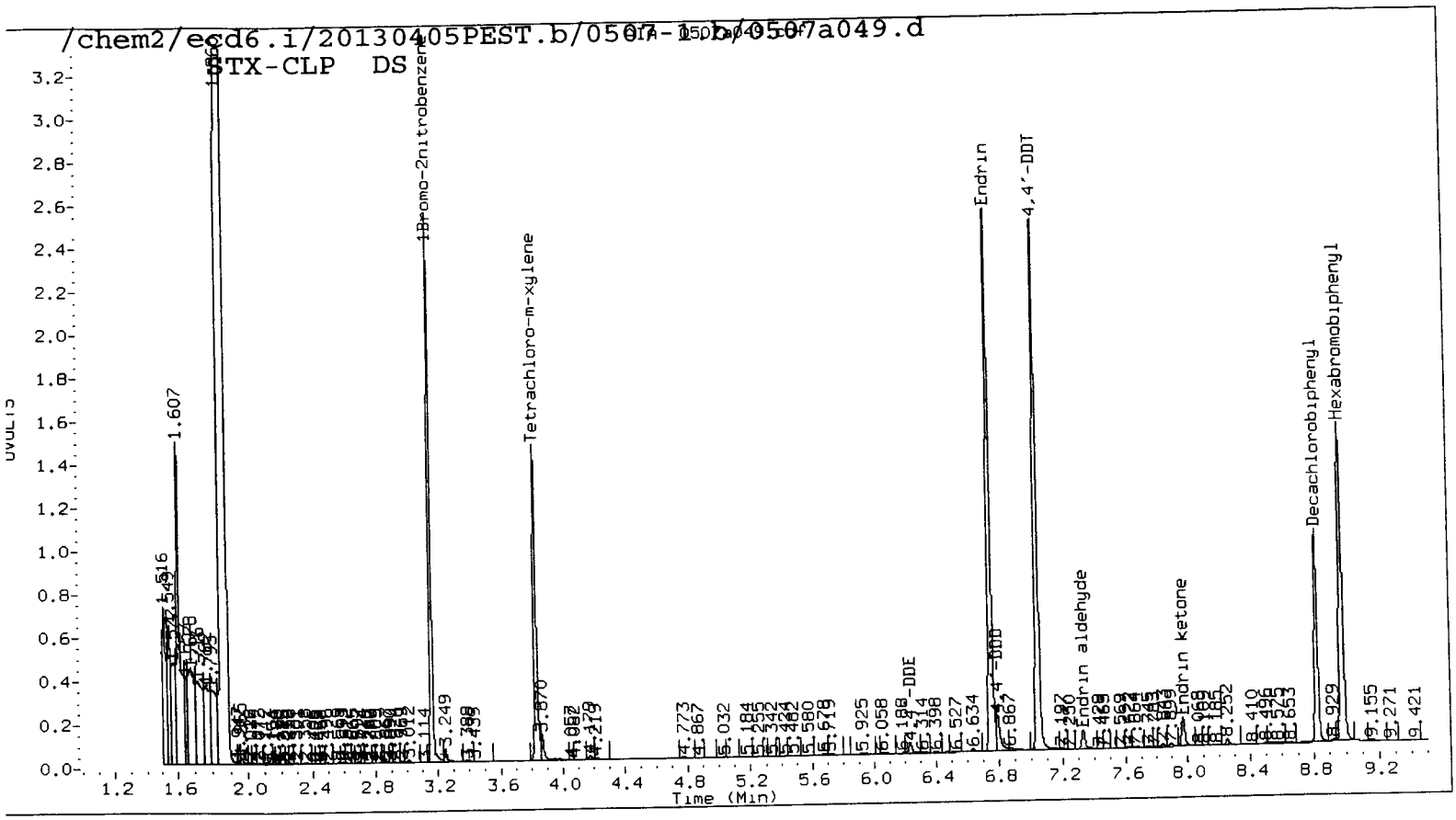
Endrin Percent Breakdown = 8.5 %
((264369+359836) * 100)/(264369+359836+6720234)

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

COMPOUND	RT	AREA
4,4'-DDE	6.917	671676
Endrin	7.404	27290466
4,4'-DDD	7.455	2832165
4,4'-DDT	7.741	27119217
Endrin ketone	8.625	1057161
Endrin aldehyde	7.890	1197805

DDT Percent Breakdown = 11.4 %
((671676+2832165) * 100)/(671676+2832165+27119217)

Endrin Percent Breakdown = 7.6 %
((1197805+1057161) * 100)/(1197805+1057161+27290466)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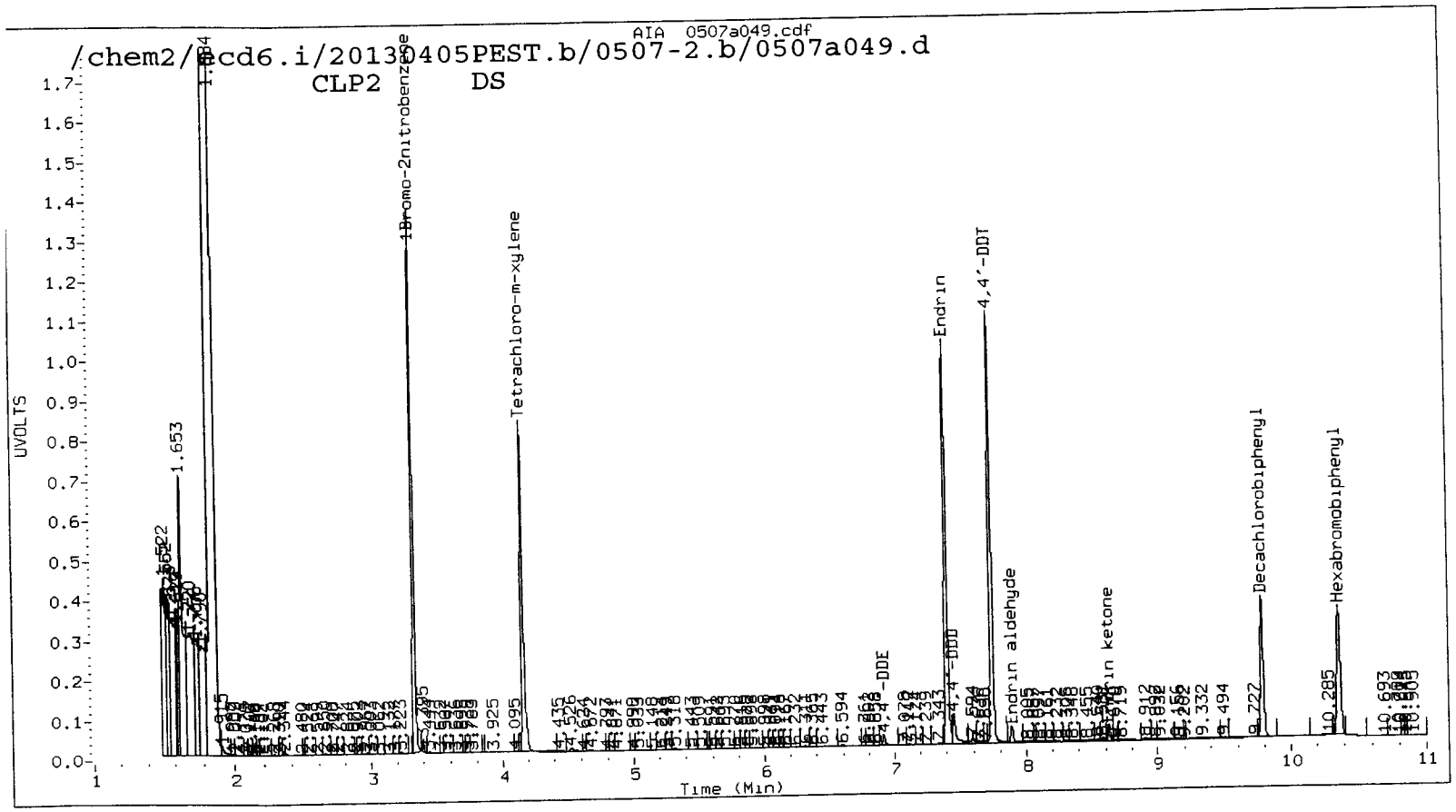
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 DS
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1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,0153

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	19.8	20.0	-0.9
beta-BHC	4.69	4.64	4.74	18.5	20.0	-7.5
delta-BHC	4.86	4.81	4.91	18.7	20.0	-6.4
gamma-BHC (Lindane)	4.61	4.56	4.66	19.5	20.0	-2.7
Heptachlor	5.06	5.02	5.12	19.2	20.0	-3.8
Aldrin	5.35	5.31	5.41	19.1	20.0	-4.4
Heptachlor epoxide b	5.93	5.89	5.99	18.9	20.0	-5.3
Endosulfan I	6.30	6.26	6.36	18.5	20.0	-7.4
Dieldrin	6.53	6.49	6.59	38.9	40.0	-2.8
4,4'-DDE	6.23	6.18	6.28	37.1	40.0	-7.3
Endrin	6.75	6.71	6.81	36.7	40.0	-8.2
Endosulfan II	6.95	6.91	7.01	36.9	40.0	-7.7
4,4'-DDD	6.79	6.74	6.84	39.4	40.0	-1.4
Endosulfan sulfate	7.72	7.68	7.78	36.3	40.0	-9.2
4,4'-DDT	7.04	7.00	7.10	36.8	40.0	-8.1
Methoxychlor	7.47	7.42	7.52	164.9	200.0	-17.6
Endrin ketone	7.98	7.93	8.03	36.0	40.0	-10.0
Endrin aldehyde	7.33	7.29	7.39	35.2	40.0	-11.9
gamma-Chlordane	6.05	6.01	6.11	19.5	20.0	-2.6
alpha-Chlordane	6.17	6.13	6.23	18.9	20.0	-5.3
Hexachlorobutadiene	2.34	2.29	2.39	19.5	20.0	-2.5
Hexachlorobenzene	4.18	4.13	4.23	19.4	20.0	-2.9
Tetrachloro-m-xylene	3.83	3.79	3.89	37.9	40.0	-5.2
Decachlorobiphenyl	8.83	8.78	8.88	33.8	40.0	-15.4

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,0153

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	19.8	20.0	-1.2	
beta-BHC	5.18	5.13	5.23	19.2	20.0	-3.8	
delta-BHC	5.49	5.45	5.55	19.4	20.0	-2.8	
gamma-BHC (Lindane)	5.11	5.07	5.17	19.4	20.0	-3.1	
Heptachlor	5.58	5.53	5.63	19.5	20.0	-2.3	
Aldrin	5.91	5.87	5.97	20.4	20.0	2.0	
Heptachlor epoxide b	6.47	6.43	6.53	20.7	20.0	3.4	
Endosulfan I	6.85	6.81	6.91	21.5	20.0	7.4	
Dieldrin	7.11	7.07	7.17	42.4	40.0	6.0	
4,4'-DDE	6.91	6.87	6.97	42.7	40.0	6.9	
Endrin	7.40	7.36	7.46	33.4	40.0	-16.6	
Endosulfan II	7.59	7.55	7.65	33.8	40.0	-15.4	
4,4'-DDD	7.45	7.41	7.51	35.4	40.0	-11.5	
Endosulfan sulfate	8.13	8.09	8.19	32.7	40.0	-18.2	
4,4'-DDT	7.74	7.70	7.80	32.5	40.0	-18.7	
Methoxychlor	8.32	8.28	8.38	140.4	200.0	-29.8	<-
Endrin ketone	8.63	8.58	8.68	33.3	40.0	-16.6	
Endrin aldehyde	7.89	7.85	7.95	32.2	40.0	-19.5	
gamma-Chlordane	6.65	6.61	6.71	21.1	20.0	5.6	
alpha-Chlordane	6.79	6.75	6.85	21.2	20.0	5.9	
Hexachlorobutadiene	2.49	2.45	2.55	18.7	20.0	-6.3	
Hexachlorobenzene	4.63	4.58	4.68	20.9	20.0	4.5	
Tetrachloro-m-xylene	4.16	4.12	4.22	36.4	40.0	-8.9	
Decachlorobiphenyl	9.79	9.75	9.85	32.7	40.0	-18.3	

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,0211

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.00	6.96	7.06	3230	2500	29.2	<-
Toxaphene -2	7.06	7.01	7.11	3360	2500	34.4	<-
Toxaphene -3	7.31	7.27	7.37	3120	2500	24.8	<-
Toxaphene -4	7.64	7.59	7.69	3050	2500	22.0	<-
Toxaphene -5	7.68	7.63	7.73	3090	2500	23.6	<-
Toxaphene -6	7.96	7.92	8.02	3040	2500	21.6	<-

AVERAGE %D = 25.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,0211

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.34	7.29	7.39	2810	2500	12.4
Toxaphene -2	7.66	7.62	7.72	2680	2500	7.2
Toxaphene -3	7.89	7.85	7.95	2660	2500	6.4
Toxaphene -4	8.36	8.32	8.42	2580	2500	3.2
Toxaphene -5	8.40	8.36	8.46	2600	2500	4.0

AVERAGE %D = 6.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 06:02 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.229	40019
Endrin	6.746	4342973
4,4'-DDD	6.786	2545846
4,4'-DDT	7.041	1465654
Endrin ketone	7.975	1347945
Endrin aldehyde	7.329	85655

DDT Percent Breakdown = 63.8 %
((40019+2545846) * 100)/(40019+2545846+1465654)

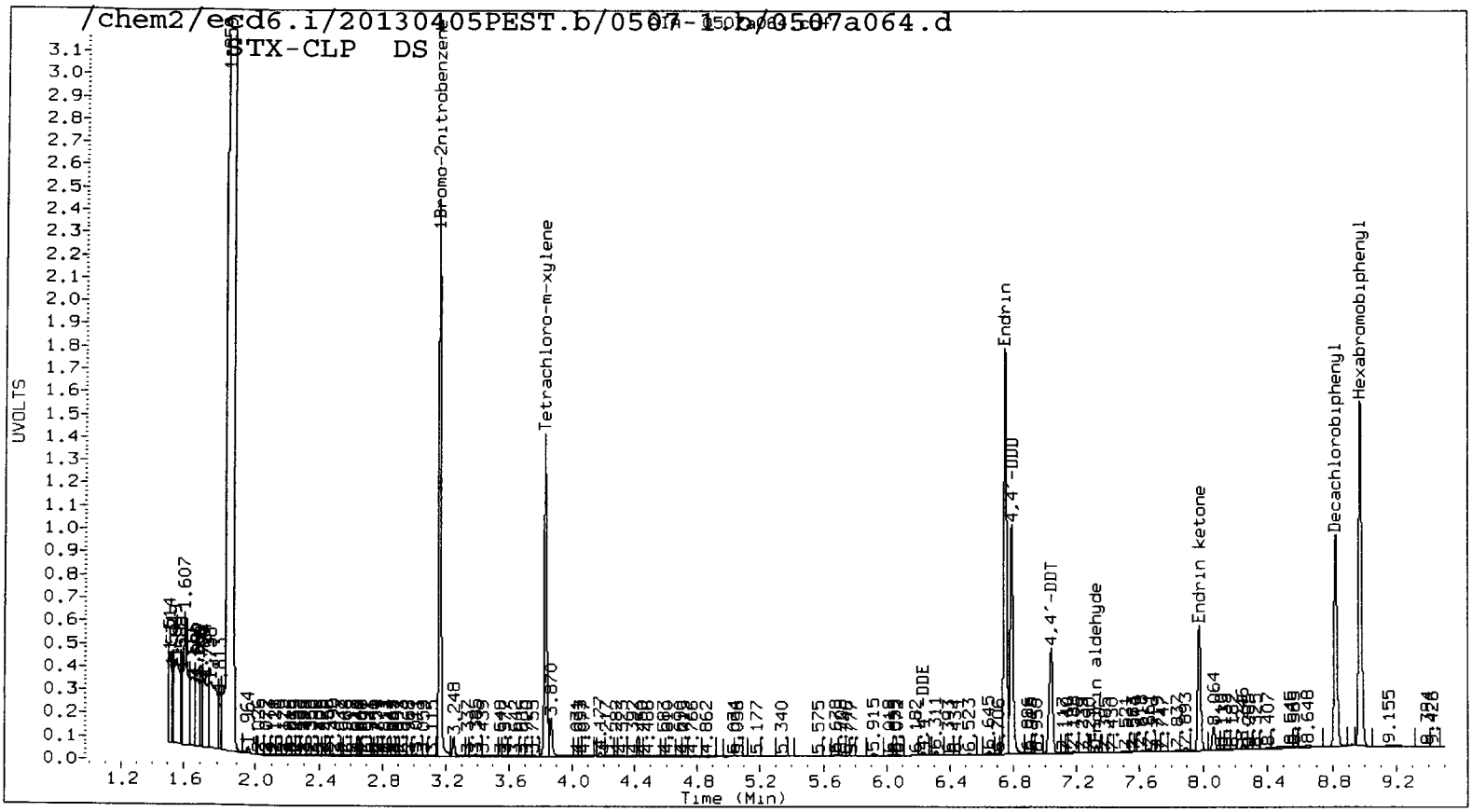
Endrin Percent Breakdown = 24.8 %
((85655+1347945) * 100)/(85655+1347945+4342973)

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

COMPOUND	RT	AREA
4,4'-DDE	6.913	271320
Endrin	7.402	13480030
4,4'-DDD	7.452	8495876
4,4'-DDT	7.739	3358432
Endrin ketone	8.624	3218436
Endrin aldehyde	7.888	599635

DDT Percent Breakdown = 72.3 %
((271320+8495876) * 100)/(271320+8495876+3358432)

Endrin Percent Breakdown = 22.1 %
((599635+3218436) * 100)/(599635+3218436+13480030)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STX-CLP DS
UVOLTS
Time (Min)
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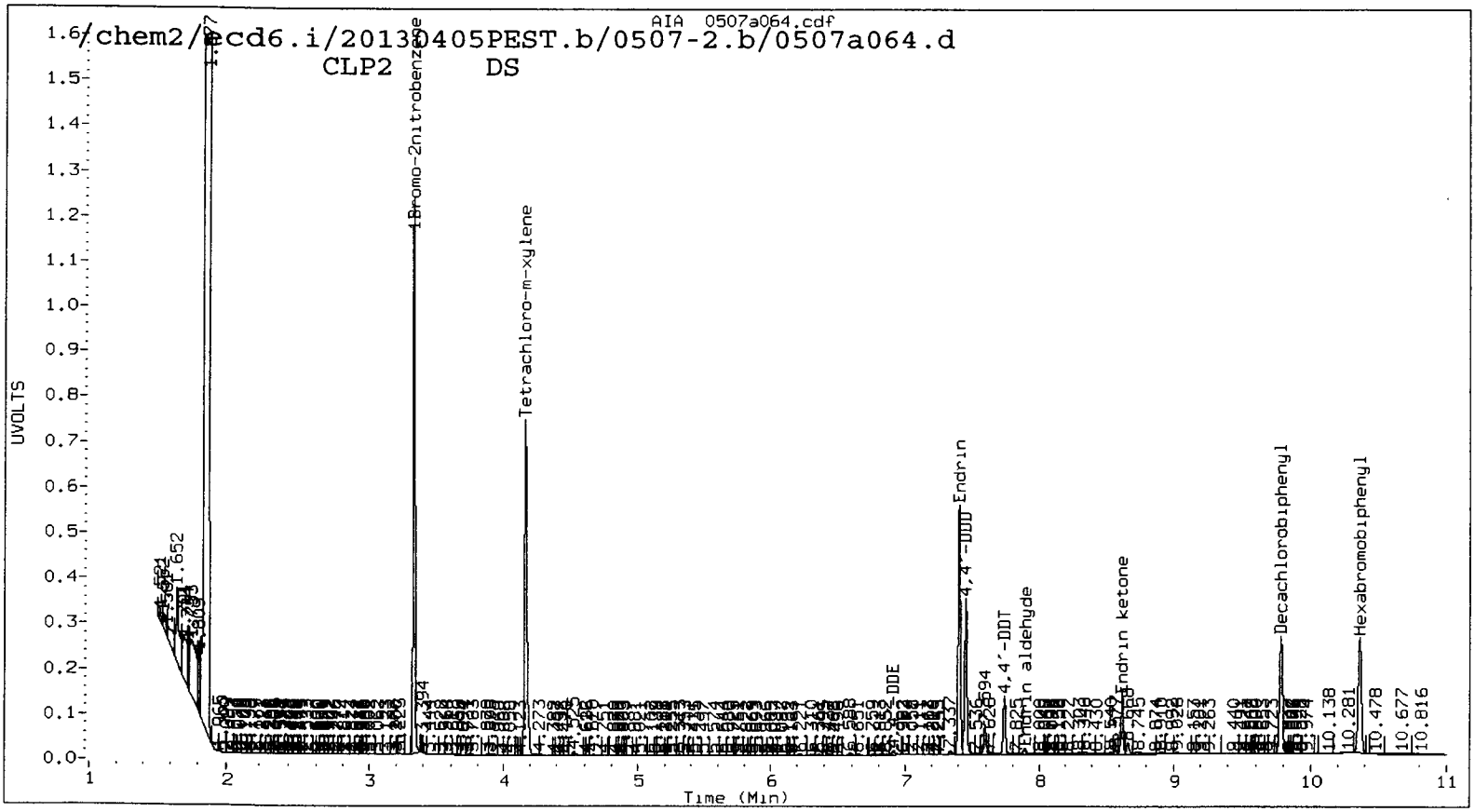
3.248
3.870
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDD
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.652
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDD
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
10.138
10.281
10.478
10.677
10.816

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,0620

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.32	4.28	4.38	19.5	20.0	-2.3	
beta-BHC	4.69	4.64	4.74	17.1	20.0	-14.4	
delta-BHC	4.86	4.81	4.91	18.2	20.0	-8.8	
gamma-BHC (Lindane)	4.61	4.56	4.66	17.4	20.0	-12.8	
Heptachlor	5.06	5.02	5.12	11.5	20.0	-42.4	<-
Aldrin	5.35	5.31	5.41	19.1	20.0	-4.7	
Heptachlor epoxide b	5.93	5.89	5.99	18.1	20.0	-9.5	
Endosulfan I	6.30	6.26	6.36	18.5	20.0	-7.2	
Dieldrin	6.53	6.49	6.59	37.8	40.0	-5.4	
4,4'-DDE	6.23	6.18	6.28	37.4	40.0	-6.6	
Endrin	6.75	6.71	6.81	24.8	40.0	-38.0	<-
Endosulfan II	6.95	6.91	7.01	33.9	40.0	-15.1	
4,4'-DDD	6.78	6.74	6.84	48.5	40.0	21.1	<-
Endosulfan sulfate	7.72	7.68	7.78	31.5	40.0	-21.3	<-
4,4'-DDT	7.03	7.00	7.10	15.2	40.0	-62.0	<-
Methoxychlor	7.47	7.42	7.52	34.1	200.0	-82.9	<-
Endrin ketone	7.97	7.93	8.03	25.4	40.0	-36.6	<-
Endrin aldehyde	7.33	7.29	7.39	31.0	40.0	-22.5	<-
gamma-Chlordane	6.05	6.01	6.11	18.4	20.0	-8.0	
alpha-Chlordane	6.17	6.13	6.23	18.3	20.0	-8.6	
Hexachlorobutadiene	2.34	2.29	2.39	20.1	20.0	0.5	
Hexachlorobenzene	4.18	4.13	4.23	19.5	20.0	-2.4	
Tetrachloro-m-xylene	3.83	3.79	3.89	37.8	40.0	-5.5	
Decachlorobiphenyl	8.82	8.78	8.88	32.4	40.0	-19.1	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,0620

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	19.2	20.0	-4.1	
beta-BHC	5.18	5.13	5.23	17.2	20.0	-13.8	
delta-BHC	5.50	5.45	5.55	18.1	20.0	-9.3	
gamma-BHC (Lindane)	5.11	5.07	5.17	16.7	20.0	-16.2	
Heptachlor	5.57	5.53	5.63	11.4	20.0	-43.0	<-
Aldrin	5.91	5.87	5.97	18.6	20.0	-7.0	
Heptachlor epoxide b	6.47	6.43	6.53	16.8	20.0	-16.2	
Endosulfan I	6.85	6.81	6.91	17.5	20.0	-12.4	
Dieldrin	7.11	7.07	7.17	35.6	40.0	-11.0	
4,4'-DDE	6.91	6.87	6.97	35.5	40.0	-11.2	
Endrin	7.40	7.36	7.46	21.5	40.0	-46.1	<-
Endosulfan II	7.59	7.55	7.65	34.9	40.0	-12.8	
4,4'-DDD	7.45	7.41	7.51	39.6	40.0	-1.0	
Endosulfan sulfate	8.13	8.09	8.19	26.3	40.0	-34.3	<-
4,4'-DDT	7.74	7.70	7.80	6.1	40.0	-84.8	<-
Methoxychlor	8.32	8.28	8.38	31.4	200.0	-84.3	<-
Endrin ketone	8.62	8.58	8.68	20.9	40.0	-47.8	<-
Endrin aldehyde	7.89	7.85	7.95	26.7	40.0	-33.2	<-
gamma-Chlordane	6.65	6.61	6.71	17.3	20.0	-13.7	
alpha-Chlordane	6.79	6.75	6.85	17.0	20.0	-15.0	
Hexachlorobutadiene	2.50	2.45	2.55	18.8	20.0	-6.2	
Hexachlorobenzene	4.63	4.58	4.68	20.7	20.0	3.3	
Tetrachloro-m-xylene	4.16	4.12	4.22	36.9	40.0	-7.7	
Decachlorobiphenyl	9.79	9.75	9.85	29.7	40.0	-25.8	<-

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 17:15 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.232	109469
Endrin	6.747	6874336
4,4'-DDD	6.788	406244
4,4'-DDT	7.045	6622694
Endrin ketone	7.976	265307
Endrin aldehyde	7.330	151784

DDT Percent Breakdown = 7.2 %
((109469+406244) * 100)/(109469+406244+6622694)

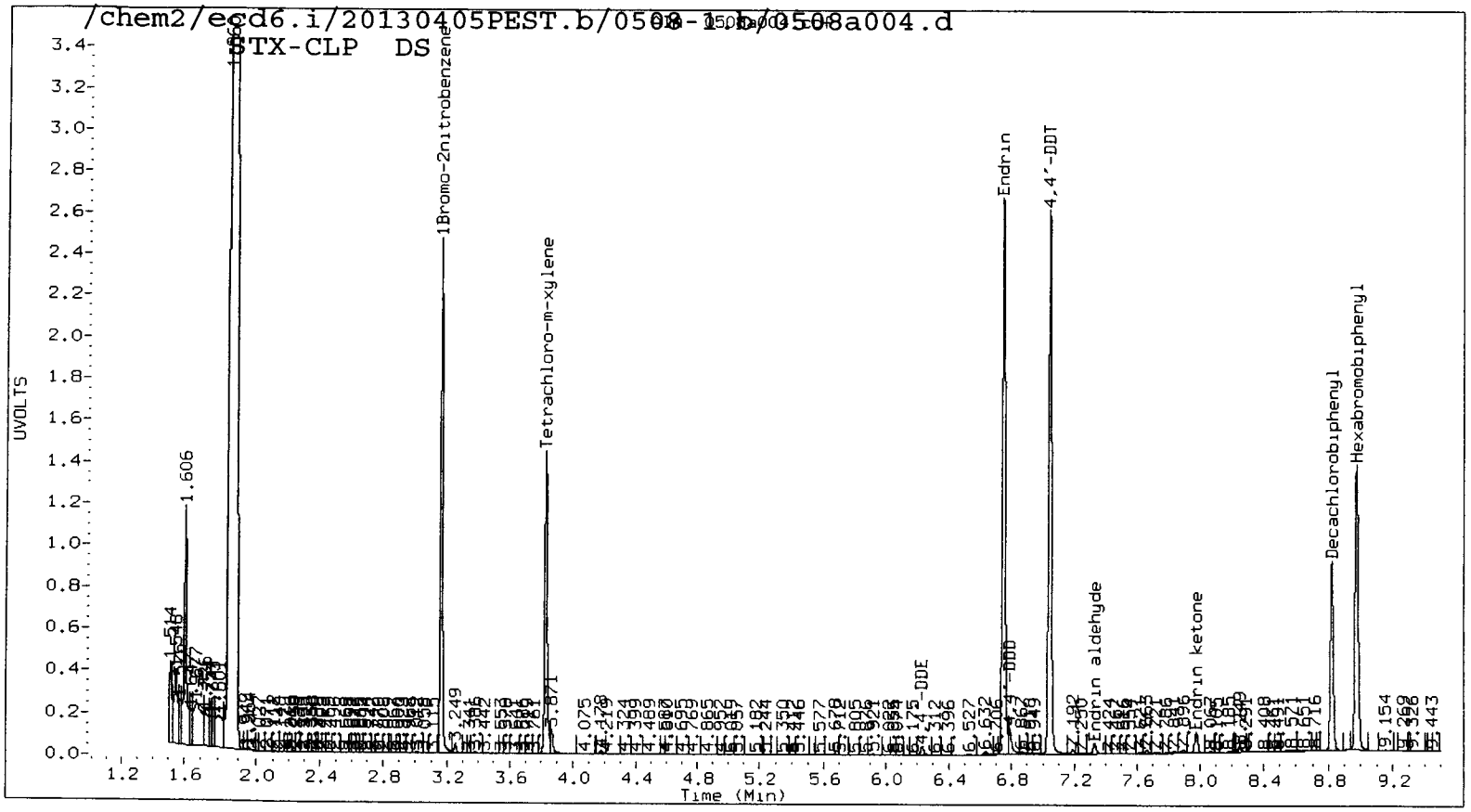
Endrin Percent Breakdown = 5.7 %
((151784+265307) * 100)/(151784+265307+6874336)

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

COMPOUND	RT	AREA
4,4'-DDE	6.915	598841
Endrin	7.402	25070437
4,4'-DDD	7.453	1815013
4,4'-DDT	7.741	24365782
Endrin ketone	8.625	894253
Endrin aldehyde	7.889	673881

DDT Percent Breakdown = 9.0 %
((598841+1815013) * 100)/(598841+1815013+24365782)

Endrin Percent Breakdown = 5.9 %
((673881+894253) * 100)/(673881+894253+25070437)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UVOLTS
Time (Min)
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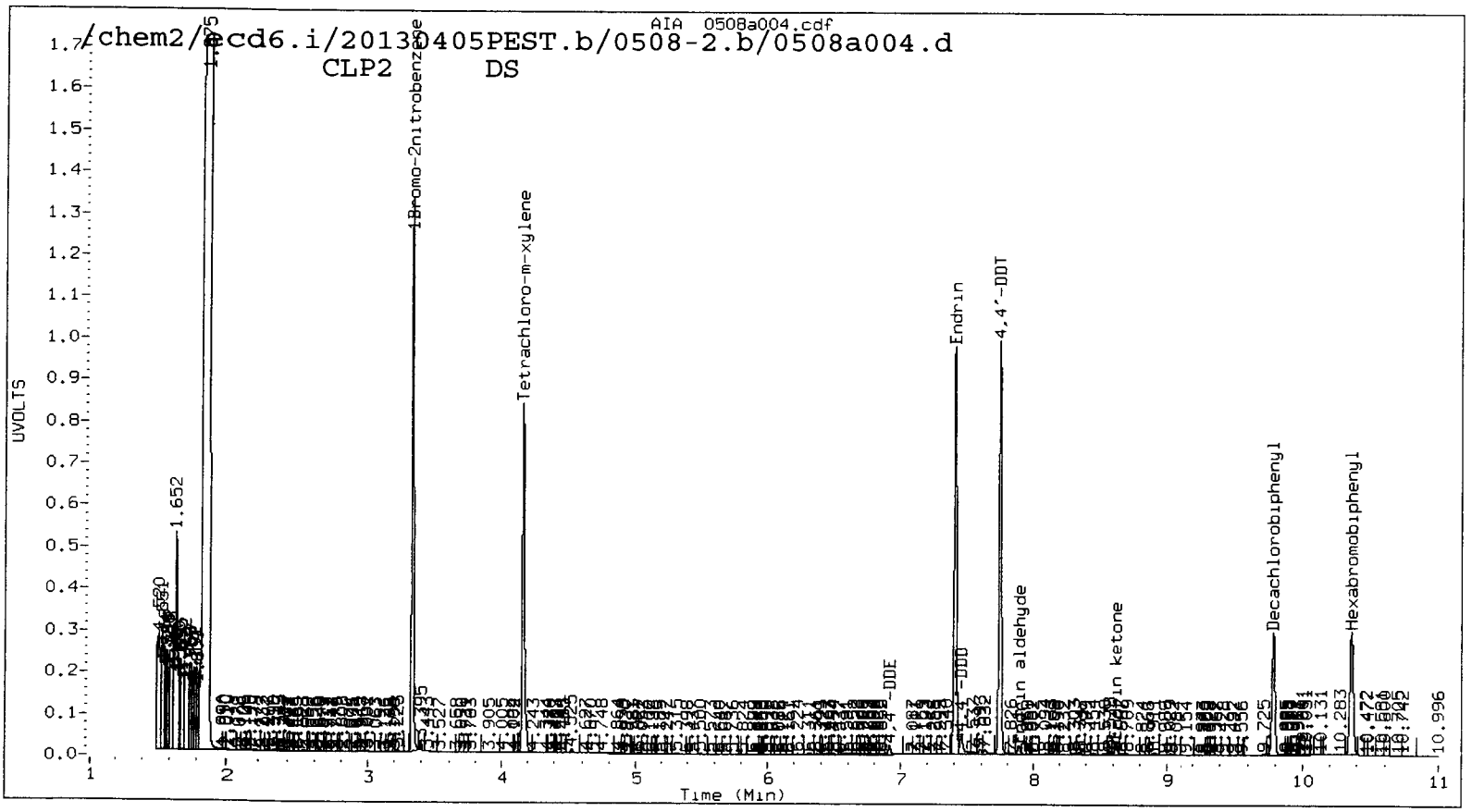
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.652
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1732

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	19.1	20.0	-4.7
beta-BHC	4.69	4.64	4.74	17.8	20.0	-11.2
delta-BHC	4.86	4.81	4.91	18.1	20.0	-9.4
gamma-BHC (Lindane)	4.61	4.56	4.66	18.8	20.0	-6.1
Heptachlor	5.06	5.02	5.12	19.0	20.0	-5.1
Aldrin	5.35	5.31	5.41	19.0	20.0	-5.0
Heptachlor epoxide b	5.93	5.89	5.99	18.4	20.0	-8.2
Endosulfan I	6.30	6.26	6.36	18.7	20.0	-6.5
Dieldrin	6.53	6.49	6.59	38.5	40.0	-3.8
4,4'-DDE	6.23	6.18	6.28	37.1	40.0	-7.3
Endrin	6.75	6.71	6.81	41.1	40.0	2.8
Endosulfan II	6.95	6.91	7.01	38.8	40.0	-3.0
4,4'-DDD	6.79	6.74	6.84	41.6	40.0	4.0
Endosulfan sulfate	7.72	7.68	7.78	36.7	40.0	-8.3
4,4'-DDT	7.04	7.00	7.10	39.5	40.0	-1.2
Methoxychlor	7.47	7.42	7.52	176.4	200.0	-11.8
Endrin ketone	7.98	7.93	8.03	35.9	40.0	-10.4
Endrin aldehyde	7.33	7.29	7.39	36.1	40.0	-9.7
gamma-Chlordane	6.05	6.01	6.11	19.0	20.0	-5.0
alpha-Chlordane	6.17	6.13	6.23	18.6	20.0	-6.9
Hexachlorobutadiene	2.34	2.29	2.39	19.0	20.0	-5.1
Hexachlorobenzene	4.18	4.13	4.23	19.3	20.0	-3.7
Tetrachloro-m-xylene	3.83	3.79	3.89	37.7	40.0	-5.6
Decachlorobiphenyl	8.82	8.78	8.88	34.2	40.0	-14.6

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1732

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	18.7	20.0	-6.3	
beta-BHC	5.18	5.13	5.23	18.0	20.0	-9.8	
delta-BHC	5.50	5.45	5.55	18.8	20.0	-6.2	
gamma-BHC (Lindane)	5.11	5.07	5.17	18.2	20.0	-8.8	
Heptachlor	5.58	5.53	5.63	19.2	20.0	-4.2	
Aldrin	5.91	5.87	5.97	20.0	20.0	-0.2	
Heptachlor epoxide b	6.47	6.43	6.53	19.2	20.0	-3.8	
Endosulfan I	6.85	6.81	6.91	19.5	20.0	-2.7	
Dieldrin	7.11	7.07	7.17	37.3	40.0	-6.8	
4,4'-DDE	6.91	6.87	6.97	38.6	40.0	-3.4	
Endrin	7.40	7.36	7.46	33.7	40.0	-15.9	
Endosulfan II	7.59	7.55	7.65	32.0	40.0	-19.9	
4,4'-DDD	7.45	7.41	7.51	33.2	40.0	-17.0	
Endosulfan sulfate	8.13	8.09	8.19	30.5	40.0	-23.7	<-
4,4'-DDT	7.74	7.70	7.80	32.1	40.0	-19.7	
Methoxychlor	8.32	8.28	8.38	142.7	200.0	-28.6	<-
Endrin ketone	8.63	8.58	8.68	30.9	40.0	-22.8	<-
Endrin aldehyde	7.89	7.85	7.95	30.7	40.0	-23.4	<-
gamma-Chlordane	6.65	6.61	6.71	19.6	20.0	-1.9	
alpha-Chlordane	6.79	6.75	6.85	19.1	20.0	-4.4	
Hexachlorobutadiene	2.49	2.45	2.55	17.9	20.0	-10.6	
Hexachlorobenzene	4.63	4.58	4.68	20.5	20.0	2.4	
Tetrachloro-m-xylene	4.16	4.12	4.22	36.1	40.0	-9.6	
Decachlorobiphenyl	9.79	9.75	9.85	30.0	40.0	-25.1	<-

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1750

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.00	6.96	7.06	3280	2500	31.2	<-
Toxaphene -2	7.06	7.01	7.11	3400	2500	36.0	<-
Toxaphene -3	7.31	7.27	7.37	3160	2500	26.4	<-
Toxaphene -4	7.64	7.59	7.69	3080	2500	23.2	<-
Toxaphene -5	7.68	7.63	7.73	3100	2500	24.0	<-
Toxaphene -6	7.96	7.92	8.02	3020	2500	20.8	<-

AVERAGE %D = 26.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1750

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.34	7.29	7.39	2740	2500	9.6
Toxaphene -2	7.66	7.62	7.72	2660	2500	6.4
Toxaphene -3	7.89	7.85	7.95	2640	2500	5.6
Toxaphene -4	8.36	8.32	8.42	2470	2500	-1.2
Toxaphene -5	8.40	8.36	8.46	2500	2500	0.0

AVERAGE %D = 4.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 08-MAY-2013 18:44 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.232	97105
Endrin	6.747	6792102
4,4'-DDD	6.788	490449
4,4'-DDT	7.044	6112306
Endrin ketone	7.976	265129
Endrin aldehyde	7.330	90497

DDT Percent Breakdown = 8.8 %
((97105+490449) * 100)/(97105+490449+6112306)

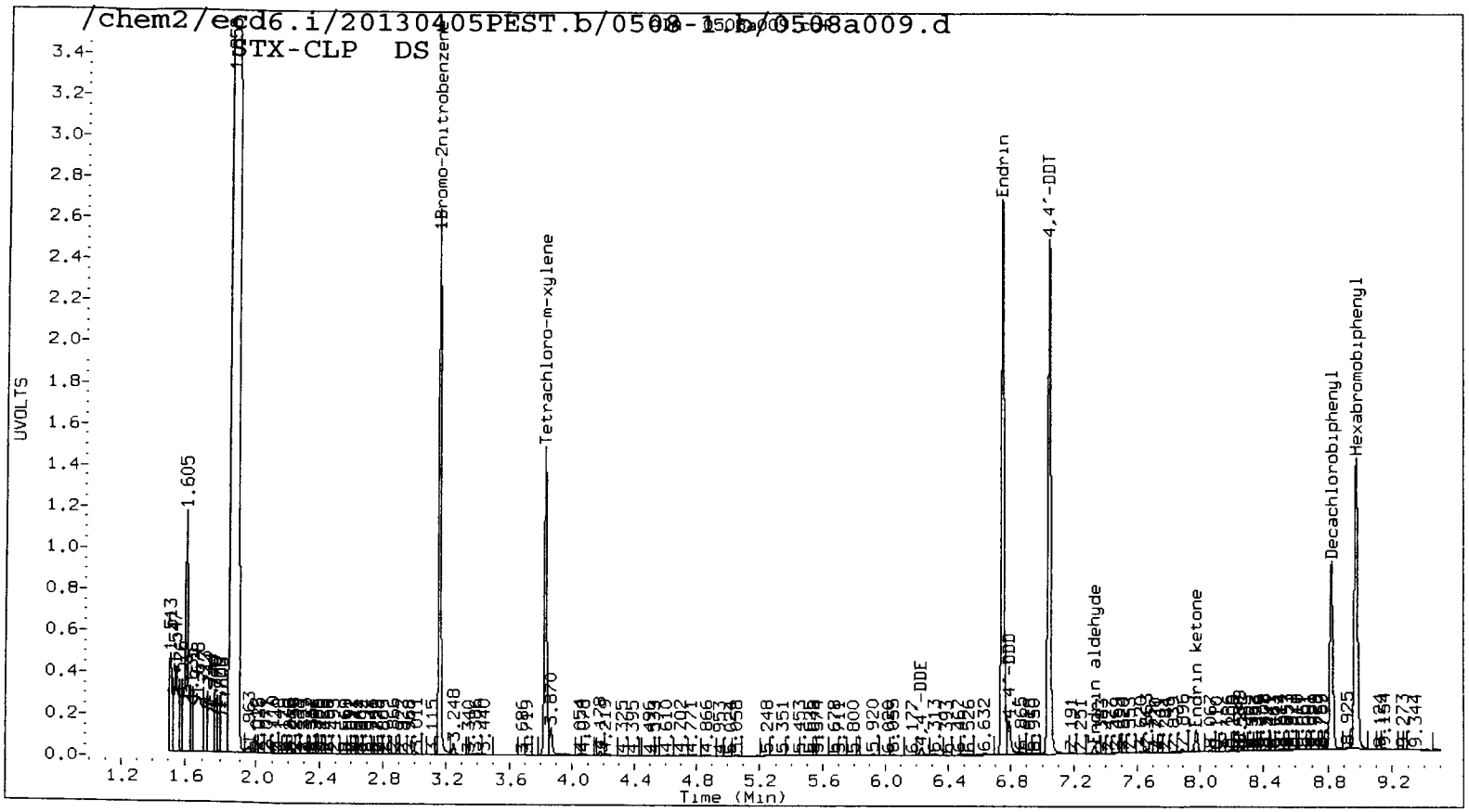
Endrin Percent Breakdown = 5.0 %
((90497+265129) * 100)/(90497+265129+6792102)

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

COMPOUND	RT	AREA
4,4'-DDE	6.915	452618
Endrin	7.403	20929994
4,4'-DDD	7.453	1890920
4,4'-DDT	7.740	18940049
Endrin ketone	8.625	864429
Endrin aldehyde	7.889	487930

DDT Percent Breakdown = 11.0 %
((452618+1890920) * 100)/(452618+1890920+18940049)

Endrin Percent Breakdown = 6.1 %
((487930+864429) * 100)/(487930+864429+20929994)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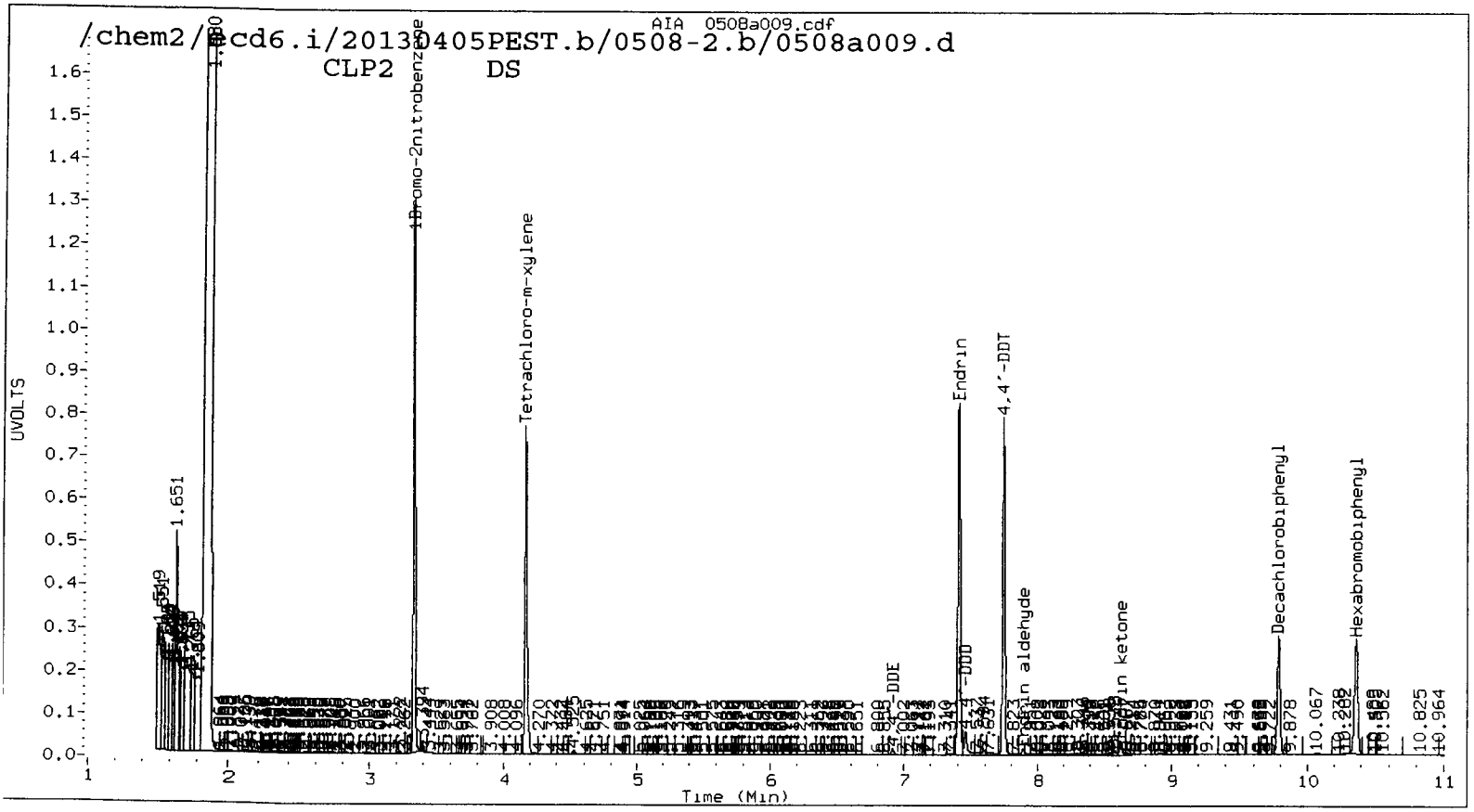
STX-CLP DS
UVOLTS
Time (Min)
1.605
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.651
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1901

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.32	4.28	4.38	19.0	20.0	-5.2
beta-BHC	4.69	4.64	4.74	17.3	20.0	-13.6
delta-BHC	4.86	4.81	4.91	17.5	20.0	-12.3
gamma-BHC (Lindane)	4.61	4.56	4.66	18.4	20.0	-8.0
Heptachlor	5.06	5.02	5.12	18.5	20.0	-7.2
Aldrin	5.35	5.31	5.41	18.6	20.0	-7.2
Heptachlor epoxide b	5.93	5.89	5.99	17.7	20.0	-11.3
Endosulfan I	6.30	6.26	6.36	18.0	20.0	-9.8
Dieldrin	6.53	6.49	6.59	36.5	40.0	-8.8
4,4'-DDE	6.23	6.18	6.28	36.4	40.0	-8.9
Endrin	6.75	6.71	6.81	41.0	40.0	2.4
Endosulfan II	6.95	6.91	7.01	37.9	40.0	-5.3
4,4'-DDD	6.79	6.74	6.84	41.9	40.0	4.8
Endosulfan sulfate	7.72	7.68	7.78	35.9	40.0	-10.2
4,4'-DDT	7.04	7.00	7.10	37.2	40.0	-6.9
Methoxychlor	7.47	7.42	7.52	171.8	200.0	-14.1
Endrin ketone	7.98	7.93	8.03	34.9	40.0	-12.6
Endrin aldehyde	7.33	7.29	7.39	35.3	40.0	-11.7
gamma-Chlordane	6.05	6.01	6.11	18.2	20.0	-8.8
alpha-Chlordane	6.17	6.13	6.23	17.8	20.0	-10.9
Hexachlorobutadiene	2.34	2.29	2.39	19.2	20.0	-4.0
Hexachlorobenzene	4.18	4.13	4.23	19.2	20.0	-4.0
Tetrachloro-m-xylene	3.83	3.79	3.89	37.6	40.0	-6.1
Decachlorobiphenyl	8.82	8.78	8.88	33.9	40.0	-15.4

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1901

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	18.1	20.0	-9.4	
beta-BHC	5.18	5.13	5.23	17.2	20.0	-14.0	
delta-BHC	5.50	5.45	5.55	17.8	20.0	-10.8	
gamma-BHC (Lindane)	5.11	5.07	5.17	17.6	20.0	-12.0	
Heptachlor	5.57	5.53	5.63	18.2	20.0	-9.0	
Aldrin	5.91	5.87	5.97	18.5	20.0	-7.4	
Heptachlor epoxide b	6.47	6.43	6.53	17.9	20.0	-10.7	
Endosulfan I	6.85	6.81	6.91	18.0	20.0	-10.2	
Dieldrin	7.11	7.07	7.17	34.9	40.0	-12.7	
4,4'-DDE	6.91	6.87	6.97	35.8	40.0	-10.6	
Endrin	7.40	7.36	7.46	32.5	40.0	-18.8	
Endosulfan II	7.59	7.55	7.65	32.1	40.0	-19.6	
4,4'-DDD	7.45	7.41	7.51	32.5	40.0	-18.7	
Endosulfan sulfate	8.13	8.09	8.19	29.4	40.0	-26.5	<-
4,4'-DDT	7.74	7.70	7.80	29.6	40.0	-26.0	<-
Methoxychlor	8.32	8.28	8.38	139.6	200.0	-30.2	<-
Endrin ketone	8.63	8.58	8.68	29.7	40.0	-25.8	<-
Endrin aldehyde	7.89	7.85	7.95	28.6	40.0	-28.5	<-
gamma-Chlordane	6.65	6.61	6.71	17.9	20.0	-10.4	
alpha-Chlordane	6.79	6.75	6.85	17.5	20.0	-12.7	
Hexachlorobutadiene	2.49	2.45	2.55	18.0	20.0	-10.0	
Hexachlorobenzene	4.63	4.58	4.68	19.7	20.0	-1.4	
Tetrachloro-m-xylene	4.16	4.12	4.22	35.0	40.0	-12.4	
Decachlorobiphenyl	9.79	9.75	9.85	30.0	40.0	-25.1	<-

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1919

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.00	6.96	7.06	3190	2500	27.6	<-
Toxaphene -2	7.06	7.01	7.11	3350	2500	34.0	<-
Toxaphene -3	7.31	7.27	7.37	3100	2500	24.0	<-
Toxaphene -4	7.64	7.59	7.69	2960	2500	18.4	
Toxaphene -5	7.68	7.63	7.73	2920	2500	16.8	
Toxaphene -6	7.96	7.92	8.02	2800	2500	12.0	

AVERAGE %D = 22.1

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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: 05/08/13,1919

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.34	7.29	7.39	2660	2500	6.4
Toxaphene -2	7.66	7.62	7.72	2580	2500	3.2
Toxaphene -3	7.89	7.85	7.95	2480	2500	-0.8
Toxaphene -4	8.36	8.32	8.42	2290	2500	-8.4
Toxaphene -5	8.40	8.36	8.46	2290	2500	-8.4

AVERAGE %D = 5.4

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 01-MAY-2013 14:13 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.233	78181
Endrin	6.750	6110744
4,4'-DDD	6.789	291045
4,4'-DDT	7.046	6276120
Endrin ketone	7.979	305155
Endrin aldehyde	7.334	287938

DDT Percent Breakdown = 5.6 %
((78181+291045) * 100)/(78181+291045+6276120)

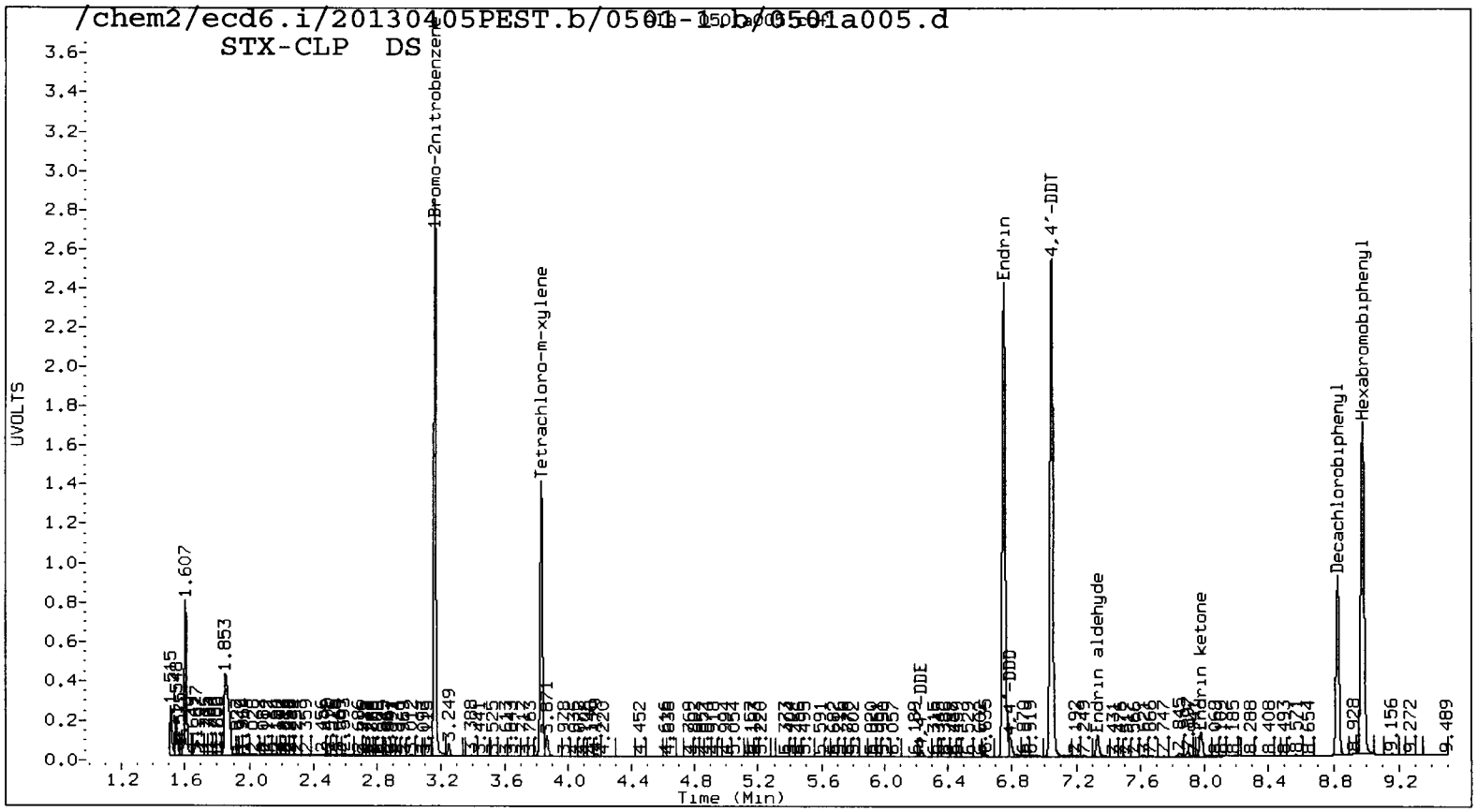
Endrin Percent Breakdown = 8.8 %
((287938+305155) * 100)/(287938+305155+6110744)

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

COMPOUND	RT	AREA
4,4'-DDE	6.918	399918
Endrin	7.406	25172509
4,4'-DDD	7.455	1845622
4,4'-DDT	7.743	26127904
Endrin ketone	8.628	1111738
Endrin aldehyde	7.892	1346070

DDT Percent Breakdown = 7.9 %
((399918+1845622) * 100)/(399918+1845622+26127904)

Endrin Percent Breakdown = 8.9 %
((1346070+1111738) * 100)/(1346070+1111738+25172509)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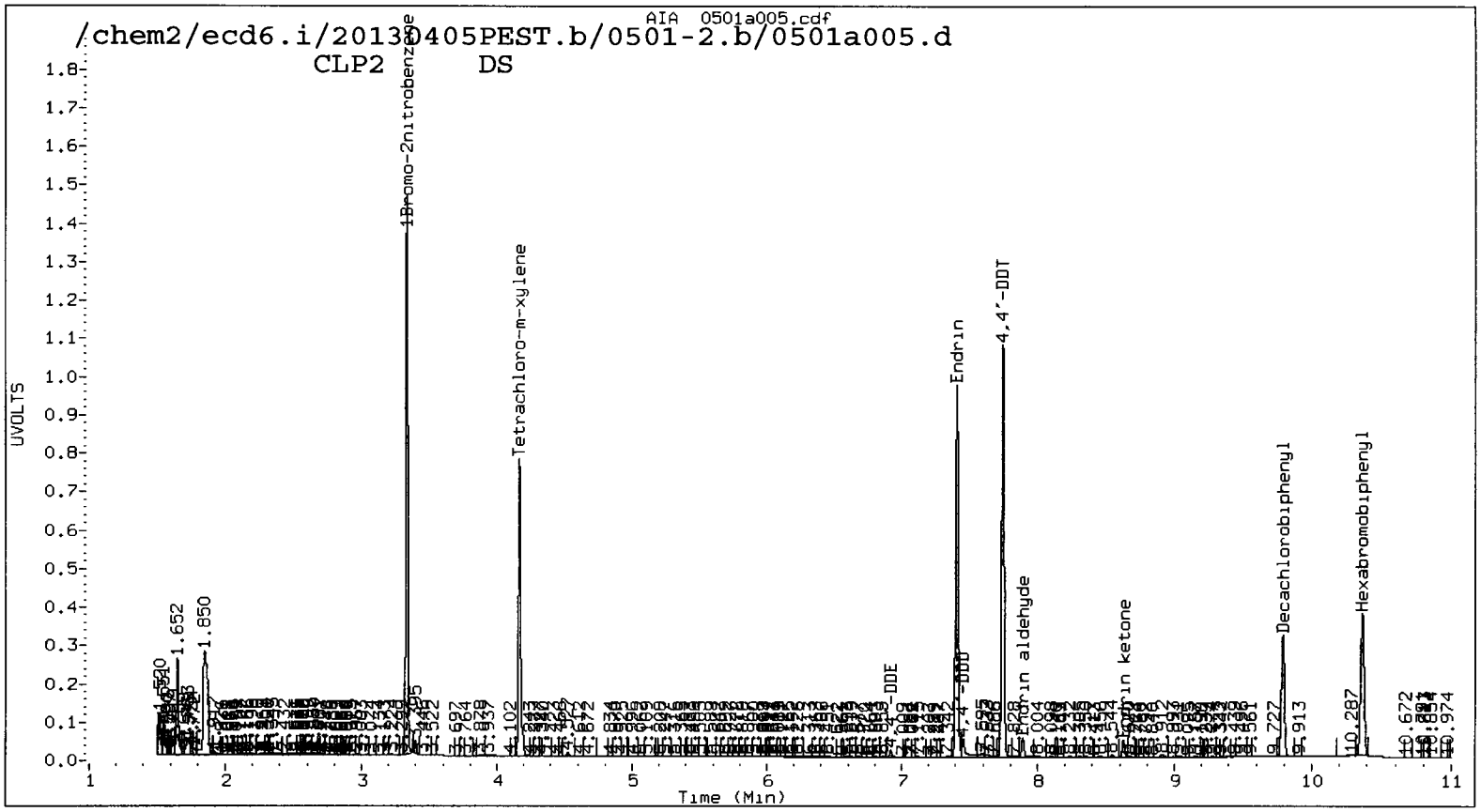
STX-CLP DS
UVOLTS
Time (Min)
1.607
1.853
3.249
3.871
Bromo-2nitrobenzene
Tetrachloro-m-xylene
4,4'-DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.652
1.850
Bromo-2nitrobenzene
Tetrachloro-m-xylene
4,4'-DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/01/13,1433

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	19.9	20.0	-0.7
beta-BHC	4.69	4.64	4.74	18.4	20.0	-8.1
delta-BHC	4.86	4.81	4.91	20.0	20.0	-0.2
gamma-BHC (Lindane)	4.62	4.56	4.66	19.8	20.0	-1.2
Heptachlor	5.06	5.02	5.12	19.6	20.0	-1.9
Aldrin	5.36	5.31	5.41	19.8	20.0	-1.0
Heptachlor epoxide b	5.93	5.89	5.99	19.9	20.0	-0.6
Endosulfan I	6.31	6.26	6.36	19.0	20.0	-5.1
Dieldrin	6.53	6.49	6.59	39.9	40.0	-0.2
4,4'-DDE	6.23	6.18	6.28	38.5	40.0	-3.7
Endrin	6.75	6.71	6.81	37.7	40.0	-5.8
Endosulfan II	6.96	6.91	7.01	37.6	40.0	-6.0
4,4'-DDD	6.79	6.74	6.84	39.5	40.0	-1.2
Endosulfan sulfate	7.73	7.68	7.78	37.1	40.0	-7.2
4,4'-DDT	7.05	7.00	7.10	38.7	40.0	-3.2
Methoxychlor	7.47	7.42	7.52	173.6	200.0	-13.2
Endrin ketone	7.98	7.93	8.03	36.6	40.0	-8.5
Endrin aldehyde	7.34	7.29	7.39	37.4	40.0	-6.5
gamma-Chlordane	6.05	6.01	6.11	19.3	20.0	-3.3
alpha-Chlordane	6.18	6.13	6.23	19.5	20.0	-2.6
Hexachlorobutadiene	2.34	2.29	2.39	19.7	20.0	-1.4
Hexachlorobenzene	4.18	4.13	4.23	19.8	20.0	-1.2
Tetrachloro-m-xylene	3.84	3.79	3.89	38.2	40.0	-4.4
Decachlorobiphenyl	8.83	8.78	8.88	35.5	40.0	-11.2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/01/13,1433

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.76	4.71	4.81	20.0	20.0	0.0	
beta-BHC	5.19	5.13	5.23	19.0	20.0	-5.1	
delta-BHC	5.50	5.45	5.55	20.2	20.0	1.0	
gamma-BHC (Lindane)	5.11	5.07	5.17	19.8	20.0	-1.0	
Heptachlor	5.58	5.53	5.63	20.1	20.0	0.6	
Aldrin	5.92	5.87	5.97	20.4	20.0	2.1	
Heptachlor epoxide b	6.47	6.43	6.53	21.3	20.0	6.5	
Endosulfan I	6.86	6.81	6.91	21.6	20.0	7.8	
Dieldrin	7.12	7.07	7.17	42.8	40.0	7.0	
4,4'-DDE	6.92	6.87	6.97	42.9	40.0	7.3	
Endrin	7.41	7.36	7.46	34.6	40.0	-13.5	
Endosulfan II	7.60	7.55	7.65	34.9	40.0	-12.8	
4,4'-DDD	7.46	7.41	7.51	35.0	40.0	-12.4	
Endosulfan sulfate	8.14	8.09	8.19	33.8	40.0	-15.5	
4,4'-DDT	7.74	7.70	7.80	33.6	40.0	-15.9	
Methoxychlor	8.33	8.28	8.38	152.0	200.0	-24.0	<-
Endrin ketone	8.63	8.58	8.68	35.3	40.0	-11.8	
Endrin aldehyde	7.89	7.85	7.95	33.7	40.0	-15.8	
gamma-Chlordane	6.65	6.61	6.71	22.0	20.0	9.8	
alpha-Chlordane	6.79	6.75	6.85	21.2	20.0	5.8	
Hexachlorobutadiene	2.50	2.45	2.55	20.6	20.0	3.1	
Hexachlorobenzene	4.63	4.58	4.68	21.0	20.0	5.1	
Tetrachloro-m-xylene	4.17	4.12	4.22	37.4	40.0	-6.5	
Decachlorobiphenyl	9.79	9.75	9.85	33.2	40.0	-17.1	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/01/13,1451

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	7.01	6.96	7.06	2616.3	2500.0	4.6
Tetrachloro-m-xylene	3.84	3.79	3.89	36.3	40.0	-9.2
Decachlorobiphenyl	8.83	8.78	8.88	35.3	40.0	-11.7

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/01/13,1451

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	7.34	7.29	7.39	2270.8	2500.0	-9.2
Tetrachloro-m-xylene	4.17	4.12	4.22	36.2	40.0	-9.4
Decachlorobiphenyl	9.79	9.75	9.85	33.2	40.0	-16.9

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 01-MAY-2013 19:26 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.237	69606
Endrin	6.754	6025954
4,4'-DDD	6.793	311011
4,4'-DDT	7.050	6014581
Endrin ketone	7.982	269808
Endrin aldehyde	7.337	242035

DDT Percent Breakdown = 6.0 %
((69606+311011) * 100)/(69606+311011+6014581)

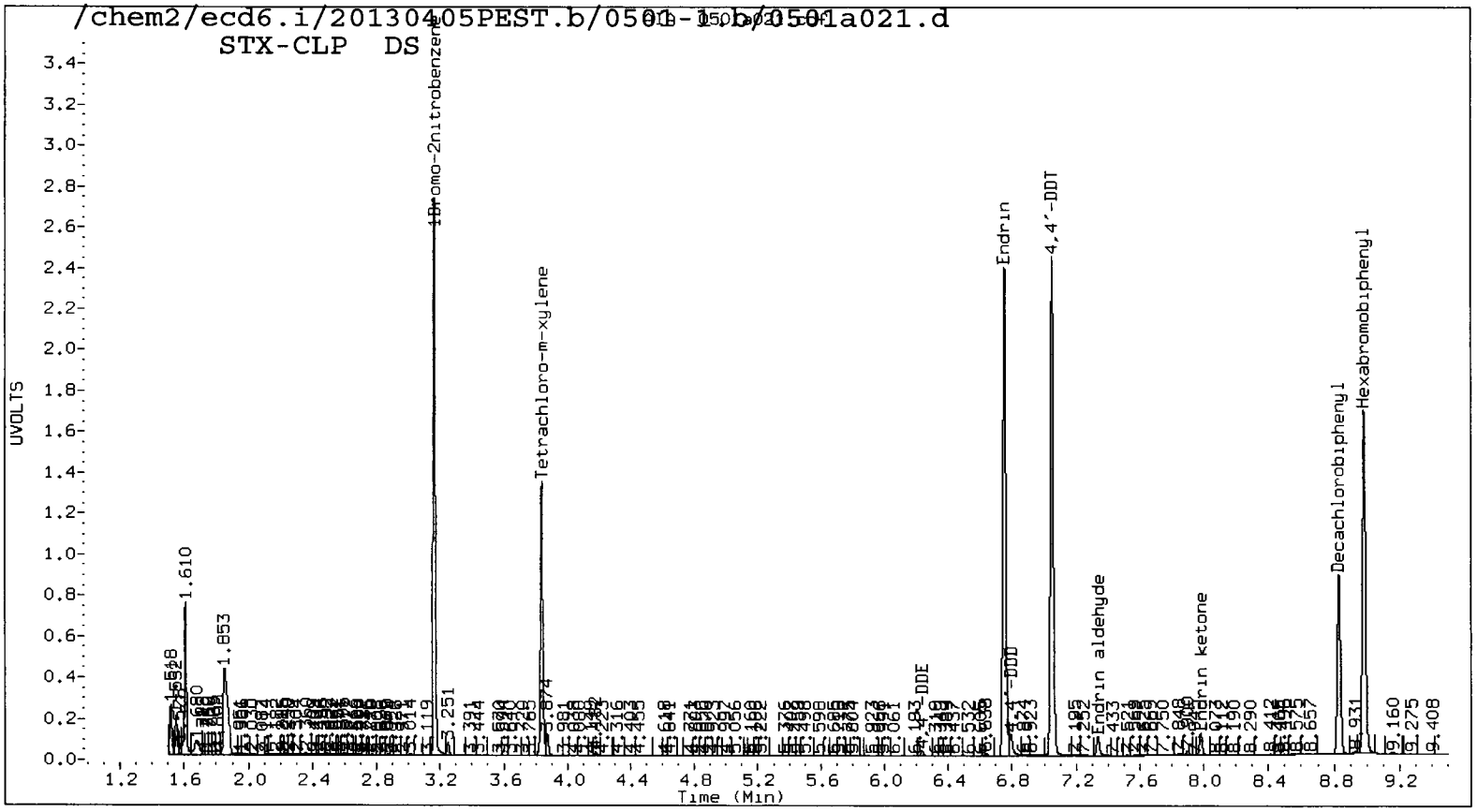
Endrin Percent Breakdown = 7.8 %
((242035+269808) * 100)/(242035+269808+6025954)

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

COMPOUND	RT	AREA
4,4'-DDE	6.920	359165
Endrin	7.408	24895800
4,4'-DDD	7.458	1956415
4,4'-DDT	7.745	25208999
Endrin ketone	8.630	879609
Endrin aldehyde	7.894	1094031

DDT Percent Breakdown = 8.4 %
((359165+1956415) * 100)/(359165+1956415+25208999)

Endrin Percent Breakdown = 7.3 %
((1094031+879609) * 100)/(1094031+879609+24895800)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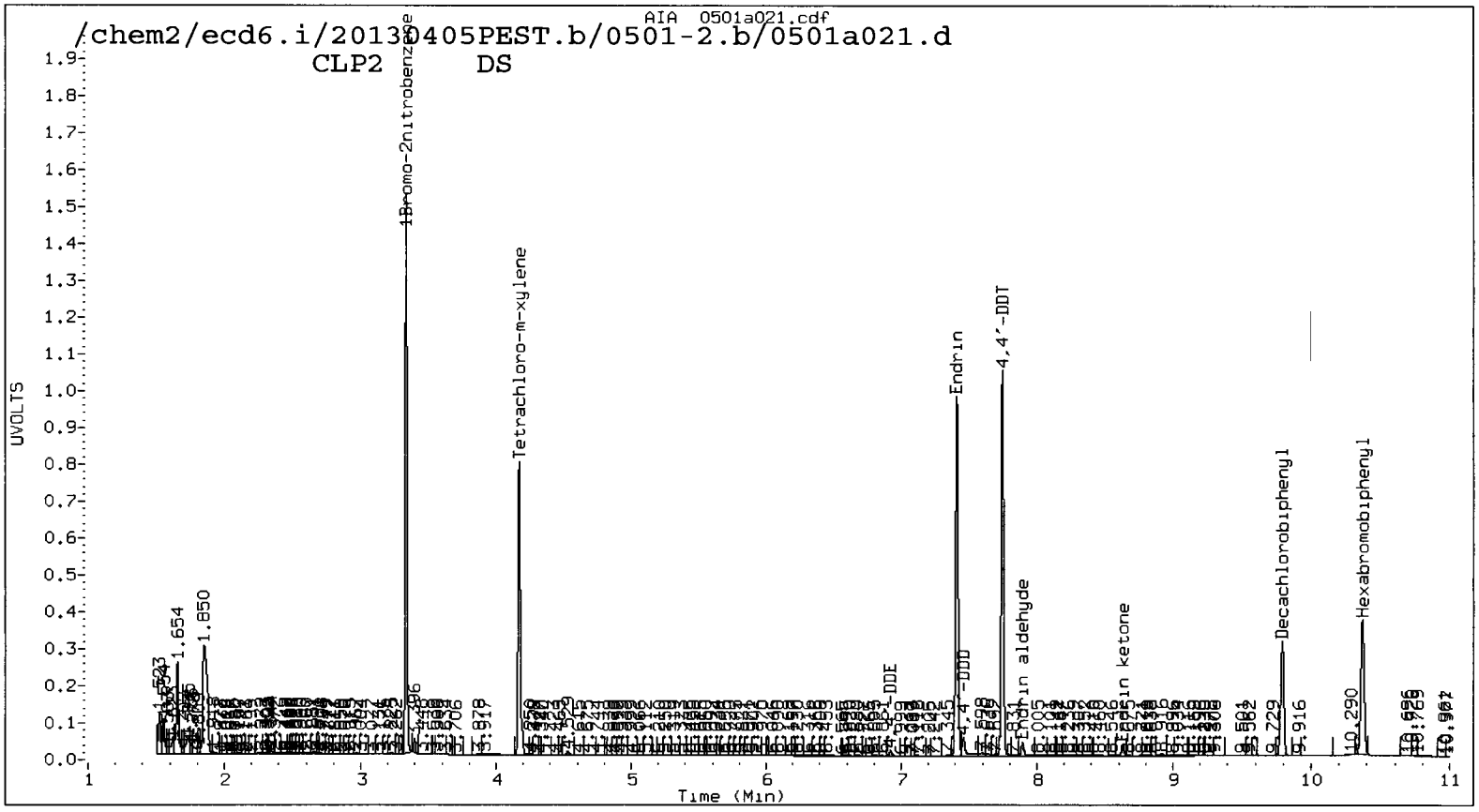
STX-CLP DS
UVOLTS
Time (Min)
1.610
1.853
3.251
3.874
Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0501a021.cdf
/chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a021.d
CLP2 DS
UVOLTS
Time (Min)
1.654
1.850
Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/01/13,1944

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	19.9	20.0	-0.7
beta-BHC	4.69	4.64	4.74	18.3	20.0	-8.4
delta-BHC	4.86	4.81	4.91	19.9	20.0	-0.3
gamma-BHC (Lindane)	4.61	4.56	4.66	19.8	20.0	-1.0
Heptachlor	5.06	5.02	5.12	19.7	20.0	-1.7
Aldrin	5.36	5.31	5.41	19.7	20.0	-1.5
Heptachlor epoxide b	5.93	5.89	5.99	19.9	20.0	-0.3
Endosulfan I	6.31	6.26	6.36	19.5	20.0	-2.5
Dieldrin	6.53	6.49	6.59	39.8	40.0	-0.4
4,4'-DDE	6.23	6.18	6.28	38.2	40.0	-4.5
Endrin	6.75	6.71	6.81	37.5	40.0	-6.3
Endosulfan II	6.96	6.91	7.01	36.9	40.0	-7.7
4,4'-DDD	6.79	6.74	6.84	39.2	40.0	-2.0
Endosulfan sulfate	7.72	7.68	7.78	36.4	40.0	-9.0
4,4'-DDT	7.05	7.00	7.10	38.2	40.0	-4.4
Methoxychlor	7.47	7.42	7.52	172.4	200.0	-13.8
Endrin ketone	7.98	7.93	8.03	36.1	40.0	-9.8
Endrin aldehyde	7.33	7.29	7.39	37.1	40.0	-7.4
gamma-Chlordane	6.05	6.01	6.11	19.7	20.0	-1.7
alpha-Chlordane	6.17	6.13	6.23	19.5	20.0	-2.3
Hexachlorobutadiene	2.34	2.29	2.39	19.4	20.0	-3.2
Hexachlorobenzene	4.18	4.13	4.23	19.7	20.0	-1.7
Tetrachloro-m-xylene	3.84	3.79	3.89	38.3	40.0	-4.3
Decachlorobiphenyl	8.83	8.78	8.88	34.9	40.0	-12.8

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 05/01/13,1944

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	19.9	20.0	-0.6	
beta-BHC	5.18	5.13	5.23	18.8	20.0	-5.8	
delta-BHC	5.50	5.45	5.55	20.1	20.0	0.6	
gamma-BHC (Lindane)	5.11	5.07	5.17	19.8	20.0	-0.9	
Heptachlor	5.58	5.53	5.63	19.9	20.0	-0.4	
Aldrin	5.92	5.87	5.97	20.2	20.0	0.8	
Heptachlor epoxide b	6.47	6.43	6.53	20.8	20.0	3.9	
Endosulfan I	6.86	6.81	6.91	20.8	20.0	3.9	
Dieldrin	7.12	7.07	7.17	41.3	40.0	3.1	
4,4'-DDE	6.92	6.87	6.97	41.3	40.0	3.2	
Endrin	7.41	7.36	7.46	33.7	40.0	-15.8	
Endosulfan II	7.59	7.55	7.65	34.0	40.0	-15.1	
4,4'-DDD	7.45	7.41	7.51	34.1	40.0	-14.8	
Endosulfan sulfate	8.14	8.09	8.19	32.6	40.0	-18.6	
4,4'-DDT	7.74	7.70	7.80	33.0	40.0	-17.4	
Methoxychlor	8.32	8.28	8.38	148.4	200.0	-25.8	<-
Endrin ketone	8.63	8.58	8.68	33.4	40.0	-16.5	
Endrin aldehyde	7.89	7.85	7.95	32.8	40.0	-18.0	
gamma-Chlordane	6.65	6.61	6.71	21.2	20.0	5.8	
alpha-Chlordane	6.79	6.75	6.85	20.5	20.0	2.4	
Hexachlorobutadiene	2.50	2.45	2.55	20.2	20.0	1.2	
Hexachlorobenzene	4.63	4.58	4.68	21.1	20.0	5.6	
Tetrachloro-m-xylene	4.17	4.12	4.22	36.8	40.0	-8.1	
Decachlorobiphenyl	9.79	9.75	9.85	32.1	40.0	-19.7	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/01/13,2001

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	7.01	6.96	7.06	2553.6	2500.0	2.1
Tetrachloro-m-xylene	3.84	3.79	3.89	36.3	40.0	-9.2
Decachlorobiphenyl	8.83	8.78	8.88	34.8	40.0	-13.1

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN31 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 05/01/13,2001

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	7.34	7.29	7.39	2185.9	2500.0	-12.6
Tetrachloro-m-xylene	4.17	4.12	4.22	35.8	40.0	-10.6
Decachlorobiphenyl	9.79	9.75	9.85	32.0	40.0	-19.9

FORM VII PEST-2

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 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	05/08/13	0135	4595896	3.161	4141527	8.980
10		INDAE	05/08/13	0153	5547890	3.161	5116989	8.981
11		TOXAPH	05/08/13	0211	4713362	3.160	4355363	8.981
12	WN27MBS1	WN27MBS1	05/08/13	0228	5310596	3.160	5089048	8.974
13	WN27LCSS1	WN27LCSS1	05/08/13	0246	5032757	3.160	4732756	8.973
14	CG-MH-010-20	WN27A	05/08/13	0340	5221608	3.160	4720201	8.985
15	CG-MH-010-20	WN27AMS	05/08/13	0358	5374608	3.160	5059646	8.987
16	CG-MH-010-20	WN27AMSD	05/08/13	0415	5186782	3.160	4786191	8.985
17	ES-TS-INF-20	WN31A	05/08/13	0433	6289988	3.161	4927135	9.020
18	WN27LCSDS1	WN27LCSDS1	05/08/13	0527	5599264	3.160	4869522	8.973
19		DS	05/08/13	0602	4412035	3.160	3963868	8.975
20		INDAE	05/08/13	0620	5388860	3.160	4973861	8.975
21		DS	05/08/13	1715	4452384	3.160	3730334	8.978
22		INDAE	05/08/13	1732	4606200	3.161	3886005	8.979
23		TOXAPH	05/08/13	1750	4148076	3.161	3606518	8.980
24	CG-MH-010-20	WN27A	05/08/13	1808	5104914	3.160	4349446	8.973
25	ES-TS-INF-20	WN31A	05/08/13	1826	5265221	3.160	4608412	8.975
26		DS	05/08/13	1844	4741068	3.160	3797112	8.978
27		INDAE	05/08/13	1901	4721528	3.160	3843165	8.980
28		TOXAPH	05/08/13	1919	4137986	3.160	3482863	8.981

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.: WN27 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	05/08/13	0135	25110132	3.331	11246418	10.361
10		INDAE	05/08/13	0153	29986568	3.330	14091218	10.362
11		TOXAPH	05/08/13	0211	25685217	3.330	12281080	10.361
12	WN27MBS1	WN27MBS1	05/08/13	0228	27392372	3.331	14536366	10.357
13	WN27LCSS1	WN27LCSS1	05/08/13	0246	25467745	3.330	13272223	10.358
14	CG-MH-010-20	WN27A	05/08/13	0340	23190958	3.330	8139307	10.365
15	CG-MH-010-20	WN27AMS	05/08/13	0358	18765104	3.330	7938408	10.367
16	CG-MH-010-20	WN27AMSD	05/08/13	0415	18292648	3.330	8130197	10.367
17	ES-TS-INF-20	WN31A	05/08/13	0433	15376770	3.330	6962958	10.388
18	WN27LCSDS1	WN27LCSDS1	05/08/13	0527	26917886	3.330	9724485	10.359
19		DS	05/08/13	0602	22330803	3.330	8666855	10.359
20		INDAE	05/08/13	0620	27376233	3.331	11364621	10.359
21		DS	05/08/13	1715	24597709	3.330	10088401	10.360
22		INDAE	05/08/13	1732	24467634	3.331	10167501	10.360
23		TOXAPH	05/08/13	1750	21770088	3.331	9021897	10.361
24	CG-MH-010-20	WN27A	05/08/13	1808	26356724	3.330	10361445	10.358
25	ES-TS-INF-20	WN31A	05/08/13	1826	24219365	3.330	9865983	10.359
26		DS	05/08/13	1844	23624251	3.330	9120055	10.360
27		INDAE	05/08/13	1901	25124831	3.330	9725369	10.361
28		TOXAPH	05/08/13	1919	21752207	3.330	8713837	10.362

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.: WN31 Project: NPDES SAMPLING

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		DS	04/05/13	1146	12937*	3.168		
02		INDAE	04/05/13	1247	5448520	3.165	4807902	8.980
03		INDAA	04/05/13	1305	6225835	3.164	5241456	8.979
04		INDAB	04/05/13	1323	6111022	3.164	5357211	8.979
05		INDAC	04/05/13	1341	5854383	3.165	5133358	8.979
06		INDAD	04/05/13	1358	5880001	3.165	5227384	8.979
07		INDAF	04/05/13	1417	4847986	3.165	4193877	8.980
08		INDAG	04/05/13	1435	5342959	3.165	4760154	8.980
09		INDA ICV	04/05/13	1453	5329694	3.165	4682567	8.979
10		DS	04/05/13	1510	5751850	3.165	5020125	8.979
11		TOXAPHENE	04/05/13	1528	5312805	3.165	4975008	8.979
12		DS	05/01/13	1413	4991590	3.161	4572661	8.979
13		INDAE	05/01/13	1433	4845287	3.163	4501320	8.983
14		TOXAPH	05/01/13	1451	4899368	3.162	4654061	8.980
15	WN31MBW1	WN31MBW1	05/01/13	1731	4299558	3.163	3652896	8.979
16	WN31LCSW1	WN31LCSW1	05/01/13	1751	4917542	3.163	4244562	8.979
17	WN31LCSDW1	WN31LCSDW1	05/01/13	1811	4673500	3.163	4243140	8.978
18	ZZZZZ	ZZZZZ	05/01/13	1830	4508858	3.162	4181605	8.977
19	ES-MH-001-20	WN31B	05/01/13	1848	4799509	3.162	4854809	8.976
20		DS	05/01/13	1926	4849998	3.164	4515689	8.983
21		INDAE	05/01/13	1944	4890379	3.162	4585677	8.980
22		TOXAPH	05/01/13	2001	5000263	3.163	4838075	8.981

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.: WN31 Project: NPDES SAMPLING

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		DS	04/05/13	1146	160519*	3.179*		
02		INDAE	04/05/13	1247	21702340	3.333	7681727	10.368
03		INDAA	04/05/13	1305	24741508	3.333	9038709	10.366
04		INDAB	04/05/13	1323	25491655	3.333	9687228	10.367
05		INDAC	04/05/13	1341	25508207	3.333	9574018	10.367
06		INDAD	04/05/13	1358	26036651	3.334	9979752	10.368
07		INDAF	04/05/13	1417	21952139	3.333	8109922	10.368
08		INDAG	04/05/13	1435	24214609	3.333	9338784	10.367
09		INDA ICV	04/05/13	1453	24310130	3.334	9265075	10.368
10		DS	04/05/13	1510	26369927	3.333	10003613	10.367
11		TOXAPHENE	04/05/13	1528	24507429	3.333	9646485	10.367
12		DS	05/01/13	1413	26819597	3.331	12744074	10.363
13		INDAE	05/01/13	1433	27129824	3.332	12597951	10.366
14		TOXAPH	05/01/13	1451	27649831	3.333	13277091	10.364
15	WN31MBW1	WN31MBW1	05/01/13	1731	23767794	3.333	9569979	10.366
16	WN31LCSW1	WN31LCSW1	05/01/13	1751	28112154	3.333	11153781	10.365
17	WN31LCSDW1	WN31LCSDW1	05/01/13	1811	26636720	3.332	11269576	10.365
18	ZZZZZ	ZZZZZ	05/01/13	1830	25843676	3.332	11021442	10.363
19	ES-MH-001-20	WN31B	05/01/13	1848	25982328	3.332	12423269	10.364
20		DS	05/01/13	1926	27934442	3.333	12711882	10.367
21		INDAE	05/01/13	1944	28421146	3.332	13152986	10.365
22		TOXAPH	05/01/13	2001	29098114	3.332	13831115	10.366

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: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: ES-TS-INF-20130424-S
SAMPLE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/02/13
Date Analyzed: 05/06/13 22:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 60.3%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	3.9	< 3.9 U
53469-21-9	Aroclor 1242	1.3	3.9	< 3.9 U
12672-29-6	**Aroclor 1248**	**1.3**	**3.9**	**50**
11097-69-1	**Aroclor 1254**	**1.3**	**3.9**	**64**
11096-82-5	**Aroclor 1260**	**1.3**	**3.9**	**53**
11104-28-2	Aroclor 1221	1.3	3.9	< 3.9 U
11141-16-5	Aroclor 1232	1.3	3.9	< 3.9 U
37324-23-5	Aroclor 1262	1.3	3.9	< 3.9 U
11100-14-4	Aroclor 1268	1.3	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	75.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: ES-TS-INF-20130424-S**
Extraction Method: SW3546 **DILUTION**
Page 1 of 1

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Date Extracted: 05/02/13
Date Analyzed: 05/08/13 05:30
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 60.3%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.0	20	< 20 U
53469-21-9	Aroclor 1242	6.7	20	< 20 U
12672-29-6	**Aroclor 1248**	**6.7**	**20**	**50**
11097-69-1	**Aroclor 1254**	**6.7**	**20**	**97**
11096-82-5	**Aroclor 1260**	**6.7**	**20**	**50**
11104-28-2	Aroclor 1221	6.7	20	< 20 U
11141-16-5	Aroclor 1232	6.7	20	< 20 U
37324-23-5	Aroclor 1262	6.7	20	< 20 U
11100-14-4	Aroclor 1268	6.7	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	119%
Tetrachlorometaxylene	82.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-050213	84.8%	64-105	75.2%	54-100	0
LCS-050213	89.5%	64-105	87.8%	54-100	0
LCSD-050213	87.0%	64-105	79.0%	54-100	0
ES-TS-INF-20130424-S	85.8%	37-128	75.8%	45-102	0
ES-TS-INF-20130424-S DL	119%	37-128	82.4%	45-102	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-050213
LCS/LCSD

Lab Sample ID: LCS-050213
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 05/02/13

Date Analyzed LCS: 05/06/13 19:02
LCSD: 05/06/13 19:22
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

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

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	86.4	101	85.5%	80.0	101	79.2%	7.7%
Aroclor 1260	85.8	101	85.0%	84.3	101	83.5%	1.8%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	89.5%	87.0%
Tetrachlorometaxylene	87.8%	79.0%

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

PCB METHOD BLANK SUMMARY

BLANK NO.

WO14MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: USGS

ARI Job No.: WN27
Project: GREEN RIVER TOXIC LO

Lab Sample ID: WO14MBS1
Lab File ID: 0506A008

Date Extracted: 05/02/13
Matrix: SOLID

Date Analyzed: 05/06/13
Instrument ID: ECD5

Time Analyzed: 1842
GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WO14LCSS1	WO14LCSS1	05/06/13
02	WO14LCSDS1	WO14LCSDS1	05/06/13
03	CG-MH-010-20130423-	WN27A	05/06/13
04	CG-MH-010-20130 MS	WN27AMS	05/06/13
04	CG-MH-010-20130 MSD	WN27AMSD	05/06/13
05	ES-TS-INF-20130424-	WN31A	05/06/13
06	CG-MH-010-20130423-	WN27A	05/08/13
07	ES-TS-INF-20130424-	WN31A	05/08/13

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: MB-050213**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-050213
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/08/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 05/02/13
Date Analyzed: 05/06/13 18:42
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

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

Percent Moisture: NA

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

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	84.8%
Tetrachlorometaxylene	75.2%

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 04/16/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.4492	1.3336	1.3448	1.2692	1.2337	1.1774	1.3013	7.4
DCB 12.73-12.93	1.5345	1.4214	1.2892	1.1151	1.0172	0.9367	1.2190	19.3

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 5.96- 6.16	0.0395	0.0357	0.0363	0.0327	0.0306	0.0285	0.0339	11.9
2 6.37- 6.57	0.1294	0.1113	0.1126	0.1002	0.0938	0.0863	0.1056	14.6
3 6.52- 6.72	0.0556	0.0476	0.0500	0.0441	0.0412	0.0377	0.0460	14.0
4 6.63- 6.83	0.0370	0.0318	0.0358	0.0322	0.0301	0.0277	0.0324	10.7

AROCLOR AVERAGE %RSD = 12.8

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 9.87-10.07	0.0531	0.0490	0.0464	0.0429	0.0390	0.0351	0.0443	15.0
2 10.19-10.39	0.0549	0.0489	0.0465	0.0433	0.0394	0.0356	0.0448	12.5
3 10.56-10.76	0.1288	0.1194	0.1132	0.1052	0.0959	0.0836	0.1077	11.2
4 10.96-11.16	0.0697	0.0621	0.0603	0.0568	0.0524	0.0478	0.0582	10.7
5 11.15-11.35	0.0376	0.0315	0.0321	0.0304	0.0280	0.0258	0.0309	11.1

AROCLOR AVERAGE %RSD = 12.1

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 04/16/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.32- 4.52	1.3119	1.1898	1.2125	1.1404	1.1255	1.0814	1.1769	6.9
DCB 13.11-13.31	1.3741	1.1837	1.1716	1.0462	0.9751	0.9054	1.1094	15.3

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 6.07- 6.27	0.0611	0.0511	0.0482	0.0424	0.0395	0.0362	0.0464	19.5
2 6.70- 6.90	0.1246	0.1050	0.1003	0.0892	0.0866	0.0805	0.0977	16.3
3 7.09- 7.29	0.0313	0.0270	0.0257	0.0240	0.0231	0.0217	0.0255	13.4
4 7.26- 7.46	0.0304	0.0255	0.0240	0.0217	0.0207	0.0192	0.0236	17.0

AROCLOR AVERAGE %RSD = 16.5

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 10.16-10.36	0.0577	0.0481	0.0459	0.0412	0.0385	0.0355	0.0445	18.0
2 10.61-10.81	0.0678	0.0577	0.0550	0.0500	0.0471	0.0437	0.0536	16.2
3 10.89-11.09	0.1387	0.1133	0.1090	0.0996	0.0943	0.0879	0.1071	16.8
4 11.41-11.61	0.0376	0.0326	0.0312	0.0288	0.0274	0.0256	0.0305	14.0

AROCLOR AVERAGE %RSD = 16.2

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.31- 4.51	1.2778	1.2769	1.3021	1.2444	1.1977	1.1434	1.2404	4.8
DCB	12.73-12.93	1.4525	1.2874	1.2269	1.1209	1.0641	1.0185	1.1950	13.5

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	5.96- 6.16	0.0419	0.0392	0.0380	0.0346	0.0323	0.0304	0.0361	12.1
2	6.37- 6.57	0.1293	0.1202	0.1174	0.1063	0.0998	0.0934	0.1111	12.2
3	6.52- 6.72	0.0588	0.0546	0.0526	0.0473	0.0442	0.0411	0.0498	13.5
4	6.63- 6.83	0.0432	0.0407	0.0393	0.0352	0.0334	0.0312	0.0372	12.4

AROCLOR AVERAGE %RSD = 12.6

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	9.87-10.07	0.0809	0.0714	0.0687	0.0624	0.0572	0.0524	0.0655	15.7
2	10.18-10.38	0.0749	0.0676	0.0659	0.0605	0.0560	0.0517	0.0628	11.1
3	10.56-10.76	0.1738	0.1618	0.1583	0.1468	0.1383	0.1296	0.1514	8.8
4	10.96-11.16	0.0842	0.0787	0.0766	0.0716	0.0683	0.0640	0.0739	8.2
5	11.15-11.35	0.0430	0.0421	0.0415	0.0388	0.0375	0.0354	0.0397	5.7

AROCLOR AVERAGE %RSD = 9.9

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

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

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	6.06- 6.26	0.0514	0.0510	0.0486	0.0445	0.0410	0.0373	0.0456	12.5
2	6.70- 6.90	0.1117	0.1063	0.1043	0.0972	0.0916	0.0843	0.0992	10.2
3	7.08- 7.28	0.0278	0.0270	0.0274	0.0257	0.0247	0.0232	0.0259	6.9
4	7.26- 7.46	0.0276	0.0258	0.0256	0.0233	0.0223	0.0204	0.0242	10.9

AROCLOR AVERAGE %RSD = 10.1

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	10.16-10.36	0.0846	0.0784	0.0760	0.0710	0.0656	0.0598	0.0726	12.4
2	10.61-10.81	0.0966	0.0905	0.0885	0.0844	0.0782	0.0718	0.0850	10.5
3	10.88-11.08	0.1687	0.1671	0.1641	0.1571	0.1479	0.1368	0.1569	7.9
4	11.40-11.60	0.0485	0.0457	0.0437	0.0415	0.0392	0.0366	0.0425	10.2

AROCLOR AVERAGE %RSD = 10.3

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.056	4.96- 5.16	0.03196
2	6.463	6.36- 6.56	0.01009
3	7.876	7.78- 7.98	0.01396

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.054	5.95- 6.15	0.01408
2	6.461	6.36- 6.56	0.04340
3	7.438	7.34- 7.54	0.02193
4	7.871	7.77- 7.97	0.02572

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.055	5.96- 6.16	0.02633
2	6.462	6.36- 6.56	0.08105
3	6.612	6.51- 6.71	0.03590
4	7.867	7.77- 7.97	0.04490

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.467	6.37- 6.57	0.05052
2	7.445	7.34- 7.54	0.05597
3	7.876	7.78- 7.98	0.07224
4	8.111	8.01- 8.21	0.05114

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.194	8.09- 8.29	0.07442
2	8.567	8.47- 8.67	0.04939
3	8.702	8.60- 8.80	0.09915
4	9.053	8.95- 9.15	0.10641
5	9.364	9.26- 9.46	0.04380

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.282	10.18-10.38	0.05136
2	10.659	10.56-10.76	0.13372
3	11.059	10.96-11.16	0.04748
4	11.247	11.15-11.35	0.05697
5	11.919	11.82-12.02	0.05591

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.174	11.07-11.27	0.13029
2	11.245	11.14-11.34	0.13012
3	11.631	11.53-11.73	0.11247
4	12.421	12.32-12.52	0.32821

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.689	3.59- 3.79	0.00835
2	5.088	4.99- 5.19	0.01307
3	5.340	5.24- 5.44	0.00790
4	5.455	5.35- 5.55	0.02385

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.161	6.06- 6.26	0.01989
2	6.797	6.70- 6.90	0.03907
3	7.007	6.91- 7.11	0.01634
4	8.237	8.14- 8.34	0.01338

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.161	6.06- 6.26	0.03437
2	6.798	6.70- 6.90	0.07332
3	7.005	6.91- 7.11	0.03073
4	8.233	8.13- 8.33	0.02528

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.800	6.70- 6.90	0.04475
2	7.707	7.61- 7.81	0.03673
3	8.239	8.14- 8.34	0.03780
4	8.583	8.48- 8.68	0.04936

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.297	8.20- 8.40	0.03682
2	8.474	8.37- 8.57	0.04547
3	8.995	8.89- 9.09	0.03515
4	9.146	9.05- 9.25	0.07596
5	9.930	9.83-10.03	0.04386

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.260	10.16-10.36	0.06622
2	10.711	10.61-10.81	0.05736
3	10.987	10.89-11.09	0.13232
4	11.567	11.47-11.67	0.08604
5	12.309	12.21-12.41	0.05172

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.506	11.41-11.61	0.13392
2	11.573	11.47-11.67	0.13215
3	11.969	11.87-12.07	0.10949
4	12.792	12.69-12.89	0.32319

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

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

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

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.059	5.96- 6.16	0.02881
2	6.467	6.37- 6.57	0.08837
3	6.617	6.52- 6.72	0.03943
4	7.873	7.77- 7.97	0.04869

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.463	6.36- 6.56	0.05630
2	7.440	7.34- 7.54	0.06332
3	7.872	7.77- 7.97	0.08051
4	8.108	8.01- 8.21	0.05614

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.190	8.09- 8.29	0.07461
2	8.561	8.46- 8.66	0.04925
3	8.698	8.60- 8.80	0.10267
4	9.050	8.95- 9.15	0.10574
5	9.360	9.26- 9.46	0.03999

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

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

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

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

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

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.164	6.06- 6.26	0.03645
2	6.801	6.70- 6.90	0.08006
3	7.010	6.91- 7.11	0.03345
4	8.237	8.14- 8.34	0.02802

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.798	6.70- 6.90	0.05013
2	7.704	7.60- 7.80	0.04157
3	8.236	8.14- 8.34	0.04304
4	8.581	8.48- 8.68	0.05593

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.297	8.20- 8.40	0.03879
2	8.473	8.37- 8.57	0.04792
3	8.995	8.89- 9.09	0.03671
4	9.145	9.05- 9.25	0.07862
5	9.931	9.83-10.03	0.04427

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

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

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WN27

Project: NPDES

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1254

Time Analyzed :1802

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	244.8	250.0	-2.1
Aroclor-1254-2	8.56	8.47	8.67	223.2	250.0	-10.7
Aroclor-1254-3	8.69	8.60	8.80	273.9	250.0	9.6
Aroclor-1254-4	9.05	8.95	9.15	281.1	250.0	12.4
Aroclor-1254-5	9.36	9.26	9.46	274.9	250.0	10.0

AVERAGE %D = 9.0

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WN27
Project: NPDES

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1254
Time Analyzed :1802

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.29	8.20	8.40	275.8	250.0	10.3
Aroclor-1254-2	8.47	8.37	8.57	277.2	250.0	10.9
Aroclor-1254-3	8.99	8.89	9.09	278.1	250.0	11.2
Aroclor-1254-4	9.14	9.05	9.25	248.9	250.0	-0.4
Aroclor-1254-5	9.93	9.83	10.03	286.7	250.0	14.7

AVERAGE %D = 9.5

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.05	5.96	6.16	269.5	250.0	7.8
Aroclor-1016-2	6.46	6.37	6.57	269.5	250.0	7.8
Aroclor-1016-3	6.61	6.52	6.72	276.6	250.0	10.6
Aroclor-1016-4	6.72	6.63	6.83	289.9	250.0	16.0

AVERAGE %D = 10.6

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.87	10.07	262.2	250.0	4.9
Aroclor-1260-2	10.28	10.19	10.39	251.3	250.0	0.5
Aroclor-1260-3	10.65	10.56	10.76	251.3	250.0	0.5
Aroclor-1260-4	11.05	10.96	11.16	244.0	250.0	-2.4
Aroclor-1260-5	11.24	11.15	11.35	250.4	250.0	0.2

AVERAGE %D = 1.7

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.07	6.27	243.0	250.0	-2.8
Aroclor-1016-2	6.80	6.70	6.90	210.4	250.0	-15.8
Aroclor-1016-3	7.18	7.09	7.29	262.3	250.0	4.9
Aroclor-1016-4	7.35	7.26	7.46	254.4	250.0	1.8

AVERAGE %D = 6.3

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :1822

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	266.0	250.0	6.4
Aroclor-1260-2	10.71	10.61	10.81	276.6	250.0	10.6
Aroclor-1260-3	10.98	10.89	11.09	266.2	250.0	6.5
Aroclor-1260-4	11.50	11.41	11.61	277.3	250.0	10.9

AVERAGE %D = 8.6

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1242 Time Analyzed :2043

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.06	5.96	6.16	272.8	250.0	9.1
Aroclor-1242-2	6.46	6.36	6.56	274.8	250.0	9.9
Aroclor-1242-3	6.61	6.51	6.71	278.5	250.0	11.4
Aroclor-1242-4	7.87	7.77	7.97	274.9	250.0	10.0

AVERAGE %D = 10.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WN27

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1242

Time Analyzed :2043

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.16	6.06	6.26	257.3	250.0	2.9
Aroclor-1242-2	6.80	6.70	6.90	220.7	250.0	-11.7
Aroclor-1242-3	7.01	6.91	7.11	263.4	250.0	5.4
Aroclor-1242-4	8.23	8.13	8.33	273.3	250.0	9.3

AVERAGE %D = 7.3

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.05	5.96	6.16	264.2	250.0	5.7
Aroclor-1016-2	6.46	6.37	6.57	268.0	250.0	7.2
Aroclor-1016-3	6.61	6.52	6.72	274.8	250.0	9.9
Aroclor-1016-4	6.72	6.63	6.83	288.3	250.0	15.3

AVERAGE %D = 9.5

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.87	10.07	257.5	250.0	3.0
Aroclor-1260-2	10.28	10.19	10.39	249.0	250.0	-0.4
Aroclor-1260-3	10.65	10.56	10.76	254.2	250.0	1.7
Aroclor-1260-4	11.05	10.96	11.16	245.4	250.0	-1.8
Aroclor-1260-5	11.24	11.15	11.35	258.7	250.0	3.5

AVERAGE %D = 2.1

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.07	6.27	239.5	250.0	-4.2
Aroclor-1016-2	6.80	6.70	6.90	207.9	250.0	-16.8
Aroclor-1016-3	7.18	7.09	7.29	258.6	250.0	3.4
Aroclor-1016-4	7.35	7.26	7.46	251.0	250.0	0.4

AVERAGE %D = 6.2

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2103

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	263.3	250.0	5.3
Aroclor-1260-2	10.71	10.61	10.81	273.0	250.0	9.2
Aroclor-1260-3	10.98	10.89	11.09	265.8	250.0	6.3
Aroclor-1260-4	11.50	11.41	11.61	275.1	250.0	10.0

AVERAGE %D = 7.7

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1248 Time Analyzed :2243

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1248-1	6.47	6.37	6.57	198.9	250.0	-20.4	
Aroclor-1248-2	7.44	7.34	7.54	171.3	250.0	-31.5	<-
Aroclor-1248-3	7.87	7.78	7.98	173.0	250.0	-30.8	<-
Aroclor-1248-4	8.11	8.01	8.21	174.1	250.0	-30.3	<-

AVERAGE %D = 28.2

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WN27

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1248

Time Analyzed :2243

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1248-1	6.80	6.70	6.90	190.3	250.0	-23.9	
Aroclor-1248-2	7.71	7.61	7.81	180.9	250.0	-27.6	<-
Aroclor-1248-3	8.24	8.14	8.34	181.3	250.0	-27.5	<-
Aroclor-1248-4	8.58	8.48	8.68	168.2	250.0	-32.7	<-

AVERAGE %D = 27.9

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	209.9	250.0	-16.0
Aroclor-1016-2	6.47	6.37	6.57	212.4	250.0	-15.0
Aroclor-1016-3	6.62	6.52	6.72	204.8	250.0	-18.1
Aroclor-1016-4	6.73	6.63	6.83	207.8	250.0	-16.9

AVERAGE %D = 16.5

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.87	10.07	277.8	250.0	11.1
Aroclor-1260-2	10.29	10.19	10.39	282.7	250.0	13.1
Aroclor-1260-3	10.66	10.56	10.76	295.8	250.0	18.3
Aroclor-1260-4	11.06	10.96	11.16	255.4	250.0	2.1
Aroclor-1260-5	11.25	11.15	11.35	253.5	250.0	1.4

AVERAGE %D = 9.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 04/16/13

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1016-1	6.17	6.07	6.27	202.0	250.0	-19.2	
Aroclor-1016-2	6.80	6.70	6.90	184.9	250.0	-26.0	<-
Aroclor-1016-3	7.19	7.09	7.29	182.2	250.0	-27.1	<-
Aroclor-1016-4	7.36	7.26	7.46	175.8	250.0	-29.7	<-

AVERAGE %D = 25.5

Date Analyzed :05/06/13

Lab Standard ID: AR1660 Time Analyzed :2303

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1260-1	10.26	10.16	10.36	314.6	250.0	25.8	<-
Aroclor-1260-2	10.71	10.61	10.81	324.2	250.0	29.7	<-
Aroclor-1260-3	10.99	10.89	11.09	302.7	250.0	21.1	
Aroclor-1260-4	11.51	11.41	11.61	287.3	250.0	14.9	

AVERAGE %D = 22.9

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1248 Time Analyzed :0348

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.46	6.36	6.56	241.4	250.0	-3.4
Aroclor-1248-2	7.44	7.34	7.54	223.0	250.0	-10.8
Aroclor-1248-3	7.87	7.77	7.97	219.8	250.0	-12.1
Aroclor-1248-4	8.11	8.01	8.21	217.8	250.0	-12.9

AVERAGE %D = 9.8

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WN27

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1248

Time Analyzed :0348

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.80	6.70	6.90	242.8	250.0	-2.9
Aroclor-1248-2	7.70	7.60	7.80	234.0	250.0	-6.4
Aroclor-1248-3	8.24	8.14	8.34	229.5	250.0	-8.2
Aroclor-1248-4	8.58	8.48	8.68	222.6	250.0	-11.0

AVERAGE %D = 7.1

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	232.1	250.0	-7.2
Aroclor-1016-2	6.47	6.37	6.57	234.5	250.0	-6.2
Aroclor-1016-3	6.62	6.52	6.72	230.1	250.0	-7.9
Aroclor-1016-4	6.73	6.63	6.83	228.9	250.0	-8.4

AVERAGE %D = 7.4

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.87	10.07	199.9	250.0	-20.0
Aroclor-1260-2	10.28	10.18	10.38	197.8	250.0	-20.9
Aroclor-1260-3	10.66	10.56	10.76	205.8	250.0	-17.7
Aroclor-1260-4	11.06	10.96	11.16	206.3	250.0	-17.5
Aroclor-1260-5	11.25	11.15	11.35	205.4	250.0	-17.8

AVERAGE %D = 18.8

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WN27

Project: NPDES

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Lab Standard ID: AR1660

Date Analyzed :05/08/13

Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	240.5	250.0	-3.8
Aroclor-1016-2	6.80	6.70	6.90	238.6	250.0	-4.6
Aroclor-1016-3	7.18	7.08	7.28	234.7	250.0	-6.1
Aroclor-1016-4	7.36	7.26	7.46	228.6	250.0	-8.6

AVERAGE %D = 5.8

Lab Standard ID: AR1660

Date Analyzed :05/08/13

Time Analyzed :0408

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	212.9	250.0	-14.8
Aroclor-1260-2	10.71	10.61	10.81	213.8	250.0	-14.5
Aroclor-1260-3	10.98	10.88	11.08	222.5	250.0	-11.0
Aroclor-1260-4	11.50	11.40	11.60	220.7	250.0	-11.7

AVERAGE %D = 13.0

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WN27

Project: NPDES

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1254

Time Analyzed :0630

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	206.4	250.0	-17.4
Aroclor-1254-2	8.56	8.46	8.66	199.5	250.0	-20.2
Aroclor-1254-3	8.70	8.60	8.80	201.0	250.0	-19.6
Aroclor-1254-4	9.05	8.95	9.15	201.6	250.0	-19.3
Aroclor-1254-5	9.36	9.26	9.46	197.6	250.0	-21.0

AVERAGE %D = 19.5

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1254 Time Analyzed :0630

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.30	8.20	8.40	212.7	250.0	-14.9
Aroclor-1254-2	8.47	8.37	8.57	213.1	250.0	-14.8
Aroclor-1254-3	8.99	8.89	9.09	204.1	250.0	-18.4
Aroclor-1254-4	9.15	9.05	9.25	203.8	250.0	-18.5
Aroclor-1254-5	9.93	9.83	10.03	200.9	250.0	-19.6

AVERAGE %D = 17.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	230.2	250.0	-7.9
Aroclor-1016-2	6.47	6.37	6.57	232.4	250.0	-7.0
Aroclor-1016-3	6.62	6.52	6.72	226.4	250.0	-9.4
Aroclor-1016-4	6.73	6.63	6.83	223.6	250.0	-10.6

AVERAGE %D = 8.7

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.87	10.07	189.6	250.0	-24.2
Aroclor-1260-2	10.28	10.18	10.38	187.8	250.0	-24.9
Aroclor-1260-3	10.66	10.56	10.76	194.9	250.0	-22.0
Aroclor-1260-4	11.06	10.96	11.16	194.7	250.0	-22.1
Aroclor-1260-5	11.25	11.15	11.35	192.7	250.0	-22.9

AVERAGE %D = 23.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	241.1	250.0	-3.6
Aroclor-1016-2	6.80	6.70	6.90	237.7	250.0	-4.9
Aroclor-1016-3	7.18	7.08	7.28	234.5	250.0	-6.2
Aroclor-1016-4	7.36	7.26	7.46	225.5	250.0	-9.8

AVERAGE %D = 6.1

Date Analyzed :05/08/13

Lab Standard ID: AR1660 Time Analyzed :0651

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	204.3	250.0	-18.3
Aroclor-1260-2	10.71	10.61	10.81	208.8	250.0	-16.5
Aroclor-1260-3	10.98	10.88	11.08	217.6	250.0	-13.0
Aroclor-1260-4	11.50	11.40	11.60	215.1	250.0	-13.9

AVERAGE %D = 15.4

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

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

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	48646950	2.242	81878684	13.191
				UPPER LIMIT	97293900	2.342	163757368	13.291
				LOWER LIMIT	24323475	2.142	40939342	13.091
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		IB	04/16/13	1345			40577*	13.198
02		AR1660 250	04/16/13	1405	48646950	2.242	81878684	13.191
03		AR1660 20	04/16/13	1425	50033552	2.242	86581362	13.190
04		AR1660 50	04/16/13	1445	50522404	2.241	88346709	13.190
05		AR1660 1000	04/16/13	1505	47829881	2.241	84747587	13.189
06		AR1660 100	04/16/13	1525	49491748	2.241	87022078	13.189
07		AR1660 500	04/16/13	1545	48471309	2.241	83893855	13.188
08		AR1242	04/16/13	1605	48740551	2.243	82526190	13.191
09		AR1248	04/16/13	1625	50911859	2.242	85659578	13.191
10		AR1254	04/16/13	1646	48930377	2.242	81889180	13.191
11		AR2162	04/16/13	1706	48787562	2.243	82562472	13.192
12		AR3268	04/16/13	1726	48833507	2.242	86055260	13.192
13	ZZZZZ	ZZZZZ	04/16/13	1746	51001242	2.242	88986803	13.191
14	ZZZZZ	ZZZZZ	04/16/13	1807	49939659	2.243	86667397	13.190
15	ZZZZZ	ZZZZZ	04/16/13	1827	50495612	2.242	87535490	13.191
16	ZZZZZ	ZZZZZ	04/16/13	1847	48414554	2.243	87556282	13.191
17	ZZZZZ	ZZZZZ	04/16/13	1907	50527664	2.241	87430012	13.191
18	ZZZZZ	ZZZZZ	04/16/13	1927	51740334	2.242	88870021	13.191
19		AR1254	05/06/13	1802	48419450	2.244	82802662	13.186
20		AR1660	05/06/13	1822	42607777	2.242	74194353	13.185
21	WO14MBS1	WO14MBS1	05/06/13	1842	55886984	2.243	96255452	13.185
22	WO14LCSS1	WO14LCSS1	05/06/13	1902	52490645	2.243	92004843	13.185
23	WO14LCSDS1	WO14LCSDS1	05/06/13	1922	56059074	2.244	96999147	13.185
24		AR1242	05/06/13	2043	48909239	2.245	81323597	13.186
25		AR1660	05/06/13	2103	44586778	2.243	76967556	13.185
26	CG-MH-010-20	WN27A	05/06/13	2123	52899222	2.247	60035869	13.208
27	CG-MH-010-20	WN27AMS	05/06/13	2143	50387145	2.249	48042336	13.206
28	CG-MH-010-20	WN27AMSD	05/06/13	2203	50682807	2.249	44241720	13.208
29	ES-TS-INF-20	WN31A	05/06/13	2223	48641408	2.254	45720799	13.252
30		AR1248	05/06/13	2243	59147946	2.251	51063965	13.193
31		AR1660	05/06/13	2303	43905947	2.252	37691491*	13.192

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.: WN27 Project: NPDES

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

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	14456526	2.719	16263628	14.072
	UPPER LIMIT	28913052	2.819	32527256	14.172
	LOWER LIMIT	7228263	2.619	8131814	13.972

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		IB	04/16/13	1345	26669*	2.726	32767*	14.064
02		AR1660 250	04/16/13	1405	14456526	2.719	16263628	14.072
03		AR1660 20	04/16/13	1425	14453887	2.721	16475546	14.074
04		AR1660 50	04/16/13	1445	14648372	2.719	16608531	14.074
05		AR1660 1000	04/16/13	1505	14373421	2.719	16751848	14.073
06		AR1660 100	04/16/13	1525	14814772	2.718	16888223	14.074
07		AR1660 500	04/16/13	1545	14695511	2.720	16865680	14.072
08		AR1242	04/16/13	1605	14577569	2.719	16939274	14.072
09		AR1248	04/16/13	1625	15380233	2.719	17640987	14.071
10		AR1254	04/16/13	1646	14676530	2.719	16779133	14.073
11		AR2162	04/16/13	1706	14371825	2.719	17005647	14.074
12		AR3268	04/16/13	1726	14519211	2.718	17039356	14.076
13	ZZZZZ	ZZZZZ	04/16/13	1746	15142458	2.719	17563296	14.074
14	ZZZZZ	ZZZZZ	04/16/13	1807	14906989	2.720	17073568	14.073
15	ZZZZZ	ZZZZZ	04/16/13	1827	14997960	2.719	17267294	14.074
16	ZZZZZ	ZZZZZ	04/16/13	1847	15086663	2.720	17274152	14.073
17	ZZZZZ	ZZZZZ	04/16/13	1907	14807065	2.718	17280448	14.074
18	ZZZZZ	ZZZZZ	04/16/13	1927	15260632	2.719	17569147	14.072
19		AR1254	05/06/13	1802	14233456	2.721	15559769	14.069
20		AR1660	05/06/13	1822	12690692	2.720	13855174	14.070
21	WO14MBS1	WO14MBS1	05/06/13	1842	16871793	2.721	18204310	14.070
22	WO14LCSS1	WO14LCSS1	05/06/13	1902	15566793	2.723	17329892	14.070
23	WO14LCSDS1	WO14LCSDS1	05/06/13	1922	16206025	2.722	18174342	14.069
24		AR1242	05/06/13	2043	14063095	2.721	14993516	14.069
25		AR1660	05/06/13	2103	12959627	2.721	14141138	14.069
26	CG-MH-010-20	WN27A	05/06/13	2123	16132918	2.724	12426771	14.081
27	CG-MH-010-20	WN27AMS	05/06/13	2143	15088103	2.725	9761622	14.083
28	CG-MH-010-20	WN27AMSD	05/06/13	2203	14914589	2.728	9296772	14.083
29	ES-TS-INF-20	WN31A	05/06/13	2223	14523544	2.732	9434284	14.114
30		AR1248	05/06/13	2243	17050048	2.727	9128992	14.075
31		AR1660	05/06/13	2303	12605877	2.728	6673150*	14.074

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.: WN27 Project: NPDES

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

Init. Calib. Date: 05/07/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	48807947	2.249	51001521	13.191
02		0.25PPMAR166	05/07/13	1639	48977254	2.250	50004151	13.191
03		0.02PPMAR166	05/07/13	1659	49978735	2.250	50389911	13.191
04		0.05PPMAR166	05/07/13	1719	50752482	2.250	53170067	13.191
05		1PPMAR1660	05/07/13	1739	49361946	2.249	53269354	13.189
06		0.1PPMAR1660	05/07/13	1759	51692067	2.249	53692342	13.191
07		0.5PPMAR1660	05/07/13	1819	50537542	2.249	53291913	13.190
08		AR1242	05/07/13	1839	51594521	2.248	55145987	13.190
09		AR1248	05/07/13	1859	52790343	2.249	57162764	13.190
10		AR1254	05/07/13	1920	52930034	2.249	57859101	13.190
11		AR2162	05/07/13	1940	53739671	2.248	58323154	13.191
12		AR3268	05/07/13	2000	53262724	2.248	57460185	13.191
13	ZZZZZ	ZZZZZ	05/07/13	2021	54248541	2.248	60099807	13.190
14	ZZZZZ	ZZZZZ	05/07/13	2041	53651835	2.248	60660565	13.190
15	ZZZZZ	ZZZZZ	05/07/13	2101	53642771	2.248	58188446	13.191
16	ZZZZZ	ZZZZZ	05/07/13	2121	54355833	2.249	58930522	13.190
17	ZZZZZ	ZZZZZ	05/07/13	2142	54884040	2.249	58566252	13.190
18	ZZZZZ	ZZZZZ	05/07/13	2202	54747539	2.248	60316622	13.190
19		AR1248	05/08/13	0348	57636312	2.247	59113555	13.188
20		AR1660	05/08/13	0408	57225805	2.247	60264061	13.188
21	CG-MH-010-20	WN27A	05/08/13	0429	55268578	2.248	58552850	13.191
22	ES-TS-INF-20	WN31A	05/08/13	0530	49200228	2.249	51794064	13.206
23		AR1254	05/08/13	0630	57538144	2.247	56147205	13.189
24		AR1660	05/08/13	0651	57738341	2.247	59085325	13.188

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

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WN27 Project: NPDES

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

Init. Calib. Date: 05/07/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	15184482	2.727	9588268	14.075
02		0.25PPMAR166	05/07/13	1639	14839715	2.727	9345340	14.074
03		0.02PPMAR166	05/07/13	1659	14776833	2.727	9354827	14.073
04		0.05PPMAR166	05/07/13	1719	15017003	2.726	9808139	14.073
05		1PPMAR1660	05/07/13	1739	14864205	2.727	9909484	14.072
06		0.1PPMAR1660	05/07/13	1759	15354151	2.725	9856374	14.073
07		0.5PPMAR1660	05/07/13	1819	14890872	2.725	9751846	14.073
08		AR1242	05/07/13	1839	15094795	2.728	10120992	14.073
09		AR1248	05/07/13	1859	15297537	2.725	10392760	14.073
10		AR1254	05/07/13	1920	15196733	2.725	10477901	14.072
11		AR2162	05/07/13	1940	15340978	2.724	10583916	14.072
12		AR3268	05/07/13	2000	15239954	2.725	10518547	14.073
13	ZZZZZ	ZZZZZ	05/07/13	2021	15658755	2.725	10888882	14.072
14	ZZZZZ	ZZZZZ	05/07/13	2041	15441440	2.724	10952020	14.072
15	ZZZZZ	ZZZZZ	05/07/13	2101	15360402	2.725	10510294	14.073
16	ZZZZZ	ZZZZZ	05/07/13	2121	15522820	2.725	10608758	14.073
17	ZZZZZ	ZZZZZ	05/07/13	2142	15378234	2.725	10470042	14.073
18	ZZZZZ	ZZZZZ	05/07/13	2202	15307215	2.724	10773388	14.074
19		AR1248	05/08/13	0348	15578403	2.723	9865366	14.071
20		AR1660	05/08/13	0408	15463967	2.723	9866019	14.071
21	CG-MH-010-20	WN27A	05/08/13	0429	15716950	2.723	10635473	14.073
22	ES-TS-INF-20	WN31A	05/08/13	0530	13559510	2.724	9519479	14.082
23		AR1254	05/08/13	0630	15370880	2.723	9337721	14.071
24		AR1660	05/08/13	0651	15320524	2.723	9330725	14.072

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

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

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: WN31-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 04/24/13

Data Release Authorized: MW
Reported: 05/03/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-042613	Method Blank	04/30/13	1.0	Diesel	< 50 U	50	14
13-8693		FID4A		Motor Oil	< 100 U	100	25
				HC ID	---		
				o-Terphenyl	103%		
WN31A	ES-TS-INF-20130424-S	04/30/13	5.0	**Diesel**	**12,000**	630	170
13-8693		FID4A		**Motor Oil**	**30,000**	1,300	310
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	92.9%		

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: WN31-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
042613MBS	103%	0
042613LCS	103%	0
ES-TS-INF-20130424-S	92.9%	0

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

Prep Method: SW3546
Log Number Range: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-042613
LAB CONTROL

Lab Sample ID: LCS-042613
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/03/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/26/13
Date Analyzed: 04/30/13 16:28
Instrument/Analyst: FID4A/JLW

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 10 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	1,460	1,500	97.3%

TPHD Surrogate Recovery

o-Terphenyl	103%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WN31
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 04/24/13 209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-8693-042613MB1	Method Blank	10.0 g	10.0 mL	-	04/26/13
13-8693-042613LCS1	Lab Control	10.0 g	10.0 mL	-	04/26/13
13-8693-WN31A	ES-TS-INF-20130424-	3.98 g	10.0 mL	D	04/26/13

Basis: D=Dry Weight W=As Received

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WN27MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN27 Project No.: NPDES SAMPLING SUPPORT

Date Extracted: 04/26/13 Matrix: SOLID

Date Analyzed : 04/30/13 Instrument ID : FID4A

Time Analyzed : 1607

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WN27LCSS1	WN27LCSS1	04/30/13
02	CG-MH-010-20	WN27A	04/30/13
03	CG-MH-010-20	WN27AMS	04/30/13
04	CG-MH-010-20	WN27AMSD	04/30/13
05	ES-TS-INF-20	WN31A	04/30/13
06			
07			
08			
09			
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FORM IV TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID4A.I Project: NPDES Sampling Support

Calibration Date: 13-APR-2013 SDG No.: WN27/WN31

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

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

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID4A.I Project: NPDES Sampling Support

Calibration Date: 13-APR-2013 SDG No.: WN27/WN31

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14286	14877	13594	13683	13271	11581	13549	8.3
Triac Surr	18499	18745	18903	18271	17525	17235	18196	3.7

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

Calibration Files	Analysis Time
0413a013.d	13-APR-2013 14:16
0413a014.d	13-APR-2013 14:36
0413a015.d	13-APR-2013 14:57
0413a016.d	13-APR-2013 15:17
0413a017.d	13-APR-2013 15:38
0413a018.d	13-APR-2013 15:58

7a
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 13-APR-2013 Project: NPDES Sampling Supp

CCal Date: 30-APR-2013 SDG No.: WN27

Analysis Time: 15:26 Lab ID: DIESEL#2

Instrument: FID4A.I Lab File Name: 0430a018.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3730152	257.0	250	2.8	
AK102 (C10-C25)	4401823	255.7	250	2.3	
NASDies(C10-C24)	4385104	222.3	250	-11.1	
Terphenyl	941323	48.8	45	8.5	
Creos (C12-C22)	3588951	1644.9	250	557.9	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

7a
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 13-APR-2013 Project: NPDES Sampling Supp

CCal Date: 30-APR-2013 SDG No.: WN27

Analysis Time: 15:46 Lab ID: MOIL#2

Instrument: FID4A.I Lab File Name: 0430a019.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6542031	480.9	500	-3.8
AK103 (C25-C36)	5678192	617.1	500	23.4
OR MOIL(C28-C40)	5105868	676.0	500	35.2
CRUDE(Tol-C40)	7656518	1013.7	500	102.7
n-Triacontane	904929	49.7	45	10.5

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 13-APR-2013 Project: NPDES Sampling Supp

CCal Date: 30-APR-2013 SDG No.: WN27

Analysis Time: 18:11 Lab ID: DIESEL#3

Instrument: FID4A.I Lab File Name: 0430a026.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3776818	260.2	250	4.1	
AK102 (C10-C25)	4446816	258.3	250	3.3	
NASDies(C10-C24)	4430679	224.7	250	-10.1	
Terphenyl	947006	49.1	45	9.1	
Creos (C12-C22)	3640759	1668.6	250	567.4	<-

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 30-APR-2013
SDG No.: WN27

Analysis Time: 18:32
Lab ID: MOIL#3

Instrument: FID4A.I
Lab File Name: 0430a027.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6475200	476.0	500	-4.8
AK103 (C25-C36)	5605647	609.2	500	21.8
OR MOIL(C28-C40)	4956425	656.2	500	31.2
CRUDE(Tol-C40)	7472421	989.4	500	97.9
n-Triacontane	902281	49.6	45	10.2

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN27 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID4A GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.76 TRIAC: 8.58

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	04/30/13	0908	5.86*	8.77*
02	ZZZZZ	ZZZZZ	04/30/13	0928	5.86*	8.75*
03	ZZZZZ	ZZZZZ	04/30/13	0948	5.87*	8.76*
04		RT0430	04/30/13	1009	5.76	8.58
05	ZZZZZ	ZZZZZ	04/30/13	1029	5.76	8.58
06	ZZZZZ	ZZZZZ	04/30/13	1049	5.76	8.59
07	ZZZZZ	ZZZZZ	04/30/13	1110	5.75	8.58
08	ZZZZZ	ZZZZZ	04/30/13	1157	5.76	8.59
09	ZZZZZ	ZZZZZ	04/30/13	1217	5.76	8.58
10	ZZZZZ	ZZZZZ	04/30/13	1238	5.76	8.58
11	ZZZZZ	ZZZZZ	04/30/13	1259	5.75	8.58
12	ZZZZZ	ZZZZZ	04/30/13	1320	5.75	8.59
13	ZZZZZ	ZZZZZ	04/30/13	1341	5.75	8.58
14	ZZZZZ	ZZZZZ	04/30/13	1402	5.76	8.59
15	ZZZZZ	ZZZZZ	04/30/13	1423	5.76	8.60
16	ZZZZZ	ZZZZZ	04/30/13	1444	5.76	8.59
17	ZZZZZ	ZZZZZ	04/30/13	1505	5.76	8.60
18	NPDES SAMPLI	DIESEL#2	04/30/13	1526	5.77	8.58
19	NPDES SAMPLI	MOIL#2	04/30/13	1546	5.75	8.60
20	WN27MBS1	WN27MBS1	04/30/13	1607	5.77	8.60
21	WN27LCSS1	WN27LCSS1	04/30/13	1628	5.77	8.59
22	CG-MH-010-20	WN27A	04/30/13	1649	5.76	8.59
23	CG-MH-010-20	WN27AMS	04/30/13	1709	5.76	8.59
24	CG-MH-010-20	WN27AMSD	04/30/13	1730	5.76	8.59
25	ES-TS-INF-20	WN31A	04/30/13	1750	5.76	8.60
26	NPDES SAMPLI	DIESEL#3	04/30/13	1811	5.77	8.58
27	NPDES SAMPLI	MOIL#3	04/30/13	1832	5.76	8.61

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.: WN27/WN31 Project: SNPDES Sampling Support

Instrument ID: FID4A GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

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

* Values outside of QC limits.

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result	LOQ	DL
MB-042513	Method Blank	04/25/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-8696		PID1		HC ID	---		
				Trifluorotoluene	90.2%		
				Bromobenzene	88.8%		
WN31D	ES-TB-001-20130404	25/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-8696		PID1		HC ID	---		
				Trifluorotoluene	89.6%		
				Bromobenzene	85.6%		

Gasoline values reported in mg/L (ppm)

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

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

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WN31
Matrix: Water

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	TFT	BBZ	TOT OUT
MB-042513	90.2%	88.8%	0
LCS-042513	97.2%	91.4%	0
LCSD-042513	97.0%	92.8%	0
ES-TB-001-20130424	89.6%	85.6%	0

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

Log Number Range: 13-8696 to 13-8696

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 05/14/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

ARI ID	Client ID	Analysis Date	Range	Result	LOQ	DL
MB-042613	Method Blank	04/26/13	Gasoline	< 5.0 U	5.0	1.7
13-8693		PID1	HC ID	---		
			Trifluorotoluene	91.6%		
			Bromobenzene	85.6%		
WN31A	ES-TS-INF-20130404	04/26/13	Gasoline	< 18 U	18	6.0
13-8693		PID1	HC ID	---		
			Trifluorotoluene	86.6%		
			Bromobenzene	89.3%		

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: WN31
Matrix: Sediment

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-042613	NA	91.6%	85.6%	0
LCS-042613	NA	92.7%	86.1%	0
LCSD-042613	NA	86.5%	82.2%	0
ES-TS-INF-20130424-S	NA	86.6%	89.3%	0

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

Log Number Range: 13-8693 to 13-8693

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-042513
LAB CONTROL SAMPLE

Lab Sample ID: LCS-042513
LIMS ID: 13-8696
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 04/25/13 09:46
LCSD: 04/25/13 10:15
Instrument/Analyst LCS: PID1/LH
LCSD: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	0.97	1.00	97.0%	0.99	1.00	99.0%	2.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.2%	97.0%
Bromobenzene	91.4%	92.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-042613
LAB CONTROL SAMPLE

Lab Sample ID: LCS-042613
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized: MW
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 04/26/13 11:24
LCSD: 04/26/13 11:53
Instrument/Analyst LCS: PID1/LH
LCSD: PID1/LH

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	45.4	50.0	90.8%	44.4	50.0	88.8%	2.2%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	92.7%	86.5%
Bromobenzene	86.1%	82.2%

4

TPH METHOD BLANK SUMMARY

BLANK NO.

MB0425

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WN31

Project No.: NPDES SAMPLING SUPPORT

Date Extracted:

Matrix: WATER

Date Analyzed : 04/25/13

Instrument ID : PID1

Time Analyzed : 1044

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0425	LCS0425	04/25/13
02	LCSD0425	LCSD0425	04/25/13
03	ES-TB-001-20	WN31D	04/25/13
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
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30			

FORM IV TPH

4

TPH METHOD BLANK SUMMARY

BLANK NO.

MB0426

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WN31

Project No.: NPDES SAMPLING SUPPORT

Date Extracted:

Matrix: WATER

Date Analyzed : 04/26/13

Instrument ID : PID1

Time Analyzed : 1428

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0426	LCS0426	04/26/13
02	LCSD0426	LCSD0426	04/26/13
03	ES-TS-INF-20	WN31A	04/26/13
04			
05			
06			
07			
08			
09			
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12			
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FORM IV TPH

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.: WN31

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: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	850316	2.37	2.50	-5.0
AKGas (C6-C10)	1364014	2.34	2.50	-6.4
NWGas (Tol-Nap)	889838	2.37	2.50	-5.1
8015C (2MP-TMB)	1673682	2.31	2.50	-7.5

* 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: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	49101	102.6	100.0	2.6
Bromobenzene	19855	92.5	100.0	-7.5

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	802524	2.24	2.50	-10.4
AKGas (C6-C10)	1270652	2.18	2.50	-12.8
NWGas (Tol-Nap)	836210	2.23	2.50	-10.8
8015C (2MP-TMB)	1565162	2.16	2.50	-13.5

* 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: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	48243	100.7	100.0	0.7
Bromobenzene	18922	91.8	100.0	-8.2

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	813459	2.27	2.50	-9.1
AKGas (C6-C10)	1260672	2.16	2.50	-13.5
NWGas (Tol-Nap)	848070	2.26	2.50	-9.6
8015C (2MP-TMB)	1558060	2.15	2.50	-13.9

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

FORM VII-GAS

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	45729	96.0	100.0	-4.0
Bromobenzene	18791	90.8	100.0	-9.2

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

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

CCal Date: 25-APR-2013 SDG No.: WN31

Lab File Name: 0425a030.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	761641	2.13	2.50	-14.9
AKGas (C6-C10)	1169692	2.01	2.50	-19.7
NWGas (Tol-Nap)	794652	2.12	2.50	-15.3
8015C (2MP-TMB)	1448530	2.00	2.50	-19.9

* 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: 25-APR-2013
SDG No.: WN31

Lab File Name: 0425a030.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	44315	93.0	100.0	-7.0
Bromobenzene	18188	88.8	100.0	-11.2

FORM VII-Surr

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

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

CCal Date: 26-APR-2013 SDG No.: WN31

Lab File Name: 0426a003.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	813796	2.27	2.50	-9.1
AKGas (C6-C10)	1308758	2.25	2.50	-10.2
NWGas (Tol-Nap)	850296	2.27	2.50	-9.3
8015C (2MP-TMB)	1607165	2.22	2.50	-11.2

* 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: 26-APR-2013
SDG No.: WN31

Lab File Name: 0426a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46618	97.6	100.0	-2.4
Bromobenzene	18345	88.7	100.0	-11.3

FORM VII-Surr

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

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

CCal Date: 26-APR-2013 SDG No.: WN31

Lab File Name: 0426a016.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	818032	2.28	2.50	-8.6
AKGas (C6-C10)	1308648	2.25	2.50	-10.2
NWGas (Tol-Nap)	852457	2.27	2.50	-9.1
8015C (2MP-TMB)	1608272	2.22	2.50	-11.1

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

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 26-APR-2013
SDG No.: WN31

Lab File Name: 0426a016.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	47975	100.2	100.0	0.2
Bromobenzene	19514	91.9	100.0	-8.1

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:SAIC

SDG No.: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

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

METHOD SURROGATE RT
S1 : 7.89 S2 : 15.39

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01		RINSE	10/23/12	0941				
02		RT1023+BCAL1	10/23/12	1010	7.88		15.39	
03		GCAL1	10/23/12	1039	7.88		15.39	
04		B 200	10/23/12	1750	7.89		15.39	
05		B 100	10/23/12	1820	7.88		15.39	
06		B 50	10/23/12	1849	7.88		15.39	
07		B 25	10/23/12	1918	7.89		15.39	
08		B 5	10/23/12	1947	7.88		15.39	
09		B 1	10/23/12	2016	7.88		15.39	
10		B 0.5	10/23/12	2045	7.88		15.39	
11		B 0.25	10/23/12	2115	7.89		15.39	
12		BICV	10/23/12	2144	7.88		15.39	
13		G 0.10	10/23/12	2213	7.89		15.39	
14		G 0.25	10/23/12	2242	7.89		15.39	
15		G 1.0	10/23/12	2311	7.89		15.39	
16		G 2.5	10/23/12	2340	7.88		15.39	
17		G 5.0	10/24/12	0010	7.88		15.39	
18		G 10	10/24/12	0039	7.88		15.39	
19		GICV	10/24/12	0108	7.88		15.39	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN31 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.

FORM VIII-2 BETX

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Column: RTX 502-2 FID

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

SURROGATE RT FROM DAILY STANDARD
S1 : 7.83 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	RT/BCAL 1	RT/BCAL 1	04/25/13	0847	7.83	15.38
02	GCAL 1	GCAL 1	04/25/13	0916	7.83	15.38
03	LCS0425	LCS0425	04/25/13	0946	7.84	15.38
04	LCSD0425	LCSD0425	04/25/13	1015	7.84	15.38
05	MB0425	MB0425	04/25/13	1044	7.84	15.38
06	GCAL 2	GCAL 2	04/25/13	1446	7.84	15.38
07	GCAL 3	GCAL 3	04/25/13	2012	7.84	15.38
08	ES-TB-001-20	WN31D	04/25/13	2041	7.84	15.38
09	GCAL 4	GCAL 4	04/25/13	2239	7.84	15.38

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WN31 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Column: RTX 502-2 FID

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

SURROGATE RT FROM DAILY STANDARD
S1 : 7.83 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	04/26/13	1025	7.83		15.38	
02	GCAL 1	GCAL 1	04/26/13	1055	7.83		15.38	
03	LCS0426	LCS0426	04/26/13	1124	7.83		15.38	
04	LCSD0426	LCSD0426	04/26/13	1153	7.83		15.38	
05	MB0426	MB0426	04/26/13	1428	7.84		15.38	
06	ES-TS-INF-20	WN31A	04/26/13	1637	7.83		15.38	
07	GCAL 2	GCAL 2	04/26/13	1934	7.84		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
ES-TS-INF-20130424	WN31A	13-8693	
ES-TS-INF-20130424D	WN31ADUP	13-8693	
ES-TS-INF-20130424S	WN31ASPK	13-8693	
PBS	WN31MB1	13-8693	
LCSS	WN31MB1SPK	13-8693	
ES-MH-001-20130424	WN31B	13-8694	
ES-MH-001-20130424D	WN31BDUP	13-8694	
ES-MH-001-20130424S	WN31BSPK	13-8694	
PBW	WN31MB2	13-8694	
LCSW	WN31MB2SPK	13-8694	
ES-MH-001-20130424	WN31C	13-8695	
ES-MH-001-20130424D	WN31CDUP	13-8695	
ES-MH-001-20130424S	WN31CSPK	13-8695	
PBW	WN31MB3	13-8695	
LCSW	WN31MB3SPK	13-8695	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 5/15/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: ES-TS-INF-20130424-S
SAMPLE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Percent Total Solids: 39.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	04/25/13	200.8	04/30/13	**7440-36-0**	**Antimony**	0.032	0.5	**0.6**	
3050B	04/25/13	200.8	04/30/13	**7440-38-2**	**Arsenic**	0.21	0.5	**7.4**	
3050B	04/25/13	6010C	04/29/13	7440-41-7	Beryllium	0.024	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	**7440-43-9**	**Cadmium**	0.029	0.2	**2.3**	
3050B	04/25/13	200.8	04/30/13	**7440-47-3**	**Chromium**	0.093	1	**76**	
3050B	04/25/13	6010C	04/29/13	**7440-50-8**	**Copper**	0.12	0.5	**173**	
3050B	04/25/13	200.8	04/30/13	**7439-92-1**	**Lead**	0.12	0.2	**88.7**	
CLP	04/25/13	7471A	04/26/13	**7439-97-6**	**Mercury**	0.0030	0.06	**0.19**	
3050B	04/25/13	200.8	04/30/13	**7440-02-0**	**Nickel**	0.12	1	**46**	
3050B	04/25/13	200.8	04/30/13	7782-49-2	Selenium	0.24	1	1	U
3050B	04/25/13	200.8	04/30/13	**7440-22-4**	**Silver**	0.020	0.5	**0.6**	
3050B	04/25/13	200.8	04/30/13	7440-28-0	Thallium	0.0073	0.5	0.5	U
3050B	04/25/13	6010C	04/29/13	**7440-66-6**	**Zinc**	0.29	2	**984**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: ES-TS-INF-20130424-S
MATRIX SPIKE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.6	6.3	61.0	9.3%	N
Arsenic	200.8	7.4	65.9	61.0	95.9%	
Beryllium	6010C	0.2 U	107	121	88.4%	
Cadmium	200.8	2.3	58.4	61.0	92.0%	
Chromium	200.8	76	128	61.0	85.2%	
Copper	6010C	173	288	121	95.0%	
Lead	200.8	88.7	146	61.0	93.9%	
Mercury	7471A	0.19	0.81	0.588	105%	
Nickel	200.8	46	102	61.0	91.8%	
Selenium	200.8	1 U	186	195	95.4%	
Silver	200.8	0.6	52.5	61.0	85.1%	
Thallium	200.8	0.5 U	56.0	61.0	91.8%	
Zinc	6010C	984	1,100	121	95.9%	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

Sample ID: ES-TS-INF-20130424-S DUPLICATE

Lab Sample ID: WN31A
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.6	0.6	0.0%	+/- 0.5	L
Arsenic	200.8	7.4	7.3	1.4%	+/- 20%	
Beryllium	6010C	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	2.3	4.1	56.2%	+/- 20%	*
Chromium	200.8	76	78	2.6%	+/- 20%	
Copper	6010C	173	194	11.4%	+/- 20%	
Lead	200.8	88.7	89.4	0.8%	+/- 20%	
Mercury	7471A	0.19	0.24	23.3%	+/- 0.06	L
Nickel	200.8	46	47	2.2%	+/- 20%	
Selenium	200.8	1 U	1 U	0.0%	+/- 1	L
Silver	200.8	0.6	0.5 U	18.2%	+/- 0.5	L
Thallium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Zinc	6010C	984	1,000	1.6%	+/- 20%	

Reported in mg/kg-dry

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN31LCS
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.6	25.0	98.4%	
Arsenic	200.8	26.2	25.0	105%	
Beryllium	6010C	46.3	50.0	92.6%	
Cadmium	200.8	24.8	25.0	99.2%	
Chromium	200.8	24.5	25.0	98.0%	
Copper	6010C	48.0	50.0	96.0%	
Lead	200.8	25.9	25.0	104%	
Mercury	7471A	0.52	0.50	104%	
Nickel	200.8	25.1	25.0	100%	
Selenium	200.8	81.8	80.0	102%	
Silver	200.8	25.2	25.0	101%	
Thallium	200.8	26.1	25.0	104%	
Zinc	6010C	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN31MB
LIMS ID: 13-8693
Matrix: Sediment
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	04/25/13	200.8	04/30/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	04/25/13	6010C	04/29/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	04/25/13	200.8	04/30/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	04/25/13	200.8	04/30/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	04/25/13	6010C	04/29/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	04/25/13	7471A	04/26/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	04/25/13	200.8	04/30/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	04/25/13	200.8	04/30/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	04/25/13	200.8	04/30/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	04/25/13	200.8	04/30/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	04/25/13	6010C	04/29/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
SAMPLE

Lab Sample ID: WN31B
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	04/26/13	200.8	04/30/13	**7440-36-0**	**Antimony**	0.010	0.2	**0.6**	
200.8	04/26/13	200.8	05/01/13	**7440-38-2**	**Arsenic**	0.048	0.5	**0.7**	
200.8	04/26/13	200.8	04/30/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/26/13	200.8	04/30/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	**7440-50-8**	**Copper**	0.158	0.5	**4.2**	
200.8	04/26/13	200.8	04/30/13	**7439-92-1**	**Lead**	0.046	0.1	**0.8**	
200.8	04/26/13	200.8	04/30/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.5**	
200.8	04/26/13	200.8	05/01/13	7782-49-2	Selenium	0.13	2	2	U
200.8	04/26/13	200.8	04/30/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	**7440-66-6**	**Zinc**	0.50	4	**19**	

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: ES-MH-001-20130424-W
MATRIX SPIKE

Lab Sample ID: WN31C
LIMS ID: 13-8695
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.6	25.8	25.0	101%	
Arsenic	200.8	0.5 U	25.6	25.0	102%	
Beryllium	200.8	0.2 U	22.9	25.0	91.6%	
Cadmium	200.8	0.1 U	23.3	25.0	93.2%	
Chromium	200.8	0.5 U	23.4	25.0	93.6%	
Copper	200.8	2.7	26.3	25.0	94.4%	
Lead	200.8	0.5	24.8	25.0	97.2%	
Nickel	200.8	1.2	24.8	25.0	94.4%	
Selenium	200.8	2 U	78	80.0	97.5%	
Silver	200.8	0.2 U	22.9	25.0	91.6%	
Thallium	200.8	0.2 U	24.3	25.0	97.2%	
Zinc	200.8	12	80	80.0	85.0%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: ES-MH-001-20130424-W DUPLICATE

Lab Sample ID: WN31B
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.6	0.8	28.6%	+/- 0.2	L*
Arsenic	200.8	0.7	0.8	13.3%	+/- 0.5	L
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Copper	200.8	4.2	4.4	4.7%	+/- 20%	
Lead	200.8	0.8	1.0	22.2%	+/- 20%	*
Nickel	200.8	1.5	1.4	6.9%	+/- 0.5	L
Selenium	200.8	2 U	2 U	0.0%	+/- 2	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	19	24	23.3%	+/- 4	L*

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN31LCS
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.9	25.0	99.6%	
Arsenic	200.8	26.2	25.0	105%	
Beryllium	200.8	23.0	25.0	92.0%	
Cadmium	200.8	24.9	25.0	99.6%	
Chromium	200.8	24.9	25.0	99.6%	
Copper	200.8	26.2	25.0	105%	
Lead	200.8	26.4	25.0	106%	
Nickel	200.8	25.4	25.0	102%	
Selenium	200.8	81.1	80.0	101%	
Silver	200.8	25.1	25.0	100%	
Thallium	200.8	26.2	25.0	105%	
Zinc	200.8	80	80	100%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN31MB
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	04/26/13	200.8	04/30/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/26/13	200.8	04/30/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	04/26/13	200.8	04/30/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-66-6	Zinc	0.50	4	4	U

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
SAMPLE

Lab Sample ID: WN31C
LIMS ID: 13-8695
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	04/26/13	200.8	04/30/13	**7440-36-0**	**Antimony**	0.010	0.2	**0.6**	
200.8	04/26/13	200.8	05/01/13	7440-38-2	Arsenic	0.048	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/26/13	200.8	04/30/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	**7440-50-8**	**Copper**	0.158	0.5	**2.7**	
200.8	04/26/13	200.8	04/30/13	**7439-92-1**	**Lead**	0.046	0.1	**0.5**	
200.8	04/26/13	200.8	04/30/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.2**	
200.8	04/26/13	200.8	05/01/13	7782-49-2	Selenium	0.13	2	2	U
200.8	04/26/13	200.8	04/30/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	**7440-66-6**	**Zinc**	0.50	4	**12**	

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: ES-MH-001-20130424-W
MATRIX SPIKE

Lab Sample ID: WN31B
LIMS ID: 13-8694
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.6	25.0	25.0	97.6%	
Arsenic	200.8	0.7	26.4	25.0	103%	
Beryllium	200.8	0.2 U	21.9	25.0	87.6%	
Cadmium	200.8	0.1 U	23.6	25.0	94.4%	
Chromium	200.8	0.5 U	22.7	25.0	90.8%	
Copper	200.8	4.2	28.2	25.0	96.0%	
Lead	200.8	0.8	25.3	25.0	98.0%	
Nickel	200.8	1.5	25.8	25.0	97.2%	
Selenium	200.8	2 U	76	80	95.0%	
Silver	200.8	0.2 U	22.6	25.0	90.4%	
Thallium	200.8	0.2 U	24.3	25.0	97.2%	
Zinc	200.8	19	87	80	85.0%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
DUPLICATE

Lab Sample ID: WN31C
LIMS ID: 13-8695
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.6	0.6	0.0%	+/- 0.2	L
Arsenic	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Copper	200.8	2.7	2.7	0.0%	+/- 20%	
Lead	200.8	0.5	0.5	0.0%	+/- 0.1	L
Nickel	200.8	1.2	1.2	0.0%	+/- 0.5	L
Selenium	200.8	2 U	2 U	0.0%	+/- 2	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	12	12	0.0%	+/- 4	L

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN31LCS
LIMS ID: 13-8695
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.3	25.0	97.2%	
Arsenic	200.8	25.6	25.0	102%	
Beryllium	200.8	22.8	25.0	91.2%	
Cadmium	200.8	24.3	25.0	97.2%	
Chromium	200.8	24.4	25.0	97.6%	
Copper	200.8	25.6	25.0	102%	
Lead	200.8	25.8	25.0	103%	
Nickel	200.8	25.1	25.0	100%	
Selenium	200.8	77.6	80.0	97.0%	
Silver	200.8	24.3	25.0	97.2%	
Thallium	200.8	25.8	25.0	103%	
Zinc	200.8	78	80	97.5%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN31MB
LIMS ID: 13-8695
Matrix: Water
Data Release Authorized:
Reported: 05/02/13

QC Report No: WN31-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	04/26/13	200.8	04/30/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/26/13	200.8	04/30/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	04/26/13	200.8	04/30/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	04/26/13	200.8	04/30/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/26/13	200.8	04/30/13	7440-66-6	Zinc	0.50	4	4	U

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS043081	50.0	51.42	102.8	50.0	50.00	100.0	48.45	96.9	48.95	97.9	50.97	101.9	49.80	99.6
Arsenic	AS	PMS	MS043081	50.0	52.99	106.0	50.0	50.14	100.3	50.18	100.4	50.20	100.4	50.12	100.2	49.84	99.7
Beryllium	BE	ICP	IP042971	1000.0	1006.89	100.7	1000.0	968.48	96.8	977.49	97.7	974.06	97.4	971.29	97.1	968.85	96.9
Beryllium	BE	PMS	MS043081	50.0	49.47	98.9	50.0	48.20	96.4	46.68	93.4	47.69	95.4	47.97	95.9	47.79	95.6
Cadmium	CD	PMS	MS043081	50.0	50.51	101.0	50.0	49.20	98.4	50.01	100.0	49.93	99.9	49.82	99.6	50.95	101.9
Chromium	CR	PMS	MS043081	50.0	51.09	102.2	50.0	49.70	99.4	50.25	100.5	50.25	100.5	49.88	99.8	49.74	99.5
Copper	CU	PMS	MS043081	50.0	52.06	104.1	50.0	50.27	100.5	50.50	101.0	50.02	100.0	49.30	98.6	49.55	99.1
Copper	CU	ICP	IP042971	1000.0	1036.99	103.7	1000.0	1002.07	100.2	1023.40	102.3	992.22	99.2	1004.14	100.4	1001.86	100.2
Lead	PB	PMS	MS043081	50.0	52.84	105.7	50.0	50.38	100.8	51.56	103.1	50.96	101.9	51.55	103.1	51.16	102.3
Mercury	HG	CVA	HG042602	8.0	8.28	103.5	4.0	4.19	104.8	4.29	107.3						
Nickel	NI	PMS	MS043081	50.0	51.20	102.4	50.0	49.81	99.6	51.45	102.9	50.30	100.6	49.31	98.6	49.65	99.3
Selenium	SE	PMS	MS043081	80.0	81.22	101.5	50.0	50.67	101.3	53.63	107.3	52.98	106.0	51.08	102.2	51.43	102.9
Silver	AG	PMS	MS043081	50.0	51.62	103.2	50.0	49.91	99.8	49.92	99.8	49.48	99.0	50.32	100.6	50.25	100.5
Thallium	TL	PMS	MS043081	50.0	53.09	106.2	50.0	50.80	101.6	51.87	103.7	51.80	103.6	51.92	103.8	51.79	103.6
Zinc	ZN	ICP	IP042971	1000.0	1013.33	101.3	1000.0	995.65	99.6	1014.98	101.5	1008.00	100.8	992.12	99.2	1007.91	100.8
Zinc	ZN	PMS	MS043081	50.0	51.80	103.6	50.0	50.75	101.5	50.50	101.0	50.88	101.8	50.50	101.0	50.38	100.8

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS043081	50.0	50.15	100.3	49.03	98.1	49.66	99.3	49.57	99.1	49.93	99.9		
Arsenic	AS	PMS	MS043081	50.0	50.16	100.3	50.59	101.2	50.52	101.0	50.27	100.5	49.76	99.5		
Beryllium	BE	ICP	IP042971	1000.0	968.56	96.9	950.00	95.0								
Beryllium	BE	PMS	MS043081	50.0	48.90	97.8	47.75	95.5	49.50	99.0	52.00	104.0	47.72	95.4		
Cadmium	CD	PMS	MS043081	50.0	50.35	100.7	49.82	99.6	50.53	101.1	50.16	100.3	49.66	99.3		
Chromium	CR	PMS	MS043081	50.0	50.03	100.1	49.70	99.4	50.17	100.3	50.82	101.6	48.89	97.8		
Copper	CU	PMS	MS043081	50.0	49.32	98.6	49.93	99.9	50.07	100.1	50.37	100.7	49.15	98.3		
Copper	CU	ICP	IP042971	1000.0	993.19	99.3	996.11	99.6								
Lead	PB	PMS	MS043081	50.0	50.31	100.6	50.95	101.9	51.71	103.4	52.20	104.4	51.50	103.0		
Mercury	HG	CVA	HG042602	4.0												
Nickel	NI	PMS	MS043081	50.0	49.04	98.1	50.34	100.7	50.63	101.3	50.55	101.1	48.68	97.4		
Selenium	SE	PMS	MS043081	50.0	50.77	101.5	52.67	105.3	51.98	104.0	51.67	103.3	50.82	101.6		
Silver	AG	PMS	MS043081	50.0	50.24	100.5	49.71	99.4	49.96	99.9	50.17	100.3	49.81	99.6		
Thallium	TL	PMS	MS043081	50.0	51.24	102.5	51.30	102.6	52.16	104.3	52.71	105.4	51.96	103.9		
Zinc	ZN	ICP	IP042971	1000.0	1000.85	100.1	997.34	99.7								
Zinc	ZN	PMS	MS043081	50.0	50.45	100.9	50.16	100.3	51.47	102.9	51.49	103.0	49.74	99.5		

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS050181	50.0	53.42	**106.8**	50.0	50.45	**100.9**	49.85	**99.7**	51.24	**102.5**				
Selenium	SE	PMS	MS050181	80.0	83.75	**104.7**	50.0	53.51	**107.0**	49.24	**98.5**	51.31	**102.6**				

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WN31

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	MS043081	0.2	0.19	**95.0**										
Arsenic	AS	PMS	MS043081	0.2	0.23	**115.0**										
Beryllium	BE	PMS	MS043081	0.2	0.18	**90.0**										
Beryllium	BE	ICP	IP042971	1.0	0.93	**93.0**										
Cadmium	CD	PMS	MS043081	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS043081	0.5	0.50	**100.0**										
Copper	CU	ICP	IP042971	2.0	1.76	**88.0**										
Copper	CU	PMS	MS043081	0.5	0.53	**106.0**										
Lead	PB	PMS	MS043081	0.1	0.11	**110.0**										
Mercury	HG	CVA	HG042602	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS043081	0.5	0.49	**98.0**										
Selenium	SE	PMS	MS043081	0.5	0.51	**102.0**										
Silver	AG	PMS	MS043081	0.2	0.19	**95.0**										
Thallium	TL	PMS	MS043081	0.2	0.21	**105.0**										
Zinc	ZN	ICP	IP042971	10.0	9.20	**92.0**										
Zinc	ZN	PMS	MS043081	4.0	4.07	**101.8**										

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WN31

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
Arsenic	AS	PMS	MS050181		0.2	0.21	**105.0**										
Selenium	SE	PMS	MS050181		0.5	0.57	**114.0**										

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: WN31

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS043081	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	MS043081	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	IP042971	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	BE	PMS	MS043081	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS043081	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	MS043081	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS043081	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	ICP	IP042971	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	MS043081	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	HG042602	0.2	0.1	0.1	U	0.1	U	0.1	U						
Nickel	NI	PMS	MS043081	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS043081	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS043081	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	MS043081	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	IP042971	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	ZN	PMS	MS043081	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS043081	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Arsenic	AS	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Beryllium	BE	ICP	IP042971	5.0	1.0	1.0	U	1.0	U								
Beryllium	BE	PMS	MS043081	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Cadmium	CD	PMS	MS043081	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Chromium	CR	PMS	MS043081	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Copper	CU	PMS	MS043081	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Copper	CU	ICP	IP042971	25.0	2.0	2.0	U	2.0	U								
Lead	PB	PMS	MS043081	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Mercury	HG	CVA	HG042602	0.2	0.1												
Nickel	NI	PMS	MS043081	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Selenium	SE	PMS	MS043081	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U		
Silver	AG	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Thallium	TL	PMS	MS043081	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Zinc	ZN	ICP	IP042971	20.0	10.0	10.0	U	10.0	U								
Zinc	ZN	PMS	MS043081	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U		

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS050181	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U				
Selenium	SE	PMS	MS050181	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP042971

SDG: WN31

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	197046.7	196161.7	**98.1**						
Antimony		1000	-16.5	972.2	**97.2**						
Arsenic		1000	36.6	1031.1	**103.1**						
Barium		1000	-1.8	1024.7	**102.5**						
Beryllium		1000	0.0	975.1	**97.5**						
Boron			13.5	4.7							
Cadmium		1000	2.7	1023.7	**102.4**						
Calcium	100000	100000	98426.3	98242.9	**98.2**						
Chromium		1000	-2.1	1012.8	**101.3**						
Cobalt		1000	2.2	952.6	**95.3**						
Copper		1000	1.3	1014.7	**101.5**						
Iron	200000	200000	182435.7	182430.5	**91.2**						
Lead		1000	-9.1	947.1	**94.7**						
Magnesium	100000	100000	101867.9	97638.5	**97.6**						
Manganese		1000	0.1	938.5	**93.9**						
Molybdenum			5.0	5.4							
Nickel		1000	0.5	977.9	**97.8**						
Potassium			19.9	8.9							
Selenium		1000	-16.4	961.1	**96.1**						
Silicon			-0.2	0.2							
Silver		1000	-0.8	1060.9	**106.1**						
Sodium			10.2	7.3							
Strontium			4.0	4.0							
Thallium		1000	15.0	964.4	**96.4**						
Tin			-7.2	-8.3							
Titanium			5.7	5.3							
Vanadium		1000	2.1	964.8	**96.5**						
Zinc		1000	-0.8	960.2	**96.0**						

WN31.ICSM

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS043081

SDG: WN31

INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.5	**97.5**						
Barium			0.0	0.1							
Cadmium		20	0.0	20.1	**100.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	19.4	**97.0**						
Copper		20	0.4	19.6	**98.0**						
Manganese		20	0.0	19.5	**97.5**						
Molybdenum	400	400	392.9	389.8	**97.5**						
Nickel		20	0.4	19.6	**98.0**						
Silver		20	0.0	19.7	**98.5**						
Vanadium			0.1	-0.3							
Zinc		20	1.3	20.3	**101.5**						

WN31 00035

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

ICS SOURCE: I.V.

RUNID: MS050181

INSTRUMENT ID: PE ELAN 6000

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	18.9	**94.5**						
Cadmium		20	0.1	19.8	**99.0**						
Selenium			-0.2	-0.1							
Silver		20	0.0	19.5	**97.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WN31

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	ES-TS-INF-20130424	WN31APOST	MS043081	502.66	B	5.00	B	500	Sediment	**99.5**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

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	PE ELAN 6000 MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	PE ELAN 6000 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
Beryllium	BE	PMS	PE ELAN 6000 MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	PE ELAN 6000 MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	PE ELAN 6000 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
Copper	CU	PMS	PE ELAN 6000 MS	0.00		25	0.5	4/1/2012		
Lead	PB	PMS	PE ELAN 6000 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	PE ELAN 6000 MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	PE ELAN 6000 MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	PE ELAN 6000 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
Zinc	ZN	PMS	PE ELAN 6000 MS	0.00		20	4.0	4/1/2012		

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 1/22/2013

SDG: WN31

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

WN31 - 00353

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 1/22/2013

SDG: WN31

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: WN31

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 4/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
ES-TS-INF-20130424	WN31A	1.049	0.0	50.0
ES-TS-INF-20130424D	WN31ADUP	1.046	0.0	50.0
ES-TS-INF-20130424S	WN31ASPK	1.048	0.0	50.0
PBS	WN31MB1	1.000	0.0	50.0
LCSS	WN31MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 4/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
ES-TS-INF-20130424	WN31A	1.038	0.0	50.0
ES-TS-INF-20130424D	WN31ADUP	1.037	0.0	50.0
ES-TS-INF-20130424S	WN31ASPK	1.041	0.0	50.0
PBS	WN31MB1	1.000	0.0	50.0
LCSS	WN31MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 4/26/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
ES-MH-001-20130424	WN31B	0.000	50.0	25.0
ES-MH-001-20130424D	WN31BDUP	0.000	50.0	25.0
ES-MH-001-20130424S	WN31BSPK	0.000	50.0	25.0
ES-MH-001-20130424	WN31C	0.000	50.0	25.0
ES-MH-001-20130424D	WN31CDUP	0.000	50.0	25.0
ES-MH-001-20130424S	WN31CSPK	0.000	50.0	25.0
PBW	WN31MB2	0.000	50.0	25.0
LCSW	WN31MB2SPK	0.000	50.0	25.0
PBW	WN31MB3	0.000	50.0	25.0
LCSW	WN31MB3SPK	0.000	50.0	25.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN31

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 4/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
ES-TS-INF-20130424	WN31A	0.218	0.0	50.0
ES-TS-INF-20130424D	WN31ADUP	0.214	0.0	50.0
ES-TS-INF-20130424S	WN31ASPK	0.216	0.0	50.0
PBS	WN31MB1	0.200	0.0	50.0
LCSW	WN31MB1SPK	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: 4/29/2013

SDG: WN31 | RUNID: IP042971 | METHOD: ICP | END DATE: 4/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08441							X					X																		X
S2	S2	1.00	08482												X																		
S3	S3	1.00	08502							X																							X
S4	S4	1.00	08530																														
S5	S5	1.00	08552																														
ICV	ICV	1.00	09053							X					X																		X
ICB	ICB	1.00	09093							X					X																		X
CRI	CRII	1.00	09135							X					X																		X
ICSA	ICSAI	1.00	09181							X					X																		X
ICSAB	ICSABI	1.00	09222							X					X																		X
ZZZZZZ	HiPurQC7M	1.00	09275																														
ZZZZZZ	SPEXQC21	1.00	09320																														
ZZZZZZ	DICHECK	1.00	09362																														
CCV	CCV1	1.00	09404							X					X																		X
CCB	CCB1	1.00	09444							X					X																		X
ZZZZZZ	WN26MB	2.00	09490																														
ZZZZZZ	3031-13Chec	1.00	09531																														
ZZZZZZ	WN26ADUP	2.00	09570																														
ZZZZZZ	WN26A	2.00	10010																														
ZZZZZZ	WN26ASPK	2.00	10052																														
ZZZZZZ	WN26B	2.00	10092																														
ZZZZZZ	WN26C	2.00	10132																														
ZZZZZZ	WN26MBSPK	2.00	10173																														
CCV	CCV2	1.00	10213							X					X																		X
CCB	CCB2	1.00	10253							X					X																		X
ZZZZZZ	WM19MB	2.00	10295																														
ZZZZZZ	WM19MB	5.00	10340																														
ZZZZZZ	WM19F	5.00	10384																														
ZZZZZZ	WM19A	2.00	10431																														
CCV	CCV3	1.00	10473							X					X																		X
CCB	CCB3	1.00	10512							X					X																		X
ZZZZZZ	WN07MB1	1.00	10553																														
ZZZZZZ	WN07MB2	5.00	10595																														
ZZZZZZ	WN07WDUP	5.00	11042																														
ZZZZZZ	WN07W	5.00	11084																														

FORM XIV

WN31 SDG

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/29/2013

SDG: WN31 | RUNID: IP042971 | METHOD: ICP | END DATE: 4/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WN07WSPK	5.00	11130																														
ZZZZZZ	WN07TDUP	1.00	11172																														
ZZZZZZ	WN07T	1.00	11213																														
ZZZZZZ	WN07TSPK	1.00	11255																														
ZZZZZZ	ZZZZZZ	1.00	11301																														
ZZZZZZ	WN07MB1SPK	1.00	11333																														
CCV	CCV4	1.00	11373							X					X																		X
CCB	CCB4	1.00	11413							X					X																		X
ZZZZZZ	WN59MB1	2.00	11455																														
ZZZZZZ	WN59ADUP	2.00	11501																														
ZZZZZZ	WN59A	2.00	11541																														
ZZZZZZ	WN59ASPK	2.00	11581																														
ZZZZZZ	WN59B	2.00	12003																														
ZZZZZZ	WN59C	2.00	12043																														
ZZZZZZ	WN59D	2.00	12083																														
ZZZZZZ	WM19F	10.00	12123																														
ZZZZZZ	WN59MB1SPK	2.00	12165																														
ZZZZZZ	WN59MB1SPD	2.00	12210																														
CCV	CCV5	1.00	12250							X					X																		X
CCB	CCB5	1.00	12290							X					X																		X
ZZZZZZ	WN27MB1	2.00	12332																														
ZZZZZZ	WN27ADUP	2.00	12373																														
ZZZZZZ	WN27A	2.00	12414																														
ZZZZZZ	WN27ASPK	2.00	12454																														
ZZZZZZ	ZZZZZZ	2.00	12494																														
ZZZZZZ	WN27MB1SPK	2.00	12525																														
CCV	CCV6	1.00	12565							X					X																		X
CCB	CCB6	1.00	13005							X					X																		X
PBS	WN31MB1	2.00	13051							X					X																		X
ES-TS-INF-20130424D	WN31ADUP	2.00	13092							X					X																		X
ES-TS-INF-20130424	WN31A	2.00	13133							X					X																		X
ES-TS-INF-20130424S	WN31ASPK	2.00	13173							X					X																		X
ZZZZZZ	ZZZZZZ	2.00	13213																														
LCSS	WN31MB1SPK	2.00	13253							X					X																		X
CCV	CCV7	1.00	13293							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/29/2013

SDG: WN31 | RUNID: IP042971 | METHOD: ICP | END DATE: 4/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB7	1.00	13334							X					X																		X

WN31 : 00317

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 4/30/2013

SDG: WN31 | RUNID: MS043081 METHOD: PMS | END DATE: 4/30/2013

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	09050		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	09110		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	09170		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	09220		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	09280		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	Rinse Sampl	1.00	09350																														
S0	S0	1.00	09420		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	1.00	09470																														
ICV	MICV	1.00	09560		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	10020		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	10080		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	10140		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	1.00	10190																														
S0	S0	1.00	10260		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV2	1.00	10320		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10380		X		X			X		X		X	X								X	X	X	X				X			X
S0	S0	1.00	10460		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV3	1.00	10540		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11000		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	11060		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	11110		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	11170		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	11230																														
ZZZZZZ	LR300	1.00	11290																														
CCV	MCCV4	1.00	11360		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	11420		X		X			X		X		X	X								X	X	X	X				X			X
S0	S0	1.00	11530		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV5	1.00	11590		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	12050		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	WN27MB1	20.00	12100																														
ZZZZZZ	WL69A	100.00	12160																														
ZZZZZZ	WL69B	100.00	12220																														
ZZZZZZ	WN27ADUP	20.00	12280																														
ZZZZZZ	WN27A	20.00	12340																														
ZZZZZZ	WN27ASPK	20.00	12400																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 4/30/2013

SDG: WN31 | RUNID: MS043081 METHOD: PMS | END DATE: 4/30/2013

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	WN27APOST	20.00	12460																														
ZZZZZZ	WN27MB1SPK	20.00	12520																														
CCV	MCCV6	1.00	12580		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB6	1.00	13040		X		X			X		X		X	X								X	X	X	X				X			X
S0	S0	1.00	13130		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV7	1.00	13180		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB7	1.00	13250		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WN31MB2	2.00	13300		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	WN27ADUP	100.00	13360																														
ZZZZZZ	WN27A	100.00	13420																														
ZZZZZZ	WN27ASPK	100.00	13480																														
ZZZZZZ	WN40B	2.00	13540																														
ES-MH-001-20130424D	WN31BDUP	2.00	14000		X					X		X		X	X								X	X	X					X			X
ES-MH-001-20130424	WN31B	2.00	14060		X					X		X		X	X								X	X	X					X			X
ES-MH-001-20130424S	WN31BSPK	2.00	14120		X					X		X		X	X								X	X	X					X			X
ZZZZZZ	ZZZZZZ	2.00	14180																														
LCSW	WN31MB2SPK	2.00	14240		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV8	1.00	14300		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB8	1.00	14360		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WN31MB3	2.00	14530		X		X			X		X		X	X								X	X	X	X				X			X
ES-TS-INF-20130424D	WN31ADUP	20.00	14590		X		X					X		X									X	X	X	X				X			
ES-TS-INF-20130424	WN31A	20.00	15050		X		X					X		X									X	X	X	X				X			
ES-TS-INF-20130424S	WN31ASPK	20.00	15110		X		X					X		X									X	X	X	X				X			
ES-TS-INF-20130424A	WN31APOST	20.00	15170		X		X					X		X									X	X	X	X				X			
ES-MH-001-20130424D	WN31CDUP	2.00	15230		X					X		X		X	X								X	X	X					X			X
ES-MH-001-20130424	WN31C	2.00	15290		X					X		X		X	X								X	X	X					X			X
ES-MH-001-20130424S	WN31CSPK	2.00	15340		X					X		X		X	X								X	X	X					X			X
ZZZZZZ	ZZZZZZ	2.00	15400																														
LCSW	WN31MB3SPK	2.00	15460		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV9	1.00	15520		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB9	1.00	15590		X		X			X		X		X	X								X	X	X	X				X			X
PBS	WN31MB1	20.00	16040		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WN40MB1	2.00	16100																														
ZZZZZZ	WN40ADUP	2.00	16160																														
ZZZZZZ	WN40A	2.00	16220																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 4/30/2013

SDG: WN31 | RUNID: MS043081 METHOD: PMS | END DATE: 4/30/2013

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	WN40ASPK	2.00	16280																														
ZZZZZZ	ZZZZZZ	2.00	16340																														
ZZZZZZ	WN52B	2.00	16400																														
ZZZZZZ	WN52C	2.00	16460																														
ZZZZZZ	WN40MB1SPK	2.00	16520																														
LCSS	WN31MB1SPK	20.00	16580		X		X					X		X									X	X	X	X				X			
CCV	MCCV10	1.00	17040		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB10	1.00	17100		X		X			X		X		X	X								X	X	X	X				X			X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 4/30/2013

SDG: WN31 | RUNID: MS043081 | METHOD: PMS | END DATE: 4/30/2013

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	09050		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	09110		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	09170		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	09220		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	09280		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	Rinse Samp1	1.00	09350																														
S0	S0	1.00	09420		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	1.00	09470																														
ICV	MICV	1.00	09560		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	10020		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	10080		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	10140		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	1.00	10190																														
S0	S0	1.00	10260		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV2	1.00	10320		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10380		X		X			X		X		X	X								X	X	X	X				X			X
S0	S0	1.00	10460		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV3	1.00	10540		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11000		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	11060		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	11110		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	11170		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	11230																														
ZZZZZZ	LR300	1.00	11290																														
CCV	MCCV4	1.00	11360		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	11420		X		X			X		X		X	X								X	X	X	X				X			X
S0	S0	1.00	11530		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV5	1.00	11590		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	12050		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	WN27MB1	20.00	12100																														
ZZZZZZ	WL69A	100.00	12160																														
ZZZZZZ	WL69B	100.00	12220																														
ZZZZZZ	WN27ADUP	20.00	12280																														
ZZZZZZ	WN27A	20.00	12340																														
ZZZZZZ	WN27ASPK	20.00	12400																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 5/1/2013

SDG: WN31 | RUNID: MS050181 METHOD: PMS | END DATE: 5/1/2013

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	10160				X																			X							
S1	S1	1.00	10210				X																			X							
S2	S2	1.00	10250				X																			X							
S3	S3	1.00	10300				X																			X							
S4	S4	1.00	10350				X																			X							
ZZZZZZ	Rinse Samp1	1.00	10400																														
ICV	MICV	1.00	10460				X																			X							
ICB	ICB	1.00	10510				X																			X							
CCV	MCCV1	1.00	10550				X																			X							
CCB	CCB1	1.00	11000				X																			X							
CRI	MCRI	1.00	11050				X																			X							
ICSA	ICSAI	1.00	11090				X																			X							
ICSAB	ICSABI	1.00	11140				X																			X							
ZZZZZZ	LR200	1.00	11190																														
ZZZZZZ	LR300	1.00	11240																														
CCV	MCCV2	1.00	11290				X																			X							
CCB	CCB2	1.00	11340				X																			X							
ES-MH-001-20130424D	WN31BDUP	2.00	11390				X																			X							
ES-MH-001-20130424	WN31B	2.00	11440				X																			X							
ES-MH-001-20130424S	WN31BSPK	2.00	11490				X																			X							
ES-MH-001-20130424D	WN31CDUP	2.00	11530				X																			X							
ES-MH-001-20130424	WN31C	2.00	11580				X																			X							
ES-MH-001-20130424S	WN31CSPK	2.00	12030				X																			X							
ZZZZZZ	WN52F	2.00	12080																														
ZZZZZZ	WN52R	2.00	12130																														
ZZZZZZ	WN52E	50.00	12170																														
ZZZZZZ	WN52Q	50.00	12220																														
CCV	MCCV3	1.00	12270				X																			X							
CCB	CCB3	1.00	12320				X																			X							

25C09 TENM

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN35

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
ES-MH-001-20130424	WN35A	13-8725	
ES-MH-001-20130424D	WN35ADUP	13-8725	
ES-MH-001-20130424S	WN35ASPK	13-8725	
PBW	WN35MB1	13-8725	
LCSW	WN35MB1SPK	13-8725	
ES-MH-001-20130424	WN35B	13-8726	
ES-MH-001-20130424D	WN35BDUP	13-8726	
ES-MH-001-20130424S	WN35BSPK	13-8726	
PBW	WN35MB2	13-8726	
LCSW	WN35MB2SPK	13-8726	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 5/15/13 Title: Inorganics Director

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

ANALYTICAL RESOURCES INCORPORATED

Data Release Authorized:
Reported: 05/03/13
Date Received: 04/24/13
Page 1 of 1

QC Report No: WN35-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
ES-MH-001-20130424-W WN35A 13-8725	04/24/13	Water	04/26/13 05/02/13	20.0	20.0 U
MB-042613 Method Blank	NA	Water	04/26/13 05/02/13	20.0	20.0 U

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
MATRIX SPIKE

Lab Sample ID: WN35A
LIMS ID: 13-8725
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN35-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	116	100	116%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
DUPLICATE

Lab Sample ID: WN35A
LIMS ID: 13-8725
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN35-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

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

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN35LCS
LIMS ID: 13-8725
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN35-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	214	200	107%	

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 05/03/13
Date Received: 04/24/13
Page 1 of 1

QC Report No238: WN35-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
ES-MH-001-20130424-W WN35B 13-8726	04/24/13	Water	04/26/13 05/02/13	20.0	20.0 U
MB-042613 Method Blank	NA	Water	04/26/13 05/02/13	20.0	20.0 U

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
MATRIX SPIKE

Lab Sample ID: WN35B
LIMS ID: 13-8726
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN35-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	113	100	113%	

Reported in ng/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: ES-MH-001-20130424-W
DUPLICATE

Lab Sample ID: WN35B
LIMS ID: 13-8726
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN35-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/24/13
Date Received: 04/24/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

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

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WN35LCS
LIMS ID: 13-8726
Matrix: Water
Data Release Authorized:
Reported: 05/03/13

QC Report No: WN35-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	220	200	110%	

Reported in ng/L

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WN35

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG050201	500.0	508.00	**101.6**	500.0	516.00	**103.2**	517.00	**103.4**	517.00	**103.4**	515.00	**103.0**	511.00	**102.2**

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WN35

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Mercury	HG	CVL	HG050201	500.0	517.00	**103.4**	527.00	**105.4**	538.00	**107.6**	547.00	**109.4**				

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WN35

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Mercury	HG	CVL	HG050201		20.0	20.30	**101.5**										

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

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN35

UNITS:ng/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG050201	25.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN35

UNITS:ng/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Mercury	HG	CVL	HG050201	25.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U				

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN35 UNITS: ng/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ng/L)	ICP LR DATE
Mercury	HG	CVL	CETAC MERCURY	253.70		25	20.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN35

ANALYSIS METHOD: CVL

ARI PREP CODE: DLM

PREPDATE: 4/26/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
ES-MH-001-20130424	WN35B	0.000	20.0	20.0
ES-MH-001-20130424D	WN35BDUP	0.000	20.0	20.0
ES-MH-001-20130424S	WN35BSPK	0.000	20.0	20.0
PBW	WN35MB2	0.000	20.0	20.0
LCSW	WN35MB2SPK	0.000	20.0	20.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WN35

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 4/26/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
ES-MH-001-20130424	WN35A	0.000	20.0	20.0
ES-MH-001-20130424D	WN35ADUP	0.000	20.0	20.0
ES-MH-001-20130424S	WN35ASPK	0.000	20.0	20.0
PBW	WN35MB1	0.000	20.0	20.0
LCSW	WN35MB1SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/2/2013

SDG: WN35 | RUNID: HG050201 METHOD: CVL | END DATE: 5/2/2013

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	07534														X																
S20	S20	1.00	07562														X																
S50	S50	1.00	07590														X																
S100	S100	1.00	08015														X																
S200	S200	1.00	08043														X																
S400	S400	1.00	08071														X																
S1000	S1000	1.00	08100														X																
ICV	AICV	1.00	08135														X																
ICB	ICB	1.00	08163														X																
CCV	ACCV1	1.00	08191														X																
CCB	CCB1	1.00	08220														X																
CRA	CRA	1.00	08244														X																
ZZZZZZ	WN54MB1	1.00	08272																														
ZZZZZZ	WN54MB1SPK	1.00	08300																														
ZZZZZZ	WN54A	1.00	08324																														
ZZZZZZ	WN54ADUP	1.00	08352																														
ZZZZZZ	WN54ASPK	1.00	08381																														
ZZZZZZ	WN54B	1.00	08405																														
ZZZZZZ	WN54C	1.00	08433																														
ZZZZZZ	WN54D	1.00	08461																														
ZZZZZZ	WN54E	1.00	08490																														
CCV	ACCV2	1.00	08514														X																
CCB	CCB2	1.00	08543														X																
ZZZZZZ	WN54F	1.00	08571																														
ZZZZZZ	WN54G	1.00	08595																														
ZZZZZZ	WN54H	1.00	09023																														
ZZZZZZ	WN54I	1.00	09051																														
ZZZZZZ	WN54J	1.00	09075																														
ZZZZZZ	WN54K	1.00	09103																														
ZZZZZZ	WN54L	1.00	09131																														
ZZZZZZ	WN54MB2	1.00	09160																														
ZZZZZZ	WN54MB2SPK	1.00	09184																														
ZZZZZZ	WN54M	1.00	09212																														
CCV	ACCV3	1.00	09241														X																
CCB	CCB3	1.00	09265														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/2/2013

SDG: WN35 | RUNID: HG050201 METHOD: CVL | END DATE: 5/2/2013

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	WN54MDUP	1.00	09294																														
ZZZZZZ	WN54MSPK	1.00	09322																														
ZZZZZZ	WN54N	1.00	09350																														
ZZZZZZ	WN54O	1.00	09374																														
ZZZZZZ	WN54P	1.00	09402																														
ZZZZZZ	WN54Q	1.00	09430																														
ZZZZZZ	WN54R	1.00	09455																														
ZZZZZZ	WN54S	1.00	09483																														
ZZZZZZ	WN54T	1.00	09511																														
ZZZZZZ	WN54U	1.00	09535																														
CCV	ACCV4	1.00	09564														X																
CCB	CCB4	1.00	09592														X																
ZZZZZZ	WN54V	1.00	10021																														
ZZZZZZ	WN54W	1.00	10045																														
ZZZZZZ	WN54X	1.00	10073																														
CCV	ACCV5	1.00	10102														X																
CCB	CCB5	1.00	10130														X																
ZZZZZZ	WN55MB1	1.00	10161																														
ZZZZZZ	WN55MB1SPK	1.00	10185																														
ZZZZZZ	WN55A	1.00	10213																														
ZZZZZZ	WN55ADUP	1.00	10241																														
ZZZZZZ	WN55ASPK	1.00	10265																														
ZZZZZZ	WN55B	1.00	10293																														
ZZZZZZ	WN55C	1.00	10322																														
ZZZZZZ	WN55D	1.00	10350																														
ZZZZZZ	WN55E	1.00	10374																														
ZZZZZZ	WN55F	1.00	10402																														
CCV	ACCV6	1.00	10431														X																
CCB	CCB6	1.00	10455														X																
ZZZZZZ	WN55G	1.00	10484																														
ZZZZZZ	WN55H	1.00	10512																														
ZZZZZZ	WN55I	1.00	10540																														
ZZZZZZ	WN55J	1.00	10564																														
ZZZZZZ	WN55MB2	1.00	10592																														
ZZZZZZ	WN55MB2SPK	1.00	11020																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/2/2013

SDG: WN35 | RUNID: HG050201 METHOD: CVL | END DATE: 5/2/2013

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	07534														X																
S20	S20	1.00	07562														X																
S50	S50	1.00	07590														X																
S100	S100	1.00	08015														X																
S200	S200	1.00	08043														X																
S400	S400	1.00	08071														X																
S1000	S1000	1.00	08100														X																
ICV	AICV	1.00	08135														X																
ICB	ICB	1.00	08163														X																
CCV	ACCV1	1.00	08191														X																
CCB	CCB1	1.00	08220														X																
CRA	CRA	1.00	08244														X																
ZZZZZZ	WN54MB1	1.00	08272																														
ZZZZZZ	WN54MB1SPK	1.00	08300																														
ZZZZZZ	WN54A	1.00	08324																														
ZZZZZZ	WN54ADUP	1.00	08352																														
ZZZZZZ	WN54ASPK	1.00	08381																														
ZZZZZZ	WN54B	1.00	08405																														
ZZZZZZ	WN54C	1.00	08433																														
ZZZZZZ	WN54D	1.00	08461																														
ZZZZZZ	WN54E	1.00	08490																														
CCV	ACCV2	1.00	08514														X																
CCB	CCB2	1.00	08543														X																
ZZZZZZ	WN54F	1.00	08571																														
ZZZZZZ	WN54G	1.00	08595																														
ZZZZZZ	WN54H	1.00	09023																														
ZZZZZZ	WN54I	1.00	09051																														
ZZZZZZ	WN54J	1.00	09075																														
ZZZZZZ	WN54K	1.00	09103																														
ZZZZZZ	WN54L	1.00	09131																														
ZZZZZZ	WN54MB2	1.00	09160																														
ZZZZZZ	WN54MB2SPK	1.00	09184																														
ZZZZZZ	WN54M	1.00	09212																														
CCV	ACCV3	1.00	09241														X																
CCB	CCB3	1.00	09265														X																

FORM XIV

SJC08 : TSNM

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/2/2013

SDG: WN35 | RUNID: HG050201 METHOD: CVL | END DATE: 5/2/2013

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	WN54MDUP	1.00	09294																														
ZZZZZZ	WN54MSPK	1.00	09322																														
ZZZZZZ	WN54N	1.00	09350																														
ZZZZZZ	WN54O	1.00	09374																														
ZZZZZZ	WN54P	1.00	09402																														
ZZZZZZ	WN54Q	1.00	09430																														
ZZZZZZ	WN54R	1.00	09455																														
ZZZZZZ	WN54S	1.00	09483																														
ZZZZZZ	WN54T	1.00	09511																														
ZZZZZZ	WN54U	1.00	09535																														
CCV	ACCV4	1.00	09564														X																
CCB	CCB4	1.00	09592														X																
ZZZZZZ	WN54V	1.00	10021																														
ZZZZZZ	WN54W	1.00	10045																														
ZZZZZZ	WN54X	1.00	10073																														
CCV	ACCV5	1.00	10102														X																
CCB	CCB5	1.00	10130														X																
ZZZZZZ	WN55MB1	1.00	10161																														
ZZZZZZ	WN55MB1SPK	1.00	10185																														
ZZZZZZ	WN55A	1.00	10213																														
ZZZZZZ	WN55ADUP	1.00	10241																														
ZZZZZZ	WN55ASPK	1.00	10265																														
ZZZZZZ	WN55B	1.00	10293																														
ZZZZZZ	WN55C	1.00	10322																														
ZZZZZZ	WN55D	1.00	10350																														
ZZZZZZ	WN55E	1.00	10374																														
ZZZZZZ	WN55F	1.00	10402																														
CCV	ACCV6	1.00	10431														X																
CCB	CCB6	1.00	10455														X																
ZZZZZZ	WN55G	1.00	10484																														
ZZZZZZ	WN55H	1.00	10512																														
ZZZZZZ	WN55I	1.00	10540																														
ZZZZZZ	WN55J	1.00	10564																														
ZZZZZZ	WN55MB2	1.00	10592																														
ZZZZZZ	WN55MB2SPK	1.00	11020																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 5/2/2013

SDG: WN35 | RUNID: HG050201 METHOD: CVL | END DATE: 5/2/2013

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	WN55K	1.00	11044																														
ZZZZZZ	WN55KDUP	1.00	11072																														
ZZZZZZ	WN55KSPK	1.00	11101																														
ZZZZZZ	WN55L	1.00	11125																														
CCV	ACCV7	1.00	11153														X																
CCB	CCB7	1.00	11182														X																
ZZZZZZ	WN55M	1.00	11210																														
ZZZZZZ	WN55N	1.00	11234																														
ZZZZZZ	WN55O	1.00	11263																														
ZZZZZZ	WN55P	1.00	11291																														
ZZZZZZ	WN55Q	1.00	11315																														
ZZZZZZ	WN55R	1.00	11343																														
ZZZZZZ	WN55S	1.00	11371																														
ZZZZZZ	WN55T	1.00	11400																														
PBW	WN35MB1	1.00	11424														X																
LCSW	WN35MB1SPK	1.00	11452														X																
CCV	ACCV8	1.00	11480														X																
CCB	CCB8	1.00	11505														X																
ES-MH-001-20130424	WN35A	1.00	11533														X																
ES-MH-001-20130424D	WN35ADUP	1.00	11561														X																
ES-MH-001-20130424S	WN35ASPK	1.00	11590														X																
PBW	WN35MB2	1.00	12014														X																
LCSW	WN35MB2SPK	1.00	12042														X																
ES-MH-001-20130424	WN35B	1.00	12071														X																
ES-MH-001-20130424D	WN35BDUP	1.00	12095														X																
ES-MH-001-20130424S	WN35BSPK	1.00	12123														X																
CCV	ACCV9	1.00	12151														X																
CCB	CCB9	1.00	12180														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

SAMPLE RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/15/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Client ID: ES-MH-001-20130424-W
ARI ID: 13-8694 WN31B

Analyte	Date Batch	Method	Units	RL	Sample
pH	04/24/13 042413#1	SM4500H	std units	0.01	6.66
Alkalinity	05/06/13 050613#1	SM 2320	mg/L CaCO3	1.0	45.0
Carbonate	05/06/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	05/06/13	SM 2320	mg/L CaCO3	1.0	45.0
Hydroxide	05/06/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	04/25/13 042513#1	EPA 120.1	umhos/cm	1.00	1,220
Total Suspended Solids	04/25/13 042513#1	SM2540D	mg/L	2.1	12.1
Chloride	04/27/13 042713#1	EPA 300.0	mg/L	10.0	316
N-Nitrate	04/25/13 042513#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	04/27/13 042713#1	EPA 300.0	mg/L	1.0	49.5
Total Organic Carbon	04/25/13 042513#1	SM5310B	mg/L	1.50	5.61
Dissolved Organic Carbon	04/26/13 042613#1	SM5310B	mg/L	1.50	4.94

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QL
Reported: 05/15/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WN31B Client ID: ES-MH-001-20130424-W							
Chloride	EPA 300.0	04/27/13	mg/L	316	707	400	97.8%
N-Nitrate	EPA 300.0	04/25/13	mg-N/L	0.3	2.3	2.0	100.0%
Sulfate	EPA 300.0	04/27/13	mg/L	49.5	92.7	40.0	108.0%

REPLICATE RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QW
Reported: 05/15/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WN31B Client ID: ES-MH-001-20130424-W						
pH	SM4500H	04/24/13	std units	6.66	6.77	0.11
Alkalinity	SM 2320	05/06/13	mg/L CaCO3	45.0	45.1	0.2%
Carbonate	SM 2320	05/06/13	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	05/06/13	mg/L CaCO3	45.0	45.1	0.2%
Hydroxide	SM 2320	05/06/13	mg/L CaCO3	< 1.0	< 1.0	NA
Conductivity	EPA 120.1	04/25/13	umhos/cm	1,220	1,230	0.8%
Total Suspended Solids	SM2540D	04/25/13	mg/L	12.1	13.1	7.9%
Chloride	EPA 300.0	04/27/13	mg/L	316	315	0.3%
N-Nitrate	EPA 300.0	04/25/13	mg-N/L	0.3	0.3	0.0%
Sulfate	EPA 300.0	04/27/13	mg/L	49.5	49.5	0.0%

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

LAB CONTROL RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QC
Reported: 05/15/13

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

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SM4500H	ICVL	04/24/13	std units	7.00	7.00	0.00
Total Suspended Solids SM2540D	ICVL	04/25/13	mg/L	49.4	50.0	98.8%

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

METHOD BLANK RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: (signature)
Reported: 05/15/13

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

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	04/25/13	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	04/25/13	mg/L	< 1.0 U	
Chloride	EPA 300.0	04/27/13	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	04/25/13	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	04/27/13	mg/L	< 0.1 U	
Total Organic Carbon	SM5310B	04/25/13	mg/L	< 1.50 U	
Dissolved Organic Carbon	SM5310B	04/26/13	mg/L	< 1.50 U	
		04/26/13		< 1.50 U	FB
		04/26/13		< 1.50 U	FB

FB Filtration Blank

STANDARD REFERENCE RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: QD
Reported: 05/15/13

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

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	05/06/13	mg/L CaCO3	40.4	41.9	96.4%
Conductivity Ricca #4110724	EPA 120.1	04/25/13	umhos/cm	1,010	1,000	101.0%
Chloride ERA 210312	EPA 300.0	04/27/13	mg/L	3.0	3.0	100.0%
N-Nitrate EAR 230511	EPA 300.0	04/25/13	mg-N/L	3.0	3.0	100.0%
Sulfate ERA 240312	EPA 300.0	04/27/13	mg/L	3.1	3.0	103.3%
Total Organic Carbon ERA 0409-12-01	SM5310B	04/25/13	mg/L	19.6	20.0	98.0%
Dissolved Organic Carbon ERA 0409-12-01	SM5310B	04/26/13	mg/L	20.8	20.0	104.0%

SAMPLE RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/07/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Client ID: ES-TS-INF-20130424-S
ARI ID: 13-8693 WN31A

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/25/13 042513#1	SM2540B	Percent	0.01	37.96
Total Organic Carbon	04/29/13 042913#1	Plumb,1981	Percent	0.196	19.6

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/07/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WN31A Client ID: ES-TS-INF-20130424-S						
Total Organic Carbon	04/29/13	Percent	19.6	32.9	17.4	76.4%

REPLICATE RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/07/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/24/13
Date Received: 04/24/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WN31A Client ID: ES-TS-INF-20130424-S					
Total Solids	04/25/13	Percent	37.96	37.92 37.70	0.4%
Total Organic Carbon	04/29/13	Percent	19.6	19.2 17.7	5.3%

LAB CONTROL RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/07/13

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	04/29/13	Percent	0.093	0.100	93.0%

METHOD BLANK RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/07/13

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

Analyte	Date	Units	Blank	QC ID
Total Solids	04/25/13	Percent	< 0.01 U	ICB
Total Organic Carbon	04/29/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WN31-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 05/07/13

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	04/29/13	Percent	2.69	2.99	90.0%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WN31, WN35

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
ES-TS-INF-20130424-S	100.0	100.0	99.2	95.7	85.7	76.5	64.2	52.7	50.4	9.8	8.3	6.5	6.5	6.7

Notes to the Testing:

1. Organic matter was not removed pnor to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WN31

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
ES-TS-INF-20130424-S	0.8	3.5	10.1	9.2	12.3	11.6	2.3	40.6	1.5	1.8	0.0	-0.2	6.7	52.7

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.

WN31

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.	WN31-1

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
ES-TS-INF-20130424-S	4/24/2013	5/1/2013	5/3/2013		6.5

* ARI Internal QA limits = 95-105%

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing

Total Solids

ARI Job ID: WN31, WN35

Volatiles Total Solids-voats
Data By: Pat Basilio
Created: 5/ 1/13

Worklist: 9802
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. WN31A 13-8693	_____	_____		% 39.37

Worklist ID: 9802 Page: 1
* - VOA TS Copied From BETX TS
% - VOA TS Copied From Metals TS
$ - VOA TS Copied From Extraction TS

BETX/TPHG Total Solids-betxts
Data By: Lani Hertzog
Created: 5/ 1/13

Worklist: 26
Analyst: LH
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. WN31A 13-8693	_____	_____	_____	* 39.37

Worklist ID: 26 Page: 1
* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

Solids Data Entry Report Checked by: NB Date: 04/26/13
Date: 04/26/13 Data Analyst: DM

Solids Determination performed on 04/25/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WN31	A	ES-TS-INF-20130424-	0.973	10.424	4.694	39.37

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 04-25-13 Time: 1205 Temp: 102°C Analyst: CB

Removed from Oven: Date: 4-26-13 Time: 0645 Temp: 101°C Analyst: DM

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WN26 A	0.986	10.849	9.045	—	✓
" B	0.976	10.787	7.459	—	✓
" C	1.018	10.535	9.423	—	✓
WN31 A	0.973	10.424	4.694	—	✓
WN27 A	0.986	10.133	6.309	—	✓
		CB 4-25-13			

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.

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 4/25/13

Worklist: 8505
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WN31A	10.00	39.7	25.19

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/24/13

Worklist: 7860
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.	WN31A 13-8693 ES-TS-INF-20130424-S	1.20	11.78	5.40	39.7	NR

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/24/13

Worklist: 7860
Analyst: AC
Comments:

Oven ID: ϕ15

Balance ID: B13929800Ø2

Samples In: Date: 4-24-13 Time: 18:55 Temp: 103°C Analyst: AC

Samples Out: Date: 4/25/13 Time: 06:55 Temp: 100° Analyst: RR

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WN31A 13-8693 ES-TS-INF-20130424-S	1.2ϕ	11.78	5.4Ø		NR

Volatile Raw Data
Preparation Log

ARI Job ID: WN31, WN35

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
WN31		4/26/11		CA

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	
1	WN31A	2	✓			41.35	35.16	6.19			
2											
3	WN31A4	3		✓	VE695	34.33	28.117	6.213	5mL	100µL	
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
				Balance ID:							

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WN31, WN35

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): 4/20/13 Internal Standard ID WN794-L 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	WN794-3	10/10/13	accustd	WN794-4	10/10/13
~~absolute~~ restek	WN795-1	6/27/13	SPEX	WN797-1	6/30/13
(lab) ~~restek absolute~~	WN793-2	10/9/13	ultra	ISTD	7/31/13
ultra	WN790-1	6/30/13			

Detail problems, corrective actions and/or other pertinent information below:

linear - acetone
quadratic - DCM

ICV - DCDFM - 124%R, acetone 79%R, trans 1,2 DCE 126%R, VA 85%R
trans 1,4 dichloro 2 butene 75%R

Analyst: [signature] **Date:** 4/29/13

Reviewer: [signature] **Date:** 4/29/13

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 4/26/13 Analysis: 8260C Analyst: [illegible]

GC Program: 60A.GT Column No: 93815L Column Type: 624UI

Instrument Tune (.U or .CT.): BATCH.U EM Voltage: 1982

Inj. Vol: 5 Calibration File: 26apr424 Curve Date: 4/26/13

IS/SS	Ical/Ccal	LCS/ICV
w774-2	w797-1	w794-4
	w797-6	w797-3
		ICV01

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/26APR13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	0845	bfb0426.d	BFB0426	BFB0426	1		1								
2	0925	0010426.d	IC0426	VSTD1	1	4.67	641769	5.12	1376353	7.61	1409627	9.69	722322		
3	0949	2000426.d	IC0426	VSTD200	1	4.67	676897	5.12	1453627	7.62	1519754	9.70	791075		
4	1012	1500426.d	IC0426	VSTD150	1	4.67	635942	5.12	1375211	7.62	1438315	9.69	743710		
5	1036	1000426.d	IC0426	VSTD100	1	4.67	638539	5.12	1388156	7.62	1447397	9.69	754146		
6	1100	0500426.d	IC0426	VSTD50	1	4.67	656923	5.12	1427826	7.61	1483267	9.69	790697		
7	1124	0100426.d	IC0426	VSTD10	1	4.67	643244	5.12	1400609	7.61	1457079	9.69	792287		
8	1148	0050426.d	IC0426	VSTD5	1	4.68	606286	5.13	1318908	7.61	1384621	9.69	735666		
9	1212	0020426.d	IC0426	VSTD2	1	4.68	625236	5.13	1370704	7.61	1416622	9.69	737719		
10	1349	icv0426.d	ICV0426	ICV0426	1	4.67	624830	5.13	1357833	7.61	1400276	9.69	765423		

4/26/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Data File: /chem1/nt5.i/26APR13.b/bfb0426.d

Date : 26-APR-2013 08:45

Client ID: BFB0426

Instrument: nt5.1

Sample Info: BFB0426,BFB0426,,1,26APR13,,

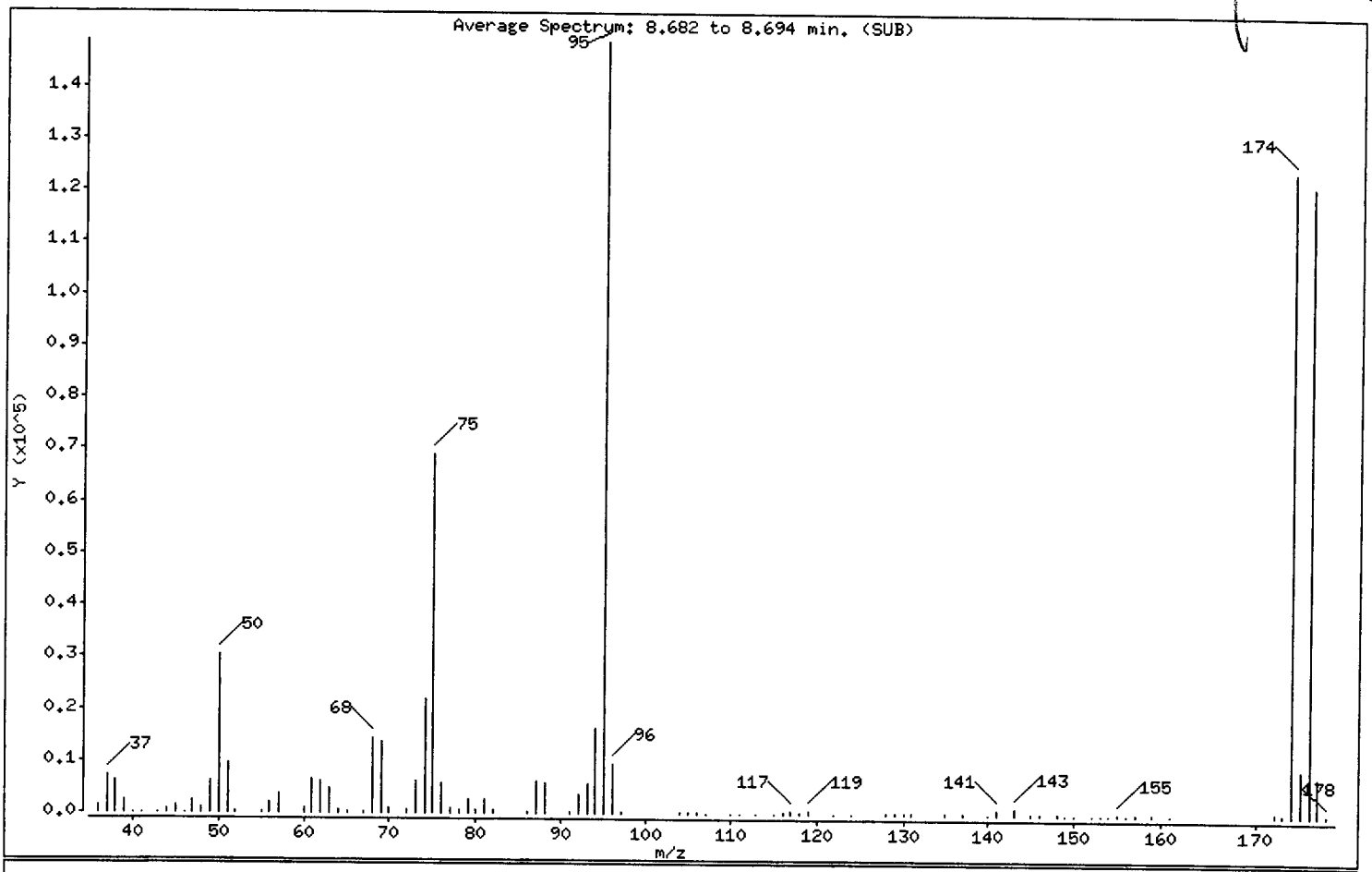
Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene

4/29/14



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.45
75	30.00 - 66.00% of mass 95	46.36
96	5.00 - 9.00% of mass 95	6.49
173	Less than 2.00% of mass 174	0.29 (0.34)
174	50.00 - 101.00% of mass 95	83.55
175	4.00 - 9.00% of mass 174	5.89 (7.05)
176	95.00 - 101.00% of mass 174	81.67 (97.74)
177	5.00 - 9.00% of mass 176	5.03 (6.16)

Data File: /chem1/nt5.i/26APR13.b/bfb0426.d
Date : 26-APR-2013 08:45
Client ID: BFB0426
Sample Info: BFB0426,BFB0426,,1,26APR13,,

Instrument: nt5.i
Operator: PB
Column phase: RTXVMS
Column diameter: 0.18

Data File: bfb0426.d
Spectrum: Average Spectrum: 8.682 to 8.694 min. (SUB)
Location of Maximum: 95.00
Number of points: 97

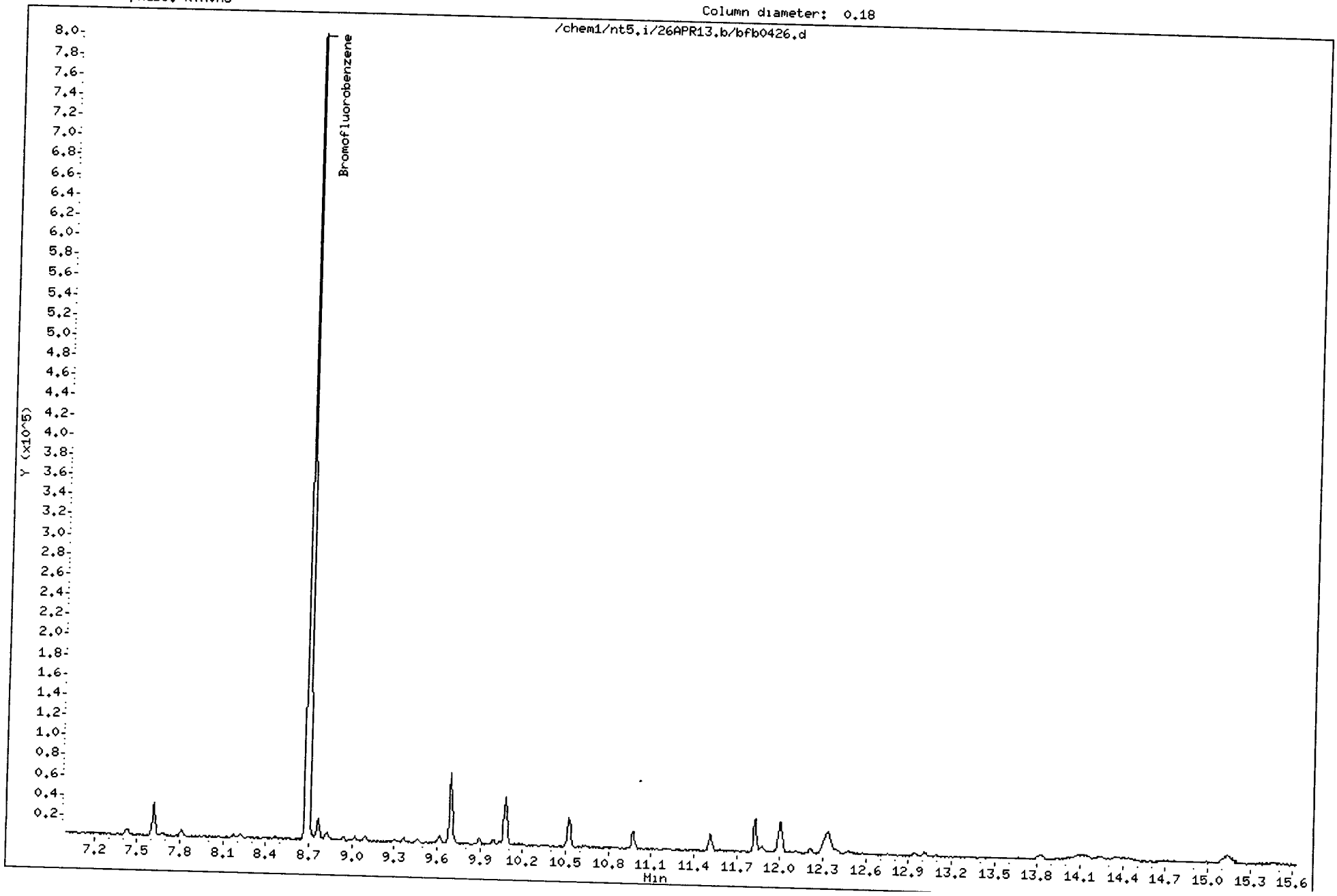
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1236	65.00	288	96.00	9659	142.00	155
37.00	7087	67.00	331	97.00	234	143.00	1319
38.00	6299	68.00	14214	104.00	508	145.00	220
39.00	2539	69.00	13796	105.00	178	146.00	225
40.00	57	70.00	935	106.00	408	148.00	370
41.00	38	71.00	60	107.00	103	149.00	36
43.00	125	72.00	699	110.00	57	150.00	105
44.00	597	73.00	6027	111.00	50	152.00	42
45.00	1264	74.00	21928	113.00	146	153.00	41
46.00	97	75.00	68960	115.00	104	154.00	36
47.00	2354	76.00	5924	116.00	426	155.00	341
48.00	928	77.00	859	117.00	835	156.00	42
49.00	6070	78.00	565	118.00	505	157.00	193
50.00	30424	79.00	2893	119.00	650	159.00	174
51.00	9639	80.00	841	122.00	35	161.00	142
52.00	495	81.00	2713	124.00	107	172.00	524
55.00	345	82.00	641	125.00	34	173.00	427
56.00	2023	86.00	174	128.00	398	174.00	124272
57.00	3916	87.00	6144	129.00	248	175.00	8766
58.00	156	88.00	5906	130.00	480	176.00	121464
60.00	1082	91.00	424	131.00	256	177.00	7487
61.00	6534	92.00	3831	135.00	270	178.00	322
62.00	6307	93.00	5826	137.00	230		
63.00	4797	94.00	16528	140.00	37		
64.00	598	95.00	148736	141.00	1192		

Data File: /chem1/nt5.i/26APR13.b/bfb0426.d
Date : 26-APR-2013 08:45
Client ID: BFB0426
Sample Info: BFB0426,BFB0426,,1,26APR13,,

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Calibration File Names:
Level 1: /chem1/nt5.i/26APR13.b/0010426.d
Level 2: /chem1/nt5.i/26APR13.b/0020426.d
Level 3: /chem1/nt5.i/26APR13.b/0050426.d
Level 4: /chem1/nt5.i/26APR13.b/0100426.d
Level 5: /chem1/nt5.i/26APR13.b/0500426.d
Level 6: /chem1/nt5.i/26APR13.b/1000426.d
Level 7: /chem1/nt5.i/26APR13.b/1500426.d
Level 8: /chem1/nt5.i/26APR13.b/2000426.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
1 Dichlorodifluoromethane	0.55822	0.49469	0.51491	0.48978	0.47064	0.58885					
	0.52169	0.52781					AVRG		0.52082		7.35649
2 Chloromethane	0.67088	0.64951	0.74786	0.72013	0.60603	0.76591					
	0.77675	0.75051					AVRG		0.71095		8.69516
3 Vinyl Chloride	0.79554	0.72417	0.78263	0.72902	0.77379	0.80017					
	0.90298	0.95333					AVRG		0.80770		9.97487

4/29/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
4 Bromomethane	0.36446	0.41005	0.39810	0.40146	0.34351	0.39257					
	0.36854	0.33620					AVRG		0.37686		7.36450
5 Chloroethane	0.49854	0.44339	0.45317	0.43730	0.38553	0.45650					
	0.39982	0.40084					AVRG		0.43439		8.59370
6 Trichlorofluoromethane	0.79296	0.79166	0.88717	0.88740	0.73762	0.89509					
	0.88570	0.89631					AVRG		0.84674		7.39338
7 1,1-Dichloroethene	0.50602	0.51780	0.53671	0.52615	0.48144	0.55809					
	0.52306	0.43783					AVRG		0.51089		7.23035
8 Carbon Disulfide	1.83321	1.74942	1.85531	1.82383	1.61111	1.89602					
	1.73412	1.34642					AVRG		1.73118		10.34184
9 112Trichloro122Trifluoroethan	0.48561	0.45315	0.50036	0.46300	0.43409	0.49255					
	0.46363	0.39916					AVRG		0.46144		7.22005
10 Iodomethane	0.50610	0.45887	0.42848	0.37759	0.45838	0.49005					
	0.44018	0.44969					AVRG		0.45117		8.66300

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
11 Bromoethane	0.36290	0.33044	0.32702	0.31533	0.32730	0.32573					
	0.29978	0.26002					AVRG		0.31857		9.26395
12 Acrolein	0.12624	0.12857	0.10675	0.07768	0.11614	+++++					
	+++++	+++++					AVRG		0.11108		18.53497
13 Methylene Chloride	+++++	17335	38044	54358	330789	543260					
	687391	+++++					QUAD	0.000e+00	1.26641	1.36491	0.99856
14 Acetone	7015	11904	27100	81072	218296	468872					
	+++++	+++++					LINR	0.000e+00	0.07294		0.99053
15 Trans-1,2-Dichloroethene	0.59803	0.58874	0.62870	0.53425	0.48645	0.48021					
	0.41626	0.34139					AVRG		0.50925		19.25143
16 Methyl tert butyl ether	1.70474	1.82003	2.00153	2.00372	1.60602	1.92155					
	1.86926	1.82282					AVRG		1.84371		7.50514
17 1,1-Dichloroethane	1.18290	1.18035	1.29142	1.32695	1.07866	1.28920					
	1.28444	1.28331					AVRG		1.23966		6.77131

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	150 Level 7	200 Level 8										
18 Acrylonitrile	0.23910	0.27622	0.29103	0.29708	0.25300	0.28376						
	0.27456	0.27212					AVRG		0.27336		7.02633	
19 Vinyl Acetate	1.46159	1.58748	1.71452	1.74307	1.50450	1.68727						
	1.63991	1.56896					AVRG		1.61341		6.23131	
20 Cis-1,2-Dichloroethene	0.61891	0.64256	0.68989	0.69230	0.56975	0.67613						
	0.68073	0.67968					AVRG		0.65624		6.57650	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
22 2,2-Dichloropropane	0.90180	0.89398	0.96438	0.99970	0.81573	0.98683						
	0.99239	1.01206					AVRG		0.94586		7.26294	
23 Bromochloromethane	0.28904	0.26982	0.28938	0.30288	0.25566	0.29630						
	0.29285	0.32509					AVRG		0.29013		7.17394	
24 Chloroform	1.06939	1.04245	1.12468	1.16561	0.88665	1.13101						
	1.13125	1.12940					AVRG		1.08505		8.22072	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
25 Carbon Tetrachloride	0.36139	0.36273	0.40068	0.40896	0.30316	0.41051					
	0.41312	0.42956					AVRG		0.38627		10.71281
26 1,1,1-Trichloroethane	0.91972	0.95352	1.02323	1.06309	0.85996	1.05689					
	1.05545	1.08038					AVRG		1.00153		8.04887
28 1,1-Dichloropropene	0.40836	0.40180	0.42859	0.46307	0.36681	0.45053					
	0.45247	0.46763					AVRG		0.42991		8.19779
29 2-Butanone	0.06576	0.08204	0.08732	0.08641	0.07565	0.08360					
	0.08157	0.08093					AVRG		0.08041		8.61183
30 Benzene	1.16689	1.20166	1.30201	1.32976	1.10423	1.28943					
	1.25936	1.21977					AVRG		1.23414		6.13307
33 1,2-Dichloroethane	0.41167	0.41291	0.44547	0.44612	0.37850	0.43019					
	0.42479	0.41628					AVRG		0.42074		5.16772
34 Trichloroethene	0.27914	0.27801	0.30597	0.31459	0.25988	0.31416					
	0.31866	0.32923					AVRG		0.29996		8.14617

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	150 Level 7	200 Level 8										
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
37 Dibromomethane	0.15134	0.15868	0.17209	0.17450	0.15188	0.17370						
	0.17349	0.17186					AVRG		0.16594		6.14197	
38 1,2-Dichloropropane	0.32041	0.32191	0.33975	0.36074	0.30188	0.35803						
	0.35915	0.35908					AVRG		0.34012		6.71337	
39 Bromodichloromethane	0.37087	0.35969	0.39677	0.41179	0.34916	0.41022						
	0.41209	0.40879					AVRG		0.38992		6.66193	
40 2-Chloroethyl Vinyl Ether	0.15810	0.17343	0.20177	0.21470	0.19887	0.22820						
	0.22519	0.22447					AVRG		0.20309		12.66848	
41 Cis 1,3-dichloropropene	0.42602	0.45840	0.51410	0.52617	0.45751	0.53275						
	0.53109	0.52522					AVRG		0.49641		8.50085	
43 Toluene	0.78628	0.75738	0.82994	0.83986	0.69161	0.81953						
	0.81233	0.80528					AVRG		0.79278		6.10236	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
44 Tetrachloroethene	0.30008	0.29191	0.29720	0.31487	0.25850	0.31326					
	0.32135	0.33363					AVRG		0.30385		7.52604
45 4-Methyl-2-Pentanone	0.11576	0.13308	0.15446	0.15917	0.14372	0.15824					
	0.15225	0.14772					AVRG		0.14555		10.13072
46 Trans 1,3-Dichloropropene	0.40157	0.41785	0.46472	0.47723	0.42627	0.49204					
	0.48801	0.47828					AVRG		0.45575		7.71240
47 1,1,2-Trichloroethane	0.21768	0.23572	0.25787	0.26782	0.23190	0.26522					
	0.26377	0.26046					AVRG		0.25006		7.53722
48 Chlorodibromomethane	0.24453	0.25550	0.27896	0.28373	0.25111	0.28799					
	0.28888	0.28457					AVRG		0.27191		6.73503
49 1,3-Dichloropropane	0.40873	0.43627	0.45868	0.47069	0.41192	0.46724					
	0.46166	0.44892					AVRG		0.44551		5.44504
50 1,2-Dibromoethane	0.20645	0.23430	0.25993	0.25860	0.22775	0.25850					
	0.25592	0.25254					AVRG		0.24425		7.98047

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
51 2-Hexanone	0.21089	0.23020	0.25774	0.26771	0.23543	0.24864					
	0.23769	0.23126					AVRG		0.23994		7.39420
53 Chlorobenzene	0.74796	0.76589	0.81020	0.83076	0.68709	0.79607					
	0.78399	0.76785					AVRG		0.77373		5.66620
54 Ethyl Benzene	1.32085	1.31916	1.42460	1.48755	1.22842	1.41498					
	1.34574	1.26711					AVRG		1.35105		6.38997
55 1,1,1,2-Tetrachloroethane	0.25205	0.24772	0.27714	0.29034	0.24637	0.28941					
	0.29149	0.28798					AVRG		0.27281		7.51252
56 m,p-xylene	0.47419	0.47582	0.52683	0.55576	0.46516	0.54271					
	0.52698	0.50380					AVRG		0.50891		6.73589
57 o-Xylene	0.43160	0.44629	0.49484	0.52427	0.45070	0.53314					
	0.53290	0.53169					AVRG		0.49318		8.87865
58 Styrene	0.72243	0.75098	0.82930	0.89478	0.77162	0.90183					
	0.88160	0.84492					AVRG		0.82468		8.35603

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	150 Level 7	200 Level 8										
59 Bromoform	0.32970	0.34112	0.37883	0.37597	0.34424	0.39475						
	0.39353	0.38190					AVRG		0.36751		6.89423	
60 Isopropyl Benzene	2.25405	2.17451	2.44411	2.54400	2.15077	2.55501						
	2.45377	2.28907					AVRG		2.35816		6.84082	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
63 Bromobenzene	0.59226	0.59125	0.61234	0.61387	0.52909	0.62992						
	0.63152	0.62410					AVRG		0.60304		5.57273	
64 N-Propyl Benzene	2.85849	2.68364	2.93182	3.00056	2.53491	2.94709						
	2.79644	2.56414					AVRG		2.78964		6.37307	
65 1,1,2,2-Tetrachloroethane	0.55737	0.61256	0.62568	0.62383	0.56276	0.62909						
	0.61820	0.60635					AVRG		0.60448		4.69832	
66 2-Chloro Toluene	1.72555	1.67543	1.79040	1.82161	1.55083	1.85091						
	1.81614	1.74407					AVRG		1.74687		5.60476	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
67 1,3,5-Trimethyl Benzene	1.87153	1.81658	2.03034	2.13384	1.79280	2.14419					
	2.09150	1.99352					AVRG		1.98429		7.10527
68 1,2,3-Trichloropropane	0.17361	0.19184	0.19830	0.19572	0.17295	0.19554					
	0.18981	0.18668					AVRG		0.18806		5.22489
69 Trans-1,4-Dichloro 2-Butene	0.23514	0.22956	0.24139	0.24545	0.22684	0.25135					
	0.23893	0.24075					AVRG		0.23868		3.37348
70 4-Chloro Toluene	1.74431	1.72169	1.87306	1.86255	1.60807	1.91674					
	1.87861	1.80154					AVRG		1.80082		5.75279
71 T-Butyl Benzene	1.53692	1.57184	1.79747	1.87602	1.57269	1.90360					
	1.86512	1.80023					AVRG		1.74049		8.83081
72 1,2,4-Trimethylbenzene	1.76936	1.78350	2.00193	2.07426	1.79047	2.11549					
	2.05516	1.94465					AVRG		1.94185		7.33162
73 S-Butyl Benzene	2.38578	2.42579	2.67944	2.75337	2.29827	2.72626					
	2.61151	2.42383					AVRG		2.53803		6.88108

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
74 4-Isopropyl Toluene	1.92843	1.86951	2.10835	2.21210	1.90542	2.28248					
	2.21943	2.07622					AVRG		2.07524		7.64696
75 1,3-Dichlorobenzene	1.14582	1.07883	1.14827	1.15748	0.99638	1.18418					
	1.17539	1.14615					AVRG		1.12906		5.50698
77 1,4-Dichlorobenzene	1.25789	1.17006	1.20468	1.18725	1.01353	1.19697					
	1.18324	1.15791					AVRG		1.17144		6.01378
78 N-Butyl Benzene	1.99350	1.81702	1.98466	2.09988	1.77965	2.14511					
	2.11146	1.99711					AVRG		1.99105		6.71530
80 1,2-Dichlorobenzene	1.15309	1.09049	1.15967	1.13894	0.97144	1.11891					
	1.10159	1.08007					AVRG		1.10177		5.45071
81 1,2-Dibromo 3-Chloropropane	0.11899	0.12474	0.12992	0.12268	0.11040	0.12047					
	0.12083	0.12026					AVRG		0.12104		4.56437
82 Hexachloro 1,3-Butadiene	0.48773	0.43950	0.49705	0.48233	0.38993	0.48087					
	0.49184	0.49649					AVRG		0.47072		7.96190

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
$ 79 d4-1,2-Dichlorobenzene	0.95573	0.95955	0.96162	0.93741	0.94445	0.93801					
	0.93351	0.93489					AVRG		0.94564		1.22579

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
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Origin : Force
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Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb

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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/26APR13.b/0010426.d
Level 2: /chem1/nt5.i/26APR13.b/0020426.d
Level 3: /chem1/nt5.i/26APR13.b/0050426.d
Level 4: /chem1/nt5.i/26APR13.b/0100426.d
Level 5: /chem1/nt5.i/26APR13.b/0500426.d
Level 6: /chem1/nt5.i/26APR13.b/1000426.d
Level 7: /chem1/nt5.i/26APR13.b/1500426.d
Level 8: /chem1/nt5.i/26APR13.b/2000426.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
1 Dichlorodifluoromethane	0.55822	0.49469	0.51491	0.48978	0.47064	0.58885		
	0.52169	0.52781					0.52082	7.356
2 Chloromethane	0.67088	0.64951	0.74786	0.72013	0.60603	0.76591		
	0.77675	0.75051					0.71095	8.695
3 Vinyl Chloride	0.79554	0.72417	0.78263	0.72902	0.77379	0.80017		
	0.90298	0.95333					0.80770	9.975
4 Bromomethane	0.36446	0.41005	0.39810	0.40146	0.34351	0.39257		
	0.36854	0.33620					0.37686	7.364
5 Chloroethane	0.49854	0.44339	0.45317	0.43730	0.38553	0.45650		
	0.39982	0.40084					0.43439	8.594
6 Trichlorofluoromethane	0.79296	0.79166	0.88717	0.88740	0.73762	0.89509		
	0.88570	0.89631					0.84674	7.393

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
7 1,1-Dichloroethene	0.50602	0.51780	0.53671	0.52615	0.48144	0.55809			
	0.52306	0.43783					0.51089	7.230	
8 Carbon Disulfide	1.83321	1.74942	1.85531	1.82383	1.61111	1.89602			
	1.73412	1.34642					1.73118	10.342	
9 112Trichloro122Trifluoroethan	0.48561	0.45315	0.50036	0.46300	0.43409	0.49255			
	0.46363	0.39916					0.46144	7.220	
10 Iodomethane	0.50610	0.45887	0.42848	0.37759	0.45838	0.49005			
	0.44018	0.44969					0.45117	8.663	
11 Bromoethane	0.36290	0.33044	0.32702	0.31533	0.32730	0.32573			
	0.29978	0.26002					0.31857	9.264	
12 Acrolein	0.12624	0.12857	0.10675	0.07768	0.11614	+++++			
	+++++	+++++					0.11108	18.535	
13 Methylene Chloride	+++++	0.69314	0.62749	0.42253	0.50354	0.42539			
	0.36030	+++++					0.50540	25.719	<-
14 Acetone	0.10931	0.09520	0.08940	0.12604	0.06646	0.07343			
	+++++	+++++					0.09330	23.782	<-
15 Trans-1,2-Dichloroethene	0.59803	0.58874	0.62870	0.53425	0.48645	0.48021			
	0.41626	0.34139					0.50925	19.251	

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1 / 150.000 Level 7	2.000 Level 2 / 200.000 Level 8	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
16 Methyl tert butyl ether	1.70474	1.82003	2.00153	2.00372	1.60602	1.92155			
	1.86926	1.82282					1.84371	7.505	
17 1,1-Dichloroethane	1.18290	1.18035	1.29142	1.32695	1.07866	1.28920			
	1.28444	1.28331					1.23966	6.771	
18 Acrylonitrile	0.23910	0.27622	0.29103	0.29708	0.25300	0.28376			
	0.27456	0.27212					0.27336	7.026	
19 Vinyl Acetate	1.46159	1.58748	1.71452	1.74307	1.50450	1.68727			
	1.63991	1.56896					1.61341	6.231	
20 Cis-1,2-Dichloroethene	0.61891	0.64256	0.68989	0.69230	0.56975	0.67613			
	0.68073	0.67968					0.65624	6.577	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	0.90180	0.89398	0.96438	0.99970	0.81573	0.98683			
	0.99239	1.01206					0.94586	7.263	
23 Bromochloromethane	0.28904	0.26982	0.28938	0.30288	0.25566	0.29630			
	0.29285	0.32509					0.29013	7.174	
24 Chloroform	1.06939	1.04245	1.12468	1.16561	0.88665	1.13101			
	1.13125	1.12940					1.08505	8.221	

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.36139	0.36273	0.40068	0.40896	0.30316	0.41051			
	0.41312	0.42956					0.38627	10.713	
26 1,1,1-Trichloroethane	0.91972	0.95352	1.02323	1.06309	0.85996	1.05689			
	1.05545	1.08038					1.00153	8.049	
28 1,1-Dichloropropene	0.40836	0.40180	0.42859	0.46307	0.36681	0.45053			
	0.45247	0.46763					0.42991	8.198	
29 2-Butanone	0.06576	0.08204	0.08732	0.08641	0.07565	0.08360			
	0.08157	0.08093					0.08041	8.612	
30 Benzene	1.16689	1.20166	1.30201	1.32976	1.10423	1.28943			
	1.25936	1.21977					1.23414	6.133	
33 1,2-Dichloroethane	0.41167	0.41291	0.44547	0.44612	0.37850	0.43019			
	0.42479	0.41628					0.42074	5.168	
34 Trichloroethene	0.27914	0.27801	0.30597	0.31459	0.25988	0.31416			
	0.31866	0.32923					0.29996	8.146	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.15134	0.15868	0.17209	0.17450	0.15188	0.17370			
	0.17349	0.17186					0.16594	6.142	

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.32041	0.32191	0.33975	0.36074	0.30188	0.35803		
	0.35915	0.35908					0.34012	6.713
39 Bromodichloromethane	0.37087	0.35969	0.39677	0.41179	0.34916	0.41022		
	0.41209	0.40879					0.38992	6.662
40 2-Chloroethyl Vinyl Ether	0.15810	0.17343	0.20177	0.21470	0.19887	0.22820		
	0.22519	0.22447					0.20309	12.668
41 Cis 1,3-dichloropropene	0.42602	0.45840	0.51410	0.52617	0.45751	0.53275		
	0.53109	0.52522					0.49641	8.501
43 Toluene	0.78628	0.75738	0.82994	0.83986	0.69161	0.81953		
	0.81233	0.80528					0.79278	6.102
44 Tetrachloroethene	0.30008	0.29191	0.29720	0.31487	0.25850	0.31326		
	0.32135	0.33363					0.30385	7.526
45 4-Methyl-2-Pentanone	0.11576	0.13308	0.15446	0.15917	0.14372	0.15824		
	0.15225	0.14772					0.14555	10.131
46 Trans 1,3-Dichloropropene	0.40157	0.41785	0.46472	0.47723	0.42627	0.49204		
	0.48801	0.47828					0.45575	7.712
47 1,1,2-Trichloroethane	0.21768	0.23572	0.25787	0.26782	0.23190	0.26522		
	0.26377	0.26046					0.25006	7.537

Analytical Resources, Inc.

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Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.24453	0.25550	0.27896	0.28373	0.25111	0.28799		
	0.28888	0.28457					0.27191	6.735
49 1,3-Dichloropropane	0.40873	0.43627	0.45868	0.47069	0.41192	0.46724		
	0.46166	0.44892					0.44551	5.445
50 1,2-Dibromoethane	0.20645	0.23430	0.25993	0.25860	0.22775	0.25850		
	0.25592	0.25254					0.24425	7.980
51 2-Hexanone	0.21089	0.23020	0.25774	0.26771	0.23543	0.24864		
	0.23769	0.23126					0.23994	7.394
53 Chlorobenzene	0.74796	0.76589	0.81020	0.83076	0.68709	0.79607		
	0.78399	0.76785					0.77373	5.666
54 Ethyl Benzene	1.32085	1.31916	1.42460	1.48755	1.22842	1.41498		
	1.34574	1.26711					1.35105	6.390
55 1,1,1,2-Tetrachloroethane	0.25205	0.24772	0.27714	0.29034	0.24637	0.28941		
	0.29149	0.28798					0.27281	7.513
56 m,p-xylene	0.47419	0.47582	0.52683	0.55576	0.46516	0.54271		
	0.52698	0.50380					0.50891	6.736
57 o-Xylene	0.43160	0.44629	0.49484	0.52427	0.45070	0.53314		
	0.53290	0.53169					0.49318	8.879

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Method file : /chem1/nt5.i/26APR13.b/V0121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1 / 150.000 Level 7	2.000 Level 2 / 200.000 Level 8	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
58 Styrene	0.72243	0.75098	0.82930	0.89478	0.77162	0.90183			
	0.88160	0.84492					0.82468	8.356	
59 Bromoform	0.32970	0.34112	0.37883	0.37597	0.34424	0.39475			
	0.39353	0.38190					0.36751	6.894	
60 Isopropyl Benzene	2.25405	2.17451	2.44411	2.54400	2.15077	2.55501			
	2.45377	2.28907					2.35816	6.841	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
63 Bromobenzene	0.59226	0.59125	0.61234	0.61387	0.52909	0.62992			
	0.63152	0.62410					0.60304	5.573	
64 N-Propyl Benzene	2.85849	2.68364	2.93182	3.00056	2.53491	2.94709			
	2.79644	2.56414					2.78964	6.373	
65 1,1,2,2-Tetrachloroethane	0.55737	0.61256	0.62568	0.62383	0.56276	0.62909			
	0.61820	0.60635					0.60448	4.698	
66 2-Chloro Toluene	1.72555	1.67543	1.79040	1.82161	1.55083	1.85091			
	1.81614	1.74407					1.74687	5.605	
67 1,3,5-Trimethyl Benzene	1.87153	1.81658	2.03034	2.13384	1.79280	2.14419			
	2.09150	1.99352					1.98429	7.105	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
68 1,2,3-Trichloropropane	0.17361	0.19184	0.19830	0.19572	0.17295	0.19554		
	0.18981	0.18668					0.18806	5.225
69 Trans-1,4-Dichloro 2-Butene	0.23514	0.22956	0.24139	0.24545	0.22684	0.25135		
	0.23893	0.24075					0.23868	3.373
70 4-Chloro Toluene	1.74431	1.72169	1.87306	1.86255	1.60807	1.91674		
	1.87861	1.80154					1.80082	5.753
71 T-Butyl Benzene	1.53692	1.57184	1.79747	1.87602	1.57269	1.90360		
	1.86512	1.80023					1.74049	8.831
72 1,2,4-Trimethylbenzene	1.76936	1.78350	2.00193	2.07426	1.79047	2.11549		
	2.05516	1.94465					1.94185	7.332
73 S-Butyl Benzene	2.38578	2.42579	2.67944	2.75337	2.29827	2.72626		
	2.61151	2.42383					2.53803	6.881
74 4-Isopropyl Toluene	1.92843	1.86951	2.10835	2.21210	1.90542	2.28248		
	2.21943	2.07622					2.07524	7.647
75 1,3-Dichlorobenzene	1.14582	1.07883	1.14827	1.15748	0.99638	1.18418		
	1.17539	1.14615					1.12906	5.507
77 1,4-Dichlorobenzene	1.25789	1.17006	1.20468	1.18725	1.01353	1.19697		
	1.18324	1.15791					1.17144	6.014

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

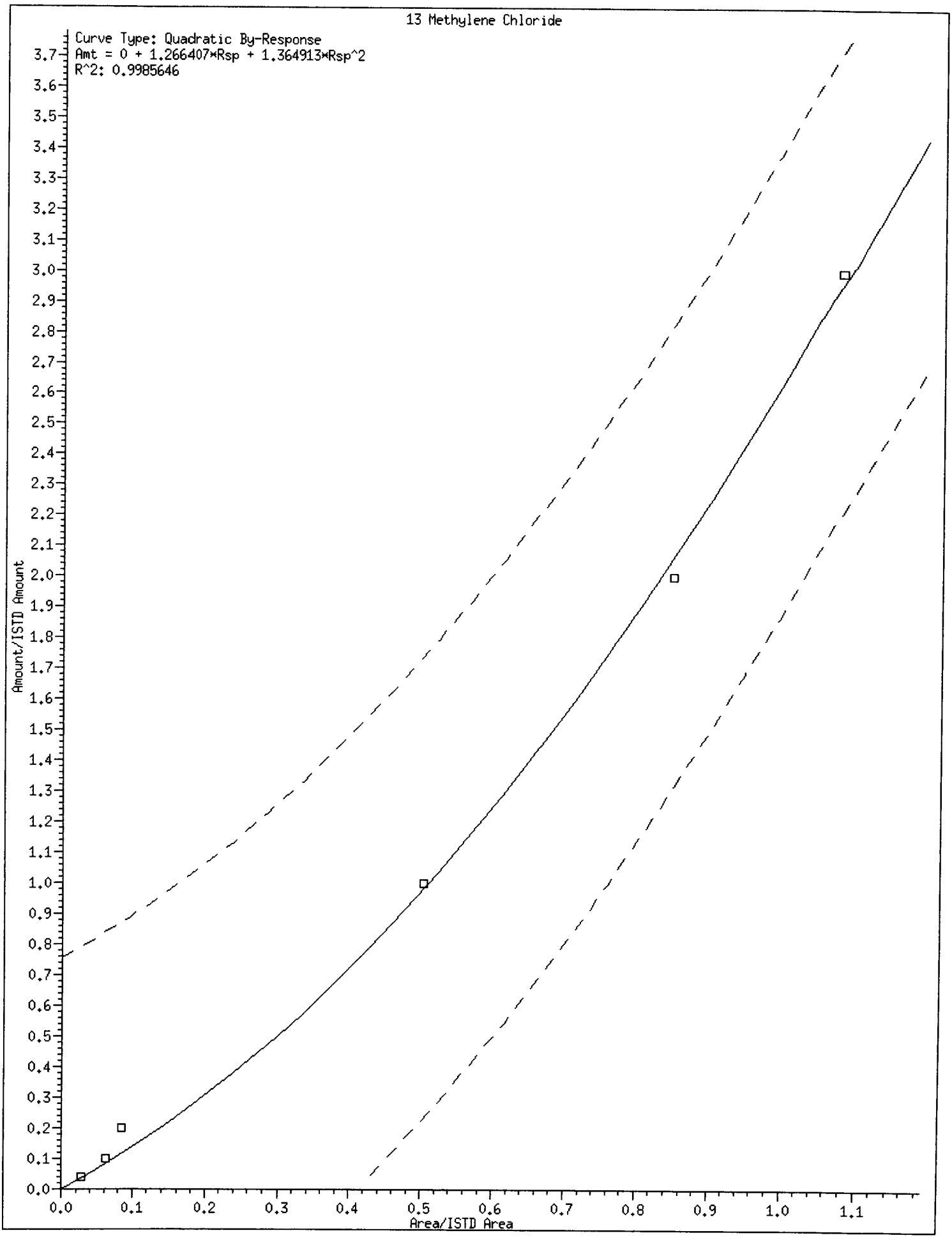
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
78 N-Butyl Benzene	1.99350	1.81702	1.98466	2.09988	1.77965	2.14511		
	2.11146	1.99711					1.99105	6.715
80 1,2-Dichlorobenzene	1.15309	1.09049	1.15967	1.13894	0.97144	1.11891		
	1.10159	1.08007					1.10177	5.451
81 1,2-Dibromo 3-Chloropropane	0.11899	0.12474	0.12992	0.12268	0.11040	0.12047		
	0.12083	0.12026					0.12104	4.564
82 Hexachloro 1,3-Butadiene	0.48773	0.43950	0.49705	0.48233	0.38993	0.48087		
	0.49184	0.49649					0.47072	7.962
83 1,2,4-Trichlorobenzene	0.87918	0.71447	0.75735	0.76126	0.68025	0.79569		
	0.84144	0.84984					0.78493	8.833
84 Naphthalene	2.48386	2.03275	2.04485	2.00349	1.76155	1.93074		
	1.87236	1.78295					1.98907	11.422
85 1,2,3-Trichlorobenzene	0.80290	0.69803	0.76690	0.75078	0.64967	0.74549		
	0.77040	0.77420					0.74479	6.549
$ 27 Dibromofluoromethane	0.70208	0.72168	0.72385	0.71650	0.71387	0.72246		
	0.72447	0.71017					0.71689	1.098
$ 32 d4-1,2-Dichloroethane	0.78949	0.81524	0.82182	0.79024	0.78921	0.79932		
	0.78810	0.77797					0.79642	1.872

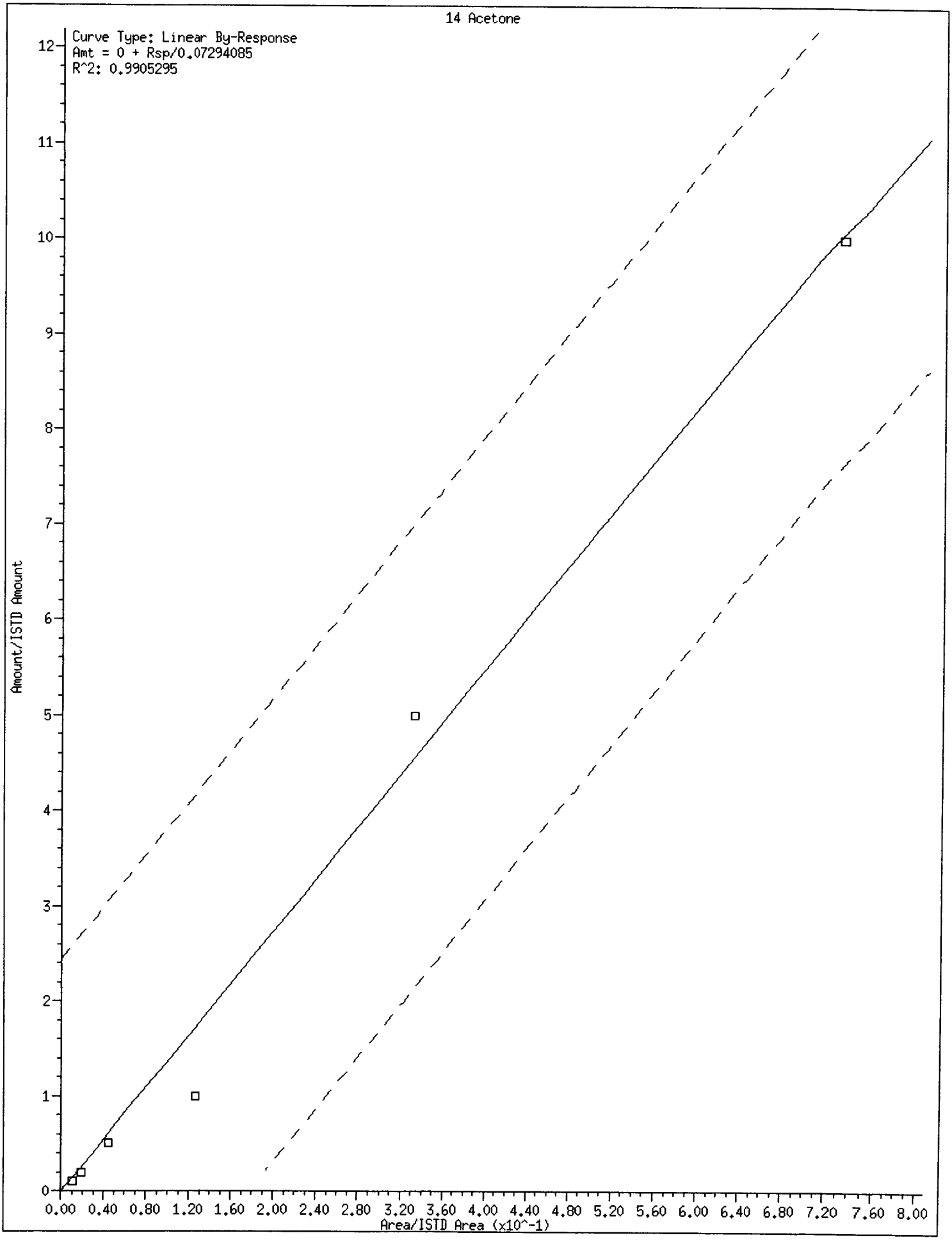
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2013 09:25
End Cal Date : 26-APR-2013 12:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/26APR13.b/VO121012S.m
Cal Date : 26-Apr-2013 12:34 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	150.000 Level 7	200.000 Level 8	RRF	% RSD
$ 42 d8-Toluene	1.34339	1.34268	1.35425	1.34853	1.33546	1.34025	1.34439	1.34145	1.34380	0.418
$ 62 4-Bromofluorobenzene	0.52637	0.53216	0.53583	0.53280	0.52989	0.52203	0.51998	0.51606	0.52689	1.324
$ 79 d4-1,2-Dichlorobenzene	0.95573	0.95955	0.96162	0.93741	0.94445	0.93801	0.93351	0.93489	0.94564	1.226


13 Methylene Chloride
Curve Type: Quadratic By-Response
Amt = 0 + 1.266407*Rsp + 1.364913*Rsp^2
R^2: 0.9985646
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
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7


14 Acetone
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.07294085
R^2: 0.9905295
Amount/ISTD Amount
0
1
2
3
4
5
6
7
8
9
10
11
12
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80 3.20 3.60 4.00 4.40 4.80 5.20 5.60 6.00 6.40 6.80 7.20 7.60 8.00
Area/ISTD Area (x10^-1)

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/26APR13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	0010426	2000426	1500426	1000426	0500426	0100426	0050426	0020426
INJ.DATE:	26-APR-2013	26-APR-2013	26-APR-2013	26-APR-2013	26-APR-2013	26-APR-2013	26-APR-2013	26-APR-2013
INJ.TIME:	09:25	09:49	10:12	10:36	11:00	11:24	11:48	12:12

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.000	0.995	1.012	1.006	1.000	0.995	1.017	1.011	1.000	0.907-1.094	1.004	0.008
2 Chloromethane	1.210	1.255	1.255	1.238	1.221	1.226	1.255	1.238	1.221	1.127-1.314	1.237	0.017
3 Vinyl Chloride	1.176	1.164	1.187	1.181	1.176	1.170	1.187	1.181	1.176	1.082-1.269	1.178	0.008
4 Bromomethane	1.385	1.379	1.396	1.391	1.385	1.379	1.396	1.390	1.385	1.291-1.478	1.388	0.007
5 Chloroethane	1.475	1.464	1.487	1.481	1.475	1.470	1.487	1.481	1.475	1.382-1.569	1.478	0.008
6 Trichlorofluoromethane	1.572	1.560	1.583	1.577	1.572	1.566	1.583	1.583	1.572	1.478-1.665	1.574	0.009
7 1,1-Dichloroethene	1.939	1.917	1.945	1.945	1.939	1.928	1.951	1.945	1.939	1.846-2.033	1.939	0.011
8 Carbon Disulfide	1.939	1.922	1.951	1.945	1.945	1.934	1.956	1.950	1.945	1.852-2.038	1.943	0.011
9 112Trichloro122Trifluo	1.985	1.962	1.990	1.990	1.985	1.979	1.996	1.990	1.985	1.891-2.078	1.985	0.010
10 Iodomethane	2.041	2.018	2.047	2.047	2.041	2.030	2.053	2.052	2.041	1.948-2.135	2.041	0.012
11 Bromoethane	2.149	2.115	2.149	2.143	2.143	2.132	2.149	2.148	2.143	2.050-2.236	2.141	0.012
12 Acrolein	2.245	2.222	2.250	2.251	2.262	2.233	2.262	2.256	2.262	2.233-2.420	2.248	0.014
13 Methylene Chloride	2.420	2.386	2.420	2.415	2.420	2.403	2.426	2.431	2.420	2.352-2.539	2.415	0.014
14 Acetone	2.556	2.578	2.590	2.607	2.629	2.578	2.584	2.578	2.629	2.590-2.777	2.588	0.022
15 Trans-1,2-Dichloroethe	2.562	2.522	2.556	2.556	2.562	2.539	2.567	2.567	2.562	2.468-2.655	2.554	0.016
16 Methyl tert butyl ethe	2.726	2.754	2.754	2.743	2.726	2.737	2.748	2.737	2.726	2.632-2.819	2.740	0.011
17 1,1-Dichloroethane	3.178	3.155	3.178	3.178	3.178	3.167	3.190	3.189	3.178	3.085-3.272	3.177	0.011

Reviewer 1 _____ Date: 4/29/13
Reviewer 2 _____ Date: 4/29/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/26APR13.b
Inst ID: nt5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 Acrylonitrile	3.280	3.291	3.308	3.303	3.303	3.286	3.303	3.291	3.303	3.209-3.396	3.296	0.010
19 Vinyl Acetate	3.518	3.523	3.535	3.529	3.523	3.518	3.535	3.534	3.523	3.430-3.617	3.527	0.007
20 Cis-1,2-Dichloroethene	3.733	3.721	3.733	3.733	3.733	3.727	3.744	3.738	3.733	3.639-3.826	3.733	0.007
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.466-4.654	+++++	+++++
22 2,2-Dichloropropane	3.834	3.812	3.829	3.829	3.829	3.817	3.840	3.834	3.829	3.735-3.922	3.828	0.009
23 Bromochloromethane	3.914	3.908	3.919	3.919	3.919	3.908	3.925	3.925	3.919	3.826-4.013	3.917	0.007
24 Chloroform	4.021	4.015	4.027	4.027	4.021	4.015	4.027	4.026	4.021	3.928-4.114	4.022	0.005
25 Carbon Tetrachloride	4.112	4.089	4.106	4.106	4.112	4.100	4.117	4.111	4.112	4.009-4.214	4.107	0.009
26 1,1,1-Trichloroethane	4.179	4.168	4.179	4.180	4.179	4.174	4.185	4.185	4.179	4.086-4.273	4.179	0.006
$ 27 Dibromofluoromethane	4.191	4.185	4.196	4.191	4.191	4.185	4.196	4.196	4.191	4.097-4.284	4.191	0.005
28 1,1-Dichloropropene	4.298	4.287	4.304	4.304	4.298	4.293	4.310	4.304	4.298	4.196-4.401	4.300	0.007
29 2-Butanone	4.372	4.400	4.406	4.400	4.406	4.389	4.394	4.383	4.406	4.312-4.499	4.394	0.012
30 Benzene	4.530	4.524	4.536	4.530	4.530	4.524	4.536	4.536	4.530	4.428-4.633	4.531	0.005
* 31 Pentafluorobenzene	4.672	4.666	4.672	4.672	4.672	4.666	4.677	4.677	4.672	4.578-4.765	4.672	0.004
$ 32 d4-1,2-Dichloroethane	4.660	4.660	4.666	4.666	4.666	4.660	4.666	4.666	4.666	4.572-4.759	4.664	0.003
33 1,2-Dichloroethane	4.723	4.722	4.728	4.728	4.723	4.722	4.728	4.728	4.723	4.620-4.825	4.725	0.003
34 Trichloroethene	5.068	5.062	5.073	5.073	5.068	5.068	5.073	5.073	5.068	4.965-5.170	5.070	0.004
* 35 1,4-Difluorobenzene	5.124	5.118	5.124	5.124	5.124	5.124	5.130	5.130	5.124	5.022-5.227	5.125	0.004
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.590-5.796	+++++	+++++
37 Dibromomethane	5.430	5.424	5.430	5.430	5.430	5.424	5.430	5.429	5.430	5.327-5.532	5.428	0.003
38 1,2-Dichloropropane	5.520	5.520	5.526	5.526	5.520	5.520	5.526	5.520	5.520	5.418-5.623	5.522	0.003
39 Bromodichloromethane	5.594	5.599	5.599	5.599	5.599	5.594	5.599	5.599	5.599	5.497-5.702	5.598	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/26APR13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	40 2-Chloroethyl Vinyl Et	6.131	6.137	6.142	6.137	6.137	6.131	6.137	6.136	6.137	6.034-6.239	6.136	0.004
	41 Cis 1,3-dichloropropen	6.148	6.148	6.154	6.148	6.148	6.148	6.148	6.148	6.148	6.046-6.251	6.149	0.002
$	42 d8-Toluene	6.306	6.306	6.306	6.306	6.306	6.301	6.306	6.306	6.306	6.204-6.409	6.306	0.002
	43 Toluene	6.346	6.346	6.352	6.352	6.346	6.346	6.346	6.346	6.346	6.244-6.449	6.347	0.003
	44 Tetrachloroethene	6.657	6.663	6.663	6.663	6.663	6.663	6.663	6.663	6.663	6.511-6.815	6.662	0.002
	45 4-Methyl-2-Pentanone	6.714	6.731	6.725	6.719	6.719	6.714	6.714	6.713	6.719	6.617-6.822	6.719	0.006
	46 Trans 1,3-Dichloroprop	6.714	6.714	6.719	6.714	6.714	6.714	6.714	6.713	6.714	6.611-6.816	6.714	0.002
	47 1,1,2-Trichloroethane	6.838	6.849	6.849	6.844	6.844	6.844	6.844	6.844	6.844	6.741-6.946	6.845	0.004
	48 Chlorodibromomethane	6.980	6.985	6.985	6.980	6.980	6.980	6.980	6.979	6.980	6.827-7.132	6.981	0.003
	49 1,3-Dichloropropane	7.059	7.070	7.070	7.065	7.064	7.064	7.065	7.064	7.064	6.912-7.217	7.065	0.004
	50 1,2-Dibromoethane	7.155	7.161	7.161	7.161	7.161	7.155	7.161	7.160	7.161	7.058-7.263	7.159	0.003
	51 2-Hexanone	7.427	7.443	7.438	7.438	7.432	7.432	7.432	7.426	7.432	7.280-7.584	7.434	0.006
*	52 d5-Chlorobenzene	7.613	7.619	7.619	7.619	7.613	7.613	7.613	7.613	7.613	7.461-7.765	7.615	0.003
	53 Chlorobenzene	7.625	7.630	7.630	7.630	7.630	7.624	7.630	7.624	7.630	7.478-7.782	7.628	0.003
	54 Ethyl Benzene	7.675	7.687	7.687	7.681	7.681	7.675	7.675	7.675	7.681	7.529-7.833	7.680	0.005
	55 1,1,1,2-Tetrachloroeth	7.692	7.704	7.704	7.698	7.698	7.692	7.692	7.692	7.698	7.546-7.850	7.697	0.005
	56 m,p-xylene	7.811	7.822	7.817	7.817	7.811	7.811	7.811	7.811	7.811	7.659-7.963	7.814	0.004
	57 o-Xylene	8.173	8.179	8.179	8.179	8.173	8.173	8.173	8.173	8.173	8.021-8.325	8.175	0.003
	58 Styrene	8.224	8.230	8.230	8.224	8.224	8.224	8.224	8.224	8.224	8.072-8.376	8.226	0.003
	59 Bromoform	8.213	8.224	8.224	8.219	8.219	8.213	8.213	8.213	8.219	8.024-8.412	8.217	0.005
	60 Isopropyl Benzene	8.462	8.467	8.467	8.467	8.462	8.462	8.462	8.461	8.462	8.268-8.655	8.464	0.003
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.415-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.682	8.688	8.688	8.688	8.688	8.682	8.682	8.682	8.688	8.536-8.840	8.685	0.003
	63 Bromobenzene	8.762	8.767	8.767	8.767	8.762	8.761	8.762	8.761	8.762	8.568-8.955	8.764	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Batch File: /chem1/nt5.i/26APR13.b
Inst ID: nt5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
64 N-Propyl Benzene	8.829	8.841	8.835	8.835	8.829	8.829	8.829	8.829	8.829	8.635-9.023	8.832	0.004
65 1,1,2,2-Tetrachloroeth	8.892	8.903	8.903	8.897	8.892	8.892	8.892	8.891	8.892	8.698-9.085	8.895	0.005
66 2-Chloro Toluene	8.943	8.948	8.948	8.943	8.943	8.943	8.943	8.942	8.943	8.749-9.136	8.944	0.003
67 1,3,5-Trimethyl Benzen	9.022	9.033	9.027	9.027	9.022	9.022	9.022	9.016	9.022	8.828-9.216	9.024	0.005
68 1,2,3-Trichloropropane	8.988	8.999	8.999	8.994	8.993	8.988	8.988	8.988	8.993	8.799-9.187	8.992	0.005
69 Trans-1,4-Dichloro 2-B	9.050	9.056	9.056	9.050	9.050	9.050	9.044	9.050	9.050	8.856-9.244	9.051	0.004
70 4-Chloro Toluene	9.095	9.101	9.101	9.095	9.095	9.095	9.090	9.089	9.095	8.901-9.289	9.095	0.004
71 T-Butyl Benzene	9.299	9.305	9.299	9.299	9.299	9.293	9.293	9.293	9.299	9.105-9.493	9.298	0.004
72 1,2,4-Trimethylbenzene	9.361	9.372	9.367	9.367	9.361	9.361	9.361	9.361	9.361	9.167-9.555	9.364	0.004
73 S-Butyl Benzene	9.463	9.469	9.469	9.463	9.463	9.457	9.457	9.457	9.463	9.269-9.657	9.462	0.005
74 4-Isopropyl Toluene	9.604	9.616	9.610	9.610	9.604	9.604	9.604	9.604	9.604	9.410-9.798	9.607	0.004
75 1,3-Dichlorobenzene	9.621	9.627	9.627	9.621	9.621	9.616	9.616	9.615	9.621	9.427-9.815	9.621	0.005
* 76 d4-1,4-Dichlorobenzene	9.695	9.700	9.695	9.695	9.695	9.689	9.689	9.689	9.695	9.501-9.889	9.693	0.004
77 1,4-Dichlorobenzene	9.706	9.712	9.712	9.706	9.706	9.706	9.706	9.706	9.706	9.512-9.900	9.708	0.003
78 N-Butyl Benzene	9.995	10.000	9.995	9.995	9.989	9.989	9.989	9.989	9.989	9.795-10.183	9.993	0.004
$ 79 d4-1,2-Dichlorobenzene	10.080	10.085	10.080	10.080	10.080	10.074	10.074	10.074	10.080	9.886-10.273	10.078	0.004
80 1,2-Dichlorobenzene	10.085	10.091	10.091	10.085	10.085	10.085	10.085	10.085	10.085	9.891-10.279	10.087	0.003
81 1,2-Dibromo 3-Chloropr	10.843	10.843	10.843	10.838	10.838	10.838	10.838	10.837	10.838	10.644-11.031	10.840	0.003
82 Hexachloro 1,3-Butadie	11.528	11.522	11.522	11.517	11.516	11.516	11.511	11.511	11.516	11.322-11.710	11.518	0.006
83 1,2,4-Trichlorobenzene	11.511	11.516	11.511	11.505	11.505	11.499	11.500	11.499	11.505	11.311-11.699	11.506	0.006
84 Naphthalene	11.828	11.828	11.822	11.816	11.816	11.816	11.816	11.810	11.816	11.634-12.022	11.819	0.006
85 1,2,3-Trichlorobenzene	12.014	12.009	12.003	11.997	11.997	11.997	11.997	11.997	11.997	11.803-12.191	12.002	0.007

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/26APR13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 26-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0845	bfb0426.d	BFB0426	BFB0426	1	NO MANUAL INTEGRATION
0925	0010426.d	IC0426	VSTD1	1	Acetone, 1,2,3-Trichloropropane,
0949	2000426.d	IC0426	VSTD200	1	Acetone,
1012	1500426.d	IC0426	VSTD150	1	NO MANUAL INTEGRATION
1036	1000426.d	IC0426	VSTD100	1	Acetone,
1100	0500426.d	IC0426	VSTD50	1	Acetone,
1124	0100426.d	IC0426	VSTD10	1	NO MANUAL INTEGRATION
1148	0050426.d	IC0426	VSTD5	1	NO MANUAL INTEGRATION
1212	0020426.d	IC0426	VSTD2	1	1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
1349	icv0426.d	ICV0426	ICV0426	1	Vinyl Chloride, Acetone,

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8260C

Data file : /chem1/nt5.i/26APR13.b/0010426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD1
Inj Date : 26-APR-2013 09:25
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:15 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:25 Cal File: 0010426.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.000	1.000	(0.214)	7165	1.00000	1.072
2 Chloromethane	50	1.210	1.221	(0.259)	8611	1.00000	0.9436
3 Vinyl Chloride	62	1.176	1.176	(0.252)	10211	1.00000	0.9849
4 Bromomethane	94	1.385	1.385	(0.296)	4678	1.00000	0.9671
5 Chloroethane	64	1.475	1.475	(0.316)	6399	1.00000	1.148
6 Trichlorofluoromethane	101	1.572	1.572	(0.336)	10178	1.00000	0.9365
7 1,1-Dichloroethene	96	1.939	1.939	(0.415)	6495	1.00000	0.9905
8 Carbon Disulfide	76	1.939	1.945	(0.415)	23530	1.00000	1.059(T)
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.425)	6233	1.00000	1.052
10 Iodomethane	142	2.041	2.041	(0.437)	6496	1.00000	1.122
11 Bromoethane	108	2.149	2.143	(0.460)	4658	1.00000	1.139
12 Acrolein	56	2.245	2.262	(0.481)	8102	5.00000	5.683
13 Methylene Chloride	84	2.420	2.420	(0.518)	12161	1.00000	1.224
14 Acetone	43	2.556	2.629	(0.547)	7015	5.00000	7.493(MH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.548)	7676	1.00000	1.174
	16 Methyl tert butyl ether	73	2.726	2.726	(0.583)	21881	1.00000	0.9246
	17 1,1-Dichloroethane	63	3.178	3.178	(0.680)	15183	1.00000	0.9542
	18 Acrylonitrile	53	3.280	3.303	(0.702)	3069	1.00000	0.8747(T)
	19 Vinyl Acetate	43	3.518	3.523	(0.753)	18760	1.00000	0.9059
	20 Cis-1,2-Dichloroethene	96	3.733	3.733	(0.799)	7944	1.00000	0.9431
	22 2,2-Dichloropropane	77	3.834	3.829	(0.821)	11575	1.00000	0.9534
	23 Bromochloromethane	128	3.914	3.919	(0.838)	3710	1.00000	0.9963
	24 Chloroform	83	4.021	4.021	(0.861)	13726	1.00000	0.9856
	25 Carbon Tetrachloride	117	4.112	4.112	(0.802)	9948	1.00000	0.9356
$	27 Dibromofluoromethane	111	4.191	4.191	(0.897)	450571	50.0000	48.967
	26 1,1,1-Trichloroethane	97	4.179	4.179	(0.895)	11805	1.00000	0.9183
	28 1,1-Dichloropropene	75	4.298	4.298	(0.839)	11241	1.00000	0.9499
	29 2-Butanone	72	4.372	4.406	(0.936)	4220	5.00000	4.089
	30 Benzene	78	4.530	4.530	(0.884)	32121	1.00000	0.9455
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	641769	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.666	(0.998)	506670	50.0000	49.565
	33 1,2-Dichloroethane	62	4.723	4.723	(0.922)	11332	1.00000	0.9784
	34 Trichloroethene	95	5.068	5.068	(0.989)	7684	1.00000	0.9306
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1376353	50.0000	
	37 Dibromomethane	93	5.430	5.430	(1.060)	4166	1.00000	0.9120
	38 1,2-Dichloropropane	63	5.520	5.520	(1.077)	8820	1.00000	0.9421
	39 Bromodichloromethane	83	5.594	5.599	(1.092)	10209	1.00000	0.9511
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.137	(1.196)	4352	1.00000	0.7785
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.200)	11727	1.00000	0.8582
$	42 d8-Toluene	98	6.306	6.306	(1.231)	1848972	50.0000	49.985
	43 Toluene	92	6.346	6.346	(1.238)	21644	1.00000	0.9918
	44 Tetrachloroethene	166	6.657	6.663	(0.874)	8460	1.00000	0.9876
	45 4-Methyl-2-Pentanone	58	6.714	6.719	(1.310)	15932	5.00000	3.977
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	11054	1.00000	0.8811
	47 1,1,2-Trichloroethane	97	6.838	6.844	(1.334)	5992	1.00000	0.8705
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	6894	1.00000	0.8993
	49 1,3-Dichloropropane	76	7.059	7.064	(0.927)	11523	1.00000	0.9174
	50 1,2-Dibromoethane	107	7.155	7.161	(1.396)	5683	1.00000	0.8453
	51 2-Hexanone	43	7.427	7.432	(0.975)	29728	5.00000	4.395
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1409627	50.0000	
	53 Chlorobenzene	112	7.625	7.630	(1.001)	21087	1.00000	0.9667
	54 Ethyl Benzene	91	7.675	7.681	(1.008)	37238	1.00000	0.9776
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.698	(1.010)	7106	1.00000	0.9239
	56 m,p-xylene	106	7.811	7.811	(1.026)	26737	2.00000	1.864
	57 o-Xylene	106	8.173	8.173	(1.074)	12168	1.00000	0.8751
	58 Styrene	104	8.224	8.224	(1.080)	20367	1.00000	0.8760
	59 Bromoform	173	8.213	8.219	(0.847)	4763	1.00000	0.8971
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	32563	1.00000	0.9559
$	62 4-Bromofluorobenzene	95	8.682	8.688	(1.140)	741981	50.0000	49.951
	63 Bromobenzene	156	8.762	8.762	(0.904)	8556	1.00000	0.9821
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	41295	1.00000	1.025

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.892	8.892	(0.917)	8052	1.00000	0.9221
66	2-Chloro Toluene	91	8.943	8.943	(0.922)	24928	1.00000	0.9878
67	1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	27037	1.00000	0.9432
68	1,2,3-Trichloropropane	110	8.988	8.993	(0.927)	2508	1.00000	0.9232(TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.933)	3397	1.00000	0.9852
70	4-Chloro Toluene	91	9.095	9.095	(0.938)	25199	1.00000	0.9686
71	T-Butyl Benzene	119	9.299	9.299	(0.959)	22203	1.00000	0.8830
72	1,2,4-Trimethylbenzene	105	9.361	9.361	(0.966)	25561	1.00000	0.9112
73	S-Butyl Benzene	105	9.463	9.463	(0.976)	34466	1.00000	0.9400
74	4-Isopropyl Toluene	119	9.604	9.604	(0.991)	27859	1.00000	0.9293
75	1,3-Dichlorobenzene	146	9.621	9.621	(0.992)	16553	1.00000	1.015
* 76	d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	722322	50.0000	
77	1,4-Dichlorobenzene	146	9.706	9.706	(1.001)	18172	1.00000	1.074
78	N-Butyl Benzene	91	9.995	9.989	(1.031)	28799	1.00000	1.001
$ 79	d4-1,2-Dichlorobenzene	152	10.080	10.080	(1.040)	690344	50.0000	50.533
80	1,2-Dichlorobenzene	146	10.085	10.085	(1.040)	16658	1.00000	1.047
81	1,2-Dibromo 3-Chloropropane	75	10.843	10.838	(1.118)	1719	1.00000	0.9831
82	Hexachloro 1,3-Butadiene	225	11.528	11.516	(1.189)	7046	1.00000	1.036
83	1,2,4-Trichlorobenzene	180	11.511	11.505	(1.187)	12701	1.00000	1.120
84	Naphthalene	128	11.828	11.816	(1.220)	35883	1.00000	1.249
85	1,2,3-Trichlorobenzene	180	12.014	11.997	(1.239)	11599	1.00000	1.078

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0010426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD1
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	641769	-2.31
35 1,4-Difluorobenze	1427826	713913	2855652	1376353	-3.60
52 d5-Chlorobenzene	1483267	741634	2966534	1409627	-4.96
76 d4-1,4-Dichlorobe	790697	395348	1581394	722322	-8.65

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	0.00

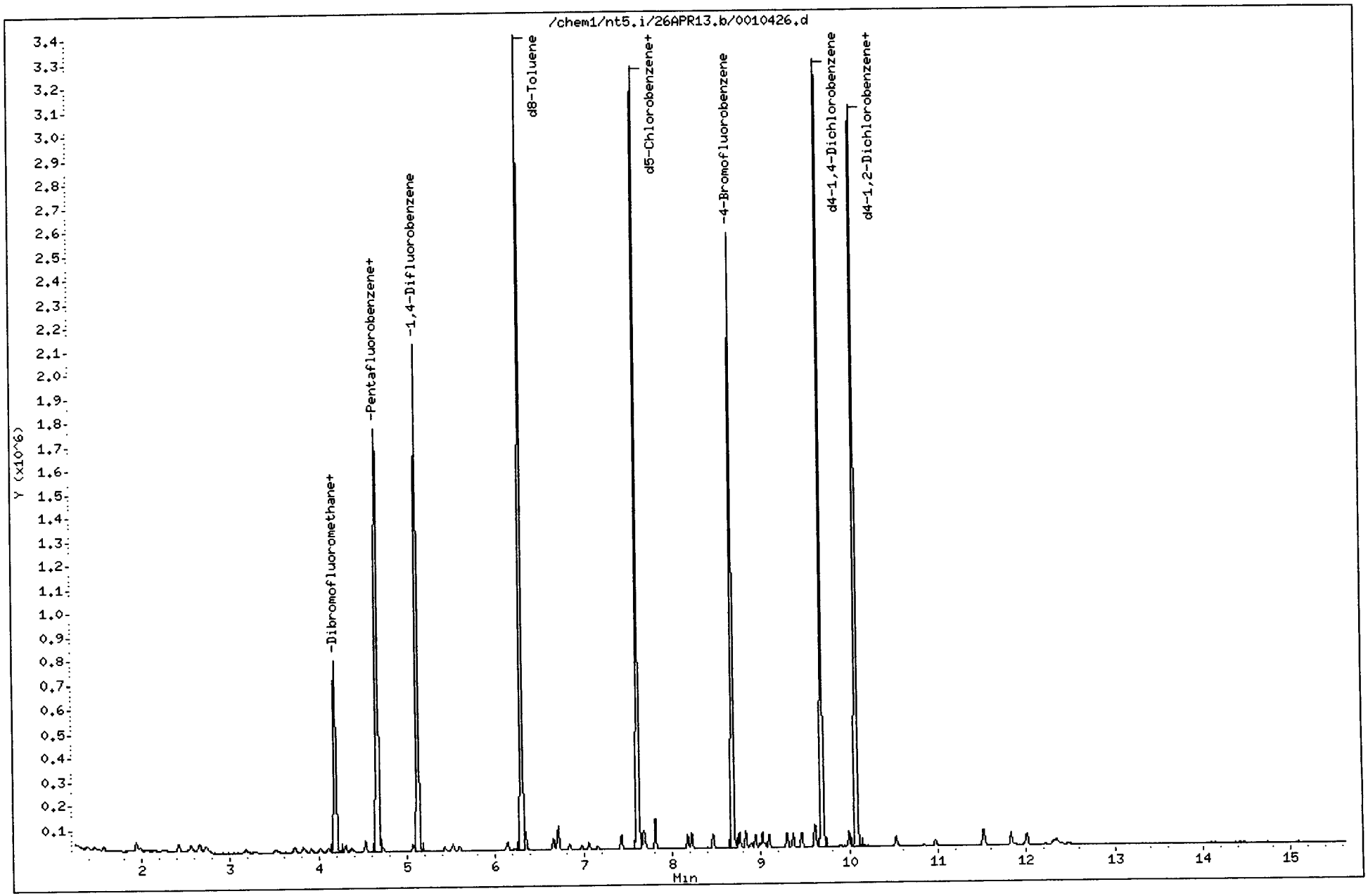
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/0010426.d
Date : 26-APR-2013 09:25
Client ID: VSTD1
Sample Info: IC0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

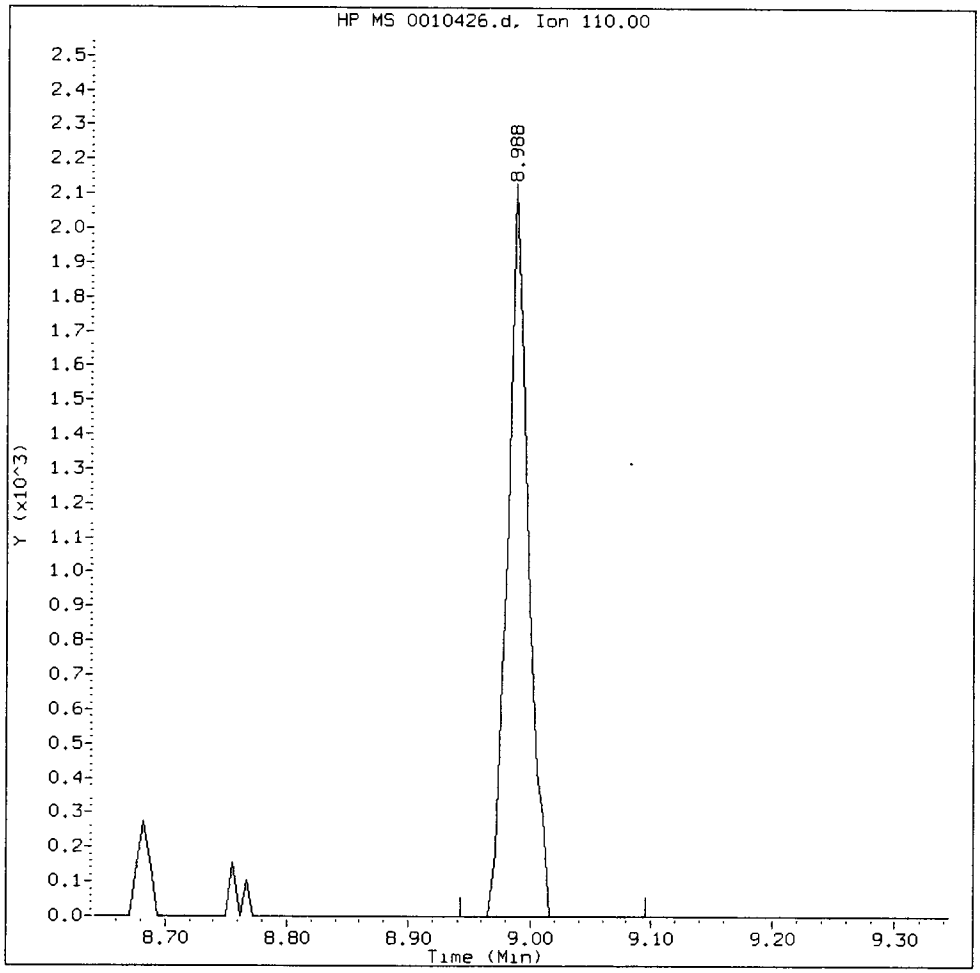
Column phase: RTXVMS



CH1006 : 04/13/13

IC0426, /chem1/nt5.i/26APR13.b/0010426.d

1,2,3-Trichloropropane Amount: 0.92 Area: 2508



MANUAL INTEGRATION for 1,2,3-Trichloropropane

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

5. Other _____

Analyst: _____ Date: 4/14/14

CO-ELUTION SUMMARY FOR FILE - 0010426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

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Data file : /chem1/nt5.i/26APR13.b/0020426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD2
Inj Date : 26-APR-2013 12:12
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:15 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 12:12 Cal File: 0020426.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.011	1.000	(0.216)	12372	2.00000	1.900
2 Chloromethane	50	1.238	1.221	(0.265)	16244	2.00000	1.827
3 Vinyl Chloride	62	1.181	1.176	(0.253)	18111	2.00000	1.793
4 Bromomethane	94	1.390	1.385	(0.297)	10255	2.00000	2.176
5 Chloroethane	64	1.481	1.475	(0.317)	11089	2.00000	2.041
6 Trichlorofluoromethane	101	1.583	1.572	(0.338)	19799	2.00000	1.870
7 1,1-Dichloroethene	96	1.945	1.939	(0.416)	12950	2.00000	2.027
8 Carbon Disulfide	76	1.950	1.945	(0.417)	43752	2.00000	2.021(T)
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.425)	11333	2.00000	1.964
10 Iodomethane	142	2.052	2.041	(0.439)	11476	2.00000	2.034
11 Bromoethane	108	2.148	2.143	(0.459)	8264	2.00000	2.075
12 Acrolein	56	2.256	2.262	(0.482)	16077	10.0000	11.575
13 Methylene Chloride	84	2.431	2.420	(0.520)	17335	2.00000	1.808
14 Acetone	43	2.578	2.629	(0.551)	11904	10.0000	13.051(H)

Data File: /chem1/nt5.i/26APR13.b/0020426.d
Report Date: 29-Apr-2013 11:15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.562	(0.549)	14724	2.00000	2.312
	16 Methyl tert butyl ether	73	2.737	2.726	(0.585)	45518	2.00000	1.974
	17 1,1-Dichloroethane	63	3.189	3.178	(0.682)	29520	2.00000	1.904
	18 Acrylonitrile	53	3.291	3.303	(0.704)	6908	2.00000	2.021(T)
	19 Vinyl Acetate	43	3.534	3.523	(0.756)	39702	2.00000	1.968
	20 Cis-1,2-Dichloroethene	96	3.738	3.733	(0.799)	16070	2.00000	1.958
	22 2,2-Dichloropropane	77	3.834	3.829	(0.820)	22358	2.00000	1.890
	23 Bromochloromethane	128	3.925	3.919	(0.839)	6748	2.00000	1.860
	24 Chloroform	83	4.026	4.021	(0.861)	26071	2.00000	1.921
	25 Carbon Tetrachloride	117	4.111	4.112	(0.801)	19888	2.00000	1.878
$	27 Dibromofluoromethane	111	4.196	4.191	(0.897)	451220	50.0000	50.334
	26 1,1,1-Trichloroethane	97	4.185	4.179	(0.895)	23847	2.00000	1.904
	28 1,1-Dichloropropene	75	4.304	4.298	(0.839)	22030	2.00000	1.869
	29 2-Butanone	72	4.383	4.406	(0.937)	10259	10.0000	10.203
	30 Benzene	78	4.536	4.530	(0.884)	65885	2.00000	1.947
*	31 Pentafluorobenzene	168	4.677	4.672	(1.000)	625236	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.998)	509717	50.0000	51.181
	33 1,2-Dichloroethane	62	4.728	4.723	(0.922)	22639	2.00000	1.963
	34 Trichloroethene	95	5.073	5.068	(0.989)	15243	2.00000	1.854
*	35 1,4-Difluorobenzene	114	5.130	5.124	(1.000)	1370704	50.0000	
	37 Dibromomethane	93	5.429	5.430	(1.058)	8700	2.00000	1.912
	38 1,2-Dichloropropane	63	5.520	5.520	(1.076)	17650	2.00000	1.893
	39 Bromodichloromethane	83	5.599	5.599	(1.092)	19721	2.00000	1.845
	40 2-Chloroethyl Vinyl Ether	63	6.136	6.137	(1.196)	9509	2.00000	1.708
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.198)	25133	2.00000	1.847
$	42 d8-Toluene	98	6.306	6.306	(1.229)	1840410	50.0000	49.958
	43 Toluene	92	6.346	6.346	(1.237)	41526	2.00000	1.911
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	16541	2.00000	1.921
	45 4-Methyl-2-Pentanone	58	6.713	6.719	(1.309)	36483	10.0000	9.143
	46 Trans 1,3-Dichloropropene	75	6.713	6.714	(1.309)	22910	2.00000	1.834
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.334)	12924	2.00000	1.885
	48 Chlorodibromomethane	129	6.979	6.980	(0.917)	14478	2.00000	1.879
	49 1,3-Dichloropropane	76	7.064	7.064	(0.928)	24721	2.00000	1.958
	50 1,2-Dibromoethane	107	7.160	7.161	(1.396)	12846	2.00000	1.919
	51 2-Hexanone	43	7.426	7.432	(0.975)	65220	10.0000	9.594
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1416622	50.0000	
	53 Chlorobenzene	112	7.624	7.630	(1.001)	43399	2.00000	1.980
	54 Ethyl Benzene	91	7.675	7.681	(1.008)	74750	2.00000	1.953
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.698	(1.010)	14037	2.00000	1.816
	56 m,p-xylene	106	7.811	7.811	(1.026)	53925	4.00000	3.740
	57 o-Xylene	106	8.173	8.173	(1.074)	25289	2.00000	1.810
	58 Styrene	104	8.224	8.224	(1.080)	42554	2.00000	1.821
	59 Bromoform	173	8.213	8.219	(0.848)	10066	2.00000	1.856
	60 Isopropyl Benzene	105	8.461	8.462	(0.873)	64167	2.00000	1.844
$	62 4-Bromofluorobenzene	95	8.682	8.688	(1.140)	753870	50.0000	50.500
	63 Bromobenzene	156	8.761	8.762	(0.904)	17447	2.00000	1.961
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	79191	2.00000	1.924

	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	8.891	8.892	(0.918)	18076	2.00000	2.027
66	2-Chloro Toluene	91	8.942	8.943	(0.923)	49440	2.00000	1.918
67	1,3,5-Trimethyl Benzene	105	9.016	9.022	(0.931)	53605	2.00000	1.831
68	1,2,3-Trichloropropane	110	8.988	8.993	(0.928)	5661	2.00000	2.040(TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.934)	6774	2.00000	1.924(M)
70	4-Chloro Toluene	91	9.089	9.095	(0.938)	50805	2.00000	1.912
71	T-Butyl Benzene	119	9.293	9.299	(0.959)	46383	2.00000	1.806
72	1,2,4-Trimethylbenzene	105	9.361	9.361	(0.966)	52629	2.00000	1.837
73	S-Butyl Benzene	105	9.457	9.463	(0.976)	71582	2.00000	1.912
74	4-Isopropyl Toluene	119	9.604	9.604	(0.991)	55167	2.00000	1.802
75	1,3-Dichlorobenzene	146	9.615	9.621	(0.992)	31835	2.00000	1.911
* 76	d4-1,4-Dichlorobenzene	152	9.689	9.695	(1.000)	737719	50.0000	
77	1,4-Dichlorobenzene	146	9.706	9.706	(1.002)	34527	2.00000	1.998
78	N-Butyl Benzene	91	9.989	9.989	(1.031)	53618	2.00000	1.825
$ 79	d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	707877	50.0000	50.735
80	1,2-Dichlorobenzene	146	10.085	10.085	(1.041)	32179	2.00000	1.980
81	1,2-Dibromo 3-Chloropropane	75	10.837	10.838	(1.119)	3681	2.00000	2.061
82	Hexachloro 1,3-Butadiene	225	11.511	11.516	(1.188)	12969	2.00000	1.867
83	1,2,4-Trichlorobenzene	180	11.499	11.505	(1.187)	21083	2.00000	1.820
84	Naphthalene	128	11.810	11.816	(1.219)	59984	2.00000	2.044
85	1,2,3-Trichlorobenzene	180	11.997	11.997	(1.238)	20598	2.00000	1.874

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0020426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD2
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	625236	-4.82
35 1,4-Difluorobenze	1427826	713913	2855652	1370704	-4.00
52 d5-Chlorobenzene	1483267	741634	2966534	1416622	-4.49
76 d4-1,4-Dichlorobe	790697	395348	1581394	737719	-6.70

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	5.13	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-0.06

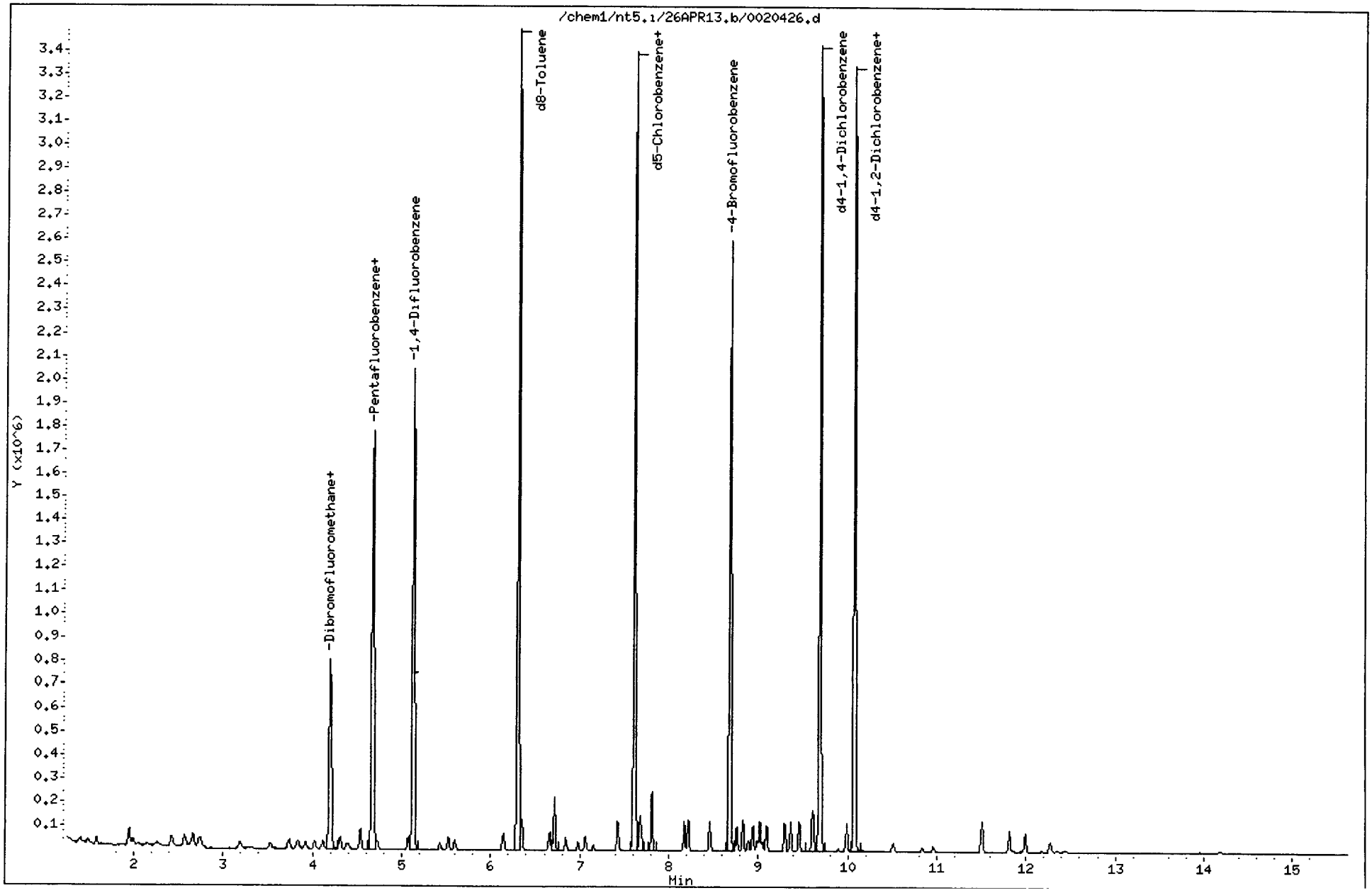
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/0020426.d
Date : 26-APR-2013 12:12
Client ID: VSTD2
Sample Info: IC0426,5,5,0

Instrument: nt5.1

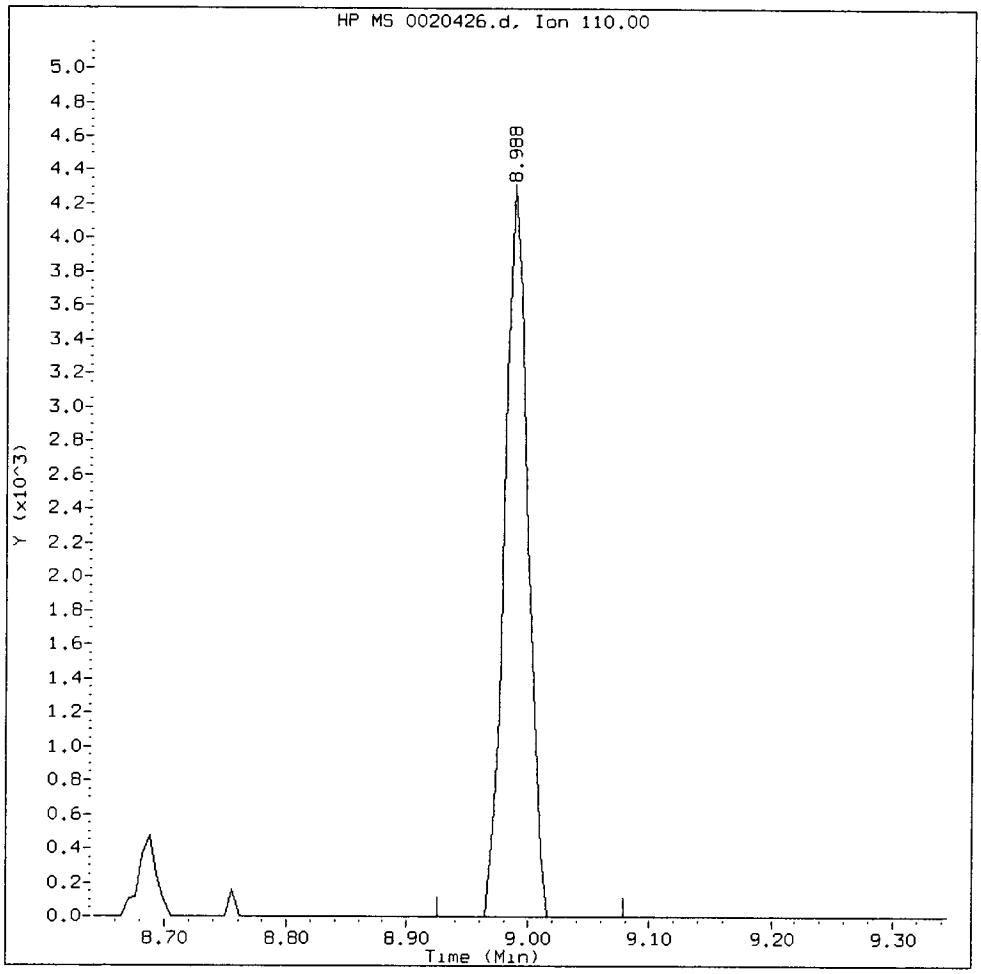
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0426, /chem1/nt5.i/26APR13.b/0020426.d

1,2,3-Trichloropropane Amount: 2.04 Area: 5661



MANUAL INTEGRATION for 1,2,3-Trichloropropane

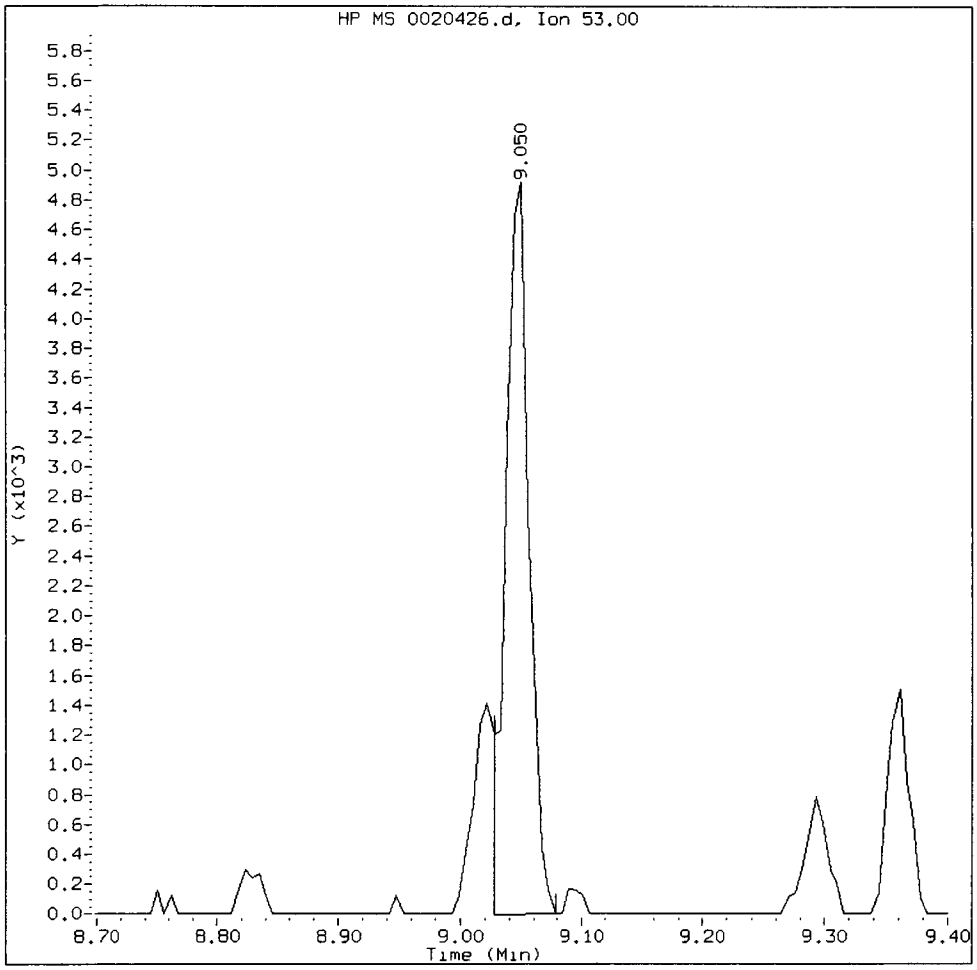
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 4/24

IC0426, /chem1/nt5.i/26APR13.b/0020426.d

Trans-1,4-Dichloro 2-Butene Amount: 1.92 Area: 6774



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

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

5. Other _____

Analyst: _____ Date: 4/24

CO-ELUTION SUMMARY FOR FILE - 0020426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/0050426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD5
Inj Date : 26-APR-2013 11:48
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:15 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 11:48 Cal File: 0050426.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.017	1.000	(0.217)	31218	5.00000	4.943
2 Chloromethane	50	1.255	1.221	(0.268)	45342	5.00000	5.260
3 Vinyl Chloride	62	1.187	1.176	(0.254)	47450	5.00000	4.845
4 Bromomethane	94	1.396	1.385	(0.299)	24136	5.00000	5.282
5 Chloroethane	64	1.487	1.475	(0.318)	27475	5.00000	5.216
6 Trichlorofluoromethane	101	1.583	1.572	(0.338)	53788	5.00000	5.239
7 1,1-Dichloroethene	96	1.951	1.939	(0.417)	32540	5.00000	5.253
8 Carbon Disulfide	76	1.956	1.945	(0.418)	112485	5.00000	5.359
9 112Trichloro122Trifluoroethane	101	1.996	1.985	(0.427)	30336	5.00000	5.422
10 Iodomethane	142	2.053	2.041	(0.439)	25978	5.00000	4.749
11 Bromoethane	108	2.149	2.143	(0.459)	19827	5.00000	5.133
12 Acrolein	56	2.262	2.262	(0.484)	32359	25.0000	24.025
13 Methylene Chloride	84	2.426	2.420	(0.519)	38044	5.00000	4.242
14 Acetone	43	2.584	2.629	(0.552)	27100	25.0000	30.640(H)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.562	(0.549)	38117	5.00000	6.173
	16 Methyl tert butyl ether	73	2.748	2.726	(0.588)	121350	5.00000	5.428
	17 1,1-Dichloroethane	63	3.190	3.178	(0.682)	78297	5.00000	5.209
	18 Acrylonitrile	53	3.303	3.303	(0.706)	17645	5.00000	5.323
	19 Vinyl Acetate	43	3.535	3.523	(0.756)	103949	5.00000	5.313
	20 Cis-1,2-Dichloroethene	96	3.744	3.733	(0.800)	41827	5.00000	5.256
	22 2,2-Dichloropropane	77	3.840	3.829	(0.821)	58469	5.00000	5.098
	23 Bromochloromethane	128	3.925	3.919	(0.839)	17545	5.00000	4.987
	24 Chloroform	83	4.027	4.021	(0.861)	68188	5.00000	5.183
	25 Carbon Tetrachloride	117	4.117	4.112	(0.803)	52846	5.00000	5.187
$	27 Dibromofluoromethane	111	4.196	4.191	(0.897)	438862	50.0000	50.486
	26 1,1,1-Trichloroethane	97	4.185	4.179	(0.895)	62037	5.00000	5.108
	28 1,1-Dichloropropene	75	4.310	4.298	(0.840)	56527	5.00000	4.985
	29 2-Butanone	72	4.394	4.406	(0.940)	26471	25.0000	27.149
	30 Benzene	78	4.536	4.530	(0.884)	171723	5.00000	5.275
*	31 Pentafluorobenzene	168	4.677	4.672	(1.000)	606286	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.998)	498256	50.0000	51.594
	33 1,2-Dichloroethane	62	4.728	4.723	(0.922)	58754	5.00000	5.294
	34 Trichloroethene	95	5.073	5.068	(0.989)	40354	5.00000	5.100
*	35 1,4-Difluorobenzene	114	5.130	5.124	(1.000)	1318908	50.0000	
	37 Dibromomethane	93	5.430	5.430	(1.058)	22697	5.00000	5.185
	38 1,2-Dichloropropane	63	5.526	5.520	(1.077)	44810	5.00000	4.995
	39 Bromodichloromethane	83	5.599	5.599	(1.092)	52330	5.00000	5.088
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.137	(1.196)	26612	5.00000	4.968
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.198)	67805	5.00000	5.178
$	42 d8-Toluene	98	6.306	6.306	(1.229)	1786134	50.0000	50.389
	43 Toluene	92	6.346	6.346	(1.237)	109462	5.00000	5.234
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	41151	5.00000	4.891
	45 4-Methyl-2-Pentanone	58	6.714	6.719	(1.309)	101860	25.0000	26.531
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.309)	61292	5.00000	5.098
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.334)	34011	5.00000	5.156
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	38625	5.00000	5.130
	49 1,3-Dichloropropane	76	7.065	7.064	(0.928)	63510	5.00000	5.148
	50 1,2-Dibromoethane	107	7.161	7.161	(1.396)	34283	5.00000	5.321
	51 2-Hexanone	43	7.432	7.432	(0.976)	178436	25.0000	26.854
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1384621	50.0000	
	53 Chlorobenzene	112	7.630	7.630	(1.002)	112182	5.00000	5.236
	54 Ethyl Benzene	91	7.675	7.681	(1.008)	197253	5.00000	5.272
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.698	(1.010)	38374	5.00000	5.079
	56 m,p-xylene	106	7.811	7.811	(1.026)	145891	10.0000	10.352
	57 o-Xylene	106	8.173	8.173	(1.074)	68516	5.00000	5.017
	58 Styrene	104	8.224	8.224	(1.080)	114827	5.00000	5.028
	59 Bromoform	173	8.213	8.219	(0.848)	27869	5.00000	5.154
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	179805	5.00000	5.182
$	62 4-Bromofluorobenzene	95	8.682	8.688	(1.140)	741917	50.0000	50.848
	63 Bromobenzene	156	8.762	8.762	(0.904)	45048	5.00000	5.077
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	215684	5.00000	5.255

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.892	8.892	(0.918)	46029	5.00000	5.175
66	2-Chloro Toluene	91	8.943	8.943	(0.923)	131714	5.00000	5.125
67	1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	149365	5.00000	5.116
68	1,2,3-Trichloropropane	110	8.988	8.993	(0.928)	14588	5.00000	5.272
69	Trans-1,4-Dichloro 2-Butene	53	9.044	9.050	(0.933)	17758	5.00000	5.057
70	4-Chloro Toluene	91	9.090	9.095	(0.938)	137795	5.00000	5.201
71	T-Butyl Benzene	119	9.293	9.299	(0.959)	132234	5.00000	5.164
72	1,2,4-Trimethylbenzene	105	9.361	9.361	(0.966)	147275	5.00000	5.155
73	S-Butyl Benzene	105	9.457	9.463	(0.976)	197117	5.00000	5.279
74	4-Isopropyl Toluene	119	9.604	9.604	(0.991)	155104	5.00000	5.080
75	1,3-Dichlorobenzene	146	9.616	9.621	(0.992)	84474	5.00000	5.085
* 76	d4-1,4-Dichlorobenzene	152	9.689	9.695	(1.000)	735666	50.0000	
77	1,4-Dichlorobenzene	146	9.706	9.706	(1.002)	88624	5.00000	5.142
78	N-Butyl Benzene	91	9.989	9.989	(1.031)	146005	5.00000	4.984
$ 79	d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	707428	50.0000	50.844
80	1,2-Dichlorobenzene	146	10.085	10.085	(1.041)	85313	5.00000	5.263
81	1,2-Dibromo 3-Chloropropane	75	10.838	10.838	(1.119)	9558	5.00000	5.367
82	Hexachloro 1,3-Butadiene	225	11.511	11.516	(1.188)	36566	5.00000	5.280
83	1,2,4-Trichlorobenzene	180	11.500	11.505	(1.187)	55716	5.00000	4.824
84	Naphthalene	128	11.816	11.816	(1.220)	150433	5.00000	5.140
85	1,2,3-Trichlorobenzene	180	11.997	11.997	(1.238)	56418	5.00000	5.148

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0050426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD5
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	606286	-7.71
35 1,4-Difluorobenze	1427826	713913	2855652	1318908	-7.63
52 d5-Chlorobenzene	1483267	741634	2966534	1384621	-6.65
76 d4-1,4-Dichlorobe	790697	395348	1581394	735666	-6.96

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	5.13	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-0.06

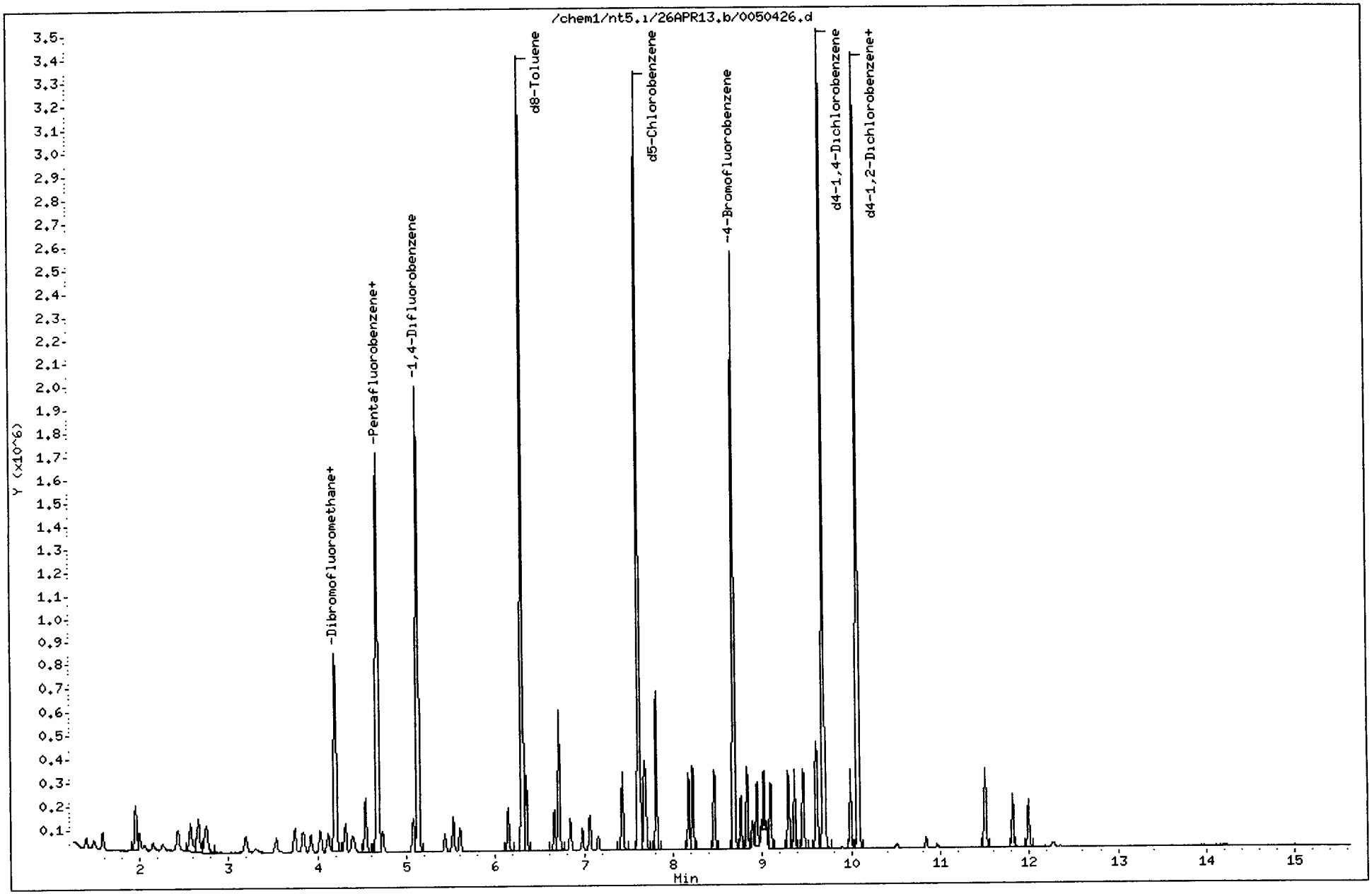
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/0050426.d
Date : 26-APR-2013 11:48
Client ID: VSTD5
Sample Info: IC0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 0050426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/0100426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD10
Inj Date : 26-APR-2013 11:24
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:15 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 11:24 Cal File: 0100426.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	0.995	1.000	(0.213)	63009	10.0000	9.404
2 Chloromethane	50	1.226	1.221	(0.263)	92644	10.0000	10.129
3 Vinyl Chloride	62	1.170	1.176	(0.251)	93788	10.0000	9.026
4 Bromomethane	94	1.379	1.385	(0.296)	51647	10.0000	10.653
5 Chloroethane	64	1.470	1.475	(0.315)	56258	10.0000	10.067
6 Trichlorofluoromethane	101	1.566	1.572	(0.336)	114163	10.0000	10.480
7 1,1-Dichloroethene	96	1.928	1.939	(0.413)	67688	10.0000	10.299
8 Carbon Disulfide	76	1.934	1.945	(0.414)	234634	10.0000	10.535
9 112Trichloro122Trifluoroethane	101	1.979	1.985	(0.424)	59565	10.0000	10.034
10 Iodomethane	142	2.030	2.041	(0.435)	48576	10.0000	8.369
11 Bromoethane	108	2.132	2.143	(0.457)	40567	10.0000	9.898
12 Acrolein	56	2.233	2.262	(0.479)	49970	50.0000	34.969
13 Methylene Chloride	84	2.403	2.420	(0.515)	54358	10.0000	5.838
14 Acetone	43	2.578	2.629	(0.553)	81072	50.0000	86.396(H)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.539	2.562	(0.544)	68731	10.0000	10.491
	16 Methyl tert butyl ether	73	2.737	2.726	(0.587)	257776	10.0000	10.868
	17 1,1-Dichloroethane	63	3.167	3.178	(0.679)	170711	10.0000	10.704
	18 Acrylonitrile	53	3.286	3.303	(0.704)	38219	10.0000	10.868
	19 Vinyl Acetate	43	3.518	3.523	(0.754)	224244	10.0000	10.804
	20 Cis-1,2-Dichloroethene	96	3.727	3.733	(0.799)	89063	10.0000	10.549
	22 2,2-Dichloropropane	77	3.817	3.829	(0.818)	128610	10.0000	10.569
	23 Bromochloromethane	128	3.908	3.919	(0.838)	38965	10.0000	10.440
	24 Chloroform	83	4.015	4.021	(0.861)	149954	10.0000	10.742
	25 Carbon Tetrachloride	117	4.100	4.112	(0.800)	114560	10.0000	10.588
$	27 Dibromofluoromethane	111	4.185	4.191	(0.897)	460885	50.0000	49.973
	26 1,1,1-Trichloroethane	97	4.174	4.179	(0.895)	136765	10.0000	10.615
	28 1,1-Dichloropropene	75	4.293	4.298	(0.838)	129715	10.0000	10.771
	29 2-Butanone	72	4.389	4.406	(0.941)	55584	50.0000	53.731
	30 Benzene	78	4.524	4.530	(0.883)	372496	10.0000	10.775
*	31 Pentafluorobenzene	168	4.666	4.672	(1.000)	643244	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.666	(0.999)	508318	50.0000	49.612
	33 1,2-Dichloroethane	62	4.722	4.723	(0.922)	124967	10.0000	10.603
	34 Trichloroethene	95	5.068	5.068	(0.989)	88124	10.0000	10.488
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1400609	50.0000	
	37 Dibromomethane	93	5.424	5.430	(1.058)	48882	10.0000	10.516
	38 1,2-Dichloropropane	63	5.520	5.520	(1.077)	101050	10.0000	10.606
	39 Bromodichloromethane	83	5.594	5.599	(1.092)	115350	10.0000	10.561
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.137	(1.196)	60143	10.0000	10.572
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.200)	147392	10.0000	10.600
$	42 d8-Toluene	98	6.301	6.306	(1.230)	1888762	50.0000	50.176
	43 Toluene	92	6.346	6.346	(1.238)	235264	10.0000	10.594
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	91758	10.0000	10.363
	45 4-Methyl-2-Pentanone	58	6.714	6.719	(1.310)	222928	50.0000	54.678
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	133682	10.0000	10.471
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.336)	75022	10.0000	10.710
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	82682	10.0000	10.435
	49 1,3-Dichloropropane	76	7.064	7.064	(0.928)	137167	10.0000	10.565
	50 1,2-Dibromoethane	107	7.155	7.161	(1.396)	72439	10.0000	10.588
	51 2-Hexanone	43	7.432	7.432	(0.976)	390078	50.0000	55.786
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1457079	50.0000	
	53 Chlorobenzene	112	7.624	7.630	(1.001)	242096	10.0000	10.737
	54 Ethyl Benzene	91	7.675	7.681	(1.008)	433497	10.0000	11.010
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.698	(1.010)	84611	10.0000	10.643
	56 m,p-xylene	106	7.811	7.811	(1.026)	323914	20.0000	21.841
	57 o-Xylene	106	8.173	8.173	(1.074)	152780	10.0000	10.630
	58 Styrene	104	8.224	8.224	(1.080)	260754	10.0000	10.850
	59 Bromoform	173	8.213	8.219	(0.848)	59576	10.0000	10.230
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	403115	10.0000	10.788
$	62 4-Bromofluorobenzene	95	8.682	8.688	(1.140)	776325	50.0000	50.561
	63 Bromobenzene	156	8.761	8.762	(0.904)	97273	10.0000	10.180
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	475461	10.0000	10.756

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.892	8.892	(0.918)	98851	10.0000	10.320
	66 2-Chloro Toluene	91	8.943	8.943	(0.923)	288648	10.0000	10.428
	67 1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	338123	10.0000	10.754
	68 1,2,3-Trichloropropane	110	8.988	8.993	(0.928)	31013	10.0000	10.407
	69 Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.934)	38893	10.0000	10.284
	70 4-Chloro Toluene	91	9.095	9.095	(0.939)	295135	10.0000	10.343
	71 T-Butyl Benzene	119	9.293	9.299	(0.959)	297270	10.0000	10.779
	72 1,2,4-Trimethylbenzene	105	9.361	9.361	(0.966)	328682	10.0000	10.682
	73 S-Butyl Benzene	105	9.457	9.463	(0.976)	436292	10.0000	10.848
	74 4-Isopropyl Toluene	119	9.604	9.604	(0.991)	350523	10.0000	10.659
	75 1,3-Dichlorobenzene	146	9.616	9.621	(0.992)	183411	10.0000	10.252
*	76 d4-1,4-Dichlorobenzene	152	9.689	9.695	(1.000)	792287	50.0000	
	77 1,4-Dichlorobenzene	146	9.706	9.706	(1.002)	188129	10.0000	10.135
	78 N-Butyl Benzene	91	9.989	9.989	(1.031)	332741	10.0000	10.547
$	79 d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	742695	50.0000	49.564
	80 1,2-Dichlorobenzene	146	10.085	10.085	(1.041)	180473	10.0000	10.337
	81 1,2-Dibromo 3-Chloropropane	75	10.838	10.838	(1.119)	19440	10.0000	10.136
	82 Hexachloro 1,3-Butadiene	225	11.516	11.516	(1.189)	76429	10.0000	10.247
	83 1,2,4-Trichlorobenzene	180	11.499	11.505	(1.187)	120627	10.0000	9.698
	84 Naphthalene	128	11.816	11.816	(1.220)	317468	10.0000	10.072
	85 1,2,3-Trichlorobenzene	180	11.997	11.997	(1.238)	118966	10.0000	10.080

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0100426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD10
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	643244	-2.08
35 1,4-Difluorobenze	1427826	713913	2855652	1400609	-1.91
52 d5-Chlorobenzene	1483267	741634	2966534	1457079	-1.77
76 d4-1,4-Dichlorobe	790697	395348	1581394	792287	0.20

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-0.06

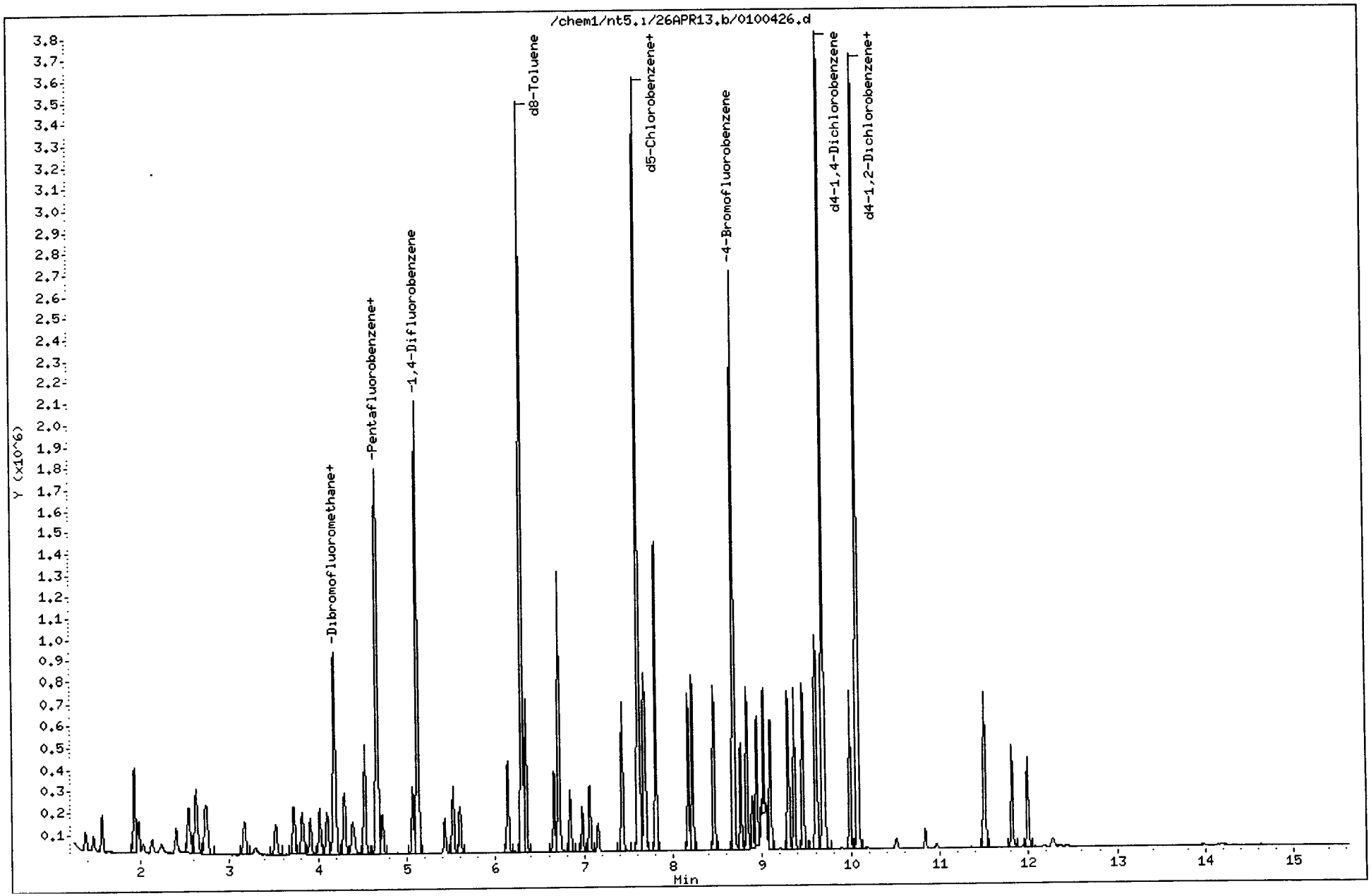
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/0100426.d
Date : 26-APR-2013 11:24
Client ID: VSTD10
Sample Info: IC0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 0100426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/0500426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD50
Inj Date : 26-APR-2013 11:00
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:16 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 11:00 Cal File: 0500426.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.000	1.000	(0.214)	309173	50.0000	45.182
2 Chloromethane	50	1.221	1.221	(0.261)	398113	50.0000	42.621
3 Vinyl Chloride	62	1.176	1.176	(0.252)	508321	50.0000	47.901
4 Bromomethane	94	1.385	1.385	(0.296)	225662	50.0000	45.576
5 Chloroethane	64	1.475	1.475	(0.316)	253264	50.0000	44.376
6 Trichlorofluoromethane	101	1.572	1.572	(0.336)	484558	50.0000	43.556
7 1,1-Dichloroethene	96	1.939	1.939	(0.415)	316272	50.0000	47.118
8 Carbon Disulfide	76	1.945	1.945	(0.416)	1058377	50.0000	46.532
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.425)	285163	50.0000	47.036
10 Iodomethane	142	2.041	2.041	(0.437)	301123	50.0000	50.800
11 Bromoethane	108	2.143	2.143	(0.459)	215010	50.0000	51.371
12 Acrolein	56	2.262	2.262	(0.484)	381484	250.000	261.40
13 Methylene Chloride	84	2.420	2.420	(0.518)	330789	50.0000	49.189
14 Acetone	43	2.629	2.629	(0.563)	218296	250.000	227.79(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.562	(0.548)	319559	50.0000	47.761
	16 Methyl tert butyl ether	73	2.726	2.726	(0.583)	1055029	50.0000	43.554
	17 1,1-Dichloroethane	63	3.178	3.178	(0.680)	708599	50.0000	43.507
	18 Acrylonitrile	53	3.303	3.303	(0.707)	166199	50.0000	46.276
	19 Vinyl Acetate	43	3.523	3.523	(0.754)	988341	50.0000	46.625
	20 Cis-1,2-Dichloroethene	96	3.733	3.733	(0.799)	374280	50.0000	43.410
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	535869	50.0000	43.121
	23 Bromochloromethane	128	3.919	3.919	(0.839)	167949	50.0000	44.060
	24 Chloroform	83	4.021	4.021	(0.861)	582463	50.0000	40.858
	25 Carbon Tetrachloride	117	4.112	4.112	(0.802)	432858	50.0000	39.242
$	27 Dibromofluoromethane	111	4.191	4.191	(0.897)	468958	50.0000	49.790
	26 1,1,1-Trichloroethane	97	4.179	4.179	(0.895)	564929	50.0000	42.932
	28 1,1-Dichloropropene	75	4.298	4.298	(0.839)	523737	50.0000	42.661
	29 2-Butanone	72	4.406	4.406	(0.943)	248481	250.000	235.20
	30 Benzene	78	4.530	4.530	(0.884)	1576653	50.0000	44.737
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	656923	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	518448	50.0000	49.547
	33 1,2-Dichloroethane	62	4.723	4.723	(0.922)	540432	50.0000	44.980
	34 Trichloroethene	95	5.068	5.068	(0.989)	371069	50.0000	43.320
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1427826	50.0000	
	37 Dibromomethane	93	5.430	5.430	(1.060)	216852	50.0000	45.761
	38 1,2-Dichloropropane	63	5.520	5.520	(1.077)	431032	50.0000	44.379
	39 Bromodichloromethane	83	5.599	5.599	(1.093)	498533	50.0000	44.773
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.137	(1.198)	283952	50.0000	48.961
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.200)	653243	50.0000	46.082
$	42 d8-Toluene	98	6.306	6.306	(1.231)	1906806	50.0000	49.690
	43 Toluene	92	6.346	6.346	(1.238)	987493	50.0000	43.619
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	383424	50.0000	42.537
	45 4-Methyl-2-Pentanone	58	6.719	6.719	(1.311)	1026018	250.000	246.86
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	608643	50.0000	46.766
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.336)	331116	50.0000	46.370
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	372458	50.0000	46.175
	49 1,3-Dichloropropane	76	7.064	7.064	(0.928)	610983	50.0000	46.230
	50 1,2-Dibromoethane	107	7.161	7.161	(1.397)	325194	50.0000	46.624
	51 2-Hexanone	43	7.432	7.432	(0.976)	1745999	250.000	245.29
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1483267	50.0000	
	53 Chlorobenzene	112	7.630	7.630	(1.002)	1019131	50.0000	44.401
	54 Ethyl Benzene	91	7.681	7.681	(1.009)	1822077	50.0000	45.462
	55 1,1,1,2-Tetrachloroethane	131	7.698	7.698	(1.011)	365434	50.0000	45.154
	56 m,p-xylene	106	7.811	7.811	(1.026)	1379910	100.000	91.404
	57 o-Xylene	106	8.173	8.173	(1.074)	668513	50.0000	45.694
	58 Styrene	104	8.224	8.224	(1.080)	1144517	50.0000	46.783
	59 Bromoform	173	8.219	8.219	(0.848)	272187	50.0000	46.834
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	1700611	50.0000	45.603
$	62 4-Bromofluorobenzene	95	8.688	8.688	(1.141)	785968	50.0000	50.285
	63 Bromobenzene	156	8.762	8.762	(0.904)	418349	50.0000	43.868
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	2004344	50.0000	45.434

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.892	8.892	(0.917)	444976	50.0000	46.549
66	2-Chloro Toluene	91	8.943	8.943	(0.922)	1226237	50.0000	44.389
67	1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	1417558	50.0000	45.175
68	1,2,3-Trichloropropane	110	8.993	8.993	(0.928)	136754	50.0000	45.985
69	Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.933)	179362	50.0000	47.521
70	4-Chloro Toluene	91	9.095	9.095	(0.938)	1271498	50.0000	44.648
71	T-Butyl Benzene	119	9.299	9.299	(0.959)	1243523	50.0000	45.180
72	1,2,4-Trimethylbenzene	105	9.361	9.361	(0.966)	1415718	50.0000	46.102
73	S-Butyl Benzene	105	9.463	9.463	(0.976)	1817235	50.0000	45.277
74	4-Isopropyl Toluene	119	9.604	9.604	(0.991)	1506606	50.0000	45.908
75	1,3-Dichlorobenzene	146	9.621	9.621	(0.992)	787831	50.0000	44.124
* 76	d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	790697	50.0000	
77	1,4-Dichlorobenzene	146	9.706	9.706	(1.001)	801393	50.0000	43.260
78	N-Butyl Benzene	91	9.989	9.989	(1.030)	1407161	50.0000	44.691
$ 79	d4-1,2-Dichlorobenzene	152	10.080	10.080	(1.040)	746774	50.0000	49.937
80	1,2-Dichlorobenzene	146	10.085	10.085	(1.040)	768113	50.0000	44.085
81	1,2-Dibromo 3-Chloropropane	75	10.838	10.838	(1.118)	87295	50.0000	45.607
82	Hexachloro 1,3-Butadiene	225	11.516	11.516	(1.188)	308318	50.0000	41.419
83	1,2,4-Trichlorobenzene	180	11.505	11.505	(1.187)	537873	50.0000	43.332
84	Naphthalene	128	11.816	11.816	(1.219)	1392853	50.0000	44.281
85	1,2,3-Trichlorobenzene	180	11.997	11.997	(1.237)	513693	50.0000	43.614

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: 0500426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
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	656923	328462	1313846	656923	0.00
35 1,4-Difluorobenze	1427826	713913	2855652	1427826	0.00
52 d5-Chlorobenzene	1483267	741634	2966534	1483267	0.00
76 d4-1,4-Dichlorobe	790697	395348	1581394	790697	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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	0.00

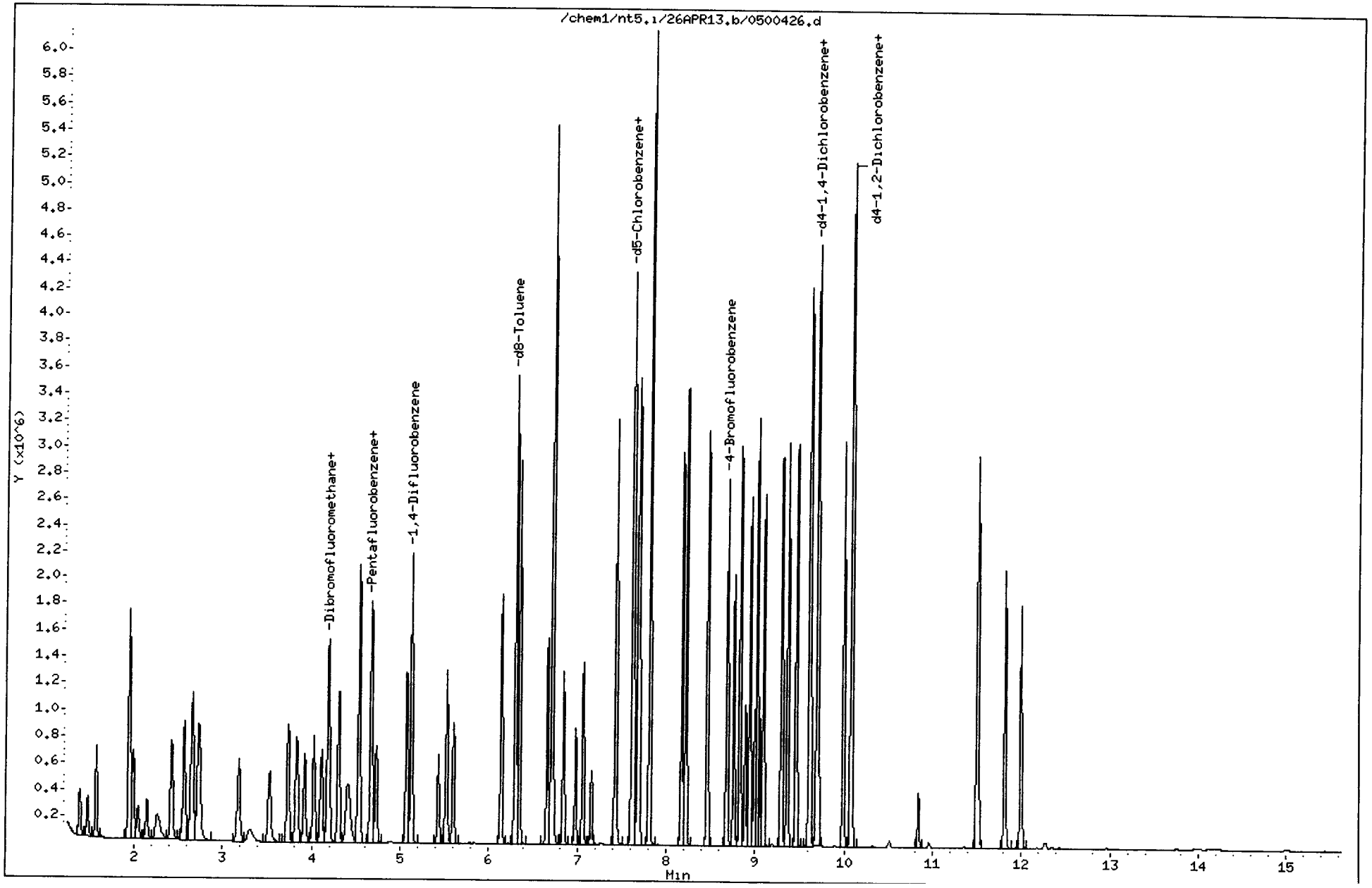
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/0500426.d
Date : 26-APR-2013 11:00
Client ID: VSTD50
Sample Info: IC0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 0500426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/1000426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD100
Inj Date : 26-APR-2013 10:36
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:16 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 10:36 Cal File: 1000426.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

4/14/14

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	1.006	1.000	(0.215)	752004	100.000	113.06
2 Chloromethane	50	1.238	1.221	(0.265)	978123	100.000	107.73
3 Vinyl Chloride	62	1.181	1.176	(0.253)	1021880	100.000	99.067
4 Bromomethane	94	1.391	1.385	(0.298)	501338	100.000	104.17
5 Chloroethane	64	1.481	1.475	(0.317)	582988	100.000	105.09
6 Trichlorofluoromethane	101	1.577	1.572	(0.338)	1143104	100.000	105.71
7 1,1-Dichloroethene	96	1.945	1.939	(0.416)	712727	100.000	109.24
8 Carbon Disulfide	76	1.945	1.945	(0.416)	2421367	100.000	109.52
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.426)	629028	100.000	106.74
10 Iodomethane	142	2.047	2.041	(0.438)	625837	100.000	108.62
11 Bromoethane	108	2.143	2.143	(0.459)	415984	100.000	102.25
12 Acrolein	56	2.251	2.262	(0.482)	514808	500.000	362.91
13 Methylene Chloride	84	2.415	2.420	(0.517)	543260	100.000	103.27
14 Acetone	43	2.607	2.629	(0.558)	468872	500.000	503.35(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.562	(0.547)	613268	100.000	94.297
	16 Methyl tert butyl ether	73	2.743	2.726	(0.587)	2453965	100.000	104.22
	17 1,1-Dichloroethane	63	3.178	3.178	(0.680)	1646411	100.000	104.00
	18 Acrylonitrile	53	3.303	3.303	(0.707)	362380	100.000	103.80
	19 Vinyl Acetate	43	3.529	3.523	(0.755)	2154778	100.000	104.58
	20 Cis-1,2-Dichloroethene	96	3.733	3.733	(0.799)	863469	100.000	103.03
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	1260261	100.000	104.33
	23 Bromochloromethane	128	3.919	3.919	(0.839)	378392	100.000	102.13
	24 Chloroform	83	4.027	4.021	(0.862)	1444385	100.000	104.24
	25 Carbon Tetrachloride	117	4.106	4.112	(0.801)	1139704	100.000	106.28
$	27 Dibromofluoromethane	111	4.191	4.191	(0.897)	461322	50.0000	50.389
	26 1,1,1-Trichloroethane	97	4.180	4.179	(0.895)	1349729	100.000	105.53
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	1250813	100.000	104.80
	29 2-Butanone	72	4.400	4.406	(0.942)	533827	500.000	519.84
	30 Benzene	78	4.530	4.530	(0.884)	3579870	100.000	104.48
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	638539	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	510394	50.0000	50.182
	33 1,2-Dichloroethane	62	4.728	4.723	(0.923)	1194338	100.000	102.25
	34 Trichloroethene	95	5.073	5.068	(0.990)	872210	100.000	104.74
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1388156	50.0000	
	37 Dibromomethane	93	5.430	5.430	(1.060)	482250	100.000	104.68
	38 1,2-Dichloropropane	63	5.526	5.520	(1.078)	994009	100.000	105.27
	39 Bromodichloromethane	83	5.599	5.599	(1.093)	1138897	100.000	105.21
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.137	(1.198)	633550	100.000	112.36
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.200)	1479070	100.000	107.32
$	42 d8-Toluene	98	6.306	6.306	(1.231)	1860475	50.0000	49.868
	43 Toluene	92	6.352	6.346	(1.240)	2275260	100.000	103.37
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	906834	100.000	103.10
	45 4-Methyl-2-Pentanone	58	6.719	6.719	(1.311)	2196604	500.000	543.60
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	1366064	100.000	107.96
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.336)	736326	100.000	106.06
	48 Chlorodibromomethane	129	6.980	6.980	(0.916)	833673	100.000	105.91
	49 1,3-Dichloropropane	76	7.065	7.064	(0.927)	1352571	100.000	104.88
	50 1,2-Dibromoethane	107	7.161	7.161	(1.397)	717667	100.000	105.83
	51 2-Hexanone	43	7.438	7.432	(0.976)	3598864	500.000	518.13
*	52 d5-Chlorobenzene	117	7.619	7.613	(1.000)	1447397	50.0000	
	53 Chlorobenzene	112	7.630	7.630	(1.001)	2304473	100.000	102.89
	54 Ethyl Benzene	91	7.681	7.681	(1.008)	4096080	100.000	104.73
	55 1,1,1,2-Tetrachloroethane	131	7.698	7.698	(1.010)	837786	100.000	106.08
	56 m,p-xylene	106	7.817	7.811	(1.026)	3142057	200.000	213.28
	57 o-Xylene	106	8.179	8.173	(1.073)	1543344	100.000	108.10
	58 Styrene	104	8.224	8.224	(1.079)	2610600	100.000	109.35
	59 Bromoform	173	8.219	8.219	(0.848)	595399	100.000	107.41
	60 Isopropyl Benzene	105	8.467	8.462	(0.873)	3853699	100.000	108.35
$	62 4-Bromofluorobenzene	95	8.688	8.688	(1.140)	755584	50.0000	49.539
	63 Bromobenzene	156	8.767	8.762	(0.904)	950107	100.000	104.46
	64 N-Propyl Benzene	91	8.835	8.829	(0.911)	4445065	100.000	105.64

Data File: /chem1/nt5.i/26APR13.b/1000426.d
Report Date: 29-Apr-2013 11:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.897	8.892	(0.918)	948846	100.000	104.07
	66 2-Chloro Toluene	91	8.943	8.943	(0.922)	2791711	100.000	105.96
	67 1,3,5-Trimethyl Benzene	105	9.027	9.022	(0.931)	3234071	100.000	108.06
	68 1,2,3-Trichloropropane	110	8.994	8.993	(0.928)	294937	100.000	103.98
	69 Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.933)	379106	100.000	105.31
	70 4-Chloro Toluene	91	9.095	9.095	(0.938)	2891010	100.000	106.44
	71 T-Butyl Benzene	119	9.299	9.299	(0.959)	2871184	100.000	109.37
	72 1,2,4-Trimethylbenzene	105	9.367	9.361	(0.966)	3190784	100.000	108.94
	73 S-Butyl Benzene	105	9.463	9.463	(0.976)	4111996	100.000	107.42
	74 4-Isopropyl Toluene	119	9.610	9.604	(0.991)	3442650	100.000	109.99
	75 1,3-Dichlorobenzene	146	9.621	9.621	(0.992)	1786090	100.000	104.88
*	76 d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	754146	50.0000	
	77 1,4-Dichlorobenzene	146	9.706	9.706	(1.001)	1805381	100.000	102.18
	78 N-Butyl Benzene	91	9.995	9.989	(1.031)	3235459	100.000	107.74
$	79 d4-1,2-Dichlorobenzene	152	10.080	10.080	(1.040)	707395	50.0000	49.596
	80 1,2-Dichlorobenzene	146	10.085	10.085	(1.040)	1687644	100.000	101.56
	81 1,2-Dibromo 3-Chloropropane	75	10.838	10.838	(1.118)	181701	100.000	99.529
	82 Hexachloro 1,3-Butadiene	225	11.517	11.516	(1.188)	725297	100.000	102.16
	83 1,2,4-Trichlorobenzene	180	11.505	11.505	(1.187)	1200130	100.000	101.37
	84 Naphthalene	128	11.816	11.816	(1.219)	2912124	100.000	97.068
	85 1,2,3-Trichlorobenzene	180	11.997	11.997	(1.237)	1124412	100.000	100.09

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: 1000426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD100
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	638539	-2.80
35 1,4-Difluorobenze	1427826	713913	2855652	1388156	-2.78
52 d5-Chlorobenzene	1483267	741634	2966534	1447397	-2.42
76 d4-1,4-Dichlorobe	790697	395348	1581394	754146	-4.62

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	7.61	7.11	8.11	7.62	0.07
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	0.00

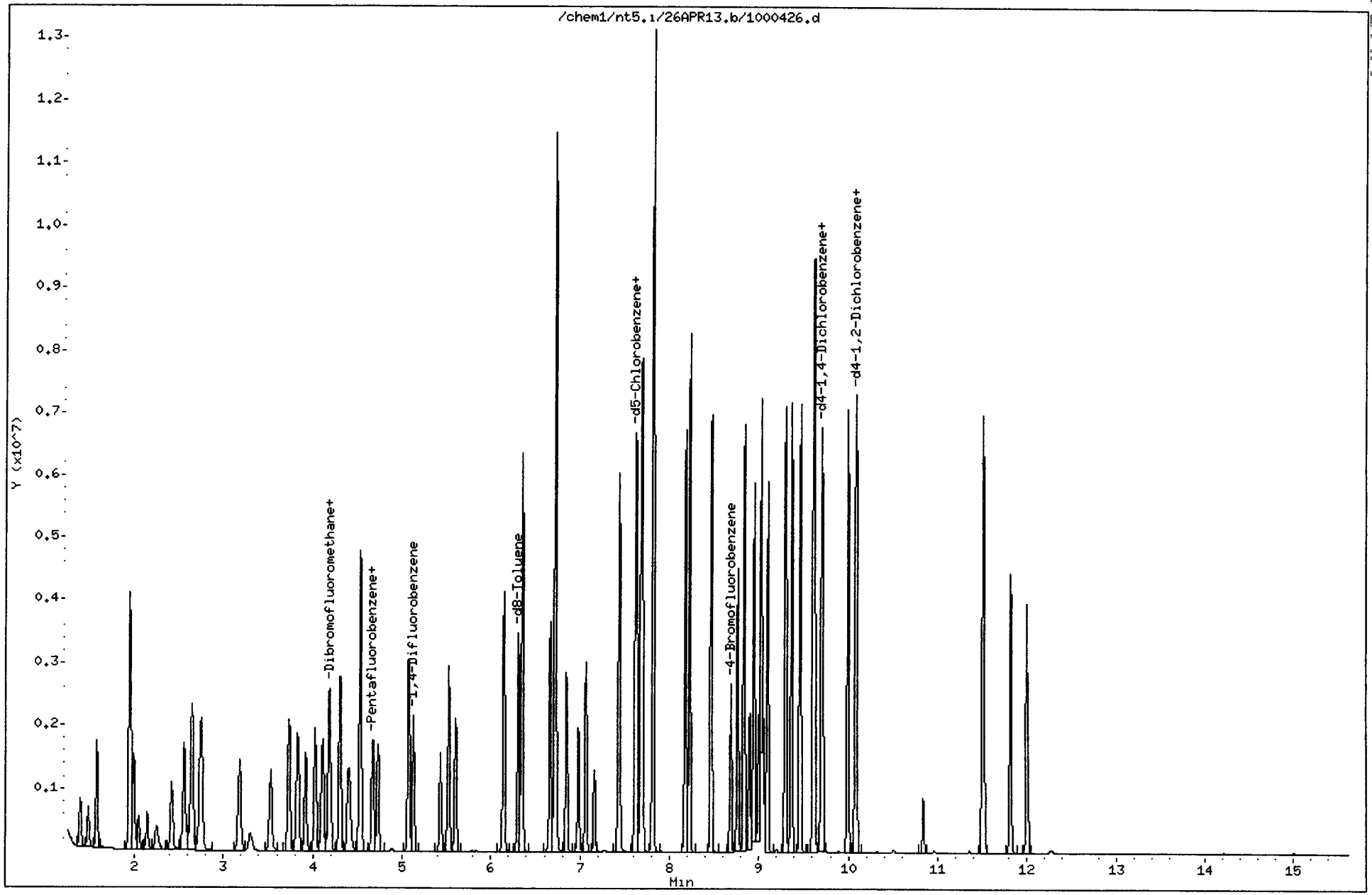
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/1000426.d
Date : 26-APR-2013 10:36
Client ID: VSTD100
Sample Info: IC0426,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - 1000426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/1500426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD150
Inj Date : 26-APR-2013 10:12
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/V0121012S.m
Meth Date : 29-Apr-2013 11:16 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 10:12 Cal File: 1500426.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.012	1.000	(0.217)	995299	150.000	150.25
2 Chloromethane	50	1.255	1.221	(0.269)	1481896	150.000	163.88
3 Vinyl Chloride	62	1.187	1.176	(0.254)	1722728	150.000	167.69
4 Bromomethane	94	1.396	1.385	(0.299)	703106	150.000	146.69
5 Chloroethane	64	1.487	1.475	(0.318)	762783	150.000	138.06
6 Trichlorofluoromethane	101	1.583	1.572	(0.339)	1689755	150.000	156.90
7 1,1-Dichloroethene	96	1.945	1.939	(0.416)	997899	150.000	153.57
8 Carbon Disulfide	76	1.951	1.945	(0.418)	3308396	150.000	150.25
9 112Trichloro122Trifluoroethane	101	1.990	1.985	(0.426)	884516	150.000	150.71
10 Iodomethane	142	2.047	2.041	(0.438)	839781	150.000	146.35
11 Bromoethane	108	2.149	2.143	(0.460)	571921	150.000	141.15
12 Acrolein	56	2.250	2.262	(0.482)	615631	750.000	435.76
13 Methylene Chloride	84	2.420	2.420	(0.518)	687391	150.000	148.18
14 Acetone	43	2.590	2.629	(0.554)	519461	750.000	559.93(H)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.562	(0.547)	794153	150.000	122.61
	16 Methyl tert butyl ether	73	2.754	2.726	(0.589)	3566219	150.000	152.08
	17 1,1-Dichloroethane	63	3.178	3.178	(0.680)	2450489	150.000	155.42
	18 Acrylonitrile	53	3.308	3.303	(0.708)	523811	150.000	150.66
	19 Vinyl Acetate	43	3.535	3.523	(0.757)	3128665	150.000	152.46
	20 Cis-1,2-Dichloroethene	96	3.733	3.733	(0.799)	1298707	150.000	155.60
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	1893304	150.000	157.38
	23 Bromochloromethane	128	3.919	3.919	(0.839)	558699	150.000	151.41
	24 Chloroform	83	4.027	4.021	(0.862)	2158227	150.000	156.39
	25 Carbon Tetrachloride	117	4.106	4.112	(0.801)	1704379	150.000	160.43
$	27 Dibromofluoromethane	111	4.196	4.191	(0.898)	460720	50.0000	50.529
	26 1,1,1-Trichloroethane	97	4.179	4.179	(0.895)	2013613	150.000	158.08
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	1866729	150.000	157.87
	29 2-Butanone	72	4.406	4.406	(0.943)	778153	750.000	760.85
	30 Benzene	78	4.536	4.530	(0.885)	5195677	150.000	153.07
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	635942	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	501187	50.0000	49.478
	33 1,2-Dichloroethane	62	4.728	4.723	(0.923)	1752524	150.000	151.44
	34 Trichloroethene	95	5.073	5.068	(0.990)	1314685	150.000	159.35
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1375211	50.0000	
	37 Dibromomethane	93	5.430	5.430	(1.060)	715766	150.000	156.82
	38 1,2-Dichloropropane	63	5.526	5.520	(1.078)	1481701	150.000	158.39
	39 Bromodichloromethane	83	5.599	5.599	(1.093)	1700142	150.000	158.53
	40 2-Chloroethyl Vinyl Ether	63	6.142	6.137	(1.199)	929033	150.000	166.32
	41 Cis 1,3-dichloropropene	75	6.154	6.148	(1.201)	2191078	150.000	160.48
$	42 d8-Toluene	98	6.306	6.306	(1.231)	1848825	50.0000	50.022
	43 Toluene	92	6.352	6.346	(1.240)	3351370	150.000	153.70
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	1386601	150.000	158.64
	45 4-Methyl-2-Pentanone	58	6.725	6.719	(1.312)	3140623	750.000	784.53
	46 Trans 1,3-Dichloropropene	75	6.719	6.714	(1.311)	2013350	150.000	160.62
	47 1,1,2-Trichloroethane	97	6.849	6.844	(1.337)	1088238	150.000	158.23
	48 Chlorodibromomethane	129	6.985	6.980	(0.917)	1246488	150.000	159.36
	49 1,3-Dichloropropane	76	7.070	7.064	(0.928)	1992018	150.000	155.44
	50 1,2-Dibromoethane	107	7.161	7.161	(1.397)	1055829	150.000	157.17
	51 2-Hexanone	43	7.438	7.432	(0.976)	5128154	750.000	742.96
*	52 d5-Chlorobenzene	117	7.619	7.613	(1.000)	1438315	50.0000	
	53 Chlorobenzene	112	7.630	7.630	(1.001)	3382890	150.000	151.99
	54 Ethyl Benzene	91	7.687	7.681	(1.009)	5806811	150.000	149.41
	55 1,1,1,2-Tetrachloroethane	131	7.704	7.698	(1.011)	1257766	150.000	160.27
	56 m,p-xylene	106	7.817	7.811	(1.026)	4547801	300.000	310.66
	57 o-Xylene	106	8.179	8.173	(1.073)	2299430	150.000	162.08
	58 Styrene	104	8.230	8.224	(1.080)	3804062	150.000	160.35
	59 Bromoform	173	8.224	8.219	(0.848)	878015	150.000	160.62
	60 Isopropyl Benzene	105	8.467	8.462	(0.873)	5474688	150.000	156.08
$	62 4-Bromofluorobenzene	95	8.688	8.688	(1.140)	747893	50.0000	49.344
	63 Bromobenzene	156	8.767	8.762	(0.904)	1409008	150.000	157.08
	64 N-Propyl Benzene	91	8.835	8.829	(0.911)	6239227	150.000	150.37

	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	8.903	8.892	(0.918)	1379284	150.000	153.40
	66 2-Chloro Toluene	91	8.948	8.943	(0.923)	4052050	150.000	155.95
	67 1,3,5-Trimethyl Benzene	105	9.027	9.022	(0.931)	4666403	150.000	158.10
	68 1,2,3-Trichloropropane	110	8.999	8.993	(0.928)	423494	150.000	151.40
	69 Trans-1,4-Dichloro 2-Butene	53	9.056	9.050	(0.934)	533086	150.000	150.16
	70 4-Chloro Toluene	91	9.101	9.095	(0.939)	4191427	150.000	156.48
	71 T-Butyl Benzene	119	9.299	9.299	(0.959)	4161327	150.000	160.74
	72 1,2,4-Trimethylbenzene	105	9.367	9.361	(0.966)	4585331	150.000	158.75
	73 S-Butyl Benzene	105	9.469	9.463	(0.977)	5826624	150.000	154.34
	74 4-Isopropyl Toluene	119	9.610	9.604	(0.991)	4951843	150.000	160.42
	75 1,3-Dichlorobenzene	146	9.627	9.621	(0.993)	2622444	150.000	156.15
*	76 d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	743710	50.0000	
	77 1,4-Dichlorobenzene	146	9.712	9.706	(1.002)	2639959	150.000	151.51
	78 N-Butyl Benzene	91	9.995	9.989	(1.031)	4710939	150.000	159.07
$	79 d4-1,2-Dichlorobenzene	152	10.080	10.080	(1.040)	694262	50.0000	49.358
	80 1,2-Dichlorobenzene	146	10.091	10.085	(1.041)	2457784	150.000	149.97
	81 1,2-Dibromo 3-Chloropropane	75	10.843	10.838	(1.118)	269597	150.000	149.75
	82 Hexachloro 1,3-Butadiene	225	11.522	11.516	(1.188)	1097365	150.000	156.73
	83 1,2,4-Trichlorobenzene	180	11.511	11.505	(1.187)	1877359	150.000	160.80
	84 Naphthalene	128	11.822	11.816	(1.219)	4177488	150.000	141.20
	85 1,2,3-Trichlorobenzene	180	12.003	11.997	(1.238)	1718860	150.000	155.16

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1500426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD150
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	635942	-3.19
35 1,4-Difluorobenze	1427826	713913	2855652	1375211	-3.68
52 d5-Chlorobenzene	1483267	741634	2966534	1438315	-3.03
76 d4-1,4-Dichlorobe	790697	395348	1581394	743710	-5.94

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	7.61	7.11	8.11	7.62	0.07
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	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.

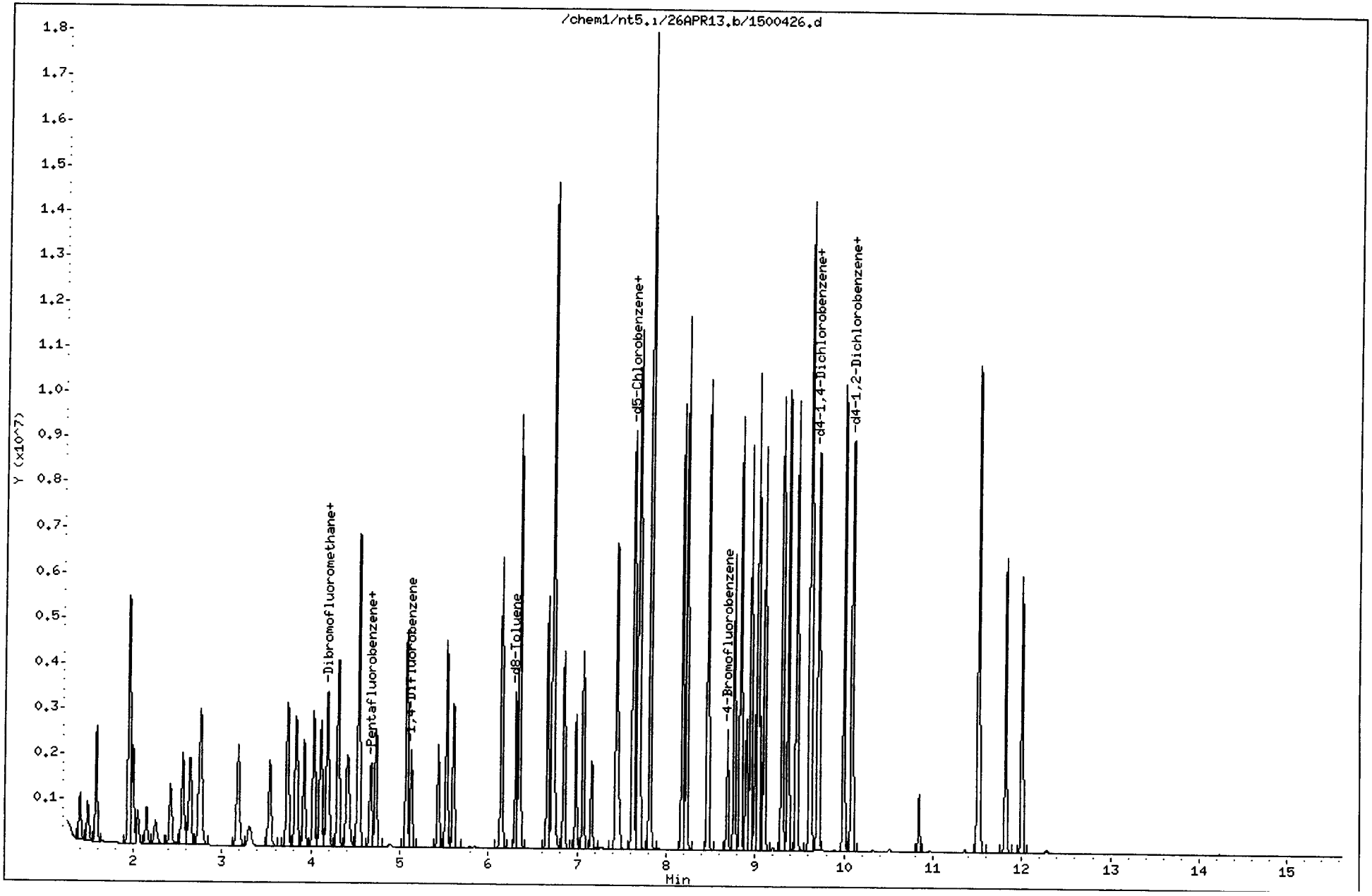
Data File: /chem1/nt5.i/26APR13.b/1500426.d
Date : 26-APR-2013 10:12
Client ID: VSTD150
Sample Info: IC0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS

WN31 : 00102



CO-ELUTION SUMMARY FOR FILE - 1500426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/2000426.d
Lab Smp Id: IC0426 Client Smp ID: VSTD200
Inj Date : 26-APR-2013 09:49
Operator : PB Inst ID: nt5.i
Smp Info : IC0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:16 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	0.995	1.000	(0.213)	1429096	200.000	202.68
2 Chloromethane	50	1.255	1.221	(0.269)	2032077	200.000	211.13
3 Vinyl Chloride	62	1.164	1.176	(0.250)	2581233	200.000	236.06
4 Bromomethane	94	1.379	1.385	(0.296)	910298	200.000	178.42
5 Chloroethane	64	1.464	1.475	(0.314)	1085317	200.000	184.56
6 Trichlorofluoromethane	101	1.560	1.572	(0.334)	2426827	200.000	211.71
7 1,1-Dichloroethene	96	1.917	1.939	(0.411)	1185469	200.000	171.40
8 Carbon Disulfide	76	1.922	1.945	(0.412)	3645542	200.000	155.55
9 112Trichloro122Trifluoroethane	101	1.962	1.985	(0.420)	1080756	200.000	173.00
10 Iodomethane	142	2.018	2.041	(0.433)	1217569	200.000	199.34
11 Bromoethane	108	2.115	2.143	(0.453)	704035	200.000	163.25
12 Acrolein	56	2.222	2.262	(0.476)	593232	1000.00	394.50
13 Methylene Chloride	84	2.386	2.420	(0.511)	741012	200.000	151.10
14 Acetone	43	2.578	2.629	(0.553)	599207	1000.00	606.81(TM)

	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	2.522	2.562	(0.540)	924341	200.000	134.07
	16 Methyl tert butyl ether	73	2.754	2.726	(0.590)	4935435	200.000	197.73
	17 1,1-Dichloroethane	63	3.155	3.178	(0.676)	3474672	200.000	207.04
	18 Acrylonitrile	53	3.291	3.303	(0.705)	736782	200.000	199.09
	19 Vinyl Acetate	43	3.523	3.523	(0.755)	4248101	200.000	194.49
	20 Cis-1,2-Dichloroethene	96	3.721	3.733	(0.798)	1840287	200.000	207.14
	22 2,2-Dichloropropane	77	3.812	3.829	(0.817)	2740251	200.000	214.00
	23 Bromochloromethane	128	3.908	3.919	(0.838)	880203	200.000	224.10
	24 Chloroform	83	4.015	4.021	(0.861)	3057959	200.000	208.17
	25 Carbon Tetrachloride	117	4.089	4.112	(0.799)	2497704	200.000	222.42
$	27 Dibromofluoromethane	111	4.185	4.191	(0.897)	480712	50.0000	49.532
	26 1,1,1-Trichloroethane	97	4.168	4.179	(0.893)	2925221	200.000	215.75
	28 1,1-Dichloropropene	75	4.287	4.298	(0.838)	2719034	200.000	217.55
	29 2-Butanone	72	4.400	4.406	(0.943)	1095663	1000.00	1006.5
	30 Benzene	78	4.524	4.530	(0.884)	7092367	200.000	197.67
*	31 Pentafluorobenzene	168	4.666	4.672	(1.000)	676897	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.666	(0.999)	526607	50.0000	48.842
	33 1,2-Dichloroethane	62	4.722	4.723	(0.923)	2420463	200.000	197.88
	34 Trichloroethene	95	5.062	5.068	(0.989)	1914319	200.000	219.52
*	35 1,4-Difluorobenzene	114	5.118	5.124	(1.000)	1453627	50.0000	
	37 Dibromomethane	93	5.424	5.430	(1.060)	999307	200.000	207.14
	38 1,2-Dichloropropane	63	5.520	5.520	(1.078)	2087872	200.000	211.15
	39 Bromodichloromethane	83	5.599	5.599	(1.094)	2376915	200.000	209.68
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.137	(1.199)	1305156	200.000	221.05
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.201)	3053894	200.000	211.61
$	42 d8-Toluene	98	6.306	6.306	(1.232)	1949967	50.0000	49.913
	43 Toluene	92	6.346	6.346	(1.240)	4682323	200.000	203.15
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	2028122	200.000	219.60
	45 4-Methyl-2-Pentanone	58	6.731	6.719	(1.315)	4294509	1000.00	1014.9
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.312)	2780973	200.000	209.89
	47 1,1,2-Trichloroethane	97	6.849	6.844	(1.338)	1514457	200.000	208.32
	48 Chlorodibromomethane	129	6.985	6.980	(0.917)	1729924	200.000	209.32
	49 1,3-Dichloropropane	76	7.070	7.064	(0.928)	2729001	200.000	201.53
	50 1,2-Dibromoethane	107	7.161	7.161	(1.399)	1468378	200.000	206.79
	51 2-Hexanone	43	7.443	7.432	(0.977)	7029018	1000.00	963.78
*	52 d5-Chlorobenzene	117	7.619	7.613	(1.000)	1519754	50.0000	
	53 Chlorobenzene	112	7.630	7.630	(1.001)	4667760	200.000	198.48
	54 Ethyl Benzene	91	7.687	7.681	(1.009)	7702756	200.000	187.57
	55 1,1,1,2-Tetrachloroethane	131	7.704	7.698	(1.011)	1750638	200.000	211.12
	56 m,p-xylene	106	7.822	7.811	(1.027)	6125216	400.000	395.99
	57 o-Xylene	106	8.179	8.173	(1.073)	3232146	200.000	215.62
	58 Styrene	104	8.230	8.224	(1.080)	5136279	200.000	204.91
	59 Bromoform	173	8.224	8.219	(0.848)	1208458	200.000	207.84
	60 Isopropyl Benzene	105	8.467	8.462	(0.873)	7243304	200.000	194.14
$	62 4-Bromofluorobenzene	95	8.688	8.688	(1.140)	784285	50.0000	48.972
	63 Bromobenzene	156	8.767	8.762	(0.904)	1974849	200.000	206.98
	64 N-Propyl Benzene	91	8.841	8.829	(0.911)	8113697	200.000	183.83

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.903	8.892	(0.918)	1918666	200.000	200.62
66	2-Chloro Toluene	91	8.948	8.943	(0.922)	5518745	200.000	199.68
67	1,3,5-Trimethyl Benzene	105	9.033	9.022	(0.931)	6308089	200.000	200.93
68	1,2,3-Trichloropropane	110	8.999	8.993	(0.928)	590701	200.000	198.53
69	Trans-1,4-Dichloro 2-Butene	53	9.056	9.050	(0.934)	761793	200.000	201.74
70	4-Chloro Toluene	91	9.101	9.095	(0.938)	5700624	200.000	200.08
71	T-Butyl Benzene	119	9.305	9.299	(0.959)	5696460	200.000	206.86
72	1,2,4-Trimethylbenzene	105	9.372	9.361	(0.966)	6153467	200.000	200.29
73	S-Butyl Benzene	105	9.469	9.463	(0.976)	7669723	200.000	191.00
74	4-Isopropyl Toluene	119	9.616	9.604	(0.991)	6569779	200.000	200.09
75	1,3-Dichlorobenzene	146	9.627	9.621	(0.992)	3626761	200.000	203.03
* 76	d4-1,4-Dichlorobenzene	152	9.700	9.695	(1.000)	791075	50.0000	
77	1,4-Dichlorobenzene	146	9.712	9.706	(1.001)	3663983	200.000	197.69
78	N-Butyl Benzene	91	10.000	9.989	(1.031)	6319465	200.000	200.61
$ 79	d4-1,2-Dichlorobenzene	152	10.085	10.080	(1.040)	739568	50.0000	49.431
80	1,2-Dichlorobenzene	146	10.091	10.085	(1.040)	3417657	200.000	196.06
81	1,2-Dibromo 3-Chloropropane	75	10.843	10.838	(1.118)	380534	200.000	198.71
82	Hexachloro 1,3-Butadiene	225	11.522	11.516	(1.188)	1571041	200.000	210.95
83	1,2,4-Trichlorobenzene	180	11.516	11.505	(1.187)	2689161	200.000	216.54
84	Naphthalene	128	11.828	11.816	(1.219)	5641782	200.000	179.27
85	1,2,3-Trichlorobenzene	180	12.009	11.997	(1.238)	2449803	200.000	207.90

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 2000426.d
Lab Smp Id: IC0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: VSTD200
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	676897	3.04
35 1,4-Difluorobenze	1427826	713913	2855652	1453627	1.81
52 d5-Chlorobenzene	1483267	741634	2966534	1519754	2.46
76 d4-1,4-Dichlorobe	790697	395348	1581394	791075	0.05

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	7.61	7.11	8.11	7.62	0.07
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.70	0.06

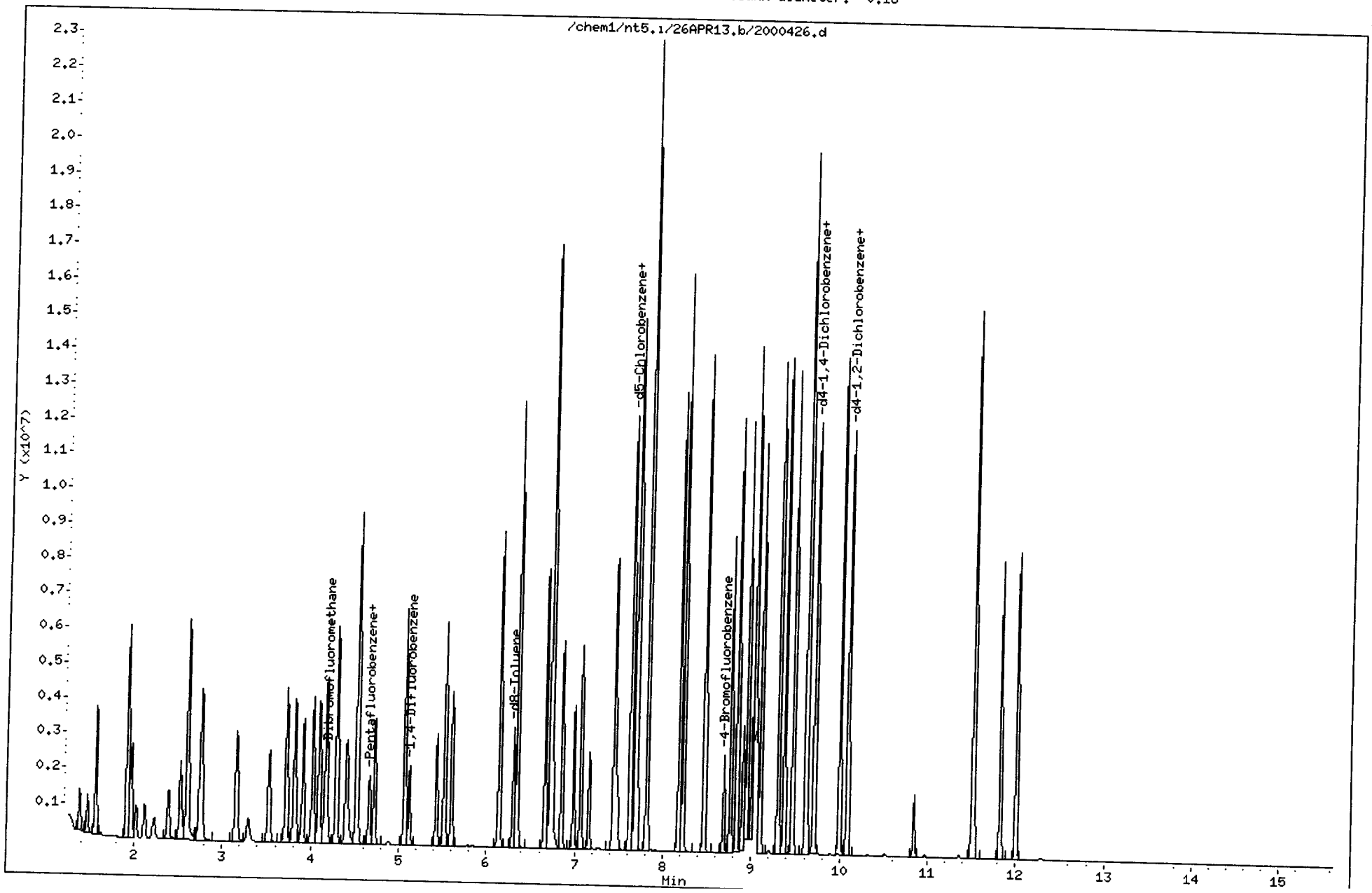
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/26APR13.b/2000426.d
Date : 26-APR-2013 09:49
Client ID: VSTD200
Sample Info: IC0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 2000426.d

Lab ID: IC0426, Method: VO121012S.m, Instrument: nt5.i, Date: 26-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/26APR13.b/icv0426.d
Lab Smp Id: ICV0426
Client Smp ID: ICV0426
Inj Date : 26-APR-2013 13:49
Operator : PB
Inst ID: nt5.i
Smp Info : ICV0426,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/26APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 11:16 patrickb
Quant Type: ISTD
Cal Date : 26-APR-2013 09:49
Cal File: 2000426.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	1.011	1.000	(0.217)	402358	61.8193	61.819(R)
2 Chloromethane	50	1.232	1.221	(0.264)	465149	52.3548	52.355
3 Vinyl Chloride	62	1.187	1.176	(0.254)	551176	54.6059	54.606(M)
4 Bromomethane	94	1.396	1.385	(0.299)	258772	54.9464	54.946
5 Chloroethane	64	1.487	1.475	(0.318)	310992	57.2894	57.289
6 Trichlorofluoromethane	101	1.583	1.572	(0.339)	587220	55.4949	55.495
7 1,1-Dichloroethene	96	1.951	1.939	(0.418)	363086	56.8703	56.870(Q)
8 Carbon Disulfide	76	1.951	1.945	(0.418)	1150689	53.1885	53.188
9 112Trichloro122Trifluoroethane	101	1.996	1.985	(0.427)	334794	58.0579	58.058
10 Iodomethane	142	2.052	2.041	(0.439)	310530	55.0768	55.077
11 Bromoethane	108	2.149	2.143	(0.460)	211575	53.1457	53.146
12 Acrolein	56	2.256	2.262	(0.483)	54542	39.2925	39.292(R)
13 Methylene Chloride	84	2.426	2.420	(0.519)	358252	58.7393	58.739(Q)
14 Acetone	43	2.595	2.629	(0.556)	51439	56.4318	56.432(QMH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.562	(0.550)	400980	63.0072	63.007(QR)
	16 Methyl tert butyl ether	73	2.743	2.726	(0.587)	1106505	48.0245	48.025
	17 1,1-Dichloroethane	63	3.189	3.178	(0.683)	751868	48.5336	48.534
	18 Acrylonitrile	53	3.297	3.303	(0.706)	167789	49.1172	49.117
	19 Vinyl Acetate	43	3.529	3.523	(0.755)	456116	22.6220	22.622(R)
	20 Cis-1,2-Dichloroethene	96	3.738	3.733	(0.800)	419938	51.2063	51.206
	22 2,2-Dichloropropane	77	3.834	3.829	(0.821)	594584	50.3024	50.302
	23 Bromochloromethane	128	3.925	3.919	(0.840)	345772	95.3682	95.368
	24 Chloroform	83	4.027	4.021	(0.862)	655969	48.3764	48.376
	25 Carbon Tetrachloride	117	4.117	4.112	(0.803)	538279	51.3152	51.315
$	27 Dibromofluoromethane	111	4.196	4.191	(0.898)	448754	50.0911	50.091
	26 1,1,1-Trichloroethane	97	4.185	4.179	(0.896)	629451	50.2921	50.292
	28 1,1-Dichloropropene	75	4.309	4.298	(0.840)	579366	49.6252	49.625
	29 2-Butanone	72	4.394	4.406	(0.941)	45459	45.2382	45.238
	30 Benzene	78	4.536	4.530	(0.884)	1648404	49.1839	49.184
*	31 Pentafluorobenzene	168	4.672	4.672	(1.000)	624839	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	487137	48.9451	48.945
	33 1,2-Dichloroethane	62	4.728	4.723	(0.922)	522758	45.7520	45.752
	34 Trichloroethene	95	5.073	5.068	(0.989)	411771	50.5500	50.550
*	35 1,4-Difluorobenzene	114	5.130	5.124	(1.000)	1357833	50.0000	
	37 Dibromomethane	93	5.430	5.430	(1.058)	212138	47.0742	47.074
	38 1,2-Dichloropropane	63	5.526	5.520	(1.077)	434674	47.0605	47.061
	39 Bromodichloromethane	83	5.599	5.599	(1.092)	549338	51.8784	51.878
	40 2-Chloroethyl Vinyl Ether	63	6.137	6.137	(1.196)	272734	49.4507	49.451
	41 Cis 1,3-dichloropropene	75	6.148	6.148	(1.198)	683375	50.6927	50.693
$	42 d8-Toluene	98	6.306	6.306	(1.229)	1824582	49.9980	49.998
	43 Toluene	92	6.346	6.346	(1.237)	1048694	48.7104	48.710
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	429654	50.4913	50.491
	45 4-Methyl-2-Pentanone	58	6.714	6.719	(1.309)	188149	47.6013	47.601(Q)
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.309)	583174	47.1193	47.119(Q)
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.334)	316067	46.5443	46.544
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	390211	51.2429	51.243
	49 1,3-Dichloropropane	76	7.064	7.064	(0.928)	581450	46.6024	46.602
	50 1,2-Dibromoethane	107	7.161	7.161	(1.396)	303927	45.8206	45.821
	51 2-Hexanone	43	7.432	7.432	(0.976)	317773	47.2892	47.289
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1400276	50.0000	
	53 Chlorobenzene	112	7.630	7.630	(1.002)	1008553	46.5444	46.544
	54 Ethyl Benzene	91	7.681	7.681	(1.009)	1970248	52.0721	52.072
	55 1,1,1,2-Tetrachloroethane	131	7.698	7.698	(1.011)	369350	48.3423	48.342
	56 m,p-xylene	106	7.811	7.811	(1.026)	1441335	101.131	101.13(Q)
	57 o-Xylene	106	8.179	8.173	(1.074)	654890	47.4155	47.415(Q)
	58 Styrene	104	8.224	8.224	(1.080)	1196666	51.8135	51.814
	59 Bromoform	173	8.218	8.219	(0.848)	265918	47.2664	47.266
	60 Isopropyl Benzene	105	8.467	8.462	(0.873)	1738057	48.1459	48.146
$	62 4-Bromofluorobenzene	95	8.688	8.688	(1.141)	748701	50.7395	50.739
	63 Bromobenzene	156	8.767	8.762	(0.904)	427970	46.3588	46.359
	64 N-Propyl Benzene	91	8.835	8.829	(0.911)	2105081	49.2935	49.294

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.897	8.892	(0.918)	410391	44.3490	44.349
66	2-Chloro Toluene	91	8.942	8.943	(0.922)	1254262	46.9026	46.903
67	1,3,5-Trimethyl Benzene	105	9.027	9.022	(0.931)	1601513	52.7223	52.722
68	1,2,3-Trichloropropane	110	8.993	8.993	(0.928)	124921	43.3927	43.393
69	Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.933)	137915	37.7461	37.746(R)
70	4-Chloro Toluene	91	9.095	9.095	(0.938)	1280559	46.4512	46.451
71	T-Butyl Benzene	119	9.299	9.299	(0.959)	1280138	48.0457	48.046
72	1,2,4-Trimethylbenzene	105	9.367	9.361	(0.966)	1575503	52.9994	52.999
73	S-Butyl Benzene	105	9.463	9.463	(0.976)	1914881	49.2848	49.285
74	4-Isopropyl Toluene	119	9.610	9.604	(0.991)	1645725	51.8032	51.803
75	1,3-Dichlorobenzene	146	9.621	9.621	(0.992)	796643	46.0909	46.091
* 76	d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	765423	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.712	9.706	(1.002)	866677	48.3287	48.329
78	N-Butyl Benzene	91	10.000	9.989	(1.032)	1687460	55.3630	55.363
$ 79	d4-1,2-Dichlorobenzene	152	10.079	10.080	(1.040)	717525	49.5653	49.565(Q)
80	1,2-Dichlorobenzene	146	10.091	10.085	(1.041)	746321	44.2488	44.249
81	1,2-Dibromo 3-Chloropropane	75	10.849	10.838	(1.119)	79766	43.0492	43.049
82	Hexachloro 1,3-Butadiene	225	11.533	11.516	(1.190)	355979	49.4006	49.401
83	1,2,4-Trichlorobenzene	180	11.516	11.505	(1.188)	601836	50.0856	50.086
84	Naphthalene	128	11.833	11.816	(1.221)	1333797	43.8034	43.803
85	1,2,3-Trichlorobenzene	180	12.020	11.997	(1.240)	540280	47.3861	47.386

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: icv0426.d
Lab Smp Id: ICV0426
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 26-APR-2013
Calibration Time: 11:00
Client Smp ID: ICV0426
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	656923	328462	1313846	624839	-4.88
35 1,4-Difluorobenze	1427826	713913	2855652	1357833	-4.90
52 d5-Chlorobenzene	1483267	741634	2966534	1400276	-5.60
76 d4-1,4-Dichlorobe	790697	395348	1581394	765423	-3.20

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	5.13	0.11
52 d5-Chlorobenzene	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	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: 26APR13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: ICV0426 Client Smp ID: ICV0426
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCS
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/26APR13.b/VO121012S.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	61.819	123.64*	80-120
2 Chloromethane	50.000	52.355	104.71	80-120
3 Vinyl Chloride	50.000	54.606	109.21	80-120
4 Bromomethane	50.000	54.946	109.89	80-120
5 Chloroethane	50.000	57.289	114.58	80-120
6 Trichlorofluoromet	50.000	55.495	110.99	80-120
12 Acrolein	50.000	39.292	78.58*	80-120
9 112Trichloro122Tri	50.000	58.058	116.12	80-120
14 Acetone	50.000	56.432	112.86	80-120
7 1,1-Dichloroethene	50.000	56.870	113.74	80-120
11 Bromoethane	50.000	53.146	106.29	80-120
10 Iodomethane	50.000	55.077	110.15	80-120
13 Methylene Chloride	50.000	58.739	117.48	80-120
8 Carbon Disulfide	50.000	53.188	106.38	80-120
18 Acrylonitrile	50.000	49.117	98.23	80-120
15 Trans-1,2-Dichloro	50.000	63.007	126.01*	80-120
16 Methyl tert butyl	50.000	48.025	96.05	80-120
19 Vinyl Acetate	50.000	22.622	45.24*	80-120
17 1,1-Dichloroethane	50.000	48.534	97.07	80-120
29 2-Butanone	50.000	45.238	90.48	80-120
22 2,2-Dichloropropan	50.000	50.302	100.60	80-120
20 Cis-1,2-Dichloroet	50.000	51.206	102.41	80-120
24 Chloroform	50.000	48.376	96.75	80-120
23 Bromochloromethane	100.00	95.368	95.37	80-120
26 1,1,1-Trichloroeth	50.000	50.292	100.58	80-120
28 1,1-Dichloropropen	50.000	49.625	99.25	80-120
25 Carbon Tetrachlori	50.000	51.315	102.63	80-120
33 1,2-Dichloroethane	50.000	45.752	91.50	80-120
30 Benzene	50.000	49.184	98.37	80-120
34 Trichloroethene	50.000	50.550	101.10	80-120
38 1,2-Dichloropropan	50.000	47.061	94.12	80-120
39 Bromodichlorometha	50.000	51.878	103.76	80-120
37 Dibromomethane	50.000	47.074	94.15	80-120

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
40 2-Chloroethyl Viny	50.000	49.451	98.90	80-120
45 4-Methyl-2-Pentano	50.000	47.601	95.20	80-120
41 Cis 1,3-dichloropr	50.000	50.693	101.39	80-120
43 Toluene	50.000	48.710	97.42	80-120
46 Trans 1,3-Dichloro	50.000	47.119	94.24	80-120
51 2-Hexanone	50.000	47.289	94.58	80-120
47 1,1,2-Trichloroeth	50.000	46.544	93.09	80-120
49 1,3-Dichloropropan	50.000	46.602	93.20	80-120
44 Tetrachloroethene	50.000	50.491	100.98	80-120
48 Chlorodibromometha	50.000	51.243	102.49	80-120
50 1,2-Dibromoethane	50.000	45.821	91.64	80-120
53 Chlorobenzene	50.000	46.544	93.09	80-120
55 1,1,1,2-Tetrachlor	50.000	48.342	96.68	80-120
54 Ethyl Benzene	50.000	52.072	104.14	80-120
56 m,p-xylene	100.00	101.13	101.13	80-120
57 o-Xylene	50.000	47.415	94.83	80-120
58 Styrene	50.000	51.814	103.63	80-120
60 Isopropyl Benzene	50.000	48.146	96.29	80-120
59 Bromoform	50.000	47.266	94.53	80-120
65 1,1,2,2-Tetrachlor	50.000	44.349	88.70	80-120
68 1,2,3-Trichloropro	50.000	43.393	86.79	80-120
69 Trans-1,4-Dichloro	50.000	37.746	75.49*	80-120
64 N-Propyl Benzene	50.000	49.294	98.59	80-120
63 Bromobenzene	50.000	46.359	92.72	80-120
67 1,3,5-Trimethyl Be	50.000	52.722	105.44	80-120
66 2-Chloro Toluene	50.000	46.903	93.81	80-120
70 4-Chloro Toluene	50.000	46.451	92.90	80-120
71 T-Butyl Benzene	50.000	48.046	96.09	80-120
72 1,2,4-Trimethylben	50.000	52.999	106.00	80-120
73 S-Butyl Benzene	50.000	49.285	98.57	80-120
74 4-Isopropyl Toluen	50.000	51.803	103.61	80-120
75 1,3-Dichlorobenzen	50.000	46.091	92.18	80-120
77 1,4-Dichlorobenzen	50.000	48.329	96.66	80-120
78 N-Butyl Benzene	50.000	55.363	110.73	80-120
80 1,2-Dichlorobenzen	50.000	44.249	88.50	80-120
81 1,2-Dibromo 3-Chlo	50.000	43.049	86.10	80-120
83 1,2,4-Trichloroben	50.000	50.086	100.17	80-120
82 Hexachloro 1,3-But	50.000	49.401	98.80	80-120
84 Naphthalene	50.000	43.803	87.61	80-120
85 1,2,3-Trichloroben	50.000	47.386	94.77	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	50.091	100.18	70-130

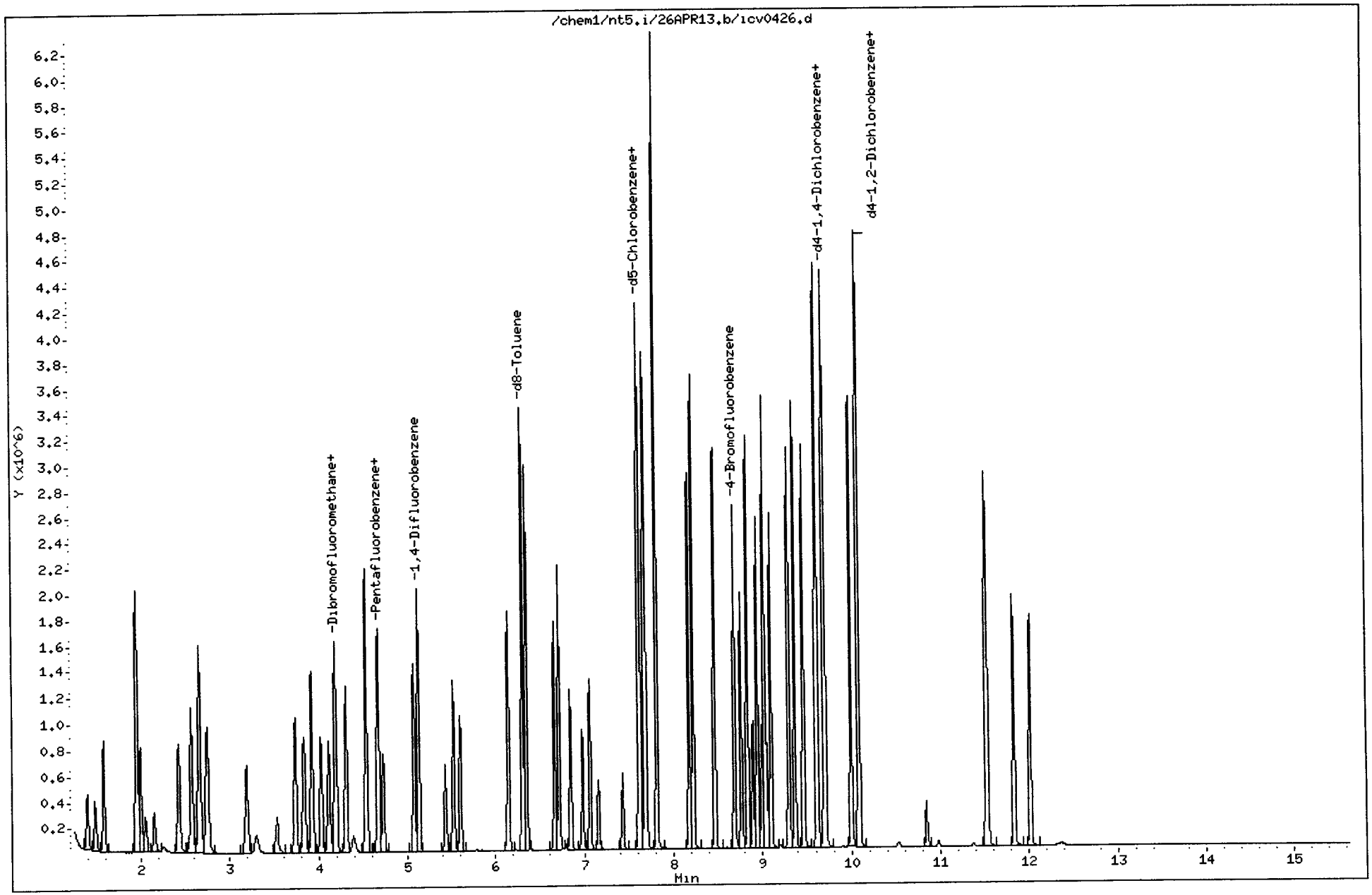
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	48.945	97.89	80-149
$ 42 d8-Toluene	50.000	49.998	100.00	77-120
$ 62 4-Bromofluorobenze	50.000	50.739	101.48	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.565	99.13	80-120

Data File: /chem1/nt5.i/26APR13.b/icv0426.d
Date : 26-APR-2013 13:49
Client ID: ICV0426
Sample Info: ICV0426,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

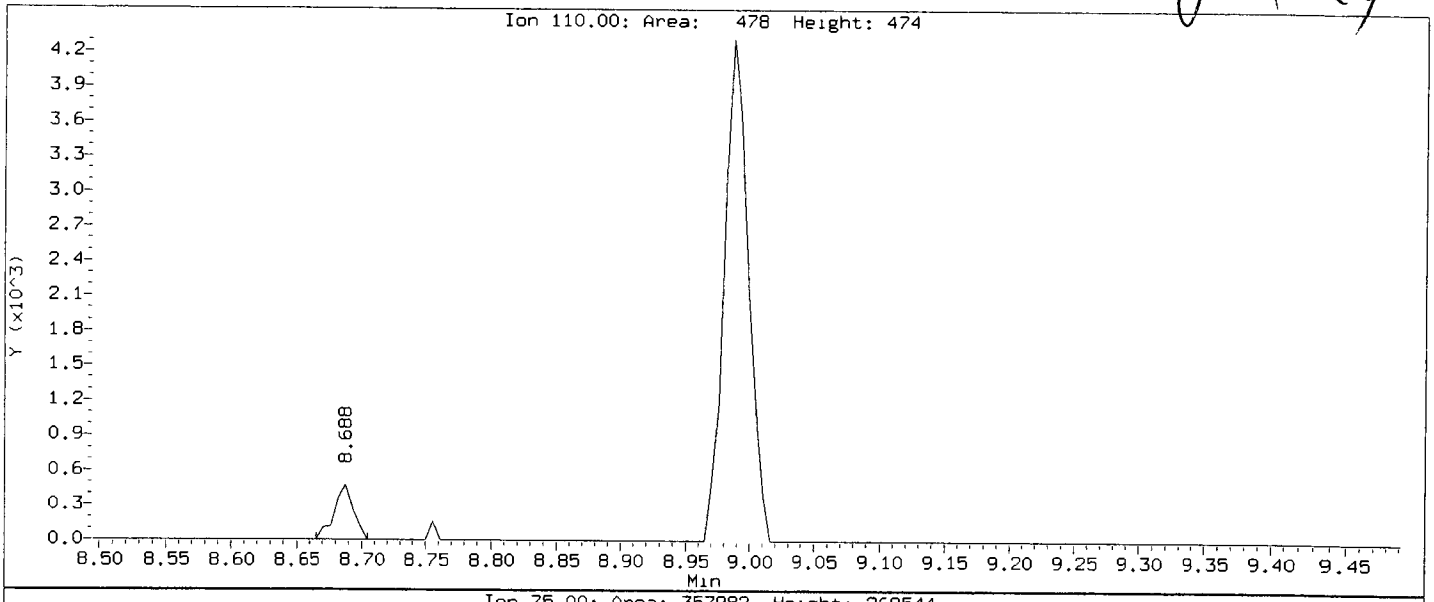
Column phase: RTXVMS

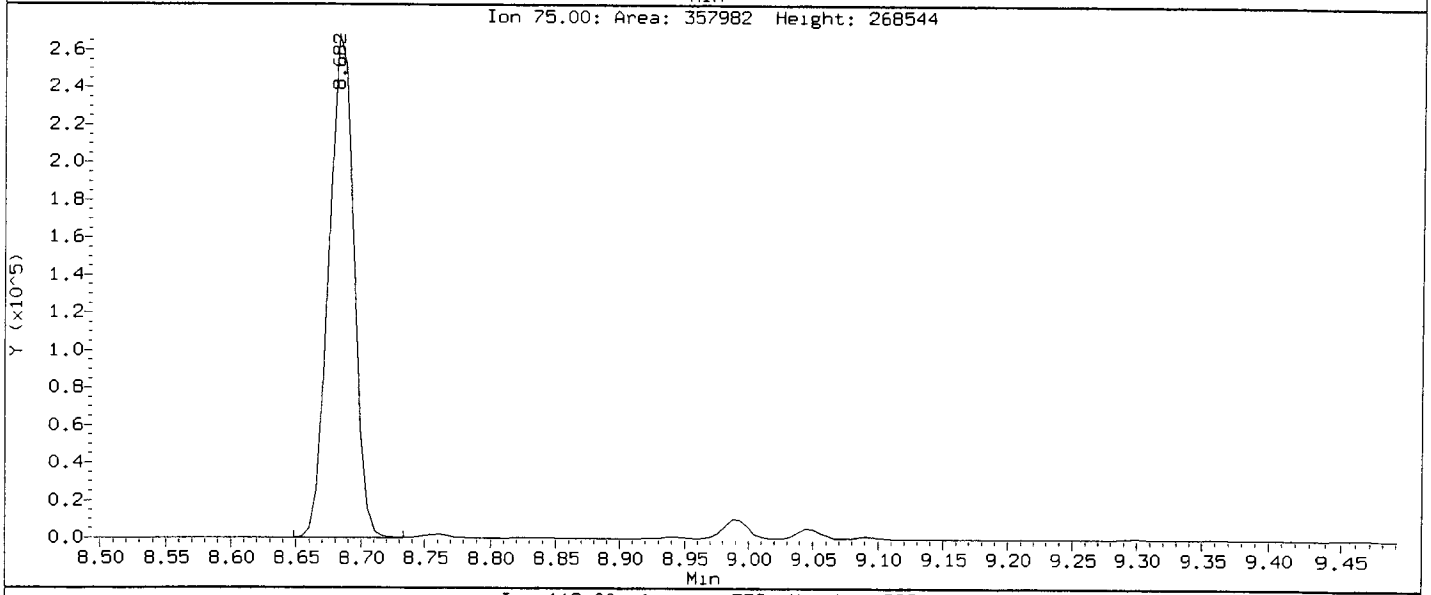


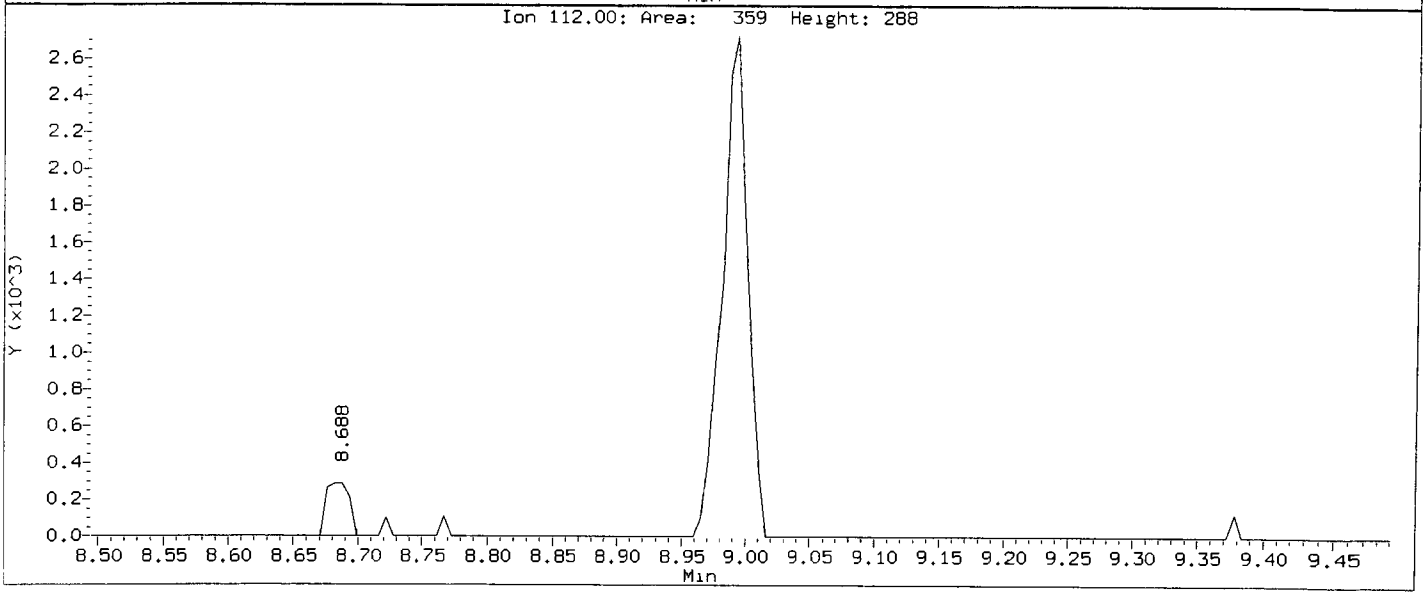
Data File: /chem1/nt5.1/26APR13.b/0020426.d
Injection Date: 26-APR-2013 12:12
Instrument: nt5.1
Client Sample ID: VSTD2

Compound: 1,2,3-Trichloropropane
CAS Number:

if 4/26



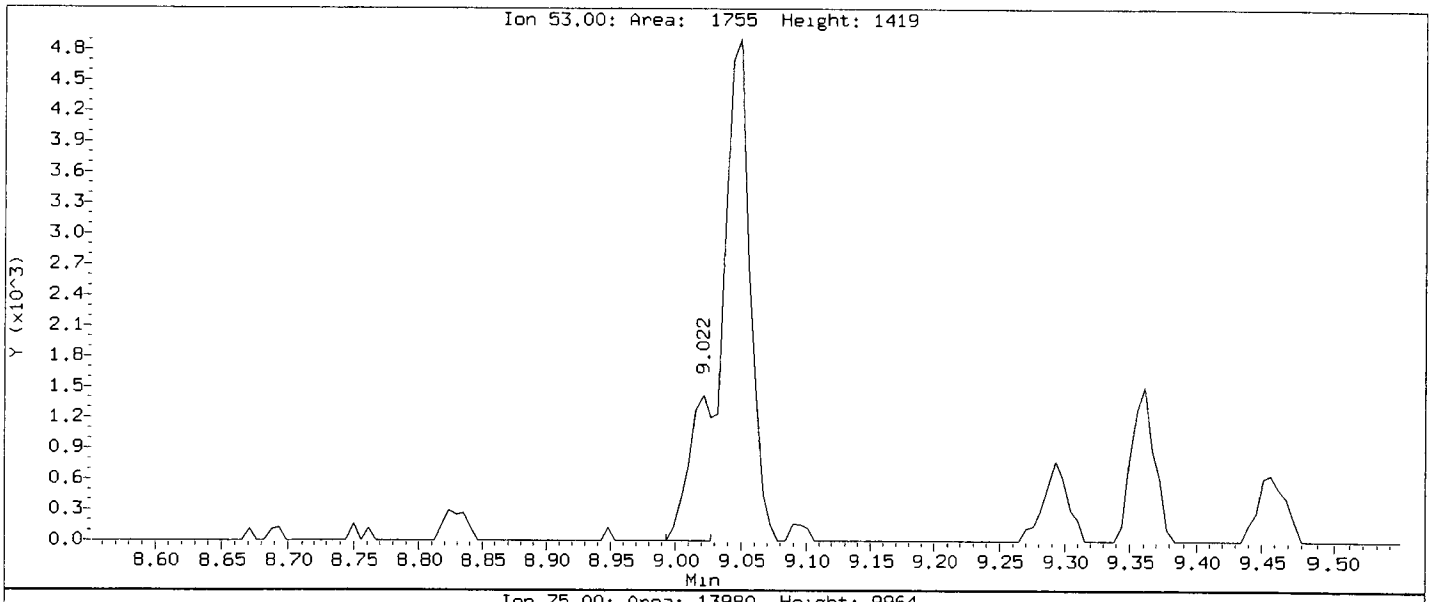


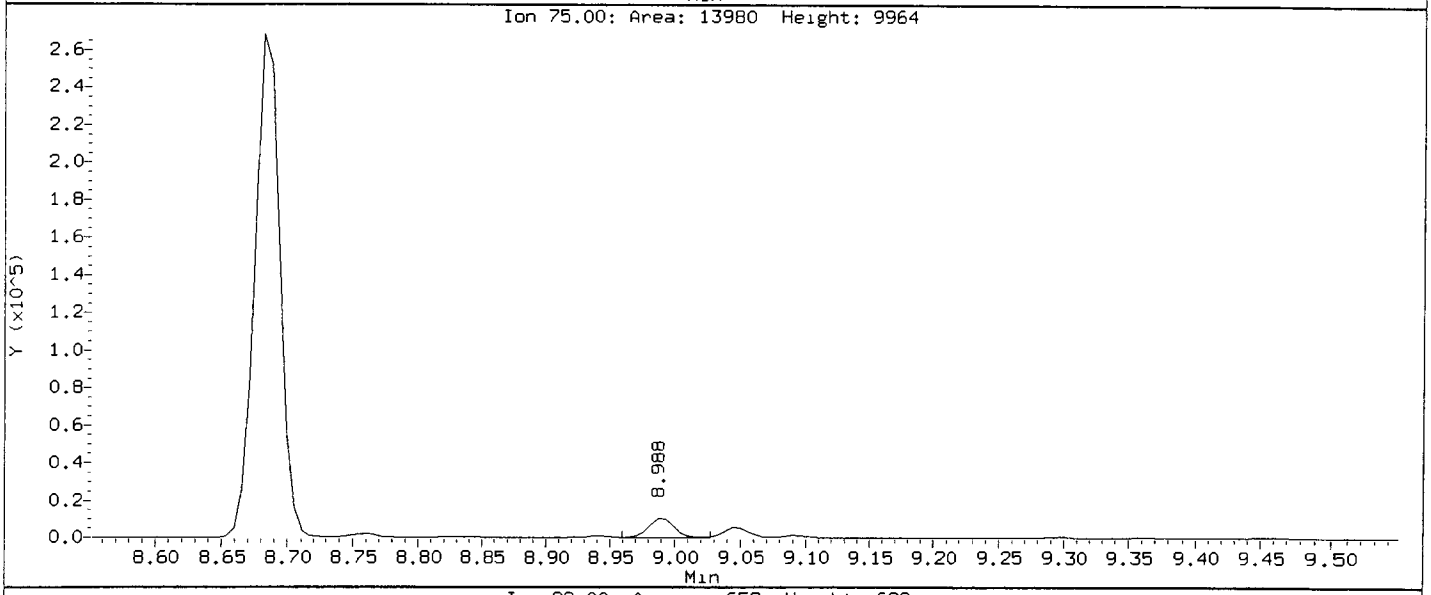


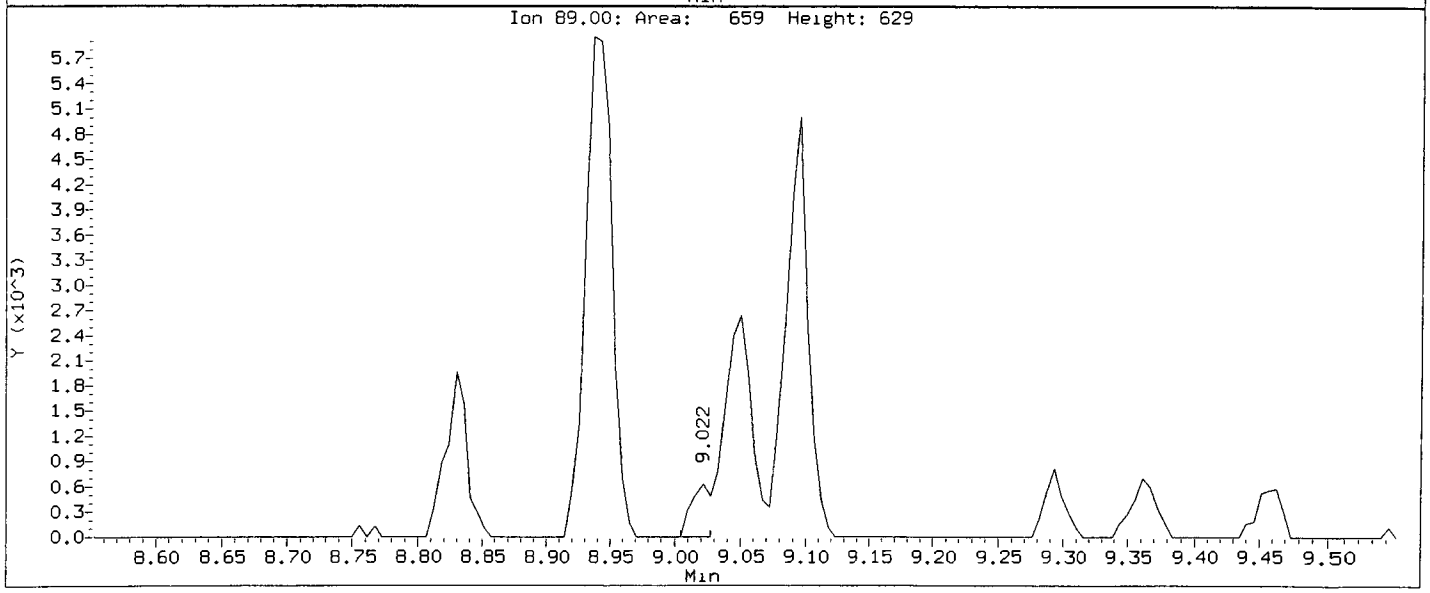
Data File: /chem1/nt5.1/26APR13.b/0020426.d
Injection Date: 26-APR-2013 12:12
Instrument: nt5.1
Client Sample ID: VSTD2

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:

1/24/14



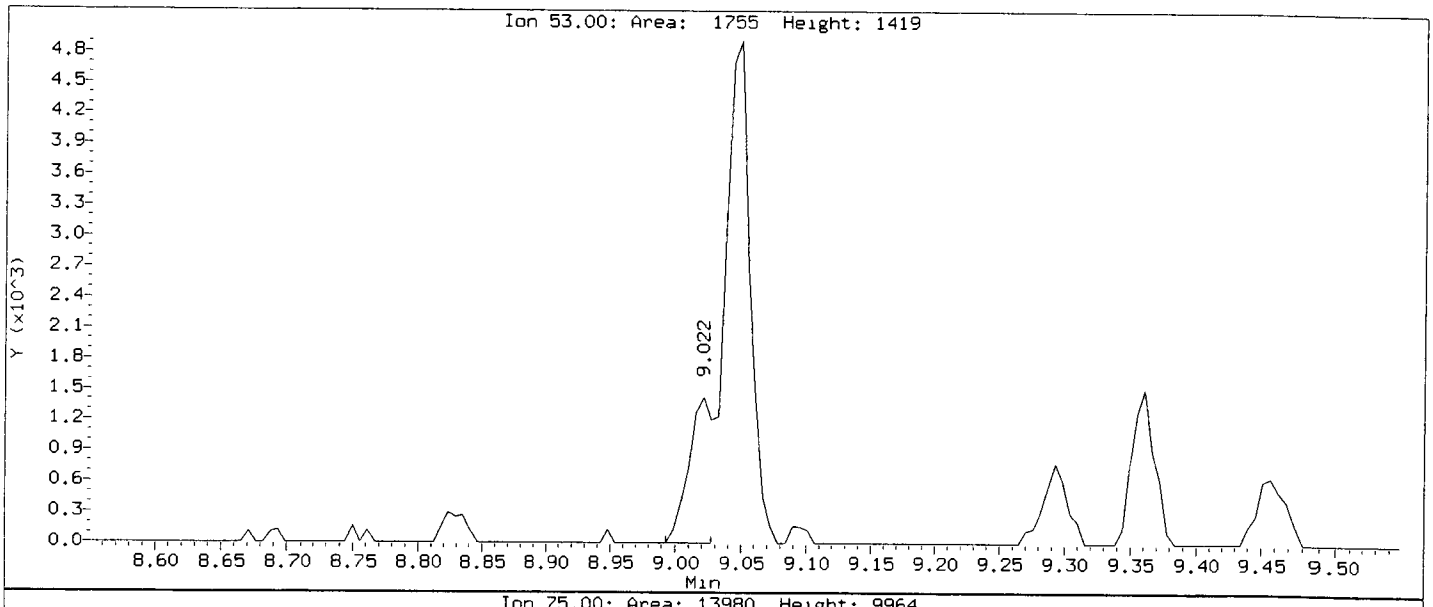


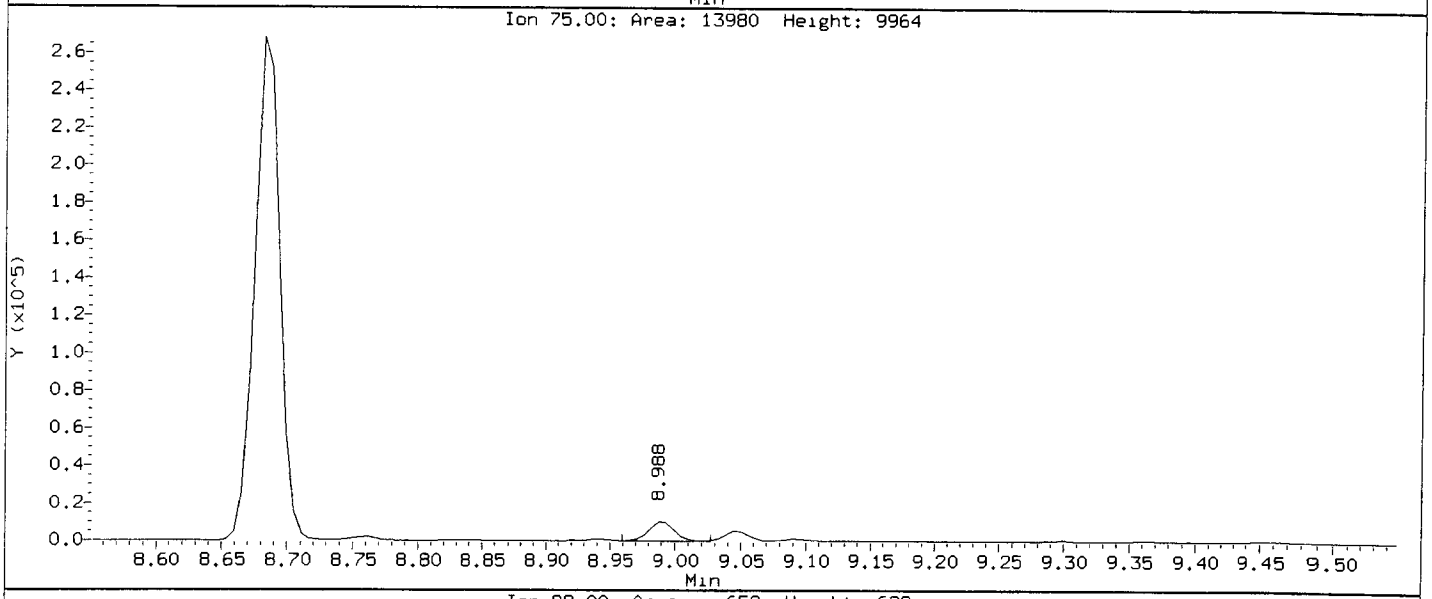


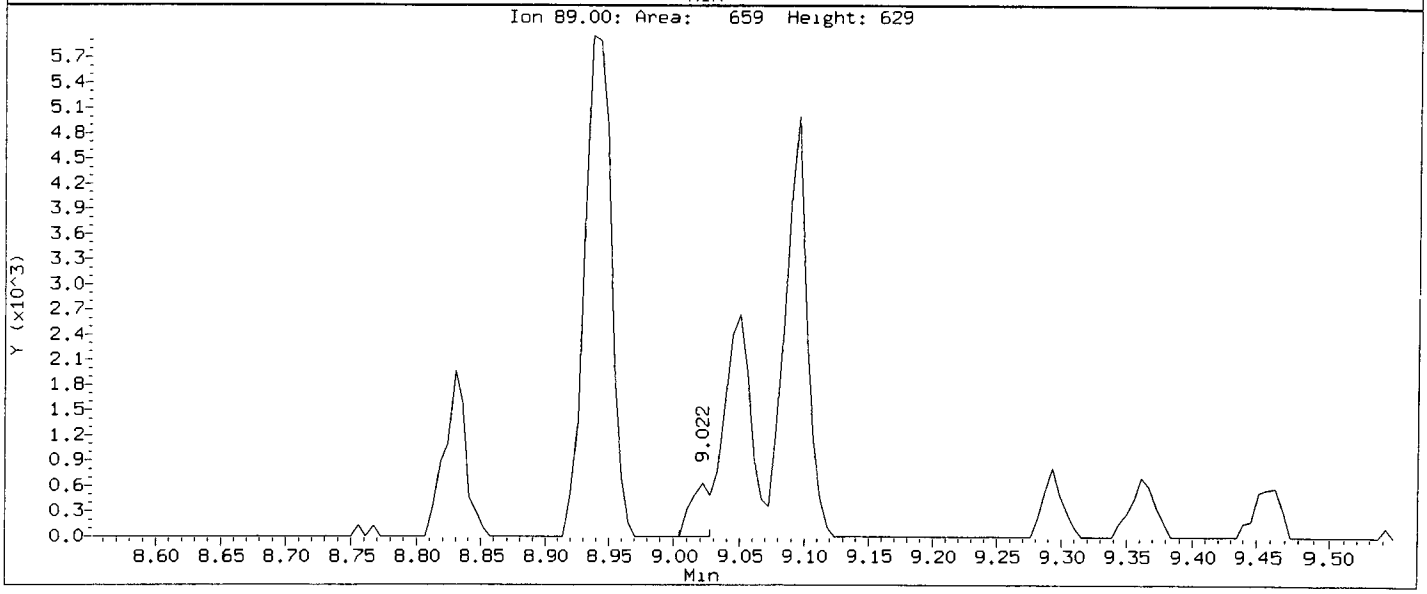
Data File: /chem1/nt5.i/26APR13.b/0020426.d
Injection Date: 26-APR-2013 12:12
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:

1/24/13

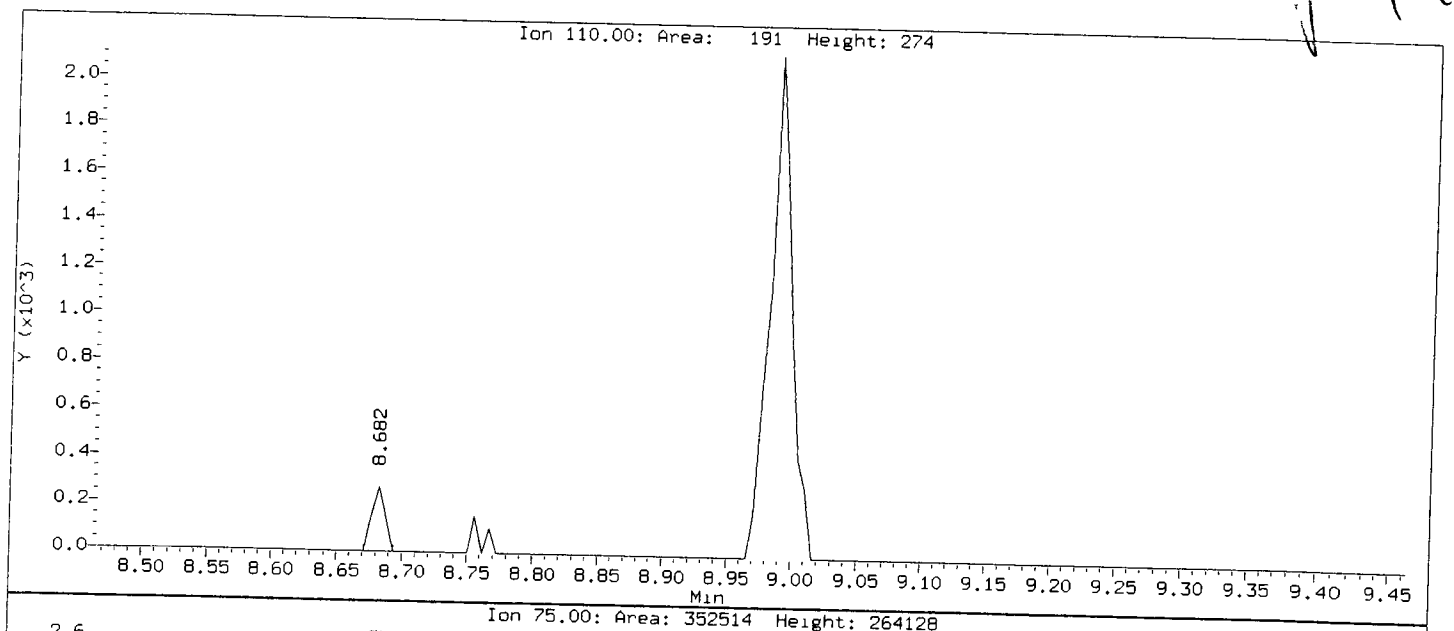


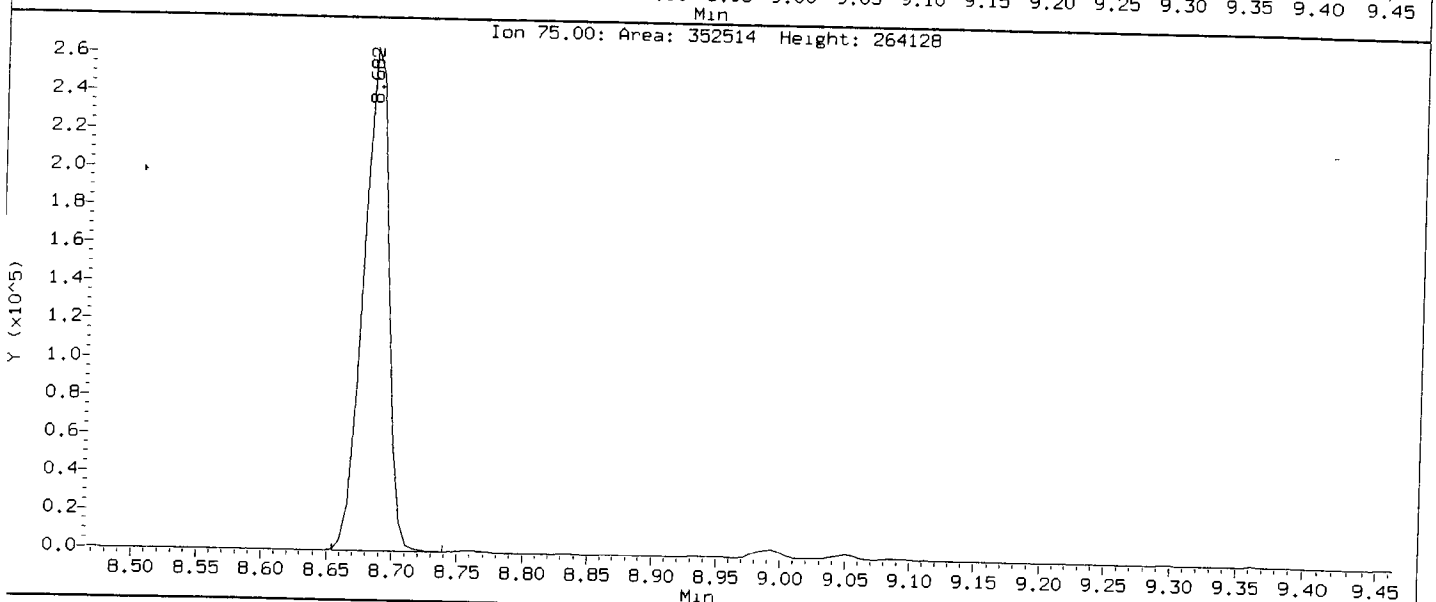


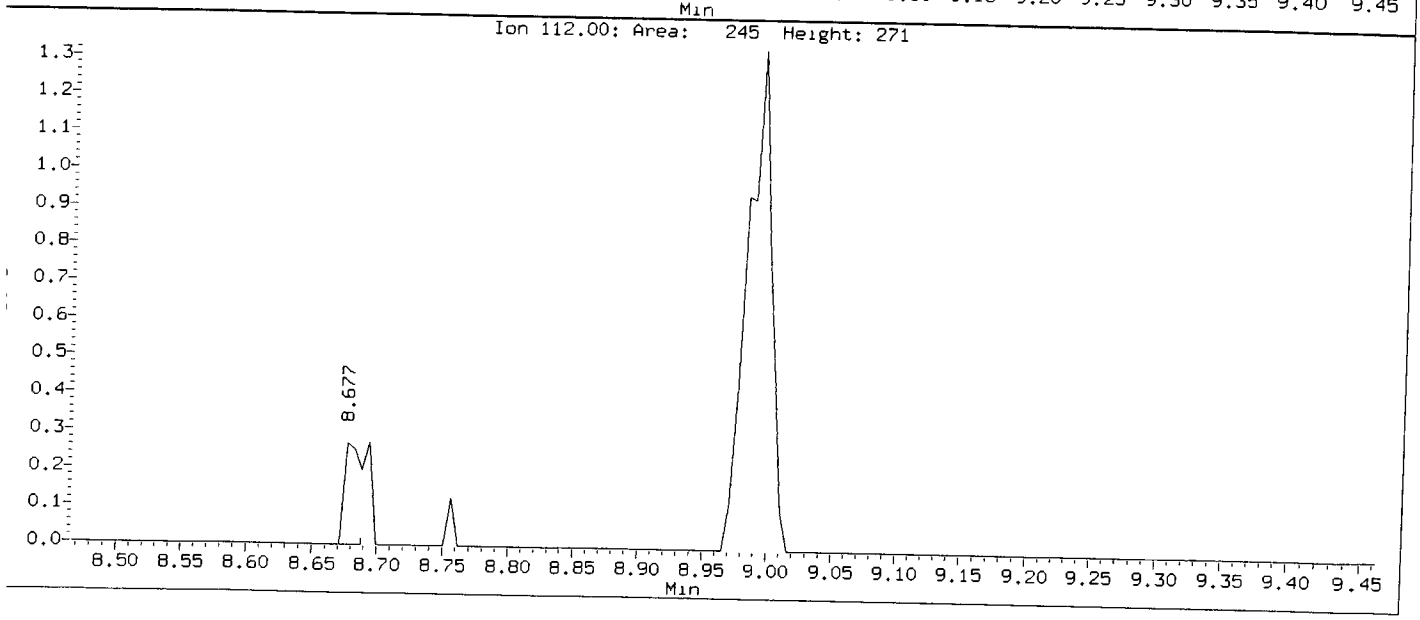


Data File: /chem1/nt5.1/26APR13.b/0010426.d
Injection Date: 26-APR-2013 09:25
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:







Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 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: 4/26/13 Analysis Start Date: 4/26/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / Y / N /	Method Blank In Control?	Y / N / ✓
BFB Tune Meets Criteria?	NA / Y / N /	Surrogate Recovery in Control?	Y / N / ✓
Internal STD within 50-200%?	NA / Y / N / ✓	LCS / LCSD Recovery Met?	Y / N / ✓
CCAL Meets %D	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA /
ICAL Q flag applied?	NA / Y / N / ✓	MS / MSD Recovery Met?	NA / Y / N /
CCAL Q Flag applied	NA / Y / N /	MS / MSD RPD ≤30%?	NA /
Manual Integrations?	Y / N /	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N /

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

Sample Annotated

(Review 1)Analyst: [signature] **Date:** 5/1/13

(Review 2)Reviewer: MW **Date:** 5/1

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 4/29/13 Analysis: 8260C Analyst: LP

GC Program: WAWT Column No: 923815L Column Type: RTX-624

Instrument Tune (.U or .CT.): PAT(100) EM Voltage: 1482

Inj. Vol: 5 Calibration File: wb04z4 Curve Date: 4/29/13

IS/SS	Ical/Ccal	LCS/ICV
WJ794-L	WJ797-1	WJ797-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/29APR13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	1020	bfb0429.d	BFB0429	BFB0429	1										
2	1136	cc0429.d	CC0429	VSTD50	1	4.67	606267	5.12	1424290	7.61	1500192	9.69	810912		
3	1218	cc0429a.d	CC0429	VSTD50	1	4.67	564244	5.12	1325979	7.61	1398233	9.69	743756		
4	1241	lcs0429.d	LCS0429	LCS0429	1	4.67	588940	5.12	1364770	7.61	1454651	9.69	786182		
5	1305	lcs0429a.d	LCS0429	LCS0429	1	4.67	563971	5.12	1317747	7.61	1375261	9.69	720340		
6	1329	mb0429.d	MB0429	MB0429	1	4.67	580577	5.12	1363752	7.61	1438655	9.69	746987		
7	1449	wn07s2.d	WN07S	PZ03-130417-DNAPL	1	4.67	550469	5.12	1300616	7.61	1381686	9.69	741611		
8	1513	wn07x2.d	WN07X	WC-130417-2	1	4.68	564294	5.12	1318463	7.61	1403239	9.69	732434		
9	1536	wn31a2.d	WN31A	ES-TS-INF-20130424-	1	4.67	594966	5.12	1392769	7.61	1464104	9.69	758489		
10	1631	wn31d.d	WN31D	ES-TB-001-20130424-	1	4.67	566804	5.12	1332759	7.61	1415729	9.69	749043		
11	1655	wn31a3.d	WN31A	ES-TS-INF-20130424-	1	4.67	582218	5.12	1375058	7.61	1468491	9.69	787882		
12	1719	wn07xms.d	WN07XMS	WC-130417-2 MS	1	4.68	553226	5.13	1312409	7.61	1394738	9.69	749804		

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 perio

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/29APR13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 29-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1020	bfb0429.d	BFB0429	BFB0429	1	NO MANUAL INTEGRATION
1218	cc0429a.d	CC0429	VSTD50	1	Acetone,
1241	lcs0429.d	LCS0429	LCS0429	1	Acetone,
1305	lcs0429a.d	LCS0429	LCS0429	1	Acetone,
1329	mb04291.d	MB0429	MB0429	1	NO MANUAL INTEGRATION
1655	wn31a3.d	WN31A	ES-TS-INF-	1	NO MANUAL INTEGRATION
1631	wn31d.d	WN31D	ES-TB-001-	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/29APR13.b

Instrument: nt5.i Date: 29-APR-2013 Method: VO121012S.m

INITIAL CAL: 26-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 29-APR-2013

Compound	%D
Methylene Chloride	32.5
Trans-1,2-Dichloroethene	26.2

Data File: /chem1/nt5.1/29APR13.b/bfb0429.d

Date : 29-APR-2013 10:20

Client ID: BFB0429

Instrument: nt5.1

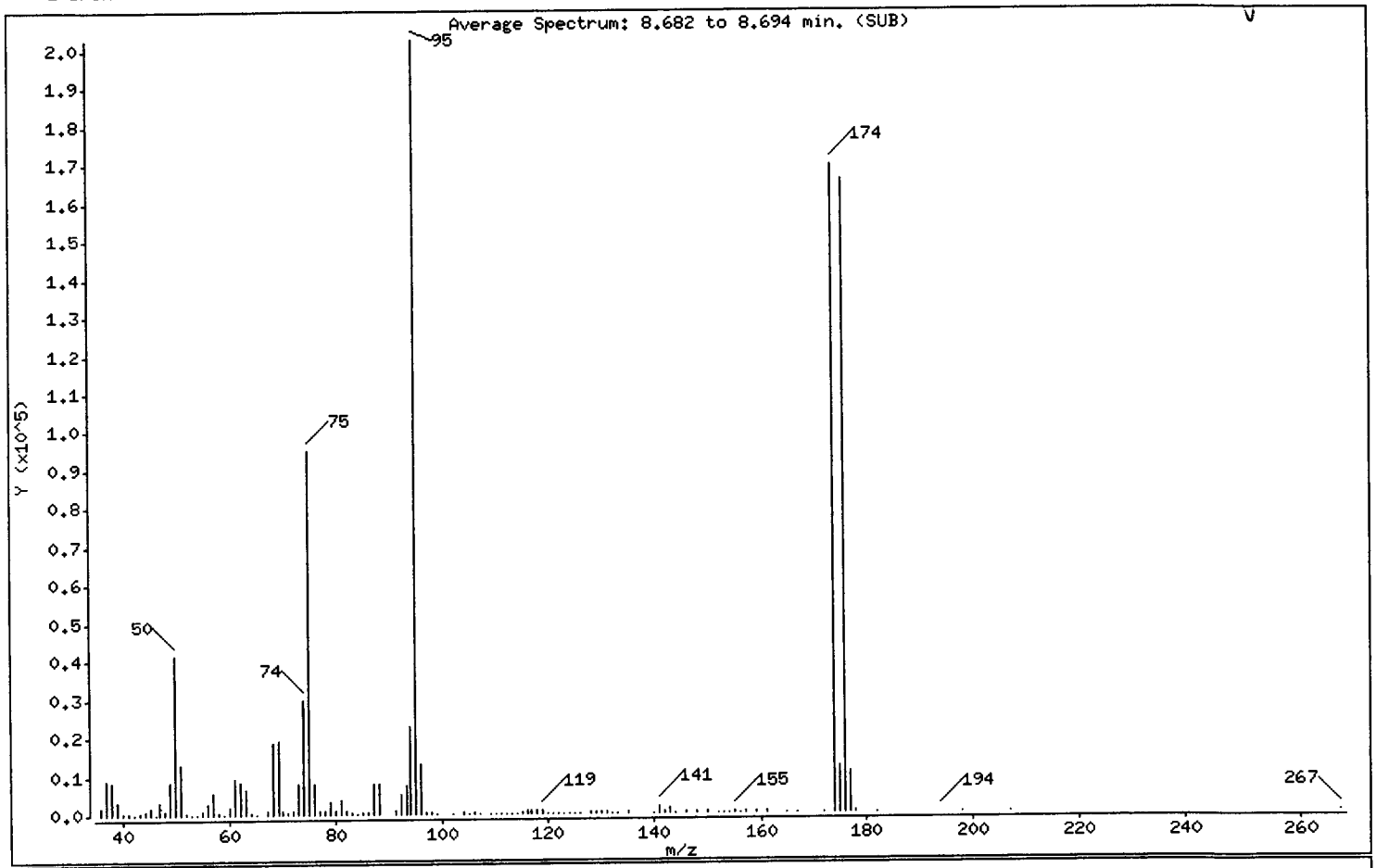
Sample Info: BFB0429,BFB0429,,1,29APR13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.41
75	30.00 - 66.00% of mass 95	46.82
96	5.00 - 9.00% of mass 95	6.34
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	83.76
175	4.00 - 9.00% of mass 174	5.98 (7.13)
176	95.00 - 101.00% of mass 174	81.88 (97.75)
177	5.00 - 9.00% of mass 176	5.21 (6.37)

Data File: /chem1/nt5.i/29APR13.b/bfb0429.d

Date : 29-APR-2013 10:20

Client ID: BFB0429

Instrument: nt5.i

Sample Info: BFB0429,BFB0429,,1,29APR13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0429.d

Spectrum: Average Spectrum: 8.682 to 8.694 min. (SUB)

Location of Maximum: 95.00

Number of points: 132

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1637	71.00	626	110.00	88	147.00	57
37.00	9063	72.00	971	111.00	189	148.00	650
38.00	8279	73.00	7890	112.00	75	149.00	134
39.00	3329	74.00	29824	113.00	162	150.00	300
40.00	357	75.00	94952	114.00	36	152.00	67
41.00	240	76.00	8110	115.00	480	153.00	186
42.00	215	77.00	1039	116.00	759	154.00	116
43.00	538	78.00	1067	117.00	936	155.00	402
44.00	1097	79.00	3360	118.00	705	156.00	80
45.00	1821	80.00	824	119.00	1120	157.00	382
46.00	117	81.00	3760	120.00	135	159.00	256
47.00	3327	82.00	723	121.00	58	160.00	146
48.00	1143	83.00	464	122.00	101	161.00	234
49.00	8435	84.00	135	123.00	188	165.00	192
50.00	41392	85.00	298	124.00	78	166.00	64
51.00	13016	86.00	249	125.00	87	167.00	42
52.00	637	87.00	7762	126.00	138	171.00	133
53.00	121	88.00	7860	127.00	113	172.00	146
54.00	81	91.00	773	128.00	531	174.00	169856
55.00	854	92.00	4945	129.00	385	175.00	12118
56.00	2755	93.00	7567	130.00	550	176.00	166016
57.00	5654	94.00	22648	131.00	294	177.00	10573
58.00	269	95.00	202752	132.00	92	178.00	360
59.00	109	96.00	12852	133.00	31	180.00	4
60.00	1841	97.00	448	134.00	49	181.00	81
61.00	9209	98.00	282	135.00	276	182.00	19
62.00	8526	99.00	10	137.00	233	194.00	157
63.00	6459	101.00	33	140.00	23	198.00	33
64.00	591	102.00	5	141.00	1771	207.00	34
65.00	118	104.00	680	142.00	574	267.00	42
67.00	715	105.00	59	143.00	1584		
68.00	18528	106.00	600	144.00	180		
69.00	19016	107.00	109	145.00	174		
70.00	1155	109.00	36	146.00	494		

Data File: /chem1/nt5.i/29APR13.b/bfb0429.d

Date : 29-APR-2013 10:20

Client ID: BFB0429

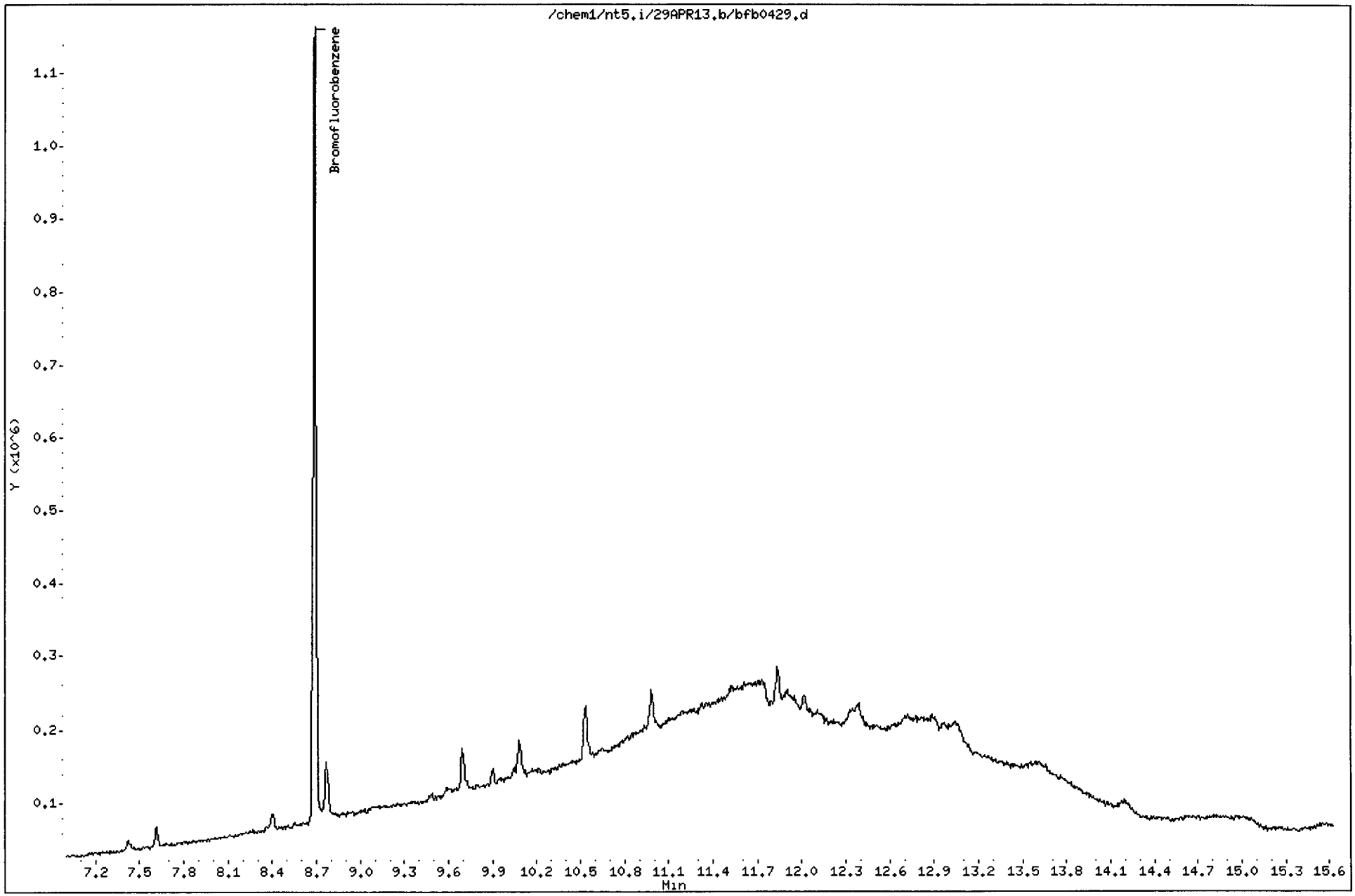
Sample Info: BFB0429,BFB0429,,1,29APR13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/29APR13.b/cc0429a.d
Lab Smp Id: CC0429 Client Smp ID: VSTD50
Inj Date : 29-APR-2013 12:18
Operator : PB Inst ID: nt5.i
Smp Info : CC0429,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/29APR13.b/VO121012S.m
Meth Date : 29-Apr-2013 13:28 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.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)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.000	1.000	(0.214)	316003	50.0000	53.766
2 Chloromethane	50	1.244	1.244	(0.266)	425145	50.0000	52.991
3 Vinyl Chloride	62	1.176	1.176	(0.252)	470641	50.0000	51.635
4 Bromomethane	94	1.385	1.385	(0.297)	236063	50.0000	55.507
5 Chloroethane	64	1.476	1.476	(0.316)	278347	50.0000	56.782
6 Trichlorofluoromethane	101	1.572	1.572	(0.337)	508809	50.0000	53.249
7 1,1-Dichloroethene	96	1.934	1.934	(0.414)	279747	50.0000	48.522
8 Carbon Disulfide	76	1.939	1.939	(0.416)	954225	50.0000	48.844
9 112Trichloro122Trifluoroethane	101	1.979	1.979	(0.424)	255139	50.0000	48.996
10 Iodomethane	142	2.036	2.036	(0.436)	270784	50.0000	53.185
11 Bromoethane	108	2.137	2.137	(0.458)	186917	50.0000	51.994
12 Acrolein	56	2.239	2.239	(0.480)	361035	250.000	288.02
13 Methylene Chloride	84	2.415	2.415	(0.517)	352764	50.0000	66.263
14 Acetone	43	2.550	2.550	(0.547)	224602	250.000	272.86(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.556	(0.548)	362683	50.0000	63.110
	16 Methyl tert butyl ether	73	2.731	2.731	(0.585)	1071622	50.0000	51.505
	17 1,1-Dichloroethane	63	3.178	3.178	(0.681)	723988	50.0000	51.753
	18 Acrylonitrile	53	3.280	3.280	(0.703)	156945	50.0000	50.877
	19 Vinyl Acetate	43	3.518	3.518	(0.754)	949657	50.0000	52.158
	20 Cis-1,2-Dichloroethene	96	3.727	3.727	(0.799)	379796	50.0000	51.285
	22 2,2-Dichloropropane	77	3.829	3.829	(0.821)	568163	50.0000	53.229
	23 Bromochloromethane	128	3.914	3.914	(0.839)	181007	50.0000	55.285
	24 Chloroform	83	4.015	4.015	(0.861)	621398	50.0000	50.748
	25 Carbon Tetrachloride	117	4.106	4.106	(0.801)	493779	50.0000	48.204
$	27 Dibromofluoromethane	111	4.185	4.185	(0.897)	453271	50.0000	56.029
	26 1,1,1-Trichloroethane	97	4.180	4.180	(0.896)	579374	50.0000	51.262
	28 1,1-Dichloropropene	75	4.298	4.298	(0.839)	544195	50.0000	47.732
	29 2-Butanone	72	4.372	4.372	(0.937)	235354	250.000	259.36
	30 Benzene	78	4.530	4.530	(0.884)	1589979	50.0000	48.580
*	31 Pentafluorobenzene	168	4.666	4.666	(1.000)	564244	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.999)	481267	50.0000	53.548
	33 1,2-Dichloroethane	62	4.723	4.723	(0.922)	509514	50.0000	45.664
	34 Trichloroethene	95	5.068	5.068	(0.989)	381092	50.0000	47.908
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1325979	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	204144	50.0000	46.389
	38 1,2-Dichloropropane	63	5.520	5.520	(1.077)	429446	50.0000	47.611
	39 Bromodichloromethane	83	5.594	5.594	(1.092)	485808	50.0000	46.981
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.131	(1.196)	265561	50.0000	49.307
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.199)	640460	50.0000	48.651
$	42 d8-Toluene	98	6.301	6.301	(1.230)	1811538	50.0000	50.833
	43 Toluene	92	6.346	6.346	(1.238)	1004719	50.0000	47.789
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	407172	50.0000	47.919
	45 4-Methyl-2-Pentanone	58	6.714	6.714	(1.310)	941019	250.000	243.80
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	588265	50.0000	48.672
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.336)	314401	50.0000	47.411
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	356792	50.0000	46.923
	49 1,3-Dichloropropane	76	7.059	7.059	(0.927)	577255	50.0000	46.334
	50 1,2-Dibromoethane	107	7.155	7.155	(1.396)	308392	50.0000	47.611
	51 2-Hexanone	43	7.427	7.427	(0.975)	1626351	250.000	242.38
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1398233	50.0000	
	53 Chlorobenzene	112	7.625	7.625	(1.001)	1034149	50.0000	47.795
	54 Ethyl Benzene	91	7.675	7.675	(1.008)	1878888	50.0000	49.730
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.692	(1.010)	360242	50.0000	47.219
	56 m,p-xylene	106	7.811	7.811	(1.026)	1414744	100.000	99.410
	57 o-Xylene	106	8.173	8.173	(1.074)	676914	50.0000	49.082
	58 Styrene	104	8.224	8.224	(1.080)	1149192	50.0000	49.831
	59 Bromoform	173	8.213	8.213	(0.847)	254854	50.0000	46.619
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	1755864	50.0000	50.056
$	62 4-Bromofluorobenzene	95	8.682	8.682	(1.140)	736372	50.0000	49.977
	63 Bromobenzene	156	8.762	8.762	(0.904)	417230	50.0000	46.512
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	2113526	50.0000	50.933

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.892	8.892	(0.917)	414092	50.0000	46.053
66	2-Chloro Toluene	91	8.943	8.943	(0.922)	1262587	50.0000	48.589
67	1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	1478715	50.0000	50.098
68	1,2,3-Trichloropropane	110	8.994	8.994	(0.928)	126173	50.0000	45.104
69	Trans-1,4-Dichloro 2-Butene	53	9.050	9.050	(0.933)	172488	50.0000	48.584
70	4-Chloro Toluene	91	9.095	9.095	(0.938)	1321726	50.0000	49.341
71	T-Butyl Benzene	119	9.299	9.299	(0.959)	1287293	50.0000	49.722
72	1,2,4-Trimethylbenzene	105	9.367	9.367	(0.966)	1463452	50.0000	50.664
73	S-Butyl Benzene	105	9.463	9.463	(0.976)	1930251	50.0000	51.128
74	4-Isopropyl Toluene	119	9.610	9.610	(0.991)	1610861	50.0000	52.183
75	1,3-Dichlorobenzene	146	9.621	9.621	(0.992)	819996	50.0000	48.824
* 76	d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	743756	50.0000	
77	1,4-Dichlorobenzene	146	9.706	9.706	(1.001)	833460	50.0000	47.830
78	N-Butyl Benzene	91	9.995	9.995	(1.031)	1564418	50.0000	52.821
$ 79	d4-1,2-Dichlorobenzene	152	10.080	10.080	(1.040)	715672	50.0000	50.877
80	1,2-Dichlorobenzene	146	10.085	10.085	(1.040)	774347	50.0000	47.248
81	1,2-Dibromo 3-Chloropropane	75	10.843	10.843	(1.118)	79298	50.0000	44.043
82	Hexachloro 1,3-Butadiene	225	11.528	11.528	(1.189)	345075	50.0000	49.282
83	1,2,4-Trichlorobenzene	180	11.511	11.511	(1.187)	589807	50.0000	50.514
84	Naphthalene	128	11.828	11.828	(1.220)	1342734	50.0000	45.382
85	1,2,3-Trichlorobenzene	180	12.009	12.009	(1.239)	542302	50.0000	48.949

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: cc0429a.d
Lab Smp Id: CC0429
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 29-APR-2013
Calibration Time: 12:18
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	656923	328462	1313846	564244	-14.11
35 1,4-Difluorobenze	1427826	713913	2855652	1325979	-7.13
52 d5-Chlorobenzene	1483267	741634	2966534	1398233	-5.73
76 d4-1,4-Dichlorobe	790697	395348	1581394	743756	-5.94

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	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/29APR13.b/cc0429a.d
Report Date: 29-Apr-2013 13:28

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0429a.d
Analysis Type: SOIL
Lab Sample ID: CC0429
Method: /chem1/nt5.i/29APR13.b/VO121012S.m

Injection Date: 29-APR-2013 12:18
Init. Cal. Date(s): 26-APR-2013 26-APR-2013
Init. Cal. Times: 09:25 12:12
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.52082	0.56005	0.56005	0.100	7.53104	20.00000	Averaged	
2 Chloromethane	0.71095	0.75348	0.75348	0.100	5.98207	20.00000	Averaged	
3 Vinyl Chloride	0.80770	0.83411	0.83411	0.100	3.26912	20.00000	Averaged	
4 Bromomethane	0.37686	0.41837	0.41837	0.100	11.01480	20.00000	Averaged	
5 Chloroethane	0.43439	0.49331	0.49331	0.100	13.56450	20.00000	Averaged	
6 Trichlorofluoromethane	0.84674	0.90175	0.90175	0.100	6.49723	20.00000	Averaged	
7 1,1-Dichloroethene	0.51089	0.49579	0.49579	0.100	-2.95518	20.00000	Averaged	
8 Carbon Disulfide	1.73118	1.69116	1.69116	0.010	-2.31197	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.46144	0.45218	0.45218	0.010	-2.00781	20.00000	Averaged	
10 Iodomethane	0.45117	0.47991	0.47991	0.010	6.36995	20.00000	Averaged	
11 Bromoethane	0.31857	0.33127	0.33127	0.100	3.98803	20.00000	Averaged	
12 Acrolein	0.11108	0.12797	0.12797	0.000	15.20962	20.00000	Averaged	
13 Methylene Chloride	66.26305	50.00000	0.62520	0.010	32.52610	20.00000	Quadratic	<-
14 Acetone	273	250	0.07961	0.001	9.14550	20.00000	Linear	
15 Trans-1,2-Dichloroethene	0.50925	0.64278	0.64278	0.010	26.21932	20.00000	Averaged	<-
16 Methyl tert butyl ether	1.84371	1.89922	1.89922	0.100	3.01077	20.00000	Averaged	
17 1,1-Dichloroethane	1.23966	1.28311	1.28311	0.100	3.50548	20.00000	Averaged	
18 Acrylonitrile	0.27336	0.27815	0.27815	0.001	1.75333	20.00000	Averaged	
19 Vinyl Acetate	1.61341	1.68306	1.68306	0.010	4.31682	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	0.65624	0.67311	0.67311	0.010	2.56978	20.00000	Averaged	
22 2,2-Dichloropropane	0.94586	1.00695	1.00695	0.010	6.45829	20.00000	Averaged	
23 Bromochloromethane	0.29013	0.32080	0.32080	0.050	10.57079	20.00000	Averaged	
24 Chloroform	1.08505	1.10129	1.10129	0.100	1.49653	20.00000	Averaged	
25 Carbon Tetrachloride	0.38627	0.37239	0.37239	0.100	-3.59256	20.00000	Averaged	
$ 27 Dibromofluoromethane	0.71689	0.80332	0.80332	0.100	12.05756	20.00000	Averaged	
26 1,1,1-Trichloroethane	1.00153	1.02681	1.02681	0.100	2.52460	20.00000	Averaged	
28 1,1-Dichloropropene	0.42991	0.41041	0.41041	0.010	-4.53518	20.00000	Averaged	
29 2-Butanone	0.08041	0.08342	0.08342	0.001	3.74524	20.00000	Averaged	
30 Benzene	1.23414	1.19910	1.19910	0.100	-2.83945	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	0.79642	0.85294	0.85294	0.010	7.09653	20.00000	Averaged	
33 1,2-Dichloroethane	0.42074	0.38425	0.38425	0.100	-8.67177	20.00000	Averaged	
34 Trichloroethene	0.29996	0.28740	0.28740	0.100	-4.18477	20.00000	Averaged	
37 Dibromomethane	0.16594	0.15396	0.15396	0.010	-7.22297	20.00000	Averaged	
38 1,2-Dichloropropane	0.34012	0.32387	0.32387	0.100	-4.77713	20.00000	Averaged	
39 Bromodichloromethane	0.38992	0.36638	0.36638	0.100	-6.03822	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0429a.d
Analysis Type: SOIL
Lab Sample ID: CC0429
Method: /chem1/nt5.i/29APR13.b/VO121012S.m

Injection Date: 29-APR-2013 12:18
Init. Cal. Date(s): 26-APR-2013 26-APR-2013
Init. Cal. Times: 09:25 12:12
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.20309	0.20028	0.20028	0.000	-1.38632	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.49641	0.48301	0.48301	0.100	-2.69875	20.00000	Averaged
$ 42 d8-Toluene	1.34380	1.36619	1.36619	0.010	1.66615	20.00000	Averaged
43 Toluene	0.79278	0.75772	0.75772	0.100	-4.42223	20.00000	Averaged
44 Tetrachloroethene	0.30385	0.29120	0.29120	0.100	-4.16159	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.14555	0.14194	0.14194	0.000	-2.48196	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.45575	0.44365	0.44365	0.010	-2.65515	20.00000	Averaged
47 1,1,2-Trichloroethane	0.25006	0.23711	0.23711	0.100	-5.17756	20.00000	Averaged
48 Chlorodibromomethane	0.27191	0.25517	0.25517	0.100	-6.15448	20.00000	Averaged
49 1,3-Dichloropropane	0.44551	0.41285	0.41285	0.100	-7.33237	20.00000	Averaged
50 1,2-Dibromoethane	0.24425	0.23258	0.23258	0.010	-4.77857	20.00000	Averaged
51 2-Hexanone	0.23994	0.23263	0.23263	0.010	-3.04874	20.00000	Averaged
53 Chlorobenzene	0.77373	0.73961	0.73961	0.300	-4.40921	20.00000	Averaged
54 Ethyl Benzene	1.35105	1.34376	1.34376	0.100	-0.53977	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.27281	0.25764	0.25764	0.010	-5.56181	20.00000	Averaged
56 m,p-xylene	0.50891	0.50590	0.50590	0.100	-0.58977	20.00000	Averaged
57 o-Xylene	0.49318	0.48412	0.48412	0.100	-1.83669	20.00000	Averaged
58 Styrene	0.82468	0.82189	0.82189	0.100	-0.33867	20.00000	Averaged
59 Bromoform	0.36751	0.34266	0.34266	0.100	-6.76103	20.00000	Averaged
60 Isopropyl Benzene	2.35816	2.36081	2.36081	0.010	0.11217	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.52689	0.52664	0.52664	0.200	-0.04627	20.00000	Averaged
63 Bromobenzene	0.60304	0.56098	0.56098	0.010	-6.97592	20.00000	Averaged
64 N-Propyl Benzene	2.78964	2.84169	2.84169	0.010	1.86609	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.60448	0.55676	0.55676	0.300	-7.89479	20.00000	Averaged
66 2-Chloro Toluene	1.74687	1.69758	1.69758	0.010	-2.82139	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	1.98429	1.98817	1.98817	0.010	0.19579	20.00000	Averaged
68 1,2,3-Trichloropropane	0.18806	0.16964	0.16964	0.010	-9.79126	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.23868	0.23191	0.23191	0.001	-2.83256	20.00000	Averaged
70 4-Chloro Toluene	1.80082	1.77710	1.77710	0.010	-1.31756	20.00000	Averaged
71 T-Butyl Benzene	1.74049	1.73080	1.73080	0.010	-0.55655	20.00000	Averaged
72 1,2,4-Trimethylbenzene	1.94185	1.96765	1.96765	0.010	1.32845	20.00000	Averaged
73 S-Butyl Benzene	2.53803	2.59527	2.59527	0.010	2.25545	20.00000	Averaged
74 4-Isopropyl Toluene	2.07524	2.16585	2.16585	0.010	4.36593	20.00000	Averaged
75 1,3-Dichlorobenzene	1.12906	1.10251	1.10251	0.100	-2.35189	20.00000	Averaged
77 1,4-Dichlorobenzene	1.17144	1.12061	1.12061	0.100	-4.33921	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0429a.d
Analysis Type: SOIL
Lab Sample ID: CC0429
Method: /chem1/nt5.i/29APR13.b/VO121012S.m

Injection Date: 29-APR-2013 12:18
Init. Cal. Date(s): 26-APR-2013 26-APR-2013
Init. Cal. Times: 09:25 12:12
Quant Type: ISTD

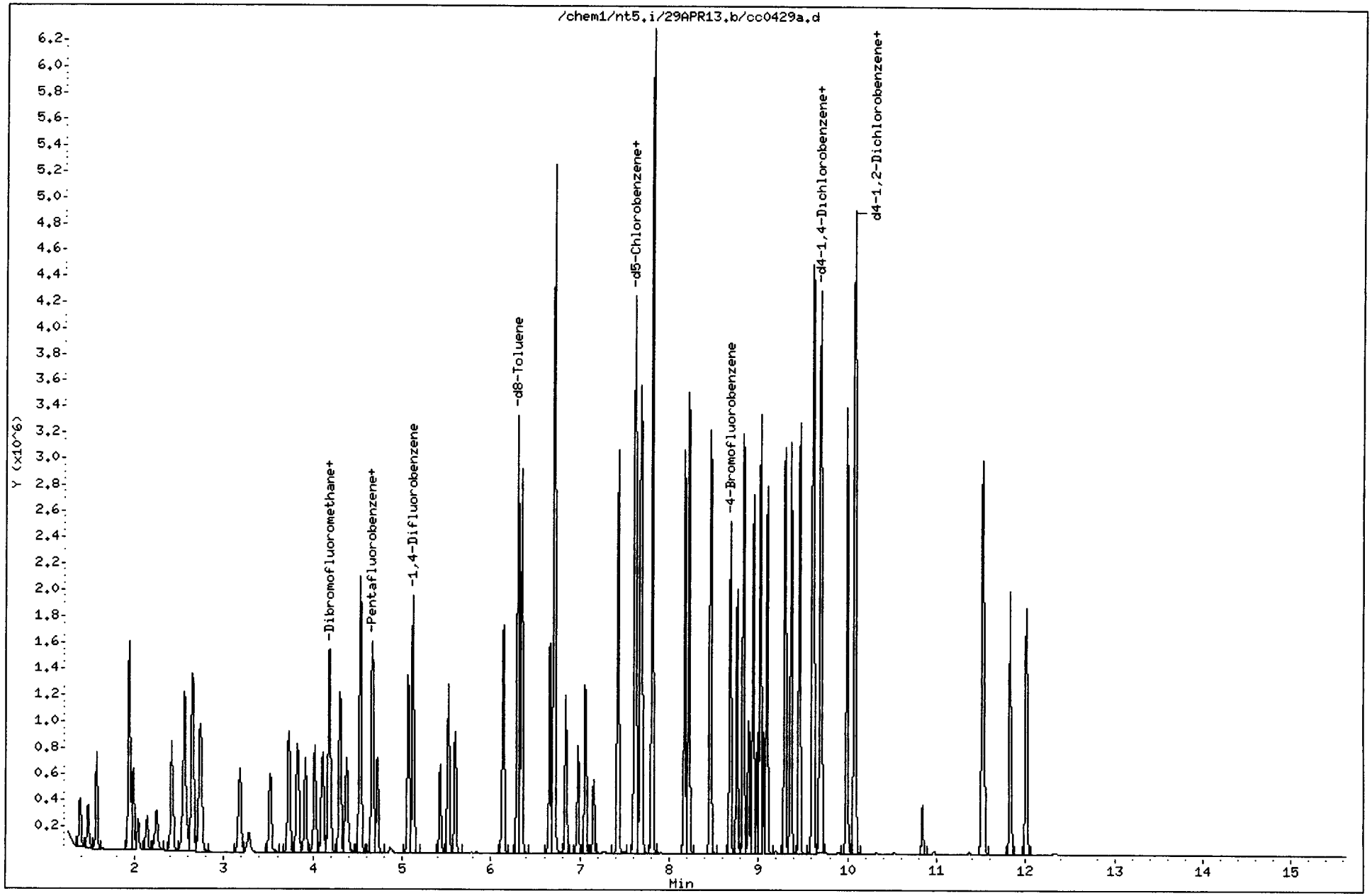
COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	1.99105	2.10340	2.10340	0.010	5.64290	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.94564	0.96224	0.96224	0.010	1.75493	20.00000	Averaged
80 1,2-Dichlorobenzene	1.10177	1.04113	1.04113	0.100	-5.50412	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.12104	0.10662	0.10662	0.010	-11.91330	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.47072	0.46396	0.46396	0.010	-1.43512	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.78493	0.79301	0.79301	0.010	1.02894	20.00000	Averaged
84 Naphthalene	1.98907	1.80534	1.80534	0.010	-9.23692	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.74479	0.72914	0.72914	0.010	-2.10192	20.00000	Averaged

Data File: /chem1/nt5.i/29APR13.b/cc0429a.d
Date : 29-APR-2013 12:18
Client ID: VSTD50
Sample Info: CC0429,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/29APR13.b/lcs0429.d
Lab Smp Id: LCS0429 Client Smp ID: LCS0429
Inj Date : 29-APR-2013 12:41
Operator : PB Inst ID: nt5.i
Smp Info : LCS0429,5,5,0
Misc Info : 13-8510
Comment :
Method : /chem1/nt5.i/29APR13.b/VO121012S.m
Meth Date : 01-May-2013 08:37 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.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	1.006	1.000	(0.215)	308905	50.3539	50.354
2 Chloromethane	50	1.238	1.244	(0.265)	418500	49.9754	49.975
3 Vinyl Chloride	62	1.176	1.176	(0.252)	492725	51.7906	51.791
4 Bromomethane	94	1.390	1.385	(0.298)	230355	51.8939	51.894
5 Chloroethane	64	1.481	1.476	(0.317)	262416	51.2876	51.288
6 Trichlorofluoromethane	101	1.577	1.572	(0.338)	495317	49.6630	49.663
7 1,1-Dichloroethene	96	1.939	1.934	(0.415)	277596	46.1303	46.130
8 Carbon Disulfide	76	1.945	1.939	(0.416)	951447	46.6596	46.660
9 112Trichloro122Trifluoroethane	101	1.984	1.979	(0.425)	248421	45.7055	45.706
10 Iodomethane	142	2.041	2.036	(0.437)	265843	50.0250	50.025
11 Bromoethane	108	2.137	2.137	(0.457)	176802	47.1181	47.118
12 Acrolein	56	2.245	2.239	(0.480)	359073	274.447	274.45
13 Methylene Chloride	84	2.420	2.415	(0.518)	354537	62.8501	62.850(R)
14 Acetone	43	2.561	2.550	(0.548)	249910	290.879	290.88(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.561	2.556	(0.548)	356218	59.3855	59.385
	16 Methyl tert butyl ether	73	2.737	2.731	(0.586)	1097272	50.5267	50.527
	17 1,1-Dichloroethane	63	3.184	3.178	(0.682)	711187	48.7059	48.706
	18 Acrylonitrile	53	3.286	3.280	(0.703)	163890	50.9002	50.900
	19 Vinyl Acetate	43	3.523	3.518	(0.754)	972725	51.1851	51.185
	20 Cis-1,2-Dichloroethene	96	3.732	3.727	(0.799)	375664	48.5998	48.600
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	542211	48.6677	48.668
	23 Bromochloromethane	128	3.919	3.914	(0.839)	162818	47.6446	47.645
	24 Chloroform	83	4.021	4.015	(0.861)	622312	48.6918	48.692
	25 Carbon Tetrachloride	117	4.111	4.106	(0.802)	485647	46.0623	46.062
$	27 Dibromofluoromethane	111	4.191	4.185	(0.897)	464670	55.0293	55.029
	26 1,1,1-Trichloroethane	97	4.179	4.180	(0.895)	572132	48.4988	48.499
	28 1,1-Dichloropropene	75	4.304	4.298	(0.840)	526601	44.8764	44.876
	29 2-Butanone	72	4.377	4.372	(0.937)	245527	259.228	259.23
	30 Benzene	78	4.530	4.530	(0.884)	1576632	46.8033	46.803
*	31 Pentafluorobenzene	168	4.672	4.666	(1.000)	588940	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	499563	53.2532	53.253
	33 1,2-Dichloroethane	62	4.722	4.723	(0.922)	517994	45.1046	45.105
	34 Trichloroethene	95	5.067	5.068	(0.989)	372759	45.5282	45.528
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1364770	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	207516	45.8145	45.814
	38 1,2-Dichloropropane	63	5.520	5.520	(1.077)	428766	46.1849	46.185
	39 Bromodichloromethane	83	5.594	5.594	(1.092)	486289	45.6907	45.691
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.131	(1.196)	274479	49.5141	49.514
	41 Cis 1,3-dichloropropene	75	6.148	6.142	(1.200)	644005	47.5295	47.529
$	42 d8-Toluene	98	6.306	6.301	(1.231)	1875032	51.1193	51.119
	43 Toluene	92	6.346	6.346	(1.238)	996015	46.0283	46.028
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	394859	44.6678	44.668
	45 4-Methyl-2-Pentanone	58	6.714	6.714	(1.310)	987995	248.690	248.69
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	594713	47.8073	47.807
	47 1,1,2-Trichloroethane	97	6.844	6.844	(1.336)	318826	46.7120	46.712
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	361673	45.7199	45.720
	49 1,3-Dichloropropane	76	7.064	7.059	(0.928)	592399	45.7052	45.705
	50 1,2-Dibromoethane	107	7.155	7.155	(1.396)	311154	46.6718	46.672
	51 2-Hexanone	43	7.426	7.427	(0.975)	1683534	241.169	241.17
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1454651	50.0000	
	53 Chlorobenzene	112	7.624	7.625	(1.001)	1020390	45.3304	45.330
	54 Ethyl Benzene	91	7.675	7.675	(1.008)	1839671	46.8036	46.804
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.692	(1.010)	360582	45.4306	45.431
	56 m,p-xylene	106	7.811	7.811	(1.026)	1388330	93.7706	93.771
	57 o-Xylene	106	8.173	8.173	(1.074)	667546	46.5251	46.525
	58 Styrene	104	8.224	8.224	(1.080)	1144393	47.6980	47.698
	59 Bromoform	173	8.213	8.213	(0.848)	261293	45.2180	45.218
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	1729958	46.6562	46.656
$	62 4-Bromofluorobenzene	95	8.682	8.682	(1.140)	773209	50.4417	50.442
	63 Bromobenzene	156	8.761	8.762	(0.904)	417969	44.0800	44.080
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	2062269	47.0159	47.016

	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	8.892	8.892	(0.918)	427720	45.0012	45.001
	66 2-Chloro Toluene	91	8.942	8.943	(0.923)	1239981	45.1442	45.144
	67 1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	1445824	46.3402	46.340
	68 1,2,3-Trichloropropane	110	8.988	8.994	(0.928)	131244	44.3853	44.385
	69 Trans-1,4-Dichloro 2-Butene	53	9.044	9.050	(0.933)	175352	46.7251	46.725
	70 4-Chloro Toluene	91	9.095	9.095	(0.939)	1297853	45.8354	45.835
	71 T-Butyl Benzene	119	9.293	9.299	(0.959)	1267018	46.2976	46.298
	72 1,2,4-Trimethylbenzene	105	9.361	9.367	(0.966)	1435851	47.0262	47.026
	73 S-Butyl Benzene	105	9.457	9.463	(0.976)	1880529	47.1227	47.123
	74 4-Isopropyl Toluene	119	9.604	9.610	(0.991)	1568029	48.0543	48.054
	75 1,3-Dichlorobenzene	146	9.616	9.621	(0.992)	801170	45.1288	45.129
*	76 d4-1,4-Dichlorobenzene	152	9.689	9.695	(1.000)	786182	50.0000	
	77 1,4-Dichlorobenzene	146	9.706	9.706	(1.002)	820565	44.5492	44.549
	78 N-Butyl Benzene	91	9.989	9.995	(1.031)	1502797	48.0026	48.003
$	79 d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	748757	50.3570	50.357
	80 1,2-Dichlorobenzene	146	10.085	10.085	(1.041)	766170	44.2262	44.226
	81 1,2-Dibromo 3-Chloropropane	75	10.838	10.843	(1.119)	82310	43.2492	43.249
	82 Hexachloro 1,3-Butadiene	225	11.516	11.528	(1.189)	334164	45.1488	45.149
	83 1,2,4-Trichlorobenzene	180	11.505	11.511	(1.187)	570656	46.2368	46.237
	84 Naphthalene	128	11.816	11.828	(1.220)	1335776	42.7101	42.710
	85 1,2,3-Trichlorobenzene	180	11.997	12.009	(1.238)	522108	44.5831	44.583

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: lcs0429.d
Lab Smp Id: LCS0429
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8510

Calibration Date: 29-APR-2013
Calibration Time: 12:18
Client Smp ID: LCS0429
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	656923	328462	1313846	588940	-10.35
35 1,4-Difluorobenze	1427826	713913	2855652	1364770	-4.42
52 d5-Chlorobenzene	1483267	741634	2966534	1454651	-1.93
76 d4-1,4-Dichlorobe	790697	395348	1581394	786182	-0.57

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-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: LCS0429
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8510

Client SDG: 29APR13
Fraction: VOA
Client Smp ID: LCS0429
Operator: PB
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	50.354	100.71	53-148
2 Chloromethane	50.000	49.975	99.95	64-125
3 Vinyl Chloride	50.000	51.791	103.58	63-137
4 Bromomethane	50.000	51.894	103.79	57-136
5 Chloroethane	50.000	51.288	102.58	64-131
6 Trichlorofluoromet	50.000	49.663	99.33	69-132
12 Acrolein	250.00	274.45	109.78	54-137
9 112Trichloro122Tri	50.000	45.706	91.41	74-130
14 Acetone	250.00	290.88	116.35	60-131
7 1,1-Dichloroethene	50.000	46.130	92.26	75-126
11 Bromoethane	50.000	47.118	94.24	76-126
10 Iodomethane	50.000	50.025	100.05	65-139
13 Methylene Chloride	50.000	62.850	125.70*	70-123
8 Carbon Disulfide	50.000	46.660	93.32	71-129
18 Acrylonitrile	50.000	50.900	101.80	67-125
15 Trans-1,2-Dichloro	50.000	59.385	118.77	80-120
19 Vinyl Acetate	50.000	51.185	102.37	60-136
17 1,1-Dichloroethane	50.000	48.706	97.41	80-120
29 2-Butanone	250.00	259.23	103.69	70-120
22 2,2-Dichloropropan	50.000	48.668	97.34	74-123
20 Cis-1,2-Dichloroet	50.000	48.600	97.20	80-120
24 Chloroform	50.000	48.692	97.38	80-120
23 Bromochloromethane	50.000	47.645	95.29	80-120
26 1,1,1-Trichloroeth	50.000	48.499	97.00	77-121
28 1,1-Dichloropropen	50.000	44.876	89.75	80-120
25 Carbon Tetrachlori	50.000	46.062	92.12	77-122
33 1,2-Dichloroethane	50.000	45.105	90.21	76-120
30 Benzene	50.000	46.803	93.61	80-120
34 Trichloroethene	50.000	45.528	91.06	80-120
38 1,2-Dichloropropan	50.000	46.185	92.37	80-120
39 Bromodichlorometha	50.000	45.691	91.38	77-121
37 Dibromomethane	50.000	45.814	91.63	80-120
40 2-Chloroethyl Viny	50.000	49.514	99.03	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	248.69	99.48	67-120
41 Cis 1,3-dichloropr	50.000	47.529	95.06	74-120
43 Toluene	50.000	46.028	92.06	80-120
46 Trans 1,3-Dichloro	50.000	47.807	95.61	65-120
51 2-Hexanone	250.00	241.17	96.47	65-130
47 1,1,2-Trichloroeth	50.000	46.712	93.42	80-120
49 1,3-Dichloropropan	50.000	45.705	91.41	80-120
44 Tetrachloroethene	50.000	44.668	89.34	80-121
48 Chlorodibromometha	50.000	45.720	91.44	64-120
50 1,2-Dibromoethane	50.000	46.672	93.34	75-120
53 Chlorobenzene	50.000	45.330	90.66	80-120
55 1,1,1,2-Tetrachlor	50.000	45.431	90.86	69-121
54 Ethyl Benzene	50.000	46.804	93.61	80-127
56 m,p-xylene	100.00	93.771	93.77	80-125
57 o-Xylene	50.000	46.525	93.05	78-120
58 Styrene	50.000	47.698	95.40	80-123
60 Isopropyl Benzene	50.000	46.656	93.31	80-127
59 Bromoform	50.000	45.218	90.44	60-120
65 1,1,2,2-Tetrachlor	50.000	45.001	90.00	74-120
68 1,2,3-Trichloropro	50.000	44.385	88.77	72-121
69 Trans-1,4-Dichloro	50.000	46.725	93.45	65-126
64 N-Propyl Benzene	50.000	47.016	94.03	80-132
63 Bromobenzene	50.000	44.080	88.16	80-120
67 1,3,5-Trimethyl Be	50.000	46.340	92.68	80-125
66 2-Chloro Toluene	50.000	45.144	90.29	80-125
70 4-Chloro Toluene	50.000	45.835	91.67	80-127
71 T-Butyl Benzene	50.000	46.298	92.60	87-122
72 1,2,4-Trimethylben	50.000	47.026	94.05	80-126
73 S-Butyl Benzene	50.000	47.123	94.25	80-134
74 4-Isopropyl Toluen	50.000	48.054	96.11	80-131
75 1,3-Dichlorobenzen	50.000	45.129	90.26	80-120
77 1,4-Dichlorobenzen	50.000	44.549	89.10	80-120
78 N-Butyl Benzene	50.000	48.003	96.01	80-138
80 1,2-Dichlorobenzen	50.000	44.226	88.45	80-120
81 1,2-Dibromo 3-Chlo	50.000	43.249	86.50	59-120
83 1,2,4-Trichloroben	50.000	46.237	92.47	78-130
82 Hexachloro 1,3-But	50.000	45.149	90.30	76-129
84 Naphthalene	50.000	42.710	85.42	66-120
85 1,2,3-Trichloroben	50.000	44.583	89.17	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	55.029	110.06	70-130

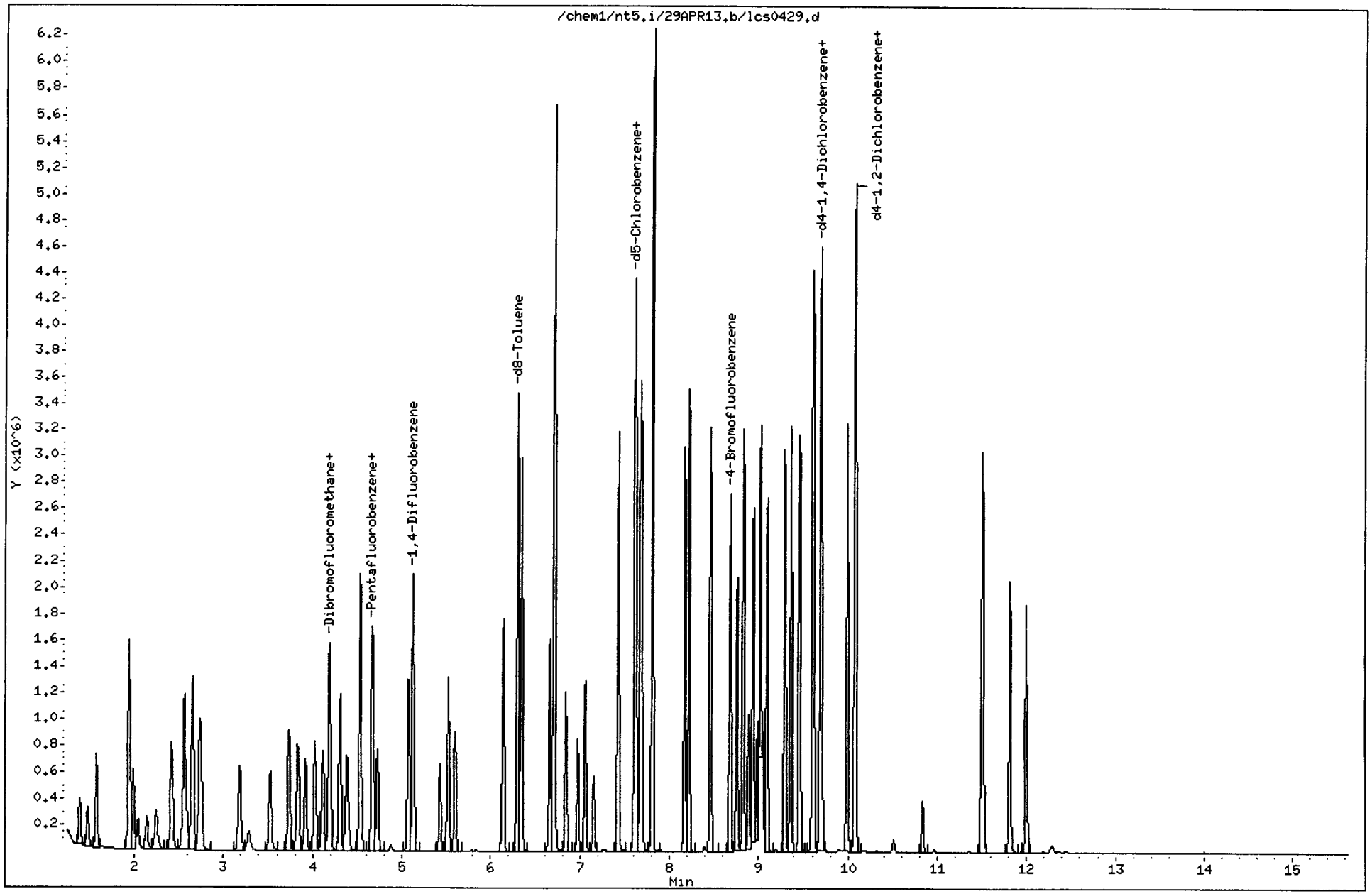
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	53.253	106.51	80-149
$ 42 d8-Toluene	50.000	51.119	102.24	77-120
$ 62 4-Bromofluorobenze	50.000	50.442	100.88	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.357	100.71	80-120

Data File: /chem1/nt5.i/29APR13.b/lcs0429.d
Date : 29-APR-2013 12:41
Client ID: LCS0429
Sample Info: LCS0429,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/29APR13.b/lcs0429a.d
Lab Smp Id: LCS0429 Client Smp ID: LCS0429
Inj Date : 29-APR-2013 13:05
Operator : PB Inst ID: nt5.i
Smp Info : LCS0429,5,5,0
Misc Info : 13-8510
Comment :
Method : /chem1/nt5.i/29APR13.b/VO121012S.m
Meth Date : 01-May-2013 08:37 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.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	1.000	1.000	(0.214)	295257	50.2601	50.260
2 Chloromethane	50	1.221	1.244	(0.261)	386279	48.1700	48.170
3 Vinyl Chloride	62	1.170	1.176	(0.250)	456553	50.1132	50.113
4 Bromomethane	94	1.385	1.385	(0.296)	212220	49.9252	49.925
5 Chloroethane	64	1.476	1.476	(0.316)	259235	52.9090	52.909
6 Trichlorofluoromethane	101	1.572	1.572	(0.336)	453928	47.5281	47.528
7 1,1-Dichloroethene	96	1.928	1.934	(0.413)	235360	40.8432	40.843
8 Carbon Disulfide	76	1.928	1.939	(0.413)	779266	39.9077	39.908
9 112Trichloro122Trifluoroethane	101	1.968	1.979	(0.421)	218951	42.0670	42.067
10 Iodomethane	142	2.030	2.036	(0.434)	302311	59.4060	59.406
11 Bromoethane	108	2.132	2.137	(0.456)	206642	57.5087	57.509
12 Acrolein	56	2.234	2.239	(0.478)	399551	318.905	318.91
13 Methylene Chloride	84	2.415	2.415	(0.517)	334260	61.5028	61.503(R)
14 Acetone	43	2.533	2.550	(0.542)	216511	263.162	263.16(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.556	(0.547)	340075	59.2043	59.204
	16 Methyl tert butyl ether	73	2.737	2.731	(0.586)	1020993	49.0958	49.096
	17 1,1-Dichloroethane	63	3.178	3.178	(0.680)	681277	48.7232	48.723
	18 Acrylonitrile	53	3.274	3.280	(0.701)	167048	54.1780	54.178
	19 Vinyl Acetate	43	3.518	3.518	(0.753)	932709	51.2524	51.252
	20 Cis-1,2-Dichloroethene	96	3.727	3.727	(0.798)	352557	47.6298	47.630
	22 2,2-Dichloropropane	77	3.829	3.829	(0.820)	513477	48.1291	48.129
	23 Bromochloromethane	128	3.914	3.914	(0.838)	154938	47.3460	47.346
	24 Chloroform	83	4.021	4.015	(0.861)	585863	47.8694	47.869
	25 Carbon Tetrachloride	117	4.106	4.106	(0.801)	459068	45.0951	45.095
$	27 Dibromofluoromethane	111	4.185	4.185	(0.896)	440232	54.4434	54.443
	26 1,1,1-Trichloroethane	97	4.180	4.180	(0.895)	543581	48.1187	48.119
	28 1,1-Dichloropropene	75	4.298	4.298	(0.839)	499034	44.0447	44.045
	29 2-Butanone	72	4.366	4.372	(0.935)	244309	269.362	269.36
	30 Benzene	78	4.530	4.530	(0.884)	1494200	45.9390	45.939
*	31 Pentafluorobenzene	168	4.672	4.666	(1.000)	563971	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	478073	53.2186	53.219
	33 1,2-Dichloroethane	62	4.723	4.723	(0.922)	488795	44.0809	44.081
	34 Trichloroethene	95	5.068	5.068	(0.989)	353330	44.6951	44.695
*	35 1,4-Difluorobenzene	114	5.124	5.124	(1.000)	1317747	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.058)	196666	44.9684	44.968
	38 1,2-Dichloropropane	63	5.520	5.520	(1.077)	402134	44.8619	44.862
	39 Bromodichloromethane	83	5.594	5.594	(1.092)	460183	44.7808	44.781
	40 2-Chloroethyl Vinyl Ether	63	6.131	6.131	(1.196)	256732	47.9653	47.965
	41 Cis 1,3-dichloropropene	75	6.142	6.142	(1.199)	599613	45.8323	45.832
$	42 d8-Toluene	98	6.301	6.301	(1.230)	1794812	50.6784	50.678
	43 Toluene	92	6.346	6.346	(1.238)	943289	45.1473	45.147
	44 Tetrachloroethene	166	6.663	6.663	(0.875)	372688	44.5935	44.593
	45 4-Methyl-2-Pentanone	58	6.714	6.714	(1.310)	985889	257.015	257.02
	46 Trans 1,3-Dichloropropene	75	6.714	6.714	(1.310)	555397	46.2400	46.240
	47 1,1,2-Trichloroethane	97	6.838	6.844	(1.334)	304021	46.1323	46.132
	48 Chlorodibromomethane	129	6.980	6.980	(0.917)	336526	44.9968	44.997
	49 1,3-Dichloropropane	76	7.059	7.059	(0.927)	551935	45.0415	45.041
	50 1,2-Dibromoethane	107	7.155	7.155	(1.396)	297088	46.1521	46.152
	51 2-Hexanone	43	7.427	7.427	(0.975)	1702269	257.930	257.93
*	52 d5-Chlorobenzene	117	7.613	7.613	(1.000)	1375261	50.0000	
	53 Chlorobenzene	112	7.625	7.625	(1.001)	962864	45.2441	45.244
	54 Ethyl Benzene	91	7.675	7.675	(1.008)	1751799	47.1408	47.141
	55 1,1,1,2-Tetrachloroethane	131	7.692	7.692	(1.010)	338201	45.0705	45.071
	56 m,p-xylene	106	7.811	7.811	(1.026)	1317529	94.1256	94.126
	57 o-Xylene	106	8.173	8.173	(1.074)	626820	46.2086	46.209
	58 Styrene	104	8.219	8.224	(1.079)	1069776	47.1619	47.162
	59 Bromoform	173	8.213	8.213	(0.848)	249350	47.0954	47.095
	60 Isopropyl Benzene	105	8.462	8.462	(0.873)	1639858	48.2687	48.269
$	62 4-Bromofluorobenzene	95	8.682	8.682	(1.140)	716650	49.4508	49.451
	63 Bromobenzene	156	8.762	8.762	(0.904)	392599	45.1889	45.189
	64 N-Propyl Benzene	91	8.829	8.829	(0.911)	1947072	48.4470	48.447

	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	8.892	8.892	(0.918)	410551	47.1430	47.143
66	2-Chloro Toluene	91	8.943	8.943	(0.923)	1173954	46.6470	46.647
67	1,3,5-Trimethyl Benzene	105	9.022	9.022	(0.931)	1363462	47.6948	47.695
68	1,2,3-Trichloropropane	110	8.988	8.994	(0.928)	130121	48.0278	48.028
69	Trans-1,4-Dichloro 2-Butene	53	9.044	9.050	(0.933)	167460	48.7008	48.701
70	4-Chloro Toluene	91	9.090	9.095	(0.938)	1223914	47.1750	47.175
71	T-Butyl Benzene	119	9.293	9.299	(0.959)	1199409	47.8332	47.833
72	1,2,4-Trimethylbenzene	105	9.361	9.367	(0.966)	1347667	48.1724	48.172
73	S-Butyl Benzene	105	9.457	9.463	(0.976)	1786224	48.8508	48.851
74	4-Isopropyl Toluene	119	9.604	9.610	(0.991)	1472227	49.2423	49.242
75	1,3-Dichlorobenzene	146	9.616	9.621	(0.992)	749156	46.0561	46.056
* 76	d4-1,4-Dichlorobenzene	152	9.689	9.695	(1.000)	720340	50.0000	
77	1,4-Dichlorobenzene	146	9.701	9.706	(1.001)	768061	45.5101	45.510
78	N-Butyl Benzene	91	9.989	9.995	(1.031)	1403119	48.9153	48.915
$ 79	d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	697451	51.1939	51.194
80	1,2-Dichlorobenzene	146	10.085	10.085	(1.041)	717100	45.1773	45.177
81	1,2-Dibromo 3-Chloropropane	75	10.832	10.843	(1.118)	85215	48.8683	48.868
82	Hexachloro 1,3-Butadiene	225	11.511	11.528	(1.188)	312758	46.1190	46.119
83	1,2,4-Trichlorobenzene	180	11.500	11.511	(1.187)	525697	46.4873	46.487
84	Naphthalene	128	11.816	11.828	(1.220)	1327641	46.3301	46.330
85	1,2,3-Trichlorobenzene	180	11.997	12.009	(1.238)	494466	46.0821	46.082

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: lcs0429a.d
Lab Smp Id: LCS0429
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8510

Calibration Date: 29-APR-2013
Calibration Time: 12:18
Client Smp ID: LCS0429
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	656923	328462	1313846	563971	-14.15
35 1,4-Difluorobenze	1427826	713913	2855652	1317747	-7.71
52 d5-Chlorobenzene	1483267	741634	2966534	1375261	-7.28
76 d4-1,4-Dichlorobe	790697	395348	1581394	720340	-8.90

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-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: 29APR13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0429 Client Smp ID: LCS0429
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/29APR13.b/VO121012S.m
Misc Info: 13-8510

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	50.260	100.52	53-148
2 Chloromethane	50.000	48.170	96.34	64-125
3 Vinyl Chloride	50.000	50.113	100.23	63-137
4 Bromomethane	50.000	49.925	99.85	57-136
5 Chloroethane	50.000	52.909	105.82	64-131
6 Trichlorofluoromet	50.000	47.528	95.06	69-132
12 Acrolein	250.00	318.91	127.56	54-137
9 112Trichloro122Tri	50.000	42.067	84.13	74-130
14 Acetone	250.00	263.16	105.26	60-131
7 1,1-Dichloroethene	50.000	40.843	81.69	75-126
11 Bromoethane	50.000	57.509	115.02	76-126
10 Iodomethane	50.000	59.406	118.81	65-139
13 Methylene Chloride	50.000	61.503	123.01*	70-123
8 Carbon Disulfide	50.000	39.908	79.82	71-129
18 Acrylonitrile	50.000	54.178	108.36	67-125
15 Trans-1,2-Dichloro	50.000	59.204	118.41	80-120
19 Vinyl Acetate	50.000	51.252	102.50	60-136
17 1,1-Dichloroethane	50.000	48.723	97.45	80-120
29 2-Butanone	250.00	269.36	107.74	70-120
22 2,2-Dichloropropan	50.000	48.129	96.26	74-123
20 Cis-1,2-Dichloroet	50.000	47.630	95.26	80-120
24 Chloroform	50.000	47.869	95.74	80-120
23 Bromochloromethane	50.000	47.346	94.69	80-120
26 1,1,1-Trichloroeth	50.000	48.119	96.24	77-121
28 1,1-Dichloropropen	50.000	44.045	88.09	80-120
25 Carbon Tetrachlori	50.000	45.095	90.19	77-122
33 1,2-Dichloroethane	50.000	44.081	88.16	76-120
30 Benzene	50.000	45.939	91.88	80-120
34 Trichloroethene	50.000	44.695	89.39	80-120
38 1,2-Dichloropropan	50.000	44.862	89.72	80-120
39 Bromodichlorometha	50.000	44.781	89.56	77-121
37 Dibromomethane	50.000	44.968	89.94	80-120
40 2-Chloroethyl Viny	50.000	47.965	95.93	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	257.02	102.81	67-120
41 Cis 1,3-dichloropr	50.000	45.832	91.66	74-120
43 Toluene	50.000	45.147	90.29	80-120
46 Trans 1,3-Dichloro	50.000	46.240	92.48	65-120
51 2-Hexanone	250.00	257.93	103.17	65-130
47 1,1,2-Trichloroeth	50.000	46.132	92.26	80-120
49 1,3-Dichloropropan	50.000	45.041	90.08	80-120
44 Tetrachloroethene	50.000	44.593	89.19	80-121
48 Chlorodibromometha	50.000	44.997	89.99	64-120
50 1,2-Dibromoethane	50.000	46.152	92.30	75-120
53 Chlorobenzene	50.000	45.244	90.49	80-120
55 1,1,1,2-Tetrachlor	50.000	45.071	90.14	69-121
54 Ethyl Benzene	50.000	47.141	94.28	80-127
56 m,p-xylene	100.00	94.126	94.13	80-125
57 o-Xylene	50.000	46.209	92.42	78-120
58 Styrene	50.000	47.162	94.32	80-123
60 Isopropyl Benzene	50.000	48.269	96.54	80-127
59 Bromoform	50.000	47.095	94.19	60-120
65 1,1,2,2-Tetrachlor	50.000	47.143	94.29	74-120
68 1,2,3-Trichloropro	50.000	48.028	96.06	72-121
69 Trans-1,4-Dichloro	50.000	48.701	97.40	65-126
64 N-Propyl Benzene	50.000	48.447	96.89	80-132
63 Bromobenzene	50.000	45.189	90.38	80-120
67 1,3,5-Trimethyl Be	50.000	47.695	95.39	80-125
66 2-Chloro Toluene	50.000	46.647	93.29	80-125
70 4-Chloro Toluene	50.000	47.175	94.35	80-127
71 T-Butyl Benzene	50.000	47.833	95.67	87-122
72 1,2,4-Trimethylben	50.000	48.172	96.34	80-126
73 S-Butyl Benzene	50.000	48.851	97.70	80-134
74 4-Isopropyl Toluen	50.000	49.242	98.48	80-131
75 1,3-Dichlorobenzen	50.000	46.056	92.11	80-120
77 1,4-Dichlorobenzen	50.000	45.510	91.02	80-120
78 N-Butyl Benzene	50.000	48.915	97.83	80-138
80 1,2-Dichlorobenzen	50.000	45.177	90.35	80-120
81 1,2-Dibromo 3-Chlo	50.000	48.868	97.74	59-120
83 1,2,4-Trichloroben	50.000	46.487	92.97	78-130
82 Hexachloro 1,3-But	50.000	46.119	92.24	76-129
84 Naphthalene	50.000	46.330	92.66	66-120
85 1,2,3-Trichloroben	50.000	46.082	92.16	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.443	108.89	70-130

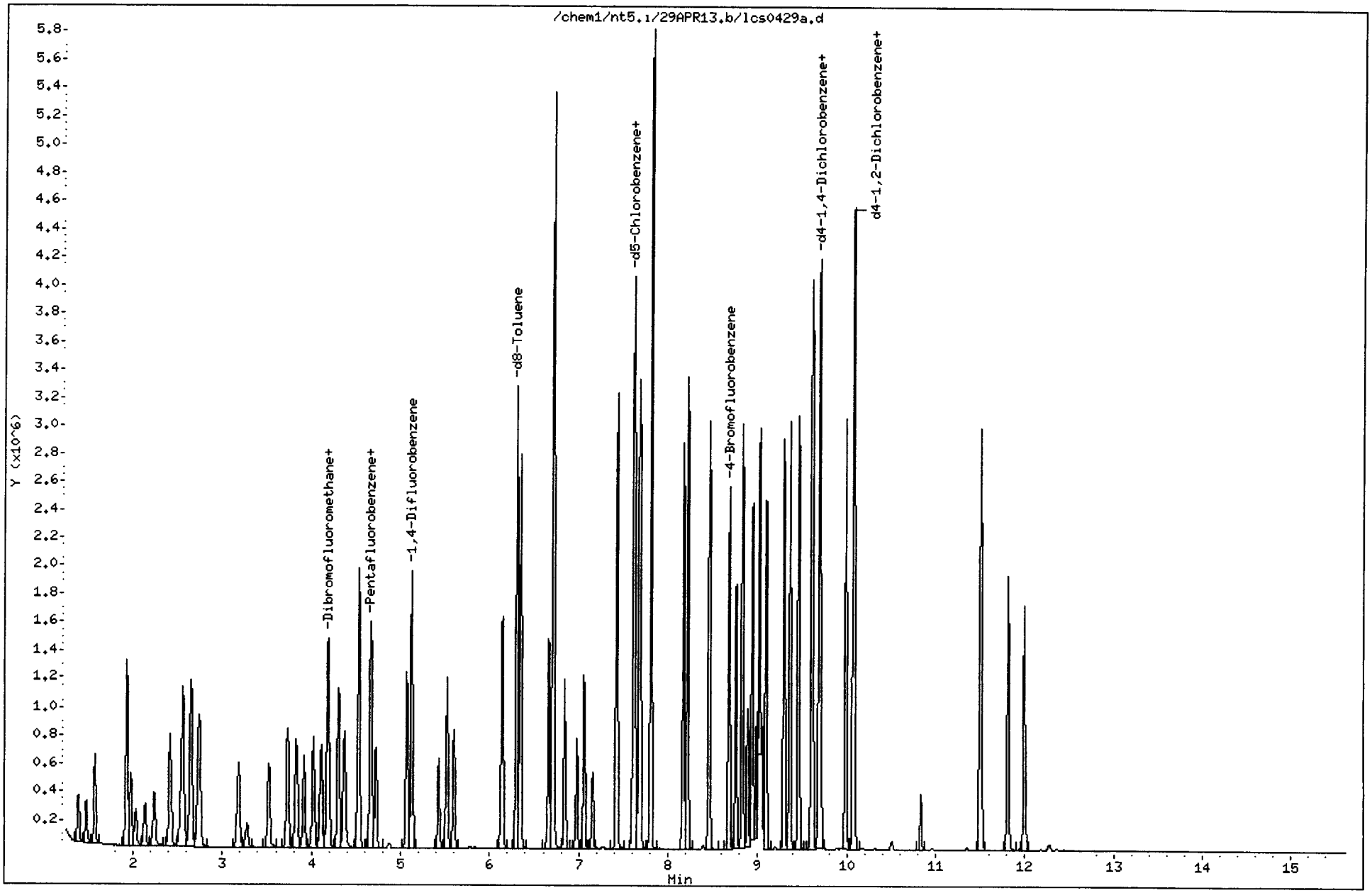
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	53.219	106.44	80-149
$ 42 d8-Toluene	50.000	50.678	101.36	77-120
$ 62 4-Bromofluorobenze	50.000	49.451	98.90	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.194	102.39	80-120

Data File: /chem1/nt5.i/29APR13.b/lcs0429a.d
Date : 29-APR-2013 13:05
Client ID: LCS0429
Sample Info: LCS0429,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/29APR13.b/mb04291.d
Lab Smp Id: MB0429 Client Smp ID: MB0429
Inj Date : 29-APR-2013 13:29
Operator : PB Inst ID: nt5.i
Smp Info : MB0429,5,5,0
Misc Info : 13-8510
Comment :
Method : /chem1/nt5.i/29APR13.b/VO121012S.m
Meth Date : 01-May-2013 08:37 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.420	2.415	(0.518)	8241	0.91255	0.9126
14 Acetone	43	2.533	2.550	(0.542)	5426	6.40648	6.406(Q)
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	4.185	4.185	(0.896)	456873	54.8853	54.885
	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	4.672	4.666	(1.000)	580577	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	506950	54.8191	54.819
	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)	1363752	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	6.301	6.301	(1.230)	1871488	51.0608	51.061
	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	7.613	7.613	(1.000)	1438655	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	8.682	8.682	(1.140)	766356	50.5505	50.550
	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	9.689	9.695	(1.000)	746987	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	732886	51.8759	51.876
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	11.811	11.828	(1.219)	22906	0.77083	0.7708
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: mb04291.d
Lab Smp Id: MB0429
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8510

Calibration Date: 29-APR-2013
Calibration Time: 12:18
Client Smp ID: MB0429
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	656923	328462	1313846	580577	-11.62
35 1,4-Difluorobenze	1427826	713913	2855652	1363752	-4.49
52 d5-Chlorobenzene	1483267	741634	2966534	1438655	-3.01
76 d4-1,4-Dichlorobe	790697	395348	1581394	746987	-5.53

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-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: 29APR13
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: MB0429
Client Smp ID: MB0429
Level: LOW
Operator: PB
Data Type: MS DATA
SampleType: BLANK
SpikeList File: all.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8510

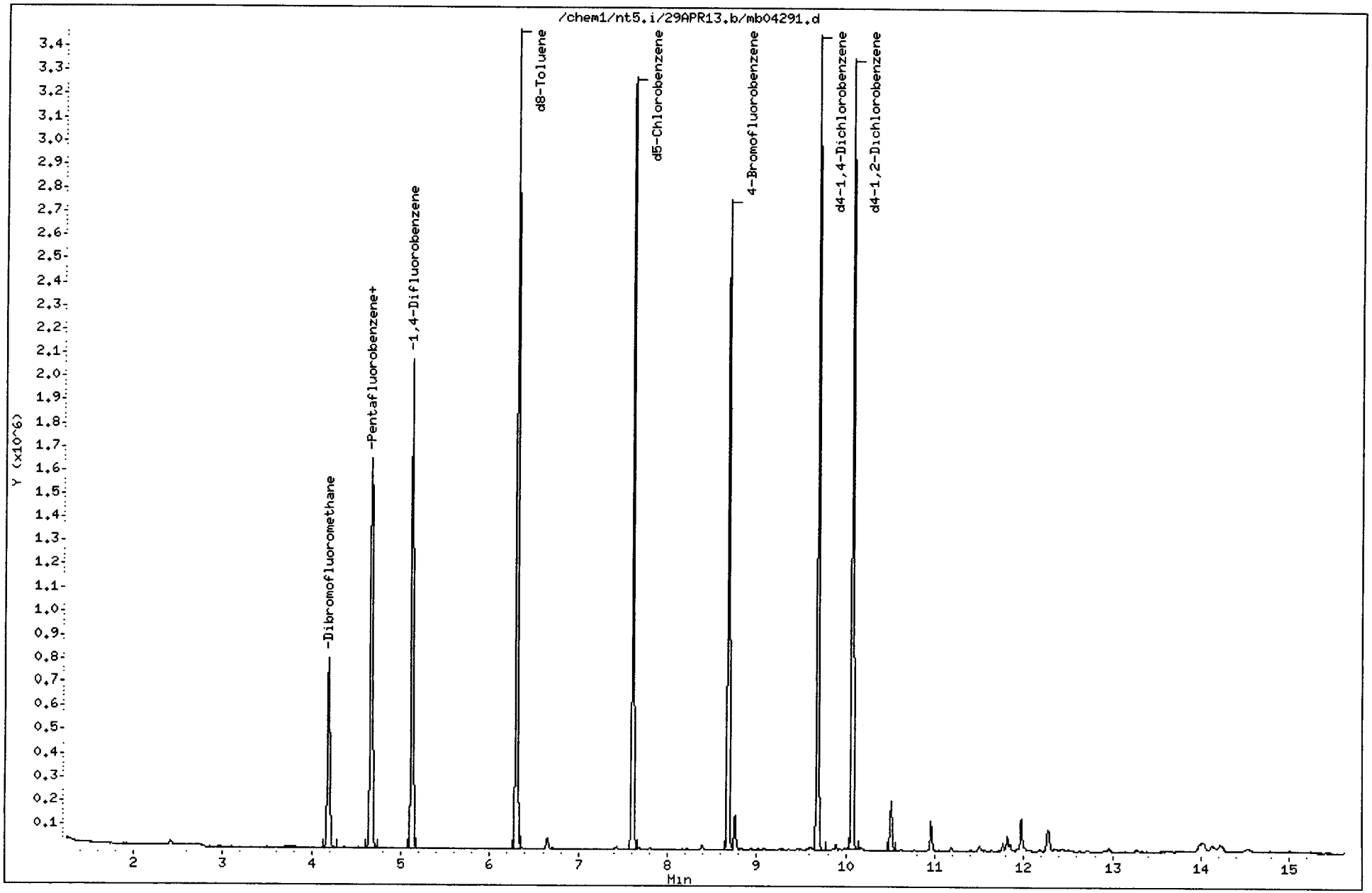
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.885	109.77	70-130
$ 32 d4-1,2-Dichloroeth	50.000	54.819	109.64	80-149
$ 42 d8-Toluene	50.000	51.061	102.12	77-120
$ 62 4-Bromofluorobenze	50.000	50.550	101.10	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.876	103.75	80-120

Data File: /chem1/nt5.i/29APR13.b/mb04291.d
Date : 29-APR-2013 13:29
Client ID: MB0429
Sample Info: MB0429,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - mb04291.d

Lab ID: MB0429, Method: VO121012S.m, Instrument: nt5.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/29APR13.b/mb04291.d

Date : 29-APR-2013 13:29

Client ID: MB0429

Instrument: nt5.i

Sample Info: MB0429,5,5,0

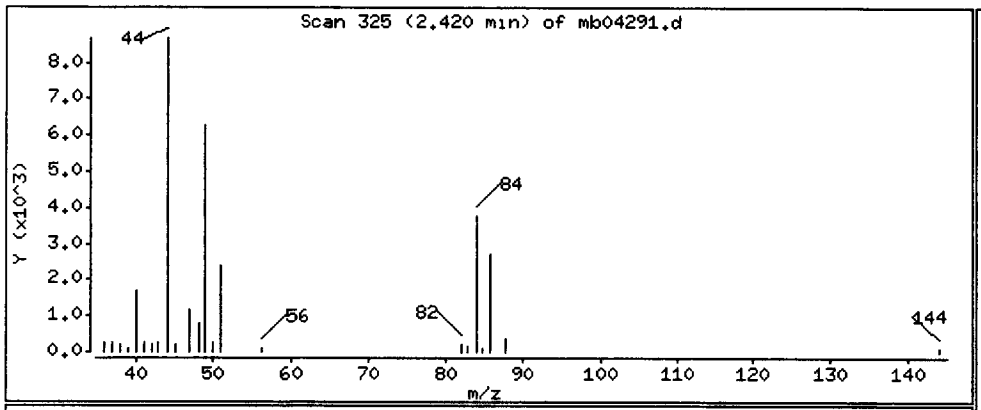
Operator: PB

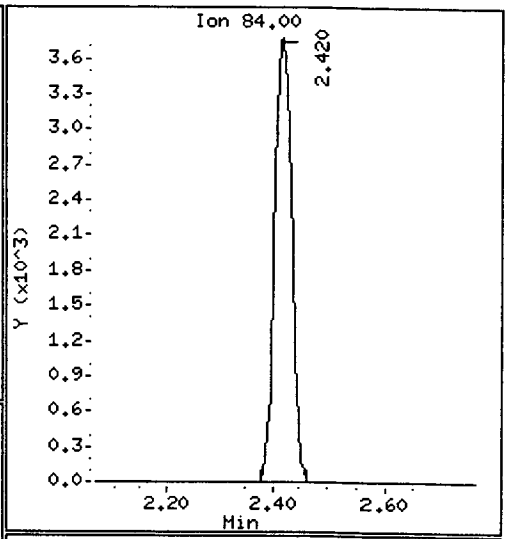
Column phase: RTXVMS

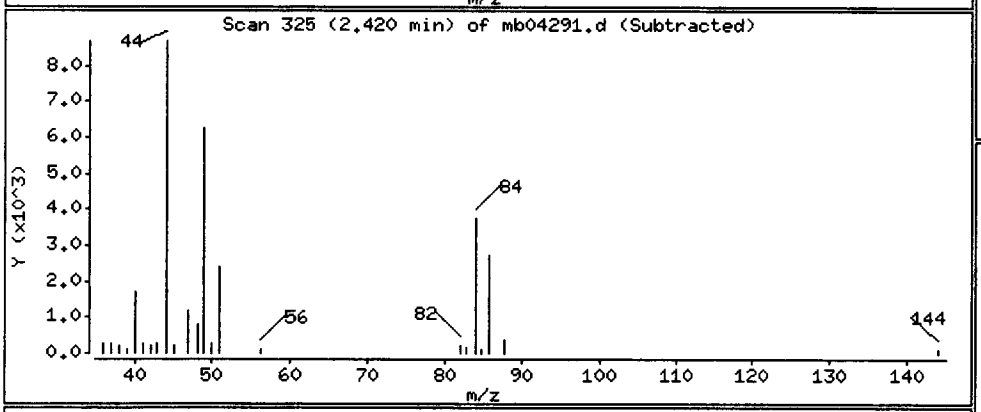
Column diameter: 0.18

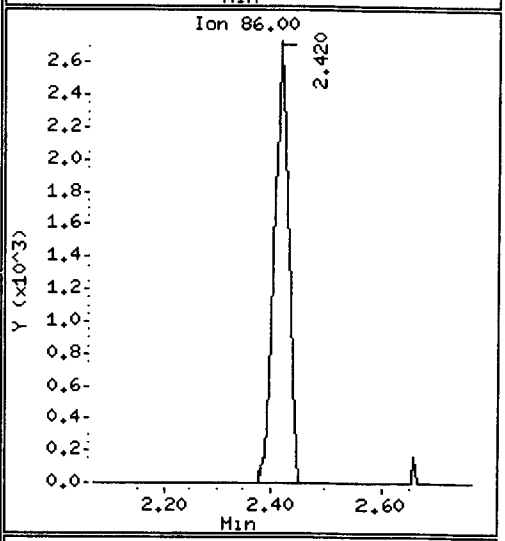
13 Methylene Chloride

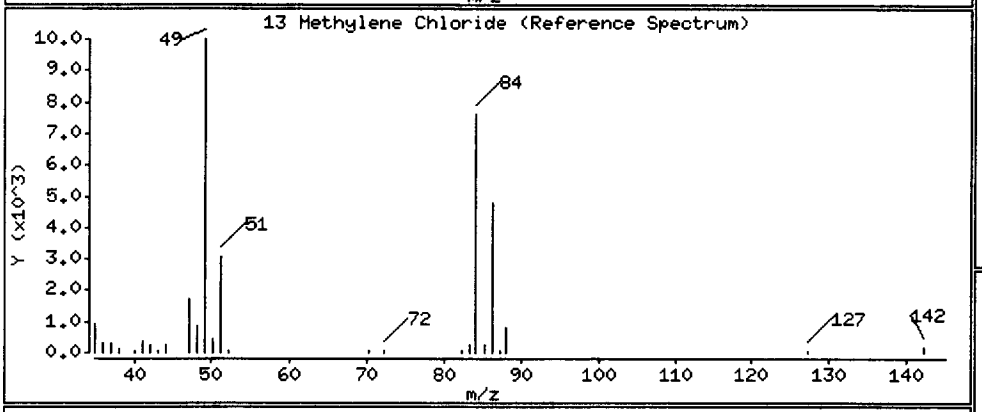
Concentration: 0.9126 ug/Kg

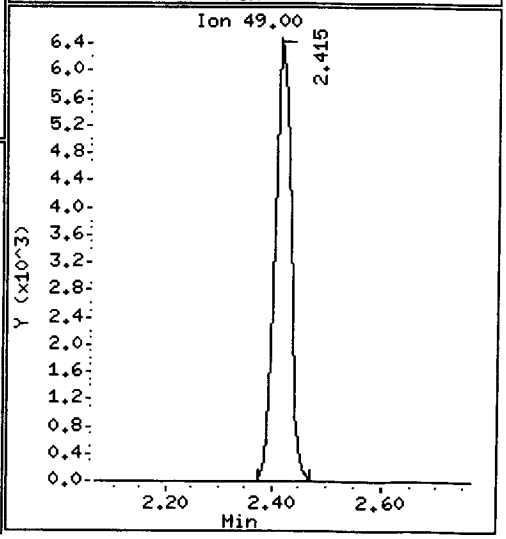


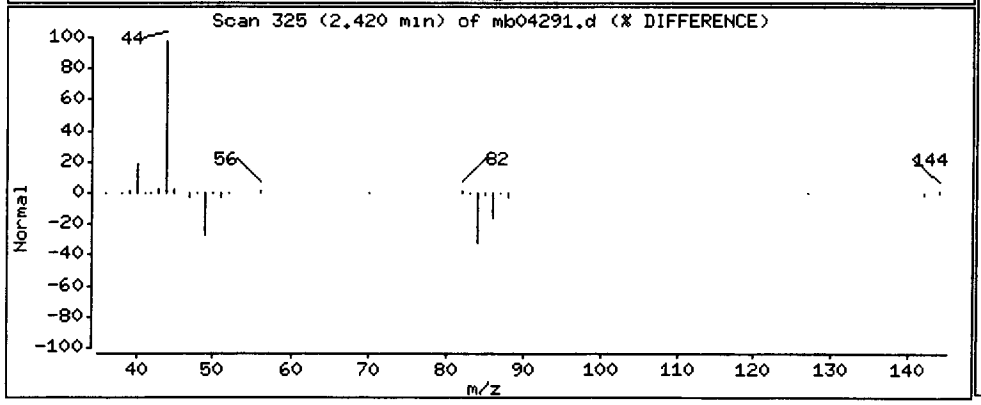












Data File: /chem1/nt5.i/29APR13.b/mb04291.d

Date : 29-APR-2013 13:29

Client ID: MB0429

Instrument: nt5.i

Sample Info: MB0429,5,5,0

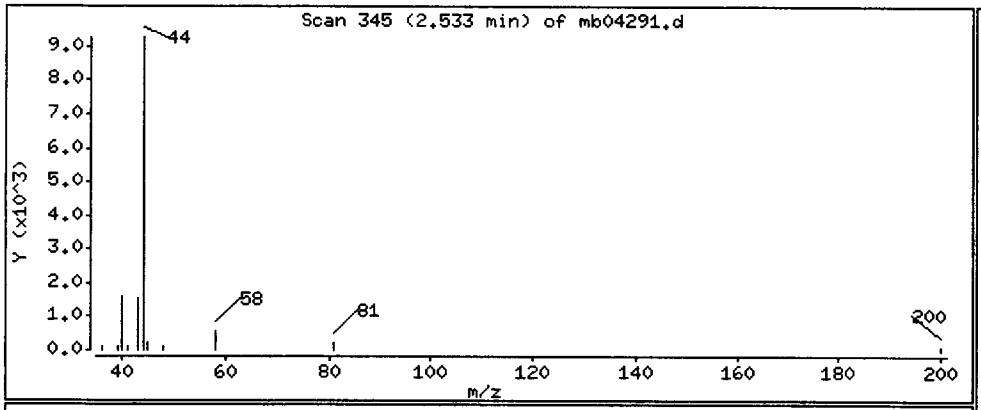
Operator: PB

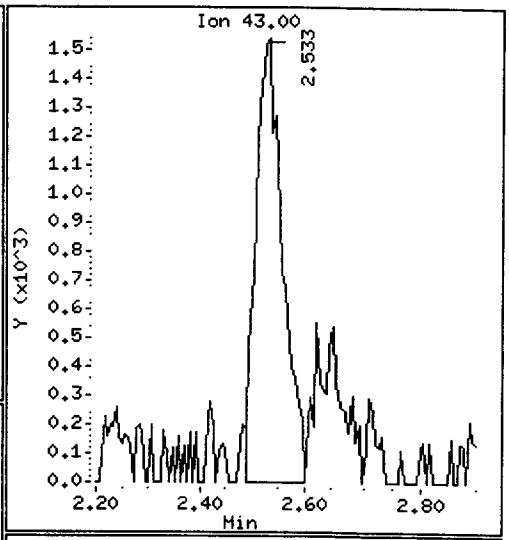
Column phase: RTXVMS

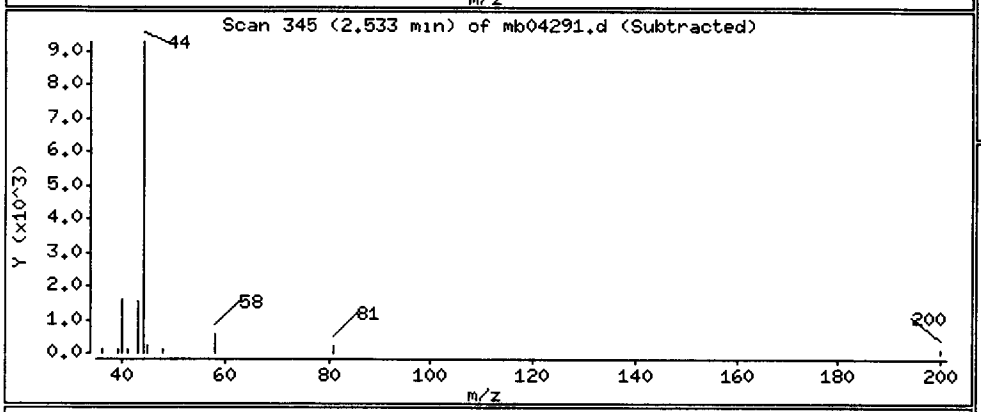
Column diameter: 0.18

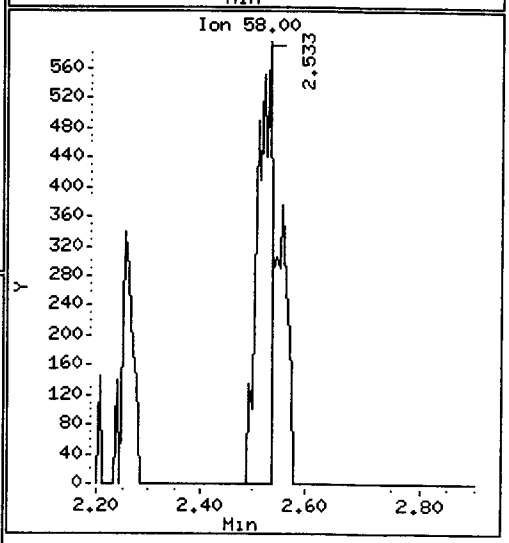
14 Acetone

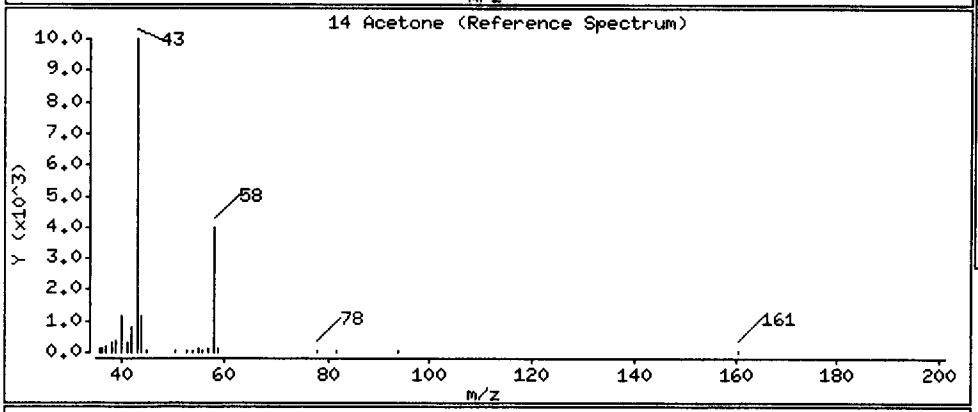
Concentration: 6.406 ug/Kg

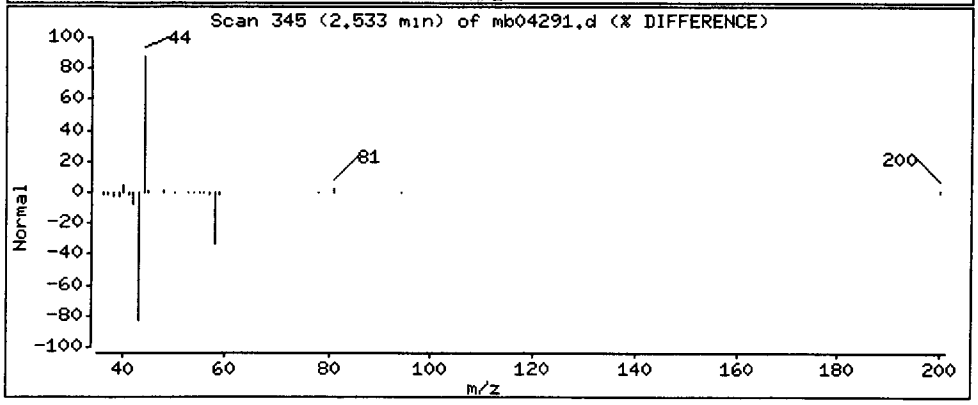












Data File: /chem1/nt5.i/29APR13.b/mb04291.d

Date : 29-APR-2013 13:29

Client ID: MB0429

Instrument: nt5.i

Sample Info: MB0429,5,5,0

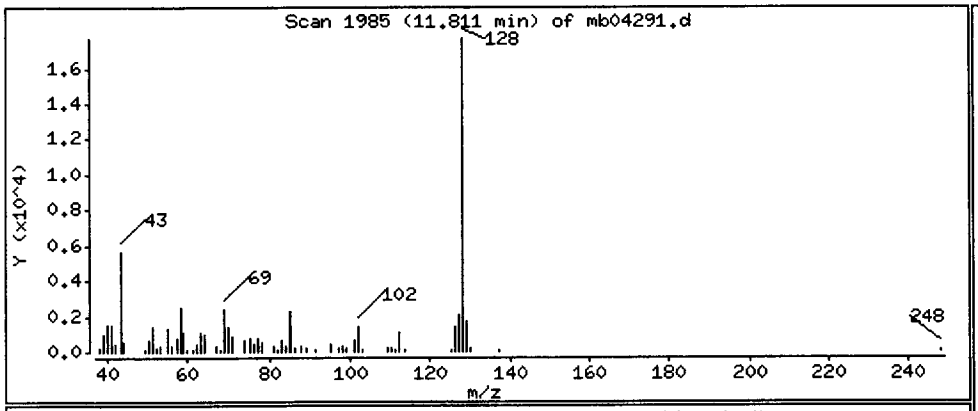
Operator: PB

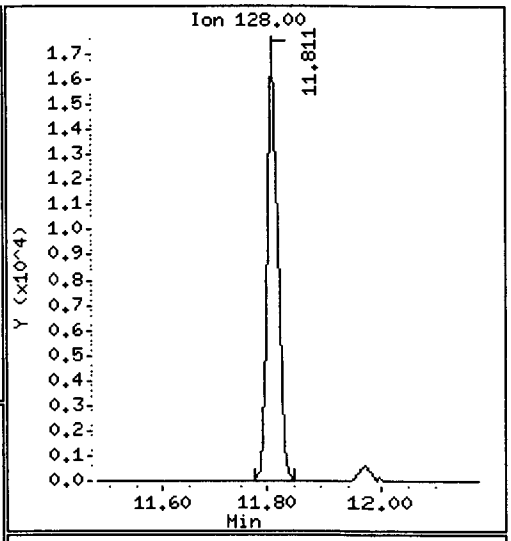
Column phase: RTXVMS

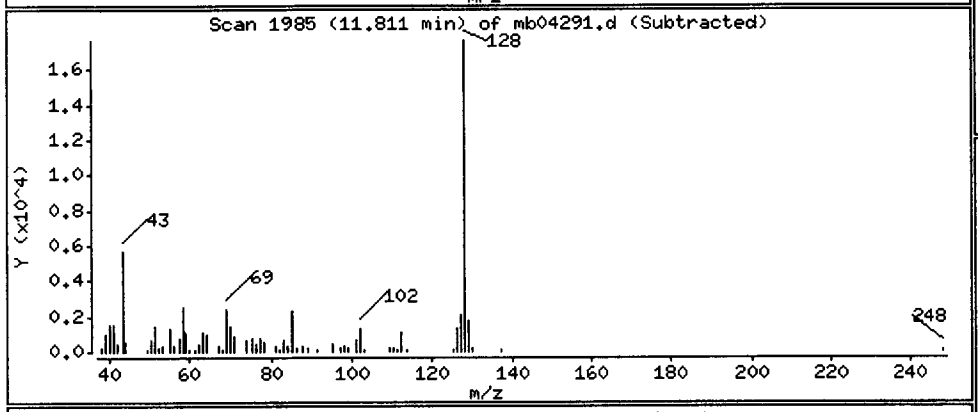
Column diameter: 0.18

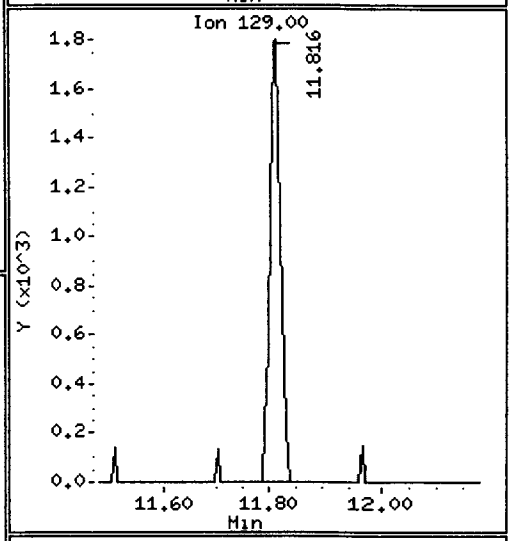
84 Naphthalene

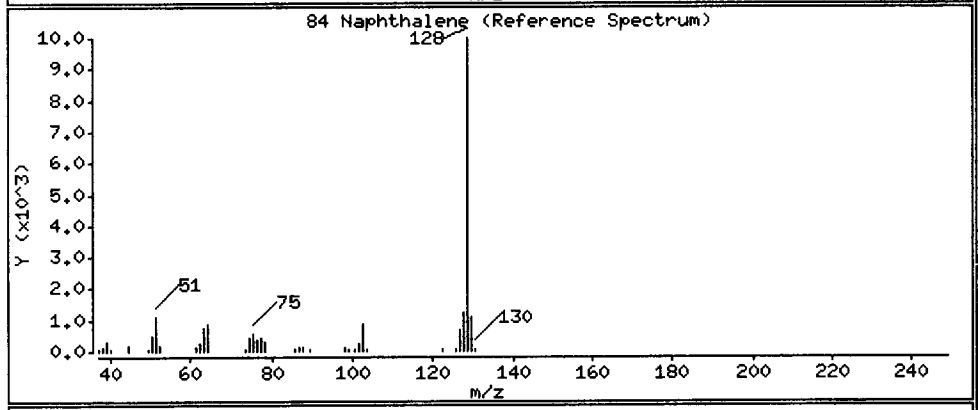
Concentration: 0.7708 ug/Kg

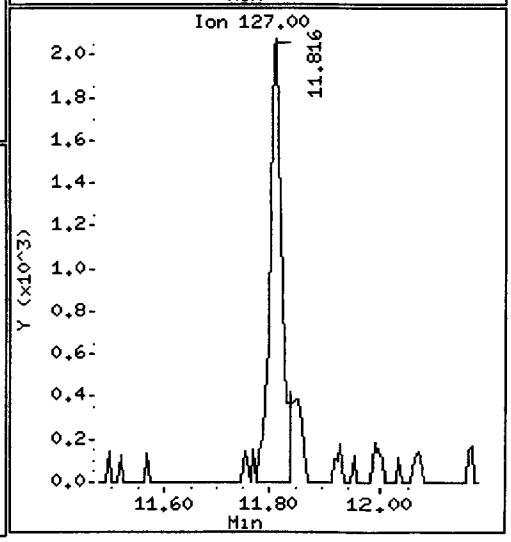


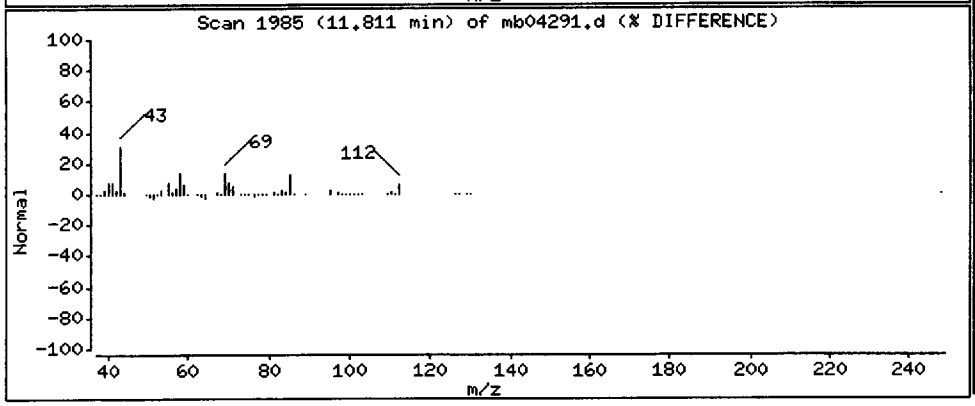












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/29APR13.b/wn31a3.d
Lab Smp Id: WN31A Client Smp ID: ES-TS-INF-20130424-
Inj Date : 29-APR-2013 16:55
Operator : PB Inst ID: nt5.i
Smp Info : WN31A,5,6.212,1,100UL
Misc Info : 13-8693
Comment :
Method : /chem1/nt5.i/29APR13.b/VO121012S.m
Meth Date : 01-May-2013 08:46 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.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 * Uf * 1/(Ws * (100 - M)/100) * CpndVariable

M	0.00000	% Moisture (not decanted)
Uf	1.00000	ng unit correction factor
Ws	5.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	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	1.583	1.572	(0.339)	12869	1.30521	0.2610
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	2.420	2.415	(0.518)	5223	0.57353	0.1147
14	Acetone	43	Compound Not Detected.					
15	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
16	Methyl tert butyl ether	73	Compound Not Detected.					
17	1,1-Dichloroethane	63	Compound Not Detected.					
18	Acrylonitrile	53	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.196	4.185	(0.898)	462936	55.4569	11.091
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.400	4.372	(0.942)	2716	2.90067	0.5801(Q)
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.672	4.666	(1.000)	582218	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.660	(0.999)	510112	55.0055	11.001
	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)	1375058	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	6.306	6.301	(1.231)	1886810	51.0555	10.211
	43 Toluene	92	6.346	6.346	(1.238)	634918	29.1216	5.824
	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	7.613	7.613	(1.000)	1468491	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	8.682	8.682	(1.140)	788641	50.9635	10.193
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
	66 2-Chloro Toluene	91	Compound Not Detected.					
	67 1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
	68 1,2,3-Trichloropropane	110	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	69 Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
	70 4-Chloro Toluene	91	Compound Not Detected.					
	71 T-Butyl Benzene	119	Compound Not Detected.					
	72 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	73 S-Butyl Benzene	105	Compound Not Detected.					
	74 4-Isopropyl Toluene	119	Compound Not Detected.					
	75 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	76 d4-1,4-Dichlorobenzene	152	9.689	9.695	(1.000)	787882	50.0000	
	77 1,4-Dichlorobenzene	146	Compound Not Detected.					
	78 N-Butyl Benzene	91	Compound Not Detected.					
$	79 d4-1,2-Dichlorobenzene	152	10.074	10.080	(1.040)	755214	50.6817	10.136
	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	11.816	11.828	(1.220)	29764	0.94962	0.1899
	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: wn31a3.d
Lab Smp Id: WN31A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8693

Calibration Date: 29-APR-2013
Calibration Time: 12:18
Client Smp ID: ES-TS-INF-20130424-
Level: MED
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	582218	-11.37
35 1,4-Difluorobenze	1427826	713913	2855652	1375058	-3.70
52 d5-Chlorobenzene	1483267	741634	2966534	1468491	-1.00
76 d4-1,4-Dichlorobe	790697	395348	1581394	787882	-0.36

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	-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: WN31A
Level: MED
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8693

Client SDG: WN31
Fraction: VOA
Client Smp ID: ES-TS-INF-20130424-
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	55.457	110.91	70-130
$ 32 d4-1,2-Dichloroeth	50.000	55.006	110.01	80-149
$ 42 d8-Toluene	50.000	51.056	102.11	77-120
$ 62 4-Bromofluorobenze	50.000	50.964	101.93	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.682	101.36	80-120

Data File: /chem1/nt5.i/29APR13.b/wn31a3.d

Date : 29-APR-2013 16:55

Client ID: ES-TS-INF-20130424-

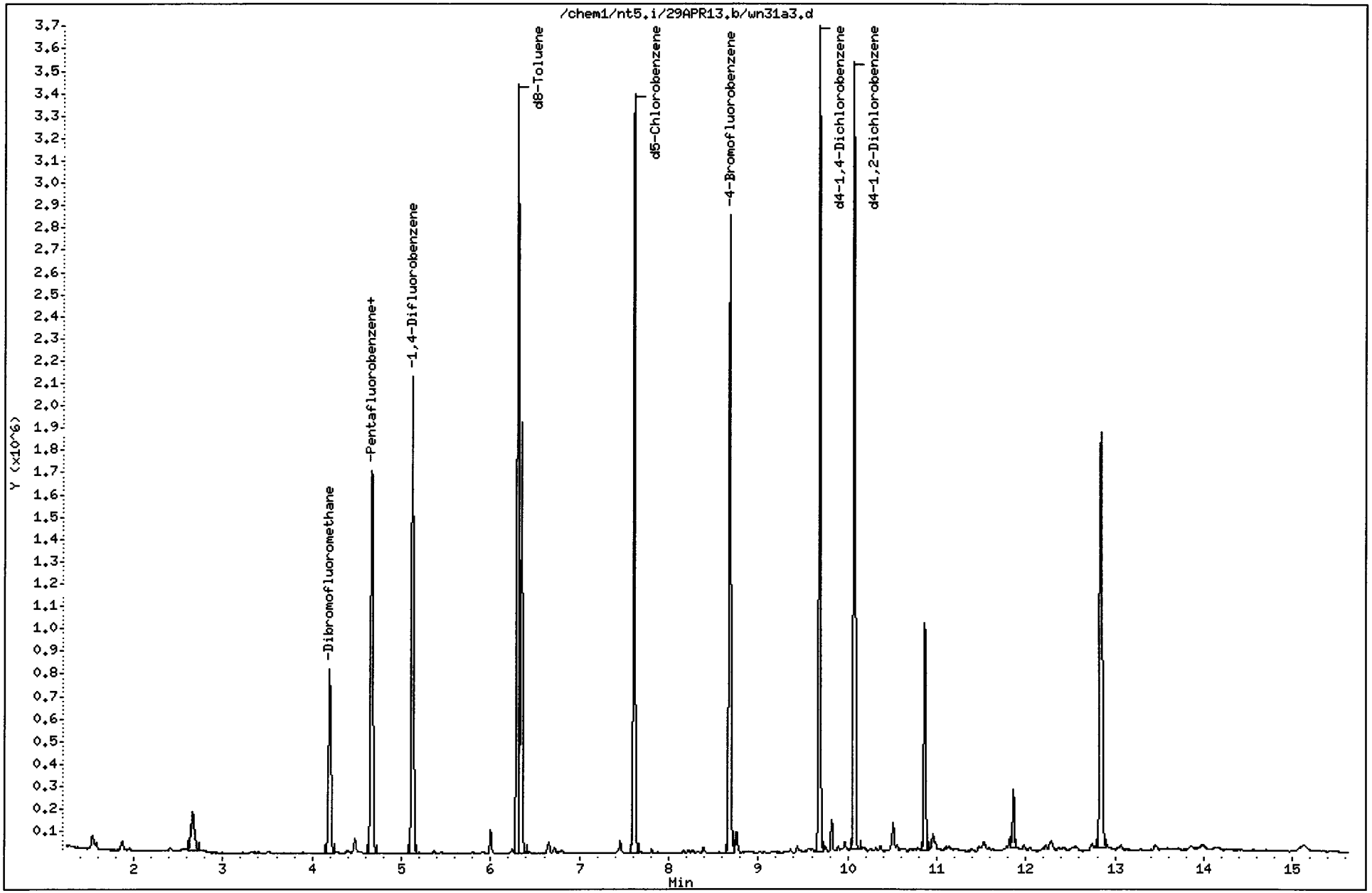
Sample Info: WN31A,5,6.212,1,100UL

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Data File: /chem1/nt5.i/29APR13.b/wn31a3.d

Date : 29-APR-2013 16:55

Client ID: ES-TS-INF-20130424-

Instrument: nt5.i

Sample Info: WN31A,5,6.212,1,100UL

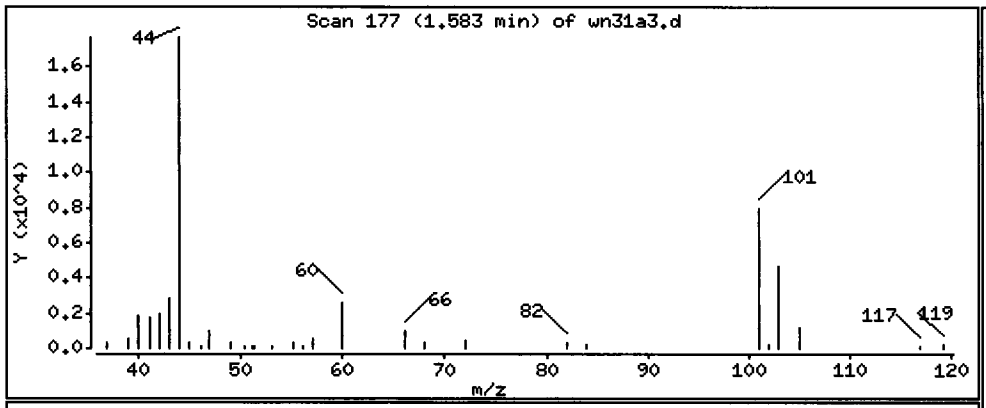
Operator: PB

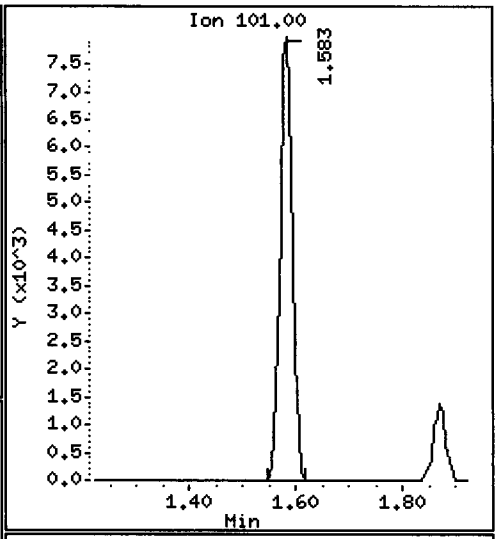
Column phase: RTXVMS

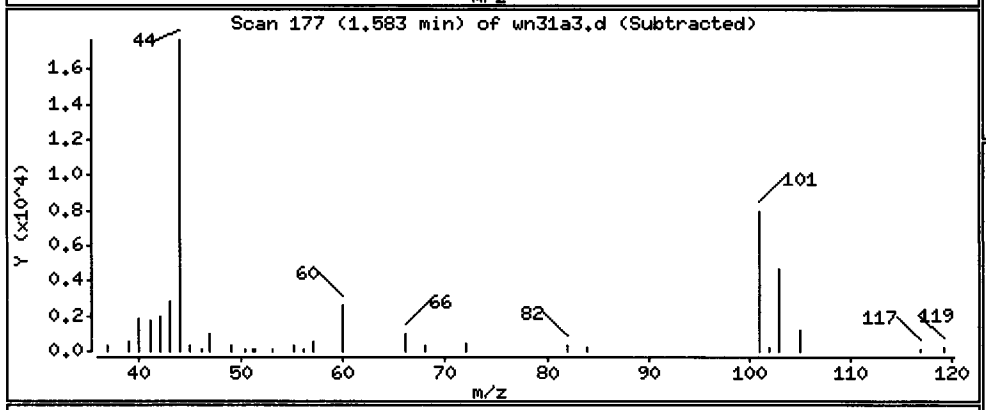
Column diameter: 0.18

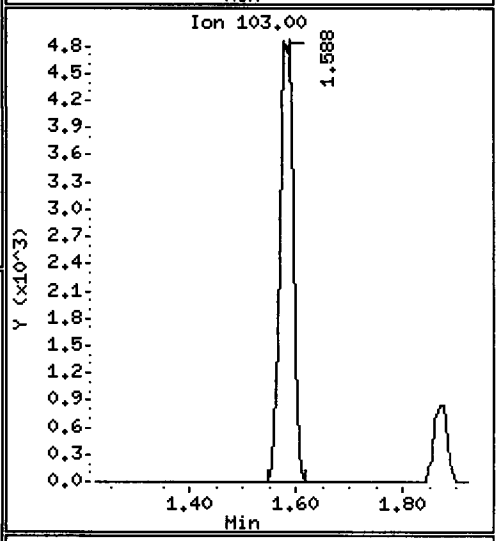
6 Trichlorofluoromethane

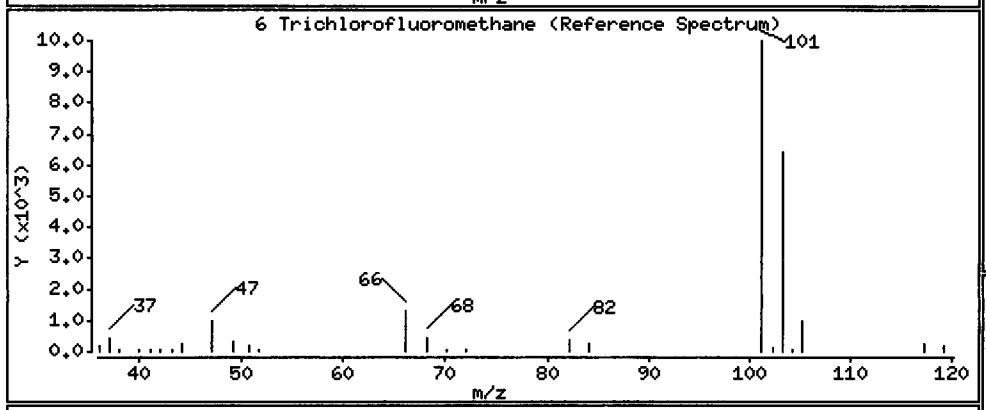
Concentration: 0.2610 ug/Kg

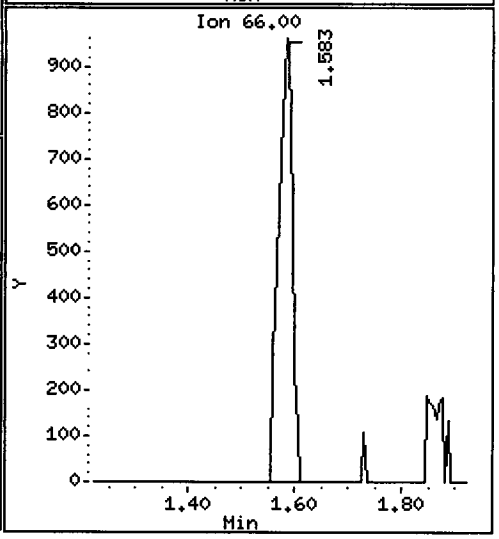


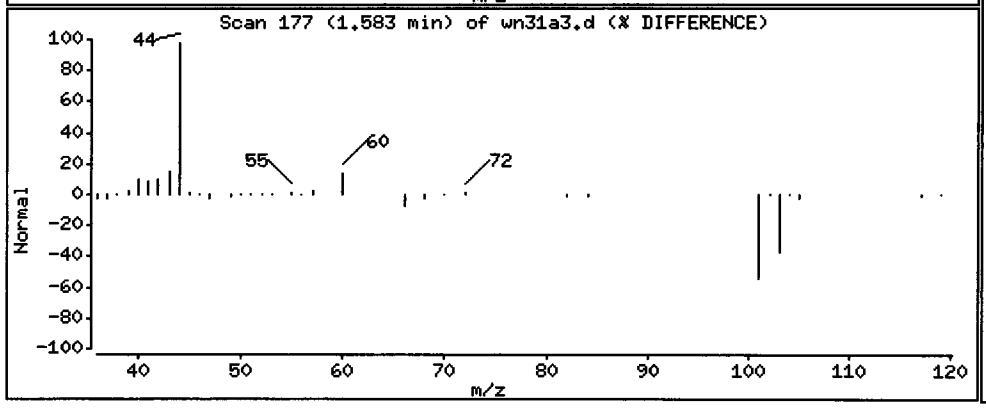












Data File: /chem1/nt5.i/29APR13.b/wn31a3.d

Date : 29-APR-2013 16:55

Client ID: ES-TS-INF-20130424-

Instrument: nt5.i

Sample Info: WN31A,5,6.212,1,100UL

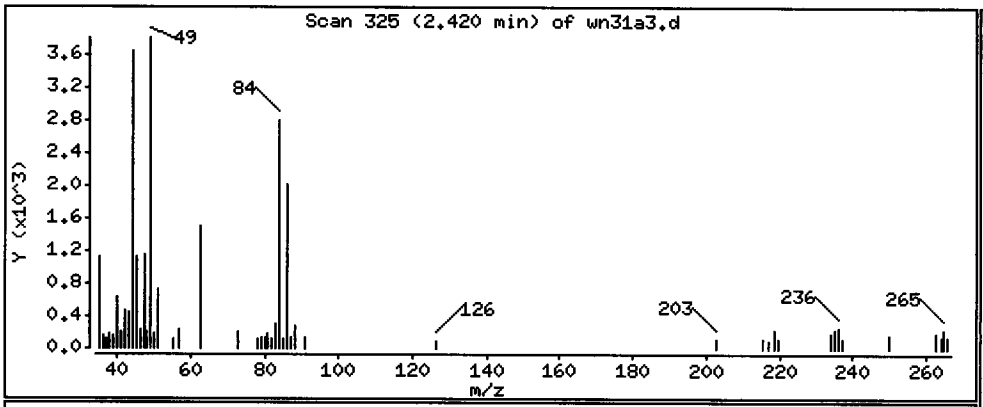
Operator: PB

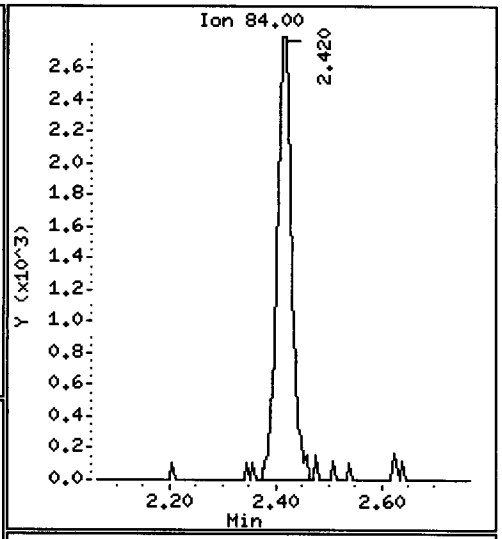
Column phase: RTXVMS

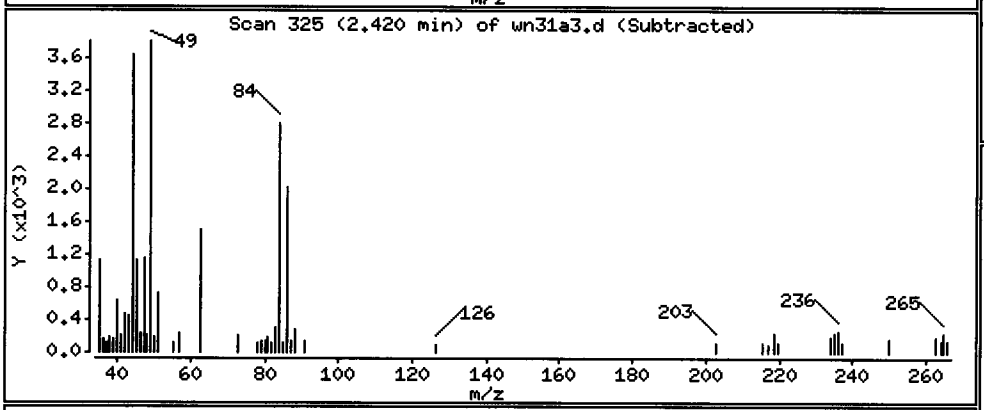
Column diameter: 0.18

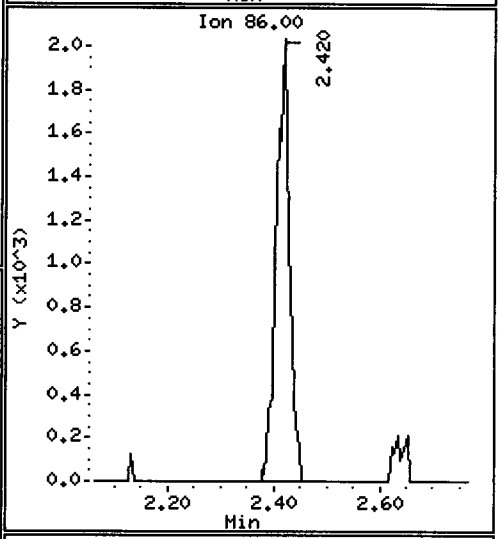
13 Methylene Chloride

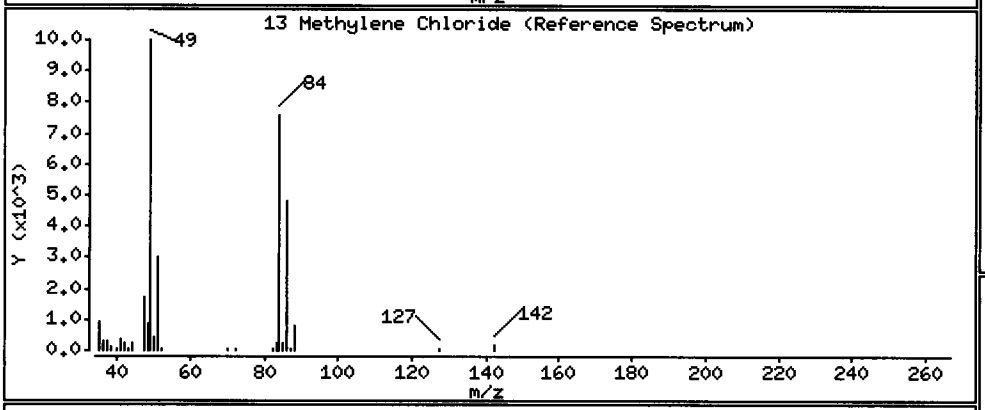
Concentration: 0.1147 ug/Kg

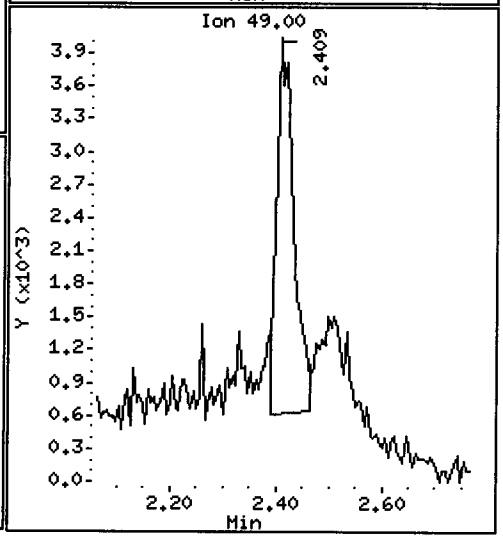


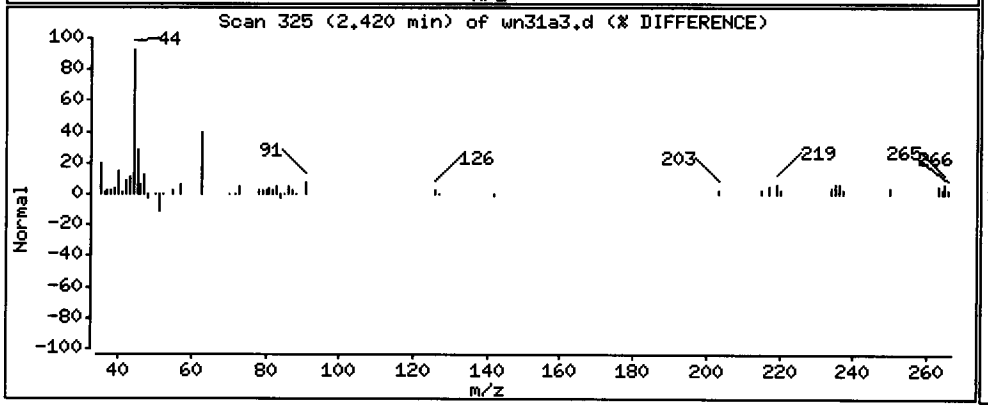












Data File: /chem1/nt5.i/29APR13.b/wn31a3.d

Date : 29-APR-2013 16:55

Client ID: ES-TS-INF-20130424-

Instrument: nt5.i

Sample Info: WN31A,5,6.212,1,100UL

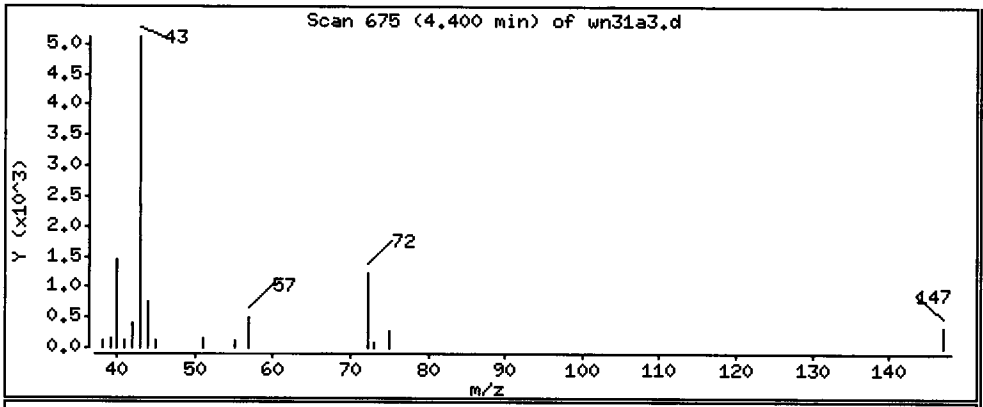
Operator: PB

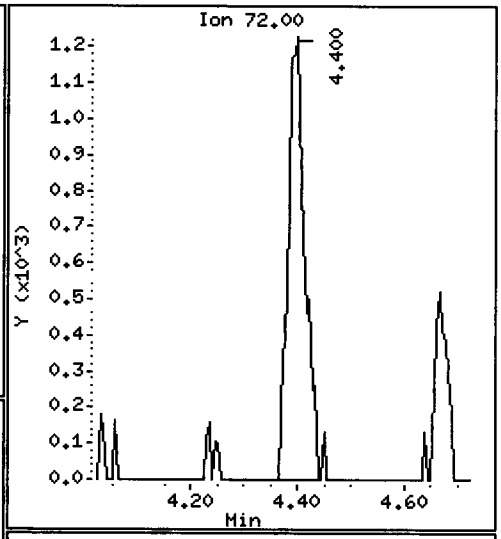
Column phase: RTXVMS

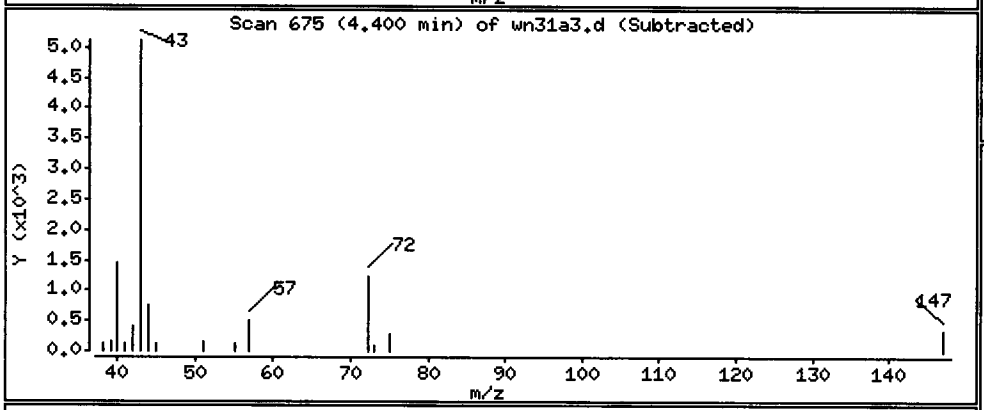
Column diameter: 0.18

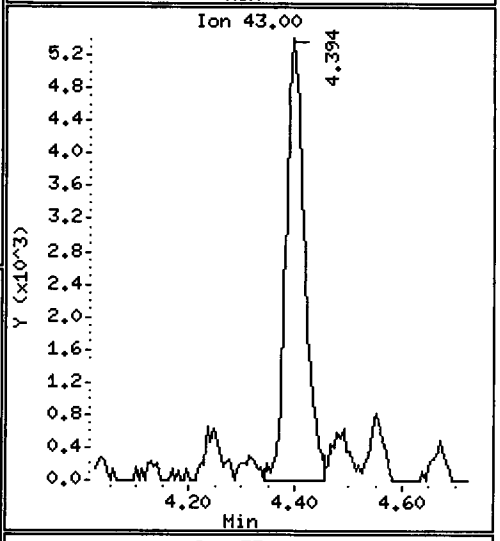
29 2-Butanone

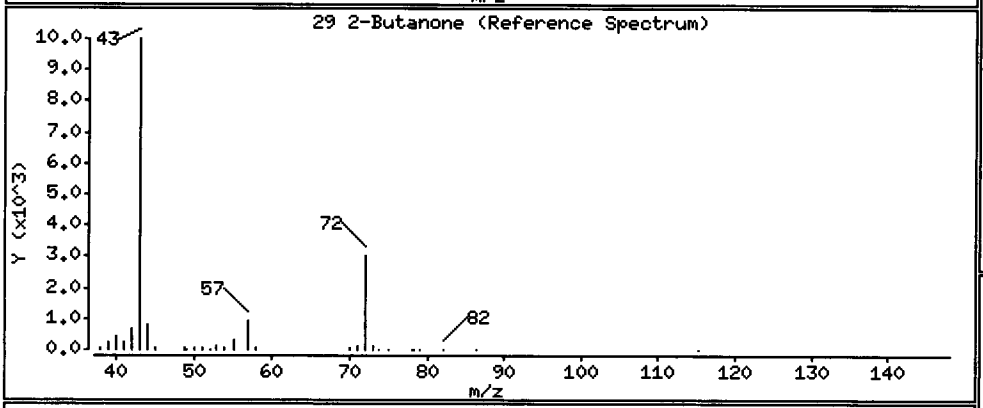
Concentration: 0.5801 ug/Kg

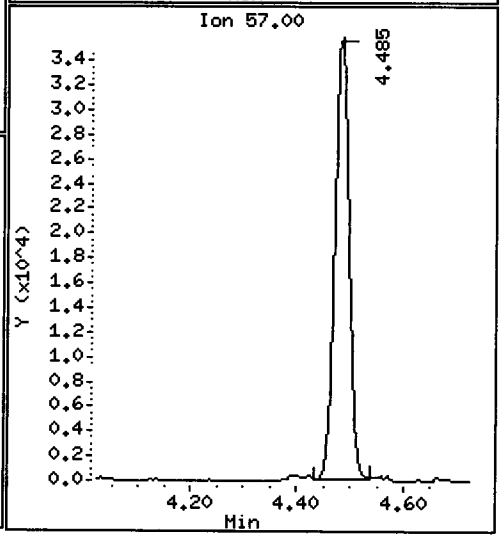


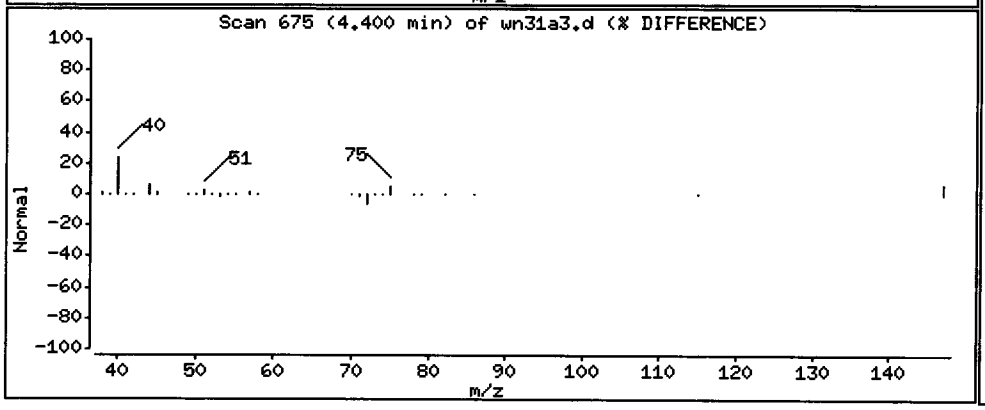












Data File: /chem1/nt5.i/29APR13.b/wn31a3.d

Date : 29-APR-2013 16:55

Client ID: ES-TS-INF-20130424-

Instrument: nt5.i

Sample Info: WN31A,5,6.212,1,100UL

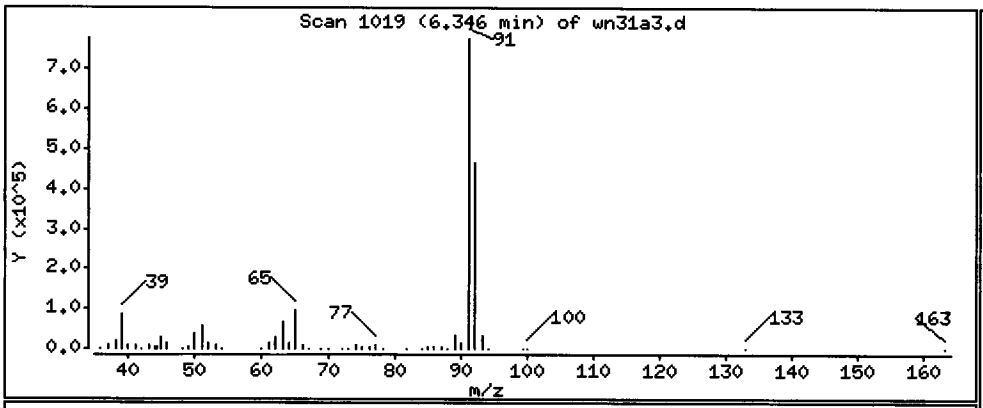
Operator: PB

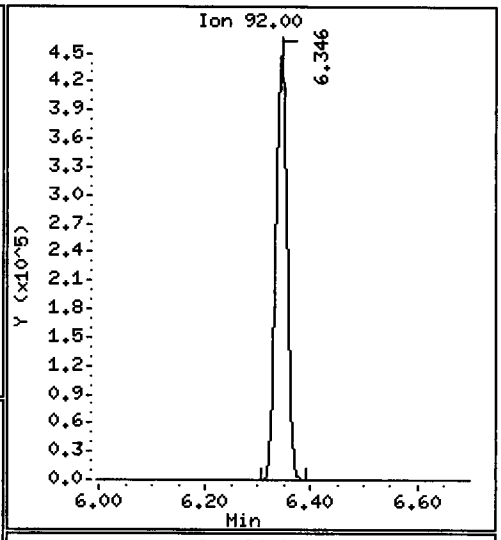
Column phase: RTXVMS

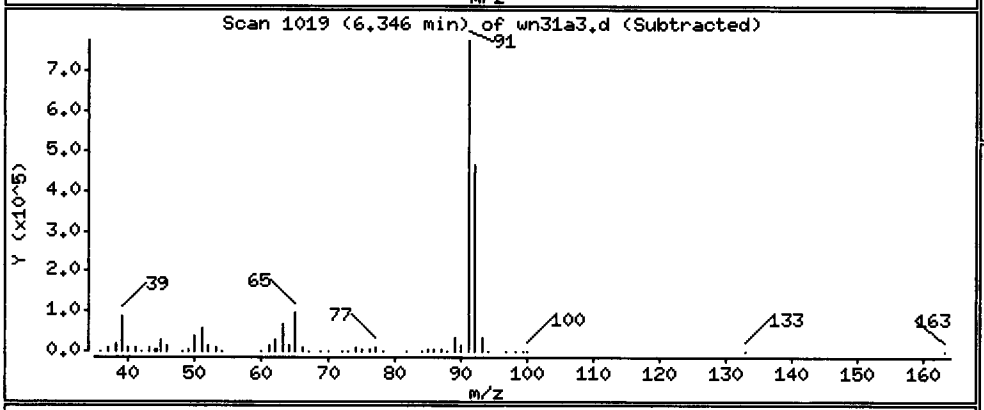
Column diameter: 0.18

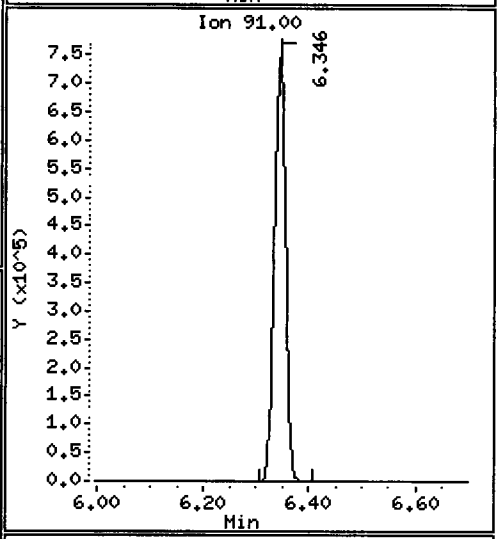
43 Toluene

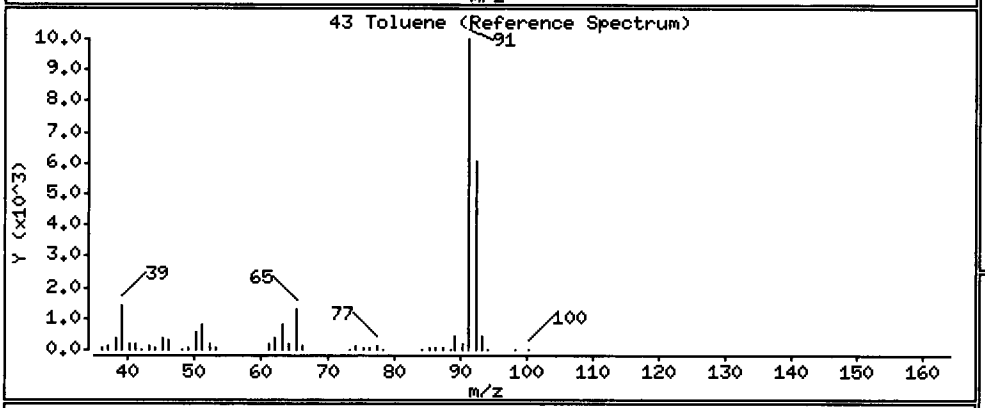
Concentration: 5.824 ug/Kg

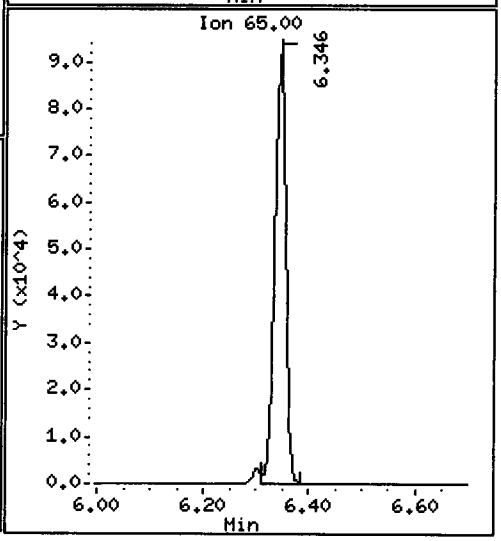


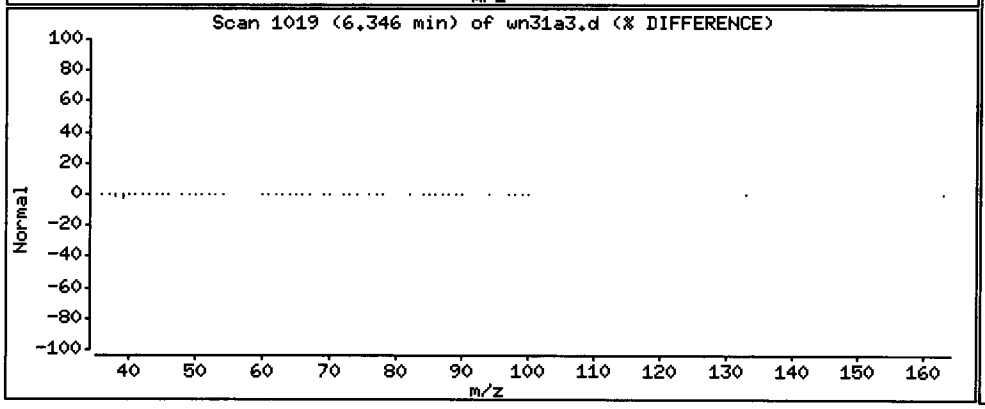












Data File: /chem1/nt5.i/29APR13.b/wn31a3.d

Date : 29-APR-2013 16:55

Client ID: ES-TS-INF-20130424-

Instrument: nt5.i

Sample Info: WN31A,5,6.212,1,100UL

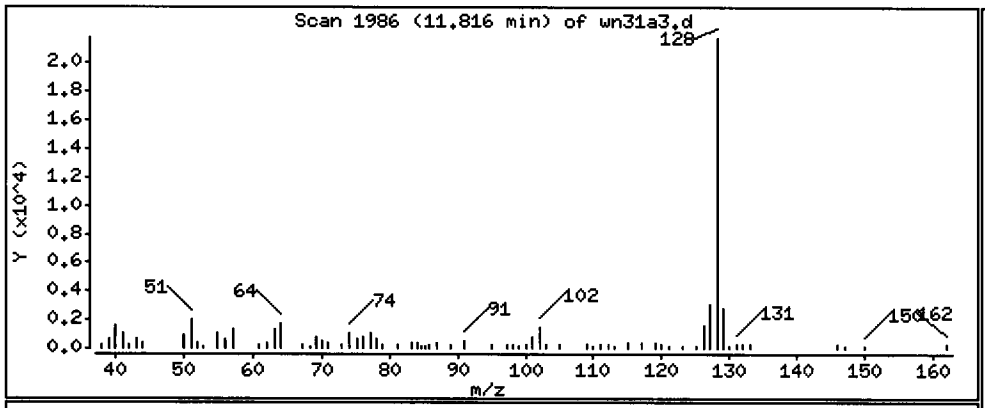
Operator: PB

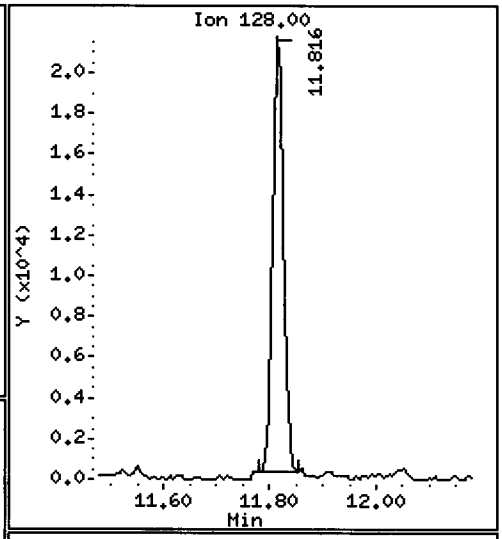
Column phase: RTXVMS

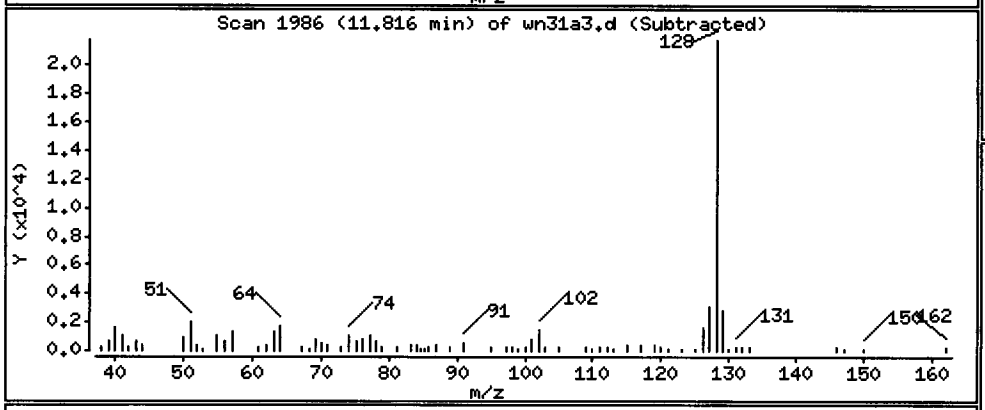
Column diameter: 0.18

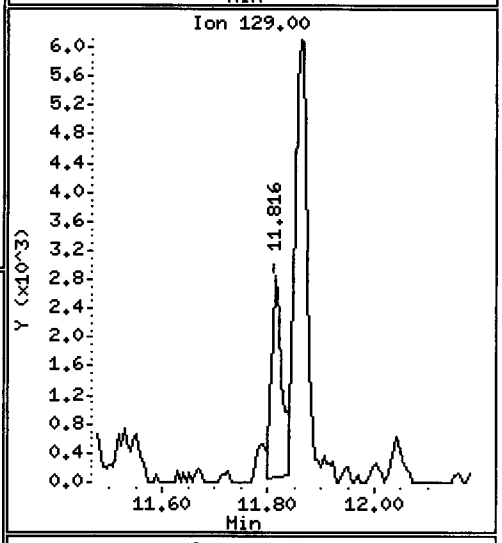
84 Naphthalene

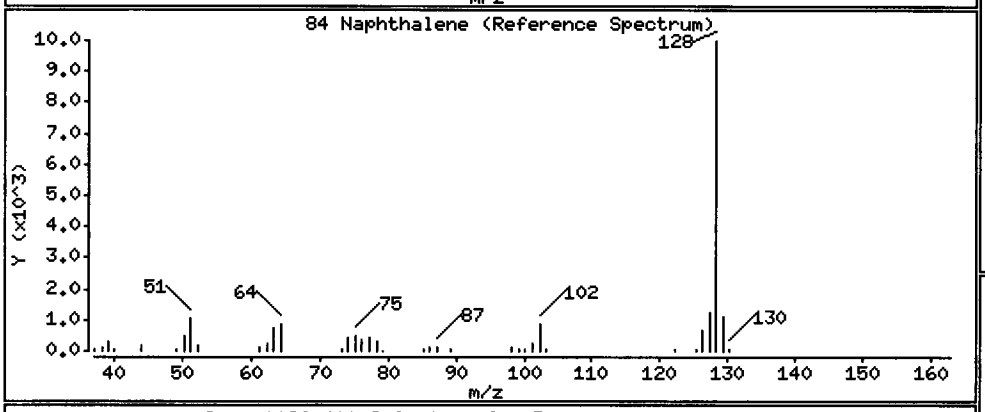
Concentration: 0.1899 ug/Kg

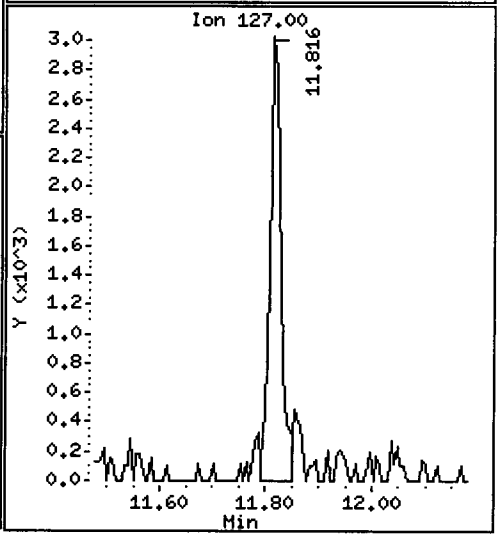


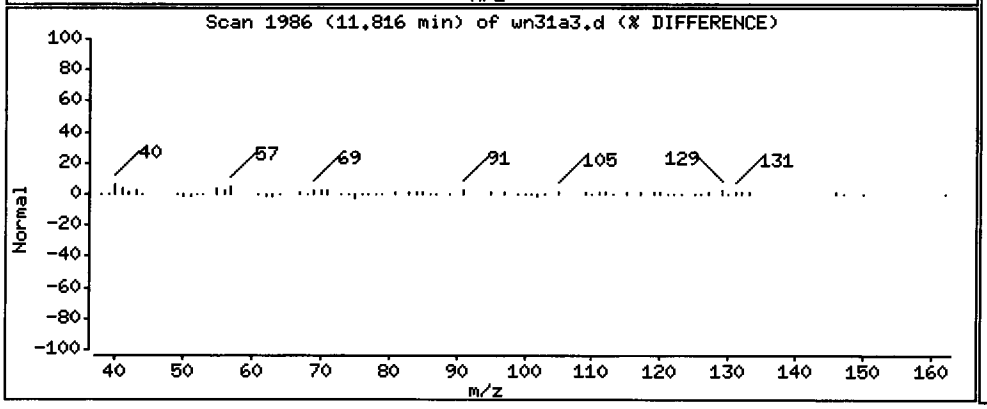












CO-ELUTION SUMMARY FOR FILE - wn31a3.d

Lab ID: WN31A, Method: VO121012S.m, Instrument: nt5.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/29APR13.b/wn31d.d
Lab Smp Id: WN31D Client Smp ID: ES-TB-001-20130424-
Inj Date : 29-APR-2013 16:31
Operator : PB Inst ID: nt5.i
Smp Info : WN31D,5,5,0
Misc Info : 13-8696
Comment :
Method : /chem1/nt5.i/29APR13.b/VO121012S.m
Meth Date : 01-May-2013 08:46 patrickb Quant Type: ISTD
Cal Date : 26-APR-2013 09:49 Cal File: 2000426.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	0.00000	Purge Volume (mL)
Sa	0.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.420	2.415	(0.518)	7816	0.88614	0.8861
14 Acetone	43	2.550	2.550	(0.546)	4782	5.78330	5.783(Q)
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/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.185	4.185	(0.896)	450255	55.4046	55.405
	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	4.672	4.666	(1.000)	566804	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.660	(0.998)	486634	53.9009	53.901
	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)	1332759	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	6.301	6.301	(1.230)	1824439	50.9346	50.935
	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	7.613	7.613	(1.000)	1415729	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	8.682	8.682	(1.140)	743821	49.8585	49.859
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
	66 2-Chloro Toluene	91	Compound Not Detected.					
	67 1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
	68 1,2,3-Trichloropropane	110	Compound Not Detected.					
	69 Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
	70 4-Chloro Toluene	91	Compound Not Detected.					
	71 T-Butyl Benzene	119	Compound Not Detected.					
	72 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	73 S-Butyl Benzene	105	Compound Not Detected.					
	74 4-Isopropyl Toluene	119	Compound Not Detected.					
	75 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	76 d4-1,4-Dichlorobenzene	152	9.695	9.695	(1.000)	749043	50.0000	
	77 1,4-Dichlorobenzene	146	Compound Not Detected.					
	78 N-Butyl Benzene	91	Compound Not Detected.					
$	79 d4-1,2-Dichlorobenzene	152	10.080	10.080	(1.040)	719034	50.7557	50.756
	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	11.828	11.828	(1.220)	43463	1.45859	1.459
	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: wn31d.d
Lab Smp Id: WN31D
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8696

Calibration Date: 29-APR-2013
Calibration Time: 12:18
Client Smp ID: ES-TB-001-20130424-
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	656923	328462	1313846	566804	-13.72
35 1,4-Difluorobenze	1427826	713913	2855652	1332759	-6.66
52 d5-Chlorobenzene	1483267	741634	2966534	1415729	-4.55
76 d4-1,4-Dichlorobe	790697	395348	1581394	749043	-5.27

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	7.61	7.11	8.11	7.61	0.00
76 d4-1,4-Dichlorobe	9.69	9.19	10.19	9.69	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WN31D
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/29APR13.b/VO121012S.m
Misc Info: 13-8696

Client SDG: WN31
Fraction: VOA
Client Smp ID: ES-TB-001-20130424-
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

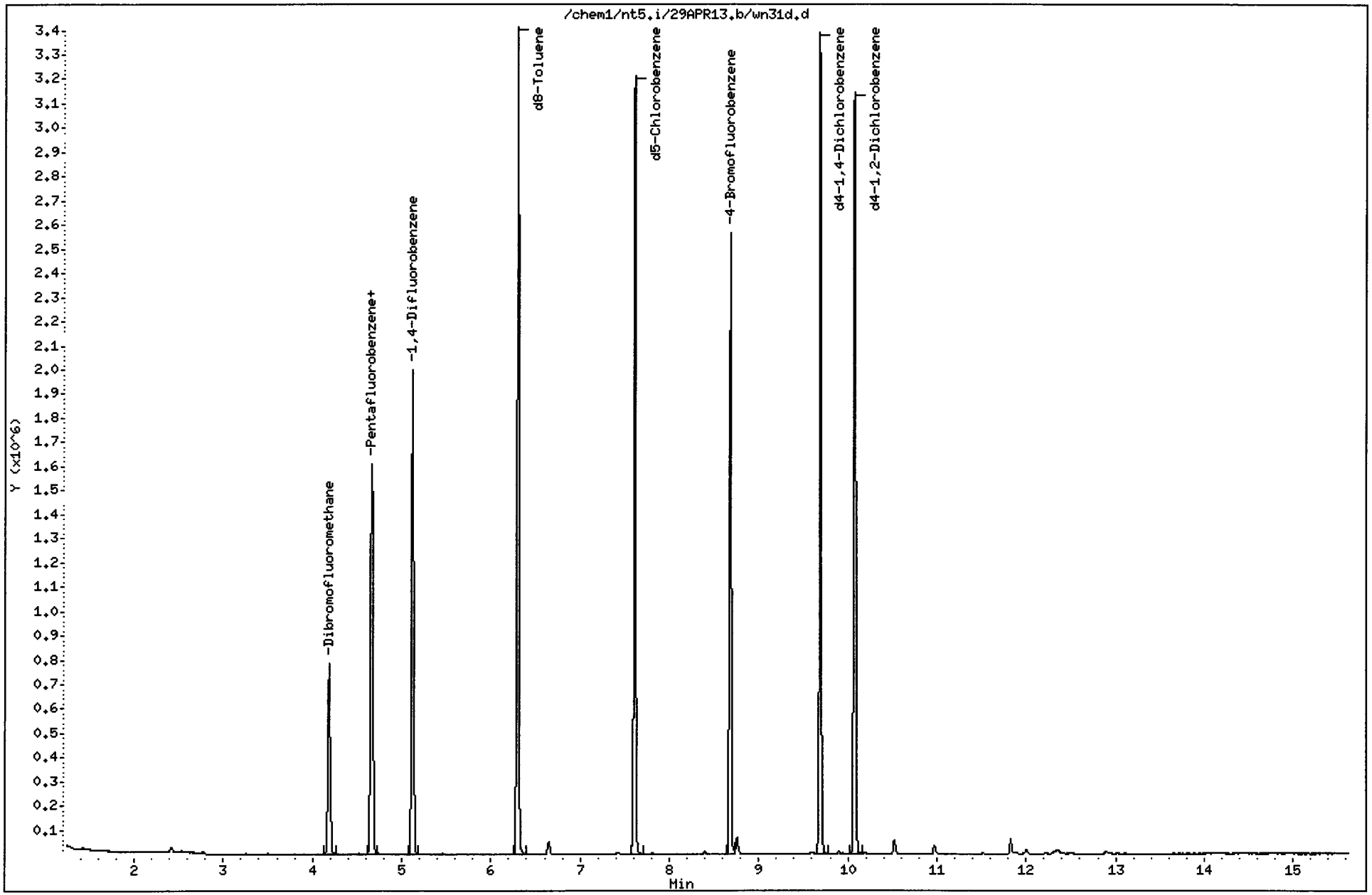
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	55.405	110.81	30-160
$ 32 d4-1,2-Dichloroeth	50.000	53.901	107.80	75-152
$ 42 d8-Toluene	50.000	50.935	101.87	82-115
$ 62 4-Bromofluorobenze	50.000	49.859	99.72	71-120
$ 79 d4-1,2-Dichloroben	50.000	50.756	101.51	80-121

Data File: /chem1/nt5.i/29APR13.b/wn31d.d
Date : 29-APR-2013 16:31
Client ID: ES-TB-001-20130424-
Sample Info: WN31D,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/29APR13.b/wn31d.d

Date : 29-APR-2013 16:31

Client ID: ES-TB-001-20130424-

Instrument: nt5.i

Sample Info: WN31D,5,5,0

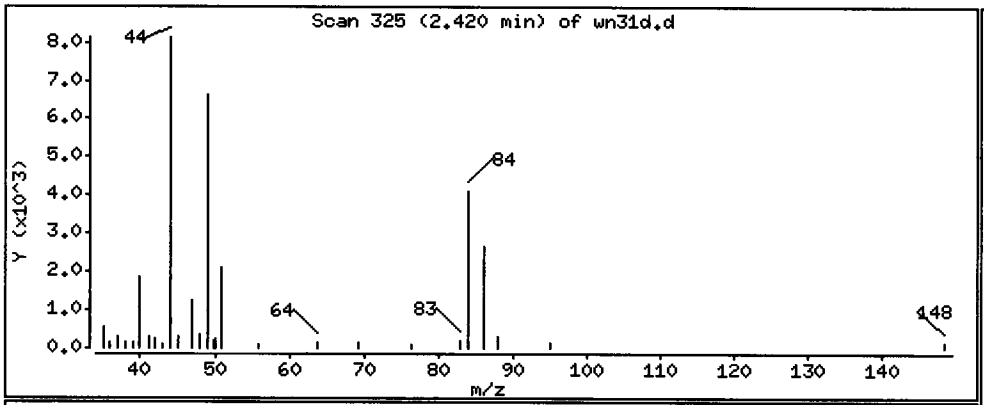
Operator: PB

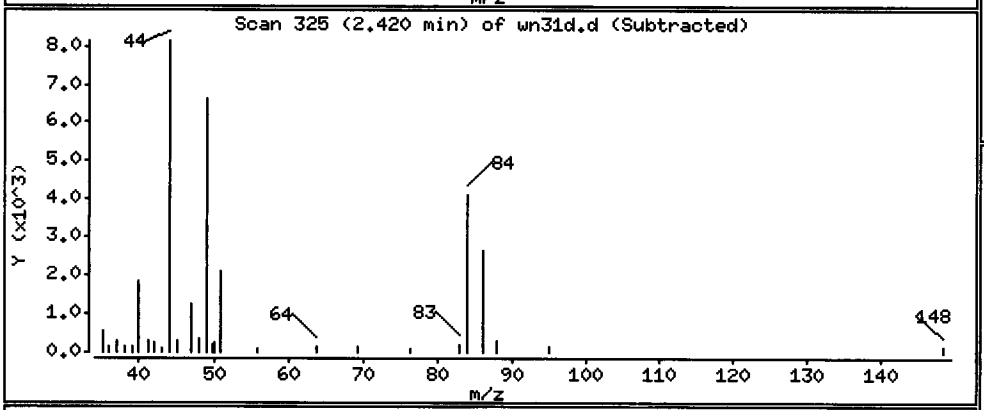
Column phase: RTXVMS

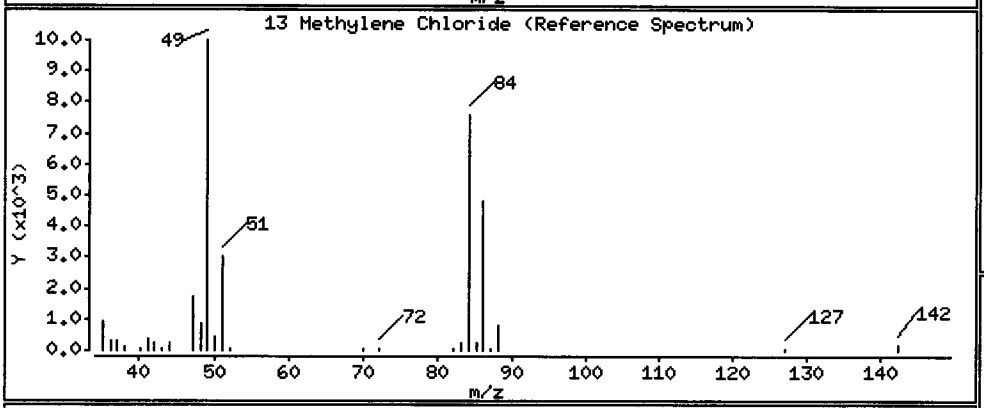
Column diameter: 0.18

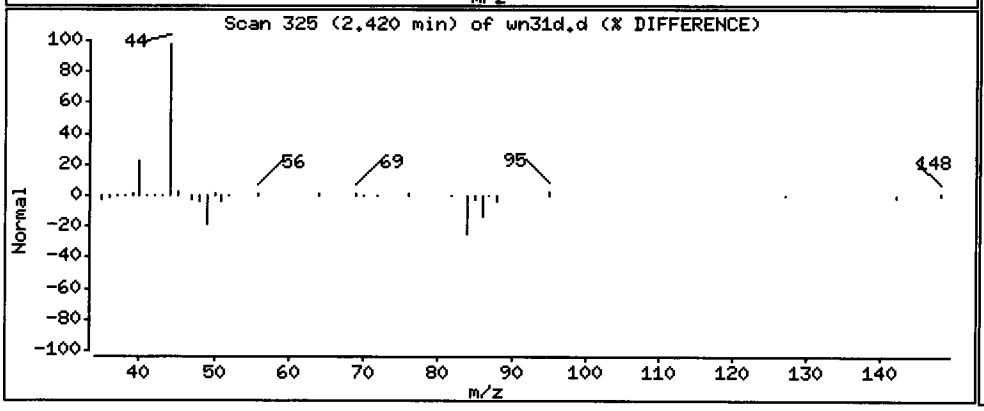
13 Methylene Chloride

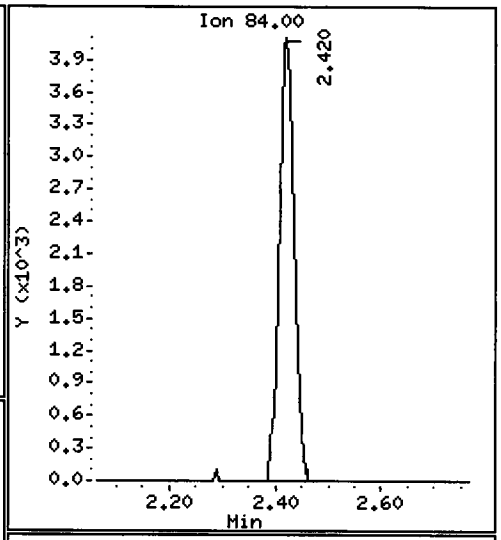
Concentration: 0.8861 ug/L

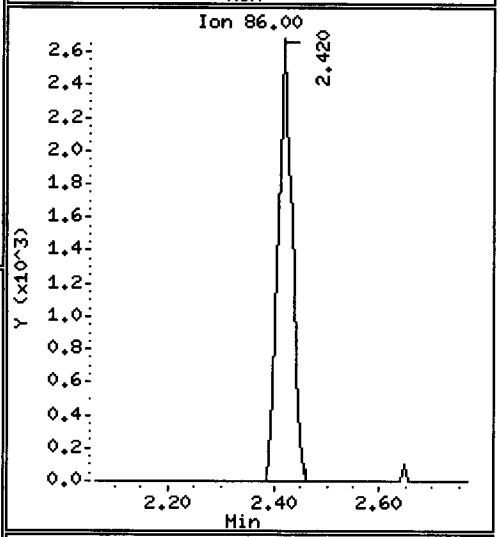


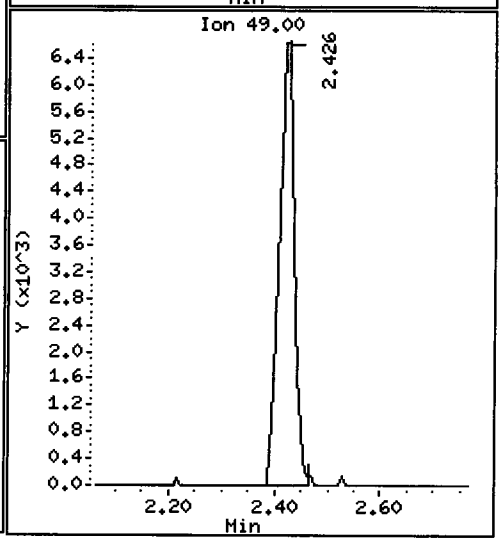












Data File: /chem1/nt5.i/29APR13.b/wn31d.d

Date : 29-APR-2013 16:31

Client ID: ES-TB-001-20130424-

Instrument: nt5.i

Sample Info: WN31D,5,5,0

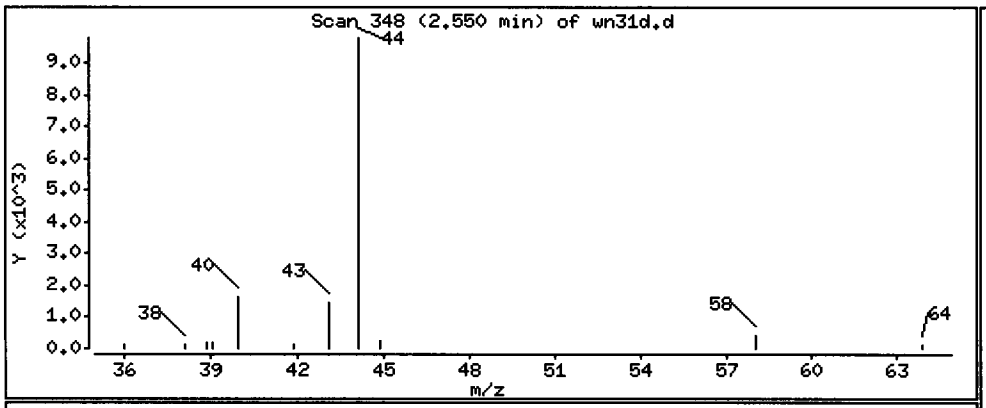
Operator: PB

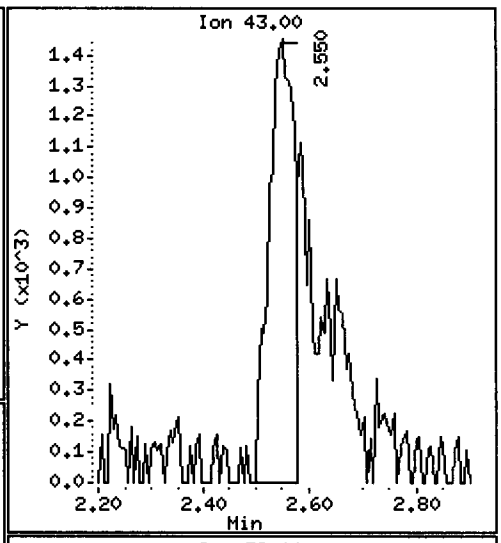
Column phase: RTXVMS

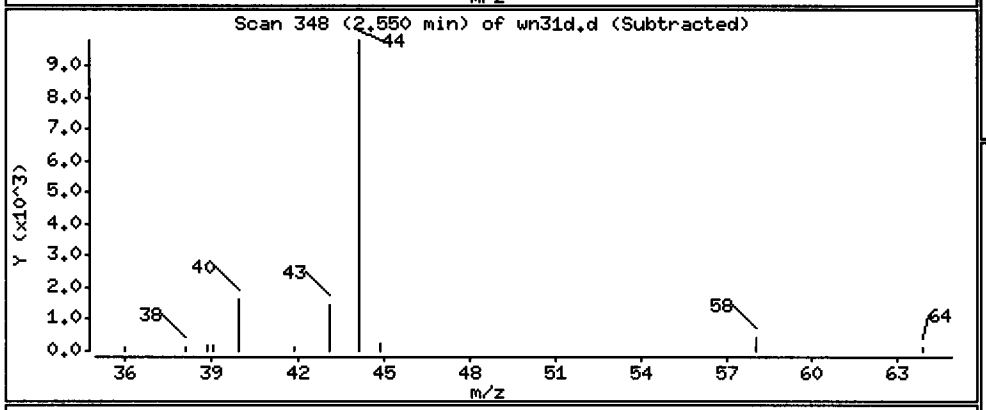
Column diameter: 0.18

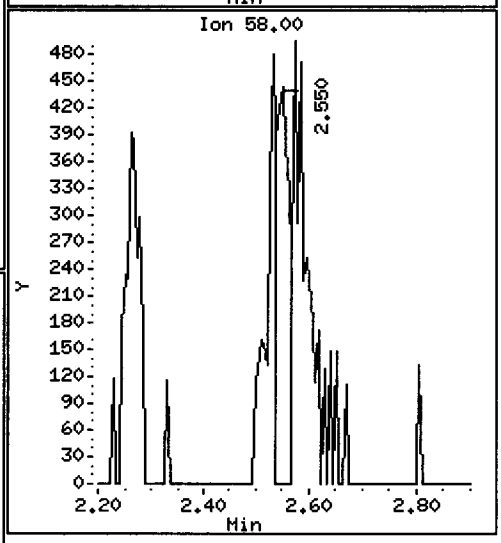
14 Acetone

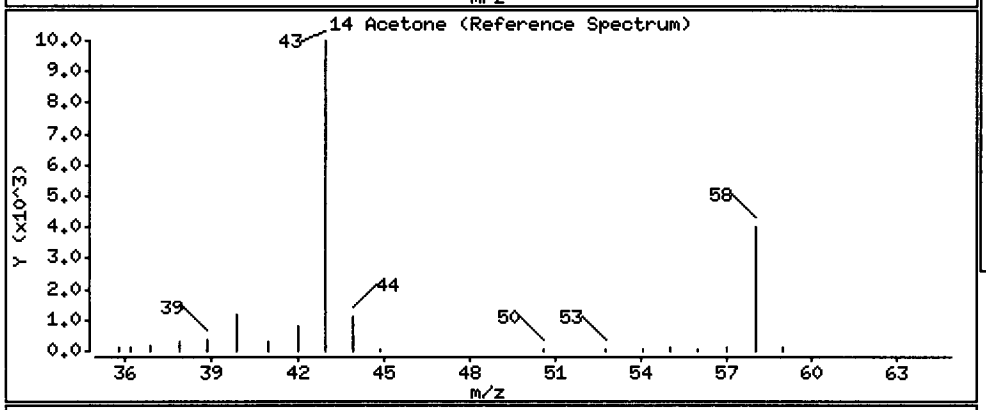
Concentration: 5.783 ug/L

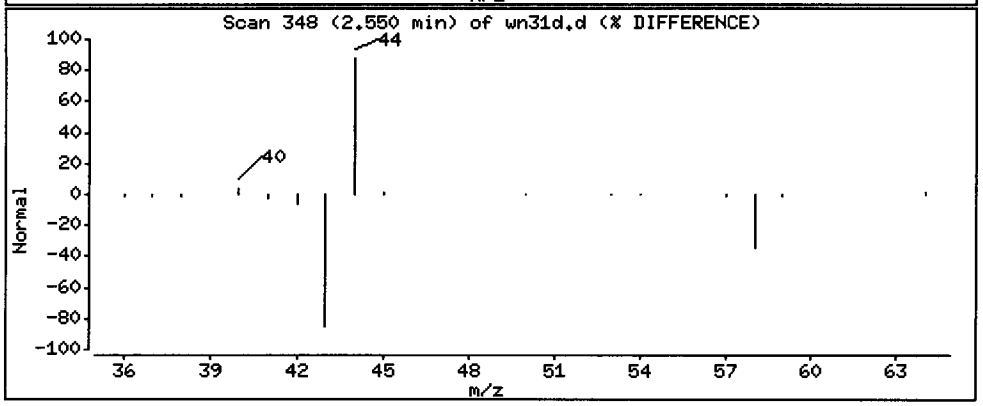












Data File: /chem1/nt5.i/29APR13.b/wn31d.d

Date : 29-APR-2013 16:31

Client ID: ES-TB-001-20130424-

Instrument: nt5.i

Sample Info: WN31D,5,5,0

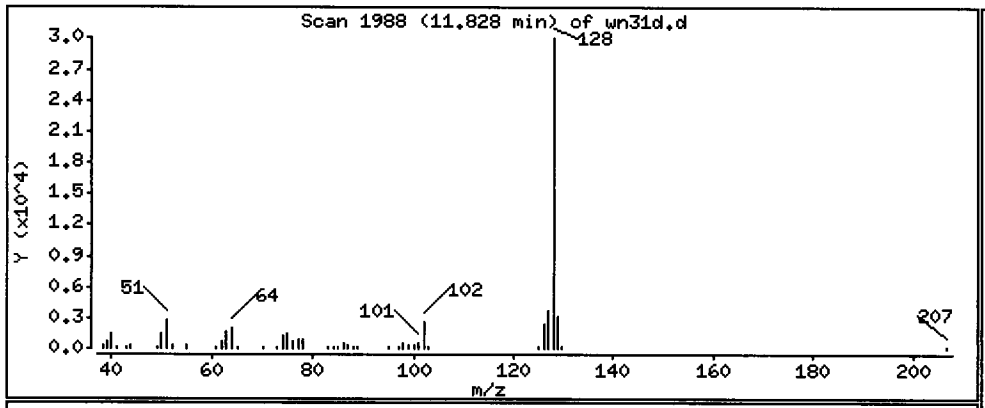
Operator: PB

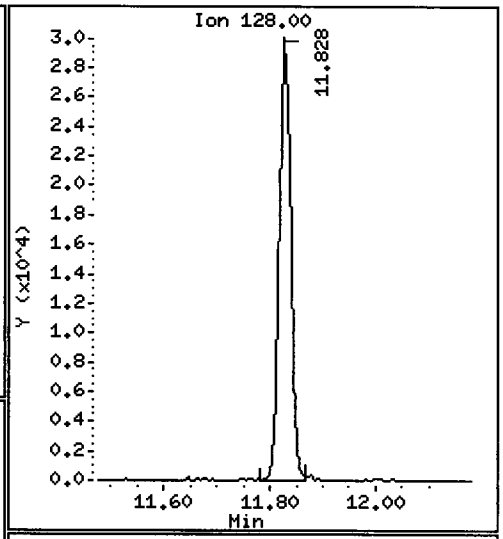
Column phase: RTXVMS

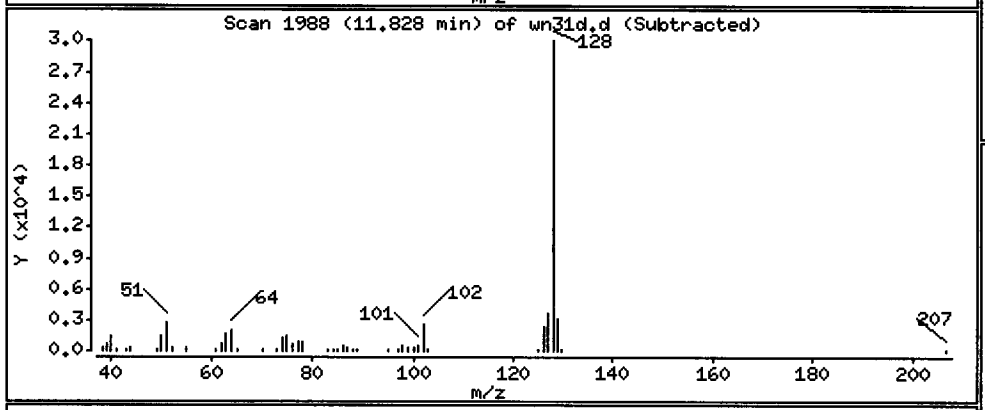
Column diameter: 0.18

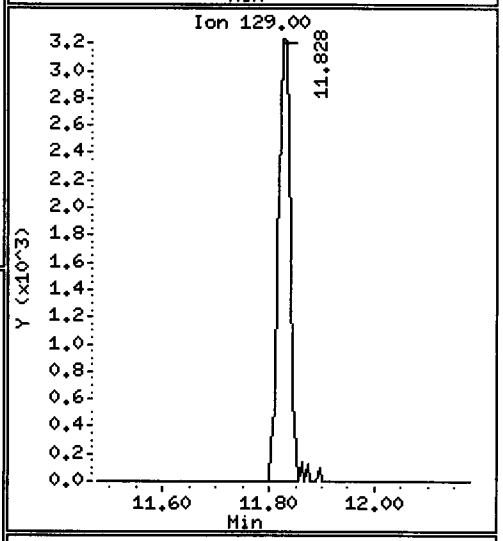
84 Naphthalene

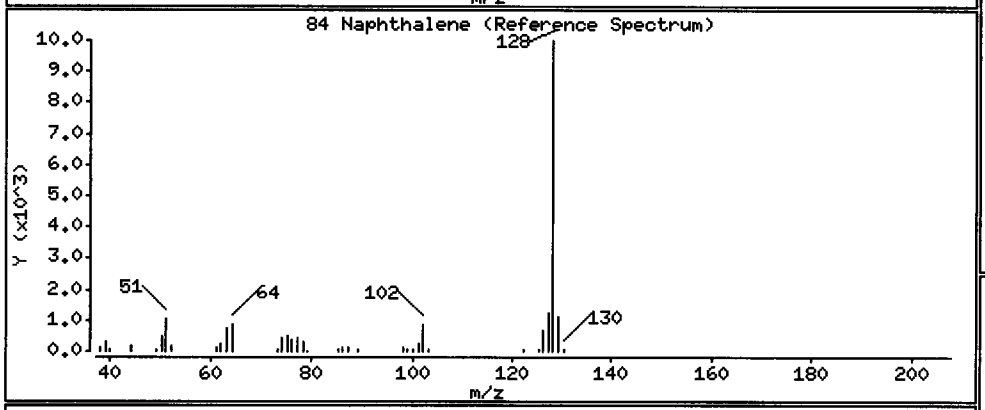
Concentration: 1.459 ug/L

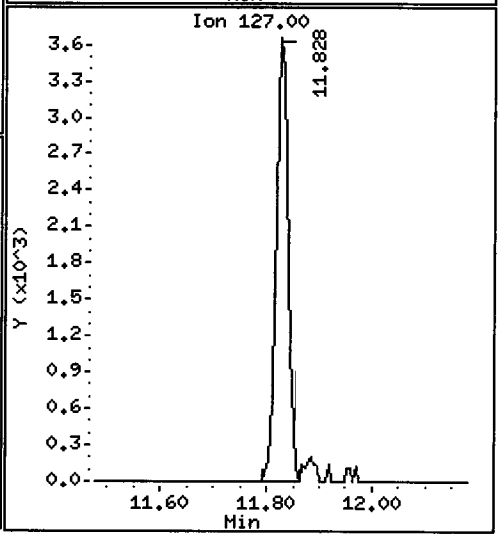


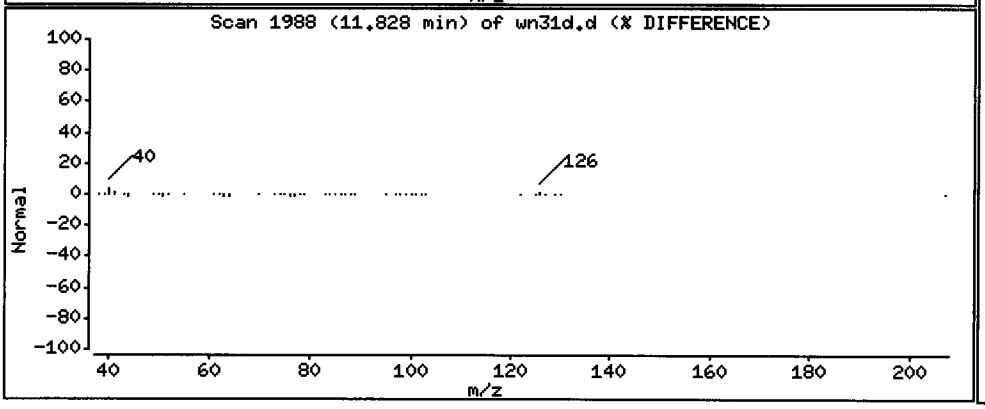












CO-ELUTION SUMMARY FOR FILE - wn31d.d

Lab ID: WN31D, Method: VO121012S.m, Instrument: nt5.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

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

Preparation Test BAN # 1 (BANWSI)
ARI Job No(s) WN31, WN57 Page 1 of 1 In-House (1.0-5.0ppb)
Batch set up by: JH

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WN31 MBW	500mL	0.5mL	0.5mL		AC 4-29-13
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup	500mL	0.5mL	0.5mL		
	QLS	500mL	0.5mL	0.5mL		
10	B	500mL	0.5mL	0.5mL		
5	WN57 A	500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		KD 80-85°C 1 2 3 4 5 6
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		04/30/13
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap 1 2 3
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL	CJZ 5/1/13	
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		CJZ 5/1/13
Analyst/Date	AC 4-29-13		CJZ 5/1/13	CJZ 5/1/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2084-3)	100/150µg/mL	125µL	7/22/13	AC	WW
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	125µL	1/29/14	AC	WW
Base Spike	56 (2065-2)	200µg/mL	125µL	7/31/13	AC	WW
Benzidine Spike	39 (2022-4)	500µg/mL	125µL	10/23/13	AC	WW
Acid Spike	38 (2091-4)	100/200µg/mL	125µL	2/28/14	AC	WW
QLS Spike (Freezer)	14 (2092-2)	10-100µg/mL	50µL	1/27/14	AC	WW
Extraction Time:	13:35					

SPECIAL INSTRUCTIONS: 1. Add surr/spk. 2. Adjust Acid (pH <2) using 1:1 Sulfuric Acid. (1/4 pipet for blanks & 1/2 pipet for samples). Verify pH! 3. Extract 1X 60mL DCM, Plus 2X 30mL DCM. 4. Adjust Basic (pH >12) using 1 pipet 10 N Sodium Hydroxide solution. Verify pH! 5. Extract 1X 60mL DCM, Plus 2X 30mL DCM.
5. Pour Acid Fraction first into KD then Basic Fraction into Acid. 6. KD to 5mL at 80°. 7. TurboVap to 0.5mL.
8. Vial in DCM.

A. Archive Y (N)

Reagent and Solutions Identification

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

ARI Job No(s) WN31, WN57

(8270D) BAN Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I#8242) 1:1 Sulfuric Acid/DI H2O: (H# 114) 10 N Sodium Hydroxide: (H# 049) Anhydrous Sodium Sulfate: (I#3068+ jar date 4-19-13)	Sep Funnel AC 4-29-13
KD Station: Methylene Chloride: (I#8202)	KD RR 4/30/13
Vialing Station: Methylene Chloride: (I#8202)	Vialing CJZ 5/1/13

Analytical Resources, Incorporated
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Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN31 Client ID: SAIC

Parameter: B.AN Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color= Brown-tan	AC 4-29-13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN31 Client ID: SAIC

Parameter: BAN/SIM SVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= strong sulfur odors.	YL 05/01/13
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GC/MS Analyst (Centrifuge#1 used for all Centrifugations) Sample volume extracted reduced based on pre-screen	SP 4/29/13

3056F

Revision 009
08/14/12

WN31 : 00570

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(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) WN34, WN27, WN31 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 / Analyst/Date
	WN34 MBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	YL 05/01/13
	SBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave (1) 2 3 NLK 05/01/13 Analyst/Date
	SBS Dup.	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C (1) 2 3 4 5 6 Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 (2) 3 Analyst/Date
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
2	WN34 K	24.03	(1:1) (Y) / N	1mL	1mL		CSZ 5/2/13 Analyst/Date
2	WN27 A	10.01	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	GPC Prep Filter (1:1)
2	AMS	10.03	(1:1) (Y) / N	1mL	1mL		CSZ 5/2/13 Analyst/Date
2	AMSD	10.02	(1:1) (Y) / N	1mL	1mL		
9	WN31 A	3.03	(1:1) (Y) / N	1mL	1mL		Post GPC KD 80-85°C (1) 2 3 4 5 6 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL	CSZ 5/3/13	
			(1:1) Y / N	1mL	1mL		TurboVap 1 (2) 3 CSZ 5/3/13 Analyst/Date
Analyst/Date		YL 05/01/13 (2093-4)	CSZ 5/2/13	CSZ 5/3/13	CSZ 5/3/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (~~2084-3~~)	100/150µg/mL	50µL	7/02/13	YL	WW
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/24/14	YL	WW
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	WW
Acid Spike	38(2091-4)	100/150µg/mL	50µL	7/28/14	YL	WW
~~QLS Spike (14 in Freezer)~~	~~14(~~)	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25(~~)	~~1µg/mL~~	~~50µL~~			
Extraction Time: 11:50			Balance ID: B1464261G			

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** WN34 only

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 3/6/13 Internal Standard ID 1998-2 Expiration 7/3/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	N/A / YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Ultra	2053-2	8/5/13	Supelco	2046-1	8/13/13
↓	2044-1	12/5/12	↓	2057-1	12/5/13
↓	2055-1	12/5/13	↓	2058-1	12/5/13
in house stock	2061-1	12/5/13	in house stock	2061-1	12/5/13
Cambridge	18031	1/23/14	Cambridge	18031	1/23/14
8270 x-Restek	2007-2	10/5/13	Aldrich	1998-2	7/2/13
Aldrich	2058-2	7/2/13			

Detail problems, corrective actions and/or other pertinent information below:

Quadratic curve fit used: Butylated hydroxytoluene, Tributyl Phosphate, Biphenyl, Naphthalene, 4-chloroaniline, 2-chloronaphthalene, 3-Nitroaniline, Fluorene, Carbazole, Benzo(b,k) fluoranthene, ~~4-Bromophenyl-phenylether~~

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

80ppm point dropped: naphthalene, 4-chloroaniline, phenanthrene, Anthracene, Di-n-butylphthalate, Benzidine. didn't met min response factor and out of ac limit on ~~Jan~~ ICV.

Analyst: _____ **Date:** 3/7/13

Reviewer: _____ **Date:** 3/7/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

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

03/07/13

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
186 Carbaryl	0.39701	0.47535	0.56117	0.49062	0.46459	0.42558		
	0.42067	+++++					0.46214	11.884
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
177 p-Benzoquinone	0.05008	0.07043	0.09004	0.08723	0.08034	0.07949		
	0.07703	+++++					0.07638	17.383
168 Pentachlorobenzene	0.54002	0.44946	0.48381	0.42999	0.39543	0.37082		
	0.39690	+++++					0.43806	13.414
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
133 Butylatedhydroxytoluene	1.14333	0.98886	1.01757	0.90348	0.73978	0.64214			
	0.61393	+++++					0.86416	23.429	<-
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	

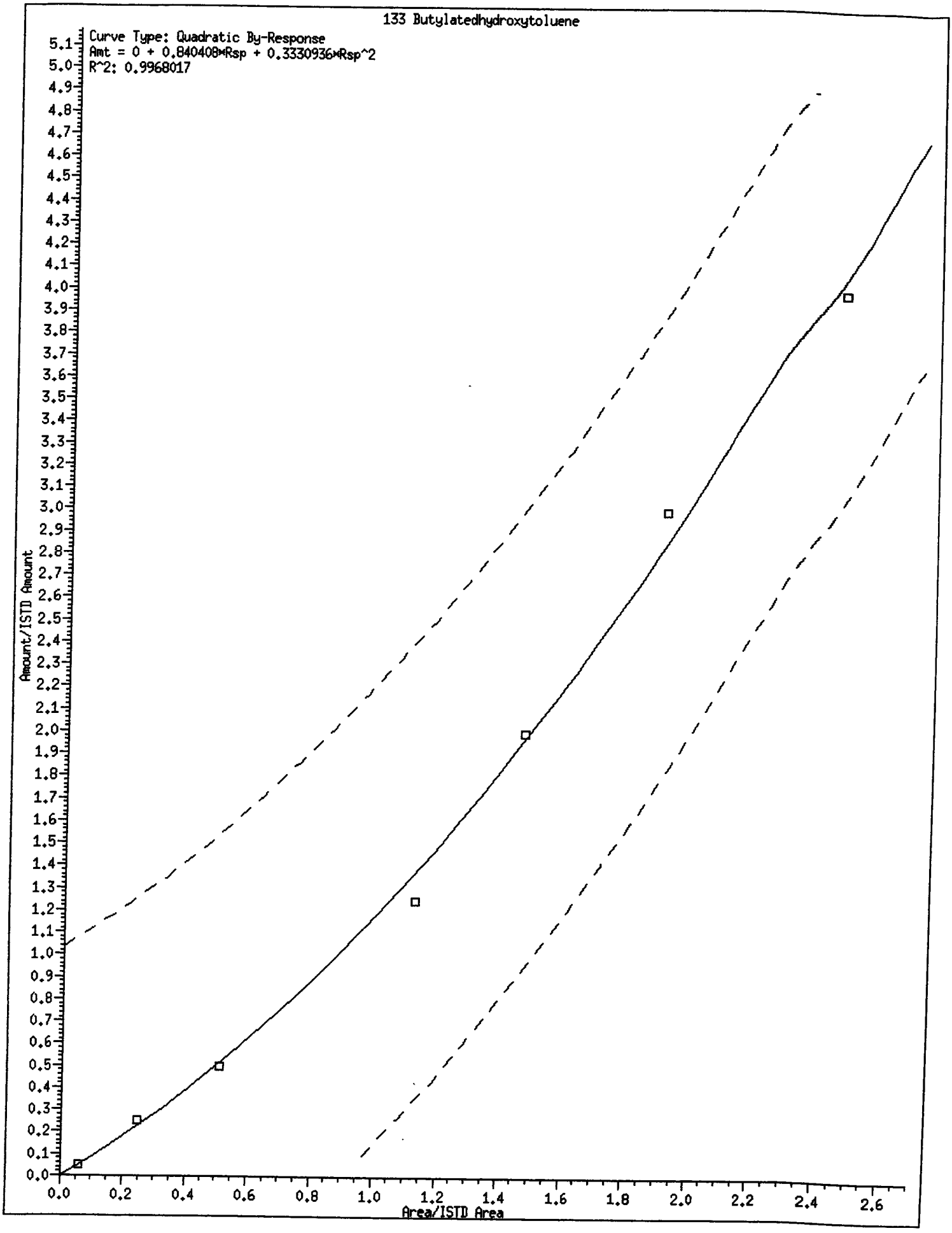
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

DZ 03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
133 Butylatedhydroxytoluene	55856	240649	644369	1140696	1474910	1855173					
	2177090	+++++					QUAD	0.000e+00	0.84041	0.33309	0.99680
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00


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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 alpha-Terpineol	0.29935	0.28907	0.28287	0.25012	0.23154	0.21632		
	0.21106	+++++					0.25433	14.269
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
123 Acetophenone	2.14833	1.97774	2.14601	1.85029	1.73200	1.63910		
	1.68468	+++++					1.88259	11.294
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 1,4-Dioxane	0.70789	0.62615	0.68743	0.61563	0.60104	0.58481		
	0.62088	0.74708					0.64887	8.913
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.21112	0.27662	0.33189	0.30795	0.30141	0.27621		
	0.29312	+++++					0.28547	13.312

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
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Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
178 2-Benzyl-4-Chlorophenol	0.15564	0.16773	0.19566	0.17601	0.15696	0.14827			
	0.15928	+++++					0.16565	9.643	
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
118 Triphenyl Phosphate	0.17525	0.16342	0.19227	0.18313	0.17027	0.16645			
	0.17518	+++++					0.17514	5.680	
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561			
	0.15293	+++++					0.18415	13.621	
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019			
	0.32986	+++++					0.52887	19.190	
115 Tributyl Phosphate	1.07204	0.94669	0.98668	0.84143	0.73508	0.63101			
	0.65635	+++++					0.83847	20.377	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045			
	0.65225	+++++					0.77860	15.566	
112 Biphenyl	1.50584	1.36472	1.24623	1.05635	0.90153	0.79289			
	0.81967	+++++					1.09818	25.495	<-

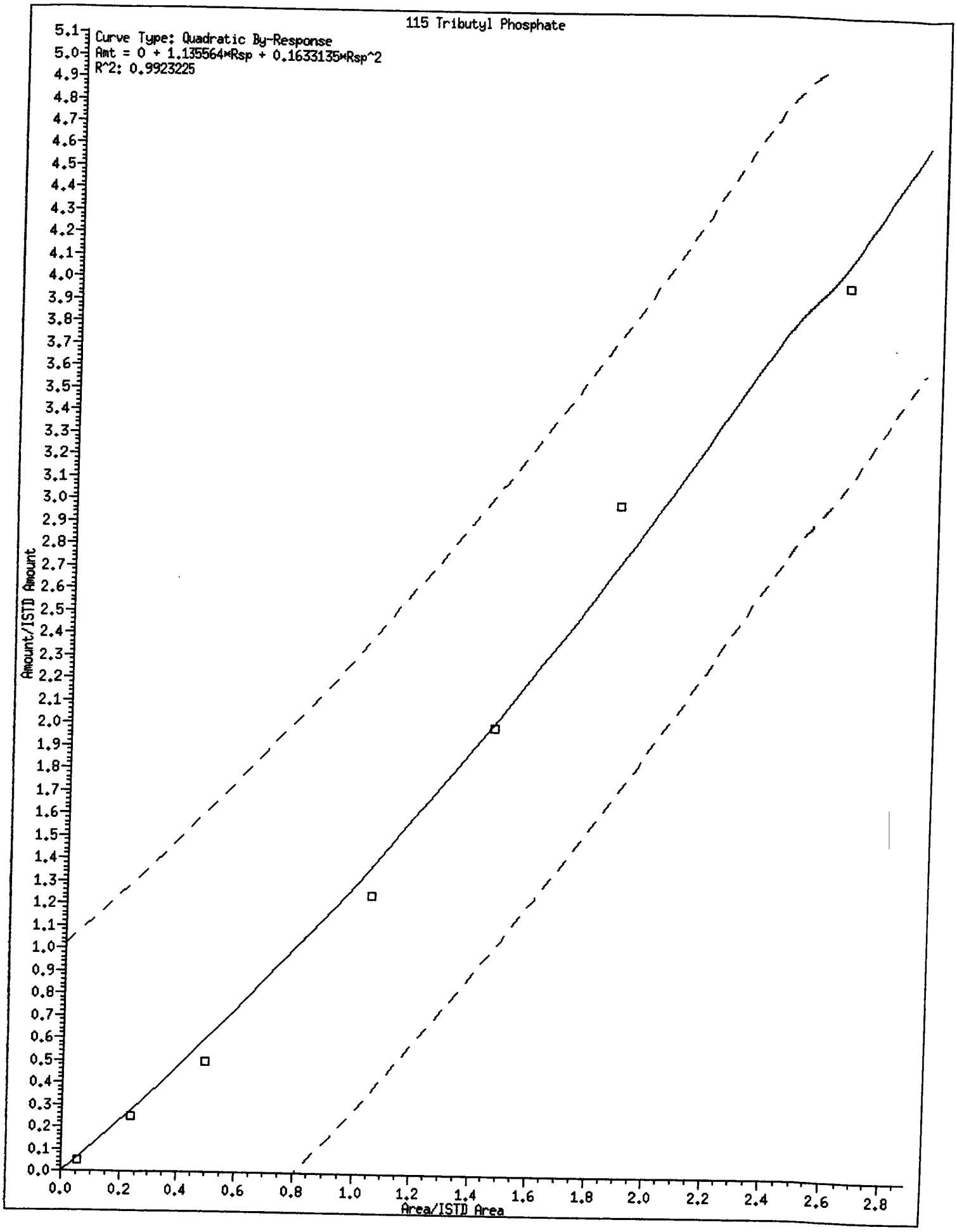
Analytical Resources, Inc.

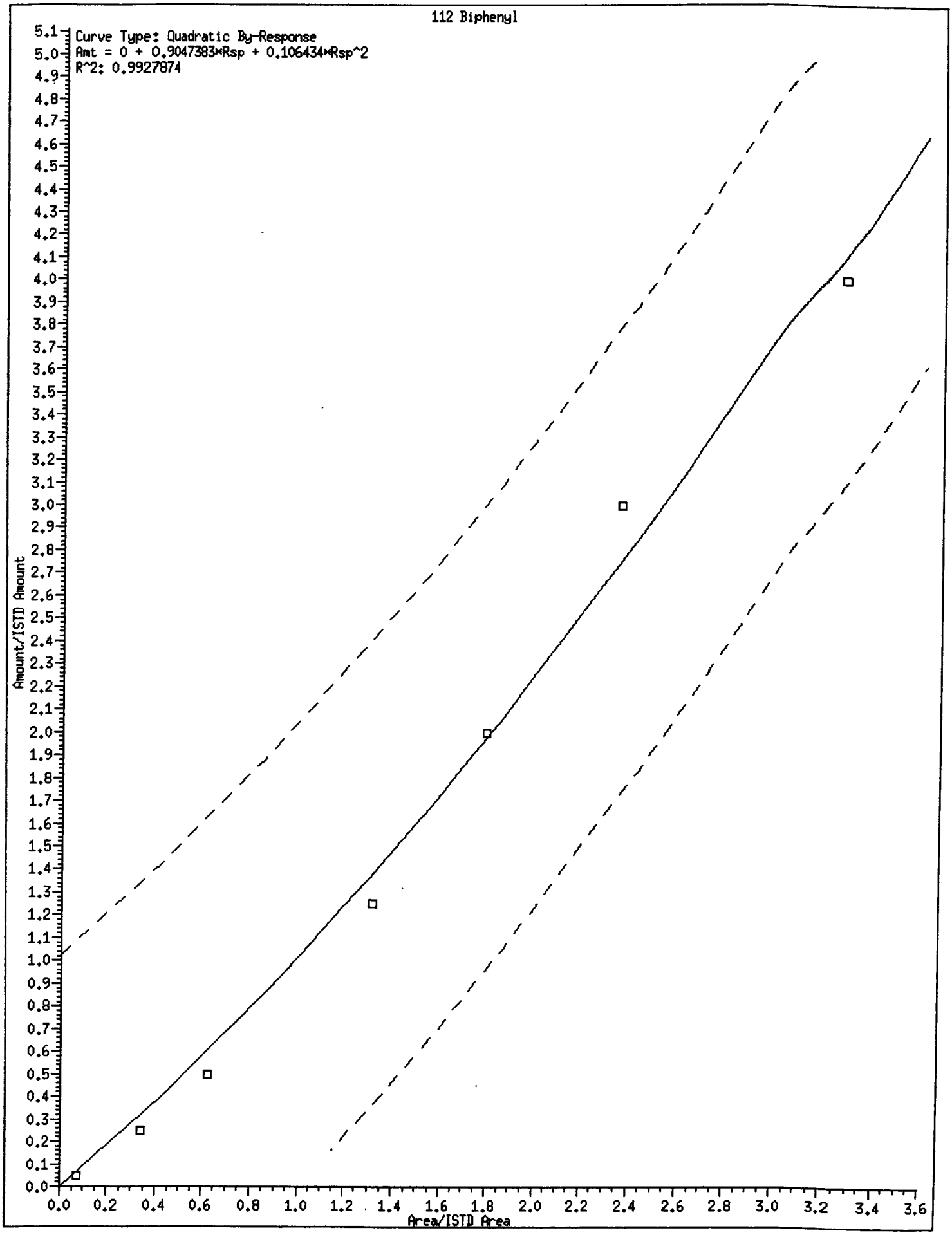
INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1 80 Level 7	5 Level 2 0.2000 Level 8	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561					
	0.15293	+++++					AVRG		0.18415		13.62056
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019					
	0.32986	+++++					AVRG		0.52887		19.19001
115 Tributyl Phosphate	82254	364951	993217	1753043	2401166	3026027					
	3817283	+++++					QUAD	0.000e+00	1.13556	0.16331	0.99232
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045					
	0.65225	+++++					AVRG		0.77860		15.56612
112 Biphenyl	73566	332118	789168	1333701	1797394	2290712					
	2906690	+++++					QUAD	0.000e+00	0.90474	0.10643	0.99279
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761					
	0.99651	+++++					AVRG		1.26720		18.16759


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


112 Biphenyl
Curve Type: Quadratic By-Response
Amt = 0 + 0.9047383*Rsp + 0.106434*Rsp^2
R^2: 0.9927874
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761		
	0.99651	+++++					1.26720	18.168
110 Tetrachloroguaiacol	0.10144	0.10936	0.12483	0.10869	0.10075	0.09321		
	0.09632	+++++					0.10494	10.074
109 3,4,5-Trichloroguaiacol	0.11477	0.11815	0.12746	0.12229	0.10934	0.09910		
	0.10860	+++++					0.11425	8.305
181 3,4,6-Trichloroguaiacol	0.43141	0.47417	0.53018	0.50138	0.41933	0.41537		
	0.42275	+++++					0.45637	10.040
108 4,5,6-Trichloroguaiacol	0.16930	0.18527	0.21198	0.20697	0.18460	0.17184		
	0.17943	+++++					0.18706	8.817
184 3,4-Dichloroguaiacol	0.43918	0.42819	0.49791	0.46649	0.40627	0.38479		
	0.40939	+++++					0.43317	8.937
107 4,5-Dichloroguaiacol	0.24196	0.24929	0.27603	0.26392	0.23066	0.21900		
	0.23005	+++++					0.24442	8.269
182 4,6-Dichloroguaiacol	0.49926	0.53426	0.61321	0.57613	0.50603	0.47974		
	0.49129	+++++					0.52856	9.333
185 4-Chloroguaiacol	0.48657	0.54944	0.65015	0.62373	0.55846	0.49724		
	0.56809	+++++					0.56195	10.695

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
106 Guaiacol	1.24586	1.15918	1.23291	1.07310	0.91138	0.81234		
	0.84782	+++++					1.04037	17.558
105 1-methylnaphthalene	0.61050	0.56976	0.56450	0.48433	0.43716	0.40010		
	0.39230	+++++					0.49409	17.868
151 1,2,4,5-Tetrachlorobenzene	0.59727	0.49980	0.53345	0.47181	0.44897	0.42889		
	0.43944	+++++					0.48852	12.333
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Phenol	1.76224	1.73918	1.83003	1.55412	1.48613	1.36745		
	1.44212	+++++					1.59733	11.217
4 Bis(2-Chloroethyl)ether	1.60048	1.46370	1.59535	1.35339	1.28082	1.18687		
	1.22983	+++++					1.38721	12.206
6 2-Chlorophenol	1.37831	1.35510	1.48160	1.27414	1.21027	1.10283		
	1.14376	+++++					1.27800	10.632
7 1,3-Dichlorobenzene	1.81681	1.60019	1.72092	1.47702	1.37550	1.23803		
	1.21973	+++++					1.49260	15.521
9 1,4-Dichlorobenzene	1.82032	1.55518	1.67185	1.43038	1.32574	1.19194		
	1.17353	+++++					1.45271	16.773
11 Benzyl alcohol	0.87814	0.94410	0.96815	0.88893	0.80130	0.76972		
	0.84099	+++++					0.87019	8.282
12 1,2-Dichlorobenzene	1.75726	1.52316	1.60555	1.35410	1.23587	1.09413		
	1.15115	+++++					1.38875	17.850
13 2-Methylphenol	1.25131	1.27565	1.40693	1.22918	1.16820	1.08763		
	1.05956	+++++					1.21121	9.799

Analytical Resources, Inc.

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Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
14 2,2'-oxybis(1-Chloropropane)	2.65572	2.34667	2.53456	2.16149	2.04249	1.89075		
	1.79656	+++++					2.20404	14.652
15 4-Methylphenol	1.24172	1.26860	1.42287	1.24234	1.15506	1.05073		
	1.00274	+++++					1.19772	11.861
16 N-Nitroso-di-n-propylamine	1.19534	1.07425	1.16253	1.02032	0.96375	0.91446		
	0.95659	+++++					1.04103	10.318
17 Hexachloroethane	0.69948	0.61914	0.67843	0.57825	0.54358	0.50067		
	0.49368	+++++					0.58761	13.924
19 Nitrobenzene	0.47644	0.42369	0.44826	0.37521	0.34533	0.30829		
	0.31169	+++++					0.38413	17.393
20 Isophorone	0.78131	0.68897	0.74735	0.63483	0.61575	0.59471		
	0.62384	+++++					0.66954	10.685
21 2-Nitrophenol	0.14475	0.18211	0.21326	0.18617	0.18391	0.16934		
	0.16463	+++++					0.17774	11.981
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039		
	0.29443	+++++					0.33613	10.045
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399		
	0.37262	+++++					0.43930	14.803

Analytical Resources, Inc.

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Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513			
	0.30610	+++++					0.29097	13.821	
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391			
	0.23074	+++++					0.25883	11.350	
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919			
	0.26929	+++++					0.32219	15.982	
28 Naphthalene	1.25818	1.04449	1.06870	0.85731	0.76662	0.67606			
	+++++	+++++					0.94522	22.941	<-
29 4-Chloroaniline	0.40601	0.41245	0.37680	0.25657	0.23831	0.21446			
	+++++	+++++					0.31743	28.516	<-
30 Hexachlorobutadiene	0.23409	0.20453	0.22348	0.19224	0.18055	0.16813			
	0.16943	+++++					0.19606	13.193	
31 4-Chloro-3-methylphenol	0.24514	0.28452	0.33097	0.28692	0.27737	0.24791			
	0.25165	+++++					0.27493	11.055	
32 2-Methylnaphthalene	0.59617	0.57361	0.56565	0.48068	0.42538	0.38709			
	0.37604	+++++					0.48637	19.091	
33 Hexachlorocyclopentadiene	0.23396	0.28456	0.36132	0.34785	0.33400	0.33313			
	0.35447	+++++					0.32133	14.309	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
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Quant Method : ISTD
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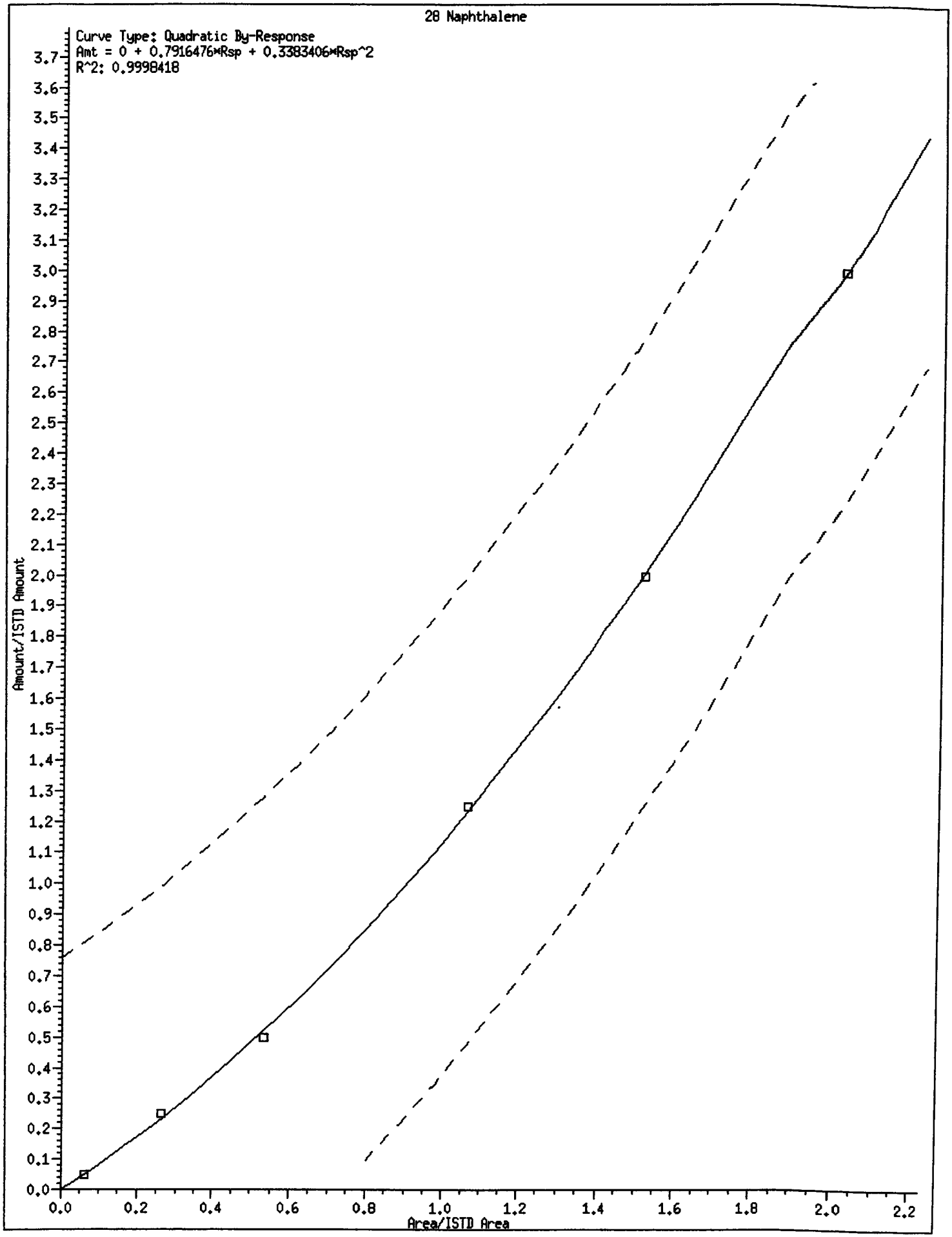
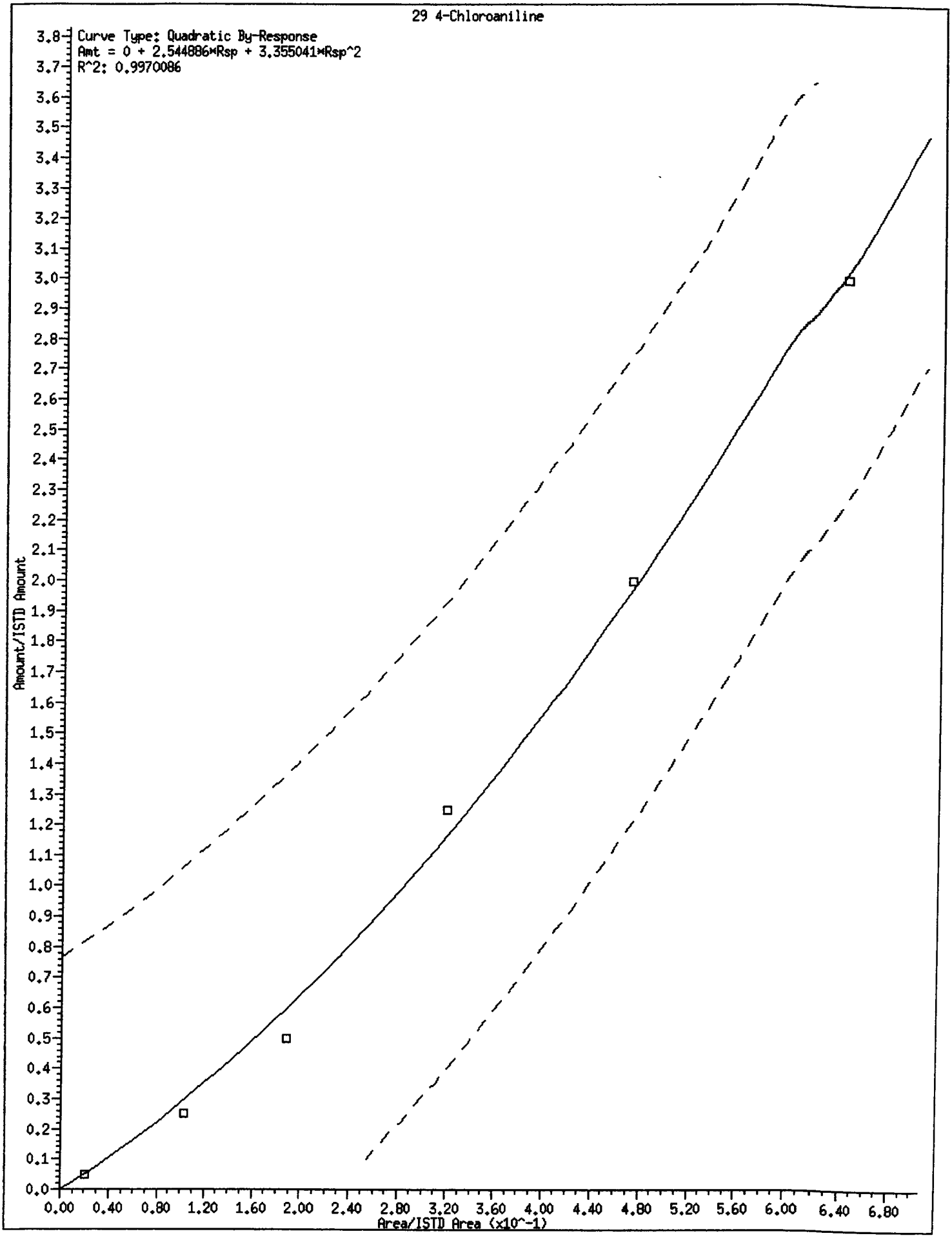
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039					
	0.29443	+++++					AVRG		0.33613		10.04487
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399					
	0.37262	+++++					AVRG		0.43930		14.80298
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513					
	0.30610	+++++					AVRG		0.29097		13.82096
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391					
	0.23074	+++++					AVRG		0.25883		11.35002
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919					
	0.26929	+++++					AVRG		0.32219		15.98220
28 Naphthalene	106156	433038	1122405	1841435	2641007	3435418					
	+++++	+++++					QUAD	0.000e+00	0.79165	0.33834	0.99984
29 4-Chloroaniline	34256	171000	395736	551083	820986	1089759					
	+++++	+++++					QUAD	0.000e+00	2.54489	3.35504	0.99701


28 Naphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 0.7916476*Rsp + 0.3383406*Rsp^2
R^2: 0.9998418
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
0.1
0.3
0.5
0.7
0.9
1.1
1.3
1.5
1.7
1.9
2.1
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7


29 4-Chloroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 2.544886*Rsp + 3.355041*Rsp^2
R^2: 0.9970086
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80 3.20 3.60 4.00 4.40 4.80 5.20 5.60 6.00 6.40 6.80

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
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Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960			
	0.35029	+++++					0.33621	7.521	
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623			
	0.31812	+++++					0.33167	14.969	
37 2-Chloronaphthalene	1.30198	1.09706	1.09950	0.90253	0.81425	0.74840			
	0.76882	+++++					0.96179	21.687	<-
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154			
	0.30102	+++++					0.29567	13.698	
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418			
	1.07862	+++++					1.20372	13.790	
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430			
	1.26069	+++++					1.57756	19.869	
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578			
	0.24419	+++++					0.25718	9.659	
43 3-Nitroaniline	0.21873	0.26028	0.21928	0.19165	0.17183	0.14368			
	0.14011	+++++					0.19222	22.831	<-
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034			
	0.84339	+++++					1.02139	18.356	

Analytical Resources, Inc.

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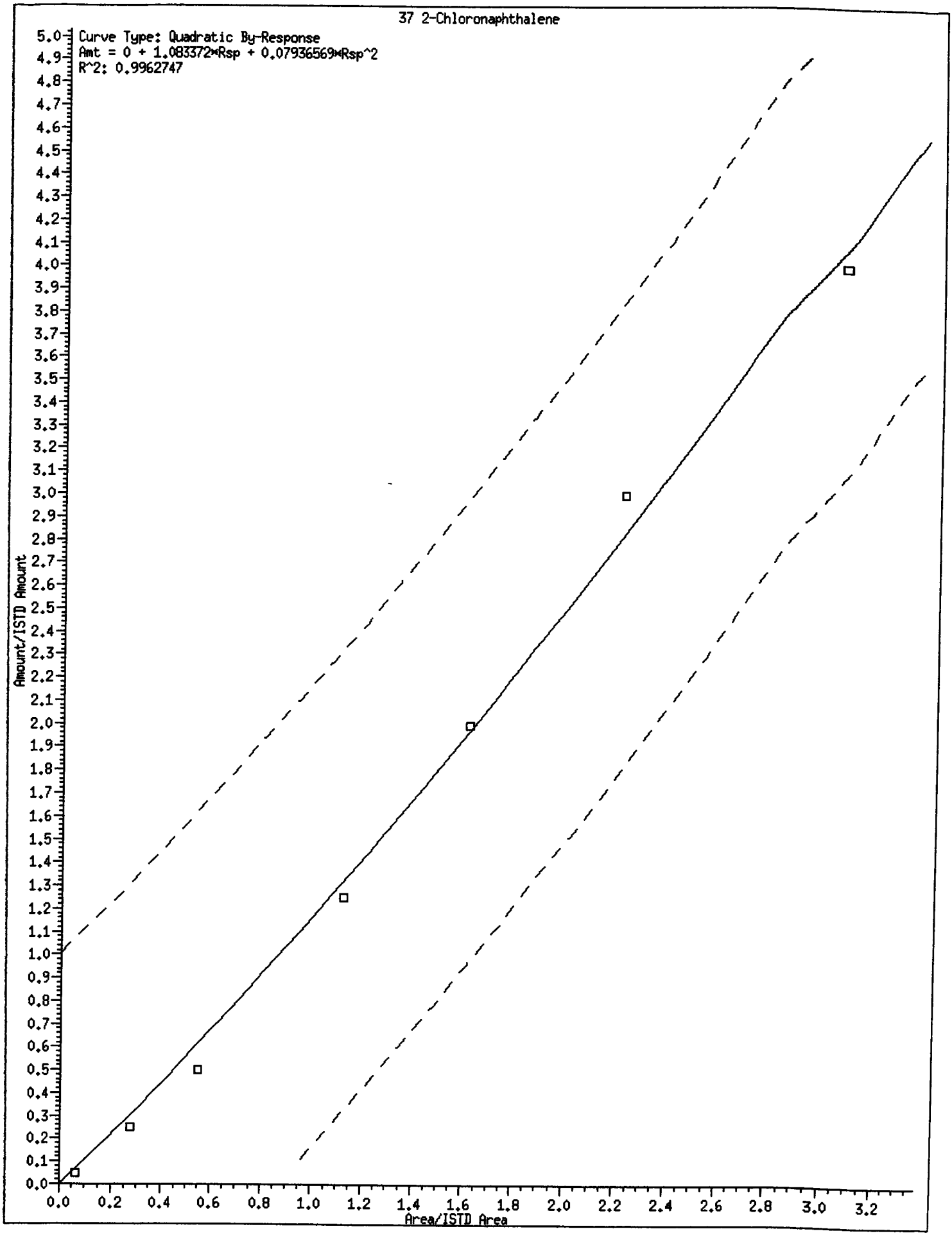
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
30 Hexachlorobutadiene	0.23409	0.20453	0.22348	0.19224	0.18055	0.16813					
	0.16943	+++++					AVRG		0.19606		13.19319
31 4-Chloro-3-methylphenol	0.24514	0.28452	0.33097	0.28692	0.27737	0.24791					
	0.25165	+++++					AVRG		0.27493		11.05467
32 2-Methylnaphthalene	0.59617	0.57361	0.56565	0.48068	0.42538	0.38709					
	0.37604	+++++					AVRG		0.48637		19.09150
33 Hexachlorocyclopentadiene	0.23396	0.28456	0.36132	0.34785	0.33400	0.33313					
	0.35447	+++++					AVRG		0.32133		14.30942
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960					
	0.35029	+++++					AVRG		0.33621		7.52054
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623					
	0.31812	+++++					AVRG		0.33167		14.96876
37 2-Chloronaphthalene	63607	266980	696255	1139487	1623373	2162175					
	2726374	+++++					QUAD	0.000e+00	1.08337	0.07937	0.99627


37 2-Chloronaphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 1.083372*Rsp + 0.07936569*Rsp^2
R^2: 0.9962747
Amount/ISTD Amount
Area/ISTD Area

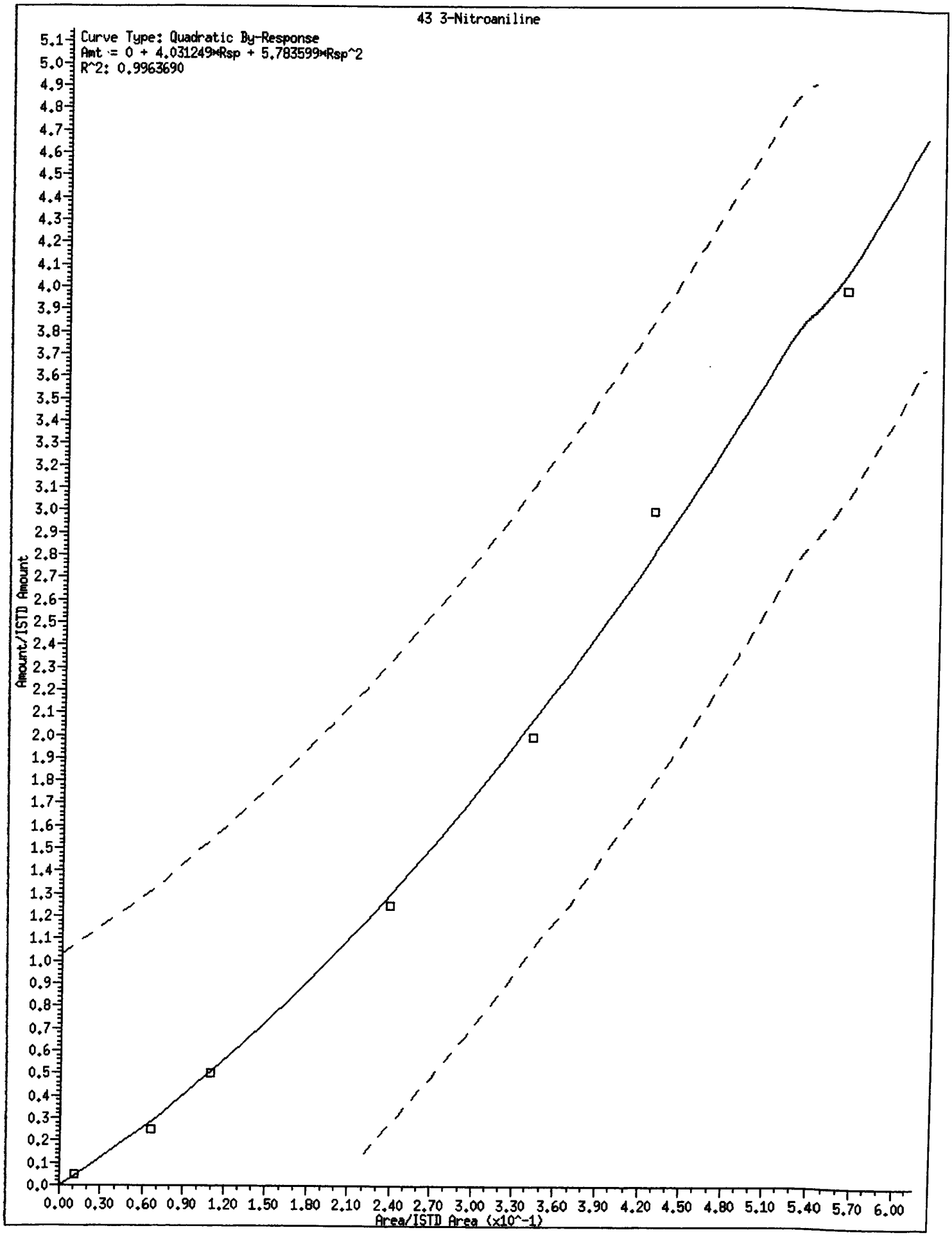
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154					
	0.30102	+++++					AVRG		0.29567		13.69777
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418					
	1.07862	+++++					AVRG		1.20372		13.78953
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430					
	1.26069	+++++					AVRG		1.57756		19.86859
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578					
	0.24419	+++++					AVRG		0.25718		9.65852
43 3-Nitroaniline	10686	63342	138858	241966	342573	415090					
	496848	+++++					QUAD	0.000e+00	4.03125	5.78360	0.99637
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034					
	0.84339	+++++					AVRG		1.02139		18.35615
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201					
	0.20527	+++++					AVRG		0.18369		19.49624


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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201			
	0.20527	+++++					0.18369	19.496	
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741			
	1.07080	+++++					1.33585	19.072	
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815			
	0.12271	+++++					0.13065	10.521	
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554			
	0.33475	+++++					0.34786	9.712	
49 Fluorene	1.42570	1.19230	1.22127	1.02020	0.88746	0.80652			
	0.82304	+++++					1.05379	22.212	<-
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432			
	0.91979	+++++					1.11525	16.797	
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871			
	0.49545	+++++					0.58637	18.257	
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748			
	0.19900	+++++					0.19616	7.581	
53 4,6-Dinitro-2-methylphenol	+++++	0.12093	0.16337	0.14567	0.14760	0.14183			
	0.14470	+++++					0.14402	9.462	

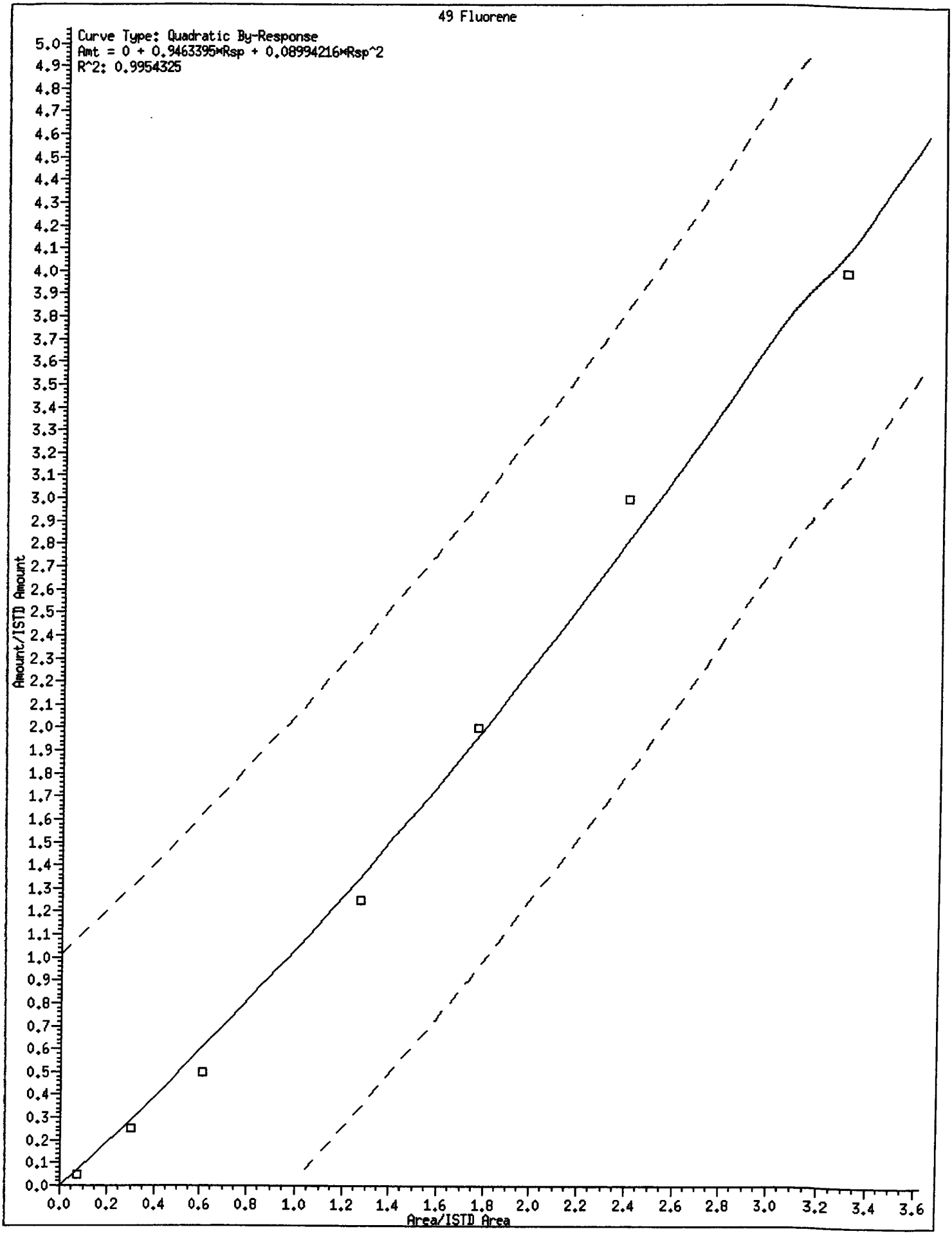
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741					
	1.07080	+++++					AVRG		1.33585		19.07199
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815					
	0.12271	+++++					AVRG		0.13065		10.52089
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554					
	0.33475	+++++					AVRG		0.34786		9.71205
49 Fluorene	69651	290158	773364	1288051	1769346	2330094					
	2918650	+++++					QUAD	0.000e+00	0.94634	0.08994	0.99543
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432					
	0.91979	+++++					AVRG		1.11525		16.79699
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871					
	0.49545	+++++					AVRG		0.58637		18.25714
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748					
	0.19900	+++++					AVRG		0.19616		7.58115


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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 14:11 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
54 N-Nitrosodiphenylamine	0.68117	0.59351	0.63351	0.52168	0.48269	0.44490			
	0.44875	+++++					0.54375	17.192	
56 4-Bromophenyl-phenylether	0.25180	0.22762	0.25074	0.21253	0.20583	0.18453			
	0.20347	+++++					0.21950	11.466	
57 Hexachlorobenzene	0.27367	0.23383	0.25499	0.21336	0.20543	0.18963			
	0.21317	+++++					0.22630	13.064	
58 Pentachlorophenol	+++++	0.10881	0.15047	0.13607	0.13563	0.12677			
	0.14329	+++++					0.13351	10.854	
60 Phenanthrene	1.28894	1.06840	1.10242	0.86833	0.83569	0.77325			
	+++++	+++++					0.98950	19.894	
61 Anthracene	1.19069	1.07644	1.15760	0.93304	0.84037	0.74643			
	+++++	+++++					0.99076	18.100	
62 Carbazole	1.14209	0.91469	0.79902	0.66574	0.70348	0.69029			
	0.71834	+++++					0.80481	21.285	<-
63 Di-n-butylphthalate	1.54066	1.38246	1.45272	1.15876	1.04056	0.91923			
	+++++	+++++					1.24906	19.764	
64 Fluoranthene	1.25483	1.12929	1.24063	1.02750	0.93710	0.85018			
	0.84693	+++++					1.04092	16.567	

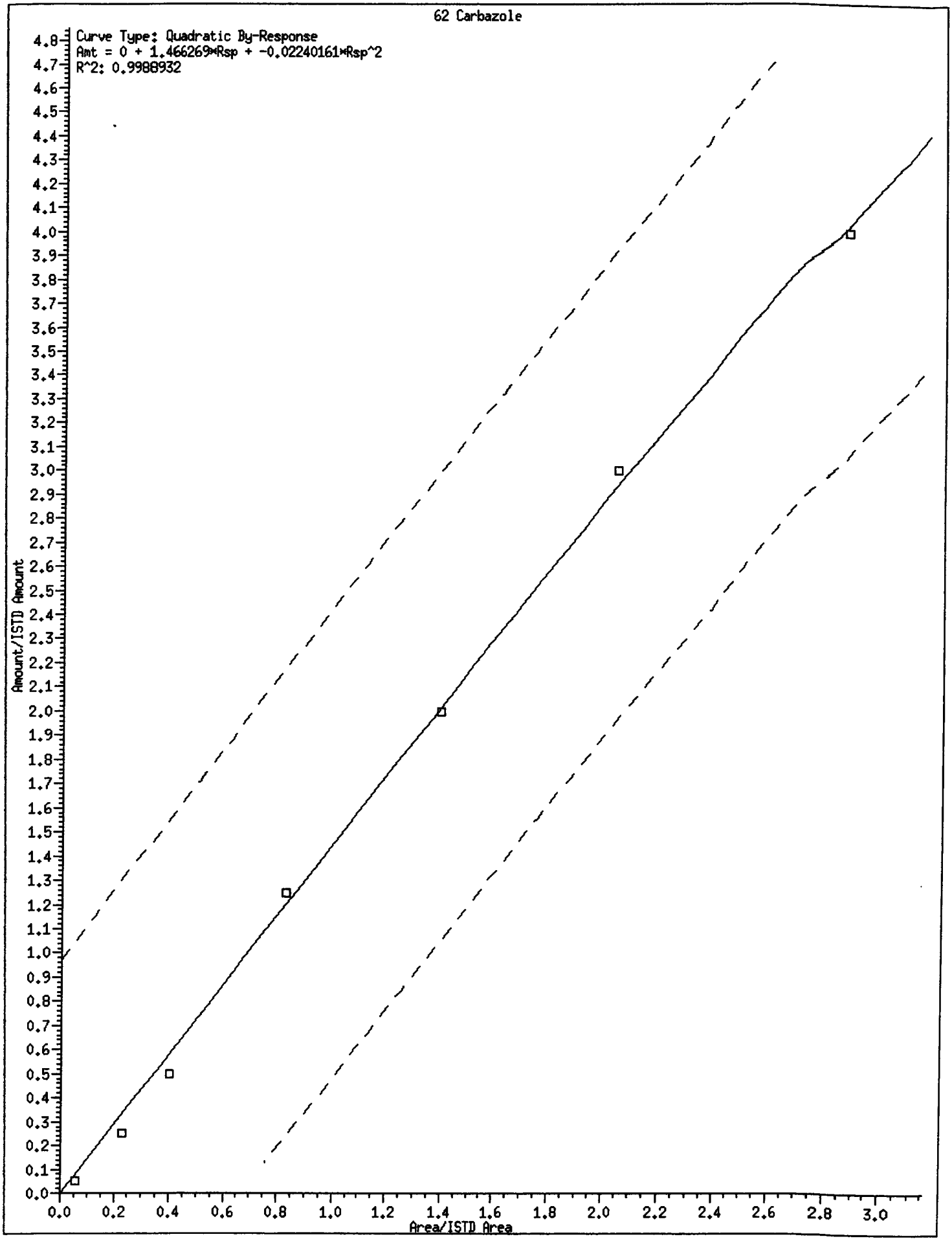
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
62 Carbazole	87629	352615	804312	1387020	2297956	3310342					
	4177813	+++++					QUAD	0.000e+00	1.46627	-0.02240	0.99889
63 Di-n-butylphthalate	1.54066	1.38246	1.45272	1.15876	1.04056	0.91923					
	+++++	+++++					AVRG		1.24906		19.76433
64 Fluoranthene	1.25483	1.12929	1.24063	1.02750	0.93710	0.85018					
	0.84693	+++++					AVRG		1.04092		16.56672
65 Pyrene	1.38441	1.18057	1.25832	1.05458	0.97355	0.89088					
	0.90359	+++++					AVRG		1.09227		17.22487
67 Butylbenzylphthalate	0.59155	0.58245	0.62877	0.53378	0.50169	0.44980					
	0.45073	+++++					AVRG		0.53411		13.17416
68 Benzo(a)anthracene	1.07054	0.96307	1.03562	0.88663	0.83466	0.77690					
	0.81543	+++++					AVRG		0.91184		12.44208
70 3,3'-Dichlorobenzidine	0.26639	0.28674	0.29446	0.23996	0.23070	0.21759					
	0.22026	+++++					AVRG		0.25087		12.60238


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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
65 Pyrene	1.38441	1.18057	1.25832	1.05458	0.97355	0.89088			
	0.90359	+++++					1.09227	17.225	
67 Butylbenzylphthalate	0.59155	0.58245	0.62877	0.53378	0.50169	0.44980			
	0.45073	+++++					0.53411	13.174	
68 Benzo(a)anthracene	1.07054	0.96307	1.03562	0.88663	0.83466	0.77690			
	0.81543	+++++					0.91184	12.442	
70 3,3'-Dichlorobenzidine	0.26639	0.28674	0.29446	0.23996	0.23070	0.21759			
	0.22026	+++++					0.25087	12.602	
71 Chrysene	1.14947	1.00652	1.08941	0.89575	0.83974	0.76132			
	0.77370	+++++					0.93085	16.505	
72 bis(2-Ethylhexyl)phthalate	0.64692	0.60690	0.67888	0.58952	0.55677	0.51803			
	0.52262	+++++					0.58852	10.344	
73 Di-n-octylphthalate	1.12999	0.97646	1.03547	0.93501	0.88820	0.82066			
	0.82450	+++++					0.94433	11.973	
74 Benzo(b)fluoranthene	0.89938	0.85526	1.04183	0.95727	0.83840	0.81423			
	0.79806	+++++					0.88635	9.839	
75 Benzo(k)fluoranthene	1.39296	1.25661	1.25986	0.96283	0.96180	0.80306			
	0.80825	+++++					1.06362	22.310	<-

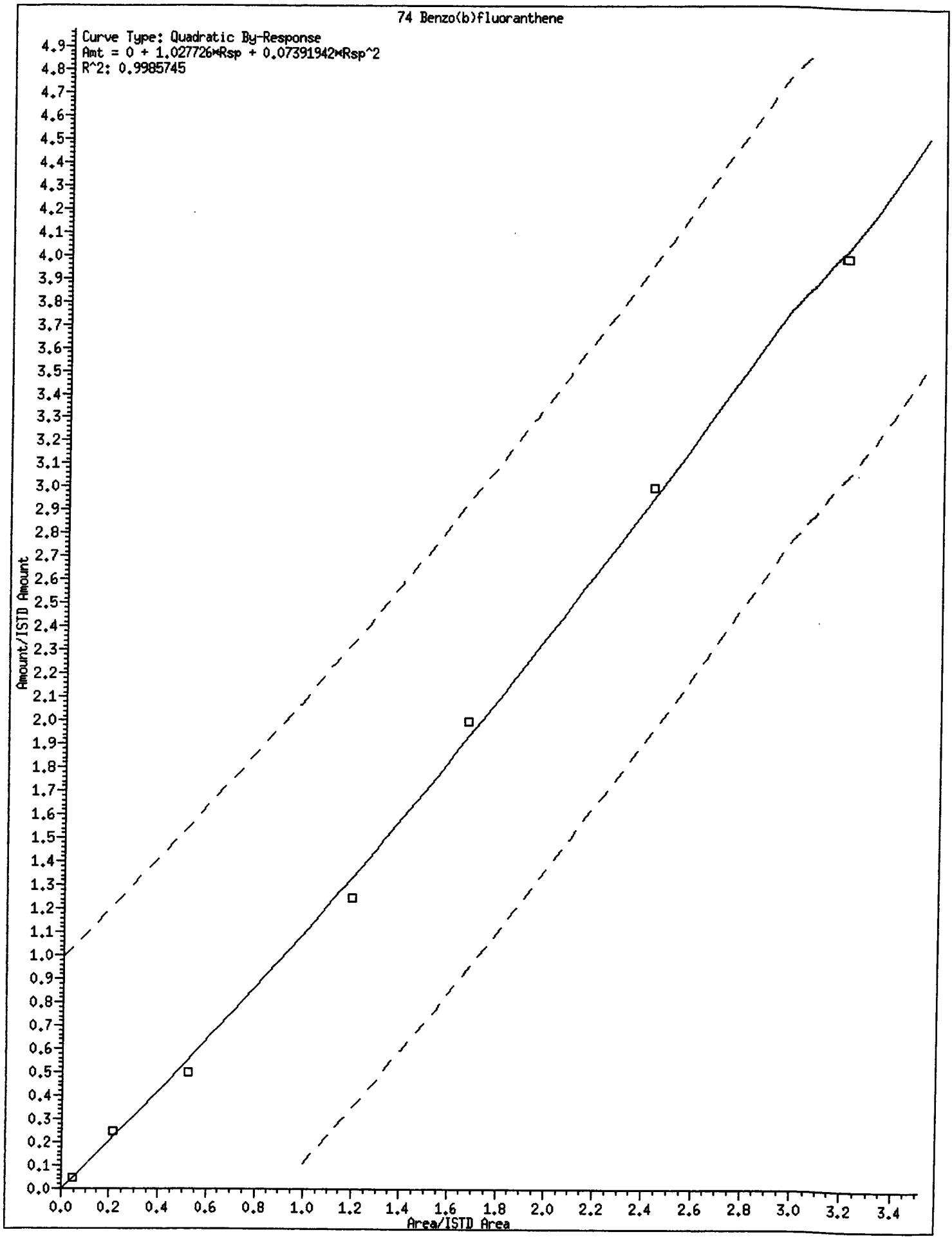
Analytical Resources, Inc.

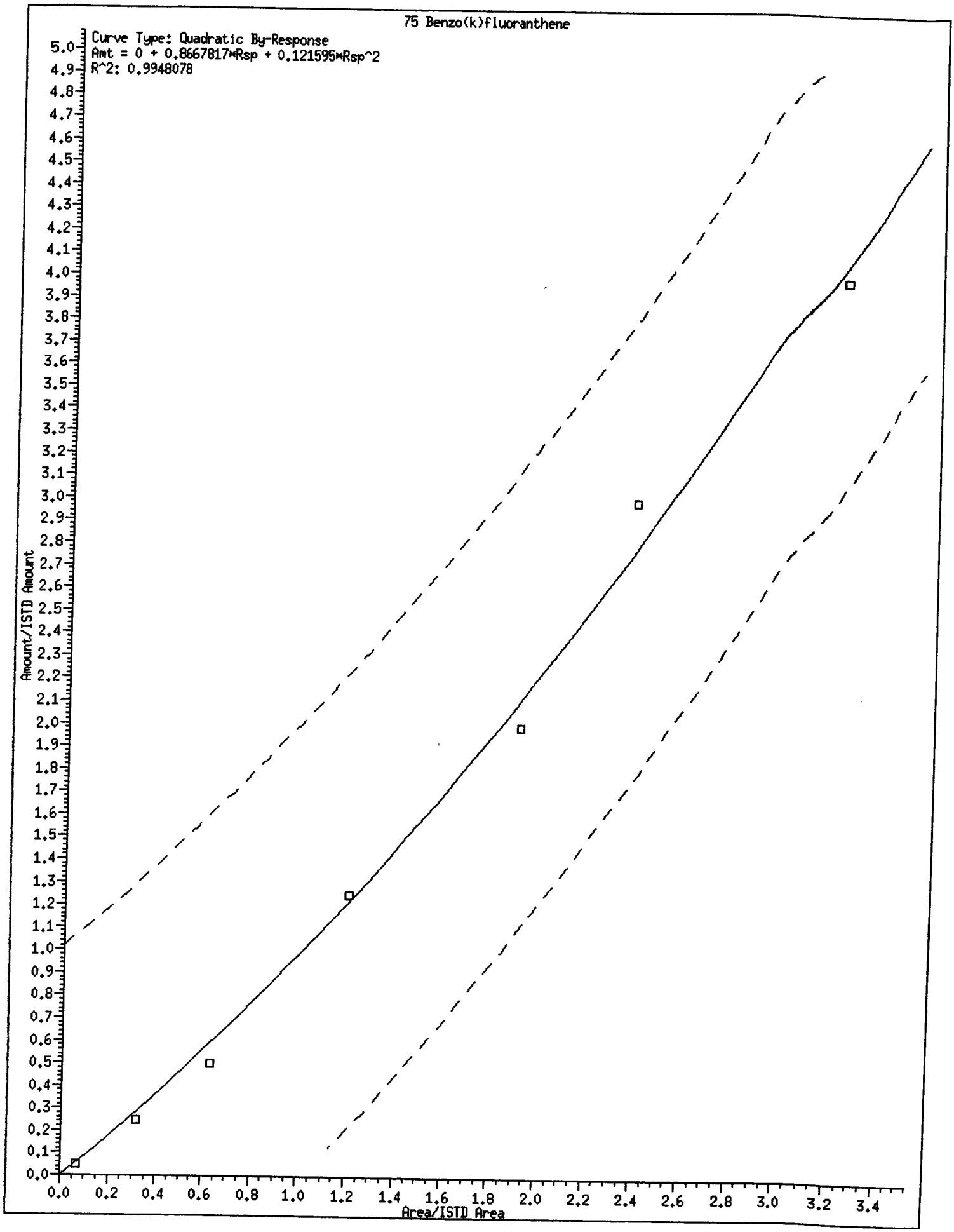
INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
71 Chrysene	1.14947	1.00652	1.08941	0.89575	0.83974	0.76132					
	0.77370	+++++					AVRG		0.93085		16.50541
72 bis(2-Ethylhexyl)phthalate	0.64692	0.60690	0.67888	0.58952	0.55677	0.51803					
	0.52262	+++++					AVRG		0.58852		10.34369
73 Di-n-octylphthalate	1.12999	0.97646	1.03547	0.93501	0.88820	0.82066					
	0.82450	+++++					AVRG		0.94433		11.97291
74 Benzo(b)fluoranthene	60045	314216	1040205	1959445	2694359	3947727					
	4864908	+++++					QUAD	0.000e+00	1.02773	0.07392	0.99857
75 Benzo(k)fluoranthene	92998	461669	1257901	1970824	3090941	3893557					
	4926982	+++++					QUAD	0.000e+00	0.86678	0.12160	0.99481
76 Benzo(a)pyrene	0.92501	0.86150	1.02405	0.86112	0.82038	0.74537					
	0.74649	+++++					AVRG		0.85485		11.55589
78 Indeno(1,2,3-cd)pyrene	1.04859	1.01895	1.20212	1.02187	0.99965	0.93988					
	0.97035	+++++					AVRG		1.02877		8.20489


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


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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
76 Benzo(a)pyrene	0.92501	0.86150	1.02405	0.86112	0.82038	0.74537		
	0.74649	+++++					0.85485	11.556
78 Indeno(1,2,3-cd)pyrene	1.04859	1.01895	1.20212	1.02187	0.99965	0.93988		
	0.97035	+++++					1.02877	8.205
79 Dibenzo(a,h)anthracene	0.72560	0.81926	0.97643	0.82797	0.79605	0.75327		
	0.77178	+++++					0.81005	10.093
80 Benzo(g,h,i)perylene	0.82862	0.85803	1.02707	0.88731	0.88688	0.82365		
	0.84702	+++++					0.87980	7.918
90 N-Nitrosodimethylamine	0.99632	0.92450	1.01613	0.92945	0.90446	0.88103		
	0.94094	+++++					0.94183	5.136
91 Aniline	2.22343	2.10141	1.97052	1.66965	1.48467	1.39278		
	1.54639	+++++					1.76984	18.445
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
93 Benzidine	+++++	+++++	0.10900	0.08219	0.08858	0.10253		
	0.10411	+++++					0.09728	11.663
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
98 Retene	0.53443	0.49274	0.52286	0.47522	0.43428	0.41626		
	0.42376	+++++					0.47136	10.167
99 Perylene	0.89315	0.82306	0.85562	0.73941	0.68087	0.63164		
	0.61789	+++++					0.74881	14.764
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
103 Pyridine	1.43098	1.46786	1.75118	1.62729	1.38945	1.33587		
	1.45312	+++++					1.49368	9.708
187 Total Benzofluoranthenes	1.07820	1.02709	1.10775	0.89502	0.83617	0.75745		
	0.74383	+++++					0.92079	16.402
188 2,6-Dichlorophenol	+++++	0.96091	1.01753	0.96424	0.81971	0.76745		
	0.78343	+++++					0.88554	12.162

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
189 N-Nitrosomethylethylamine	+++++	0.66719	0.69607	0.68402	0.62566	0.63220		
	0.65967	+++++					0.66080	4.214
$ 1 2-Fluorophenol	1.39745	1.38536	1.43699	1.22316	1.19684	1.13577		
	+++++	+++++					1.29593	9.697
$ 137 d8-1,4-Dioxane	0.67499	0.59708	0.66029	0.60426	0.58702	0.54859		
	0.57883	+++++					0.60730	7.416
$ 2 Phenol-d5	1.70898	1.71151	1.70189	1.39938	1.32653	1.25371		
	+++++	+++++					1.51700	14.086
$ 5 2-Chlorophenol-d4	1.46722	1.39820	1.43146	1.20537	1.12780	1.06397		
	+++++	+++++					1.28234	13.386
$ 10 1,2-Dichlorobenzene-d4	1.12248	1.02541	1.00084	0.82678	0.76090	0.67878		
	+++++	+++++					0.90253	19.127
$ 18 Nitrobenzene-d5	0.46223	0.43430	0.44112	0.37325	0.35728	0.33980		
	+++++	+++++					0.40133	12.653
$ 36 2-Fluorobiphenyl	1.60650	1.45970	1.33685	1.11210	1.06628	0.99323		
	+++++	+++++					1.26244	19.285
$ 55 2,4,6-Tribromophenol	0.14826	0.17093	0.17863	0.15638	0.14826	0.14641		
	+++++	+++++					0.15815	8.575

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
$ 66 Terphenyl-d14	0.83641	0.80990	0.75366	0.63080	0.60631	0.57508		
	+++++	+++++					0.70203	15.953
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

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

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

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

03/07/13

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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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

03/07/13

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.432	+++++	6.425	6.429	6.432	6.434	6.442	+++++	6.432	3.432-9.432	6.432	0.006
186 Carbaryl	16.459	+++++	16.447	16.445	16.448	16.462	16.470	16.473	16.459	13.459-19.459	16.458	0.011
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.225	5.225-11.225	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.363	11.363-17.363	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.531	15.531-21.531	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.634	13.634-19.634	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.863	13.863-19.863	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.605	17.605-23.605	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.015	14.015-20.015	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.562	14.562-20.562	+++++	+++++
177 p-Benzoquinone	7.083	+++++	7.082	7.080	7.078	7.086	7.089	7.092	7.083	4.083-10.083	7.085	0.005
168 Pentachlorobenzene	13.638	+++++	13.627	13.630	13.633	13.641	13.644	13.647	13.638	10.638-16.638	13.637	0.008
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: _____
Reviewer 2 _____ Date: 3/7/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.871	10.871-16.871	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	3.039	+++++	3.060	3.047	3.050	3.047	3.061	3.086	3.039	0.039-6.039	3.056	0.015
* 134 Di-n-octylphthalate-d4	21.085	21.077	21.079	21.077	21.074	21.072	21.074	21.078	21.085	18.085-24.085	21.077	0.004
133 Butylatedhydroxytoluen	13.440	+++++	13.440	13.438	13.435	13.443	13.446	13.450	13.440	10.440-16.440	13.442	0.005
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	10.470	+++++	10.464	10.462	10.465	10.473	10.481	10.485	10.470	7.470-13.470	10.471	0.009
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	9.332	+++++	9.326	9.324	9.327	9.335	9.343	9.347	9.332	6.332-12.332	9.334	0.009
105 1-methylnaphthalene	11.747	+++++	11.741	11.739	11.742	11.744	11.747	11.751	11.747	8.747-14.747	11.744	0.004
151 1,2,4,5-Tetrachloroben	11.907	+++++	11.901	11.904	11.902	11.910	11.913	11.911	11.907	8.907-14.907	11.907	0.005
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.442	20.442-26.442	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.968	18.968-24.968	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.466	20.466-26.466	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.866	19.866-25.866	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.413	20.413-26.413	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.721	18.721-24.721	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.159	15.159-21.159	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	7.933	+++++	7.921	7.925	7.927	7.936	7.949	+++++	7.933	4.933-10.933	7.932	0.010
3 Phenol	7.954	+++++	7.942	7.941	7.943	7.957	7.970	7.969	7.954	4.954-10.954	7.954	0.012
4 Bis(2-Chloroethyl)ethe	8.050	+++++	8.044	8.047	8.045	8.053	8.061	8.059	8.050	5.050-11.050	8.051	0.007
$ 5 2-Chlorophenol-d4	8.082	+++++	8.081	8.079	8.082	8.085	8.093	+++++	8.082	5.082-11.082	8.084	0.005

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

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

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	78 Indeno(1,2,3-cd)pyrene	23.767	+++++	23.755	23.748	23.745	23.759	23.767	23.781	23.767	20.767-26.767	23.760	0.012
	79 Dibenzo(a,h)anthracene	23.788	+++++	23.766	23.764	23.767	23.786	23.799	23.808	23.788	20.788-26.788	23.782	0.017
	80 Benzo(g,h,i)perylene	24.226	+++++	24.199	24.202	24.205	24.224	24.237	24.251	24.226	21.226-27.226	24.221	0.020
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	3.889	+++++	3.893	3.891	3.894	3.902	3.921	3.962	3.889	0.889-6.889	3.907	0.026
	91 Aniline	7.938	+++++	7.937	7.935	7.938	7.941	7.943	7.947	7.938	4.938-10.938	7.940	0.004
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	17.874	+++++	17.874	17.872	17.864	17.872	17.869	17.873	17.874	14.874-20.874	17.871	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	18.548	+++++	18.541	18.534	18.537	18.540	18.548	18.546	18.548	15.548-21.548	18.542	0.005
	99 Perylene	22.175	+++++	22.158	22.161	22.159	22.167	22.175	22.179	22.175	19.175-25.175	22.168	0.009
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.074	19.074-25.074	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.255	19.255-25.255	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.369	18.369-24.369	+++++	+++++
	103 Pyridine	3.851	+++++	3.898	3.870	3.862	3.854	3.867	3.914	3.851	0.851-6.851	3.874	0.023
	187 Total Benzofluoranthen	21.641	+++++	21.629	21.627	21.625	21.638	21.646	21.655	21.641	18.641-24.641	21.637	0.011
	188 2,6-Dichlorophenol	10.598	+++++	10.592	10.596	10.593	10.601	10.604	10.613	10.598	7.598-13.598	10.600	0.007
	189 N-Nitrosomethylethylam	5.620	+++++	5.635	5.627	5.625	5.622	5.625	5.634	5.620	2.620-8.620	5.627	0.006

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

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

GC Program: [illegible] Column No: 234-149 Column Type: ZB-5MS

Instrument Tune (.U or .CT.): 171019 EM Voltage: 1647

Calibration File: 03061301 Curve Date: 3/6/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2043-1, 2044-1~~	~~2046-1, 2047-1~~
	~~2044-1, 2041-1~~	~~2048-1, 2061-1~~
	~~1803, 2027-2~~	~~1803, 2052-1~~
	~~2048-2~~	~~2048-2~~

Document All Maintenance Tasks in StarLIMS

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

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

[illegible] 03/07/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Data File: /ohem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

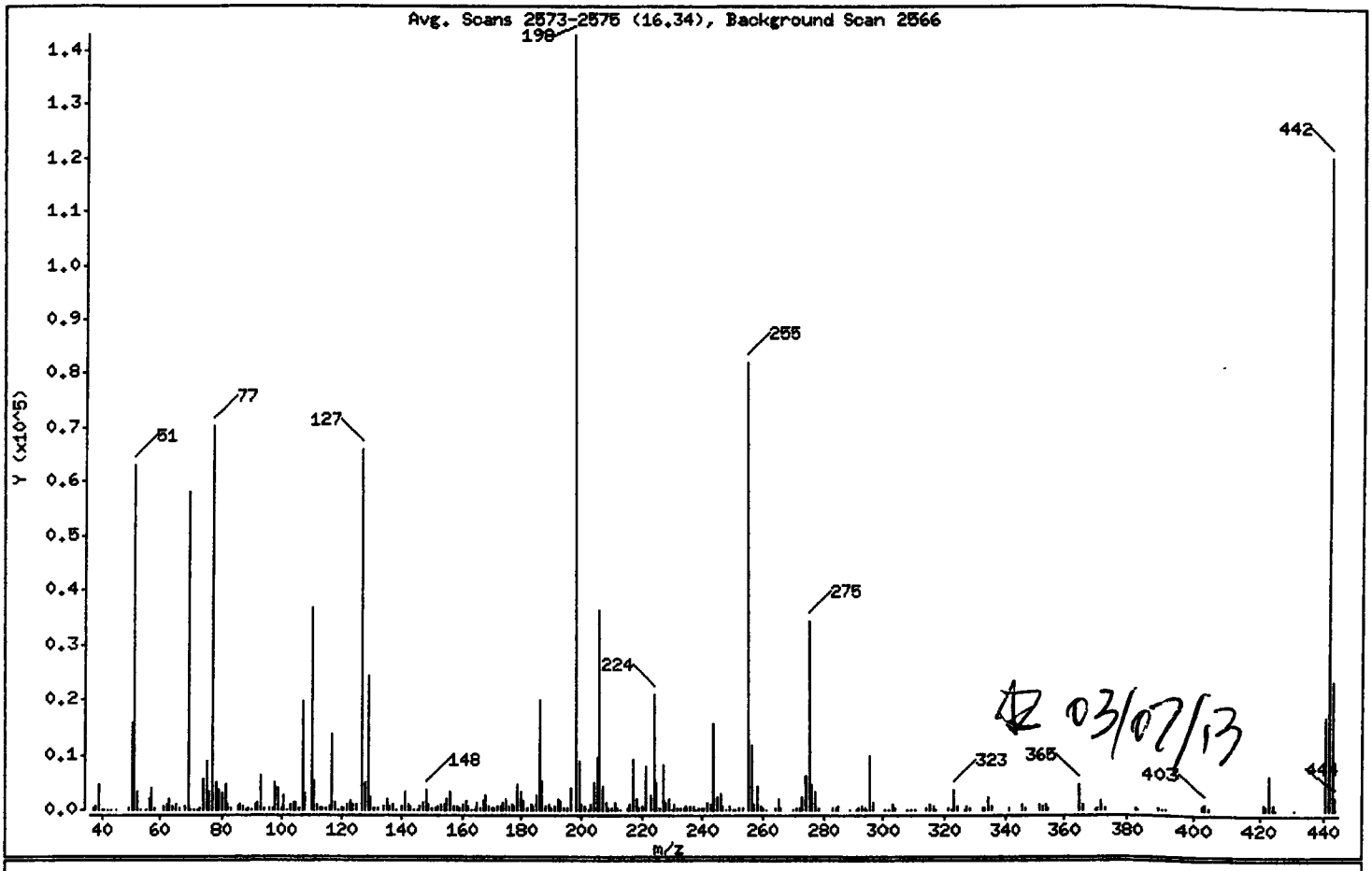
Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.13
68	Less than 2.00% of mass 69	0.49 (1.20)
69	Mass 69 relative abundance	40.66
70	Less than 2.00% of mass 69	0.05 (0.13)
127	10.00 - 80.00% of mass 198	46.23
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.29
275	10.00 - 60.00% of mass 198	24.23
365	Greater than 1.00% of mass 198	3.15
441	0.01 - 24.00% of mass 442	11.89 (14.10)
442	50.00 - 200.00% of mass 198	84.31
443	15.00 - 24.00% of mass 442	16.57 (19.65)

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

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 03061301.D

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

Location of Maximum: 198.00

Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	435	119.00	66	193.00	1619	273.00	2434
38.00	626	120.00	258	194.00	443	274.00	6366
39.00	4620	121.00	165	195.00	168	275.00	34624
40.00	86	122.00	886	196.00	3989	276.00	4716
41.00	135	123.00	1661	198.00	142912	277.00	3135
42.00	51	124.00	828	199.00	8988	278.00	473
43.00	28	125.00	867	200.00	881	283.00	323
45.00	136	127.00	66064	201.00	717	284.00	313
49.00	481	128.00	4907	202.00	116	285.00	557
50.00	15922	129.00	24440	203.00	1035	289.00	56
51.00	63072	130.00	2373	204.00	4827	291.00	57
52.00	3191	131.00	431	205.00	9390	292.00	177
53.00	162	132.00	298	206.00	36344	293.00	733
55.00	98	134.00	652	207.00	4326	294.00	208
56.00	1869	135.00	2095	208.00	1180	295.00	158
57.00	3936	136.00	536	209.00	372	296.00	9810
58.00	169	137.00	984	210.00	177	297.00	1471
61.00	642	138.00	123	211.00	1258	301.00	70
62.00	970	140.00	542	212.00	284	302.00	154
63.00	1956	141.00	3143	213.00	60	303.00	1095
64.00	580	142.00	1094	215.00	376	304.00	380
65.00	1013	143.00	721	216.00	827	308.00	75
66.00	210	144.00	116	217.00	9098	309.00	59
68.00	697	145.00	163	218.00	2040	310.00	77
69.00	58112	146.00	509	219.00	416	314.00	465
70.00	77	147.00	1412	220.00	540	315.00	1124
71.00	81	148.00	3677	221.00	7971	316.00	582
72.00	69	149.00	1042	223.00	2475	317.00	55
73.00	438	150.00	197	224.00	21088	321.00	316
74.00	5646	151.00	325	225.00	4987	322.00	65
75.00	8887	152.00	661	226.00	376	323.00	3459
76.00	3385	153.00	989	227.00	8225	324.00	632
77.00	70280	154.00	1118	228.00	1216	326.00	53
78.00	4804	155.00	1872	229.00	1823	327.00	643
79.00	3594	156.00	3281	230.00	87	328.00	319

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

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306 Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

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

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3059	157.00	522	231.00	872	332.00	237
81.00	4436	158.00	528	232.00	224	333.00	301
82.00	972	159.00	466	233.00	206	334.00	2192
83.00	492	160.00	1036	234.00	485	335.00	686
85.00	751	161.00	1744	235.00	636	341.00	443
86.00	1051	162.00	516	236.00	521	346.00	856
87.00	634	163.00	117	237.00	702	347.00	183
88.00	127	164.00	129	238.00	55	352.00	952
89.00	252	165.00	1368	239.00	302	353.00	644
90.00	99	166.00	343	240.00	249	354.00	998
91.00	1049	167.00	1586	241.00	491	355.00	189
92.00	1155	168.00	2662	242.00	1253	365.00	4506
93.00	6399	169.00	655	243.00	1142	366.00	833
94.00	256	170.00	233	244.00	15704	370.00	54
96.00	212	171.00	359	245.00	2359	371.00	348
97.00	186	172.00	631	246.00	3012	372.00	1688
98.00	5046	173.00	729	247.00	819	373.00	481
99.00	4074	174.00	1277	248.00	77	383.00	453
100.00	397	175.00	1888	249.00	591	384.00	67
101.00	2639	176.00	773	250.00	59	390.00	264
102.00	93	177.00	1015	251.00	80	391.00	143
103.00	823	178.00	604	252.00	207	392.00	131
104.00	1234	179.00	4701	253.00	455	402.00	763
105.00	1408	180.00	3447	255.00	81992	403.00	990
106.00	237	181.00	1714	256.00	11952	404.00	418
107.00	19712	182.00	468	257.00	849	421.00	881
108.00	2948	183.00	943	258.00	4194	422.00	805
110.00	36840	184.00	660	259.00	769	423.00	6078
111.00	5315	185.00	2694	260.00	200	424.00	1104
112.00	1126	186.00	19928	261.00	83	425.00	146
113.00	289	187.00	5334	264.00	247	431.00	55
114.00	222	188.00	665	265.00	1902	441.00	16992
115.00	192	189.00	1117	266.00	328	442.00	120496
116.00	686	190.00	270	270.00	68	443.00	23680
117.00	13830	191.00	589	271.00	192	444.00	2214

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

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

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

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

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

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

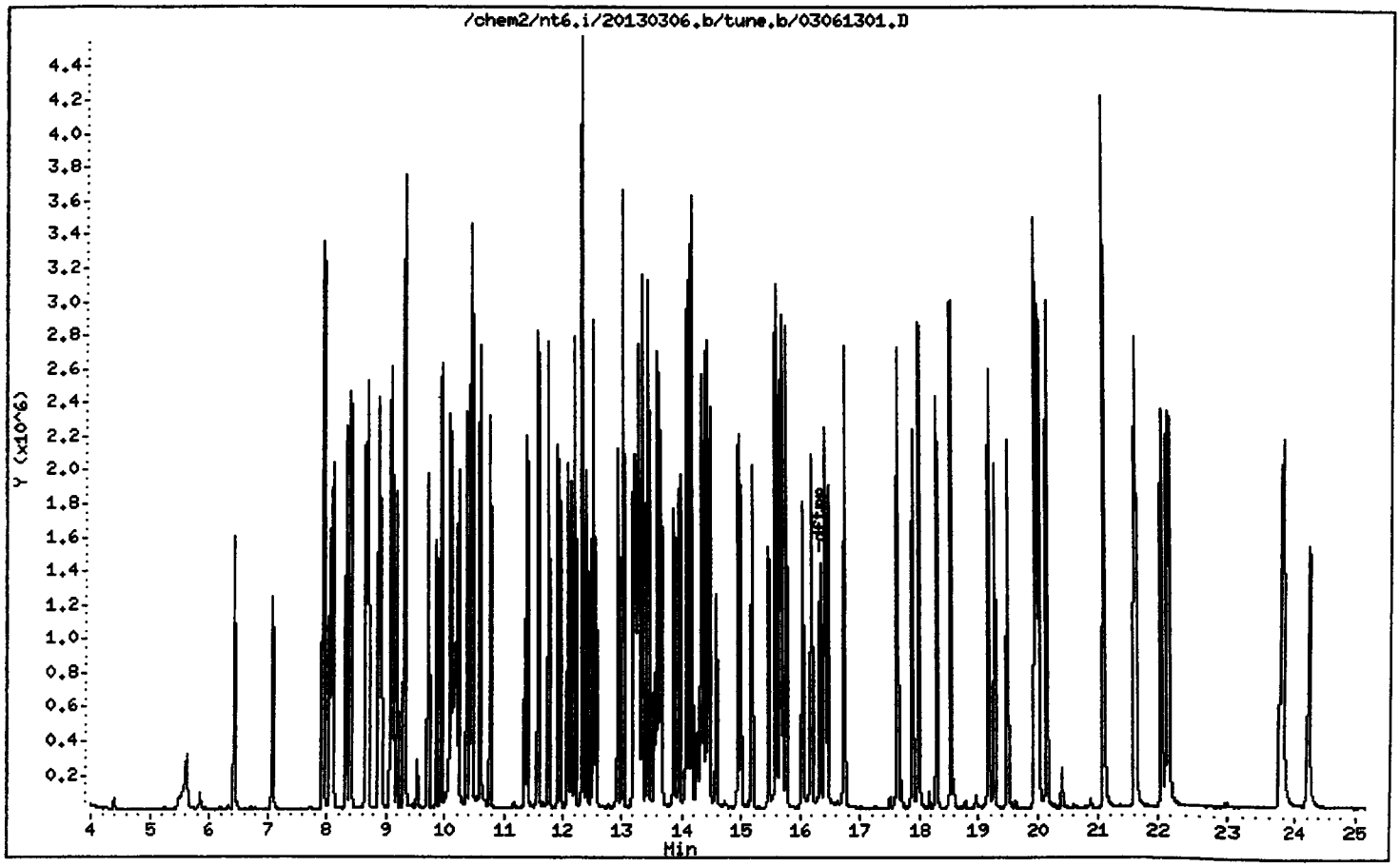
Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

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

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

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

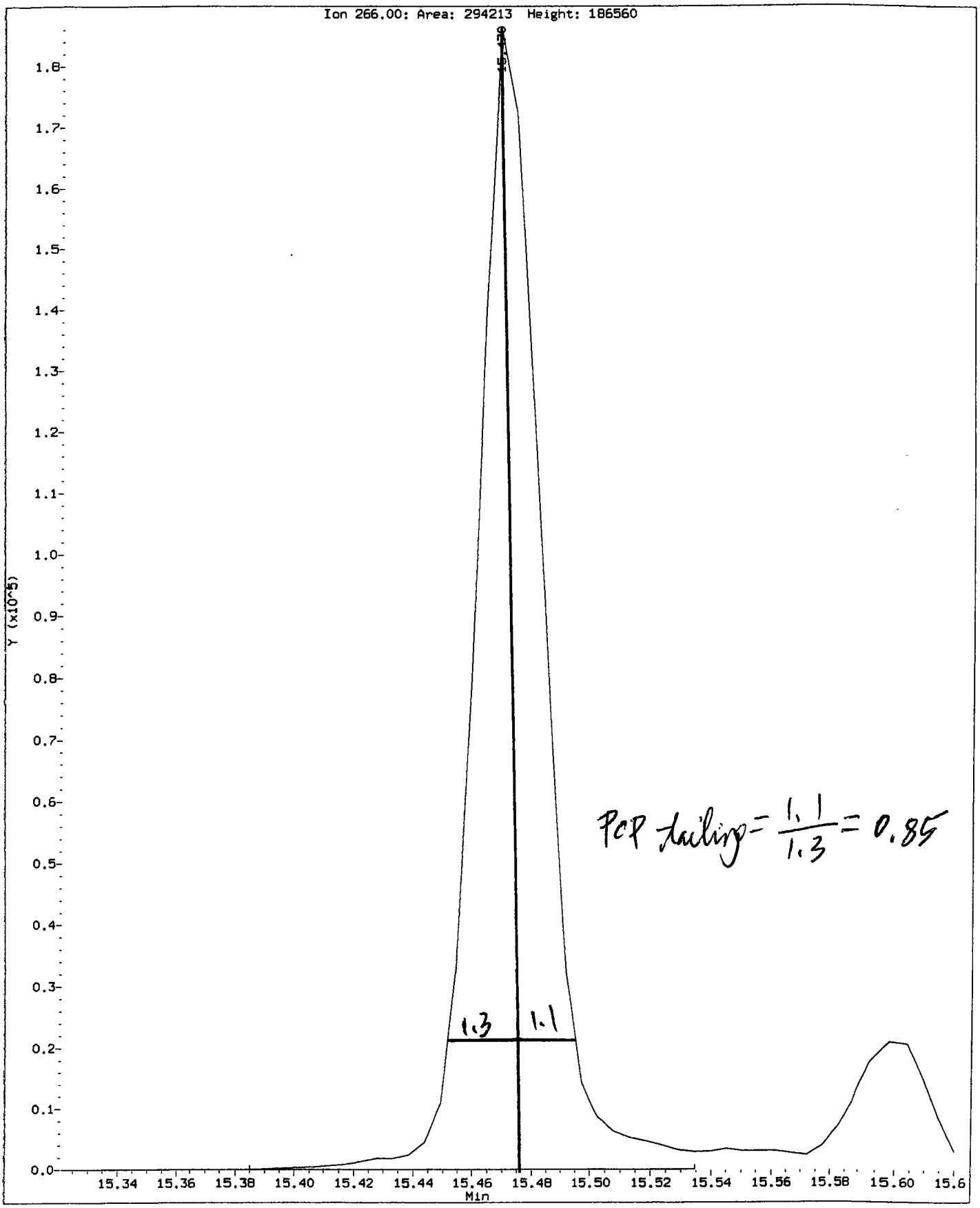
$$\text{DDT Percent Breakdown} = \frac{(0 + 12007) * 100}{(0 + 12007 + 647493)}$$

DDT Percent Breakdown = 1.8 %

03/07/13

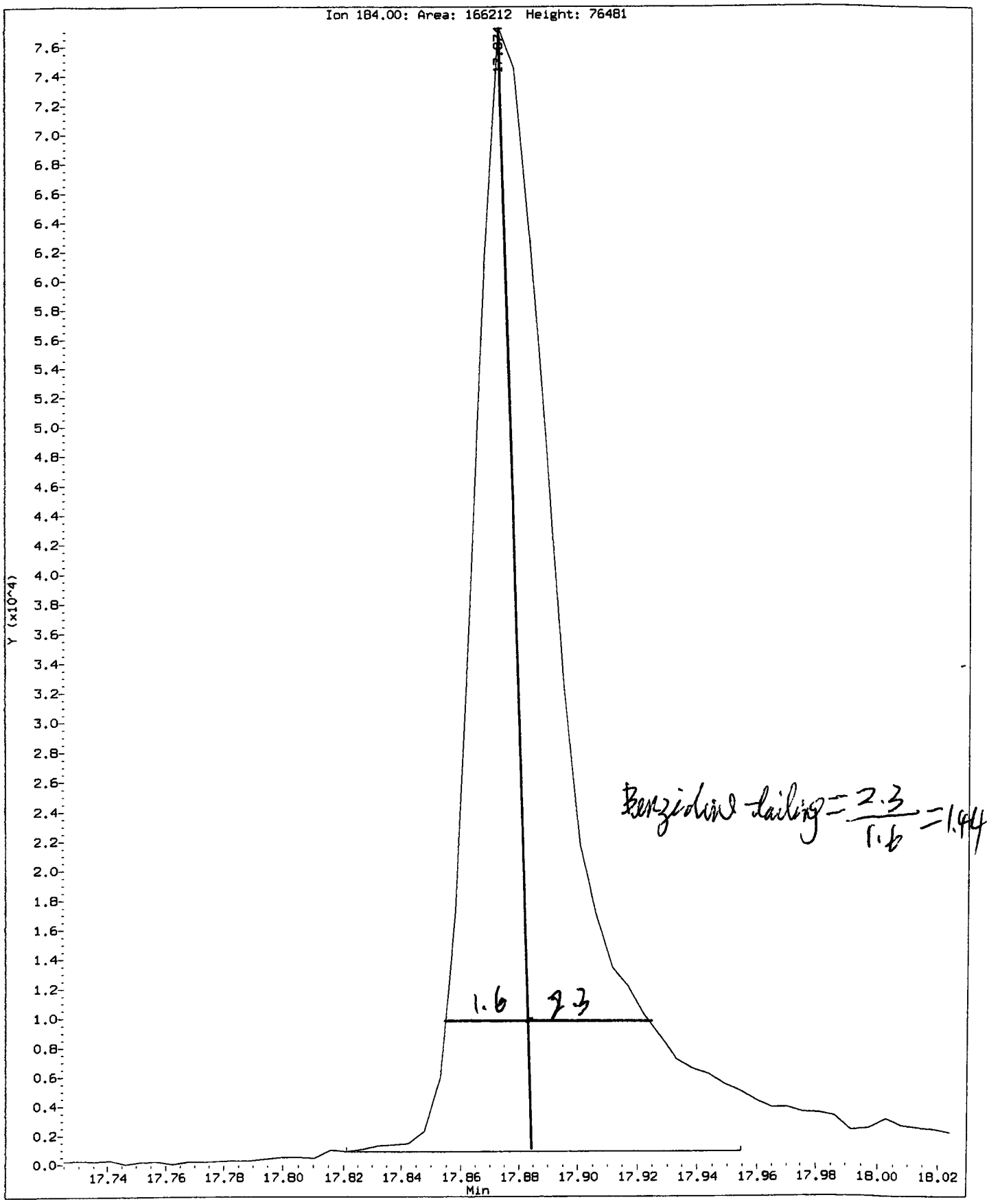
Data File: /chem2/nt6.i/20130306.b/ddt.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: DDT0306

Compound: Pentachlorophenol
CAS Number: 87-86-5



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

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

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

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	469293	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.419	10.422	(1.000)	1660759	20.0000	
	28 Naphthalene	128	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	141	Compound Not Detected.					
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					
34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	Compound Not Detected.					
38	2-Nitroaniline	65	Compound Not Detected.					
39	Dimethylphthalate	163	Compound Not Detected.					
40	Acenaphthylene	152	Compound Not Detected.					
41	2,6-Dinitrotoluene	165	Compound Not Detected.					
* 42	Acenaphthene-d10	164	13.277	13.286	(1.000)	977166	20.0000	
43	3-Nitroaniline	138	Compound Not Detected.					
44	Acenaphthene	153	Compound Not Detected.					
45	2,4-Dinitrophenol	184	Compound Not Detected.					
46	Dibenzofuran	168	Compound Not Detected.					
47	4-Nitrophenol	109	Compound Not Detected.					
48	2,4-Dinitrotoluene	165	Compound Not Detected.					
50	Diethylphthalate	149	Compound Not Detected.					
49	Fluorene	166	Compound Not Detected.					
51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
52	4-Nitroaniline	138	Compound Not Detected.					
53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	15.655	15.663	(1.000)	1519395	20.0000	
60	Phenanthrene	178	Compound Not Detected.					
61	Anthracene	178	Compound Not Detected.					
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	Compound Not Detected.					
65	Pyrene	202	Compound Not Detected.					
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	19.971	19.979	(1.000)	1581424	20.0000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
* 134	Di-n-octylphthalate-d4	153	21.077	21.085	(1.000)	2063915	20.0000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
187	Total Benzofluoranthenes	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	22.129	22.137	(1.000)	1491578	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
105	1-methylnaphthalene	141	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
143	1,4-Dioxane	88	3.117	3.103	(0.372)	3506	0.20000	0.2303
$ 137	d8-1,4-Dioxane	96	Compound Not Detected.					
144	alpha-Terpineol	59	Compound Not Detected.					
177	p-Benzoquinone	82	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
99	Perylene	252	Compound Not Detected.					
133	Butylatedhydroxytoluene	205	Compound Not Detected.					
115	Tributyl Phosphate	99	Compound Not Detected.					
116	Dibutyl Phenyl Phosphate	175	Compound Not Detected.					
117	Butyl Diphenyl Phosphate	94	Compound Not Detected.					
118	Triphenyl Phosphate	326	Compound Not Detected.					
123	Acetophenone	105	Compound Not Detected.					
168	Pentachlorobenzene	250	Compound Not Detected.					
113	Diphenyl Oxide	170	Compound Not Detected.					
112	Biphenyl	154	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
151	1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
110	Tetrachloroguaiacol	247	Compound Not Detected.					
109	3,4,5-Trichloroguaiacol	213	Compound Not Detected.					
181	3,4,6-Trichloroguaiacol	211	Compound Not Detected.					
108	4,5,6-Trichloroguaiacol	213	Compound Not Detected.					
184	3,4-Dichloroguaiacol	192	Compound Not Detected.					
107	4,5-Dichloroguaiacol	192	Compound Not Detected.					
182	4,6-Dichloroguaiacol	192	Compound Not Detected.					
185	4-Chloroguaiacol	115	Compound Not Detected.					
186	Carbaryl	144	Compound Not Detected.					
178	2-Benzyl-4-Chlorophenol	218	Compound Not Detected.					
106	Guaiacol	124	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

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

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

Test Mode:
Use Initial Calibration Level 4.

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

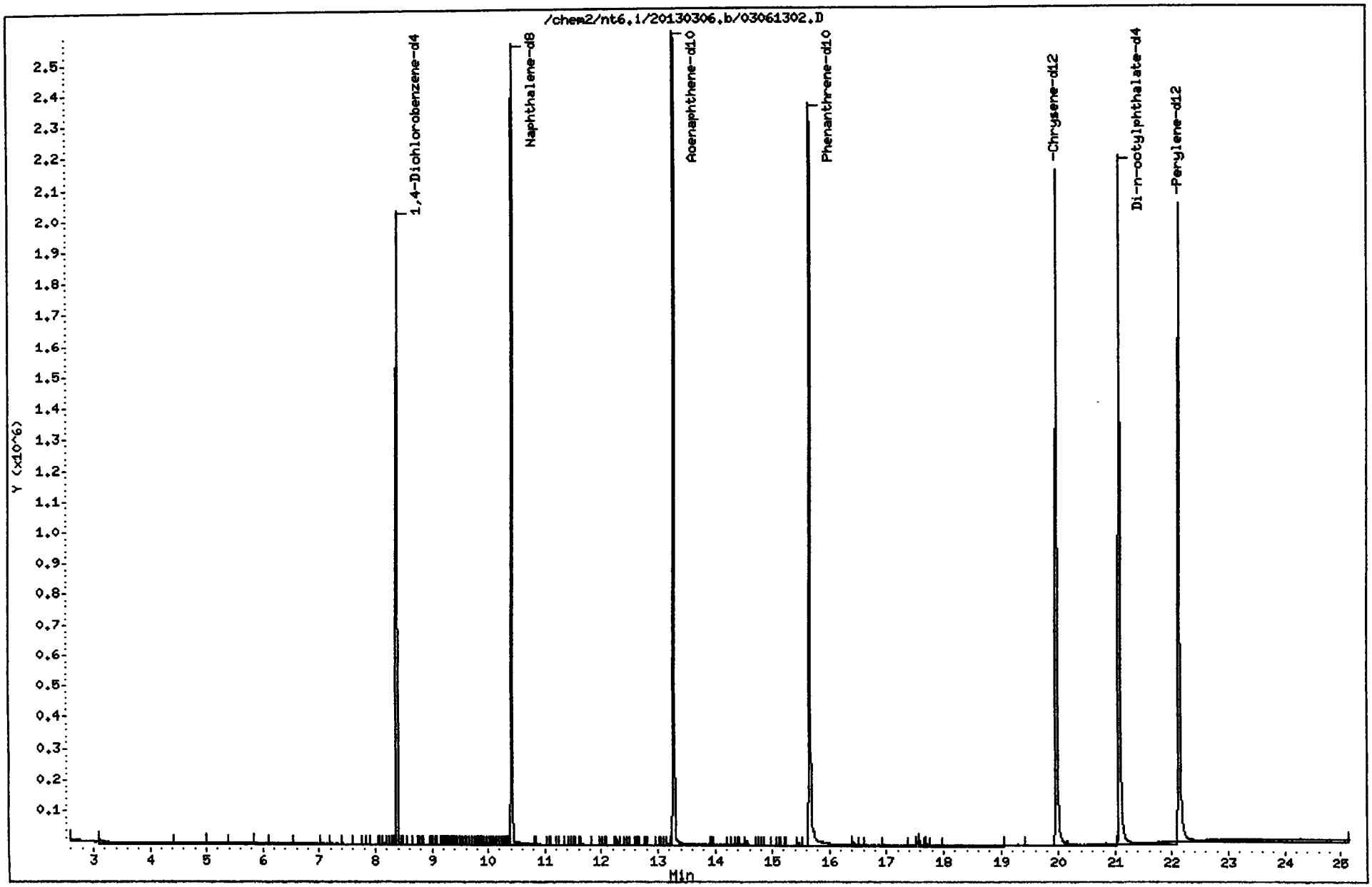
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.04
134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

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

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

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 03061302.D

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

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

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

03/07/13

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

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

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

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

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

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

Test Mode:
Use Initial Calibration Level 4.

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

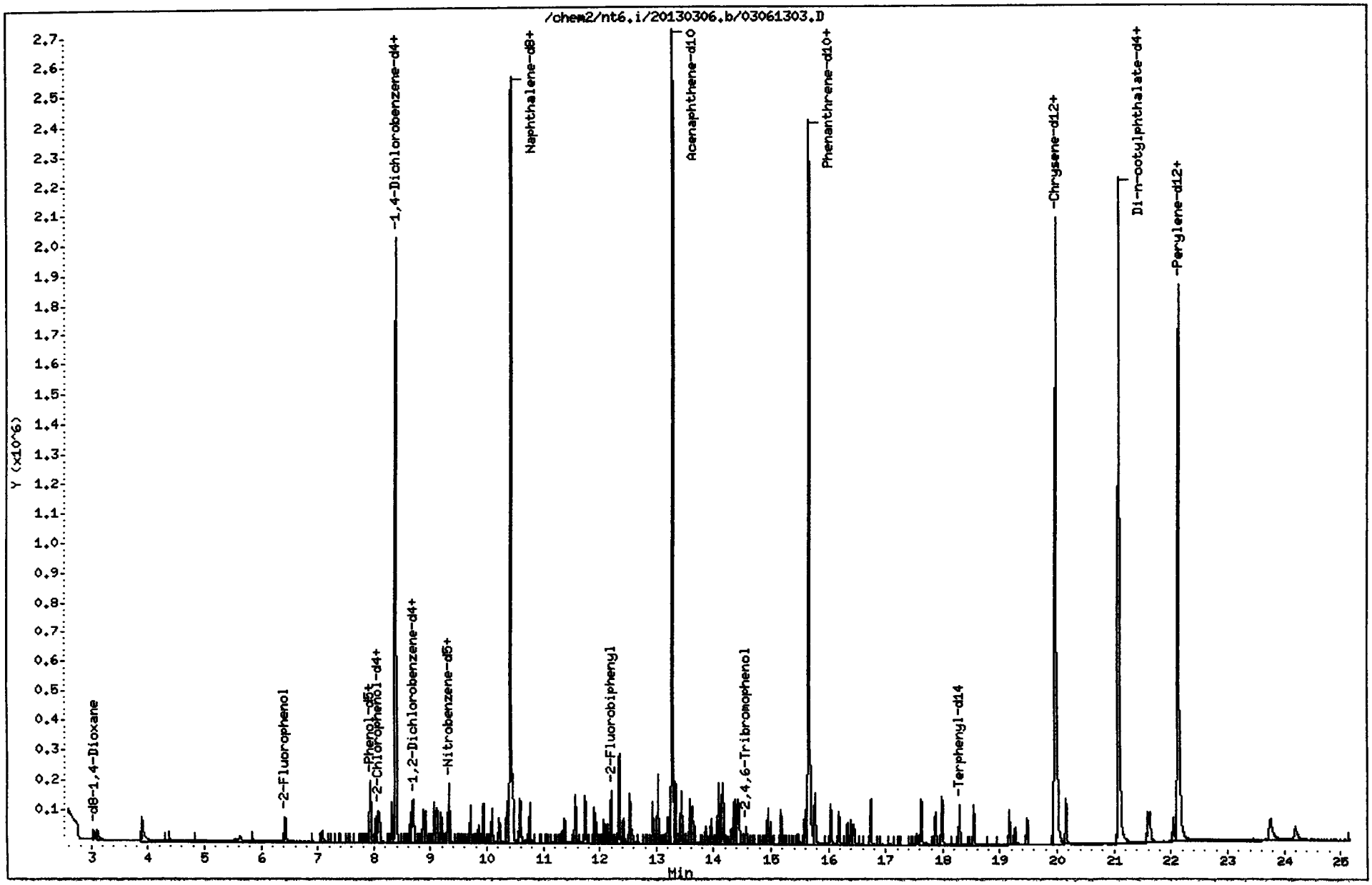
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.07
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.01
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.05
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.04
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.06
134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

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

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

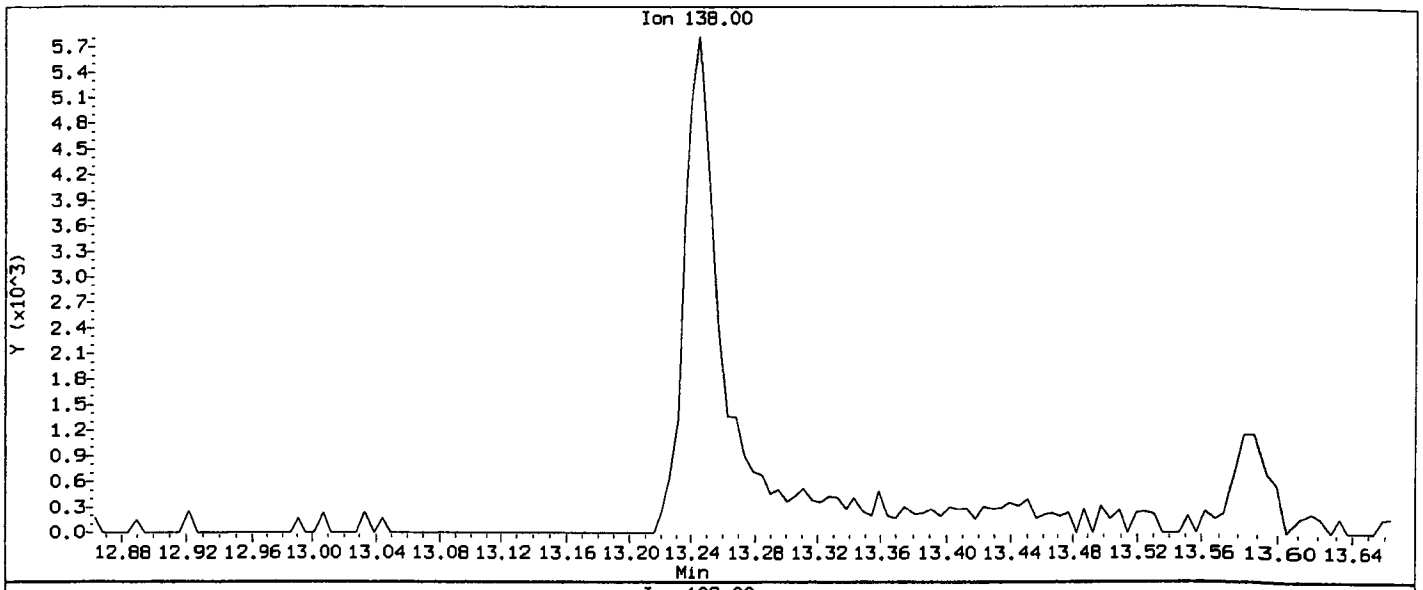
Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

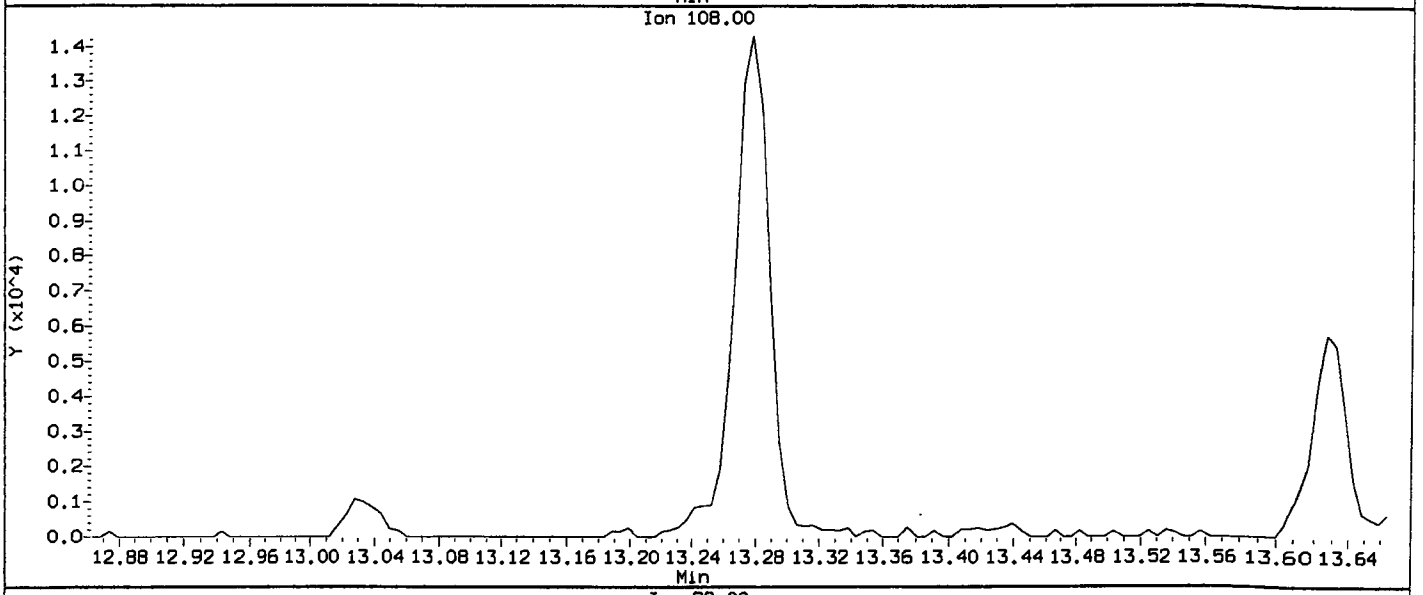
Column phase: ZB-5msi

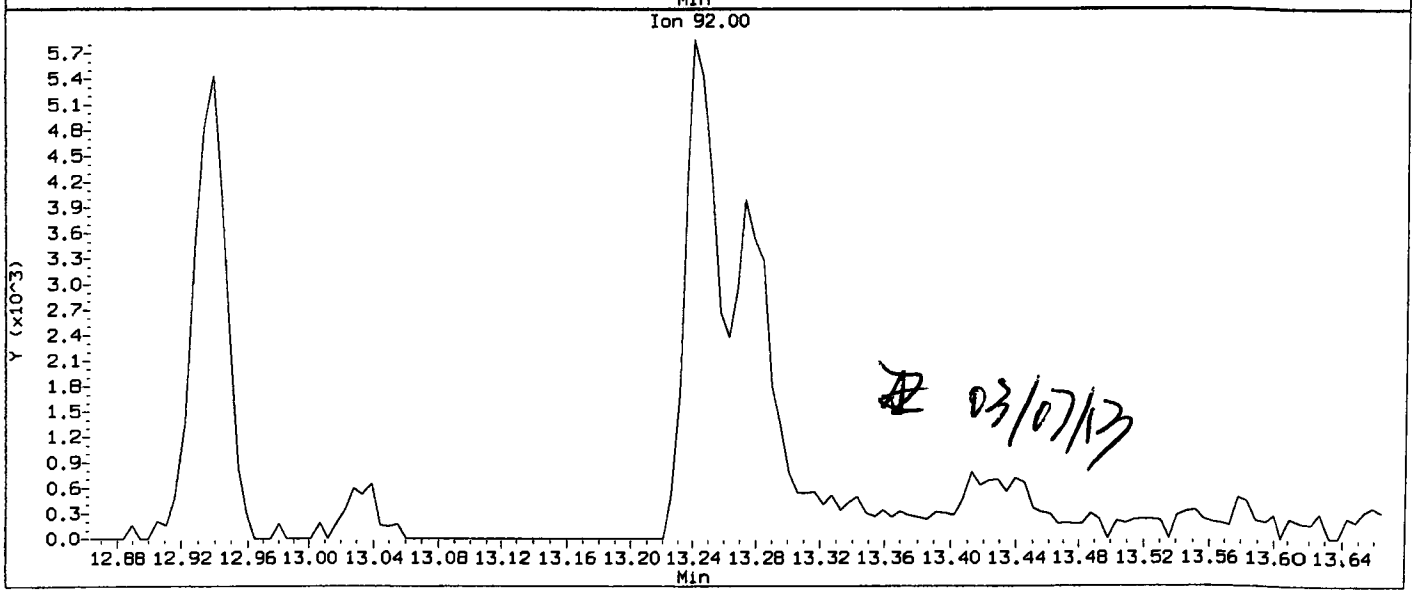


Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

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



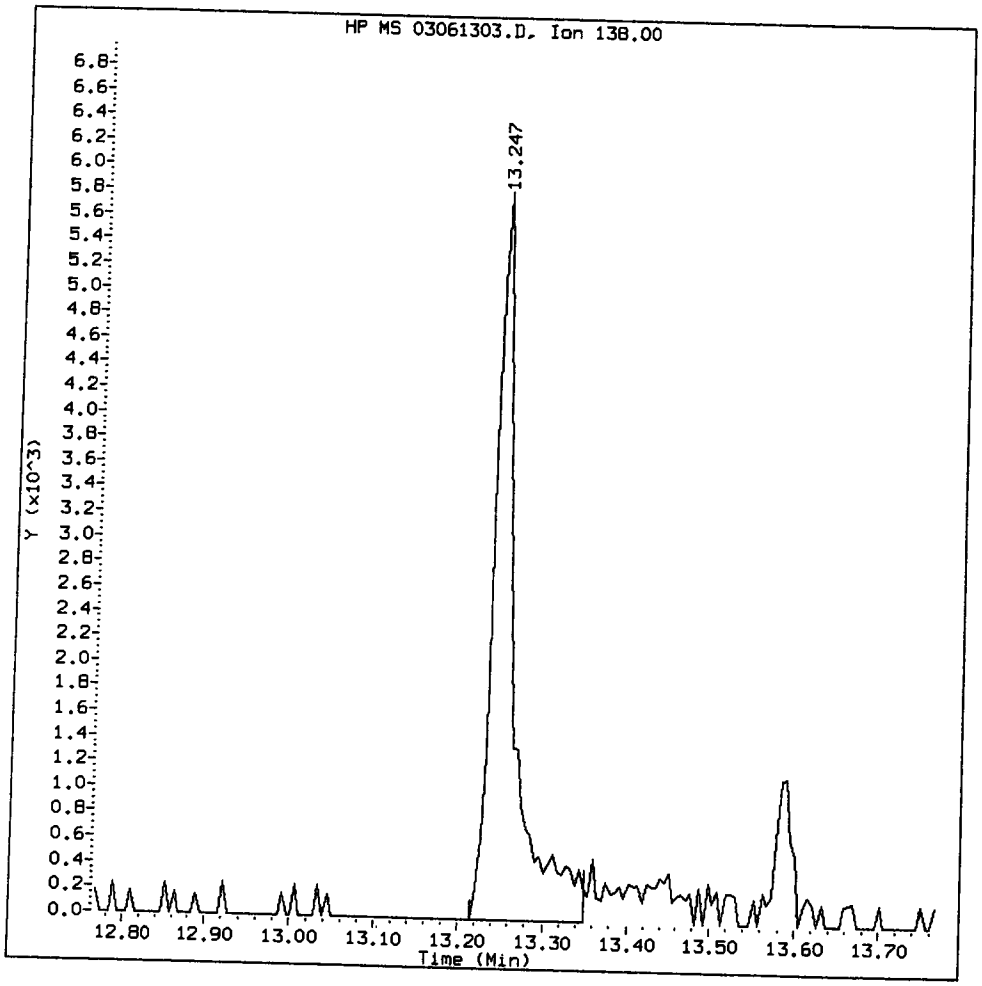




03/07/13

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

3-Nitroaniline Amount: 0.90 Area: 10686



MANUAL INTEGRATION for 3-Nitroaniline

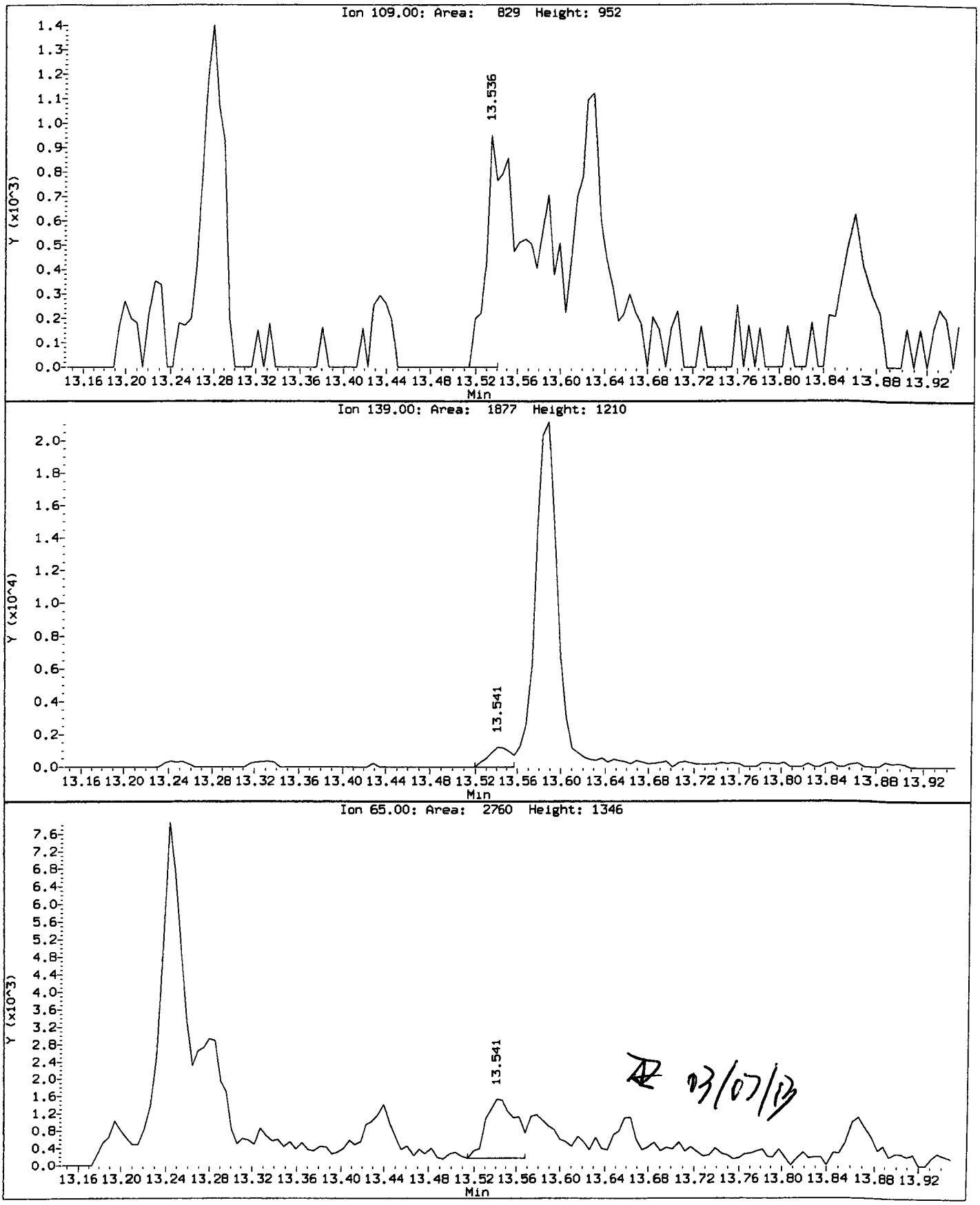
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

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

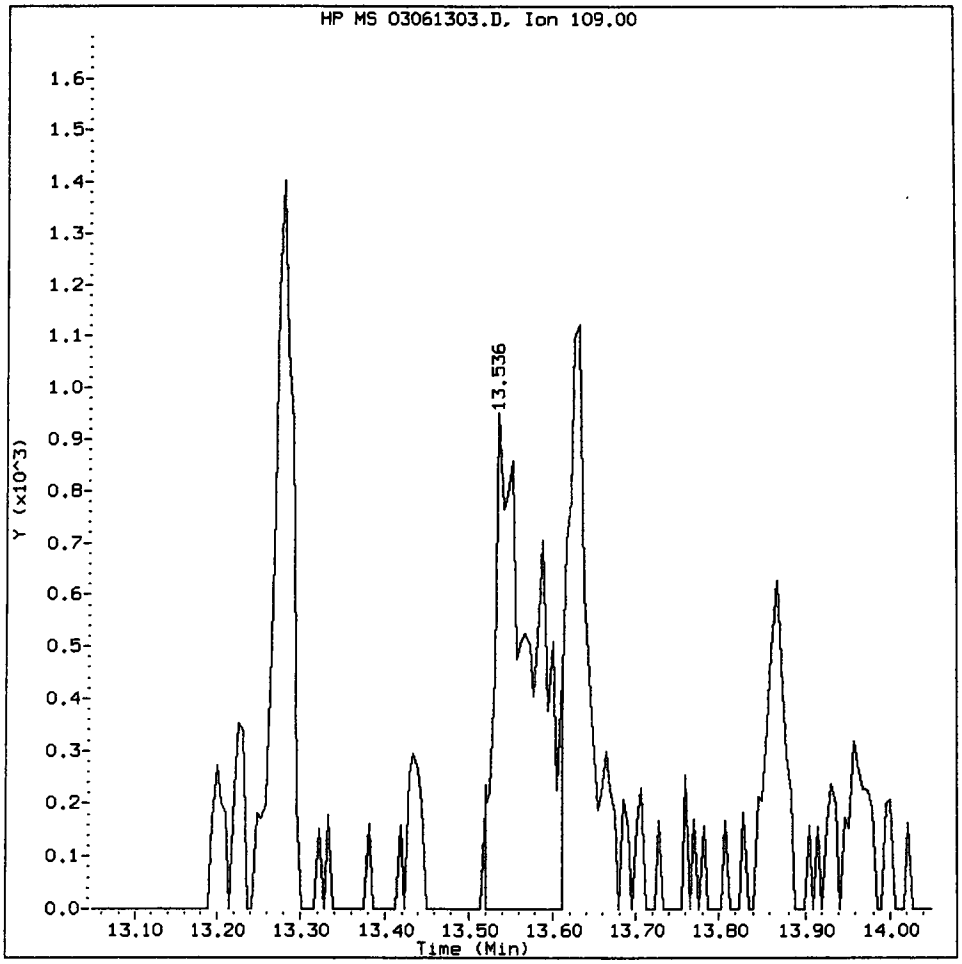
Compound: 4-Nitrophenol
CAS Number: 100-02-7



03/07/13

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

4-Nitrophenol Amount: 0.48 Area: 3036



MANUAL INTEGRATION for 4-Nitrophenol

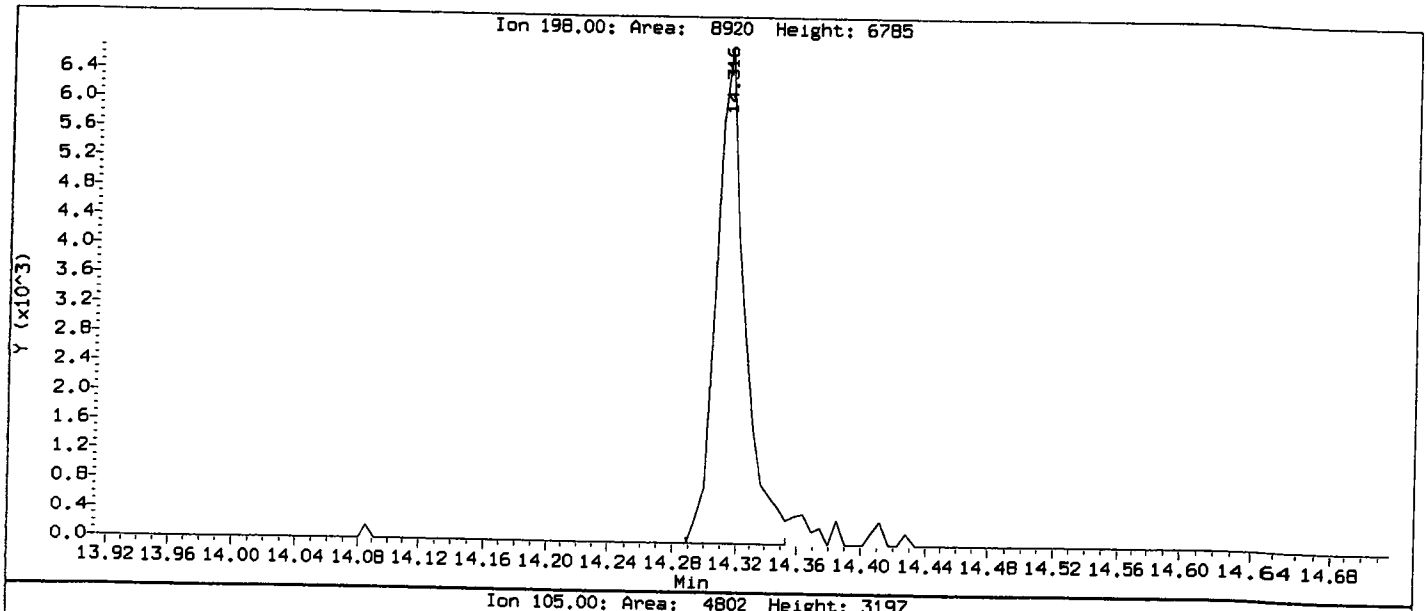
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

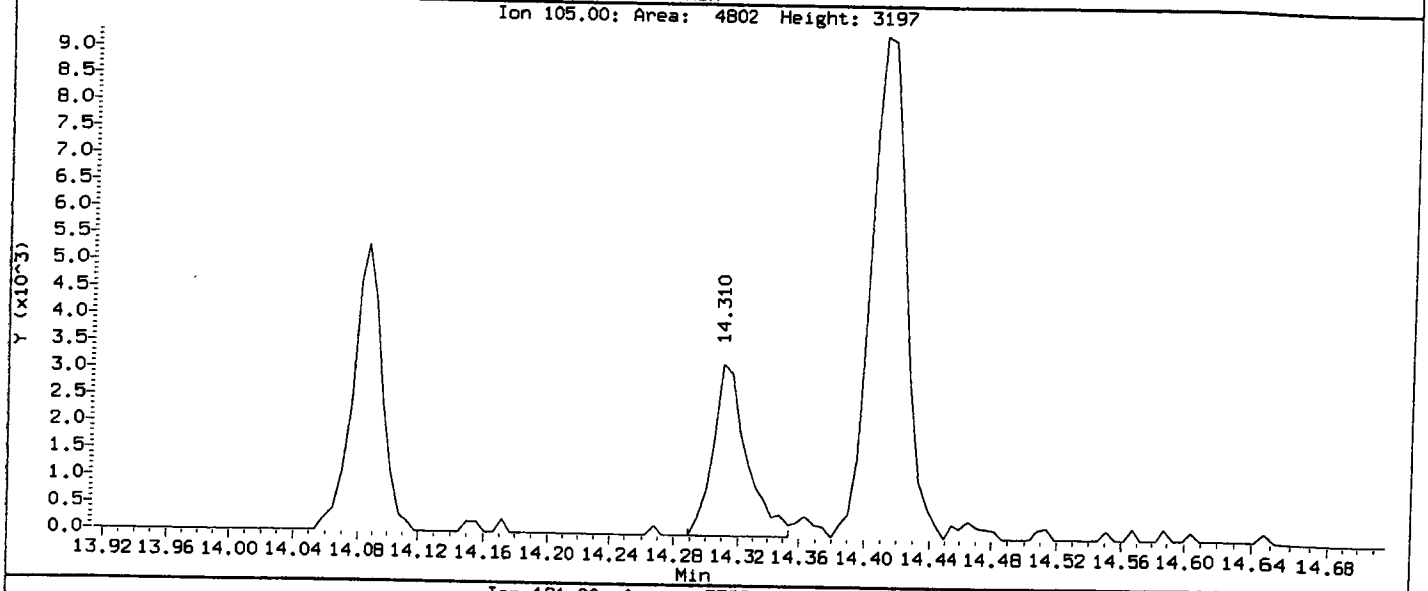
5. Other _____

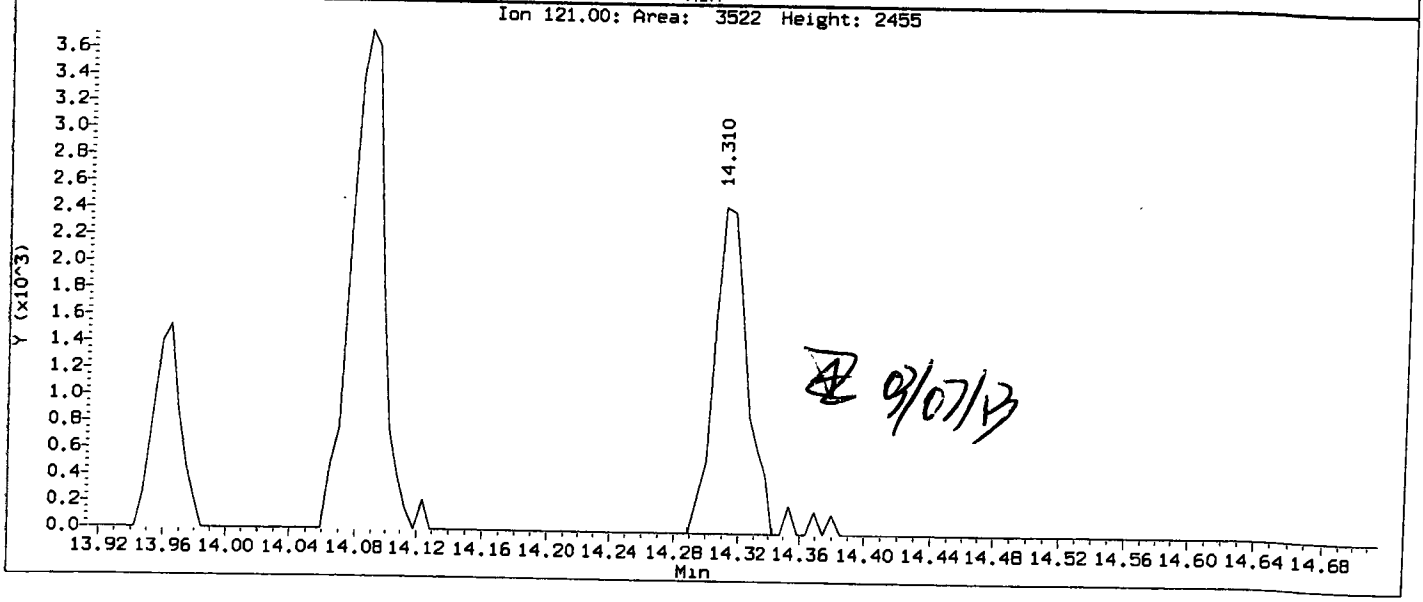
Analyst: _____ Date: 03/07/13

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

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



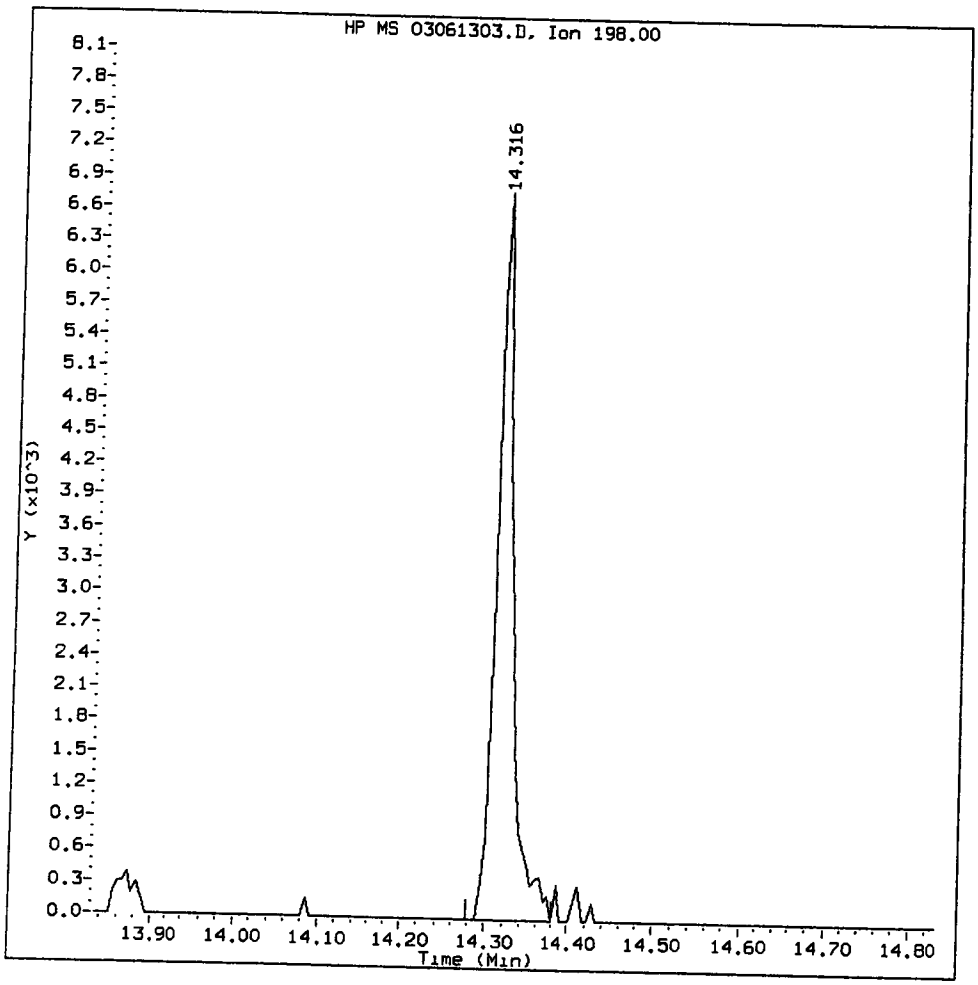




9/07/13

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

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



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

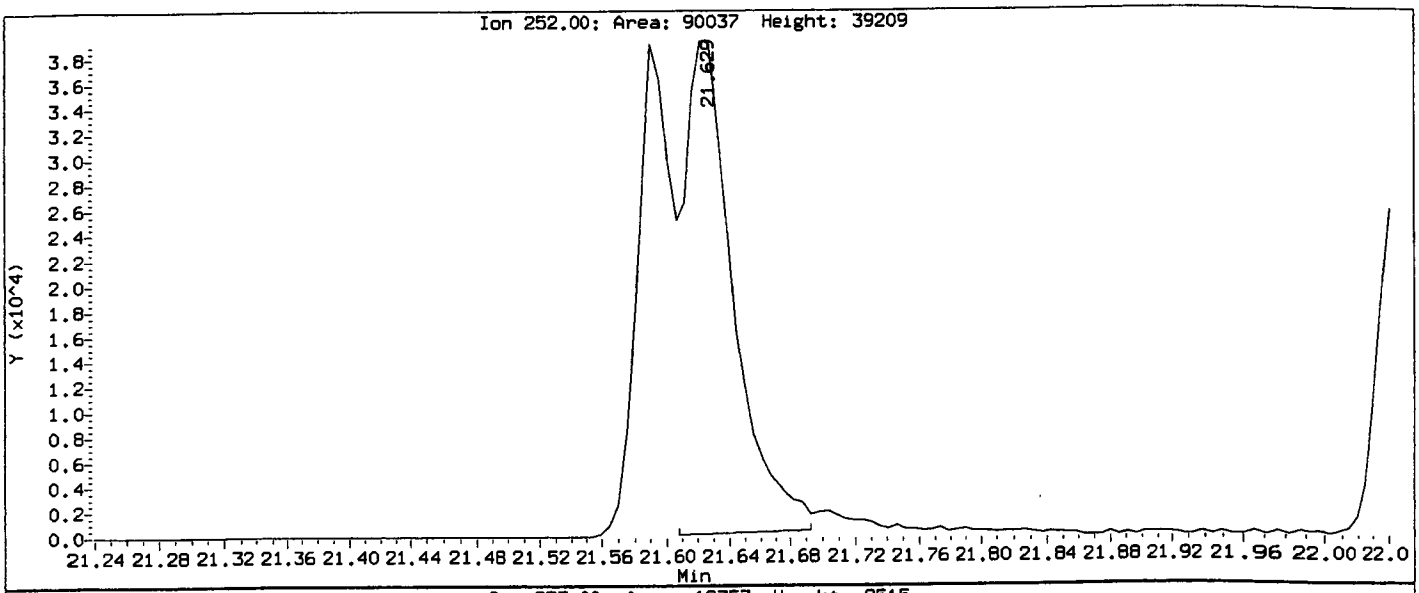
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

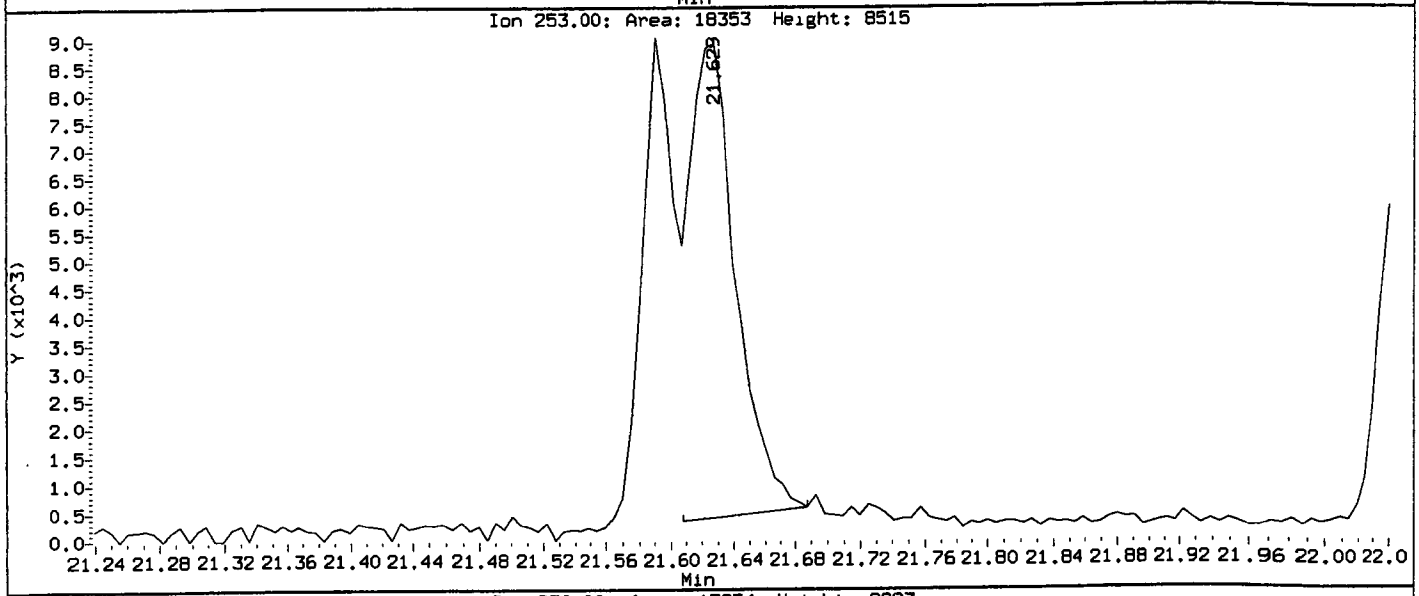
5. Other _____

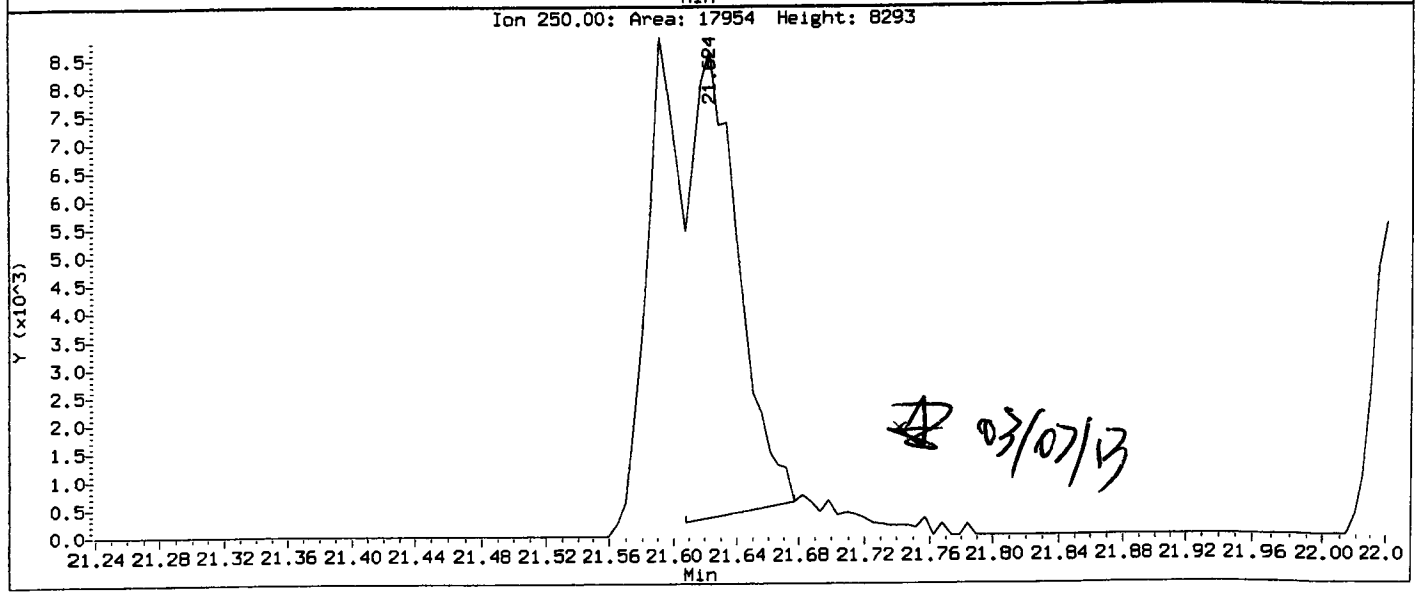
Analyst: _____ Date: 03/07/13

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

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





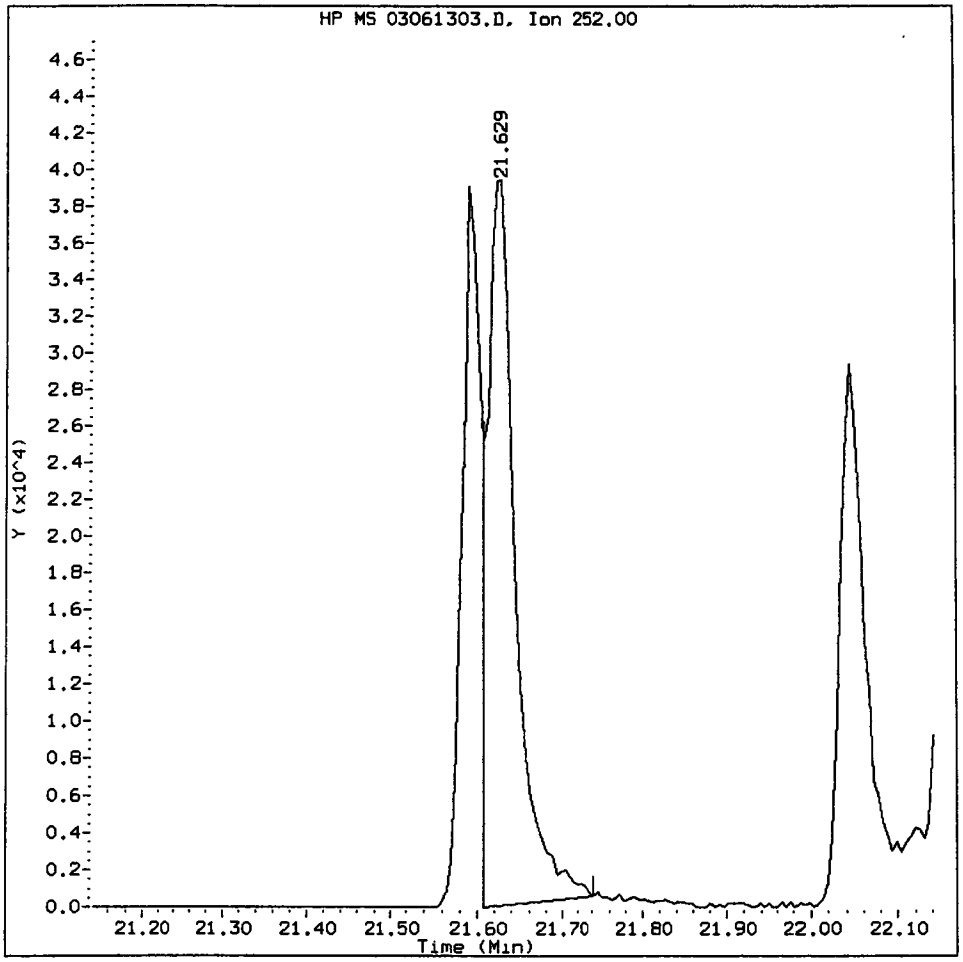


03/07/13

WN31 : 00648

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

Benzo(k)fluoranthene Amount: 1.22 Area: 92998



MANUAL INTEGRATION for Benzo(k)fluoranthene

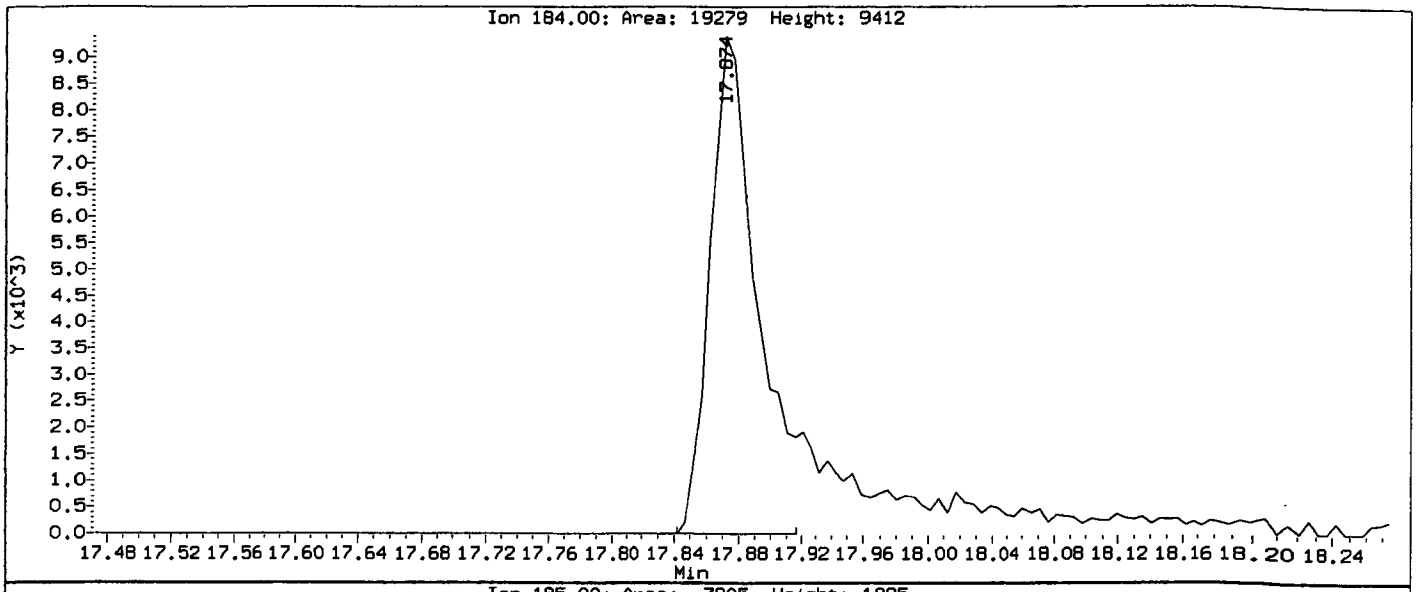
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

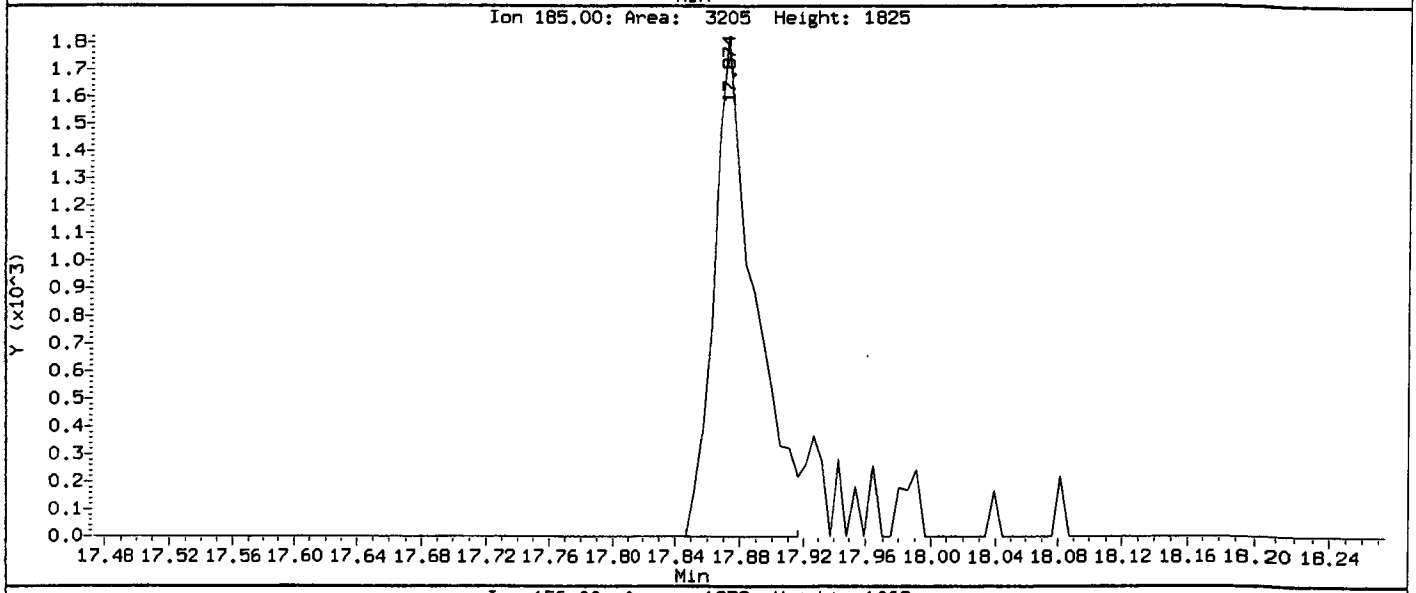
5. Other _____

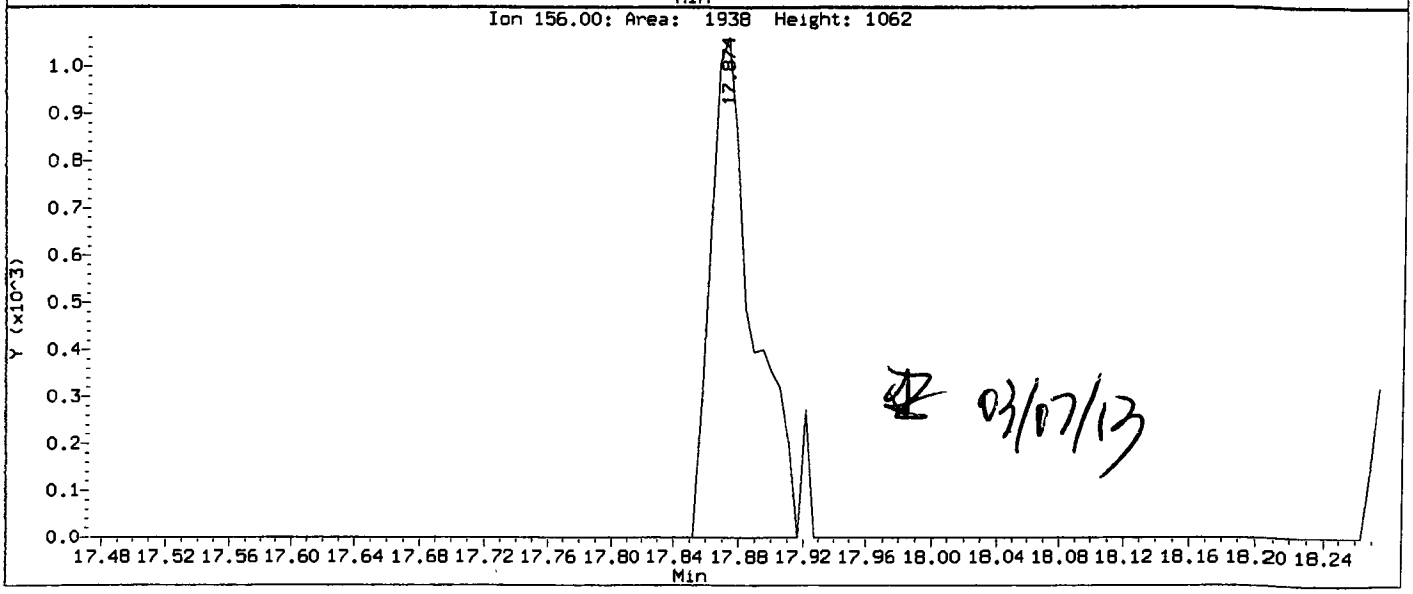
Analyst: _____ Date: 02/07/13

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

Compound: Benzidine
CAS Number:



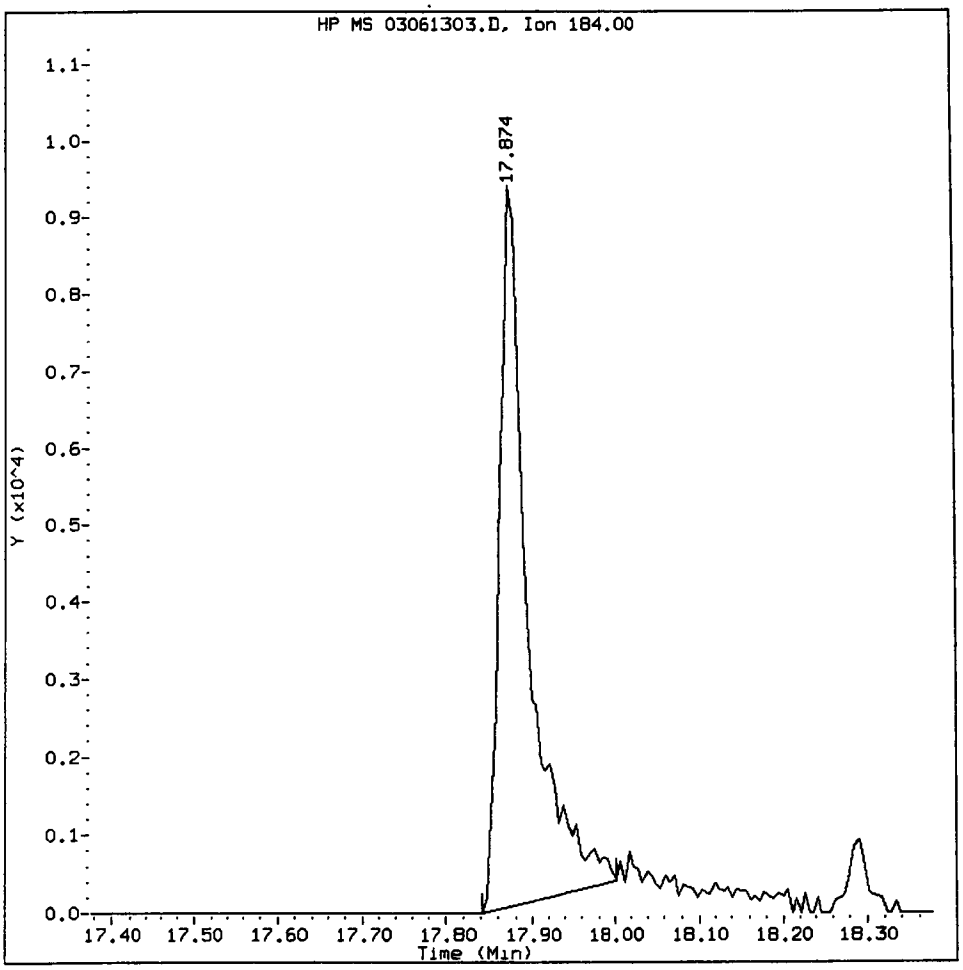




03/07/13

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

Benzidine Amount: 3.15 Area: 22120



MANUAL INTEGRATION for Benzidine

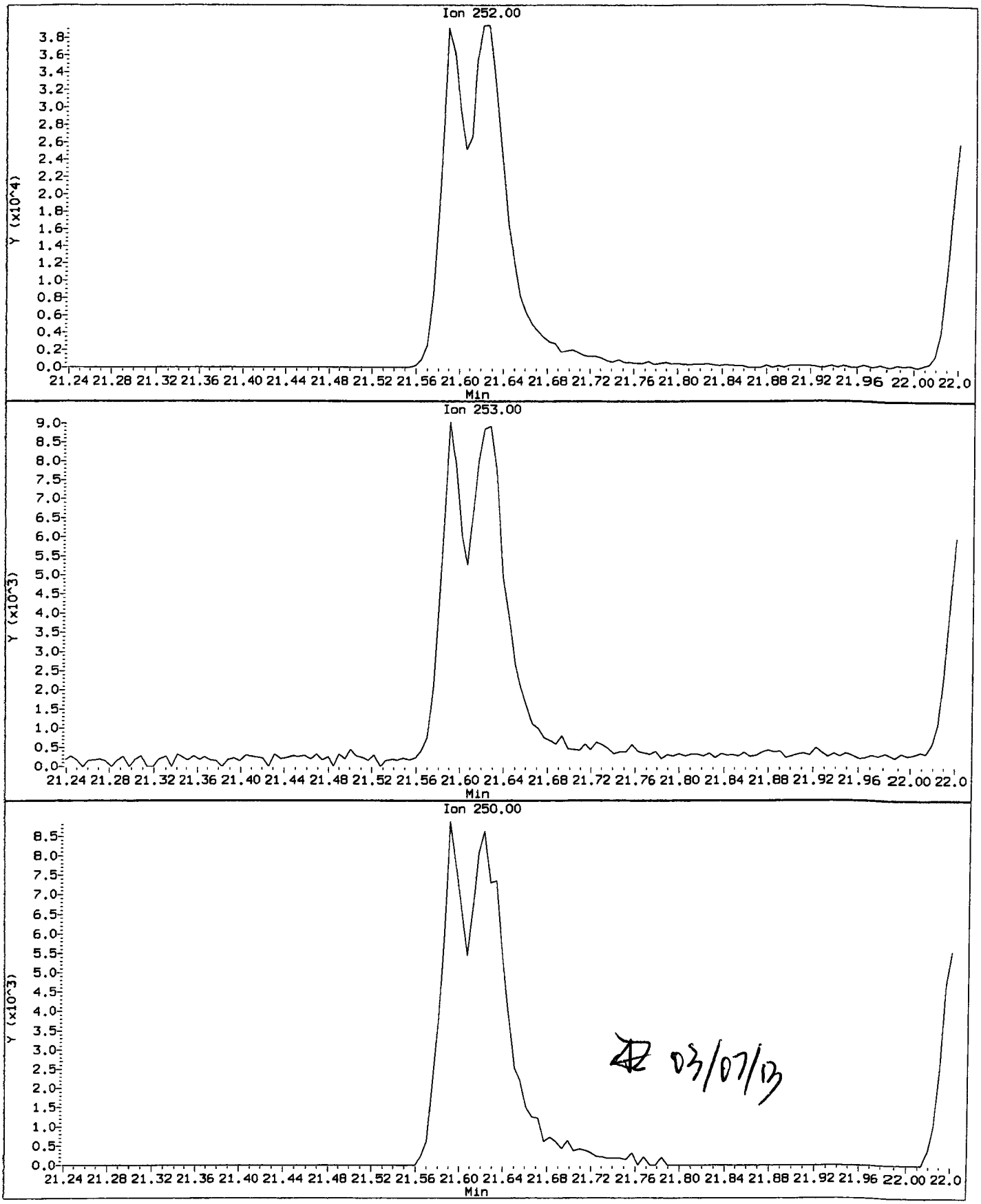
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

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

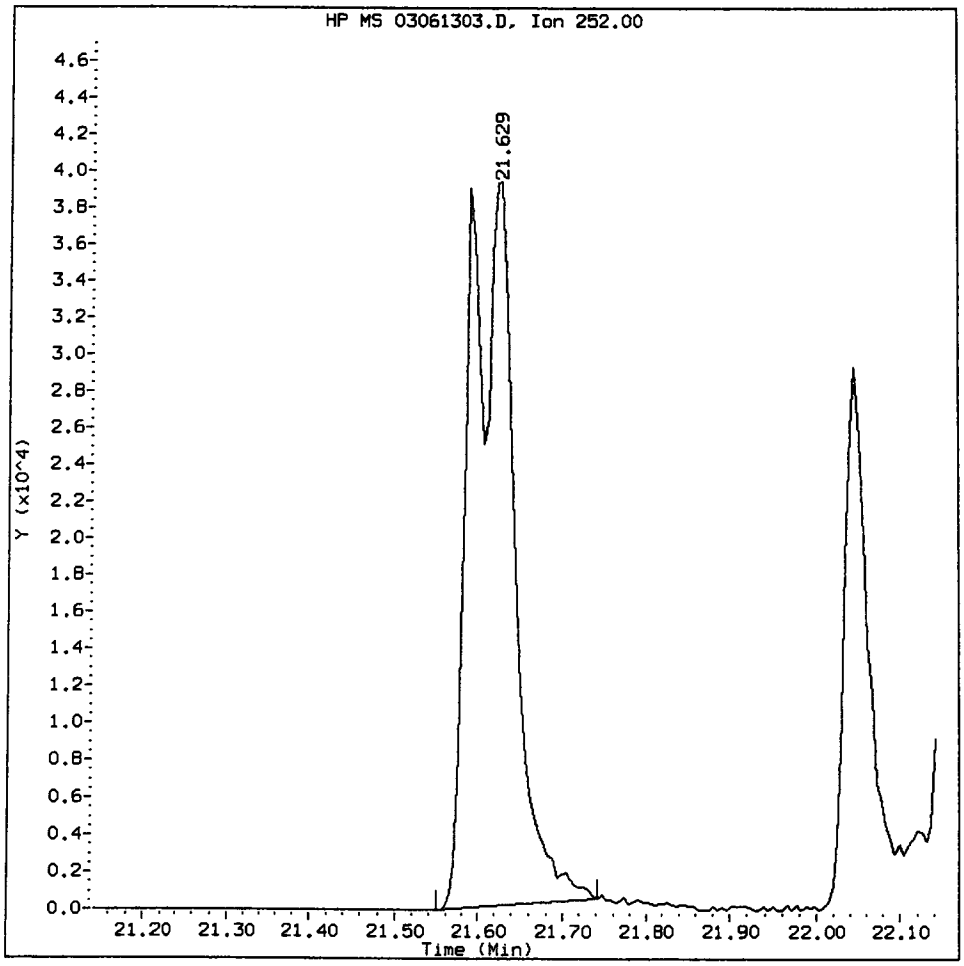
Compound: Total Benzofluoranthenes
CAS Number:



03/07/13

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

Total Benzofluoranthenes Amount: 2.34 Area: 143967



MANUAL INTEGRATION for Total Benzofluoranthenes

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

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061303.D

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

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

checked OK

03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

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

03/07/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.429	6.432	(0.767)	157487	5.00000	5.345
$	2	Phenol-d5	99	7.925	7.933	(0.945)	194564	5.00000	5.641
	3	Phenol	94	7.941	7.954	(0.947)	197710	5.00000	5.444
$	5	2-Chlorophenol-d4	132	8.079	8.082	(0.964)	158947	5.00000	5.452
	4	Bis(2-Chloroethyl)ether	93	8.047	8.050	(0.960)	166393	5.00000	5.276
	6	2-Chlorophenol	128	8.101	8.109	(0.966)	154047	5.00000	5.302
	7	1,3-Dichlorobenzene	146	8.320	8.328	(0.992)	181909	5.00000	5.360
*	8	1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	454719	20.0000	
	9	1,4-Dichlorobenzene	146	8.405	8.408	(1.003)	176793	5.00000	5.353
$	10	1,2-Dichlorobenzene-d4	152	8.683	8.681	(1.036)	116568	5.00000	5.681
	12	1,2-Dichlorobenzene	146	8.704	8.707	(1.038)	173153	5.00000	5.484
	11	Benzyl alcohol	108	8.651	8.654	(1.032)	107325	5.00000	5.425
	14	2,2'-oxybis(1-Chloropropane)	45	8.907	8.916	(1.062)	266769	5.00000	5.324
	13	2-Methylphenol	108	8.870	8.878	(1.058)	145016	5.00000	5.266
	17	Hexachloroethane	117	9.191	9.193	(1.096)	70384	5.00000	5.268
	16	N-Nitroso-di-n-propylamine	70	9.121	9.135	(1.088)	122120	5.00000	5.160
	15	4-Methylphenol	108	9.100	9.108	(1.085)	144214	5.00000	5.296
$	18	Nitrobenzene-d5	82	9.303	9.311	(0.893)	180057	5.00000	5.411
	19	Nitrobenzene	77	9.330	9.343	(0.895)	175660	5.00000	5.515
	20	Isophorone	82	9.709	9.717	(0.932)	285645	5.00000	5.145
	21	2-Nitrophenol	139	9.848	9.851	(0.945)	75503	5.00000	5.123
	22	2,4-Dimethylphenol	107	9.939	9.947	(0.954)	147352	5.00000	5.287
	23	Bis(2-Chloroethoxy)methane	93	10.093	10.096	(0.969)	193375	5.00000	5.309
	24	Benzoic acid	105	10.083	10.198	(0.968)	174391	10.0000	7.233 (M)
	25	2,4-Dichlorophenol	162	10.222	10.230	(0.981)	112355	5.00000	5.235
	26	1,2,4-Trichlorobenzene	180	10.361	10.363	(0.994)	140913	5.00000	5.275
*	27	Naphthalene-d8	136	10.419	10.422	(1.000)	1658379	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.451	10.454	(1.003)	433038	5.00000	4.596
	29 4-Chloroaniline	127	10.585	10.588	(1.016)	171000	5.00000	5.962
	30 Hexachlorobutadiene	225	10.761	10.764	(1.033)	84797	5.00000	5.216
	31 4-Chloro-3-methylphenol	107	11.376	11.384	(1.092)	117962	5.00000	5.175
	32 2-Methylnaphthalene	141	11.563	11.571	(1.110)	237814	5.00000	5.897
	33 Hexachlorocyclopentadiene	237	11.947	11.950	(0.900)	69251	5.00000	4.428
	34 2,4,6-Trichlorophenol	196	12.070	12.078	(0.909)	79746	5.00000	4.873
	35 2,4,5-Trichlorophenol	196	12.129	12.137	(0.913)	83114	5.00000	5.149
$	36 2-Fluorobiphenyl	172	12.204	12.212	(0.919)	355231	5.00000	5.781
	37 2-Chloronaphthalene	162	12.348	12.356	(0.930)	266980	5.00000	6.062
	38 2-Nitroaniline	65	12.567	12.580	(0.946)	76657	5.00000	5.327
	39 Dimethylphthalate	163	12.935	12.949	(0.974)	306672	5.00000	5.234
	40 Acenaphthylene	152	13.026	13.034	(0.981)	433072	5.00000	5.640
	41 2,6-Dinitrotoluene	165	13.032	13.045	(0.981)	67148	5.00000	5.364
*	42 Acenaphthene-d10	164	13.277	13.286	(1.000)	973436	20.0000	
	43 3-Nitroaniline	138	13.245	13.264	(0.998)	63342	5.00000	5.771
	44 Acenaphthene	153	13.325	13.334	(1.004)	270963	5.00000	5.451
	45 2,4-Dinitrophenol	184	13.411	13.424	(1.010)	54175	10.0000	6.060
	46 Dibenzofuran	168	13.587	13.595	(1.023)	378333	5.00000	5.819
	47 4-Nitrophenol	109	13.534	13.547	(1.019)	26876	5.00000	4.226 (M)
	48 2,4-Dinitrotoluene	165	13.662	13.676	(1.029)	86291	5.00000	5.097
	50 Diethylphthalate	149	14.089	14.098	(1.061)	325228	5.00000	5.992
	49 Fluorene	166	14.143	14.156	(1.065)	290158	5.00000	5.801
	51 4-Chlorophenyl-phenylether	204	14.164	14.172	(1.067)	156539	5.00000	5.485
	52 4-Nitroaniline	138	14.234	14.252	(1.072)	54497	5.00000	5.708
	53 4,6-Dinitro-2-methylphenol	198	14.314	14.333	(0.914)	93237	10.0000	8.397
	54 N-Nitrosodiphenylamine	169	14.362	14.375	(0.917)	228800	5.00000	5.303
$	55 2,4,6-Tribromophenol	330	14.565	14.573	(1.097)	41598	5.00000	5.404
	56 4-Bromophenyl-phenylether	248	14.944	14.952	(0.955)	87747	5.00000	5.185
	57 Hexachlorobenzene	284	15.174	15.182	(0.969)	90144	5.00000	5.166
	58 Pentachlorophenol	266	15.462	15.470	(0.988)	41947	5.00000	4.076
*	59 Phenanthrene-d10	188	15.655	15.663	(1.000)	1542012	20.0000	
	60 Phenanthrene	178	15.692	15.700	(1.002)	411870	5.00000	5.399
	61 Anthracene	178	15.761	15.770	(1.007)	414969	5.00000	5.432
	62 Carbazole	167	16.039	16.047	(1.025)	352615	5.00000	6.682
	63 Di-n-butylphthalate	149	16.739	16.747	(1.069)	532943	5.00000	5.534
	64 Fluoranthene	202	17.626	17.639	(1.126)	435344	5.00000	5.424
	65 Pyrene	202	17.984	17.992	(0.900)	455140	5.00000	5.404
$	66 Terphenyl-d14	244	18.288	18.291	(0.916)	312240	5.00000	5.768
	67 Butylbenzylphthalate	149	19.159	19.167	(0.959)	224551	5.00000	5.453
	68 Benzo(a)anthracene	228	19.939	19.953	(0.998)	371290	5.00000	5.281
*	69 Chrysene-d12	240	19.971	19.979	(1.000)	1542109	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.939	19.953	(0.998)	110548	5.00000	5.715
	71 Chrysene	228	20.008	20.017	(1.002)	388039	5.00000	5.406
	72 bis(2-Ethylhexyl)phthalate	149	20.147	20.150	(0.956)	311275	5.00000	5.156
*	134 Di-n-octylphthalate-d4	153	21.077	21.085	(1.000)	2051585	20.0000	
	73 Di-n-octylphthalate	149	21.088	21.096	(1.000)	500822	5.00000	5.170

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

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

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

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

Test Mode:
Use Initial Calibration Level 4.

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

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

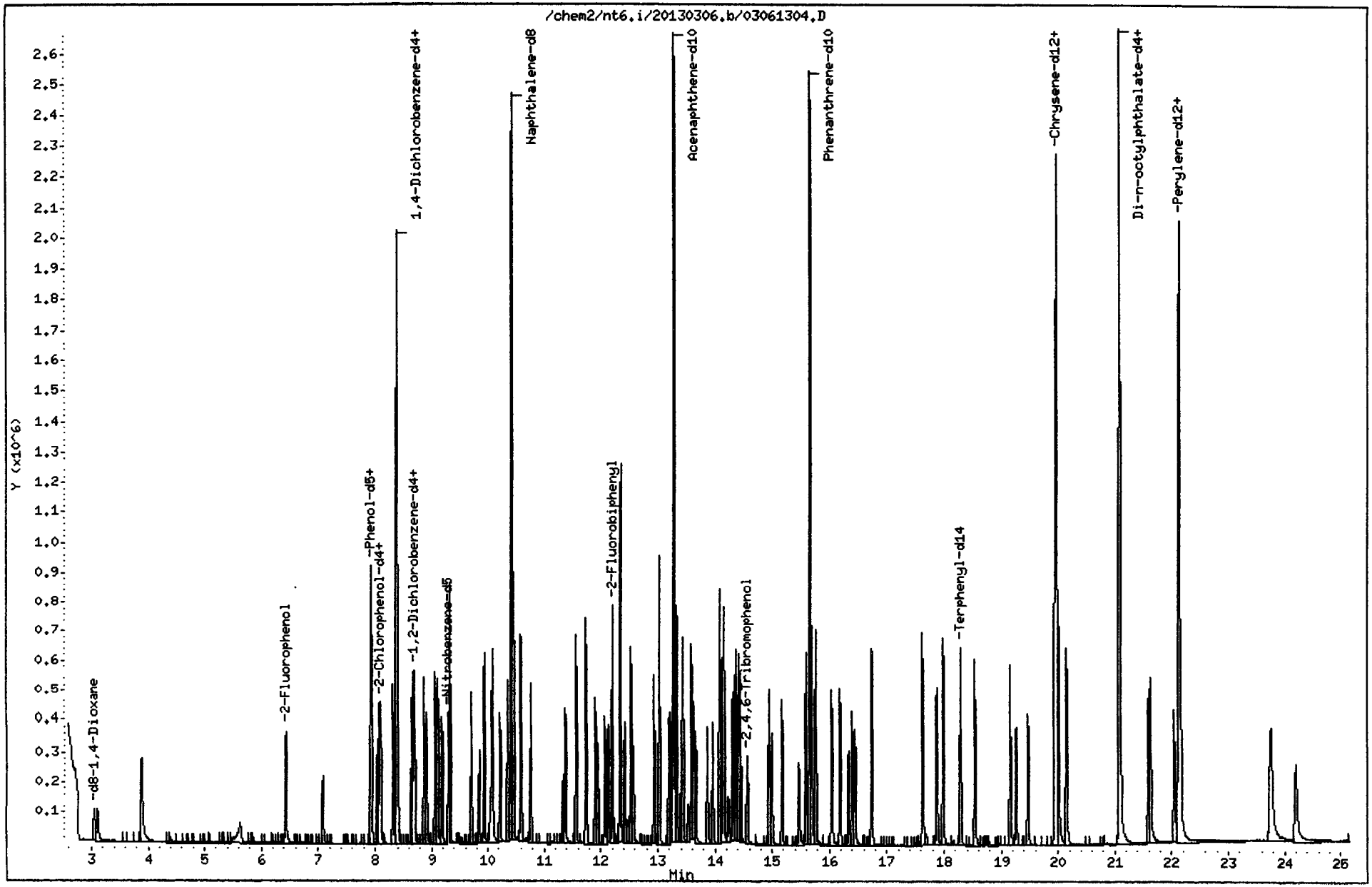
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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

Instrument: nt6.i

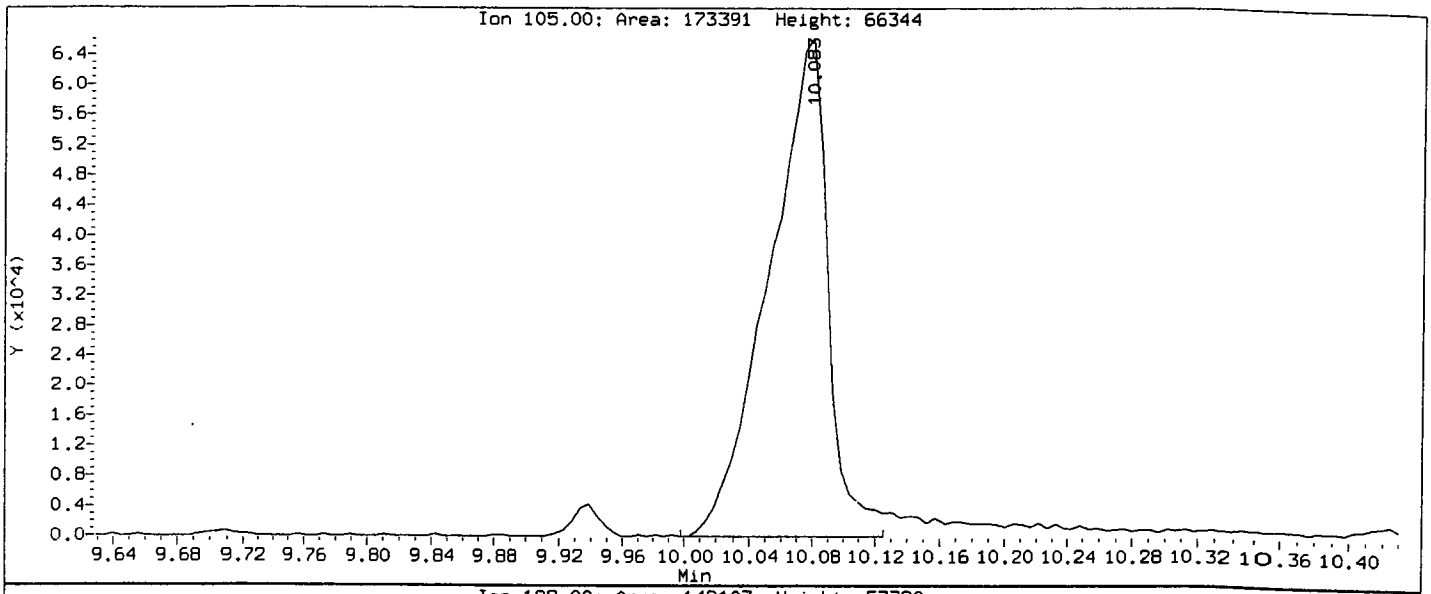
Operator: JZ
Column diameter: 0.32

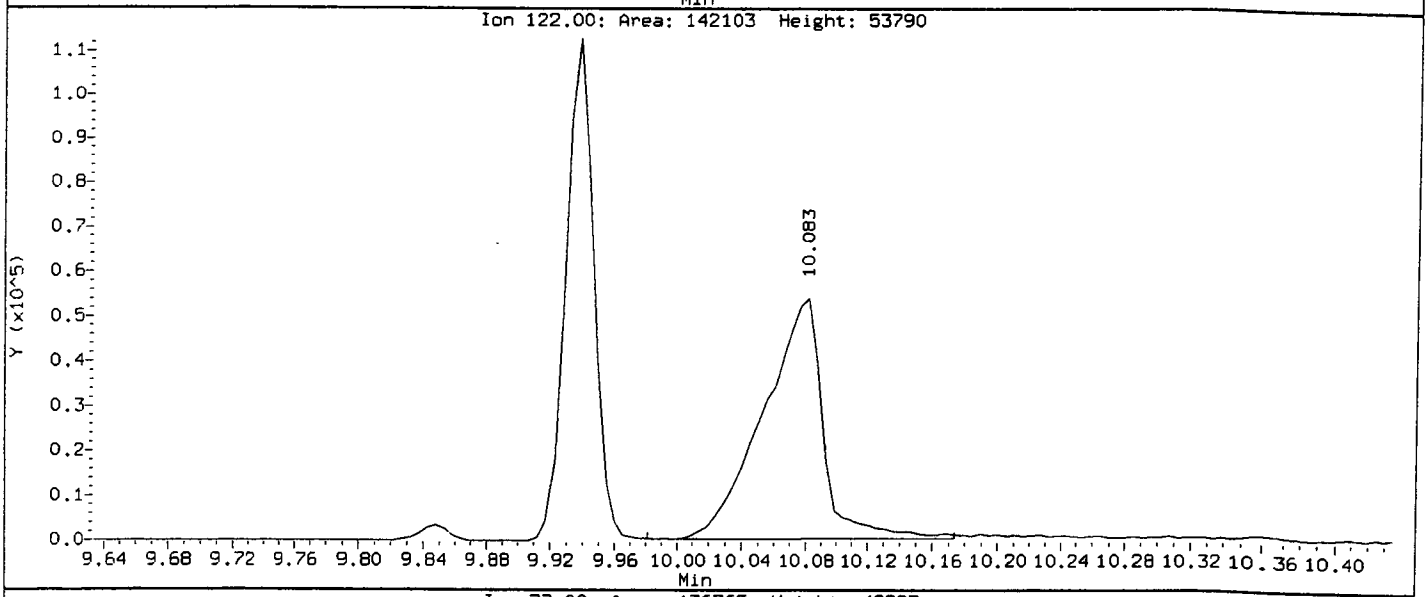
Column phase: ZB-5msi

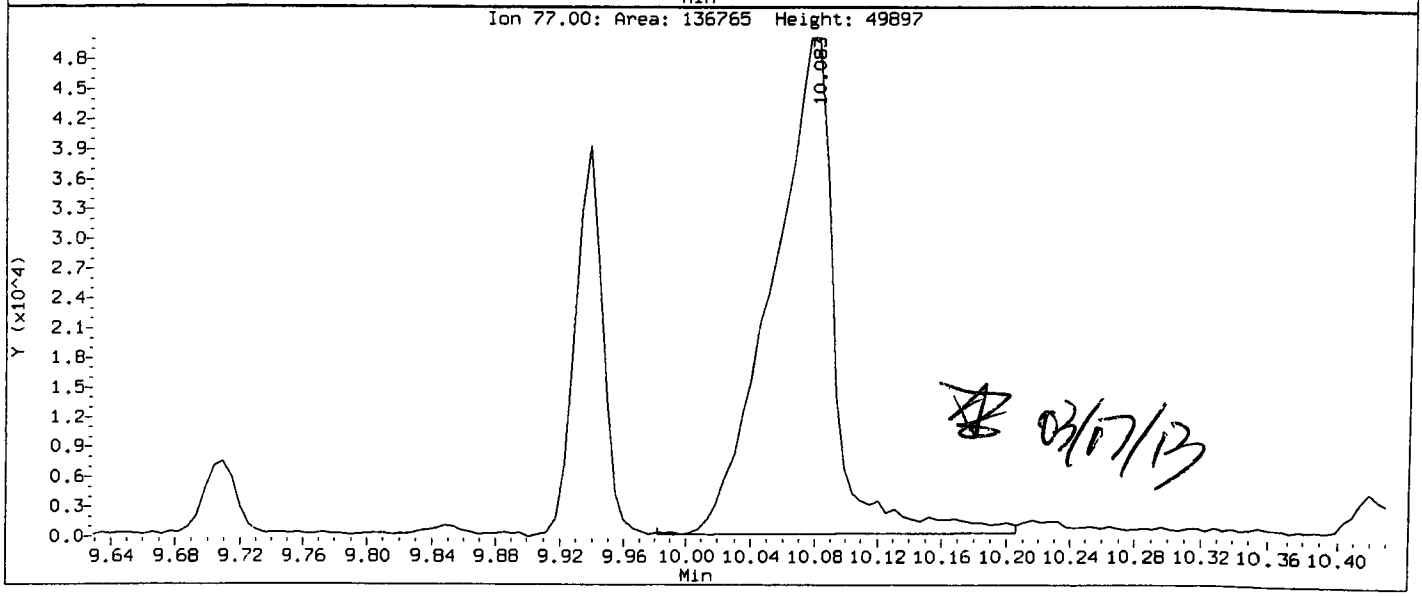


Data File: /chem2/nt6.i/20130306.b/03061304.D
Injection Date: 06-MAR-2013 14:00
Instrument: nt6.i
Client Sample ID: IC50306

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



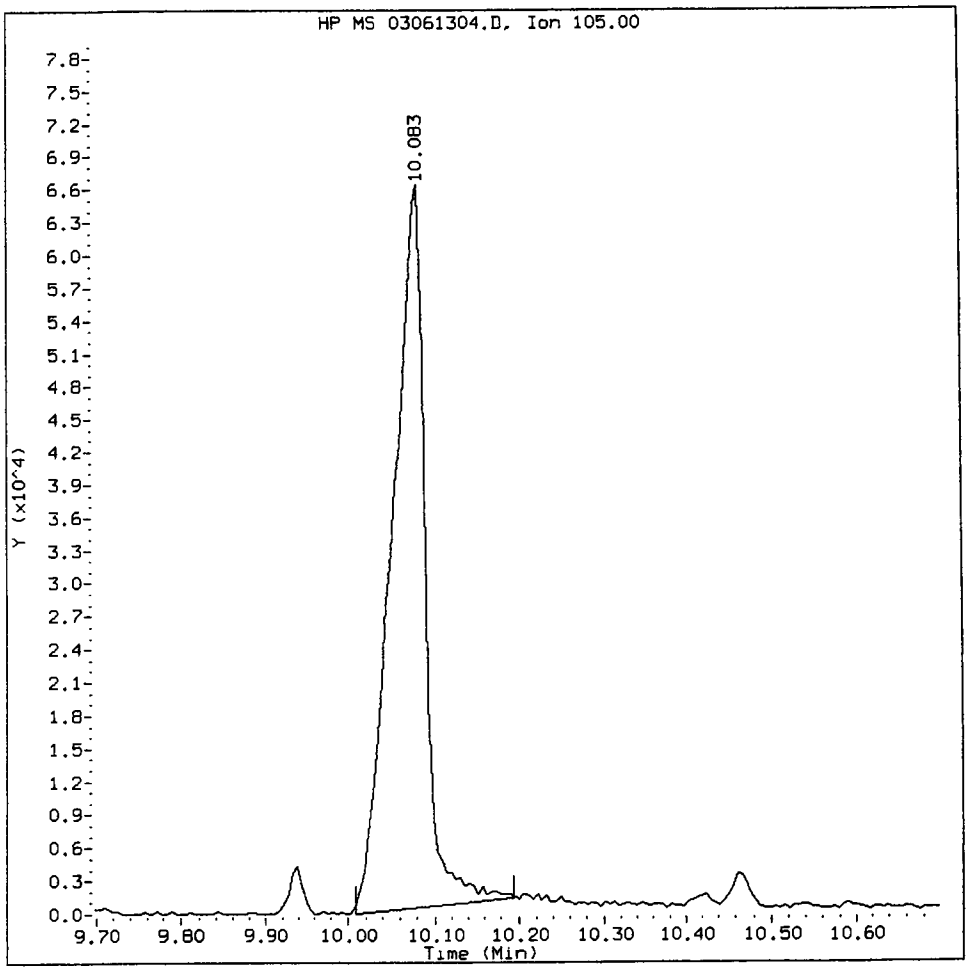




03/07/13

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

Benzoic acid Amount: 7.23 Area: 174391



MANUAL INTEGRATION for Benzoic acid

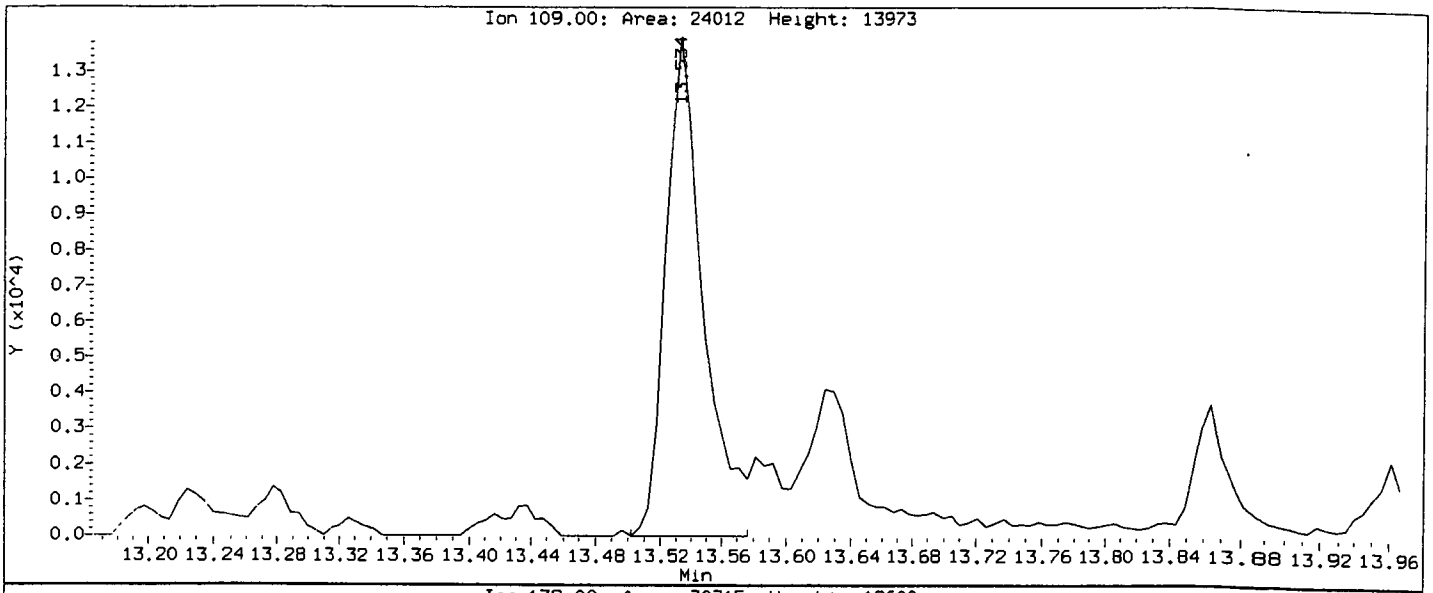
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

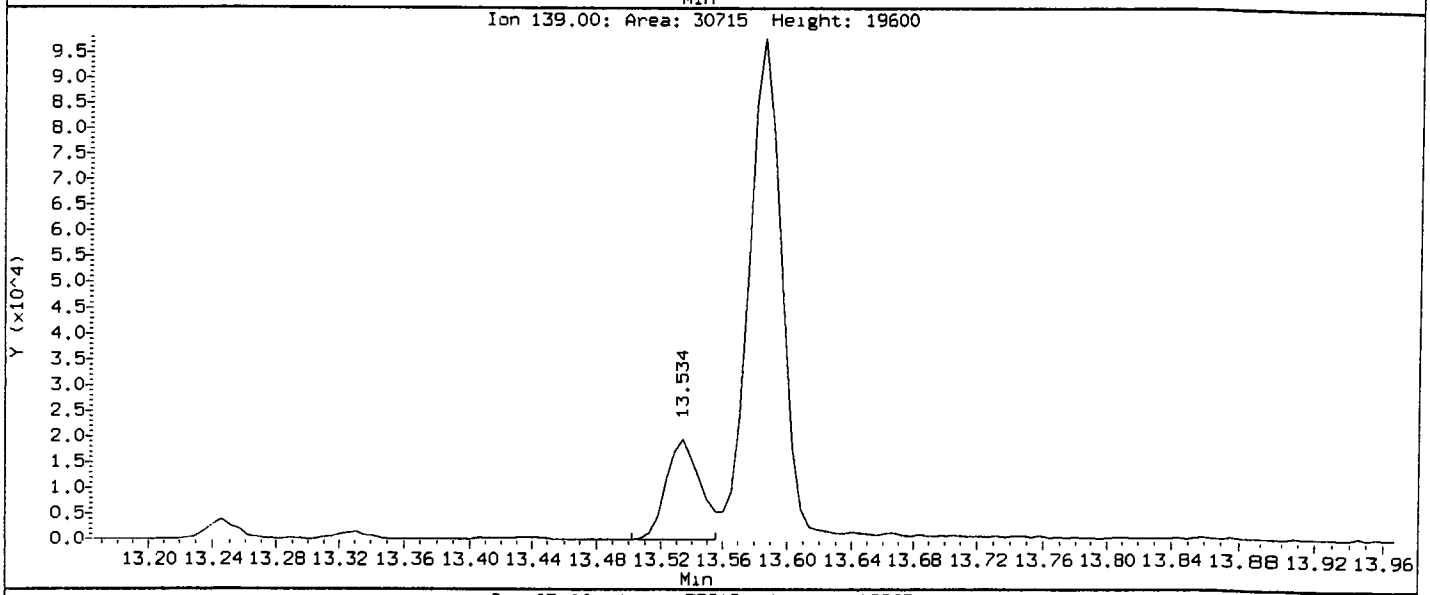
5. Other _____

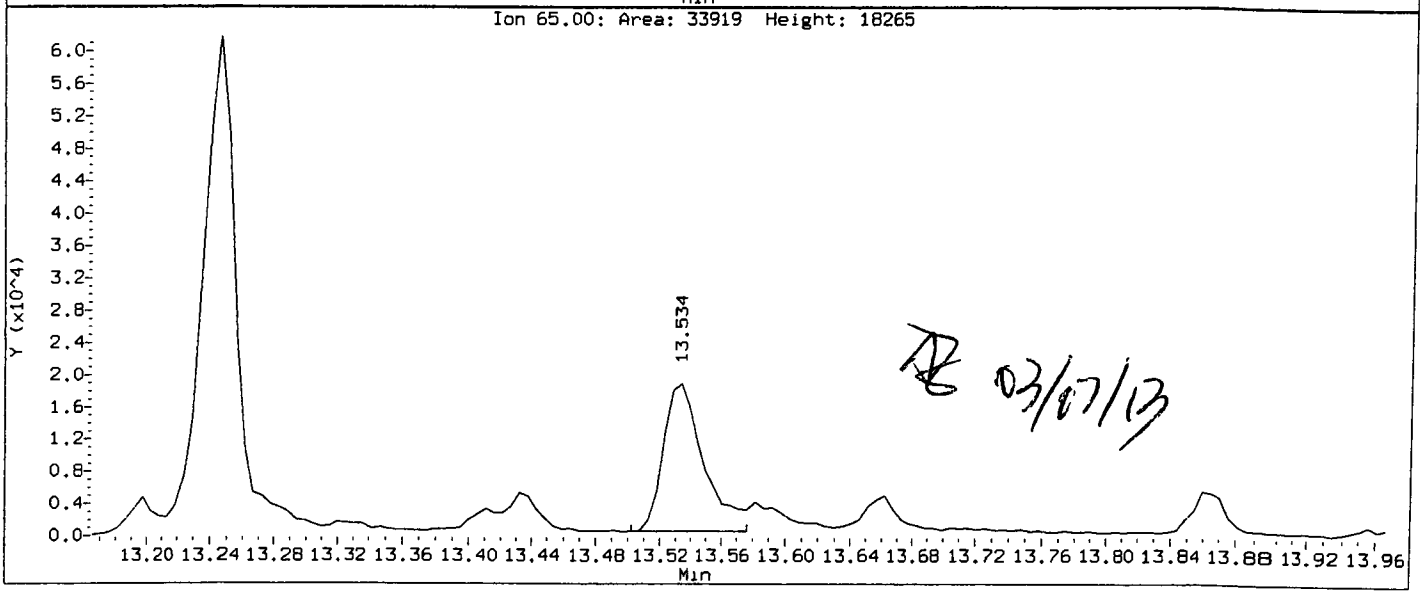
Analyst: AB Date: 03/07/13

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

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



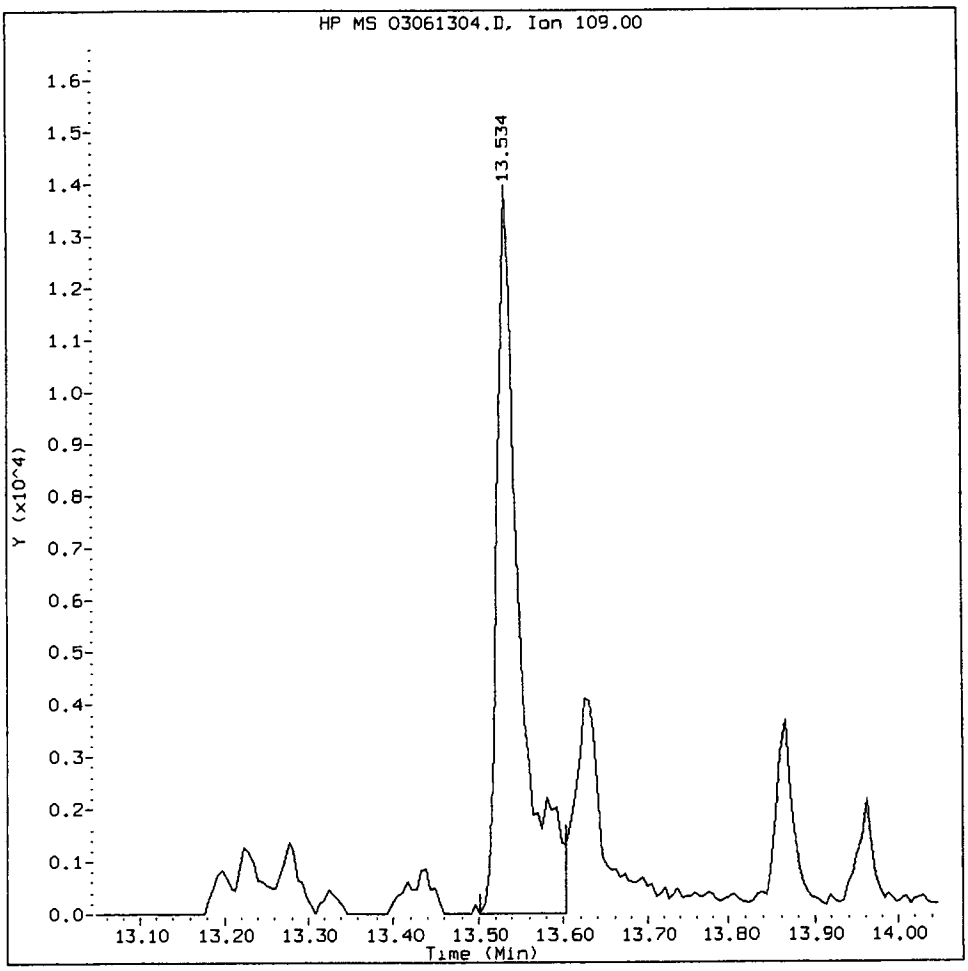




03/07/13

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

4-Nitrophenol Amount: 4.23 Area: 26876



MANUAL INTEGRATION for 4-Nitrophenol

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

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061304.D

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

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

checked ok

03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

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

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.432	6.432	(0.767)	409606	10.0000	11.09
$	2 Phenol-d5	99	7.927	7.933	(0.946)	485114	10.0000	11.22
	3 Phenol	94	7.943	7.954	(0.948)	521638	10.0000	11.46
$	5 2-Chlorophenol-d4	132	8.082	8.082	(0.964)	408030	10.0000	11.16
	4 Bis(2-Chloroethyl)ether	93	8.045	8.050	(0.960)	454744	10.0000	11.50
	6 2-Chlorophenol	128	8.104	8.109	(0.967)	422320	10.0000	11.59
	7 1,3-Dichlorobenzene	146	8.323	8.328	(0.993)	490538	10.0000	11.53
*	8 1,4-Dichlorobenzene-d4	152	8.382	8.387	(1.000)	570088	20.0000	
	9 1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	476551	10.0000	11.51
$	10 1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.036)	285284	10.0000	11.09
	12 1,2-Dichlorobenzene	146	8.702	8.707	(1.038)	457651	10.0000	11.56
	11 Benzyl alcohol	108	8.649	8.654	(1.032)	275965	10.0000	11.13
	14 2,2'-oxybis(1-Chloropropane)	45	8.910	8.916	(1.063)	722460	10.0000	11.50
	13 2-Methylphenol	108	8.873	8.878	(1.059)	401038	10.0000	11.62
	17 Hexachloroethane	117	9.188	9.193	(1.096)	193382	10.0000	11.55
	16 N-Nitroso-di-n-propylamine	70	9.124	9.135	(1.089)	331372	10.0000	11.17
	15 4-Methylphenol	108	9.103	9.108	(1.086)	405580	10.0000	11.88
$	18 Nitrobenzene-d5	82	9.306	9.311	(0.893)	463288	10.0000	10.99
	19 Nitrobenzene	77	9.332	9.343	(0.895)	470788	10.0000	11.67
	20 Isophorone	82	9.706	9.717	(0.931)	784907	10.0000	11.16
	21 2-Nitrophenol	139	9.845	9.851	(0.945)	223980	10.0000	12.00
	22 2,4-Dimethylphenol	107	9.941	9.947	(0.954)	406831	10.0000	11.52
	23 Bis(2-Chloroethoxy)methane	93	10.091	10.096	(0.968)	524076	10.0000	11.36
	24 Benzoic acid	105	10.144	10.198	(0.973)	669262	20.0000	21.92
	25 2,4-Dichlorophenol	162	10.219	10.230	(0.981)	328904	10.0000	12.10
	26 1,2,4-Trichlorobenzene	180	10.358	10.363	(0.994)	387548	10.0000	11.45
*	27 Naphthalene-d8	136	10.422	10.422	(1.000)	2100513	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	10.449	10.454	(1.003)	1122405	10.0000	10.39
29	4-Chloroaniline	127	10.582	10.588	(1.015)	395736	10.0000	11.97
30	Hexachlorobutadiene	225	10.764	10.764	(1.033)	234707	10.0000	11.40
31	4-Chloro-3-methylphenol	107	11.378	11.384	(1.092)	347605	10.0000	12.04
32	2-Methylnaphthalene	141	11.565	11.571	(1.110)	594073	10.0000	11.63
33	Hexachlorocyclopentadiene	237	11.945	11.950	(0.899)	228802	10.0000	11.24
34	2,4,6-Trichlorophenol	196	12.073	12.078	(0.909)	231449	10.0000	10.87
35	2,4,5-Trichlorophenol	196	12.126	12.137	(0.913)	254387	10.0000	12.11
$ 36	2-Fluorobiphenyl	172	12.206	12.212	(0.919)	846552	10.0000	10.59
37	2-Chloronaphthalene	162	12.345	12.356	(0.930)	696255	10.0000	12.39
38	2-Nitroaniline	65	12.570	12.580	(0.946)	214601	10.0000	11.46
39	Dimethylphthalate	163	12.938	12.949	(0.974)	850044	10.0000	11.15
40	Acenaphthylene	152	13.024	13.034	(0.981)	1152396	10.0000	11.54
41	2,6-Dinitrotoluene	165	13.040	13.045	(0.982)	190803	10.0000	11.72
* 42	Acenaphthene-d10	164	13.280	13.286	(1.000)	1266491	20.0000	
43	3-Nitroaniline	138	13.254	13.264	(0.998)	138858	10.0000	10.28
44	Acenaphthene	153	13.328	13.334	(1.004)	725512	10.0000	11.22
45	2,4-Dinitrophenol	184	13.414	13.424	(1.010)	256578	20.0000	22.06
46	Dibenzofuran	168	13.590	13.595	(1.023)	963887	10.0000	11.39
47	4-Nitrophenol	109	13.537	13.547	(1.019)	94565	10.0000	11.43
48	2,4-Dinitrotoluene	165	13.665	13.676	(1.029)	260744	10.0000	11.84
50	Diethylphthalate	149	14.092	14.098	(1.061)	851918	10.0000	12.06
49	Fluorene	166	14.146	14.156	(1.065)	773364	10.0000	12.23
51	4-Chlorophenyl-phenylether	204	14.167	14.172	(1.067)	421621	10.0000	11.35
52	4-Nitroaniline	138	14.242	14.252	(1.072)	114126	10.0000	9.188
53	4,6-Dinitro-2-methylphenol	198	14.317	14.333	(0.914)	328910	20.0000	22.69
54	N-Nitrosodiphenylamine	169	14.365	14.375	(0.917)	637709	10.0000	11.32
$ 55	2,4,6-Tribromophenol	330	14.568	14.573	(1.097)	113119	10.0000	11.30
56	4-Bromophenyl-phenylether	248	14.947	14.952	(0.955)	252399	10.0000	11.42
57	Hexachlorobenzene	284	15.171	15.182	(0.969)	256679	10.0000	11.27
58	Pentachlorophenol	266	15.465	15.470	(0.988)	151470	10.0000	11.27
* 59	Phenanthrene-d10	188	15.658	15.663	(1.000)	2013244	20.0000	
60	Phenanthrene	178	15.690	15.700	(1.002)	1109716	10.0000	11.14
61	Anthracene	178	15.764	15.770	(1.007)	1165266	10.0000	11.68
62	Carbazole	167	16.037	16.047	(1.024)	804312	10.0000	11.64
63	Di-n-butylphthalate	149	16.737	16.747	(1.069)	1462335	10.0000	11.63
64	Fluoranthene	202	17.629	17.639	(1.126)	1248849	10.0000	11.92
65	Pyrene	202	17.987	17.992	(0.901)	1303708	10.0000	11.52
$ 66	Terphenyl-d14	244	18.286	18.291	(0.916)	780843	10.0000	10.74
67	Butylbenzylphthalate	149	19.157	19.167	(0.959)	651451	10.0000	11.77
68	Benzo(a)anthracene	228	19.942	19.953	(0.999)	1072977	10.0000	11.36
* 69	Chrysene-d12	240	19.969	19.979	(1.000)	2072136	20.0000	
70	3,3'-Dichlorobenzidine	252	19.937	19.953	(0.998)	305076	10.0000	11.74
71	Chrysene	228	20.006	20.017	(1.002)	1128707	10.0000	11.70
72	bis(2-Ethylhexyl)phthalate	149	20.140	20.150	(0.956)	894958	10.0000	11.54
* 134	Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	2636581	20.0000	
73	Di-n-octylphthalate	149	21.085	21.096	(1.000)	1365050	10.0000	10.97

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

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

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

Test Mode:
Use Initial Calibration Level 4.

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

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.06
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.00
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.04
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.03
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.05
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.02

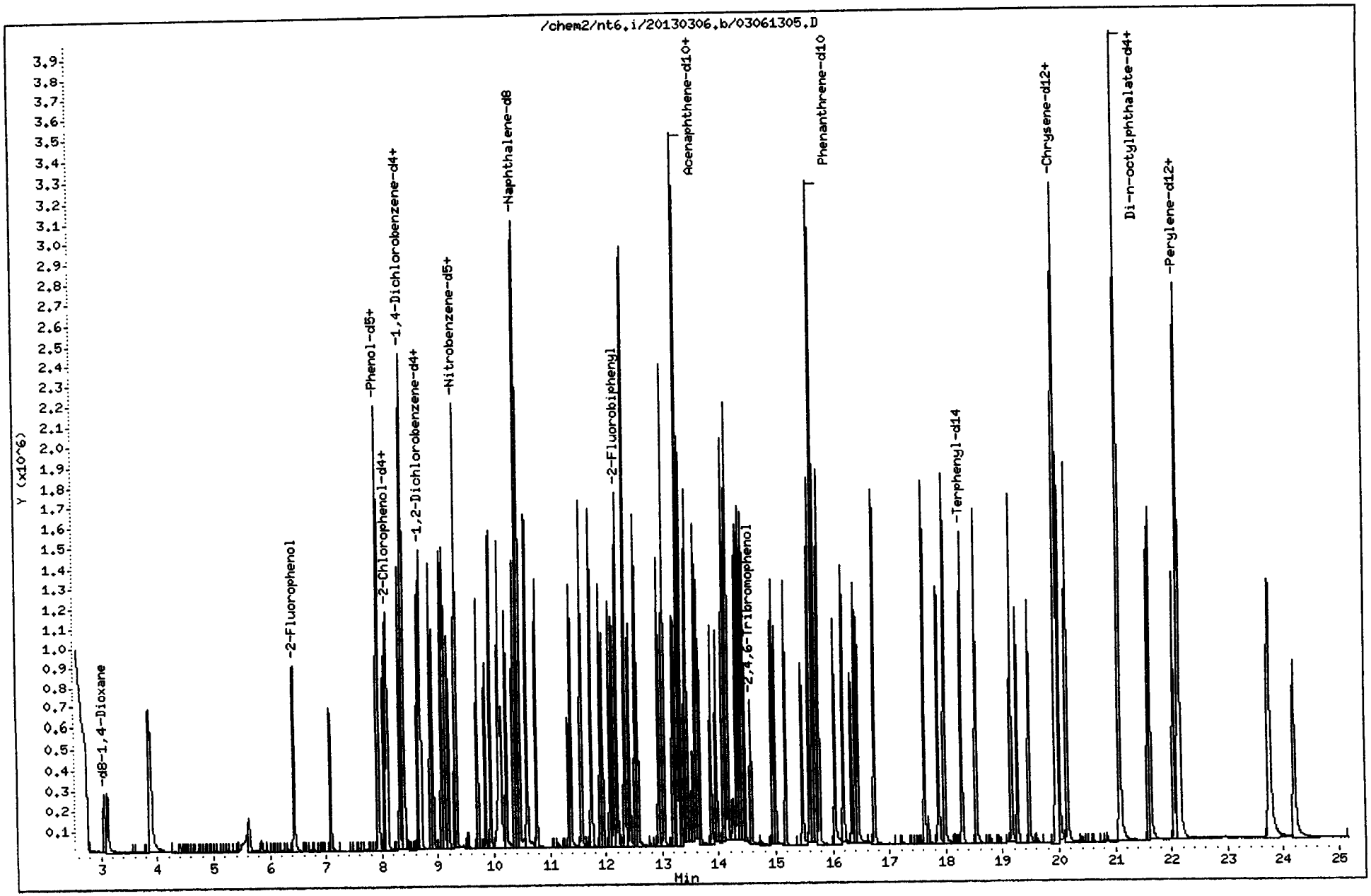
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061305.D
Date : 06-MAR-2013 14:34
Client ID: IC100306
Sample Info: IC100306,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 03061305.D

Lab ID: IC100306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061301.D
Lab Smp Id: IC250306 Client Smp ID: IC250306
Inj Date : 06-MAR-2013 12:16
Operator : JZ Inst ID: nt6.i
Smp Info : IC250306
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AZ 03/07/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1	2-Fluorophenol	112	6.432	6.432	(0.767)	700440	25.0000	23.60	
$	2	Phenol-d5	99	7.933	7.933	(0.946)	801352	25.0000	23.06	
	3	Phenol	94	7.954	7.954	(0.948)	889960	25.0000	24.32	
$	5	2-Chlorophenol-d4	132	8.082	8.082	(0.964)	690249	25.0000	23.50	
	4	Bis(2-Chloroethyl)ether	93	8.050	8.050	(0.960)	775014	25.0000	24.39	
	6	2-Chlorophenol	128	8.109	8.109	(0.967)	729630	25.0000	24.92	
	7	1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	845812	25.0000	24.74	
*	8	1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	458117	20.0000		
	9	1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	819102	25.0000	24.62	
$	10	1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.035)	473455	25.0000	22.90 (H)	
	12	1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	775420	25.0000	24.38	
	11	Benzyl alcohol	108	8.654	8.654	(1.032)	509044	25.0000	25.54	
	14	2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	1237768	25.0000	24.52	
	13	2-Methylphenol	108	8.878	8.878	(1.059)	703888	25.0000	25.37	
	17	Hexachloroethane	117	9.193	9.193	(1.096)	331130	25.0000	24.60	
	16	N-Nitroso-di-n-propylamine	70	9.135	9.135	(1.089)	584280	25.0000	24.50	
	15	4-Methylphenol	108	9.108	9.108	(1.086)	711421	25.0000	25.93	
$	18	Nitrobenzene-d5	82	9.311	9.311	(0.893)	801723	25.0000	23.25	
	19	Nitrobenzene	77	9.343	9.343	(0.896)	805918	25.0000	24.42	
	20	Isophorone	82	9.717	9.717	(0.932)	1363565	25.0000	23.70	
	21	2-Nitrophenol	139	9.851	9.851	(0.945)	399887	25.0000	26.19	
	22	2,4-Dimethylphenol	107	9.947	9.947	(0.954)	711080	25.0000	24.62	
	23	Bis(2-Chloroethoxy)methane	93	10.096	10.096	(0.969)	910222	25.0000	24.12	
	24	Benzoic acid	105	10.198	10.198	(0.978)	1318002	50.0000	52.76	
	25	2,4-Dichlorophenol	162	10.230	10.230	(0.982)	588303	25.0000	26.46	
	26	1,2,4-Trichlorobenzene	180	10.363	10.363	(0.994)	665788	25.0000	24.05	
*	27	Naphthalene-d8	136	10.422	10.422	(1.000)	1718341	20.0000		

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.454	10.454	(1.003)	1841435	25.0000	24.74
	29 4-Chloroaniline	127	10.588	10.588	(1.016)	551083	25.0000	23.22
	30 Hexachlorobutadiene	225	10.764	10.764	(1.033)	412907	25.0000	24.51
	31 4-Chloro-3-methylphenol	107	11.384	11.384	(1.092)	616289	25.0000	26.09
	32 2-Methylnaphthalene	141	11.571	11.571	(1.110)	1032469	25.0000	24.71
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	439183	25.0000	27.06
	34 2,4,6-Trichlorophenol	196	12.078	12.078	(0.909)	432718	25.0000	25.48
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	441206	25.0000	26.34
$	36 2-Fluorobiphenyl	172	12.212	12.212	(0.919)	1404089	25.0000	22.02
	37 2-Chloronaphthalene	162	12.356	12.356	(0.930)	1139487	25.0000	26.46
	38 2-Nitroaniline	65	12.580	12.580	(0.947)	397884	25.0000	26.65
	39 Dimethylphthalate	163	12.949	12.949	(0.975)	1466956	25.0000	24.13
	40 Acenaphthylene	152	13.034	13.034	(0.981)	1904411	25.0000	23.90
	41 2,6-Dinitrotoluene	165	13.045	13.045	(0.982)	328738	25.0000	25.31
*	42 Acenaphthene-d10	164	13.286	13.286	(1.000)	1010041	20.0000	
	43 3-Nitroaniline	138	13.264	13.264	(0.998)	241966	25.0000	26.00
	44 Acenaphthene	153	13.334	13.334	(1.004)	1232398	25.0000	23.89
	45 2,4-Dinitrophenol	184	13.424	13.424	(1.010)	496821	50.0000	53.56
	46 Dibenzofuran	168	13.595	13.595	(1.023)	1655296	25.0000	24.54
	47 4-Nitrophenol	109	13.547	13.547	(1.020)	178575	25.0000	27.06
	48 2,4-Dinitrotoluene	165	13.676	13.676	(1.029)	452448	25.0000	25.75
	50 Diethylphthalate	149	14.098	14.098	(1.061)	1399966	25.0000	24.86
	49 Fluorene	166	14.156	14.156	(1.066)	1288051	25.0000	27.06
	51 4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	716110	25.0000	24.18
	52 4-Nitroaniline	138	14.252	14.252	(1.073)	226139	25.0000	22.83
	53 4,6-Dinitro-2-methylphenol	198	14.333	14.333	(0.915)	606968	50.0000	50.57
	54 N-Nitrosodiphenylamine	169	14.375	14.375	(0.918)	1086875	25.0000	23.31 (M)
$	55 2,4,6-Tribromophenol	330	14.573	14.573	(1.097)	197436	25.0000	24.72
	56 4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	442782	25.0000	24.21
	57 Hexachlorobenzene	284	15.182	15.182	(0.969)	444526	25.0000	23.57
	58 Pentachlorophenol	266	15.470	15.470	(0.988)	283481	25.0000	25.48
*	59 Phenanthrene-d10	188	15.663	15.663	(1.000)	1666734	20.0000	
	60 Phenanthrene	178	15.700	15.700	(1.002)	1809085	25.0000	21.94
	61 Anthracene	178	15.770	15.770	(1.007)	1943905	25.0000	23.54
	62 Carbazole	167	16.047	16.047	(1.025)	1387020	25.0000	24.09
	63 Di-n-butylphthalate	149	16.747	16.747	(1.069)	2414175	25.0000	23.19
	64 Fluoranthene	202	17.639	17.639	(1.126)	2140710	25.0000	24.68
	65 Pyrene	202	17.992	17.992	(0.901)	2209020	25.0000	24.14
$	66 Terphenyl-d14	244	18.291	18.291	(0.916)	1321332	25.0000	22.46
	67 Butylbenzylphthalate	149	19.167	19.167	(0.959)	1118097	25.0000	24.98
	68 Benzo(a)anthracene	228	19.953	19.953	(0.999)	1857209	25.0000	24.31
*	69 Chrysene-d12	240	19.979	19.979	(1.000)	1675752	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.953	19.953	(0.999)	502648	25.0000	23.91
	71 Chrysene	228	20.017	20.017	(1.002)	1876324	25.0000	24.06
	72 bis(2-Ethylhexyl)phthalate	149	20.150	20.150	(0.956)	1493223	25.0000	25.04
*	134 Di-n-octylphthalate-d4	153	21.085	21.085	(1.000)	2026355	20.0000	
	73 Di-n-octylphthalate	149	21.096	21.096	(1.000)	2368328	25.0000	24.75

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
74	Benzo(b)fluoranthene	252	21.609	21.609	(0.976)	1959445	25.0000	26.71	(H)
75	Benzo(k)fluoranthene	252	21.641	21.641	(0.978)	1970824	25.0000	24.39	
187	Total Benzofluoranthenes	252	21.641	21.641	(0.978)	3664023	50.0000	48.58	
76	Benzo(a)pyrene	252	22.057	22.057	(0.996)	1762639	25.0000	25.18	
* 77	Perylene-d12	264	22.137	22.137	(1.000)	1637524	20.0000		
78	Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	2091673	25.0000	24.83	
79	Dibenzo(a,h)anthracene	278	23.788	23.788	(1.075)	1694786	25.0000	25.55	
80	Benzo(g,h,i)perylene	276	24.226	24.226	(1.094)	1816240	25.0000	25.21	
90	N-Nitrosodimethylamine	74	3.889	3.889	(0.464)	532245	25.0000	24.67	
103	Pyridine	79	3.851	3.851	(0.459)	931862	25.0000	27.24	
91	Aniline	93	7.938	7.938	(0.946)	956121	25.0000	23.58	
105	1-methylnaphthalene	141	11.747	11.747	(1.127)	1040306	25.0000	24.51	
93	Benzidine	184	17.874	17.874	(0.895)	172170	25.0000	21.07	
111	Azobenzene (1,2-DP-Hydrazine)	77	14.423	14.423	(1.086)	1570394	25.0000	24.54	
143	1,4-Dioxane	88	3.103	3.103	(0.370)	352540	25.0000	23.72	
$ 137	d8-1,4-Dioxane	96	3.039	3.039	(0.362)	346030	25.0000	24.88	
144	alpha-Terpineol	59	10.470	10.470	(1.005)	537237	25.0000	24.59	
177	p-Benzoquinone	82	7.083	7.083	(0.680)	187368	25.0000	28.55	
98	Retene	219	18.548	18.548	(0.928)	995435	25.0000	25.20	
99	Perylene	252	22.175	22.175	(1.002)	1513496	25.0000	24.69	
133	Butylatedhydroxytoluene	205	13.440	13.440	(1.012)	1140696	25.0000	27.48	
115	Tributyl Phosphate	99	14.461	14.461	(0.923)	1753043	25.0000	27.50	
116	Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	1196318	25.0000	27.14	
117	Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	391455	25.0000	25.37	
118	Triphenyl Phosphate	326	19.482	19.482	(0.975)	383597	25.0000	26.14	
123	Acetophenone	105	9.076	9.076	(1.082)	1059559	25.0000	24.57	
168	Pentachlorobenzene	250	13.638	13.638	(1.027)	542883	25.0000	24.54	
113	Diphenyl Oxide	170	12.538	12.538	(0.944)	986027	25.0000	25.08	
112	Biphenyl	154	12.345	12.345	(0.929)	1333701	25.0000	27.60	
120	2,3,4,6-Tetrachlorophenol	232	13.873	13.873	(1.044)	388804	25.0000	26.97	
151	1,2,4,5-Tetrachlorobenzene	216	11.907	11.907	(0.896)	595688	25.0000	24.15	
110	Tetrachloroguaiacol	247	15.599	15.599	(0.996)	452880	50.0000	51.78	
109	3,4,5-Trichloroguaiacol	213	13.969	13.969	(0.892)	254783	25.0000	26.76	
181	3,4,6-Trichloroguaiacol	211	14.087	14.087	(1.680)	287113	25.0000	27.47	
108	4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	261306	25.0000	27.66	
184	3,4-Dichloroguaiacol	192	12.425	12.425	(1.482)	267135	25.0000	26.92	
107	4,5-Dichloroguaiacol	192	13.205	13.205	(0.994)	666413	50.0000	54.00	
182	4,6-Dichloroguaiacol	192	13.205	13.205	(1.575)	659838	50.0000	54.51	
185	4-Chloroguaiacol	115	11.336	11.336	(1.352)	178588	12.5000	13.87	
186	Carbaryl	144	16.459	16.459	(1.051)	1022156	25.0000	26.54	
178	2-Benzyl-4-Chlorophenol	218	16.411	16.411	(1.048)	366709	25.0000	26.56	
106	Guaiacol	124	9.332	9.332	(1.113)	614508	25.0000	25.79	
188	2,6-Dichlorophenol	162	10.598	10.598	(1.264)	552166	25.0000	27.22	
189	N-Nitrosomethylethylamine	88	5.620	5.620	(0.670)	391699	25.0000	25.88	

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061301.D
Lab Smp Id: IC250306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC250306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	458117	0.00
27 Naphthalene-d8	1718341	859170	3436682	1718341	0.00
42 Acenaphthene-d10	1010041	505020	2020082	1010041	0.00
59 Phenanthrene-d10	1666734	833367	3333468	1666734	0.00
69 Chrysene-d12	1675752	837876	3351504	1675752	0.00
134 Di-n-octylphthala	2026355	1013178	4052710	2026355	0.00
77 Perylene-d12	1637524	818762	3275048	1637524	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.00
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	0.00
77 Perylene-d12	22.14	21.64	22.64	22.14	0.00

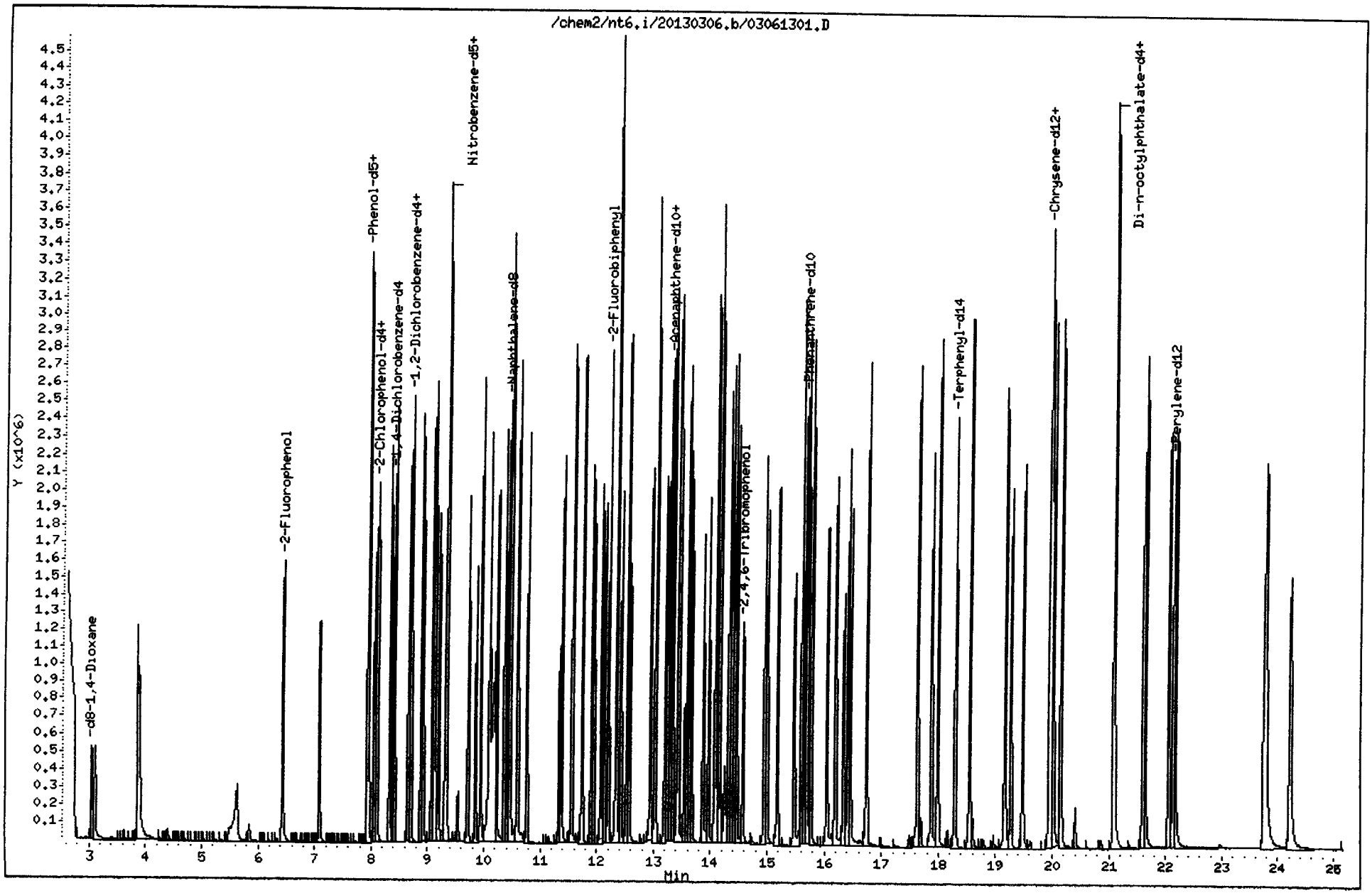
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061301.D
Date : 06-MAR-2013 12:16
Client ID: IC250306
Sample Info: IC250306

Column phase: ZB-5msi

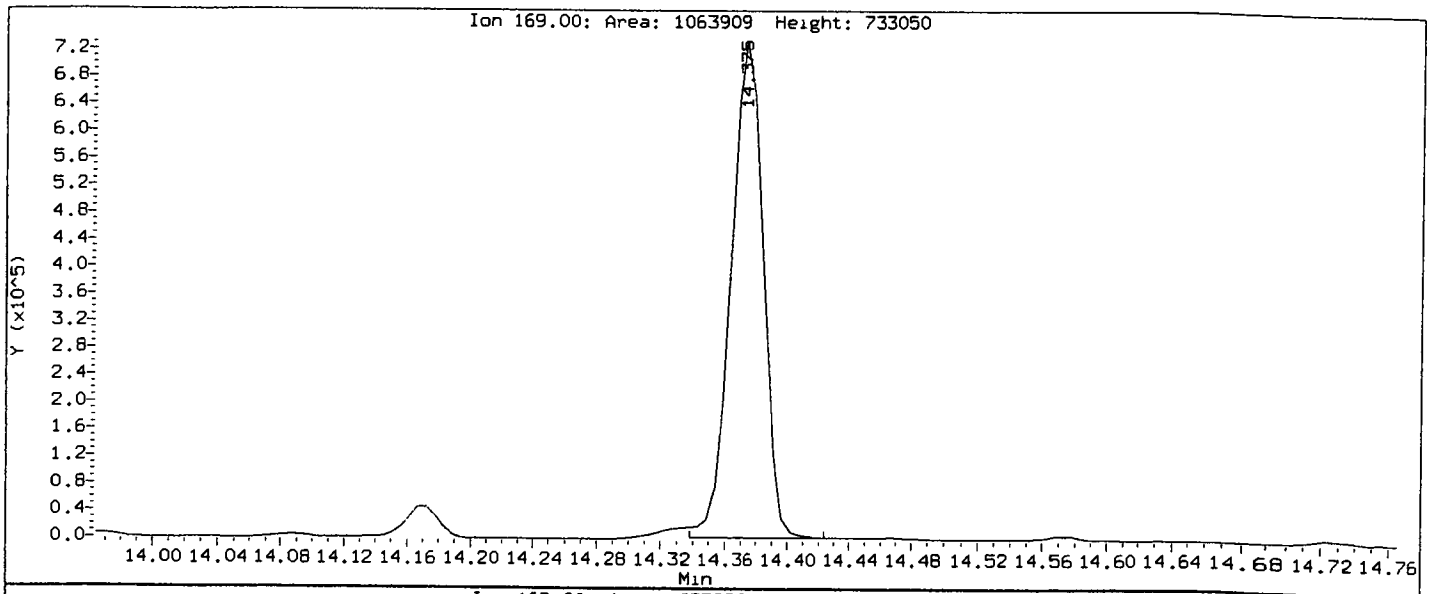
Instrument: nt6.i

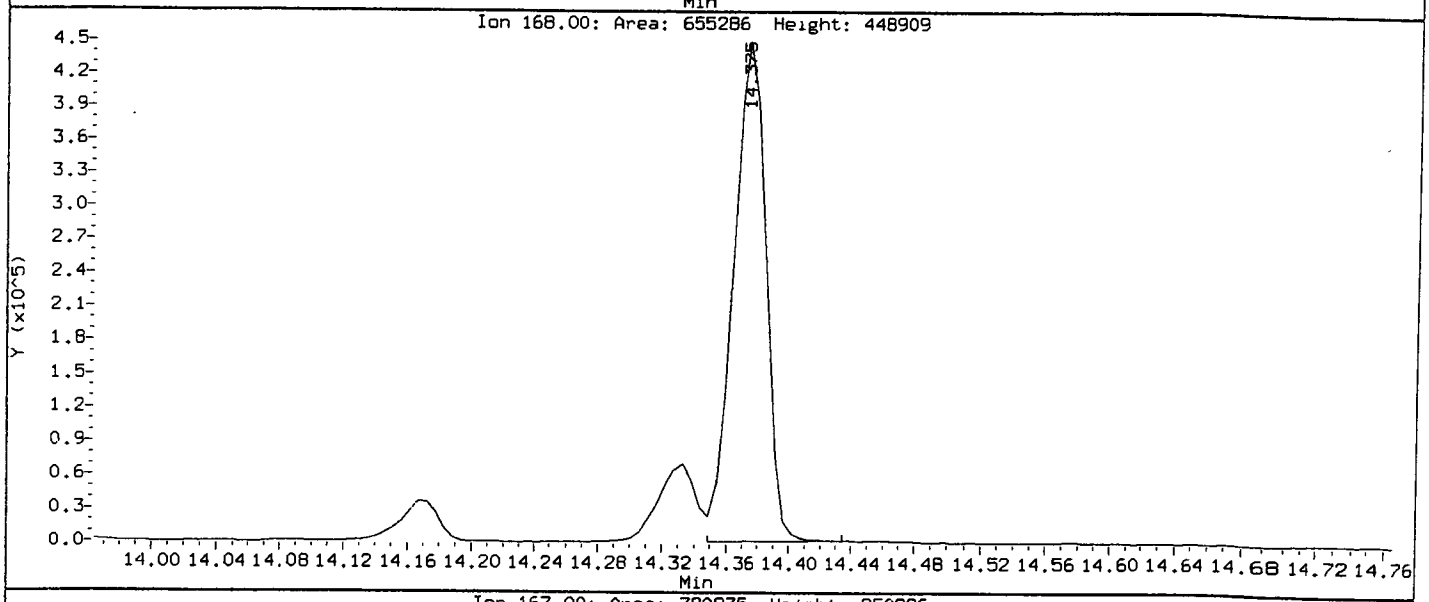
Operator: JZ
Column diameter: 0.32

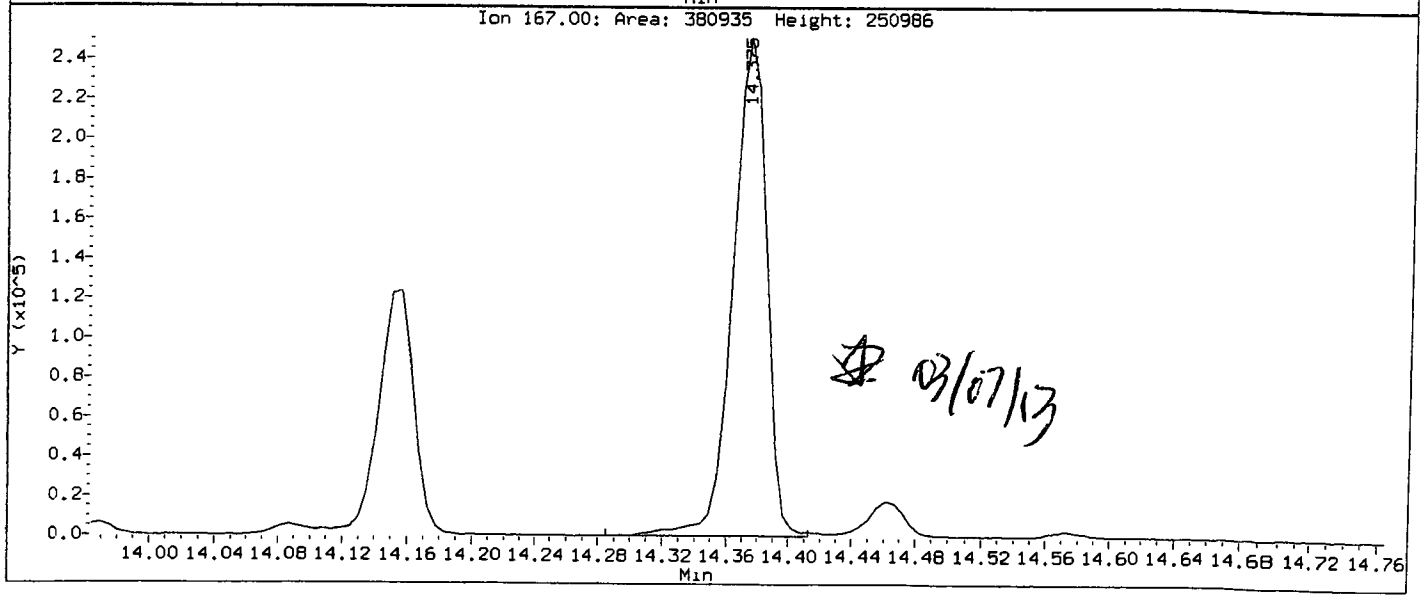


Data File: /chem2/nt6.i/20130306.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: IC250306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



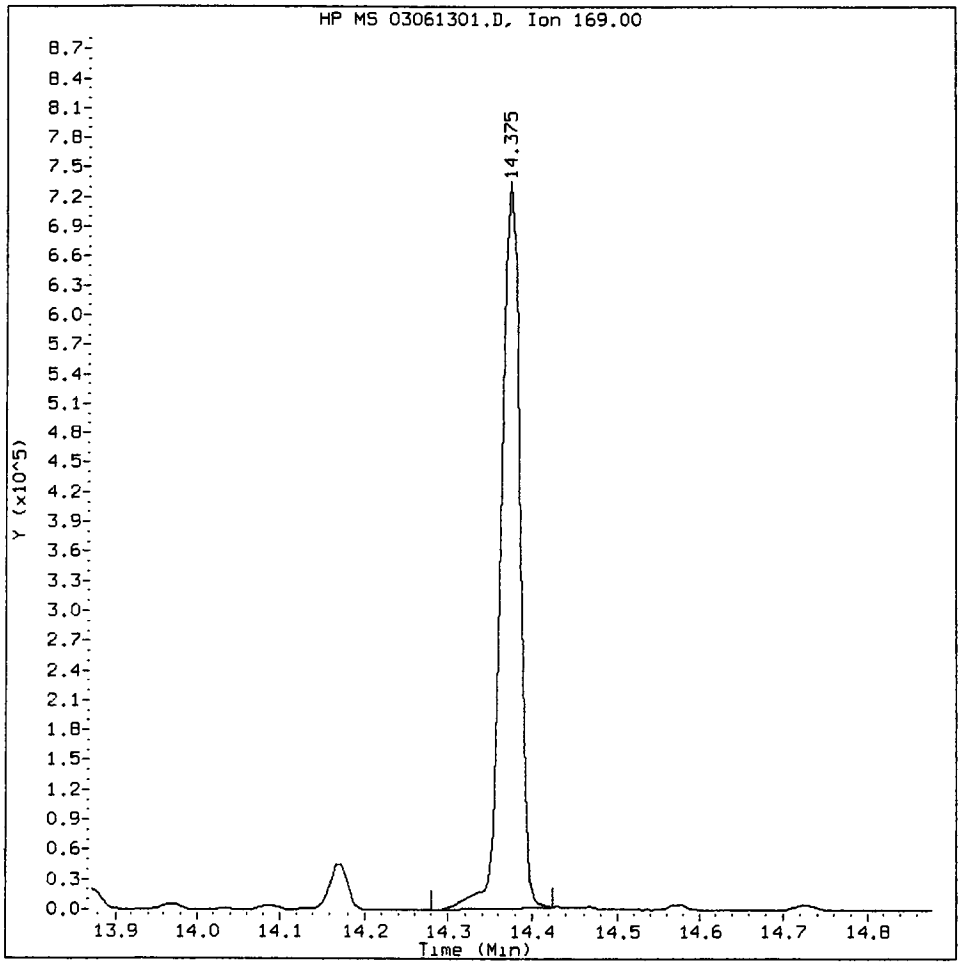




03/07/13

IC250306, /chem2/nt6.i/20130306.b/03061301.D

N-Nitrosodiphenylamine Amount: 23.31 Area: 1086875



MANUAL INTEGRATION for N-Nitrosodiphenylamine

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

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061301.D

Lab ID: IC250306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.953	3,3'-Dichlorobenzidine and Benzo(a)anthracene

Checked OK

03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061306.D
Lab Smp Id: IC40306 Client Smp ID: IC400306
Inj Date : 06-MAR-2013 15:09
Operator : JZ Inst ID: nt6.i
Smp Info : IC40306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.434	6.432	(0.767)	1107900	40.0000	36.94
$ 2	Phenol-d5	99	7.936	7.933	(0.946)	1227948	40.0000	34.98
3	Phenol	94	7.957	7.954	(0.949)	1375693	40.0000	37.22
$ 5	2-Chlorophenol-d4	132	8.085	8.082	(0.964)	1043987	40.0000	35.18
4	Bis(2-Chloroethyl)ether	93	8.053	8.050	(0.960)	1185638	40.0000	36.93
6	2-Chlorophenol	128	8.112	8.109	(0.968)	1120333	40.0000	37.88
7	1,3-Dichlorobenzene	146	8.325	8.328	(0.993)	1273280	40.0000	36.86
* 8	1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	462843	20.0000	
9	1,4-Dichlorobenzene	146	8.411	8.408	(1.003)	1227217	40.0000	36.50
$ 10	1,2-Dichlorobenzene-d4	152	8.683	8.681	(1.036)	704353	40.0000	33.72
12	1,2-Dichlorobenzene	146	8.705	8.707	(1.038)	1144025	40.0000	35.60
11	Benzyl alcohol	108	8.662	8.654	(1.033)	741756	40.0000	36.83
14	2,2'-oxybis(1-Chloropropane)	45	8.913	8.916	(1.063)	1890709	40.0000	37.07
13	2-Methylphenol	108	8.886	8.878	(1.060)	1081384	40.0000	38.58
17	Hexachloroethane	117	9.191	9.193	(1.096)	503186	40.0000	37.00
16	N-Nitroso-di-n-propylamine	70	9.137	9.135	(1.090)	892126	40.0000	37.03
15	4-Methylphenol	108	9.116	9.108	(1.087)	1069226	40.0000	38.58
$ 18	Nitrobenzene-d5	82	9.314	9.311	(0.893)	1230848	40.0000	35.61
19	Nitrobenzene	77	9.346	9.343	(0.896)	1189654	40.0000	35.96
20	Isophorone	82	9.720	9.717	(0.932)	2121281	40.0000	36.79
21	2-Nitrophenol	139	9.853	9.851	(0.945)	633587	40.0000	41.39
22	2,4-Dimethylphenol	107	9.949	9.947	(0.954)	1112897	40.0000	38.44
23	Bis(2-Chloroethoxy)methane	93	10.099	10.096	(0.969)	1370952	40.0000	36.24
24	Benzoic acid	105	10.249	10.198	(0.983)	2127913	80.0000	84.97
25	2,4-Dichlorophenol	162	10.233	10.230	(0.982)	856137	40.0000	38.41
26	1,2,4-Trichlorobenzene	180	10.366	10.363	(0.994)	1010268	40.0000	36.41
* 27	Naphthalene-d8	136	10.425	10.422	(1.000)	1722510	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.457	10.454	(1.003)	2641007	40.0000	40.18
	29 4-Chloroaniline	127	10.591	10.588	(1.016)	820986	40.0000	39.50 (M)
	30 Hexachlorobutadiene	225	10.767	10.764	(1.033)	622003	40.0000	36.84
	31 4-Chloro-3-methylphenol	107	11.387	11.384	(1.092)	955539	40.0000	40.36
	32 2-Methylnaphthalene	141	11.568	11.571	(1.110)	1465439	40.0000	34.98
	33 Hexachlorocyclopentadiene	237	11.947	11.950	(0.899)	665905	40.0000	41.58
	34 2,4,6-Trichlorophenol	196	12.081	12.078	(0.910)	682992	40.0000	40.76
	35 2,4,5-Trichlorophenol	196	12.134	12.137	(0.914)	693411	40.0000	41.95
$	36 2-Fluorobiphenyl	172	12.209	12.212	(0.919)	2125857	40.0000	33.78
	37 2-Chloronaphthalene	162	12.359	12.356	(0.930)	1623373	40.0000	39.49
	38 2-Nitroaniline	65	12.583	12.580	(0.947)	592401	40.0000	40.20
	39 Dimethylphthalate	163	12.952	12.949	(0.975)	2195089	40.0000	36.59
	40 Acenaphthylene	152	13.032	13.034	(0.981)	2734694	40.0000	34.78
	41 2,6-Dinitrotoluene	165	13.048	13.045	(0.982)	488547	40.0000	38.11
*	42 Acenaphthene-d10	164	13.283	13.286	(1.000)	996854	20.0000	
	43 3-Nitroaniline	138	13.262	13.264	(0.998)	342573	40.0000	41.36 (M)
	44 Acenaphthene	153	13.336	13.334	(1.004)	1794261	40.0000	35.24
	45 2,4-Dinitrophenol	184	13.433	13.424	(1.011)	774315	80.0000	84.57
	46 Dibenzofuran	168	13.598	13.595	(1.024)	2363050	40.0000	35.49
	47 4-Nitrophenol	109	13.545	13.547	(1.020)	262854	40.0000	40.36
	48 2,4-Dinitrotoluene	165	13.678	13.676	(1.030)	690237	40.0000	39.81
	50 Diethylphthalate	149	14.106	14.098	(1.062)	2067081	40.0000	37.19
	49 Fluorene	166	14.154	14.156	(1.066)	1769346	40.0000	39.26
	51 4-Chlorophenyl-phenylether	204	14.170	14.172	(1.067)	1029522	40.0000	35.23
	52 4-Nitroaniline	138	14.261	14.252	(1.074)	391191	40.0000	40.01
	53 4,6-Dinitro-2-methylphenol	198	14.341	14.333	(0.916)	964307	80.0000	81.99
	54 N-Nitrosodiphenylamine	169	14.378	14.375	(0.918)	1576736	40.0000	34.50 (M)
$	55 2,4,6-Tribromophenol	330	14.576	14.573	(1.097)	295587	40.0000	37.50
	56 4-Bromophenyl-phenylether	248	14.950	14.952	(0.955)	672353	40.0000	37.51
	57 Hexachlorobenzene	284	15.179	15.182	(0.969)	671036	40.0000	36.31
	58 Pentachlorophenol	266	15.473	15.470	(0.988)	443042	40.0000	40.64
*	59 Phenanthrene-d10	188	15.660	15.663	(1.000)	1633268	20.0000	
	60 Phenanthrene	178	15.703	15.700	(1.003)	2729819	40.0000	33.78
	61 Anthracene	178	15.772	15.770	(1.007)	2745113	40.0000	33.93
	62 Carbazole	167	16.045	16.047	(1.025)	2297956	40.0000	40.37
	63 Di-n-butylphthalate	149	16.745	16.747	(1.069)	3399020	40.0000	33.32
	64 Fluoranthene	202	17.631	17.639	(1.126)	3061055	40.0000	36.01
	65 Pyrene	202	17.995	17.992	(0.901)	3123892	40.0000	35.65
$	66 Terphenyl-d14	244	18.289	18.291	(0.915)	1945507	40.0000	34.55
	67 Butylbenzylphthalate	149	19.159	19.167	(0.959)	1609814	40.0000	37.57
	68 Benzo(a)anthracene	228	19.950	19.953	(0.999)	2678240	40.0000	36.61
*	69 Chrysene-d12	240	19.977	19.979	(1.000)	1604385	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.945	19.953	(0.998)	740264	40.0000	36.78
	71 Chrysene	228	20.014	20.017	(1.002)	2694539	40.0000	36.09
	72 bis(2-Ethylhexyl)phthalate	149	20.142	20.150	(0.956)	2120847	40.0000	37.84
*	134 Di-n-octylphthalate-d4	153	21.072	21.085	(1.000)	1904606	20.0000	
	73 Di-n-octylphthalate	149	21.088	21.096	(1.001)	3383339	40.0000	37.62

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.606	21.609	(0.976)	2694359	40.0000	38.62
75	Benzo(k)fluoranthene	252	21.638	21.641	(0.978)	3090941	40.0000	42.35
187	Total Benzofluoranthenes	252	21.638	21.641	(0.978)	5374417	80.0000	72.61
76	Benzo(a)pyrene	252	22.049	22.057	(0.996)	2636463	40.0000	38.39
* 77	Perylene-d12	264	22.130	22.137	(1.000)	1606852	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.759	23.767	(1.074)	3212593	40.0000	38.87
79	Dibenzo(a,h)anthracene	278	23.786	23.788	(1.075)	2558263	40.0000	39.31
80	Benzo(g,h,i)perylene	276	24.224	24.226	(1.095)	2850182	40.0000	40.32
90	N-Nitrosodimethylamine	74	3.902	3.889	(0.465)	837250	40.0000	38.41
103	Pyridine	79	3.854	3.851	(0.460)	1286192	40.0000	37.21
91	Aniline	93	7.941	7.938	(0.947)	1374340	40.0000	33.56
105	1-methylnaphthalene	141	11.744	11.747	(1.127)	1506021	40.0000	35.39
93	Benzidine	184	17.872	17.874	(0.895)	284218	40.0000	36.33
111	Azobenzene (1,2-DP-Hydrazine)	77	14.426	14.423	(1.086)	2252849	40.0000	35.67
143	1,4-Dioxane	88	3.106	3.103	(0.370)	556372	40.0000	37.05
$ 137	d8-1,4-Dioxane	96	3.047	3.039	(0.363)	543400	40.0000	38.66
144	alpha-Terpineol	59	10.473	10.470	(1.005)	797649	40.0000	36.41
177	p-Benzoquinone	82	7.086	7.083	(0.680)	276763	40.0000	42.07
98	Retene	219	18.540	18.548	(0.928)	1393516	40.0000	36.85
99	Perylene	252	22.167	22.175	(1.002)	2188116	40.0000	36.37
133	Butylatedhydroxytoluene	205	13.443	13.440	(1.012)	1474910	40.0000	39.45
115	Tributyl Phosphate	99	14.469	14.461	(0.924)	2401166	40.0000	40.45
116	Dibutyl Phenyl Phosphate	175	16.194	16.192	(1.034)	1669656	40.0000	38.66
117	Butyl Diphenyl Phosphate	94	17.877	17.880	(0.895)	545870	40.0000	36.95
118	Triphenyl Phosphate	326	19.480	19.482	(0.975)	546364	40.0000	38.89
123	Acetophenone	105	9.079	9.076	(1.083)	1603289	40.0000	36.80
168	Pentachlorobenzene	250	13.641	13.638	(1.027)	788366	40.0000	36.11
113	Diphenyl Oxide	170	12.535	12.538	(0.944)	1385867	40.0000	35.71
112	Biphenyl	154	12.343	12.345	(0.929)	1797394	40.0000	39.55
120	2,3,4,6-Tetrachlorophenol	232	13.871	13.873	(1.044)	600924	40.0000	42.23
151	1,2,4,5-Tetrachlorobenzene	216	11.910	11.907	(0.897)	895114	40.0000	36.76
110	Tetrachloroguaiacol	247	15.601	15.599	(0.996)	658192	80.0000	76.80
109	3,4,5-Trichloroguaiacol	213	13.967	13.969	(0.892)	357175	40.0000	38.28
181	3,4,6-Trichloroguaiacol	211	14.090	14.087	(1.680)	388170	40.0000	36.75
108	4,5,6-Trichloroguaiacol	213	14.998	15.000	(1.129)	368030	40.0000	39.47
184	3,4-Dichloroguaiacol	192	12.423	12.425	(1.482)	376077	40.0000	37.51
107	4,5-Dichloroguaiacol	192	13.208	13.205	(0.994)	919744	80.0000	75.51
182	4,6-Dichloroguaiacol	192	13.208	13.205	(1.575)	936857	80.0000	76.60
185	4-Chloroguaiacol	115	11.338	11.336	(1.352)	258479	20.0000	19.88
186	Carbaryl	144	16.462	16.459	(1.051)	1517584	40.0000	40.21
178	2-Benzyl-4-Chlorophenol	218	16.413	16.411	(1.048)	512701	40.0000	37.90
106	Guaiacol	124	9.335	9.332	(1.113)	843648	40.0000	35.04
188	2,6-Dichlorophenol	162	10.601	10.598	(1.264)	758794	40.0000	37.03
189	N-Nitrosomethylethylamine	88	5.622	5.620	(0.671)	579162	40.0000	37.87

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061306.D
Lab Smp Id: IC40306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC400306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	462843	1.03
27 Naphthalene-d8	1718341	859170	3436682	1722510	0.24
42 Acenaphthene-d10	1010041	505020	2020082	996854	-1.31
59 Phenanthrene-d10	1666734	833367	3333468	1633268	-2.01
69 Chrysene-d12	1675752	837876	3351504	1604385	-4.26
134 Di-n-octylphthala	2026355	1013178	4052710	1904606	-6.01
77 Perylene-d12	1637524	818762	3275048	1606852	-1.87

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.02
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.02
69 Chrysene-d12	19.98	19.48	20.48	19.98	-0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.04

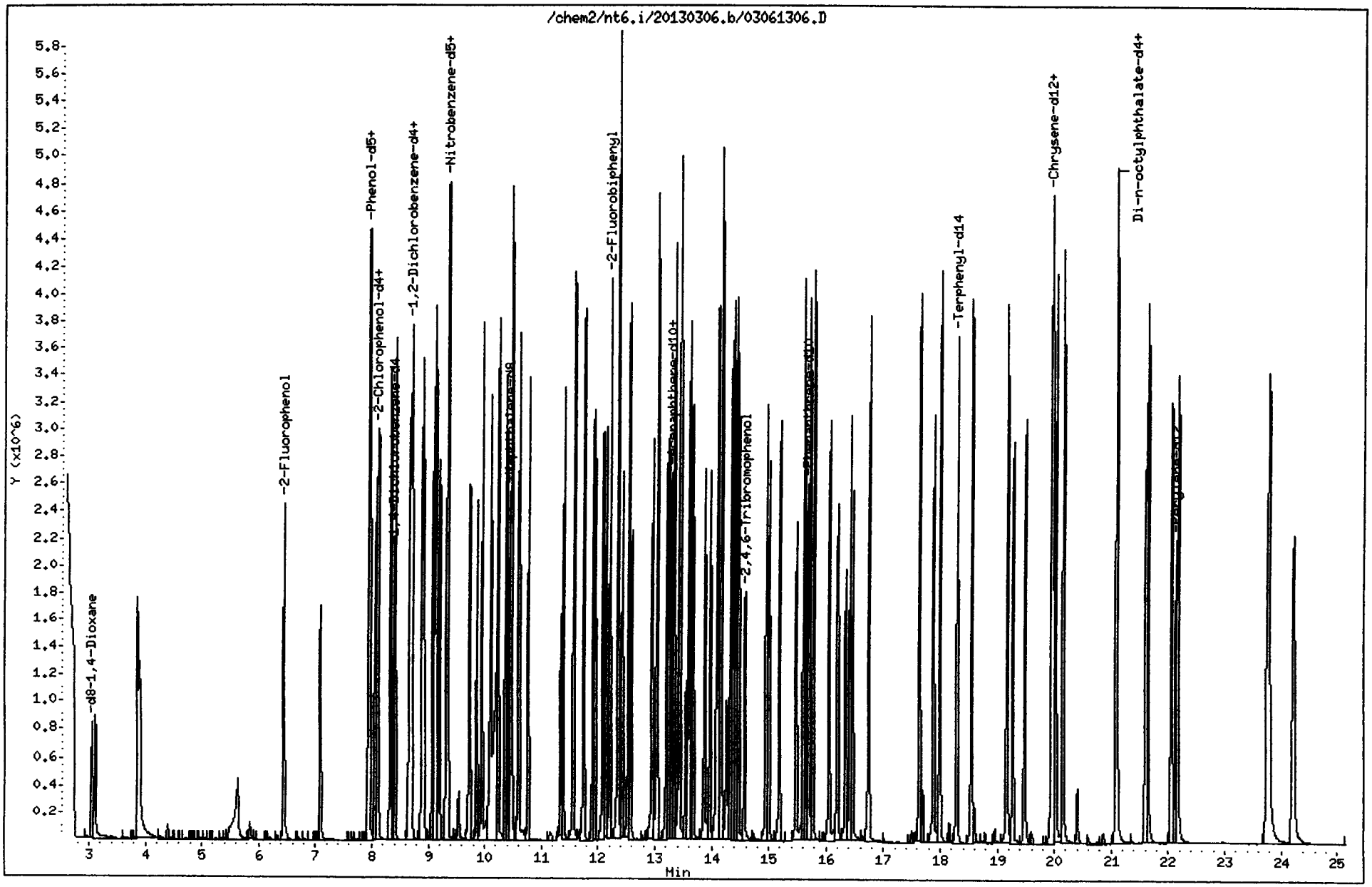
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061306.D
Date : 06-MAR-2013 15:09
Client ID: IC400306
Sample Info: IC40306,

Instrument: nt6.i

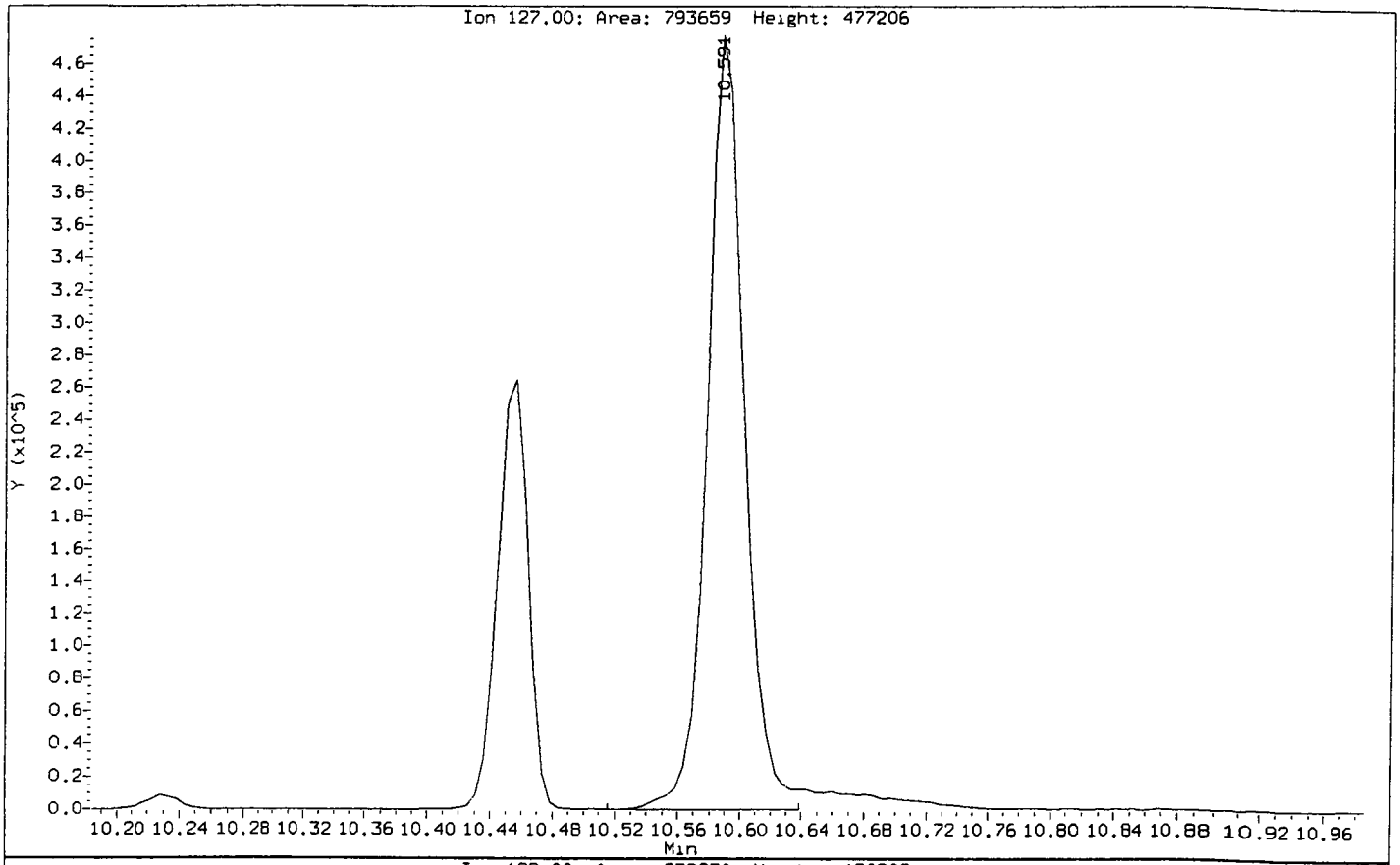
Operator: JZ
Column diameter: 0.32

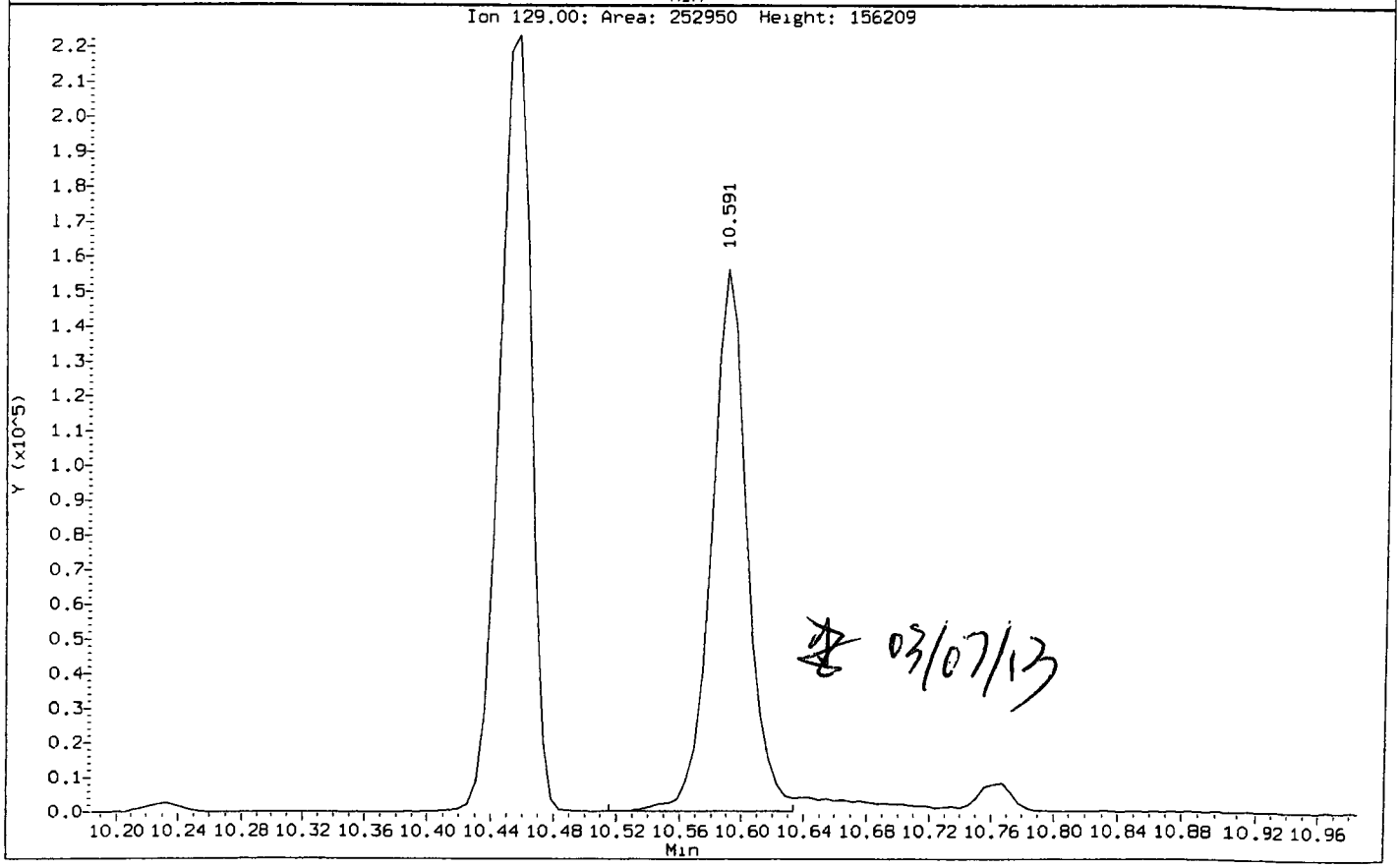
Column phase: ZB-5msi



Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: 4-Chloroaniline
CAS Number: 106-47-8



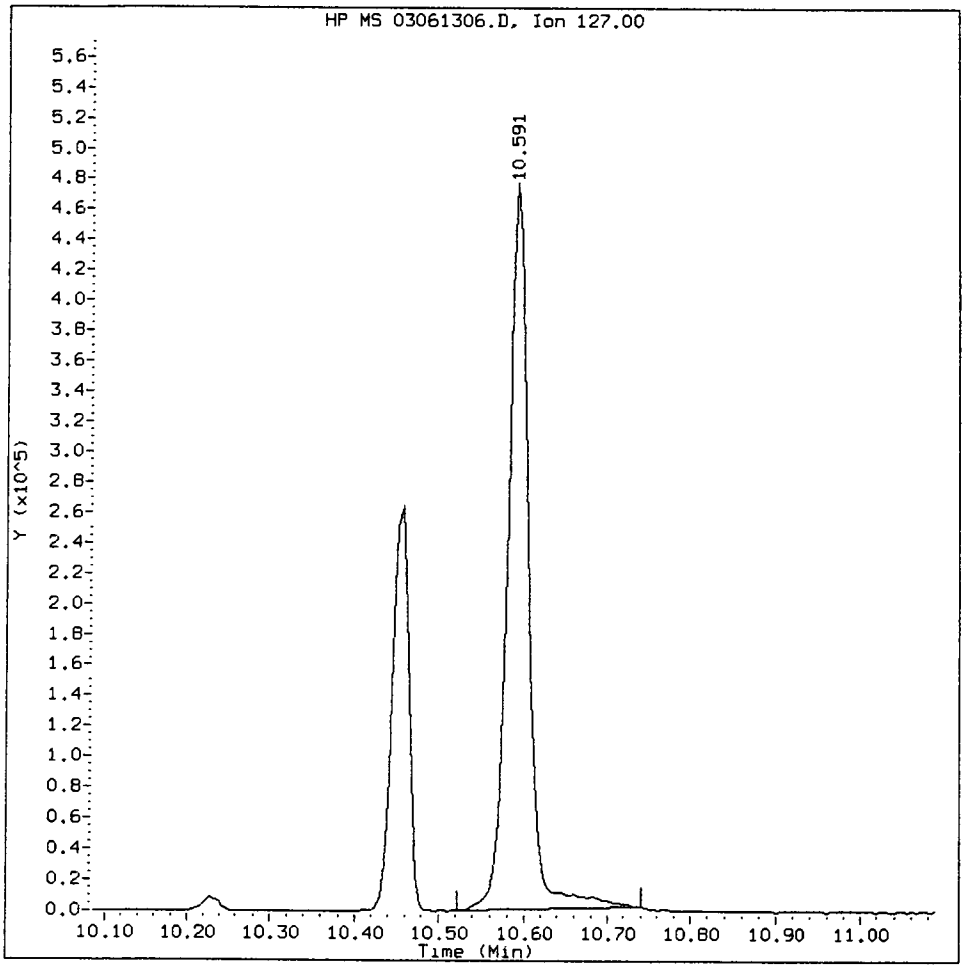


03/07/13

WN31 : 00687

IC40306, /chem2/nt6.i/20130306.b/03061306.D

4-Chloroaniline Amount: 39.50 Area: 820986



MANUAL INTEGRATION for 4-Chloroaniline

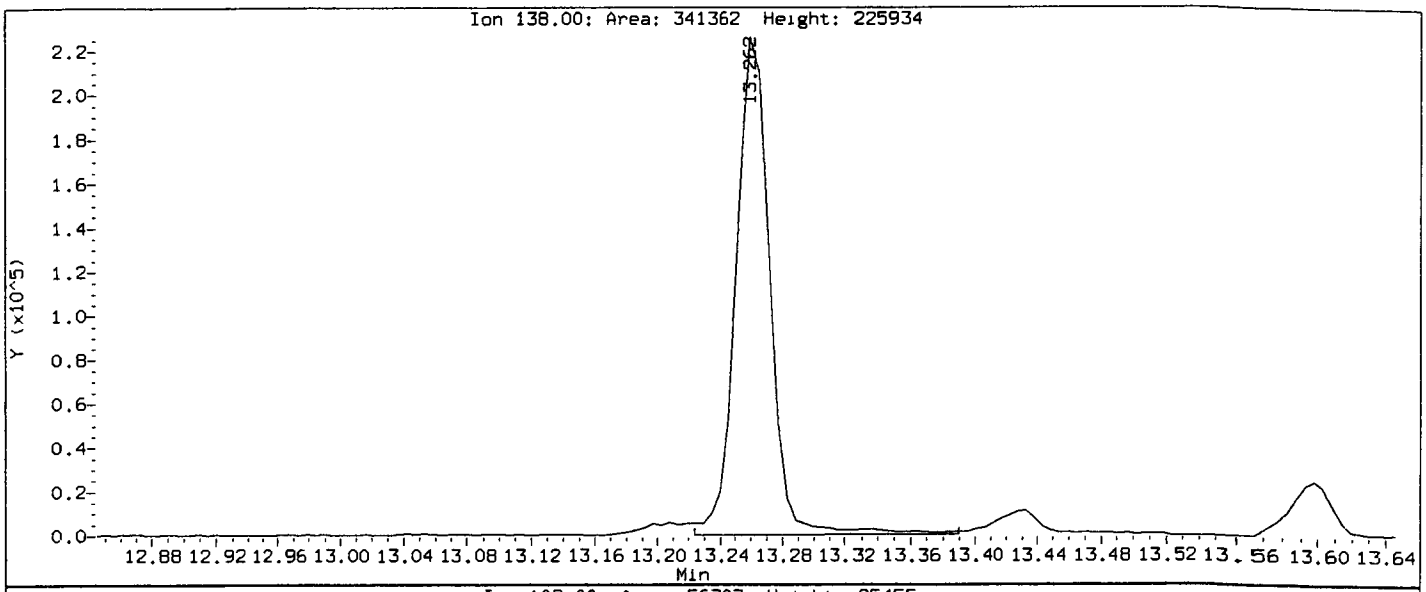
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

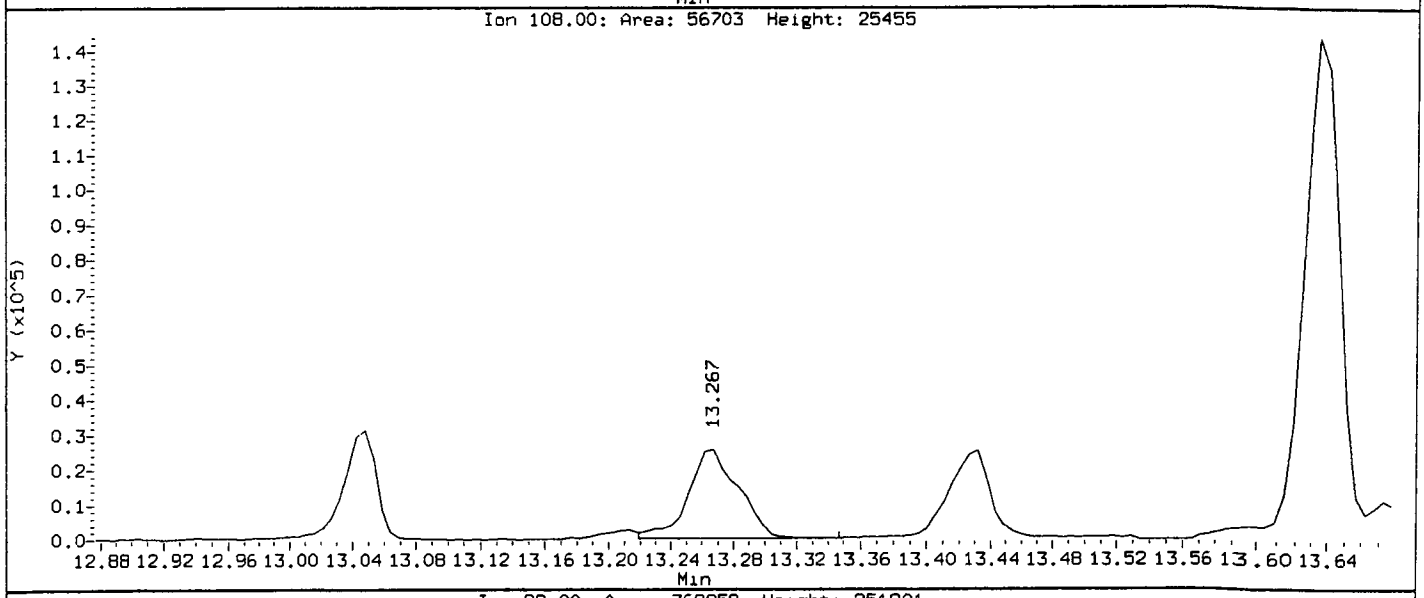
5. Other _____

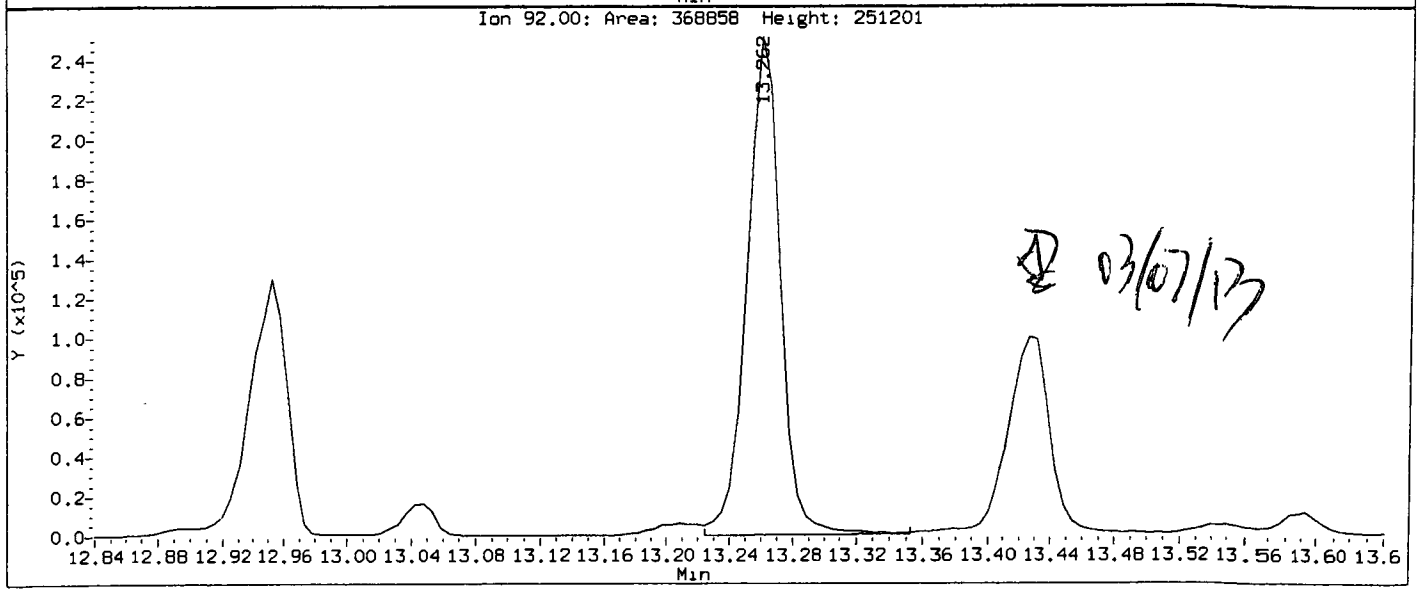
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

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



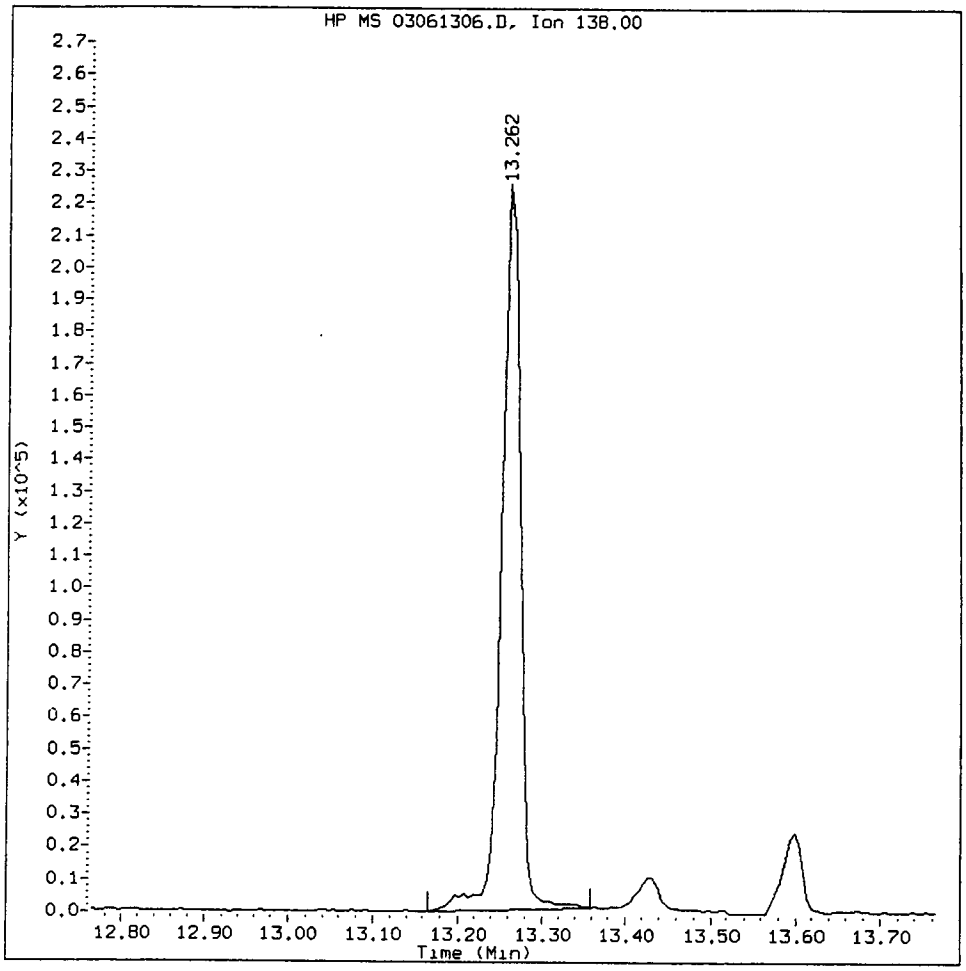




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

3-Nitroaniline Amount: 41.36 Area: 342573



MANUAL INTEGRATION for 3-Nitroaniline

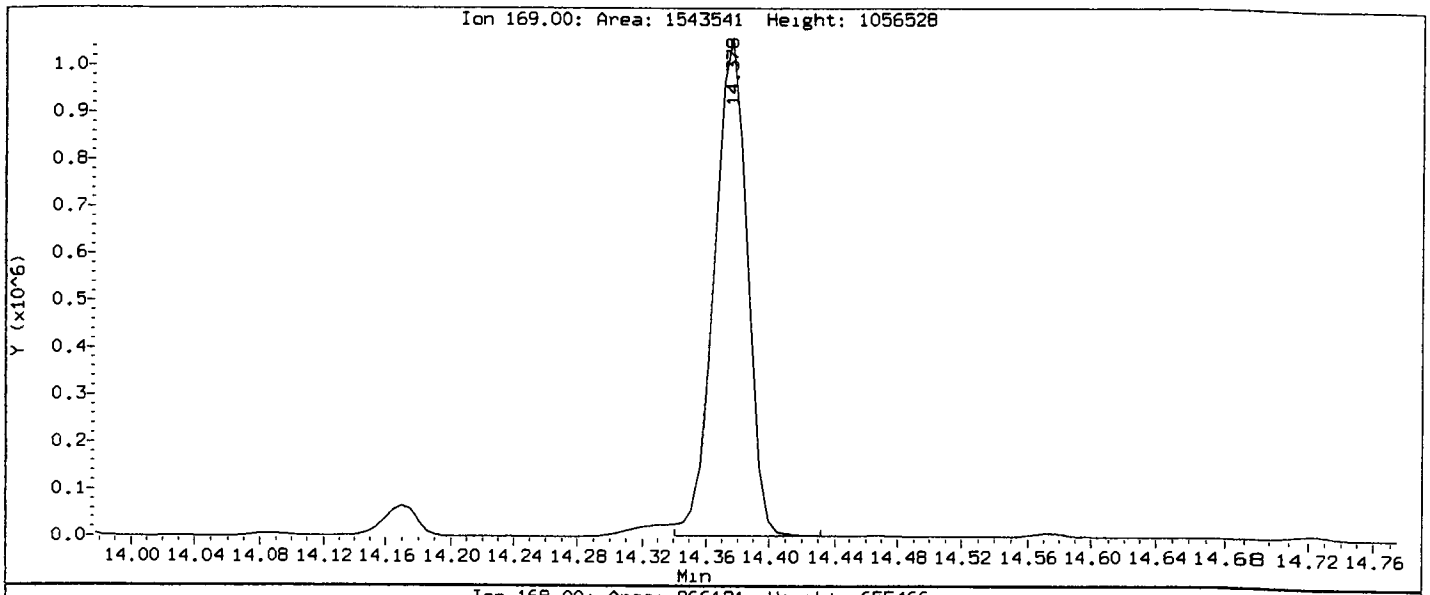
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

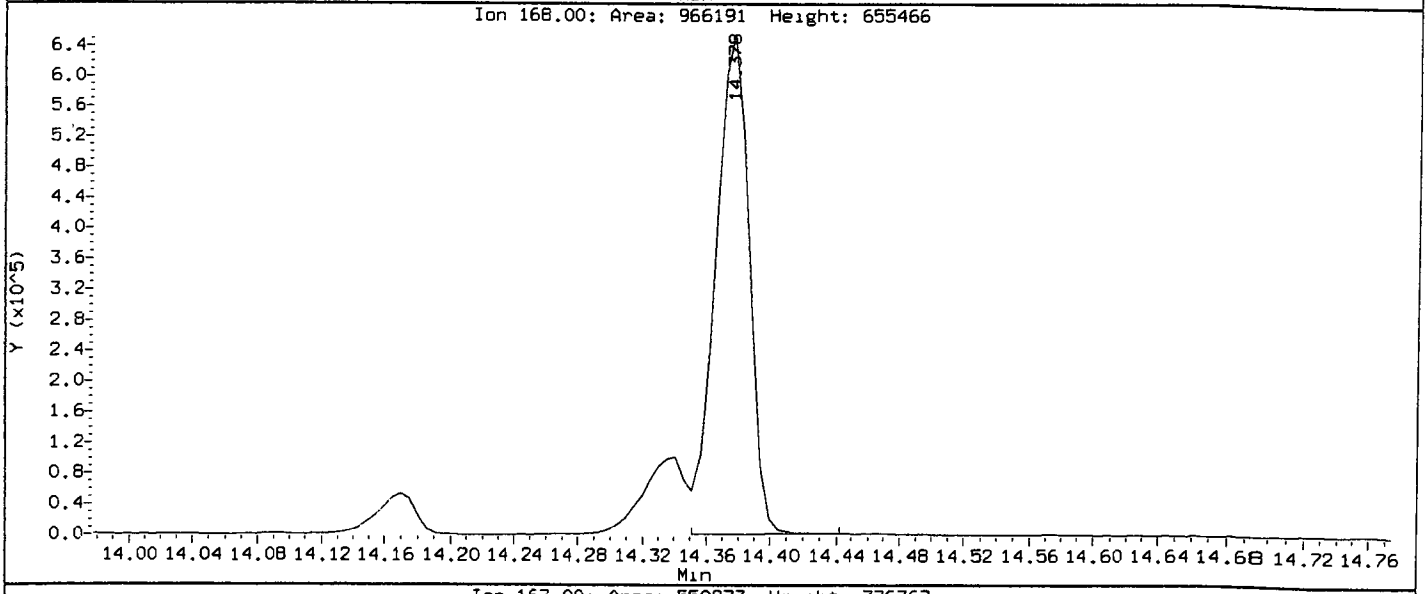
5. Other _____

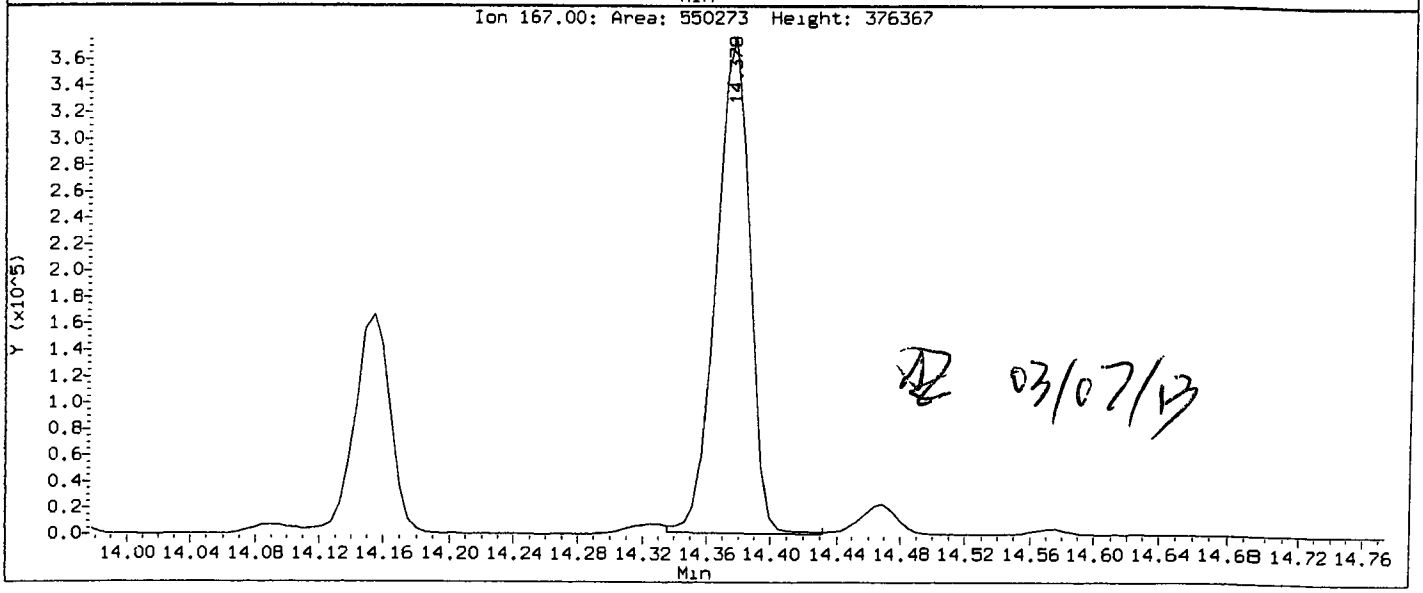
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



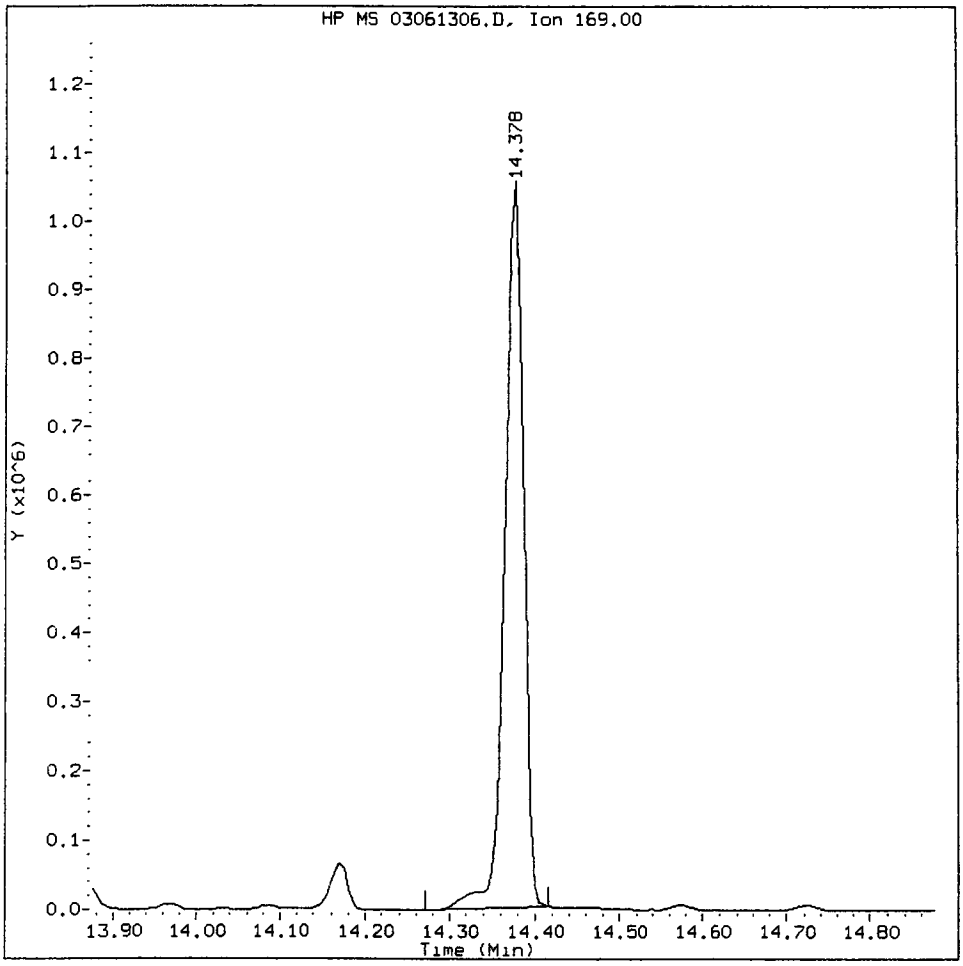




AZ 03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

N-Nitrosodiphenylamine Amount: 34.50 Area: 1576736



MANUAL INTEGRATION for N-Nitrosodiphenylamine

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

5. Other _____

Analyst: _____ Date: 3/07/13

CO-ELUTION SUMMARY FOR FILE - 03061306.D

Lab ID: IC40306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061307.D
Lab Smp Id: IC60306 Client Smp ID: IC600306
Inj Date : 06-MAR-2013 15:43
Operator : JZ Inst ID: nt6.i
Smp Info : IC60306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.442	6.432	(0.768)	1543969	60.0000	52.58
$	2 Phenol-d5	99	7.949	7.933	(0.948)	1704303	60.0000	49.59
	3 Phenol	94	7.970	7.954	(0.950)	1858925	60.0000	51.37
$	5 2-Chlorophenol-d4	132	8.093	8.082	(0.965)	1446368	60.0000	49.78
	4 Bis(2-Chloroethyl)ether	93	8.061	8.050	(0.961)	1613442	60.0000	51.34
	6 2-Chlorophenol	128	8.114	8.109	(0.968)	1499188	60.0000	51.78
	7 1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	1682990	60.0000	49.77
*	8 1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	453135	20.0000	
	9 1,4-Dichlorobenzene	146	8.414	8.408	(1.003)	1620328	60.0000	49.23
$	10 1,2-Dichlorobenzene-d4	152	8.686	8.681	(1.036)	922731	60.0000	45.12
	12 1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	1487370	60.0000	47.27
	11 Benzyl alcohol	108	8.665	8.654	(1.033)	1046357	60.0000	53.07
	14 2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	2570296	60.0000	51.47
	13 2-Methylphenol	108	8.889	8.878	(1.060)	1478529	60.0000	53.88
	17 Hexachloroethane	117	9.194	9.193	(1.096)	680617	60.0000	51.12
	16 N-Nitroso-di-n-propylamine	70	9.151	9.135	(1.091)	1243123	60.0000	52.71
	15 4-Methylphenol	108	9.124	9.108	(1.088)	1428361	60.0000	52.64
$	18 Nitrobenzene-d5	82	9.316	9.311	(0.893)	1726673	60.0000	50.80
	19 Nitrobenzene	77	9.354	9.343	(0.897)	1566587	60.0000	48.15
	20 Isophorone	82	9.733	9.717	(0.933)	3022002	60.0000	53.29
	21 2-Nitrophenol	139	9.856	9.851	(0.945)	860516	60.0000	57.17
	22 2,4-Dimethylphenol	107	9.952	9.947	(0.954)	1526425	60.0000	53.62
	23 Bis(2-Chloroethoxy)methane	93	10.107	10.096	(0.969)	1900431	60.0000	51.08
	24 Benzoic acid	105	10.294	10.198	(0.987)	2999389	120.000	121.8 (M)
	25 2,4-Dichlorophenol	162	10.235	10.230	(0.982)	1188590	60.0000	54.22
	26 1,2,4-Trichlorobenzene	180	10.369	10.363	(0.994)	1367908	60.0000	50.13
*	27 Naphthalene-d8	136	10.428	10.422	(1.000)	1693833	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.460	10.454	(1.003)	3435418	60.0000	59.95
	29 4-Chloroaniline	127	10.599	10.588	(1.016)	1089759	60.0000	60.52
	30 Hexachlorobutadiene	225	10.764	10.764	(1.032)	854336	60.0000	51.45
	31 4-Chloro-3-methylphenol	107	11.389	11.384	(1.092)	1259730	60.0000	54.10
	32 2-Methylnaphthalene	141	11.576	11.571	(1.110)	1966974	60.0000	47.75
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	962426	60.0000	62.20
	34 2,4,6-Trichlorophenol	196	12.084	12.078	(0.910)	981135	60.0000	60.61
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	942506	60.0000	59.02
$	36 2-Fluorobiphenyl	172	12.212	12.212	(0.919)	2869518	60.0000	47.21
	37 2-Chloronaphthalene	162	12.361	12.356	(0.930)	2162175	60.0000	56.65
	38 2-Nitroaniline	65	12.586	12.580	(0.947)	842270	60.0000	59.16
	39 Dimethylphthalate	163	12.960	12.949	(0.975)	2901139	60.0000	50.05
	40 Acenaphthylene	152	13.035	13.034	(0.981)	3594874	60.0000	47.32
	41 2,6-Dinitrotoluene	165	13.056	13.045	(0.983)	652291	60.0000	52.67
*	42 Acenaphthene-d10	164	13.286	13.286	(1.000)	963022	20.0000	
	43 3-Nitroaniline	138	13.270	13.264	(0.999)	415090	60.0000	56.15 (M)
	44 Acenaphthene	153	13.339	13.334	(1.004)	2398903	60.0000	48.78
	45 2,4-Dinitrophenol	184	13.441	13.424	(1.012)	1109465	120.000	125.4
	46 Dibenzofuran	168	13.606	13.595	(1.024)	2968241	60.0000	46.15
	47 4-Nitrophenol	109	13.558	13.547	(1.020)	370235	60.0000	58.85
	48 2,4-Dinitrotoluene	165	13.686	13.676	(1.030)	940513	60.0000	56.15
	50 Diethylphthalate	149	14.108	14.098	(1.062)	2728210	60.0000	50.80
	49 Fluorene	166	14.156	14.156	(1.066)	2330094	60.0000	56.33
	51 4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	1325257	60.0000	46.94
	52 4-Nitroaniline	138	14.274	14.252	(1.074)	570540	60.0000	60.40
	53 4,6-Dinitro-2-methylphenol	198	14.349	14.333	(0.916)	1360341	120.000	118.2
	54 N-Nitrosodiphenylamine	169	14.386	14.375	(0.918)	2133517	60.0000	47.70 (M)
$	55 2,4,6-Tribromophenol	330	14.578	14.573	(1.097)	422991	60.0000	55.55
	56 4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	884941	60.0000	50.44
	57 Hexachlorobenzene	284	15.182	15.182	(0.969)	909402	60.0000	50.28
	58 Pentachlorophenol	266	15.476	15.470	(0.988)	607951	60.0000	56.98
*	59 Phenanthrene-d10	188	15.663	15.663	(1.000)	1598516	20.0000	
	60 Phenanthrene	178	15.706	15.700	(1.003)	3708136	60.0000	46.89 (M)
	61 Anthracene	178	15.780	15.770	(1.008)	3579517	60.0000	45.20
	62 Carbazole	167	16.053	16.047	(1.025)	3310342	60.0000	58.81
	63 Di-n-butylphthalate	149	16.747	16.747	(1.069)	4408198	60.0000	44.16
	64 Fluoranthene	202	17.639	17.639	(1.126)	4077087	60.0000	49.01
	65 Pyrene	202	17.997	17.992	(0.901)	4174219	60.0000	48.94
$	66 Terphenyl-d14	244	18.291	18.291	(0.916)	2694546	60.0000	49.15
	67 Butylbenzylphthalate	149	19.162	19.167	(0.959)	2107544	60.0000	50.53
	68 Benzo(a)anthracene	228	19.953	19.953	(0.999)	3640168	60.0000	51.12
*	69 Chrysene-d12	240	19.979	19.979	(1.000)	1561828	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.947	19.953	(0.998)	1019524	60.0000	52.04
	71 Chrysene	228	20.022	20.017	(1.002)	3567166	60.0000	49.07
	72 bis(2-Ethylhexyl)phthalate	149	20.145	20.150	(0.956)	2762285	60.0000	52.81
*	134 Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	1777444	20.0000	
	73 Di-n-octylphthalate	149	21.090	21.096	(1.001)	4376021	60.0000	52.14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	
74	Benzo(b)fluoranthene	252	21.609	21.609	(0.976)	3947727	60.0000	59.03	
75	Benzo(k)fluoranthene	252	21.646	21.641	(0.978)	3893557	60.0000	55.88	(H)
187	Total Benzofluoranthenes	252	21.646	21.641	(0.978)	7344864	120.000	98.66	
76	Benzo(a)pyrene	252	22.057	22.057	(0.997)	3613860	60.0000	52.32	
* 77	Perylene-d12	264	22.132	22.137	(1.000)	1616143	20.0000		
78	Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	4556930	60.0000	54.82	
79	Dibenzo(a,h)anthracene	278	23.799	23.788	(1.075)	3652156	60.0000	55.79	
80	Benzo(g,h,i)perylene	276	24.237	24.226	(1.095)	3993414	60.0000	56.17	
90	N-Nitrosodimethylamine	74	3.921	3.889	(0.467)	1197674	60.0000	56.13	
103	Pyridine	79	3.867	3.851	(0.461)	1815991	60.0000	53.66	
91	Aniline	93	7.943	7.938	(0.947)	1893346	60.0000	47.22	
105	1-methylnaphthalene	141	11.747	11.747	(1.127)	2033113	60.0000	48.59	
93	Benzidine	184	17.869	17.874	(0.894)	480405	60.0000	63.08	
111	Azobenzene (1,2-DP-Hydrazine)	77	14.429	14.423	(1.086)	2968844	60.0000	48.66	
143	1,4-Dioxane	88	3.125	3.103	(0.373)	794994	60.0000	54.08	
$ 137	d8-1,4-Dioxane	96	3.061	3.039	(0.365)	745761	60.0000	54.20	
144	alpha-Terpineol	59	10.481	10.470	(1.005)	1099224	60.0000	51.03	
177	p-Benzoquinone	82	7.089	7.083	(0.680)	403946	60.0000	62.45	
98	Retene	219	18.548	18.548	(0.928)	1950387	60.0000	52.99	
99	Perylene	252	22.175	22.175	(1.002)	3062481	60.0000	50.61	
133	Butylatedhydroxytoluene	205	13.446	13.440	(1.012)	1855173	60.0000	57.10	
115	Tributyl Phosphate	99	14.477	14.461	(0.924)	3026027	60.0000	54.70	
116	Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	2350712	60.0000	55.61	
117	Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	729085	60.0000	50.70	
118	Triphenyl Phosphate	326	19.482	19.482	(0.975)	779896	60.0000	57.02	
123	Acetophenone	105	9.087	9.076	(1.083)	2228195	60.0000	52.24	
168	Pentachlorobenzene	250	13.644	13.638	(1.027)	1071312	60.0000	50.79	
113	Diphenyl Oxide	170	12.538	12.538	(0.944)	1879194	60.0000	50.12	
112	Biphenyl	154	12.351	12.345	(0.930)	2290712	60.0000	55.09	
120	2,3,4,6-Tetrachlorophenol	232	13.879	13.873	(1.045)	798003	60.0000	58.05	
151	1,2,4,5-Tetrachlorobenzene	216	11.913	11.907	(0.897)	1239101	60.0000	52.68	
110	Tetrachloroguaiacol	247	15.609	15.599	(0.997)	894026	120.000	106.6	
109	3,4,5-Trichloroguaiacol	213	13.975	13.969	(0.892)	475254	60.0000	52.05	
181	3,4,6-Trichloroguaiacol	211	14.092	14.087	(1.680)	564659	60.0000	54.61	
108	4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	496468	60.0000	55.12	
184	3,4-Dichloroguaiacol	192	12.431	12.425	(1.482)	523084	60.0000	53.28	
107	4,5-Dichloroguaiacol	192	13.216	13.205	(0.995)	1265428	120.000	107.5	
182	4,6-Dichloroguaiacol	192	13.216	13.205	(1.576)	1304327	120.000	108.9	
185	4-Chloroguaiacol	115	11.341	11.336	(1.352)	337977	30.0000	26.55	
186	Carbaryl	144	16.470	16.459	(1.052)	2040898	60.0000	55.25	
178	2-Benzyl-4-Chlorophenol	218	16.421	16.411	(1.048)	711018	60.0000	53.70	
106	Guaiacol	124	9.343	9.332	(1.114)	1104296	60.0000	46.85	
188	2,6-Dichlorophenol	162	10.604	10.598	(1.264)	1043274	60.0000	52.00	
189	N-Nitrosomethylethylamine	88	5.625	5.620	(0.671)	859420	60.0000	57.40	

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061307.D
Lab Smp Id: IC60306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC600306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	453135	-1.09
27 Naphthalene-d8	1718341	859170	3436682	1693833	-1.43
42 Acenaphthene-d10	1010041	505020	2020082	963022	-4.66
59 Phenanthrene-d10	1666734	833367	3333468	1598516	-4.09
69 Chrysene-d12	1675752	837876	3351504	1561828	-6.80
134 Di-n-octylphthala	2026355	1013178	4052710	1777444	-12.28
77 Perylene-d12	1637524	818762	3275048	1616143	-1.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.42	9.92	10.92	10.43	0.05
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.02

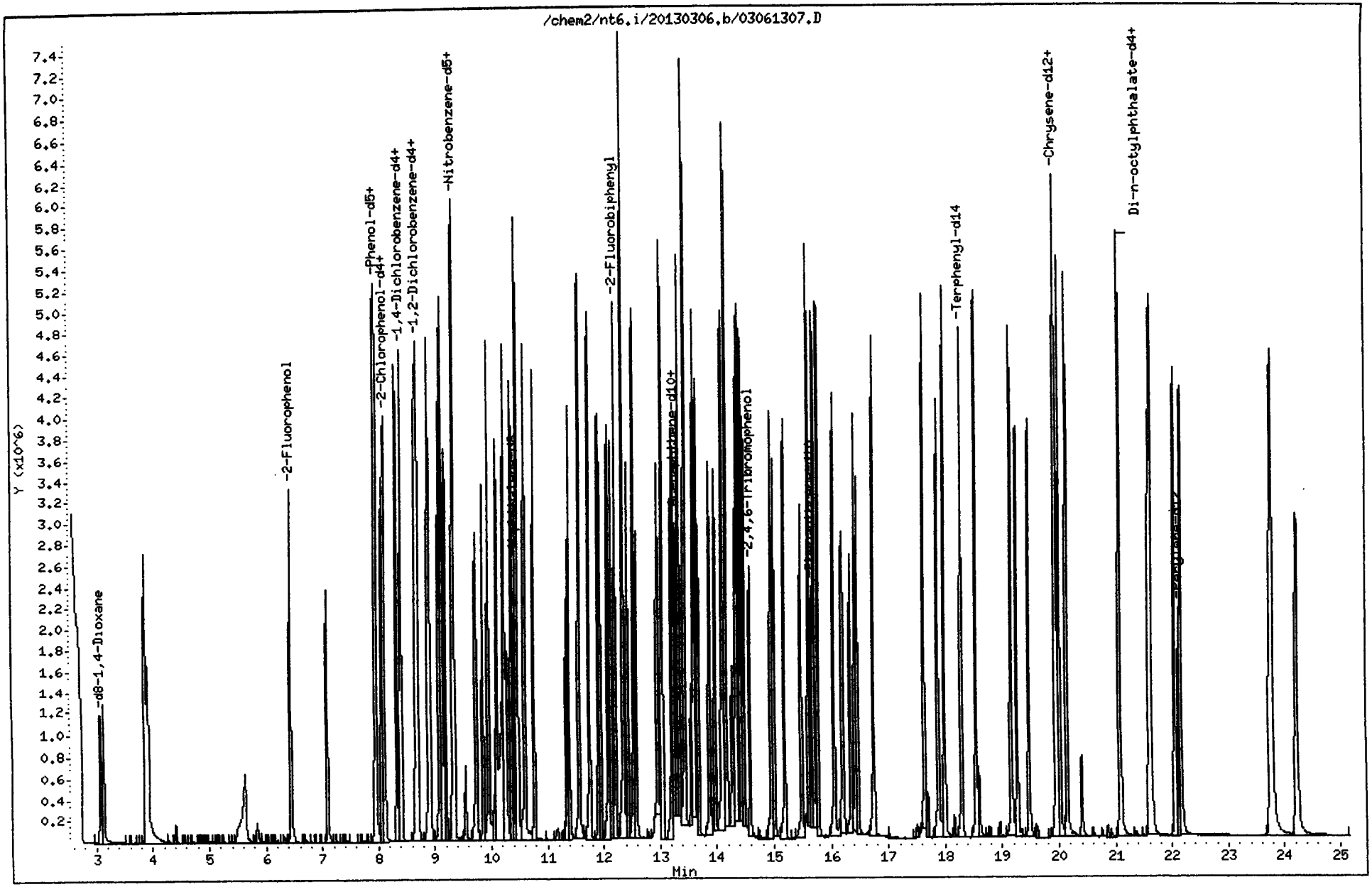
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061307.D
Date : 06-MAR-2013 15:43
Client ID: IC600306
Sample Info: IC60306,

Instrument: nt6.i

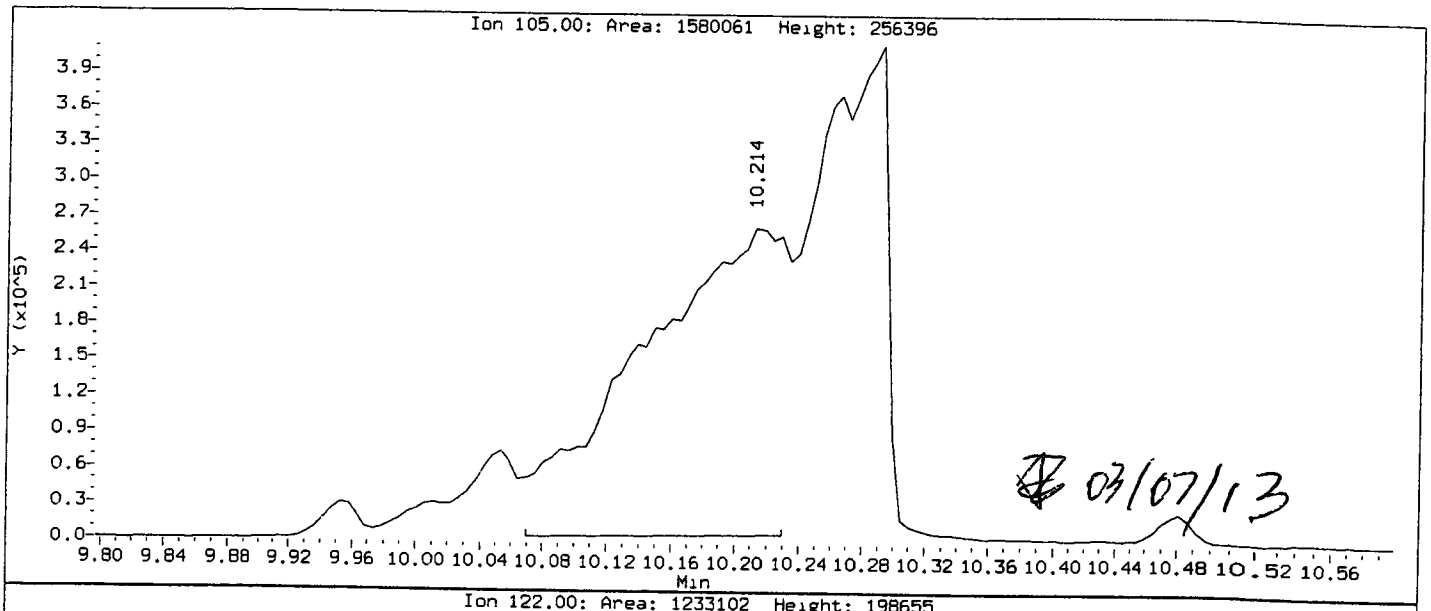
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi

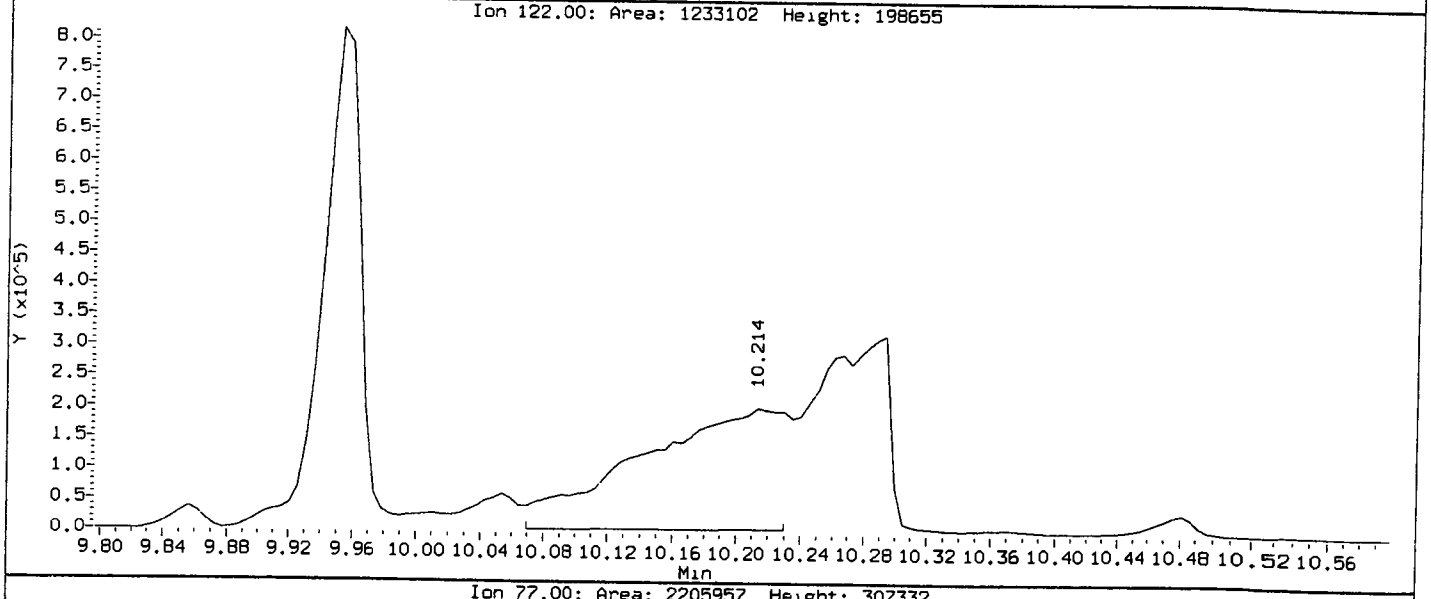


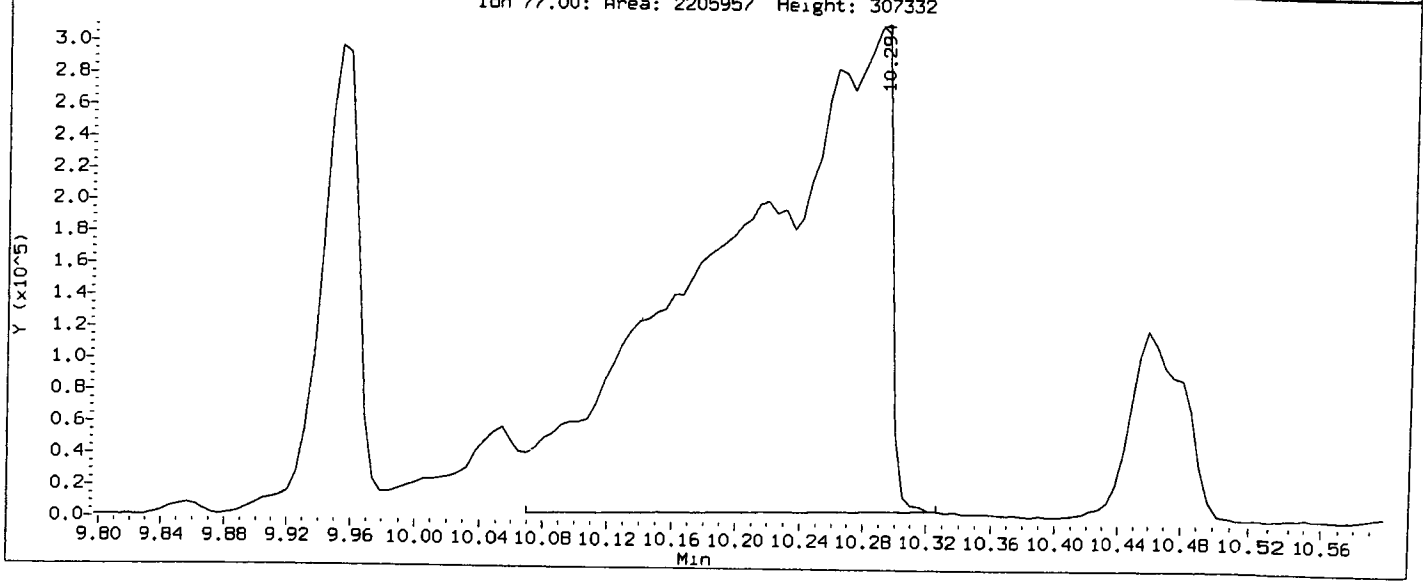
Data File: /chem2/nt6.1/20130306A.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.1
Client Sample ID: IC600306

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



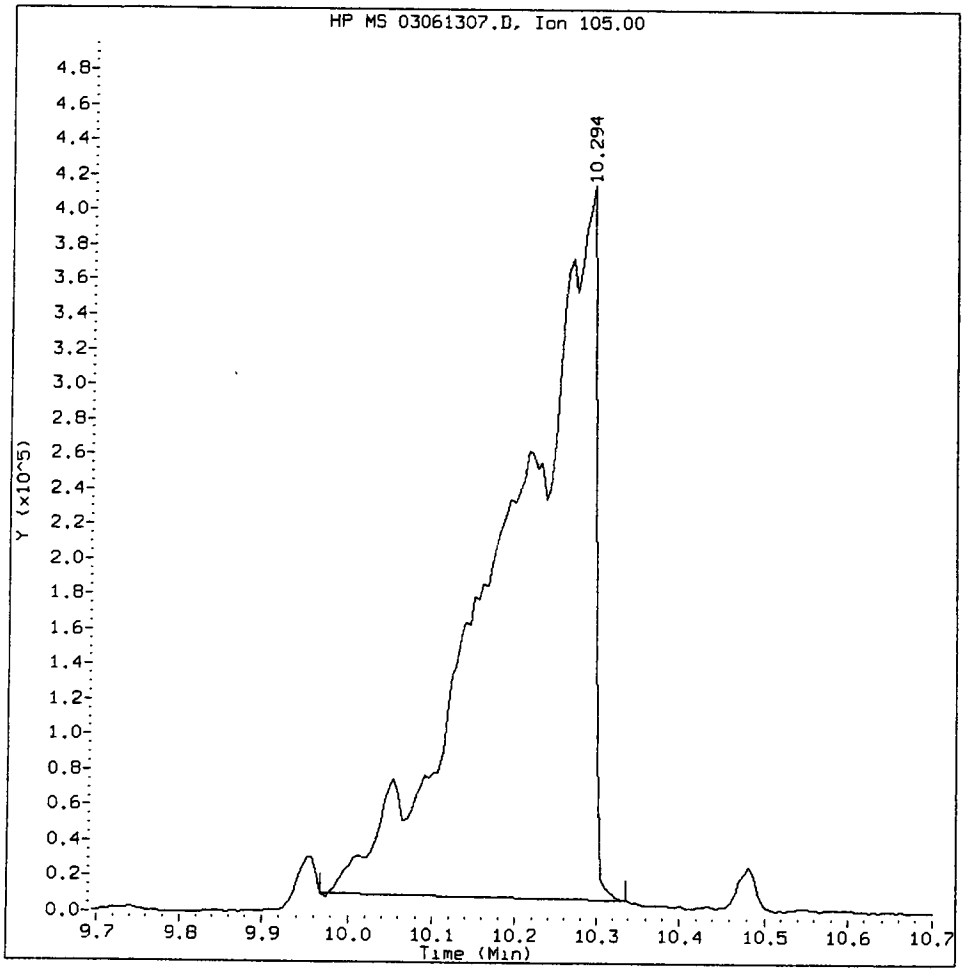
03/07/13





IC60306, /chem2/nt6.i/20130306.b/03061307.D

Benzoic acid Amount: 121.80 Area: 2999389



MANUAL INTEGRATION for Benzoic acid

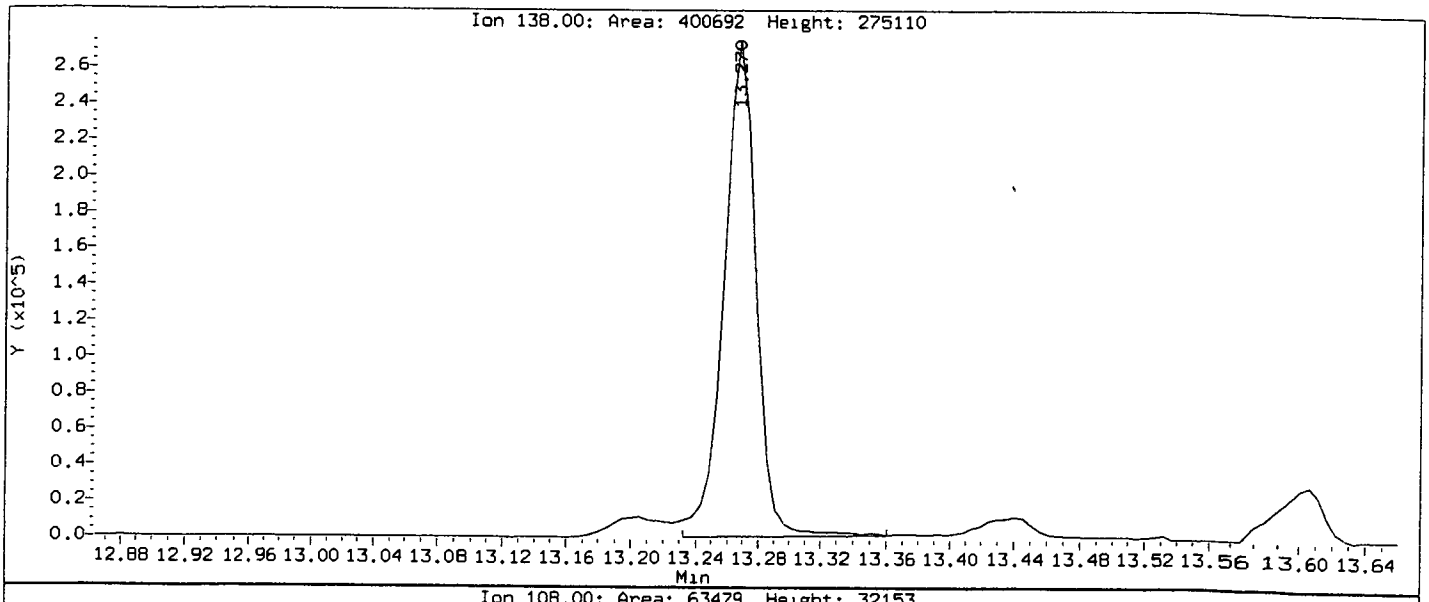
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

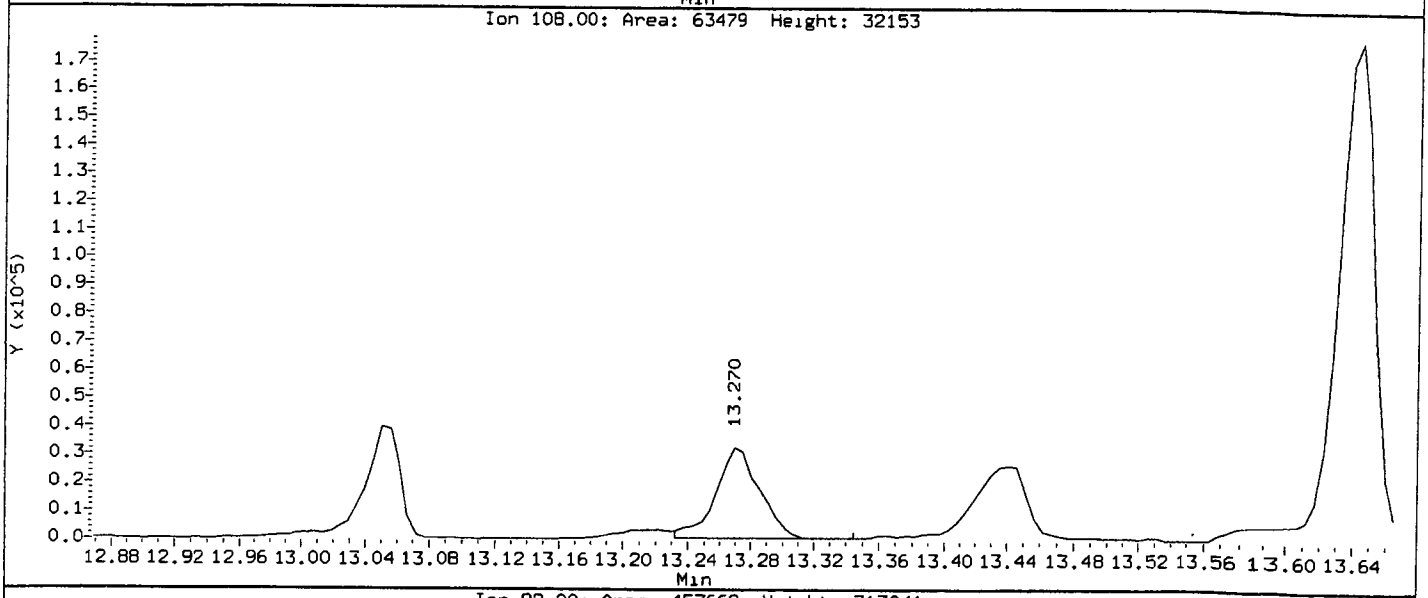
5. Other _____

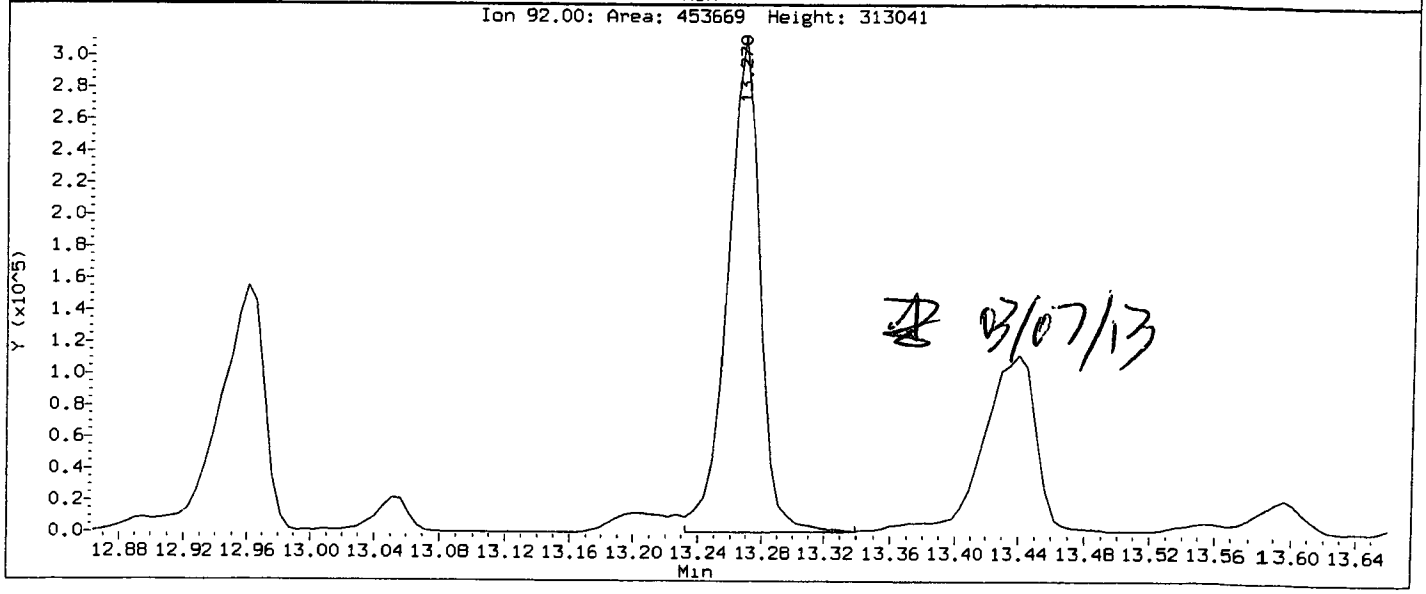
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

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



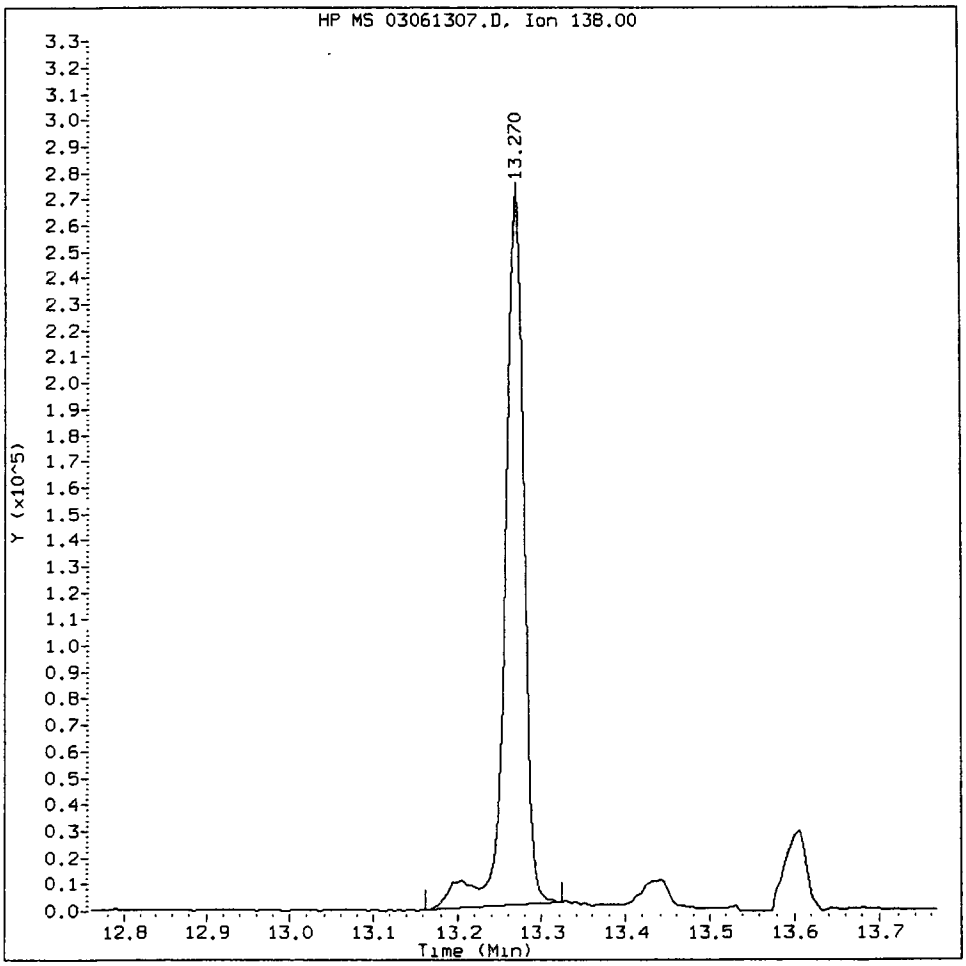




3/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

3-Nitroaniline Amount: 56.15 Area: 415090



MANUAL INTEGRATION for 3-Nitroaniline

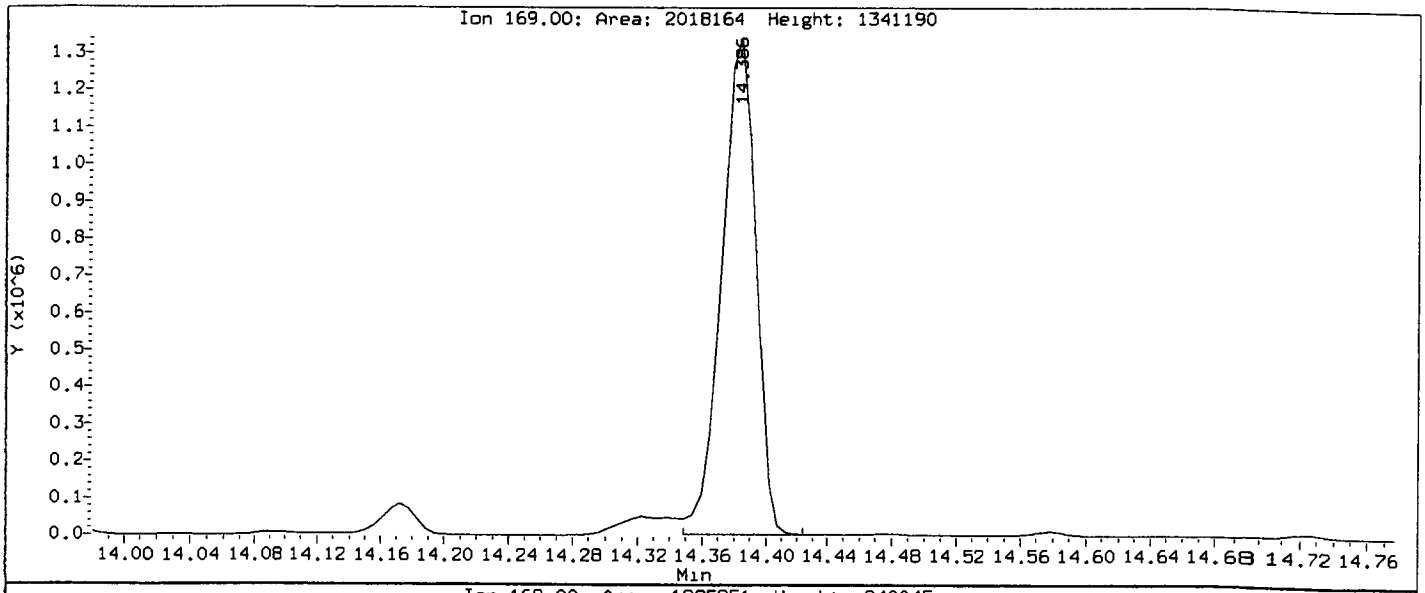
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

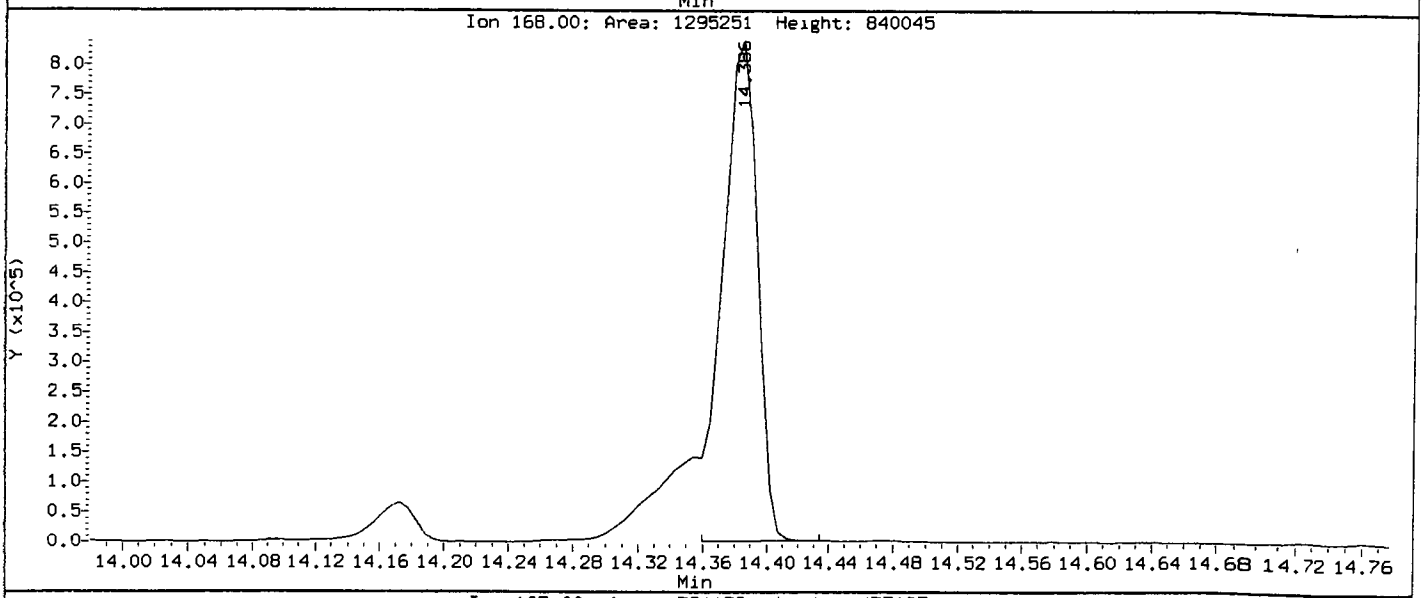
5. Other _____

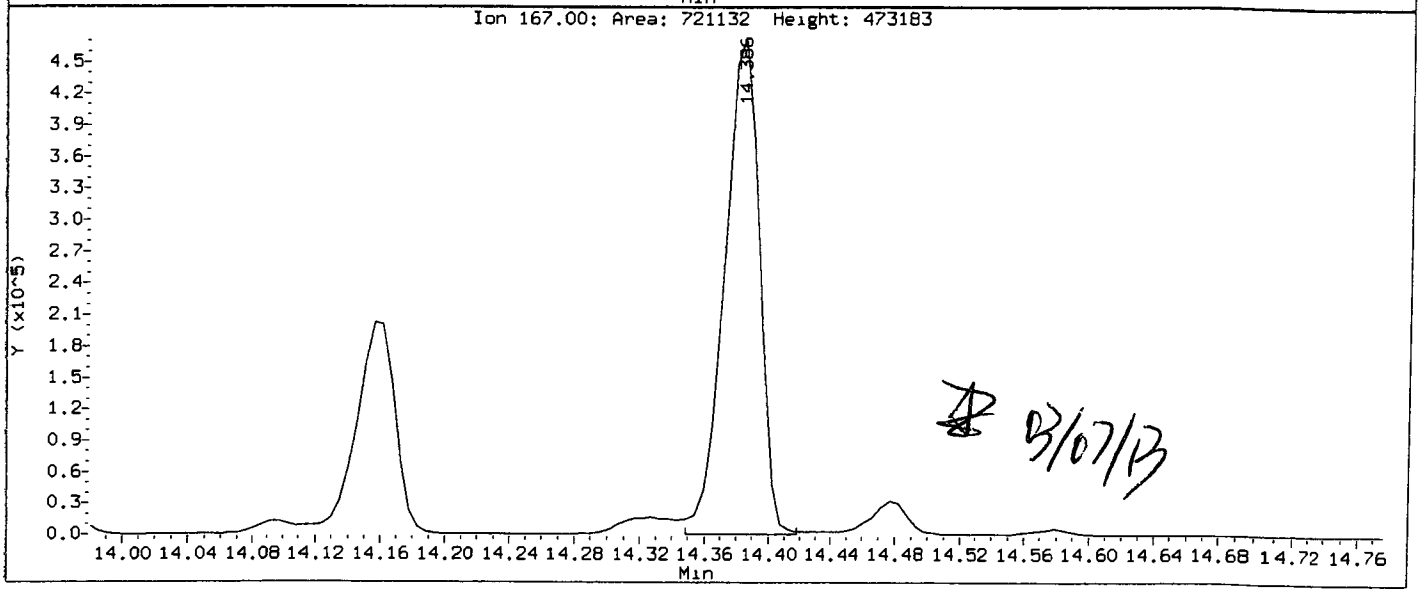
Analyst: AZ Date: 3/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



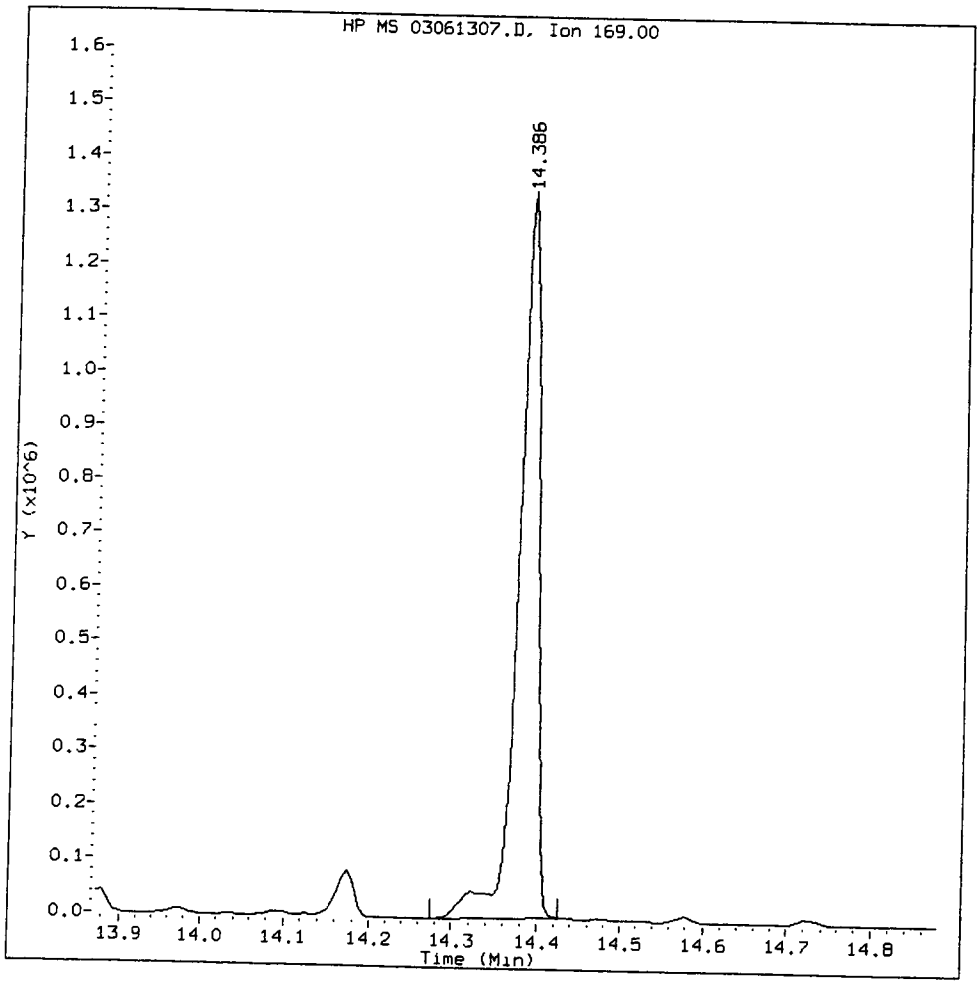




B/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

N-Nitrosodiphenylamine Amount: 47.70 Area: 2133517



MANUAL INTEGRATION for N-Nitrosodiphenylamine

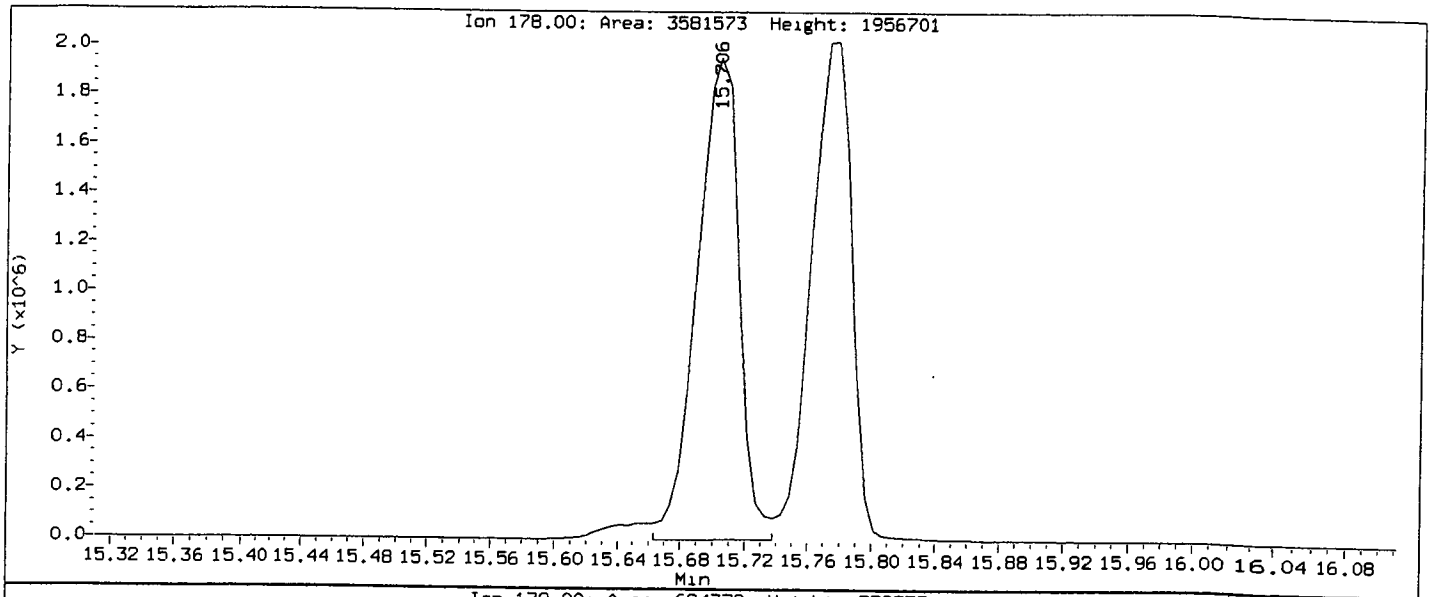
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

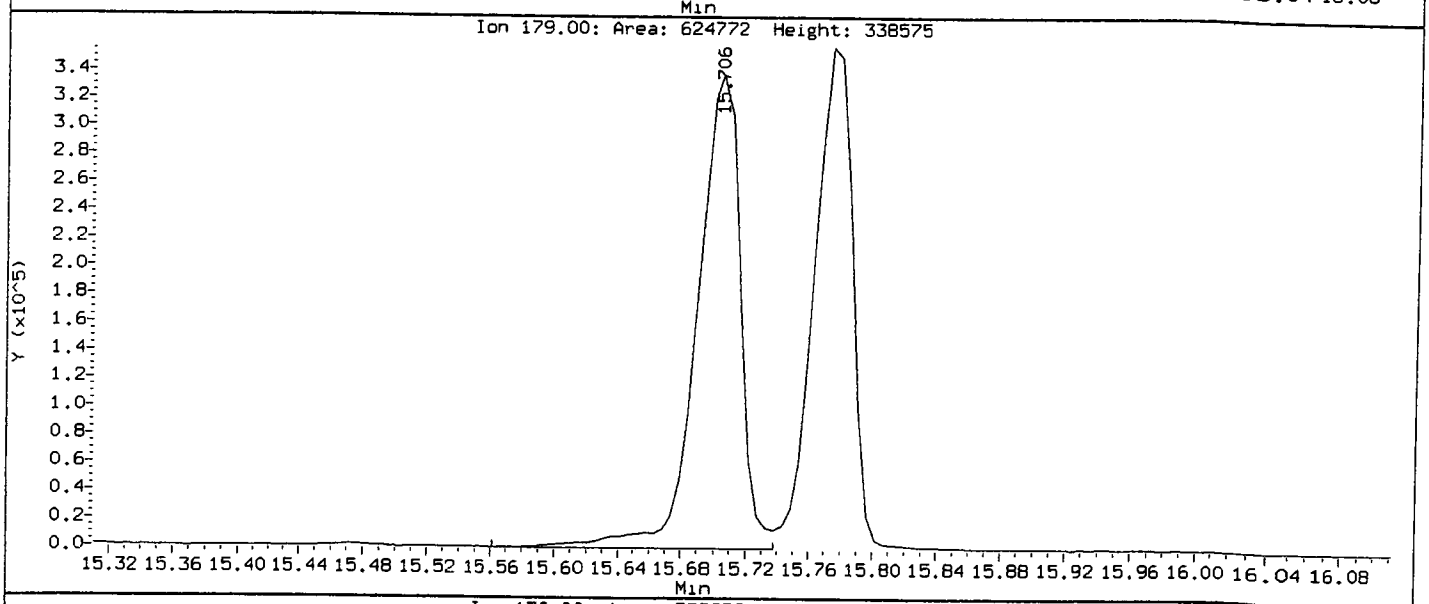
5. Other _____

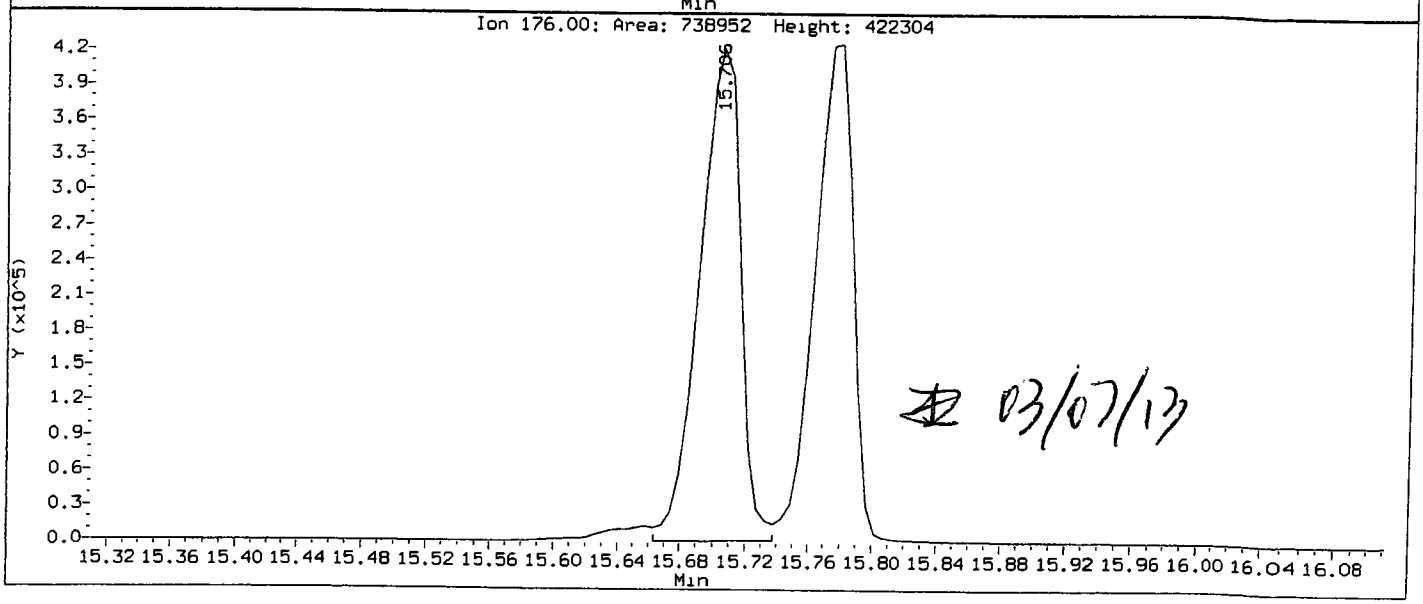
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.1/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.1
Client Sample ID: IC600306

Compound: Phenanthrene
CAS Number: 85-01-8



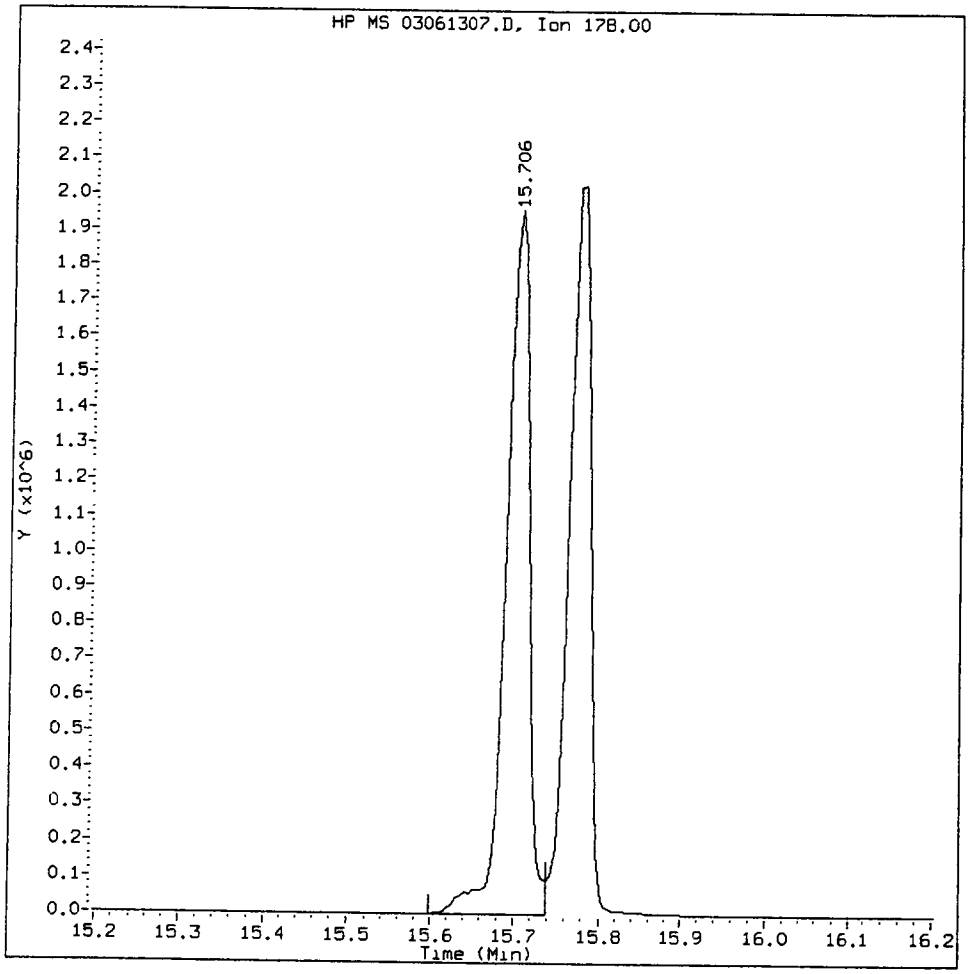




03/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

Phenanthrene Amount: 46.89 Area: 3708136



MANUAL INTEGRATION for Phenanthrene

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

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061307.D

Lab ID: IC60306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061308.D
Lab Smp Id: IC80306 Client Smp ID: IC800306
Inj Date : 06-MAR-2013 16:18
Operator : JZ Inst ID: nt6.i
Smp Info : IC80306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	7.969	7.954	(0.950)	2394706	80.0000	72.23
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.059	8.050	(0.961)	2042188	80.0000	70.92
6	2-Chlorophenol	128	8.118	8.109	(0.968)	1899262	80.0000	71.60
7	1,3-Dichlorobenzene	146	8.332	8.328	(0.994)	2025421	80.0000	65.37
* 8	1,4-Dichlorobenzene-d4	152	8.385	8.387	(1.000)	415136	20.0000	
9	1,4-Dichlorobenzene	146	8.417	8.408	(1.004)	1948690	80.0000	64.63
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	8.706	8.707	(1.038)	1911534	80.0000	66.31
11	Benzyl alcohol	108	8.674	8.654	(1.034)	1396503	80.0000	77.32
14	2,2'-oxybis(1-Chloropropane)	45	8.919	8.916	(1.064)	2983275	80.0000	65.21
13	2-Methylphenol	108	8.898	8.878	(1.061)	1759442	80.0000	69.98
17	Hexachloroethane	117	9.192	9.193	(1.096)	819781	80.0000	67.21
16	N-Nitroso-di-n-propylamine	70	9.155	9.135	(1.092)	1588460	80.0000	73.51
15	4-Methylphenol	108	9.128	9.108	(1.089)	1665095	80.0000	66.98
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	9.358	9.343	(0.898)	1980493	80.0000	64.91
20	Isophorone	82	9.742	9.717	(0.934)	3963893	80.0000	74.54
21	2-Nitrophenol	139	9.860	9.851	(0.946)	1046064	80.0000	74.10
22	2,4-Dimethylphenol	107	9.961	9.947	(0.955)	1870842	80.0000	70.08
23	Bis(2-Chloroethoxy)methane	93	10.111	10.096	(0.970)	2367641	80.0000	67.86
24	Benzoic acid	105	10.330	10.198	(0.991)	3889953	160.000	168.4 (M)
25	2,4-Dichlorophenol	162	10.239	10.230	(0.982)	1466098	80.0000	71.32
26	1,2,4-Trichlorobenzene	180	10.367	10.363	(0.994)	1711053	80.0000	66.86
* 27	Naphthalene-d8	136	10.426	10.422	(1.000)	1588502	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.463	10.454	(1.004)	4129583	80.0000	86.89
	29 4-Chloroaniline	127	10.602	10.588	(1.017)	1419444	80.0000	99.06
	30 Hexachlorobutadiene	225	10.768	10.764	(1.033)	1076533	80.0000	69.13
	31 4-Chloro-3-methylphenol	107	11.393	11.384	(1.093)	1599016	80.0000	73.23
	32 2-Methylnaphthalene	141	11.580	11.571	(1.111)	2389384	80.0000	61.85
	33 Hexachlorocyclopentadiene	237	11.948	11.950	(0.899)	1256994	80.0000	88.25
	34 2,4,6-Trichlorophenol	196	12.087	12.078	(0.910)	1242196	80.0000	83.35
	35 2,4,5-Trichlorophenol	196	12.141	12.137	(0.914)	1128101	80.0000	76.73
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	12.360	12.356	(0.930)	2726374	80.0000	81.65
	38 2-Nitroaniline	65	12.595	12.580	(0.948)	1067475	80.0000	81.45
	39 Dimethylphthalate	163	12.969	12.949	(0.976)	3824957	80.0000	71.69
	40 Acenaphthylene	152	13.038	13.034	(0.981)	4470626	80.0000	63.93
	41 2,6-Dinitrotoluene	165	13.060	13.045	(0.983)	865930	80.0000	75.96
*	42 Acenaphthene-d10	164	13.289	13.286	(1.000)	886542	20.0000	
	43 3-Nitroaniline	138	13.273	13.264	(0.999)	496848	80.0000	81.26 (M)
	44 Acenaphthene	153	13.348	13.334	(1.004)	2990801	80.0000	66.06
	45 2,4-Dinitrophenol	184	13.455	13.424	(1.012)	1455877	160.000	178.8
	46 Dibenzofuran	168	13.610	13.595	(1.024)	3797229	80.0000	64.13
	47 4-Nitrophenol	109	13.567	13.547	(1.021)	435155	80.0000	75.14
	48 2,4-Dinitrotoluene	165	13.690	13.676	(1.030)	1187085	80.0000	76.98
	50 Diethylphthalate	149	14.112	14.098	(1.062)	3261747	80.0000	65.98
	49 Fluorene	166	14.165	14.156	(1.066)	2918650	80.0000	81.81
	51 4-Chlorophenyl-phenylether	204	14.176	14.172	(1.067)	1756954	80.0000	67.60
	52 4-Nitroaniline	138	14.288	14.252	(1.075)	705690	80.0000	81.16
	53 4,6-Dinitro-2-methylphenol	198	14.358	14.333	(0.916)	1683138	160.000	160.8
	54 N-Nitrosodiphenylamine	169	14.390	14.375	(0.918)	2609924	80.0000	64.16 (M)
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	14.956	14.952	(0.955)	1183353	80.0000	74.16
	57 Hexachlorobenzene	284	15.186	15.182	(0.969)	1239812	80.0000	75.36
	58 Pentachlorophenol	266	15.480	15.470	(0.988)	833386	80.0000	85.88
*	59 Phenanthrene-d10	188	15.667	15.663	(1.000)	1453987	20.0000	
	60 Phenanthrene	178	15.709	15.700	(1.003)	4601992	80.0000	63.97
	61 Anthracene	178	15.784	15.770	(1.008)	4251383	80.0000	59.02
	62 Carbazole	167	16.057	16.047	(1.025)	4177813	80.0000	80.56
	63 Di-n-butylphthalate	149	16.751	16.747	(1.069)	5262499	80.0000	57.95
	64 Fluoranthene	202	17.643	17.639	(1.126)	4925676	80.0000	65.09
	65 Pyrene	202	18.001	17.992	(0.901)	5041196	80.0000	66.18
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	19.171	19.167	(0.959)	2514680	80.0000	67.51
	68 Benzo(a)anthracene	228	19.956	19.953	(0.999)	4549328	80.0000	71.54
*	69 Chrysene-d12	240	19.983	19.979	(1.000)	1394767	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.951	19.953	(0.998)	1228873	80.0000	70.24
	71 Chrysene	228	20.026	20.017	(1.002)	4316537	80.0000	66.49
	72 bis(2-Ethylhexyl)phthalate	149	20.149	20.150	(0.956)	3297035	80.0000	71.04
*	134 Di-n-octylphthalate-d4	153	21.078	21.085	(1.000)	1577157	20.0000	
	73 Di-n-octylphthalate	149	21.089	21.096	(1.000)	5201474	80.0000	69.85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.618	21.609	(0.977)	4864908	80.0000	80.68
75	Benzo(k)fluoranthene	252	21.655	21.641	(0.978)	4926982	80.0000	81.46
187	Total Benzofluoranthenes	252	21.655	21.641	(0.978)	9068544	160.000	129.2
76	Benzo(a)pyrene	252	22.066	22.057	(0.997)	4550492	80.0000	69.86
* 77	Perylene-d12	264	22.136	22.137	(1.000)	1523971	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.781	23.767	(1.074)	5915162	80.0000	75.46
79	Dibenzo(a,h)anthracene	278	23.808	23.788	(1.076)	4704710	80.0000	76.22
80	Benzo(g,h,i)perylene	276	24.251	24.226	(1.096)	5163322	80.0000	77.02
90	N-Nitrosodimethylamine	74	3.962	3.889	(0.472)	1562474	80.0000	79.92
103	Pyridine	79	3.914	3.851	(0.467)	2412972	80.0000	77.83
91	Aniline	93	7.947	7.938	(0.948)	2567853	80.0000	69.90
105	1-methylnaphthalene	141	11.751	11.747	(1.127)	2492684	80.0000	63.52
93	Benzidine	184	17.873	17.874	(0.894)	580818	80.0000	85.40
111	Azobenzene (1,2-DP-Hydrazine)	77	14.438	14.423	(1.086)	3533789	80.0000	62.91
143	1,4-Dioxane	88	3.145	3.103	(0.375)	1031006	80.0000	76.55
$ 137	d8-1,4-Dioxane	96	3.086	3.039	(0.368)	961171	80.0000	76.25
144	alpha-Terpineol	59	10.485	10.470	(1.006)	1341096	80.0000	66.39
177	p-Benzoquinone	82	7.092	7.083	(0.680)	489430	80.0000	80.68
98	Retene	219	18.546	18.548	(0.928)	2364163	80.0000	71.92
99	Perylene	252	22.179	22.175	(1.002)	3766561	80.0000	66.01
133	Butylatedhydroxytoluene	205	13.450	13.440	(1.012)	2177090	80.0000	81.45
115	Tributyl Phosphate	99	14.486	14.461	(0.925)	3817283	80.0000	82.14
116	Dibutyl Phenyl Phosphate	175	16.190	16.192	(1.033)	1918467	80.0000	49.90
117	Butyl Diphenyl Phosphate	94	17.878	17.880	(0.895)	853223	80.0000	66.44
118	Triphenyl Phosphate	326	19.486	19.482	(0.975)	977320	80.0000	80.02
123	Acetophenone	105	9.090	9.076	(1.084)	2797491	80.0000	71.59
168	Pentachlorobenzene	250	13.647	13.638	(1.027)	1407461	80.0000	72.48
113	Diphenyl Oxide	170	12.541	12.538	(0.944)	2312992	80.0000	67.02
112	Biphenyl	154	12.349	12.345	(0.929)	2906690	80.0000	82.21
120	2,3,4,6-Tetrachlorophenol	232	13.882	13.873	(1.045)	1039446	80.0000	82.14
151	1,2,4,5-Tetrachlorobenzene	216	11.911	11.907	(0.896)	1558330	80.0000	71.96
110	Tetrachloroguaiacol	247	15.613	15.599	(0.997)	1120414	160.000	146.9
109	3,4,5-Trichloroguaiacol	213	13.978	13.969	(0.892)	631624	80.0000	76.05
181	3,4,6-Trichloroguaiacol	211	14.096	14.087	(1.681)	701991	80.0000	74.11
108	4,5,6-Trichloroguaiacol	213	15.004	15.000	(1.129)	636275	80.0000	76.74
184	3,4-Dichloroguaiacol	192	12.435	12.425	(1.483)	679803	80.0000	75.59
107	4,5-Dichloroguaiacol	192	13.220	13.205	(0.995)	1631611	160.000	150.6
182	4,6-Dichloroguaiacol	192	13.220	13.205	(1.577)	1631611	160.000	148.7
185	4-Chloroguaiacol	115	11.345	11.336	(1.353)	471670	40.0000	40.44
186	Carbaryl	144	16.473	16.459	(1.051)	2446617	80.0000	72.82
178	2-Benzyl-4-Chlorophenol	218	16.425	16.411	(1.048)	926358	80.0000	76.92
106	Guaiacol	124	9.347	9.332	(1.115)	1407845	80.0000	65.19
188	2,6-Dichlorophenol	162	10.613	10.598	(1.266)	1300919	80.0000	70.78
189	N-Nitrosomethylethylamine	88	5.634	5.620	(0.672)	1095419	80.0000	79.86

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061308.D
Lab Smp Id: IC80306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC800306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	415136	-9.38
27 Naphthalene-d8	1718341	859170	3436682	1588502	-7.56
42 Acenaphthene-d10	1010041	505020	2020082	886542	-12.23
59 Phenanthrene-d10	1666734	833367	3333468	1453987	-12.76
69 Chrysene-d12	1675752	837876	3351504	1394767	-16.77
134 Di-n-octylphthala	2026355	1013178	4052710	1577157	-22.17
77 Perylene-d12	1637524	818762	3275048	1523971	-6.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.02
27 Naphthalene-d8	10.42	9.92	10.92	10.43	0.04
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.03
59 Phenanthrene-d10	15.66	15.16	16.16	15.67	0.02
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.02
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.03
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.01

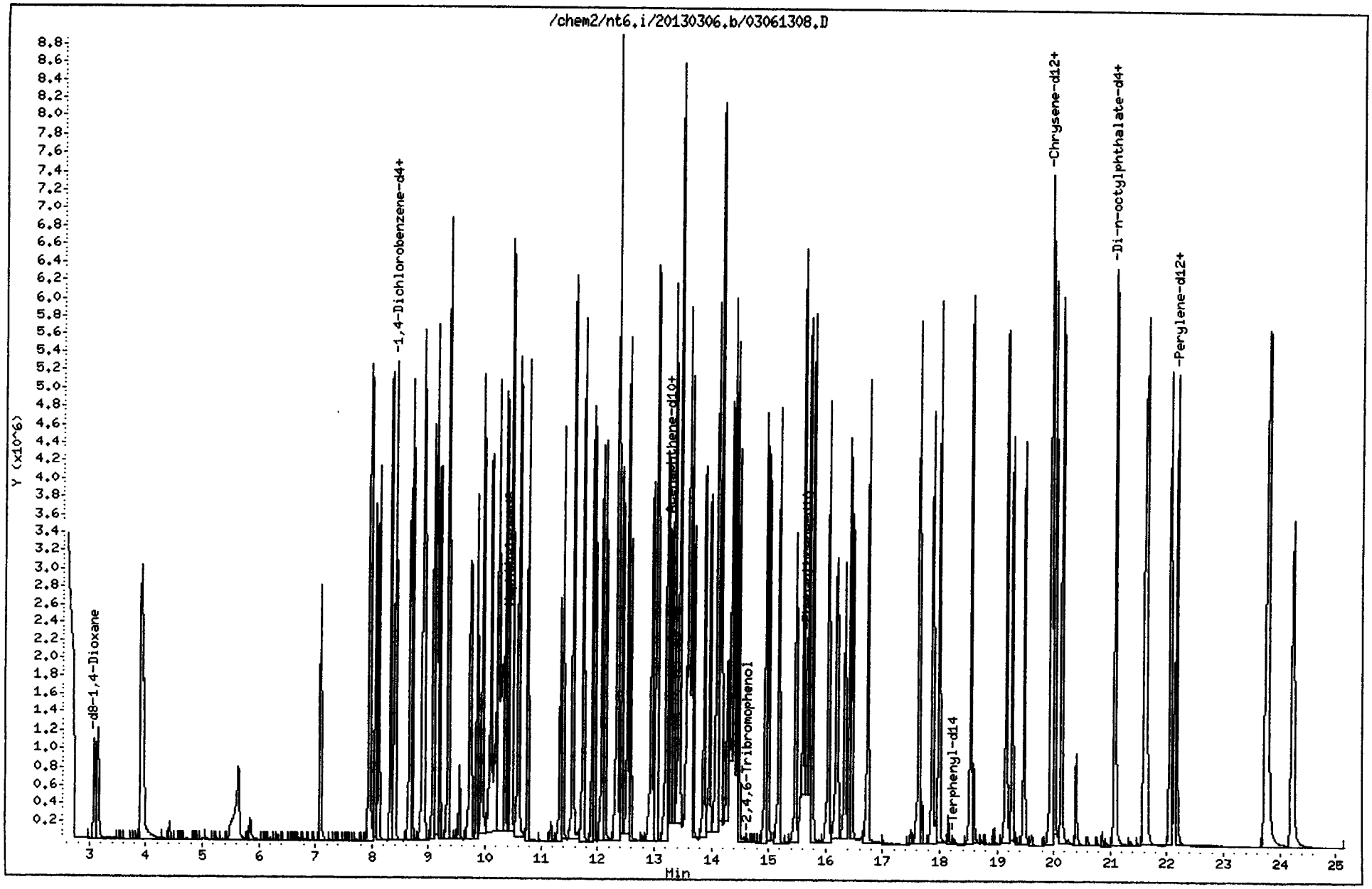
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061308.D
Date : 06-MAR-2013 16:18
Client ID: IC800306
Sample Info: IC80306,

Instrument: nt6.i

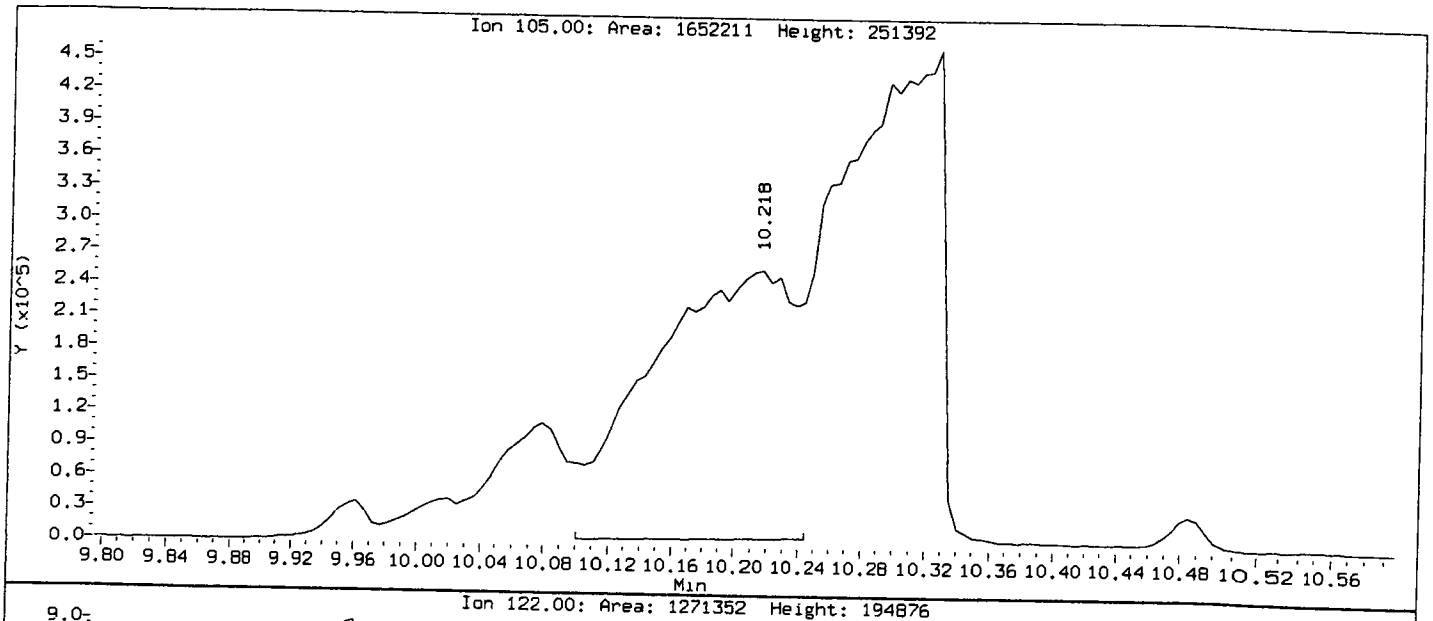
Operator: JZ
Column diameter: 0.32

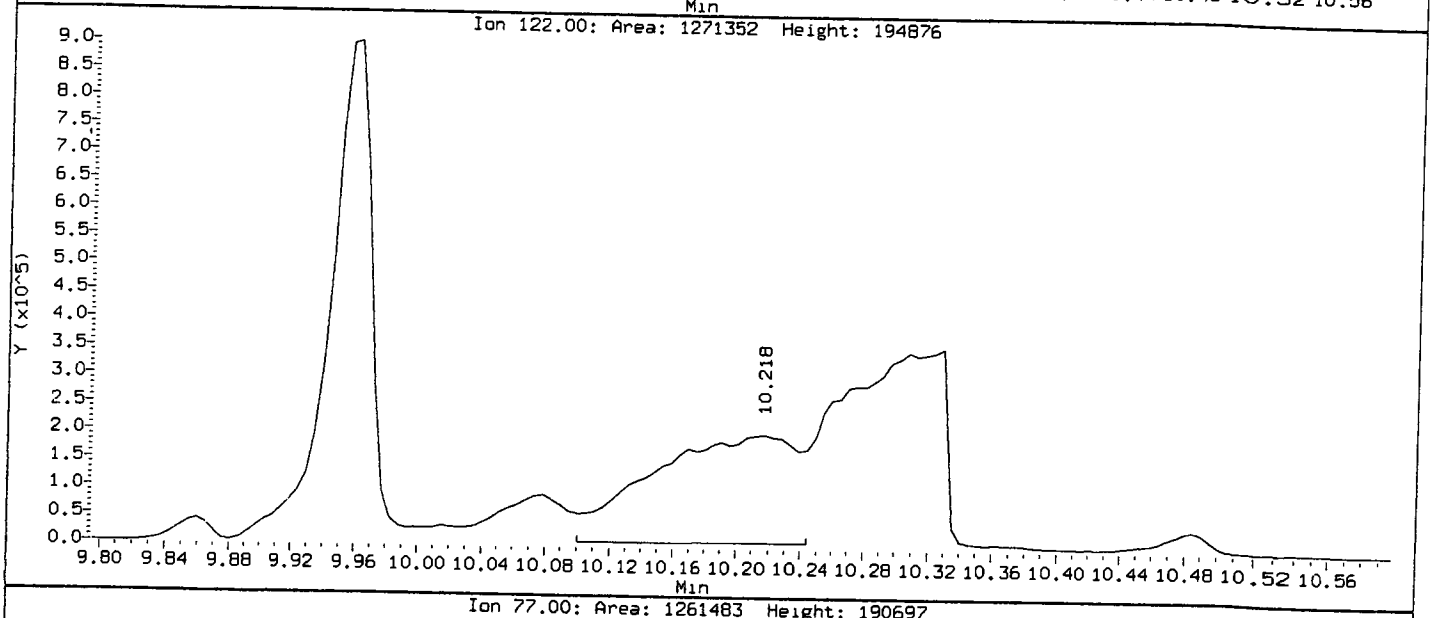
Column phase: ZB-5msi

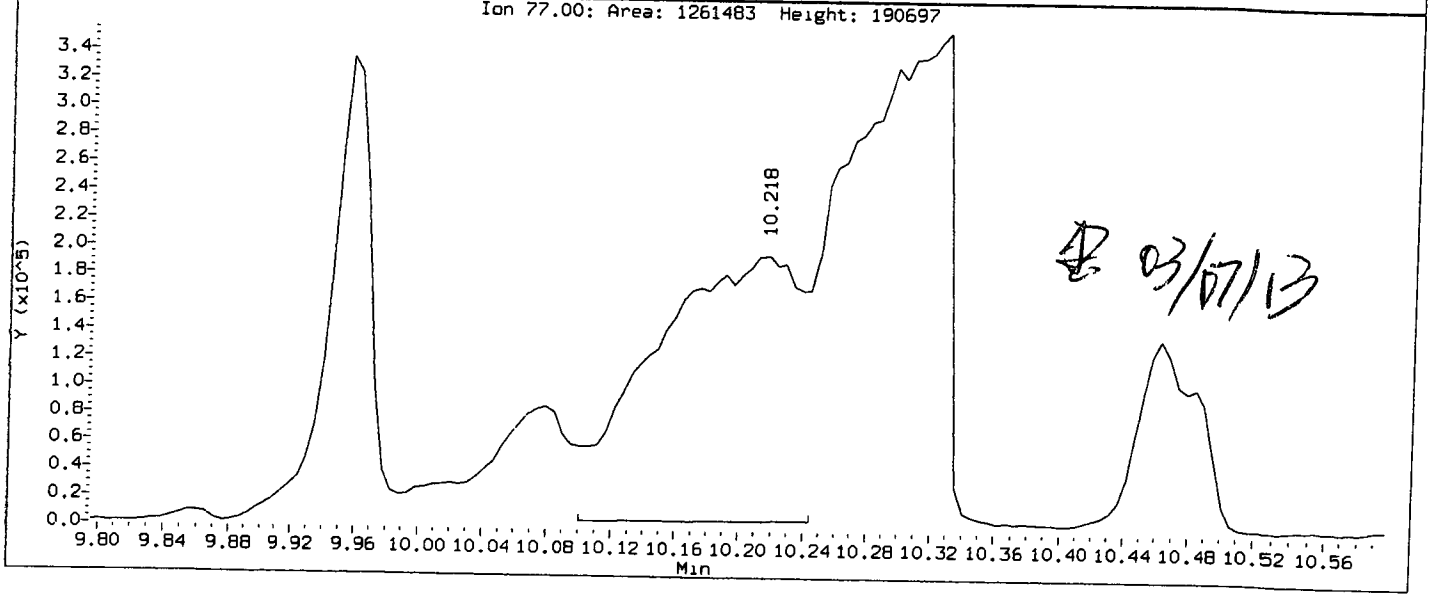


Data File: /chem2/nt6.1/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.1
Client Sample ID: IC800306

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



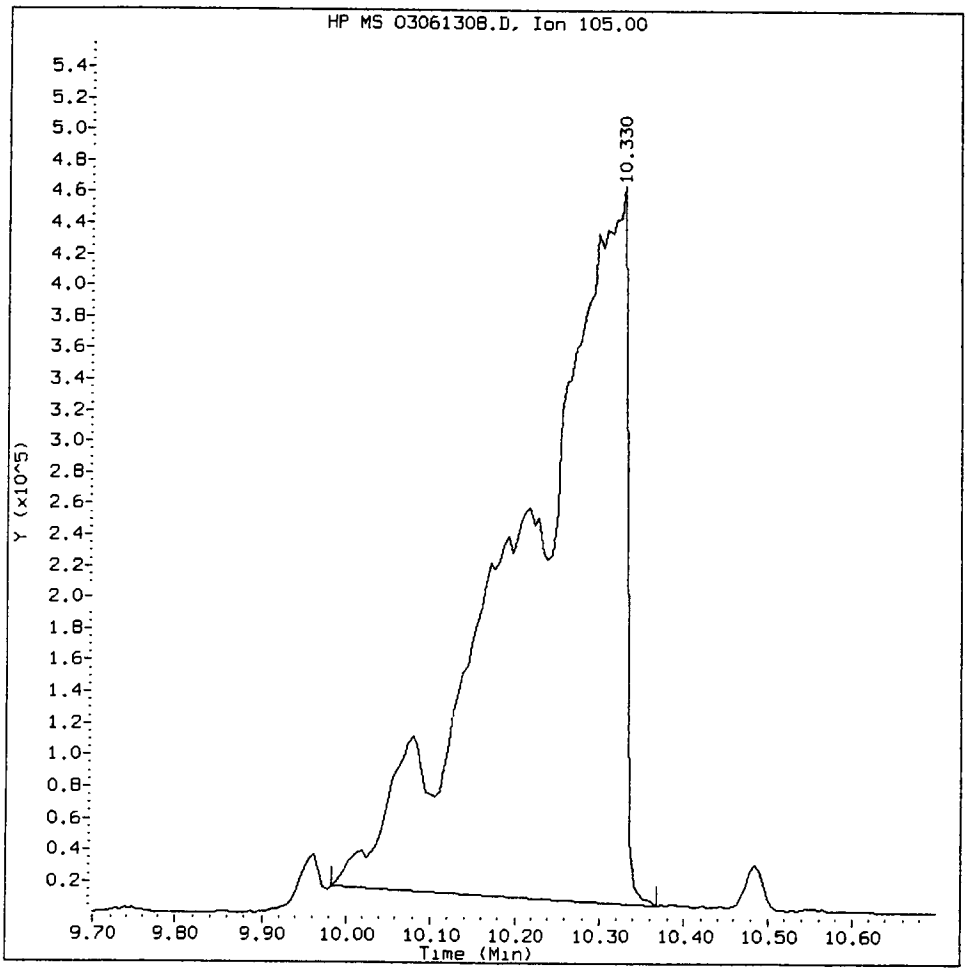




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

Benzoic acid Amount: 168.44 Area: 3889953



MANUAL INTEGRATION for Benzoic acid

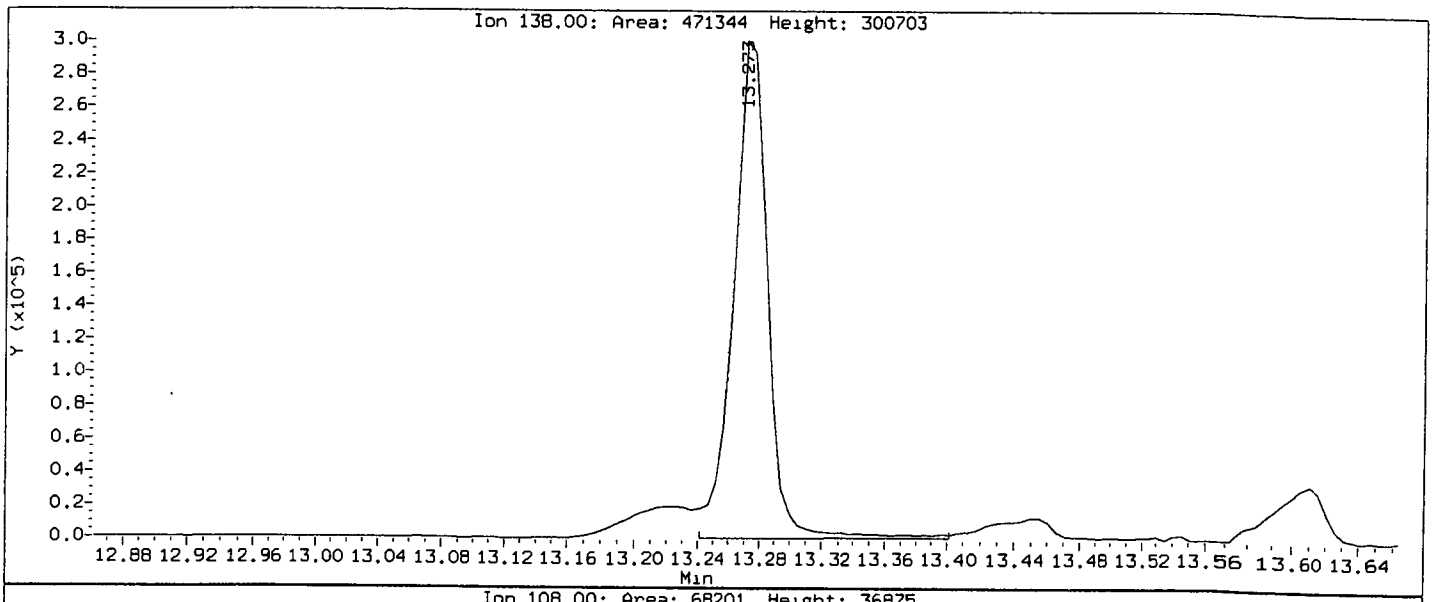
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

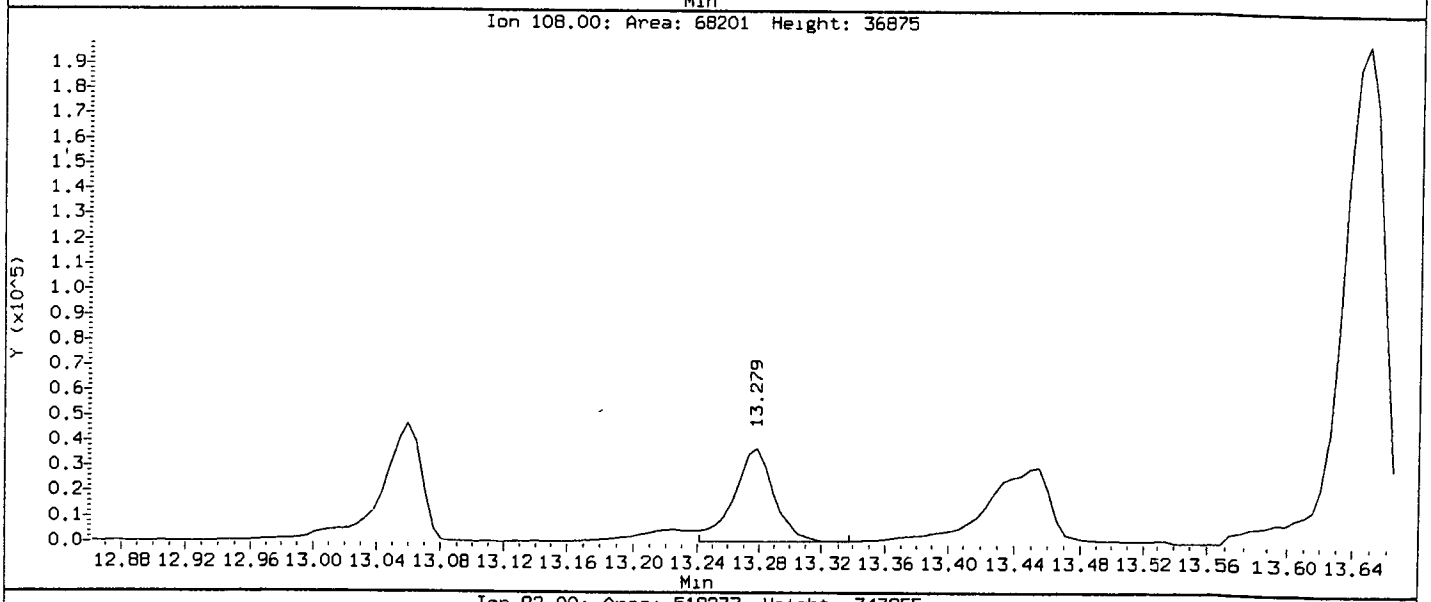
5. Other _____

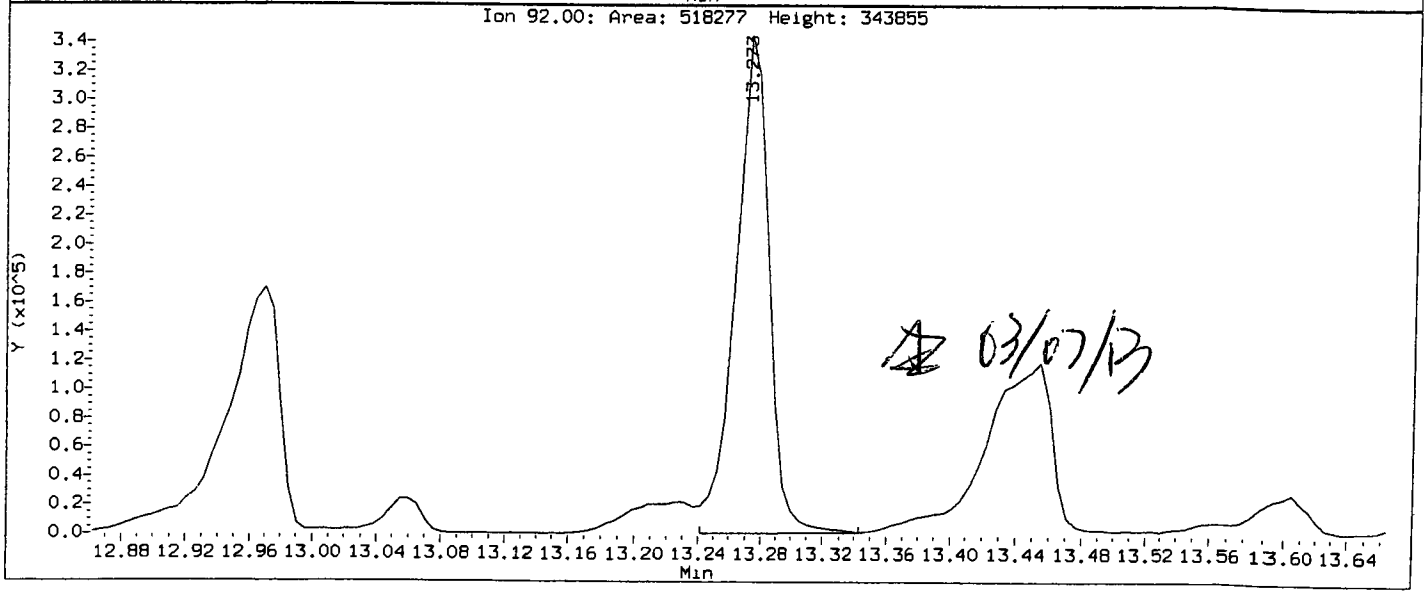
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.1/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.1
Client Sample ID: ICB00306

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



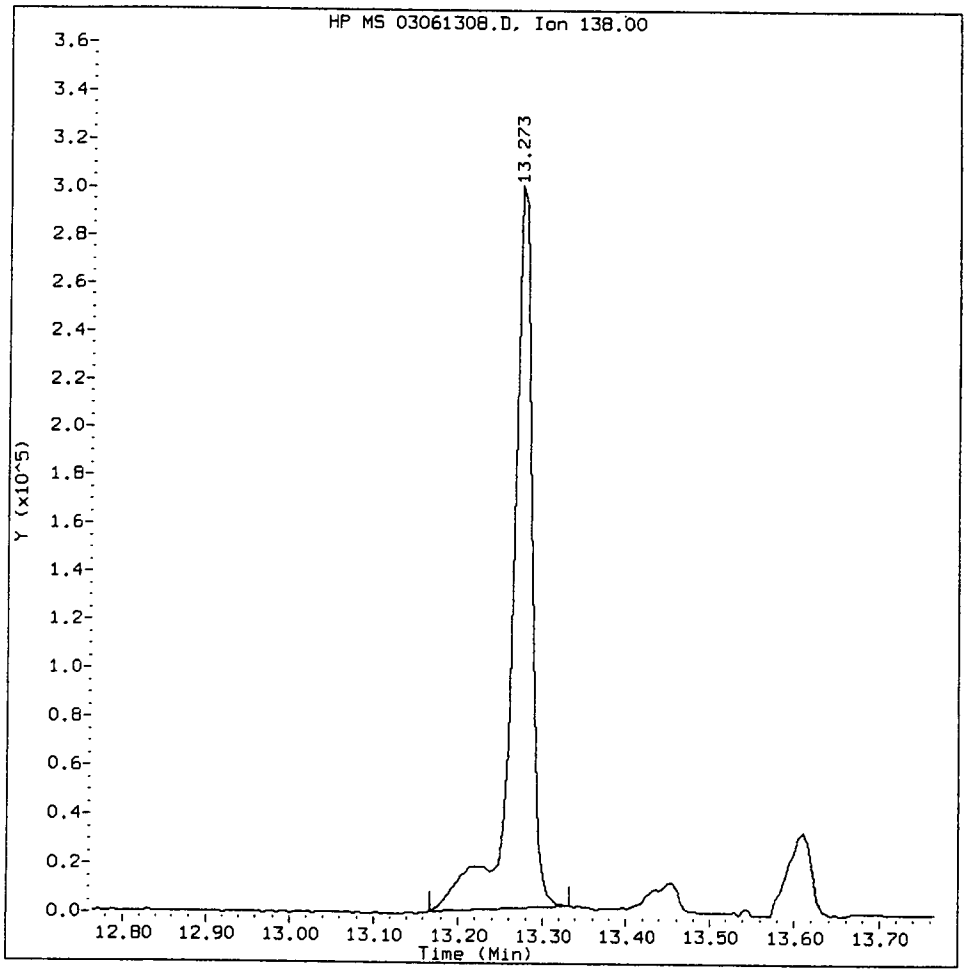




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

3-Nitroaniline Amount: 81.26 Area: 496848



MANUAL INTEGRATION for 3-Nitroaniline

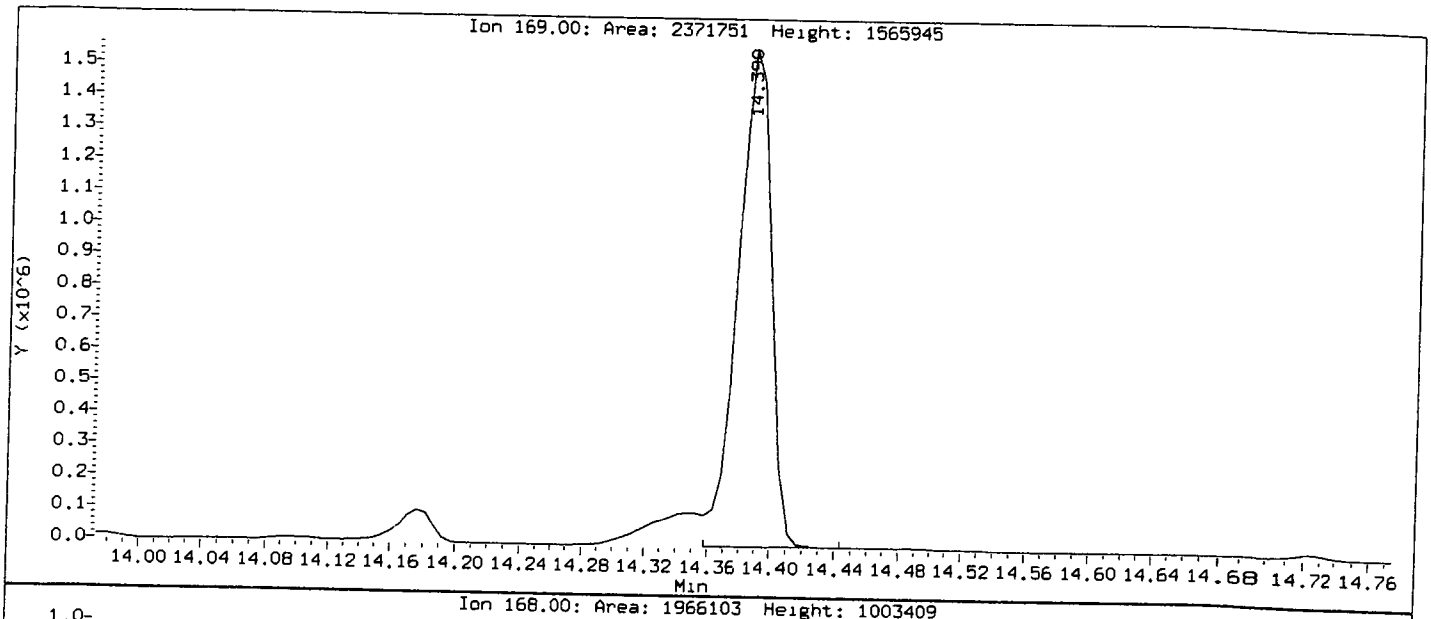
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

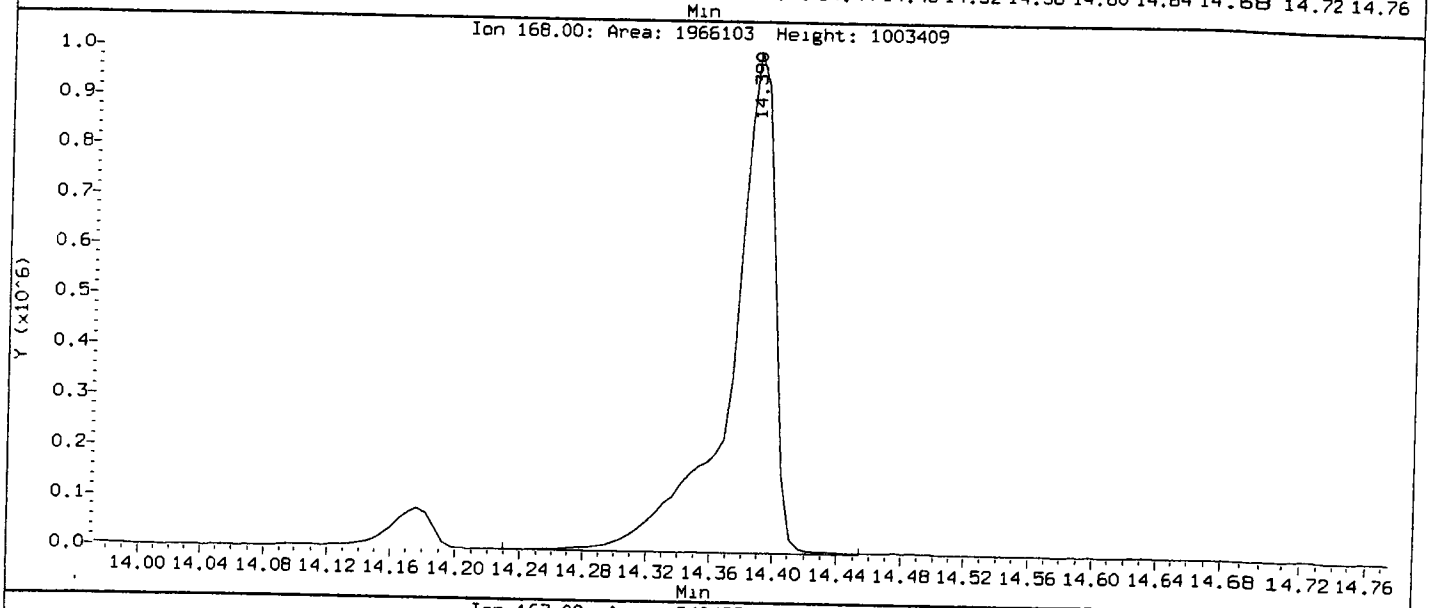
5. Other _____

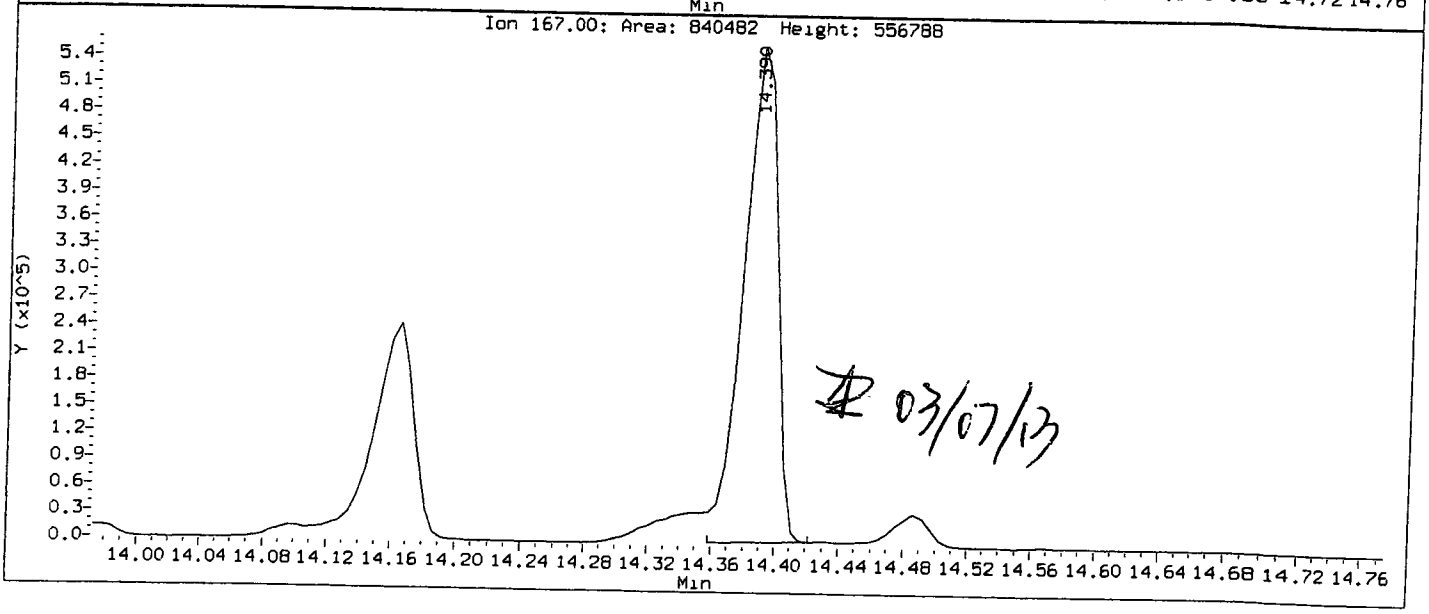
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: IC800306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



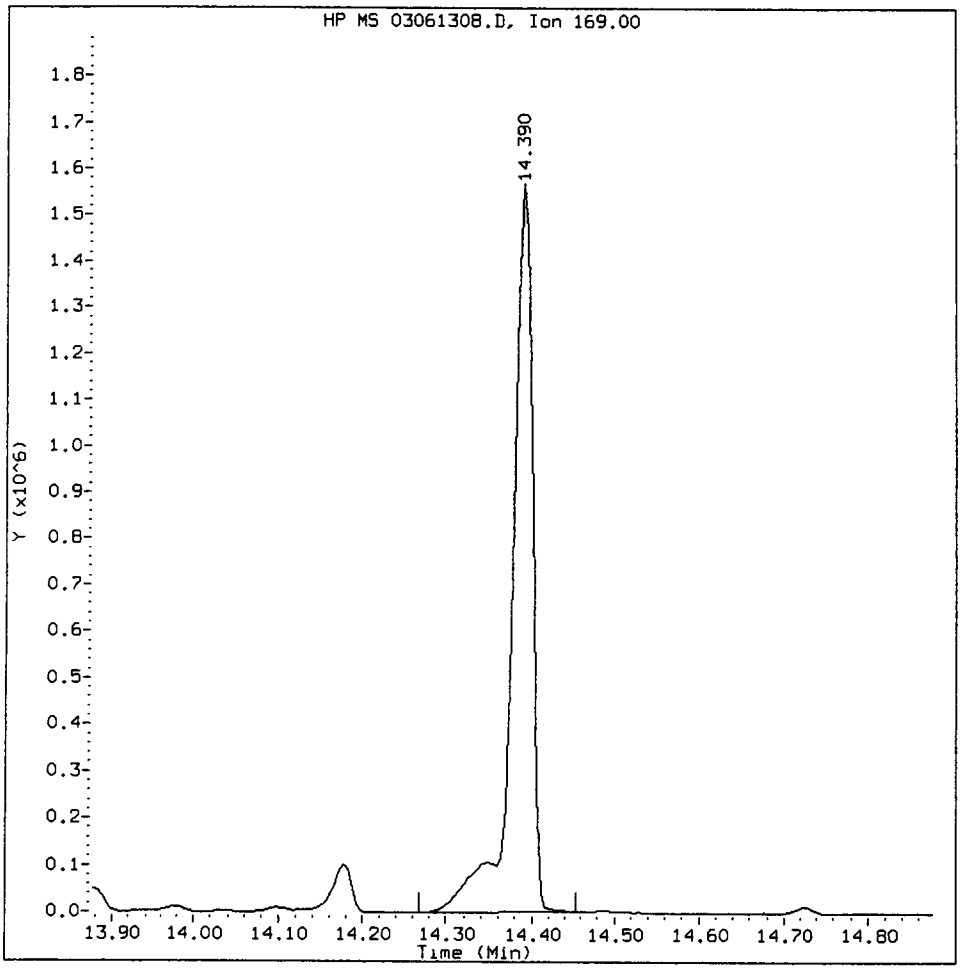




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

N-Nitrosodiphenylamine Amount: 64.16 Area: 2609924



MANUAL INTEGRATION for N-Nitrosodiphenylamine

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

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061308.D

Lab ID: IC80306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061309.D
Lab Smp Id: ICV0306 Client Smp ID: ICV0306
Inj Date : 06-MAR-2013 16:52
Operator : JZ Inst ID: nt6.i
Smp Info : ICV0306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 14:16 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICVS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 03/07/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1 2-Fluorophenol	112	6.429	6.432	(0.767)	680731	24.0771	24.08
$ 2 Phenol-d5	99	7.930	7.933	(0.946)	780413	23.5802	23.58
3 Phenol	94	7.952	7.969	(0.948)	902305	25.8922	25.89
$ 5 2-Chlorophenol-d4	132	8.080	8.082	(0.964)	662890	23.6945	23.69
4 Bis(2-Chloroethyl)ether	93	8.048	8.059	(0.960)	698741	23.0879	23.09
6 2-Chlorophenol	128	8.107	8.118	(0.967)	729337	26.1581	26.16
7 1,3-Dichlorobenzene	146	8.326	8.332	(0.993)	749128	23.0049	23.00
* 8 1,4-Dichlorobenzene-d4	152	8.384	8.385	(1.000)	436336	20.0000	
9 1,4-Dichlorobenzene	146	8.411	8.417	(1.003)	733836	23.1542	23.15
$ 10 1,2-Dichlorobenzene-d4	152	8.684	8.681	(1.036)	461465	23.4361	23.44
12 1,2-Dichlorobenzene	146	8.705	8.706	(1.038)	693297	22.8826	22.88
11 Benzyl alcohol	108	8.651	8.674	(1.032)	448309	23.6141	23.61
14 2,2'-oxybis(1-Chloropropane)	45	8.908	8.919	(1.062)	1134956	23.6031	23.60
13 2-Methylphenol	108	8.876	8.898	(1.059)	723080	27.3638	27.36
17 Hexachloroethane	117	9.191	9.192	(1.096)	297182	23.1817	23.18
16 N-Nitroso-di-n-propylamine	70	9.127	9.155	(1.089)	503015	22.1475	22.15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	9.106	9.128	(1.086)	729199	27.9061	27.91
$	18 Nitrobenzene-d5	82	9.309	9.311	(0.893)	772979	24.0494	24.05
	19 Nitrobenzene	77	9.335	9.358	(0.896)	711278	23.1206	23.12
	20 Isophorone	82	9.715	9.742	(0.932)	1353521	25.2423	25.24
	21 2-Nitrophenol	139	9.848	9.860	(0.945)	393118	27.6169	27.62
	22 2,4-Dimethylphenol	107	9.944	9.961	(0.954)	711827	26.4423	26.44
	23 Bis(2-Chloroethoxy)methane	93	10.094	10.111	(0.969)	770762	21.9078	21.91
	24 Benzoic acid	105	10.201	10.330	(0.979)	1345602	57.7442	57.74
	25 2,4-Dichlorophenol	162	10.222	10.239	(0.981)	573091	27.6475	27.65
	26 1,2,4-Trichlorobenzene	180	10.361	10.367	(0.994)	592045	22.9449	22.94
*	27 Naphthalene-d8	136	10.420	10.426	(1.000)	1601740	20.0000	
	28 Naphthalene	128	10.452	10.463	(1.003)	1764697	25.6575	25.66
	29 4-Chloroaniline	127	10.585	10.602	(1.016)	659198	32.3122	32.31
	30 Hexachlorobutadiene	225	10.762	10.768	(1.033)	362788	23.1045	23.10
	31 4-Chloro-3-methylphenol	107	11.381	11.393	(1.092)	612805	27.8320	27.83
	32 2-Methylnaphthalene	141	11.568	11.580	(1.110)	906115	23.2622	23.26
	33 Hexachlorocyclopentadiene	237	11.942	11.948	(0.899)	375240	24.8473	24.85
	34 2,4,6-Trichlorophenol	196	12.076	12.087	(0.909)	427256	27.0392	27.04
	35 2,4,5-Trichlorophenol	196	12.129	12.141	(0.913)	468145	30.0326	30.03
$	36 2-Fluorobiphenyl	172	12.204	12.212	(0.919)	1325851	22.3460	22.35
	37 2-Chloronaphthalene	162	12.348	12.360	(0.930)	1001690	24.8929	24.89
	38 2-Nitroaniline	65	12.573	12.595	(0.947)	351131	25.2684	25.27
	39 Dimethylphthalate	163	12.941	12.969	(0.975)	1245240	22.0112	22.01
	40 Acenaphthylene	152	13.027	13.038	(0.981)	1824648	24.6099	24.61
	41 2,6-Dinitrotoluene	165	13.037	13.060	(0.982)	275947	22.8301	22.83
*	42 Acenaphthene-d10	164	13.278	13.289	(1.000)	939966	20.0000	
	43 3-Nitroaniline	138	13.256	13.273	(0.998)	239619	28.0702	28.07
	44 Acenaphthene	153	13.331	13.348	(1.004)	1129525	23.5301	23.53
	45 2,4-Dinitrophenol	184	13.422	13.455	(1.011)	479725	55.5689	55.57
	46 Dibenzofuran	168	13.593	13.610	(1.024)	1455003	23.1752	23.18
	47 4-Nitrophenol	109	13.534	13.567	(1.019)	172005	28.0119	28.01
	48 2,4-Dinitrotoluene	165	13.668	13.690	(1.029)	385311	23.5679	23.57
	50 Diethylphthalate	149	14.095	14.112	(1.062)	1220857	23.2922	23.29
	49 Fluorene	166	14.148	14.165	(1.066)	1223636	27.6871	27.69
	51 4-Chlorophenyl-phenylether	204	14.165	14.176	(1.067)	596246	21.6357	21.64
	52 4-Nitroaniline	138	14.245	14.288	(1.073)	251920	27.3255	27.33
	53 4,6-Dinitro-2-methylphenol	198	14.325	14.358	(0.915)	572575	53.7527	53.75
	54 N-Nitrosodiphenylamine	169	14.368	14.390	(0.918)	914372	22.7358	22.74
$	55 2,4,6-Tribromophenol	330	14.571	14.573	(1.097)	189554	25.5032	25.50
	56 4-Bromophenyl-phenylether	248	14.944	14.956	(0.955)	377350	23.2428	23.24
	57 Hexachlorobenzene	284	15.174	15.186	(0.969)	384515	22.9728	22.97
	58 Pentachlorophenol	266	15.468	15.480	(0.988)	287065	29.0708	29.07
*	59 Phenanthrene-d10	188	15.655	15.667	(1.000)	1479267	20.0000	
	60 Phenanthrene	178	15.692	15.709	(1.002)	1680027	22.9553	22.96
	61 Anthracene	178	15.767	15.784	(1.007)	1755058	23.9500	23.95
	62 Carbazole	167	16.040	16.057	(1.025)	1330730	26.0182	26.02
	63 Di-n-butylphthalate	149	16.734	16.751	(1.069)	2030430	21.9779	21.98

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	17.626	17.643	(1.126)	1972942	25.6259	25.63
	65 Pyrene	202	17.984	18.001	(0.901)	2056966	25.5013	25.50
$	66 Terphenyl-d14	244	18.283	18.291	(0.916)	1211475	23.3683	23.37
	67 Butylbenzylphthalate	149	19.154	19.171	(0.959)	908272	23.0277	23.03
	68 Benzo(a)anthracene	228	19.939	19.956	(0.999)	1685817	25.0357	25.04
*	69 Chrysene-d12	240	19.966	19.983	(1.000)	1476943	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.939	19.951	(0.999)	451257	24.3578	24.36
	71 Chrysene	228	20.009	20.026	(1.002)	1736178	25.2571	25.26
	72 bis(2-Ethylhexyl)phthalate	149	20.137	20.149	(0.956)	1228581	22.7274	22.73
*	134 Di-n-octylphthalate-d4	153	21.072	21.078	(1.000)	1837060	20.0000	
	73 Di-n-octylphthalate	149	21.083	21.089	(1.000)	1880578	21.6808	21.68
	74 Benzo(b)fluoranthene	252	21.595	21.618	(0.976)	1566636	23.6801	23.68
	75 Benzo(k)fluoranthene	252	21.627	21.655	(0.978)	1994452	28.1196	28.12
	187 Total Benzofluoranthenes	252	21.627	21.655	(0.978)	3327670	49.3546	49.35
	76 Benzo(a)pyrene	252	22.044	22.066	(0.996)	1613570	25.7778	25.78
*	77 Perylene-d12	264	22.124	22.136	(1.000)	1464482	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.743	23.781	(1.073)	1965367	26.0897	26.09
	79 Dibenzo(a,h)anthracene	278	23.770	23.808	(1.074)	1560578	26.3098	26.31
	80 Benzo(g,h,i)perylene	276	24.202	24.251	(1.094)	1686995	26.1865	26.19
	90 N-Nitrosodimethylamine	74	3.897	3.962	(0.465)	477683	23.2474	23.25
	103 Pyridine	79	3.860	3.914	(0.460)	714173	21.9157	21.92
	91 Aniline	93	7.941	7.947	(0.947)	926839	24.0038	24.00
	105 1-methylnaphthalene	141	11.739	11.751	(1.127)	940259	23.7617	23.76
	93 Benzidine	184	17.867	17.873	(0.895)	240615	33.4934	33.49(R)
	111 Azobenzene (1,2-DP-Hydrazine)	77	14.416	14.438	(1.086)	1374366	23.0768	23.08
	143 1,4-Dioxane	88	3.112	3.145	(0.371)	350623	24.7683	24.77
$	137 d8-1,4-Dioxane	96	3.053	3.086	(0.364)	318432	24.0340	24.03
	144 alpha-Terpineol	59	10.468	10.485	(1.005)	525055	25.7775	25.78
	177 p-Benzoquinone	82	7.081	7.092	(0.680)	168536	27.5531	27.55
	98 Retene	219	18.534	18.546	(0.928)	857189	24.6256	24.63
	99 Perylene	252	22.156	22.179	(1.001)	1395665	25.4541	25.45
	133 Butylatedhydroxytoluene	205	13.438	13.450	(1.012)	979147	24.7376	24.74
	115 Tributyl Phosphate	99	14.453	14.486	(0.923)	1516405	26.7138	26.71
	116 Dibutyl Phenyl Phosphate	175	16.189	16.190	(1.034)	1011072	25.8473	25.85
	117 Butyl Diphenyl Phosphate	94	17.867	17.878	(0.895)	334533	24.6000	24.60
	118 Triphenyl Phosphate	326	19.475	19.486	(0.975)	321794	24.8809	24.88
	123 Acetophenone	105	9.073	9.090	(1.082)	978965	23.8352	23.84
	168 Pentachlorobenzene	250	13.636	13.647	(1.027)	526515	25.5739	25.57
	113 Diphenyl Oxide	170	12.530	12.541	(0.944)	860260	23.5091	23.51
	112 Biphenyl	154	12.338	12.349	(0.929)	1201266	26.6016	26.60
	120 2,3,4,6-Tetrachlorophenol	232	13.865	13.882	(1.044)	367023	27.3555	27.36
	151 1,2,4,5-Tetrachlorobenzene	216	11.905	11.911	(0.897)	595534	25.9384	25.94
	110 Tetrachloroguaiacol	247	15.596	15.613	(0.996)	430258	55.4316	55.43
	109 3,4,5-Trichloroguaiacol	213	13.962	13.978	(0.892)	229733	27.1873	27.19
	181 3,4,6-Trichloroguaiacol	211	14.079	14.096	(1.679)	263271	26.4421	26.44
	108 4,5,6-Trichloroguaiacol	213	14.993	15.004	(1.129)	232582	26.4561	26.46
	184 3,4-Dichloroguaiacol	192	12.423	12.435	(1.482)	244376	25.8587	25.86

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
107 4,5-Dichloroguaiacol	192	13.203	13.220	(0.994)	600400	52.2673	52.27
182 4,6-Dichloroguaiacol	192	13.203	13.220	(1.575)	597711	51.8329	51.83
185 4-Chloroguaiacol	115	11.333	11.345	(1.352)	158010	12.8882	12.89
186 Carbaryl	144	16.451	16.473	(1.051)	922128	26.9774	26.98
178 2-Benzyl-4-Chlorophenol	218	16.403	16.425	(1.048)	320599	26.1670	26.17
106 Guaiacol	124	9.330	9.347	(1.113)	546489	24.0770	24.08

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem2/nt6.i/20130306.b/03061309.D
Report Date: 07-Mar-2013 14:18

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061309.D
Lab Smp Id: ICV0306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: ICV0306
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	436336	-4.75
27 Naphthalene-d8	1718341	859170	3436682	1601740	-6.79
42 Acenaphthene-d10	1010041	505020	2020082	939966	-6.94
59 Phenanthrene-d10	1666734	833367	3333468	1479267	-11.25
69 Chrysene-d12	1675752	837876	3351504	1476943	-11.86
134 Di-n-octylphthala	2026355	1013178	4052710	1837060	-9.34
77 Perylene-d12	1637524	818762	3275048	1464482	-10.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.02
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.07
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77 Perylene-d12	22.14	21.64	22.64	22.12	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV0306
Level: LOW
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: ICVS.sub
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Client SDG: 20130306
Fraction: SV
Client Smp ID: ICV0306
Operator: JZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	25.89	103.57	70-130
4 Bis(2-Chloroethyl)	25.00	23.09	92.35	70-130
6 2-Chlorophenol	25.00	26.16	104.63	70-130
7 1,3-Dichlorobenzen	25.00	23.00	92.02	70-130
9 1,4-Dichlorobenzen	25.00	23.15	92.62	70-130
11 Benzyl alcohol	25.00	23.61	94.46	70-130
12 1,2-Dichlorobenzen	25.00	22.88	91.53	70-130
13 2-Methylphenol	25.00	27.36	109.46	70-130
14 2,2'-oxybis(1-Chlo	25.00	23.60	94.41	70-130
15 4-Methylphenol	25.00	27.91	111.62	70-130
16 N-Nitroso-di-n-pro	25.00	22.15	88.59	70-130
17 Hexachloroethane	25.00	23.18	92.73	70-130
19 Nitrobenzene	25.00	23.12	92.48	70-130
20 Isophorone	25.00	25.24	100.97	70-130
21 2-Nitrophenol	25.00	27.62	110.47	70-130
22 2,4-Dimethylphenol	25.00	26.44	105.77	70-130
23 Bis(2-Chloroethoxy	25.00	21.91	87.63	70-130
24 Benzoic acid	50.00	57.74	115.49	70-130
25 2,4-Dichlorophenol	25.00	27.65	110.59	70-130
26 1,2,4-Trichloroben	25.00	22.94	91.78	70-130
28 Naphthalene	25.00	25.66	102.63	70-130
29 4-Chloroaniline	25.00	32.31	129.25	70-130
30 Hexachlorobutadien	25.00	23.10	92.42	70-130
31 4-Chloro-3-methylp	25.00	27.83	111.33	70-130
32 2-Methylnaphthalen	25.00	23.26	93.05	70-130
33 Hexachlorocyclopen	25.00	24.85	99.39	70-130
34 2,4,6-Trichlorophe	25.00	27.04	108.16	70-130
35 2,4,5-Trichlorophe	25.00	30.03	120.13	70-130
37 2-Chloronaphthalen	25.00	24.89	99.57	70-130
38 2-Nitroaniline	25.00	25.27	101.07	70-130
39 Dimethylphthalate	25.00	22.01	88.04	70-130
40 Acenaphthylene	25.00	24.61	98.44	70-130
41 2,6-Dinitrotoluene	25.00	22.83	91.32	70-130

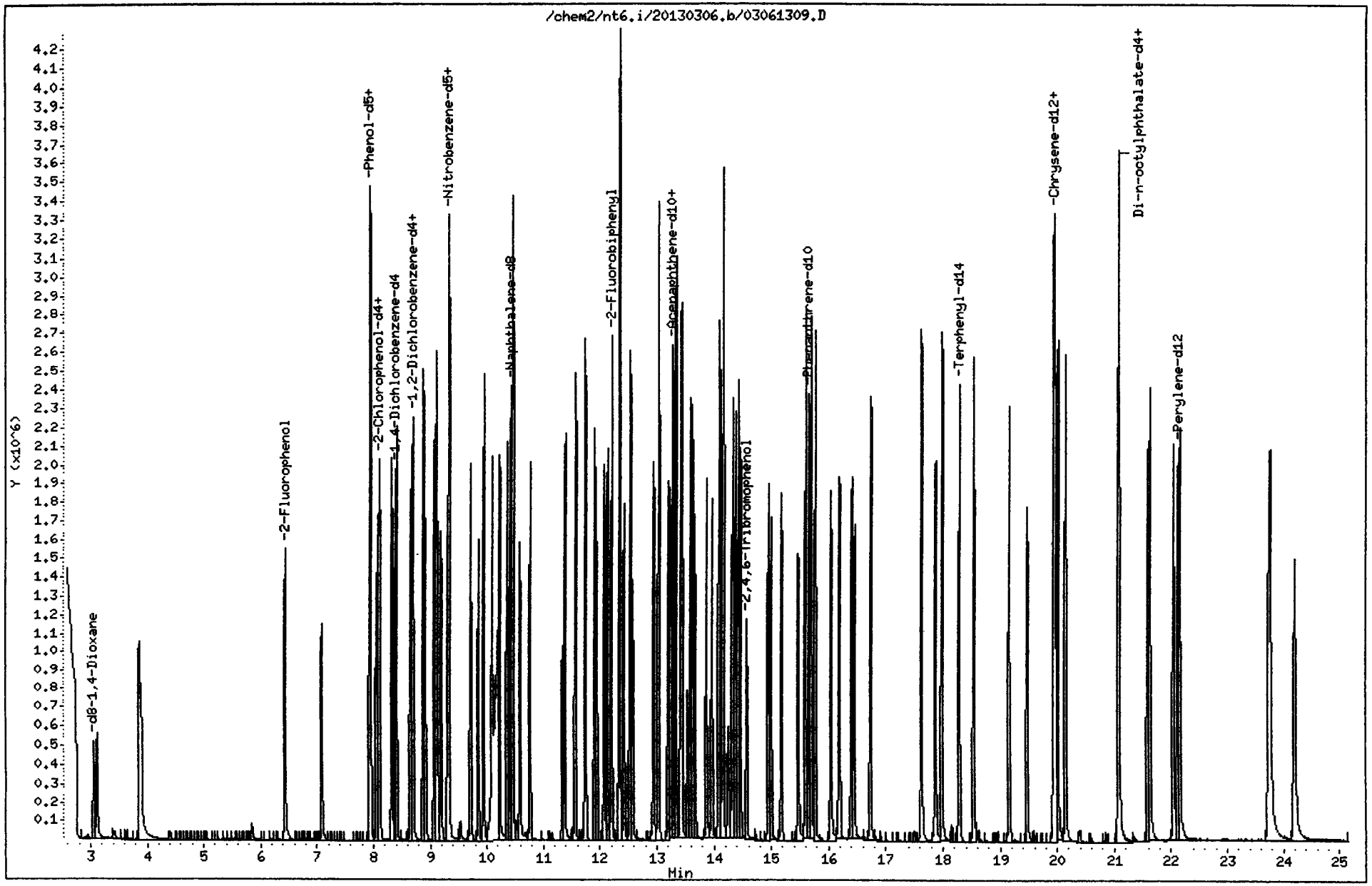
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	25.00	28.07	112.28	70-130
44	Acenaphthene	25.00	23.53	94.12	70-130
45	2,4-Dinitrophenol	50.00	55.57	111.14	70-130
46	Dibenzofuran	25.00	23.18	92.70	70-130
47	4-Nitrophenol	25.00	28.01	112.05	70-130
48	2,4-Dinitrotoluene	25.00	23.57	94.27	70-130
49	Fluorene	25.00	27.69	110.75	70-130
50	Diethylphthalate	25.00	23.29	93.17	70-130
51	4-Chlorophenyl-phe	25.00	21.64	86.54	70-130
52	4-Nitroaniline	25.00	27.33	109.30	70-130
53	4,6-Dinitro-2-meth	50.00	53.75	107.51	70-130
54	N-Nitrosodiphenyla	25.00	22.74	90.94	70-130
56	4-Bromophenyl-phen	25.00	23.24	92.97	70-130
57	Hexachlorobenzene	25.00	22.97	91.89	70-130
58	Pentachlorophenol	25.00	29.07	116.28	70-130
60	Phenanthrene	25.00	22.96	91.82	70-130
61	Anthracene	25.00	23.95	95.80	70-130
62	Carbazole	25.00	26.02	104.07	70-130
63	Di-n-butylphthalat	25.00	21.98	87.91	70-130
64	Fluoranthene	25.00	25.63	102.50	70-130
65	Pyrene	25.00	25.50	102.01	70-130
67	Butylbenzylphthala	25.00	23.03	92.11	70-130
68	Benzo(a)anthracene	25.00	25.04	100.14	70-130
70	3,3'-Dichlorobenzi	25.00	24.36	97.43	70-130
71	Chrysene	25.00	25.26	101.03	70-130
72	bis(2-Ethylhexyl)p	25.00	22.73	90.91	70-130
73	Di-n-octylphthalat	25.00	21.68	86.72	70-130
74	Benzo(b)fluoranthe	25.00	23.68	94.72	70-130
75	Benzo(k)fluoranthe	25.00	28.12	112.48	70-130
187	Total Benzofluoran	50.00	49.35	98.71	70-130
76	Benzo(a)pyrene	25.00	25.78	103.11	70-130
78	Indeno(1,2,3-cd)py	25.00	26.09	104.36	70-130
79	Dibenzo(a,h)anthra	25.00	26.31	105.24	70-130
80	Benzo(g,h,i)peryle	25.00	26.19	104.75	70-130
90	N-Nitrosodimethyla	25.00	23.25	92.99	70-130
103	Pyridine	25.00	21.92	87.66	70-130
91	Aniline	25.00	24.00	96.02	70-130
105	1-methylnaphthalen	25.00	23.76	95.05	70-130
93	Benzidine	25.00	33.49	133.97*	70-130
111	Azobenzene (1,2-DP	25.00	23.08	92.31	70-130
143	1,4-Dioxane	25.00	24.77	99.07	70-130
144	alpha-Terpineol	25.00	25.78	103.11	70-130
177	p-Benzoquinone	25.00	27.55	110.21	70-130
98	Retene	25.00	24.63	98.50	70-130
99	Perylene	25.00	25.45	101.82	70-130
133	Butylatedhydroxyto	25.00	24.74	98.95	70-130
115	Tributyl Phosphate	25.00	26.71	106.86	70-130

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
116 Dibutyl Phenyl Pho	25.00	25.85	103.39	70-130
117 Butyl Diphenyl Pho	25.00	24.60	98.40	70-130
118 Triphenyl Phosphat	25.00	24.88	99.52	70-130
123 Acetophenone	25.00	23.84	95.34	70-130
168 Pentachlorobenzene	25.00	25.57	102.30	70-130
113 Diphenyl Oxide	25.00	23.51	94.04	70-130
112 Biphenyl	25.00	26.60	106.41	70-130
120 2,3,4,6-Tetrachlor	25.00	27.36	109.42	70-130
151 1,2,4,5-Tetrachlor	25.00	25.94	103.75	70-130
106 Guaiacol	25.00	24.08	96.31	70-130
186 Carbaryl	25.00	26.98	107.91	70-130
178 2-Benzyl-4-Chlorop	25.00	26.17	104.67	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	25.00	24.08	96.31	75-125
$ 2 Phenol-d5	25.00	23.58	94.32	75-125
$ 5 2-Chlorophenol-d4	25.00	23.69	94.78	75-125
$ 10 1,2-Dichlorobenzen	25.00	23.44	93.74	75-125
$ 18 Nitrobenzene-d5	25.00	24.05	96.20	75-125
$ 36 2-Fluorobiphenyl	25.00	22.35	89.38	75-125
$ 55 2,4,6-Tribromophen	25.00	25.50	102.01	75-125
$ 66 Terphenyl-d14	25.00	23.37	93.47	75-125
$ 137 d8-1,4-Dioxane	25.00	24.03	96.14	75-125

Data File: /chem2/nt6.i/20130306.b/03061309.D
Date : 06-MAR-2013 16:52
Client ID: ICV0306
Sample Info: ICV0306,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



WH31 : 007739

CO-ELUTION SUMMARY FOR FILE - 03061309.D

Lab ID: ICV0306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

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

checked ok

03/07/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	(YES) / NO
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	Benzidine (YES) / NO
Q flag applied?	YES / (NO)	Quadratic Fits Used?	(YES) / NO
Manual Integrations for ICal?	(YES) / NO	Calibration Points Dropped?	(YES) / NO
Spectral Library Updated?	(YES) / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/31/13	UCT	2055-1	12/05/13
	2073-1	6/31/13		2054-1	12/31/13
	2064-2	08/25/14		2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine
4,6 Dinitro-2-methylphenol - quadratic fit used.

- Low point of the curve dropped for Benzoic acid, 4 Nitrophenol, 2,4 Dinitrophenol, Carbazol Benzidine

Analyst: YZ **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SIM/~~BNA~~ Analyst: YZ

GC Program: ABN_2 Column No: ~~247358~~ 252945 Column Type: ~~ZB5 ms~~

Instrument Tune (.U or .CT.): B122804 EM Voltage: ~~1625~~ 1650

Calibration File: DF0429 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal		LCS/ICV
1998-2	~~2036-2~~	~~2050-1, 2~~	2053-1
	~~2044-2~~	~~1998-4~~	2054-1
	~~2068-2~~		2053-1
	2072-1	B000112	
	2073-1	1998-4	
	2064-2		

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF											
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1653	ic0429a.d	IC0429A		1	8.99	45250	11.64	166754	15.54	106910	18.82	179783	23.90	192841	26.35	184310	24.99	229567
3	1730	ic0429b.d	IC0429B		1	8.99	36696	11.65	136283	15.55	88131	18.83	152272	23.90	162543	26.36	160177	25.00	211292
4	1807	ic0429c.d	IC0429C		1	8.99	50456	11.64	186081	15.54	109826	18.81	184210	23.90	198580	26.34	178934	24.99	212453
5	1844	ic0429d.d	IC0429D		1	8.98	44580	11.64	164171	15.54	101406	18.81	169929	23.90	185129	26.35	168300	25.00	198625
6	1921	ic0429e.d	IC0429E		1	8.99	38285	11.65	142908	15.54	92187	18.82	160272	23.90	172225	26.36	166300	25.00	210890
7	2034	ic0429g.d	IC0429G		1	8.99	36591	11.64	137898	15.54	87308	18.82	150153	23.90	164553	26.36	152859	25.00	170975
8	2147	ic0429i.d	IC0429I		1	8.98	41602	11.64	157250	15.53	94337	18.81	159582	23.90	170666	26.35	157899	24.99	174102
9	2224	ic0429icv.d	IC0429ICV		1	8.98	41290	11.64	152009	15.53	95722	18.81	161863	23.90	175186	26.35	166766	24.99	197383

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.349	26.357	26.342	26.349	26.357	26.357	26.350	26.349	23.349-29.349	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	28.690	28.713	28.674	28.682	28.705	28.697	28.690	28.690	25.690-31.690	28.693	0.013
	79 Dibenzo(a,h)anthracene	28.713	28.737	28.698	28.705	28.729	28.721	28.698	28.713	25.713-31.713	28.714	0.015
	80 Benzo(g,h,i)perylene	29.373	29.405	29.358	29.358	29.389	29.381	29.350	29.373	26.373-32.373	29.373	0.020
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.366	4.389	4.382	4.366	4.374	4.351	4.366	4.366	1.366-7.366	4.371	0.013
	91 Aniline	8.414	8.421	8.406	8.406	8.414	8.406	8.406	8.414	5.414-11.414	8.410	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.542	21.549	21.542	21.542	21.549	21.541	21.542	21.542	18.542-24.542	21.544	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	22.316	22.316	22.308	22.316	22.323	22.315	22.316	22.316	19.316-25.316	22.316	0.004
	99 Perylene	26.396	26.411	26.388	26.396	26.411	26.403	26.388	26.396	23.396-29.396	26.399	0.010
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.382	4.389	4.420	4.397	4.374	4.374	4.397	4.382	1.382-7.382	4.390	0.016
	188 2,6-Dichlorophenol	11.874	11.890	11.866	11.866	11.882	11.866	11.867	11.874	8.874-14.874	11.873	0.009
	189 N-Nitrosomethylethylam	5.818	5.825	5.833	5.818	5.825	5.817	5.818	5.818	2.818-8.818	5.822	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429b	ic0429c	ic0429d	ic0429e	ic0429g	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	17:30	18:07	18:44	19:21	20:34	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.629	6.636	6.636	6.628	6.628	6.628	6.629	6.629	3.629-9.629	6.631	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5-4-13

SS_009_1GNE

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.994	25.002	24.994	25.002	25.002	25.002	24.995	24.994	21.994-27.994	24.999	0.004
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.346	16.354	16.338	16.338	16.346	16.346	16.338	16.346	13.346-19.346	16.344	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.103	17.118	17.095	17.095	17.111	17.103	17.095	17.103	14.103-20.103	17.103	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
	105 1-methylnaphthalene	13.437	13.437	13.429	13.429	13.437	13.429	13.430	13.437	10.437-16.437	13.433	0.004
	151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
	152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
	153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
	154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
	155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
	156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
	157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
	158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
	159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
	160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
	161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
	162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
	163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
	164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
	165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
	166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
	167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$	2 Phenol-d5	8.344	8.352	8.336	8.336	8.344	8.336	8.337	8.344	5.344-11.344	8.341	0.006
	3 Phenol	8.367	8.375	8.360	8.360	8.367	8.359	8.360	8.367	5.367-11.367	8.364	0.006
	4 Bis(2-Chloroethyl)ethe	8.522	8.530	8.522	8.522	8.529	8.522	8.522	8.522	5.522-11.522	8.524	0.004
$	5 2-Chlorophenol-d4	8.599	8.607	8.599	8.591	8.599	8.599	8.599	8.599	5.599-11.599	8.599	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.630	8.638	8.630	8.622	8.630	8.622	8.622	8.630	5.630-11.630	8.628	0.006
	7 1,3-Dichlorobenzene	8.917	8.917	8.917	8.909	8.917	8.916	8.909	8.917	5.917-11.917	8.914	0.004
*	8 1,4-Dichlorobenzene-d4	8.986	8.986	8.986	8.979	8.986	8.986	8.979	8.986	5.986-11.986	8.984	0.004
	9 1,4-Dichlorobenzene	9.017	9.017	9.017	9.010	9.017	9.017	9.018	9.017	6.017-12.017	9.016	0.003
$	10 1,2-Dichlorobenzene-d4	9.367	9.375	9.367	9.367	9.367	9.367	9.367	9.367	6.367-12.367	9.368	0.003
	11 Benzyl alcohol	9.289	9.305	9.289	9.289	9.297	9.289	9.289	9.289	6.289-12.289	9.292	0.006
	12 1,2-Dichlorobenzene	9.398	9.398	9.398	9.390	9.398	9.390	9.390	9.398	6.398-12.398	9.394	0.004
	13 2-Methylphenol	9.553	9.561	9.553	9.545	9.553	9.553	9.553	9.553	6.553-12.553	9.553	0.005
	14 2,2'-oxybis(1-Chloropr	9.623	9.623	9.623	9.623	9.623	9.623	9.623	9.623	6.623-12.623	9.623	0.000
	15 4-Methylphenol	9.848	9.856	9.840	9.840	9.848	9.840	9.840	9.848	6.848-12.848	9.845	0.006
	16 N-Nitroso-di-n-propyla	9.902	9.910	9.902	9.895	9.902	9.894	9.895	9.902	6.902-12.902	9.900	0.006
	17 Hexachloroethane	10.027	10.027	10.027	10.019	10.026	10.026	10.027	10.027	7.027-13.027	10.025	0.003
$	18 Nitrobenzene-d5	10.159	10.166	10.158	10.158	10.158	10.158	10.159	10.159	7.159-13.159	10.160	0.003
	19 Nitrobenzene	10.197	10.205	10.197	10.197	10.197	10.197	10.190	10.197	7.197-13.197	10.197	0.004
	20 Isophorone	10.686	10.709	10.686	10.686	10.694	10.686	10.686	10.686	7.686-13.686	10.691	0.009
	21 2-Nitrophenol	10.872	10.879	10.872	10.872	10.879	10.871	10.872	10.872	7.872-13.872	10.874	0.004
	22 2,4-Dimethylphenol	10.964	10.980	10.964	10.964	10.972	10.964	10.964	10.964	7.964-13.964	10.967	0.006
	23 Bis(2-Chloroethoxy)met	11.180	11.188	11.172	11.172	11.180	11.172	11.172	11.180	8.180-14.180	11.176	0.006
	24 Benzoic acid	11.226	11.280	11.064	11.110	11.303	11.164	11.080	11.226	8.226-14.226	11.175	0.096
	25 2,4-Dichlorophenol	11.365	11.380	11.365	11.365	11.372	11.365	11.365	11.365	8.365-14.365	11.368	0.006
	26 1,2,4-Trichlorobenzene	11.565	11.565	11.558	11.558	11.565	11.557	11.558	11.565	8.565-14.565	11.561	0.004
*	27 Naphthalene-d8	11.643	11.650	11.643	11.643	11.650	11.642	11.643	11.643	8.643-14.643	11.645	0.004
	28 Naphthalene	11.689	11.697	11.689	11.689	11.689	11.689	11.681	11.689	8.689-14.689	11.689	0.004
	29 4-Chloroaniline	11.859	11.874	11.851	11.851	11.859	11.851	11.843	11.859	8.859-14.859	11.855	0.010

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.098	12.106	12.106	12.098	12.106	12.098	12.099	12.098	9.098-15.098	12.102	0.004
	31 4-Chloro-3-methylpheno	12.919	12.927	12.911	12.911	12.919	12.911	12.911	12.919	9.919-15.919	12.915	0.006
	32 2-Methylnaphthalene	13.197	13.205	13.197	13.197	13.197	13.197	13.197	13.197	10.197-16.197	13.198	0.003
	33 Hexachlorocyclopentadi	13.716	13.716	13.708	13.708	13.716	13.716	13.708	13.716	10.716-16.716	13.712	0.004
	34 2,4,6-Trichlorophenol	13.878	13.894	13.878	13.878	13.886	13.878	13.879	13.878	10.878-16.878	13.882	0.006
	35 2,4,5-Trichlorophenol	13.956	13.964	13.956	13.956	13.956	13.956	13.948	13.956	10.956-16.956	13.956	0.004
$	36 2-Fluorobiphenyl	14.064	14.064	14.056	14.056	14.064	14.056	14.057	14.064	11.064-17.064	14.060	0.004
	37 2-Chloronaphthalene	14.265	14.273	14.258	14.257	14.265	14.265	14.258	14.265	11.265-17.265	14.263	0.006
	38 2-Nitroaniline	14.559	14.575	14.559	14.552	14.567	14.559	14.552	14.559	11.559-17.559	14.560	0.008
	39 Dimethylphthalate	15.055	15.070	15.047	15.055	15.062	15.055	15.047	15.055	12.055-18.055	15.056	0.008
	40 Acenaphthylene	15.202	15.202	15.194	15.194	15.194	15.194	15.194	15.202	12.202-18.202	15.196	0.004
	41 2,6-Dinitrotoluene	15.194	15.202	15.186	15.186	15.194	15.186	15.179	15.194	12.194-18.194	15.190	0.008
*	42 Acenaphthene-d10	15.542	15.550	15.542	15.542	15.542	15.542	15.535	15.542	12.542-18.542	15.542	0.004
	43 3-Nitroaniline	15.488	15.511	15.480	15.480	15.496	15.480	15.473	15.488	12.488-18.488	15.487	0.013
	44 Acenaphthene	15.612	15.619	15.612	15.612	15.612	15.611	15.604	15.612	12.612-18.612	15.612	0.004
	45 2,4-Dinitrophenol	15.712	15.743	15.712	15.704	15.727	15.712	15.705	15.712	12.712-18.712	15.717	0.014
	46 Dibenzofuran	15.967	15.983	15.959	15.967	15.975	15.967	15.960	15.967	12.967-18.967	15.968	0.008
	47 4-Nitrophenol	15.867	15.890	15.867	15.859	15.874	15.859	15.867	15.867	12.867-18.867	15.869	0.011
	48 2,4-Dinitrotoluene	16.060	16.075	16.052	16.052	16.068	16.052	16.052	16.060	13.060-19.060	16.059	0.009
	49 Fluorene	16.740	16.748	16.733	16.733	16.740	16.732	16.733	16.740	13.740-19.740	16.737	0.006
	50 Diethylphthalate	16.640	16.663	16.632	16.632	16.647	16.640	16.632	16.640	13.640-19.640	16.641	0.011
	51 4-Chlorophenyl-phenyle	16.756	16.756	16.748	16.756	16.756	16.756	16.748	16.756	13.756-19.756	16.754	0.004
	52 4-Nitroaniline	16.856	16.895	16.856	16.848	16.872	16.856	16.841	16.856	13.856-19.856	16.861	0.018
	53 4,6-Dinitro-2-methylph	16.964	16.995	16.949	16.949	16.972	16.956	16.949	16.964	13.964-19.964	16.962	0.017

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.026	17.041	17.026	17.026	17.034	17.026	17.026	17.026	14.026-20.026	17.029	0.006
$	55 2,4,6-Tribromophenol	17.319	17.327	17.311	17.311	17.319	17.311	17.311	17.319	14.319-20.319	17.316	0.006
	56 4-Bromophenyl-phenylet	17.836	17.843	17.835	17.835	17.835	17.835	17.836	17.836	14.836-20.836	17.837	0.003
	57 Hexachlorobenzene	18.160	18.160	18.153	18.153	18.160	18.152	18.153	18.160	15.160-21.160	18.156	0.004
	58 Pentachlorophenol	18.555	18.563	18.547	18.547	18.555	18.547	18.548	18.555	15.555-21.555	18.552	0.006
*	59 Phenanthrene-d10	18.818	18.826	18.810	18.810	18.818	18.818	18.811	18.818	15.818-21.818	18.816	0.006
	60 Phenanthrene	18.865	18.872	18.857	18.857	18.865	18.864	18.857	18.865	15.865-21.865	18.862	0.006
	61 Anthracene	18.965	18.973	18.957	18.957	18.965	18.957	18.958	18.965	15.965-21.965	18.962	0.006
	62 Carbazole	19.313	19.321	19.313	19.313	19.321	19.313	19.314	19.313	16.313-22.313	19.316	0.004
	63 Di-n-butylphthalate	20.188	20.188	20.188	20.188	20.188	20.187	20.188	20.188	17.188-23.188	20.188	0.000
	64 Fluoranthene	21.286	21.286	21.279	21.278	21.286	21.286	21.279	21.286	18.286-24.286	21.283	0.004
	65 Pyrene	21.704	21.704	21.696	21.696	21.704	21.704	21.697	21.704	18.704-24.704	21.701	0.004
$	66 Terphenyl-d14	22.021	22.029	22.021	22.021	22.029	22.029	22.022	22.021	19.021-25.021	22.025	0.004
	67 Butylbenzylphthalate	22.974	22.974	22.966	22.974	22.974	22.974	22.974	22.974	19.974-25.974	22.973	0.003
	68 Benzo(a)anthracene	23.872	23.880	23.864	23.864	23.872	23.872	23.864	23.872	20.872-26.872	23.870	0.006
*	69 Chrysene-d12	23.895	23.903	23.895	23.895	23.903	23.903	23.895	23.895	20.895-26.895	23.898	0.004
	70 3,3'-Dichlorobenzidine	23.849	23.857	23.841	23.849	23.856	23.849	23.841	23.849	20.849-26.849	23.849	0.006
	71 Chrysene	23.942	23.949	23.934	23.942	23.949	23.941	23.934	23.942	20.942-26.942	23.942	0.006
	72 bis(2-Ethylhexyl)phtha	24.019	24.019	24.019	24.019	24.027	24.027	24.019	24.019	21.019-27.019	24.021	0.004
	73 Di-n-octylphthalate	25.010	25.010	25.002	25.010	25.018	25.017	25.002	25.010	22.010-28.010	25.010	0.006
	74 Benzo(b)fluoranthene	25.668	25.676	25.660	25.668	25.676	25.668	25.660	25.668	22.668-28.668	25.668	0.006
	75 Benzo(k)fluoranthene	25.707	25.722	25.699	25.707	25.714	25.714	25.699	25.707	22.707-28.707	25.709	0.009
	187 Total Benzofluoranthen	25.707	25.722	25.660	25.668	25.714	25.668	25.699	25.707	22.707-28.707	25.691	0.025
	76 Benzo(a)pyrene	26.249	26.257	26.241	26.241	26.256	26.249	26.241	26.249	23.249-29.249	26.248	0.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Average

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.32264 / 1.18447	1.26754	1.24075	1.27398	1.12394	1.24670	AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713	1.54128	AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695	0.92792	AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920	0.64417	AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371	0.38522	AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242	0.82790	AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164	0.24290	AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253	0.39424	AVRG		0.40172		4.20008

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
23 Bis(2-Chloroethoxy)methane	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041						
	0.41838						AVRG		0.43229		2.68164	
24 Benzoic acid	+++++	0.16051	0.25143	0.30891	0.33851	0.37356						
	0.37918						AVRG		0.30202		27.71646	<-
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768						
	0.39114						AVRG		0.36979		12.81889	
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336						
	0.35130						AVRG		0.36143		6.42232	
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273						
	1.04570						AVRG		1.06494		6.20233	
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932						
	0.38118						AVRG		0.41634		9.58081	
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093						
	0.21857						AVRG		0.21470		5.08490	

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735	0.36548	AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921	0.72726	AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660	0.48996	AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335	0.46998	AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279	0.50176	AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488	1.11166	AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072	0.30122	AVRG		0.26826		15.20234

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823						
	1.17494						AVRG		1.20078		6.32260	
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941						
	1.75642						AVRG		1.88508		8.21819	
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512						
	0.29050						AVRG		0.28135		6.35382	
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105						
	0.20850						AVRG		0.23227		9.23578	
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513						
	1.13044						AVRG		1.13602		7.04098	
45 2,4-Dinitrophenol	+++++	0.09212	0.14513	0.19634	0.23880	0.27206						
	0.28220						AVRG		0.20444		36.60389	<-
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360						
	1.57471						AVRG		1.55334		4.27158	

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Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.07895	0.11479	0.15259	0.16439	0.18465						
	0.18270						AVRG		0.14635		28.48976	<-
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613						
	0.39616						AVRG		0.36288		11.05203	
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389						
	1.30199						AVRG		1.32546		5.15880	
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908						
	1.18817						AVRG		1.20662		5.91539	
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584						
	0.67359						AVRG		0.65156		9.31141	
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164						
	0.25433						AVRG		0.24126		11.76360	
53 4,6-Dinitro-2-methylphenol	0.10675	0.12341	0.16076	0.17466	0.18882	0.19809						
	0.19914						AVRG		0.16452		22.27885	<-

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123	0.45114	AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955	0.23436	AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286	0.26660	AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141	0.22676	AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893	1.09863	AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739	1.14221	AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549	0.71548	AVRG		0.67896		19.54874

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687						
	1.25417							AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427						
	1.34952							AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931						
	1.28506							AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663						
	0.46466							AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986						
	1.14667							AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001						
	0.48944							AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164						
	1.04126							AVRG		1.01345		7.90157

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498	0.89449					
								AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498	0.89449					
								AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210	1.23295					
								AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473	1.34515					
								AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984	1.17534					
								AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501	1.07592					
								AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168	1.28789					
								AVRG		1.16916		8.32633

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990	0.99039	AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106	1.08082	AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623	0.92370	AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183	3.92480	AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746	257371	QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
98 Retene	5229	8851	20776	46252	111862	206286	402573	QUAD	0.000e+00	2.17724	-0.06444	0.99996	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094	1.18529	AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643	0.79117	AVRG		0.80099		5.76462	

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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

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Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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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											
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.26333	0.25576	0.30846	0.32296	0.35171	0.37615						
	0.38141						AVRG		0.32283		15.66985	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

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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)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

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Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
						20 Level 7						
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.70389 / 0.67337	0.59747	0.62527	0.63990	0.63292	0.66830	AVRG		0.64873		5.46363	
151 1,2,4,5-Tetrachlorobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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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										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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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	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

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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	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

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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	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

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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	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041					
	0.41838						AVRG		0.43229		2.68164
24 Benzoic acid	+++++	12620	41278	106496	282242	533852					
	1033515						QUAD	0.000e+00	2.88330	-0.03348	0.99937
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768					
	0.39114						AVRG		0.36979		12.81889
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336					
	0.35130						AVRG		0.36143		6.42232
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273					
	1.04570						AVRG		1.06494		6.20233
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932					
	0.38118						AVRG		0.41634		9.58081
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093					
	0.21857						AVRG		0.21470		5.08490

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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	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
39 Dimethylphthalate	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823					
	1.17494						AVRG		1.20078		6.32260
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941					
	1.75642						AVRG		1.88508		8.21819
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512					
	0.29050						AVRG		0.28135		6.35382
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105					
	0.20850						AVRG		0.23227		9.23578
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513					
	1.13044						AVRG		1.13602		7.04098
45 2,4-Dinitrophenol	+++++	4345	14717	42855	127651	250805					
	497418						QUAD	0.000e+00	4.08739	-0.09870	0.99880
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360					
	1.57471						AVRG		1.55334		4.27158

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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	+++++	1862	5820	16653	43938	85112					
	161016						QUAD	0.000e+00	5.79130	-0.18557	0.99905
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613					
	0.39616						AVRG		0.36288		11.05203
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389					
	1.30199						AVRG		1.32546		5.15880
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908					
	1.18817						AVRG		1.20662		5.91539
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584					
	0.67359						AVRG		0.65156		9.31141
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164					
	0.25433						AVRG		0.24126		11.76360
53 4,6-Dinitro-2-methylphenol	3933	9847	27317	65565	169735	317489					
	606483						QUAD	0.000e+00	5.26585	-0.06370	0.99977

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687	1.25417	AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427	1.34952	AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931	1.28506	AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663	0.46466	AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986	1.14667	AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001	0.48944	AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164	1.04126	AVRG		1.01345		7.90157

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	0.52664	0.41489	0.44890	0.44972	0.46406	0.47911						
	0.49534						AVRG		0.46838		7.71935	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218							
	0.61259							AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857							
	1.41072							AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225							
	1.49284							AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++							
	+++++							AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451							
	1.96238							AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002							
	1.43020							AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380							
	1.02722							AVRG		1.00879		2.24119	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

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

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.629	6.629	(0.738)	81023	5.00000	5.017
$	2 Phenol-d5	99	8.344	8.337	(0.929)	105112	5.00000	5.029
	3 Phenol	94	8.367	8.360	(0.931)	113480	5.00000	4.851
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	78597	5.00000	4.954
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	77866	5.00000	4.629
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	85400	5.00000	4.734
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	87800	5.00000	4.850
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	45250	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	86690	5.00000	4.858
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	55493	5.00000	4.863
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	82329	5.00000	4.819
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	49937	5.00000	5.075
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	25903	5.00000	4.989
	13 2-Methylphenol	108	9.553	9.553	(1.063)	82489	5.00000	4.900
	17 Hexachloroethane	117	10.027	10.027	(1.116)	35082	5.00000	4.699
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	50195	5.00000	4.776
	15 4-Methylphenol	108	9.848	9.840	(1.096)	86398	5.00000	5.034
$	18 Nitrobenzene-d5	82	10.159	10.159	(0.873)	83504	5.00000	4.745
	19 Nitrobenzene	77	10.197	10.190	(0.876)	76232	5.00000	4.692
	20 Isophorone	82	10.686	10.686	(0.918)	141952	5.00000	4.645
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	47662	5.00000	5.233
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	167774	10.0000	10.02
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	86369	5.00000	4.793
	24 Benzoic acid	105	11.226	11.080	(0.964)	282242	20.0000	19.18
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	164580	10.0000	10.68
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	71903	5.00000	4.772
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	166754	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	212706	5.00000	4.791
	29 4-Chloroaniline	127	11.859	11.843	(1.019)	177286	10.0000	10.21
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	43209	5.00000	4.828
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.110)	143169	10.0000	10.56
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	143274	5.00000	4.859
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	118300	10.0000	10.06
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	115672	10.0000	10.28
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	121431	10.0000	10.47
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	178632	5.00000	4.787
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	143132	5.00000	4.818
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	77138	10.0000	10.76
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	154999	5.00000	4.830
	40 Acenaphthylene	152	15.202	15.194	(0.978)	236850	5.00000	4.701
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	76040	10.0000	10.11
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	106910	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	64182	10.0000	10.34
	44 Acenaphthene	153	15.612	15.604	(1.004)	142494	5.00000	4.693
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	127651	20.0000	18.96
	46 Dibenzofuran	168	15.967	15.960	(1.027)	196715	5.00000	4.738
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43938	10.0000	9.395
	48 2,4-Dinitrotoluene	165	16.060	16.052	(1.033)	100913	10.0000	10.40
	50 Diethylphthalate	149	16.640	16.632	(1.071)	156420	5.00000	4.850
	49 Fluorene	166	16.740	16.733	(1.077)	169915	5.00000	4.796
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	79049	5.00000	4.539
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	65331	10.0000	10.13
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.901)	169735	20.0000	19.66
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102905	5.00000	4.945
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	29230	5.00000	5.170
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	50141	5.00000	4.929
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	57420	5.00000	4.731
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	94970	10.0000	11.15
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	179783	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	235067	5.00000	4.794
	61 Anthracene	178	18.965	18.958	(1.008)	242517	5.00000	4.827
	62 Carbazole	167	19.313	19.314	(1.026)	106901	5.00000	3.503
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	256423	5.00000	4.944
	64 Fluoranthene	202	21.286	21.279	(1.131)	286067	5.00000	4.956
	65 Pyrene	202	21.704	21.697	(0.908)	294528	5.00000	4.936
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	183888	5.00000	4.899
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	105931	5.00000	5.199
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	263867	5.00000	4.887
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	192841	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	185563	10.0000	9.024
	71 Chrysene	228	23.942	23.934	(1.002)	235545	5.00000	4.821
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	144972	5.00000	4.750(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	229567	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	250054	5.00000	4.731

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	279937	5.00000	5.115
	75 Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	262519	5.00000	4.554
	76 Benzo(a)pyrene	252	26.249	26.241	(0.996)	230935	5.00000	4.939
*	77 Perylene-d12	264	26.349	26.350	(1.000)	184310	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	277417	5.00000	5.150
	79 Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	212015	5.00000	5.130
	80 Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	230573	5.00000	4.947
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	96874	10.0000	9.397
	91 Aniline	93	8.414	8.406	(0.936)	223621	5.00000	4.927
	93 Benzidine	184	21.542	21.542	(0.902)	60043	10.0000	9.736
	103 Pyridine	79	4.382	4.397	(0.488)	88248	10.0000	9.739
	105 1-methylnaphthalene	142	13.437	13.430	(1.154)	131928	5.00000	4.878
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	150200	5.00000	4.542
	187 Total Benzofluoranthenes	252	25.707	25.699	(0.976)	515221	10.0000	9.694
	99 Perylene	252	26.396	26.388	(1.002)	253757	5.00000	4.747
	98 Retene	219	22.316	22.316	(0.934)	111862	5.00000	4.954
	120 2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	47002	5.00000	5.447
	188 2,6-Dichlorophenol	162	11.874	11.867	(1.020)	253741	10.0000	10.16
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.647)	147492	10.0000	9.592

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45250	0.00
27 Naphthalene-d8	166754	83377	333508	166754	0.00
42 Acenaphthene-d10	106910	53455	213820	106910	0.00
59 Phenanthrene-d10	179783	89892	359566	179783	0.00
69 Chrysene-d12	192841	96420	385682	192841	0.00
134 Di-n-octylphthala	229567	114784	459134	229567	0.00
77 Perylene-d12	184310	92155	368620	184310	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

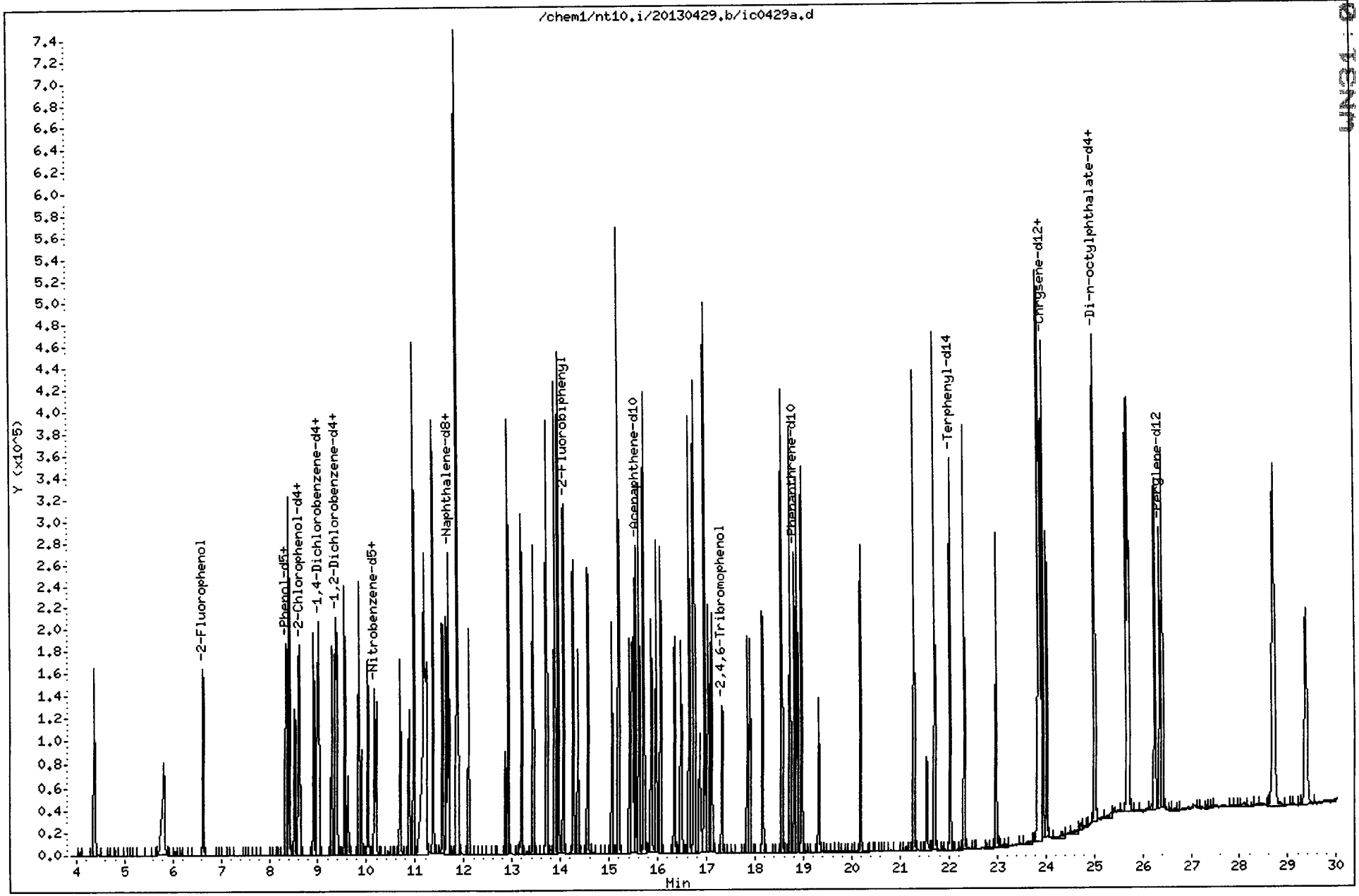
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Column phase: ZB-5msi

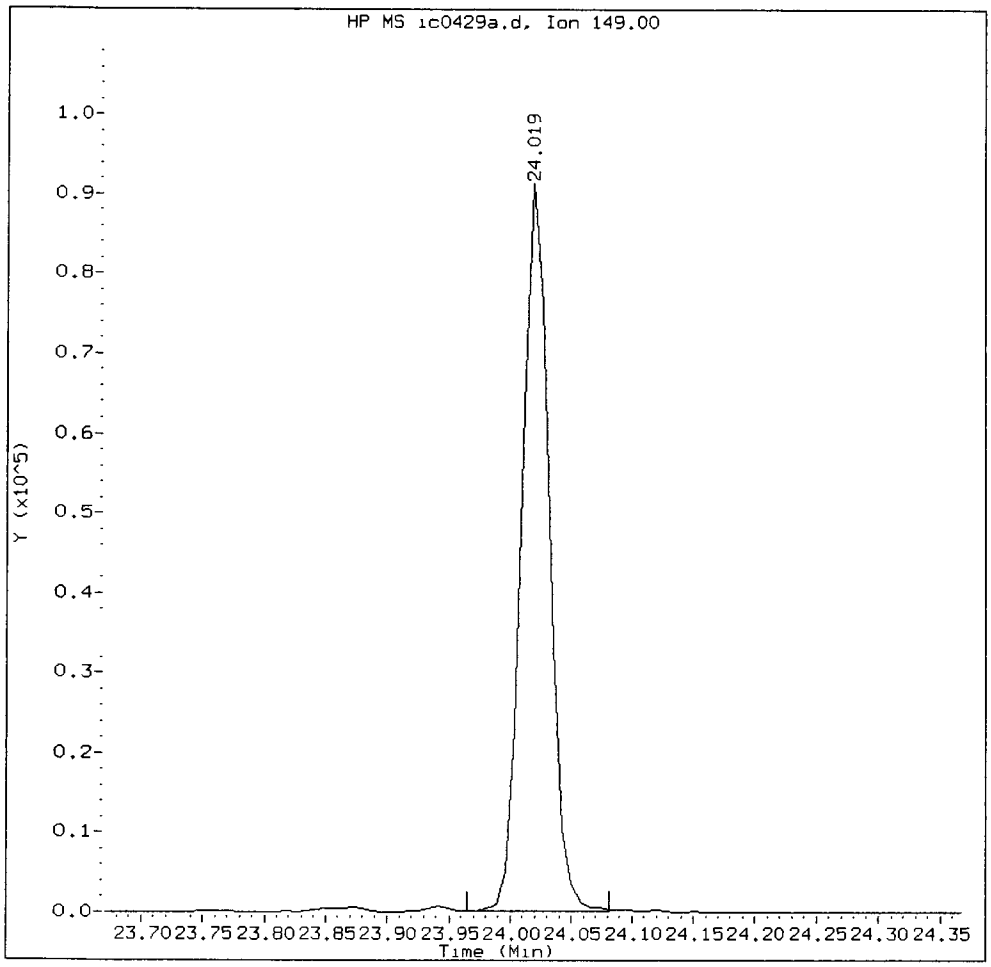
Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



IC0429A, /chem1/nt10.i/20130429.b/ic0429a.d

bis(2-Ethylhexyl)phthalate Amount: 4.75 Area: 144972



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: VZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429b.d
Lab Smp Id: IC0429B
Inj Date : 29-APR-2013 17:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 17:30 Cal File: ic0429b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.636	6.629	(0.738)	273907	20.0000	20.91
$	2 Phenol-d5	99	8.352	8.337	(0.929)	360057	20.0000	21.24
	3 Phenol	94	8.375	8.360	(0.932)	373116	20.0000	19.67
$	5 2-Chlorophenol-d4	132	8.607	8.599	(0.958)	262414	20.0000	20.40
	4 Bis(2-Chloroethyl)ether	93	8.530	8.522	(0.949)	257095	20.0000	18.85
	6 2-Chlorophenol	128	8.638	8.622	(0.961)	331706	20.0000	22.67
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	292512	20.0000	19.92
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36696	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	284169	20.0000	19.64
$	10 1,2-Dichlorobenzene-d4	152	9.375	9.367	(1.043)	188475	20.0000	20.37
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	271486	20.0000	19.59
	11 Benzyl alcohol	108	9.305	9.289	(1.035)	168782	20.0000	21.15
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	84885	20.0000	20.16
	13 2-Methylphenol	108	9.561	9.553	(1.064)	276689	20.0000	20.27
	17 Hexachloroethane	117	10.027	10.027	(1.116)	118193	20.0000	19.52
	16 N-Nitroso-di-n-propylamine	70	9.910	9.895	(1.103)	170255	20.0000	19.98
	15 4-Methylphenol	108	9.856	9.840	(1.097)	282794	20.0000	20.32
$	18 Nitrobenzene-d5	82	10.166	10.159	(0.873)	285663	20.0000	19.86
	19 Nitrobenzene	77	10.205	10.190	(0.876)	262495	20.0000	19.77
	20 Isophorone	82	10.709	10.686	(0.919)	564145	20.0000	22.59
	21 2-Nitrophenol	139	10.879	10.872	(0.934)	165519	20.0000	22.24
	22 2,4-Dimethylphenol	107	10.980	10.964	(0.942)	537286	40.0000	39.26
	23 Bis(2-Chloroethoxy)methane	93	11.188	11.172	(0.960)	285091	20.0000	19.36
	24 Benzoic acid	105	11.388	11.080	(0.977)	1043882	80.0000	79.78(M)
	25 2,4-Dichlorophenol	162	11.380	11.365	(0.977)	533058	40.0000	42.31
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	239383	20.0000	19.44
*	27 Naphthalene-d8	136	11.650	11.643	(1.000)	136283	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.697	11.681	(1.004)	712555	20.0000	19.64
	29 4-Chloroaniline	127	11.874	11.843	(1.019)	519478	40.0000	36.62
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	148934	20.0000	20.36
	31 4-Chloro-3-methylphenol	107	12.927	12.911	(1.110)	498092	40.0000	44.94
	32 2-Methylnaphthalene	142	13.205	13.197	(1.133)	495565	20.0000	20.56
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	431807	40.0000	44.53
	34 2,4,6-Trichlorophenol	196	13.894	13.879	(0.894)	414194	40.0000	44.65
	35 2,4,5-Trichlorophenol	196	13.964	13.948	(0.898)	442203	40.0000	46.24
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.904)	616937	20.0000	20.06
	37 2-Chloronaphthalene	162	14.273	14.258	(0.918)	489858	20.0000	20.00
	38 2-Nitroaniline	65	14.575	14.552	(0.937)	265470	40.0000	44.92
	39 Dimethylphthalate	163	15.070	15.047	(0.969)	517745	20.0000	19.57
	40 Acenaphthylene	152	15.202	15.194	(0.978)	773977	20.0000	18.64
	41 2,6-Dinitrotoluene	165	15.202	15.179	(0.978)	256022	40.0000	41.30
*	42 Acenaphthene-d10	164	15.550	15.535	(1.000)	88131	4.00000	
	43 3-Nitroaniline	138	15.511	15.473	(0.998)	183750	40.0000	35.91
	44 Acenaphthene	153	15.619	15.604	(1.004)	498134	20.0000	19.90
	45 2,4-Dinitrophenol	184	15.743	15.705	(1.012)	497418	80.0000	79.70
	46 Dibenzofuran	168	15.983	15.960	(1.028)	693905	20.0000	20.28
	47 4-Nitrophenol	109	15.890	15.867	(1.022)	161016	40.0000	39.85
	48 2,4-Dinitrotoluene	165	16.075	16.052	(1.034)	349138	40.0000	43.67
	50 Diethylphthalate	149	16.663	16.632	(1.072)	523573	20.0000	19.69
	49 Fluorene	166	16.748	16.733	(1.077)	573728	20.0000	19.65
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	296820	20.0000	20.68
	52 4-Nitroaniline	138	16.895	16.841	(1.086)	224140	40.0000	42.17
	53 4,6-Dinitro-2-methylphenol	198	16.995	16.949	(0.903)	606483	80.0000	79.85
	54 N-Nitrosodiphenylamine	169	17.041	17.026	(0.905)	343477	20.0000	19.49
$	55 2,4,6-Tribromophenol	330	17.327	17.311	(1.114)	106190	20.0000	22.78
	56 4-Bromophenyl-phenylether	248	17.843	17.836	(0.948)	178429	20.0000	20.71
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	202975	20.0000	19.74
	58 Pentachlorophenol	266	18.563	18.548	(0.986)	345299	40.0000	47.85
*	59 Phenanthrene-d10	188	18.826	18.811	(1.000)	152272	4.00000	
	60 Phenanthrene	178	18.872	18.857	(1.002)	836454	20.0000	20.14
	61 Anthracene	178	18.973	18.958	(1.008)	869630	20.0000	20.44
	62 Carbazole	167	19.321	19.314	(1.026)	544741	20.0000	21.08
	63 Di-n-butylphthalate	149	20.188	20.188	(1.072)	954876	20.0000	21.74
	64 Fluoranthene	202	21.286	21.279	(1.131)	1027468	20.0000	21.02
	65 Pyrene	202	21.704	21.697	(0.908)	1044384	20.0000	20.77
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	639846	20.0000	20.22
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	377639	20.0000	21.99
	68 Benzo(a)anthracene	228	23.880	23.864	(0.999)	931914	20.0000	20.48
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	162543	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.857	23.841	(0.998)	795550	40.0000	45.90
	71 Chrysene	228	23.949	23.934	(1.002)	846249	20.0000	20.55
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	538822	20.0000	19.18(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	211292	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	944988	20.0000	19.42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	987454	20.0000	20.76
	75 Benzo(k)fluoranthene	252	25.722	25.699	(0.976)	1077307	20.0000	21.50
	76 Benzo(a)pyrene	252	26.257	26.241	(0.996)	861687	20.0000	21.20
*	77 Perylene-d12	264	26.357	26.350	(1.000)	160177	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.713	28.690	(1.089)	1031455	20.0000	22.03
	79 Dibenzo(a,h)anthracene	278	28.737	28.698	(1.090)	793192	20.0000	22.09
	80 Benzo(g,h,i)perylene	276	29.405	29.350	(1.116)	865612	20.0000	21.37
	90 N-Nitrosodimethylamine	74	4.389	4.366	(0.488)	338961	40.0000	40.55
	91 Aniline	93	8.421	8.406	(0.937)	720123	20.0000	19.56
	93 Benzidine	184	21.549	21.542	(0.902)	257371	40.0000	40.13
	103 Pyridine	79	4.389	4.397	(0.488)	290326	40.0000	39.51
	105 1-methylnaphthalene	142	13.437	13.430	(1.153)	458844	20.0000	20.76
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.118	17.095	(1.101)	521942	20.0000	19.15
	187 Total Benzofluoranthenes	252	25.722	25.699	(0.976)	1886688	40.0000	40.85
	99 Perylene	252	26.411	26.388	(1.002)	949277	20.0000	20.43
	98 Retene	219	22.316	22.316	(0.934)	402573	20.0000	21.15
	120 2,3,4,6-Tetrachlorophenol	232	16.354	16.338	(1.052)	168064	20.0000	23.63
	188 2,6-Dichlorophenol	162	11.890	11.867	(1.021)	834861	40.0000	40.89
	189 N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	517676	40.0000	41.51

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429b.d
Lab Smp Id: IC0429B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36696	-18.90
27 Naphthalene-d8	166754	83377	333508	136283	-18.27
42 Acenaphthene-d10	106910	53455	213820	88131	-17.57
59 Phenanthrene-d10	179783	89892	359566	152272	-15.30
69 Chrysene-d12	192841	96420	385682	162543	-15.71
134 Di-n-octylphthala	229567	114784	459134	211292	-7.96
77 Perylene-d12	184310	92155	368620	160177	-13.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.83	0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

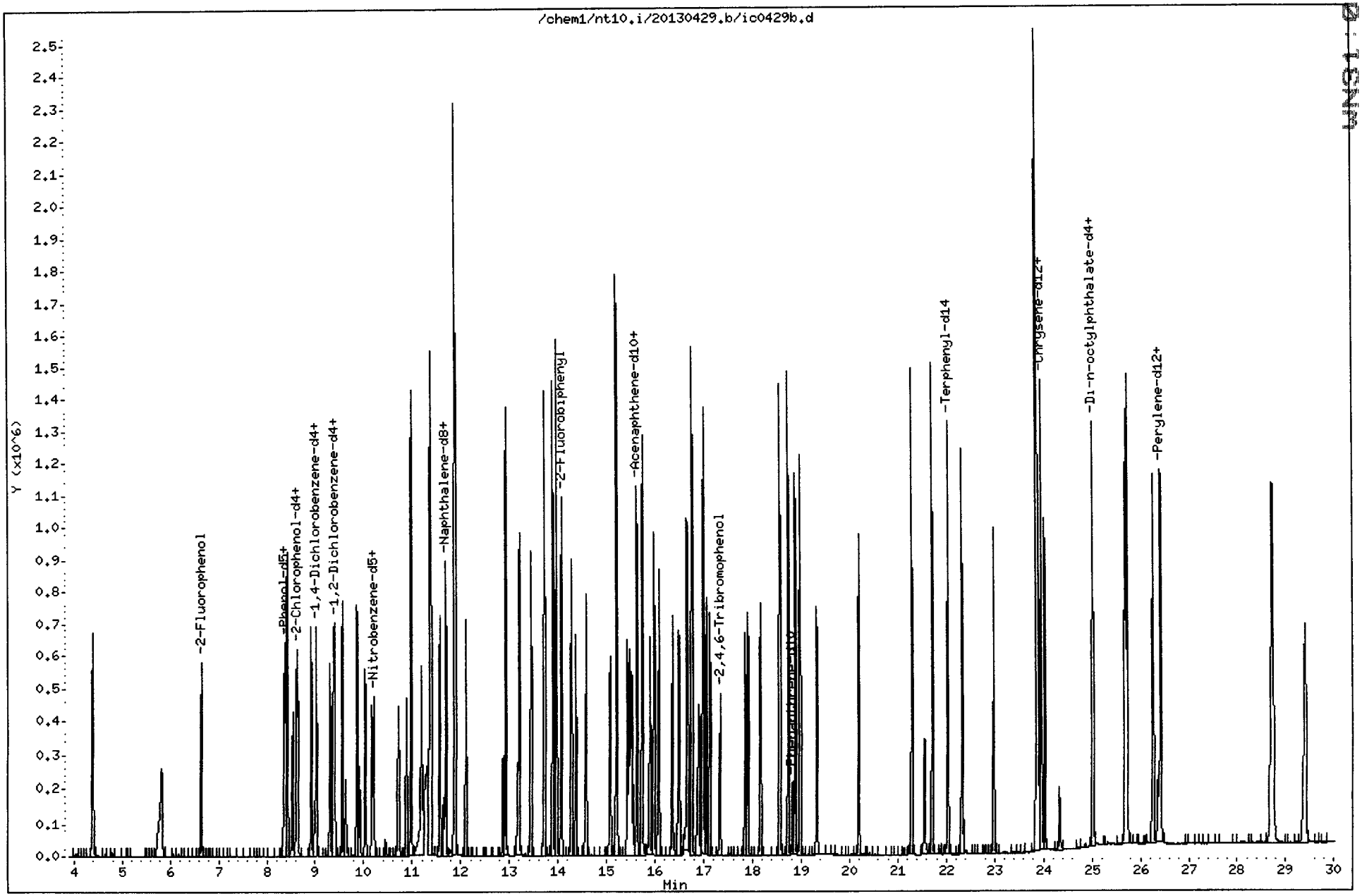
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429b.d
Date : 29-APR-2013 17:30
Client ID:
Sample Info: IC0429B

Instrument: nt10.i

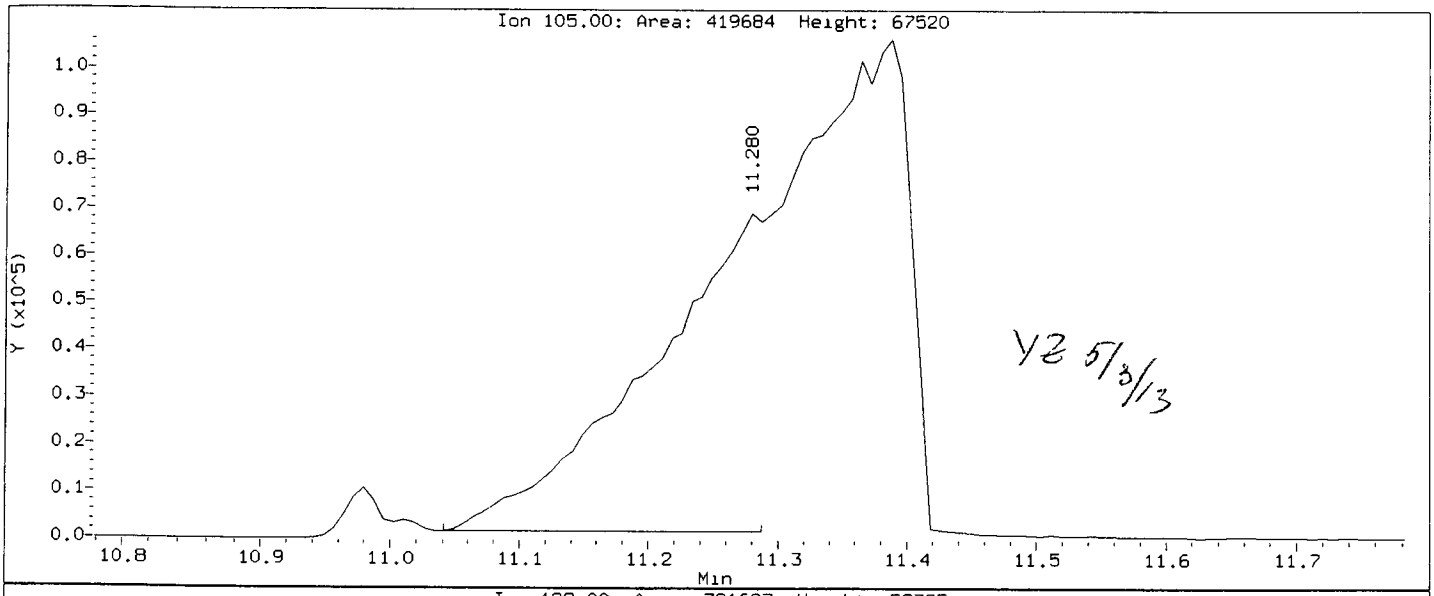
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi

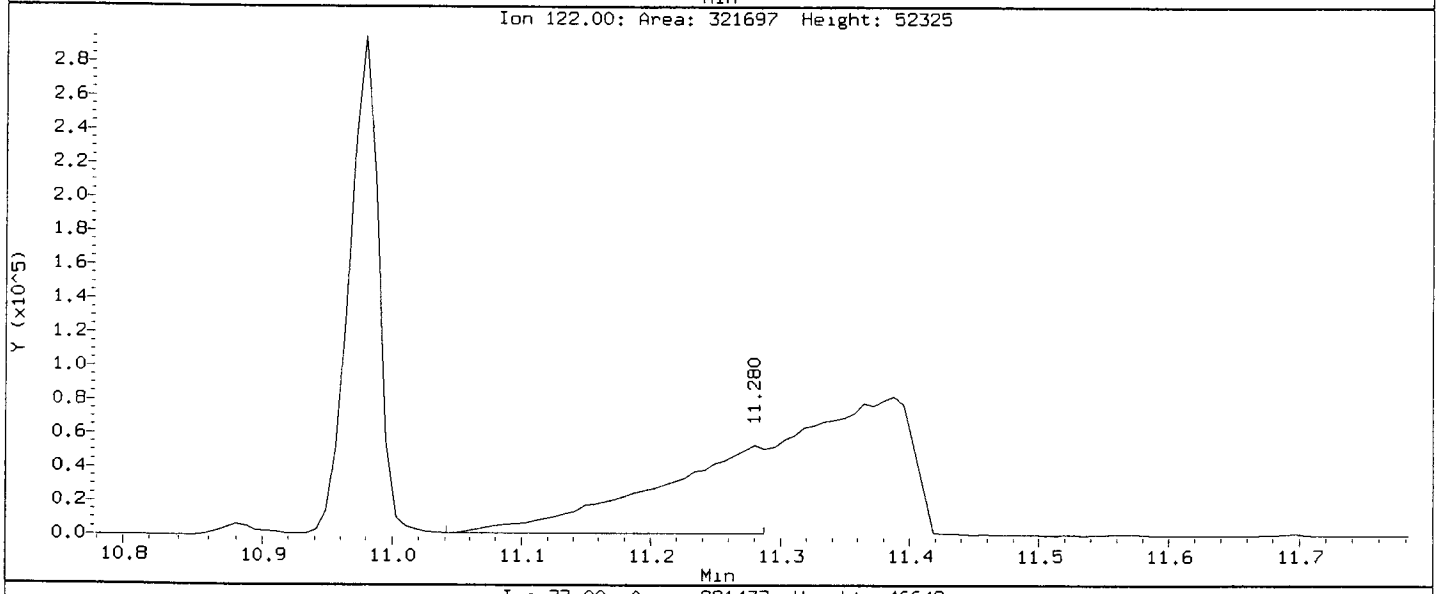


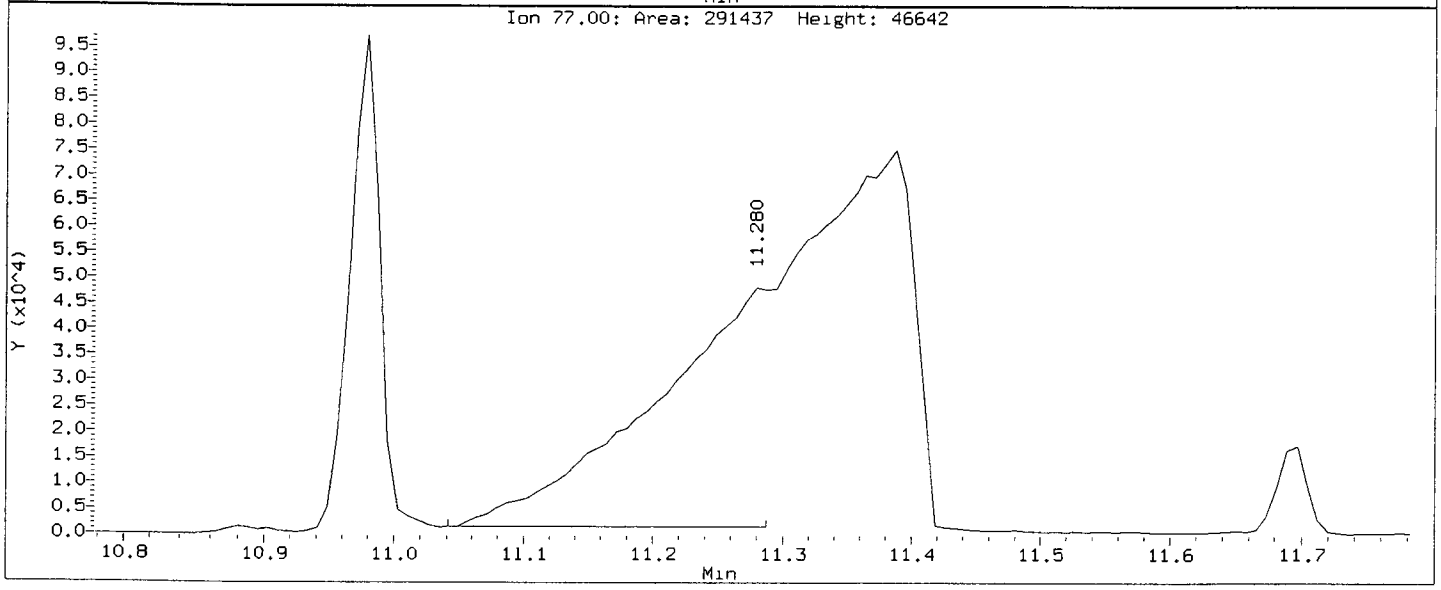
Data File: /chem1/nt10.1/20130429.b/ic0429b.d
Injection Date: 29-APR-2013 17:30
Instrument: nt10.1
Client Sample ID:

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



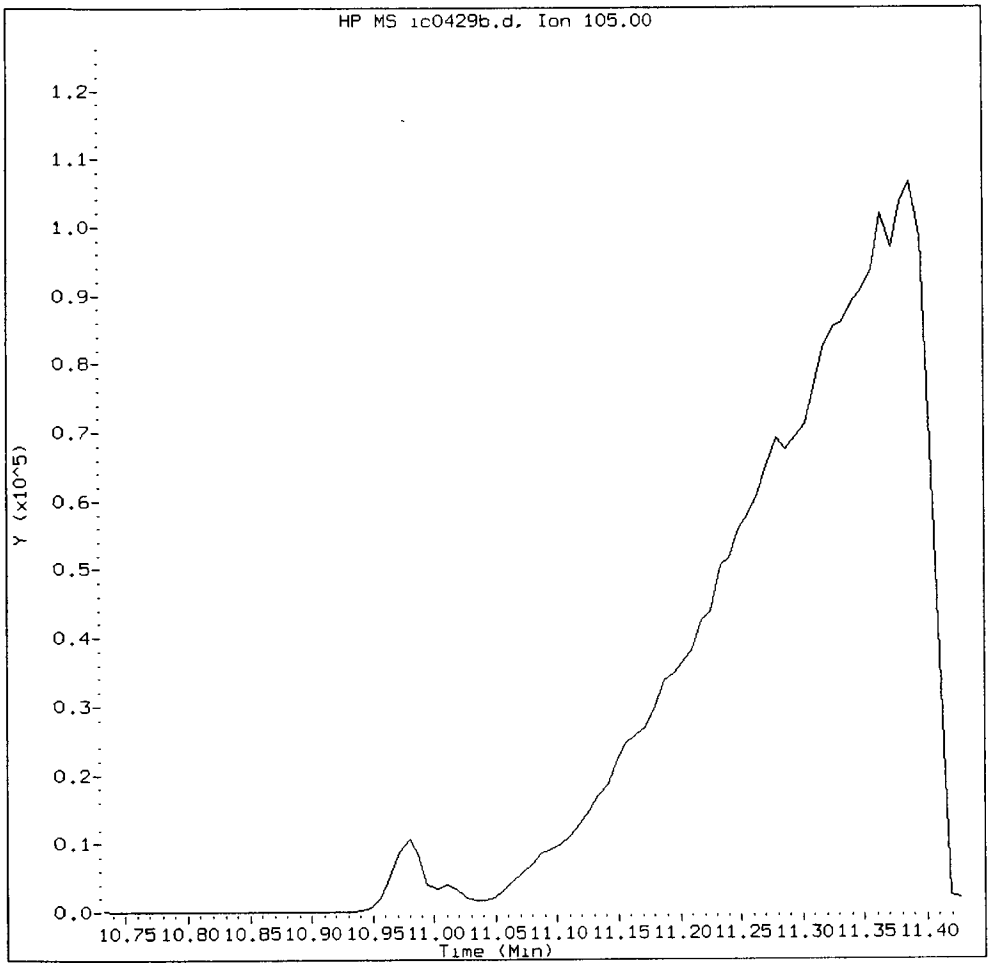
YZ 5/3/13





IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

Benzoic acid Amount: 79.78 Area: 1043882



MANUAL INTEGRATION for Benzoic acid

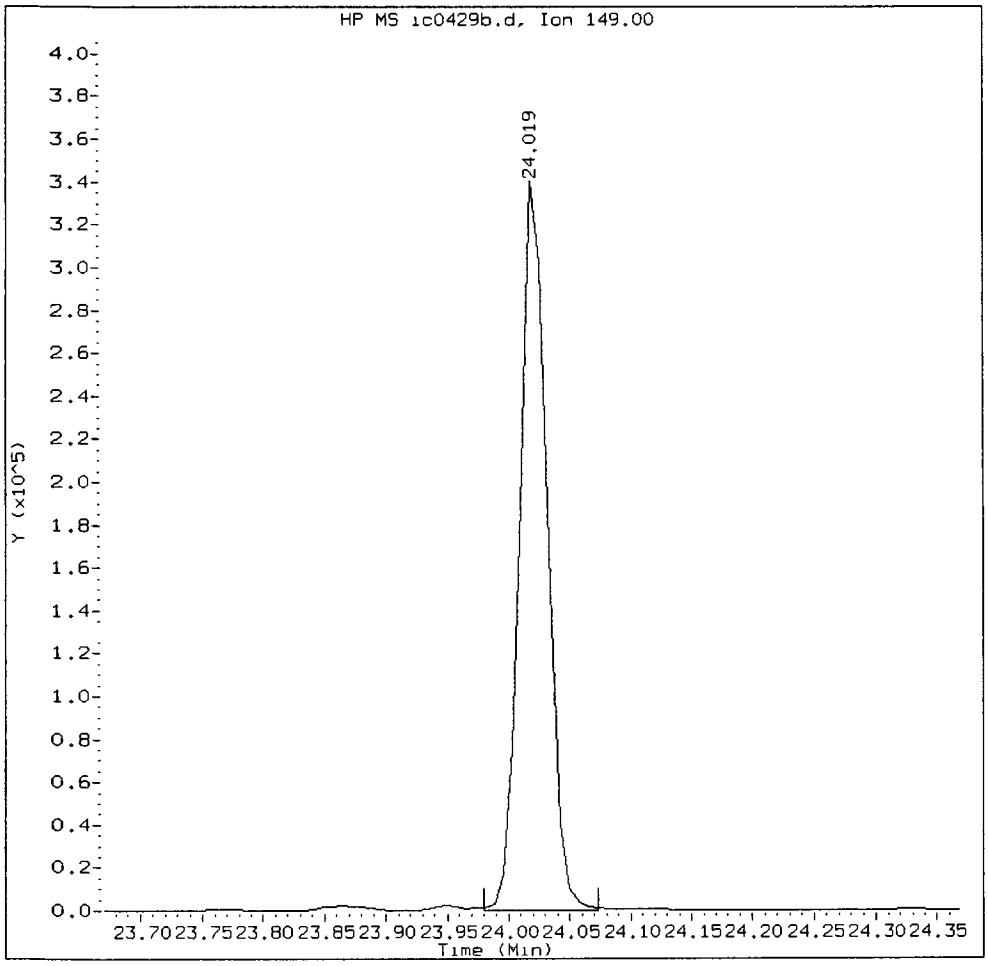
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

bis(2-Ethylhexyl)phthalate Amount: 19.18 Area: 538822



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: _____ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429b.d

Lab ID: IC0429B, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.202	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.636	6.629	(0.738)	3383	0.20000	0.1878
$	2	Phenol-d5	99	8.336	8.337	(0.928)	4401	0.20000	0.1889
	3	Phenol	94	8.360	8.360	(0.930)	5241	0.20000	0.2009
$	5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	3739	0.20000	0.2114
	4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	3959	0.20000	0.2111
	6	2-Chlorophenol	128	8.630	8.622	(0.960)	3911	0.20000	0.1944
	7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	4272	0.20000	0.2116
*	8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	50456	4.00000	
	9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	4324	0.20000	0.2173
$	10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	2496	0.20000	0.1962
	12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	4100	0.20000	0.2152
	11	Benzyl alcohol	108	9.289	9.289	(1.034)	2146	0.20000	0.1956
	14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	1075	0.20000	0.1857
	13	2-Methylphenol	108	9.553	9.553	(1.063)	3759	0.20000	0.2003
	17	Hexachloroethane	117	10.027	10.027	(1.116)	1739	0.20000	0.2089
	16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	2403	0.20000	0.2051
	15	4-Methylphenol	108	9.840	9.840	(1.095)	3626	0.20000	0.1895
$	18	Nitrobenzene-d5	82	10.158	10.159	(0.873)	3990	0.20000	0.2032
	19	Nitrobenzene	77	10.197	10.190	(0.876)	3676	0.20000	0.2028
	20	Isophorone	82	10.686	10.686	(0.918)	6624	0.20000	0.1943
	21	2-Nitrophenol	139	10.872	10.872	(0.934)	1931	0.20000	0.1900
	22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	7665	0.40000	0.4102
	23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	4126	0.20000	0.2052
	24	Benzoic acid	105	11.064	11.080	(0.950)	4976	0.80000	0.3099
	25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	5918	0.40000	0.3440
	26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	3837	0.20000	0.2282
*	27	Naphthalene-d8	136	11.643	11.643	(1.000)	186081	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	11214	0.20000	0.2264
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	7896	0.40000	0.4077
	30 Hexachlorobutadiene	225	12.106	12.099	(1.040)	2172	0.20000	0.2175
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	4902	0.40000	0.3239
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	6890	0.20000	0.2094
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	4924	0.40000	0.4074
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	4276	0.40000	0.3699
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	3903	0.40000	0.3275
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	8598	0.20000	0.2243
	37 2-Chloronaphthalene	162	14.258	14.258	(0.917)	6906	0.20000	0.2263
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	2248	0.40000	0.3052
	39 Dimethylphthalate	163	15.047	15.047	(0.968)	7495	0.20000	0.2273
	40 Acenaphthylene	152	15.194	15.194	(0.978)	11459	0.20000	0.2214
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	2863	0.40000	0.3706
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	109826	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	2279	0.40000	0.3574(M)
	44 Acenaphthene	153	15.612	15.604	(1.004)	7176	0.20000	0.2301
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	1264	0.80000	0.1881
	46 Dibenzofuran	168	15.959	15.960	(1.027)	9186	0.20000	0.2154
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	600	0.40000	0.1265
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	3351	0.40000	0.3363
	50 Diethylphthalate	149	16.632	16.632	(1.070)	7435	0.20000	0.2244
	49 Fluorene	166	16.733	16.733	(1.077)	8040	0.20000	0.2209
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	4050	0.20000	0.2264
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	2307	0.40000	0.3483
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	3933	0.80000	0.4496
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	4565	0.20000	0.2141
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	1098	0.20000	0.1890
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	2097	0.20000	0.2012
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	2973	0.20000	0.2390
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	2858	0.40000	0.3274
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	184210	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	11324	0.20000	0.2254
	61 Anthracene	178	18.957	18.958	(1.008)	11018	0.20000	0.2140
	62 Carbazole	167	19.313	19.314	(1.027)	8831	0.20000	0.2824
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	11372	0.20000	0.2140
	64 Fluoranthene	202	21.279	21.279	(1.131)	12505	0.20000	0.2115
	65 Pyrene	202	21.696	21.697	(0.908)	13621	0.20000	0.2217
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	8855	0.20000	0.2291
	67 Butylbenzylphthalate	149	22.966	22.974	(0.961)	4232	0.20000	0.2017
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	12468	0.20000	0.2243
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	198580	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	10168	0.40000	0.4802
	71 Chrysene	228	23.934	23.934	(1.002)	11695	0.20000	0.2324
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	6713	0.20000	0.2377(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	212453	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	11203	0.20000	0.2290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	12082	0.20000	0.2274
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.976)	12787	0.20000	0.2285
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	10298	0.20000	0.2268
* 77	Perylene-d12	264	26.342	26.350	(1.000)	178934	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.674	28.690	(1.089)	10579	0.20000	0.2023
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	8265	0.20000	0.2060
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.115)	9355	0.20000	0.2067
90	N-Nitrosodimethylamine	74	4.382	4.366	(0.488)	4445	0.40000	0.3867
91	Aniline	93	8.406	8.406	(0.935)	10097	0.20000	0.1995
93	Benzidine	184	21.542	21.542	(0.902)	6811	0.40000	1.117
103	Pyridine	79	4.420	4.397	(0.492)	3667	0.40000	0.3629
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	6549	0.20000	0.2170
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	7263	0.20000	0.2138
187	Total Benzofluoranthenes	252	25.660	25.699	(0.974)	23419	0.40000	0.4539
99	Perylene	252	26.388	26.388	(1.002)	12169	0.20000	0.2345
98	Retene	219	22.308	22.316	(0.934)	5229	0.20000	0.2249
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	1446	0.20000	0.1631
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	11183	0.40000	0.4011
189	N-Nitrosomethylethylamine	88	5.833	5.818	(0.649)	6603	0.40000	0.3851

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	50456	11.50
27 Naphthalene-d8	166754	83377	333508	186081	11.59
42 Acenaphthene-d10	106910	53455	213820	109826	2.73
59 Phenanthrene-d10	179783	89892	359566	184210	2.46
69 Chrysene-d12	192841	96420	385682	198580	2.98
134 Di-n-octylphthala	229567	114784	459134	212453	-7.45
77 Perylene-d12	184310	92155	368620	178934	-2.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.34	-0.03

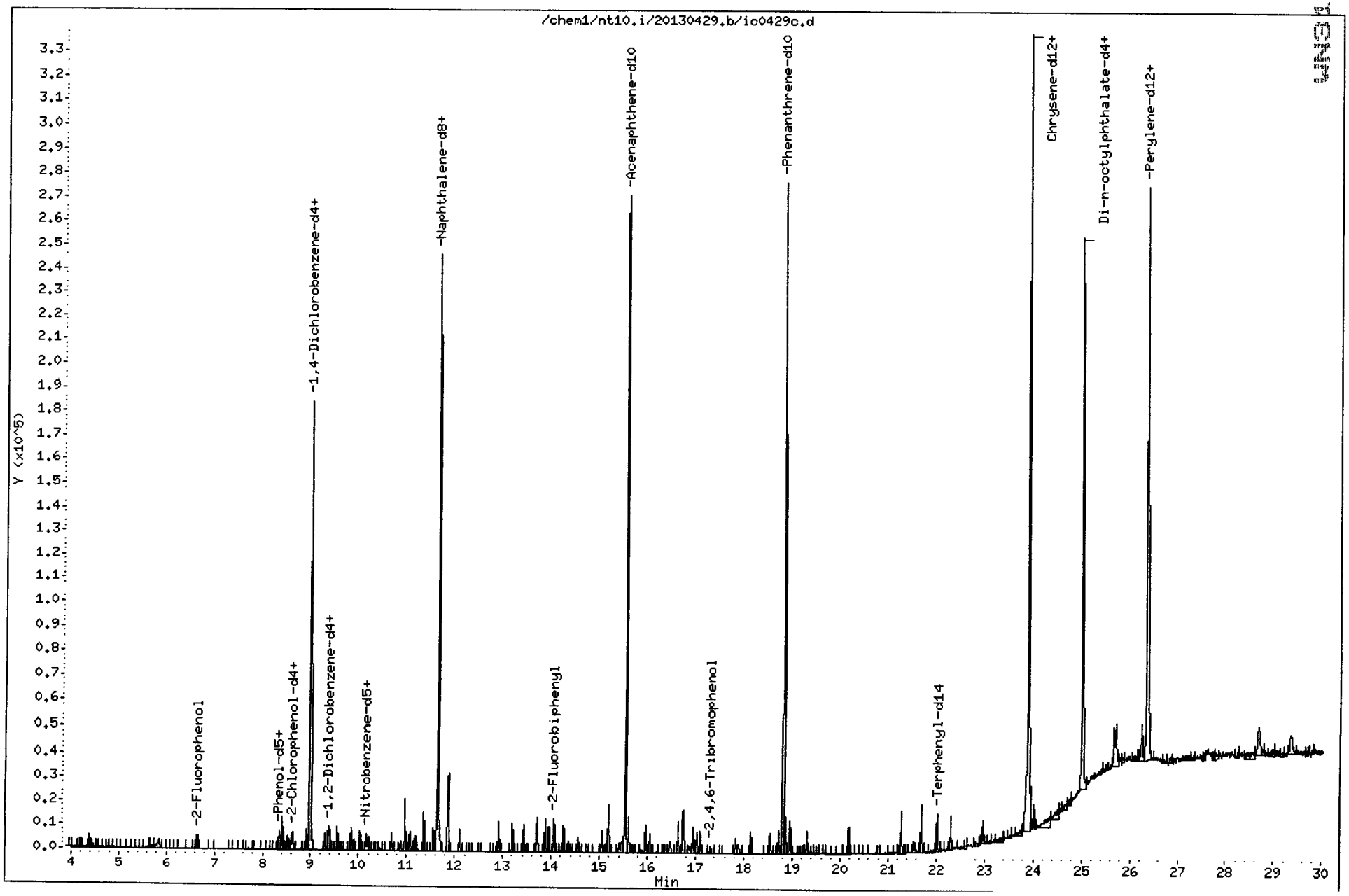
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Instrument: nt10.i

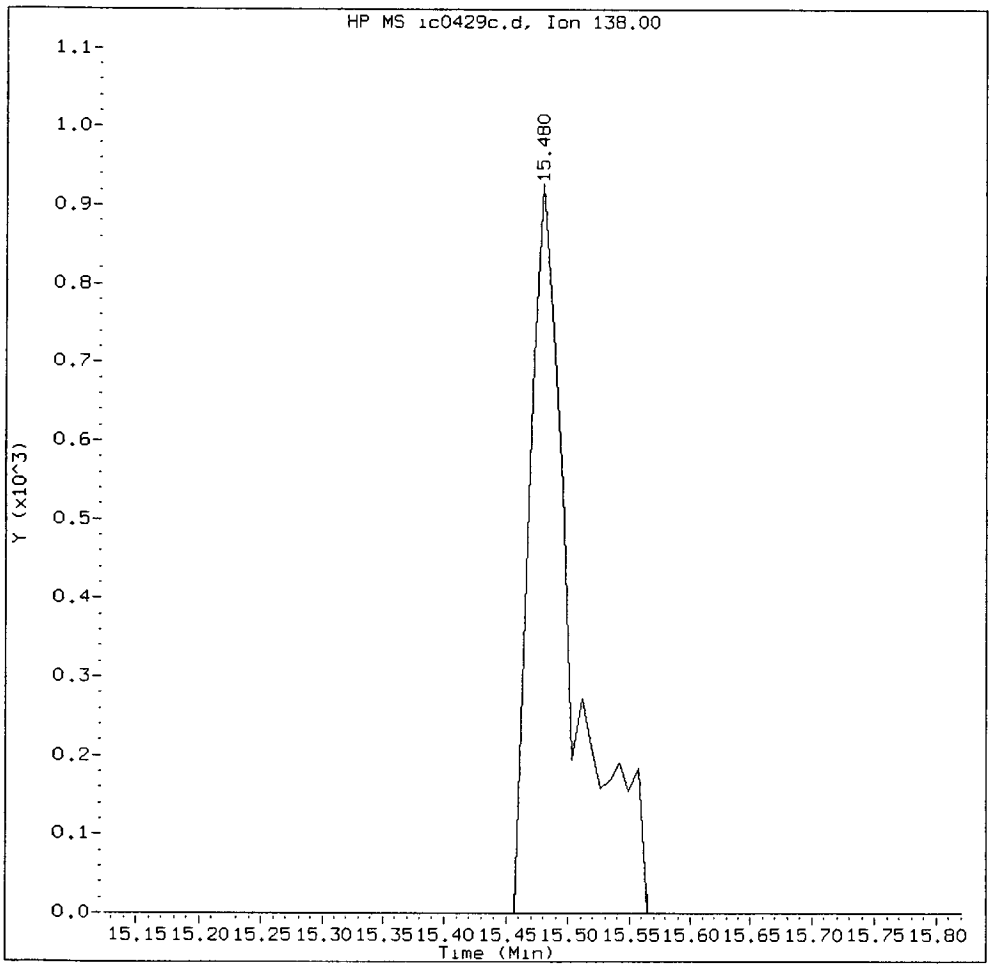
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

3-Nitroaniline Amount: 0.36 Area: 2279



MANUAL INTEGRATION for 3-Nitroaniline

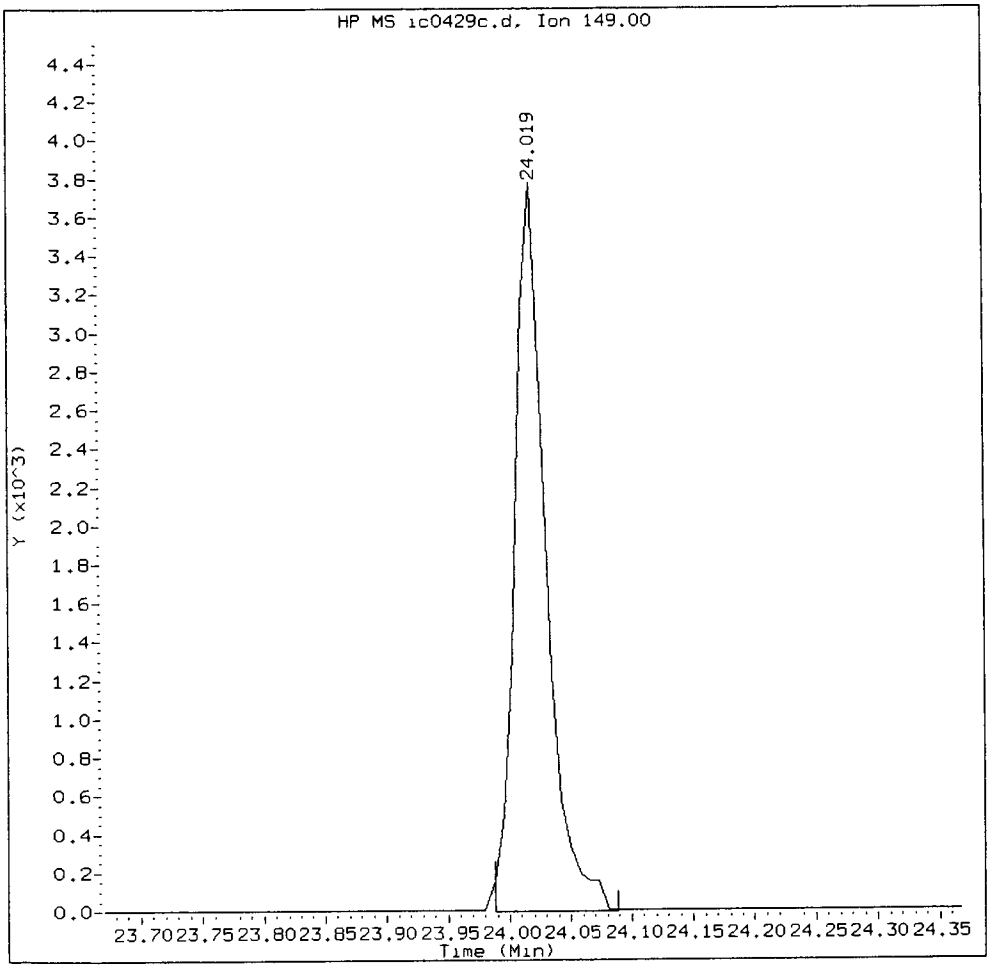
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

bis(2-Ethylhexyl)phthalate Amount: 0.24 Area: 6713



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: YP Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	15307	1.00000	0.9620
$	2 Phenol-d5	99	8.336	8.337	(0.928)	19285	1.00000	0.9366
	3 Phenol	94	8.360	8.360	(0.931)	22180	1.00000	0.9624
$	5 2-Chlorophenol-d4	132	8.591	8.599	(0.957)	14988	1.00000	0.9589
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	16380	1.00000	0.9883
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	16398	1.00000	0.9226
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	17715	1.00000	0.9933
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	44580	4.00000	
	9 1,4-Dichlorobenzene	146	9.010	9.018	(1.003)	16867	1.00000	0.9594
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	11111	1.00000	0.9883
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	16787	1.00000	0.9973
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	9257	1.00000	0.9548
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	5171	1.00000	1.011
	13 2-Methylphenol	108	9.545	9.553	(1.063)	16160	1.00000	0.9744
	17 Hexachloroethane	117	10.019	10.027	(1.116)	7294	1.00000	0.9916
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	9787	1.00000	0.9452
	15 4-Methylphenol	108	9.840	9.840	(1.096)	16603	1.00000	0.9818
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	17141	1.00000	0.9894
	19 Nitrobenzene	77	10.197	10.190	(0.876)	15823	1.00000	0.9893
	20 Isophorone	82	10.686	10.686	(0.918)	27613	1.00000	0.9178
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	8265	1.00000	0.9218
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	32296	2.00000	1.959
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	17765	1.00000	1.001
	24 Benzoic acid	105	11.110	11.080	(0.954)	41278	4.00000	2.905
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	31611	2.00000	2.083
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	14941	1.00000	1.007
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	164171	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	42702	1.00000	0.9770
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	33352	2.00000	1.952
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	8779	1.00000	0.9963
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	25572	2.00000	1.915
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	27982	1.00000	0.9638
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	21045	2.00000	1.886
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	20650	2.00000	1.935
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	21226	2.00000	1.929
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	34053	1.00000	0.9621
	37 2-Chloronaphthalene	162	14.257	14.258	(0.917)	27105	1.00000	0.9620
	38 2-Nitroaniline	65	14.552	14.552	(0.936)	13213	2.00000	1.943
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	29710	1.00000	0.9760
	40 Acenaphthylene	152	15.194	15.194	(0.978)	46429	1.00000	0.9715
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	13962	2.00000	1.957
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	101406	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	12865	2.00000	2.185
	44 Acenaphthene	153	15.612	15.604	(1.004)	27470	1.00000	0.9538
	45 2,4-Dinitrophenol	184	15.704	15.705	(1.010)	14717	4.00000	2.364
	46 Dibenzofuran	168	15.967	15.960	(1.027)	38532	1.00000	0.9785
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	5820	2.00000	1.327
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	18293	2.00000	1.988
	50 Diethylphthalate	149	16.632	16.632	(1.070)	29344	1.00000	0.9593
	49 Fluorene	166	16.733	16.733	(1.077)	32959	1.00000	0.9809
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	15568	1.00000	0.9425
	52 4-Nitroaniline	138	16.848	16.841	(1.084)	13721	2.00000	2.243
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	27317	4.00000	3.379
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	20108	1.00000	1.022
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	4956	1.00000	0.9242
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	9783	1.00000	1.017
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	11321	1.00000	0.9868
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	14694	2.00000	1.825
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	169929	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	46140	1.00000	0.9955
	61 Anthracene	178	18.957	18.958	(1.008)	46666	1.00000	0.9828
	62 Carbazole	167	19.313	19.314	(1.027)	35449	1.00000	1.229
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	46503	1.00000	0.9487
	64 Fluoranthene	202	21.278	21.279	(1.131)	52957	1.00000	0.9708
	65 Pyrene	202	21.696	21.697	(0.908)	55189	1.00000	0.9635
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	34900	1.00000	0.9684
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	19089	1.00000	0.9759
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	50618	1.00000	0.9766
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	185129	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	37586	2.00000	1.904
	71 Chrysene	228	23.942	23.934	(1.002)	43967	1.00000	0.9374
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	26029	1.00000	0.9857(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	198625	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.000)	43269	1.00000	0.9461

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	46024	1.00000	0.9209
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	52368	1.00000	0.9948
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	40952	1.00000	0.9591
* 77	Perylene-d12	264	26.349	26.350	(1.000)	168300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.682	28.690	(1.089)	46418	1.00000	0.9436
79	Dibenzo(a,h)anthracene	278	28.705	28.698	(1.089)	35967	1.00000	0.9531
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.114)	41617	1.00000	0.9778
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	19685	2.00000	1.938
91	Aniline	93	8.406	8.406	(0.936)	43396	1.00000	0.9705
93	Benzidine	184	21.542	21.542	(0.902)	23877	2.00000	4.142
103	Pyridine	79	4.397	4.397	(0.490)	17576	2.00000	1.969
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	25663	1.00000	0.9638
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	31455	1.00000	1.003
187	Total Benzofluoranthenes	252	25.668	25.699	(0.974)	94813	2.00000	1.954
99	Perylene	252	26.396	26.388	(1.002)	46957	1.00000	0.9620
98	Retene	219	22.316	22.316	(0.934)	20776	1.00000	0.9584
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	7820	1.00000	0.9555
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	48496	2.00000	1.972
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	29106	2.00000	1.921

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	44580	-1.48
27 Naphthalene-d8	166754	83377	333508	164171	-1.55
42 Acenaphthene-d10	106910	53455	213820	101406	-5.15
59 Phenanthrene-d10	179783	89892	359566	169929	-5.48
69 Chrysene-d12	192841	96420	385682	185129	-4.00
134 Di-n-octylphthala	229567	114784	459134	198625	-13.48
77 Perylene-d12	184310	92155	368620	168300	-8.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

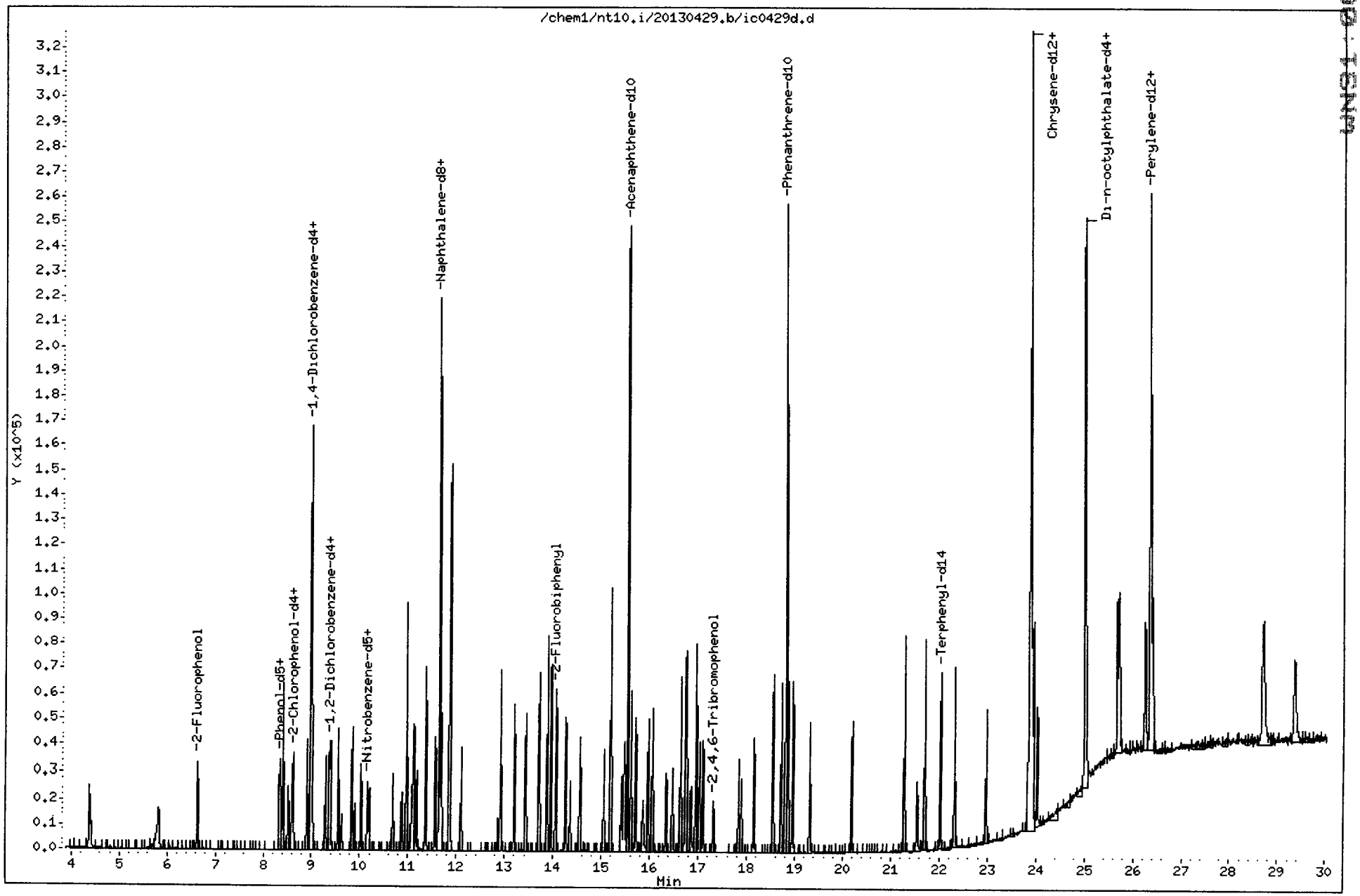
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i

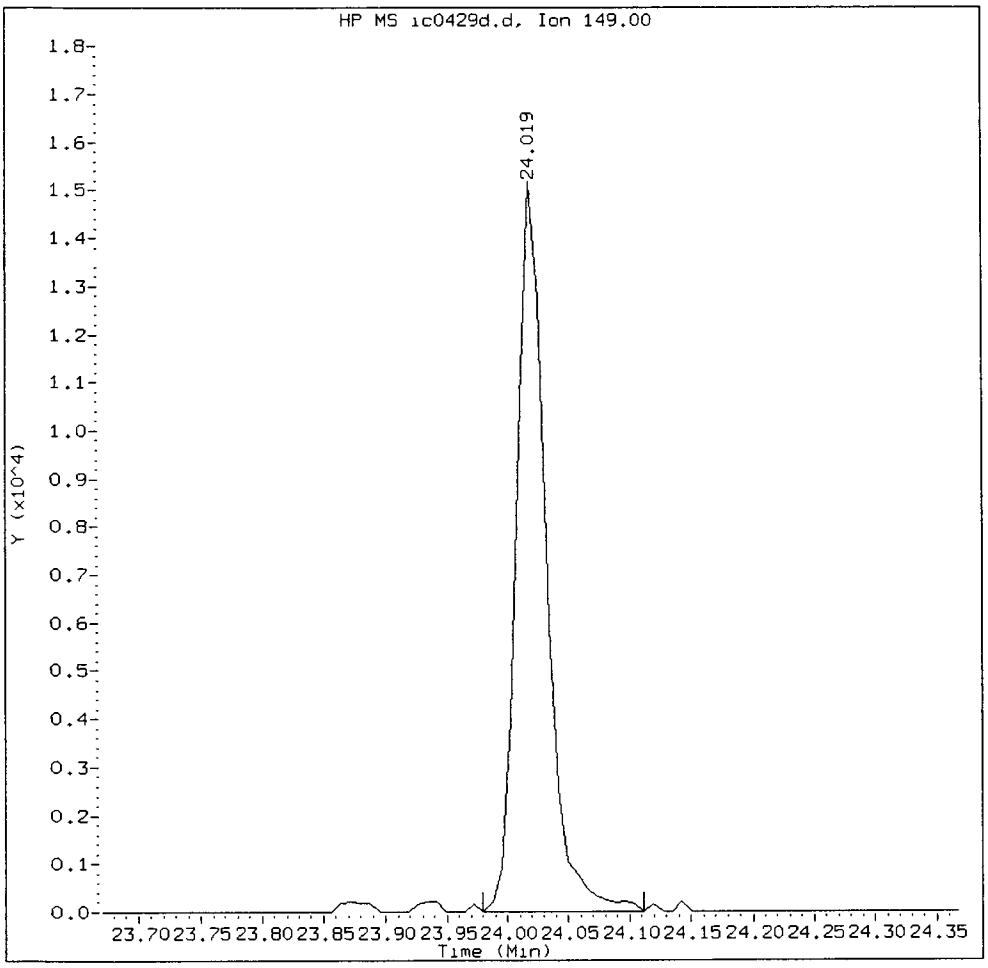
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/ic0429d.d

bis(2-Ethylhexyl)phthalate Amount: 0.99 Area: 26029



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: _____ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/2/13

Data file : /chem1/nt10.i/20130429.b/ic0429e.d
Lab Smp Id: IC0429E
Inj Date : 29-APR-2013 19:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:21 Cal File: ic0429e.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	146655	10.0000	10.73
$	2 Phenol-d5	99	8.344	8.337	(0.929)	196642	10.0000	11.12
	3 Phenol	94	8.367	8.360	(0.931)	210587	10.0000	10.64
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	137828	10.0000	10.27
	4 Bis(2-Chloroethyl)ether	93	8.529	8.522	(0.949)	143624	10.0000	10.09
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	173765	10.0000	11.38
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	155864	10.0000	10.18
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	38285	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	151337	10.0000	10.02
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	99905	10.0000	10.35
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	143308	10.0000	9.914
	11 Benzyl alcohol	108	9.297	9.289	(1.035)	92776	10.0000	11.14
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	45681	10.0000	10.40
	13 2-Methylphenol	108	9.553	9.553	(1.063)	149351	10.0000	10.49
	17 Hexachloroethane	117	10.026	10.027	(1.116)	64051	10.0000	10.14
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	93506	10.0000	10.52
	15 4-Methylphenol	108	9.848	9.840	(1.096)	160522	10.0000	11.05
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.872)	157610	10.0000	10.45
	19 Nitrobenzene	77	10.197	10.190	(0.875)	144235	10.0000	10.36
	20 Isophorone	82	10.694	10.686	(0.918)	308116	10.0000	11.77
	21 2-Nitrophenol	139	10.879	10.872	(0.934)	86330	10.0000	11.06
	22 2,4-Dimethylphenol	107	10.972	10.964	(0.942)	301913	20.0000	21.04
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	157345	10.0000	10.19
	24 Benzoic acid	105	11.303	11.080	(0.970)	533852	40.0000	41.16
	25 2,4-Dichlorophenol	162	11.372	11.365	(0.976)	298452	20.0000	22.59
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	126245	10.0000	9.777
*	27 Naphthalene-d8	136	11.650	11.643	(1.000)	142908	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.003)	383254	10.0000	10.07
	29 4-Chloroaniline	127	11.859	11.843	(1.018)	349641	20.0000	23.51
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	78933	10.0000	10.29
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.109)	269630	20.0000	23.20
	32 2-Methylnaphthalene	142	13.197	13.197	(1.133)	264096	10.0000	10.45
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	215070	20.0000	21.20
	34 2,4,6-Trichlorophenol	196	13.886	13.879	(0.893)	208965	20.0000	21.54
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	227145	20.0000	22.71
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	325794	10.0000	10.13
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	259249	10.0000	10.12
	38 2-Nitroaniline	65	14.567	14.552	(0.937)	143221	20.0000	23.17
	39 Dimethylphthalate	163	15.062	15.047	(0.969)	278457	10.0000	10.06
	40 Acenaphthylene	152	15.194	15.194	(0.978)	490760	10.0000	11.30
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	140641	20.0000	21.69
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	92187	4.00000	
	43 3-Nitroaniline	138	15.496	15.473	(0.997)	115718	20.0000	21.62
	44 Acenaphthene	153	15.612	15.604	(1.004)	261611	10.0000	9.992
	45 2,4-Dinitrophenol	184	15.727	15.705	(1.012)	250805	40.0000	41.56
	46 Dibenzofuran	168	15.975	15.960	(1.028)	364969	10.0000	10.19
	47 4-Nitrophenol	109	15.874	15.867	(1.021)	85112	20.0000	20.75
	48 2,4-Dinitrotoluene	165	16.068	16.052	(1.034)	187198	20.0000	22.38
	50 Diethylphthalate	149	16.647	16.632	(1.071)	283263	10.0000	10.19
	49 Fluorene	166	16.740	16.733	(1.077)	309724	10.0000	10.14
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	167282	10.0000	11.14
	52 4-Nitroaniline	138	16.872	16.841	(1.086)	125210	20.0000	22.52
	53 4,6-Dinitro-2-methylphenol	198	16.972	16.949	(0.902)	317489	40.0000	40.73
	54 N-Nitrosodiphenylamine	169	17.034	17.026	(0.905)	184807	10.0000	9.961
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	55755	10.0000	11.44
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	91977	10.0000	10.14
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	105323	10.0000	9.733
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	177427	20.0000	23.36
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	160272	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	440318	10.0000	10.07
	61 Anthracene	178	18.965	18.958	(1.008)	455728	10.0000	10.18
	62 Carbazole	167	19.321	19.314	(1.027)	242608	10.0000	8.918
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	495591	10.0000	10.72
	64 Fluoranthene	202	21.286	21.279	(1.131)	534614	10.0000	10.39
	65 Pyrene	202	21.704	21.697	(0.908)	542210	10.0000	10.18
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	341948	10.0000	10.20
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	196606	10.0000	10.80
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	490781	10.0000	10.18
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	172225	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.856	23.841	(0.998)	404734	20.0000	22.04
	71 Chrysene	228	23.949	23.934	(1.002)	439878	10.0000	10.08
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	275645	10.0000	9.831(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	210890	4.00000	
	73 Di-n-octylphthalate	149	25.018	25.002	(1.001)	477130	10.0000	9.826

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.676	25.660	(0.974)	516402	10.0000	10.46
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	509181	10.0000	9.789
76	Benzo(a)pyrene	252	26.256	26.241	(0.996)	438619	10.0000	10.40
* 77	Perylene-d12	264	26.357	26.350	(1.000)	166300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.705	28.690	(1.089)	528701	10.0000	10.88
79	Dibenzo(a,h)anthracene	278	28.729	28.698	(1.090)	403235	10.0000	10.81
80	Benzo(g,h,i)perylene	276	29.389	29.350	(1.115)	445295	10.0000	10.59
90	N-Nitrosodimethylamine	74	4.374	4.366	(0.487)	190704	20.0000	21.87
91	Aniline	93	8.414	8.406	(0.936)	403125	10.0000	10.50
93	Benzidine	184	21.549	21.542	(0.902)	110746	20.0000	19.11
103	Pyridine	79	4.374	4.397	(0.487)	162027	20.0000	21.13
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	238762	10.0000	10.30
111	Azobenzene (1,2-DP-Hydrazine)	77	17.111	17.095	(1.101)	287323	10.0000	10.08
187	Total Benzofluoranthenes	252	25.714	25.699	(0.976)	972720	20.0000	20.28
99	Perylene	252	26.411	26.388	(1.002)	482660	10.0000	10.01
98	Retene	219	22.323	22.316	(0.934)	206286	10.0000	10.23
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	86691	10.0000	11.65
188	2,6-Dichlorophenol	162	11.882	11.867	(1.020)	451718	20.0000	21.10
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	279207	20.0000	21.46

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429e.d
Lab Smp Id: IC0429E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38285	-15.39
27 Naphthalene-d8	166754	83377	333508	142908	-14.30
42 Acenaphthene-d10	106910	53455	213820	92187	-13.77
59 Phenanthrene-d10	179783	89892	359566	160272	-10.85
69 Chrysene-d12	192841	96420	385682	172225	-10.69
134 Di-n-octylphthala	229567	114784	459134	210890	-8.14
77 Perylene-d12	184310	92155	368620	166300	-9.77

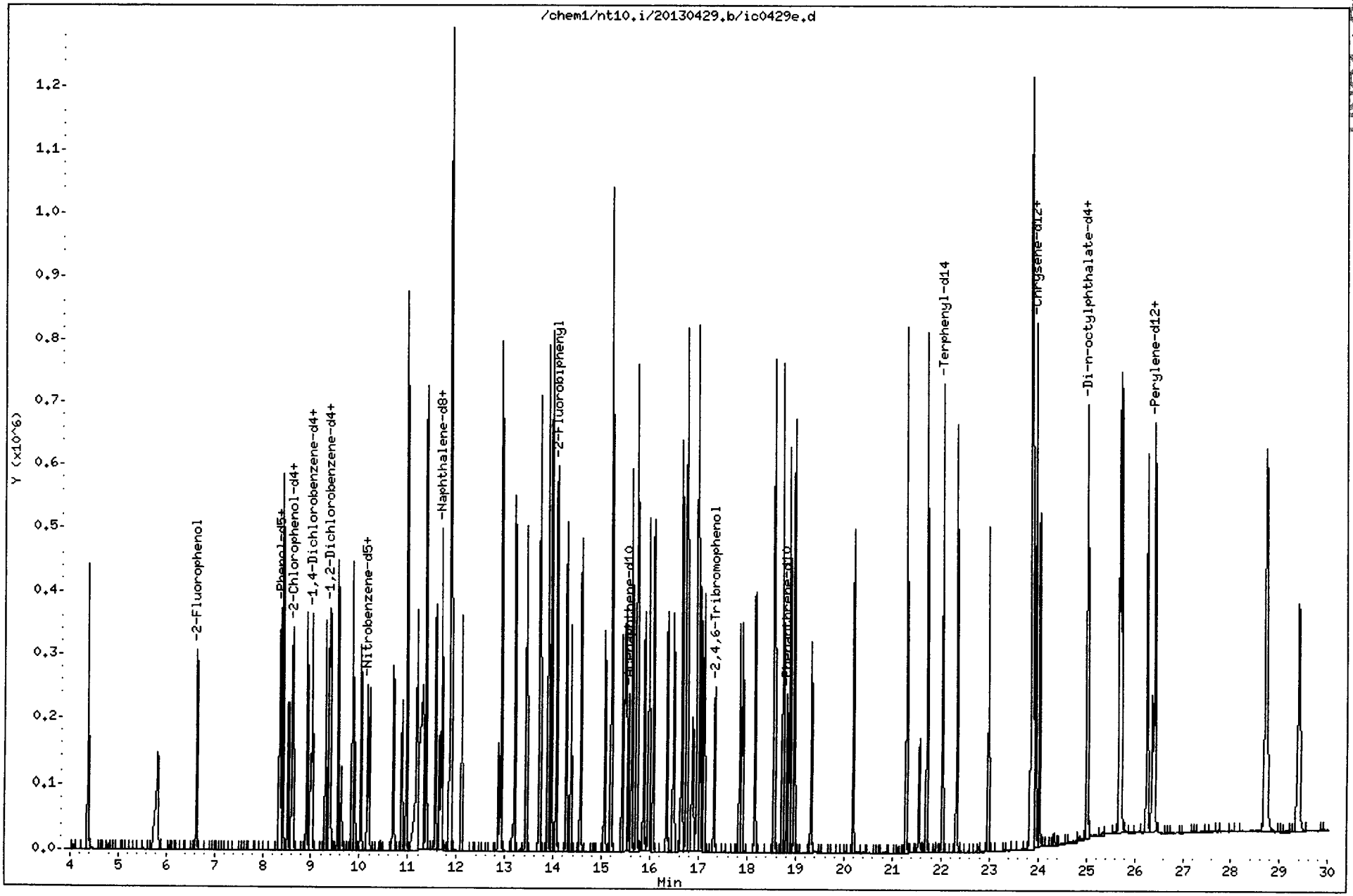
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

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

Data File: /chem1/nt10.i/20130429.b/ic0429e.d
Date : 29-APR-2013 19:21
Client ID:
Sample Info: IC0429E

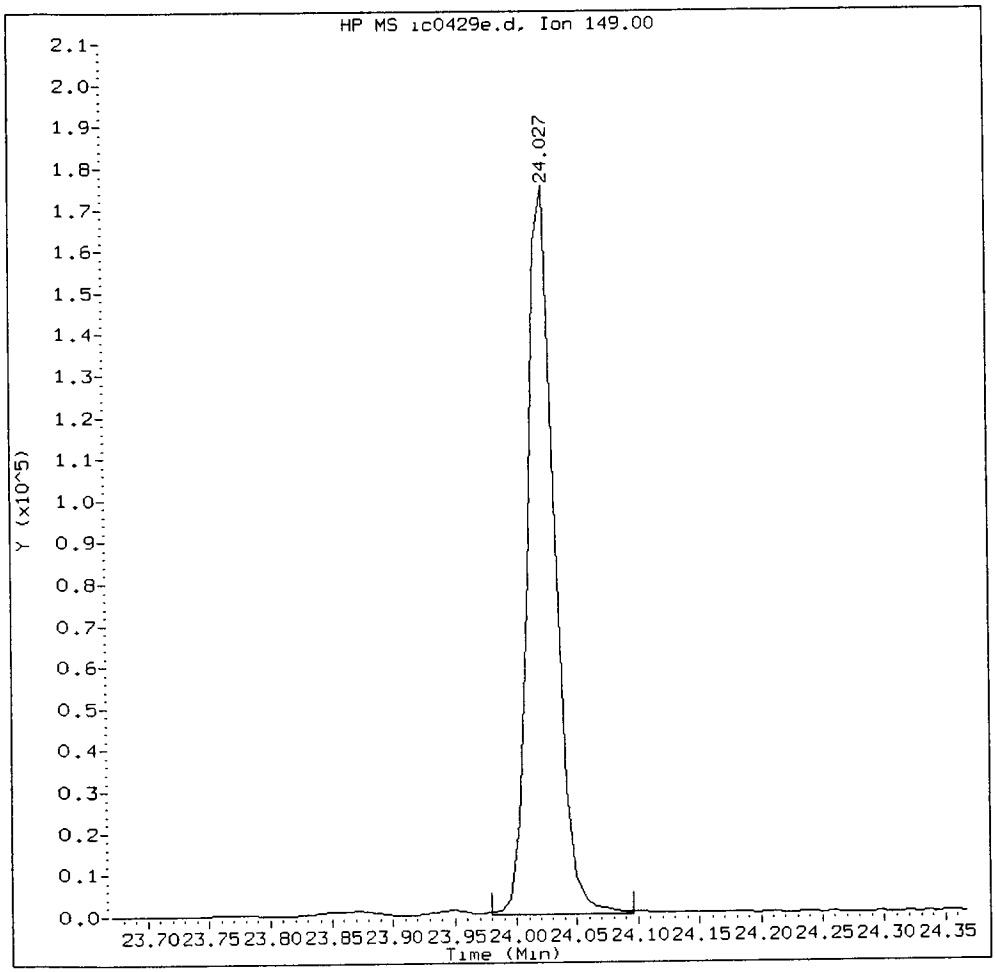
Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429E, /chem1/nt10.i/20130429.b/ic0429e.d

bis(2-Ethylhexyl)phthalate Amount: 9.83 Area: 275645



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: KZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429e.d

Lab ID: IC0429E, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.194	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	33327	2.50000	2.552
$	2 Phenol-d5	99	8.336	8.337	(0.928)	43013	2.50000	2.545
	3 Phenol	94	8.359	8.360	(0.930)	49200	2.50000	2.601
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	32303	2.50000	2.518
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	35522	2.50000	2.611
	6 2-Chlorophenol	128	8.622	8.622	(0.959)	35254	2.50000	2.417
	7 1,3-Dichlorobenzene	146	8.916	8.909	(0.992)	36581	2.50000	2.499
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36591	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	37170	2.50000	2.576
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	23363	2.50000	2.532
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.045)	34665	2.50000	2.509
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	20599	2.50000	2.589
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	11085	2.50000	2.640
	13 2-Methylphenol	108	9.553	9.553	(1.063)	35312	2.50000	2.594
	17 Hexachloroethane	117	10.026	10.027	(1.116)	15637	2.50000	2.590
	16 N-Nitroso-di-n-propylamine	70	9.894	9.895	(1.101)	22554	2.50000	2.654
	15 4-Methylphenol	108	9.840	9.840	(1.095)	36435	2.50000	2.625
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	37054	2.50000	2.546
	19 Nitrobenzene	77	10.197	10.190	(0.876)	34459	2.50000	2.565
	20 Isophorone	82	10.686	10.686	(0.918)	61248	2.50000	2.424
	21 2-Nitrophenol	139	10.871	10.872	(0.934)	19030	2.50000	2.527
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	71562	5.00000	5.167
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	38098	2.50000	2.556
	24 Benzoic acid	105	11.164	11.080	(0.959)	106496	10.0000	8.861
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	67816	5.00000	5.320
	26 1,2,4-Trichlorobenzene	180	11.557	11.558	(0.993)	30525	2.50000	2.450
*	27 Naphthalene-d8	136	11.642	11.643	(1.000)	137898	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	91698	2.50000	2.498
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	72996	5.00000	5.086
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	18006	2.50000	2.433
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	59257	5.00000	5.284
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	60463	2.50000	2.479
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	46418	5.00000	4.831
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	46504	5.00000	5.061
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	48311	5.00000	5.100
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	75007	2.50000	2.461
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	59913	2.50000	2.470
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	31617	5.00000	5.400
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	64965	2.50000	2.479
	40 Acenaphthylene	152	15.194	15.194	(0.978)	99122	2.50000	2.409
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	32305	5.00000	5.261
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	87308	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	27423	5.00000	5.409
	44 Acenaphthene	153	15.611	15.604	(1.004)	61853	2.50000	2.494
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	42855	10.0000	7.930
	46 Dibenzofuran	168	15.967	15.960	(1.027)	84689	2.50000	2.498
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	16653	5.00000	4.391
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	41845	5.00000	5.283
	50 Diethylphthalate	149	16.640	16.632	(1.071)	65811	2.50000	2.499
	49 Fluorene	166	16.732	16.733	(1.077)	72923	2.50000	2.521
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	33604	2.50000	2.363
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	26194	5.00000	4.974
	53 4,6-Dinitro-2-methylphenol	198	16.956	16.949	(0.901)	65565	10.0000	9.149
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	44352	2.50000	2.552
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	11658	2.50000	2.525
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	20878	2.50000	2.457
	57 Hexachlorobenzene	284	18.152	18.153	(0.965)	24254	2.50000	2.393
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	37390	5.00000	5.254
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	150153	4.00000	
	60 Phenanthrene	178	18.864	18.857	(1.002)	100003	2.50000	2.442
	61 Anthracene	178	18.957	18.958	(1.007)	103502	2.50000	2.467
	62 Carbazole	167	19.313	19.314	(1.026)	60342	2.50000	2.368
	63 Di-n-butylphthalate	149	20.187	20.188	(1.073)	104682	2.50000	2.417
	64 Fluoranthene	202	21.286	21.279	(1.131)	117131	2.50000	2.430
	65 Pyrene	202	21.704	21.697	(0.908)	123102	2.50000	2.418
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	78162	2.50000	2.440
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	42839	2.50000	2.464
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	110437	2.50000	2.397
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	164553	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	73617	5.00000	4.195
	71 Chrysene	228	23.941	23.934	(1.002)	100065	2.50000	2.400
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	59748	2.50000	2.511(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	178975	4.00000	
	73 Di-n-octylphthalate	149	25.017	25.002	(1.001)	101315	2.50000	2.459

Data File: /chem1/nt10.i/20130429.b/ic0429g.d
Report Date: 03-May-2013 16:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	107559	2.50000	2.369
	75 Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	117137	2.50000	2.450
	76 Benzo(a)pyrene	252	26.249	26.241	(0.996)	93000	2.50000	2.398
*	77 Perylene-d12	264	26.357	26.350	(1.000)	152859	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.697	28.690	(1.089)	107108	2.50000	2.397
	79 Dibenzo(a,h)anthracene	278	28.721	28.698	(1.090)	84630	2.50000	2.469
	80 Benzo(g,h,i)perylene	276	29.381	29.350	(1.115)	94698	2.50000	2.450
	90 N-Nitrosodimethylamine	74	4.351	4.366	(0.484)	44045	5.00000	5.284
	91 Aniline	93	8.406	8.406	(0.935)	96404	2.50000	2.627
	93 Benzidine	184	21.541	21.542	(0.901)	29714	5.00000	5.756
	103 Pyridine	79	4.374	4.397	(0.487)	39707	5.00000	5.419
	105 1-methylnaphthalene	142	13.429	13.430	(1.153)	55151	2.50000	2.466
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	69518	2.50000	2.574
	187 Total Benzofluoranthenes	252	25.668	25.699	(0.974)	213730	5.00000	4.849
	99 Perylene	252	26.403	26.388	(1.002)	104964	2.50000	2.368
	98 Retene	219	22.315	22.316	(0.934)	46252	2.50000	2.400
	120 2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	17623	2.50000	2.501
	188 2,6-Dichlorophenol	162	11.866	11.867	(1.019)	104652	5.00000	5.066
	189 N-Nitrosomethylethylamine	88	5.817	5.818	(0.647)	65642	5.00000	5.279

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

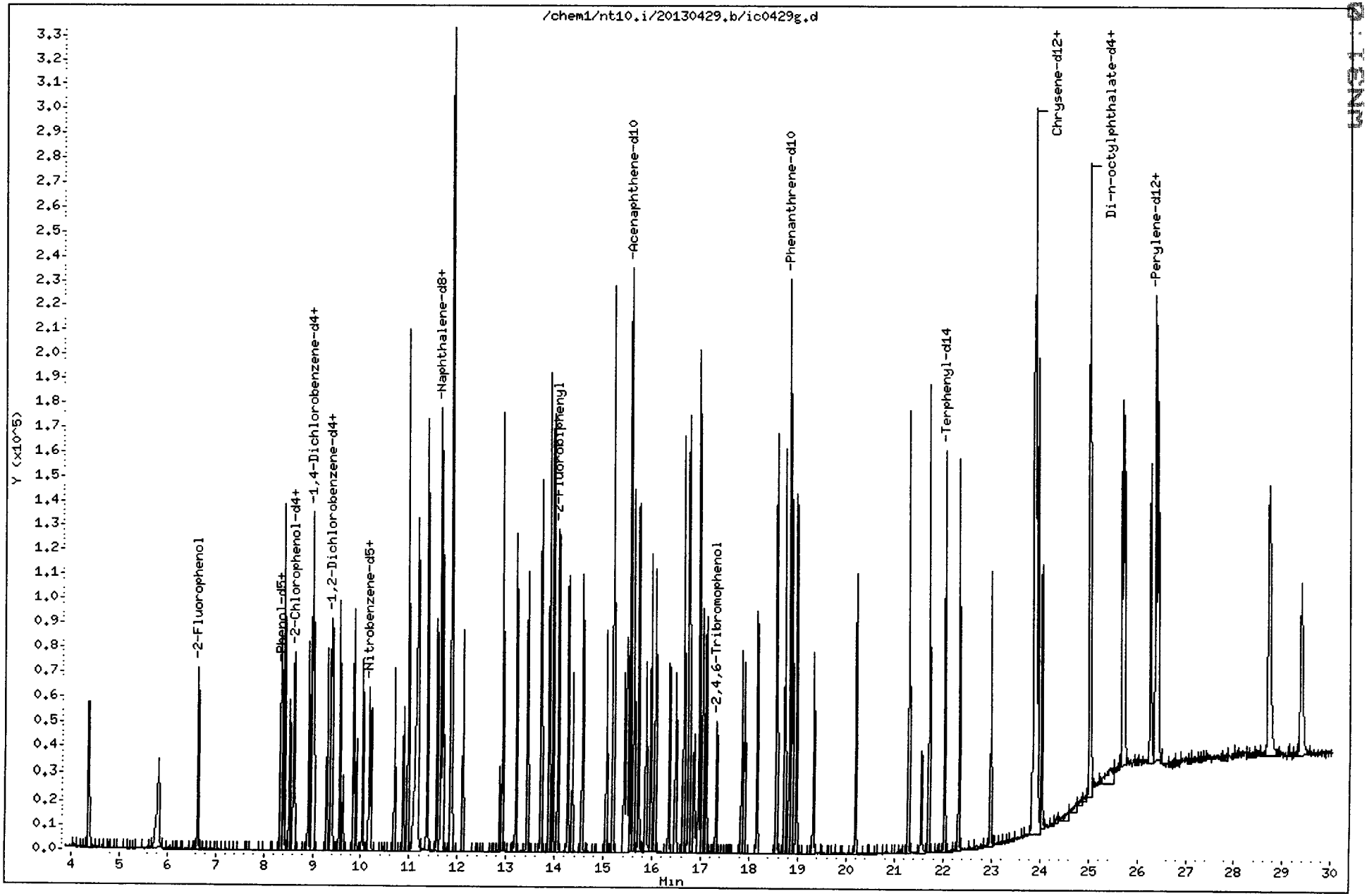
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36591	-19.14
27 Naphthalene-d8	166754	83377	333508	137898	-17.30
42 Acenaphthene-d10	106910	53455	213820	87308	-18.34
59 Phenanthrene-d10	179783	89892	359566	150153	-16.48
69 Chrysene-d12	192841	96420	385682	164553	-14.67
134 Di-n-octylphthala	229567	114784	459134	178975	-22.04
77 Perylene-d12	184310	92155	368620	152859	-17.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

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

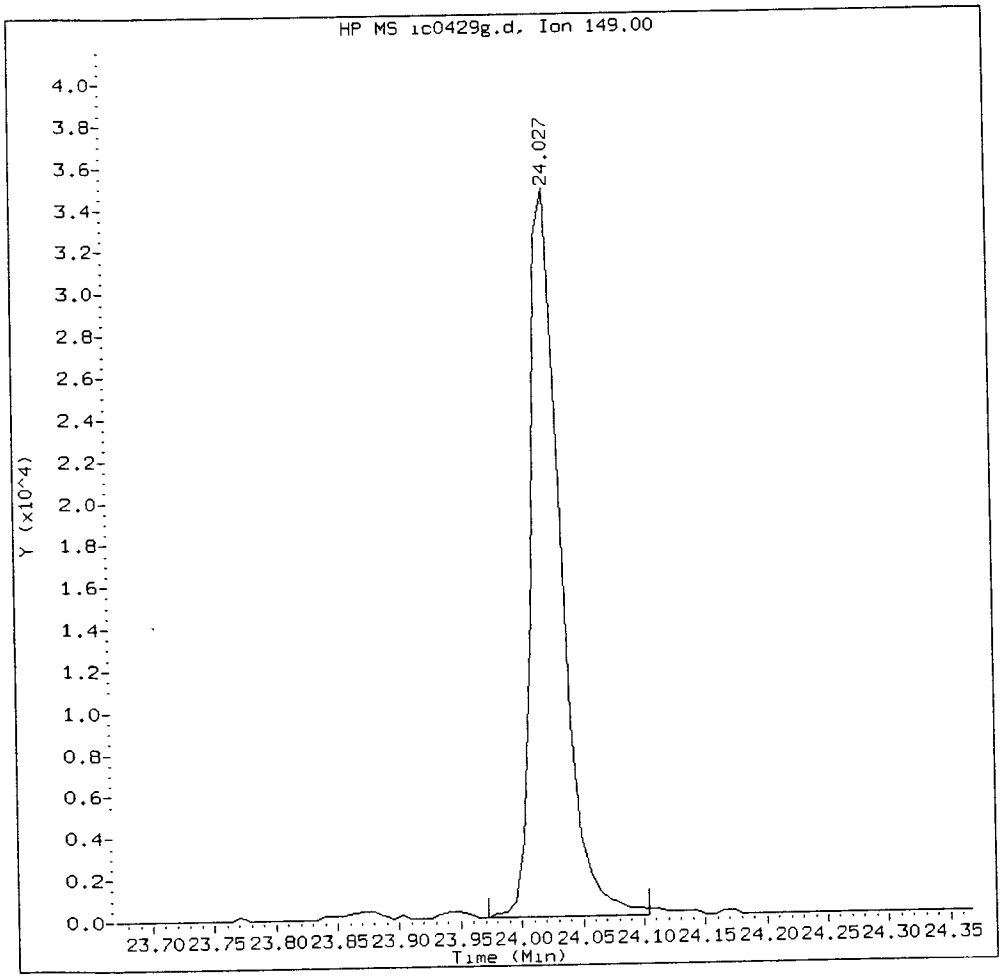
Data File: /chem1/nt10.i/20130429.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5ms1
Column diameter: 0.25



IC0429G, /chem1/nt10.i/20130429.b/ic0429g.d

bis(2-Ethylhexyl)phthalate Amount: 2.51 Area: 59748



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: VS Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev
Quant Type: ISTD
Cal Date : 29-APR-2013 21:47
Cal File: ic0429i.d
Als bottle: 10
Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.629	6.629	(0.738)	7097	0.50000	0.4779
$	2 Phenol-d5	99	8.337	8.337	(0.928)	8848	0.50000	0.4605
	3 Phenol	94	8.360	8.360	(0.931)	10487	0.50000	0.4876
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.958)	6852	0.50000	0.4698
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	8003	0.50000	0.5174
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	7629	0.50000	0.4600
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	8033	0.50000	0.4826
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41602	4.00000	
	9 1,4-Dichlorobenzene	146	9.018	9.018	(1.004)	7938	0.50000	0.4839
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	5208	0.50000	0.4964
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	7759	0.50000	0.4940
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	3823	0.50000	0.4226
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	2289	0.50000	0.4795
	13 2-Methylphenol	108	9.553	9.553	(1.064)	7310	0.50000	0.4723
	17 Hexachloroethane	117	10.027	10.027	(1.117)	3426	0.50000	0.4991
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	4650	0.50000	0.4812
	15 4-Methylphenol	108	9.840	9.840	(1.096)	7046	0.50000	0.4465
$	18 Nitrobenzene-d5	82	10.159	10.159	(0.873)	8203	0.50000	0.4943
	19 Nitrobenzene	77	10.190	10.190	(0.875)	7721	0.50000	0.5040
	20 Isophorone	82	10.686	10.686	(0.918)	13058	0.50000	0.4531
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	3663	0.50000	0.4265
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	14636	1.00000	0.9268
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	8541	0.50000	0.5026
	24 Benzoic acid	105	11.080	11.080	(0.952)	12620	2.00000	0.9294
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	11335	1.00000	0.7797
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	6875	0.50000	0.4839
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	157250	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.681	11.681	(1.003)	19775	0.50000	0.4723
	29 4-Chloroaniline	127	11.843	11.843	(1.017)	14329	1.00000	0.8755
	30 Hexachlorobutadiene	225	12.099	12.099	(1.039)	3928	0.50000	0.4654
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	10700	1.00000	0.8367
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	13246	0.50000	0.4763
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	9274	1.00000	0.8934
	34 2,4,6-Trichlorophenol	196	13.879	13.879	(0.893)	8685	1.00000	0.8747
	35 2,4,5-Trichlorophenol	196	13.948	13.948	(0.898)	8785	1.00000	0.8583
$	36 2-Fluorobiphenyl	172	14.057	14.057	(0.905)	15786	0.50000	0.4794
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	12356	0.50000	0.4714
	38 2-Nitroaniline	65	14.552	14.552	(0.937)	5242	1.00000	0.8286
	39 Dimethylphthalate	163	15.047	15.047	(0.969)	13385	0.50000	0.4726
	40 Acenaphthylene	152	15.194	15.194	(0.978)	21258	0.50000	0.4782
	41 2,6-Dinitrotoluene	165	15.179	15.179	(0.977)	6067	1.00000	0.9143
*	42 Acenaphthene-d10	164	15.535	15.535	(1.000)	94337	4.00000	
	43 3-Nitroaniline	138	15.473	15.473	(0.996)	5039	1.00000	0.9199
	44 Acenaphthene	153	15.604	15.604	(1.004)	12929	0.50000	0.4826
	45 2,4-Dinitrophenol	184	15.705	15.705	(1.011)	4345	2.00000	0.7522
	46 Dibenzofuran	168	15.960	15.960	(1.027)	17668	0.50000	0.4823
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	1862	1.00000	0.4569
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	7334	1.00000	0.8570
	50 Diethylphthalate	149	16.632	16.632	(1.071)	13456	0.50000	0.4729
	49 Fluorene	166	16.733	16.733	(1.077)	14861	0.50000	0.4754
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	7105	0.50000	0.4624
	52 4-Nitroaniline	138	16.841	16.841	(1.084)	4664	1.00000	0.8197
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	9847	2.00000	1.299
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	8567	0.50000	0.4637
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	2005	0.50000	0.4019
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	4326	0.50000	0.4791
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	5141	0.50000	0.4772
	58 Pentachlorophenol	266	18.548	18.548	(0.986)	5592	1.00000	0.7394
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	159582	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	20200	0.50000	0.4641
	61 Anthracene	178	18.958	18.958	(1.008)	21303	0.50000	0.4777
	62 Carbazole	167	19.314	19.314	(1.027)	15951	0.50000	0.5889
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	19951	0.50000	0.4334
	64 Fluoranthene	202	21.279	21.279	(1.131)	23534	0.50000	0.4594
	65 Pyrene	202	21.697	21.697	(0.908)	24226	0.50000	0.4588
$	66 Terphenyl-d14	244	22.022	22.022	(0.922)	14939	0.50000	0.4497
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	7305	0.50000	0.4051
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	22076	0.50000	0.4620
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	170666	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	15590	1.00000	0.8567
	71 Chrysene	228	23.934	23.934	(1.002)	20337	0.50000	0.4703
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	10757	0.50000	0.4647(M)
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	174102	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	20550	0.50000	0.5126

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.660	25.660	(0.974)	20816	0.50000	0.4439
	75 Benzo(k)fluoranthene	252	25.699	25.699	(0.975)	22672	0.50000	0.4591
	76 Benzo(a)pyrene	252	26.241	26.241	(0.996)	17222	0.50000	0.4299
*	77 Perylene-d12	264	26.350	26.350	(1.000)	157899	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	20006	0.50000	0.4335
	79 Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	14468	0.50000	0.4087
	80 Benzo(g,h,i)perylene	276	29.350	29.350	(1.114)	17808	0.50000	0.4460
	90 N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	9105	1.00000	0.9607
	91 Aniline	93	8.406	8.406	(0.936)	20193	0.50000	0.4839
	93 Benzidine	184	21.542	21.542	(0.902)	8518	1.00000	1.621
	103 Pyridine	79	4.397	4.397	(0.490)	8381	1.00000	1.006
	105 1-methylnaphthalene	142	13.430	13.430	(1.153)	11744	0.50000	0.4605
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	14947	0.50000	0.5123
	187 Total Benzofluoranthenes	252	25.699	25.699	(0.975)	41609	1.00000	0.9139
	99 Perylene	252	26.388	26.388	(1.001)	21669	0.50000	0.4732
	98 Retene	219	22.316	22.316	(0.934)	8851	0.50000	0.4429
	120 2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.052)	3016	0.50000	0.3961
	188 2,6-Dichlorophenol	162	11.867	11.867	(1.019)	21326	1.00000	0.9052
	189 N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	13437	1.00000	0.9505

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem1/nt10.i/20130429.b/ic0429i.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41602	-8.06
27 Naphthalene-d8	166754	83377	333508	157250	-5.70
42 Acenaphthene-d10	106910	53455	213820	94337	-11.76
59 Phenanthrene-d10	179783	89892	359566	159582	-11.24
69 Chrysene-d12	192841	96420	385682	170666	-11.50
134 Di-n-octylphthala	229567	114784	459134	174102	-24.16
77 Perylene-d12	184310	92155	368620	157899	-14.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.08
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

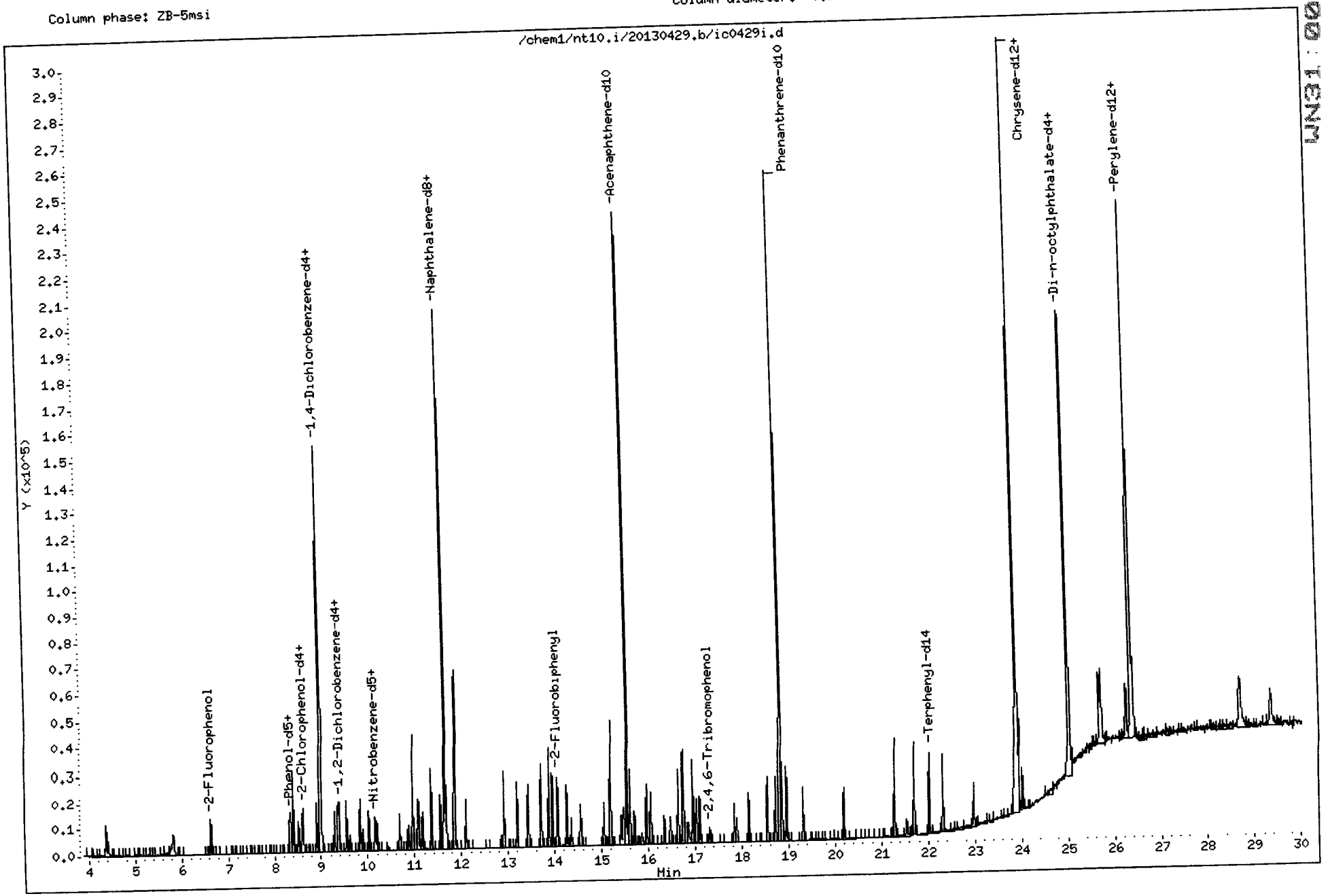
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Column phase: ZB-5msi

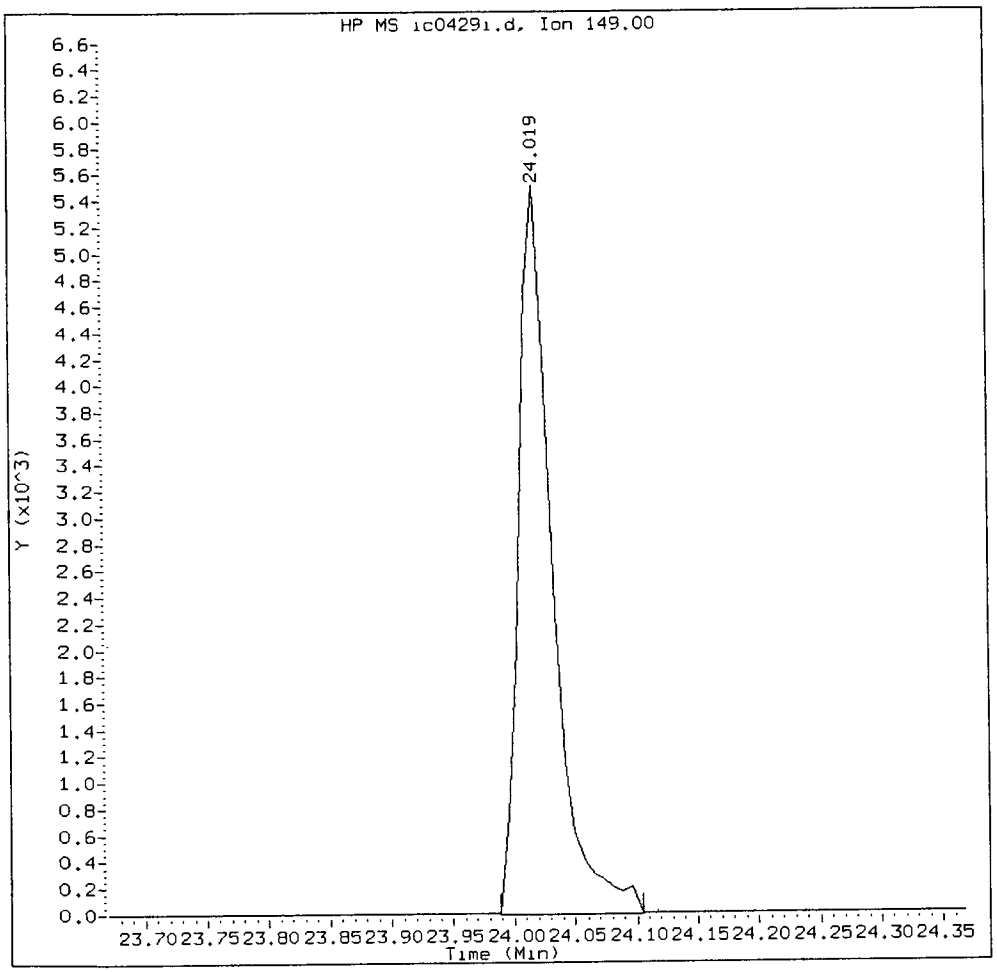
Instrument: nt10.1

Operator: VTS/YZ
Column diameter: 0.25



IC0429I, /chem1/nt10.i/20130429.b/ic0429i.d

bis(2-Ethylhexyl)phthalate Amount: 0.46 Area: 10757



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: YZ Date: 5/4/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429icv.d
Lab Smp Id: IC0429ICV
Inj Date : 29-APR-2013 22:24
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429ICV
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.360	8.360	(0.931)	111426	5.21984	5.220
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	81953	5.33870	5.339
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	80570	4.89423	4.894
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	84507	5.11566	5.116
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41290	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.004)	84755	5.20517	5.205
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	79538	5.10200	5.102
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	44014	4.90168	4.902
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	24983	5.27307	5.273
	13 2-Methylphenol	108	9.545	9.553	(1.063)	84376	5.49292	5.493
	17 Hexachloroethane	117	10.019	10.027	(1.116)	35524	5.21434	5.214
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	51945	5.41648	5.416
	15 4-Methylphenol	108	9.840	9.840	(1.096)	87603	5.59319	5.593
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.190	10.190	(0.875)	79523	5.36973	5.370
	20 Isophorone	82	10.686	10.686	(0.918)	173340	6.22278	6.223
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	42978	5.17676	5.177
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	164268	10.7602	10.76
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	90256	5.49412	5.494
	24 Benzoic acid	105	11.234	11.080	(0.965)	282915	21.0014	21.00
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	155797	11.0867	11.09
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	70353	5.12215	5.122
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	152009	4.00000	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	191530	4.73263	4.733
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	173412	10.9603	10.96
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	42367	5.19271	5.193
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	147122	11.9007	11.90
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	129228	4.80733	4.807
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	107971	10.2504	10.25
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	112509	11.1670	11.17
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	125520	12.0854	12.09
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	142918	5.37333	5.373
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	73989	11.5256	11.53
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	152060	5.29173	5.292
	40 Acenaphthylene	152	15.194	15.194	(0.978)	207472	4.59913	4.599
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.978)	75138	11.1601	11.16
*	42 Acenaphthene-d10	164	15.534	15.535	(1.000)	95722	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	71502	12.8642	12.86
	44 Acenaphthene	153	15.612	15.604	(1.005)	131114	4.82292	4.823
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	126391	20.8995	20.90
	46 Dibenzofuran	168	15.967	15.960	(1.028)	179601	4.83159	4.832
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43830	10.4514	10.45
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	100486	11.5716	11.57
	50 Diethylphthalate	149	16.640	16.632	(1.071)	148426	5.14027	5.140
	49 Fluorene	166	16.733	16.733	(1.077)	152283	4.80101	4.801
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	77730	4.98522	4.985
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	68038	11.7844	11.78
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.902)	169347	21.7583	21.76
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102490	5.46980	5.470
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	49463	5.40070	5.401
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	56636	5.18261	5.183
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	90998	11.8629	11.86
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	161863	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.003)	216640	4.90686	4.907
	61 Anthracene	178	18.958	18.958	(1.008)	219969	4.86323	4.863
	62 Carbazole	167	19.313	19.314	(1.027)	146715	5.34003	5.340
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	259155	5.55031	5.550
	64 Fluoranthene	202	21.279	21.279	(1.131)	257141	4.94850	4.949
	65 Pyrene	202	21.696	21.697	(0.908)	264541	4.88069	4.881
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	106153	5.73506	5.735
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	240855	4.91069	4.911
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	175186	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	155141	8.30491	8.305
	71 Chrysene	228	23.942	23.934	(1.002)	214847	4.84048	4.840
	72 bis(2-Ethylhexyl)phthalate	149	25.010	24.019	(1.001)	242465	5.33975	5.340
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	197383	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	242465	5.33515	5.335

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	227705	4.59796	4.598
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	268725	5.15172	5.152
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	203839	4.81788	4.818
* 77	Perylene-d12	264	26.349	26.350	(1.000)	166766	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	251131	5.15203	5.152
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	191446	5.12002	5.120
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	209597	4.96989	4.970
90	N-Nitrosodimethylamine	74	4.358	4.366	(0.485)	105643	11.2307	11.23
91	Aniline	93	8.406	8.406	(0.936)	203803	4.92093	4.921
93	Benzidine	184	21.542	21.542	(0.902)	86479	15.0162	15.02(R)
103	Pyridine	79	4.374	4.397	(0.487)	90444	10.9387	10.94
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	118938	4.82444	4.824
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.101)	163298	5.51577	5.516
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	469919	9.77502	9.775
99	Perylene	252	26.404	26.388	(1.002)	212820	4.40032	4.400
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429icv.d
Lab Smp Id: IC0429ICV
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41290	-8.75
27 Naphthalene-d8	166754	83377	333508	152009	-8.84
42 Acenaphthene-d10	106910	53455	213820	95722	-10.46
59 Phenanthrene-d10	179783	89892	359566	161863	-9.97
69 Chrysene-d12	192841	96420	385682	175186	-9.16
134 Di-n-octylphthala	229567	114784	459134	197383	-14.02
77 Perylene-d12	184310	92155	368620	166766	-9.52

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

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

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: IC0429ICV
Level:
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Client SDG: 20130429
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	5.220	104.40	
4	Bis(2-Chloroethyl)	5.000	5.339	106.77	
6	2-Chlorophenol	5.000	4.894	97.88	
7	1,3-Dichlorobenzen	5.000	5.116	102.31	
9	1,4-Dichlorobenzen	5.000	5.205	104.10	
11	Benzyl alcohol	5.000	4.902	98.03	
12	1,2-Dichlorobenzen	5.000	5.102	102.04	
13	2-Methylphenol	5.000	5.493	109.86	
14	2,2'-oxybis(1-Chlo	5.000	5.273	105.46	
15	4-Methylphenol	5.000	5.593	111.86	
16	N-Nitroso-di-n-pro	5.000	5.416	108.33	
17	Hexachloroethane	5.000	5.214	104.29	
19	Nitrobenzene	5.000	5.370	107.39	
20	Isophorone	5.000	6.223	124.46	
21	2-Nitrophenol	5.000	5.177	103.54	
22	2,4-Dimethylphenol	10.00	10.76	107.60	
23	Bis(2-Chloroethoxy	5.000	5.494	109.88	
24	Benzoic acid	20.00	21.00	105.01	
25	2,4-Dichlorophenol	10.00	11.09	110.87	
26	1,2,4-Trichloroben	5.000	5.122	102.44	
28	Naphthalene	5.000	4.733	94.65	
29	4-Chloroaniline	10.00	10.96	109.60	
30	Hexachlorobutadien	5.000	5.193	103.85	
31	4-Chloro-3-methylp	10.00	11.90	119.01	
32	2-Methylnaphthalen	5.000	4.807	96.15	
33	Hexachlorocyclopen	10.00	10.25	102.50	
34	2,4,6-Trichlorophe	10.00	11.17	111.67	
35	2,4,5-Trichlorophe	10.00	12.09	120.85	
37	2-Chloronaphthalen	5.000	5.373	107.47	
38	2-Nitroaniline	10.00	11.53	115.26	
39	Dimethylphthalate	5.000	5.292	105.83	
40	Acenaphthylene	5.000	4.599	91.98	
41	2,6-Dinitrotoluene	10.00	11.16	111.60	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	12.86	128.64	
44	Acenaphthene	5.000	4.823	96.46	
45	2,4-Dinitrophenol	20.00	20.90	104.50	
46	Dibenzofuran	5.000	4.832	96.63	
47	4-Nitrophenol	10.00	10.45	104.51	
48	2,4-Dinitrotoluene	10.00	11.57	115.72	
49	Fluorene	5.000	4.801	96.02	
50	Diethylphthalate	5.000	5.140	102.81	
51	4-Chlorophenyl-phe	5.000	4.985	99.70	
52	4-Nitroaniline	10.00	11.78	117.84	
53	4,6-Dinitro-2-meth	20.00	21.76	108.79	
54	N-Nitrosodiphenyla	5.000	5.470	109.40	
56	4-Bromophenyl-phen	5.000	5.401	108.01	
57	Hexachlorobenzene	5.000	5.183	103.65	
58	Pentachlorophenol	10.00	11.86	118.63	
60	Phenanthrene	5.000	4.907	98.14	
61	Anthracene	5.000	4.863	97.26	
63	Di-n-butylphthalat	5.000	5.550	111.01	
64	Fluoranthene	5.000	4.949	98.97	
65	Pyrene	5.000	4.881	97.61	
67	Butylbenzylphthala	5.000	5.735	114.70	
68	Benzo(a)anthracene	5.000	4.911	98.21	
70	3,3'-Dichlorobenzi	10.00	8.305	83.05	
71	Chrysene	5.000	4.840	96.81	
72	bis(2-Ethylhexyl)p	5.000	5.340	106.80	
73	Di-n-octylphthalat	5.000	5.335	106.70	
74	Benzo(b)fluoranthe	5.000	4.598	91.96	
75	Benzo(k)fluoranthe	5.000	5.152	103.03	
76	Benzo(a)pyrene	5.000	4.818	96.36	
78	Indeno(1,2,3-cd)py	5.000	5.152	103.04	
79	Dibenzo(a,h)anthra	5.000	5.120	102.40	
80	Benzo(g,h,i)peryle	5.000	4.970	99.40	
90	N-Nitrosodimethyla	10.00	11.23	112.31	
91	Aniline	5.000	4.921	98.42	
93	Benzidine	10.00	15.02	150.16*	
105	1-methylnaphthalen	5.000	4.824	96.49	
120	2,3,4,6-Tetrachlo	5.000	0.000	*	
151	1,2,4,5-Tetrachlo	5.000	0.000	*	
110	Tetrachloroguaiac	10.00	0.000	*	
109	3,4,5-Trichlorogu	5.000	0.000	*	
181	3,4,6-Trichlorogu	5.000	0.000	*	
108	4,5,6-Trichlorogu	5.000	0.000	*	
184	3,4-Dichloroguaia	5.000	0.000	*	
107	4,5-Dichloroguaia	10.00	0.000	*	
182	4,6-Dichloroguaia	10.00	0.000	*	
185	4-Chloroguaiacol	2.500	0.000	*	
106	Guaiacol	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Report Date: 03-May-2013 16:45

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: IC0429ICV
Level:
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Client SDG: 20130429
Fraction: SV

Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

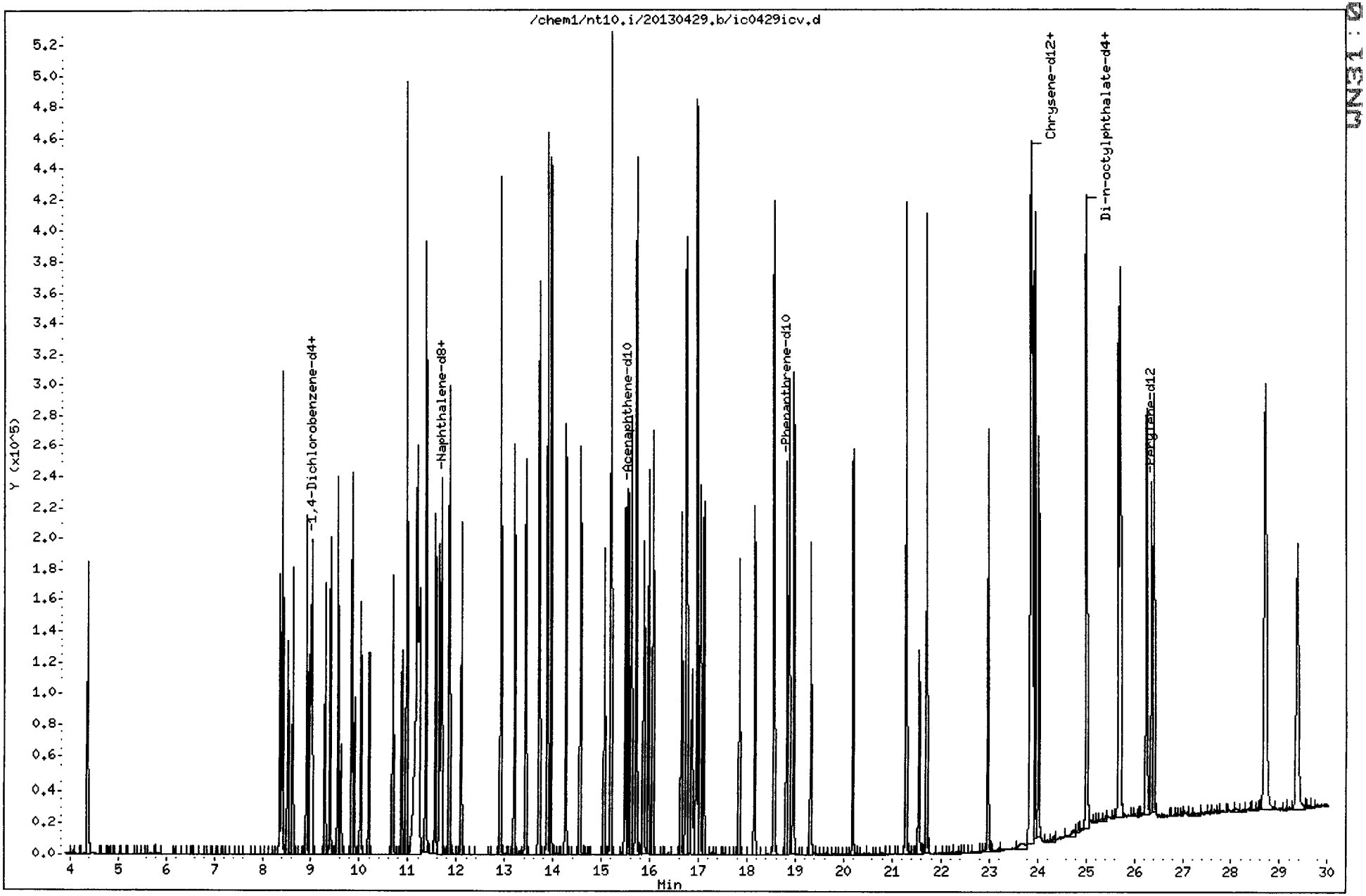
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.000	*	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Date : 29-APR-2013 22:24
Client ID:
Sample Info: IC0429ICV

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

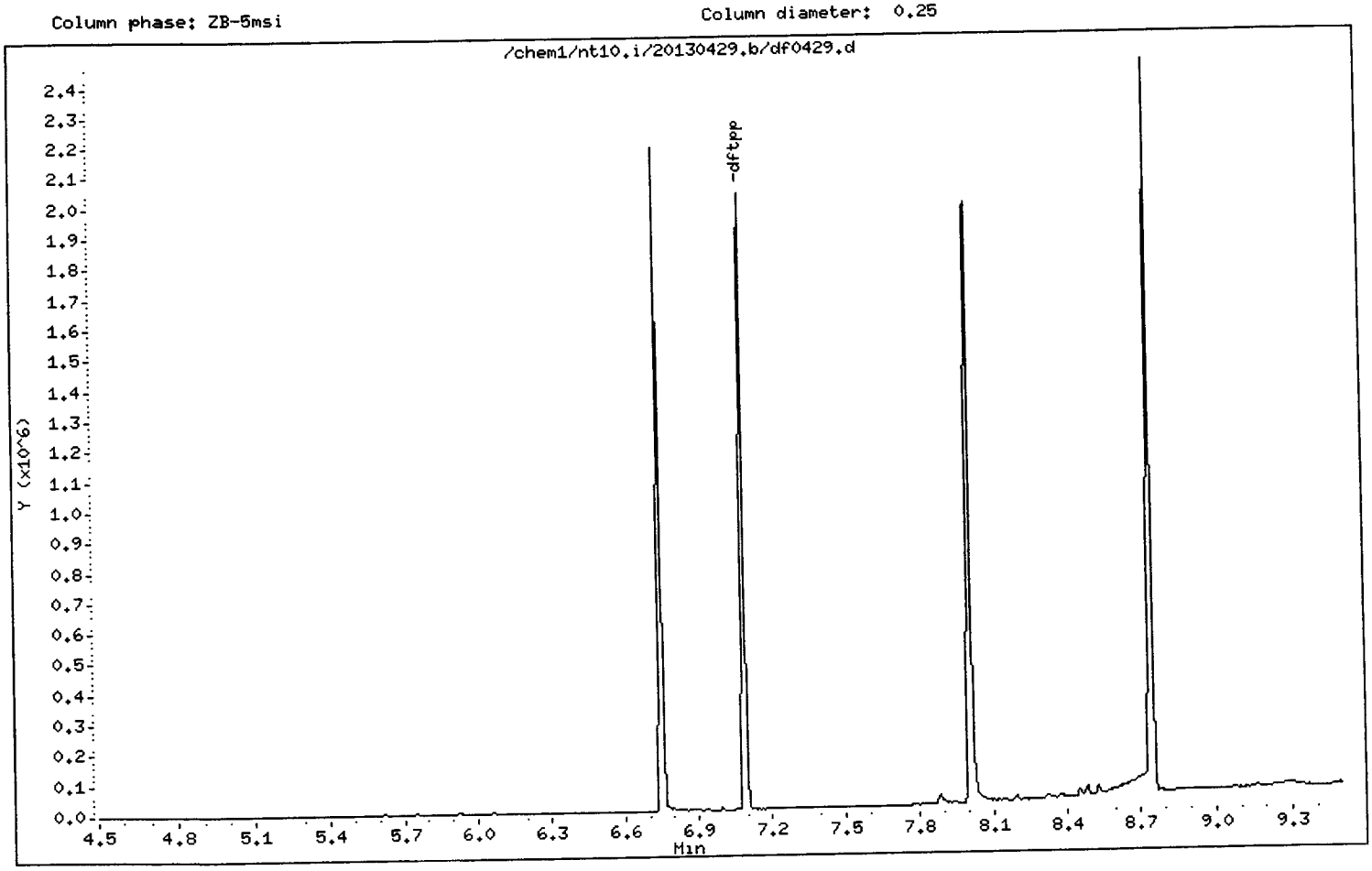
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

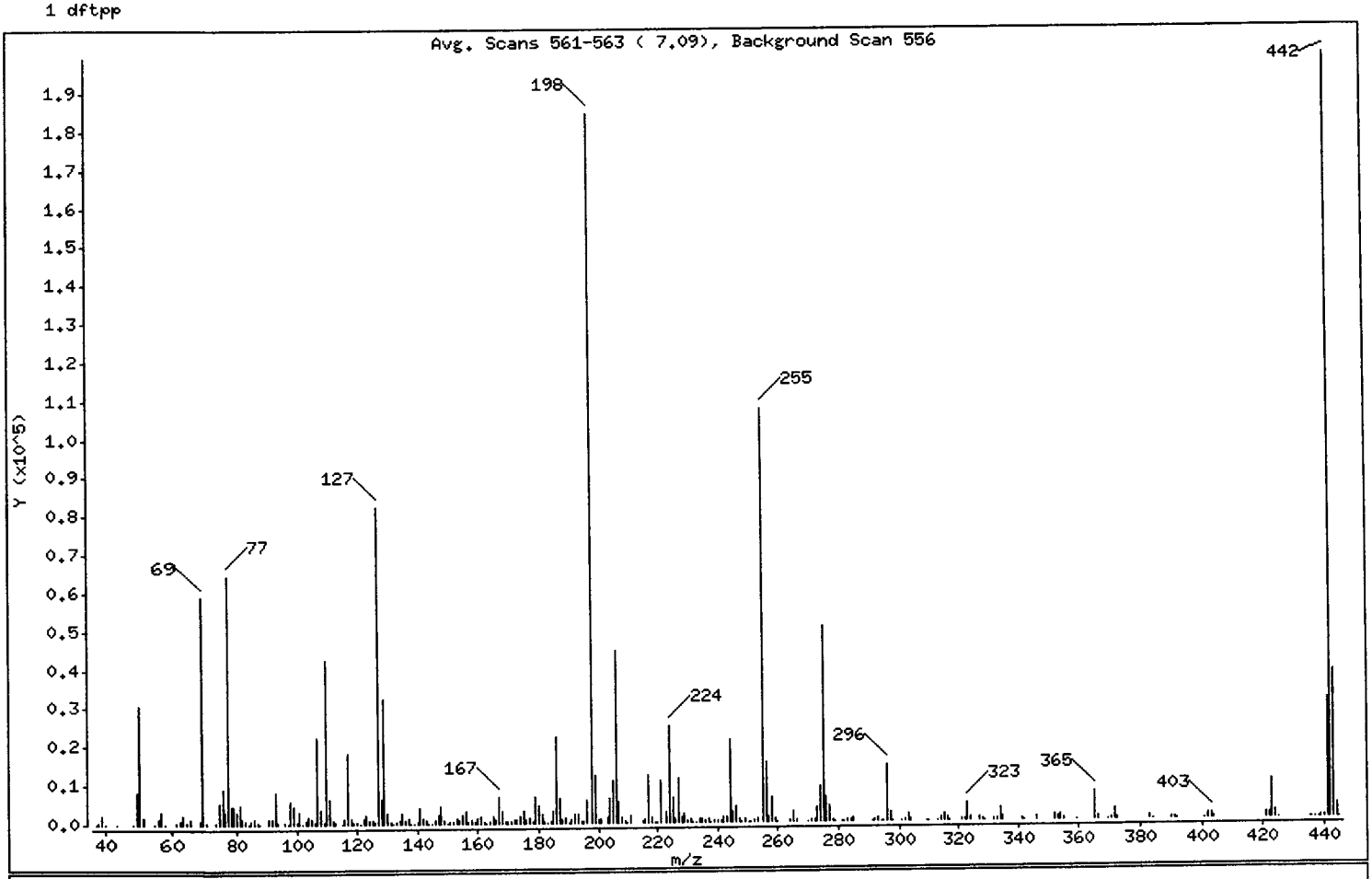
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

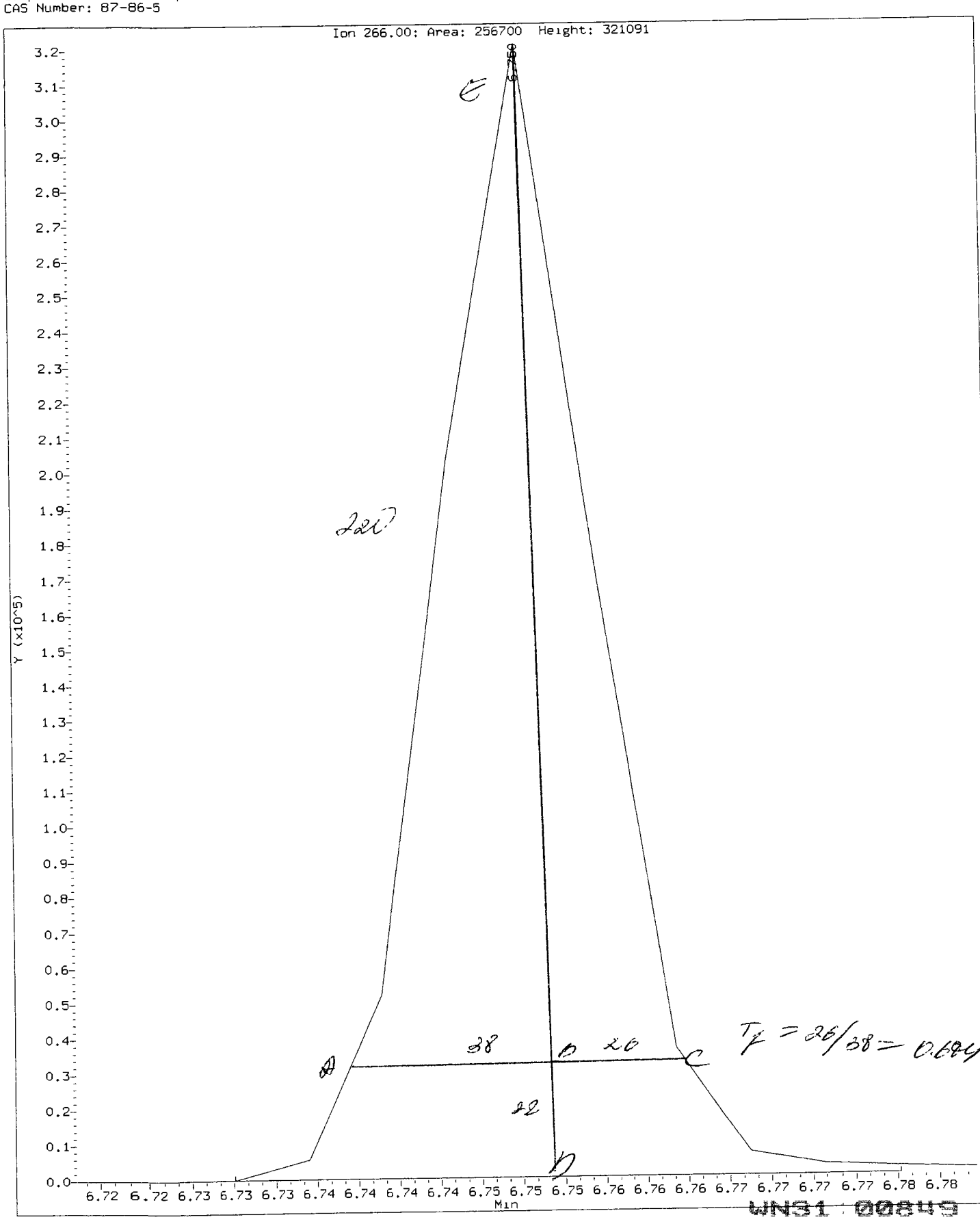
Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

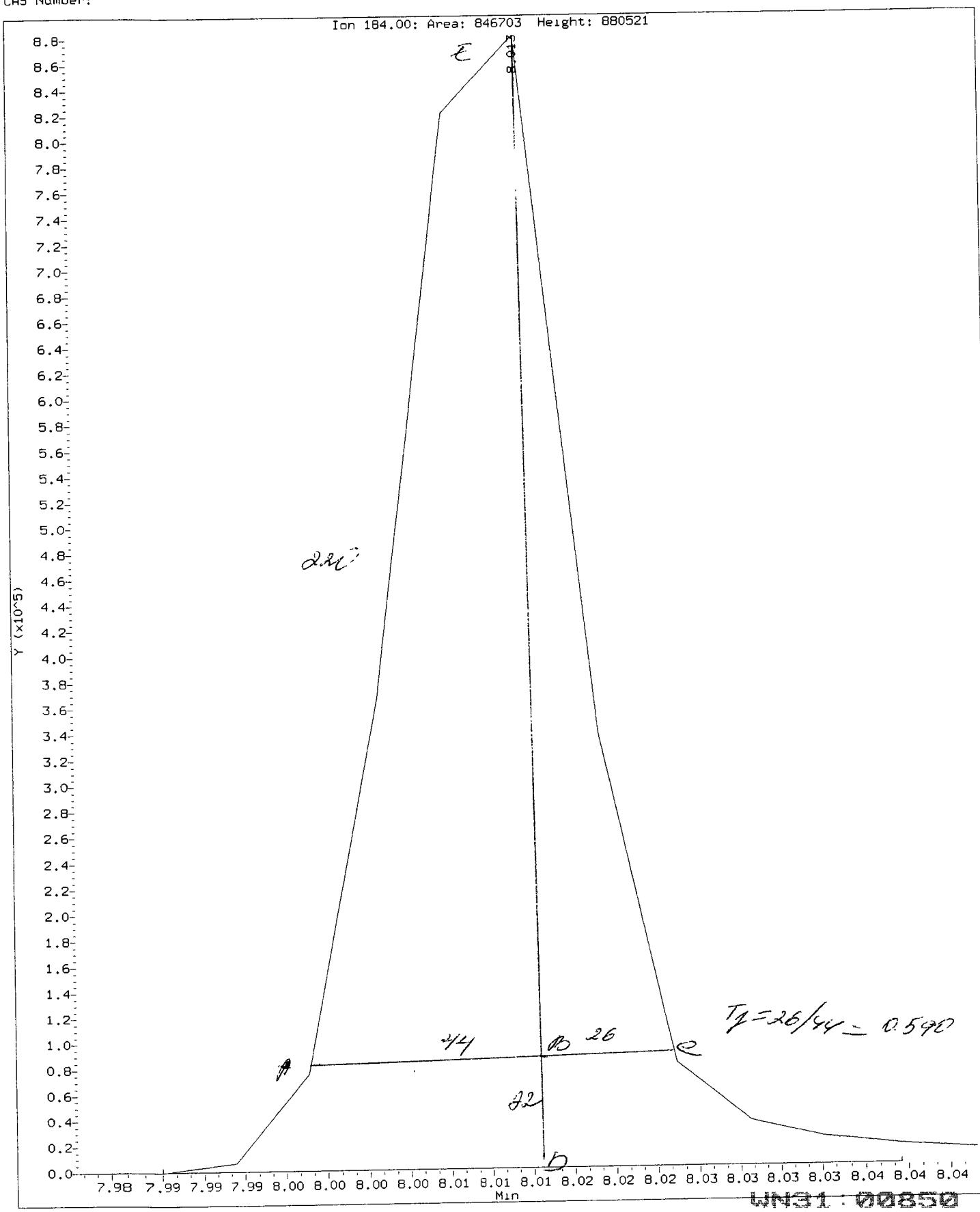
Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
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/20130429.b/ddt.b/df0429.d
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m
Analysis Date: 29-APR-2013 16:37

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1804 + 6740) * 100}{(\ 1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 Client ID: SATC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 3/6/13 Analysis Start Date: 4/1/13

	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 / NA ✓	LCS / LCSD RPD ≤ 30%?	NA / ✓
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / NA
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

Sample 3 + MB/LCS/LCSD

LCS/LCSD: compounds 4-Chloroaniline and 3-Nitroaniline recoveries out of QC limits (a high bias with Sample "ND".

Forms included

Shaw curve copy with WM80.

(Review 1) Analyst: [signature] **Date:** 04/07/13

(Review 2) Reviewer: [signature] **Date:** 5/3/13

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 5/1/13 Analysis: 8270D Analyst: [illegible]

GC Program: ABN/A new Column No: 234149 Column Type: ZB-5MSi

Instrument Tune (.U or .CT.): 121019 EM Voltage: 1761

Calibration File: CC0130 Curve Date: 3/6/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2053-1, 2054-1~~	
	~~2055-1, 2061-1~~	
	~~2030-1~~, 2027-2	
	2058-2	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130501.b

	Time	Filename	LabID	ClientId	DF															
1	1522	05011301.d	CC0501	CC0501	1	7.79	527879	9.82	2035865	12.67	1284118	15.02	2335966	19.30	2407623	21.43	2398007	20.45	3025624	
2	1556	05011302.d	WM84MBW1	WM84MBW1	1	7.79	468817	9.82	1723517	12.66	1061967	15.01	1764825	19.29	1887621	20.45	2527919	21.42	1745951	
3	1630	05011303.d	WM84LCSW1	WM84LCSW1	1	7.79	450681	9.82	1702274	12.67	1001669	15.02	1832992	19.29	1778770	20.45	2395681	21.43	1854036	
4	1704	05011304.d	WM84LCSDW1	WM84LCSDW1	1	7.79	461526	9.82	1725985	12.67	1022585	15.02	1898887	19.29	1832396	20.45	2464265	21.43	1959903	
5	1739	05011305.d	WM84A	NS-OF-006-20	1	7.79	451560	9.82	1649584	12.66	1035505	15.01	1767002	19.29	1892653	20.45	2475147	21.42	1772148	
6	1813	05011306.d	WM84B	NS-OF-002-20	1	7.79	475579	9.82	1737921	12.66	1067833	15.01	1820215	19.29	1941270	20.45	2601079	21.43	1837949	
7	1847	05011307.d	WM84C	NS-MH-682-20	3	7.79	463733	9.82	1700844	12.66	1045847	15.01	1783222	19.29	1882028	20.45	2542500	21.43	1844423	
8	1921	05011308.d	WM84C	NS-MH-682-20	1	7.79	424839	9.82	1574433	12.66	985905	15.01	1687419	19.29	1812098	20.45	2357621	21.43	1844712	
9	1956	05011309.d	WM84D	NS-WS-316-20	1	7.79	485174	9.82	1770476	12.66	1095825	15.01	1902640	19.29	2064410	20.45	2640838	21.43	2017896	
10	2030	05011310.d	WN31MBW1	WN31MBW1	1	7.79	438393	9.82	1622467	12.66	1004491	15.01	1734958	19.29	1859186	20.45	2478391	21.43	1820013	
11	2104	05011311.d	WN31LCSW1	WN31LCSW1	1	7.79	471562	9.83	1791265	12.67	1052777	15.02	1961936	19.29	1876341	20.45	2566961	21.43	2065559	
12	2138	05011312.d	WN31LCSDW1	WN31LCSDW1	1	7.79	466859	9.82	1742998	12.67	1026251	15.02	1930755	19.29	1805635	20.45	2458367	21.43	1994543	
13	2212	05011313.d	WN31QLS	WN31QLS	1	7.79	474686	9.82	1747367	12.66	1077113	15.01	1853799	19.29	1972924	20.45	2619199	21.43	1915186	
14	2246	05011314.d	WN31B	ES-MH-001-20	1	7.79	417582	9.82	1567959	12.66	978692	15.01	1694592	19.29	1879526	20.46	2330220	21.43	1929304	
15	2320	05011315.d	WN48MBW1	WN48MBW1	1	9.82	1259995	12.66	773243	15.01	1321897	19.28	1383939	21.42	1321188					
16	2354	05011316.d	WN48LCSW1	WN48LCSW1	1	9.82	1604203	12.66	1000525	15.01	1704914	19.29	1771317	21.43	1754504					
17	0028	05011317.d	WN48LCSDW1	WN48LCSDW1	1	9.82	1615339	12.66	1005897	15.01	1698376	19.29	1788049	21.43	1781109					
18	0102	05011318.d	WN48QLS	WN48QLS	1	9.82	1624236	12.66	1002490	15.01	1661309	19.29	1757691	21.42	1677155					
19	0136	05011319.d	WN48A	MW-5-042413	1	9.82	1536571	12.66	945636	15.01	1597388	19.29	1657795	21.42	1587400					
20	0210	05011320.d	WN48B	MW-6-042413	1	9.82	1616218	12.66	973979	15.02	1657148	19.29	1908291	21.43	1858858					
21	0243	05011321.d	WN48C	MW-7-042413	1	9.82	1708374	12.66	1047647	15.02	1713313	19.29	1959129	21.42	1913818					
22	0317	05011322.d	WN48E	MW-9-042413	1	9.82	1562078	12.66	981666	15.02	1677522	19.28	1840786	21.42	1783244					

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

[signature] 05/02/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130501.b

ARI Job No.: CC05 Method: SW846030613.m Instrument: nt6.i Date: 01-MAY-2013

05/02/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1522	05011301.d	CC0501	CC0501	1	NO MANUAL INTEGRATION
2030	05011310.d	WN31MBW1	WN31MBW1	1	NO MANUAL INTEGRATION
2104	05011311.d	WN31LCSW1	WN31LCSW1	1	Phenol,
2138	05011312.d	WN31LCSDW1	WN31LCSDW1	1	Phenol, Pyridine,
2212	05011313.d	WN31QLS	WN31QLS	1	Isophorone, 2,4-Dinitrophenol, Benzidine, Pyridine,
2246	05011314.d	WN31B	ES-MH-001-	1	bis(2-Ethylhexyl)phthalate,

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130501.b

Instrument: nt6.i Date: 01-MAY-2013 Method: SW846030613.m

INITIAL CAL: 05-MAR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-MAY-2013

Compound	%D
2,2'-oxybis(1-Chloropropane)	-20.9
Benzoic acid	-22.3
N-Nitrosodimethylamine	-22.4
Aniline	-23.0

01/01/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 05011301.d
Analysis Type:
Lab Sample ID: CC0501
Method: /chem2/nt6.i/20130501.b/SW846030613.m

Injection Date: 01-MAY-2013 15:22
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

AZ 05/07/13

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.29593	1.09136	1.09136	0.010	-15.78565	20.00000	Averaged	
$ 2 Phenol-d5	1.51700	1.38743	1.38743	0.010	-8.54136	20.00000	Averaged	
3 Phenol	1.59733	1.45653	1.45653	0.010	-8.81452	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.28234	1.13748	1.13748	0.010	-11.29655	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.38721	1.14348	1.14348	0.010	-17.56975	20.00000	Averaged	
6 2-Chlorophenol	1.27800	1.16005	1.16005	0.010	-9.22902	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.49260	1.39694	1.39694	0.010	-6.40895	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.45271	1.37113	1.37113	0.010	-5.61510	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	0.90253	0.77406	0.77406	0.010	-14.23425	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.38875	1.25745	1.25745	0.010	-9.45446	20.00000	Averaged	
11 Benzyl alcohol	0.87019	0.72912	0.72912	0.010	-16.21148	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	2.20404	1.74267	1.74267	0.010	-20.93290	20.00000	Averaged	<-
13 2-Methylphenol	1.21121	1.08582	1.08582	0.010	-10.35235	20.00000	Averaged	
17 Hexachloroethane	0.58761	0.50933	0.50933	0.010	-13.32144	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	1.04103	0.92514	0.92514	0.005	-11.13268	20.00000	Averaged	
15 4-Methylphenol	1.19772	1.12345	1.12345	0.010	-6.20103	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.40133	0.33428	0.33428	0.010	-16.70742	20.00000	Averaged	
19 Nitrobenzene	0.38413	0.35569	0.35569	0.010	-7.40420	20.00000	Averaged	
20 Isophorone	0.66954	0.56080	0.56080	0.010	-16.24090	20.00000	Averaged	
21 2-Nitrophenol	0.17774	0.17020	0.17020	0.010	-4.24271	20.00000	Averaged	
22 2,4-Dimethylphenol	0.33613	0.30719	0.30719	0.010	-8.61132	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43930	0.37594	0.37594	0.010	-14.42237	20.00000	Averaged	
24 Benzoic acid	0.29097	0.22594	0.22594	0.010	-22.34983	20.00000	Averaged	<-
25 2,4-Dichlorophenol	0.25883	0.25594	0.25594	0.010	-1.11506	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.32219	0.30107	0.30107	0.010	-6.55249	20.00000	Averaged	
28 Naphthalene	24.20646	25.00000	0.84323	0.010	-3.17414	20.00000	Quadratic	
29 4-Chloroaniline	23.78535	25.00000	0.26132	0.010	-4.85858	20.00000	Quadratic	
30 Hexachlorobutadiene	0.19606	0.18693	0.18693	0.010	-4.65691	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.27493	0.27051	0.27051	0.010	-1.60645	20.00000	Averaged	
32 2-Methylnaphthalene	0.48637	0.45635	0.45635	0.010	-6.17228	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.32133	0.30123	0.30123	0.010	-6.25574	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.33621	0.31016	0.31016	0.010	-7.74966	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.33167	0.32465	0.32465	0.010	-2.11597	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.26244	1.02371	1.02371	0.010	-18.91082	20.00000	Averaged	
37 2-Chloronaphthalene	25.98207	25.00000	0.88722	0.010	3.92829	20.00000	Quadratic	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 05011301.d
Analysis Type:
Lab Sample ID: CC0501
Method: /chem2/nt6.i/20130501.b/SW846030613.m

Injection Date: 01-MAY-2013 15:22
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.29567	0.27639	0.27639	0.010	-6.52107	20.00000	Averaged
39 Dimethylphthalate	1.20372	1.07238	1.07238	0.010	-10.91180	20.00000	Averaged
40 Acenaphthylene	1.57756	1.42085	1.42085	0.010	-9.93397	20.00000	Averaged
41 2,6-Dinitrotoluene	0.25718	0.26168	0.26168	0.010	1.75062	20.00000	Averaged
43 3-Nitroaniline	22.33508	25.00000	0.16987	0.010	-10.65969	20.00000	Quadratic
44 Acenaphthene	1.02139	0.89662	0.89662	0.010	-12.21510	20.00000	Averaged
45 2,4-Dinitrophenol	0.18369	0.15714	0.15714	0.010	-14.45008	20.00000	Averaged
46 Dibenzofuran	1.33585	1.23289	1.23289	0.010	-7.70724	20.00000	Averaged
47 4-Nitrophenol	0.13065	0.15542	0.15542	0.010	18.95537	20.00000	Averaged
48 2,4-Dinitrotoluene	0.34786	0.35924	0.35924	0.010	3.27065	20.00000	Averaged
50 Diethylphthalate	1.11525	1.07595	1.07595	0.010	-3.52380	20.00000	Averaged
49 Fluorene	26.17990	25.00000	0.99011	0.010	4.71959	20.00000	Quadratic
51 4-Chlorophenyl-phenylether	0.58637	0.57360	0.57360	0.010	-2.17750	20.00000	Averaged
52 4-Nitroaniline	0.19616	0.17135	0.17135	0.010	-12.64888	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.14402	0.12868	0.12868	0.010	-10.65064	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.54375	0.45363	0.45363	0.010	-16.57364	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.15815	0.16067	0.16067	0.010	1.59525	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.21950	0.18804	0.18804	0.010	-14.33132	20.00000	Averaged
57 Hexachlorobenzene	0.22630	0.19467	0.19467	0.010	-13.97550	20.00000	Averaged
58 Pentachlorophenol	0.13351	0.10914	0.10914	0.010	-18.25070	20.00000	Averaged
60 Phenanthrene	0.98950	0.83711	0.83711	0.010	-15.40118	20.00000	Averaged
61 Anthracene	0.99076	0.81717	0.81717	0.010	-17.52086	20.00000	Averaged
62 Carbazole	22.80745	25.00000	0.62976	0.010	-8.77021	20.00000	Quadratic
63 Di-n-butylphthalate	1.24906	1.02771	1.02771	0.010	-17.72118	20.00000	Averaged
64 Fluoranthene	1.04092	0.93732	0.93732	0.010	-9.95258	20.00000	Averaged
65 Pyrene	1.09227	0.94396	0.94396	0.010	-13.57798	20.00000	Averaged
$ 66 Terphenyl-d14	0.70203	0.57864	0.57864	0.010	-17.57660	20.00000	Averaged
67 Butylbenzylphthalate	0.53411	0.47140	0.47140	0.010	-11.74030	20.00000	Averaged
68 Benzo(a)anthracene	0.91184	0.87542	0.87542	0.010	-3.99376	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.25087	0.23798	0.23798	0.010	-5.13988	20.00000	Averaged
71 Chrysene	0.93085	0.81065	0.81065	0.010	-12.91276	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.58852	0.51618	0.51618	0.010	-12.29096	20.00000	Averaged
73 Di-n-octylphthalate	0.94433	0.82625	0.82625	0.010	-12.50359	20.00000	Averaged
74 Benzo(b)fluoranthene	25.08913	25.00000	0.90316	0.010	0.35652	20.00000	Quadratic
75 Benzo(k)fluoranthene	22.06293	25.00000	0.88180	0.010	-11.74826	20.00000	Quadratic

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 05011301.d
Analysis Type:
Lab Sample ID: CC0501
Method: /chem2/nt6.i/20130501.b/SW846030613.m

Injection Date: 01-MAY-2013 15:22
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
187 Total Benzofluoranthenes	0.92079	0.82236	0.82236	0.010	-10.68967	20.00000	Averaged	
76 Benzo(a)pyrene	0.85485	0.78647	0.78647	0.010	-7.99907	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.02877	0.93195	0.93195	0.010	-9.41170	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.81005	0.76991	0.76991	0.010	-4.95541	20.00000	Averaged	
80 Benzo(g,h,i)perylene	0.87980	0.80512	0.80512	0.010	-8.48829	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.94183	0.73107	0.73107	0.010	-22.37815	20.00000	Averaged	<-
103 Pyridine	1.49368	1.23732	1.23732	0.010	-17.16266	20.00000	Averaged	
91 Aniline	1.76984	1.36244	1.36244	0.010	-23.01908	20.00000	Averaged	<-
105 1-methylnaphthalene	0.49409	0.46234	0.46234	0.010	-6.42750	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.26720	1.10856	1.10856	0.010	-12.51853	20.00000	Averaged	
143 1,4-Dioxane	0.64887	0.58492	0.58492	0.010	-9.85548	20.00000	Averaged	
$ 137 d8-1,4-Dioxane	0.60730	0.55139	0.55139	0.010	-9.20501	20.00000	Averaged	
99 Perylene	0.74881	0.65337	0.65337	0.010	-12.74460	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.28547	0.27812	0.27812	0.010	-2.57467	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130501.b/05011301.d
Lab Smp Id: CC0501 Client Smp ID: CC0501
Inj Date : 01-MAY-2013 15:22
Operator : JZ Inst ID: nt6.i
Smp Info : CC0501
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130501.b/SW846030613.m
Meth Date : 02-May-2013 13:28 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALA.sub
Target Version: 3.50

05/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.860	5.860	(0.752)	720131	25.0000	21.05
$	2 Phenol-d5	99	7.419	7.419	(0.953)	915493	25.0000	22.86
	3 Phenol	94	7.436	7.436	(0.955)	961089	25.0000	22.80
$	5 2-Chlorophenol-d4	132	7.505	7.505	(0.964)	750563	25.0000	22.18
	4 Bis(2-Chloroethyl)ether	93	7.473	7.473	(0.960)	754522	25.0000	20.61
	6 2-Chlorophenol	128	7.532	7.532	(0.967)	765459	25.0000	22.69
	7 1,3-Dichlorobenzene	146	7.724	7.724	(0.992)	921770	25.0000	23.40
*	8 1,4-Dichlorobenzene-d4	152	7.788	7.788	(1.000)	527879	20.0000	
	9 1,4-Dichlorobenzene	146	7.815	7.815	(1.003)	904741	25.0000	23.60
$	10 1,2-Dichlorobenzene-d4	152	8.087	8.087	(1.038)	510764	25.0000	21.44
	12 1,2-Dichlorobenzene	146	8.109	8.109	(1.041)	829725	25.0000	22.64
	11 Benzyl alcohol	108	8.093	8.093	(1.039)	481109	25.0000	20.95
	14 2,2'-oxybis(1-Chloropropane)	45	8.338	8.338	(1.071)	1149897	25.0000	19.77
	13 2-Methylphenol	108	8.354	8.354	(1.073)	716477	25.0000	22.41
	17 Hexachloroethane	117	8.589	8.589	(1.103)	336079	25.0000	21.67
	16 N-Nitroso-di-n-propylamine	70	8.563	8.563	(1.099)	610451	25.0000	22.22
	15 4-Methylphenol	108	8.584	8.584	(1.102)	741308	25.0000	23.45
$	18 Nitrobenzene-d5	82	8.723	8.723	(0.888)	850682	25.0000	20.82
	19 Nitrobenzene	77	8.755	8.755	(0.891)	905167	25.0000	23.15
	20 Isophorone	82	9.134	9.134	(0.930)	1427136	25.0000	20.94
	21 2-Nitrophenol	139	9.268	9.268	(0.943)	433129	25.0000	23.94
	22 2,4-Dimethylphenol	107	9.407	9.407	(0.958)	781743	25.0000	22.85
	23 Bis(2-Chloroethoxy)methane	93	9.535	9.535	(0.971)	956705	25.0000	21.39
	24 Benzoic acid	105	9.695	9.695	(0.987)	1149946	50.0000	38.83
	25 2,4-Dichlorophenol	162	9.663	9.663	(0.984)	651322	25.0000	24.72
	26 1,2,4-Trichlorobenzene	180	9.770	9.770	(0.995)	766185	25.0000	23.36
*	27 Naphthalene-d8	136	9.823	9.823	(1.000)	2035865	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	9.855	9.855	(1.003)	2145881	25.0000	24.21
	29 4-Chloroaniline	127	10.016	10.016	(1.020)	665014	25.0000	23.79
	30 Hexachlorobutadiene	225	10.176	10.176	(1.036)	475710	25.0000	23.84
	31 4-Chloro-3-methylphenol	107	10.849	10.849	(1.104)	688401	25.0000	24.60
	32 2-Methylnaphthalene	141	10.972	10.972	(1.117)	1161342	25.0000	23.46
	33 Hexachlorocyclopentadiene	237	11.346	11.346	(0.896)	483512	25.0000	23.44
	34 2,4,6-Trichlorophenol	196	11.496	11.496	(0.908)	497847	25.0000	23.06
	35 2,4,5-Trichlorophenol	196	11.560	11.560	(0.913)	521112	25.0000	24.47
$	36 2-Fluorobiphenyl	172	11.618	11.618	(0.917)	1643200	25.0000	20.27
	37 2-Chloronaphthalene	162	11.741	11.741	(0.927)	1424122	25.0000	25.98
	38 2-Nitroaniline	65	11.992	11.992	(0.947)	443647	25.0000	23.37
	39 Dimethylphthalate	163	12.361	12.361	(0.976)	1721321	25.0000	22.27
	40 Acenaphthylene	152	12.414	12.414	(0.980)	2280674	25.0000	22.52
	41 2,6-Dinitrotoluene	165	12.452	12.452	(0.983)	420037	25.0000	25.44
*	42 Acenaphthene-d10	164	12.665	12.665	(1.000)	1284118	20.0000	
	43 3-Nitroaniline	138	12.671	12.671	(1.000)	272667	25.0000	22.34
	44 Acenaphthene	153	12.714	12.714	(1.004)	1439214	25.0000	21.95
	45 2,4-Dinitrophenol	184	12.831	12.831	(1.013)	504480	50.0000	42.77
	46 Dibenzofuran	168	12.975	12.975	(1.024)	1978977	25.0000	23.07
	47 4-Nitrophenol	109	13.018	13.018	(1.028)	249469	25.0000	29.74
	48 2,4-Dinitrotoluene	165	13.077	13.077	(1.032)	576635	25.0000	25.82
	50 Diethylphthalate	149	13.510	13.510	(1.067)	1727058	25.0000	24.12
	49 Fluorene	166	13.526	13.526	(1.068)	1589274	25.0000	26.18
	51 4-Chlorophenyl-phenylether	204	13.558	13.558	(1.070)	920719	25.0000	24.46
	52 4-Nitroaniline	138	13.664	13.664	(1.079)	275040	25.0000	21.84
	53 4,6-Dinitro-2-methylphenol	198	13.729	13.729	(0.914)	751474	50.0000	44.67
	54 N-Nitrosodiphenylamine	169	13.771	13.771	(0.917)	1324571	25.0000	20.86
$	55 2,4,6-Tribromophenol	330	13.953	13.953	(1.102)	257896	25.0000	25.40
	56 4-Bromophenyl-phenylether	248	14.332	14.332	(0.954)	549082	25.0000	21.42
	57 Hexachlorobenzene	284	14.546	14.546	(0.969)	568437	25.0000	21.51
	58 Pentachlorophenol	266	14.850	14.850	(0.989)	318689	25.0000	20.44
*	59 Phenanthrene-d10	188	15.016	15.016	(1.000)	2335966	20.0000	
	60 Phenanthrene	178	15.053	15.053	(1.002)	2444318	25.0000	21.15
	61 Anthracene	178	15.128	15.128	(1.007)	2386105	25.0000	20.62
	62 Carbazole	167	15.417	15.417	(1.027)	1838884	25.0000	22.81
	63 Di-n-butylphthalate	149	16.138	16.138	(1.075)	3000884	25.0000	20.57
	64 Fluoranthene	202	16.971	16.971	(1.130)	2736945	25.0000	22.51
	65 Pyrene	202	17.318	17.318	(0.898)	2840883	25.0000	21.61
$	66 Terphenyl-d14	244	17.644	17.644	(0.914)	1741419	25.0000	20.61
	67 Butylbenzylphthalate	149	18.531	18.531	(0.960)	1418706	25.0000	22.06
	68 Benzo(a)anthracene	228	19.268	19.268	(0.999)	2634600	25.0000	24.00
*	69 Chrysene-d12	240	19.295	19.295	(1.000)	2407623	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.284	19.284	(0.999)	716202	25.0000	23.72
	71 Chrysene	228	19.332	19.332	(1.002)	2439669	25.0000	21.77
	72 bis(2-Ethylhexyl)phthalate	149	19.525	19.525	(0.955)	1952226	25.0000	21.93
*	134 Di-n-octylphthalate-d4	153	20.454	20.454	(1.000)	3025624	20.0000	
	73 Di-n-octylphthalate	149	20.465	20.465	(1.001)	3124911	25.0000	21.87

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	20.908	20.908	(0.976)	2707217	25.0000	25.09
75	Benzo(k)fluoranthene	252	20.940	20.940	(0.977)	2643212	25.0000	22.06
187	Total Benzofluoranthenes	252	20.940	20.940	(0.977)	4930045	50.0000	44.66
76	Benzo(a)pyrene	252	21.352	21.352	(0.996)	2357437	25.0000	23.00
* 77	Perylene-d12	264	21.432	21.432	(1.000)	2398007	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	22.832	22.832	(1.065)	2793525	25.0000	22.65
79	Dibenzo(a,h)anthracene	278	22.853	22.853	(1.066)	2307814	25.0000	23.76
80	Benzo(g,h,i)perylene	276	23.195	23.195	(1.082)	2413348	25.0000	22.88
90	N-Nitrosodimethylamine	74	3.050	3.050	(0.392)	482395	25.0000	19.41
103	Pyridine	79	3.007	3.007	(0.386)	816447	25.0000	20.71
91	Aniline	93	7.355	7.355	(0.944)	899002	25.0000	19.25
105	1-methylnaphthalene	141	11.138	11.138	(1.134)	1176564	25.0000	23.39
111	Azobenzene (1,2-DP-Hydrazine)	77	13.809	13.809	(1.090)	1779405	25.0000	21.87
143	1,4-Dioxane	88	2.403	2.403	(0.309)	385956	25.0000	22.54
$ 137	d8-1,4-Dioxane	96	2.355	2.355	(0.302)	363836	25.0000	22.70
99	Perylene	252	21.464	21.464	(1.001)	1958493	25.0000	21.81
120	2,3,4,6-Tetrachlorophenol	232	13.269	13.269	(1.048)	446430	25.0000	24.36

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 05011301.d
Lab Smp Id: CC0501
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-

Calibration Date: 01-MAY-2013
Calibration Time: 13:29
Client Smp ID: CC0501
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	527879	15.23
27 Naphthalene-d8	1718341	859170	3436682	2035865	18.48
42 Acenaphthene-d10	1010041	505020	2020082	1284118	27.14
59 Phenanthrene-d10	1666734	833367	3333468	2335966	40.15
69 Chrysene-d12	1675752	837876	3351504	2407623	43.67
134 Di-n-octylphthala	2026355	1013178	4052710	3025624	49.31
77 Perylene-d12	1637524	818762	3275048	2398007	46.44

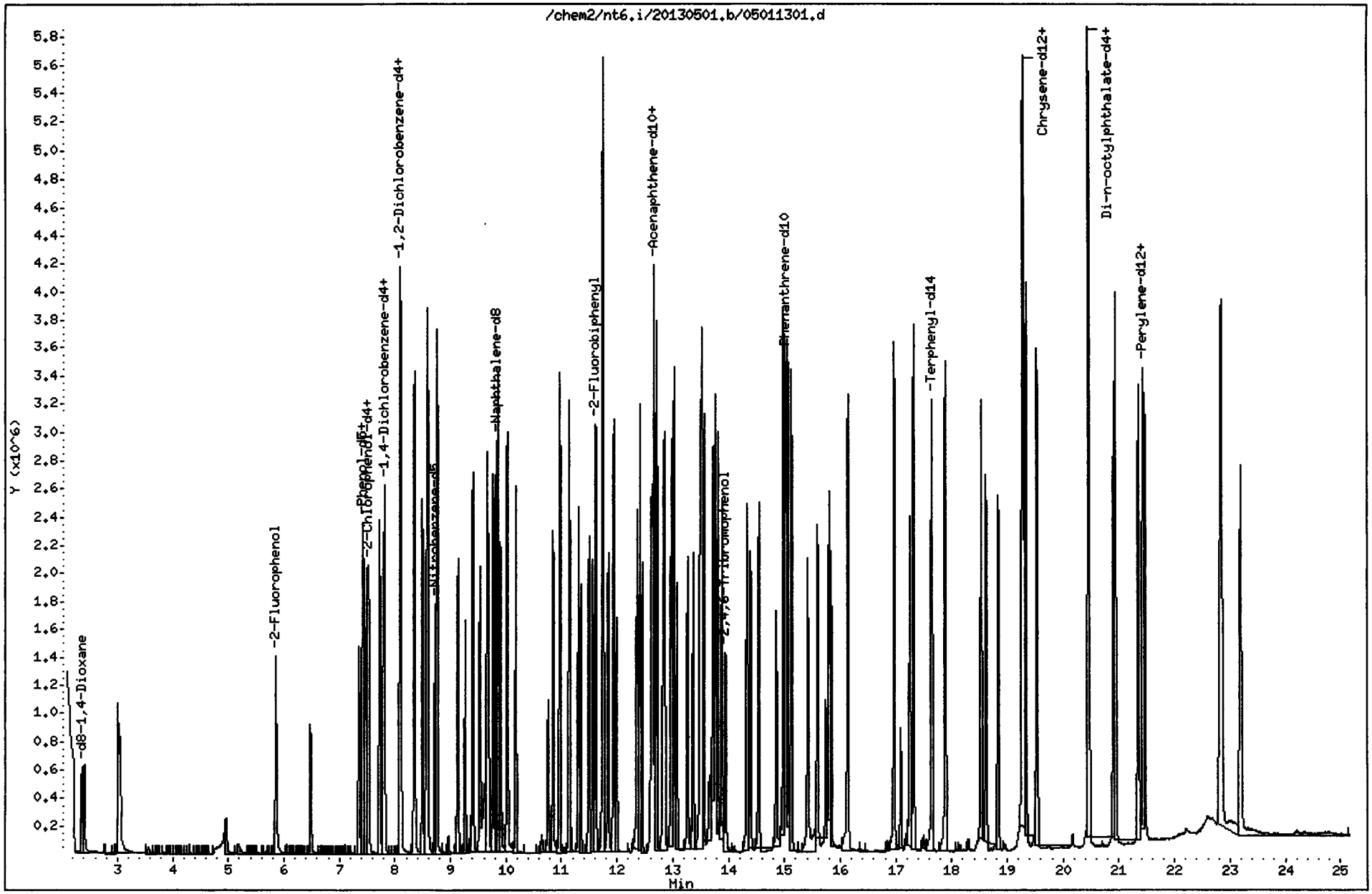
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.79	7.29	8.29	7.79	0.00
27 Naphthalene-d8	9.82	9.32	10.32	9.82	0.00
42 Acenaphthene-d10	12.67	12.17	13.17	12.67	0.00
59 Phenanthrene-d10	15.02	14.52	15.52	15.02	0.00
69 Chrysene-d12	19.30	18.80	19.80	19.30	0.00
134 Di-n-octylphthala	20.45	19.95	20.95	20.45	0.00
77 Perylene-d12	21.43	20.93	21.93	21.43	0.00

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

Data File: /chem2/nt6.i/20130501.b/05011301.d
Date : 01-MAY-2013 15:22
Client ID: CC0501
Sample Info: CC0501

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 05011301.d

Lab ID: CC0501, Method: SW846030613.m, Instrument: nt6.i, Date: 01-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem2/nt6.i/20130501.b/tune.b/05011301.d

Date : 01-MAY-2013 15:22

Client ID: DFTPP0501

Instrument: nt6.i

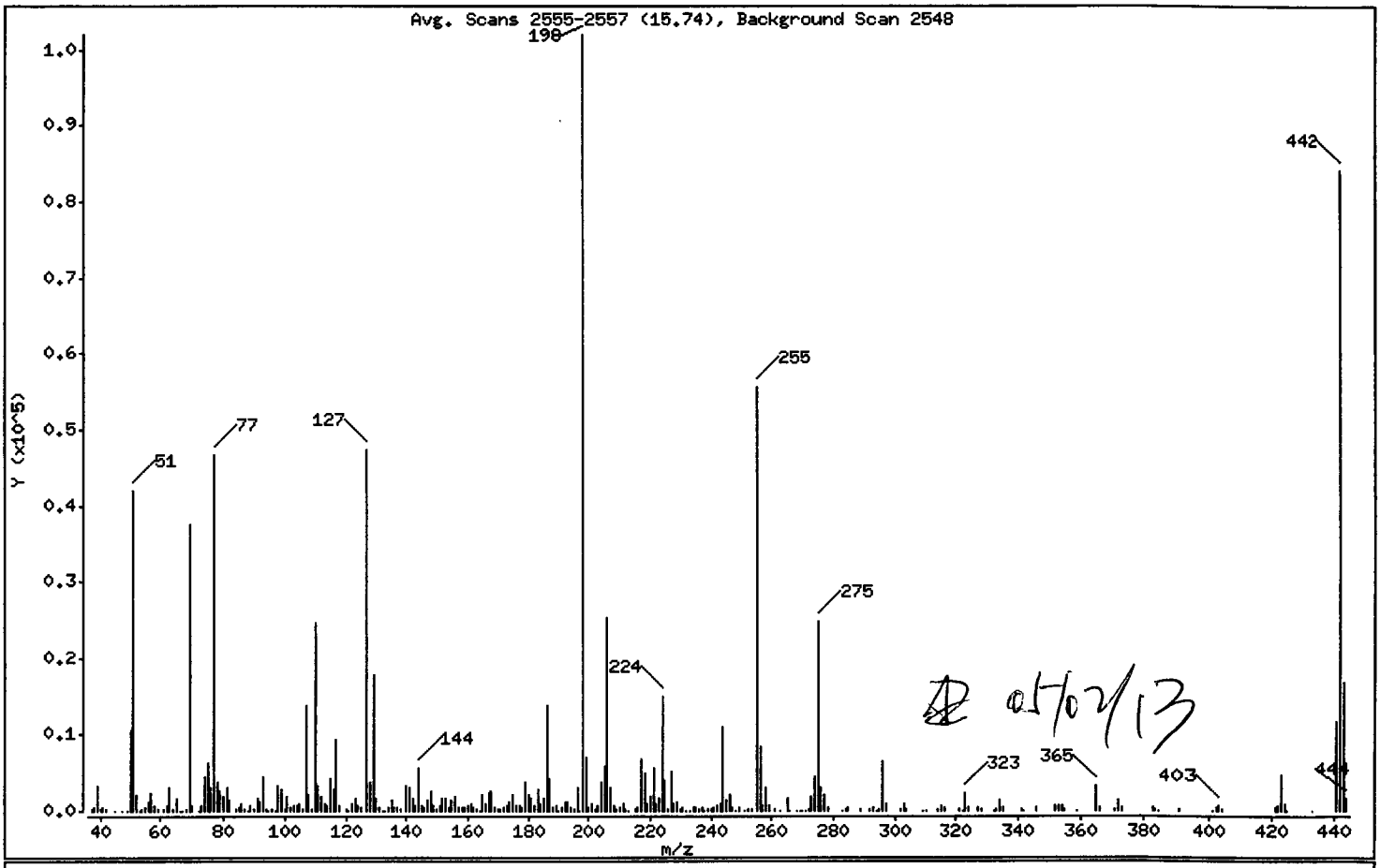
Sample Info: DFTPP0501

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	41.14
68	Less than 2.00% of mass 69	0.27 (0.73)
69	Mass 69 relative abundance	36.87
70	Less than 2.00% of mass 69	0.64 (1.73)
127	10.00 - 80.00% of mass 198	46.34
197	Less than 2.00% of mass 198	0.10
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 60.00% of mass 198	24.42
365	Greater than 1.00% of mass 198	3.18
441	0.01 - 24.00% of mass 442	11.41 (13.84)
442	50.00 - 200.00% of mass 198	82.42
443	15.00 - 24.00% of mass 442	16.45 (19.96)

Date : 01-MAY-2013 15:22

Client ID: DFTPP0501 Instrument: nt6.i

Sample Info: DFTPP0501

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 05011301.d
Spectrum: Avg. Scans 2555-2557 (15.74), Background Scan 2548
Location of Maximum: 198.00
Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	350	116.00	2797	191.00	378	270.00	64
38.00	383	117.00	9351	192.00	1246	271.00	105
39.00	3210	118.00	799	193.00	1200	272.00	289
40.00	301	120.00	123	194.00	371	273.00	1982
41.00	483	121.00	12	195.00	186	274.00	4451
42.00	130	122.00	822	196.00	3037	275.00	24928
45.00	25	123.00	1563	197.00	99	276.00	3003
47.00	59	124.00	726	198.00	102072	277.00	2018
49.00	46	125.00	541	199.00	6931	278.00	369
50.00	10576	127.00	47304	200.00	559	283.00	66
51.00	41992	128.00	3813	201.00	999	284.00	252
52.00	2212	129.00	17888	202.00	149	285.00	415
53.00	91	130.00	1529	203.00	621	289.00	164
54.00	149	131.00	359	204.00	3665	292.00	136
55.00	554	132.00	54	205.00	5861	293.00	581
56.00	1279	133.00	82	206.00	25416	294.00	56
57.00	2320	134.00	510	207.00	3087	295.00	152
58.00	663	135.00	1510	208.00	820	296.00	6607
59.00	178	136.00	459	209.00	298	297.00	886
61.00	350	137.00	353	210.00	463	302.00	134
62.00	727	138.00	125	211.00	859	303.00	925
63.00	3038	140.00	3302	212.00	220	304.00	128
64.00	309	141.00	2967	213.00	66	309.00	58
65.00	1550	142.00	1548	215.00	239	310.00	74
66.00	77	143.00	793	216.00	523	314.00	329
67.00	33	144.00	5716	217.00	6707	315.00	787
68.00	274	145.00	693	218.00	4967	316.00	515
69.00	37632	146.00	435	219.00	883	321.00	222
70.00	651	147.00	1413	220.00	1816	322.00	84
72.00	66	148.00	2492	221.00	5735	323.00	2262
73.00	675	149.00	740	222.00	865	324.00	497
74.00	4431	150.00	293	223.00	1602	327.00	410
75.00	6284	151.00	675	224.00	14915	328.00	234
76.00	3012	152.00	1692	225.00	4041	332.00	87
77.00	46784	153.00	1740	226.00	293	333.00	261

Data File: /chem2/nt6.i/20130501.b/tune.b/05011301.d

Date : 01-MAY-2013 15:22

Client ID: DFTPP0501

Instrument: nt6.i

Sample Info: DFTPP0501

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 05011301.d
Spectrum: Avg. Scans 2555-2557 (15.74), Background Scan 2548
Location of Maximum: 198.00
Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	3805	154.00	380	227.00	5189	334.00	1423
79.00	2520	155.00	1318	228.00	931	335.00	398
80.00	1880	156.00	1842	229.00	1160	341.00	308
81.00	3012	157.00	381	230.00	328	342.00	101
82.00	1336	158.00	454	231.00	559	346.00	500
84.00	301	159.00	397	232.00	57	352.00	744
85.00	549	160.00	753	233.00	67	353.00	619
86.00	972	161.00	1013	234.00	374	354.00	717
87.00	314	162.00	367	235.00	517	355.00	156
88.00	38	163.00	215	236.00	345	359.00	54
89.00	654	164.00	2	237.00	463	365.00	3242
90.00	270	165.00	2215	238.00	64	366.00	400
91.00	1745	166.00	855	239.00	212	371.00	183
92.00	1098	167.00	2331	240.00	260	372.00	1395
93.00	4446	168.00	2551	241.00	561	373.00	378
94.00	318	169.00	531	242.00	738	383.00	422
95.00	90	170.00	216	243.00	958	384.00	146
96.00	337	171.00	278	244.00	11115	385.00	50
97.00	60	172.00	477	245.00	1357	391.00	126
98.00	3238	173.00	629	246.00	2170	401.00	79
99.00	2700	174.00	1203	247.00	464	402.00	537
100.00	215	175.00	2095	248.00	54	403.00	732
101.00	1797	176.00	783	249.00	476	404.00	309
102.00	424	177.00	732	251.00	53	421.00	549
103.00	611	178.00	413	252.00	121	422.00	613
104.00	652	179.00	3756	253.00	329	423.00	4801
105.00	1001	180.00	2154	255.00	55640	424.00	934
106.00	307	181.00	1608	256.00	8378	425.00	68
107.00	13742	182.00	600	257.00	702	433.00	50
108.00	2109	183.00	2904	258.00	3134	441.00	11645
109.00	185	184.00	894	259.00	598	442.00	84128
110.00	24696	185.00	1693	261.00	144	443.00	16792
111.00	3285	186.00	13752	263.00	67	444.00	1703
112.00	1991	187.00	4240	265.00	1589		
113.00	857	188.00	381	266.00	110		

Data File: /chem2/nt6.i/20130501.b/tune.b/05011301.d

Date : 01-MAY-2013 15:22

Client ID: DFTPP0501

Instrument: nt6.i

Sample Info: DFTPP0501

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 05011301.d

Spectrum: Avg. Scans 2555-2557 (15.74), Background Scan 2548

Location of Maximum: 198.00

Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	654	189.00	778	268.00	68		
115.00	4179	190.00	115	269.00	50		

Data File: /chem2/nt6.i/20130501.b/tune.b/05011301.d

Date : 01-MAY-2013 15:22

Client ID: DFTPP0501

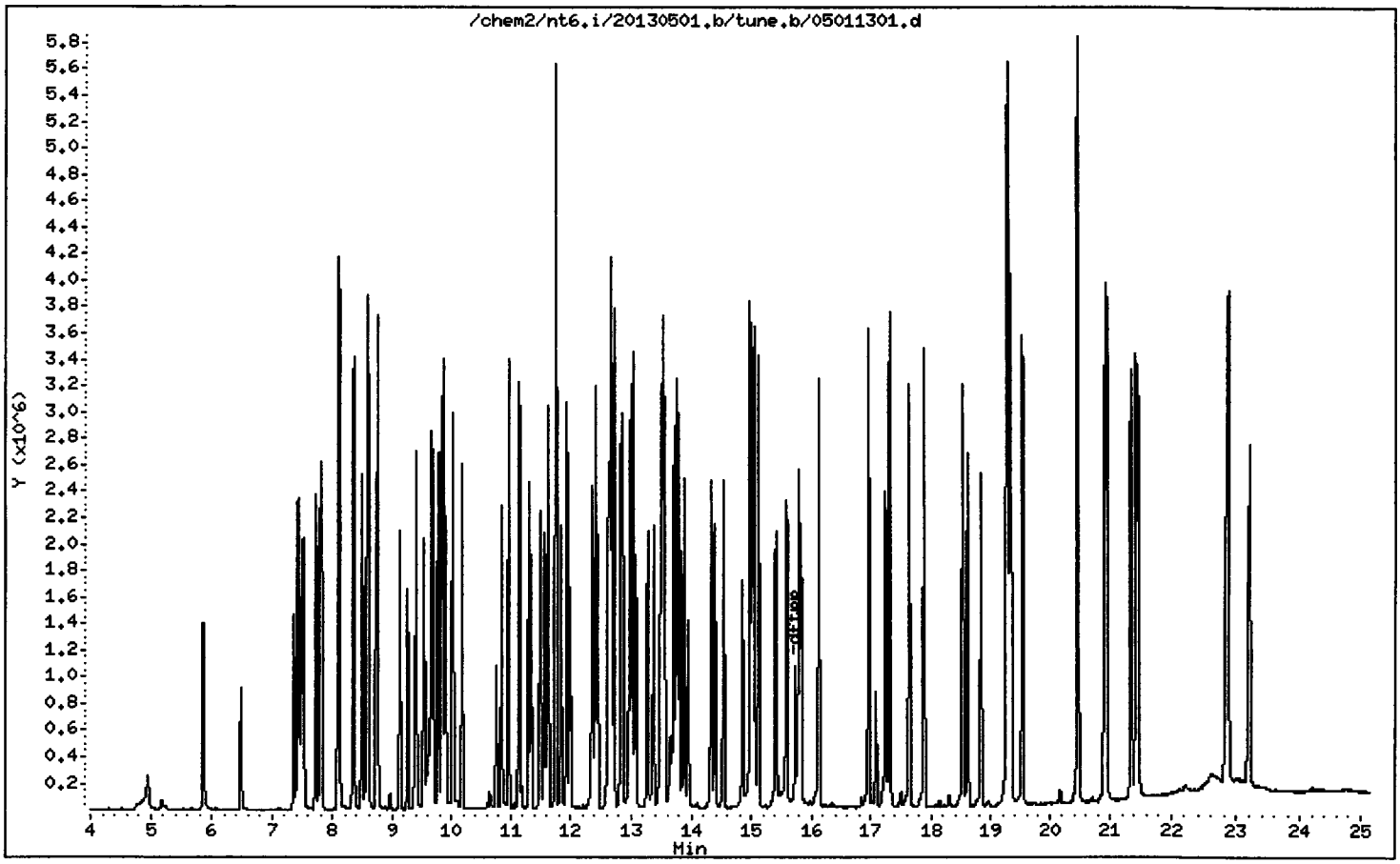
Instrument: nt6.i

Sample Info: DFTPP0501

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130501.b/ddt.b/05011301.d ARI ID: DDT0501
Method: /chem2/nt6.i/20130501.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 01-MAY-2013 15:22 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	14.850	325503
Benzidine	17.238	37723
4,4'-DDE	----	----
4,4'-DDD	18.146	14466
4,4'-DDT	18.617	910672

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

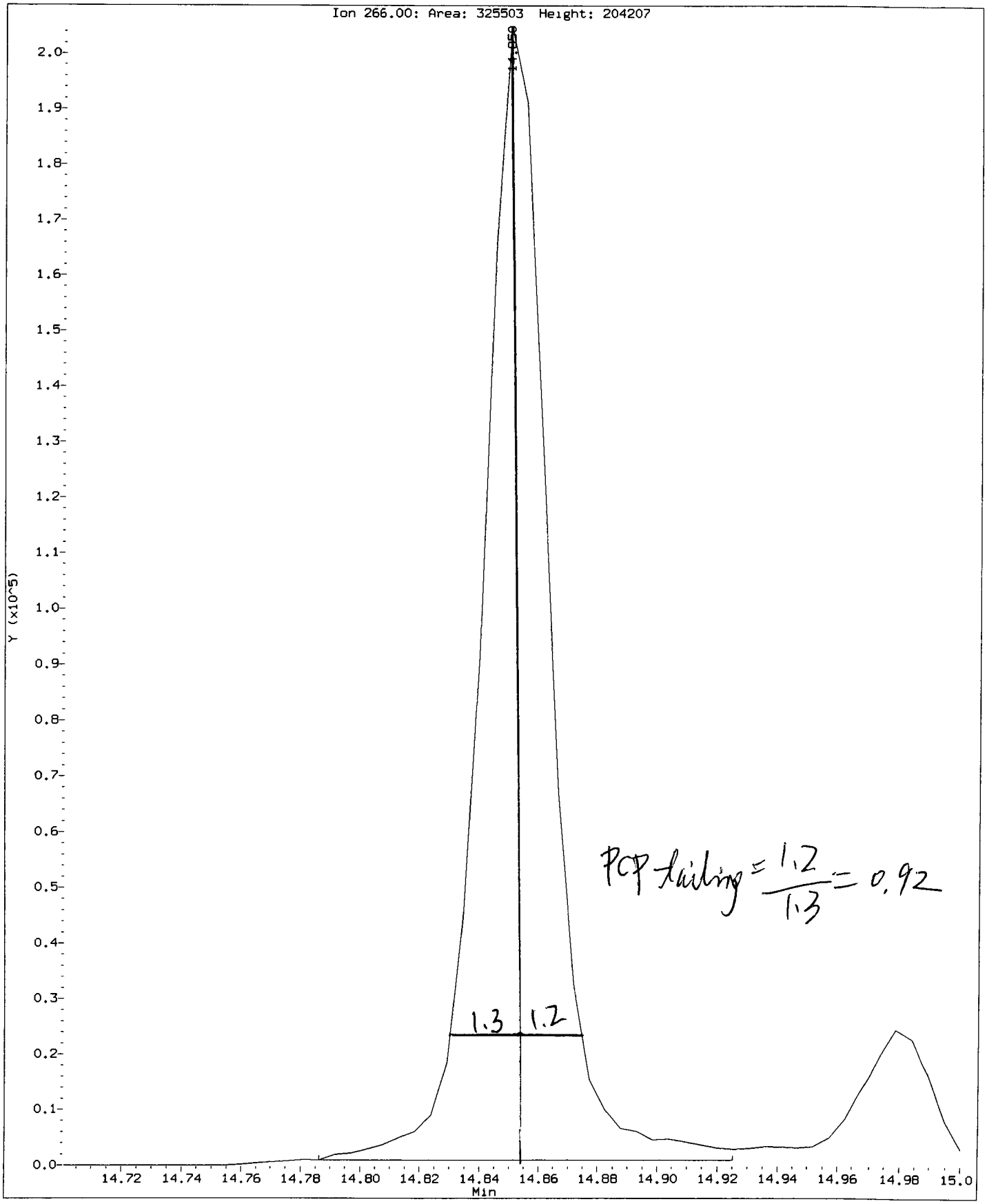
$$\text{DDT Percent Breakdown} = \frac{(0 + 14466) * 100}{(0 + 14466 + 910672)}$$

DDT Percent Breakdown = 1.6 %

QA 5/7/13

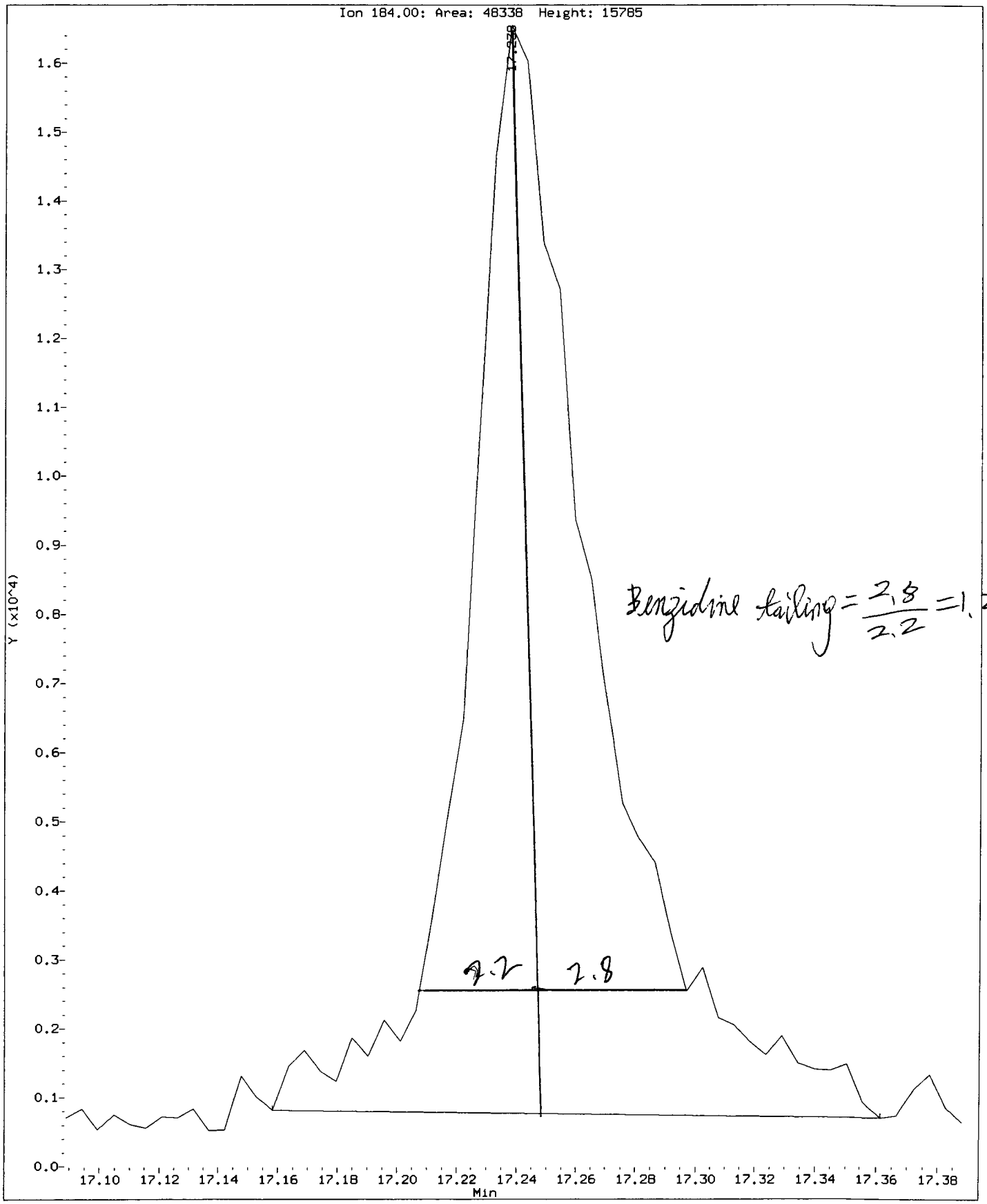
Data File: /chem2/nt6.i/20130501.b/ddt.b/05011301.d
Injection Date: 01-MAY-2013 15:22
Instrument: nt6.i
Client Sample ID: DDT0501

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20130501.b/ddt.b/05011301.d
Injection Date: 01-MAY-2013 15:22
Instrument: nt6.i
Client Sample ID: DDT0501

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130501.b/05011314.d
Lab Smp Id: WN31B Client Smp ID: ES-MH-001-20130424-
Inj Date : 01-MAY-2013 22:46
Operator : JZ Inst ID: nt6.i
Smp Info : WN31B
Misc Info : 13-8694
Comment : 1ul Injection
Method : /chem2/nt6.i/20130501.b/SW846030613.m
Meth Date : 02-May-2013 15:44 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$	1	2-Fluorophenol	112	5.856	5.860	(0.752)	506336	18.7131	18.71
$	2	Phenol-d5	99	7.416	7.419	(0.952)	440402	13.9044	13.90
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	7.507	7.505	(0.964)	779017	29.0960	29.10
	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	7.790	7.788	(1.000)	417582	20.0000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.089	8.087	(1.038)	343163	18.2107	18.21
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	Compound Not Detected.					
	14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	17	Hexachloroethane	117	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.720	8.723	(0.888)	586687	18.6466	18.65
	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	9.558	9.695	(0.973)	23396	1.02563	1.026
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.820	9.823	(1.000)	1567959	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	11.610	11.618	(0.917)	1174496	19.0118	19.01
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.662	12.665	(1.000)	978692	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	13.944	13.953	(1.101)	298053	38.5141	38.51
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.013	15.016	(1.000)	1694592	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.646	17.644	(0.915)	1373774	20.8230	20.82
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.286	19.295	(1.000)	1879526	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	19.527	19.525	(0.955)	58833	0.85802	0.8580(M)
*	134 Di-n-octylphthalate-d4	153	20.456	20.454	(1.000)	2330220	20.0000	
	73 Di-n-octylphthalate	149	20.462	20.465	(1.000)	741360	6.73814	6.738
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.428	21.432	(1.000)	1929304	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 05011314.d
Lab Smp Id: WN31B
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

Calibration Date: 01-MAY-2013
Calibration Time: 15:22
Client Smp ID: ES-MH-001-201304
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	417582	-8.85
27 Naphthalene-d8	1718341	859170	3436682	1567959	-8.75
42 Acenaphthene-d10	1010041	505020	2020082	978692	-3.10
59 Phenanthrene-d10	1666734	833367	3333468	1694592	1.67
69 Chrysene-d12	1675752	837876	3351504	1879526	12.16
134 Di-n-octylphthala	2026355	1013178	4052710	2330220	15.00
77 Perylene-d12	1637524	818762	3275048	1929304	17.82

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.79	7.29	8.29	7.79	0.02
27 Naphthalene-d8	9.82	9.32	10.32	9.82	-0.04
42 Acenaphthene-d10	12.67	12.17	13.17	12.66	-0.03
59 Phenanthrene-d10	15.02	14.52	15.52	15.01	-0.02
69 Chrysene-d12	19.30	18.80	19.80	19.29	-0.05
134 Di-n-octylphthala	20.45	19.95	20.95	20.46	0.01
77 Perylene-d12	21.43	20.93	21.93	21.43	-0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WN31
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WN31B
Client Smp ID: ES-MH-001-20130424-
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.71	49.90	33-100
$ 2 Phenol-d5	37.50	13.90	37.08	15-121
$ 5 2-Chlorophenol-d4	37.50	29.10	77.59	46-102
$ 10 1,2-Dichlorobenzen	25.00	18.21	72.84	40-100
$ 18 Nitrobenzene-d5	25.00	18.65	74.59	50-100
$ 36 2-Fluorobiphenyl	25.00	19.01	76.05	51-100
$ 55 2,4,6-Tribromophen	37.50	38.51	102.70	46-125
$ 66 Terphenyl-d14	25.00	20.82	83.29	54-117

Data File: /chem2/nt6.i/20130501.b/05011314.d

Page 6

Date : 01-MAY-2013 22:46

Client ID: ES-MH-001-20130424-

Instrument: nt6.i

Sample Info: WN31B

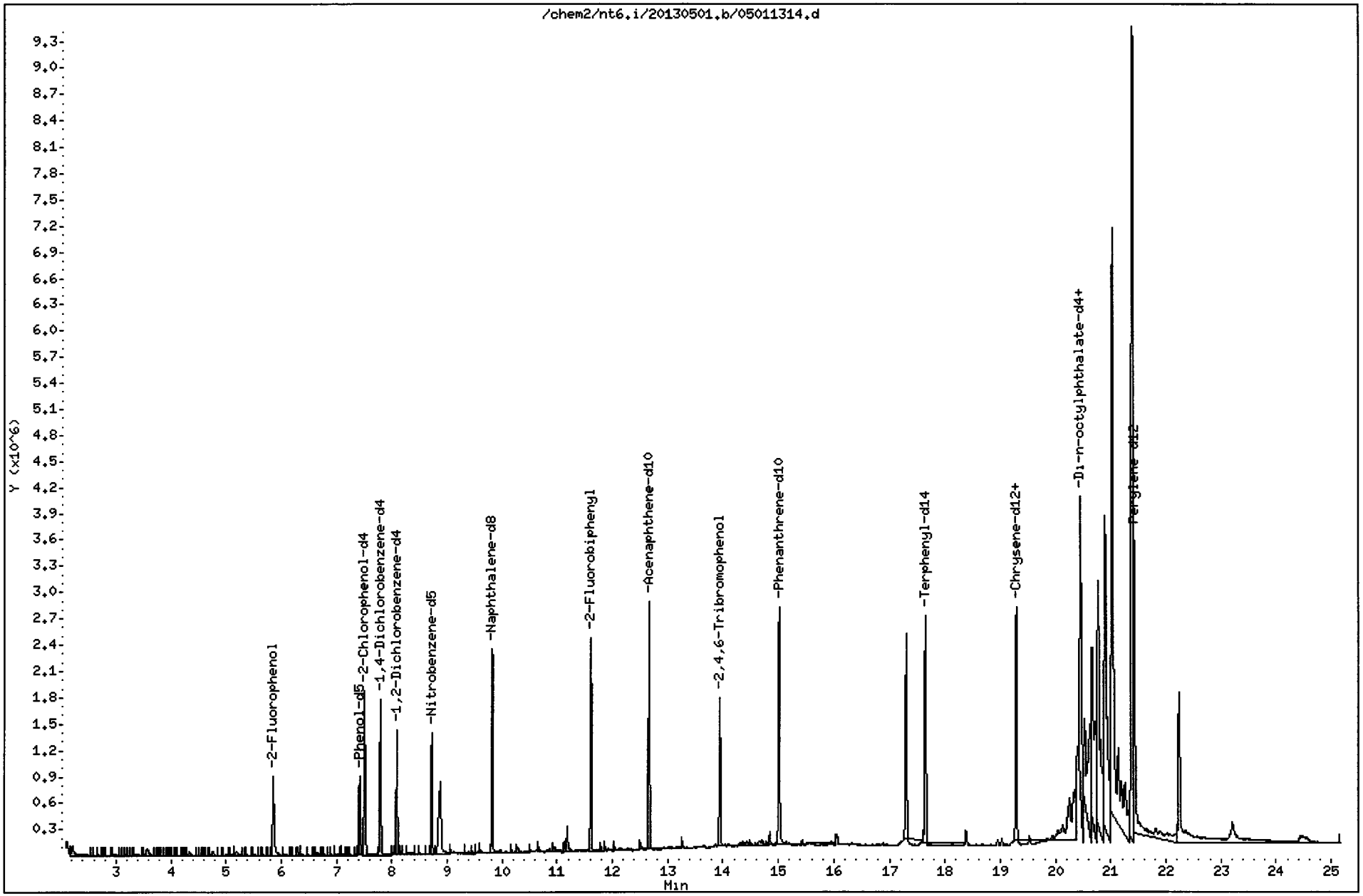
Volume Injected (uL): 1.0

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

WN31 : 668179



Data File: /chem2/nt6.i/20130501.b/05011314.d

Date : 01-MAY-2013 22:46

Client ID: ES-MH-001-20130424-

Instrument: nt6.i

Sample Info: WN31B

Volume Injected (uL): 1.0

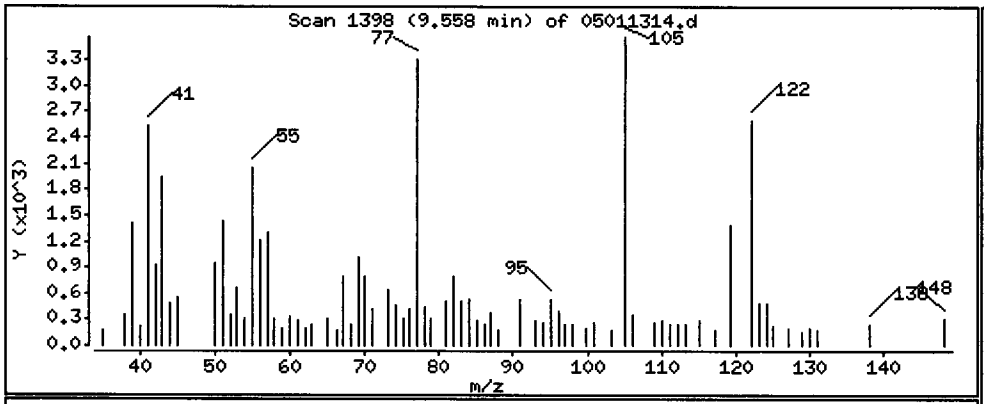
Operator: JZ

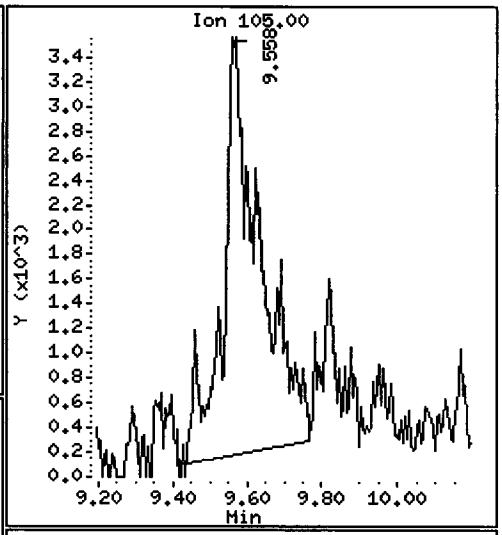
Column phase: ZB-5msi

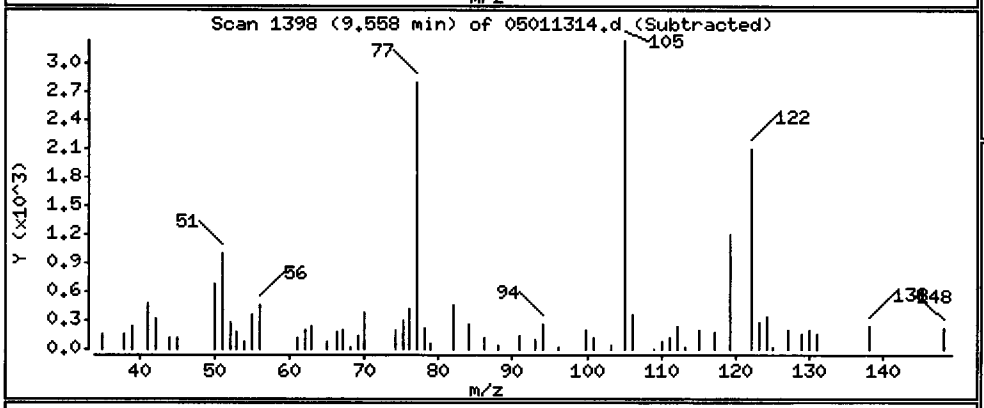
Column diameter: 0.32

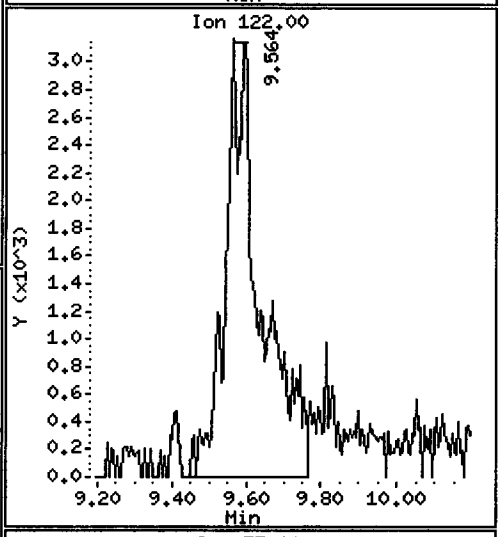
24 Benzoic acid

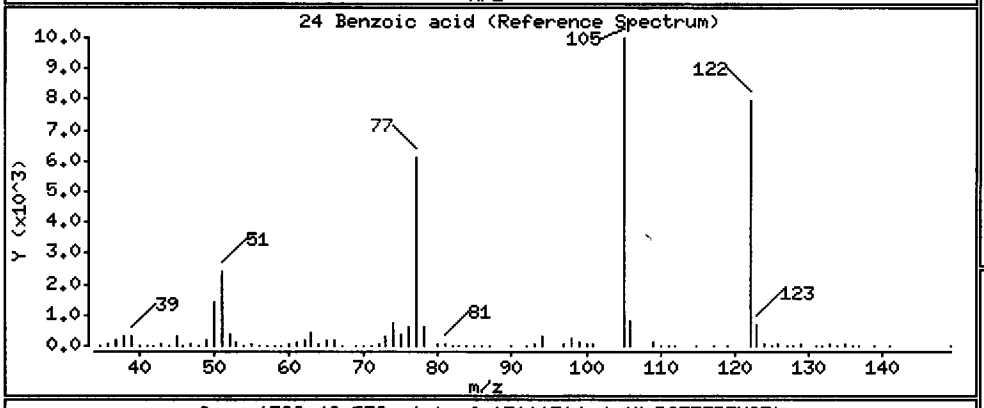
Concentration: 1.026 ug/L

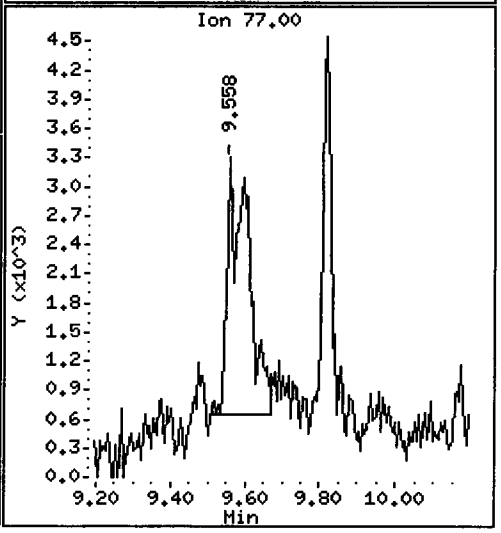


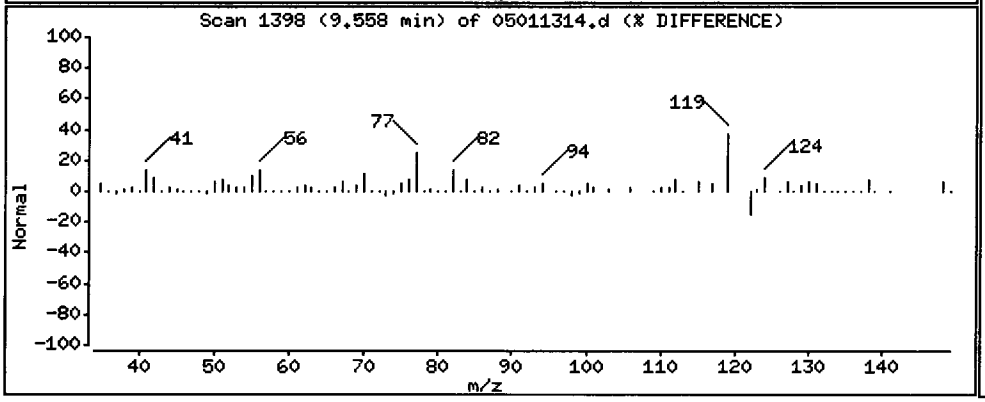






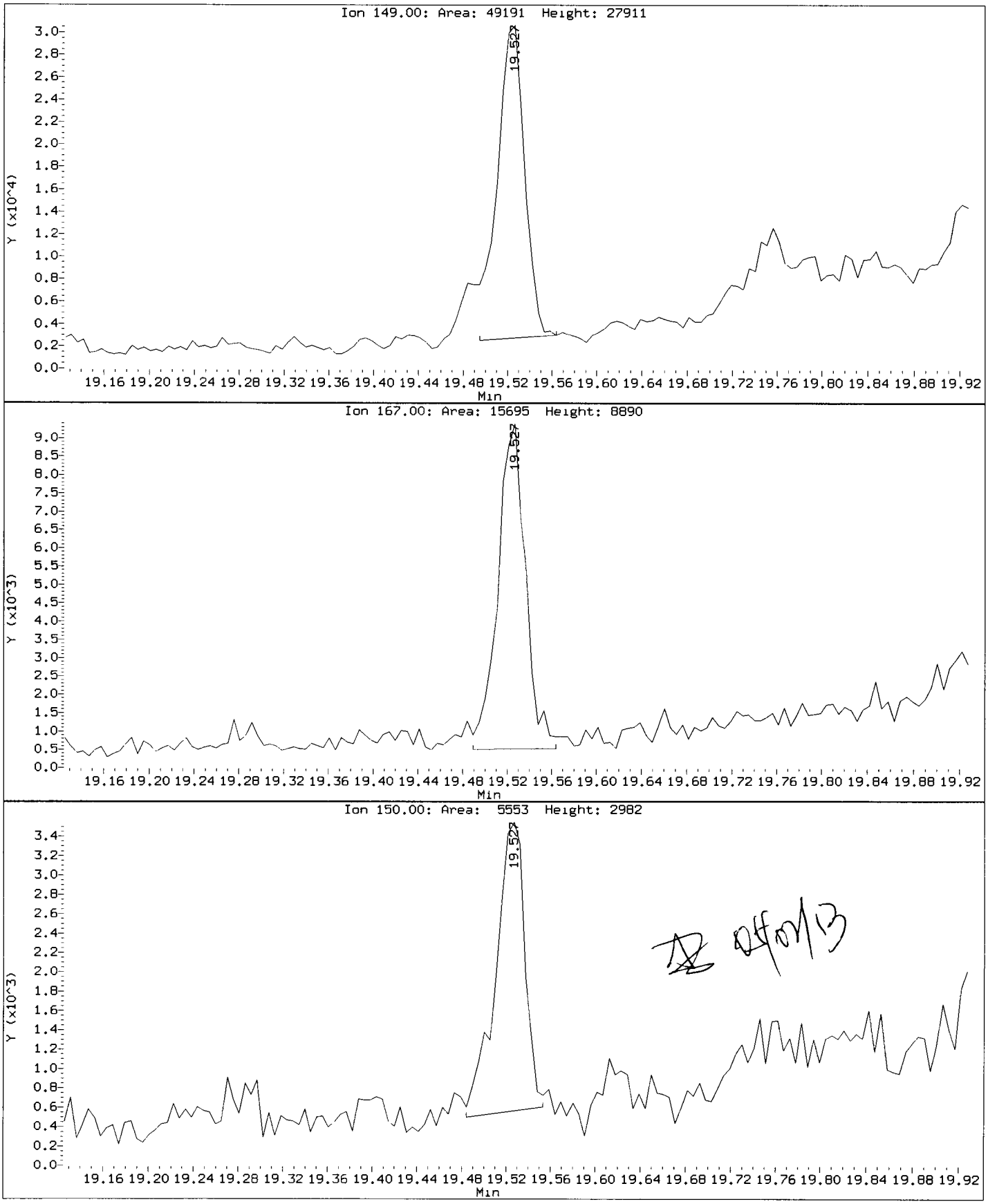






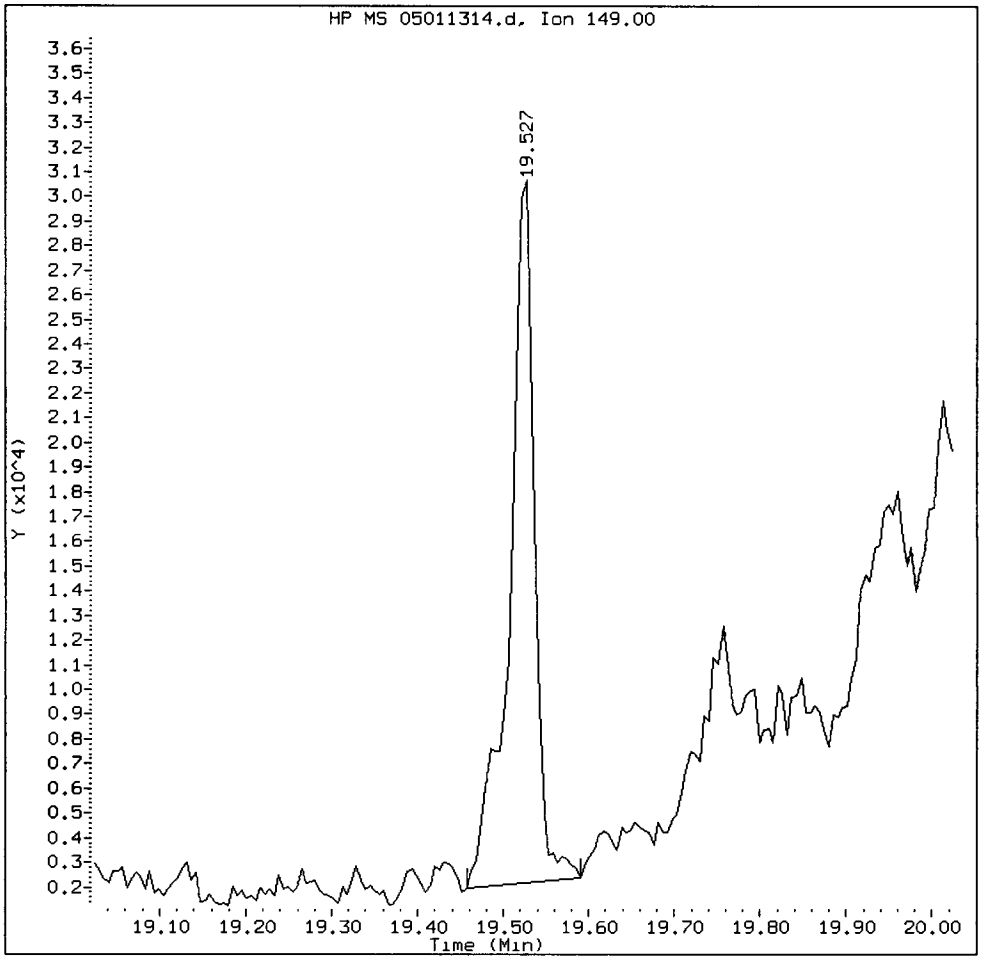
Data File: /chem2/nt6.1/20130501.b/05011314.d
Injection Date: 01-MAY-2013 22:46
Instrument: nt6.1
Client Sample ID: ES-MH-001-20130424-

Compound: bis(2-Ethylhexyl)phthalate
CAS Number: 117-81-7



WN31B, /chem2/nt6.i/20130501.b/05011314.d

bis(2-Ethylhexyl)phthalate Amount: 0.86 Area: 58833



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

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

5. Other _____

Analyst: _____ Date: 01/07/13

Data File: /chem2/nt6.i/20130501.b/05011314.d

Date : 01-MAY-2013 22:46

Client ID: ES-MH-001-20130424-

Instrument: nt6.i

Sample Info: WN31B

Volume Injected (uL): 1.0

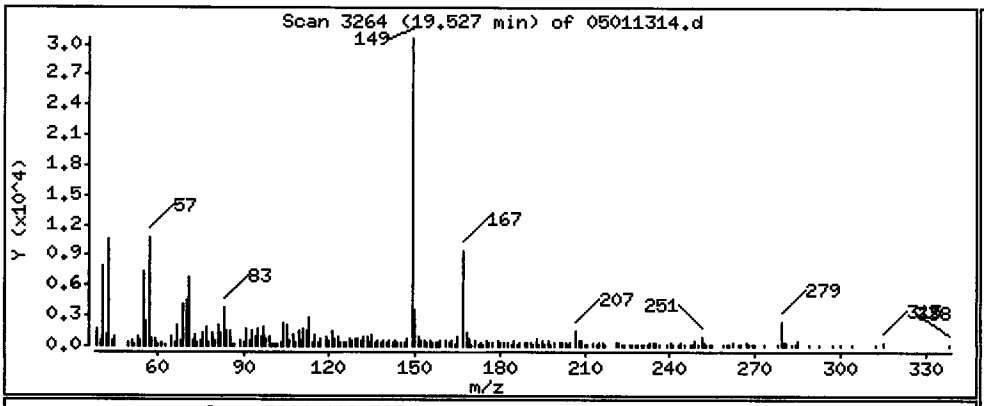
Operator: JZ

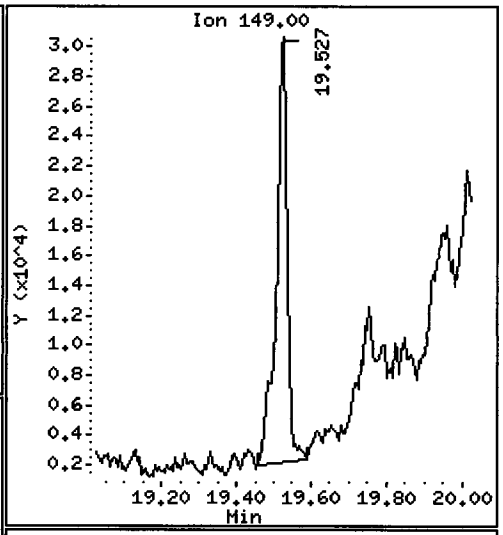
Column phase: ZB-5msi

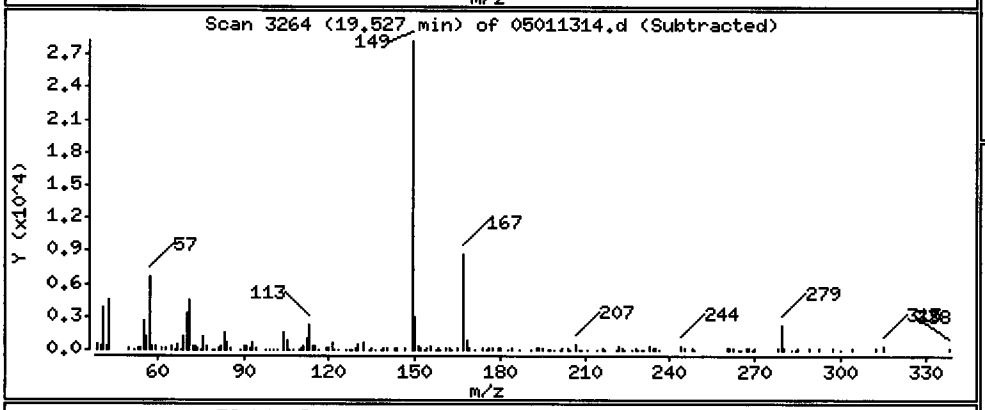
Column diameter: 0.32

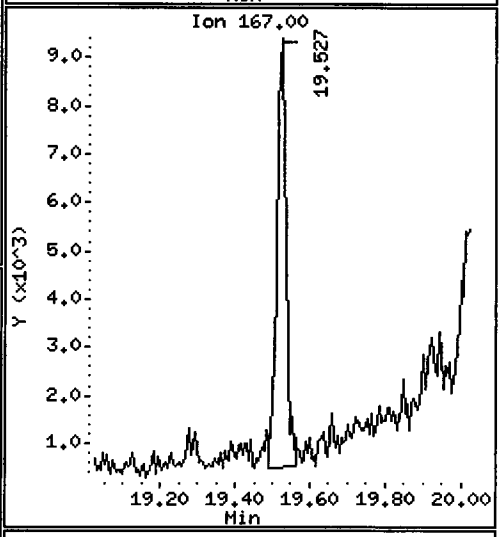
72 bis(2-Ethylhexyl)phthalate

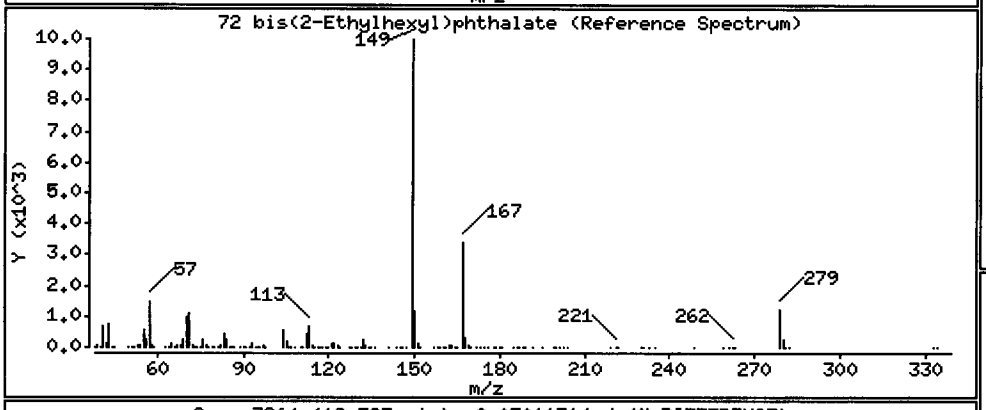
Concentration: 0.8580 ug/L

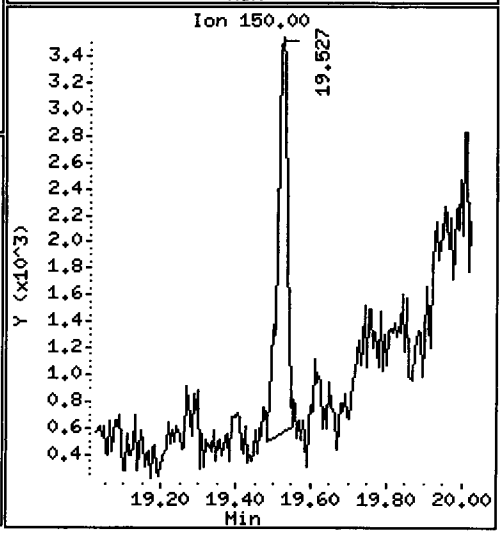


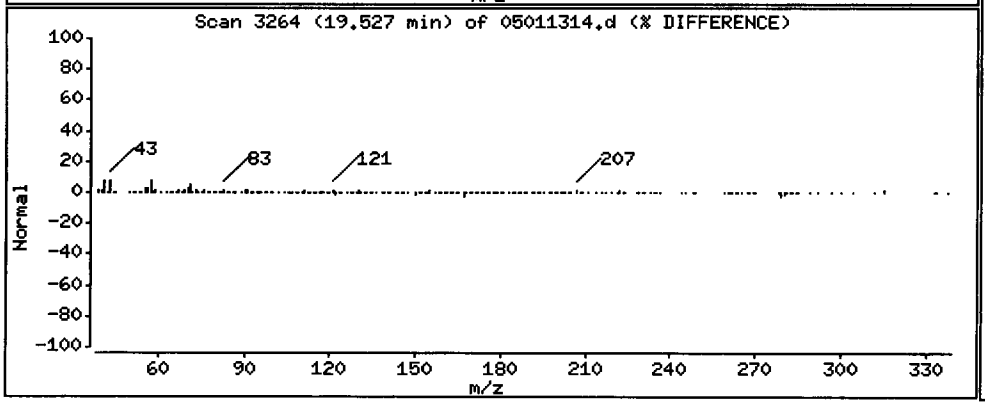












Data File: /chem2/nt6.i/20130501.b/05011314.d

Date : 01-MAY-2013 22:46

Client ID: ES-MH-001-20130424-

Instrument: nt6.i

Sample Info: WN31B

Volume Injected (uL): 1.0

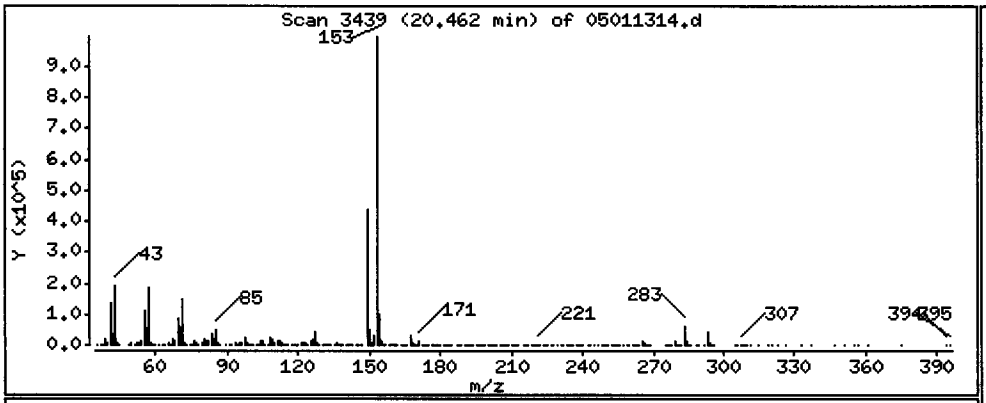
Operator: JZ

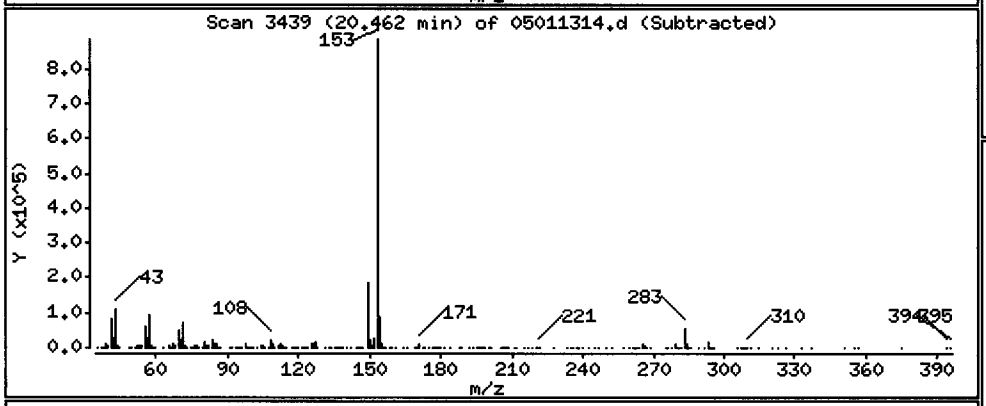
Column phase: ZB-5msi

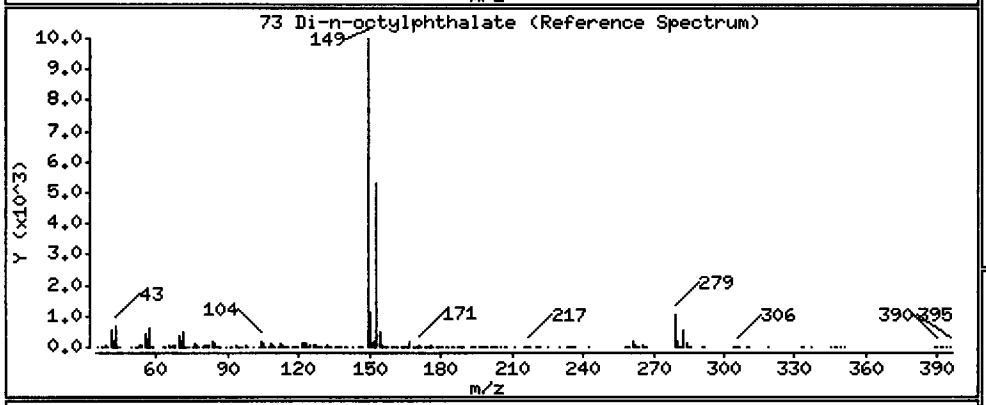
Column diameter: 0.32

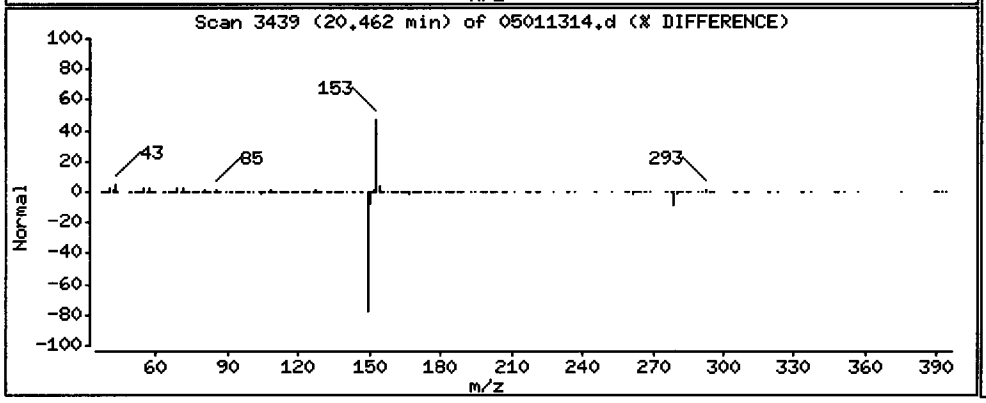
73 Di-n-octylphthalate

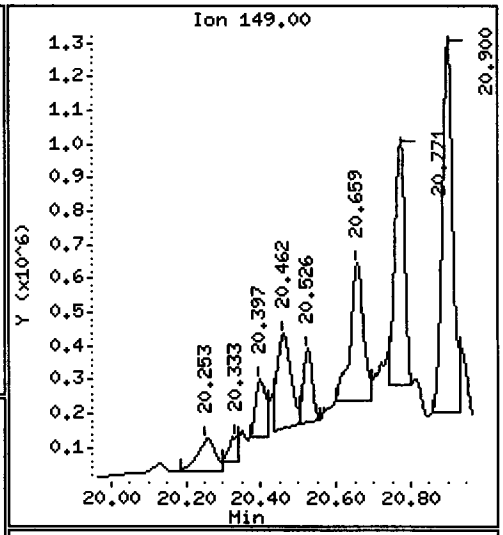
Concentration: 6.738 ug/L

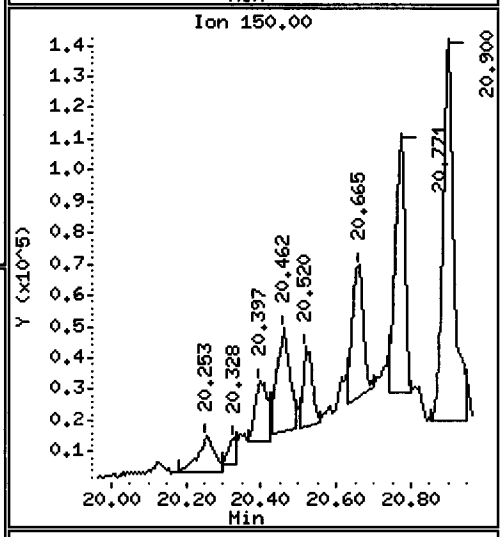


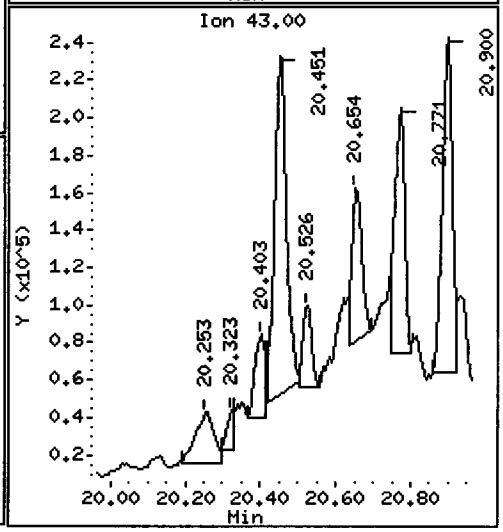












CO-ELUTION SUMMARY FOR FILE - 05011314.d

Lab ID: WN31B, Method: SW846030613.m, Instrument: nt6.i, Date: 01-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130501.b/05011314.d
Lab Smp Id: WN31B Client Smp ID: ES-MH-001-20130424-
Inj Date : 01-MAY-2013 22:46
Operator : JZ Inst ID: nt6.i
Smp Info : WN31B
Misc Info : 13-8694
Comment : 1ul Injection
Method : /chem2/nt6.i/20130501.b/SW846030613.m
Meth Date : 02-May-2013 15:44 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50
Processing Host: cserv3

JZ 04/02/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.856	5.860	(0.752)	506336	18.7131	18.71
$ 2	Phenol-d5	99	7.416	7.419	(0.952)	440402	13.9044	13.90
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	7.507	7.505	(0.964)	779017	29.0960	29.10
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	7.790	7.788	(1.000)	417582	20.0000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.089	8.087	(1.038)	343163	18.2107	18.21
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.720	8.723	(0.888)	586687	18.6466	18.65
	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	9.558	9.695	(0.973)	23396	1.02563	1.026
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.820	9.823	(1.000)	1567959	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	11.610	11.618	(0.917)	1174496	19.0118	19.01
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.662	12.665	(1.000)	978692	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	13.944	13.953	(1.101)	298053	38.5141	38.51
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.013	15.016	(1.000)	1694592	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	Compound Not Detected.					
65	Pyrene	202	Compound Not Detected.					
$ 66	Terphenyl-d14	244	17.646	17.644	(0.915)	1373774	20.8230	20.82
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	19.286	19.295	(1.000)	1879526	20.0000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	19.527	19.525	(0.955)	58833	0.85801	0.8580(M)
* 134	Di-n-octylphthalate-d4	153	20.456	20.454	(1.000)	2330220	20.0000	
73	Di-n-octylphthalate	149	20.462	20.465	(1.000)	741360	6.73814	6.738
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	21.428	21.432	(1.000)	1929304	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	141	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
151	1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
187	Total Benzofluoranthenes	252	Compound Not Detected.					

cnm

QC Flag Legend

M - Compound response manually integrated.

05/02/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 05011310.d
Lab Smp Id: WN31MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

Calibration Date: 01-MAY-2013
Calibration Time: 15:22
Client Smp ID: WN31MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	438393	-4.31
27 Naphthalene-d8	1718341	859170	3436682	1622467	-5.58
42 Acenaphthene-d10	1010041	505020	2020082	1004491	-0.55
59 Phenanthrene-d10	1666734	833367	3333468	1734958	4.09
69 Chrysene-d12	1675752	837876	3351504	1859186	10.95
134 Di-n-octylphthala	2026355	1013178	4052710	2478391	22.31
77 Perylene-d12	1637524	818762	3275048	1820013	11.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.79	7.29	8.29	7.79	0.01
27 Naphthalene-d8	9.82	9.32	10.32	9.82	0.01
42 Acenaphthene-d10	12.67	12.17	13.17	12.66	-0.03
59 Phenanthrene-d10	15.02	14.52	15.52	15.01	-0.03
69 Chrysene-d12	19.30	18.80	19.80	19.29	-0.05
134 Di-n-octylphthala	20.45	19.95	20.95	20.45	-0.02
77 Perylene-d12	21.43	20.93	21.93	21.43	-0.02

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

Analytical Resources, Inc.

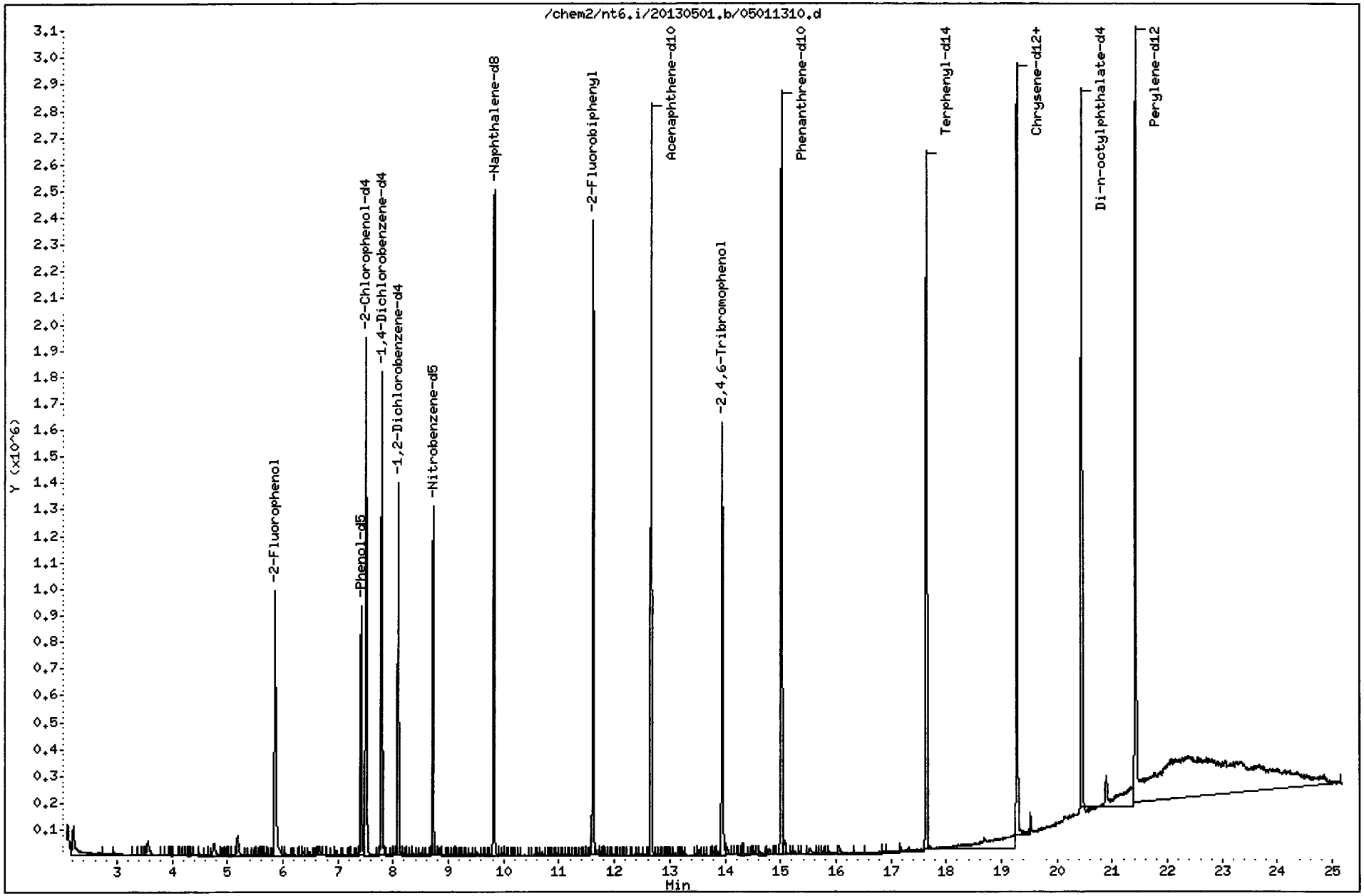
RECOVERY REPORT

Client Name: SAIC
Client SDG: WN31
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WN31B
Client Smp ID: ES-MH-001-20130424-
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.71	49.90	23-100
$ 2 Phenol-d5	37.50	13.90	37.08	16-106
$ 5 2-Chlorophenol-d4	37.50	29.10	77.59	33-100
$ 10 1,2-Dichlorobenzen	25.00	18.21	72.84	27-100
$ 18 Nitrobenzene-d5	25.00	18.65	74.59	34-101
$ 36 2-Fluorobiphenyl	25.00	19.01	76.05	38-100
$ 55 2,4,6-Tribromophen	37.50	38.51	102.70	31-128
$ 66 Terphenyl-d14	25.00	20.82	83.29	27-122

Data File: /chem2/nt6.i/20130501.b/05011310.d
Date : 01-MAY-2013 20:30
Client ID: WN31MBW1
Sample Info: WN31MBW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



WN31 : 00831

Data File: /chem2/nt6.i/20130501.b/05011310.d

Date : 01-MAY-2013 20:30

Client ID: WN31MBW1

Instrument: nt6.i

Sample Info: WN31MBW1,

Volume Injected (uL): 1.0

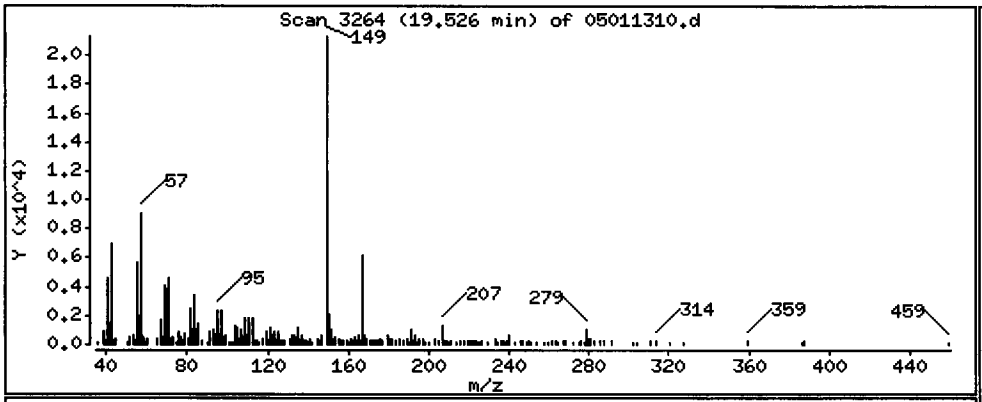
Operator: JZ

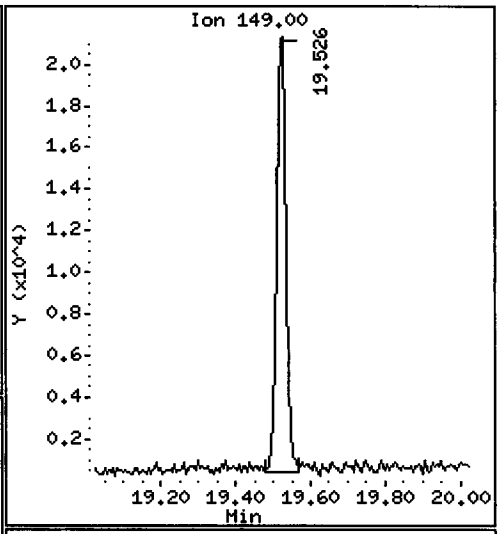
Column phase: ZB-5msi

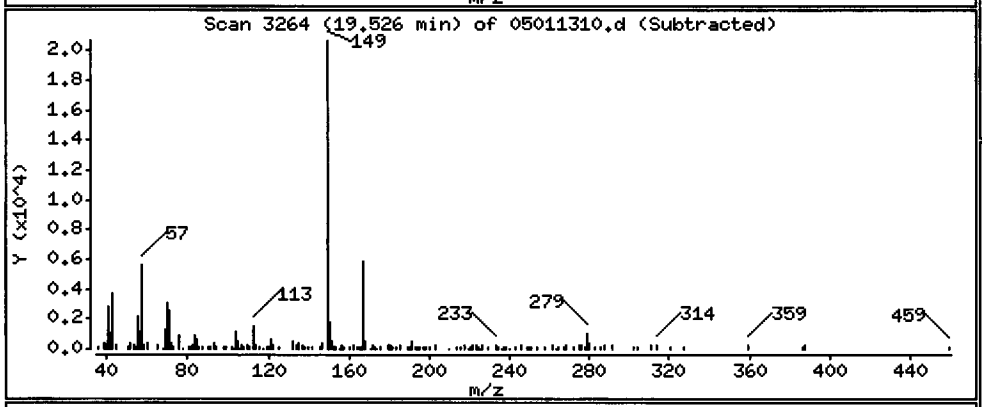
Column diameter: 0.32

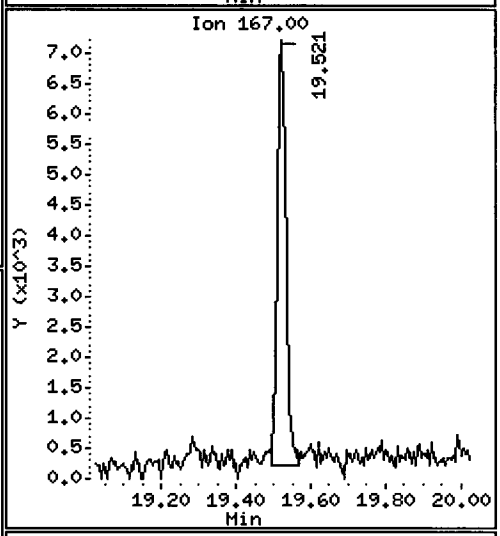
72 bis(2-Ethylhexyl)phthalate

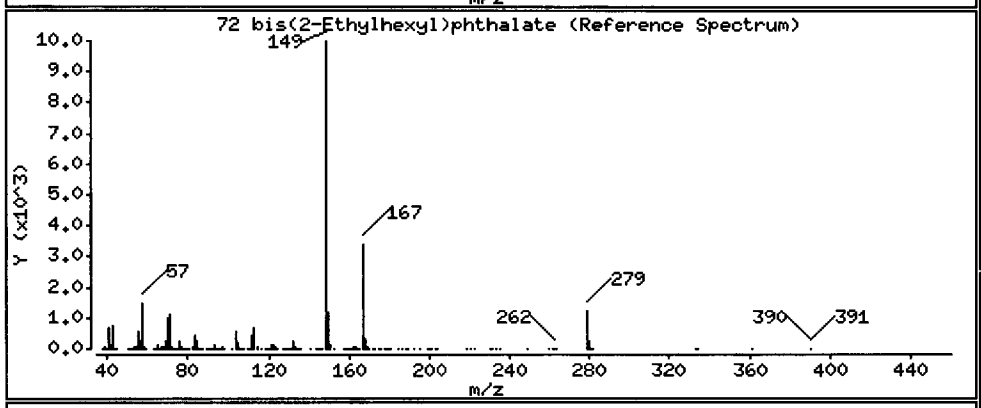
Concentration: 0.5037 ug/L

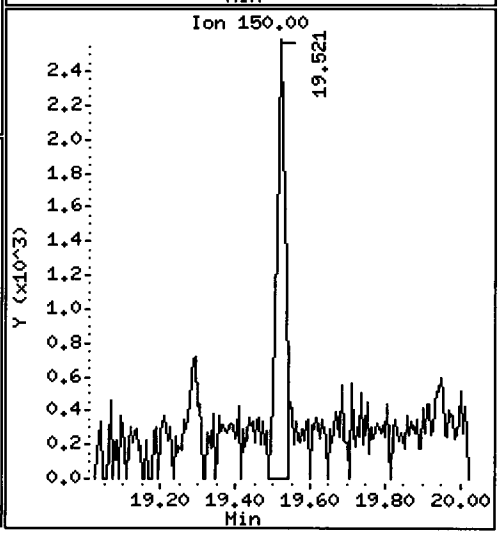


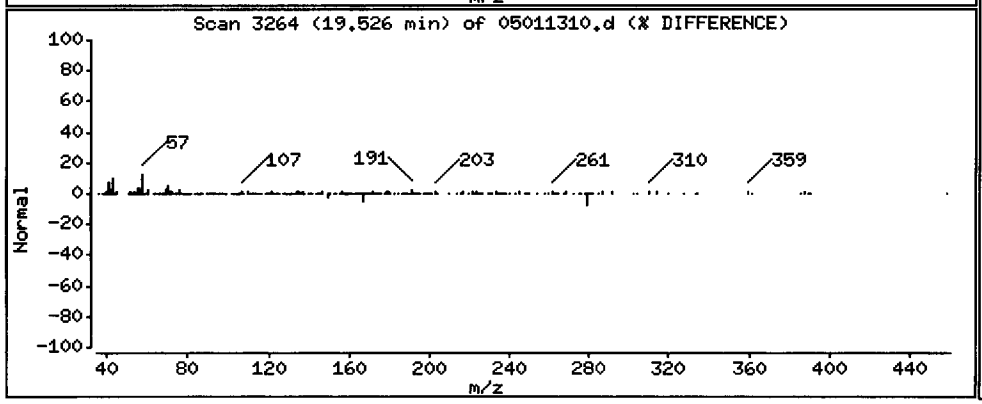












CO-ELUTION SUMMARY FOR FILE - 05011310.d

Lab ID: WN31MBW1, Method: SW846030613.m, Instrument: nt6.i, Date: 01-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130501.b/05011311.d
Lab Smp Id: WN31LCSW1 Client Smp ID: WN31LCSW1
Inj Date : 01-MAY-2013 21:04
Operator : JZ Inst ID: nt6.i
Smp Info : WN31LCSW1,
Misc Info : 13-8694
Comment : 1ul Injection
Method : /chem2/nt6.i/20130501.b/SW846030613.m
Meth Date : 02-May-2013 15:44 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

Q 05/02/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.856	5.860	(0.752)	592320	19.3850	19.39
$ 2	Phenol-d5	99	7.416	7.419	(0.952)	529874	14.8142	14.81
3	Phenol	94	7.438	7.436	(0.955)	374851	9.95307	9.953(M)
$ 5	2-Chlorophenol-d4	132	7.507	7.505	(0.964)	872732	28.8649	28.86
4	Bis(2-Chloroethyl)ether	93	7.475	7.473	(0.960)	540102	16.5130	16.51
6	2-Chlorophenol	128	7.528	7.532	(0.966)	582144	19.3193	19.32
7	1,3-Dichlorobenzene	146	7.726	7.724	(0.992)	545792	15.5087	15.51
* 8	1,4-Dichlorobenzene-d4	152	7.790	7.788	(1.000)	471562	20.0000	
9	1,4-Dichlorobenzene	146	7.817	7.815	(1.003)	547657	15.9890	15.99
$ 10	1,2-Dichlorobenzene-d4	152	8.089	8.087	(1.038)	360703	16.9503	16.95
12	1,2-Dichlorobenzene	146	8.111	8.109	(1.041)	528072	16.1273	16.13
11	Benzyl alcohol	108	8.095	8.093	(1.039)	376178	18.3345	18.33
14	2,2'-oxybis(1-Chloropropane)	45	8.340	8.338	(1.071)	798807	15.3714	15.37 Q
13	2-Methylphenol	108	8.351	8.354	(1.072)	481744	16.8690	16.87
17	Hexachloroethane	117	8.592	8.589	(1.103)	192425	13.8889	13.89
16	N-Nitroso-di-n-propylamine	70	8.559	8.563	(1.099)	417686	17.0168	17.02

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	8.592	8.584	(1.103)	973031	34.4558	34.46
$	18 Nitrobenzene-d5	82	8.720	8.723	(0.887)	666403	18.5398	18.54
	19 Nitrobenzene	77	8.752	8.755	(0.891)	635399	18.4688	18.47
	20 Isophorone	82	9.142	9.134	(0.930)	1137766	18.9736	18.97
	21 2-Nitrophenol	139	9.265	9.268	(0.943)	334773	21.0297	21.03
	22 2,4-Dimethylphenol	107	9.409	9.407	(0.958)	1431869	47.5621	47.56
	23 Bis(2-Chloroethoxy)methane	93	9.537	9.535	(0.971)	676109	17.1841	17.18
	24 Benzoic acid	105	9.703	9.695	(0.987)	1216671	46.6871	46.69
	25 2,4-Dichlorophenol	162	9.665	9.663	(0.984)	1394711	60.1655	60.17
	26 1,2,4-Trichlorobenzene	180	9.772	9.770	(0.995)	475903	16.4923	16.49
*	27 Naphthalene-d8	136	9.826	9.823	(1.000)	1791265	20.0000	
	28 Naphthalene	128	9.858	9.855	(1.003)	1556458	18.8665	18.87
	29 4-Chloroaniline	127	10.018	10.016	(1.020)	1973589	137.534	137.5(R)
	30 Hexachlorobutadiene	225	10.173	10.176	(1.035)	269932	15.3720	15.37
	31 4-Chloro-3-methylphenol	107	10.851	10.849	(1.104)	1558048	63.2754	63.28
	32 2-Methylnaphthalene	141	10.969	10.972	(1.116)	887371	20.3707	20.37
	33 Hexachlorocyclopentadiene	237	11.348	11.346	(0.896)	292873	17.3151	17.32
	34 2,4,6-Trichlorophenol	196	11.498	11.496	(0.908)	1130515	63.8789	63.88
	35 2,4,5-Trichlorophenol	196	11.562	11.560	(0.913)	1206865	69.1270	69.13
$	36 2-Fluorobiphenyl	172	11.615	11.618	(0.917)	1334377	20.0798	20.08
	37 2-Chloronaphthalene	162	11.743	11.741	(0.927)	1075866	23.8003	23.80
	38 2-Nitroaniline	65	12.000	11.992	(0.947)	1134867	72.9171	72.92
	39 Dimethylphthalate	163	12.368	12.361	(0.976)	1343780	21.2078	21.21
	40 Acenaphthylene	152	12.416	12.414	(0.980)	1842765	22.1910	22.19
	41 2,6-Dinitrotoluene	165	12.459	12.452	(0.984)	930061	68.7020	68.70
*	42 Acenaphthene-d10	164	12.668	12.665	(1.000)	1052777	20.0000	
	43 3-Nitroaniline	138	12.678	12.671	(1.001)	1027245	188.799	188.8(R)
	44 Acenaphthene	153	12.716	12.714	(1.004)	1132680	21.0674	21.07
	45 2,4-Dinitrophenol	184	12.839	12.831	(1.013)	954258	98.6916	98.69
	46 Dibenzofuran	168	12.977	12.975	(1.024)	1684263	23.9522	23.95
	47 4-Nitrophenol	109	13.025	13.018	(1.028)	304516	44.2778	44.28
	48 2,4-Dinitrotoluene	165	13.084	13.077	(1.033)	1295392	70.7433	70.74
	50 Diethylphthalate	149	13.512	13.510	(1.067)	1412292	24.0573	24.06
	49 Fluorene	166	13.528	13.526	(1.068)	1287309	25.8328	25.83
	51 4-Chlorophenyl-phenylether	204	13.560	13.558	(1.070)	698063	22.6159	22.62
	52 4-Nitroaniline	138	13.683	13.664	(1.080)	1080937	104.684	104.7
	53 4,6-Dinitro-2-methylphenol	198	13.736	13.729	(0.915)	1367552	96.7995	96.80
	54 N-Nitrosodiphenylamine	169	13.773	13.771	(0.917)	1075531	20.1638	20.16
$	55 2,4,6-Tribromophenol	330	13.955	13.953	(1.102)	361157	43.3843	43.38
	56 4-Bromophenyl-phenylether	248	14.329	14.332	(0.954)	423054	19.6472	19.65
	57 Hexachlorobenzene	284	14.543	14.546	(0.968)	415592	18.7210	18.72
	58 Pentachlorophenol	266	14.852	14.850	(0.989)	864611	66.0174	66.02
*	59 Phenanthrene-d10	188	15.018	15.016	(1.000)	1961936	20.0000	
	60 Phenanthrene	178	15.056	15.053	(1.002)	2047792	21.0967	21.10
	61 Anthracene	178	15.125	15.128	(1.007)	1977598	20.3477	20.35
	62 Carbazole	167	15.419	15.417	(1.027)	1993345	29.3324	29.33
	63 Di-n-butylphthalate	149	16.140	16.138	(1.075)	2500385	20.4064	20.41

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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
	64 Fluoranthene	202	16.973	16.971	(1.130)	2380152	23.3094	23.31	
	65 Pyrene	202	17.321	17.318	(0.898)	2456592	23.9729	23.97	
$	66 Terphenyl-d14	244	17.646	17.644	(0.915)	1612700	24.4860	24.49	
	67 Butylbenzylphthalate	149	18.528	18.531	(0.960)	1152586	23.0017	23.00	
	68 Benzo(a)anthracene	228	19.265	19.268	(0.999)	2204466	25.7694	25.77	
*	69 Chrysene-d12	240	19.292	19.295	(1.000)	1876341	20.0000		
	70 3,3'-Dichlorobenzidine	252	19.297	19.284	(1.000)	2037578	86.5723	86.57	
	71 Chrysene	228	19.335	19.332	(1.002)	2062239	23.6145	23.61	
	72 bis(2-Ethylhexyl)phthalate	149	19.522	19.525	(0.955)	1612952	21.3536	21.35	
*	134 Di-n-octylphthalate-d4	153	20.451	20.454	(1.000)	2566961	20.0000		
	73 Di-n-octylphthalate	149	20.462	20.465	(1.001)	2591279	21.3797	21.38	
	74 Benzo(b)fluoranthene	252	20.910	20.908	(0.976)	2129395	22.7609	22.76	
	75 Benzo(k)fluoranthene	252	20.943	20.940	(0.977)	2300750	22.3268	22.33	
	76 Benzo(a)pyrene	252	21.349	21.352	(0.996)	1939571	21.9690	21.97	
*	77 Perylene-d12	264	21.429	21.432	(1.000)	2065559	20.0000		
	78 Indeno(1,2,3-cd)pyrene	276	22.828	22.832	(1.065)	2294174	21.5923	21.59	
	79 Dibenzo(a,h)anthracene	278	22.850	22.853	(1.066)	1828782	21.8596	21.86	
	80 Benzo(g,h,i)perylene	276	23.192	23.195	(1.082)	1816580	19.9924	19.99	
	90 N-Nitrosodimethylamine	74	3.062	3.050	(0.393)	699540	31.5014	31.50	R
	91 Aniline	93	7.357	7.355	(0.944)	2204581	52.8304	52.83	R
	93 Benzidine	184	17.240	17.238	(0.894)	2441510	267.513	267.5	
	103 Pyridine	79	3.009	3.007	(0.386)	1257585	35.7085	35.71	
	105 1-methylnaphthalene	141	11.140	11.138	(1.134)	905047	20.4519	20.45	
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.811	13.809	(1.090)	1382365	20.7240	20.72	
	120 2,3,4,6-Tetrachlorophenol	232	13.271	13.269	(1.048)	389549	25.9232	25.92	
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.				NC		
	187 Total Benzofluoranthenes	252	20.943	20.940	(0.977)	4153452	43.6760	43.68	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

05/7/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 05011311.d
Lab Smp Id: WN31LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

Calibration Date: 01-MAY-2013
Calibration Time: 15:22
Client Smp ID: WN31LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	471562	2.93
27 Naphthalene-d8	1718341	859170	3436682	1791265	4.24
42 Acenaphthene-d10	1010041	505020	2020082	1052777	4.23
59 Phenanthrene-d10	1666734	833367	3333468	1961936	17.71
69 Chrysene-d12	1675752	837876	3351504	1876341	11.97
134 Di-n-octylphthala	2026355	1013178	4052710	2566961	26.68
77 Perylene-d12	1637524	818762	3275048	2065559	26.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.79	7.29	8.29	7.79	0.03
27 Naphthalene-d8	9.82	9.32	10.32	9.83	0.02
42 Acenaphthene-d10	12.67	12.17	13.17	12.67	0.02
59 Phenanthrene-d10	15.02	14.52	15.52	15.02	0.01
69 Chrysene-d12	19.30	18.80	19.80	19.29	-0.02
134 Di-n-octylphthala	20.45	19.95	20.95	20.45	-0.02
77 Perylene-d12	21.43	20.93	21.93	21.43	-0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WN31
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WN31LCSW1
Client Smp ID: WN31LCSW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	9.953	39.81	16-100
4 Bis(2-Chloroethyl)	25.00	16.51	66.05	41-112
6 2-Chlorophenol	25.00	19.32	77.28	43-111
7 1,3-Dichlorobenzen	25.00	15.51	62.03	32-100
9 1,4-Dichlorobenzen	25.00	15.99	63.96	32-100
11 Benzyl alcohol	25.00	18.33	73.34	22-100
12 1,2-Dichlorobenzen	25.00	16.13	64.51	34-100
13 2-Methylphenol	25.00	16.87	67.48	36-110
14 2,2'-oxybis(1-Chlo	25.00	15.37	61.49	29-118
15 4-Methylphenol	50.00	34.46	68.91	38-104
16 N-Nitroso-di-n-pro	25.00	17.02	68.07	38-115
17 Hexachloroethane	25.00	13.89	55.56	24-100
19 Nitrobenzene	25.00	18.47	73.88	45-106
20 Isophorone	25.00	18.97	75.89	55-119
21 2-Nitrophenol	25.00	21.03	84.12	46-118
22 2,4-Dimethylphenol	75.00	47.56	63.42	28-105
23 Bis(2-Chloroethoxy	25.00	17.18	68.74	44-118
24 Benzoic acid	137.5	46.69	33.95	11-100
25 2,4-Dichlorophenol	75.00	60.17	80.22	43-121
26 1,2,4-Trichloroben	25.00	16.49	65.97	35-100
28 Naphthalene	25.00	18.87	75.47	36-111
29 4-Chloroaniline	75.00	137.5	183.38*	10-153
30 Hexachlorobutadien	25.00	15.37	61.49	24-100
31 4-Chloro-3-methylp	75.00	63.28	84.37	45-122
32 2-Methylnaphthalen	25.00	20.37	81.48	45-103
33 Hexachlorocyclopen	75.00	17.32	23.09	23-108
34 2,4,6-Trichlorophe	75.00	63.88	85.17	48-122
35 2,4,5-Trichlorophe	75.00	69.13	92.17	48-122
37 2-Chloronaphthalen	25.00	23.80	95.20	39-118
38 2-Nitroaniline	75.00	72.92	97.22	48-118
39 Dimethylphthalate	25.00	21.21	84.83	50-120
40 Acenaphthylene	25.00	22.19	88.76	50-119
41 2,6-Dinitrotoluene	75.00	68.70	91.60	48-133

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	188.8	251.73*	10-208
44 Acenaphthene	25.00	21.07	84.27	41-120
45 2,4-Dinitrophenol	137.5	98.69	71.78	10-224
46 Dibenzofuran	25.00	23.95	95.81	51-114
47 4-Nitrophenol	75.00	44.28	59.04	10-103
48 2,4-Dinitrotoluene	75.00	70.74	94.32	51-134
49 Fluorene	25.00	25.83	103.33	50-120
50 Diethylphthalate	25.00	24.06	96.23	48-122
51 4-Chlorophenyl-phe	25.00	22.62	90.46	50-118
52 4-Nitroaniline	75.00	104.7	139.58	13-144
53 4,6-Dinitro-2-meth	125.0	96.80	77.44	10-190
54 N-Nitrosodiphenyla	25.00	20.16	80.66	58-141
56 4-Bromophenyl-phen	25.00	19.65	78.59	50-122
57 Hexachlorobenzene	25.00	18.72	74.88	47-125
58 Pentachlorophenol	75.00	66.02	88.02	35-130
60 Phenanthrene	25.00	21.10	84.39	49-120
61 Anthracene	25.00	20.35	81.39	53-116
62 Carbazole	25.00	29.33	117.33	57-122
63 Di-n-butylphthalat	25.00	20.41	81.63	57-121
64 Fluoranthene	25.00	23.31	93.24	56-119
65 Pyrene	25.00	23.97	95.89	37-143
67 Butylbenzylphthala	25.00	23.00	92.01	34-152
68 Benzo(a)anthracene	25.00	25.77	103.08	49-129
70 3,3'-Dichlorobenzi	75.00	86.57	115.43	50-128
71 Chrysene	25.00	23.61	94.46	45-128
72 bis(2-Ethylhexyl)p	25.00	21.35	85.41	57-133
73 Di-n-octylphthalat	25.00	21.38	85.52	52-120
74 Benzo(b)fluoranthe	25.00	22.76	91.04	50-126
75 Benzo(k)fluoranthe	25.00	22.33	89.31	49-126
76 Benzo(a)pyrene	25.00	21.97	87.88	46-109
78 Indeno(1,2,3-cd)py	25.00	21.59	86.37	34-136
79 Dibenzo(a,h)anthra	25.00	21.86	87.44	41-134
80 Benzo(g,h,i)peryle	25.00	19.99	79.97	41-133
91 Aniline	75.00	52.83	70.44	28-126
111 Azobenzene (1,2-DP	25.00	20.72	82.90	55-119
105 1-methylnaphthalen	25.00	20.45	81.81	43-115
90 N-Nitrosodimethyla	50.00	31.50	63.00	31-100
103 Pyridine	50.00	35.71	71.42	25-100
120 2,3,4,6-Tetrachlor	25.00	25.92	103.69	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	*	30-160
187 Total Benzofluoran	50.00	43.68	87.35	30-160

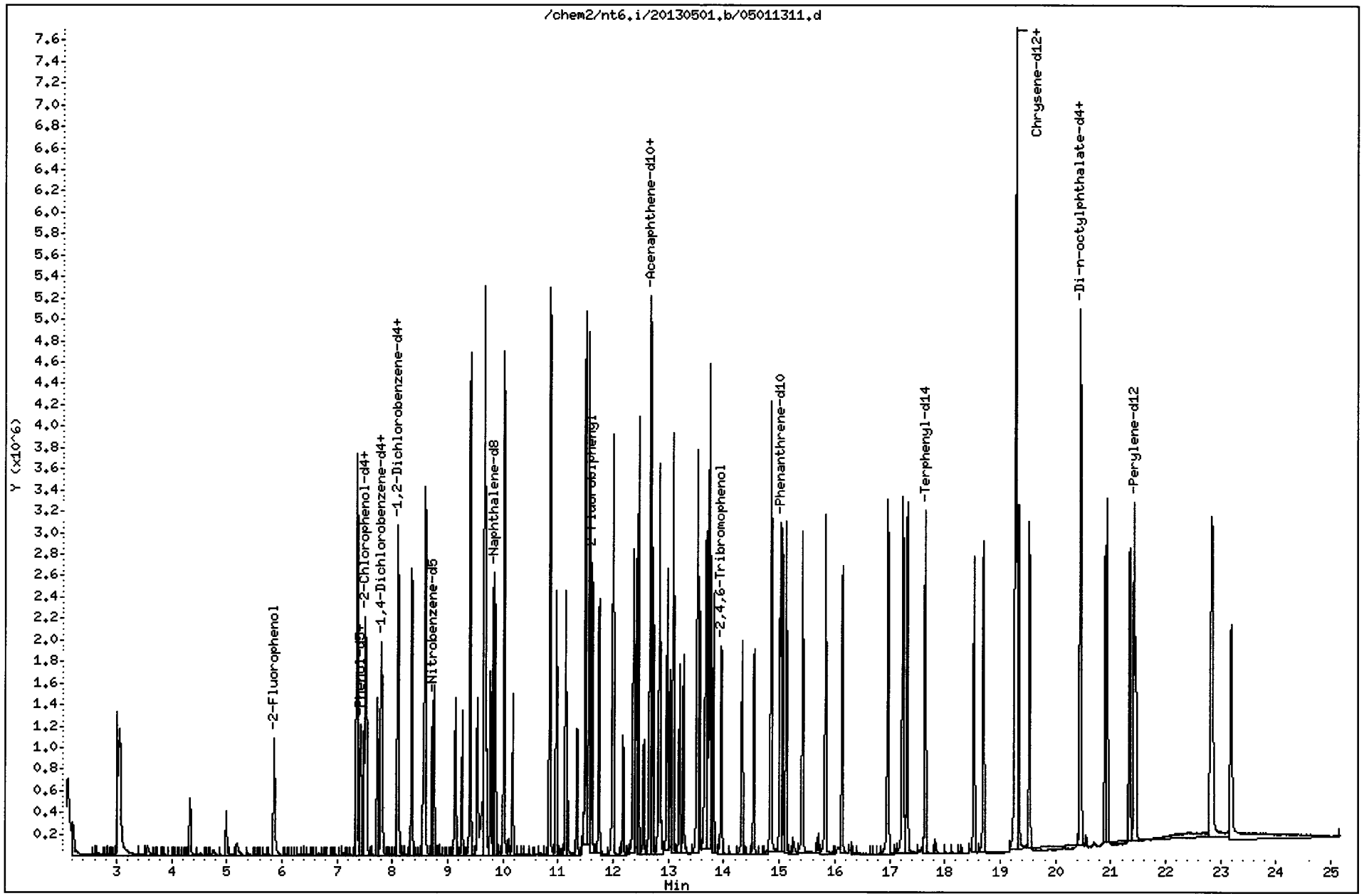
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	19.39	51.69	33-100

9/10/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.81	39.50	15-121
$ 5 2-Chlorophenol-d4	37.50	28.86	76.97	46-102
$ 10 1,2-Dichlorobenzen	25.00	16.95	67.80	40-100
$ 18 Nitrobenzene-d5	25.00	18.54	74.16	50-100
$ 36 2-Fluorobiphenyl	25.00	20.08	80.32	51-100
$ 55 2,4,6-Tribromophen	37.50	43.38	115.69	46-125
$ 66 Terphenyl-d14	25.00	24.49	97.94	54-117

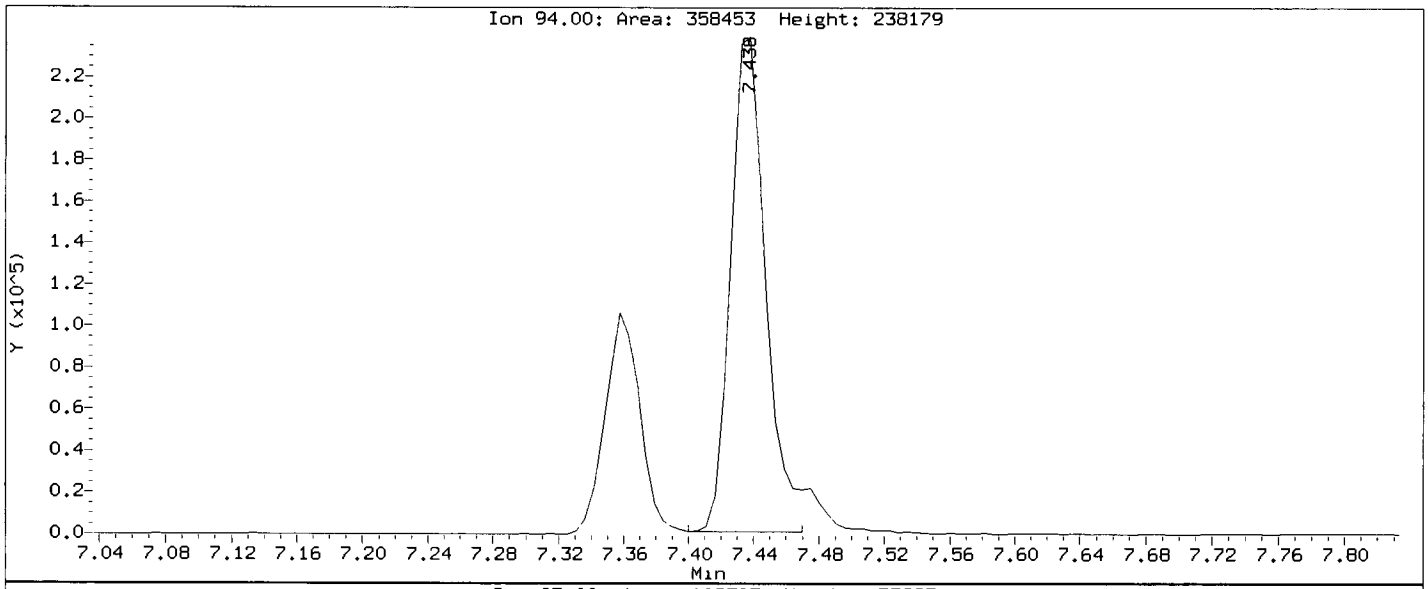
Data File: /chem2/nt6.i/20130501.b/05011311.d
Date : 01-MAY-2013 21:04
Client ID: WN31LCSW1
Sample Info: WN31LCSW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

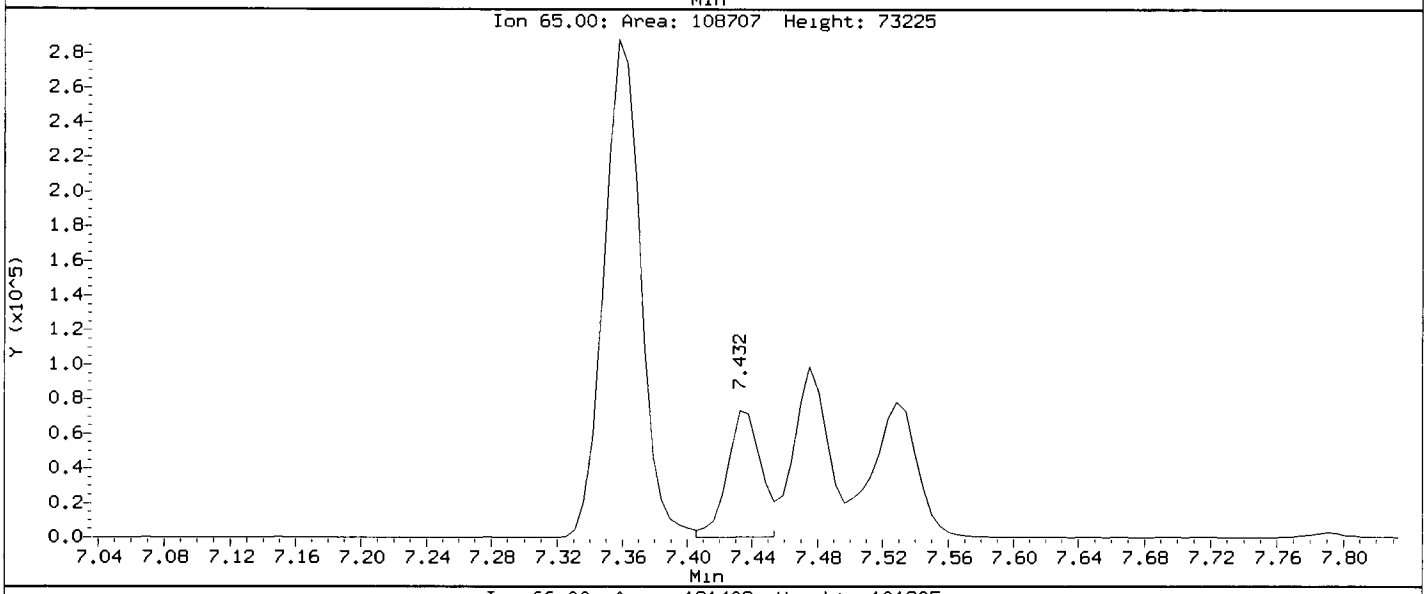
Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

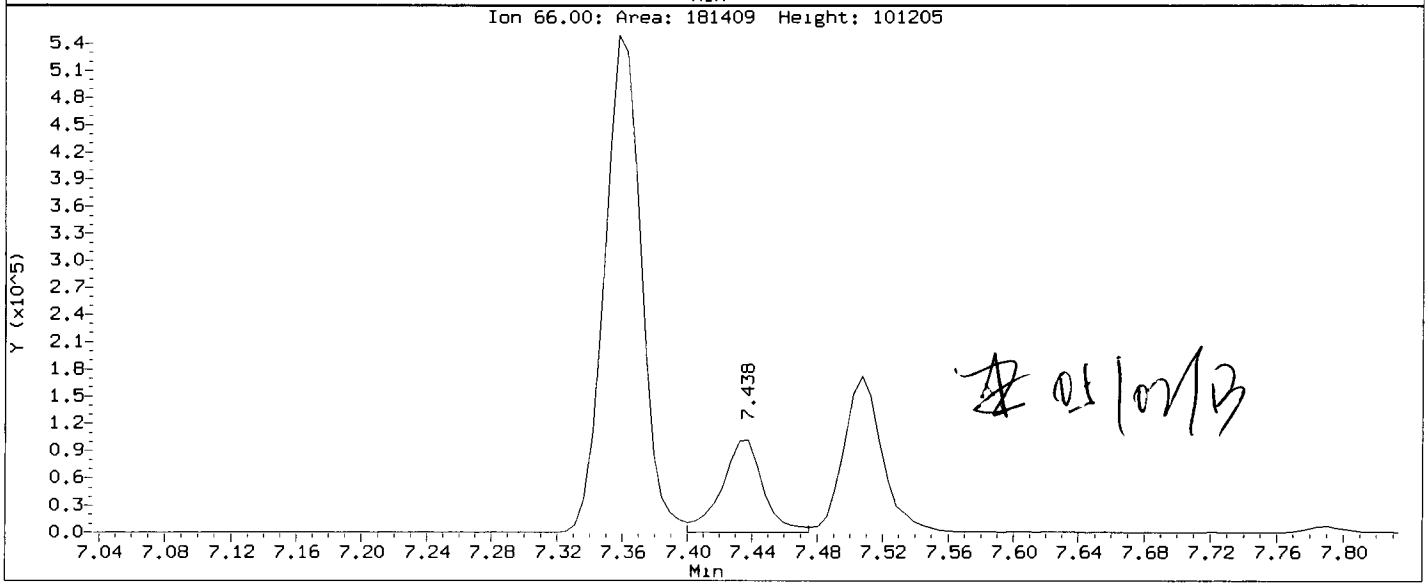


Data File: /chem2/nt6.i/20130501.b/05011311.d
Injection Date: 01-MAY-2013 21:04
Instrument: nt6.i
Client Sample ID: WN31LCSW1

Compound: Phenol
CAS Number: 108-95-2



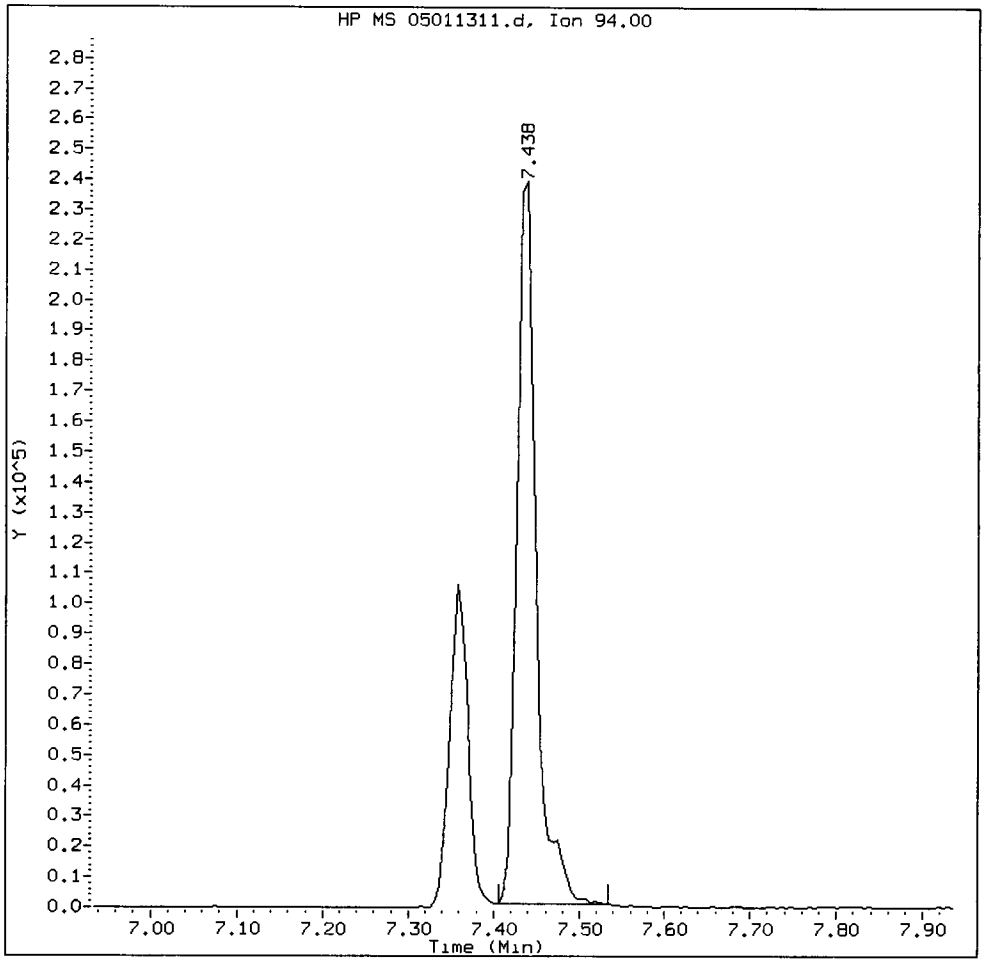




01/07/13

WN31LCSW1, /chem2/nt6.i/20130501.b/05011311.d

Phenol Amount: 9.95 Area: 374851



MANUAL INTEGRATION for Phenol

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

5. Other _____

Analyst: _____ Date: 04/07/13

CO-ELUTION SUMMARY FOR FILE - 05011311.d

Lab ID: WN31LCSW1, Method: SW846030613.m, Instrument: nt6.i, Date: 01-MAY-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130501.b/05011312.d
Lab Smp Id: WN31LCSDW1 Client Smp ID: WN31LCSDW1
Inj Date : 01-MAY-2013 21:38
Operator : JZ Inst ID: nt6.i
Smp Info : WN31LCSDW1
Misc Info : 13-8694
Comment : 1ul Injection
Method : /chem2/nt6.i/20130501.b/SW846030613.m
Meth Date : 02-May-2013 15:44 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 12 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 05/07/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.856	5.860	(0.752)	553841	18.3083	18.31
$ 2	Phenol-d5	99	7.415	7.419	(0.952)	498864	14.0877	14.09
3	Phenol	94	7.432	7.436	(0.954)	361571	9.69716	9.697(M)
$ 5	2-Chlorophenol-d4	132	7.506	7.505	(0.964)	833292	27.8381	27.84
4	Bis(2-Chloroethyl)ether	93	7.474	7.473	(0.960)	530544	16.3842	16.38
6	2-Chlorophenol	128	7.528	7.532	(0.966)	574039	19.2422	19.24
7	1,3-Dichlorobenzene	146	7.725	7.724	(0.992)	538700	15.4613	15.46
* 8	1,4-Dichlorobenzene-d4	152	7.789	7.788	(1.000)	466859	20.0000	
9	1,4-Dichlorobenzene	146	7.816	7.815	(1.003)	546807	16.1250	16.13
$ 10	1,2-Dichlorobenzene-d4	152	8.089	8.087	(1.038)	352613	16.7371	16.74
12	1,2-Dichlorobenzene	146	8.110	8.109	(1.041)	520346	16.0514	16.05
11	Benzyl alcohol	108	8.094	8.093	(1.039)	371943	18.3107	18.31
14	2,2'-oxybis(1-Chloropropane)	45	8.340	8.338	(1.071)	792318	15.4002	15.40
13	2-Methylphenol	108	8.345	8.354	(1.071)	482698	17.0726	17.07
17	Hexachloroethane	117	8.591	8.589	(1.103)	185545	13.5272	13.53
16	N-Nitroso-di-n-propylamine	70	8.559	8.563	(1.099)	420417	17.3006	17.30

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
15	4-Methylphenol	108	8.591	8.584	(1.103)	963393	34.4581	34.46
$ 18	Nitrobenzene-d5	82	8.724	8.723	(0.888)	644723	18.4333	18.43
19	Nitrobenzene	77	8.751	8.755	(0.891)	634936	18.9664	18.97
20	Isophorone	82	9.141	9.134	(0.930)	1136542	19.4780	19.48
21	2-Nitrophenol	139	9.264	9.268	(0.943)	338223	21.8348	21.83
22	2,4-Dimethylphenol	107	9.408	9.407	(0.958)	1460557	49.8584	49.86
23	Bis(2-Chloroethoxy)methane	93	9.536	9.535	(0.971)	675344	17.6400	17.64
24	Benzoic acid	105	9.702	9.695	(0.987)	1212479	47.8147	47.81
25	2,4-Dichlorophenol	162	9.665	9.663	(0.984)	1380193	61.1880	61.19
26	1,2,4-Trichlorobenzene	180	9.771	9.770	(0.995)	469804	16.7318	16.73
* 27	Naphthalene-d8	136	9.825	9.823	(1.000)	1742998	20.0000	
28	Naphthalene	128	9.857	9.855	(1.003)	1536491	19.2155	19.22
29	4-Chloroaniline	127	10.017	10.016	(1.020)	1935240	139.230	139.2(R)
30	Hexachlorobutadiene	225	10.172	10.176	(1.035)	271236	15.8740	15.87
31	4-Chloro-3-methylphenol	107	10.850	10.849	(1.104)	1549035	64.6514	64.65
32	2-Methylnaphthalene	141	10.968	10.972	(1.116)	870956	20.5475	20.55
33	Hexachlorocyclopentadiene	237	11.347	11.346	(0.896)	393314	23.8544	23.85
34	2,4,6-Trichlorophenol	196	11.497	11.496	(0.908)	1130602	65.5350	65.54
35	2,4,5-Trichlorophenol	196	11.561	11.560	(0.913)	1200628	70.5473	70.55
$ 36	2-Fluorobiphenyl	172	11.614	11.618	(0.917)	1285486	19.8441	19.84
37	2-Chloronaphthalene	162	11.743	11.741	(0.927)	1061737	24.1156	24.12
38	2-Nitroaniline	65	11.999	11.992	(0.947)	1124057	74.0893	74.09
39	Dimethylphthalate	163	12.368	12.361	(0.976)	1351435	21.8799	21.88
40	Acenaphthylene	152	12.416	12.414	(0.980)	1852143	22.8804	22.88
41	2,6-Dinitrotoluene	165	12.458	12.452	(0.984)	923447	69.9766	69.98
* 42	Acenaphthene-d10	164	12.667	12.665	(1.000)	1026251	20.0000	
43	3-Nitroaniline	138	12.677	12.671	(1.001)	1020239	194.473	194.5(R)
44	Acenaphthene	153	12.715	12.714	(1.004)	1124184	21.4498	21.45
45	2,4-Dinitrophenol	184	12.838	12.831	(1.013)	973540	103.288	103.3
46	Dibenzofuran	168	12.977	12.975	(1.024)	1687179	24.6139	24.61
47	4-Nitrophenol	109	13.019	13.018	(1.028)	274764	40.9844	40.98
48	2,4-Dinitrotoluene	165	13.083	13.077	(1.033)	1285444	72.0145	72.01
50	Diethylphthalate	149	13.516	13.510	(1.067)	1396152	24.3971	24.40
49	Fluorene	166	13.527	13.526	(1.068)	1293154	26.7054	26.71
51	4-Chlorophenyl-phenylether	204	13.559	13.558	(1.070)	690049	22.9342	22.93
52	4-Nitroaniline	138	13.682	13.664	(1.080)	1075663	106.866	106.9
53	4,6-Dinitro-2-methylphenol	198	13.735	13.729	(0.915)	1375509	98.9351	98.94
54	N-Nitrosodiphenylamine	169	13.773	13.771	(0.917)	1062558	20.2423	20.24
$ 55	2,4,6-Tribromophenol	330	13.949	13.953	(1.101)	343824	42.3697	42.37
56	4-Bromophenyl-phenylether	248	14.334	14.332	(0.954)	419475	19.7956	19.80
57	Hexachlorobenzene	284	14.542	14.546	(0.968)	407193	18.6388	18.64
58	Pentachlorophenol	266	14.852	14.850	(0.989)	854764	66.3196	66.32
* 59	Phenanthrene-d10	188	15.017	15.016	(1.000)	1930755	20.0000	
60	Phenanthrene	178	15.055	15.053	(1.002)	2024419	21.1927	21.19
61	Anthracene	178	15.124	15.128	(1.007)	1977283	20.6730	20.67
62	Carbazole	167	15.418	15.417	(1.027)	1962584	29.3459	29.35
63	Di-n-butylphthalate	149	16.134	16.138	(1.074)	2452854	20.3418	20.34

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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
	64 Fluoranthene	202	16.973	16.971	(1.130)	2348276	23.3687	23.37	
	65 Pyrene	202	17.320	17.318	(0.898)	2415321	24.4931	24.49	
$	66 Terphenyl-d14	244	17.646	17.644	(0.915)	1512626	23.8659	23.87	
	67 Butylbenzylphthalate	149	18.527	18.531	(0.960)	1122537	23.2793	23.28	
	68 Benzo(a)anthracene	228	19.270	19.268	(0.999)	2137523	25.9653	25.97	
*	69 Chrysene-d12	240	19.291	19.295	(1.000)	1805635	20.0000		
	70 3,3'-Dichlorobenzidine	252	19.296	19.284	(1.000)	1986082	87.6887	87.69	
	71 Chrysene	228	19.334	19.332	(1.002)	1984616	23.6156	23.62	
	72 bis(2-Ethylhexyl)phthalate	149	19.521	19.525	(0.955)	1564549	21.6278	21.63	
*	134 Di-n-octylphthalate-d4	153	20.450	20.454	(1.000)	2458367	20.0000		
	73 Di-n-octylphthalate	149	20.461	20.465	(1.001)	2503688	21.5695	21.57	
	74 Benzo(b)fluoranthene	252	20.904	20.908	(0.976)	2080434	23.0481	23.05	
	75 Benzo(k)fluoranthene	252	20.942	20.940	(0.977)	2215087	22.2519	22.25	
	76 Benzo(a)pyrene	252	21.348	21.352	(0.996)	1914854	22.4613	22.46	
*	77 Perylene-d12	264	21.428	21.432	(1.000)	1994543	20.0000		
	78 Indeno(1,2,3-cd)pyrene	276	22.828	22.832	(1.065)	2258337	22.0118	22.01	
	79 Dibenzo(a,h)anthracene	278	22.849	22.853	(1.066)	1795783	22.2294	22.23	
	80 Benzo(g,h,i)perylene	276	23.196	23.195	(1.083)	1803831	20.5589	20.56	
	90 N-Nitrosodimethylamine	74	3.056	3.050	(0.392)	687808	31.2851	31.29	R
	91 Aniline	93	7.362	7.355	(0.945)	2143544	51.8852	51.89	R
	93 Benzidine	184	17.240	17.238	(0.894)	2572459	292.899	292.9	
	103 Pyridine	79	3.003	3.007	(0.386)	1183739	33.9503	33.95(M)	
	105 1-methylnaphthalene	141	11.139	11.138	(1.134)	888097	20.6246	20.62	
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.810	13.809	(1.090)	1369451	21.0610	21.06	
	120 2,3,4,6-Tetrachlorophenol	232	13.270	13.269	(1.048)	393725	26.8784	26.88	
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.						
	187 Total Benzofluoranthenes	252	20.942	20.940	(0.977)	4028477	43.8701	43.87	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

05/02/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 05011312.d
Lab Smp Id: WN31LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

Calibration Date: 01-MAY-2013
Calibration Time: 15:22
Client Smp ID: WN31LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	466859	1.91
27 Naphthalene-d8	1718341	859170	3436682	1742998	1.43
42 Acenaphthene-d10	1010041	505020	2020082	1026251	1.60
59 Phenanthrene-d10	1666734	833367	3333468	1930755	15.84
69 Chrysene-d12	1675752	837876	3351504	1805635	7.75
134 Di-n-octylphthala	2026355	1013178	4052710	2458367	21.32
77 Perylene-d12	1637524	818762	3275048	1994543	21.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.79	7.29	8.29	7.79	0.02
27 Naphthalene-d8	9.82	9.32	10.32	9.82	0.01
42 Acenaphthene-d10	12.67	12.17	13.17	12.67	0.01
59 Phenanthrene-d10	15.02	14.52	15.52	15.02	0.01
69 Chrysene-d12	19.30	18.80	19.80	19.29	-0.02
134 Di-n-octylphthala	20.45	19.95	20.95	20.45	-0.02
77 Perylene-d12	21.43	20.93	21.93	21.43	-0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WN31
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WN31LCSDW1
Client Smp ID: WN31LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130501.b/SW846030613.m
Misc Info: 13-8694

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	9.697	38.79	16-100
4	Bis(2-Chloroethyl)	25.00	16.38	65.54	41-112
6	2-Chlorophenol	25.00	19.24	76.97	43-111
7	1,3-Dichlorobenzen	25.00	15.46	61.85	32-100
9	1,4-Dichlorobenzen	25.00	16.13	64.50	32-100
11	Benzyl alcohol	25.00	18.31	73.24	22-100
12	1,2-Dichlorobenzen	25.00	16.05	64.21	34-100
13	2-Methylphenol	25.00	17.07	68.29	36-110
14	2,2'-oxybis(1-Chlo	25.00	15.40	61.60	29-118
15	4-Methylphenol	50.00	34.46	68.92	38-104
16	N-Nitroso-di-n-pro	25.00	17.30	69.20	38-115
17	Hexachloroethane	25.00	13.53	54.11	24-100
19	Nitrobenzene	25.00	18.97	75.87	45-106
20	Isophorone	25.00	19.48	77.91	55-119
21	2-Nitrophenol	25.00	21.83	87.34	46-118
22	2,4-Dimethylphenol	75.00	49.86	66.48	28-105
23	Bis(2-Chloroethoxy	25.00	17.64	70.56	44-118
24	Benzoic acid	137.5	47.81	34.77	11-100
25	2,4-Dichlorophenol	75.00	61.19	81.58	43-121
26	1,2,4-Trichloroben	25.00	16.73	66.93	35-100
28	Naphthalene	25.00	19.22	76.86	36-111
29	4-Chloroaniline	75.00	139.2	185.64*	10-153
30	Hexachlorobutadien	25.00	15.87	63.50	24-100
31	4-Chloro-3-methylp	75.00	64.65	86.20	45-122
32	2-Methylnaphthalen	25.00	20.55	82.19	45-103
33	Hexachlorocyclopen	75.00	23.85	31.81	23-108
34	2,4,6-Trichlorophe	75.00	65.54	87.38	48-122
35	2,4,5-Trichlorophe	75.00	70.55	94.06	48-122
37	2-Chloronaphthalen	25.00	24.12	96.46	39-118
38	2-Nitroaniline	75.00	74.09	98.79	48-118
39	Dimethylphthalate	25.00	21.88	87.52	50-120
40	Acenaphthylene	25.00	22.88	91.52	50-119
41	2,6-Dinitrotoluene	75.00	69.98	93.30	48-133

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	194.5	259.30*	10-208
44 Acenaphthene	25.00	21.45	85.80	41-120
45 2,4-Dinitrophenol	137.5	103.3	75.12	10-224
46 Dibenzofuran	25.00	24.61	98.46	51-114
47 4-Nitrophenol	75.00	40.98	54.65	10-103
48 2,4-Dinitrotoluene	75.00	72.01	96.02	51-134
49 Fluorene	25.00	26.71	106.82	50-120
50 Diethylphthalate	25.00	24.40	97.59	48-122
51 4-Chlorophenyl-phe	25.00	22.93	91.74	50-118
52 4-Nitroaniline	75.00	106.9	142.49	13-144
53 4,6-Dinitro-2-meth	125.0	98.94	79.15	10-190
54 N-Nitrosodiphenyla	25.00	20.24	80.97	58-141
56 4-Bromophenyl-phen	25.00	19.80	79.18	50-122
57 Hexachlorobenzene	25.00	18.64	74.56	47-125
58 Pentachlorophenol	75.00	66.32	88.43	35-130
60 Phenanthrene	25.00	21.19	84.77	49-120
61 Anthracene	25.00	20.67	82.69	53-116
62 Carbazole	25.00	29.35	117.38	57-122
63 Di-n-butylphthalat	25.00	20.34	81.37	57-121
64 Fluoranthene	25.00	23.37	93.47	56-119
65 Pyrene	25.00	24.49	97.97	37-143
67 Butylbenzylphthala	25.00	23.28	93.12	34-152
68 Benzo(a)anthracene	25.00	25.97	103.86	49-129
70 3,3'-Dichlorobenzi	75.00	87.69	116.92	50-128
71 Chrysene	25.00	23.62	94.46	45-128
72 bis(2-Ethylhexyl)p	25.00	21.63	86.51	57-133
73 Di-n-octylphthalat	25.00	21.57	86.28	52-120
74 Benzo(b)fluoranthe	25.00	23.05	92.19	50-126
75 Benzo(k)fluoranthe	25.00	22.25	89.01	49-126
76 Benzo(a)pyrene	25.00	22.46	89.85	46-109
78 Indeno(1,2,3-cd)py	25.00	22.01	88.05	34-136
79 Dibenzo(a,h)anthra	25.00	22.23	88.92	41-134
80 Benzo(g,h,i)peryle	25.00	20.56	82.24	41-133
91 Aniline	75.00	51.89	69.18	28-126
111 Azobenzene (1,2-DP	25.00	21.06	84.24	55-119
105 1-methylnaphthalen	25.00	20.62	82.50	43-115
90 N-Nitrosodimethyla	50.00	31.29	62.57	31-100
103 Pyridine	50.00	33.95	67.90	25-100
120 2,3,4,6-Tetrachlor	25.00	26.88	107.51	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	*	30-160
187 Total Benzofluoran	50.00	43.87	87.74	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.31	48.82	33-100

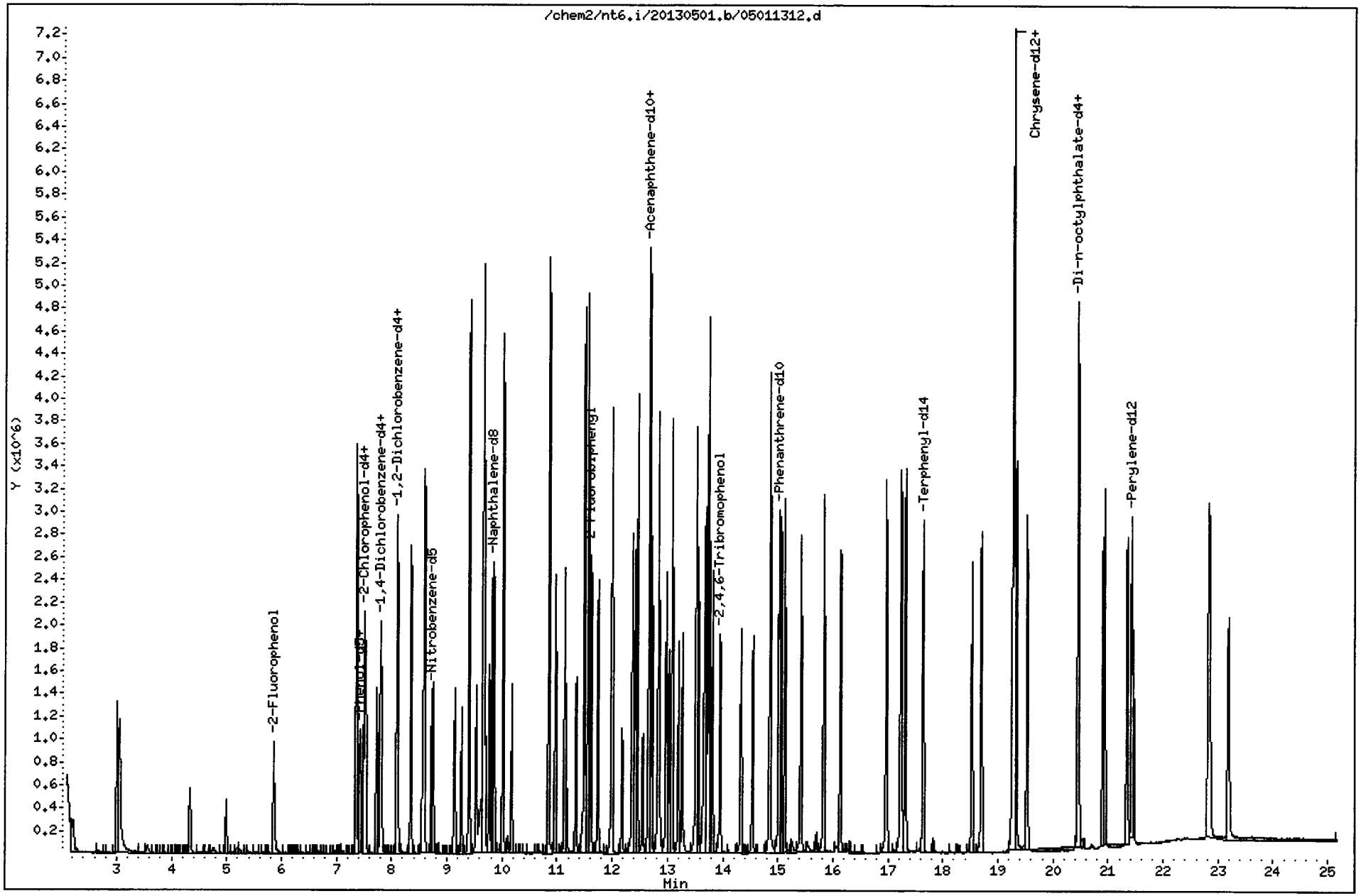
04/02/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.09	37.57	15-121
$ 5 2-Chlorophenol-d4	37.50	27.84	74.23	46-102
$ 10 1,2-Dichlorobenzen	25.00	16.74	66.95	40-100
$ 18 Nitrobenzene-d5	25.00	18.43	73.73	50-100
$ 36 2-Fluorobiphenyl	25.00	19.84	79.38	51-100
$ 55 2,4,6-Tribromophen	37.50	42.37	112.99	46-125
$ 66 Terphenyl-d14	25.00	23.87	95.46	54-117

Data File: /chem2/nt6.i/20130501.b/05011312.d
Date : 01-MAY-2013 21:38
Client ID: WN31LCSDW1
Sample Info: WN31LCSDW1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

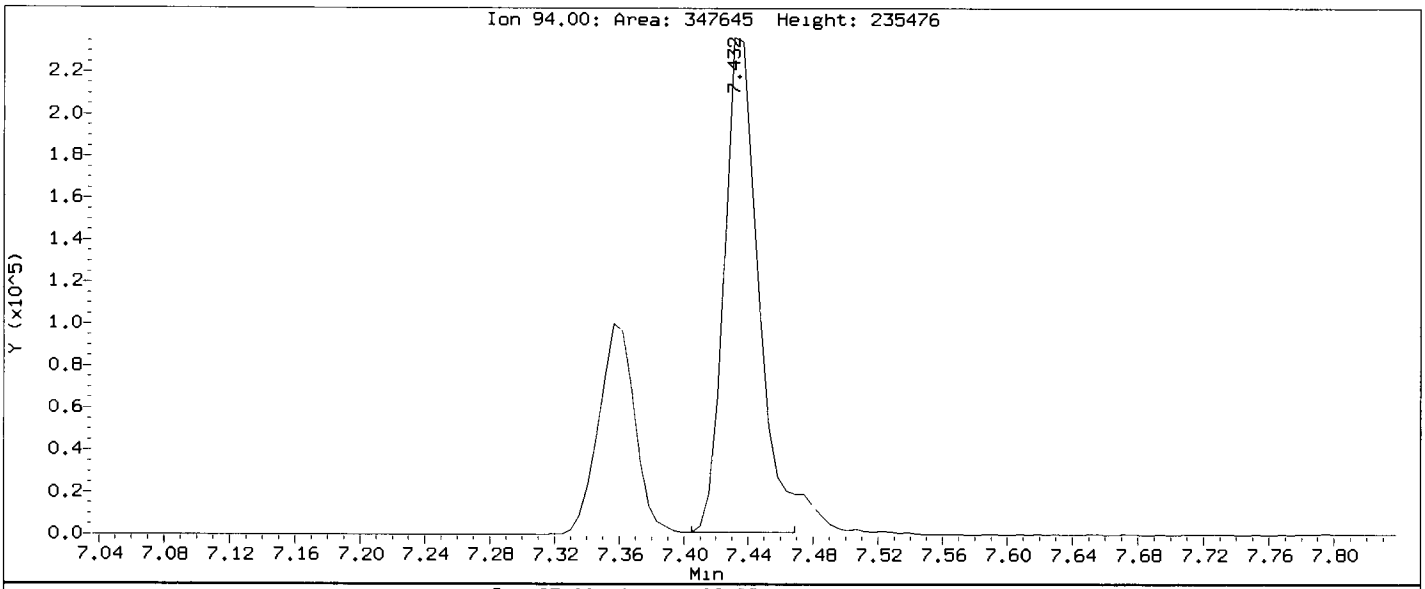
Instrument: nt6.i

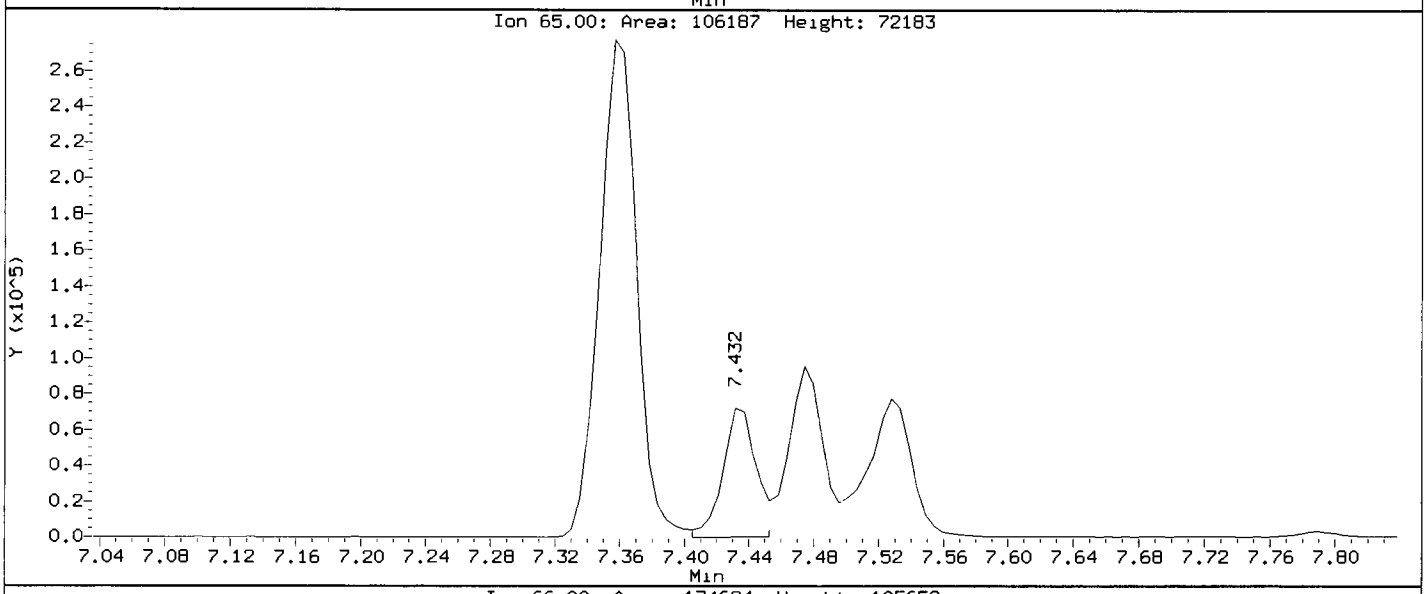
Operator: JZ
Column diameter: 0.32

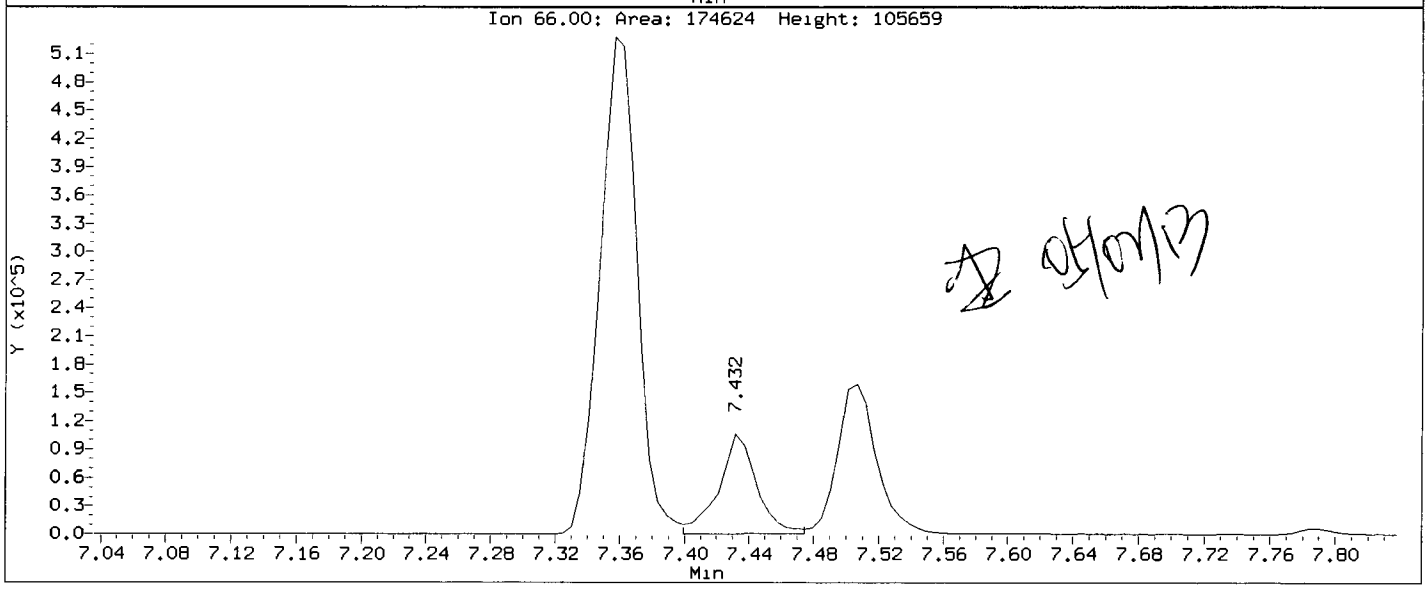


Data File: /chem2/nt6.i/20130501.b/05011312.d
Injection Date: 01-MAY-2013 21:38
Instrument: nt6.i
Client Sample ID: WN31LCSDW1

Compound: Phenol
CAS Number: 108-95-2



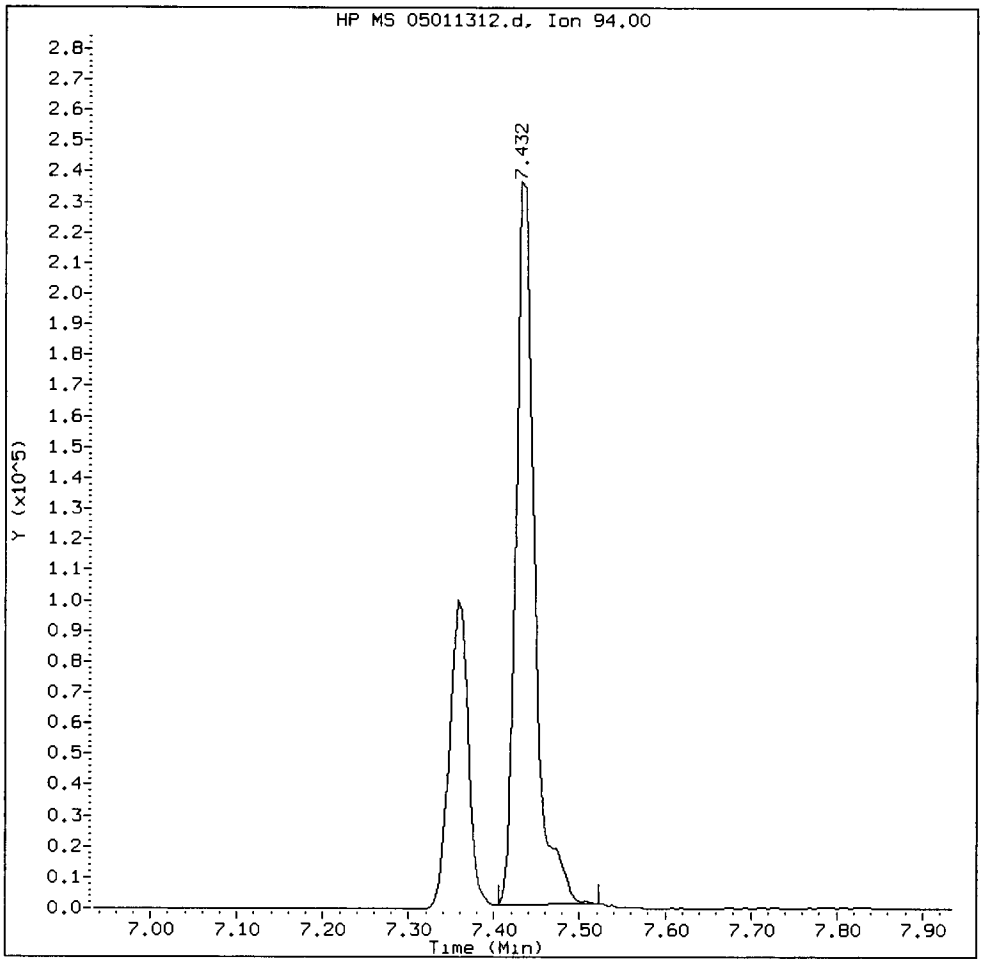




WN31 : 00913

WN31LCSDW1, /chem2/nt6.i/20130501.b/05011312.d

Phenol Amount: 9.70 Area: 361571



MANUAL INTEGRATION for Phenol

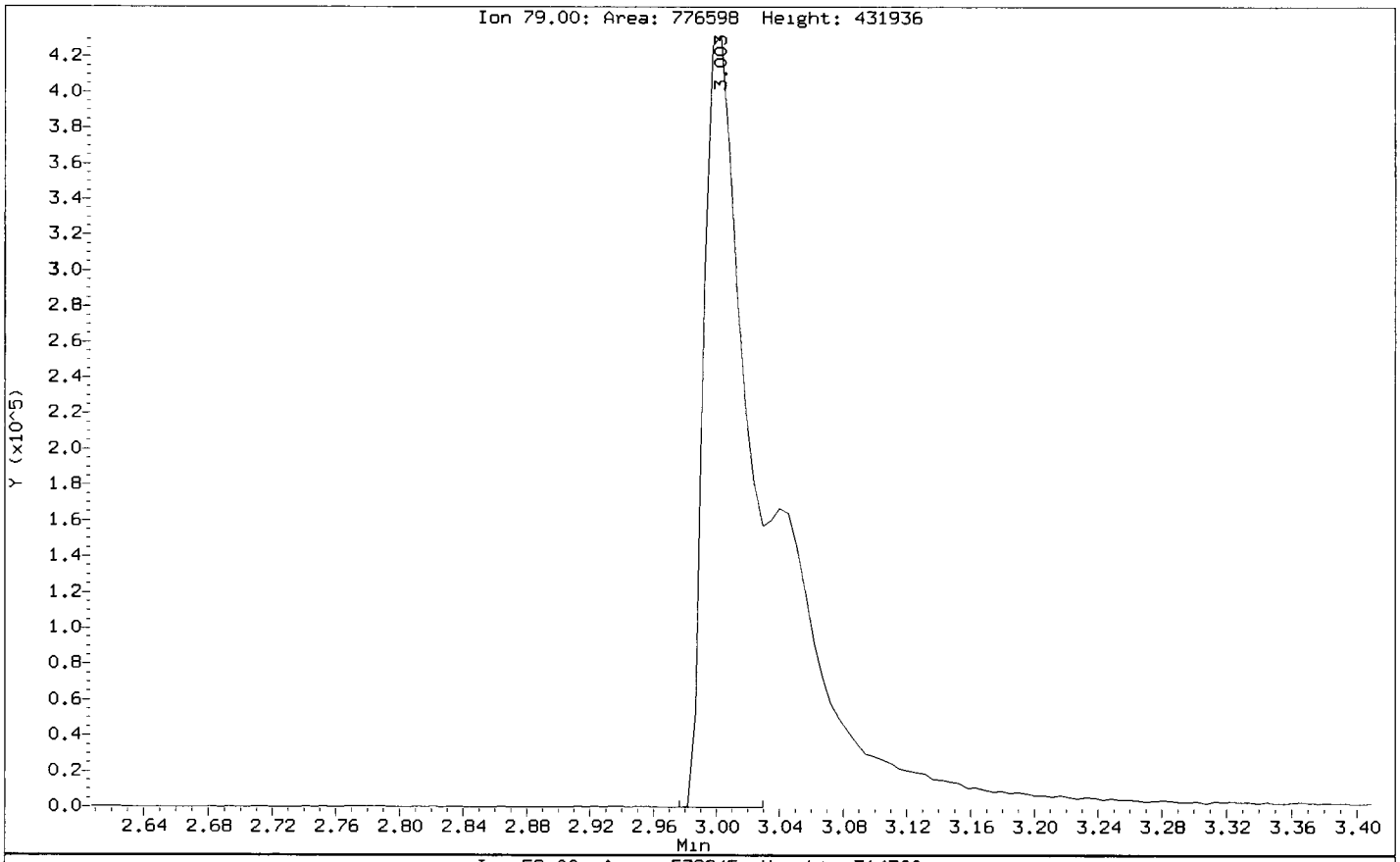
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

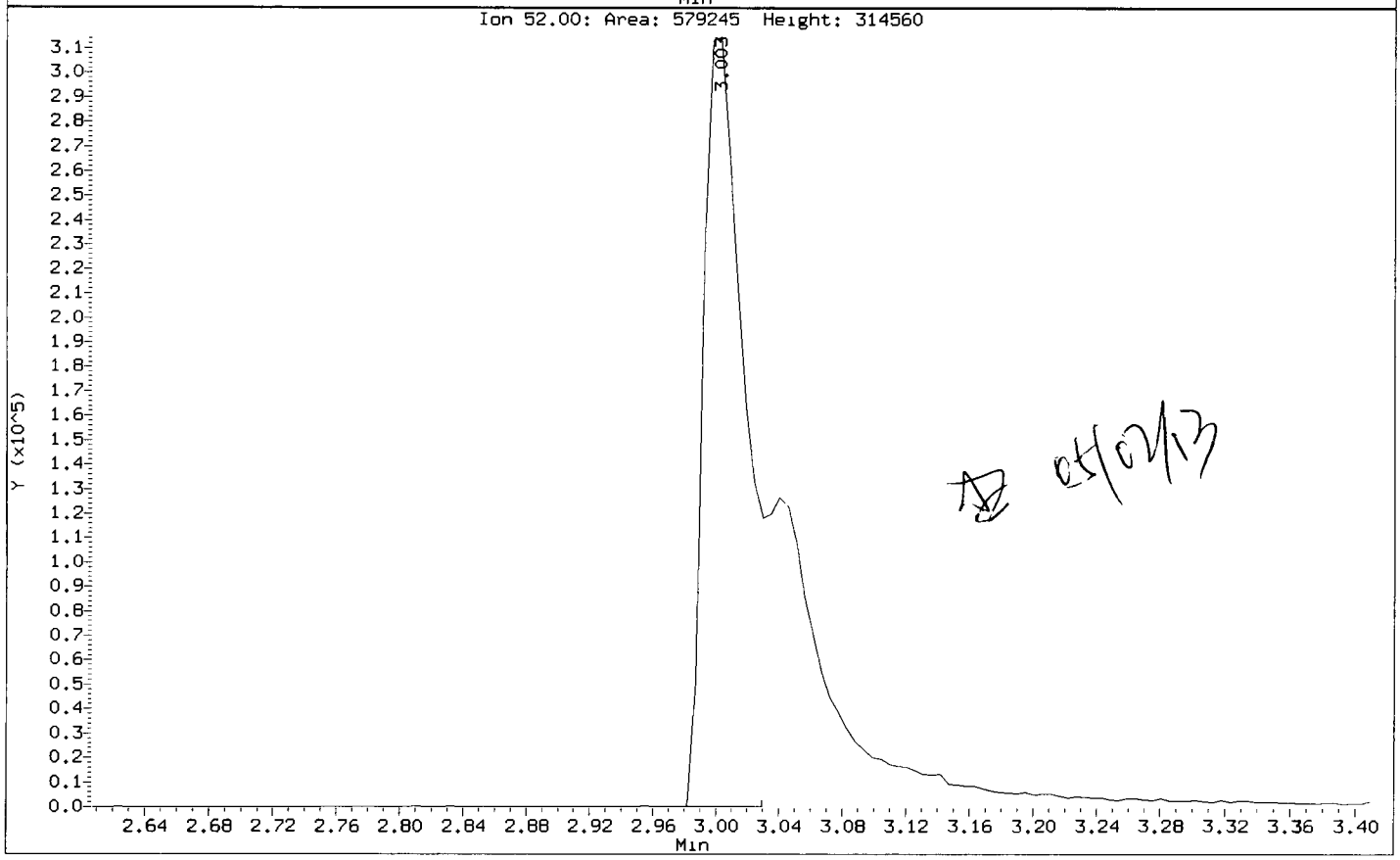
5. Other _____

Analyst: _____ Date: 04/07/13

Data File: /chem2/nt6.i/20130501.b/05011312.d
Injection Date: 01-MAY-2013 21:38
Instrument: nt6.i
Client Sample ID: WN31LCSDW1

Compound: Pyridine
CAS Number:

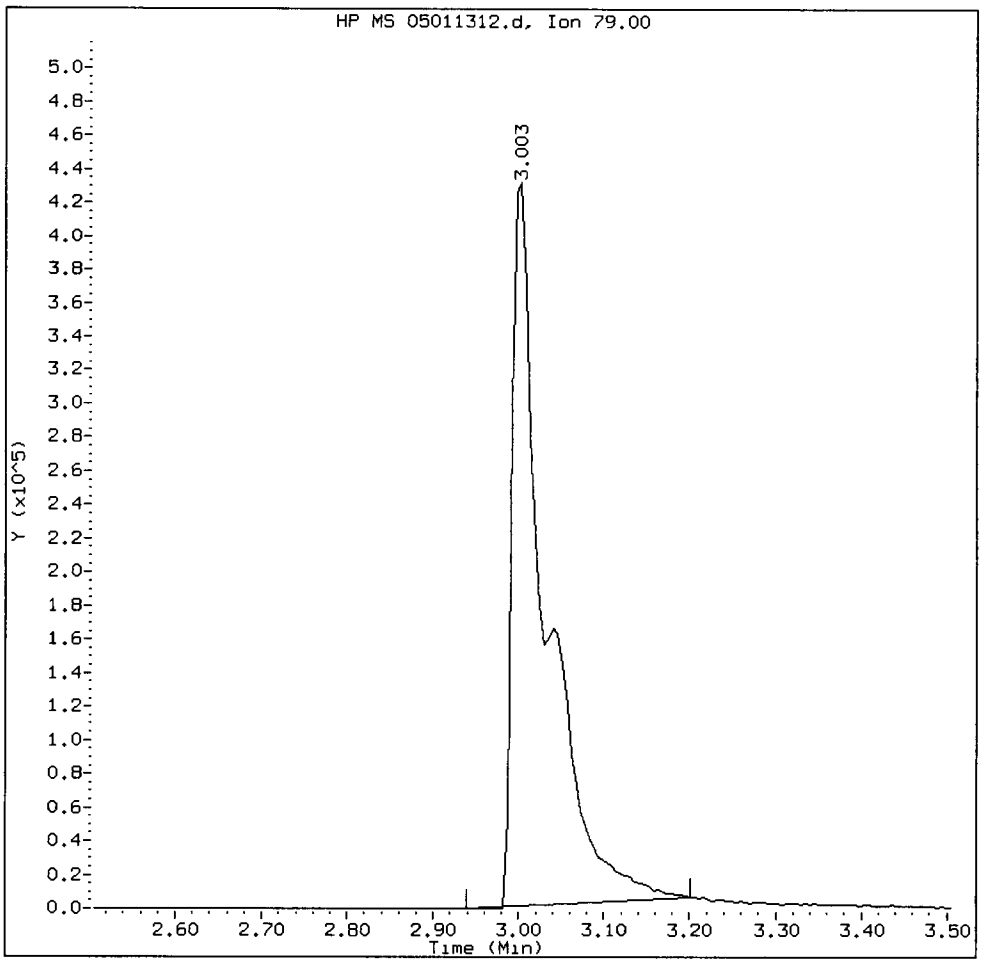




05/02/13

WN31LCSDW1, /chem2/nt6.i/20130501.b/05011312.d

Pyridine Amount: 33.95 Area: 1183739



MANUAL INTEGRATION for Pyridine

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

5. Other _____

Analyst: _____ Date: 04/07/13

CO-ELUTION SUMMARY FOR FILE - 05011312.d

Lab ID: WN31LCSDW1, Method: SW846030613.m, Instrument: nt6.i, Date: 01-MAY-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 04/29/13 Analysis Start Date: 05/07/13

	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 / X
CCAL Q flag applied?	(Y) / N / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Surrogate Recovery met?	(Y) / N / ✓	MS / MSD RPD ≤ 30%?	NA / X
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	(Y) / N / 3X, 9X
Integration Summary?	(Y) / N /	Special Analysis Request?	(Y) / N /

Detail problems, corrective actions and/or other pertinent information below.

Sample was re-run @ 9X dilution on 05/08/13

(Review 1) Analyst: XZ **Date:** 5/10/13

(Review 2) Reviewer: [signature] **Date:** 5/11

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/07/13 Analysis: ABN/SIMABN Analyst: YB

GC Program: ABN_2 Column No: 252945 Column Type: ZB5 msi

Instrument Tune (.U or .CT.): 130228.U EM Voltage: 1650

Calibration File: DF0507 Curve Date: 04/29/13 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 Beco112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

	Time	Filename	LabID	ClientId	DF													
1	1219	df0507.d	DFTPP	DFTPP	1	NO ISTDS FOUND												
2	1234	cc0507.d	CC0507		1	8.13	53304	10.74	196084	14.57	123166	17.79	216894	22.99	236097	25.27	207013	24.16	290407
3	1347	wo14mbs1.d	WO14MBS1		1	8.12	45966	10.73	180960	14.56	111267	17.79	189746	22.97	210537	25.26	179343	24.16	244069
4	1424	wo14lcss1.d	WO14LCSS1		1	8.12	41804	10.73	157611	14.57	104833	17.79	182190	22.98	204147	25.26	176406	24.16	242567
5	1500	wo14lcsds1.d	WO14LCSDS1		1	8.12	44349	10.73	165769	14.56	105520	17.79	185816	22.98	206612	25.26	180632	24.16	246940
6	1537	wo14a.d	WO14A		1	8.12	45310	10.73	175183	14.56	107052	17.79	179266	22.98	176892	25.27	163596	24.16	227155
7	1614	wo14b.d	WO14B		1	8.12	44516	10.73	173669	14.57	104917	17.79	172197	22.98	168928	25.27	161255	24.16	220043
8	1650	wn30mbs1.d	WN30MBS1	WN30MBS1	1	8.12	45490	10.73	177750	14.56	109384	17.79	187454	22.97	194527	25.26	165936	24.16	232557
9	1727	wn30lcss1.d	WN30LCSS1	WN30LCSS1	1	8.12	43320	10.73	164232	14.56	103234	17.79	179602	22.97	195115	25.26	172204	24.16	236239
10	1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	8.12	41011	10.73	153177	14.56	97637	17.79	169618	22.97	188414	25.26	167622	24.16	228678
11	1916	wn27a.d	WN27A	CG-MH-010-20	3	8.12	37725	10.73	153422	14.56	98941	17.79	165938	23.01	151066	25.33	149092	24.19	194771
12	1953	wn27ams.d	WN27AMS	CG-MH-010-20	3	8.12	41218	10.73	160389	14.56	104861	17.79	174739	23.02	166399	25.34	160390	24.22	214048
13	2030	wn27amsd.d	WN27AMSD	CG-MH-010-20	3	8.12	36925	10.73	147667	14.56	96968	17.79	163337	23.00	155420	25.32	139410	24.19	195600
14	1840	wn30k.d	WN30K	JW-EA02-SC05	1	8.12	41321	10.74	163460	14.57	104611	17.81	167294	23.04	161669	25.34	157326	24.22	208219
15	1916	wn27a.d	WN27A	CG-MH-010-20	3	8.12	37725	10.73	153422	14.56	98941	17.79	165938	23.01	151066	25.33	149092	24.19	194771
16	2106	wn31a.d	WN31A	ES-TS-INF-20	3	8.12	40105	10.73	157068	14.56	95378	17.79	153652	23.00	165029	25.31	157251	24.18	206574
17	2143	wp04mbs1.d	WP04MBS1	WP04MBS1	1	8.11	35923	10.72	145744	14.55	99658	17.78	154888	22.96	151725	25.26	144349	24.14	198476
18	2219	wp04lcss1.d	WP04LCSS1	WP04LCSS1	1	8.11	38610	10.72	145929	14.55	96241	17.78	164362	22.96	157718	25.25	146832	24.13	201872
19	2256	wp04a.d	WO04A	G-S-3	1	8.11	41484	10.71	162389	14.54	100764	17.77	170768	22.96	167105	25.24	154772	24.13	212943
20	2333	wn59d2.d	WN59D		6	8.12	39843	10.71	156668	14.54	99600	17.77	173823	22.96	161462	25.24	145328	24.13	208496

line must contain information or be lined out. Make all entries legible.
a new page for each QC period. Document All Maintenance Tasks In StarLIMS

YB 5/8/13

F

book

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

ARI Job No.: WN30 Method: ABN.m Instrument: nt10.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1650	wn30mbs1.d	WN30MBS1	WN30MBS1	1	NO MANUAL INTEGRATION
1727	wn30lcss1.d	WN30LCSS1	WN30LCSS1	1	NO MANUAL INTEGRATION
1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	NO MANUAL INTEGRATION
1916	wn27a.d	WN27A	CG-MH-010-	3	Di-n-octylphthalate, Dibenzo(a,h)anthracene,
1953	wn27ams.d	WN27AMS	CG-MH-010-	3	Di-n-octylphthalate, Dibenzo(a,h)anthracene,
2030	wn27amsd.d	WN27AMSD	CG-MH-010-	3	Di-n-octylphthalate, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2106	wn31a.d	WN31A	ES-TS-INF-	3	Benzo(a)anthracene, Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene,
1527	wn27a9.d	WN27A	CG-MH-010-	9	Indeno(1,2,3-cd)pyrene,
1603	wn31a9.d	WN31A	ES-TS-INF-	9	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

Instrument: nt10.i Date: 07-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 07-MAY-2013

Compound	%D
Benzoic acid	-28.6
3-Nitroaniline	22.5
2,4-Dinitrophenol	-38.6
4-Nitroaniline	20.4
4,6-Dinitro-2-methylphenol	-33.7
Pentachlorophenol	-31.4

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

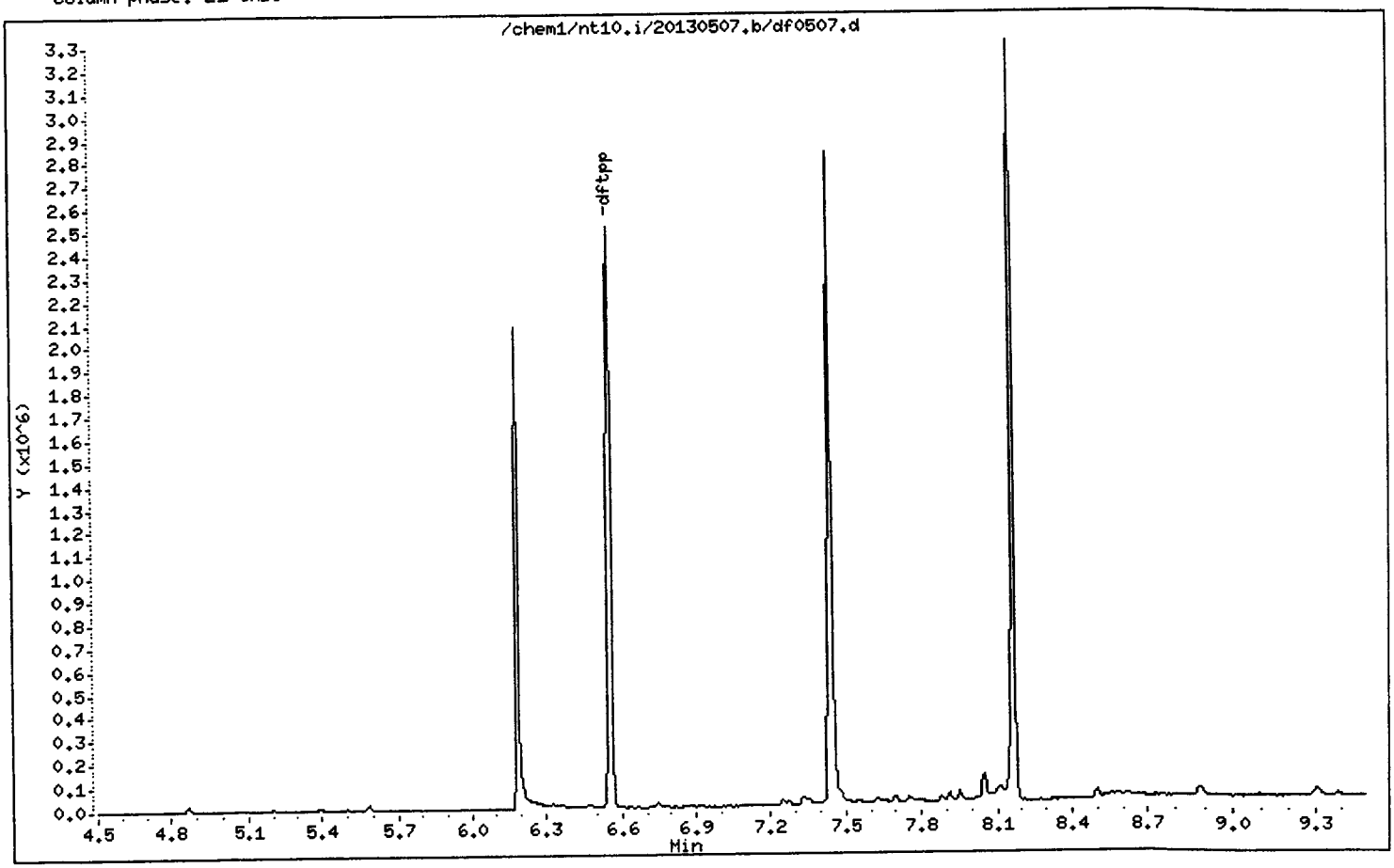
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

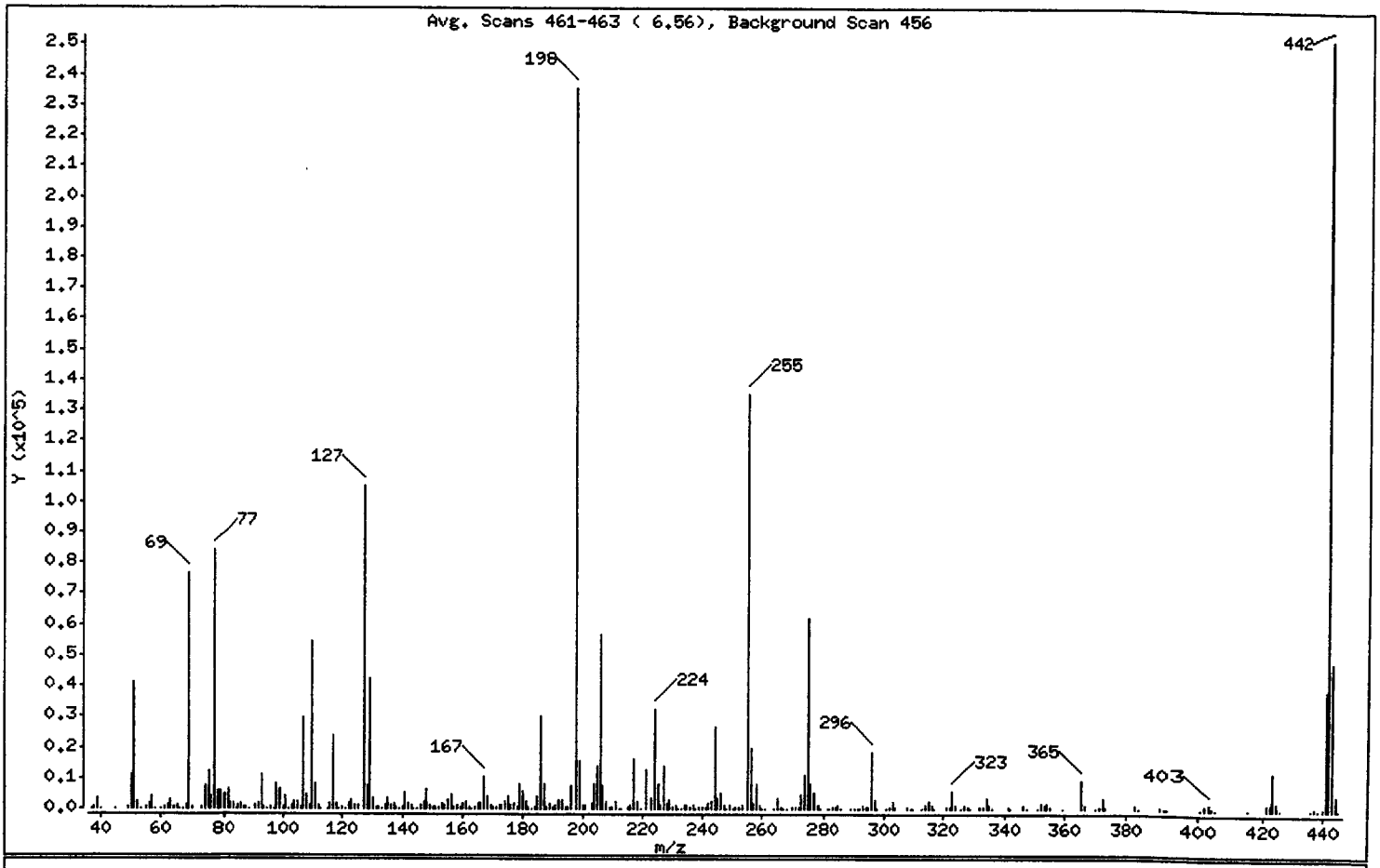
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.49
68	Less than 2.00% of mass 69	0.55 (1.68)
69	Mass 69 relative abundance	32.59
70	Less than 2.00% of mass 69	0.19 (0.60)
127	10.00 - 80.00% of mass 198	44.66
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.66
275	10.00 - 60.00% of mass 198	26.49
365	Greater than 1.00% of mass 198	3.85
441	0.01 - 24.00% of mass 442	16.45 (15.34)
442	50.00 - 200.00% of mass 198	107.26
443	15.00 - 24.00% of mass 442	20.48 (19.10)

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	165	127.00	105160	205.00	14065	291.00	68
38.00	541	128.00	7752	206.00	56872	292.00	264
39.00	3217	129.00	42416	207.00	7418	293.00	1209
40.00	147	130.00	3423	208.00	2073	294.00	308
45.00	50	131.00	712	209.00	493	295.00	342
49.00	348	132.00	392	210.00	649	296.00	18312
50.00	11161	133.00	235	211.00	2179	297.00	2673
51.00	41176	134.00	1318	212.00	90	298.00	188
52.00	2280	135.00	3367	213.00	115	301.00	277
53.00	57	136.00	1352	215.00	715	302.00	365
55.00	301	137.00	1539	216.00	1332	303.00	2162
56.00	1813	138.00	363	217.00	16327	304.00	538
57.00	4098	139.00	186	218.00	2040	308.00	295
58.00	169	140.00	541	219.00	190	309.00	131
60.00	30	141.00	5378	221.00	13051	310.00	154
61.00	838	142.00	1775	223.00	3684	313.00	206
62.00	965	143.00	1211	224.00	32464	314.00	947
63.00	2847	144.00	290	225.00	8230	315.00	2153
64.00	418	145.00	288	226.00	912	316.00	1225
65.00	1416	146.00	894	227.00	13707	317.00	149
66.00	51	147.00	2502	228.00	2031	321.00	688
67.00	72	148.00	6165	229.00	3030	322.00	351
68.00	1291	149.00	1165	230.00	444	323.00	5703
69.00	76744	150.00	292	231.00	1266	324.00	1065
70.00	457	151.00	649	232.00	236	326.00	137
73.00	432	152.00	342	233.00	246	327.00	1197
74.00	7451	153.00	1632	234.00	874	328.00	555
75.00	12036	154.00	1325	235.00	995	329.00	64
76.00	4044	155.00	3061	236.00	720	332.00	491
77.00	83968	156.00	4441	237.00	1095	333.00	662
78.00	5637	157.00	831	238.00	150	334.00	3759
79.00	5692	158.00	1013	239.00	606	335.00	948
80.00	4518	159.00	749	240.00	436	336.00	50
81.00	6259	160.00	1692	241.00	808	341.00	791
82.00	1687	161.00	2495	242.00	1850	342.00	161

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1477	162.00	738	243.00	2192	346.00	1373
84.00	44	163.00	224	244.00	26544	347.00	233
85.00	1154	164.00	334	245.00	3604	351.00	175
86.00	1817	165.00	1952	246.00	5235	352.00	1921
87.00	817	166.00	1695	247.00	1018	353.00	1269
88.00	297	167.00	10680	248.00	282	354.00	1662
89.00	164	168.00	4218	249.00	965	355.00	370
91.00	1338	169.00	910	250.00	160	359.00	72
92.00	1663	170.00	397	251.00	307	365.00	9068
93.00	10827	171.00	504	252.00	333	366.00	1280
94.00	762	172.00	1038	253.00	926	370.00	224
95.00	205	173.00	1276	255.00	135040	371.00	578
96.00	418	174.00	2241	256.00	19728	372.00	3197
97.00	92	175.00	4219	257.00	1535	373.00	812
98.00	8120	176.00	1336	258.00	8246	383.00	962
99.00	6177	177.00	1989	259.00	1344	384.00	230
100.00	543	178.00	739	260.00	152	390.00	455
101.00	3998	179.00	8371	261.00	154	391.00	270
102.00	191	180.00	5645	264.00	228	392.00	266
103.00	1187	181.00	2604	265.00	3278	401.00	156
104.00	2428	182.00	455	266.00	542	402.00	1404
105.00	2176	183.00	290	267.00	51	403.00	1976
106.00	697	184.00	683	268.00	94	404.00	632
107.00	29376	185.00	4026	270.00	295	405.00	57
108.00	4701	186.00	29992	271.00	319	415.00	50
109.00	1004	187.00	8079	272.00	496	421.00	1847
110.00	54304	188.00	829	273.00	4553	422.00	1500
111.00	8140	189.00	1902	274.00	10985	423.00	12300
112.00	1092	190.00	312	275.00	62368	424.00	2395
113.00	262	191.00	937	276.00	8275	425.00	213
115.00	124	192.00	2653	277.00	5081	436.00	159
116.00	1667	193.00	3118	278.00	877	437.00	326
117.00	23744	194.00	633	279.00	162	438.00	233
118.00	1682	195.00	539	281.00	203	440.00	740
119.00	256	196.00	7352	282.00	74	441.00	38728

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

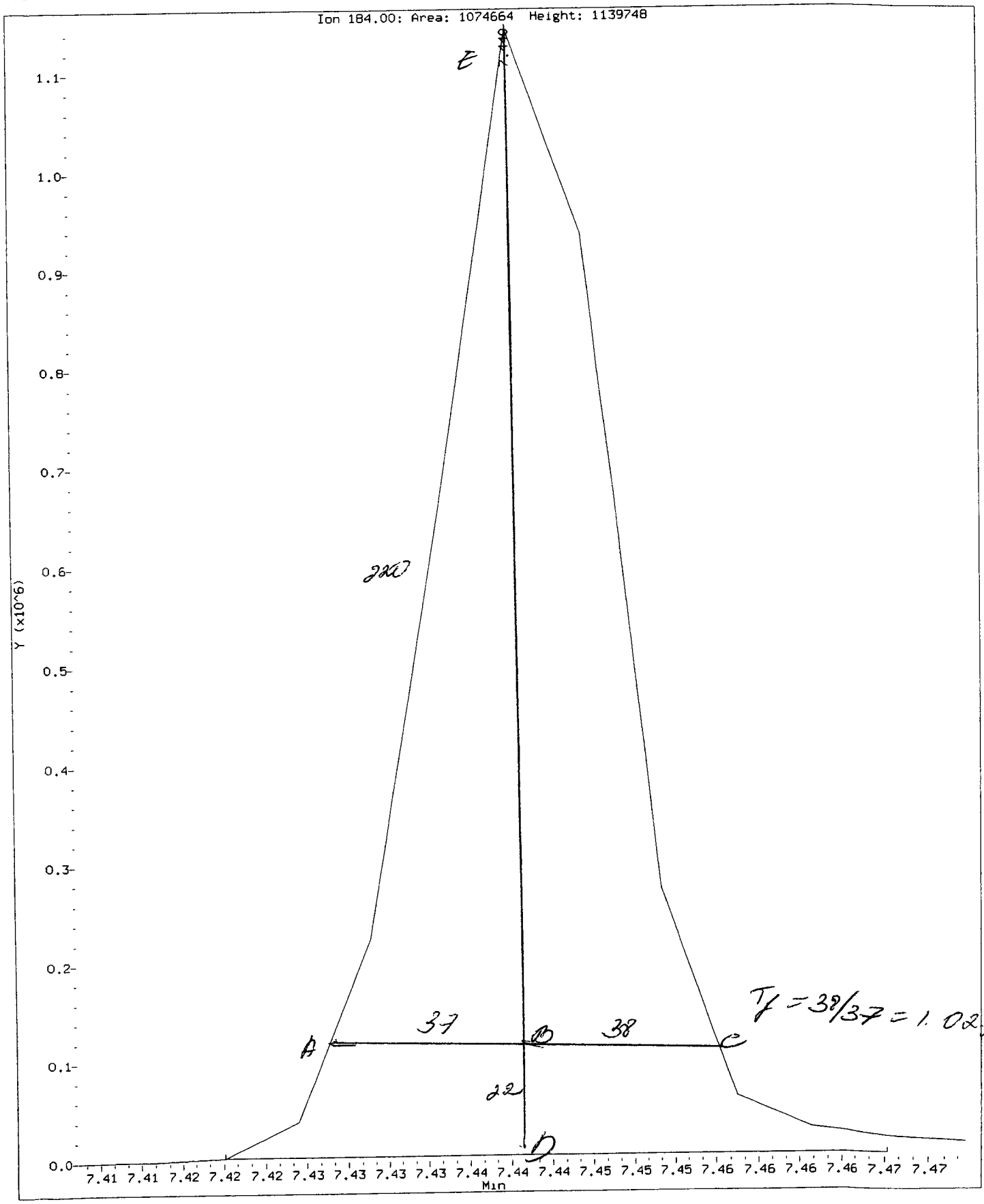
Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	477	198.00	235456	283.00	622	442.00	252544
121.00	231	199.00	15678	284.00	415	443.00	48232
122.00	1965	200.00	1247	285.00	987	444.00	4582
123.00	3125	201.00	1259	286.00	85	445.00	255
124.00	1325	203.00	1721	289.00	239		
125.00	1300	204.00	8312	290.00	141		

Data File: /chem1/nt10.1/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
Instrument: nt10.1
Client Sample ID: DFTPP

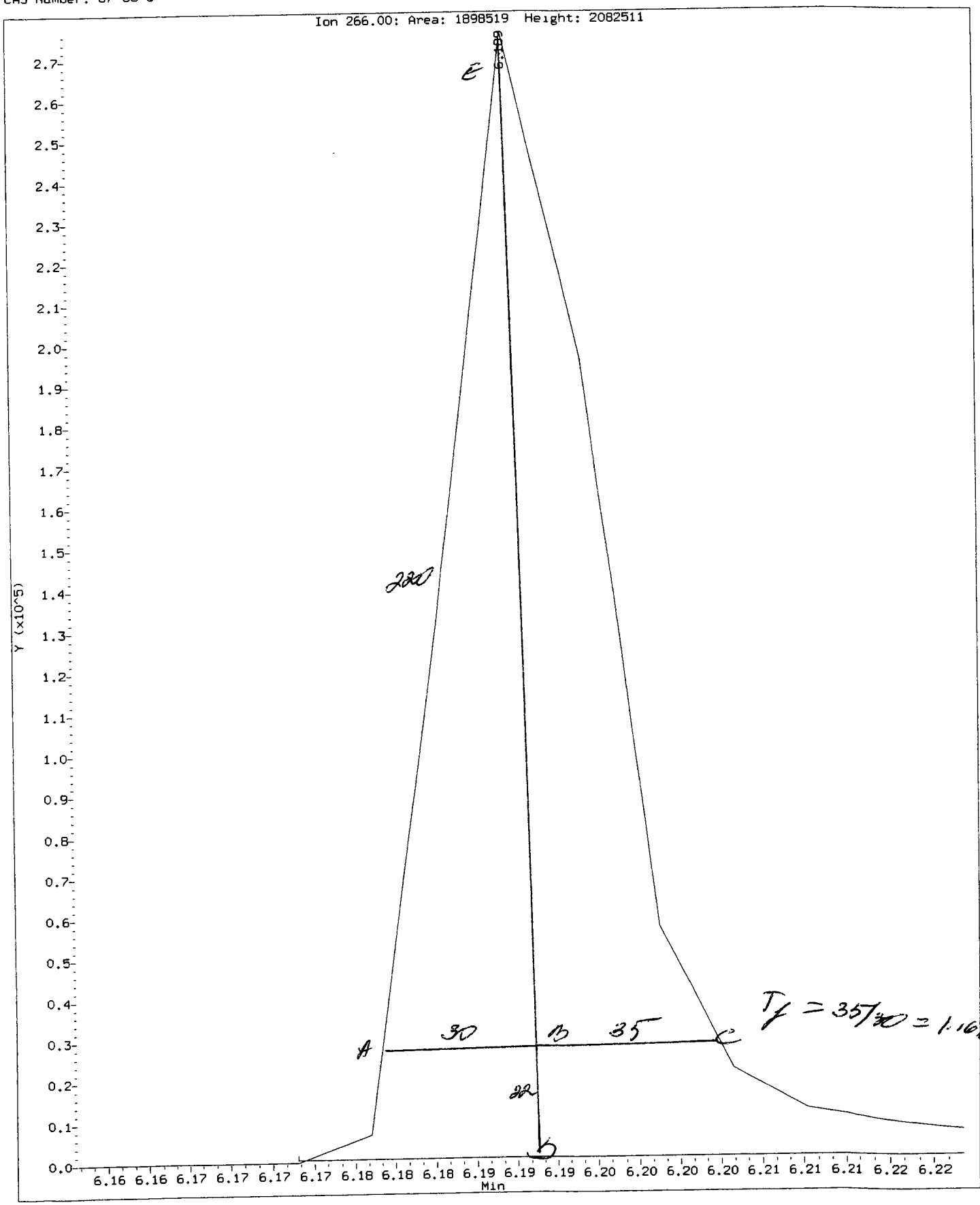
Compound: Benzidine
CAS Number:



WN31 : 00927

Data File: /chem1/nt10.1/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
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/20130507.b/ddt.b/df0507.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130507.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 07-MAY-2013 12:19 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.189	1898519
Benzidine	7.440	1074664
4,4'-DDE	7.628	1584
4,4'-DDD	7.954	6093
4,4'-DDT	8.168	617170

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

$$\text{DDT Percent Breakdown} = \frac{(1584 + 6093) * 100}{(1584 + 6093 + 617170)}$$

DDT Percent Breakdown = 1.2 %

Data File: /chem1/nt10.i/20130507.b/cc0507.d
Report Date: 08-May-2013 09:46

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0507.d
Analysis Type:
Lab Sample ID: CC0507
Method: /chem1/nt10.i/20130507.b/ABN.m

Injection Date: 07-MAY-2013 12:34
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.42771	1.43243	1.43243	0.010	0.33080	20.00000	Averaged
$ 2 Phenol-d5	1.84748	1.91642	1.91642	0.010	3.73160	20.00000	Averaged
3 Phenol	2.06794	2.29115	2.29115	0.100	10.79346	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.40240	1.38158	1.38158	0.010	-1.48442	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.48709	1.38688	1.38688	0.700	-6.73870	20.00000	Averaged
6 2-Chlorophenol	1.59477	1.47049	1.47049	0.800	-7.79248	20.00000	Averaged
7 1,3-Dichlorobenzene	1.60030	1.56039	1.56039	0.010	-2.49392	20.00000	Averaged
9 1,4-Dichlorobenzene	1.57739	1.53249	1.53249	0.010	-2.84640	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	1.00879	0.99668	0.99668	0.010	-1.19999	20.00000	Averaged
12 1,2-Dichlorobenzene	1.51024	1.47300	1.47300	0.010	-2.46606	20.00000	Averaged
11 Benzyl alcohol	0.86989	0.93655	0.93655	0.010	7.66306	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	0.45898	0.44540	0.44540	0.010	-2.95798	20.00000	Averaged
13 2-Methylphenol	1.48808	1.44783	1.44783	0.700	-2.70467	20.00000	Averaged
17 Hexachloroethane	0.65999	0.64310	0.64310	0.300	-2.55909	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.92905	0.90639	0.90639	0.500	-2.43875	20.00000	Averaged
15 4-Methylphenol	1.51729	1.51282	1.51282	0.600	-0.29467	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.42210	0.42109	0.42109	0.010	-0.23910	20.00000	Averaged
19 Nitrobenzene	0.38970	0.38855	0.38855	0.200	-0.29462	20.00000	Averaged
20 Isophorone	0.73300	0.71470	0.71470	0.300	-2.49750	20.00000	Averaged
21 2-Nitrophenol	0.21847	0.23807	0.23807	0.100	8.97423	20.00000	Averaged
22 2,4-Dimethylphenol	0.40172	0.43768	0.43768	0.200	8.95109	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.43229	0.43520	0.43520	0.050	0.67319	20.00000	Averaged
24 Benzoic acid	14.27021	20.00000	0.25035	0.010	-28.64895	20.00000	Quadratic<-
25 2,4-Dichlorophenol	0.36979	0.36151	0.36151	0.100	-2.23675	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.36143	0.34945	0.34945	0.010	-3.31262	20.00000	Averaged
28 Naphthalene	1.06494	1.03373	1.03373	0.100	-2.93089	20.00000	Averaged
29 4-Chloroaniline	0.41634	0.44037	0.44037	0.010	5.77318	20.00000	Averaged
30 Hexachlorobutadiene	0.21470	0.21603	0.21603	0.010	0.61790	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.32531	0.35742	0.35742	0.200	9.87066	20.00000	Averaged
32 2-Methylnaphthalene	0.70737	0.70780	0.70780	0.300	0.06131	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.44016	0.39375	0.39375	0.001	-10.54326	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.42101	0.41705	0.41705	0.200	-0.94136	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.43401	0.46584	0.46584	0.200	7.33349	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.39609	1.36646	1.36646	0.010	-2.12199	20.00000	Averaged
37 2-Chloronaphthalene	1.11145	1.11117	1.11117	0.700	-0.02531	20.00000	Averaged

Data File: /chem1/nt10.i/20130507.b/cc0507.d
Report Date: 08-May-2013 09:46

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0507.d
Analysis Type:
Lab Sample ID: CC0507
Method: /chem1/nt10.i/20130507.b/ABN.m

Injection Date: 07-MAY-2013 12:34
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.31731	0.31731	0.010	18.28722	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.22682	1.22682	0.010	2.16864	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.84322	1.84322	0.900	-2.22046	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.29696	0.29696	0.100	5.54857	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.28459	0.28459	0.010	22.52705	20.00000	Averaged	<-
44 Acenaphthene	1.13602	1.13540	1.13540	0.100	-0.05461	20.00000	Averaged	
45 2,4-Dinitrophenol	12.28302	20.00000	0.15308	0.030	-38.58489	20.00000	Quadratic	<-
46 Dibenzofuran	1.55334	1.56166	1.56166	0.800	0.53620	20.00000	Averaged	
47 4-Nitrophenol	9.50478	10.00000	0.16634	0.010	-4.95219	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.36288	0.39749	0.39749	0.200	9.53799	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.34108	1.34108	0.010	11.14357	20.00000	Averaged	
49 Fluorene	1.32546	1.29939	1.29939	0.100	-1.96647	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.67615	0.67615	0.100	3.77499	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.29040	0.29040	0.010	20.36782	20.00000	Averaged	<-
53 4,6-Dinitro-2-methylphenol	13.25800	20.00000	0.12686	0.001	-33.70998	20.00000	Quadratic	<-
54 N-Nitrosodiphenylamine	0.46304	0.45872	0.45872	0.010	-0.93396	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.20880	0.20880	0.010	-1.29399	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22655	0.22655	0.100	0.09852	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.25382	0.25382	0.100	-6.01277	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.13012	0.13012	0.010	-31.35745	20.00000	Averaged	<-
60 Phenanthrene	1.09106	1.04631	1.04631	0.700	-4.10141	20.00000	Averaged	
61 Anthracene	1.11776	1.09931	1.09931	0.700	-1.65087	20.00000	Averaged	
62 Carbazole	0.67896	0.69637	0.69637	0.010	2.56418	20.00000	Averaged	
63 Di-n-butylphthalate	1.15386	1.21123	1.21123	0.010	4.97159	20.00000	Averaged	
64 Fluoranthene	1.28413	1.31646	1.31646	0.600	2.51807	20.00000	Averaged	
65 Pyrene	1.23758	1.24040	1.24040	0.600	0.22758	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.75182	0.75182	0.010	-3.44493	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.47321	0.47321	0.010	11.96968	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.13485	1.13485	0.700	1.33576	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.41797	0.41797	0.010	-2.00779	20.00000	Averaged	
71 Chrysene	1.01345	0.97569	0.97569	0.700	-3.72559	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.52179	0.52179	0.010	-1.88156	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.86999	0.86999	0.010	-5.53702	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.19890	1.19890	0.700	0.93116	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.33226	1.33226	0.700	6.48354	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 07-MAY-2013 12:34
Lab File ID: cc0507.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0507 Quant Type: ISTD
Method: /chem1/nt10.i/20130507.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.01481	1.06177	1.06177	0.700	4.62723	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.16916	1.04792	1.04792	0.500	-10.36974	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.89686	0.96563	0.96563	0.400	7.66771	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.01156	1.04792	1.04792	0.500	3.59451	20.00000	Averaged
90 N-Nitrosodimethylamine	0.91125	0.88180	0.88180	0.010	-3.23205	20.00000	Averaged
91 Aniline	4.01210	4.23269	4.23269	0.010	5.49799	20.00000	Averaged
93 Benzidine	9.92027	10.00000	0.12702	0.010	-0.79732	20.00000	Quadratic
103 Pyridine	0.80099	0.77712	0.77712	0.010	-2.97995	20.00000	Averaged
105 1-methylnaphthalene	0.64873	0.64134	0.64134	0.010	-1.13922	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.19579	1.19579	0.010	-3.34271	20.00000	Averaged
187 Total Benzofluoranthenes	1.15343	1.17435	1.17435	0.010	1.81367	20.00000	Averaged
99 Perylene	1.16006	1.10494	1.10494	0.010	-4.75127	20.00000	Averaged
98 Retene	0.46838	0.48271	0.48271	0.010	3.05943	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.32282	0.34236	0.34236	0.010	6.05164	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/8/13

Data file : /chem1/nt10.i/20130507.b/cc0507.d
Lab Smp Id: CC0507
Inj Date : 07-MAY-2013 12:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0507
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 08-May-2013 09:46 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.867	5.867	(0.722)	95443	5.00000	5.017
$	2 Phenol-d5	99	7.567	7.567	(0.931)	127691	5.00000	5.187
	3 Phenol	94	7.583	7.583	(0.932)	152659	5.00000	5.540
$	5 2-Chlorophenol-d4	132	7.760	7.760	(0.954)	92055	5.00000	4.926
	4 Bis(2-Chloroethyl)ether	93	7.706	7.706	(0.948)	92408	5.00000	4.663
	6 2-Chlorophenol	128	7.791	7.791	(0.958)	97979	5.00000	4.610
	7 1,3-Dichlorobenzene	146	8.055	8.055	(0.990)	103969	5.00000	4.875
*	8 1,4-Dichlorobenzene-d4	152	8.132	8.132	(1.000)	53304	4.00000	
	9 1,4-Dichlorobenzene	146	8.163	8.163	(1.004)	102110	5.00000	4.858
$	10 1,2-Dichlorobenzene-d4	152	8.497	8.497	(1.045)	66409	5.00000	4.940
	12 1,2-Dichlorobenzene	146	8.528	8.528	(1.049)	98146	5.00000	4.877
	11 Benzyl alcohol	108	8.458	8.458	(1.040)	62402	5.00000	5.383
	14 2,2'-oxybis(1-Chloropropane)	121	8.784	8.784	(1.080)	29677	5.00000	4.852
	13 2-Methylphenol	108	8.738	8.738	(1.074)	96469	5.00000	4.865
	17 Hexachloroethane	117	9.141	9.141	(1.124)	42850	5.00000	4.872
	16 N-Nitroso-di-n-propylamine	70	9.056	9.056	(1.114)	60393	5.00000	4.878
	15 4-Methylphenol	108	9.033	9.033	(1.111)	100799	5.00000	4.985
$	18 Nitrobenzene-d5	82	9.289	9.289	(0.865)	103212	5.00000	4.988
	19 Nitrobenzene	77	9.320	9.320	(0.868)	95236	5.00000	4.985
	20 Isophorone	82	9.816	9.816	(0.914)	175176	5.00000	4.875
	21 2-Nitrophenol	139	9.987	9.987	(0.930)	58353	5.00000	5.449
	22 2,4-Dimethylphenol	107	10.126	10.126	(0.943)	214554	10.0000	10.90
	23 Bis(2-Chloroethoxy)methane	93	10.319	10.319	(0.961)	106669	5.00000	5.034
	24 Benzoic acid	105	10.450	10.450	(0.973)	245445	20.0000	14.27
	25 2,4-Dichlorophenol	162	10.488	10.488	(0.977)	177218	10.0000	9.776
	26 1,2,4-Trichlorobenzene	180	10.658	10.658	(0.993)	85653	5.00000	4.834
*	27 Naphthalene-d8	136	10.735	10.735	(1.000)	196084	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	10.774	10.774	(1.004)	253372	5.00000	4.853
	29 4-Chloroaniline	127	10.967	10.967	(1.022)	215876	10.0000	10.58
	30 Hexachlorobutadiene	225	11.199	11.199	(1.043)	52949	5.00000	5.031
	31 4-Chloro-3-methylphenol	107	12.042	12.042	(1.122)	175211	10.0000	10.99
	32 2-Methylnaphthalene	142	12.267	12.267	(1.143)	173485	5.00000	5.003
	33 Hexachlorocyclopentadiene	237	12.770	12.770	(0.877)	121243	10.0000	8.946
	34 2,4,6-Trichlorophenol	196	12.955	12.955	(0.889)	128416	10.0000	9.906
	35 2,4,5-Trichlorophenol	196	13.033	13.033	(0.895)	143438	10.0000	10.73
$	36 2-Fluorobiphenyl	172	13.126	13.126	(0.901)	210377	5.00000	4.894
	37 2-Chloronaphthalene	162	13.311	13.311	(0.914)	171073	5.00000	4.999
	38 2-Nitroaniline	65	13.629	13.629	(0.936)	97706	10.0000	11.83
	39 Dimethylphthalate	163	14.132	14.132	(0.970)	188878	5.00000	5.108
	40 Acenaphthylene	152	14.225	14.225	(0.977)	283778	5.00000	4.889
	41 2,6-Dinitrotoluene	165	14.256	14.256	(0.979)	91438	10.0000	10.55
*	42 Acenaphthene-d10	164	14.565	14.565	(1.000)	123166	4.00000	
	43 3-Nitroaniline	138	14.550	14.550	(0.999)	87629	10.0000	12.25
	44 Acenaphthene	153	14.635	14.635	(1.005)	174803	5.00000	4.997
	45 2,4-Dinitrophenol	184	14.774	14.774	(1.014)	94274	20.0000	12.28
	46 Dibenzofuran	168	14.990	14.990	(1.029)	240430	5.00000	5.027
	47 4-Nitrophenol	109	14.975	14.975	(1.028)	51218	10.0000	9.505
	48 2,4-Dinitrotoluene	165	15.114	15.114	(1.038)	122393	10.0000	10.95
	50 Diethylphthalate	149	15.709	15.709	(1.079)	206469	5.00000	5.557
	49 Fluorene	166	15.748	15.748	(1.081)	200051	5.00000	4.902
	51 4-Chlorophenyl-phenylether	204	15.787	15.787	(1.084)	104099	5.00000	5.189
	52 4-Nitroaniline	138	15.895	15.895	(1.091)	89420	10.0000	12.04
	53 4,6-Dinitro-2-methylphenol	198	16.003	16.003	(0.899)	137576	20.0000	13.26
	54 N-Nitrosodiphenylamine	169	16.064	16.064	(0.903)	124367	5.00000	4.953
$	55 2,4,6-Tribromophenol	330	16.326	16.326	(1.121)	32146	5.00000	4.935
	56 4-Bromophenyl-phenylether	248	16.851	16.851	(0.947)	61423	5.00000	5.005
	57 Hexachlorobenzene	284	17.144	17.144	(0.963)	68815	5.00000	4.699
	58 Pentachlorophenol	266	17.555	17.555	(0.987)	70556	10.0000	6.864
*	59 Phenanthrene-d10	188	17.794	17.794	(1.000)	216894	4.00000	
	60 Phenanthrene	178	17.849	17.849	(1.003)	283672	5.00000	4.795
	61 Anthracene	178	17.941	17.941	(1.008)	298041	5.00000	4.917
	62 Carbazole	167	18.336	18.336	(1.030)	188797	5.00000	5.128
	63 Di-n-butylphthalate	149	19.295	19.295	(1.084)	328385	5.00000	5.249
	64 Fluoranthene	202	20.348	20.348	(1.143)	356916	5.00000	5.126
	65 Pyrene	202	20.765	20.765	(0.903)	366067	5.00000	5.011
$	66 Terphenyl-d14	244	21.129	21.129	(0.919)	221878	5.00000	4.828
	67 Butylbenzylphthalate	149	22.112	22.112	(0.962)	139655	5.00000	5.598
	68 Benzo(a)anthracene	228	22.956	22.956	(0.999)	334917	5.00000	5.067
*	69 Chrysene-d12	240	22.987	22.987	(1.000)	236097	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.964	22.964	(0.999)	246703	10.0000	9.799
	71 Chrysene	228	23.026	23.026	(1.002)	287948	5.00000	4.814
	72 bis(2-Ethylhexyl)phthalate	149	23.189	23.189	(0.960)	189416	5.00000	4.906
*	134 Di-n-octylphthalate-d4	153	24.164	24.164	(1.000)	290407	4.00000	
	73 Di-n-octylphthalate	149	24.172	24.172	(1.000)	315813	5.00000	4.723

	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	24.714	24.714	(0.978)	310236	5.00000	5.047
	75 Benzo(k)fluoranthene	252	24.745	24.745	(0.979)	344744	5.00000	5.324
	76 Benzo(a)pyrene	252	25.186	25.186	(0.997)	274749	5.00000	5.231
*	77 Perylene-d12	264	25.271	25.271	(1.000)	207013	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	27.613	27.613	(1.093)	271166	5.00000	4.482
	79 Dibenzo(a,h)anthracene	278	27.116	27.116	(1.073)	249873	5.00000	5.383
	80 Benzo(g,h,i)perylene	276	27.613	27.613	(1.093)	271166	5.00000	5.180
	90 N-Nitrosodimethylamine	74	3.636	3.636	(0.447)	117509	10.0000	9.677
	91 Aniline	93	7.583	7.583	(0.932)	282024	5.00000	5.275
	93 Benzidine	184	20.642	20.642	(0.898)	74975	10.0000	9.920
	103 Pyridine	79	3.636	3.636	(0.447)	103559	10.0000	9.702
	105 1-methylnaphthalene	142	12.491	12.491	(1.164)	157196	5.00000	4.943
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.126	16.126	(1.107)	184101	5.00000	4.833(H)
	187 Total Benzofluoranthenes	252	24.745	24.745	(0.979)	607766	10.0000	10.18
	99 Perylene	252	25.310	25.310	(1.002)	285921	5.00000	4.762
	98 Retene	219	21.415	21.415	(0.932)	142458	5.00000	5.153
	120 2,3,4,6-Tetrachlorophenol	232	15.384	15.384	(1.056)	52709	5.00000	5.303

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0507.d
Lab Smp Id: CC0507
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info:

Calibration Date: 07-MAY-2013
Calibration Time: 11:17

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	53304	17.80
27 Naphthalene-d8	166754	83377	333508	196084	17.59
42 Acenaphthene-d10	106910	53455	213820	123166	15.21
59 Phenanthrene-d10	179783	89892	359566	216894	20.64
69 Chrysene-d12	192841	96420	385682	236097	22.43
134 Di-n-octylphthala	229567	114784	459134	290407	26.50
77 Perylene-d12	184310	92155	368620	207013	12.32

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.74	10.24	11.24	10.74	0.00
42 Acenaphthene-d10	14.57	14.07	15.07	14.57	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	22.99	0.00
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	0.00
77 Perylene-d12	25.27	24.77	25.77	25.27	0.00

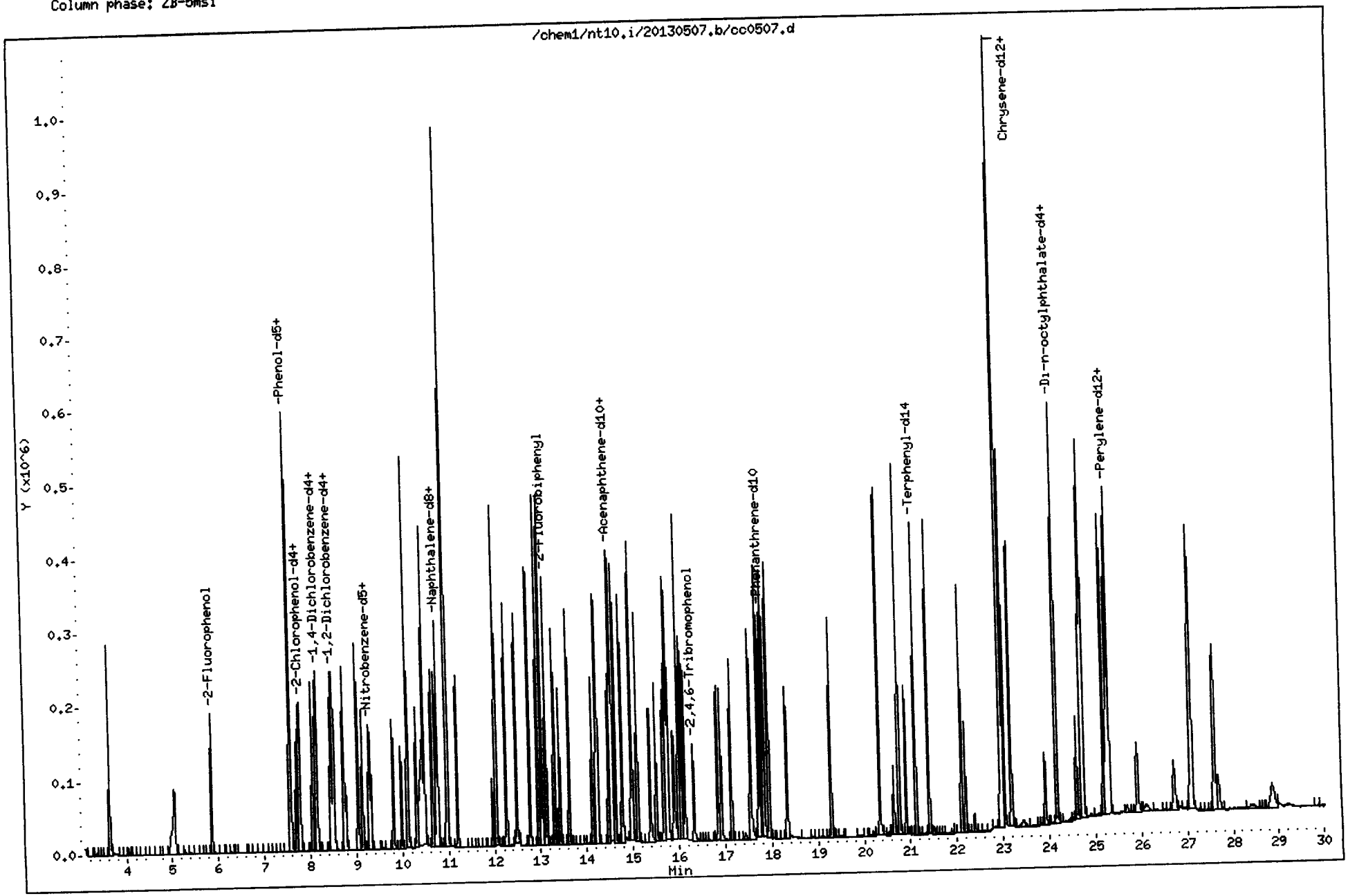
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130507.b/cc0507.d
Date : 07-MAY-2013 12:34
Client ID:
Sample Info: CC0507

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0507.d

Lab ID: CC0507, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
27.613	Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130507.b/wn30mbs1.d
Lab Smp Id: WN30MBS1 Client Smp ID: WN30MBS1
Inj Date : 07-MAY-2013 16:50
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN30MBS1
Misc Info : 13-8692
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 08-May-2013 10:54 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

YZ 5/8/13

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	5.875	5.867	(0.723)	67853	4.17901	417.9
$	2 Phenol-d5	99	7.560	7.567	(0.930)	90305	4.29810	429.8
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.753	7.760	(0.954)	70287	4.40703	440.7
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.124	8.132	(1.000)	45490	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.045)	34124	2.97443	297.4
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	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	9.281	9.289	(0.865)	53283	2.84067	284.1
	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	10.728	10.735	(1.000)	177750	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	13.118	13.126	(0.901)	108964	2.85415	285.4
	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	14.557	14.565	(1.000)	109384	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	16.319	16.326	(1.121)	24470	4.23017	423.0
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.787	17.794	(1.000)	187454	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	21.121	21.129	(0.919)	134601	3.55459	355.5
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	22.972	22.987	(1.000)	194527	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	23.181	23.189	(0.960)	30897	0.99930	99.93 (R)
* 134	Di-n-octylphthalate-d4	153	24.156	24.164	(1.000)	232557	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	25.263	25.271	(1.000)	165936	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: wn30mbs1.d
Lab Smp Id: WN30MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: WN30MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45490	0.53
27 Naphthalene-d8	166754	83377	333508	177750	6.59
42 Acenaphthene-d10	106910	53455	213820	109384	2.31
59 Phenanthrene-d10	179783	89892	359566	187454	4.27
69 Chrysene-d12	192841	96420	385682	194527	0.87
134 Di-n-octylphthala	229567	114784	459134	232557	1.30
77 Perylene-d12	184310	92155	368620	165936	-9.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	-0.04
69 Chrysene-d12	22.99	22.49	23.49	22.97	-0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	-0.03
77 Perylene-d12	25.27	24.77	25.77	25.26	-0.03

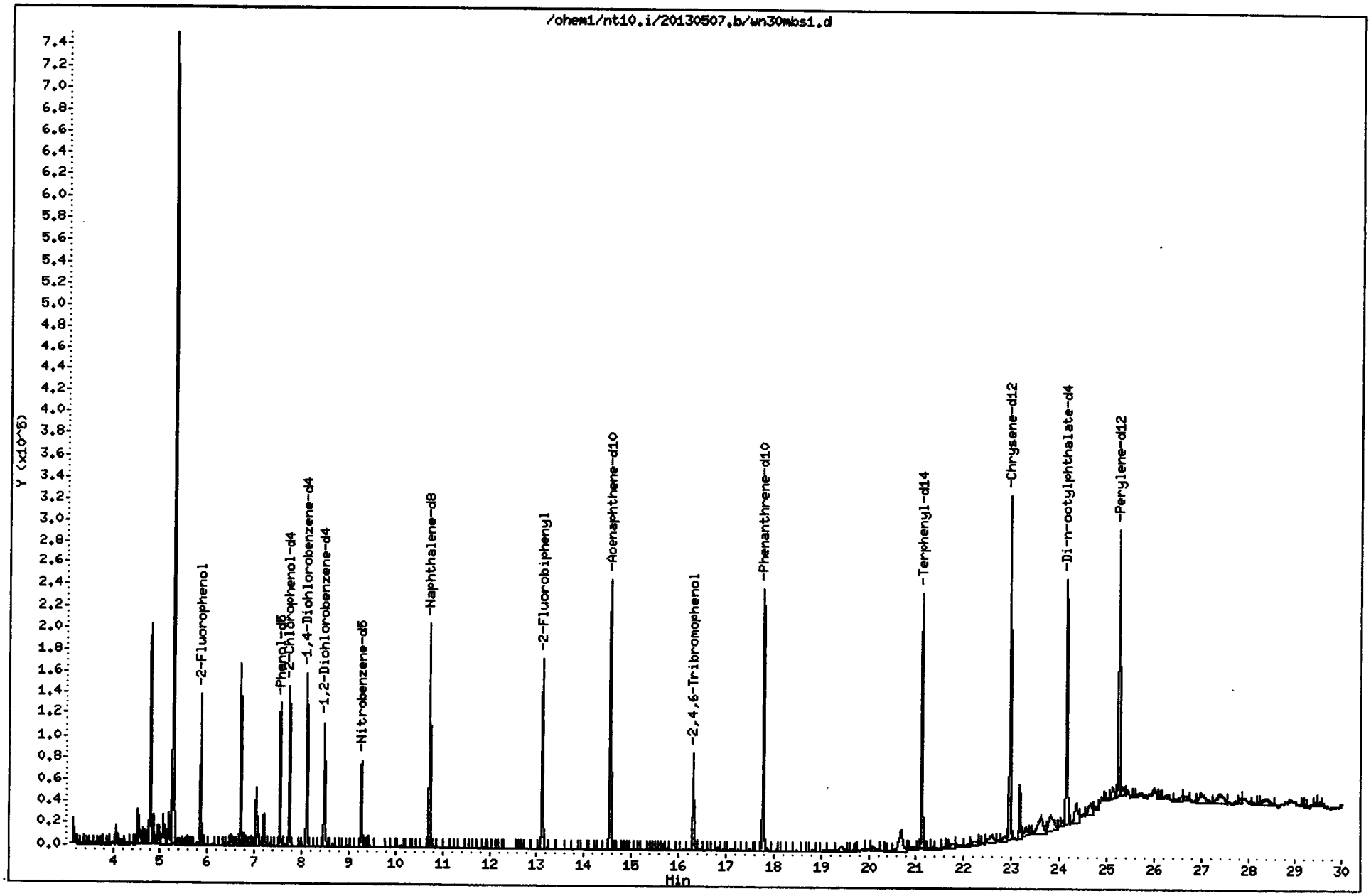
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
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	417.9	55.72	30-160
$ 2 Phenol-d5	750.0	429.8	57.31	30-160
$ 5 2-Chlorophenol-d4	750.0	440.7	58.76	30-160
$ 10 1,2-Dichlorobenzen	500.0	297.4	59.49	30-160
$ 18 Nitrobenzene-d5	500.0	284.1	56.81	30-160
$ 36 2-Fluorobiphenyl	500.0	285.4	57.08	30-160
$ 55 2,4,6-Tribromophen	750.0	423.0	56.40	30-160
$ 66 Terphenyl-d14	500.0	355.5	71.09	30-160

Data File: /chem1/nt10.i/20130507.b/wn30mbs1.d
Date : 07-MAY-2013 16:50
Client ID: WN30MBS1
Sample Info: WN30MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/wn30mbs1.d

Date : 07-MAY-2013 16:50

Client ID: WN30MBS1

Instrument: nt10.i

Sample Info: WN30MBS1

Volume Injected (uL): 1.0

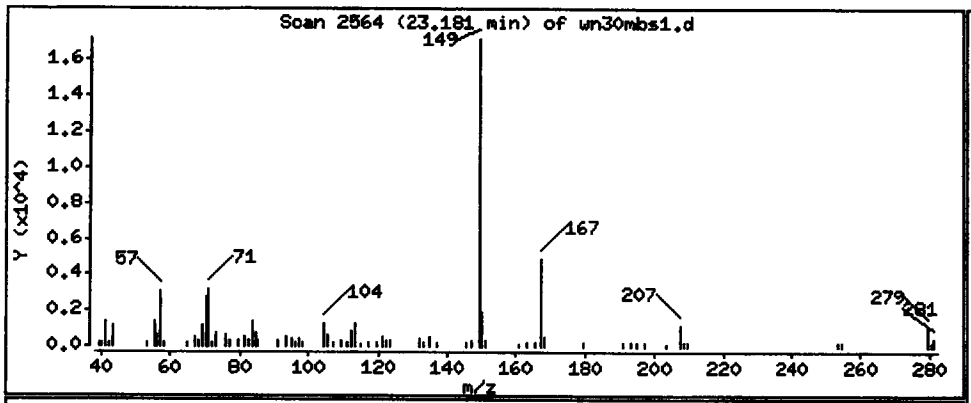
Operator: VTS/YZ

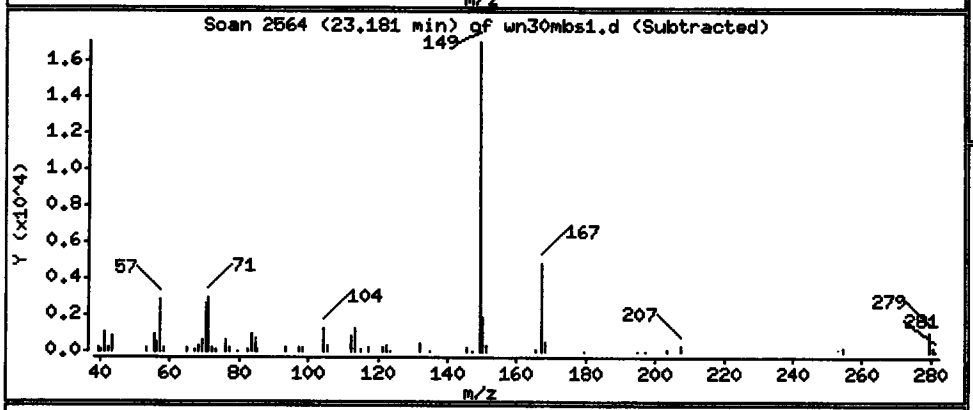
Column phase: ZB-5msi

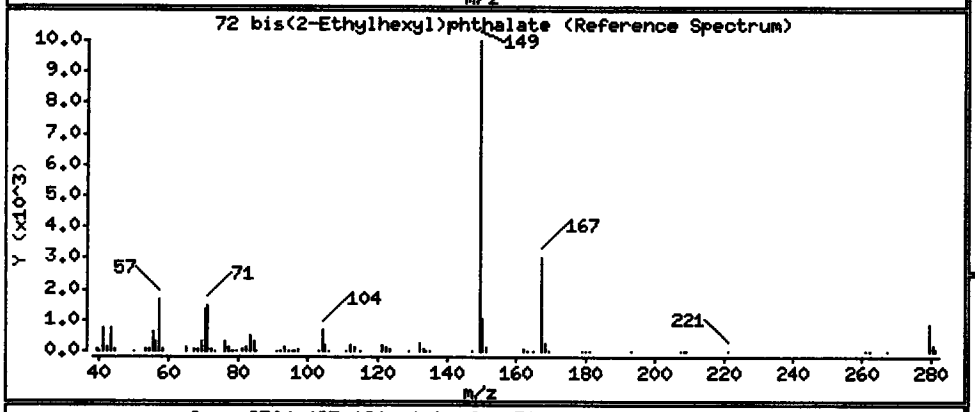
Column diameter: 0.25

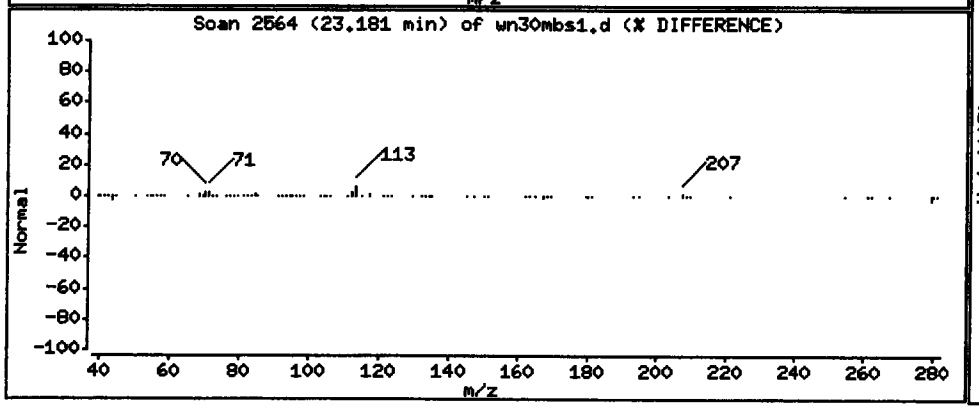
72 bis(2-Ethylhexyl)phthalate

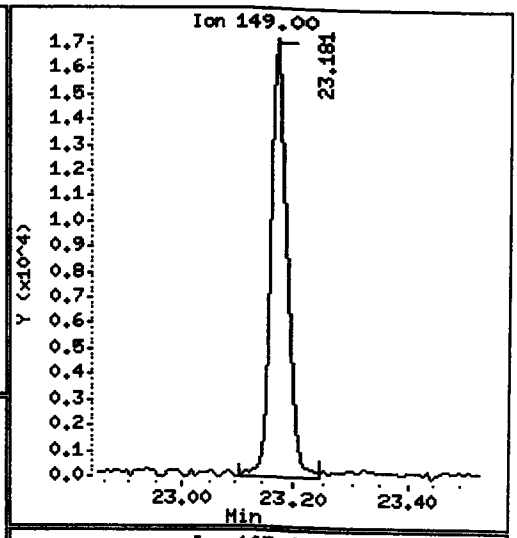
Concentration: 99.93 ug/kg

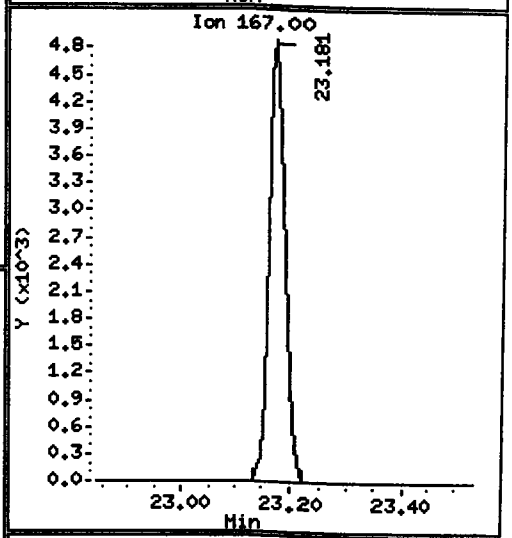


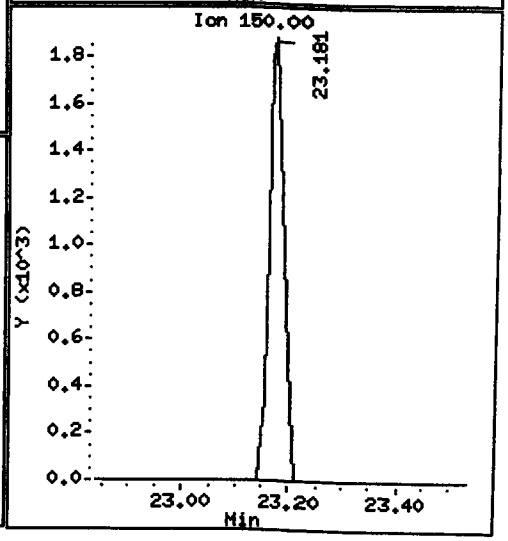












CO-ELUTION SUMMARY FOR FILE - wn30mbs1.d

Lab ID: WN30MBS1, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/14/13

Data file : /chem1/nt10.i/20130507.b/wn30lcss1.d
Lab Smp Id: WN30LCSS1 Client Smp ID: WN30LCSS1
Inj Date : 07-MAY-2013 17:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN30LCSS1
Misc Info : 13-8692
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 14-Aug-2013 14:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

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	5.867	5.867	(0.723)	68242	4.41350	441.4
$	2	Phenol-d5	99	7.559	7.567	(0.931)	93037	4.64995	465.0
	3	Phenol	94	7.575	7.583	(0.933)	71580	3.19613	319.6
$	5	2-Chlorophenol-d4	132	7.753	7.760	(0.955)	67431	4.43975	444.0
	4	Bis(2-Chloroethyl)ether	93	7.691	7.706	(0.948)	48722	3.02523	302.5
	6	2-Chlorophenol	128	7.783	7.791	(0.959)	44508	2.57699	257.7
	7	1,3-Dichlorobenzene	146	8.047	8.055	(0.991)	49153	2.83608	283.6
*	8	1,4-Dichlorobenzene-d4	152	8.116	8.132	(1.000)	43320	4.00000	
	9	1,4-Dichlorobenzene	146	8.147	8.163	(1.004)	49023	2.86967	287.0
$	10	1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.046)	30973	2.83501	283.5
	12	1,2-Dichlorobenzene	146	8.520	8.528	(1.050)	47220	2.88702	288.7
	11	Benzyl alcohol	108	8.450	8.458	(1.041)	30648	3.25321	325.3
	14	2,2'-oxybis(1-Chloropropane)	121	8.776	8.784	(1.081)	14689	2.95511	295.5
	13	2-Methylphenol	108	8.737	8.738	(1.077)	40493	2.51261	251.3
	17	Hexachloroethane	117	9.133	9.141	(1.125)	20610	2.88343	288.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
16	N-Nitroso-di-n-propylamine	70	9.048	9.056	(1.115)	31013	3.08231	308.2
15	4-Methylphenol	108	9.032	9.033	(1.113)	86168	5.24384	524.4
$ 18	Nitrobenzene-d5	82	9.281	9.289	(0.865)	50084	2.88990	289.0
19	Nitrobenzene	77	9.312	9.320	(0.868)	48321	3.02001	302.0
20	Isophorone	82	9.801	9.816	(0.914)	86422	2.87157	287.2
21	2-Nitrophenol	139	9.979	9.987	(0.930)	22865	2.54910	254.9
22	2,4-Dimethylphenol	107	10.118	10.126	(0.943)	112671	6.83111	683.1
23	Bis(2-Chloroethoxy)methane	93	10.311	10.319	(0.961)	56126	3.16223	316.2
24	Benzoic acid	105	10.404	10.450	(0.970)	136186	9.50737	950.7
25	2,4-Dichlorophenol	162	10.481	10.488	(0.977)	117503	7.73929	773.9
26	1,2,4-Trichlorobenzene	180	10.650	10.658	(0.993)	42923	2.89249	289.2
* 27	Naphthalene-d8	136	10.727	10.735	(1.000)	164232	4.00000	
28	Naphthalene	128	10.766	10.774	(1.004)	116916	2.67393	267.4
29	4-Chloroaniline	127	10.959	10.967	(1.022)	114406	6.69275	669.3
30	Hexachlorobutadiene	225	11.191	11.199	(1.043)	24990	2.83490	283.5
31	4-Chloro-3-methylphenol	107	12.042	12.042	(1.123)	135735	10.1624	1016
32	2-Methylnaphthalene	142	12.259	12.267	(1.143)	83287	2.86771	286.8
33	Hexachlorocyclopentadiene	237	12.770	12.770	(0.877)	68627	6.04115	604.1
34	2,4,6-Trichlorophenol	196	12.955	12.955	(0.890)	94976	8.74088	874.1
35	2,4,5-Trichlorophenol	196	13.025	13.033	(0.895)	105793	9.44487	944.5
$ 36	2-Fluorobiphenyl	172	13.118	13.126	(0.901)	102778	2.85250	285.2
37	2-Chloronaphthalene	162	13.304	13.311	(0.914)	86995	3.03278	303.3
38	2-Nitroaniline	65	13.621	13.629	(0.936)	82849	11.9666	1197
39	Dimethylphthalate	163	14.124	14.132	(0.970)	117553	3.79322	379.3
40	Acenaphthylene	152	14.217	14.225	(0.977)	133891	2.75207	275.2
41	2,6-Dinitrotoluene	165	14.248	14.256	(0.979)	81533	11.2286	1123
* 42	Acenaphthene-d10	164	14.557	14.565	(1.000)	103234	4.00000	
43	3-Nitroaniline	138	14.542	14.550	(0.999)	71881	11.9913	1199
44	Acenaphthene	153	14.627	14.635	(1.005)	83509	2.84830	284.8
45	2,4-Dinitrophenol	184	14.766	14.774	(1.014)	57044	8.91374	891.4
46	Dibenzofuran	168	14.982	14.990	(1.029)	121638	3.03418	303.4
47	4-Nitrophenol	109	14.975	14.975	(1.029)	47245	10.4461	1045
48	2,4-Dinitrotoluene	165	15.106	15.114	(1.038)	113789	12.1500	1215
50	Diethylphthalate	149	15.709	15.709	(1.079)	120513	3.86992	387.0
49	Fluorene	166	15.740	15.748	(1.081)	101420	2.96480	296.5
51	4-Chlorophenyl-phenylether	204	15.779	15.787	(1.084)	51527	3.06421	306.4
52	4-Nitroaniline	138	15.895	15.895	(1.092)	87775	14.0966	1410
53	4,6-Dinitro-2-methylphenol	198	15.995	16.003	(0.899)	113963	13.2628	1326
54	N-Nitrosodiphenylamine	169	16.064	16.064	(0.903)	78709	3.78574	378.6
$ 55	2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	27538	5.04414	504.4
56	4-Bromophenyl-phenylether	248	16.843	16.851	(0.947)	34262	3.37144	337.1
57	Hexachlorobenzene	284	17.136	17.144	(0.963)	35908	2.96131	296.1
58	Pentachlorophenol	266	17.547	17.555	(0.986)	63193	7.42446	742.4
* 59	Phenanthrene-d10	188	17.794	17.794	(1.000)	179602	4.00000	
60	Phenanthrene	178	17.841	17.849	(1.003)	167398	3.41706	341.7
61	Anthracene	178	17.941	17.941	(1.008)	159254	3.17315	317.3
62	Carbazole	167	18.328	18.336	(1.030)	161253	5.28950	529.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
63	Di-n-butylphthalate	149	19.287	19.295	(1.084)	217476	4.19765	419.8
64	Fluoranthene	202	20.340	20.348	(1.143)	212701	3.68901	368.9
65	Pyrene	202	20.757	20.765	(0.904)	214912	3.56006	356.0
$ 66	Terphenyl-d14	244	21.121	21.129	(0.919)	142835	3.76067	376.1
67	Butylbenzylphthalate	149	22.104	22.112	(0.962)	93396	4.53046	453.0
68	Benzo(a)anthracene	228	22.948	22.956	(0.999)	198997	3.64286	364.3
* 69	Chrysene-d12	240	22.972	22.987	(1.000)	195115	4.00000	
70	3,3'-Dichlorobenzidine	252	22.956	22.964	(0.999)	157915	7.58997	759.0
71	Chrysene	228	23.018	23.026	(1.002)	166520	3.36847	336.8
72	bis(2-Ethylhexyl)phthalate	149	23.181	23.189	(0.960)	126376	4.02369	402.4
* 134	Di-n-octylphthalate-d4	153	24.156	24.164	(1.000)	236239	4.00000	
73	Di-n-octylphthalate	149	24.164	24.172	(1.000)	207079	3.80709	380.7
74	Benzo(b)fluoranthene	252	24.706	24.714	(0.978)	185571	3.62884	362.9
75	Benzo(k)fluoranthene	252	24.737	24.745	(0.979)	189276	3.51403	351.4
76	Benzo(a)pyrene	252	25.178	25.186	(0.997)	149144	3.41381	341.4
* 77	Perylene-d12	264	25.263	25.271	(1.000)	172204	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.077	27.093	(1.072)	169556	3.36866	336.9(M)
79	Dibenzo(a,h)anthracene	278	27.101	27.116	(1.073)	131887	3.41580	341.6
80	Benzo(g,h,i)perylene	276	27.598	27.613	(1.092)	132282	3.03757	303.8
90	N-Nitrosodimethylamine	74	3.666	3.636	(0.452)	77934	7.89694	789.7
91	Aniline	93	7.567	7.583	(0.932)	125242	2.88237	288.2
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.674	3.636	(0.453)	106417	12.2675	1227
105	1-methylnaphthalene	142	12.491	12.491	(1.164)	81177	3.04768	304.8
111	Azobenzene (1,2-DP-Hydrazine)	77	16.126	16.126	(1.108)	104000	3.25724	325.7
187	Total Benzofluoranthenes	252	24.737	24.745	(0.979)	349184	7.03199	703.2
99	Perylene	252	25.302	25.310	(1.002)	78186	1.56555	156.6
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.377	15.384	(1.056)	29064	3.48840	348.8

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: wn30lcss1.d
Lab Smp Id: WN30LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: WN30LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	43320	-4.27
27 Naphthalene-d8	166754	83377	333508	164232	-1.51
42 Acenaphthene-d10	106910	53455	213820	103234	-3.44
59 Phenanthrene-d10	179783	89892	359566	179602	-0.10
69 Chrysene-d12	192841	96420	385682	195115	1.18
134 Di-n-octylphthala	229567	114784	459134	236239	2.91
77 Perylene-d12	184310	92155	368620	172204	-6.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.19
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	22.97	-0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	-0.03
77 Perylene-d12	25.27	24.77	25.77	25.26	-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: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Client SDG: WN30
Fraction: SV
Client Smp ID: WN30LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

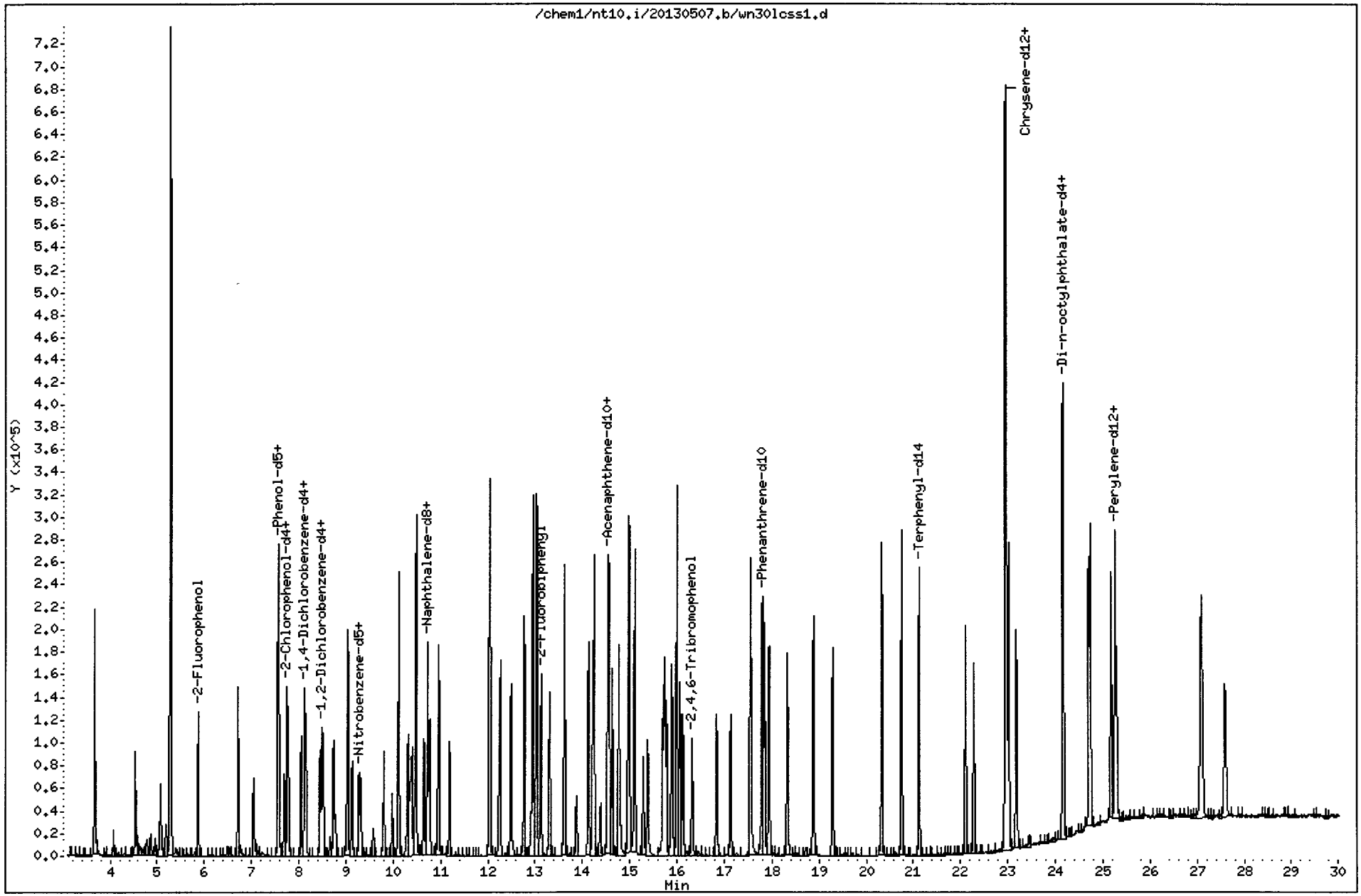
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	319.6	63.92	34-105
7	1,3-Dichlorobenzen	500.0	283.6	56.72	40-100
9	1,4-Dichlorobenzen	500.0	287.0	57.39	39-100
11	Benzyl alcohol	500.0	325.3	65.06	19-117
12	1,2-Dichlorobenzen	500.0	288.7	57.74	40-100
13	2-Methylphenol	500.0	251.3	50.25	28-100
15	4-Methylphenol	1000	524.4	52.44	29-100
17	Hexachloroethane	500.0	288.3	57.67	38-100
22	2,4-Dimethylphenol	1500	683.1	45.54	10-100
24	Benzoic acid	2750	950.7	34.57	10-107
26	1,2,4-Trichloroben	500.0	289.2	57.85	35-103
28	Naphthalene	500.0	267.4	53.48	43-100
30	Hexachlorobutadien	500.0	283.5	56.70	37-100
32	2-Methylnaphthalen	500.0	286.8	57.35	43-100
39	Dimethylphthalate	500.0	379.3	75.86	43-114
40	Acenaphthylene	500.0	275.2	55.04	42-102
44	Acenaphthene	500.0	284.8	56.97	45-100
46	Dibenzofuran	500.0	303.4	60.68	43-103
49	Fluorene	500.0	296.5	59.30	45-107
50	Diethylphthalate	500.0	387.0	77.40	50-120
54	N-Nitrosodiphenyla	500.0	378.6	75.71	36-111
57	Hexachlorobenzene	500.0	296.1	59.23	33-113
58	Pentachlorophenol	1500	742.4	49.50	16-120
60	Phenanthrene	500.0	341.7	68.34	49-112
61	Anthracene	500.0	317.3	63.46	45-106
63	Di-n-butylphthalat	500.0	419.8	83.95	48-126
64	Fluoranthene	500.0	368.9	73.78	53-118
65	Pyrene	500.0	356.0	71.20	48-121
67	Butylbenzylphthala	500.0	453.0	90.61	45-132
68	Benzo(a)anthracene	500.0	364.3	72.86	49-115
71	Chrysene	500.0	336.8	67.37	47-115
72	bis(2-Ethylhexyl)p	500.0	402.4	80.47	34-130
73	Di-n-octylphthalat	500.0	380.7	76.14	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	341.4	68.28	42-113
78 Indeno(1,2,3-cd)py	500.0	336.9	67.37	42-123
79 Dibenzo(a,h)anthra	500.0	341.6	68.32	30-133
80 Benzo(g,h,i)peryle	500.0	303.8	60.75	38-126
105 1-methylnaphthalen	500.0	304.8	60.95	42-100
187 Total Benzofluoran	1000	703.2	70.32	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	441.4	58.85	30-160
$ 2 Phenol-d5	750.0	465.0	62.00	30-160
$ 5 2-Chlorophenol-d4	750.0	444.0	59.20	30-160
$ 10 1,2-Dichlorobenzen	500.0	283.5	56.70	30-160
$ 18 Nitrobenzene-d5	500.0	289.0	57.80	30-160
$ 36 2-Fluorobiphenyl	500.0	285.2	57.05	30-160
$ 55 2,4,6-Tribromophen	750.0	504.4	67.26	30-160
$ 66 Terphenyl-d14	500.0	376.1	75.21	30-160

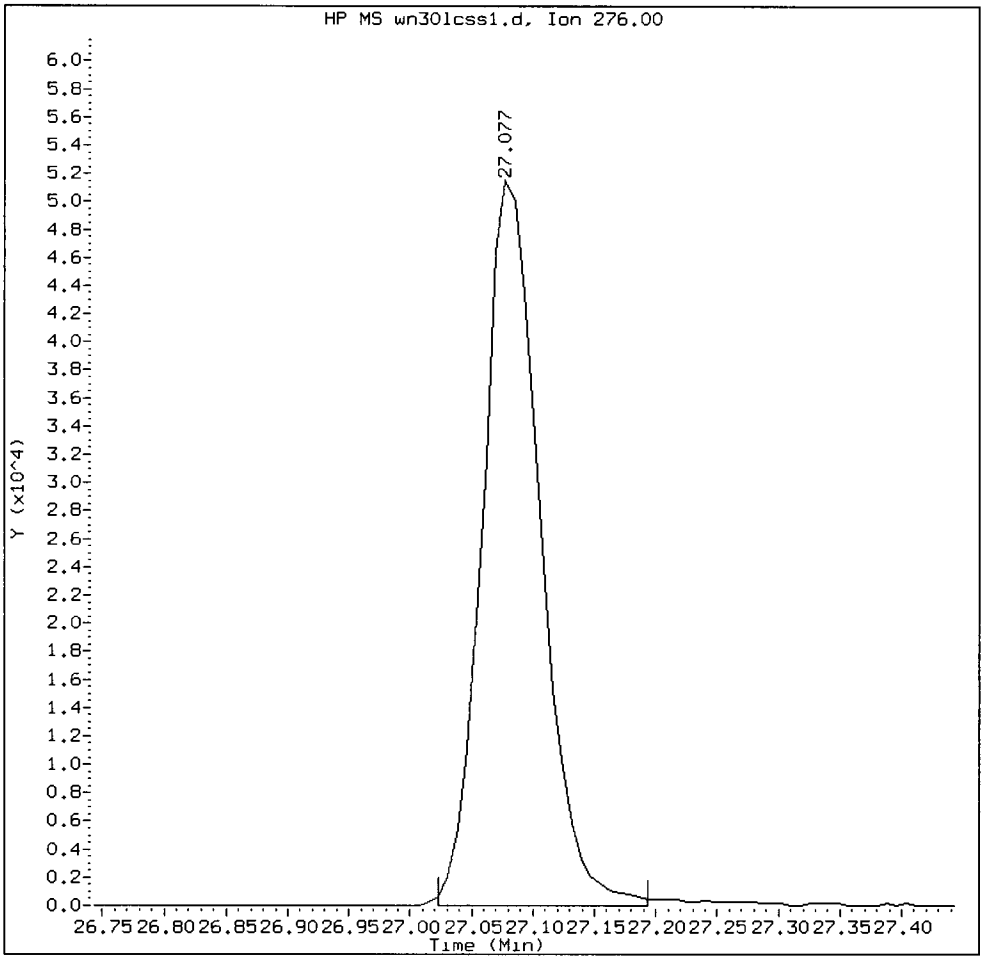
Data File: /chem1/nt10.i/20130507.b/wn30lcss1.d
Date : 07-MAY-2013 17:27
Client ID: WN30LCSS1
Sample Info: WN30LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WN30LCSS1, /chem1/nt10.i/20130507.b/wn30lcss1.d

Indeno(1,2,3-cd)pyrene Amount: 3.37 Area: 169556



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: VE Date: 8/14/13

WN31;953A 8/16/13

CO-ELUTION SUMMARY FOR FILE - wn30lcss1.d

Lab ID: WN30LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

WN31·954R BC 8/14/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/14/13

Data file : /chem1/nt10.i/20130507.b/wn30lcsds1.d
Lab Smp Id: WN30LCSDS1 Client Smp ID: WN30LCSDS1
Inj Date : 07-MAY-2013 18:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN30LCSDS1
Misc Info : 13-8692
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 14-Aug-2013 14:58 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.867	5.867	(0.723)	74930	5.11889	511.9
$	2 Phenol-d5	99	7.552	7.567	(0.930)	101943	5.38193	538.2
	3 Phenol	94	7.575	7.583	(0.933)	79283	3.73939	373.9
$	5 2-Chlorophenol-d4	132	7.753	7.760	(0.955)	73295	5.09755	509.8
	4 Bis(2-Chloroethyl)ether	93	7.691	7.706	(0.948)	54389	3.56724	356.7
	6 2-Chlorophenol	128	7.776	7.791	(0.958)	49679	3.03833	303.8
	7 1,3-Dichlorobenzene	146	8.047	8.055	(0.991)	53280	3.24729	324.7
*	8 1,4-Dichlorobenzene-d4	152	8.116	8.132	(1.000)	41011	4.00000	
	9 1,4-Dichlorobenzene	146	8.148	8.163	(1.004)	55483	3.43068	343.1
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.046)	33979	3.28526	328.5
	12 1,2-Dichlorobenzene	146	8.512	8.528	(1.049)	53153	3.43274	343.3
	11 Benzyl alcohol	108	8.442	8.458	(1.040)	34096	3.82297	382.3
	14 2,2'-oxybis(1-Chloropropane)	121	8.776	8.784	(1.081)	17309	3.67825	367.8
	13 2-Methylphenol	108	8.730	8.738	(1.076)	44318	2.90478	290.5
	17 Hexachloroethane	117	9.133	9.141	(1.125)	22944	3.39070	339.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
16	N-Nitroso-di-n-propylamine	70	9.040	9.056	(1.114)	33301	3.49605	349.6
15	4-Methylphenol	108	9.032	9.033	(1.113)	99713	6.40978	641.0
$ 18	Nitrobenzene-d5	82	9.273	9.289	(0.864)	53800	3.32837	332.8
19	Nitrobenzene	77	9.312	9.320	(0.868)	52348	3.50781	350.8
20	Isophorone	82	9.801	9.816	(0.914)	95093	3.38773	338.8
21	2-Nitrophenol	139	9.979	9.987	(0.930)	29493	3.52532	352.5
22	2,4-Dimethylphenol	107	10.119	10.126	(0.943)	131888	8.57332	857.3
23	Bis(2-Chloroethoxy)methane	93	10.303	10.319	(0.960)	62455	3.77278	377.3
24	Benzoic acid	105	10.411	10.450	(0.971)	147675	11.0335	1103
25	2,4-Dichlorophenol	162	10.481	10.488	(0.977)	141093	9.96373	996.4
26	1,2,4-Trichlorobenzene	180	10.650	10.658	(0.993)	46900	3.38859	338.9
* 27	Naphthalene-d8	136	10.728	10.735	(1.000)	153177	4.00000	
28	Naphthalene	128	10.766	10.774	(1.004)	132151	3.24050	324.0
29	4-Chloroaniline	127	10.959	10.967	(1.022)	120974	7.58773	758.8
30	Hexachlorobutadiene	225	11.191	11.199	(1.043)	28447	3.45997	346.0
31	4-Chloro-3-methylphenol	107	12.042	12.042	(1.123)	147507	11.8408	1184
32	2-Methylnaphthalene	142	12.259	12.267	(1.143)	95436	3.52318	352.3
33	Hexachlorocyclopentadiene	237	12.770	12.770	(0.877)	79713	7.41928	741.9
34	2,4,6-Trichlorophenol	196	12.948	12.955	(0.889)	104686	10.1868	1019
35	2,4,5-Trichlorophenol	196	13.025	13.033	(0.895)	113222	10.6876	1069
$ 36	2-Fluorobiphenyl	172	13.118	13.126	(0.901)	111280	3.26551	326.6
37	2-Chloronaphthalene	162	13.304	13.311	(0.914)	97354	3.58847	358.8
38	2-Nitroaniline	65	13.621	13.629	(0.936)	86490	13.2087	1321
39	Dimethylphthalate	163	14.124	14.132	(0.970)	118613	4.04683	404.7
40	Acenaphthylene	152	14.217	14.225	(0.977)	148955	3.23721	323.7
41	2,6-Dinitrotoluene	165	14.248	14.256	(0.979)	83803	12.2029	1220
* 42	Acenaphthene-d10	164	14.557	14.565	(1.000)	97637	4.00000	
43	3-Nitroaniline	138	14.534	14.550	(0.998)	70837	12.4946	1249
44	Acenaphthene	153	14.627	14.635	(1.005)	92538	3.33719	333.7
45	2,4-Dinitrophenol	184	14.766	14.774	(1.014)	57569	9.50283	950.3
46	Dibenzofuran	168	14.982	14.990	(1.029)	137694	3.63158	363.2
47	4-Nitrophenol	109	14.975	14.975	(1.029)	46977	10.9739	1097
48	2,4-Dinitrotoluene	165	15.106	15.114	(1.038)	114778	12.9582	1296
50	Diethylphthalate	149	15.701	15.709	(1.079)	119325	4.05142	405.1
49	Fluorene	166	15.740	15.748	(1.081)	109936	3.39798	339.8
51	4-Chlorophenyl-phenylether	204	15.779	15.787	(1.084)	55783	3.50747	350.7
52	4-Nitroaniline	138	15.895	15.895	(1.092)	85065	14.4445	1444
53	4,6-Dinitro-2-methylphenol	198	15.995	16.003	(0.899)	111948	13.7909	1379
54	N-Nitrosodiphenylamine	169	16.057	16.064	(0.903)	79588	4.05334	405.3
$ 55	2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	28318	5.48436	548.4
56	4-Bromophenyl-phenylether	248	16.843	16.851	(0.947)	36219	3.77380	377.4
57	Hexachlorobenzene	284	17.136	17.144	(0.963)	37575	3.28118	328.1
58	Pentachlorophenol	266	17.547	17.555	(0.986)	64127	7.97767	797.8
* 59	Phenanthrene-d10	188	17.787	17.794	(1.000)	169618	4.00000	
60	Phenanthrene	178	17.833	17.849	(1.003)	170051	3.67553	367.6
61	Anthracene	178	17.934	17.941	(1.008)	159281	3.36050	336.1
62	Carbazole	167	18.328	18.336	(1.030)	157949	5.48609	548.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
63	Di-n-butylphthalate	149	19.288	19.295	(1.084)	212402	4.34103	434.1
64	Fluoranthene	202	20.340	20.348	(1.144)	211033	3.87552	387.6
65	Pyrene	202	20.758	20.765	(0.904)	214800	3.68475	368.5
$ 66	Terphenyl-d14	244	21.121	21.129	(0.919)	136539	3.72276	372.3
67	Butylbenzylphthalate	149	22.104	22.112	(0.962)	94307	4.73735	473.7
68	Benzo(a)anthracene	228	22.941	22.956	(0.999)	195726	3.71041	371.0
* 69	Chrysene-d12	240	22.972	22.987	(1.000)	188414	4.00000	
70	3,3'-Dichlorobenzidine	252	22.948	22.964	(0.999)	154173	7.67366	767.4
71	Chrysene	228	23.018	23.026	(1.002)	164868	3.45367	345.4
72	bis(2-Ethylhexyl)phthalate	149	23.173	23.189	(0.959)	124298	4.08838	408.8
* 134	Di-n-octylphthalate-d4	153	24.156	24.164	(1.000)	228678	4.00000	
73	Di-n-octylphthalate	149	24.164	24.172	(1.000)	210909	4.00571	400.6
74	Benzo(b)fluoranthene	252	24.698	24.714	(0.978)	205002	4.11839	411.8
75	Benzo(k)fluoranthene	252	24.737	24.745	(0.979)	183931	3.50814	350.8
76	Benzo(a)pyrene	252	25.170	25.186	(0.997)	154505	3.63319	363.3
* 77	Perylene-d12	264	25.256	25.271	(1.000)	167622	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.077	27.093	(1.072)	170920	3.48858	348.9(M)
79	Dibenzo(a,h)anthracene	278	27.101	27.116	(1.073)	130620	3.47546	347.5
80	Benzo(g,h,i)perylene	276	27.598	27.613	(1.093)	132451	3.12459	312.5
90	N-Nitrosodimethylamine	74	3.667	3.636	(0.452)	86416	9.24941	924.9
91	Aniline	93	7.567	7.583	(0.932)	130724	3.17792	317.8
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.674	3.636	(0.453)	120256	14.6433	1464
105	1-methylnaphthalene	142	12.483	12.491	(1.164)	91749	3.69320	369.3
111	Azobenzene (1,2-DP-Hydrazine)	77	16.126	16.126	(1.108)	108045	3.57791	357.8
187	Total Benzofluoranthenes	252	24.737	24.745	(0.979)	359607	7.43985	744.0
99	Perylene	252	25.294	25.310	(1.002)	79019	1.62548	162.5
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	15.377	15.384	(1.056)	30427	3.86134	386.1

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: wn30lcsds1.d
Lab Smp Id: WN30LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: WN30LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41011	-9.37
27 Naphthalene-d8	166754	83377	333508	153177	-8.14
42 Acenaphthene-d10	106910	53455	213820	97637	-8.67
59 Phenanthrene-d10	179783	89892	359566	169618	-5.65
69 Chrysene-d12	192841	96420	385682	188414	-2.30
134 Di-n-octylphthala	229567	114784	459134	228678	-0.39
77 Perylene-d12	184310	92155	368620	167622	-9.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.19
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	-0.04
69 Chrysene-d12	22.99	22.49	23.49	22.97	-0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.16	-0.03
77 Perylene-d12	25.27	24.77	25.77	25.26	-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: Anchor QEA, LLC
Client SDG: WN30
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN30LCSDS1
Client Smp ID: WN30LCSDS1
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8692

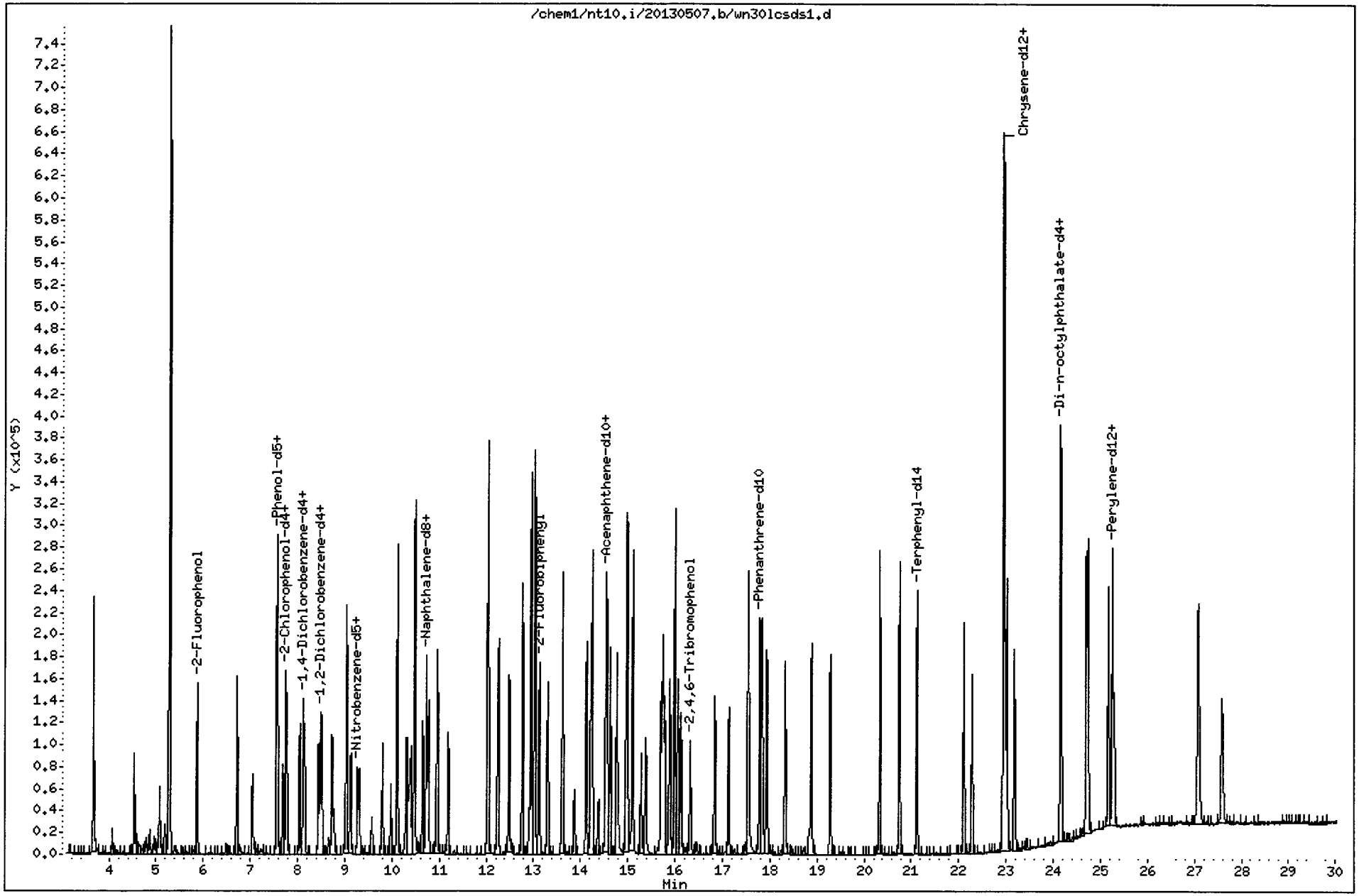
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	373.9	74.79	34-105
7	1,3-Dichlorobenzen	500.0	324.7	64.95	40-100
9	1,4-Dichlorobenzen	500.0	343.1	68.61	39-100
11	Benzyl alcohol	500.0	382.3	76.46	19-117
12	1,2-Dichlorobenzen	500.0	343.3	68.65	40-100
13	2-Methylphenol	500.0	290.5	58.10	28-100
15	4-Methylphenol	1000	641.0	64.10	29-100
17	Hexachloroethane	500.0	339.1	67.81	38-100
22	2,4-Dimethylphenol	1500	857.3	57.16	10-100
24	Benzoic acid	2750	1103	40.12	10-107
26	1,2,4-Trichloroben	500.0	338.9	67.77	35-103
28	Naphthalene	500.0	324.0	64.81	43-100
30	Hexachlorobutadien	500.0	346.0	69.20	37-100
32	2-Methylnaphthalen	500.0	352.3	70.46	43-100
39	Dimethylphthalate	500.0	404.7	80.94	43-114
40	Acenaphthylene	500.0	323.7	64.74	42-102
44	Acenaphthene	500.0	333.7	66.74	45-100
46	Dibenzofuran	500.0	363.2	72.63	43-103
49	Fluorene	500.0	339.8	67.96	45-107
50	Diethylphthalate	500.0	405.1	81.03	50-120
54	N-Nitrosodiphenyla	500.0	405.3	81.07	36-111
57	Hexachlorobenzene	500.0	328.1	65.62	33-113
58	Pentachlorophenol	1500	797.8	53.18	16-120
60	Phenanthrene	500.0	367.6	73.51	49-112
61	Anthracene	500.0	336.1	67.21	45-106
63	Di-n-butylphthalat	500.0	434.1	86.82	48-126
64	Fluoranthene	500.0	387.6	77.51	53-118
65	Pyrene	500.0	368.5	73.70	48-121
67	Butylbenzylphthala	500.0	473.7	94.75	45-132
68	Benzo(a)anthracene	500.0	371.0	74.21	49-115
71	Chrysene	500.0	345.4	69.07	47-115
72	bis(2-Ethylhexyl)p	500.0	408.8	81.77	34-130
73	Di-n-octylphthalat	500.0	400.6	80.11	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	363.3	72.66	42-113
78 Indeno(1,2,3-cd)py	500.0	348.9	69.77	42-123
79 Dibenzo(a,h)anthra	500.0	347.5	69.51	30-133
80 Benzo(g,h,i)peryle	500.0	312.5	62.49	38-126
105 1-methylnaphthalen	500.0	369.3	73.86	42-100
187 Total Benzofluoran	1000	744.0	74.40	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	511.9	68.25	30-160
$ 2 Phenol-d5	750.0	538.2	71.76	30-160
$ 5 2-Chlorophenol-d4	750.0	509.8	67.97	30-160
$ 10 1,2-Dichlorobenzen	500.0	328.5	65.71	30-160
$ 18 Nitrobenzene-d5	500.0	332.8	66.57	30-160
$ 36 2-Fluorobiphenyl	500.0	326.6	65.31	30-160
$ 55 2,4,6-Tribromophen	750.0	548.4	73.12	30-160
$ 66 Terphenyl-d14	500.0	372.3	74.46	30-160

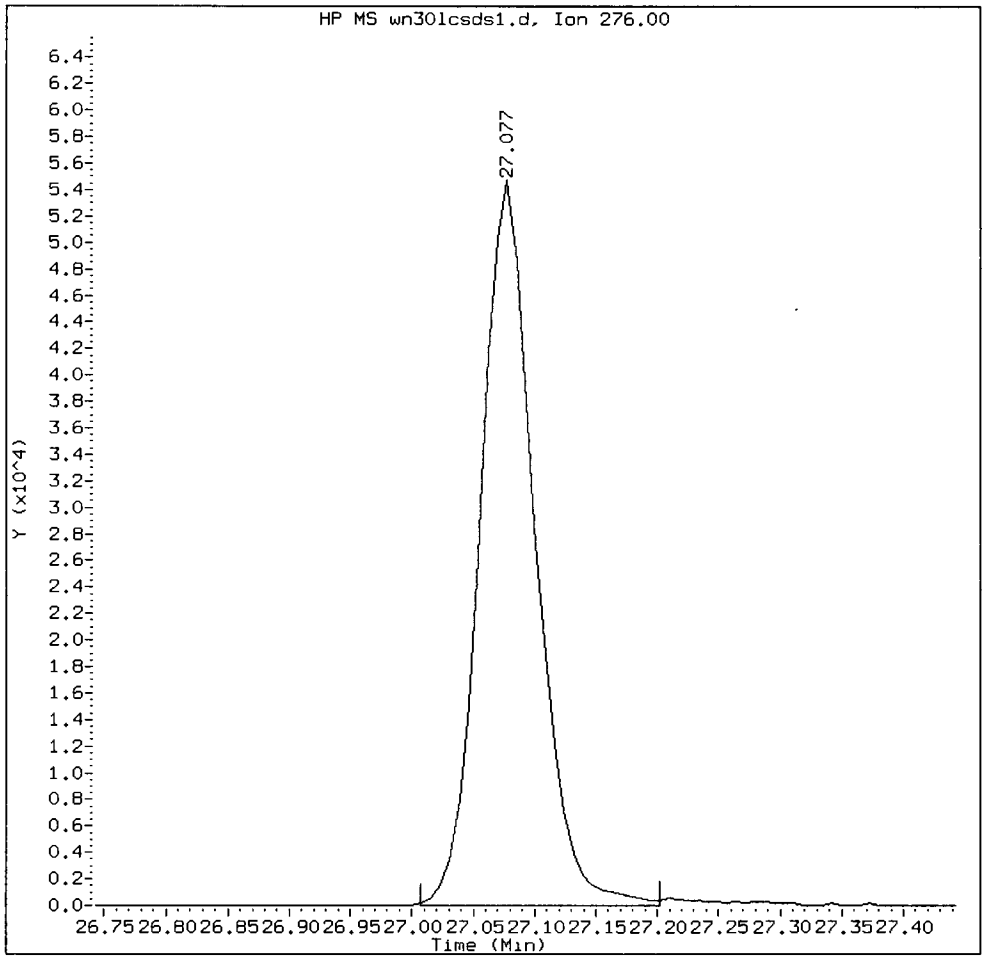
Data File: /chem1/nt10.i/20130507.b/wn30lcsds1.d
Date : 07-MAY-2013 18:03
Client ID: WN30LCSDS1
Sample Info: WN30LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WN30LCSDS1, /chem1/nt10.i/20130507.b/wn30lcsds1.d

Indeno(1,2,3-cd)pyrene Amount: 3.49 Area: 170920



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: 1/2 Date: 8/14/13

WN3: 96/A 8/16/13

CO-ELUTION SUMMARY FOR FILE - wn30lcsds1.d

Lab ID: WN30LCSDS1, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

WN31: 962R BC 8/16/13

Analytical Resources, Inc.

YZ 8/14/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130507.b/wn31a.d
Lab Smp Id: WN31A Client Smp ID: ES-TS-INF-20130424-
Inj Date : 07-MAY-2013 21:06
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN31A,3
Misc Info : 13-8693
Comment : 1ul Injection
Method : /chem1/nt10.i/20130507.b/ABN.m
Meth Date : 14-Aug-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 16
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	3.02000	Weight of sample extracted (g)
M	60.30000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.883	5.867	(0.724)	20641	1.44196	3608
$	2 Phenol-d5	99	7.567	7.567	(0.931)	28747	1.55194	3883
	3 Phenol	94	7.590	7.583	(0.934)	19639	0.94720	2370
$	5 2-Chlorophenol-d4	132	7.760	7.760	(0.955)	22387	1.59215	3984
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.124	8.132	(1.000)	40105	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.489	8.497	(1.045)	10263	1.01470	2539
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	8.458	8.458	(1.041)	2315	0.26543	664.2
	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	9.032	9.033	(1.112)	91593	6.02082	15070
$	18 Nitrobenzene-d5	82	9.273	9.289	(0.864)	16685	1.00666	2519
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	10.327	10.450	(0.963)	13031	0.96073	2404
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.728	10.735	(1.000)	157068	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	12.259	12.267	(1.143)	3432	0.12356	309.2
	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	13.118	13.126	(0.901)	38016	1.14200	2858
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	14.124	14.132	(0.970)	14615	0.51044	1277
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.557	14.565	(1.000)	95378	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	16.049	16.064	(0.902)	3112	0.17496	437.8(H)
$	55 2,4,6-Tribromophenol	330	16.319	16.326	(1.121)	8845	1.75359	4388
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.794	17.794	(1.000)	153652	4.00000	
	60 Phenanthrene	178	17.841	17.849	(1.003)	20425	0.48735	1219
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	19.295	19.295	(1.084)	9578	0.21609	540.7
64	Fluoranthene	202	20.347	20.348	(1.143)	36651	0.74302	1859
65	Pyrene	202	20.773	20.765	(0.903)	52995	1.03791	2597
$ 66	Terphenyl-d14	244	21.144	21.129	(0.919)	36615	1.13978	2852
67	Butylbenzylphthalate	149	22.128	22.112	(0.962)	11712	0.67170	1681
68	Benzo(a)anthracene	228	22.979	22.956	(0.999)	9348	0.20232	506.3(M)
* 69	Chrysene-d12	240	23.003	22.987	(1.000)	165029	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.041	23.026	(1.002)	25032	0.59868	1498
72	bis(2-Ethylhexyl)phthalate	149	23.204	23.189	(0.960)	1356007	49.3739	123500
* 134	Di-n-octylphthalate-d4	153	24.179	24.164	(1.000)	206574	4.00000	
73	Di-n-octylphthalate	149	24.195	24.172	(1.001)	79893	1.67974	4203(M)
74	Benzo(b)fluoranthene	252	24.752	24.714	(0.978)	26254	0.56222	1407
75	Benzo(k)fluoranthene	252	24.752	24.745	(0.978)	26254	0.53377	1336
76	Benzo(a)pyrene	252	25.225	25.186	(0.997)	8133	0.20386	510.1
* 77	Perylene-d12	264	25.310	25.271	(1.000)	157251	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.171	27.093	(1.074)	6451	0.14035	J 351.2(M)
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	27.683	27.613	(1.094)	12383	0.31139	779.2
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	24.752	24.745	(0.978)	26685	0.58849	1473
99	Perylene	252	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn31a.d
Lab Smp Id: WN31A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130507.b/ABN.m
Misc Info: 13-8693

Calibration Date: 07-MAY-2013
Calibration Time: 12:34
Client Smp ID: ES-TS-INF-201304
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	40105	-11.37
27 Naphthalene-d8	166754	83377	333508	157068	-5.81
42 Acenaphthene-d10	106910	53455	213820	95378	-10.79
59 Phenanthrene-d10	179783	89892	359566	153652	-14.53
69 Chrysene-d12	192841	96420	385682	165029	-14.42
134 Di-n-octylphthala	229567	114784	459134	206574	-10.02
77 Perylene-d12	184310	92155	368620	157251	-14.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.74	10.24	11.24	10.73	-0.07
42 Acenaphthene-d10	14.57	14.07	15.07	14.56	-0.05
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.99	22.49	23.49	23.00	0.07
134 Di-n-octylphthala	24.16	23.66	24.66	24.18	0.06
77 Perylene-d12	25.27	24.77	25.77	25.31	0.15

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.

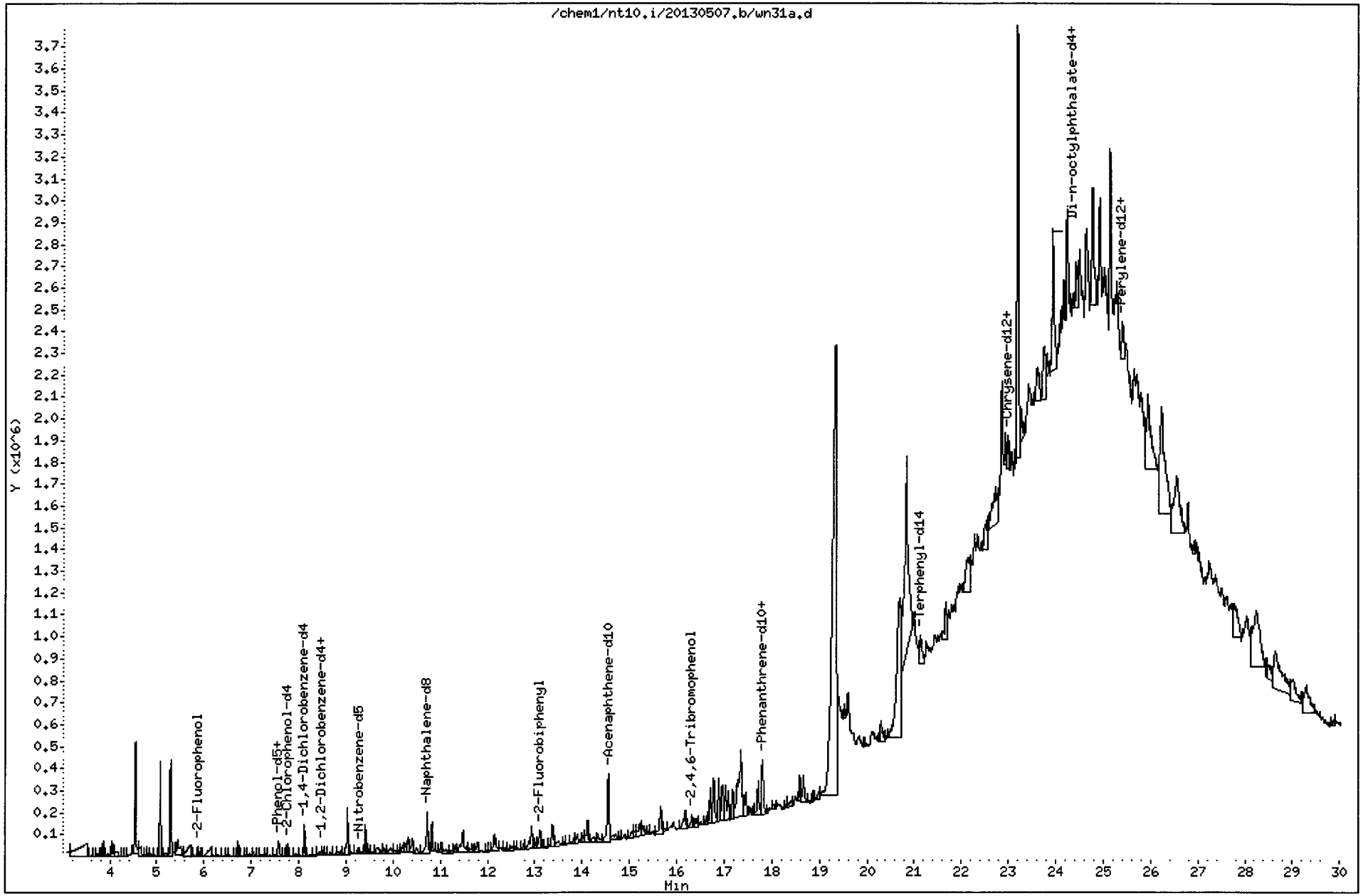
RECOVERY REPORT

Client Name: SAIC
Client SDG: WN31
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN31A
Client Smp ID: ES-TS-INF-20130424-
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/20130507.b/ABN.m
Misc Info: 13-8693

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	6256	3608	57.68	30-160
$ 2 Phenol-d5	6256	3883	62.08	30-160
$ 5 2-Chlorophenol-d4	6256	3984	63.69	30-160
$ 10 1,2-Dichlorobenzen	4170	2539	60.88	30-160
$ 18 Nitrobenzene-d5	4170	2519	60.40	30-160
$ 36 2-Fluorobiphenyl	4170	2858	68.52	30-160
$ 55 2,4,6-Tribromophen	6256	4388	70.14	30-160
$ 66 Terphenyl-d14	4170	2852	68.39	30-160

Data File: /chem1/nt10.i/20130507.b/wn31a.d
Date : 07-MAY-2013 21:06
Client ID: ES-TS-INF-20130424-
Sample Info: WN31A,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/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

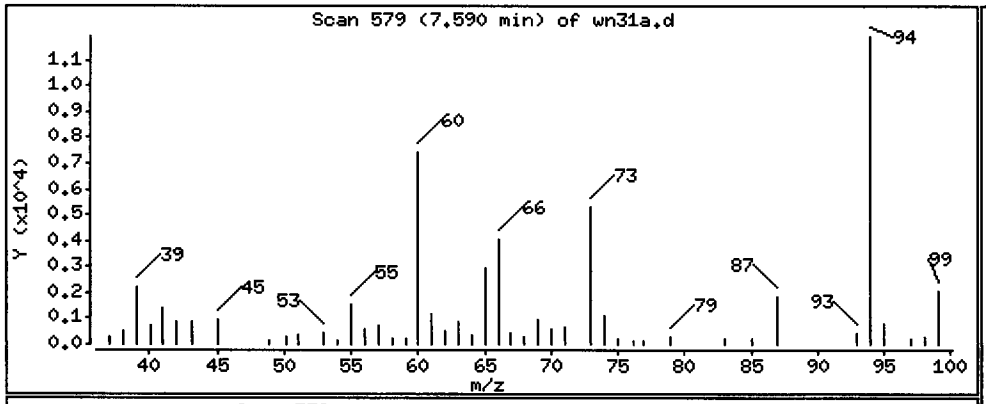
Operator: VTS/YZ

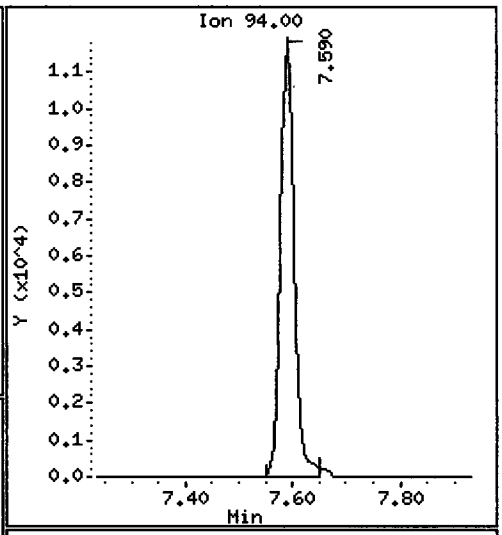
Column phase: ZB-5msi

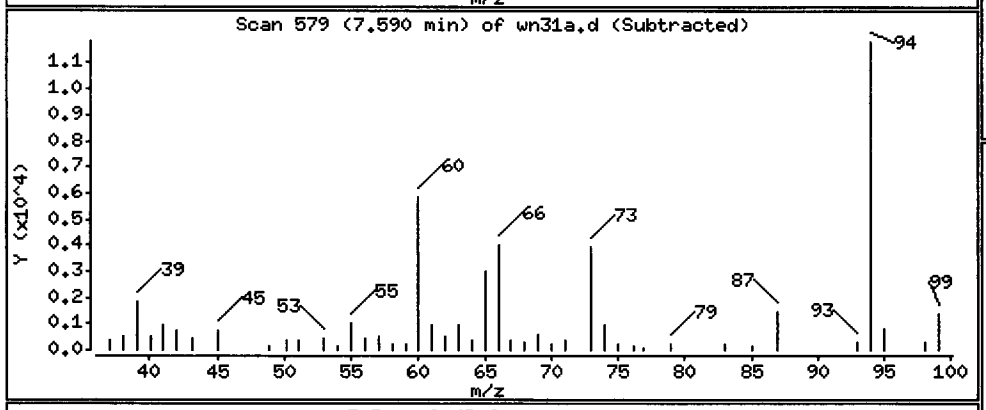
Column diameter: 0.25

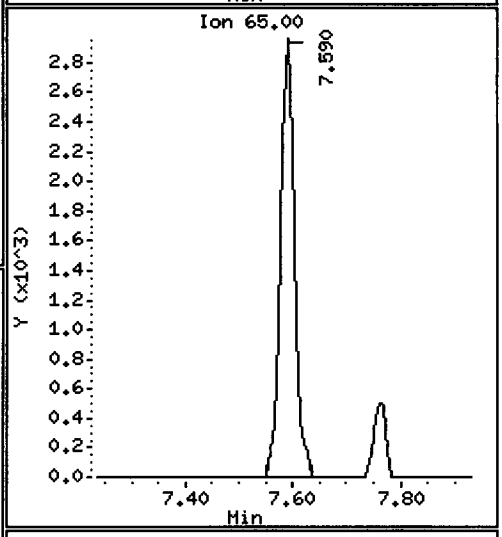
3 Phenol

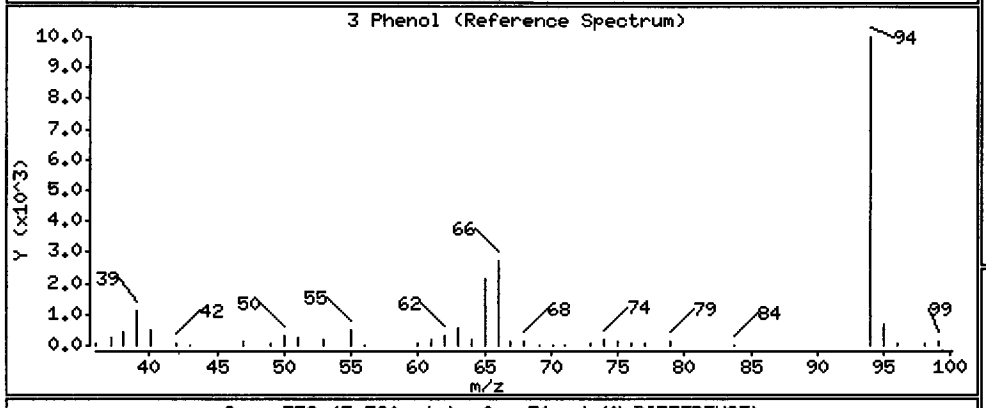
Concentration: 2370 ug/kg

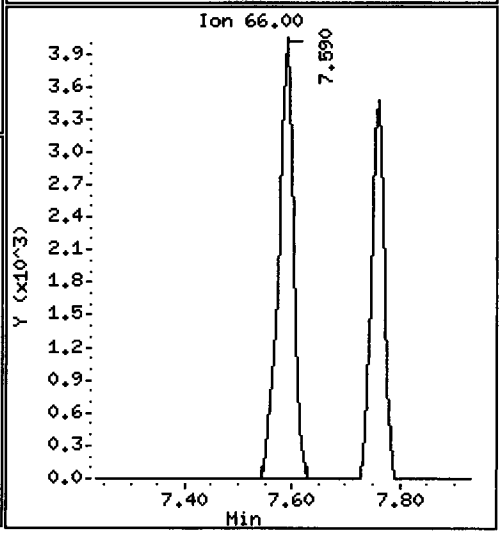


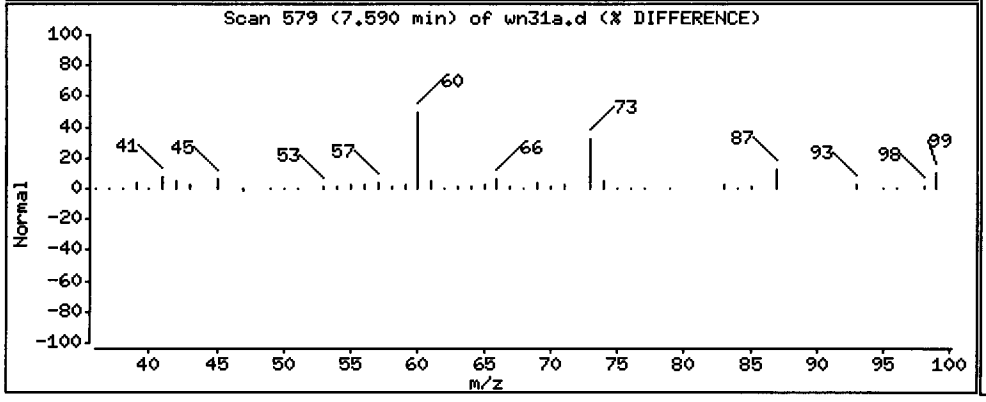












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

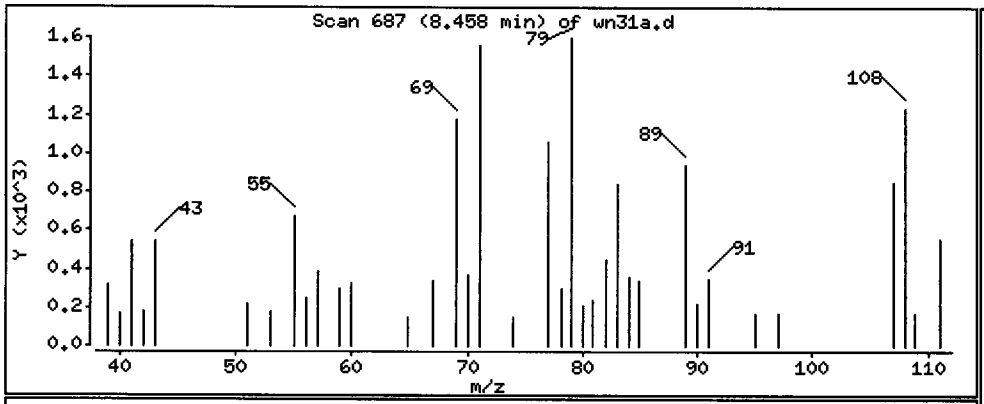
Operator: VTS/YZ

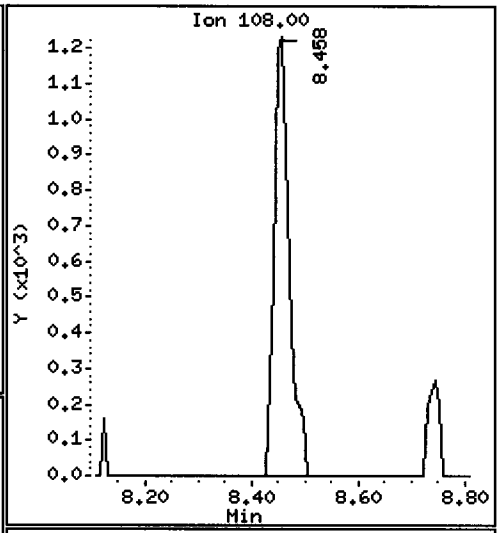
Column phase: ZB-5msi

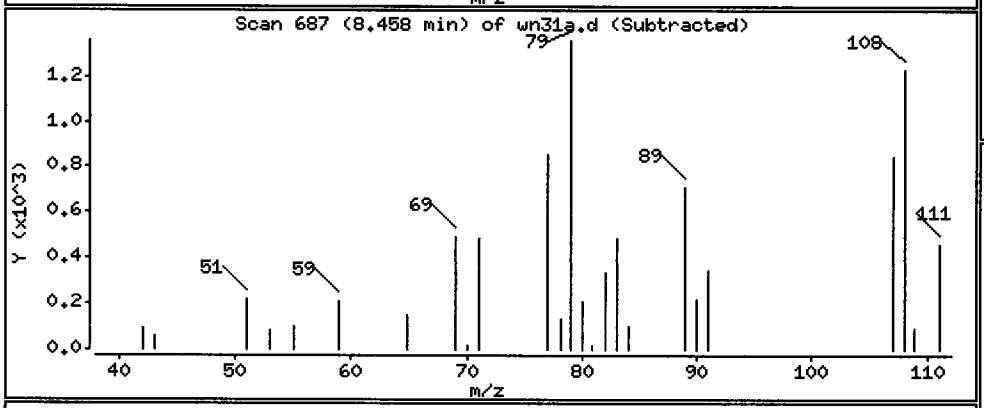
Column diameter: 0.25

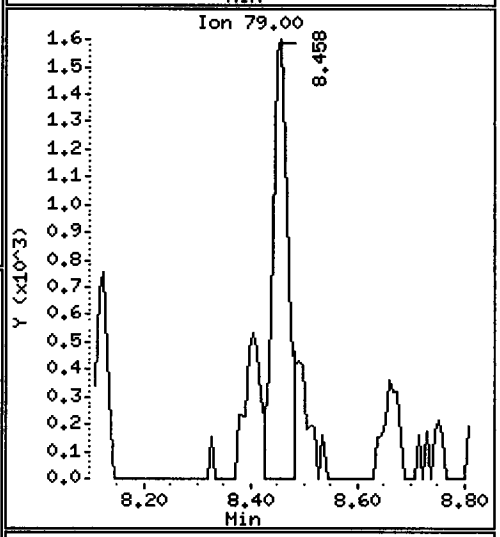
11 Benzyl alcohol

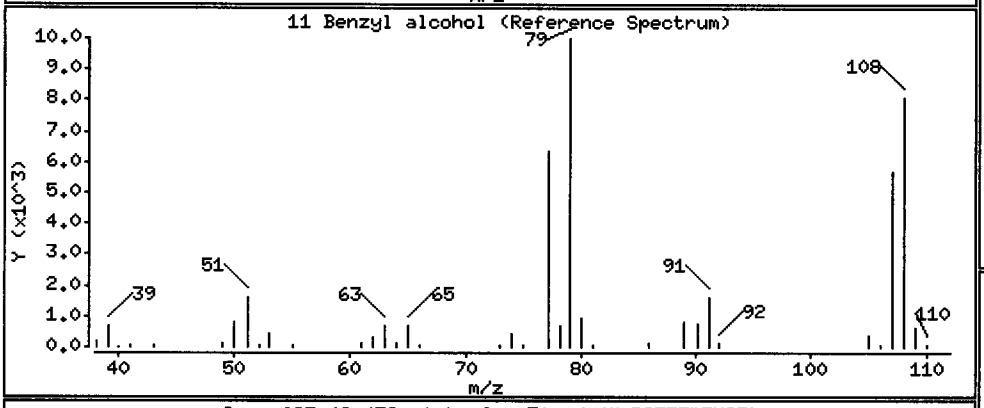
Concentration: 664.2 ug/kg

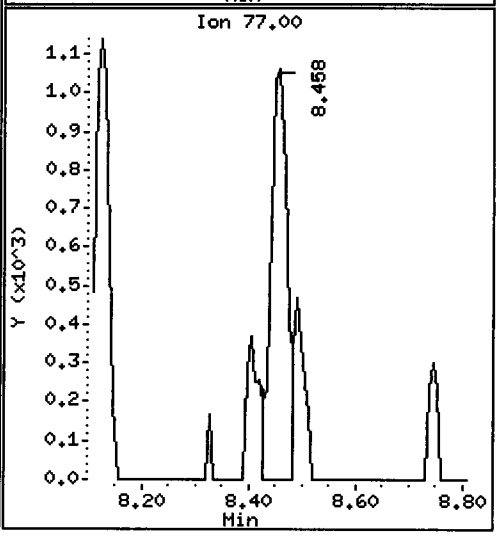


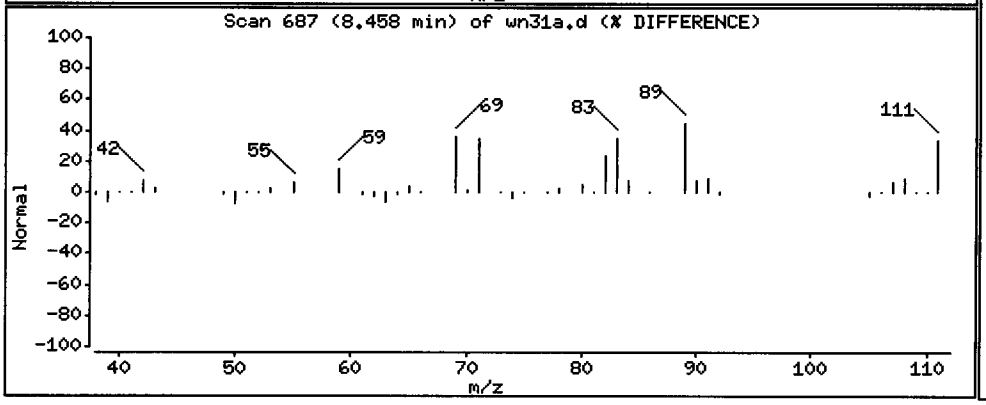












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

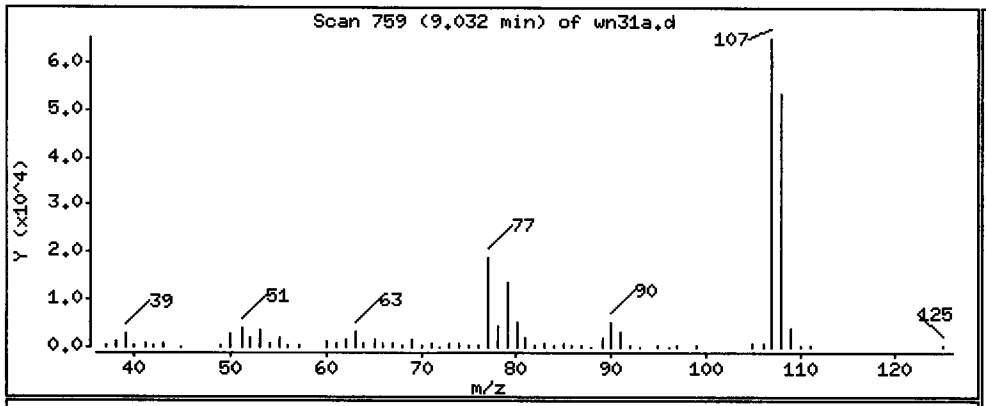
Operator: VTS/YZ

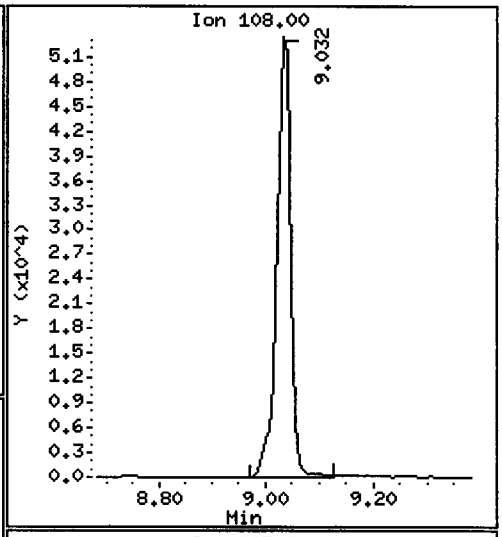
Column phase: ZB-5msi

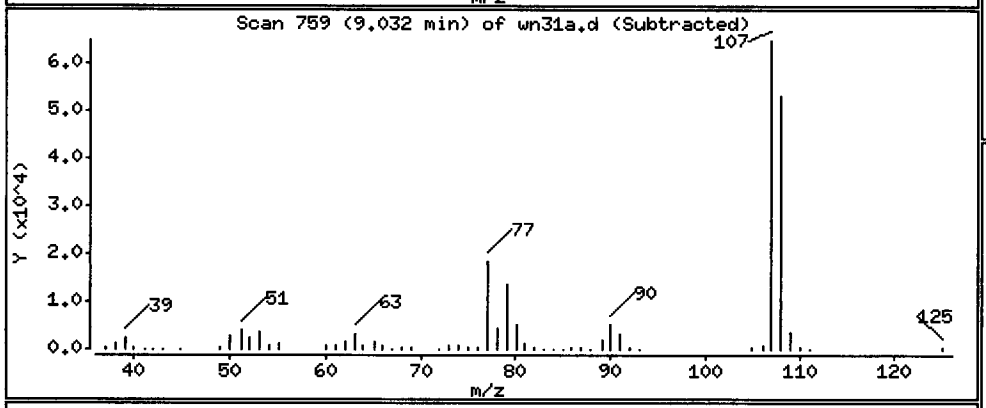
Column diameter: 0.25

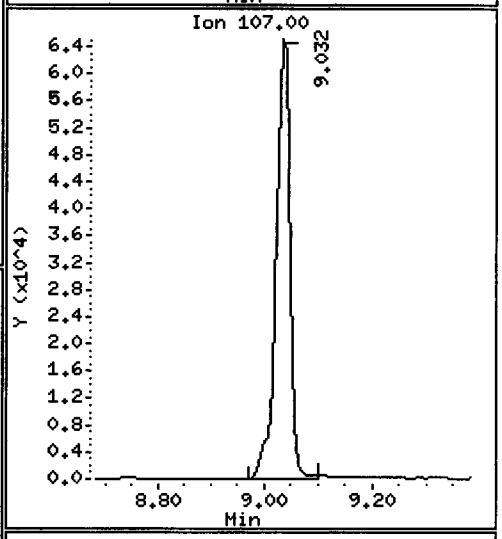
15 4-Methylphenol

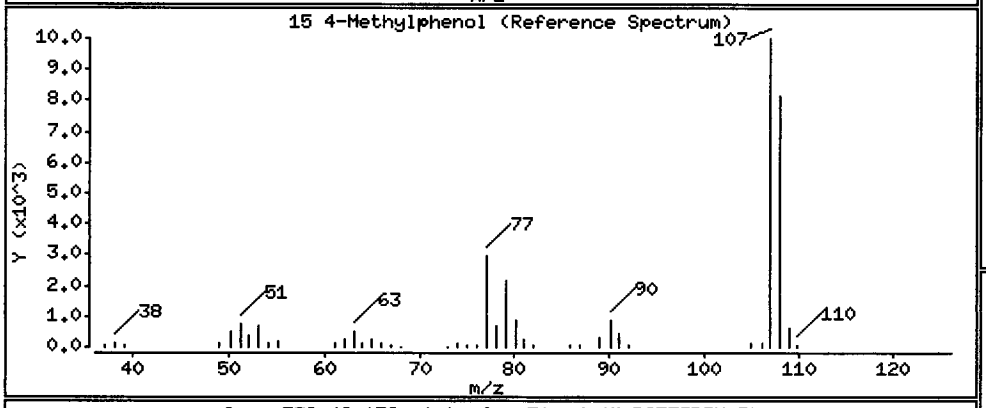
Concentration: 15070 ug/kg

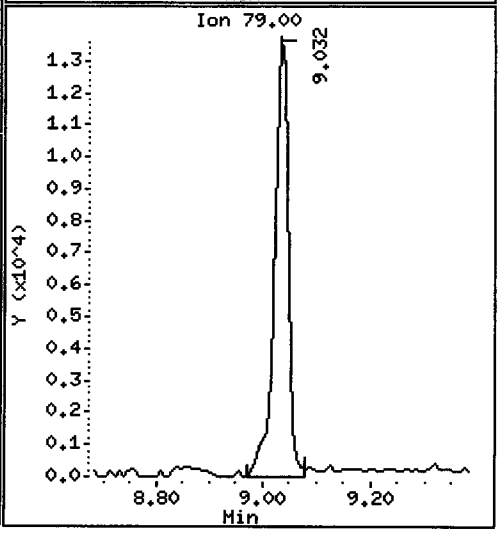


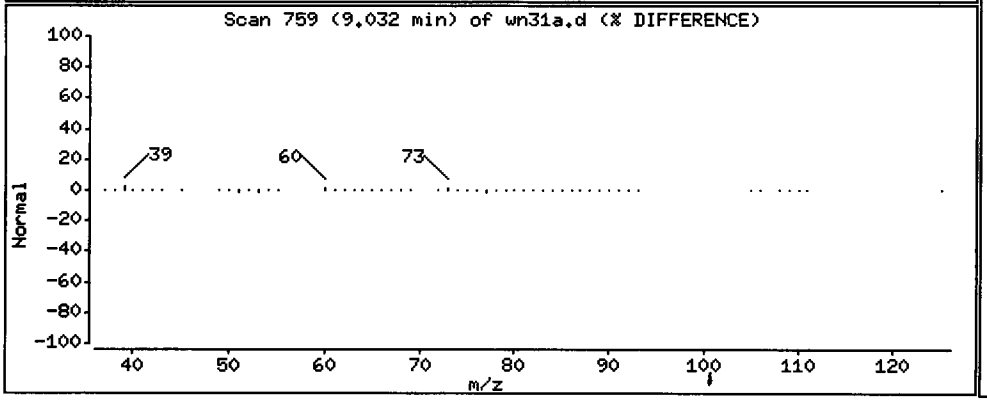












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

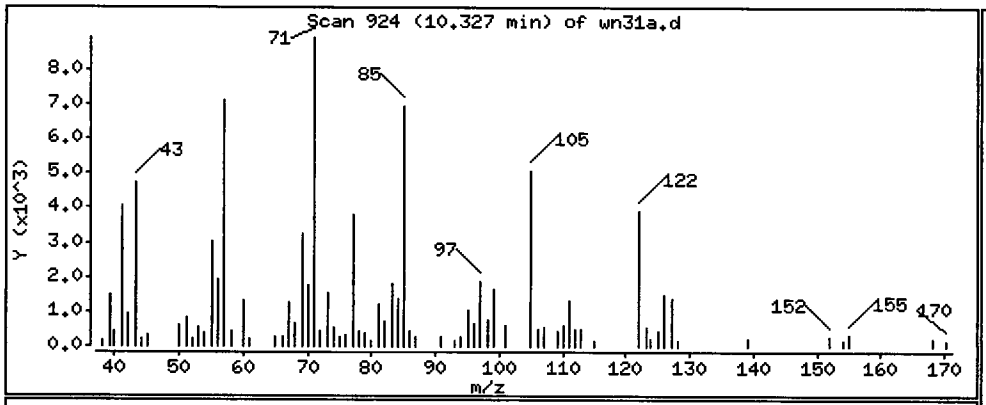
Operator: VTS/YZ

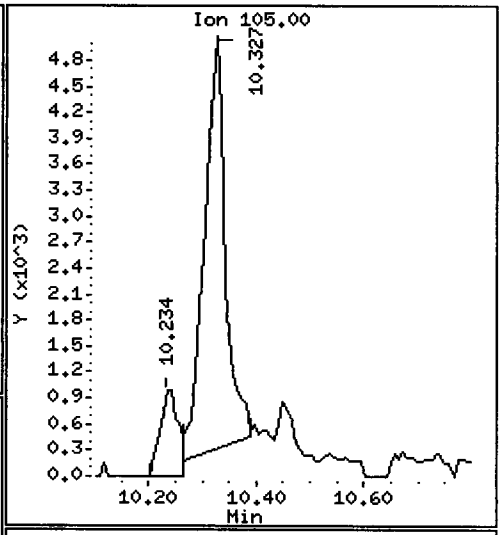
Column phase: ZB-5msi

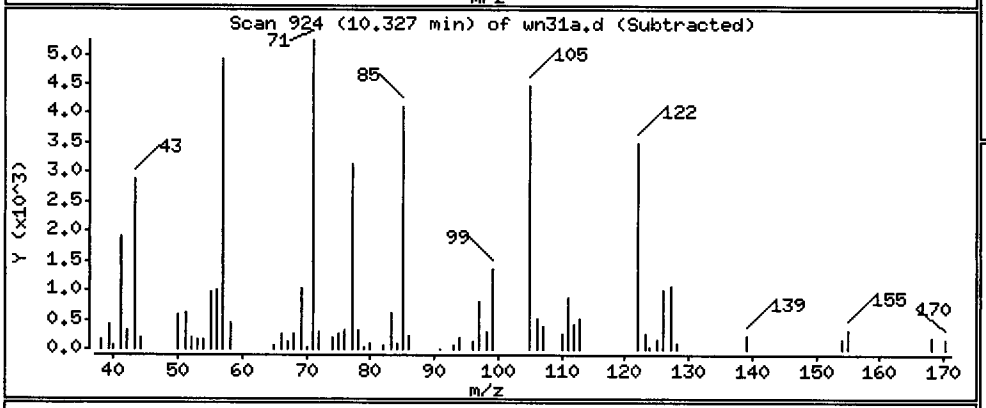
Column diameter: 0.25

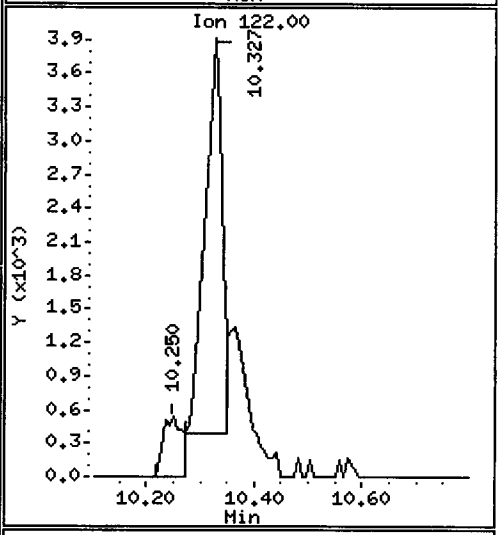
24 Benzoic acid

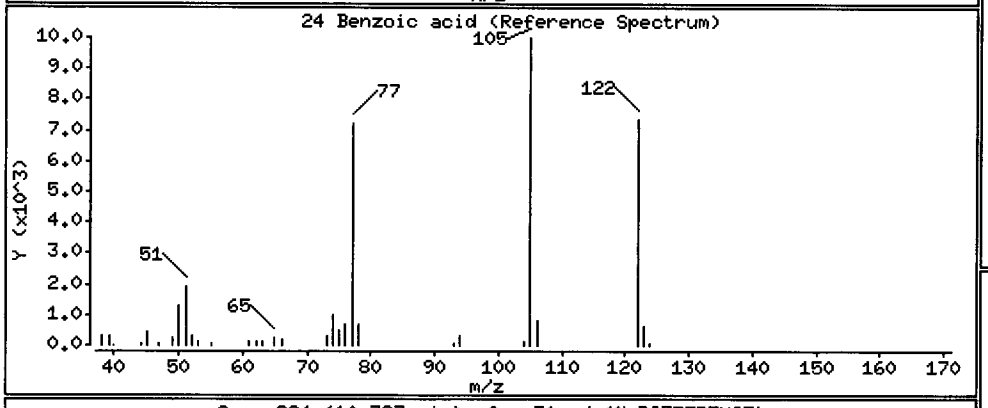
Concentration: 2404 ug/kg

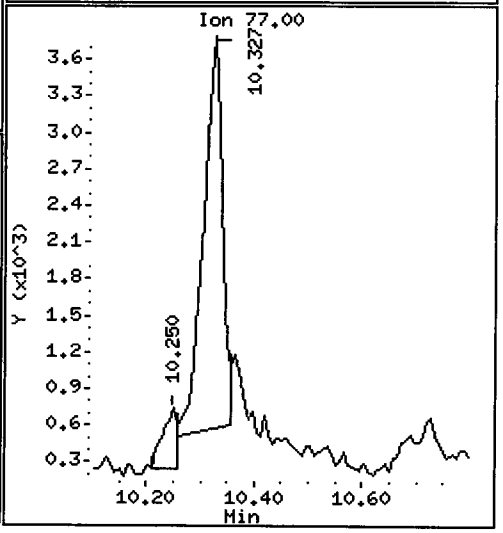


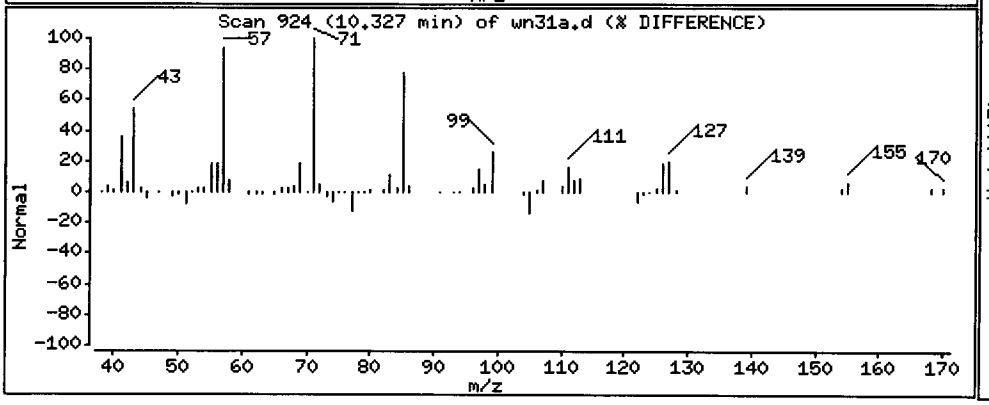












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

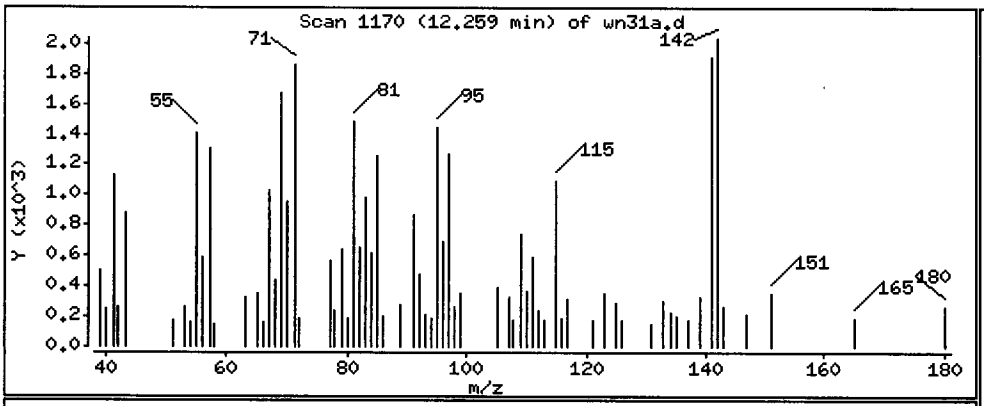
Operator: VTS/YZ

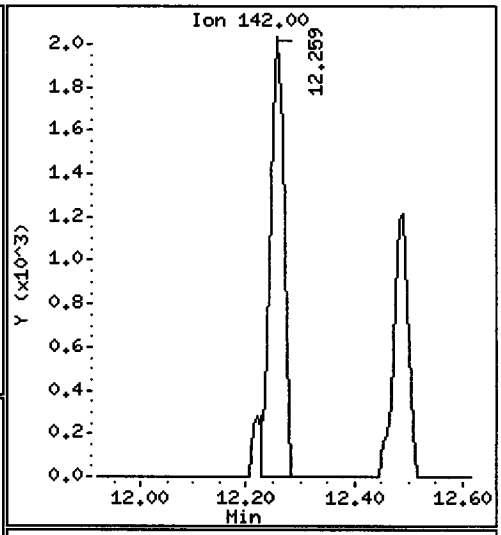
Column phase: ZB-5msi

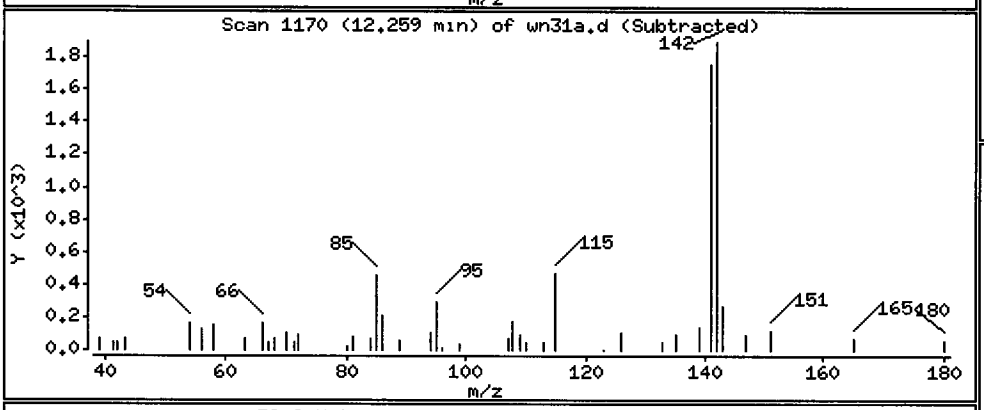
Column diameter: 0.25

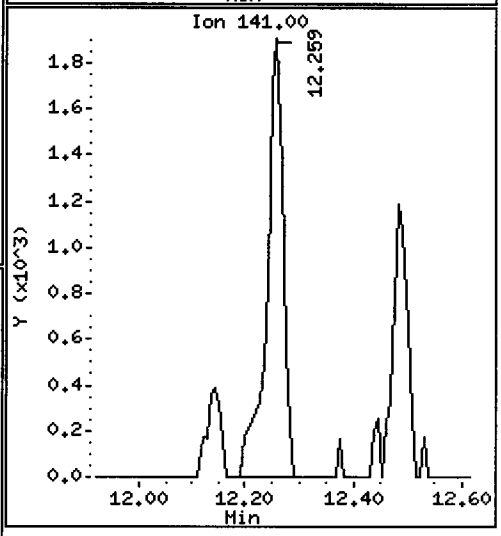
32 2-Methylnaphthalene

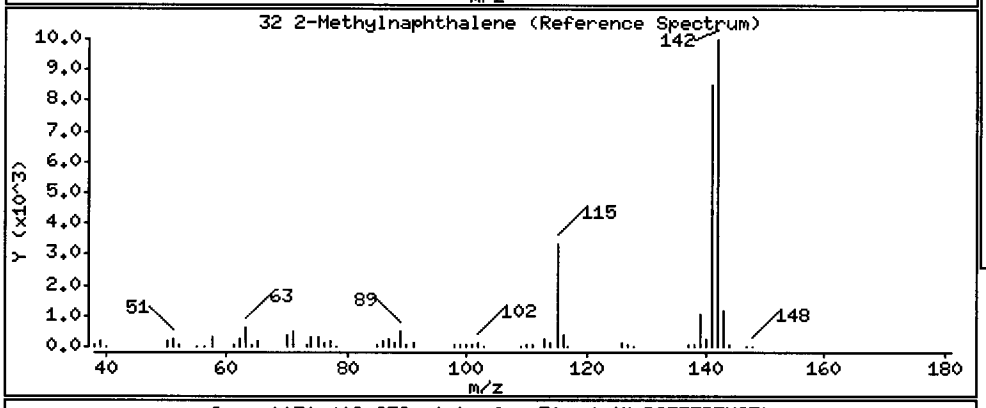
Concentration: 309.2 ug/kg

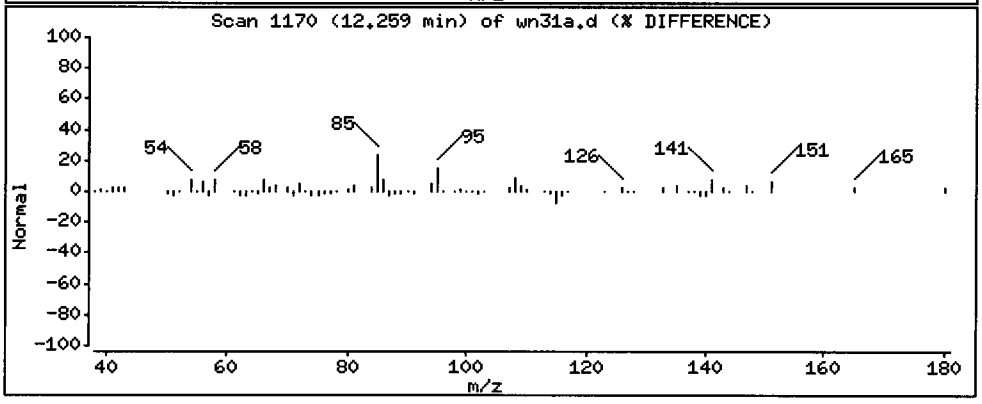












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

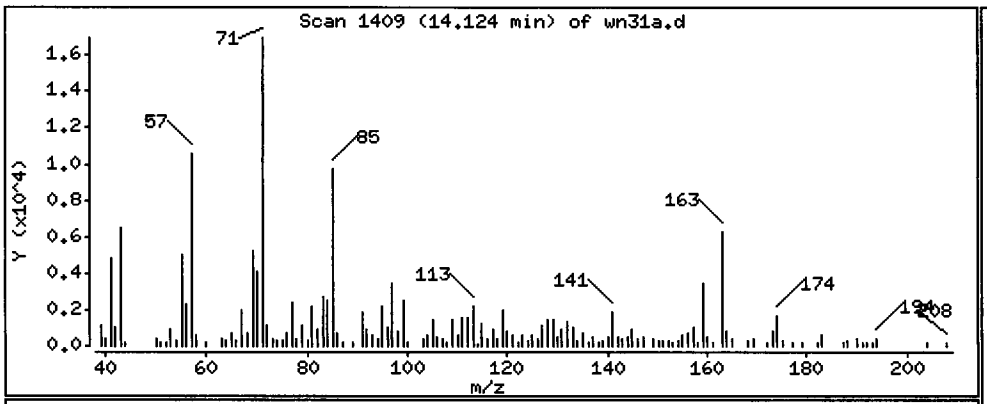
Operator: VTS/YZ

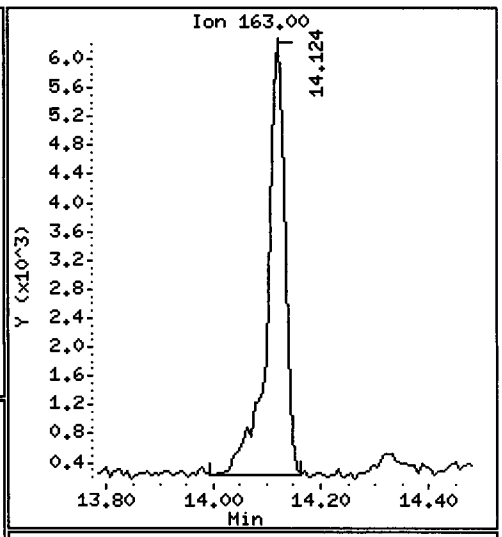
Column phase: ZB-5msi

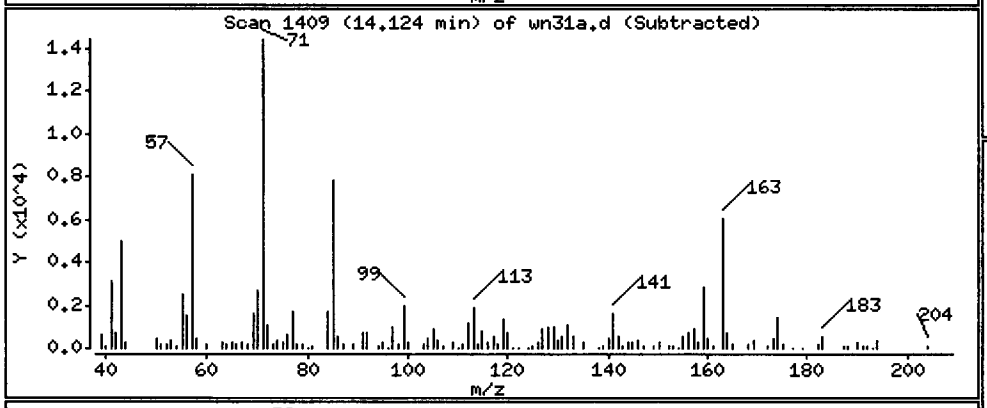
Column diameter: 0.25

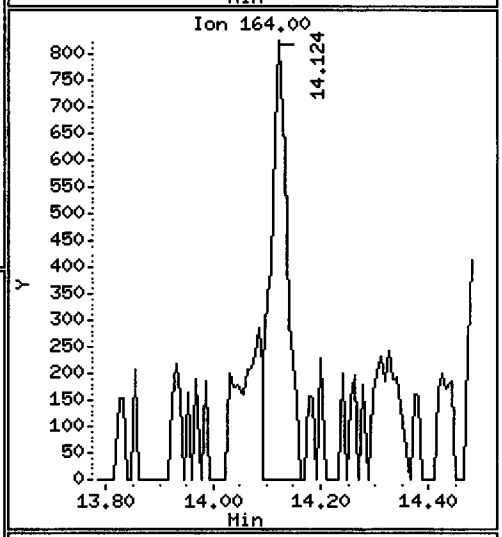
39 Dimethylphthalate

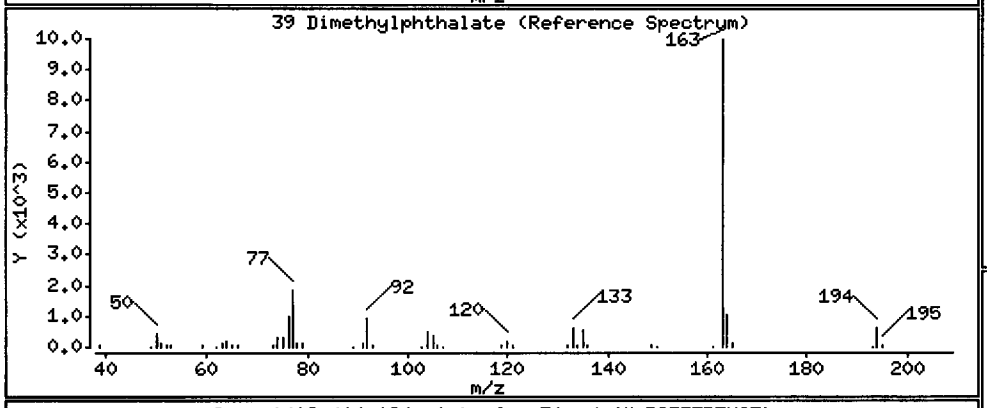
Concentration: 1277 ug/kg

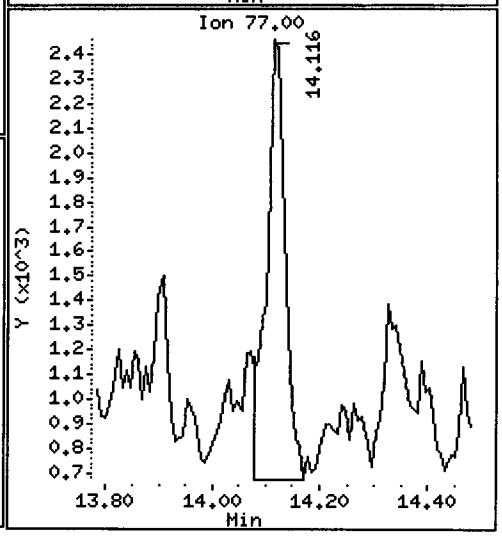


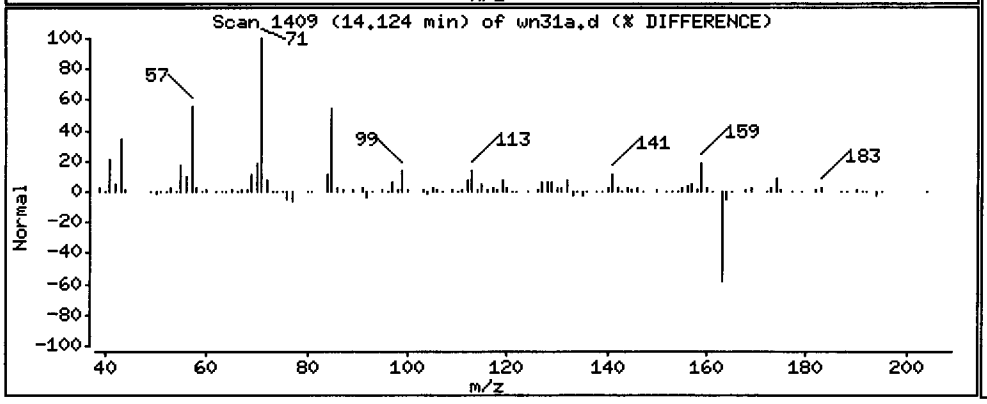












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

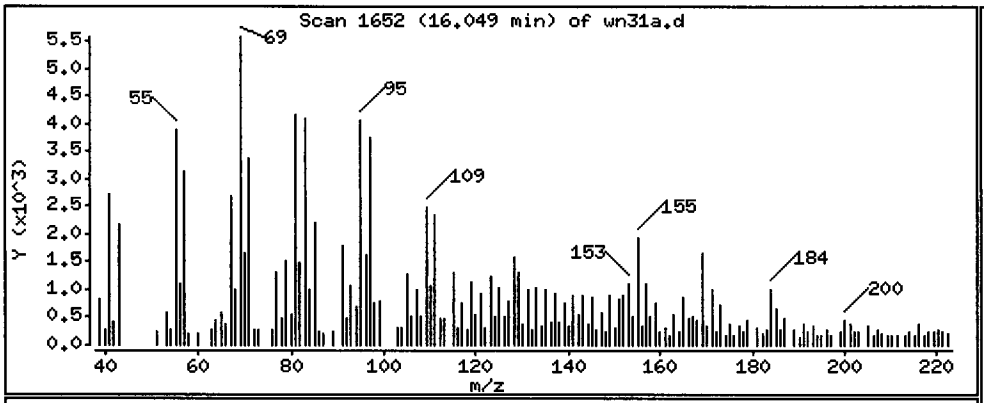
Operator: VTS/YZ

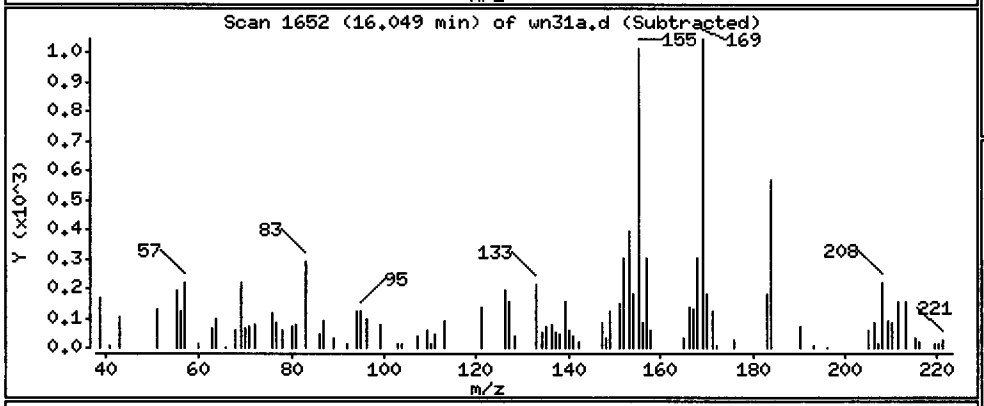
Column phase: ZB-5msi

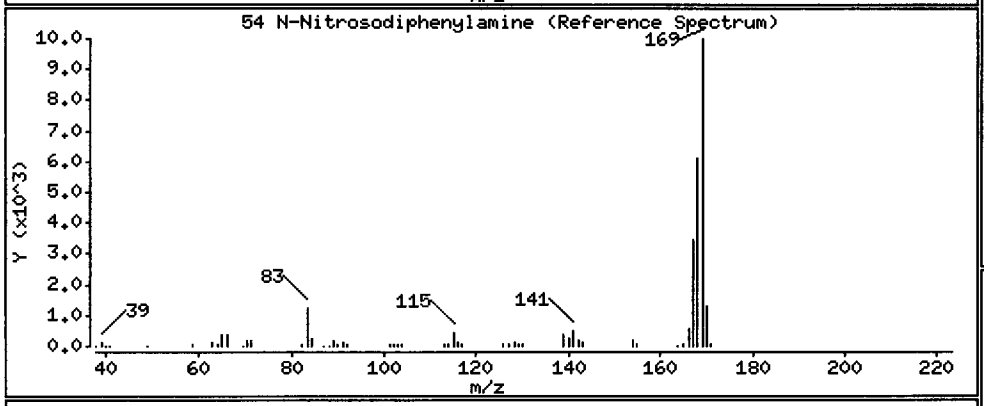
Column diameter: 0.25

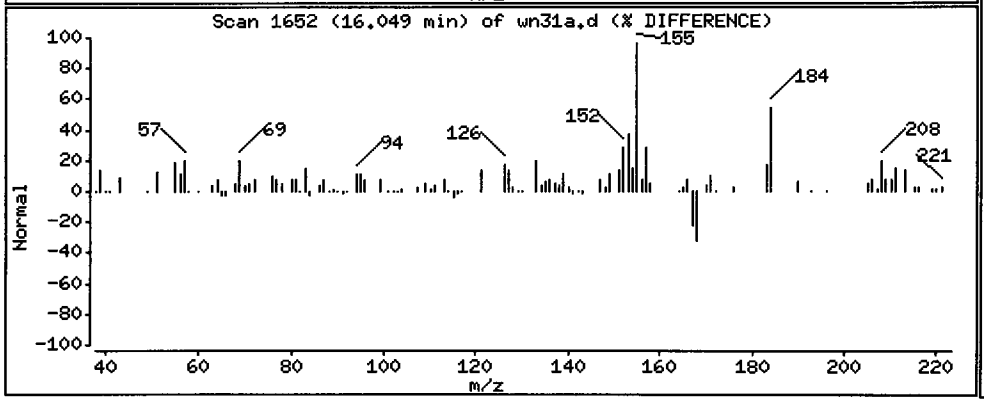
54 N-Nitrosodiphenylamine

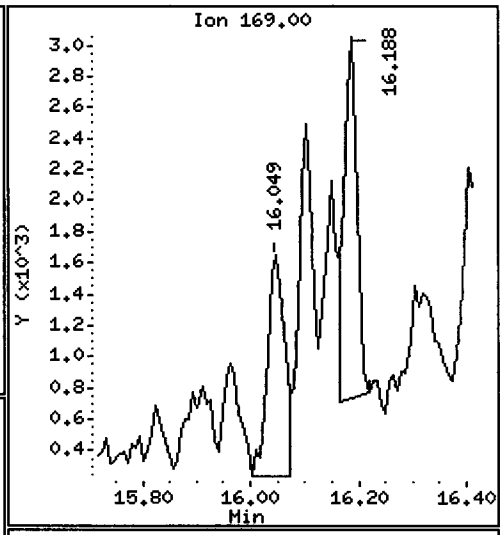
Concentration: 437.8 ug/kg

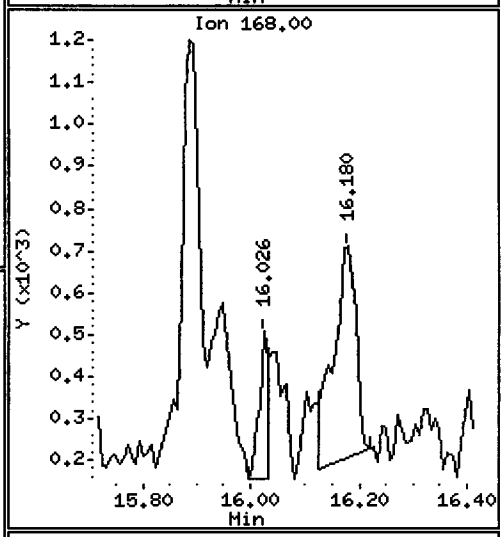


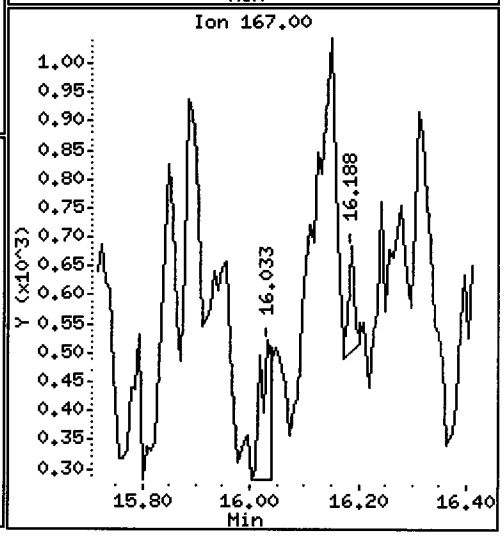












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

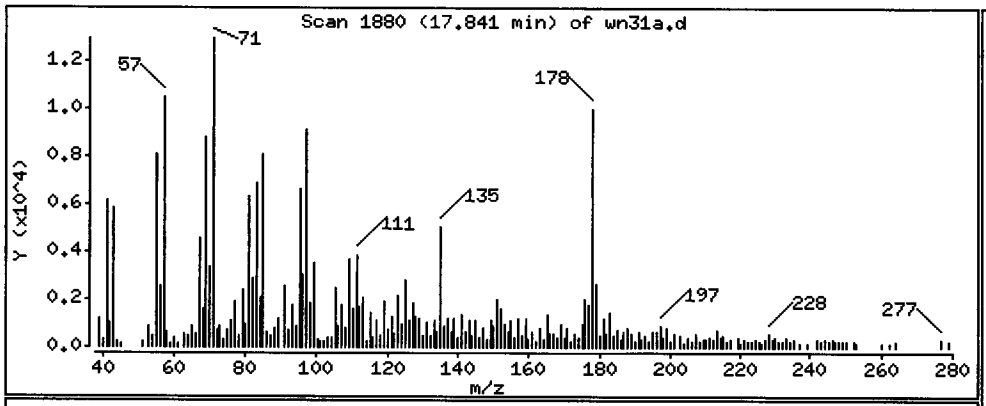
Operator: VTS/YZ

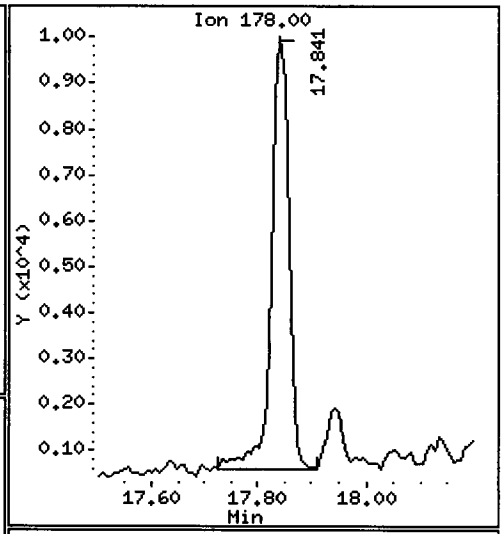
Column phase: ZB-5msi

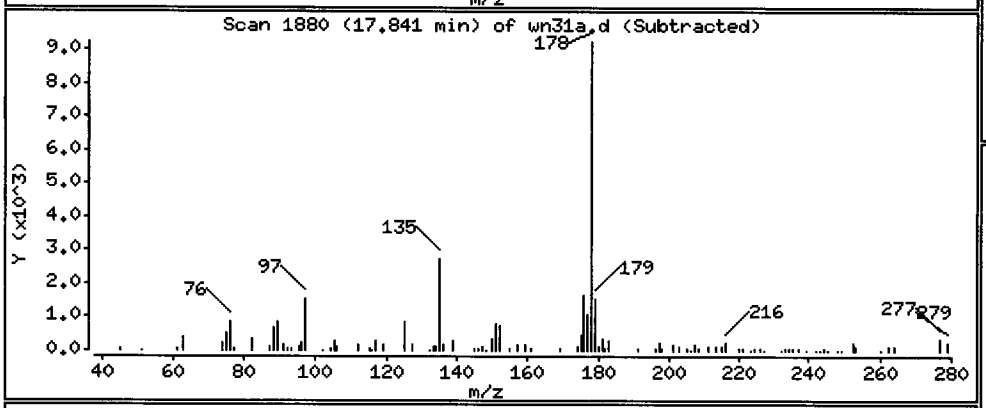
Column diameter: 0.25

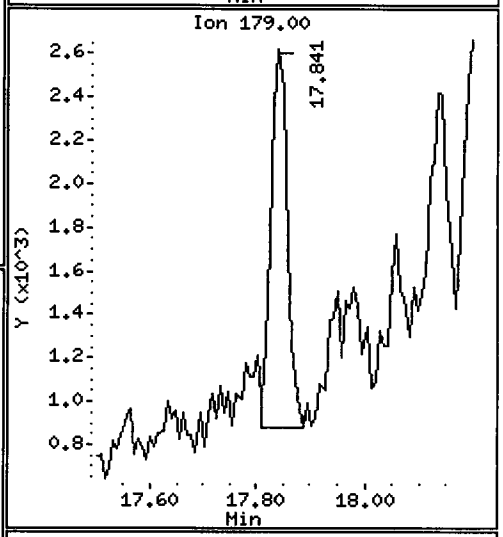
60 Phenanthrene

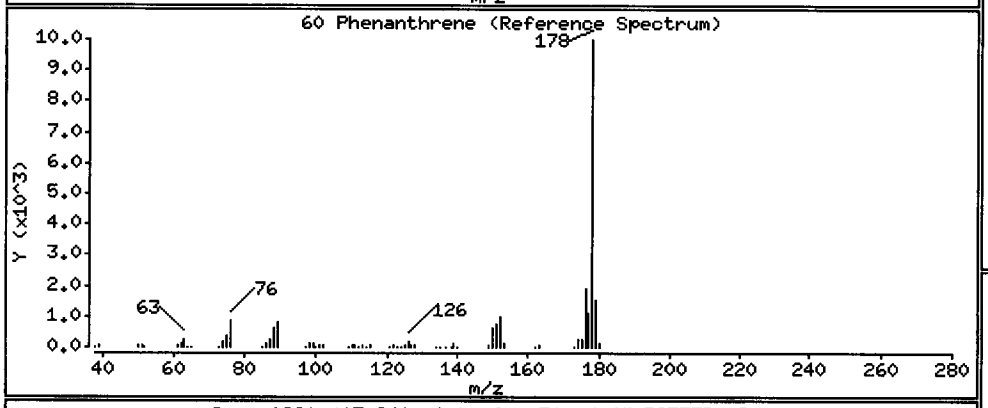
Concentration: 1219 ug/kg

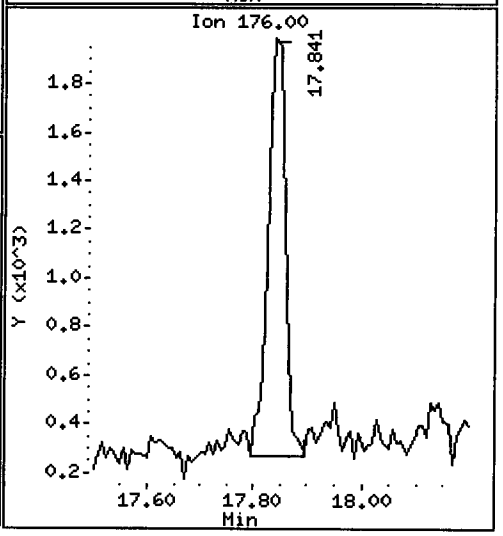


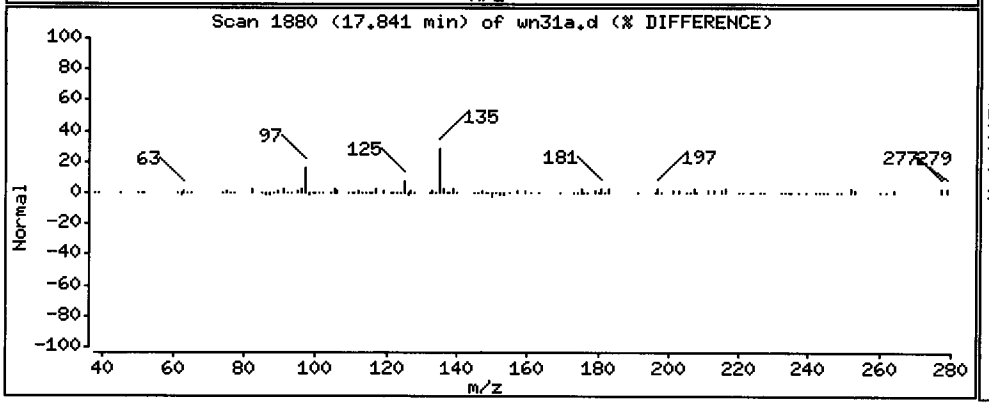












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

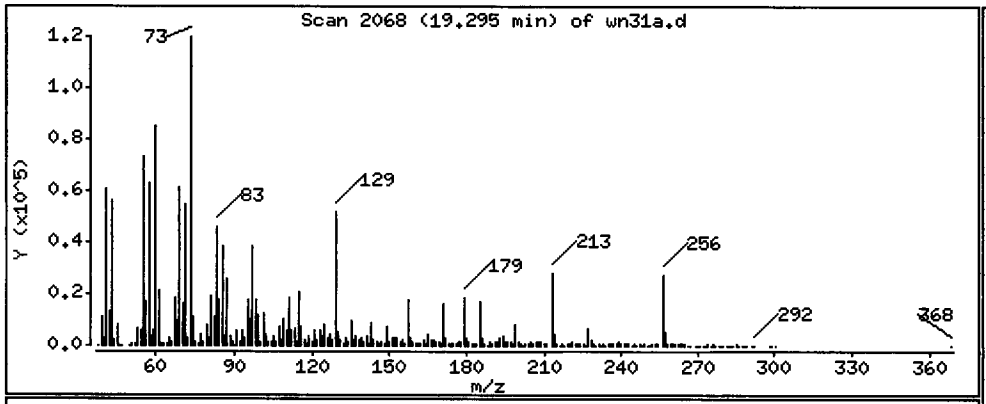
Operator: VTS/YZ

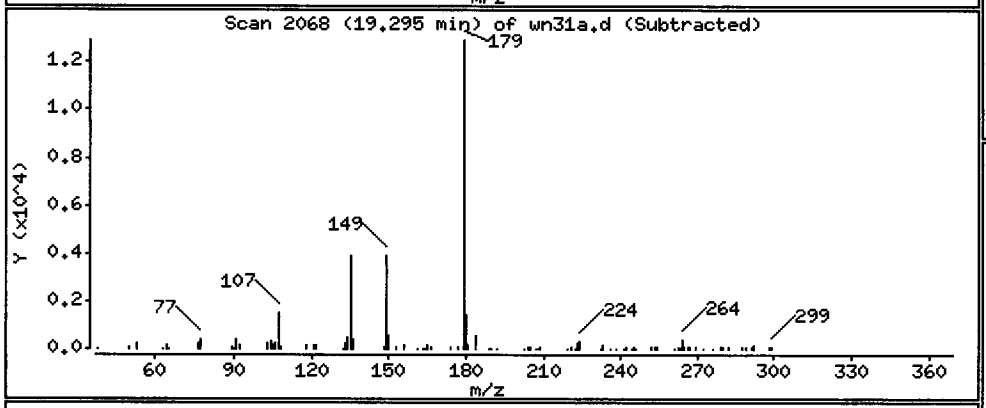
Column phase: ZB-5msi

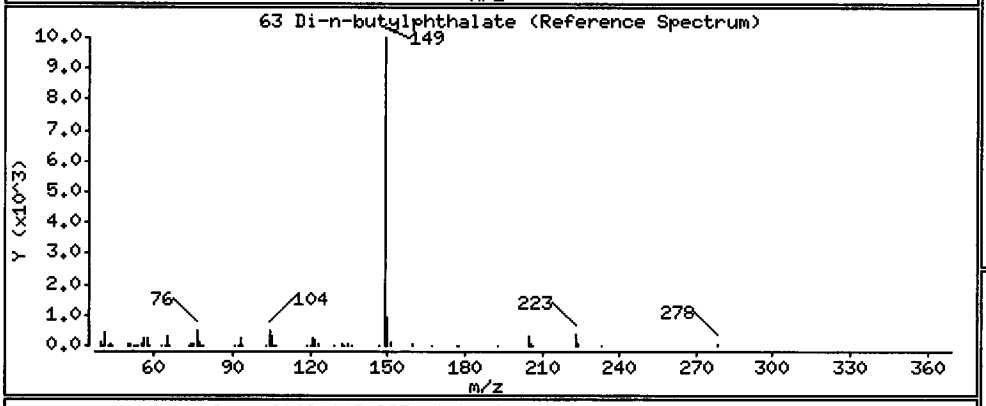
Column diameter: 0.25

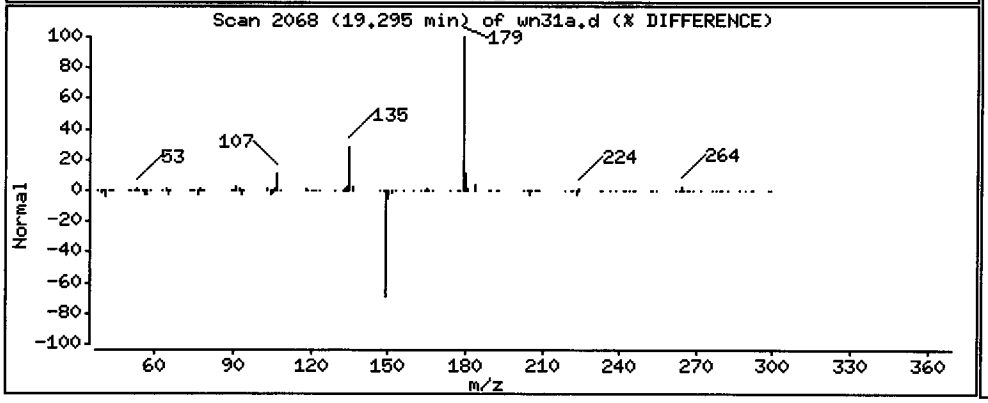
63 Di-n-butylphthalate

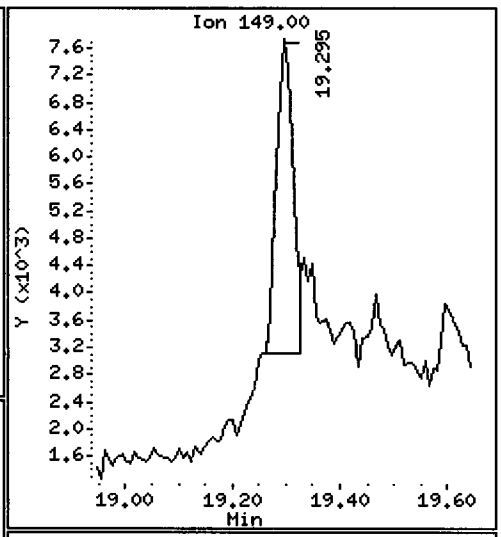
Concentration: 540.7 ug/kg

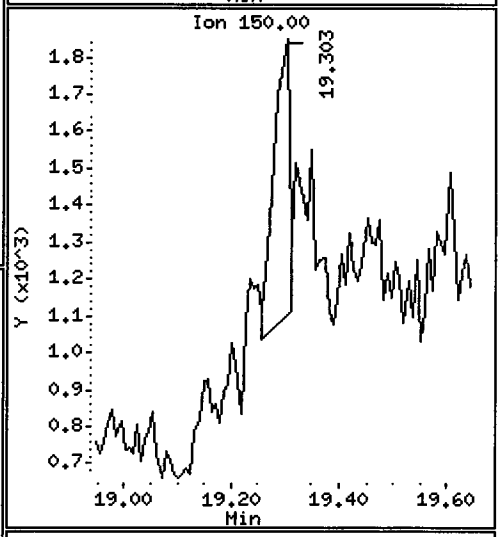


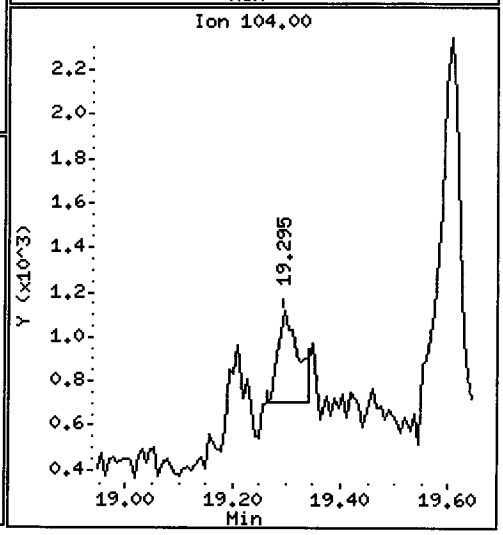












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

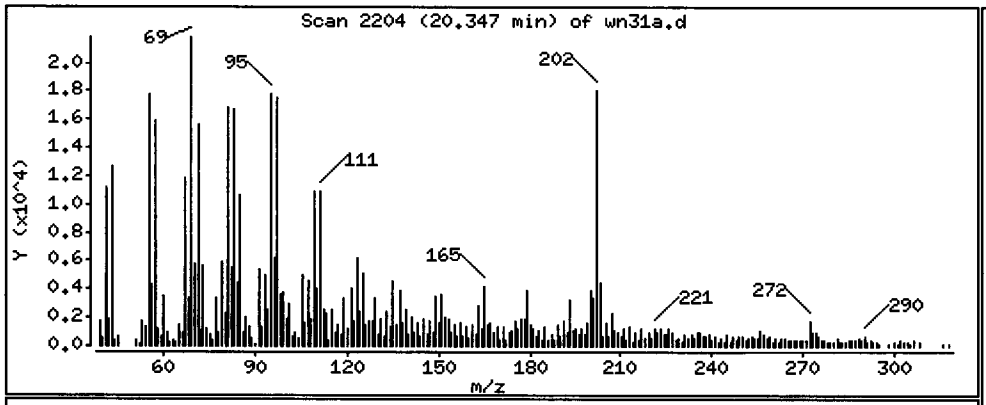
Operator: VTS/YZ

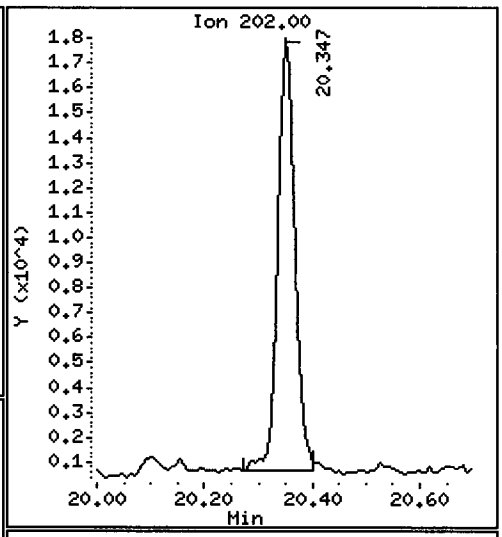
Column phase: ZB-5msi

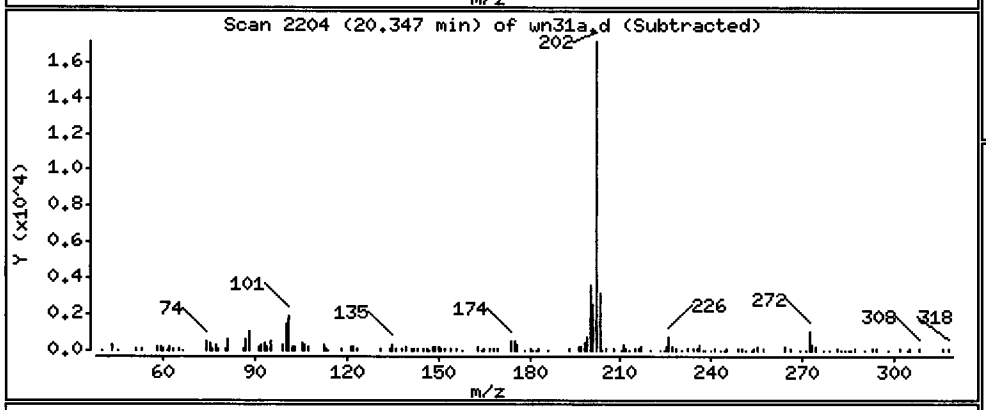
Column diameter: 0.25

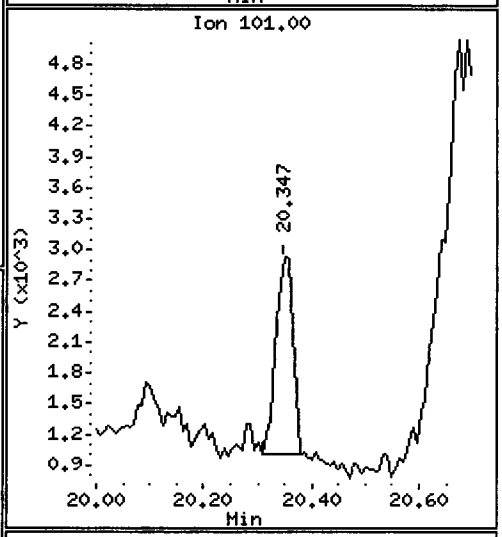
64 Fluoranthene

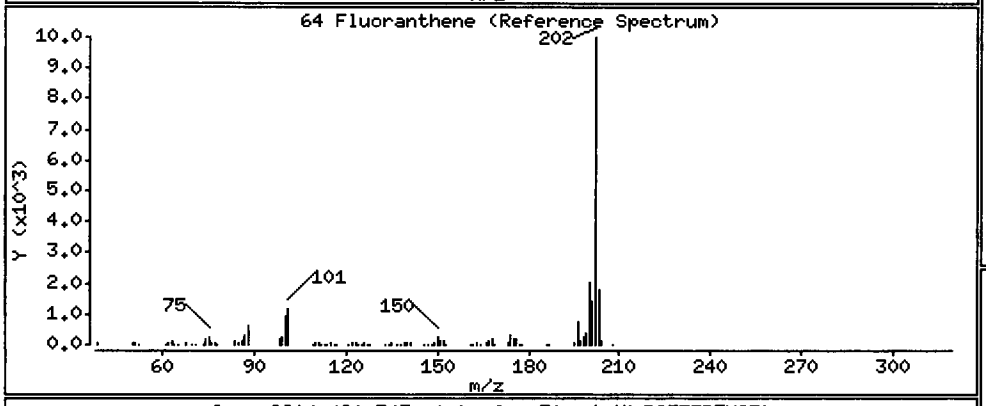
Concentration: 1859 ug/kg

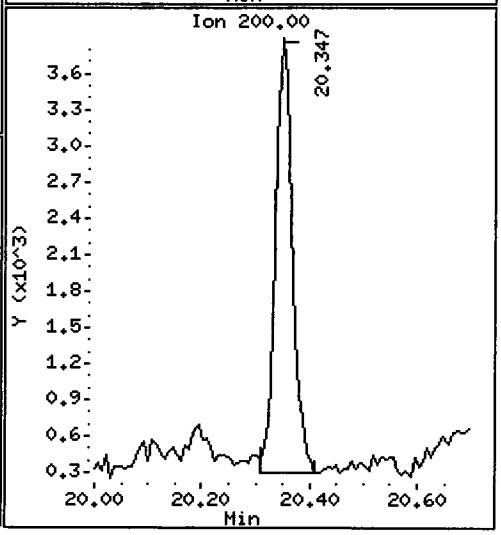


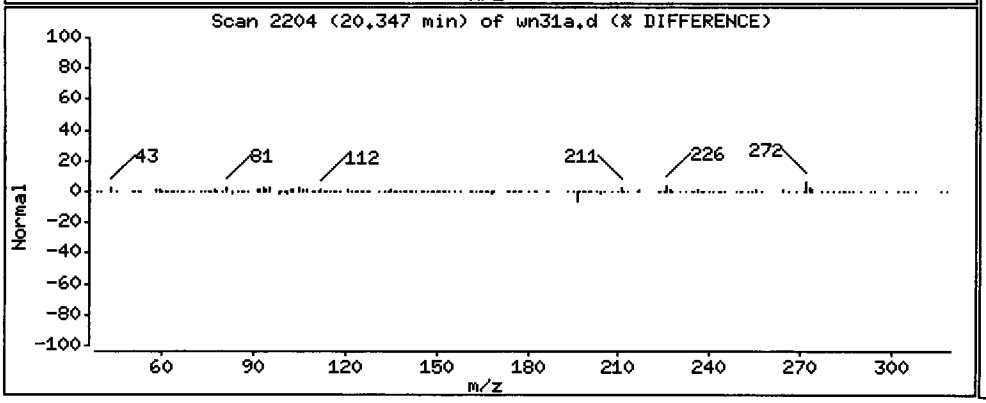












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

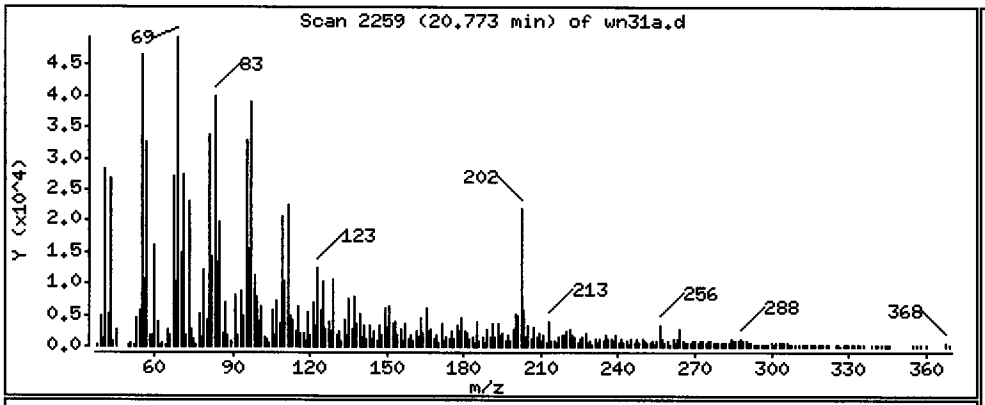
Operator: VTS/YZ

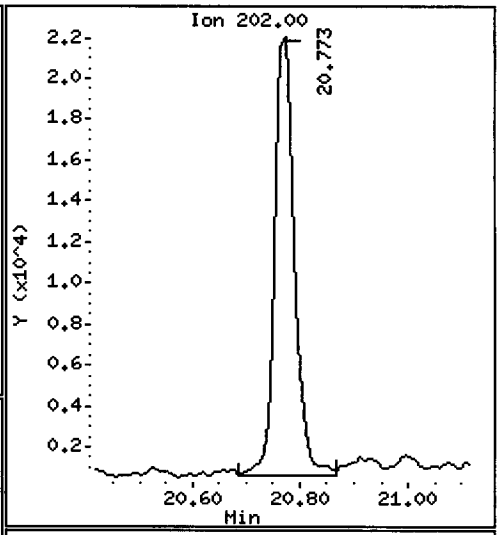
Column phase: ZB-5msi

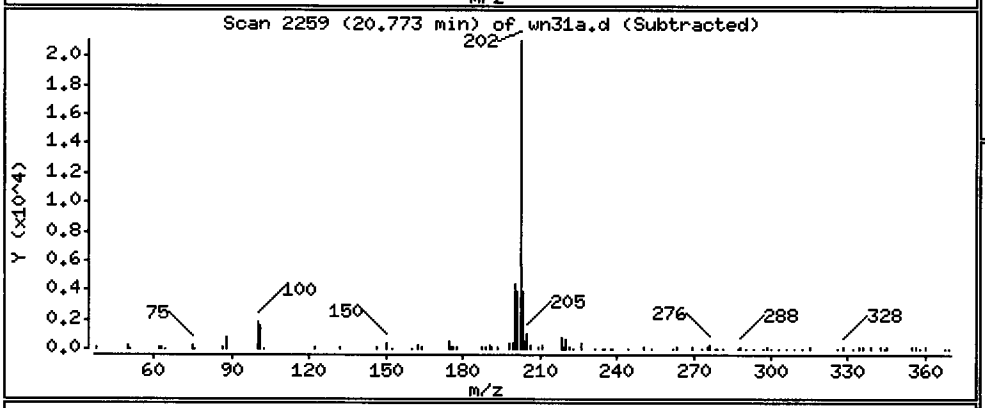
Column diameter: 0.25

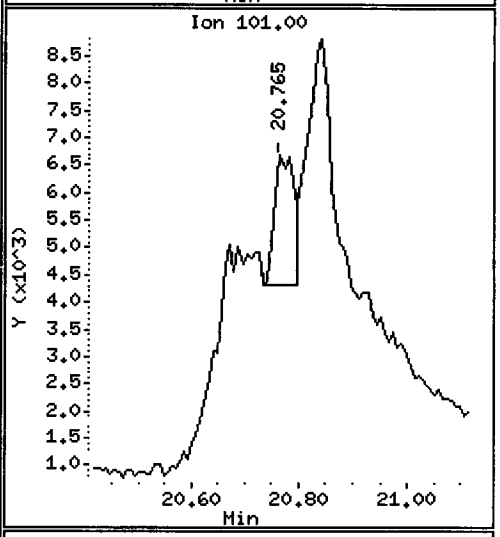
65 Pyrene

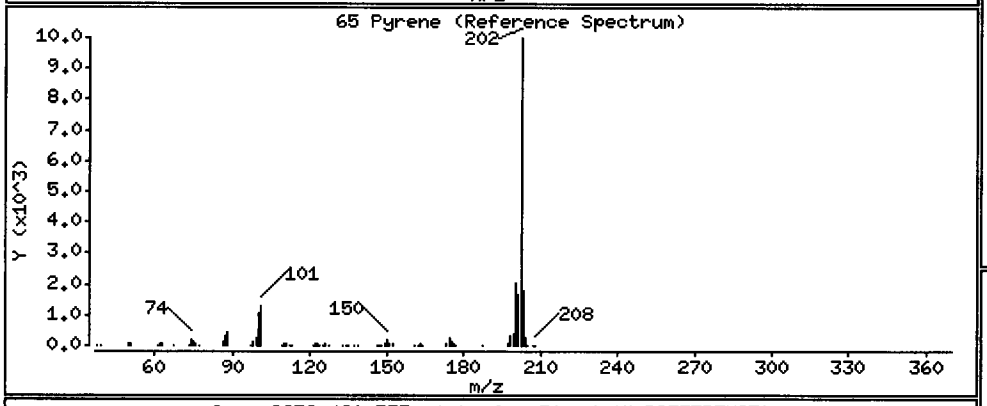
Concentration: 2597 ug/kg

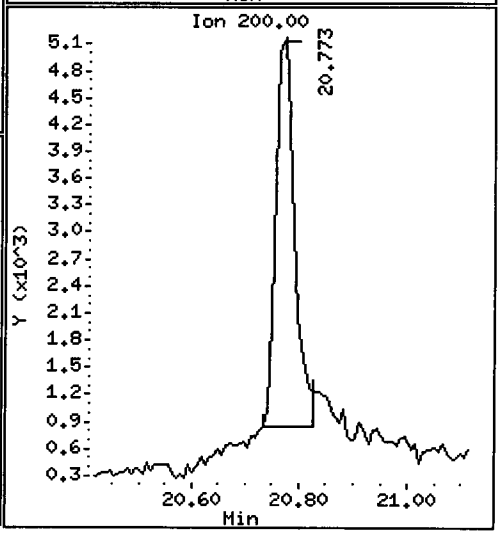


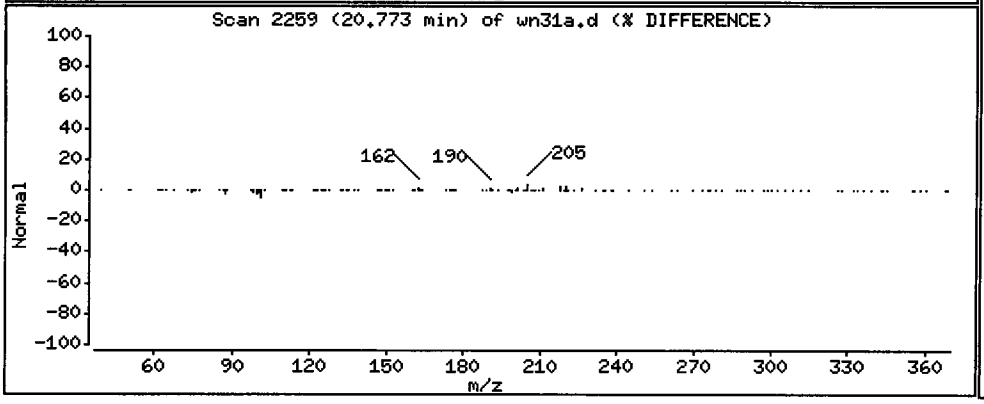












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

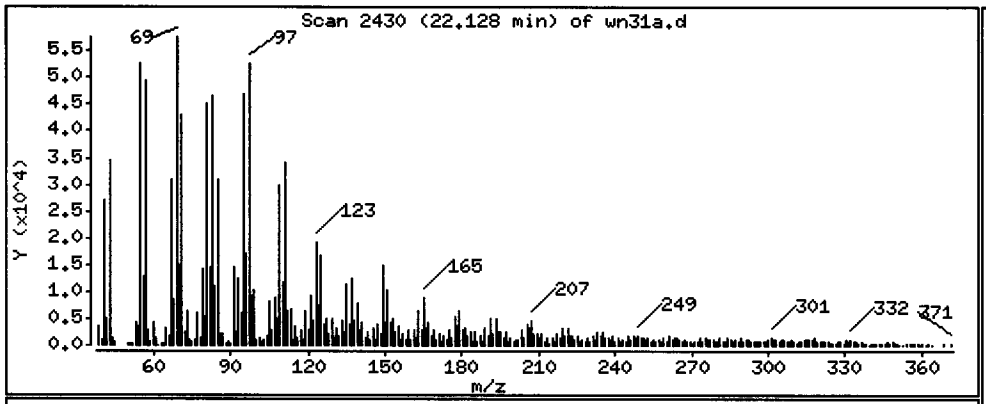
Operator: VTS/YZ

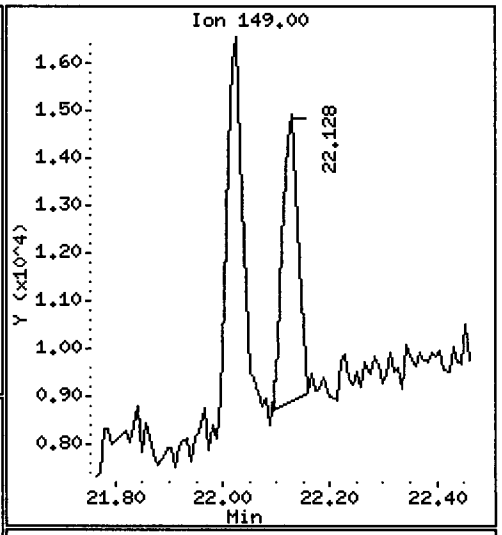
Column phase: ZB-5ms

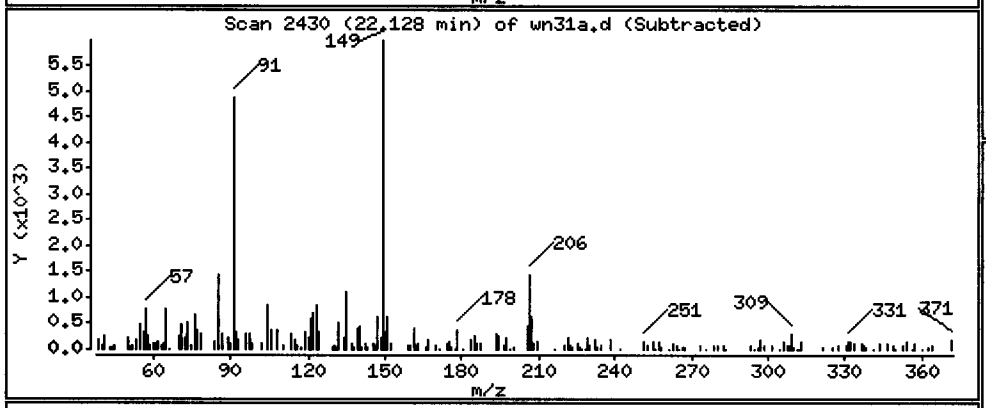
Column diameter: 0.25

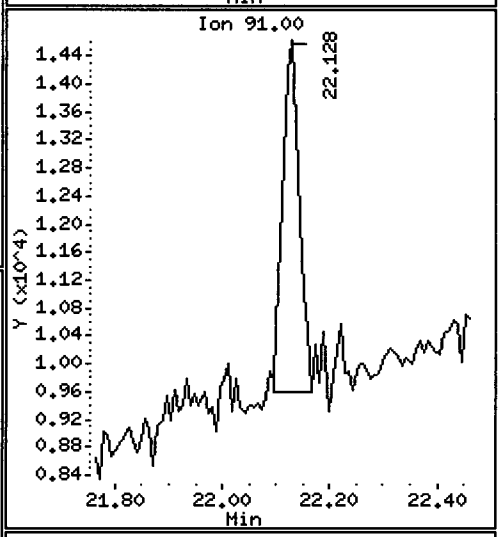
67 Butylbenzylphthalate

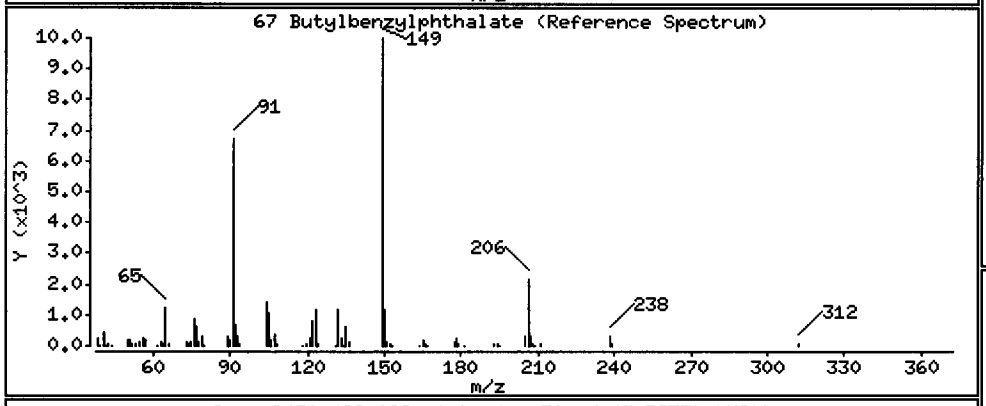
Concentration: 1681 ug/kg

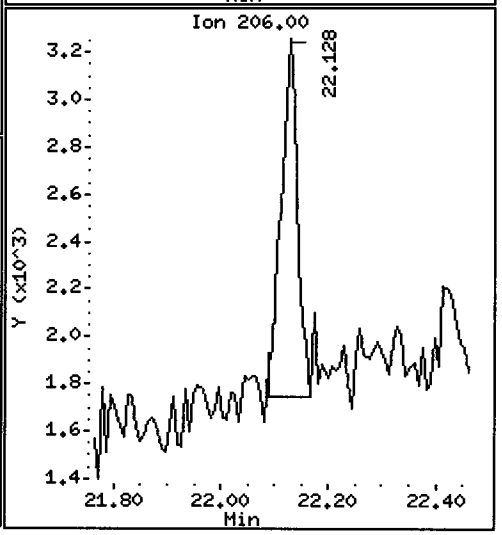


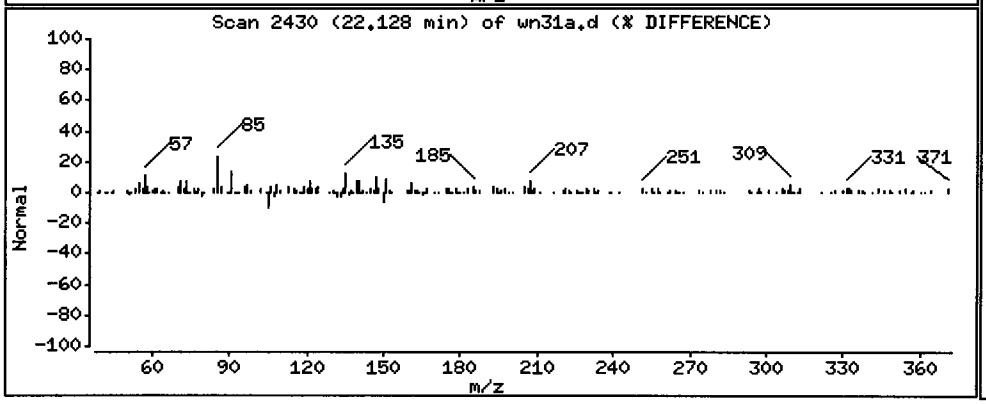












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

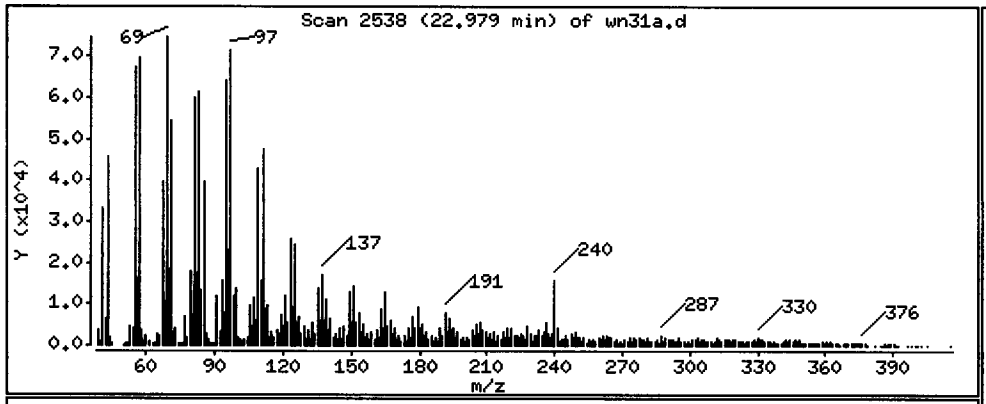
Operator: VTS/YZ

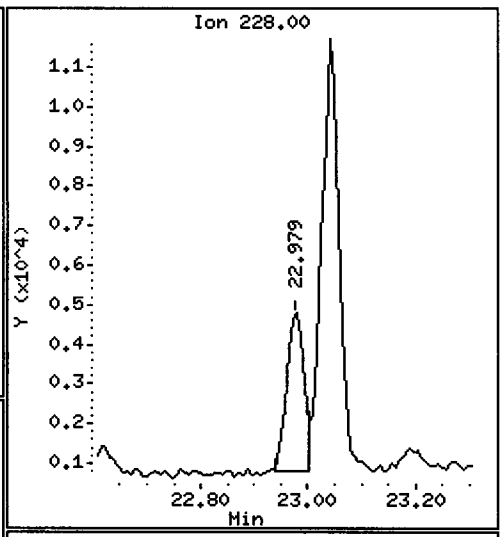
Column phase: ZB-5msi

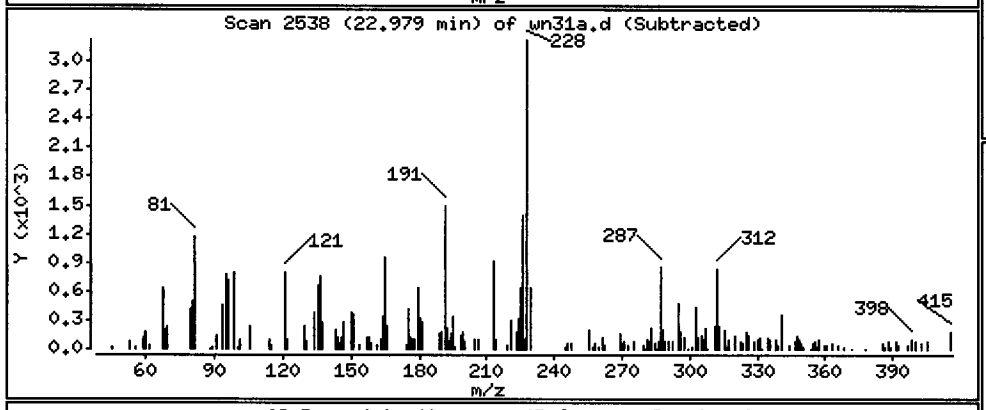
Column diameter: 0.25

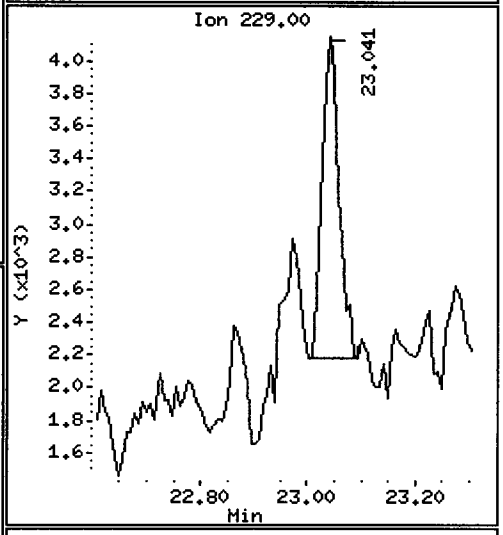
68 Benzo(a)anthracene

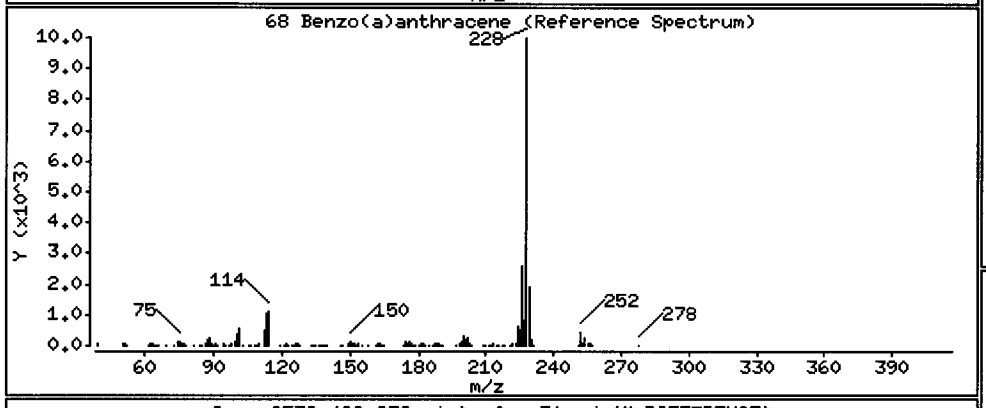
Concentration: 506.3 ug/kg

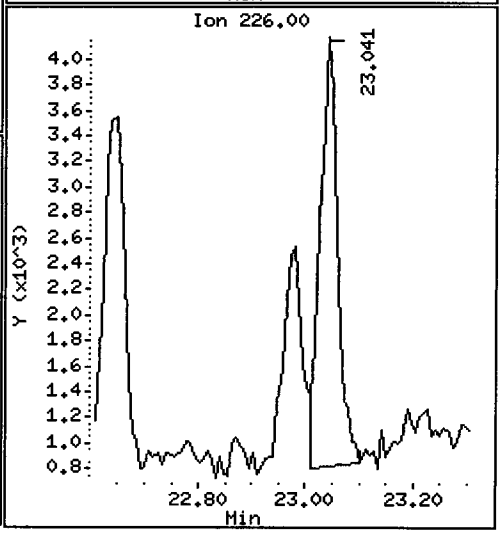


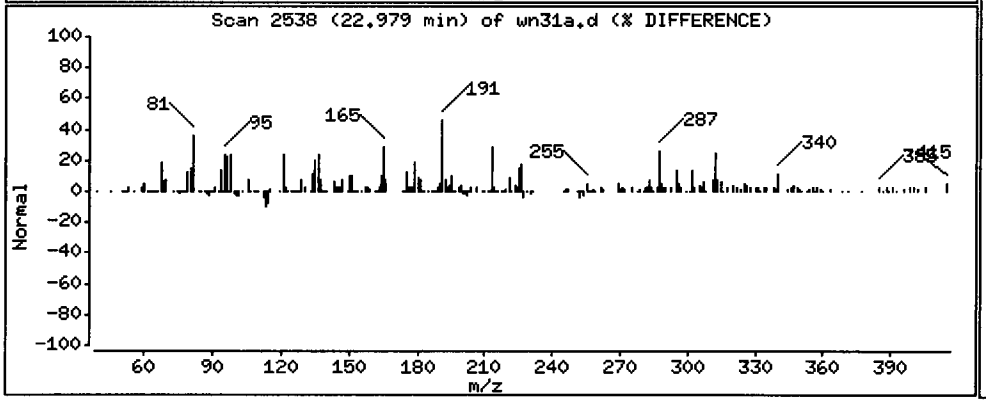












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

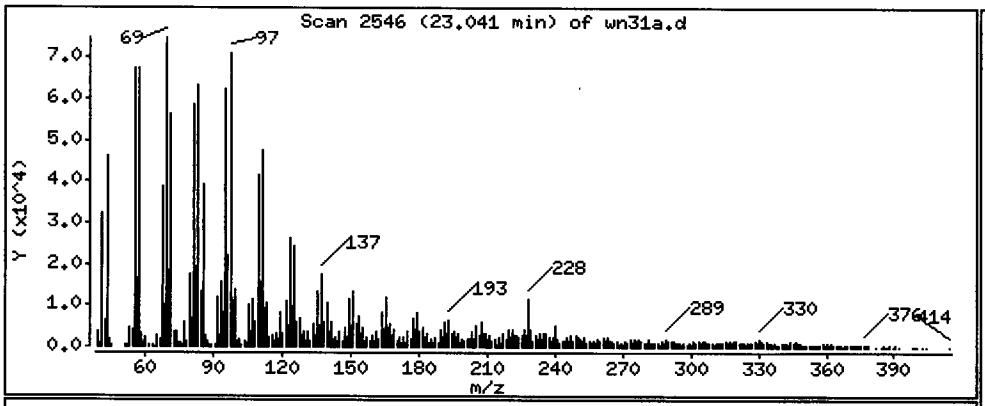
Operator: VTS/YZ

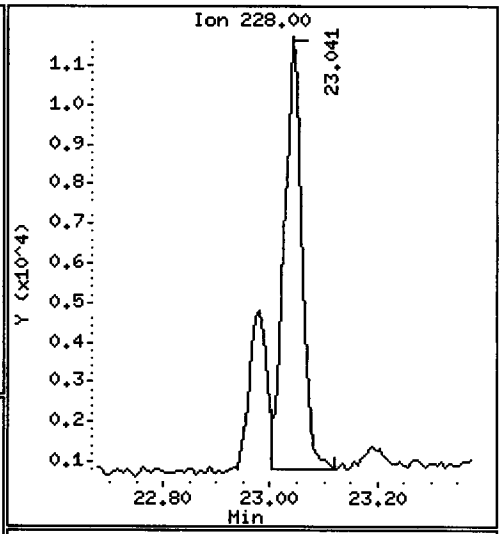
Column phase: ZB-5msi

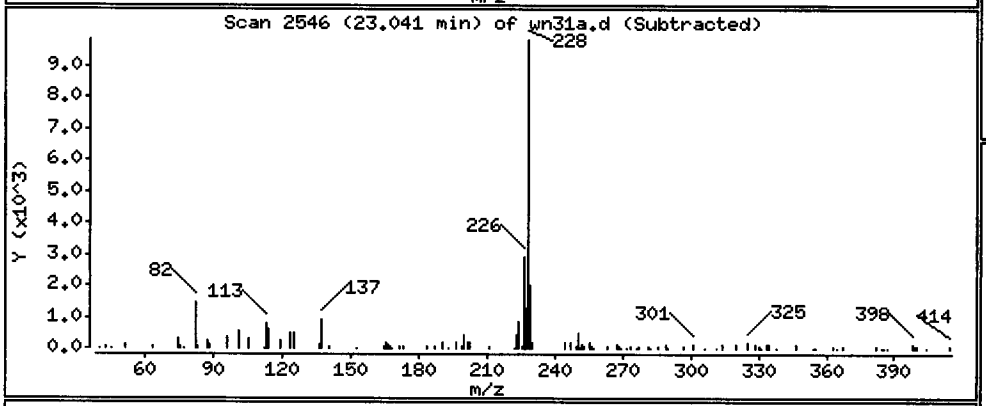
Column diameter: 0.25

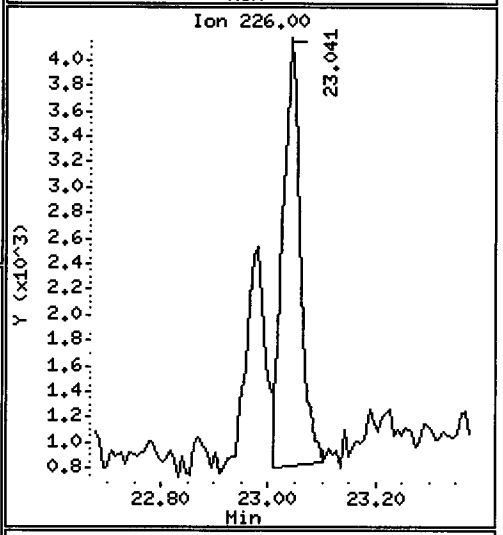
71 Chrysene

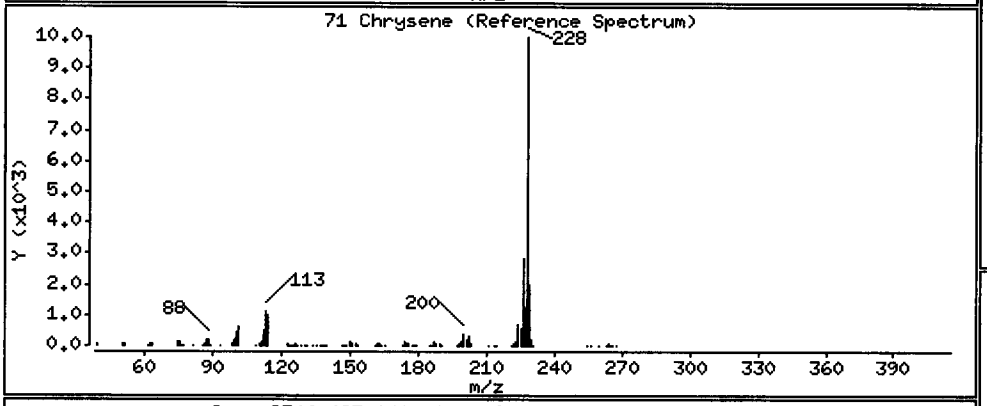
Concentration: 1498 ug/kg

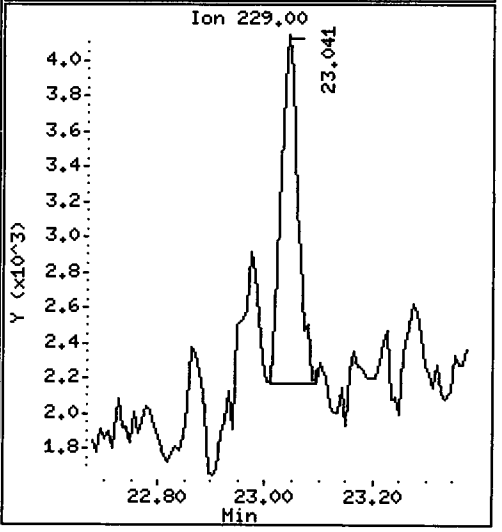


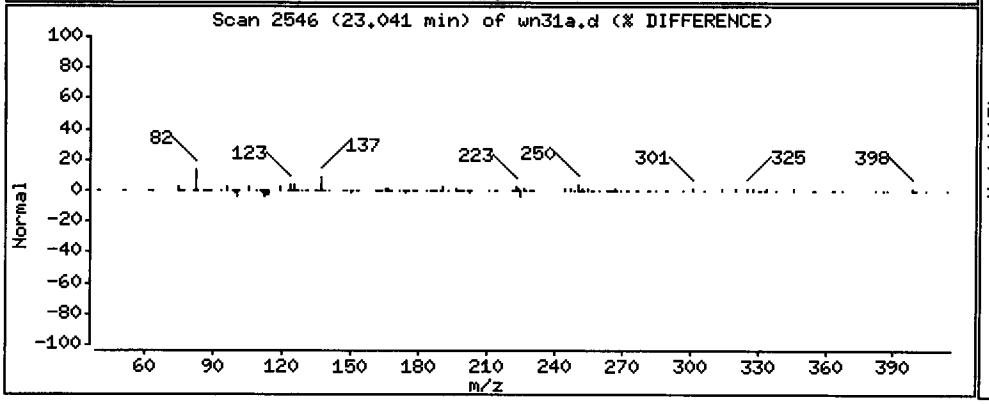












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

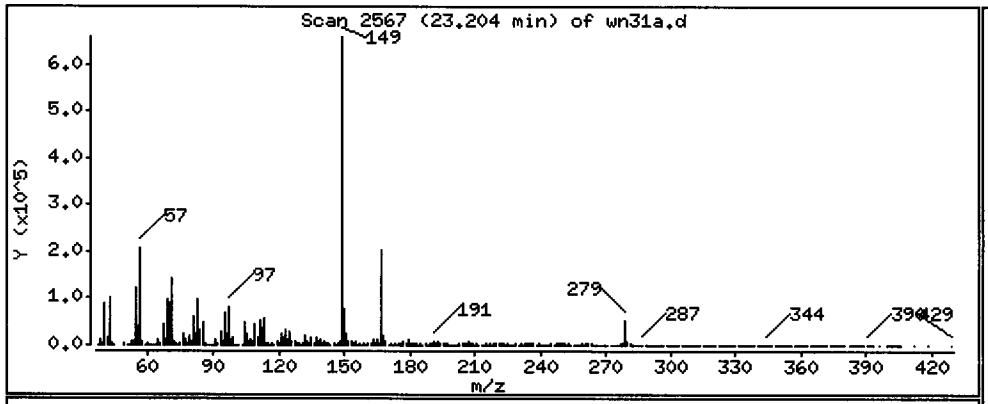
Operator: VTS/YZ

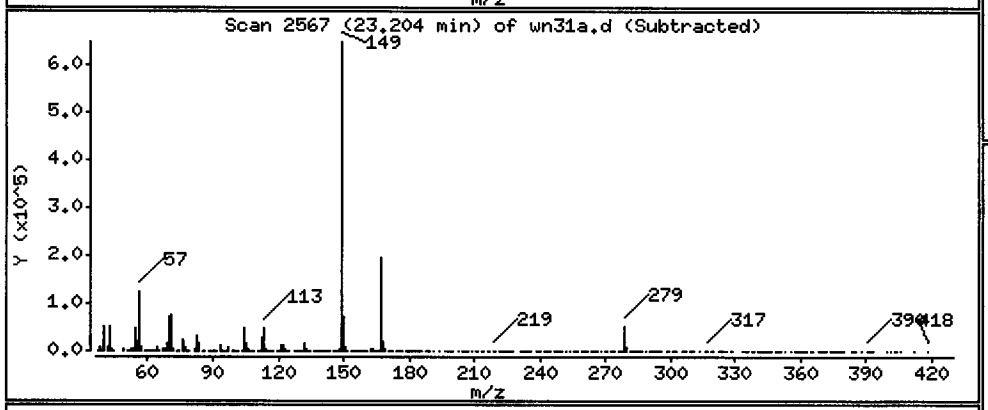
Column phase: ZB-5msi

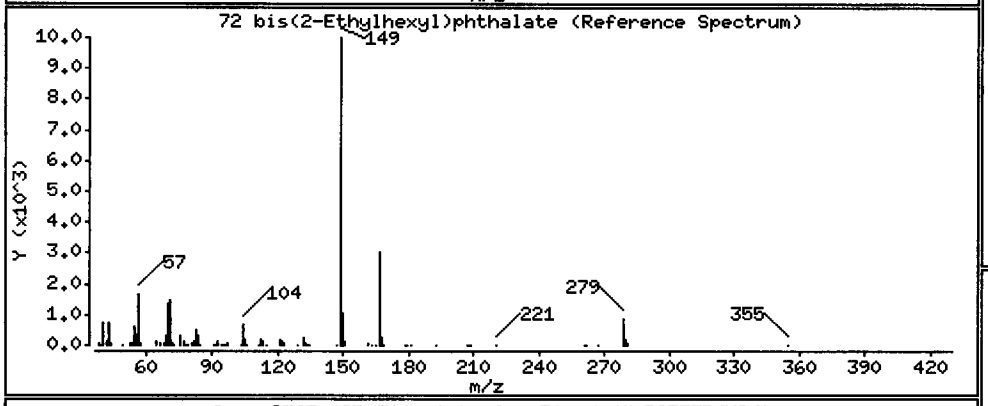
Column diameter: 0.25

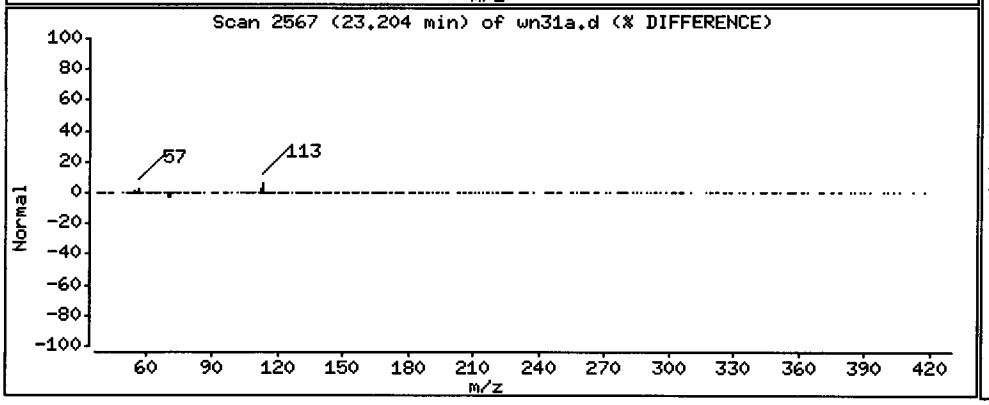
72 bis(2-Ethylhexyl)phthalate

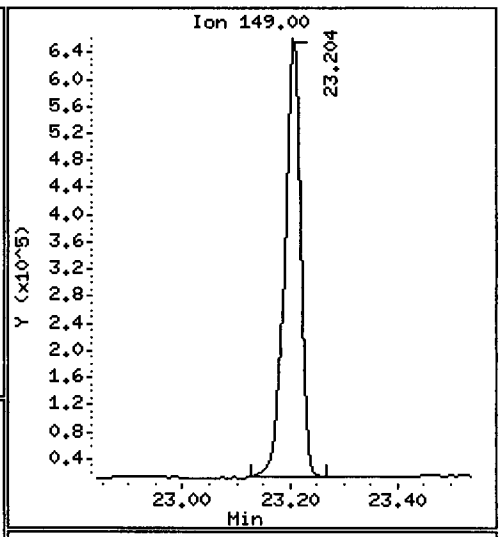
Concentration: 123500 ug/kg

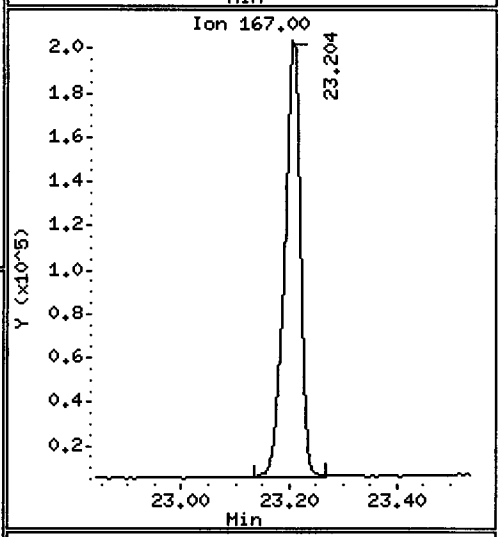


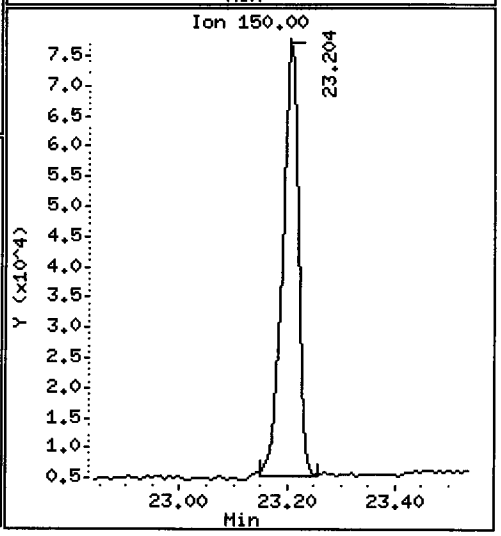












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

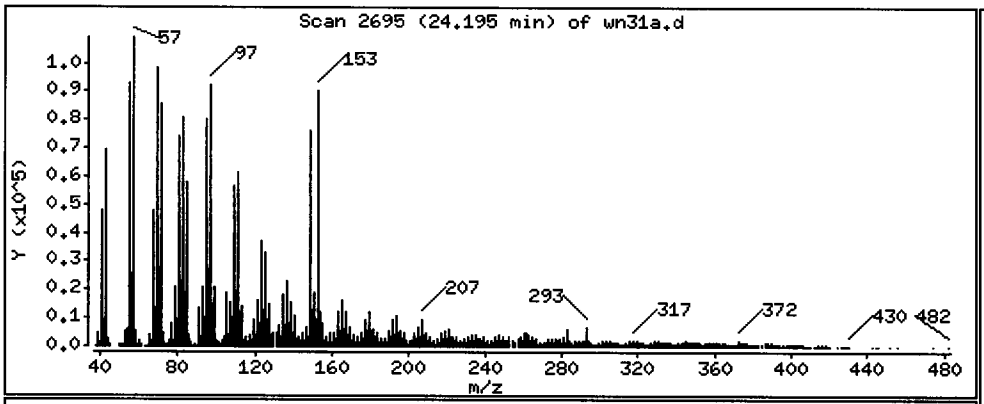
Operator: VTS/YZ

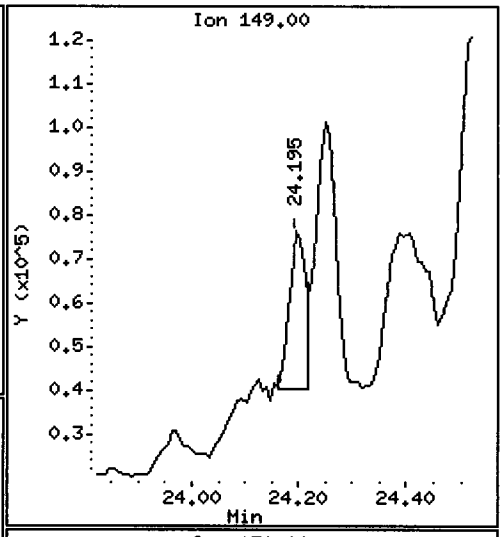
Column phase: ZB-5msi

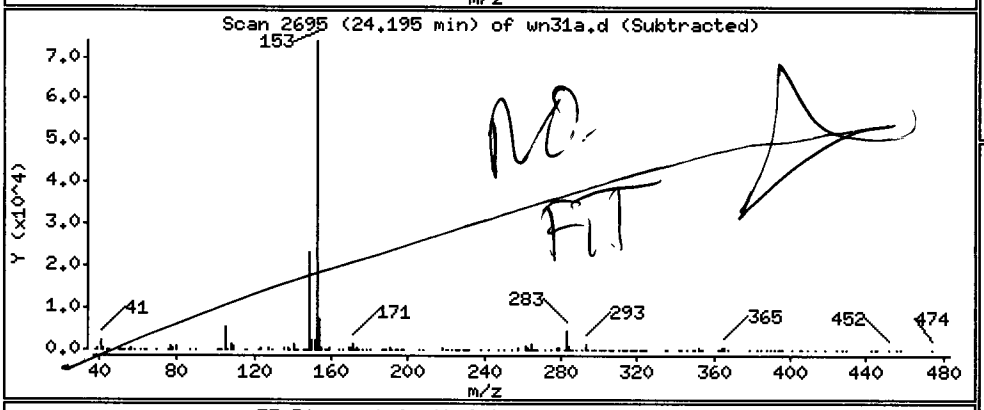
Column diameter: 0.25

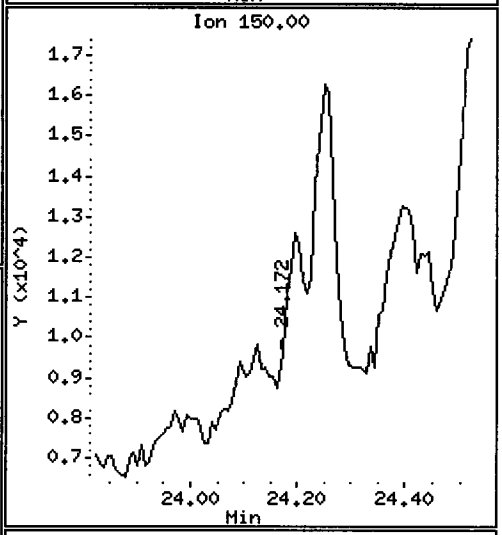
73 Di-n-octylphthalate

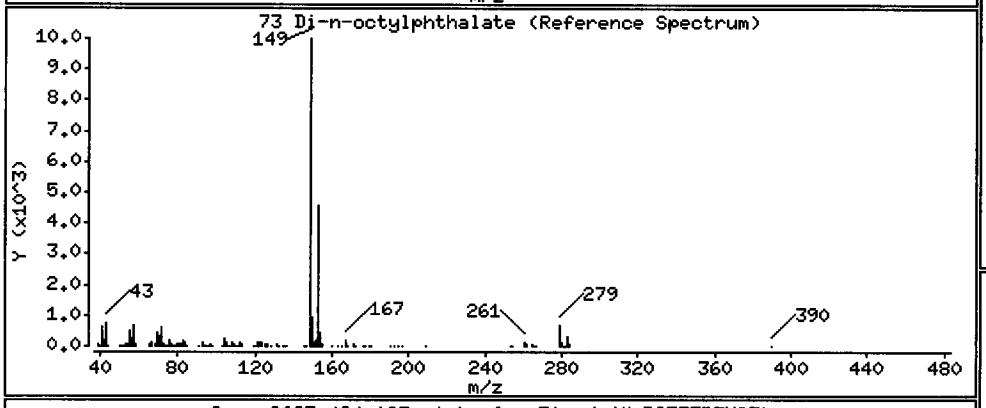
Concentration: 4203 ug/kg

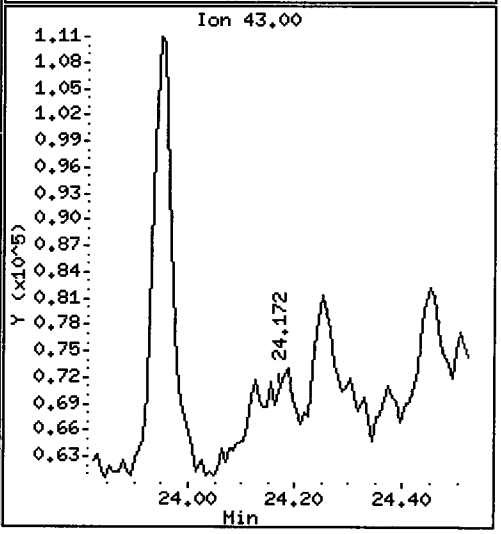


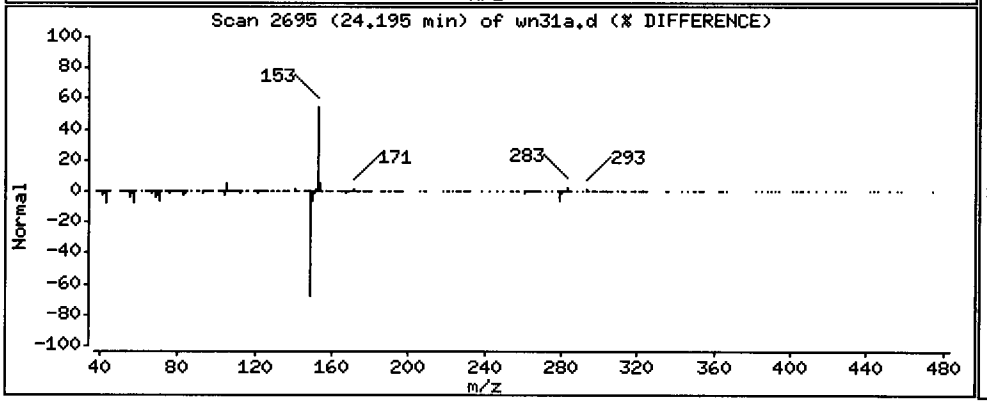












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

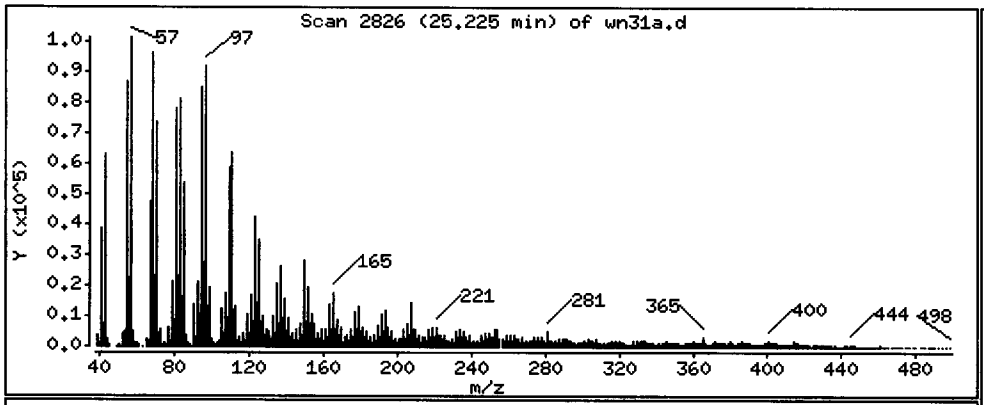
Operator: VTS/YZ

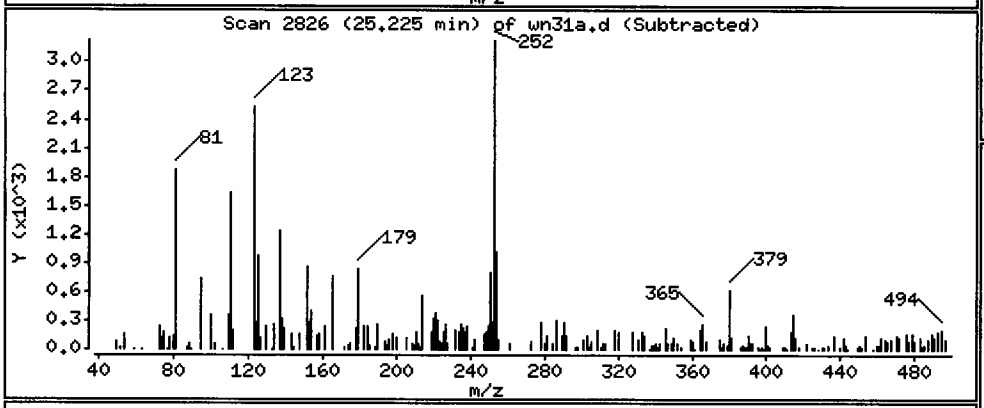
Column phase: ZB-5ms1

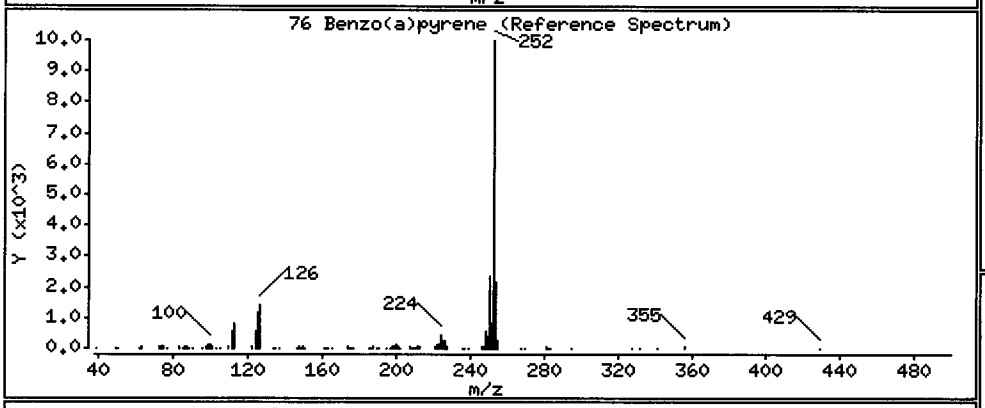
Column diameter: 0.25

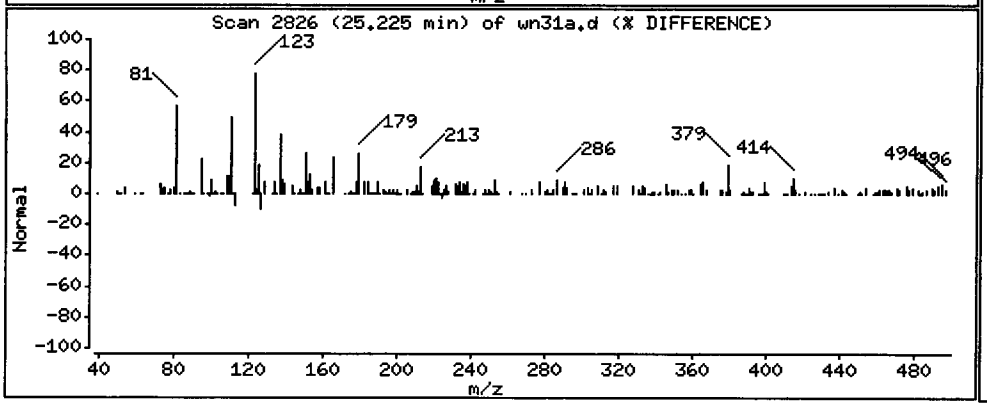
76 Benzo(a)pyrene

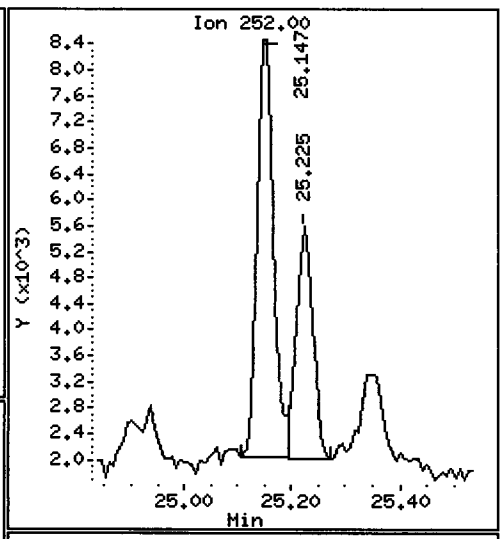
Concentration: 510.1 ug/kg

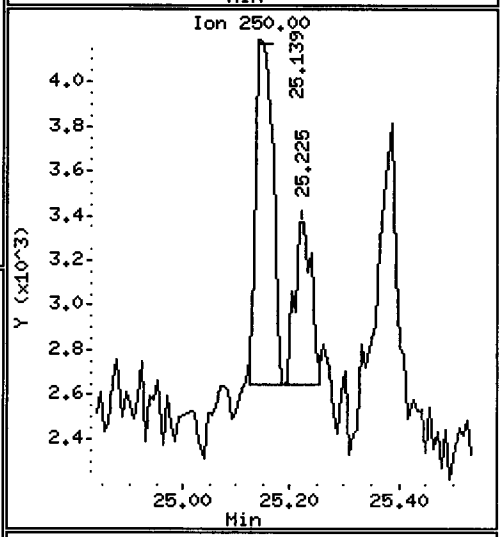


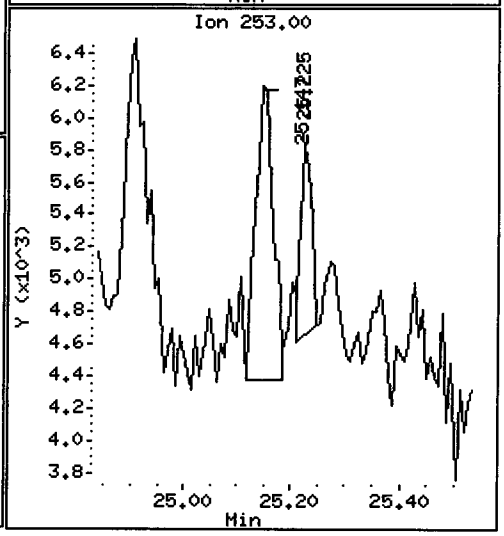












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

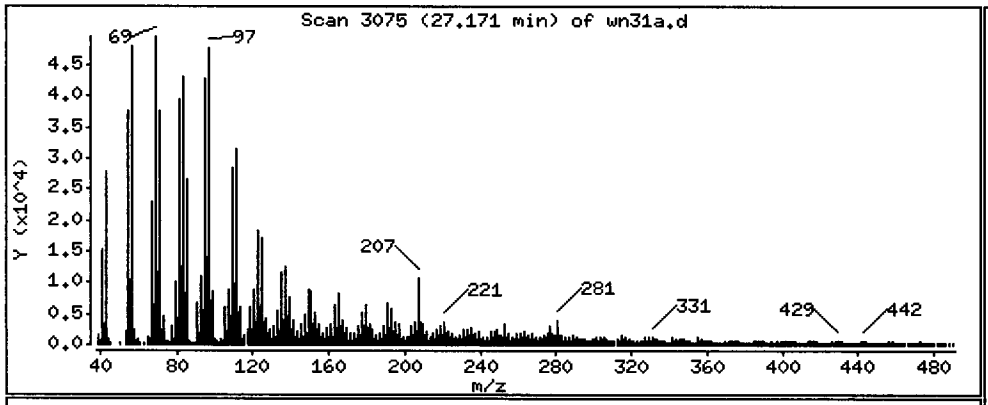
Operator: VTS/YZ

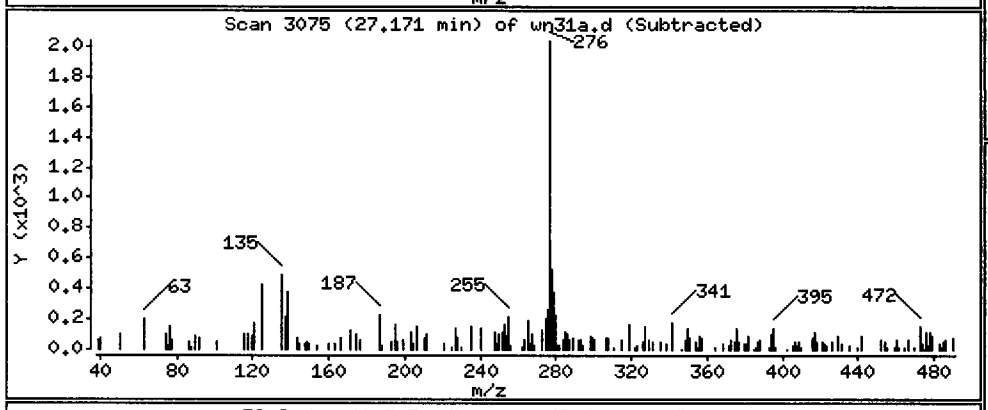
Column phase: ZB-5msi

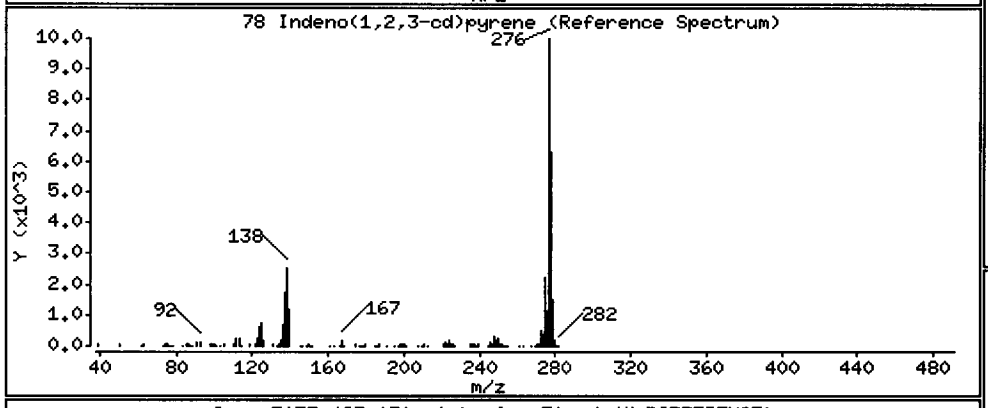
Column diameter: 0.25

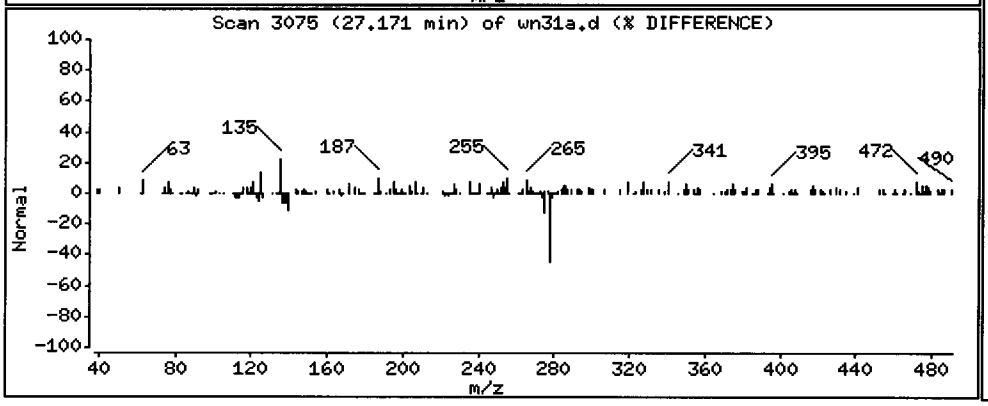
78 Indeno(1,2,3-cd)pyrene

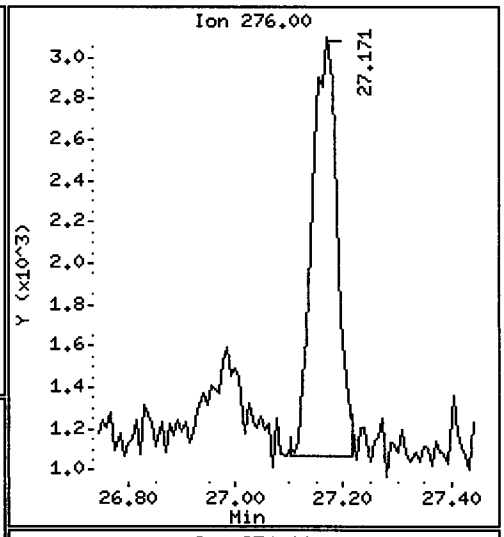
Concentration: 351.2 ug/kg

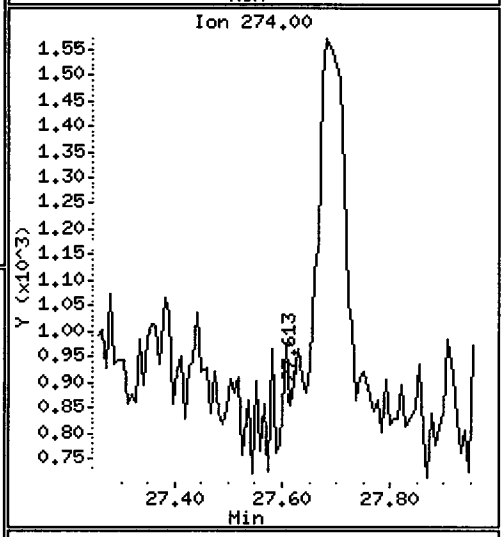


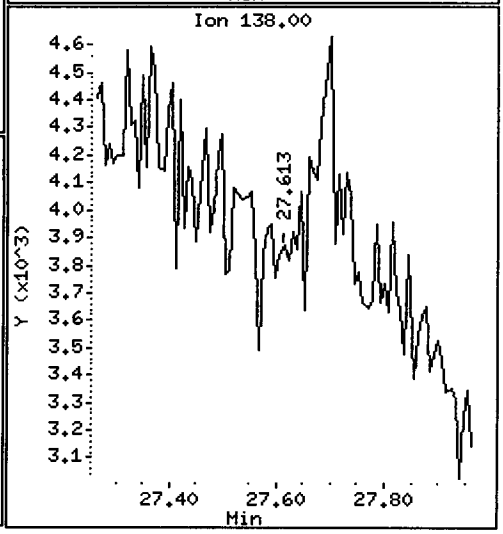












WN31: 98 R BC 8/16/13

Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

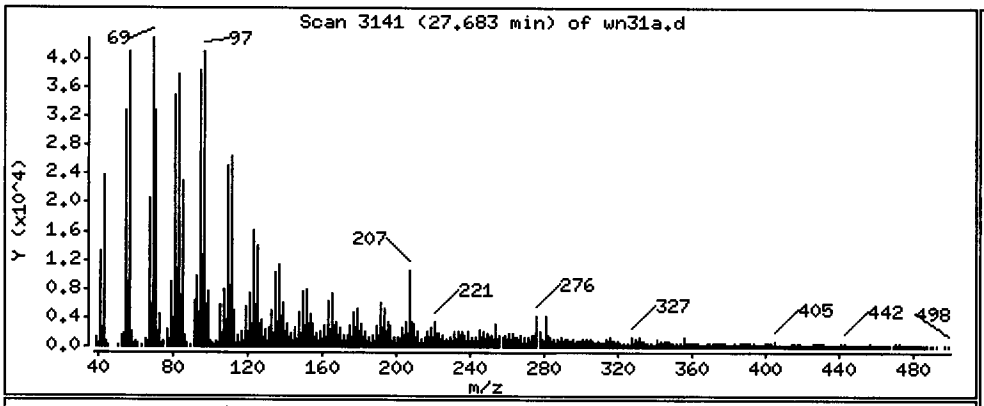
Operator: VTS/YZ

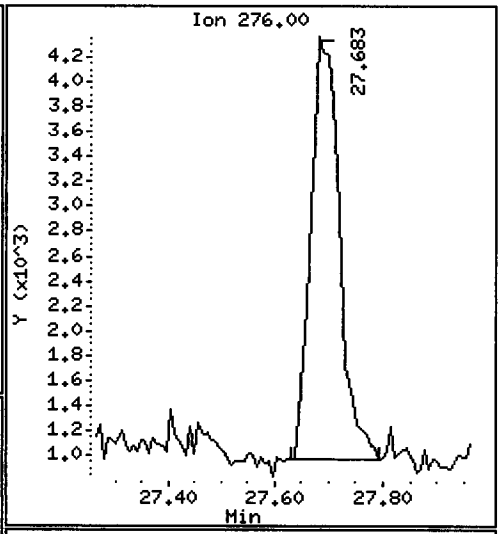
Column phase: ZB-5msi

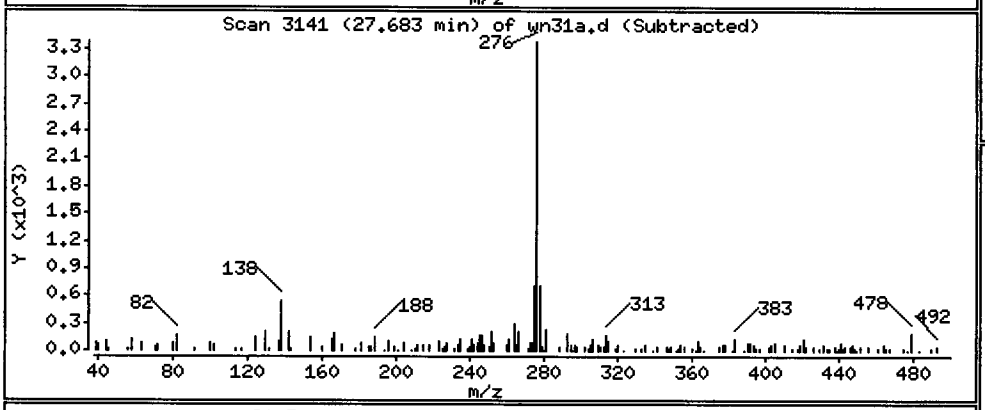
Column diameter: 0.25

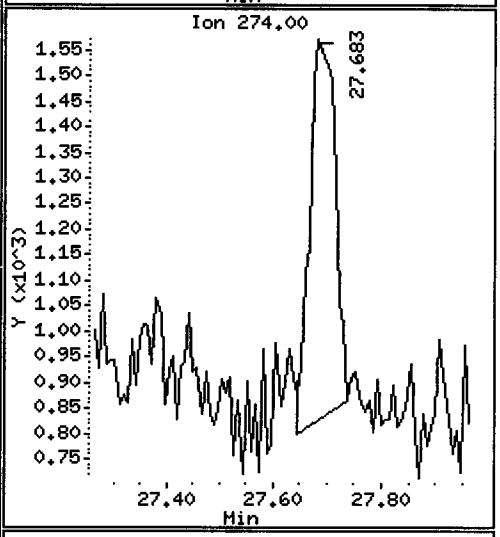
80 Benzo(g,h,i)perylene

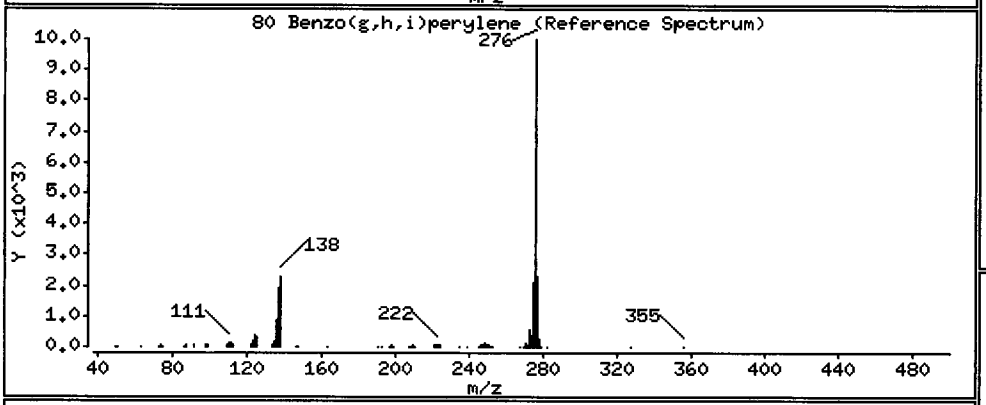
Concentration: 779.2 ug/kg

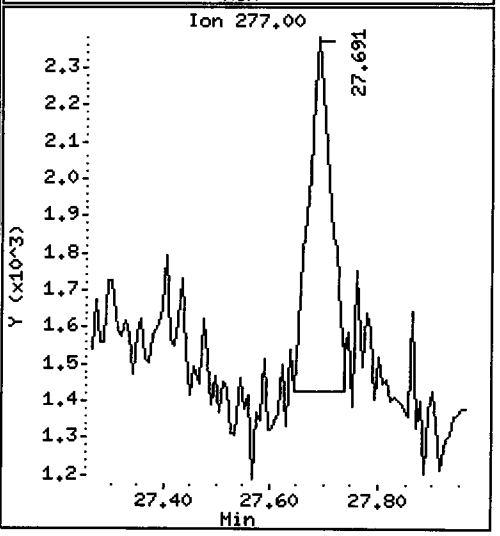


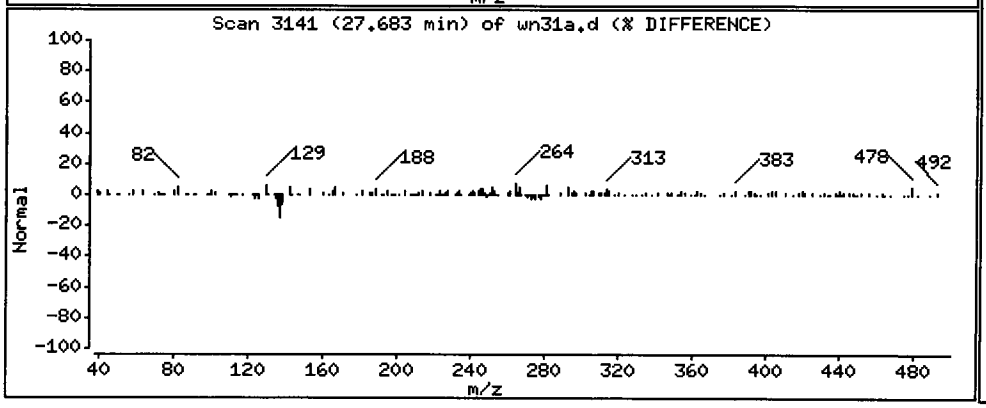












Data File: /chem1/nt10.i/20130507.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

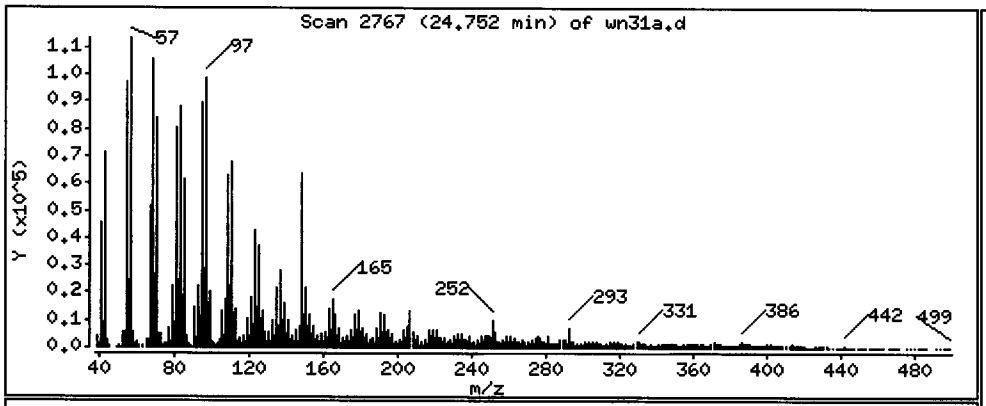
Operator: VTS/YZ

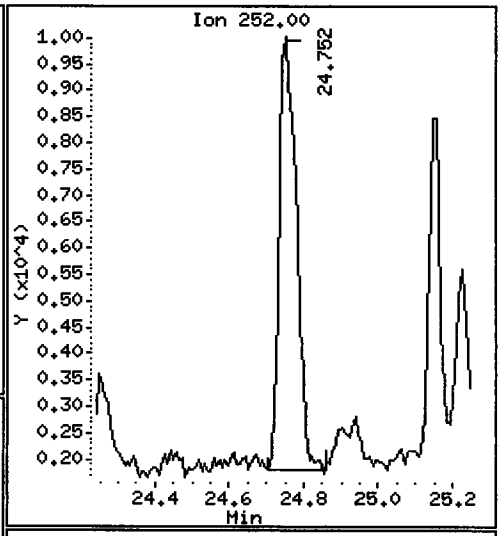
Column phase: ZB-5msi

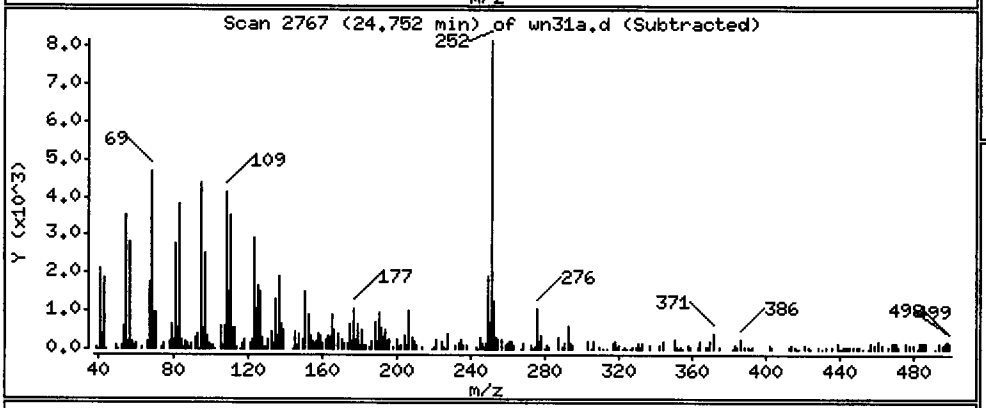
Column diameter: 0.25

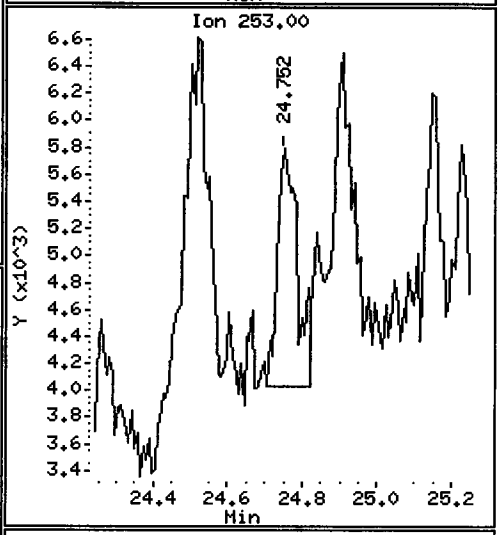
187 Total Benzofluoranthenes

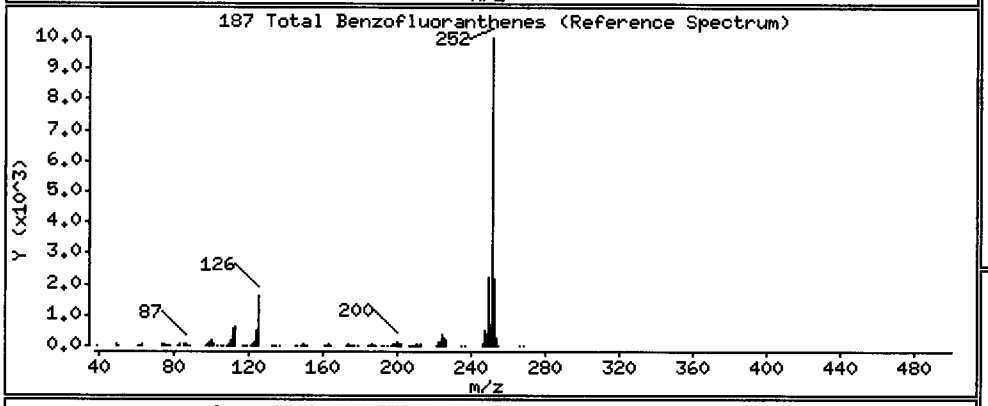
Concentration: 1473 ug/kg

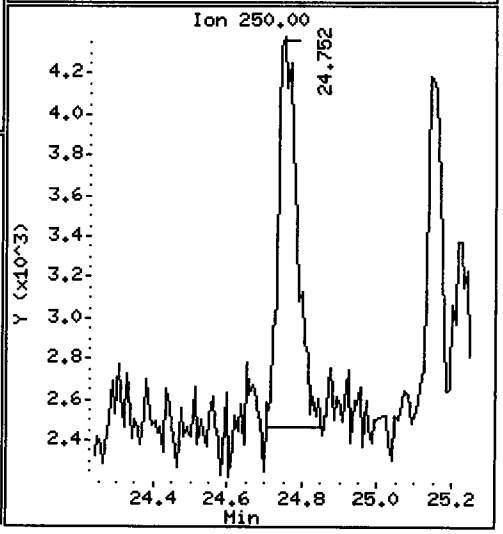


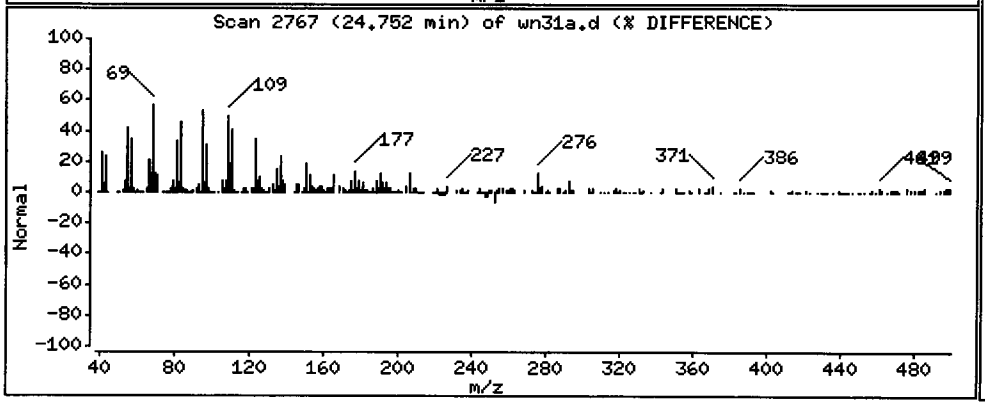






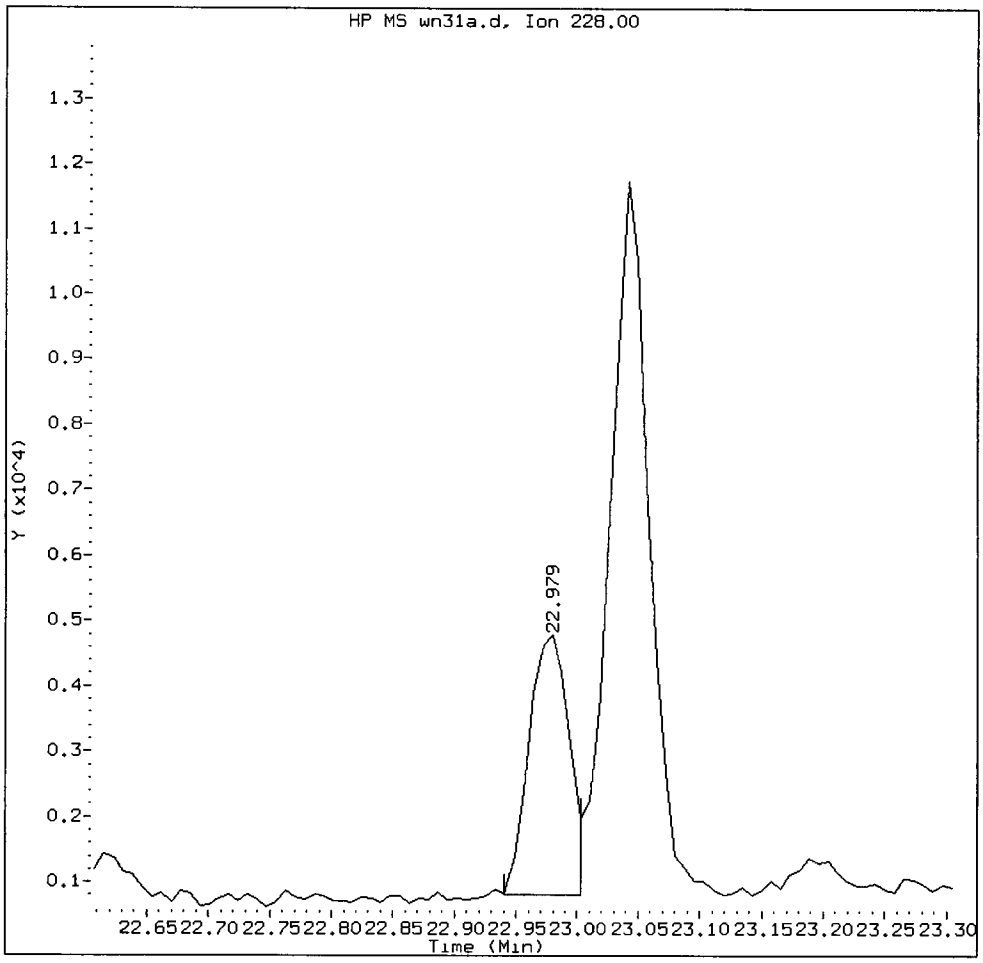






WN31A, /chem1/nt10.i/20130507.b/wn31a.d

Benzo(a)anthracene Amount: 0.20 Area: 9348



MANUAL INTEGRATION for Benzo(a)anthracene

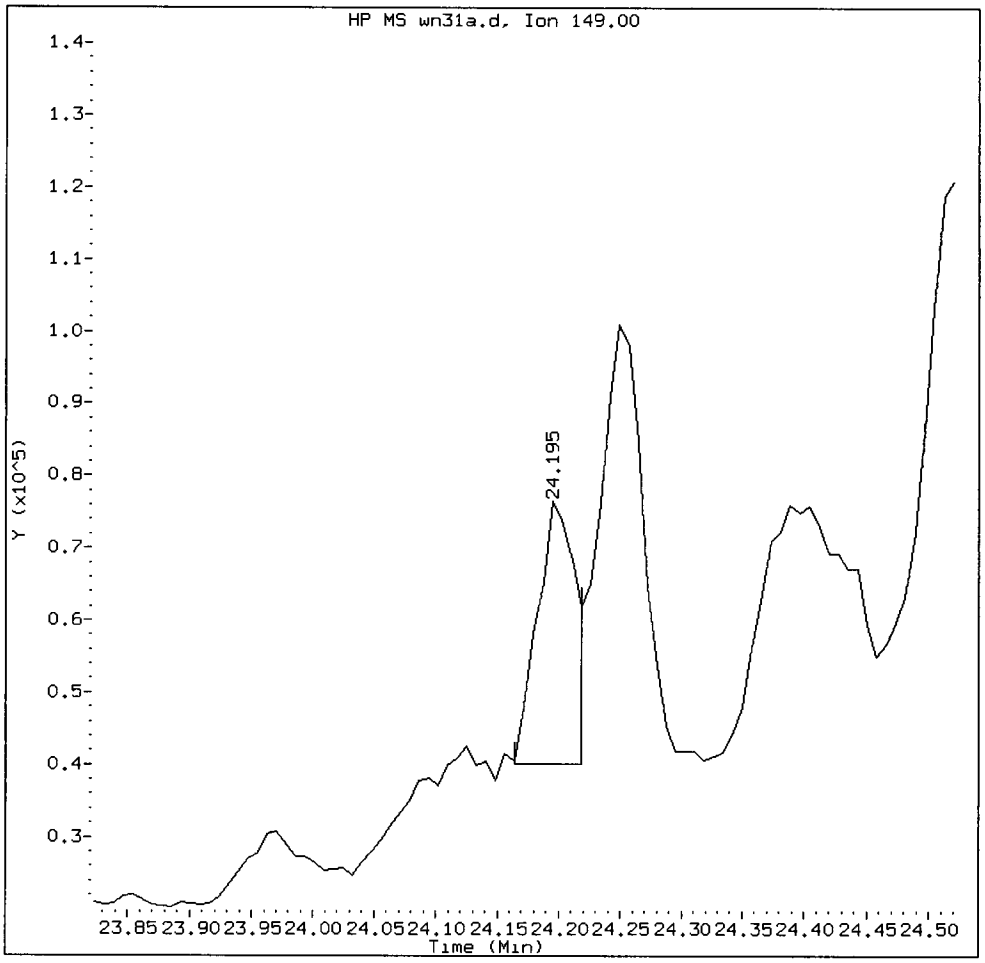
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/10/13

WN31A, /chem1/nt10.i/20130507.b/wn31a.d

Di-n-octylphthalate Amount: 1.68 Area: 79893



MANUAL INTEGRATION for Di-n-octylphthalate

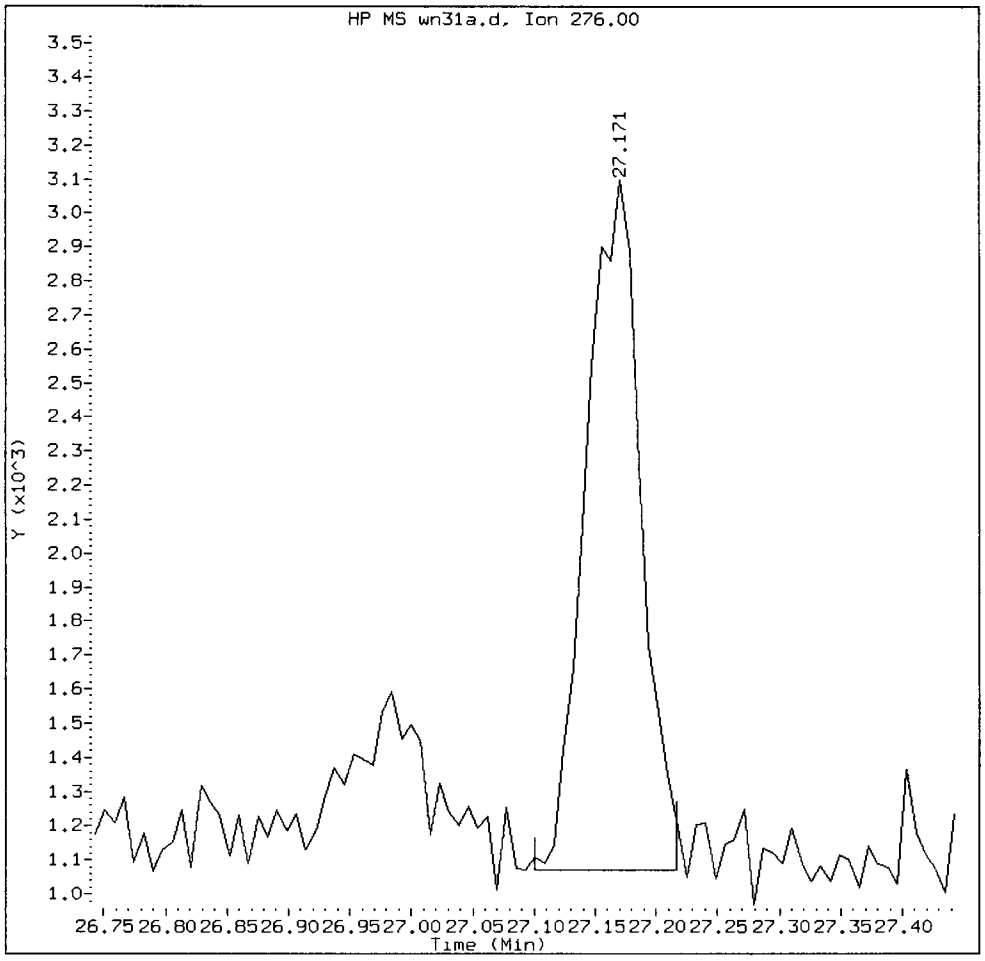
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YR Date: 5/14/13

WN31A, /chem1/nt10.i/20130507.b/wn31a.d

Indeno(1,2,3-cd)pyrene Amount: 0.14 Area: 6451



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: 8/14/13

WN31: 99/R 8/16/13

CO-ELUTION SUMMARY FOR FILE - wn31a.d

Lab ID: WN31A, Method: ABN.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS
24.752	Benzo(k)fluoranthene and Benzo(b)fluoranthene

WN31:992R BC 8/6/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 5/10/13 Analysis: ABN Analyst: YZ

GC Program: ABN2 Column No: 252945 Column Type: ZB 5MSI

Instrument Tune (.U or .CT.): 1302284 EM Voltage: 1650

Calibration File: DF0508 Curve Date: 04/24/13 Injection Vol.: 1µL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000112	
	2073-1 1998-4.	
	2064-1	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130508.b

	Time	Filename	LabID	ClientId	DF											
1	1435	df0508 d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1450	cc0508.d	CC0508		1	8.11	54414	10.70	200917	14 53	129691	17 76	221407	22.94	226704	25 22	203438	24.11	281343
3	1527	wn27a9 d	WN27A	CG-MH-010-20	9	8.10	46508	10.70	180924	14.53	111784	17.75	188992	22 94	172453	25 23	166740	24.12	218441
4	1603	wn31a9.d	WN31A	ES-TS-INF-20	9	8.10	47698	10 70	177198	14.52	107487	17.75	162964	22.93	168170	25 22	167173	24.11	220595

YZ 5/10/13

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

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130508.b

Instrument: nt10.i Date: 08-MAY-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 08-MAY-2013

Compound	%D
Carbazole	20.3
3,3'-Dichlorobenzidine	22.5

Data File: /chem1/nt10.1/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

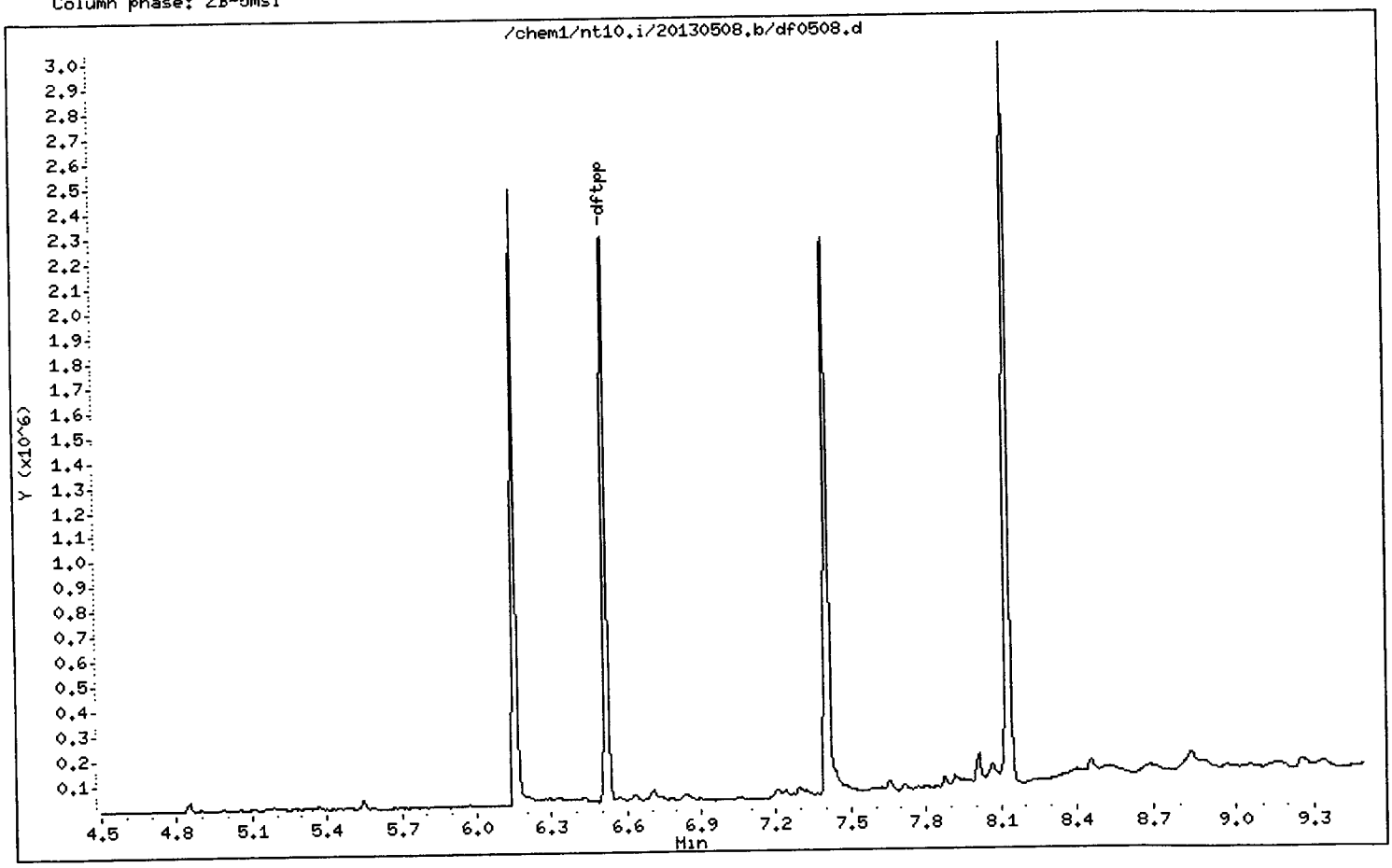
Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

Instrument: nt10.i

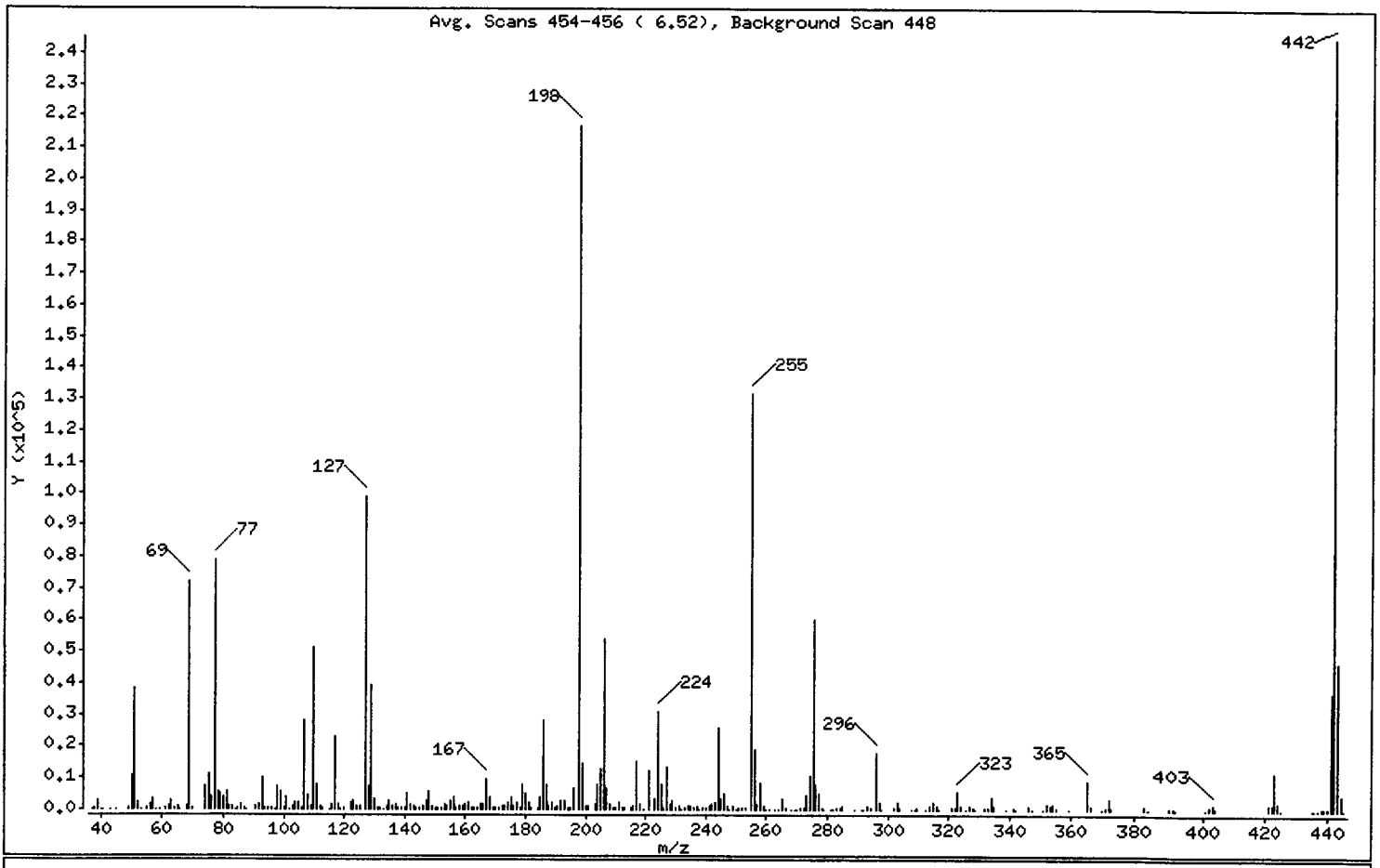
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.55
68	Less than 2.00% of mass 69	0.54 (1.63)
69	Mass 69 relative abundance	33.20
70	Less than 2.00% of mass 69	0.16 (0.50)
127	10.00 - 80.00% of mass 198	45.70
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.86
275	10.00 - 60.00% of mass 198	27.85
365	Greater than 1.00% of mass 198	4.13
441	0.01 - 24.00% of mass 442	17.24 (15.27)
442	50.00 - 200.00% of mass 198	112.88
443	15.00 - 24.00% of mass 442	21.65 (19.18)

Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 454-456 (6.52), Background Scan 448

Location of Maximum: 442.00

Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	181	125.00	1378	205.00	13139	291.00	127
38.00	577	127.00	99200	206.00	54288	292.00	280
39.00	3001	128.00	7232	207.00	6983	293.00	1127
40.00	128	129.00	39688	208.00	1889	294.00	332
41.00	109	130.00	3544	209.00	758	296.00	18240
43.00	171	131.00	726	210.00	398	297.00	2492
45.00	60	132.00	439	211.00	2383	298.00	129
49.00	324	133.00	133	212.00	363	301.00	216
50.00	10500	134.00	1180	213.00	283	302.00	311
51.00	38104	135.00	2987	215.00	663	303.00	2092
52.00	2098	136.00	1333	216.00	1278	304.00	508
53.00	121	137.00	1421	217.00	15432	308.00	246
55.00	394	138.00	398	218.00	1961	309.00	114
56.00	1566	139.00	282	219.00	233	310.00	292
57.00	3625	140.00	507	221.00	12147	313.00	183
58.00	179	141.00	5164	223.00	3592	314.00	951
59.00	50	142.00	1638	224.00	31104	315.00	2130
61.00	785	143.00	1059	225.00	7945	316.00	1167
62.00	899	144.00	354	226.00	825	317.00	184
63.00	2743	145.00	375	227.00	13602	321.00	593
64.00	391	146.00	919	228.00	1890	322.00	353
65.00	1354	147.00	2592	229.00	2788	323.00	5659
66.00	163	148.00	5733	230.00	372	324.00	1062
67.00	9	149.00	1211	231.00	1163	326.00	55
68.00	1173	150.00	379	232.00	228	327.00	1243
69.00	72080	151.00	701	233.00	322	328.00	546
70.00	357	152.00	437	234.00	939	329.00	51
73.00	252	153.00	1657	235.00	1029	332.00	488
74.00	7192	154.00	1263	236.00	658	333.00	566
75.00	11347	155.00	2923	237.00	1196	334.00	3926
76.00	3738	156.00	4040	238.00	149	335.00	1017
77.00	78784	157.00	780	239.00	610	339.00	61
78.00	5387	158.00	890	240.00	412	341.00	765
79.00	5254	159.00	889	241.00	898	342.00	138
80.00	4042	160.00	1621	242.00	1676	346.00	1229

Data File: /chem1/nt10.i/20130508.b/df0508.d

Date : 08-MAY-2013 14:35

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0508.d

Spectrum: Avg. Scans 454-456 (6.52), Background Scan 448

Location of Maximum: 442.00

Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	5806	161.00	2451	243.00	2061	347.00	263
82.00	1400	162.00	743	244.00	25872	351.00	120
83.00	1397	163.00	356	245.00	3426	352.00	1783
84.00	109	164.00	349	246.00	5199	353.00	1316
85.00	771	165.00	1962	247.00	1124	354.00	1706
86.00	1816	166.00	1518	248.00	190	355.00	414
87.00	718	167.00	9798	249.00	997	359.00	57
88.00	263	168.00	3866	250.00	211	365.00	8965
89.00	147	169.00	823	251.00	297	366.00	1260
91.00	1384	170.00	324	252.00	325	370.00	204
92.00	1663	171.00	544	253.00	799	371.00	504
93.00	10092	172.00	971	255.00	132032	372.00	3133
94.00	669	173.00	1308	256.00	19232	373.00	794
95.00	283	174.00	2187	257.00	1519	383.00	848
96.00	355	175.00	3938	258.00	8246	384.00	265
97.00	184	176.00	1251	259.00	1284	390.00	499
98.00	7485	177.00	2066	260.00	252	391.00	315
99.00	5637	178.00	674	261.00	214	392.00	214
100.00	571	179.00	7841	263.00	52	401.00	246
101.00	3871	180.00	5209	264.00	156	402.00	1212
102.00	169	181.00	2504	265.00	3137	403.00	1790
103.00	1203	182.00	433	266.00	458	404.00	671
104.00	2402	183.00	254	268.00	32	421.00	1752
105.00	2050	184.00	687	269.00	51	422.00	1581
106.00	761	185.00	4075	270.00	264	423.00	12097
107.00	28320	186.00	27896	271.00	328	424.00	2308
108.00	4294	187.00	7845	272.00	449	425.00	257
109.00	995	188.00	863	273.00	4508	435.00	157
110.00	51192	189.00	2000	274.00	10831	436.00	186
111.00	7773	190.00	354	275.00	60456	437.00	265
112.00	1052	191.00	987	276.00	7863	438.00	576
113.00	353	192.00	2641	277.00	5175	439.00	576
115.00	27	193.00	2788	278.00	774	440.00	662
116.00	1664	194.00	691	279.00	160	441.00	37416
117.00	23064	195.00	501	281.00	26	442.00	245056

Date : 08-MAY-2013 14:35

Client ID: DFTPP Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

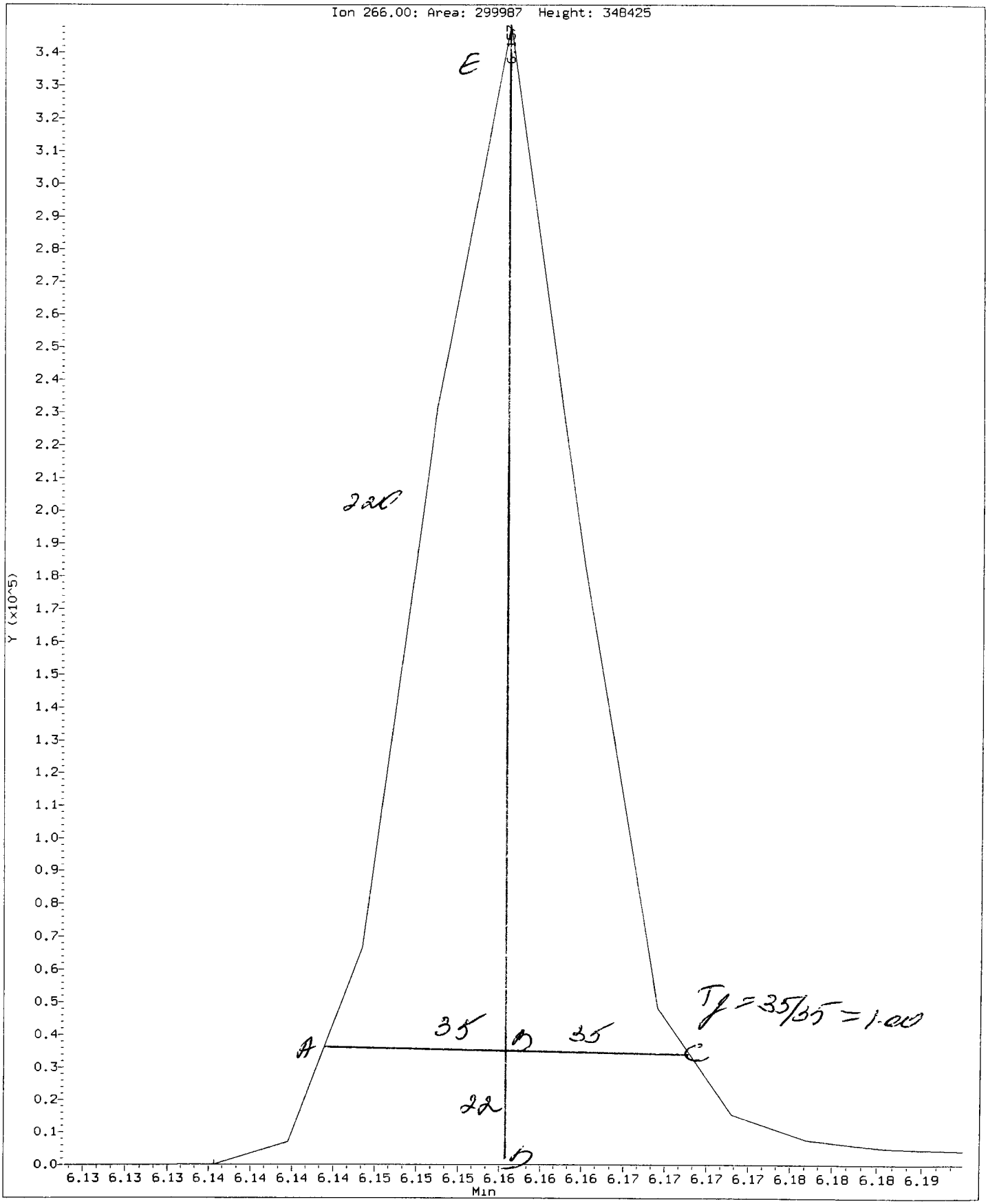
Column phase: ZB-5msi Column diameter: 0.25

Data File: df0508.d
Spectrum: Avg. Scans 454-456 (6.52), Background Scan 448
Location of Maximum: 442.00
Number of points: 304

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1567	196.00	6668	282.00	128	443.00	47008
119.00	183	198.00	217088	283.00	715	444.00	4302
120.00	379	199.00	14883	284.00	515	445.00	175
121.00	48	200.00	1255	285.00	968		
122.00	1972	201.00	1112	286.00	130		
123.00	2862	203.00	1591	289.00	239		
124.00	1387	204.00	7820	290.00	200		

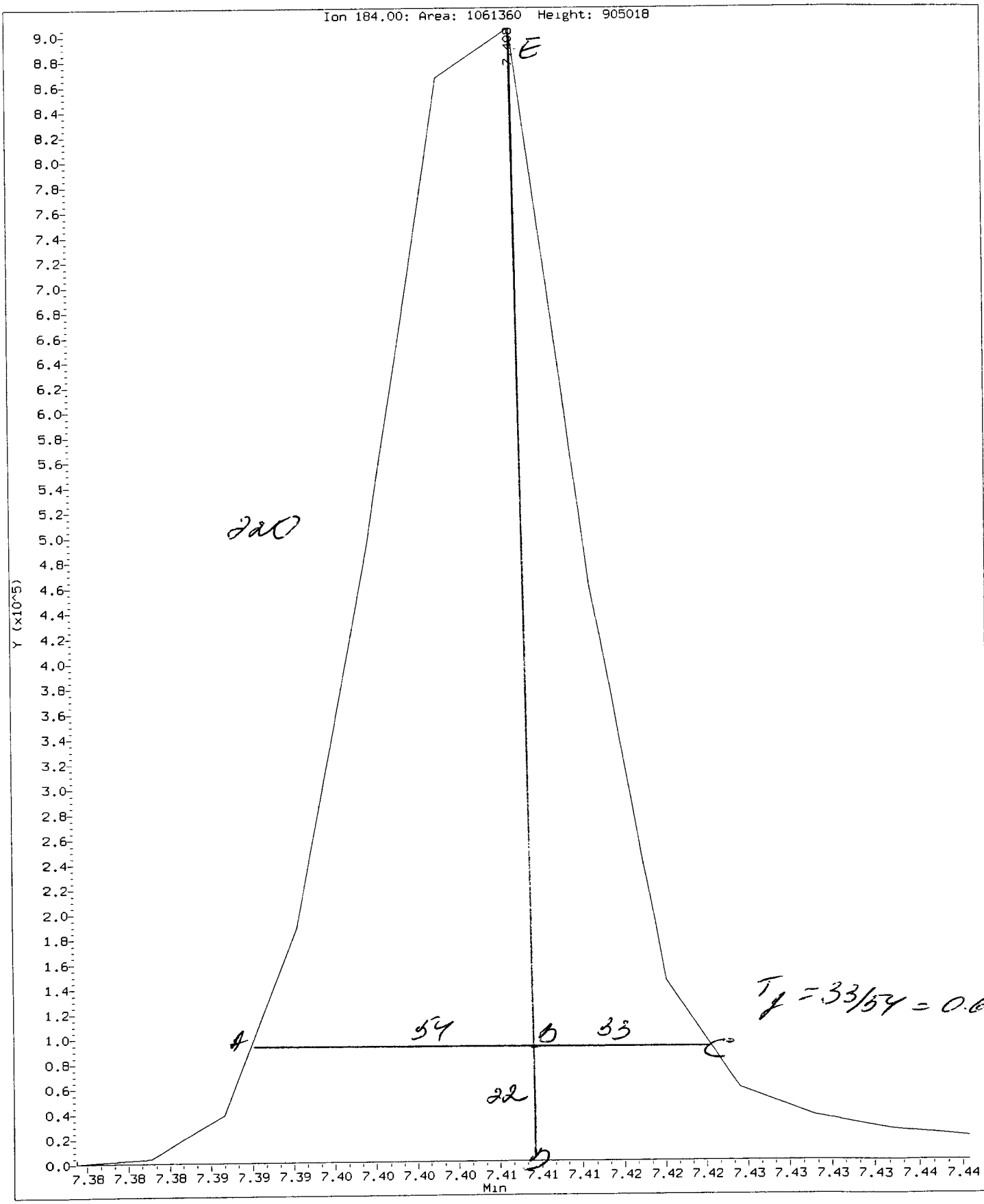
Data File: /chem1/nt10.1/20130508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2013 14:35
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130508.b/ddt.b/df0508.d
Injection Date: 08-MAY-2013 14:35
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/20130508.b/ddt.b/df0508.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130508.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 08-MAY-2013 14:35 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.157	299987
Benzidine	7.408	1061360
4,4'-DDE	7.590	1394
4,4'-DDD	7.879	10230
4,4'-DDT	8.130	657617

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1394 + 10230) * 100}{(\ 1394 + 10230 + 657617)}$$

DDT Percent Breakdown = 1.7 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0508.d
Analysis Type:
Lab Sample ID: CC0508
Method: /chem1/nt10.i/20130508.b/ABN.m

Injection Date: 08-MAY-2013 14:50
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.42771	1.42280	1.42280	0.010	-0.34399	20.00000	Averaged
$ 2 Phenol-d5	1.84748	1.83012	1.83012	0.010	-0.93959	20.00000	Averaged
3 Phenol	2.06794	2.18852	2.18852	0.100	5.83063	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.40240	1.39423	1.39423	0.010	-0.58288	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.48709	1.39475	1.39475	0.700	-6.20961	20.00000	Averaged
6 2-Chlorophenol	1.59477	1.47605	1.47605	0.800	-7.44433	20.00000	Averaged
7 1,3-Dichlorobenzene	1.60030	1.57186	1.57186	0.010	-1.77708	20.00000	Averaged
9 1,4-Dichlorobenzene	1.57739	1.53386	1.53386	0.010	-2.75973	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	1.00879	1.01072	1.01072	0.010	0.19136	20.00000	Averaged
12 1,2-Dichlorobenzene	1.51024	1.48026	1.48026	0.010	-1.98519	20.00000	Averaged
11 Benzyl alcohol	0.86989	0.88935	0.88935	0.010	2.23737	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	0.45898	0.47298	0.47298	0.010	3.05175	20.00000	Averaged
13 2-Methylphenol	1.48808	1.44017	1.44017	0.700	-3.21978	20.00000	Averaged
17 Hexachloroethane	0.65999	0.64514	0.64514	0.300	-2.25080	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.92905	0.92087	0.92087	0.500	-0.88068	20.00000	Averaged
15 4-Methylphenol	1.51729	1.46620	1.46620	0.600	-3.36703	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.42210	0.41020	0.41020	0.010	-2.81964	20.00000	Averaged
19 Nitrobenzene	0.38970	0.36892	0.36892	0.200	-5.33205	20.00000	Averaged
20 Isophorone	0.73300	0.72155	0.72155	0.300	-1.56285	20.00000	Averaged
21 2-Nitrophenol	0.21847	0.22337	0.22337	0.100	2.24390	20.00000	Averaged
22 2,4-Dimethylphenol	0.40172	0.43489	0.43489	0.200	8.25645	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.43229	0.43410	0.43410	0.050	0.41922	20.00000	Averaged
24 Benzoic acid	16.59579	20.00000	0.29196	0.010	-17.02105	20.00000	Quadratic
25 2,4-Dichlorophenol	0.36979	0.32361	0.32361	0.100	-12.48690	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.36143	0.40809	0.40809	0.010	12.91154	20.00000	Averaged
28 Naphthalene	1.06494	1.05075	1.05075	0.100	-1.33219	20.00000	Averaged
29 4-Chloroaniline	0.41634	0.42939	0.42939	0.010	3.13518	20.00000	Averaged
30 Hexachlorobutadiene	0.21470	0.21703	0.21703	0.010	1.08649	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.32531	0.35960	0.35960	0.200	10.54134	20.00000	Averaged
32 2-Methylnaphthalene	0.70737	0.70770	0.70770	0.300	0.04766	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.44016	0.39249	0.39249	0.001	-10.83133	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.42101	0.42459	0.42459	0.200	0.85001	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.43401	0.45269	0.45269	0.200	4.30450	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.39609	1.34086	1.34086	0.010	-3.95604	20.00000	Averaged
37 2-Chloronaphthalene	1.11145	1.09230	1.09230	0.700	-1.72335	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0508.d
Analysis Type:
Lab Sample ID: CC0508
Method: /chem1/nt10.i/20130508.b/ABN.m

Injection Date: 08-MAY-2013 14:50
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.30237	0.30237	0.010	12.71778	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.18763	1.18763	0.010	-1.09483	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.79603	1.79603	0.900	-4.72375	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.29323	0.29323	0.100	4.22233	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.27624	0.27624	0.010	18.93469	20.00000	Averaged	
44 Acenaphthene	1.13602	1.08612	1.08612	0.100	-4.39215	20.00000	Averaged	
45 2,4-Dinitrophenol	17.31110	20.00000	0.21747	0.030	-13.44452	20.00000	Quadratic	
46 Dibenzofuran	1.55334	1.53078	1.53078	0.800	-1.45222	20.00000	Averaged	
47 4-Nitrophenol	9.21466	10.00000	0.16119	0.010	-7.85340	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.36288	0.39690	0.39690	0.200	9.37419	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.37303	1.37303	0.010	13.79194	20.00000	Averaged	
49 Fluorene	1.32546	1.29287	1.29287	0.100	-2.45876	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.59044	0.59044	0.100	-9.38007	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.25562	0.25562	0.010	5.95047	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	17.79011	20.00000	0.17068	0.001	-11.04946	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.46304	0.46852	0.46852	0.010	1.18277	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.22284	0.22284	0.010	5.34466	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22620	0.22620	0.100	-0.05921	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.30466	0.30466	0.100	12.81357	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.15417	0.15417	0.010	-18.66860	20.00000	Averaged	
60 Phenanthrene	1.09106	1.05961	1.05961	0.700	-2.88222	20.00000	Averaged	
61 Anthracene	1.11776	1.10468	1.10468	0.700	-1.17035	20.00000	Averaged	
62 Carbazole	0.67896	0.81693	0.81693	0.010	20.32177	20.00000	Averaged	<-
63 Di-n-butylphthalate	1.15386	1.21917	1.21917	0.010	5.66001	20.00000	Averaged	
64 Fluoranthene	1.28413	1.29998	1.29998	0.600	1.23480	20.00000	Averaged	
65 Pyrene	1.23758	1.29891	1.29891	0.600	4.95608	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.85619	0.85619	0.010	9.95966	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.47550	0.47550	0.010	12.50990	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.14127	1.14127	0.700	1.90962	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.52270	0.52270	0.010	22.54511	20.00000	Averaged	<-
71 Chrysene	1.01345	0.97202	0.97202	0.700	-4.08795	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.51546	0.51546	0.010	-3.07308	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.88398	0.88398	0.010	-4.01792	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.17653	1.17653	0.700	-0.95278	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.29155	1.29155	0.700	3.22982	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 08-MAY-2013 14:50
Lab File ID: cc0508.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0508 Quant Type: ISTD
Method: /chem1/nt10.i/20130508.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.01481	1.02475	1.02475	0.700	0.97996	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.16916	1.04542	1.04542	0.500	-10.58357	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.89686	0.98019	0.98019	0.400	9.29104	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.01156	1.04542	1.04542	0.500	3.34736	20.00000	Averaged
90 N-Nitrosodimethylamine	0.91125	0.86748	0.86748	0.010	-4.80402	20.00000	Averaged
91 Aniline	4.01210	4.10726	4.10726	0.010	2.37175	20.00000	Averaged
93 Benzidine	9.67924	10.00000	0.12379	0.010	-3.20764	20.00000	Quadratic
103 Pyridine	0.80099	0.74050	0.74050	0.010	-7.55178	20.00000	Averaged
105 1-methylnaphthalene	0.64873	0.65410	0.65410	0.010	0.82815	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.16907	1.16907	0.010	-5.50238	20.00000	Averaged
187 Total Benzofluoranthenes	1.15343	1.13642	1.13642	0.010	-1.47530	20.00000	Averaged
99 Perylene	1.16006	1.11893	1.11893	0.010	-3.54486	20.00000	Averaged
98 Retene	0.46838	0.50233	0.50233	0.010	7.24860	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.32282	0.37183	0.37183	0.010	15.17950	20.00000	Averaged

Analytical Resources, Inc.

YZ 5/10/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130508.b/cc0508.d
Lab Smp Id: CC0508
Inj Date : 08-MAY-2013 14:50
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0508
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130508.b/ABN.m
Meth Date : 08-May-2013 16:24 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 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	5.867	5.867	(0.724)	96776	5.00000	4.983
$	2 Phenol-d5	99	7.552	7.552	(0.931)	124481	5.00000	4.953
	3 Phenol	94	7.575	7.575	(0.934)	148859	5.00000	5.292
$	5 2-Chlorophenol-d4	132	7.745	7.745	(0.955)	94833	5.00000	4.971
	4 Bis(2-Chloroethyl)ether	93	7.683	7.683	(0.948)	94868	5.00000	4.690
	6 2-Chlorophenol	128	7.776	7.776	(0.959)	100398	5.00000	4.628
	7 1,3-Dichlorobenzene	146	8.039	8.039	(0.991)	106915	5.00000	4.911
*	8 1,4-Dichlorobenzene-d4	152	8.109	8.109	(1.000)	54414	4.00000	
	9 1,4-Dichlorobenzene	146	8.140	8.140	(1.004)	104330	5.00000	4.862
$	10 1,2-Dichlorobenzene-d4	152	8.473	8.473	(1.045)	68747	5.00000	5.010
	12 1,2-Dichlorobenzene	146	8.504	8.504	(1.049)	100684	5.00000	4.901
	11 Benzyl alcohol	108	8.442	8.442	(1.041)	60491	5.00000	5.112
	14 2,2'-oxybis(1-Chloropropane)	121	8.761	8.761	(1.080)	32171	5.00000	5.153
	13 2-Methylphenol	108	8.722	8.722	(1.076)	97957	5.00000	4.839
	17 Hexachloroethane	117	9.118	9.118	(1.124)	43881	5.00000	4.887
	16 N-Nitroso-di-n-propylamine	70	9.032	9.032	(1.114)	62635	5.00000	4.956
	15 4-Methylphenol	108	9.017	9.017	(1.112)	99728	5.00000	4.832
$	18 Nitrobenzene-d5	82	9.265	9.265	(0.866)	103020	5.00000	4.859
	19 Nitrobenzene	77	9.296	9.296	(0.868)	92653	5.00000	4.733
	20 Isophorone	82	9.793	9.793	(0.915)	181214	5.00000	4.922
	21 2-Nitrophenol	139	9.964	9.964	(0.931)	56098	5.00000	5.112
	22 2,4-Dimethylphenol	107	10.103	10.103	(0.944)	218441	10.0000	10.83
	23 Bis(2-Chloroethoxy)methane	93	10.288	10.288	(0.961)	109022	5.00000	5.021
	24 Benzoic acid	105	10.442	10.442	(0.976)	293304	20.0000	16.60
	25 2,4-Dichlorophenol	162	10.465	10.465	(0.978)	162547	10.0000	8.751
	26 1,2,4-Trichlorobenzene	180	10.635	10.635	(0.994)	102491	5.00000	5.646
*	27 Naphthalene-d8	136	10.704	10.704	(1.000)	200917	4.00000	

Data File: /chem1/nt10.i/20130508.b/cc0508.d
Report Date: 10-May-2013 10:29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.751	10.751	(1.004)	263893	5.00000	4.933
	29 4-Chloroaniline	127	10.944	10.944	(1.022)	215680	10.0000	10.31
	30 Hexachlorobutadiene	225	11.168	11.168	(1.043)	54506	5.00000	5.054
	31 4-Chloro-3-methylphenol	107	12.027	12.027	(1.124)	180626	10.0000	11.05
	32 2-Methylnaphthalene	142	12.236	12.236	(1.143)	177737	5.00000	5.002
	33 Hexachlorocyclopentadiene	237	12.746	12.746	(0.877)	127255	10.0000	8.917
	34 2,4,6-Trichlorophenol	196	12.932	12.932	(0.890)	137664	10.0000	10.09
	35 2,4,5-Trichlorophenol	196	13.010	13.010	(0.895)	146774	10.0000	10.43
$	36 2-Fluorobiphenyl	172	13.095	13.095	(0.901)	217371	5.00000	4.802
	37 2-Chloronaphthalene	162	13.280	13.280	(0.914)	177076	5.00000	4.914
	38 2-Nitroaniline	65	13.598	13.598	(0.936)	98038	10.0000	11.27
	39 Dimethylphthalate	163	14.101	14.101	(0.970)	192531	5.00000	4.945
	40 Acenaphthylene	152	14.194	14.194	(0.977)	291162	5.00000	4.764
	41 2,6-Dinitrotoluene	165	14.225	14.225	(0.979)	95072	10.0000	10.42
*	42 Acenaphthene-d10	164	14.534	14.534	(1.000)	129691	4.00000	
	43 3-Nitroaniline	138	14.519	14.519	(0.999)	89566	10.0000	11.89
	44 Acenaphthene	153	14.604	14.604	(1.005)	176075	5.00000	4.780
	45 2,4-Dinitrophenol	184	14.743	14.743	(1.014)	141021	20.0000	17.31
	46 Dibenzofuran	168	14.959	14.959	(1.029)	248160	5.00000	4.927
	47 4-Nitrophenol	109	14.959	14.959	(1.029)	52263	10.0000	9.215
	48 2,4-Dinitrotoluene	165	15.083	15.083	(1.038)	128684	10.0000	10.94
	50 Diethylphthalate	149	15.670	15.670	(1.078)	222587	5.00000	5.690
	49 Fluorene	166	15.717	15.717	(1.081)	209591	5.00000	4.877
	51 4-Chlorophenyl-phenylether	204	15.748	15.748	(1.083)	95718	5.00000	4.531
	52 4-Nitroaniline	138	15.871	15.871	(1.092)	82879	10.0000	10.60
	53 4,6-Dinitro-2-methylphenol	198	15.972	15.972	(0.900)	188950	20.0000	17.79
	54 N-Nitrosodiphenylamine	169	16.033	16.033	(0.903)	129667	5.00000	5.059
$	55 2,4,6-Tribromophenol	330	16.288	16.288	(1.121)	36125	5.00000	5.267
	56 4-Bromophenyl-phenylether	248	16.812	16.812	(0.947)	62602	5.00000	4.997
	57 Hexachlorobenzene	284	17.105	17.105	(0.963)	84317	5.00000	5.641
	58 Pentachlorophenol	266	17.523	17.523	(0.987)	85338	10.0000	8.133
*	59 Phenanthrene-d10	188	17.756	17.756	(1.000)	221407	4.00000	
	60 Phenanthrene	178	17.810	17.810	(1.003)	293256	5.00000	4.856
	61 Anthracene	178	17.910	17.910	(1.009)	305729	5.00000	4.941
	62 Carbazole	167	18.297	18.297	(1.030)	226093	5.00000	6.016
	63 Di-n-butylphthalate	149	19.249	19.249	(1.084)	337416	5.00000	5.283
	64 Fluoranthene	202	20.301	20.301	(1.143)	359781	5.00000	5.062
	65 Pyrene	202	20.727	20.727	(0.903)	368086	5.00000	5.248
$	66 Terphenyl-d14	244	21.082	21.082	(0.919)	242628	5.00000	5.498
	67 Butylbenzylphthalate	149	22.066	22.066	(0.962)	134745	5.00000	5.625
	68 Benzo(a)anthracene	228	22.910	22.910	(0.999)	323413	5.00000	5.095
*	69 Chrysene-d12	240	22.941	22.941	(1.000)	226704	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.917	22.917	(0.999)	296242	10.0000	12.25
	71 Chrysene	228	22.979	22.979	(1.002)	275451	5.00000	4.796
	72 bis(2-Ethylhexyl)phthalate	149	23.134	23.134	(0.960)	181276	5.00000	4.846
*	134 Di-n-octylphthalate-d4	153	24.110	24.110	(1.000)	281343	4.00000	
	73 Di-n-octylphthalate	149	24.125	24.125	(1.001)	310877	5.00000	4.799

	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	24.667	24.667	(0.978)	299187	5.00000	4.952
75	Benzo(k)fluoranthene	252	24.698	24.698	(0.979)	328438	5.00000	5.161
76	Benzo(a)pyrene	252	25.139	25.139	(0.997)	260592	5.00000	5.049
* 77	Perylene-d12	264	25.225	25.225	(1.000)	203438	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	27.543	27.543	(1.092)	265847	5.00000	4.471
79	Dibenzo(a,h)anthracene	278	27.046	27.046	(1.072)	249260	5.00000	5.465
80	Benzo(g,h,i)perylene	276	27.543	27.543	(1.092)	265847	5.00000	5.167
90	N-Nitrosodimethylamine	74	3.643	3.643	(0.449)	118008	10.0000	9.520
91	Aniline	93	7.560	7.560	(0.932)	279368	5.00000	5.119
93	Benzidine	184	20.603	20.603	(0.898)	70158	10.0000	9.679
103	Pyridine	79	3.651	3.651	(0.450)	100735	10.0000	9.245
105	1-methylnaphthalene	142	12.460	12.460	(1.164)	164276	5.00000	5.041
111	Azobenzene (1,2-DP-Hydrazine)	77	16.095	16.095	(1.107)	189523	5.00000	4.725
187	Total Benzofluoranthenes	252	24.698	24.698	(0.979)	577976	10.0000	9.852
99	Perylene	252	25.263	25.263	(1.002)	284542	5.00000	4.823
98	Retene	219	21.369	21.369	(0.931)	142350	5.00000	5.362
120	2,3,4,6-Tetrachlorophenol	232	15.353	15.353	(1.056)	60278	5.00000	5.759

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0508.d
Lab Smp Id: CC0508
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130508.b/ABN.m
Misc Info:

Calibration Date: 08-MAY-2013
Calibration Time: 14:50

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	54414	20.25
27 Naphthalene-d8	166754	83377	333508	200917	20.49
42 Acenaphthene-d10	106910	53455	213820	129691	21.31
59 Phenanthrene-d10	179783	89892	359566	221407	23.15
69 Chrysene-d12	192841	96420	385682	226704	17.56
134 Di-n-octylphthala	229567	114784	459134	281343	22.55
77 Perylene-d12	184310	92155	368620	203438	10.38

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.11	7.61	8.61	8.11	0.00
27 Naphthalene-d8	10.70	10.20	11.20	10.70	0.00
42 Acenaphthene-d10	14.53	14.03	15.03	14.53	0.00
59 Phenanthrene-d10	17.76	17.26	18.26	17.76	0.00
69 Chrysene-d12	22.94	22.44	23.44	22.94	0.00
134 Di-n-octylphthala	24.11	23.61	24.61	24.11	0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	0.00

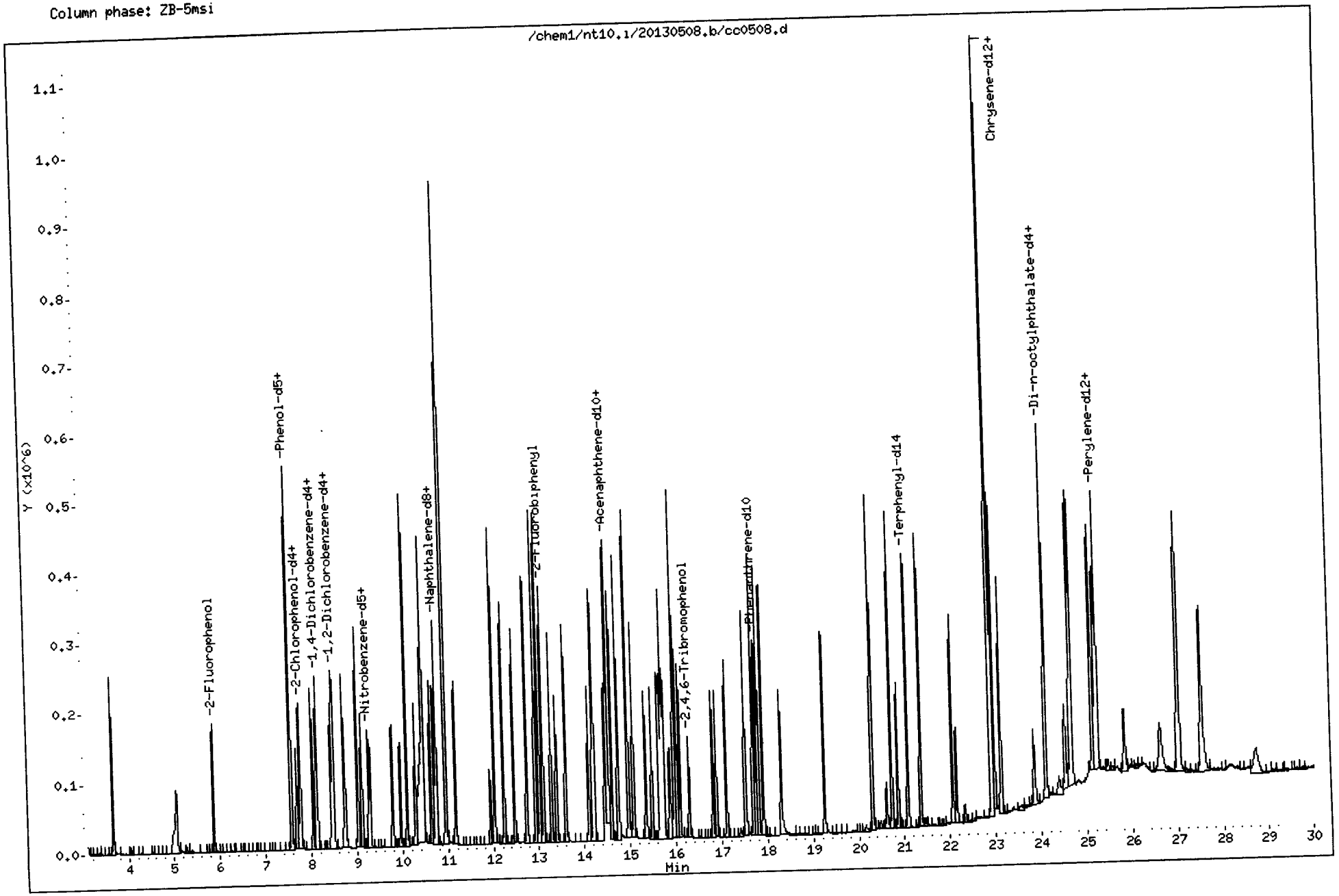
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130508.b/cc0508.d
Date : 08-MAY-2013 14:50
Client ID:
Sample Info: CC0508

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



UN31 : 01010

CO-ELUTION SUMMARY FOR FILE - cc0508.d

Lab ID: CC0508, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2013

RT	CO-ELUTION COMPOUNDS
27.543	Benzo(g,h,i)perylene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/14/13

Data file : /chem1/nt10.i/20130508.b/wn31a9.d
Lab Smp Id: WN31A Client Smp ID: ES-TS-INF-20130424-
Inj Date : 08-MAY-2013 16:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WN31A,9
Misc Info : 13-8693
Comment : 1ul Injection
Method : /chem1/nt10.i/20130508.b/ABN.m
Meth Date : 14-Aug-2013 11:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 5
Dil Factor: 9.00000
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	9.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	3.02000	Weight of sample extracted (g)
M	60.30000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.860	5.867	(0.723)	8421	0.49463	3713
$	2 Phenol-d5	99	7.544	7.552	(0.931)	11377	0.51643	3877
	3 Phenol	94	7.567	7.575	(0.934)	7605	0.30840	2315
$	5 2-Chlorophenol-d4	132	7.737	7.745	(0.955)	8829	0.52796	3963
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.101	8.109	(1.000)	47698	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.466	8.473	(1.045)	4079	0.33909	2545
	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	9.009	9.017	(1.112)	33647	1.85968	13960
$	18 Nitrobenzene-d5	82	9.250	9.265	(0.865)	6487	0.34692	2604
	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	10.697	10.704	(1.000)	177198	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	13.087	13.095	(0.901)	14399	0.38382	2881
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	14.086	14.101	(0.970)	6736	0.20876	1567
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.519	14.534	(1.000)	107487	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	16.280	16.288	(1.121)	3287	0.57826	4341
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.748	17.756	(1.000)	162964	4.00000	
	60 Phenanthrene	178	17.794	17.810	(1.003)	7627	0.17158	1288
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	20.301	20.301	(1.144)	13924	0.26615	1998
	65 Pyrene	202	20.719	20.727	(0.903)	19677	0.37818	2839
$	66 Terphenyl-d14	244	21.083	21.082	(0.919)	15731	0.48054	3607
	67 Butylbenzylphthalate	149	22.066	22.066	(0.962)	3766	0.21195	1591
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	22.933	22.941	(1.000)	168170	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.972	22.979	(1.002)	8579	0.20135	1511
	72 bis(2-Ethylhexyl)phthalate	149	23.134	23.134	(0.960)	494208	16.8510	126500
*	134 Di-n-octylphthalate-d4	153	24.110	24.110	(1.000)	220595	4.00000	
	73 Di-n-octylphthalate	149	24.118	24.125	(1.000)	36091	0.71058	5334(M)
	74 Benzo(b)fluoranthene	252	24.675	24.667	(0.978)	9850	0.19841	1489
	75 Benzo(k)fluoranthene	252	24.675	24.698	(0.978)	9847	0.18832	1414
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	25.225	25.225	(1.000)	167173	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	27.551	27.543	(1.092)	7417	0.17544	1317
	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	24.675	24.698	(0.978)	10036	0.20819	1563
	99 Perylene	252	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn31a9.d
Lab Smp Id: WN31A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130508.b/ABN.m
Misc Info: 13-8693

Calibration Date: 08-MAY-2013
Calibration Time: 14:50
Client Smp ID: ES-TS-INF-201304
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	47698	5.41
27 Naphthalene-d8	166754	83377	333508	177198	6.26
42 Acenaphthene-d10	106910	53455	213820	107487	0.54
59 Phenanthrene-d10	179783	89892	359566	162964	-9.36
69 Chrysene-d12	192841	96420	385682	168170	-12.79
134 Di-n-octylphthala	229567	114784	459134	220595	-3.91
77 Perylene-d12	184310	92155	368620	167173	-9.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.11	7.61	8.61	8.10	-0.09
27 Naphthalene-d8	10.70	10.20	11.20	10.70	-0.07
42 Acenaphthene-d10	14.53	14.03	15.03	14.52	-0.10
59 Phenanthrene-d10	17.76	17.26	18.26	17.75	-0.04
69 Chrysene-d12	22.94	22.44	23.44	22.93	-0.03
134 Di-n-octylphthala	24.11	23.61	24.61	24.11	0.00
77 Perylene-d12	25.22	24.72	25.72	25.22	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.

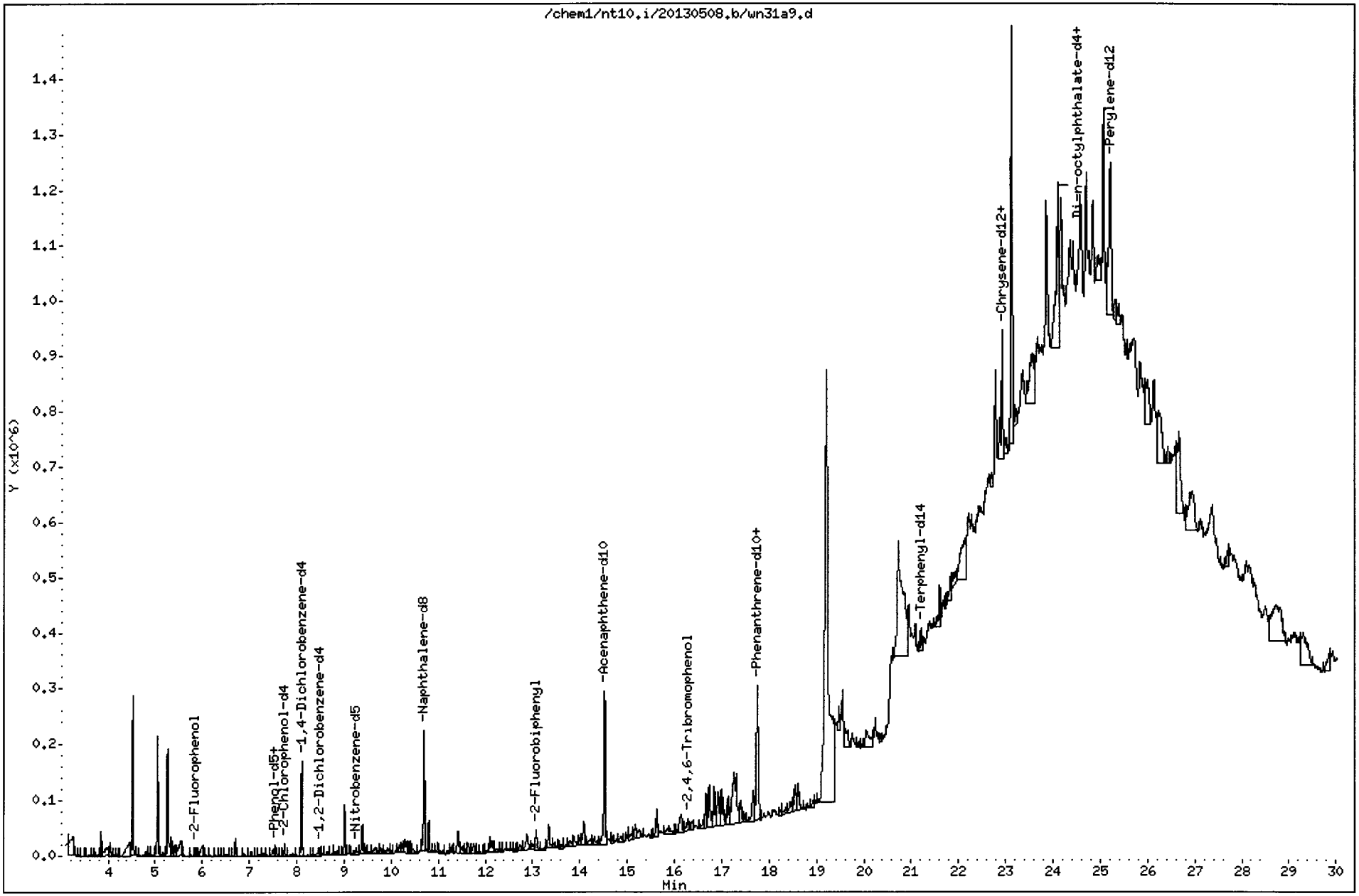
RECOVERY REPORT

Client Name: SAIC
Client SDG: WN31
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN31A
Client Smp ID: ES-TS-INF-20130424-
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/20130508.b/ABN.m
Misc Info: 13-8693

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	6256	3713	59.36	30-160
$ 2 Phenol-d5	6256	3877	61.97	30-160
$ 5 2-Chlorophenol-d4	6256	3963	63.35	30-160
$ 10 1,2-Dichlorobenzen	4170	2545	61.04	30-160
$ 18 Nitrobenzene-d5	4170	2604	62.45	30-160
$ 36 2-Fluorobiphenyl	4170	2881	69.09	30-160
$ 55 2,4,6-Tribromophen	6256	4341	69.39	30-160
$ 66 Terphenyl-d14	4170	3607	86.50	30-160

Data File: /chem1/nt10.i/20130508.b/wn31a9.d
Date : 08-MAY-2013 16:03
Client ID: ES-TS-INF-20130424-
Sample Info: WN31A,9
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

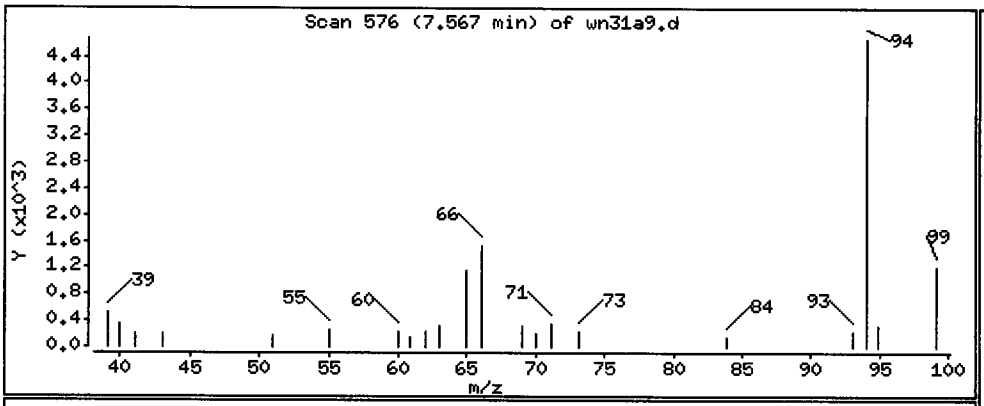
Operator: VTS/YZ

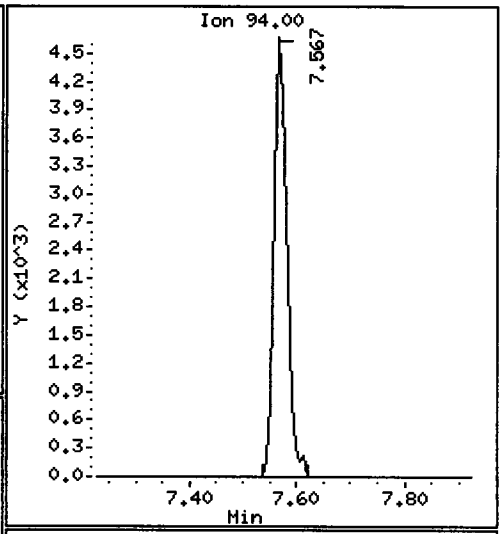
Column phase: ZB-5msi

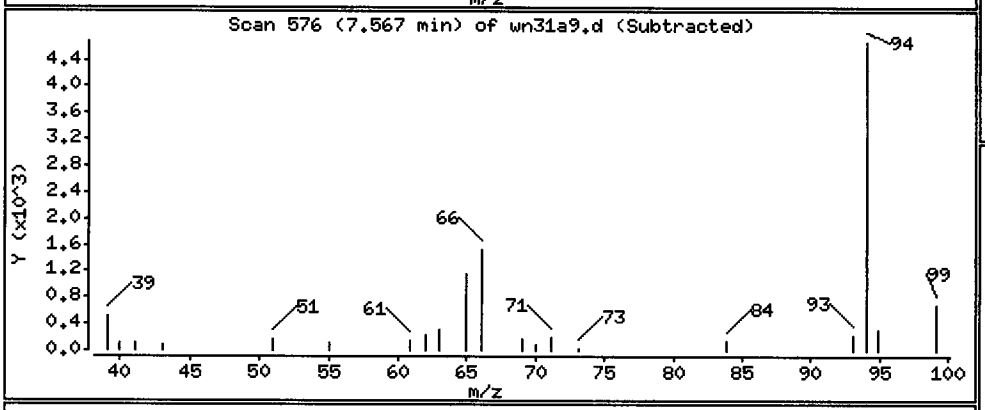
Column diameter: 0.25

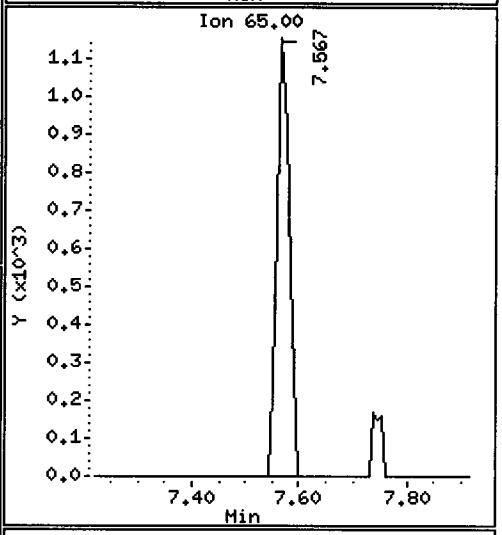
3 Phenol

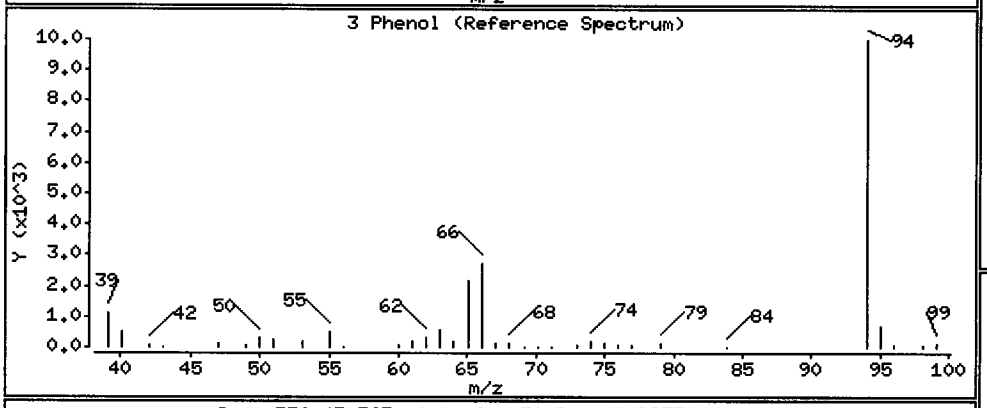
Concentration: 2315 ug/kg

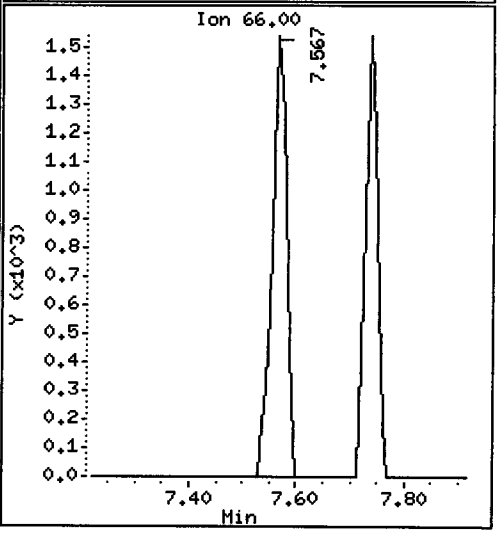


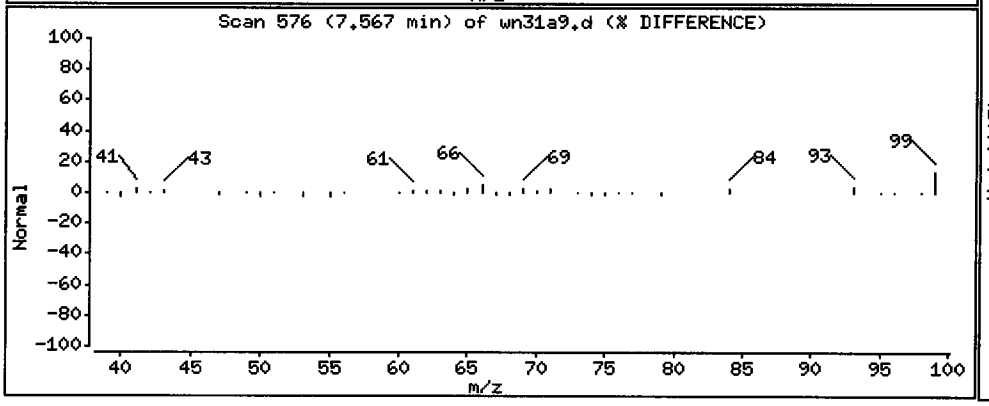












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

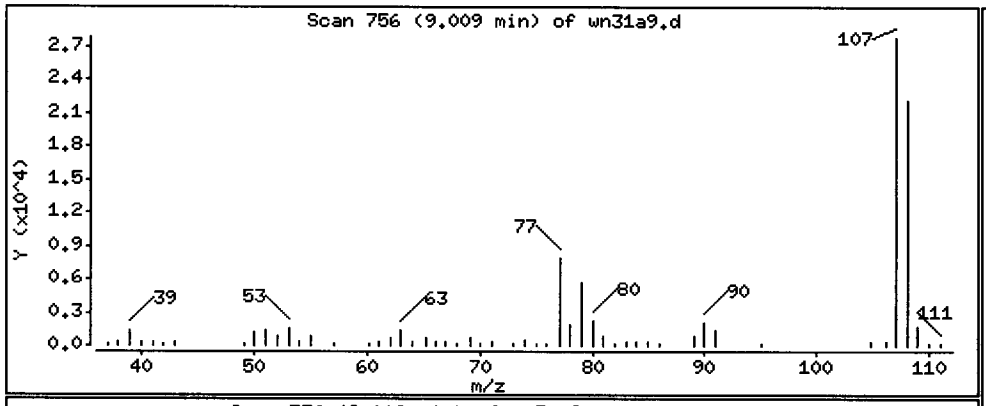
Operator: VTS/YZ

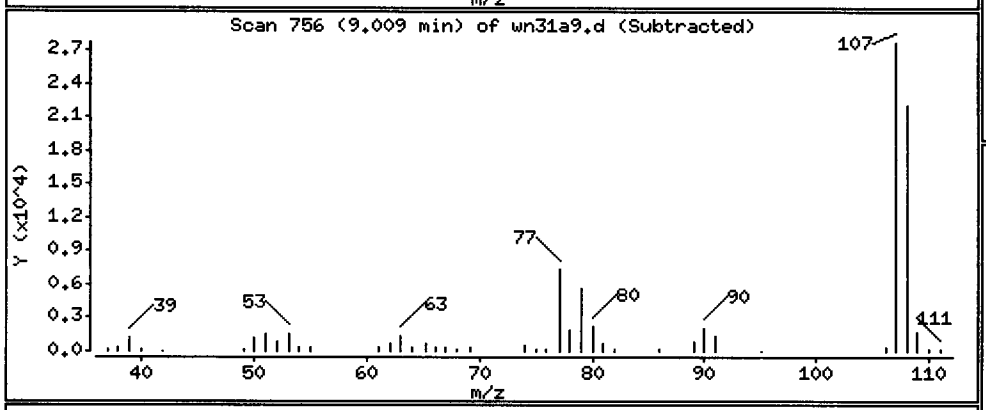
Column phase: ZB-5msi

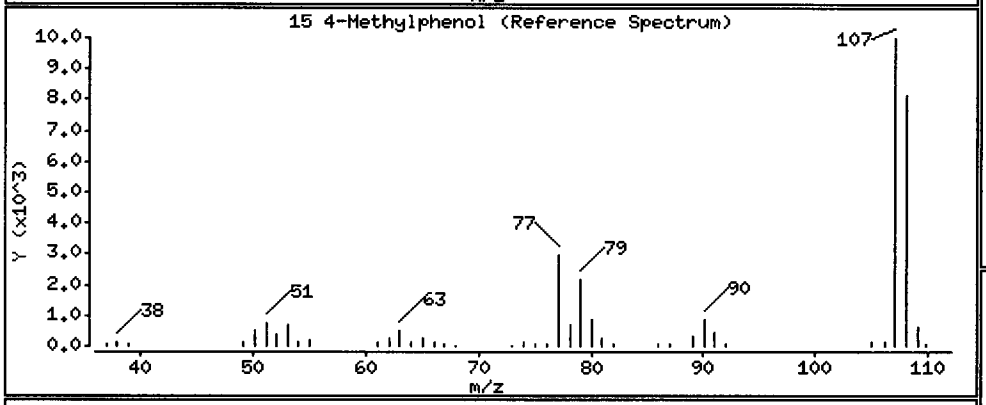
Column diameter: 0.25

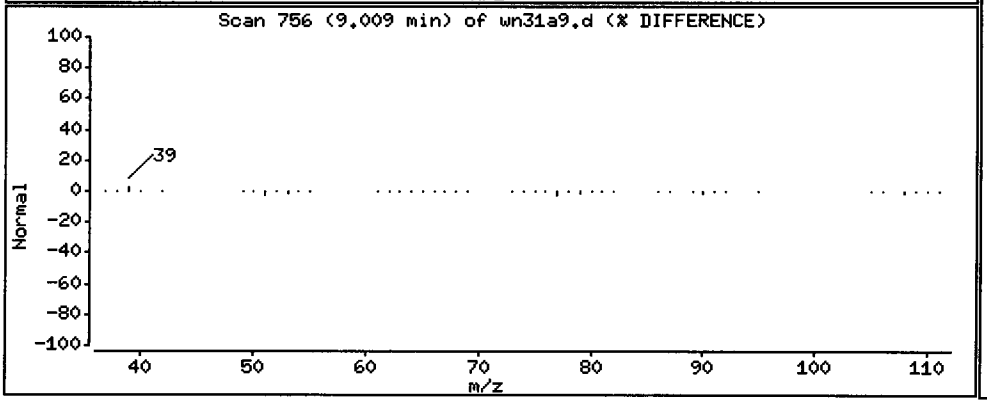
15 4-Methylphenol

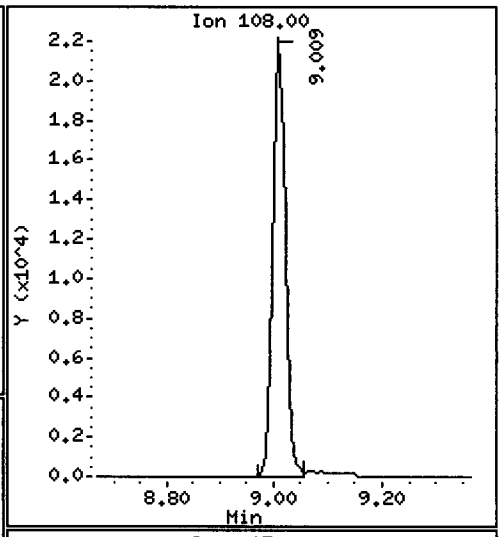
Concentration: 13960 ug/kg

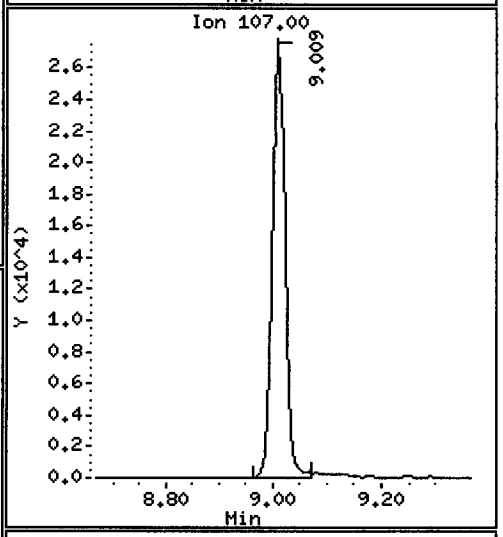


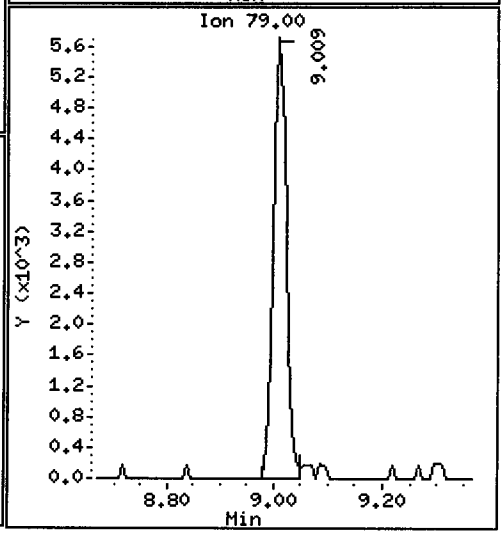












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

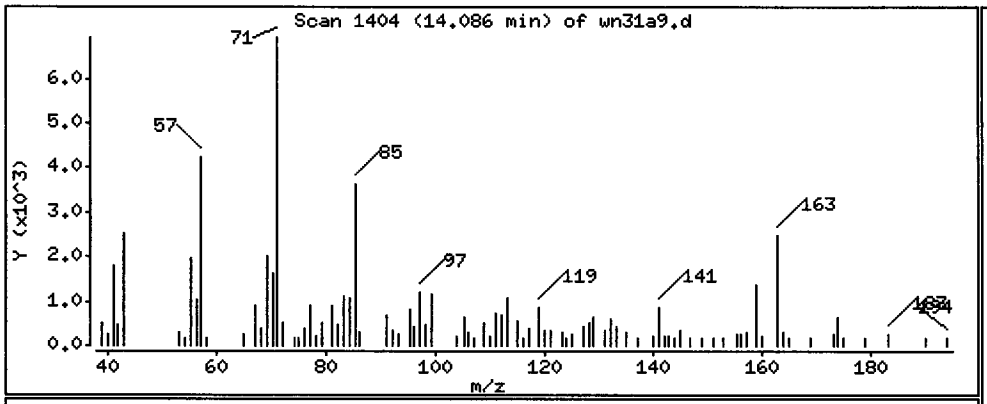
Operator: VTS/YZ

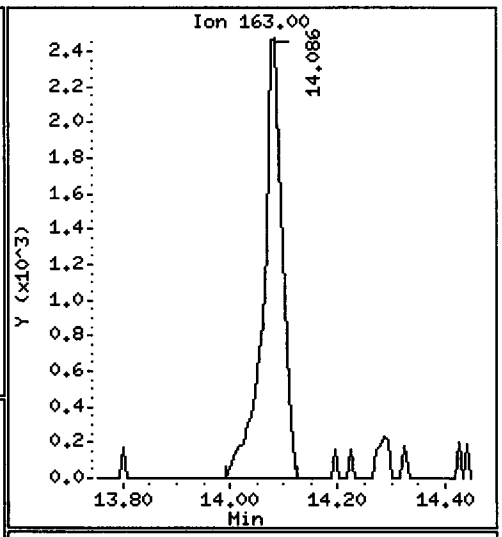
Column phase: ZB-5msi

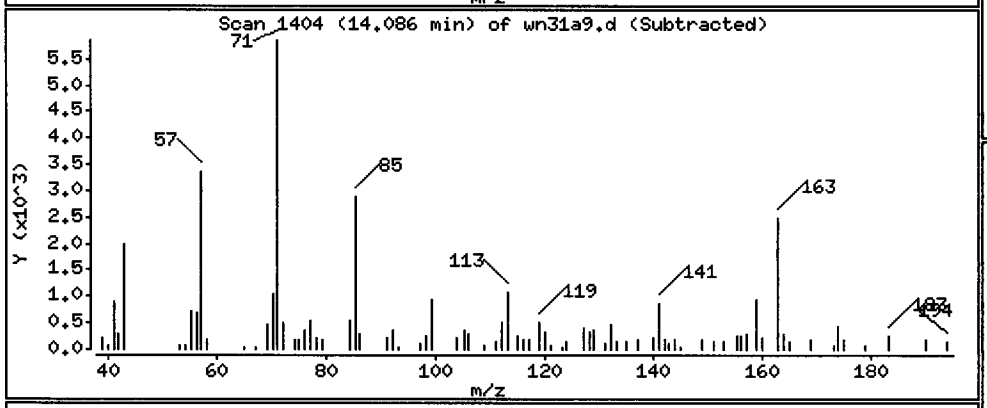
Column diameter: 0.25

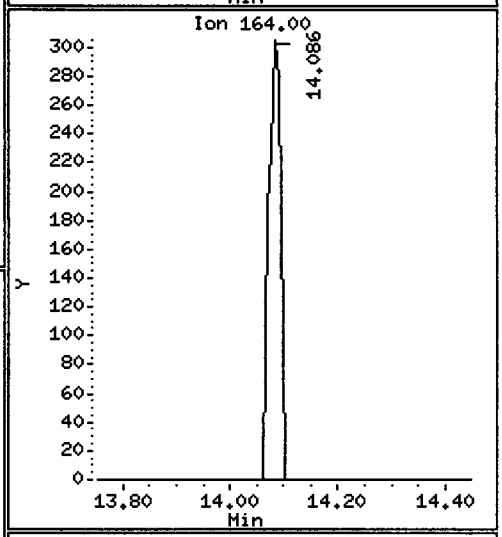
39 Dimethylphthalate

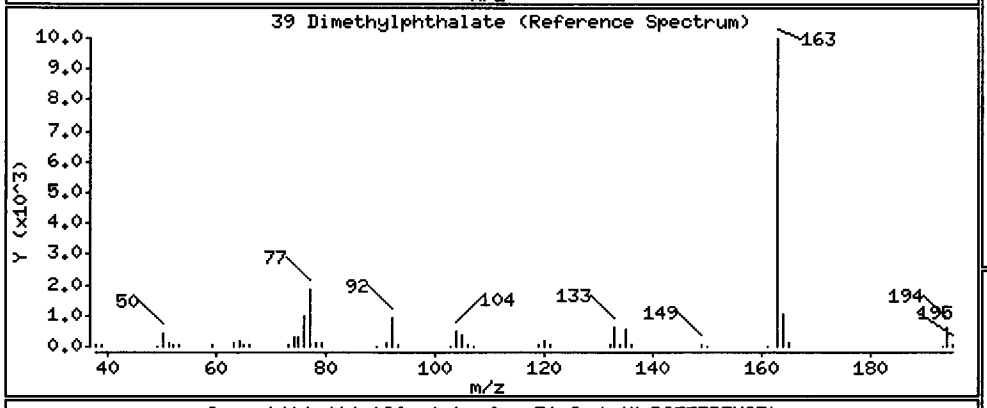
Concentration: 1567 ug/kg

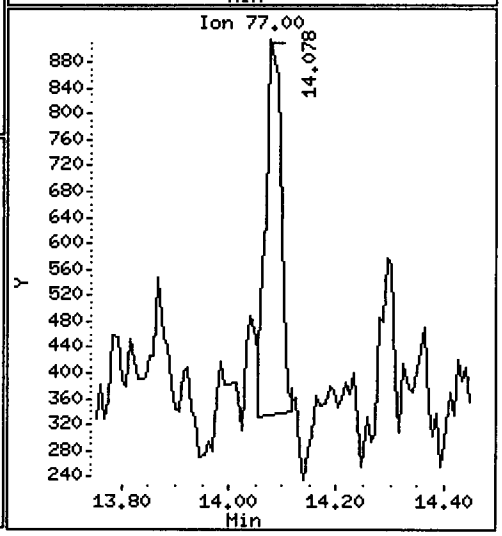


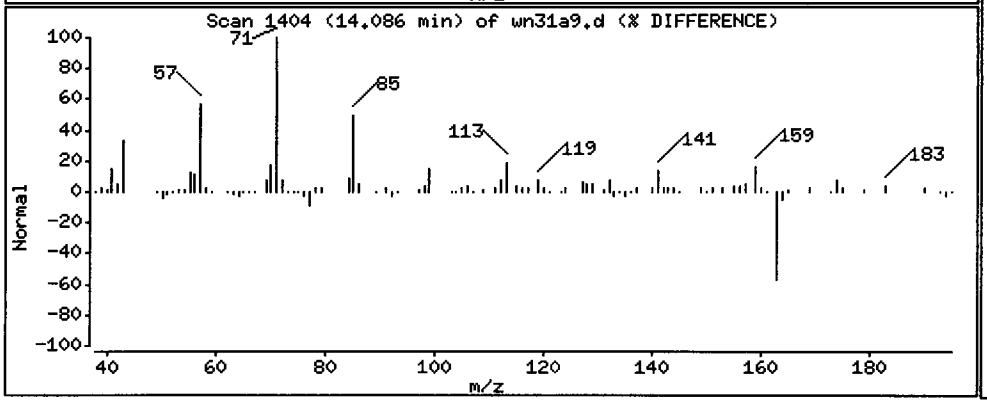












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

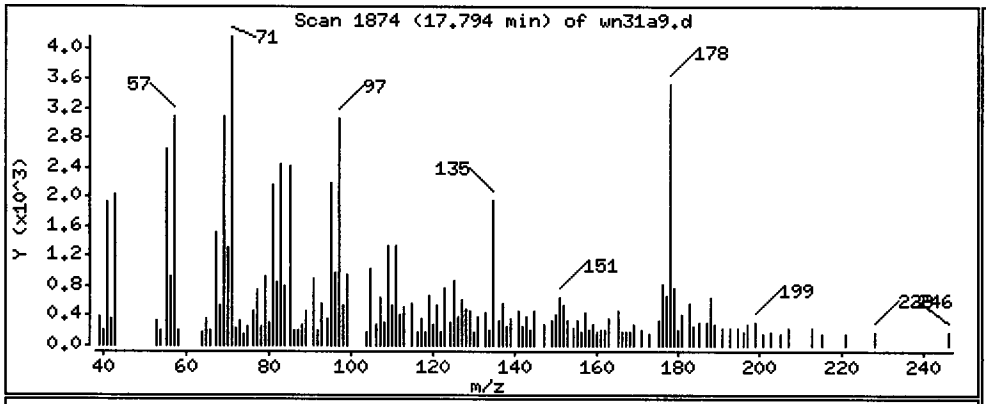
Operator: VTS/YZ

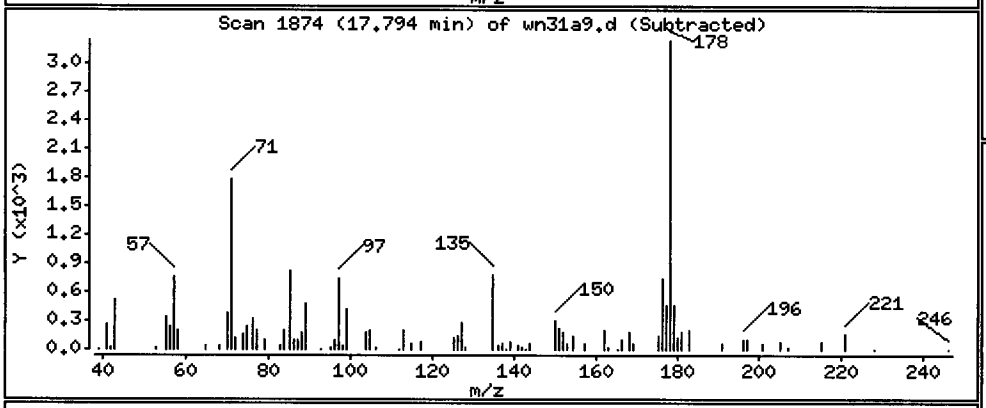
Column phase: ZB-5msi

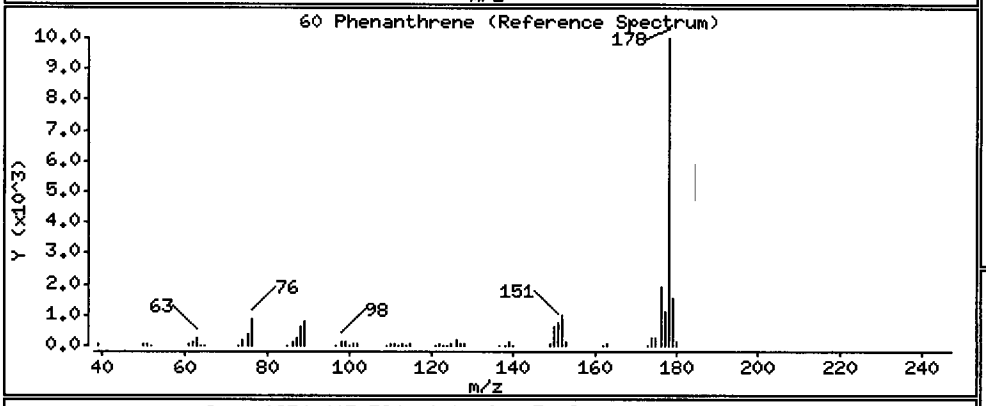
Column diameter: 0.25

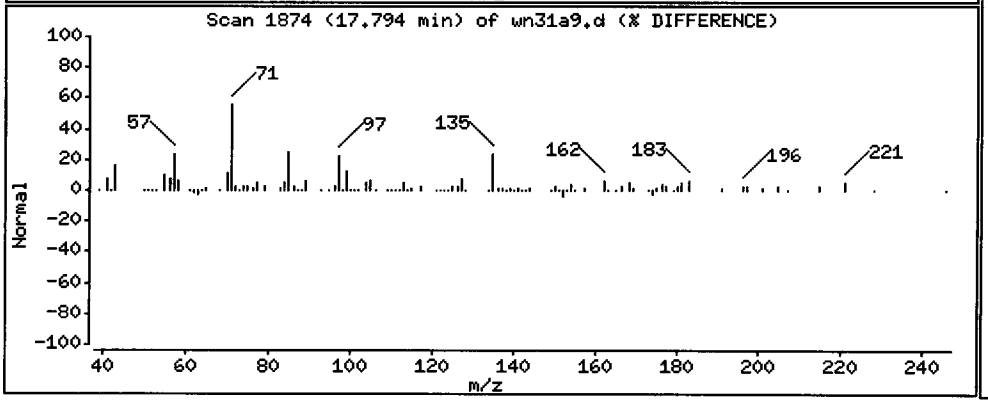
60 Phenanthrene

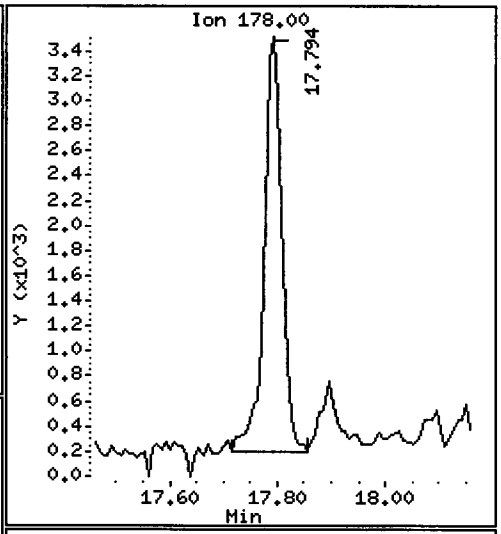
Concentration: 1288 ug/kg

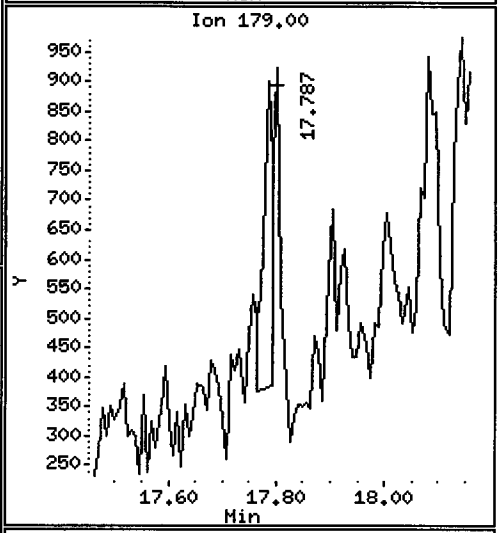


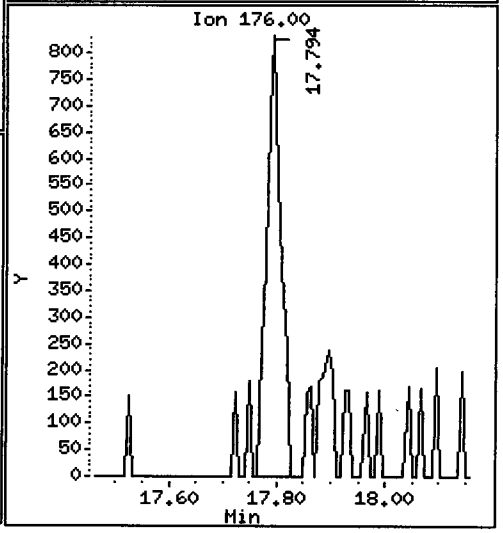












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

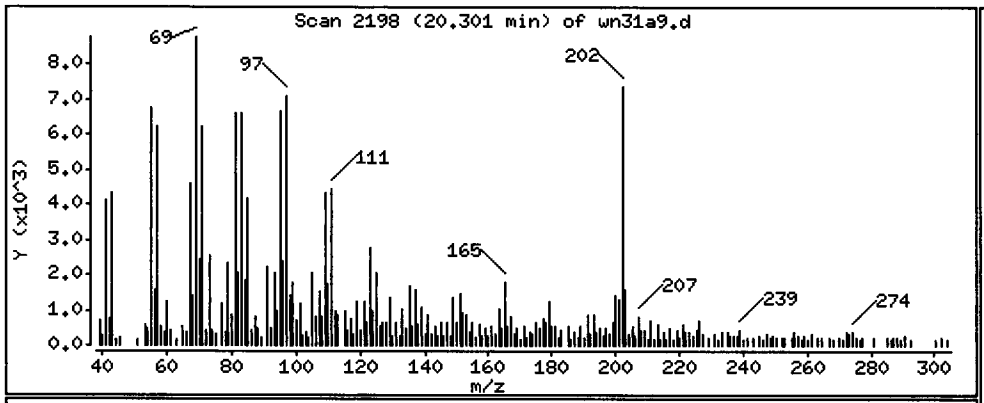
Operator: VTS/YZ

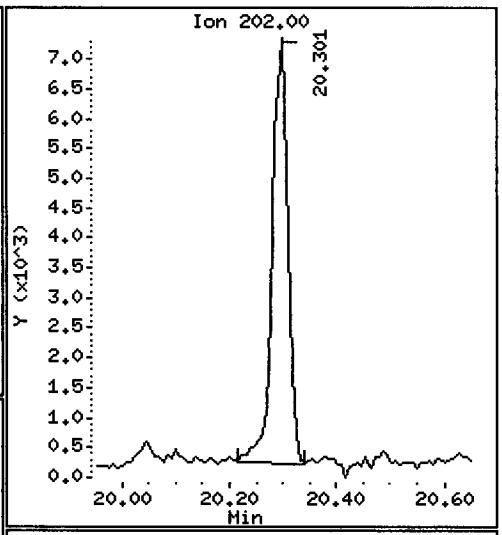
Column phase: ZB-5msi

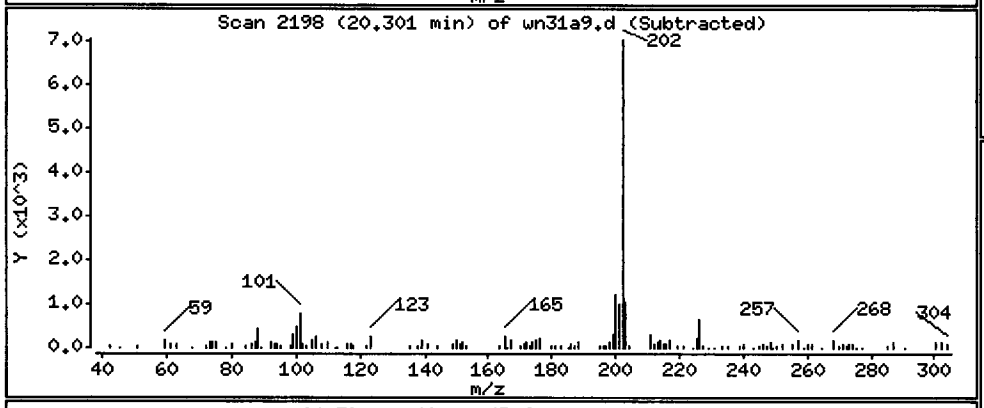
Column diameter: 0.25

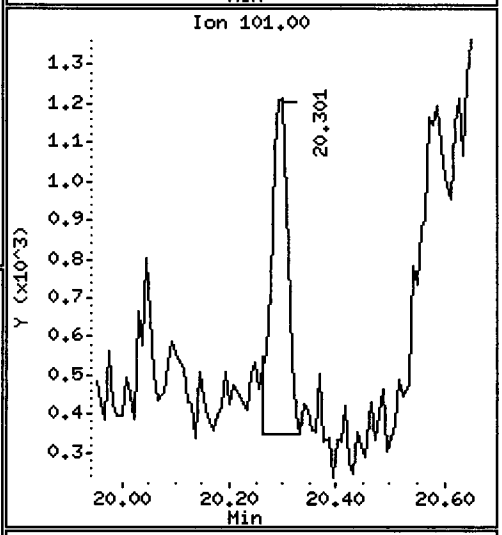
64 Fluoranthene

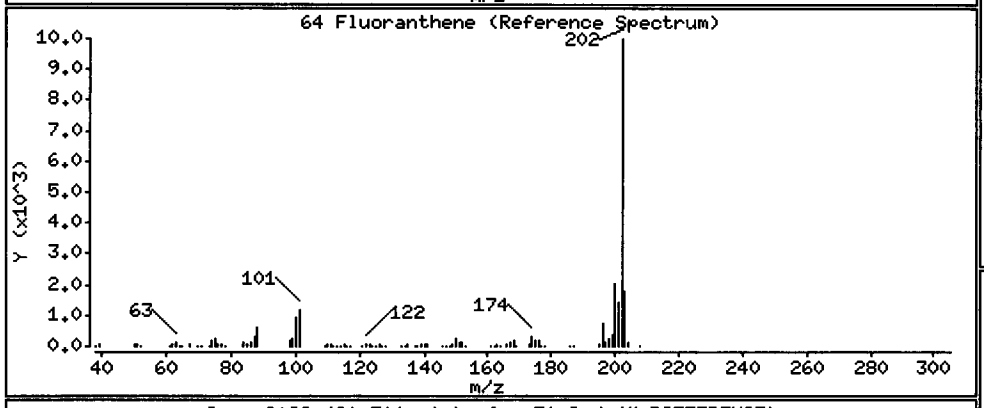
Concentration: 1998 ug/kg

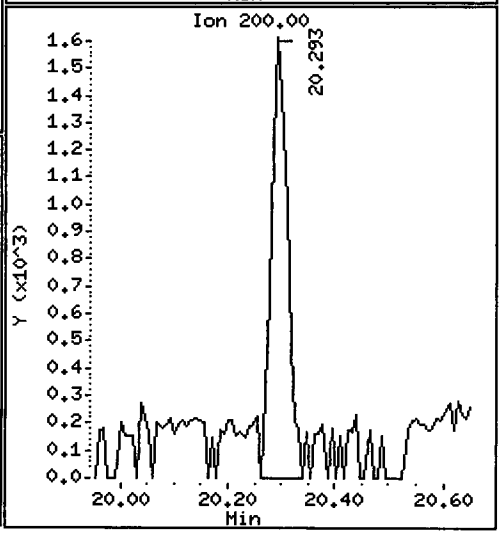


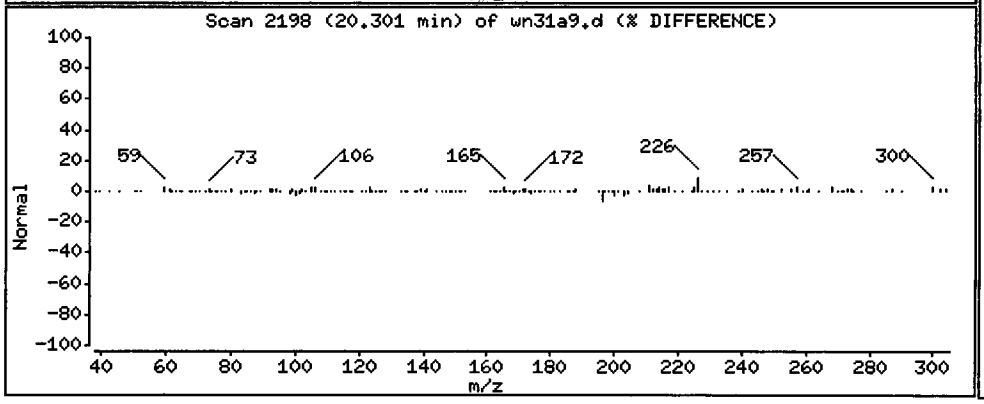












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

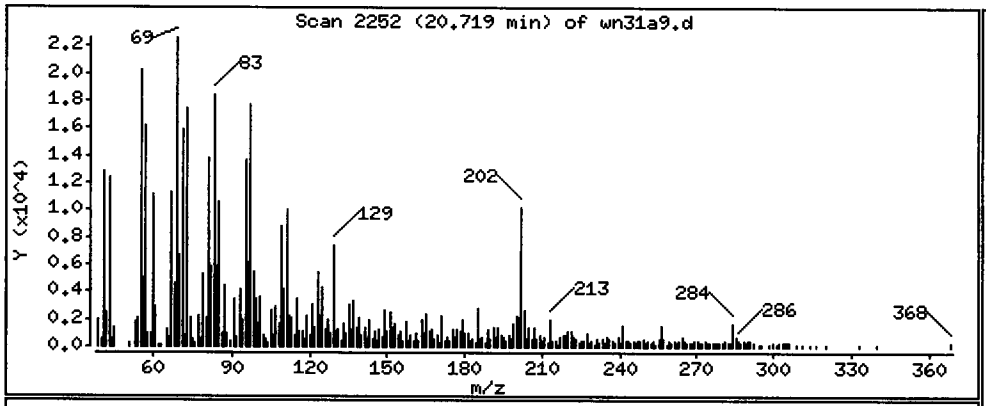
Operator: VTS/YZ

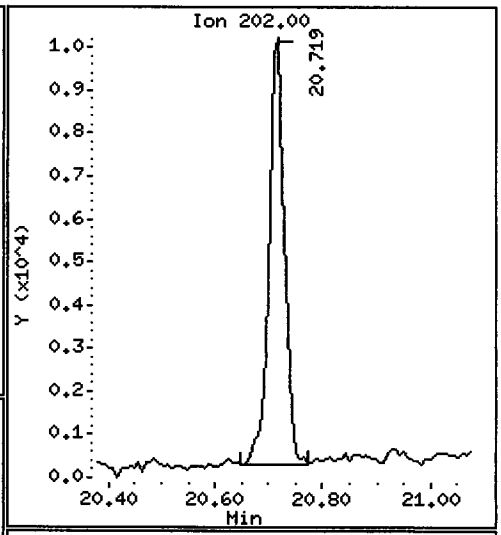
Column phase: ZB-5msi

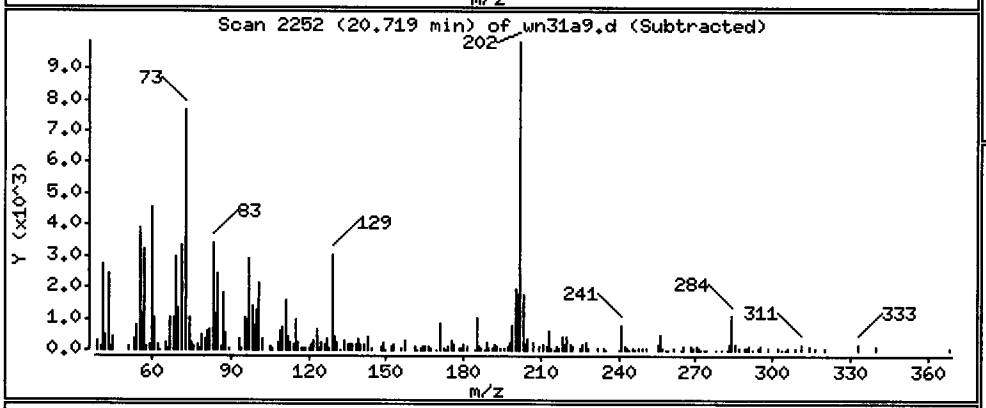
Column diameter: 0.25

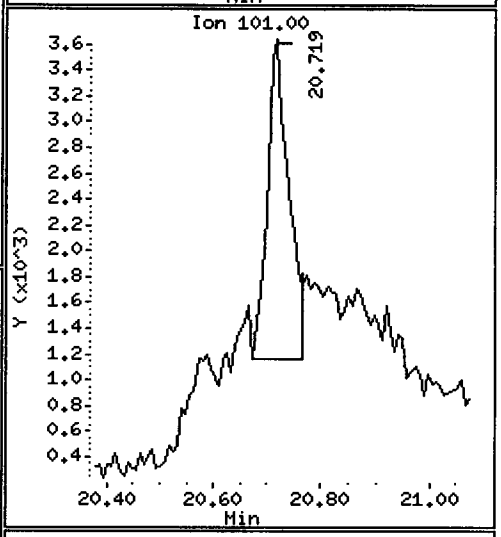
65 Pyrene

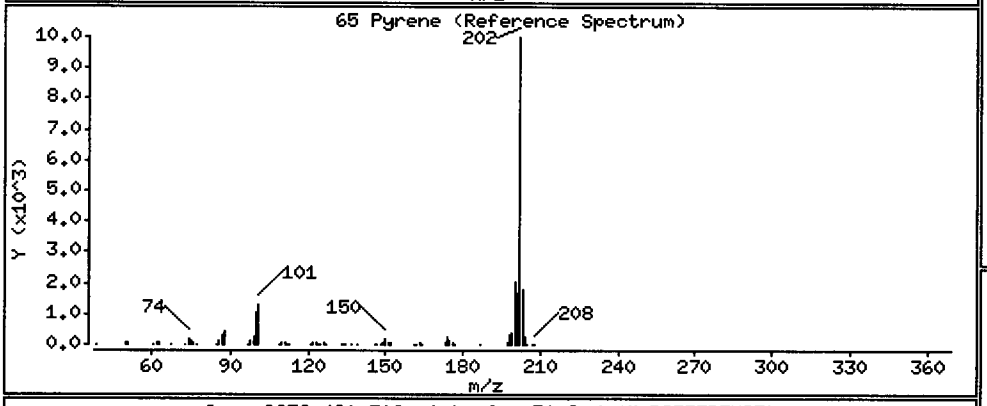
Concentration: 2839 ug/kg

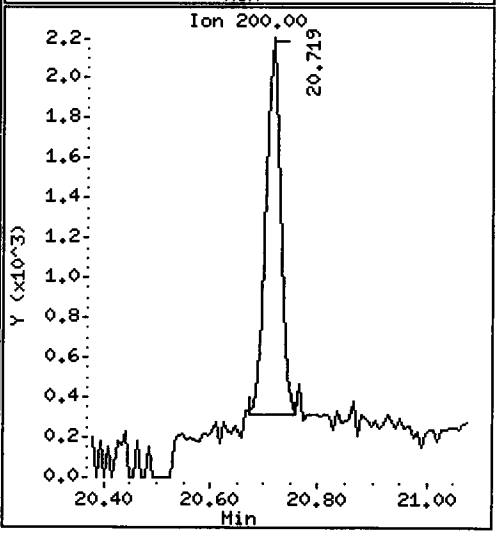


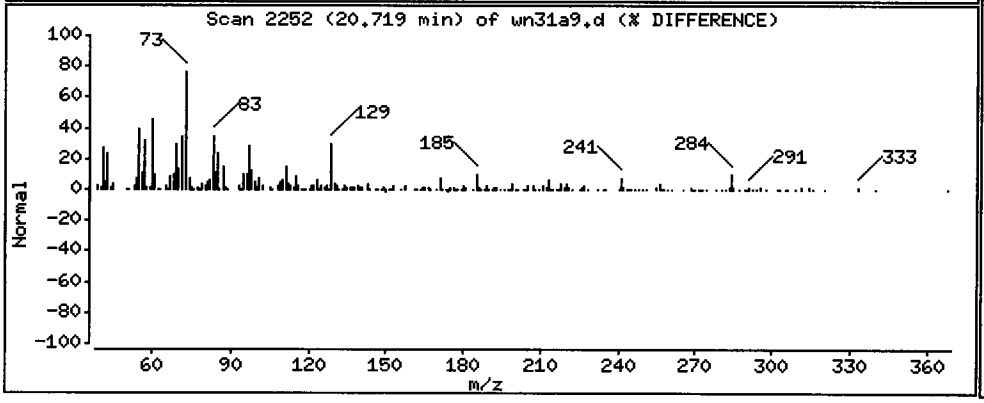












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

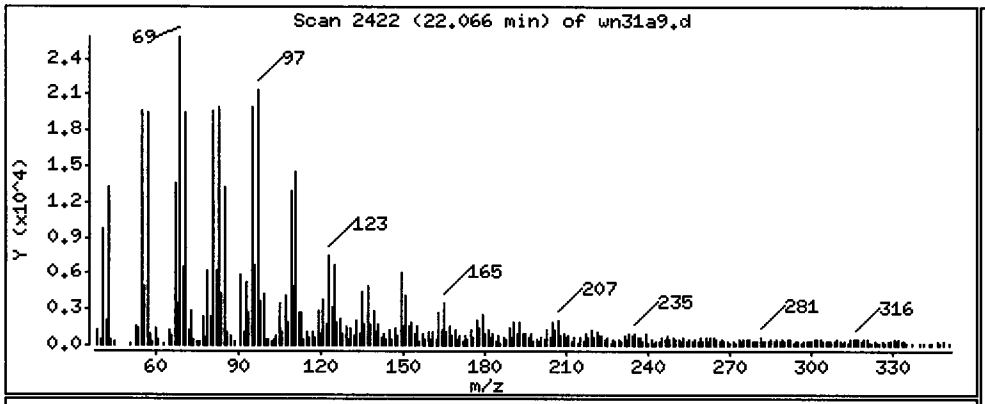
Operator: VTS/YZ

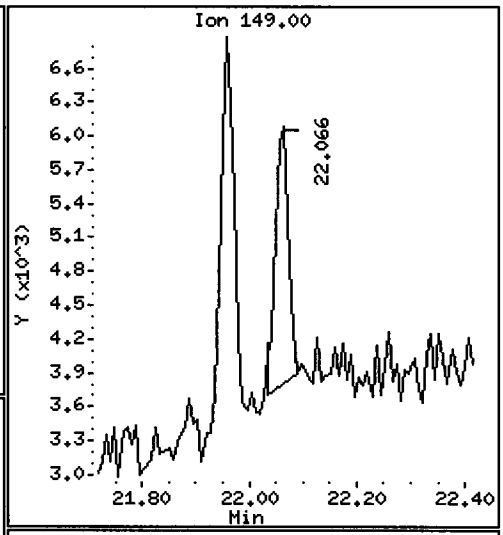
Column phase: ZB-5msi

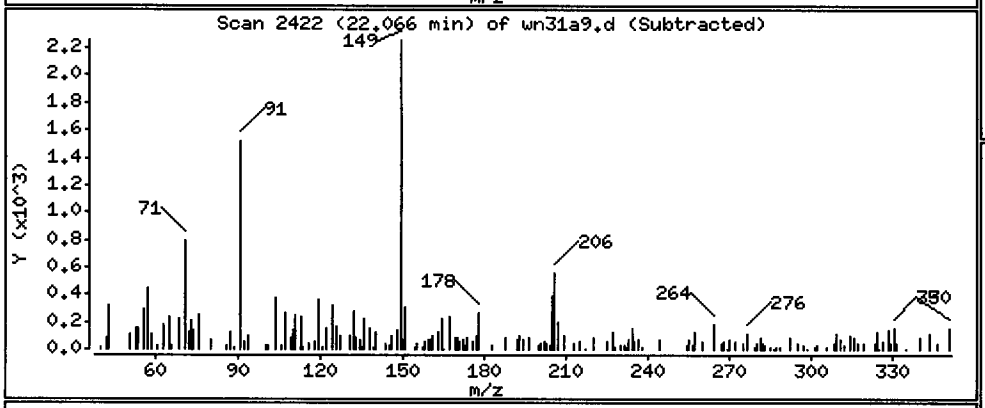
Column diameter: 0.25

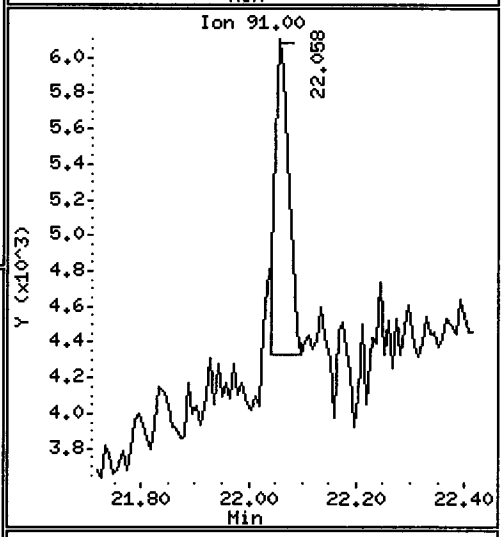
67 Butylbenzylphthalate

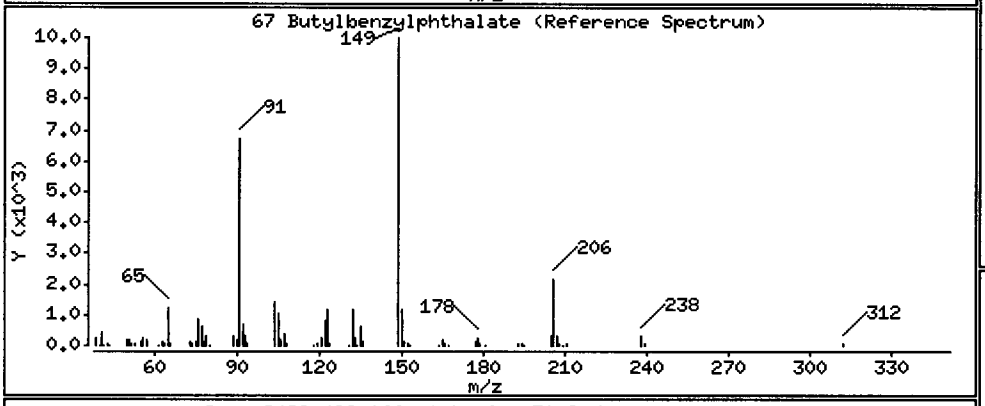
Concentration: 1591 ug/kg

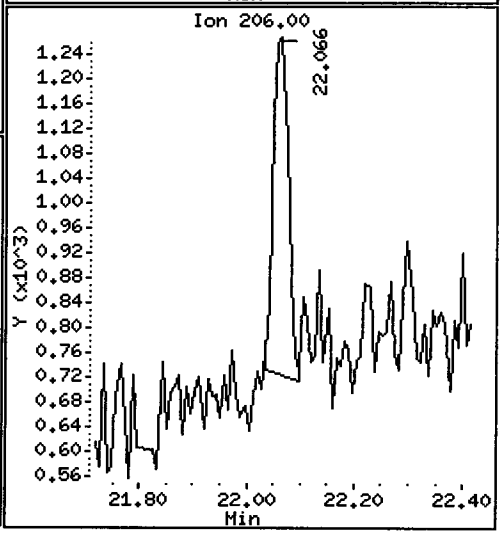


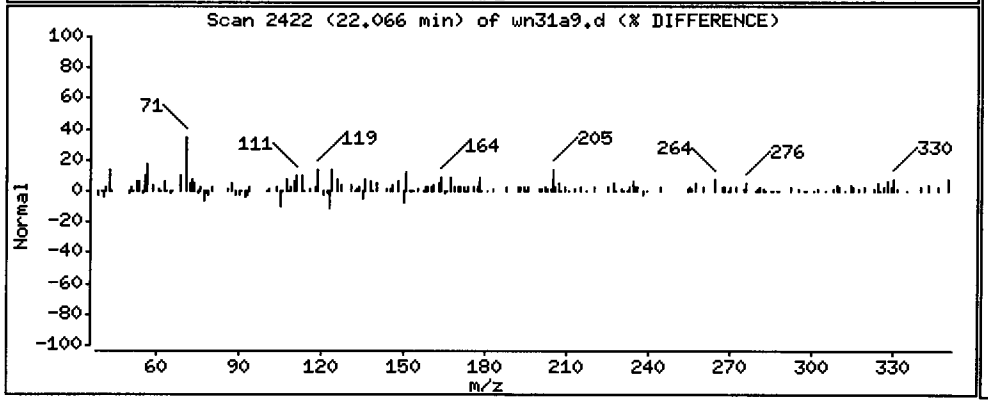












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

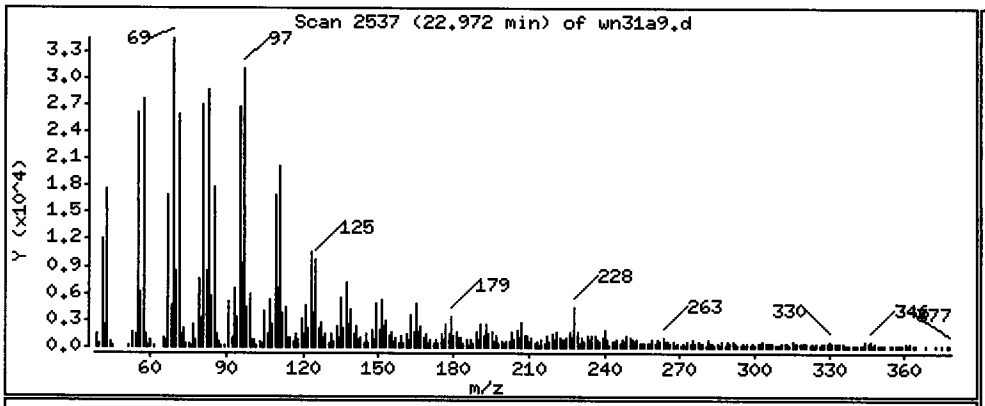
Operator: VTS/YZ

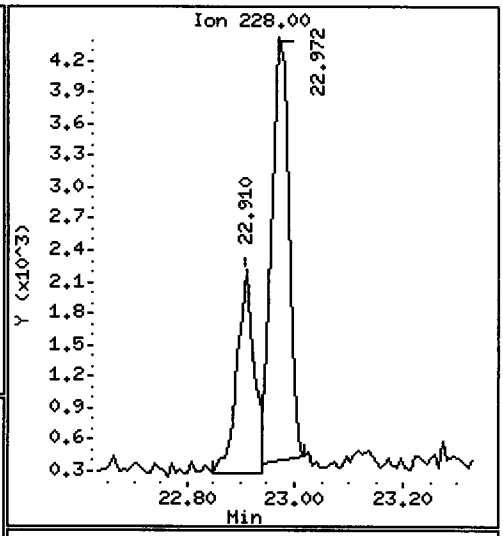
Column phase: ZB-5msi

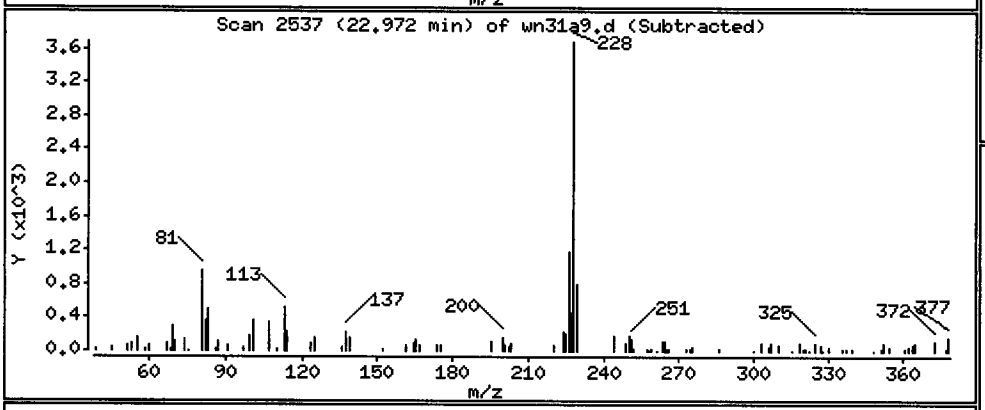
Column diameter: 0.25

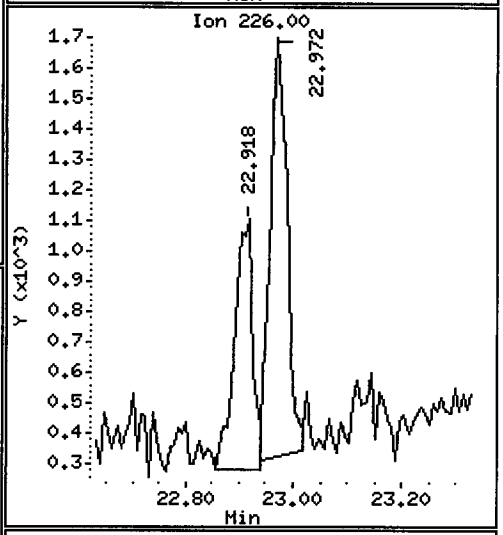
71 Chrysene

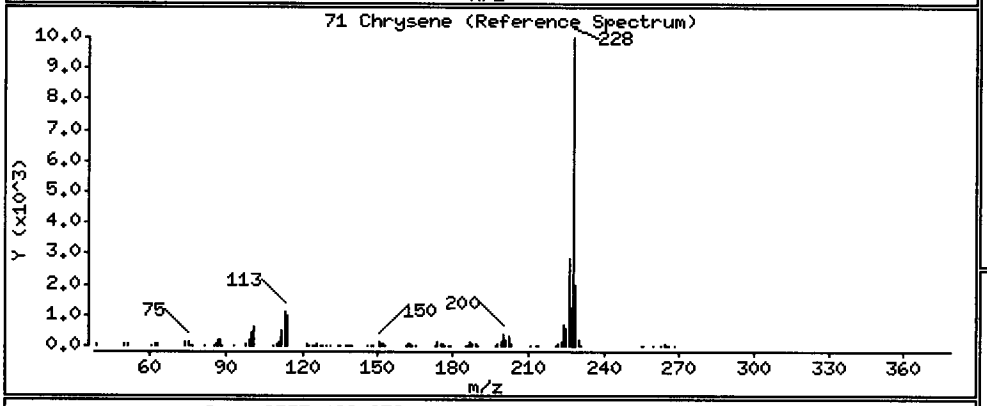
Concentration: 1511 ug/kg

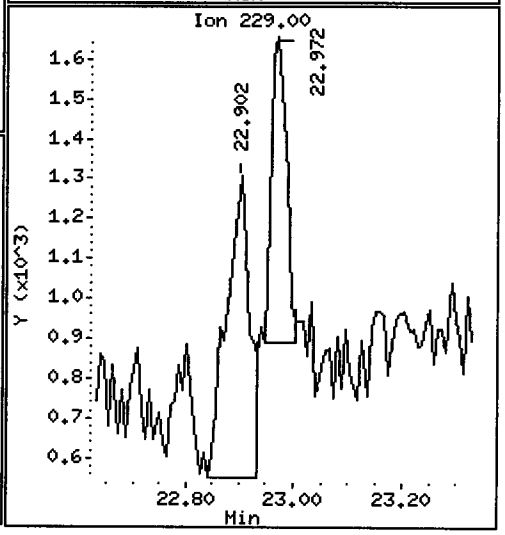


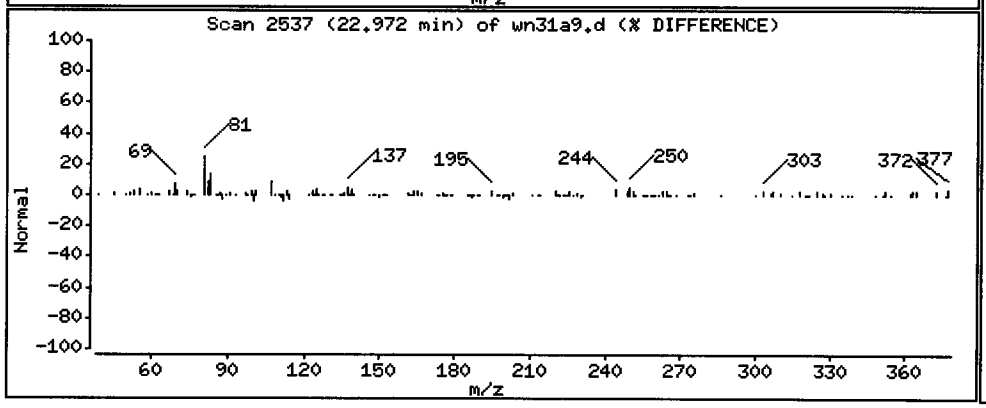












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

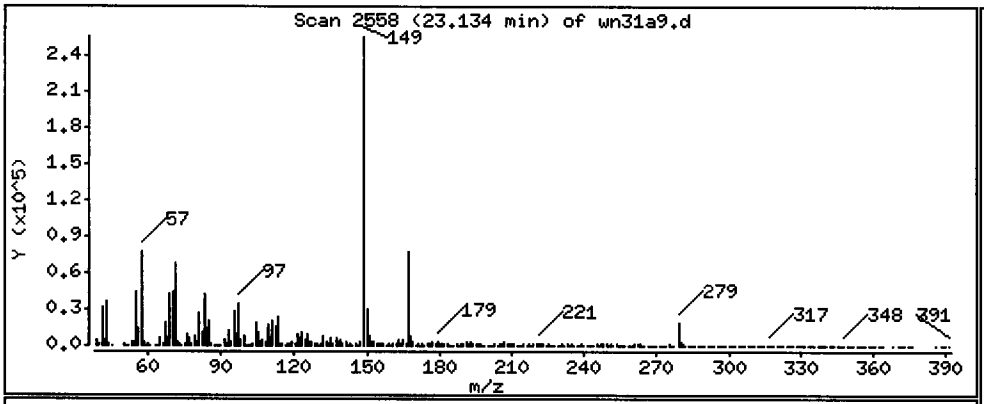
Operator: VTS/YZ

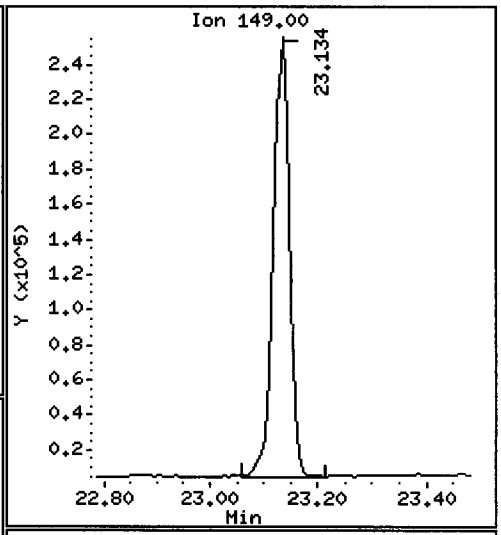
Column phase: ZB-5msi

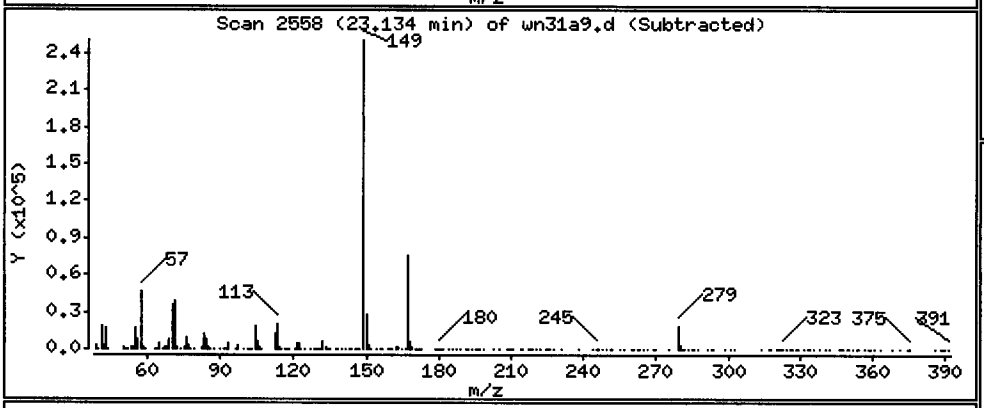
Column diameter: 0.25

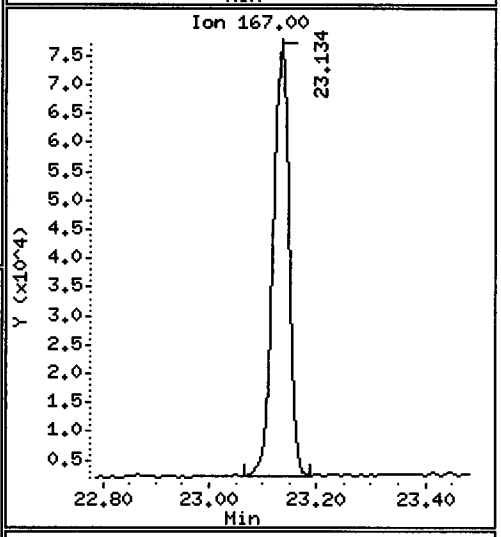
72 bis(2-Ethylhexyl)phthalate

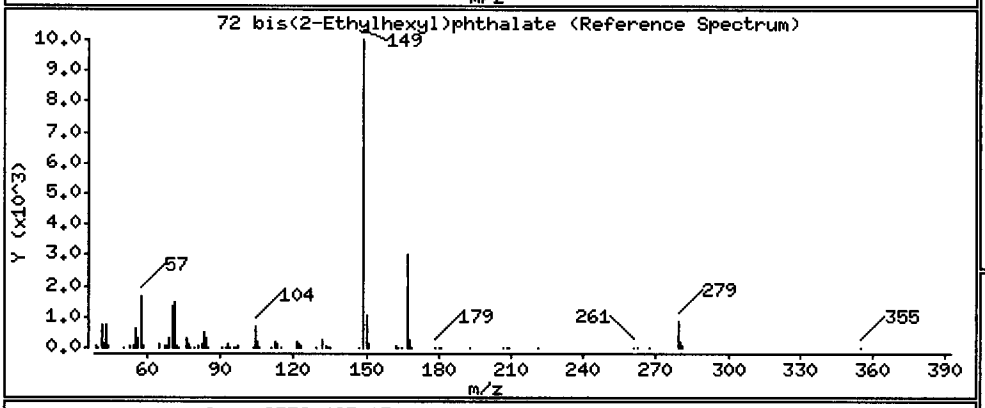
Concentration: 126500 ug/kg

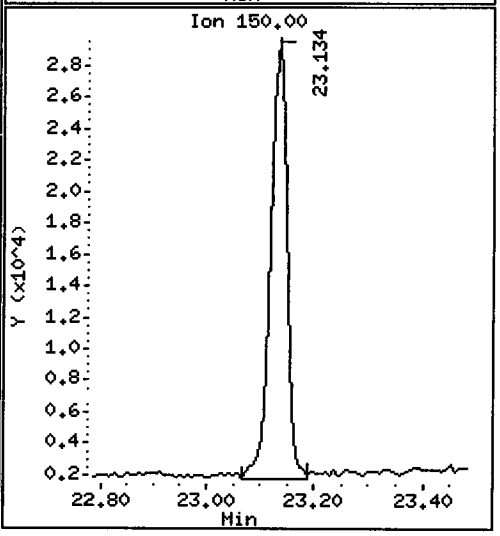


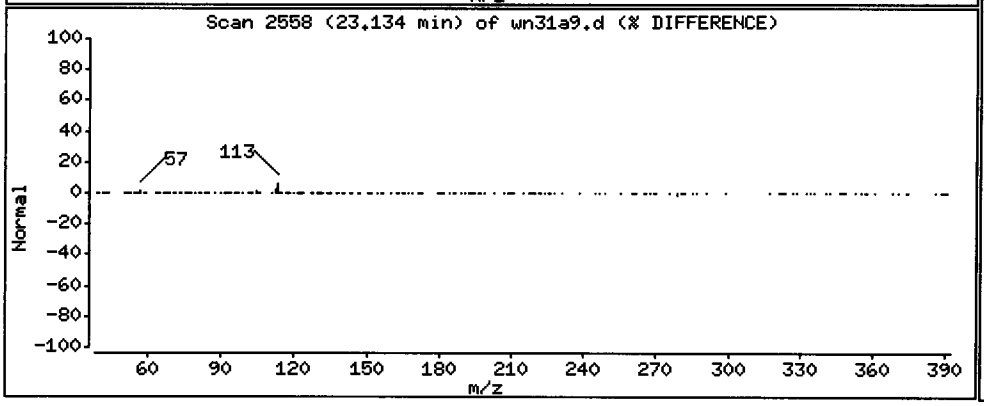












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

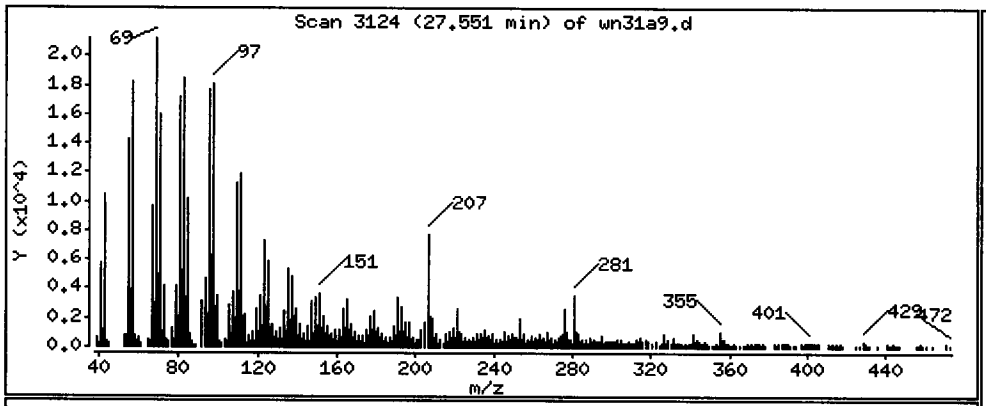
Operator: VTS/YZ

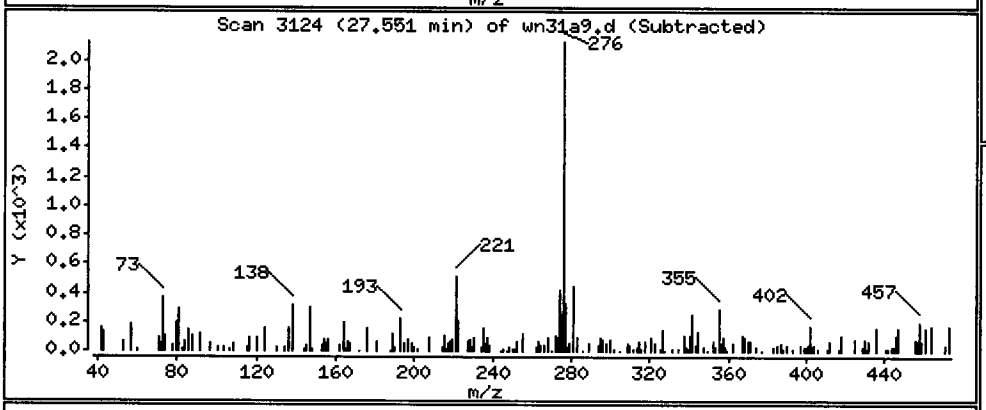
Column phase: ZB-5msi

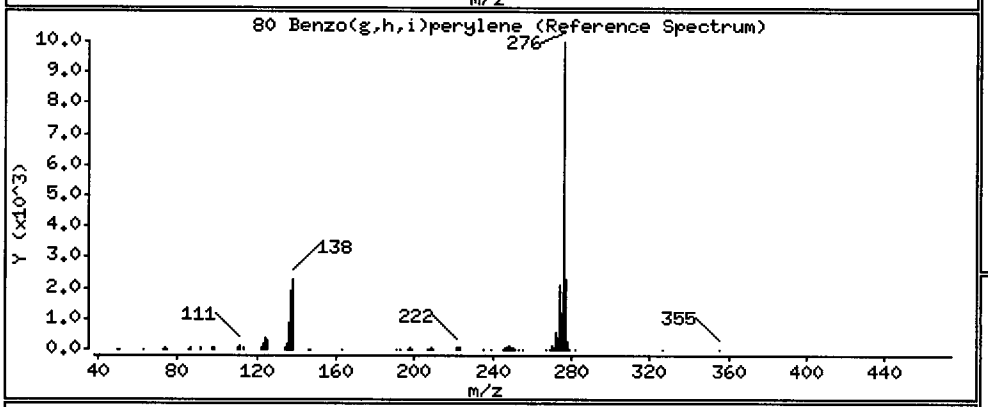
Column diameter: 0.25

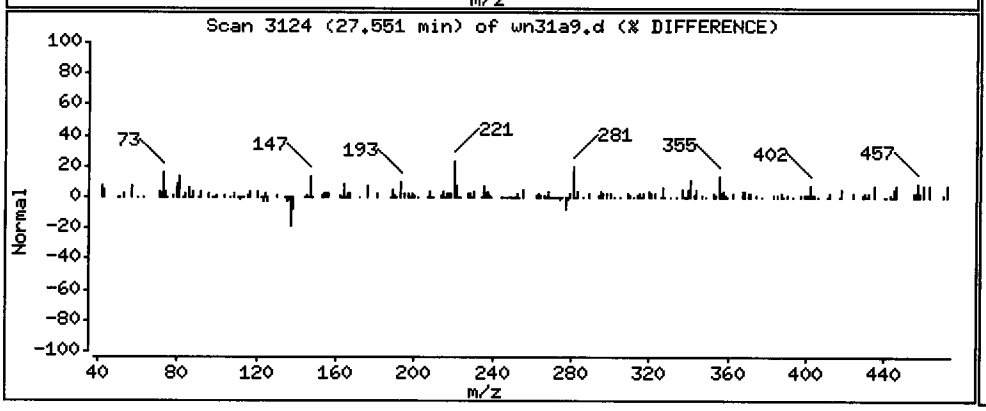
80 Benzo(g,h,i)perylene

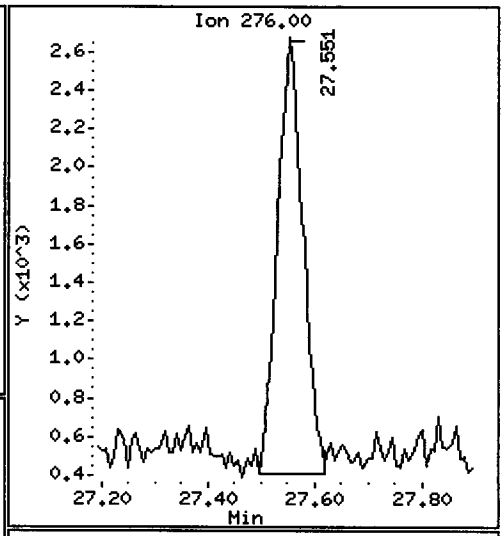
Concentration: 1317 ug/kg

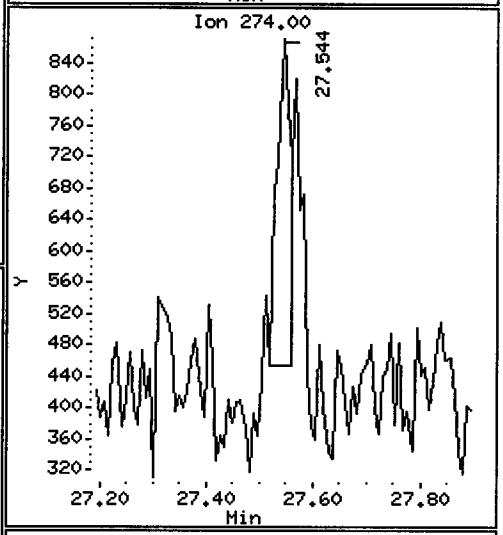


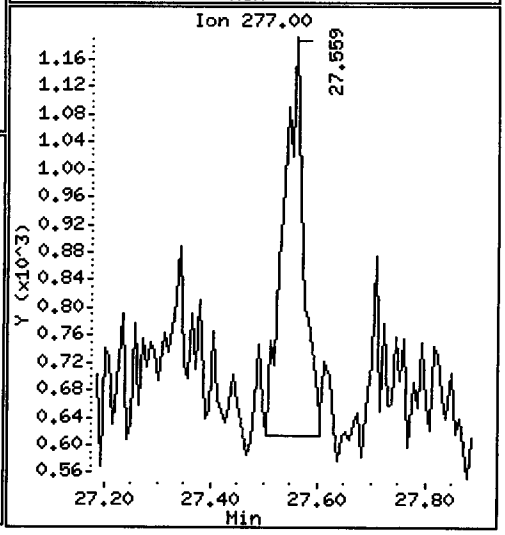












Data File: /chem1/nt10.i/20130508.b/wn31a9.d

Date : 08-MAY-2013 16:03

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,9

Volume Injected (uL): 1.0

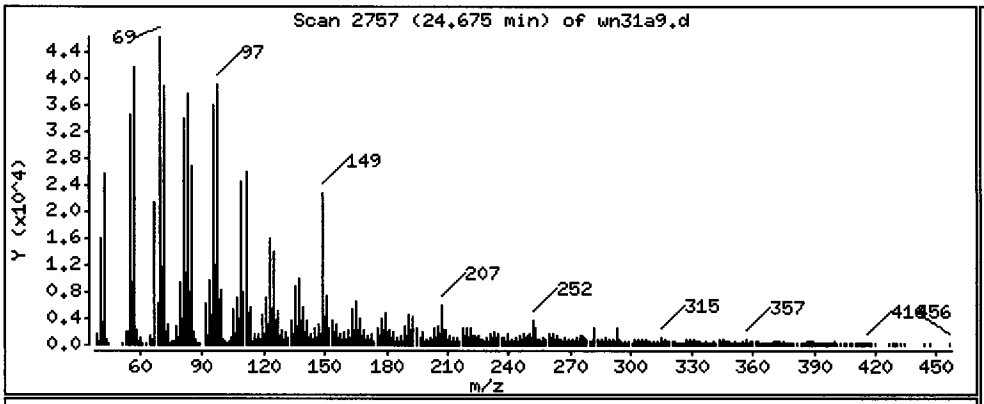
Operator: VTS/YZ

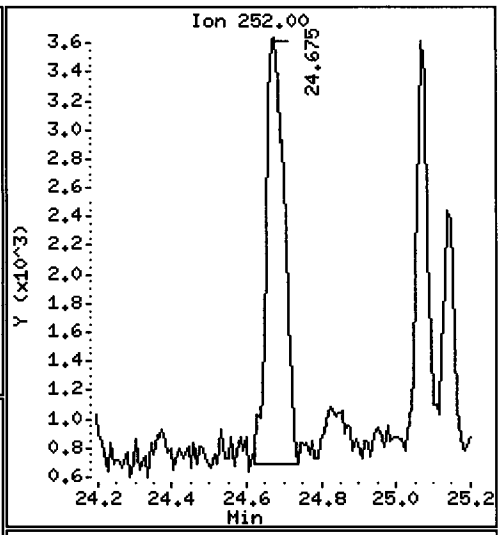
Column phase: ZB-5msi

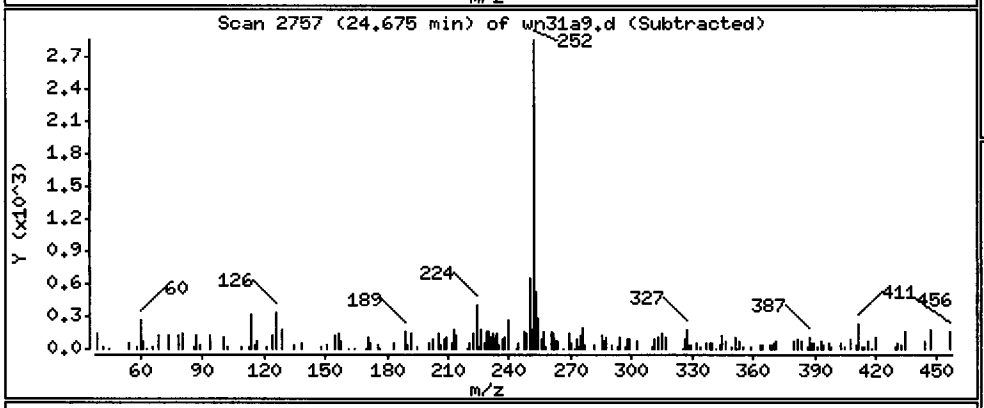
Column diameter: 0.25

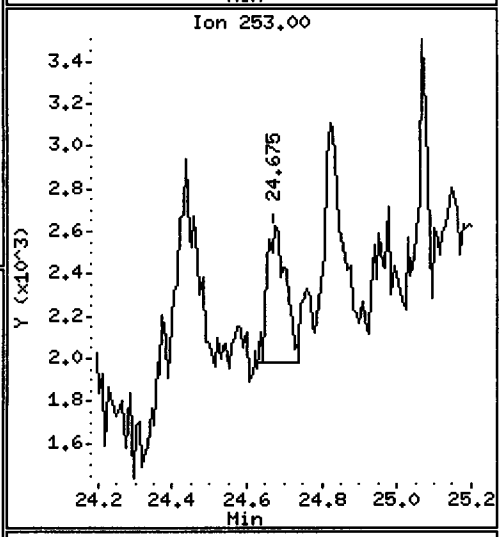
187 Total Benzofluoranthenes

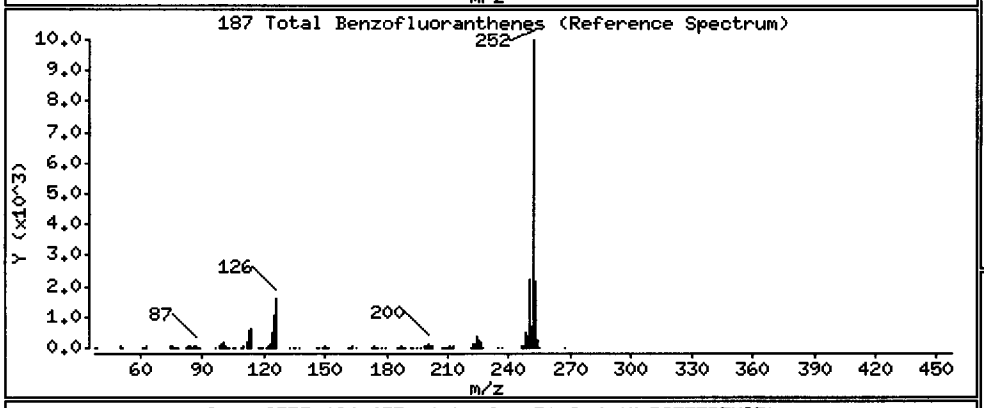
Concentration: 1563 ug/kg

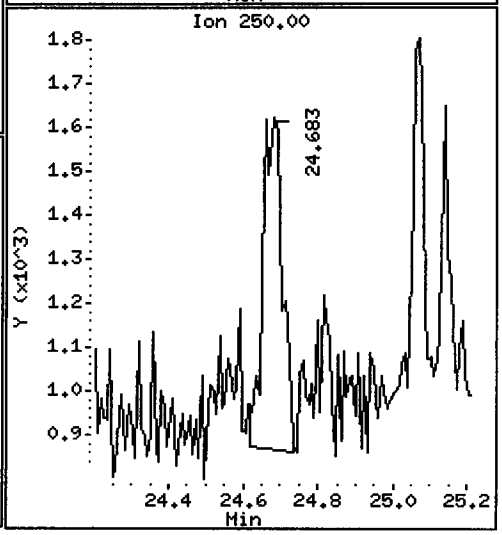


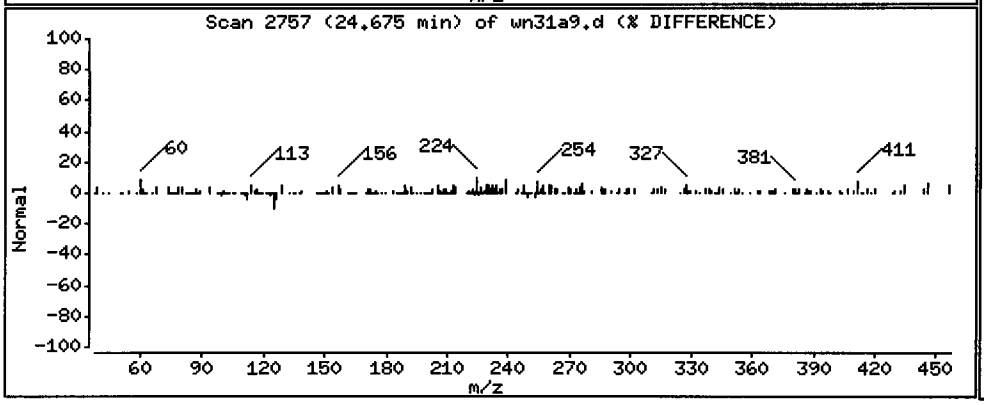












CO-ELUTION SUMMARY FOR FILE - wn31a9.d

Lab ID: WN31A, Method: ABN.m, Instrument: nt10.i, Date: 08-MAY-2013

RT	CO-ELUTION COMPOUNDS
24.675	Benzo(k)fluoranthene and Benzo(b)fluoranthene

WN31: 1029R BC 8/16/13

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

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) WN3Φ, WN27, WN31 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
	WN3Φ MBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	YL Φ5/Φ1/13 Analyst/Date
	SBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL CF Φ5/Φ1/13 Analyst/Date
	SBS Dup.	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6 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 Analyst/Date
2	WN3Φ K	24.Φ3	(1:1) Y / N	1mL	1mL		CSZ 5/2/13 Analyst/Date
2	WN27 A	1Φ.Φ1	(1:1) Y / N	1mL	1mL	See Analyst Notes	GPC Prep Filter (1:1)
2	AMS	1Φ.Φ3	(1:1) Y / N	1mL	1mL		CSZ 5/2/13 Analyst/Date
2	AMSd	1Φ.Φ2	(1:1) Y / N	1mL	1mL		
9	WN31 A	3.Φ3	(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL	CSZ 5/3/13	
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 CSZ 5/3/13 Analyst/Date
Analyst/Date	YL Φ5/Φ6/13		CSZ 5/2/13	CSZ 5/3/13	CSZ 5/3/13		

Standard	Standard ID (2Φ93-4) ✓	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (~~2Φ84-3~~)	100/150µg/mL	50µL	7/02/13	YL	WW
Full List Spike (Freezer)	7 (2Φ65-5)	100µg/mL	50µL	1/24/14	YL	WW
Base Spike	56(2Φ65-2)	200µg/mL	50µL	7/31/13	YL	WW
Acid Spike	38(2Φ91-4)	100/150µg/mL	50µL	7/28/14	YL	WW
~~QLS Spike (14 in Freezer)~~	~~14(~~)	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25(~~)	~~1µg/ml~~	~~50µL~~			
Extraction Time: 11:50			Balance ID: B1464261 4			

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** WN3Φ only

WN31 : 01031

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) SIM **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%? see Full Scan	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2072-1	6/31/13	Ultra	20551	12/05/13
	2073-1	6/31/13	Full	20541	12/31/13
	2064-1	04/25/14	scan	20532	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABN2 Column No: 252945 Column Type: ZB5-MSI

Instrument Tune (.U or .CT.): L302284 EM Voltage: 1650

Calibration File: DF 0429 Curve Date: 04/29/13 Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF									
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1653	ic0429a.d	IC0429A		1	8.99	53090	11.65	194944	15.55	113450	18.82	212689	23.90	235045	26.35	227736
3	1807	ic0429c.d	IC0429C		1	8.98	58845	11.65	217141	15.54	121711	18.82	222131	23.89	244600	26.35	221779
4	1844	ic0429d.d	IC0429D		1	8.98	52658	11.65	192325	15.54	109274	18.82	203933	23.90	223647	26.35	211919
5	1957	ic0429f.d	IC0429F		1	8.98	52849	11.65	195311	15.54	106586	18.82	192165	23.90	215273	26.35	195976
6	2034	ic0429g.d	IC0429G		1	8.98	43709	11.65	160165	15.54	95179	18.82	178699	23.90	199199	26.36	191024
7	2111	ic0429h.d	IC0429H		1	8.98	51614	11.65	192559	15.54	107939	18.82	194268	23.89	211275	26.35	196007
8	2147	ic0429i.d	IC0429I		1	8.98	49468	11.64	182546	15.54	105486	18.82	191121	23.90	208500	26.35	197777

YZ 5/03/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429c	ic0429d	ic0429f	ic0429g	ic0429h	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	18:07	18:44	19:57	20:34	21:11	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	+++++	6.641	6.634	6.634	6.633	6.633	6.634	6.634	6.134-7.134	6.635	0.003
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 _____ Date: 5/3/13
Reviewer 2 _____ Date: 5.4.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108	4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107	4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105	1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$ 2	Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
3	Phenol	8.365	8.365	8.357	8.365	8.364	8.365	8.365	8.365	7.865-8.865	8.364	0.003
4	Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$ 5	2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
6	2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
7	1,3-Dichlorobenzene	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.414-9.414	8.914	0.000
* 8	1,4-Dichlorobenzene-d4	8.991	8.984	8.984	8.984	8.983	8.984	8.984	8.991	8.491-9.491	8.985	0.003
9	1,4-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	8.515-9.515	9.015	0.000
$ 10	1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
11	Benzyl alcohol	9.294	9.294	9.286	9.294	9.294	9.294	9.294	9.294	8.794-9.794	9.293	0.003
12	1,2-Dichlorobenzene	9.395	9.395	9.395	9.395	9.395	9.395	9.395	9.395	8.895-9.895	9.395	0.000
13	2-Methylphenol	9.558	9.550	9.550	9.550	9.550	9.550	9.551	9.558	9.058-10.058	9.551	0.003
14	2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
15	4-Methylphenol	9.853	9.845	9.845	9.845	9.845	9.845	9.846	9.853	9.353-10.353	9.846	0.003
16	N-Nitroso-di-n-propyla	9.900	9.900	9.900	9.900	9.899	9.899	9.900	9.900	9.400-10.400	9.900	0.000
17	Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.363	8.863-9.863	+++++	+++++
$ 18	Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
19	Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.696	8.196-9.196	+++++	+++++
20	Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
21	2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Report Date : 03-May-2013 17:11

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.969	10.969	10.961	10.962	10.969	10.961	10.962	10.969	10.469-11.469	10.965	0.004
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.557	9.057-10.057	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.063-12.063	11.563	0.000
*	27 Naphthalene-d8	11.648	11.648	11.648	11.648	11.647	11.647	11.640	11.648	11.148-12.148	11.647	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.103	12.103	12.103	12.104	12.103	12.103	12.104	12.103	11.603-12.603	12.103	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	15.060	15.052	15.052	15.052	15.060	15.052	15.052	15.060	14.560-15.560	15.054	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.547	15.539	15.539	15.540	15.539	15.539	15.540	15.547	15.047-16.047	15.540	0.003
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.031	12.531-13.531	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.645	16.637	16.637	16.637	16.645	16.637	16.637	16.645	16.145-17.145	16.639	0.004
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.510	13.010-14.010	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.340	12.840-13.840	+++++	+++++
	54 N-Nitrosodiphenylamine	17.031	17.023	17.031	17.031	17.031	17.023	17.023	17.031	16.531-17.531	17.028	0.004
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.158	18.150	18.158	18.150	18.157	18.157	18.158	18.158	17.658-18.658	18.155	0.004
	58 Pentachlorophenol	18.552	18.545	18.552	18.553	18.552	18.552	18.553	18.552	18.052-19.052	18.551	0.003
*	59 Phenanthrene-d10	18.816	18.816	18.815	18.816	18.815	18.815	18.816	18.816	18.316-19.316	18.816	0.000
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.290	14.790-15.790	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.986	15.486-16.486	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.026	22.026	22.026	22.027	22.026	22.026	22.027	22.026	21.526-22.526	22.026	0.000
	67 Butylbenzylphthalate	22.979	22.971	22.979	22.979	22.979	22.971	22.971	22.979	22.479-23.479	22.975	0.004
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.900	23.892	23.900	23.900	23.900	23.892	23.900	23.900	23.400-24.400	23.898	0.004
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.373	21.873-22.873	+++++	+++++
*	77 Perylene-d12	26.355	26.347	26.354	26.355	26.362	26.347	26.347	26.355	25.855-26.855	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.718	28.703	28.710	28.726	28.718	28.710	28.703	28.718	28.218-29.218	28.713	0.009
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.408	24.908-25.908	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.597	16.097-17.097	+++++	+++++
	90 N-Nitrosodimethylamine	4.371	4.387	4.371	4.387	4.356	4.386	4.371	4.371	3.871-4.871	4.376	0.012
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.413-8.413	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.089	14.589-15.589	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Level 2: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Level 3: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Level 4: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Level 5: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Level 6: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Level 7: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	2.19342	1.93668	2.06101	1.92949	1.94728	2.08759	1.98249	2.01971	4.874
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.87553	1.75224	1.72793	1.58761	1.57264	1.59509	1.53900	1.66429	7.407
9 1,4-Dichlorobenzene	1.91943	1.70341	1.73949	1.57791	1.55213	1.57844	1.52865	1.65707	8.453
11 Benzyl alcohol	1.01421	0.92378	0.95981	0.91615	0.94937	1.02397	0.99327	0.96865	4.413
12 1,2-Dichlorobenzene	1.80136	1.61817	1.67423	1.49430	1.47632	1.51145	1.44728	1.57473	8.180
13 2-Methylphenol	1.59549	1.39187	1.48696	1.36428	1.39709	1.47085	1.40118	1.44396	5.556
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.58792	1.37715	1.51721	1.38530	1.44358	1.52071	1.46089	1.47039	5.215
16 N-Nitroso-di-n-propylamine	0.91430	0.80598	0.85037	0.79906	0.80117	0.85017	0.78320	0.82918	5.500

Analytical Resources, Inc.

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.40571	0.35657	0.40416	0.37154	0.38512	0.40380	0.38544	0.38748	4.824
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.44278	0.39385	0.40914	0.36326	0.36118	0.36604	0.34742	0.38338	8.776

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.27157	0.23723	0.24399	0.22079	0.21930	0.22590	0.21485	0.23337	8.466
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.29548	1.18474	1.22635	1.06304	1.10760	1.11120	1.09034	1.15411	7.293
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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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	1.48913 / 1.27512	1.22551	1.39412	1.18097	1.28213	1.30160	1.30694	7.961
51 4-Chlorophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.39424 / 0.45294	0.38298	0.48476	0.43332	0.46296	0.45890	0.43858	8.547
56 4-Bromophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.37593 / 0.27374	0.30103	0.32963	0.26764	0.27658	0.27272	0.29961	13.400

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
58 Pentachlorophenol	0.14488	0.13785	0.18228	0.16591	0.19052	0.20510	0.22038	0.17813	17.090
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Butylbenzylphthalate	0.36122	0.29118	0.41472	0.31985	0.38893	0.40240	0.41936	0.37109	13.311
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
79 Dibenzo(a,h)anthracene	0.97359	0.78303	0.98900	0.78861	0.87907	0.89559	0.93233	0.89160	9.207

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Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
90 N-Nitrosodimethylamine	0.90219	0.86023	0.85122	0.86270	0.83980	0.90195		
	0.81542						0.86193	3.667
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 2-Fluorophenol	1.51980	1.35157	1.44617	1.31204	1.36686	1.43403	1.39600	1.40378	4.930
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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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
$ 18 Nitrobenzene-d5	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.56524 / 0.47799	0.46461	0.53843	0.44428	0.47993	0.47146	0.49170	8.830
$ 85 p-Cresol-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
	5.000 Level 7							
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:18 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	92642	5.00000	4.972 (M)
	3 Phenol	94	8.365	8.365	(0.930)	131563	5.00000	4.908
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.991)	102132	5.00000	4.624
*	8 1,4-Dichlorobenzene-d4	152	8.991	8.984	(1.000)	53090	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	101445	5.00000	4.613
	11 Benzyl alcohol	79	9.294	9.294	(1.034)	65916	5.00000	5.127
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.045)	96045	5.00000	4.595
	13 2-Methylphenol	108	9.558	9.551	(1.063)	92986	5.00000	4.852
	15 4-Methylphenol	108	9.853	9.846	(1.096)	96948	5.00000	4.968
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.101)	51975	5.00000	4.723
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	187850	10.0000	9.948
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	84659	5.00000	4.531
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	194944	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	52354	5.00000	4.603
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	154624	5.00000	4.724
*	42 Acenaphthene-d10	162	15.547	15.540	(1.000)	113450	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	180828	5.00000	4.878
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	120418	5.00000	5.164
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	72778	5.00000	4.568
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	117179	10.0000	12.37
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	212689	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	140436	5.00000	4.861
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	123210	5.00000	5.650
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	235045	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	227736	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.090)	265405	5.00000	5.228
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.486)	108227	10.0000	9.460

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53090	0.82
27 Naphthalene-d8	192325	96162	384650	194944	1.36
42 Acenaphthene-d10	109274	54637	218548	113450	3.82
59 Phenanthrene-d10	203933	101966	407866	212689	4.29
69 Chrysene-d12	223647	111824	447294	235045	5.10
77 Perylene-d12	211919	105960	423838	227736	7.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.99	0.09
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

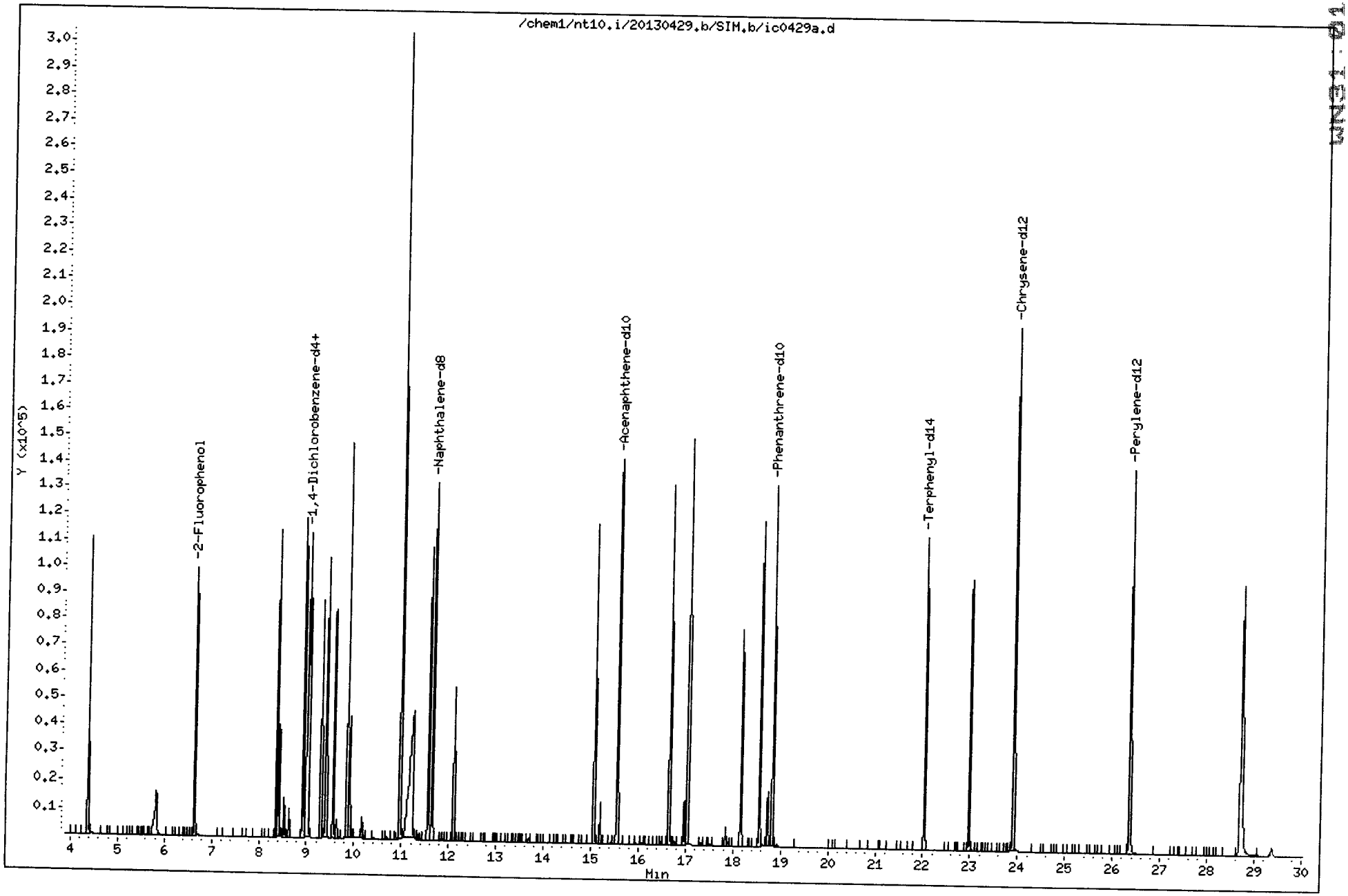
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

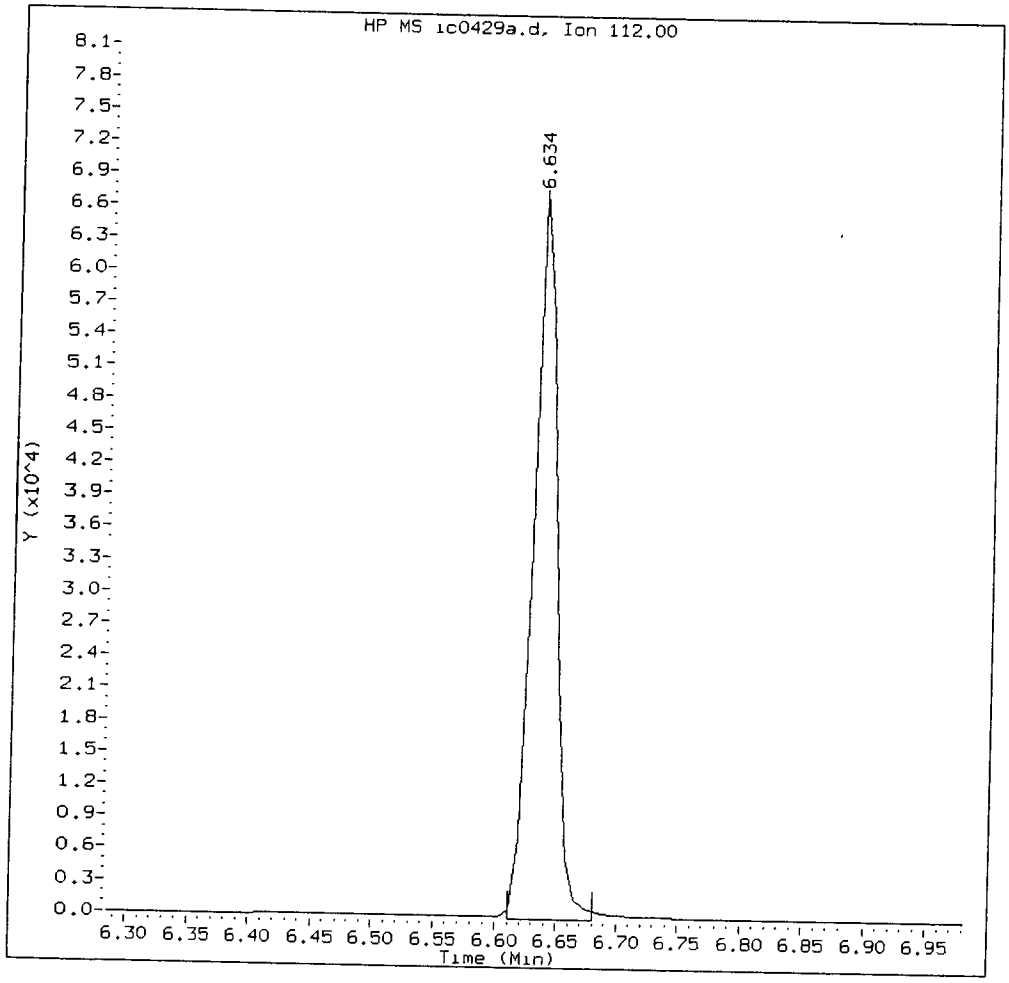
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429A, /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

2-Fluorophenol Amount: 4.97 Area: 92642



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.641	6.634	(0.739)	4255	0.20000	0.2058(M)
	3 Phenol	94	8.365	8.365	(0.931)	6064	0.20000	0.2041
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	5084	0.20000	0.2076
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	58845	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	5118	0.20000	0.2099
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	2824	0.20000	0.1982
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	4926	0.20000	0.2126
	13 2-Methylphenol	108	9.550	9.551	(1.063)	4375	0.20000	0.2060
	15 4-Methylphenol	108	9.845	9.846	(1.096)	4464	0.20000	0.2064
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	2502	0.20000	0.2051
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	8776	0.40000	0.4172
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	4442	0.20000	0.2134
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	217141	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	2649	0.20000	0.2091
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	7463	0.20000	0.2125
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	121711	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	8484	0.20000	0.2133
	54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	5384	0.20000	0.2211
	57 Hexachlorobenzene	284	18.150	18.158	(0.965)	3661	0.20000	0.2200
	58 Pentachlorophenol	266	18.545	18.553	(0.986)	4049	0.40000	0.3970
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	222131	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	6585	0.20000	0.2190
	67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	5072	0.20000	0.2235
*	69 Chrysene-d12	240	23.892	23.900	(1.000)	244600	4.00000	
*	77 Perylene-d12	264	26.347	26.347	(1.000)	221779	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	10967	0.20000	0.2218
	90 N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	5009	0.40000	0.3950

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58845	11.75
27 Naphthalene-d8	192325	96162	384650	217141	12.90
42 Acenaphthene-d10	109274	54637	218548	121711	11.38
59 Phenanthrene-d10	203933	101966	407866	222131	8.92
69 Chrysene-d12	223647	111824	447294	244600	9.37
77 Perylene-d12	211919	105960	423838	221779	4.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

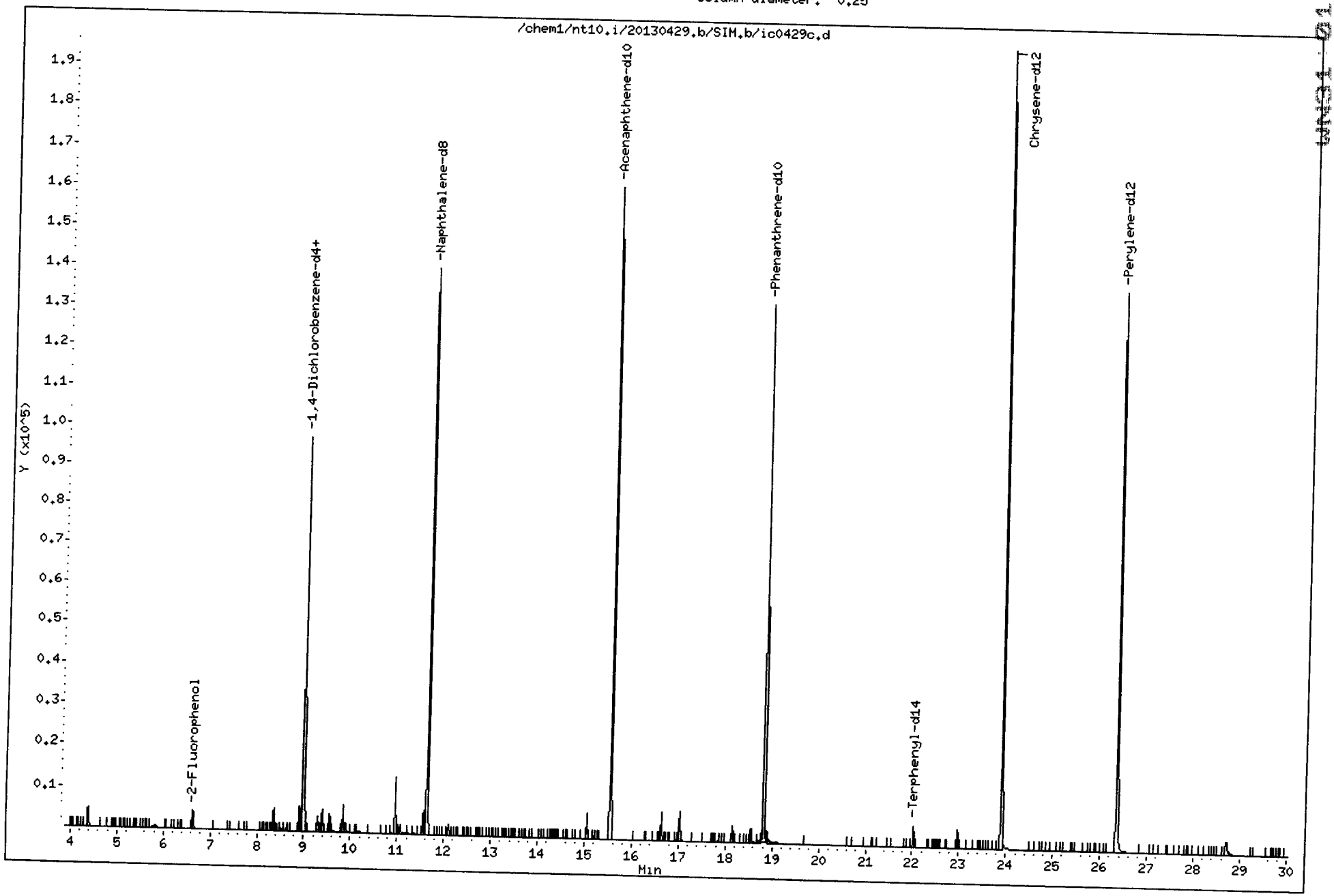
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Column phase: ZB-5msi

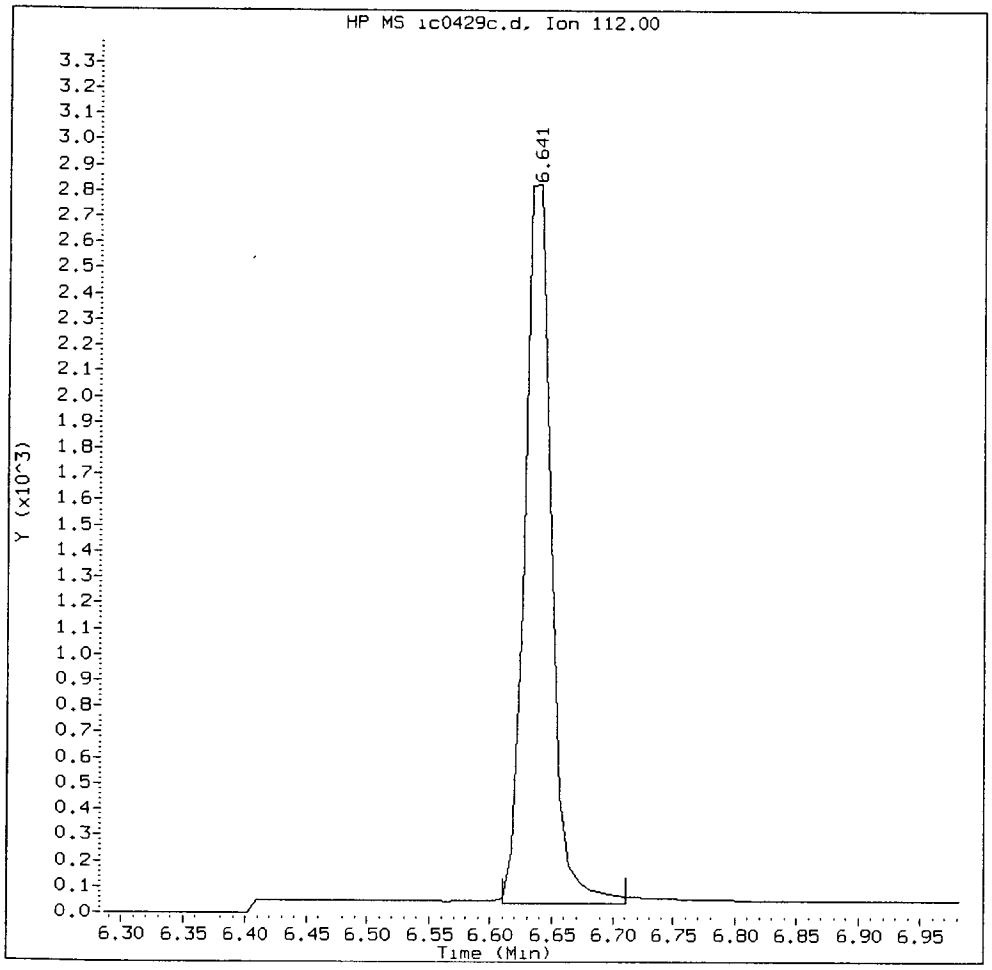
Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



IC0429C, /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d

2-Fluorophenol Amount: 0.21 Area: 4255



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	17994	1.00000	0.9728(M)
	3 Phenol	94	8.357	8.365	(0.930)	25635	1.00000	0.9641
*	8 1,4-Dichlorobenzene-d4	146	8.914	8.914	(0.992)	20703	1.00000	0.9449
	9 1,4-Dichlorobenzene	152	8.984	8.984	(1.000)	52658	4.00000	
	11 Benzyl alcohol	146	9.015	9.015	(1.003)	20433	1.00000	0.9367
	12 1,2-Dichlorobenzene	79	9.286	9.294	(1.034)	12498	1.00000	0.9801
	13 2-Methylphenol	146	9.395	9.395	(1.046)	19435	1.00000	0.9375
	15 4-Methylphenol	108	9.550	9.551	(1.063)	18392	1.00000	0.9675
	16 N-Nitroso-di-n-propylamine	108	9.845	9.846	(1.096)	19004	1.00000	0.9818
	22 2,4-Dimethylphenol	70	9.900	9.900	(1.102)	10547	1.00000	0.9662
	26 1,2,4-Trichlorobenzene	107	10.961	10.962	(0.941)	37034	2.00000	1.988
*	27 Naphthalene-d8	180	11.563	11.563	(0.993)	17366	1.00000	0.9421
	30 Hexachlorobutadiene	136	11.648	11.640	(1.000)	192325	4.00000	
	39 Dimethylphthalate	225	12.103	12.104	(1.039)	10544	1.00000	0.9397
*	42 Acenaphthene-d10	163	15.052	15.052	(0.969)	30258	1.00000	0.9597
	50 Diethylphthalate	162	15.539	15.540	(1.000)	109274	4.00000	
	54 N-Nitrosodiphenylamine	149	16.637	16.637	(1.071)	35026	1.00000	0.9810
	57 Hexachlorobenzene	169	17.031	17.023	(0.905)	23603	1.00000	1.056
	58 Pentachlorophenol	284	18.158	18.158	(0.965)	14101	1.00000	0.9231
*	59 Phenanthrene-d10	266	18.552	18.553	(0.986)	19427	2.00000	2.075
$	66 Terphenyl-d14	188	18.815	18.816	(1.000)	203933	4.00000	
	67 Butylbenzylphthalate	244	22.026	22.027	(0.922)	26834	1.00000	0.9761
*	69 Chrysene-d12	149	22.979	22.971	(0.961)	21746	1.00000	1.048
*	77 Perylene-d12	240	23.900	23.900	(1.000)	223647	4.00000	
	79 Dibenzo(a,h)anthracene	264	26.354	26.347	(1.000)	211919	4.00000	
	90 N-Nitrosodimethylamine	278	28.710	28.703	(1.089)	46573	1.00000	0.9859
		74	4.371	4.371	(0.487)	22111	2.00000	1.949

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52658	0.00
27 Naphthalene-d8	192325	96162	384650	192325	0.00
42 Acenaphthene-d10	109274	54637	218548	109274	0.00
59 Phenanthrene-d10	203933	101966	407866	203933	0.00
69 Chrysene-d12	223647	111824	447294	223647	0.00
77 Perylene-d12	211919	105960	423838	211919	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

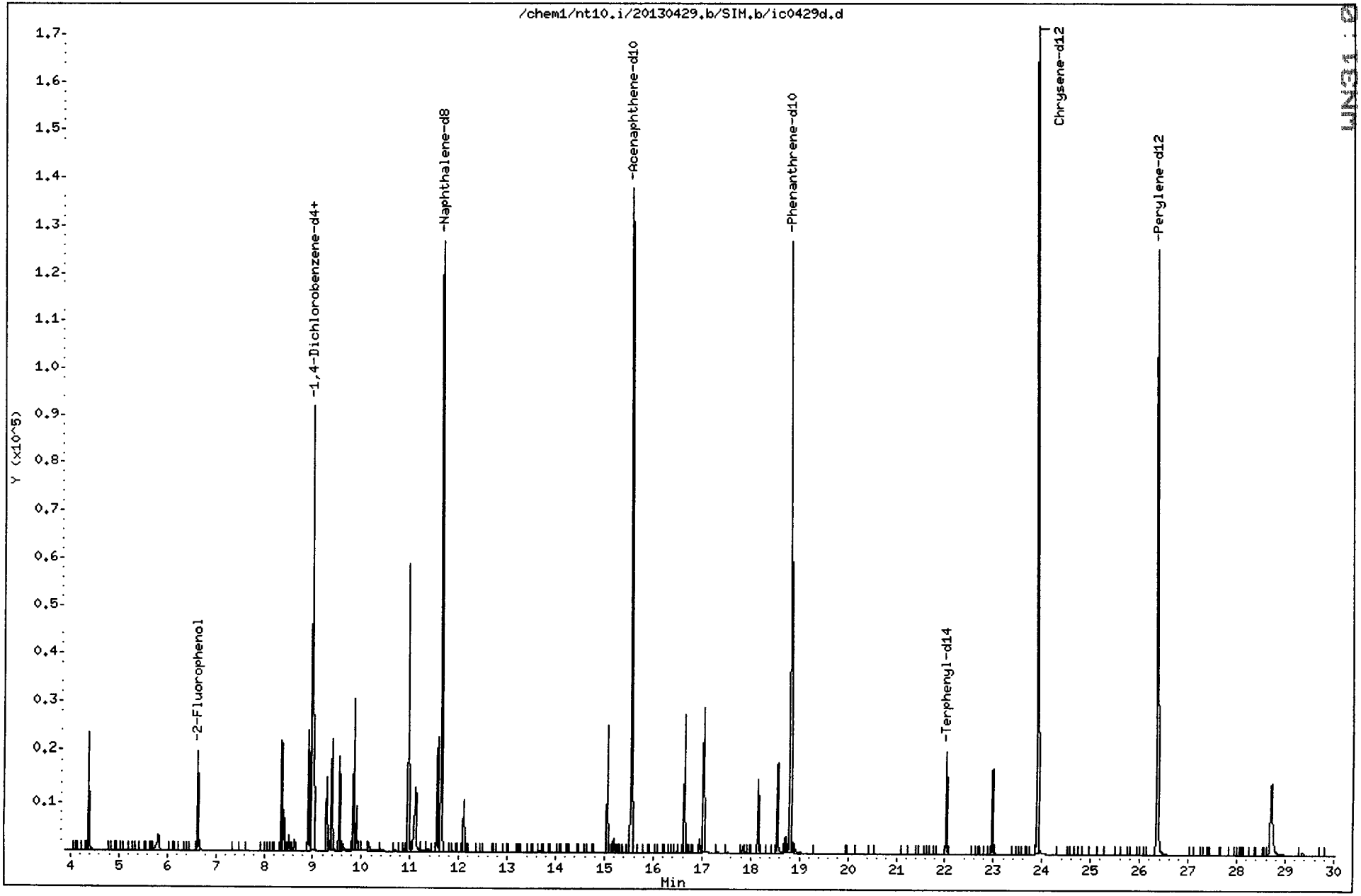
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i

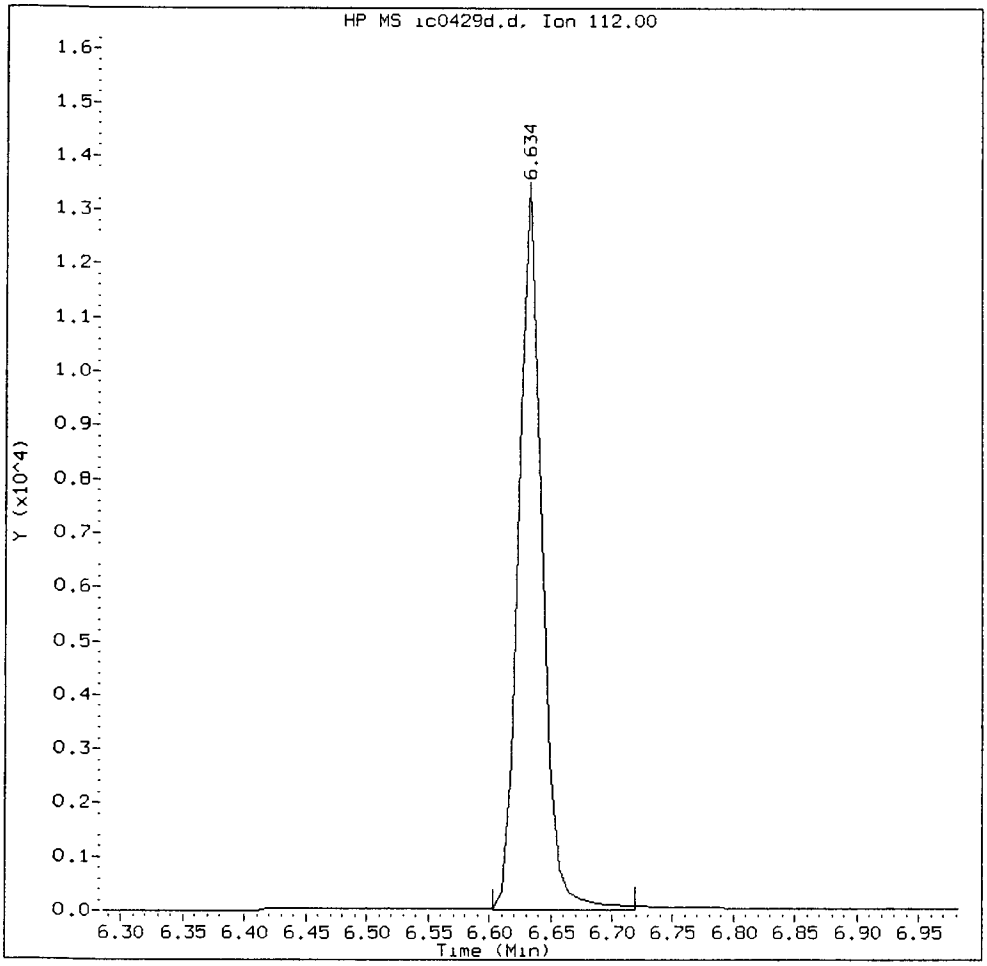
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d

2-Fluorophenol Amount: 0.97 Area: 17994



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: KR Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Lab Smp Id: IC0429F
Inj Date : 29-APR-2013 19:57
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:57 Cal File: ic0429f.d
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	1004	0.05000	0.05408(M)
	3	Phenol	94	8.365	8.365	(0.931)	1449	0.05000	0.05430
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	1239	0.05000	0.05635(M)
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52849	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	1268	0.05000	0.05792(M)
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	670	0.05000	0.05235(M)
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	1190	0.05000	0.05720
	13	2-Methylphenol	108	9.550	9.551	(1.063)	1054	0.05000	0.05525
	15	4-Methylphenol	108	9.845	9.846	(1.096)	1049	0.05000	0.05400
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	604	0.05000	0.05513(M)
	22	2,4-Dimethylphenol	107	10.962	10.962	(0.941)	1981	0.10000	0.1047
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1081	0.05000	0.05775
*	27	Naphthalene-d8	136	11.648	11.640	(1.000)	195311	4.00000	
	30	Hexachlorobutadiene	225	12.104	12.104	(1.039)	663	0.05000	0.05818(M)
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	1726	0.05000	0.05612
*	42	Acenaphthene-d10	162	15.540	15.540	(1.000)	106586	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	1984	0.05000	0.05697
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	947	0.05000	0.04495(M)
	57	Hexachlorobenzene	284	18.150	18.158	(0.965)	903	0.05000	0.06274(M)
	58	Pentachlorophenol	266	18.553	18.553	(0.986)	696	0.10000	0.07888
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	192165	4.00000	
$	66	Terphenyl-d14	244	22.027	22.027	(0.922)	1521	0.05000	0.05748
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	972	0.05000	0.04867
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	215273	4.00000	
*	77	Perylene-d12	264	26.355	26.347	(1.000)	195976	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.726	28.703	(1.090)	2385	0.05000	0.05460
	90	N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	1192	0.10000	0.1047

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429f.d
Lab Smp Id: IC0429F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52849	0.36
27 Naphthalene-d8	192325	96162	384650	195311	1.55
42 Acenaphthene-d10	109274	54637	218548	106586	-2.46
59 Phenanthrene-d10	203933	101966	407866	192165	-5.77
69 Chrysene-d12	223647	111824	447294	215273	-3.74
77 Perylene-d12	211919	105960	423838	195976	-7.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

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

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Page 4

Date : 29-APR-2013 19:57

Client ID:

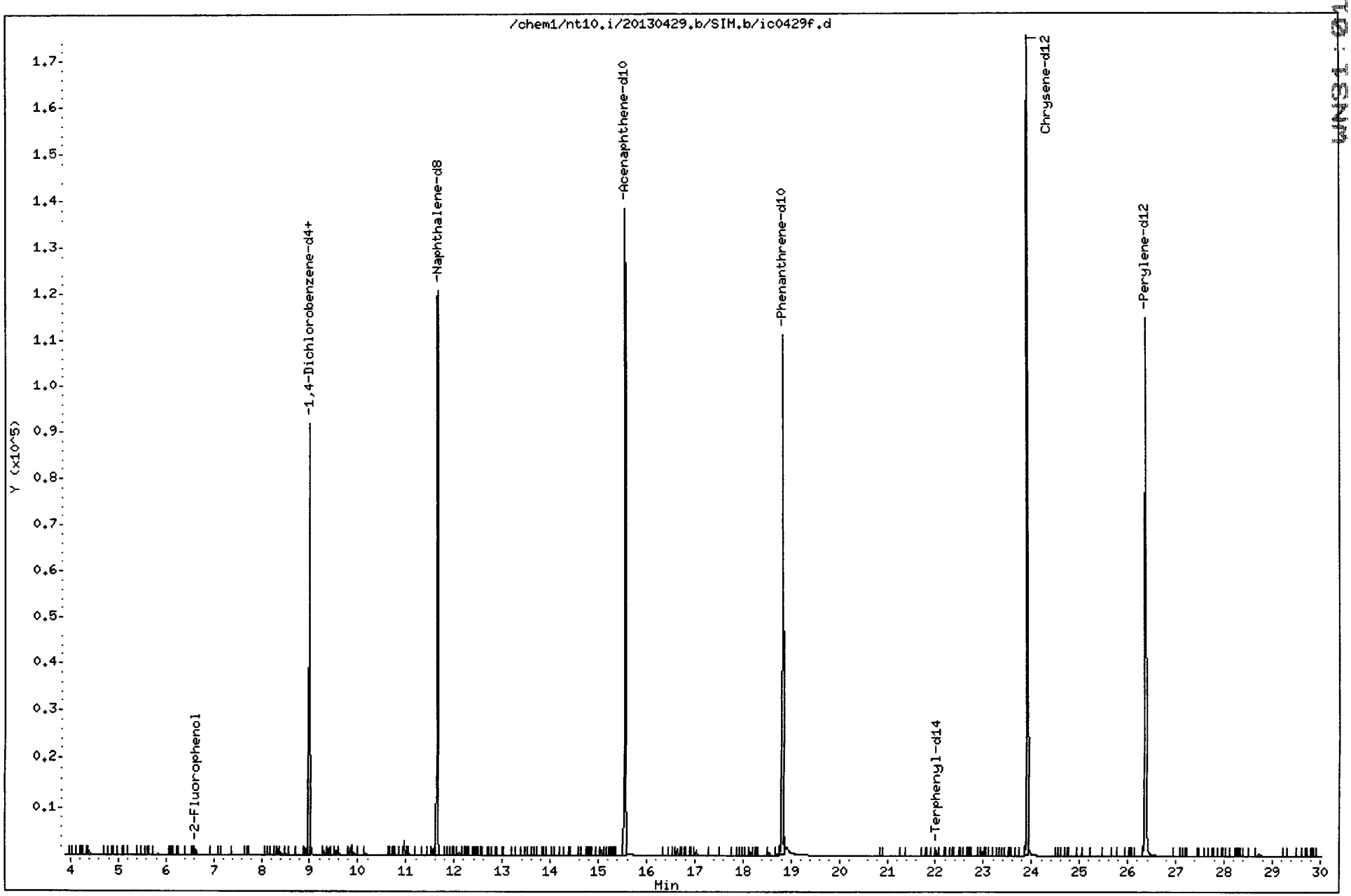
Instrument: nt10.i

Sample Info: IC0429F

Operator: YZ

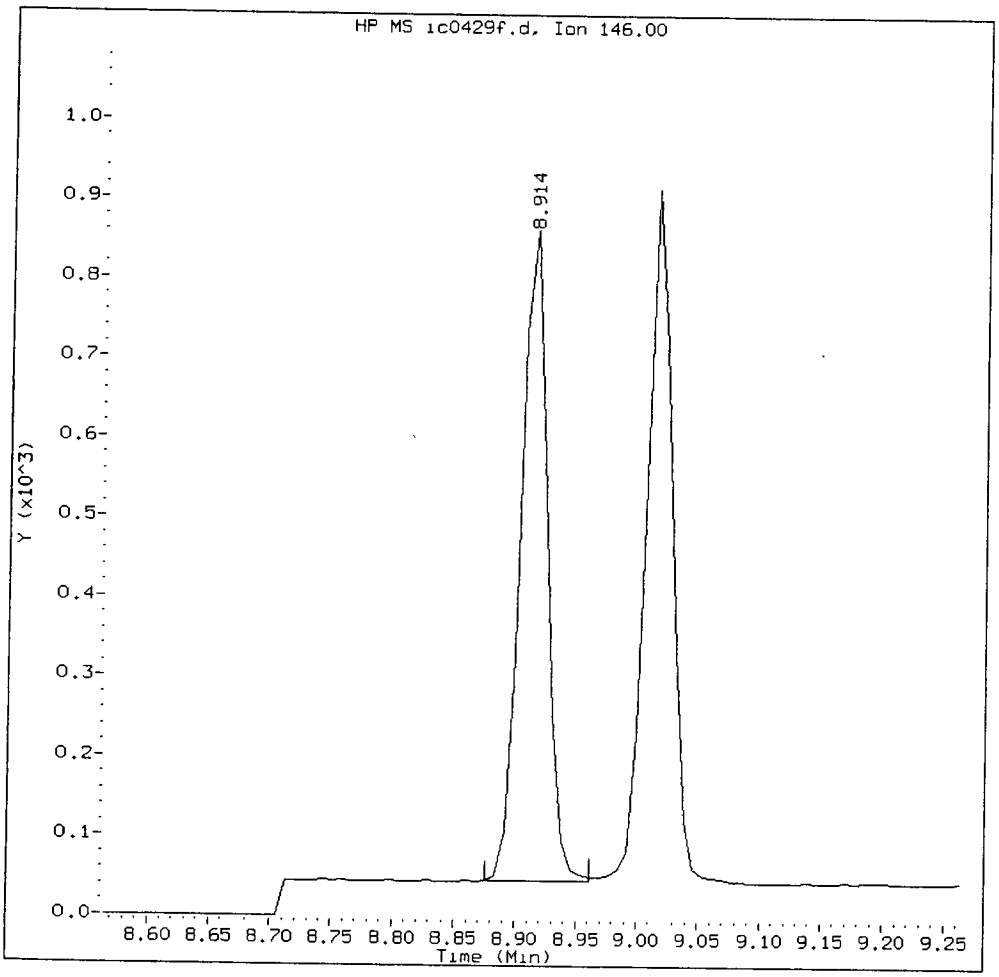
Column phase: ZB-5msi

Column diameter: 0.25



IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,3-Dichlorobenzene Amount: 0.06 Area: 1239



MANUAL INTEGRATION for 1,3-Dichlorobenzene

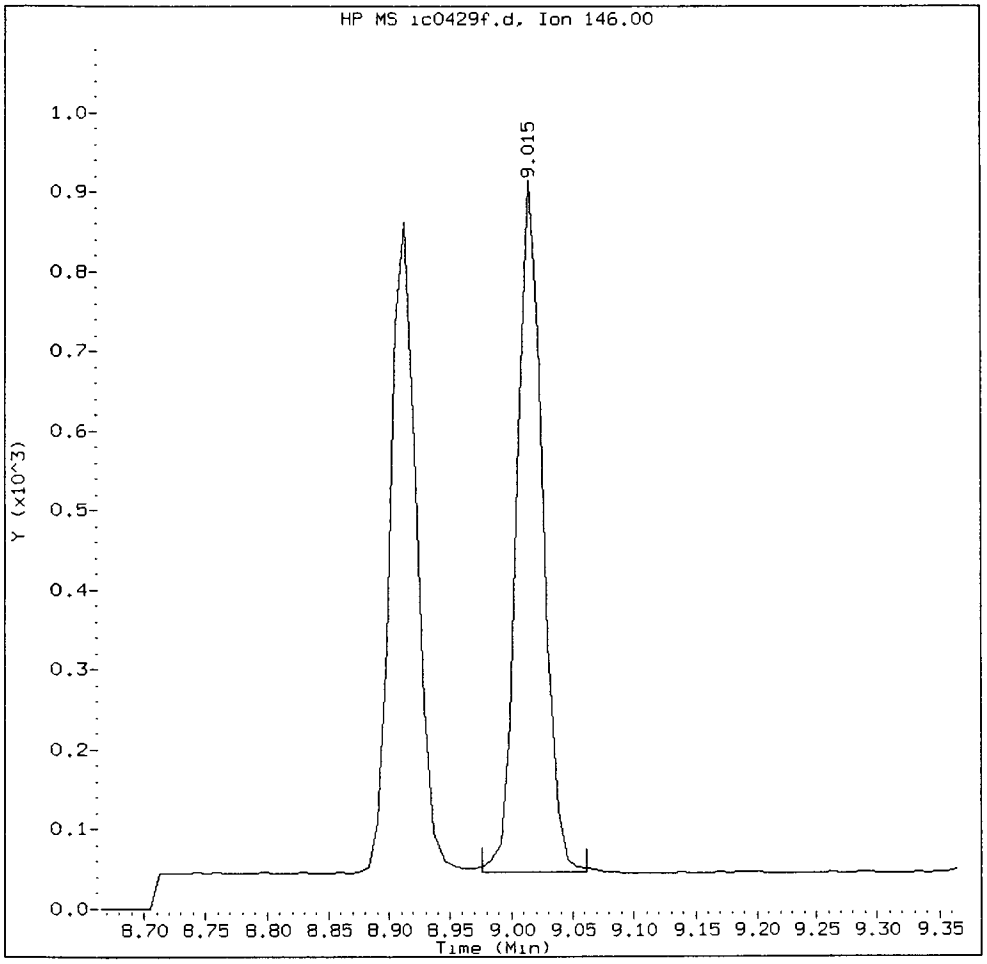
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VJ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,4-Dichlorobenzene Amount: 0.06 Area: 1268



MANUAL INTEGRATION for 1,4-Dichlorobenzene

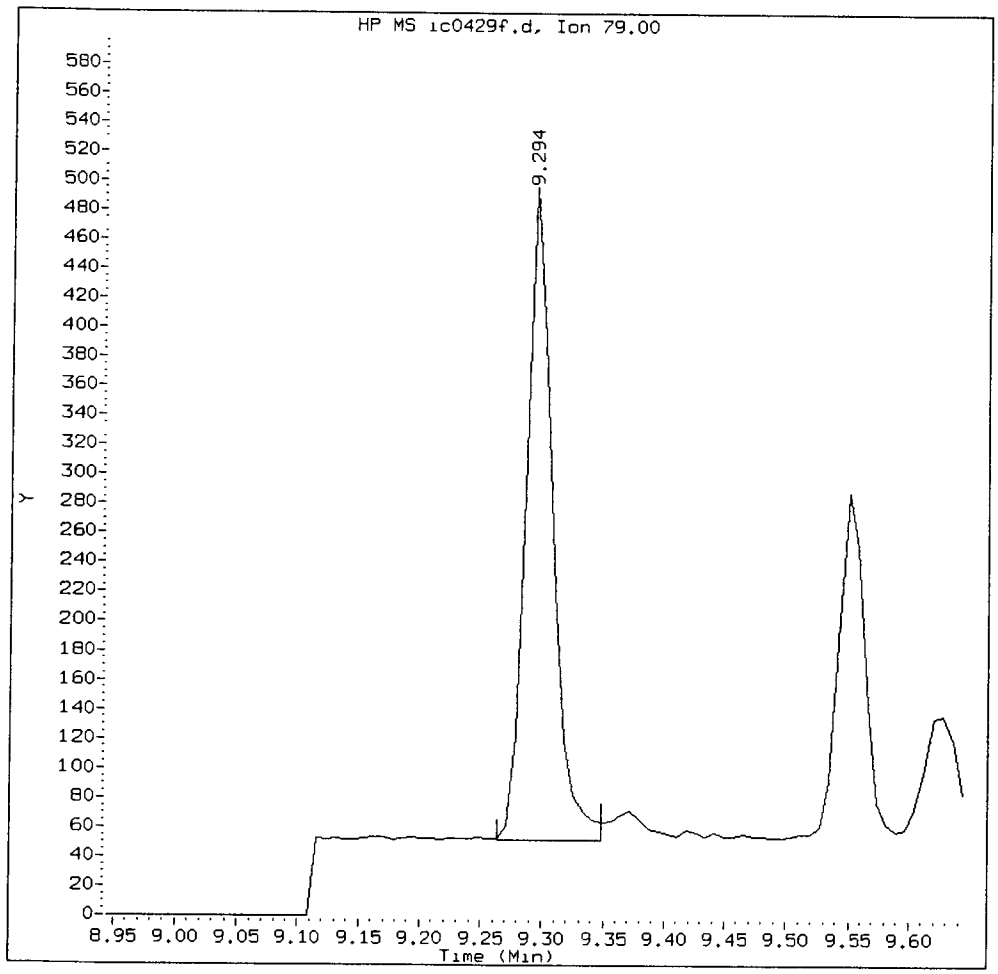
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KZ Date: 5/9/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Benzyl alcohol Amount: 0.05 Area: 670



MANUAL INTEGRATION for Benzyl alcohol

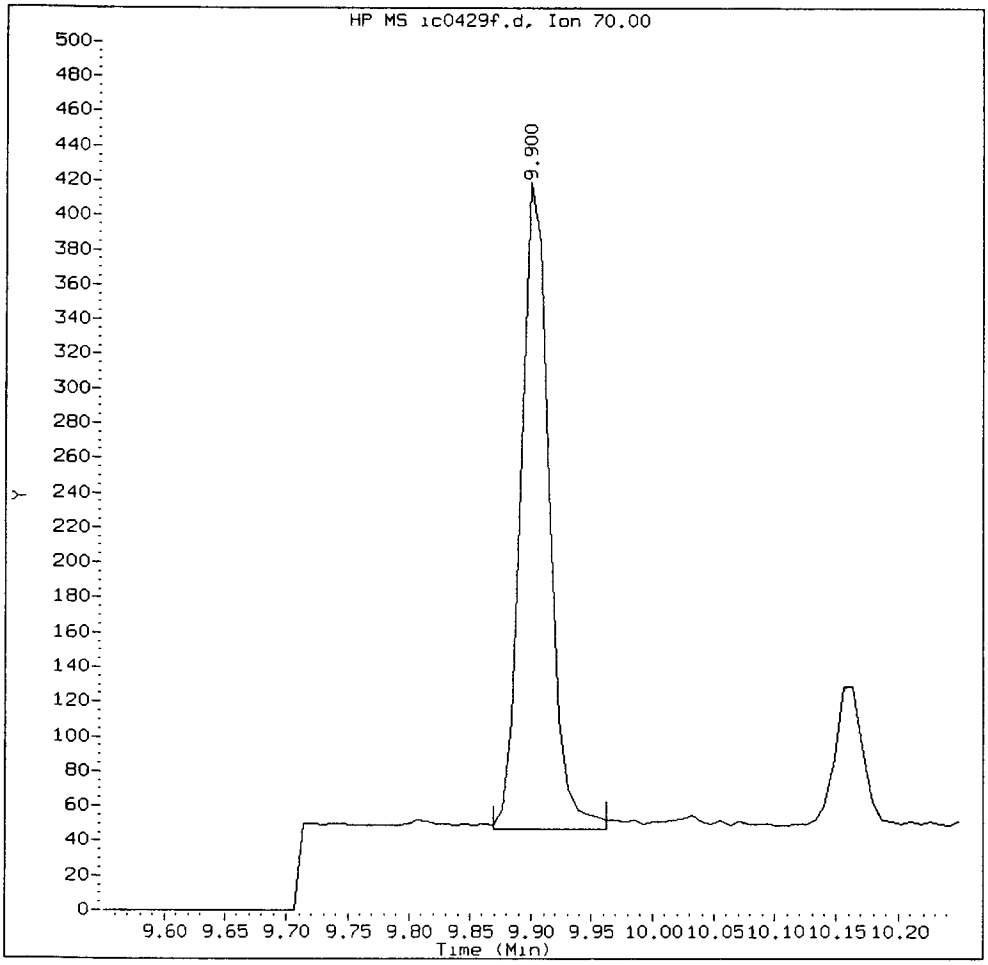
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitroso-di-n-propylamine Amount: 0.06 Area: 604



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

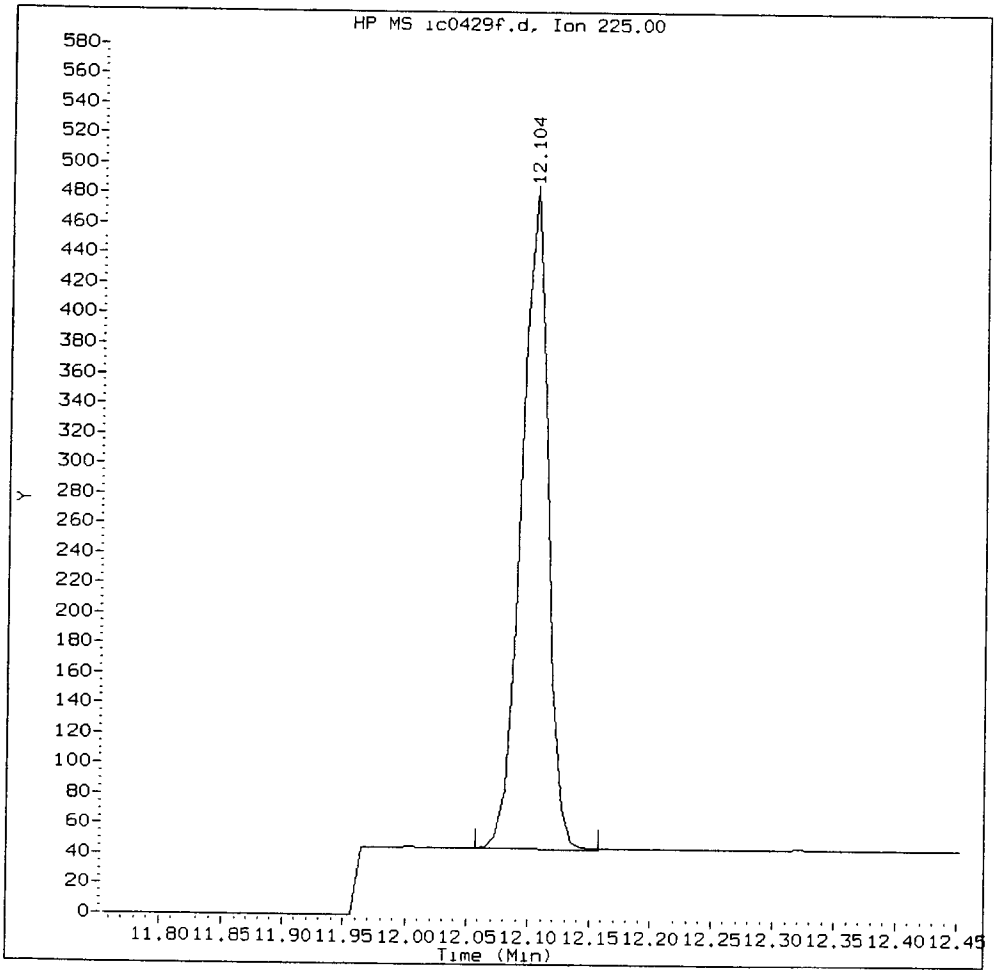
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobutadiene Amount: 0.06 Area: 663



MANUAL INTEGRATION for Hexachlorobutadiene

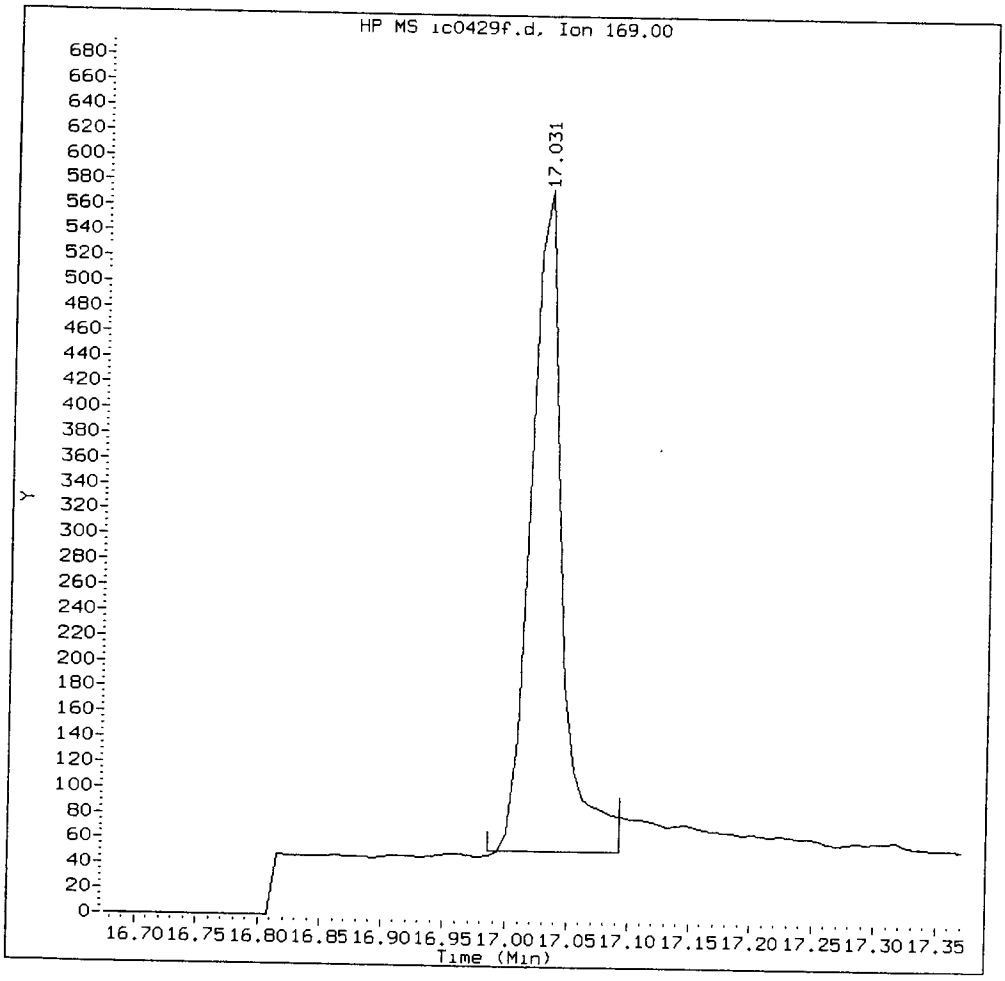
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 947



MANUAL INTEGRATION for N-Nitrosodiphenylamine

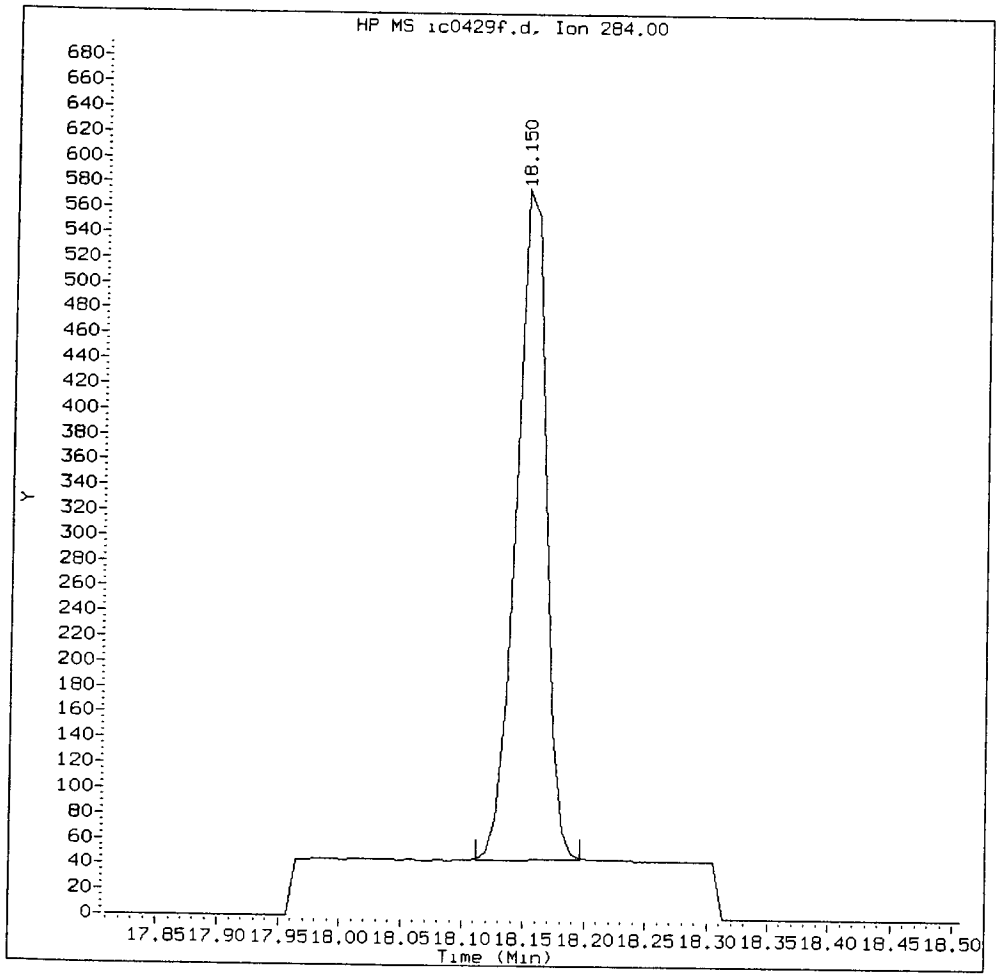
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/31/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobenzene Amount: 0.06 Area: 903



MANUAL INTEGRATION for Hexachlorobenzene

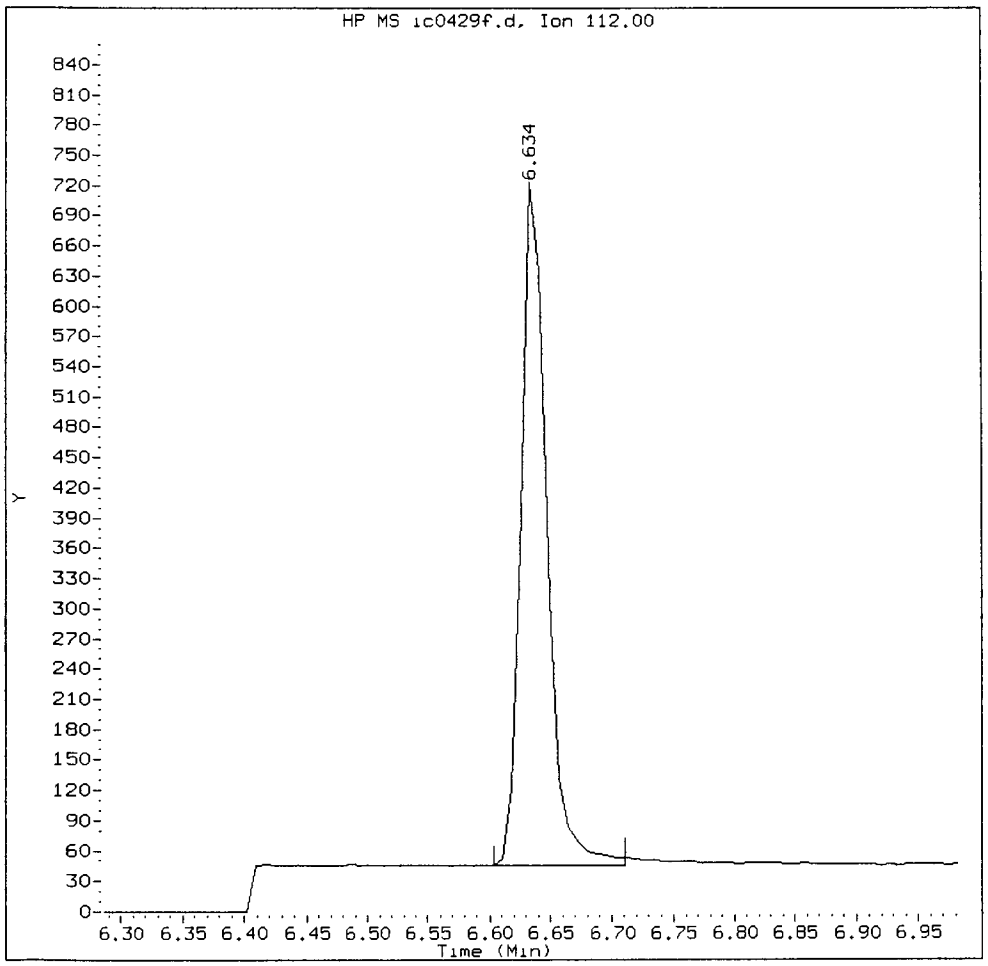
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/8/17

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

2-Fluorophenol Amount: 0.05 Area: 1004



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: KZ Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429f.d

Lab ID: IC0429F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.633	6.634	(0.738)	39175	2.50000	2.552(M)
	3	Phenol	94	8.364	8.365	(0.931)	57029	2.50000	2.584
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	43575	2.50000	2.396
*	8	1,4-Dichlorobenzene-d4	152	8.983	8.984	(1.000)	43709	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	43120	2.50000	2.381
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	27973	2.50000	2.643
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	41290	2.50000	2.400
	13	2-Methylphenol	108	9.550	9.551	(1.063)	40181	2.50000	2.547
	15	4-Methylphenol	108	9.845	9.846	(1.096)	41543	2.50000	2.586
	16	N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	23225	2.50000	2.563
	22	2,4-Dimethylphenol	107	10.969	10.962	(0.942)	80843	5.00000	5.211
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	36642	2.50000	2.387
*	27	Naphthalene-d8	136	11.647	11.640	(1.000)	160165	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	22613	2.50000	2.420
	39	Dimethylphthalate	163	15.060	15.052	(0.969)	66102	2.50000	2.407
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	95179	4.00000	
	50	Diethylphthalate	149	16.645	16.637	(1.071)	77428	2.50000	2.490
	54	N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	51253	2.50000	2.616
	57	Hexachlorobenzene	284	18.157	18.158	(0.965)	30459	2.50000	2.276
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	45814	5.00000	5.583
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	178699	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	58696	2.50000	2.397
	67	Butylbenzylphthalate	149	22.979	22.971	(0.961)	50099	2.50000	2.711
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	199199	4.00000	
*	77	Perylene-d12	264	26.362	26.347	(1.000)	191024	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.718	28.703	(1.089)	106924	2.50000	2.511
	90	N-Nitrosodimethylamine	74	4.356	4.371	(0.485)	49279	5.00000	5.232

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	43709	-16.99
27 Naphthalene-d8	192325	96162	384650	160165	-16.72
42 Acenaphthene-d10	109274	54637	218548	95179	-12.90
59 Phenanthrene-d10	203933	101966	407866	178699	-12.37
69 Chrysene-d12	223647	111824	447294	199199	-10.93
77 Perylene-d12	211919	105960	423838	191024	-9.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

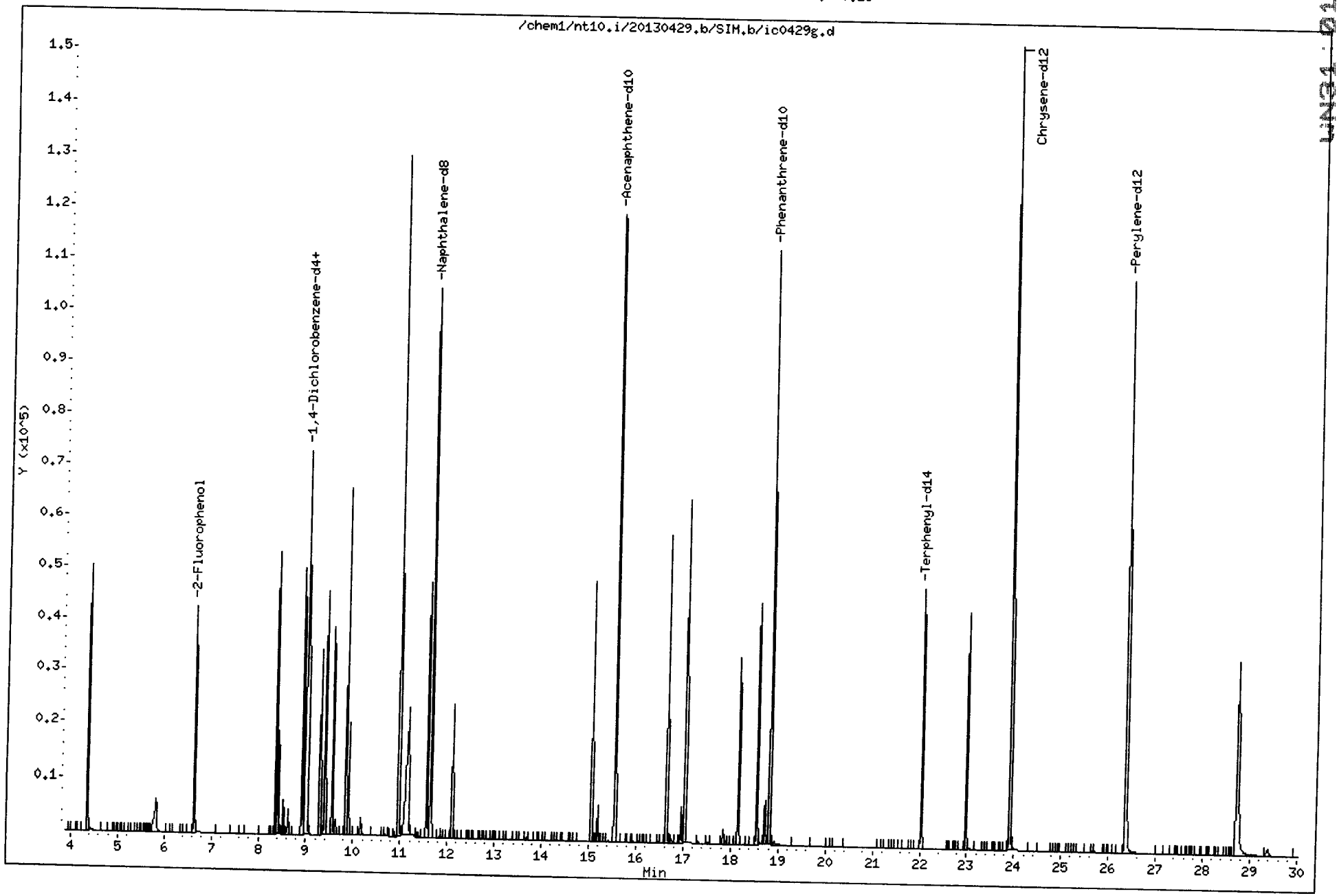
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Column phase: ZB-5msi

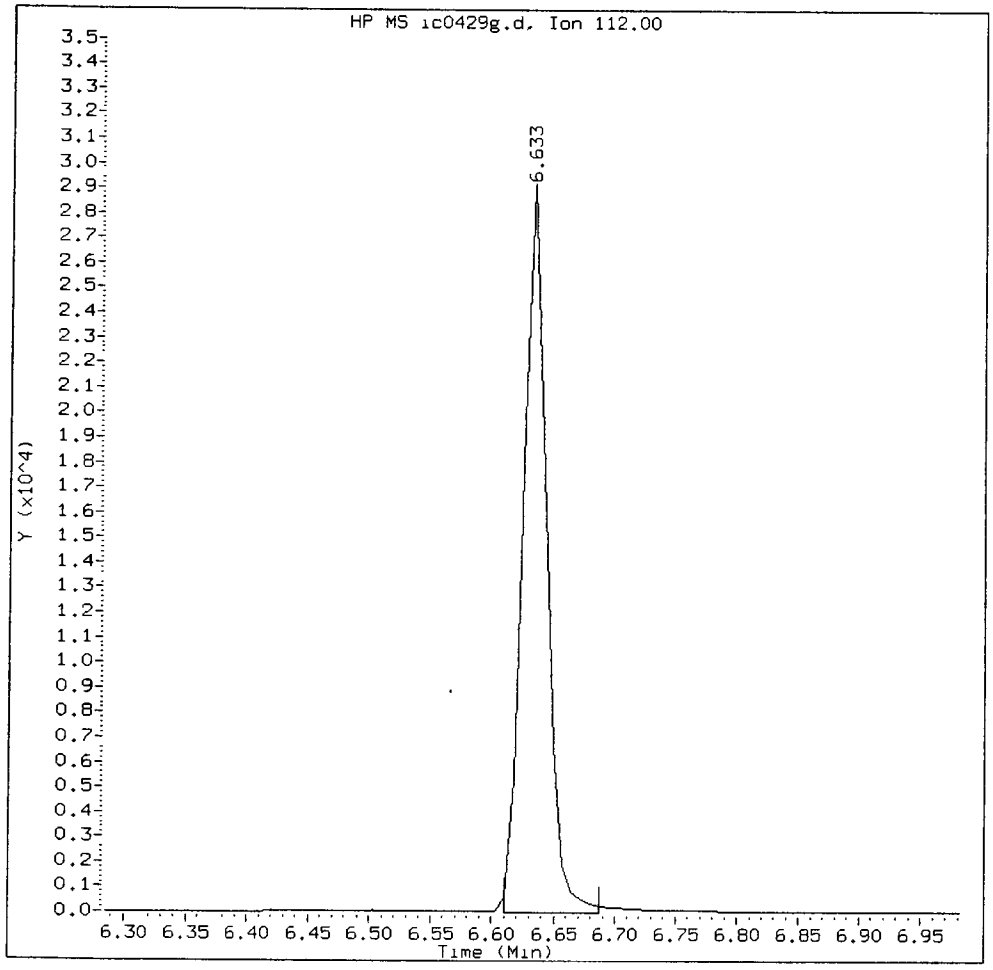
Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



IC0429G, /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d

2-Fluorophenol Amount: 2.55 Area: 39175



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: YZ Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Lab Smp Id: IC0429H
Inj Date : 29-APR-2013 21:11
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:11 Cal File: ic0429h.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.633	6.634	(0.738)	1744	0.10000	0.09619(M)
	3	Phenol	94	8.365	8.365	(0.931)	2499	0.10000	0.09589
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	2261	0.10000	0.1053
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	51614	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	2198	0.10000	0.1028(M)
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	1192	0.10000	0.09537
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	2088	0.10000	0.1028
	13	2-Methylphenol	108	9.550	9.551	(1.063)	1796	0.10000	0.09639
	15	4-Methylphenol	108	9.845	9.846	(1.096)	1777	0.10000	0.09366
	16	N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	1040	0.10000	0.09720
	22	2,4-Dimethylphenol	107	10.961	10.962	(0.941)	3433	0.20000	0.1840
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1896	0.10000	0.1027(M)
*	27	Naphthalene-d8	136	11.647	11.640	(1.000)	192559	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	1142	0.10000	0.1017(M)
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	3197	0.10000	0.1027
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	107939	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	3307	0.10000	0.09377
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	1860	0.10000	0.08732
	57	Hexachlorobenzene	284	18.157	18.158	(0.965)	1462	0.10000	0.1005
	58	Pentachlorophenol	266	18.552	18.553	(0.986)	1339	0.20000	0.1501(M)
*	59	Phenanthrene-d10	188	18.815	18.816	(1.000)	194268	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	2454	0.10000	0.09449(M)
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	1538	0.10000	0.07847
*	69	Chrysene-d12	240	23.892	23.900	(1.000)	211275	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	196007	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.710	28.703	(1.090)	3837	0.10000	0.08782
	90	N-Nitrosodimethylamine	74	4.386	4.371	(0.488)	2220	0.20000	0.1996

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429h.d
Lab Smp Id: IC0429H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51614	-1.98
27 Naphthalene-d8	192325	96162	384650	192559	0.12
42 Acenaphthene-d10	109274	54637	218548	107939	-1.22
59 Phenanthrene-d10	203933	101966	407866	194268	-4.74
69 Chrysene-d12	223647	111824	447294	211275	-5.53
77 Perylene-d12	211919	105960	423838	196007	-7.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

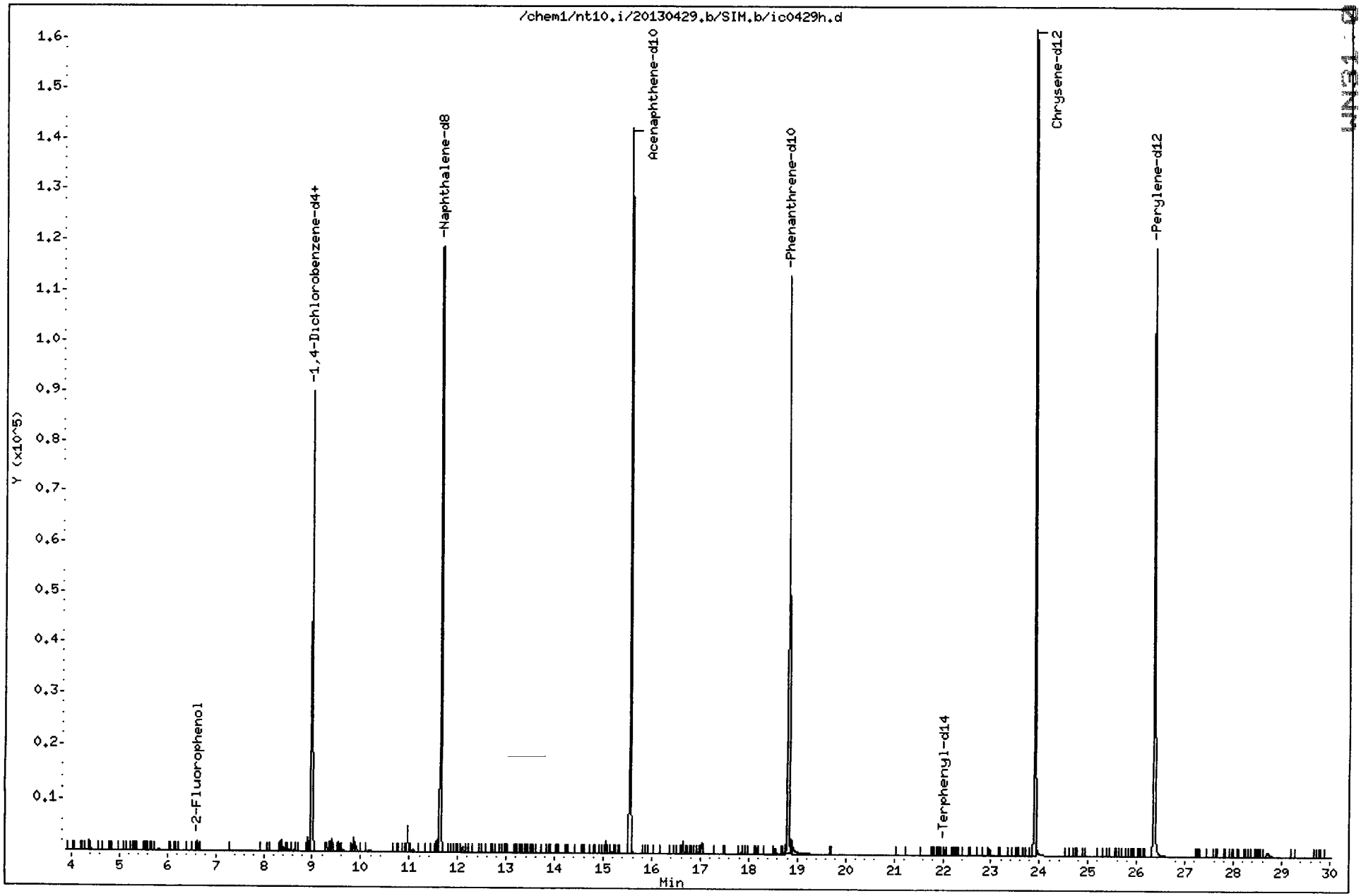
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Date : 29-APR-2013 21:11
Client ID:
Sample Info: IC0429H

Instrument: nt10.i

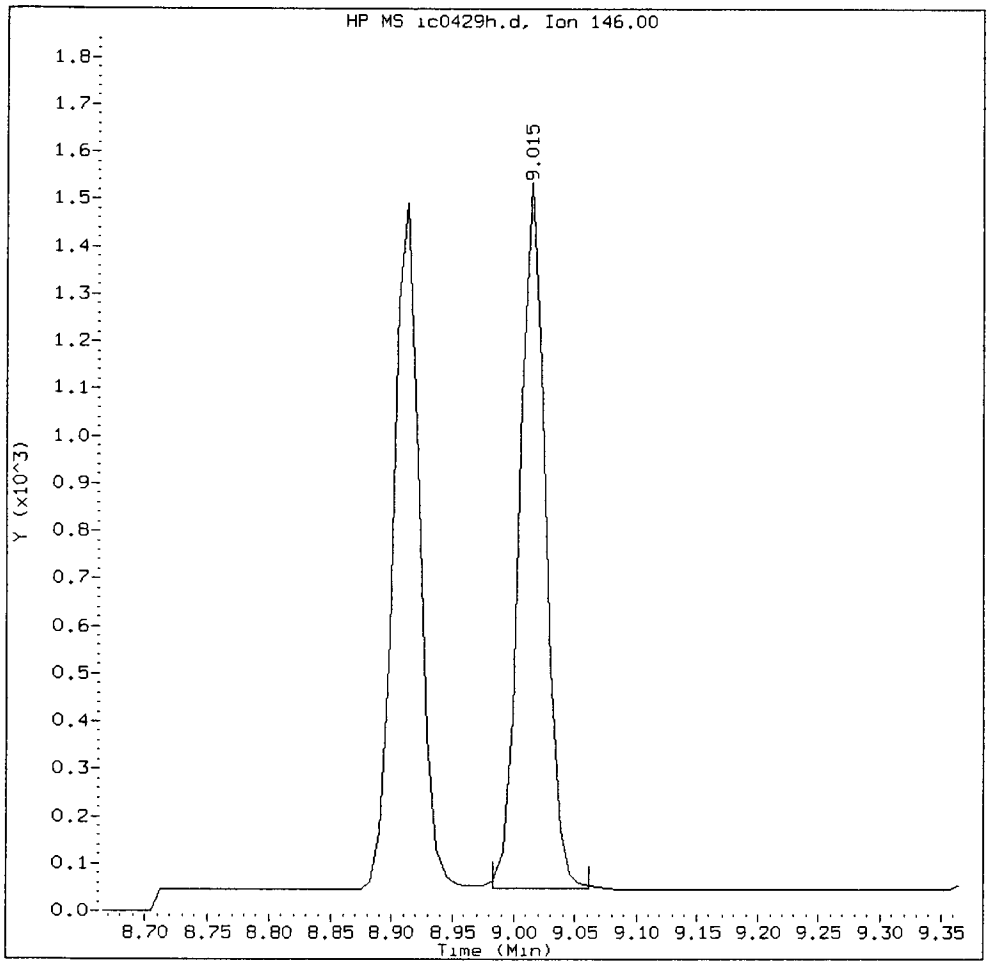
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,4-Dichlorobenzene Amount: 0.10 Area: 2198



MANUAL INTEGRATION for 1,4-Dichlorobenzene

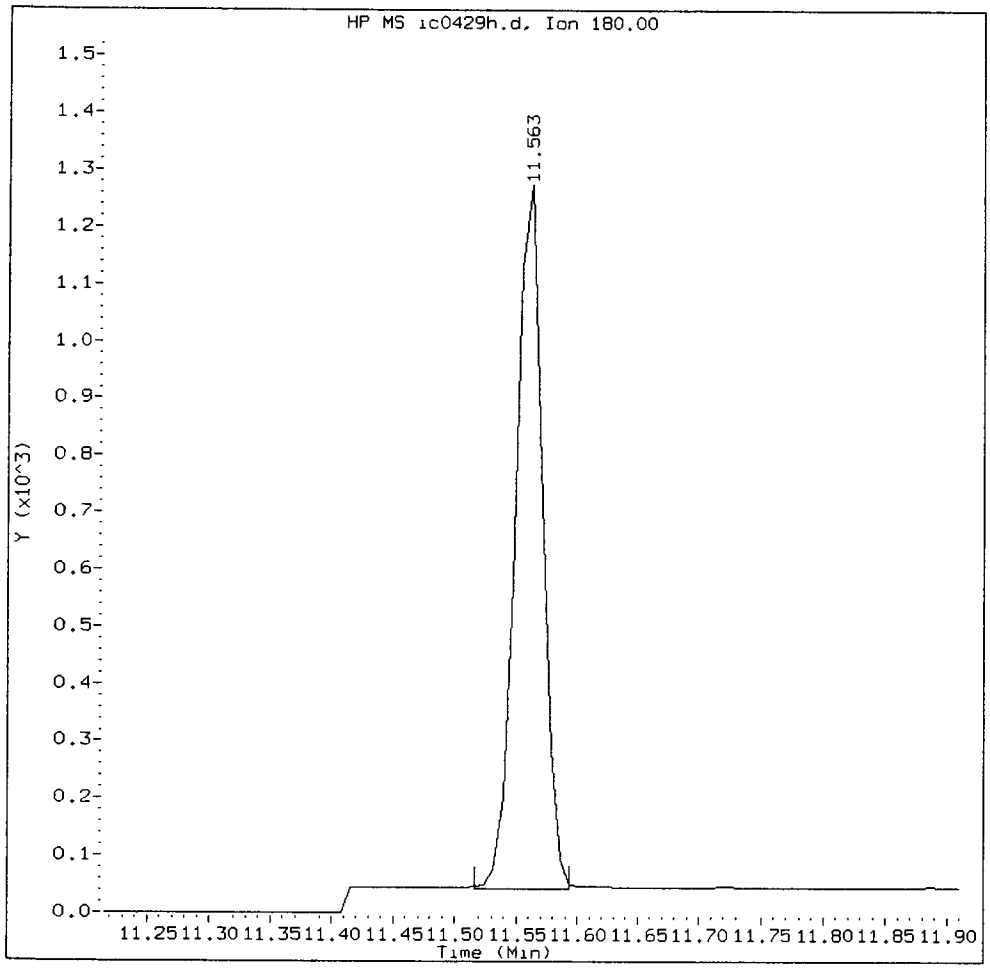
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,2,4-Trichlorobenzene Amount: 0.10 Area: 1896



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

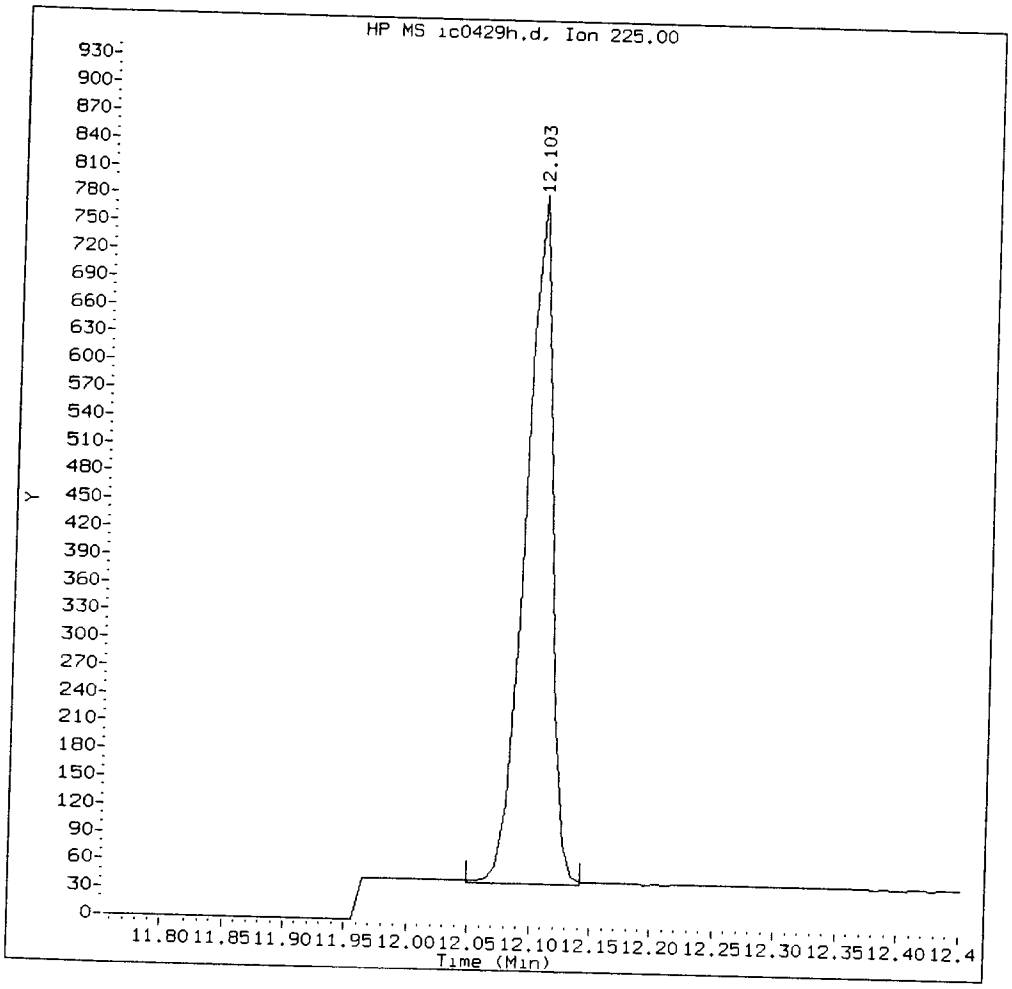
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/5/17

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Hexachlorobutadiene Amount: 0.10 Area: 1142



MANUAL INTEGRATION for Hexachlorobutadiene

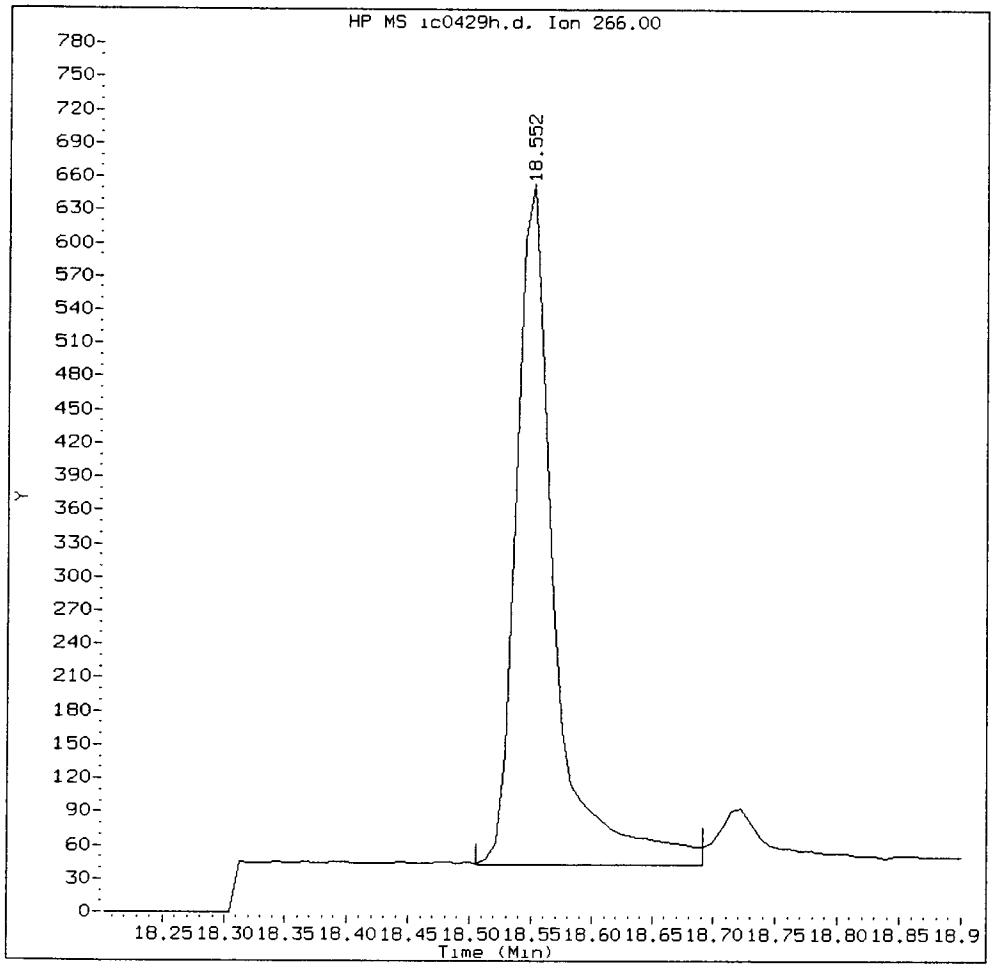
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Pentachlorophenol Amount: 0.15 Area: 1339



MANUAL INTEGRATION for Pentachlorophenol

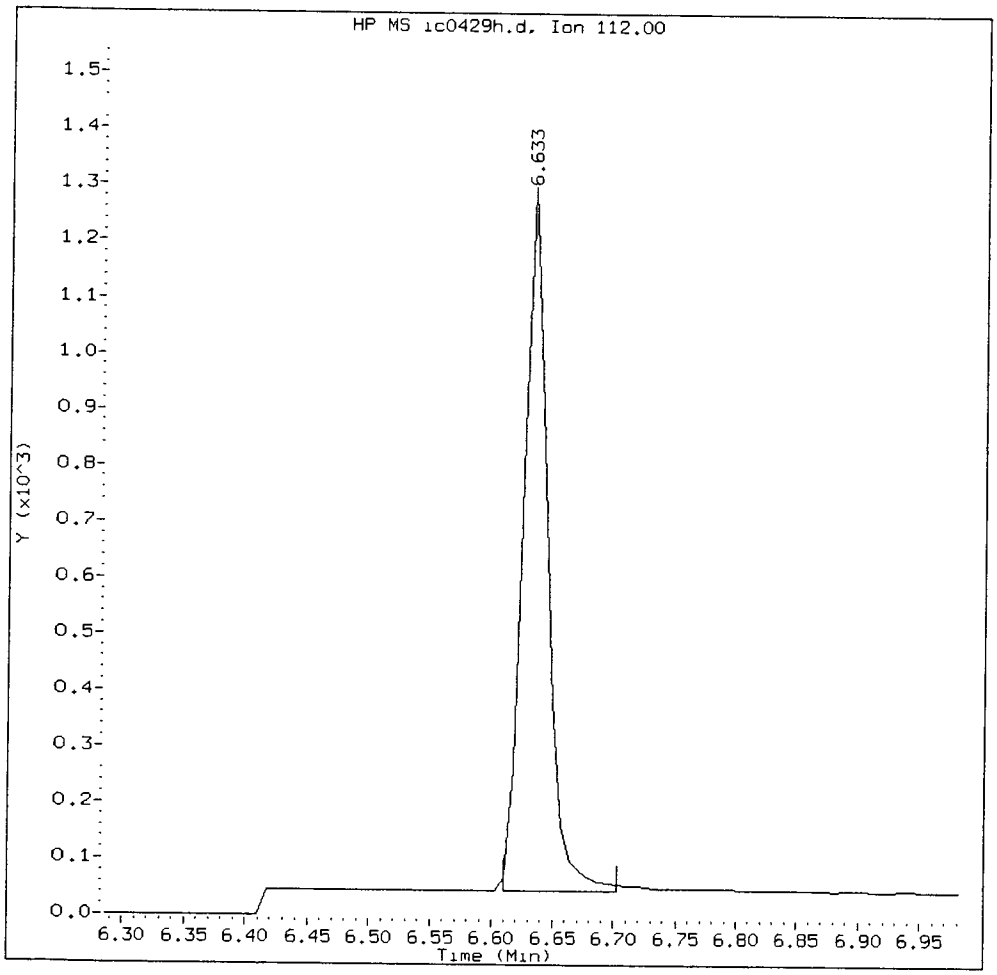
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

2-Fluorophenol Amount: 0.10 Area: 1744



MANUAL INTEGRATION for 2-Fluorophenol

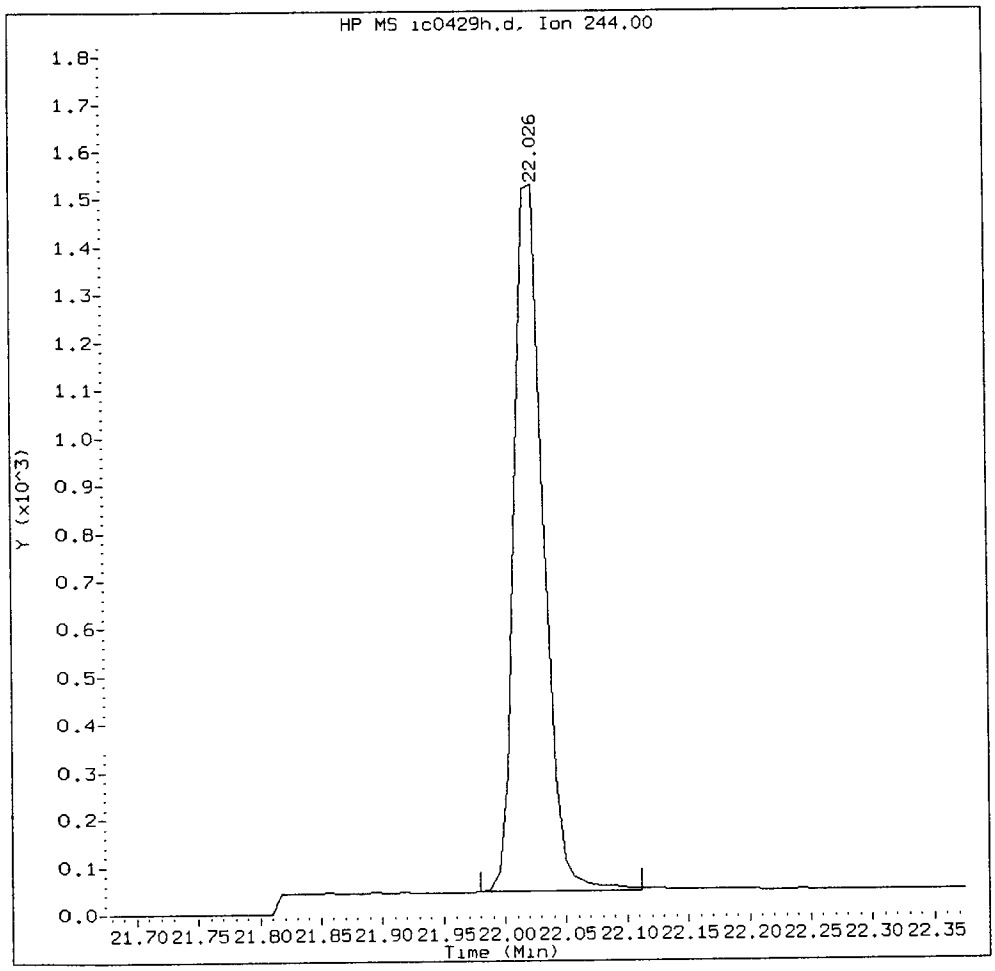
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Terphenyl-d14 Amount: 0.09 Area: 2454



MANUAL INTEGRATION for Terphenyl-d14

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

5. Other _____

Analyst: YZ Date: 7/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429h.d

Lab ID: IC0429H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	8113	0.50000	0.4669(M)
	3	Phenol	94	8.365	8.365	(0.931)	11931	0.50000	0.4777
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	9817	0.50000	0.4770
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	49468	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	9757	0.50000	0.4761
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	5665	0.50000	0.4729
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	9240	0.50000	0.4745
	13	2-Methylphenol	108	9.551	9.551	(1.063)	8436	0.50000	0.4724
	15	4-Methylphenol	108	9.846	9.846	(1.096)	8566	0.50000	0.4711
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	4941	0.50000	0.4818
	22	2,4-Dimethylphenol	107	10.962	10.962	(0.942)	16956	1.00000	0.9589
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	8289	0.50000	0.4738
*	27	Naphthalene-d8	136	11.640	11.640	(1.000)	182546	4.00000	
	30	Hexachlorobutadiene	225	12.104	12.104	(1.040)	5038	0.50000	0.4730
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	14017	0.50000	0.4605
*	42	Acenaphthene-d10	162	15.540	15.540	(1.000)	105486	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	15572	0.50000	0.4518
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	10352	0.50000	0.4940
	57	Hexachlorobenzene	284	18.158	18.158	(0.965)	6394	0.50000	0.4467
	58	Pentachlorophenol	266	18.553	18.553	(0.986)	7927	1.00000	0.9033
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	191121	4.00000	
$	66	Terphenyl-d14	244	22.027	22.027	(0.922)	11579	0.50000	0.4518
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	8336	0.50000	0.4310
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	208500	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	197777	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	19496	0.50000	0.4422
	90	N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	10669	1.00000	1.001

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	49468	-6.06
27 Naphthalene-d8	192325	96162	384650	182546	-5.08
42 Acenaphthene-d10	109274	54637	218548	105486	-3.47
59 Phenanthrene-d10	203933	101966	407866	191121	-6.28
69 Chrysene-d12	223647	111824	447294	208500	-6.77
77 Perylene-d12	211919	105960	423838	197777	-6.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.64	-0.06
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

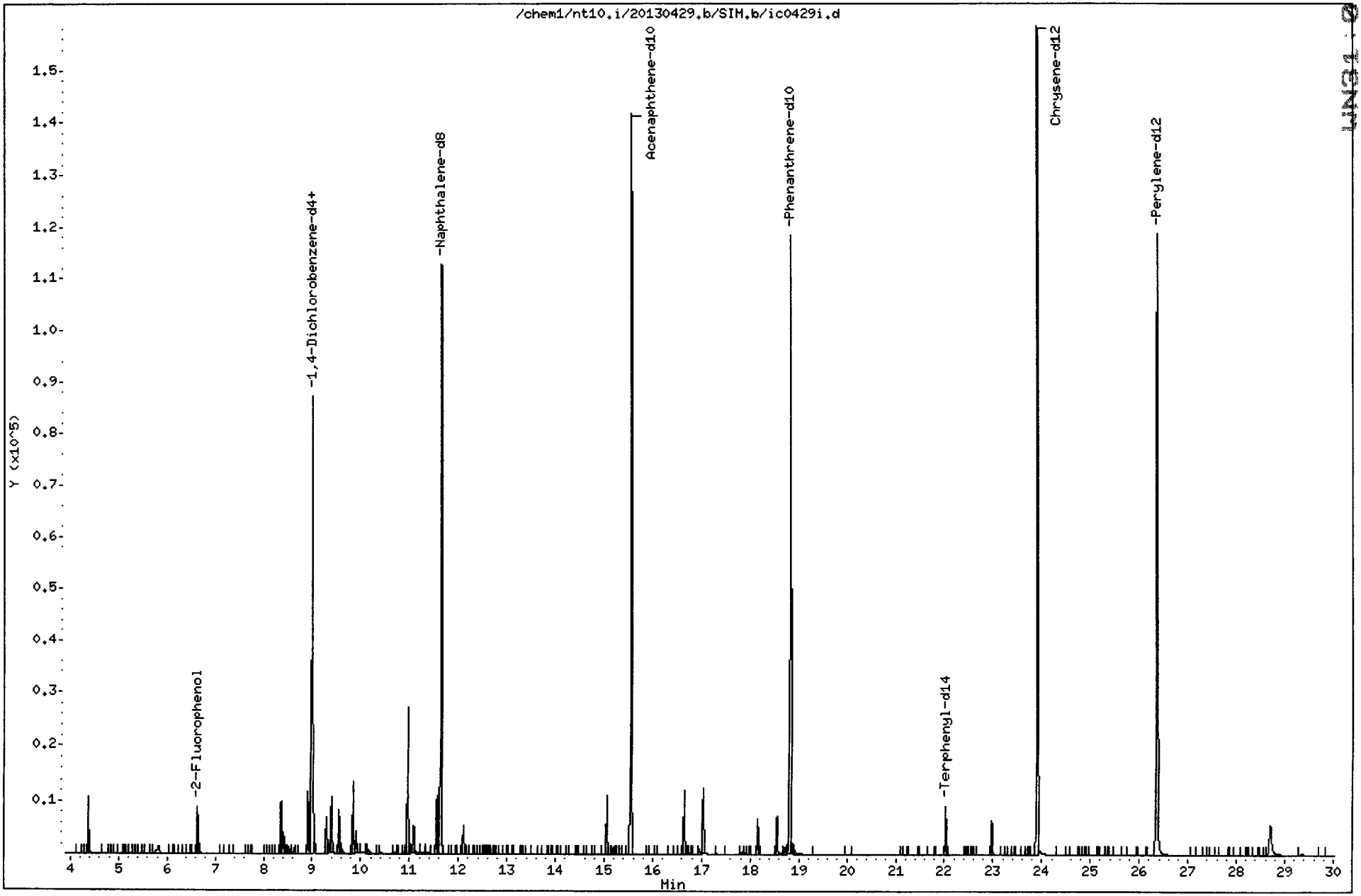
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i

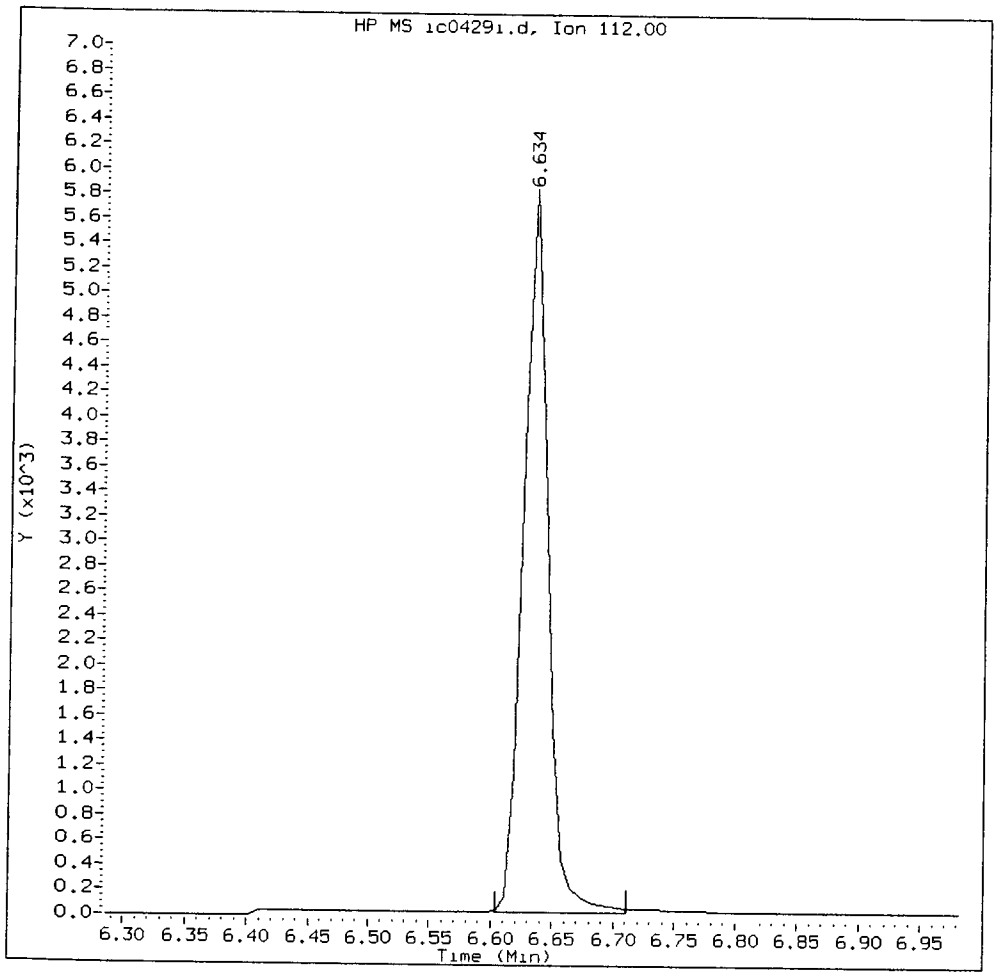
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429I, /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d

2-Fluorophenol Amount: 0.47 Area: 8113



MANUAL INTEGRATION for 2-Fluorophenol

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

5. Other _____

Analyst: YS Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

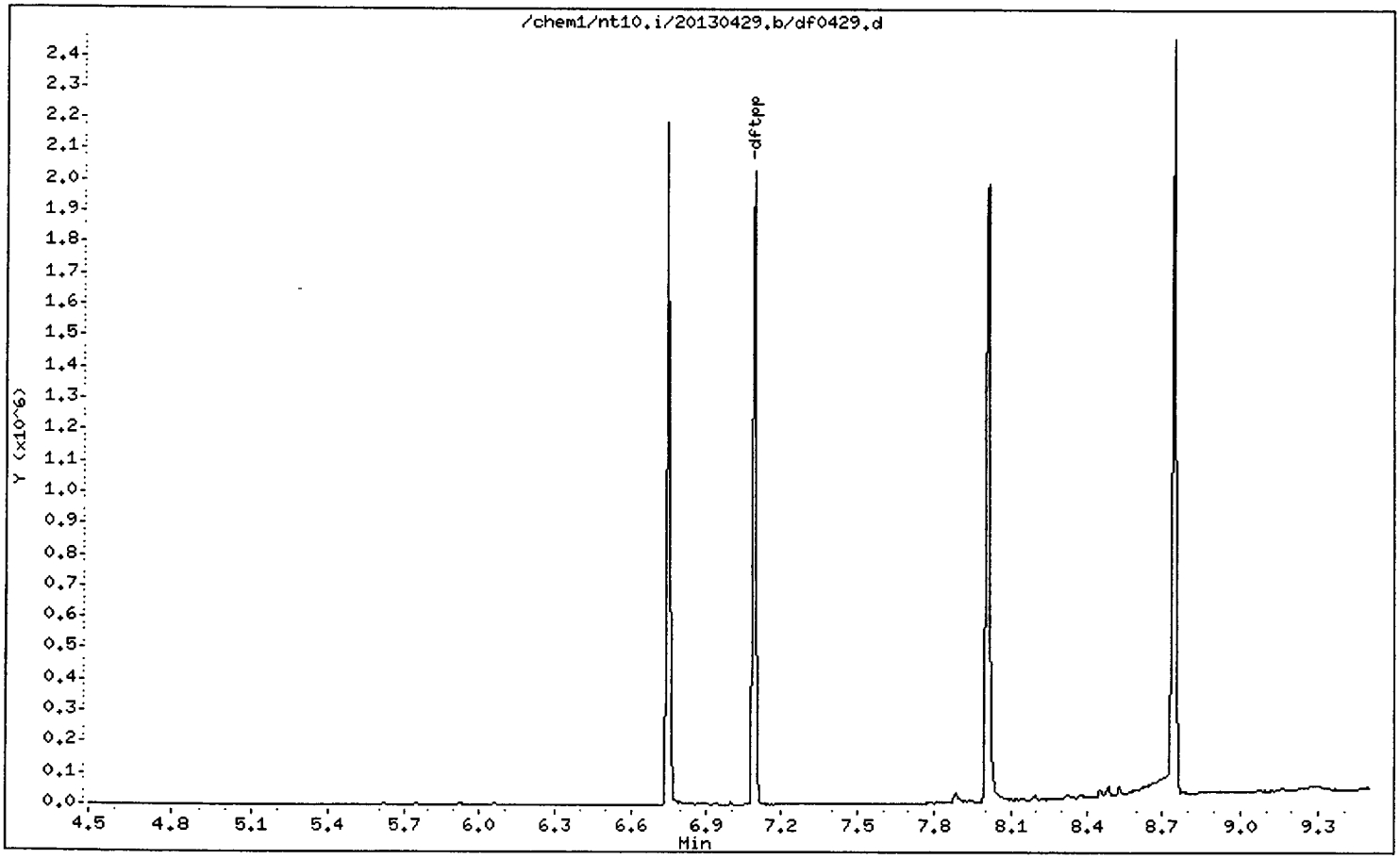
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

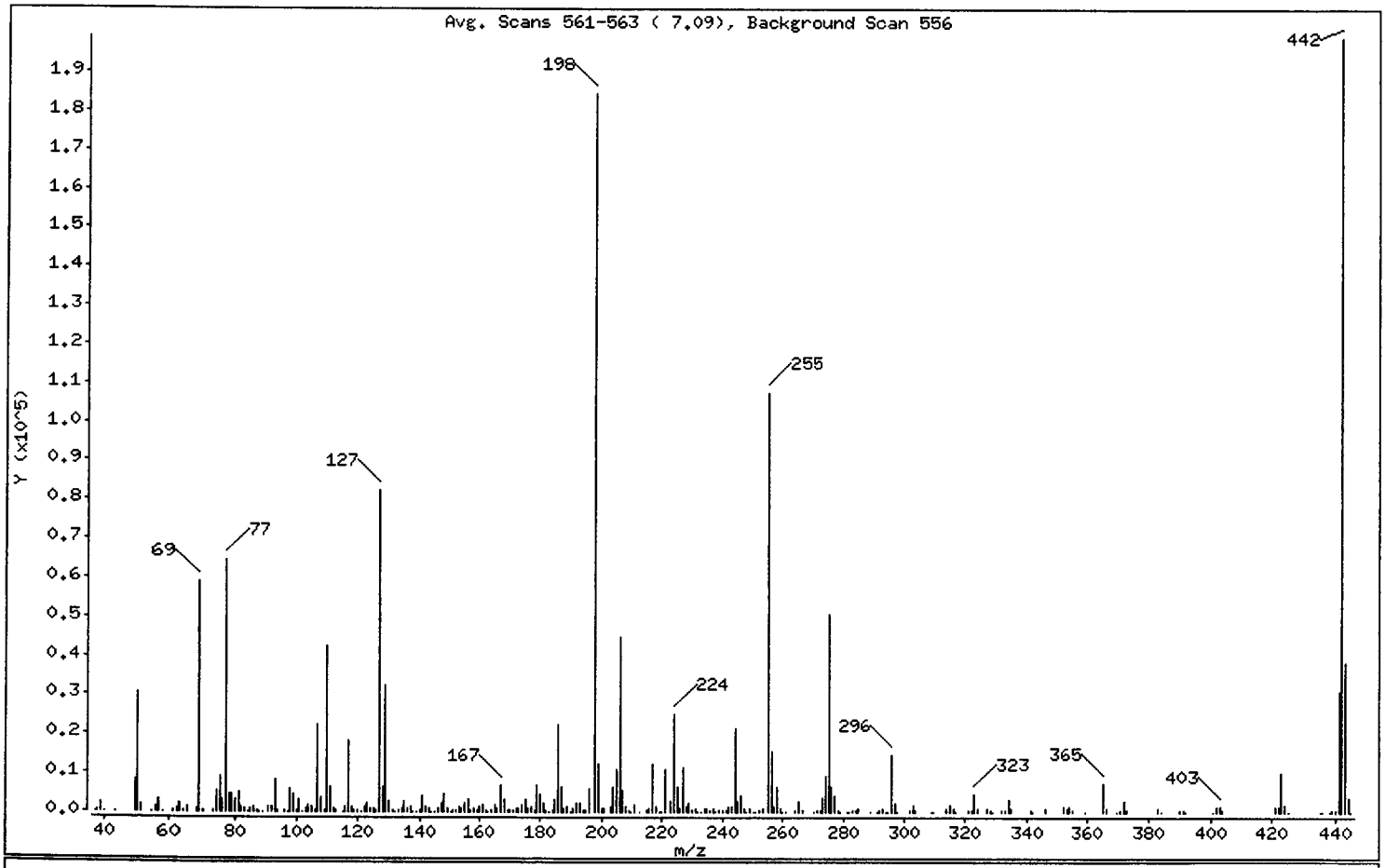
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

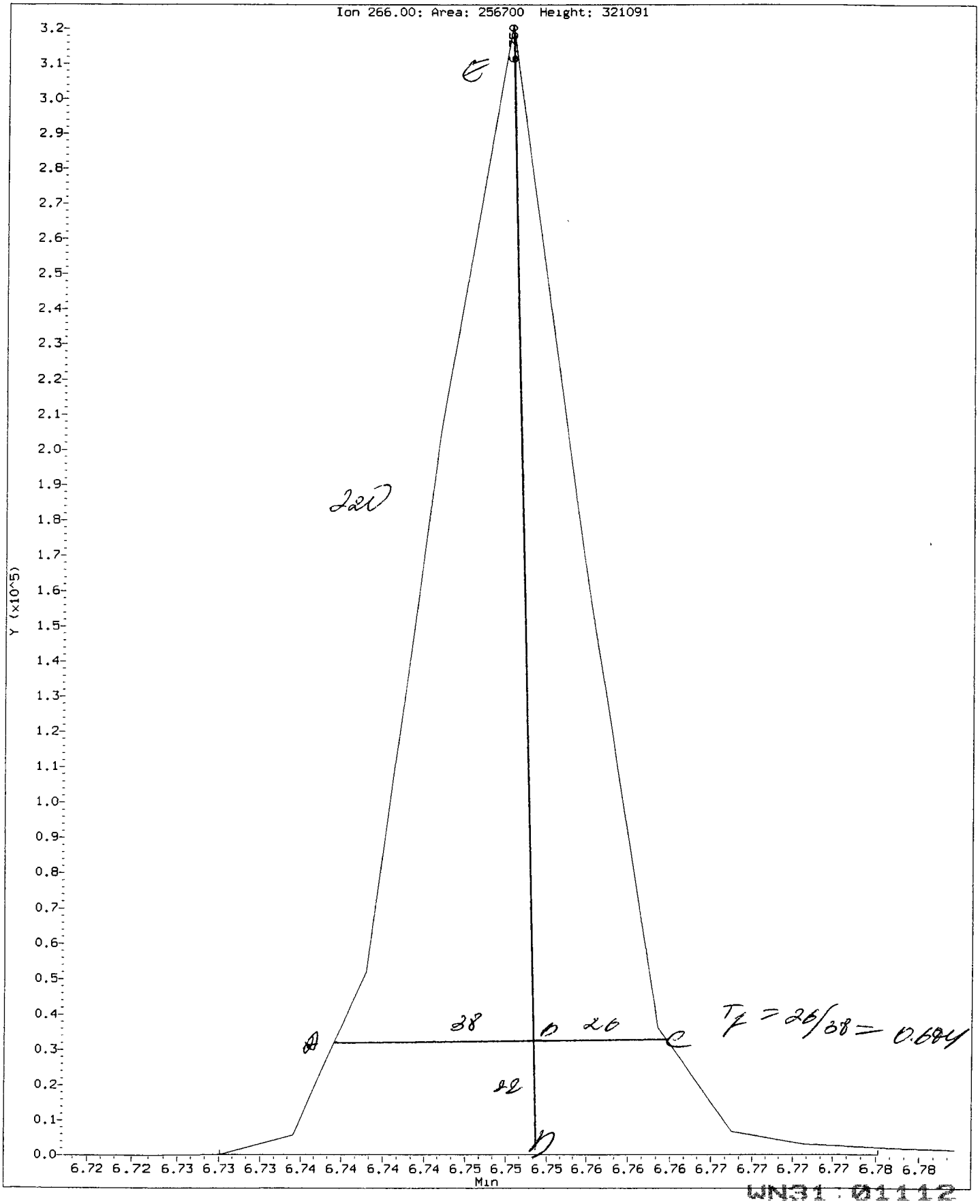
Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

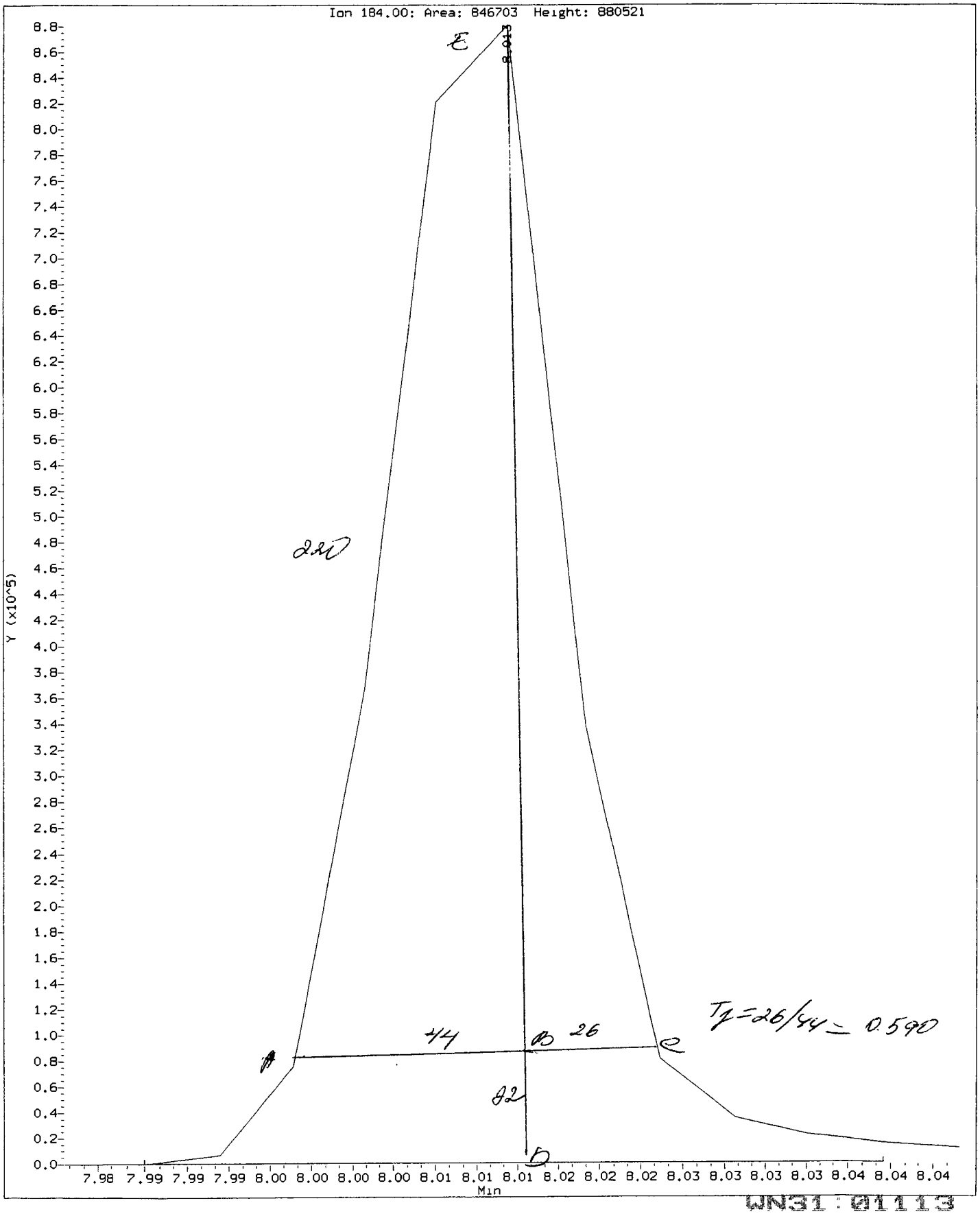
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
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/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1804 + 6740) * 100}{(\ 1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: ~~NT-4~~ NT-6 NT-8 (NT-10) NT11 NT12

Curve Date: 04/29/13 Analysis Start Date: 05/07/13

	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 / Y
CCAL Q flag applied?	(Y) / N / ____	MS / MSD Recovery in Control?	(Y) / N / ____
Surrogate Recovery met?	(Y) / N / ____	MS / MSD RPD ≤ 30%?	NA / Y
Manual Integrations?	(Y) / N / ____	Samples Diluted?	(Y) / N / 3X
Integration Summary?	(Y) / N / ____	Special Analysis Request?	(Y) / N / ____

Detail problems, corrective actions and/or other pertinent information below.

(Review 1) Analyst: YZ **Date:** 5/10/13

(Review 2) Reviewer: MWT **Date:** 5/10

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 05/07/13 Analysis: ABN/SIM ABN Analyst: YE

GC Program: ABN2 Column No: 252945 Column Type: 280 ms1

Instrument Tune (.U or .CT.): 130228.1 EM Voltage: 1650

Calibration File: DF0507 Curve Date: 04/29/13 Injection Vol.: 1 ul

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 BOOKI2	
	2073-1 1998-1	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b

	Time	Filename	LabID	ClientId	DF									
1	1219	df0507 d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1310	cc0507a.d	CC0507A		1	8 13	56926 | 10.73	209171 | 14.56	117080 | 17 79	224897 | 22 98	250780 | 25.26	223069		
3	1650	wn30mbs1 d	WN30MBS1	WN30MBS1	1	8.13	53803 | 10 73	206635 | 14 56	117783 | 17.79	224711 | 22 98	238578 | 25.26	204177		
4	1727	wn30lcss1 d	WN30LCSS1	WN30LCSS1	1	8 12	51689 | 10.73	189427 | 14 56	111234 | 17.79	212909 | 22 98	239074 | 25.26	211700		
5	1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	8.12	48500 | 10 72	178583 | 14 56	105548 | 17 79	200471 | 22.98	226844 | 25 26	205354		
6	1840	wn30k.d	WN30K	JW-EA02-SC05	1	8 13	49546 | 10.73	191408 | 14.57	112467 | 17 81	214537 | 23.05	197149 | 25.35	191970		
7	1916	wn27a d	WN27A	CG-MH-010-20	3	8 13	44455 | 10 73	180083 | 14 56	105963 | 17 79	194098 | 23.01	183569 | 25 32	179016		
8	1953	wn27ams.d	WN27AMS	CG-MH-010-20	3	8.12	48313 | 10 73	187744 | 14.56	112730 | 17.80	205606 | 23.02	199913 | 25.35	205001		
9	2030	wn27amsd d	WN27AMSD	CG-MH-010-20	3	8.13	44166 | 10 73	171247 | 14.56	102716 | 17 79	190403 | 23.01	185948 | 25.32	172442		
10	2106	wn31a.d	WN31A	ES-TS-INF-20	3	8 13	47115 | 10.72	182293 | 14.56	101406 | 17.79	175865 | 23.01	198466 | 25 31	192962		

YE 5/8/13

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b/SIM.b

ARI Job No.: WN30 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1650	wn30mbs1.d	WN30MBS1	WN30MBS1	1	NO MANUAL INTEGRATION
1727	wn30lcss1.d	WN30LCSS1	WN30LCSS1	1	NO MANUAL INTEGRATION
1803	wn30lcsds1.d	WN30LCSDS1	WN30LCSDS1	1	NO MANUAL INTEGRATION
1916	wn27a.d	WN27A	CG-MH-010-	3	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, N-Nitrosodiphenylamine, Dibenzo(a,h)anthracene,
1953	wn27ams.d	WN27AMS	CG-MH-010-	3	NO MANUAL INTEGRATION
2030	wn27amsd.d	WN27AMSD	CG-MH-010-	3	NO MANUAL INTEGRATION
2106	wn31a.d	WN31A	ES-TS-INF-	3	Benzyl alcohol, Dimethylphthalate, Diethylphthalate, Dibenzo(a,h)anthracene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130507.b/SIM.b

Instrument: nt10.i Date: 07-MAY-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 07-MAY-2013

Compound	%D
Pentachlorophenol	-62.0

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

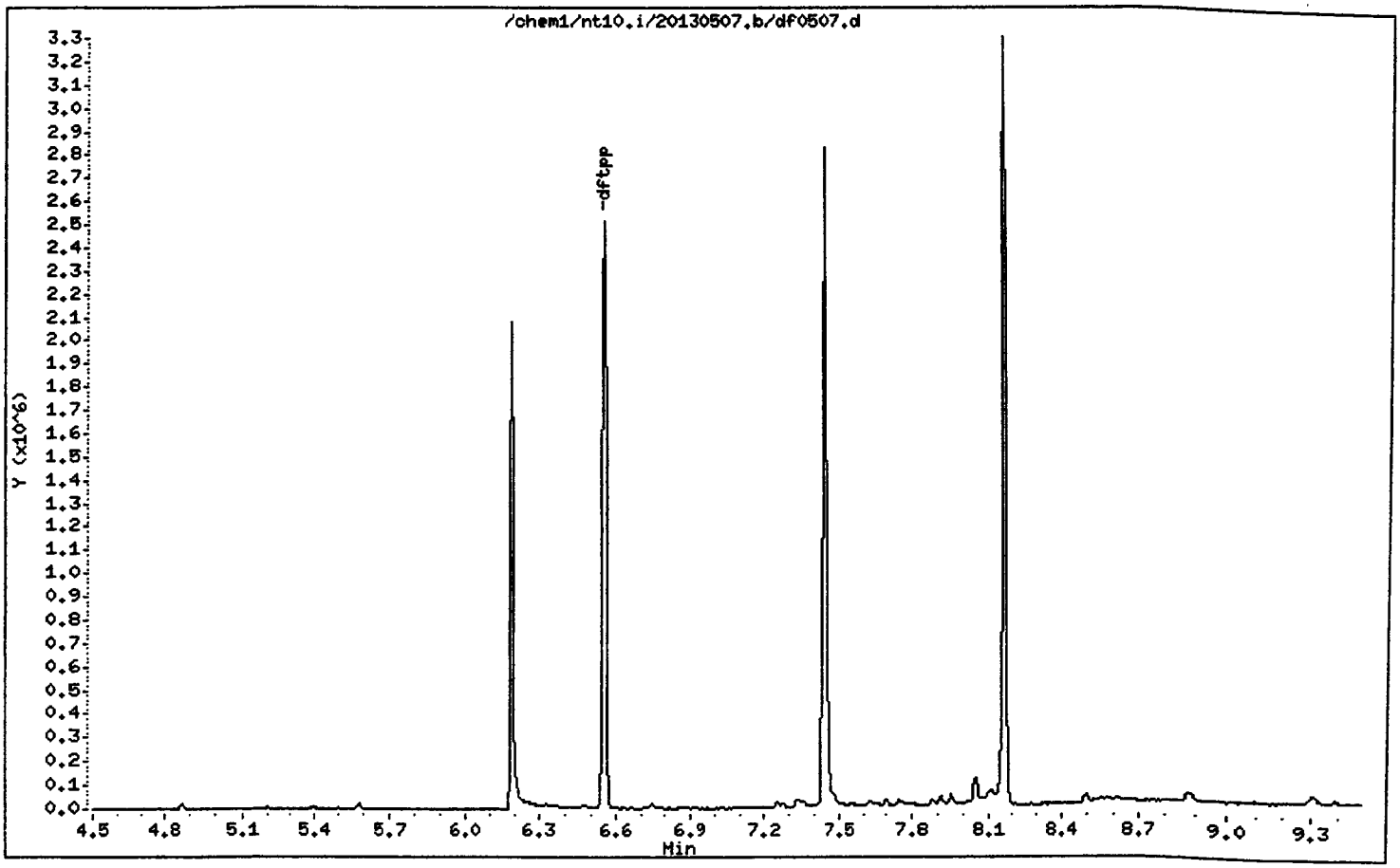
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

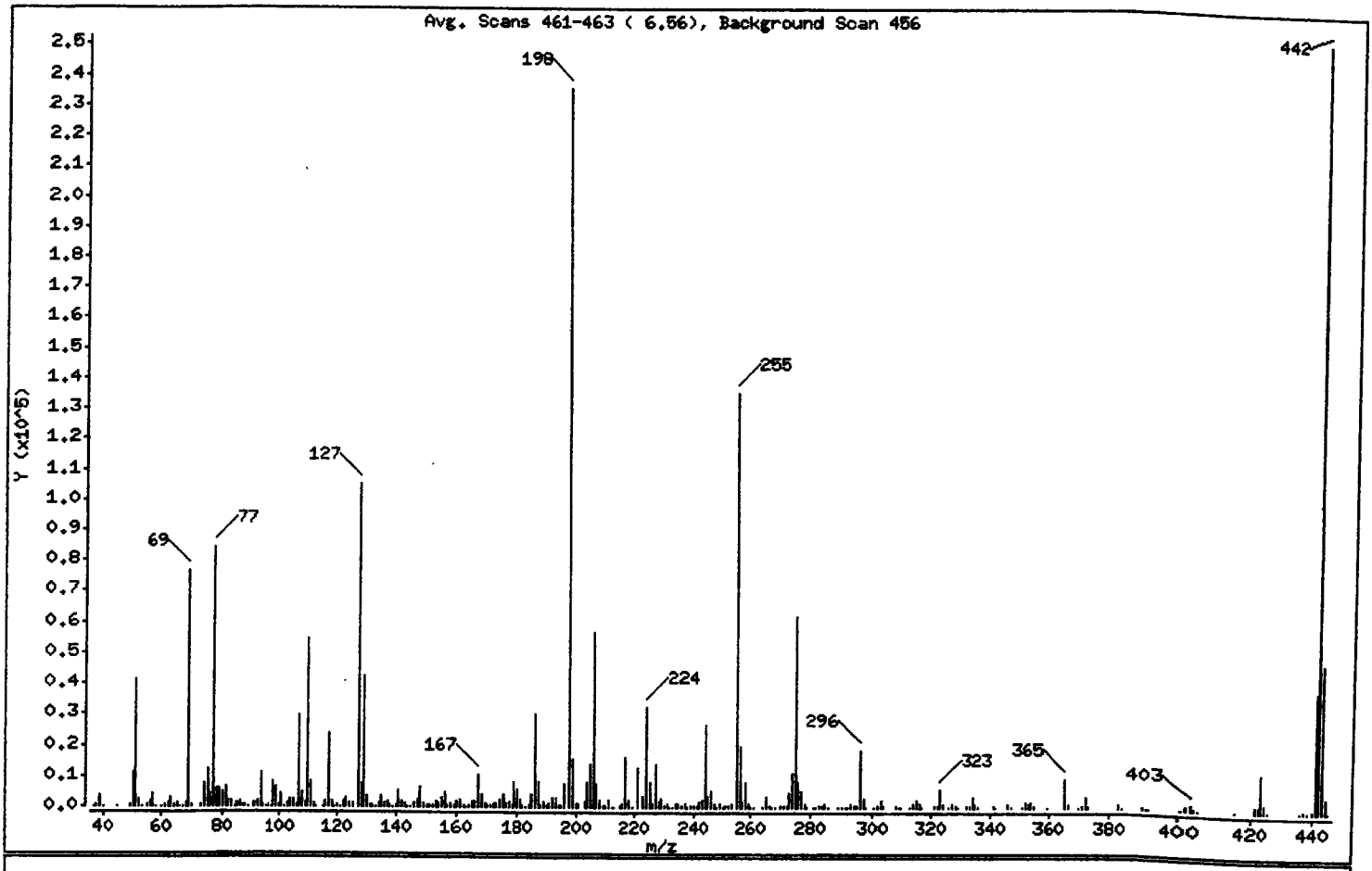
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.49
68	Less than 2.00% of mass 69	0.55 (1.68)
69	Mass 69 relative abundance	32.59
70	Less than 2.00% of mass 69	0.19 (0.60)
127	10.00 - 80.00% of mass 198	44.66
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.66
275	10.00 - 60.00% of mass 198	26.49
365	Greater than 1.00% of mass 198	3.85
441	0.01 - 24.00% of mass 442	16.45 (15.34)
442	50.00 - 200.00% of mass 198	107.26
443	15.00 - 24.00% of mass 442	20.48 (19.10)

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d
Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456
Location of Maximum: 442.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	165	127.00	105160	205.00	14065	291.00	68
38.00	541	128.00	7752	206.00	56872	292.00	264
39.00	3217	129.00	42416	207.00	7418	293.00	1209
40.00	147	130.00	3423	208.00	2073	294.00	308
45.00	50	131.00	712	209.00	493	295.00	342
49.00	348	132.00	392	210.00	649	296.00	18312
50.00	11161	133.00	235	211.00	2179	297.00	2673
51.00	41176	134.00	1318	212.00	90	298.00	188
52.00	2280	135.00	3367	213.00	115	301.00	277
53.00	57	136.00	1352	215.00	715	302.00	365
55.00	301	137.00	1539	216.00	1332	303.00	2162
56.00	1813	138.00	363	217.00	16327	304.00	538
57.00	4098	139.00	186	218.00	2040	308.00	295
58.00	169	140.00	541	219.00	190	309.00	131
60.00	30	141.00	5378	221.00	13051	310.00	154
61.00	838	142.00	1775	223.00	3684	313.00	206
62.00	965	143.00	1211	224.00	32464	314.00	947
63.00	2847	144.00	290	225.00	8230	315.00	2153
64.00	418	145.00	288	226.00	912	316.00	1225
65.00	1416	146.00	894	227.00	13707	317.00	149
66.00	51	147.00	2502	228.00	2031	321.00	688
67.00	72	148.00	6165	229.00	3030	322.00	351
68.00	1291	149.00	1165	230.00	444	323.00	5703
69.00	76744	150.00	292	231.00	1266	324.00	1065
70.00	457	151.00	649	232.00	236	326.00	137
73.00	432	152.00	342	233.00	246	327.00	1197
74.00	7451	153.00	1632	234.00	874	328.00	555
75.00	12036	154.00	1326	235.00	995	329.00	64
76.00	4044	155.00	3061	236.00	720	332.00	491
77.00	83968	156.00	4441	237.00	1095	333.00	662
78.00	5637	157.00	831	238.00	150	334.00	3759
79.00	5692	158.00	1013	239.00	606	335.00	948
80.00	4518	159.00	749	240.00	436	336.00	50
81.00	6259	160.00	1692	241.00	808	341.00	791
82.00	1687	161.00	2495	242.00	1850	342.00	161

Data File: /chem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d
Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456
Location of Maximum: 442.00
Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1477	162.00	738	243.00	2192	346.00	1373
84.00	44	163.00	224	244.00	26544	347.00	233
85.00	1154	164.00	334	245.00	3604	351.00	175
86.00	1817	165.00	1952	246.00	5235	352.00	1921
87.00	817	166.00	1696	247.00	1018	353.00	1269
88.00	297	167.00	10680	248.00	282	354.00	1662
89.00	164	168.00	4218	249.00	965	355.00	370
91.00	1338	169.00	910	250.00	160	359.00	72
92.00	1663	170.00	397	251.00	307	365.00	9068
93.00	10827	171.00	504	252.00	333	366.00	1280
94.00	762	172.00	1038	253.00	926	370.00	224
95.00	205	173.00	1276	255.00	135040	371.00	578
96.00	418	174.00	2241	256.00	19728	372.00	3197
97.00	92	175.00	4219	257.00	1535	373.00	812
98.00	8120	176.00	1336	258.00	8246	383.00	962
99.00	6177	177.00	1989	259.00	1344	384.00	230
100.00	543	178.00	739	260.00	152	390.00	455
101.00	3998	179.00	8371	261.00	154	391.00	270
102.00	191	180.00	5645	264.00	228	392.00	266
103.00	1187	181.00	2604	265.00	3278	401.00	156
104.00	2428	182.00	455	266.00	542	402.00	1404
105.00	2176	183.00	290	267.00	51	403.00	1976
106.00	697	184.00	683	268.00	94	404.00	632
107.00	29376	185.00	4026	270.00	295	405.00	57
108.00	4701	186.00	29992	271.00	319	415.00	50
109.00	1004	187.00	8079	272.00	496	421.00	1847
110.00	54304	188.00	829	273.00	4553	422.00	1500
111.00	8140	189.00	1902	274.00	10985	423.00	12300
112.00	1092	190.00	312	275.00	62368	424.00	2395
113.00	262	191.00	937	276.00	8275	425.00	213
115.00	124	192.00	2653	277.00	5081	436.00	159
116.00	1667	193.00	3118	278.00	877	437.00	326
117.00	23744	194.00	633	279.00	162	438.00	233
118.00	1682	195.00	539	281.00	203	440.00	740
119.00	256	196.00	7352	282.00	74	441.00	38728

Data File: /ohem1/nt10.i/20130507.b/df0507.d

Date : 07-MAY-2013 12:19

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0507.d

Spectrum: Avg. Scans 461-463 (6.56), Background Scan 456

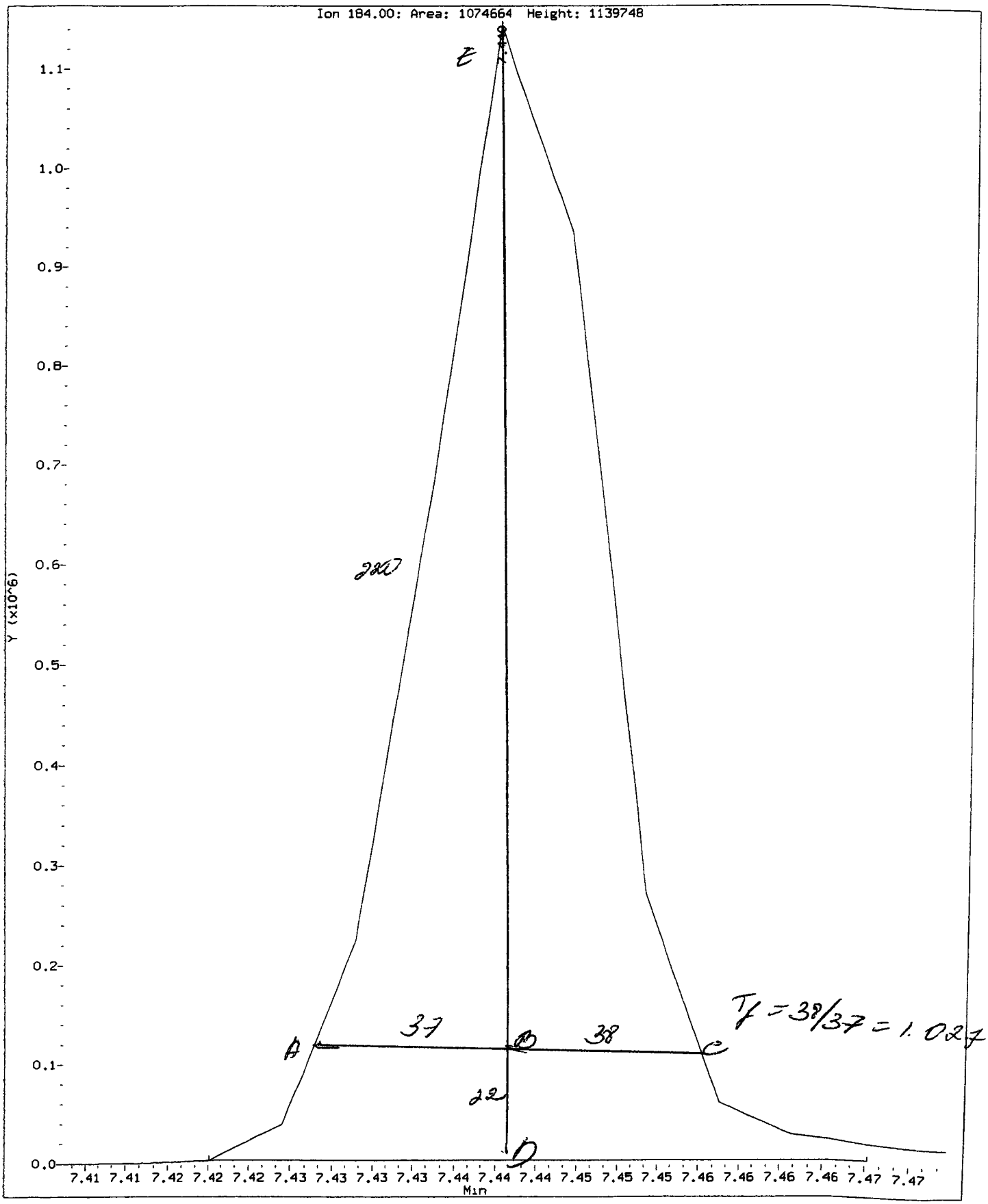
Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	477	198.00	235456	283.00	622	442.00	262544
121.00	231	199.00	15678	284.00	415	443.00	48232
122.00	1965	200.00	1247	285.00	987	444.00	4582
123.00	3125	201.00	1259	286.00	85	445.00	255
124.00	1325	203.00	1721	289.00	239		
125.00	1300	204.00	8312	290.00	141		

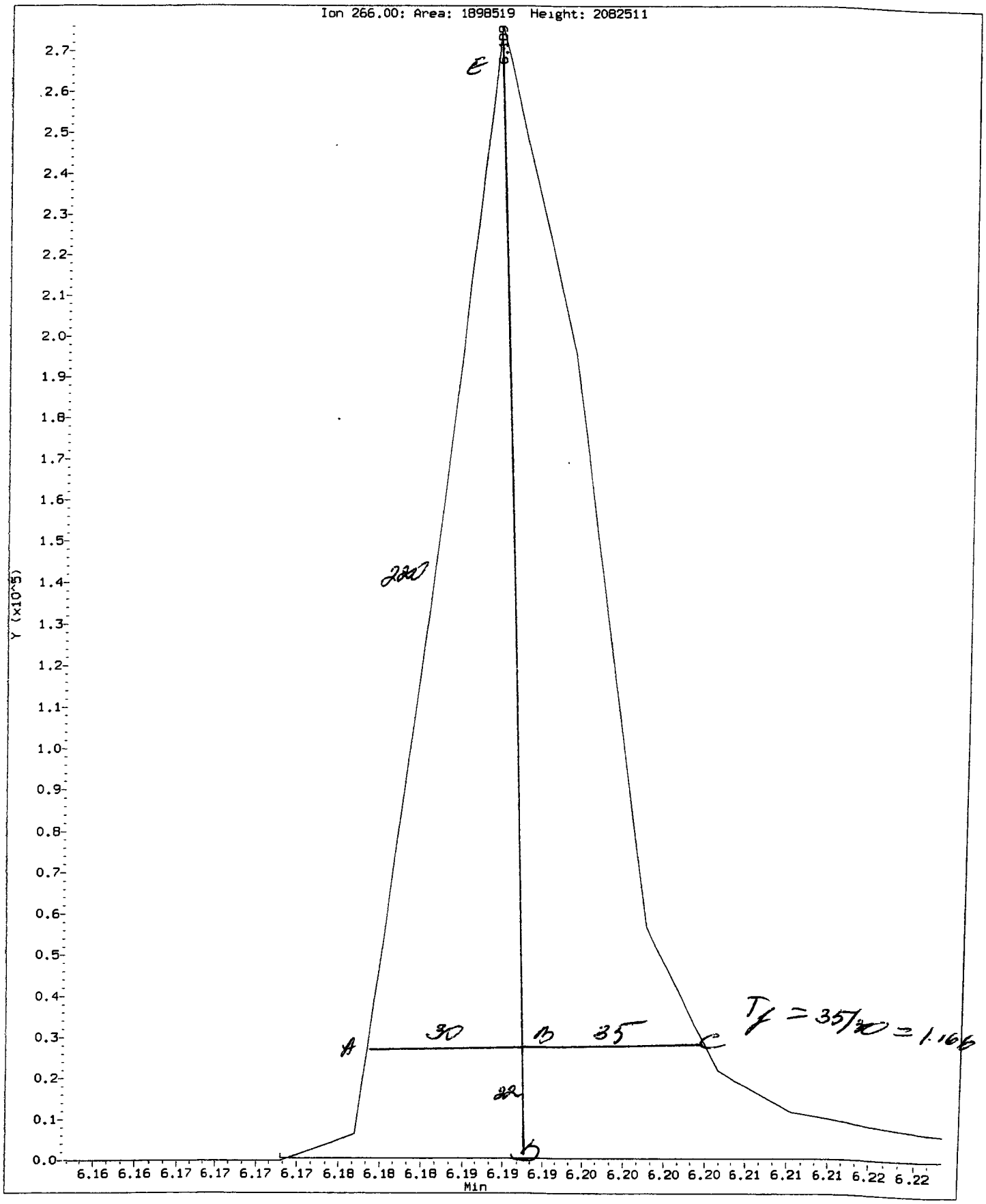
Data File: /chem1/nt10.1/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130507.b/ddt.b/df0507.d
Injection Date: 07-MAY-2013 12:19
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/20130507.b/ddt.b/df0507.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130507.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 07-MAY-2013 12:19 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.189	1898519
Benzidine	7.440	1074664
4,4'-DDE	7.628	1584
4,4'-DDD	7.954	6093
4,4'-DDT	8.168	617170

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1584 + 6093) * 100}{(\ 1584 + 6093 + 617170)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0507a.d
Analysis Type:
Lab Sample ID: CC0507A
Method: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m

Injection Date: 07-MAY-2013 13:10
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.40508	1.32305	0.010	-5.83795	20.00000	Averaged	
3 Phenol	2.01971	2.24952	0.010	11.37828	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.66429	1.55416	0.010	-6.61749	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.65707	1.55282	0.010	-6.29077	20.00000	Averaged	
11 Benzyl alcohol	0.96865	1.00875	0.010	4.13939	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.57473	1.46815	0.010	-6.76796	20.00000	Averaged	
13 2-Methylphenol	1.44396	1.42206	0.010	-1.51690	20.00000	Averaged	
15 4-Methylphenol	1.47039	1.46780	0.010	-0.17630	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.82918	0.79774	0.050	-3.79191	20.00000	Averaged	
22 2,4-Dimethylphenol	0.38748	0.38450	0.010	-0.76885	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.38338	0.36129	0.010	-5.76160	20.00000	Averaged	
30 Hexachlorobutadiene	0.23337	0.21726	0.010	-6.90534	20.00000	Averaged	
39 Dimethylphthalate	1.15411	1.13744	0.010	-1.44386	20.00000	Averaged	
50 Diethylphthalate	1.30694	1.32460	0.010	1.35113	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.43858	0.46885	0.010	6.90193	20.00000	Averaged	
57 Hexachlorobenzene	0.29961	0.27373	0.010	-8.63924	20.00000	Averaged	
58 Pentachlorophenol	0.17813	0.06765	0.005	-62.02286	20.00000	Averaged	<-
$ 66 Terphenyl-d14	0.49170	0.48449	0.010	-1.46756	20.00000	Averaged	
67 Butylbenzylphthalate	0.37109	0.42534	0.010	14.61907	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89160	0.94025	0.010	5.45596	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.86193	0.76773	0.010	-10.92854	20.00000	Averaged	

Analytical Resources, Inc.

YZ 5/8/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d
Lab Smp Id: CC0507A
Inj Date : 07-MAY-2013 13:10
Operator : YZ Inst ID: nt10.i
Smp Info : CC0507A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 08-May-2013 09:24 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.865	5.865	(0.721)	18829	1.00000	0.9416
	3 Phenol	94	7.580	7.580	(0.932)	32014	1.00000	1.114
	7 1,3-Dichlorobenzene	146	8.052	8.052	(0.990)	22118	1.00000	0.9338
*	8 1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	56926	4.00000	
	9 1,4-Dichlorobenzene	146	8.160	8.160	(1.004)	22099	1.00000	0.9371
	11 Benzyl alcohol	79	8.455	8.455	(1.040)	14356	1.00000	1.041
	12 1,2-Dichlorobenzene	146	8.525	8.525	(1.049)	20894	1.00000	0.9323
	13 2-Methylphenol	108	8.735	8.735	(1.074)	20238	1.00000	0.9848
	15 4-Methylphenol	108	9.030	9.030	(1.111)	20889	1.00000	0.9982
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.113)	11353	1.00000	0.9621
	22 2,4-Dimethylphenol	107	10.124	10.124	(0.943)	40213	2.00000	1.985
	26 1,2,4-Trichlorobenzene	180	10.656	10.656	(0.993)	18893	1.00000	0.9424
*	27 Naphthalene-d8	136	10.733	10.733	(1.000)	209171	4.00000	
	30 Hexachlorobutadiene	225	11.196	11.196	(1.043)	11361	1.00000	0.9309
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	33293	1.00000	0.9856
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	117080	4.00000	
	50 Diethylphthalate	149	15.699	15.699	(1.078)	38771	1.00000	1.014
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	26361	1.00000	1.069
	57 Hexachlorobenzene	284	17.142	17.142	(0.963)	15390	1.00000	0.9136
	58 Pentachlorophenol	266	17.560	17.560	(0.987)	7607	2.00000	0.7595 (M)
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	224897	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	30375	1.00000	0.9853
	67 Butylbenzylphthalate	149	22.110	22.110	(0.962)	26667	1.00000	1.146
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	250780	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	223069	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.098	27.098	(1.073)	52435	1.00000	1.055

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
90 N-Nitrosodimethylamine	74	3.641	3.641	(0.448)	21852	2.00000	1.781

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: cc0507a.d
Lab Smp Id: CC0507A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 07-MAY-2013
Calibration Time: 13:10

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56926	8.11
27 Naphthalene-d8	192325	96162	384650	209171	8.76
42 Acenaphthene-d10	109274	54637	218548	117080	7.14
59 Phenanthrene-d10	203933	101966	407866	224897	10.28
69 Chrysene-d12	223647	111824	447294	250780	12.13
77 Perylene-d12	211919	105960	423838	223069	5.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	0.00

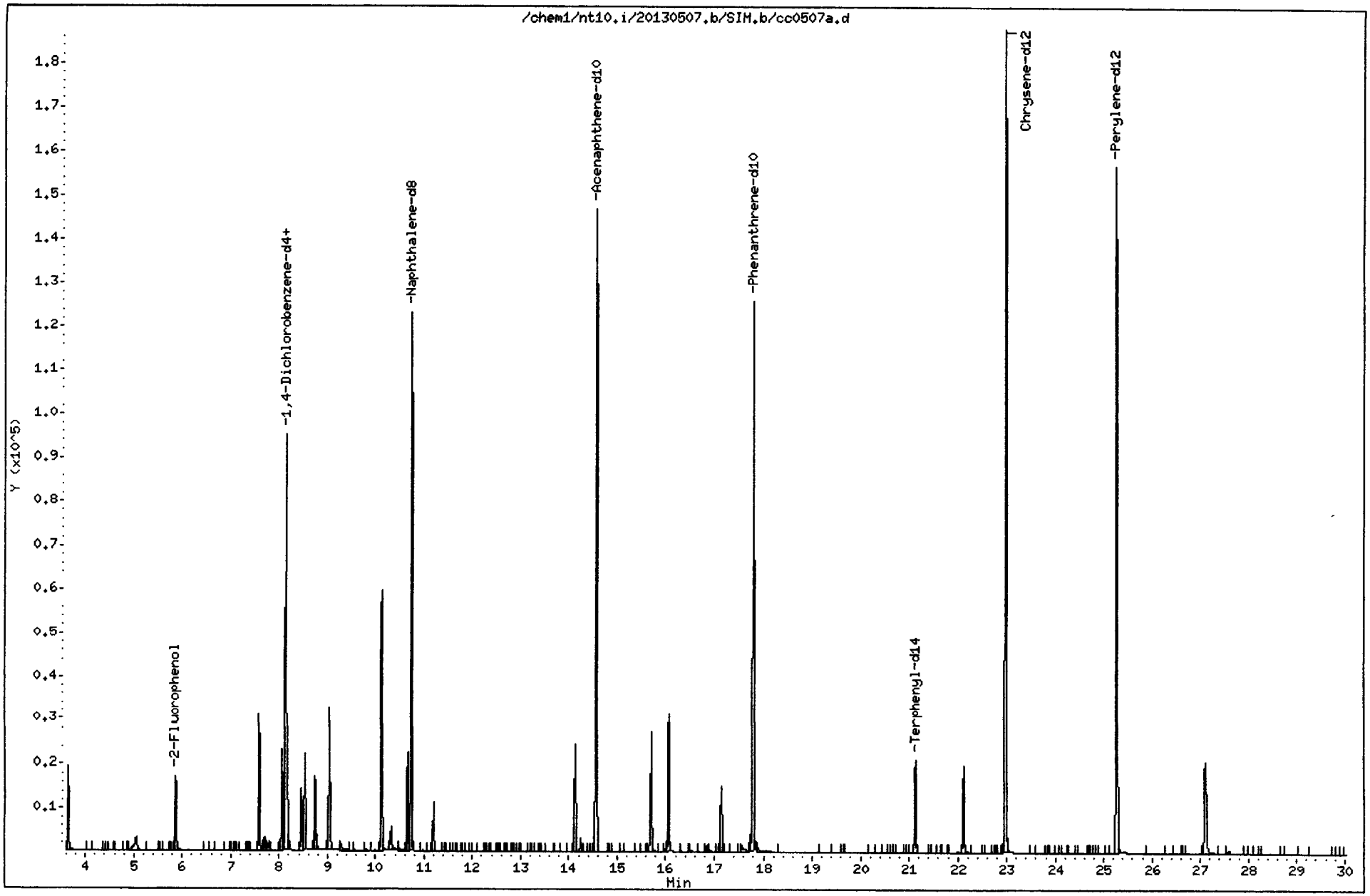
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d
Date : 07-MAY-2013 13:10
Client ID:
Sample Info: CC0507A

Column phase: ZB-5msi

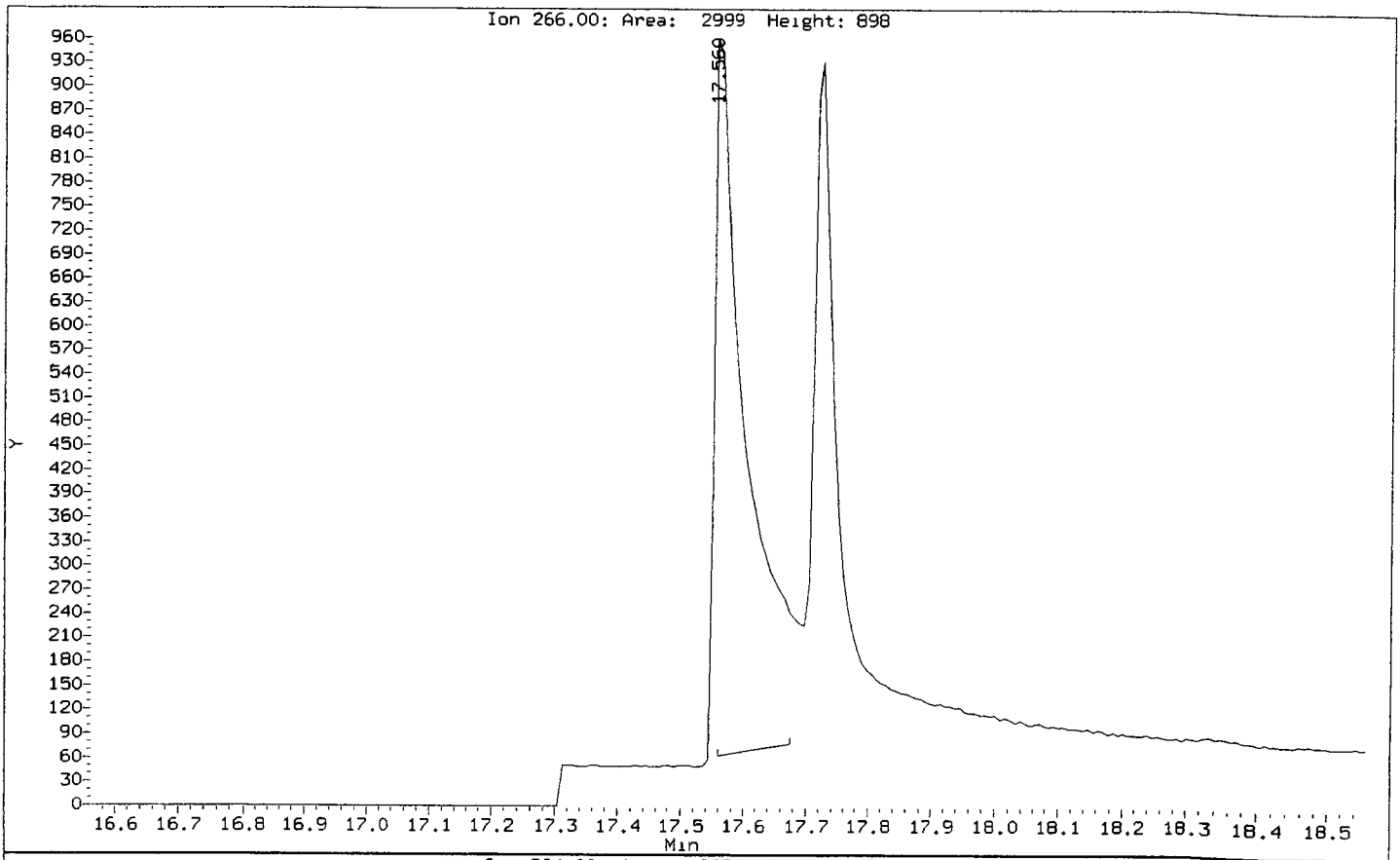
Instrument: nt10.i

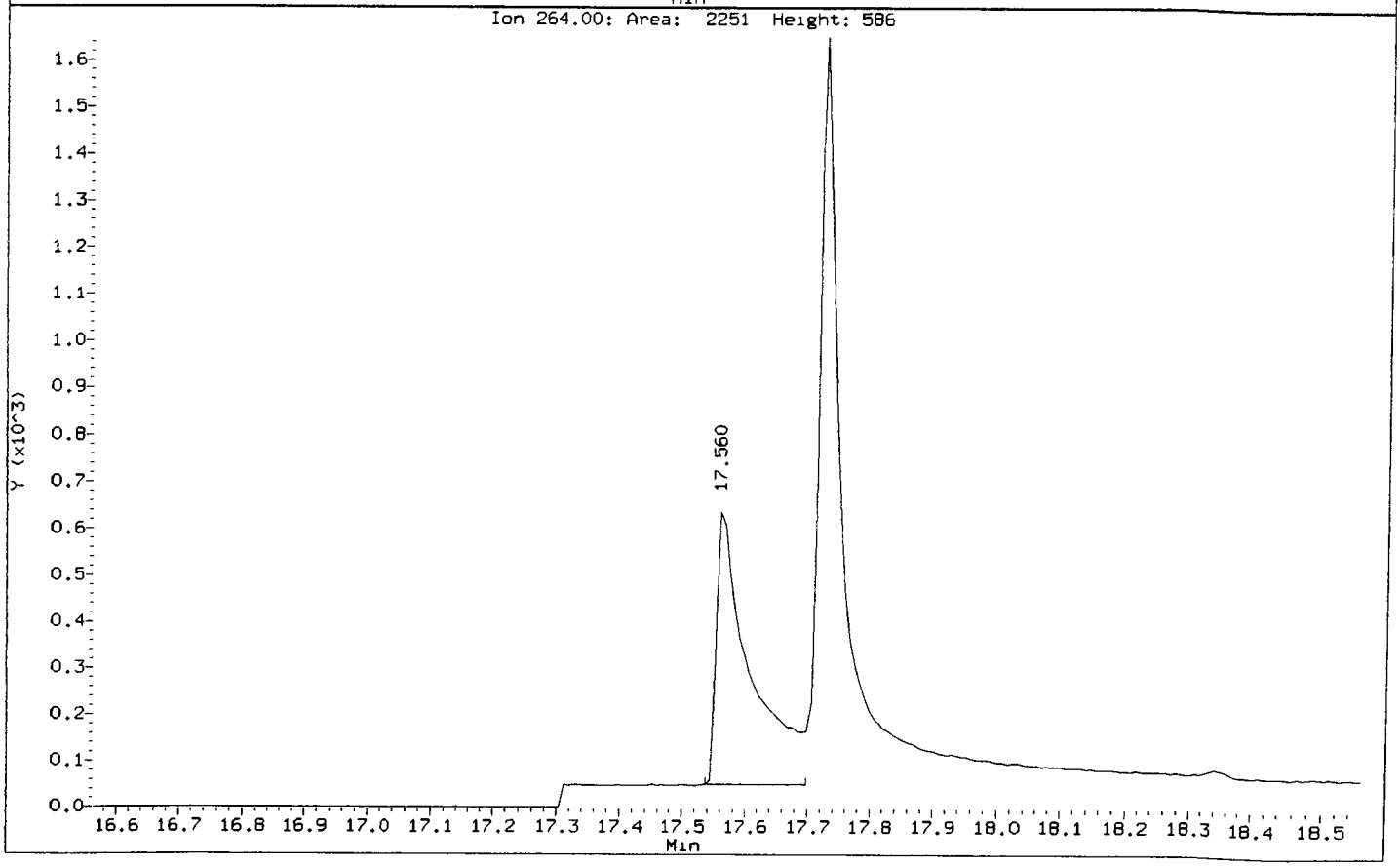
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d
Injection Date: 07-MAY-2013 13:10
Instrument: nt10.i
Client Sample ID:

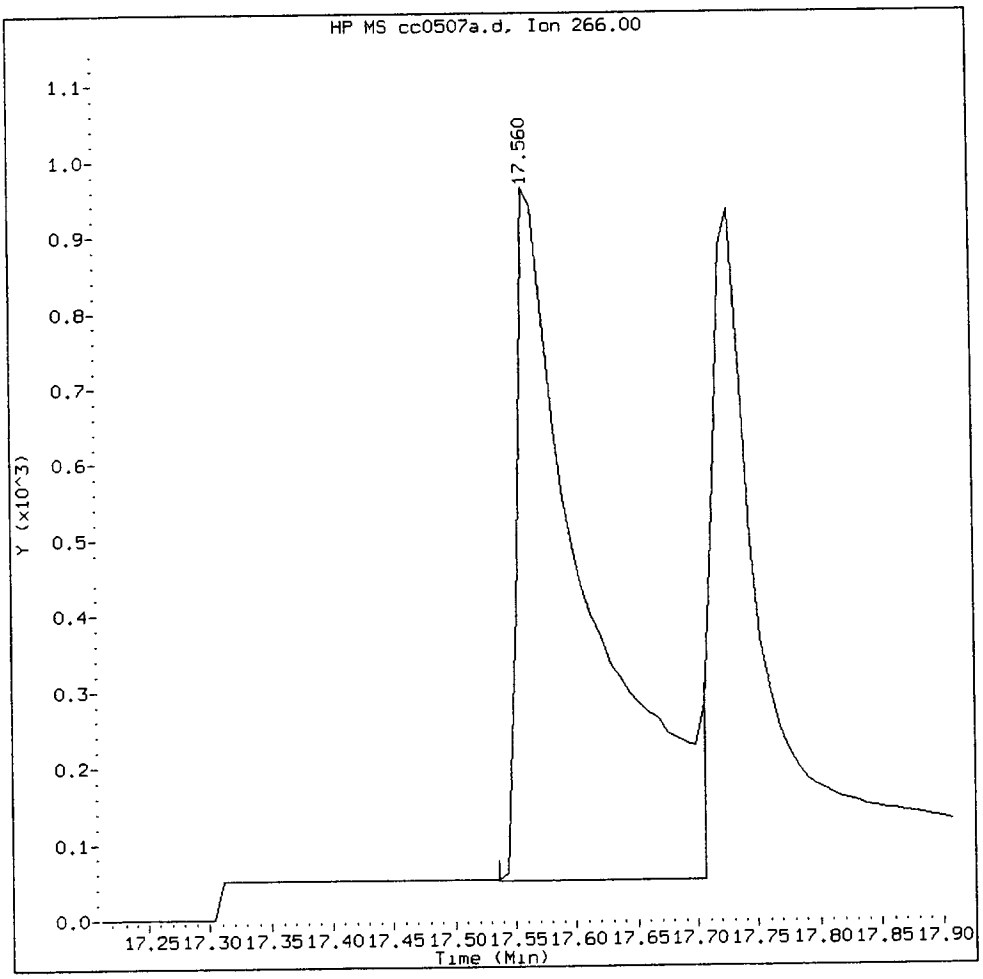
Compound: Pentachlorophenol
CAS Number: 87-86-5





CC0507A, /chem1/nt10.i/20130507.b/SIM.b/cc0507a.d

Pentachlorophenol Amount: 0.37 Area: 3691



MANUAL INTEGRATION for Pentachlorophenol

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

5. Other _____

Analyst: YZ Date: 5/8/13

CO-ELUTION SUMMARY FOR FILE - cc0507a.d

Lab ID: CC0507A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn30mbs1.d
Lab Smp Id: WN30MBS1 Client Smp ID: WN30MBS1
Inj Date : 07-MAY-2013 16:50
Operator : YZ Inst ID: nt10.i
Smp Info : WN30MBS1
Misc Info : 13-8692
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 09:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.880	5.865	(0.723)	78979	4.17892	417.9
	3 Phenol	94	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	53803	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	10.733	10.733	(1.000)	206635	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
* 42 Acenaphthene-d10	162	14.562	14.562	(1.000)	117783	4.00000	
50 Diethylphthalate	149	15.691	15.699	(1.077)	5459	0.14185	14.19(R)
54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	17.792	17.792	(1.000)	224711	4.00000	
$ 66 Terphenyl-d14	244	21.126	21.126	(0.919)	102339	3.48953	349.0
67 Butylbenzylphthalate	149	Compound Not Detected.					
* 69 Chrysene-d12	240	22.977	22.977	(1.000)	238578	4.00000	
* 77 Perylene-d12	264	25.261	25.261	(1.000)	204177	4.00000	
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30mbs1.d
Lab Smp Id: WN30MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: WN30MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53803	2.17
27 Naphthalene-d8	192325	96162	384650	206635	7.44
42 Acenaphthene-d10	109274	54637	218548	117783	7.79
59 Phenanthrene-d10	203933	101966	407866	224711	10.19
69 Chrysene-d12	223647	111824	447294	238578	6.68
77 Perylene-d12	211919	105960	423838	204177	-3.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	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: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

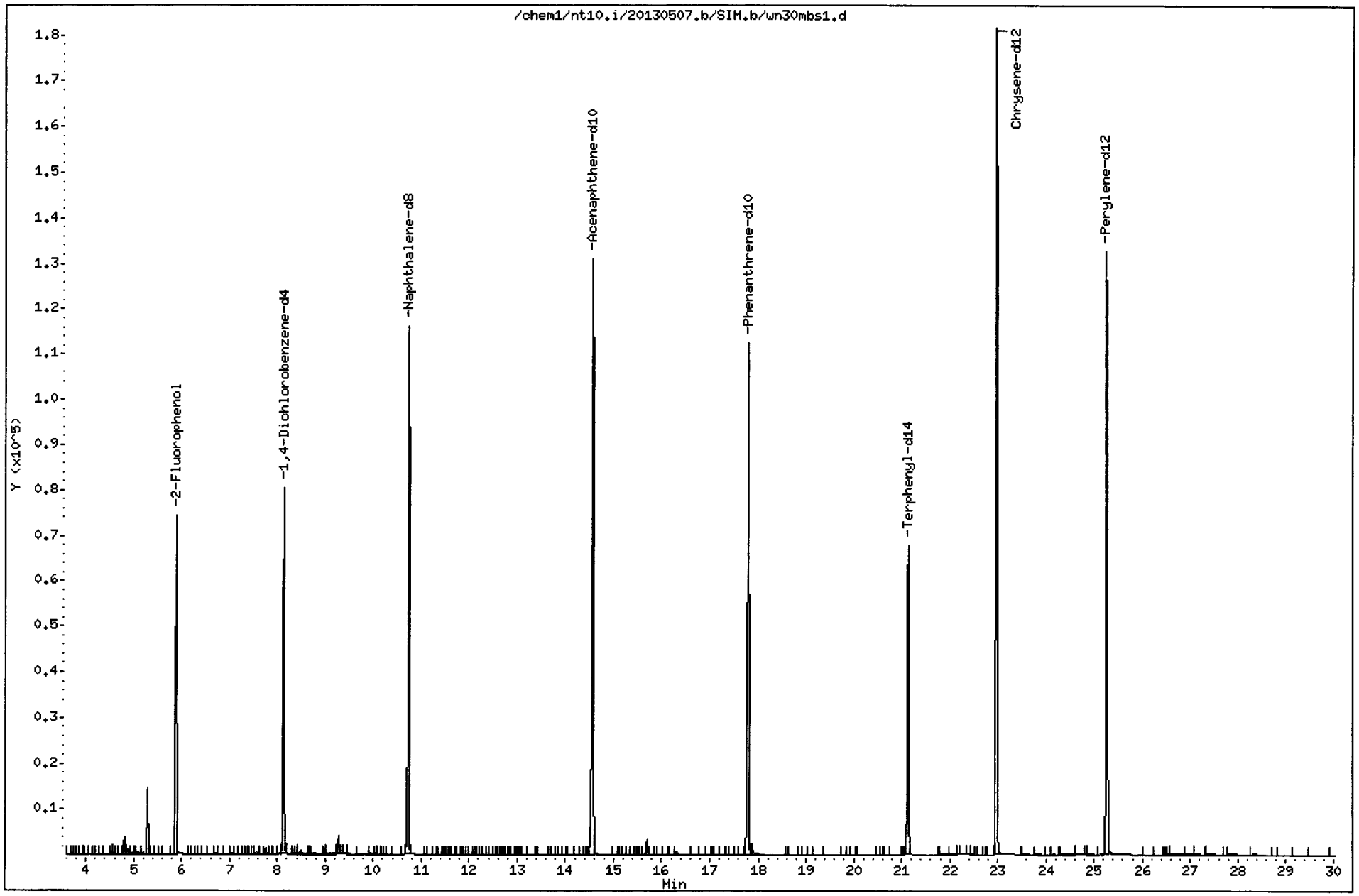
Client SDG: WN30
Fraction: SV
Client Smp ID: WN30MBS1
Operator: YZ
SampleType: BLANK
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	0.000	*	30-160
7	1,3-Dichlorobenze	500.0	0.000	*	30-160
9	1,4-Dichlorobenze	500.0	0.000	*	30-160
11	Benzyl alcohol	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	14.19	2.84*	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	417.9	55.72	30-160
$ 66	Terphenyl-d14	500.0	349.0	69.79	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30mbs1.d
Date : 07-MAY-2013 16:50
Client ID: WN30MBS1
Sample Info: WN30MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WN30 10 1.D

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30mbs1.d

Date : 07-MAY-2013 16:50

Client ID: WN30MBS1

Instrument: nt10.i

Sample Info: WN30MBS1

Volume Injected (uL): 1.0

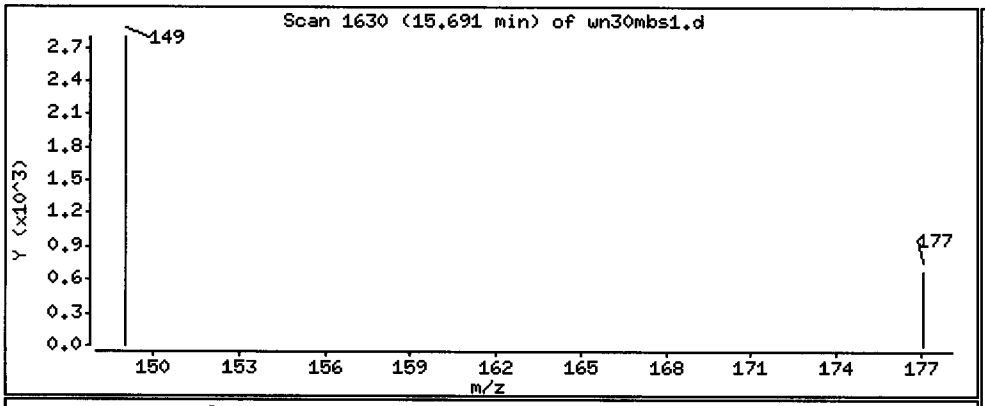
Operator: YZ

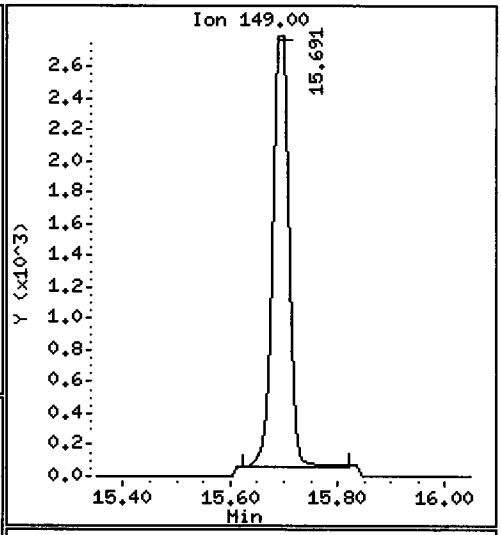
Column phase: ZB-5ms

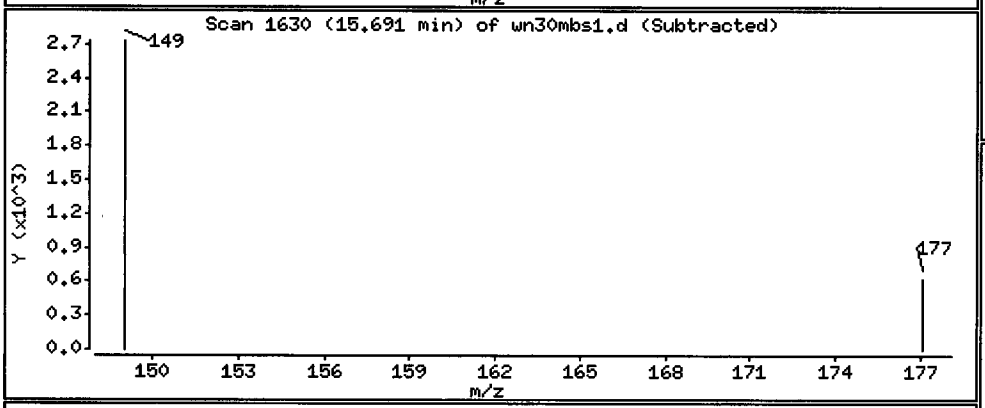
Column diameter: 0.25

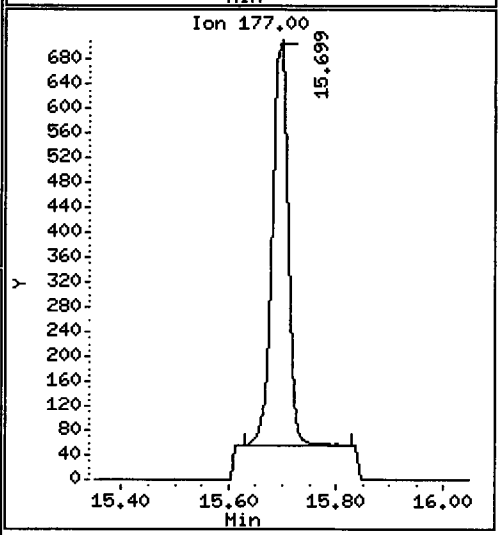
50 Diethylphthalate

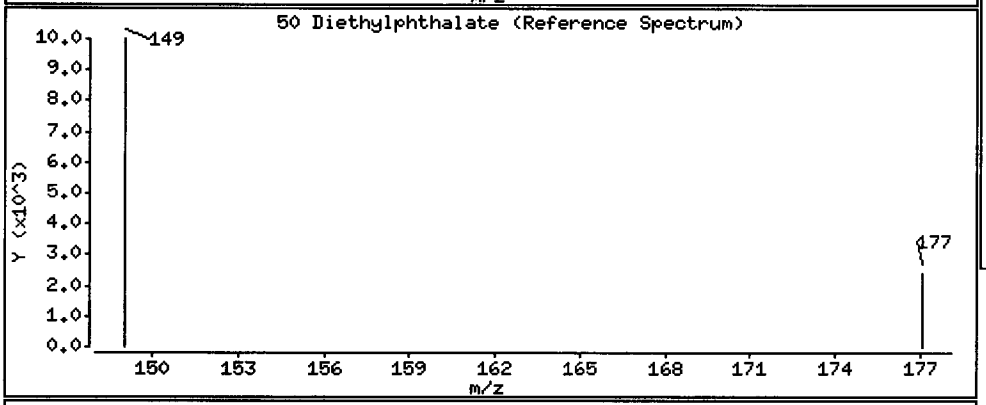
Concentration: 14.19 ug/kg

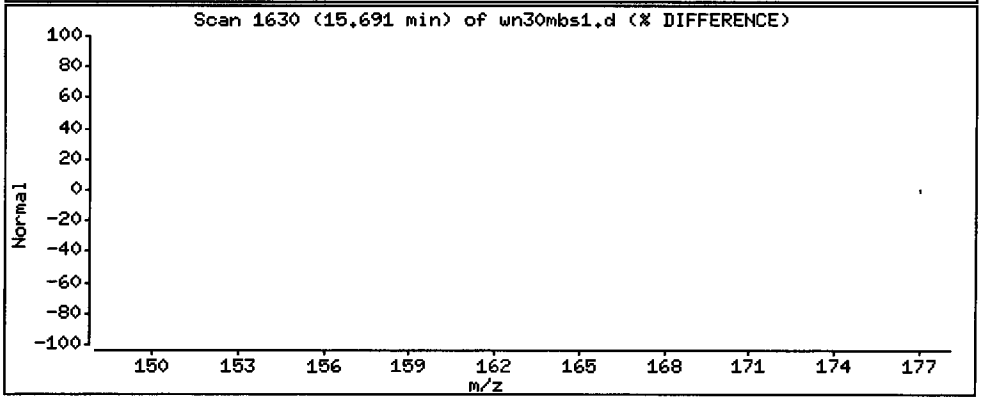












CO-ELUTION SUMMARY FOR FILE - wn30mbs1.d

Lab ID: WN30MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn30lcss1.d
Lab Smp Id: WN30LCSS1 Client Smp ID: WN30LCSS1
Inj Date : 07-MAY-2013 17:27
Operator : YZ Inst ID: nt10.i
Smp Info : WN30LCSS1
Misc Info : 13-8692
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 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	5.872	5.865	(0.723)	79066	4.35463	435.5
	3 Phenol	94	7.580	7.580	(0.933)	82355	3.15546	315.5
	7 1,3-Dichlorobenzene	146	8.052	8.052	(0.991)	57537	2.67534	267.5
*	8 1,4-Dichlorobenzene-d4	152	8.121	8.129	(1.000)	51689	4.00000	
	9 1,4-Dichlorobenzene	146	8.153	8.160	(1.004)	57643	2.69196	269.2
	11 Benzyl alcohol	79	8.455	8.455	(1.041)	41550	3.31944	331.9
	12 1,2-Dichlorobenzene	146	8.517	8.525	(1.049)	55435	2.72421	272.4
	13 2-Methylphenol	108	8.735	8.735	(1.075)	46195	2.47572	247.6
	15 4-Methylphenol	108	9.037	9.030	(1.113)	100352	5.28147	528.1
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.114)	31448	2.93499	293.5
	22 2,4-Dimethylphenol	107	10.124	10.124	(0.943)	114269	6.22730	622.7
	26 1,2,4-Trichlorobenzene	180	10.655	10.656	(0.993)	50408	2.77643	277.6
*	27 Naphthalene-d8	136	10.733	10.733	(1.000)	189427	4.00000	
	30 Hexachlorobutadiene	225	11.196	11.196	(1.043)	30308	2.74236	274.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	119297	3.71711	371.7
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	111234	4.00000	
	50 Diethylphthalate	149	15.706	15.699	(1.079)	140452	3.86451	386.5
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	91857	3.93483	393.5
	57 Hexachlorobenzene	284	17.141	17.142	(0.963)	45120	2.82931	282.9
	58 Pentachlorophenol	266	17.552	17.560	(0.987)	85861	9.05575	905.6
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	212909	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	107875	3.67066	367.1
	67 Butylbenzylphthalate	149	22.109	22.110	(0.962)	107648	4.85344	485.3
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	239074	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	211700	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.106	27.098	(1.073)	162187	3.43704	343.7
	90 N-Nitrosodimethylamine	74	3.672	3.641	(0.452)	85788	7.70223	770.2

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30lcss1.d
Lab Smp Id: WN30LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: WN30LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51689	-1.84
27 Naphthalene-d8	192325	96162	384650	189427	-1.51
42 Acenaphthene-d10	109274	54637	218548	111234	1.79
59 Phenanthrene-d10	203933	101966	407866	212909	4.40
69 Chrysene-d12	223647	111824	447294	239074	6.90
77 Perylene-d12	211919	105960	423838	211700	-0.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.73	10.23	11.23	10.73	0.00
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	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: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: WN30LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

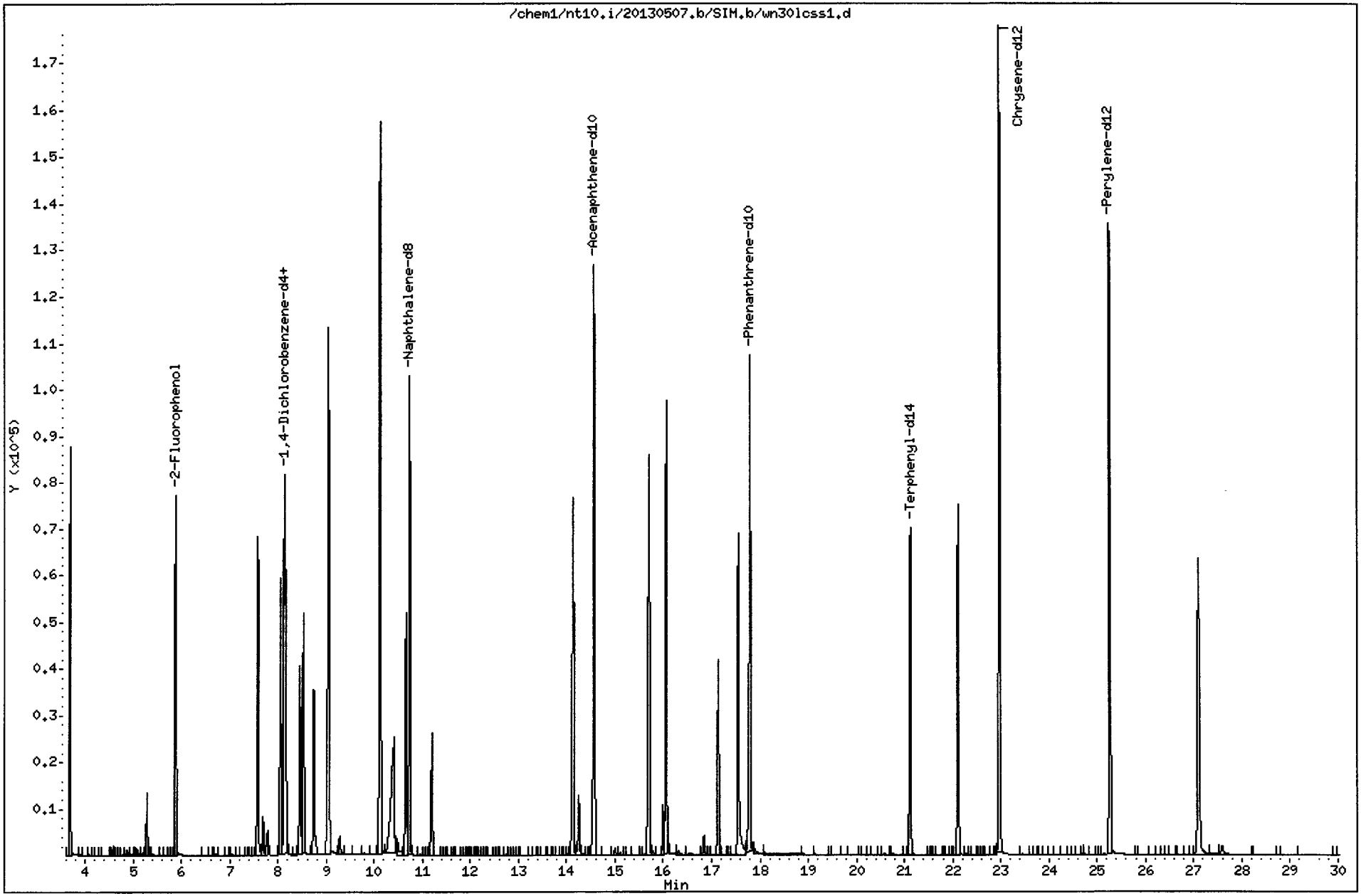
Client SDG: WN30
Fraction: SV
Client Smp ID: WN30LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	315.5	63.11	30-160
7	1,3-Dichlorobenzen	500.0	267.5	53.51	30-160
9	1,4-Dichlorobenzen	500.0	269.2	53.84	30-160
11	Benzyl alcohol	500.0	331.9	66.39	30-160
12	1,2-Dichlorobenzen	500.0	272.4	54.48	30-160
13	2-Methylphenol	500.0	247.6	49.51	30-160
15	4-Methylphenol	1000	528.1	52.81	30-160
16	N-Nitroso-di-n-pro	500.0	293.5	58.70	30-160
22	2,4-Dimethylphenol	1000	622.7	62.27	30-160
26	1,2,4-Trichloroben	500.0	277.6	55.53	30-160
30	Hexachlorobutadien	500.0	274.2	54.85	30-160
39	Dimethylphthalate	500.0	371.7	74.34	30-160
50	Diethylphthalate	500.0	386.5	77.29	30-160
54	N-Nitrosodiphenyla	500.0	393.5	78.70	30-160
57	Hexachlorobenzene	500.0	282.9	56.59	30-160
58	Pentachlorophenol	1000	905.6	90.56	30-160
67	Butylbenzylphthala	500.0	485.3	97.07	30-160
79	Dibenzo(a,h)anthra	500.0	343.7	68.74	30-160
90	N-Nitrosodimethyla	1000	770.2	77.02	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	435.5	58.06	30-160
$ 66	Terphenyl-d14	500.0	367.1	73.41	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30lcss1.d
Date : 07-MAY-2013 17:27
Client ID: WN30LCSS1
Sample Info: WN30LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WN30LCSS1 05/07/13 17:27

CO-ELUTION SUMMARY FOR FILE - wn30lcss1.d

Lab ID: WN30LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/10/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn30lcsds1.d
Lab Smp Id: WN30LCSDS1 Client Smp ID: WN30LCSDS1
Inj Date : 07-MAY-2013 18:03
Operator : YZ Inst ID: nt10.i
Smp Info : WN30LCSDS1
Misc Info : 13-8692
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 10:01 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCSD
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	5.872	5.865	(0.723)	85775	5.03475	503.5
	3 Phenol	94	7.580	7.580	(0.933)	91980	3.75598	375.6
	7 1,3-Dichlorobenzene	146	8.044	8.052	(0.990)	63945	3.16880	316.9
*	8 1,4-Dichlorobenzene-d4	152	8.122	8.129	(1.000)	48500	4.00000	
	9 1,4-Dichlorobenzene	146	8.153	8.160	(1.004)	64413	3.20592	320.6
	11 Benzyl alcohol	79	8.447	8.455	(1.040)	46260	3.93873	393.9
	12 1,2-Dichlorobenzene	146	8.517	8.525	(1.049)	61967	3.24544	324.5
	13 2-Methylphenol	108	8.735	8.735	(1.075)	51731	2.95470	295.5
	15 4-Methylphenol	108	9.037	9.030	(1.113)	112052	6.28499	628.5
	16 N-Nitroso-di-n-propylamine	70	9.045	9.045	(1.114)	34981	3.47938	347.9
	22 2,4-Dimethylphenol	107	10.116	10.124	(0.943)	131548	7.60426	760.4
	26 1,2,4-Trichlorobenzene	180	10.655	10.656	(0.994)	56696	3.31238	331.2
*	27 Naphthalene-d8	136	10.725	10.733	(1.000)	178583	4.00000	
	30 Hexachlorobutadiene	225	11.196	11.196	(1.044)	33925	3.25604	325.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.129	14.129	(0.970)	120076	3.94294	394.3
*	42 Acenaphthene-d10	162	14.562	14.562	(1.000)	105548	4.00000	
	50 Diethylphthalate	149	15.706	15.699	(1.079)	139660	4.04973	405.0
	54 N-Nitrosodiphenylamine	169	16.062	16.062	(0.903)	93917	4.27268	427.3
	57 Hexachlorobenzene	284	17.141	17.142	(0.963)	47468	3.16122	316.1
	58 Pentachlorophenol	266	17.552	17.560	(0.987)	83964	9.40511	940.5
*	59 Phenanthrene-d10	188	17.792	17.792	(1.000)	200471	4.00000	
$	66 Terphenyl-d14	244	21.126	21.126	(0.919)	103058	3.69582	369.6
	67 Butylbenzylphthalate	149	22.110	22.110	(0.962)	106588	5.06473	506.5
*	69 Chrysene-d12	240	22.977	22.977	(1.000)	226844	4.00000	
*	77 Perylene-d12	264	25.261	25.261	(1.000)	205354	4.00000	
	79 Dibenzo(a,h)anthracene	278	27.098	27.098	(1.073)	162758	3.55573	355.6
	90 N-Nitrosodimethylamine	74	3.672	3.641	(0.452)	95317	9.12046	912.0

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wn30lcsds1.d
Lab Smp Id: WN30LCSDS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: WN30LCSDS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	48500	-7.90
27 Naphthalene-d8	192325	96162	384650	178583	-7.15
42 Acenaphthene-d10	109274	54637	218548	105548	-3.41
59 Phenanthrene-d10	203933	101966	407866	200471	-1.70
69 Chrysene-d12	223647	111824	447294	226844	1.43
77 Perylene-d12	211919	105960	423838	205354	-3.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.12	-0.10
27 Naphthalene-d8	10.73	10.23	11.23	10.72	-0.07
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	22.98	0.00
77 Perylene-d12	25.26	24.76	25.76	25.26	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

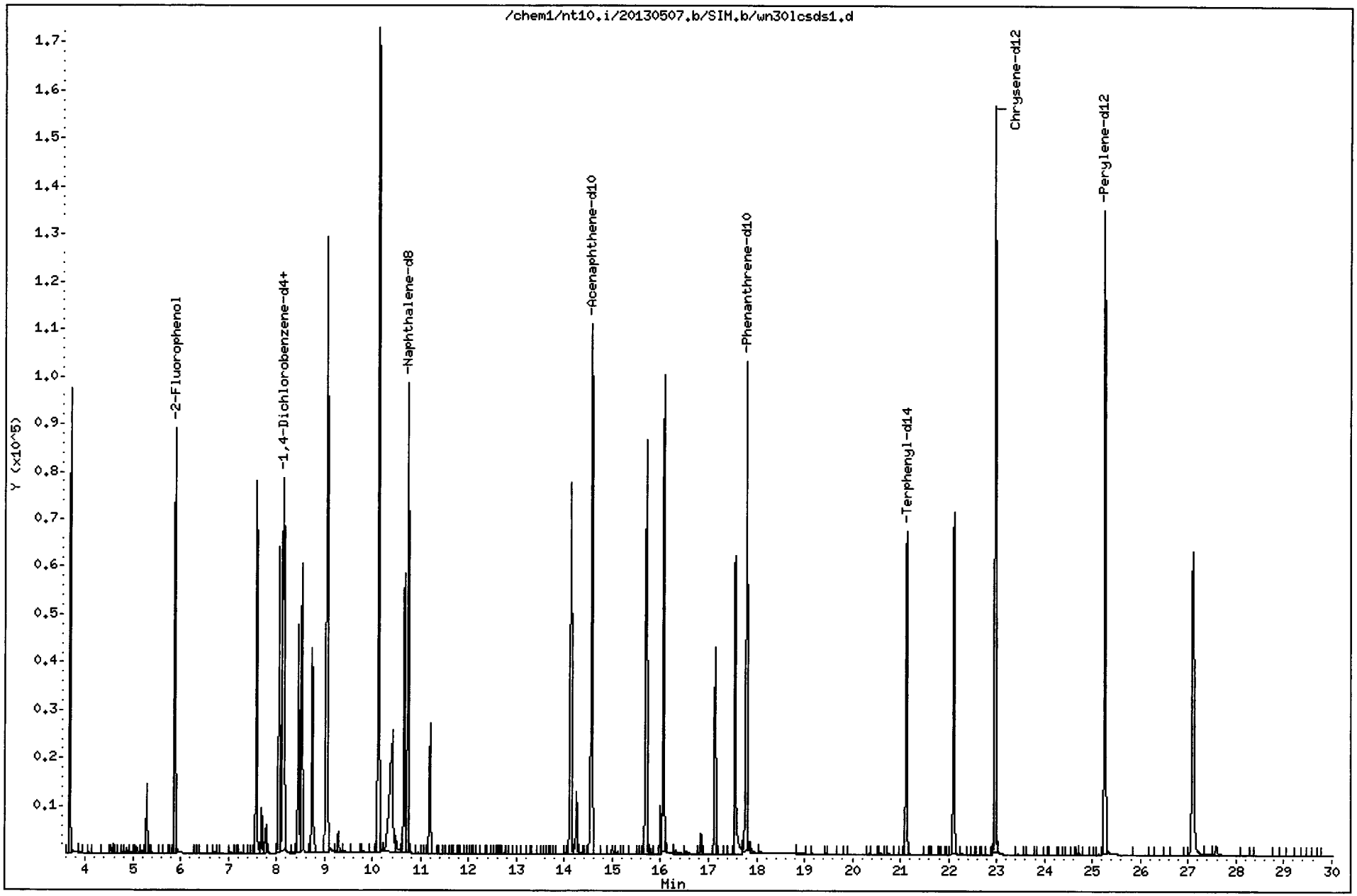
Client Name: Anchor QEA, LLC
Client SDG: WN30
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WN30LCSDS1
Client Smp ID: WN30LCSDS1
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8692

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	375.6	75.12	30-160
7	1,3-Dichlorobenzen	500.0	316.9	63.38	30-160
9	1,4-Dichlorobenzen	500.0	320.6	64.12	30-160
11	Benzyl alcohol	500.0	393.9	78.77	30-160
12	1,2-Dichlorobenzen	500.0	324.5	64.91	30-160
13	2-Methylphenol	500.0	295.5	59.09	30-160
15	4-Methylphenol	1000	628.5	62.85	30-160
16	N-Nitroso-di-n-pro	500.0	347.9	69.59	30-160
22	2,4-Dimethylphenol	1000	760.4	76.04	30-160
26	1,2,4-Trichloroben	500.0	331.2	66.25	30-160
30	Hexachlorobutadien	500.0	325.6	65.12	30-160
39	Dimethylphthalate	500.0	394.3	78.86	30-160
50	Diethylphthalate	500.0	405.0	80.99	30-160
54	N-Nitrosodiphenyla	500.0	427.3	85.45	30-160
57	Hexachlorobenzene	500.0	316.1	63.22	30-160
58	Pentachlorophenol	1000	940.5	94.05	30-160
67	Butylbenzylphthala	500.0	506.5	101.29	30-160
79	Dibenzo(a,h)anthra	500.0	355.6	71.11	30-160
90	N-Nitrosodimethyla	1000	912.0	91.20	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	503.5	67.13	30-160
$ 66	Terphenyl-d14	500.0	369.6	73.92	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn30lcsds1.d
Date : 07-MAY-2013 18:03
Client ID: WN30LCSDS1
Sample Info: WN30LCSDS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WN30LCSDS1

CO-ELUTION SUMMARY FOR FILE - wn30lcsds1.d

Lab ID: WN30LCSDS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/14/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130507.b/SIM.b/wn31a.d
Lab Smp Id: WN31A Client Smp ID: ES-TS-INF-20130424-
Inj Date : 07-MAY-2013 21:06
Operator : YZ Inst ID: nt10.i
Smp Info : WN31A,3
Misc Info : 13-8693
Comment :
Method : /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Meth Date : 10-May-2013 09:32 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 16
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	3.02000	Weight of sample extracted (g)
M	60.30000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.888	5.865	(0.724)	24163	1.45999	3653
	3 Phenol	94	7.595	7.580	(0.934)	22280	0.93654	2343
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.129	8.129	(1.000)	47115	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	8.455	8.455	(1.040)	3453	0.30264	757.3(M)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	9.037	9.030	(1.112)	105774	6.10726	15280
	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	10.725	10.733	(1.000)	182293	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
39	Dimethylphthalate	163	14.121	14.129	(0.970)	17187	0.58742	1470(M)
* 42	Acenaphthene-d10	162	14.562	14.562	(1.000)	101406	4.00000	
50	Diethylphthalate	149	15.691	15.699	(1.077)	1277	0.03854	96.44(M)
54	N-Nitrosodiphenylamine	169	16.054	16.062	(0.902)	3307	0.17150	429.1
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	17.792	17.792	(1.000)	175865	4.00000	
$ 66	Terphenyl-d14	244	21.142	21.126	(0.919)	32297	1.32383	3312
67	Butylbenzylphthalate	149	22.125	22.110	(0.962)	14441	0.78431	1963
* 69	Chrysene-d12	240	23.008	22.977	(1.000)	198466	4.00000	
* 77	Perylene-d12	264	25.315	25.261	(1.000)	192962	4.00000	
79	Dibenzo(a,h)anthracene	278	27.183	27.098	(1.074)	2308	0.05366	134.3(M)
90	~~N-Nitrosodimethylamine~~	~~74~~	~~3.533~~	~~3.641~~	~~(0.435)~~	~~32843~~	~~3.23498~~	~~8095~~

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: wn31a.d
Lab Smp Id: WN31A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8693

Calibration Date: 07-MAY-2013
Calibration Time: 13:10
Client Smp ID: ES-TS-INF-201304
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	47115	-10.53
27 Naphthalene-d8	192325	96162	384650	182293	-5.22
42 Acenaphthene-d10	109274	54637	218548	101406	-7.20
59 Phenanthrene-d10	203933	101966	407866	175865	-13.76
69 Chrysene-d12	223647	111824	447294	198466	-11.26
77 Perylene-d12	211919	105960	423838	192962	-8.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.13	7.63	8.63	8.13	0.00
27 Naphthalene-d8	10.73	10.23	11.23	10.72	-0.07
42 Acenaphthene-d10	14.56	14.06	15.06	14.56	0.00
59 Phenanthrene-d10	17.79	17.29	18.29	17.79	0.00
69 Chrysene-d12	22.98	22.48	23.48	23.01	0.13
77 Perylene-d12	25.26	24.76	25.76	25.31	0.21

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

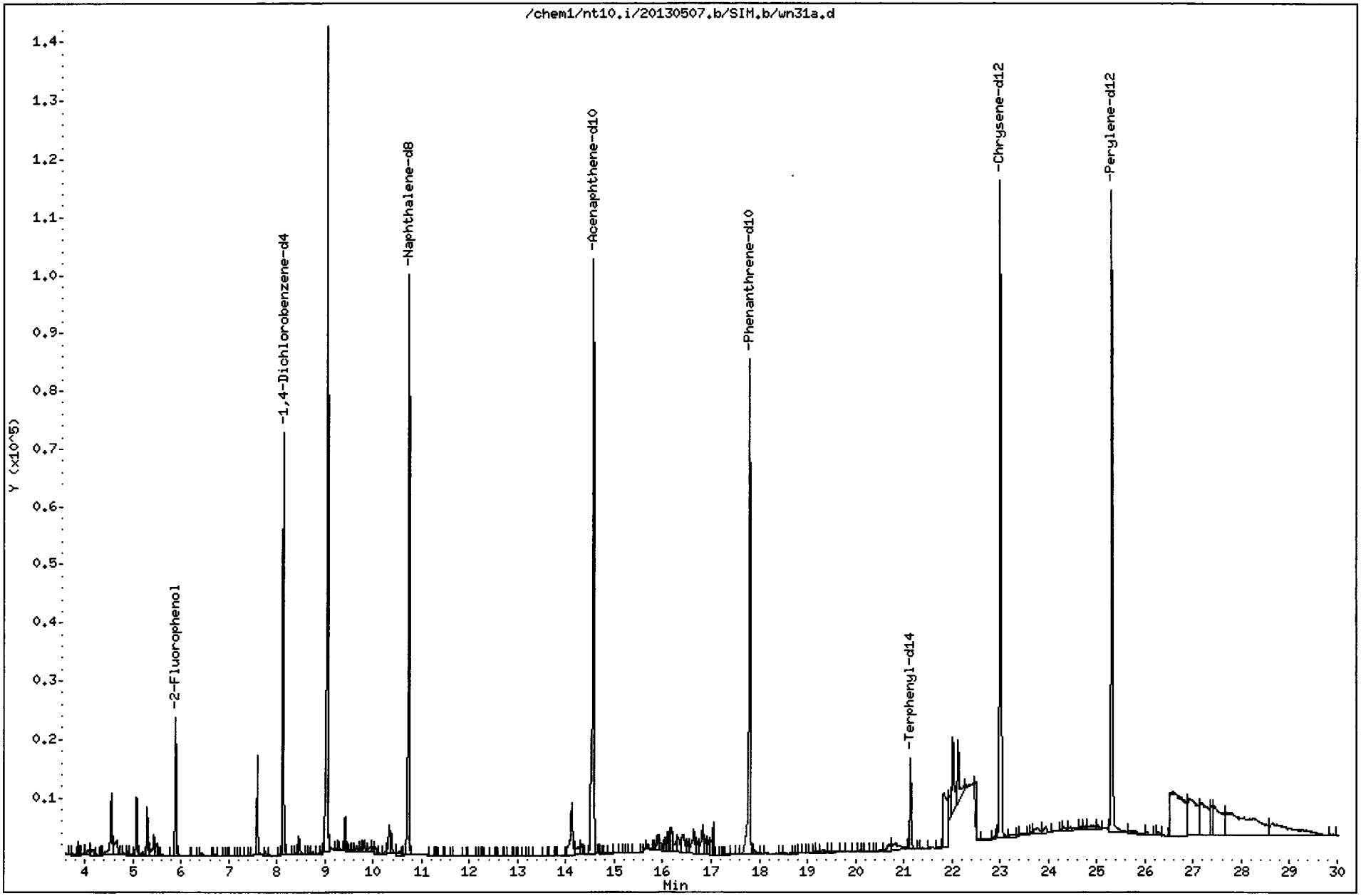
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WN31A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130507.b/SIM.b/SIMABN2.m
Misc Info: 13-8693

Client SDG: WN31
Fraction: SV
Client Smp ID: ES-TS-INF-20130424-
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	6256	3653	58.40	30-160
$ 66 Terphenyl-d14	4170	3312	79.43	30-160

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d
Date : 07-MAY-2013 21:06
Client ID: ES-TS-INF-20130424-
Sample Info: WN31A,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WN31A 01459

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

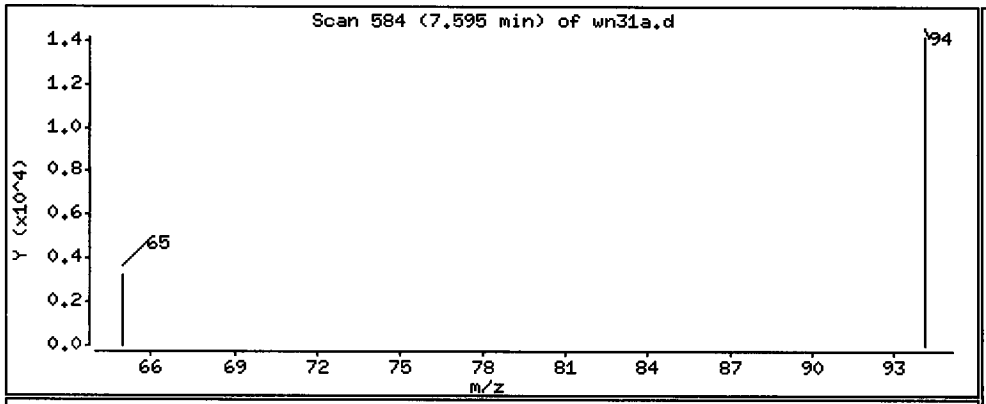
Operator: YZ

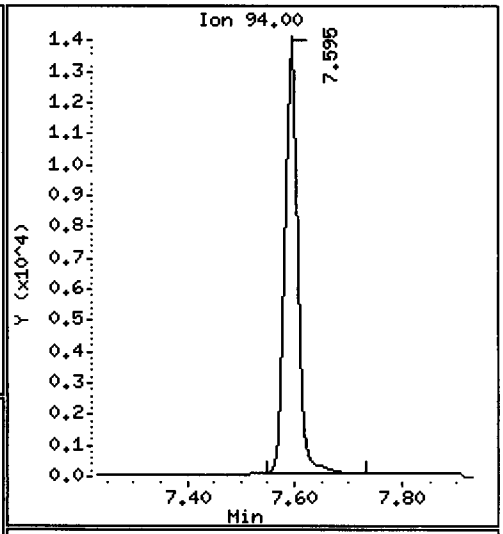
Column phase: ZB-5msi

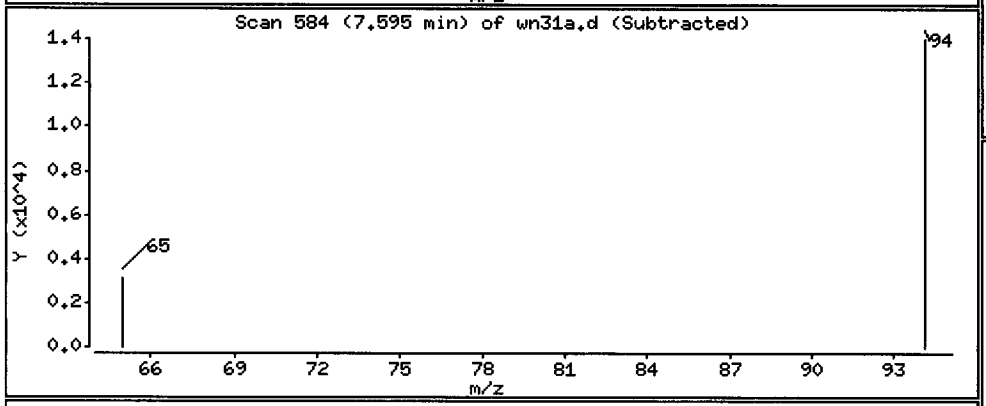
Column diameter: 0.25

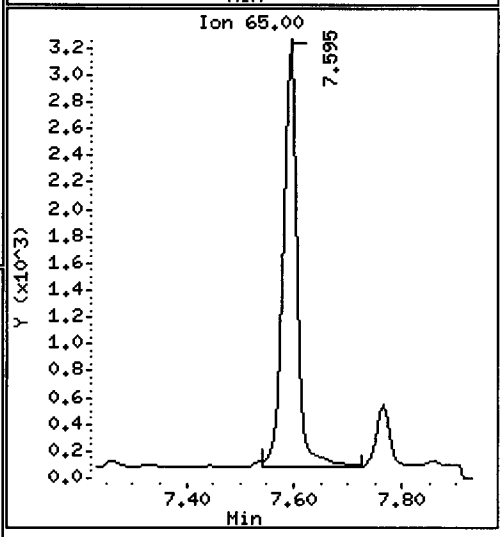
3 Phenol

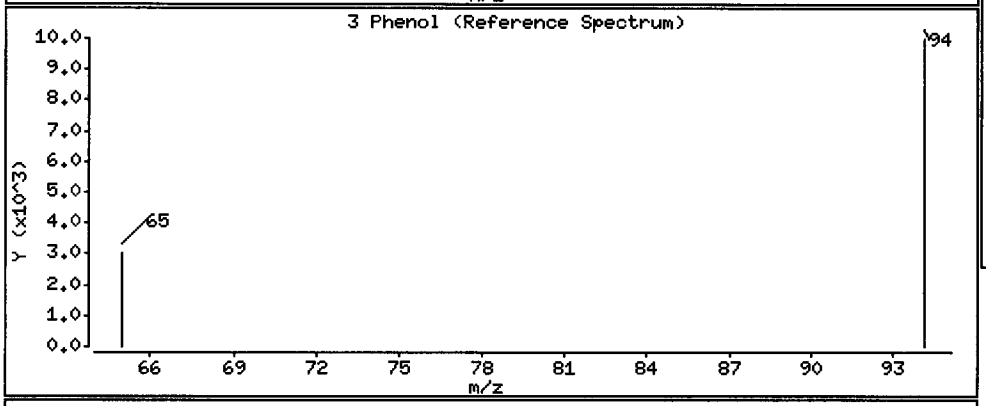
Concentration: 2343 ug/kg

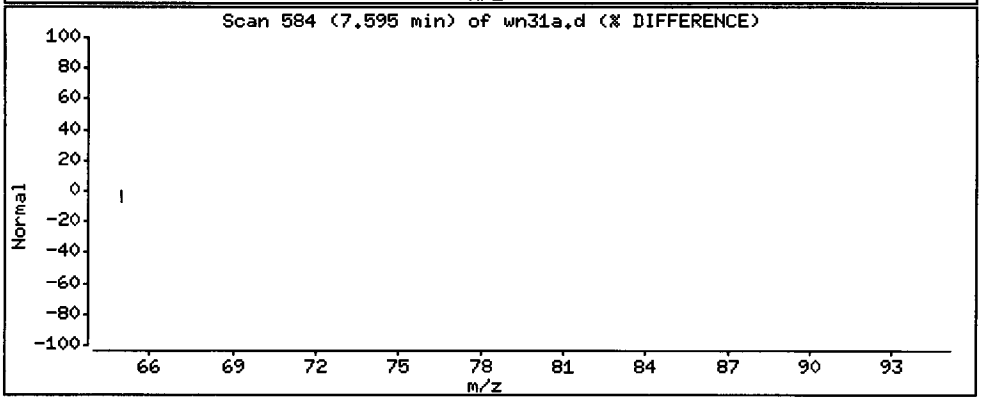












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

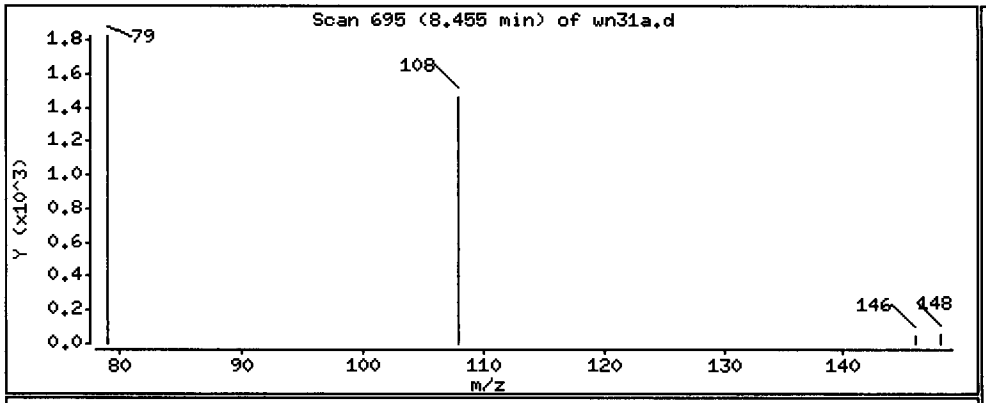
Operator: YZ

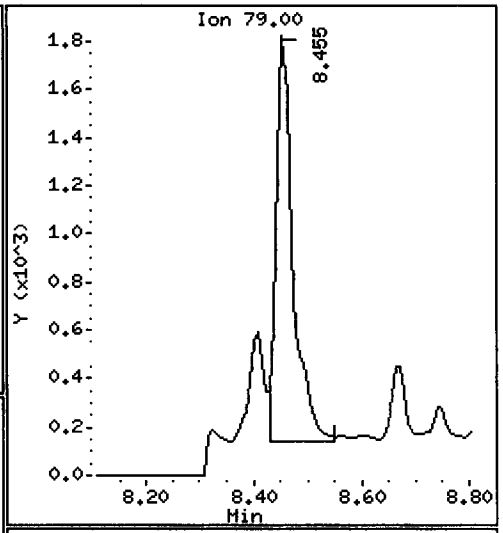
Column phase: ZB-5msi

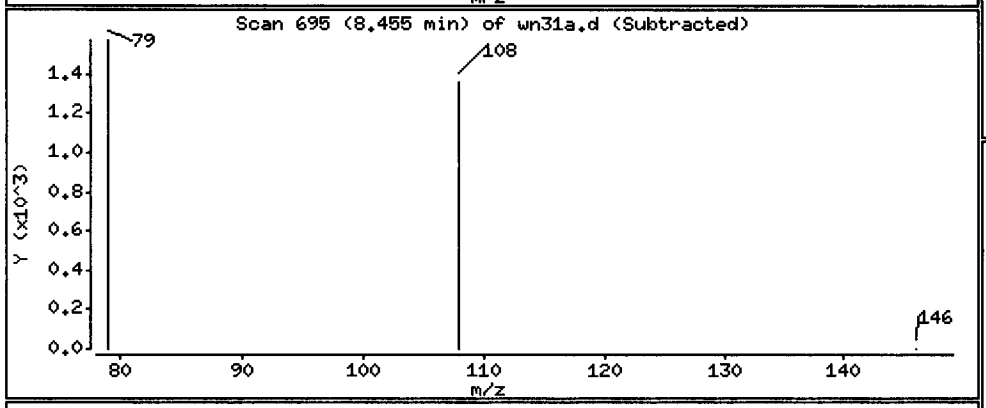
Column diameter: 0.25

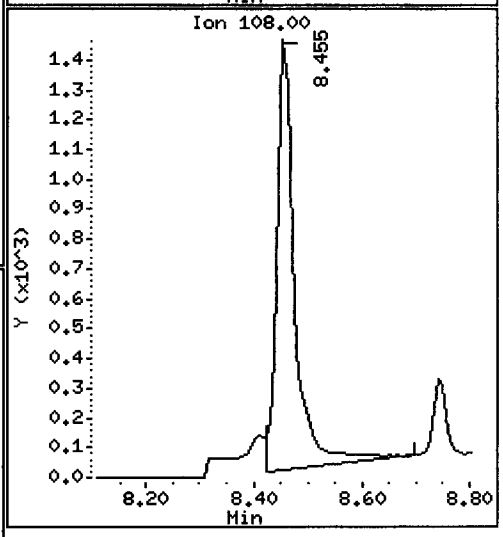
11 Benzyl alcohol

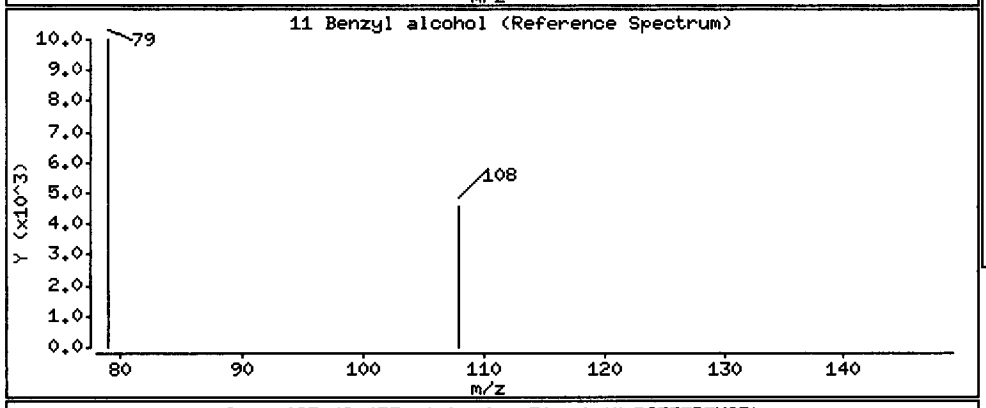
Concentration: 757.3 ug/kg

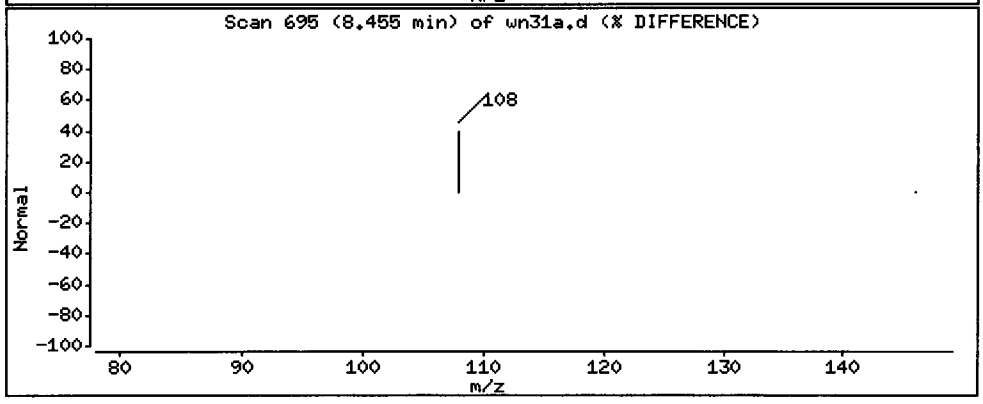












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

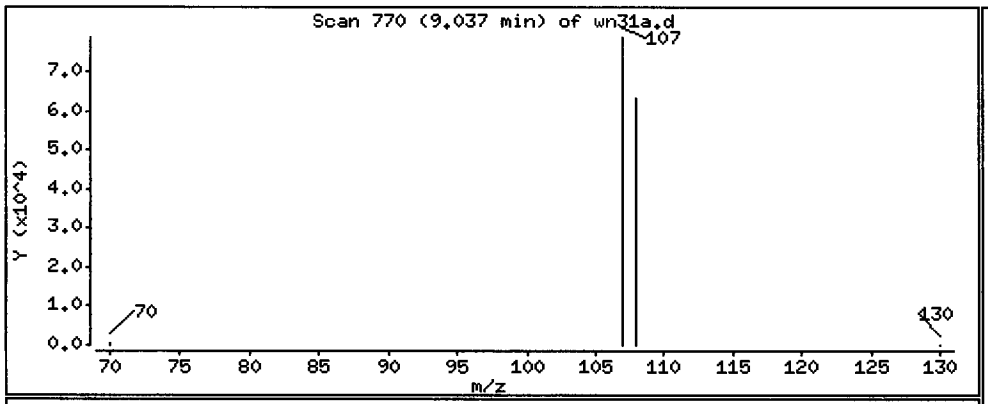
Operator: YZ

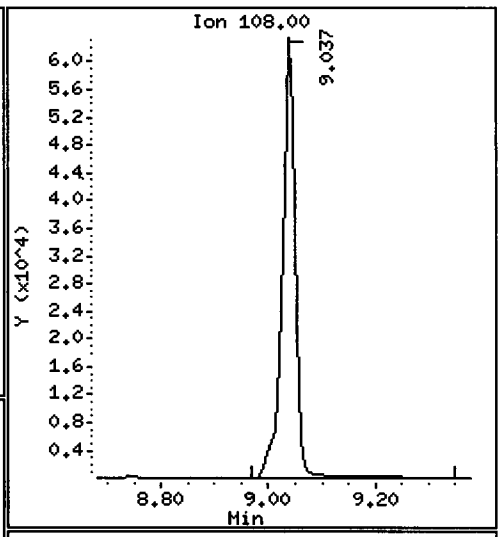
Column phase: ZB-5msi

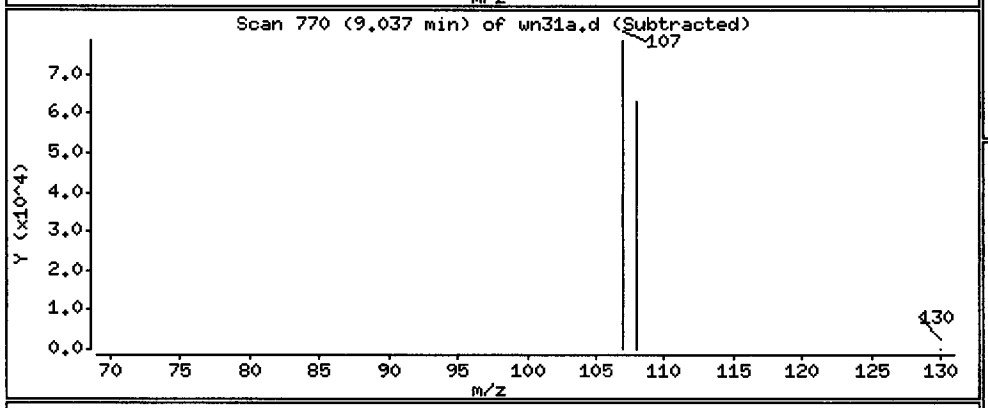
Column diameter: 0.25

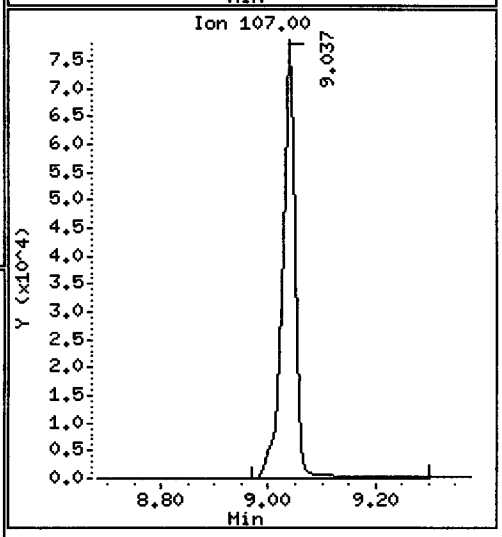
15 4-Methylphenol

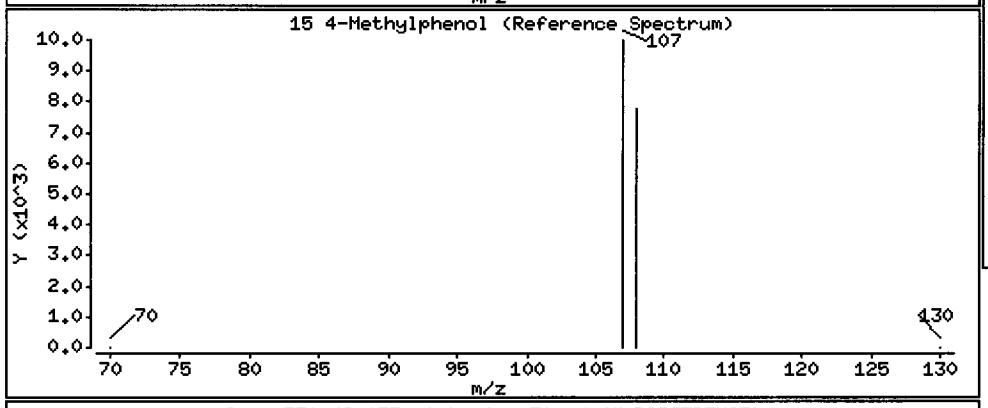
Concentration: 15280 ug/kg

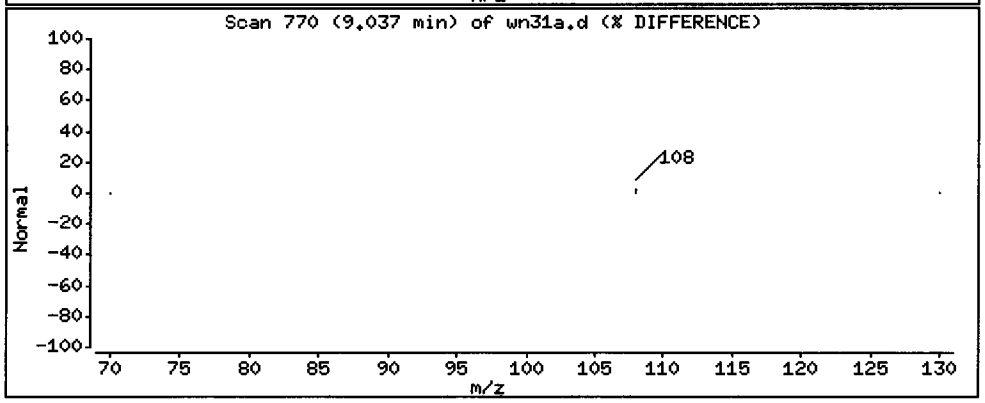












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

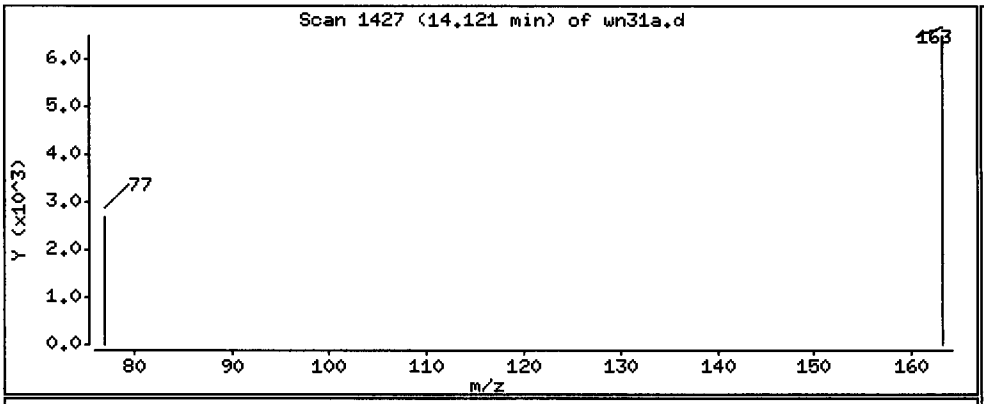
Operator: YZ

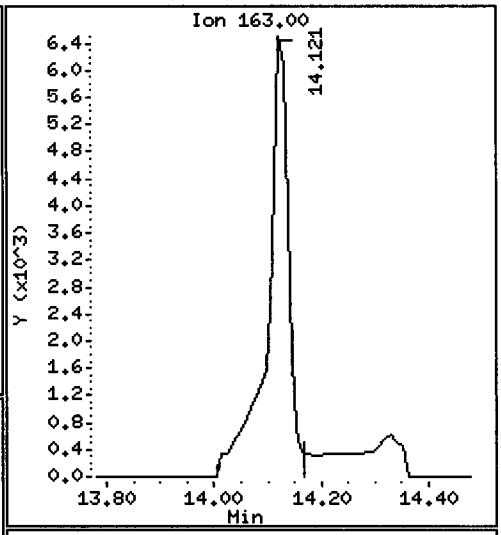
Column phase: ZB-5msi

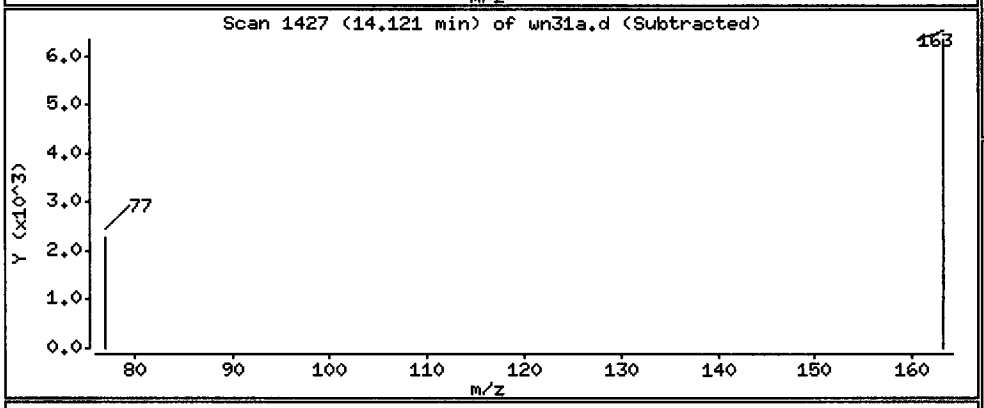
Column diameter: 0.25

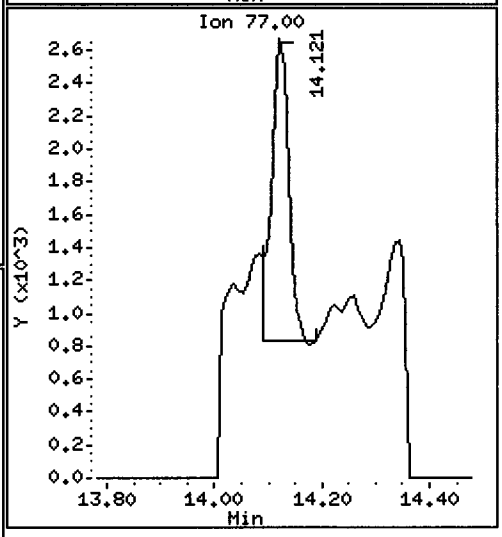
39 Dimethylphthalate

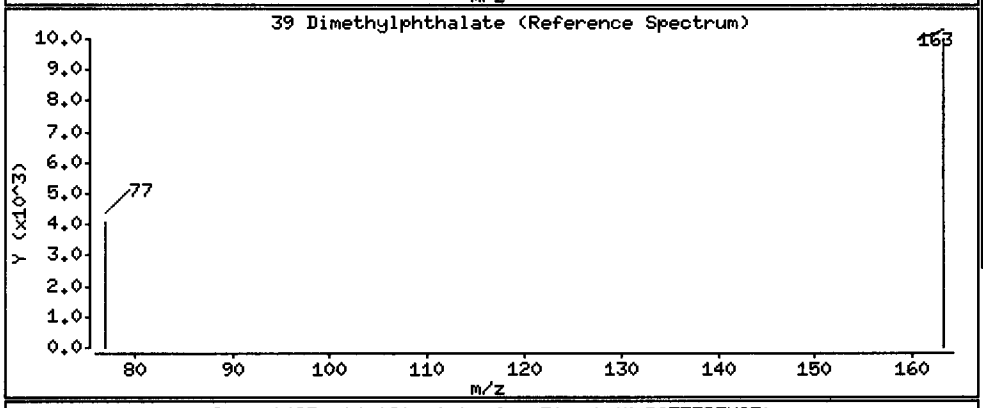
Concentration: 1470 ug/kg

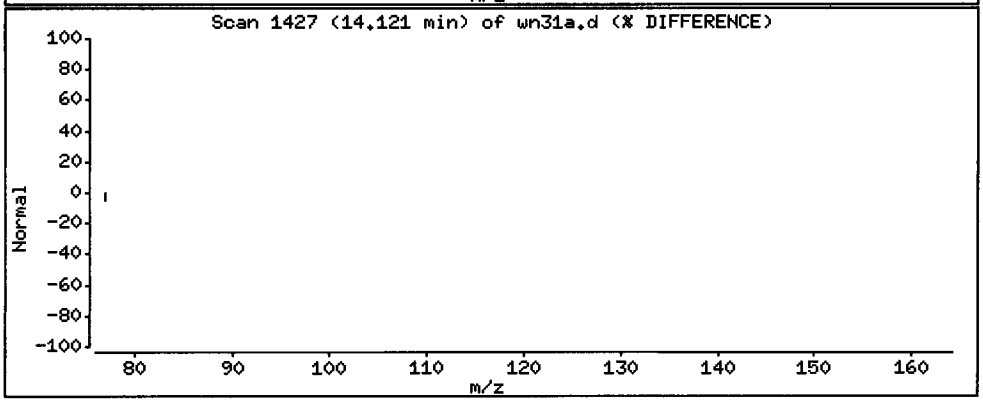












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

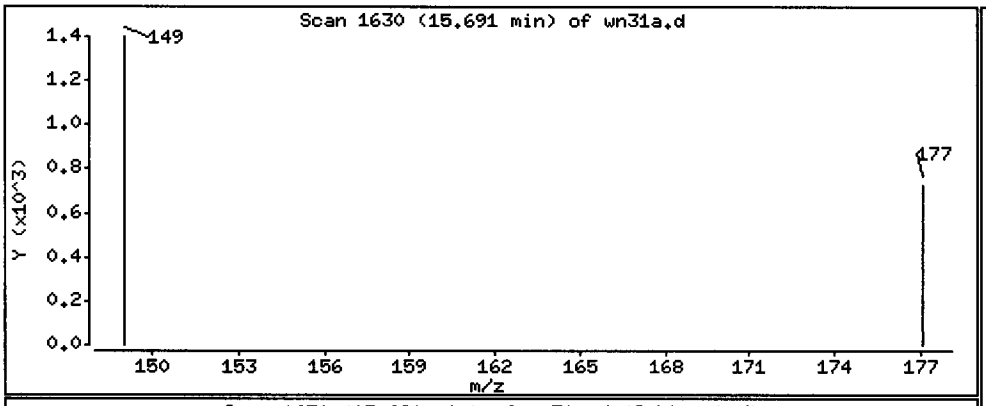
Operator: YZ

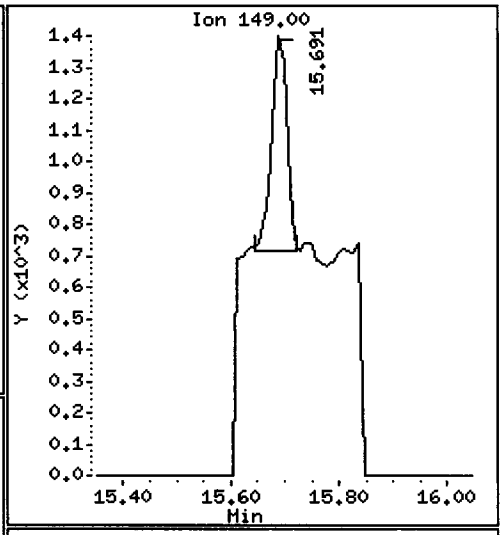
Column phase: ZB-5msi

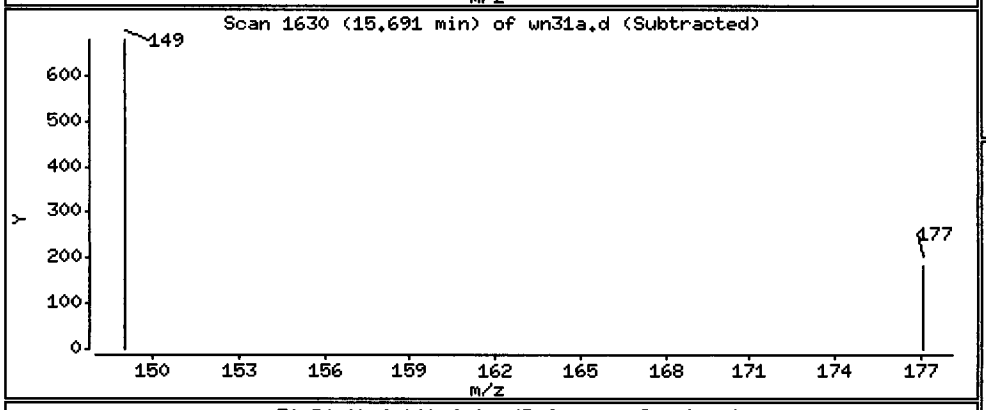
Column diameter: 0.25

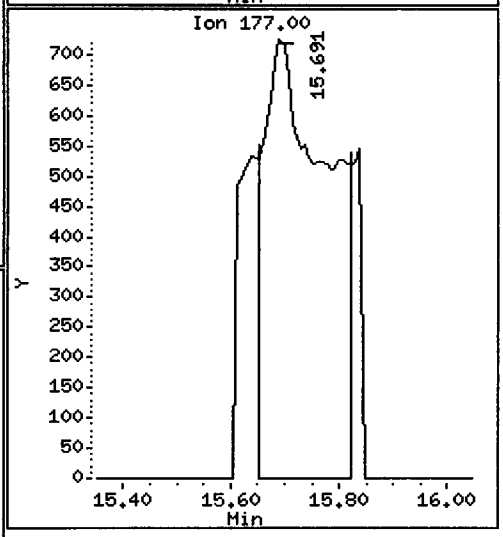
50 Diethylphthalate

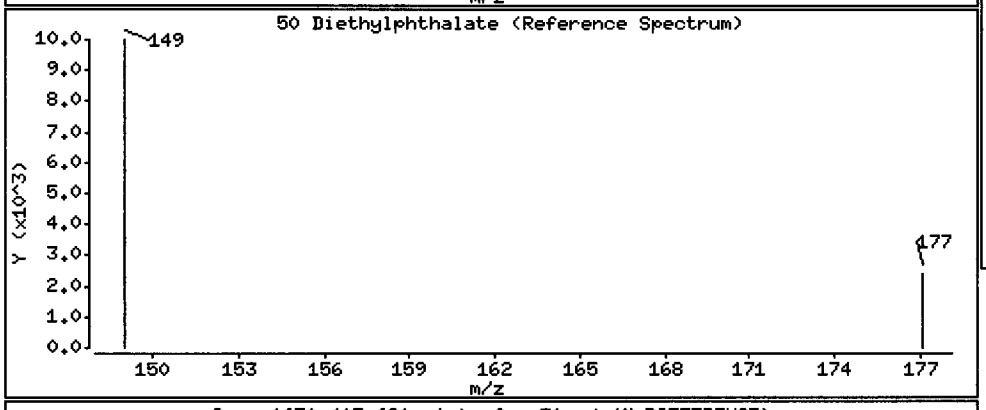
Concentration: 96.44 ug/kg

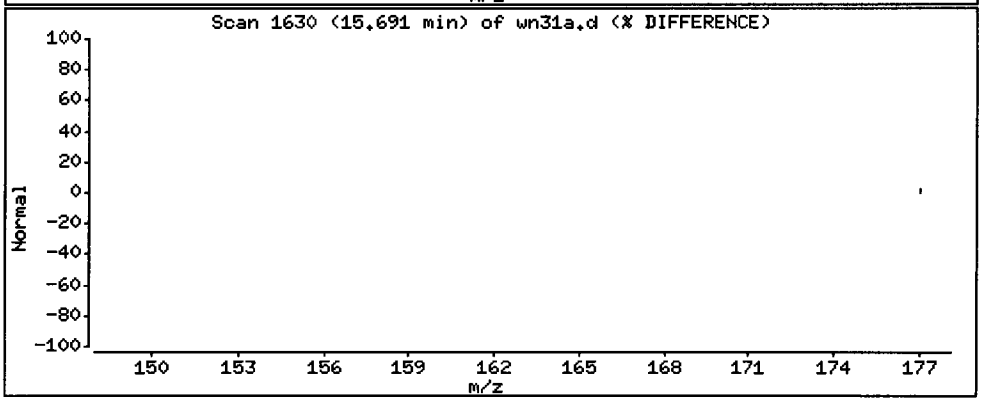












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

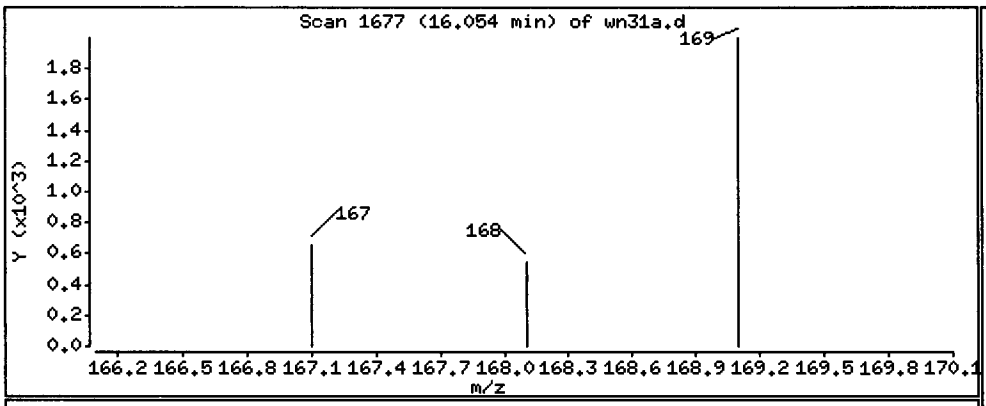
Operator: YZ

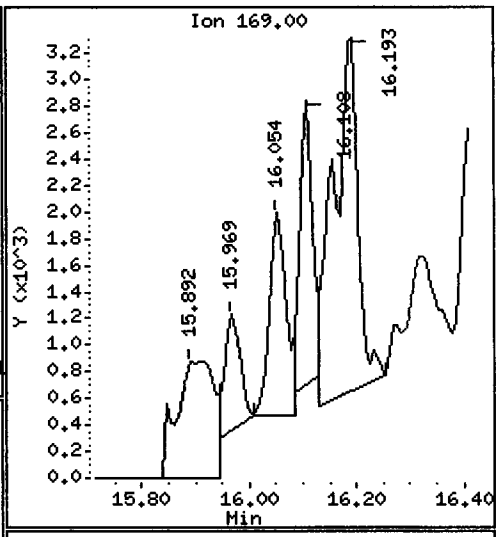
Column phase: ZB-5msi

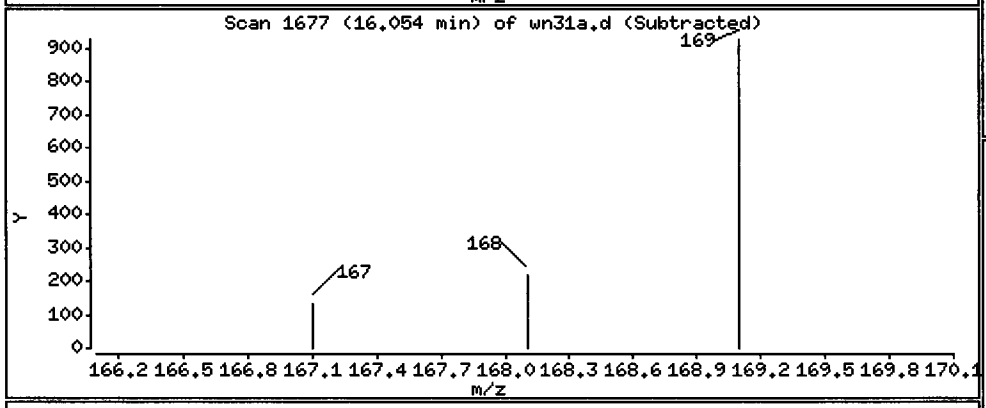
Column diameter: 0.25

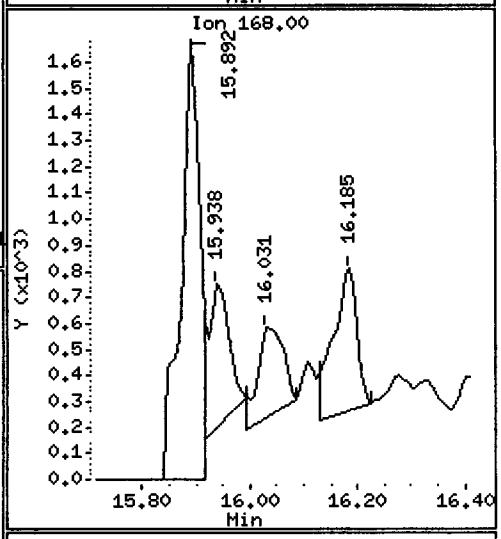
54 N-Nitrosodiphenylamine

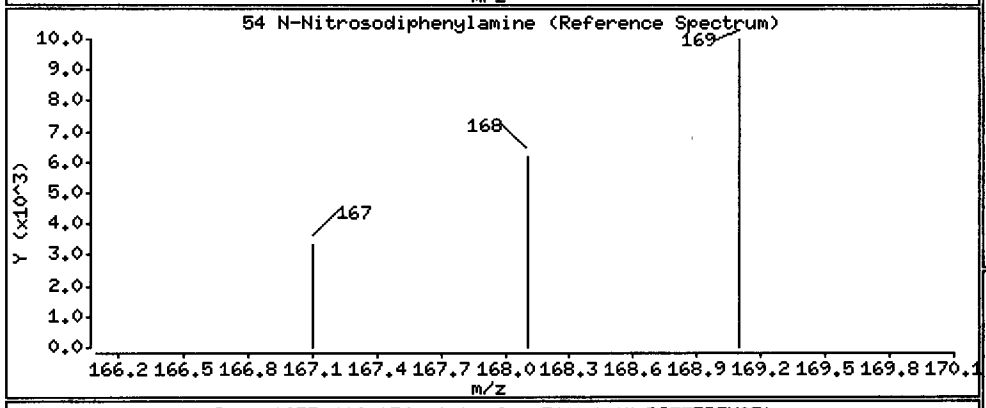
Concentration: 429.1 ug/kg

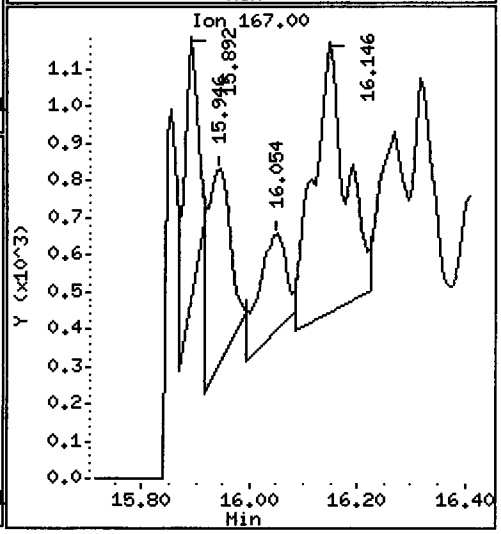


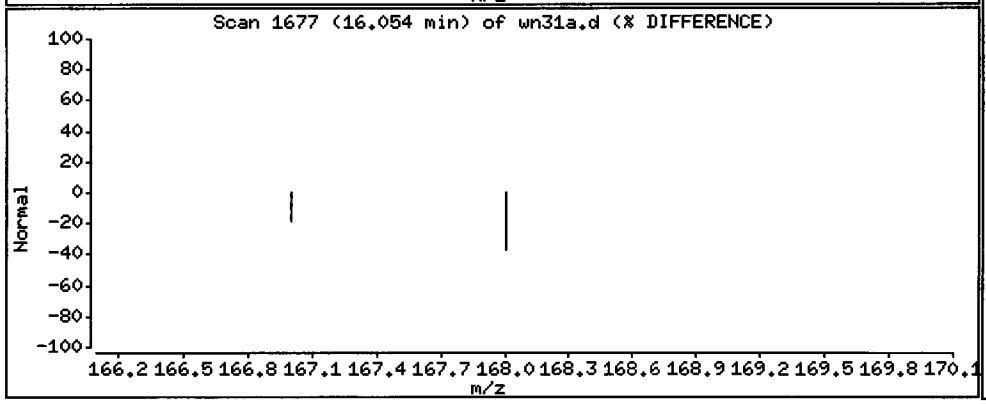












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

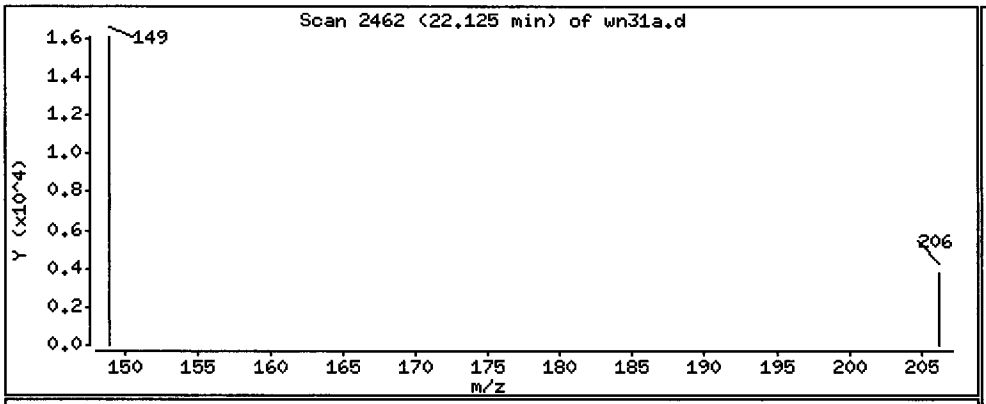
Operator: YZ

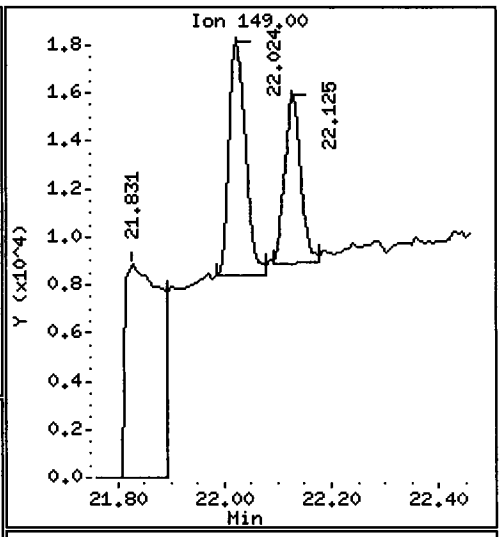
Column phase: ZB-5msi

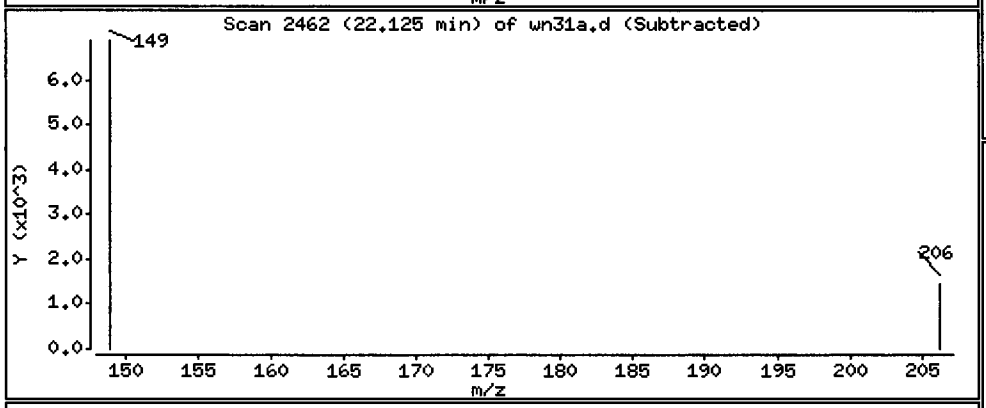
Column diameter: 0.25

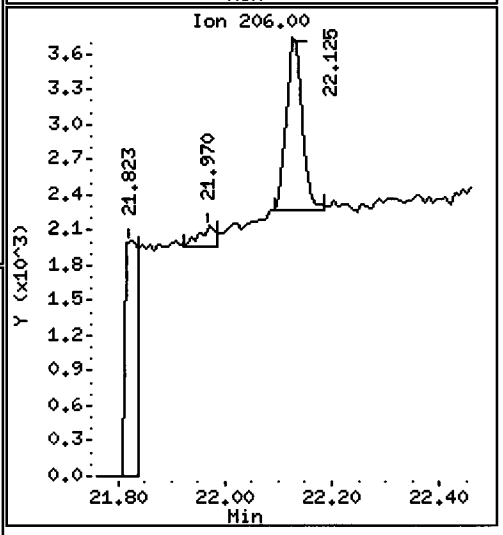
67 Butylbenzylphthalate

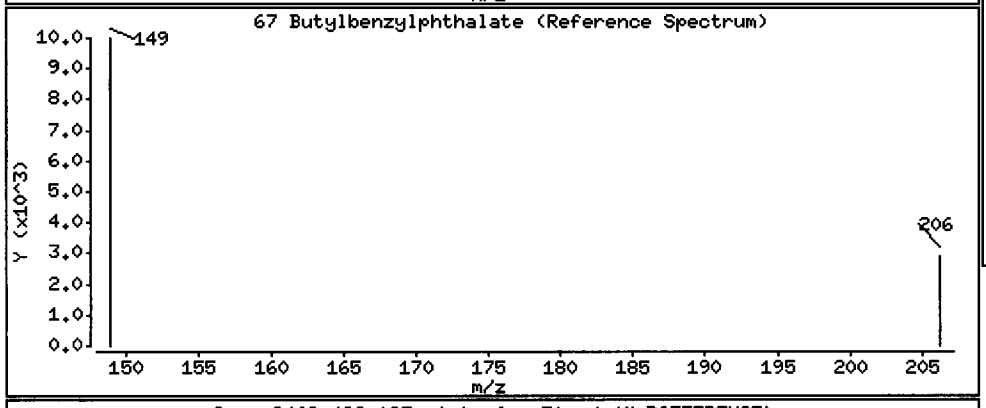
Concentration: 1963 ug/kg

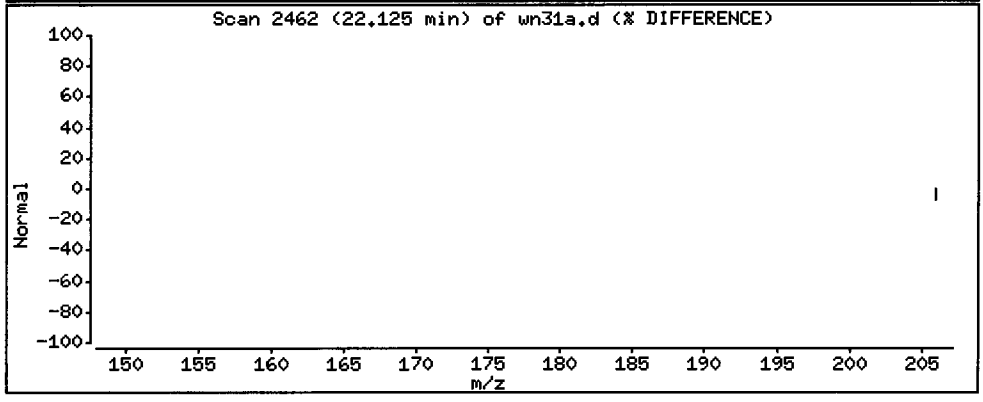












Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Date : 07-MAY-2013 21:06

Client ID: ES-TS-INF-20130424-

Instrument: nt10.i

Sample Info: WN31A,3

Volume Injected (uL): 1.0

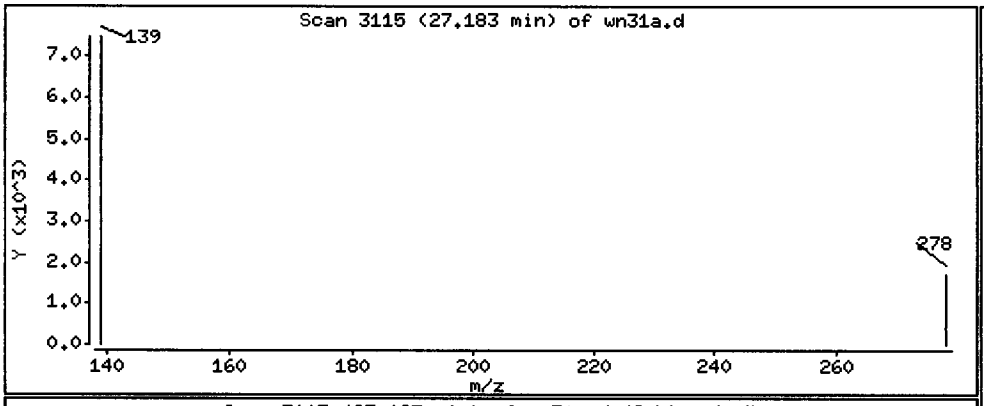
Operator: YZ

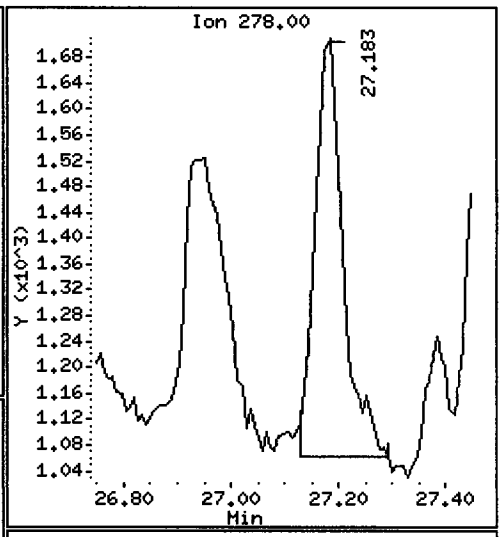
Column phase: ZB-5msi

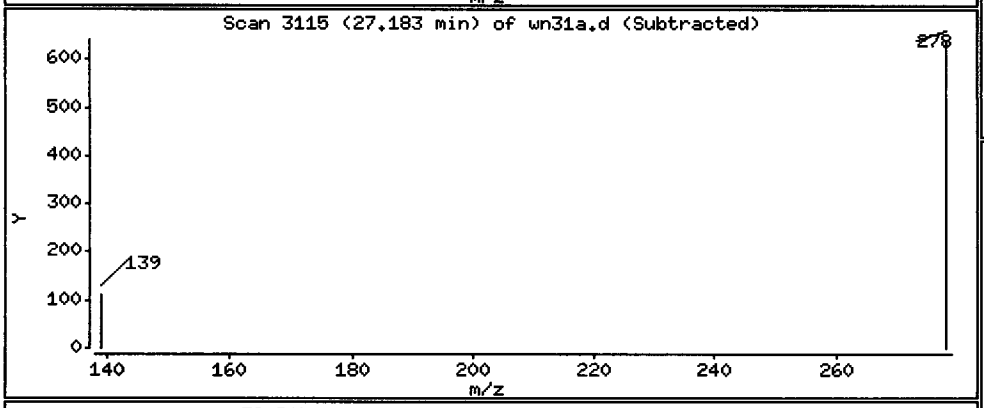
Column diameter: 0.25

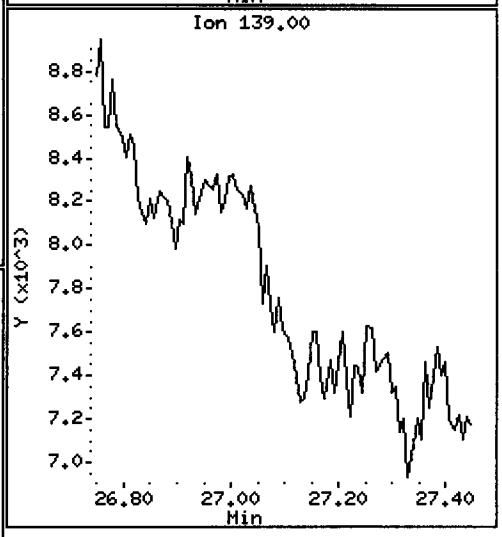
79 Dibenzo(a,h)anthracene

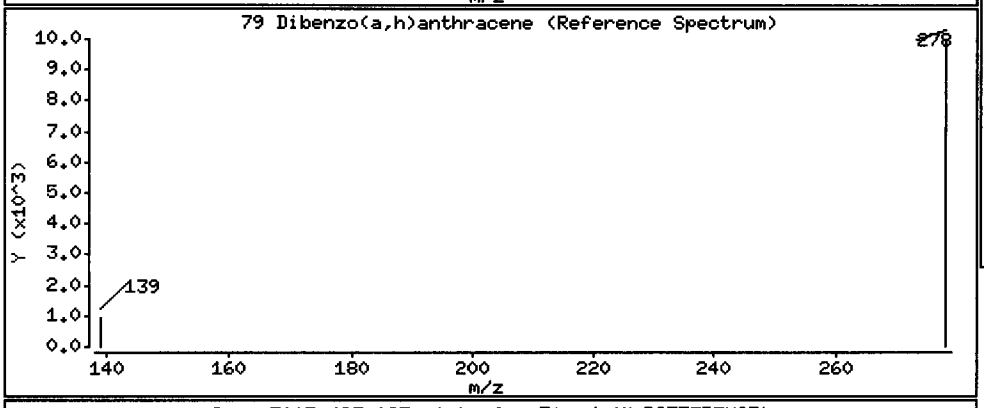
Concentration: 134.3 ug/kg

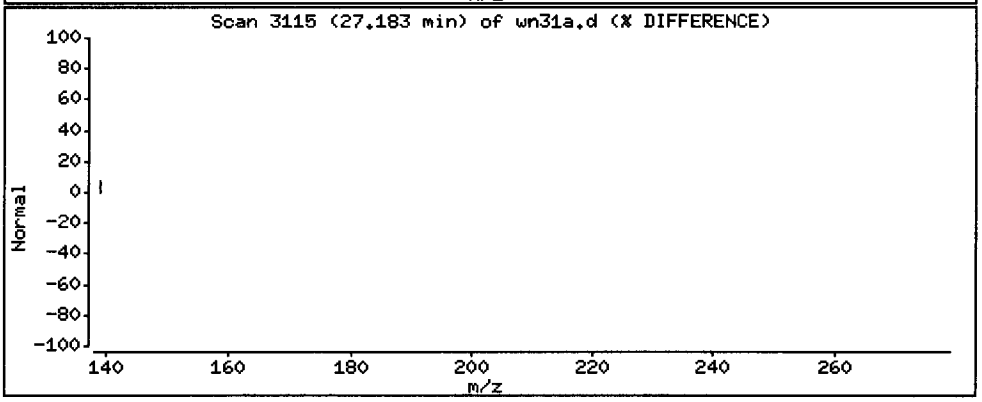






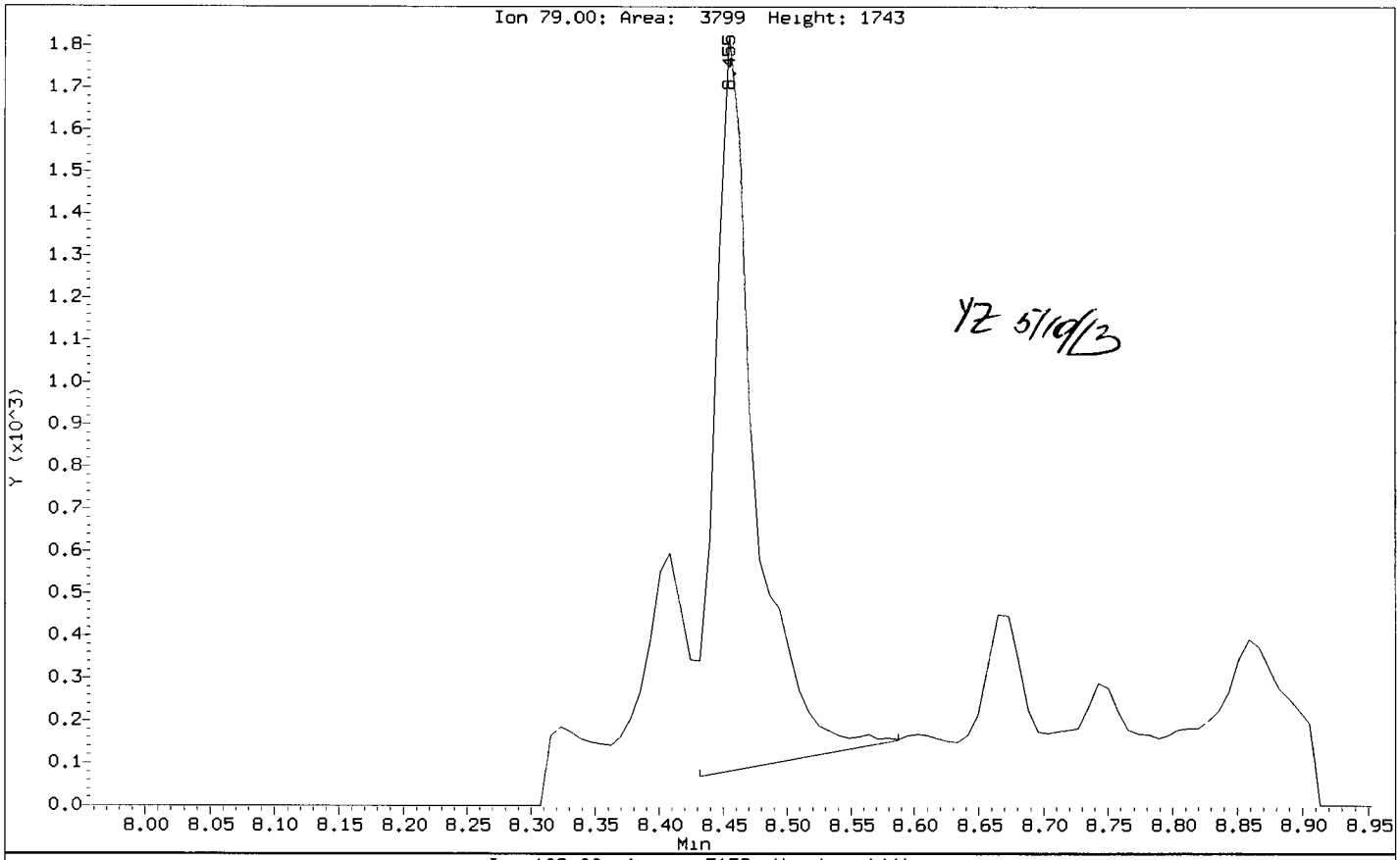




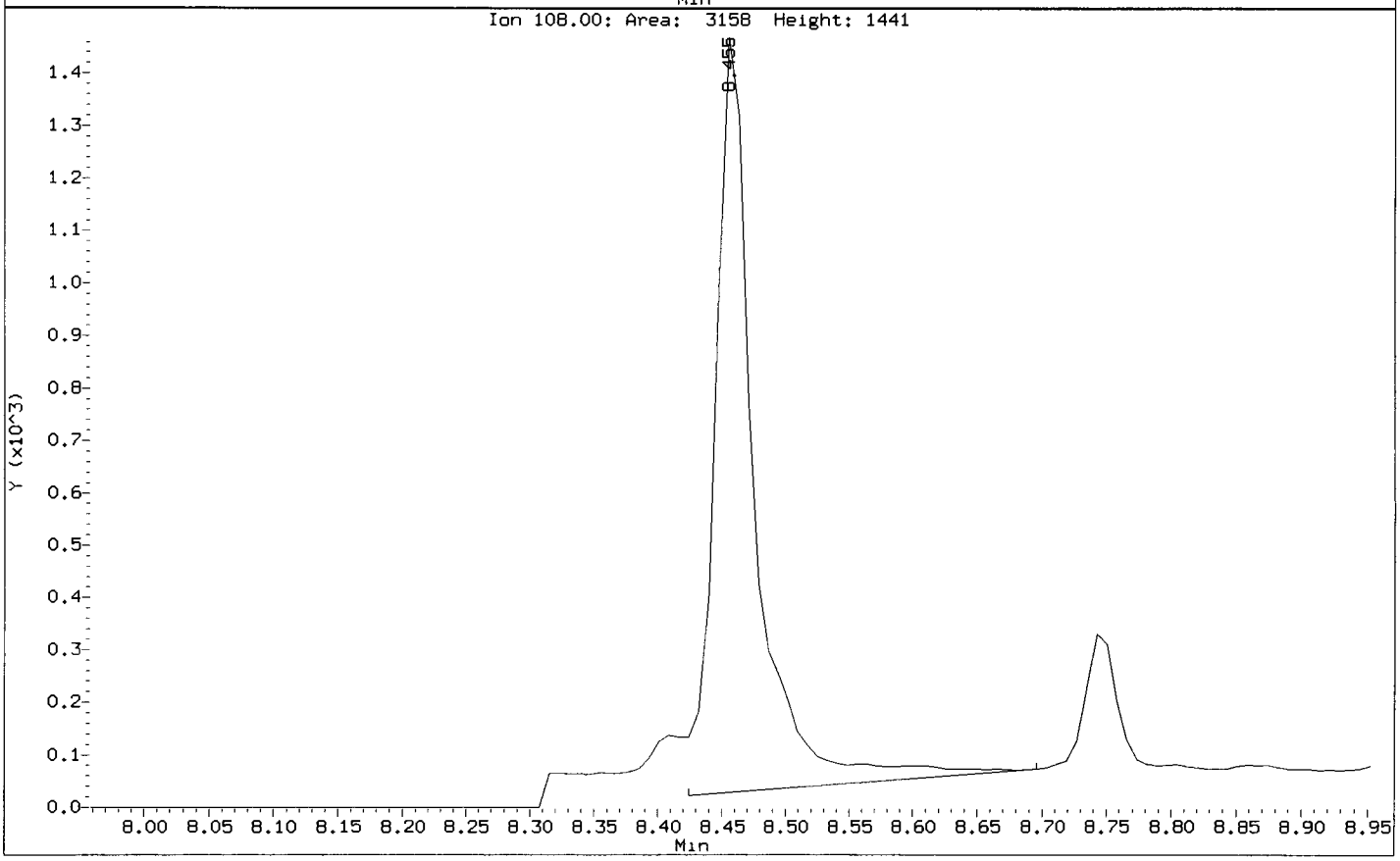


Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d
Injection Date: 07-MAY-2013 21:06
Instrument: nt10.i
Client Sample ID: ES-TS-INF-20130424-

Compound: Benzyl alcohol
CAS Number: 100-51-6

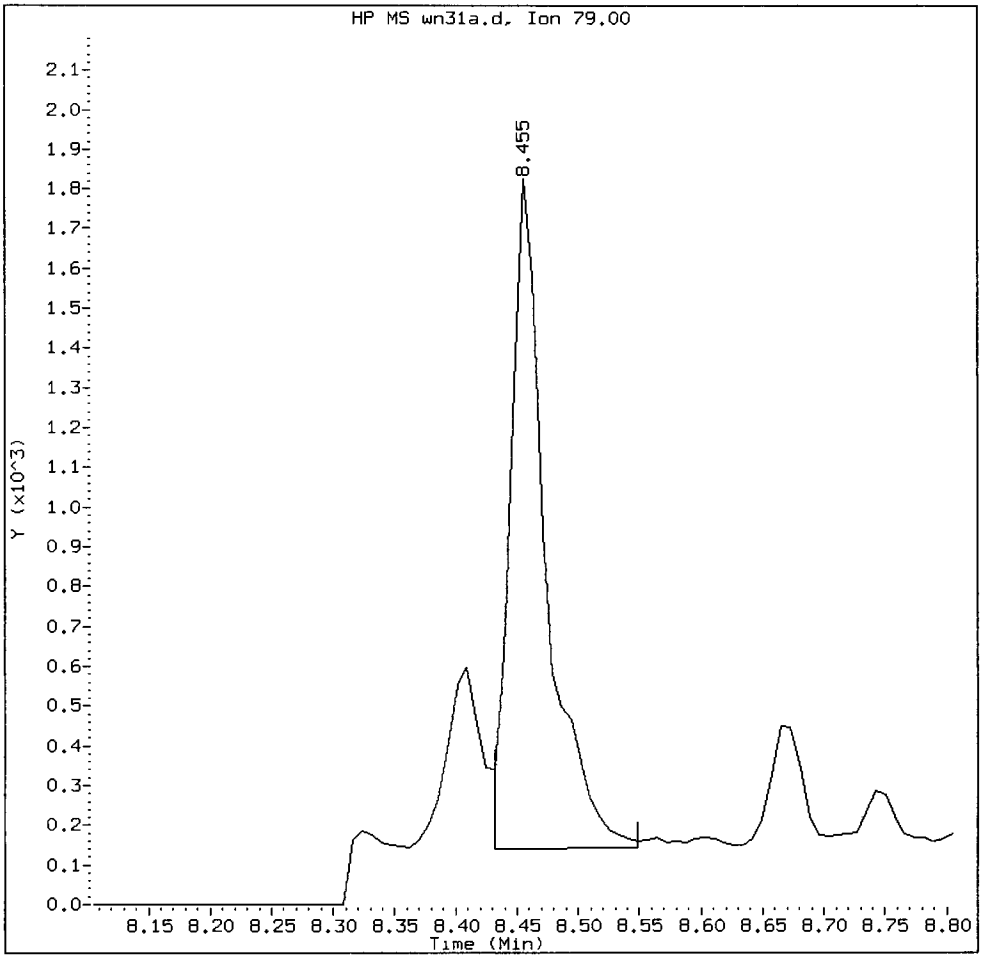


YZ 5/14/13



WN31A, /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Benzyl alcohol Amount: 0.30 Area: 3453



MANUAL INTEGRATION for Benzyl alcohol

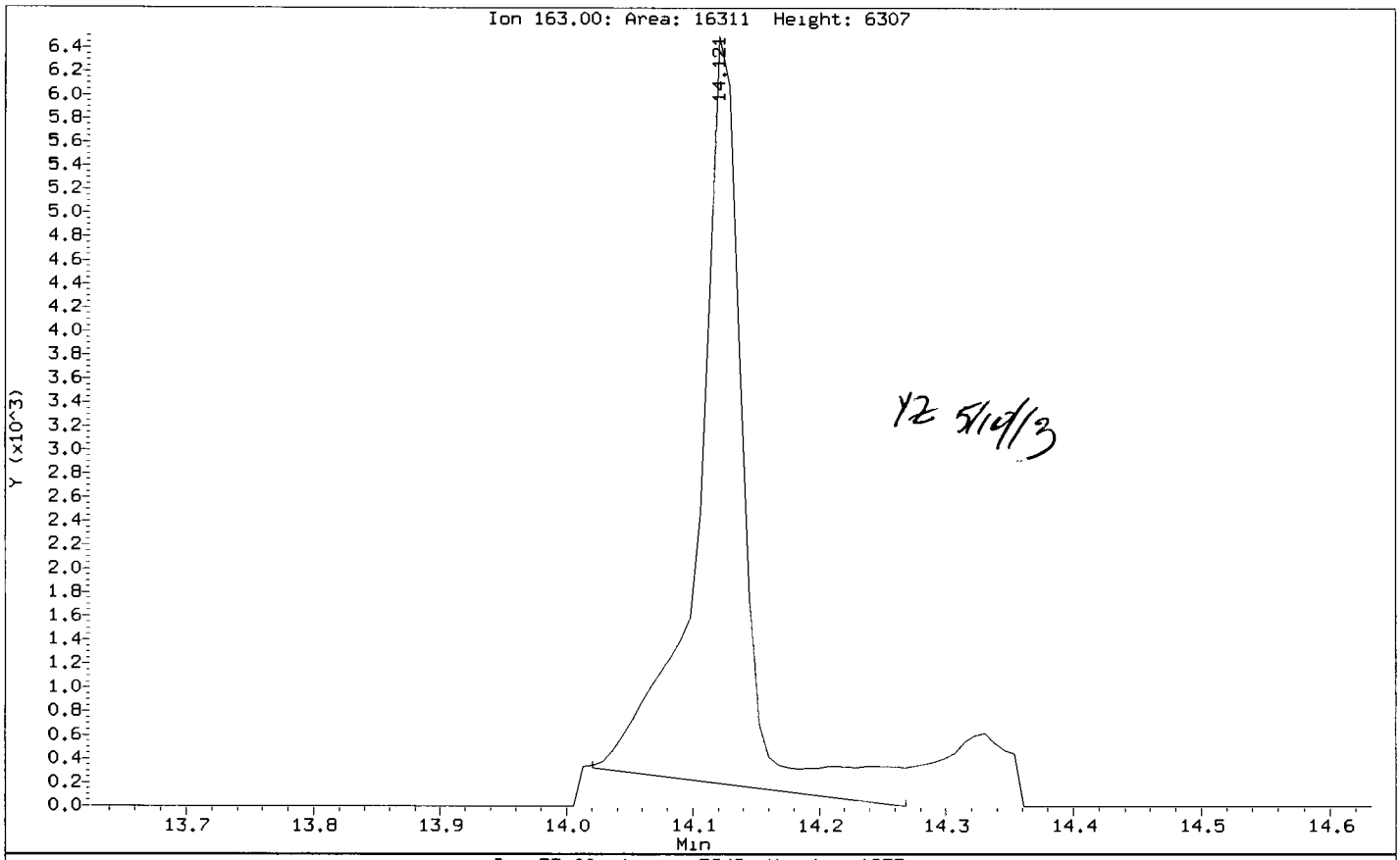
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

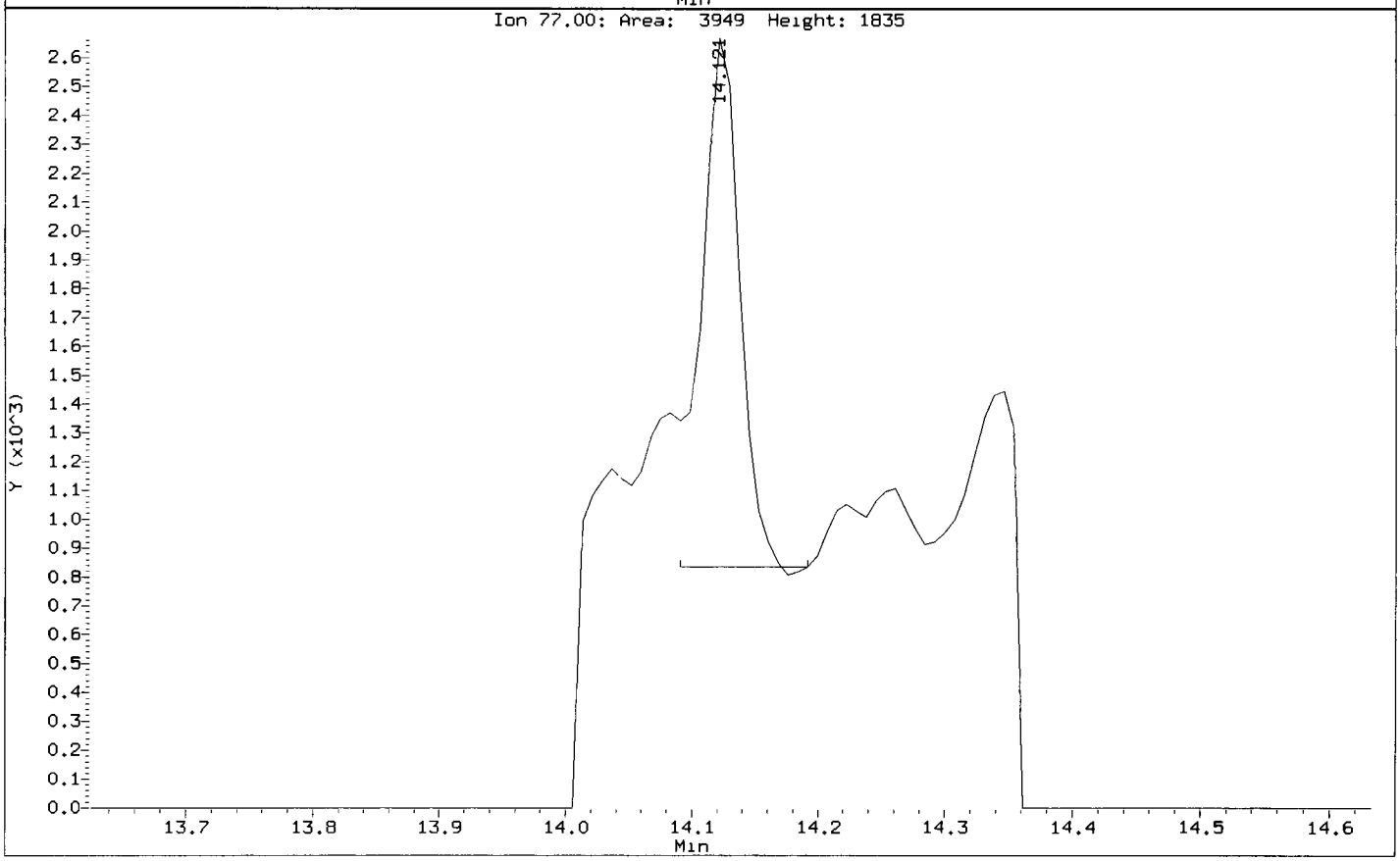
5. Other _____

Analyst: YZ Date: 5/10/13

Data File: /chem1/nt10.1/20130507.b/SIM.b/wn31a.d
Injection Date: 07-MAY-2013 21:06
Instrument: nt10.1
Client Sample ID: ES-TS-INF-20130424-

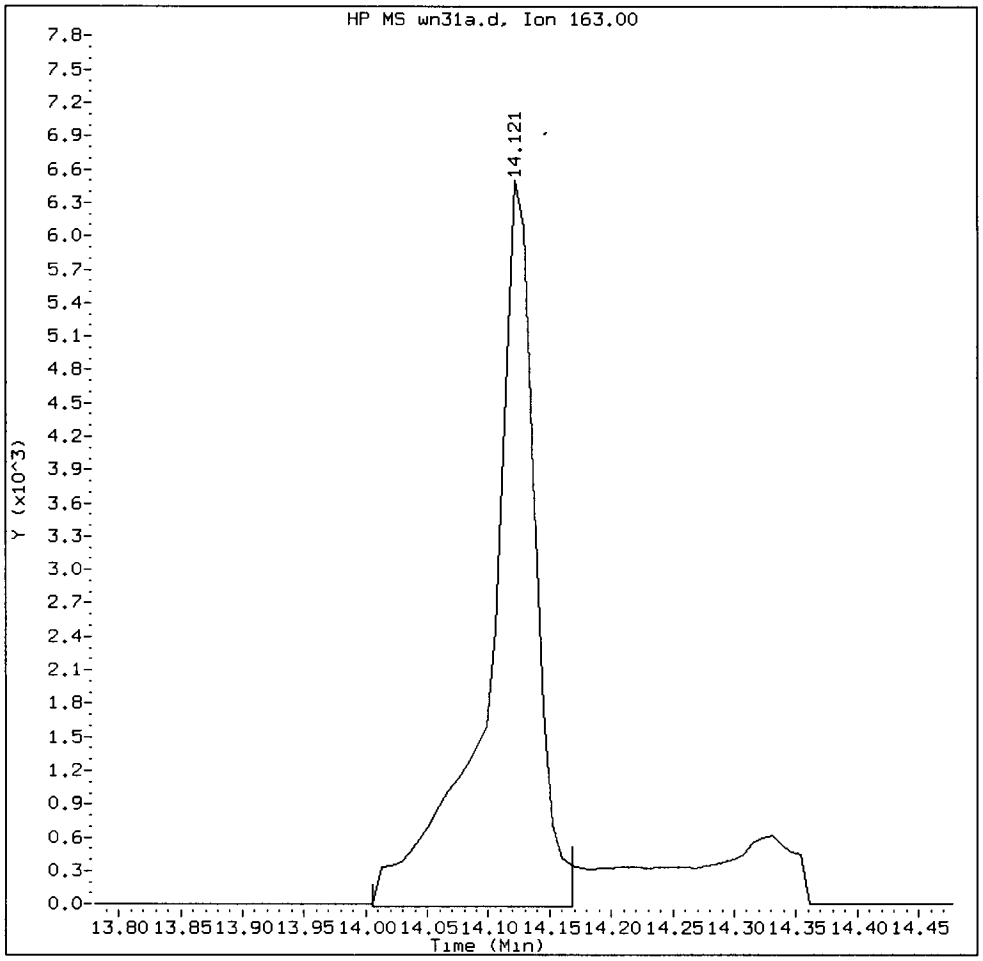
Compound: Dimethylphthalate
CAS Number: 131-11-3





WN31A, /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Dimethylphthalate Amount: 0.59 Area: 17187



MANUAL INTEGRATION for Dimethylphthalate

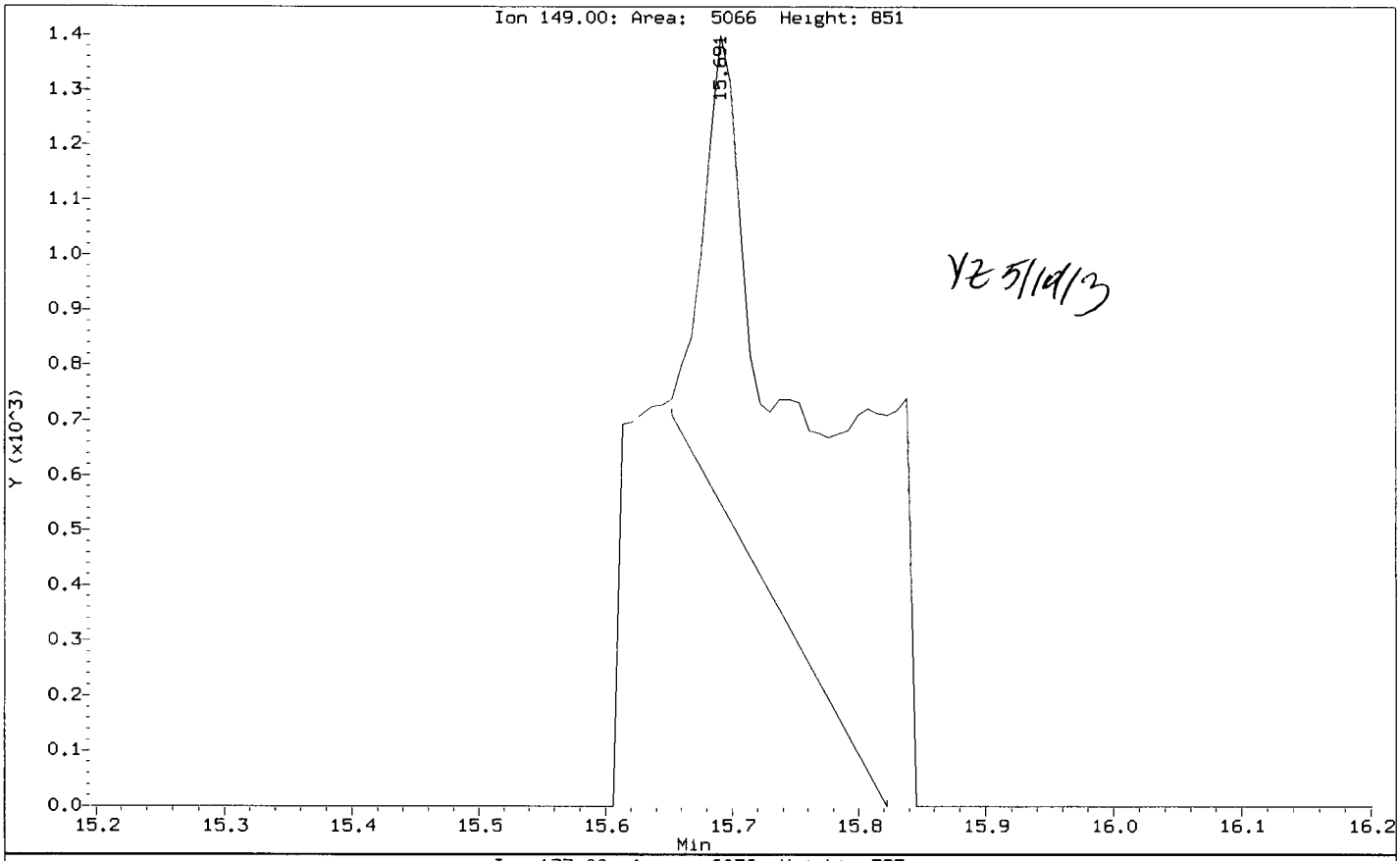
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

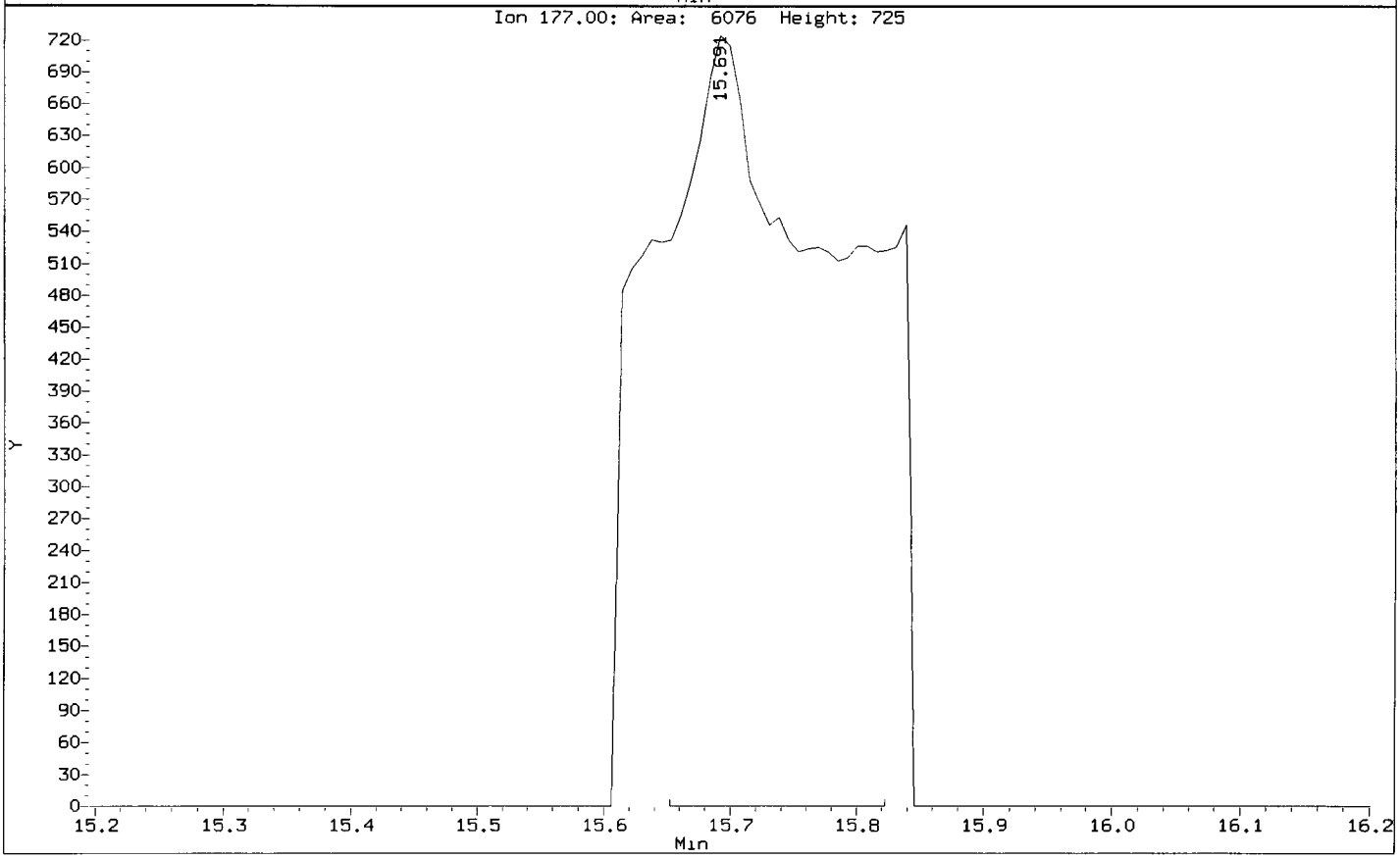
Analyst: VZ Date: 5/10/13

Data File: /chem1/nt10.1/20130507.b/SIM.b/wn31a.d
Injection Date: 07-MAY-2013 21:06
Instrument: nt10.1
Client Sample ID: ES-TS-INF-20130424-

Compound: Diethylphthalate
CAS Number: 84-66-2



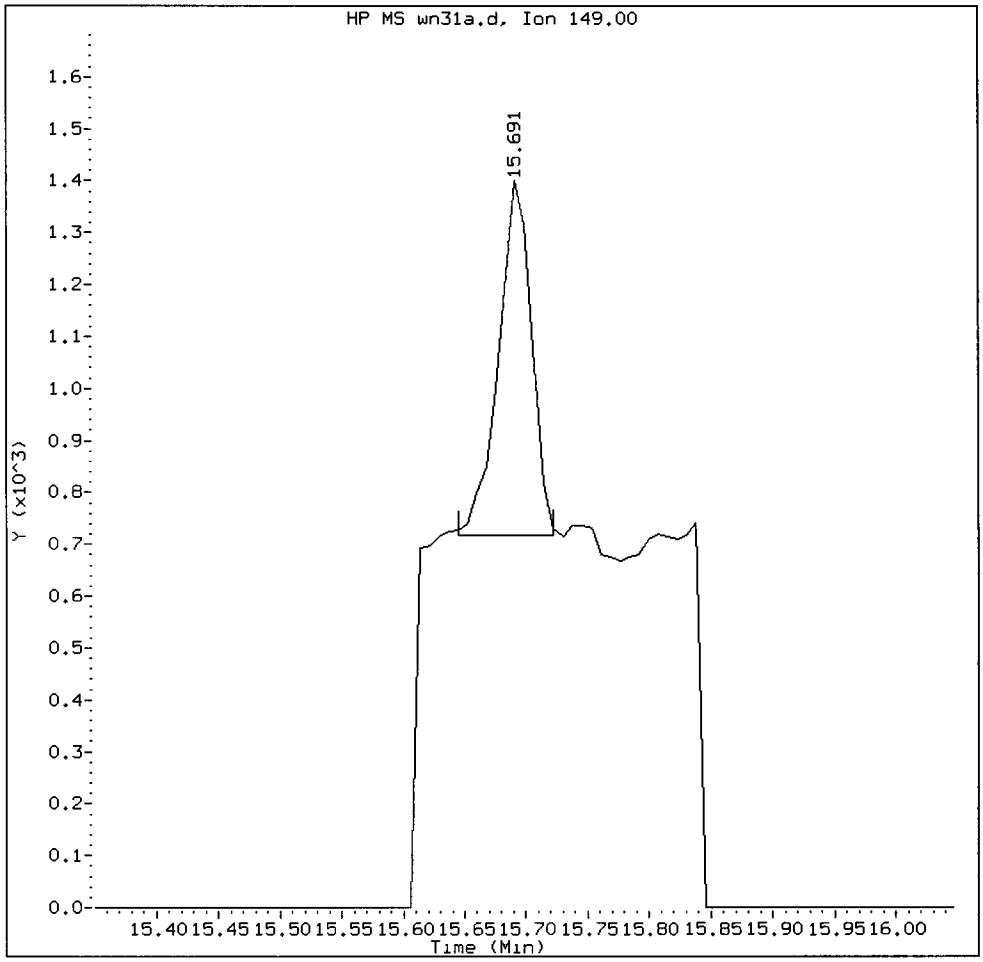
YZ 5/14/13



WN31 : 01172

WN31A, /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Diethylphthalate Amount: 0.04 Area: 1277



MANUAL INTEGRATION for Diethylphthalate

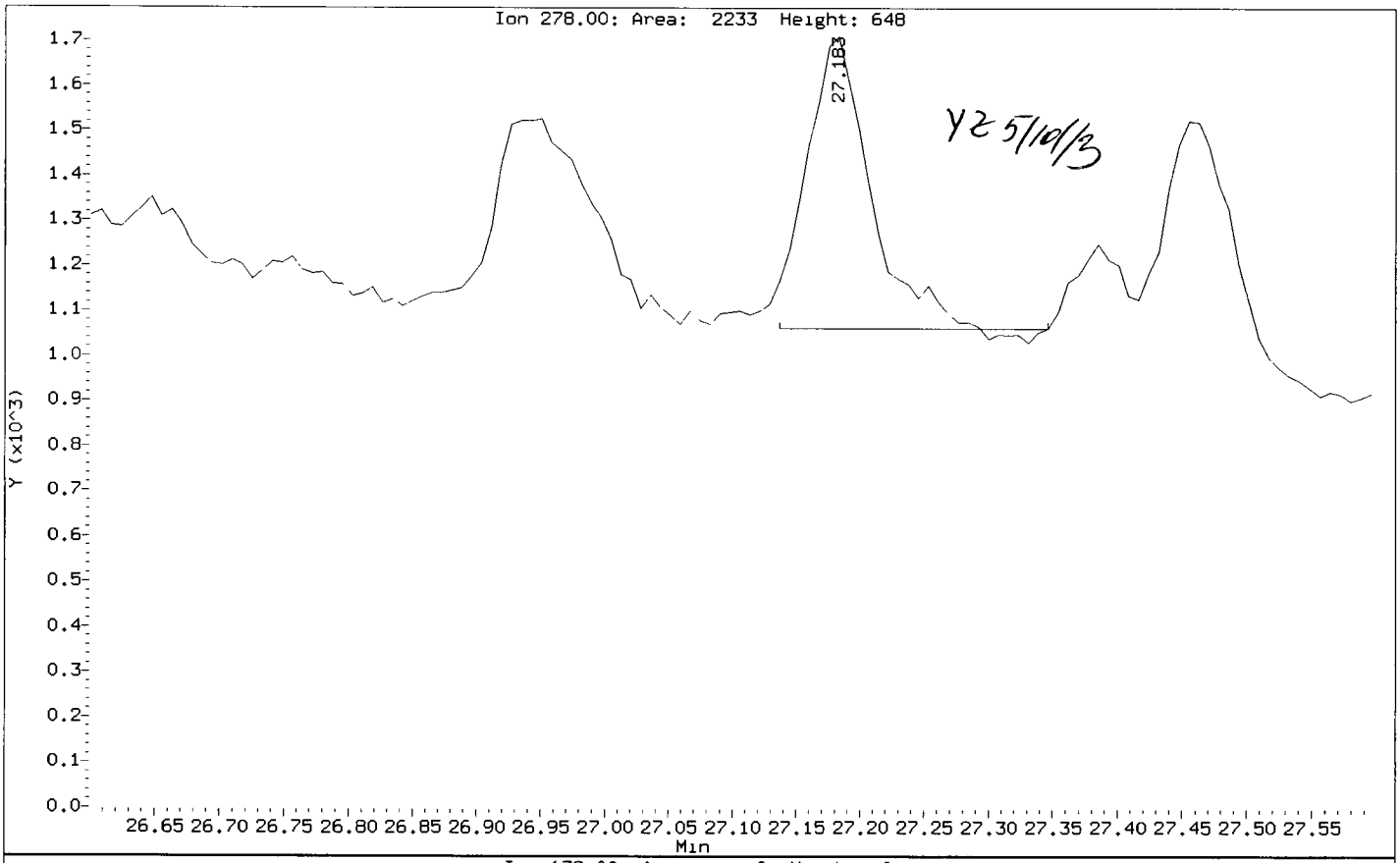
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

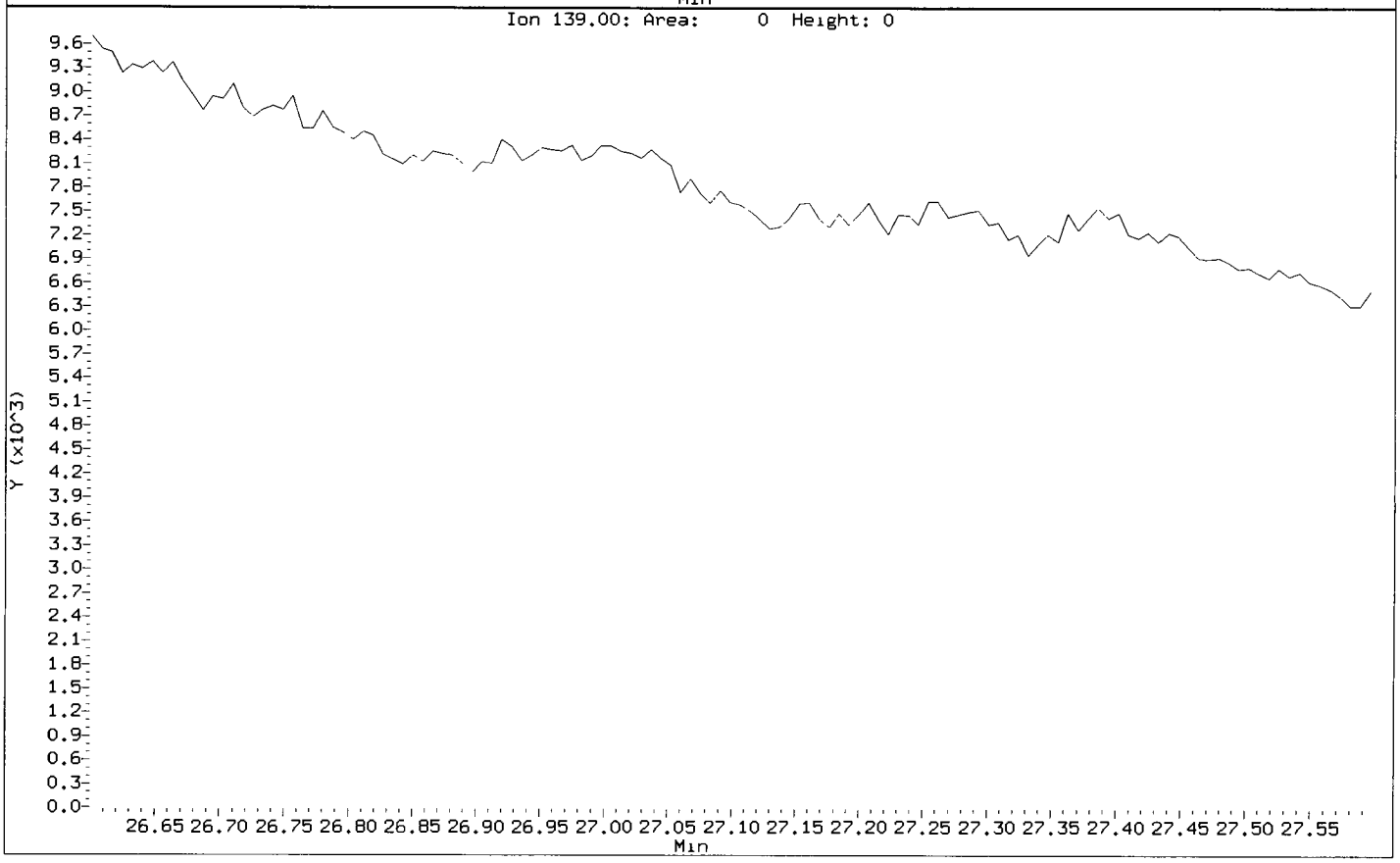
5. Other _____

Analyst: VR Date: 5/10/13

Data File: /chem1/nt10.i/20130507.b/SIM.b/wn31a.d
Injection Date: 07-MAY-2013 21:06
Instrument: nt10.i
Client Sample ID: ES-TS-INF-20130424-

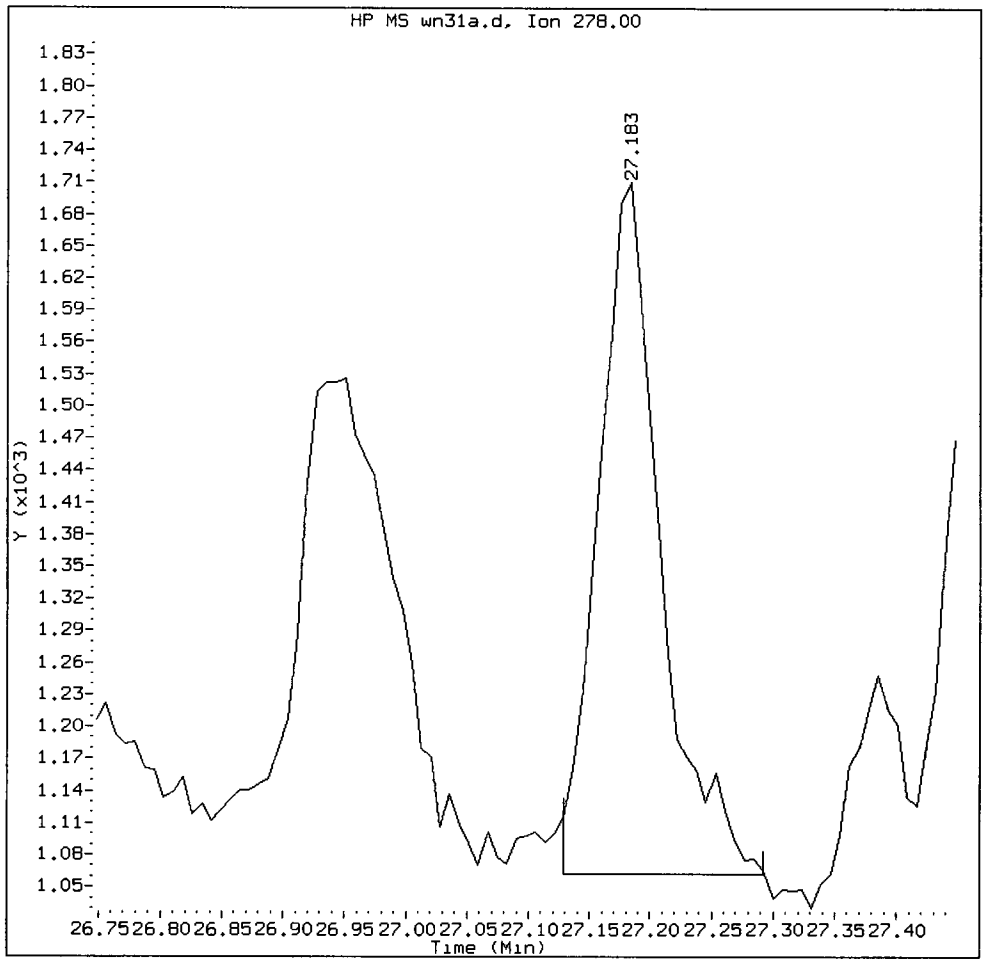
Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3





WN31A, /chem1/nt10.i/20130507.b/SIM.b/wn31a.d

Dibenzo(a,h)anthracene Amount: 0.05 Area: 2308



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: 5/10/13

CO-ELUTION SUMMARY FOR FILE - wn31a.d

Lab ID: WN31A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 07-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

Incorporated
Analytical Chemists and
Consultants

(8270D) SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test SIM PNA L-L # 6 (SPNALWSL) Low Level (0.01ppb)

ARI Job No(s) WN31, WN81, WN82 Page 1 of 1 Batch set up by: SP

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WN31 MBW	500mL	0.5mL	0.5mL		AR 04/30/13 Analyst/Date
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup.	500mL	0.5mL	0.5mL		
	QLS	~~500mL~~	~~0.5mL~~	~~0.5mL~~		KD 80°C 1 2 3 4 5 6 RR 5/1/13 Analyst/Date
9	WN31 B	500mL	0.5mL	0.5mL		
4	WN81 A	500mL	0.5mL	0.5mL		
4	B	500mL	0.5mL	0.5mL		
4	C	500mL	0.5mL	0.5mL		
4	D	500mL	0.5mL	0.5mL		TurboVap 1 2 3 Pre-Silica Gel Shakeout Analyst/Date
4	E	500mL	0.5mL	0.5mL		
4	F	500mL	0.5mL	0.5mL		
4	G	500mL	0.5mL	0.5mL		
4	H	500mL	0.5mL	0.5mL		
4	J	500mL	0.5mL	0.5mL		
4	K	500mL	0.5mL	0.5mL		
4	L	500mL	0.5mL	0.5mL		(REQ) Silica Gel Clean Shakeout (1:1) WW 5/1/13 Analyst/Date
4	M	500mL	0.5mL	0.5mL		
4	N	500mL	0.5mL	0.5mL		
4	O	500mL	0.5mL	0.5mL		
1	WN82 A	500mL	0.5mL	0.5mL		
1	B	500mL	0.5mL	0.5mL		
1	C	500mL	0.5mL	0.5mL		TurboVap (1) 2 3 Post Silica Gel Shakeout WW 5/1/13 Analyst/Date
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		
		500mL	~~0.5mL~~	0.5mL	WW 5/1/13	
		~~500mL~~	0.5mL	0.5mL		
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		
Analyst/Date	AR 04/30/13	WW 5/1/13		WW 5/1/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	I (2077-4)	1.5/7.5µg/mL	100µL	2/21/14	AR	WW
Spike	18 (2077-2)	1.5/7.5µg/mL	100µL	10/13/13	AR	WW
~~QLS Spike~~	~~2 ( )~~	~~0.1µg/mL~~	~~50µL~~			

Extraction Time: 12:30

SPECIAL INSTRUCTIONS: Note: LOW LEVEL SIM PNA'S MUST BE COMPLETED WITHIN 48HRS!
1. USE ONLY NON-SCRATCHED GLASSWARE. 2. Rinse all glassware with Low Level DCM.
3. Extract 3X with 30mL Low Level DCM. 4. KD (no drying column) at 80°. (Thoroughly rinse Snyder Columns with Low Level DCM)! 5. TurboVap. 6. Silica Gel Clean-up Shakeout=REQUIRED. (Scintillation vial shakeout). 7. TurboVap.
8. Vial in Low Level DCM. (Pre-clean vialing syringes thoroughly)! 9. Post screen extracts with any color.

A. Archive Y / N

8674
8969
8785

all (3) jobs

Reagent and Solutions Identification

(8270D)Low Level SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s)_____

(8270D) Low Level SIM PNA Aqueous:	Analyst/Date
Separatory Funnel Station: Low Level Methylene Chloride: (I# 8086) Anhydrous Sodium Sulfate: (I# 806 8+ jar date 04/19/13)	Sep. Funnel AGL 04/30/13
KD Station: Low Level Methylene Chloride: (I# 8086)	KD 05/01/13
Vialing Station: Low Level Methylene Chloride: (I# 1908) 0% Silica Gel 19035	Vialing WN 5/1/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN 31 Client ID: SAIC

Parameter: Low level SIM CNA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= WN31 sample B, slightly tan, clear	AR 04/30/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

SIM PAH Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

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): 2·23·13 Internal Standard ID 2005-1 Expiration 7·3·13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / (NO)
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	YES / (NO)
Q flag applied?	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	2077-1	10·13·13	Absolute	2079-01	

Detail problems, corrective actions and/or other pertinent information below:

- ICV run with curve on 2/23 was also Supelco. On 2/26 I made a new ICV from absolute which is presented with the ICAL

Analyst: VD Date: 2·27·13

Reviewer: [signature] Date: 2/4/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 26-Feb-2013 08:19 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130223.b/ic0223c.d
Level 2: /chem3/nt11.i/20130223.b/ic0223e.d
Level 3: /chem3/nt11.i/20130223.b/ic0223f.d
Level 4: /chem3/nt11.i/20130223.b/ic0223a.d
Level 5: /chem3/nt11.i/20130223.b/ic0223d.d
Level 6: /chem3/nt11.i/20130223.b/ic0223b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
5 Naphthalene	1.17986	1.07038	1.12173	1.07243	1.05630	1.06975	1.09508	4.315
7 2-Methylnaphthalene	0.70009	0.65437	0.70055	0.68821	0.67773	0.69131	0.68537	2.535
8 1-Methylnaphthalene	0.73994	0.65390	0.70042	0.68367	0.67218	0.68373	0.68897	4.255
10 Acenaphthylene	1.84021	1.67975	1.75477	1.78640	1.78255	1.87074	1.78573	3.748
12 Acenaphthene	1.22752	1.13659	1.19934	1.16361	1.16498	1.18041	1.17874	2.683
14 Dibenzofuran	1.81808	1.67485	1.78559	1.66071	1.66927	1.69412	1.71710	3.921
15 Fluorene	1.33744	1.22307	1.28298	1.27056	1.27104	1.30630	1.28190	2.999
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.29147	1.19136	1.28319	1.20741	1.21515	1.22365	1.23537	3.376
20 Anthracene	1.16152	1.07209	1.18065	1.15970	1.15909	1.21883	1.15865	4.159
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.21654	1.13663	1.25125	1.23561	1.23597	1.25192	1.22132	3.559
25 Pyrene	1.74397	1.53685	1.69519	1.67448	1.70011	1.69862	1.67487	4.259
28 Benzo(a)anthracene	1.42951	1.29246	1.40124	1.39924	1.37922	1.40235	1.38400	3.441
30 Chrysene	1.51404	1.35660	1.48567	1.40588	1.41140	1.40779	1.43023	4.073
44 Benzo(b)fluoranthene	1.63909	1.53504	1.64903	1.50529	1.61012	1.57183	1.58507	3.644
45 Benzo(k)fluoranthene	1.82896	1.54799	1.66440	1.77352	1.75834	1.76863	1.72364	5.869
46 Benzo(j)fluoranthene	1.71085	1.80116	1.88590	1.70137	1.70454	1.69282	1.74944	4.451
34 Benzo(a)pyrene	1.37546	1.25064	1.35897	1.34791	1.34169	1.35196	1.33777	3.306
37 Indeno(1,2,3-cd)pyrene	1.64325	1.52366	1.70267	1.64740	1.67639	1.68623	1.64660	3.910
38 Dibenzo(a,h)anthracene	1.42304	1.20093	1.36598	1.30065	1.32370	1.32911	1.32390	5.580

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 26-Feb-2013 08:19 van
Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
39 Benzo(g,h,i)perylene	1.63740	1.39502	1.50380	1.42776	1.44835	1.42748	1.47330	5.978
47 Perylene	1.60629	1.44987	1.57488	1.50213	1.50270	1.50783	1.52395	3.718
$ 6 2-Methylnaphthalene-d10	0.62998	0.61614	0.64871	0.63509	0.62909	0.63828	0.63288	1.713
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	0.99851	0.95924	1.04391	1.06478	1.05975	1.09373	1.03665	4.742
$ 36 Dibenzo(a,h)anthracene-d14	1.08287	1.08091	1.18009	1.16289	1.17177	1.17924	1.14296	4.174

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 2.23.13 Analysis: low sim pAP Analyst: VD

GC Program: low sim Column No: 14123 Column Type: Rxi-175il ms

Instrument Tune (.U or .CT.): 121208.U EM Voltage: 2424

Calibration File: df0223 Curve Date: 2.23.13 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	2022-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130223.b

	Time	Filename	LabID	ClientId	DF								
1	0936	df0223.d	DFTPP 10		1	NO ISTDS FOUND							
2	0951	ic0223a.d	SIM 250		1	6.13	255285	9.11	142891	11.76	220853	16.47	162525	19.06	139028
3	1020	ic0223b.d	SIM 1000		1	6.13	261760	9.11	147325	11.75	227826	16.47	167463	19.05	140589
4	1050	ic0223c.d	SIM 10		1	6.13	253912	9.11	139191	11.75	212997	16.46	154487	19.05	129877
5	1119	ic0223d.d	SIM 500		1	6.13	254492	9.11	141209	11.75	217906	16.46	157662	19.05	130994
6	1148	ic0223e.d	SIM 50		1	6.13	247866	9.11	133951	11.75	207726	16.46	153360	19.05	129383
7	1217	ic0223f.d	SIM 100		1	6.13	249926	9.11	136768	11.75	209065	16.46	152652	19.05	130359
8	1245	icv0223.d	SIM ICV 250		1	6.13	245685	9.11	134404	11.75	201765	16.46	150212	19.05	124288
9	1314	207702.d	207702		1	6.13	247833	9.11	133621	11.75	203907	16.46	148956	19.05	121045
10	1343	207704.d	207704		1	6.13	250225	9.11	134310	11.75	208929	16.46	148935	19.05	125260
11	1412	we13mb.d	WE13MBW1	WE13MBW1	1	6.13	253566	9.11	140998	11.75	223272	16.46	155284	19.05	132070
12	1440	we13sb.d	WE13LCSW1	WE13LCSW1	1	6.13	254711	9.11	142690	11.75	224772	16.46	161412	19.05	137437
13	1509	we13sbd.d	WE13LCSDW1	WE13LCSDW1	1	6.13	256385	9.11	144771	11.75	228325	16.46	161988	19.05	137063
14	1538	we13qls1.d	WE13QLS1		1	6.13	258780	9.11	142624	11.75	228782	16.46	159190	19.05	133513
15	1607	we13a.d	WE13A	MW-4	1	6.13	250542	9.11	138306	11.75	223123	16.46	160298	19.05	136521
16	1636	we13b.d	WE13B	MW-5	1	6.13	258018	9.11	141346	11.75	230923	16.46	164725	19.05	139916
17	1704	i8088.d	I8088		1	6.13	251254	9.11	139045	11.75	212859	16.46	149381	19.05	120565
18	1733	207104.d	207104		1	6.13	255407	9.11	139159	11.75	216546	16.46	154762	19.05	126731

2.26.13 VD

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130223.b

ARI Job No.: DFTP Method: DF8270.m Instrument: nt11.i Date: 23-FEB-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0936	df0223.d	DFTPP 10		1	NO MANUAL INTEGRATION
0951	ic0223a.d	SIM 250		1	NO MANUAL INTEGRATION
1020	ic0223b.d	SIM 1000		1	NO MANUAL INTEGRATION
1050	ic0223c.d	SIM 10		1	NO MANUAL INTEGRATION
1119	ic0223d.d	SIM 500		1	NO MANUAL INTEGRATION
1148	ic0223e.d	SIM 50		1	NO MANUAL INTEGRATION
1217	ic0223f.d	SIM 100		1	NO MANUAL INTEGRATION
1245	icv0223.d	SIM ICV 250		1	NO MANUAL INTEGRATION
1607	we13a.d	WE13A	MW-4	1	NO MANUAL INTEGRATION
1636	we13b.d	WE13B	MW-5	1	NO MANUAL INTEGRATION
1412	we13mb.d	WE13MBW1	WE13MBW1	1	NO MANUAL INTEGRATION
1538	we13qls1.d	WE13QLS1		1	NO MANUAL INTEGRATION
1440	we13sb.d	WE13LCSW1	WE13LCSW1	1	NO MANUAL INTEGRATION
1509	we13sbd.d	WE13LCSDW1	WE13LCSDW1	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130223.b/lowsim.m
Batch File: /chem3/nt11.i/20130223.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	ic0223a	ic0223b	ic0223c	ic0223d	ic0223e	ic0223f
INJ.DATE:	23-FEB-2013	23-FEB-2013	23-FEB-2013	23-FEB-2013	23-FEB-2013	23-FEB-2013
INJ.TIME:	09:51	10:20	10:50	11:19	11:48	12:17

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	6.134	6.134	6.134	6.134	6.134	6.134	6.134	5.884-6.384	6.134	0.000
	5 Naphthalene	6.176	6.165	6.176	6.165	6.165	6.165	6.176	5.926-6.426	6.169	0.005
$	6 2-Methylnaphthalene-d1	7.111	7.111	7.111	7.111	7.111	7.111	7.111	6.861-7.361	7.111	0.000
	7 2-Methylnaphthalene	7.163	7.163	7.163	7.163	7.163	7.163	7.163	6.913-7.413	7.163	0.000
	8 1-Methylnaphthalene	7.415	7.415	7.415	7.415	7.415	7.415	7.415	7.165-7.665	7.415	0.000
	10 Acenaphthylene	8.950	8.950	8.950	8.950	8.950	8.950	8.950	8.700-9.200	8.950	0.000
*	11 Acenaphthene-d10	9.105	9.105	9.105	9.105	9.105	9.105	9.105	8.855-9.355	9.105	0.000
	12 Acenaphthene	9.172	9.172	9.172	9.172	9.172	9.172	9.172	8.922-9.422	9.172	0.000
	14 Dibenzofuran	9.382	9.371	9.382	9.371	9.371	9.382	9.382	9.132-9.632	9.376	0.006
	15 Fluorene	9.991	9.991	9.991	9.991	9.991	9.991	9.991	9.741-10.241	9.991	0.000
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++
*	18 Phenanthrene-d10	11.762	11.751	11.751	11.751	11.751	11.751	11.762	11.512-12.012	11.753	0.004
	19 Phenanthrene	11.796	11.796	11.796	11.796	11.796	11.796	11.796	11.546-12.046	11.796	0.000
	20 Anthracene	11.851	11.851	11.851	11.851	11.851	11.851	11.851	11.601-12.101	11.851	0.000
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	13.840	13.840	13.840	13.840	13.840	13.840	13.840	13.590-14.090	13.840	0.000

Reviewer 1 VD Date: 2.26.17
Reviewer 2 Date: 2/27/17

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130223.b/lowsim.m
Batch File: /chem3/nt11.i/20130223.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
24 Fluoranthene	13.868	13.868	13.869	13.868	13.869	13.869	13.868	13.618-14.118	13.869	0.000
25 Pyrene	14.358	14.358	14.359	14.358	14.359	14.359	14.358	14.108-14.608	14.359	0.000
28 Benzo(a)anthracene	16.375	16.367	16.367	16.367	16.367	16.367	16.375	16.125-16.625	16.368	0.003
* 29 Chrysene-d12	16.466	16.466	16.458	16.458	16.458	16.458	16.466	16.216-16.716	16.461	0.004
30 Chrysene	16.516	16.508	16.508	16.508	16.508	16.508	16.516	16.266-16.766	16.509	0.003
44 Benzo(b)fluoranthene	18.156	18.156	18.156	18.156	18.156	18.156	18.156	17.906-18.406	18.156	0.000
45 Benzo(k)fluoranthene	18.195	18.195	18.195	18.195	18.195	18.195	18.195	17.945-18.445	18.195	0.000
46 Benzo(j)fluoranthene	18.243	18.243	18.243	18.243	18.243	18.243	18.243	17.993-18.493	18.243	0.000
34 Benzo(a)pyrene	18.877	18.877	18.877	18.877	18.877	18.877	18.877	18.627-19.127	18.877	0.000
* 35 Perylene-d12	19.059	19.050	19.050	19.050	19.050	19.050	19.059	18.809-19.309	19.051	0.004
$ 36 Dibenzo(a,h)anthracene	21.096	21.096	21.096	21.096	21.096	21.096	21.096	20.846-21.346	21.096	0.000
37 Indeno(1,2,3-cd)pyrene	21.196	21.196	21.196	21.196	21.196	21.196	21.196	20.946-21.446	21.196	0.000
38 Dibenzo(a,h)anthracene	21.196	21.185	21.185	21.185	21.185	21.185	21.196	20.946-21.446	21.187	0.004
39 Benzo(g,h,i)perylene	22.104	22.104	22.093	22.093	22.093	22.093	22.104	21.854-22.354	22.097	0.006
47 Perylene	19.107	19.107	19.108	19.107	19.108	19.108	19.107	18.857-19.357	19.107	0.000

Data File: /chem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

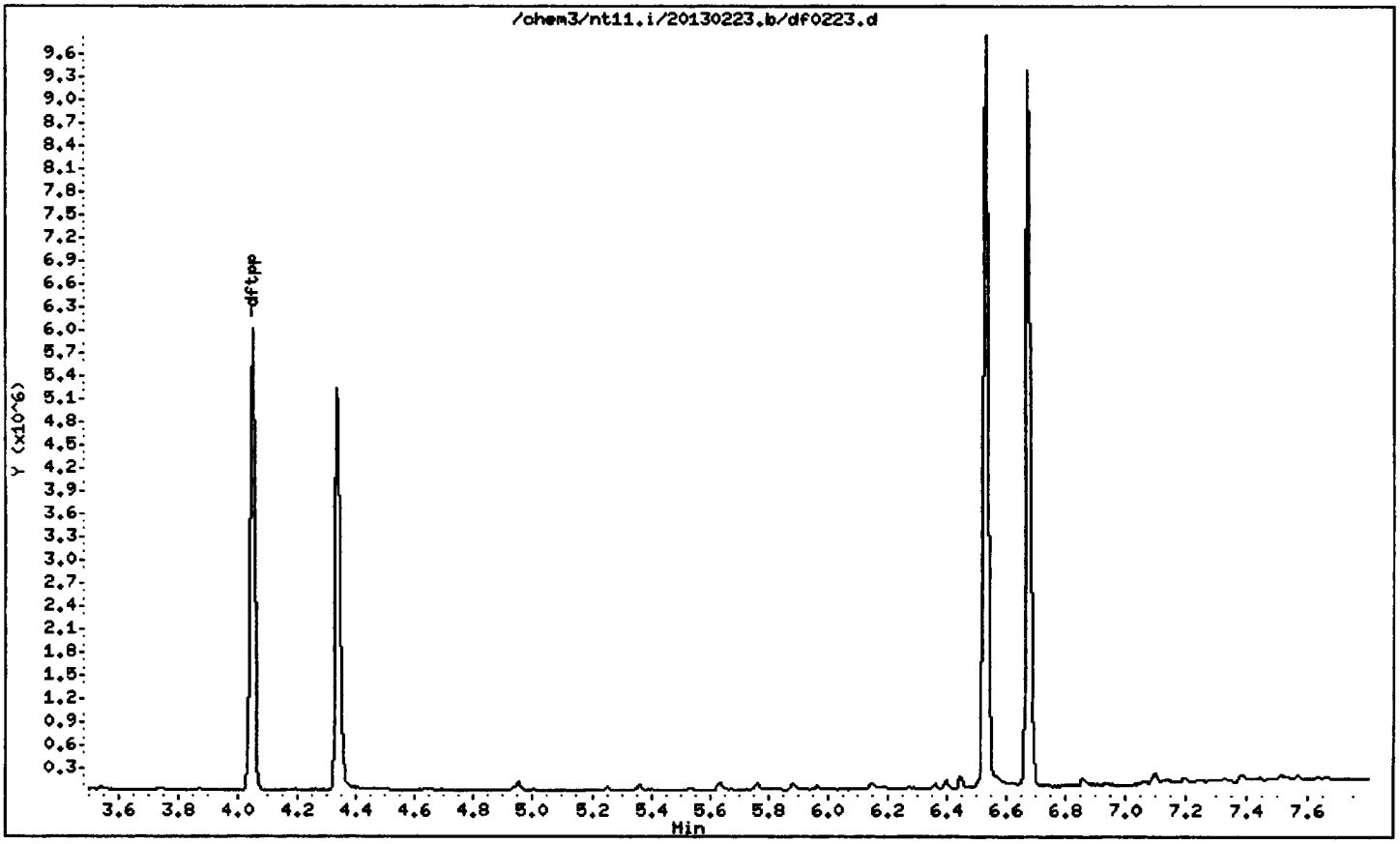
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rx1-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

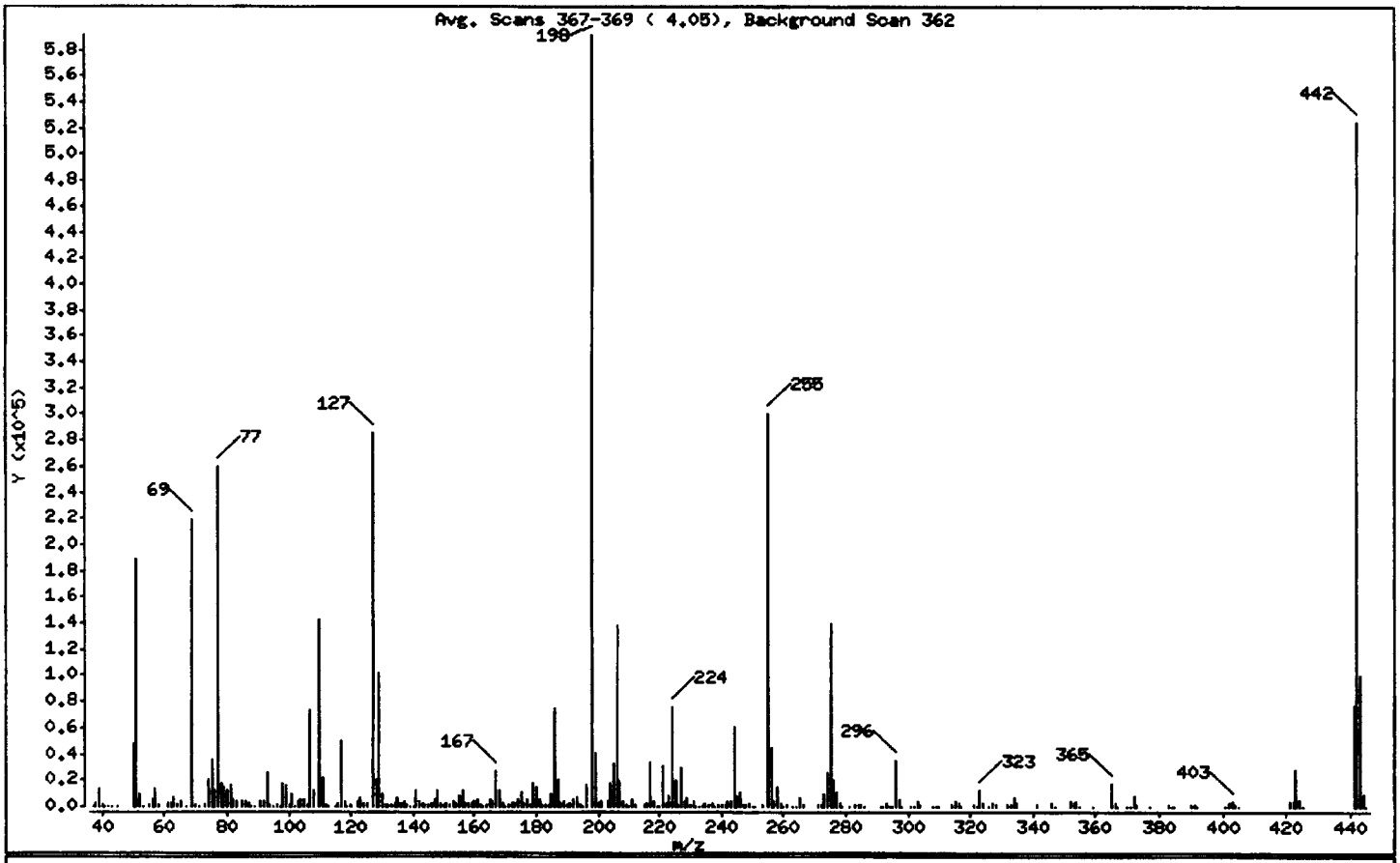
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	31.97
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	37.09
70	Less than 2.00% of mass 69	0.20 (0.53)
127	10.00 - 80.00% of mass 198	48.29
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 60.00% of mass 198	23.58
365	Greater than 1.00% of mass 198	2.90
441	0.01 - 24.00% of mass 442	13.02 (14.69)
442	50.00 - 200.00% of mass 198	88.63
443	15.00 - 24.00% of mass 442	16.95 (19.13)

Data File: /ohem3/nt11.i/20130223.b/df0223.d

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0223.d

Spectrum: Avg. Scans 367-369 (4.05), Background Scan 362

Location of Maximum: 198.00

Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	87	127.00	285696	201.00	3636	285.00	2018
38.00	2104	128.00	20472	203.00	3970	286.00	190
39.00	13694	129.00	102440	204.00	18320	291.00	440
40.00	781	130.00	8947	205.00	32432	292.00	491
41.00	369	131.00	1836	206.00	139008	293.00	2988
42.00	571	132.00	1093	207.00	18720	294.00	222
43.00	274	133.00	794	208.00	4468	295.00	393
45.00	525	134.00	2890	209.00	1199	296.00	35608
50.00	48064	135.00	7460	210.00	499	297.00	4935
51.00	189120	136.00	3328	211.00	5750	298.00	356
52.00	9614	137.00	4379	212.00	992	301.00	605
53.00	260	138.00	1207	215.00	1133	302.00	499
55.00	1592	139.00	232	216.00	2227	303.00	4743
56.00	5449	140.00	648	217.00	34312	304.00	1033
57.00	14123	141.00	11563	218.00	4578	308.00	363
58.00	761	142.00	3631	219.00	540	309.00	217
61.00	2804	143.00	2718	220.00	243	310.00	210
62.00	2969	144.00	867	221.00	31560	314.00	1587
63.00	7096	145.00	843	222.00	2462	315.00	4117
64.00	1390	146.00	2620	223.00	8679	316.00	2285
65.00	4494	147.00	5579	224.00	76032	317.00	381
67.00	663	148.00	12583	225.00	20892	321.00	1252
69.00	219456	149.00	3106	226.00	1391	322.00	301
70.00	1159	150.00	1303	227.00	29320	323.00	12190
71.00	394	151.00	2215	228.00	3953	324.00	2644
73.00	1075	152.00	1200	229.00	6381	326.00	176
74.00	21080	153.00	3757	230.00	873	327.00	2233
75.00	35568	154.00	3348	231.00	3573	328.00	1061
76.00	12220	155.00	7965	232.00	246	332.00	772
77.00	259264	156.00	11745	233.00	584	333.00	968
78.00	17496	157.00	2294	234.00	1734	334.00	7370
79.00	15272	158.00	2872	235.00	2209	335.00	2642
80.00	11616	159.00	2439	236.00	1621	341.00	1531
81.00	16672	160.00	4185	237.00	2569	346.00	2517
82.00	4861	161.00	5614	238.00	409	347.00	213

Date : 23-FEB-2013 09:36

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0223.d
Spectrum: Avg. Scans 367-369 (4.05), Background Scan 362
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	3674	162.00	1873	239.00	1453	352.00	4182
85.00	4045	163.00	588	240.00	1096	353.00	2655
86.00	3583	164.00	736	241.00	1902	354.00	4443
87.00	2329	165.00	4817	242.00	4204	355.00	554
88.00	556	166.00	4083	243.00	3830	359.00	312
89.00	209	167.00	26624	244.00	61184	365.00	17144
91.00	4040	168.00	12011	245.00	8071	366.00	2766
92.00	4309	169.00	2414	246.00	10664	367.00	168
93.00	25176	170.00	669	247.00	1812	370.00	257
94.00	1657	171.00	1064	248.00	754	371.00	670
95.00	532	172.00	2358	249.00	2141	372.00	7502
96.00	1439	173.00	3256	250.00	482	373.00	1640
97.00	436	174.00	5621	251.00	265	377.00	460
98.00	18032	175.00	10303	252.00	228	383.00	1904
99.00	15688	176.00	3308	253.00	1624	384.00	238
100.00	919	177.00	5015	255.00	300224	385.00	218
101.00	9474	178.00	1568	256.00	44856	390.00	907
102.00	554	179.00	18272	257.00	3564	391.00	784
103.00	3556	180.00	14686	258.00	14980	392.00	229
104.00	5899	181.00	5483	259.00	3085	401.00	423
105.00	5084	182.00	1421	260.00	589	402.00	2971
106.00	1322	183.00	772	261.00	718	403.00	4024
107.00	73912	184.00	1234	263.00	167	404.00	1453
108.00	11775	185.00	9615	264.00	610	405.00	392
110.00	143040	186.00	75216	265.00	6208	421.00	4156
111.00	21544	187.00	19976	266.00	806	422.00	3577
112.00	1985	188.00	2441	271.00	878	423.00	28360
113.00	528	189.00	3472	272.00	862	424.00	5622
115.00	234	190.00	828	273.00	9352	426.00	391
116.00	3241	191.00	2147	274.00	25336	441.00	77024
117.00	50824	192.00	6079	275.00	139456	442.00	524416
118.00	3973	193.00	6426	276.00	20216	443.00	100312
119.00	204	194.00	1474	277.00	10549	444.00	9753
120.00	911	195.00	609	278.00	2300	445.00	435
122.00	4758	196.00	16105	279.00	484		

Date : 23-FEB-2013 09:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

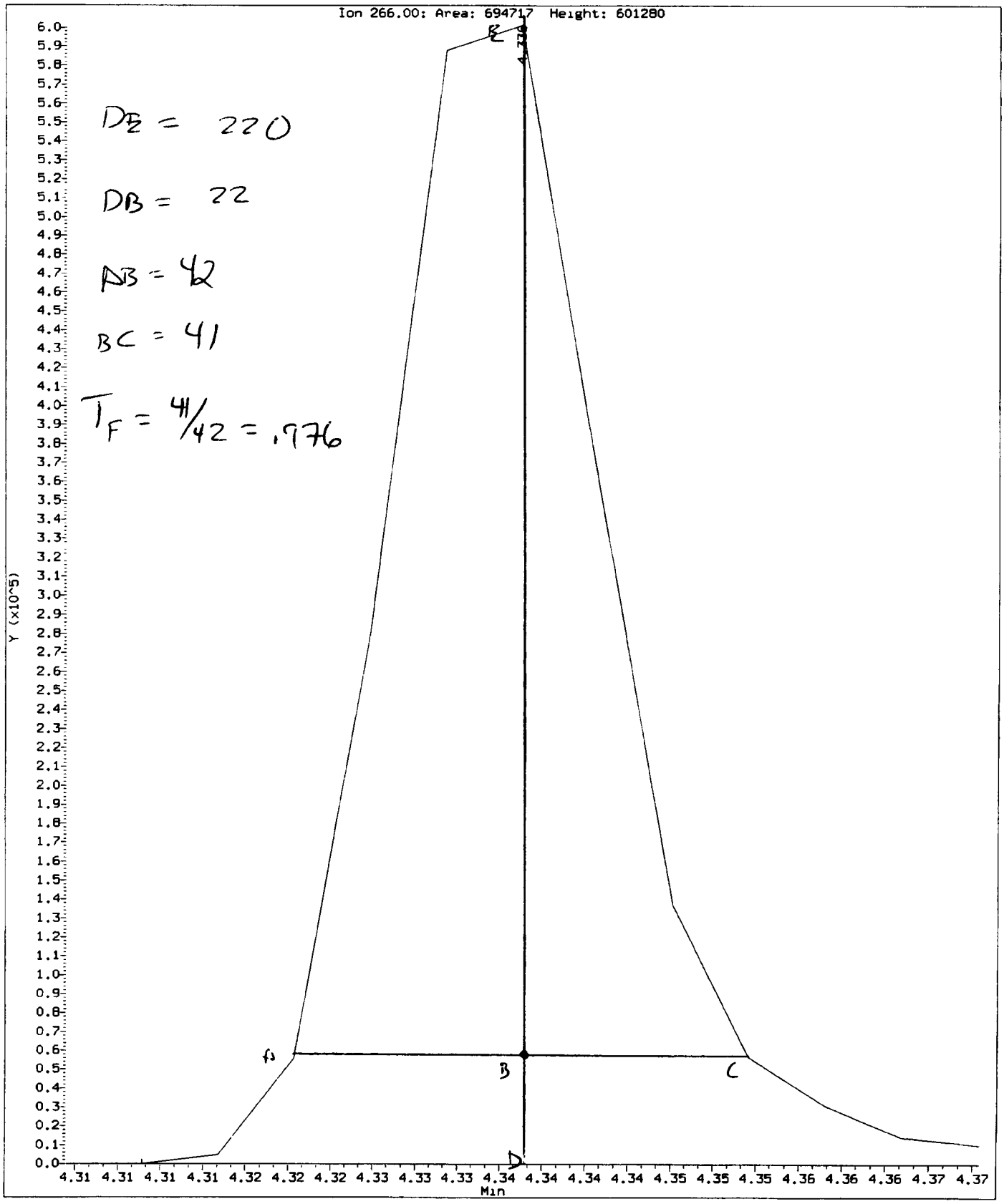
Column diameter: 0.25

Data File: df0223.d
Spectrum: Avg. Scans 367-369 (4.05), Background Scan 362
Location of Maximum: 198.00
Number of points: 288

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	6967	198.00	591680	281.00	179		
124.00	3223	199.00	40552	283.00	1444		
125.00	3257	200.00	2987	284.00	926		

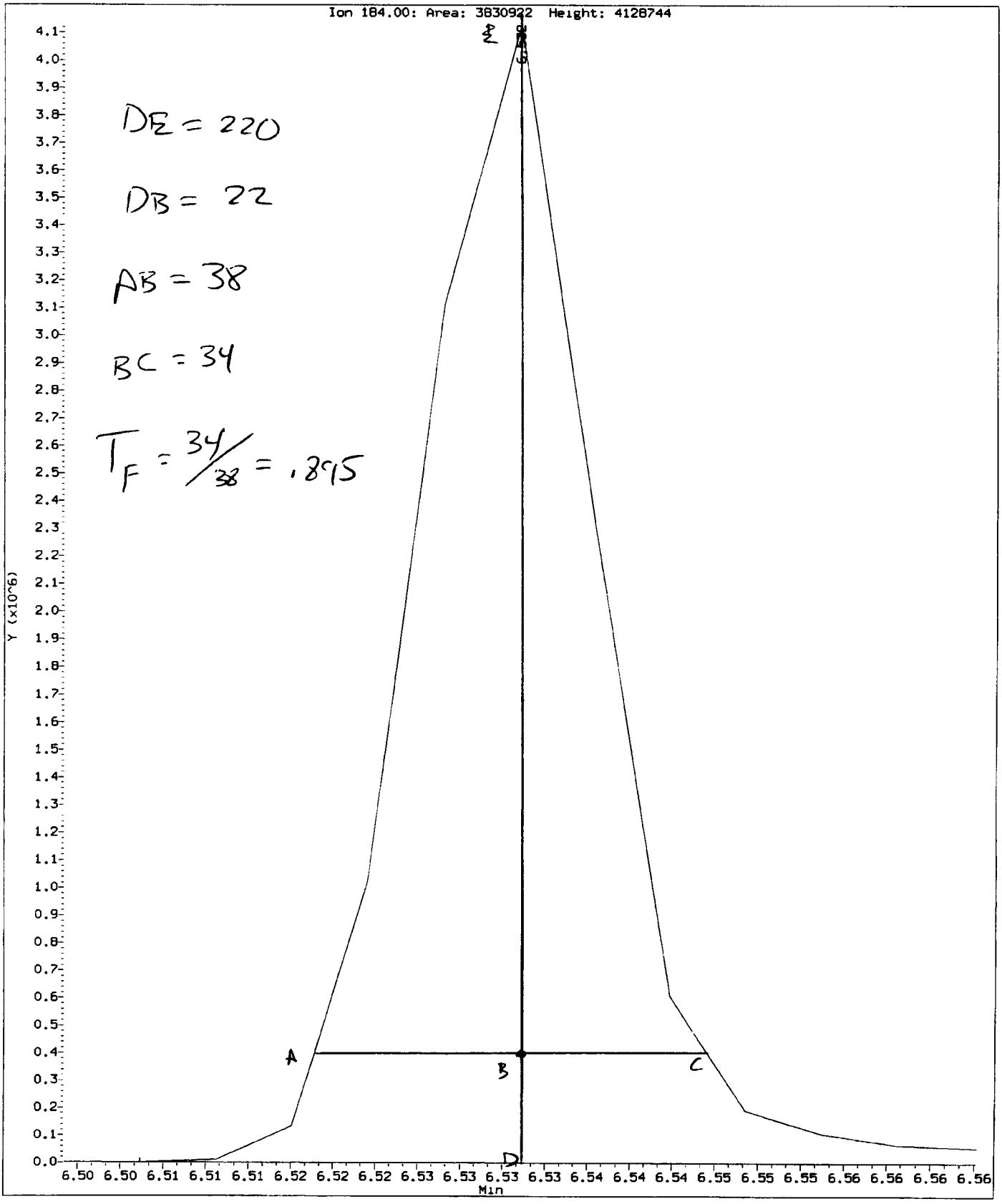
Data File: /chem3/nt11.i/20130223.b/DDT.b/df0223.d
Injection Date: 23-FEB-2013 09:36
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20130223.b/DDT.b/df0223.d
Injection Date: 23-FEB-2013 09:36
Instrument: nt11.1
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130223.b/DDT.b/df0223.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130223.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 23-FEB-2013 09:36 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.336	694717
Benzidine	6.532	3830922
4,4'-DDE	5.966	4749
4,4'-DDD	6.447	30439
4,4'-DDT	6.671	1775888

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

$$\text{DDT Percent Breakdown} = \frac{(\ 4749 + 30439) * 100}{(\ 4749 + 30439 + 1775888)}$$

DDT Percent Breakdown = 1.9 %

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130223.b

Instrument: nt11.i Date: 23-FEB-2013 Method: lowsim.m

INITIAL CAL: 23-FEB-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 23-FEB-2013

Compound	%D
NO Q-FLAGS	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 23-Feb-2013 12:48 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130223.b/ic0223c.d
Level 2: /chem3/nt11.i/20130223.b/ic0223e.d
Level 3: /chem3/nt11.i/20130223.b/ic0223f.d
Level 4: /chem3/nt11.i/20130223.b/ic0223a.d
Level 5: /chem3/nt11.i/20130223.b/ic0223d.d
Level 6: /chem3/nt11.i/20130223.b/ic0223b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
5 Naphthalene	1.17986	1.07038	1.12173	1.07243	1.05630	1.06975	1.09508	4.315
7 2-Methylnaphthalene	0.70009	0.65437	0.70055	0.68821	0.67773	0.69131	0.68537	2.535
8 1-Methylnaphthalene	0.73994	0.65390	0.70042	0.68367	0.67218	0.68373	0.68897	4.255
10 Acenaphthylene	1.84021	1.67975	1.75477	1.78640	1.78255	1.87074	1.78573	3.748
12 Acenaphthene	1.22752	1.13659	1.19934	1.16361	1.16498	1.18041	1.17874	2.683
14 Dibenzofuran	1.81808	1.67485	1.78559	1.66071	1.66927	1.69412	1.71710	3.921
15 Fluorene	1.33744	1.22307	1.28298	1.27056	1.27104	1.30630	1.28190	2.999
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.29147	1.19136	1.28319	1.20741	1.21515	1.22365	1.23537	3.376
20 Anthracene	1.16152	1.07209	1.18065	1.15970	1.15909	1.21883	1.15865	4.159
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.21654	1.13663	1.25125	1.23561	1.23597	1.25192	1.22132	3.559
25 Pyrene	1.74397	1.53685	1.69519	1.67448	1.70011	1.69862	1.67487	4.259
28 Benzo(a)anthracene	1.42951	1.29246	1.40124	1.39924	1.37922	1.40235	1.38400	3.441
30 Chrysene	1.51404	1.35660	1.48567	1.40588	1.41140	1.40779	1.43023	4.073
44 Benzo(b)fluoranthene	1.63909	1.53504	1.64903	1.50529	1.61012	1.57183	1.58507	3.644
45 Benzo(k)fluoranthene	1.82896	1.54799	1.66440	1.77352	1.75834	1.76863	1.72364	5.869
46 Benzo(j)fluoranthene	1.71085	1.80116	1.88590	1.70137	1.70454	1.69282	1.74944	4.451
34 Benzo(a)pyrene	1.37546	1.25064	1.35897	1.34791	1.34169	1.35196	1.33777	3.306
37 Indeno(1,2,3-cd)pyrene	1.64325	1.52366	1.70267	1.64740	1.67639	1.68623	1.64660	3.910
38 Dibenzo(a,h)anthracene	1.42304	1.20093	1.36598	1.30065	1.32370	1.32911	1.32390	5.580

Analytical Resources, Inc.

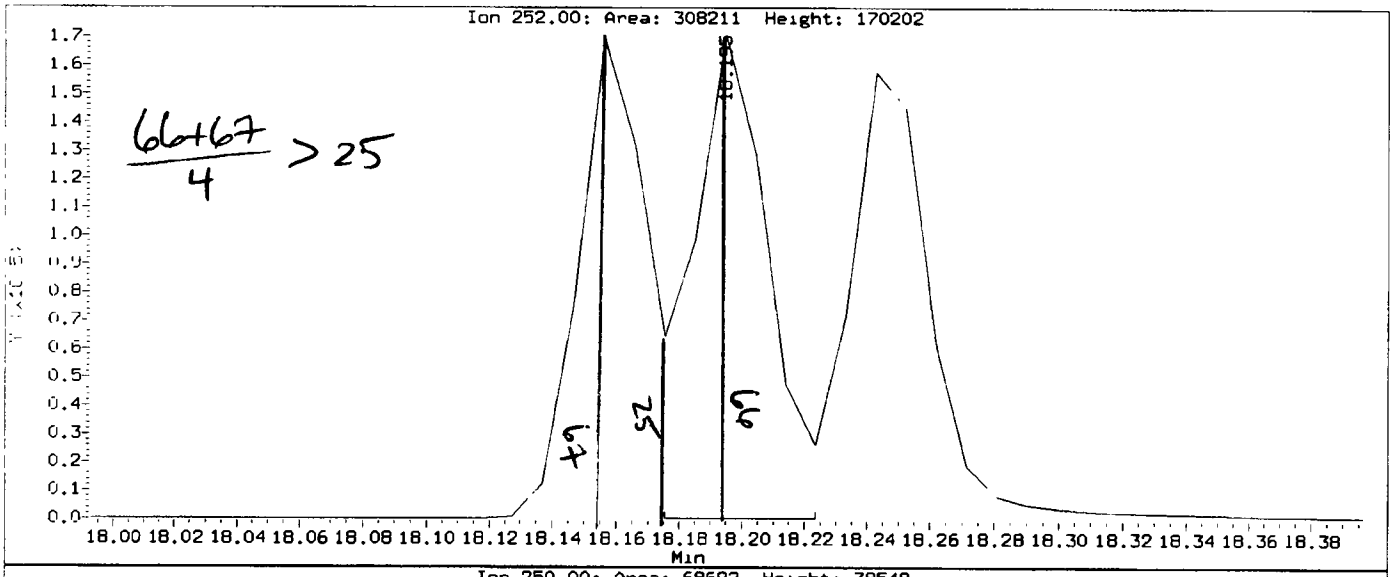
INITIAL CALIBRATION DATA

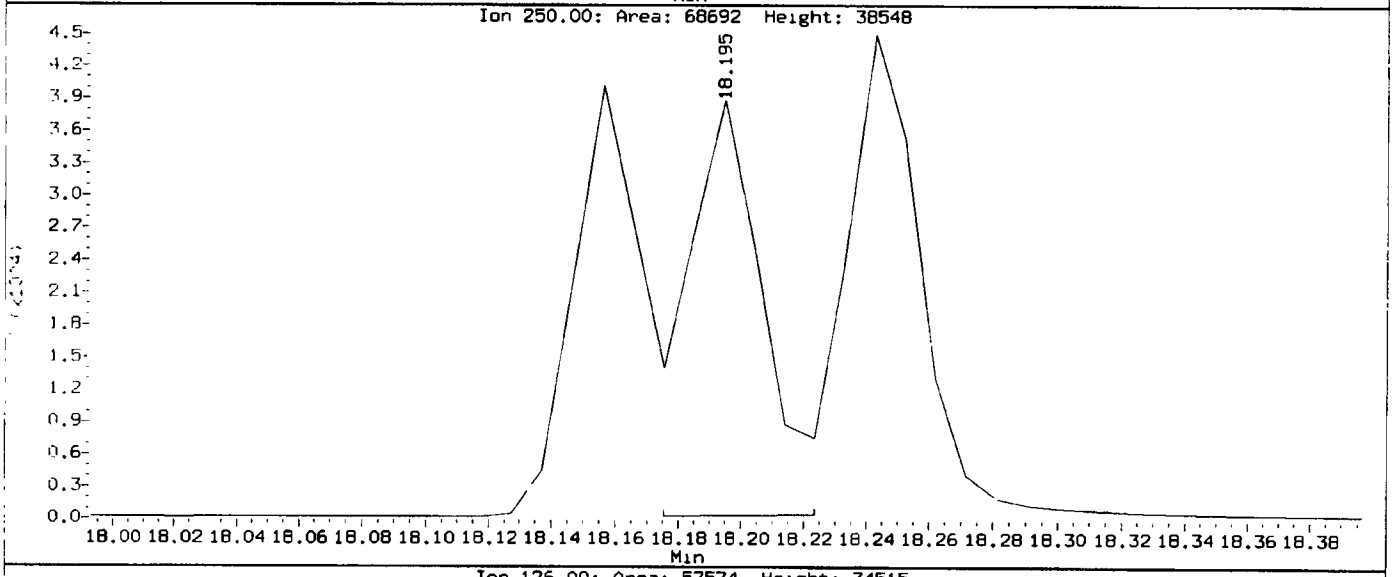
Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 23-Feb-2013 12:48 van
Curve Type : Average

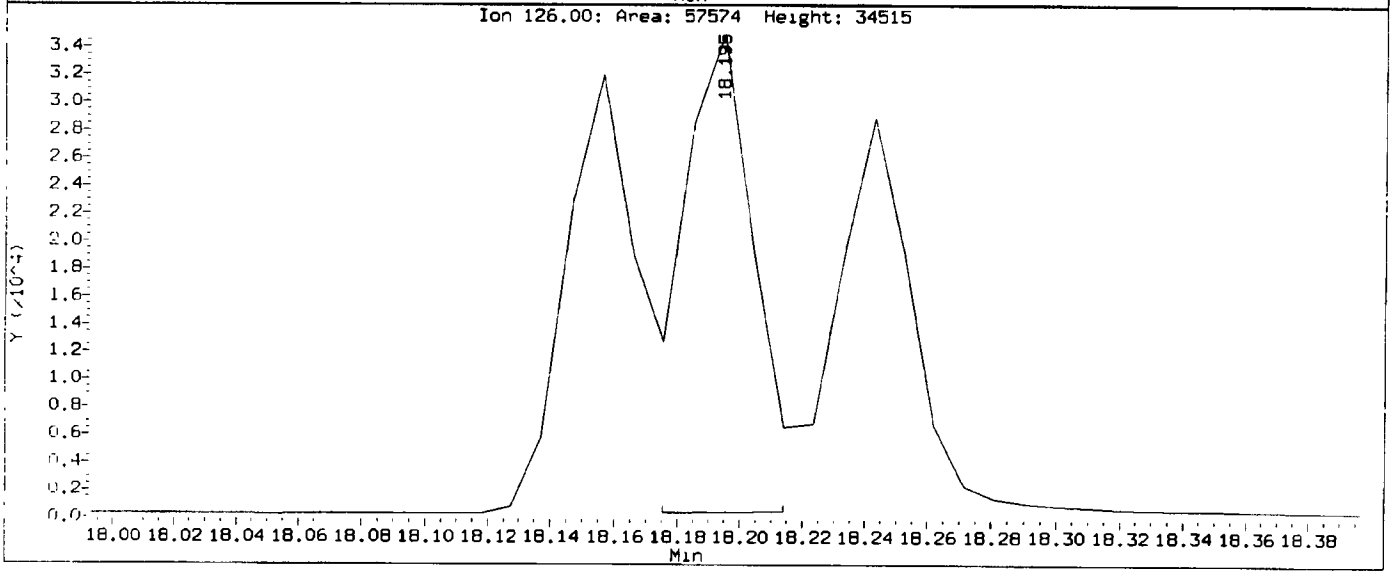
Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
39 Benzo(g,h,i)perylene	1.63740	1.39502	1.50380	1.42776	1.44835	1.42748	1.47330	5.978
47 Perylene	1.60629	1.44987	1.57488	1.50213	1.50270	1.50783	1.52395	3.718
$ 6 2-Methylnaphthalene-d10	0.62998	0.61614	0.64871	0.63509	0.62909	0.63828	0.63288	1.713
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	0.99851	0.95924	1.04391	1.06478	1.05975	1.09373	1.03665	4.742
$ 36 Dibenzo(a,h)anthracene-d14	1.08287	1.08091	1.18009	1.16289	1.17177	1.17924	1.14296	4.174

Data File: /chem3/nt11.i/20130223.b/ic0223a.d
Injection Date: 23-FEB-2013 09:51
Instrument: nt11.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number:







Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223a.d
Lab Smp Id: SIM 250
Inj Date : 23-FEB-2013 09:51
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	255285	200 000	
	5 Naphthalene	128	6.176	6.165	(1.007)	342218	250 000	245
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	202662	250.000	251
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	219611	250.000	251
	8 1-methylnaphthalene	142	7.415	7.415	(1.209)	218163	250.000	248
	10 Acenaphthylene	152	8.950	8 950	(0.983)	319075	250.000	250
*	11 Acenaphthene-d10	164	9.105	9.105	(1.000)	142891	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	207836	250.000	247
	14 Dibenzofuran	168	9.382	9.382	(1.030)	296626	250.000	242
	15 Fluorene	166	9.991	9.991	(1.097)	226939	250 000	248
*	18 Phenanthrene-d10	188	11.762	11.751	(1.000)	220853	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.003)	333326	250.000	244
	20 Anthracene	178	11 851	11.851	(1.008)	320155	250 000	250
$	23 Fluoranthene-d10	212	13.840	13.840	(1.177)	293951	250.000	257
	24 Fluoranthene	202	13.868	13.869	(1.179)	341109	250.000	253
	25 Pyrene	202	14.358	14.359	(0.872)	340181	250.000	250
	28 Benzo(a)anthracene	228	16 375	16.367	(0.994)	284264	250 000	253
*	29 Chrysene-d12	240	16.466	16.458	(1.000)	162525	200.000	
	30 Chrysene	228	16.516	16.508	(1.003)	285614	250.000	246
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	261597	250.000	237
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	308211	250.000	257
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.957)	295672	250.000	243
	34 Benzo(a)pyrene	252	18.877	18.877	(0.990)	234246	250.000	252
*	35 Perylene-d12	264	19.059	19.050	(1.000)	139028	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21 196	21.196	(1.112)	286294	250.000	250
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	202092	250.000	254

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.196	21.185	(1.112)	226033	250.000	246
39 Benzo(g,h,i)perylene	276	22 104	22.093	(1.160)	248124	250.000	242
47 Perylene	252	19 107	19.108	(1.003)	261047	250.000	246

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223a.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	255285	0.00
11 Acenaphthene-d10	142891	71446	285782	142891	0.00
18 Phenanthrene-d10	220853	110426	441706	220853	0.00
29 Chrysene-d12	162525	81262	325050	162525	0.00
35 Perylene-d12	139028	69514	278056	139028	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.76	0.00
29 Chrysene-d12	16.47	15.97	16.97	16.47	0.00
35 Perylene-d12	19.06	18.56	19.56	19.06	0.00

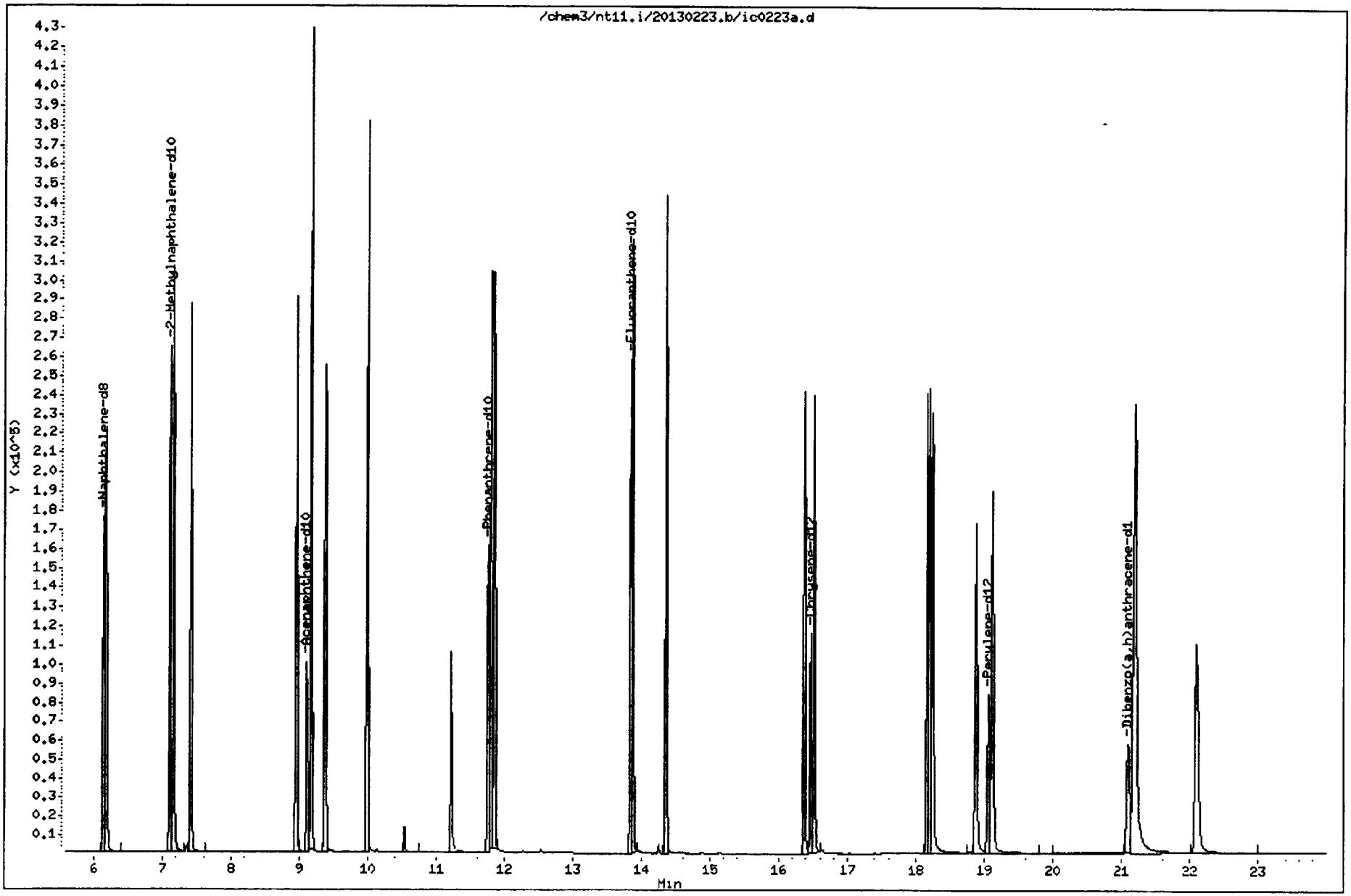
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223a.d
Date : 23-FEB-2013 09:51
Client ID:
Sample Info: SIM 260

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223a.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS
21.196	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.196	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223b.d
Lab Smp Id: SIM 1000
Inj Date : 23-FEB-2013 10:20
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 1000
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4	Naphthalene-d8	136	6.134	6.134	(1.000)	261768	200.000	
	5	Naphthalene	128	6.165	6.165	(1.005)	1400135	1000.00	977
$	6	2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	835406	1000 00	1010
	7	2-Methylnaphthalene	142	7.163	7.163	(1.168)	904810	1000.00	1010
	8	1-methylnaphthalene	142	7.415	7.415	(1.209)	894890	1000.00	992
	10	Acenaphthylene	152	8.950	8.950	(0.983)	1378031	1000.00	1050
*	11	Acenaphthene-d10	164	9.105	9.105	(1.000)	147325	200.000	
	12	Acenaphthene	153	9.172	9.172	(1.007)	869519	1000.00	1000
	14	Dibenzofuran	168	9.371	9.382	(1.029)	1247933	1000.00	987
	15	Fluorene	166	9.991	9.991	(1.097)	962250	1000.00	1020
*	18	Phenanthrene-d10	188	11.751	11.751	(1.000)	227826	200.000	
	19	Phenanthrene	178	11.796	11.796	(1.004)	1393902	1000.00	991
	20	Anthracene	178	11.851	11.851	(1.008)	1388411	1000 00	1050
$	23	Fluoranthene-d10	212	13.840	13.840	(1 178)	1245902	1000.00	1060
	24	Fluoranthene	202	13.868	13.869	(1.180)	1426096	1000.00	1030
	25	Pyrene	202	14.358	14.359	(0.872)	1422284	1000.00	1010
	28	Benzo(a)anthracene	228	16.367	16.367	(0.994)	1174210	1000.00	1010
*	29	Chrysene-d12	240	16.466	16 458	(1.000)	167463	200.000	
	30	Chrysene	228	16.508	16.508	(1.003)	1178764	1000.00	984
	44	Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	1104910	1000.00	992
	45	Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	1243248	1000.00	1030
	46	Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	1189959	1000.00	968
	34	Benzo(a)pyrene	252	18.877	18.877	(0.991)	950356	1000 00	1010
*	35	Perylene-d12	264	19.050	19.050	(1.000)	140589	200.000	
	37	Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1.113)	1185324	1000.00	1020
$	36	Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	828941	1000.00	1030

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21 185	21 185	(1.112)	934294	1000.00	1000
39 Benzo(g,h,i)perylene	276	22.104	22.093	(1.160)	1003437	1000.00	969
47 Perylene	252	19.107	19.108	(1.003)	1059924	1000.00	989

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223b.d
Lab Smp Id: SIM 1000
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	261768	2.54
11 Acenaphthene-d10	142891	71446	285782	147325	3.10
18 Phenanthrene-d10	220853	110426	441706	227826	3.16
29 Chrysene-d12	162525	81262	325050	167463	3.04
35 Perylene-d12	139028	69514	278056	140589	1.12

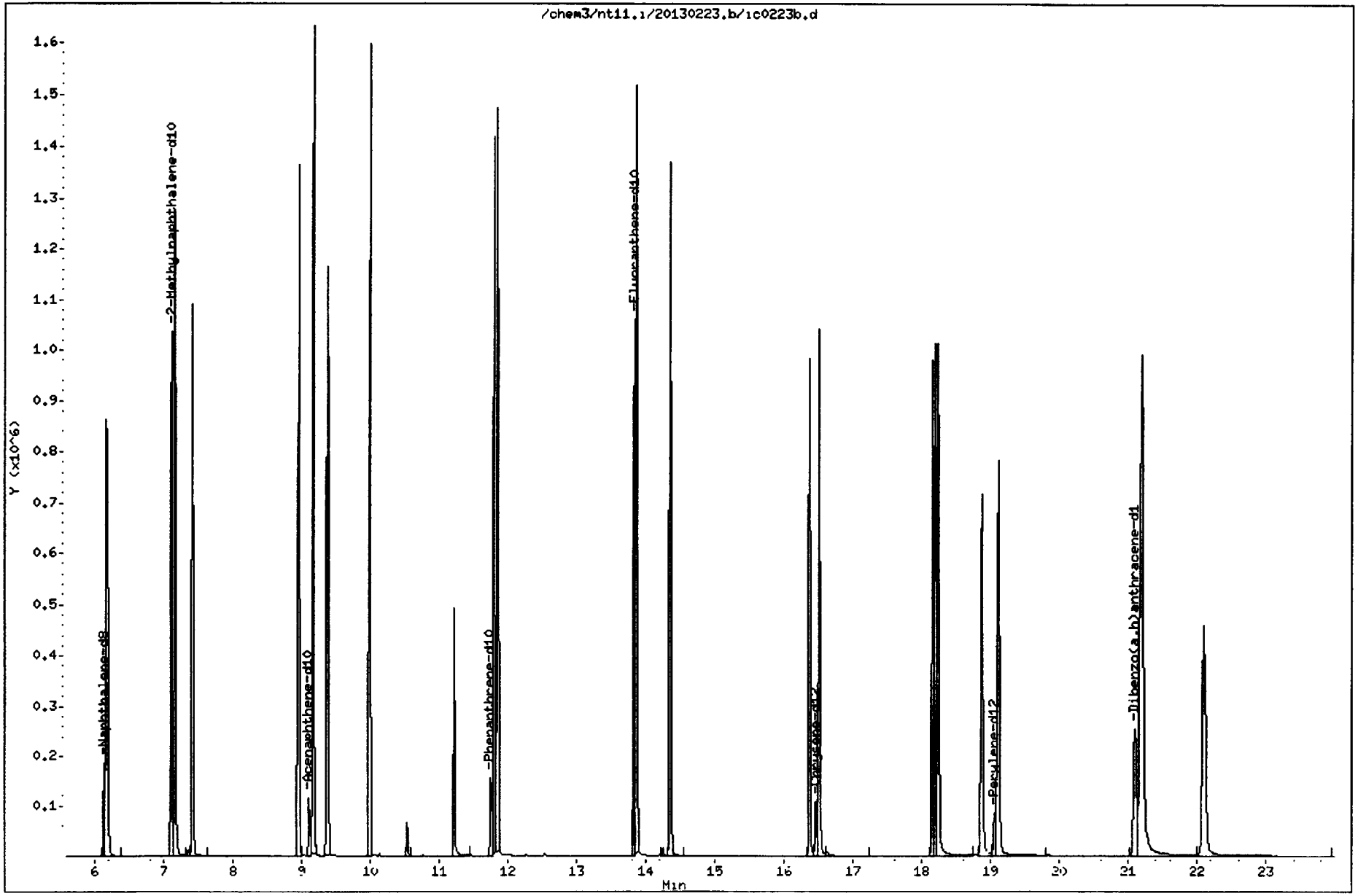
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.47	0.00
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

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

Data File: /chem3/nt11.1/20130223.b/1c0223b.d
Date : 23-FEB-2013 10:20
Client ID:
Sample Info: SIM 1000

Instrument: nt11.1

Operator: WTS
Column phase: Rxi-17Sil MS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223b.d

Lab ID: SIM 1000, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223c.d
Lab Smp Id: SIM 10
Inj Date : 23-FEB-2013 10:50
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 10
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	253912	200.000	
	5 Naphthalene	128	6.176	6.165	(1.007)	14979	10.0000	10.8
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	7998	10.0000	9.95
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	8888	10.0000	10.2
	8 1-methylnaphthalene	142	7.415	7 415	(1 209)	9394	10.0000	10.7
	10 Acenaphthylene	152	8 950	8.950	(0.983)	12807	10.0000	10.3
*	11 Acenaphthene-d10	164	9 105	9.105	(1.000)	139191	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	8543	10.0000	10 4
	14 Dibenzofuran	168	9.382	9.382	(1.030)	12653	10.0000	10.6
	15 Fluorene	166	9.991	9.991	(1.097)	9308	10.0000	10.4
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	212997	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	13754	10.0000	10.5
	20 Anthracene	178	11.851	11.851	(1.008)	12370	10 0000	10 0
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	10634	10.0000	9.63
	24 Fluoranthene	202	13.869	13.869	(1.180)	12956	10.0000	9.96
	25 Pyrene	202	14.359	14.359	(0.872)	13471	10.0000	10.4
	28 Benzo(a)anthracene	228	16.367	16.367	(0.994)	11042	10.0000	10.3
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	154487	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	11695	10.0000	10 6
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	10644	10.0000	10.3
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	11877	10.0000	10 6
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	11110	10.0000	9.78
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	8932	10.0000	10.3
*	35 Perylene-d12	264	19.050	19.050	(1.000)	129877	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21 196	(1.113)	10671	10.0000	9.98
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	7032	10.0000	9.47

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	9241	10.0000	10 7
39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	10633	10.0000	11.1
47 Perylene	252	19.108	19.108	(1.003)	10431	10.0000	10.5

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223c.d
Lab Smp Id: SIM 10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	253912	-0.54
11 Acenaphthene-d10	142891	71446	285782	139191	-2.59
18 Phenanthrene-d10	220853	110426	441706	212997	-3.56
29 Chrysene-d12	162525	81262	325050	154487	-4.95
35 Perylene-d12	139028	69514	278056	129877	-6.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

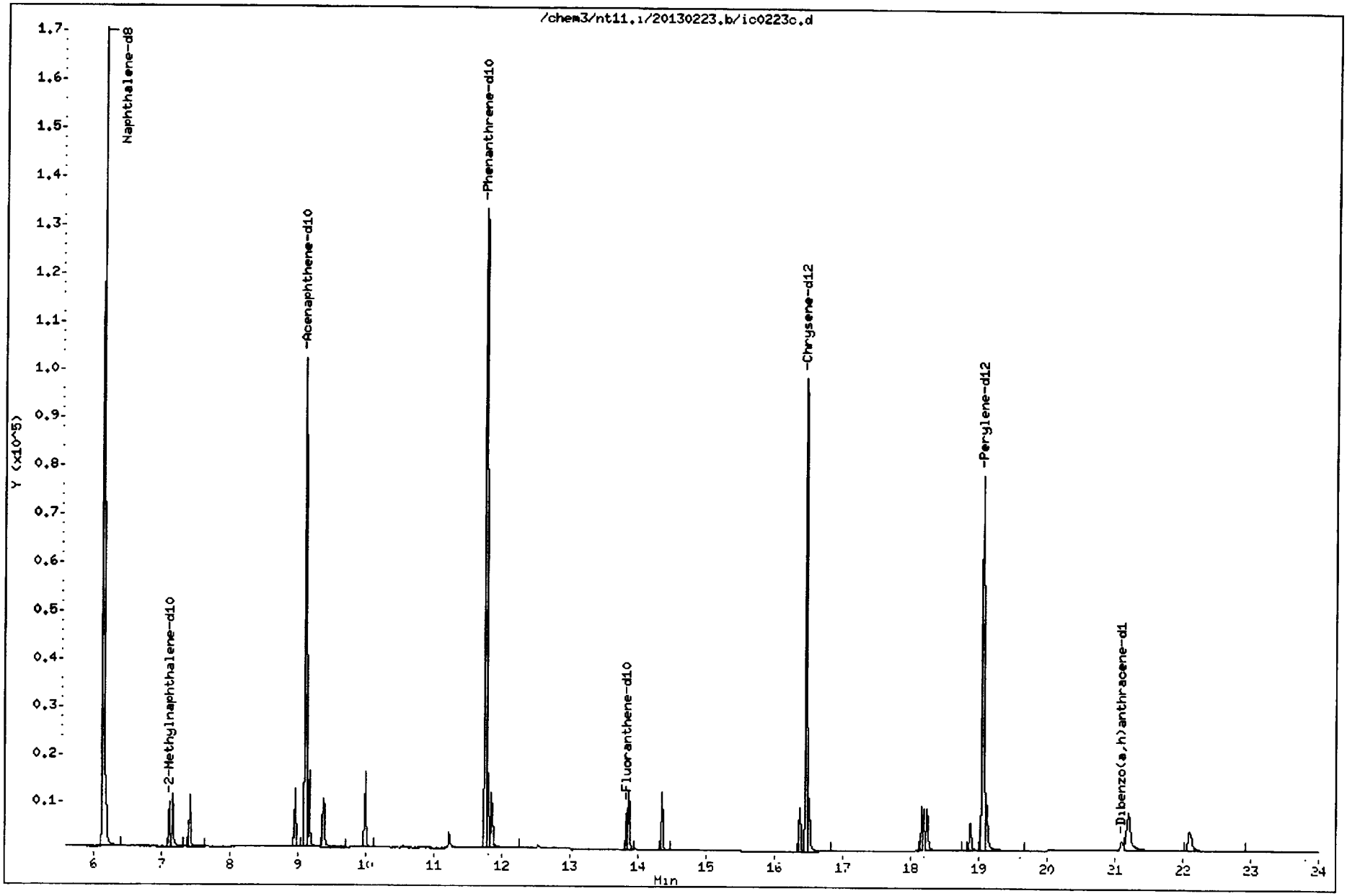
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223c.d
Date : 23-FEB-2013 10:50
Client ID:
Sample Info: SIM 10

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223c.d

Lab ID: SIM 10, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223d.d
Lab Smp Id: SIM 500
Inj Date : 23-FEB-2013 11:19
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 500
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	254492	200.000	
	5 Naphthalene	128	6.165	6.165	(1.005)	672050	500.000	482
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	400247	500.000	497
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	431191	500.000	494
	8 1-methylnaphthalene	142	7.415	7 415	(1.209)	427661	500.000	488
	10 Acenaphthylene	152	8.950	8.950	(0.983)	629280	500.000	499
*	11 Acenaphthene-d10	164	9.105	9.105	(1.000)	141209	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	411264	500.000	494
	14 Dibenzofuran	168	9.371	9.382	(1.029)	589291	500 000	486
	15 Fluorene	166	9.991	9.991	(1.097)	448706	500.000	496
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	217906	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	661971	500.000	492
	20 Anthracene	178	11.851	11.851	(1.008)	631431	500 000	500
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	577312	500.000	511
	24 Fluoranthene	202	13.868	13 869	(1.180)	673313	500.000	506
	25 Pyrene	202	14.358	14.359	(0.872)	670106	500.000	508
	28 Benzo(a)anthracene	228	16.367	16.367	(0.994)	543626	500.000	498
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	157662	200 000	
	30 Chrysene	228	16 508	16.508	(1.003)	556309	500.000	493
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	527291	500.000	508
	45 Benzo(k)fluoranthene	252	18.195	18 195	(0.955)	575831	500.000	510
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	558212	500.000	487
	34 Benzo(a)pyrene	252	18.877	18.877	(0 991)	439384	500.000	501
*	35 Perylene-d12	264	19.050	19.050	(1.000)	130994	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21 196	21.196	(1.113)	548992	500.000	509
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1 107)	383736	500.000	513

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	433493	500.000	500
39 Benzo(g,h,i)perylene	276	22 093	22.093	(1.160)	474314	500.000	492
47 Perylene	252	19 107	19.108	(1.003)	492112	500.000	493

VT 2.23.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223d.d
Lab Smp Id: SIM 500
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	254492	-0.31
11 Acenaphthene-d10	142891	71446	285782	141209	-1.18
18 Phenanthrene-d10	220853	110426	441706	217906	-1.33
29 Chrysene-d12	162525	81262	325050	157662	-2.99
35 Perylene-d12	139028	69514	278056	130994	-5.78

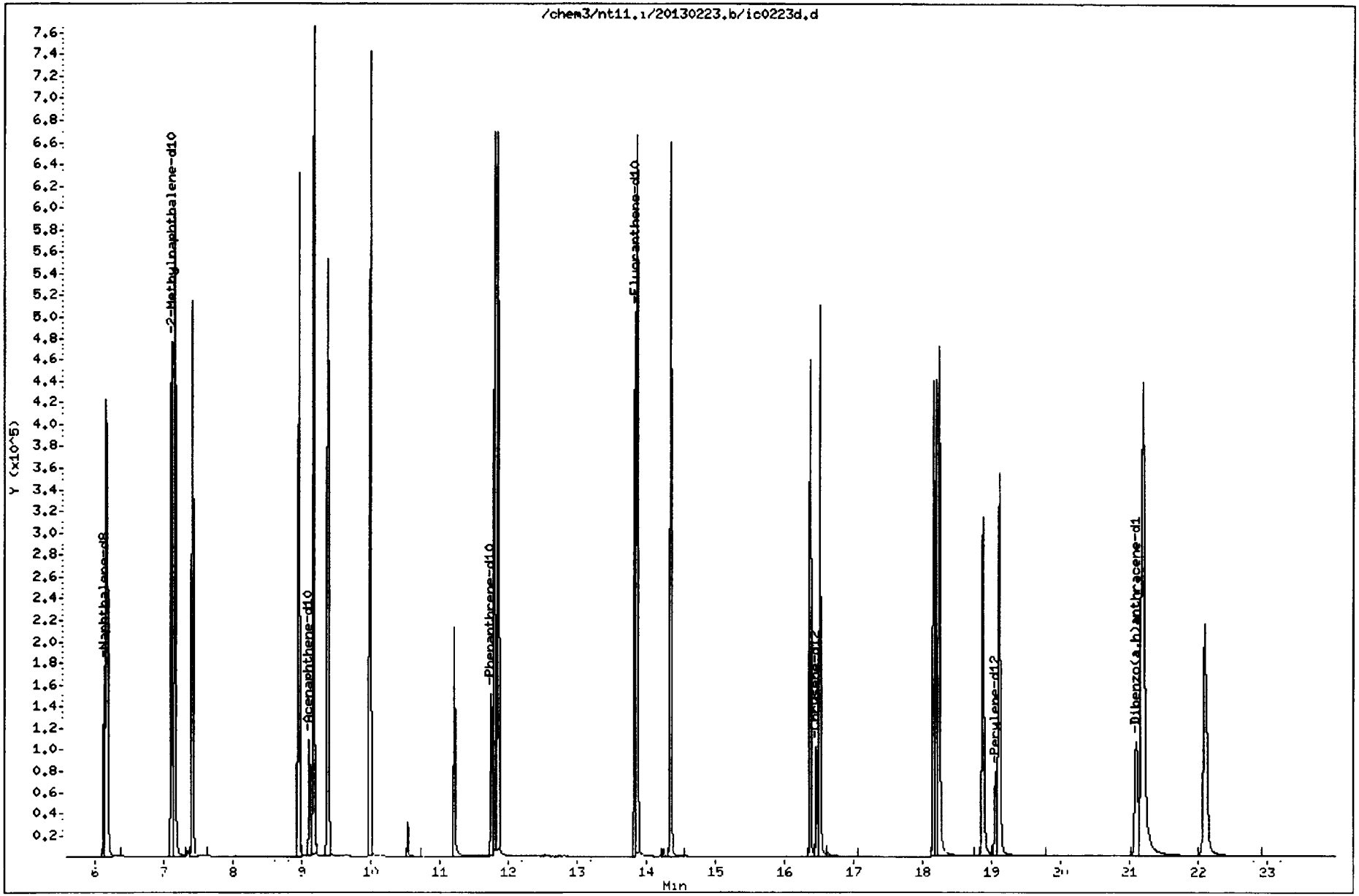
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

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

Data File: /chem3/nt11.i/20130223.b/ic0223d.d
Date : 23-FEB-2013 11:19
Client ID:
Sample Info: SIM 500

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25

Column phase: Rx1-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0223d.d

Lab ID: SIM 500, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223e.d
Lab Smp Id: SIM 50
Inj Date : 23-FEB-2013 11:48
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 50
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	247866	200 000	
	5 Naphthalene	128	6.165	6.165	(1.005)	66328	50.0000	48.9
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	38180	50.0000	48.7
	7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	40549	50.0000	47.7
	8 1-methylnaphthalene	142	7.415	7.415	(1 209)	40520	50.0000	47.5
	10 Acenaphthylene	152	8.950	8.950	(0.983)	56251	50.0000	47.0
*	11 Acenaphthene-d10	164	9.105	9.105	(1.000)	133951	200.000	
	12 Acenaphthene	153	9.172	9.172	(1.007)	38062	50.0000	48 2
	14 Dibenzofuran	168	9.371	9.382	(1.029)	56087	50.0000	48.8
	15 Fluorene	166	9.991	9 991	(1.097)	40958	50.0000	47.7
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	207726	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	61869	50.0000	48.2
	20 Anthracene	178	11.851	11.851	(1 008)	55675	50.0000	46.3
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	49815	50.0000	46 3
	24 Fluoranthene	202	13.869	13.869	(1.180)	59027	50 0000	46.5
	25 Pyrene	202	14 359	14.359	(0.872)	58923	50.0000	45.9
	28 Benzo(a)anthracene	228	16.367	16.367	(0 994)	49553	50.0000	46.7
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	153360	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	52012	50.0000	47.4
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	49652	50.0000	48.4
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	50071	50.0000	44 9
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	58260	50.0000	51 5
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	40453	50.0000	46.7
*	35 Perylene-d12	264	19 050	19.050	(1.000)	129383	200 000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1.113)	49284	50.0000	46.3
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	34963	50 0000	47.3

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	38845	50.0000	45.4
39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	45123	50.0000	47.3
47 Perylene	252	19.108	19.108	(1.003)	46897	50.0000	47.6

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223e.d
Lab Smp Id: SIM 50
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	247866	-2.91
11 Acenaphthene-d10	142891	71446	285782	133951	-6.26
18 Phenanthrene-d10	220853	110426	441706	207726	-5.94
29 Chrysene-d12	162525	81262	325050	153360	-5.64
35 Perylene-d12	139028	69514	278056	129383	-6.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

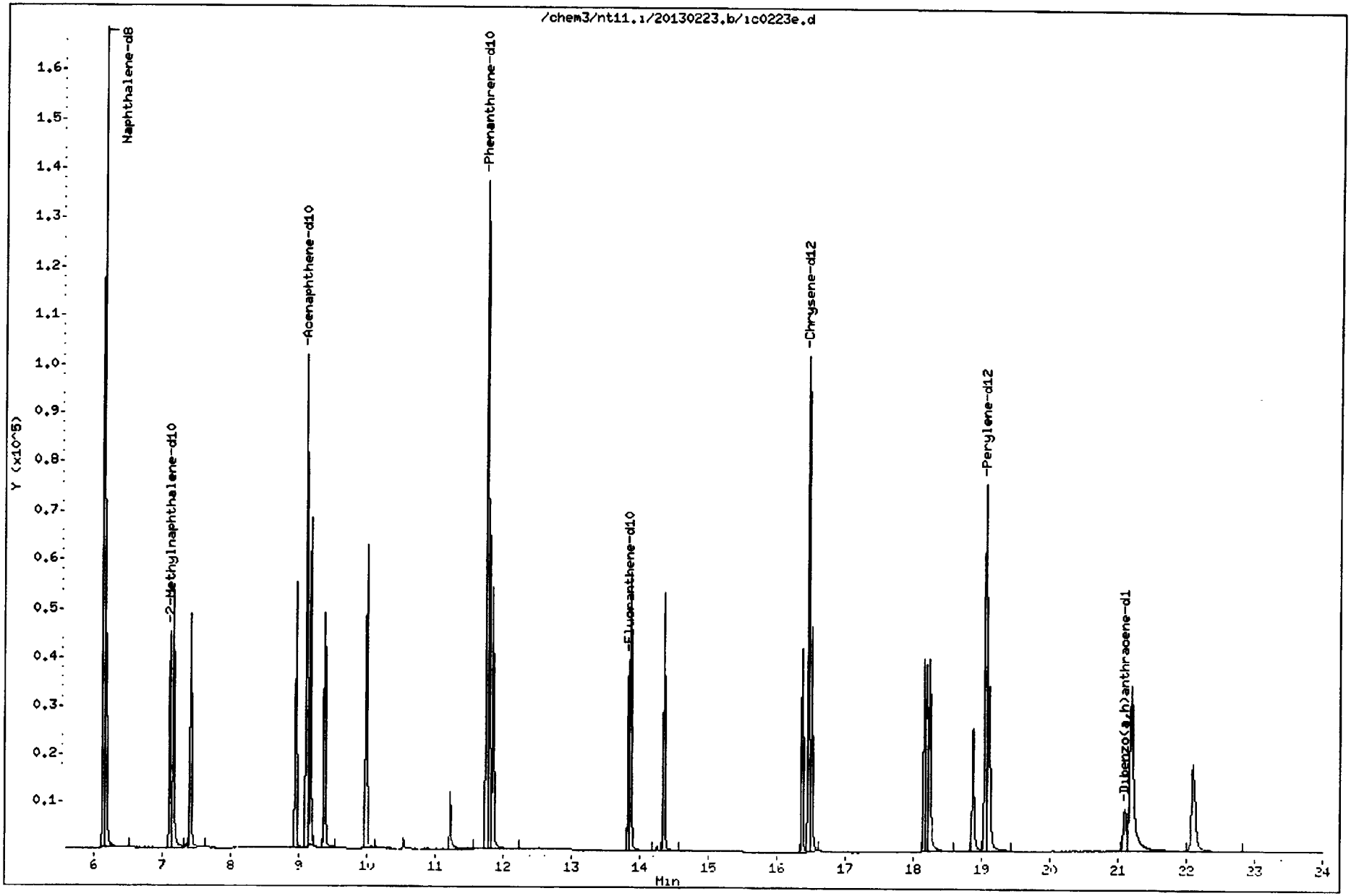
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223e.d
Date : 23-FEB-2013 11:48
Client ID:
Sample Info: SIM 50

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223e.d

Lab ID: SIM 50, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130223.b/ic0223f.d
Lab Smp Id: SIM 100
Inj Date : 23-FEB-2013 12:17
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 100
Misc Info :
Comment :
Method : /chem3/nt11.i/20130223.b/lowsim.m
Meth Date : 23-Feb-2013 14:06 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.134	6.134	(1.000)	249926	200.000	
	5 Naphthalene	128	6.165	6.165	(1.005)	140175	100.000	102
$	6 2-Methylnaphthalene-d10	152	7.111	7.111	(1.159)	81065	100.000	103
	7 2-Methylnaphthalene	142	7 163	7.163	(1.168)	87543	100 000	102
	8 1-methylnaphthalene	142	7.415	7.415	(1.209)	87526	100 000	102
	10 Acenaphthylene	152	8.950	8 950	(0.983)	119998	100.000	98 3
*	11 Acenaphthene-d10	164	9.105	9.105	(1 000)	136768	200.000	
	12 Acenaphthene	153	9.172	9.172	(1 007)	82016	100.000	102
	14 Dibenzofuran	168	9.382	9.382	(1.030)	122106	100.000	104
	15 Fluorene	166	9.991	9.991	(1.097)	87735	100.000	100
*	18 Phenanthrene-d10	188	11.751	11.751	(1.000)	209065	200.000	
	19 Phenanthrene	178	11.796	11.796	(1.004)	134135	100.000	104
	20 Anthracene	178	11.851	11.851	(1.008)	123416	100.000	102
$	23 Fluoranthene-d10	212	13.840	13.840	(1.178)	109122	100.000	101
	24 Fluoranthene	202	13.869	13.869	(1.180)	130796	100.000	102
	25 Pyrene	202	14.359	14.359	(0.872)	129387	100.000	101
	28 Benzo(a)anthracene	228	16.367	16.367	(0.994)	106951	100 000	101
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	152652	200.000	
	30 Chrysene	228	16 508	16 508	(1.003)	113395	100.000	104
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	107483	100.000	104
	45 Benzo(k)fluoranthene	252	18.195	18.195	(0.955)	108485	100.000	96.6
	46 Benzo(j)fluoranthene	252	18.243	18.243	(0.958)	122922	100.000	108
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	88577	100.000	102
*	35 Perylene-d12	264	19 050	19.050	(1.000)	130359	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1 113)	110979	100 000	103
$	36 Dibenzo(a,h)anthracene-d14	292	21.096	21.096	(1.107)	76918	100.000	103

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	89034	100.000	103
39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	98017	100.000	102
47 Perylene	252	19.108	19.108	(1.003)	102650	100.000	103

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0223f.d
Lab Smp Id: SIM 100
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130223.b/lowsim.m
Misc Info:

Calibration Date: 23-FEB-2013
Calibration Time: 09:51
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	249926	-2.10
11 Acenaphthene-d10	142891	71446	285782	136768	-4.29
18 Phenanthrene-d10	220853	110426	441706	209065	-5.34
29 Chrysene-d12	162525	81262	325050	152652	-6.07
35 Perylene-d12	139028	69514	278056	130359	-6.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.11	8.61	9.61	9.11	0.00
18 Phenanthrene-d10	11.76	11.26	12.26	11.75	-0.09
29 Chrysene-d12	16.47	15.97	16.97	16.46	-0.05
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

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

Data File: /chem3/nt11.1/20130223.b/1c0223f.d

Date : 23-FEB-2013 12:17

Client ID:

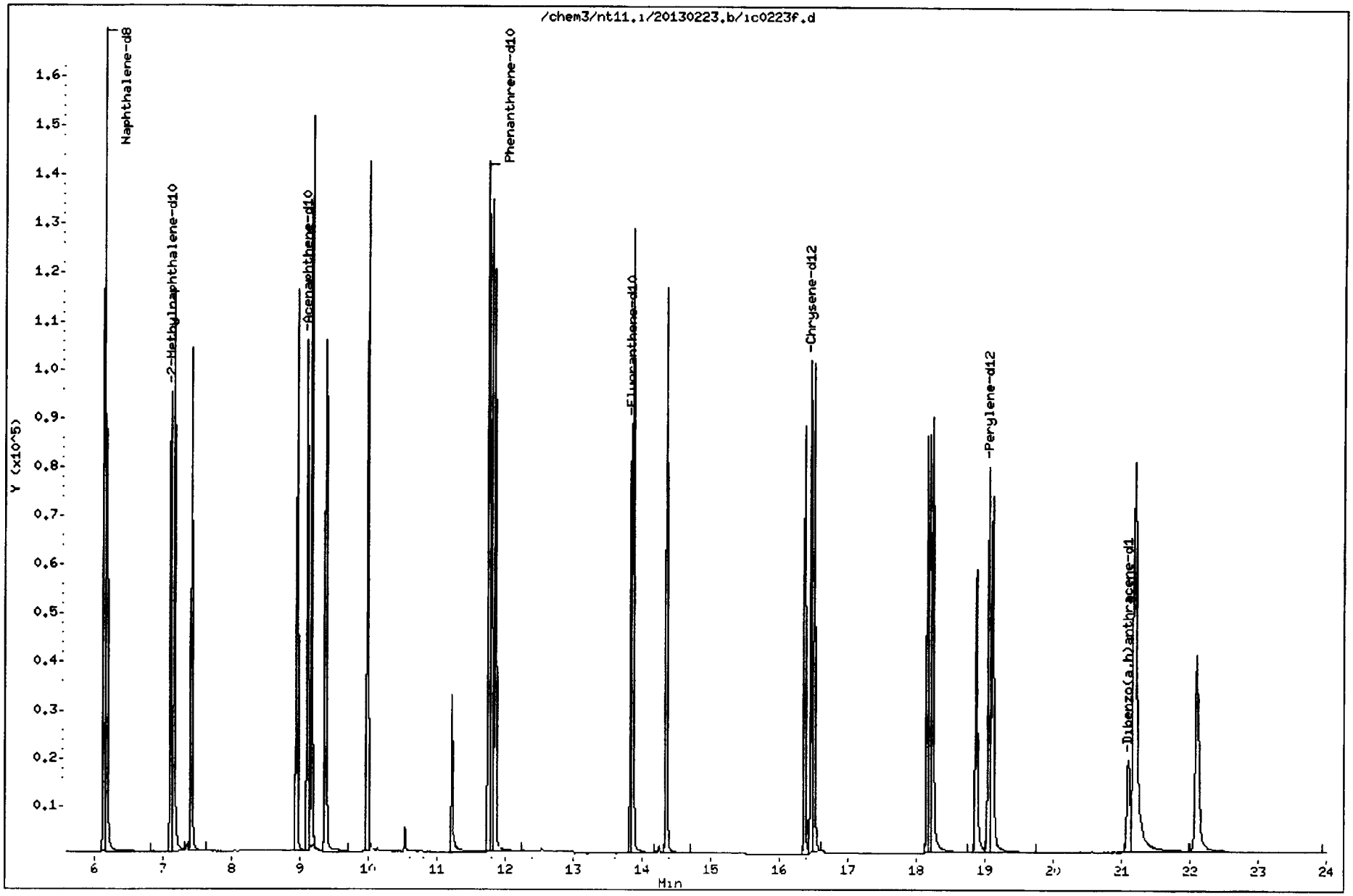
Sample Info: SIM 100

Column phase: Rx1-17Sil MS

Instrument: nt11.1

Operator: VTS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0223f.d

Lab ID: SIM 100, Method: lowsim.m, Instrument: nt11.i, Date: 23-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 2·26·13 Analysis: low sim PNA Analyst: VTB

GC Program: lowsim Column No: 14123 Column Type: RX.-175.1ms

Instrument Tune (.U or .CT.): df0226 EM Voltage: 2424

Calibration File: df0226 Curve Date: 2·23·13 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	2079-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130226.b

	Time	Filename	LabID	ClientId	DF									
1	1503	df0226.d	DFTPP 10		1	NO ISTDS FOUND								
2	1519	cc0226.d	SIM 250		1	6.13	254099	9.10	140447	11.75	216415	16.46	161300	19.06	137382
3	1548	207901.d	SIM ICV-250		1	6.13	255409	9.11	140960	11.75	215819	16.46	154729	19.05	128752
4	1617	we64mb.d	WE64MBW1	WE64MBW1	1	6.13	261205	9.11	144571	11.75	230248	16.46	158259	19.05	127887
5	1645	we64sb.d	WE64LCSW1	WE64LCSW1	1	6.13	261298	9.11	150356	11.75	233636	16.47	164758	19.05	144129
6	1714	we64sbd.d	WE64LCSDW1	WE64LCSDW1	1	6.13	267291	9.11	153460	11.75	238537	16.46	168963	19.05	140625
7	1743	we64qls1.d	WE64QLS1		1	6.13	260997	9.11	145457	11.75	231073	16.46	159741	19.05	131463
8	1812	we64a.d	WE64A	JOR-EF-13022	1	6.13	263867	9.11	151805	11.75	235536	16.46	164860	19.05	140783

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Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

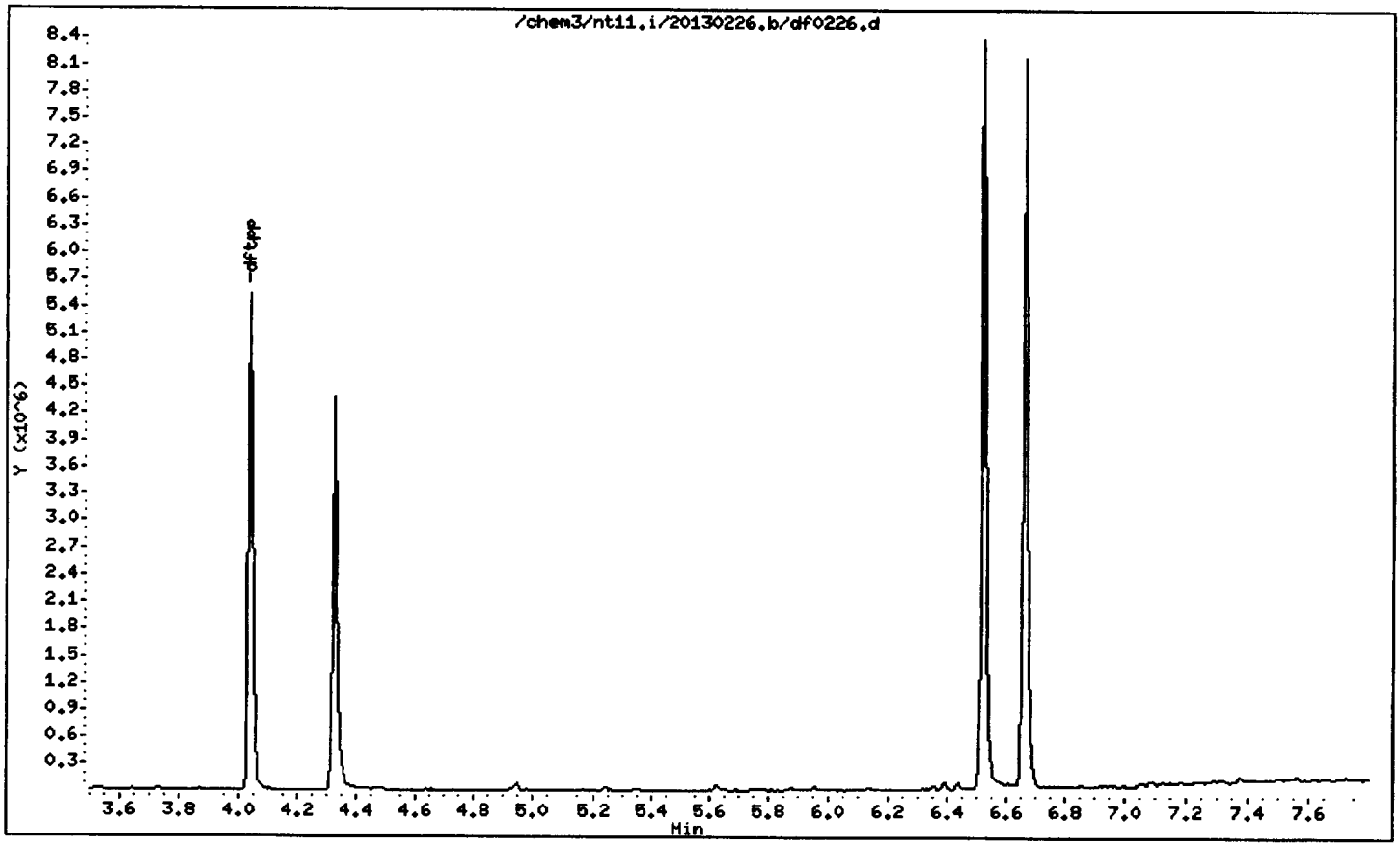
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

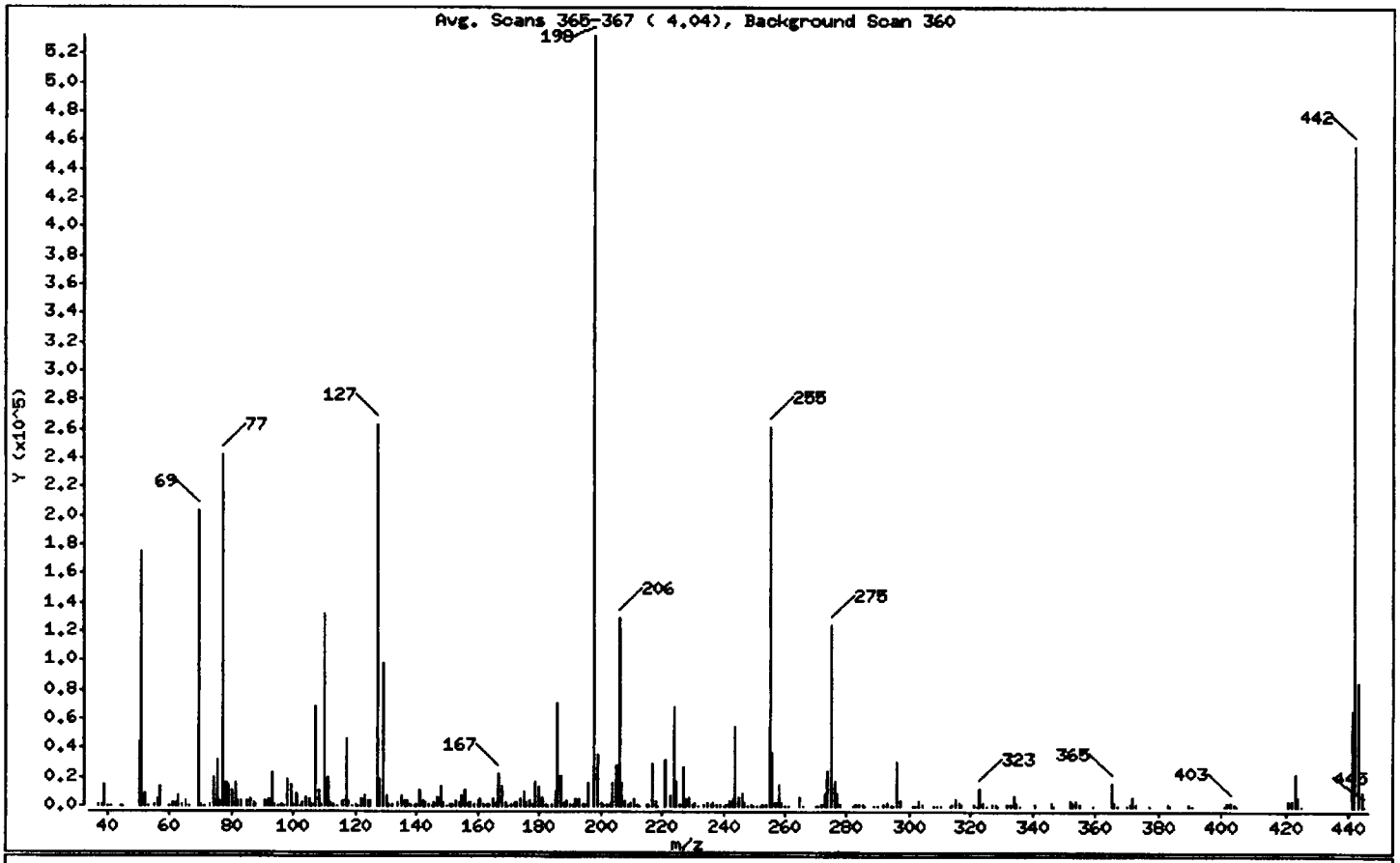
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.87
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	38.21
70	Less than 2.00% of mass 69	0.24 (0.62)
127	10.00 - 80.00% of mass 198	49.53
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	23.38
365	Greater than 1.00% of mass 198	2.89
441	0.01 - 24.00% of mass 442	12.42 (14.48)
442	50.00 - 200.00% of mass 198	85.81
443	15.00 - 24.00% of mass 442	16.12 (18.79)

Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0226.d
Spectrum: Avg. Scans 365-367 (4.04), Background Scan 360
Location of Maximum: 198.00
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	227	123.00	7385	199.00	35752	285.00	1818
37.00	633	124.00	3087	200.00	2183	286.00	327
38.00	1808	125.00	3154	201.00	1035	289.00	394
39.00	14814	127.00	263808	202.00	1782	290.00	234
40.00	116	128.00	18664	203.00	2945	292.00	848
41.00	184	129.00	97768	204.00	15926	293.00	2247
44.00	178	130.00	7525	205.00	28768	294.00	491
45.00	209	131.00	1287	206.00	130040	295.00	482
49.00	150	132.00	931	207.00	15715	296.00	30744
50.00	44144	134.00	2852	208.00	4245	297.00	4190
51.00	175040	135.00	7911	209.00	1279	301.00	174
52.00	8415	136.00	3095	210.00	2052	302.00	535
53.00	311	137.00	3313	211.00	4695	303.00	3449
55.00	1197	138.00	1387	212.00	955	304.00	1054
56.00	5058	139.00	596	213.00	174	308.00	398
57.00	13289	140.00	1075	215.00	1377	309.00	205
58.00	289	141.00	10651	216.00	1623	310.00	170
60.00	191	142.00	3981	217.00	29416	313.00	410
61.00	2226	143.00	2695	218.00	3979	314.00	1464
62.00	2344	144.00	968	219.00	327	315.00	4861
63.00	7517	145.00	308	221.00	32096	316.00	2273
64.00	1078	146.00	1857	223.00	7334	317.00	792
65.00	4246	147.00	5810	224.00	69048	321.00	838
66.00	394	148.00	13212	225.00	17256	322.00	483
69.00	203520	149.00	2616	226.00	1744	323.00	12291
70.00	1259	150.00	584	227.00	26808	324.00	2021
71.00	201	151.00	935	228.00	4572	325.00	185
73.00	1493	152.00	1720	229.00	6418	327.00	1781
74.00	19976	153.00	3434	230.00	957	328.00	774
75.00	31904	154.00	2942	231.00	2405	329.00	327
76.00	3906	155.00	6768	232.00	173	332.00	922
77.00	242432	156.00	10489	234.00	1824	333.00	1221
78.00	16504	157.00	2493	235.00	2419	334.00	7589
79.00	14521	158.00	2167	236.00	1541	335.00	2053
80.00	10671	159.00	1631	237.00	2783	336.00	348

Date : 26-FEB-2013 15:03

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0226.d
Spectrum: Avg. Scans 365-367 (4.04), Background Scan 360
Location of Maximum: 198.00
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	16194	160.00	3556	238.00	631	341.00	1744
82.00	4145	161.00	4839	239.00	1140	346.00	2311
83.00	4191	162.00	1832	240.00	567	347.00	308
85.00	3076	163.00	616	241.00	1729	352.00	3526
86.00	4599	164.00	638	242.00	3422	353.00	2622
87.00	2703	165.00	4860	243.00	4292	354.00	3464
88.00	1209	166.00	2388	244.00	55288	355.00	687
91.00	3968	167.00	21720	245.00	5901	359.00	186
92.00	4324	168.00	13399	246.00	8596	365.00	15376
93.00	23304	169.00	1985	247.00	1876	366.00	2318
94.00	1784	170.00	602	248.00	558	367.00	247
95.00	607	171.00	831	249.00	1714	370.00	377
96.00	1216	172.00	2191	250.00	509	371.00	801
97.00	576	173.00	2318	251.00	279	372.00	5576
98.00	18440	174.00	5145	252.00	231	373.00	1467
99.00	14972	175.00	9497	253.00	1240	377.00	314
100.00	919	176.00	2939	254.00	1519	383.00	1766
101.00	8308	177.00	4182	255.00	261760	384.00	196
102.00	275	178.00	1093	256.00	36992	390.00	850
103.00	2808	179.00	17688	257.00	2713	391.00	465
104.00	5809	180.00	12963	258.00	14952	401.00	209
105.00	4723	181.00	6212	259.00	2065	402.00	2602
106.00	1340	182.00	998	260.00	183	403.00	2973
107.00	68008	183.00	226	261.00	234	404.00	1506
108.00	10887	184.00	1119	265.00	5607	405.00	168
109.00	864	185.00	9193	266.00	578	421.00	3675
110.00	132736	186.00	71232	270.00	191	422.00	3444
111.00	20040	187.00	20600	271.00	553	423.00	22080
112.00	2617	188.00	2429	272.00	922	424.00	5565
113.00	701	189.00	3467	273.00	8118	425.00	470
114.00	173	190.00	1080	274.00	24296	441.00	66168
116.00	3243	191.00	1632	275.00	124528	442.00	457024
117.00	46488	192.00	5208	276.00	16936	443.00	85872
118.00	3669	193.00	5379	277.00	8287	444.00	9260
119.00	480	194.00	1478	278.00	1578	445.00	188

Date : 26-FEB-2013 15:03

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

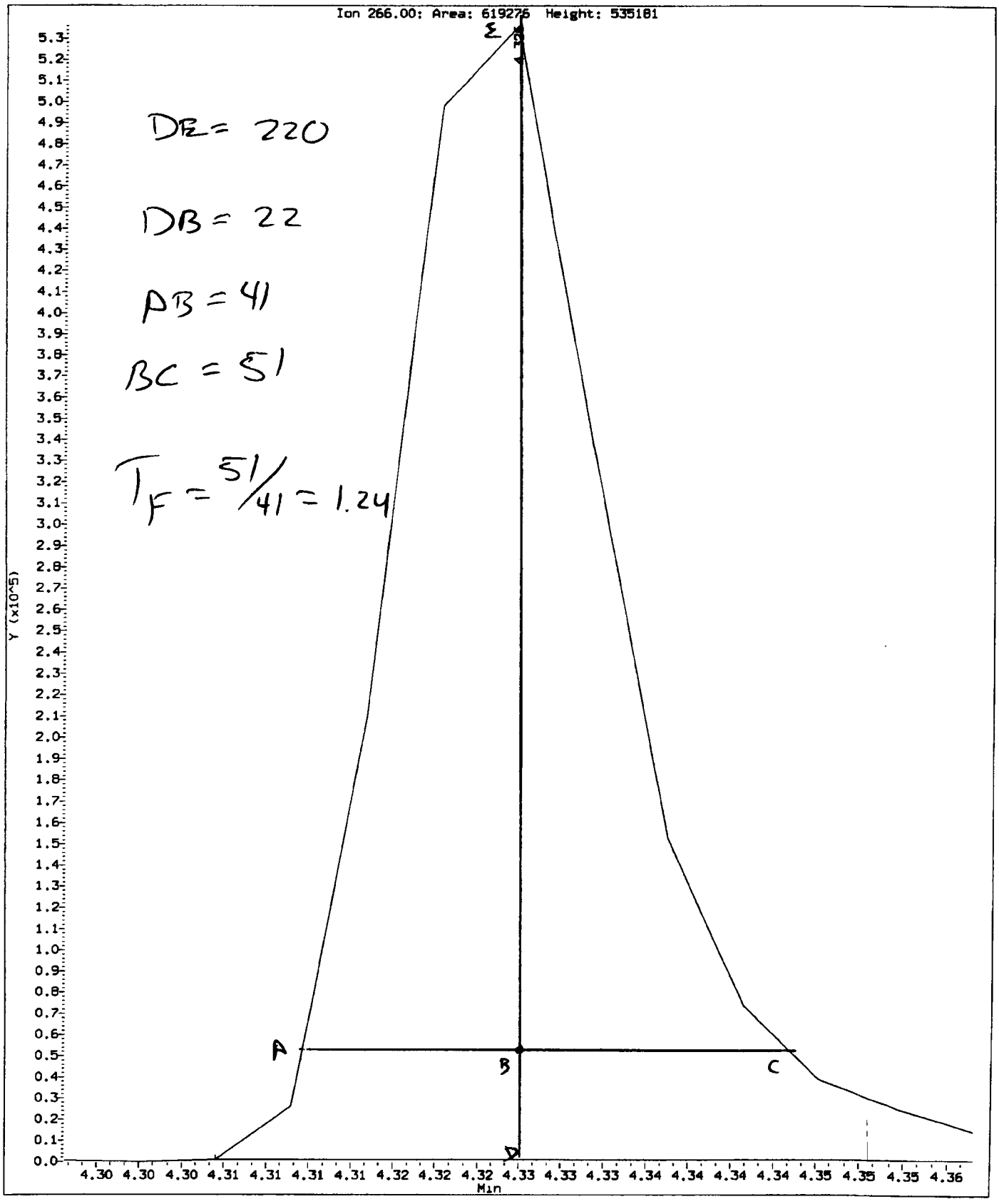
Column diameter: 0.25

Data File: df0226.d
Spectrum: Avg. Scans 365-367 (4.04), Background Scan 360
Location of Maximum: 198.00
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	1054	195.00	822	282.00	195		
121.00	426	196.00	15742	283.00	1227		
122.00	4503	198.00	532608	284.00	688		

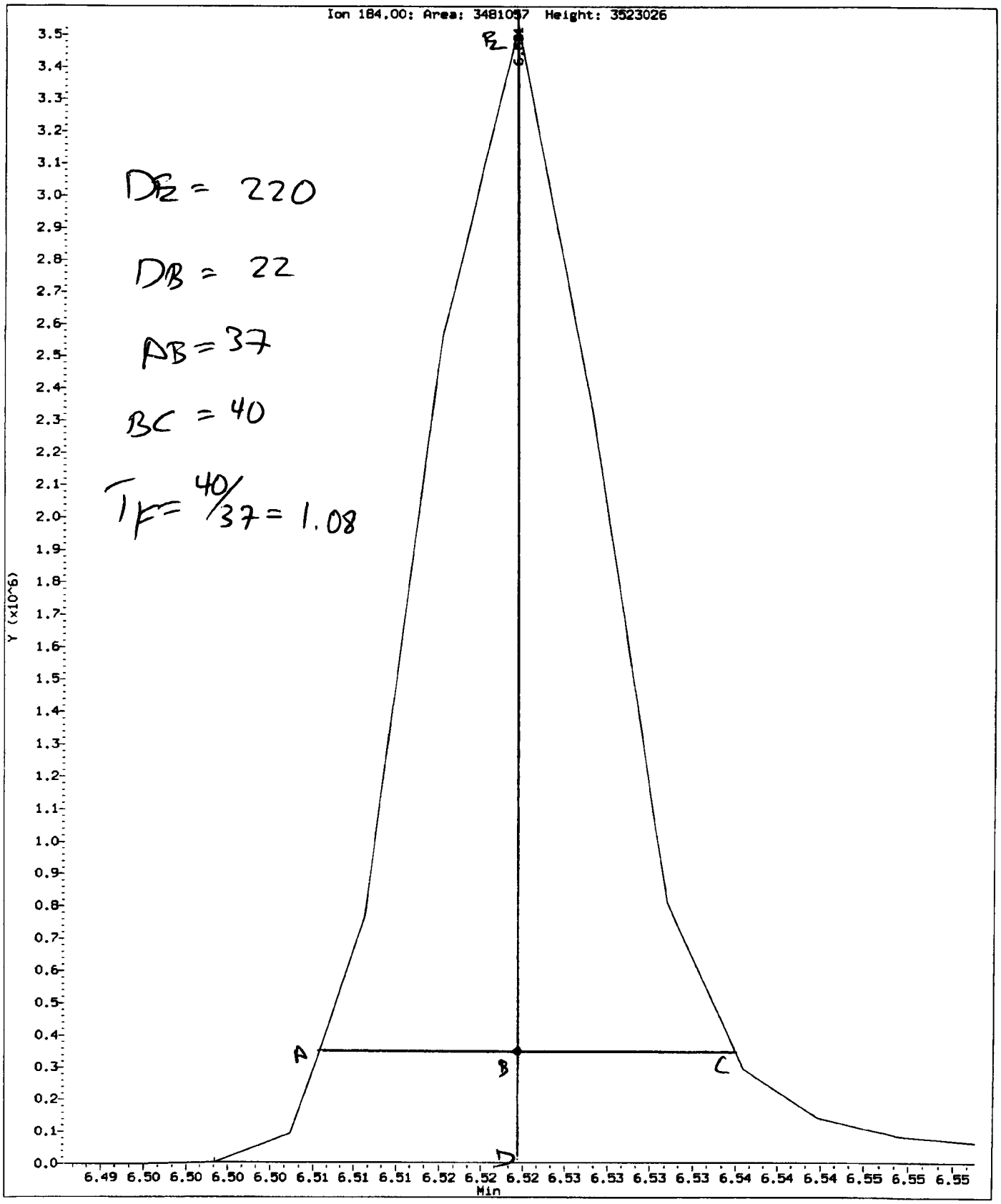
Data File: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Injection Date: 26-FEB-2013 15:03
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Injection Date: 26-FEB-2013 15:03
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Method: /chem3/nt11.i/20130226.b/DDT.b/sw846ddt.m
Analysis Date: 26-FEB-2013 15:03

ARI ID: DFTPP 10
Misc:
Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.326	619276
Benzidine	6.521	3481057
4,4'-DDE	5.955	4773
4,4'-DDD	6.436	16258
4,4'-DDT	6.660	1666007

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

$$\text{DDT Percent Breakdown} = \frac{(4773 + 16258) * 100}{(4773 + 16258 + 1666007)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130226.b/207901.d
Lab Smp Id: SIM ICV-250
Inj Date : 26-FEB-2013 15:48
Operator : VTS Inst ID: nt11.i
Smp Info : SIM ICV-250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130226.b/lowsim.m
Meth Date : 26-Feb-2013 15:56 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/L)
* 4 Naphthalene-d8	136	6.134	6.133	(1.000)	255409	200.000	
5 Naphthalene	128	6.165	6.165	(1.005)	341054	243.878	244(R)
$ 6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
7 2-Methylnaphthalene	142	7.163	7.163	(1.168)	227744	260.203	260(R)
8 1-methylnaphthalene	142	7.415	7 415	(1.209)	209111	237.667	238(R)
10 Acenaphthylene	152	8.950	8 950	(0.983)	305146	242.452	242(R)
* 11 Acenaphthene-d10	164	9.105	9.105	(1.000)	140960	200.000	
12 Acenaphthene	153	9.172	9.171	(1.007)	208708	251.220	251(R)
14 Dibenzofuran	168	9.371	9.371	(1.029)	299836	247.754	248(R)
15 Fluorene	166	9.991	9.991	(1.097)	230724	255.372	255(R)
* 18 Phenanthrene-d10	188	11.751	11.751	(1.000)	215819	200.000	
19 Phenanthrene	178	11.796	11.795	(1.004)	351113	263.384	263(R)
20 Anthracene	178	11.851	11.851	(1 008)	338584	270.804	271(R)
$ 23 Fluoranthene-d10	212	Compound Not Detected.					
24 Fluoranthene	202	13.868	13 868	(1.180)	329852	250 282	250

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/L)
	25 Pyrene	202	14.358	14.358	(0.872)	367313	283.474	283
	28 Benzo(a)anthracene	228	16.367	16.366	(0.994)	285167	266.330	266
*	29 Chrysene-d12	240	16.458	16.458	(1.000)	154729	200.000	
	30 Chrysene	228	16.508	16.508	(1.003)	293913	265.626	266(R)
	44 Benzo(b)fluoranthene	252	18.156	18.156	(0.953)	269023	263.644	264
	45 Benzo(k)fluoranthene	252	18.195	18.194	(0 955)	311636	280.851	281
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	18.877	18.877	(0.991)	256553	297.900	298(R)
*	35 Perylene-d12	264	19.050	19.059	(1.000)	128752	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.196	21.196	(1.113)	273968	258.457	258
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	21.185	21.185	(1.112)	212584	249.431	249
	39 Benzo(g,h,i)perylene	276	22.093	22.093	(1.160)	245681	259.033	259
	47 Perylene	252	19.107	19.107	(1.003)	252923	257.806	258

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

VD
2.27.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 207901.d
Lab Smp Id: SIM ICV-250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130226.b/lowsim.m
Misc Info:

Calibration Date: 26-FEB-2013
Calibration Time: 15:19

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	255409	0.05
11 Acenaphthene-d10	142891	71446	285782	140960	-1.35
18 Phenanthrene-d10	220853	110426	441706	215819	-2.28
29 Chrysene-d12	162525	81262	325050	154729	-4.80
35 Perylene-d12	139028	69514	278056	128752	-7.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.13	5.63	6.63	6.13	0.00
11 Acenaphthene-d10	9.10	8.60	9.60	9.11	0.00
18 Phenanthrene-d10	11.75	11.25	12.25	11.75	0.00
29 Chrysene-d12	16.46	15.96	16.96	16.46	0.00
35 Perylene-d12	19.06	18.56	19.56	19.05	-0.05

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: 20130226
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: SIM ICV-250
Level: LOW Operator: VTS
Data Type: MS DATA SampleType: LCS
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130226.b/lowsim.m
Misc Info:

2/28/12
70-130

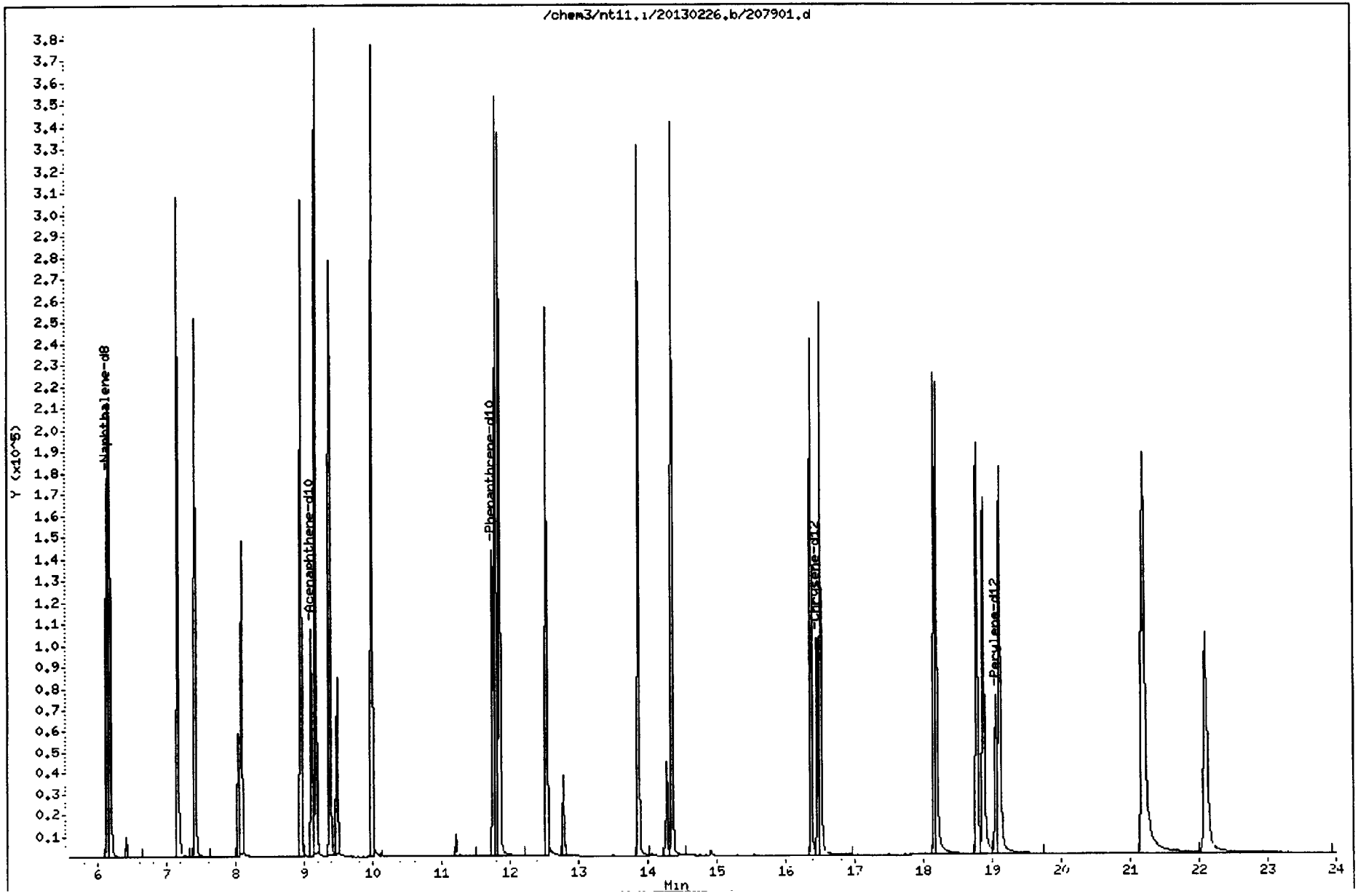
SPIKE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
5 Naphthalene	249	244	97.94*	37-90
7 2-Methylnaphthalen	249	260	104.50*	39-90
8 1-methylnaphthalen	249	238	95.45*	38-95
10 Acenaphthylene	249	242	97.37*	35-95
12 Acenaphthene	249	251	100.89*	38-94
14 Dibenzofuran	249	248	99.50*	36-94
15 Fluorene	249	255	102.56*	41-102
19 Phenanthrene	249	263	105.78*	41-101
20 Anthracene	249	271	108.76*	28-101
24 Fluoranthene	249	250	100.52	49-114
25 Pyrene	249	283	113.85	42-114
28 Benzo(a)anthracene	249	266	106.96	42-111
30 Chrysene	249	266	106.68*	46-106
44 Benzo(b)fluoranthe	249	264	105.88	30-160
45 Benzo(k)fluoranthe	249	281	112.79	30-160
46 Benzo(j)fluoranth	249	0.00	*	30-160
34 Benzo(a)pyrene	249	298	119.64*	20-99
37 Indeno(1,2,3-cd)py	249	258	103.80	32-113
38 Dibenzo(a,h)anthra	249	249	100.17	30-113
39 Benzo(g,h,i)peryle	249	259	104.03	27-113
47 Perylene	249	258	103.54	30-160

SURROGATE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthale	300	0.00	*	35-94
$ 23 Fluoranthene-d10	300	0.00	*	30-160
$ 36 Dibenzo(a,h)anthr	300	0.00	*	26-115

Data File: /chem3/nt11.i/20130226.b/207901.d
Date : 26-FEB-2013 15:48
Client ID:
Sample Info: SIM ICV-250
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: WTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - 207901.d

Lab ID: SIM ICV-250, Method: lowsim.m, Instrument: nt11.i, Date: 26-FEB-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 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: 2·23·13 Analysis Start Date: 5·4·13

	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? (2)	(Y) / N / ✓
CCAL Meets %D?	(Y) / N / ✓	LCS / LCSD Recovery in Control? (1)	(Y) / N / ✓
ICAL Q Flag applied?	Y / (N) / ✓	LCS / LCSD RPD ≤ 30%?	(NA) / ___
CCAL Q flag applied?	Y / (N) / ✓	~~MS / MSD~~ Recovery in Control?	Y / N / ~~NA~~
Surrogate Recovery met?	(Y) / N / ✓	~~MS / MSD~~ RPD ≤ 30%?	NA / ~~NA~~
Manual Integrations?	Y / (N) / ✓	Samples Diluted?	Y / (N) / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	(Y) / N / ___

Detail problems, corrective actions and/or other pertinent information below.

(1) Naphthalen > QC Limit @ 94%, 97% (Limit = 70%)
No Action Taken

(2) Naphthalen in MB - Samples & QC "B" Flagged.
- level IV package.

(Review 1) Analyst: VD **Date:** 5·7·13

(Review 2) Reviewer: [signature] **Date:** 5/7/13

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

B Analysis: lw sim PNA Analyst: VD

lowsim Column No: 14123 Column Type: Rx; -175; 1ms

Name (.U or .CT.): 121208.U EM Voltage: 2694

Injection File: df0504 Curve Date: 2.23.13 Injection Vol.: 2 uL

IS/SS	Ical/Ccal	LCS/ICV
3005-1	2077-1	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130504.b

	Time	Filename	LabID	ClientId	DF								
1	1107	df0504.d	DFTPP 10		1	NO ISTDS FOUND							
2	1142	cc0504.d	SIM 250		1	6.08	200996	9.05	112455	11.70	175490	16.39	131978	18.96	115819
3	1201	wn75kd1.d	WN75K	0413PSRIDW	20000	6.08	198102	9.05	107444	11.70	166202	16.39	123639	18.96	108747
4	1427	wm84a.d	WM84A	NS-OF-006-20	1	6.08	198977	9.05	113755	11.70	181998	16.40	134195	18.97	123886
5	1106	wm84b.d	WM84B	NS-OF-002-20	1	6.08	210463	9.05	130839	11.70	191437	16.39	142781	18.96	131043
6	1335	wn75k2.d	WN75K	0413PSRIDW	2000	6.08	219714	9.05	117824	11.70	184415	16.39	136555	18.96	125200
7	1404	wm84c.d	WM84C	NS-MH-682-20	5	6.08	205036	9.05	117404	11.70	187002	16.39	141167	18.96	133302
8	1433	wm84d.d	WM84D	NS-WS-316-20	1	6.08	209434	9.05	118455	11.70	189560	16.39	138801	18.97	134822
9	1502	wn31mb.d	WN31MBW1	WN31MBW1	1	6.08	220114	9.05	127326	11.70	200561	16.39	148928	18.96	135780
10	1531	wn31sb.d	WN31LCSW1	WN31LCSW1	1	6.08	212766	9.05	121608	11.70	194550	16.39	141893	18.96	128822
11	1600	wn31sbd.d	WN31LCSDW1	WN31LCSDW1	1	6.08	209498	9.05	119415	11.70	188878	16.39	140504	18.96	124339
12	1658	wn81a.d	WN81A		10	6.08	207200	9.05	120445	11.70	189746	16.39	136051	18.96	119883
13	1727	wn81b.d	WN81B		1	6.08	269309	9.05	127278	11.70	198716	16.39	145259	18.96	131398
14	1756	wn81c.d	WN81C		1	6.08	212746	9.05	125028	11.70	197241	16.39	146434	18.96	131856
15	1825	wn81d.d	WN81D		1	6.09	206782	9.05	119023	11.70	194293	16.39	147649	18.96	130383
16	1854	wn81e.d	WN81E		1	6.08	215202	9.05	123928	11.70	198907	16.39	146255	18.96	129893
17	1923	wn81f.d	WN81F		10	6.08	218110	9.05	123976	11.70	196019	16.39	140664	18.96	123830
18	1952	wn81g.d	WN81G		10	6.08	211016	9.05	119094	11.70	189353	16.39	136286	18.96	120569
19	2021	wn81h.d	WN81H		1	6.08	209554	9.05	119791	11.70	193426	16.39	142962	18.96	125944
20	2050	wn81j.d	WN81J		1	6.08	211888	9.05	119749	11.70	194141	16.39	142766	18.96	125454
21	2118	wn81k.d	WN81K		20	6.09	216466	9.05	116304	11.70	181826	16.39	131408	18.96	115239
22	2147	wn81l.d	WN81L		20	6.11	183357	9.05	107053	11.70	167569	16.39	120421	18.96	104884
23	2216	wn81m.d	WN81M		10	6.08	183577	9.05	106877	11.70	169835	16.39	122044	18.96	106164
24	2245	wn81n.d	WN81N		1	6.08	183120	9.05	104616	11.70	165378	16.39	124277	18.96	110485

5.7.13 VD

WN31 : 01248

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130504.b

ARI Job No.: WN31 Method: lowsim.m Instrument: nt11.i Date: 04-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1502	wn31mb.d	WN31MBW1	WN31MBW1	1	NO MANUAL INTEGRATION
1531	wn31sb.d	WN31LCSW1	WN31LCSW1	1	NO MANUAL INTEGRATION
1600	wn31sbd.d	WN31LCSDW1	WN31LCSDW1	1	NO MANUAL INTEGRATION
1629	wn31b.d	WN31B	ES-MH-001-	1	NO MANUAL INTEGRATION
1122	cc0504.d	SIM 250		1	NO MANUAL INTEGRATION
1107	df0504.d	DFTPP 10		1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130504.b

Instrument: nt11.i Date: 04-MAY-2013 Method: lowsim.m

INITIAL CAL: 23-FEB-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 04-MAY-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130504.b/df0504.d

Date : 04-MAY-2013 11:07

Client ID:

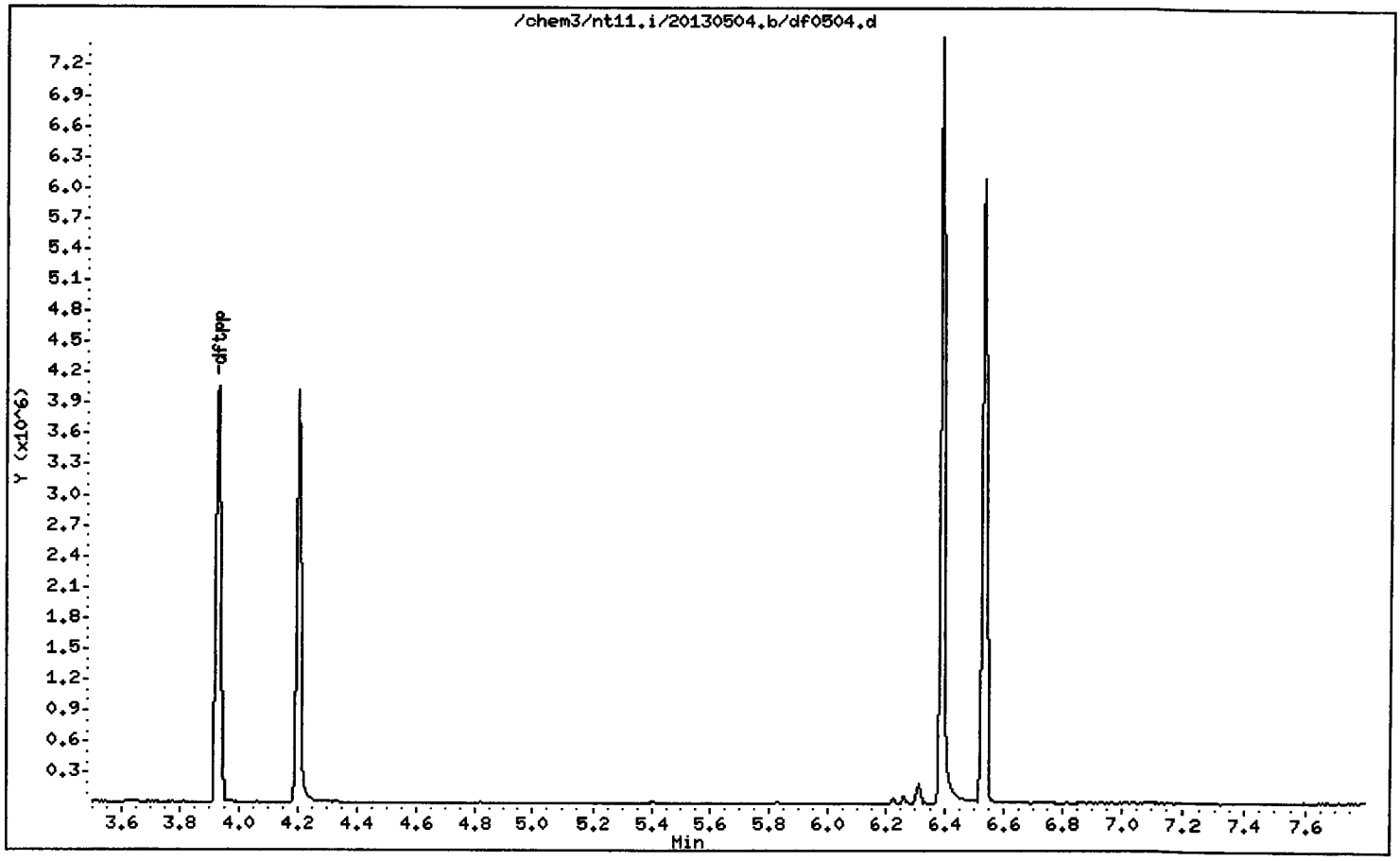
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130504.b/df0504.d

Date : 04-MAY-2013 11:07

Client ID:

Instrument: nt11.i

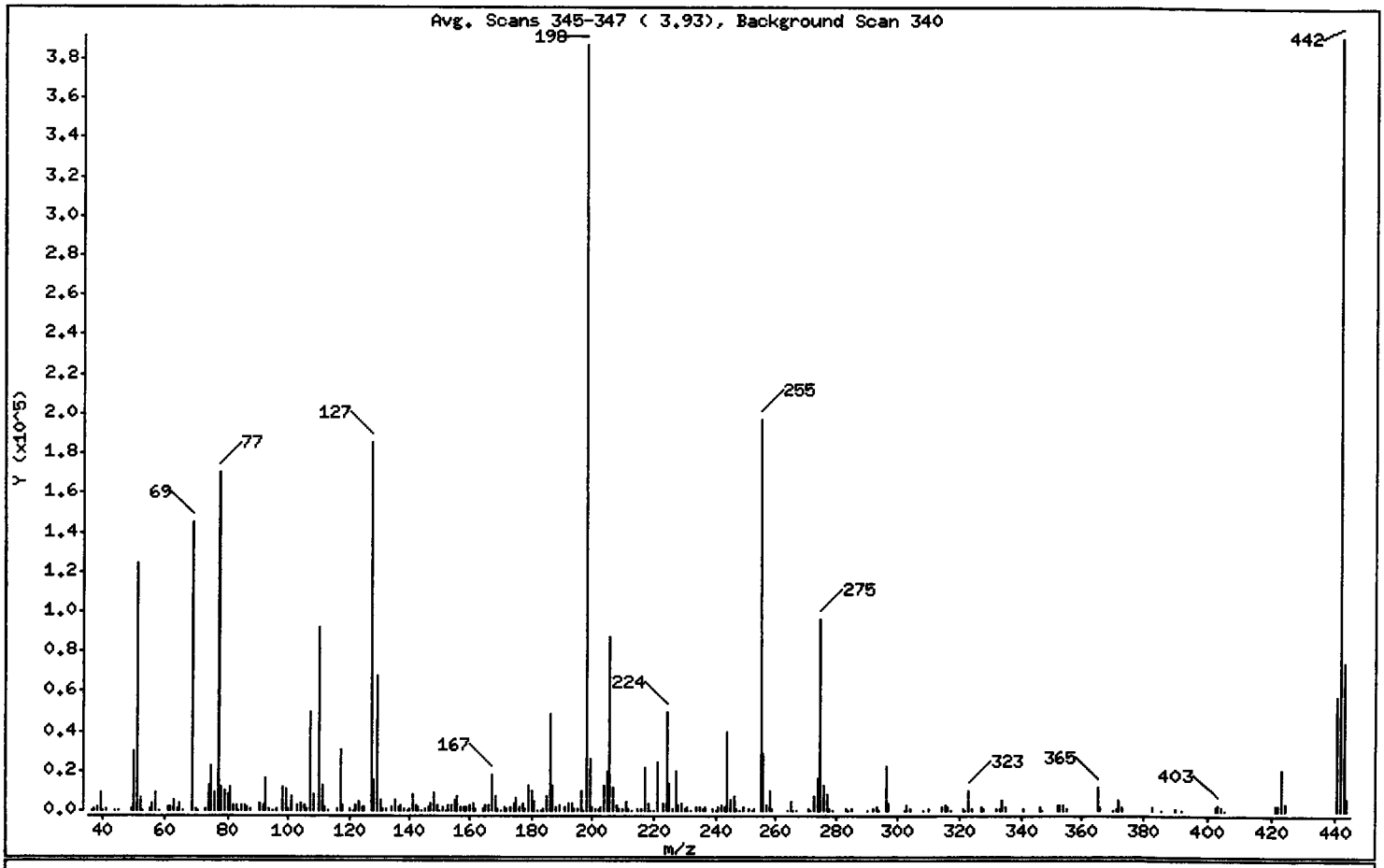
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.08
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	37.45
70	Less than 2.00% of mass 69	0.18 (0.47)
127	10.00 - 80.00% of mass 198	47.94
197	Less than 2.00% of mass 198	0.11
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	24.91
365	Greater than 1.00% of mass 198	2.92
441	0.01 - 24.00% of mass 442	14.78 (14.62)
442	50.00 - 200.00% of mass 198	101.14
443	15.00 - 24.00% of mass 442	19.28 (19.06)

Data File: /chem3/nt11.i/20130504.b/df0504.d

Date : 04-MAY-2013 11:07

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0504.d

Spectrum: Avg. Scans 345-347 (3.93), Background Scan 340

Location of Maximum: 442.00

Number of points: 265

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	367	122.00	2752	193.00	3740	273.00	6791
37.00	810	123.00	4355	194.00	671	274.00	16112
38.00	1819	124.00	2167	195.00	848	275.00	96472
39.00	9043	125.00	2114	196.00	9893	276.00	12510
40.00	335	127.00	185664	197.00	443	277.00	7923
41.00	724	128.00	14931	198.00	387328	278.00	1194
44.00	156	129.00	67648	199.00	26104	279.00	240
45.00	190	130.00	5818	200.00	1742	283.00	776
49.00	1193	131.00	1109	201.00	1293	284.00	443
50.00	29880	132.00	473	202.00	852	285.00	1155
51.00	124256	134.00	1793	203.00	2081	290.00	251
52.00	6457	135.00	5212	204.00	12828	292.00	609
53.00	176	136.00	2149	205.00	20224	293.00	2042
55.00	1163	137.00	3066	206.00	87520	294.00	382
56.00	4031	138.00	743	207.00	11927	296.00	22336
57.00	9389	139.00	424	208.00	2557	297.00	3724
58.00	208	140.00	718	209.00	1122	302.00	260
61.00	1843	141.00	8230	210.00	1143	303.00	2378
62.00	1856	142.00	2425	211.00	4187	304.00	1112
63.00	5613	143.00	1909	212.00	861	308.00	197
64.00	804	144.00	175	213.00	196	310.00	473
65.00	3444	145.00	465	215.00	675	314.00	1670
66.00	306	146.00	1628	216.00	1311	315.00	2787
69.00	145024	147.00	3849	217.00	21944	316.00	1715
70.00	687	148.00	9044	218.00	3198	317.00	172
71.00	184	149.00	2462	219.00	191	321.00	1020
73.00	1210	150.00	257	220.00	254	322.00	261
74.00	12708	151.00	1377	221.00	24408	323.00	9820
75.00	22560	152.00	212	223.00	3270	324.00	1087
76.00	8748	153.00	2749	224.00	49200	327.00	1564
77.00	170368	154.00	2398	225.00	13484	328.00	697
78.00	11684	155.00	4994	226.00	858	332.00	580
79.00	9598	156.00	7003	227.00	19968	333.00	891
80.00	7713	157.00	1410	228.00	2420	334.00	5604
81.00	11276	158.00	1380	229.00	3870	335.00	1639

Data File: /chem3/nt11.i/20130504.b/df0504.d

Date : 04-MAY-2013 11:07

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0504.d

Spectrum: Avg. Scans 345-347 (3.93), Background Scan 340

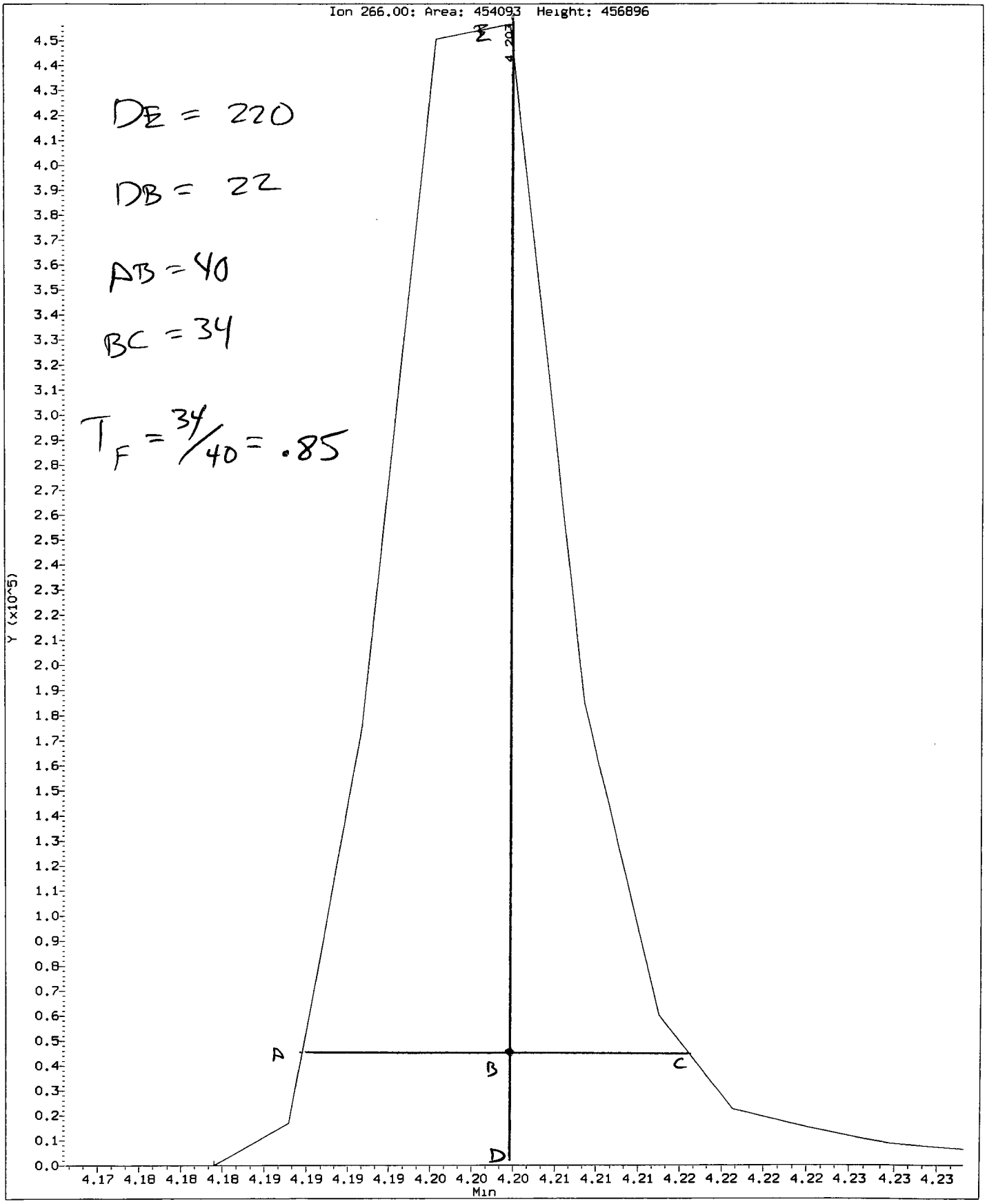
Location of Maximum: 442.00

Number of points: 265

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	2687	159.00	1438	230.00	561	341.00	1162
83.00	2647	160.00	2652	231.00	2204	346.00	1692
84.00	234	161.00	3990	232.00	274	347.00	252
85.00	2343	162.00	1311	234.00	1584	352.00	3109
86.00	2472	164.00	747	235.00	1662	353.00	2623
87.00	1408	165.00	2904	236.00	1142	354.00	2862
88.00	934	166.00	2779	237.00	1734	355.00	489
91.00	3713	167.00	17576	239.00	834	365.00	11310
92.00	2814	168.00	7228	240.00	444	366.00	1876
93.00	16408	169.00	1167	241.00	1661	370.00	216
94.00	1218	170.00	166	242.00	2787	371.00	506
95.00	186	171.00	1461	243.00	1884	372.00	5575
96.00	1180	172.00	1019	244.00	39624	373.00	1553
98.00	12145	173.00	1718	245.00	5527	383.00	1427
99.00	10410	174.00	3313	246.00	7083	386.00	189
100.00	886	175.00	6468	247.00	1267	390.00	1106
101.00	6943	176.00	2120	248.00	200	392.00	216
103.00	2302	177.00	3457	249.00	1724	402.00	2076
104.00	4027	178.00	1213	251.00	457	403.00	2991
105.00	2922	179.00	12616	252.00	231	404.00	1399
106.00	489	180.00	9762	253.00	1290	405.00	170
107.00	49144	181.00	4315	255.00	197056	421.00	3137
108.00	7710	182.00	355	256.00	29112	422.00	2810
110.00	91840	183.00	186	257.00	2610	423.00	20384
111.00	12198	184.00	1188	258.00	9615	424.00	3858
112.00	1566	185.00	6916	259.00	1259	441.00	57256
113.00	442	186.00	48304	264.00	314	442.00	391744
116.00	1188	187.00	12219	265.00	4176	443.00	74664
117.00	30960	188.00	1695	266.00	266	444.00	6537
118.00	2574	189.00	2576	267.00	173		
120.00	767	191.00	1727	271.00	508		
121.00	175	192.00	3949	272.00	319		

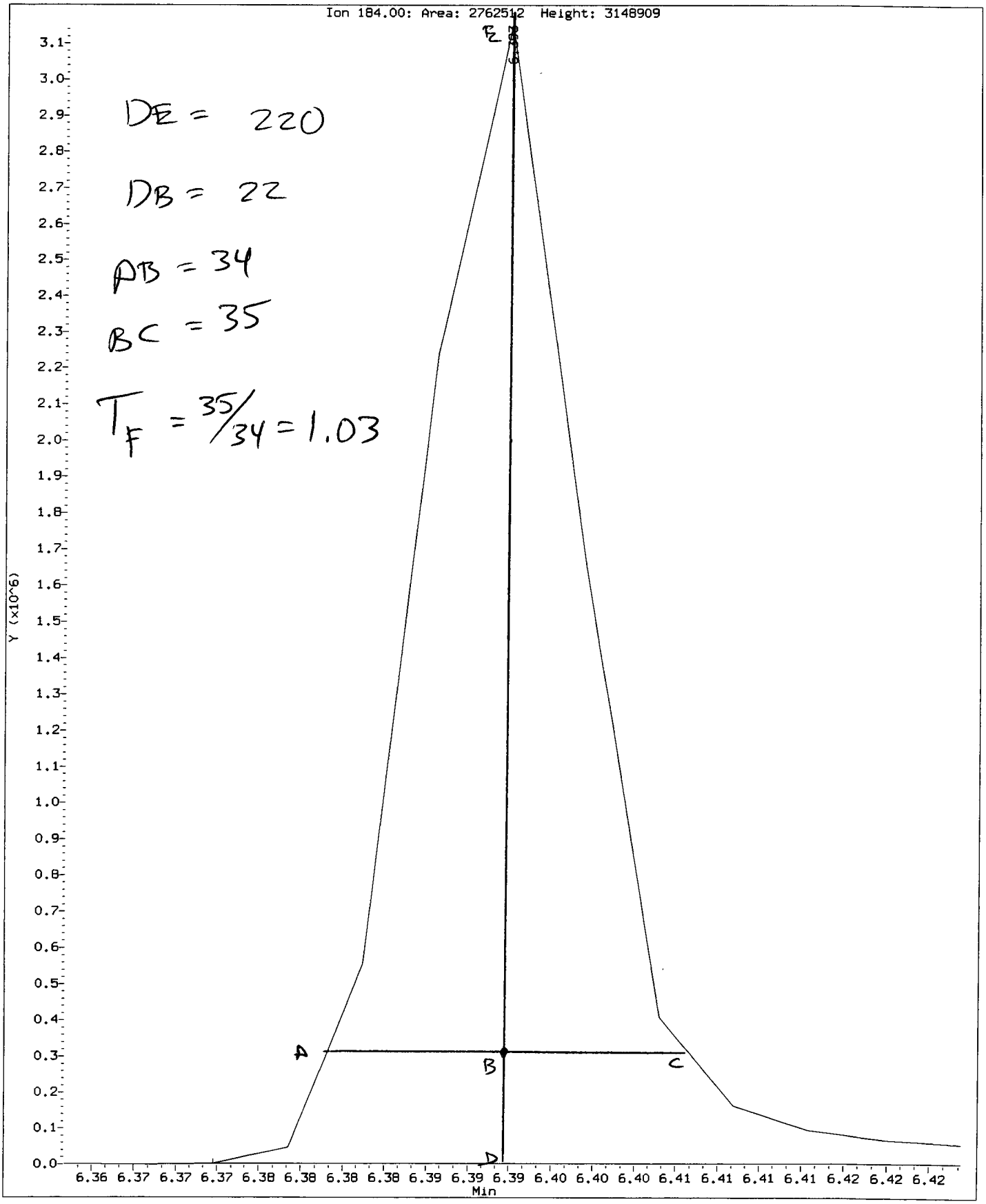
Data File: /chem3/nt11.i/20130504.b/DDT.b/df0504.d
Injection Date: 04-MAY-2013 11:07
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130504.b/DDT.b/df0504.d
Injection Date: 04-MAY-2013 11:07
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130504.b/DDT.b/df0504.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130504.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 04-MAY-2013 11:07 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.203	454093
Benzidine	6.393	2762512
4,4'-DDE	5.827	2160
4,4'-DDD	6.313	31492
4,4'-DDT	6.537	1103193

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

$$\text{DDT Percent Breakdown} = \frac{(\ 2160 + 31492) * 100}{(\ 2160 + 31492 + 1103193)}$$

DDT Percent Breakdown = 3.0 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130504.b/cc0504.d
Lab Smp Id: SIM 250
Inj Date : 04-MAY-2013 11:22
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130504.b/lowsim.m
Meth Date : 04-May-2013 11:51 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.081	6.081	(1.000)	200996	200.000	
	5 Naphthalene	128	6.113	6.113	(1.005)	265933	250.000	242
$	6 2-Methylnaphthalene-d10	152	7.058	7.058	(1.161)	155262	250.000	244
	7 2-Methylnaphthalene	142	7.111	7.111	(1.169)	167106	250.000	243
	8 1-methylnaphthalene	142	7.353	7.353	(1.209)	165865	250.000	240
	10 Acenaphthylene	152	8.895	8.895	(0.983)	246277	250.000	245
*	11 Acenaphthene-d10	164	9.050	9.050	(1.000)	112455	200.000	
	12 Acenaphthene	153	9.105	9.105	(1.006)	161004	250.000	243
	14 Dibenzofuran	168	9.316	9.316	(1.029)	230146	250.000	238
	15 Fluorene	166	9.925	9.925	(1.097)	171871	250.000	238
*	18 Phenanthrene-d10	188	11.696	11.696	(1.000)	175490	200.000	
	19 Phenanthrene	178	11.729	11.729	(1.003)	253530	250.000	234
	20 Anthracene	178	11.785	11.785	(1.008)	244015	250.000	240
$	23 Fluoranthene-d10	212	13.773	13.773	(1.178)	221237	250.000	243
	24 Fluoranthene	202	13.801	13.801	(1.180)	258196	250.000	241
	25 Pyrene	202	14.291	14.291	(0.872)	253358	250.000	229
	28 Benzo(a)anthracene	228	16.300	16.300	(0.994)	213683	250.000	234
*	29 Chrysene-d12	240	16.392	16.392	(1.000)	131978	200.000	
	30 Chrysene	228	16.442	16.442	(1.003)	217636	250.000	231
	44 Benzo(b)fluoranthene	252	18.080	18.080	(0.953)	192862	250.000	210
	45 Benzo(k)fluoranthene	252	18.118	18.118	(0.955)	238139	250.000	239
	46 Benzo(j)fluoranthene	252	18.166	18.166	(0.958)	234072	250.000	231
	34 Benzo(a)pyrene	252	18.791	18.791	(0.991)	179040	250.000	231
*	35 Perylene-d12	264	18.964	18.964	(1.000)	115819	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.074	21.074	(1.111)	223935	250.000	235
$	36 Dibenzo(a,h)anthracene-d14	292	20.974	20.974	(1.106)	154394	250.000	233

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	21.063	21.063	(1.111)	174161	250.000	227
39 Benzo(g,h,i)perylene	276	21.949	21.949	(1.157)	196107	250.000	230
47 Perylene	252	19.012	19.012	(1.003)	202049	250.000	229

VD
5.4.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0504.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info:

Calibration Date: 04-MAY-2013
Calibration Time: 11:22

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	200996	-21.27
11 Acenaphthene-d10	142891	71446	285782	112455	-21.30
18 Phenanthrene-d10	220853	110426	441706	175490	-20.54
29 Chrysene-d12	162525	81262	325050	131978	-18.80
35 Perylene-d12	139028	69514	278056	115819	-16.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.08	5.58	6.58	6.08	0.00
11 Acenaphthene-d10	9.05	8.55	9.55	9.05	0.00
18 Phenanthrene-d10	11.70	11.20	12.20	11.70	0.00
29 Chrysene-d12	16.39	15.89	16.89	16.39	0.00
35 Perylene-d12	18.96	18.46	19.46	18.96	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

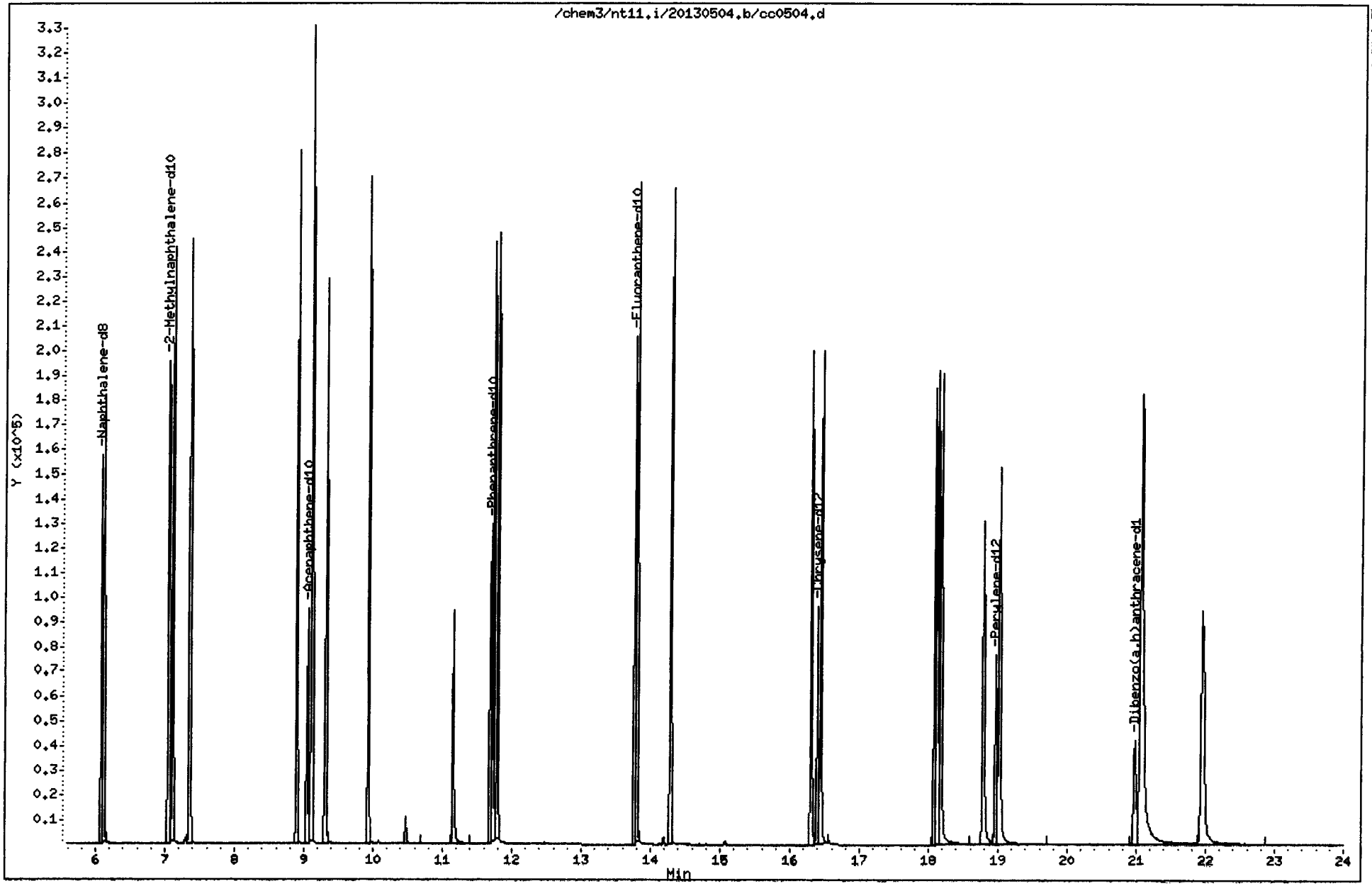
Instrument ID: nt11.i Injection Date: 04-MAY-2013 11:22
Lab File ID: cc0504.d Init. Cal. Date(s): 23-FEB-2013 23-FEB-2013
Analysis Type: Init. Cal. Times: 09:51 12:17
Lab Sample ID: SIM 250 Quant Type: ISTD
Method: /chem3/nt11.i/20130504.b/lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.09508	1.05846	0.010	-3.34375	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.63288	0.61797	0.010	-2.35602	20.00000	Averaged
7 2-Methylnaphthalene	0.68537	0.66511	0.010	-2.95642	20.00000	Averaged
8 1-Methylnaphthalene	0.68897	0.66017	0.010	-4.17977	20.00000	Averaged
10 Acenaphthylene	1.78573	1.75200	0.010	-1.88888	20.00000	Averaged
12 Acenaphthene	1.17874	1.14538	0.010	-2.83039	20.00000	Averaged
14 Dibenzofuran	1.71710	1.63726	0.010	-4.65024	20.00000	Averaged
15 Fluorene	1.28190	1.22268	0.010	-4.61930	20.00000	Averaged
19 Phenanthrene	1.23537	1.15576	0.010	-6.44462	20.00000	Averaged
20 Anthracene	1.15865	1.11238	0.010	-3.99296	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03665	1.00854	0.200	-2.71152	20.00000	Averaged
24 Fluoranthene	1.22132	1.17703	0.010	-3.62669	20.00000	Averaged
25 Pyrene	1.67487	1.53575	0.010	-8.30638	20.00000	Averaged
28 Benzo(a)anthracene	1.38400	1.29526	0.010	-6.41235	20.00000	Averaged
30 Chrysene	1.43023	1.31922	0.010	-7.76154	20.00000	Averaged
44 Benzo(b)fluoranthene	1.58507	1.33216	0.200	-15.95581	20.00000	Averaged
45 Benzo(k)fluoranthene	1.72364	1.64489	0.200	-4.56872	20.00000	Averaged
46 Benzo(j)fluoranthene	1.74944	1.61681	0.200	-7.58158	20.00000	Averaged
34 Benzo(a)pyrene	1.33777	1.23668	0.010	-7.55679	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.64660	1.54679	0.010	-6.06172	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.14296	1.06645	0.010	-6.69435	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.32390	1.20298	0.010	-9.13351	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.47330	1.35457	0.010	-8.05922	20.00000	Averaged
47 Perylene	1.52395	1.39561	0.200	-8.42153	20.00000	Averaged

Data File: /chem3/nt11.i/20130504.b/cc0504.d
Date : 04-MAY-2013 11:22
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column phase: Rxi-17Sil MS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - cc0504.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 04-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130504.b/wn31mb.d
Lab Smp Id: WN31MBW1 Client Smp ID: WN31MBW1
Inj Date : 04-MAY-2013 15:02
Operator : VTS Inst ID: nt11.i
Smp Info : WN31MBW1
Misc Info : 13-8694
Comment :
Method : /chem3/nt11.i/20130504.b/lowsim.m
Meth Date : 04-May-2013 11:51 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 10 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.081	6.081	(1.000)	220114	200.000	
	5 Naphthalene	128	6.113	6.113	(1.005)	80190	66.5363	66.5
$	6 2-Methylnaphthalene-d10	152	7.048	7.058	(1.159)	152591	219.073	219
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.050	9.050	(1.000)	127326	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.696	11.696	(1.000)	200561	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.773	13.773	(1.178)	261910	251.943	252
	24 Fluoranthene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.392	16.392	(1.000)	148928	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	18.964	18.964	(1.000)	135780	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.975	20.974	(1.106)	182457	235.138	235
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

LJD 5-7-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wn31mb.d
Lab Smp Id: WN31MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

Calibration Date: 04-MAY-2013
Calibration Time: 11:22
Client Smp ID: WN31MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	220114	-13.78
11 Acenaphthene-d10	142891	71446	285782	127326	-10.89
18 Phenanthrene-d10	220853	110426	441706	200561	-9.19
29 Chrysene-d12	162525	81262	325050	148928	-8.37
35 Perylene-d12	139028	69514	278056	135780	-2.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.08	5.58	6.58	6.08	0.00
11 Acenaphthene-d10	9.05	8.55	9.55	9.05	0.00
18 Phenanthrene-d10	11.70	11.20	12.20	11.70	0.00
29 Chrysene-d12	16.39	15.89	16.89	16.39	0.00
35 Perylene-d12	18.96	18.46	19.46	18.96	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WN31MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

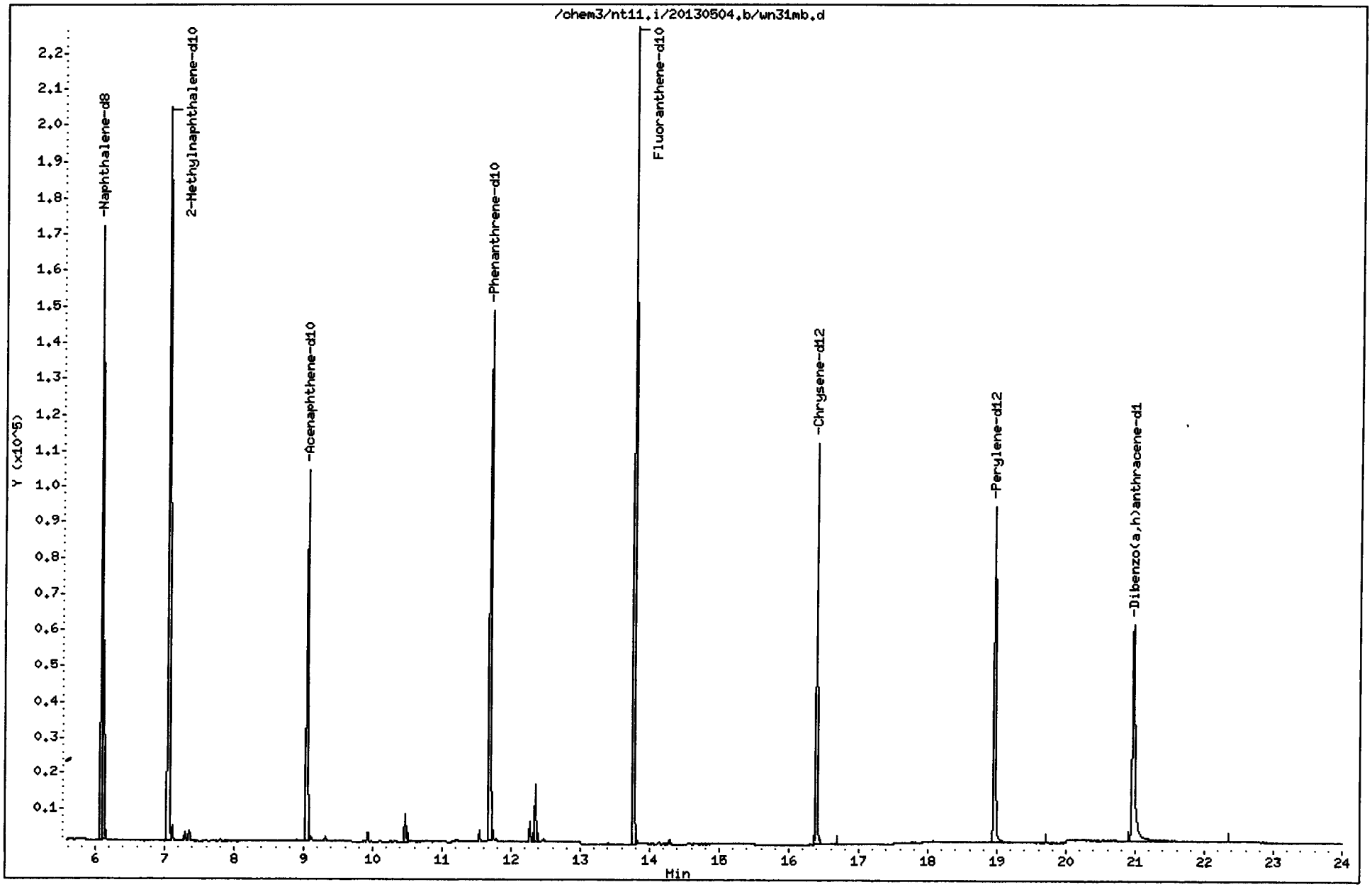
Client SDG: WN31
Fraction: SV
Client Smp ID: WN31MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	219	73.02	35-94
$ 23 Fluoranthene-d10	300	252	83.98	30-160
$ 36 Dibenzo(a,h)anthra	300	235	78.38	26-115

Data File: /chem3/nt11.i/20130504.b/wn31mb.d
Date : 04-MAY-2013 15:02
Client ID: WN31MBW1
Sample Info: WN31MBW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25

WN31.012.3



Data File: /chem3/nt11.i/20130504.b/wn31mb.d

Date : 04-MAY-2013 15:02

Client ID: WN31MBW1

Instrument: nt11.i

Sample Info: WN31MBW1

Volume Injected (uL): 2.0

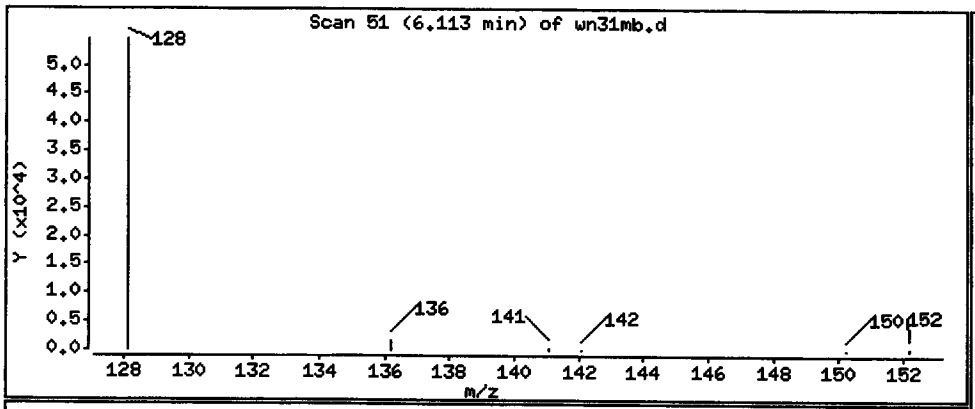
Operator: VTS

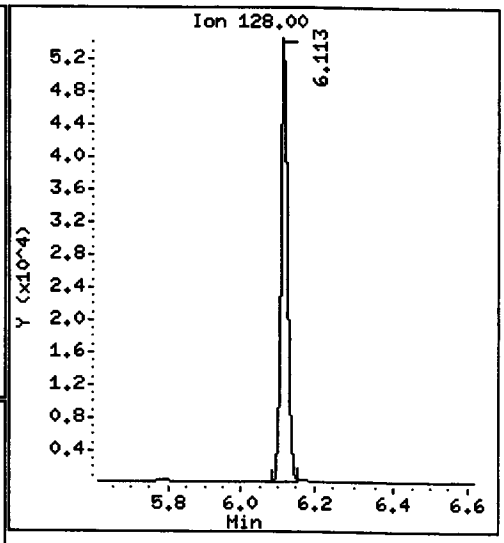
Column phase: Rxi-17Sil MS

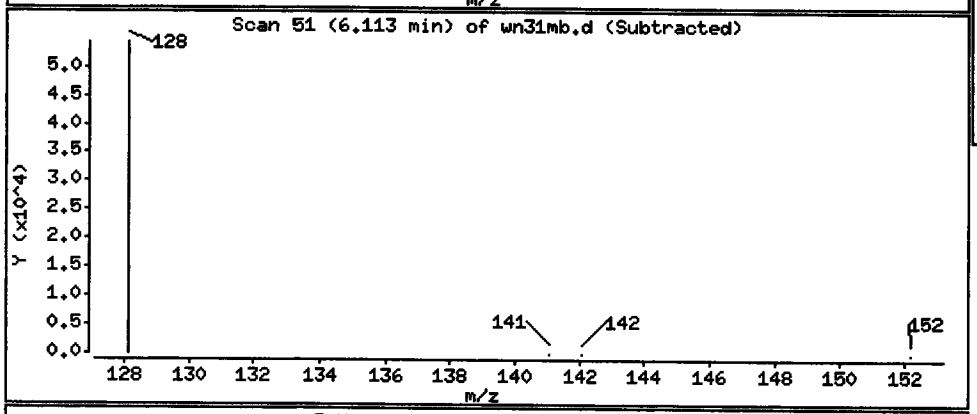
Column diameter: 0.25

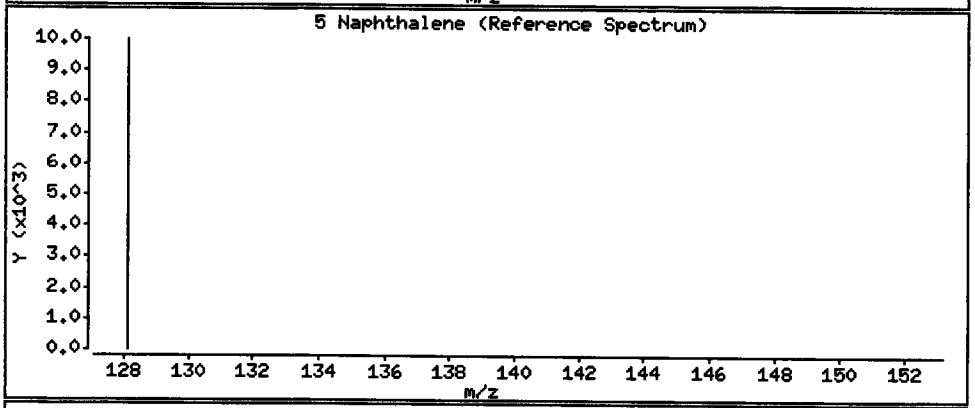
5 Naphthalene

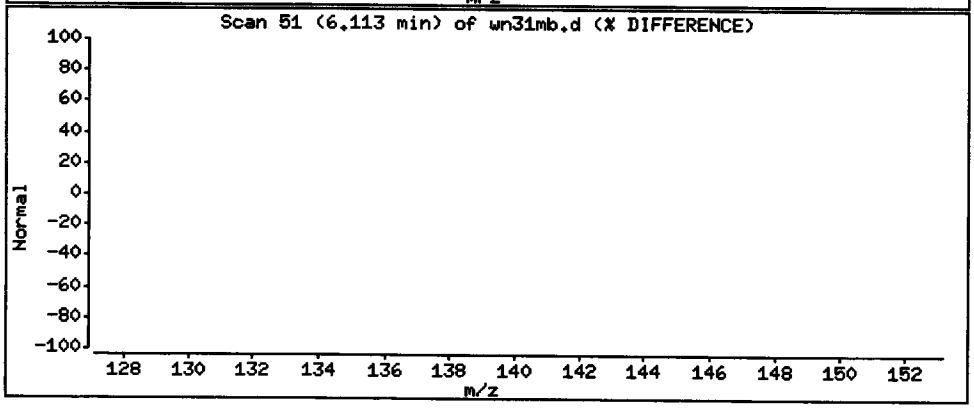
Concentration: 66.5 ug/L











CO-ELUTION SUMMARY FOR FILE - wn31mb.d

Lab ID: WN31MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 04-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130504.b/wn31sb.d
Lab Smp Id: WN31LCSW1 Client Smp ID: WN31LCSW1
Inj Date : 04-MAY-2013 15:31
Operator : VTS Inst ID: nt11.i
Smp Info : WN31LCSW1
Misc Info : 13-8694
Comment :
Method : /chem3/nt11.i/20130504.b/lowsim.m
Meth Date : 04-May-2013 11:51 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

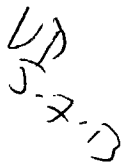
Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	6.081	6.081	(1.000)	212766	200.000	
	5 Naphthalene	128	6.113	6.113	(1.005)	327375	281.015	281(R)
$	6 2-Methylnaphthalene-d10	152	7.048	7.058	(1.159)	156859	232.977	233
	7 2-Methylnaphthalene	142	7.111	7.111	(1.169)	160811	220.554	221
	8 1-methylnaphthalene	142	7.352	7.353	(1.209)	161052	219.731	220
	10 Acenaphthylene	152	8.895	8.895	(0.983)	251835	231.935	232
*	11 Acenaphthene-d10	164	9.050	9.050	(1.000)	121608	200.000	
	12 Acenaphthene	153	9.105	9.105	(1.006)	160348	223.724	224
	14 Dibenzofuran	168	9.316	9.316	(1.029)	231511	221.739	222
	15 Fluorene	166	9.925	9.925	(1.097)	180961	232.166	232
*	18 Phenanthrene-d10	188	11.696	11.696	(1.000)	194550	200.000	
	19 Phenanthrene	178	11.729	11.729	(1.003)	268205	223.186	223
	20 Anthracene	178	11.785	11.785	(1.008)	239321	212.338	212
$	23 Fluoranthene-d10	212	13.773	13.773	(1.178)	255936	253.803	254
	24 Fluoranthene	202	13.801	13.801	(1.180)	277599	233.662	234

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.291	14.291	(0.872)	277141	233.232	233
	28 Benzo(a)anthracene	228	16.300	16.300	(0.994)	229303	233.530	234
*	29 Chrysene-d12	240	16.392	16.392	(1.000)	141893	200.000	
	30 Chrysene	228	16.441	16.442	(1.003)	233797	230.410	230
	44 Benzo(b)fluoranthene	252	18.079	18.080	(0.953)	217736	213.266	213
	45 Benzo(k)fluoranthene	252	18.118	18.118	(0.955)	256945	231.437	231
	46 Benzo(j)fluoranthene	252	18.166	18.166	(0.958)	245524	217.889	218
	34 Benzo(a)pyrene	252	18.790	18.791	(0.991)	171111	198.580	199
*	35 Perylene-d12	264	18.963	18.964	(1.000)	128822	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.063	21.074	(1.111)	240119	226.401	226
$	36 Dibenzo(a,h)anthracene-d14	292	20.974	20.974	(1.106)	165868	225.305	225
	38 Dibenzo(a,h)anthracene	278	21.063	21.063	(1.111)	173444	203.396	203
	39 Benzo(g,h,i)perylene	276	21.949	21.949	(1.157)	208002	219.187	219
	47 Perylene	252	19.011	19.012	(1.003)	193402	197.029	197

QC Flag Legend

R - Spike/Surrogate failed recovery limits.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wn31sb.d
Lab Smp Id: WN31LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

Calibration Date: 04-MAY-2013
Calibration Time: 11:22
Client Smp ID: WN31LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	212766	-16.66
11 Acenaphthene-d10	142891	71446	285782	121608	-14.89
18 Phenanthrene-d10	220853	110426	441706	194550	-11.91
29 Chrysene-d12	162525	81262	325050	141893	-12.69
35 Perylene-d12	139028	69514	278056	128822	-7.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.08	5.58	6.58	6.08	0.00
11 Acenaphthene-d10	9.05	8.55	9.55	9.05	0.00
18 Phenanthrene-d10	11.70	11.20	12.20	11.70	0.00
29 Chrysene-d12	16.39	15.89	16.89	16.39	0.00
35 Perylene-d12	18.96	18.46	19.46	18.96	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WN31LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

Client SDG: WN31
Fraction: SV
Client Smp ID: WN31LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	281	93.67*	37-90
7 2-Methylnaphthalen	300	221	73.52	39-90
8 1-methylnaphthalen	300	220	73.24	38-95
10 Acenaphthylene	300	232	77.31	35-95
12 Acenaphthene	300	224	74.57	38-94
14 Dibenzofuran	300	222	73.91	36-94
15 Fluorene	300	232	77.39	41-102
19 Phenanthrene	300	223	74.40	41-101
20 Anthracene	300	212	70.78	28-101
24 Fluoranthene	300	234	77.89	49-114
25 Pyrene	300	233	77.74	42-114
28 Benzo(a)anthracene	300	234	77.84	42-111
30 Chrysene	300	230	76.80	46-106
44 Benzo(b)fluoranthe	300	213	71.09	30-160
45 Benzo(k)fluoranthe	300	231	77.15	30-160
46 Benzo(j)fluoranthe	300	218	72.63	30-160
34 Benzo(a)pyrene	300	199	66.19	20-99
37 Indeno(1,2,3-cd)py	300	226	75.47	32-113
38 Dibenzo(a,h)anthra	300	203	67.80	30-113
39 Benzo(g,h,i)peryle	300	219	73.06	27-113
47 Perylene	300	197	65.68	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	233	77.66	35-94
$ 23 Fluoranthene-d10	300	254	84.60	30-160
$ 36 Dibenzo(a,h)anthra	300	225	75.10	26-115

Data File: /chem3/nt11.i/20130504.b/wn31sb.d

Date : 04-MAY-2013 15:31

Client ID: WN31LCSW1

Sample Info: WN31LCSW1

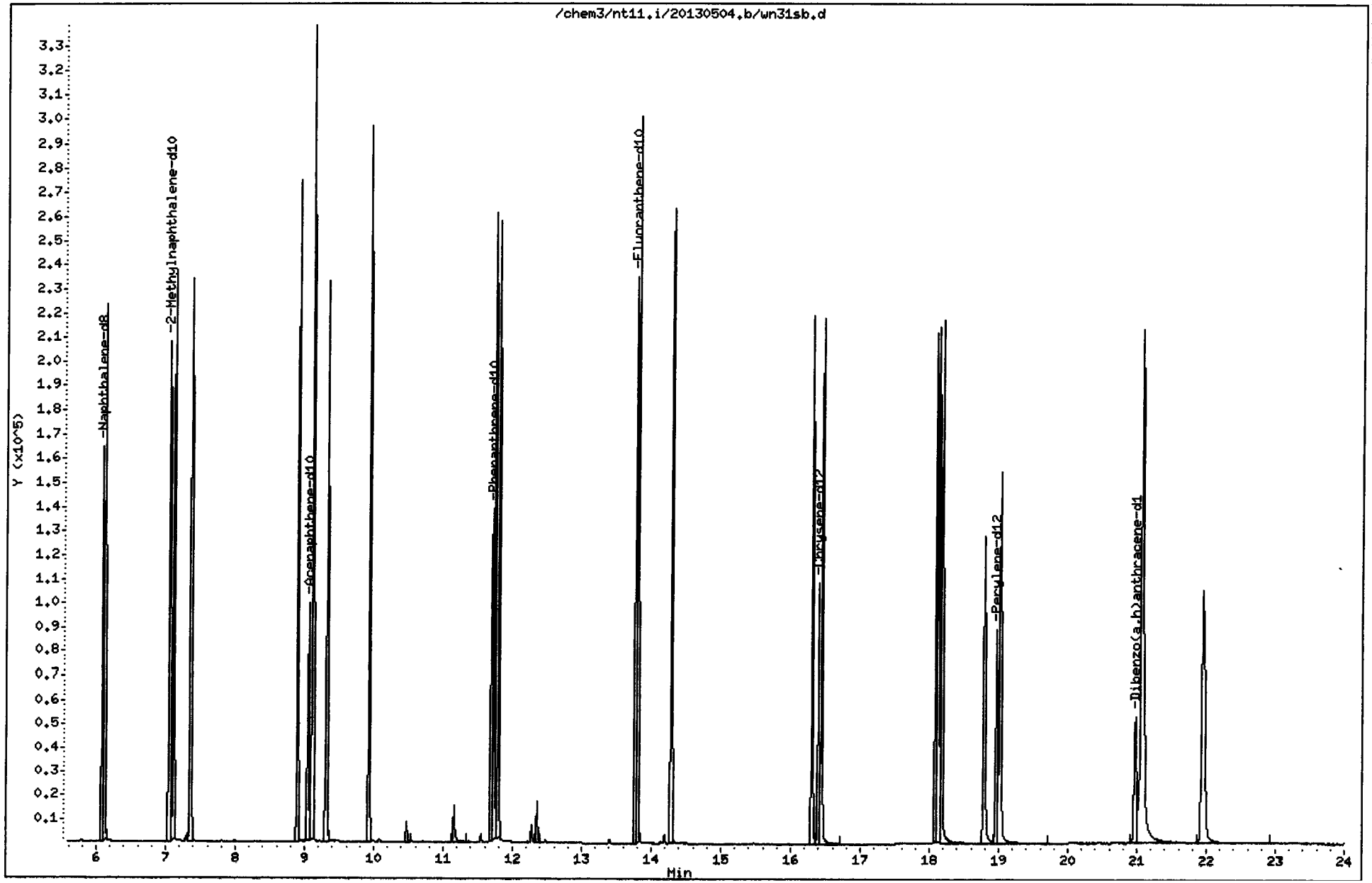
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wn31sb.d

Lab ID: WN31LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 04-MAY-2013

RT	CO-ELUTION COMPOUNDS
21.063	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.063	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130504.b/wn31sbd.d
Lab Smp Id: WN31LCSDW1 Client Smp ID: WN31LCSDW1
Inj Date : 04-MAY-2013 16:00
Operator : VTS Inst ID: nt11.i
Smp Info : WN31LCSDW1
Misc Info : 13-8694
Comment :
Method : /chem3/nt11.i/20130504.b/lowsim.m
Meth Date : 04-May-2013 11:51 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 12 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	6.081	6.081	(1.000)	209498	200.000	
	5 Naphthalene	128	6.113	6.113	(1.005)	342734	298.788	299(R)
$	6 2-Methylnaphthalene-d10	152	7.048	7.058	(1.159)	160169	241.605	242
	7 2-Methylnaphthalene	142	7.111	7.111	(1.169)	170413	237.369	237
	8 1-methylnaphthalene	142	7.352	7.353	(1.209)	169983	235.534	236
	10 Acenaphthylene	152	8.895	8.895	(0.983)	261595	245.349	245
*	11 Acenaphthene-d10	164	9.050	9.050	(1.000)	119415	200.000	
	12 Acenaphthene	153	9.105	9.105	(1.006)	169225	240.445	240
	14 Dibenzofuran	168	9.316	9.316	(1.029)	243084	237.100	237
	15 Fluorene	166	9.925	9.925	(1.097)	192066	250.939	251
*	18 Phenanthrene-d10	188	11.696	11.696	(1.000)	188878	200.000	
	19 Phenanthrene	178	11.729	11.729	(1.003)	284357	243.733	244
	20 Anthracene	178	11.785	11.785	(1.008)	246939	225.677	226
$	23 Fluoranthene-d10	212	13.772	13.773	(1.178)	257701	263.227	263
	24 Fluoranthene	202	13.801	13.801	(1.180)	290698	252.035	252

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.291	14.291	(0.872)	287476	244.322	244
	28 Benzo(a)anthracene	228	16.300	16.300	(0.994)	239671	246.502	247
*	29 Chrysene-d12	240	16.392	16.392	(1.000)	140504	200.000	
	30 Chrysene	228	16.441	16.442	(1.003)	247640	246.466	246
	44 Benzo(b)fluoranthene	252	18.079	18.080	(0.953)	225232	228.563	229
	45 Benzo(k)fluoranthene	252	18.118	18.118	(0.955)	268504	250.569	251
	46 Benzo(j)fluoranthene	252	18.166	18.166	(0.958)	256458	235.798	236
	34 Benzo(a)pyrene	252	18.790	18.791	(0.991)	171553	206.271	206
*	35 Perylene-d12	264	18.963	18.964	(1.000)	124339	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.074	21.074	(1.111)	245282	239.608	240
$	36 Dibenzo(a,h)anthracene-d14	292	20.974	20.974	(1.106)	161508	227.292	227
	38 Dibenzo(a,h)anthracene	278	21.063	21.063	(1.111)	176505	214.449	214
	39 Benzo(g,h,i)perylene	276	21.949	21.949	(1.157)	210862	230.213	230
	47 Perylene	252	19.011	19.012	(1.003)	182807	192.950	193

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wn31sbd.d
Lab Smp Id: WN31LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

Calibration Date: 04-MAY-2013
Calibration Time: 11:22
Client Smp ID: WN31LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	209498	-17.94
11 Acenaphthene-d10	142891	71446	285782	119415	-16.43
18 Phenanthrene-d10	220853	110426	441706	188878	-14.48
29 Chrysene-d12	162525	81262	325050	140504	-13.55
35 Perylene-d12	139028	69514	278056	124339	-10.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.08	5.58	6.58	6.08	0.00
11 Acenaphthene-d10	9.05	8.55	9.55	9.05	0.00
18 Phenanthrene-d10	11.70	11.20	12.20	11.70	0.00
29 Chrysene-d12	16.39	15.89	16.89	16.39	0.00
35 Perylene-d12	18.96	18.46	19.46	18.96	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WN31LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

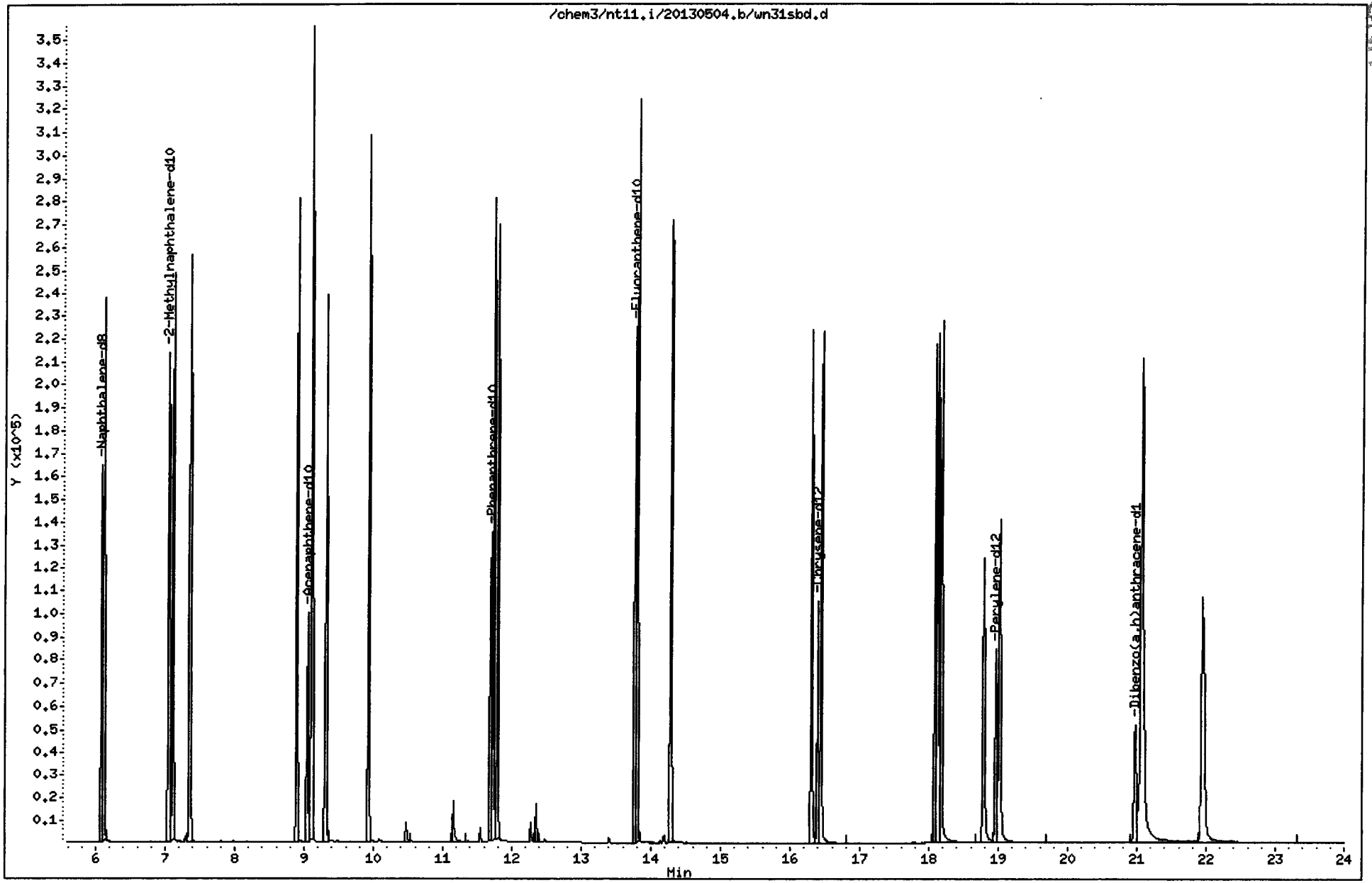
Client SDG: WN31
Fraction: SV
Client Smp ID: WN31LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	299	99.60*	37-90
7 2-Methylnaphthalen	300	237	79.12	39-90
8 1-methylnaphthalen	300	236	78.51	38-95
10 Acenaphthylene	300	245	81.78	35-95
12 Acenaphthene	300	240	80.15	38-94
14 Dibenzofuran	300	237	79.03	36-94
15 Fluorene	300	251	83.65	41-102
19 Phenanthrene	300	244	81.24	41-101
20 Anthracene	300	226	75.23	28-101
24 Fluoranthene	300	252	84.01	49-114
25 Pyrene	300	244	81.44	42-114
28 Benzo(a)anthracene	300	247	82.17	42-111
30 Chrysene	300	246	82.16	46-106
44 Benzo(b)fluoranthe	300	229	76.19	30-160
45 Benzo(k)fluoranthe	300	251	83.52	30-160
46 Benzo(j)fluoranthe	300	236	78.60	30-160
34 Benzo(a)pyrene	300	206	68.76	20-99
37 Indeno(1,2,3-cd)py	300	240	79.87	32-113
38 Dibenzo(a,h)anthra	300	214	71.48	30-113
39 Benzo(g,h,i)peryle	300	230	76.74	27-113
47 Perylene	300	193	64.32	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	242	80.53	35-94
$ 23 Fluoranthene-d10	300	263	87.74	30-160
$ 36 Dibenzo(a,h)anthra	300	227	75.76	26-115

Data File: /chem3/nt11.i/20130504.b/wn31sbd.d
Date : 04-MAY-2013 16:00
Client ID: WN31LCSDW1
Sample Info: WN31LCSDW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wn31sbd.d

Lab ID: WN31LCSDW1, Method: lowsim.m, Instrument: nt11.i, Date: 04-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130504.b/wn31b.d
Lab Smp Id: WN31B Client Smp ID: ES-MH-001-20130424-
Inj Date : 04-MAY-2013 16:29
Operator : VTS Inst ID: nt11.i
Smp Info : WN31B
Misc Info : 13-8694
Comment :
Method : /chem3/nt11.i/20130504.b/lowsim.m
Meth Date : 04-May-2013 11:51 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)	
*	4 Naphthalene-d8	136	6.081	6.081	(1.000)	209125	200.000		
	5 Naphthalene	128	6.113	6.113	(1.005)	87717	76.6062	76.6	B
$	6 2-Methylnaphthalene-d10	152	7.048	7.058	(1.159)	154056	232.798	233	
	7 2-Methylnaphthalene	142	7.121	7.111	(1.171)	20731	28.9279	28.9	
	8 1-methylnaphthalene	142	7.353	7.353	(1.209)	11450	15.8938	15.9	
	10 Acenaphthylene	152	Compound Not Detected.						
*	11 Acenaphthene-d10	164	9.050	9.050	(1.000)	120946	200.000		
	12 Acenaphthene	153	9.105	9.105	(1.006)	5607	7.86593	7.87	
	14 Dibenzofuran	168	9.316	9.316	(1.029)	8756	8.43233	8.43	
	15 Fluorene	166	9.925	9.925	(1.097)	16223	20.9274	20.9	
*	18 Phenanthrene-d10	188	11.696	11.696	(1.000)	191894	200.000		
	19 Phenanthrene	178	11.729	11.729	(1.003)	6655	5.61460	5.61	
	20 Anthracene	178	Compound Not Detected.						
$	23 Fluoranthene-d10	212	13.773	13.773	(1.178)	251650	253.007	253	
	24 Fluoranthene	202	13.801	13.801	(1.180)	6721	5.73553	5.74	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.291	14.291	(0.872)	11185	9.90549	9.91
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.392	16.392	(1.000)	134837	200.000	
	30 Chrysene	228	16.442	16.442	(1.003)	6282	6.51498	6.51
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	18.973	18.964	(1.000)	134780	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.974	20.974	(1.105)	176075	228.597	229
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

LD
5.2.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wn31b.d
Lab Smp Id: WN31B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

Calibration Date: 04-MAY-2013
Calibration Time: 11:22
Client Smp ID: ES-MH-001-20130424-
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	209125	-18.08
11 Acenaphthene-d10	142891	71446	285782	120946	-15.36
18 Phenanthrene-d10	220853	110426	441706	191894	-13.11
29 Chrysene-d12	162525	81262	325050	134837	-17.04
35 Perylene-d12	139028	69514	278056	134780	-3.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.08	5.58	6.58	6.08	0.00
11 Acenaphthene-d10	9.05	8.55	9.55	9.05	0.00
18 Phenanthrene-d10	11.70	11.20	12.20	11.70	0.00
29 Chrysene-d12	16.39	15.89	16.89	16.39	0.00
35 Perylene-d12	18.96	18.46	19.46	18.97	0.05

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WN31B
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130504.b/lowsim.m
Misc Info: 13-8694

Client SDG: WN31
Fraction: SV
Client Smp ID: ES-MH-001-20130424-
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	233	77.60	35-94
$ 23 Fluoranthene-d10	300	253	84.34	30-160
$ 36 Dibenzo(a,h)anthra	300	229	76.20	26-115

Data File: /chem3/nt11.i/20130504.b/wn31b.d

Date : 04-MAY-2013 16:29

Client ID: ES-MH-001-20130424-

Sample Info: WN31B

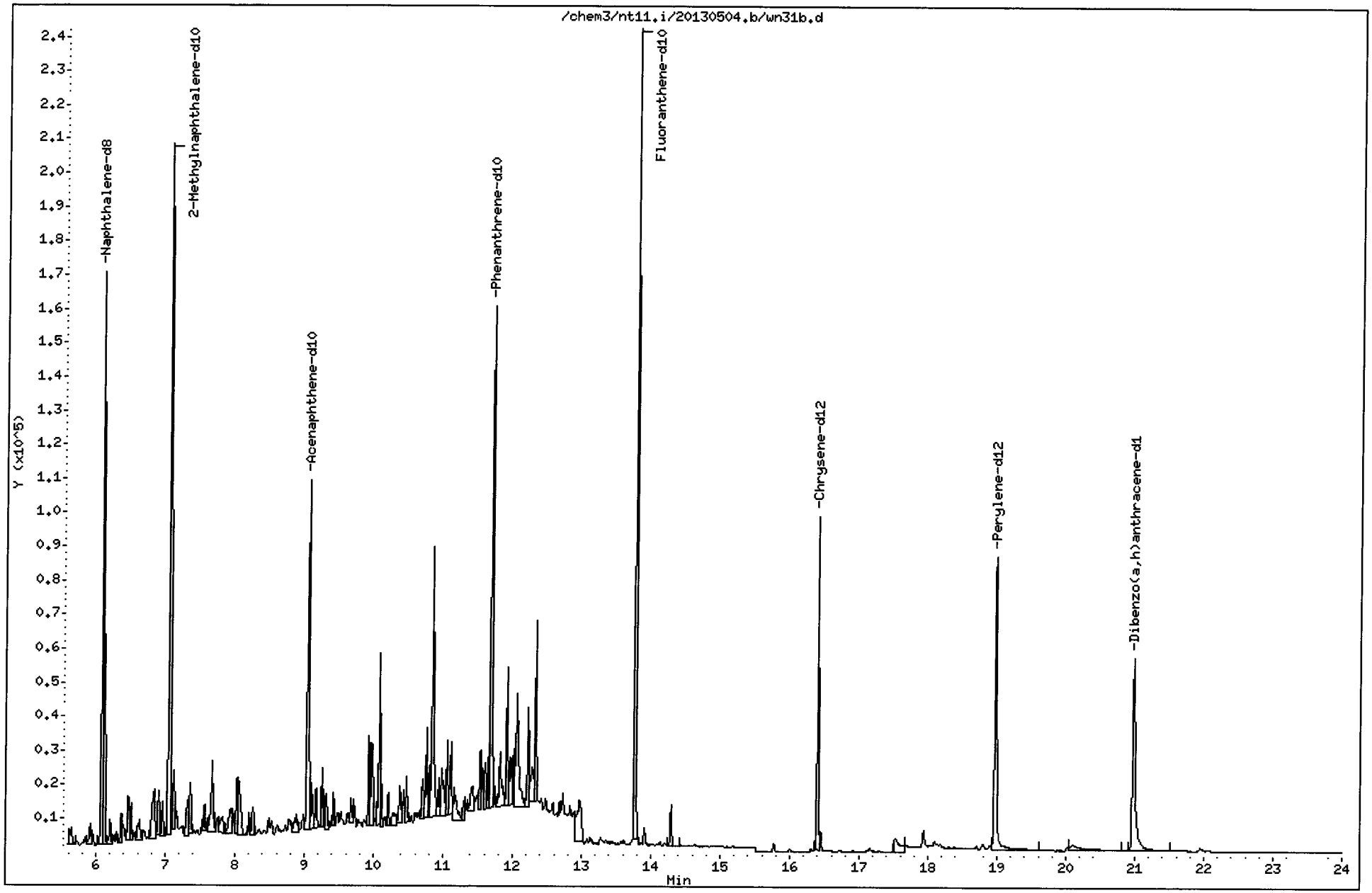
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



Data File: /chem3/nt11.i/20130504.b/wn31b.d

Date : 04-MAY-2013 16:29

Client ID: ES-MH-001-20130424-

Instrument: nt11.i

Sample Info: WN31B

Volume Injected (uL): 2.0

Operator: VTS

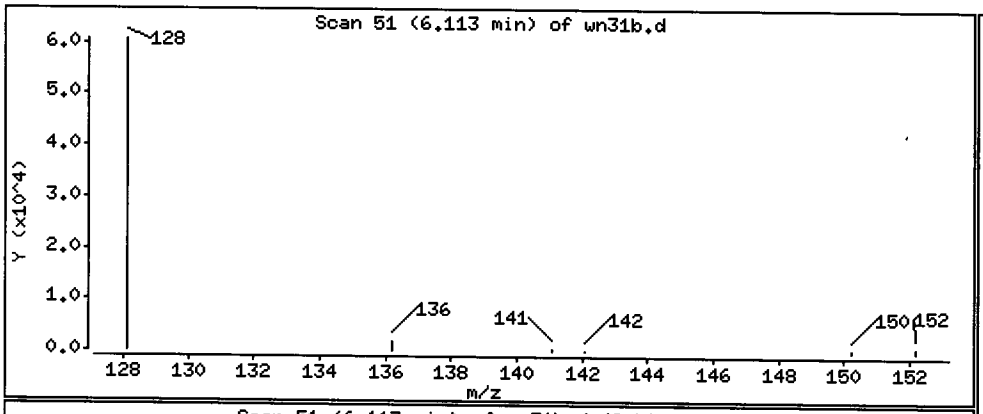
Column phase: Rxi-17Sil MS

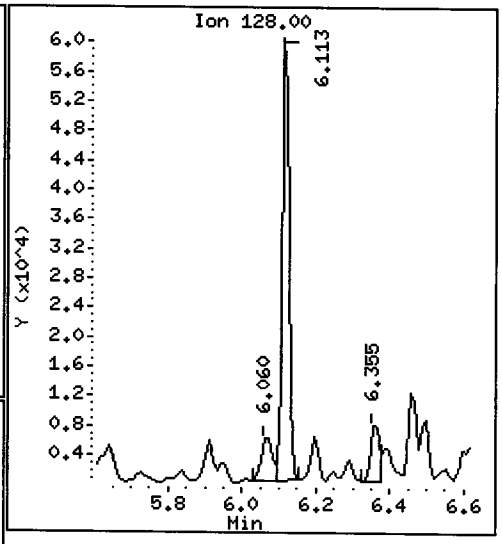
Column diameter: 0.25

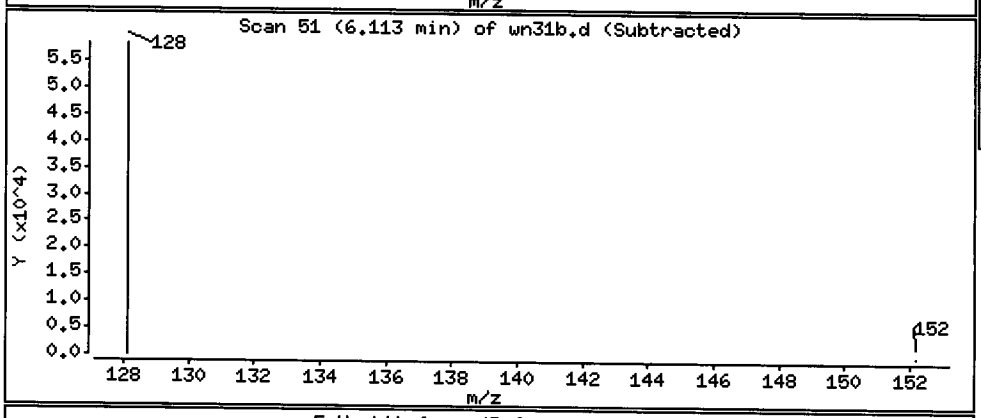
5 Naphthalene

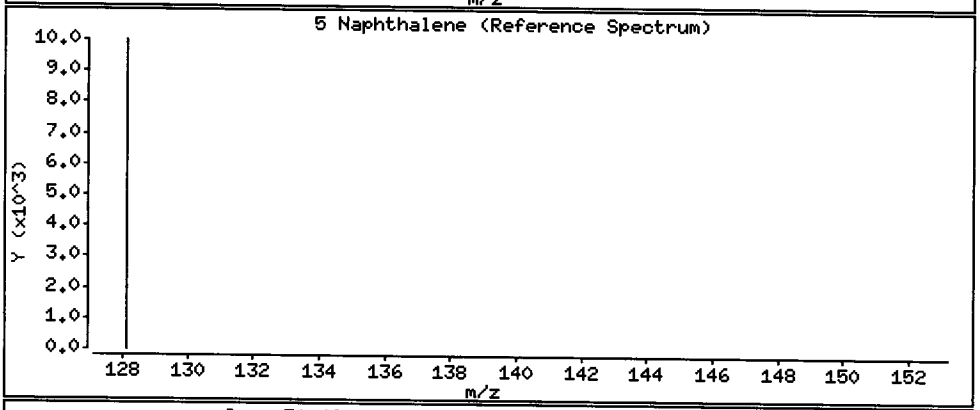
Concentration: 76.6 ug/L

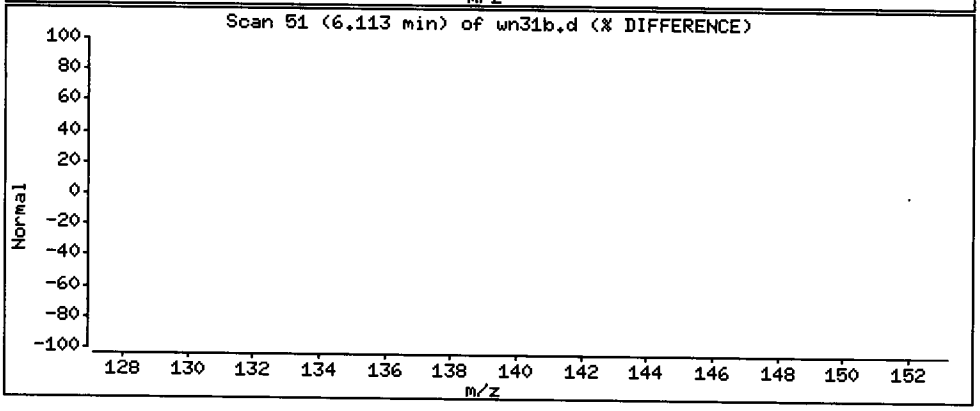
(6)











Data File: /chem3/nt11.i/20130504.b/wn31b.d

Date : 04-MAY-2013 16:29

Client ID: ES-MH-001-20130424-

Instrument: nt11.i

Sample Info: WN31B

Volume Injected (uL): 2.0

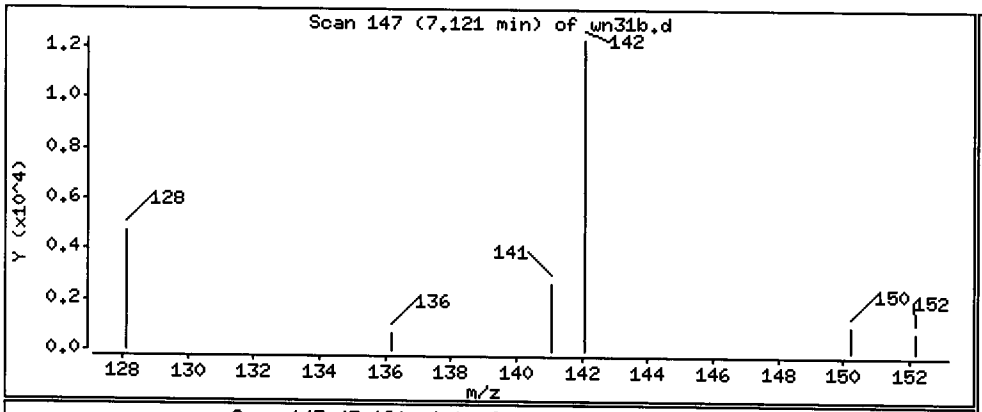
Operator: VTS

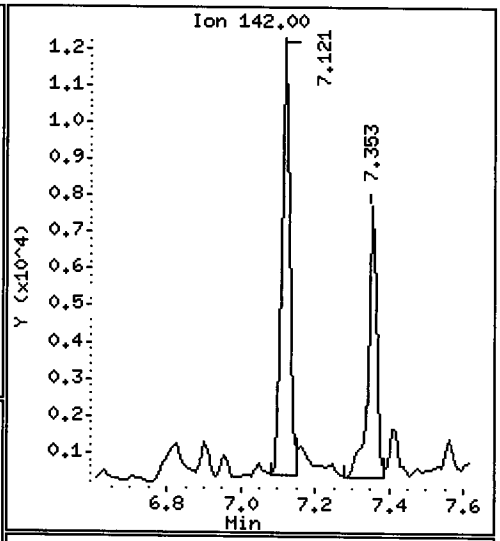
Column phase: Rxi-17Sil MS

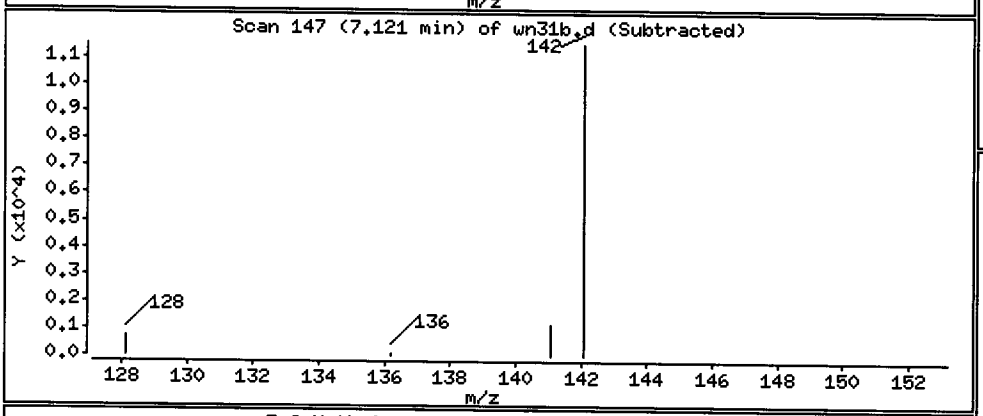
Column diameter: 0.25

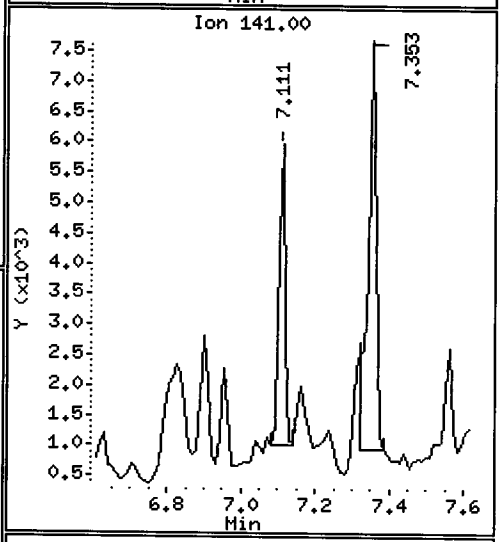
7 2-Methylnaphthalene

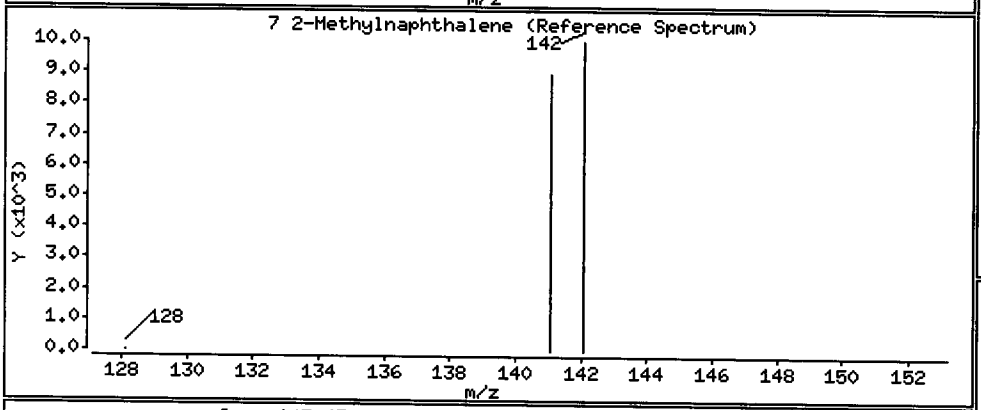
Concentration: 28.9 ug/L

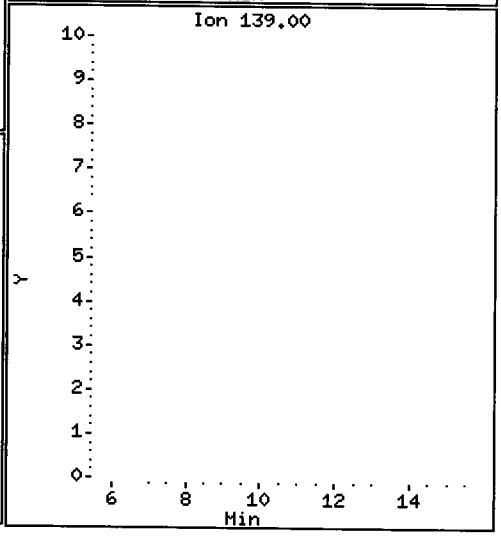


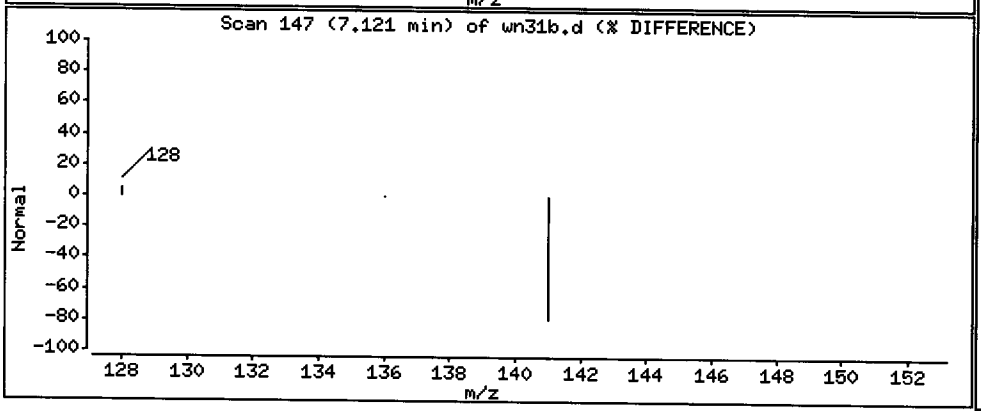












Data File: /chem3/nt11.i/20130504.b/wn31b.d

Date : 04-MAY-2013 16:29

Client ID: ES-MH-001-20130424-

Instrument: nt11.i

Sample Info: WN31B

Volume Injected (uL): 2.0

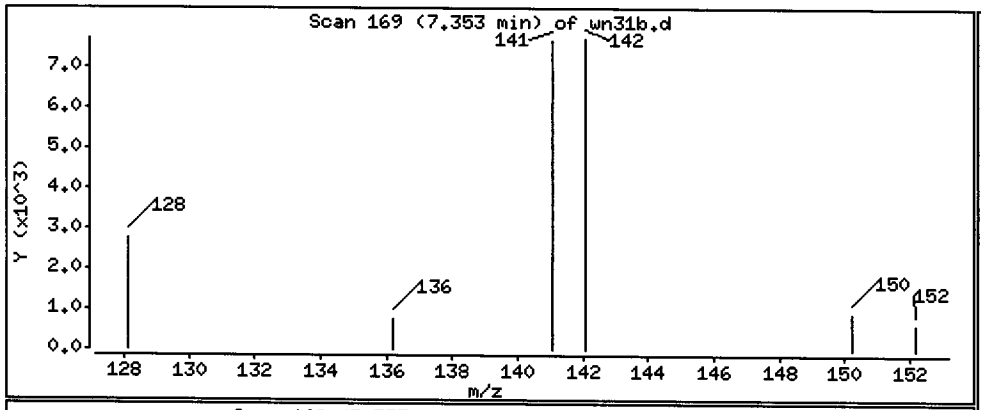
Operator: VTS

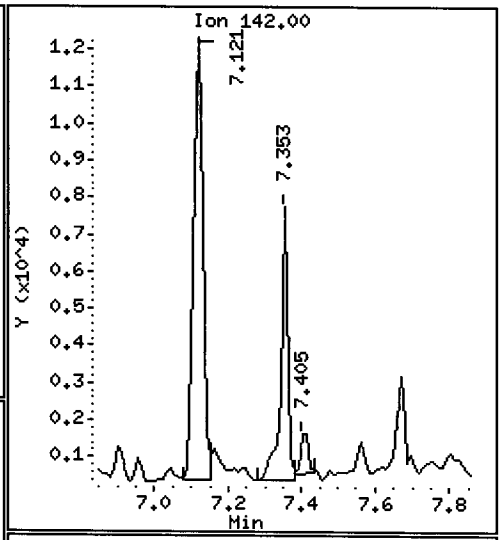
Column phase: Rxi-17Sil MS

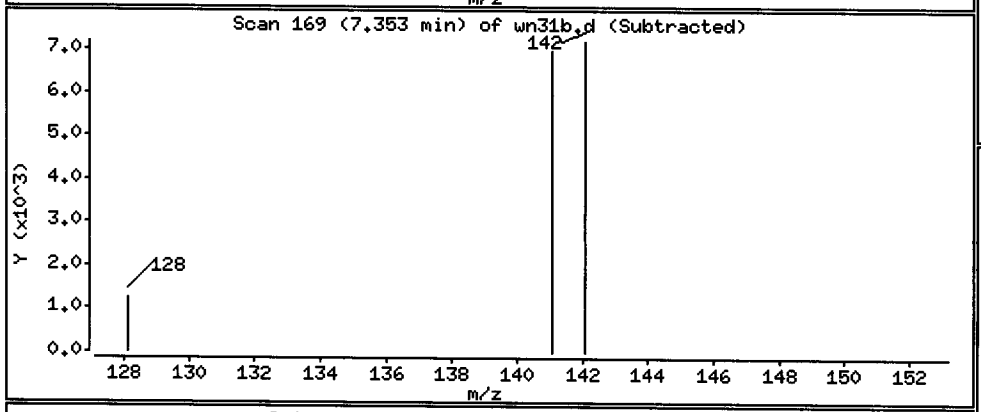
Column diameter: 0.25

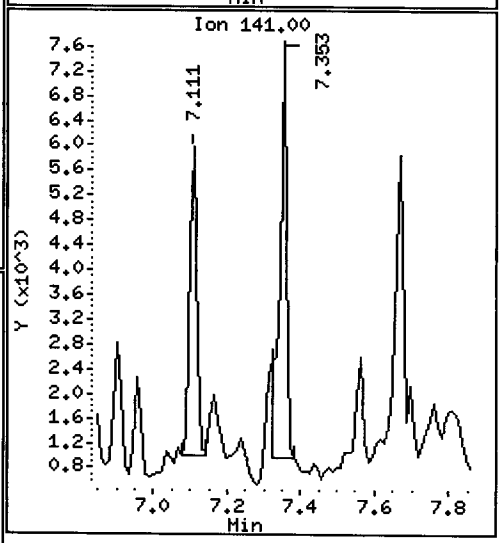
8 1-methylnaphthalene

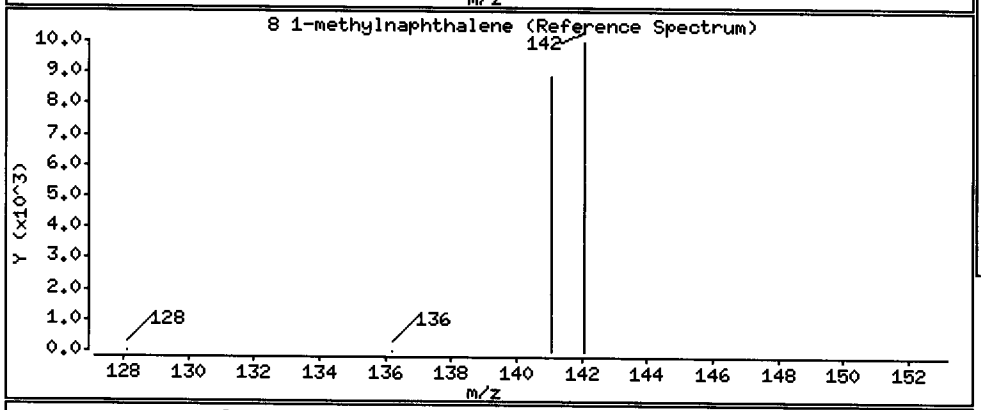
Concentration: 15.9 ug/L

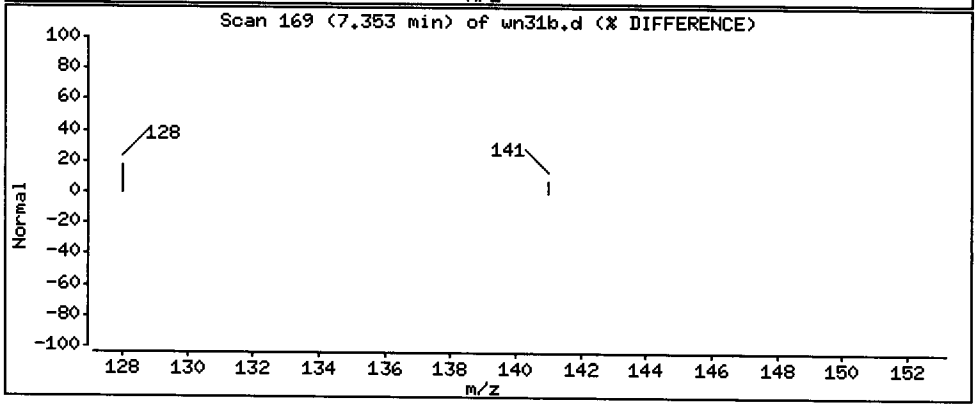












Data File: /chem3/nt11.i/20130504.b/wn31b.d

Date : 04-MAY-2013 16:29

Client ID: ES-MH-001-20130424-

Instrument: nt11.i

Sample Info: WN31B

Volume Injected (uL): 2.0

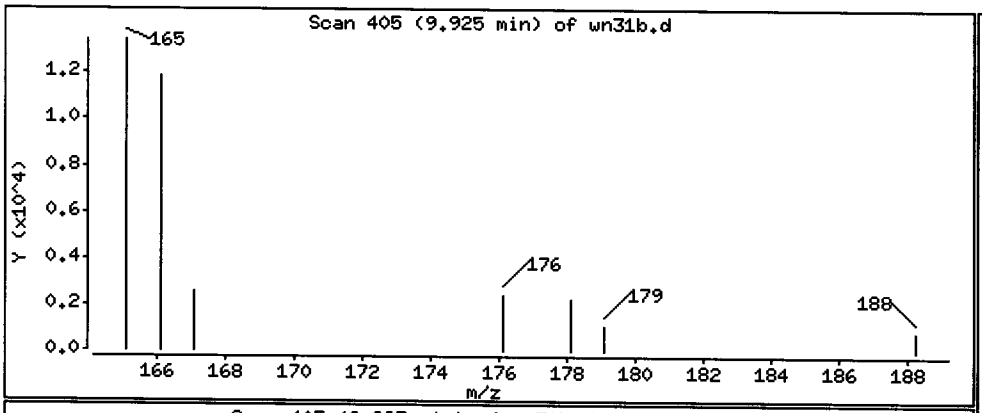
Operator: VTS

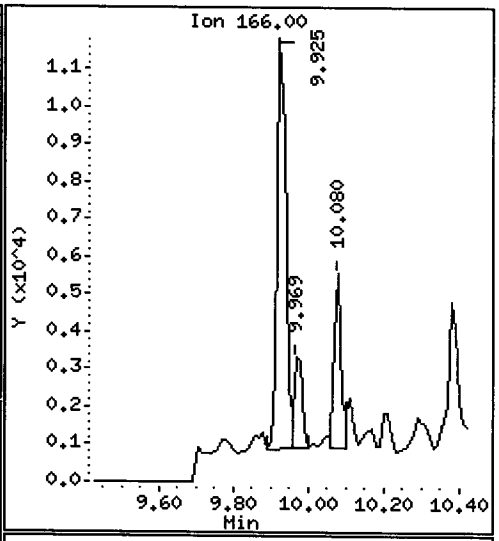
Column phase: Rxi-17Sil MS

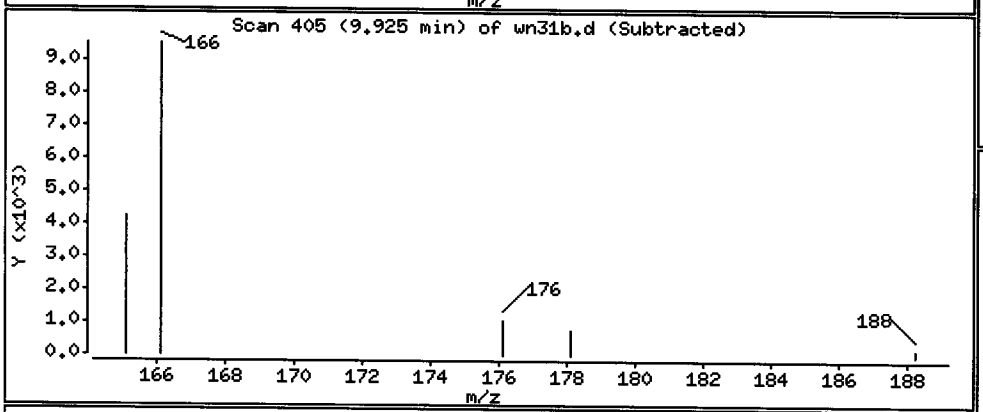
Column diameter: 0.25

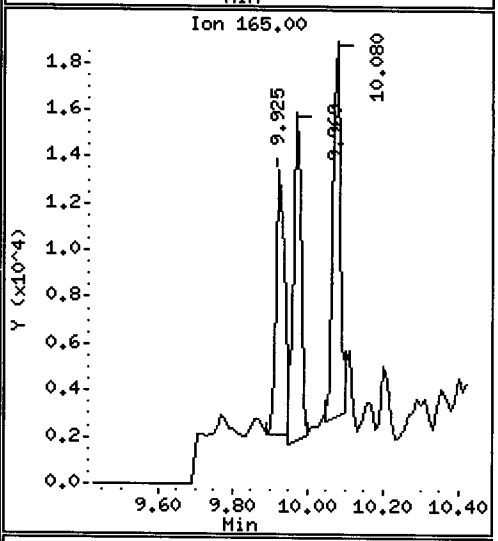
15 Fluorene

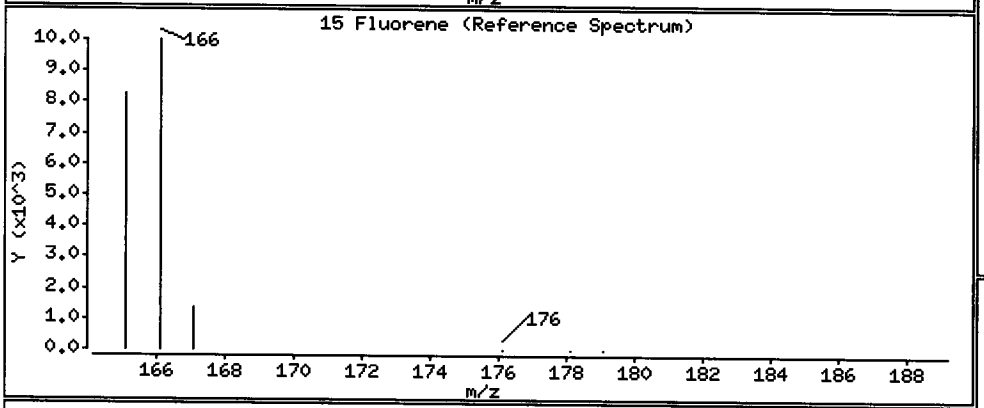
Concentration: 20.9 ug/L

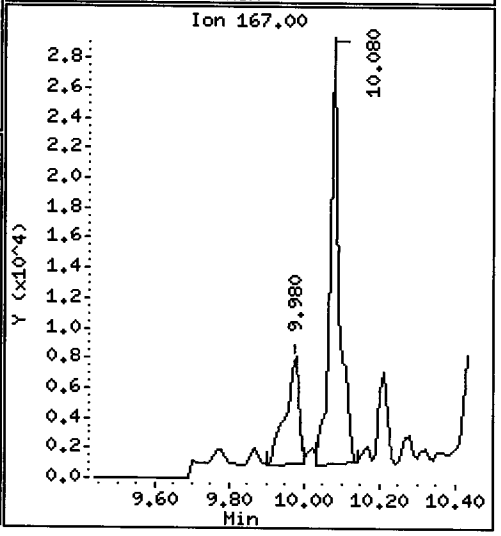


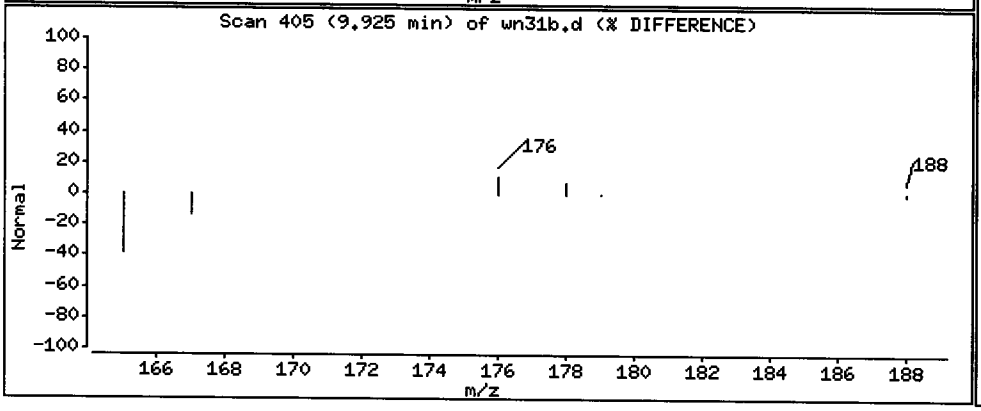












CO-ELUTION SUMMARY FOR FILE - wn31b.d

Lab ID: WN31B, Method: lowsim.m, Instrument: nt11.i, Date: 04-MAY-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WM89, WN27, WN31

Matrix (circle one)	Soil Sediment	Oil Tissue
Extraction Method	Start Time/Date:	End Time/Date:
Soxhlet	12:55 4/29/13	05:13 4/30/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	4/29/13
Purified Sand		I5025	PD	4/29/13
Toluene		I8142	PD	4/29/13
Hexane		I8023	PD	4/30/13
CH_2Cl_2		I7981	PD	5/1/13
H_2SO_4		I8156	PD	4/30/13
Na_2SO_4		I8040	PD	5/1/13
Glasswool		5/18/12	PD	5/1/13
10 % $AgNO_3$	✓			
Basic Silica		H104	PD	5/1/13
Acid Silica		H143	PD	5/1/13
0% Silica		I8035 / I8035	PD/PD	4/29/13 / 5/1/13
Activated Florisil		G989	PD	5/1/13
Dual Carbon Column	✓			
Other (PSR SRM)		I8152	PD	4/29/13
Nonane		I5167	PD	5/1/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
4/29/13	WM89MB	10.00g	(1) / 2	10uL	0.3	
↓	↓ OPR	10.00g	1 / (2)	10uL	0.3	
~~QLS~~	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
	WM89SRM	10.03	(1) / 2	10uL	0.1	
4	A	12.59	1 / (2)	10uL	3.2	
	B	13.41	(1) / 2	10uL	3.8	
↓	C	12.86	1 / (2)	10uL	3.6	
6	D	14.44	(1) / 2	10uL	4.8	
4	↓ E	14.54	1 / (2)	10uL	5.0	
3	WN27A	16.95	(1) / 2	10uL	7.0	
10	WN31A	25.23	1 / (2)	10uL	15.2	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		PD 4/29/13	PD 4/30/13 PD 5/1/13		PD 4/30/13	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	2089-4	2/4ng/mL	4/5/14	M	4/29/13	PD
Ongoing Precision /Recovery	20 µL	2089-3	10/50/100ng/mL	2/6/14	M	4/29/13	PD
~~QLS Standard~~	~~10 µL~~	~~2/1~~	~~0.5/2.5/5ng/mL~~				
Clean-up Standard	1.0 mL	2090-1	0.8ng/mL	4/5/14	PD×2	5/1/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: 5/1/13

Bench Sheet No.: 00035

Verify Client ID

Analyst/Date PD 4/29/13

Acid Clean

(Y)N

Analyst/Date PD 4/30/13

Silica-Florisil

(Y)N

Analyst/Date PD 5/1/13

LCS 2 LCSD 1 CAL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN31 Client ID: SAIC

Parameter: Dioxin 1613B Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)=	AC 4/24/13
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☑ Other (Details)= Split A before Acid wash due to black extract.	PD 4/30/13
Double Acid silica used for A due to brown turbid extract.	PD 5/1/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Dioxin Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: _____ Client ID: _____

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 3/12/13 Analysis Start Date: _____

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	Y / N / _____	Signal / Noise ≥ 2.5?	Y / N / _____
TCDD / TCDF Resolution ≤ 25%	Y / N / _____	Extraction STD Limits Met?	Y / N / _____
PCDF Windows Verified	Y / N / _____	Cleanup STD Limits Met?	Y / N / _____
CCV Meets %D Limits?	Y / N / _____	Method Blank in Control?	Y / N / _____
CCV Ion Ratios within Limits?	Y / N / _____	OPR Recovery Limits Met?	Y / N / _____
CCV RRT within Limits?	Y / N / _____	Values Exceeding Curve Range?	Y / N / _____
Manual Integrations for Samples?	Y / N / _____	Samples Diluted?	Y / N / _____
Special Analysis Request?	Y / N / _____	Duplicate Sample RPD ≤ 25%?	NA / _____

Detail problems, corrective actions and/or other pertinent information below:

- All cmpds < 20% RSD
- Man Int for HpCDF, OCDF, TD in CSL.

(Review 1)Analyst: _____ **Date:** 3/13/13

(Review 2)Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 3/12/13 Analysis: Dioxins Analyst: JH

GC Program: 8290C Column No: I7819 Column Type: RTX Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): dio130312_1-5 Detector Voltage: 350

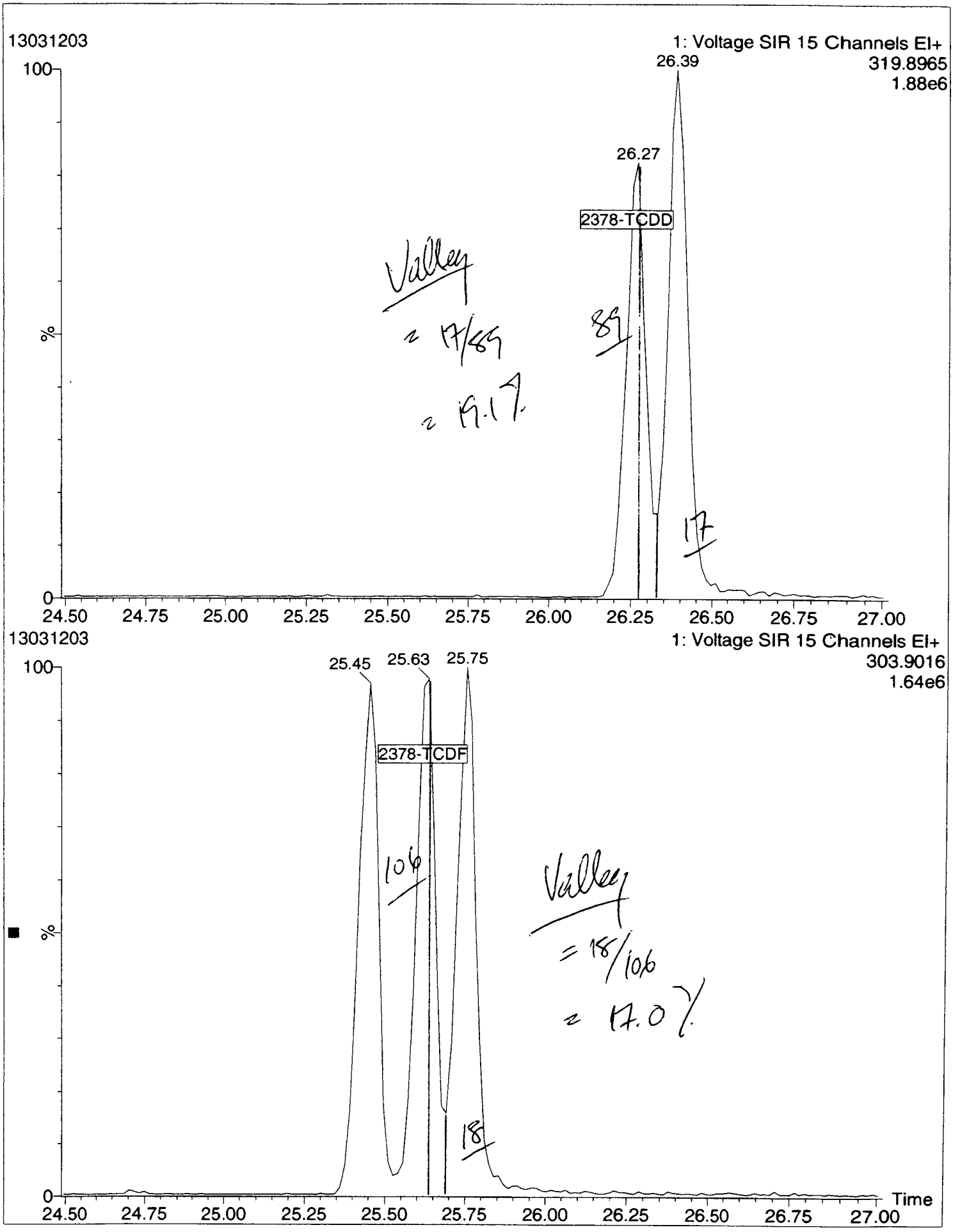
Resolution Check Files: 12:15, 22:03 Curve Date: 3/12/13

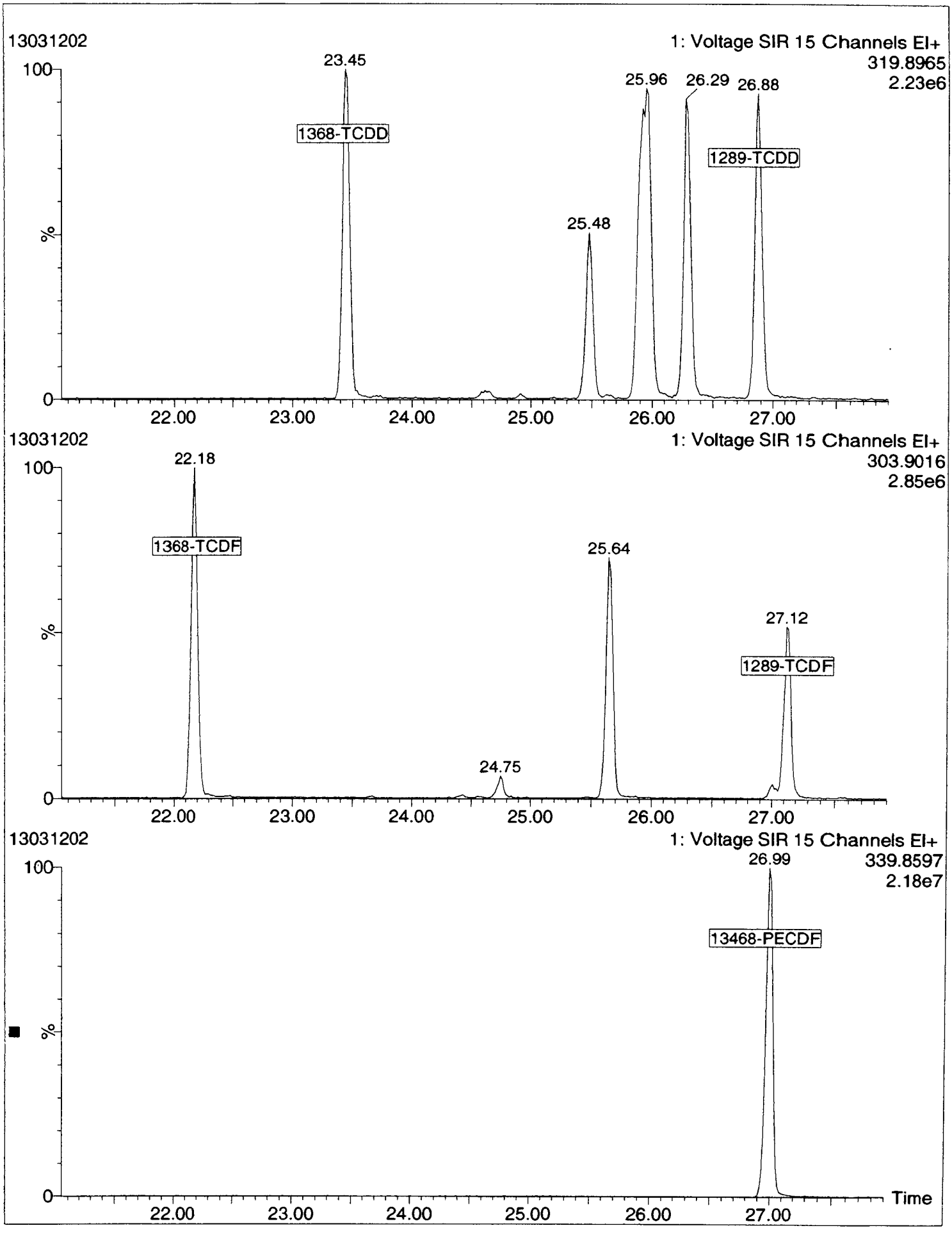
IS/SS	Ical/Ccal	LCS/ICV
I7908	I7908 C972	

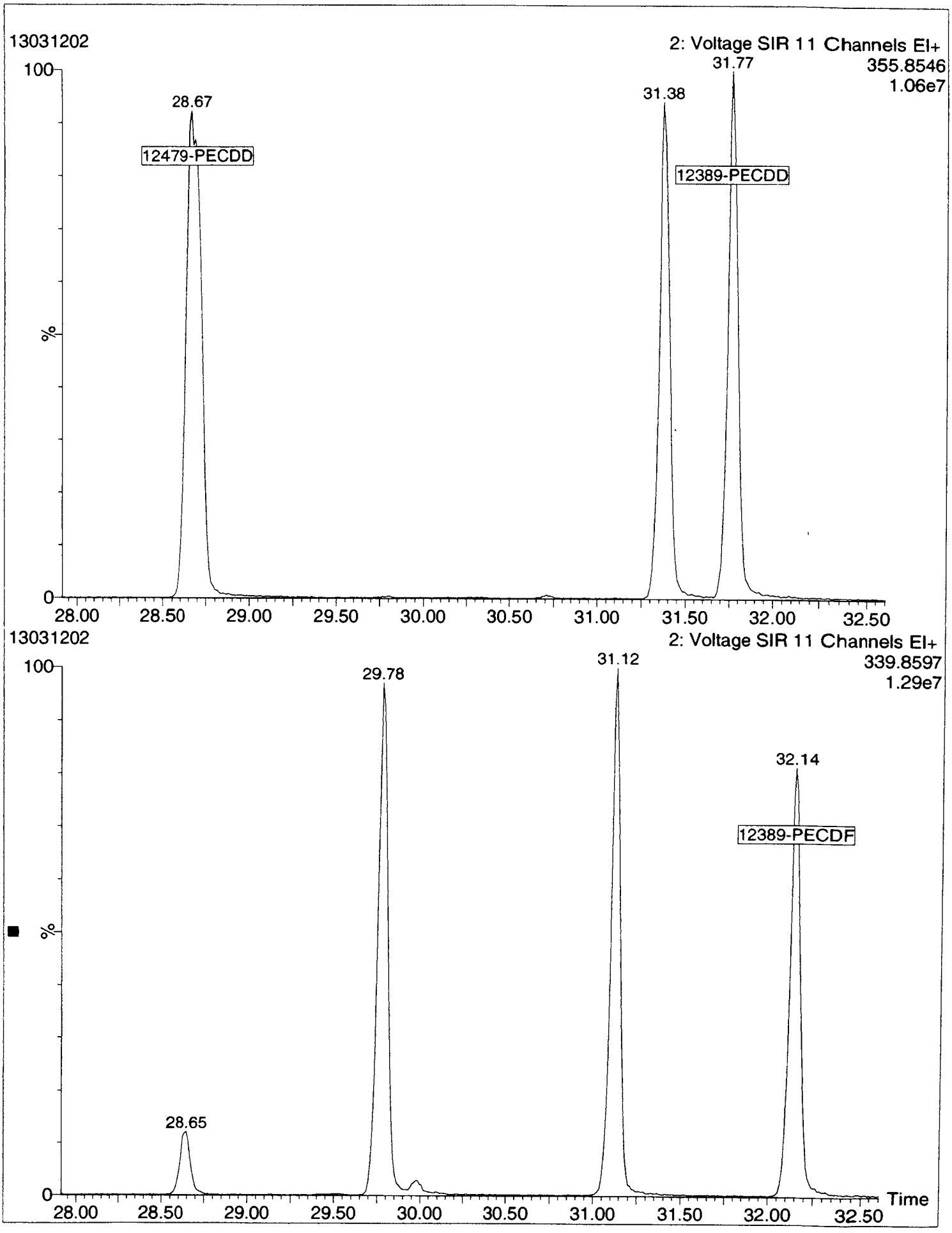
1	12-Mar-13	12:17:53	13031202	CS3
2	12-Mar-13	13:07:13	13031203	ISC01
3	12-Mar-13	15:01:10	13031204	CSL
4	12-Mar-13	15:57:32	13031205	CS1
5	12-Mar-13	16:46:52	13031206	CS2
6	12-Mar-13	17:38:09	13031207	CS3
7	12-Mar-13	18:29:32	13031208	CS4
8	12-Mar-13	19:20:50	13031209	CS5
9	12-Mar-13	20:12:13	13031210	ICV
10	12-Mar-13	21:03:32	13031211	CS3
11	12-Mar-13	22:03:05	13031212	ISC02

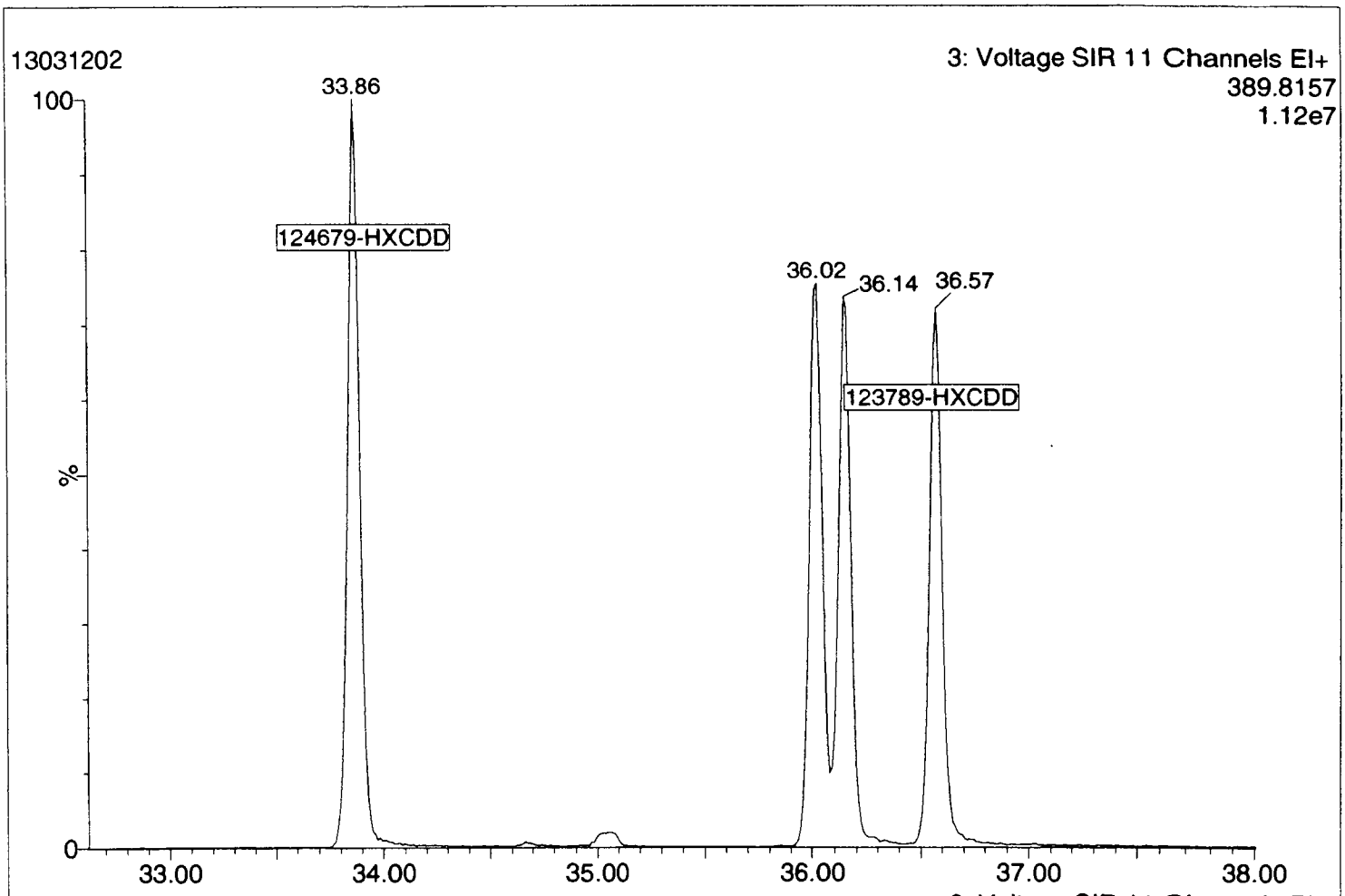
JH 3/13/13

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


13031203
1: Voltage SIR 15 Channels EI+
319.8965
1.88e6
26.39
26.27
2378-TCDD
Valley
= 17/89
= 19.1%
89
17
100
%
0
24.50
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
13031203
1: Voltage SIR 15 Channels EI+
303.9016
1.64e6
25.45
25.63
25.75
2378-TCDF
106
Valley
= 18/106
= 17.0%
18
100
%
0
Time
24.50
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00


13031202
1: Voltage SIR 15 Channels EI+
319.8965
2.23e6
100
%
0
23.45
1368-TCDD
25.48
25.96
26.29
26.88
1289-TCDD
22.00
23.00
24.00
25.00
26.00
27.00
13031202
1: Voltage SIR 15 Channels EI+
303.9016
2.85e6
100
%
0
22.18
1368-TCDF
24.75
25.64
27.12
1289-TCDF
22.00
23.00
24.00
25.00
26.00
27.00
13031202
1: Voltage SIR 15 Channels EI+
339.8597
2.18e7
100
%
0
26.99
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00


13031202
2: Voltage SIR 11 Channels EI+
355.8546
1.06e7
100
%
0
28.67
12479-PECDD
31.38
31.77
12389-PECDD
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
13031202
2: Voltage SIR 11 Channels EI+
339.8597
1.29e7
100
%
0
28.65
29.78
31.12
32.14
12389-PECDF
Time
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50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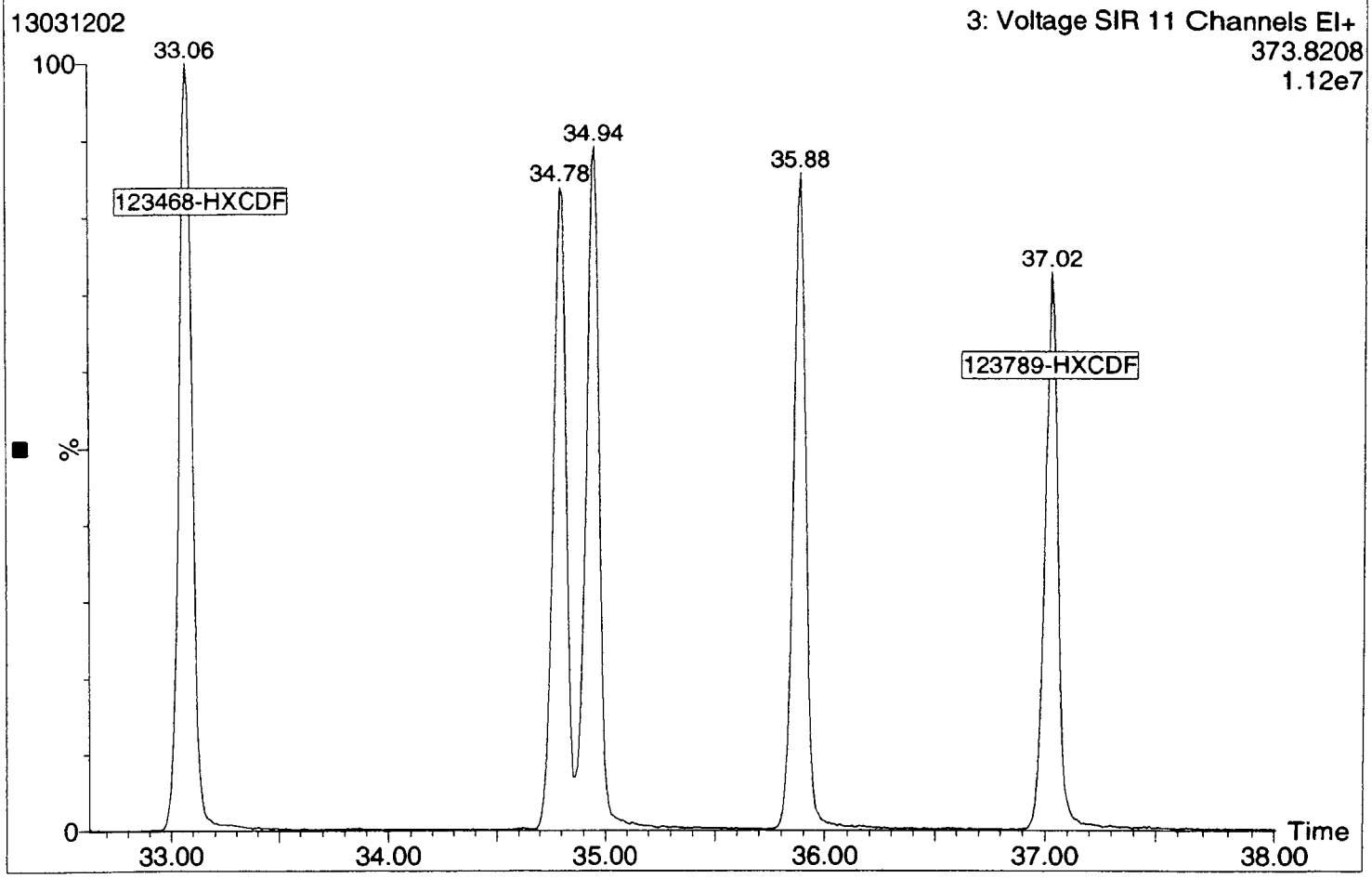
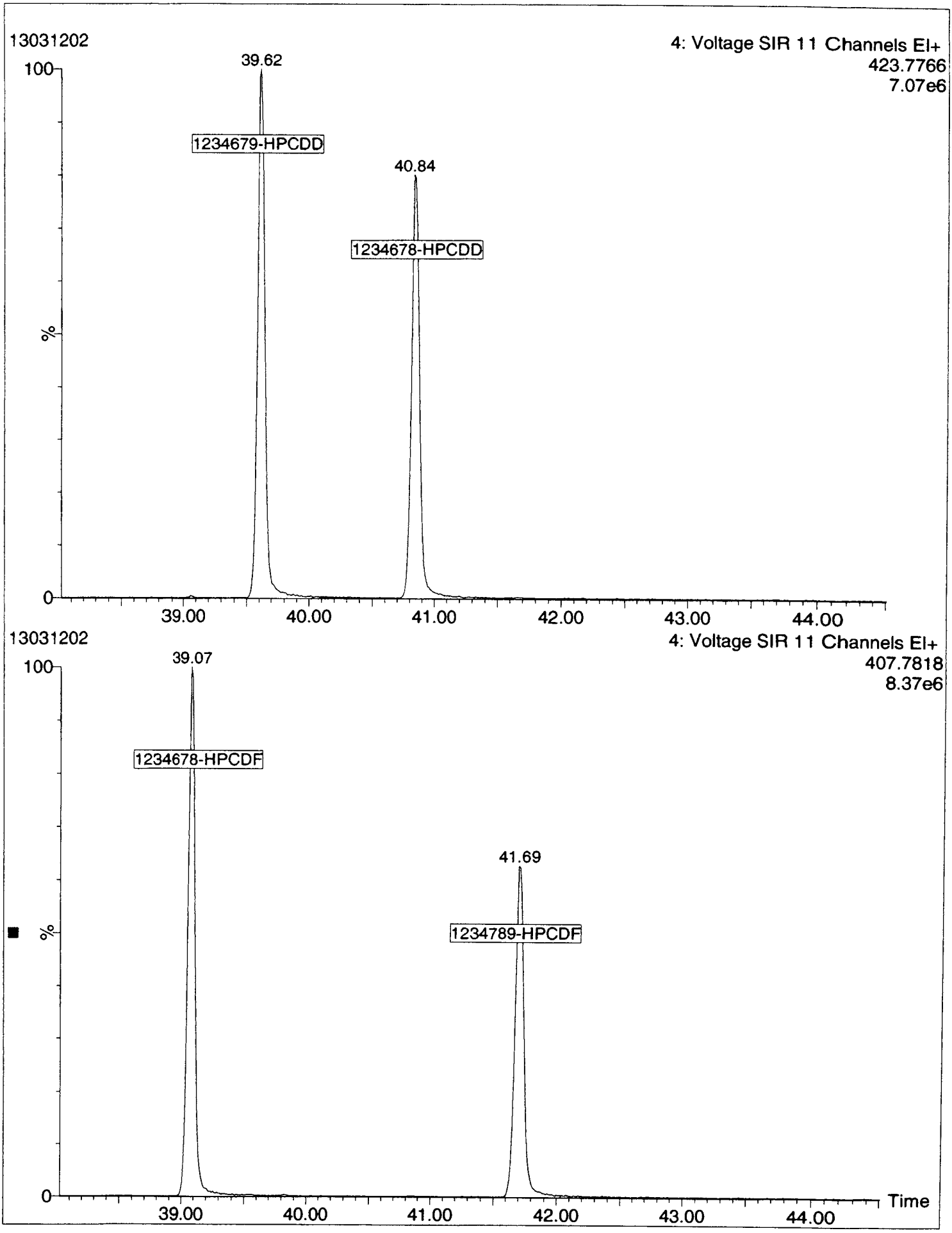
3: Voltage SIR 11 Channels EI+
389.8157
1.12e7
100
%
0
33.86
124679-HXCDD
36.02
36.14
36.57
123789-HXCDD
33.00
34.00
35.00
36.00
37.00
38.00


13031202
3: Voltage SIR 11 Channels EI+
373.8208
1.12e7
100
%
0
33.06
123468-HXCDF
34.94
34.78
35.88
37.02
123789-HXCDF
Time
33.00
34.00
35.00
36.00
37.00
38.00


13031202
4: Voltage SIR 11 Channels EI+
423.7766
7.07e6
39.62
1234679-HPCDD
40.84
1234678-HPCDD
100
%
0
39.00
40.00
41.00
42.00
43.00
44.00
13031202
4: Voltage SIR 11 Channels EI+
407.7818
8.37e6
39.07
1234678-HPCDF
41.69
1234789-HPCDF
100
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00

taset: P:\DIOXIN8290.PRO\130312IC.qld
st Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
nted: Wednesday, March 13, 2013 10:44:55 Pacific Daylight Time

Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
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Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
Pre modification peak	Sample:13031204, Compound:HF, RT:34.771	1
Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
Peak modified	Sample:13031204, Compound:HF, RT:34.771	1
Pre modification peak	Sample:13031204, Compound:OF, RT:46.836	1
Peak modified	Sample:13031204, Compound:OF, RT:46.836	1
Pre modification peak	Sample:13031204, Compound:OF, RT:46.818	1
Peak modified	Sample:13031204, Compound:OF, RT:46.818	1
Pre modification peak	Sample:13031204, Compound:TD, RT:26.272	1
Peak modified	Sample:13031204, Compound:TD, RT:26.272	1
Pre modification peak	Sample:13031204, Compound:TD, RT:26.287	1
Peak modified	Sample:13031204, Compound:TD, RT:26.287	1
Peak deleted	Sample:13031204, Compound:PP, RT:26.989	1
Peak deleted	Sample:13031204, Compound:PD, RT:30.048	1
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Peak modified	Sample:13031205, Compound:OD, RT:46.553	2
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Baseline put back as original

Printed: Tuesday, March 12, 2013 12:15:33 Pacific Daylight Time

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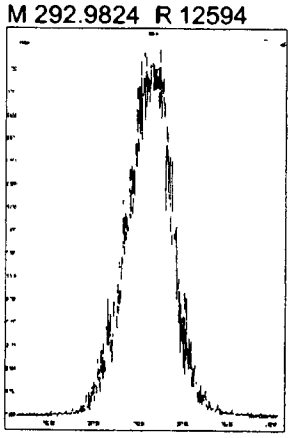

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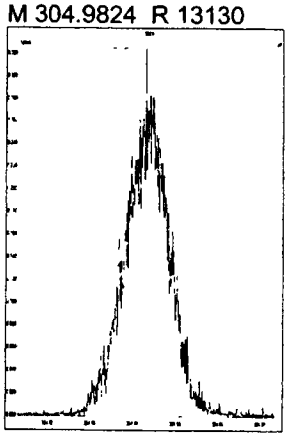

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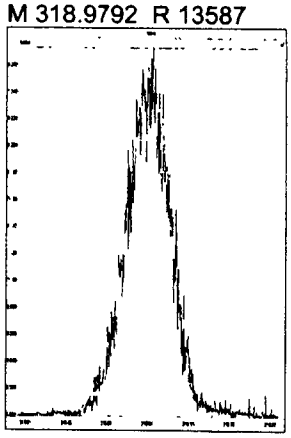

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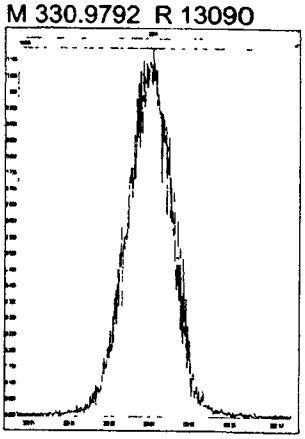

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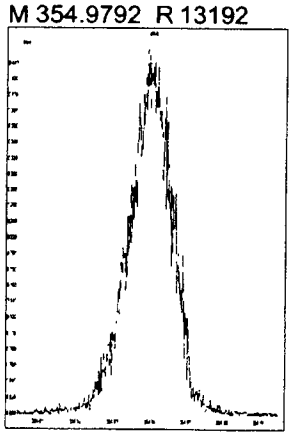

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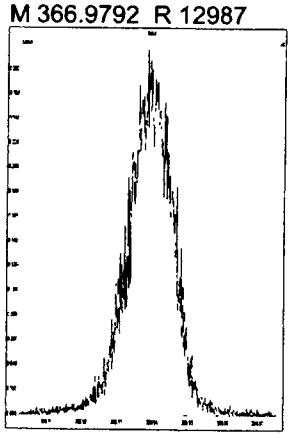

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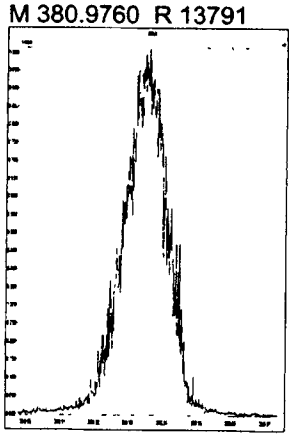

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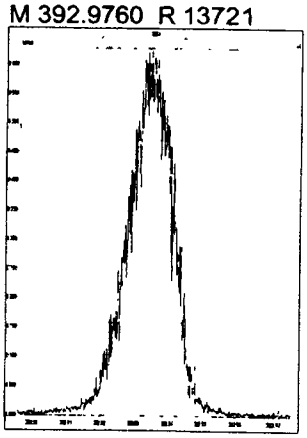

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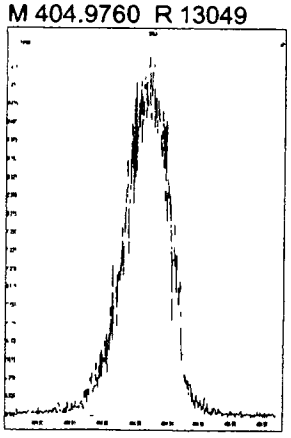

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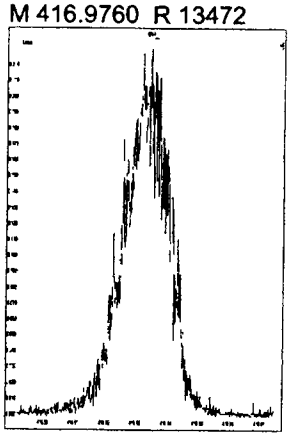

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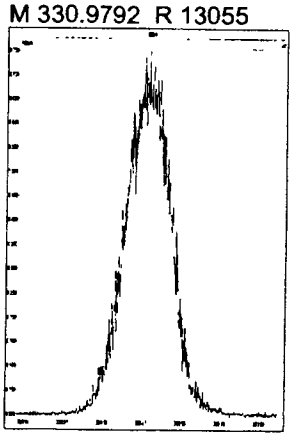

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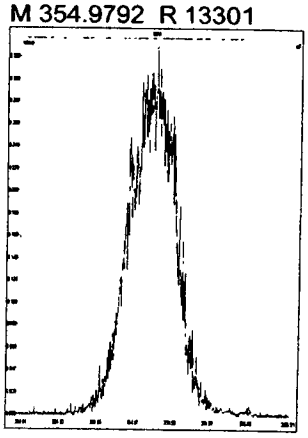

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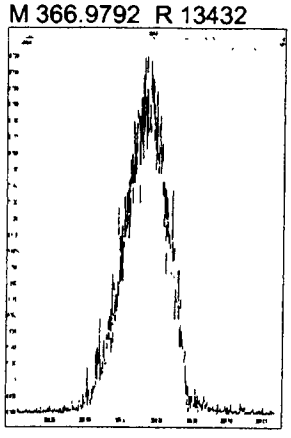

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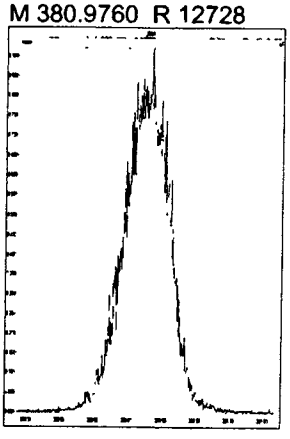

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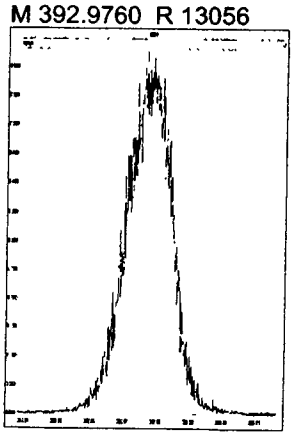

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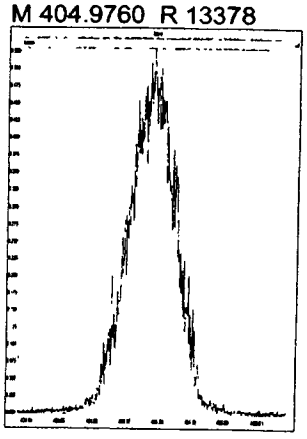

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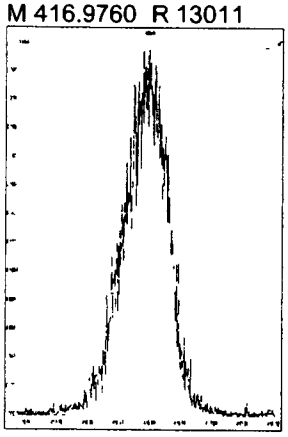

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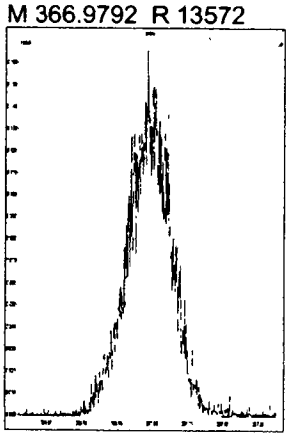

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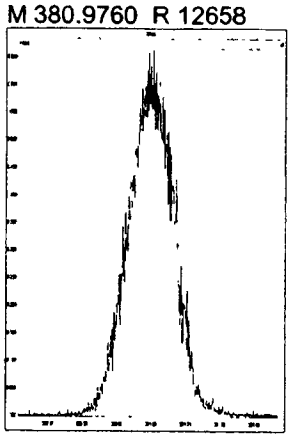

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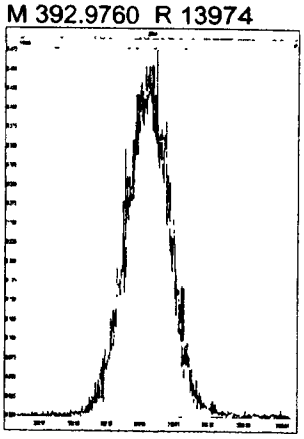

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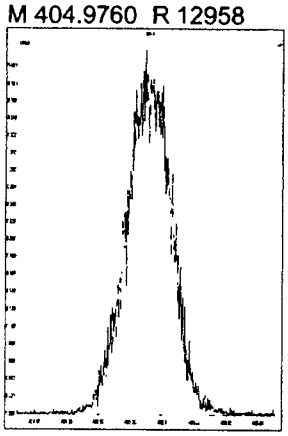

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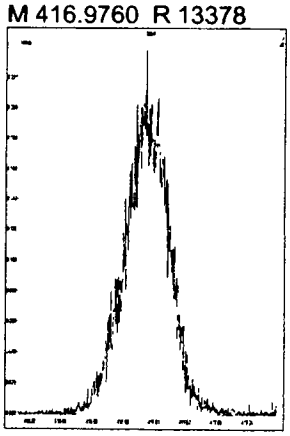

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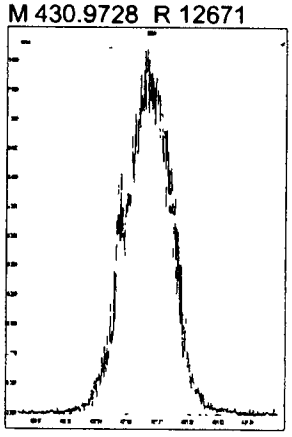

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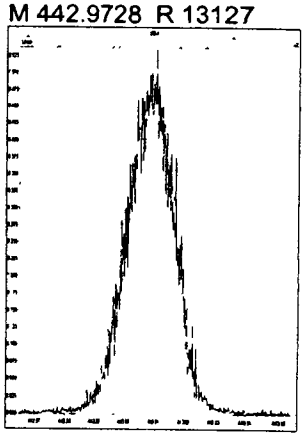

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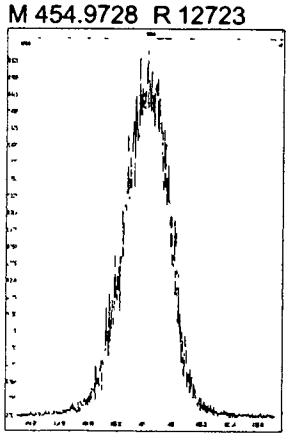

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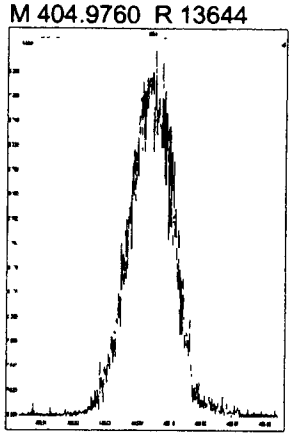

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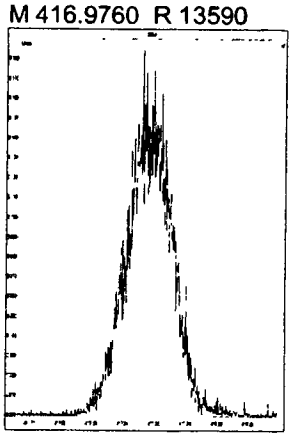

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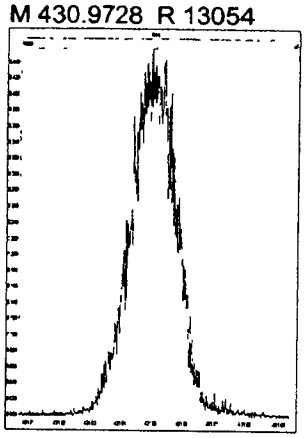

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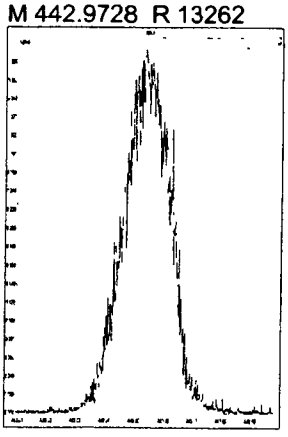

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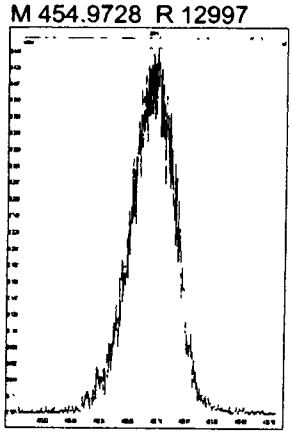

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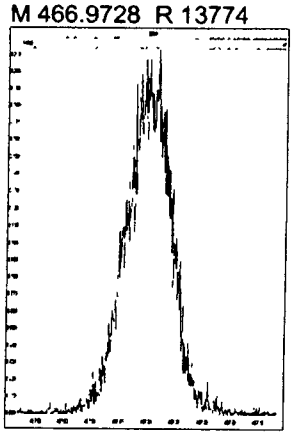

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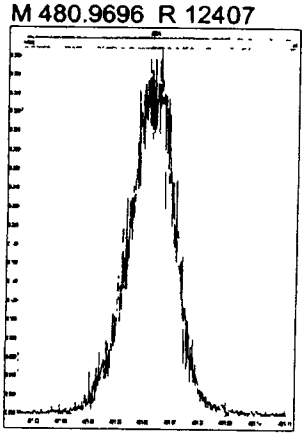

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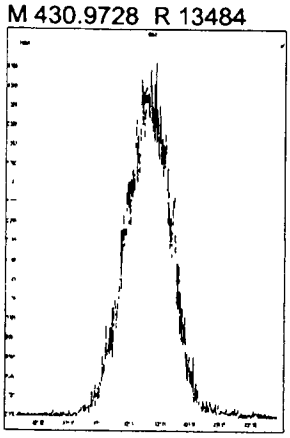

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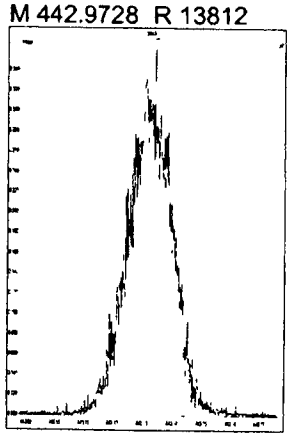

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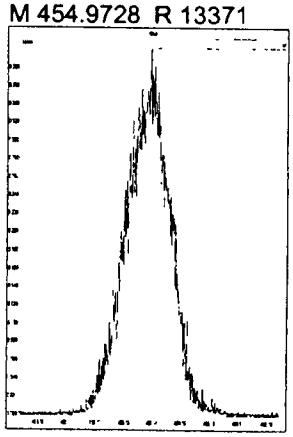

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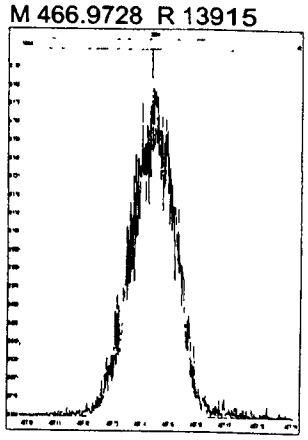

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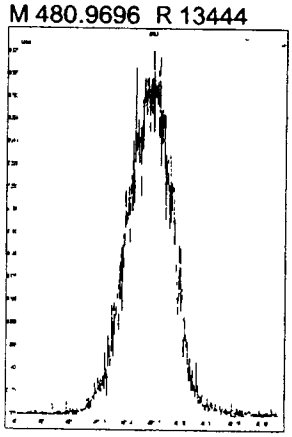

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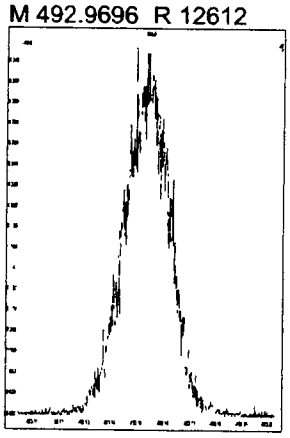

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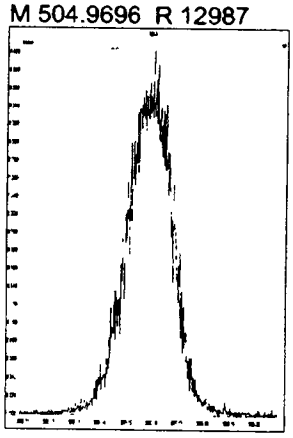

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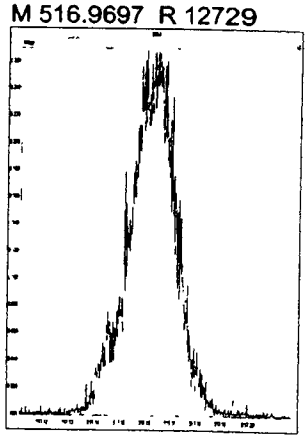

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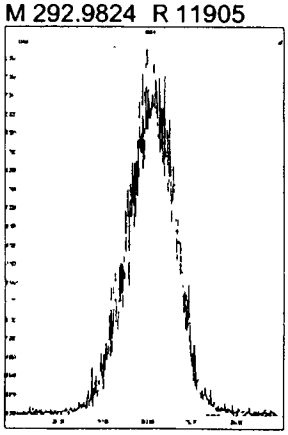

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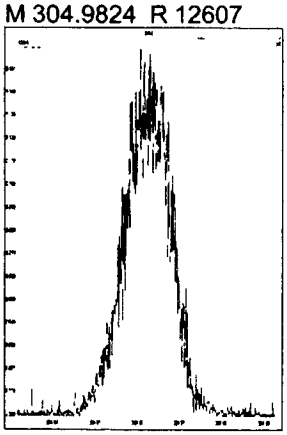

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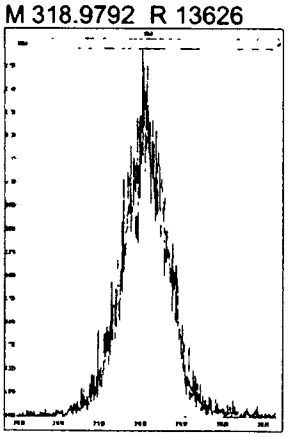

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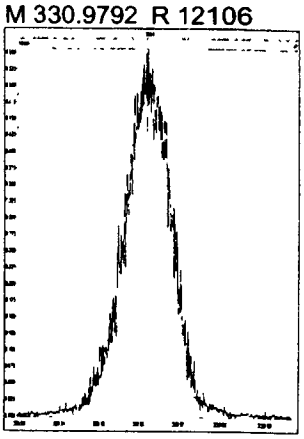

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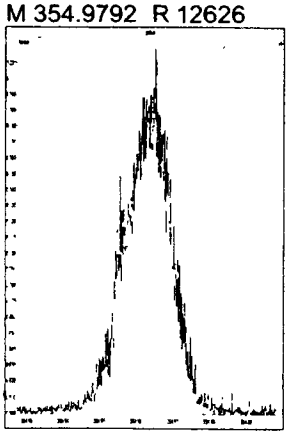

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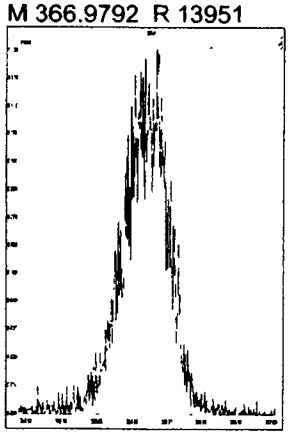

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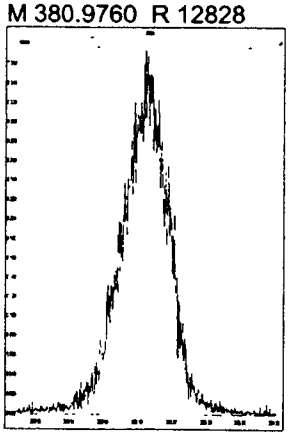

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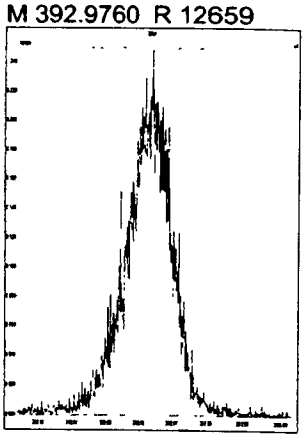

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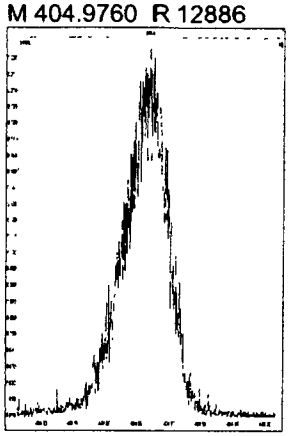

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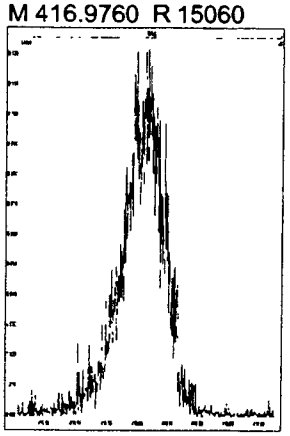

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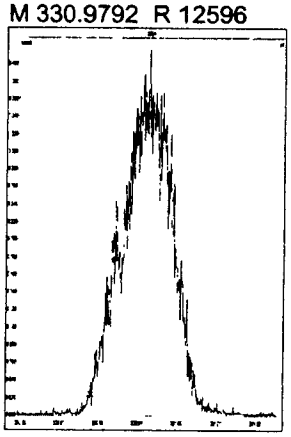

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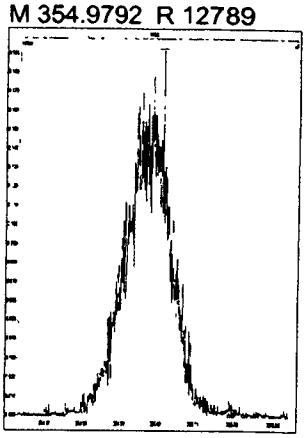

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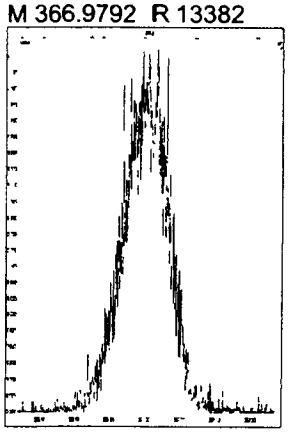

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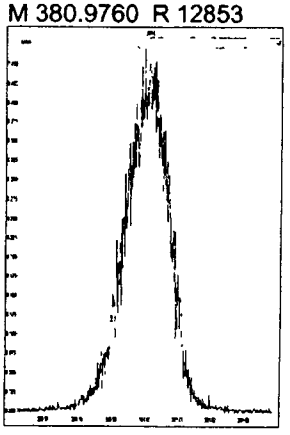

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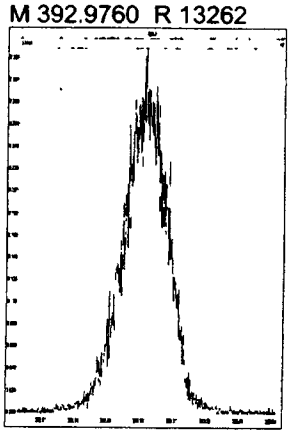

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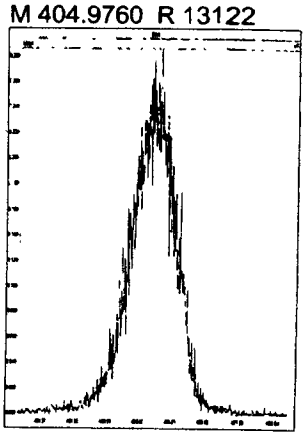

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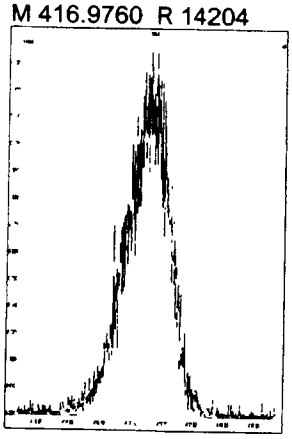
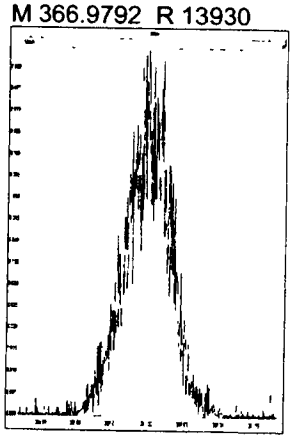
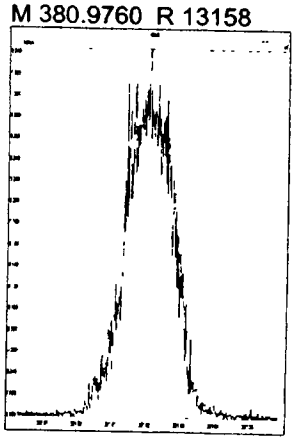


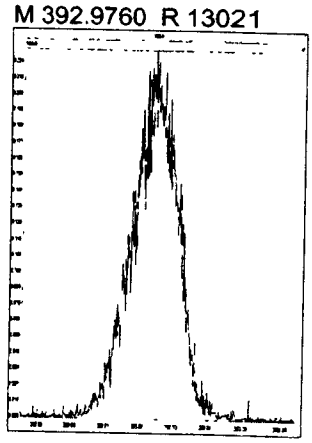
M 366.9792 R 13930



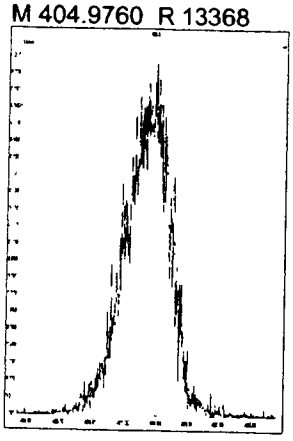
M 380.9760 R 13158



M 392.9760 R 13021



M 404.9760 R 13368



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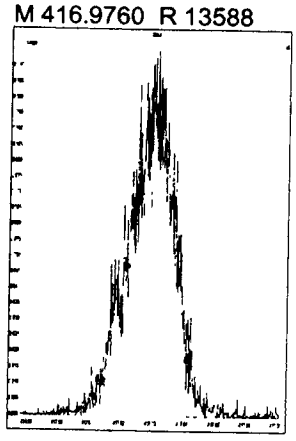

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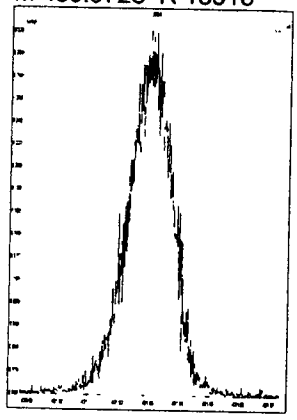
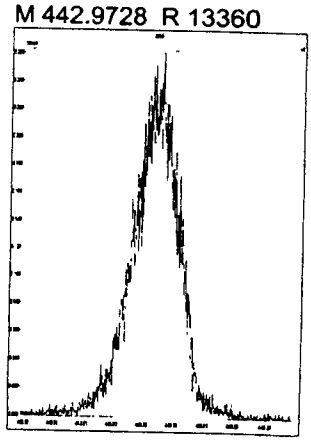


M 442.9728 R 13360



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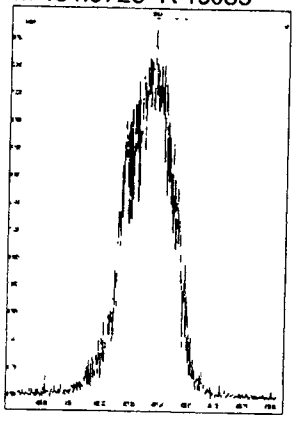

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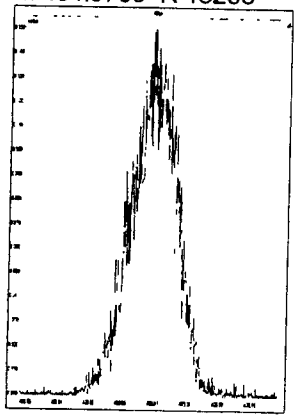

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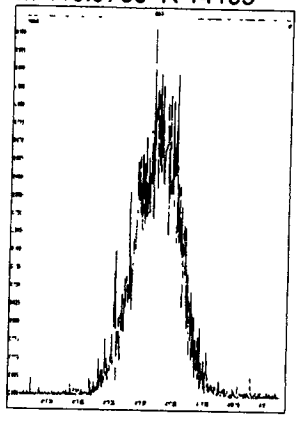

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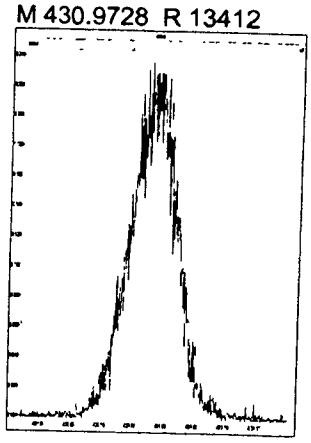

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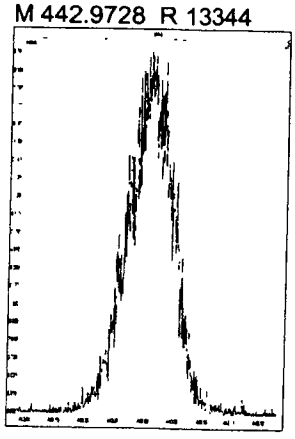
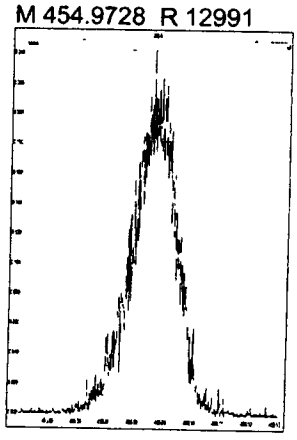
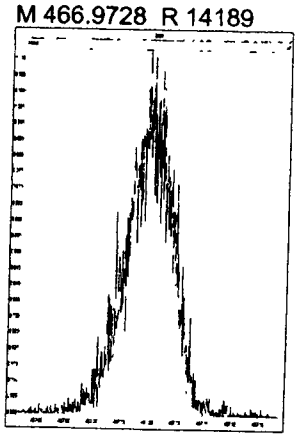


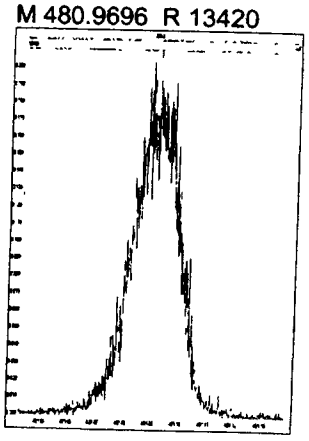
M 454.9728 R 12991



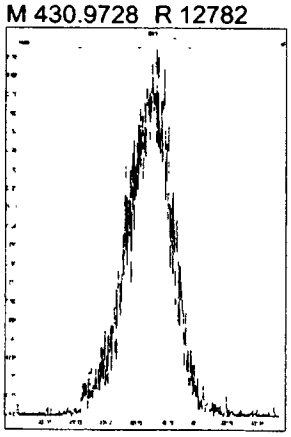
M 466.9728 R 14189



M 480.9696 R 13420



M 430.9728 R 12782



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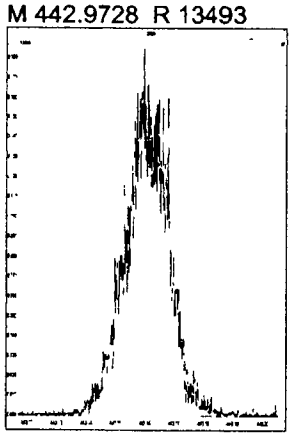

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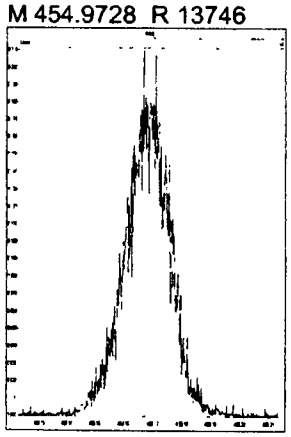

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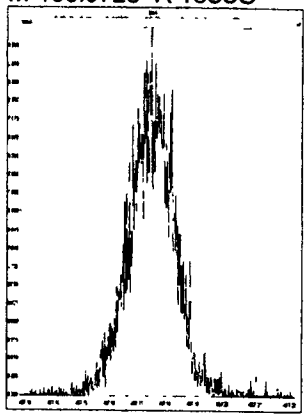
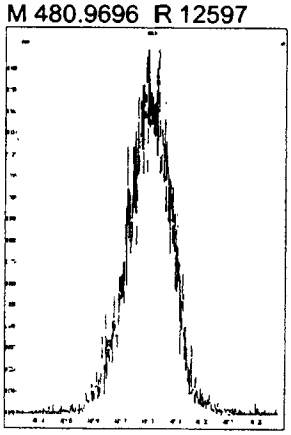
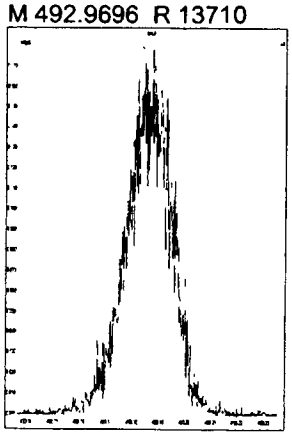


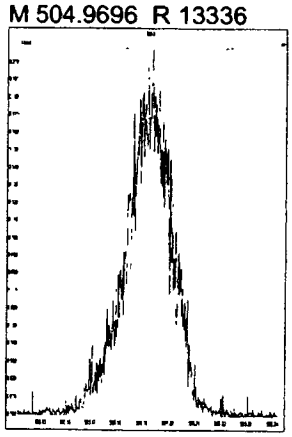
M 480.9696 R 12597



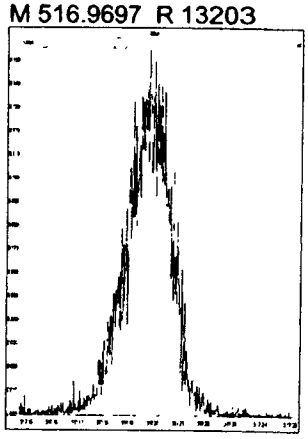
M 492.9696 R 13710



M 504.9696 R 13336



M 516.9697 R 13203



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Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

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Calibration: 13 Mar 2013 10:38:15

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Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

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	Total-tetrafurans			1.16e3		0.763					0.113
	Total-penta1			0.00e0							
	Total-pentafurans			1.10e4		0.844					0.989
	Total-hexafurans			1.60e4		0.997					1.958
	Total-heptafurans			6.22e3		1.150					1.005
	Total-Furans			3.84e4		0.970					4.968
	Total-tetradioxins			1.95e3		0.980					0.172
	Total-pentadioxins			5.23e3		0.948					0.573
	Total-hexadioxins			1.27e4		0.898					1.683
	Total-heptadioxins			2.85e3		0.948					0.566
	Total-Dioxins			2.76e4		0.934					4.116
	Total-TEQ			6.60e4							9.084
	37CL-2378-TCDD	26.287	1.033	2.26e3		0.999			22.2		0.097
	FUNCTION1 PFK			3.17e6							
	FUNCTION2 PFK			2.08e4							0.000
	FUNCTION3 PFK			0.00e0							
	FUNCTION4 PFK			1.47e6							
	FUNCTION5 PFK			2.01e5							
	FUNCTION1 HXCDPE			9.78e1							0.000
	FUNCTION1 HPCDPE			6.65e2							0.000
	FUNCTION2 HPCDPE			3.68e2							0.000
	FUNCTION3 OCDPE			0.00e0							
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	FUNCTION5 DCDPE			1.00e2							0.000

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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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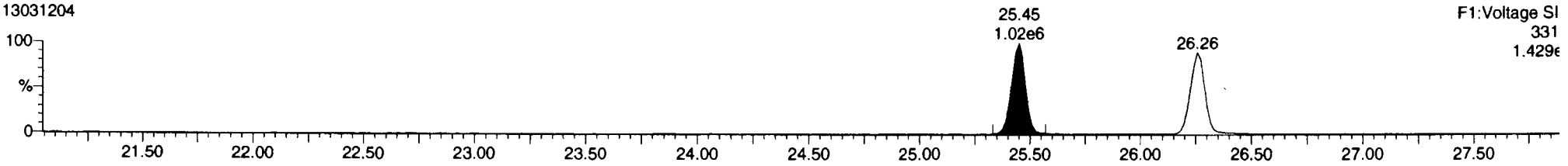
13C-1234-TCDD



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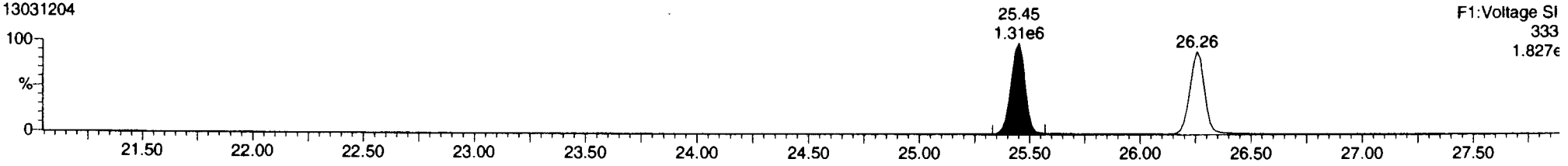

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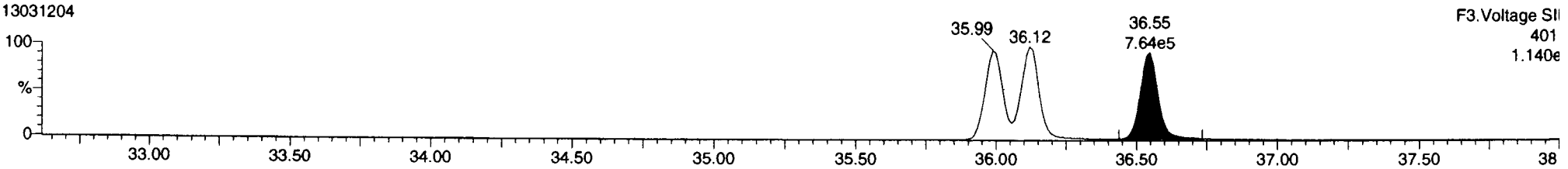

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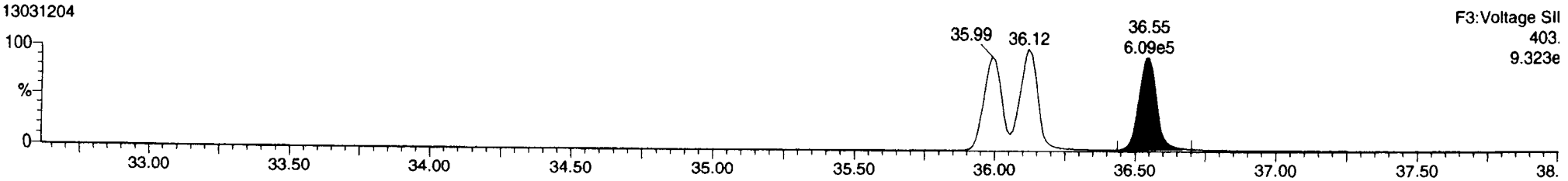

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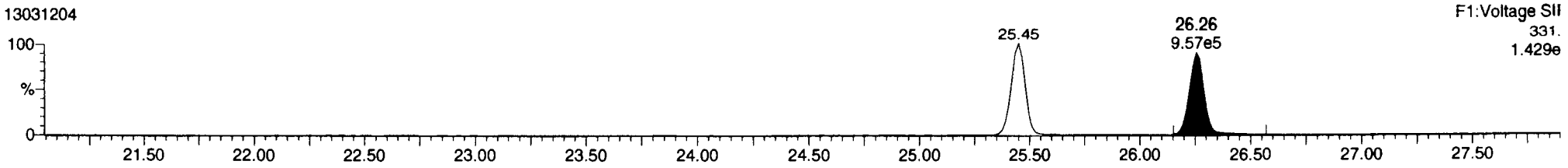
13C-2378-TCDD



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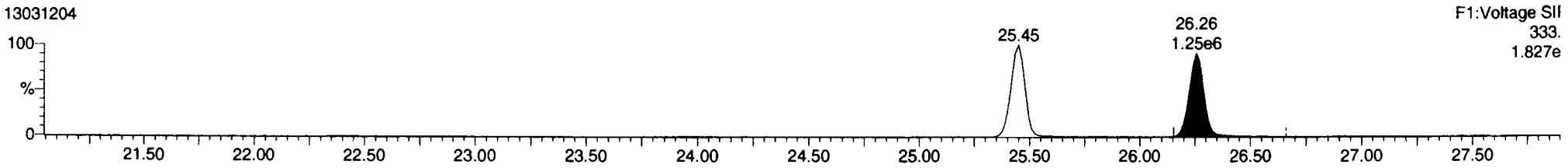
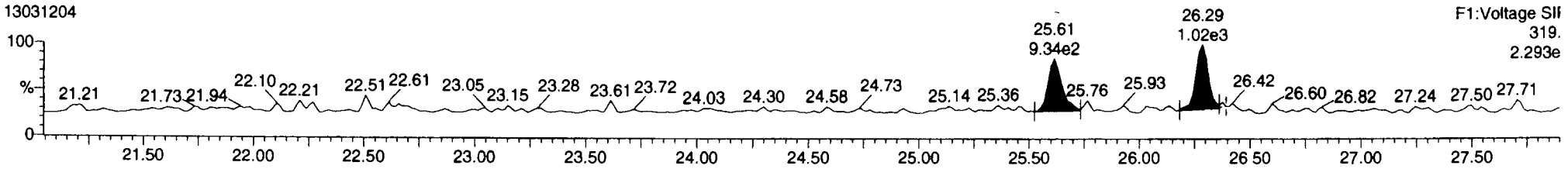
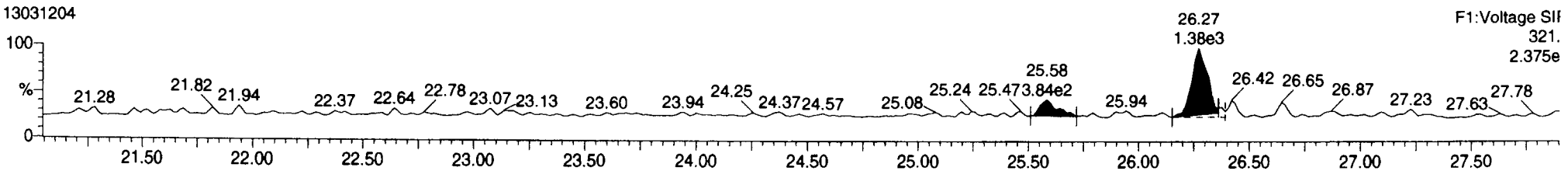


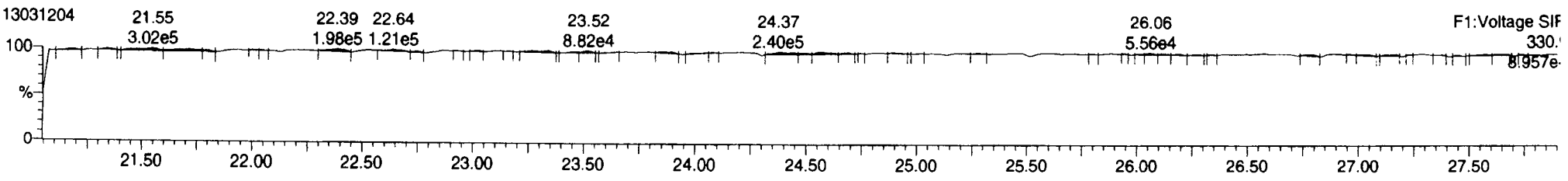
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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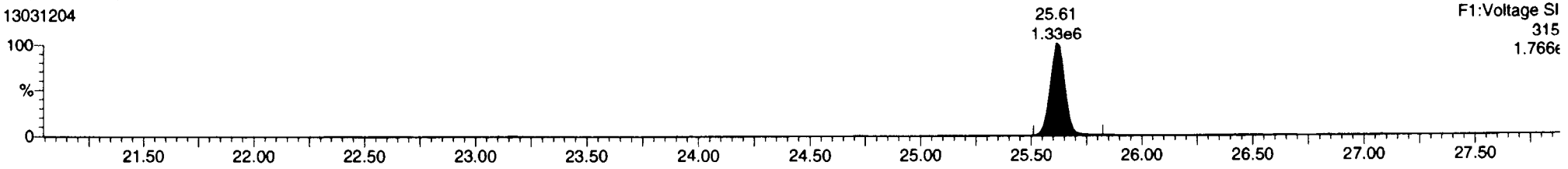
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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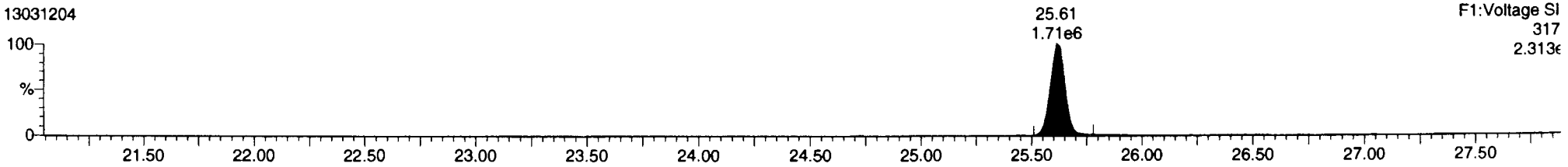
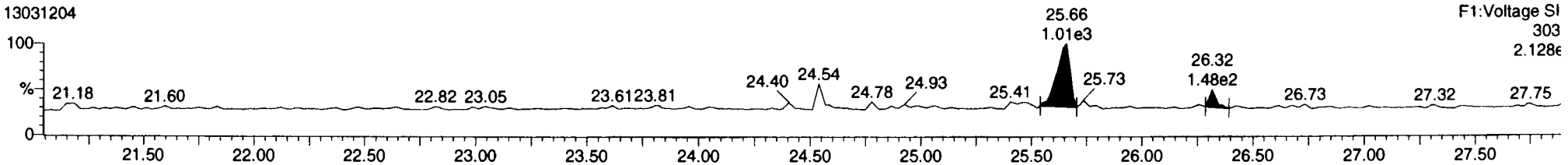
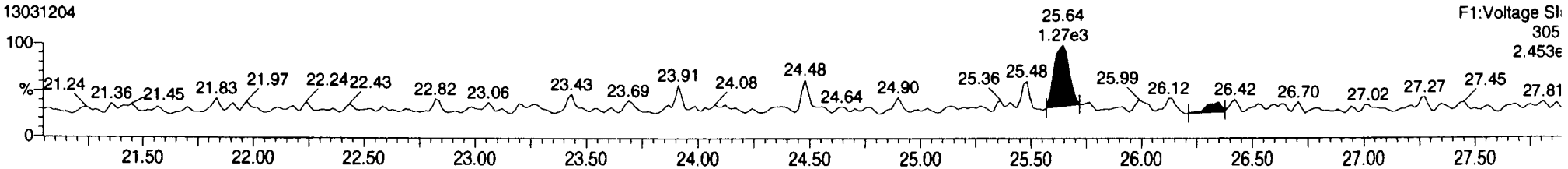


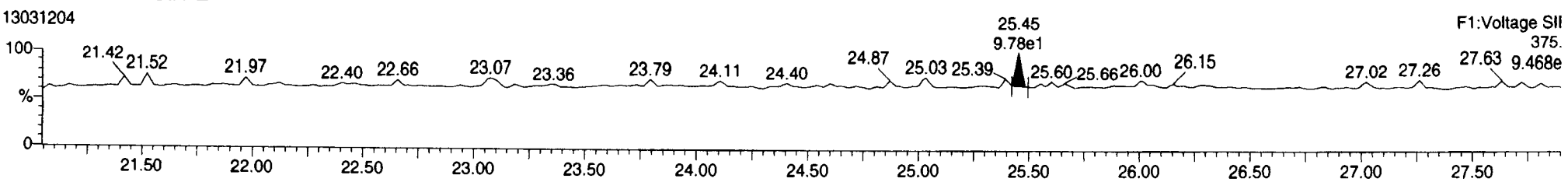
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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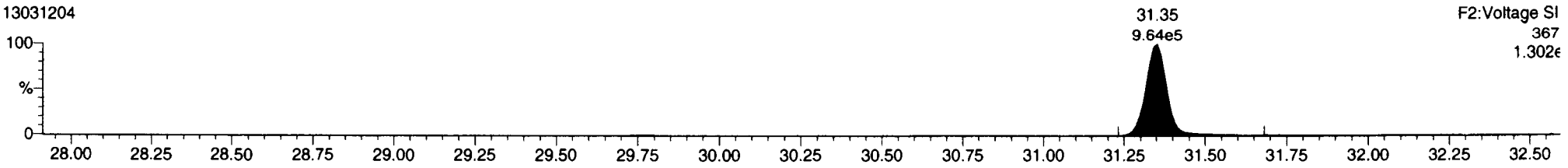
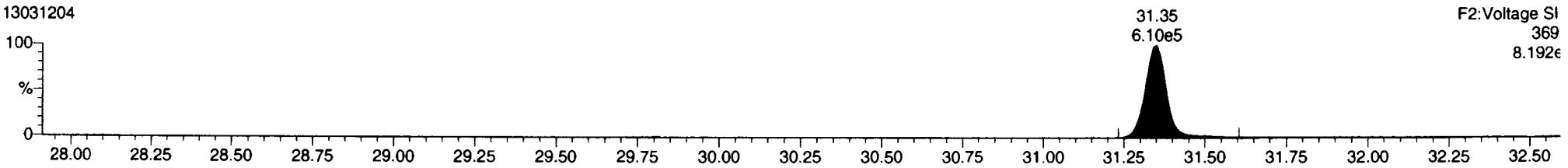
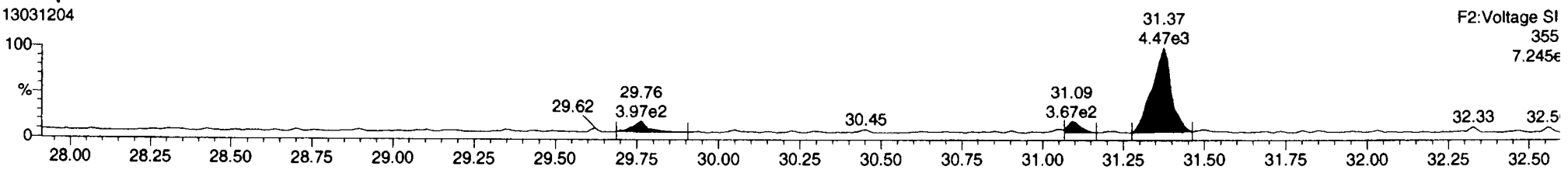
13C-12378-PeCDD



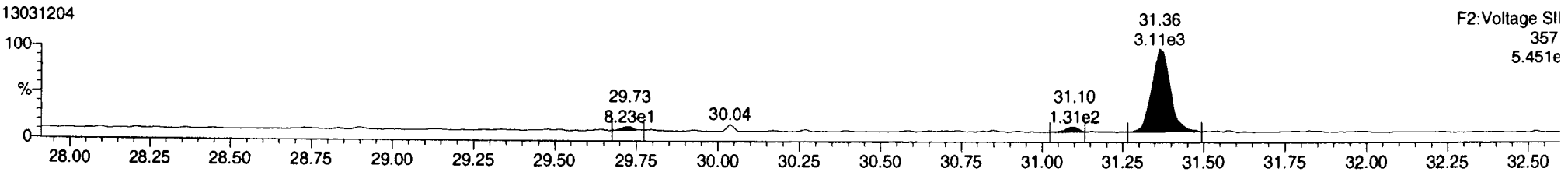
13C-12378-PeCDD



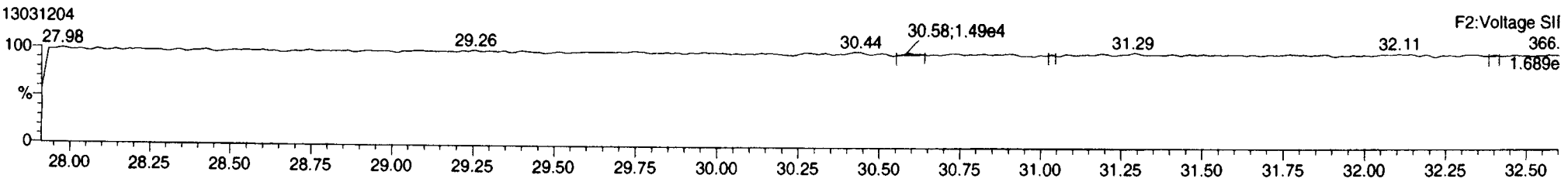
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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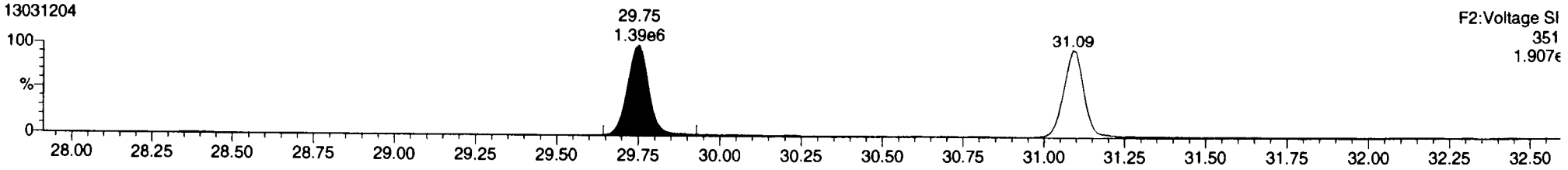
13C-12378-PeCDF



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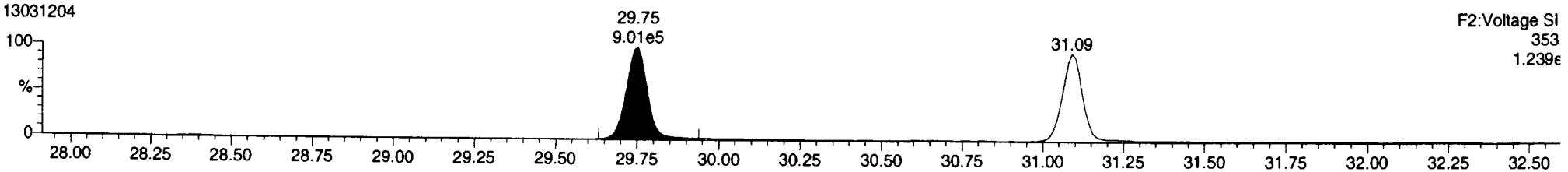
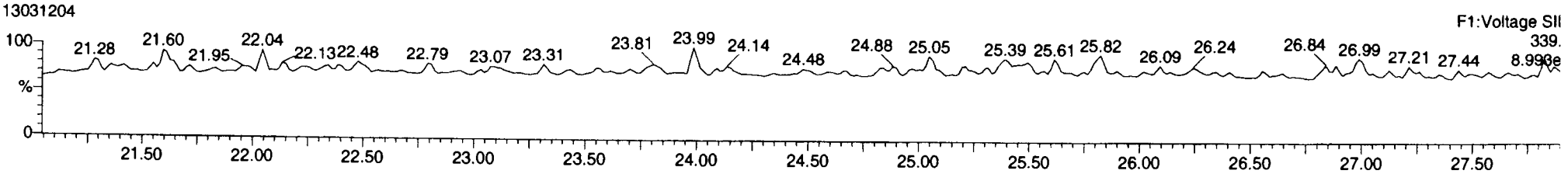
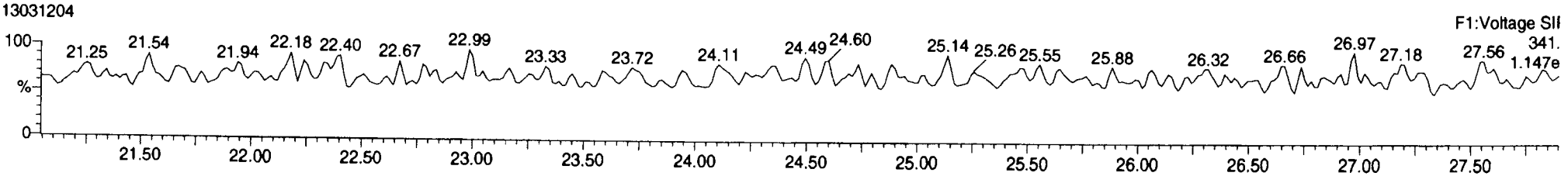


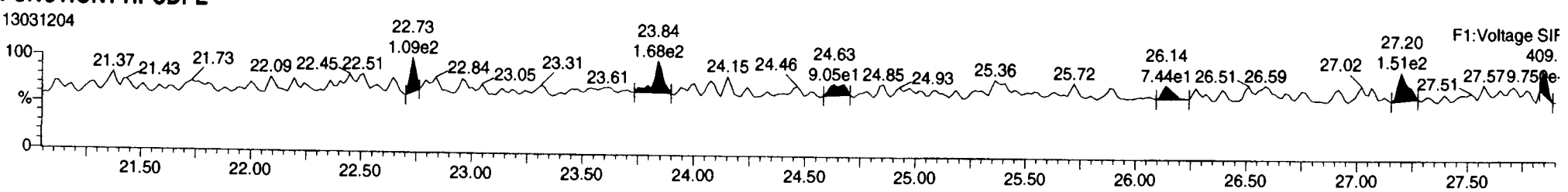
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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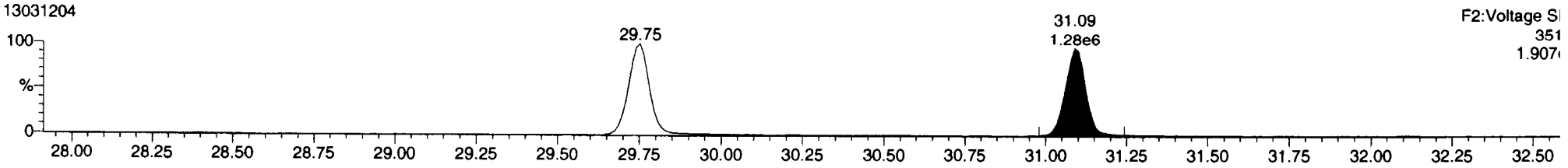
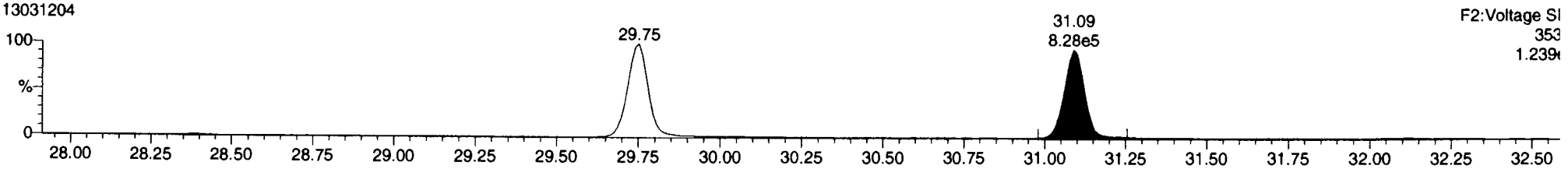
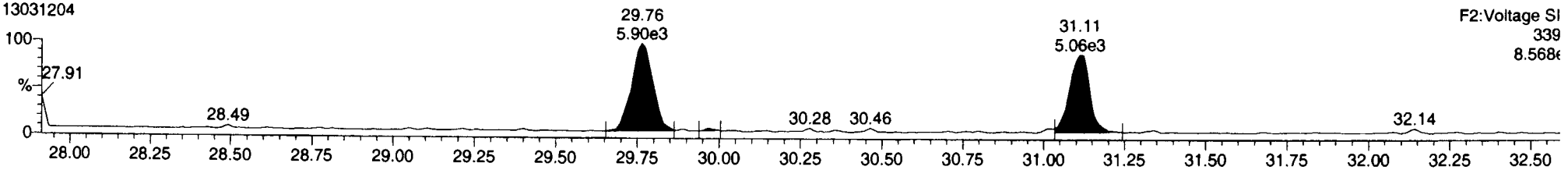
13C-23478-PeCDF



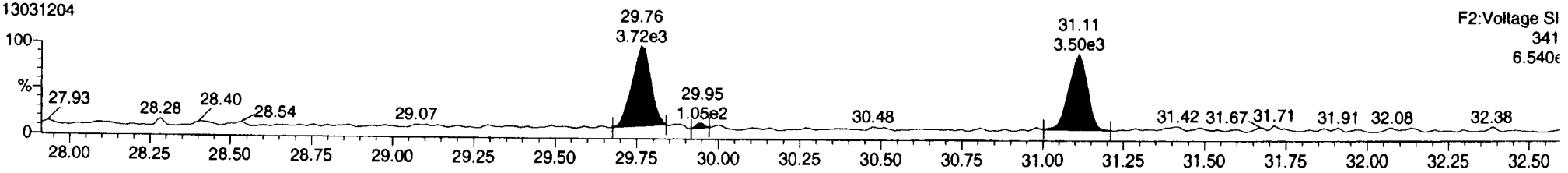
13C-23478-PeCDF



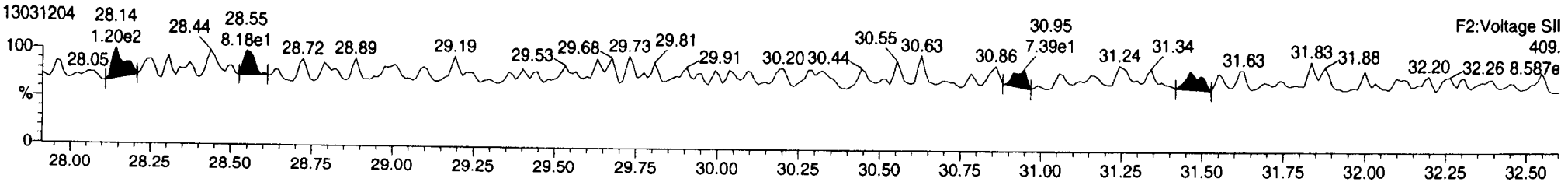
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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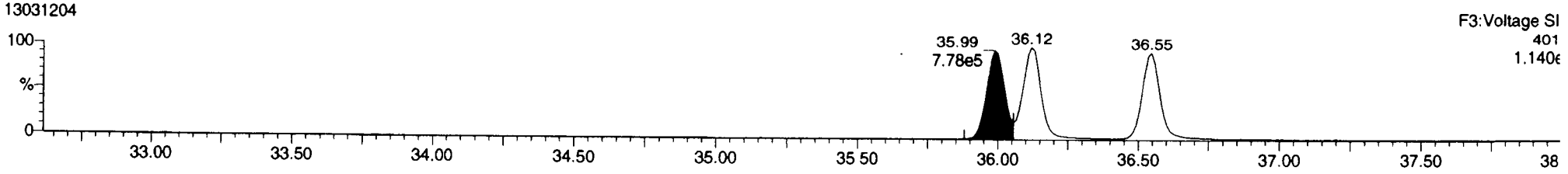
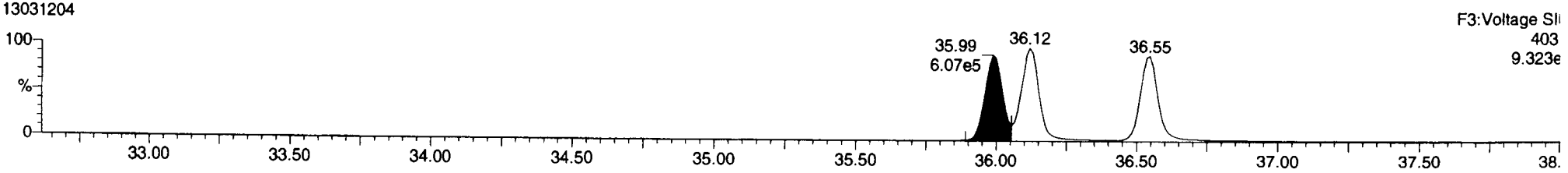
13C-123478-HxCDD

13031204



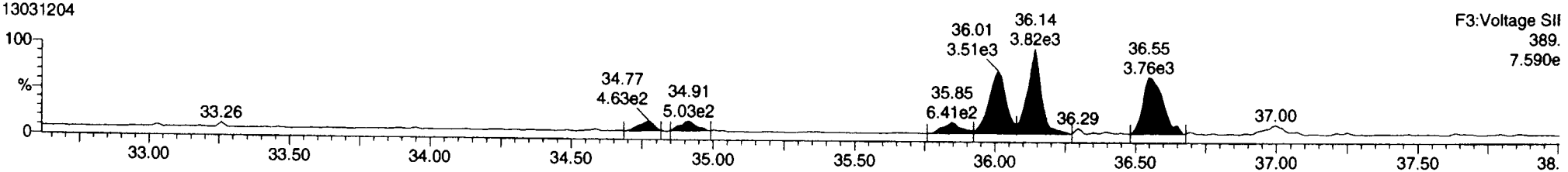
13C-123478-HxCDD

13031204



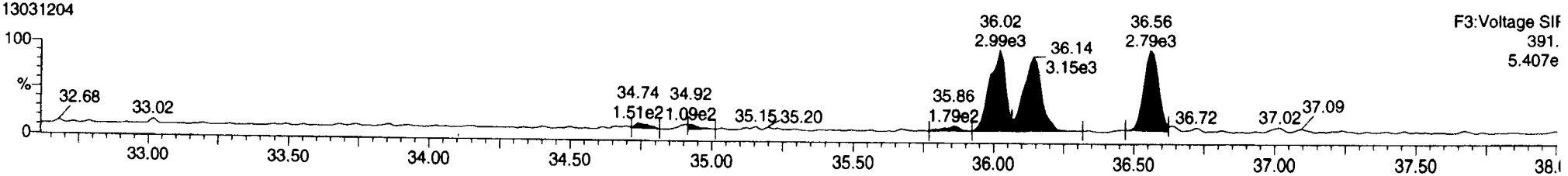
Total-hexadioxins

13031204



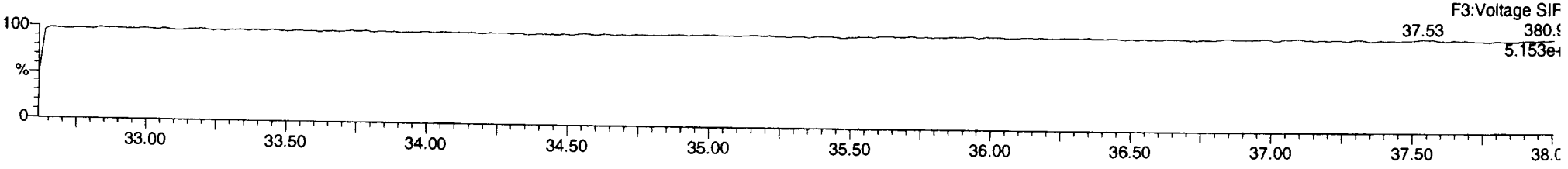
Total-hexadioxins

13031204



FUNCTION3 PFK

13031204



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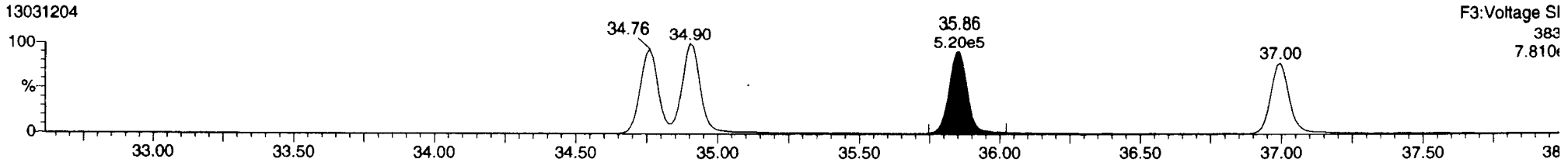
13C-234678-HxCDF



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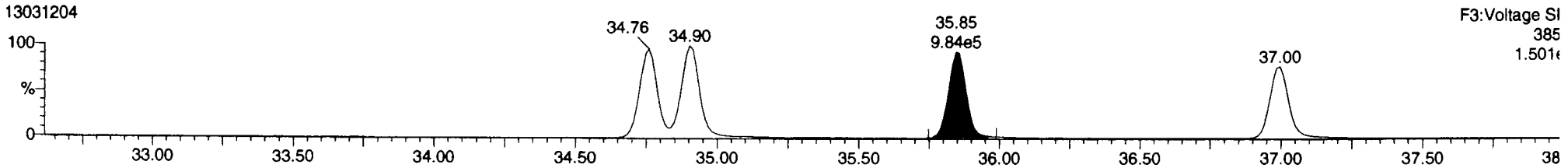
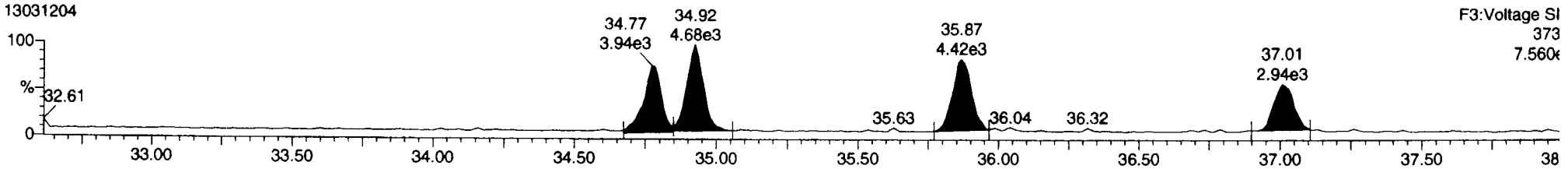
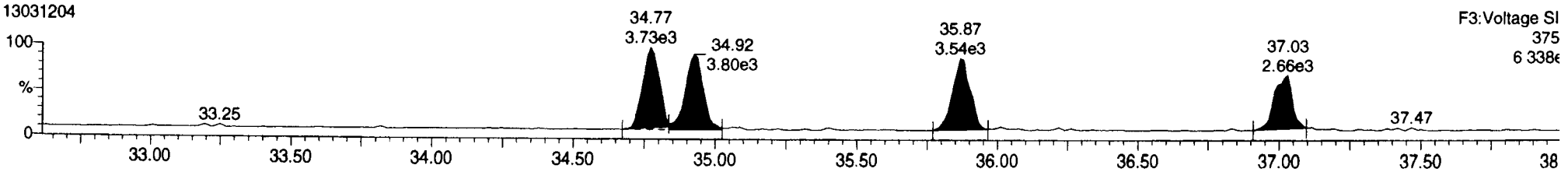


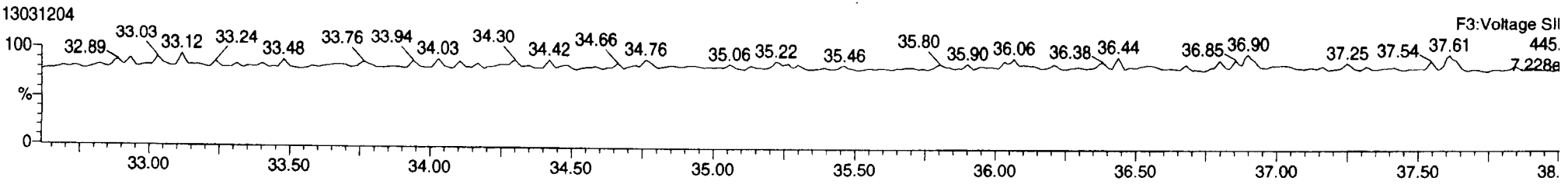
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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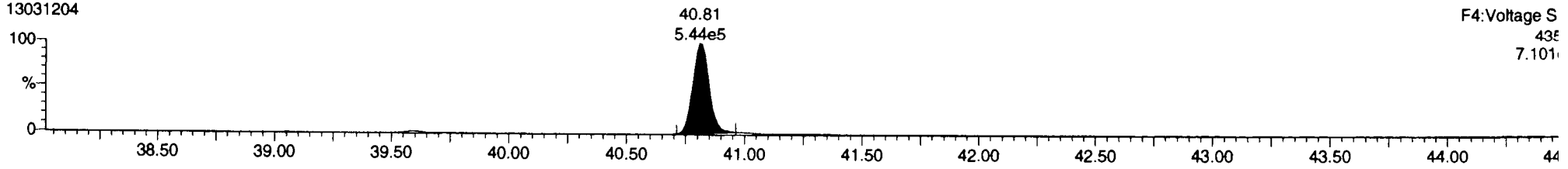
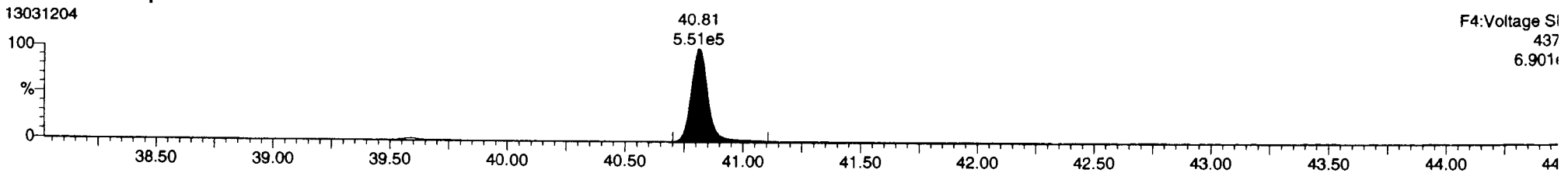
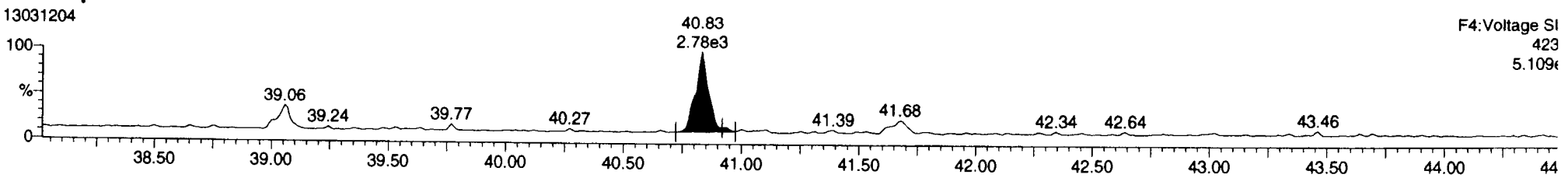
13C-1234678-HpCDD



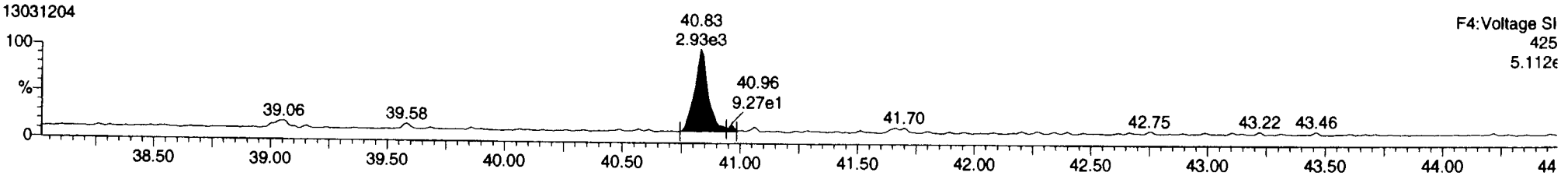
13C-1234678-HpCDD



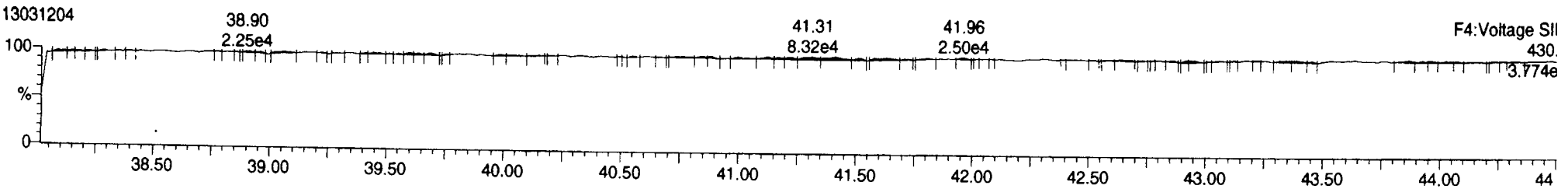
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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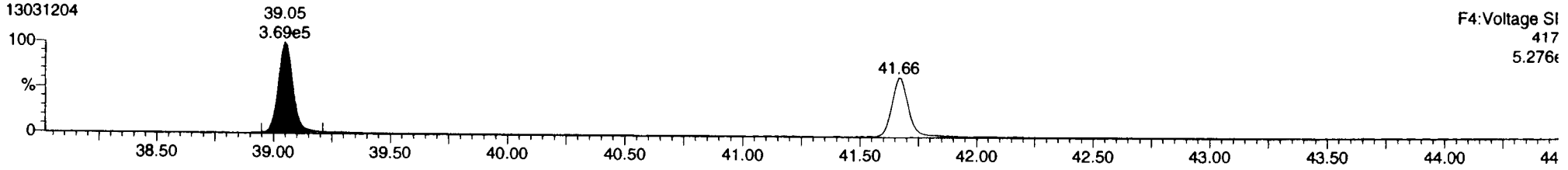
13C-1234678-HpCDF



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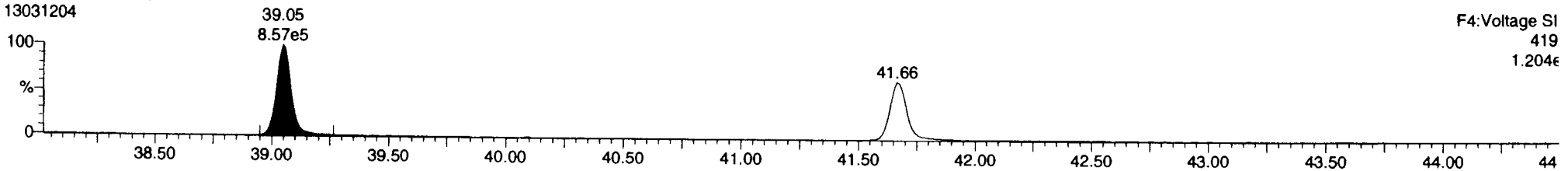
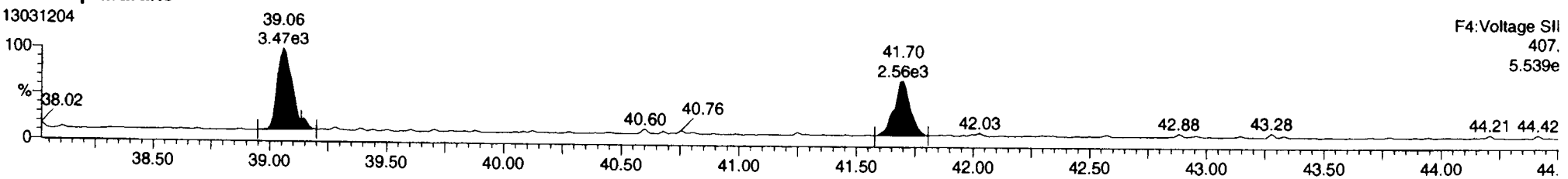
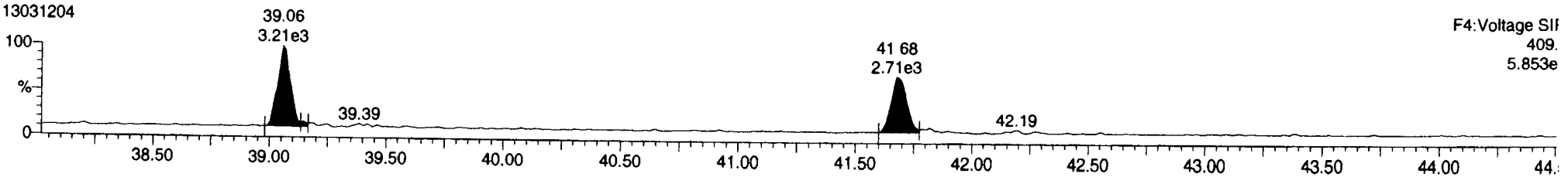


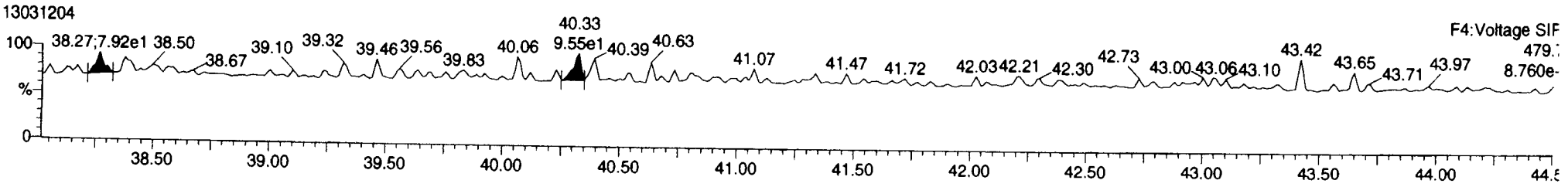
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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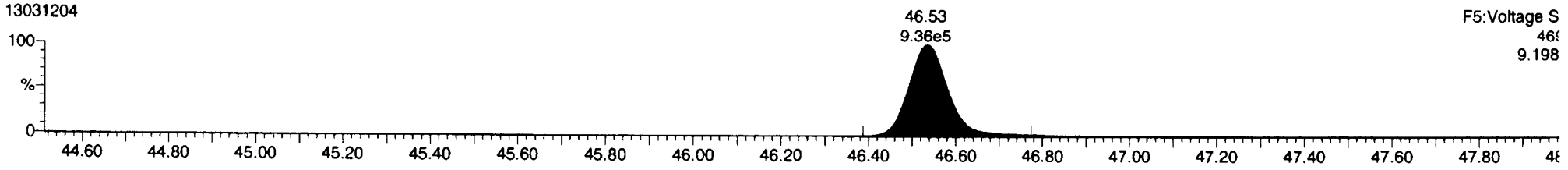
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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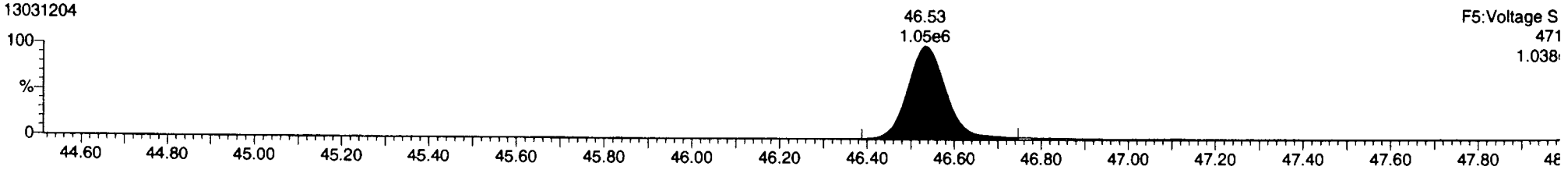

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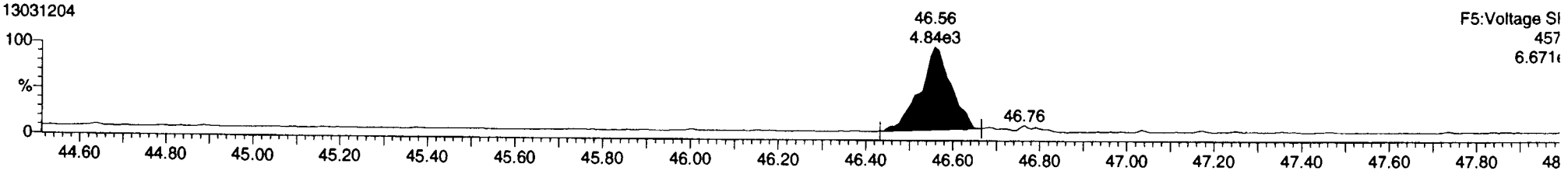

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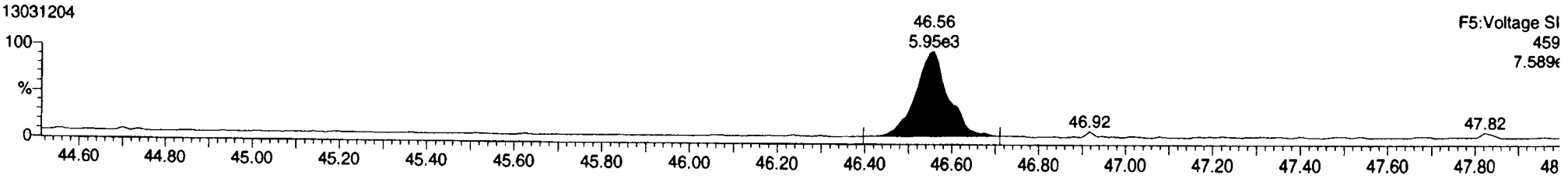

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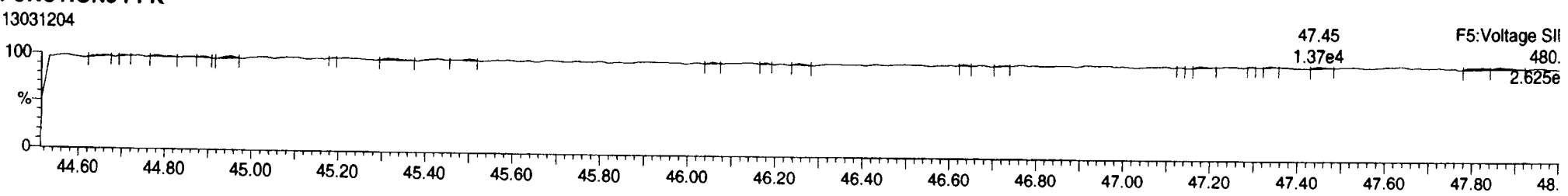

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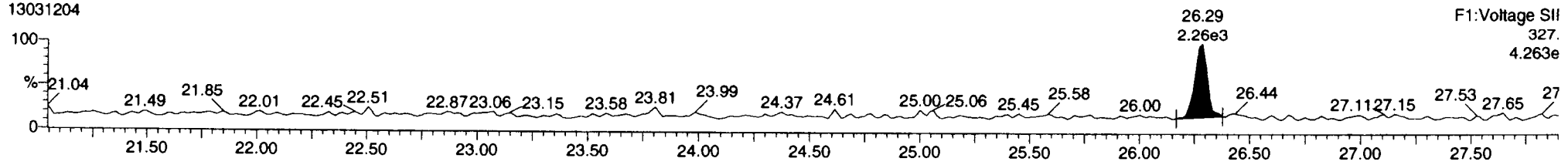
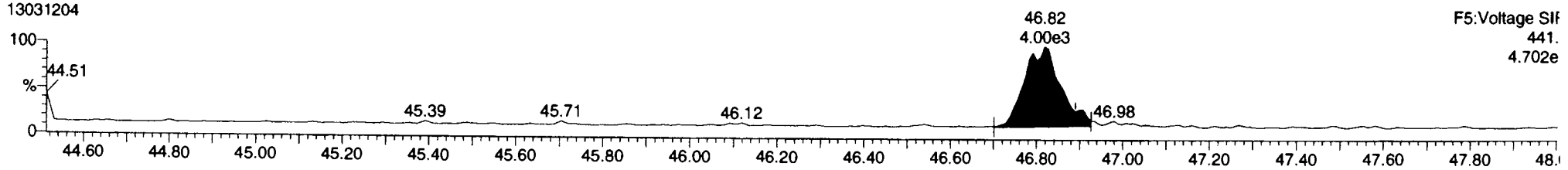
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

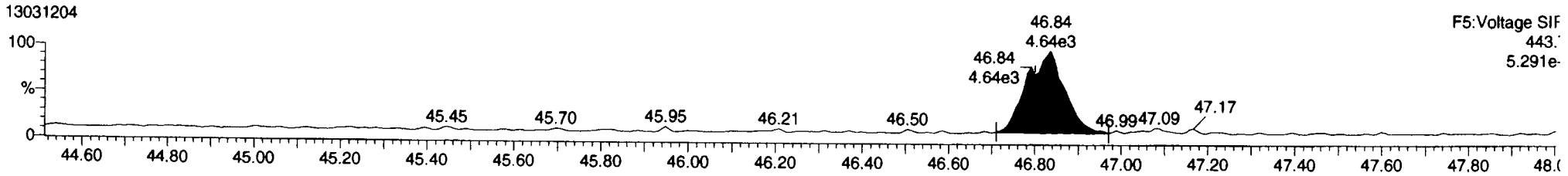
37CL-2378-TCDD



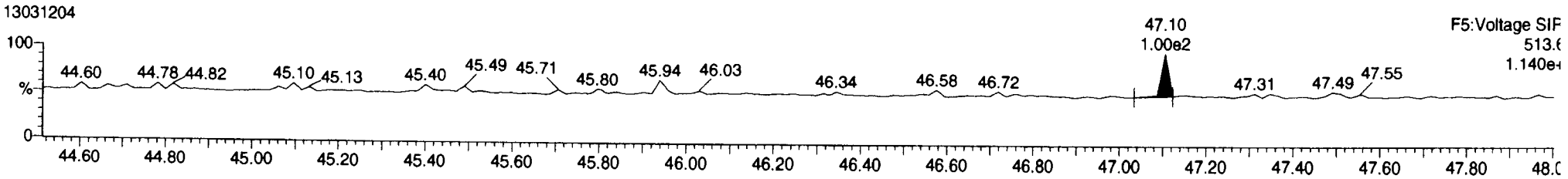
OCDF



OCDF



FUNCTION5 DCDPE



Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

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[redacted]	1234678-HpCDF	39.059	1.000	2.72e4	2.79e4	1.151	0.974	1.050	256.9	NO	2.388	2.388
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[redacted]	13C-1234789-HpCDF	41.668	1.140	4.81e5	1.10e6	0.693	0.438	0.440	1640.5	NO		100.914
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	13C-123789-HxCDD	36.538	0.000	1.25e6	1.00e6	1.000	1.252	1.240	3803.7	NO	100.000
	Total-tetrafurans			7.24e3		0.763					0.478
	Total-penta1			0.00e0							
	Total-pentafurans			8.92e4		0.844					5.009
	Total-hexafurans			1.27e5		0.997					9.955
	Total-heptafurans			4.93e4		1.150					4.833
	Total-Furans			3.12e5		0.970					25.185
	Total-tetradioxins			8.93e3		0.980					0.540
	Total-pentadioxins			3.45e4		0.948					2.416
	Total-hexadioxins			8.69e4		0.898					7.599
	Total-heptadioxins			2.24e4		0.948					2.481
	Total-Dioxins			1.92e5		0.934					17.993
	Total-TEQ			5.04e5							43.179
	37CL-2378-TCDD	26.272	1.032	1.72e4		0.999			134.7		0.473
	FUNCTION1 PFK			3.25e7							
	FUNCTION2 PFK			1.59e5							0.000
	FUNCTION3 PFK			1.92e7							0.000
	FUNCTION4 PFK			3.35e4							
	FUNCTION5 PFK			3.80e6							
	FUNCTION1 HXCDPE			7.07e1							0.000
	FUNCTION1 HPCDPE			1.36e3							0.000
	FUNCTION2 HPCDPE			6.24e2							0.000
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	FUNCTION5 DCDPE			0.00e0							

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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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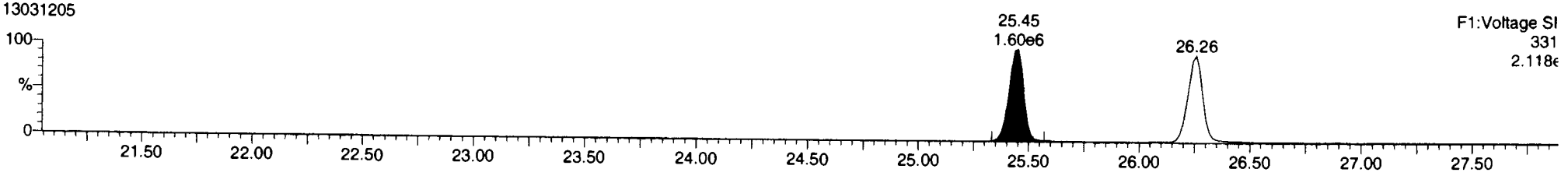
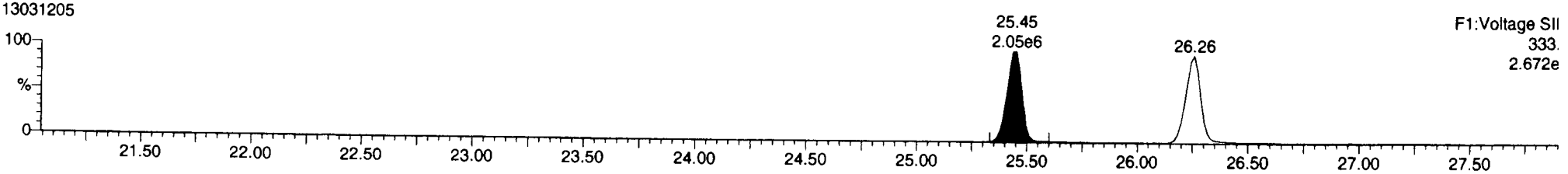
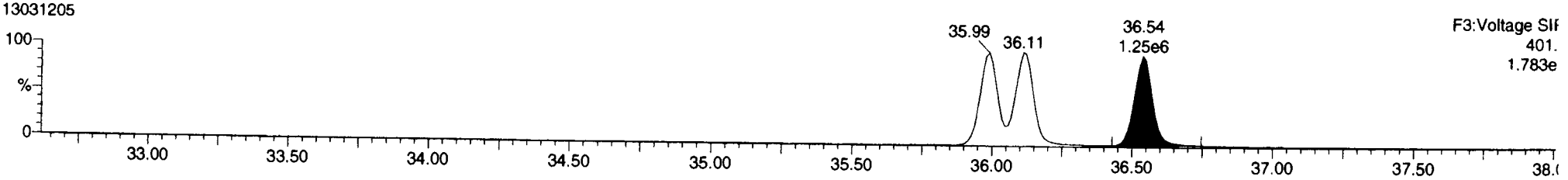
13C-1234-TCDD
13031205



13C-1234-TCDD
13031205



13C-123789-HxCDD
13031205



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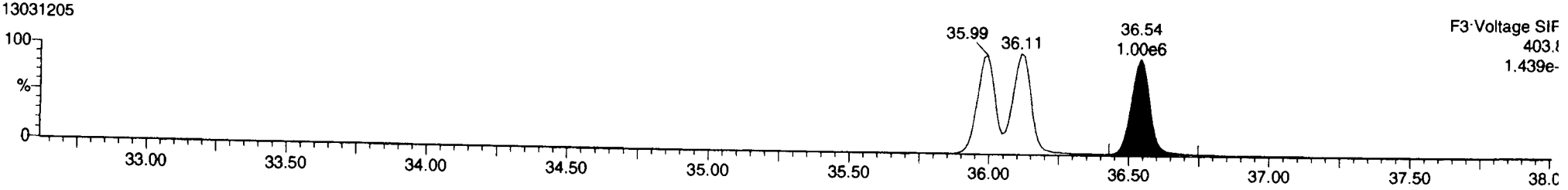

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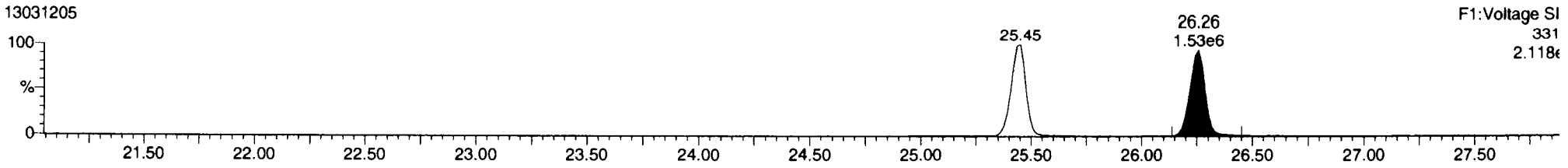
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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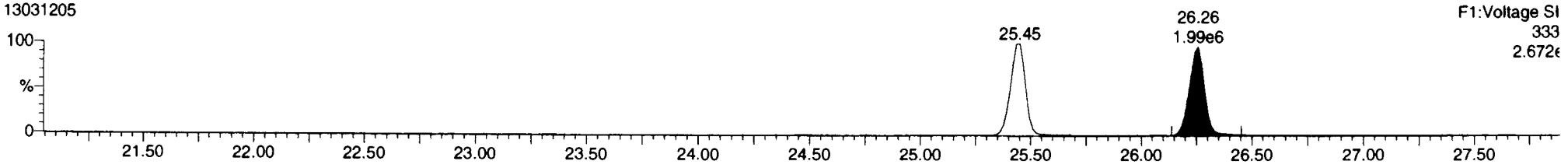
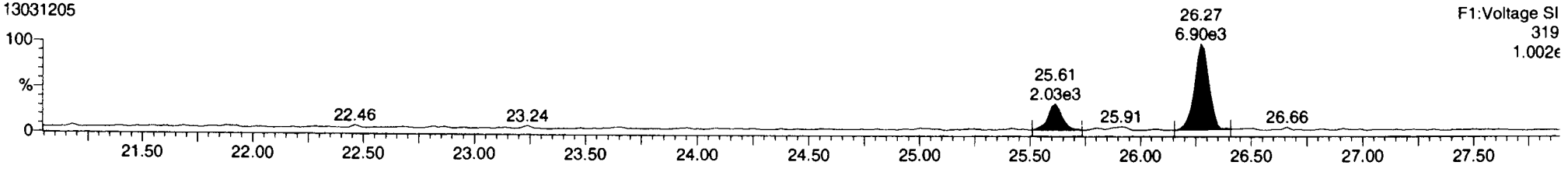
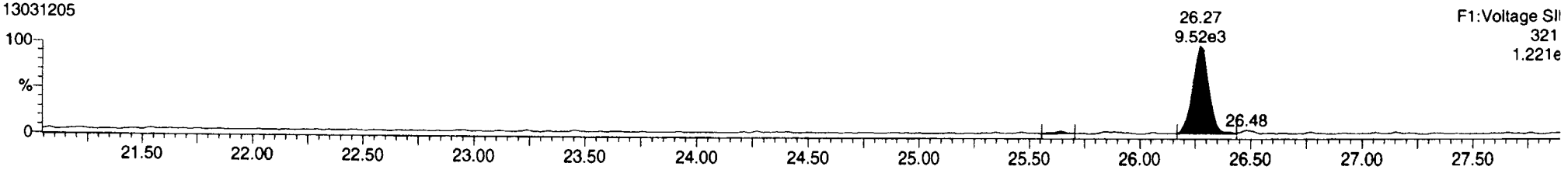


Total-tetradioxins



Total-tetradioxins



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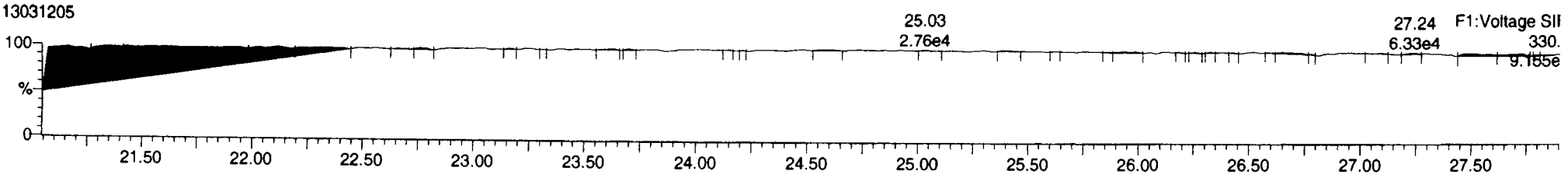

WN31 · 01329

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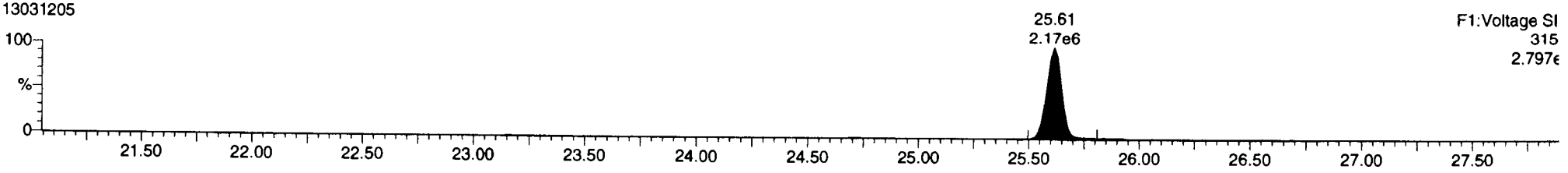
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF

13031205



13C-2378-TCDF

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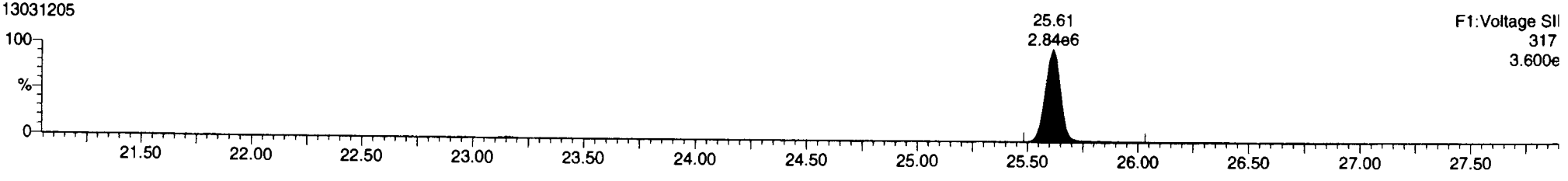
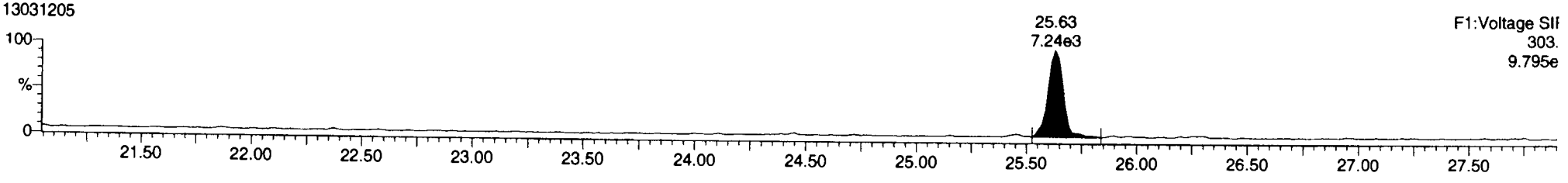


Total-tetrafurans

13031205



Total-tetrafurans

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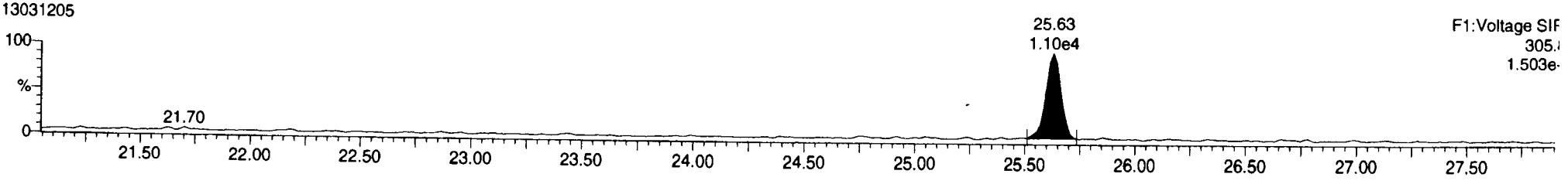
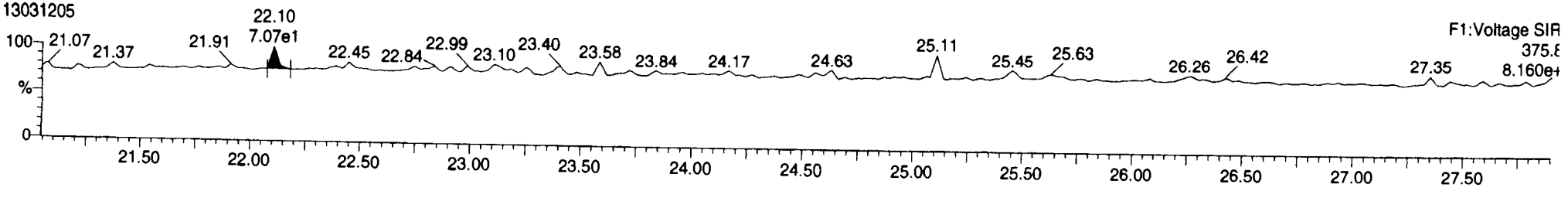


FUNCTION1 HXCDPE

13031205



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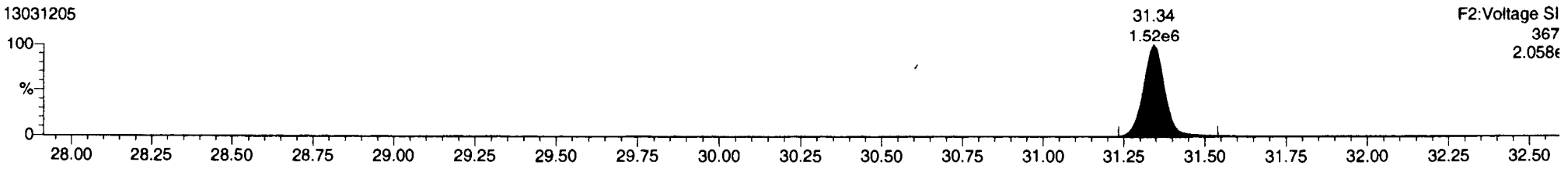
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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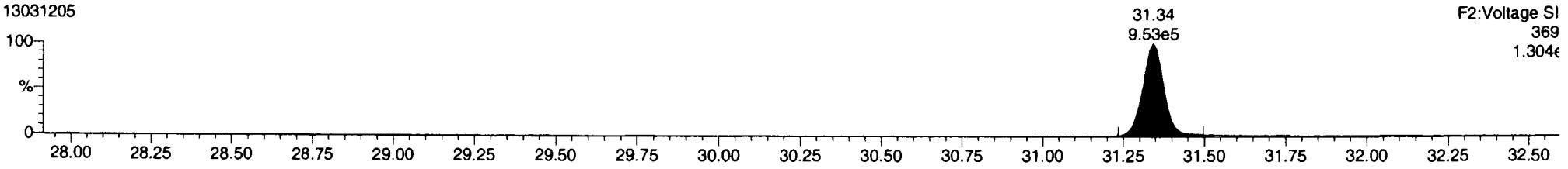
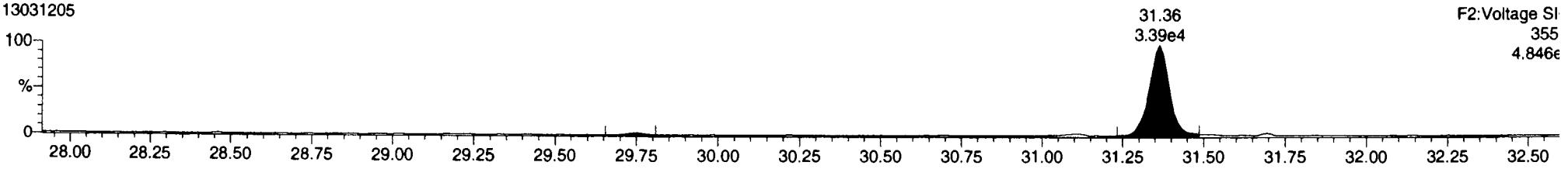
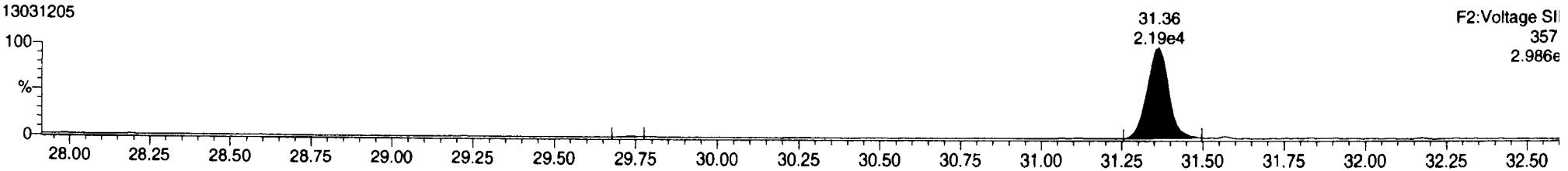


Total-pentadioxins



Total-pentadioxins



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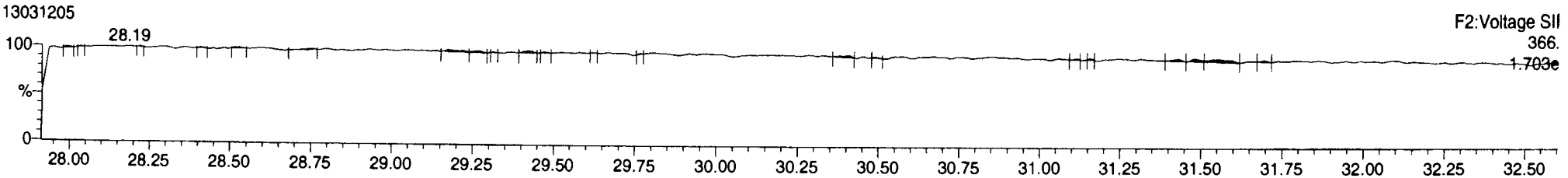

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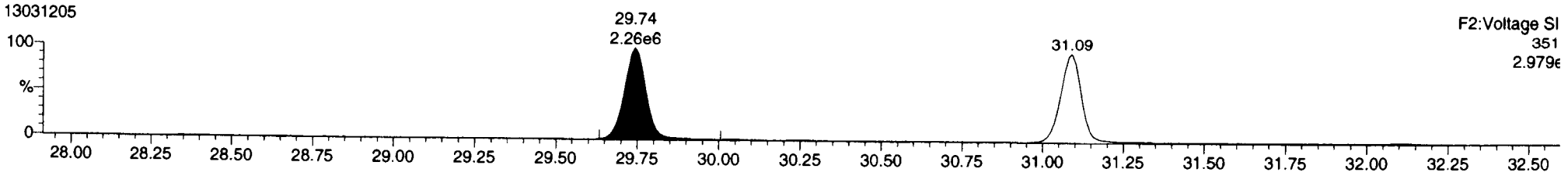
13C-12378-PeCDF



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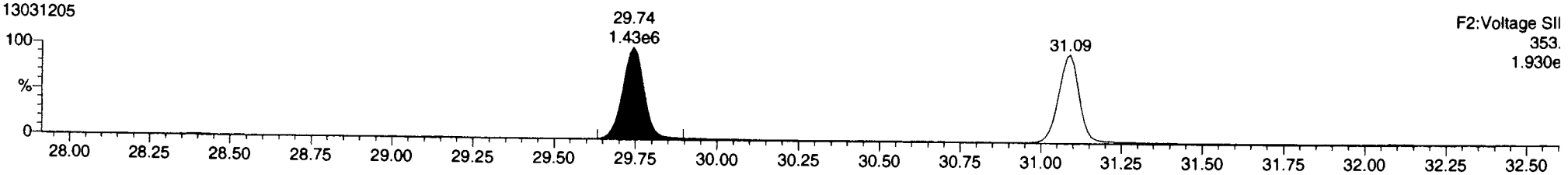

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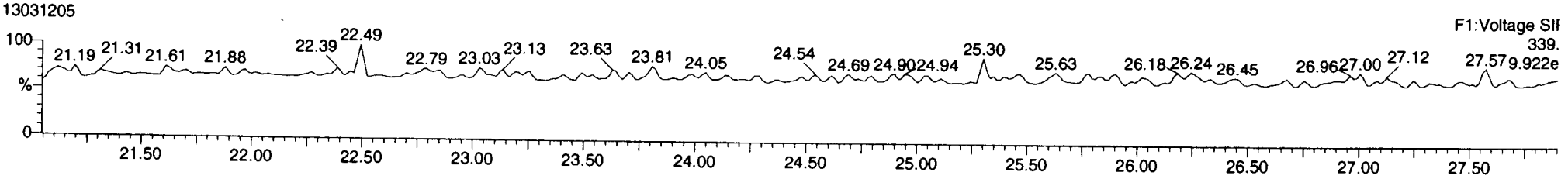

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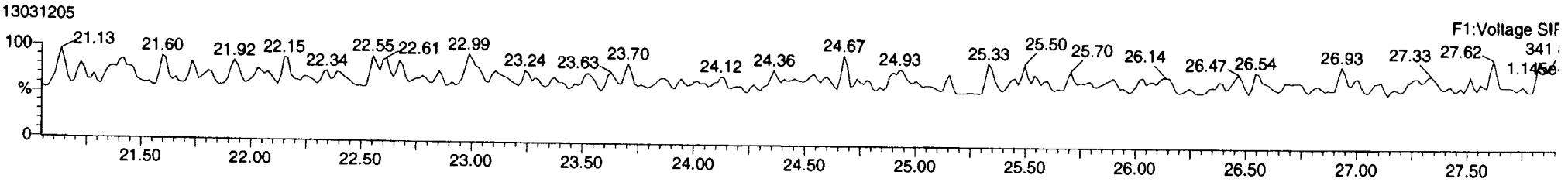

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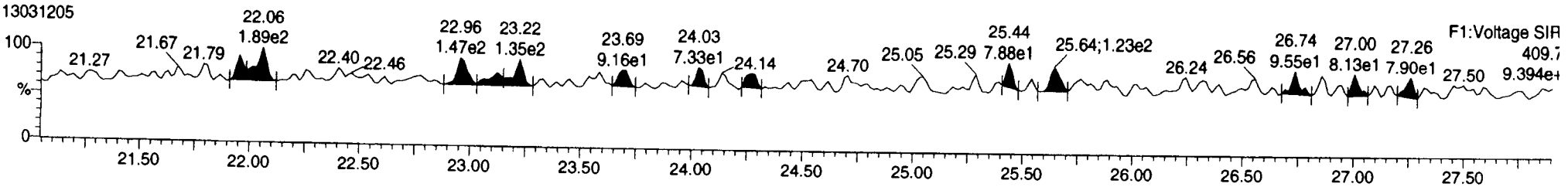

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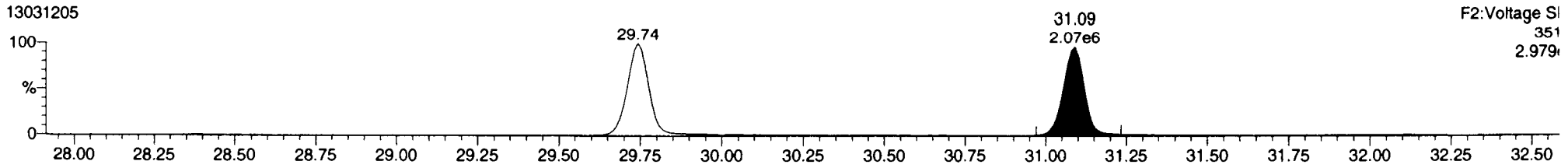
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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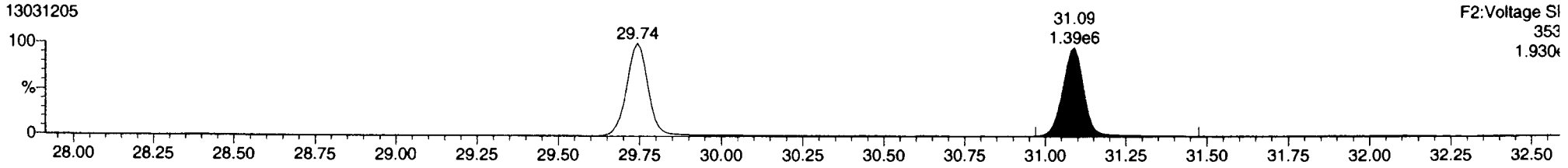
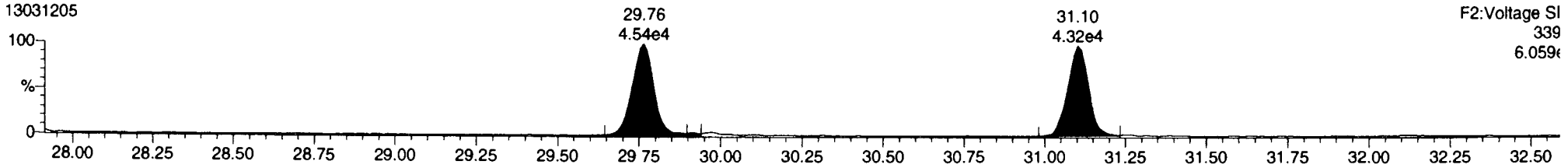
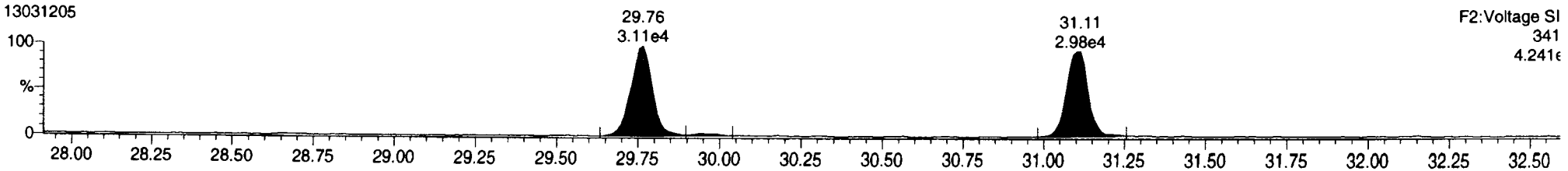


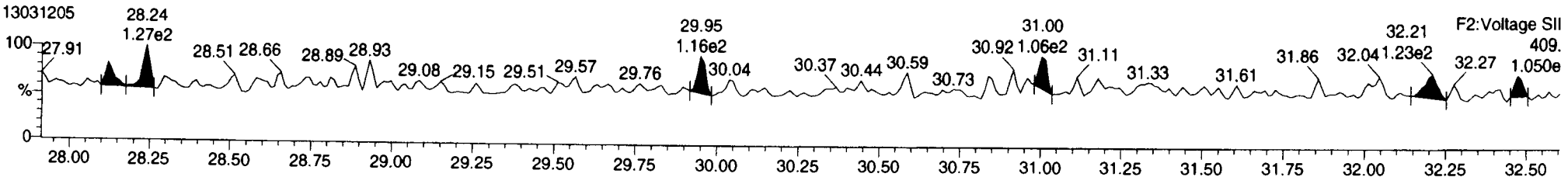
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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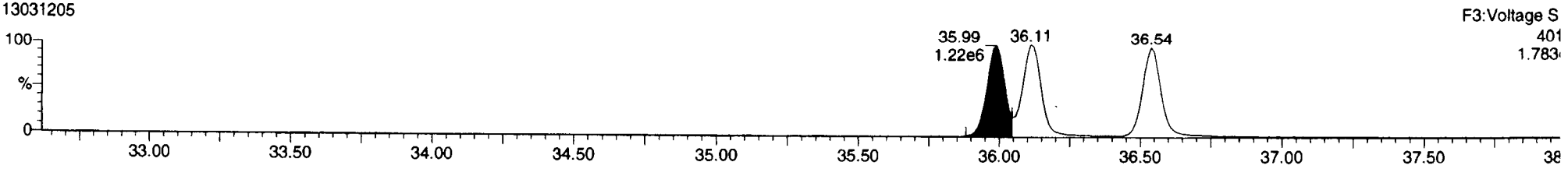
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

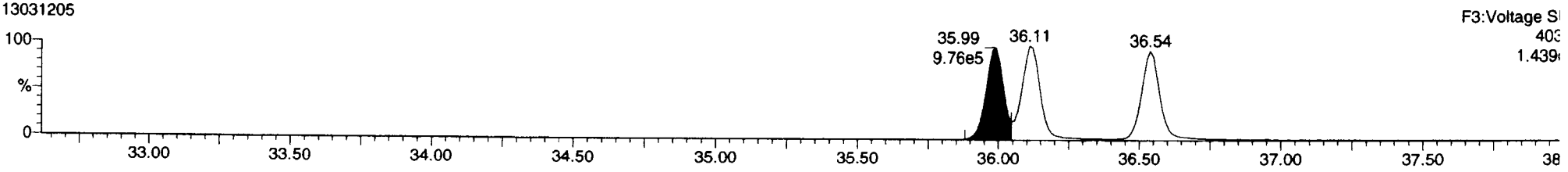
13C-123478-HxCDD

13031205



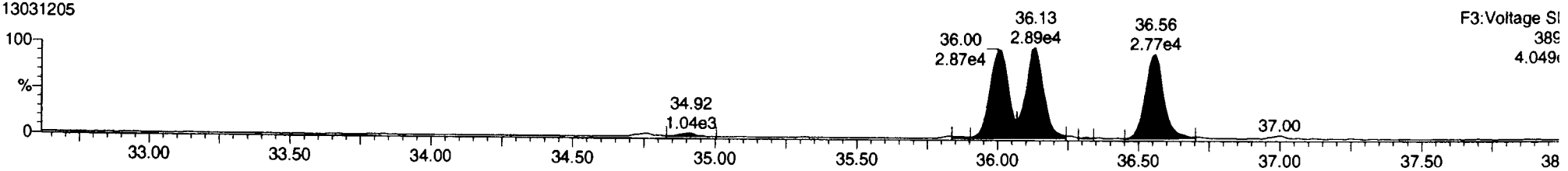
13C-123478-HxCDD

13031205



Total-hexadioxins

13031205



Total-hexadioxins

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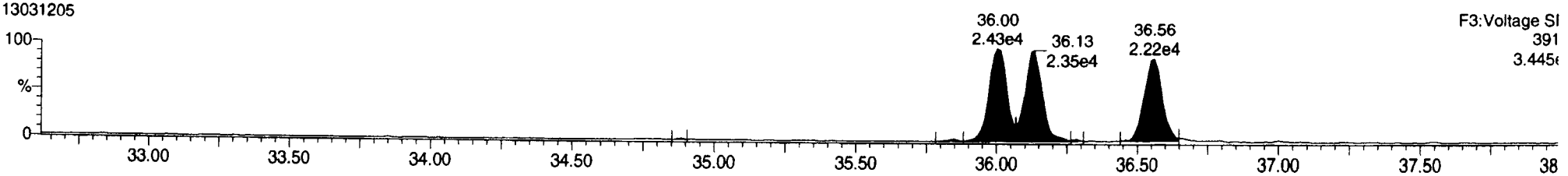

FUNCTION3 PFK

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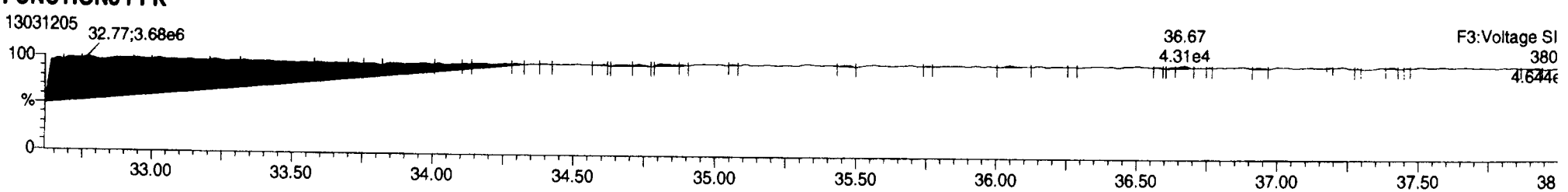
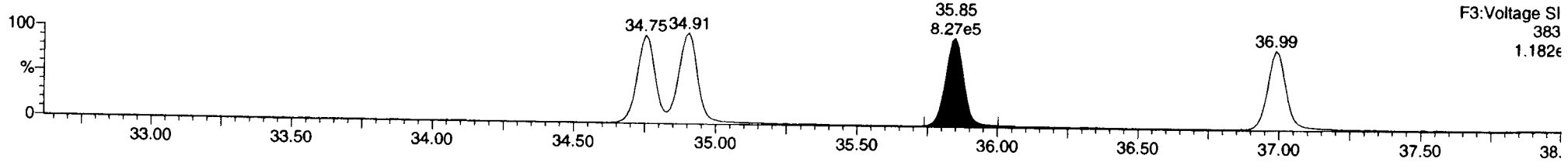


ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

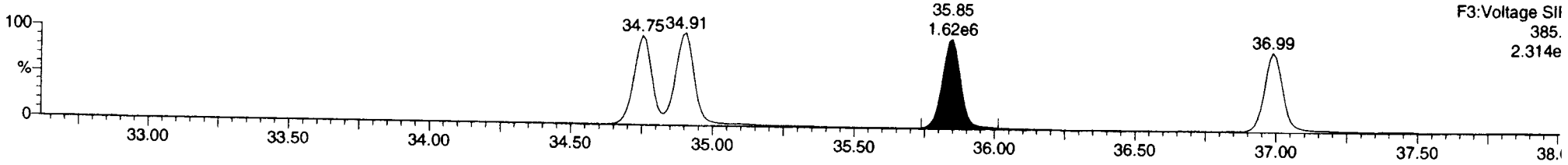
13C-234678-HxCDF

13031205



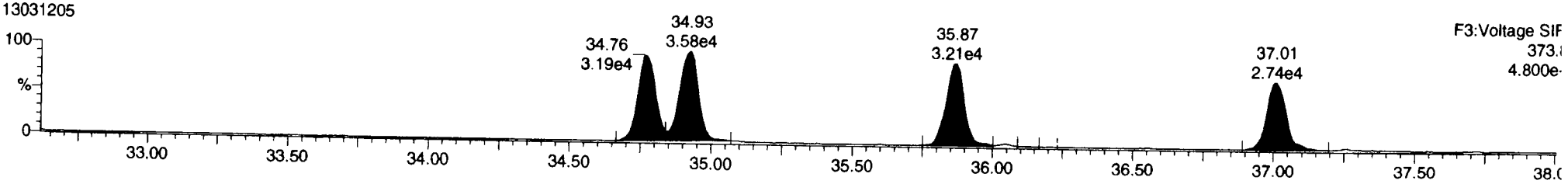
13C-234678-HxCDF

13031205



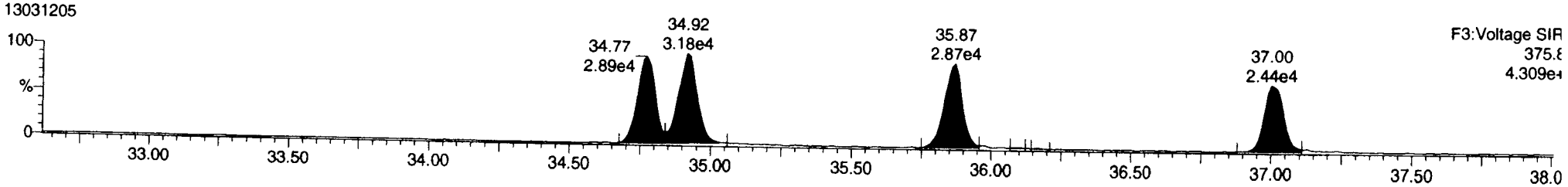
Total-hexafurans

13031205



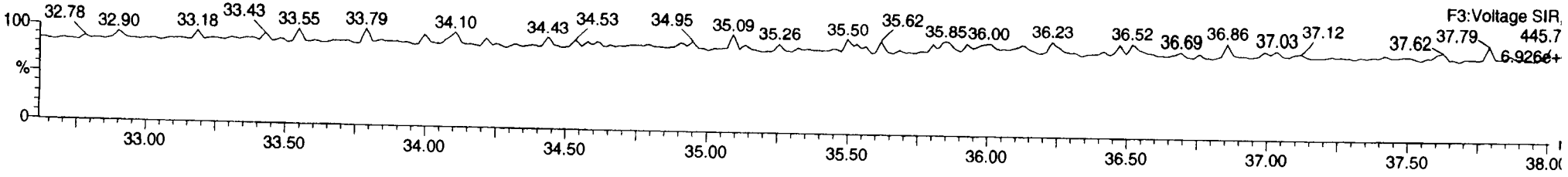
Total-hexafurans

13031205



FUNCTION3 OCDPE

13031205



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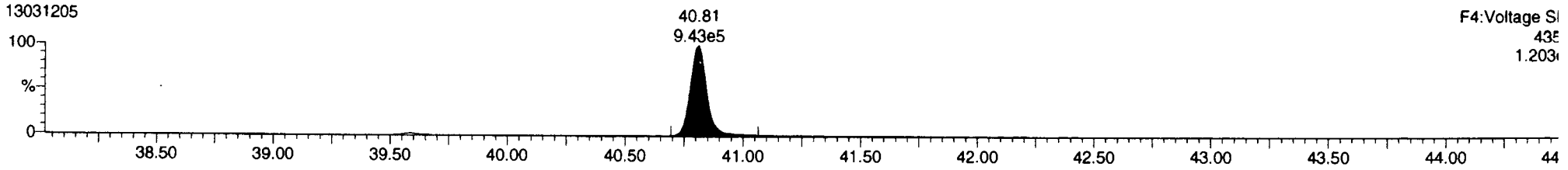
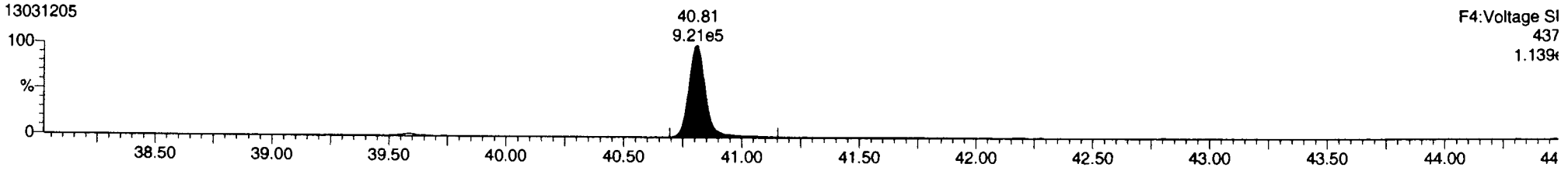
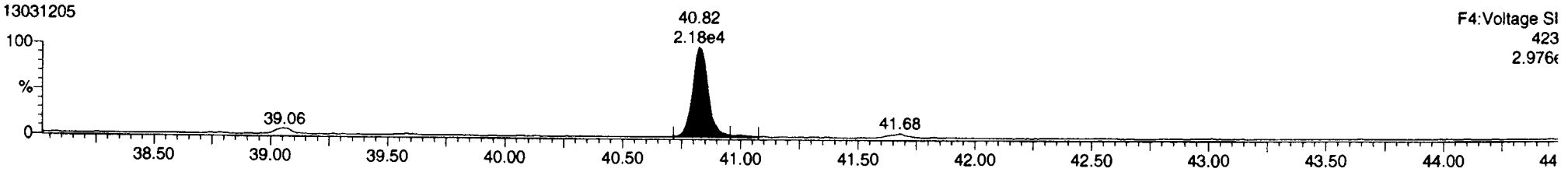
13C-1234678-HpCDD



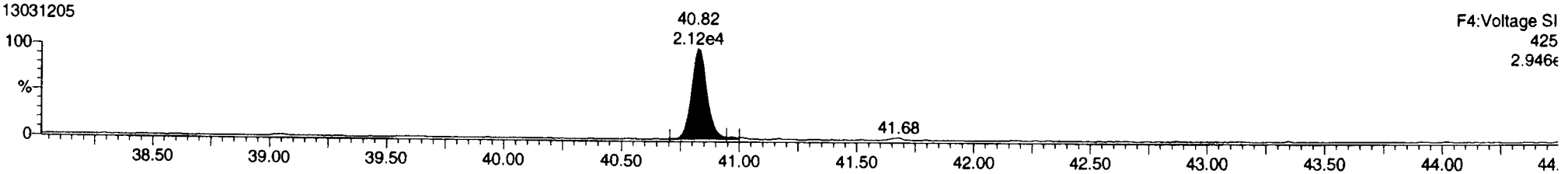
13C-1234678-HpCDD



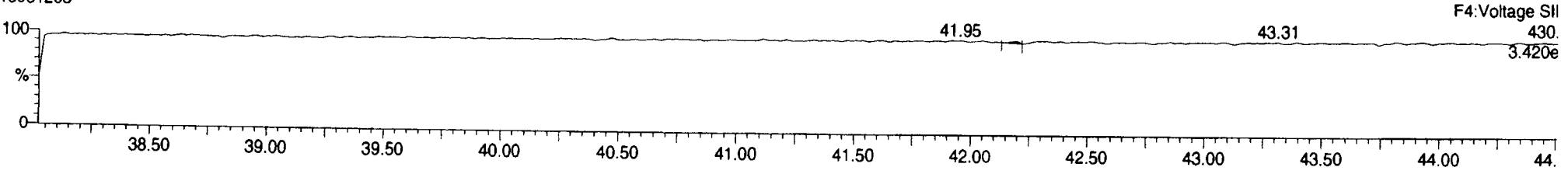
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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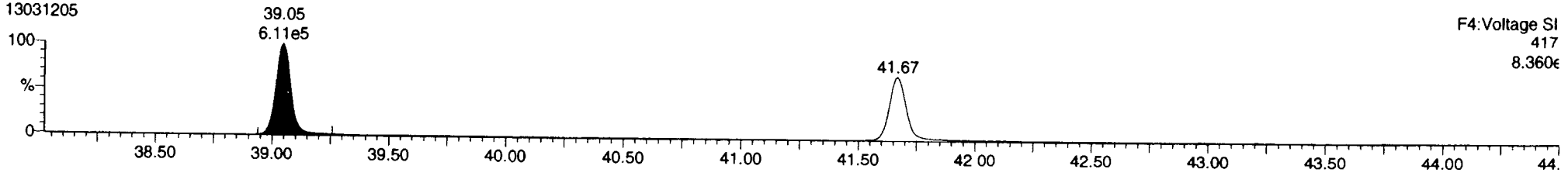
13C-1234678-HpCDF



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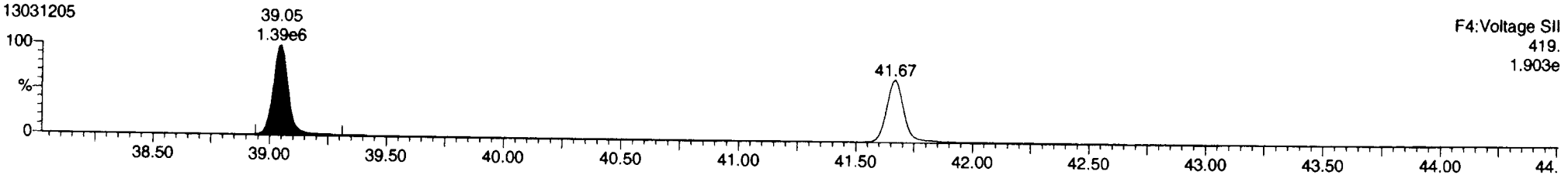
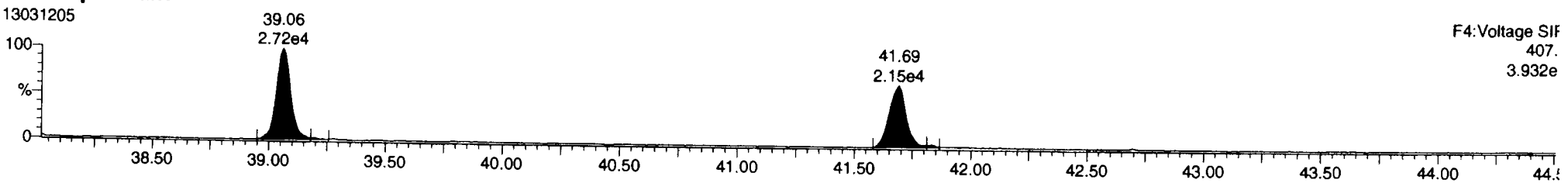


Total-heptafurans



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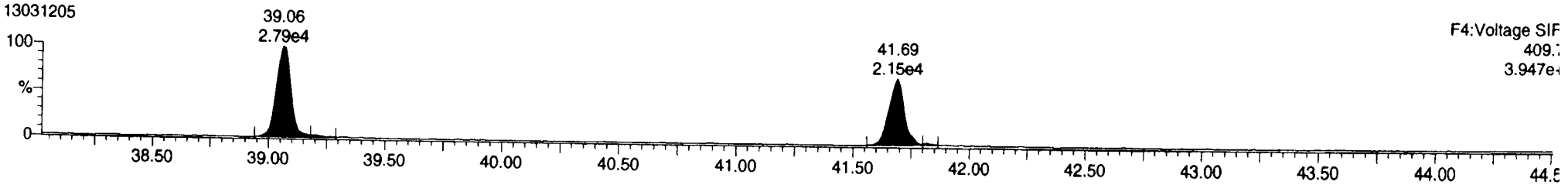
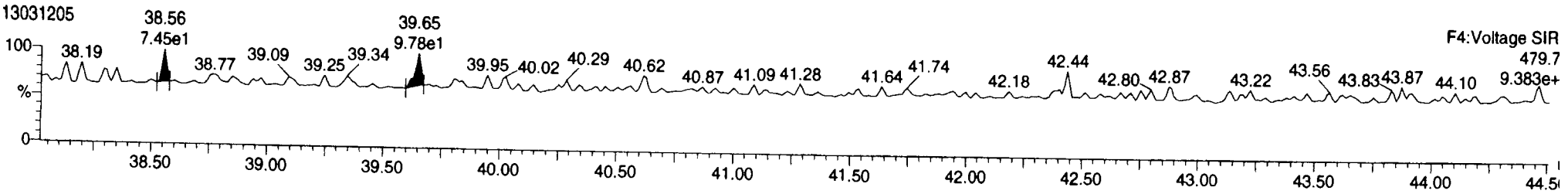


FUNCTION4 NCDPE



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13C-OCDD
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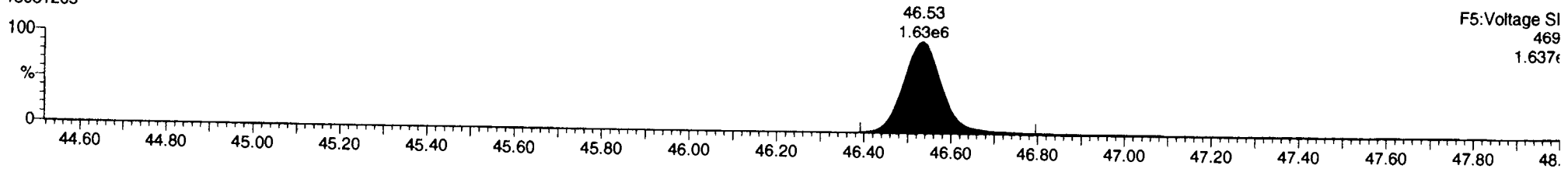
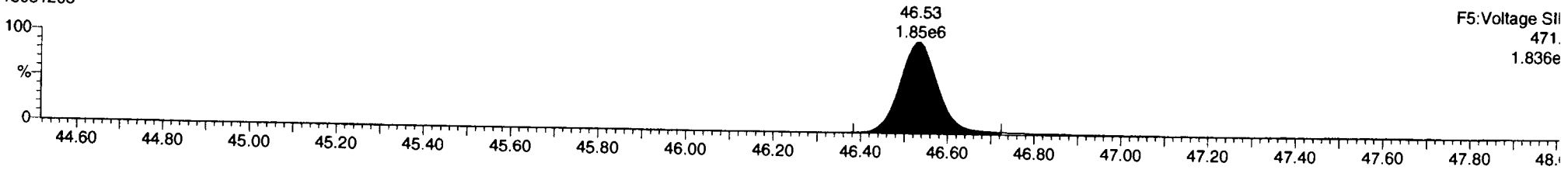
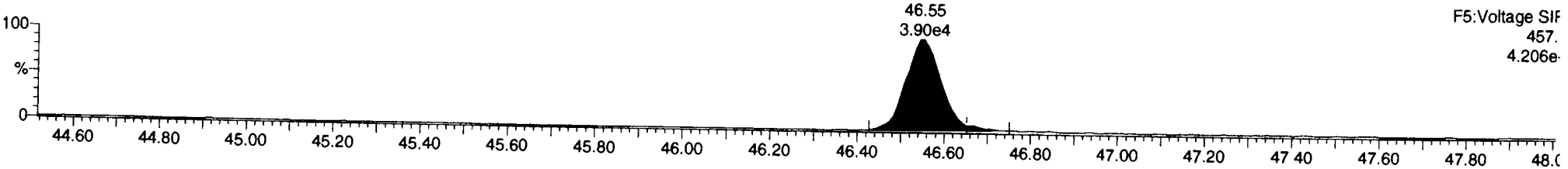


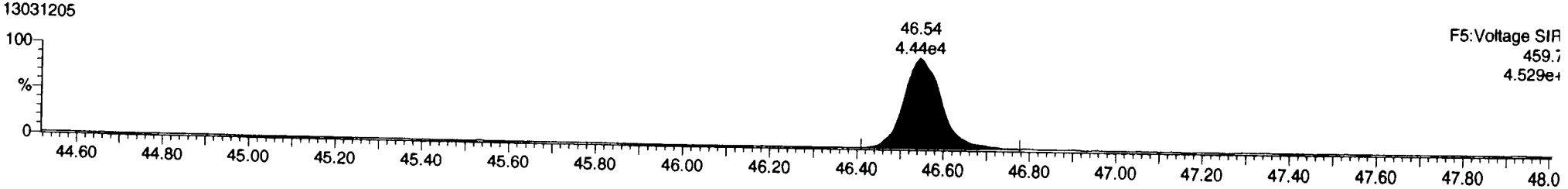
13C-OCDD
13031205



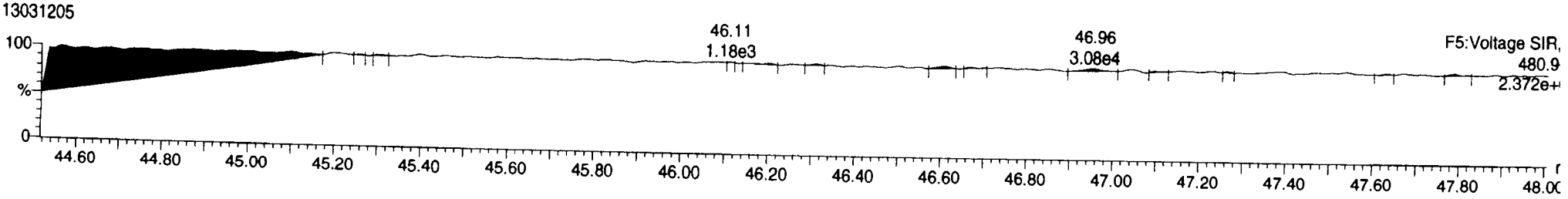
OCDD
13031205



OCDD
13031205



FUNCTION5 PFK
13031205



ACCTS - TSNM

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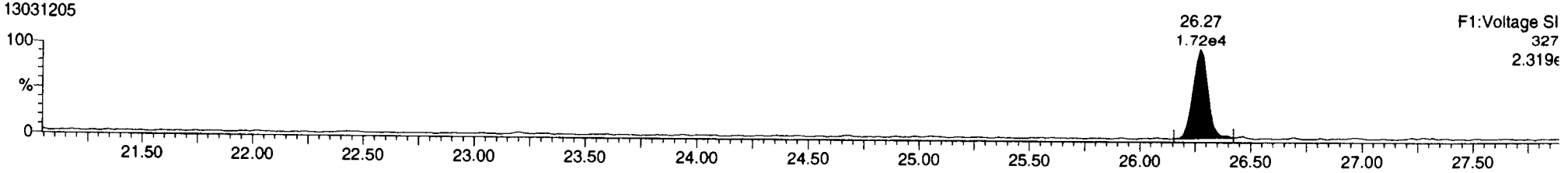
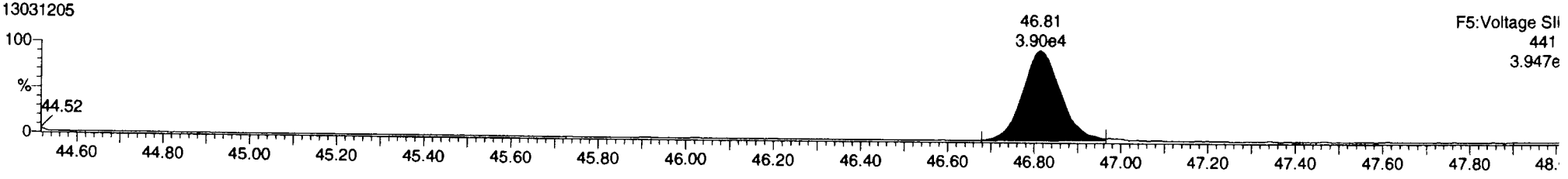
37CL-2378-TCDD

13031205



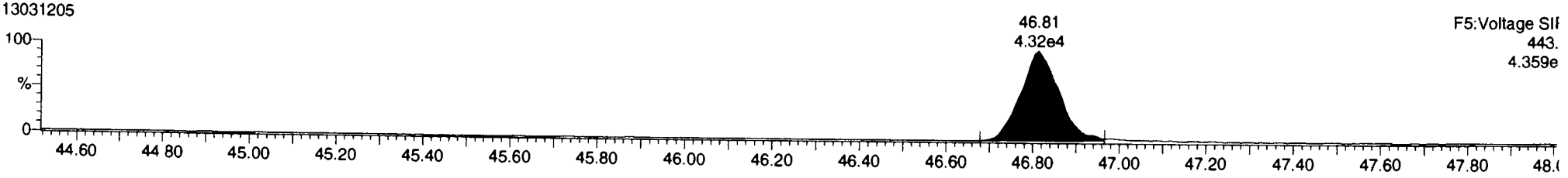
OCDF

13031205



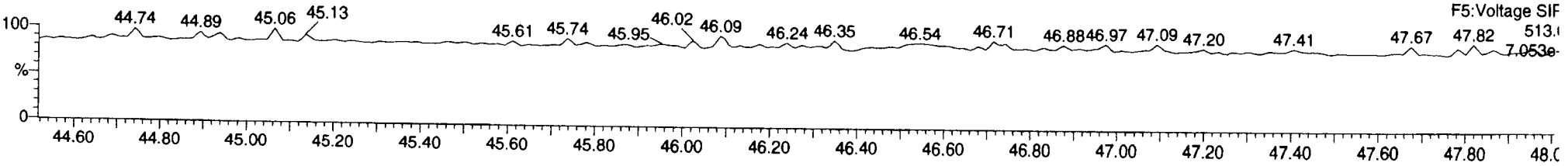
OCDF

13031205



FUNCTION5 DCDPE

13031205



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Calibration: 13 Mar 2013 10:38:15

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[redacted]	123789-HxCDD	36.560	1.012	8.98e4	7.20e4	0.870	1.247	1.240	548.8	NO	10.381	10.381
[redacted]	1234678-HpCDD	40.824	1.000	6.92e4	6.79e4	0.948	1.019	1.050	530.6	NO	9.705	9.705
[redacted]	OCDD	46.543	1.000	1.18e5	1.40e5	0.969	0.844	0.890	638.2	NO	19.203	19.203
[redacted]	13C-2378-TCDF	25.615	1.007	1.58e6	2.06e6	1.318	0.769	0.770	5539.5	NO		97.693
[redacted]	13C-12378-PeCDF	29.742	1.169	1.70e6	1.08e6	1.026	1.575	1.550	3914.8	NO		96.048
[redacted]	13C-23478-PeCDF	31.090	1.222	1.60e6	1.06e6	0.966	1.514	1.550	3761.5	NO		97.350
[redacted]	13C-123478-HxCDF	34.751	0.951	6.53e5	1.29e6	1.123	0.508	0.510	2177.5	NO		100.216
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[redacted]	13C-1234678-HpCDF	39.048	1.069	4.86e5	1.09e6	0.896	0.446	0.440	1831.1	NO		101.939
[redacted]	13C-1234789-HpCDF	41.668	1.140	3.86e5	8.64e5	0.693	0.447	0.440	1292.7	NO		104.581
[redacted]	13C-1234-TCDD	25.435	0.000	1.23e6	1.60e6	1.000	0.772	0.770	2997.0	NO		100.000
[redacted]	13C-2378-TCDD	26.242	1.032	1.14e6	1.50e6	0.961	0.763	0.770	2646.2	NO		97.243
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[redacted]	13C-123478-HxCDD	35.990	0.985	9.61e5	7.60e5	1.016	1.264	1.240	3626.0	NO		98.277
[redacted]	13C-123678-HxCDD	36.110	0.988	1.04e6	8.27e5	1.098	1.254	1.240	3791.8	NO		98.434
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[redacted]	13C-OCDD	46.535	1.274	1.32e6	1.45e6	0.770	0.912	0.890	3755.0	NO		209.376

WN1 - 51339

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

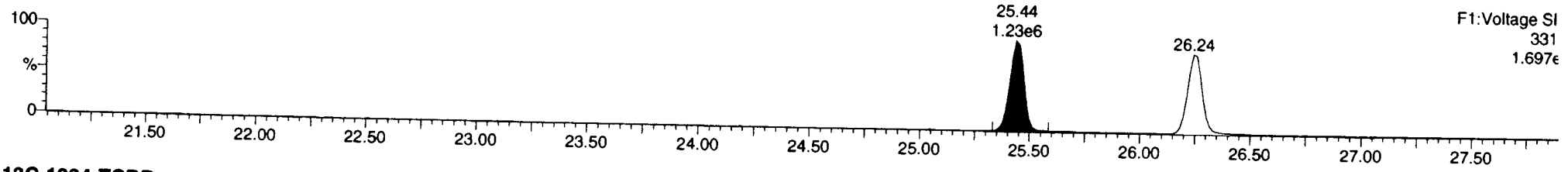
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

	13C-123789-HxCDD	36.538	0.000	9.57e5	7.66e5	1.000	1.250	1.240	3530.2	NO	100.000
	Total-tetrafurans			2.31e4		0.763					1.969
	Total-penta1			0.00e0							
	Total-pentafurans			2.76e5		0.844					20.136
	Total-hexafurans			4.13e5		0.997					39.605
	Total-heptafurans			1.61e5		1.150					19.833
	Total-Furans			9.95e5		0.970					101.435
	Total-tetradioxins			2.34e4		0.980					2.077
	Total-pentadioxins			1.13e5		0 948					10.169
	Total-hexadioxins			2.69e5		0.898					30.424
	Total-heptadioxins			7.05e4		0.948					9.881
	Total-Dioxins			5.95e5		0.934					71.764
	Total-TEQ			1.59e6							173.200
	37CL-2378-TCDD	26.272	1.033	5.53e4		0.999			371.6		1.957
	FUNCTION1 PFK			1.75e6							
	FUNCTION2 PFK			1.71e5							0.000
	FUNCTION3 PFK			5.68e5							0.000
	FUNCTION4 PFK			0.00e0							
	FUNCTION5 PFK			7.95e6							
	FUNCTION1 HXCDPE			0.00e0							
	FUNCTION1 HPCDPE			1.20e3							0.000
	FUNCTION2 HPCDPE			7.70e2							0.000
	FUNCTION3 OCDPE			0.00e0							
	FUNCTION4 NCDPE			0.00e0							
	FUNCTION5 DCDPE			0.00e0							

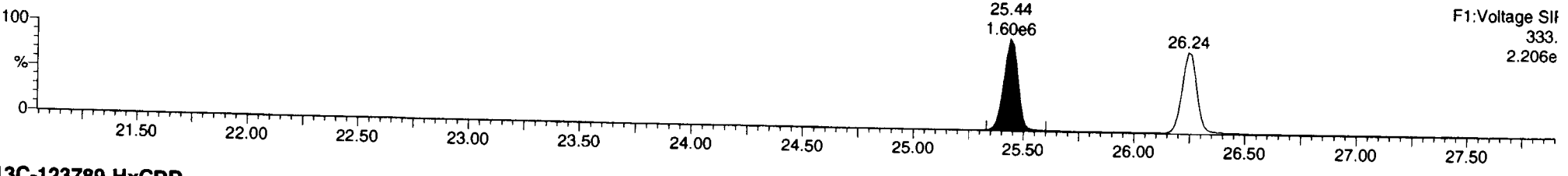
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

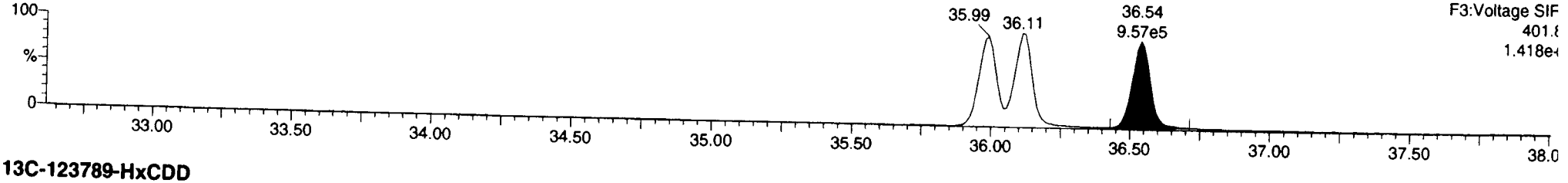
13C-1234-TCDD
13031206



13C-1234-TCDD
13031206



13C-123789-HxCDD
13031206



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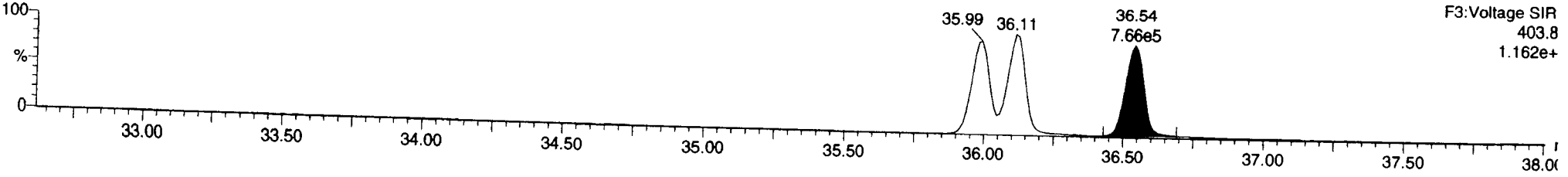
13031206

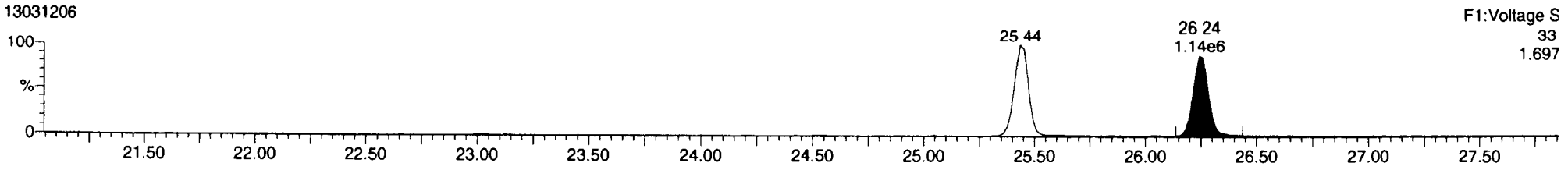


Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

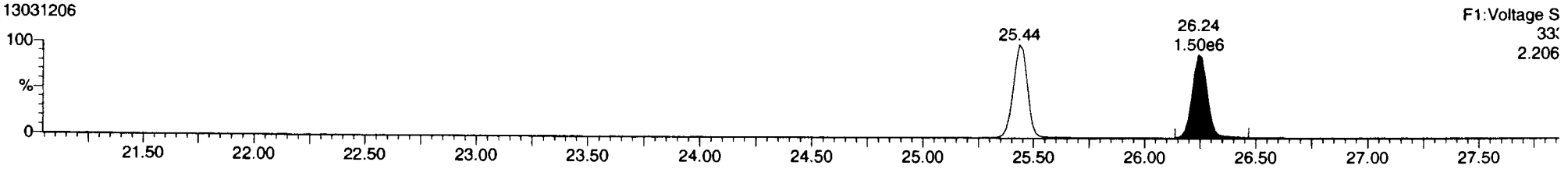
13C-2378-TCDD

13031206



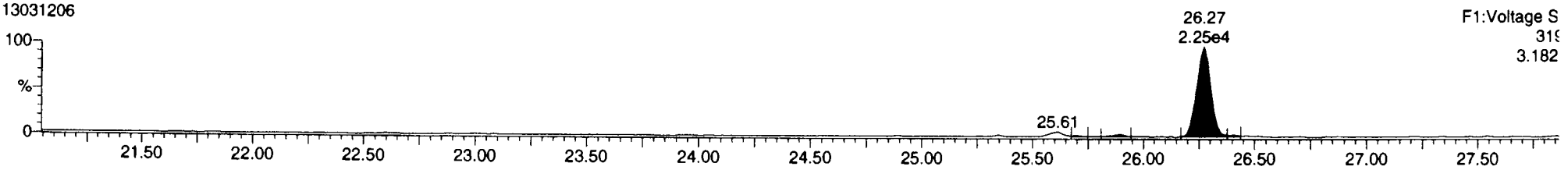
13C-2378-TCDD

13031206



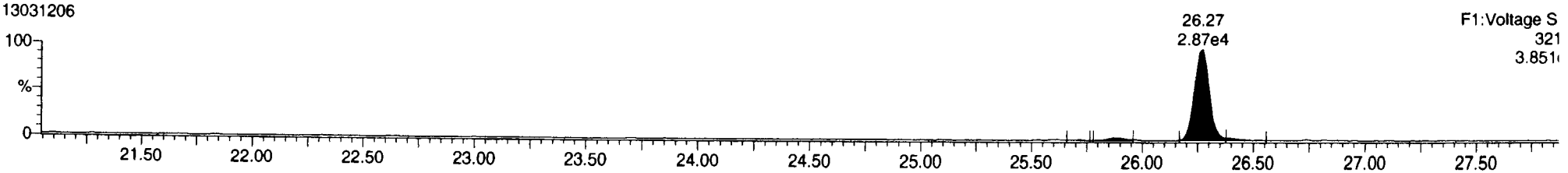
Total-tetradioxins

13031206



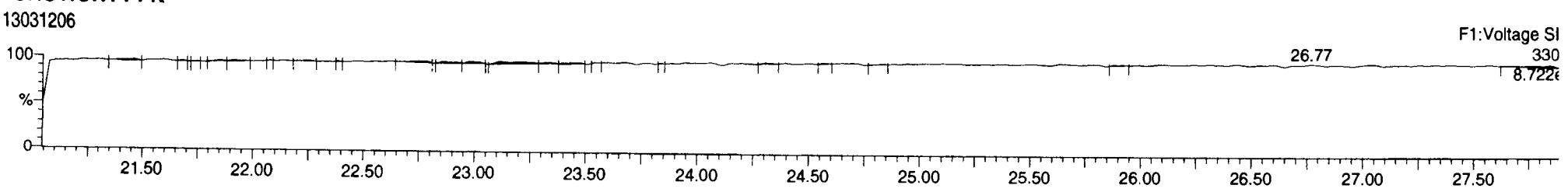
Total-tetradioxins

13031206



FUNCTION1 PFK

13031206



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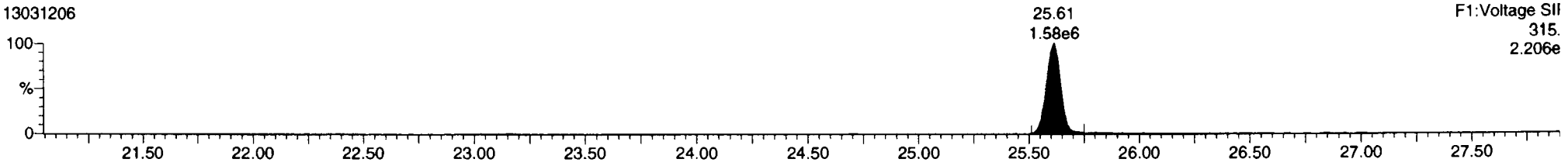
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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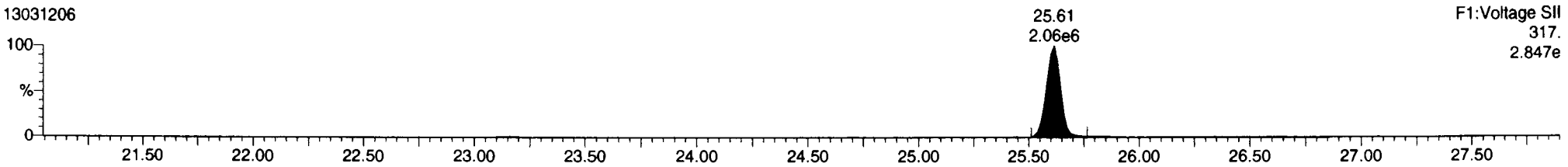
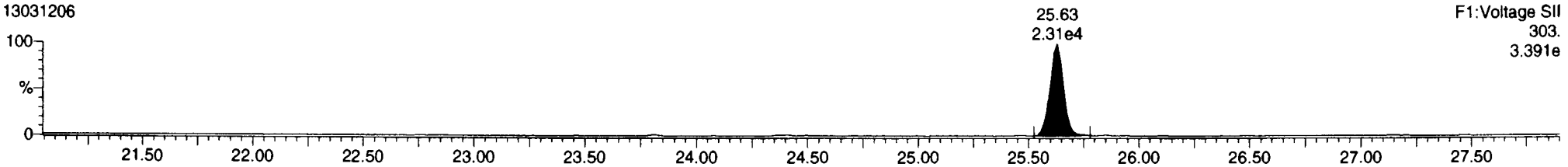
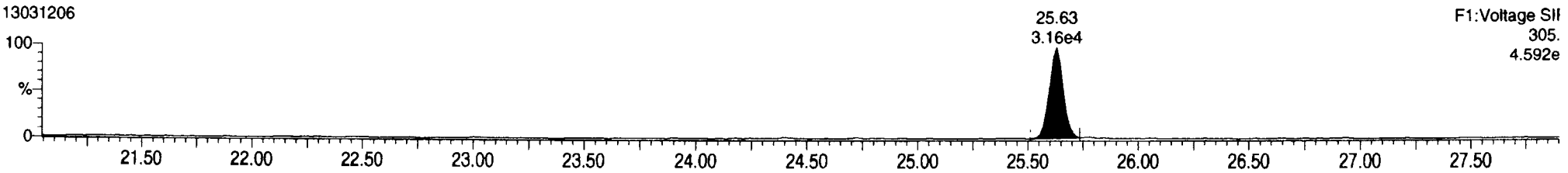


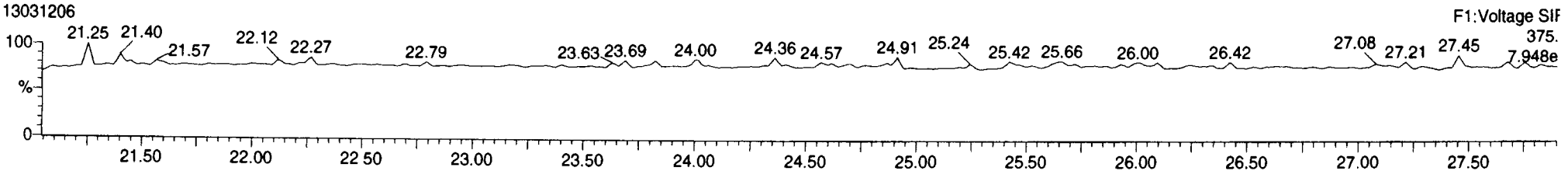
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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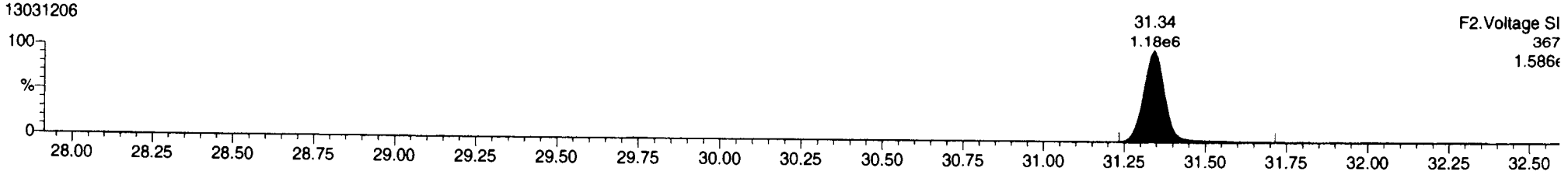
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

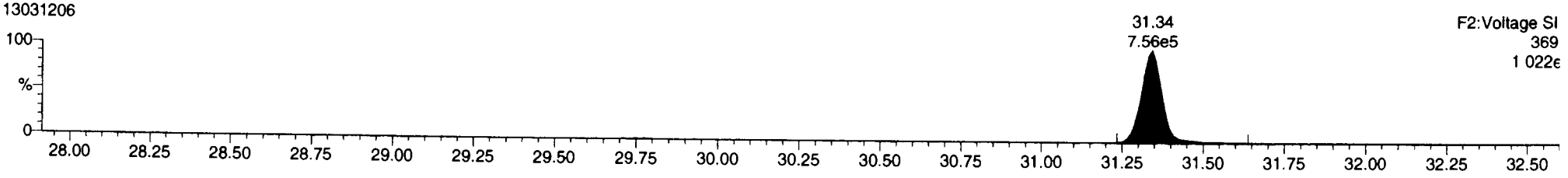
13C-12378-PeCDD

13031206



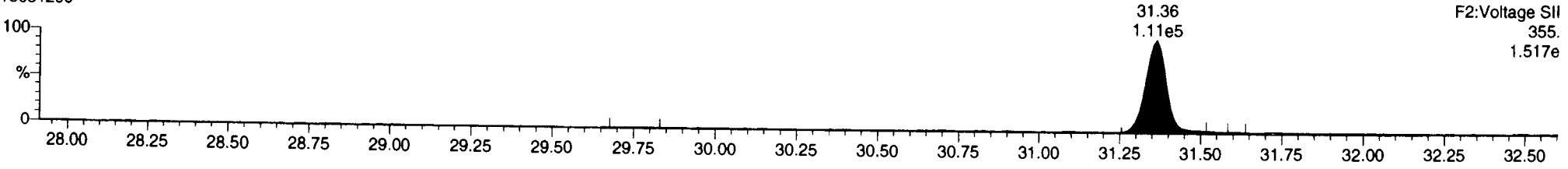
13C-12378-PeCDD

13031206



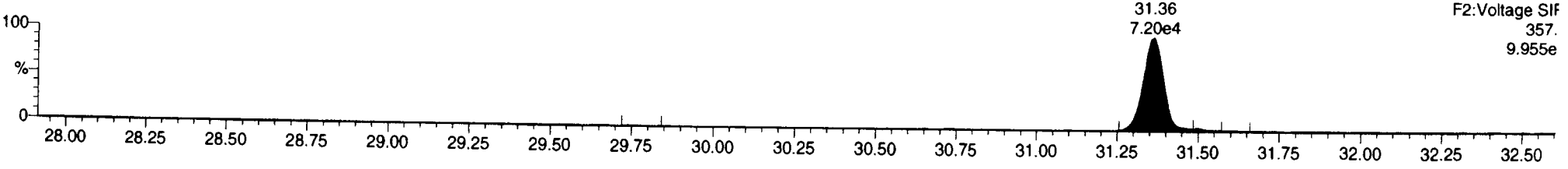
Total-pentadioxins

13031206



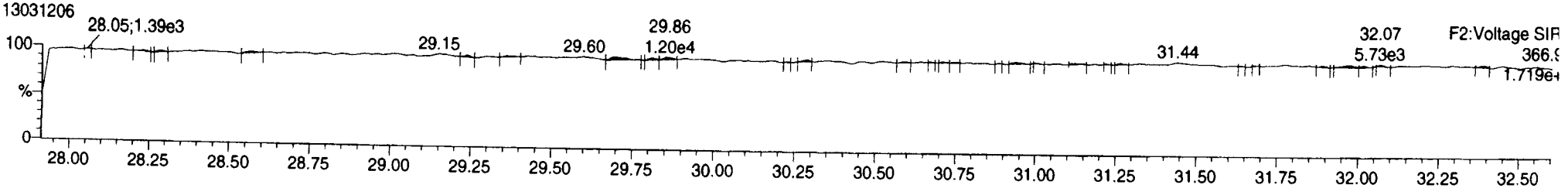
Total-pentadioxins

13031206



FUNCTION2 PFK

13031206



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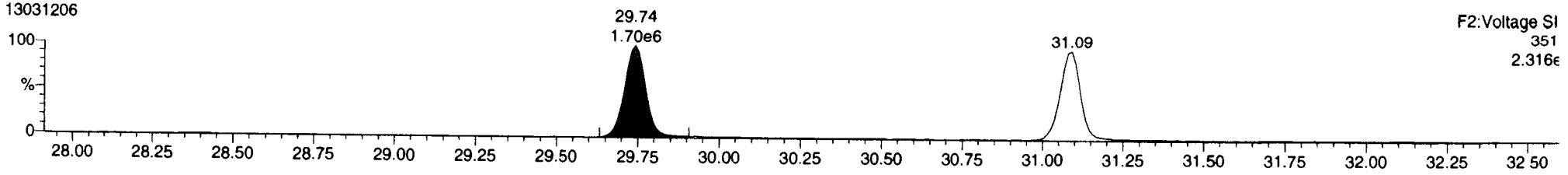
13C-12378-PeCDF



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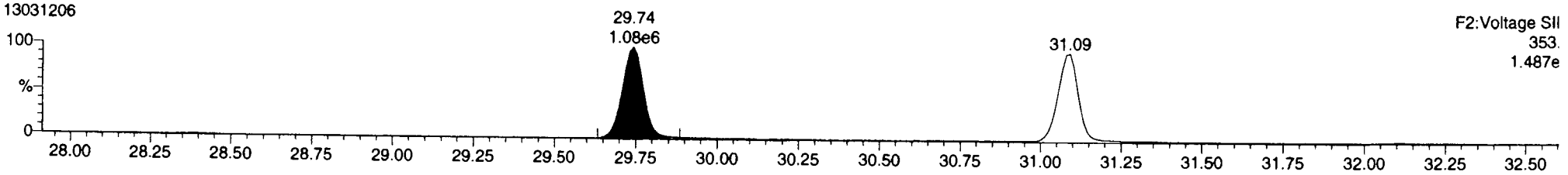
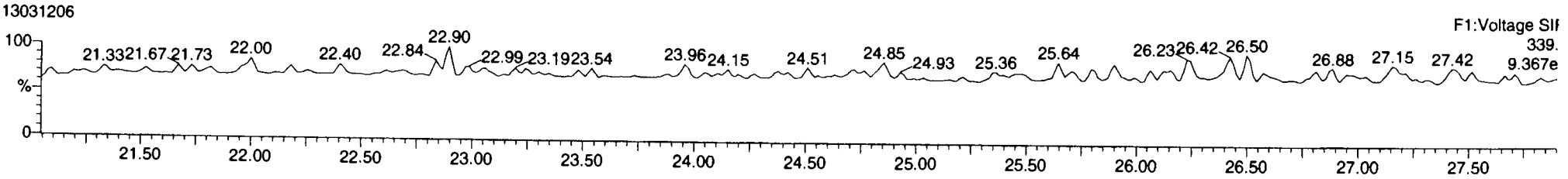
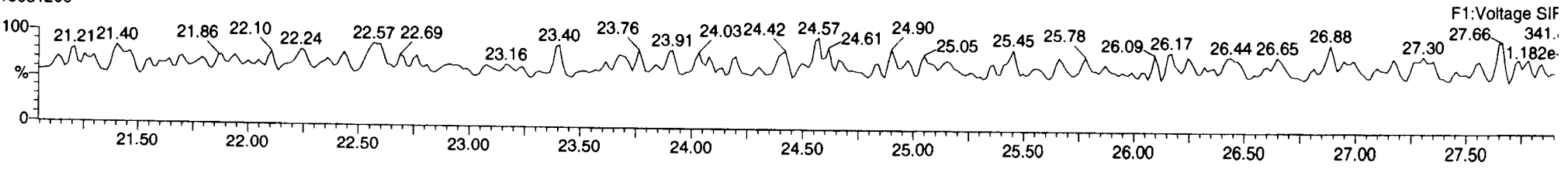


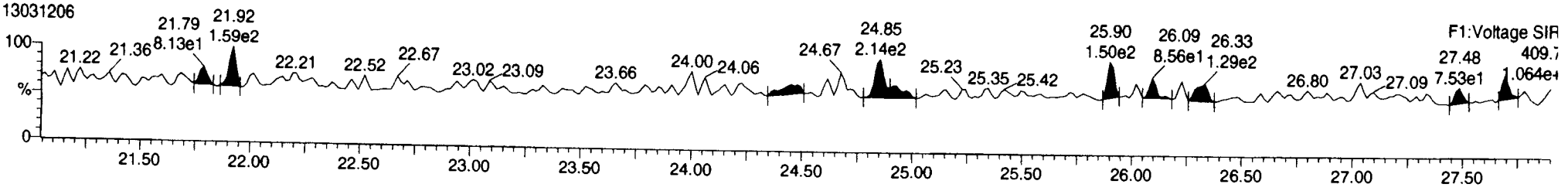
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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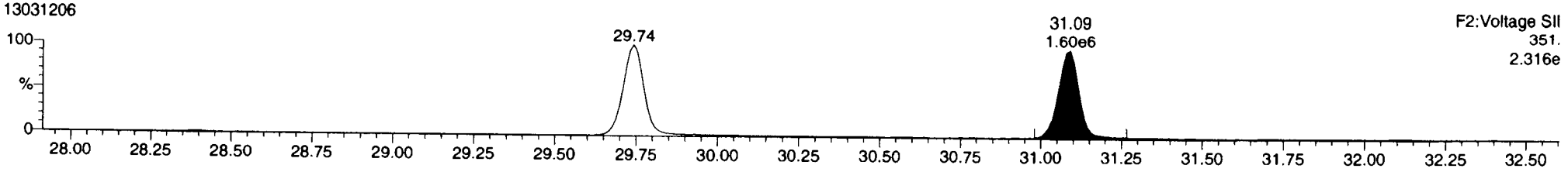
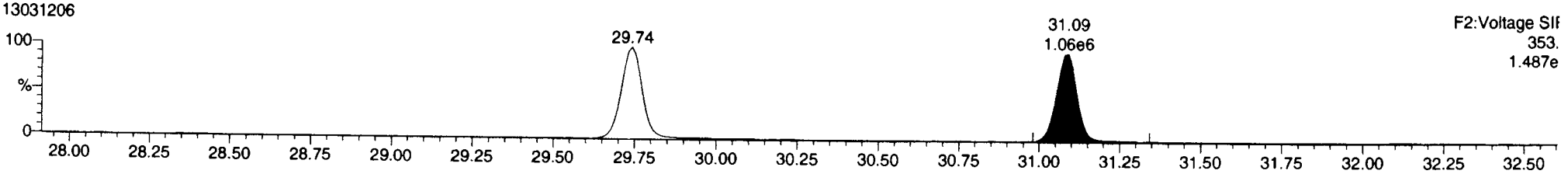
13C-23478-PeCDF

13031206



13C-23478-PeCDF

13031206



Total-pentafurans

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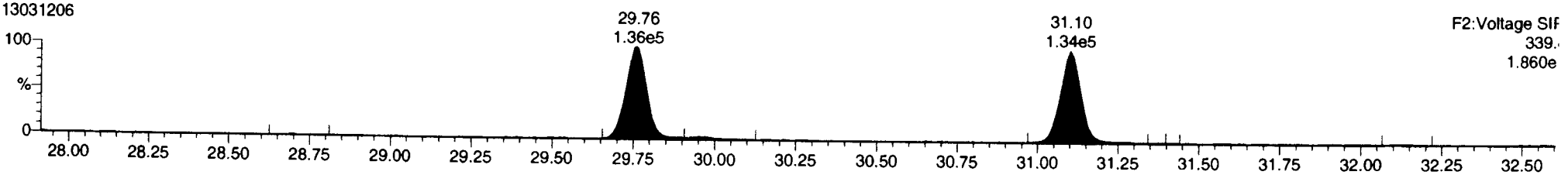

Total-pentafurans

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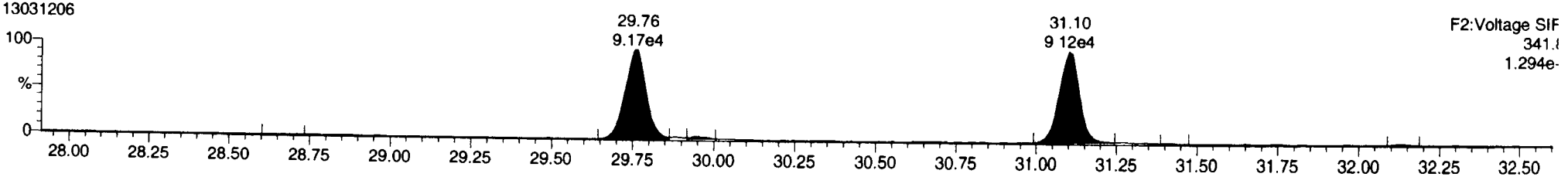

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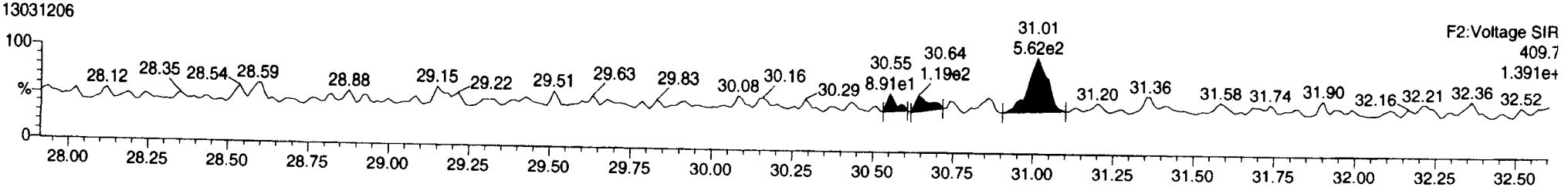

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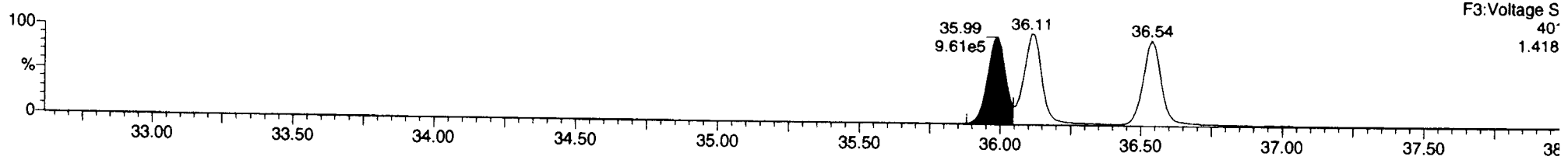
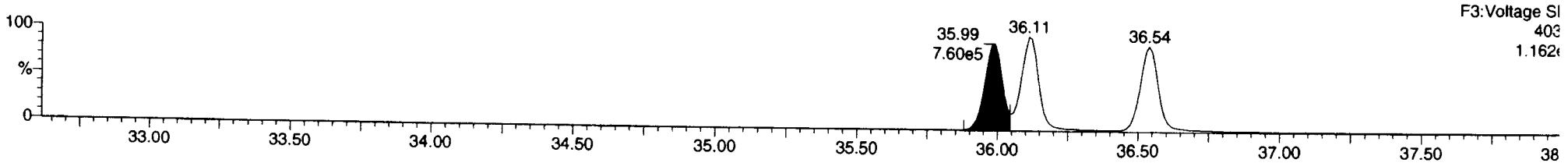
13C-123478-HxCDD
13031206



13C-123478-HxCDD
13031206



Total-hexadioxins
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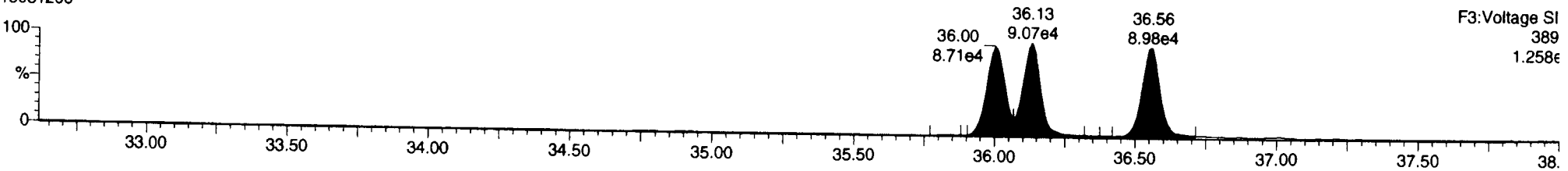

Total-hexadioxins
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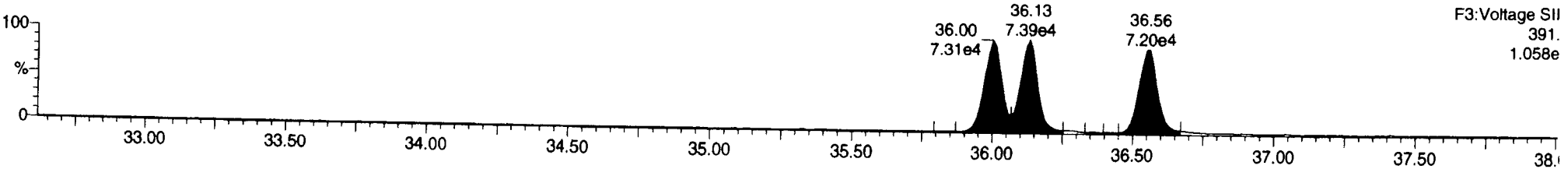
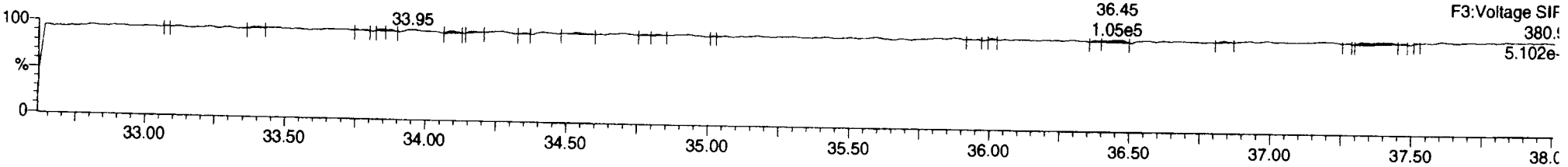


FUNCTION3 PFK
13031206



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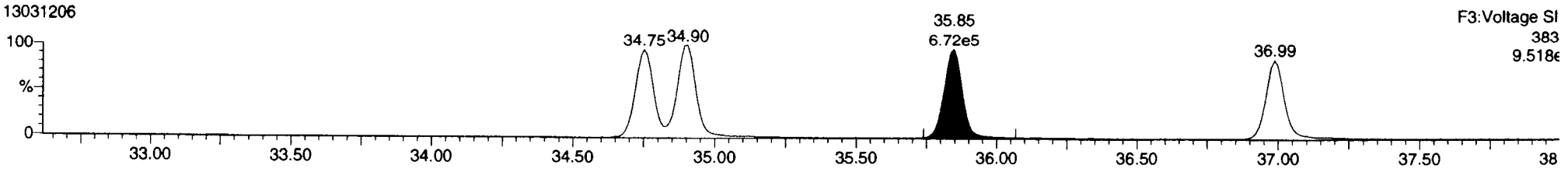
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF

13031206



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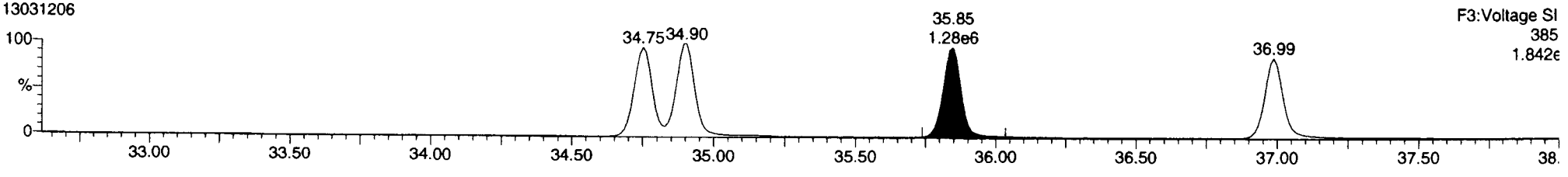
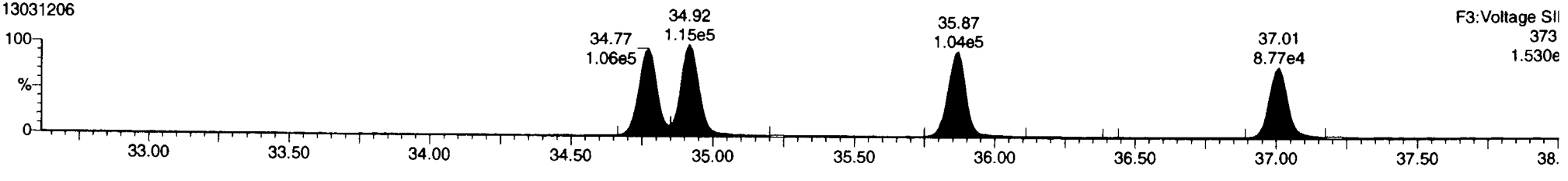
13031206



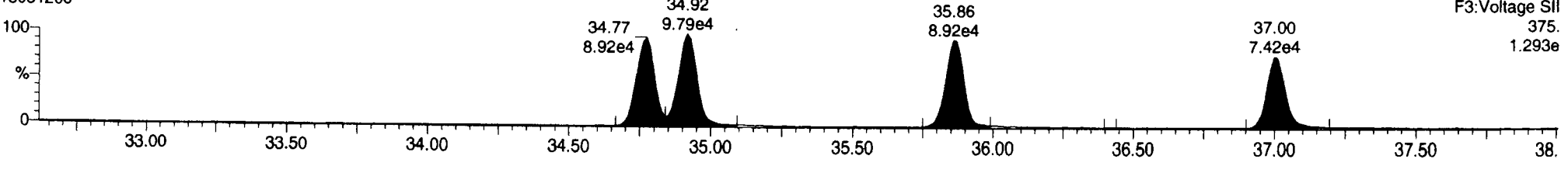
Total-hexafurans

13031206



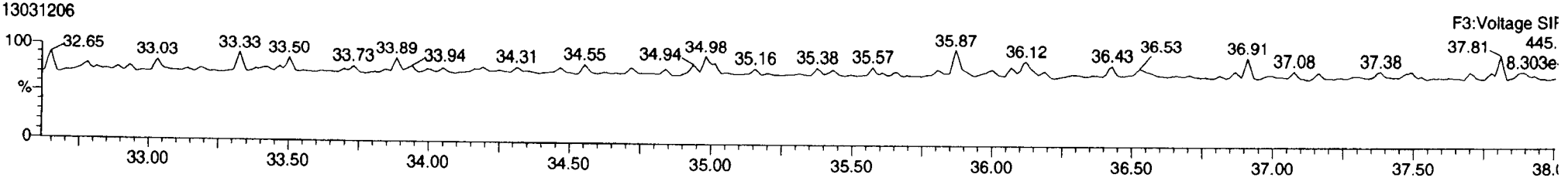
Total-hexafurans

13031206



FUNCTION3 OCDPE

13031206



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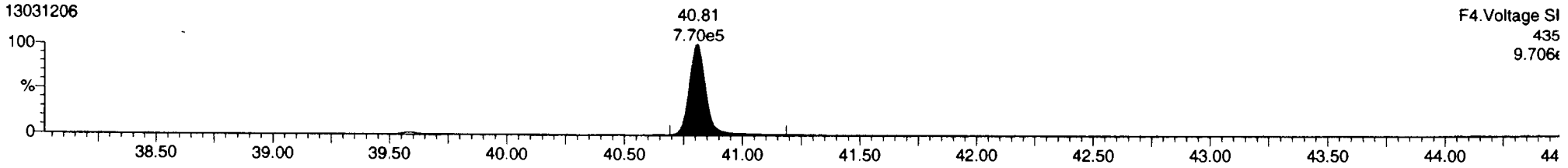

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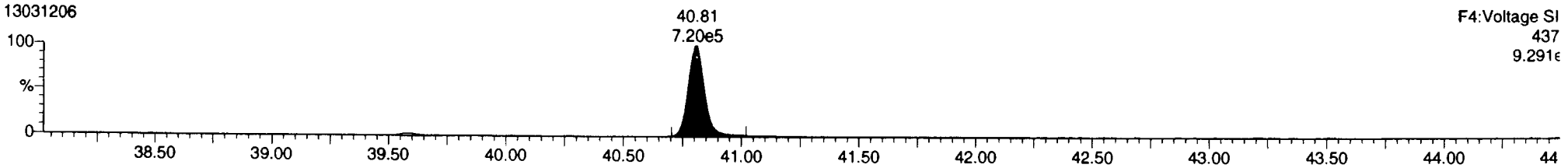

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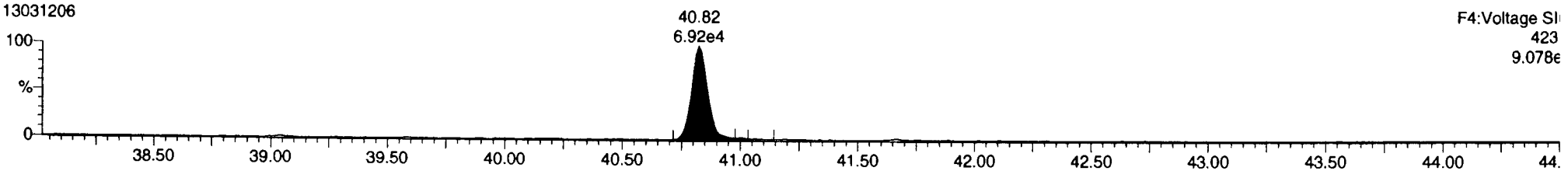
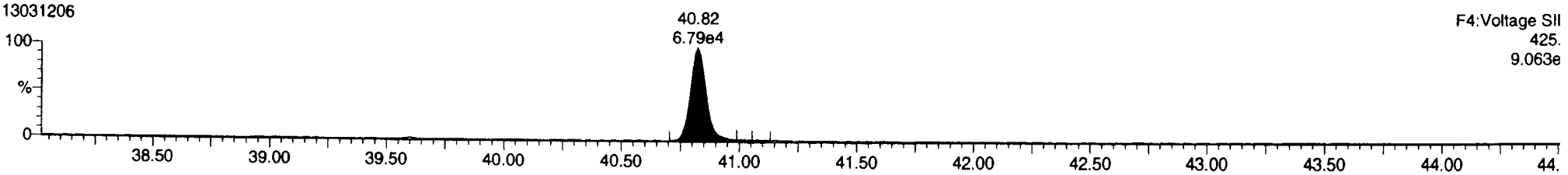


Total-heptadioxins



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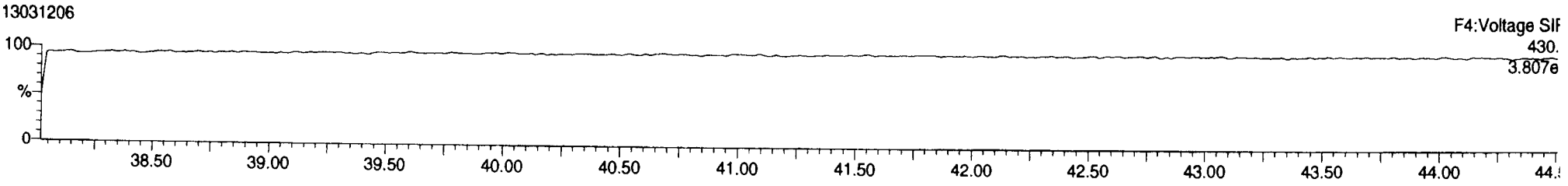

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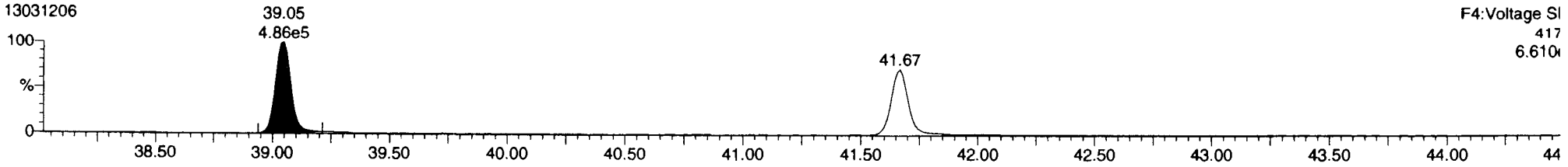

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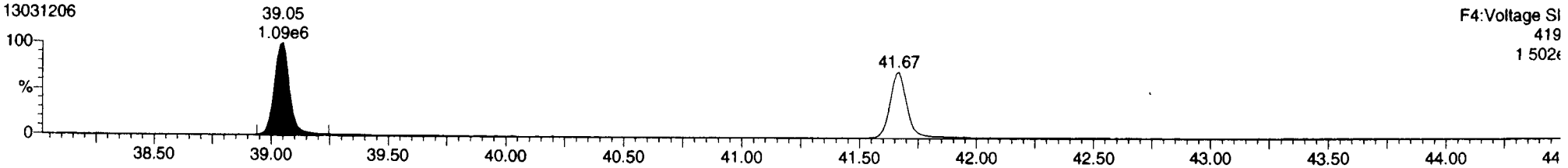
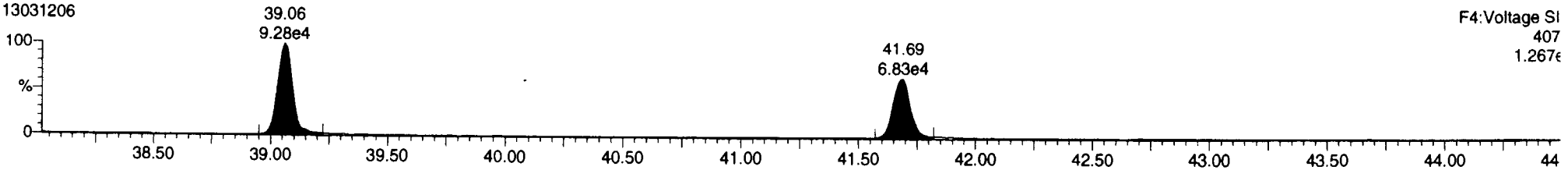


Total-heptafurans



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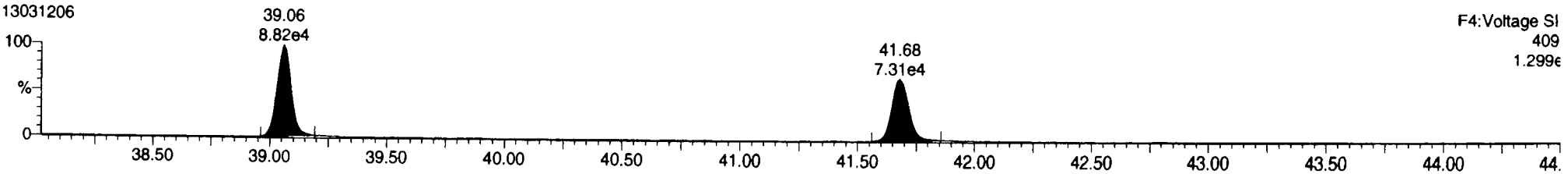
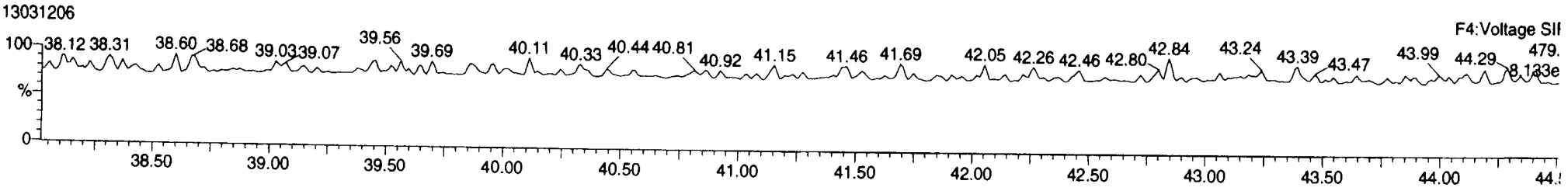


FUNCTION4 NCDPE



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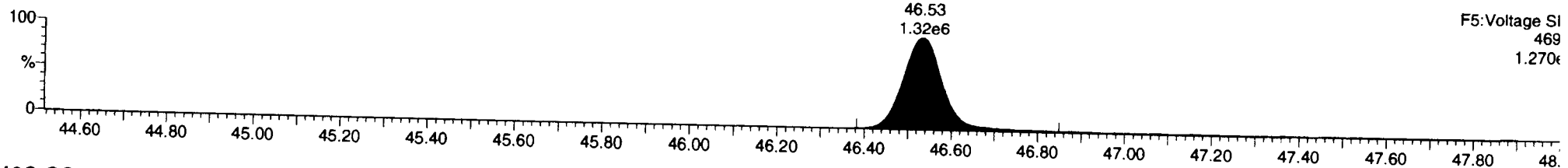
13C-OCDD
13031206



13C-OCDD
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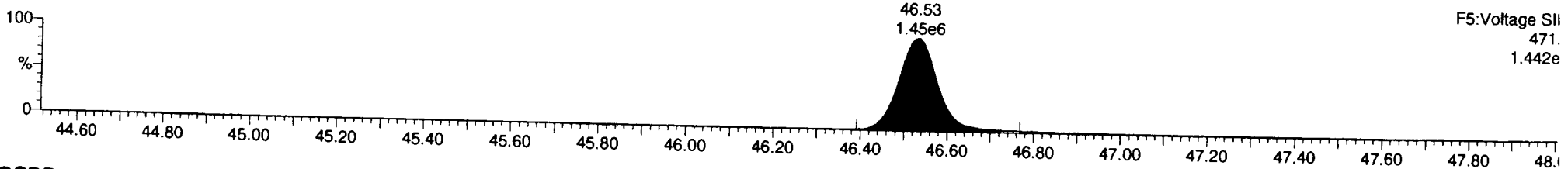

OCDD
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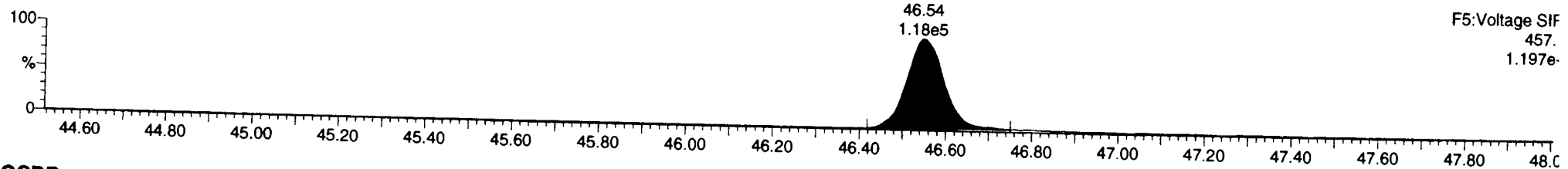

OCDD
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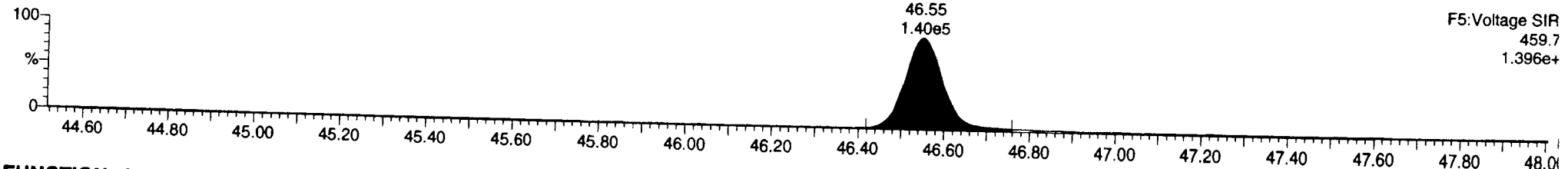
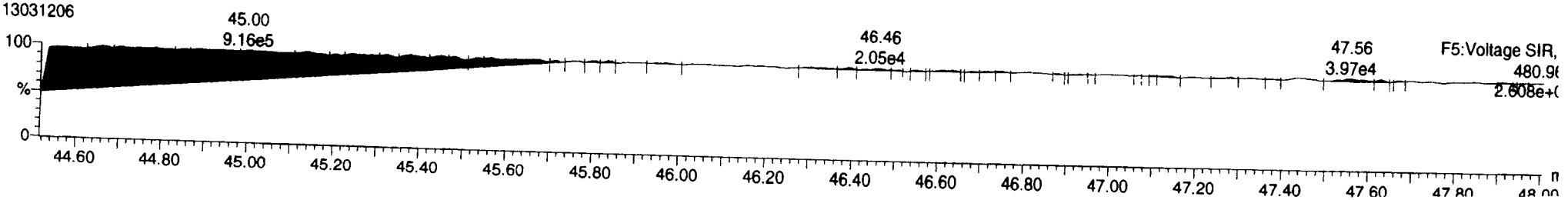


FUNCTION5 PFK
13031206



TS6179 - 1.CRF

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Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

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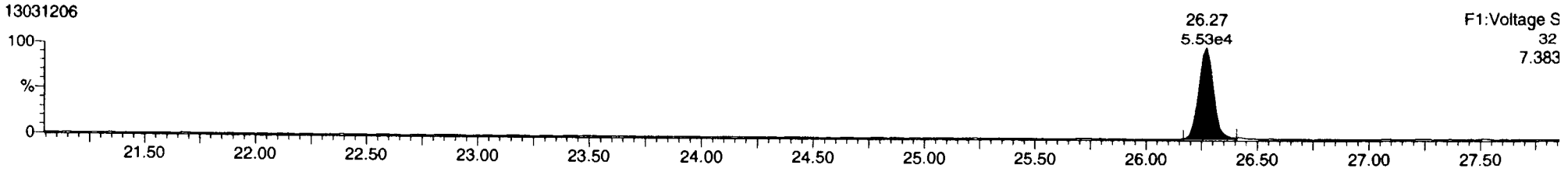
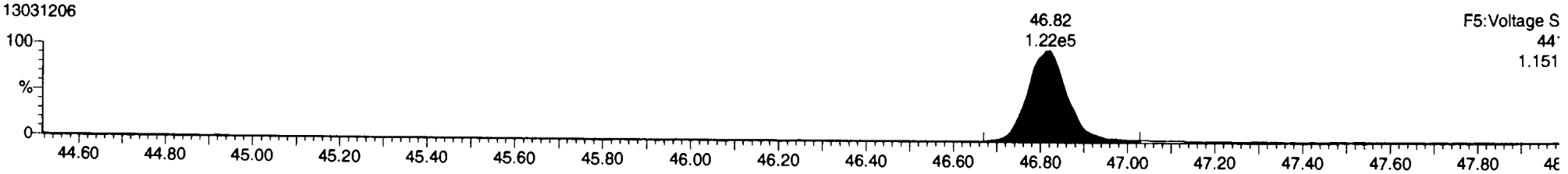
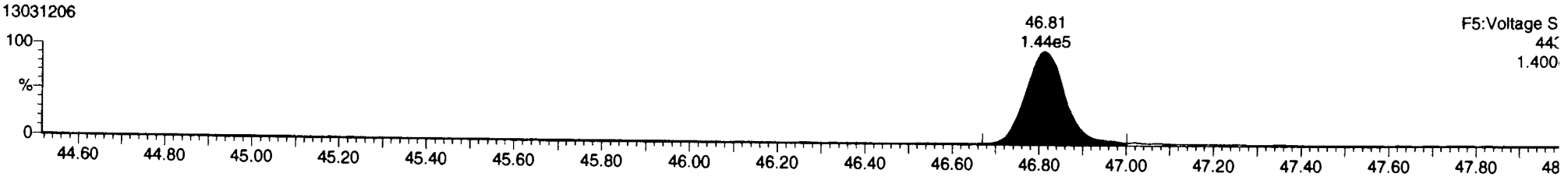
37CL-2378-TCDD



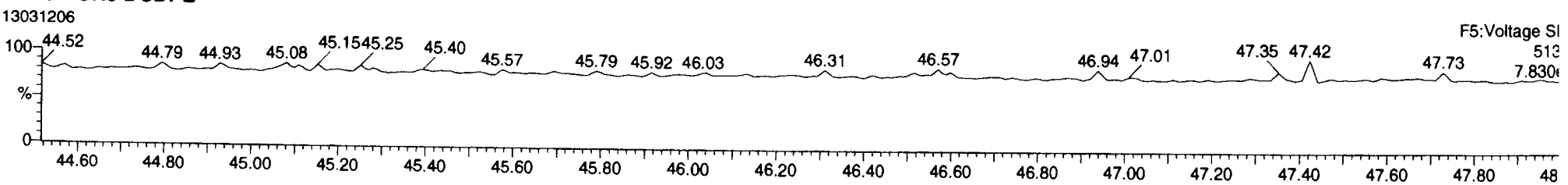
OCDF



OCDF



FUNCTION5 DCDPE



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Calibration: 13 Mar 2013 10:38:15

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	12378-PeCDF	29.764	1.001	5.71e5	3.85e5	0.836	1.484	1.550	1923.4	NO	49.317	49.317
	23478-PeCDF	31.102	1.000	5.50e5	3.68e5	0.851	1.493	1.550	1891.7	NO	50.619	50.619
	123478-HxCDF	34.774	1.001	4.20e5	3.50e5	1.017	1.201	1.240	1033.0	NO	49.502	49.502
	234678-HxCDF	35.870	1.001	4.09e5	3.46e5	1.027	1.182	1.240	956.5	NO	52.502	52.502
	123678-HxCDF	34.927	1.001	4.36e5	3.86e5	1.013	1.132	1.240	1018.1	NO	49.815	49.815
	123789-HxCDF	37.010	1.001	3.29e5	2.81e5	0.929	1.172	1.240	753.1	NO	50.260	50.260
	1234678-HpCDF	39.060	1.000	3.33e5	3.47e5	1.151	0.959	1.050	1389.2	NO	50.447	50.447
	1234789-HpCDF	41.690	1.001	2.47e5	2.51e5	1.149	0.982	1.050	861.7	NO	50.050	50.050
	OCDF	46.813	1.006	4.20e5	4.93e5	0.963	0.851	0.890	1340.7	NO	98.744	98.744
	2378-TCDD	26.272	1.001	8.90e4	1.18e5	0.980	0.754	0.770	626.4	NO	9.796	9.796
	12378-PeCDD	31.365	1.001	4.50e5	2.87e5	0.948	1.565	1.550	1703.1	NO	49.688	49.688
	123478-HxCDD	36.001	1.000	3.51e5	2.79e5	0.941	1.260	1.240	1097.0	NO	49.304	49.304
	123678-HxCDD	36.133	1.000	3.59e5	2.89e5	0.884	1.245	1.240	1041.3	NO	48.525	48.525
	123789-HxCDD	36.560	1.012	3.22e5	2.76e5	0.870	1.168	1.240	932.4	NO	47.896	47.896
	1234678-HpCDD	40.835	1.001	2.52e5	2.41e5	0.948	1.048	1.050	1073.0	NO	47.908	47.908
	OCDD	46.553	1.000	4.09e5	4.66e5	0.969	0.877	0.890	1511.3	NO	94.063	94.063
	13C-2378-TCDF	25.615	1.006	1.24e6	1.62e6	1.318	0.770	0.770	3962.9	NO		95.682
	13C-12378-PeCDF	29.742	1.169	1.40e6	9.17e5	1.026	1.527	1.550	2650.3	NO		99.646
	13C-23478-PeCDF	31.091	1.222	1.29e6	8.41e5	0.966	1.535	1.550	2606.4	NO		97.352
	13C-123478-HxCDF	34.752	0.951	5.15e5	1.02e6	1.123	0.508	0.510	1063.1	NO		105.367
	13C-123678-HxCDF	34.905	0.955	5.56e5	1.07e6	1.216	0.518	0.510	1106.5	NO		103.590
	13C-234678-HxCDF	35.848	0.981	4.77e5	9.25e5	1.106	0.516	0.510	1000.5	NO		97.959
	13C-123789-HxCDF	36.988	1.012	4.37e5	8.70e5	0.995	0.502	0.510	862.1	NO		101.496
	13C-1234678-HpCDF	39.049	1.069	3.61e5	8.11e5	0.896	0.446	0.440	1571.5	NO		101.132
	13C-1234789-HpCDF	41.668	1.140	2.62e5	6.05e5	0.693	0.433	0.440	954.6	NO		96.586
	13C-1234-TCDD	25.451	0.000	9.80e5	1.29e6	1.000	0.761	0.770	2425.4	NO		100.000
	13C-2378-TCDD	26.257	1.032	9.46e5	1.21e6	0.961	0.782	0.770	2233.2	NO		98.898
	13C-12378-PeCDD	31.343	1.232	9.43e5	6.21e5	0.703	1.518	1.550	2418.8	NO		98.059
	13C-123478-HxCDD	35.991	0.985	7.68e5	5.90e5	1.016	1.303	1.240	2629.3	NO		103.295
	13C-123678-HxCDD	36.122	0.989	8.24e5	6.86e5	1.098	1.203	1.240	2617.6	NO		106.278
	13C-1234678-HpCDD	40.813	1.117	5.55e5	5.31e5	0.828	1.046	1.050	2486.5	NO		101.321
	13C-OCDD	46.535	1.274	9.01e5	1.02e6	0.770	0.884	0.890	1703.4	NO		192.749

WN31 : 91353

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

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[redacted]	Total-Dioxins			4.56e6		0.934					643.868
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[redacted]	FUNCTION1 HXCDPE			2.76e2							0.000
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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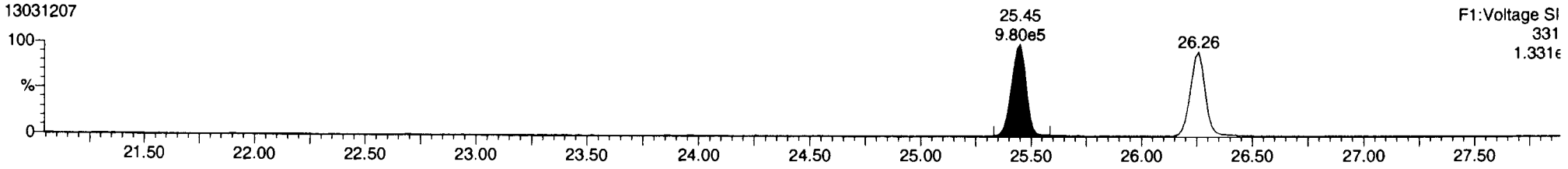
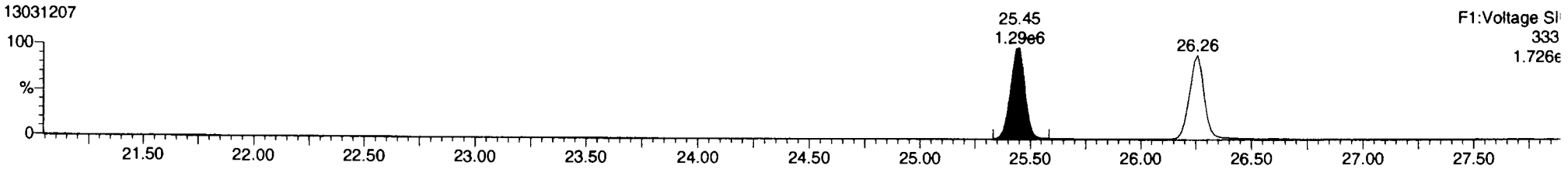
13C-1234-TCDD



13C-1234-TCDD



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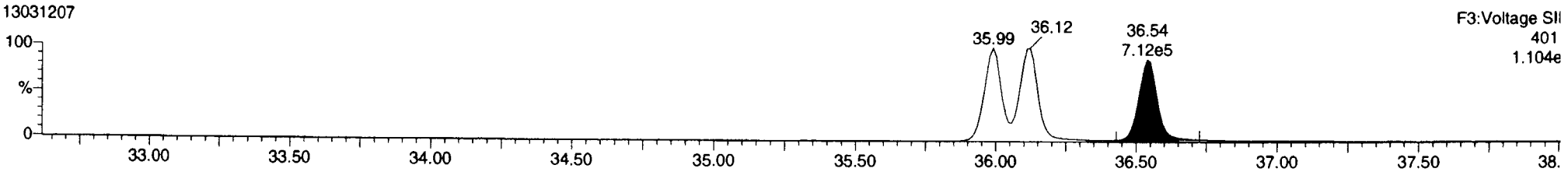

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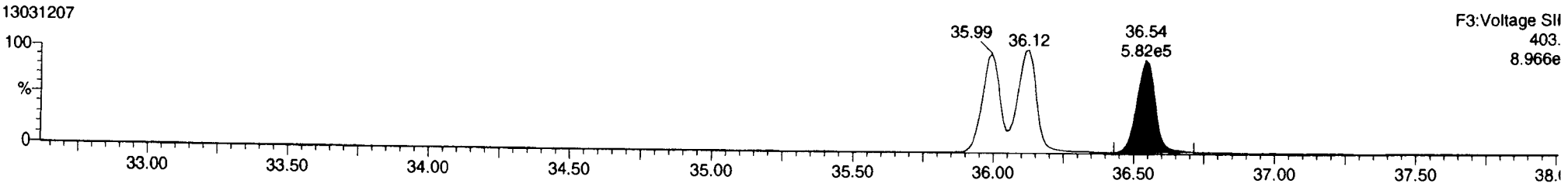

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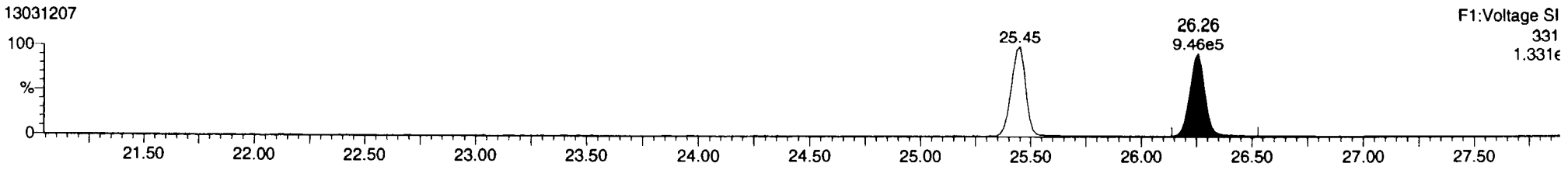
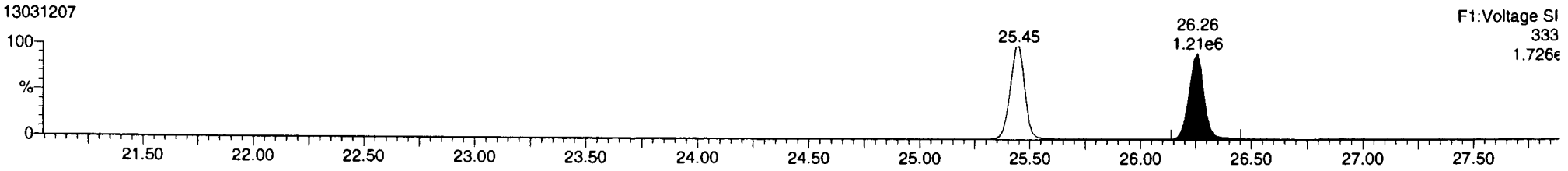
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

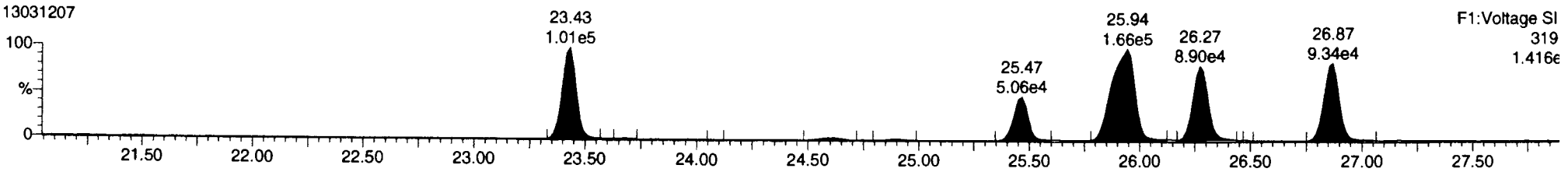
13C-2378-TCDD



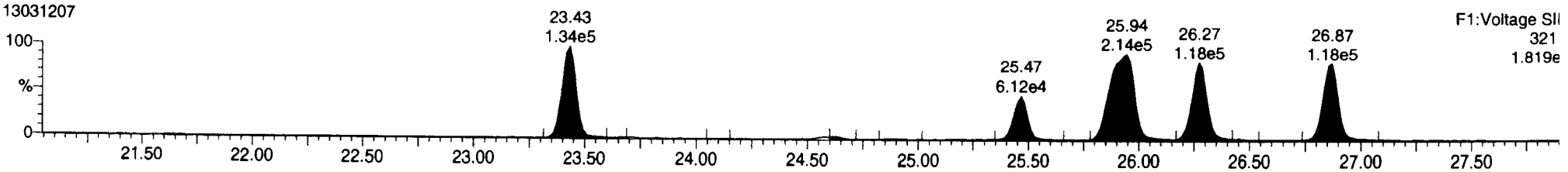
13C-2378-TCDD



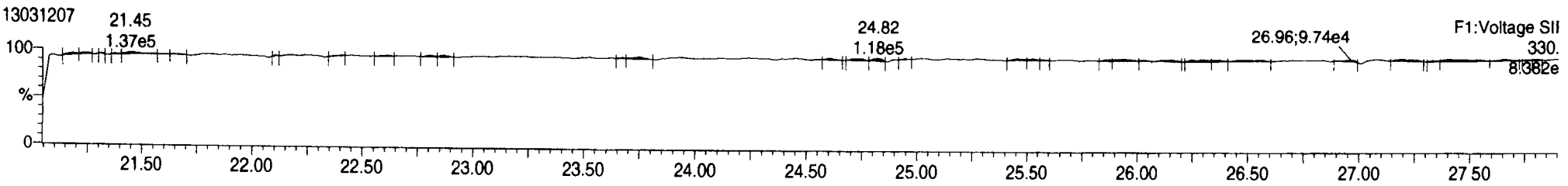
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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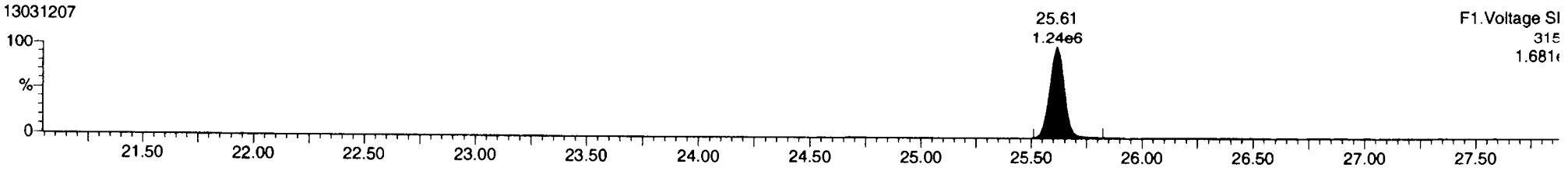
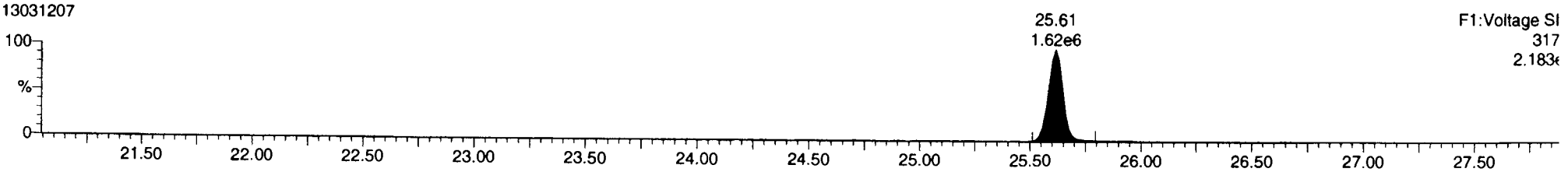
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

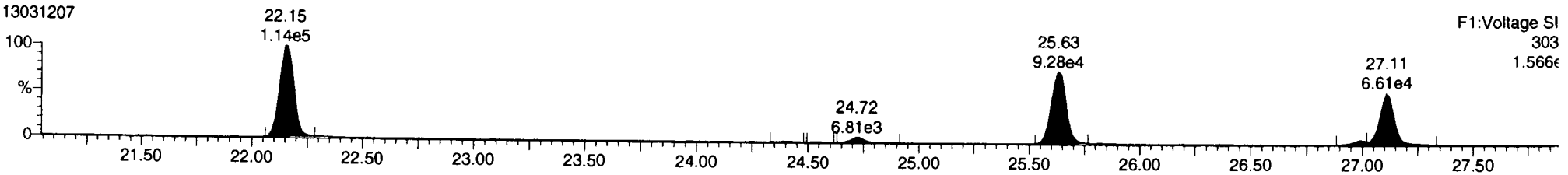
13C-2378-TCDF



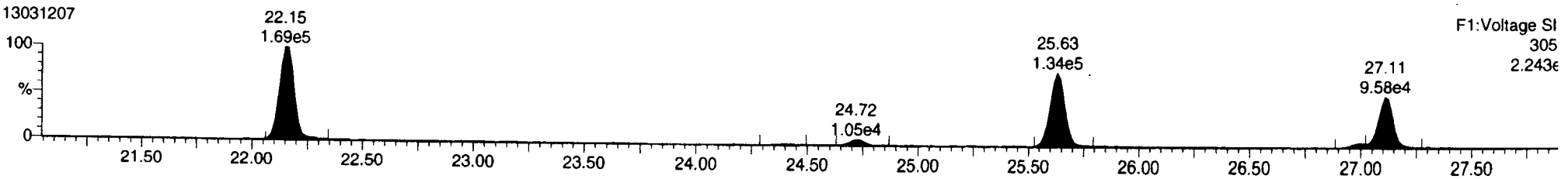
13C-2378-TCDF



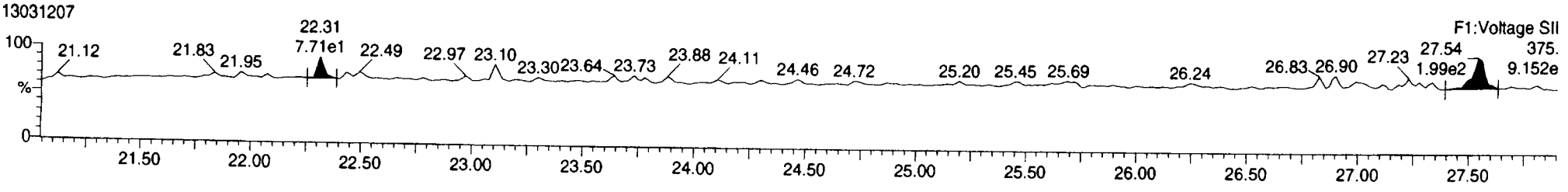
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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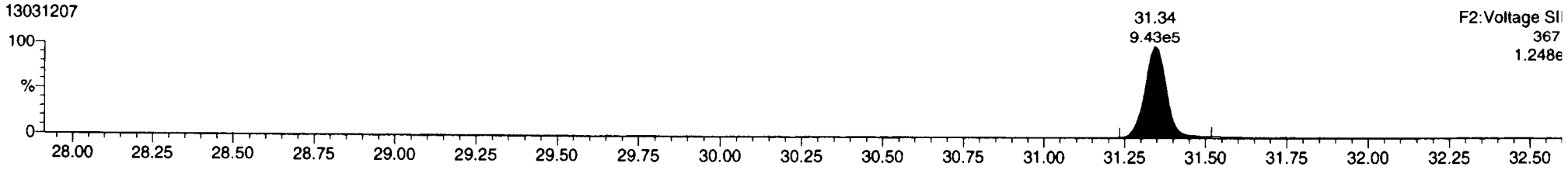
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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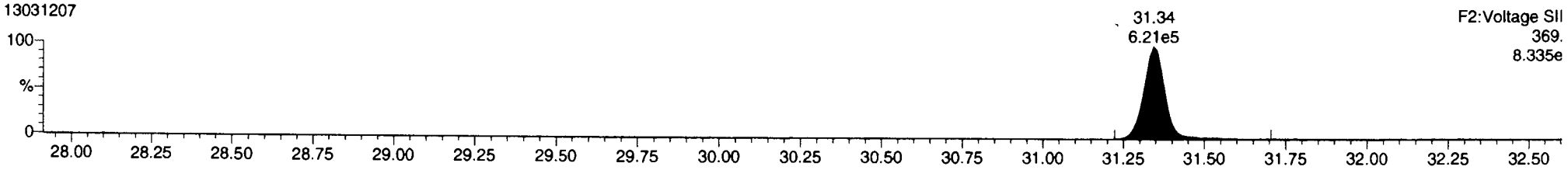
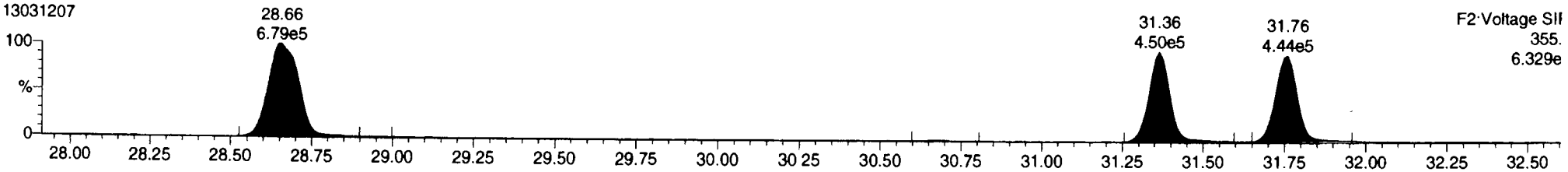
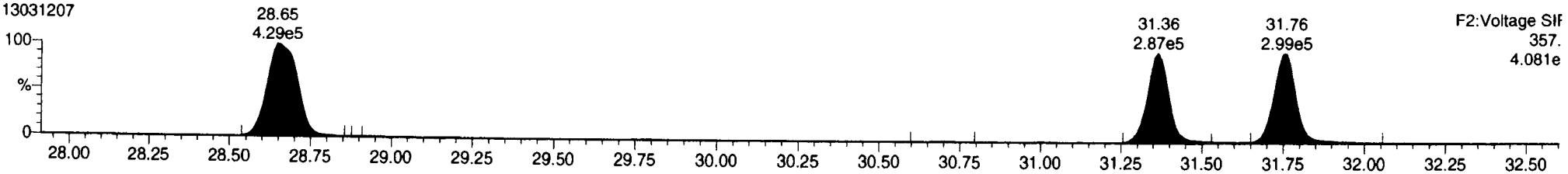


Total-pentadioxins



Total-pentadioxins



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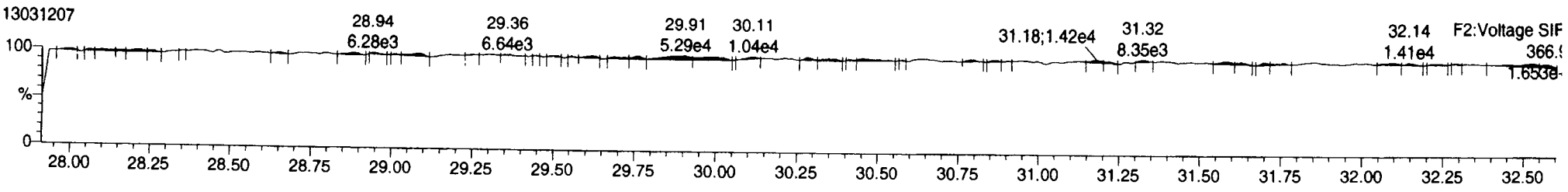

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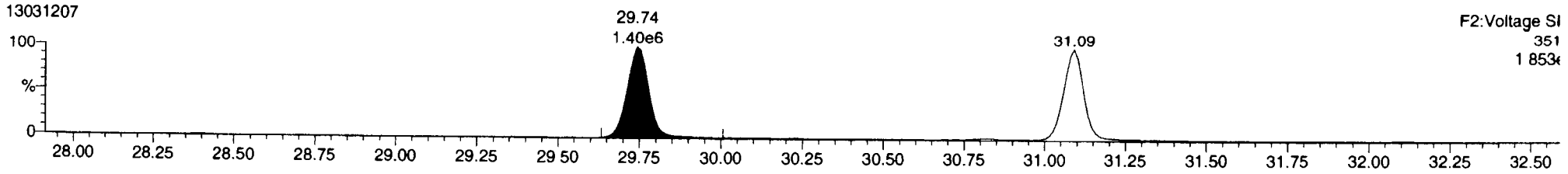
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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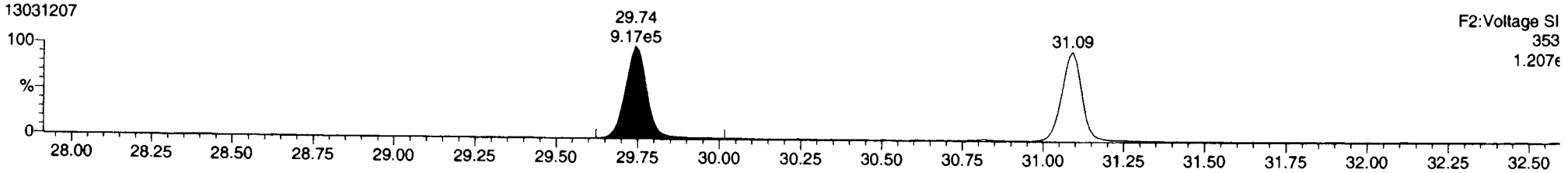
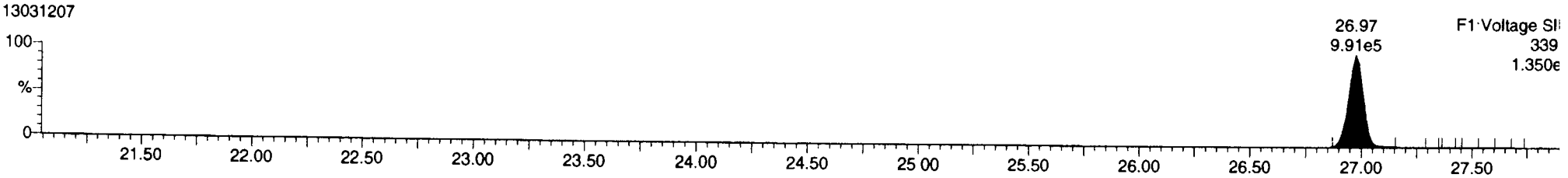
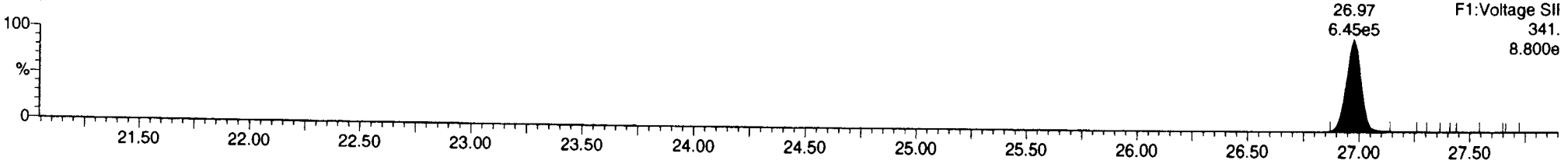


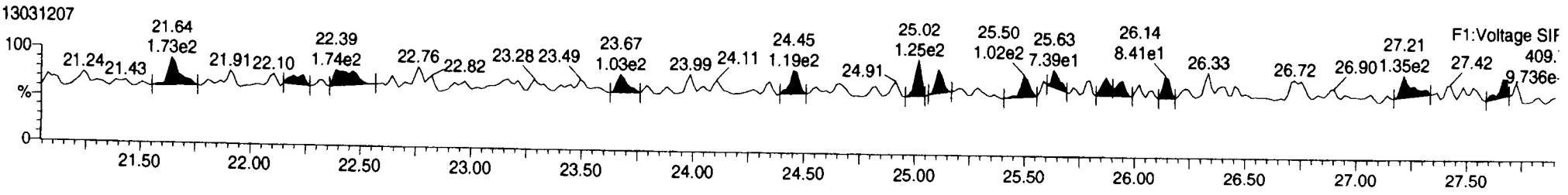
Total-penta1



Total-penta1



FUNCTION1 HPCDPE

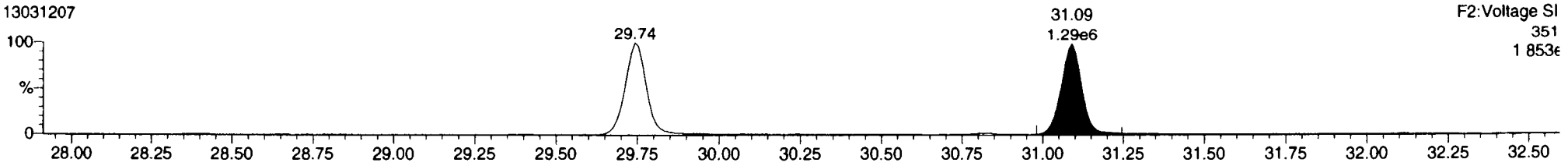


CS3.D : TEXT

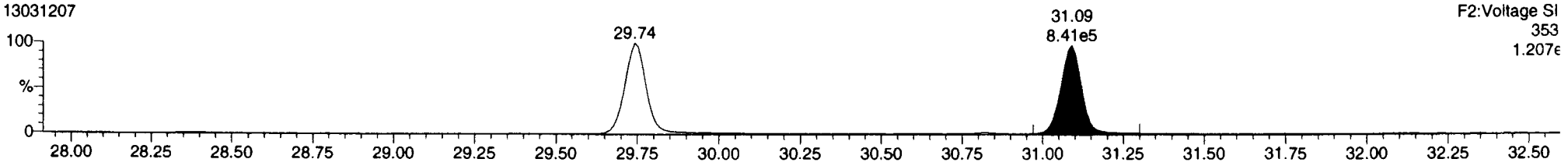
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

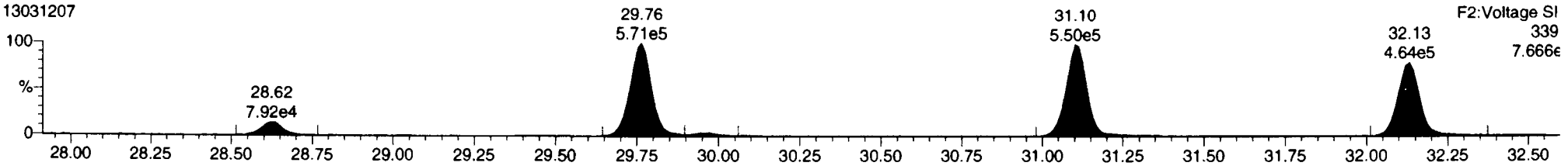
13C-23478-PeCDF



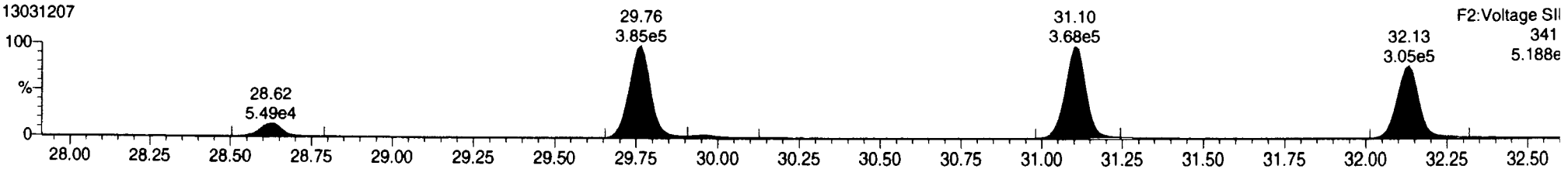
13C-23478-PeCDF



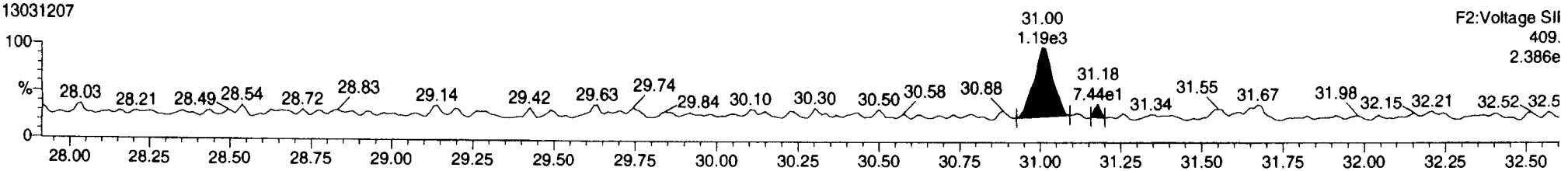
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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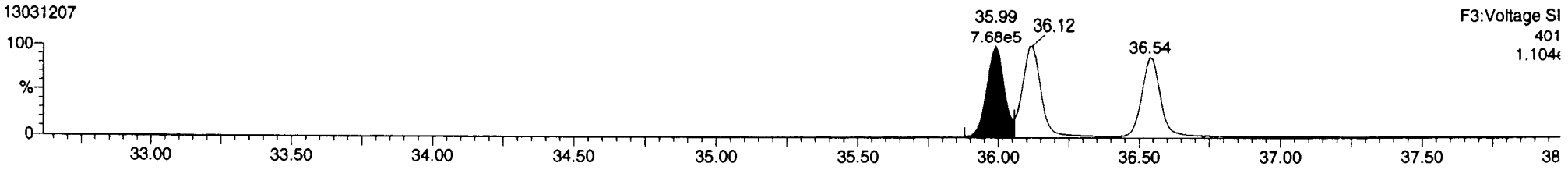
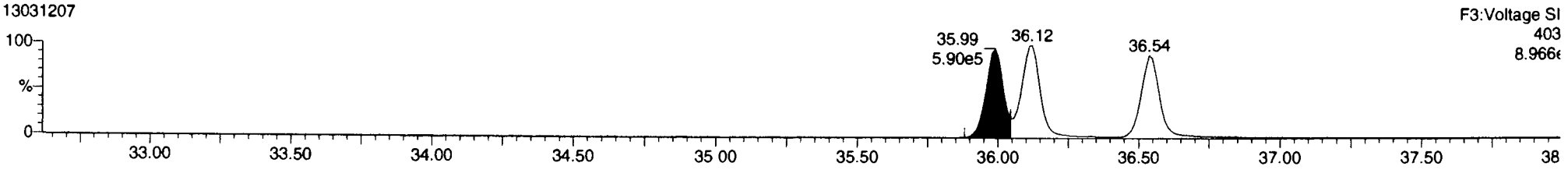
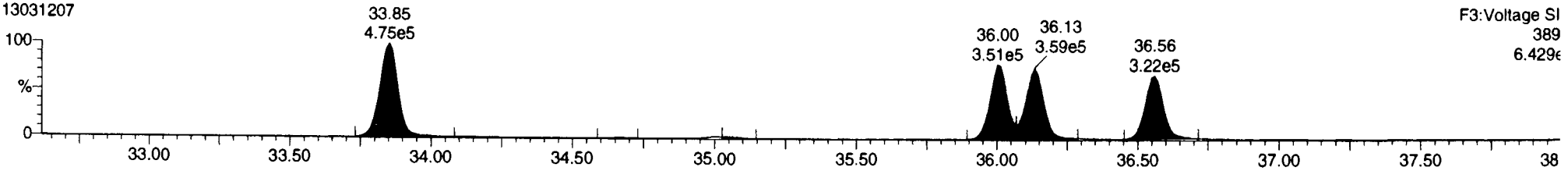
13C-123478-HxCDD



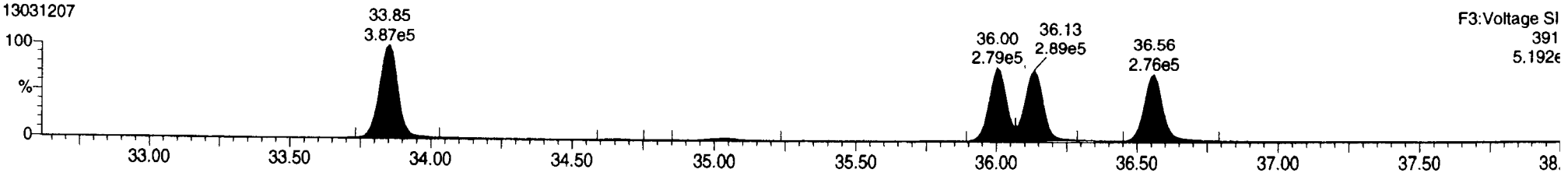
13C-123478-HxCDD



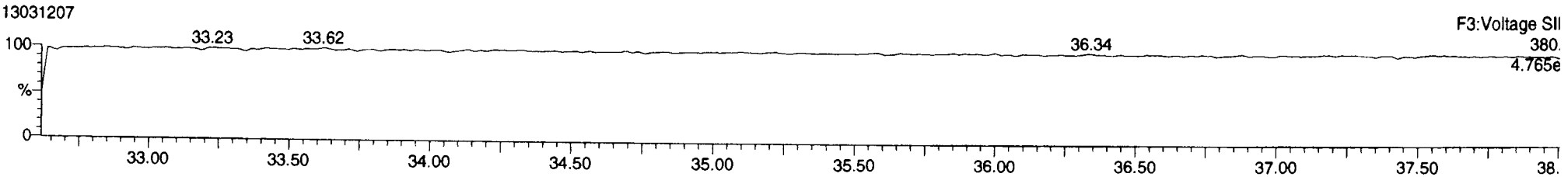
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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13C-234678-HxCDF
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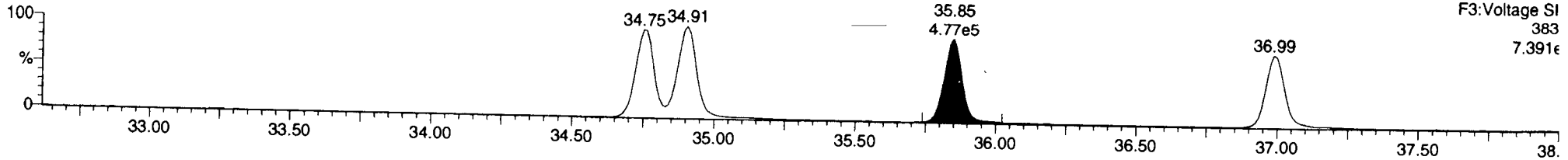

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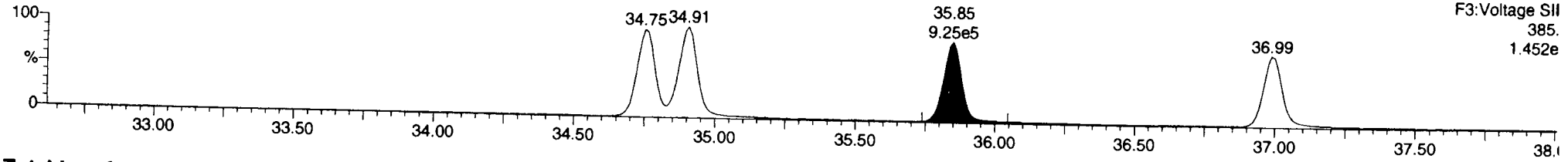
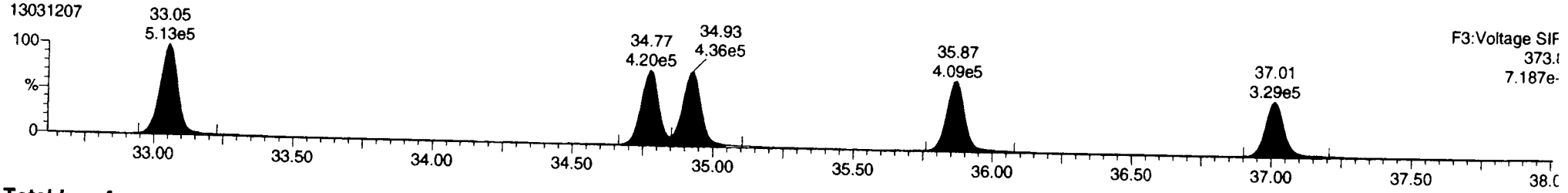


Total-hexafurans
13031207



Total-hexafurans
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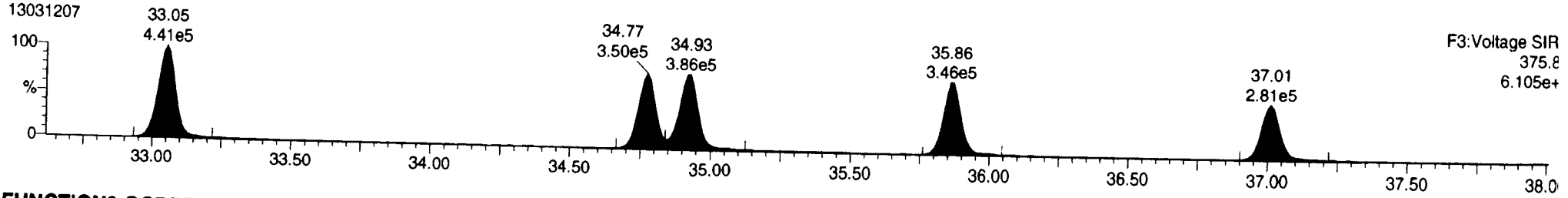
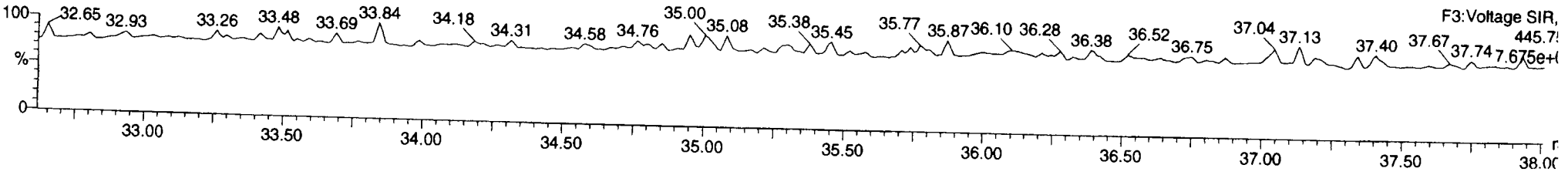


FUNCTION3 OCDPE
13031207



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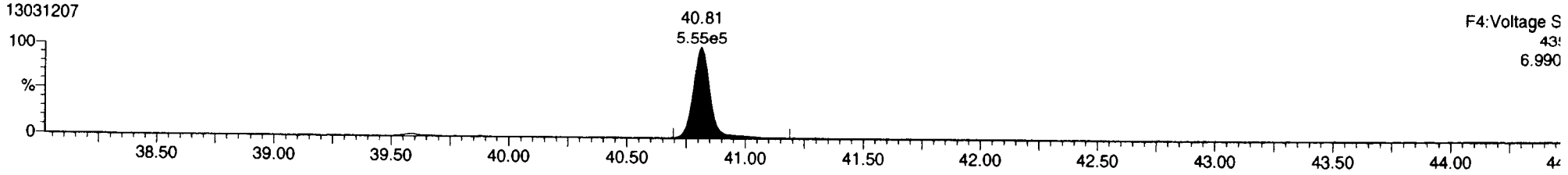
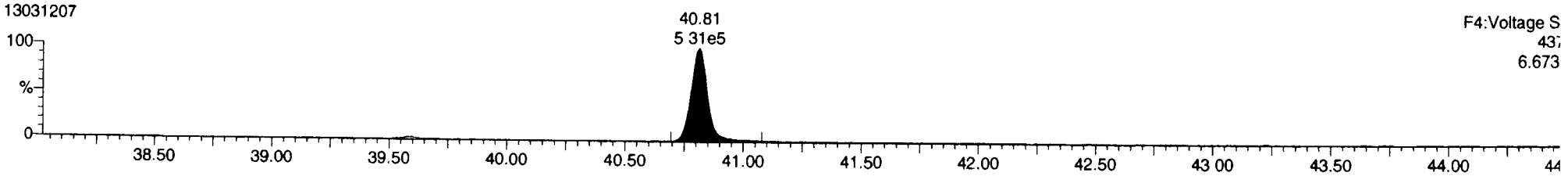
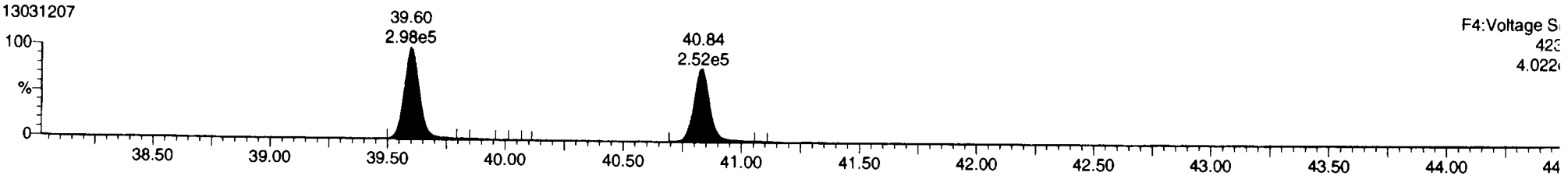
13C-1234678-HpCDD



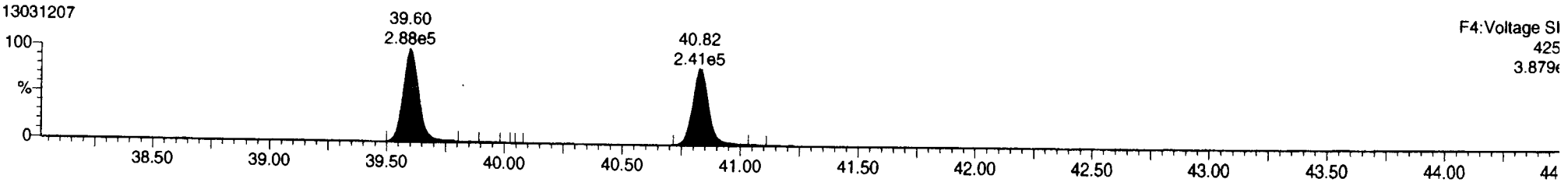
13C-1234678-HpCDD



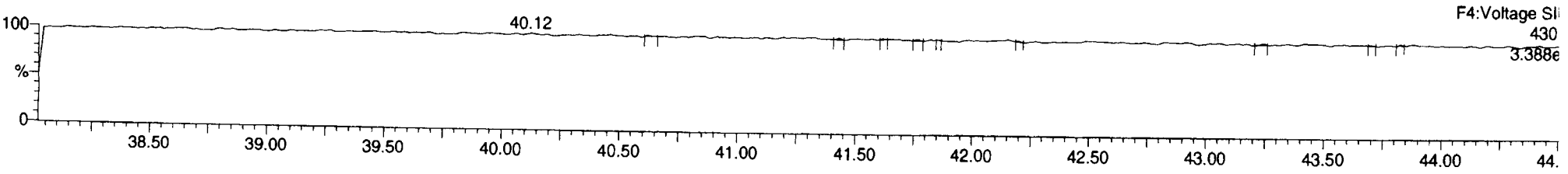
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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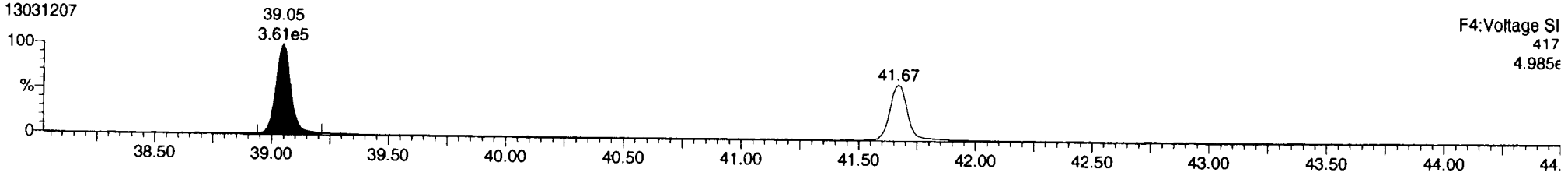
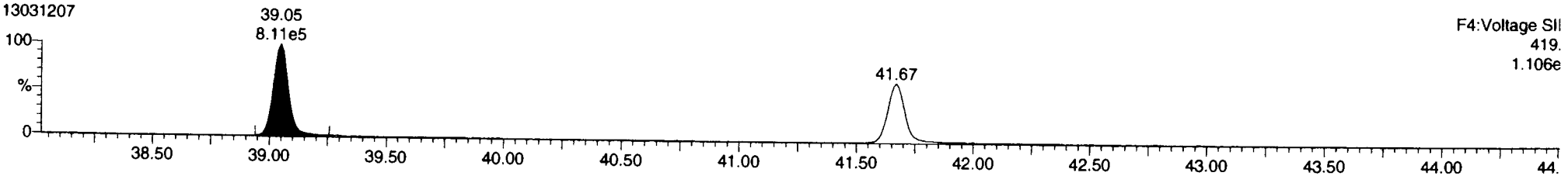
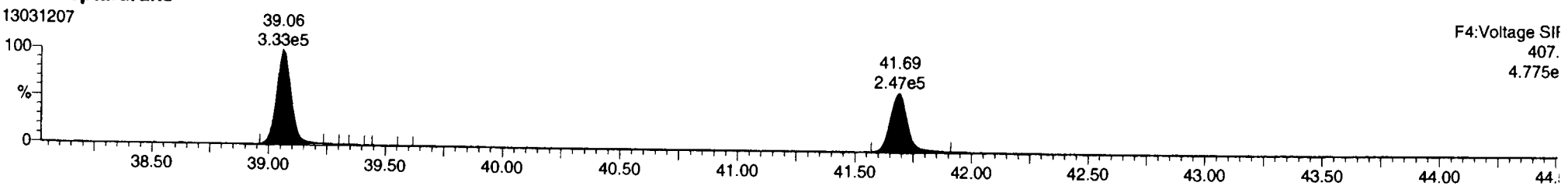
13C-1234678-HpCDF



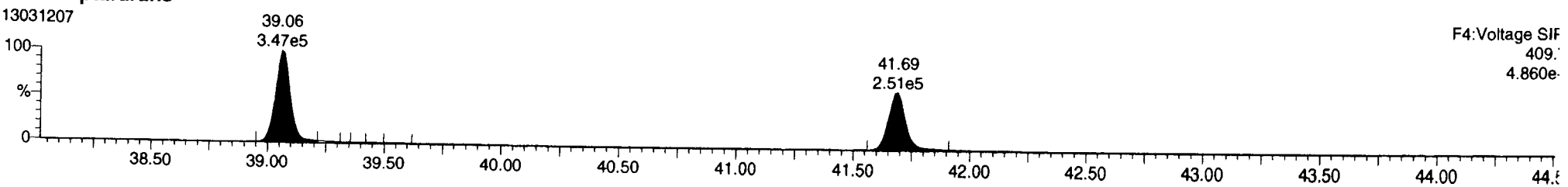
13C-1234678-HpCDF



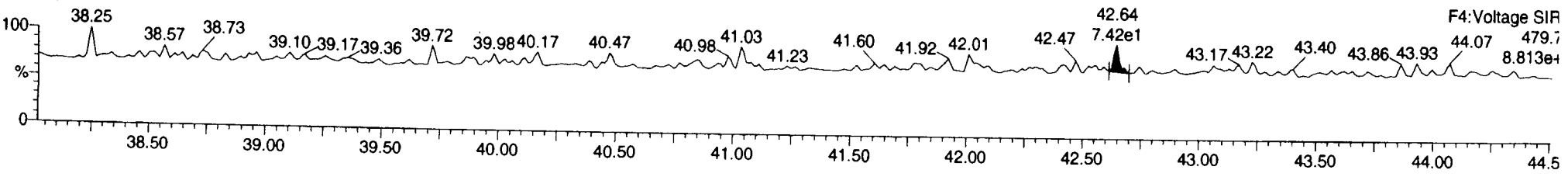
Total-heptafurans



Total-heptafurans



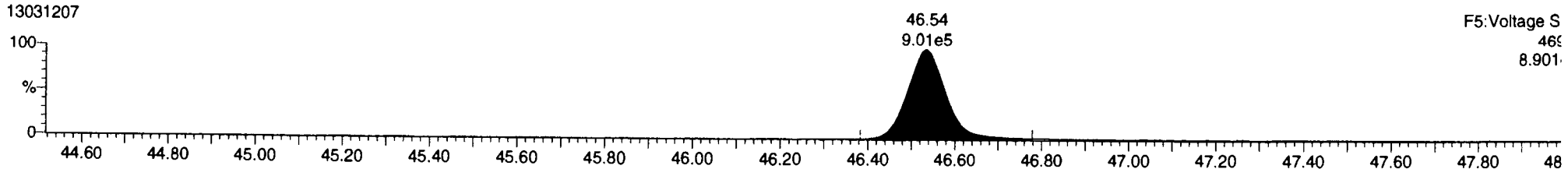
FUNCTION4 NCDPE



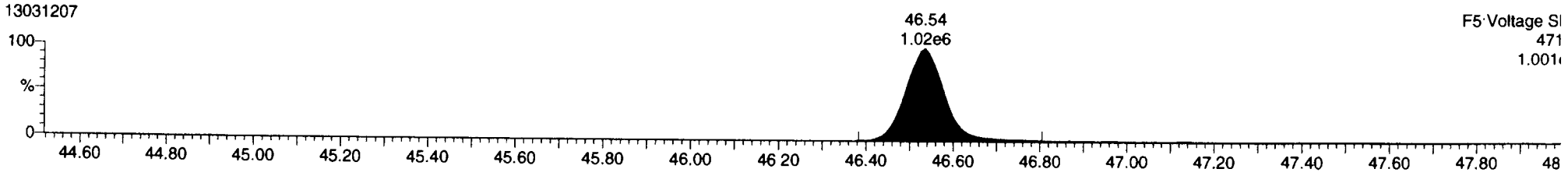
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

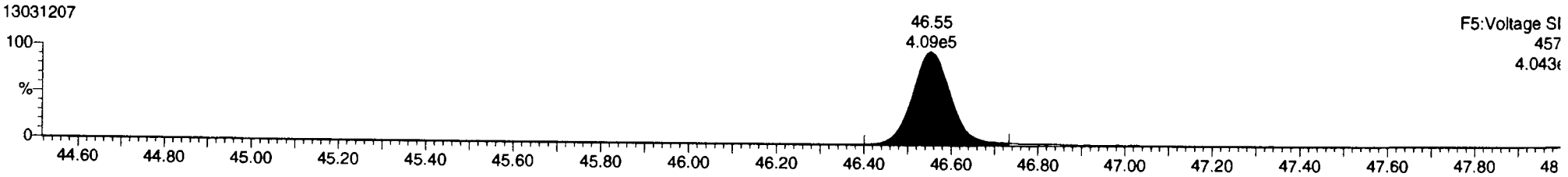
13C-OCDD



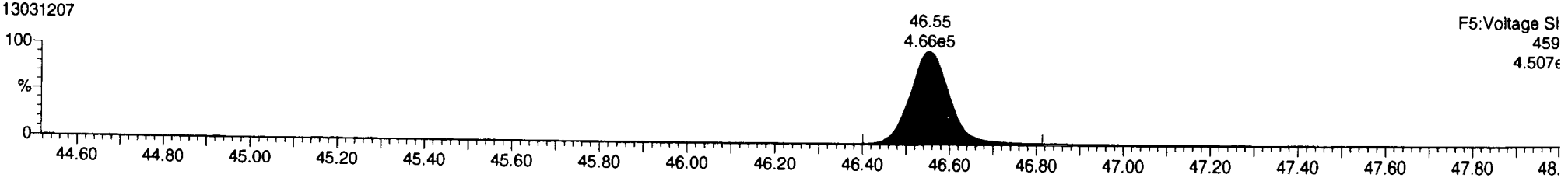
13C-OCDD



OCDD



OCDD



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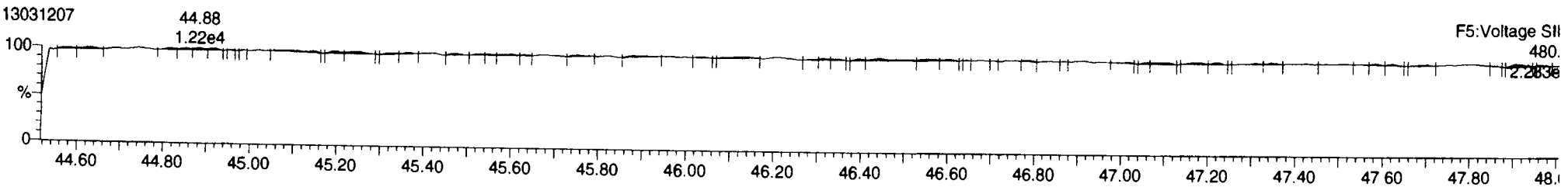

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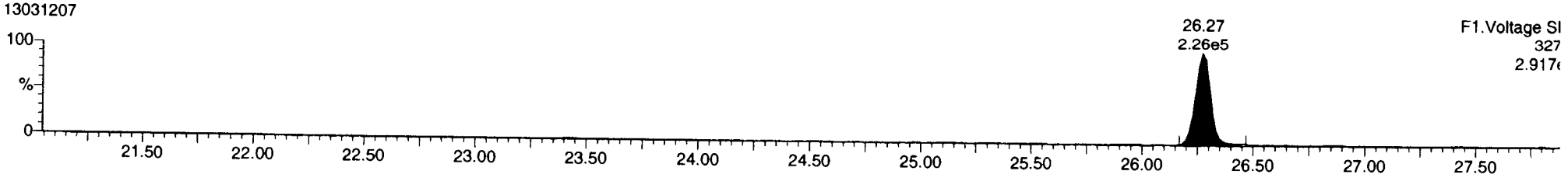
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

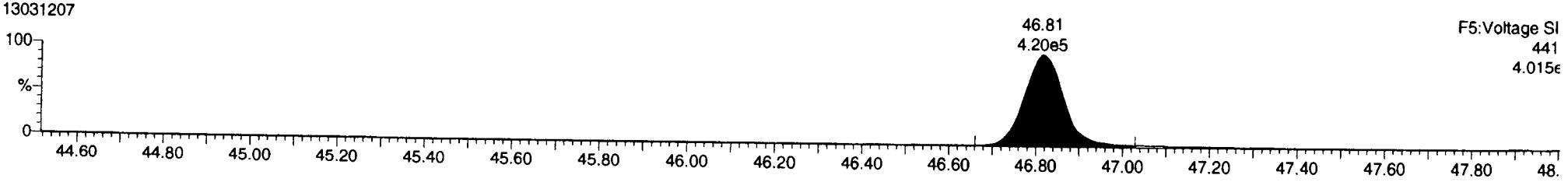
37CL-2378-TCDD

13031207



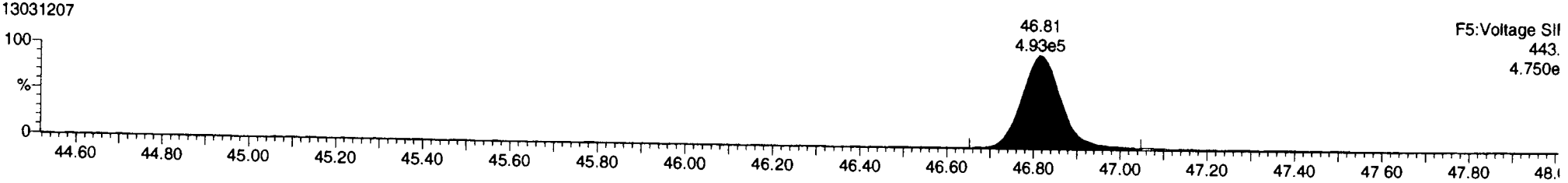
OCDF

13031207



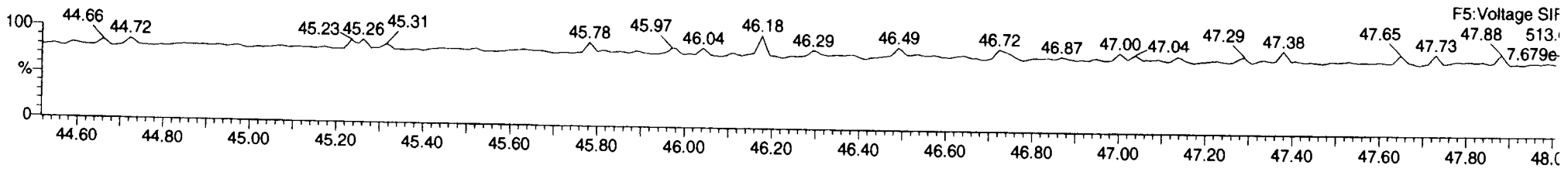
OCDF

13031207



FUNCTION5 DCDPE

13031207



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:00 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

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[redacted]	12378-PeCDF	29.753	1.000	4.08e6	2.77e6	0.836	1.471	1.550	5541.2	NO	203.619	203.619
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[redacted]	123478-HxCDF	34.763	1.000	3.27e6	2.79e6	1.017	1.169	1.240	3912.9	NO	203.402	203.402
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[redacted]	123789-HxCDF	36.999	1.000	2.66e6	2.32e6	0.929	1.149	1.240	3081.8	NO	210.254	210.254
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[redacted]	OCDD	46.553	1.001	3.44e6	3.99e6	0.969	0.862	0.890	6725.0	NO	395.487	395.487
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[redacted]	13C-12378-PeCDD	31.332	1.232	1.69e6	1.10e6	0.703	1.532	1.550	7274.1	NO		100.000
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Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:00 Pacific Daylight Time

ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

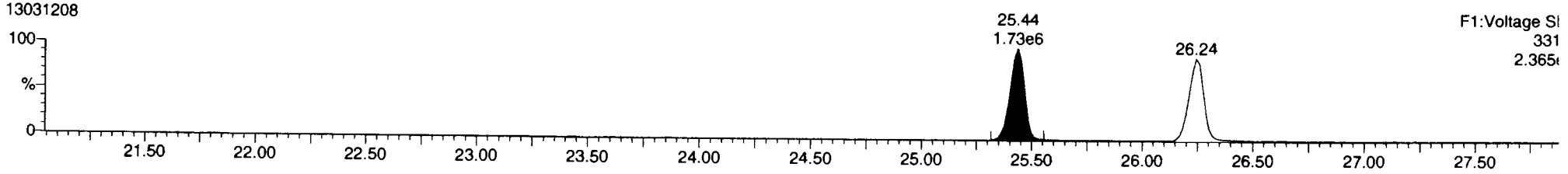
	13C-123789-HxCDD	36.538	0.000	1.43e6	1.15e6	1.000	1.242	1.240	4823.6	NO	100.000
	Total-tetrafurans			6.91e5		0.763					41.295
	Total-penta1			0.00e0							
	Total-pentafurans			8.31e6		0.844					418.095
	Total-hexafurans			1.27e7		0.997					811.647
	Total-heptafurans			4.79e6		1.150					413.439
	Total-Furans			3.00e7		0.970					2108.773
	Total-tetradioxins			6.55e5		0.980					40.476
	Total-pentadioxins			3.25e6		0.948					205.462
	Total-hexadioxins			8.17e6		0.898					599.549
	Total-heptadioxins			2.02e6		0.948					197.240
	Total-Dioxins			1.75e7		0.934					1438.235
	Total-TEQ			4.76e7							3547.008
	37CL-2378-TCDD	26.272	1.033	1.62e6		0.999			2663.1		40.862
	FUNCTION1 PFK			3.31e6							
	FUNCTION2 PFK			2.71e5							0 000
	FUNCTION3 PFK			7.93e5							0.000
	FUNCTION4 PFK			2.98e5							
	FUNCTION5 PFK			4.66e4							
	FUNCTION1 HXCDPE			1.23e2							0.000
	FUNCTION1 HPCDPE			1.14e3							0.000
	FUNCTION2 HPCDPE			8.79e3							0.000
	FUNCTION3 OCDPE			0.00e0							
	FUNCTION4 NCDPE			8.35e1							0.000
	FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:00 Pacific Daylight Time

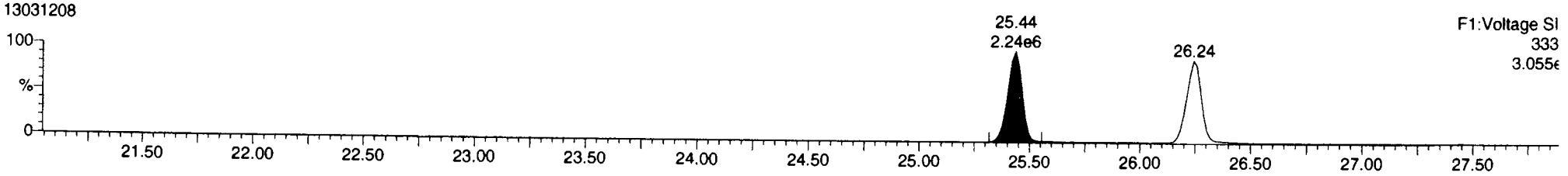
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

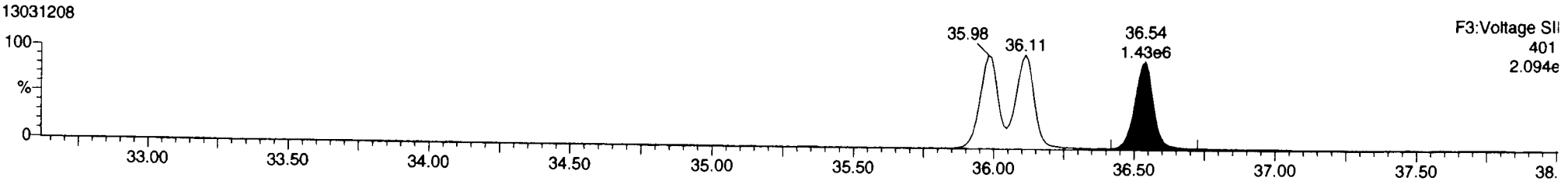
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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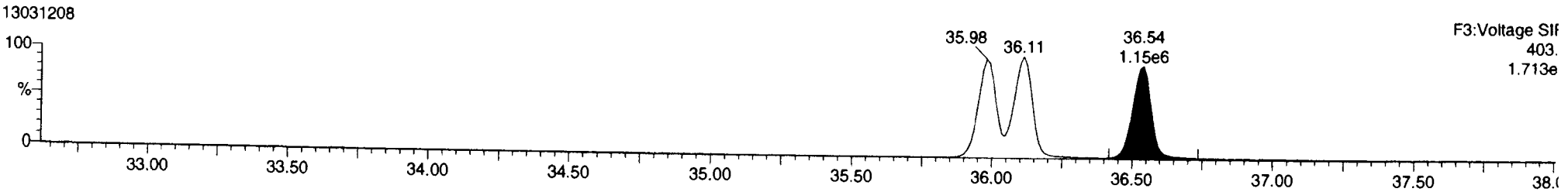

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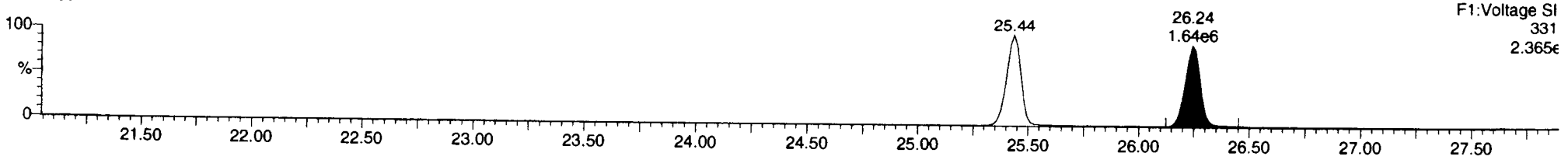
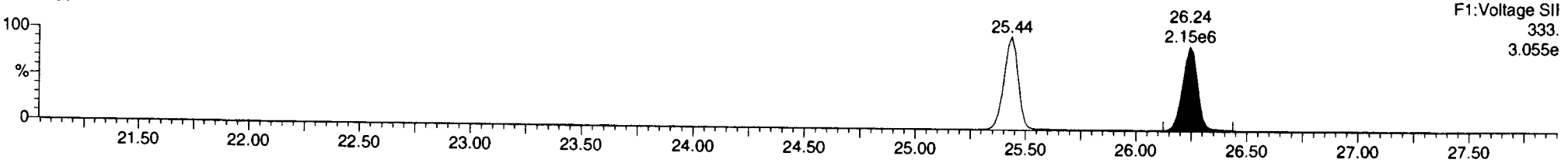
ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

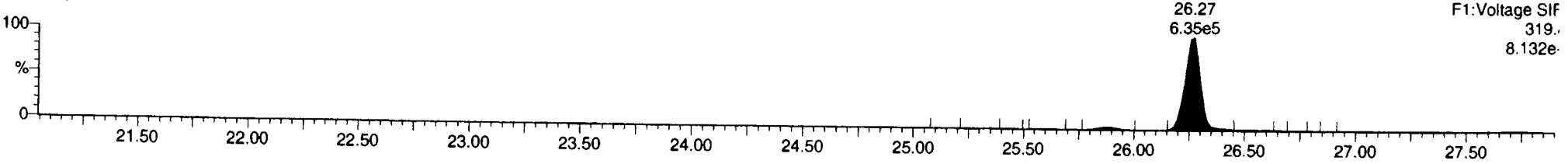
13C-2378-TCDD
13031208



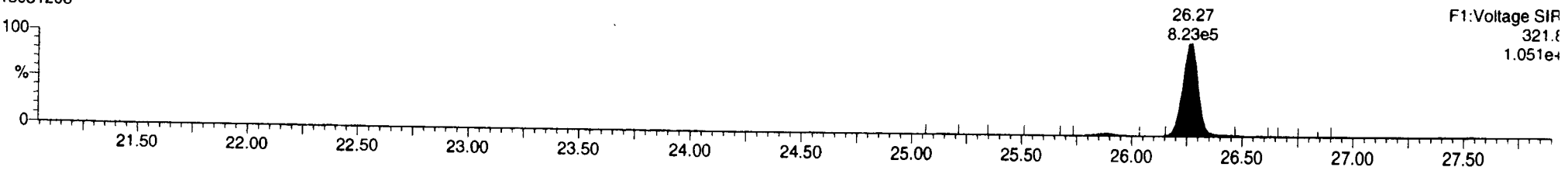
13C-2378-TCDD
13031208



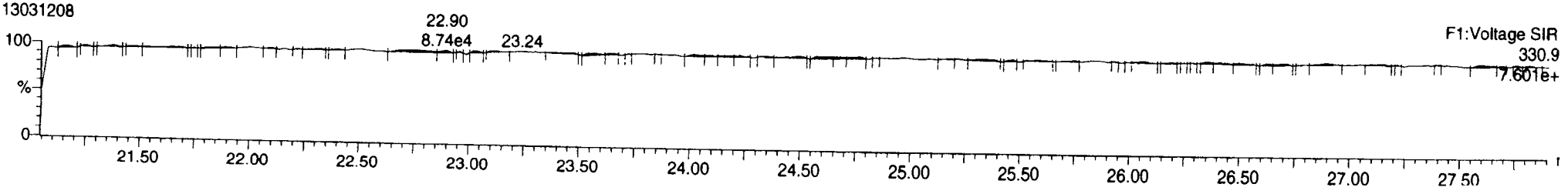
Total-tetradioxins
13031208



Total-tetradioxins
13031208



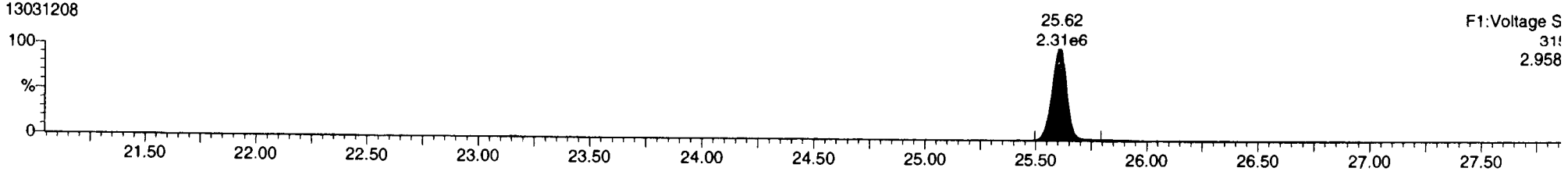
FUNCTION1 PFK
13031208



ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

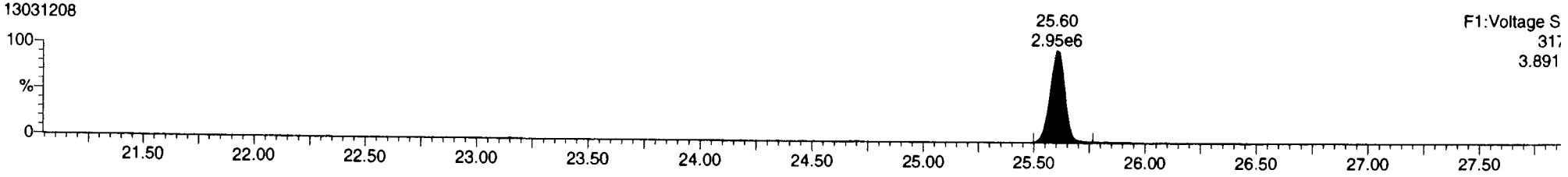
13C-2378-TCDF

13031208



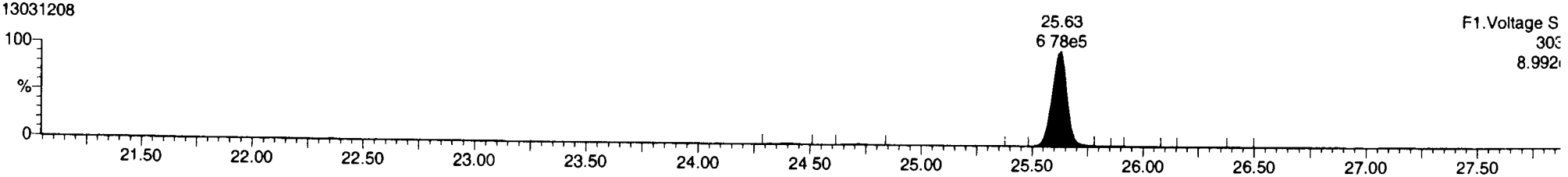
13C-2378-TCDF

13031208



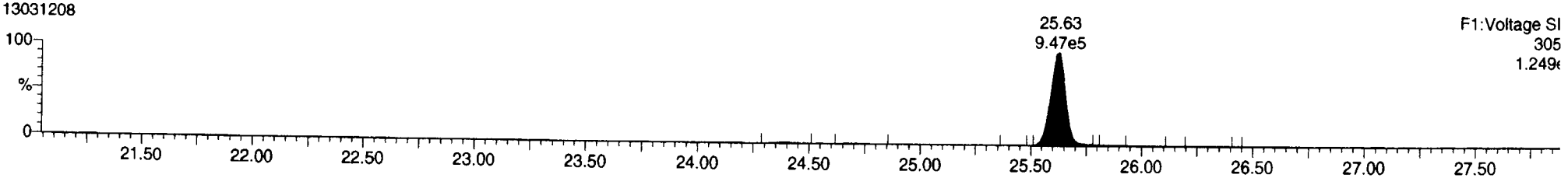
Total-tetrafurans

13031208



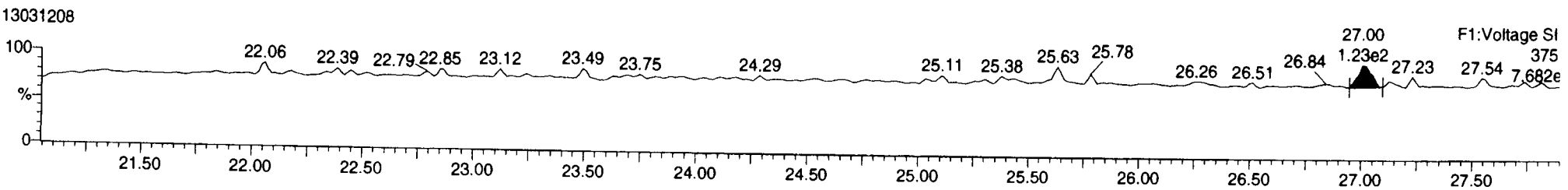
Total-tetrafurans

13031208



FUNCTION1 HXCDPE

13031208

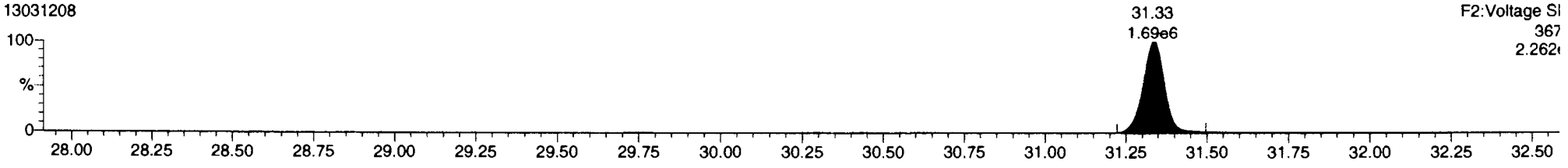


TJ-CS-5 : TCDN1

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:00 Pacific Daylight Time

ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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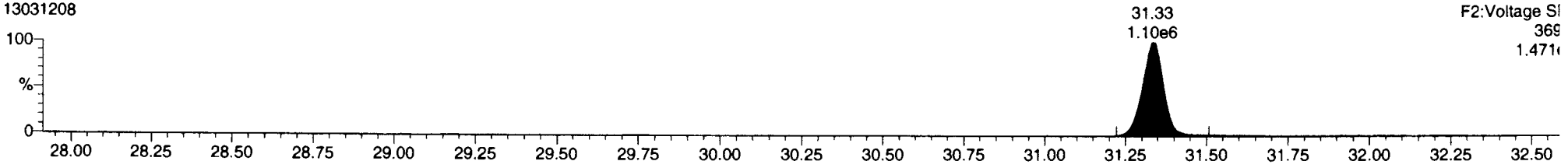
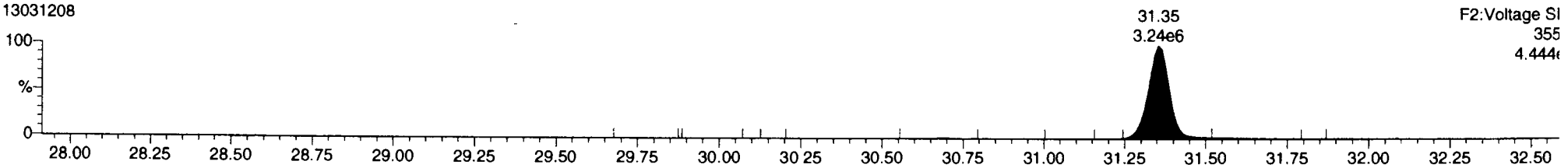
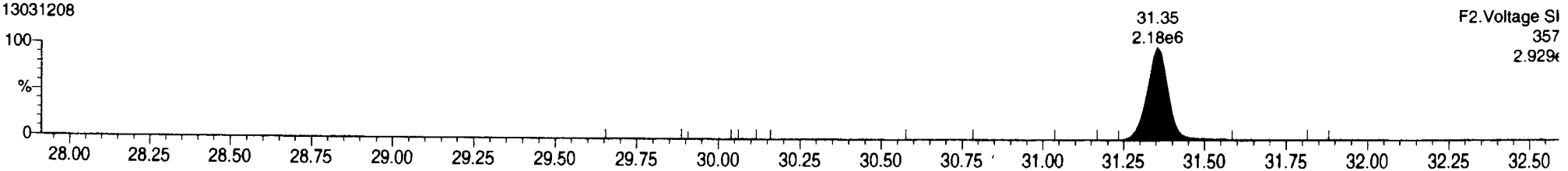


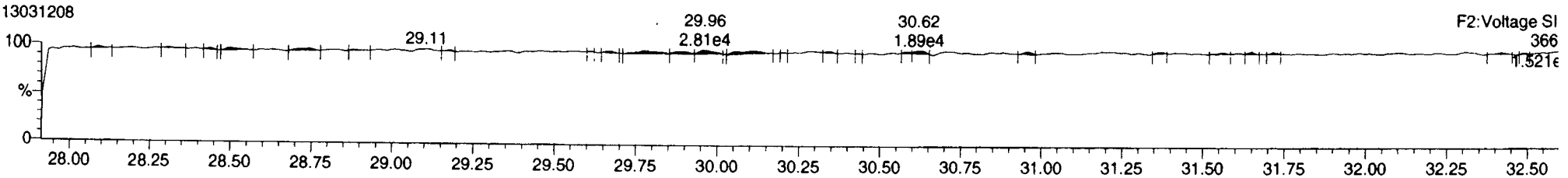
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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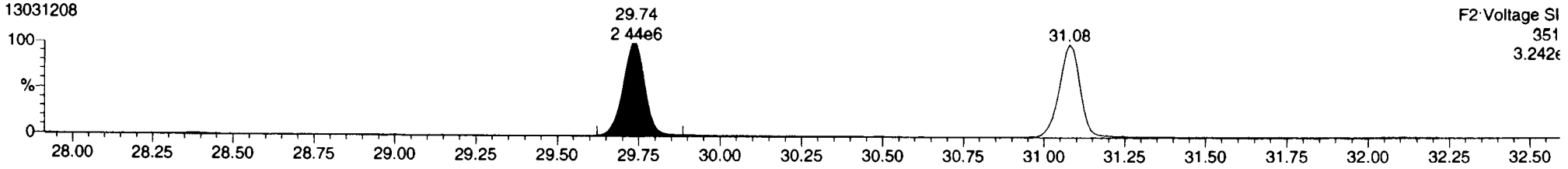
13C-12378-PeCDF



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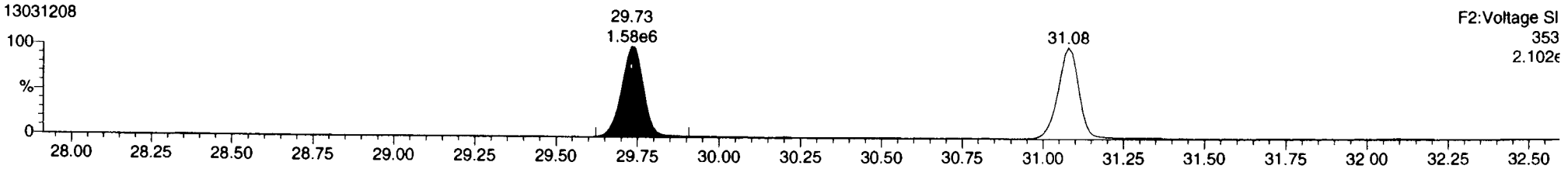

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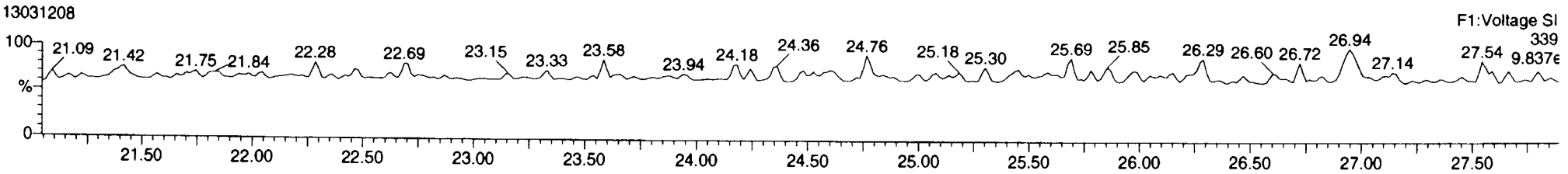

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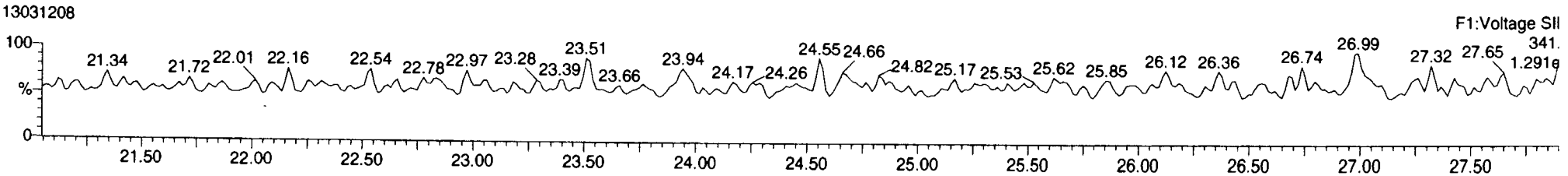

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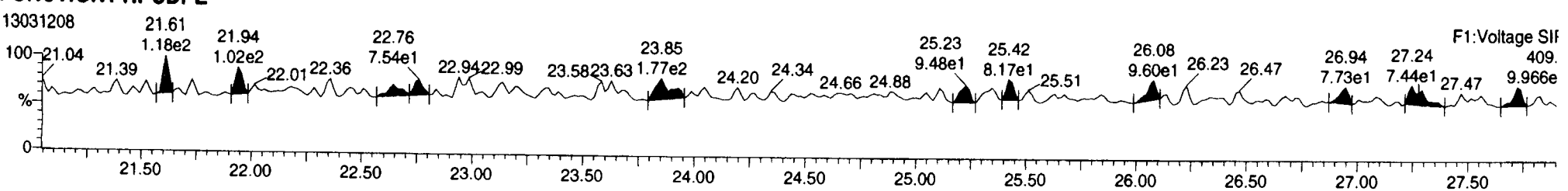

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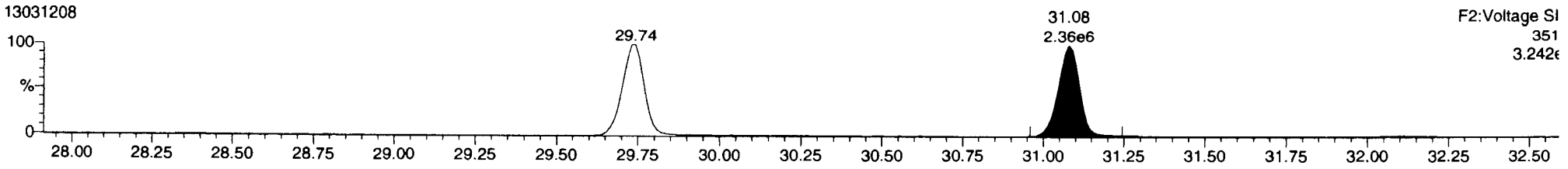
13C-23478-PeCDF



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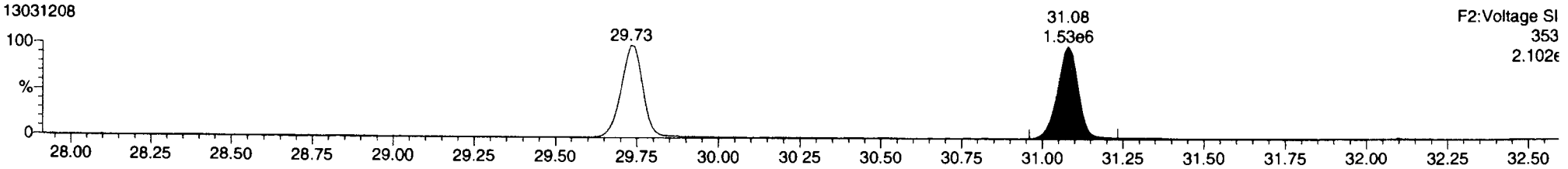

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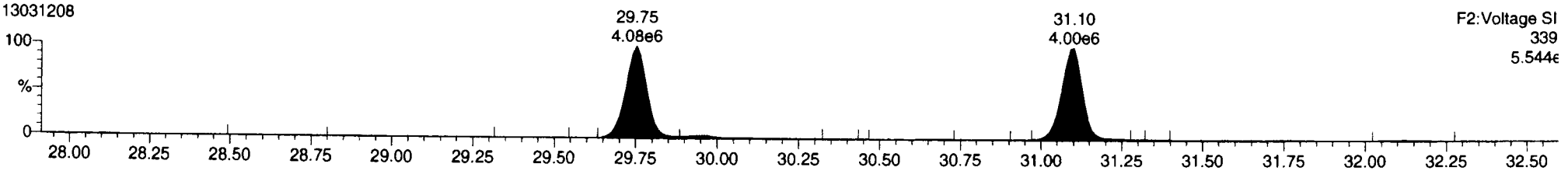

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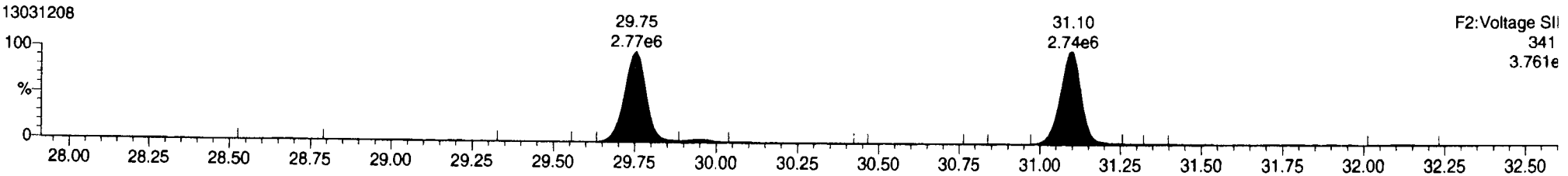

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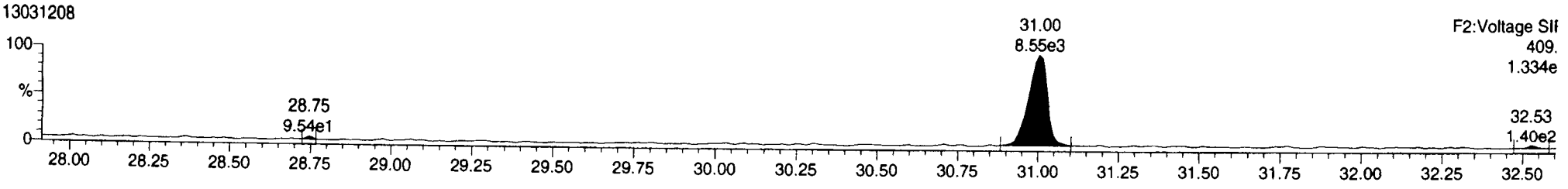

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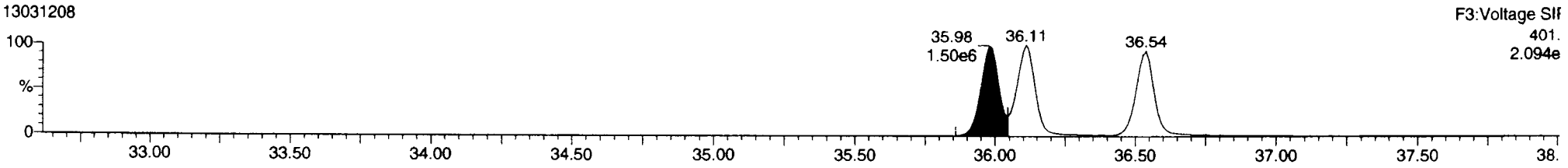
13C-123478-HxCDD



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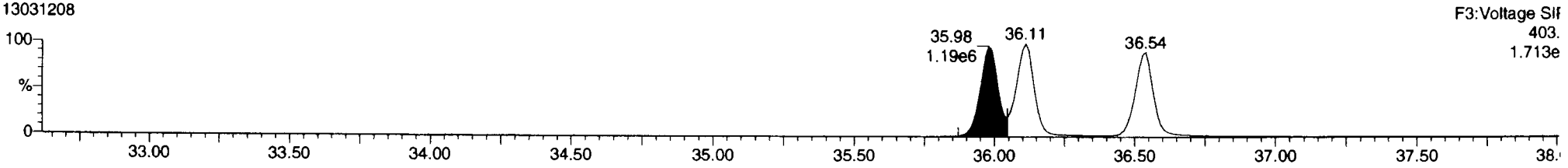

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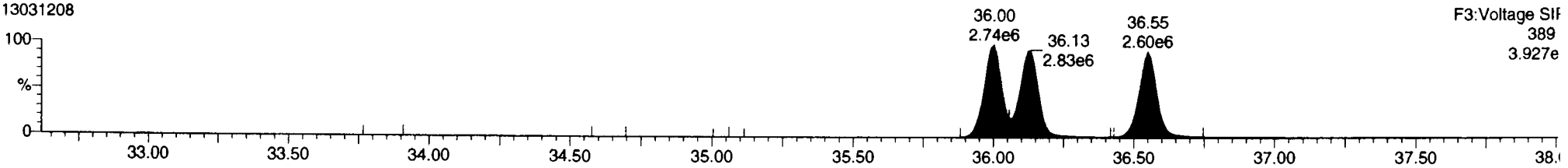
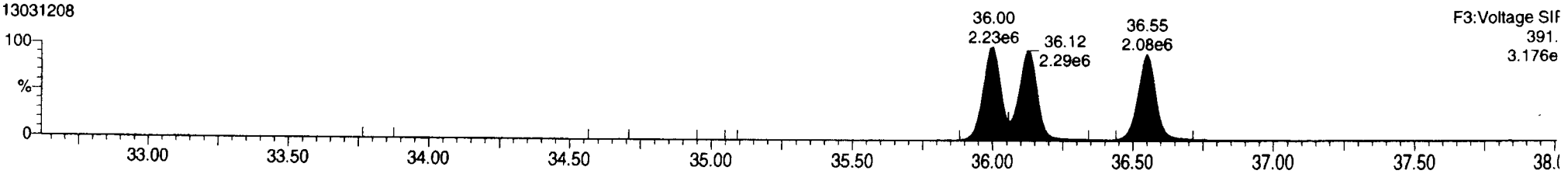


Total-hexadioxins



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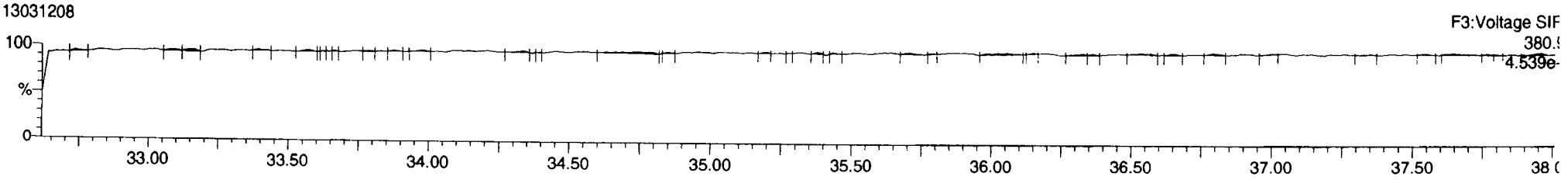

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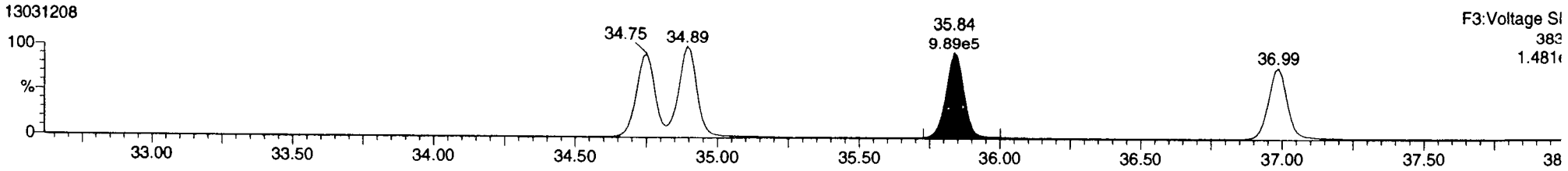
13C-234678-HxCDF



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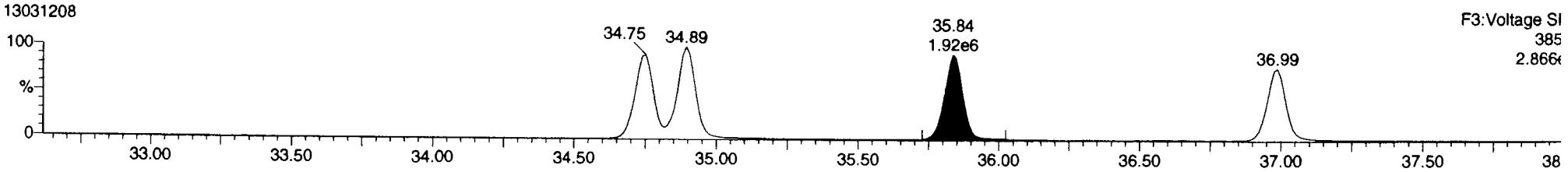
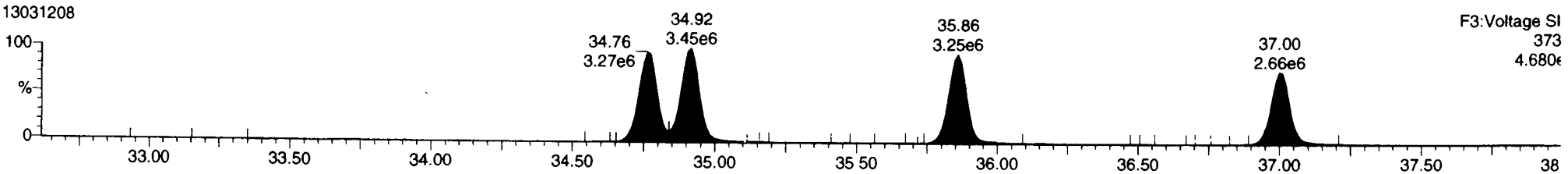


Total-hexafurans



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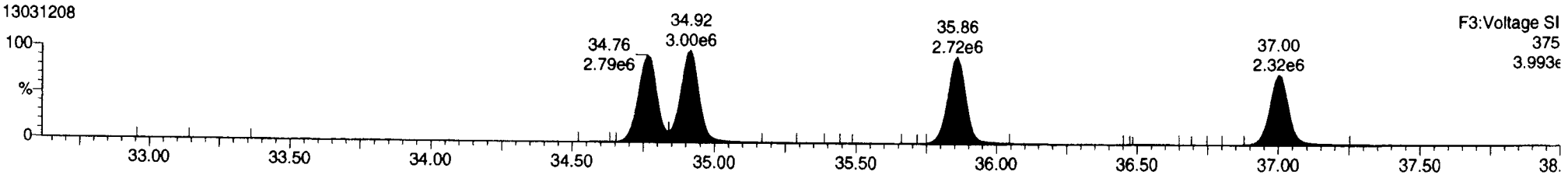

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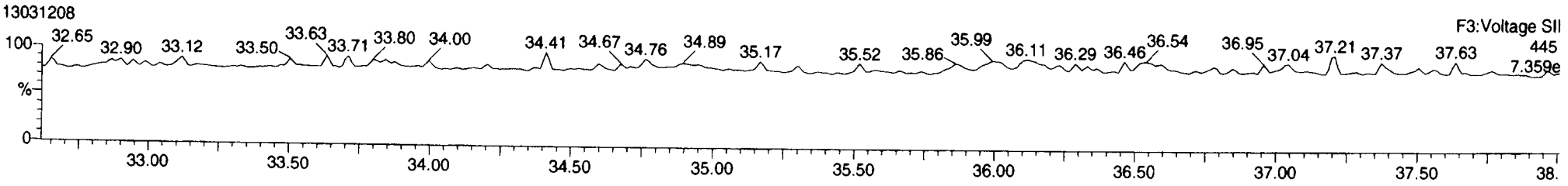

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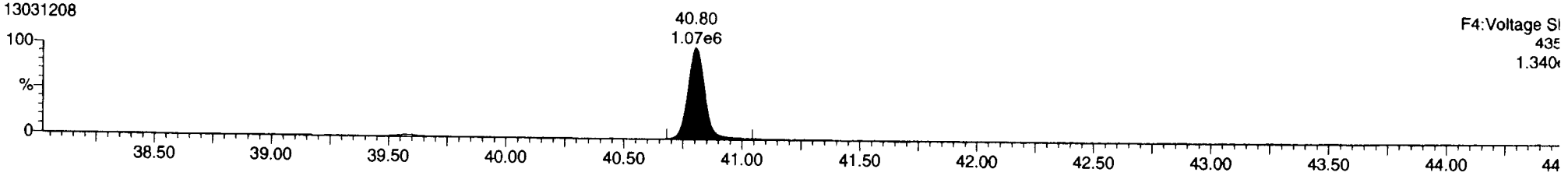
13C-1234678-HpCDD



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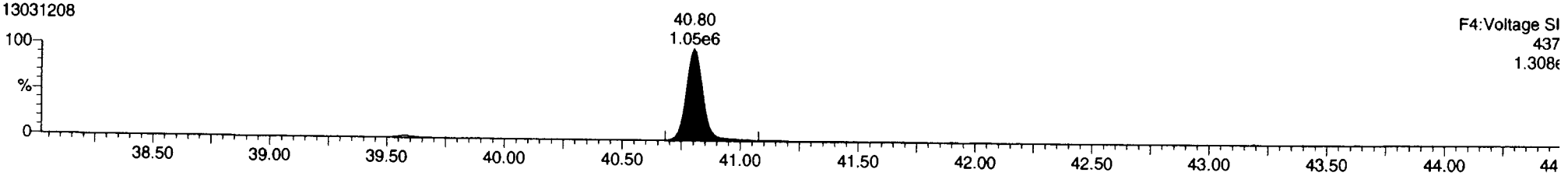

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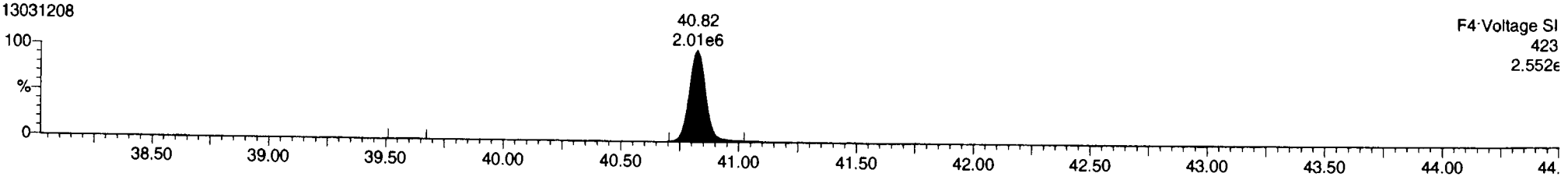

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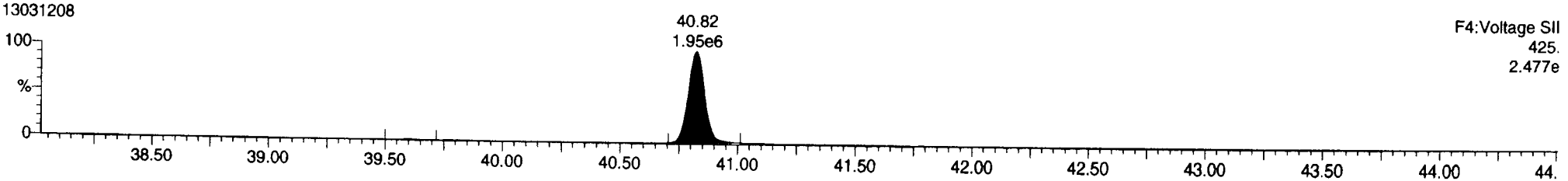
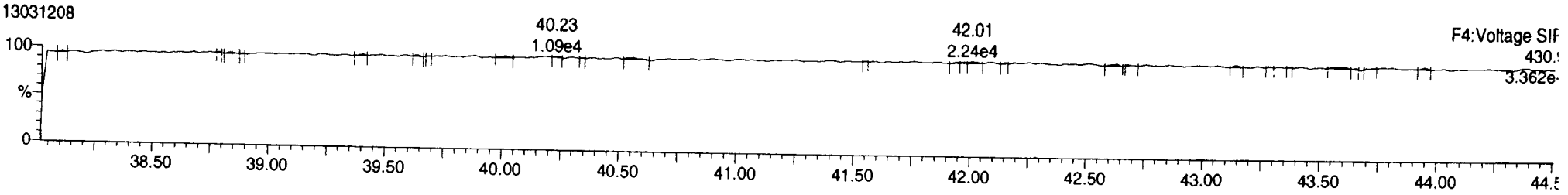


FUNCTION4 PFK



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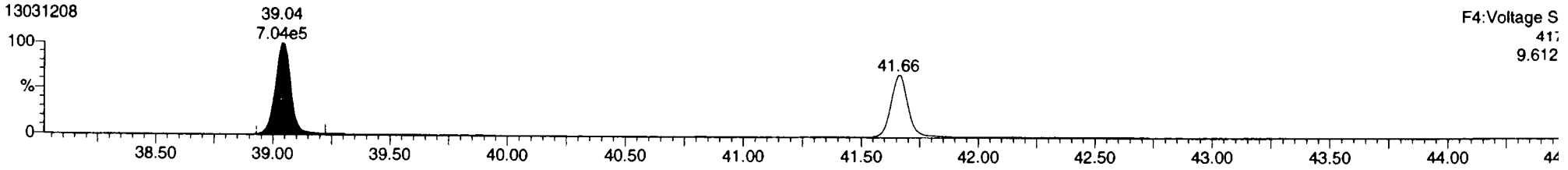

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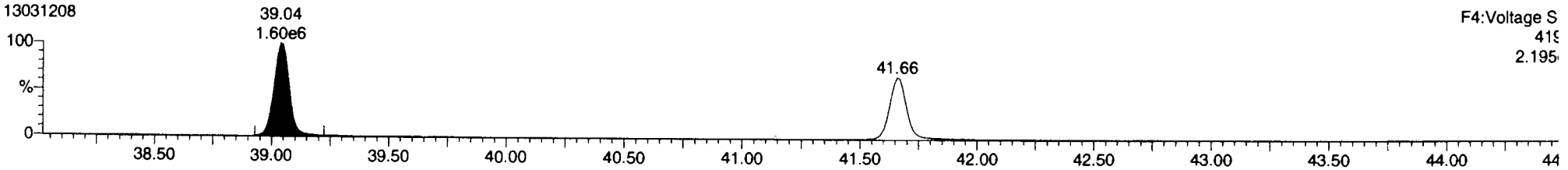

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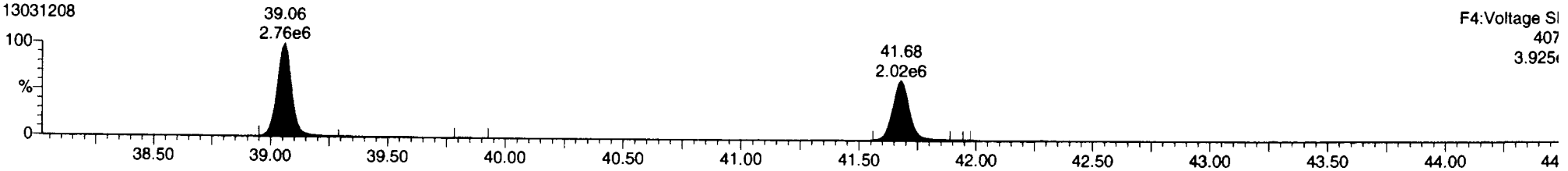

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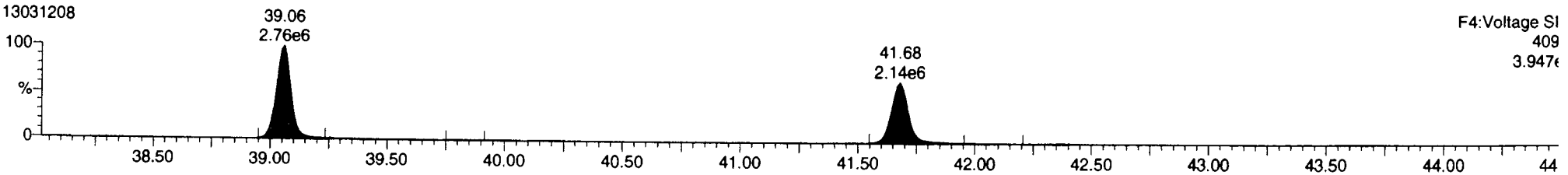

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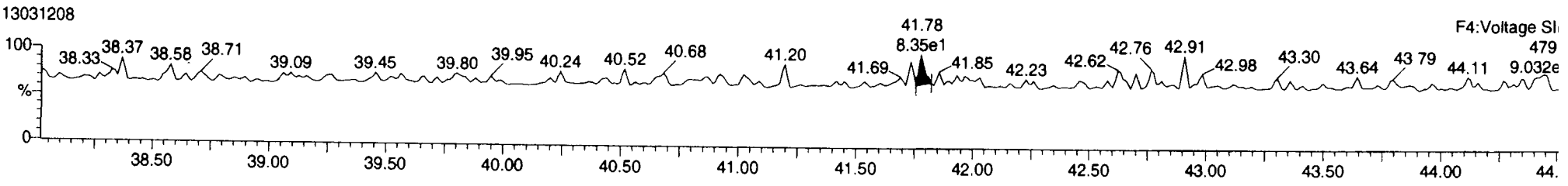

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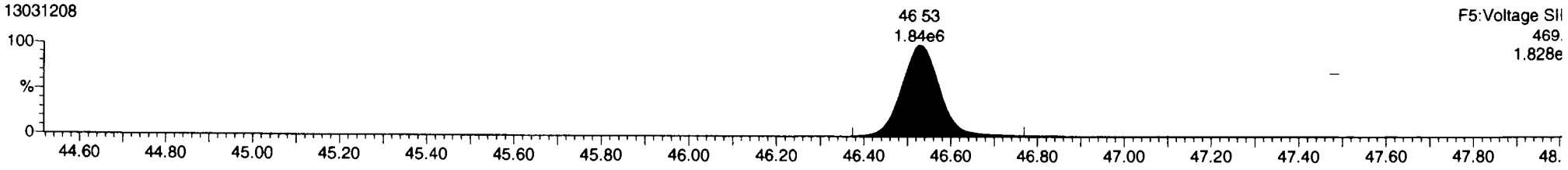
13C-OCDD



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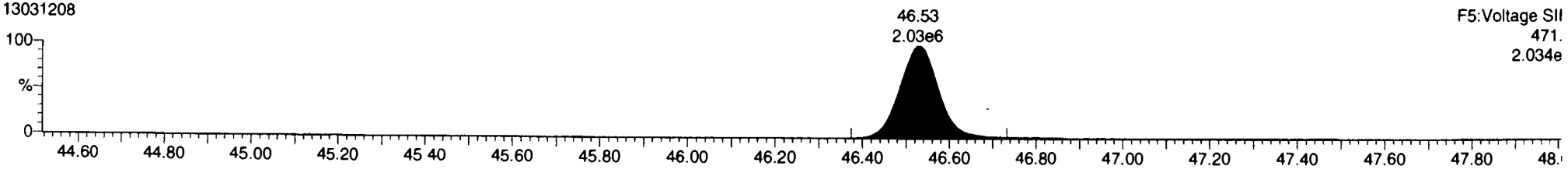

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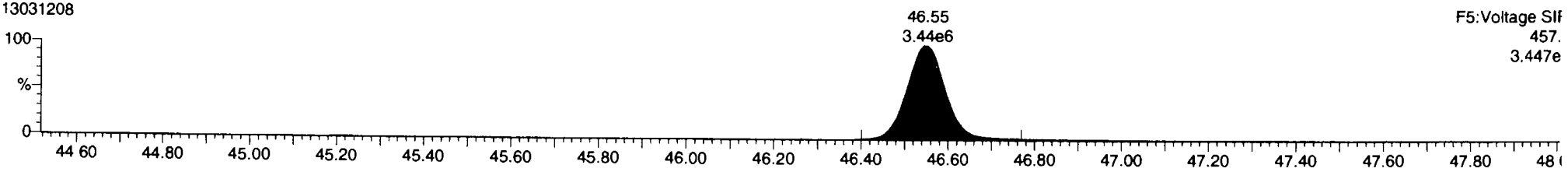

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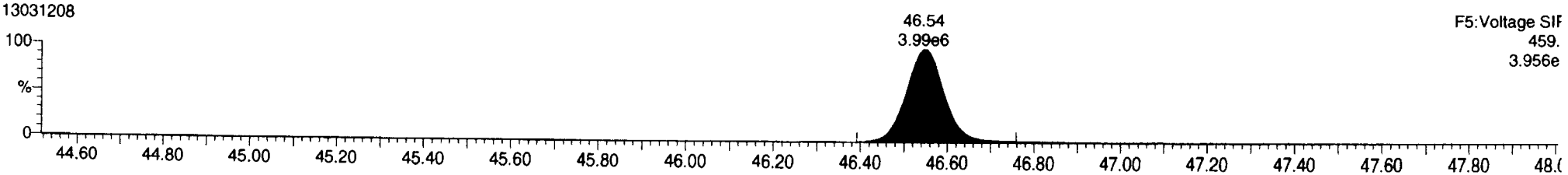
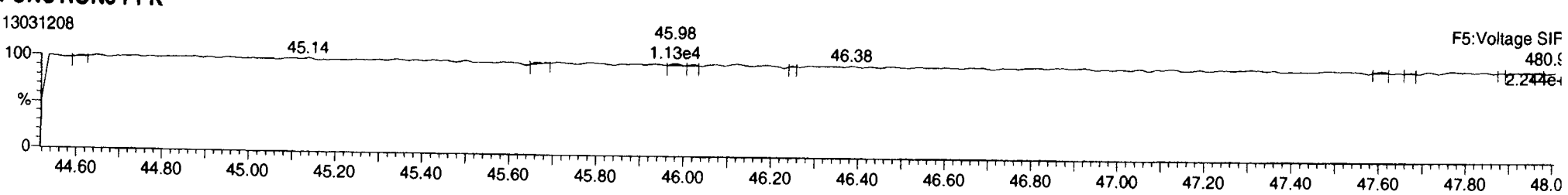


FUNCTION5 PFK



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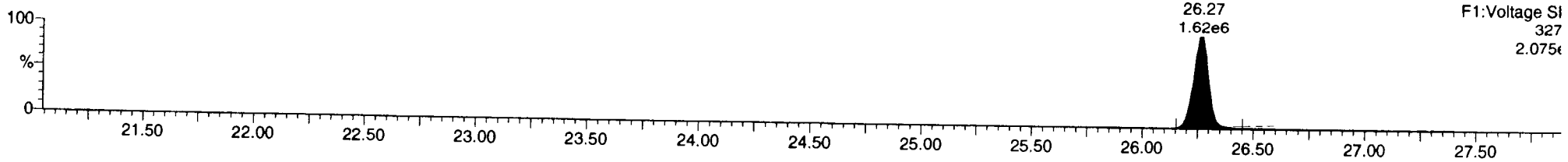
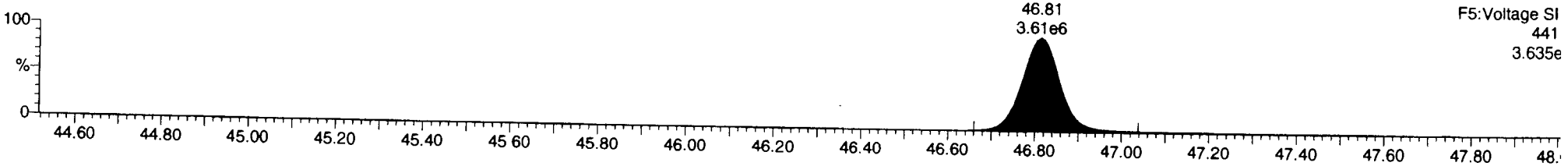
37CL-2378-TCDD

13031208



OCDF

13031208



OCDF

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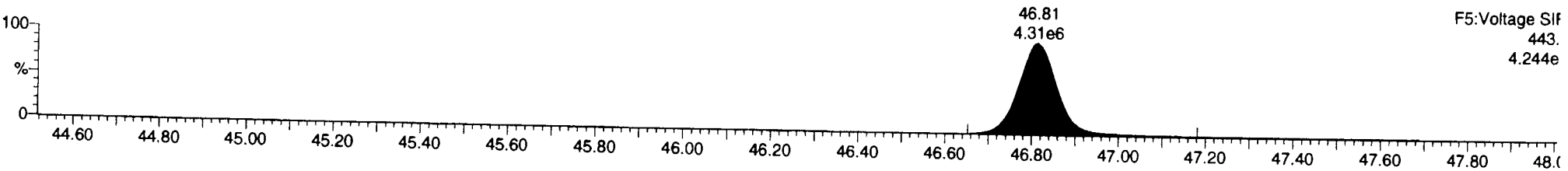
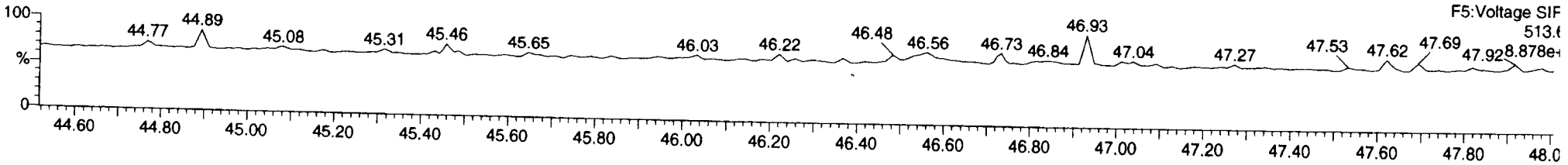


FUNCTION5 DCDPE

13031208



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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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	12378-PeCDF	29.753	1.000	2.93e7	1.97e7	0.836	1.485	1.550	19007.1	NO	1021.788	1021.788
	23478-PeCDF	31.102	1.001	2.84e7	1.92e7	0.851	1.478	1.550	18887.7	NO	1026.824	1026.824
	123478-HxCDF	34.763	1.000	2.28e7	1.95e7	1.017	1.170	1.240	39395.9	NO	1030.963	1030.963
	234678-HxCDF	35.859	1.001	2.23e7	1.88e7	1.027	1.183	1.240	39054.6	NO	987.020	987.020
	123678-HxCDF	34.916	1.001	2.37e7	2.01e7	1.013	1.180	1.240	41348.2	NO	995.527	995.527
	123789-HxCDF	37.010	1.001	1.92e7	1.62e7	0.929	1.185	1.240	33147.0	NO	1044.268	1044.268
	1234678-HpCDF	39.059	1.000	1.93e7	1.96e7	1.151	0.984	1.050	23020.1	NO	1047.820	1047.820
	1234789-HpCDF	41.679	1.000	1.54e7	1.57e7	1.149	0.983	1.050	16211.0	NO	1030.089	1030.089
	OCDF	46.822	1.006	2.87e7	3.36e7	0.963	0.854	0 890	56522.2	NO	2144.187	2144.187
	2378-TCDD	26.272	1.001	4.35e6	5.61e6	0.980	0.775	0.770	25775.5	NO	198.613	198.613
	12378-PeCDD	31.354	1.000	2.32e7	1.51e7	0.948	1.537	1.550	79805.4	NO	1016.325	1016.325
	123478-HxCDD	36.001	1.000	1.98e7	1.61e7	0.941	1.231	1.240	37321.6	NO	1018.718	1018.718
	123678-HxCDD	36.133	1.001	1.88e7	1.53e7	0.884	1.232	1.240	36096.7	NO	992.028	992.028
	123789-HxCDD	36.549	1.012	1.82e7	1.49e7	0.870	1.225	1.240	34211.2	NO	999.146	999.146
	1234678-HpCDD	40.824	1.000	1.46e7	1.42e7	0.948	1.027	1.050	17934.4	NO	1013.399	1013.399
	OCDD	46.562	1.000	2.69e7	3.15e7	0.969	0.853	0.890	31916.5	NO	1996.347	1996.347
	13C-2378-TCDF	25.615	1.007	2.98e6	3.85e6	1.318	0.774	0.770	8989.5	NO		102.936
	13C-12378-PeCDF	29.742	1.169	3.49e6	2.25e6	1.026	1.554	1.550	8635.3	NO		110.996
	13C-23478-PeCDF	31.080	1.222	3.31e6	2.14e6	0.966	1.544	1.550	8316.1	NO		112.127
	13C-123478-HxCDF	34.752	0.951	1.36e6	2.67e6	1.123	0.507	0.510	3468.5	NO		98.632
	13C-123678-HxCDF	34.894	0.955	1.48e6	2.86e6	1.216	0.517	0.510	3632.1	NO		98.061
	13C-234678-HxCDF	35.837	0.981	1.37e6	2.69e6	1.106	0.508	0.510	3456.7	NO		100.760
	13C-123789-HxCDF	36.988	1.012	1.24e6	2.40e6	0.995	0.515	0.510	3112.7	NO		100.585
	13C-1234678-HpCDF	39.048	1.069	9.92e5	2.23e6	0.896	0.445	0.440	4372.7	NO		98.833
	13C-1234789-HpCDF	41.668	1.140	8.05e5	1.82e6	0.693	0.442	0.440	3070.0	NO		104.206
	13C-1234-TCDD	25.436	0.000	2.20e6	2.84e6	1.000	0.773	0.770	5485.2	NO		100.000
	13C-2378-TCDD	26.243	1.032	2.23e6	2.88e6	0.961	0.773	0.770	5481.6	NO		105.658
	13C-12378-PeCDD	31.343	1.232	2.42e6	1.55e6	0.703	1.557	1.550	11285.4	NO		112.050
	13C-123478-HxCDD	35.990	0.985	2.08e6	1.65e6	1.016	1.261	1.240	6011.1	NO		101.093
	13C-123678-HxCDD	36.111	0.988	2.15e6	1.74e6	1.098	1.236	1.240	6296.2	NO		97.177
	13C-1234678-HpCDD	40.813	1.117	1.52e6	1.47e6	0.828	1.033	1.050	5516.0	NO		99.286
	13C-OCDD	46.544	1.274	2.86e6	3.17e6	0.770	0.901	0.890	7189.6	NO		215.358

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

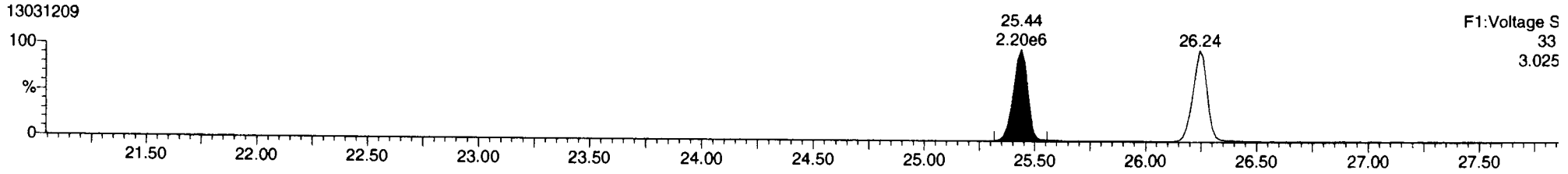
	13C-123789-HxCDD	36.539	0.000	2.00e6	1.63e6	1.000	1.227	1.240	6011.4	NO	100.000
	Total-tetrafurans			4.54e6		0.763					209.710
	Total-penta1			3.17e2							0.010
	Total-pentafurans			5.91e7		0.844					2096.610
	Total-hexafurans			8.80e7		0.997					4062.694
	Total-heptafurans			3.47e7		1.150					2079.515
	Total-Furans			2.15e8		0.970					10592.762
	Total-tetradioxins			4.46e6		0.980					203.859
	Total-pentadioxins			2.32e7		0.948					1018.763
	Total-hexadioxins			5.68e7		0.898					3010.241
	Total-heptadioxins			1.46e7		0.948					1017.095
	Total-Dioxins			1.26e8		0.934					7246.440
	Total-TEQ			3.41e8							17839.201
	37CL-2378-TCDD	26.272	1.033	1.09e7		0.999			41777.3		217.645
	FUNCTION1 PFK			3.29e7							
	FUNCTION2 PFK			3.08e5							0.000
	FUNCTION3 PFK			0.00e0							
	FUNCTION4 PFK			4.93e5							
	FUNCTION5 PFK			6.21e4							
	FUNCTION1 HXCDPE			3.88e2							0.000
	FUNCTION1 HPCDPE			3.89e2							0.000
	FUNCTION2 HPCDPE			5.38e4							0.000
	FUNCTION3 OCDPE			1.87e3							0.000
	FUNCTION4 NCDPE			3.38e2							0.000
	FUNCTION5 DCDPE			8.23e2							0.000

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

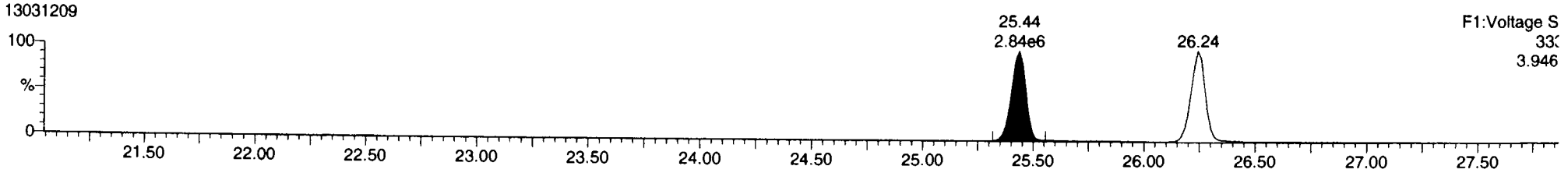
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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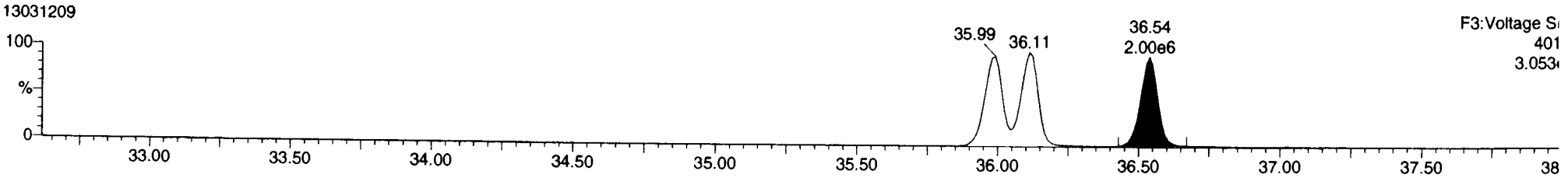
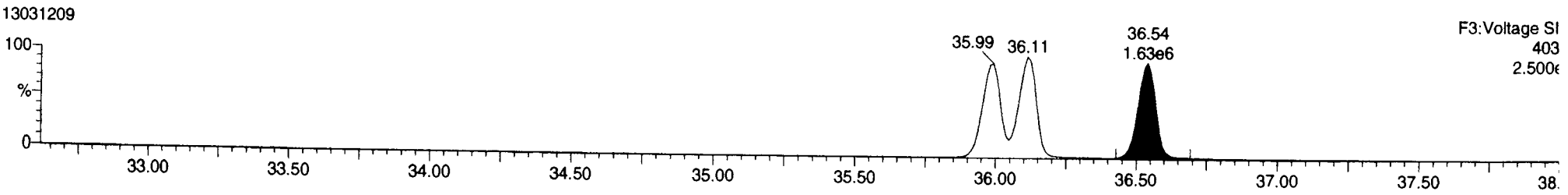


13C-123789-HxCDD



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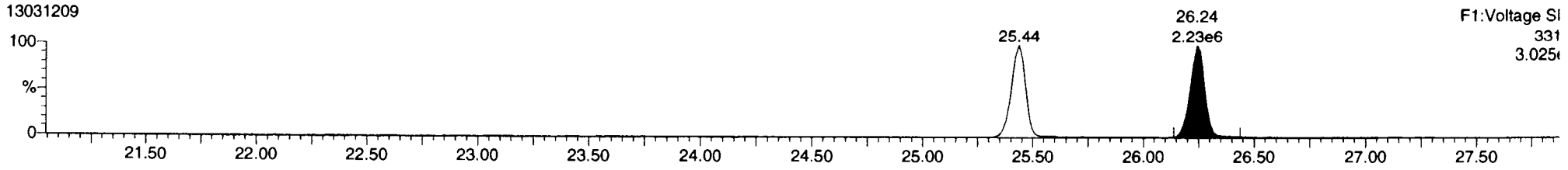
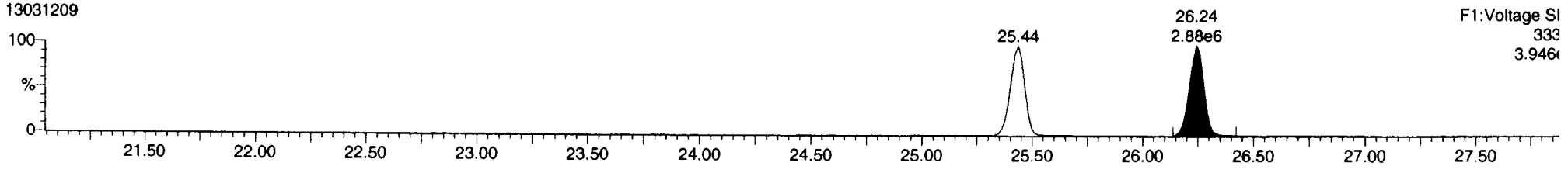
ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

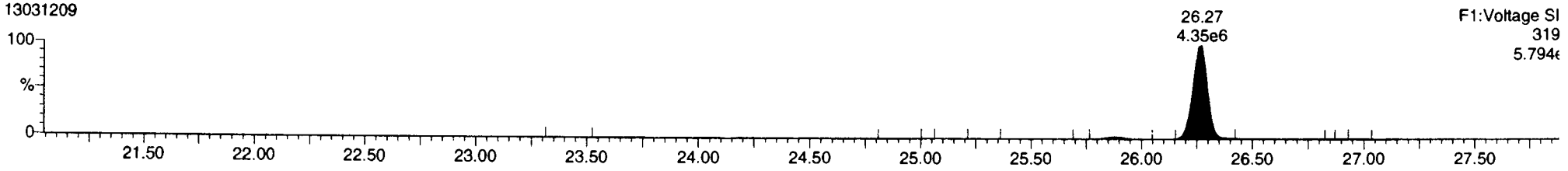
13C-2378-TCDD



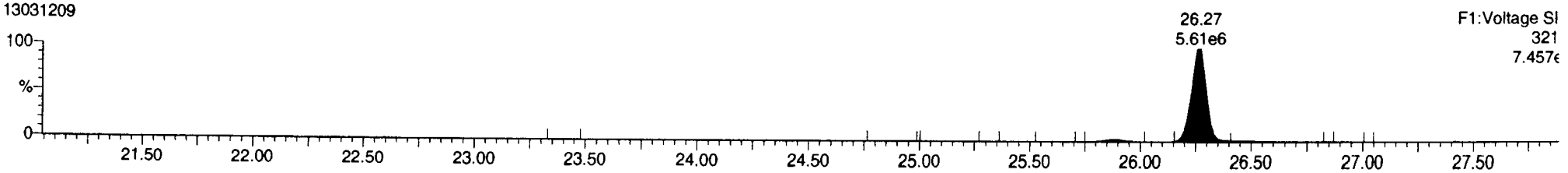
13C-2378-TCDD



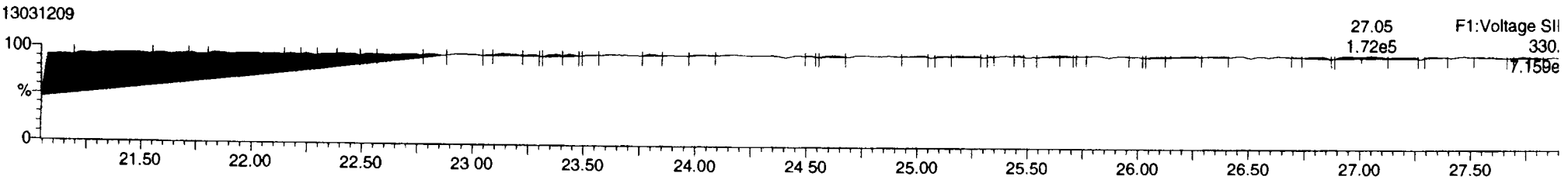
Total-tetradioxins



Total-tetradioxins



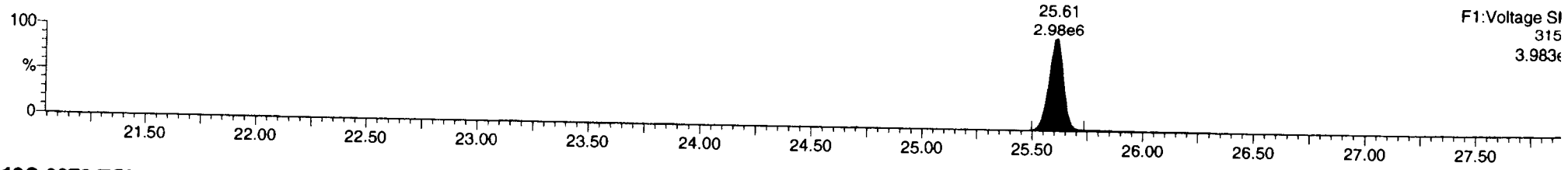
FUNCTION1 PFK



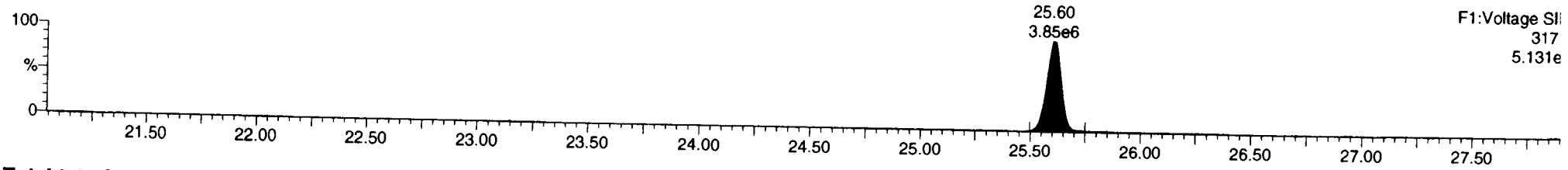
t-05 T-5 - TEnM

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

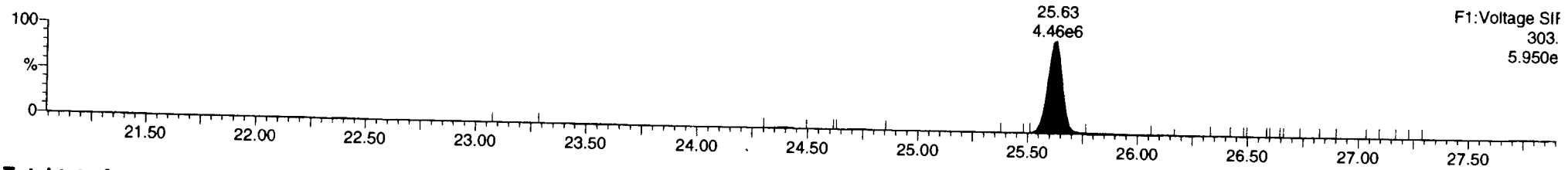
13C-2378-TCDF
13031209



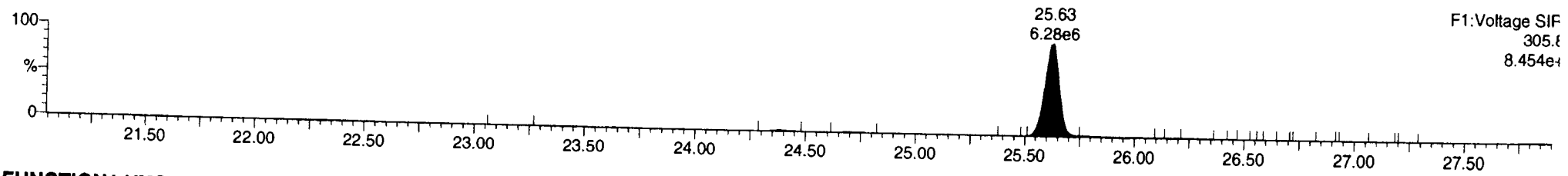
13C-2378-TCDF
13031209



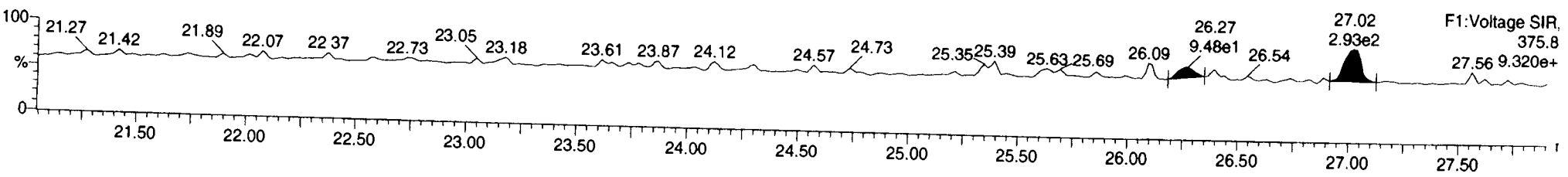
Total-tetrafurans
13031209



Total-tetrafurans
13031209



FUNCTION1 HXCDPE
13031209



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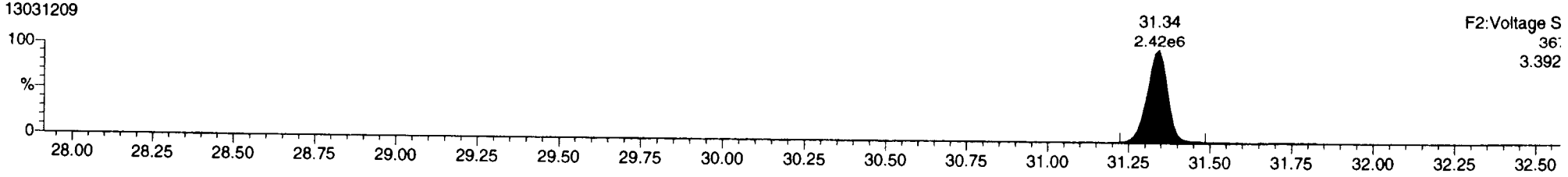
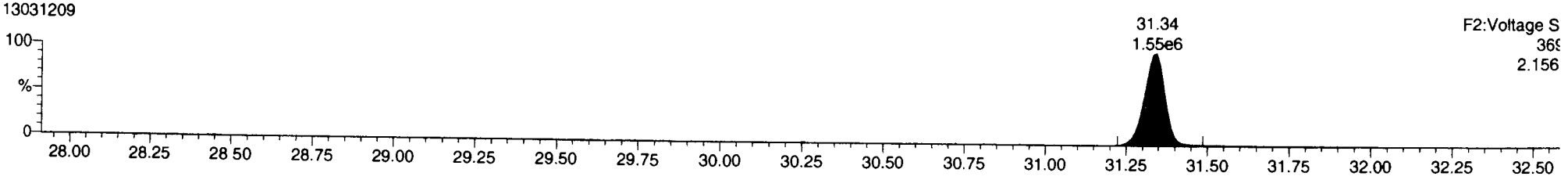
13C-12378-PeCDD

13031209



13C-12378-PeCDD

13031209



Total-pentadioxins

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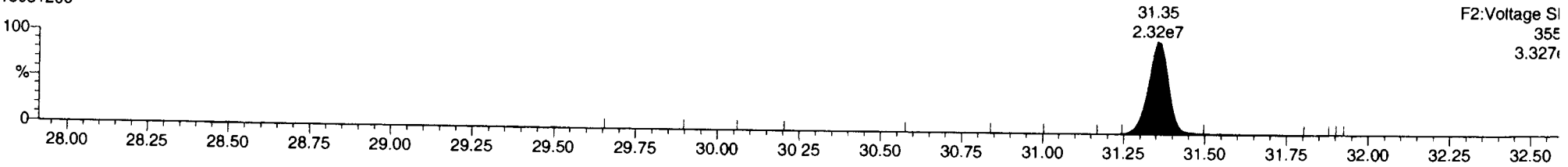
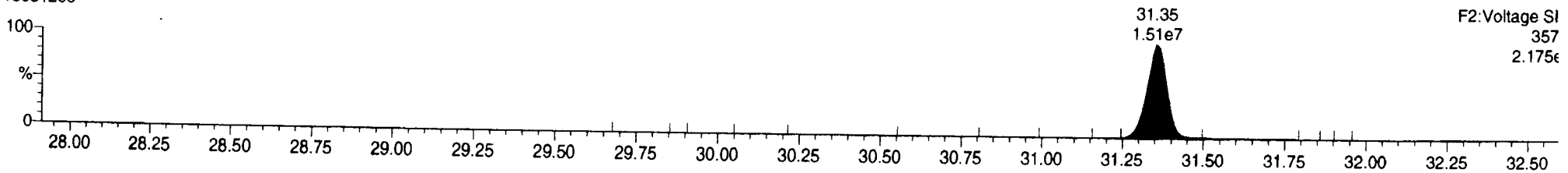


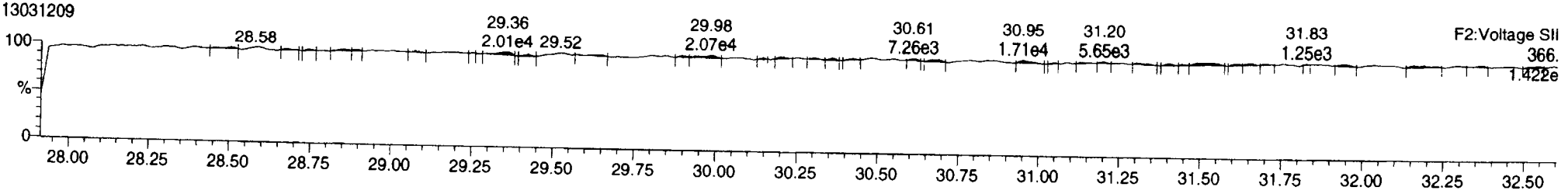
Total-pentadioxins

13031209



FUNCTION2 PFK

13031209



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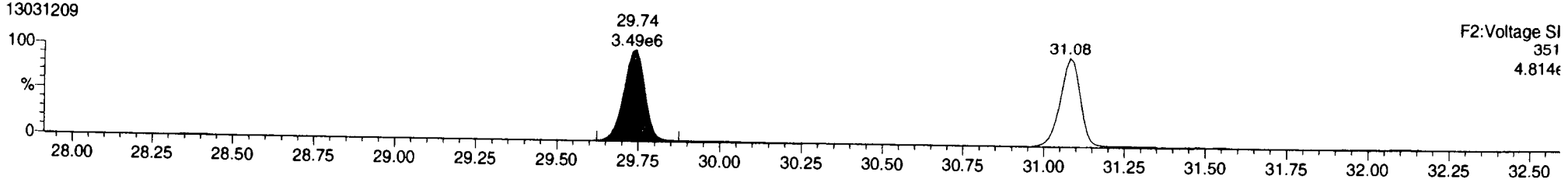
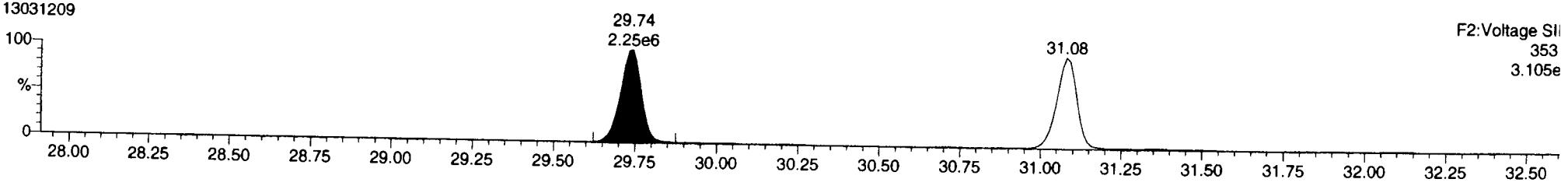
13C-12378-PeCDF

13031209



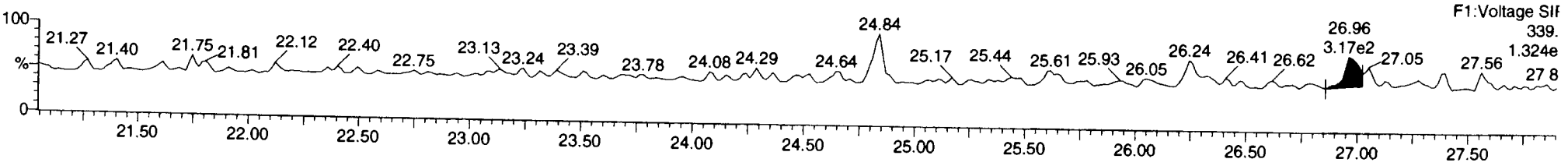
13C-12378-PeCDF

13031209



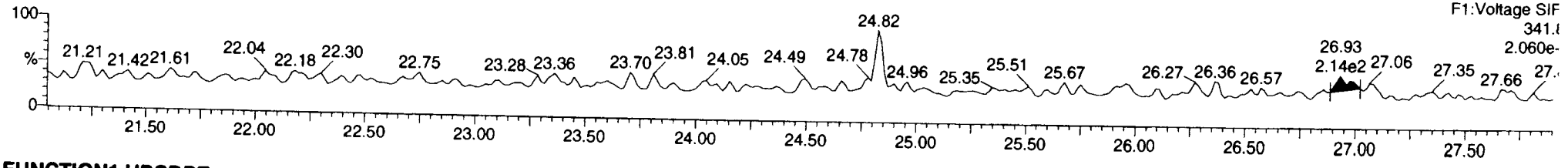
Total-penta1

13031209



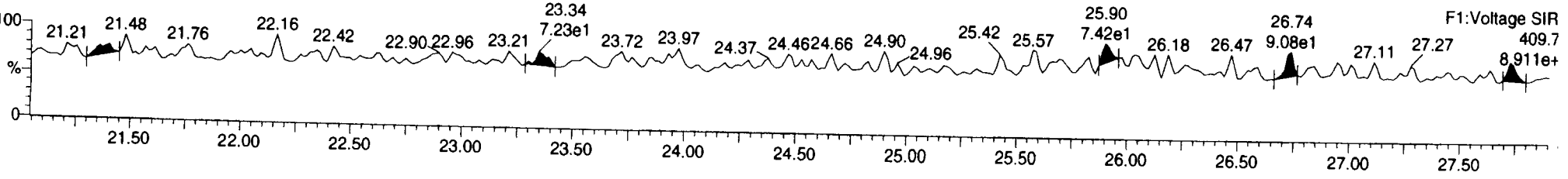
Total-penta1

13031209



FUNCTION1 HPCDPE

13031209



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13C-23478-PeCDF
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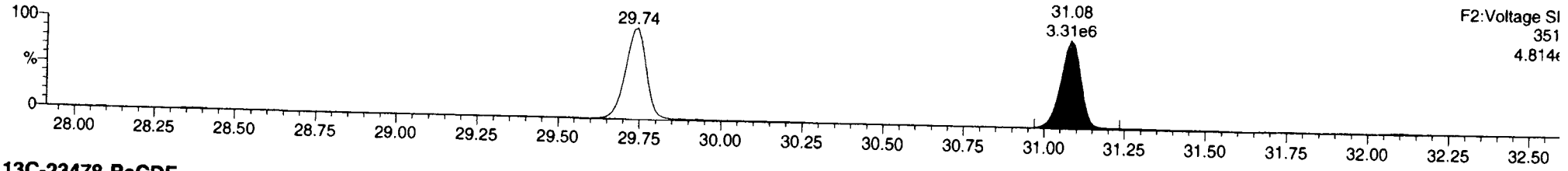

13C-23478-PeCDF
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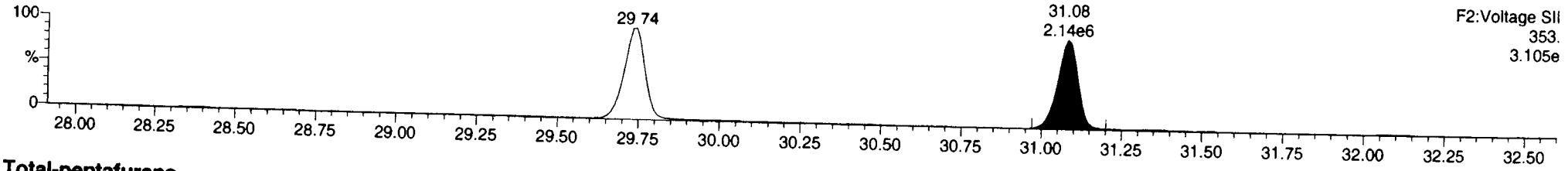

Total-pentafurans
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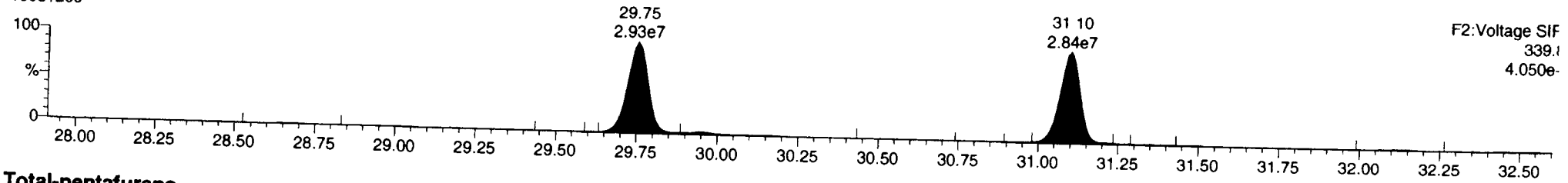

Total-pentafurans
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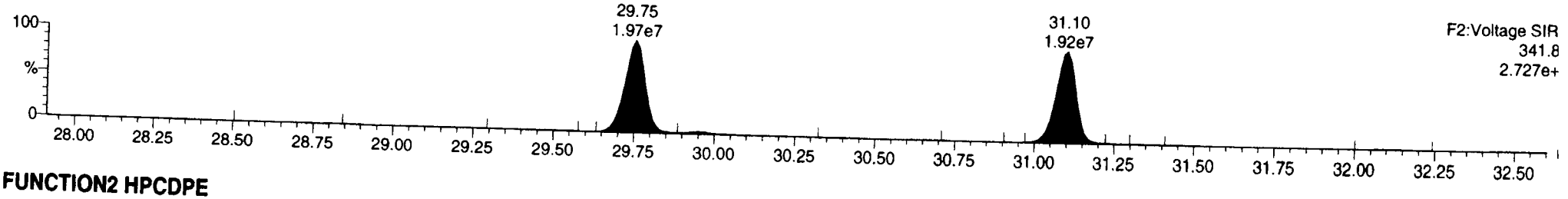

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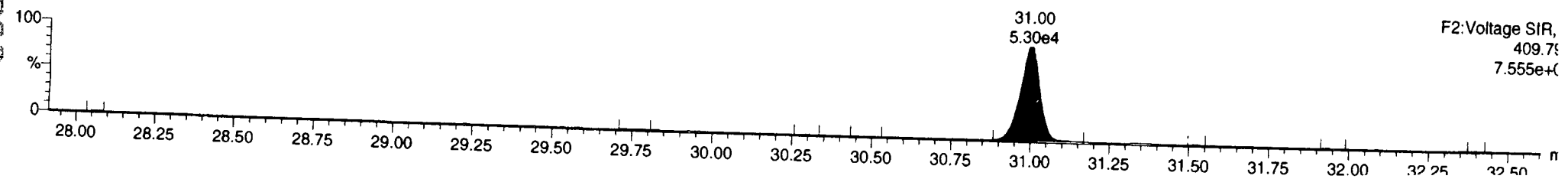

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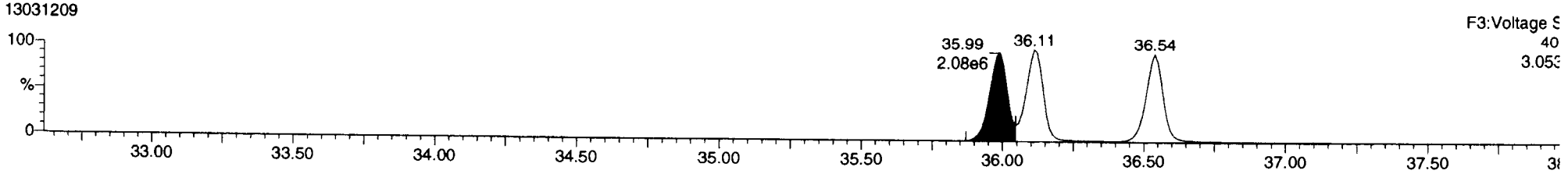
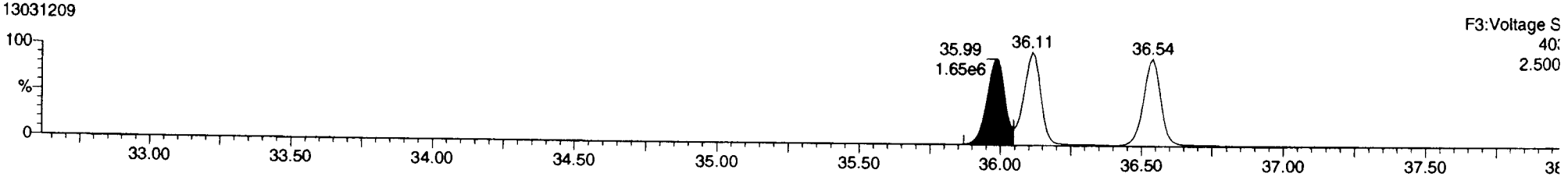
13C-123478-HxCDD

13031209



13C-123478-HxCDD

13031209



Total-hexadioxins

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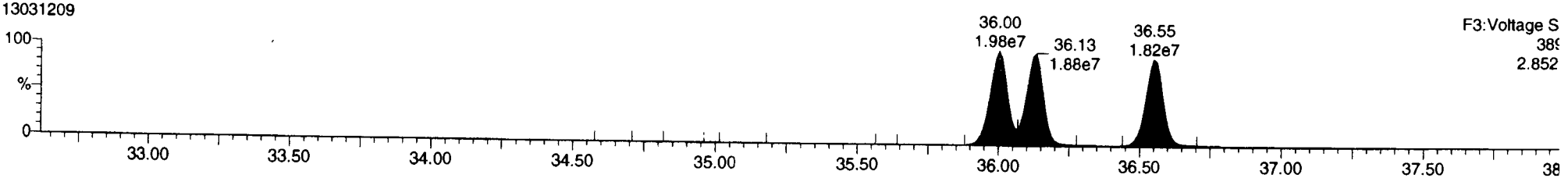
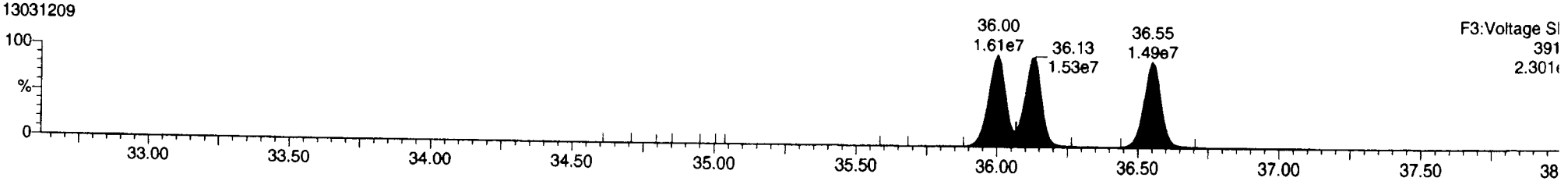


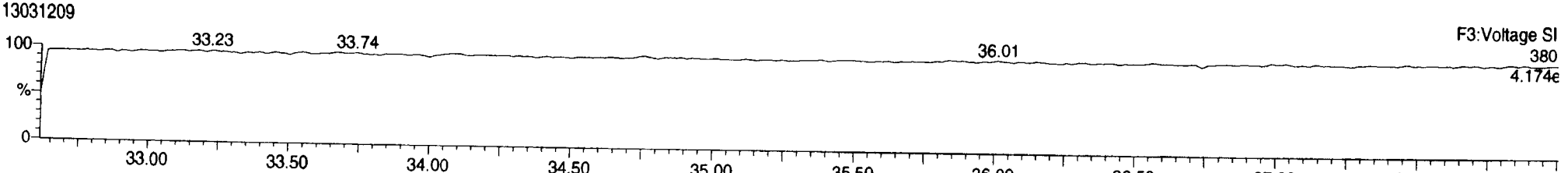
Total-hexadioxins

13031209



FUNCTION3 PFK

13031209



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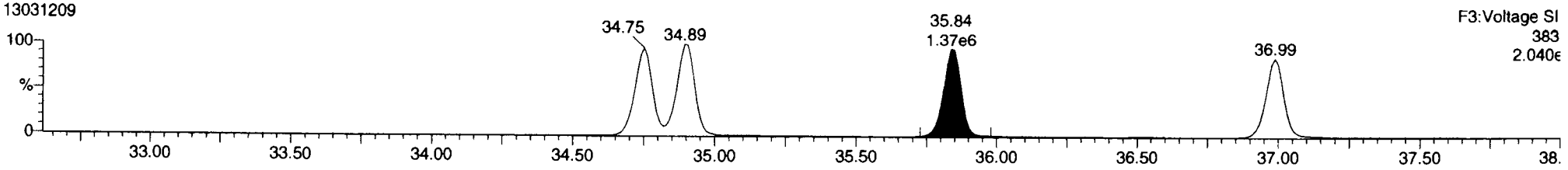
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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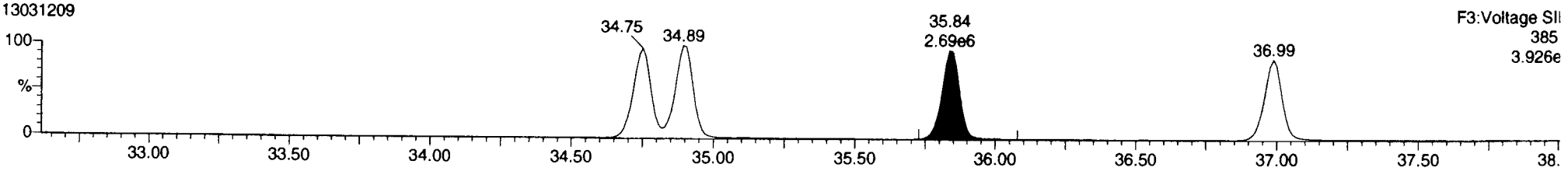
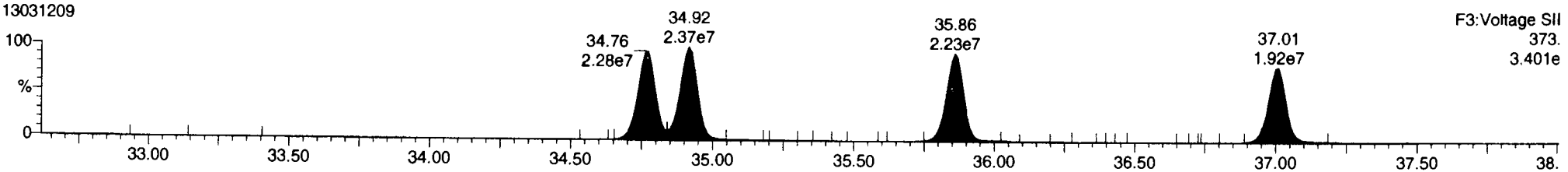
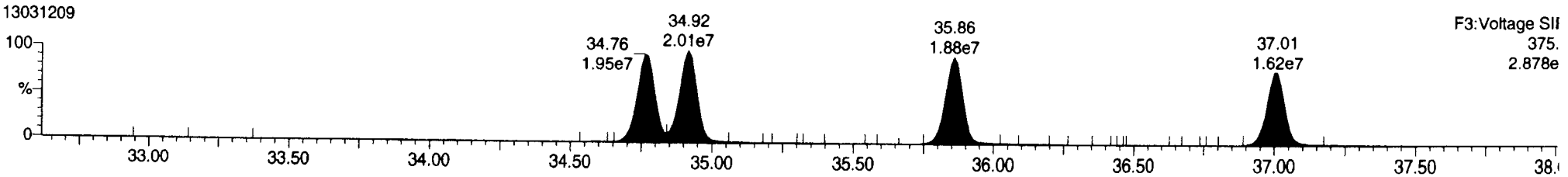


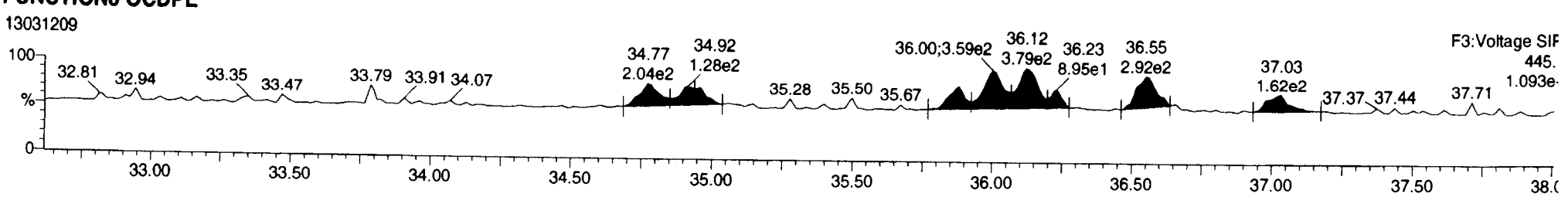
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



DB5-TD-TCNM

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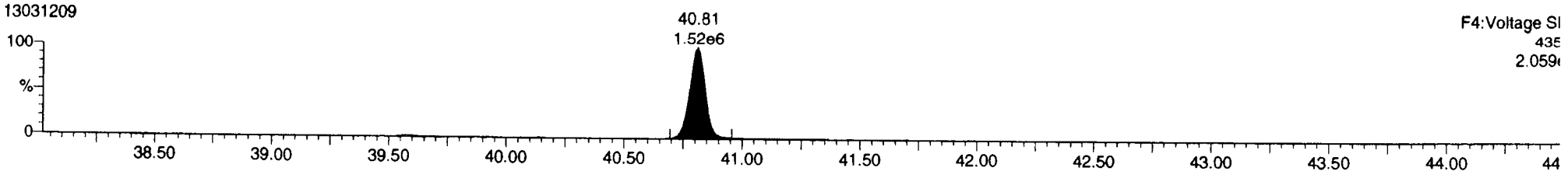
13C-1234678-HpCDD



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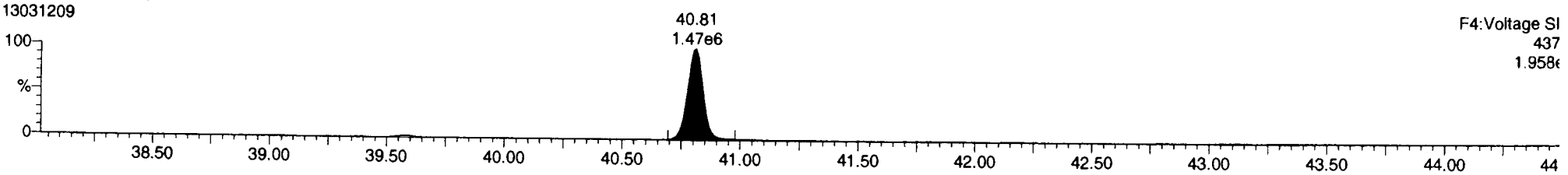

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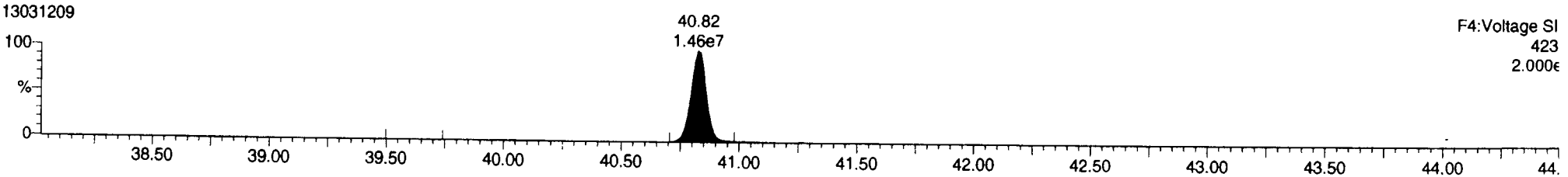

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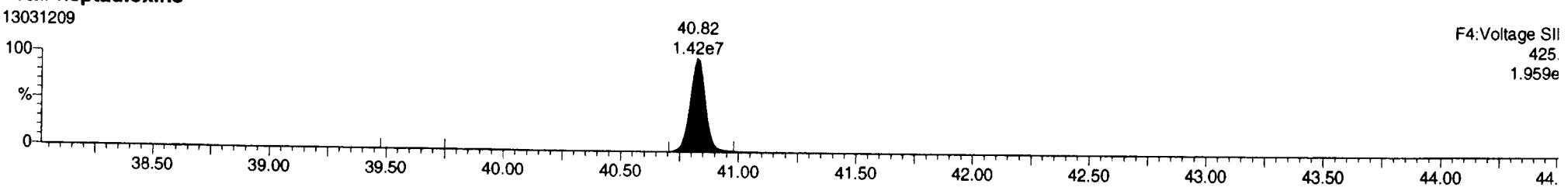
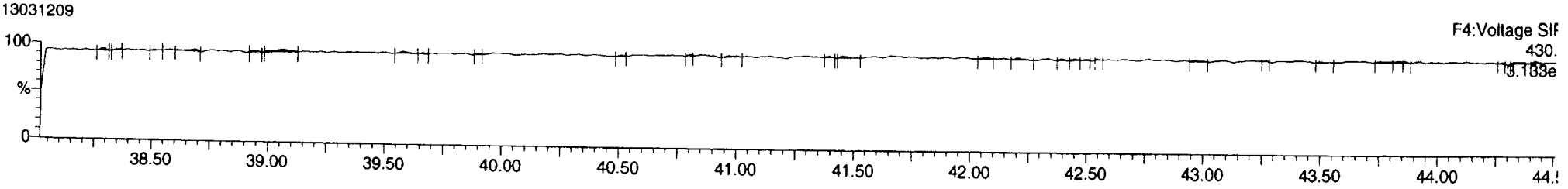


FUNCTION4 PFK



ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

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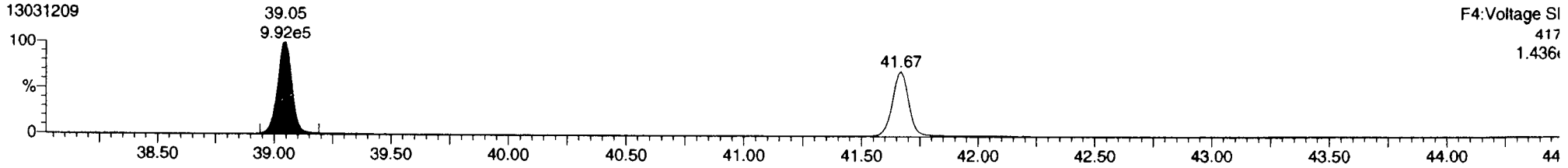

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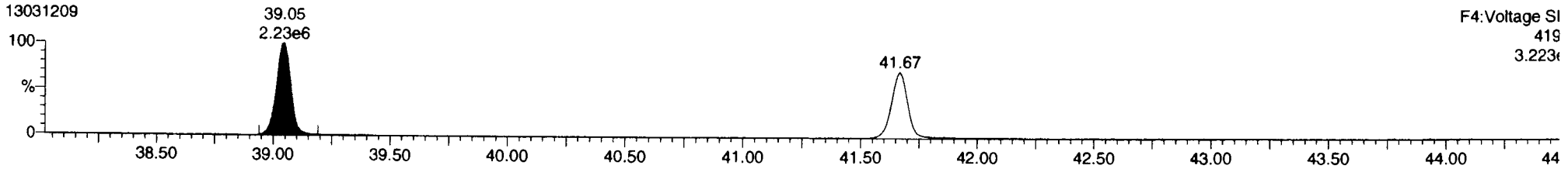
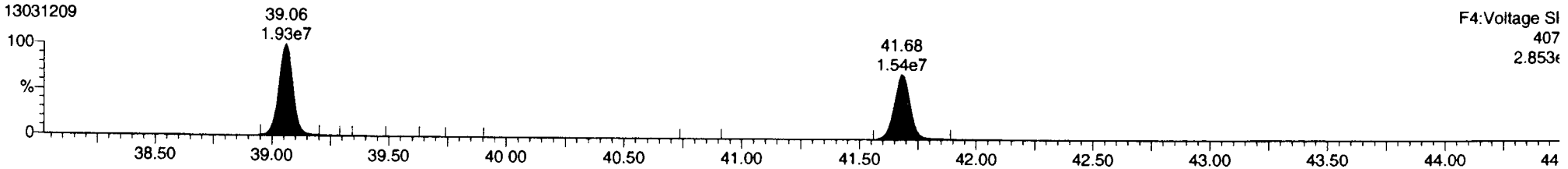


Total-heptafurans



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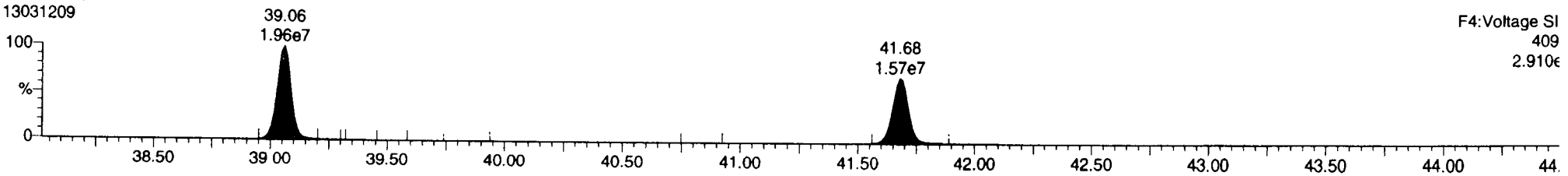
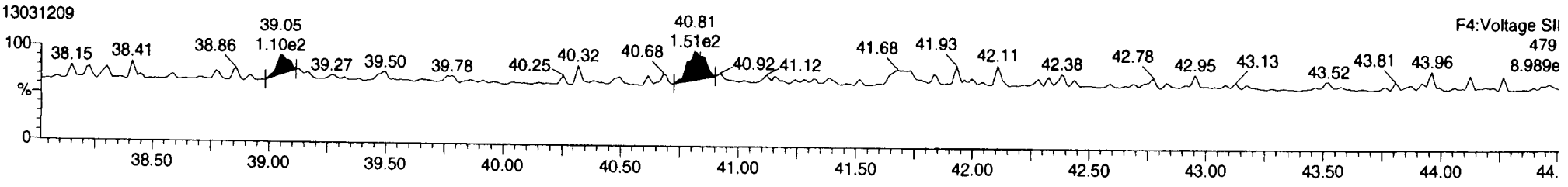


FUNCTION4 NCDPE



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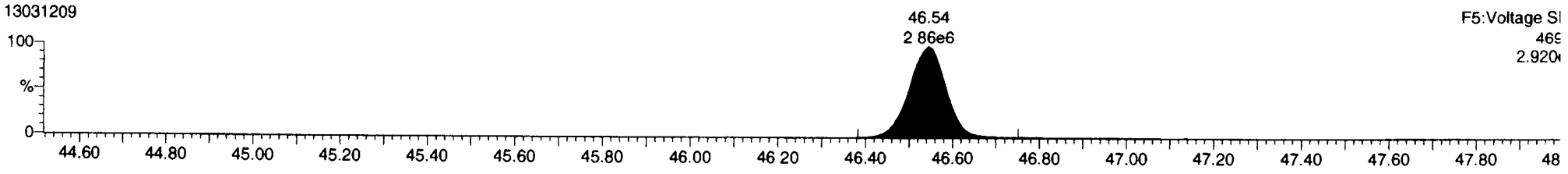
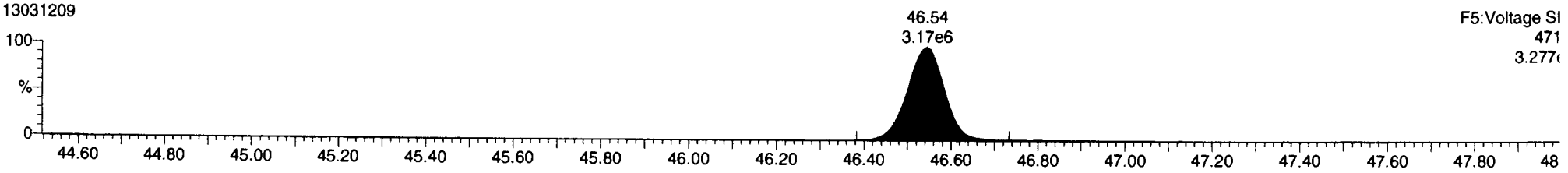
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

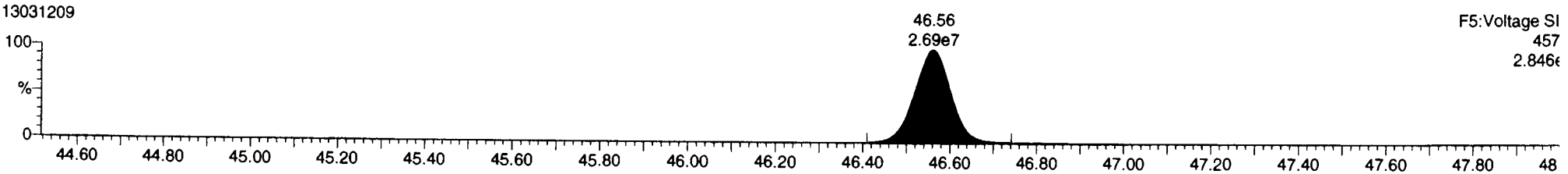
13C-OCDD



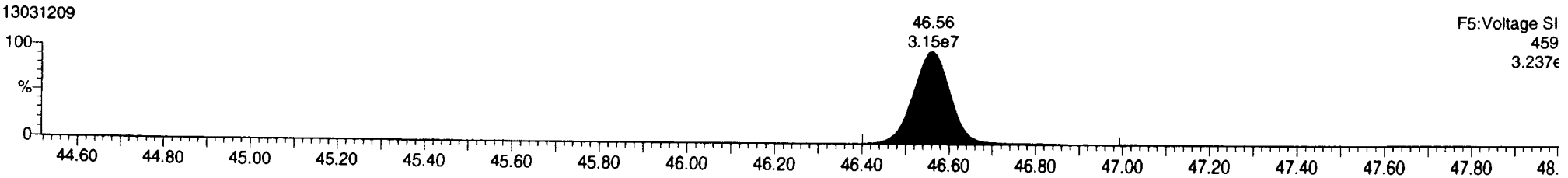
13C-OCDD



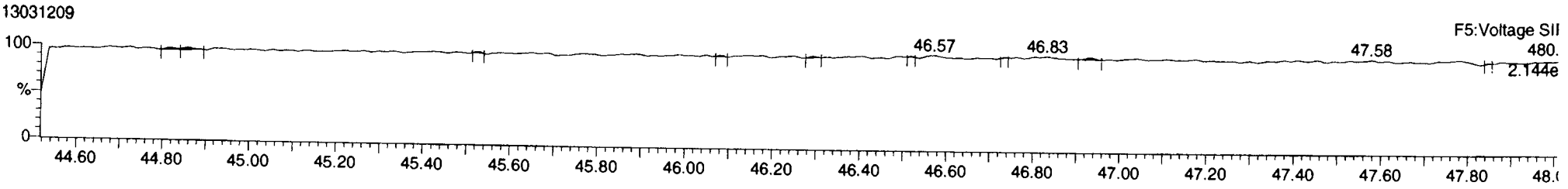
OCDD



OCDD



FUNCTION5 PFK



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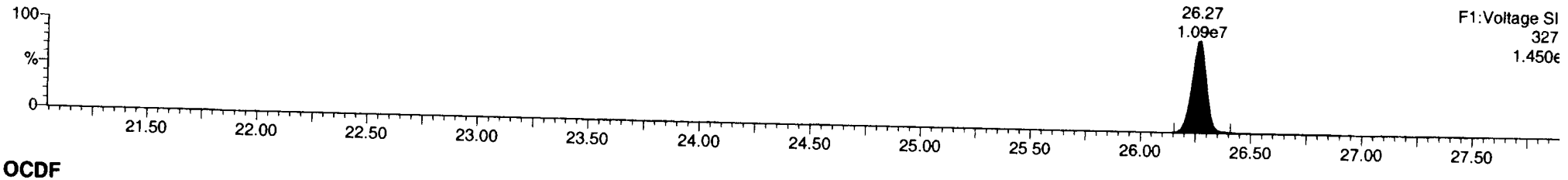
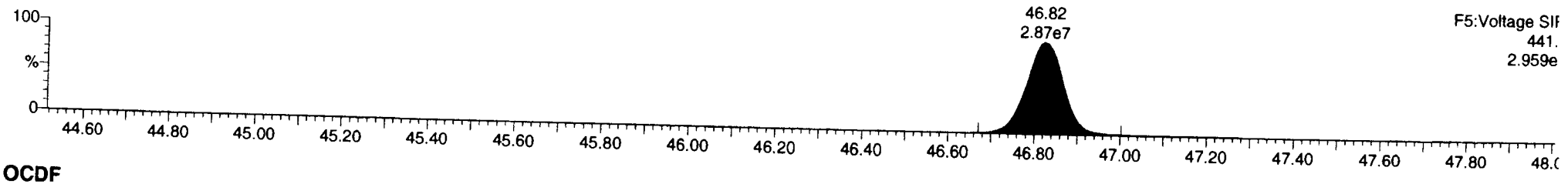
37CL-2378-TCDD

13031209



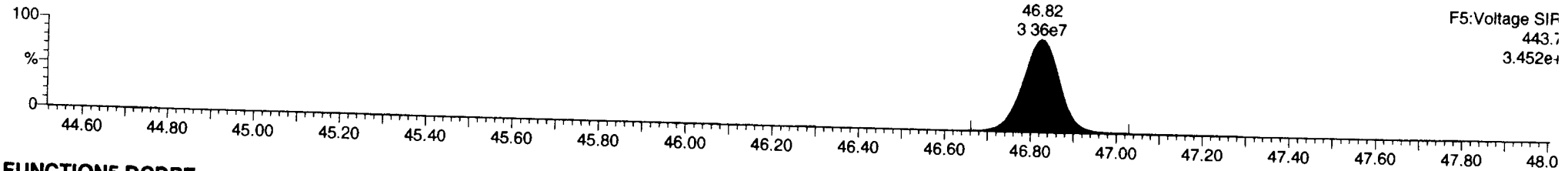
OCDF

13031209



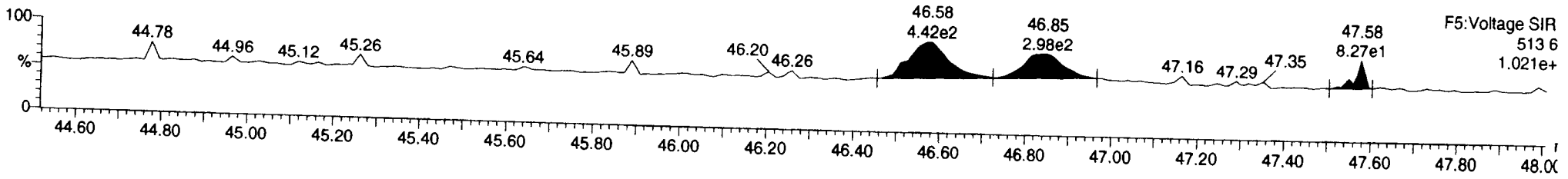
OCDF

13031209



FUNCTION5 DCDPE

13031209



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Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

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Calibration: P:\DIOXIN8290.PRO\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

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[redacted]	12378-PeCDF	29.754	1.000	1.06e6	7.17e5	0.836	1.484	1.550	2493.5	NO	55.364	55.364
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[redacted]	OCDD	46.554	1.000	8.12e5	9.38e5	0.969	0.865	0.890	1491.9	NO	107.590	107.590
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Dataset: P:\DIOXIN8290.PRO\130312ICV.qld
Last Altered: Wednesday, March 13, 2013 11:12:18 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

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	Total-tetrafurans			1.72e5		0.763					10.847
	Total-penta1			2.82e2							0.016
	Total-pentafurans			2.06e6		0.844					107.775
	Total-hexafurans			3 10e6		0.997					216.539
	Total-heptafurans			1.13e6		1.150					106.306
	Total-Furans			7.29e6		0.970					553.464
	Total-tetradioxins			1.68e5		0.980					9.907
	Total-pentadioxins			8.33e5		0.948					48.305
	Total-hexadioxins			1.97e6		0.898					165.164
	Total-heptadioxins			5.02e5		0 948					49.807
	Total-Dioxins			4.28e6		0.934					380.783
	Total-TEQ			1.16e7							934.247
	37CL-2378-TCDD	26.272	1.033	4.13e5		0.999			2227.2		9.771
	FUNCTION1 PFK			8.37e4							
	FUNCTION2 PFK			4.17e3							0.000
	FUNCTION3 PFK			6.12e5							0.000
	FUNCTION4 PFK			3.83e5							
	FUNCTION5 PFK			3.13e6							
	FUNCTION1 HXCDPE			2.53e2							0.000
	FUNCTION1 HPCDPE			0.00e0							
	FUNCTION2 HPCDPE			6.00e2							0.000
	FUNCTION3 OCDPE			7.67e1							0.000
	FUNCTION4 NCDPE			0.00e0							
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Dataset: P:\DIOXIN8290.PRO\130312ICV.qld
Last Altered: Wednesday, March 13, 2013 11:12:18 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

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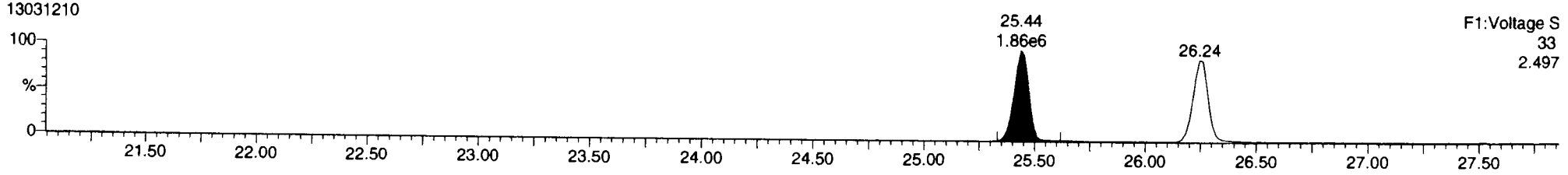
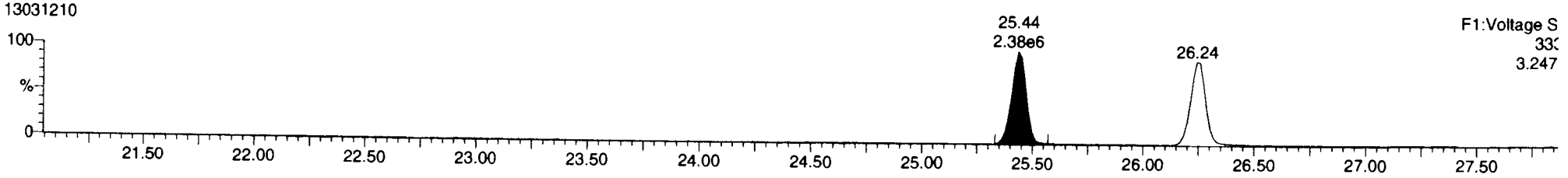
Calibration: P:\DIOXIN8290.PRO\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

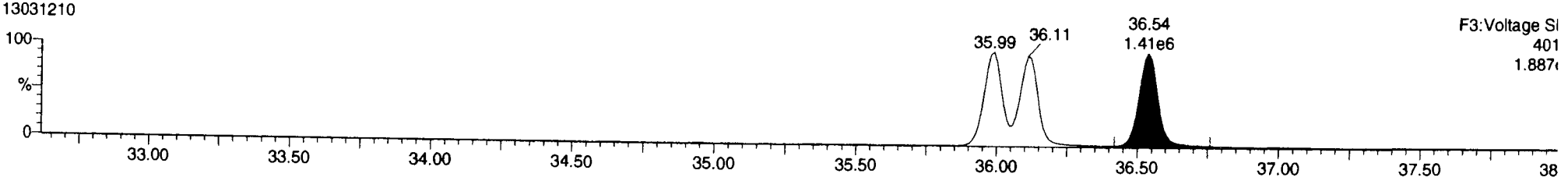
13C-1234-TCDD
13031210



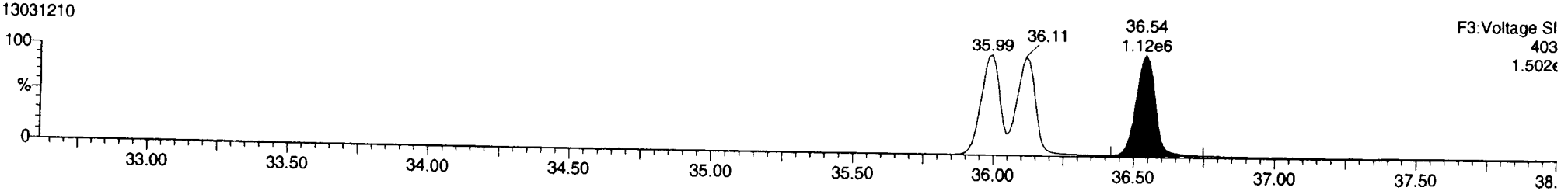
13C-1234-TCDD
13031210



13C-123789-HxCDD
13031210



13C-123789-HxCDD
13031210



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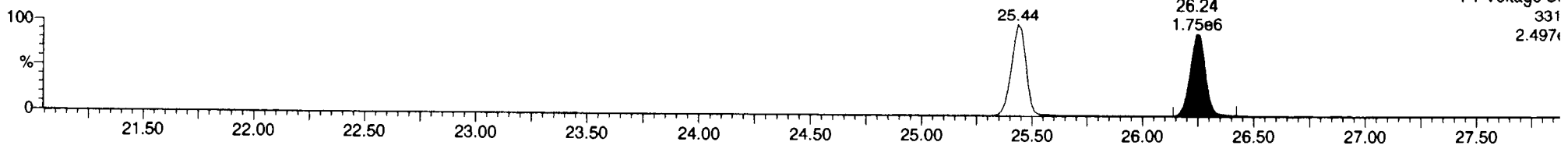
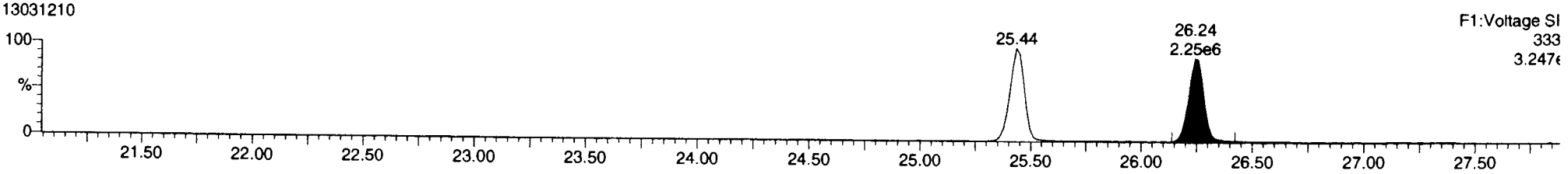
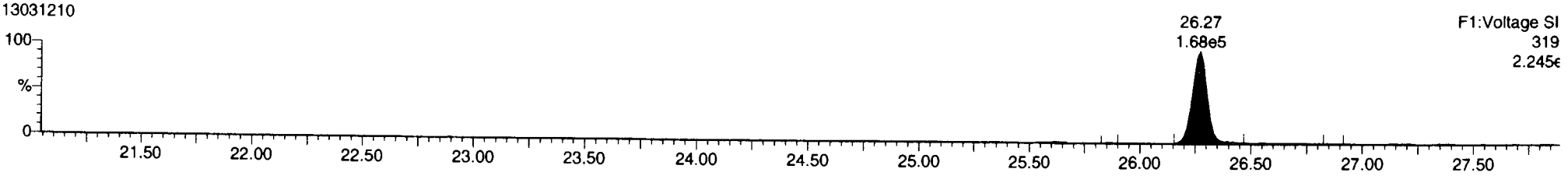
13C-2378-TCDD
13031210



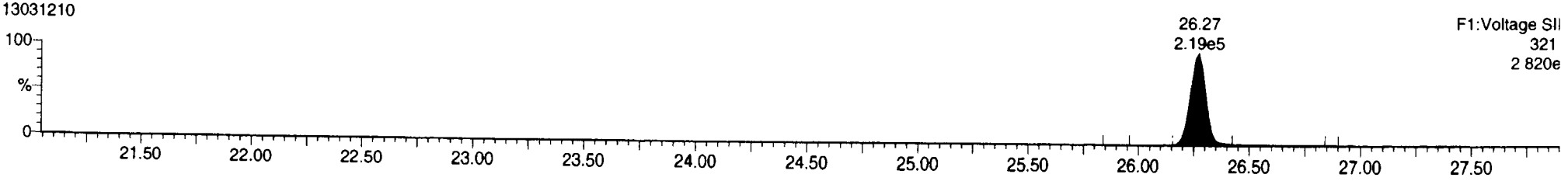
13C-2378-TCDD
13031210



Total-tetradioxins
13031210



Total-tetradioxins
13031210



FUNCTION1 PFK
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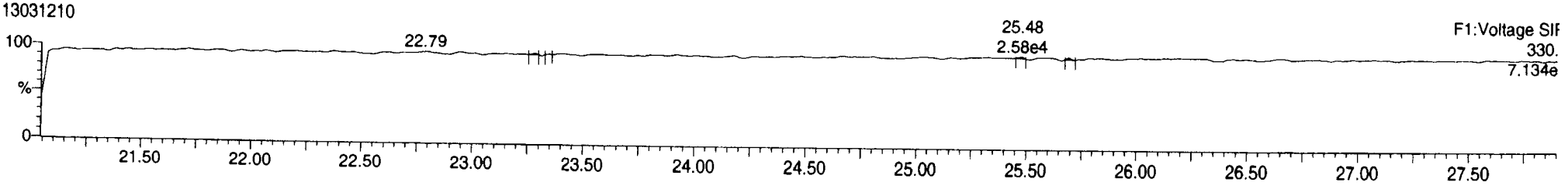

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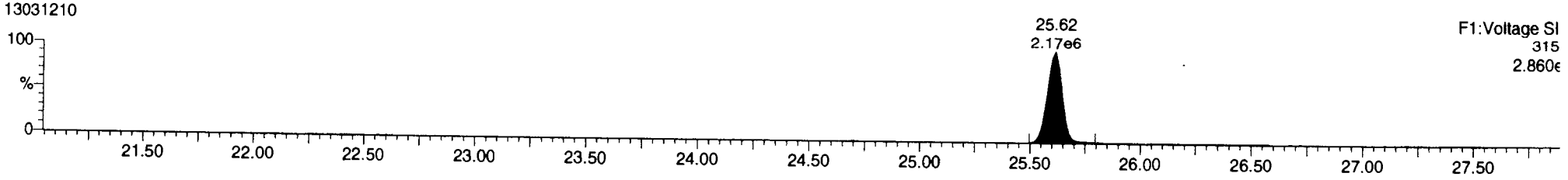
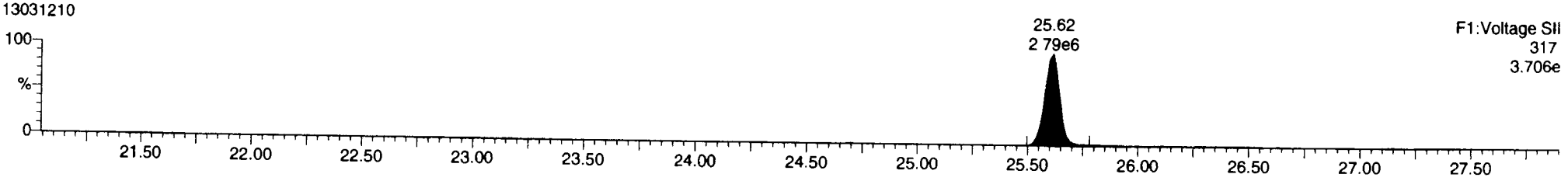
13C-2378-TCDF

13031210



13C-2378-TCDF

13031210



Total-tetrafurans

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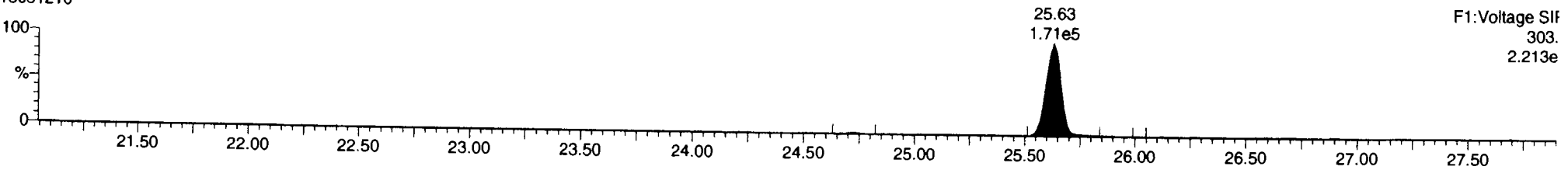

Total-tetrafurans

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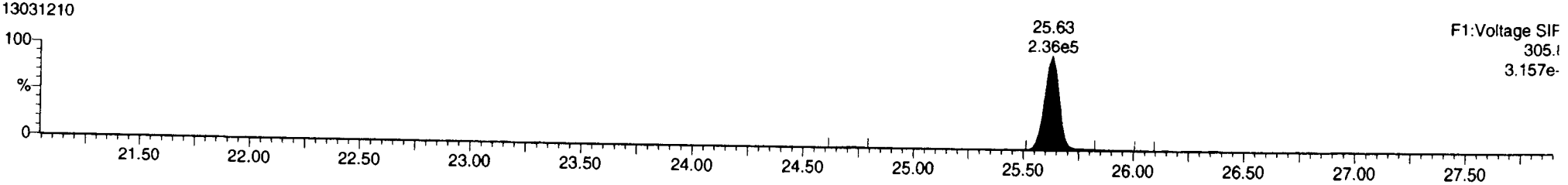
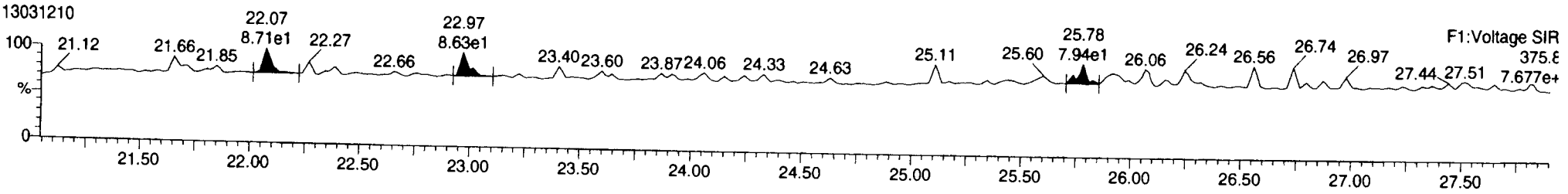


FUNCTION1 HXCDPE

13031210



GC/MS - TCDF

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13C-12378-PeCDD
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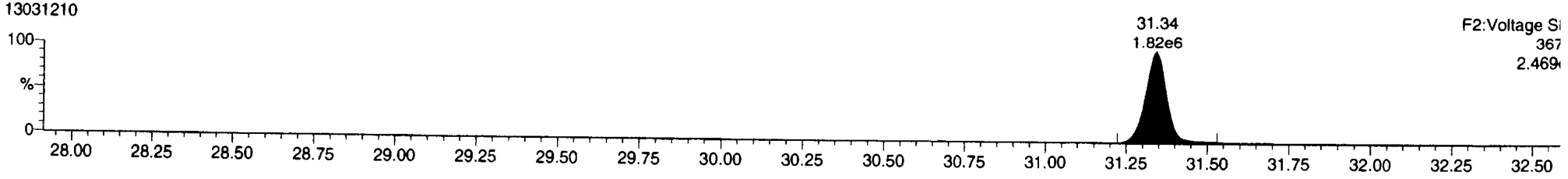
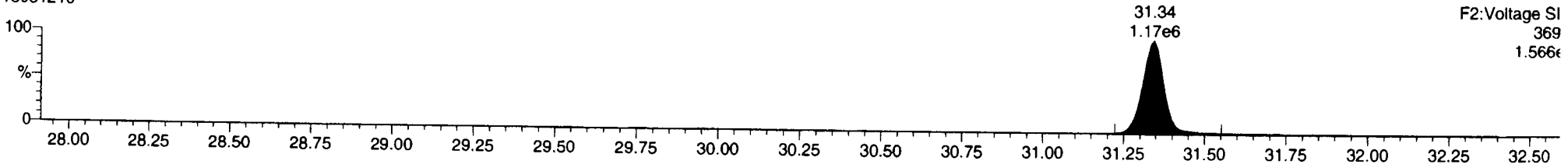


13C-12378-PeCDD
13031210



Total-pentadioxins
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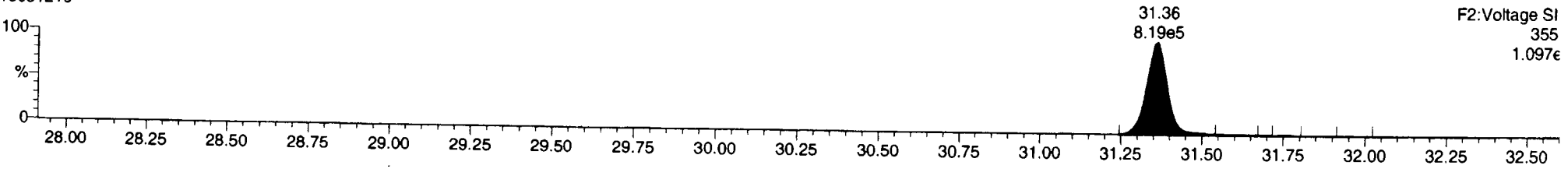
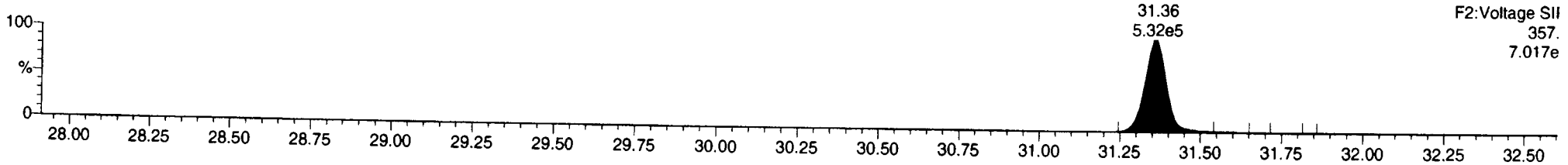


Total-pentadioxins
13031210



FUNCTION2 PFK
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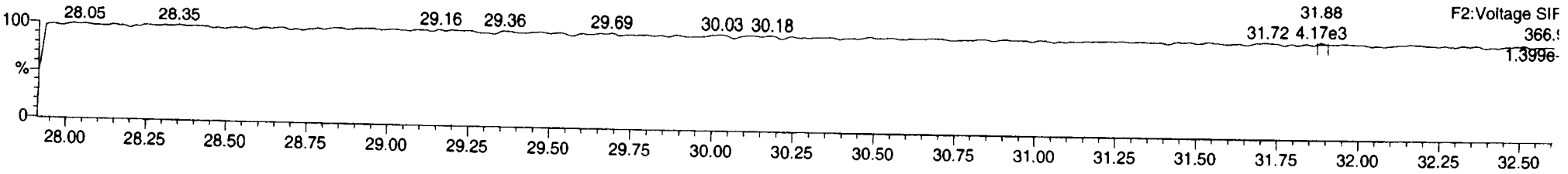

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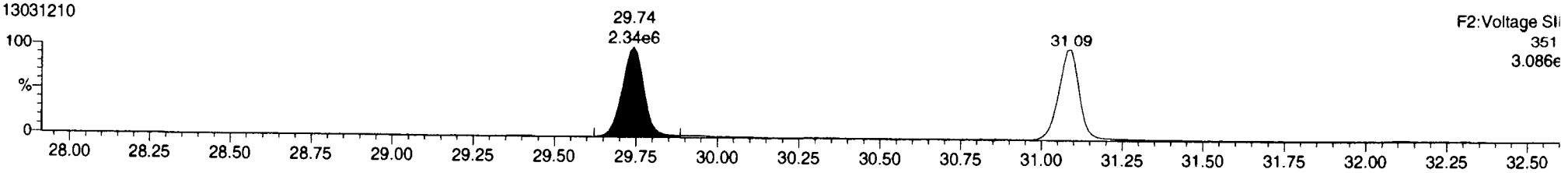
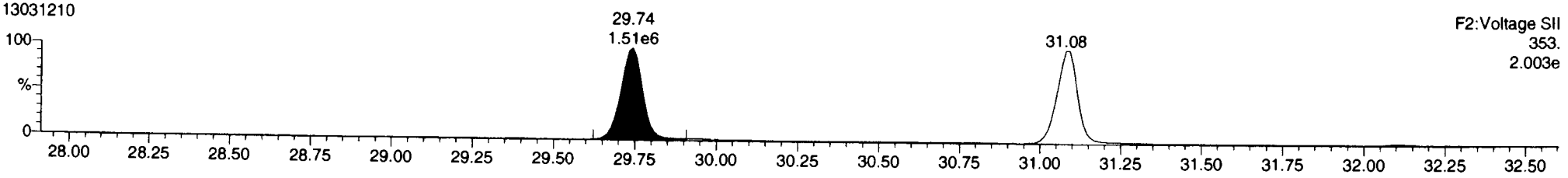
13C-12378-PeCDF

13031210



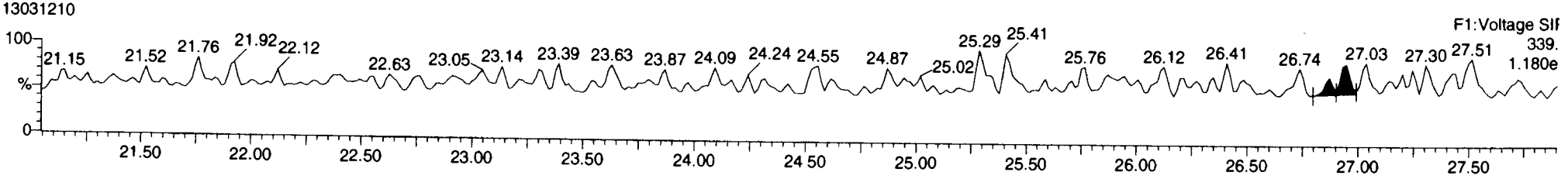
13C-12378-PeCDF

13031210



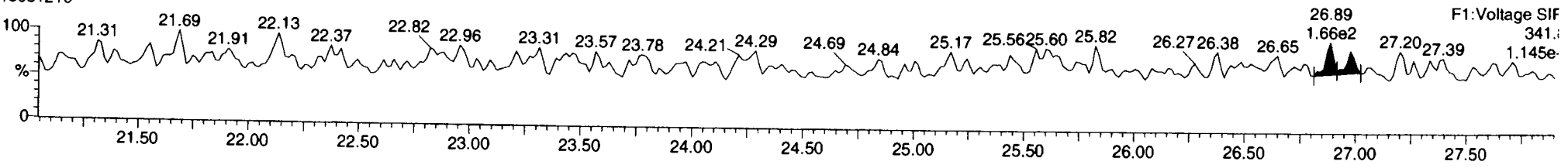
Total-penta1

13031210



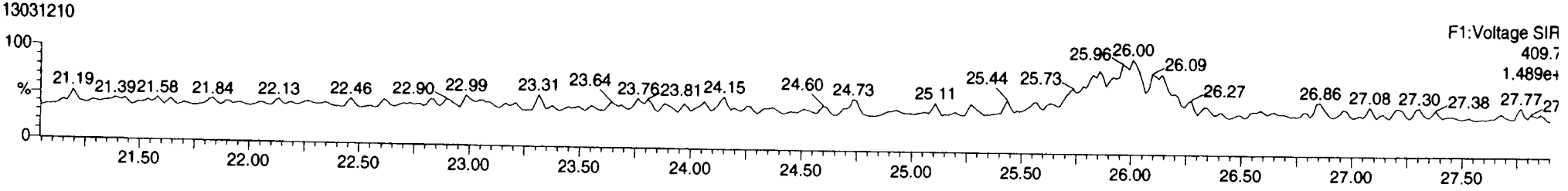
Total-penta1

13031210



FUNCTION1 HPCDPE

13031210



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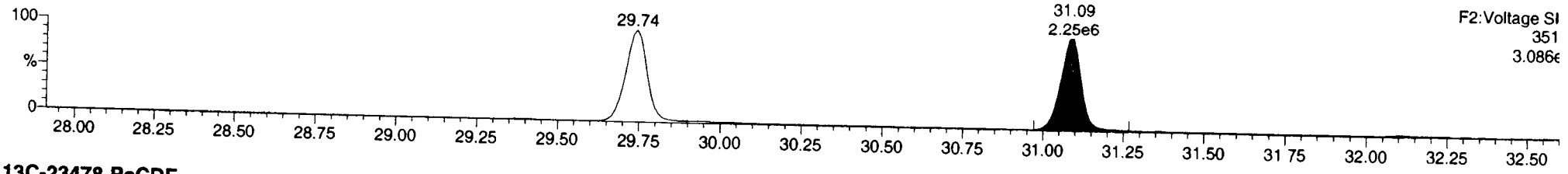
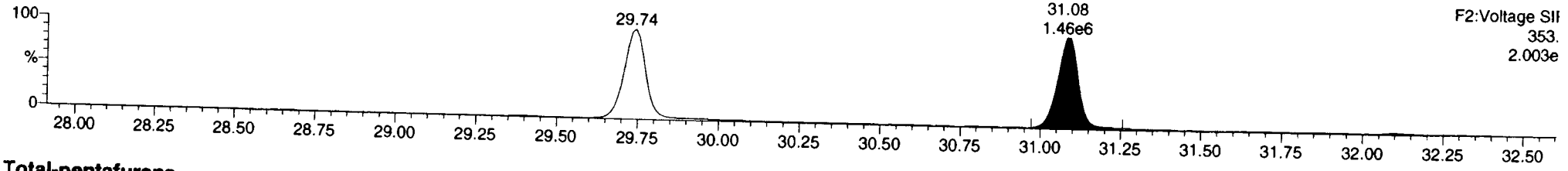
13C-23478-PeCDF
13031210



13C-23478-PeCDF
13031210



Total-pentafurans
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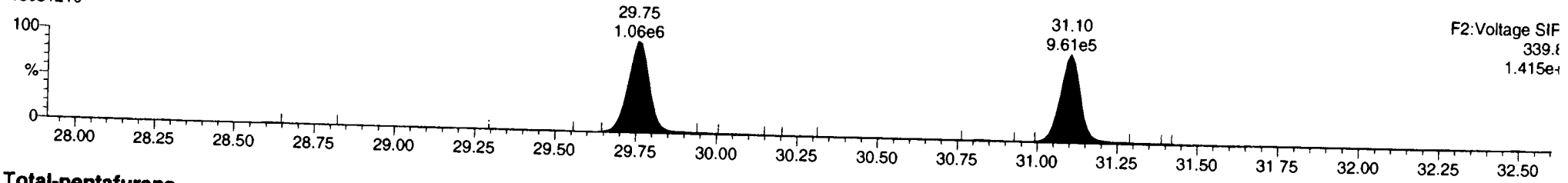

Total-pentafurans
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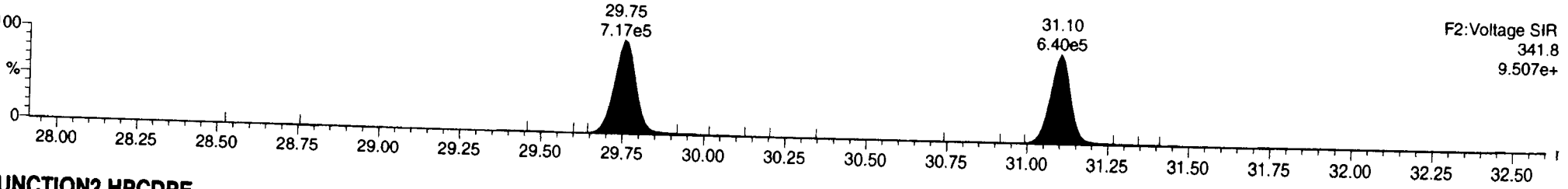

FUNCTION2 HPCDPE
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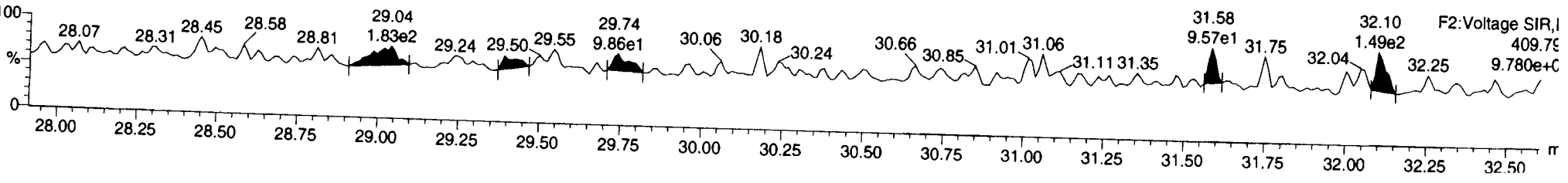

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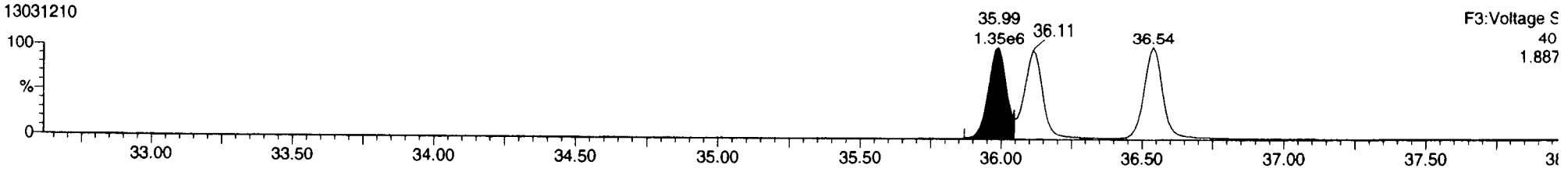
13C-123478-HxCDD



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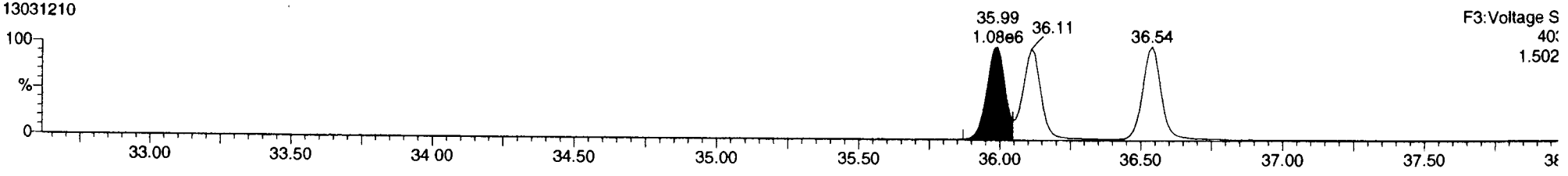
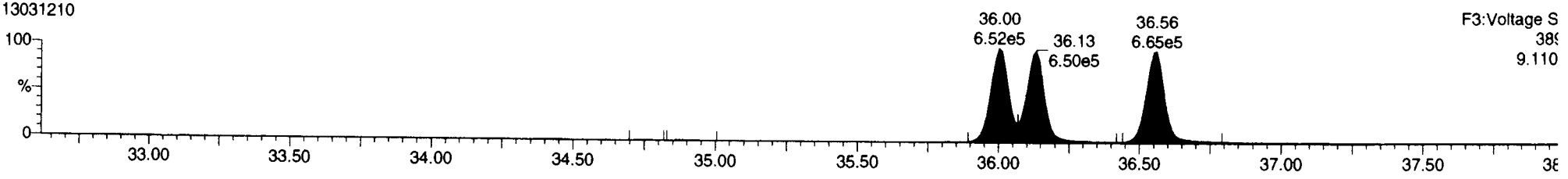
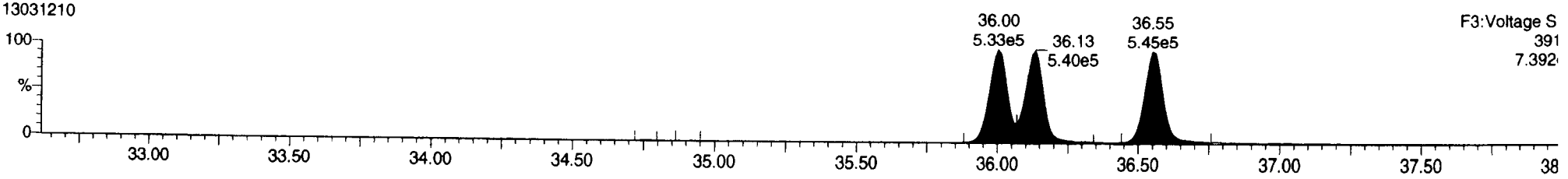


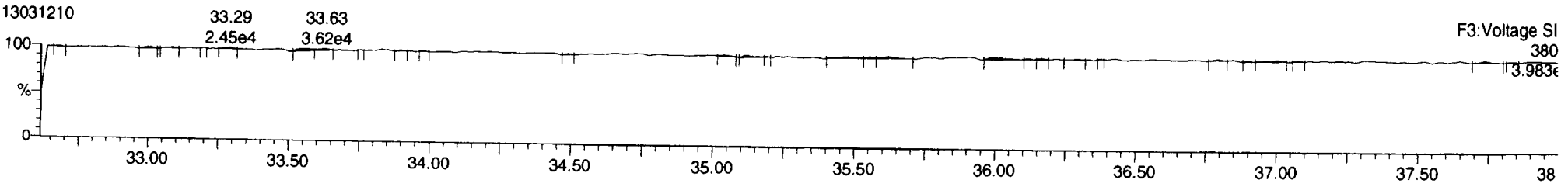
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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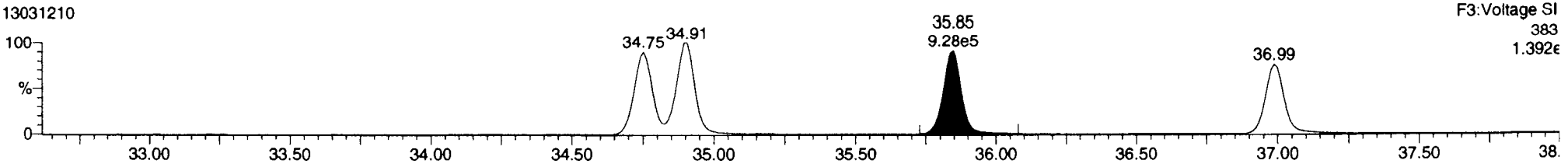
13C-234678-HxCDF



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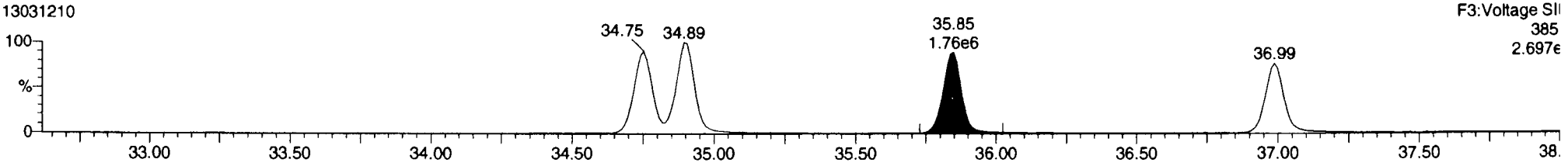
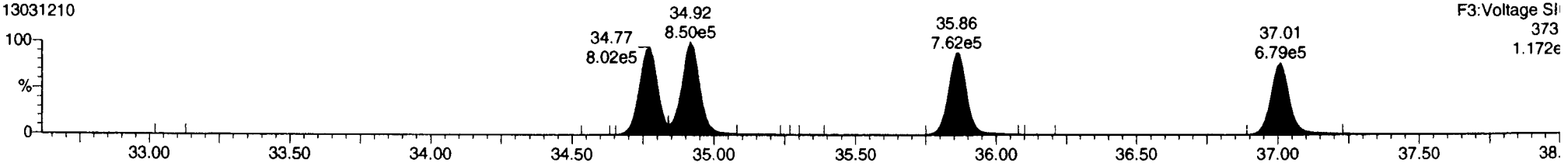
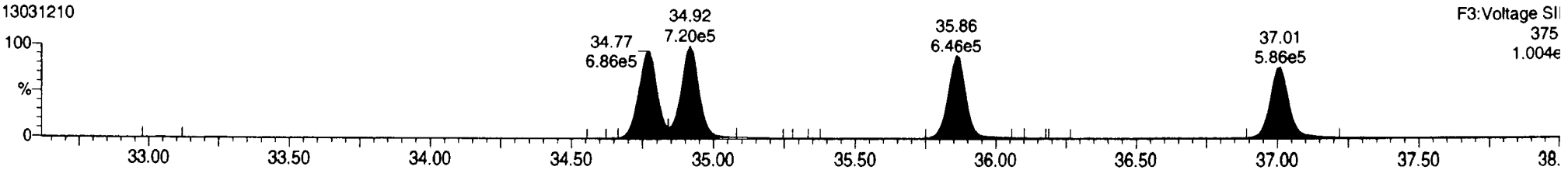


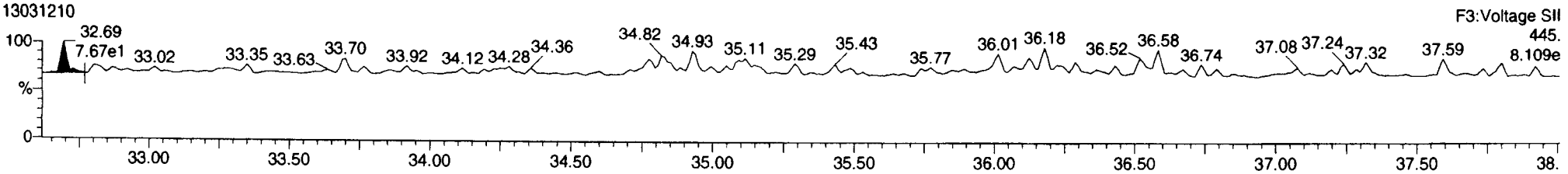
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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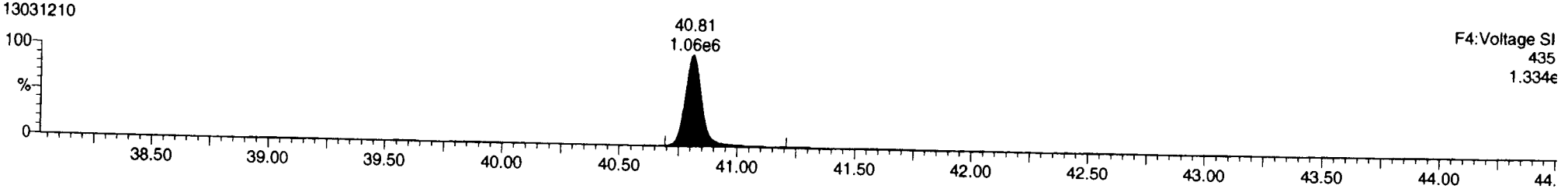
13C-1234678-HpCDD

13031210



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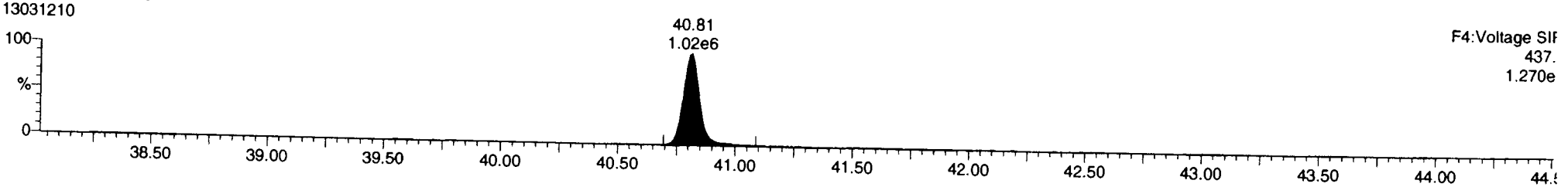
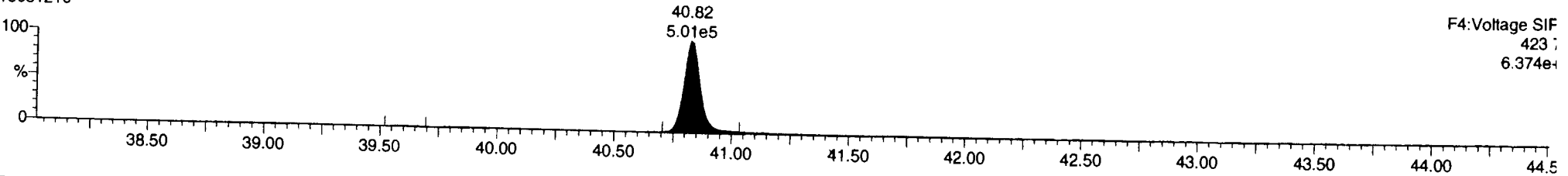
13031210



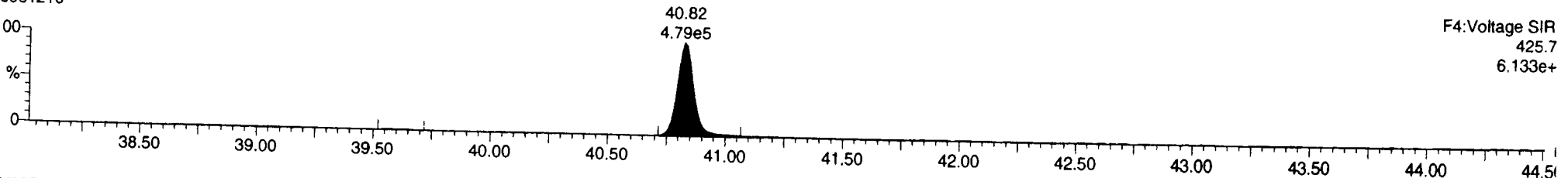
Total-heptadioxins

13031210



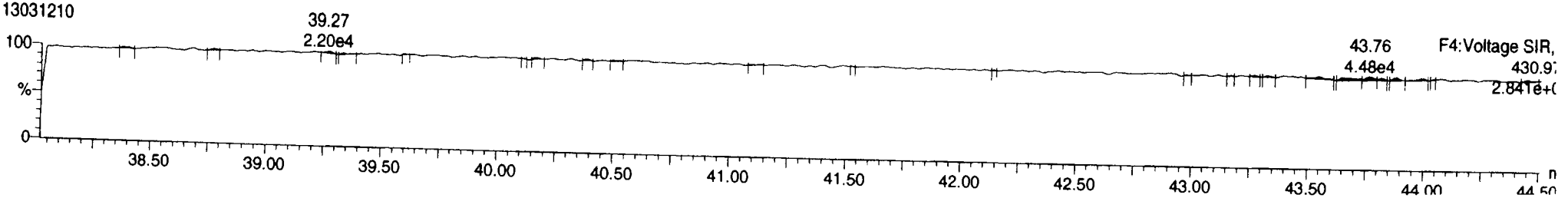
Total-heptadioxins

13031210



FUNCTION4 PFK

13031210



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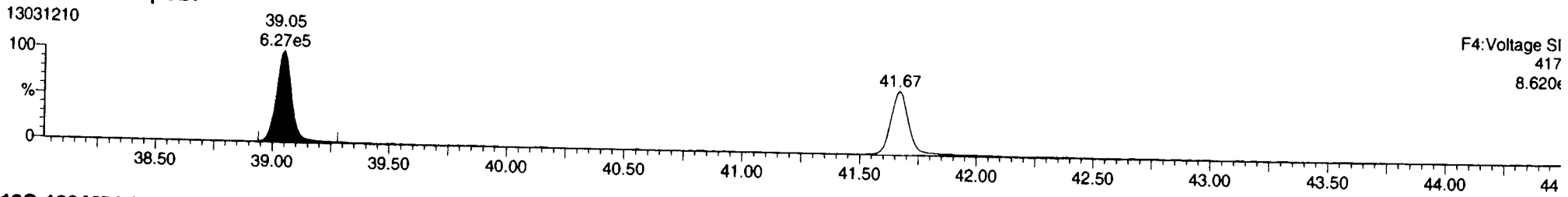
13C-1234678-HpCDF



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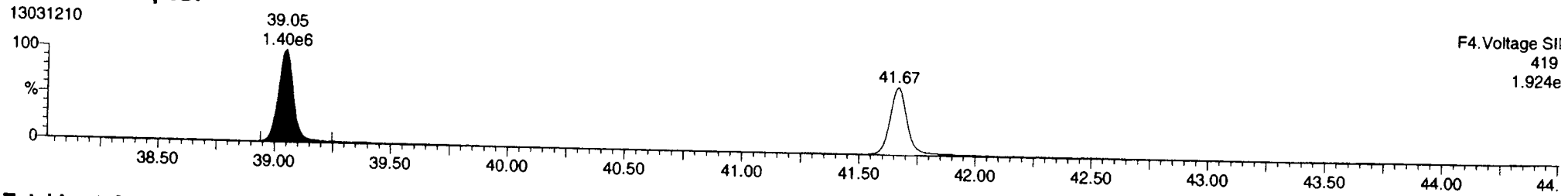
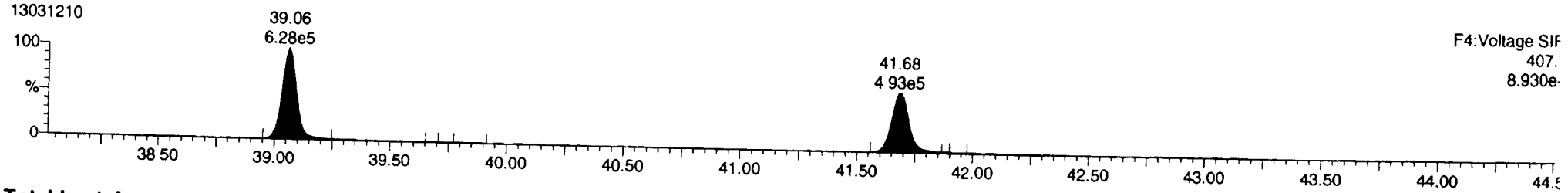


Total-heptafurans



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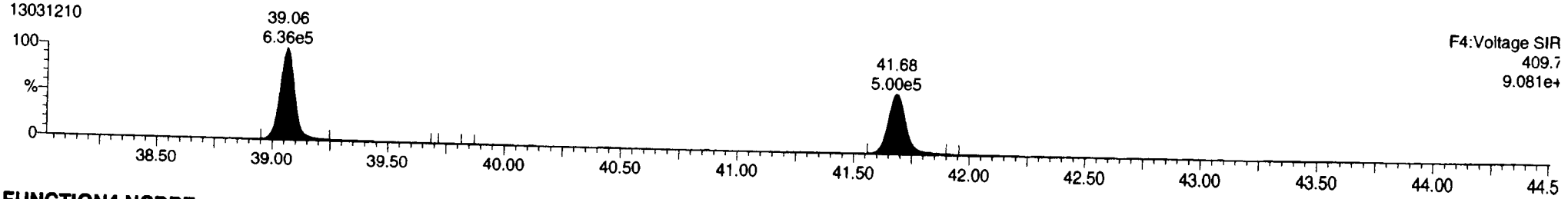

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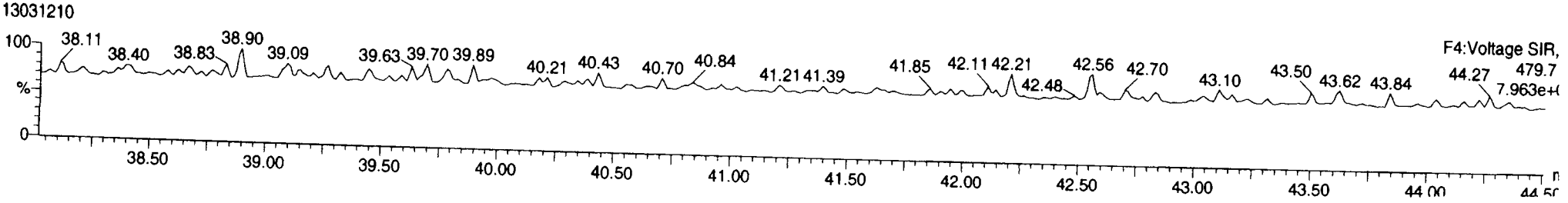

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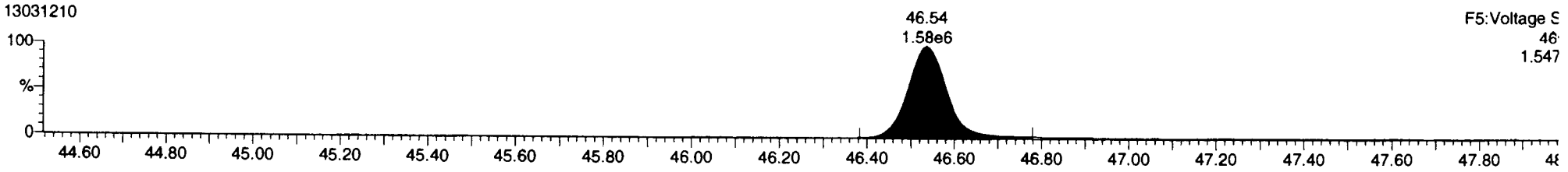

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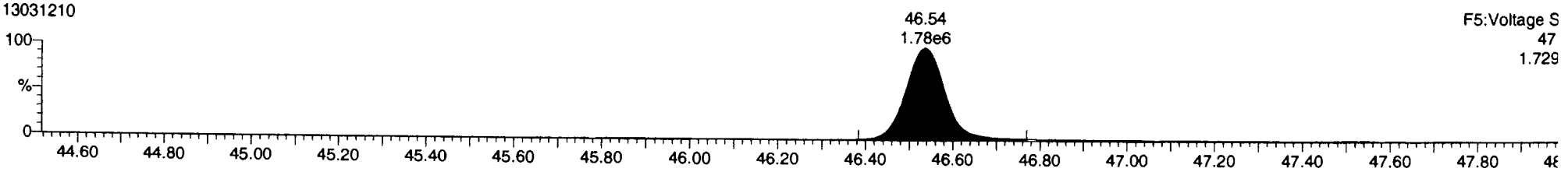

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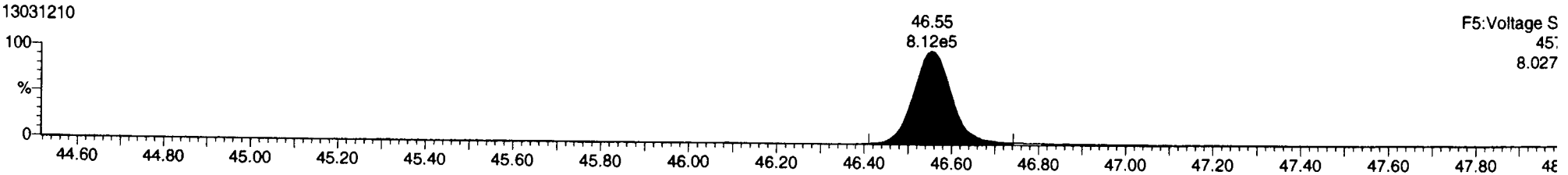

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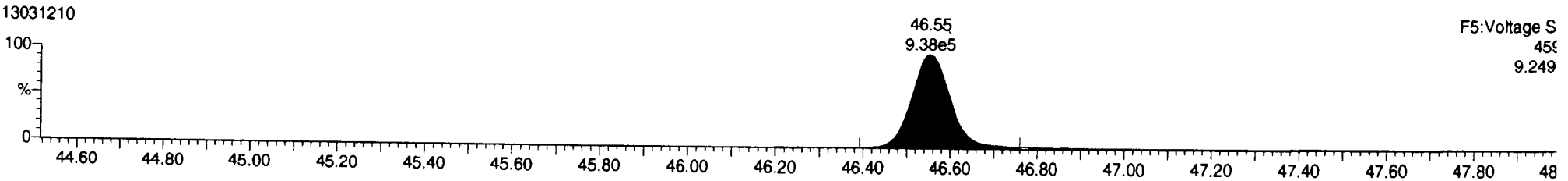

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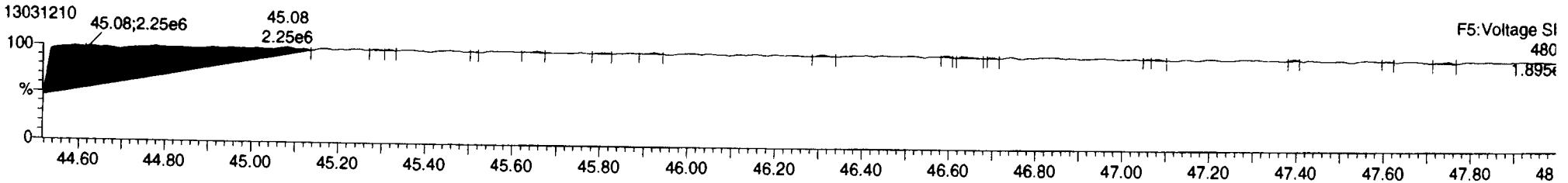

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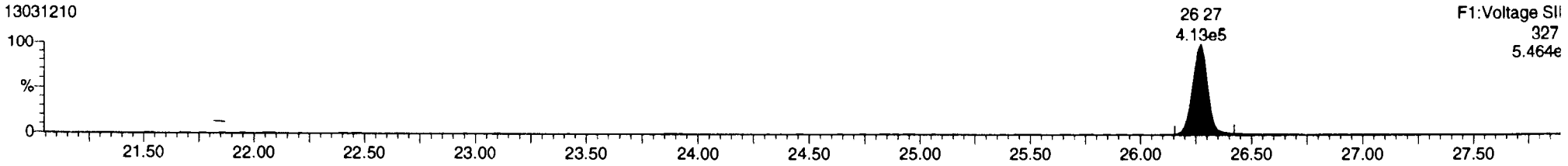
37CL-2378-TCDD



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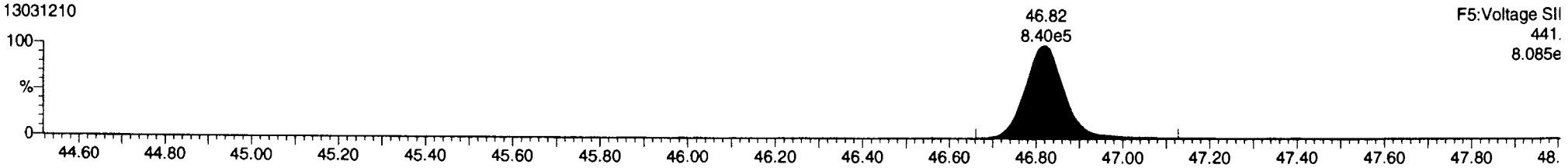

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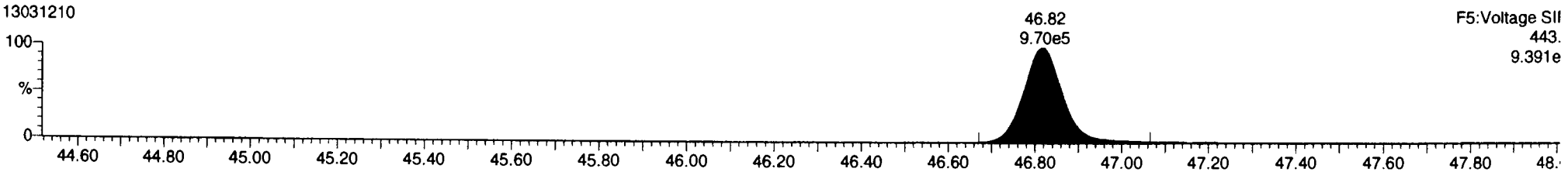

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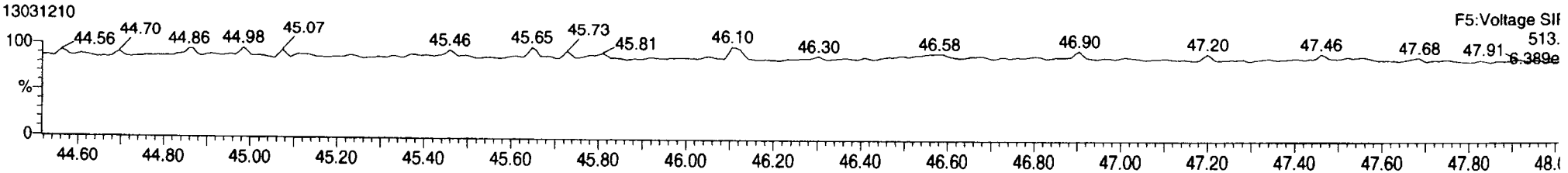

Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WN27, WN31 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 3/12/13 Analysis Start Date: 5/7/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	Y / N / ✓	Signal / Noise ≥ 2.5?	Y / N / ✓
TCDD / TCDF Resolution ≤ 25%	Y / N / ____	Extraction STD Limits Met?	Y / N / ✓
PCDF Windows Verified	Y / N / ✓	Cleanup STD Limits Met?	Y / N / ✓
CCV Meets %D Limits?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCV Ion Ratios within Limits?	Y / N / ✓	OPR Recovery Limits Met?	Y / N / ✓
CCV RRT within Limits?	Y / N / ✓	Values Exceeding Curve Range?	Y / N / ✓
Manual Integrations for Samples?	Y / N / ✓	Samples Diluted?	Y (N) CCDI
Special Analysis Request?	Y / N / ____	Duplicate Sample RPD ≤ 25%?	NA / ____

Detail problems, corrective actions and/or other pertinent information below:

In closing ccal, TCDF high by 3% and PF label high by 1% from method limits. But closing cals NOT required by method. For info only.

(Review 1)Analyst: [signature] **Date:** 5/8/13

(Review 2)Reviewer: [signature] **Date:** 5/9

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 5/7/13 Analysis: Dioxins Analyst: JL

GC Program: 8290C Column No: I7819 Column Type: DX-Dioxin 2

Inj Vol: 1ul Instrument Tune (IPR): B0506_1-5 Detector Voltage: 350

Resolution Check Files: 14:41, 02:17 Curve Date:

IS/SS	Ical/Ccal	LCS/ICV
I8144	I7708	
	I7712	

1	07-May-13	14:44:08	13050702	CS3
2	07-May-13	15:43:15	13050703	ISC01
3	07-May-13	16:33:25	13050704	WM89MBS
4	07-May-13	17:25:39	13050705	WM89OPR
5	07-May-13	18:18:00	13050706	WM89SRM
6	07-May-13	19:10:15	13050707	WM89A
7	07-May-13	20:02:41	13050708	WM89B
8	07-May-13	20:54:56	13050709	WM89C
9	07-May-13	21:47:16	13050710	WM89D
10	07-May-13	22:39:31	13050711	WM89E
11	07-May-13	23:32:06	13050712	WN27A
12	08-May-13	00:24:21	13050713	WN31A
13	08-May-13	01:16:42	13050714	CS3
14	08-May-13	02:17:10	13050715	0 SI
15	08-May-13	03:07:28	13050716	ACID SI
16	08-May-13	03:59:43	13050717	BASIC SI

JL 5/8/13

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

Printed: Tuesday, May 07, 2013 14:41:04 Pacific Daylight Time

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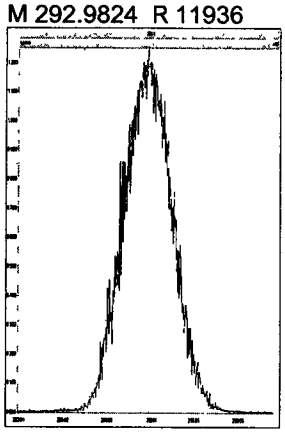

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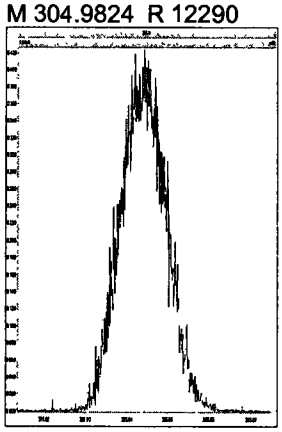

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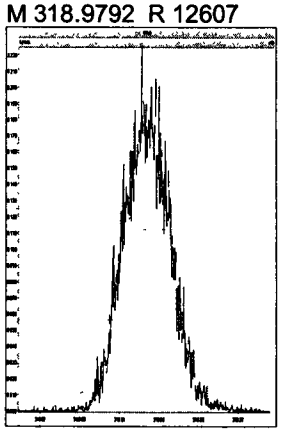

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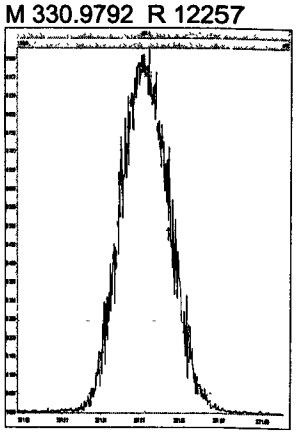

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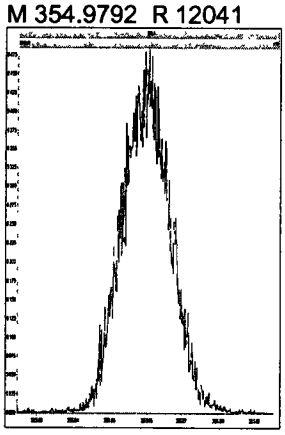

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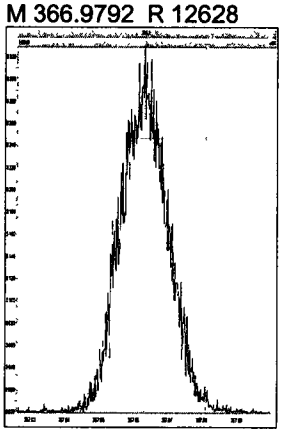

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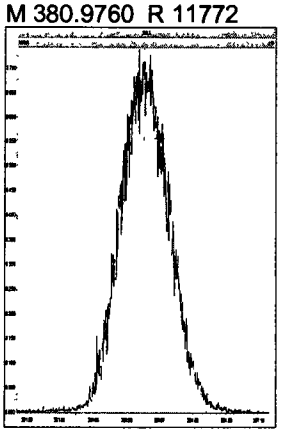

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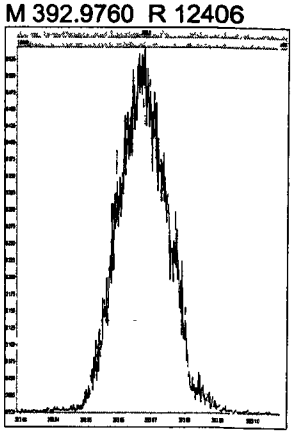

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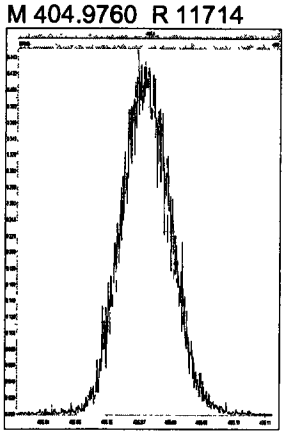

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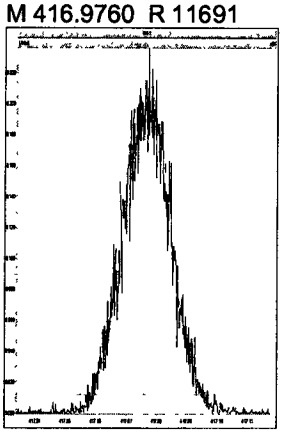

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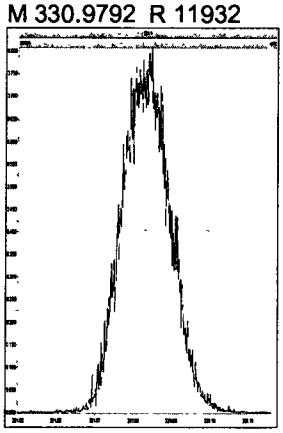

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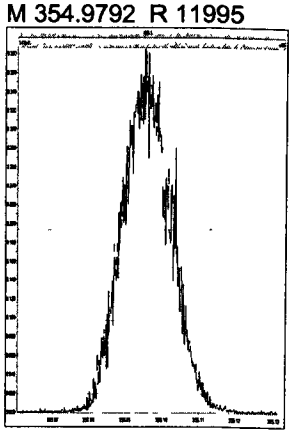

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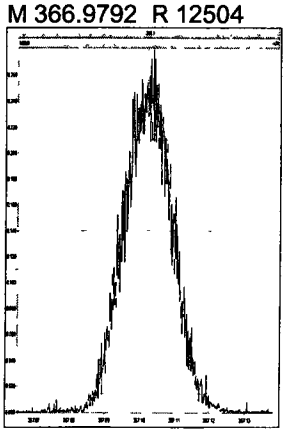

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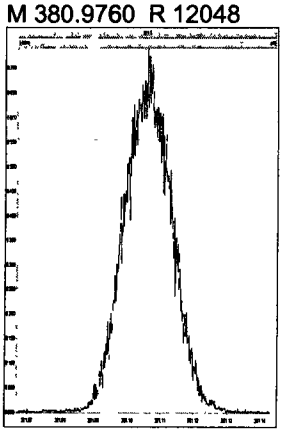

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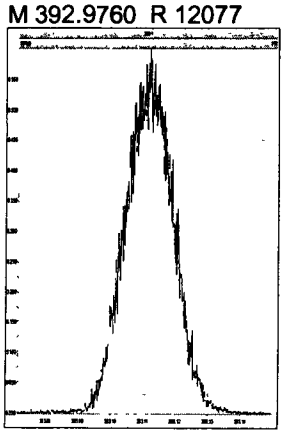

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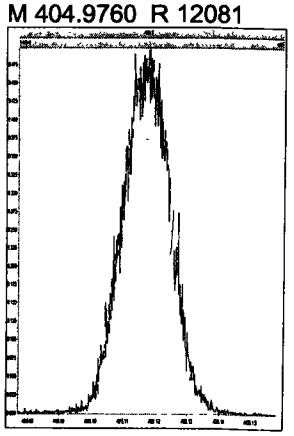

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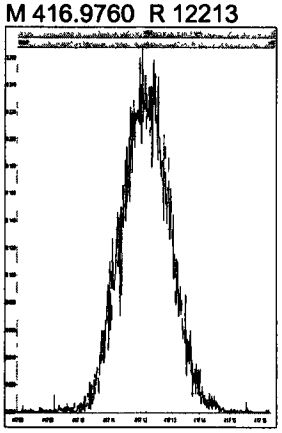

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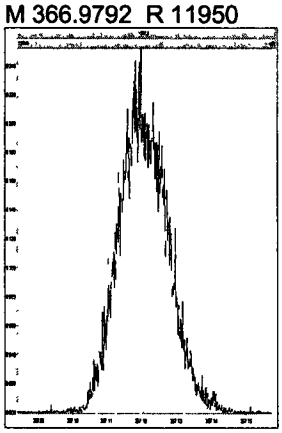

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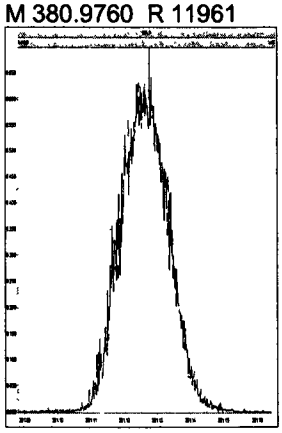

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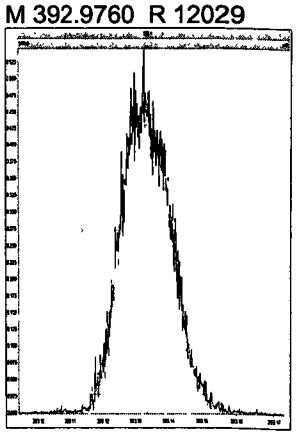

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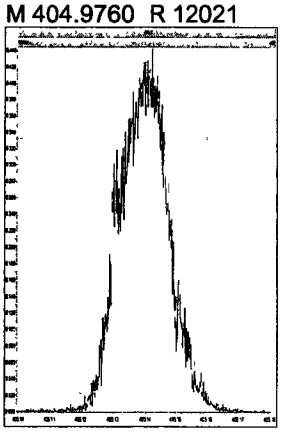

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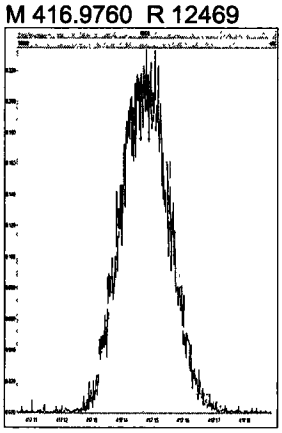

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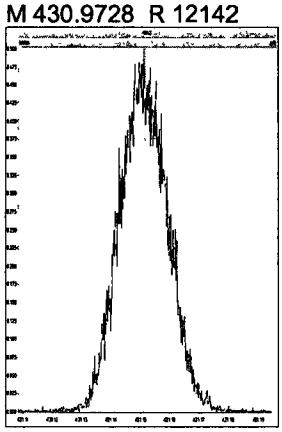

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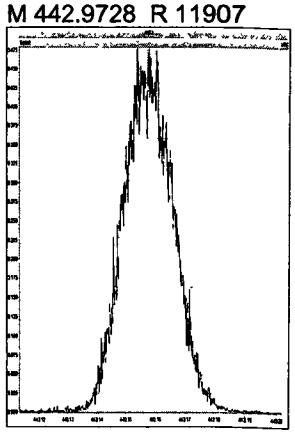

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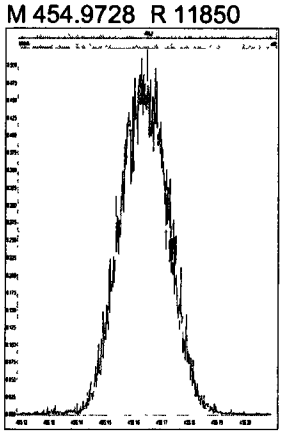

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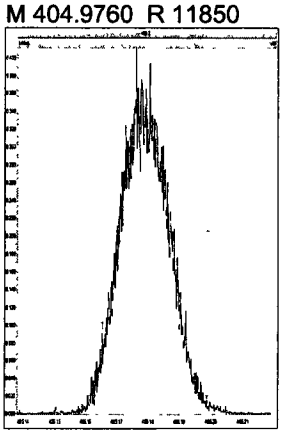

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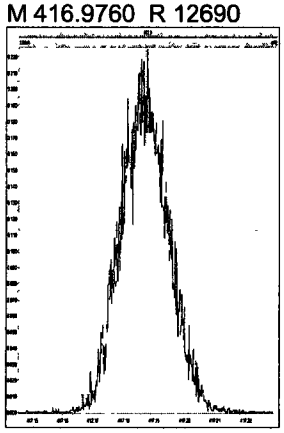

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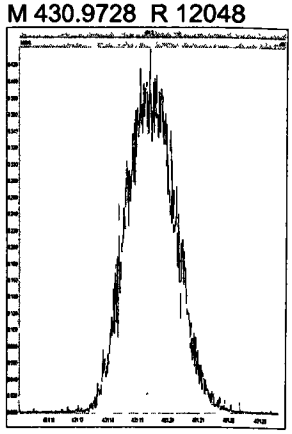

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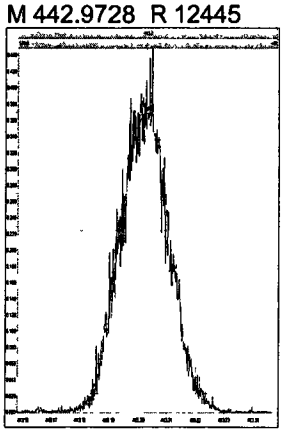

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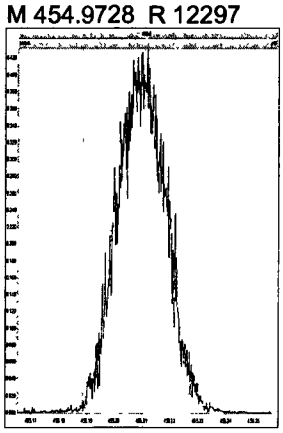
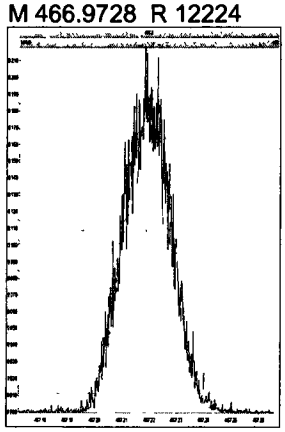
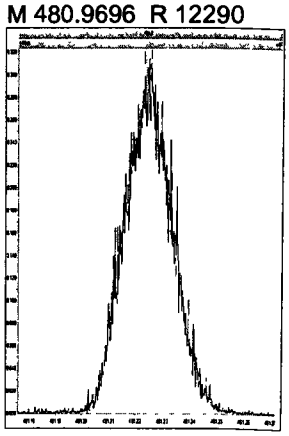


M 466.9728 R 12224



M 480.9696 R 12290



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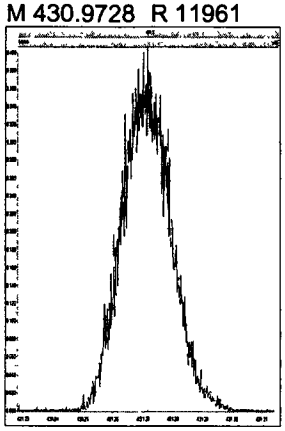
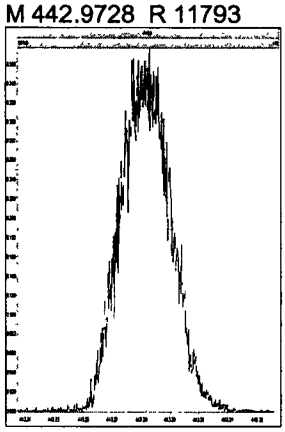
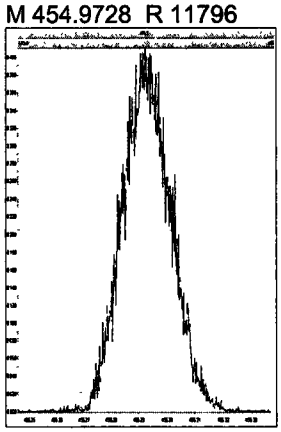
M 430.9728 R 11961



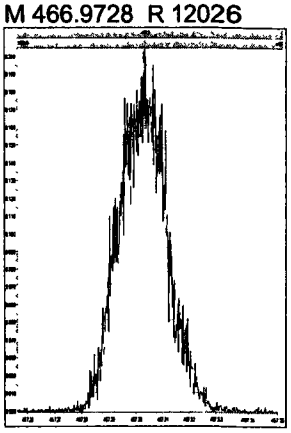
M 442.9728 R 11793



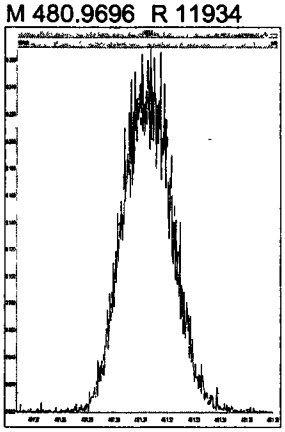
M 454.9728 R 11796



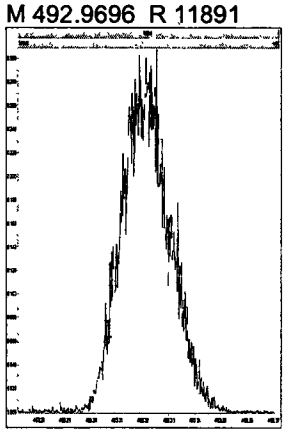
M 466.9728 R 12026



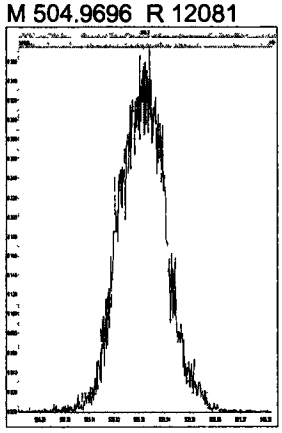
M 480.9696 R 11934



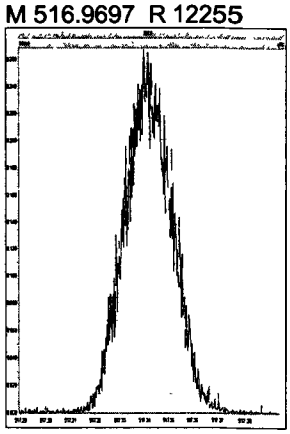
M 492.9696 R 11891

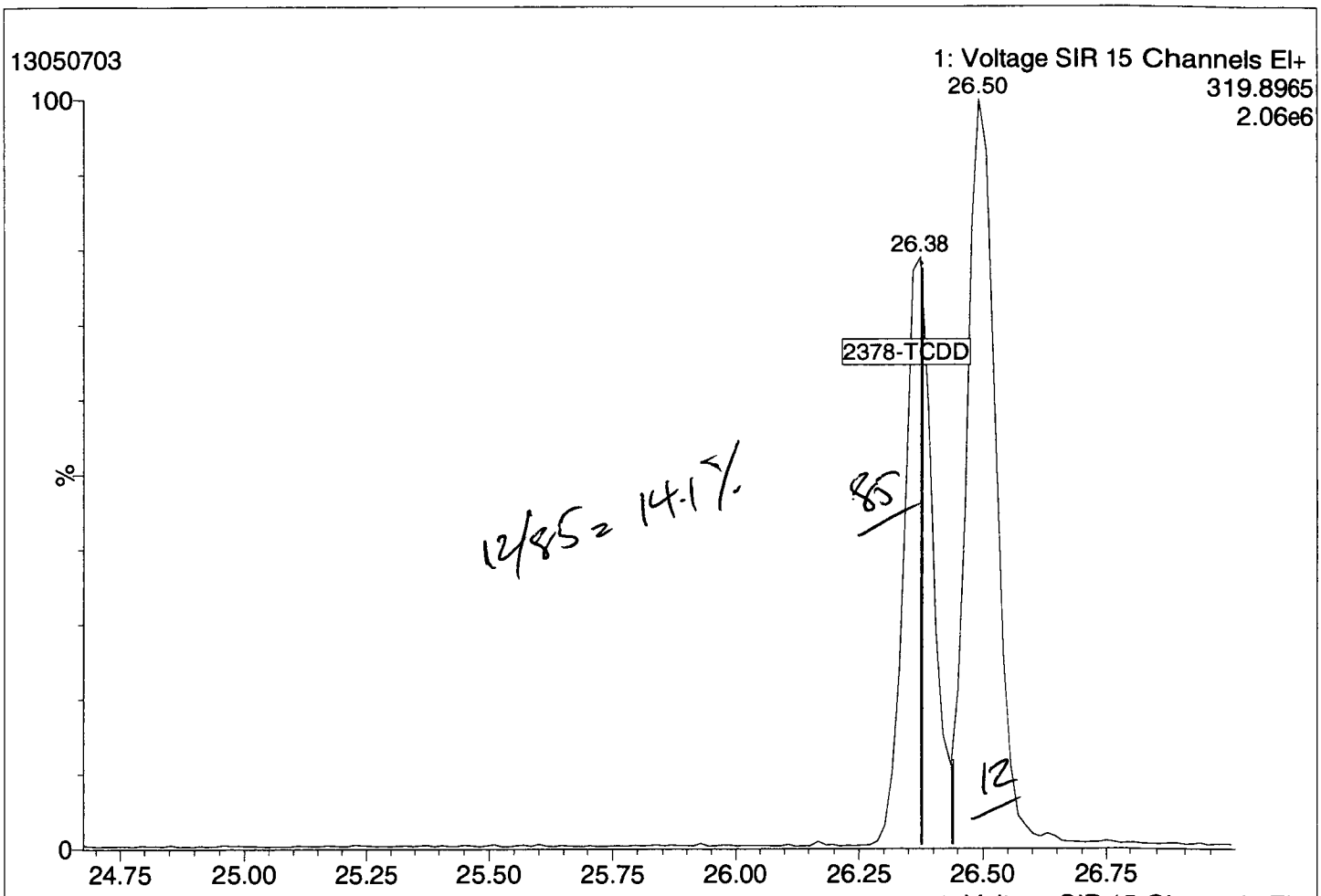


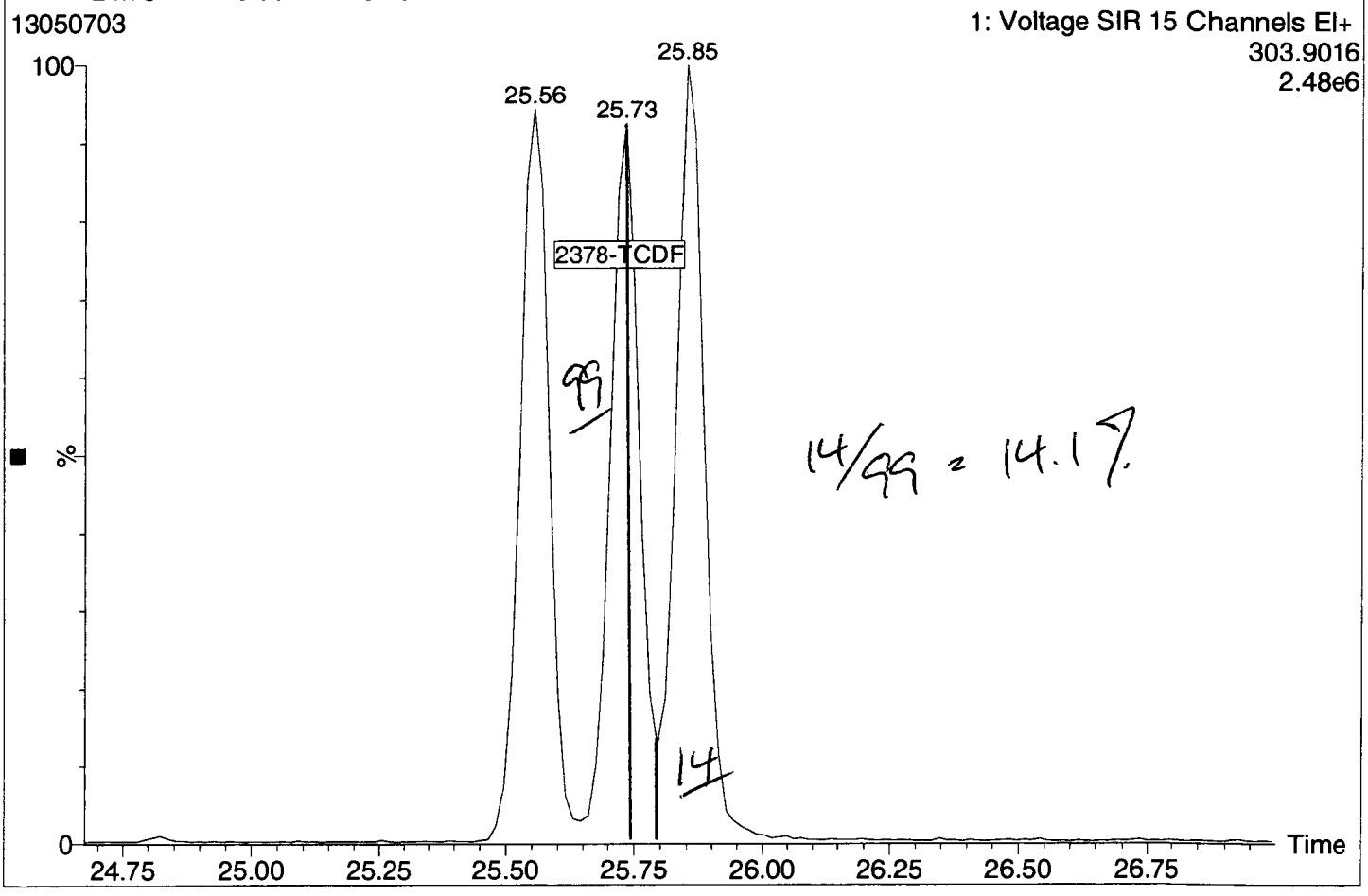
M 504.9696 R 12081

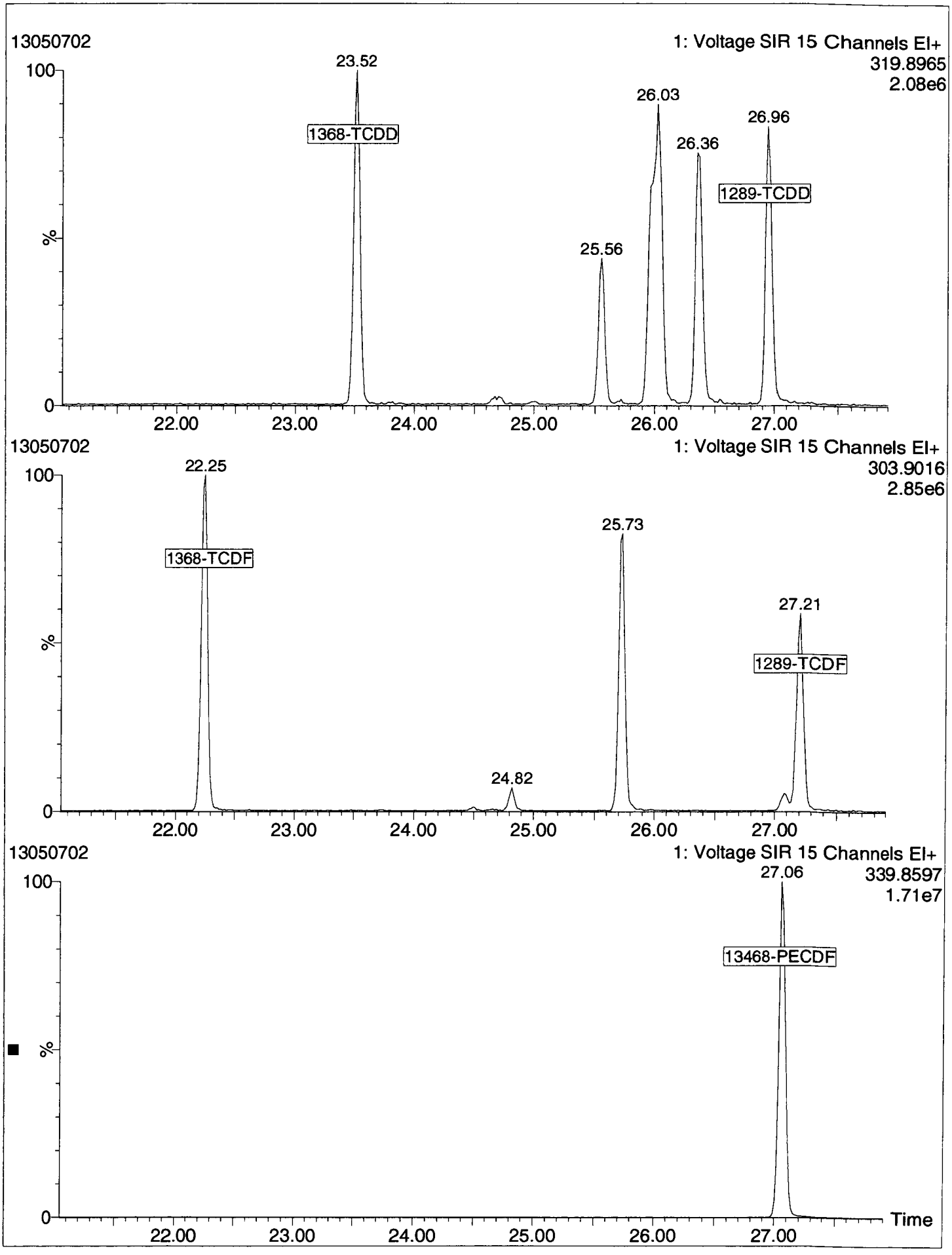


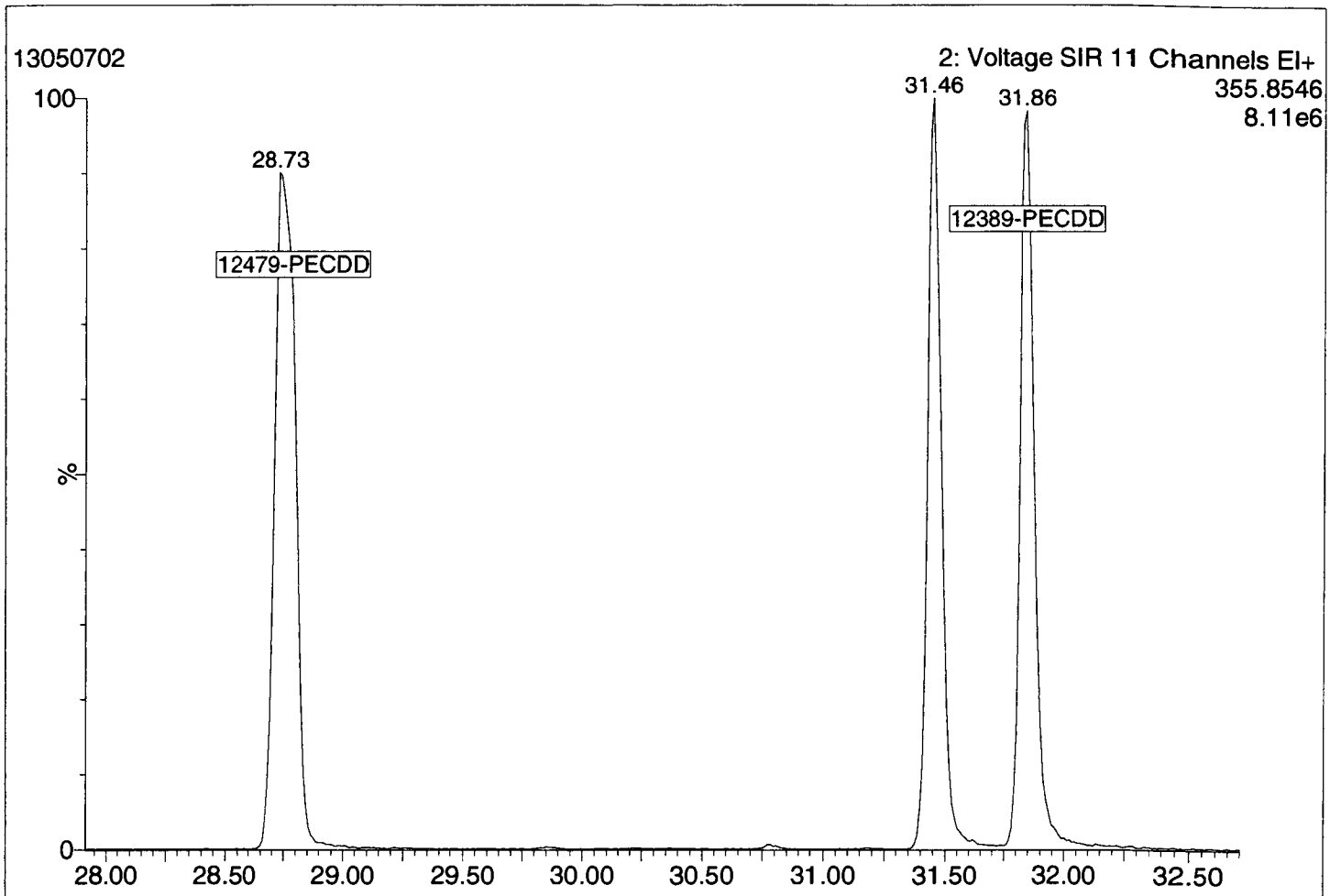
M 516.9697 R 12255

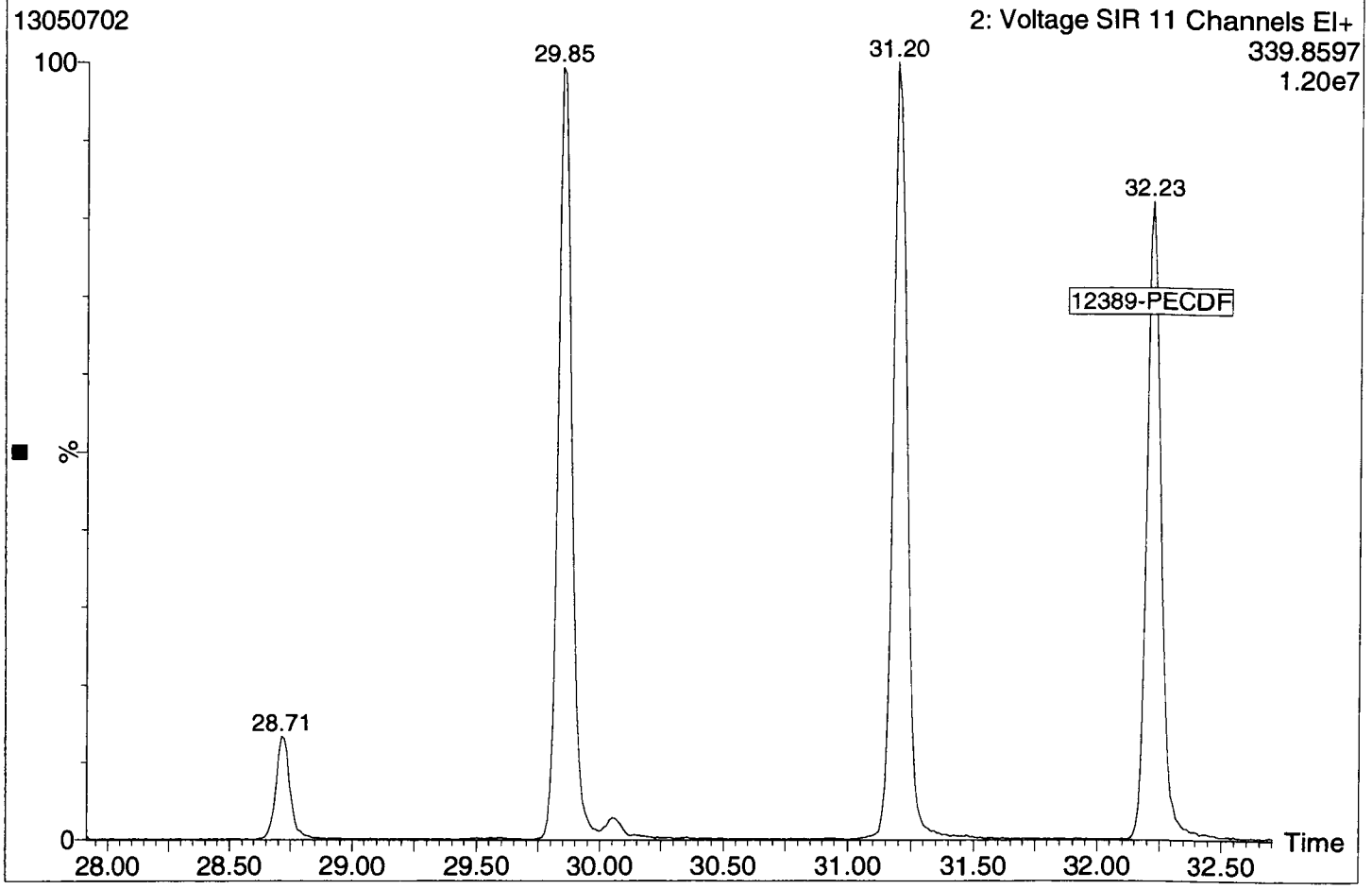


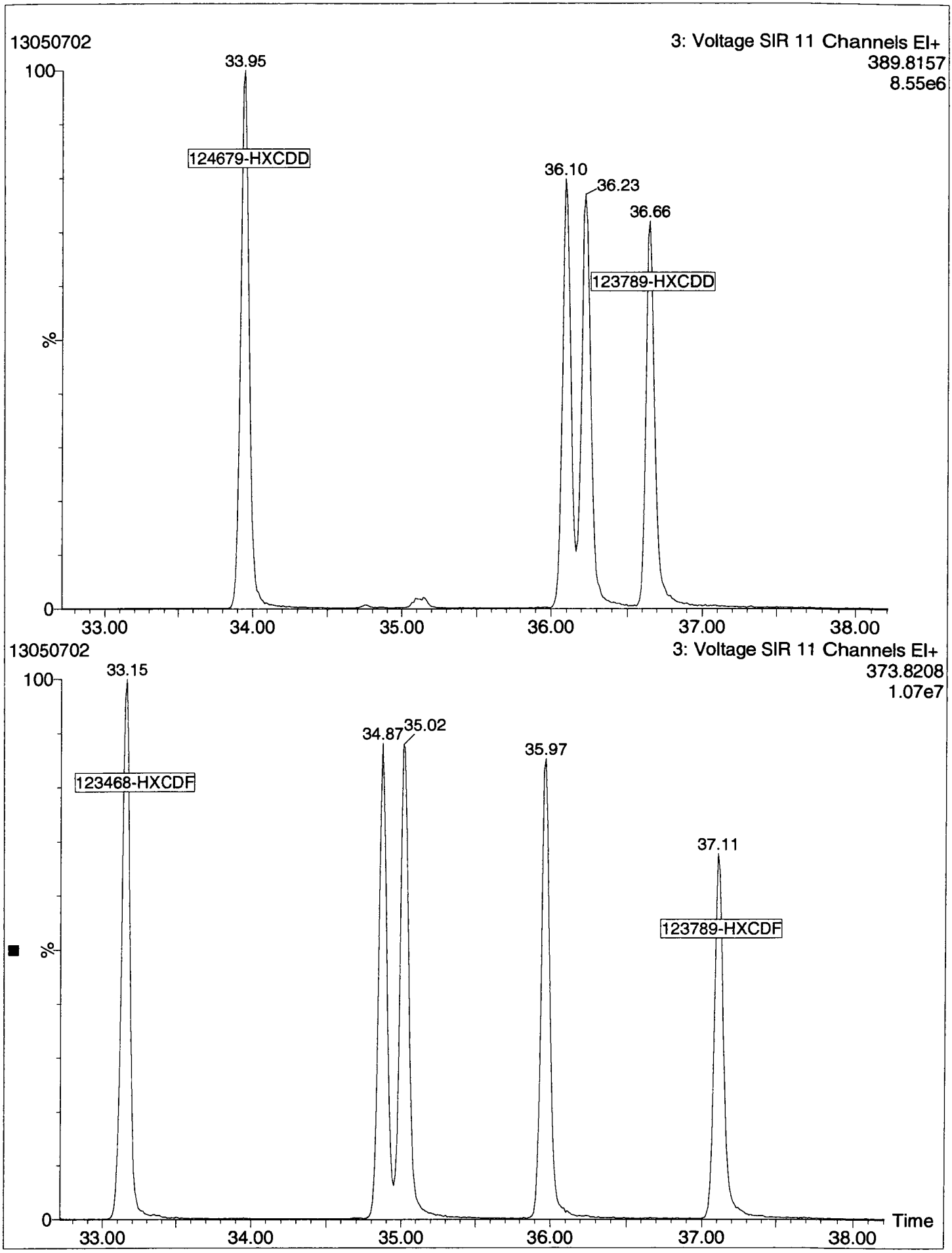

13050703
1: Voltage SIR 15 Channels El+
26.50
319.8965
2.06e6
100
26.38
2378-TCDD
%
12/85 = 14.1%
85
12
0
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75

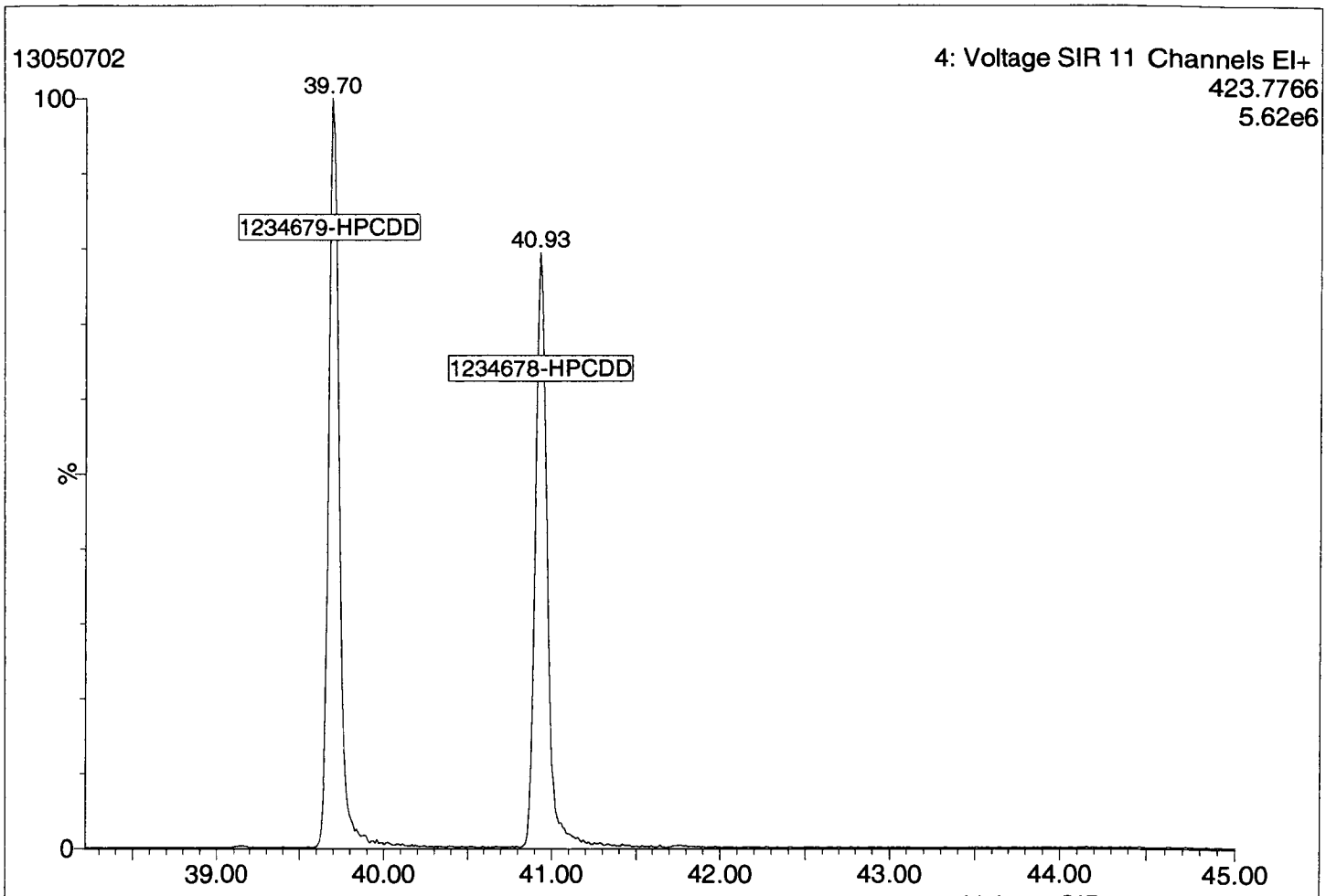

13050703
1: Voltage SIR 15 Channels El+
303.9016
2.48e6
25.85
100
25.56
25.73
2378-TCDF
%
99
14/99 = 14.1%
14
0
Time
24.75
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75

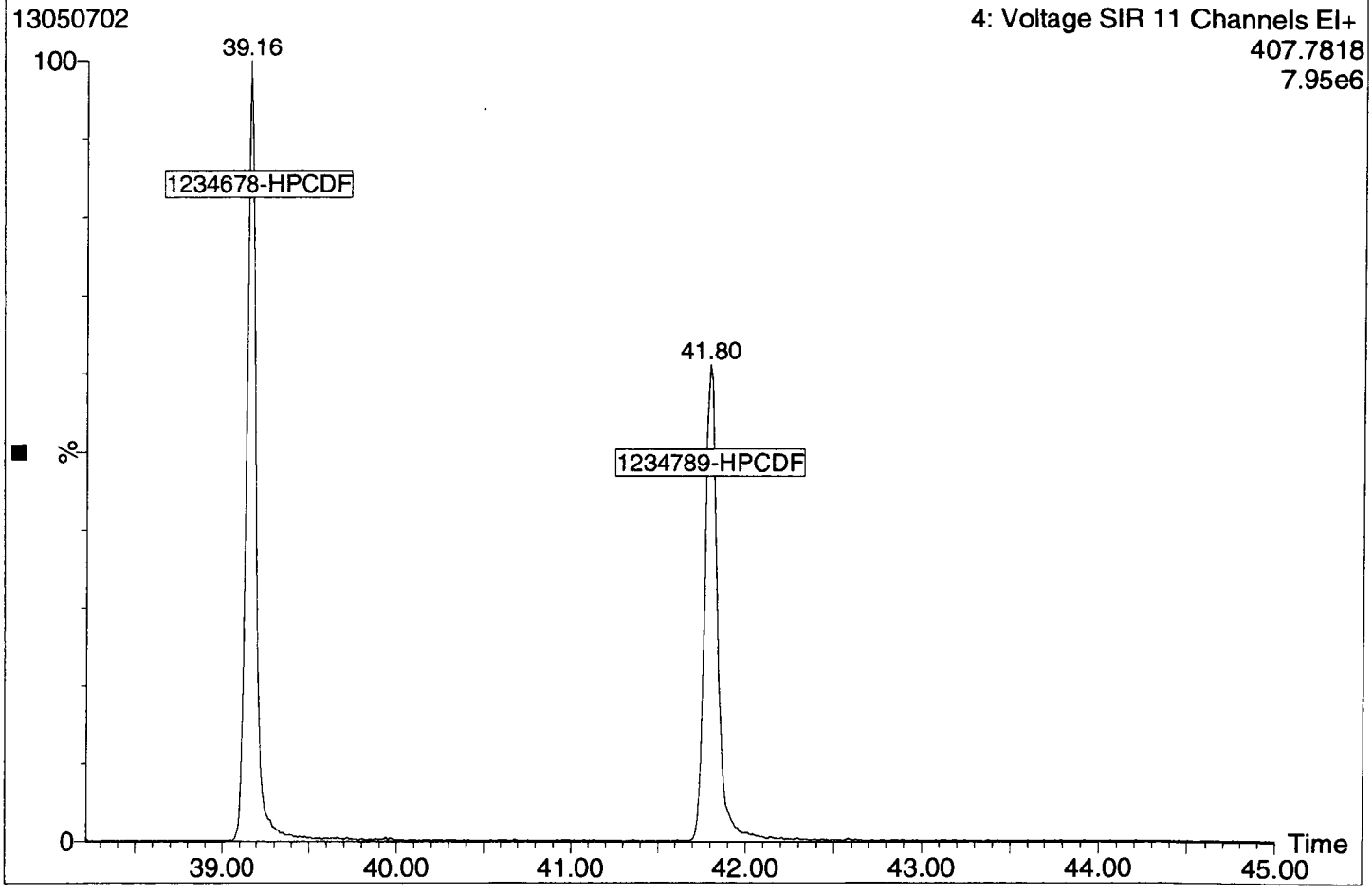

13050702
1: Voltage SIR 15 Channels EI+
319.8965
2.08e6
100
%
0
23.52
1368-TCDD
26.03
26.96
26.36
1289-TCDD
25.56
22.00
23.00
24.00
25.00
26.00
27.00
13050702
1: Voltage SIR 15 Channels EI+
303.9016
2.85e6
100
%
0
22.25
1368-TCDF
25.73
27.21
1289-TCDF
24.82
22.00
23.00
24.00
25.00
26.00
27.00
13050702
1: Voltage SIR 15 Channels EI+
339.8597
1.71e7
100
%
0
27.06
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00


13050702
2: Voltage SIR 11 Channels EI+
355.8546
8.11e6
100
%
0
28.73
12479-PECDD
31.46
31.86
12389-PECDD
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50


13050702
2: Voltage SIR 11 Channels EI+
339.8597
1.20e7
100
%
0
28.71
29.85
31.20
32.23
12389-PECDF
Time
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50


13050702
3: Voltage SIR 11 Channels EI+
389.8157
8.55e6
100
33.95
124679-HXCDD
36.10
36.23
36.66
123789-HXCDD
%
0
33.00
34.00
35.00
36.00
37.00
38.00
13050702
3: Voltage SIR 11 Channels EI+
373.8208
1.07e7
100
33.15
123468-HXCDF
34.87
35.02
35.97
37.11
123789-HXCDF
%
0
Time
33.00
34.00
35.00
36.00
37.00
38.00


13050702
4: Voltage SIR 11 Channels EI+
423.7766
5.62e6
39.70
1234679-HPCDD
40.93
1234678-HPCDD
100
%
0
39.00
40.00
41.00
42.00
43.00
44.00
45.00


13050702
4: Voltage SIR 11 Channels EI+
407.7818
7.95e6
39.16
1234678-HPCDF
41.80
1234789-HPCDF
100
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Dataset: P:\DIOXIN8290.PRO\130507OPEN.qld
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Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

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Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	Ratio	Lib Ratio	Ratio Flag	S/N	EMPC?	Ion1	Ion2
2378-TCDF	25.735	1.001	1.45e5	1.90e5	0.763	0.764	0.770	980.3	NO	11.801	11.801
12378-PeCDF	29.852	1.000	7.75e5	5.04e5	0.836	1.538	1.550	3146.6	NO	53.917	53.917
23478-PeCDF	31.201	1.000	7.59e5	4.94e5	0.851	1.535	1.550	3117.7	NO	54.723	54.723
123478-HxCDF	34.873	1.001	5.98e5	4.86e5	1.017	1.230	1.240	1402.3	NO	53.266	53.266
234678-HxCDF	35.969	1.001	6.01e5	4.82e5	1.027	1.247	1.240	1381.2	NO	54.082	54.082
123678-HxCDF	35.015	1.000	6.47e5	5.31e5	1.013	1.218	1.240	1420.7	NO	52.150	52.150
123789-HxCDF	37.109	1.000	5.11e5	4.19e5	0.929	1.220	1.240	1092.0	NO	53.738	53.738
1234678-HpCDF	39.159	1.000	5.12e5	5.10e5	1.151	1.004	1.050	2409.7	NO	52.865	52.865
1234789-HpCDF	41.801	1.000	3.91e5	3.89e5	1.149	1.006	1.050	1523.5	NO	53.308	53.308
OCDF	46.966	1.006	6.65e5	7.29e5	0.963	0.912	0.890	1391.0	NO	119.205	119.205
2378-TCDD	26.362	1.001	1.06e5	1.43e5	0.980	0.743	0.770	627.6	NO	10.619	10.619
12378-PeCDD	31.464	1.001	5.24e5	3.35e5	0.948	1.565	1.550	2271.1	NO	51.501	51.501
123478-HxCDD	36.101	1.000	4.33e5	3.52e5	0.941	1.229	1.240	1712.2	NO	51.514	51.514
123678-HxCDD	36.232	1.001	4.49e5	3.63e5	0.884	1.237	1.240	1669.4	NO	50.113	50.113
123789-HxCDD	36.660	1.012	4.18e5	3.56e5	0.870	1.176	1.240	1536.1	NO	51.501	51.501
1234678-HpCDD	40.935	1.000	3.49e5	3.34e5	0.948	1.044	1.050	1476.2	NO	52.414	52.414
OCDD	46.706	1.000	5.55e5	6.22e5	0.969	0.892	0.890	1917.7	NO	99.918	99.918
13C-2378-TCDF	25.705	1.006	1.63e6	2.09e6	1.318	0.777	0.770	7256.8	NO		114.303
13C-12378-PeCDF	29.841	1.168	1.73e6	1.11e6	1.026	1.554	1.550	4238.0	NO		112.058
13C-23478-PeCDF	31.190	1.221	1.63e6	1.06e6	0.966	1.548	1.550	4082.2	NO		112.794
13C-123478-HxCDF	34.851	0.951	6.82e5	1.32e6	1.123	0.517	0.510	2177.2	NO		110.201
13C-123678-HxCDF	35.005	0.955	7.43e5	1.49e6	1.216	0.499	0.510	2287.9	NO		113.488
13C-234678-HxCDF	35.947	0.981	6.60e5	1.29e6	1.106	0.512	0.510	2082.3	NO		109.040
13C-123789-HxCDF	37.098	1.013	6.47e5	1.22e6	0.995	0.532	0.510	1861.0	NO		115.817
13C-1234678-HpCDF	39.148	1.069	5.15e5	1.16e6	0.896	0.442	0.440	2345.1	NO		115.864
13C-1234789-HpCDF	41.779	1.140	3.85e5	8.88e5	0.693	0.433	0.440	1518.0	NO		113.539
13C-1234-TCDD	25.541	0.000	1.08e6	1.39e6	1.000	0.782	0.770	3319.7	NO		100.000
13C-2378-TCDD	26.347	1.032	1.05e6	1.35e6	0.961	0.784	0.770	3152.1	NO		101.148
13C-12378-PeCDD	31.442	1.231	1.08e6	6.83e5	0.703	1.576	1.550	3160.7	NO		101.346
13C-123478-HxCDD	36.090	0.985	9.14e5	7.06e5	1.016	1.293	1.240	4983.2	NO		98.631
13C-123678-HxCDD	36.210	0.988	1.02e6	8.18e5	1.098	1.241	1.240	5245.3	NO		103.245
13C-1234678-HpCDD	40.913	1.117	7.04e5	6.71e5	0.828	1.050	1.050	2470.5	NO		102.695
13C-OCDD	46.688	1.274	1.14e6	1.29e6	0.770	0.881	0.890	3307.1	NO		195.129

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Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

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13C-123789-HxCDD	36.638	0.000	8.97e5	7.20e5	1.000	1.246	1.240	4719.3	NO		100.000
Total-tetrafurans			4.50e5		0.763						36.559
Total-penta1			1.06e6								68.938
Total-pentafurans			2.33e6		0.844						164.660
Total-hexafurans			3.05e6		0.997						276.586
Total-heptafurans			9.09e5		1.150						106.974
Total-Furans			8.46e6		0.970						772.936
Total-tetradioxins			5.97e5		0.980						58.077
Total-pentadioxins			1.80e6		0.948						178.053
Total-hexadioxins			1.87e6		0.898						219.560
Total-heptadioxins			7.47e5		0.948						113.110
Total-Dioxins			5.57e6		0.934						668.718
Total-TEQ			1.40e7								1441.655
37CL-2378-TCDD	26.362	1.032	2.64e5		0.999			1714.1			10.688
FUNCTION1 PFK			1.98e6								
FUNCTION2 PFK			3.97e5								0.000
FUNCTION3 PFK			4.82e5								0.000
FUNCTION4 PFK			1.02e6								
FUNCTION5 PFK			3.68e5								
FUNCTION1 HXCDPE			1.91e2								0.000
FUNCTION1 HPCDPE			2.34e3								0.000
FUNCTION2 HPCDPE			1.57e3								0.000
FUNCTION3 OCDPE			7.93e1								0.000
FUNCTION4 NCDPE			5.73e2								0.000
FUNCTION5 DCDPE			0.00e0								

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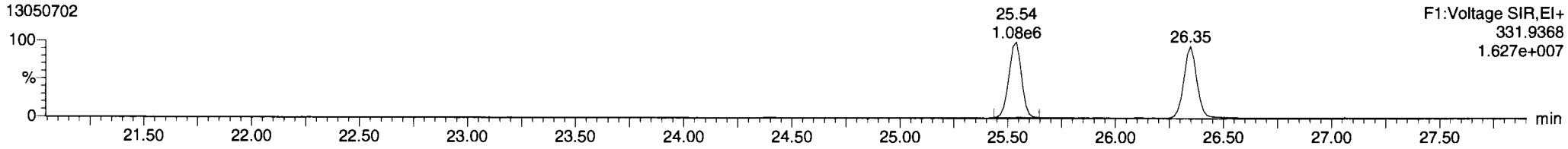
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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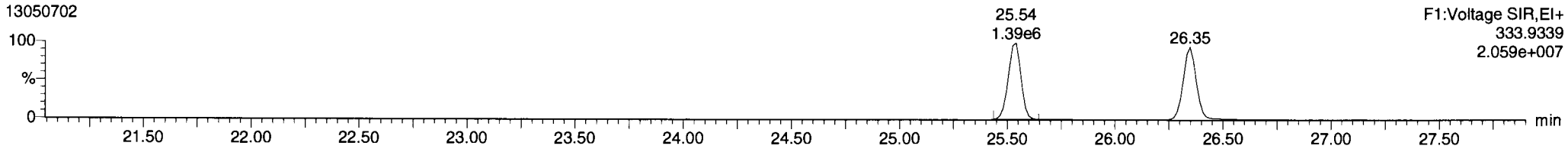

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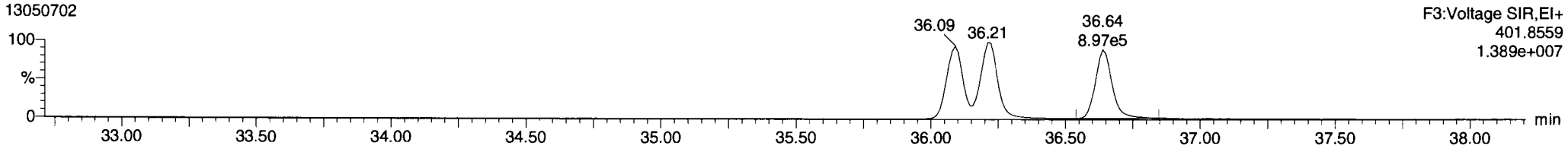

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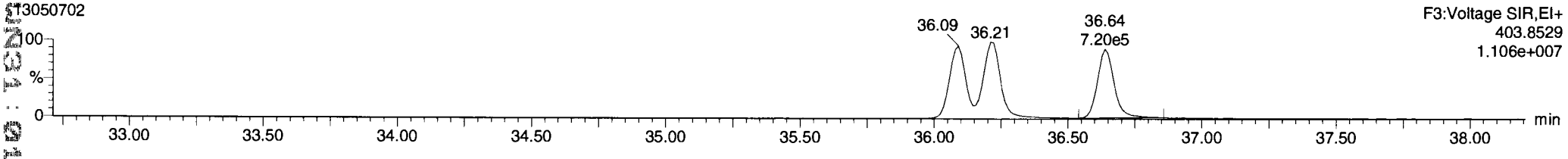

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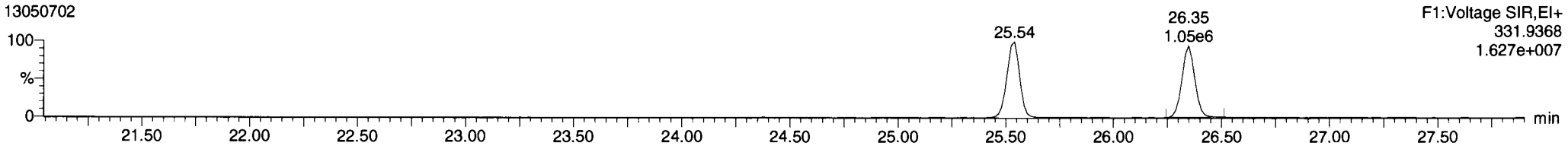
13C-2378-TCDD



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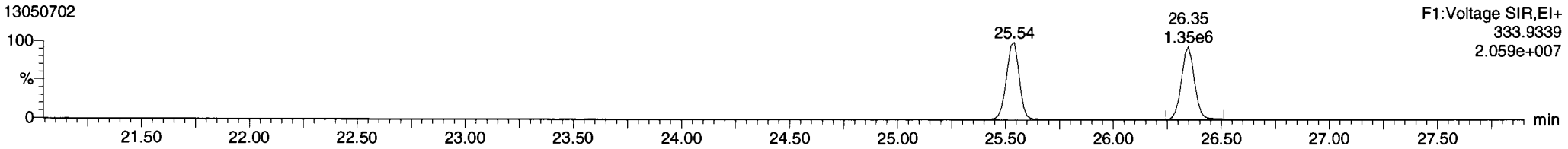
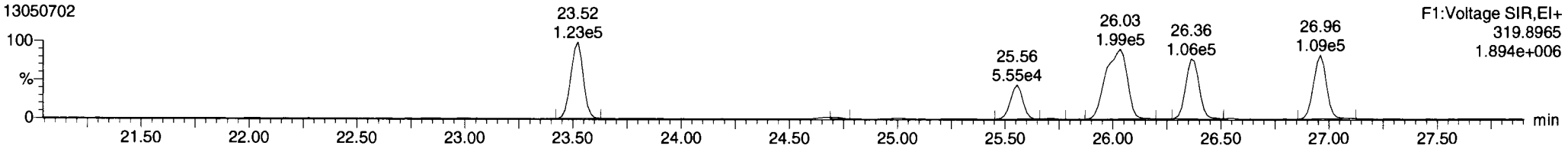
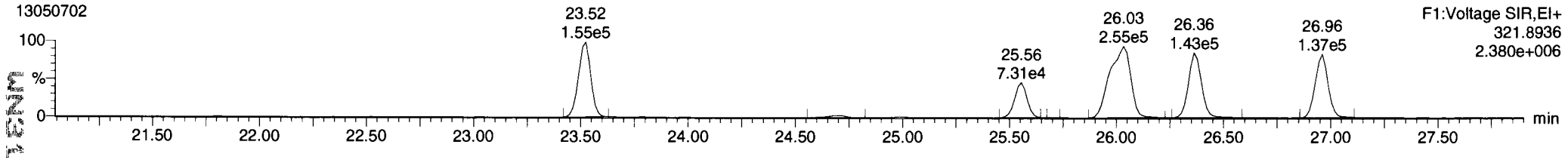


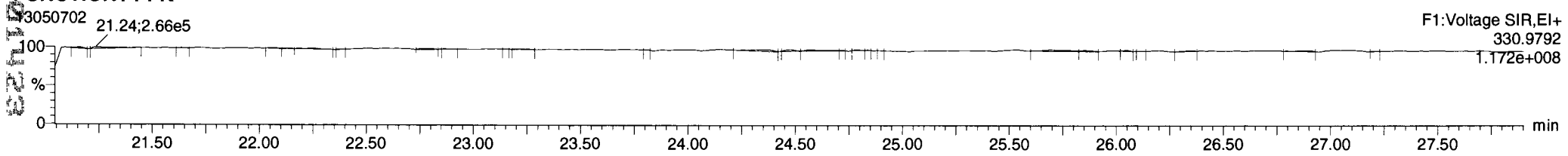
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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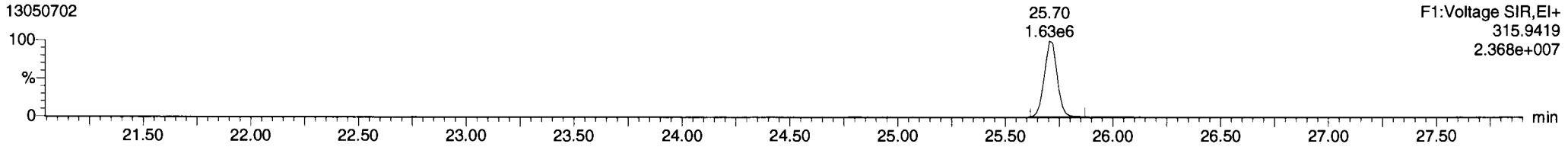
13C-2378-TCDF



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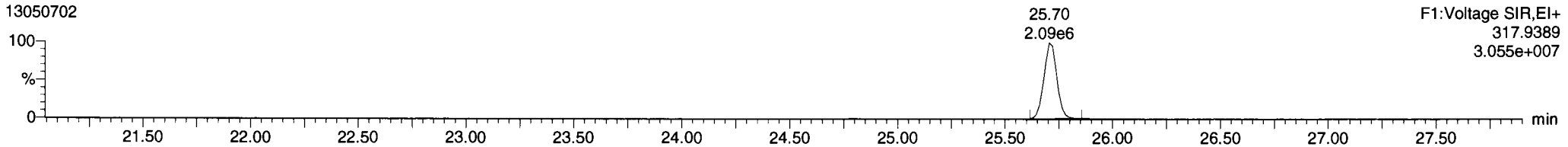
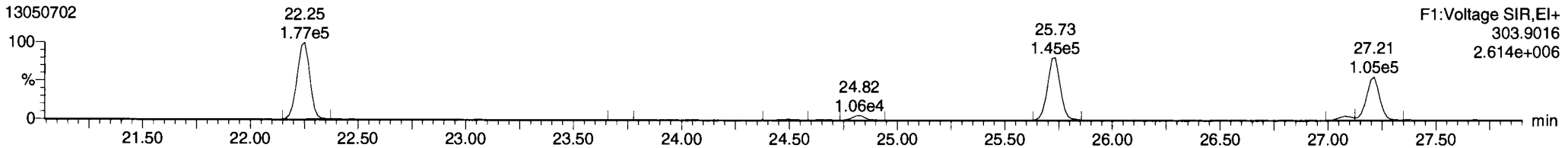
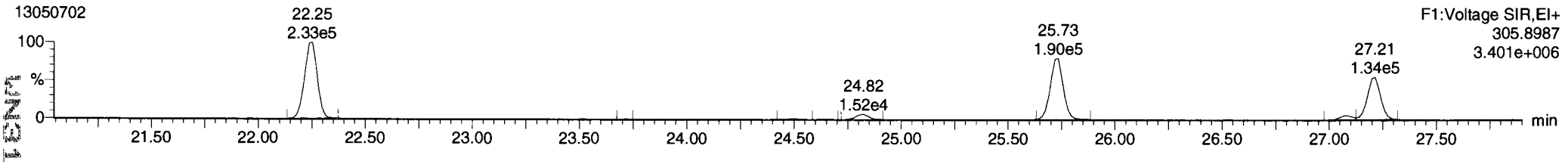


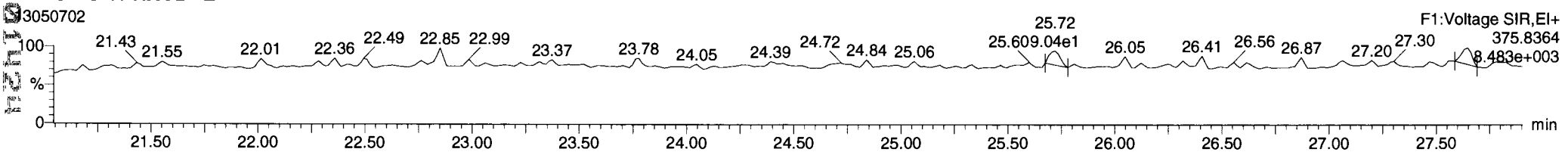
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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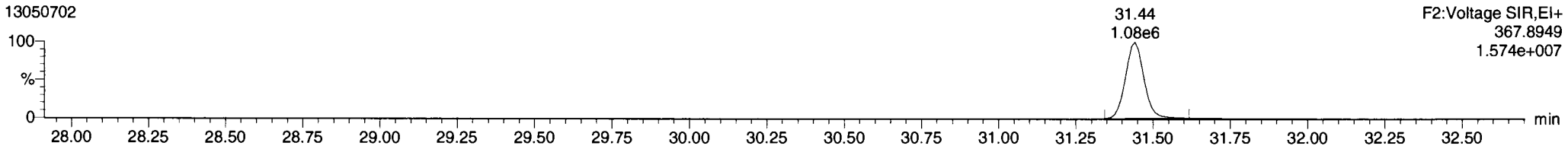
13C-12378-PeCDD



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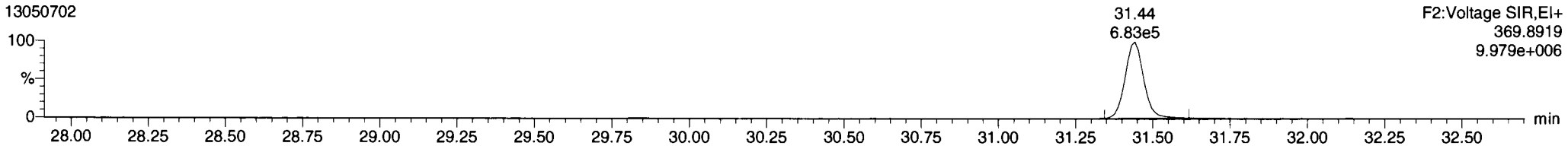
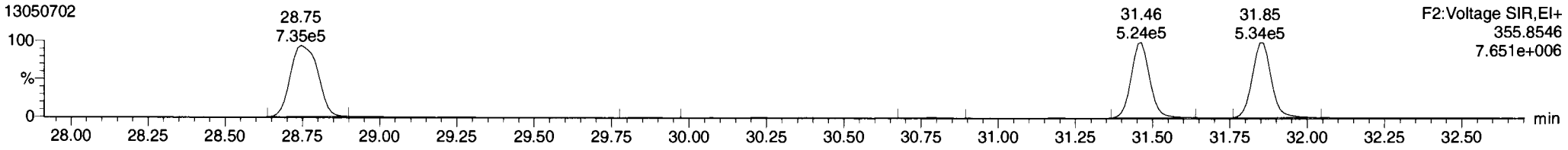
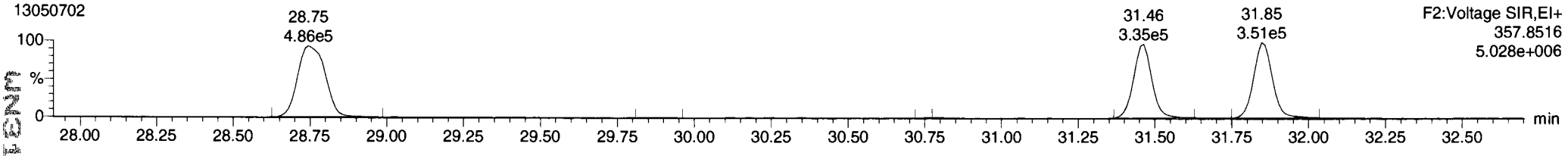


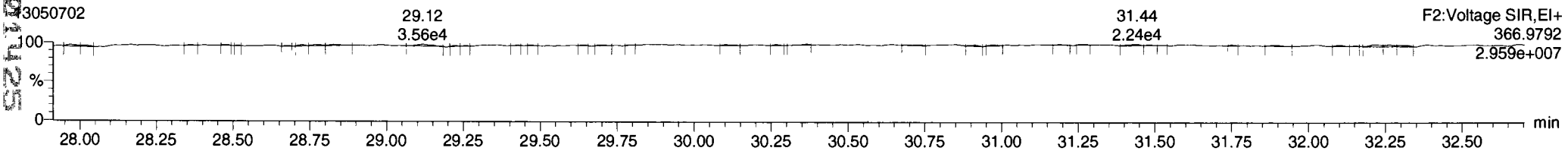
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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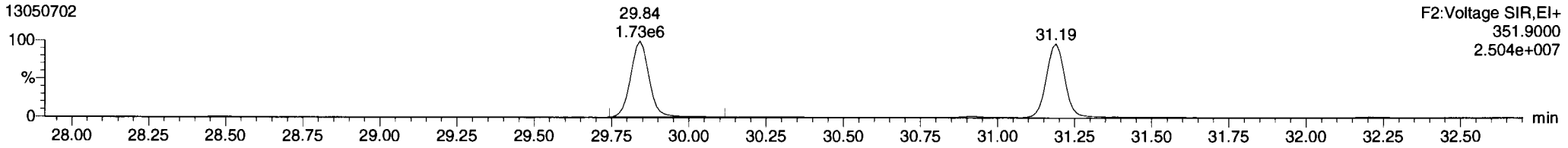
13C-12378-PeCDF



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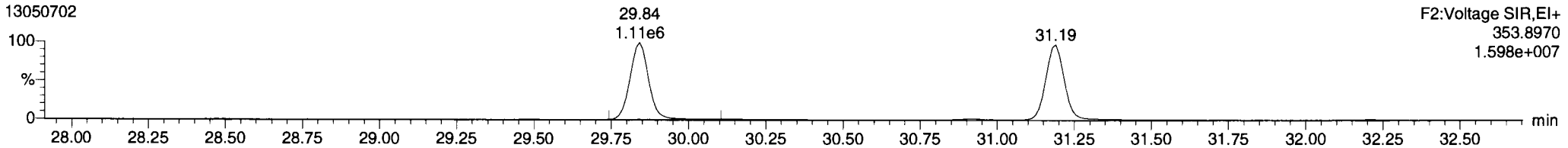
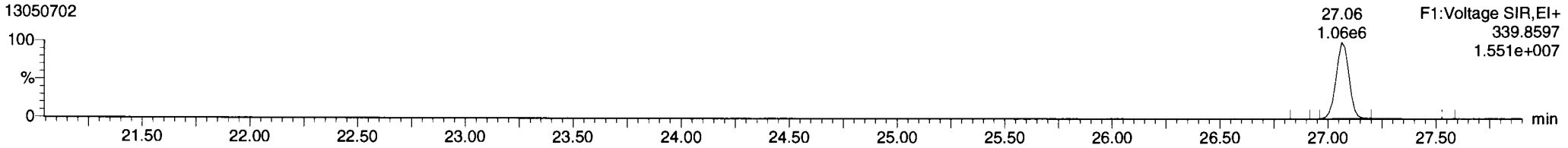
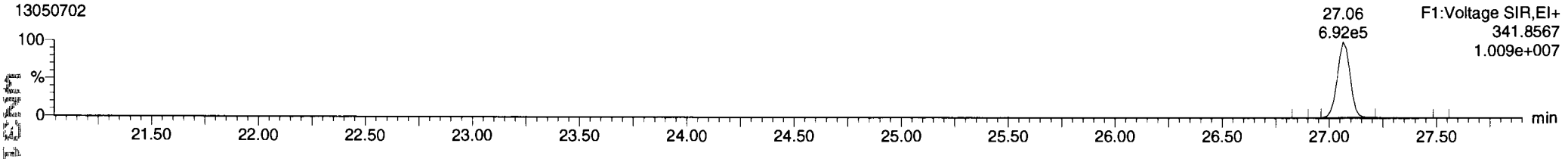


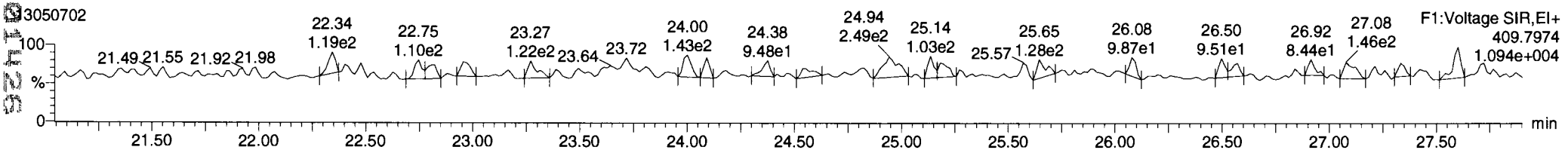
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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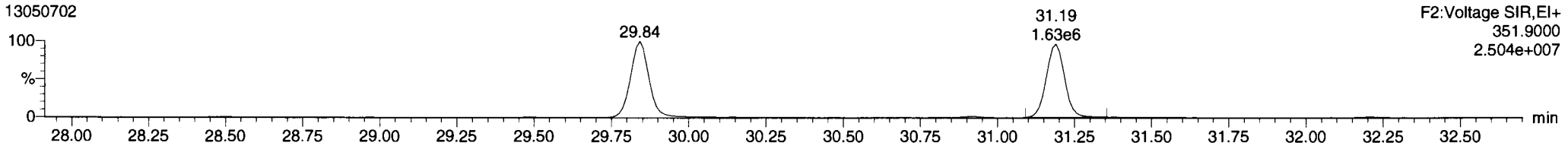
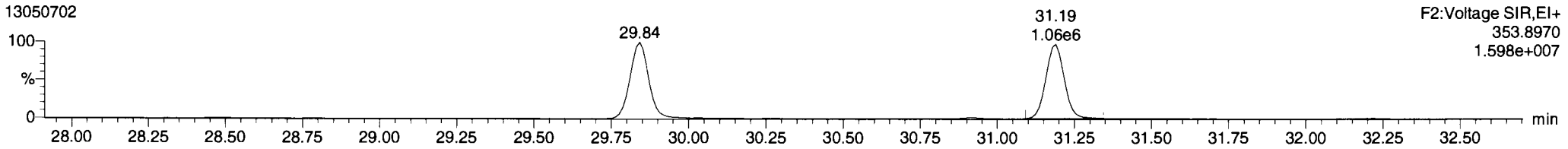
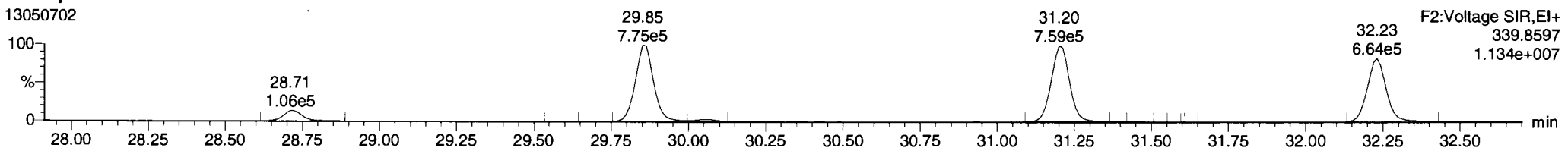
13C-23478-PeCDF



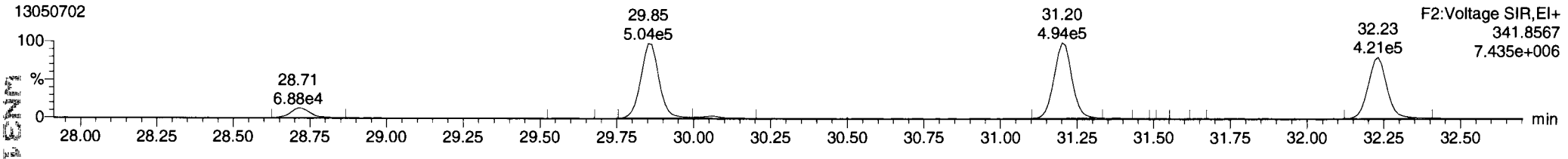
13C-23478-PeCDF



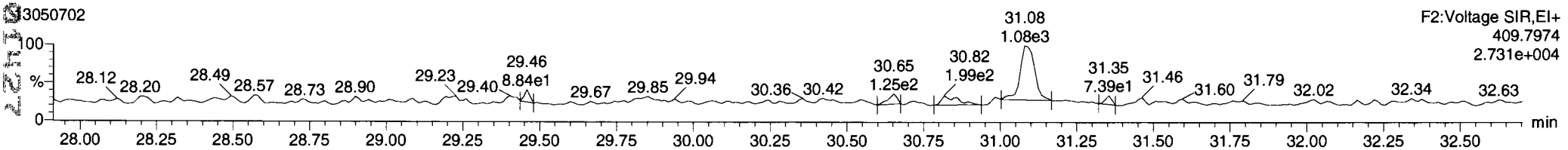
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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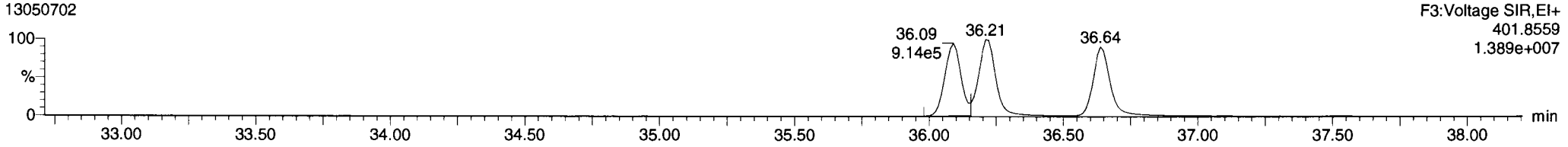
13C-123478-HxCDD



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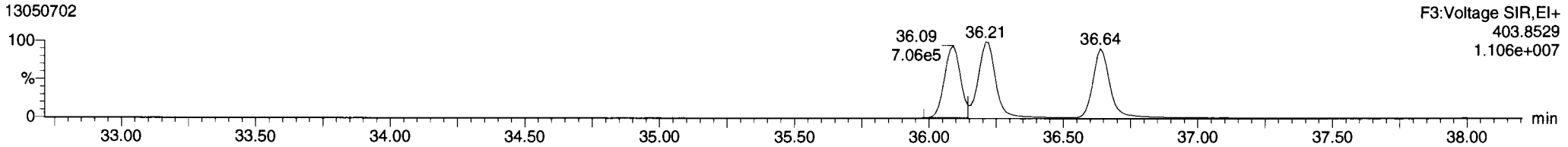
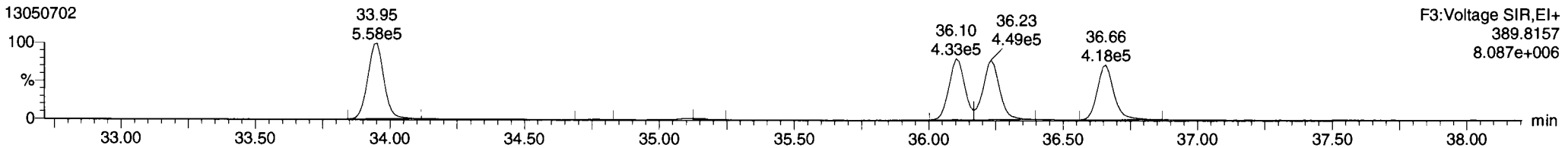
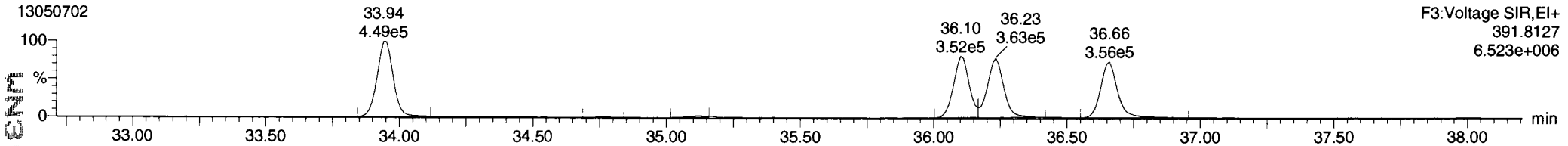


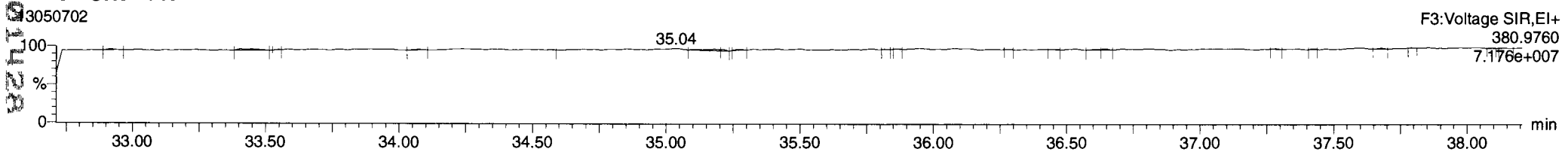
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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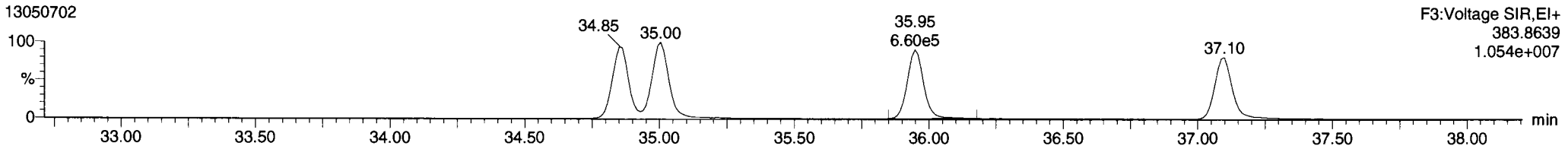
13C-234678-HxCDF



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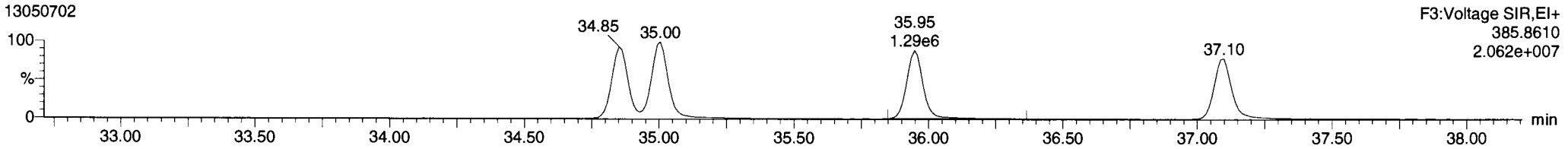
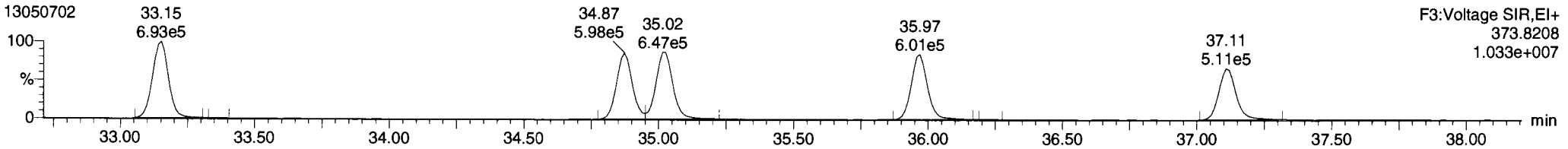
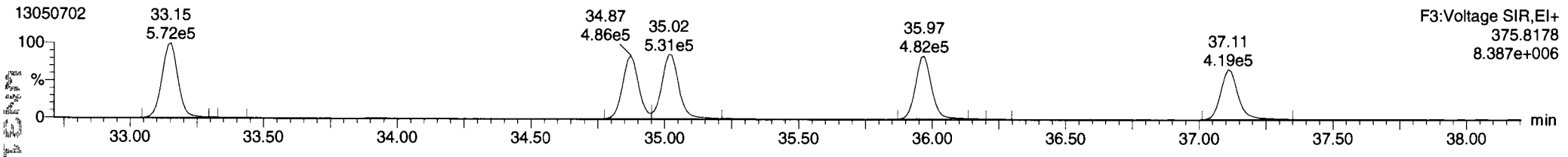


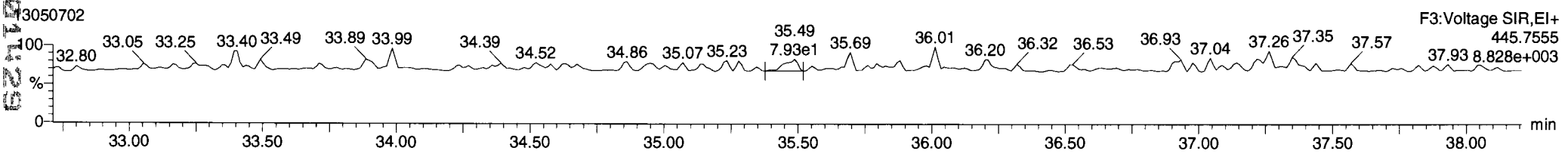
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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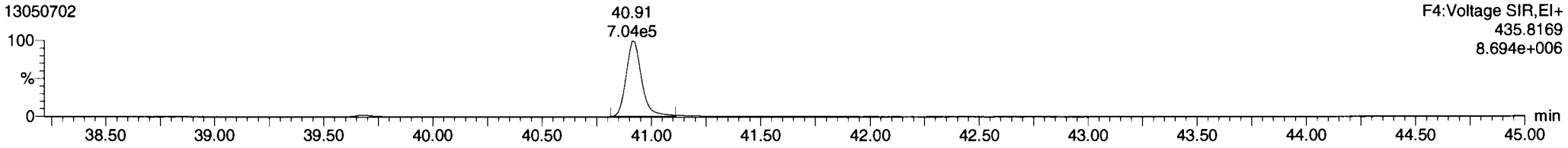
13C-1234678-HpCDD



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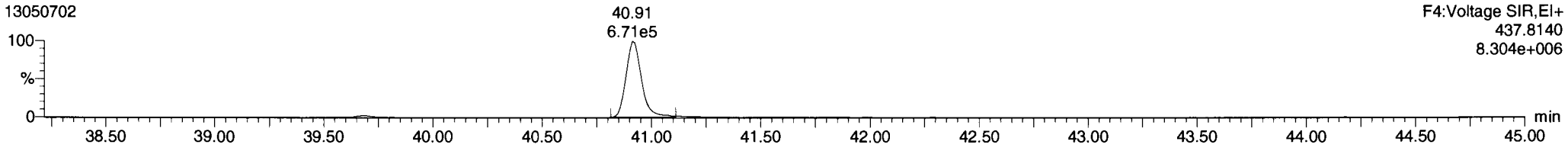
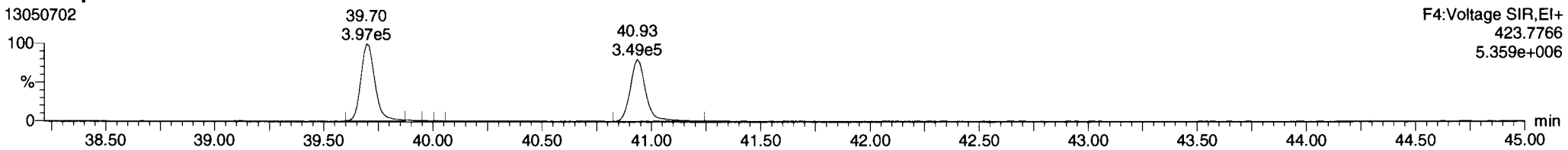


Total-heptadioxins



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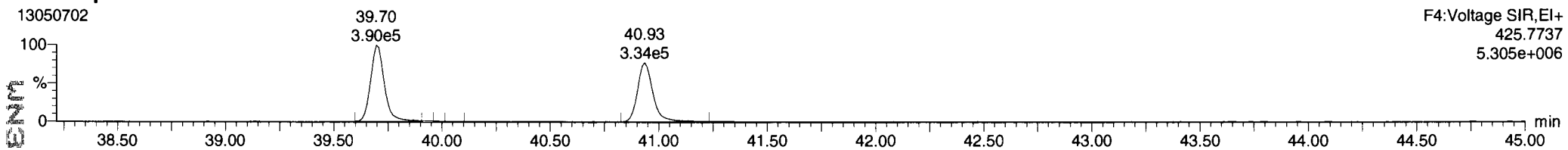
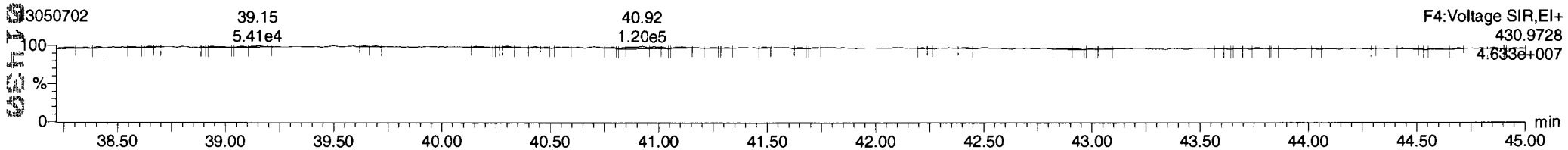


FUNCTION4 PFK



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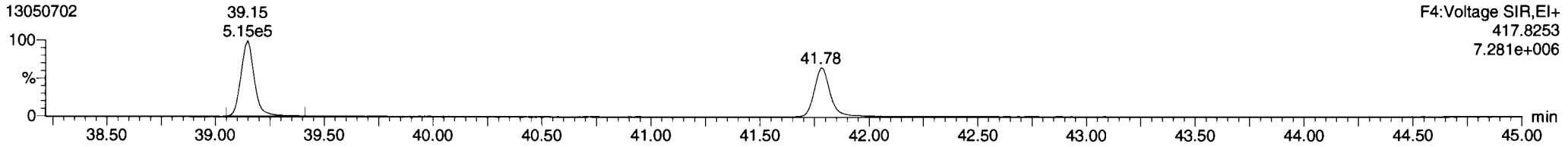

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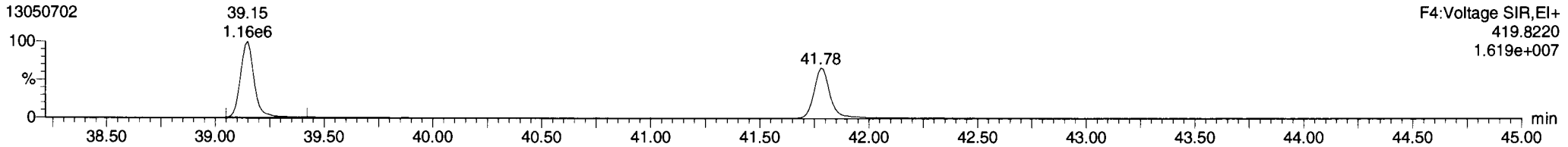
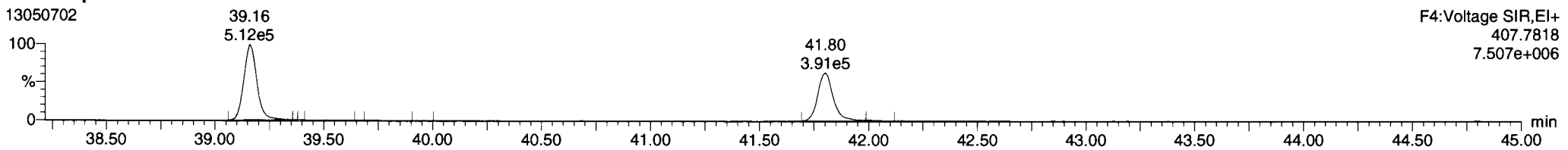
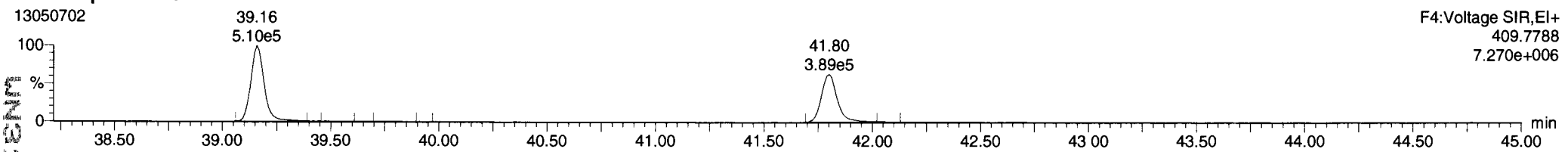


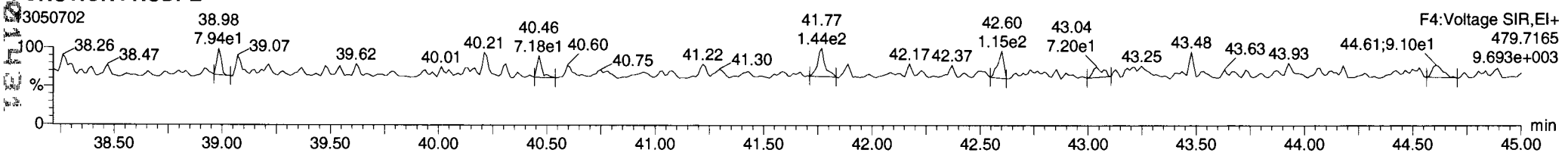
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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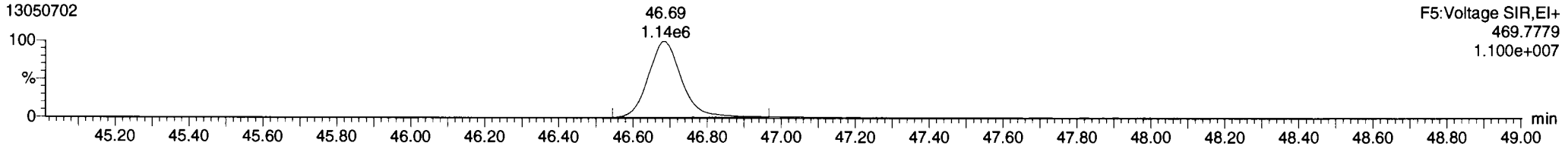
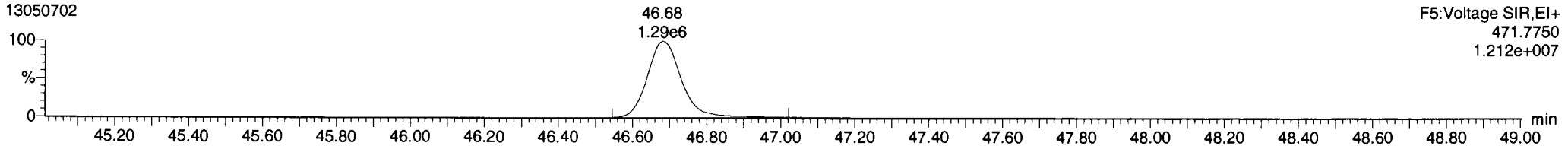
Last Altered: Wednesday, May 08, 2013 15:02:02 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

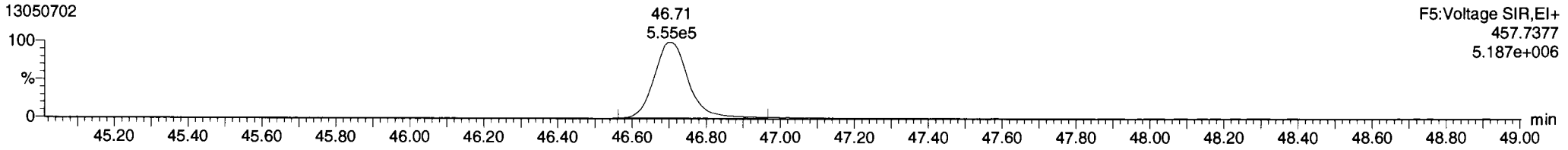
13C-OCDD



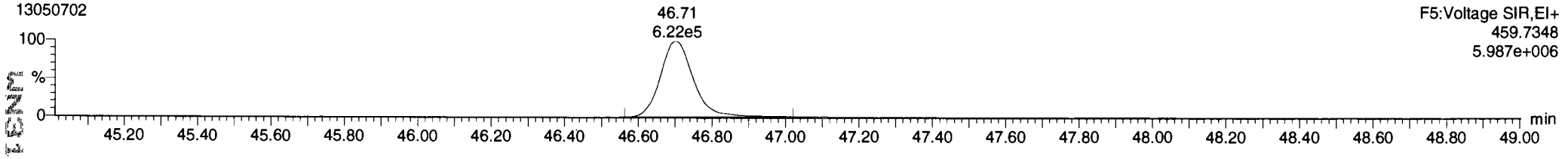
13C-OCDD



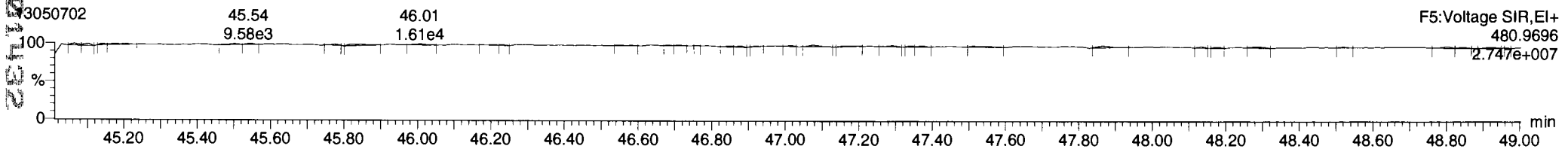
OCDD



OCDD



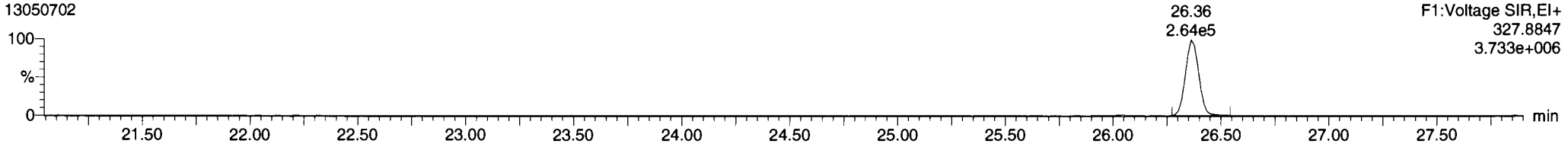
FUNCTION5 PFK



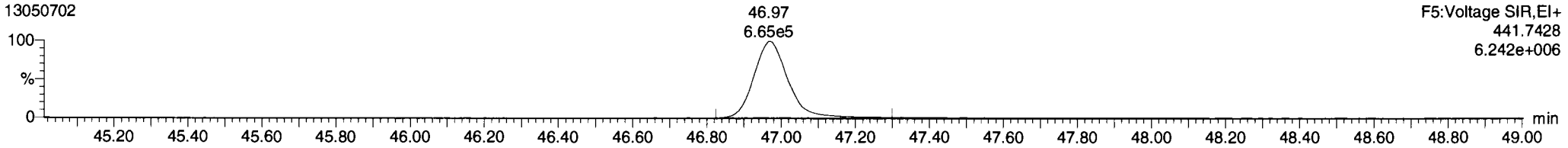
Dataset: P:\DIOXIN8290.PRO\130507OPEN.qld
Last Altered: Wednesday, May 08, 2013 15:02:02 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 16:01:23 Pacific Daylight Time

ID: CS3, Name: 13050702, Date: 07-May-2013, Time: 14:44:08, Conditions: AUTOSPEC01, User: pk

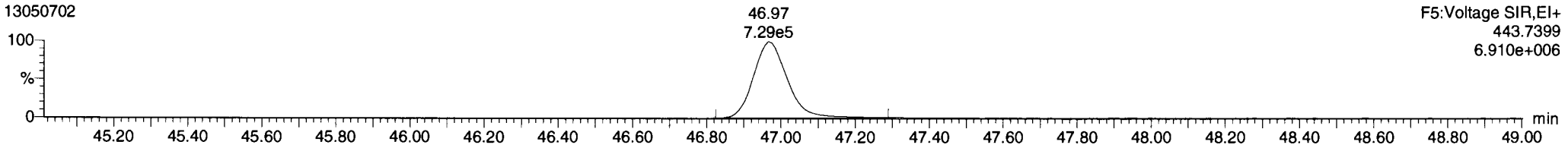
37CL-2378-TCDD



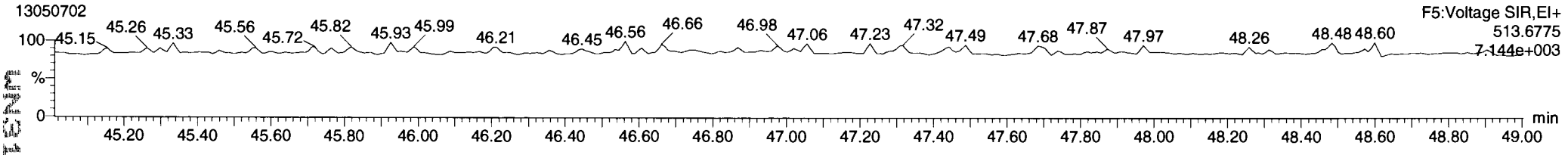
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WM89MBS
Lab.File ID: 13050704
Date Analysed: 07-May-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	26.33	0.0873	0.0300	
12378-PeCDD	356/358	31.45	0.0208	0.0160	
123478-HxCDD	390/392	0.00			0.020
123678-HxCDD	390/392	0.00			0.020
123789-HxCDD	390/392	0.00			0.021
1234678-HpCDD	424/426	40.91	0.104	0.0830	
OCDD	458/460	46.67	1.04		
2378-TCDF	304/306	25.70	0.0388		
12378-PeCDF	340/342	29.85	0.0412	0.0380	
23478-PeCDF	340/342	31.20	0.0371	0.0220	
123478-HxCDF	374/376	34.85	0.0279	0.0210	
234678-HxCDF	374/376	0.00			0.016
123678-HxCDF	374/376	0.00			0.013
123789-HxCDF	374/376	0.00			0.020
1234678-HpCDF	408/410	0.00			0.022
1234789-HpCDF	408/410	0.00			0.035
OCDF	442/444	46.98	0.0593	0.0350	

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

5/8/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

2378-TCDF	25.705	1.001	4.96e2	7.14e2	0.763	0.695	0.770	6.1	1178	2978	7.13e3	1.16e4	NO	0.039	0.039
12378-PeCDF	29.852	1.001	5.59e2	4.43e2	0.836	1.262	1.550	9.8	958	1889	9.40e3	6.60e3	YES	0.038	0.041
23478-PeCDF	31.200	1.001	2.98e2	5.26e2	0.851	0.566	1.550	6.0	958	1889	5.71e3	8.84e3	YES	0.022	0.037
123478-HxCDF	34.850	1.000	3.67e2	1.89e2	1.017	1.939	1.240	5.7	1137	612	6.52e3	3.94e3	YES	0.021	0.028
234678-HxCDF					1.027		1.240		1137	612					
123678-HxCDF					1.013		1.240		1137	612					
123789-HxCDF					0.929		1.240		1137	612					
1234678-HpCDF					1.151		1.050		1261	922					
1234789-HpCDF					1.149		1.050		1261	922					
OCDF	46.983	1.007	1.55e2	4.01e2	0.963	0.386	0.890	6.3	691	1355	4.32e3	7.63e3	YES	0.035	0.059
2378-TCDD	26.332	1.001	3.46e2	1.95e3	0.980	0.178	0.770	3.4	2033	2893	6.89e3	2.91e4	YES	0.030	0.087
12378-PeCDD	31.452	1.001	1.69e2	1.90e2	0.948	0.887	1.550	3.4	1493	729	5.03e3	2.90e3	YES	0.016	0.021
123478-HxCDD					0.941		1.240		872	1087					
123678-HxCDD					0.884		1.240		872	1087					
123789-HxCDD					0.870		1.240		872	1087					
1234678-HpCDD	40.912	1.000	5.70e2	8.31e2	0.948	0.686	1.050	12.1	1070	1326	1.29e4	1.15e4	YES	0.083	0.104
OCDD	46.669	1.000	4.79e3	5.00e3	0.969	0 956	0.890	56.1	913	1261	5.12e4	5.40e4	NO	1.038	1.038
13C-2378-TCDF	25.690	1.007	1.78e6	2.30e6	1.318	0.774	0.770	6382.3	4047	3389	2.58e7	3.31e7	NO		93.969
13C-12378-PeCDF	29.819	1.169	1 78e6	1.13e6	1.026	1.580	1.550	5307.9	4792	3592	2.54e7	1.60e7	NO		85.866
13C-23478-PeCDF	31.167	1.222	1.59e6	1.02e6	0.966	1.561	1.550	4904.9	4792	3592	2.35e7	1.50e7	NO		81.690
13C-123478-HxCDF	34.839	0.951	6.62e5	1.30e6	1.123	0.510	0.510	2815.5	3498	6756	9.85e6	1.91e7	NO		88.690
13C-123678-HxCDF	34.982	0.955	7.76e5	1.48e6	1.216	0.524	0.510	3150.8	3498	6756	1.10e7	2.09e7	NO		94.347
13C-234678-HxCDF	35.935	0.981	6.42e5	1.23e6	1.106	0.523	0.510	2656.7	3498	6756	9.29e6	1.76e7	NO		85.939
13C-123789-HxCDF	37.075	1.012	5.83e5	1.13e6	0.995	0.516	0.510	2303.7	3498	6756	8.06e6	1.54e7	NO		87.414
13C-1234678-HpCDF	39.125	1.068	4.56e5	1.02e6	0.896	0.449	0.440	3277.8	2035	4448	6.67e6	1.47e7	NO		83.506
13C-1234789-HpCDF	41.767	1.140	3.49e5	7.73e5	0.693	0.451	0.440	2093.0	2035	4448	4.26e6	9.46e6	NO		82.200
13C-1234-TCDD	25.510	0.000	1.46e6	1.84e6	1.000	0.797	0.770	4128.6	5185	2325	2.14e7	2.71e7	NO		100.000
13C-2378-TCDD	26.317	1.032	1.17e6	1.51e6	0.961	0.774	0.770	3207.8	5185	2325	1.66e7	2.16e7	NO		84.459
13C-12378-PeCDD	31.420	1.232	1.12e6	7.07e5	0.703	1.580	1.550	4563.2	3546	2530	1.62e7	1.02e7	NO		78.545
13C-123478-HxCDD	36.067	0.985	9.70e5	7.69e5	1.016	1.261	1.240	4961.0	2866	3407	1.42e7	1.14e7	NO		86.986
13C-123678-HxCDD	36.198	0.988	1.08e6	8.46e5	1.098	1.279	1.240	5293.6	2866	3407	1.52e7	1.21e7	NO		89.188
13C-1234678-HpCDD	40.901	1.117	7.26e5	6.94e5	0.828	1.046	1.050	3501.9	2681	2900	9.39e6	8.96e6	NO		87.073
13C-OCDD	46.669	1.274	9.19e5	1.03e6	0.770	0.896	0.890	2309.1	3930	3457	9.08e6	1.00e7	NO		128.391

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	36.626	0.000	1.08e6	8.87e5	1.000	1.220	1.240	5431.0	2866	3407	1.56e7	1 25e7	NO	100.000
Total-tetrafurans			4.96e2		0.763				1178		7.13e3			0.039
Total-penta1			0.00e0						843		0.00e0			
Total-pentafurans			9.84e2		0.844				958		1.86e4			0.093
Total-hexafurans			3.67e2		0.997				1137		6.52e3			0.028
Total-heptafurans			4.63e2		1.150				1261		8.84e3			0.060
Total-Furans			2.46e3		0.970				1178		4.54e4			0.279
Total-tetradioxins			3.46e2		0.980				2033		6.89e3			0.087
Total-pentadioxins			7.85e2		0.948				1493		1.62e4			0.063
Total-hexadioxins			9.83e2		0.898				872		1.96e4			0.088
Total-heptadioxins			1.08e3		0.948				1070		2.21e4			0.180
Total-Dioxins			8.71e3		0.934				2033		1.30e5			1.523
Total-TEQ			1.12e4						2033		1.75e5			1.802
37CL-2378-TCDD	26.347	1.033	1.21e6		0.999			8791.5	1954		1 72e7			36.783
FUNCTION1 PFK			1.56e8						953288		4.50e8			
FUNCTION2 PFK			6.43e4						288154		1.35e6			0.000
FUNCTION3 PFK			2.32e7						559507		2.74e8			0.000
FUNCTION4 PFK			3.58e5						398506		1.21e7			
FUNCTION5 PFK			2.09e5						275365		7.62e6			
FUNCTION1 HXCDPE			1.02e2						587		2.08e3			0.000
FUNCTION1 HPCDPE			8.72e2						929		1.87e4			0.000
FUNCTION2 HPCDPE			9.18e2						1285		2.99e4			0.000
FUNCTION3 OCDPE			1.52e2						660		4.53e3			0.000
FUNCTION4 NCDPE			4.66e2						851		1.51e4			0.000
FUNCTION5 DCDPE			0.00e0						270		0.00e0			

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

TF

1 2378-TCDF	303.9016	25.70	1209.373	0.763	0.039	0.039	0.69	0.77	NO	6.1

PP

PF

3 23478-PeCDF	339.8597	31.20	823.385	0.851	0.037	0.022	0.57	1.55	YES	6.0
2 12378-PeCDF	339.8597	29.85	1001.558	0.836	0.041	0.038	1.26	1.55	YES	9.8
37 Total-pentafurans	339.8597	29.46	342.049	0.844	0.015		0.60	1.55	YES	3.7

HF

4 123478-HxCDF	373.8208	34.85	555.562	1.017	0.028	0.021	1.94	1.24	YES	5.7

HPF

39 Total-heptafurans	407.7818	39.94	895.107	1.150	0.060		1.07	1.05	NO	7.0

Furans,TF,PP,PF,HF,HPF,OF

1 2378-TCDF	303.9016	25.70	1209.373	0.763	0.039	0.039	0.69	0.77	NO	6.1
3 23478-PeCDF	339.8597	31.20	823.385	0.851	0.037	0.022	0.57	1.55	YES	6.0
2 12378-PeCDF	339.8597	29.85	1001.558	0.836	0.041	0.038	1.26	1.55	YES	9.8
37 Total-pentafurans	339.8597	29.46	342.049	0.844	0.015		0.60	1.55	YES	3.7
4 123478-HxCDF	373.8208	34.85	555.562	1.017	0.028	0.021	1.94	1.24	YES	5.7
39 Total-heptafurans	407.7818	39.94	895.107	1.150	0.060		1.07	1.05	NO	7.0
10 OCDF	441.7428	46.98	555.865	0.963	0.059	0.035	0.39	0.89	YES	6.3

TD

11 2378-TCDD	319.8965	26.33	2293.106	0.980	0.087	0.030	0.18	0.77	YES	3.4

PD

12 12378-PeCDD	355.8546	31.45	359.194	0.948	0.021	0.016	0.89	1.55	YES	3.4
42 Total-pentadioxins	355.8546	31.18	738.907	0.948	0.043		5.03	1.55	YES	7.5

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:52:15 Pacific Daylight Time

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

HD

	43 Total-hexadioxins	389.8157	33.93	262.624	0.898	0.016		1.17	1.24	NO	3.0
	43 Total-hexadioxins	389.8157	35.16	307.429	0.898	0.019		0.86	1.24	YES	6.5
	43 Total-hexadioxins	389.8157	34.98	882.721	0.898	0.054		3.79	1.24	YES	13.0

HPD

	44 Total-heptadioxins	423.7766	39.69	1028.028	0.948	0.076		1.00	1.05	NO	8.6
	16 1234678-HpCDD	423.7766	40.91	1401.482	0.948	0.104	0.083	0.69	1.05	YES	12.1

Dioxins,TD,PD,HD,HPD,OD

	45 Total-Dioxins	319.8965	23.02	336.387	0.934	0.013		3.60	0.77	YES	1.5
	45 Total-Dioxins	319.8965	22.57	308.211	0.934	0.012		0.36	0.77	YES	0.9
	45 Total-Dioxins	319.8965	22.12	273.549	0.934	0.011		0.91	0.77	YES	1.5
	45 Total-Dioxins	319.8965	21.79	422.808	0.934	0.017		0.49	0.77	YES	1.2
	11 2378-TCDD	319.8965	26.33	2293.106	0.980	0.087	0.030	0.18	0.77	YES	3.4
	45 Total-Dioxins	319.8965	27.59	287.480	0.934	0.011		0.60	0.77	YES	1.5
	43 Total-hexadioxins	389.8157	33.93	262.624	0.898	0.016		1.17	1.24	NO	3.0
	12 12378-PeCDD	355.8546	31.45	359.194	0.948	0.021	0.016	0.89	1.55	YES	3.4
	42 Total-pentadioxins	355.8546	31.18	738.907	0.948	0.043		5.03	1.55	YES	7.5
	43 Total-hexadioxins	389.8157	35.16	307.429	0.898	0.019		0.86	1.24	YES	6.5
	43 Total-hexadioxins	389.8157	34.98	882.721	0.898	0.054		3.79	1.24	YES	13.0
	44 Total-heptadioxins	423.7766	39.69	1028.028	0.948	0.076		1.00	1.05	NO	8.6
	17 OCDD	457.7377	46.67	9789.461	0.969	1.038	1.038	0.96	0.89	NO	56.1
	16 1234678-HpCDD	423.7766	40.91	1401.482	0.948	0.104	0.083	0.69	1.05	YES	12.1

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

1	2378-TCDF	303.9016	25.70	1209.373	0.763	0.039	0.039	0.69	0.77	NO	6.1
3	23478-PeCDF	339.8597	31.20	823.385	0.851	0.037	0.022	0.57	1.55	YES	6.0
2	12378-PeCDF	339.8597	29.85	1001.558	0.836	0.041	0.038	1.26	1.55	YES	9.8
37	Total-pentafurans	339.8597	29.46	342.049	0.844	0.015		0.60	1.55	YES	3.7
4	123478-HxCDF	373.8208	34.85	555.562	1.017	0.028	0.021	1.94	1.24	YES	5.7
39	Total-heptafurans	407.7818	39.94	895.107	1.150	0.060		1.07	1.05	NO	7.0
10	OCDF	441.7428	46.98	555.865	0.963	0.059	0.035	0.39	0.89	YES	6.3
45	Total-Dioxins	319.8965	23.02	336.387	0.934	0.013		3.60	0.77	YES	1.5
45	Total-Dioxins	319.8965	22.57	308.211	0.934	0.012		0.36	0.77	YES	0.9
45	Total-Dioxins	319.8965	22.12	273.549	0.934	0.011		0.91	0.77	YES	1.5
45	Total-Dioxins	319.8965	21.79	422.808	0.934	0.017		0.49	0.77	YES	1.2
11	2378-TCDD	319.8965	26.33	2293.106	0.980	0.087	0.030	0.18	0.77	YES	3.4
45	Total-Dioxins	319.8965	27.59	287.480	0.934	0.011		0.60	0.77	YES	1.5
43	Total-hexadioxins	389.8157	33.93	262.624	0.898	0.016		1 17	1.24	NO	3.0
12	12378-PeCDD	355.8546	31.45	359.194	0.948	0 021	0.016	0.89	1.55	YES	3.4
42	Total-pentadioxins	355.8546	31.18	738.907	0.948	0.043		5.03	1.55	YES	7.5
43	Total-hexadioxins	389.8157	35.16	307.429	0.898	0.019		0.86	1.24	YES	6.5
43	Total-hexadioxins	389.8157	34.98	882.721	0.898	0.054		3.79	1.24	YES	13.0
44	Total-heptadioxins	423.7766	39.69	1028.028	0.948	0.076		1.00	1.05	NO	8.6
17	OCDD	457.7377	46.67	9789.461	0.969	1.038	1.038	0.96	0.89	NO	56.1
16	1234678-HpCDD	423.7766	40.91	1401.482	0.948	0.104	0.083	0.69	1.05	YES	12.1

PFK1

48	FUNCTION1 PFK	330.9792	22.63	0.000							60.1
48	FUNCTION1 PFK	330.9792	22.52	0.000							62.4
48	FUNCTION1 PFK	330.9792	22.28	0.000							69.9
48	FUNCTION1 PFK	330.9792	21.57	0.000							70.4
48	FUNCTION1 PFK	330.9792	21.18	0.000							64.8
48	FUNCTION1 PFK	330.9792	27.48	0.000							1.1
48	FUNCTION1 PFK	330.9792	25.67	0.000							1.9
48	FUNCTION1 PFK	330.9792	24.52	0.000							11.6
48	FUNCTION1 PFK	330.9792	23.78	0.000							34.8
48	FUNCTION1 PFK	330.9792	23.73	0.000							36.4
48	FUNCTION1 PFK	330.9792	22.72	0.000							58.7

PFK2

49	FUNCTION2 PFK	366.9792	27.96	0.000		0.000					4.7

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

PFK3

50	FUNCTION3	PFK	380.9760	33.28	0.000	0.000	31.5
50	FUNCTION3	PFK	380.9760	33.20	0.000	0.000	34.1
50	FUNCTION3	PFK	380.9760	33.02	0.000	0.000	41.0
50	FUNCTION3	PFK	380.9760	33.00	0.000	0.000	40.9
50	FUNCTION3	PFK	380.9760	32.88	0.000	0.000	42.4
50	FUNCTION3	PFK	380.9760	32.81	0.000	0.000	43.6
50	FUNCTION3	PFK	380.9760	32.77	0.000	0.000	46.8
50	FUNCTION3	PFK	380.9760	35.10	0.000	0.000	0.8
50	FUNCTION3	PFK	380.9760	35.00	0.000	0.000	1.6
50	FUNCTION3	PFK	380.9760	34.96	0.000	0.000	1.2
50	FUNCTION3	PFK	380.9760	34.59	0.000	0.000	0.4
50	FUNCTION3	PFK	380.9760	34.47	0.000	0.000	0.7
50	FUNCTION3	PFK	380.9760	34.30	0.000	0.000	2.9
50	FUNCTION3	PFK	380.9760	34.24	0.000	0.000	4.9
50	FUNCTION3	PFK	380.9760	34.12	0.000	0.000	9.3
50	FUNCTION3	PFK	380.9760	34.10	0.000	0.000	8.6
50	FUNCTION3	PFK	380.9760	34.01	0.000	0.000	11.4
50	FUNCTION3	PFK	380.9760	33.98	0.000	0.000	11.6
50	FUNCTION3	PFK	380.9760	33.86	0.000	0.000	16.2
50	FUNCTION3	PFK	380.9760	33.81	0.000	0.000	17.8
50	FUNCTION3	PFK	380.9760	33.73	0.000	0.000	19.7
50	FUNCTION3	PFK	380.9760	33.47	0.000	0.000	27.0
50	FUNCTION3	PFK	380.9760	33.34	0.000	0.000	30.2
50	FUNCTION3	PFK	380.9760	36.90	0.000	0.000	1.3
50	FUNCTION3	PFK	380.9760	36.76	0.000	0.000	1.1
50	FUNCTION3	PFK	380.9760	36.70	0.000	0.000	1.4
50	FUNCTION3	PFK	380.9760	36.51	0.000	0.000	2.8
50	FUNCTION3	PFK	380.9760	36.40	0.000	0.000	0.5
50	FUNCTION3	PFK	380.9760	36.20	0.000	0.000	0.8
50	FUNCTION3	PFK	380.9760	36.11	0.000	0.000	1.9
50	FUNCTION3	PFK	380.9760	35.81	0.000	0.000	1.3
50	FUNCTION3	PFK	380.9760	35.77	0.000	0.000	1.0
50	FUNCTION3	PFK	380.9760	35.72	0.000	0.000	2.1
50	FUNCTION3	PFK	380.9760	35.68	0.000	0.000	1.7
50	FUNCTION3	PFK	380.9760	35.60	0.000	0.000	2.0
50	FUNCTION3	PFK	380.9760	35.55	0.000	0.000	1.9
50	FUNCTION3	PFK	380.9760	35.46	0.000	0.000	1.9
50	FUNCTION3	PFK	380.9760	35.42	0.000	0.000	1.4
50	FUNCTION3	PFK	380.9760	35.26	0.000	0.000	1.0
50	FUNCTION3	PFK	380.9760	38.13	0.000	0.000	2.0
50	FUNCTION3	PFK	380.9760	38.09	0.000	0.000	2.6
50	FUNCTION3	PFK	380.9760	38.00	0.000	0.000	2.3
50	FUNCTION3	PFK	380.9760	37.66	0.000	0.000	1.0
50	FUNCTION3	PFK	380.9760	37.54	0.000	0.000	1.8
50	FUNCTION3	PFK	380.9760	37.44	0.000	0.000	2.6
50	FUNCTION3	PFK	380.9760	37.31	0.000	0.000	1.5
50	FUNCTION3	PFK	380.9760	37.24	0.000	0.000	1.3
50	FUNCTION3	PFK	380.9760	37.14	0.000	0.000	1.2
50	FUNCTION3	PFK	380.9760	37.06	0.000	0.000	1.9

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

PFK3

	50 FUNCTION3 PFK	380.9760	36.98	0.000	0.000	1.6
	50 FUNCTION3 PFK	380.9760	36.93	0.000	0.000	1.4

PFK4

	51 FUNCTION4 PFK	430.9728	38.42	0.000		2.0
	51 FUNCTION4 PFK	430.9728	38.37	0.000		1.5
	51 FUNCTION4 PFK	430.9728	38.30	0.000		1.7
	51 FUNCTION4 PFK	430.9728	43.70	0.000		1.2
	51 FUNCTION4 PFK	430.9728	42.72	0.000		0.5
	51 FUNCTION4 PFK	430.9728	42.68	0.000		0.7
	51 FUNCTION4 PFK	430.9728	42.37	0.000		0.8
	51 FUNCTION4 PFK	430.9728	42.04	0.000		1.6
	51 FUNCTION4 PFK	430.9728	41.47	0.000		0.8
	51 FUNCTION4 PFK	430.9728	41.43	0.000		0.9
	51 FUNCTION4 PFK	430.9728	41.36	0.000		1.2
	51 FUNCTION4 PFK	430.9728	41.20	0.000		1.0
	51 FUNCTION4 PFK	430.9728	41.07	0.000		1.7
	51 FUNCTION4 PFK	430.9728	41.01	0.000		0.5
	51 FUNCTION4 PFK	430.9728	39.97	0.000		1.5
	51 FUNCTION4 PFK	430.9728	39.91	0.000		1.7
	51 FUNCTION4 PFK	430.9728	39.85	0.000		0.6
	51 FUNCTION4 PFK	430.9728	39.77	0.000		1.4
	51 FUNCTION4 PFK	430.9728	39.64	0.000		1.7
	51 FUNCTION4 PFK	430.9728	44.96	0.000		0.8
	51 FUNCTION4 PFK	430.9728	44.79	0.000		0 6
	51 FUNCTION4 PFK	430.9728	44.75	0.000		0.9
	51 FUNCTION4 PFK	430.9728	44.69	0.000		1.9
	51 FUNCTION4 PFK	430.9728	43.96	0.000		0.6
	51 FUNCTION4 PFK	430.9728	43.90	0.000		1.8
	51 FUNCTION4 PFK	430.9728	43.84	0.000		1.0

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PFK5

	52 FUNCTION5 PFK	480.9696	46.04	0.000						1.2
	52 FUNCTION5 PFK	480.9696	45.83	0.000						1.5
	52 FUNCTION5 PFK	480.9696	45.78	0.000						0.6
	52 FUNCTION5 PFK	480.9696	45.67	0.000						1.5
	52 FUNCTION5 PFK	480.9696	45.63	0.000						1.0
	52 FUNCTION5 PFK	480.9696	45.28	0.000						1.1
	52 FUNCTION5 PFK	480.9696	45.19	0.000						0.4
	52 FUNCTION5 PFK	480.9696	45.08	0.000						1.6
	52 FUNCTION5 PFK	480.9696	48.63	0.000						1.5
	52 FUNCTION5 PFK	480.9696	48.49	0.000						0.9
	52 FUNCTION5 PFK	480.9696	48.04	0.000						1.0
	52 FUNCTION5 PFK	480.9696	47.86	0.000						0.8
	52 FUNCTION5 PFK	480.9696	47.70	0.000						1.6
	52 FUNCTION5 PFK	480.9696	47.64	0.000						1.7
	52 FUNCTION5 PFK	480.9696	47.42	0.000						0.9
	52 FUNCTION5 PFK	480.9696	47.34	0.000						1.2
	52 FUNCTION5 PFK	480.9696	46.89	0.000						1.0
	52 FUNCTION5 PFK	480.9696	46.76	0.000						1.2
	52 FUNCTION5 PFK	480.9696	46.63	0.000						1.0
	52 FUNCTION5 PFK	480.9696	46.57	0.000						1.4
	52 FUNCTION5 PFK	480.9696	46.51	0.000						1.2
	52 FUNCTION5 PFK	480.9696	46.46	0.000						0.8
	52 FUNCTION5 PFK	480.9696	46.27	0.000						0.8
	52 FUNCTION5 PFK	480.9696	46.17	0.000						0.9
	52 FUNCTION5 PFK	480.9696	48.82	0.000						0.8

ETHERS1

	53 FUNCTION1 HXCD...	375.8364	23.60	0.000	0.000					3.5

ETHERS2

	54 FUNCTION1 HPCD...	409.7974	27.60	0.000	0.000					2.0
	54 FUNCTION1 HPCD...	409.7974	27.48	0.000	0.000					2.0
	54 FUNCTION1 HPCD...	409.7974	26.65	0.000	0.000					1.5
	54 FUNCTION1 HPCD...	409.7974	24.32	0.000	0.000					2.4
	54 FUNCTION1 HPCD...	409.7974	24.00	0.000	0.000					1.8
	54 FUNCTION1 HPCD...	409.7974	23.84	0.000	0.000					1.3
	54 FUNCTION1 HPCD...	409.7974	22.61	0.000	0.000					3.4
	54 FUNCTION1 HPCD...	409.7974	22.09	0.000	0.000					2.3
	54 FUNCTION1 HPCD...	409.7974	22.04	0.000	0.000					1.4
	54 FUNCTION1 HPCD...	409.7974	21.63	0.000	0.000					2.0

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ETHERS3

	55	FUNCTION2 HPCD...	409.7974	28.08	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	32.67	0.000	0.000					3.4
	55	FUNCTION2 HPCD...	409.7974	32.07	0.000	0.000					1.8
	55	FUNCTION2 HPCD...	409.7974	31.54	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	30.61	0.000	0.000					2.9
	55	FUNCTION2 HPCD...	409.7974	30.09	0.000	0.000					2.3
	55	FUNCTION2 HPCD...	409.7974	29.79	0.000	0.000					2.1
	55	FUNCTION2 HPCD...	409.7974	29.41	0.000	0.000					2.7
	55	FUNCTION2 HPCD...	409.7974	29.22	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	29.00	0.000	0.000					1.1

ETHERS4

	56	FUNCTION3 OCDPE	445.7555	37.83	0.000	0.000					3.3
	56	FUNCTION3 OCDPE	445.7555	32.95	0.000	0.000					3.6

ETHERS5

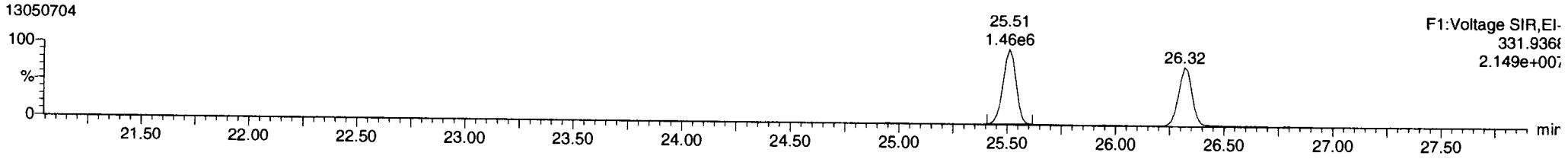
	57	FUNCTION4 NCDPE	479.7165	41.30	0.000	0.000					2.5
	57	FUNCTION4 NCDPE	479.7165	40.24	0.000	0.000					3.1
	57	FUNCTION4 NCDPE	479.7165	38.51	0.000	0.000					2.0
	57	FUNCTION4 NCDPE	479.7165	44.08	0.000	0.000					3.2
	57	FUNCTION4 NCDPE	479.7165	43.87	0.000	0.000					3.5
	57	FUNCTION4 NCDPE	479.7165	41.91	0.000	0.000					3.4

ETHERS6

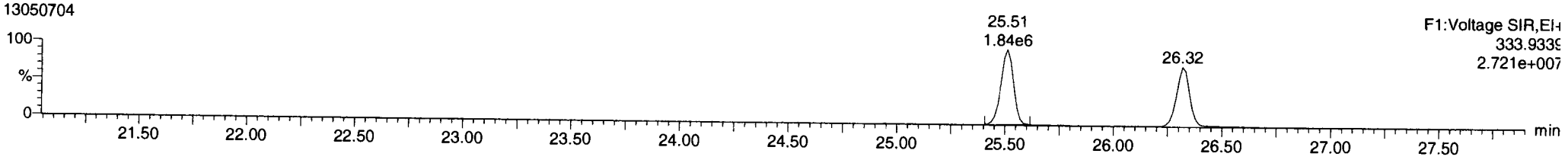
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

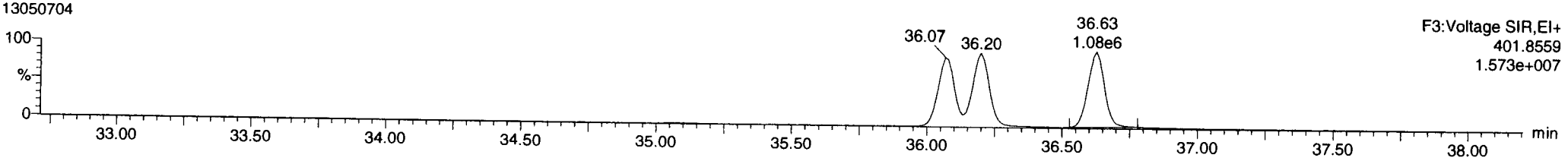
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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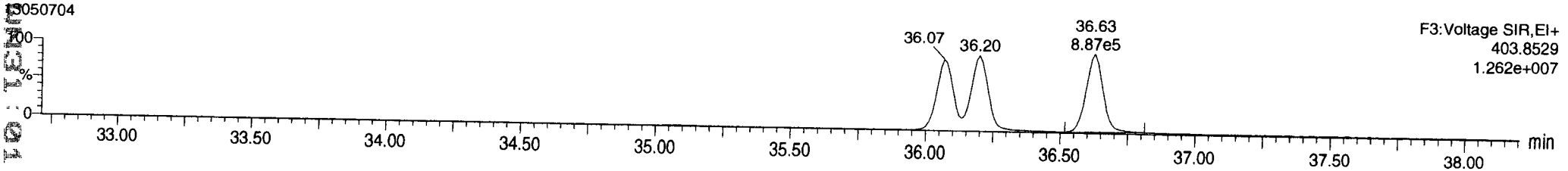

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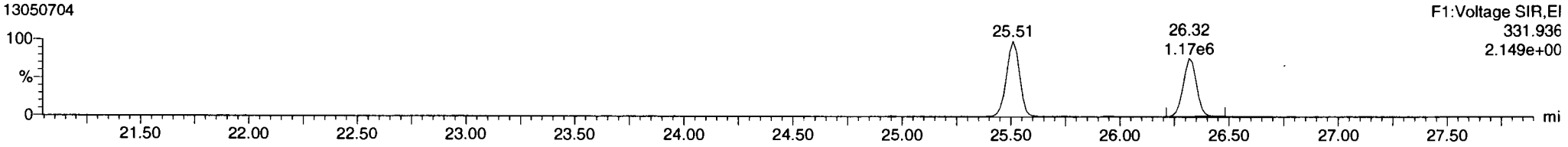
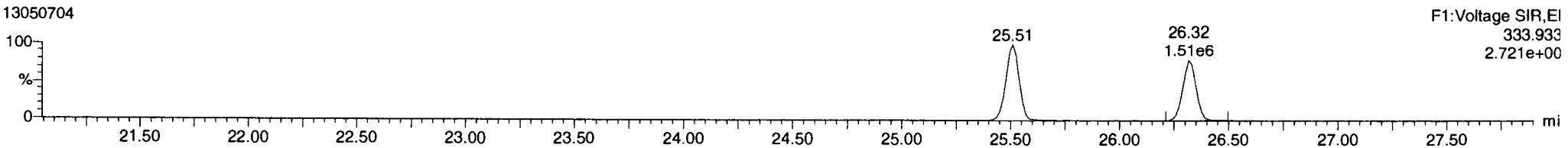
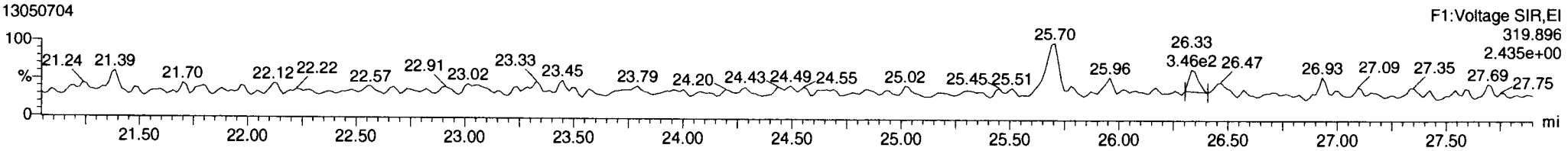
13C-2378-TCDD



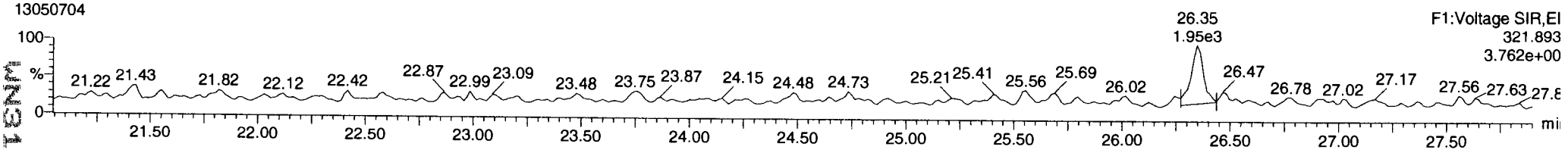
13C-2378-TCDD



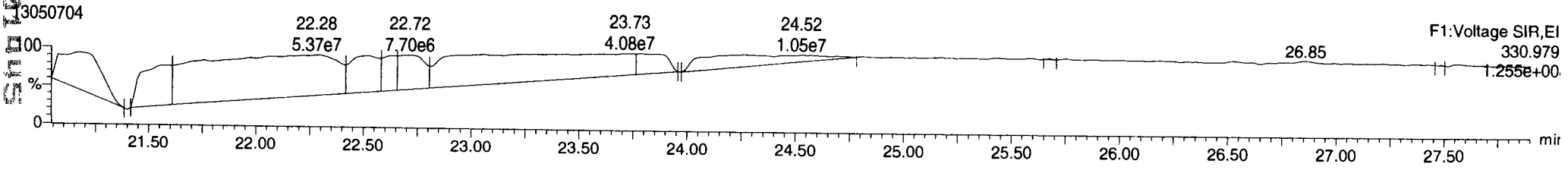
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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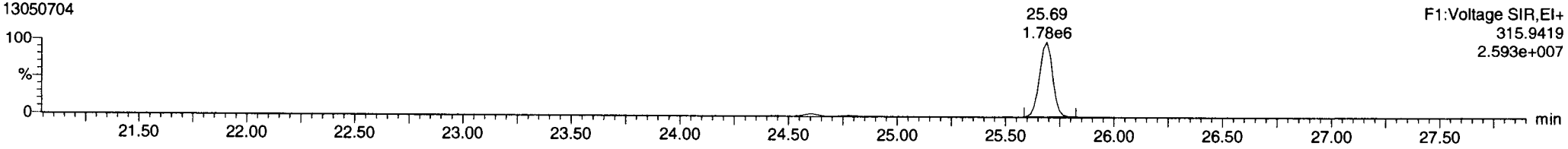
13C-2378-TCDF



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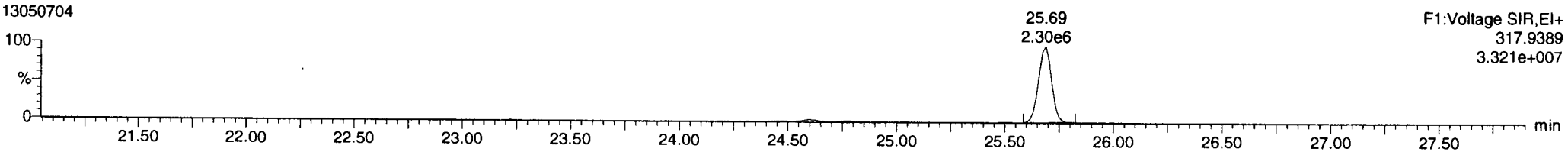
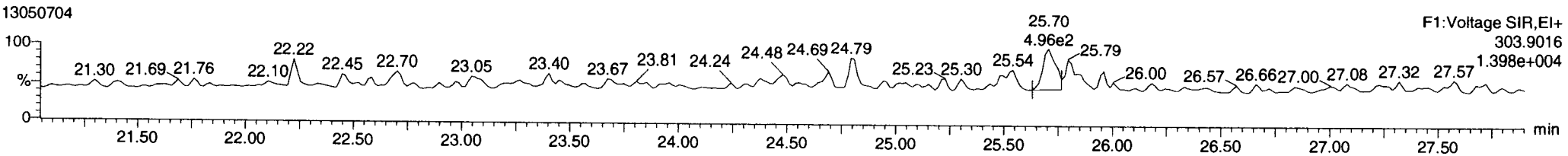
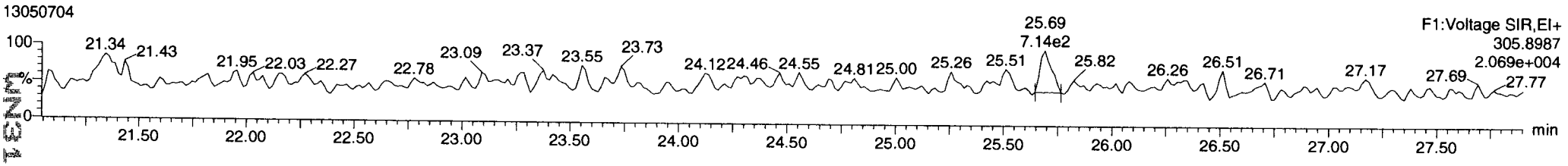


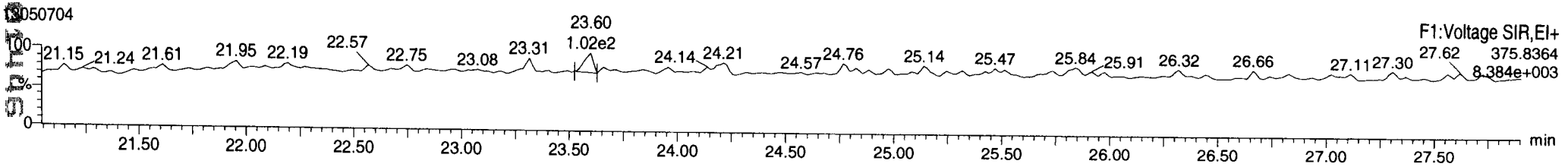
Total-tetrafurans



Total-tetrafurans



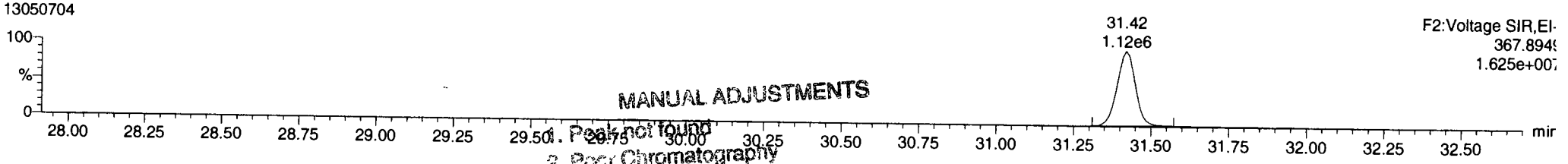
FUNCTION1 HXCDPE



ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

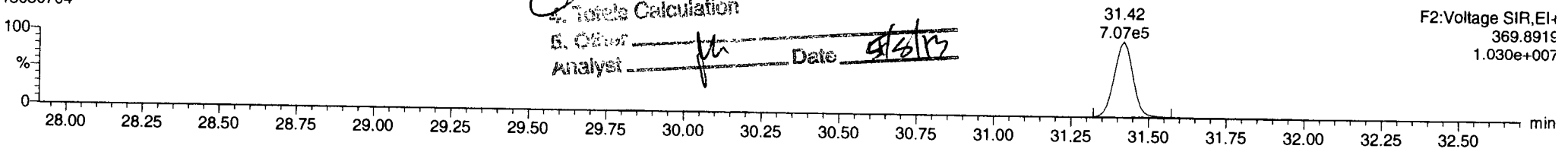
13C-12378-PeCDD

13050704



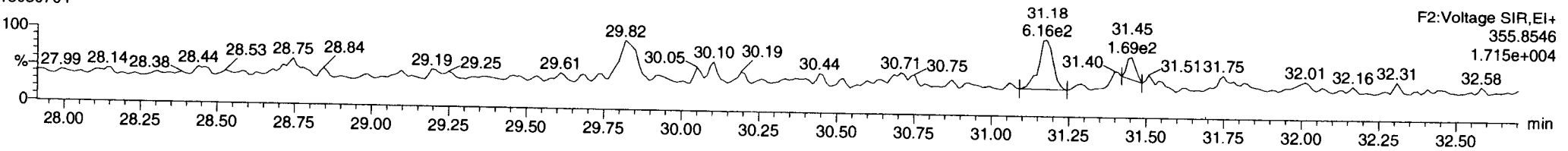
13C-12378-PeCDD

13050704



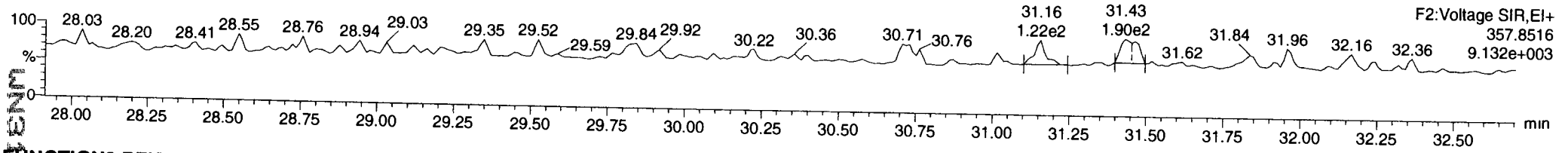
Total-pentadioxins

13050704



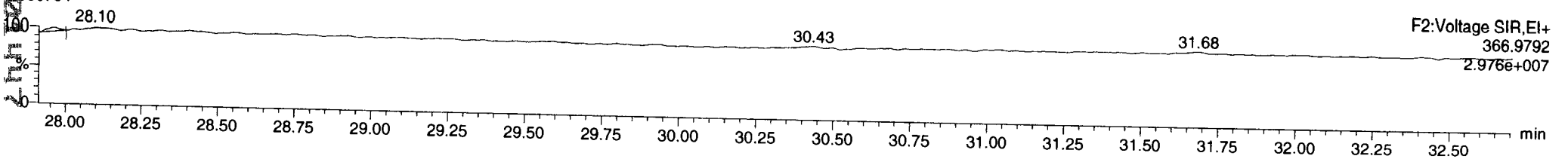
Total-pentadioxins

13050704



FUNCTION2 PFK

13050704



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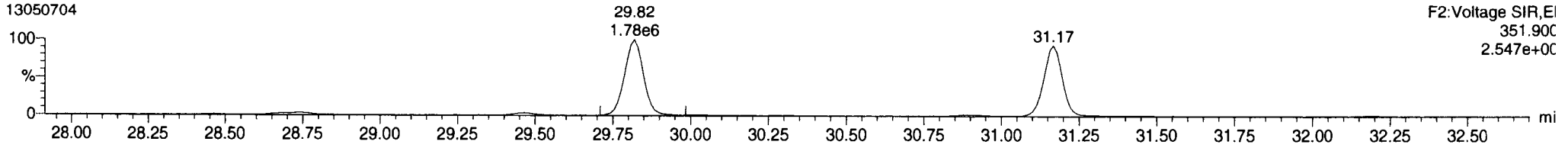
13C-12378-PeCDF



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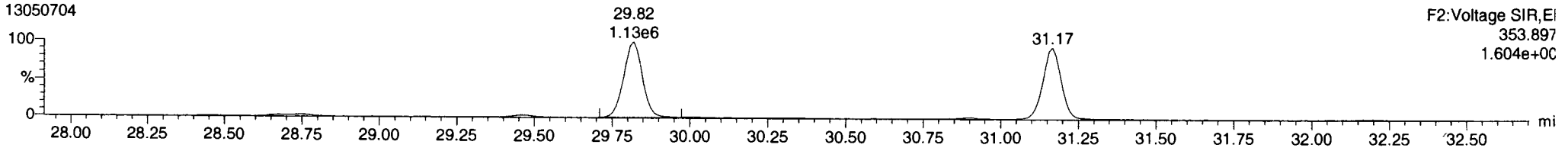
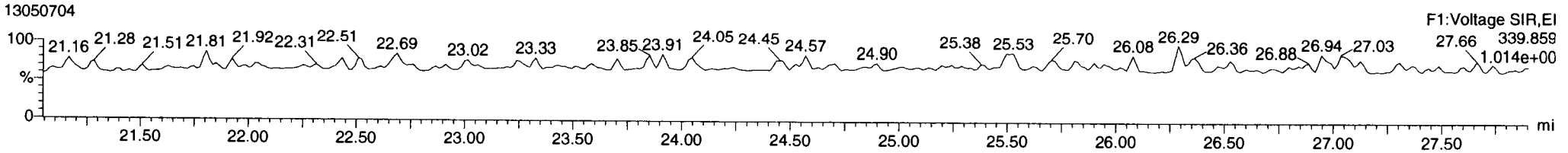


Total-penta1



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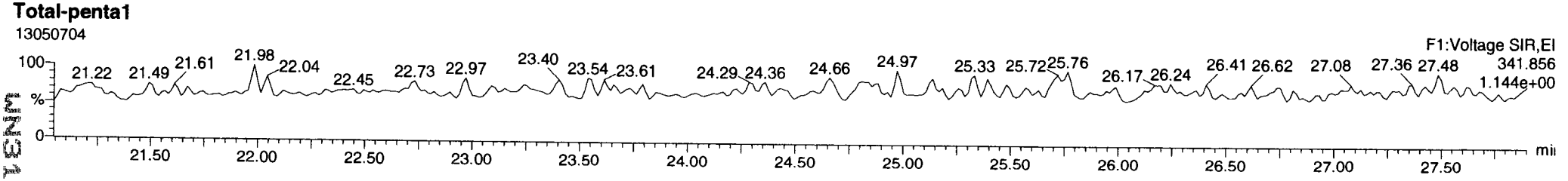
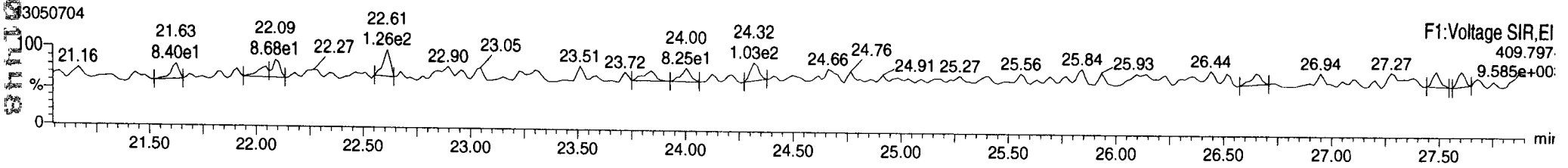


FUNCTION1 HPCDPE



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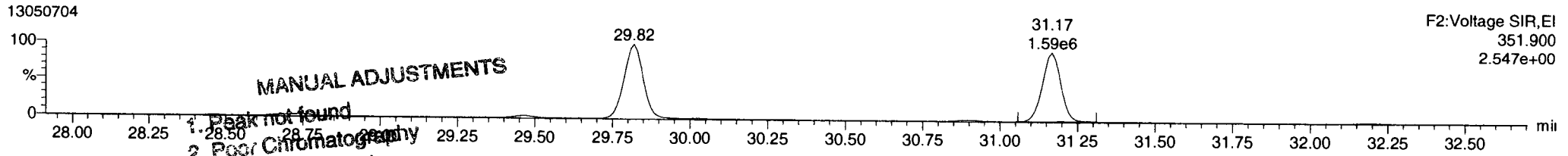
13C-23478-PeCDF



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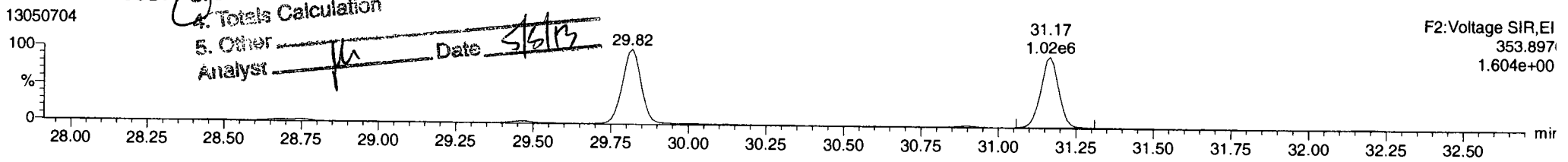
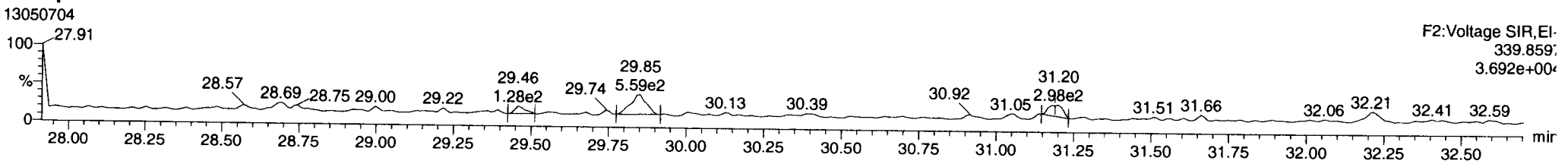
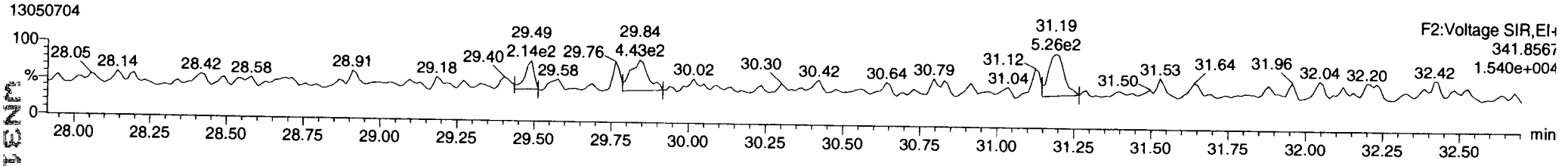


Total-pentafurans



Total-pentafurans



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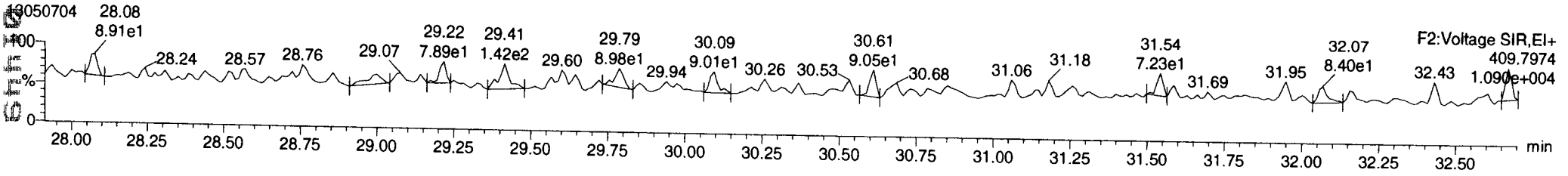

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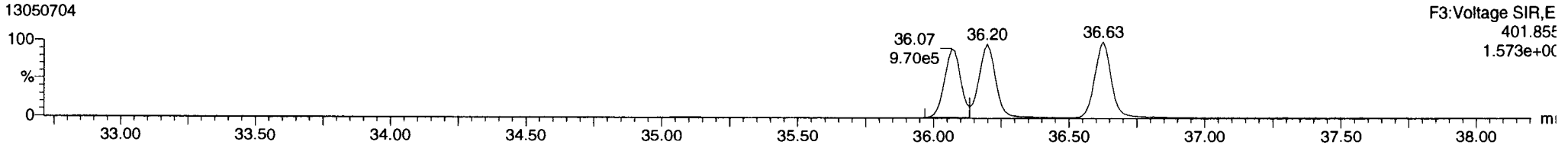
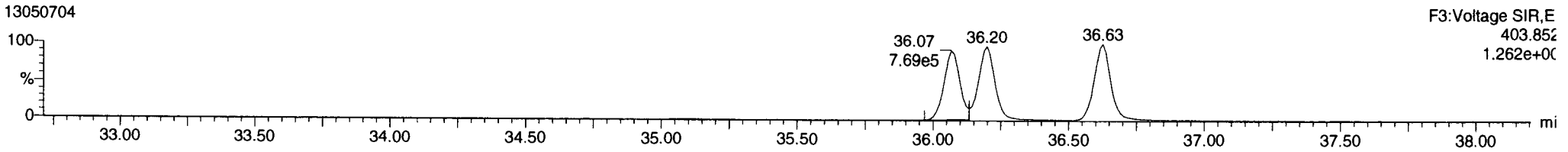
ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

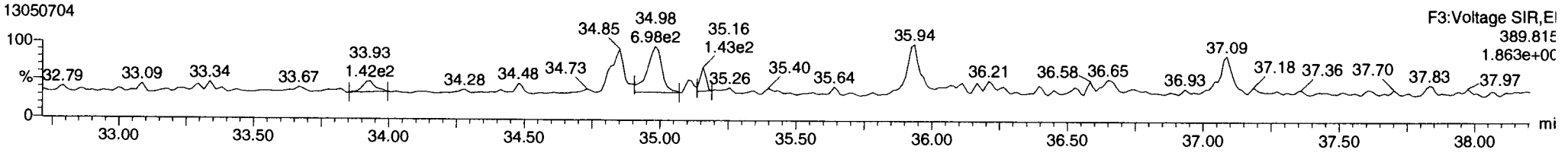
13C-123478-HxCDD



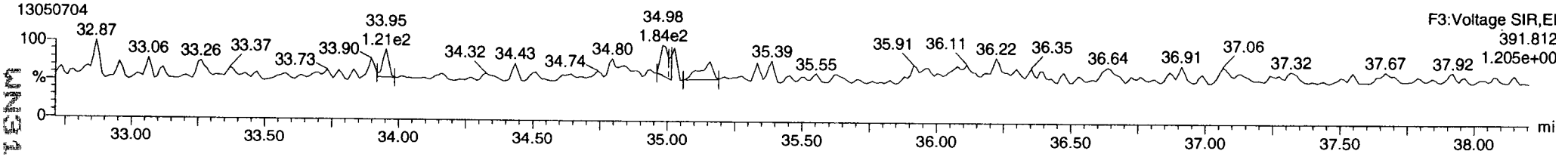
13C-123478-HxCDD



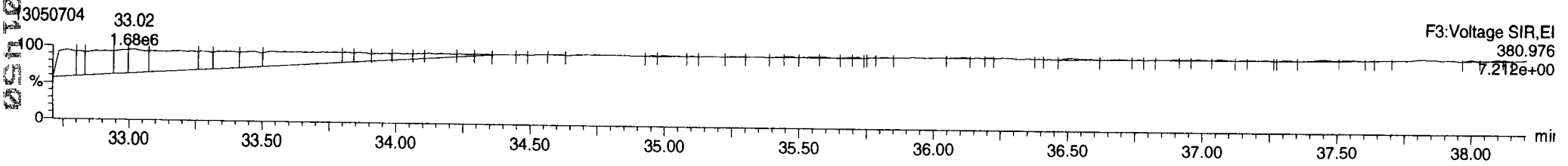
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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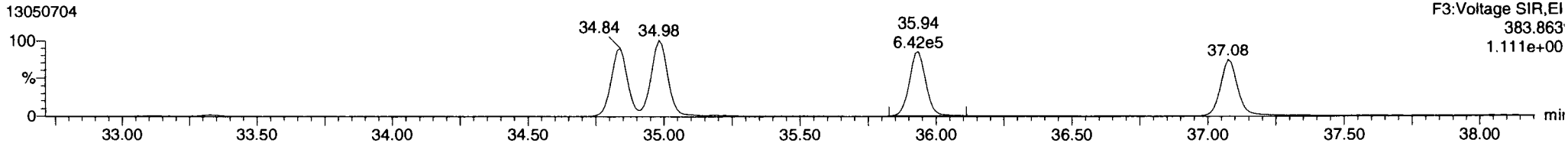
13C-234678-HxCDF



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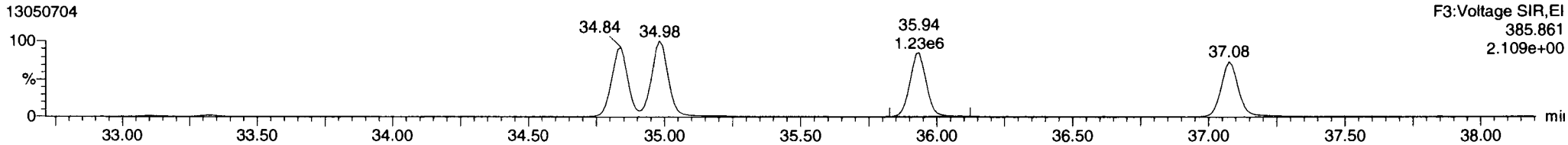
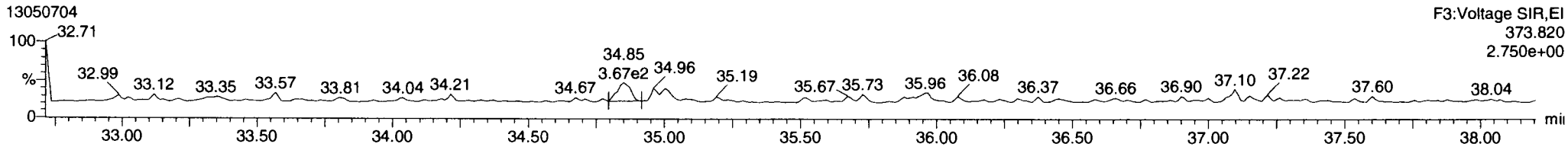
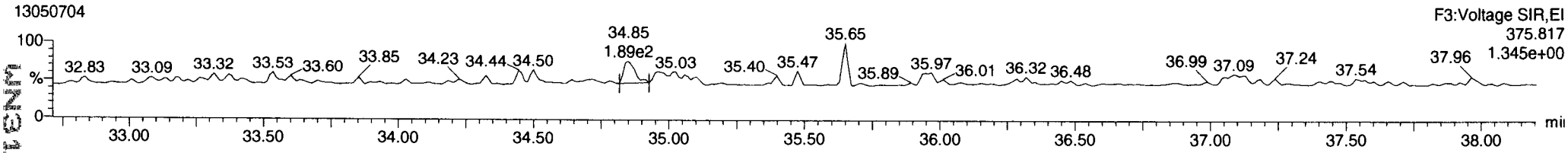


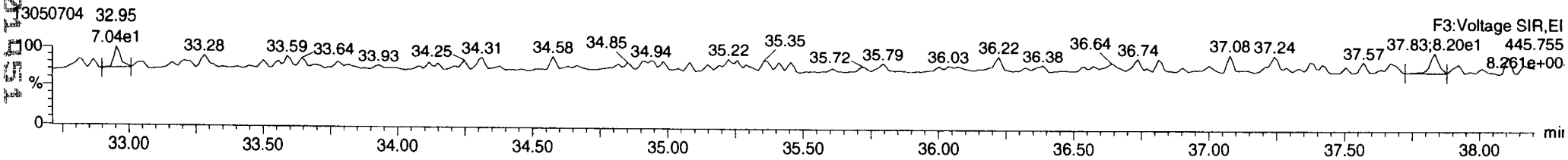
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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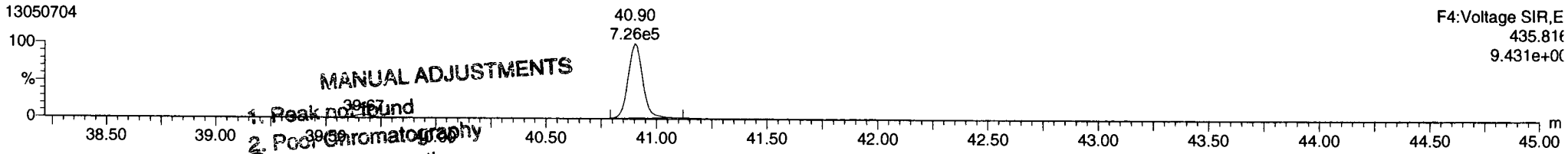
13C-1234678-HpCDD



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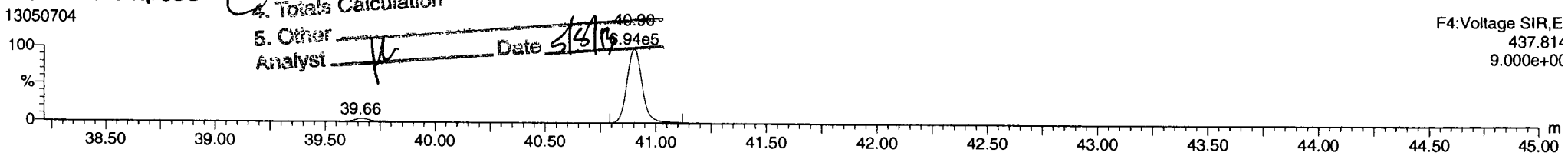
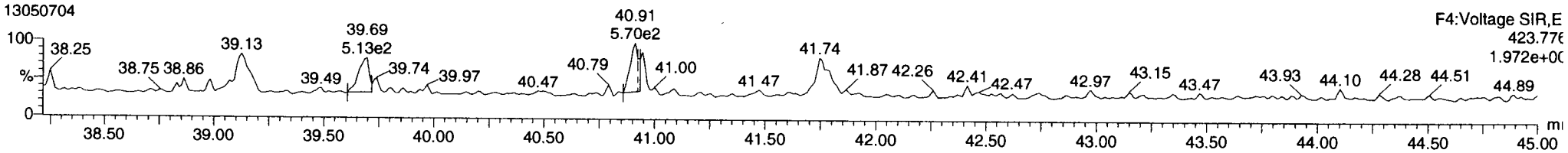
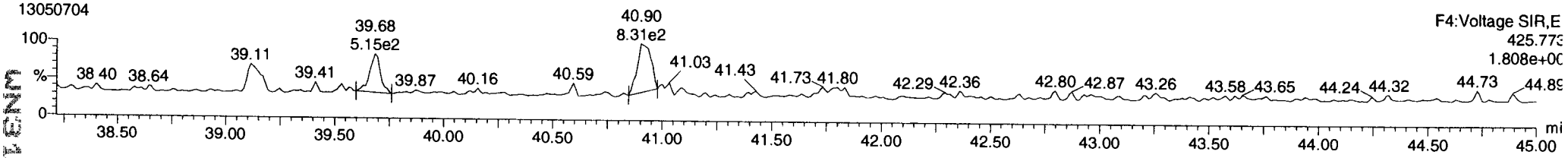


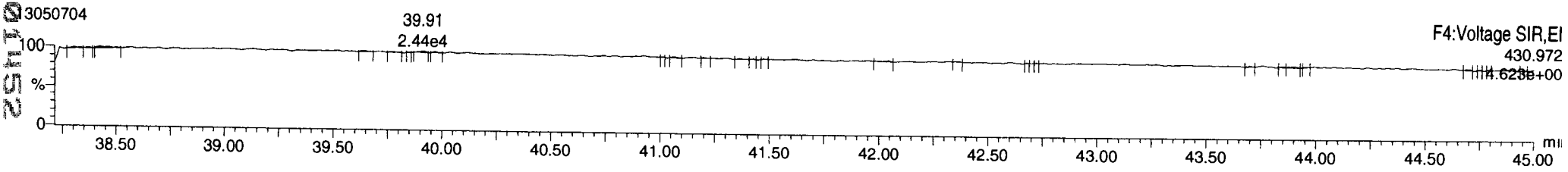
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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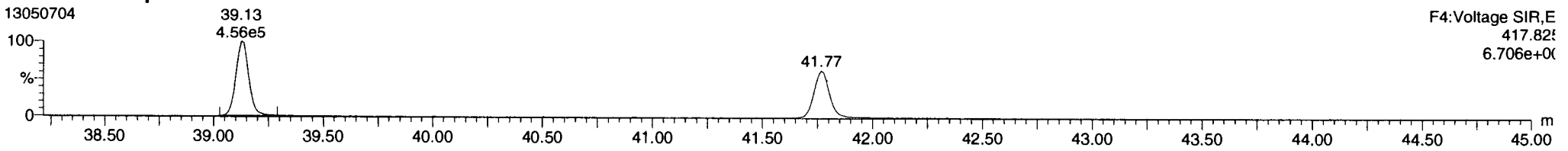
13C-1234678-HpCDF



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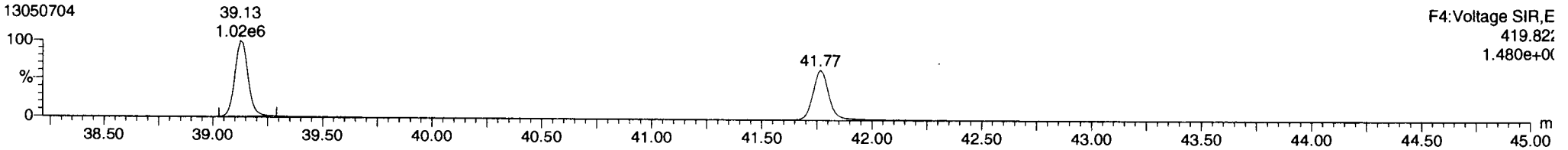
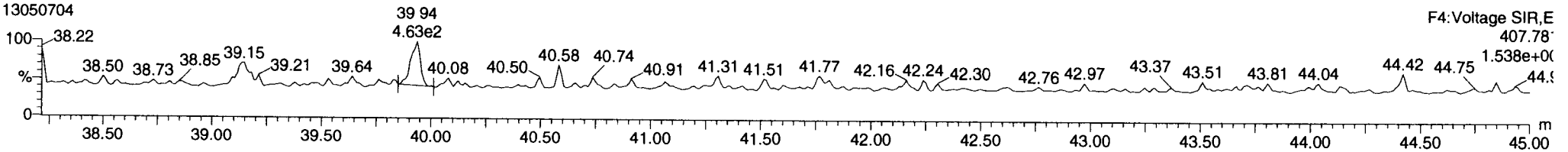


Total-heptafurans



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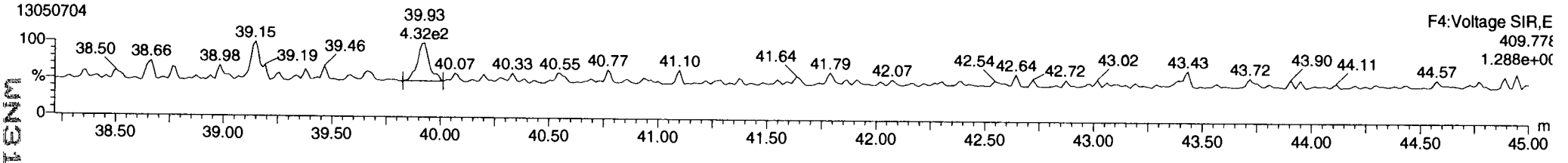
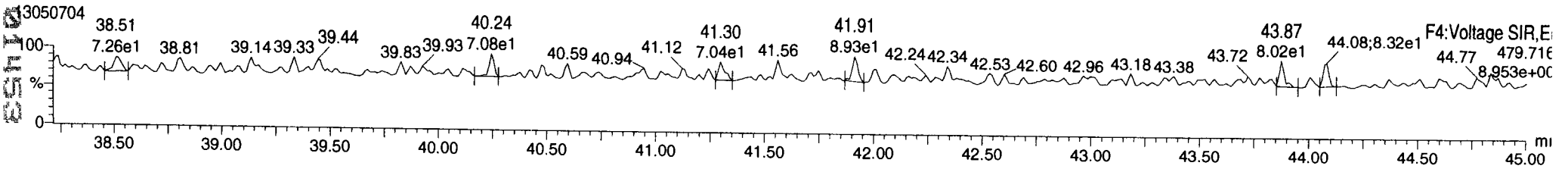


FUNCTION4 NCDPE



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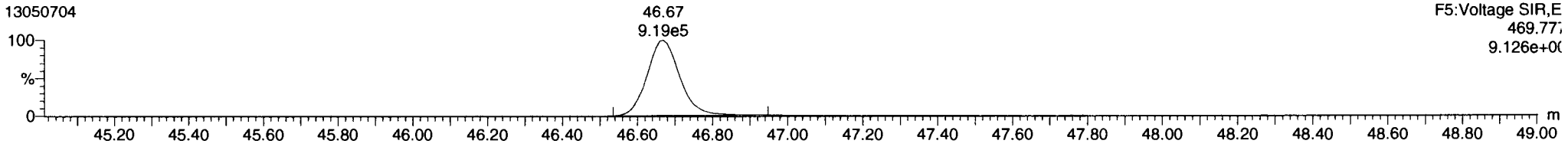
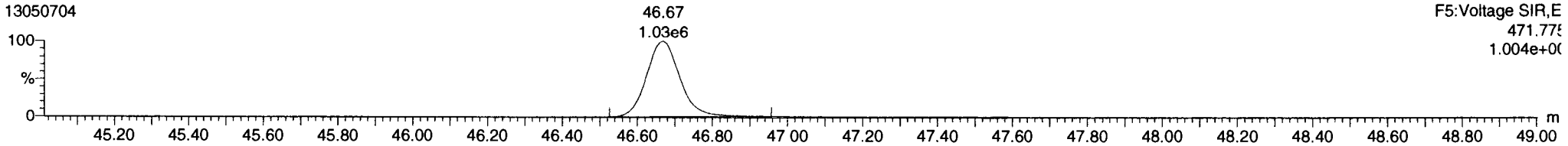
ID: WM89MBS, Name: 13050704, Date: 07-May-2013, Time: 16:33:25, Conditions: AUTOSPEC01, User: pk

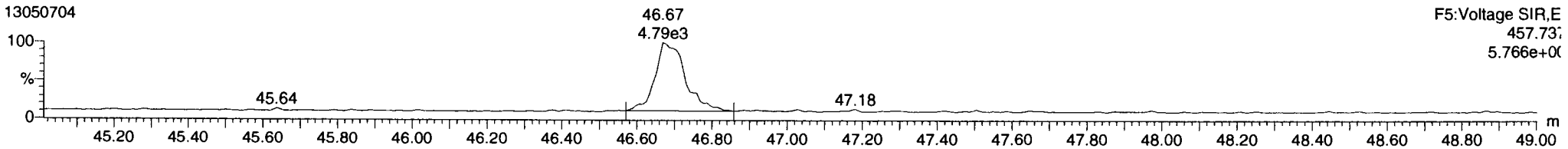
13C-OCDD



13C-OCDD



OCDD



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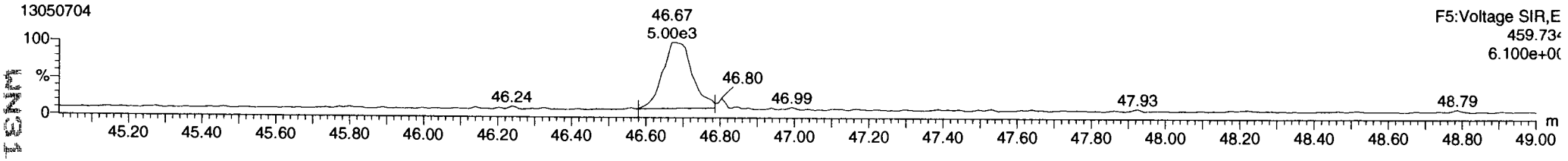
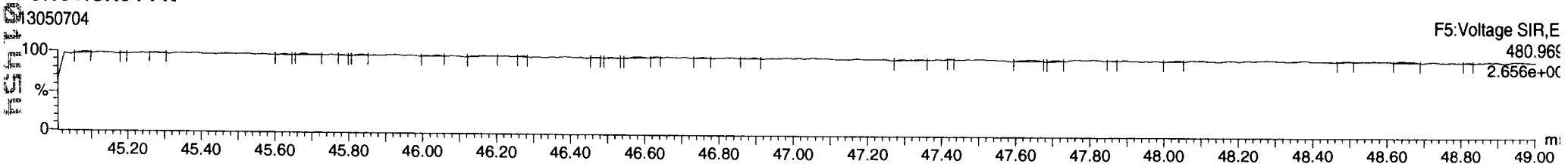


FUNCTION5 PFK



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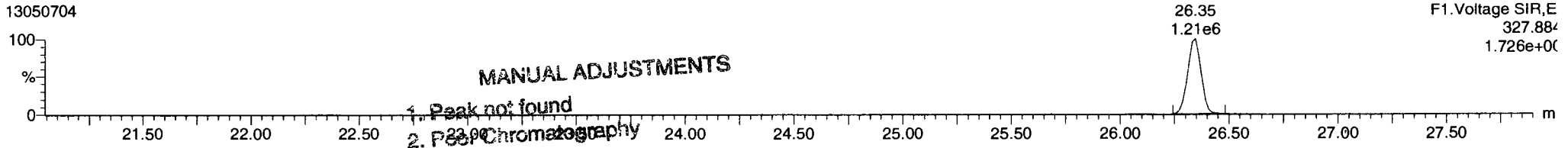
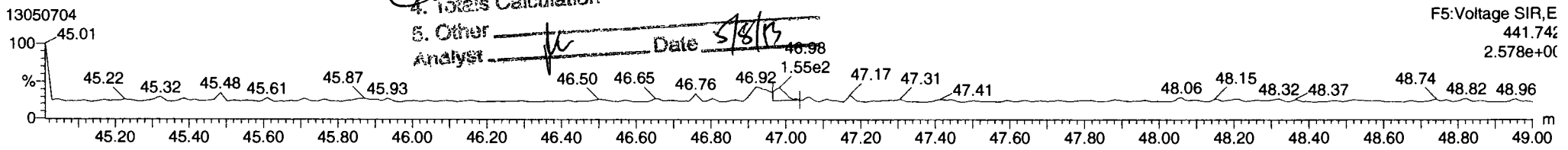
37CL-2378-TCDD



OCDF



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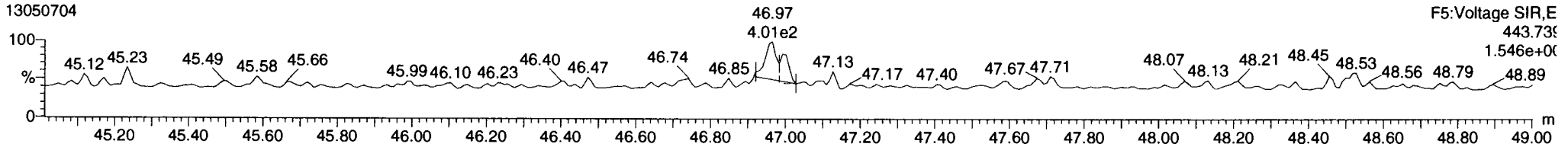
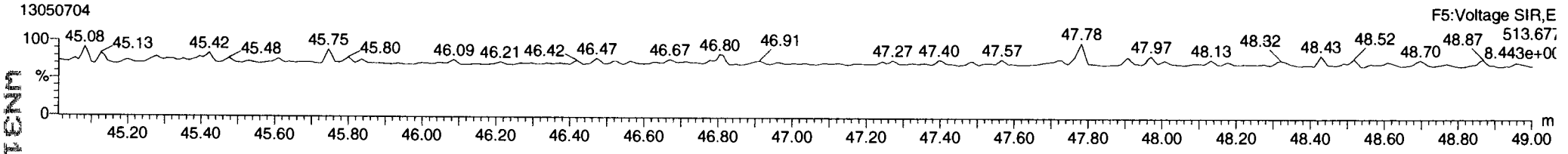


FUNCTION5 DCDPE



SCF TS . TCNN

5/8/13

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12378-PeCDF	29.841	1.001	7.56e5	5.12e5	0.836	1.477	1.550	3718.2	3023	6222	1.12e7	7.34e6	NO	56.543	56.543
23478-PeCDF	31.189	1.001	6.92e5	4.52e5	0.851	1.529	1.550	3379.5	3023	6222	1.02e7	6.59e6	NO	56.277	56.277
123478-HxCDF	34.861	1.001	5.18e5	4.26e5	1.017	1.217	1.240	2073.5	3640	3078	7.55e6	6.16e6	NO	53.746	53.746
234678-HxCDF	35.958	1.001	5.29e5	4.22e5	1.027	1.253	1.240	2077.4	3640	3078	7.56e6	6.06e6	NO	55.997	55.997
123678-HxCDF	35.004	1.000	5.89e5	4.78e5	1.013	1.231	1.240	2346.6	3640	3078	8.54e6	6.91e6	NO	53.927	53.927
123789-HxCDF	37.097	1.000	4.24e5	3.35e5	0.929	1.265	1.240	1684.4	3640	3078	6.13e6	4.82e6	NO	54.795	54.795
1234678-HpCDF	39.147	1.000	4.93e5	4.81e5	1.151	1.026	1.050	2466.0	2972	2386	7.33e6	7.13e6	NO	65.967	65.967
1234789-HpCDF	41.789	1.001	3.20e5	3.13e5	1.149	1.022	1.050	1368.0	2972	2386	4.07e6	3.91e6	NO	54.118	54.118
OCDF	46.957	1.006	4.36e5	4.87e5	0.963	0.894	0.890	1972.7	2131	2360	4.20e6	4.68e6	NO	109.531	109.531
2378-TCDD	26.347	1.001	1.11e5	1.47e5	0.980	0.753	0.770	918.2	1713	2894	1.57e6	2.09e6	NO	10.839	10.839
12378-PeCDD	31.441	1.001	5.06e5	3.36e5	0.948	1.505	1.550	4395.8	1722	1362	7.57e6	4.92e6	NO	53.470	53.470
123478-HxCDD	36.089	1.000	4.13e5	3.36e5	0.941	1.229	1.240	2202.6	2796	2242	6.16e6	5.03e6	NO	52.698	52.698
123678-HxCDD	36.221	1.001	4.12e5	3.39e5	0.884	1.218	1.240	2162 9	2796	2242	6.05e6	4.85e6	NO	50.248	50.248
123789-HxCDD	36.648	1.012	4.01e5	3.21e5	0.870	1.248	1.240	2024.3	2796	2242	5.66e6	4.62e6	NO	51.891	51.891
1234678-HpCDD	40.923	1.001	3.14e5	3.07e5	0.948	1.025	1.050	1828.8	2233	2106	4.08e6	4.08e6	NO	53.104	53.104
OCDD	46.688	1.000	4.03e5	4.60e5	0.969	0.876	0.890	1802.4	2238	2157	4.03e6	4.56e6	NO	101.728	101.728
13C-2378-TCDF	25.690	1.007	1.76e6	2.26e6	1.318	0.777	0.770	8210.6	3104	3068	2.55e7	3.28e7	NO		99.961
13C-12378-PeCDF	29.819	1.169	1.63e6	1.05e6	1.026	1.552	1.550	7426.9	3200	4213	2.38e7	1.53e7	NO		85.780
13C-23478-PeCDF	31.167	1.222	1.46e6	9.25e5	0.966	1.582	1.550	6664.0	3200	4213	2.13e7	1.35e7	NO		81.074
13C-123478-HxCDF	34.840	0.951	5.90e5	1.14e6	1.123	0.519	0.510	2532.8	3412	4077	8.64e6	1.68e7	NO		88.712
13C-123678-HxCDF	34.993	0.955	6.71e5	1.28e6	1.216	0.524	0.510	2796.4	3412	4077	9.54e6	1.83e7	NO		92.603
13C-234678-HxCDF	35.936	0.981	5.64e5	1.09e6	1.106	0.518	0.510	2448.9	3412	4077	8.35e6	1.59e7	NO		86.177
13C-123789-HxCDF	37.086	1.013	5.15e5	9.75e5	0.995	0.528	0.510	2102.7	3412	4077	7.17e6	1.39e7	NO		86.337
13C-1234678-HpCDF	39.136	1.069	3.92e5	8.90e5	0.896	0.441	0.440	2123.4	2735	3222	5.81e6	1.31e7	NO		82.524
13C-1234789-HpCDF	41.767	1.140	3.10e5	7.08e5	0.693	0.438	0.440	1417.2	2735	3222	3.88e6	8.75e6	NO		84.643
13C-1234-TCDD	25.510	0.000	1.36e6	1.69e6	1.000	0.800	0.770	3750.2	5260	3430	1.97e7	2.47e7	NO		100.000
13C-2378-TCDD	26.332	1.032	1.07e6	1.36e6	0.961	0.787	0.770	2825.6	5260	3430	1.49e7	1.88e7	NO		82.847
13C-12378-PeCDD	31.420	1.232	1.02e6	6.45e5	0.703	1.578	1.550	4087.6	3700	2040	1.51e7	9.60e6	NO		77.452
13C-123478-HxCDD	36.078	0.985	8.39e5	6.72e5	1.016	1.250	1.240	3982.0	3060	3922	1.22e7	9.87e6	NO		85.765
13C-123678-HxCDD	36.199	0.988	9.44e5	7.47e5	1.098	1.264	1.240	4299.4	3060	3922	1.32e7	1.06e7	NO		88.732
13C-1234678-HpCDD	40.901	1.117	6.32e5	6.01e5	0.828	1.050	1.050	3000 3	2771	2808	8.32e6	7.99e6	NO		85.823
13C-OCDD	46.670	1.274	8.27e5	9.23e5	0.770	0.895	0.890	3246.0	2517	2911	8.17e6	9 23e6	NO		131.090

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13C-123789-HxCDD	36.626	0.000	9.57e5	7.77e5	1.000	1.231	1.240	4573.7	3060	3922	1.40e7	1.14e7	NO	100.000
Total-tetrafurans			2.00e5		0.763				1145		2.89e6			14.959
Total-penta1			0.00e0						710		0.00e0			
Total-pentafurans			1.52e6		0.844				3023		2.25e7			118.663
Total-hexafurans			2.08e6		0.997				3640		3.00e7			220.472
Total-heptafurans			8.21e5		1.150				2972		1.15e7			121.197
Total-Furans			5.05e6		0.970				1145		7.12e7			584.821
Total-tetradioxins			1.15e5		0.980				1713		1.63e6			11.266
Total-pentadioxins			5.13e5		0.948				1722		7.67e6			54.246
Total-hexadioxins			1.23e6		0.898				2796		1.79e7			154.992
Total-heptadioxins			3.23e5		0.948				2233		4.22e6			54.516
Total-Dioxins			2.58e6		0.934				1713		3.54e7			376.748
Total-TEQ			7.63e6						1713		1.07e8			961.569
37CL-2378-TCDD	26.347	1.033	1.10e6		0.999			8555.6	1856		1.59e7			36.159
FUNCTION1 PFK			5.20e7						1053113		3.81e8			
FUNCTION2 PFK			0.00e0						255538		0.00e0			
FUNCTION3 PFK			9.40e6						484605		1.13e8			0.000
FUNCTION4 PFK			2.49e5						364866		8.35e6			
FUNCTION5 PFK			3.81e4						254829		9.03e5			
FUNCTION1 HXCDPE			0.00e0						407		0.00e0			
FUNCTION1 HPCDPE			1.11e3						758		1.76e4			0.000
FUNCTION2 HPCDPE			1.80e2						1036		3.73e3			0.000
FUNCTION3 OCDPE			1.41e2						642		5.10e3			0.000
FUNCTION4 NCDPE			4.57e2						1105		1.32e4			0.000
FUNCTION5 DCDPE			0.00e0						405		0.00e0			

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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

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TF

	35	Total-tetrafurans	303.9016	24.81	11536.023	0.763	0.376		0.74	0.77	NO	56.3
	35	Total-tetrafurans	303.9016	24.61	39721.574	0.763	1.296		0.76	0.77	NO	218.6
	35	Total-tetrafurans	303.9016	24.48	6978.742	0.763	0.228		0.71	0.77	NO	32.0
	35	Total-tetrafurans	303.9016	23.24	1943.656	0.763	0.063		0.61	0.77	YES	7.3
	1	2378-TCDF	303.9016	25.70	395836.562	0.763	12.917	12.917	0.77	0.77	NO	2190.3
	35	Total-tetrafurans	303.9016	25.53	2399.804	0.763	0.078		1.89	0.77	YES	18.7

PP

PF

	3	23478-PeCDF	339.8597	31.19	1143931.688	0.851	56.277	56.277	1.53	1.55	NO	3379.5
	37	Total-pentafurans	339.8597	30.92	2365.072	0.844	0.111		1.40	1.55	NO	6.0
	37	Total-pentafurans	339.8597	30.15	2293.147	0.844	0.107		0.41	1.55	YES	7.5
	37	Total-pentafurans	339.8597	30.04	29040.178	0.844	1.358		0.93	1.55	YES	72.3
	2	12378-PeCDF	339.8597	29.84	1268523.657	0.836	56.543	56.543	1.48	1.55	NO	3718.2
	37	Total-pentafurans	339.8597	29.48	30266.052	0.844	1.415		1.46	1.55	NO	80.1
	37	Total-pentafurans	339.8597	28.77	26984.885	0.844	1.261		1.64	1.55	NO	90.3
	37	Total-pentafurans	339.8597	28.71	23582.529	0.844	1.102		1.38	1.55	NO	71.0
	37	Total-pentafurans	339.8597	32.21	10454.701	0.844	0.489		1.34	1.55	NO	26.8

HF

	38	Total-hexafurans	373.8208	36.30	975.151	0.997	0.057		3.55	1.24	YES	3.9
	5	234678-HxCDF	373.8208	35.96	950541.501	1.027	55.997	55.997	1.25	1.24	NO	2077.4
	38	Total-hexafurans	373.8208	35.56	1489.916	0.997	0.088		0.91	1.24	YES	4.1
	6	123678-HxCDF	373.8208	35.00	1066613.969	1.013	53.927	53.927	1.23	1.24	NO	2346.6
	4	123478-HxCDF	373.8208	34.86	944422.156	1.017	53.746	53.746	1.22	1.24	NO	2073.5
	38	Total-hexafurans	373.8208	34.71	1836.573	0.997	0.108		0.93	1.24	YES	3.8
	38	Total-hexafurans	373.8208	33.34	21299.909	0.997	1.253		1.26	1.24	NO	43.6
	38	Total-hexafurans	373.8208	33.13	8506.410	0.997	0.500		1.13	1.24	NO	17.6
	7	123789-HxCDF	373.8208	37.10	758523.407	0.929	54.795	54.795	1.27	1.24	NO	1684.4

HPF

	9	1234789-HpCDF	407.7818	41.79	632963.344	1.149	54.118	54.118	1.02	1.05	NO	1368.0
	39	Total-heptafurans	407.7818	39.94	8487.559	1.150	0.642		1.14	1.05	NO	20.3
	39	Total-heptafurans	407.7818	39.63	6214.146	1.150	0.470		1.16	1.05	NO	15.2
	8	1234678-HpCDF	407.7818	39.15	973607.094	1.151	65.967	65.967	1.03	1.05	NO	2466.0

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Furans,TF,PP,PF,HF,HPF,OF

	35 Total-tetrafurans	303.9016	24.81	11536.023	0.763	0.376		0 74	0.77	NO	56.3
	35 Total-tetrafurans	303.9016	24.61	39721.574	0.763	1.296		0.76	0.77	NO	218.6
	35 Total-tetrafurans	303.9016	24.48	6978.742	0.763	0.228		0.71	0.77	NO	32.0
	35 Total-tetrafurans	303.9016	23.24	1943.656	0.763	0.063		0.61	0.77	YES	7.3
	1 2378-TCDF	303.9016	25.70	395836.562	0.763	12.917	12.917	0.77	0.77	NO	2190.3
	35 Total-tetrafurans	303.9016	25.53	2399.804	0.763	0.078		1.89	0.77	YES	18.7
	3 23478-PeCDF	339.8597	31.19	1143931.688	0.851	56.277	56.277	1.53	1.55	NO	3379.5
	37 Total-pentafurans	339.8597	30.92	2365.072	0.844	0.111		1.40	1.55	NO	6.0
	37 Total-pentafurans	339.8597	30.15	2293.147	0.844	0.107		0.41	1.55	YES	7.5
	37 Total-pentafurans	339.8597	30.04	29040.178	0.844	1.358		0.93	1.55	YES	72.3
	2 12378-PeCDF	339.8597	29.84	1268523.657	0.836	56.543	56.543	1.48	1.55	NO	3718.2
	37 Total-pentafurans	339.8597	29.48	30266.052	0.844	1.415		1.46	1.55	NO	80.1
	37 Total-pentafurans	339.8597	28.77	26984.885	0.844	1.261		1.64	1.55	NO	90.3
	37 Total-pentafurans	339.8597	28.71	23582.529	0.844	1.102		1.38	1.55	NO	71.0
	37 Total-pentafurans	339.8597	32.21	10454.701	0.844	0.489		1.34	1.55	NO	26.8
	38 Total-hexafurans	373.8208	36.30	975.151	0.997	0.057		3.55	1.24	YES	3.9
	5 234678-HxCDF	373.8208	35.96	950541.501	1.027	55.997	55.997	1.25	1.24	NO	2077.4
	38 Total-hexafurans	373.8208	35.56	1489.916	0.997	0.088		0.91	1.24	YES	4.1
	6 123678-HxCDF	373.8208	35.00	1066613.969	1.013	53.927	53.927	1.23	1.24	NO	2346.6
	4 123478-HxCDF	373.8208	34.86	944422.156	1.017	53.746	53.746	1.22	1.24	NO	2073.5
	38 Total-hexafurans	373.8208	34.71	1836.573	0.997	0.108		0.93	1.24	YES	3.8
	38 Total-hexafurans	373.8208	33.34	21299.909	0.997	1.253		1.26	1.24	NO	43.6
	38 Total-hexafurans	373.8208	33.13	8506.410	0.997	0.500		1.13	1.24	NO	17.6
	7 123789-HxCDF	373.8208	37.10	758523.407	0.929	54.795	54.795	1.27	1.24	NO	1684.4
	9 1234789-HpCDF	407.7818	41.79	632963.344	1.149	54.118	54.118	1.02	1.05	NO	1368.0
	39 Total-heptafurans	407.7818	39.94	8487.559	1.150	0.642		1.14	1.05	NO	20.3
	39 Total-heptafurans	407.7818	39.63	6214.146	1.150	0.470		1.16	1.05	NO	15.2
	8 1234678-HpCDF	407.7818	39.15	973607.094	1.151	65.967	65.967	1.03	1.05	NO	2466.0
	10 OCDF	441.7428	46.96	923286.281	0.963	109.531	109....	0.89	0.89	NO	1972.7

TD

	11 2378-TCDD	319.8965	26.35	258014.211	0.980	10.839	10.839	0.75	0.77	NO	918.2
	41 Total-tetradioxins	319.8965	25.96	8636.630	0.980	0.363		0.79	0.77	NO	30.4
	41 Total-tetradioxins	319.8965	24.94	1517.773	0.980	0.064		0.69	0.77	NO	5.4

PD

	42 Total-pentadioxins	355.8546	31.84	1631.366	0.948	0.104		0.78	1.55	YES	7.7
	12 12378-PeCDD	355.8546	31.44	842456.344	0.948	53.470	53.470	1.51	1.55	NO	4395.8
	42 Total-pentadioxins	355.8546	30.76	2116.923	0.948	0.134		1.17	1.55	YES	8.2
	42 Total-pentadioxins	355.8546	30.20	2496.671	0.948	0.158		1.50	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	30.08	3178.123	0.948	0.202		1.77	1.55	NO	17.5
	42 Total-pentadioxins	355.8546	29.84	2812.465	0.948	0.179		1.92	1.55	YES	15.3

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HD

	43	Total-hexadioxins	389.8157	35.08	2229.400	0.898	0.155		0.49	1.24	YES	6.2
	15	123789-HxCDD	389.8157	36.65	722503.344	0.870	51.891	51.891	1.25	1.24	NO	2024.3
	14	123678-HxCDD	389.8157	36.22	750962.188	0.884	50.248	50.248	1.22	1.24	NO	2162.9
	13	123478-HxCDD	389.8157	36.09	749377.125	0.941	52.698	52.698	1.23	1.24	NO	2202.6

HPD

	16	1234678-HpCDD	423.7766	40.92	620715.876	0.948	53.104	53.104	1.02	1.05	NO	1828.8
	44	Total-heptadioxins	423.7766	39.68	16503.367	0.948	1.412		1.08	1.05	NO	59.4

Dioxins,TD,PD,HD,HPD,OD

	11	2378-TCDD	319.8965	26.35	258014.211	0.980	10.839	10.839	0.75	0.77	NO	918.2
	41	Total-tetradioxins	319.8965	25.96	8636.630	0.980	0.363		0.79	0.77	NO	30.4
	41	Total-tetradioxins	319.8965	24.94	1517.773	0.980	0.064		0.69	0.77	NO	5.4
	42	Total-pentadioxins	355.8546	31.84	1631.366	0.948	0.104		0.78	1.55	YES	7.7
	12	12378-PeCDD	355.8546	31.44	842456.344	0.948	53.470	53.470	1.51	1.55	NO	4395.8
	42	Total-pentadioxins	355.8546	30.76	2116.923	0.948	0.134		1.17	1.55	YES	8.2
	42	Total-pentadioxins	355.8546	30.20	2496.671	0.948	0.158		1.50	1.55	NO	12.1
	42	Total-pentadioxins	355.8546	30.08	3178.123	0.948	0.202		1.77	1.55	NO	17.5
	42	Total-pentadioxins	355.8546	29.84	2812.465	0.948	0.179		1.92	1.55	YES	15.3
	43	Total-hexadioxins	389.8157	35.08	2229.400	0.898	0.155		0.49	1.24	YES	6.2
	15	123789-HxCDD	389.8157	36.65	722503.344	0.870	51.891	51.891	1.25	1.24	NO	2024.3
	14	123678-HxCDD	389.8157	36.22	750962.188	0.884	50.248	50.248	1.22	1.24	NO	2162.9
	13	123478-HxCDD	389.8157	36.09	749377.125	0.941	52.698	52.698	1.23	1.24	NO	2202.6
	16	1234678-HpCDD	423.7766	40.92	620715.876	0.948	53.104	53.104	1.02	1.05	NO	1828.8
	44	Total-heptadioxins	423.7766	39.68	16503.367	0.948	1.412		1.08	1.05	NO	59.4
	17	OCDD	457.7377	46.69	862906.282	0.969	101.728	101....	0.88	0.89	NO	1802.4

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TotalTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	24.81	11536.023	0.763	0.376		0.74	0.77	NO	56.3
	35 Total-tetrafurans	303.9016	24.61	39721.574	0.763	1.296		0.76	0.77	NO	218.6
	35 Total-tetrafurans	303.9016	24.48	6978.742	0.763	0.228		0.71	0.77	NO	32.0
	35 Total-tetrafurans	303.9016	23.24	1943.656	0.763	0.063		0.61	0.77	YES	7.3
	1 2378-TCDF	303.9016	25.70	395836.562	0.763	12.917	12.917	0.77	0.77	NO	2190.3
	35 Total-tetrafurans	303.9016	25.53	2399.804	0.763	0.078		1.89	0.77	YES	18.7
	3 23478-PeCDF	339.8597	31.19	1143931.688	0.851	56.277	56.277	1.53	1.55	NO	3379.5
	37 Total-pentafurans	339.8597	30.92	2365.072	0.844	0.111		1.40	1.55	NO	6.0
	37 Total-pentafurans	339.8597	30.15	2293.147	0.844	0.107		0.41	1.55	YES	7.5
	37 Total-pentafurans	339.8597	30.04	29040.178	0.844	1.358		0.93	1.55	YES	72.3
	2 12378-PeCDF	339.8597	29.84	1268523.657	0.836	56.543	56.543	1.48	1.55	NO	3718.2
	37 Total-pentafurans	339.8597	29.48	30266.052	0.844	1.415		1.46	1.55	NO	80.1
	37 Total-pentafurans	339.8597	28.77	26984.885	0.844	1.261		1.64	1.55	NO	90.3
	37 Total-pentafurans	339.8597	28.71	23582.529	0.844	1.102		1.38	1.55	NO	71.0
	37 Total-pentafurans	339.8597	32.21	10454.701	0.844	0.489		1.34	1.55	NO	26.8
	38 Total-hexafurans	373.8208	36.30	975.151	0.997	0.057		3.55	1.24	YES	3.9
	5 234678-HxCDF	373.8208	35.96	950541.501	1.027	55.997	55.997	1.25	1.24	NO	2077.4
	38 Total-hexafurans	373.8208	35.56	1489.916	0.997	0.088		0.91	1.24	YES	4.1
	6 123678-HxCDF	373.8208	35.00	1066613.969	1.013	53.927	53.927	1.23	1.24	NO	2346.6
	4 123478-HxCDF	373.8208	34.86	944422.156	1.017	53.746	53.746	1.22	1.24	NO	2073.5
	38 Total-hexafurans	373.8208	34.71	1836.573	0.997	0.108		0.93	1.24	YES	3.8
	38 Total-hexafurans	373.8208	33.34	21299.909	0.997	1.253		1.26	1.24	NO	43.6
	38 Total-hexafurans	373.8208	33.13	8506.410	0.997	0.500		1.13	1.24	NO	17.6
	7 123789-HxCDF	373.8208	37.10	758523.407	0.929	54.795	54.795	1.27	1.24	NO	1684.4
	9 1234789-HpCDF	407.7818	41.79	632963.344	1.149	54.118	54.118	1.02	1.05	NO	1368.0
	39 Total-heptafurans	407.7818	39.94	8487.559	1.150	0.642		1.14	1.05	NO	20.3
	39 Total-heptafurans	407.7818	39.63	6214.146	1.150	0.470		1.16	1.05	NO	15.2
	8 1234678-HpCDF	407.7818	39.15	973607.094	1.151	65.967	65.967	1.03	1.05	NO	2466.0
	10 OCDF	441.7428	46.96	923286.281	0.963	109.531	109....	0.89	0.89	NO	1972.7
	11 2378-TCDD	319.8965	26.35	258014.211	0.980	10.839	10.839	0.75	0.77	NO	918.2
	41 Total-tetradioxins	319.8965	25.96	8636.630	0.980	0.363		0.79	0.77	NO	30.4
	41 Total-tetradioxins	319.8965	24.94	1517.773	0.980	0.064		0.69	0.77	NO	5.4
	42 Total-pentadioxins	355.8546	31.84	1631.366	0.948	0.104		0.78	1.55	YES	7.7
	12 12378-PeCDD	355.8546	31.44	842456.344	0.948	53.470	53.470	1.51	1.55	NO	4395.8
	42 Total-pentadioxins	355.8546	30.76	2116.923	0.948	0.134		1.17	1.55	YES	8.2
	42 Total-pentadioxins	355.8546	30.20	2496.671	0.948	0.158		1.50	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	30.08	3178.123	0.948	0.202		1.77	1.55	NO	17.5
	42 Total-pentadioxins	355.8546	29.84	2812.465	0.948	0.179		1.92	1.55	YES	15.3
	43 Total-hexadioxins	389.8157	35.08	2229.400	0.898	0.155		0.49	1.24	YES	6.2
	15 123789-HxCDD	389.8157	36.65	722503.344	0.870	51.891	51.891	1.25	1.24	NO	2024.3
	14 123678-HxCDD	389.8157	36.22	750962.188	0.884	50.248	50.248	1.22	1.24	NO	2162.9
	13 123478-HxCDD	389.8157	36.09	749377.125	0.941	52.698	52.698	1.23	1.24	NO	2202.6
	16 1234678-HpCDD	423.7766	40.92	620715.876	0.948	53.104	53.104	1.02	1.05	NO	1828.8
	44 Total-heptadioxins	423.7766	39.68	16503.367	0.948	1.412		1.08	1.05	NO	59.4
	17 OCDD	457.7377	46.69	862906.282	0.969	101.728	101....	0.88	0.89	NO	1802.4

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Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

PFK1

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[redacted]	48	FUNCTION1 PFK	330.9792	22.01	0.000					25.7
[redacted]	48	FUNCTION1 PFK	330.9792	21.89	0.000					27.4
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[redacted]	48	FUNCTION1 PFK	330.9792	21.55	0.000					29.4
[redacted]	48	FUNCTION1 PFK	330.9792	21.19	0.000					34.1
[redacted]	48	FUNCTION1 PFK	330.9792	21.10	0.000					34.4
[redacted]	48	FUNCTION1 PFK	330.9792	26.65	0.000					1.1
[redacted]	48	FUNCTION1 PFK	330.9792	26.53	0.000					5.0
[redacted]	48	FUNCTION1 PFK	330.9792	26.23	0.000					3.7
[redacted]	48	FUNCTION1 PFK	330.9792	25.61	0.000					1.8
[redacted]	48	FUNCTION1 PFK	330.9792	25.20	0.000					4.0
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[redacted]	48	FUNCTION1 PFK	330.9792	24.87	0.000					2.4
[redacted]	48	FUNCTION1 PFK	330.9792	24.81	0.000					2.6
[redacted]	48	FUNCTION1 PFK	330.9792	24.55	0.000					1.1
[redacted]	48	FUNCTION1 PFK	330.9792	24.39	0.000					3.4
[redacted]	48	FUNCTION1 PFK	330.9792	24.02	0.000					4.2
[redacted]	48	FUNCTION1 PFK	330.9792	23.91	0.000					6.2
[redacted]	48	FUNCTION1 PFK	330.9792	23.15	0.000					8.0
[redacted]	48	FUNCTION1 PFK	330.9792	22.82	0.000					12.6
[redacted]	48	FUNCTION1 PFK	330.9792	22.79	0.000					12.9
[redacted]	48	FUNCTION1 PFK	330.9792	22.72	0.000					12.5
[redacted]	48	FUNCTION1 PFK	330.9792	27.59	0.000					6.4
[redacted]	48	FUNCTION1 PFK	330.9792	27.54	0.000					7.0
[redacted]	48	FUNCTION1 PFK	330.9792	27.39	0.000					5.0
[redacted]	48	FUNCTION1 PFK	330.9792	27.23	0.000					4.9
[redacted]	48	FUNCTION1 PFK	330.9792	26.89	0.000					5.8
[redacted]	48	FUNCTION1 PFK	330.9792	26.84	0.000					6.0
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PFK2

[redacted]										

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ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

PFK3

	50 FUNCTION3 PFK	380.9760	33.44	0.000	0.000					4.2
	50 FUNCTION3 PFK	380.9760	33.36	0.000	0.000					8.3
	50 FUNCTION3 PFK	380.9760	33.18	0.000	0.000					19.0
	50 FUNCTION3 PFK	380.9760	33.01	0.000	0.000					29.7
	50 FUNCTION3 PFK	380.9760	32.89	0.000	0.000					35.3
	50 FUNCTION3 PFK	380.9760	32.86	0.000	0.000					36.3
	50 FUNCTION3 PFK	380.9760	32.79	0.000	0.000					41.4
	50 FUNCTION3 PFK	380.9760	34.87	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	34.64	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	34.61	0 000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	34.51	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	34.41	0.000	0.000					2 1
	50 FUNCTION3 PFK	380.9760	34.35	0.000	0 000					1 6
	50 FUNCTION3 PFK	380.9760	34.27	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	34.11	0.000	0.000					1 6
	50 FUNCTION3 PFK	380.9760	34.02	0.000	0.000					1 6
	50 FUNCTION3 PFK	380.9760	33.96	0.000	0.000					2.8
	50 FUNCTION3 PFK	380.9760	33.92	0.000	0.000					2 3
	50 FUNCTION3 PFK	380.9760	33.89	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	33.82	0.000	0 000					2.0
	50 FUNCTION3 PFK	380.9760	33.78	0.000	0.000					2 1
	50 FUNCTION3 PFK	380.9760	33.68	0.000	0.000					2.2
	50 FUNCTION3 PFK	380.9760	33.60	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	37.06	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	36.85	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	36.78	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	36.63	0.000	0.000					2.6
	50 FUNCTION3 PFK	380.9760	36.56	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	36.32	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	36.26	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	36.22	0.000	0.000					2.2
	50 FUNCTION3 PFK	380.9760	36.11	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	36.07	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.96	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	35.90	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	35.85	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	35.52	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	35.27	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	35.00	0.000	0.000					2.0
	50 FUNCTION3 PFK	380.9760	38.16	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	38.07	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	37.91	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	37.71	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	37.65	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	37.60	0.000	0.000					1.0
	50 FUNCTION3 PFK	380.9760	37.56	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	37.45	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	37.42	0.000	0.000					0 9
	50 FUNCTION3 PFK	380.9760	37.21	0.000	0.000					1 1

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

PFK4

[redacted]	51	FUNCTION4 PFK	430.9728	39.30	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	38.92	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	38.86	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	38.43	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	38.33	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	44.89	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	44.66	0.000							2.1
[redacted]	51	FUNCTION4 PFK	430.9728	44.47	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	44.12	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	43.66	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	43.02	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	42.40	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	42.28	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	42.07	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	41.80	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	41.59	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	41.41	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	41.10	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	41.01	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	40.67	0.000							0.5

PFK5

[redacted]	52	FUNCTION5 PFK	480.9696	48.43	0.000							1.4
[redacted]	52	FUNCTION5 PFK	480.9696	47.92	0.000							2.2

ETHERS1

[redacted]												

ETHERS2

[redacted]	54	FUNCTION1 HPCD...	409.7974	26.84	0.000	0.000						2.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.11	0.000	0.000						2.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.02	0.000	0.000						3.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.30	0.000	0.000						1.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.87	0.000	0.000						1.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.75	0.000	0.000						1.6
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.30	0.000	0.000						2.3
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.19	0.000	0.000						2.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.04	0.000	0.000						2.2
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.88	0.000	0.000						3.3

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

ETHERS3

	#	Name									
	55	FUNCTION2 HPCD...	409.7974	32.19	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	32.59	0.000	0.000					1.9

ETHERS4

	#	Name									
	56	FUNCTION3 OCDPE	445.7555	36.49	0.000	0.000					4.5
	56	FUNCTION3 OCDPE	445.7555	33.39	0.000	0.000					3.4

ETHERS5

	#	Name									
	57	FUNCTION4 NCDPE	479.7165	43.72	0.000	0.000					2.9
	57	FUNCTION4 NCDPE	479.7165	42.86	0.000	0.000					2.4
	57	FUNCTION4 NCDPE	479.7165	41.08	0.000	0.000					1.6
	57	FUNCTION4 NCDPE	479.7165	40.05	0.000	0.000					2.2
	57	FUNCTION4 NCDPE	479.7165	39.70	0.000	0.000					2.8

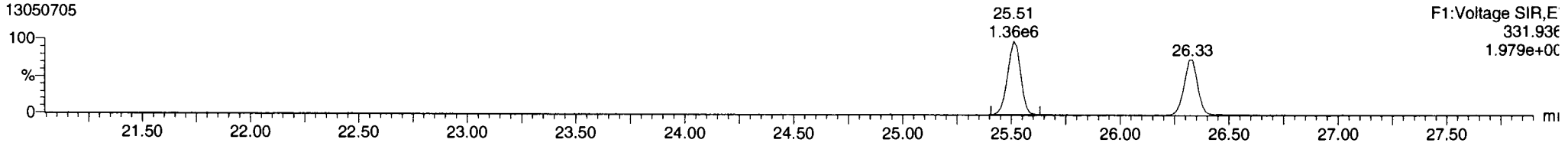
ETHERS6

	#	Name	Type	RT	Area	Resp						S/N
1												

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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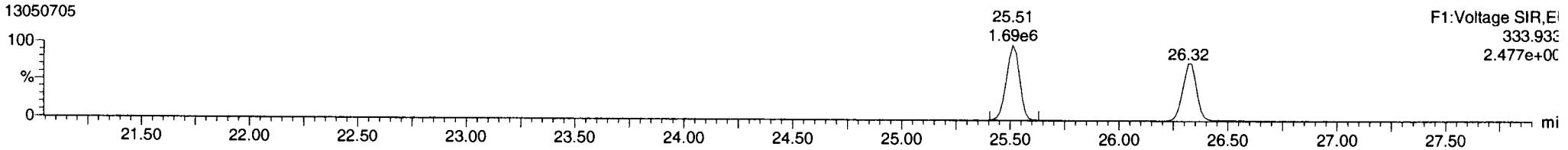

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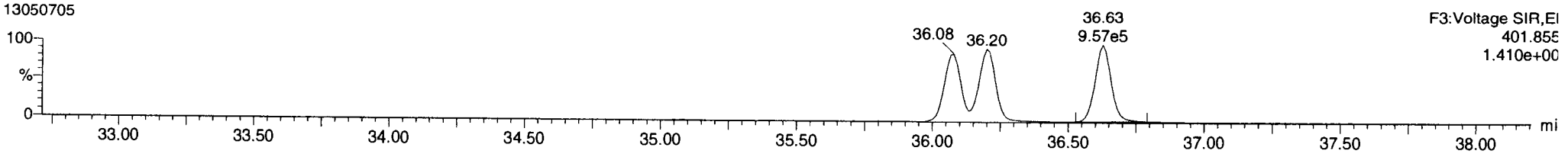

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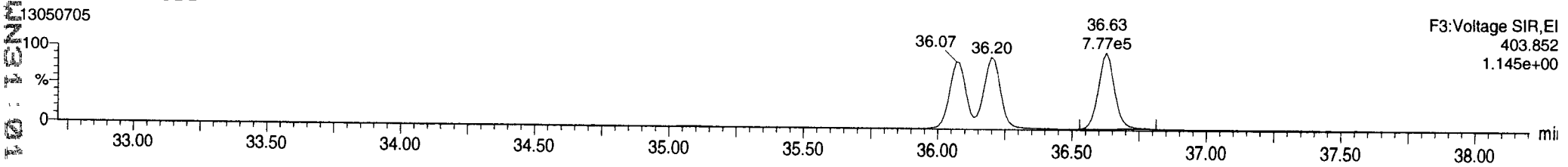

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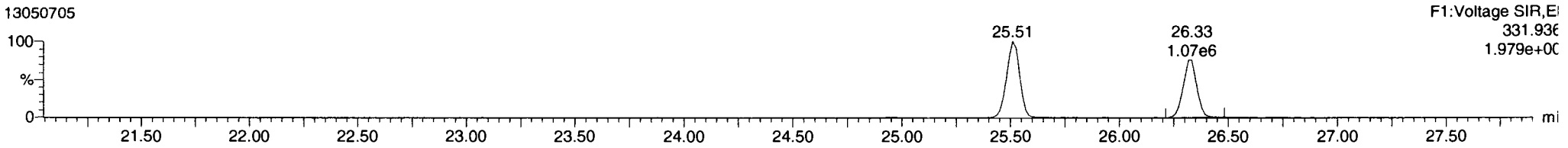
13C-2378-TCDD



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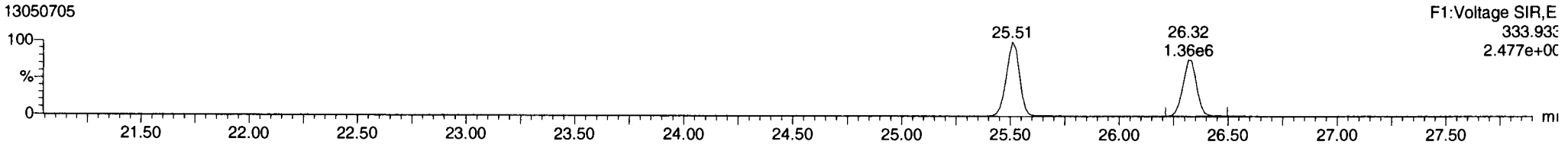

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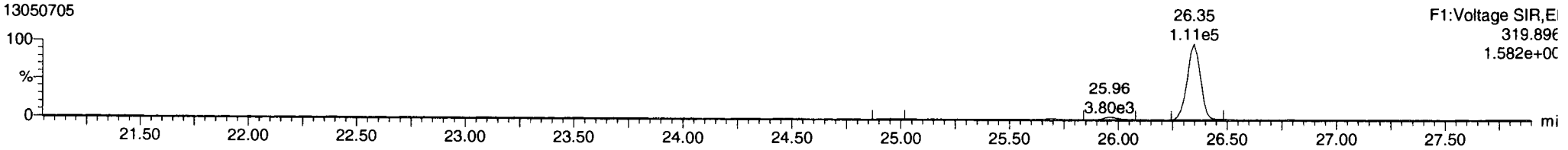
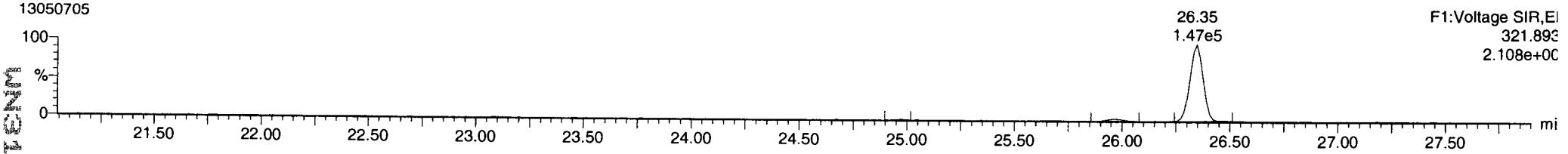
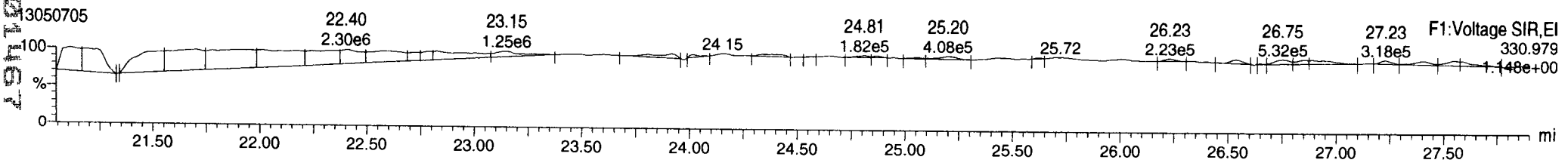


Total-tetradioxins



FUNCTION1 PFK



ID: WM89OPR, Name: 13050705, Date: 07-May-2013, Time: 17:25:39, Conditions: AUTOSPEC01, User: pk

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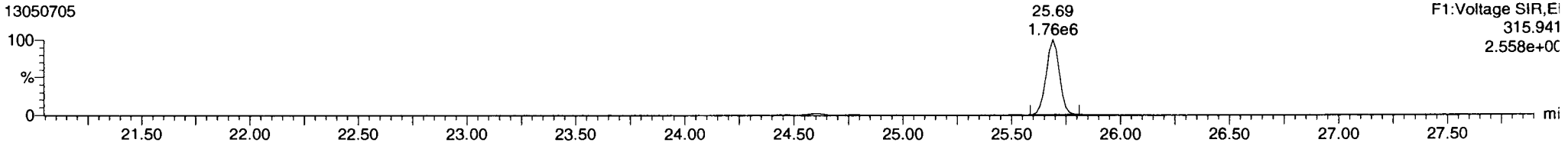

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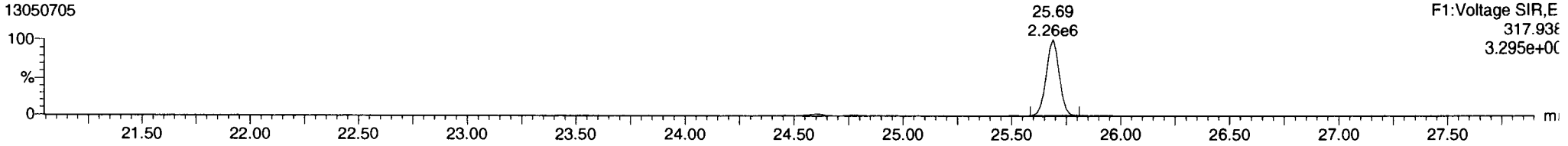
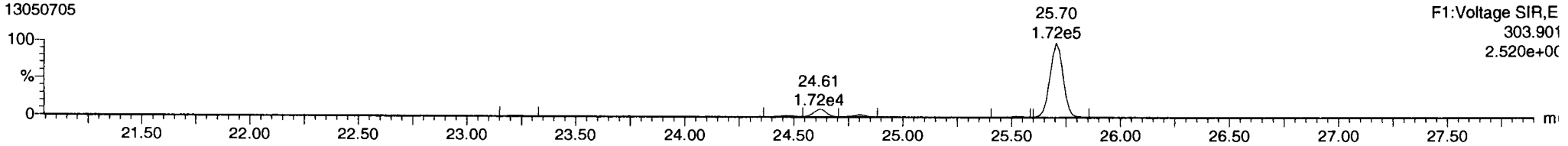
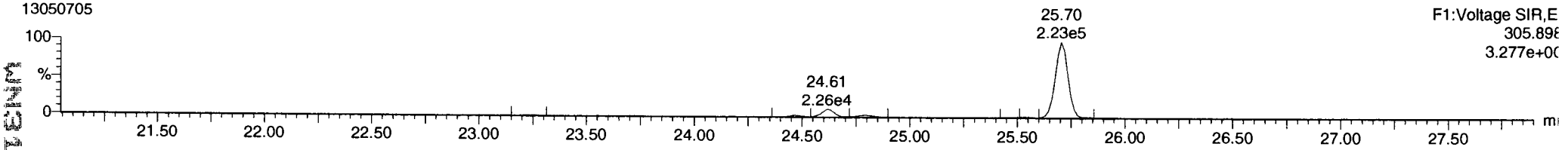


Total-tetrafurans



Total-tetrafurans



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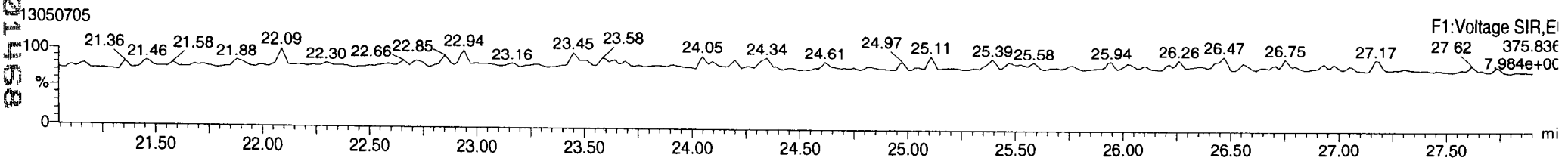

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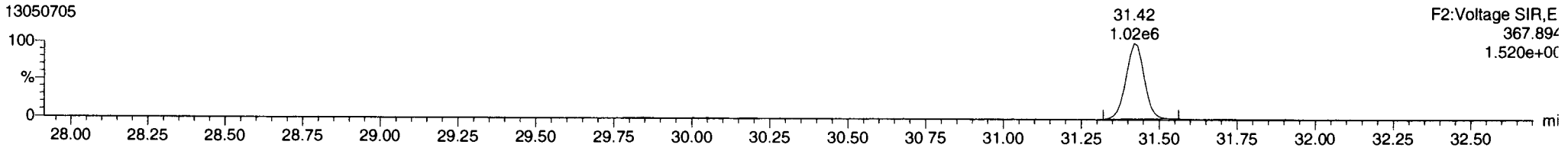
13C-12378-PeCDD



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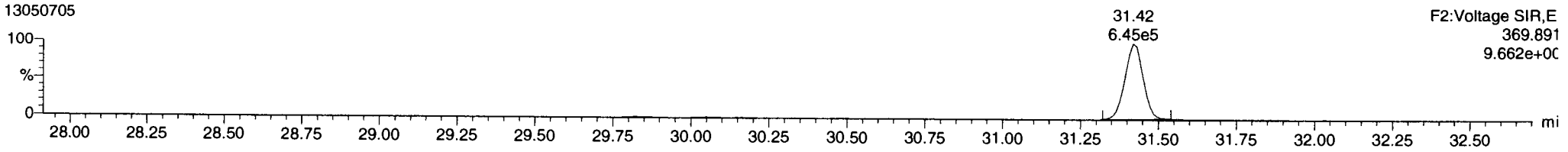

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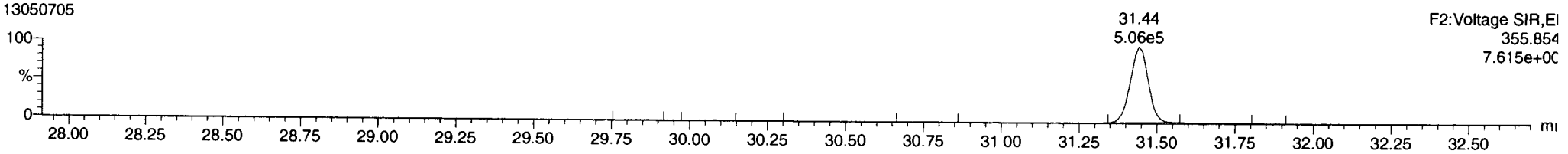
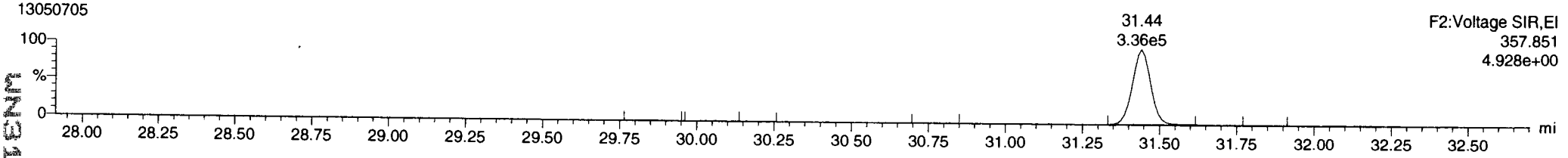


Total-pentadioxins



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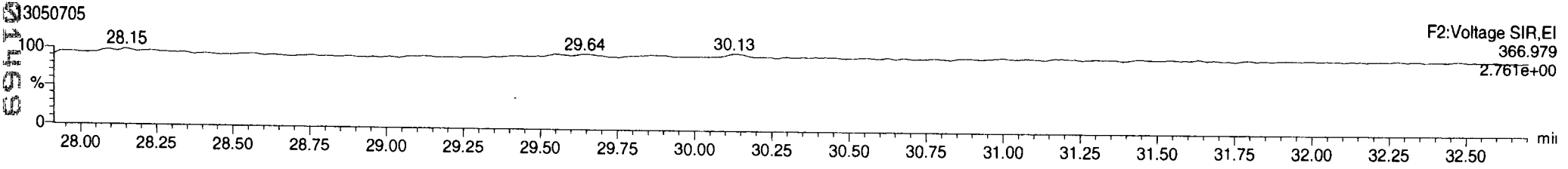

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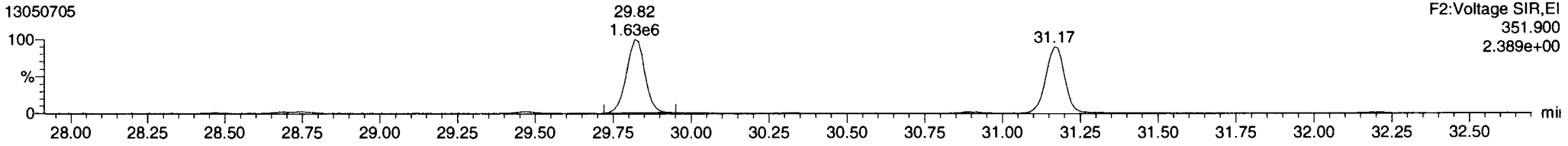
13C-12378-PeCDF



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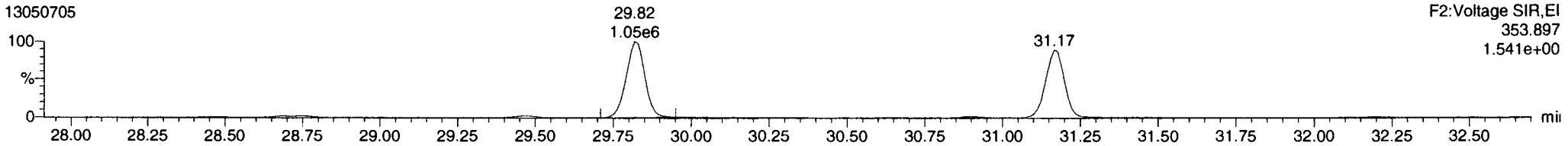

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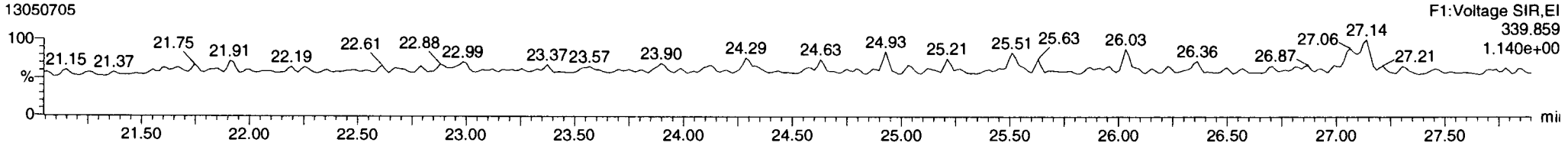

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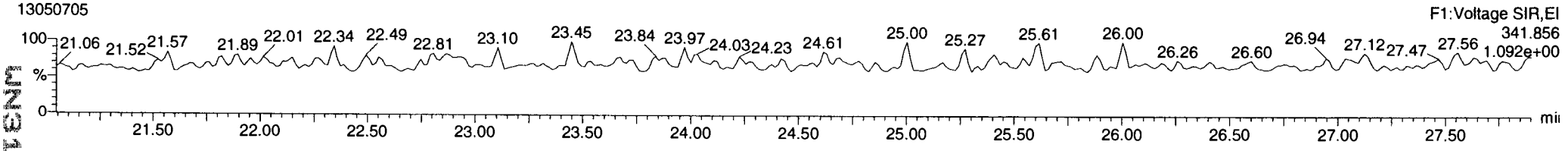

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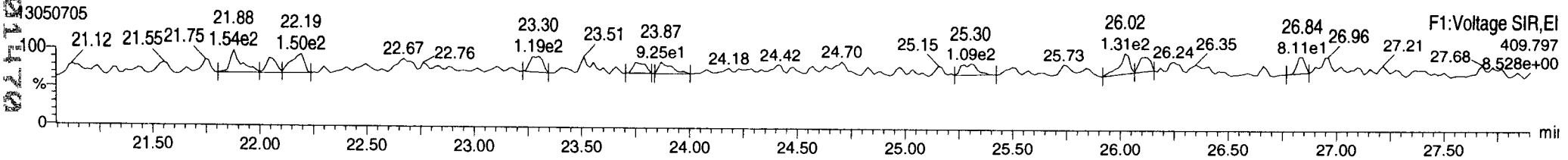

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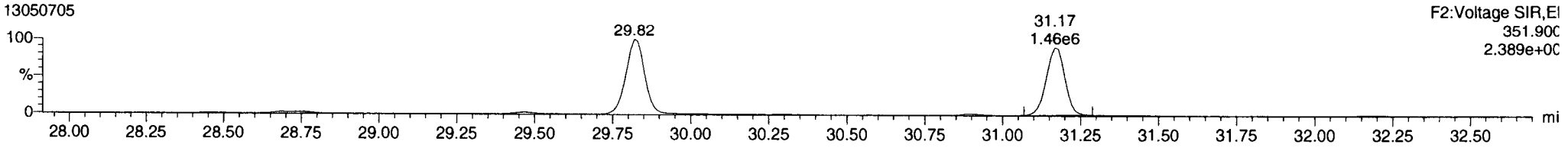
13C-23478-PeCDF



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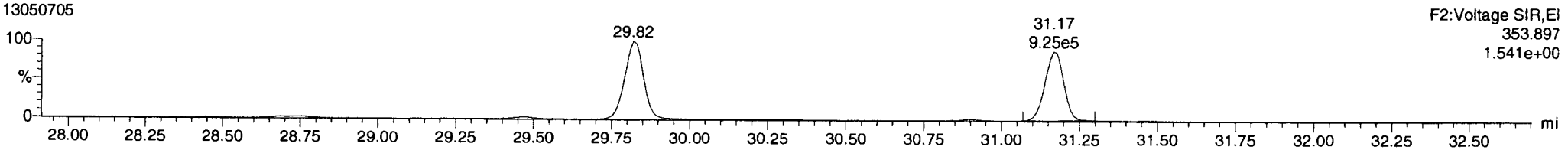

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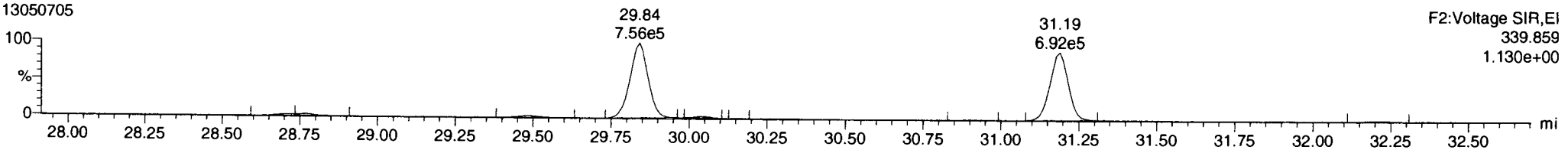
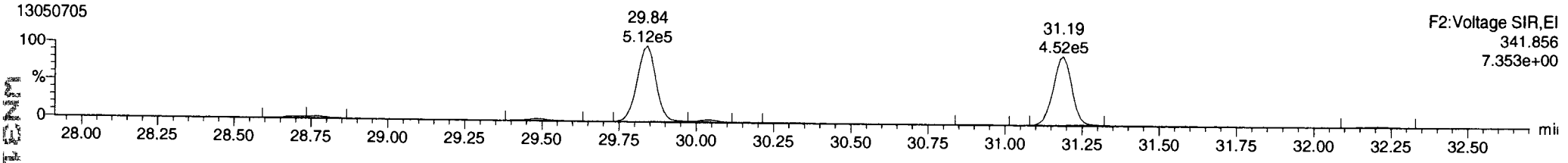


Total-pentafurans



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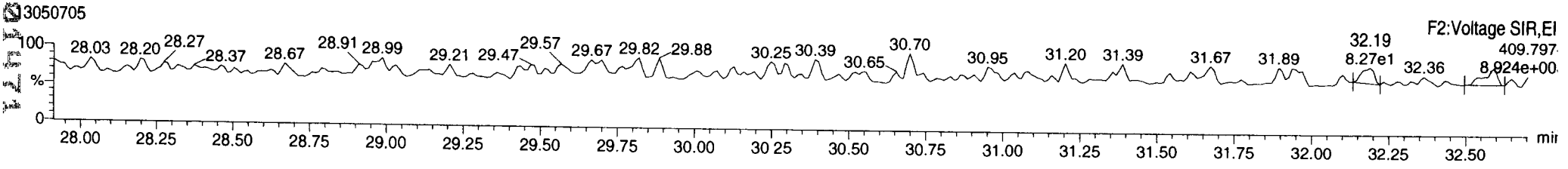

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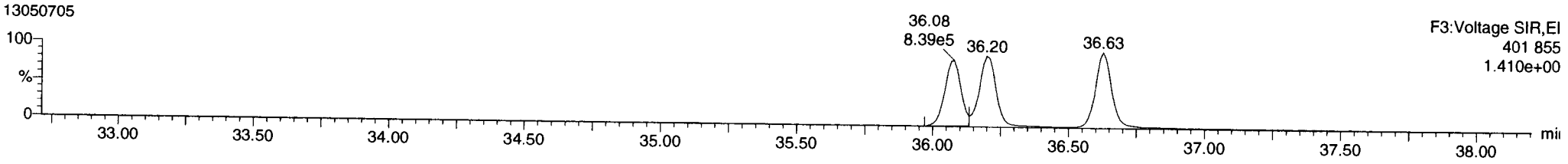
13C-123478-HxCDD



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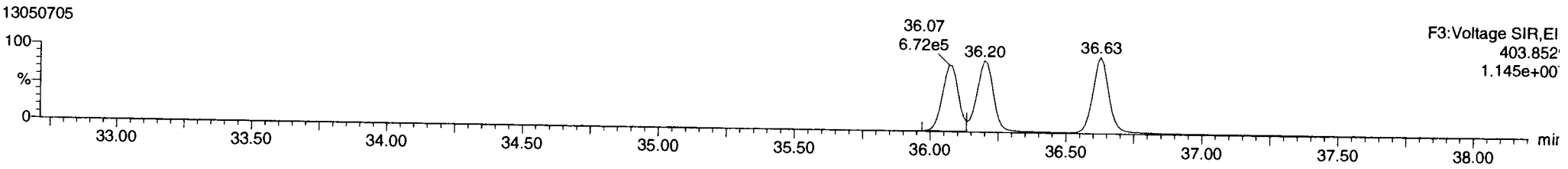
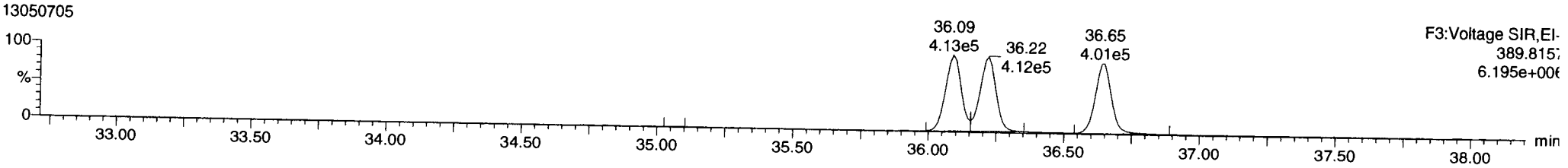
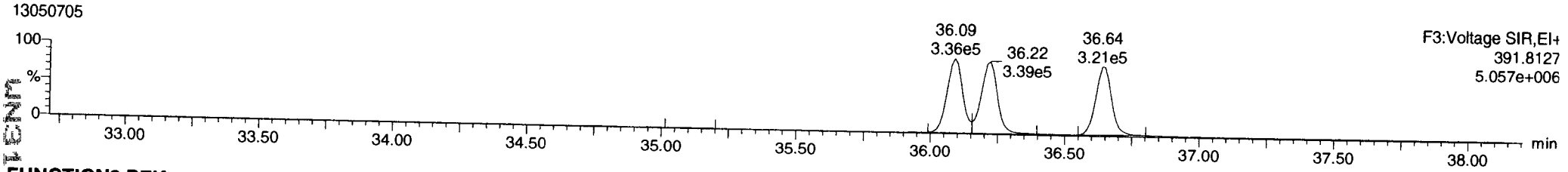


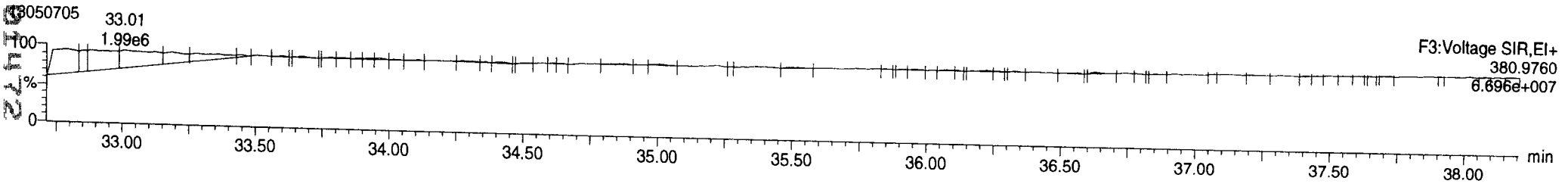
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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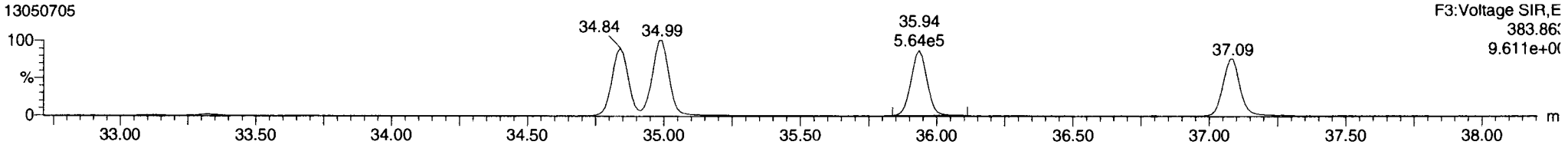
13C-234678-HxCDF



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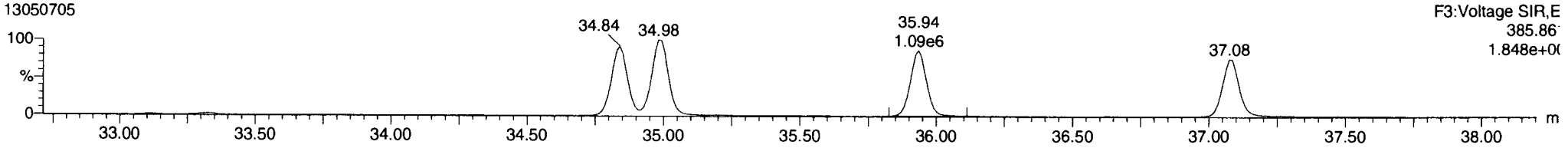
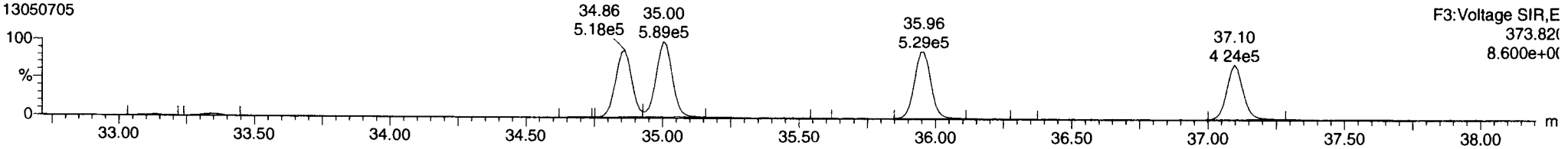
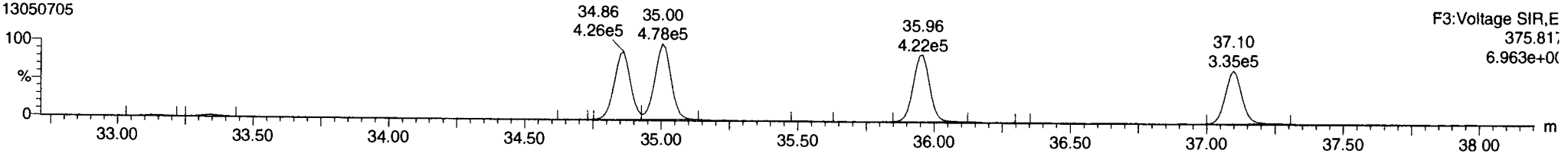


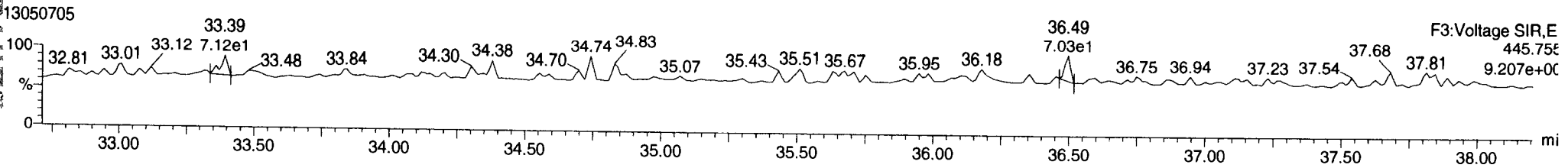
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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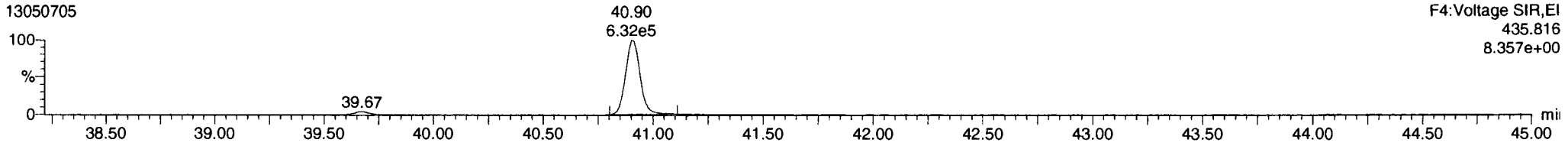
13C-1234678-HpCDD



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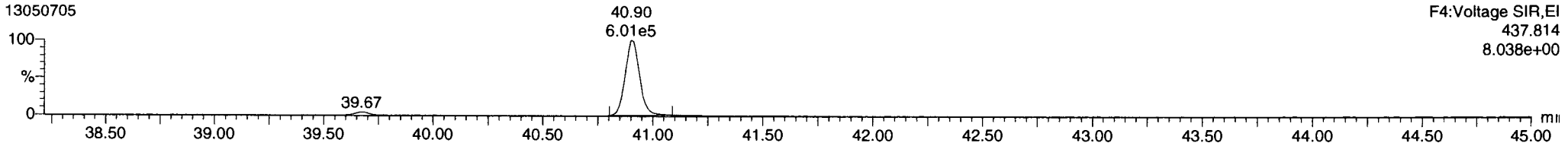
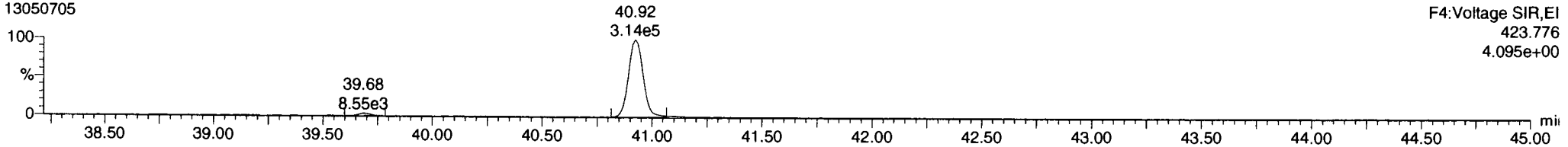
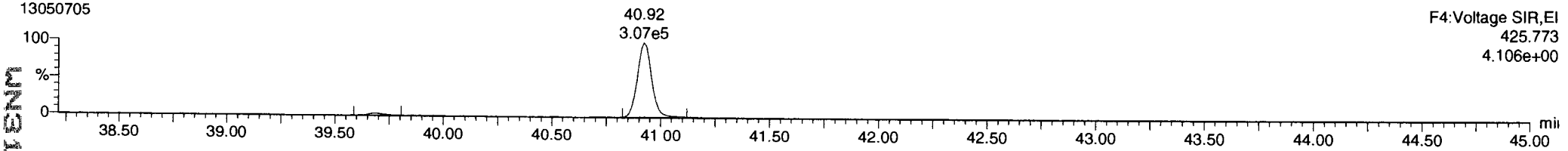


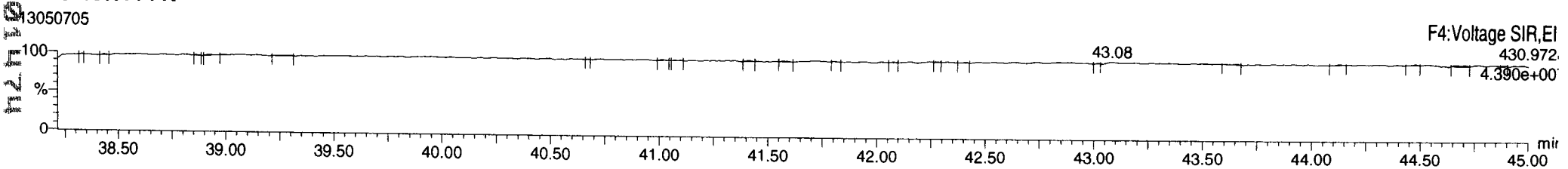
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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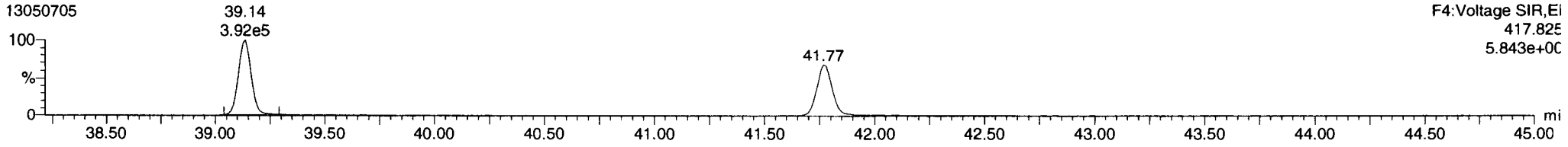
13C-1234678-HpCDF



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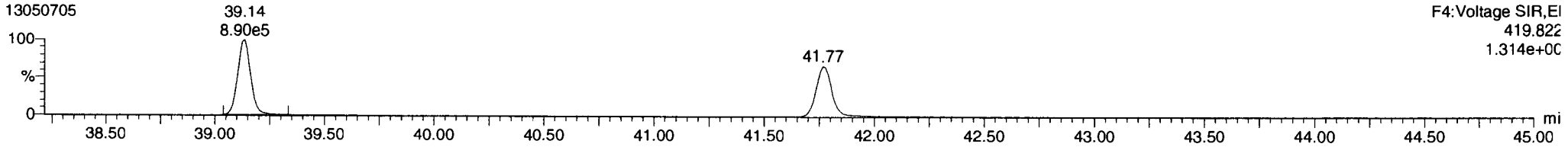
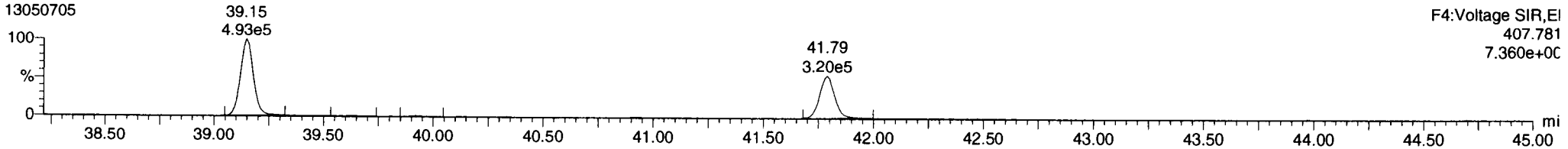


Total-heptafurans



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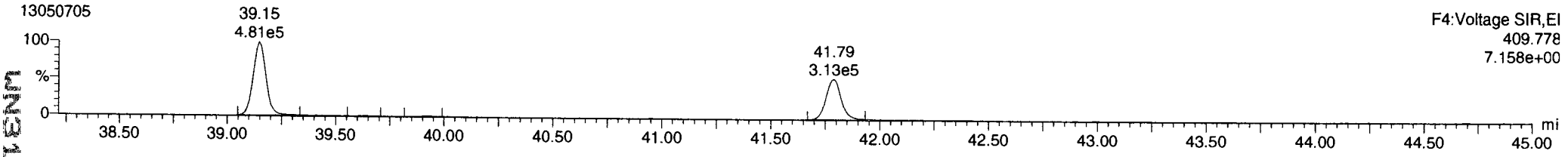
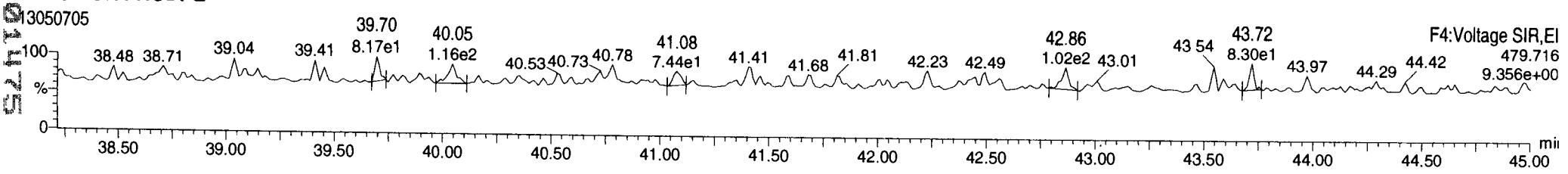


FUNCTION4 NCDPE



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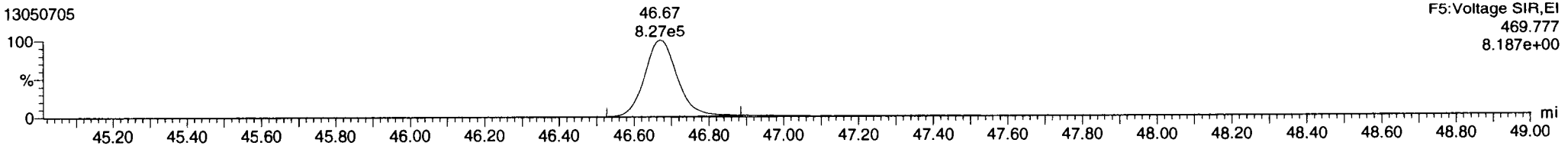
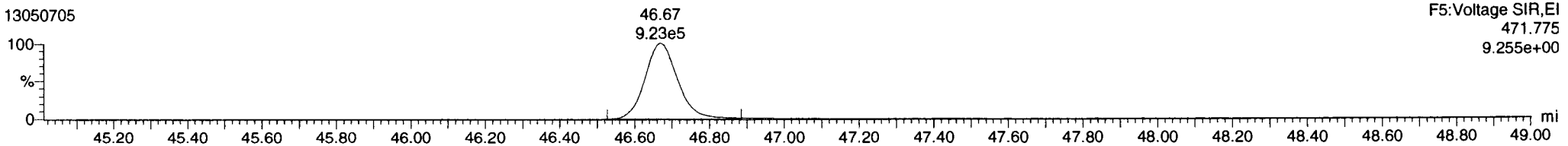
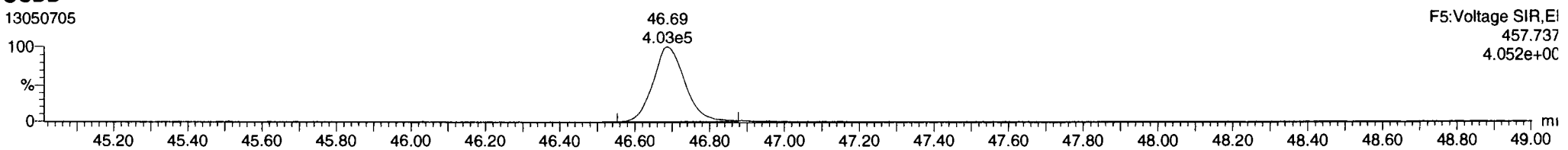
13C-OCDD



13C-OCDD



OCDD



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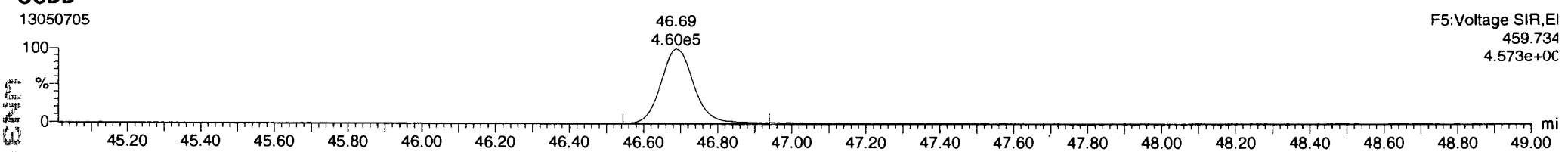
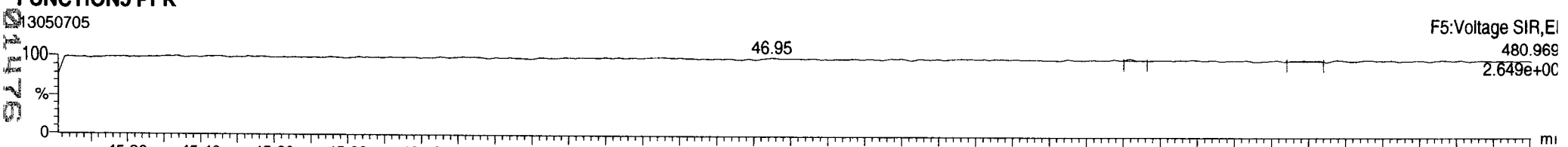


FUNCTION5 PFK



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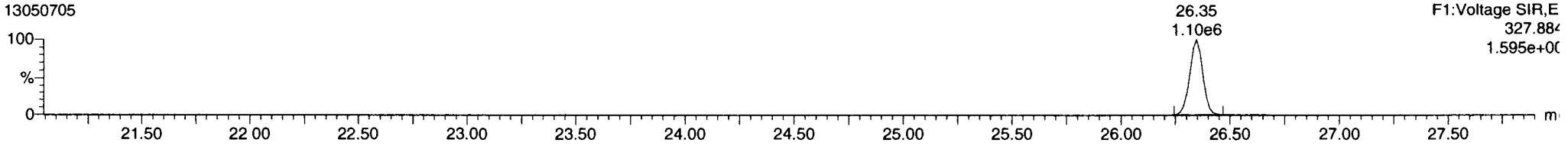
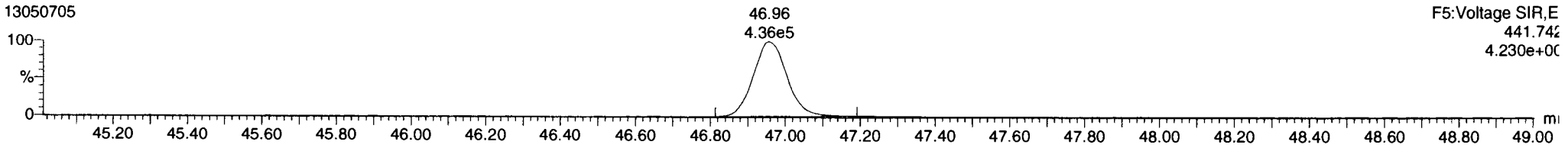
37CL-2378-TCDD



OCDF



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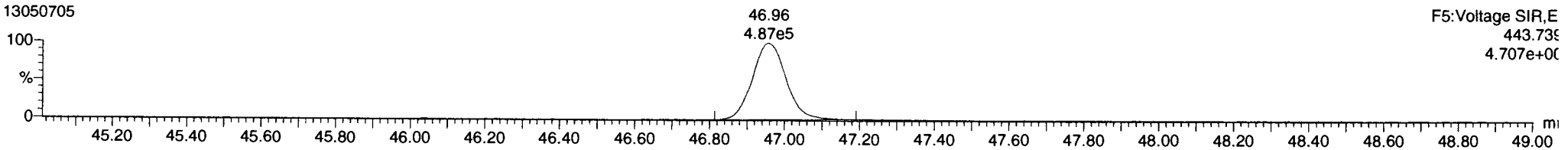
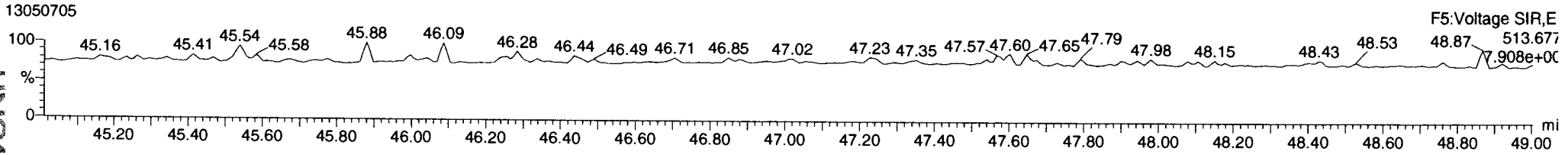


FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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pk 5/8/13

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Prod R	S/N	Noise 1	Noise 2	Height 1	Height 2	PMPC?	CMPC	pg	
2378-TCDF	25.764	1.001	1.46e4	1.92e4	0.763	0.763	0.770	71.5	3036	3726	2.17e5	2.88e5	NO	1.909	1.909	
12378-PeCDF	29.906	1.000	1.12e4	7.90e3	0.836	1.414	1.550	66.8	2499	3258	1.67e5	1.31e5	NO	1.259	1.259	X
23478-PeCDF	31.255	1.001	1.46e4	9.64e3	0.851	1.519	1.550	91.7	2499	3258	2.29e5	1.48e5	NO	2.011	2.011	
123478-HxCDF	34.938	1.001	2.02e4	1.67e4	1.017	1.208	1.240	92.8	3328	4375	3.09e5	2.47e5	NO	3.378	3.378	
234678-HxCDF	36.012	1.000	2.43e4	1.99e4	1.027	1.224	1.240	80.3	3328	4375	2.67e5	2.34e5	NO	4.643	4.643	
123678-HxCDF	35.080	1.001	2.04e4	1.66e4	1.013	1.227	1.240	91.7	3328	4375	3.05e5	2.48e5	NO	3.362	3.362	
123789-HxCDF	37.130	0.999	4.62e3	3.88e3	0.929	1.189	1.240	18.4	3328	4375	6.11e4	6.84e4	NO	1.062	1.062	
1234678-HpCDF	39.224	1.001	1.74e5	1.64e5	1.151	1.057	1.050	557.3	4766	1912	2.66e6	2.48e6	NO	48.504	48.504	
1234789-HpCDF	41.866	1.000	8.35e3	7.59e3	1.149	1.100	1.050	21.7	4766	1912	1.03e5	1.07e5	NO	2.969	2.969	
OCDF	47.046	1.006	1.72e5	1.92e5	0.963	0.897	0.890	841.5	2092	2532	1.76e6	1.96e6	NO	119.259	119.259	
2378-TCDD	26 407	1.001	4.85e3	6.10e3	0.980	0.795	0.770	12.7	5260	3929	6.69e4	9.14e4	NO	0.647	0.647	
12378-PeCDD	31.507	1.001	3.18e4	2.08e4	0.948	1.527	1.550	145.1	2734	3101	3.97e5	2.77e5	NO	4.522	4.522	
123478-HxCDD	36 166	1.001	2.47e4	2.02e4	0.941	1.227	1.240	93.4	3906	3146	3.65e5	3.17e5	NO	5.207	5.207	
123678-HxCDD	36.286	1.000	5.57e4	4.65e4	0.884	1.200	1.240	217.8	3906	3146	8.51e5	6.96e5	NO	11.993	11.993	
123789-HxCDD	36.714	1.012	4.98e4	3.86e4	0.870	1.288	1 240	193.7	3906	3146	7.57e5	6.26e5	NO	10.810	10.810	
1234678-HpCDD	41.000	1.000	8.14e5	7.82e5	0.948	1.041	1.050	1998.2	5674	3587	1.13e7	1.08e7	NO	293.500	293.500	
OCDD	46.786	1 001	4.48e6	5.08e6	0.969	0.883	0.890	14804.8	3195	3818	4.73e7	5.34e7	NO	3109.129	3109.129	E
13C-2378-TCDF	25.734	1.006	1.02e6	1.30e6	1.318	0.782	0.770	2097.5	7132	5898	1.50e7	1.93e7	NO		61.735	
13C-12378-PeCDF	29.896	1.169	1.11e6	7.02e5	1.026	1.580	1.550	5085.8	3229	3375	1.64e7	1.05e7	NO		61.867	
13C-23478-PeCDF	31.233	1.222	8.66e5	5.53e5	0.966	1.566	1.550	3904.4	3229	3375	1.26e7	8.17e6	NO		51.468	
13C-123478-HxCDF	34.916	0.952	3.66e5	7.07e5	1.123	0.518	0.510	1396.3	3935	4313	5.49e6	1.06e7	NO		73.931	
13C-123678-HxCDF	35.058	0.956	3.74e5	7.12e5	1.216	0.525	0.510	1435.2	3935	4313	5.65e6	1.08e7	NO		69.078	
13C-234678-HxCDF	36.001	0.981	3.18e5	6.09e5	1.106	0.523	0.510	1225.0	3935	4313	4.82e6	9.44e6	NO		64.836	
13C-123789-HxCDF	37.152	1.013	2.93e5	5.68e5	0.995	0.515	0.510	1091.9	3935	4313	4.30e6	8.39e6	NO		66.938	
13C-1234678-HpCDF	39.202	1.068	1.90e5	4.16e5	0.896	0.457	0.440	1038.3	2760	2725	2.87e6	6.35e6	NO		52.330	
13C-1234789-HpCDF	41.843	1.140	1.45e5	3.22e5	0.693	0.449	0.440	683.1	2760	2725	1.89e6	4.22e6	NO		52.107	
13C-1234-TCDD	25.570	0.000	1.26e6	1.59e6	1.000	0.794	0.770	4243.3	4304	4267	1.83e7	2.32e7	NO		100.000	
13C-2378-TCDD	26.377	1.032	7.52e5	9.75e5	0.961	0.772	0.770	2640.7	4304	4267	1.14e7	1.47e7	NO		62.923	
13C-12378-PeCDD	31.485	1.231	7.51e5	4.77e5	0.703	1.574	1.550	2761.4	4098	2979	1.13e7	7.20e6	NO		61.120	
13C-123478-HxCDD	36.144	0.985	5.10e5	4.06e5	1.016	1.256	1.240	2153.0	3559	3064	7.66e6	6.15e6	NO		69.776	
13C-123678-HxCDD	36.275	0.989	5.34e5	4.29e5	1.098	1.245	1.240	2255.1	3559	3064	8.03e6	6.47e6	NO		67.866	
13C-1234678-HpCDD	40.978	1.117	2.93e5	2.80e5	0.828	1.046	1.050	1610.1	2583	2283	4.16e6	3.92e6	NO		53.546	
13C-OCDD	46.759	1.274	2.99e5	3.35e5	0.770	0.895	0.890	1649.8	1871	1817	3.09e6	3.51e6	NO		63.731	

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
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ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

Name	RT	FWHM	Area	Ion Area	RRF	Ratio	Pred Ri	S/N	Mass 1	Mass 2	Height 1	Height 2	EMPC	Conc.	Amt
13C-123789-HxCDD	36.692	0.000	7.12e5	5.81e5	1.000	1.226	1.240	3006.4	3559	3064	1.07e7	8.94e6	NO		100.000
Total-tetrafurans			3.35e5		0.763				3036		4.68e6				43.584
Total-penta1			2.68e5						2467		3.66e6				30.315
Total-pentafurans			2.85e5		0.844				2499		4.09e6				34.753
Total-hexafurans			4.64e5		0.997				3328		6.85e6				84.759
Total-heptafurans			4.03e5		1.150				4766		6.04e6				122.171
Total-Furans			1.93e6		0.970				3036		2.71e7				434.840
Total-tetradioxins			1.19e5		0.980				5260		1.62e6				15.503
Total-pentadioxins			2.22e5		0.948				2734		2.84e6				31.908
Total-hexadioxins			6.39e5		0.898				3906		8.42e6				137.039
Total-heptadioxins			2.02e6		0.948				5674		2.96e7				731.124
Total-Dioxins			7.49e6		0.934				5260		8.98e7				4024.703
Total-TEQ			9.41e6						5260		1.17e8				4459.543
37CL-2378-TCDD	26.392	1.032	9.30e5		0.999			4429.6	3065		1.36e7				32.599
FUNCTION1 PFK			6.70e6						485173		2.02e7				
FUNCTION2 PFK			1.25e6						133522		3.66e6				0.000
FUNCTION3 PFK			1.31e6						297245		9.70e6				0.000
FUNCTION4 PFK			9.80e5						287722		2.13e7				
FUNCTION5 PFK			7.99e5						189095		1.42e7				
FUNCTION1 HXCDPE			9.01e3						2095		1.43e5				0.000
FUNCTION1 HPCDPE			3.03e3						1319		4.96e4				0.000
FUNCTION2 HPCDPE			3.97e3						1993		7.09e4				0.000
FUNCTION3 OCDPE			2.00e3						1829		5.60e4				0.000
FUNCTION4 NCDPE			4.81e4						2642		7.66e5				0.000
FUNCTION5 DCDPE			7.44e2						1416		2.19e4				0.000

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

TF

[illegible]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
[illegible]	35	Total-tetrafurans	303.9016	24.84	39028.303	0.763	2.203		0.80	0.77	NO	78.5
[illegible]	35	Total-tetrafurans	303.9016	24.67	69465.451	0.763	3.921		0.79	0.77	NO	137.0
[illegible]	35	Total-tetrafurans	303.9016	24.51	35061.599	0.763	1.979		0.72	0.77	NO	73.0
[illegible]	35	Total-tetrafurans	303.9016	24.42	49007.852	0.763	2.766		0.68	0.77	NO	79.4
[illegible]	35	Total-tetrafurans	303.9016	24.00	21824.777	0.763	1.232		0.76	0.77	NO	45.7
[illegible]	35	Total-tetrafurans	303.9016	23.87	19485.694	0.763	1.100		0.75	0.77	NO	44.5
[illegible]	35	Total-tetrafurans	303.9016	23.75	52171.893	0.763	2.945		0.74	0.77	NO	108.5
[illegible]	35	Total-tetrafurans	303.9016	23.60	15542.440	0.763	0.877		0.90	0.77	YES	38.0
[illegible]	35	Total-tetrafurans	303.9016	23.51	30133.023	0.763	1.701		0.67	0.77	NO	67.3
[illegible]	35	Total-tetrafurans	303.9016	23.42	30361.662	0.763	1.714		0.77	0.77	NO	56.3
[illegible]	35	Total-tetrafurans	303.9016	23.28	47655.738	0.763	2.690		0.79	0.77	NO	58.0
[illegible]	35	Total-tetrafurans	303.9016	23.10	117713.722	0.763	6.644		0.82	0.77	NO	237.1
[illegible]	35	Total-tetrafurans	303.9016	22.52	25102.030	0.763	1.417		0.71	0.77	NO	47.6
[illegible]	35	Total-tetrafurans	303.9016	22.27	27828.364	0.763	1.571		0.72	0.77	NO	57.8
[illegible]	35	Total-tetrafurans	303.9016	27.21	9641.708	0.763	0.544		0.82	0.77	NO	13.5
[illegible]	35	Total-tetrafurans	303.9016	25.99	44758.647	0.763	2.526		0.74	0.77	NO	88.1
[illegible]	35	Total-tetrafurans	303.9016	25.88	20689.505	0.763	1.168		0.78	0.77	NO	43.4
[illegible]	1	2378-TCDF	303.9016	25.76	33816.937	0.763	1.909	1.909	0.76	0.77	NO	71.5
[illegible]	35	Total-tetrafurans	303.9016	25.58	20428.798	0.763	1.153		0.65	0.77	YES	49.4
[illegible]	35	Total-tetrafurans	303.9016	25.53	18669.738	0.763	1.054		0.96	0.77	YES	47.6
[illegible]	35	Total-tetrafurans	303.9016	25.26	22079.703	0.763	1.246		0.75	0.77	NO	49.0
[illegible]	35	Total-tetrafurans	303.9016	25.06	21708.940	0.763	1.225		0.85	0.77	NO	49.8

PP

[illegible]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
[illegible]	36	Total-penta1	339.8597	27.18	449072.626		30.315		1.49	1.55	NO	1484.0

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
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PF

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
37	Total-pentafurans	339.8597	29.46	6029.128	0.844	0.442		1.60	1.55	NO	26.2
37	Total-pentafurans	339.8597	29.33	11695.676	0.844	0.858		1.60	1.55	NO	36.2
37	Total-pentafurans	339.8597	29.13	4953.780	0.844	0.363		1.62	1.55	NO	19.6
37	Total-pentafurans	339.8597	28.97	4028.086	0.844	0.296		1.57	1.55	NO	16.7
37	Total-pentafurans	339.8597	28.83	107003.359	0.844	7.851		1.41	1.55	NO	399.9
37	Total-pentafurans	339.8597	28.77	77240.857	0.844	5.668		1.77	1.55	NO	306.8
37	Total-pentafurans	339.8597	28.65	51550.694	0.844	3.783		1.48	1.55	NO	115.7
37	Total-pentafurans	339.8597	32.27	2160.674	0.844	0.159		1.40	1.55	NO	7.5
37	Total-pentafurans	339.8597	31.33	1891.247	0.844	0.139		1.27	1.55	YES	8.1
3	23478-PeCDF	339.8597	31.25	24289.441	0.851	2.011	2.011	1.52	1.55	NO	91.7
37	Total-pentafurans	339.8597	31.10	26400.476	0.844	1.937		1.41	1.55	NO	94.7
37	Total-pentafurans	339.8597	30.98	21390.478	0.844	1.570		1.45	1.55	NO	76.6
37	Total-pentafurans	339.8597	30.74	2684.893	0.844	0.197		1.13	1.55	YES	8.5
37	Total-pentafurans	339.8597	30.21	10221.596	0.844	0.750		1.83	1.55	YES	42.6
37	Total-pentafurans	339.8597	30.10	27718.962	0.844	2.034		1.49	1.55	NO	101.5
2	12378-PeCDF	339.8597	29.91	19065.914	0.836	1.259	1.259	1.41	1.55	NO	66.8
37	Total-pentafurans	339.8597	29.56	74096.278	0.844	5.437		1.52	1.55	NO	216.7

HF

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
38	Total-hexafurans	373.8208	35.44	2552.270	0.997	0.260		1.89	1.24	YES	10.0
6	123678-HxCDF	373.8208	35.08	36972.145	1.013	3.362	3.362	1.23	1.24	NO	91.7
4	123478-HxCDF	373.8208	34.94	36871.347	1.017	3.378	3.378	1.21	1.24	NO	92.8
38	Total-hexafurans	373.8208	34.77	18275.568	0.997	1.859		1.15	1.24	NO	49.1
38	Total-hexafurans	373.8208	34.28	206687.312	0.997	21.019		1.21	1.24	NO	506.7
38	Total-hexafurans	373.8208	33.96	9320.743	0.997	0.948		1.42	1.24	NO	21.3
38	Total-hexafurans	373.8208	33.43	366007.172	0.997	37.222		1.25	1.24	NO	898.4
38	Total-hexafurans	373.8208	33.21	108224.930	0.997	11.006		1.31	1.24	NO	289.4
7	123789-HxCDF	373.8208	37.13	8498.420	0.929	1.062	1.062	1.19	1.24	NO	18.4
5	234678-HxCDF	373.8208	36.01	44203.969	1.027	4.643	4.643	1.22	1.24	NO	80.3

HPF

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
9	1234789-HpCDF	407.7818	41.87	15935.114	1.149	2.969	2.969	1.10	1.05	NO	21.7
39	Total-heptafurans	407.7818	40.00	425306.391	1.150	68.922		1.01	1.05	NO	670.3
39	Total-heptafurans	407.7818	39.71	10961.652	1.150	1.776		1.24	1.05	YES	18.0
8	1234678-HpCDF	407.7818	39.22	338366.891	1.151	48.504	48.504	1.06	1.05	NO	557.3

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Mass	RT	Area	RRF M...	pg	EMPC	1° Ra...	2° Ra...	I.S.	S/N
	35	Total-tetrafurans	303.9016	24.84	39028.303	0.763	2.203		0.80	0.77	NO	78.5
	35	Total-tetrafurans	303.9016	24.67	69465.451	0.763	3.921		0.79	0.77	NO	137.0
	35	Total-tetrafurans	303.9016	24.51	35061.599	0.763	1.979		0.72	0.77	NO	73.0
	35	Total-tetrafurans	303.9016	24.42	49007.852	0.763	2.766		0.68	0.77	NO	79.4
	35	Total-tetrafurans	303.9016	24.00	21824.777	0.763	1.232		0.76	0.77	NO	45.7
	35	Total-tetrafurans	303.9016	23.87	19485.694	0.763	1.100		0.75	0.77	NO	44.5
	35	Total-tetrafurans	303.9016	23.75	52171.893	0.763	2.945		0.74	0.77	NO	108.5
	35	Total-tetrafurans	303.9016	23.60	15542.440	0.763	0.877		0.90	0.77	YES	38.0
	35	Total-tetrafurans	303.9016	23.51	30133.023	0.763	1.701		0.67	0.77	NO	67.3
	35	Total-tetrafurans	303.9016	23.42	30361.662	0.763	1.714		0.77	0.77	NO	56.3
	35	Total-tetrafurans	303.9016	23.28	47655.738	0.763	2.690		0.79	0.77	NO	58.0
	35	Total-tetrafurans	303.9016	23.10	117713.722	0.763	6.644		0.82	0.77	NO	237.1
	35	Total-tetrafurans	303.9016	22.52	25102.030	0.763	1.417		0.71	0.77	NO	47.6
	35	Total-tetrafurans	303.9016	22.27	27828.364	0.763	1.571		0.72	0.77	NO	57.8
	35	Total-tetrafurans	303.9016	27.21	9641.708	0.763	0.544		0.82	0.77	NO	13.5
	35	Total-tetrafurans	303.9016	25.99	44758.647	0.763	2.526		0.74	0.77	NO	88.1
	35	Total-tetrafurans	303.9016	25.88	20689.505	0.763	1.168		0.78	0.77	NO	43.4
	1	2378-TCDF	303.9016	25.76	33816.937	0.763	1.909	1.909	0.76	0.77	NO	71.5
	35	Total-tetrafurans	303.9016	25.58	20428.798	0.763	1.153		0.65	0.77	YES	49.4
	35	Total-tetrafurans	303.9016	25.53	18669.738	0.763	1.054		0.96	0.77	YES	47.6
	35	Total-tetrafurans	303.9016	25.26	22079.703	0.763	1.246		0.75	0.77	NO	49.0
	35	Total-tetrafurans	303.9016	25.06	21708.940	0.763	1.225		0.85	0.77	NO	49.8
	37	Total-pentafurans	339.8597	29.46	6029.128	0.844	0.442		1.60	1.55	NO	26.2
	37	Total-pentafurans	339.8597	29.33	11695.676	0.844	0.858		1.60	1.55	NO	36.2
	37	Total-pentafurans	339.8597	29.13	4953.780	0.844	0.363		1.62	1.55	NO	19.6
	37	Total-pentafurans	339.8597	28.97	4028.086	0.844	0.296		1.57	1.55	NO	16.7
	37	Total-pentafurans	339.8597	28.83	107003.359	0.844	7.851		1.41	1.55	NO	399.9
	37	Total-pentafurans	339.8597	28.77	77240.857	0.844	5.668		1.77	1.55	NO	306.8
	37	Total-pentafurans	339.8597	28.65	51550.694	0.844	3.783		1.48	1.55	NO	115.7
	37	Total-pentafurans	339.8597	32.27	2160.674	0.844	0.159		1.40	1.55	NO	7.5
	37	Total-pentafurans	339.8597	31.33	1891.247	0.844	0.139		1.27	1.55	YES	8.1
	3	23478-PeCDF	339.8597	31.25	24289.441	0.851	2.011	2.011	1.52	1.55	NO	91.7
	37	Total-pentafurans	339.8597	31.10	26400.476	0.844	1.937		1.41	1.55	NO	94.7
	37	Total-pentafurans	339.8597	30.98	21390.478	0.844	1.570		1.45	1.55	NO	76.6
	37	Total-pentafurans	339.8597	30.74	2684.893	0.844	0.197		1.13	1.55	YES	8.5
	37	Total-pentafurans	339.8597	30.21	10221.596	0.844	0.750		1.83	1.55	YES	42.6
	37	Total-pentafurans	339.8597	30.10	27718.962	0.844	2.034		1.49	1.55	NO	101.5
	2	12378-PeCDF	339.8597	29.91	19065.914	0.836	1.259	1.259	1.41	1.55	NO	66.8
	37	Total-pentafurans	339.8597	29.56	74096.278	0.844	5.437		1.52	1.55	NO	216.7
	38	Total-hexafurans	373.8208	35.44	2552.270	0.997	0.260		1.89	1.24	YES	10.0
	6	123678-HxCDF	373.8208	35.08	36972.145	1.013	3.362	3.362	1.23	1.24	NO	91.7
	4	123478-HxCDF	373.8208	34.94	36871.347	1.017	3.378	3.378	1.21	1.24	NO	92.8
	38	Total-hexafurans	373.8208	34.77	18275.568	0.997	1.859		1.15	1.24	NO	49.1
	38	Total-hexafurans	373.8208	34.28	206687.312	0.997	21.019		1.21	1.24	NO	506.7
	38	Total-hexafurans	373.8208	33.96	9320.743	0.997	0.948		1.42	1.24	NO	21.3
	38	Total-hexafurans	373.8208	33.43	366007.172	0.997	37.222		1.25	1.24	NO	898.4
	38	Total-hexafurans	373.8208	33.21	108224.930	0.997	11.006		1.31	1.24	NO	289.4
	7	123789-HxCDF	373.8208	37.13	8498.420	0.929	1.062	1.062	1.19	1.24	NO	18.4
	5	234678-HxCDF	373.8208	36.01	44203.969	1.027	4.643	4.643	1.22	1.24	NO	80.3

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Furans,TF,PP,PF,HF,HPF,OF

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
9	1234789-HpCDF	407.7818	41.87	15935.114	1.149	2.969	2.969	1.10	1.05	NO	21.7
39	Total-heptafurans	407.7818	40.00	425306.391	1.150	68.922		1.01	1.05	NO	670.3
39	Total-heptafurans	407.7818	39.71	10961.652	1.150	1.776		1.24	1.05	YES	18.0
8	1234678-HpCDF	407.7818	39.22	338366.891	1.151	48.504	48.504	1.06	1.05	NO	557.3
10	OCDF	441.7428	47.05	364303.703	0.963	119.259	119....	0.90	0.89	NO	841.5
36	Total-penta1	339.8597	27.18	449072.626		30.315		1.49	1.55	NO	1484.0

TD

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
41	Total-tetradioxins	319.8965	26.97	12966.438	0.980	0.766		0.98	0.77	YES	15.6
41	Total-tetradioxins	319.8965	26.53	14936.305	0.980	0.883		0.84	0.77	NO	19.1
11	2378-TCDD	319.8965	26.41	10942.820	0.980	0.647	0.647	0.80	0.77	NO	12.7
41	Total-tetradioxins	319.8965	26.02	21268.421	0.980	1.257		0.87	0.77	NO	17.1
41	Total-tetradioxins	319.8965	25.73	4137.986	0.980	0.245		2.00	0.77	YES	5.8
41	Total-tetradioxins	319.8965	25.57	12963.518	0.980	0.766		0.89	0.77	YES	14.4
41	Total-tetradioxins	319.8965	25.38	14440.865	0.980	0.853		0.98	0.77	YES	18.1
41	Total-tetradioxins	319.8965	25.26	4324.932	0.980	0.256		1.14	0.77	YES	5.2
41	Total-tetradioxins	319.8965	25.02	30401.621	0.980	1.796		0.80	0.77	NO	37.1
41	Total-tetradioxins	319.8965	24.73	23970.130	0.980	1.416		0.66	0.77	NO	22.4
41	Total-tetradioxins	319.8965	24.51	7667.183	0.980	0.453		0.92	0.77	YES	10.5
41	Total-tetradioxins	319.8965	24.02	10138.009	0.980	0.599		0.71	0.77	NO	11.1
41	Total-tetradioxins	319.8965	23.81	37866.268	0.980	2.237		0.80	0.77	NO	49.9
41	Total-tetradioxins	319.8965	23.55	56357.420	0.980	3.330		0.79	0.77	NO	69.4

PD

#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rat...	1° Rat...	1° R...	S/N
42	Total-pentadioxins	355.8546	31.90	16105.656	0.948	1.384		1.36	1.55	NO	52.2
12	12378-PeCDD	355.8546	31.51	52629.729	0.948	4.522	4.522	1.53	1.55	NO	145.1
42	Total-pentadioxins	355.8546	30.83	15367.385	0.948	1.320		1.28	1.55	YES	41.2
42	Total-pentadioxins	355.8546	30.44	53055.440	0.948	4.558		1.48	1.55	NO	113.1
42	Total-pentadioxins	355.8546	30.27	35840.580	0.948	3.079		1.44	1.55	NO	123.0
42	Total-pentadioxins	355.8546	30.14	42221.842	0.948	3.628		1.52	1.55	NO	143.5
42	Total-pentadioxins	355.8546	29.92	37716.857	0.948	3.241		1.66	1.55	NO	136.0
42	Total-pentadioxins	355.8546	29.29	28225.840	0.948	2.425		1.51	1.55	NO	98.3
42	Total-pentadioxins	355.8546	28.82	90219.051	0.948	7.751		1.46	1.55	NO	185.6

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HD

[redacted]	#	Name	Trace	RT	Area Resp	RRF M...	ppt	EMPC	1° Ratio	1° Ratio...	1° R...	S/N
[redacted]	43	Total-hexadioxins	389.8157	35.31	28393.111	0.898	3.362		1.29	1.24	NO	68.7
[redacted]	43	Total-hexadioxins	389.8157	35.19	412831.907	0.898	48.886		1.22	1.24	NO	544.2
[redacted]	43	Total-hexadioxins	389.8157	34.81	83487.164	0.898	9.886		1.29	1.24	NO	180.3
[redacted]	43	Total-hexadioxins	389.8157	34.01	351325.047	0.898	41.603		1.23	1.24	NO	765.3
[redacted]	43	Total-hexadioxins	389.8157	33.77	12397.042	0.898	1.468		1.44	1.24	YES	28.2
[redacted]	15	123789-HxCDD	389.8157	36.71	88390.368	0.870	10.810	10.810	1.29	1.24	NO	193.7
[redacted]	43	Total-hexadioxins	389.8157	36.46	32288.350	0.898	3.823		1.29	1.24	NO	64.9
[redacted]	14	123678-HxCDD	389.8157	36.29	102182.828	0.884	11.993	11.993	1.20	1.24	NO	217.8
[redacted]	13	123478-HxCDD	389.8157	36.17	44907.186	0.941	5.207	5.207	1.23	1.24	NO	93.4

HPD

[redacted]	#	Name	Trace	RT	Area Resp	RRF M...	ppt	EMPC	1° Ratio	1° Ratio...	1° R...	S/N
[redacted]	16	1234678-HpCDD	423.7766	41.00	1595461.813	0.948	293.500	293....	1.04	1.05	NO	1998.2
[redacted]	44	Total-heptadioxins	423.7766	39.76	2378912.500	0.948	437.623		1.04	1.05	NO	3216.1

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Dioxins,TD,PD,HD,HPD,OD

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	2° Ratio	1° R...	S/N
[redacted]	41	Total-tetradioxins	319.8965	26.97	12966.438	0.980	0.766		0.98	0.77	YES	15.6
[redacted]	41	Total-tetradioxins	319.8965	26.53	14936.305	0.980	0.883		0.84	0.77	NO	19.1
[redacted]	11	2378-TCDD	319.8965	26.41	10942.820	0.980	0.647	0.647	0.80	0.77	NO	12.7
[redacted]	41	Total-tetradioxins	319.8965	26.02	21268.421	0.980	1.257		0.87	0.77	NO	17.1
[redacted]	41	Total-tetradioxins	319.8965	25.73	4137.986	0.980	0.245		2.00	0.77	YES	5.8
[redacted]	41	Total-tetradioxins	319.8965	25.57	12963.518	0.980	0.766		0.89	0.77	YES	14.4
[redacted]	41	Total-tetradioxins	319.8965	25.38	14440.865	0.980	0.853		0.98	0.77	YES	18.1
[redacted]	41	Total-tetradioxins	319.8965	25.26	4324.932	0.980	0.256		1.14	0.77	YES	5.2
[redacted]	41	Total-tetradioxins	319.8965	25.02	30401.621	0.980	1.796		0.80	0.77	NO	37.1
[redacted]	41	Total-tetradioxins	319.8965	24.73	23970.130	0.980	1.416		0.66	0.77	NO	22.4
[redacted]	41	Total-tetradioxins	319.8965	24.51	7667.183	0.980	0.453		0.92	0.77	YES	10.5
[redacted]	41	Total-tetradioxins	319.8965	24.02	10138.009	0.980	0.599		0.71	0.77	NO	11.1
[redacted]	41	Total-tetradioxins	319.8965	23.81	37866.268	0.980	2.237		0.80	0.77	NO	49.9
[redacted]	41	Total-tetradioxins	319.8965	23.55	56357.420	0.980	3.330		0.79	0.77	NO	69.4
[redacted]	42	Total-pentadioxins	355.8546	31.90	16105.656	0.948	1.384		1.36	1.55	NO	52.2
[redacted]	12	12378-PeCDD	355.8546	31.51	52629.729	0.948	4.522	4.522	1.53	1.55	NO	145.1
[redacted]	42	Total-pentadioxins	355.8546	30.83	15367.385	0.948	1.320		1.28	1.55	YES	41.2
[redacted]	42	Total-pentadioxins	355.8546	30.44	53055.440	0.948	4.558		1.48	1.55	NO	113.1
[redacted]	42	Total-pentadioxins	355.8546	30.27	35840.580	0.948	3.079		1.44	1.55	NO	123.0
[redacted]	42	Total-pentadioxins	355.8546	30.14	42221.842	0.948	3.628		1.52	1.55	NO	143.5
[redacted]	42	Total-pentadioxins	355.8546	29.92	37716.857	0.948	3.241		1.66	1.55	NO	136.0
[redacted]	42	Total-pentadioxins	355.8546	29.29	28225.840	0.948	2.425		1.51	1.55	NO	98.3
[redacted]	42	Total-pentadioxins	355.8546	28.82	90219.051	0.948	7.751		1.46	1.55	NO	185.6
[redacted]	43	Total-hexadioxins	389.8157	35.31	28393.111	0.898	3.362		1.29	1.24	NO	68.7
[redacted]	43	Total-hexadioxins	389.8157	35.19	412831.907	0.898	48.886		1.22	1.24	NO	544.2
[redacted]	43	Total-hexadioxins	389.8157	34.81	83487.164	0.898	9.886		1.29	1.24	NO	180.3
[redacted]	43	Total-hexadioxins	389.8157	34.01	351325.047	0.898	41.603		1.23	1.24	NO	765.3
[redacted]	43	Total-hexadioxins	389.8157	33.77	12397.042	0.898	1.468		1.44	1.24	YES	28.2
[redacted]	15	123789-HxCDD	389.8157	36.71	88390.368	0.870	10.810	10.810	1.29	1.24	NO	193.7
[redacted]	43	Total-hexadioxins	389.8157	36.46	32288.350	0.898	3.823		1.29	1.24	NO	64.9
[redacted]	14	123678-HxCDD	389.8157	36.29	102182.828	0.884	11.993	11.993	1.20	1.24	NO	217.8
[redacted]	13	123478-HxCDD	389.8157	36.17	44907.186	0.941	5.207	5.207	1.23	1.24	NO	93.4
[redacted]	16	1234678-HpCDD	423.7766	41.00	1595461.813	0.948	293.500	293....	1.04	1.05	NO	1998.2
[redacted]	44	Total-heptadioxins	423.7766	39.76	2378912.500	0.948	437.623		1.04	1.05	NO	3216.1
[redacted]	17	OCDD	457.7377	46.79	9557283.500	0.969	3109.1...	3109...	0.88	0.89	NO	14804.8

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TotalTEQ,Furans,Dioxins

		Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	2° Ratio	1° R...	S/N
[redacted]	35	Total-tetrafurans	303.9016	24.84	39028.303	0.763	2.203		0.80	0.77	NO	78.5
[redacted]	35	Total-tetrafurans	303.9016	24.67	69465.451	0.763	3.921		0.79	0.77	NO	137.0
[redacted]	35	Total-tetrafurans	303.9016	24.51	35061.599	0.763	1.979		0.72	0.77	NO	73.0
[redacted]	35	Total-tetrafurans	303.9016	24.42	49007.852	0.763	2.766		0.68	0.77	NO	79.4
[redacted]	35	Total-tetrafurans	303.9016	24.00	21824.777	0.763	1.232		0.76	0.77	NO	45.7
[redacted]	35	Total-tetrafurans	303.9016	23.87	19485.694	0.763	1.100		0.75	0.77	NO	44.5
[redacted]	35	Total-tetrafurans	303.9016	23.75	52171.893	0.763	2.945		0.74	0.77	NO	108.5
[redacted]	35	Total-tetrafurans	303.9016	23.60	15542.440	0.763	0.877		0.90	0.77	YES	38.0
[redacted]	35	Total-tetrafurans	303.9016	23.51	30133.023	0.763	1.701		0.67	0.77	NO	67.3
[redacted]	35	Total-tetrafurans	303.9016	23.42	30361.662	0.763	1.714		0.77	0.77	NO	56.3
[redacted]	35	Total-tetrafurans	303.9016	23.28	47655.738	0.763	2.690		0.79	0.77	NO	58.0
[redacted]	35	Total-tetrafurans	303.9016	23.10	117713.722	0.763	6.644		0.82	0.77	NO	237.1
[redacted]	35	Total-tetrafurans	303.9016	22.52	25102.030	0.763	1.417		0.71	0.77	NO	47.6
[redacted]	35	Total-tetrafurans	303.9016	22.27	27828.364	0.763	1.571		0.72	0.77	NO	57.8
[redacted]	35	Total-tetrafurans	303.9016	27.21	9641.708	0.763	0.544		0.82	0.77	NO	13.5
[redacted]	35	Total-tetrafurans	303.9016	25.99	44758.647	0.763	2.526		0.74	0.77	NO	88.1
[redacted]	35	Total-tetrafurans	303.9016	25.88	20689.505	0.763	1.168		0.78	0.77	NO	43.4
[redacted]	1	2378-TCDF	303.9016	25.76	33816.937	0.763	1.909	1.909	0.76	0.77	NO	71.5
[redacted]	35	Total-tetrafurans	303.9016	25.58	20428.798	0.763	1.153		0.65	0.77	YES	49.4
[redacted]	35	Total-tetrafurans	303.9016	25.53	18669.738	0.763	1.054		0.96	0.77	YES	47.6
[redacted]	35	Total-tetrafurans	303.9016	25.26	22079.703	0.763	1.246		0.75	0.77	NO	49.0
[redacted]	35	Total-tetrafurans	303.9016	25.06	21708.940	0.763	1.225		0.85	0.77	NO	49.8
[redacted]	37	Total-pentafurans	339.8597	29.46	6029.128	0.844	0.442		1.60	1.55	NO	26.2
[redacted]	37	Total-pentafurans	339.8597	29.33	11695.676	0.844	0.858		1.60	1.55	NO	36.2
[redacted]	37	Total-pentafurans	339.8597	29.13	4953.780	0.844	0.363		1.62	1.55	NO	19.6
[redacted]	37	Total-pentafurans	339.8597	28.97	4028.086	0.844	0.296		1.57	1.55	NO	16.7
[redacted]	37	Total-pentafurans	339.8597	28.83	107003.359	0.844	7.851		1.41	1.55	NO	399.9
[redacted]	37	Total-pentafurans	339.8597	28.77	77240.857	0.844	5.668		1.77	1.55	NO	306.8
[redacted]	37	Total-pentafurans	339.8597	28.65	51550.694	0.844	3.783		1.48	1.55	NO	115.7
[redacted]	37	Total-pentafurans	339.8597	32.27	2160.674	0.844	0.159		1.40	1.55	NO	7.5
[redacted]	37	Total-pentafurans	339.8597	31.33	1891.247	0.844	0.139		1.27	1.55	YES	8.1
[redacted]	3	23478-PeCDF	339.8597	31.25	24289.441	0.851	2.011	2.011	1.52	1.55	NO	91.7
[redacted]	37	Total-pentafurans	339.8597	31.10	26400.476	0.844	1.937		1.41	1.55	NO	94.7
[redacted]	37	Total-pentafurans	339.8597	30.98	21390.478	0.844	1.570		1.45	1.55	NO	76.6
[redacted]	37	Total-pentafurans	339.8597	30.74	2684.893	0.844	0.197		1.13	1.55	YES	8.5
[redacted]	37	Total-pentafurans	339.8597	30.21	10221.596	0.844	0.750		1.83	1.55	YES	42.6
[redacted]	37	Total-pentafurans	339.8597	30.10	27718.962	0.844	2.034		1.49	1.55	NO	101.5
[redacted]	2	12378-PeCDF	339.8597	29.91	19065.914	0.836	1.259	1.259	1.41	1.55	NO	66.8
[redacted]	37	Total-pentafurans	339.8597	29.56	74096.278	0.844	5.437		1.52	1.55	NO	216.7
[redacted]	38	Total-hexafurans	373.8208	35.44	2552.270	0.997	0.260		1.89	1.24	YES	10.0
[redacted]	6	123678-HxCDF	373.8208	35.08	36972.145	1.013	3.362	3.362	1.23	1.24	NO	91.7
[redacted]	4	123478-HxCDF	373.8208	34.94	36871.347	1.017	3.378	3.378	1.21	1.24	NO	92.8
[redacted]	38	Total-hexafurans	373.8208	34.77	18275.568	0.997	1.859		1.15	1.24	NO	49.1
[redacted]	38	Total-hexafurans	373.8208	34.28	206687.312	0.997	21.019		1.21	1.24	NO	506.7
[redacted]	38	Total-hexafurans	373.8208	33.96	9320.743	0.997	0.948		1.42	1.24	NO	21.3
[redacted]	38	Total-hexafurans	373.8208	33.43	366007.172	0.997	37.222		1.25	1.24	NO	898.4
[redacted]	38	Total-hexafurans	373.8208	33.21	108224.930	0.997	11.006		1.31	1.24	NO	289.4
[redacted]	7	123789-HxCDF	373.8208	37.13	8498.420	0.929	1.062	1.062	1.19	1.24	NO	18.4
[redacted]	5	234678-HxCDF	373.8208	36.01	44203.969	1.027	4.643	4.643	1.22	1.24	NO	80.3

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TotalTEQ,Furans,Dioxins

#	Name	Conc	RT	Abs Resp	RRF M...	ng	EMPC	13 Rati...	37 Rati...	37 Fl...	S/N
9	1234789-HpCDF	407.7818	41.87	15935.114	1.149	2.969	2.969	1.10	1.05	NO	21.7
39	Total-heptafurans	407.7818	40.00	425306.391	1.150	68.922		1.01	1.05	NO	670.3
39	Total-heptafurans	407.7818	39.71	10961.652	1.150	1.776		1.24	1.05	YES	18.0
8	1234678-HpCDF	407.7818	39.22	338366.891	1.151	48.504	48.504	1.06	1.05	NO	557.3
10	OCDF	441.7428	47.05	364303.703	0.963	119.259	119....	0.90	0.89	NO	841.5
36	Total-penta1	339.8597	27.18	449072.626		30.315		1.49	1.55	NO	1484.0
41	Total-tetradioxins	319.8965	26.97	12966.438	0.980	0.766		0.98	0.77	YES	15.6
41	Total-tetradioxins	319.8965	26.53	14936.305	0.980	0.883		0.84	0.77	NO	19.1
11	2378-TCDD	319.8965	26.41	10942.820	0.980	0.647	0.647	0.80	0.77	NO	12.7
41	Total-tetradioxins	319.8965	26.02	21268.421	0.980	1.257		0.87	0.77	NO	17.1
41	Total-tetradioxins	319.8965	25.73	4137.986	0.980	0.245		2.00	0.77	YES	5.8
41	Total-tetradioxins	319.8965	25.57	12963.518	0.980	0.766		0.89	0.77	YES	14.4
41	Total-tetradioxins	319.8965	25.38	14440.865	0.980	0.853		0.98	0.77	YES	18.1
41	Total-tetradioxins	319.8965	25.26	4324.932	0.980	0.256		1.14	0.77	YES	5.2
41	Total-tetradioxins	319.8965	25.02	30401.621	0.980	1.796		0.80	0.77	NO	37.1
41	Total-tetradioxins	319.8965	24.73	23970.130	0.980	1.416		0.66	0.77	NO	22.4
41	Total-tetradioxins	319.8965	24.51	7667.183	0.980	0.453		0.92	0.77	YES	10.5
41	Total-tetradioxins	319.8965	24.02	10138.009	0.980	0.599		0.71	0.77	NO	11.1
41	Total-tetradioxins	319.8965	23.81	37866.268	0.980	2.237		0.80	0.77	NO	49.9
41	Total-tetradioxins	319.8965	23.55	56357.420	0.980	3.330		0.79	0.77	NO	69.4
42	Total-pentadioxins	355.8546	31.90	16105.656	0.948	1.384		1.36	1.55	NO	52.2
12	12378-PeCDD	355.8546	31.51	52629.729	0.948	4.522	4.522	1.53	1.55	NO	145.1
42	Total-pentadioxins	355.8546	30.83	15367.385	0.948	1.320		1.28	1.55	YES	41.2
42	Total-pentadioxins	355.8546	30.44	53055.440	0.948	4.558		1.48	1.55	NO	113.1
42	Total-pentadioxins	355.8546	30.27	35840.580	0.948	3.079		1.44	1.55	NO	123.0
42	Total-pentadioxins	355.8546	30.14	42221.842	0.948	3.628		1.52	1.55	NO	143.5
42	Total-pentadioxins	355.8546	29.92	37716.857	0.948	3.241		1.66	1.55	NO	136.0
42	Total-pentadioxins	355.8546	29.29	28225.840	0.948	2.425		1.51	1.55	NO	98.3
42	Total-pentadioxins	355.8546	28.82	90219.051	0.948	7.751		1.46	1.55	NO	185.6
43	Total-hexadioxins	389.8157	35.31	28393.111	0.898	3.362		1.29	1.24	NO	68.7
43	Total-hexadioxins	389.8157	35.19	412831.907	0.898	48.886		1.22	1.24	NO	544.2
43	Total-hexadioxins	389.8157	34.81	83487.164	0.898	9.886		1.29	1.24	NO	180.3
43	Total-hexadioxins	389.8157	34.01	351325.047	0.898	41.603		1.23	1.24	NO	765.3
43	Total-hexadioxins	389.8157	33.77	12397.042	0.898	1.468		1.44	1.24	YES	28.2
15	123789-HxCDD	389.8157	36.71	88390.368	0 870	10.810	10.810	1.29	1.24	NO	193.7
43	Total-hexadioxins	389.8157	36.46	32288.350	0.898	3.823		1.29	1.24	NO	64.9
14	123678-HxCDD	389.8157	36.29	102182.828	0.884	11.993	11.993	1.20	1.24	NO	217.8
13	123478-HxCDD	389.8157	36.17	44907.186	0.941	5.207	5.207	1.23	1.24	NO	93.4
16	1234678-HpCDD	423.7766	41.00	1595461.813	0.948	293.500	293....	1.04	1.05	NO	1998.2
44	Total-heptadioxins	423.7766	39.76	2378912.500	0.948	437.623		1.04	1.05	NO	3216.1
17	OCDD	457.7377	46.79	9557283.500	0.969	3109.1...	3109...	0.88	0.89	NO	14804.8

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PFK1

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R.T.	S/N
[redacted]	48	FUNCTION1 PFK	330.9792	21.18	0.000							6.0
[redacted]	48	FUNCTION1 PFK	330.9792	26.71	0.000							10.0
[redacted]	48	FUNCTION1 PFK	330.9792	25.84	0.000							6.5
[redacted]	48	FUNCTION1 PFK	330.9792	23.51	0.000							1.4
[redacted]	48	FUNCTION1 PFK	330.9792	23.00	0.000							1.5
[redacted]	48	FUNCTION1 PFK	330.9792	22.49	0.000							2.0
[redacted]	48	FUNCTION1 PFK	330.9792	21.81	0.000							2.6
[redacted]	48	FUNCTION1 PFK	330.9792	21.45	0.000							5.8
[redacted]	48	FUNCTION1 PFK	330.9792	21.31	0.000							5.7

PFK2

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R.T.	S/N
[redacted]	49	FUNCTION2 PFK	366.9792	31.58	0.000		0.000					9.0
[redacted]	49	FUNCTION2 PFK	366.9792	31.11	0.000		0.000					18.4

PFK3

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R.T.	S/N
[redacted]	50	FUNCTION3 PFK	380.9760	35.75	0.000		0.000					7.0
[redacted]	50	FUNCTION3 PFK	380.9760	34.36	0.000		0.000					1.5
[redacted]	50	FUNCTION3 PFK	380.9760	32.98	0.000		0.000					2.1
[redacted]	50	FUNCTION3 PFK	380.9760	32.83	0.000		0.000					1.8
[redacted]	50	FUNCTION3 PFK	380.9760	38.20	0.000		0.000					0.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.93	0.000		0.000					7.1
[redacted]	50	FUNCTION3 PFK	380.9760	37.69	0.000		0.000					2.8
[redacted]	50	FUNCTION3 PFK	380.9760	36.65	0.000		0.000					1.0
[redacted]	50	FUNCTION3 PFK	380.9760	36.52	0.000		0.000					1.9
[redacted]	50	FUNCTION3 PFK	380.9760	36.03	0.000		0.000					7.5

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PFK4

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	ppt	EMPD	1° Ratio	1° Ratio	1° R...	S/N
[redacted]	51	FUNCTION4 PFK	430.9728	39.60	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	39.45	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	39.42	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	39.37	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	38.94	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	38.80	0.000							0.3
[redacted]	51	FUNCTION4 PFK	430.9728	38.75	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	38.57	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	38.35	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	41.48	0.000							2.7
[redacted]	51	FUNCTION4 PFK	430.9728	41.39	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	41.35	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	41.31	0.000							2.1
[redacted]	51	FUNCTION4 PFK	430.9728	41.24	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	41.00	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	40.80	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	40.76	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	40.73	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	40.39	0.000							1.9
[redacted]	51	FUNCTION4 PFK	430.9728	40.31	0.000							3.3
[redacted]	51	FUNCTION4 PFK	430.9728	40.19	0.000							3.4
[redacted]	51	FUNCTION4 PFK	430.9728	40.09	0.000							3.2
[redacted]	51	FUNCTION4 PFK	430.9728	40.00	0.000							2.8
[redacted]	51	FUNCTION4 PFK	430.9728	39.91	0.000							1.9
[redacted]	51	FUNCTION4 PFK	430.9728	39.87	0.000							2.1
[redacted]	51	FUNCTION4 PFK	430.9728	43.38	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	43.31	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.08	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	42.91	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	42.86	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	42.82	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	42.72	0.000							1.7
[redacted]	51	FUNCTION4 PFK	430.9728	42.62	0.000							2.2
[redacted]	51	FUNCTION4 PFK	430.9728	42.56	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	42.23	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	42.18	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	42.05	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	42.01	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	41.82	0.000							1.1
[redacted]	51	FUNCTION4 PFK	430.9728	41.69	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	41.55	0.000							2.7
[redacted]	51	FUNCTION4 PFK	430.9728	44.91	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	44.86	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	44.65	0.000							2.2
[redacted]	51	FUNCTION4 PFK	430.9728	44.56	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	44.40	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	44.32	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	44.21	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	44.16	0.000							1.1

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PFK4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	S/N
	51	FUNCTION4 PFK	430.9728	43.89	0.000			1.1
	51	FUNCTION4 PFK	430.9728	43.83	0.000			0.8
	51	FUNCTION4 PFK	430.9728	43.69	0.000			0.4
	51	FUNCTION4 PFK	430.9728	43.65	0.000			0.3
	51	FUNCTION4 PFK	430.9728	43.61	0.000			0.5

PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	S/N
	52	FUNCTION5 PFK	480.9696	45.22	0.000			8.0
	52	FUNCTION5 PFK	480.9696	45.06	0.000			12.6
	52	FUNCTION5 PFK	480.9696	46.64	0.000			0.6
	52	FUNCTION5 PFK	480.9696	46.53	0.000			1.5
	52	FUNCTION5 PFK	480.9696	46.41	0.000			1.2
	52	FUNCTION5 PFK	480.9696	46.34	0.000			1.3
	52	FUNCTION5 PFK	480.9696	46.18	0.000			1.0
	52	FUNCTION5 PFK	480.9696	46.15	0.000			1.9
	52	FUNCTION5 PFK	480.9696	46.10	0.000			2.3
	52	FUNCTION5 PFK	480.9696	46.02	0.000			0.6
	52	FUNCTION5 PFK	480.9696	45.89	0.000			1.5
	52	FUNCTION5 PFK	480.9696	45.80	0.000			1.7
	52	FUNCTION5 PFK	480.9696	45.75	0.000			1.3
	52	FUNCTION5 PFK	480.9696	45.65	0.000			0.6
	52	FUNCTION5 PFK	480.9696	45.44	0.000			2.1
	52	FUNCTION5 PFK	480.9696	45.40	0.000			2.7
	52	FUNCTION5 PFK	480.9696	45.35	0.000			5.4
	52	FUNCTION5 PFK	480.9696	45.30	0.000			6.3
	52	FUNCTION5 PFK	480.9696	48.70	0.000			1.1
	52	FUNCTION5 PFK	480.9696	48.57	0.000			0.8
	52	FUNCTION5 PFK	480.9696	48.49	0.000			1.6
	52	FUNCTION5 PFK	480.9696	48.10	0.000			1.2
	52	FUNCTION5 PFK	480.9696	48.06	0.000			1.6
	52	FUNCTION5 PFK	480.9696	47.88	0.000			1.5
	52	FUNCTION5 PFK	480.9696	47.62	0.000			1.9
	52	FUNCTION5 PFK	480.9696	47.57	0.000			1.1
	52	FUNCTION5 PFK	480.9696	47.51	0.000			1.2
	52	FUNCTION5 PFK	480.9696	47.24	0.000			0.7
	52	FUNCTION5 PFK	480.9696	47.20	0.000			1.2
	52	FUNCTION5 PFK	480.9696	47.15	0.000			1.6
	52	FUNCTION5 PFK	480.9696	47.05	0.000			0.5
	52	FUNCTION5 PFK	480.9696	46.98	0.000			2.1
	52	FUNCTION5 PFK	480.9696	46.95	0.000			1.9
	52	FUNCTION5 PFK	480 9696	46.73	0.000			1.3
	52	FUNCTION5 PFK	480.9696	48.98	0.000			1.1

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ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	27.78	0.000		0.000					2.2
	53	FUNCTION1 HXCD...	375.8364	26.41	0.000		0.000					2.2
	53	FUNCTION1 HXCD...	375.8364	26.14	0.000		0.000					4.4
	53	FUNCTION1 HXCD...	375.8364	25.90	0.000		0.000					1.7
	53	FUNCTION1 HXCD...	375.8364	25.78	0.000		0.000					4.1
	53	FUNCTION1 HXCD...	375.8364	24.06	0.000		0.000					1.9
	53	FUNCTION1 HXCD...	375.8364	23.79	0.000		0.000					5.3
	53	FUNCTION1 HXCD...	375.8364	23.60	0.000		0.000					44.5
	53	FUNCTION1 HXCD...	375.8364	22.61	0.000		0.000					1.8

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	54	FUNCTION1 HPCD...	409.7974	23.82	0.000		0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	23.58	0.000		0.000					2.5
	54	FUNCTION1 HPCD...	409.7974	23.30	0.000		0.000					15.6
	54	FUNCTION1 HPCD...	409.7974	22.04	0.000		0.000					5.8
	54	FUNCTION1 HPCD...	409.7974	25.23	0.000		0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	24.73	0.000		0.000					4.3
	54	FUNCTION1 HPCD...	409.7974	24.32	0.000		0.000					4.0

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	32.43	0.000		0.000					3.4
	55	FUNCTION2 HPCD...	409.7974	30.63	0.000		0.000					4.3
	55	FUNCTION2 HPCD...	409.7974	30.37	0.000		0.000					2.3
	55	FUNCTION2 HPCD...	409.7974	29.88	0.000		0.000					13.3
	55	FUNCTION2 HPCD...	409.7974	29.54	0.000		0.000					3.8
	55	FUNCTION2 HPCD...	409.7974	28.96	0.000		0.000					6.5
	55	FUNCTION2 HPCD...	409.7974	28.40	0.000		0.000					2.1

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	56	FUNCTION3 OCDPE	445.7555	35.30	0.000		0.000					2.2
	56	FUNCTION3 OCDPE	445.7555	35.27	0.000		0.000					2.1
	56	FUNCTION3 OCDPE	445.7555	34.25	0.000		0.000					3.0
	56	FUNCTION3 OCDPE	445.7555	33.10	0.000		0.000					3.4
	56	FUNCTION3 OCDPE	445.7555	38.04	0.000		0.000					2.1
	56	FUNCTION3 OCDPE	445.7555	37.97	0.000		0.000					1.6
	56	FUNCTION3 OCDPE	445.7555	37.75	0.000		0.000					2.4
	56	FUNCTION3 OCDPE	445.7555	37.44	0.000		0.000					1.7
	56	FUNCTION3 OCDPE	445.7555	37.39	0.000		0.000					1.8
	56	FUNCTION3 OCDPE	445.7555	36.98	0.000		0.000					1.7
	56	FUNCTION3 OCDPE	445.7555	36.71	0.000		0.000					1.4
	56	FUNCTION3 OCDPE	445.7555	36.66	0.000		0.000					1.8
	56	FUNCTION3 OCDPE	445.7555	36.47	0.000		0.000					2.3
	56	FUNCTION3 OCDPE	445.7555	36.30	0.000		0.000					3.0

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:59:17 Pacific Daylight Time

ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

ETHERS5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	t' Rati...	t' Rati...	T R...	S/N
	57	FUNCTION4 NCDPE	479.7165	40.39	0.000	0.000						1.7
	57	FUNCTION4 NCDPE	479.7165	39.04	0.000	0.000						1.5
	57	FUNCTION4 NCDPE	479.7165	38.82	0.000	0.000						234.8
	57	FUNCTION4 NCDPE	479.7165	38.64	0.000	0.000						6.0
	57	FUNCTION4 NCDPE	479.7165	38.35	0.000	0.000						1.4
	57	FUNCTION4 NCDPE	479.7165	44.92	0.000	0.000						3.3
	57	FUNCTION4 NCDPE	479.7165	43.03	0.000	0.000						2.2
	57	FUNCTION4 NCDPE	479.7165	42.87	0.000	0.000						1.9
	57	FUNCTION4 NCDPE	479.7165	42.63	0.000	0.000						2.4
	57	FUNCTION4 NCDPE	479.7165	42.37	0.000	0.000						13.1
	57	FUNCTION4 NCDPE	479.7165	42.29	0.000	0.000						13.5
	57	FUNCTION4 NCDPE	479.7165	41.85	0.000	0.000						1.4
	57	FUNCTION4 NCDPE	479.7165	41.56	0.000	0.000						2.4
	57	FUNCTION4 NCDPE	479.7165	40.76	0.000	0.000						2.3
	57	FUNCTION4 NCDPE	479.7165	40.63	0.000	0.000						1.9

ETHERS6

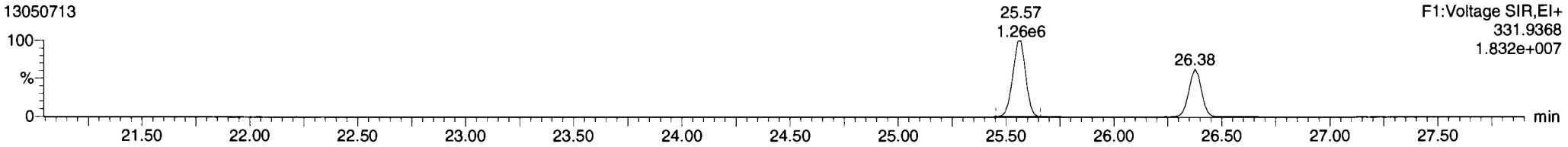
	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	t' Rati...	t' Rati...	T R...	S/N
	58	FUNCTION5 DCDPE	513.6775	47.07	0.000	0.000						2.0
	58	FUNCTION5 DCDPE	513.6775	46.94	0.000	0.000						1.5
	58	FUNCTION5 DCDPE	513.6775	46.10	0.000	0.000						1.8
	58	FUNCTION5 DCDPE	513.6775	45.99	0.000	0.000						1.8
	58	FUNCTION5 DCDPE	513.6775	45.75	0.000	0.000						1.9
	58	FUNCTION5 DCDPE	513.6775	48.49	0.000	0.000						3.0
	58	FUNCTION5 DCDPE	513.6775	47.64	0.000	0.000						1.4
	58	FUNCTION5 DCDPE	513.6775	47.25	0.000	0.000						2.1

Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:59:17 Pacific Daylight Time

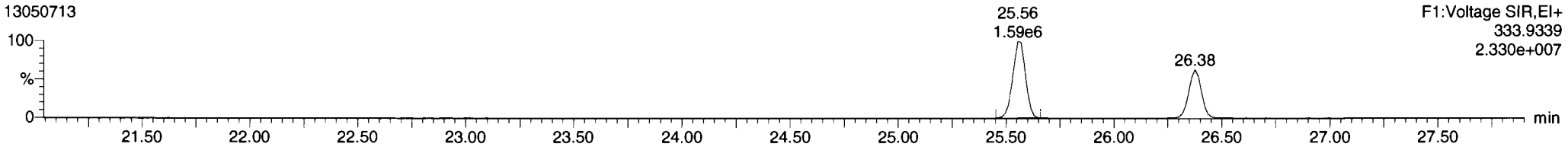
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130506.mdb 07 May 2013 11:54:30
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

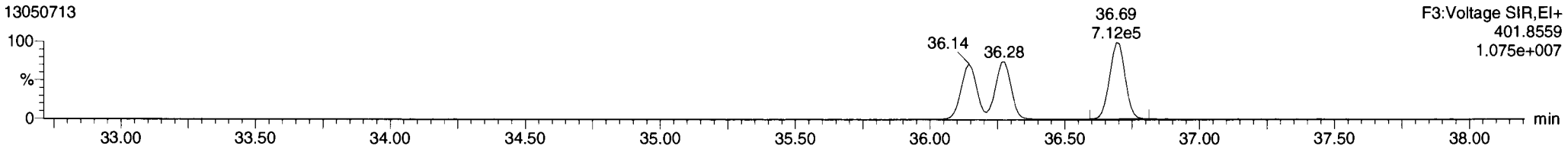
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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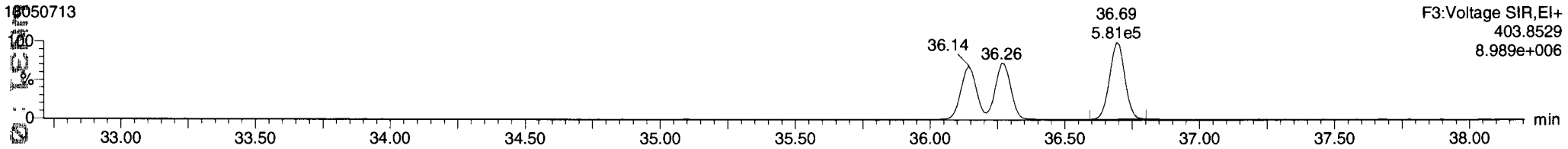

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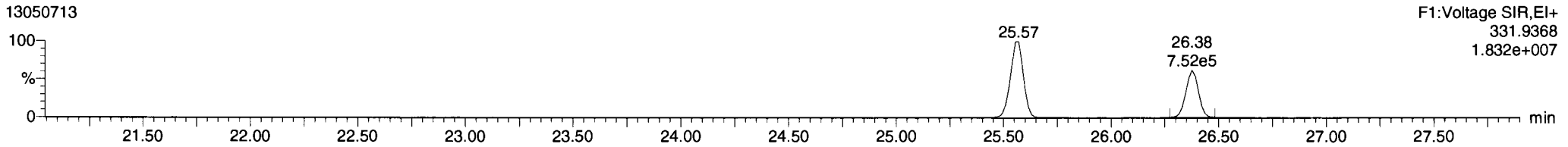
ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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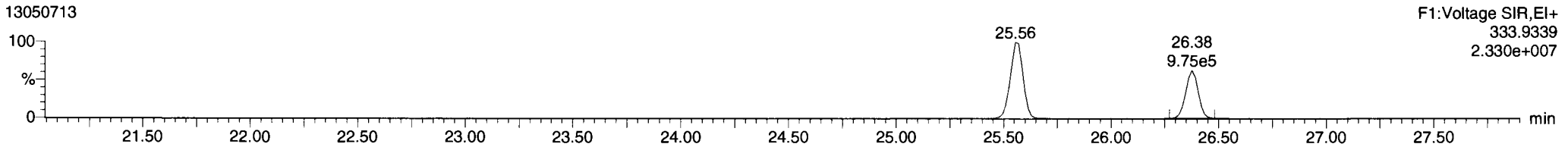
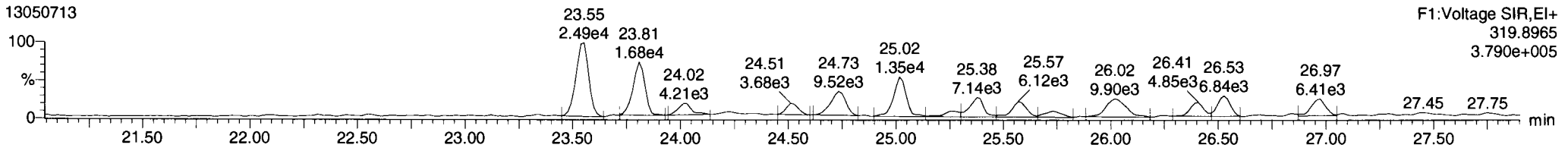
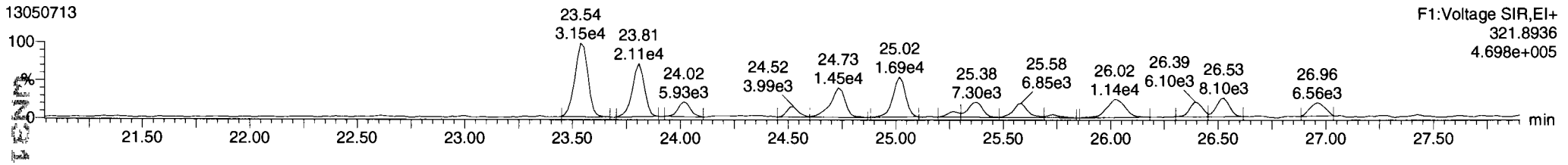


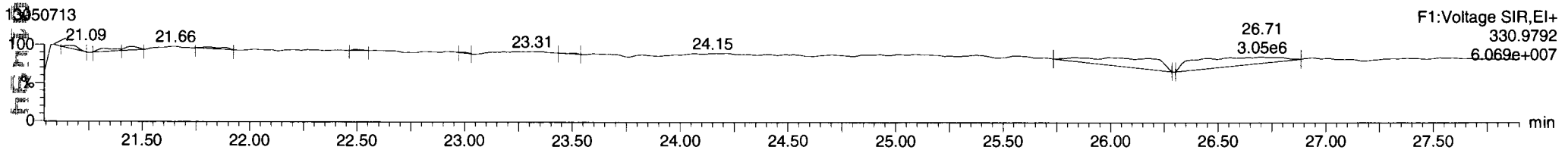
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
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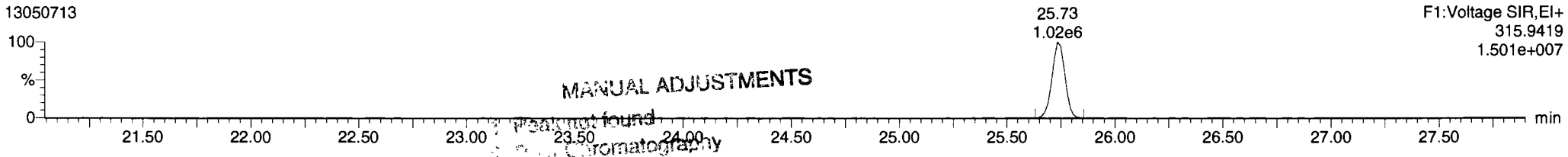
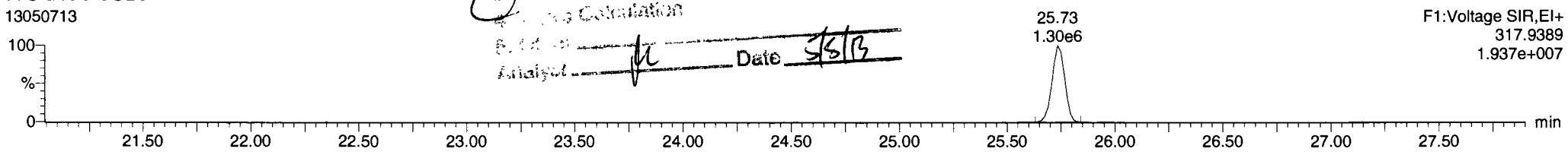
ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF

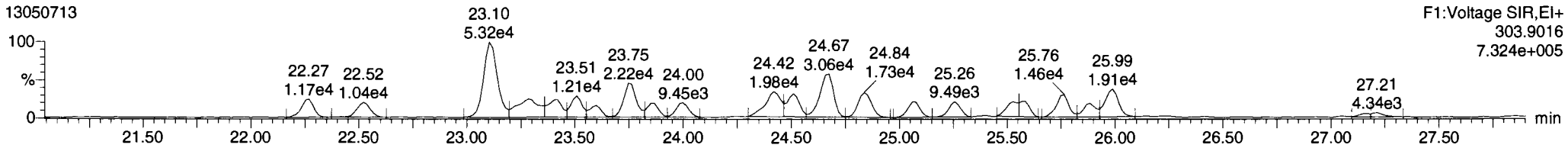


MANUAL ADJUSTMENTS
Peak not found
Chromatography
Baseline Correction
Area Calculation
Analyst _____ Date 5/8/13

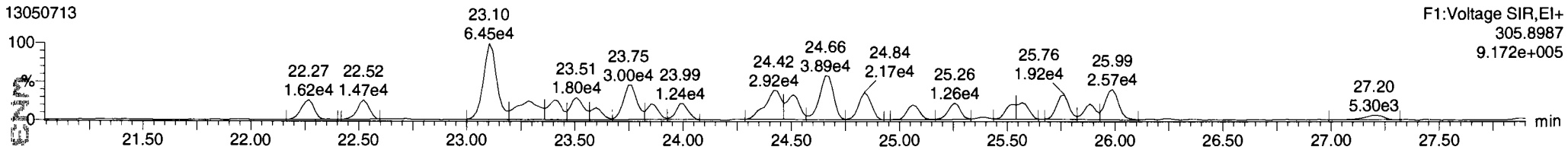
13C-2378-TCDF



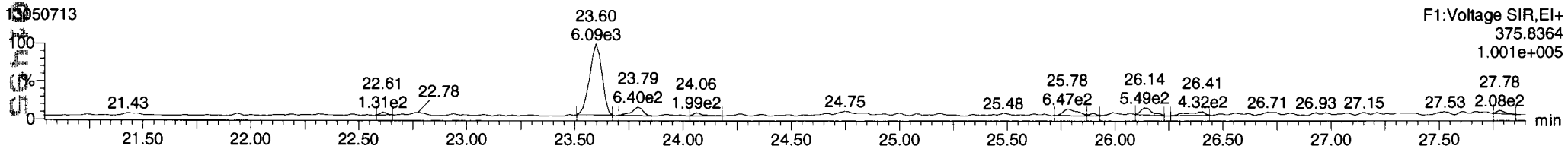
Total-tetrafurans



Total-tetrafurans



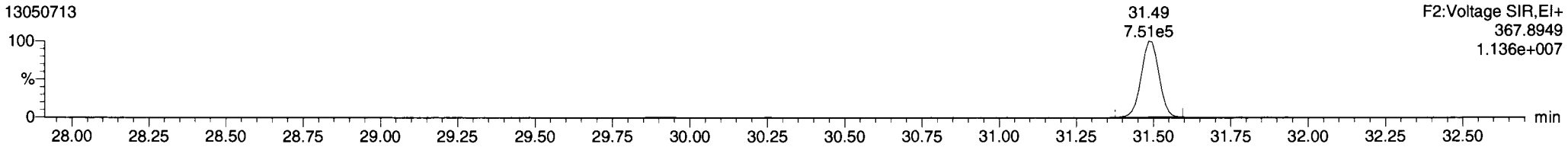
FUNCTION1 HXCDPE



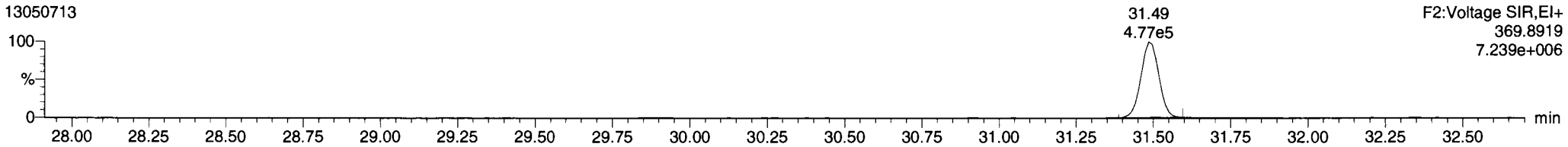
Dataset: P:\DIOXIN8290.PRO\130507DATA1.qld
Last Altered: Wednesday, May 08, 2013 10:35:09 Pacific Daylight Time
Printed: Wednesday, May 08, 2013 10:59:17 Pacific Daylight Time

ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

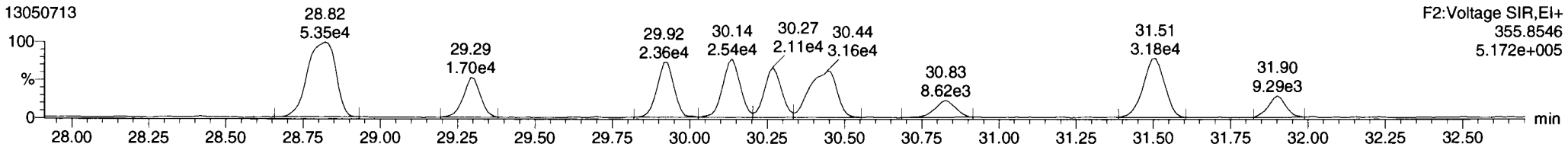
13C-12378-PeCDD



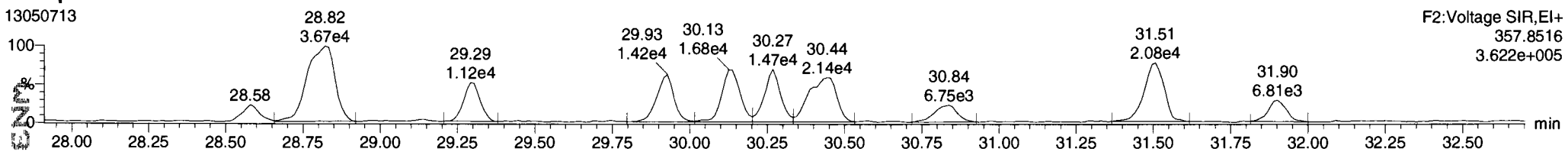
13C-12378-PeCDD



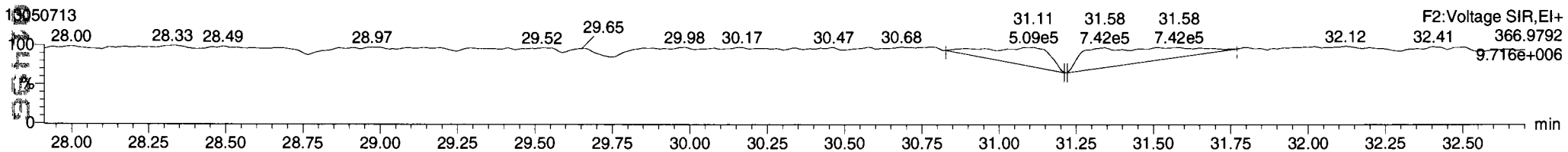
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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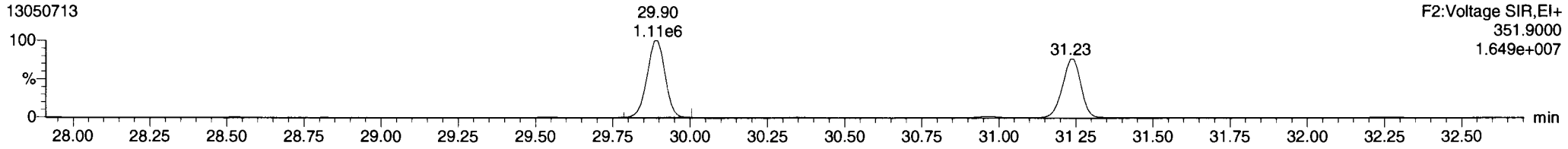
ID: WN31A, Name: 13050713, Date: 08-May-2013, Time: 00:24:21, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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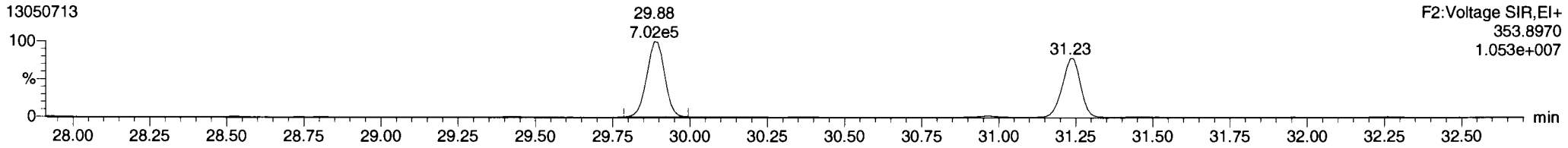
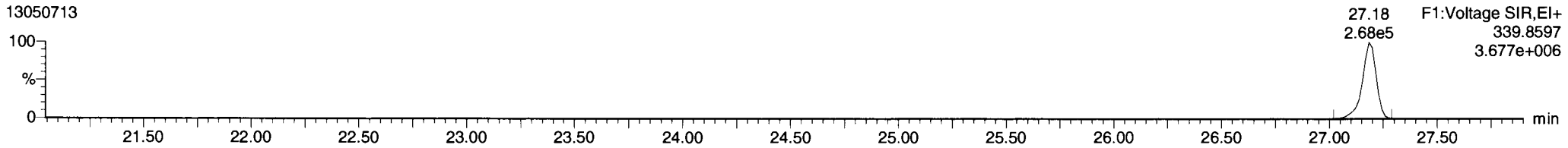
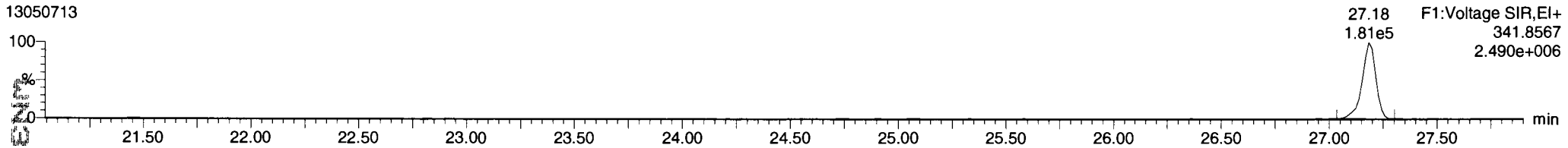


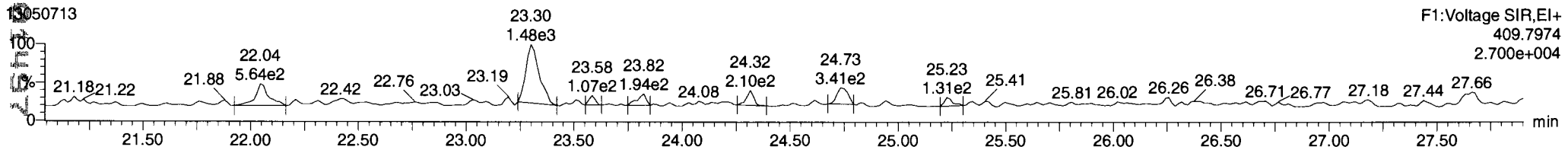
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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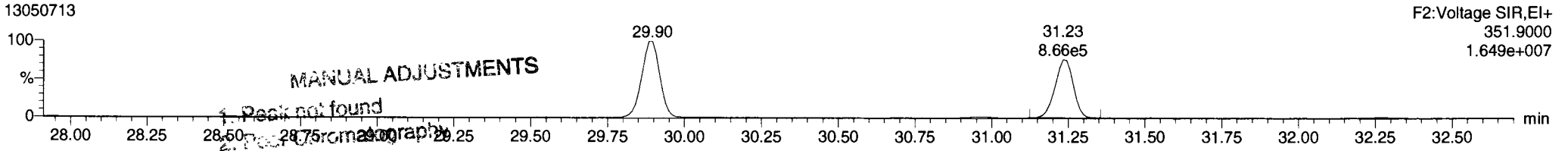
13C-23478-PeCDF



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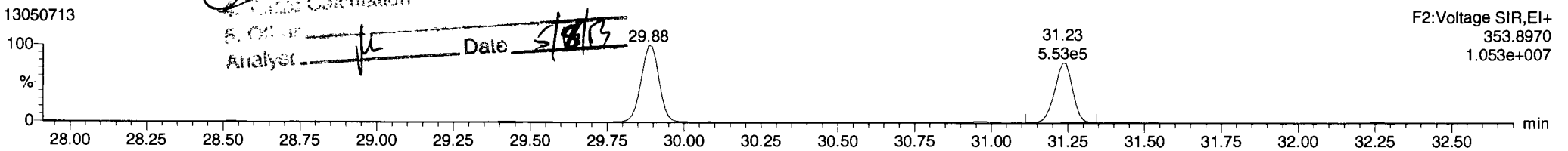
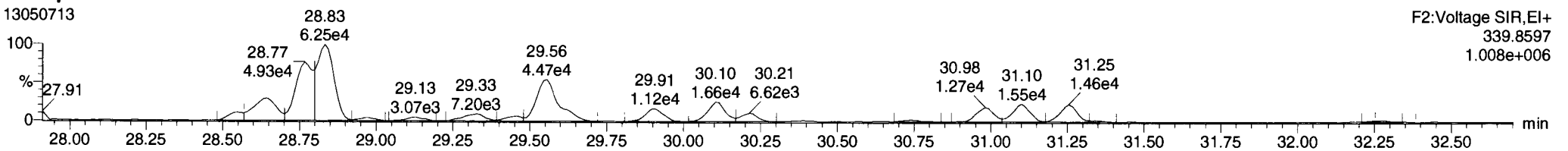
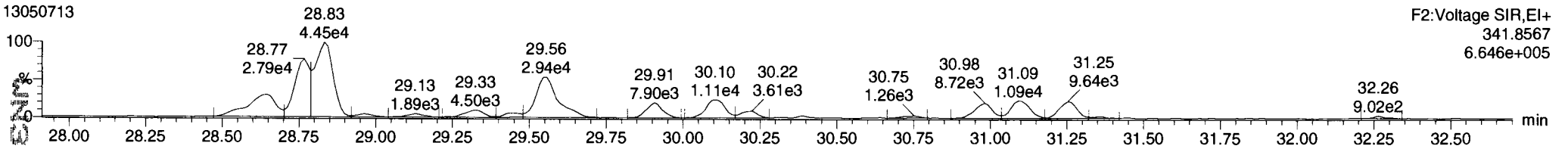


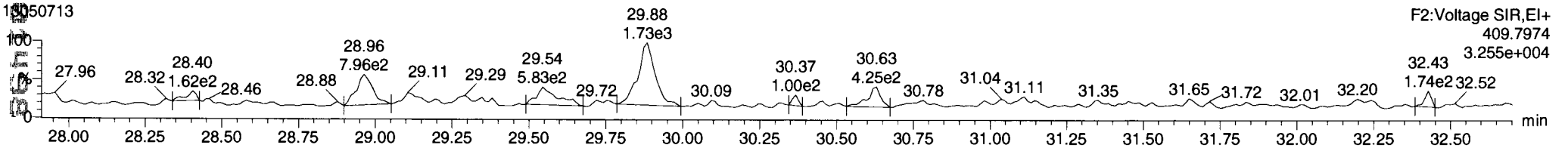
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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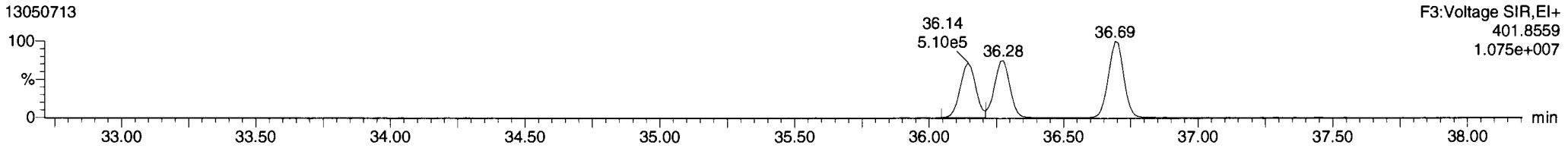
13C-123478-HxCDD



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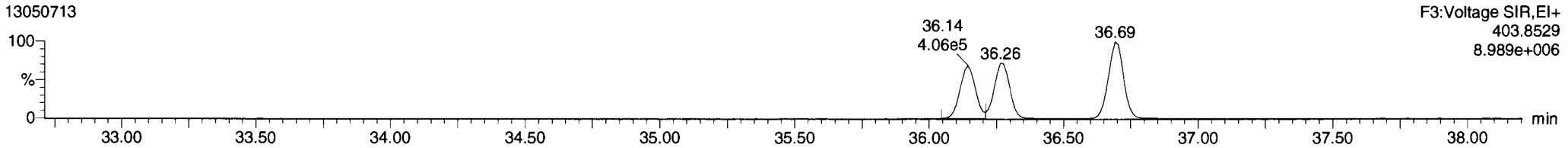
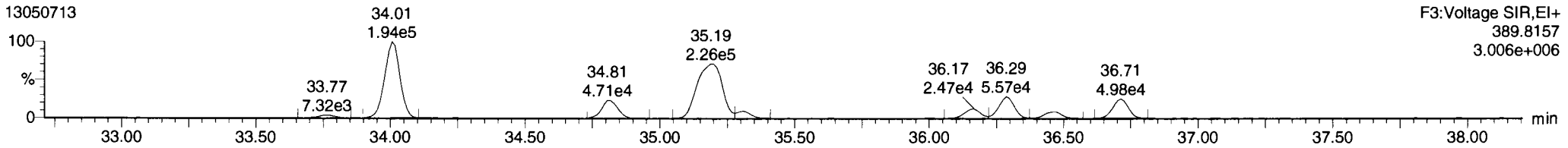
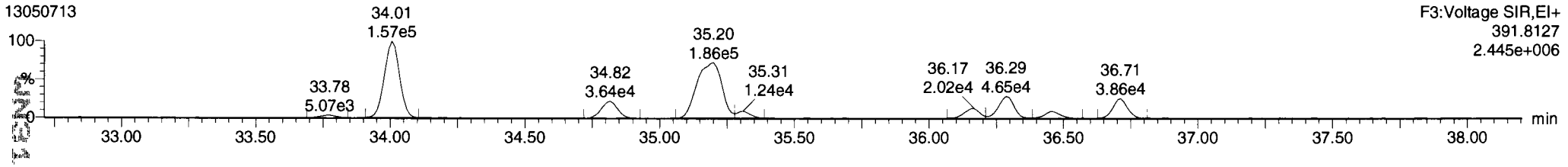


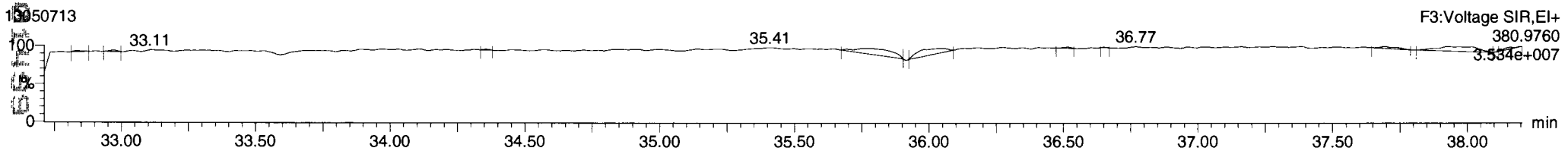
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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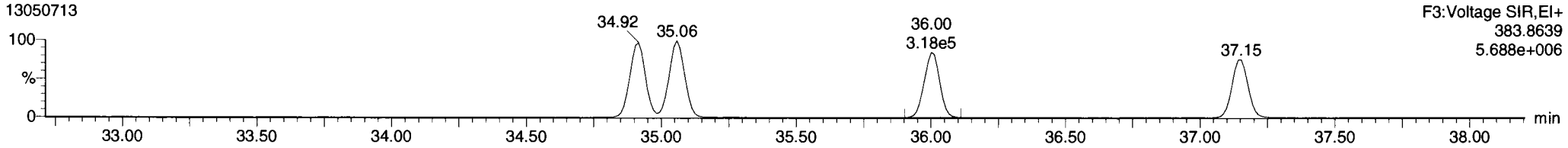
13C-234678-HxCDF



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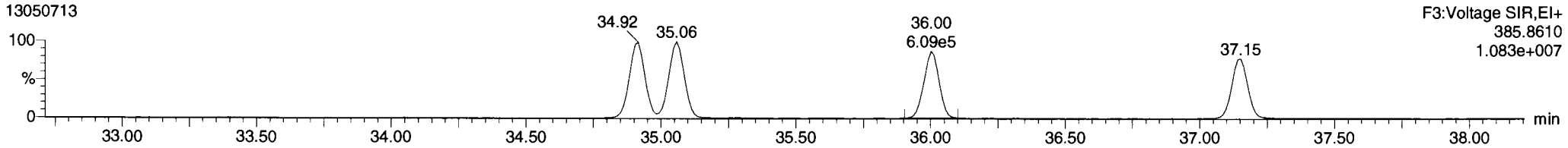
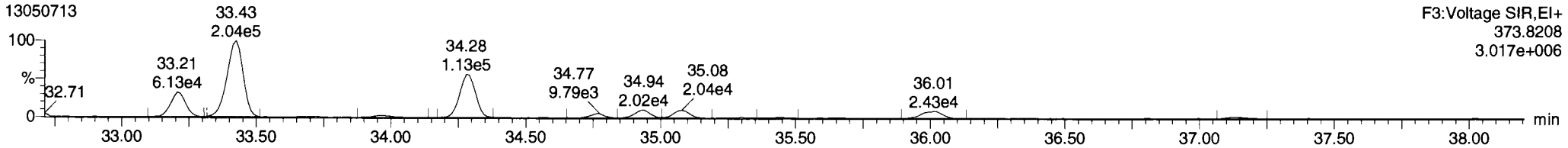


Total-hexafurans



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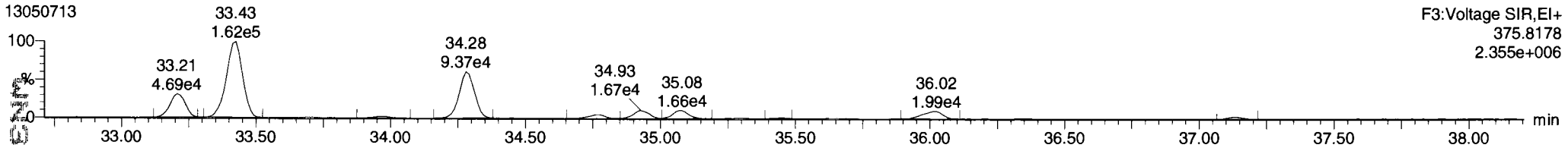
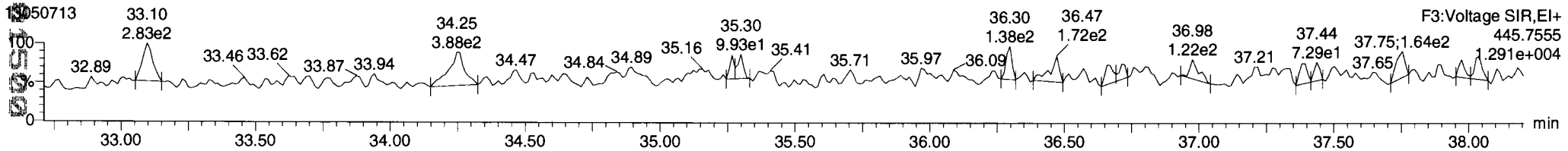


FUNCTION3 OCDPE



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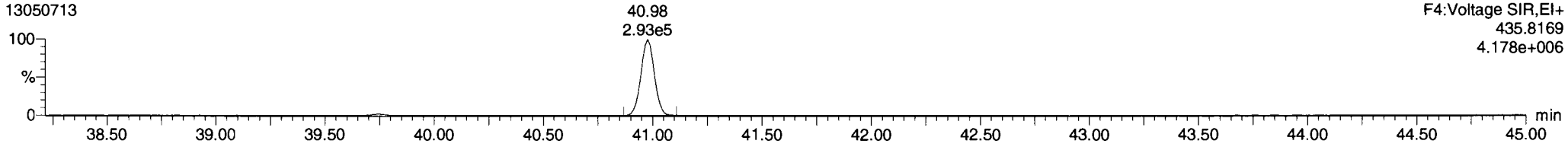
13C-1234678-HpCDD



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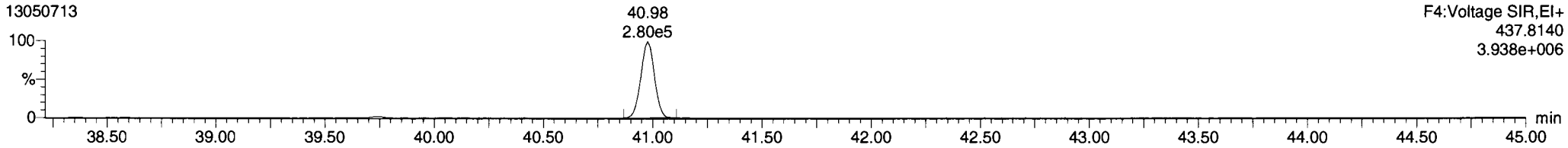

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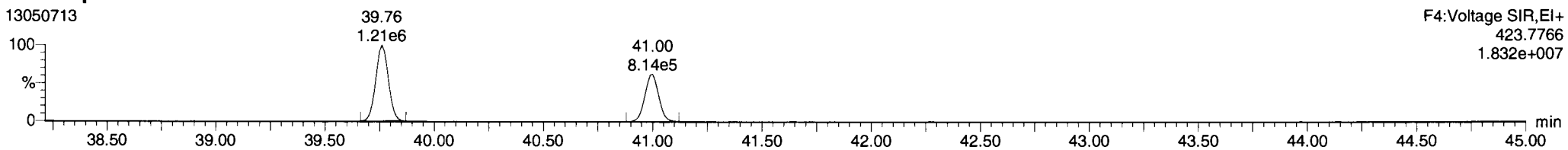

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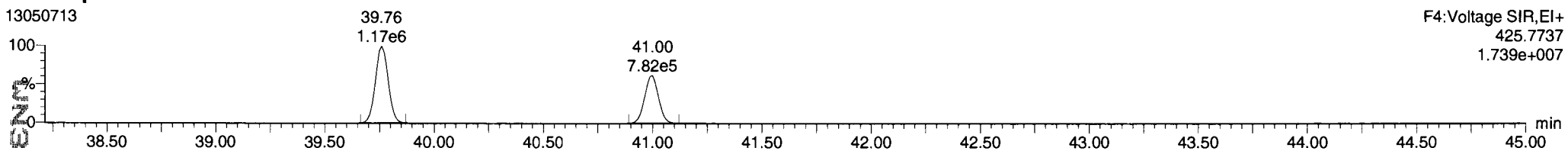
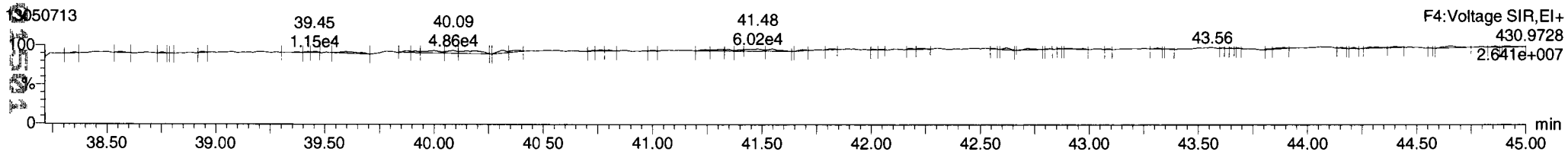


FUNCTION4 PFK



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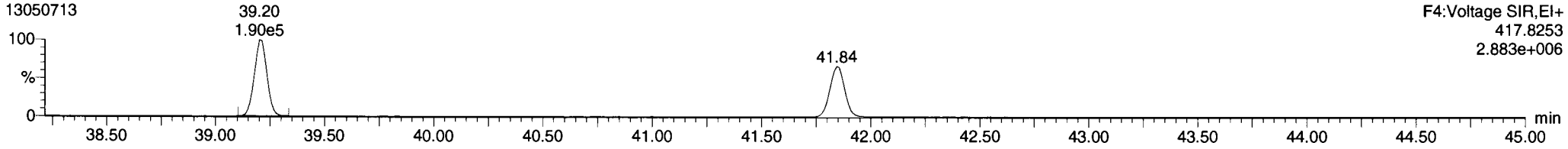
13C-1234678-HpCDF



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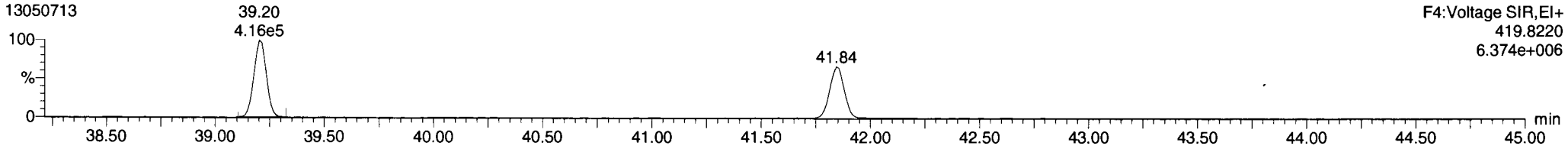

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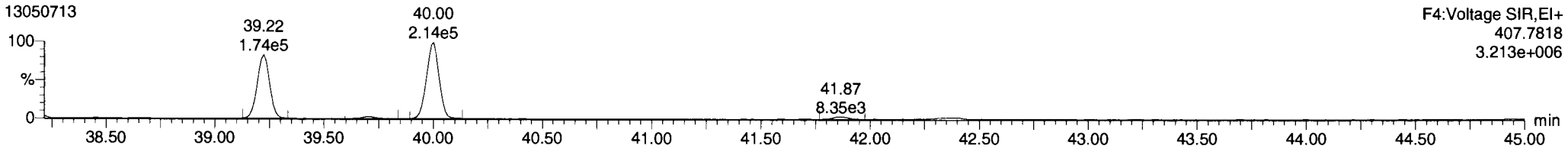

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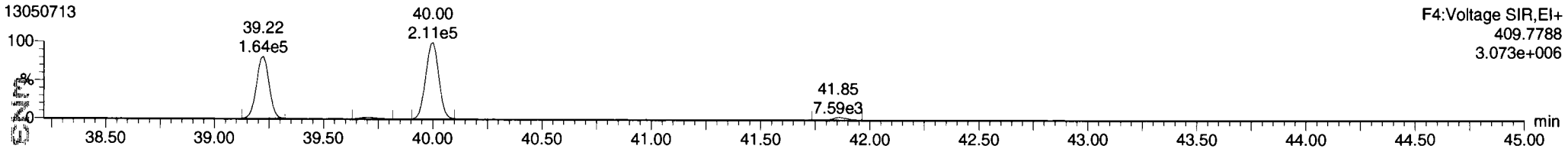
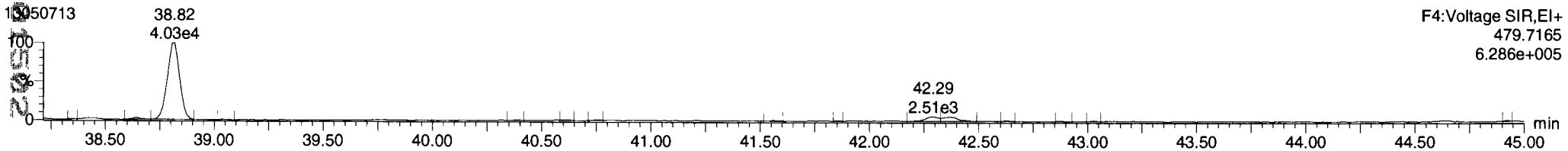


FUNCTION4 NCDPE



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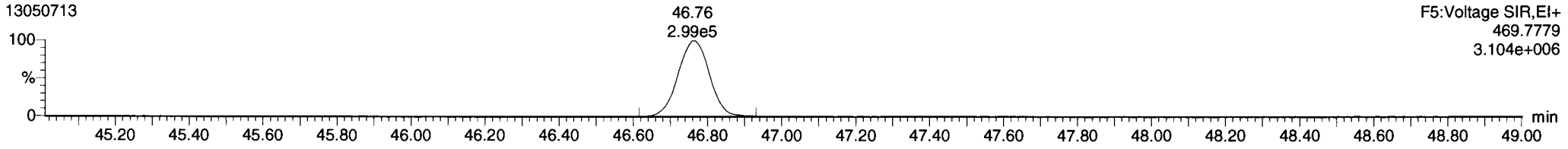
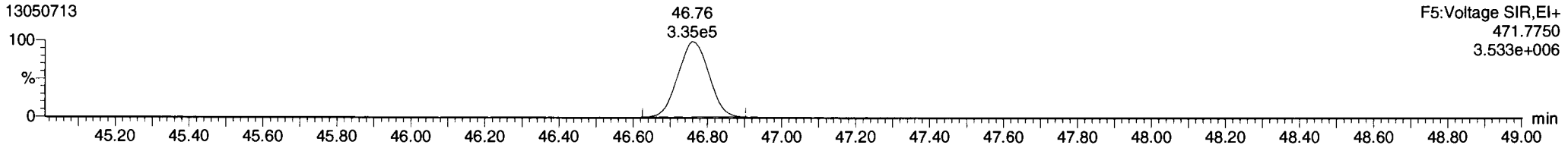
13C-OCDD



13C-OCDD



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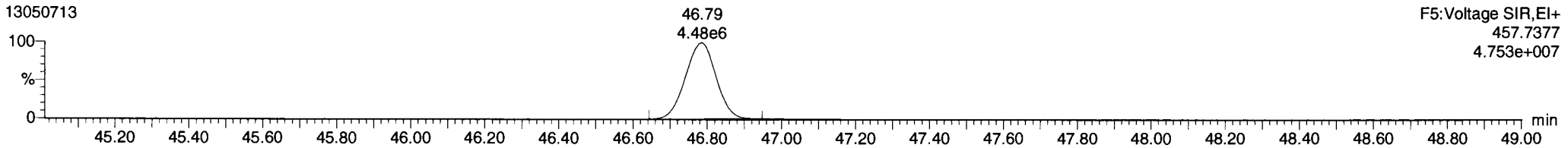

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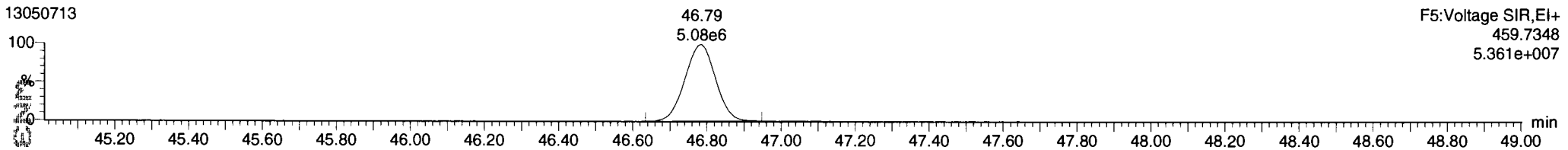
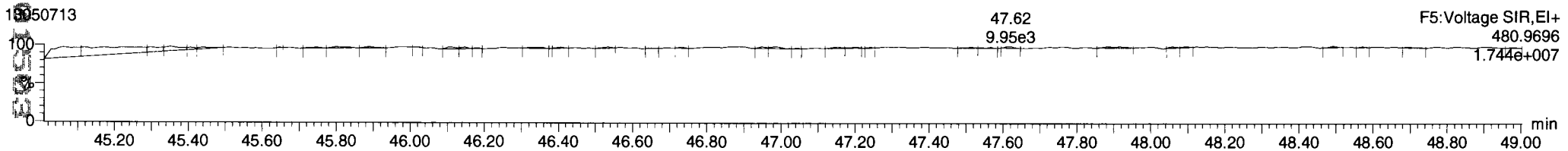


FUNCTION5 PFK



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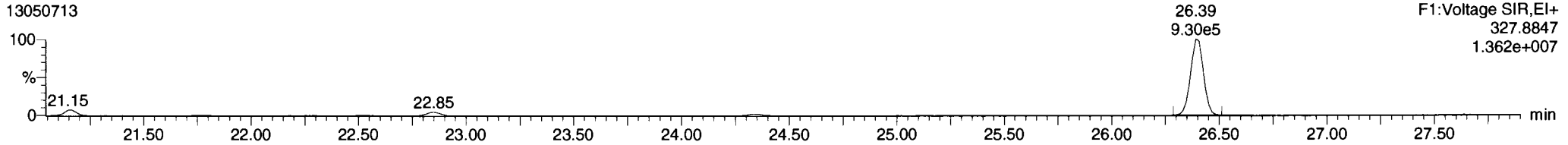
37CL-2378-TCDD



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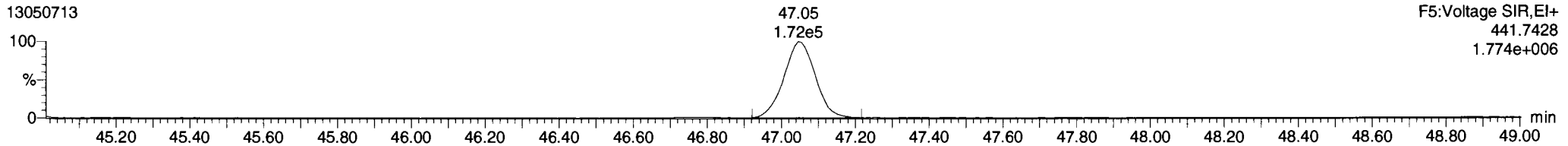

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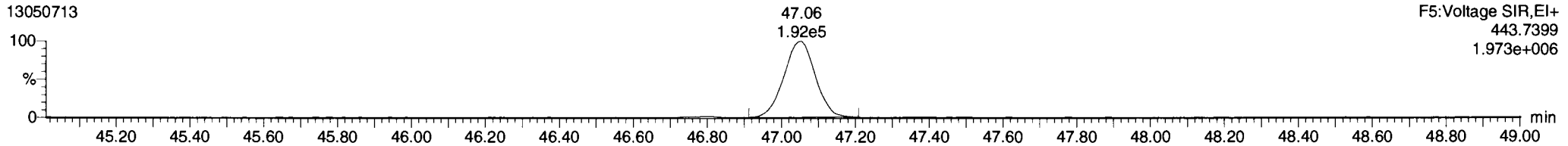
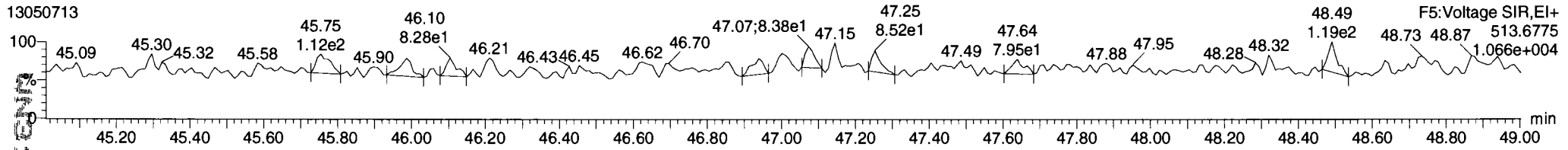


FUNCTION5 DCDPE



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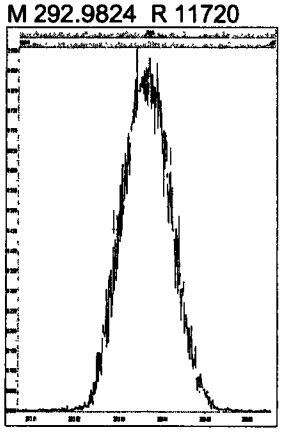
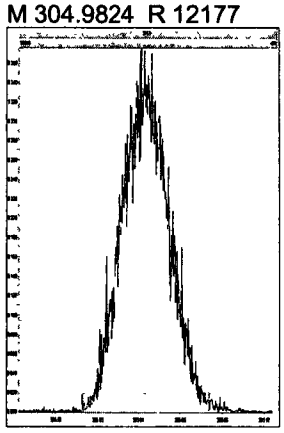
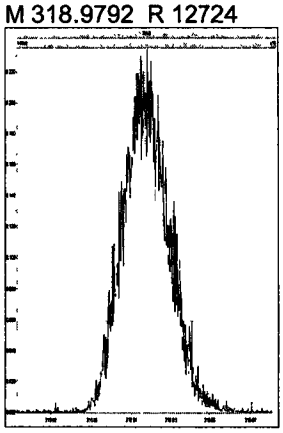


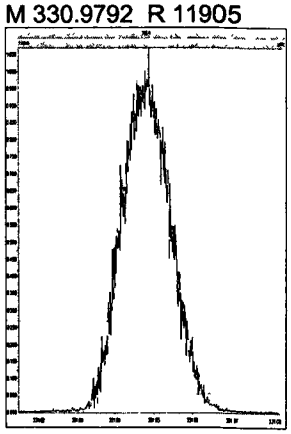
M 304.9824 R 12177



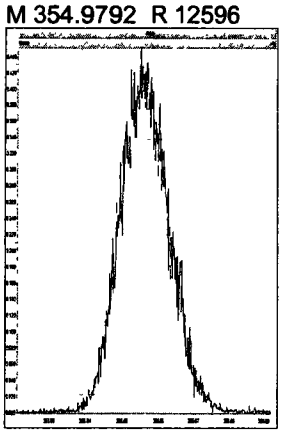
M 318.9792 R 12724



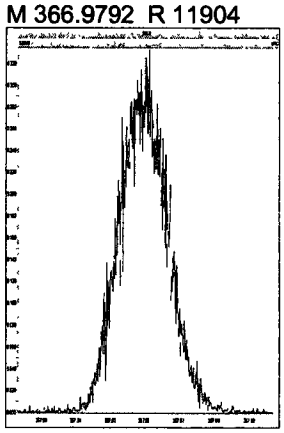
M 330.9792 R 11905



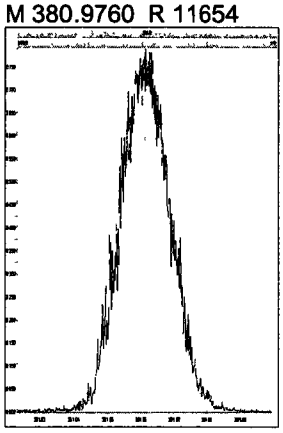
M 354.9792 R 12596



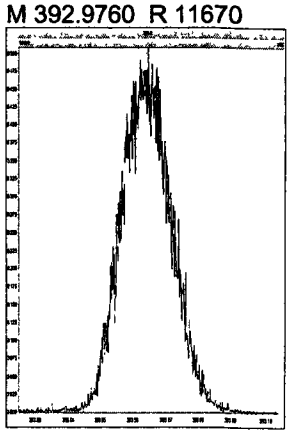
M 366.9792 R 11904



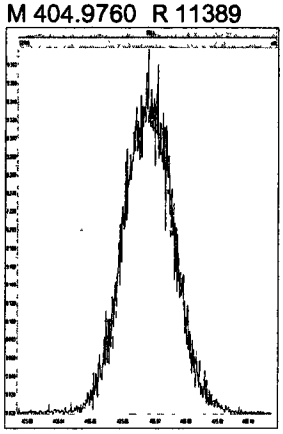
M 380.9760 R 11654



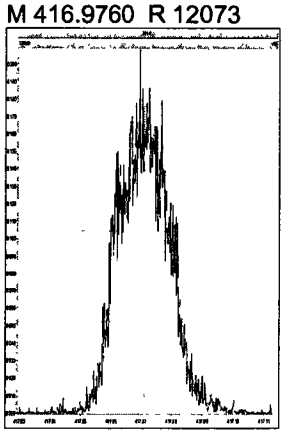
M 392.9760 R 11670



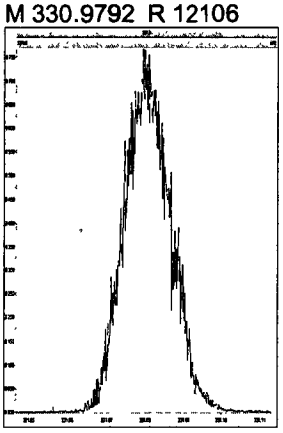
M 404.9760 R 11389



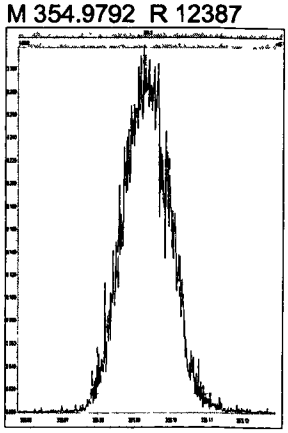
M 416.9760 R 12073



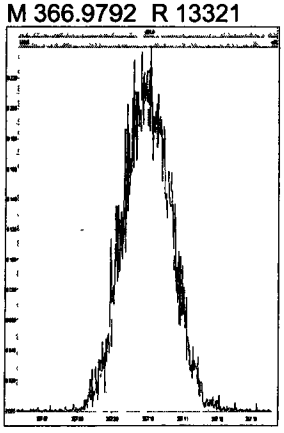
M 330.9792 R 12106



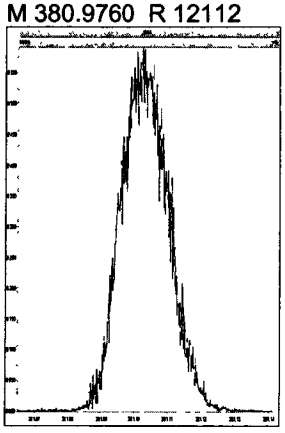
M 354.9792 R 12387



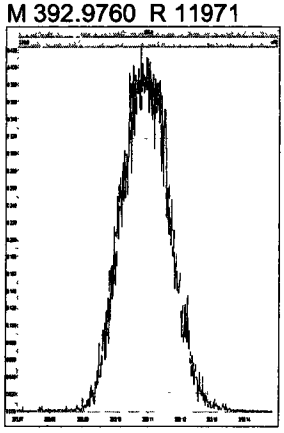
M 366.9792 R 13321



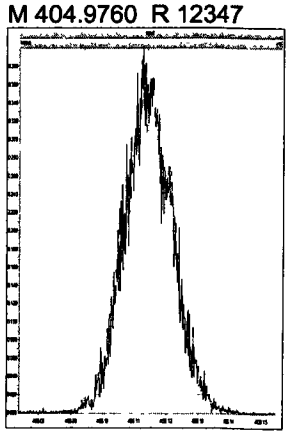
M 380.9760 R 12112



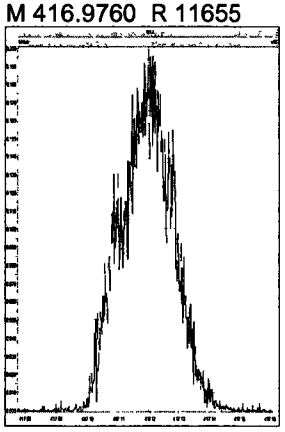
M 392.9760 R 11971



M 404.9760 R 12347



M 416.9760 R 11655



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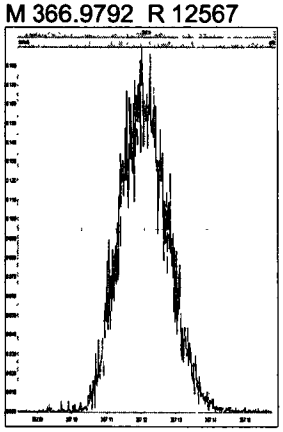

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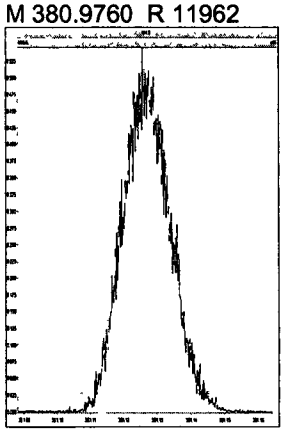

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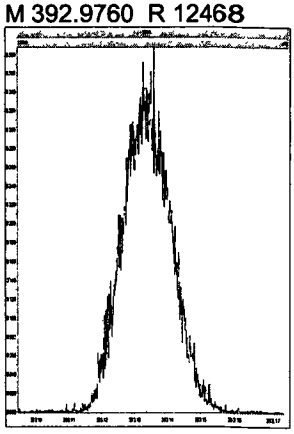

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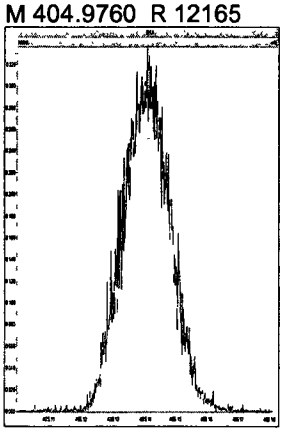

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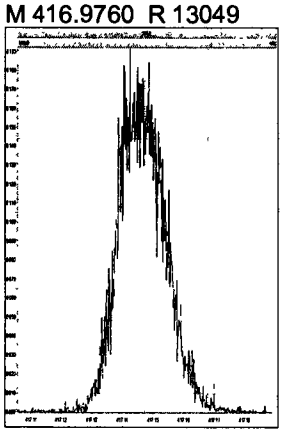

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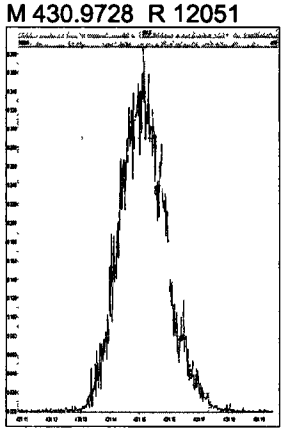
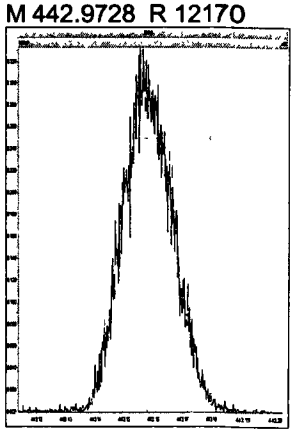
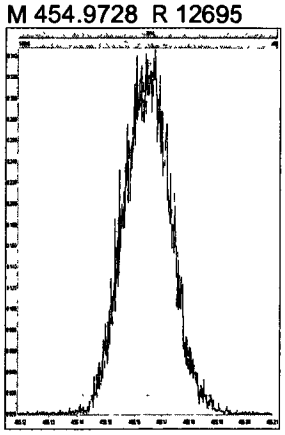


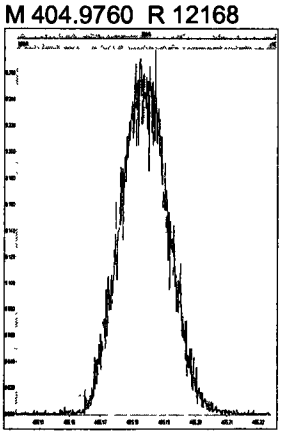
M 442.9728 R 12170



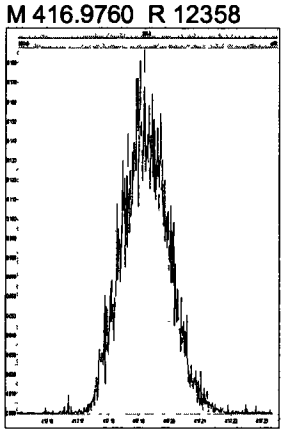
M 454.9728 R 12695



M 404.9760 R 12168



M 416.9760 R 12358



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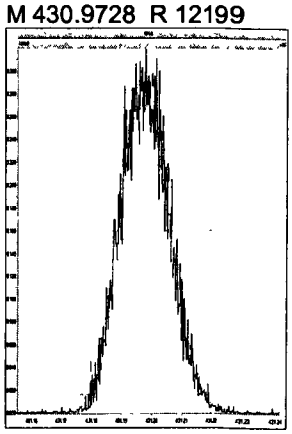
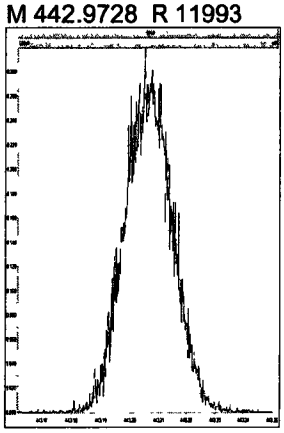
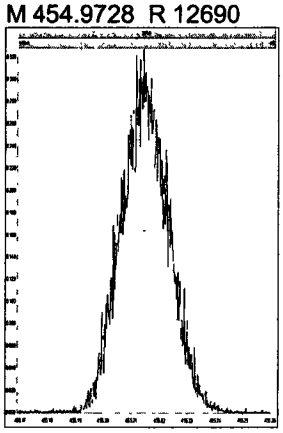


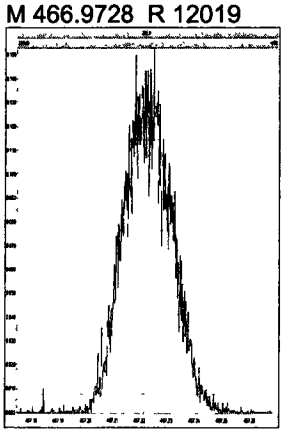
M 442.9728 R 11993



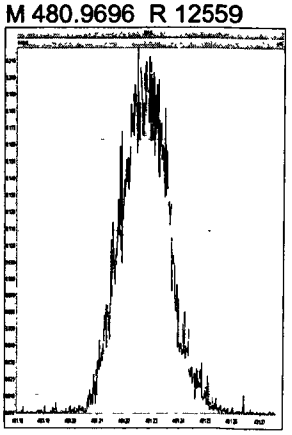
M 454.9728 R 12690



M 466.9728 R 12019



M 480.9696 R 12559



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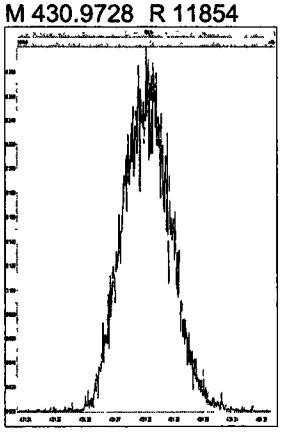
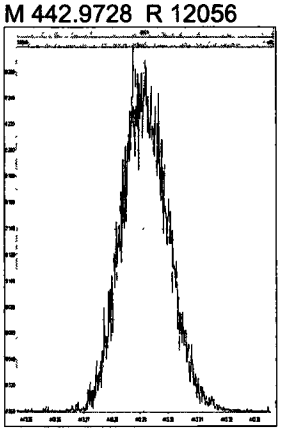
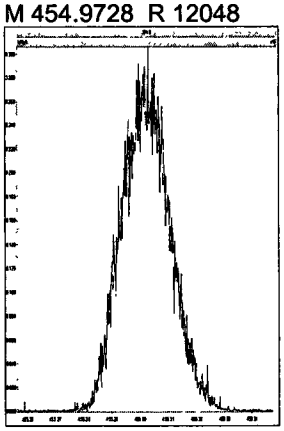
M 430.9728 R 11854



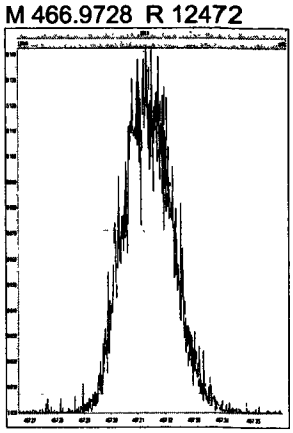
M 442.9728 R 12056



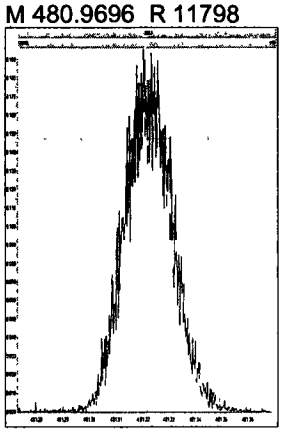
M 454.9728 R 12048



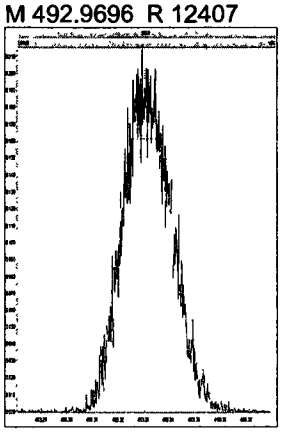
M 466.9728 R 12472



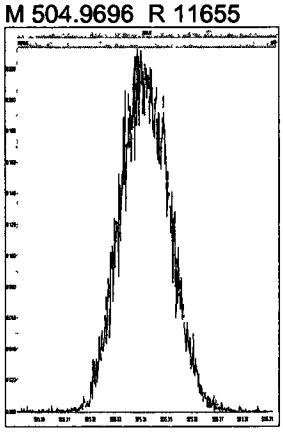
M 480.9696 R 11798



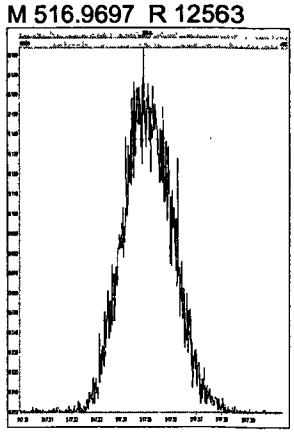
M 492.9696 R 12407



M 504.9696 R 11655



M 516.9697 R 12563



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Printed: Wednesday, May 08, 2013 16:03:06 Pacific Daylight Time

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Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13050714, Date: 08-May-2013, Time: 01:16:42, Conditions: AUTOSPEC01, User: pk

Name	RT	Rel	Lab Area	Ion2Area	Diff	Ratio	Theor	S/N	EMPC	Conc
2378-TCDF	25.705	1.001	2.29e5	2.98e5	0.763	0.770	0.770	1495.2	NO	12.347	12.347
12378-PeCDF	29.841	1.000	1.36e6	8.69e5	0.836	1.559	1.550	6739.2	NO	56.177	56.177
23478-PeCDF	31.190	1.000	1.35e6	8.80e5	0.851	1.536	1.550	6700.8	NO	56.417	56.417
123478-HxCDF	34.862	1.000	1.05e6	8.49e5	1.017	1.236	1.240	3177.7	NO	53.873	53.873
234678-HxCDF	35.958	1.000	1.04e6	8.43e5	1.027	1.237	1.240	3170.2	NO	55.606	55.606
123678-HxCDF	35.015	1.001	1.08e6	8.67e5	1.013	1.243	1.240	3305.4	NO	52.824	52.824
123789-HxCDF	37.109	1.001	8.98e5	7.33e5	0.929	1.225	1.240	2673.7	NO	53.764	53.764
1234678-HpCDF	39.159	1.000	8.31e5	8.05e5	1.151	1.033	1.050	4888.5	NO	53.924	53.924
1234789-HpCDF	41.800	1.000	6.51e5	6.30e5	1.149	1.034	1.050	3288.8	NO	53.460	53.460
OCDF	46.966	1.006	9.94e5	1.09e6	0.963	0.909	0.890	3392.5	NO	118.574	118.574
2378-TCDD	26.347	1.001	1.70e5	2.14e5	0.980	0.794	0.770	997.4	NO	10.766	10.766
12378-PeCDD	31.453	1.001	9.26e5	6.01e5	0.948	1.540	1.550	3294.5	NO	52.386	52.386
123478-HxCDD	36.100	1.001	7.89e5	6.20e5	0.941	1.273	1.240	4711.0	NO	51.767	51.767
123678-HxCDD	36.221	1.000	7.50e5	6.18e5	0.884	1.213	1.240	4524.3	NO	50.704	50.704
123789-HxCDD	36.648	1.012	7.69e5	6.28e5	0.870	1.224	1.240	4509.9	NO	54.078	54.078
1234678-HpCDD	40.934	1.000	5.82e5	5.59e5	0.948	1.041	1.050	2513.1	NO	52.450	52.450
OCDD	46.706	1.001	8.39e5	9.47e5	0.969	0.887	0.890	3559.1	NO	100.776	100.776
13C-2378-TCDF	25.690	1.007	2.45e6	3.15e6	1.318	0.777	0.770	9196.0	NO		115.674
13C-12378-PeCDF	29.830	1.169	2.90e6	1.84e6	1.026	1.574	1.550	8192.5	NO		125.837
13C-23478-PeCDF	31.178	1.222	2.84e6	1.80e6	0.966	1.576	1.550	7850.9	NO		131.118
13C-123478-HxCDF	34.851	0.951	1.18e6	2.28e6	1.123	0.518	0.510	4145.2	NO		106.538
13C-123678-HxCDF	34.993	0.955	1.25e6	2.38e6	1.216	0.526	0.510	4315.7	NO		103.202
13C-234678-HxCDF	35.947	0.981	1.14e6	2.16e6	1.106	0.527	0.510	3976.7	NO		103.107
13C-123789-HxCDF	37.087	1.012	1.12e6	2.14e6	0.995	0.525	0.510	3850.7	NO		113.308
13C-1234678-HpCDF	39.147	1.069	8.09e5	1.83e6	0.896	0.443	0.440	4852.9	NO		101.561
13C-1234789-HpCDF	41.778	1.140	6.44e5	1.44e6	0.693	0.446	0.440	3334.8	NO		103.852
13C-1234-TCDD	25.511	0.000	1.63e6	2.04e6	1.000	0.799	0.770	4650.0	NO		100.000
13C-2378-TCDD	26.333	1.032	1.60e6	2.04e6	0.961	0.784	0.770	4619.6	NO		103.295
13C-12378-PeCDD	31.431	1.232	1.88e6	1.19e6	0.703	1.577	1.550	8161.1	NO		119.125
13C-123478-HxCDD	36.078	0.985	1.62e6	1.27e6	1.016	1.269	1.240	10864.2	NO		98.231
13C-123678-HxCDD	36.210	0.988	1.69e6	1.36e6	1.098	1.235	1.240	11301.7	NO		95.865
13C-1234678-HpCDD	40.912	1.117	1.17e6	1.12e6	0.828	1.041	1.050	6458.9	NO		95.571
13C-OCDD	46.679	1.274	1.73e6	1.93e6	0.770	0.894	0.890	7247.3	NO		163.958

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Printed: Wednesday, May 08, 2013 16:03:06 Pacific Daylight Time

ID: CS3, Name: 13050714, Date: 08-May-2013, Time: 01:16:42, Conditions: AUTOSPEC01, User: pk

Name	RT	Dev(RT)	Conc(ng)	TotalArea	Ratio	Theor	Flags	IS	EMPC	%
13C-123789-HxCDD	36.637	0.000	1.60e6	1.30e6	1.000	1.230	1.240	10342.4	NO	100.000
Total-tetrafurans			6.90e5		0.763					37.487
Total-penta1			1.50e6							57.376
Total-pentafurans			4.15e6		0.844					172.501
Total-hexafurans			5.29e6		0.997					280.818
Total-heptafurans			1.48e6		1.150					107.505
Total-Furans			1.41e7		0.970					774.261
Total-tetradioxins			9.32e5		0.980					59.469
Total-pentadioxins			3.20e6		0.948					180.287
Total-hexadioxins			3.29e6		0.898					222.977
Total-heptadioxins			1.25e6		0.948					112.826
Total-Dioxins			9.51e6		0.934					676.334
Total-TEQ			2.36e7							1450.595
37CL-2378-TCDD	26.347	1.033	4.05e5		0.999			2427.4		11.040
FUNCTION1 PFK			2.34e7							
FUNCTION2 PFK			4.10e5							0.000
FUNCTION3 PFK			1.99e5							0.000
FUNCTION4 PFK			5.19e5							
FUNCTION5 PFK			4.12e4							
FUNCTION1 HXCDPE			1.49e3							0.000
FUNCTION1 HPCDPE			1.20e3							0.000
FUNCTION2 HPCDPE			2.04e3							0.000
FUNCTION3 OCDPE			1.27e3							0.000
FUNCTION4 NCDPE			1.38e3							0.000
FUNCTION5 DCDPE			4.86e2							0.000

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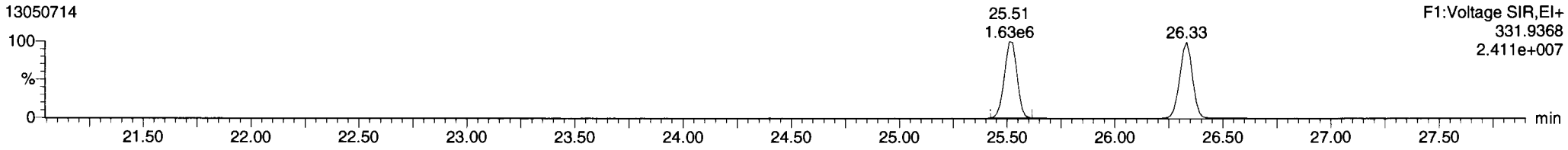
13C-1234-TCDD



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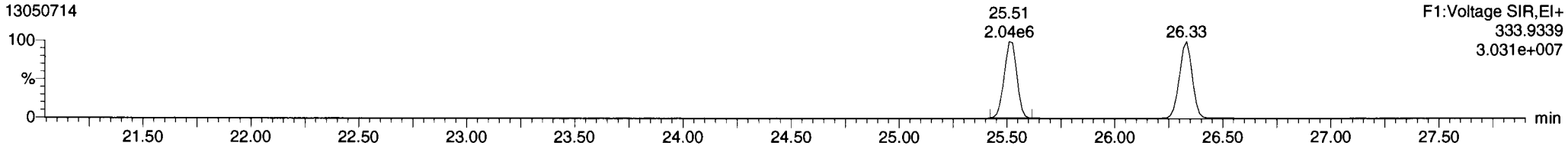

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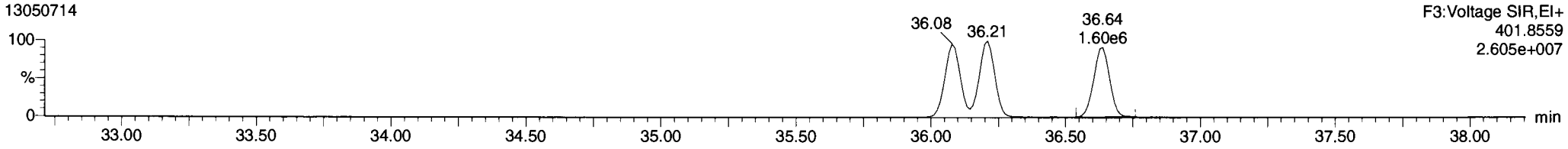

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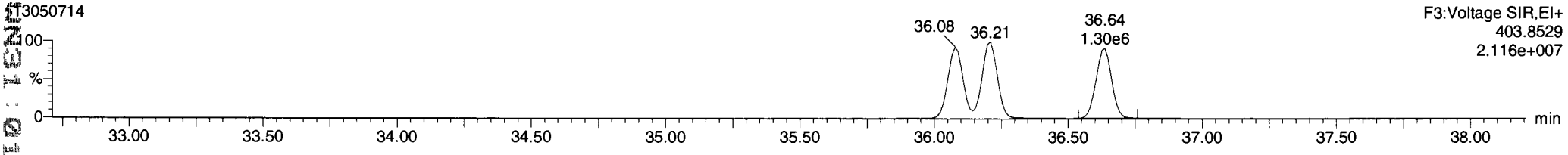

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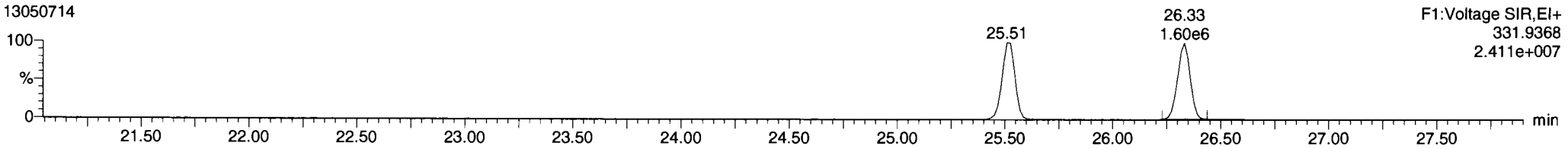
13C-2378-TCDD



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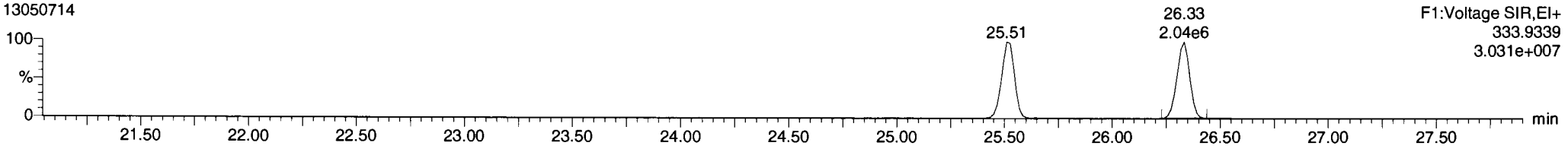
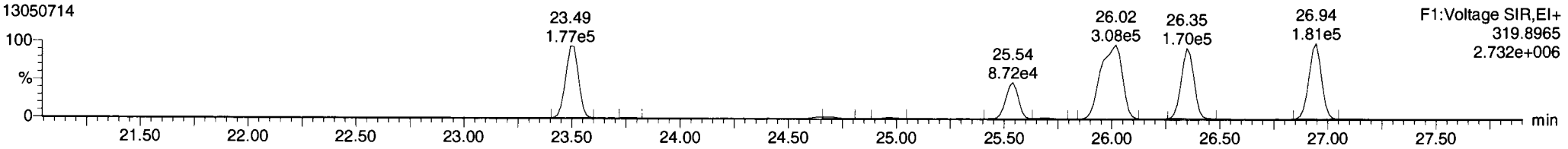
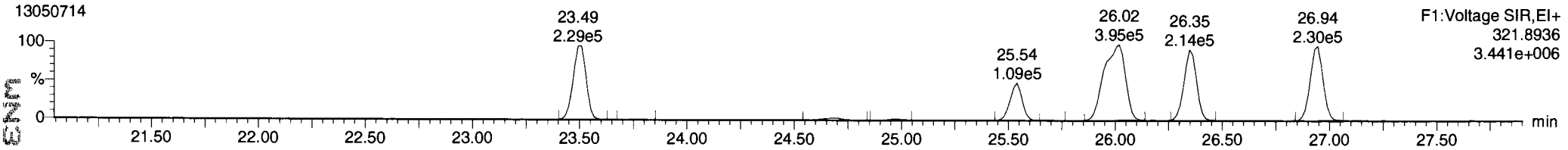


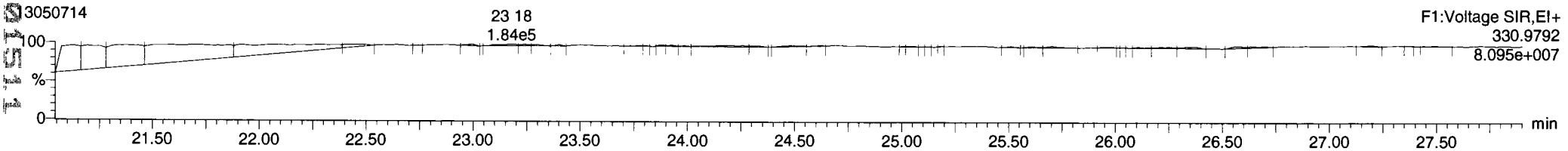
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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Last Altered: Wednesday, May 08, 2013 15:00:28 Pacific Daylight Time
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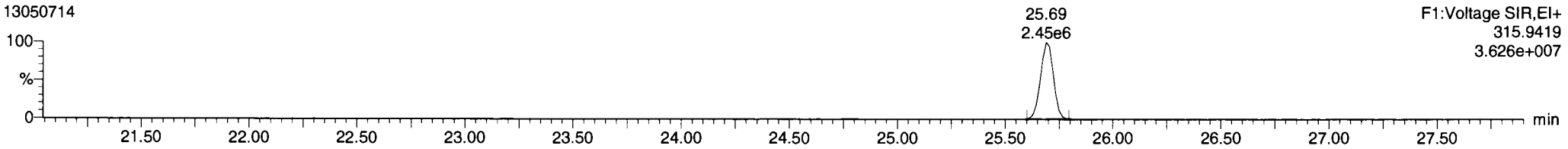
13C-2378-TCDF



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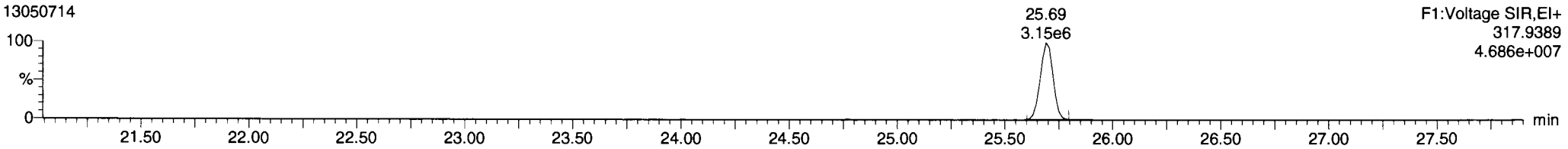
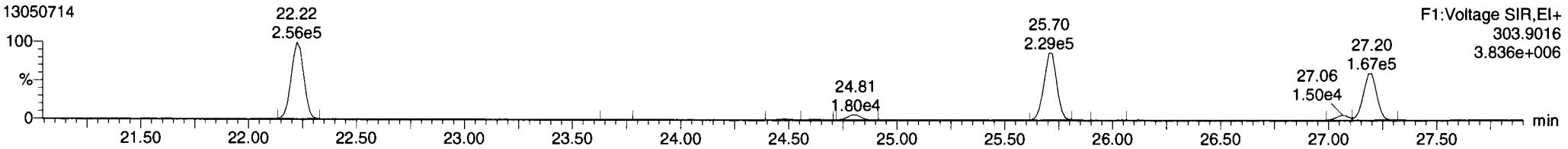
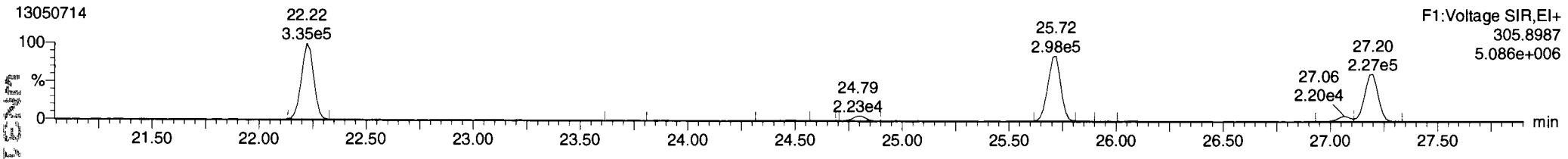


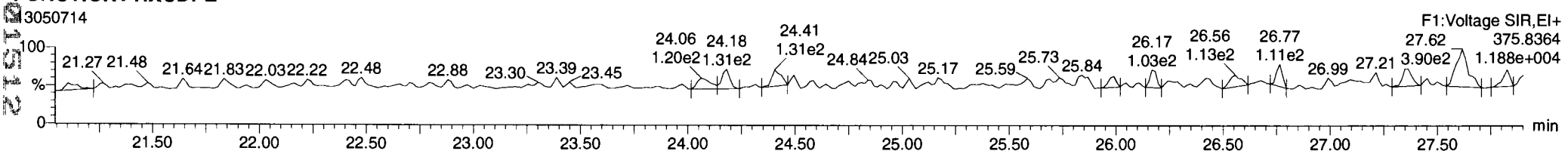
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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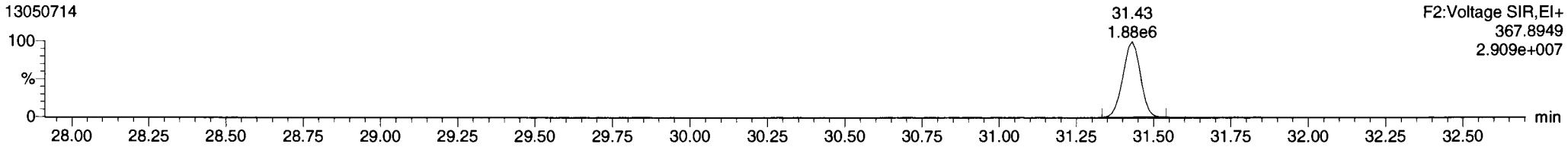
13C-12378-PeCDD



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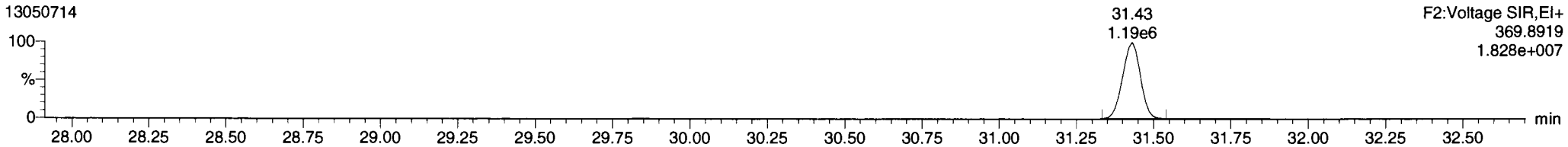

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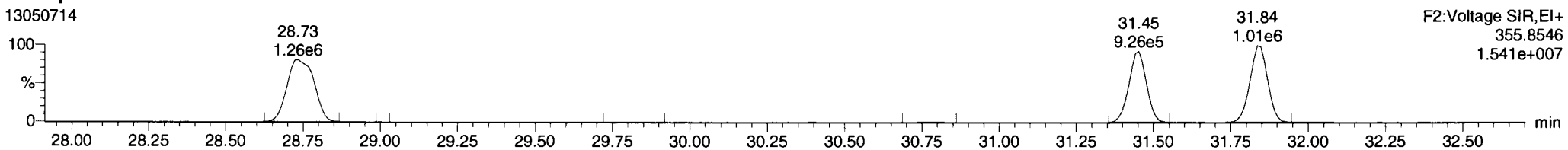
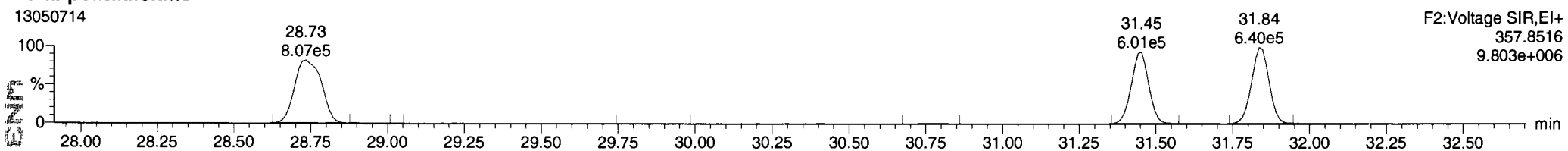


Total-pentadioxins



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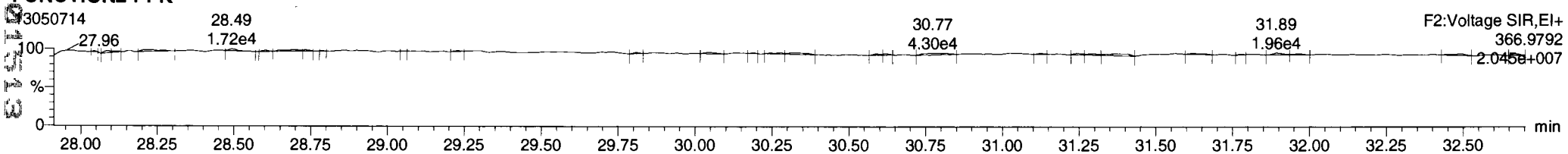

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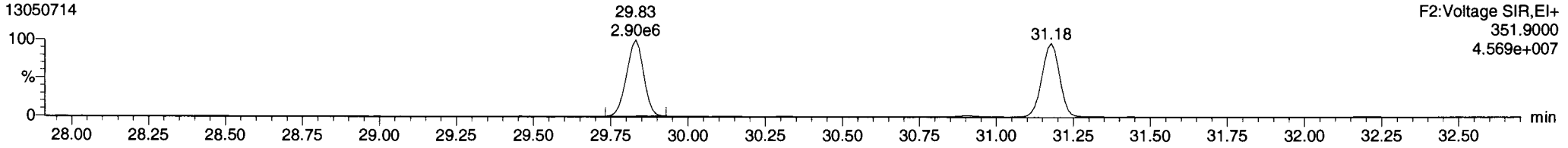
13C-12378-PeCDF



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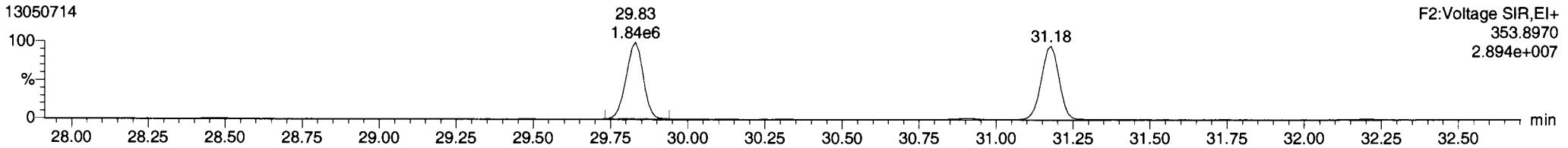

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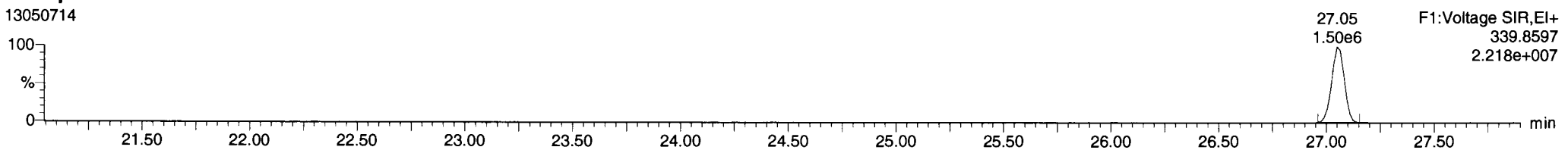

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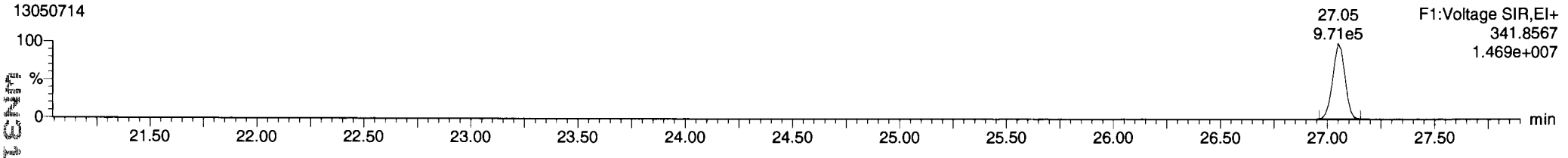
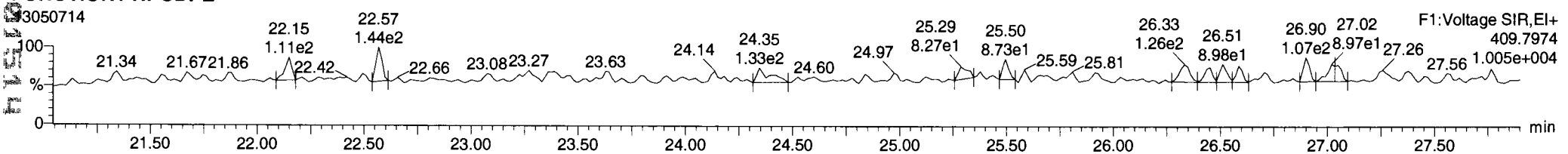


FUNCTION1 HPCDPE



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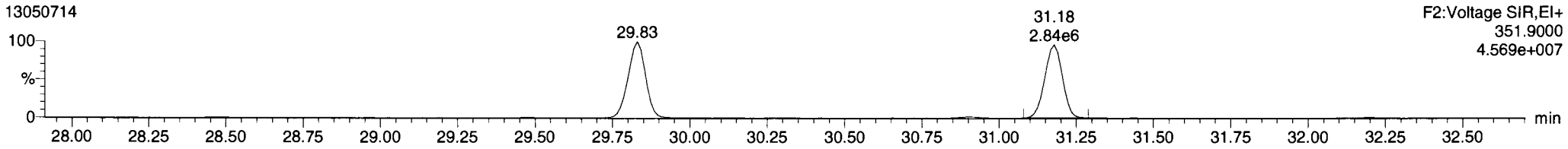
13C-23478-PeCDF



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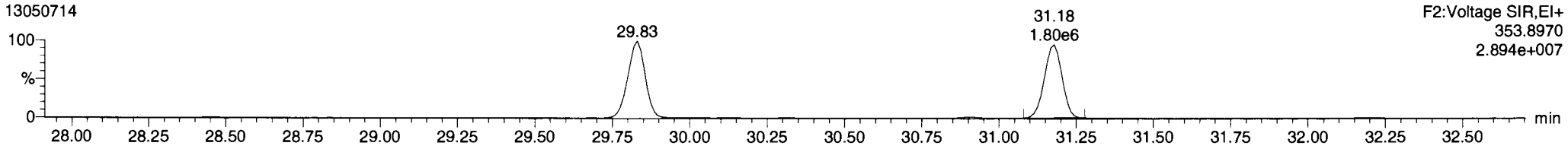
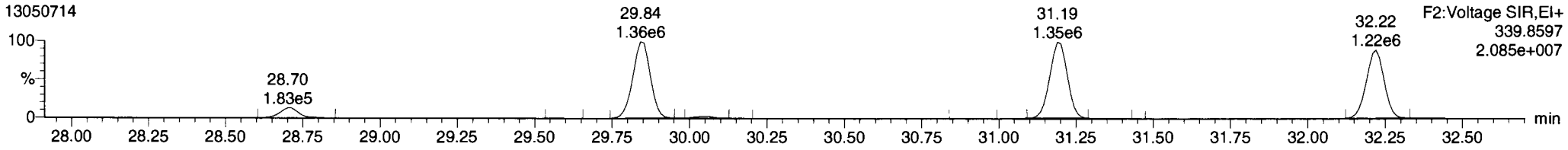
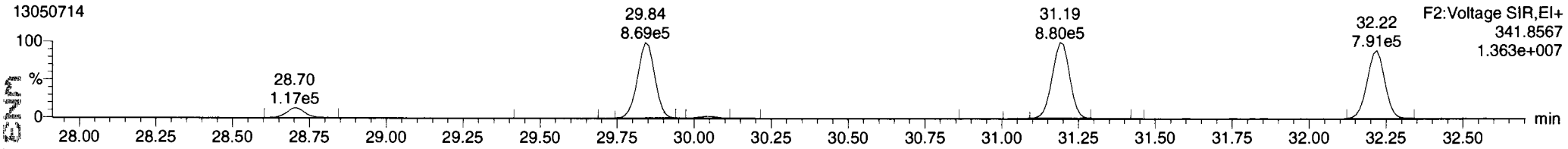


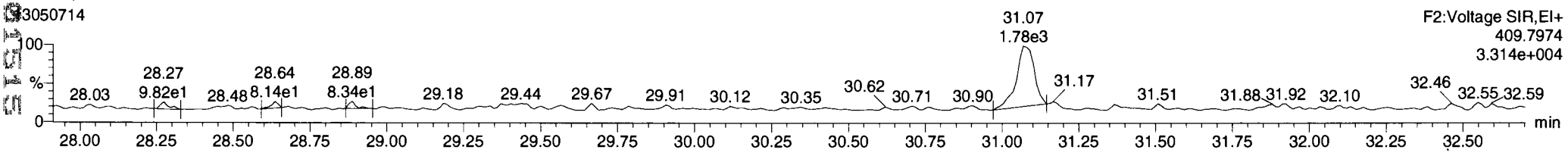
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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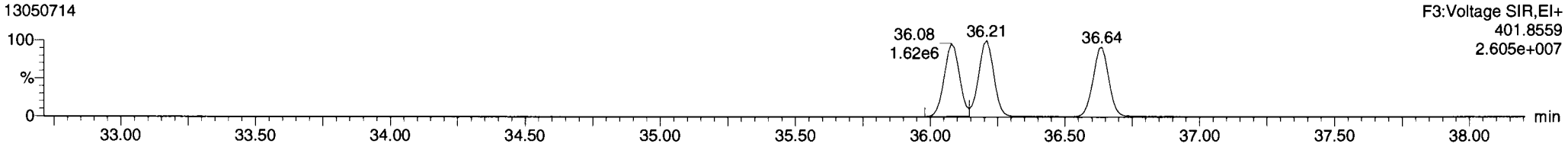
13C-123478-HxCDD



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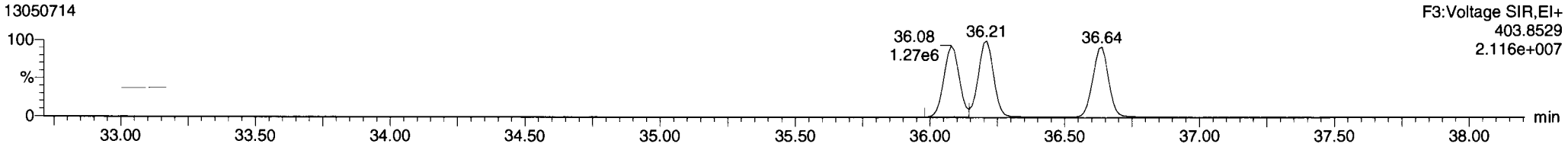
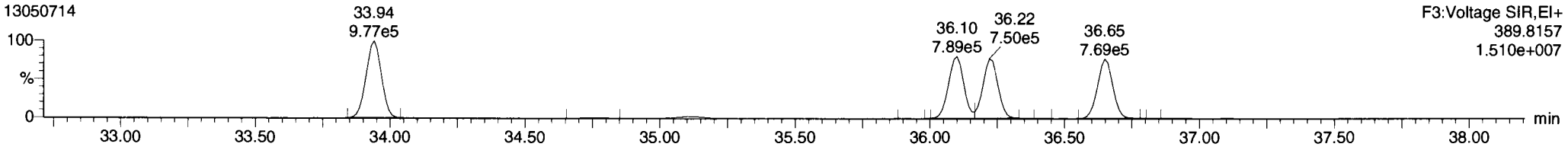
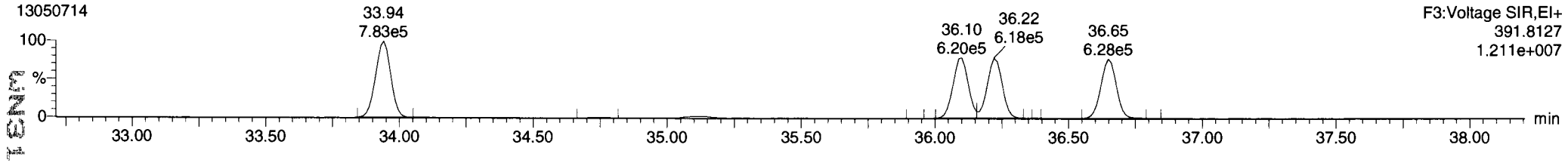


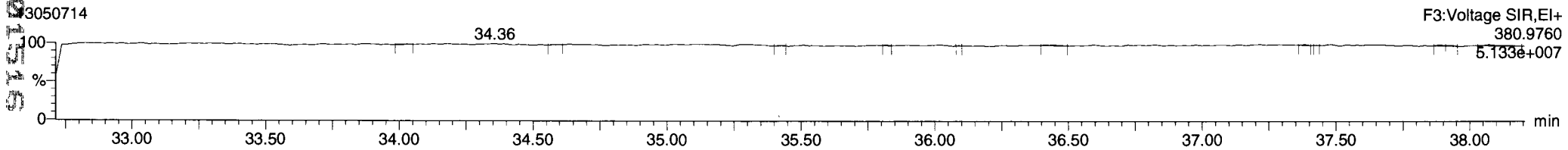
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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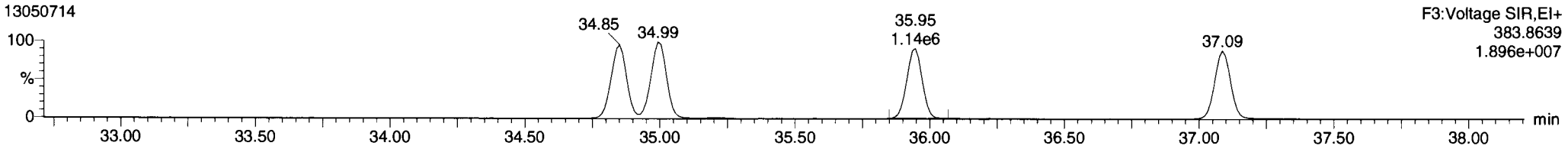
13C-234678-HxCDF



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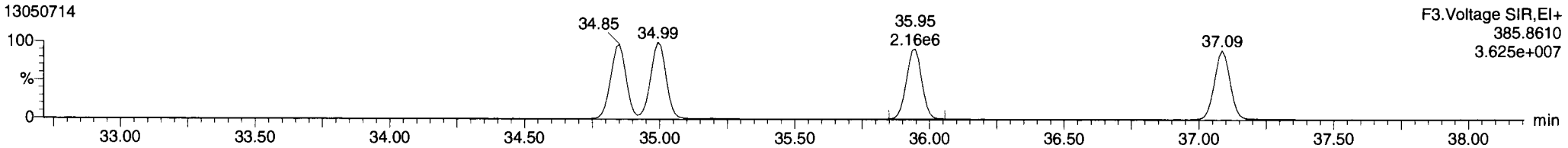
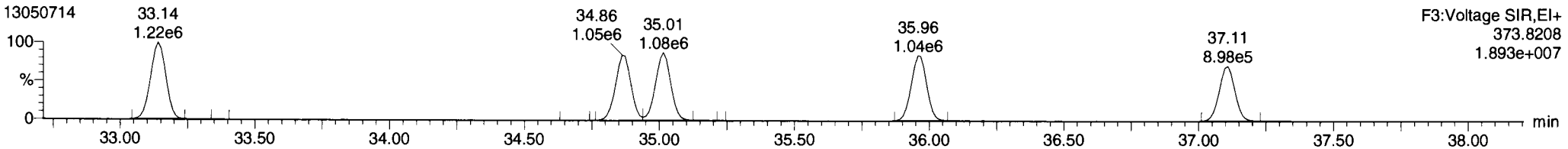


Total-hexafurans



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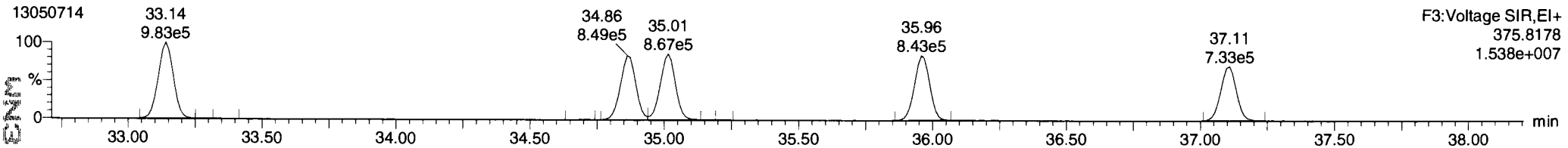
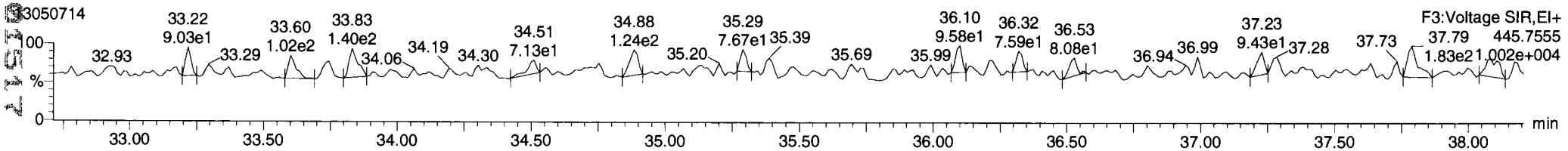


FUNCTION3 OCDPE



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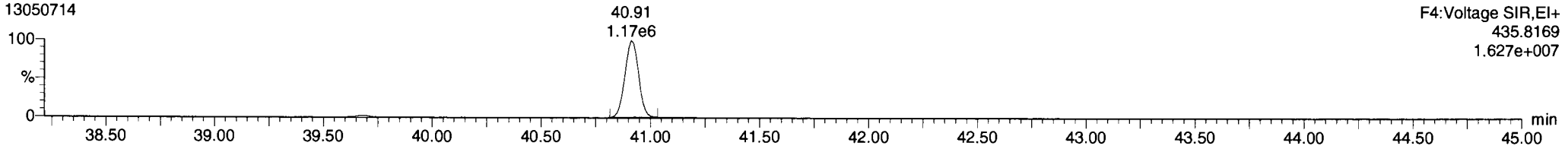
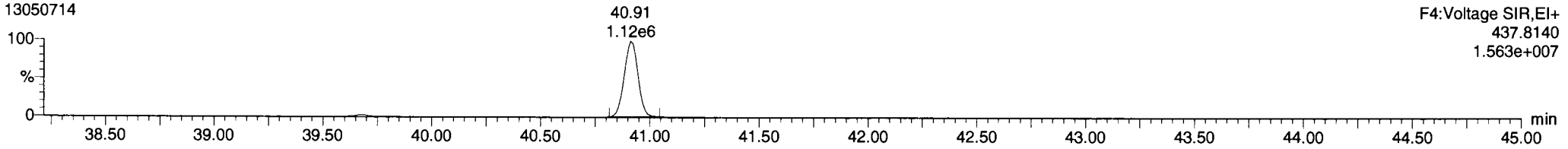
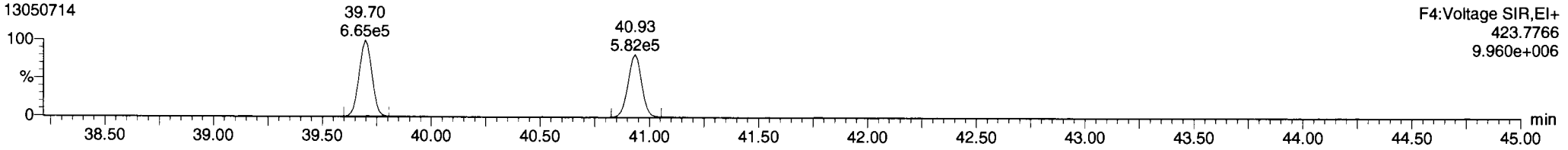
13C-1234678-HpCDD



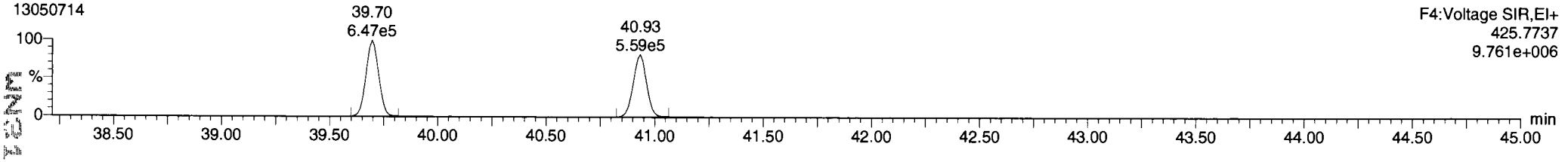
13C-1234678-HpCDD



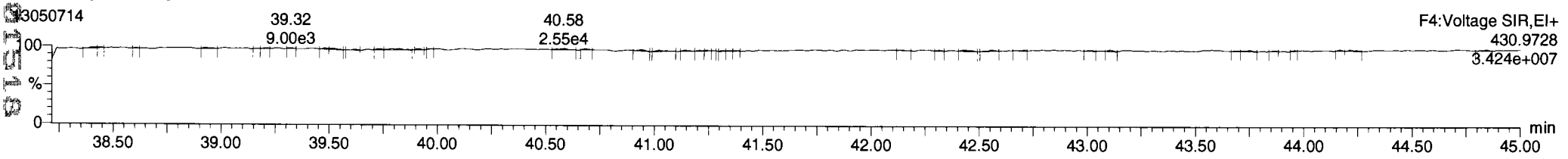
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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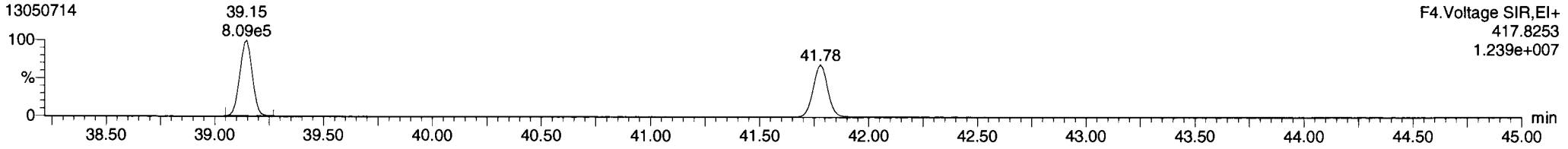
13C-1234678-HpCDF



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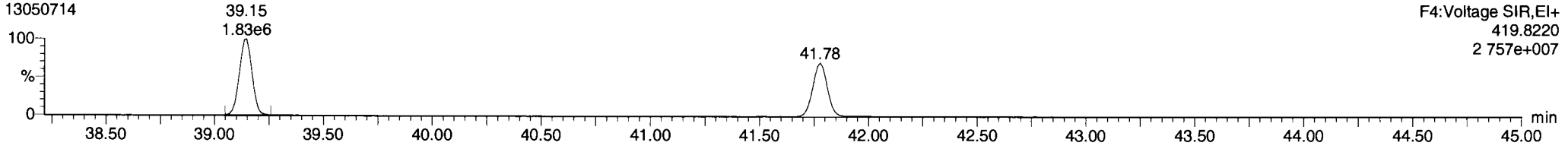
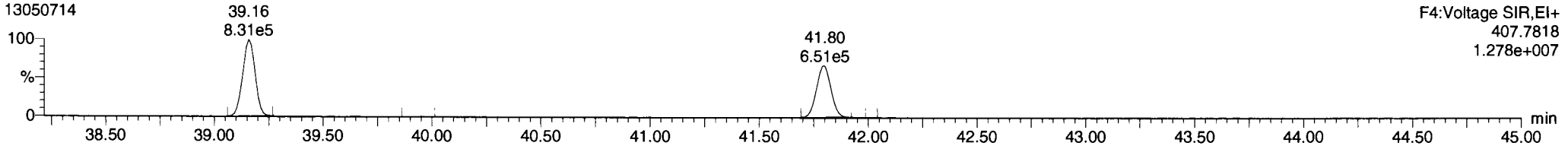
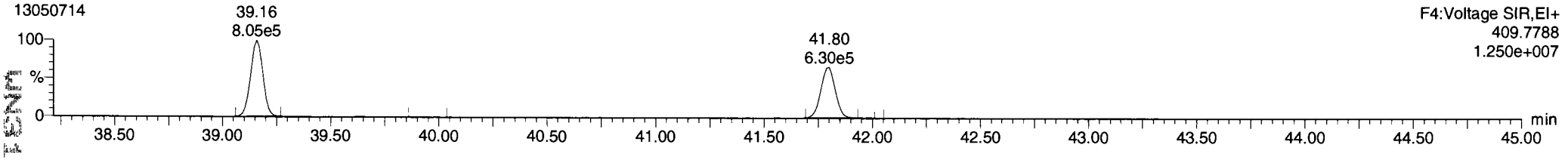


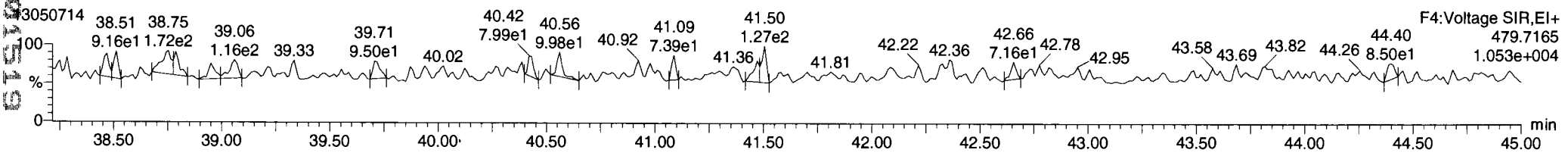
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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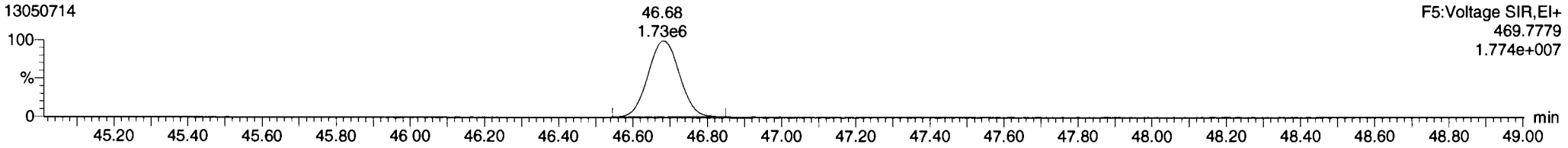
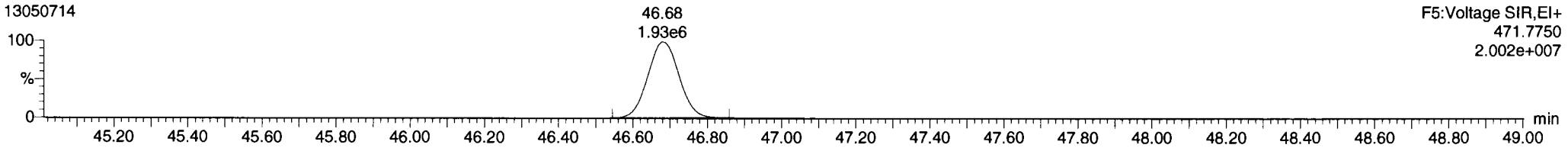
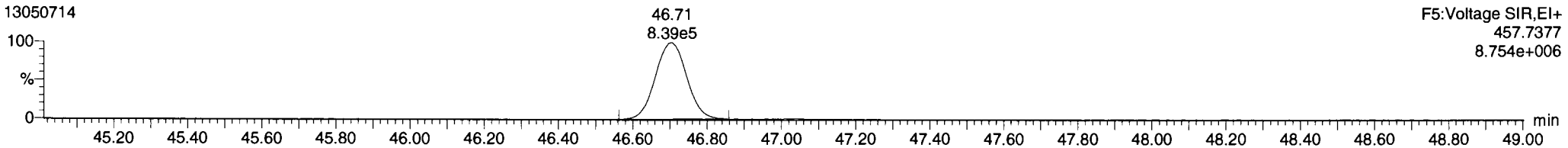
13C-OCDD



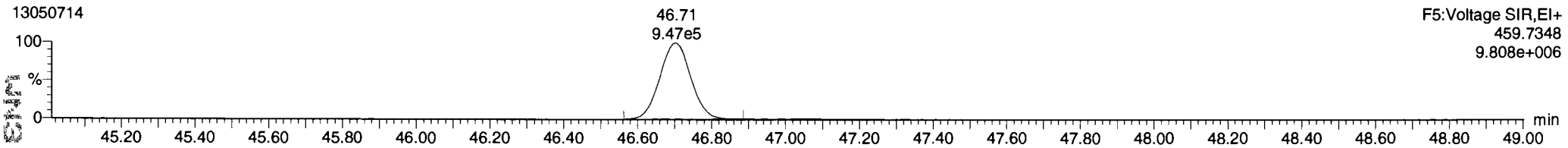
13C-OCDD



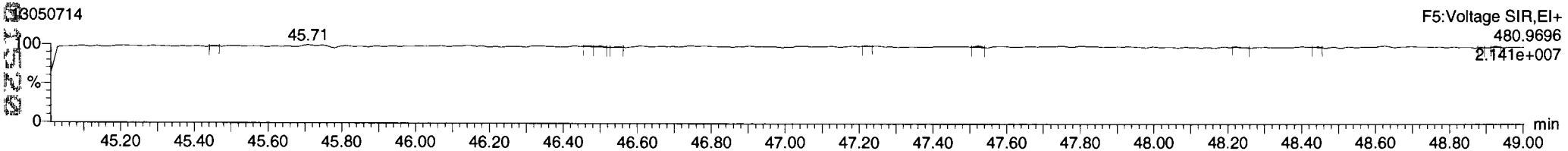
OCDD



OCDD



FUNCTION5 PFK



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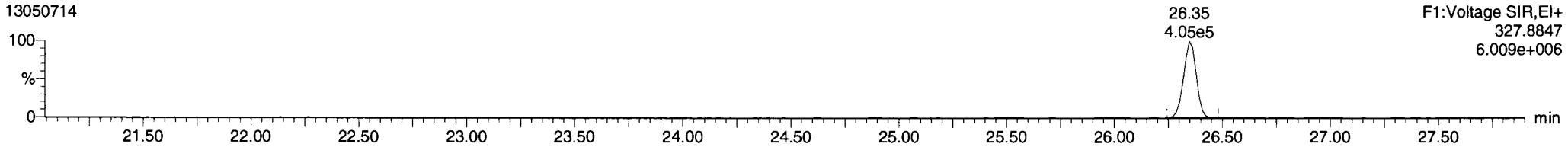
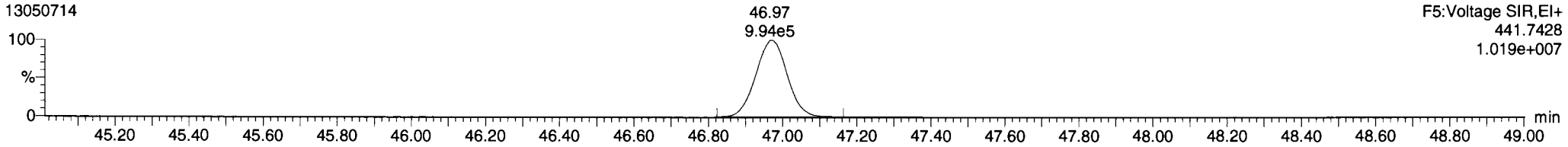
37CL-2378-TCDD



OCDF



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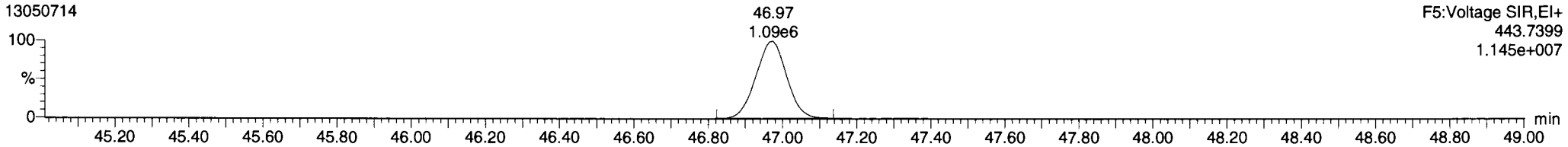
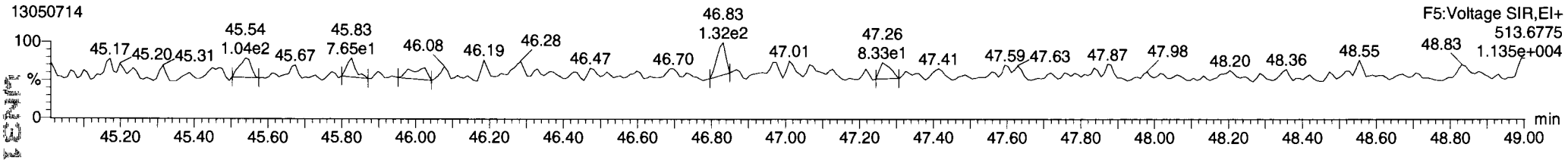


FUNCTION5 DCDPE



Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test Pest # 1(PESWSI) In-House (0.05-0.1ppb)

ARI Job No(s) WN31, WN57 Page 1 of 1 Batch set up by: SP

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate (1) 2 3	(Opt) Silica Gel Clean (1:5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WN31 MBW	500mL	(5mL) (Y) / N	(1:5) (Y) / N	5mL	1mL		AR 04/26/13 Analyst/Date
	SBW	500mL	(5mL) (Y) / N	(1:5) (Y) / N	5mL	1mL		Verify pH is 5-9
	SBW Dup.	500mL	(5mL) (Y) / N	(1:5) (Y) / N	5mL	1mL		AR 04/26/13
	QLS	500mL	(5mL) (Y) / N	(1:5) (Y) / N	5mL	1mL		Analyst/Date
6	B	500mL	(5mL) (Y) / N	(1:5) (Y) / N	5mL	1mL		KD 80-85°C
4	WN57A	500mL	(5mL) (Y) / N	(1:5) (Y) / N	5mL	1mL		Hexane Exchange (2 X 20mL) 100°C (1) 2 3 4 5 6 YL TG 04/27/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap (1) 2 3 Pre-Cleanups (4mL=10mL Hexane Exchange) SP 5-1-13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap (1) 2 3 Post Cleanups SP 5/1/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
Analyst/Date		AR 04/26/13 →	SP 5-1-13	SP 5-1-13	SP 5/1/13	SP 5/1/13	SP 5/1/13	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	**N** (2035-2)	2µg/mL	**100µL**	5/16/13	AR	WW
Spike	**3** (2079-2)	0.5/1/5µg/mL	**200µL**	12/10/13	AR	WW
QLS Spike	**10** (2046-2)	0.25-2.5µg/mL	**50µL**	12/10/13	AR	WW
Extraction Time:	15:00					

SPECIAL INSTRUCTIONS: 1. Verify pH is 5-9 2. Adjust pH (if necessary=Analyst Notes). 3. Add Surr/Spike. 4. Extract 3X with 30mL DCM. 5. KD (NO Drying Column) at 80°. 6. Exchange (2 X with 20mL) Hexane at 100°. 7. TurboVap to 4mL=10mL Hexane Exchange. 8. TurboVap. 9. Clean-ups? 10. TurboVap (if Silica Clean). 11. Vial with Hexane.

A. Archive Y (N)

Reagent and Solutions Identification

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WN31, WN57

(8081B) Pest Aqueous:	Analyst/Date
Separatory Funnel Station:	Sep. Funnel
Methylene Chloride: (I# 8202)	MC 04/26/13
Anhydrous Sodium Sulfate: (I# 3090 + jar date 04/11/13)	
KD Station:	KD
Methylene Chloride: (I# 8242)	YL/CT
Hexane: (I# 8182)	04/27/13
Vialing Station:	Vialing
Hexane: (I# 8182)	SP 5/1/13
Ethyl Acetate: (I# 6179)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 148)	
Sodium Sulfite: (I# ~~7~~ SP) 5-1-13 7704	
Silica Gel (SPE) Darts: (I# 7514)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN 31 Client ID: SAIC

Parameter: Pest Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color=WN31 sample B, light tan, clear	AR 04/26/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

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) WN27, WN31 Page 1 of 1 Batch set up by: SP

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	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WN27 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	YL Analyst/Date 05/03/13
	SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave set (1) 2 3 YL/G 05/03/13 Analyst/Date
	SBS Dup.	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
	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) CSZ 5/14/13 Analyst/Date
2	A	21.06	~~2.5mL~~ 5mL	~~(1:2.5)~~ 1:5 ~~1mL~~ 1mL	~~2.5mL~~ 5mL	1mL	See notes	
2	AMS	21.03	~~2.5mL~~ 5mL	~~(1:2.5)~~ 1:5 ~~1mL~~ 1mL	~~2.5mL~~ 5mL	1mL	See notes	
2	AMSD	21.04	~~2.5mL~~ 5mL	~~(1:2.5)~~ 1:5 ~~1mL~~ 1mL	~~2.5mL~~ 5mL	1mL	See notes	
9	WN31 A	32.00	~~2.5mL~~ 5mL	~~(1:2.5)~~ 1:5 ~~1mL~~ 1mL	~~2.5mL~~ 5mL	1mL	See notes	TurboVap (1) 2 3 Pre-Cleanups
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		SP 5/6/13 Analyst/Date
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap (1) 2 3 Post Cleanups
			2.5mL	(1:2.5) 1mL	2.5mL	1mL	SP 5/6/13	SP 5/6/13 Analyst/Date
Analyst/Date		YL 05/03/13	SP 5-6-13	SP 5/6/13	SP 5-6-13	SP 5/6/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (2035-2)	2µg/mL	50µL	5/16/13	YL	WW
Spike	3 (2079-2)	0.5/1/5µg/mL	100µL	12/16/13	YL	WW
QLS Spike	10 (2046-2)	0.25-2.5µg/mL	25µL	12/16/13	YL	WW
Extraction Time: 12:30			Balance ID: B146426l4			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Small~~ or Large drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL). 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.

A. Need Total Solids Y (N) B. ~~Archive~~/Freeze Y (N) Both Jobs

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN31 Client ID: SAIC

Parameter: PSDDA Pest Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	
- Temperture Log didn't print during microwave	YL 05/03/13
Sample A black + viscous. Took to 5mL FEV. Cleaned ~~2mL (2:5) split~~ 1mL (1:5) split on SPE	SP 5/6/13

Pesticide Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

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: VP **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.: 1092322 Column Type:

GC Method: ICal Date:

IS	Ical/Ccal	ICV
2000 -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: _____

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

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 Hexabromobipheny1	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	+++++	+++++

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

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: _____

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

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
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 YB Date: 4/9/13
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	0.000
	+++++	0.05148						
(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	0.94259	5.914
	0.84262	+++++						
40 2,4-DDD	0.86428	0.82066	0.81941	0.83423	0.77745	0.89463	0.82446	5.633
	0.76053	+++++						
41 2,4-DDT	0.97762	0.93181	0.93450	0.95197	0.89630	1.03633	0.94270	5.752
	0.87037	+++++						

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
Injection Date: 05-APR-2013 12:47
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
3.165	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

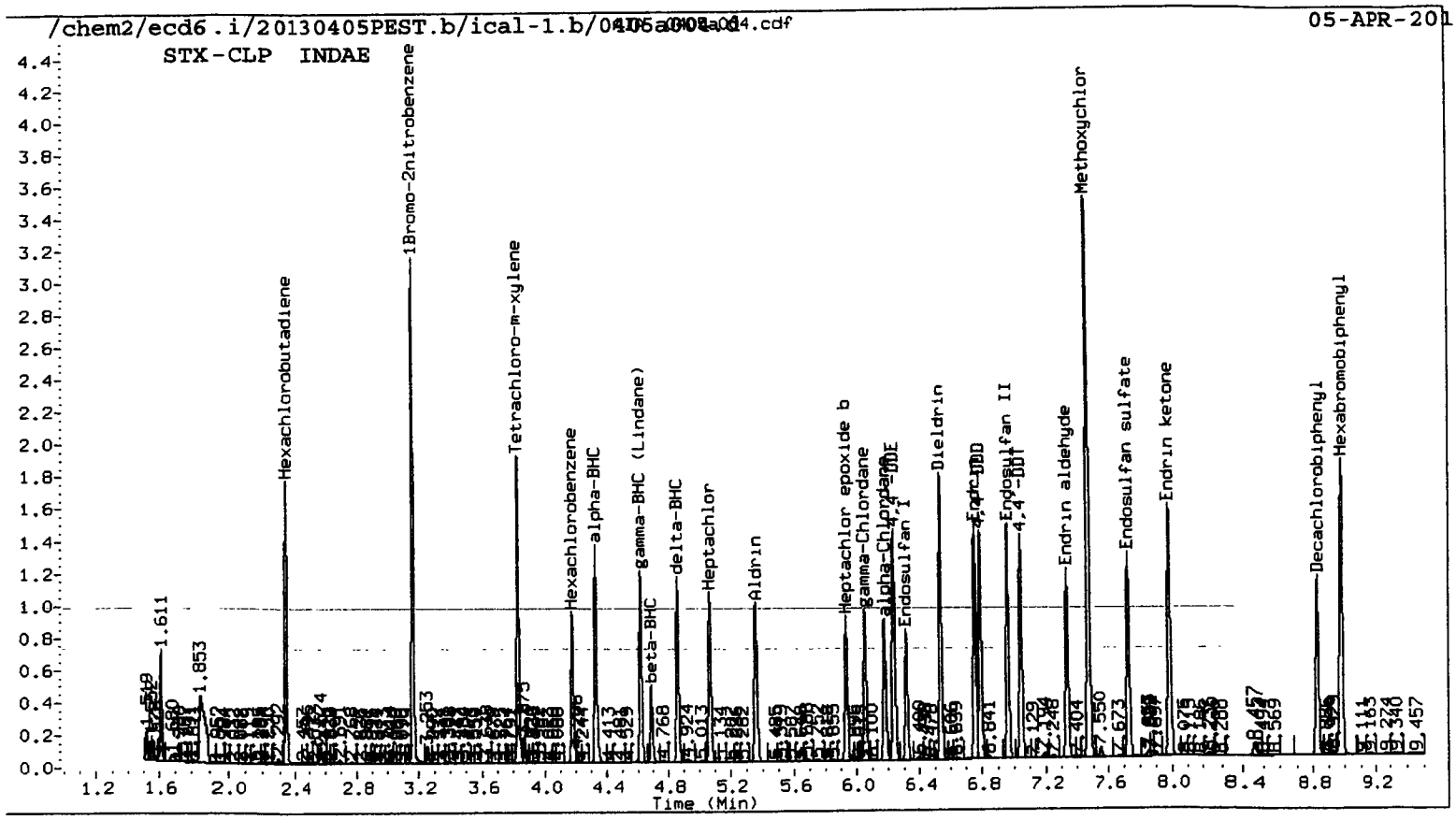
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5448520	0.0
Hexabromobiphenyl	4807902	4807902	0.0

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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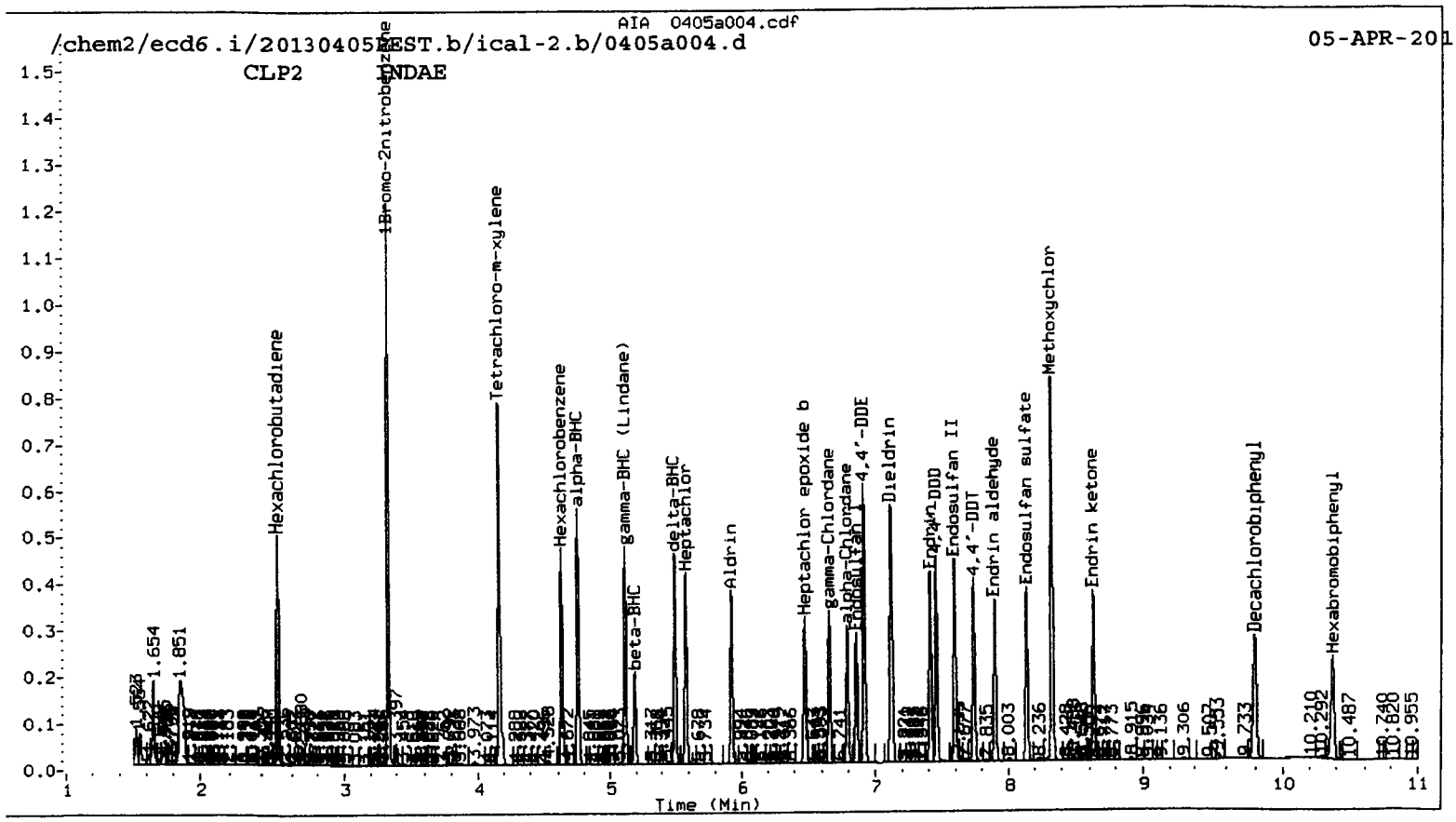
05-APR-201
STX-CLP INDAE
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 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
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/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
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 13:05
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
3.164	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

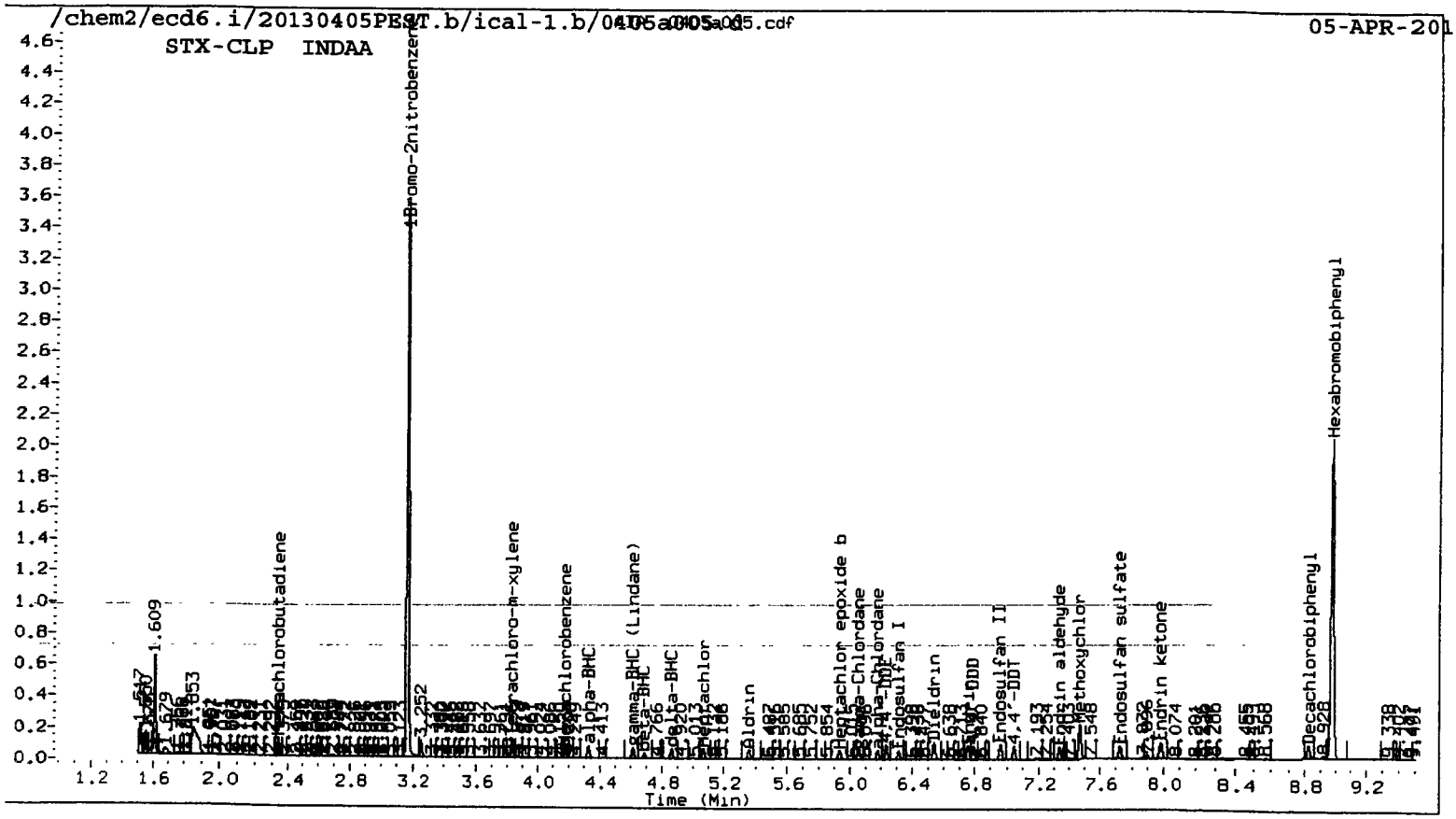
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6225835	14.3
Hexabromobiphenyl	4807902	5241456	9.0

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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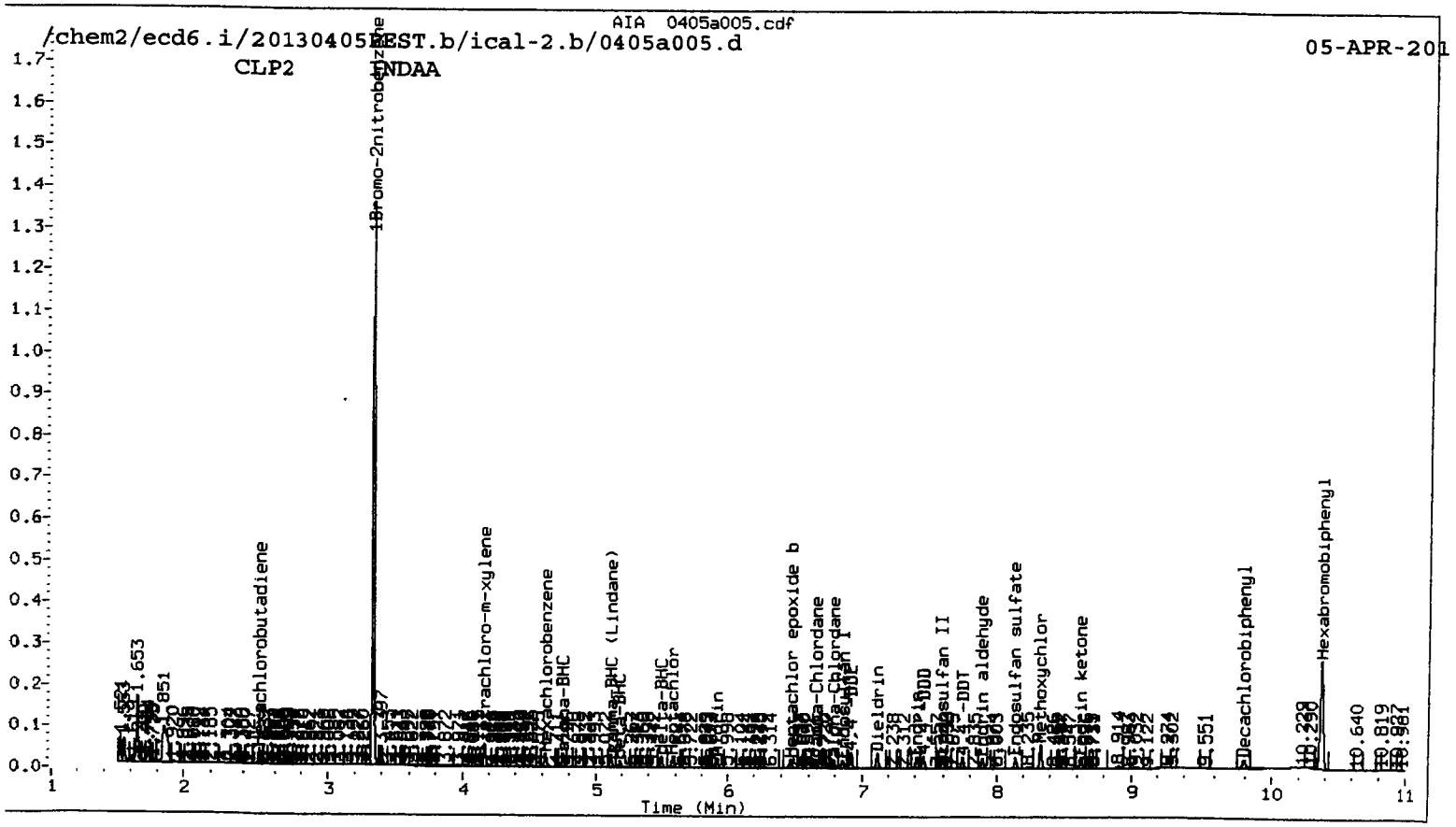
05-APR-201
STX-CLP INDAA
1bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4,5-Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxychlordane
alpha-Chlordane
gamma-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 INDAA
1bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4,5-Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Oxychlordane
alpha-Chlordane
gamma-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
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

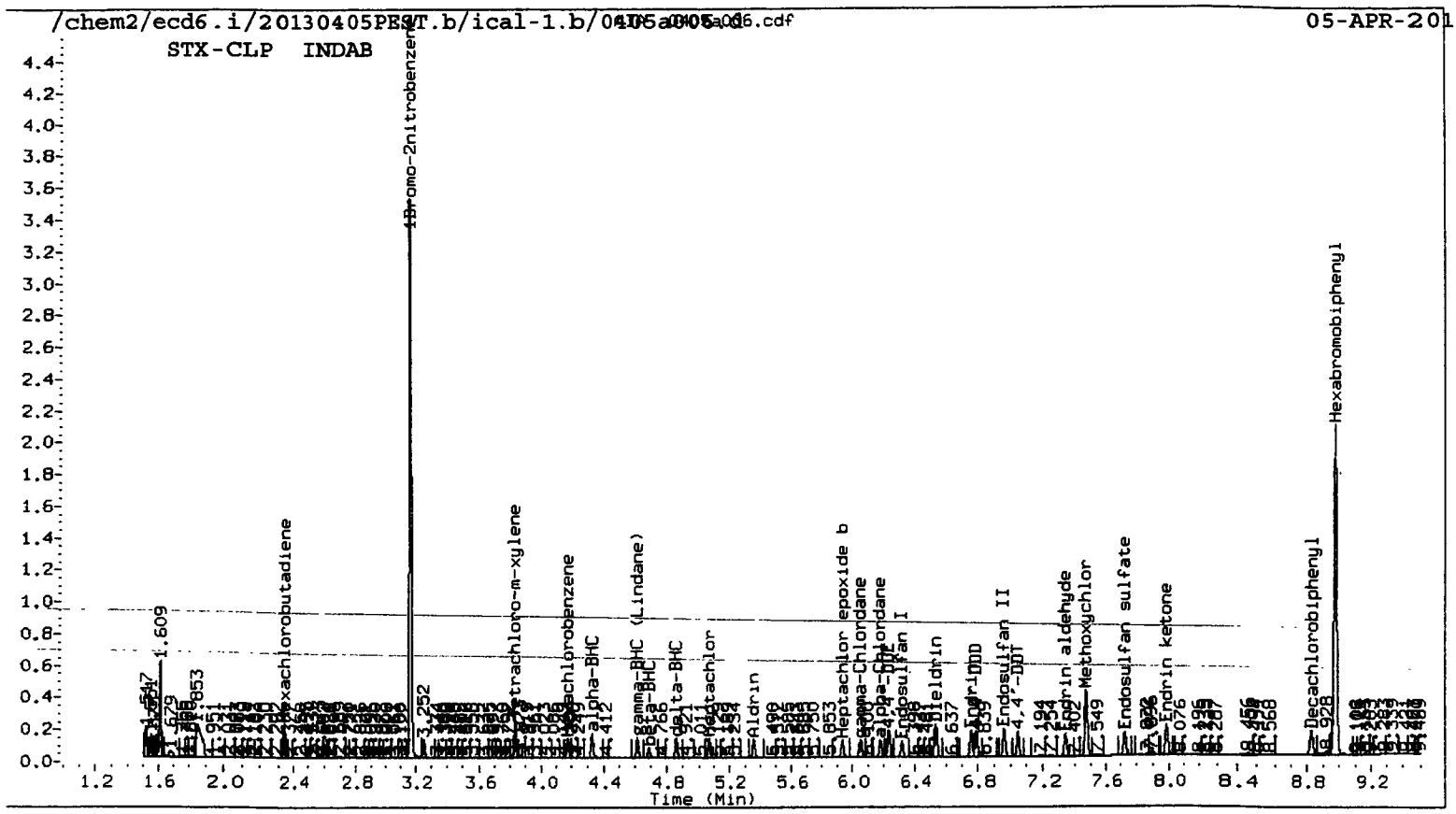
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6111022	12.2
Hexabromobiphenyl	4807902	5357211	11.4

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%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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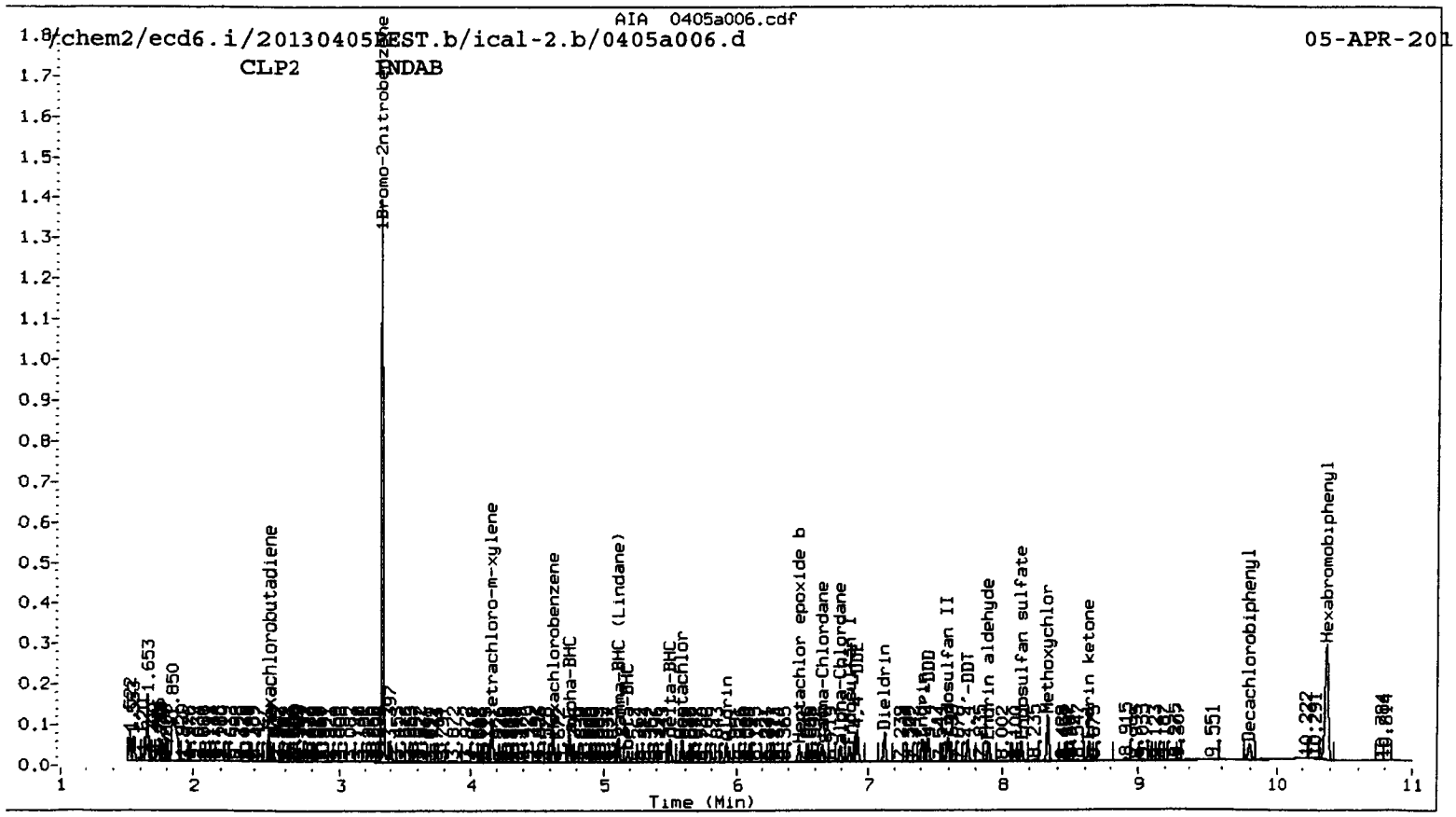
05-APR-201
STX-CLP INDAB
1Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichlorobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAB
1Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichlorobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

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
Injection Date: 05-APR-2013 13:41
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	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

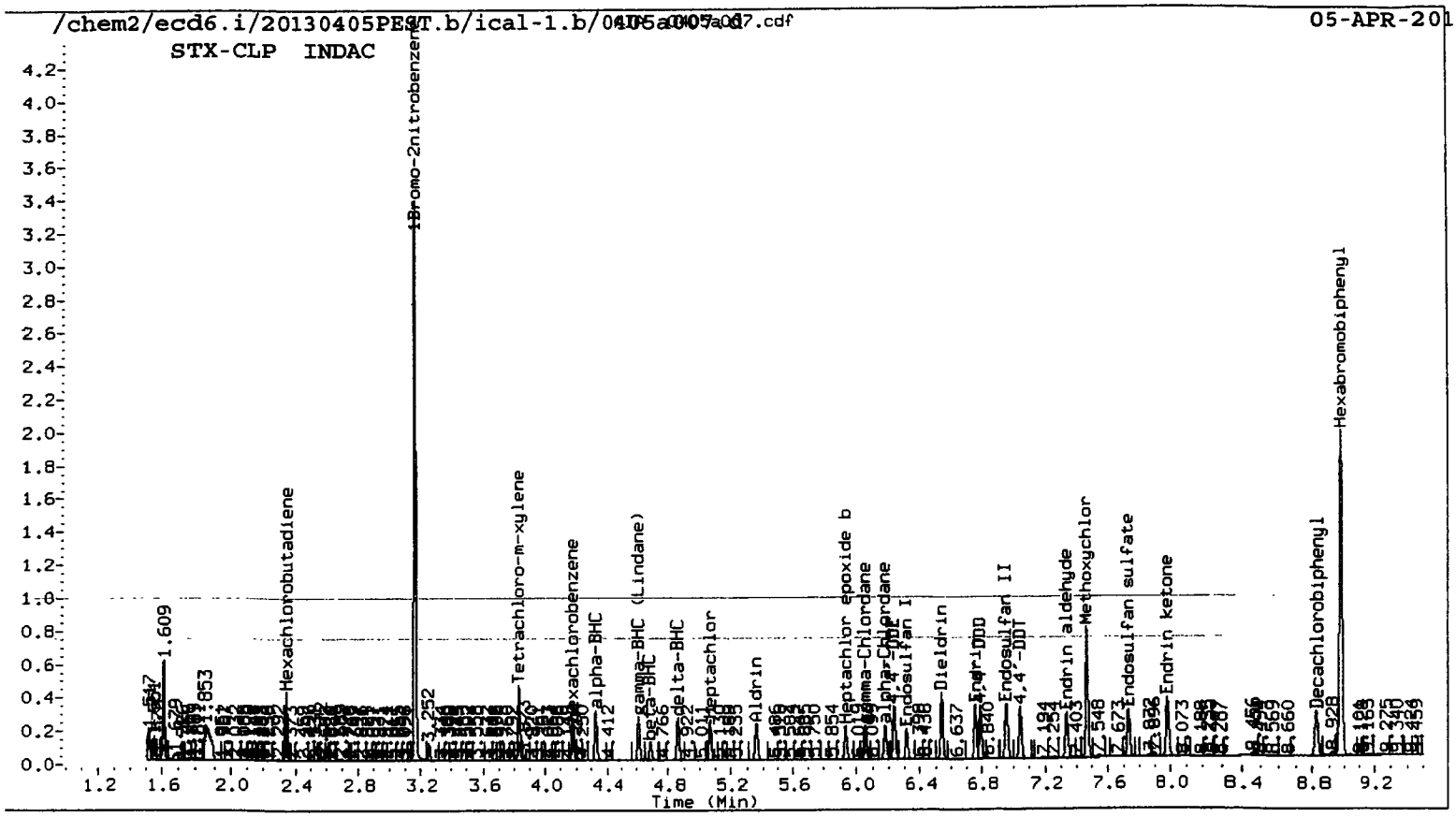
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5854383	7.4
Hexabromobiphenyl	4807902	5133358	6.8

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%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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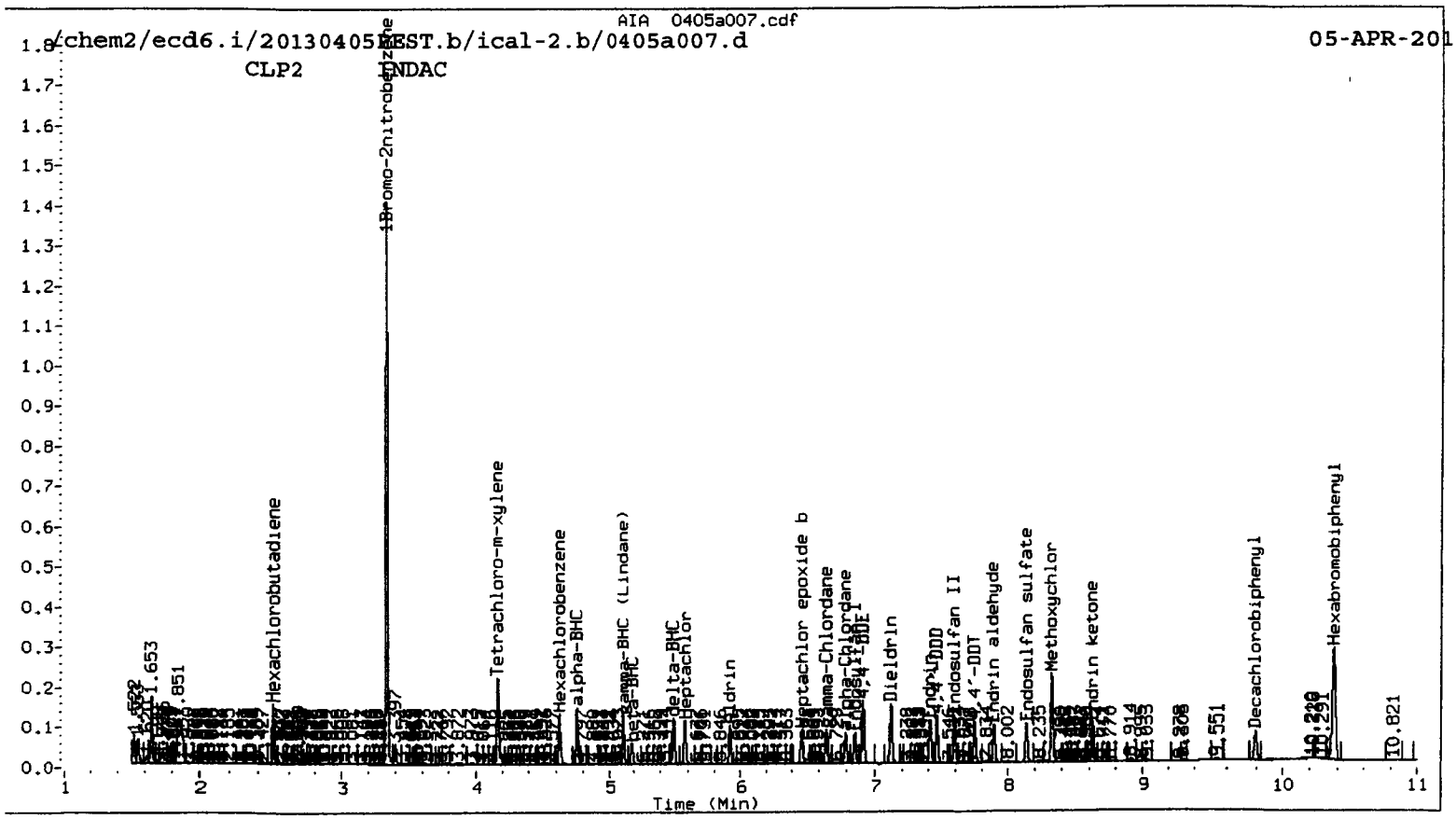
STX-CLP INDAC
1-Bromo-2-nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAC
1-Bromo-2-nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
4,4'-DDE
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
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 13:58
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	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

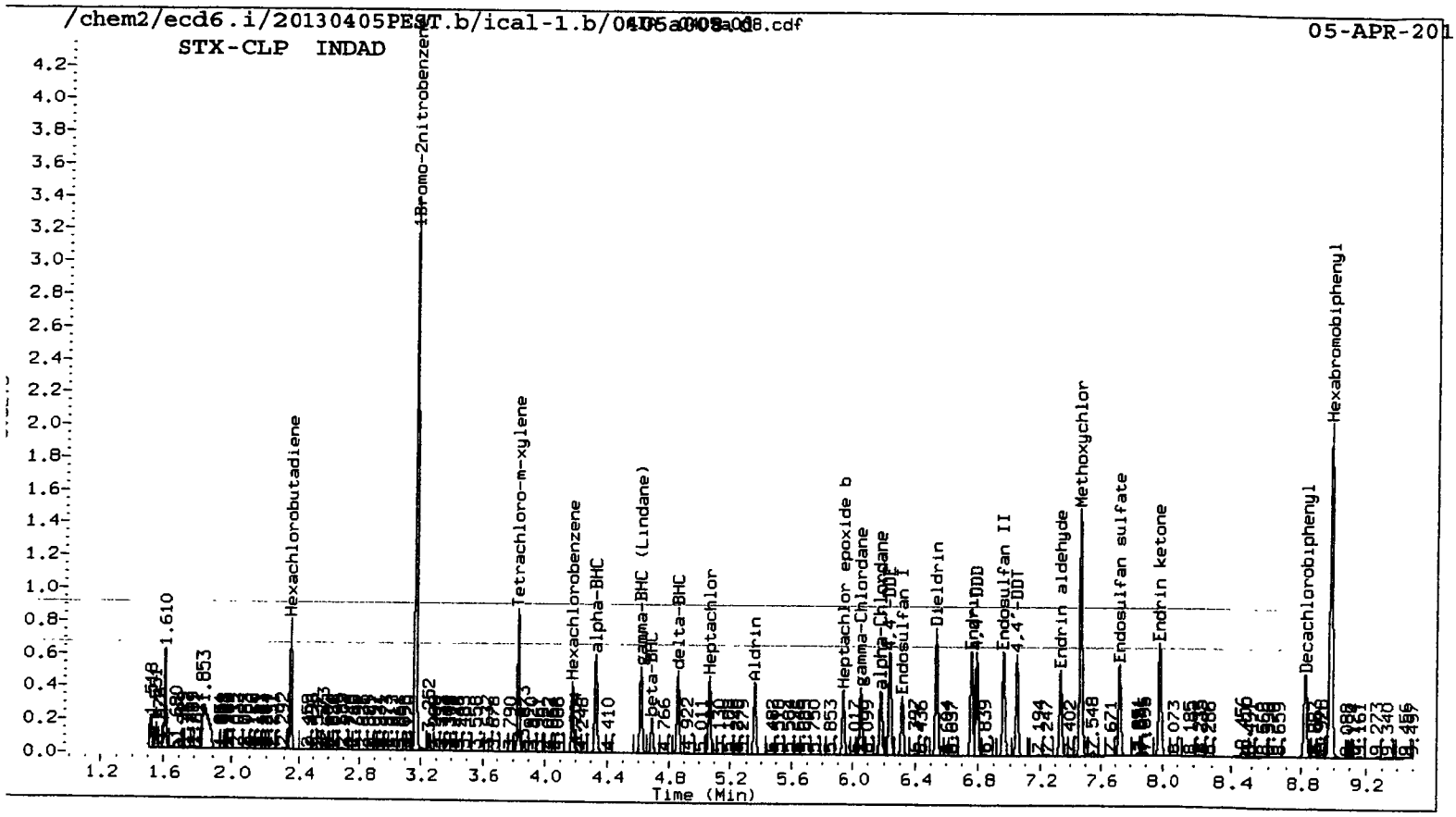
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5880001	7.9
Hexabromobiphenyl	4807902	5227384	8.7

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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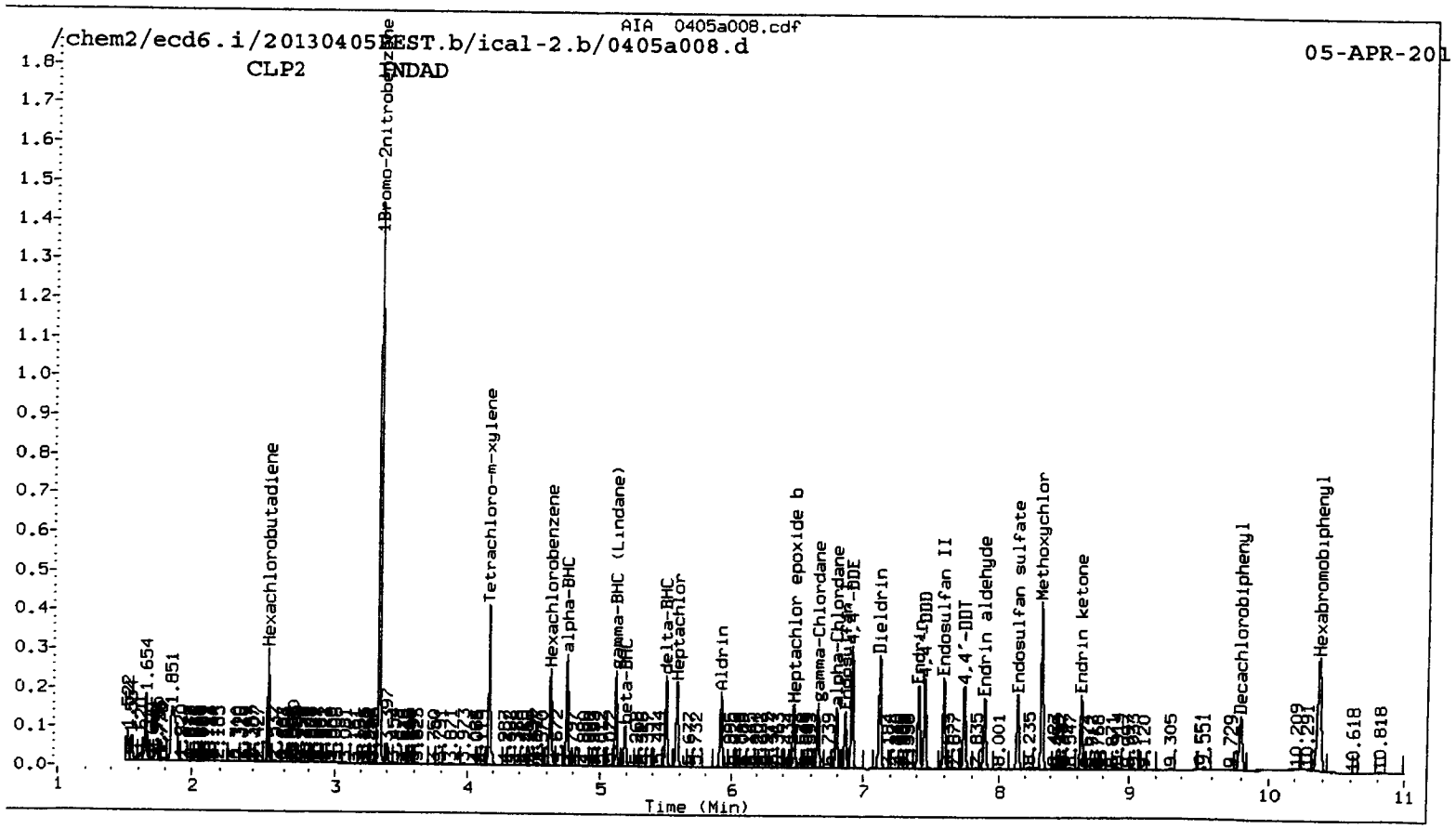
STX-CLP INDAD
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAD
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
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

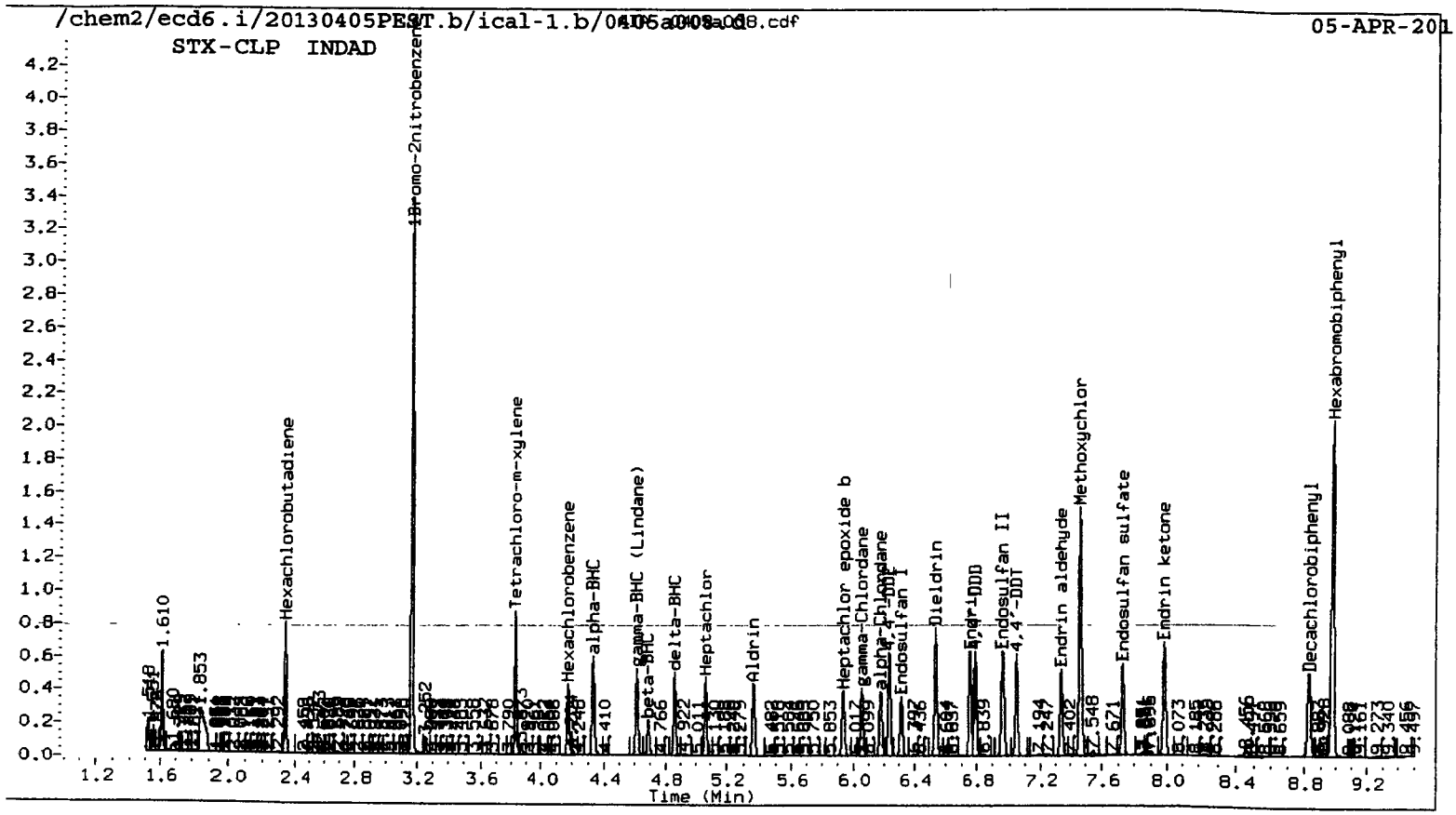
YB 4/9/13

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
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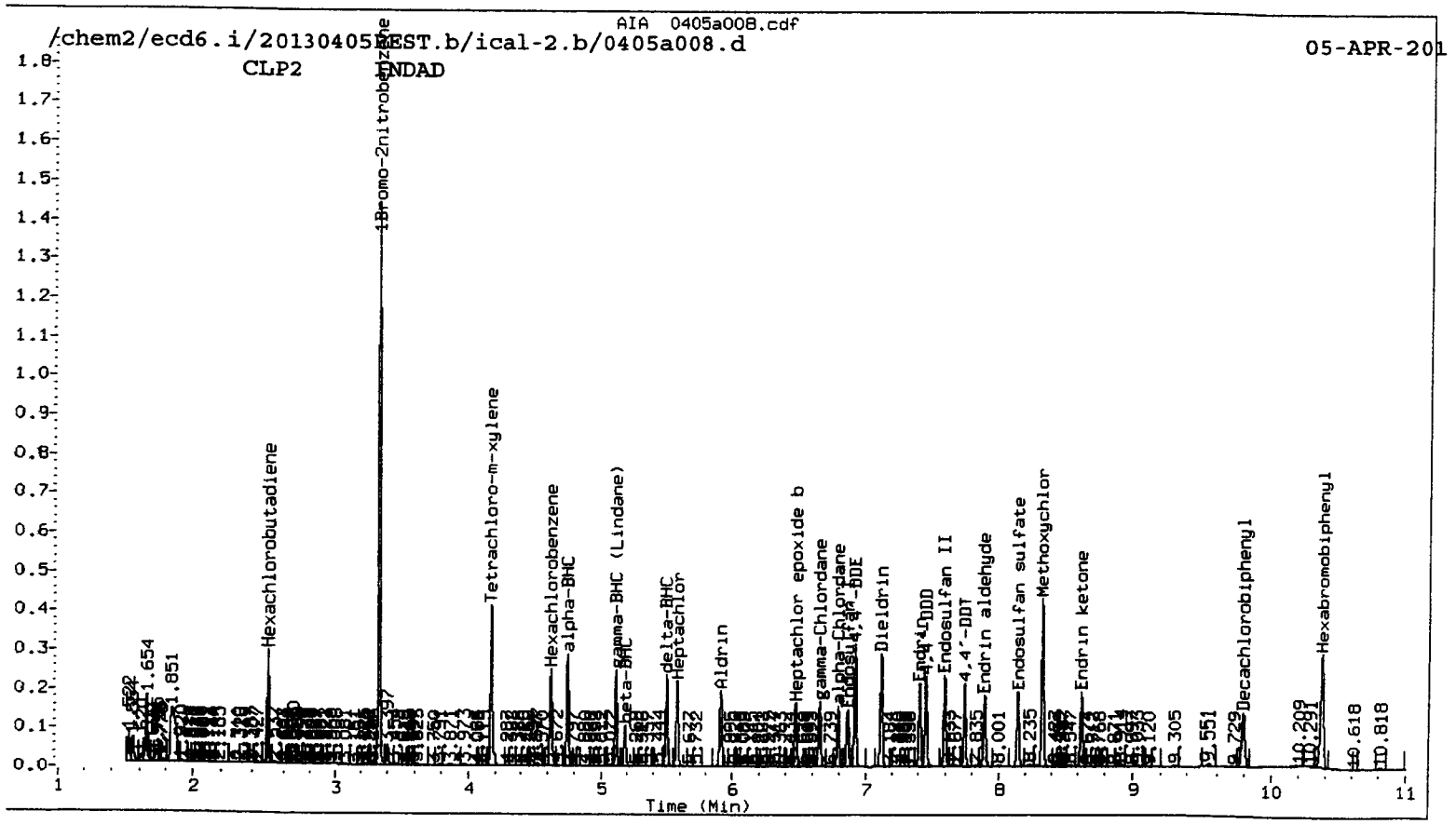
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAD
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Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

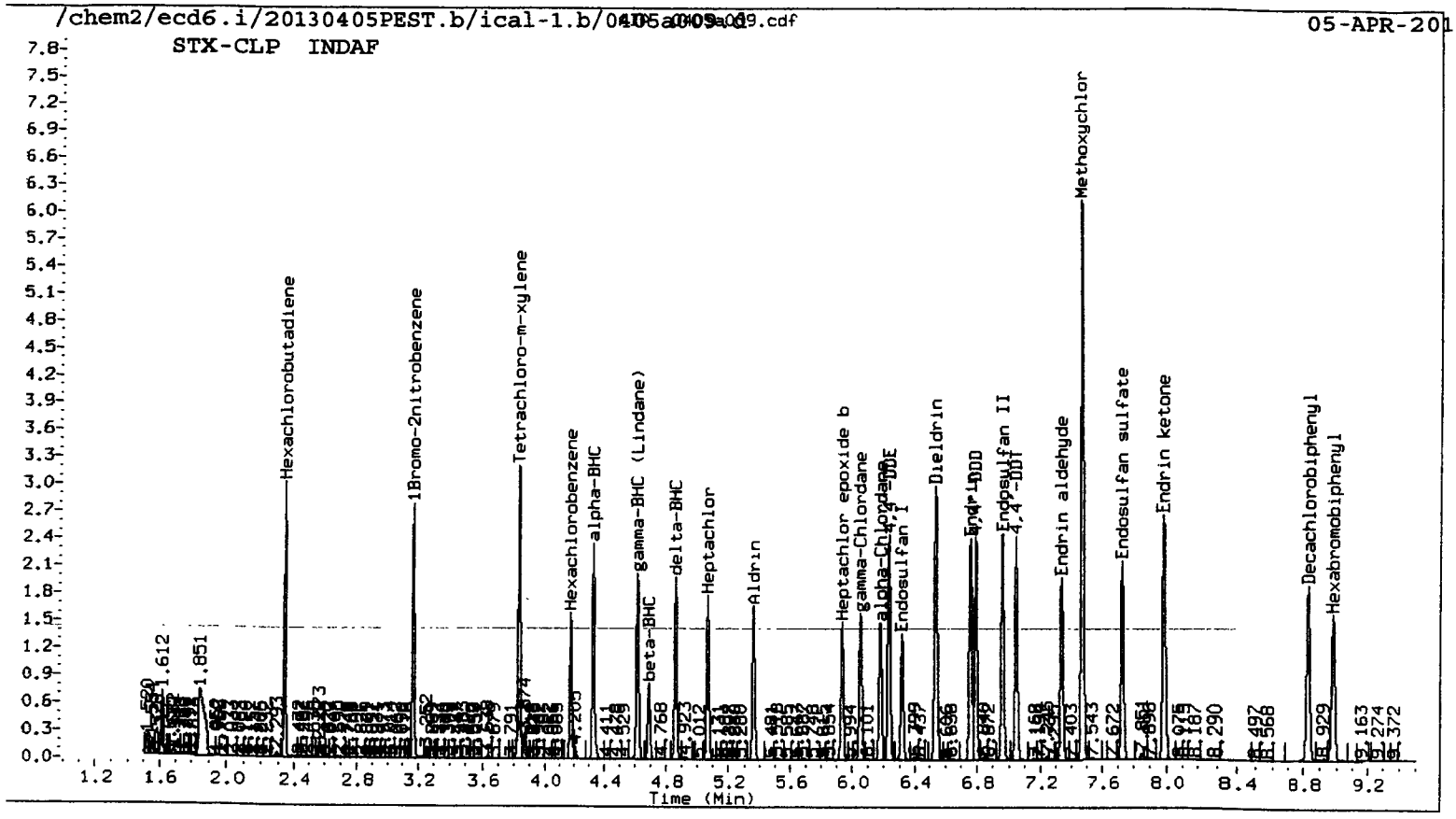
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4847986	-11.0
Hexabromobiphenyl	4807902	4193877	-12.8

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%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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05-APR-201
STX-CLP INDAF
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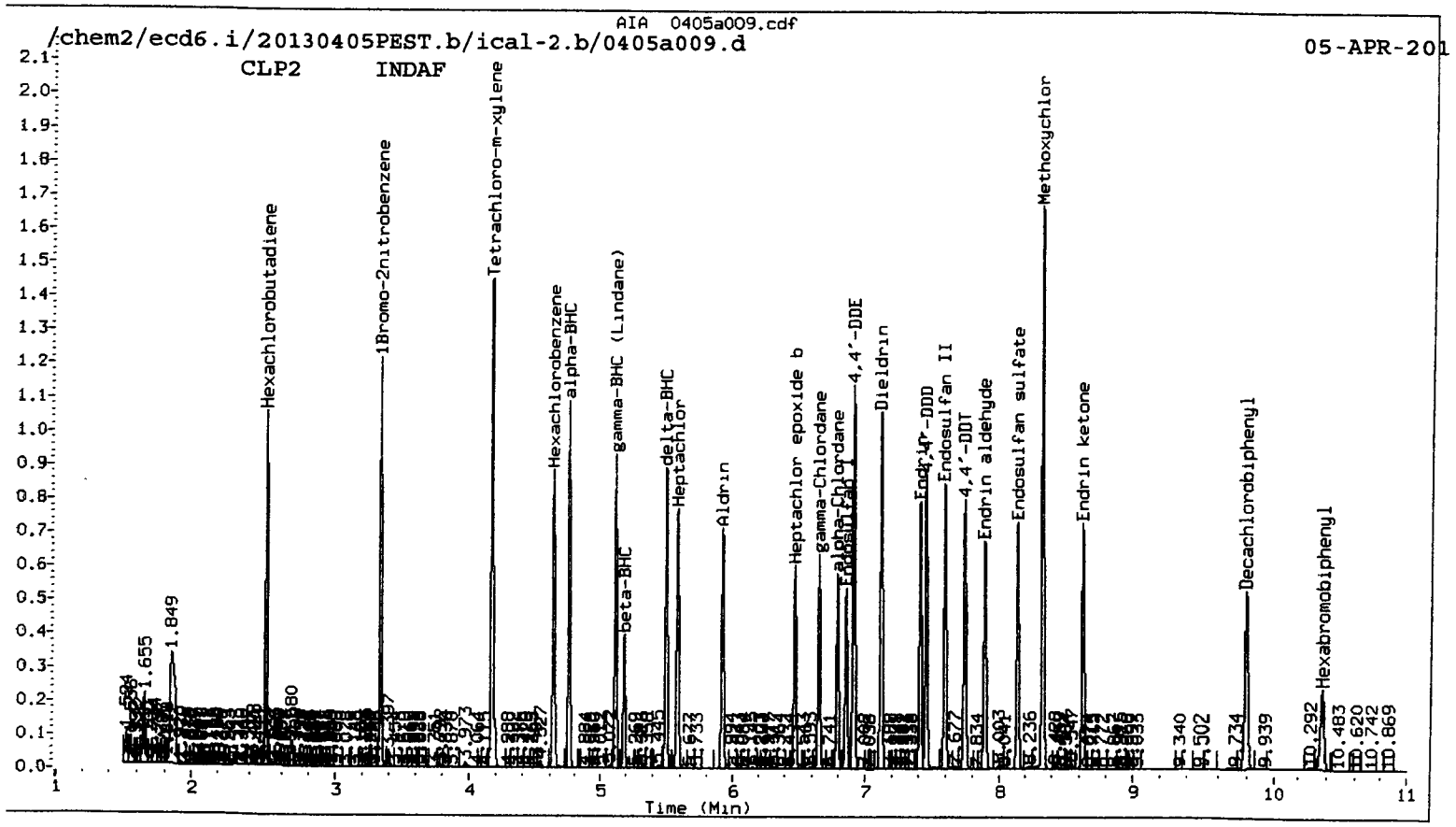
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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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
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

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

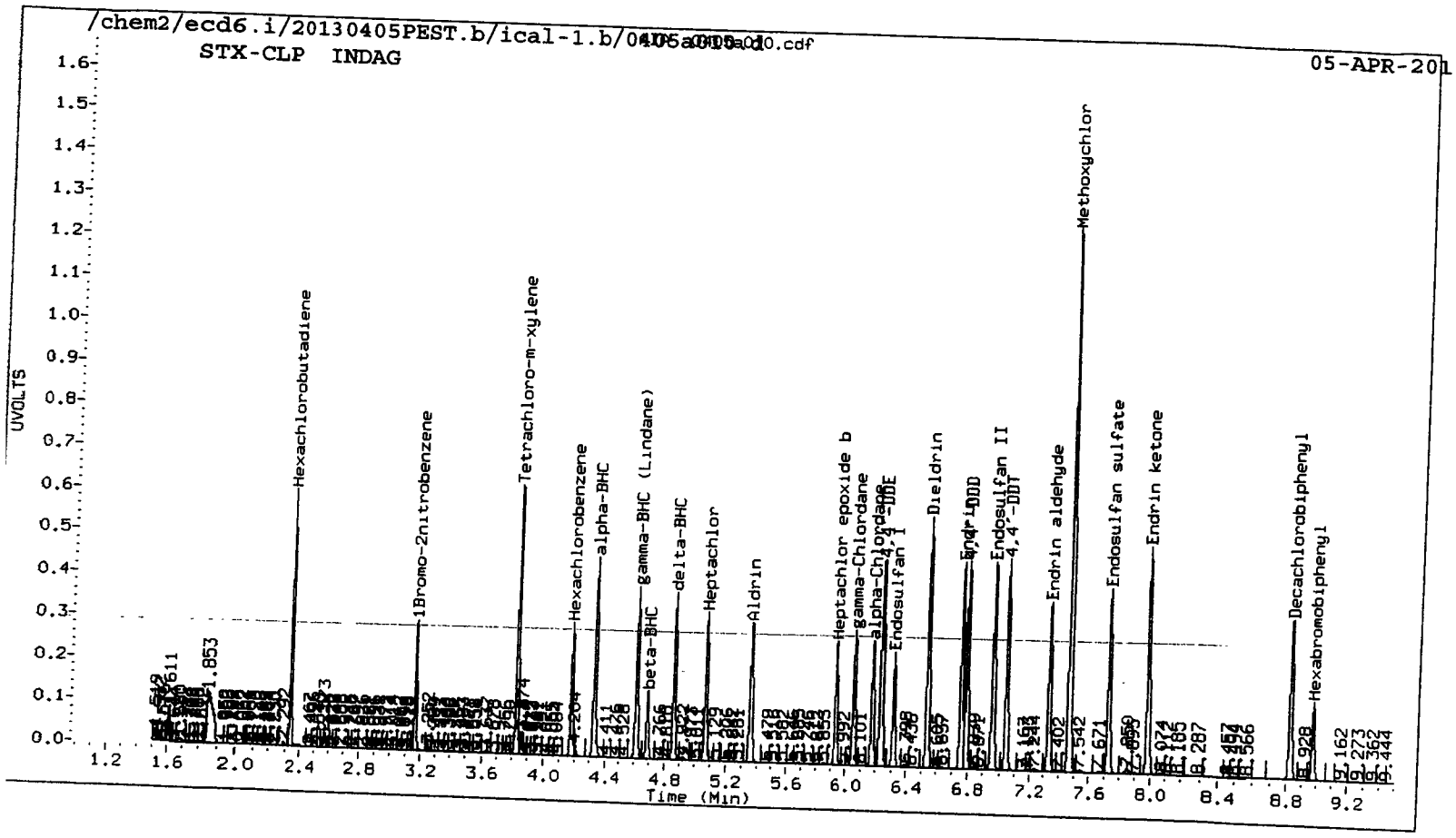
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5342959	-1.9
Hexabromobiphenyl	4807902	4760154	-1.0

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%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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05-APR-201
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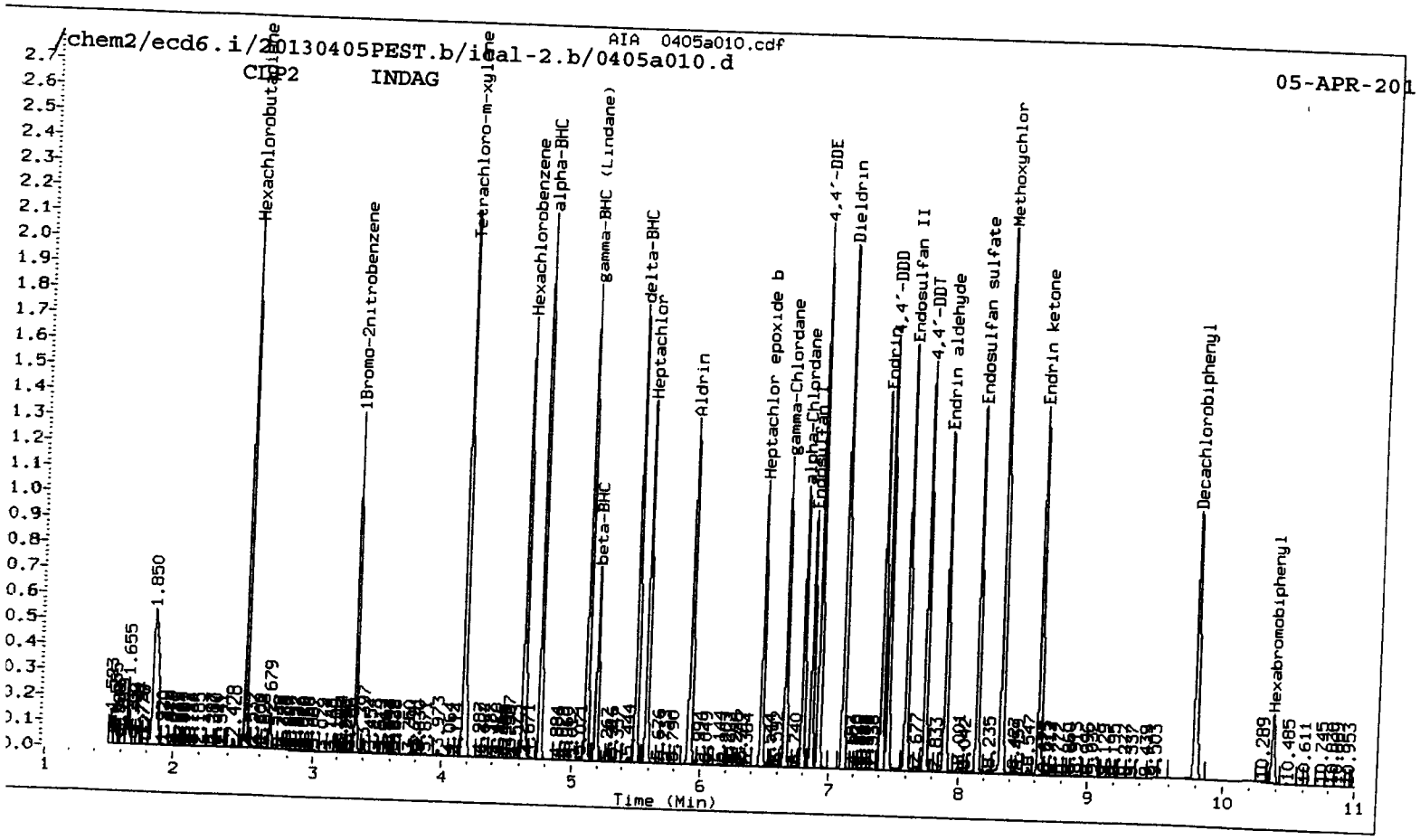
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAG
05-APR-201
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/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
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 14:53
Report Date: 04/08/2013 11:10
Matrix: NONE
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

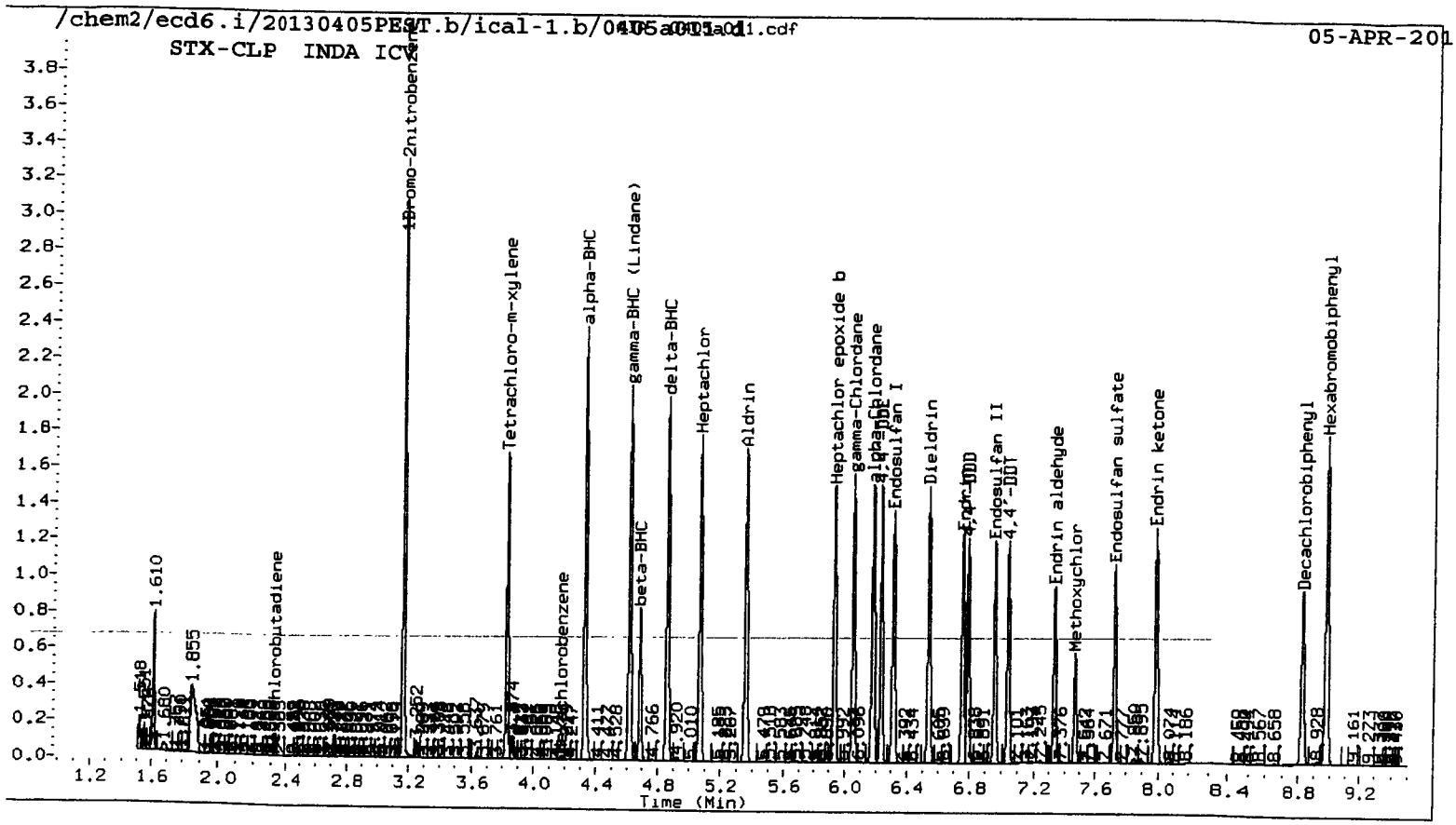
INTERNAL STANDARD SUMMARY

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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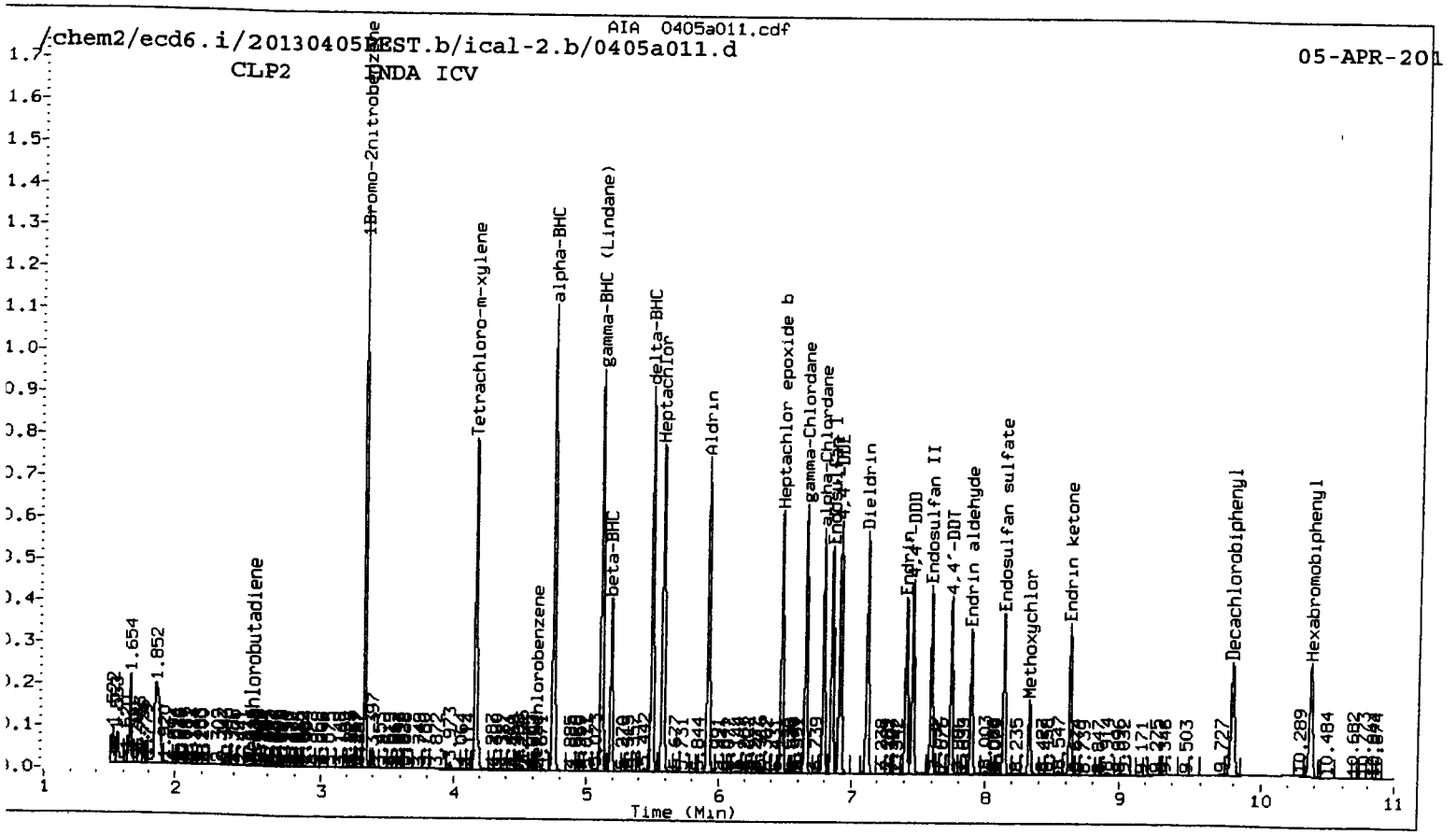
05-APR-201
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Endosulfan I
Dieldrin
Endrin DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.610
1.855
Time (Min)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CLP2 INDA ICV
05-APR-201
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
Endrin DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.654
1.852
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 Injection Date: 05-APR-2013 15:28
Compound Sublist: TOXAPH 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	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

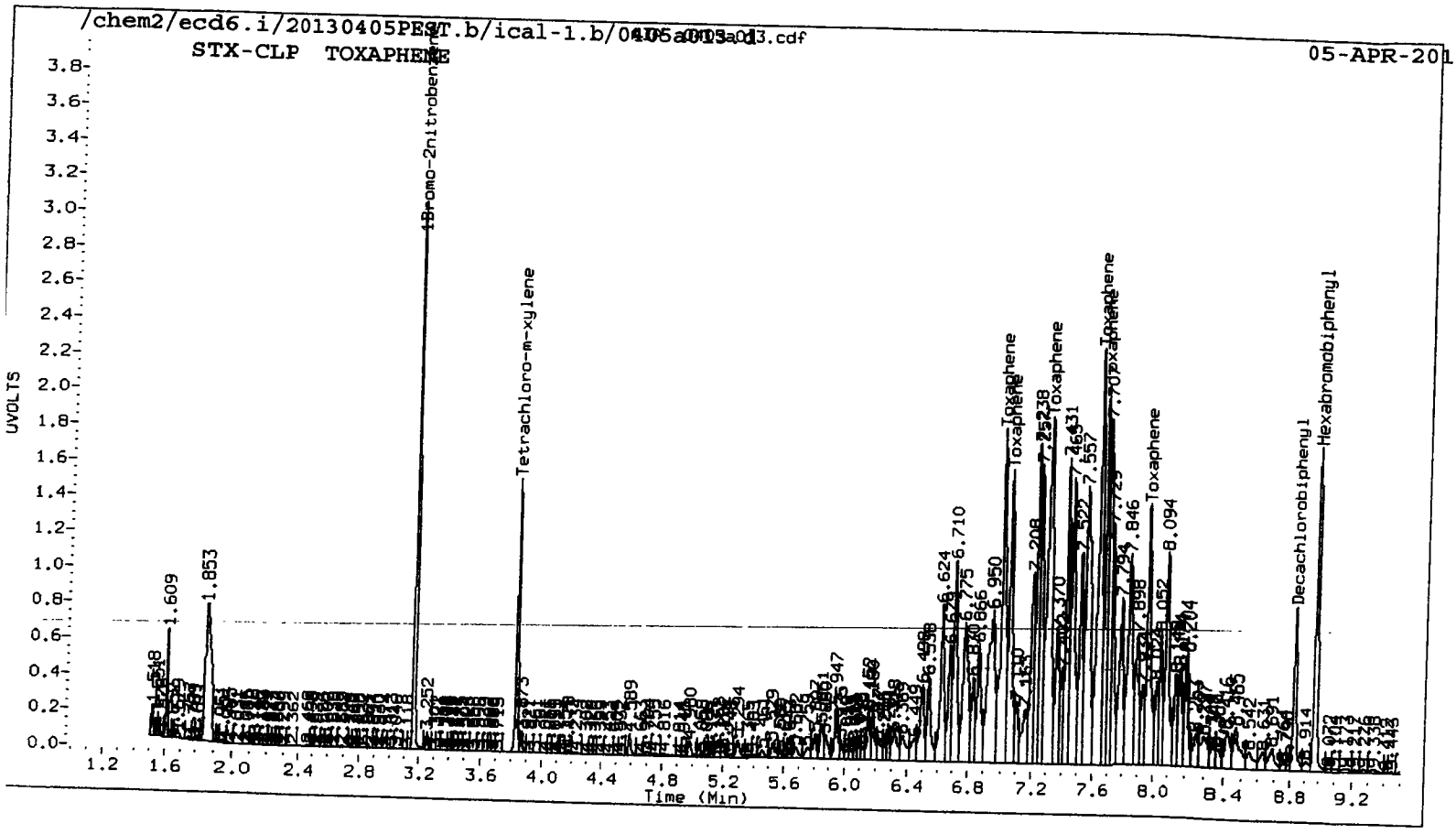
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5312805	-2.5
Hexabromobiphenyl	4807902	4975008	3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24507429	12.9
Hexabromobiphenyl	7681727	9646485	25.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	STX-CLP Col RT	Shift	Height	Amount	Peak#	CLP2 Col 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
Toxaphene	6	7.966	0.000	5225747	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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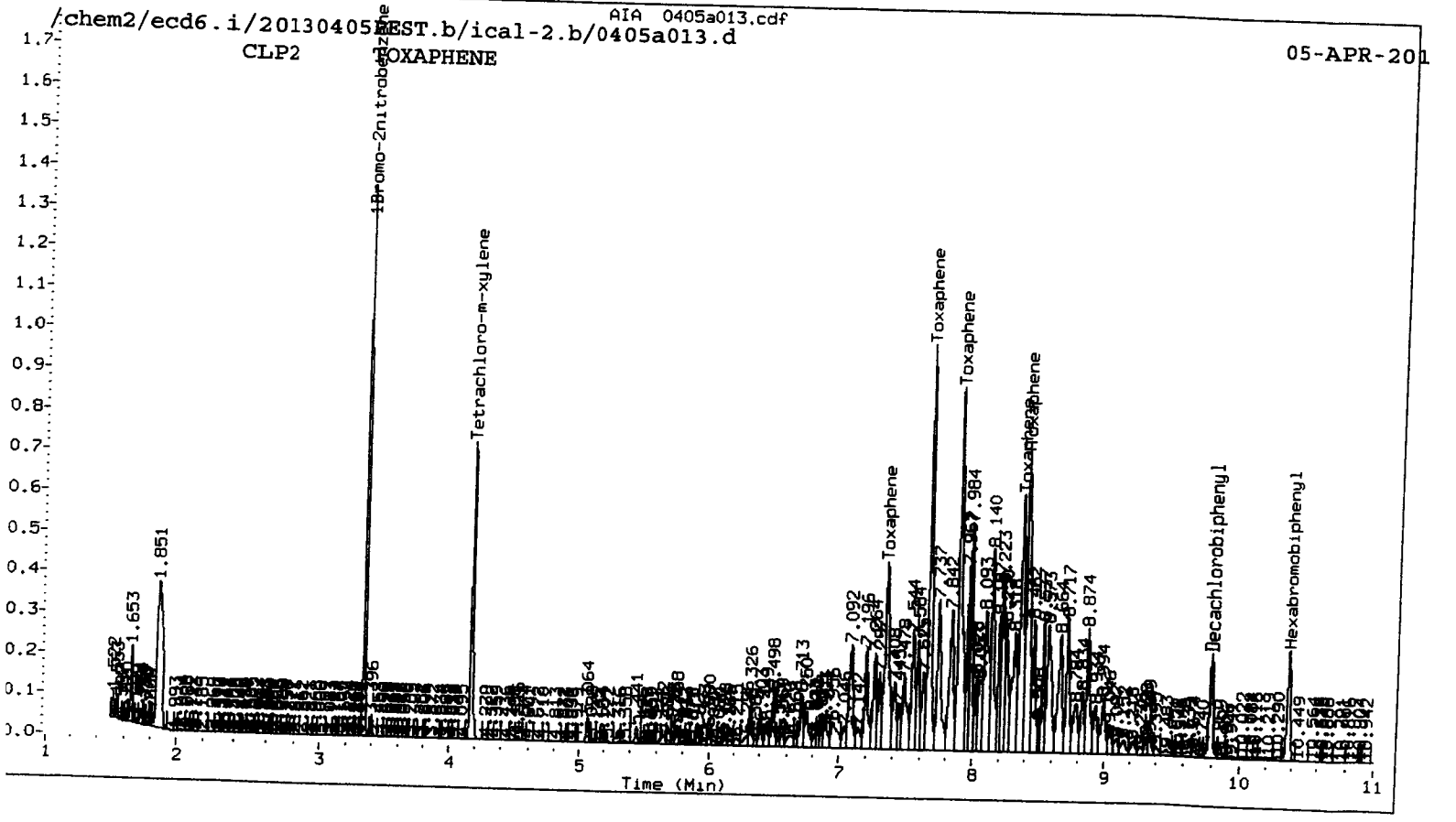
0405a013.cdf
STX-CLP TOXAPHENE
05-APR-201
UVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
1.609
1.853
6.624
6.710
6.950
7.208
7.370
7.557
8.094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AIA 0405a013.cdf
CLP2 TOXAPHENE
05-APR-201
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
1.653
1.851
7.092
7.984
8.140
8.874

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Y2 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

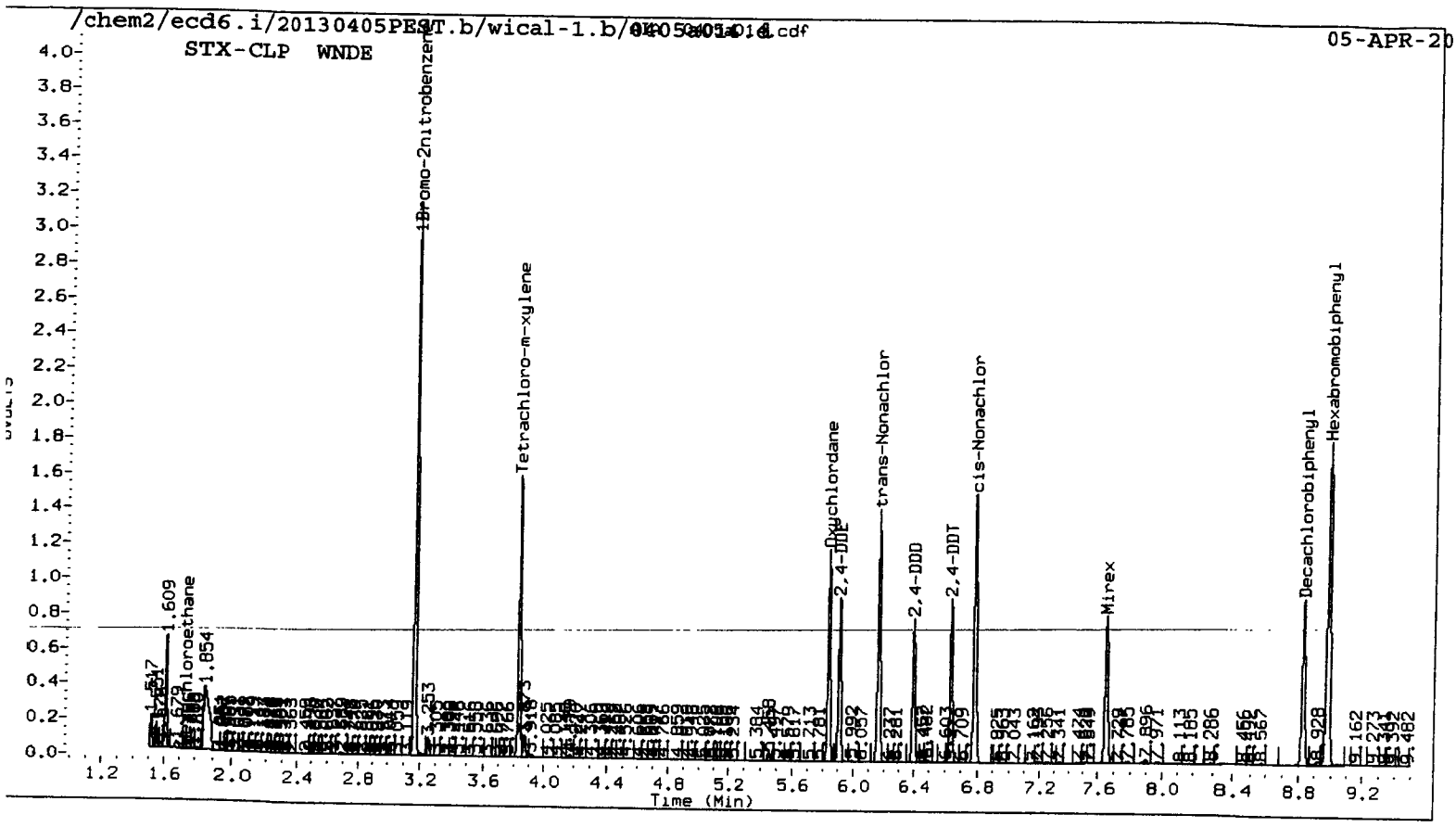
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5486756	0.7
Hexabromobiphenyl	4807902	4769081	-0.8

Standard Cpnd	Column 2 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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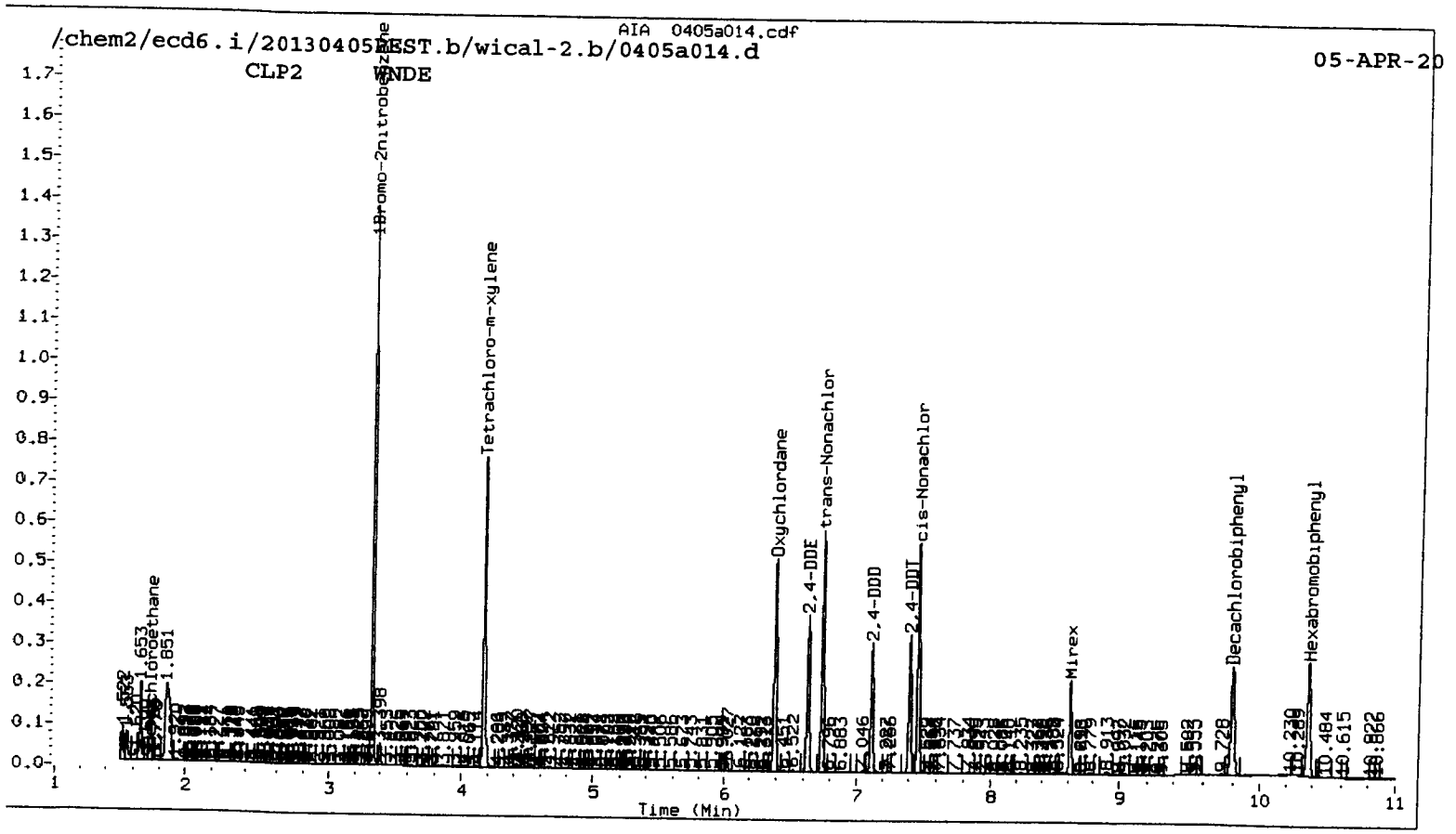
STX-CLP WNDE
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.609
Chloroethane
1.854
Time (Min)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AIA 0405a014.cdf
CLP2 WNDE
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.653
Chloroethane
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 Injection Date: 05-APR-2013 16:04
Compound Sublist: WND 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
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

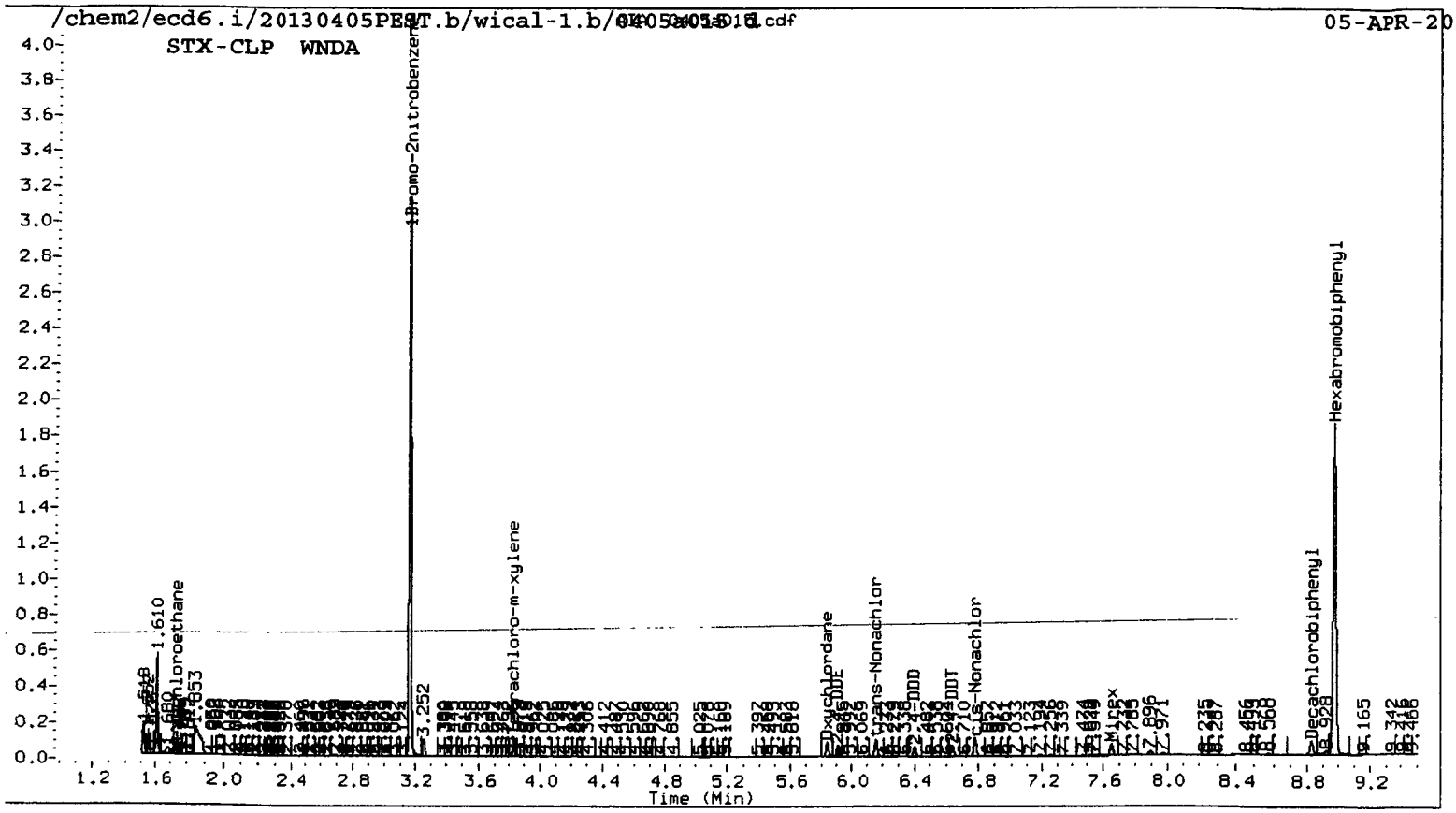
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5428471	-0.4
Hexabromobiphenyl	4807902	4784071	-0.5

Column 2

Standard Cpnd	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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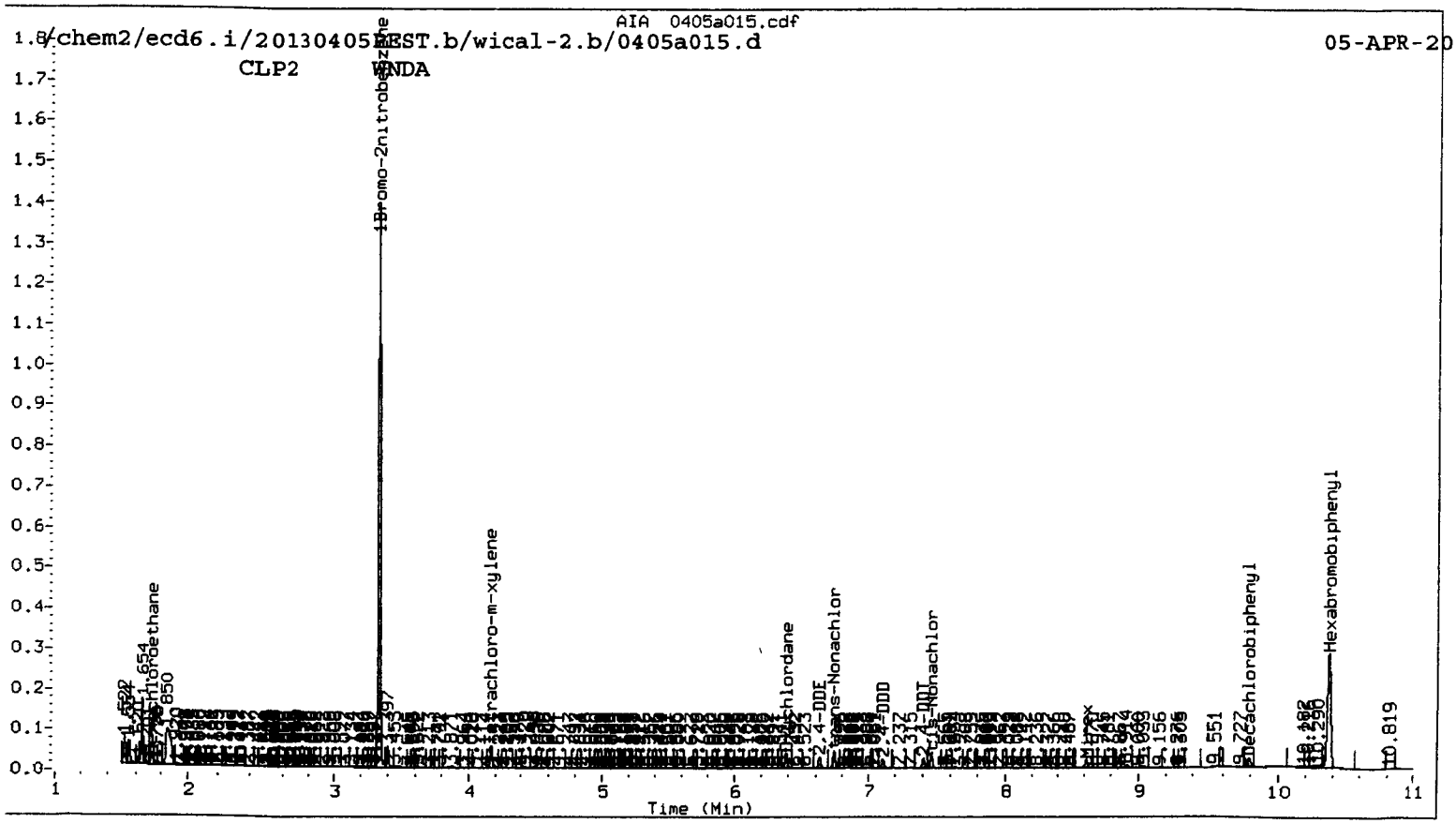
0405a015.cdf
05-APR-20
STX-CLP WNDA
1Bromo-2nitrobenzene
1,2,3,4-Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-20
CLP2 WNDA
1Bromo-2nitrobenzene
1,2,3,4-Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

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:
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

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
1.726	-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

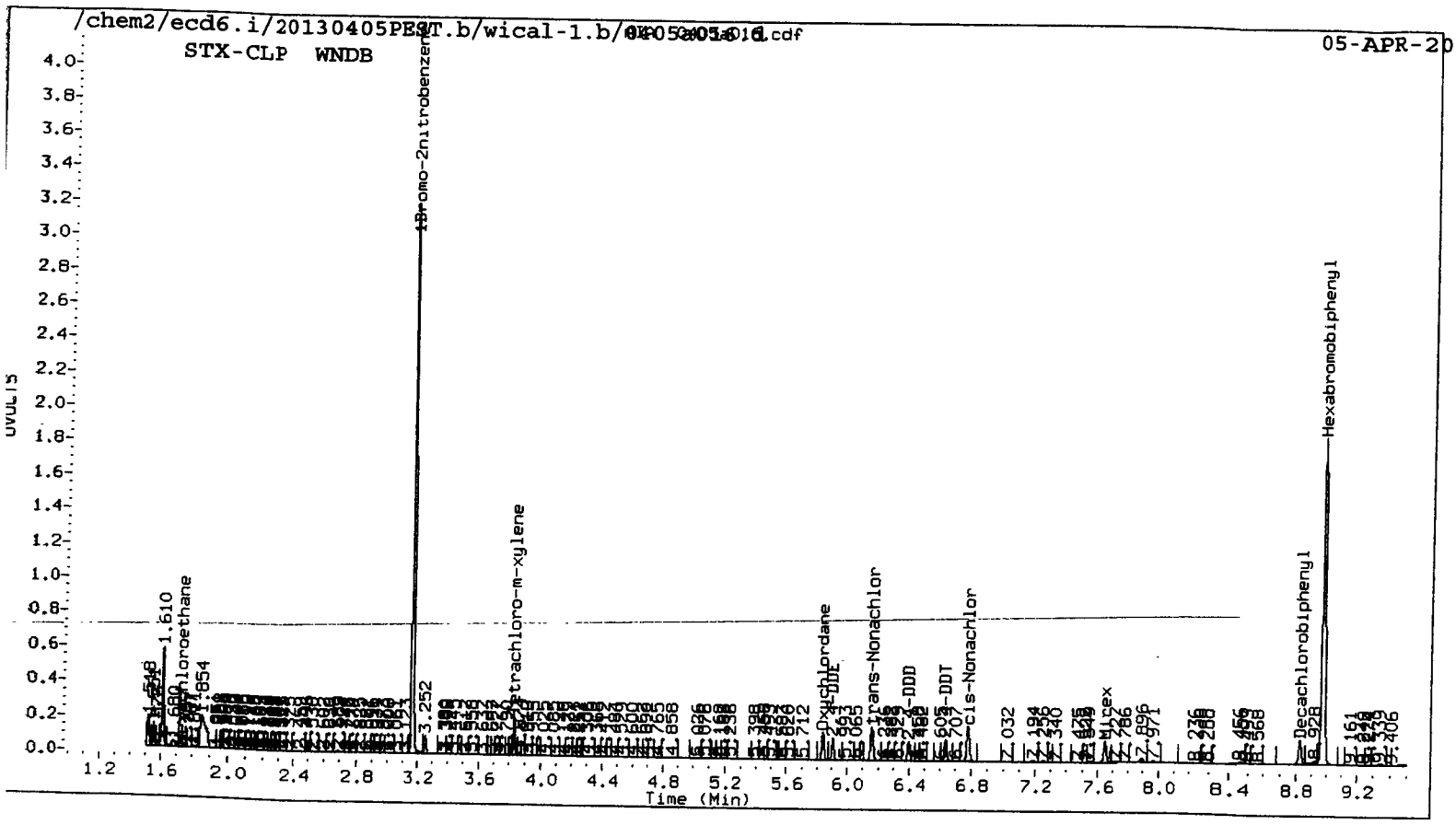
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5559811	2.0
Hexabromobiphenyl	4807902	4951391	3.0

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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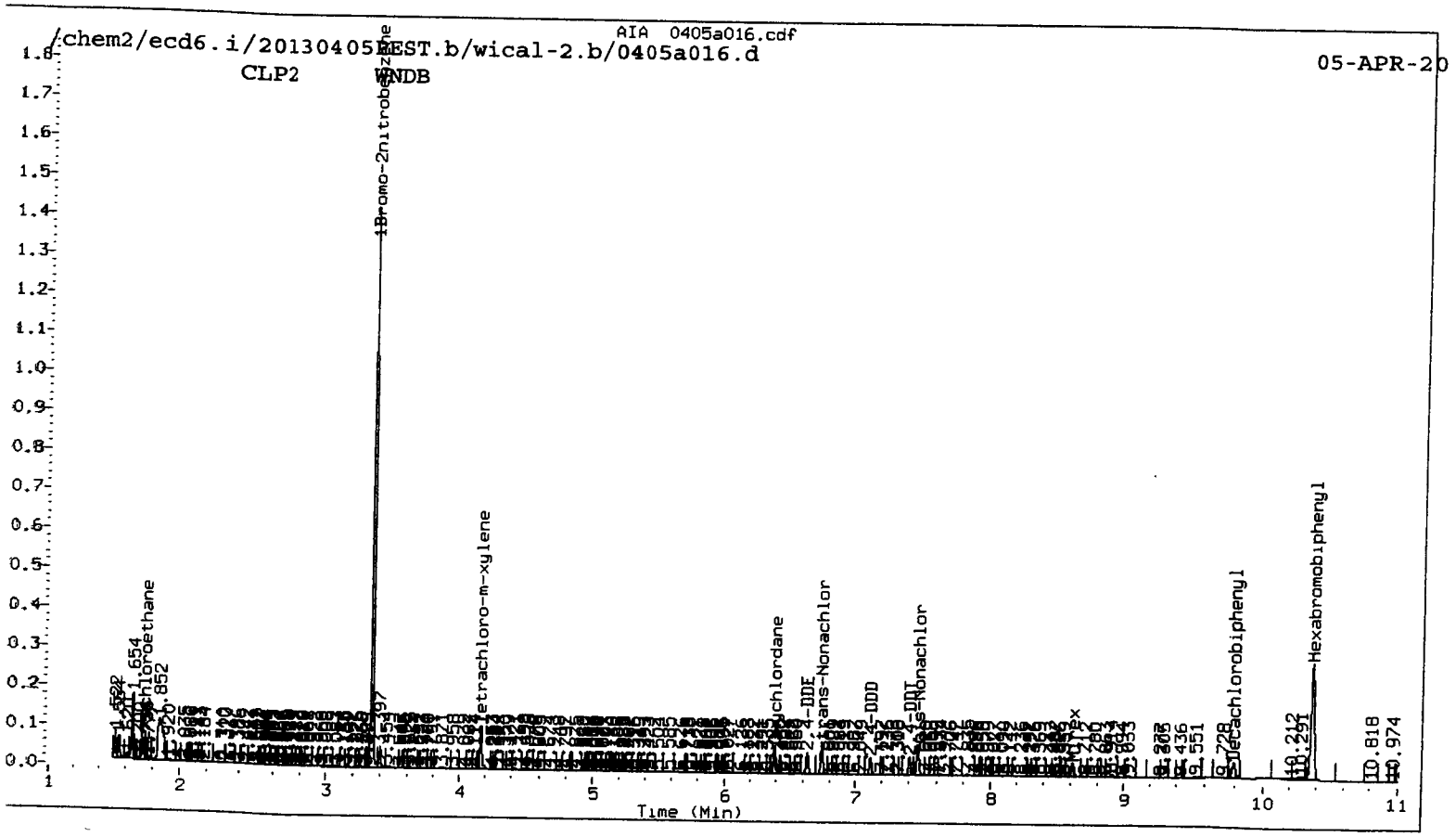
STX-CLP WNDB
05-APR-20
UV Volts
Time (Min)
1.610
1.854
3.252
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Dyuchlordane
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDB
05-APR-20
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Dyuchlordane
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl

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

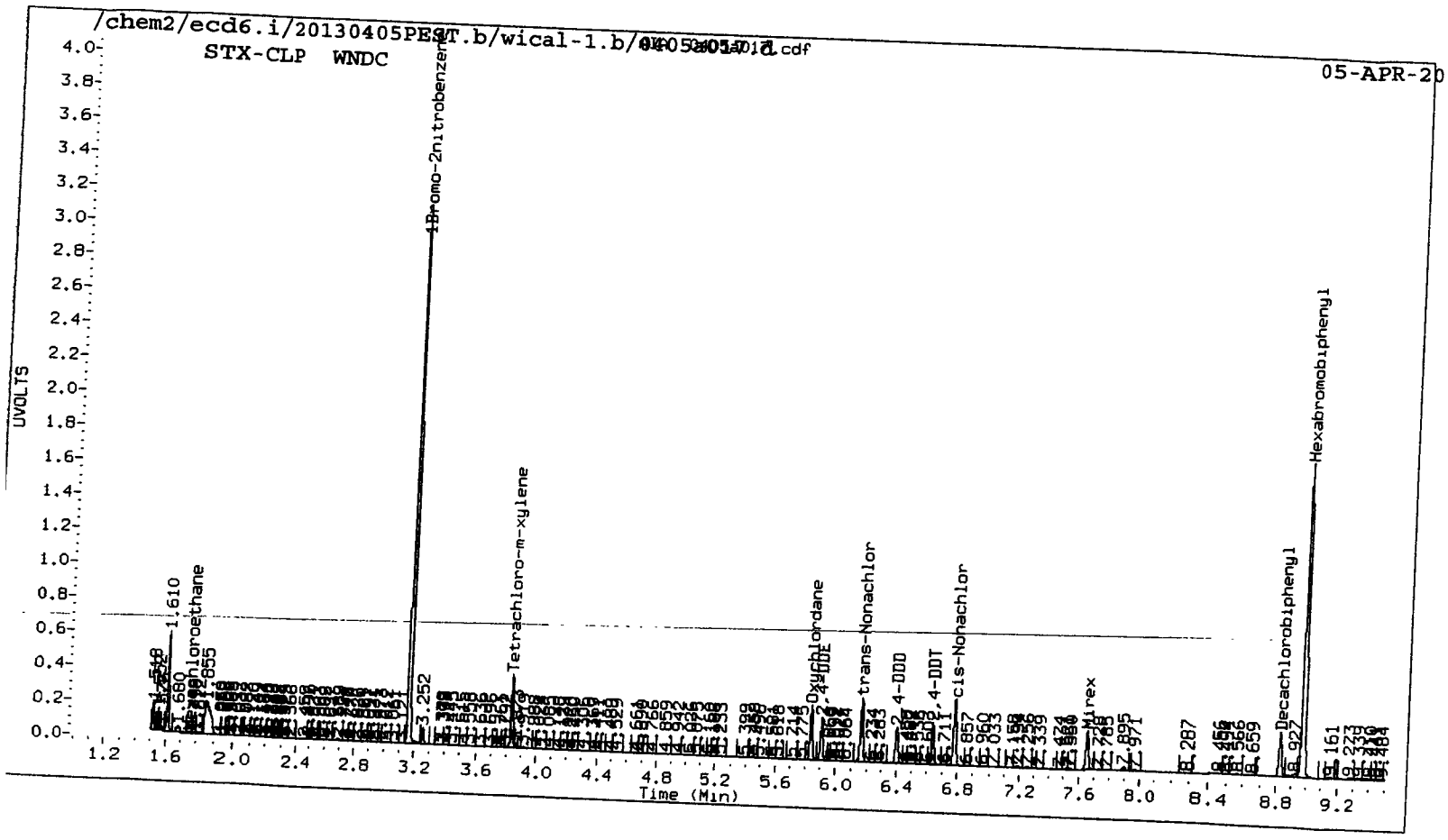
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5437070	-0.2
Hexabromobiphenyl	4807902	4741342	-1.4

Standard Cpnd	Column 2 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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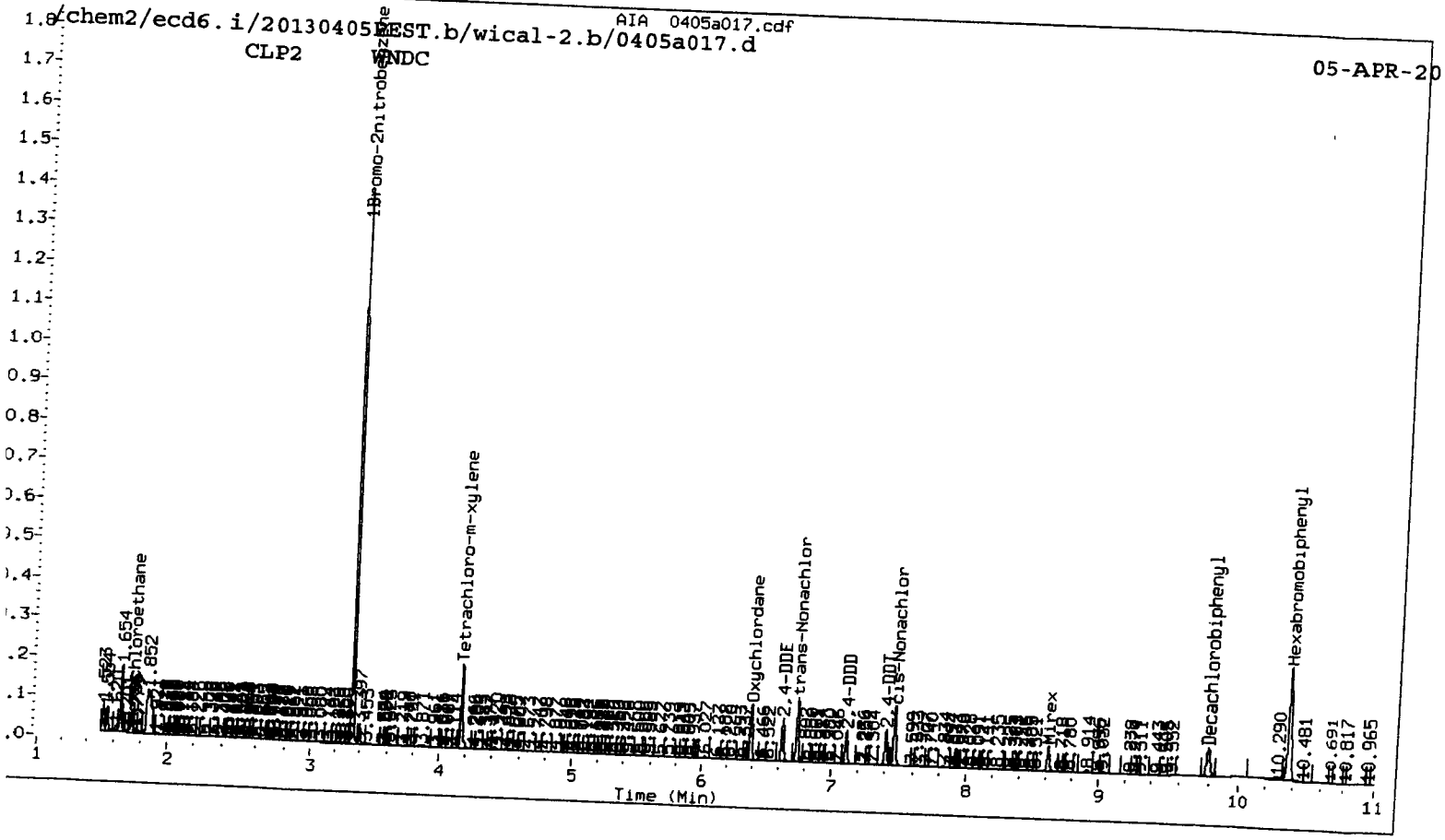
STX-CLP WNDC
05-APR-20
UVOLTS
Time (Min)
1,610
Chloroethane
1855
1Bromo-2nitrobenzene
3.252
Tetrachloro-m-xylene
Oxychlordane
4,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a017.cdf
CLP2 WNDC
05-APR-20
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
10.290
10.481
10.691
10.817
10.965

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 Injection Date: 05-APR-2013 16:57
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
1.756	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

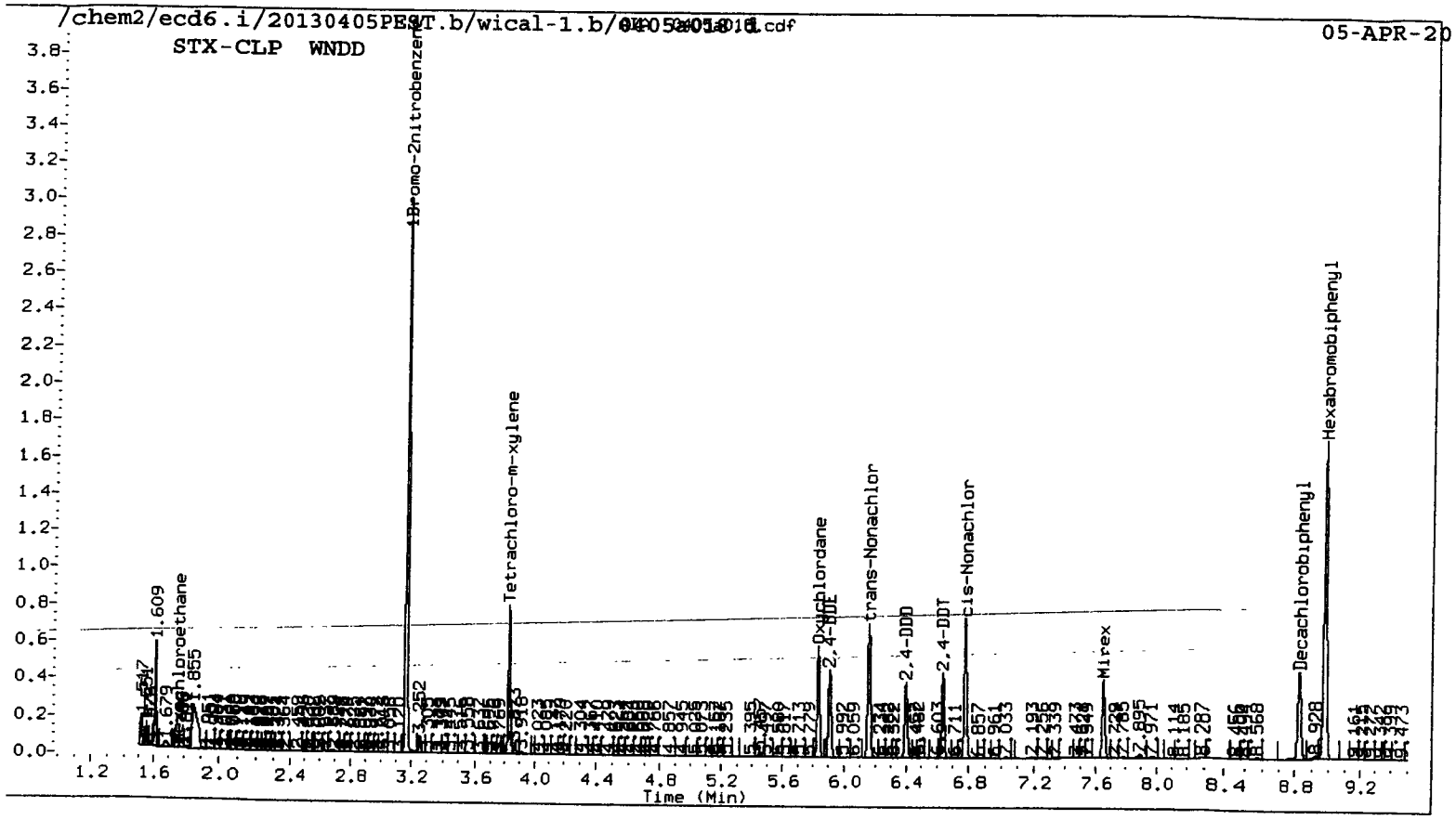
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5198393	-4.6
Hexabromobiphenyl	4807902	4473234	-7.0

Standard Cpnd	Column 2 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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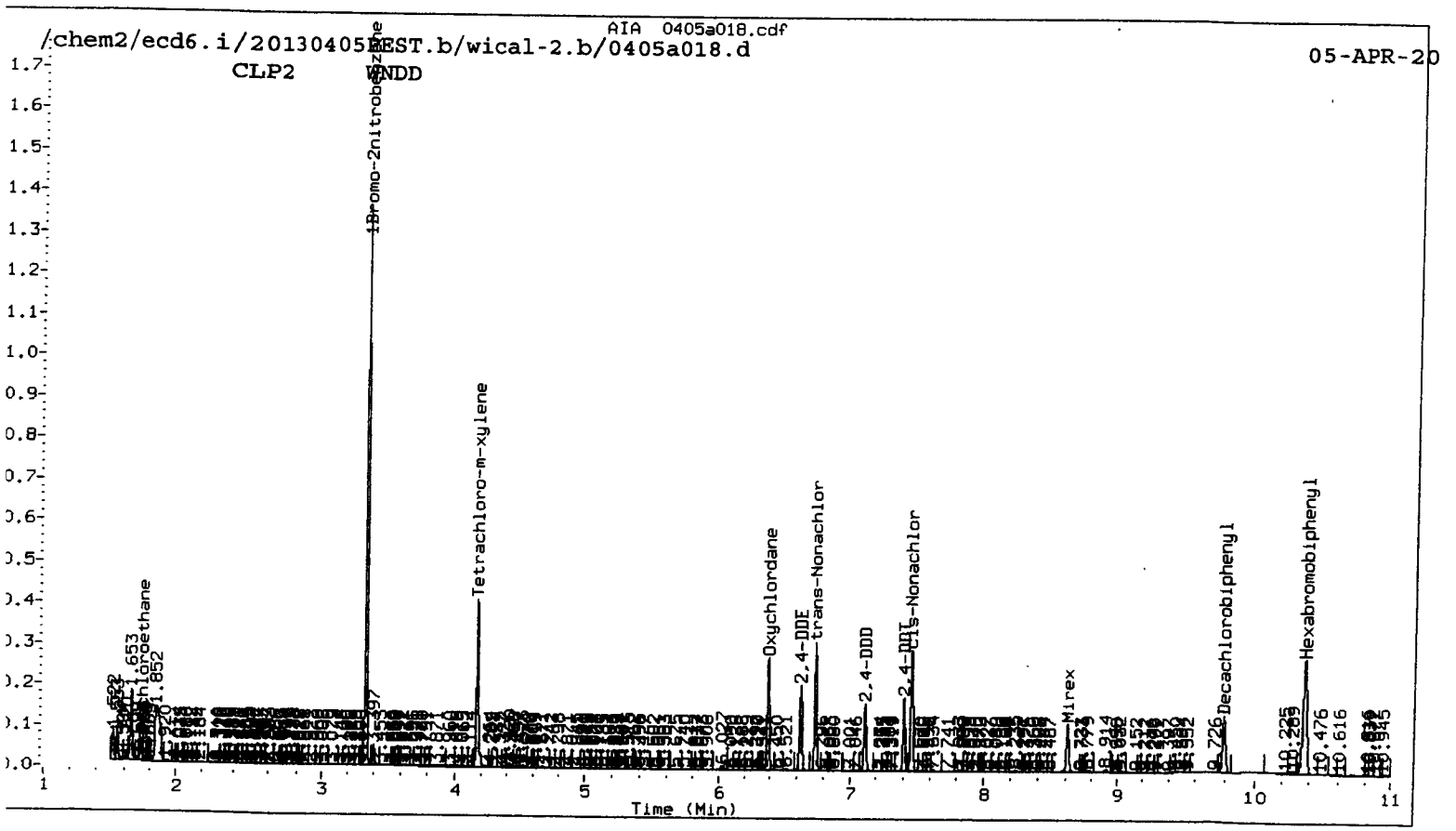
STX-CLP WNDD
05-APR-20
1.609
Chloroethane
1.855
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDD
05-APR-20
1.653
Chloroethane
1.852
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/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

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

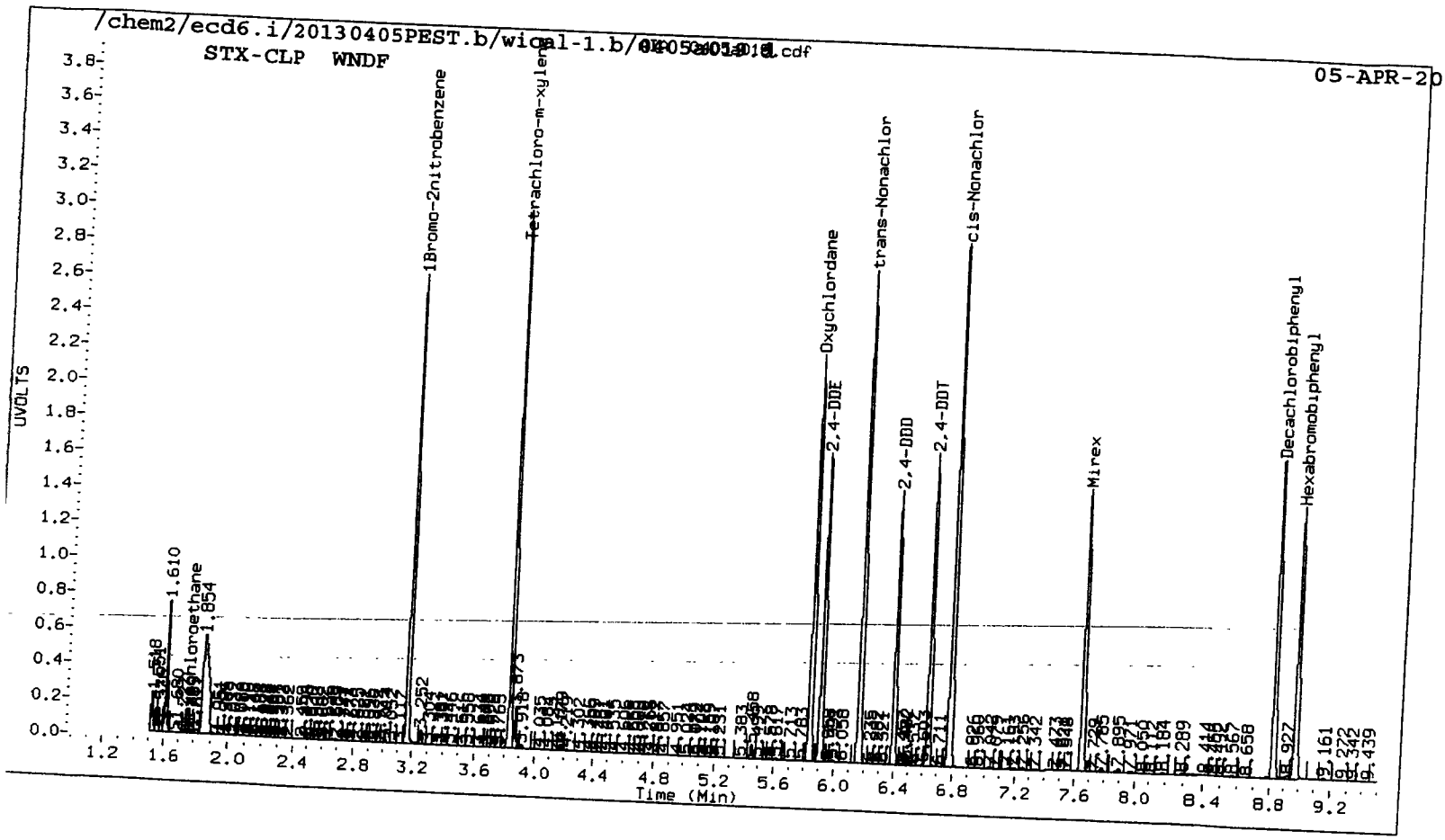
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4612962	-15.3
Hexabromobiphenyl	4807902	3994575	-16.9

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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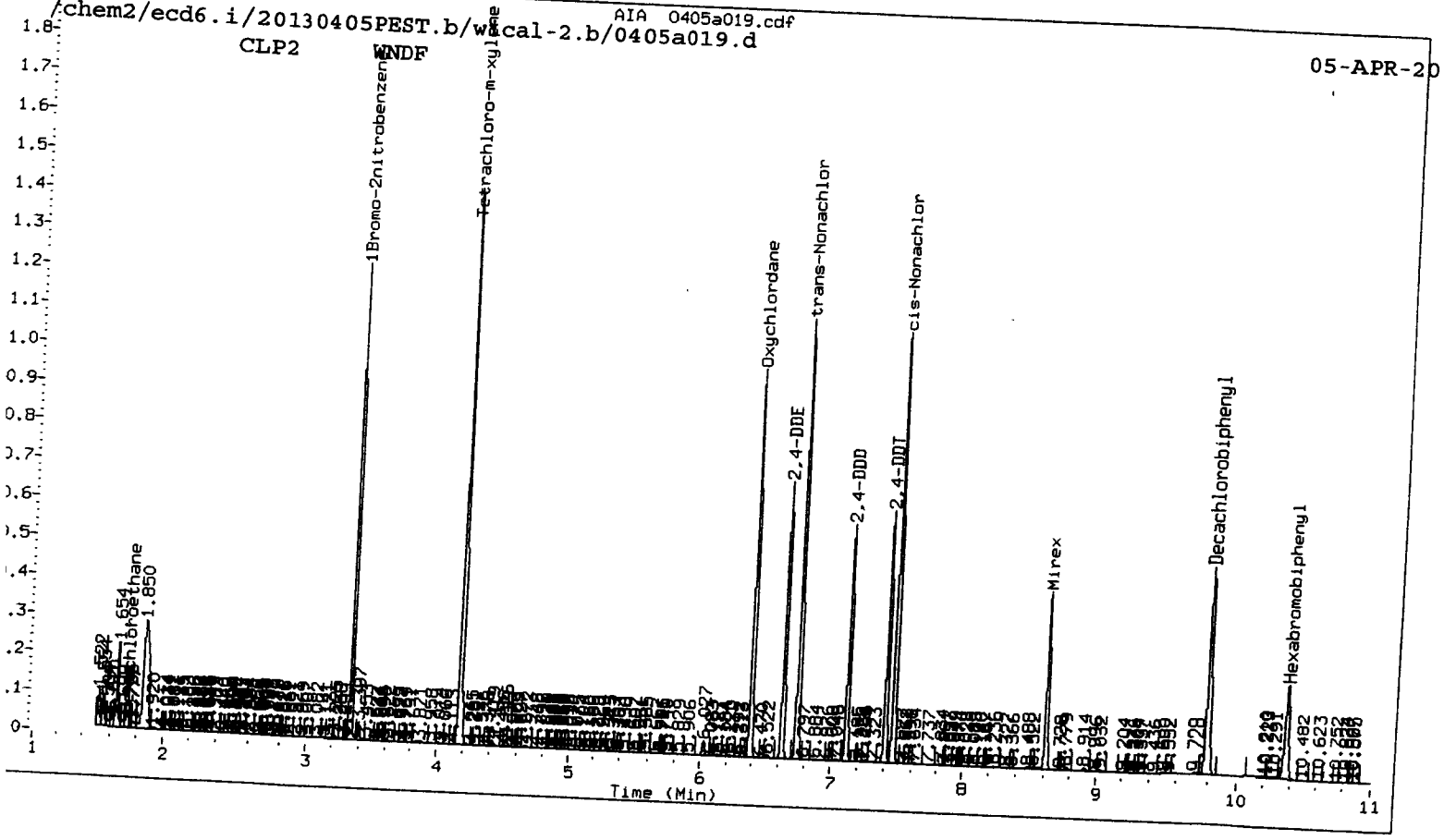
STX-CLP WNDF
05-APR-20
UVOLTS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.610
1.854
Time (Min)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AIA 0405a019.cdf
CLP2 WNDF
05-APR-20
1Bromo-2nitrobenzene
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	
5.840	0.000	10298992	6.385	0.000	46753129	145.1289	148.3892	2.2	1Bromo-2nitrobenzen
5.911	0.000	7643527	6.631	0.000	31633724	143.0297	136.5977	4.6	Oxychlordane
6.162	0.000	12613712	6.741	0.000	52659310	149.2130	145.1446	2.8	2,4-DDE
6.397	0.000	6898918	7.115	0.000	27226192	147.5945	143.1087	3.1	trans-Nonachlor
6.636	0.000	7895245	7.404	0.000	29528420	147.7234	146.2755	1.0	2,4-DDD
6.778	0.000	13589021	7.465	0.000	51029091	152.0877	148.9144	2.1	2,4-DDT
7.653	0.000	7573057	8.619	0.000	22238197	141.9155	142.3234	0.3	cis-Nonachlor
8.978	-0.001	4535578	10.366	0.000	9459401	80.0000	80.0000	0.0	Mirex
3.836	-0.001	11025035	4.167	-0.002	56455397	141.0420	130.8595	7.5	Hexabromobiphenyl
8.830	-0.001	8738751	9.795	-0.001	31424440	133.2144	140.1148	5.0	Tetrachloro-m-xyl
									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

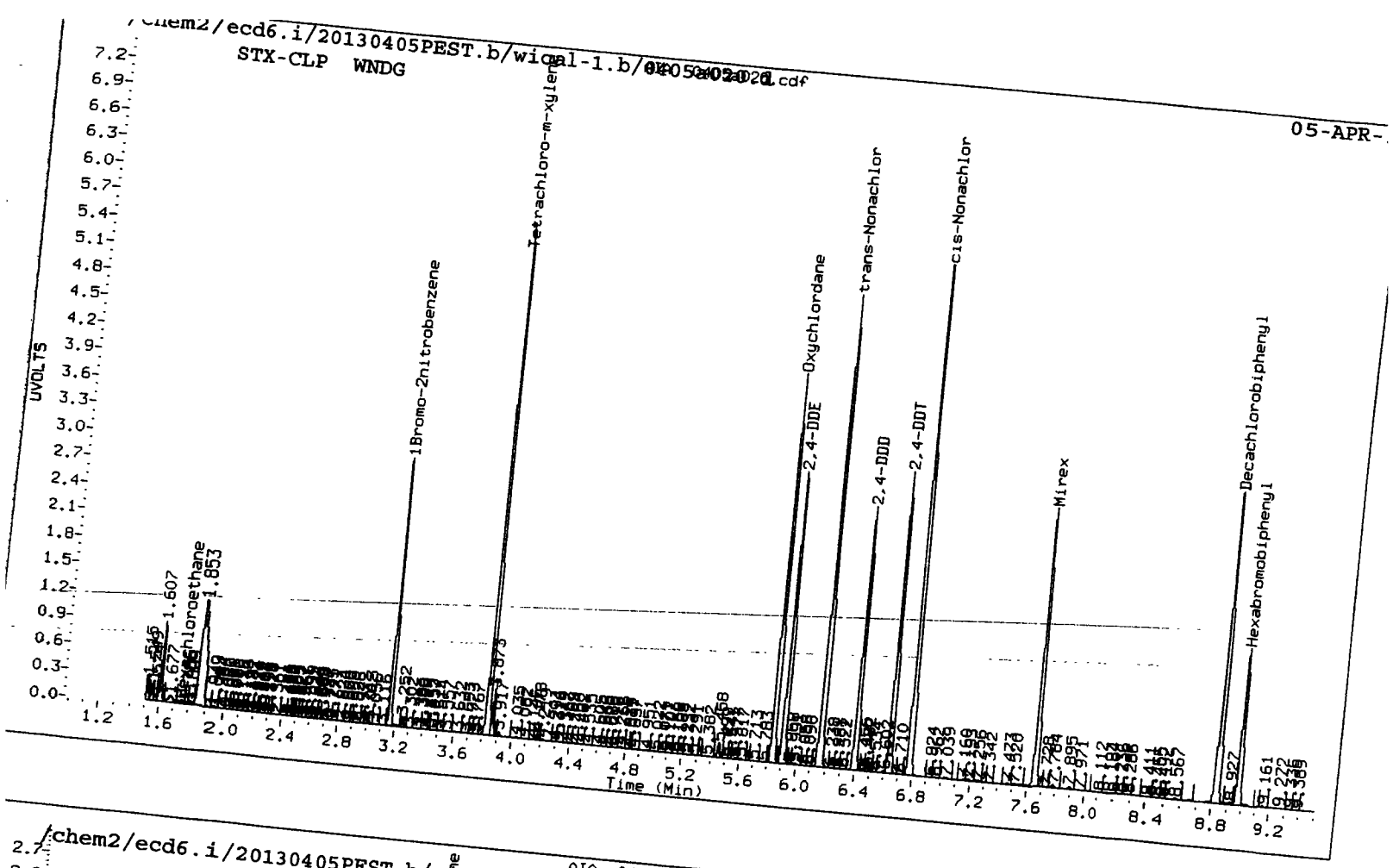
INTERNAL STANDARD SUMMARY

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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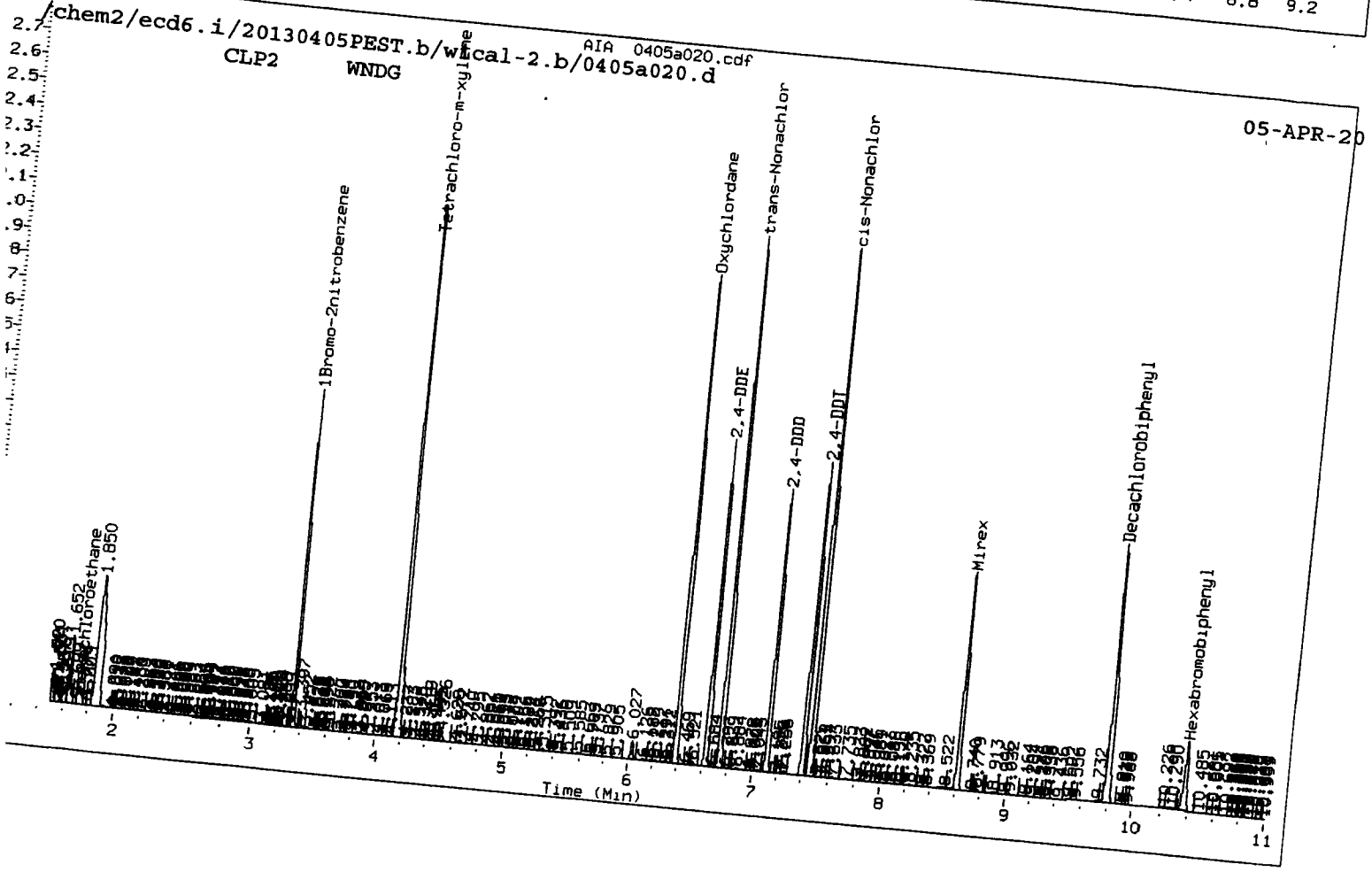
STX-CLP WNDG
05-APR-
UVOLTS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDG
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
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

Y2 4/8/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.757	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

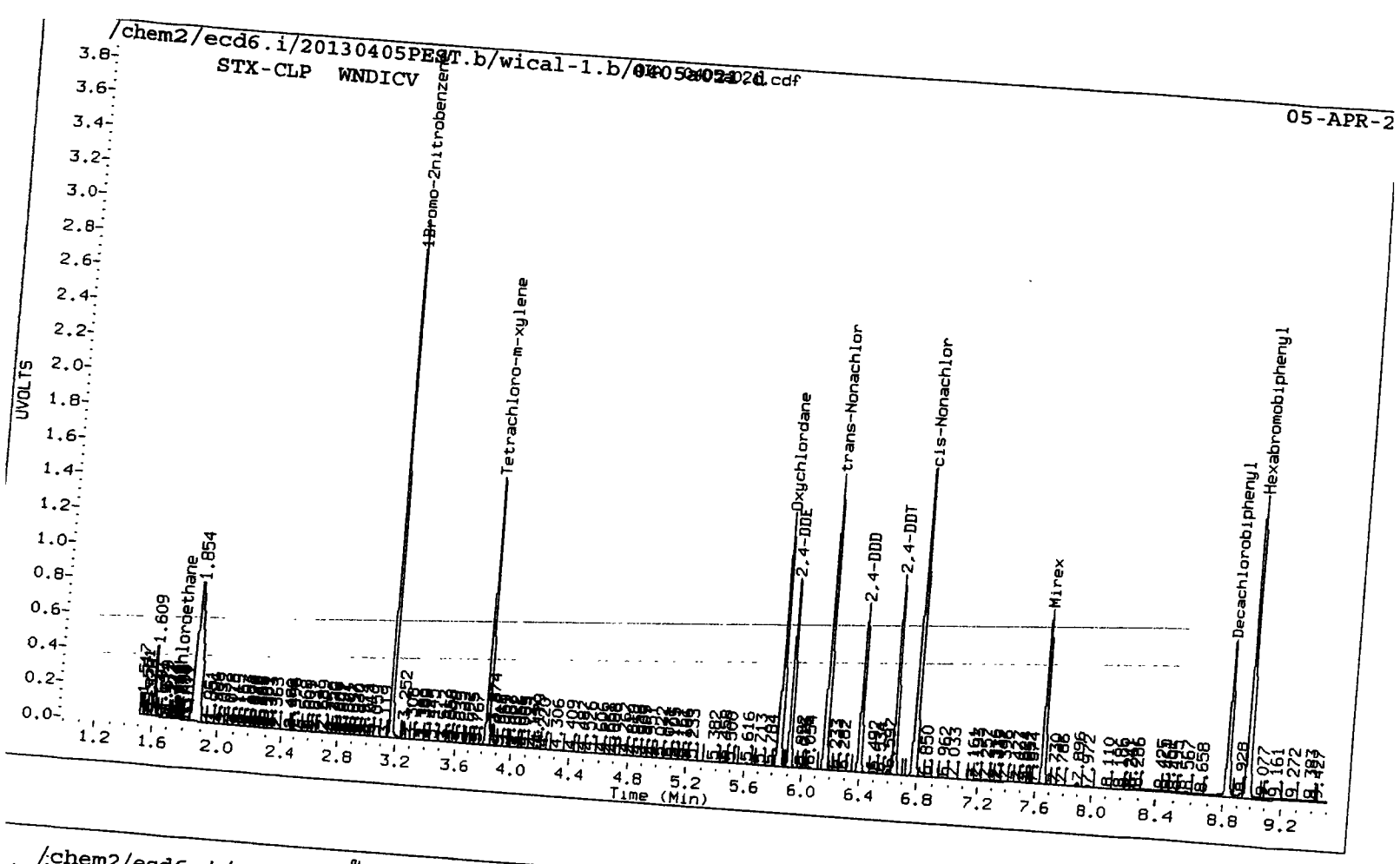
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5135851	-5.7
Hexabromobiphenyl	4807902	4564895	-5.1

Standard Cpnd	Column 2 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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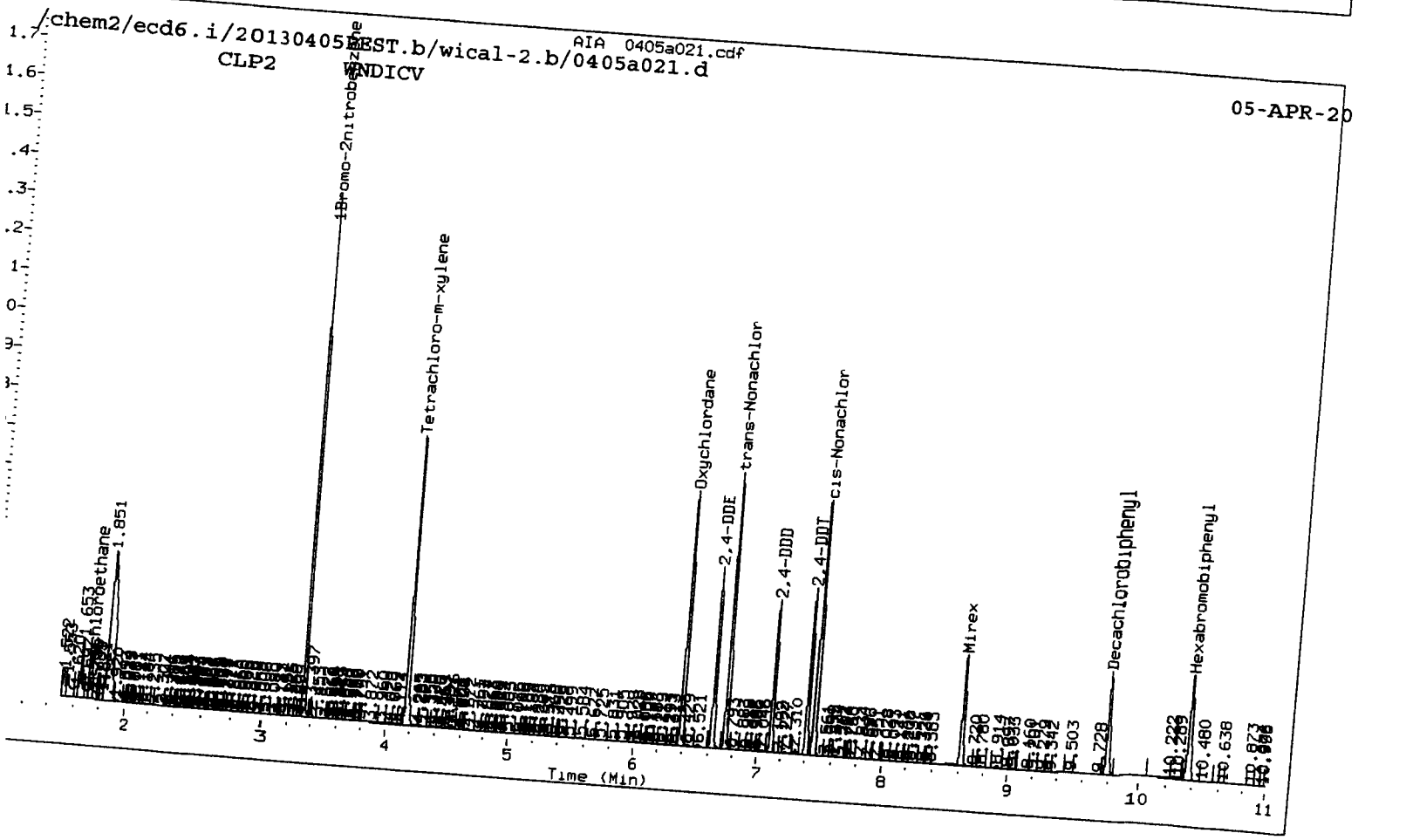
STX-CLP WNDICV
05-APR-2
UVOLTS
Time (Min)
1,4-Dibromobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a021.cdf
CLP2 WNDICV
05-APR-20
Time (Min)
1,4-Dibromobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 04/05/13 Analysis Start Date: 05/01/13

	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 / NA
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%? 22%	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

methoxychlor ccal fails low ~5% on column 2, column 1 is w/in qc. o.k to report samples are non-detects

(Review 1) Analyst: JL **Date:** 05/06/13

(Review 2) Reviewer: [illegible] **Date:** 5/6/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/04/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085684 Column Type: STX CLP

Column 2 Serial No.: 109 4709 Column Type: STX CLP

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2061-1,2	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0501-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-MAY-2013 13:17	0501a002.d	1	DS	
2	01-MAY-2013 13:35	0501a003.d	1	INDAE	
3	01-MAY-2013 13:55	0501a004.d	1	TOXAPH	
4	01-MAY-2013 14:13	0501a005.d	1	DS	
5	01-MAY-2013 14:33	0501a006.d	1	INDAE	
6	01-MAY-2013 14:51	0501a007.d	1	TOXAPH	
7	01-MAY-2013 15:11	0501a008.d	1	WM84MBW1	WM84MBW1
8	01-MAY-2013 15:31	0501a009.d	1	WM84LCSW1	WM84LCSW1
9	01-MAY-2013 15:51	0501a010.d	1	WM84LCSDW1	WM84LCSDW1
10	01-MAY-2013 16:12	0501a011.d	1	WM84A	NS-OF-006-20130419-
11	01-MAY-2013 16:32	0501a012.d	1	WM84B	NS-OF-002-20130419-
12	01-MAY-2013 16:52	0501a013.d	1	WM84C	NS-MH-682-20130419-
13	01-MAY-2013 17:11	0501a014.d	1	WM84D	NS-WS-316-20130419-
14	01-MAY-2013 17:31	0501a015.d	1	WN31MBW1	WN31MBW1
15	01-MAY-2013 17:51	0501a016.d	1	WN31LCSW1	WN31LCSW1
16	01-MAY-2013 18:11	0501a017.d	1	WN31LCSDW1	WN31LCSDW1
17	01-MAY-2013 18:30	0501a018.d	1	WN31QLS	
18	01-MAY-2013 18:48	0501a019.d	1	WN31B	ES-MH-001-20130424-
19	01-MAY-2013 19:06	0501a020.d	1	WN57A	Final Effluent Comp
20	01-MAY-2013 19:26	0501a021.d	1	DS	
21	01-MAY-2013 19:44	0501a022.d	1	INDAE	
22	01-MAY-2013 20:01	0501a023.d	1	TOXAPH	
23	01-MAY-2013 20:21	0501a024.d	1	WM89MBS1	WM89MBS1
24	01-MAY-2013 20:41	0501a025.d	1	WM89LCSS1	WM89LCSS1
25	01-MAY-2013 21:01	0501a026.d	1	WM89LCSDS1	WM89LCSDS1
26	01-MAY-2013 21:21	0501a027.d	5	WM89A	DMMU-P4-B1
27	01-MAY-2013 21:41	0501a028.d	5	WM89B	DMMU-P4-B2
28	01-MAY-2013 22:00	0501a029.d	5	WM89C	DMMU-P3-1
29	01-MAY-2013 22:18	0501a030.d	5	WM89D	DMMU-P4-A
30	01-MAY-2013 22:36	0501a031.d	5	WM89DMS	DMMU-P4-A MS
31	01-MAY-2013 22:54	0501a032.d	5	WM89DMSD	DMMU-P4-A MSD
32	01-MAY-2013 23:12	0501a033.d	5	WM89E	DMMU-P4-X1
33	01-MAY-2013 23:29	0501a034.d	1	WN31MBW1	WN31MBW1
34	01-MAY-2013 23:47	0501a035.d	1	WN31LCSW1	WN31LCSW1
35	02-MAY-2013 00:05	0501a036.d	1	WN31LCSDW1	WN31LCSDW1
36	02-MAY-2013 00:23	0501a037.d	1	DS	
37	02-MAY-2013 00:41	0501a038.d	1	INDAE	
38	02-MAY-2013 00:58	0501a039.d	1	TOXAPH	
39	02-MAY-2013 01:16	0501a040.d	1	WM28MBS1	
40	02-MAY-2013 01:34	0501a041.d	1	WM28LCSS1	
41	02-MAY-2013 01:52	0501a042.d	1	WM28QLS	
42	02-MAY-2013 02:10	0501a043.d	10	WM28A	
43	02-MAY-2013 02:27	0501a044.d	10	WM28B	
44	02-MAY-2013 02:45	0501a045.d	10	WM28C	
45	02-MAY-2013 03:03	0501a046.d	10	WM28D	
46	02-MAY-2013 03:21	0501a047.d	10	WM28DMS	
47	02-MAY-2013 03:39	0501a048.d	10	WM28DMSD	
48	02-MAY-2013 03:56	0501a049.d	10	WM28E	
49	02-MAY-2013 04:14	0501a050.d	1	WN31MBW1	WN31MBW1
50	02-MAY-2013 04:32	0501a051.d	1	WN31LCSW1	WN31LCSW1
51	02-MAY-2013 04:50	0501a052.d	1	WN31LCSDW1	WN31LCSDW1
52	02-MAY-2013 05:08	0501a053.d	1	DS	
53	02-MAY-2013 05:25	0501a054.d	1	INDAE	
54	02-MAY-2013 05:43	0501a055.d	1	TOXAPH	

Every I
Start a

YZ 5/6/13

WN31 : 01608

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0501-1.b

ARI Job No.: DS Method: PEST0405.m Instrument: ecd6.i Date: 01-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1317	0501a002.d	DS		1	NO MANUAL INTEGRATION
1335	0501a003.d	INDAE		1	NO MANUAL INTEGRATION
1355	0501a004.d	TOXAPH		1	NO MANUAL INTEGRATION
1413	0501a005.d	DS		1	NO MANUAL INTEGRATION
1433	0501a006.d	INDAE		1	NO MANUAL INTEGRATION
1451	0501a007.d	TOXAPH		1	NO MANUAL INTEGRATION
1511	0501a008.d	WM84MBW1	WM84MBW1	1	NO MANUAL INTEGRATION
1531	0501a009.d	WM84LCSW1	WM84LCSW1	1	NO MANUAL INTEGRATION
1551	0501a010.d	WM84LCSDW1	WM84LCSDW1	1	NO MANUAL INTEGRATION
1612	0501a011.d	WM84A	NS-OF-006-	1	NO MANUAL INTEGRATION
1632	0501a012.d	WM84B	NS-OF-002-	1	NO MANUAL INTEGRATION
1652	0501a013.d	WM84C	NS-MH-682-	1	NO MANUAL INTEGRATION
1711	0501a014.d	WM84D	NS-WS-316-	1	NO MANUAL INTEGRATION
1731	0501a015.d	WN31MBW1		1	NO MANUAL INTEGRATION
1751	0501a016.d	WN31LCSW1		1	NO MANUAL INTEGRATION
1811	0501a017.d	WN31LCSDW1		1	NO MANUAL INTEGRATION
1830	0501a018.d	WN31QLS		1	NO MANUAL INTEGRATION
1848	0501a019.d	WN31B		1	NO MANUAL INTEGRATION
1906	0501a020.d	WN57A		1	NO MANUAL INTEGRATION
1926	0501a021.d	DS		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0501-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2001	0501a023.d	TOXAPH		1	NO MANUAL INTEGRATION
2021	0501a024.d	WM89MBS1	WM89MBS1	1	NO MANUAL INTEGRATION
2041	0501a025.d	WM89LCSS1	WM89LCSS1	1	NO MANUAL INTEGRATION
2101	0501a026.d	WM89LCSDS1	WM89LCSDS1	1	NO MANUAL INTEGRATION
2121	0501a027.d	WM89A	DMMU-P4-B1	5	NO MANUAL INTEGRATION
2141	0501a028.d	WM89B	DMMU-P4-B2	5	NO MANUAL INTEGRATION
2200	0501a029.d	WM89C	DMMU-P3-1	5	NO MANUAL INTEGRATION
2218	0501a030.d	WM89D	DMMU-P4-A	5	NO MANUAL INTEGRATION
2236	0501a031.d	WM89DMS	DMMU-P4-A	5	Dieldrin, Endosulfan sulfate, Endrin ketone, Toxaphene, Mirex,
2254	0501a032.d	WM89DMSD	DMMU-P4-A	5	Dieldrin, Endrin ketone, Toxaphene,
2312	0501a033.d	WM89E	DMMU-P4-X1	5	NO MANUAL INTEGRATION
2329	0501a034.d	WN31MBW1		1	NO MANUAL INTEGRATION
2347	0501a035.d	WN31LCSW1		1	NO MANUAL INTEGRATION
0005	0501a036.d	WN31LCSDW1		1	NO MANUAL INTEGRATION
0023	0501a037.d	DS		1	NO MANUAL INTEGRATION
0041	0501a038.d	INDAE		1	NO MANUAL INTEGRATION
0058	0501a039.d	TOXAPH		1	NO MANUAL INTEGRATION
0116	0501a040.d	WM28MBS1		1	NO MANUAL INTEGRATION
0134	0501a041.d	WM28LCSS1		1	NO MANUAL INTEGRATION
0152	0501a042.d	WM28QLS		1	NO MANUAL INTEGRATION
0210	0501a043.d	WM28A		10	NO MANUAL INTEGRATION

0227 0501a044.d WM28B 10 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0501-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0245	0501a045.d	WM28C	10		NO MANUAL INTEGRATION
0303	0501a046.d	WM28D	10		NO MANUAL INTEGRATION
0321	0501a047.d	WM28DMS	10		NO MANUAL INTEGRATION
0339	0501a048.d	WM28DMSD	10		NO MANUAL INTEGRATION
0356	0501a049.d	WM28E	10		NO MANUAL INTEGRATION
0414	0501a050.d	WN31MBW1	1		NO MANUAL INTEGRATION
0432	0501a051.d	WN31LCSW1	1		NO MANUAL INTEGRATION
0450	0501a052.d	WN31LCSDW1	1		NO MANUAL INTEGRATION
0508	0501a053.d	DS	1		NO MANUAL INTEGRATION
0525	0501a054.d	INDAE	1		NO MANUAL INTEGRATION
0543	0501a055.d	TOXAPH	1		NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0501-2.b

Instrument: ecd6.i Date: 01-MAY-2013 Method: PEST0405B.m

INITIAL CAL: 05-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-MAY-2013

Compound	%D
Methoxychlor	-24.0

INITIAL CAL: 05-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-MAY-2013

Compound	%D
Methoxychlor	-25.8

INITIAL CAL: 05-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-MAY-2013

Compound	%D
Methoxychlor	-24.0

INITIAL CAL: 05-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-MAY-2013

Compound	%D
Methoxychlor	-25.8

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 14:33
Compound Sublist: INDA Report Date: 05/06/2013 13:26
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
3.163	-0.001	4845287	3.332	0.000	27129824	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	2116441	4.756	-0.001	13204221	19.8594	20.0004	0.7	alpha-BHC
4.691	0.004	784563	5.187	0.002	4886552	18.3754	18.9832	3.3	beta-BHC
4.862	0.003	1893303	5.499	0.000	11332384	19.9599	20.1933	1.2	delta-BHC
4.615	0.000	1901394	5.114	-0.002	11506996	19.7682	19.8023	0.2	gamma-BHC (Lindane)
5.064	-0.001	1807867	5.580	-0.002	10845956	19.6109	20.1283	2.6	Heptachlor
5.359	-0.001	1789896	5.918	-0.003	10027938	19.7905	20.4130	3.1	Aldrin
5.934	-0.003	1644173	6.472	-0.003	9064318	19.8894	21.2982	6.8	Heptachlor epoxide b
6.311	-0.004	1440193	6.860	-0.003	7997812	18.9856	21.5563	12.7	Endosulfan I
6.533	-0.004	3191907	7.117	-0.004	15939042	39.8990	42.8006	7.0	Dieldrin
6.233	-0.002	2525355	6.918	-0.002	16275140	38.5281	42.9061	10.8	4,4'-DDE
6.752	-0.004	2631471	7.407	-0.003	11834439	37.6806	34.5893	8.6	Endrin
6.959	-0.002	2691223	7.596	-0.003	13109109	37.6106	34.8844	7.5	Endosulfan II
6.791	0.000	2632537	7.456	-0.001	12683895	39.5362	35.0292	12.1	4,4'-DDD
7.727	-0.003	2342930	8.138	-0.002	10544732	37.1395	33.7908	9.4	Endosulfan sulfate
7.048	-0.001	2584859	7.744	-0.002	11060025	38.7349	33.6477	14.1	4,4'-DDT
7.473	-0.001	5811701	8.326	-0.005	20712009	173.6339	152.0153	13.3	Methoxychlor
7.982	-0.003	2898447	8.630	-0.002	11257783	36.5918	35.2694	3.7	Endrin ketone
7.336	-0.002	2197409	7.893	-0.003	9977762	37.3930	33.6655	10.5	Endrin aldehyde
6.053	-0.002	1633343	6.655	-0.002	9407024	19.3308	21.9639	12.8	gamma-Chlordane
6.177	-0.003	1583853	6.792	-0.003	8367022	19.4885	21.1717	8.3	alpha-Chlordane
2.339	-0.002	2210667	2.495	-0.002	10715558	19.7110	20.6211	4.5	Hexachlorobutadiene
4.182	0.003	1534899	4.630	0.001	12788171	19.7656	21.0281	6.2	Hexachlorobenzene
8.983	0.003	4501320	10.366	0.000	12597951	80.0000	80.0000	0.0	Hexabromobiphenyl
3.838	0.001	2787807	4.167	-0.001	17939094	38.2488	37.3840	2.3	Tetrachloro-m-xylen
8.829	-0.002	2332897	9.792	-0.004	9903483	35.5055	33.1565	6.8	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	95.6	93.5	93.5~	115- 0
Decachlorobiphenyl	88.8	82.9	82.9~	115- 0

~ Indicates recovery outside QC Limits

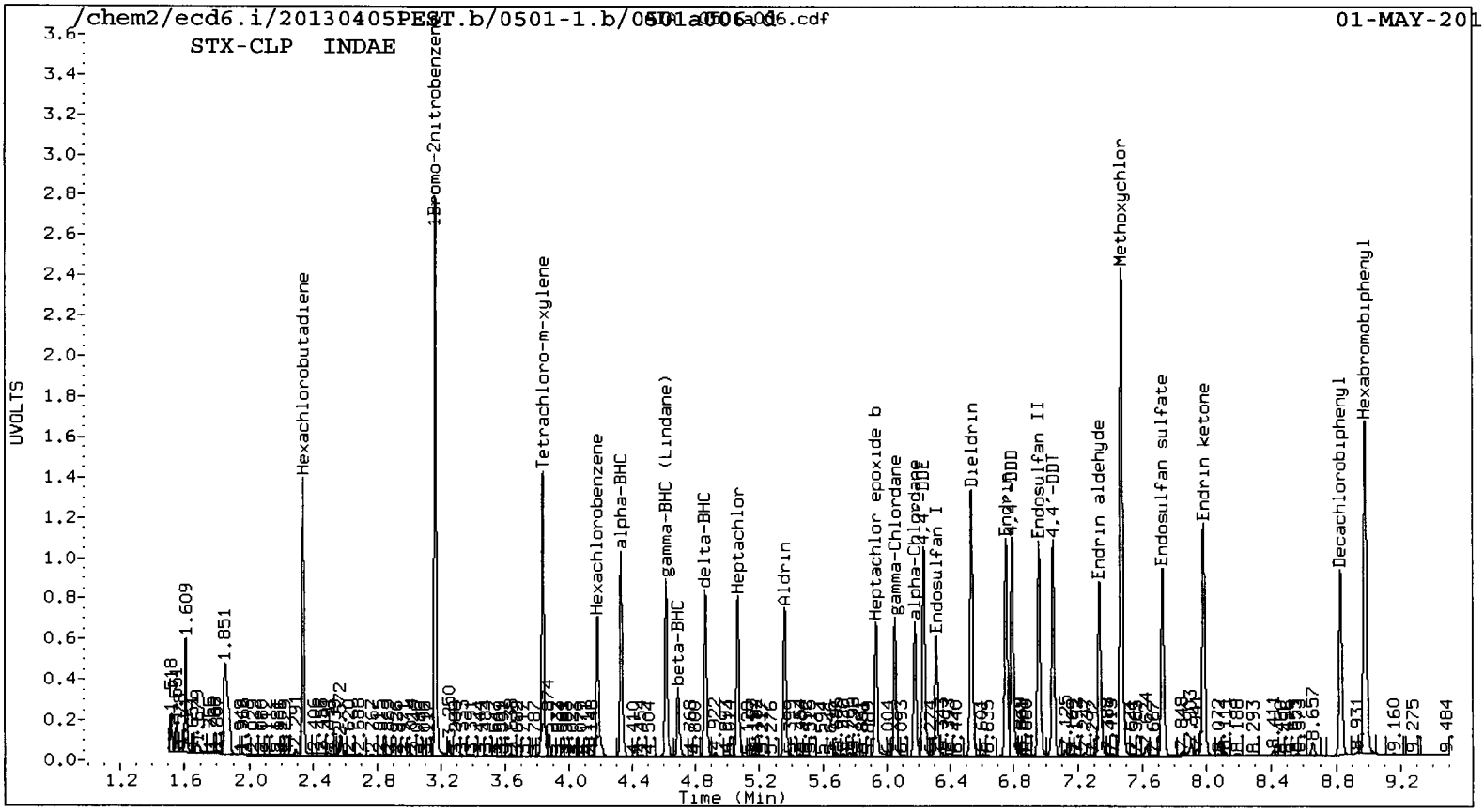
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	4845287	-11.1
Hexabromobiphenyl	4807902	4501320	-6.4

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	27129824	25.0
Hexabromobiphenyl	7681727	12597951	64.0

* 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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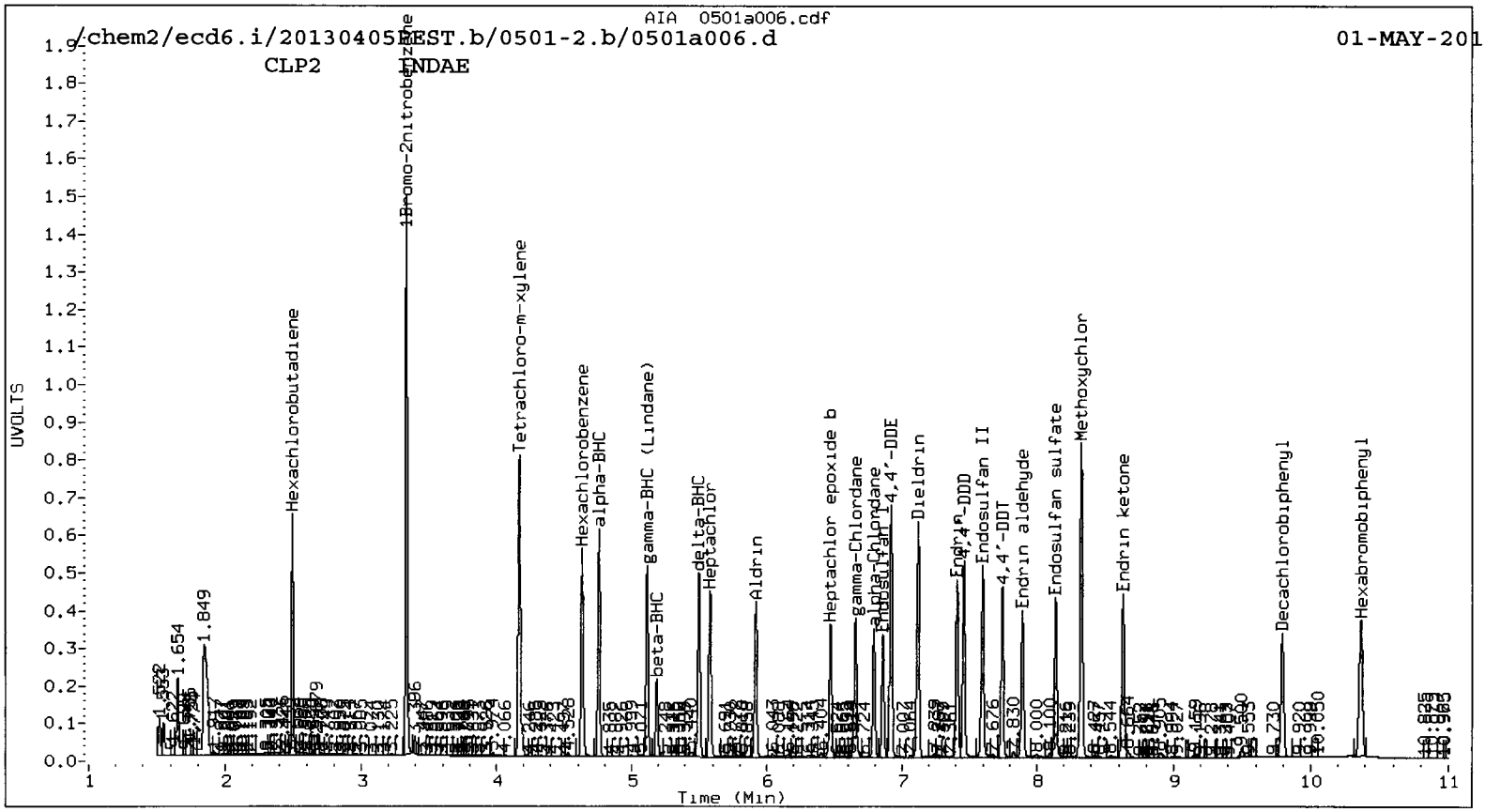
01-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.609
1.851
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0501a006.cdf
/chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a006.d
01-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
1.654
1.849
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
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a007.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 14:51
Compound Sublist: TOXAPH Report Date: 05/06/2013 13:26
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	4899368	3.333	0.000	27649831	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.980	0.001	4654061	10.364	-0.002	13277091	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	2677330	4.167	-0.002	17722963	36.3275	36.2389	0.2	Tetrachloro-m-xylen
8.827	-0.004	2398828	9.791	-0.005	10464720	35.3108	33.2434	6.0	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	90.8	90.6	90.6~	150- 0
Decachlorobiphenyl	88.3	83.1	83.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

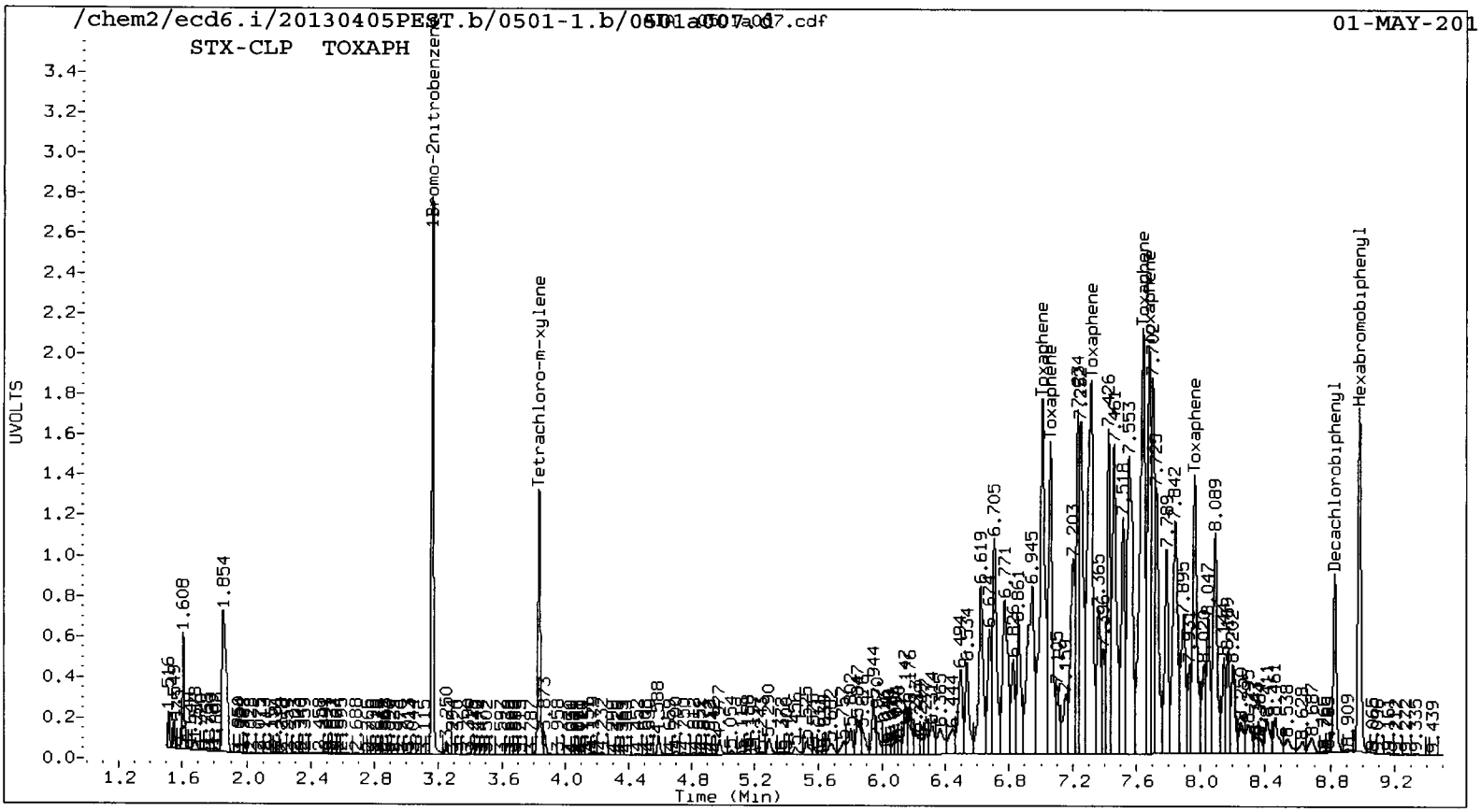
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4899368	-10.1
Hexabromobiphenyl	4807902	4654061	-3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27649831	27.4
Hexabromobiphenyl	7681727	13277091	72.8

* 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	7.007	-0.005	7858123	2623.7	1	7.341	-0.003	28176977	2310.5
Toxaphene	2	7.058	-0.005	5490539	2693.8	2	7.666	-0.002	40724205	2231.7
Toxaphene	3	7.315	-0.005	8889480	2597.7	3	7.896	-0.002	44181549	2265.4
Toxaphene	4	7.641	-0.004	8994442	2605.9	4	8.364	-0.002	31852898	2260.3
Toxaphene	5	7.680	-0.005	5927900	2602.4	5	8.403	-0.003	40797305	2286.3
Toxaphene	6	7.962	-0.004	5033559	2574.1	NS	---			----
Total STX-CLPAve (6 peaks): 2616.278						Total CLP2Ave (5 peaks): 2270.824				RPD = 14
Corrected Ave (6 peaks): 2616.278						Corrected Ave (5 peaks): 2270.824				RPD = 14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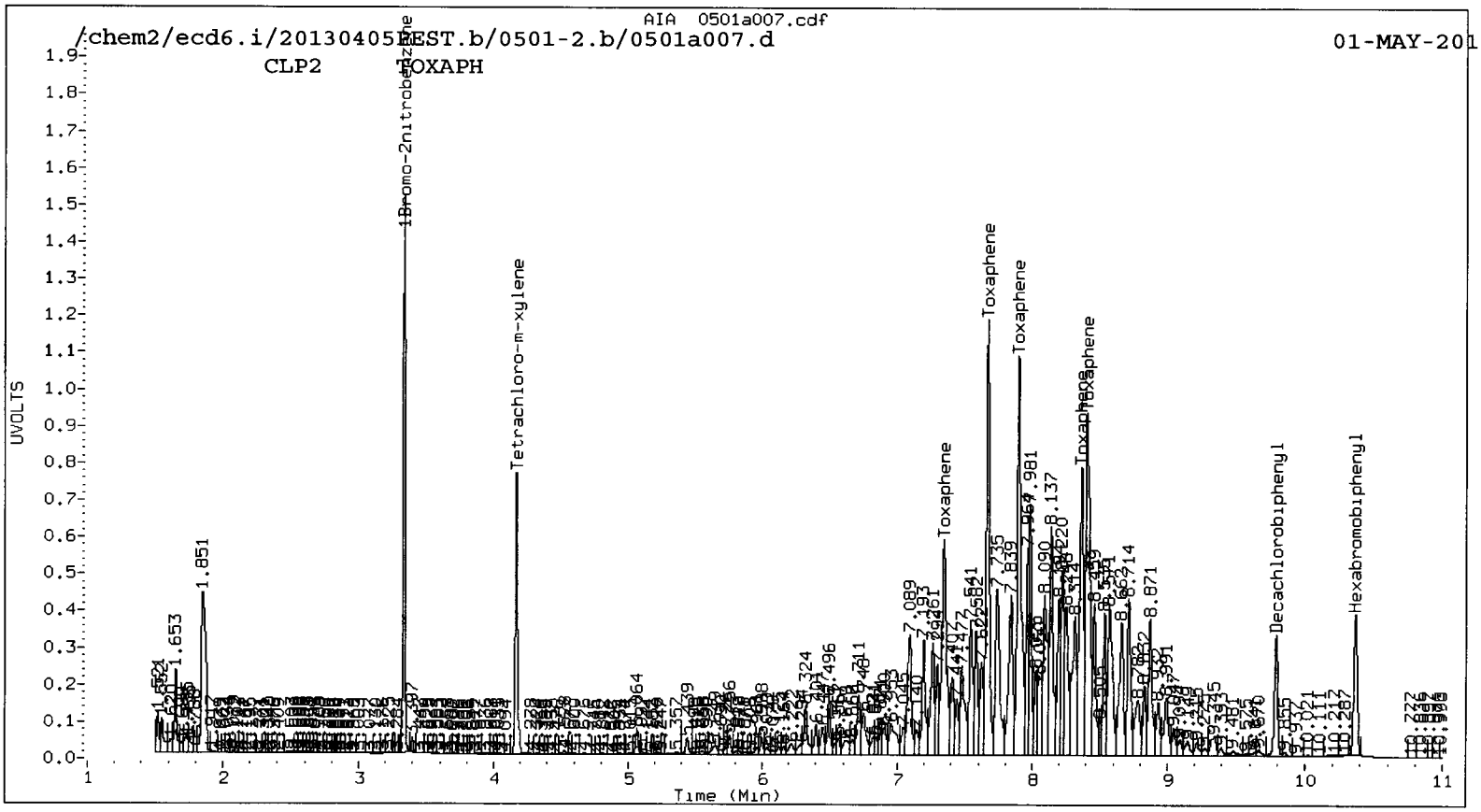
01-MAY-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 TOXAPH
01-MAY-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a015.d ARI ID: WN31MBW1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a015.d Client ID: WN31MBW1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 17:31
Compound Sublist: wpest Report Date: 05/03/2013 10:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

05/06/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.001	4299558	3.333	0.001	23767794	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.310	-0.020	22953	4.751	-0.005	55754	0.2427	0.0964	86.3*	alpha-BHC
4.691	0.004	5603	5.169	-0.016	16159	0.1479	0.0717	69.5*	beta-BHC
4.855	-0.004	8031	5.511	0.012	46724	0.0954	0.0950	0.4	delta-BHC
4.607	-0.008	7334	5.095	-0.021	98429	0.0859	0.1933	76.9*	gamma-BHC (Lindane)
5.071	0.006	2277	5.591	0.009	40781	0.0278	0.0864	102.5*	Heptachlor
5.347	-0.013	3238	5.897	-0.024	471365	0.0404	1.0952	185.8*	Aldrin
----			6.461	-0.014	63634	0.0000	0.1707	---	Heptachlor epoxide b
6.293	-0.022	23796	6.839	-0.024	51968	0.3535	0.1599	75.4*	Endosulfan I
6.512	-0.026	1949	7.166	0.045	59717	0.0275	0.1830	147.8*	Dieldrin
6.233	-0.002	23321	6.922	0.002	59052	0.4010	0.1777	77.2*	4,4'-DDE
----			7.419	0.009	163173	0.0000	0.6278	---	Endrin
6.962	0.001	6735	7.633	0.034	173486	0.1160	0.6077	135.9*	Endosulfan II
6.810	0.019	2187	----			0.0405	0.0000	---	4,4'-DDD
7.744	0.015	1793	8.173	0.033	59735	0.0350	0.2520	151.2*	Endosulfan sulfate
7.027	-0.022	1582	7.754	0.008	106502	0.0292	0.4265	174.4*	4,4'-DDT
7.459	-0.015	20236	8.330	0.000	133351	0.7450	1.2884	53.4*	Methoxychlor
7.973	-0.012	8989	----			0.1398	0.0000	---	Endrin ketone
7.331	-0.008	13425	----			0.2815	0.0000	---	Endrin aldehyde
6.050	-0.005	29133	6.673	0.016	177935	0.3886	0.4742	19.9	gamma-Chlordane
6.172	-0.008	25934	6.809	0.014	45954	0.3596	0.1327	92.2*	alpha-Chlordane
2.323	-0.018	34209	2.503	0.006	107614	0.3437	0.2364	37.0	Hexachlorobutadiene
4.181	0.002	54504	4.630	0.000	160934	0.7910	0.3021	89.5*	Hexachlorobenzene
5.833	-0.007	1128	6.376	-0.009	15002	0.0197	0.0489	84.9*	Oxychlordane
5.921	0.011	3018	6.640	0.009	13271	0.0701	0.0588	17.6	2,4-DDE
6.129	-0.032	6880	6.763	0.022	44844	0.1011	0.1222	18.9	trans-Nonachlor
6.437	0.039	9801	7.112	-0.003	162207	0.2604	0.8428	105.6*	2,4-DDD
----			----			0.0000	0.0000	---	2,4-DDT
----			7.490	0.025	107613	0.0000	0.3104	---	cis-Nonachlor
7.623	-0.029	39154	8.610	-0.009	844929	0.9110	5.3450	141.7*	Mirex
8.979	-0.001	3652896	10.366	-0.001	9569979	80.0000	80.0000	0.0	Hexabromobiphenyl
1.755	0.000	16708	1.722	-0.010	7096782	0.0000	0.0000	---	Hexachloroethane
----			7.318	-0.018	558435	0.0000	0.0000	---	Kepone
3.837	0.001	1841013	4.168	-0.001	10585081	28.4647	25.1789	12.3	Tetrachloro-m-xylen
8.828	-0.003	1317936	9.792	-0.004	4932770	24.7171	21.7400	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	71.2	62.9	62.9	52-100
Decachlorobiphenyl	61.8	54.4	54.4	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

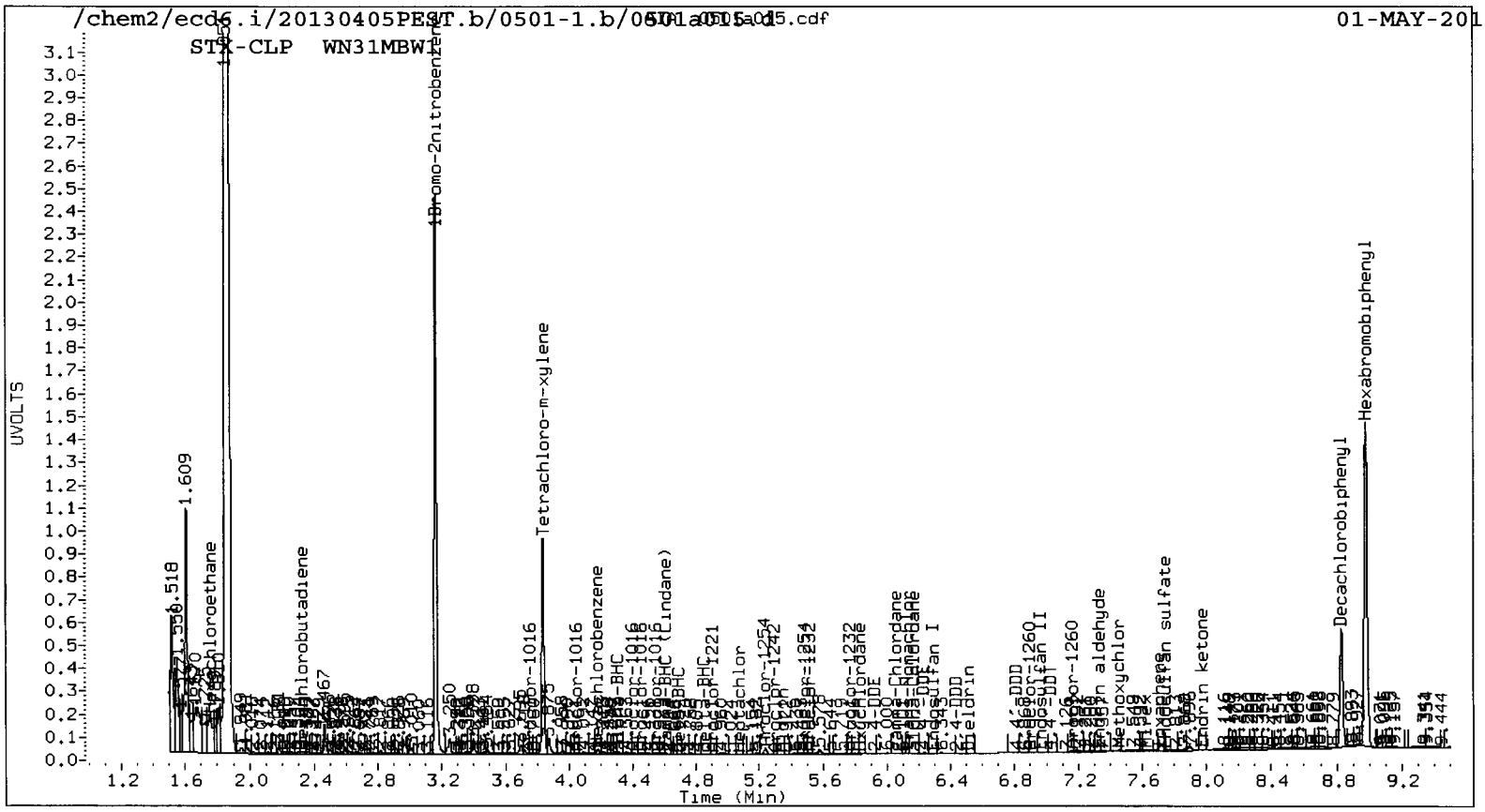
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4299558	-21.1
Hexabromobiphenyl	4807902	3652896	-24.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	23767794	9.5
Hexabromobiphenyl	7681727	9569979	24.6

* 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
Toxaphene	1	7.027	0.015	1582	0.7	1	7.318	-0.026	558435	63.5
Toxaphene	2	---			0.000	2	7.683	0.015	94027	7.1
Toxaphene	3	7.331	0.010	13425	5.0	3	---			0.0
Toxaphene	4	7.623	-0.021	39154	14.5	4	8.395	0.029	132938	13.1
Toxaphene	5	7.705	0.021	7620	4.3	5	---			0.0
Toxaphene	6	7.973	0.006	8989	5.9	NS	---			----
Total STX-CLPAve (5 peaks): 6.049						Total CLP2Ave (3 peaks): 27.922			RPD = 129*	
Corrected Ave (4 peaks): 3.948						Corrected Ave: < 3 Peaks				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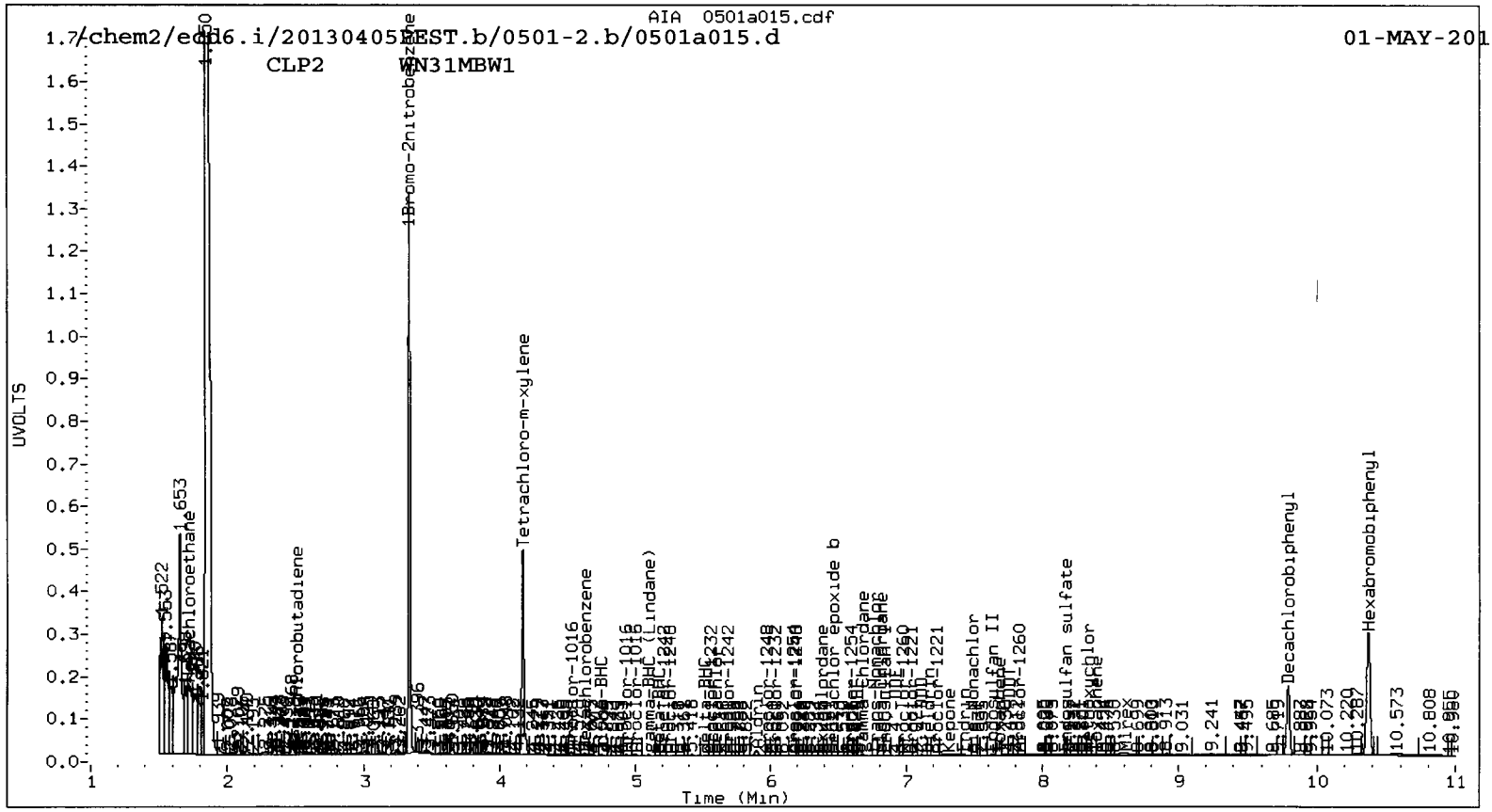
UVOLTS
Time (Min)
1.609
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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01-MAY-201
CLP2 WN31MBW1
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a016.d ARI ID: WN31LCSW1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a016.d Client ID: WN31LCSW1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 17:51
Compound Sublist: wpest Report Date: 05/03/2013 10:46
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

05/06/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.001	4917542	3.333	0.000	28112154	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	1630782	4.756	-0.001	9477285	15.0774	13.8536	8.5	alpha-BHC
4.690	0.003	607333	5.187	0.002	3415417	14.0154	12.8045	9.0	beta-BHC
4.861	0.003	1423812	5.499	0.000	8093457	14.7898	13.9179	6.1	delta-BHC
4.615	0.000	1516079	5.114	-0.002	8603323	15.5306	14.2881	8.3	gamma-BHC (Lindane)
5.064	-0.001	1313517	5.580	-0.002	7316040	14.0391	13.1029	6.9	Heptachlor
5.359	-0.002	1131890	5.919	-0.001	6163334	12.3312	12.1078	1.8	Aldrin
5.934	-0.003	1285174	6.473	-0.003	6297092	15.3182	14.2791	7.0	Heptachlor epoxide b
6.311	-0.004	1200152	6.860	-0.003	5302095	15.5887	13.7912	12.2	Endosulfan I
6.533	-0.004	2490923	7.118	-0.003	10929362	30.6792	28.3228	8.0	Dieldrin MN
6.233	-0.002	2384650	6.919	-0.002	10603168	35.8469	26.9763	28.2	4,4'-DDE
6.752	-0.004	2173004	7.407	-0.002	7795004	32.9979	25.7329	24.7	Endrin
6.958	-0.003	2121031	7.596	-0.003	8436800	31.4351	25.3579	21.4	Endosulfan II
6.789	-0.001	2078600	7.456	-0.002	8003907	33.1053	24.9665	28.0	4,4'-DDD
7.725	-0.004	1726870	8.138	-0.003	6309133	29.0297	22.8355	23.9	Endosulfan sulfate
7.047	-0.002	2001729	7.744	-0.002	7548579	31.8111	25.9384	20.3	4,4'-DDT
7.470	-0.003	4866266	8.325	-0.005	15191143	154.1821	125.9312	20.2	Methoxychlor
7.981	-0.004	2190527	8.630	-0.003	6711353	29.3275	23.7483	21.0	Endrin ketone
7.335	-0.004	1363078	7.893	-0.003	4800359	24.5984	18.2938	29.4	Endrin aldehyde
6.053	-0.002	1306457	6.655	-0.002	6066718	15.2349	13.6698	10.8	gamma-Chlordane
6.177	-0.003	1257842	6.793	-0.003	5451253	15.2497	13.3117	13.6	alpha-Chlordane
2.339	-0.002	920589	2.495	-0.002	4359206	8.0877	8.0958	0.1	Hexachlorobutadiene
4.181	0.002	1029106	4.630	0.001	8180057	13.0576	12.9808	0.6	Hexachlorobenzene
5.851	0.011	10151	6.369	-0.016	34724	0.1529	0.0956	46.1*	Oxychlordane
5.888	-0.023	1362	6.591	-0.039	79113	0.0272	0.2964	166.3*	2,4-DDE
----			6.732	-0.009	33242	0.0000	0.0777	---	trans-Nonachlor
6.397	-0.001	27926	7.118	0.003	10929362	0.6384	48.7209	194.8*	2,4-DDD
6.635	-0.001	9598	----			0.1919	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.639	-0.013	9429	8.582	-0.036	129863	0.1888	0.7049	115.5*	Mirex
8.979	-0.001	4244562	10.365	-0.001	11153781	80.0000	80.0000	0.0	Hexabromobiphenyl
1.755	0.001	9374	1.721	-0.011	4722272	0.0000	0.0000	---	Hexachloroethane
----			7.342	0.006	49755	0.0000	0.0000	---	Kepone
3.837	0.001	1880387	4.167	-0.002	11452991	25.4199	23.0333	9.9	Tetrachloro-m-xylen
8.828	-0.003	1653791	9.792	-0.003	6342276	26.6924	23.9830	10.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	63.5	57.6	57.6	52-100
Decachlorobiphenyl	66.7	60.0	60.0	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	824947.3	643322.7	643322.7~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	795276.3	648459.6	648459.6~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

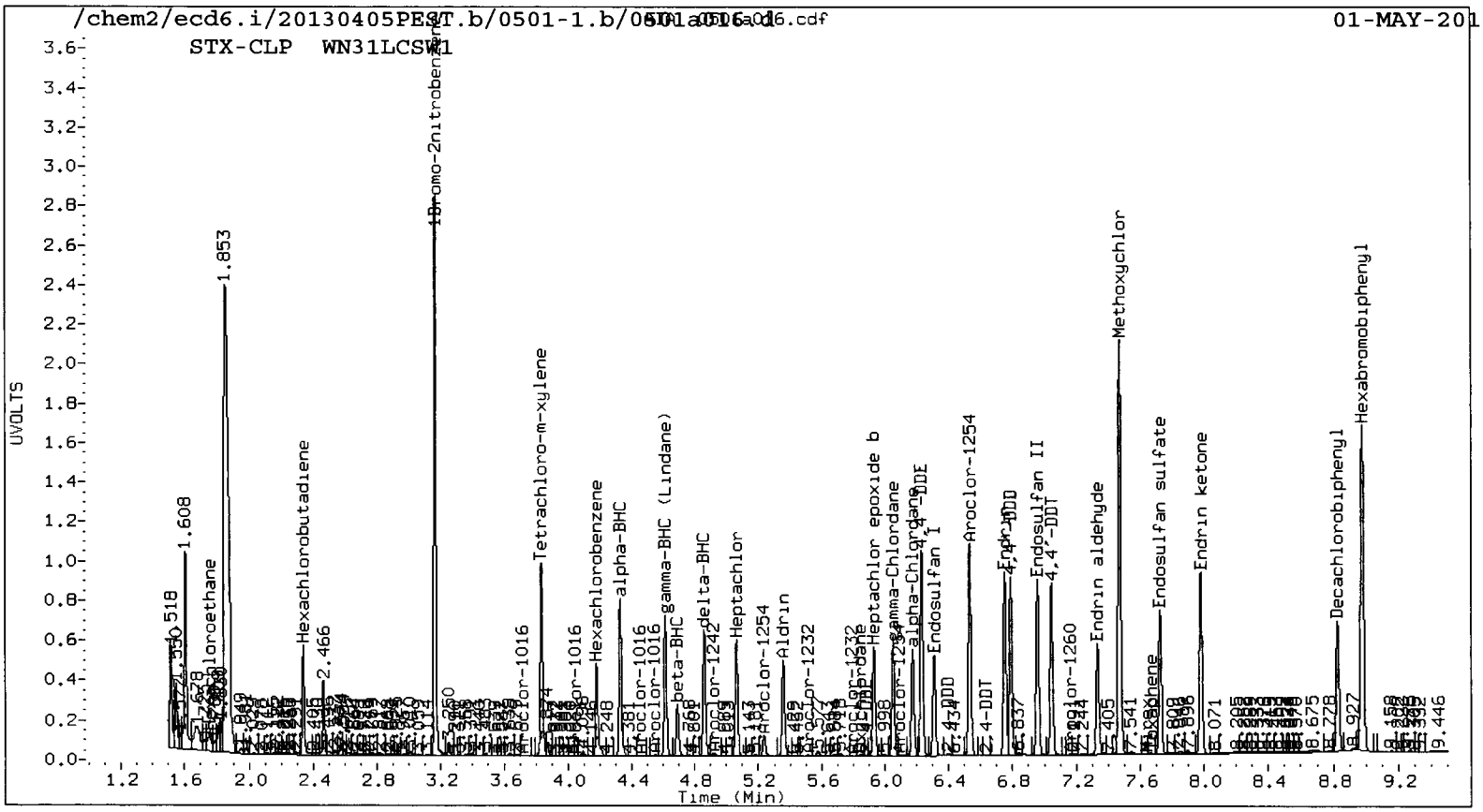
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4917542	-9.7
Hexabromobiphenyl	4807902	4244562	-11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28112154	29.5
Hexabromobiphenyl	7681727	11153781	45.2

* 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	7.047	0.035	2001729	732.8	1	7.342	-0.002	49755	4.9
Toxaphene	2	---			0.000	2	7.676	0.008	167385	10.9
Toxaphene	3	7.335	0.014	1363078	436.7	3	7.893	-0.006	4800359	293.0
Toxaphene	4	7.639	-0.005	9429	3.0	4	8.325	-0.041	15191143	1283.2
Toxaphene	5	7.667	-0.018	14035	6.8	5	8.425	0.020	147852	9.9
Toxaphene	6	7.981	0.014	2190527	1228.3	NS	---			----
Total STX-CLPAve (5 peaks): 481.525						Total CLP2Ave (5 peaks): 320.364				RPD = 40*
Corrected Ave (4 peaks): 294.834						Corrected Ave (4 peaks): 79.659				RPD = 115*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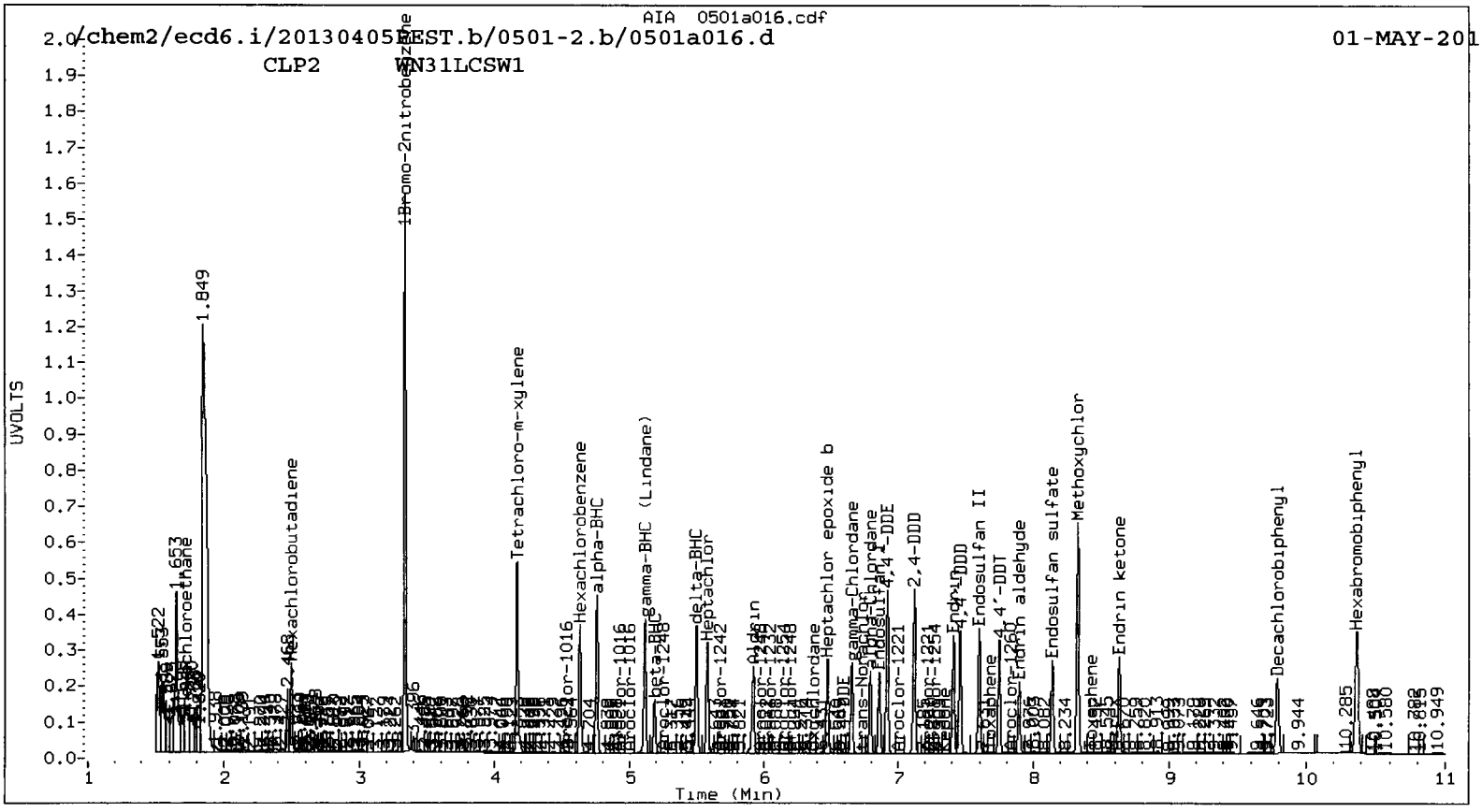
UVOLTS
Time (Min)
1.853
1.608
Hexachlorobutadiene
2.466
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
4,4'-DDD
2,4'-DDT
Aroclor-1254
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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01-MAY-201
CLP2 WN31LCSW1
UVOLTS
Time (Min)
1.849
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
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

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a017.d ARI ID: WN31LCSDW1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a017.d Client ID: WN31LCSDW1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 18:11
Compound Sublist: wpest Report Date: 05/03/2013 10:46
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

05/06/13

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	4673500	3.332	0.000	26636720	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	-0.001	1697262	4.754	-0.002	10179736	16.5115	15.7047	5.0	alpha-BHC
4.689	0.002	628852	5.186	0.001	3598680	15.2698	14.2389	7.0	beta-BHC
4.860	0.002	1478513	5.499	0.000	8521223	16.1600	15.4651	4.4	delta-BHC
4.614	-0.001	1564491	5.114	-0.003	8788079	16.8634	15.4033	9.0	gamma-BHC (Lindane)
5.063	-0.002	1371347	5.579	-0.002	7695783	15.4226	14.5465	5.8	Heptachlor
5.358	-0.002	1167335	5.918	-0.003	6394939	13.3814	13.2586	0.9	Aldrin
5.933	-0.003	1312136	6.472	-0.004	6697539	16.4562	16.0284	2.6	Heptachlor epoxide b
6.310	-0.005	1227799	6.860	-0.003	5818812	16.7806	15.9736	4.9	Endosulfan I
6.532	-0.005	2600294	7.117	-0.004	11727847	33.6986	32.0754	4.9	Dieldrin MN
6.232	-0.003	2436470	6.918	-0.003	11588953	38.5384	31.1175	21.3	4,4'-DDE
6.752	-0.005	2243197	7.407	-0.003	8915131	34.0752	29.1283	15.7	Endrin
6.957	-0.004	2192660	7.595	-0.003	9060268	32.5076	26.9520	18.7	Endosulfan II
6.789	-0.002	2146459	7.455	-0.003	9102057	34.1976	28.1002	19.6	4,4'-DDD
7.725	-0.005	1832138	8.138	-0.003	7364465	30.8097	26.3813	15.5	Endosulfan sulfate
7.046	-0.003	2100107	7.743	-0.002	8356272	33.3856	28.4187	16.1	4,4'-DDT
7.470	-0.004	5009640	8.325	-0.006	16202318	158.7780	132.9335	17.7	Methoxychlor
7.980	-0.005	2289263	8.629	-0.003	7437983	30.6596	26.0491	16.3	Endrin ketone
7.334	-0.004	1176225	7.893	-0.003	4498574	21.2335	16.9675	22.3	Endrin aldehyde
6.052	-0.003	1363920	6.654	-0.003	6711468	16.7355	15.9603	4.7	gamma-Chlordane
6.176	-0.004	1294157	6.792	-0.003	6077725	16.5093	15.6636	5.3	alpha-Chlordane
2.339	-0.002	948990	2.495	-0.002	4489057	8.7725	8.7987	0.3	Hexachlorobutadiene
4.180	0.001	1133726	4.629	0.000	9425489	15.1362	15.7856	4.2	Hexachlorobenzene
5.850	0.010	10754	6.399	0.014	30351	0.1620	0.0882	59.0*	Oxychlordane
5.886	-0.025	1180	6.590	-0.040	67998	0.0236	0.2689	167.7*	2,4-DDE
----			6.732	-0.009	65945	0.0000	0.1526	---	trans-Nonachlor
6.395	-0.002	22465	7.117	0.002	11727847	0.5137	51.7432	196.1*	2,4-DDD
6.634	-0.002	14464	----			0.2893	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.667	0.014	15941	----			0.3193	0.0000	---	Mirex
8.978	-0.001	4243140	10.365	-0.001	11269576	80.0000	80.0000	0.0	Hexabromobiphenyl
1.755	0.001	21611	1.721	-0.011	9122539	0.0000	0.0000	---	Hexachloroethane
6.578	-0.003	2675	7.343	0.007	89508	0.0000	0.0000	---	Kepone
3.836	0.000	1928672	4.166	-0.003	11998427	27.4341	25.4668	7.4	Tetrachloro-m-xylen
8.828	-0.003	1495082	9.792	-0.003	5733485	24.1389	21.4581	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	68.6	63.7	63.7	52-100
Decachlorobiphenyl	60.3	53.6	53.6~	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	851880.4	728206.9	728206.9~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	834641.0	710468.5	710468.5~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

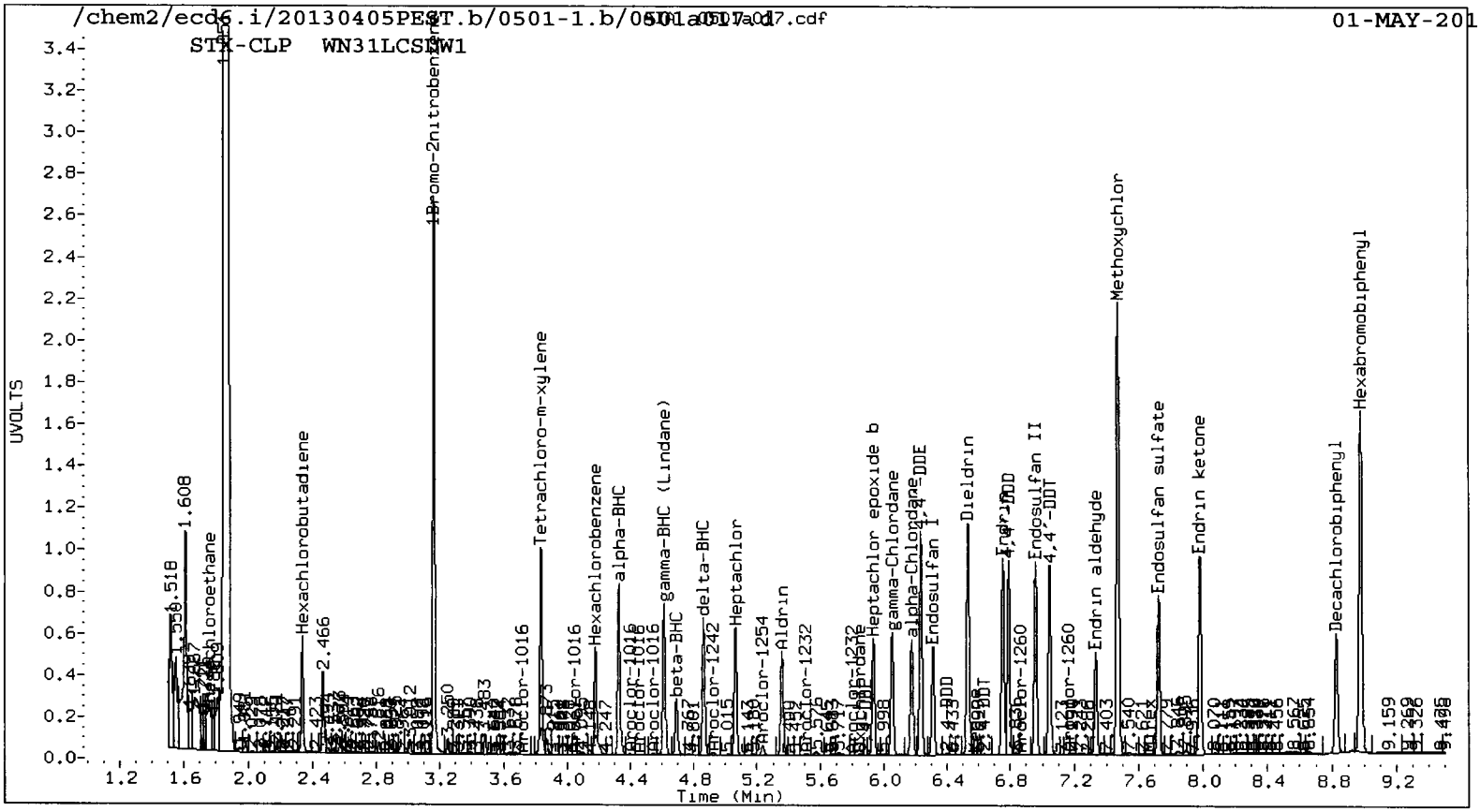
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4673500	-14.2
Hexabromobiphenyl	4807902	4243140	-11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26636720	22.7
Hexabromobiphenyl	7681727	11269576	46.7

* 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
Toxaphene	1	7.046	0.034	2100107	769.1	1	7.343	-0.001	89508	8.6
Toxaphene	2	---			0.000	2	7.676	0.008	203087	13.1
Toxaphene	3	7.334	0.014	1176225	377.0	3	7.893	-0.006	4498574	271.8
Toxaphene	4	7.667	0.022	15941	5.1	4	8.325	-0.041	16202318	1354.5
Toxaphene	5	---			0.000	5	8.425	0.019	216359	14.3
Toxaphene	6	7.980	0.014	2289263	1284.1	NS	---			----
Total STX-CLPAve (4 peaks): 608.816						Total CLP2Ave (5 peaks): 332.467				RPD = 59*
Corrected Ave (3 peaks): 383.727						Corrected Ave (4 peaks): 76.950				RPD = 133*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UVOLTS
Time (Min)
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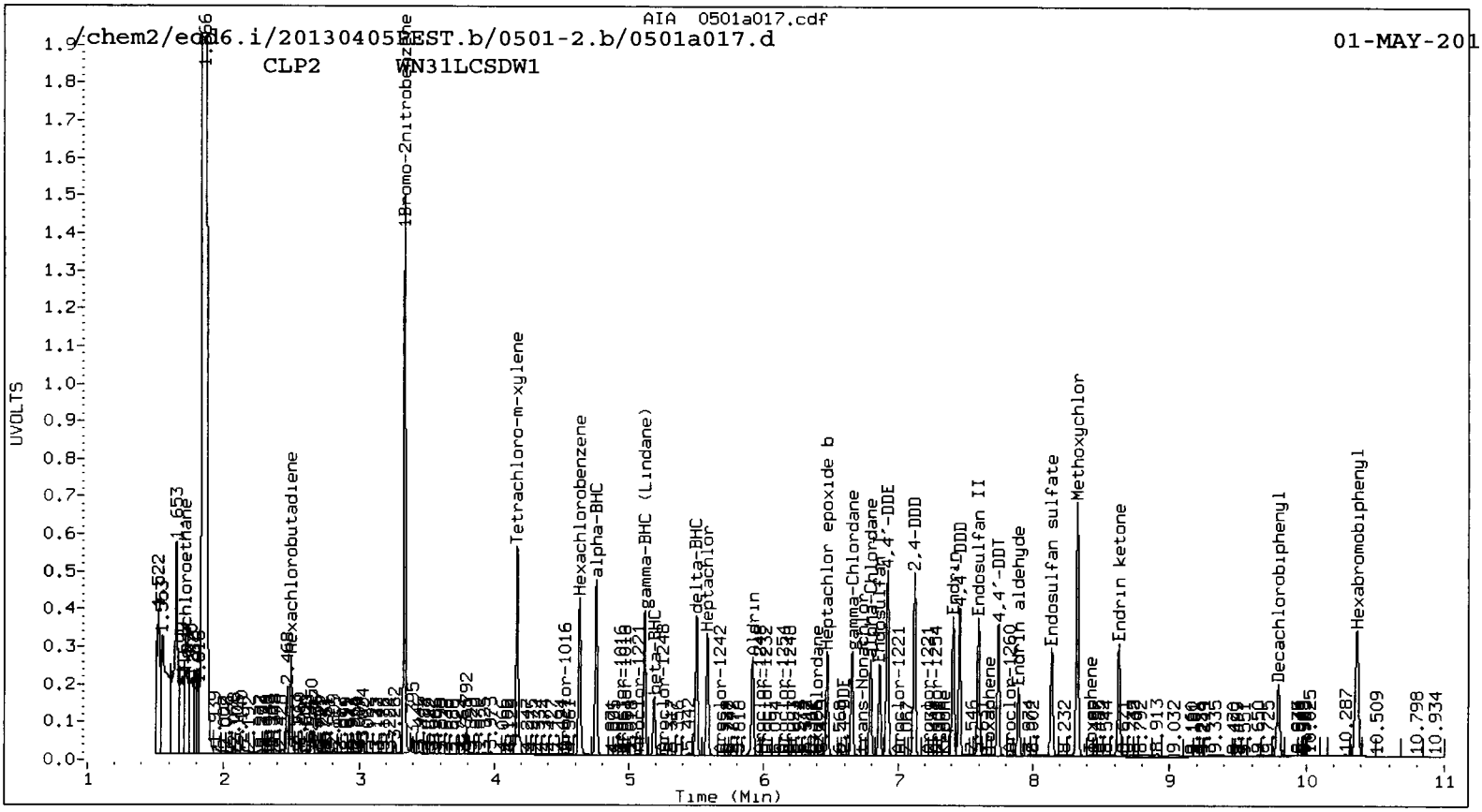
1.608
Hexachlorobutadiene
2.466
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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01-MAY-201
CLP2 WN31LCSDW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
2,4-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a019.d ARI ID: WN31B
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a019.d Client ID: ES-MH-001-20130424-
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 18:48
Compound Sublist: wpest Report Date: 05/03/2013 10:44
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

05/06/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.002	4799509	3.332	0.000	25982328	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.314	-0.016	4479	4.752	-0.005	54649	0.0424	0.0864	68.3*	alpha-BHC
4.682	-0.006	2314	5.207	0.022	20619	0.0547	0.0836	41.8*	beta-BHC
4.842	-0.016	5851	5.508	0.009	67569	0.0623	0.1257	67.5*	delta-BHC
4.606	-0.009	2154	5.092	-0.024	1156009	0.0226	2.0772	195.7*	gamma-BHC (Lindane)
5.060	-0.005	3729	5.587	0.005	23599	0.0408	0.0457	11.3	Heptachlor
5.369	0.008	7876	5.949	0.028	76928	0.0879	0.1635	60.1*	Aldrin
5.967	0.031	4687	6.464	-0.012	174467	0.0572	0.4280	152.8*	Heptachlor epoxide b
6.338	0.023	2907	6.835	-0.027	35150	0.0387	0.0989	87.5*	Endosulfan I
6.507	-0.030	2072	7.143	0.022	5777	0.0261	0.0162	47.0*	Dieldrin
6.235	0.000	25139	6.916	-0.005	19967	0.3872	0.0550	150.3*	4,4'-DDE
6.757	0.001	4854	7.419	0.009	23621	0.0645	0.0700	8.3	Endrin
6.957	-0.003	2305	7.570	-0.029	21427	0.0299	0.0578	63.7*	Endosulfan II
6.801	0.010	5669	7.450	-0.007	7941	0.0789	0.0222	112.1*	4,4'-DDD
7.719	-0.010	3600	8.153	0.013	57615	0.0529	0.1872	111.9*	Endosulfan sulfate
7.055	0.006	3884	7.746	0.000	19031	0.0540	0.0587	8.4	4,4'-DDT
7.465	-0.009	4332	8.309	-0.022	53852	0.1200	0.4008	107.8*	Methoxychlor
7.969	-0.016	11147	8.660	0.028	52963	0.1305	0.1683	25.3	Endrin ketone
7.346	0.008	8772	7.889	-0.006	11554	0.1384	0.0395	111.1*	Endrin aldehyde
6.034	-0.021	32764	6.668	0.010	248070	0.3915	0.6048	42.8*	gamma-Chlordane
----			6.795	0.000	20173	0.0000	0.0533	---	alpha-Chlordane
2.323	-0.018	26924	2.503	0.006	131373	0.2424	0.2640	8.5	Hexachlorobutadiene
4.178	-0.001	31064	4.612	-0.018	138867	0.4038	0.2384	51.5*	Hexachlorobenzene
5.831	-0.009	2572	6.400	0.016	42800	0.0339	0.1275	116.1*	Oxychlordane
5.872	-0.039	1062	6.616	-0.015	25051	0.0186	0.1016	138.2*	2,4-DDE
6.121	-0.041	1793	6.708	-0.033	109383	0.0198	0.2296	168.2*	trans-Nonachlor
6.400	0.003	2618	7.108	-0.007	30359	0.0523	0.1215	79.6*	2,4-DDD
6.652	0.016	3212	7.369	-0.034	9819	0.0562	0.0370	41.0*	2,4-DDT
----			7.503	0.038	7475	0.0000	0.0166	---	cis-Nonachlor
7.675	0.022	4904	8.610	-0.009	212968	0.0859	1.0378	169.4*	Mirex
8.976	-0.003	4854809	10.364	-0.003	12423269	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.001	7359	1.722	-0.010	2733502	0.0000	0.0000	---	Hexachloroethane
6.574	-0.007	1090	7.328	-0.008	2435	0.0000	0.0000	---	Kepone
3.835	-0.001	1707217	4.165	-0.003	9732936	23.6465	21.1786	11.0	Tetrachloro-m-xylene
8.826	-0.005	2061982	9.791	-0.005	8045574	29.0973	27.3150	6.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	59.1	52.9	52.9	52-100
Decachlorobiphenyl	72.7	68.3	68.3	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

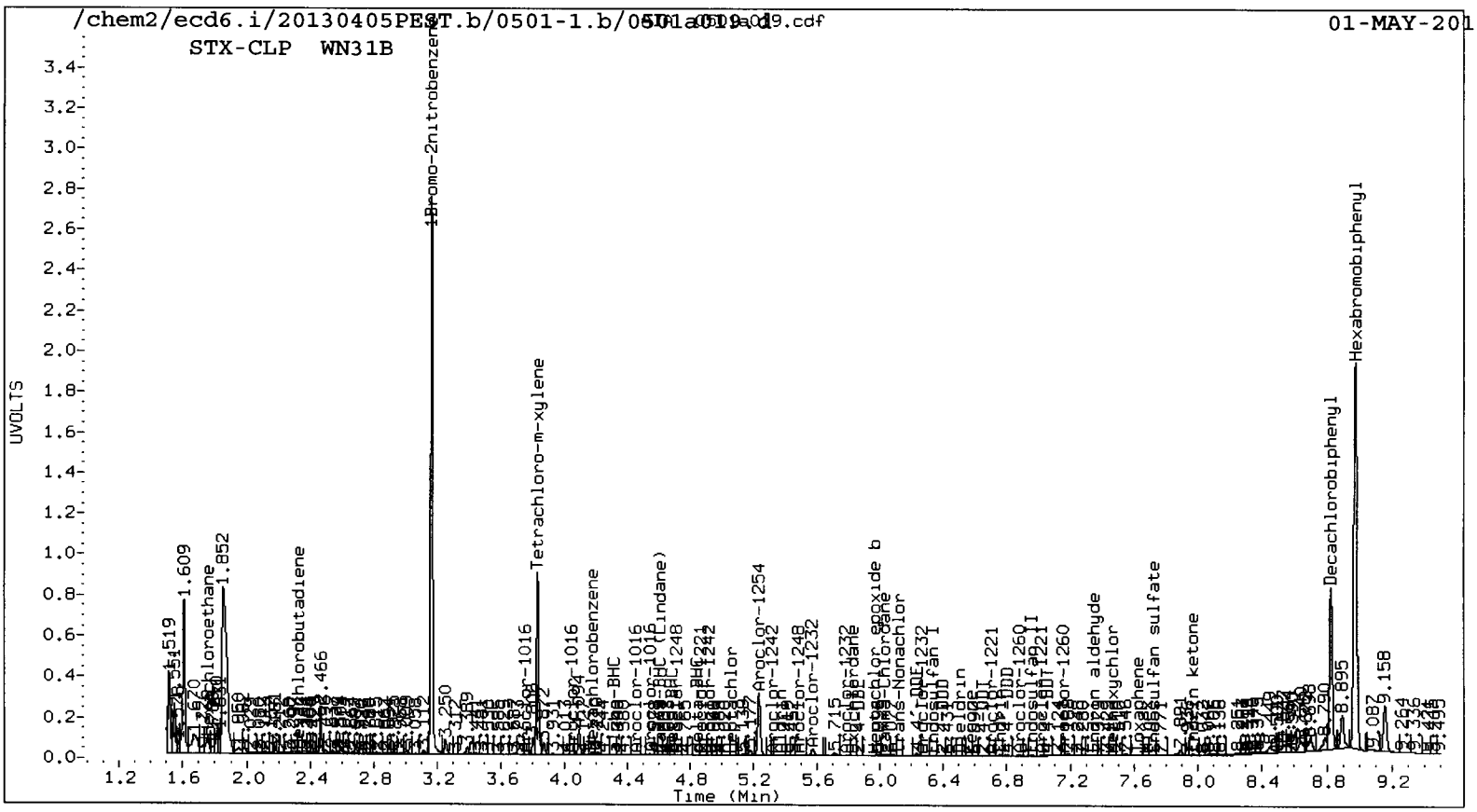
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4799509	-11.9
Hexabromobiphenyl	4807902	4854809	1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25982328	19.7
Hexabromobiphenyl	7681727	12423269	61.7

* 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
Toxaphene	1	7.023	0.011	2494	0.8	1	7.328	-0.016	2435	0.2
Toxaphene	2	7.055	-0.009	3884	1.8	2	7.677	0.009	23688	1.4
Toxaphene	3	7.346	0.026	8772	2.5	3	7.889	-0.009	11554	0.6
Toxaphene	4	7.620	-0.024	5921	1.6	4	8.414	0.047	31399	2.4
Toxaphene	5	7.675	-0.009	4904	2.1	5	---			0.0
Toxaphene	6	7.969	0.003	11147	5.5	NS	---			----
Total STX-CLPAve (6 peaks): 2.376						Total CLP2Ave (4 peaks): 1.154				RPD = 69*
Corrected Ave (5 peaks): 1.758						Corrected Ave (3 peaks): 0.745				RPD = 81*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STX-CLP WN31B
UVOLTS
Time (Min)
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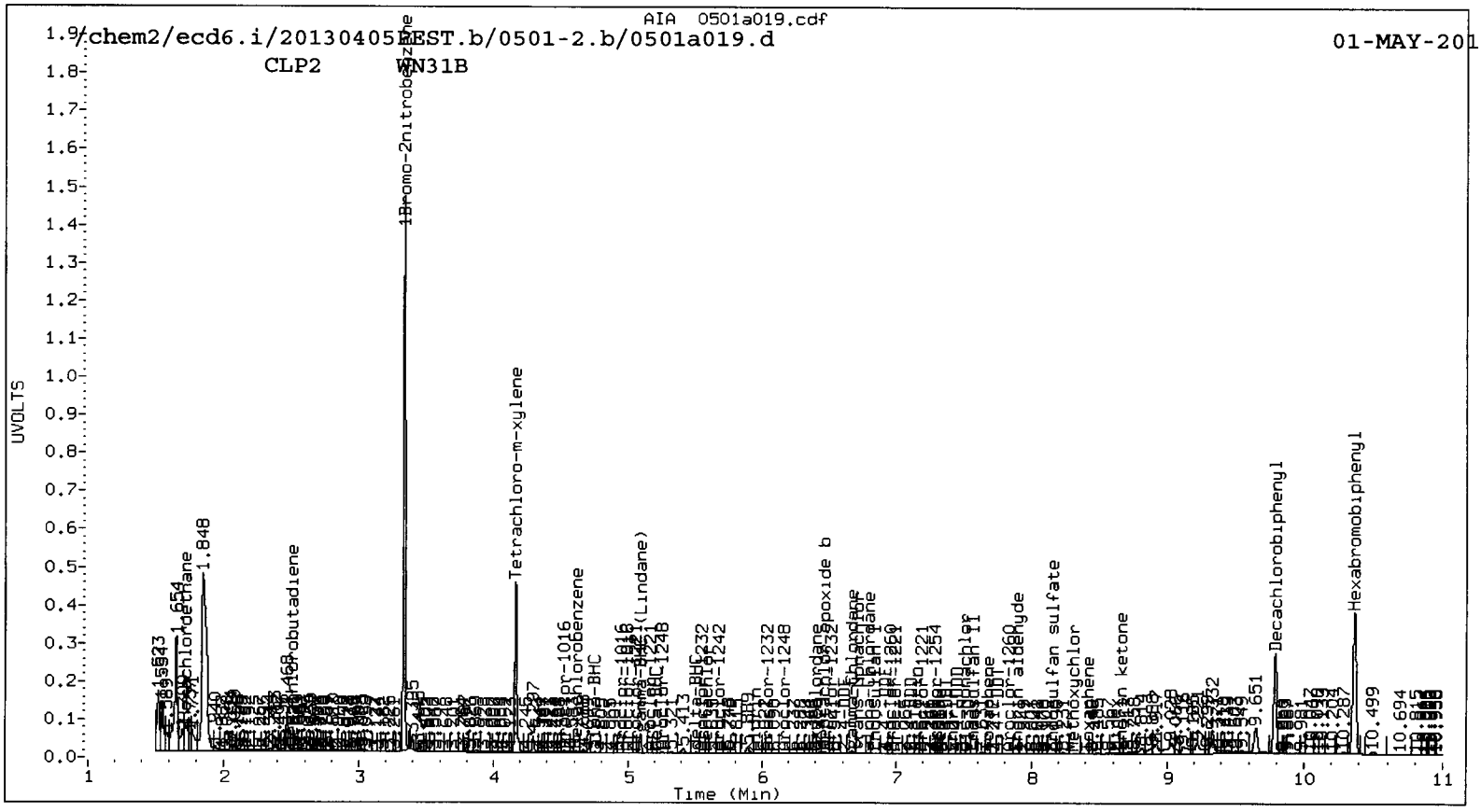
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl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CLP2 WN31B
UVOLTS
Time (Min)
1.848
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a022.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a022.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 19:44
Compound Sublist: INDA Report Date: 05/06/2013 13:26
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	4890379	3.332	0.000	28421146	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.327	-0.003	2136568	4.753	-0.003	13752194	19.8634	19.8840	0.1	alpha-BHC
4.687	0.000	789658	5.185	0.000	5080367	18.3242	18.8394	2.8	beta-BHC
4.858	-0.001	1908355	5.497	-0.002	11824279	19.9331	20.1125	0.9	delta-BHC
4.612	-0.003	1922585	5.112	-0.004	12068565	19.8042	19.8251	0.1	gamma-BHC (Lindane)
5.061	-0.005	1828852	5.578	-0.004	11239542	19.6557	19.9110	1.3	Heptachlor
5.356	-0.005	1797491	5.916	-0.004	10379711	19.6913	20.1691	2.4	Aldrin
5.930	-0.006	1664100	6.471	-0.005	9267379	19.9449	20.7860	4.1	Heptachlor epoxide b
6.308	-0.007	1492621	6.858	-0.004	8077685	19.4953	20.7824	6.4	Endosulfan I
6.531	-0.006	3215781	7.116	-0.005	16096287	39.8268	41.2590	3.5	Dieldrin
6.230	-0.005	2527244	6.917	-0.004	16397844	38.2014	41.2655	7.7	4,4'-DDE
6.750	-0.006	2665240	7.405	-0.005	12027778	37.4620	33.6710	10.7	Endrin
6.956	-0.005	2691434	7.595	-0.004	13323498	36.9216	33.9588	8.4	Endosulfan II
6.788	-0.002	2659739	7.455	-0.003	12887601	39.2099	34.0898	14.0	4,4'-DDD
7.724	-0.006	2340415	8.138	-0.003	10607037	36.4171	32.5561	11.2	Endosulfan sulfate
7.045	-0.004	2600043	7.742	-0.003	11331629	38.2457	33.0193	14.7	4,4'-DDT
7.471	-0.003	5880235	8.325	-0.006	21107167	172.4497	148.3784	15.0	Methoxychlor
7.980	-0.005	2912348	8.629	-0.003	11130857	36.0910	33.4002	7.7	Endrin ketone
7.333	-0.006	2218591	7.892	-0.003	10153145	37.0589	32.8116	12.2	Endrin aldehyde
6.050	-0.005	1677118	6.653	-0.004	9496319	19.6659	21.1650	7.3	gamma-Chlordane
6.174	-0.006	1602415	6.791	-0.004	8480376	19.5351	20.4836	4.7	alpha-Chlordane
2.339	-0.002	2190631	2.496	-0.001	11022730	19.3523	20.2484	4.5	Hexachlorobutadiene
4.179	-0.001	1540640	4.628	-0.002	13460017	19.6566	21.1272	7.2	Hexachlorobenzene
8.980	0.001	4585677	10.365	-0.001	13152986	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2815161	4.165	-0.004	18475508	38.2679	36.7525	4.0	Tetrachloro-m-xylen
8.827	-0.004	2333163	9.791	-0.005	10010984	34.8564	32.1020	8.2	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	95.7	91.9	91.9~	115- 0
Decachlorobiphenyl	87.1	80.3	80.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

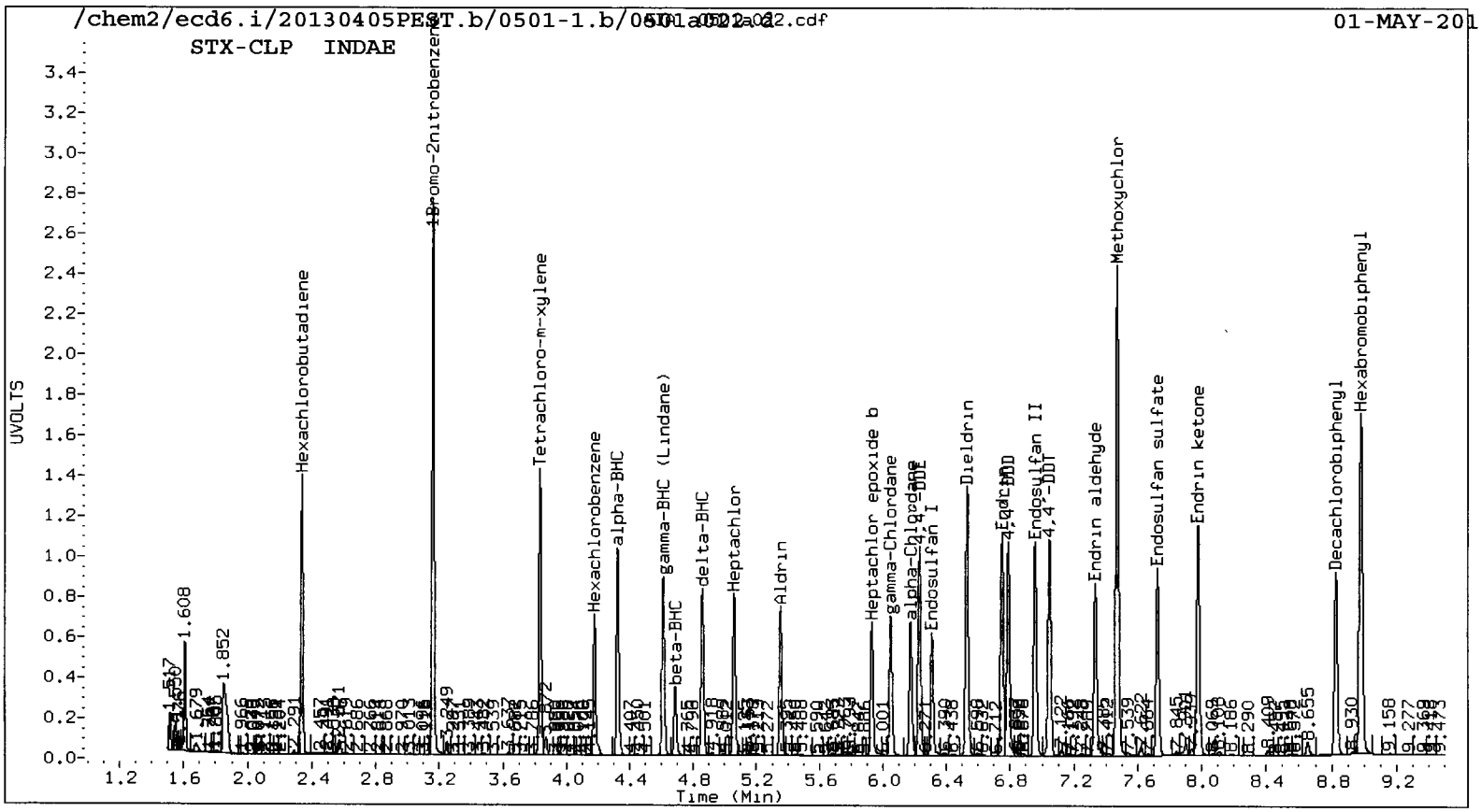
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4890379	-10.2
Hexabromobiphenyl	4807902	4585677	-4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28421146	31.0
Hexabromobiphenyl	7681727	13152986	71.2

* 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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AIA 0501a022.cdf
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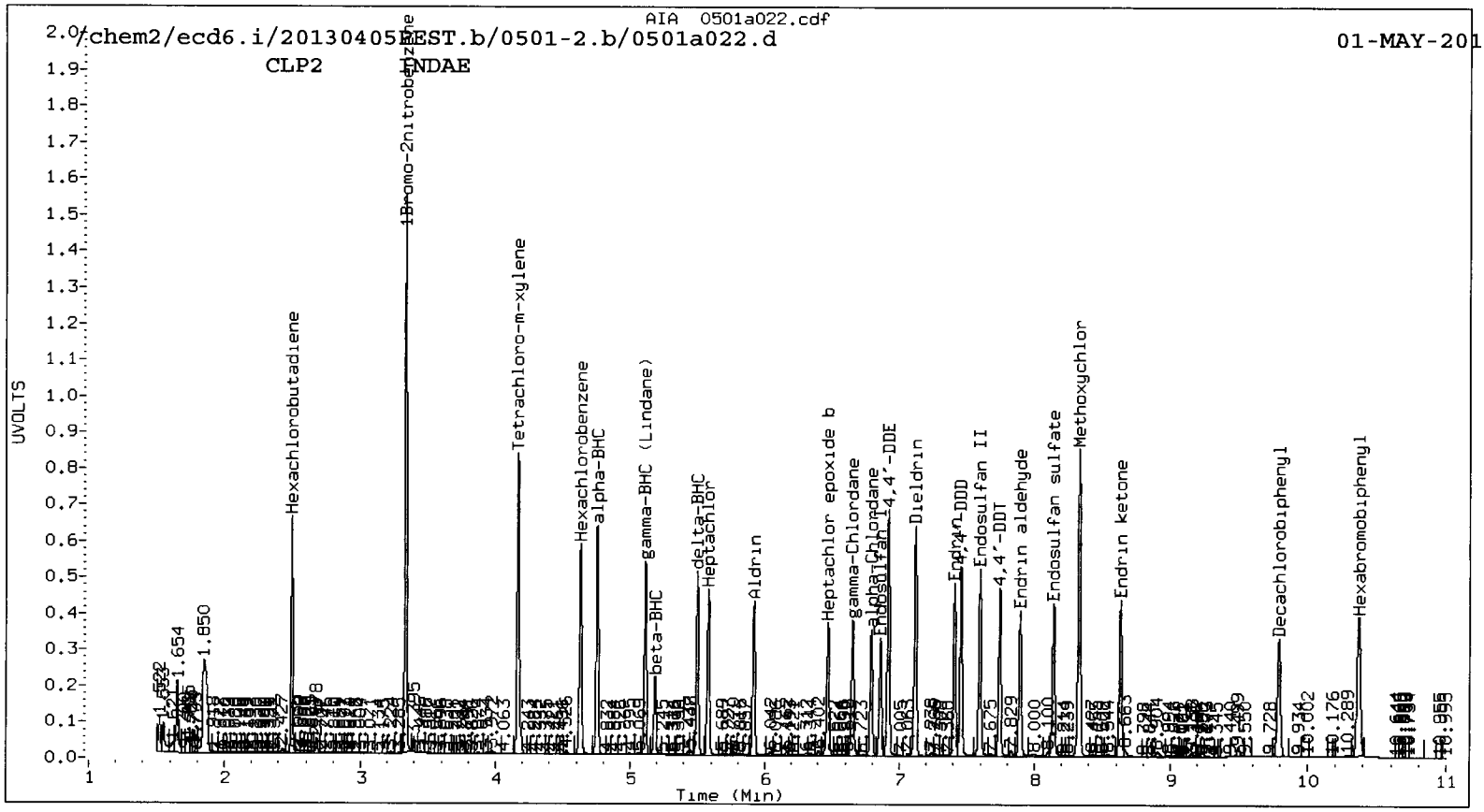
STX-CLP INDAE
UVOLTS
Time (Min)
1.608
1.852
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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01-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
1.654
1.850
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0501-1.b/0501a023.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0501-2.b/0501a023.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 01-MAY-2013 20:01
Compound Sublist: TOXAPH Report Date: 05/06/2013 13:26
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
3.163	-0.002	5000263	3.332	0.000	29098114	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.981	0.001	4838075	10.366	0.000	13831115	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	2733200	4.166	-0.003	18410584	36.3373	35.7713	1.6	Tetrachloro-m-xylen
8.828	-0.003	2455385	9.792	-0.004	10510041	34.7686	32.0500	8.1	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	90.8	89.4	89.4~	150- 0
Decachlorobiphenyl	86.9	80.1	80.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

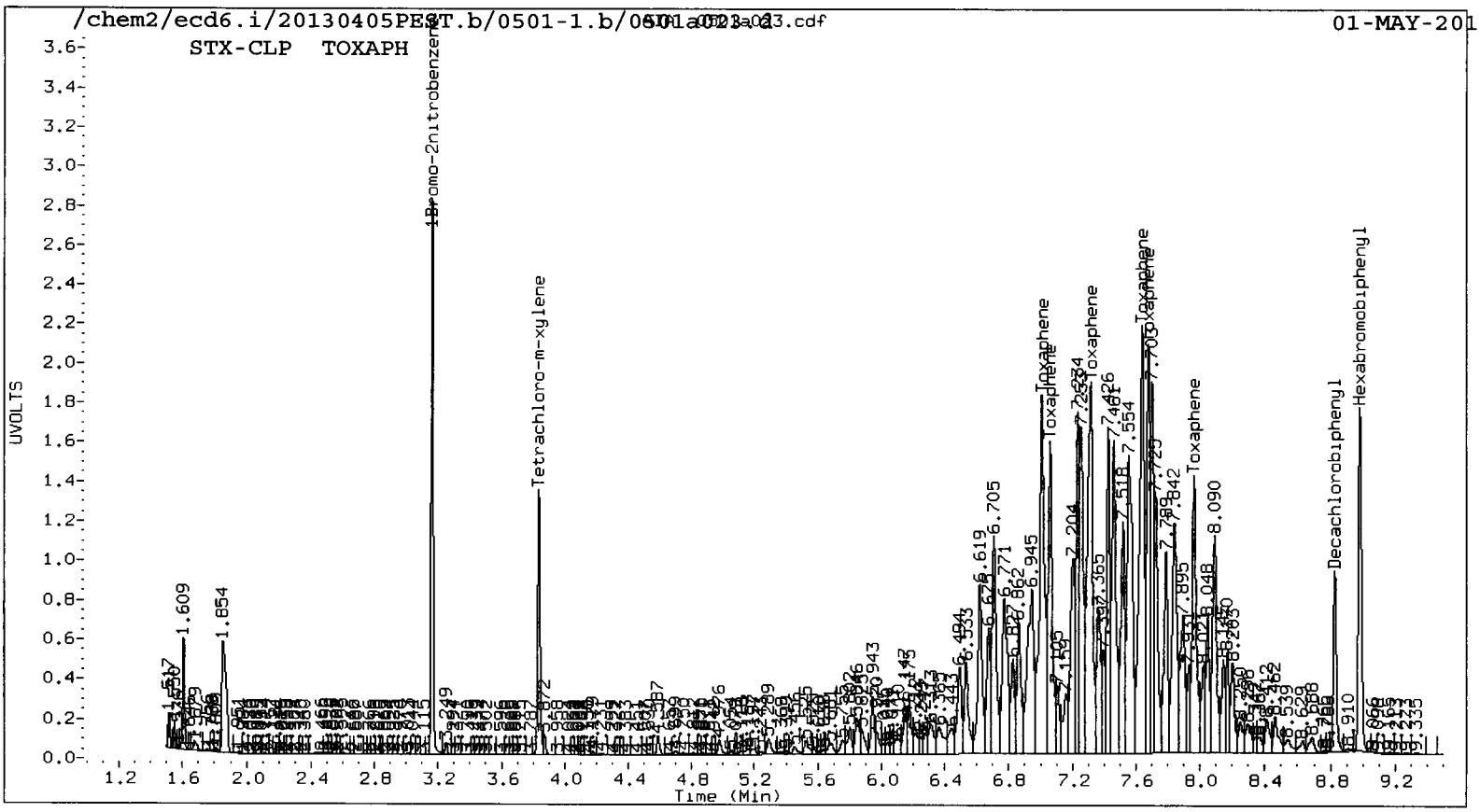
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5000263	-8.2
Hexabromobiphenyl	4807902	4838075	0.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	29098114	34.1
Hexabromobiphenyl	7681727	13831115	80.1

* 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
Toxaphene	1	7.007	-0.005	8044303	2583.8	1	7.341	-0.003	28522144	2245.1
Toxaphene	2	7.059	-0.005	5562578	2625.3	2	7.667	-0.001	41522865	2184.3
Toxaphene	3	7.316	-0.005	8935904	2511.9	3	7.897	-0.002	44642700	2197.4
Toxaphene	4	7.641	-0.003	9142529	2548.1	4	8.365	-0.001	31408668	2139.5
Toxaphene	5	7.680	-0.004	6039156	2550.4	5	8.404	-0.002	40216785	2163.5
Toxaphene	6	7.962	-0.004	5086544	2502.3	NS	---			----
Total STX-CLPAve (6 peaks): 2553.630						Total CLP2Ave (5 peaks): 2185.942				RPD = 16
Corrected Ave (6 peaks): 2553.630						Corrected Ave (5 peaks): 2185.942				RPD = 16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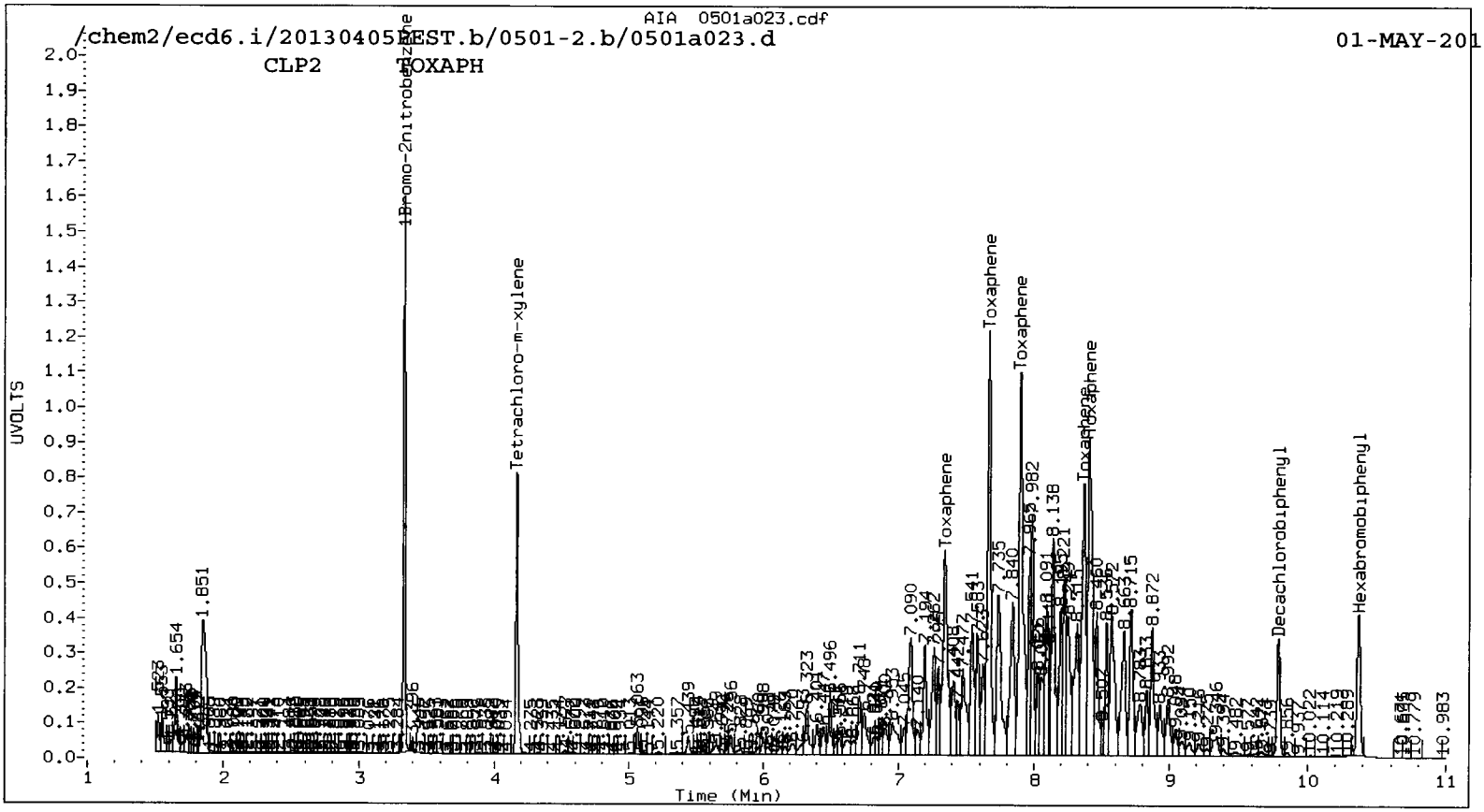
01-MAY-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0501a023.cdf
01-MAY-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN27/WN31 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: 05/7/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / 72%	Method Blank in Control?	Y / N / ____
Retention times within Windows?	Y / N / ____	LCS / LCSD Recovery in Control?	Y / N / ____
CCAL met %D Criteria?	Y / N / ____	LCS / LCSD RPD ≤30%?	NA / X
Surrogate Recovery in Control?	Y / N / ____	MS / MSD Recovery in Control?	Y / N / ____
Internal STD. within 50-200%?	NA / Y / N / ____	MS / MSD RPD ≤30%?	NA / Y
Manual Integrations?	Y / N / ____	Samples Diluted?	Y / N / 10x, 200x
Integration Summary?	Y / N / ____	Special Analysis Request?	Y / N / ____

Detail problems, corrective actions and/or other pertinent information below

- All samples were run @10x dilution due to very bad matrix.
- Opening CCALs: Methoxychlor failed on CCP_2, okay on CCP, CCP, values reported. Toxaphene is high on CCP, okay on CCP_2, not found in the samples.
- Closing CCALs: DDT breakdown - 72%, CCALs failed, closing Toxaphene were not run due to injection failure.
- Samples were re-run @200x dilution. Breakdown is okay. Some analytes failed on CCP_2 column okay on CCP.

(Review 1) Analyst: YZ **Date:** 5/10/13

(Review 2) Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/07/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 109584 Column Type: STX CLP

Column 2 Serial No.: 109 4709 Column Type: STX CLP2

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2061-1,2	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0507-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	07-MAY-2013 12:31	0507a005.d	1	DS	
2	07-MAY-2013 12:49	0507a006.d	1	INDAE	
3	07-MAY-2013 13:07	0507a007.d	1	TOXAPH	
4	07-MAY-2013 13:24	0507a008.d	1	WN79MBW1	WN79MBW1
5	07-MAY-2013 13:42	0507a009.d	1	WN79LCSW1	WN79LCSW1
6	07-MAY-2013 14:00	0507a010.d	1	WN79QLS	
7	07-MAY-2013 14:19	0507a011.d	1	WN79B	GW-7A-010-01-181
8	07-MAY-2013 14:37	0507a012.d	1	WN79C	GW-7A-002-01-181
9	07-MAY-2013 14:54	0507a013.d	1	WN79D	GW-7A-022-01-181
10	07-MAY-2013 15:12	0507a014.d	1	WN79DMS	GW-7A-022-01-18 MS
11	07-MAY-2013 15:30	0507a015.d	1	WN79DMSD	GW-7A-022-01-18 MSD
12	07-MAY-2013 15:48	0507a016.d	1	WN79E	GW-7A-007-01-181
13	07-MAY-2013 16:06	0507a017.d	1	WN79F	GW-7A-015-01-181
14	07-MAY-2013 16:23	0507a018.d	1	WN79G	GW-7A-015-02-181
15	07-MAY-2013 16:41	0507a019.d	1	WN79H	GW-7A-011-01-181
16	07-MAY-2013 16:59	0507a020.d	1	WN79I	GW-7A-008-01-181
17	07-MAY-2013 17:17	0507a021.d	1	WN79J	GW-7A-018-01-181
18	07-MAY-2013 17:35	0507a022.d	1	DS	
19	07-MAY-2013 17:52	0507a023.d	1	INDAE	
20	07-MAY-2013 18:10	0507a024.d	1	TOXAPH	
21	07-MAY-2013 18:28	0507a025.d	1	WN79K	GW-7A-013-01-181
22	07-MAY-2013 18:46	0507a026.d	1	WN79L	GW-7A-003-01-181
23	07-MAY-2013 19:04	0507a027.d	1	WN79M	GW-7A-004-01-181
24	07-MAY-2013 19:21	0507a028.d	1	WN79N	GW-7A-012-01-181
25	07-MAY-2013 19:39	0507a029.d	1	WN79O	WR-7A-FB-01-181
26	07-MAY-2013 19:57	0507a030.d	1	WN79P	WR-7A-EB-01-181
27	07-MAY-2013 20:15	0507a031.d	1	WO09MBW1	
28	07-MAY-2013 20:33	0507a032.d	1	WO09LCSW1	
29	07-MAY-2013 20:50	0507a033.d	1	WO09LCSDW1	
30	07-MAY-2013 21:08	0507a034.d	1	WO09QLS	
31	07-MAY-2013 21:26	0507a035.d	1	WO09A	
32	07-MAY-2013 21:44	0507a036.d	1	WO09B	
33	07-MAY-2013 22:02	0507a037.d	1	DS	
34	07-MAY-2013 22:19	0507a038.d	1	INDAE	
35	07-MAY-2013 22:37	0507a039.d	1	TOXAPH	
36	07-MAY-2013 22:55	0507a040.d	1	WO14MBS1	
37	07-MAY-2013 23:13	0507a041.d	1	WO14LCSS1	
38	07-MAY-2013 23:31	0507a042.d	1	WO14LCSDS1	
39	07-MAY-2013 23:48	0507a043.d	1	WO14QLS	
40	08-MAY-2013 00:06	0507a044.d	1	WO14A	
41	08-MAY-2013 00:24	0507a045.d	1	WO14B	
42	08-MAY-2013 00:42	0507a046.d	1	WM19MBW1	
43	08-MAY-2013 01:00	0507a047.d	1	WM19LCSS1	
44	08-MAY-2013 01:17	0507a048.d	1	WM19N	
45	08-MAY-2013 01:35	0507a049.d	1	DS	
46	08-MAY-2013 01:53	0507a050.d	1	INDAE	
47	08-MAY-2013 02:11	0507a051.d	1	TOXAPH	
48	08-MAY-2013 02:28	0507a052.d	1	WN27MBS1	
49	08-MAY-2013 02:46	0507a053.d	1	WN27LCSS1	
50	08-MAY-2013 03:04	0507a054.d	1	WN27LCSDS1	
51	08-MAY-2013 03:22	0507a055.d	1	WN27QLS	
52	08-MAY-2013 03:40	0507a056.d	10	WN27A	10
53	08-MAY-2013 03:58	0507a057.d	10	WN27AMS	10
54	08-MAY-2013 04:15	0507a058.d	10	WN27AMSD	10
55	08-MAY-2013 04:33	0507a059.d	10	WN31A	10
56	08-MAY-2013 04:51	0507a060.d	1	WN27MBS1	
57	08-MAY-2013 05:09	0507a061.d	1	WN27LCSS1	
58	08-MAY-2013 05:27	0507a062.d	1	WN27LCSDS1	
59	08-MAY-2013 05:44	0507a063.d	1	WN27QLS	
60	08-MAY-2013 06:02	0507a064.d	1	DS	
61	08-MAY-2013 06:20	0507a065.d	1	INDAE	

Every li
Start a

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a050.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a050.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 08-MAY-2013 01:53
Report Date: 05/10/2013 13:04
Matrix: NONE
Dilution Factor: 1.000

V2 5/10/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.161	-0.004	5547890	3.330	-0.002	29986568	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2418645	4.751	-0.006	14416553	19.8209	19.7564	0.3	alpha-BHC
4.687	-0.001	904233	5.183	-0.002	5474400	18.4961	19.2408	3.9	beta-BHC
4.857	-0.001	2032772	5.495	-0.004	12057554	18.7163	19.4386	3.8	delta-BHC
4.610	-0.005	2144033	5.110	-0.006	12446556	19.4679	19.3787	0.5	gamma-BHC (Lindane)
5.058	-0.007	2031484	5.575	-0.007	11632788	19.2458	19.5318	1.5	Heptachlor
5.352	-0.008	1980420	5.913	-0.008	11077067	19.1240	20.4005	6.5	Aldrin
5.927	-0.009	1791819	6.467	-0.008	9733400	18.9304	20.6915	8.9	Heptachlor epoxide b
6.304	-0.010	1607986	6.855	-0.008	8805172	18.5130	21.4714	14.8	Endosulfan I
6.527	-0.010	3561068	7.113	-0.008	17445661	38.8762	42.3834	8.6	Dieldrin
6.227	-0.008	2782805	6.914	-0.007	17921728	37.0792	42.7459	14.2	4,4'-DDE
6.746	-0.011	2916193	7.402	-0.008	12772301	36.7333	33.3745	9.6	Endrin
6.953	-0.008	3003266	7.591	-0.007	14227986	36.9215	33.8496	8.7	Endosulfan II
6.788	-0.002	2983739	7.454	-0.004	14334270	39.4191	35.3919	10.8	4,4'-DDD
7.721	-0.009	2604282	8.134	-0.006	11424642	36.3153	32.7308	10.4	Endosulfan sulfate
7.044	-0.005	2788808	7.740	-0.005	11955180	36.7629	32.5168	12.3	4,4'-DDT
7.470	-0.003	6273476	8.323	-0.008	21394519	164.8788	140.3845	16.0	Methoxychlor
7.976	-0.009	3239815	8.626	-0.006	11906819	35.9803	33.3497	7.6	Endrin ketone
7.330	-0.008	2353630	7.889	-0.007	10673191	35.2324	32.1956	9.0	Endrin aldehyde
6.047	-0.008	1885103	6.650	-0.007	9995906	19.4850	21.1154	8.0	gamma-Chlordane
6.171	-0.009	1762086	6.788	-0.007	9250561	18.9357	21.1774	11.2	alpha-Chlordane
2.338	-0.003	2503043	2.495	-0.002	10761887	19.4915	18.7372	3.9	Hexachlorobutadiene
4.179	-0.001	1727106	4.626	-0.003	14052534	19.4241	20.9057	7.3	Hexachlorobenzene
8.981	0.002	5116989	10.362	-0.004	14091218	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	3165691	4.164	-0.005	19331755	37.9328	36.4482	4.0	Tetrachloro-m-xylen
8.825	-0.006	2527943	9.787	-0.008	10916382	33.8449	32.6746	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.8	91.1	91.1~	115- 0
Decachlorobiphenyl	84.6	81.7	81.7~	115- 0

~ Indicates recovery outside QC Limits

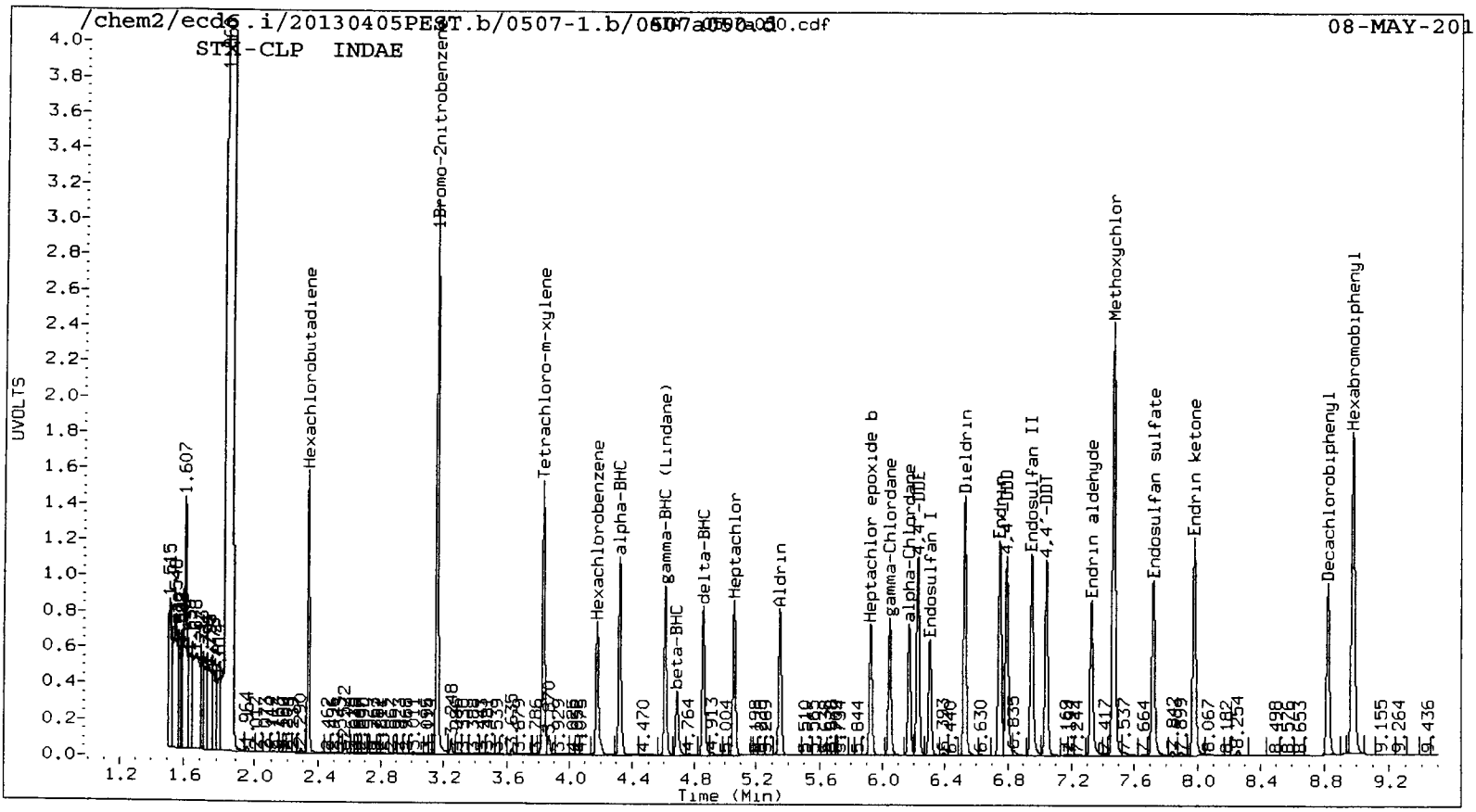
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	5547890	1.8
Hexabromobiphenyl	4807902	5116989	6.4

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	29986568	38.2
Hexabromobiphenyl	7681727	14091218	83.4

* 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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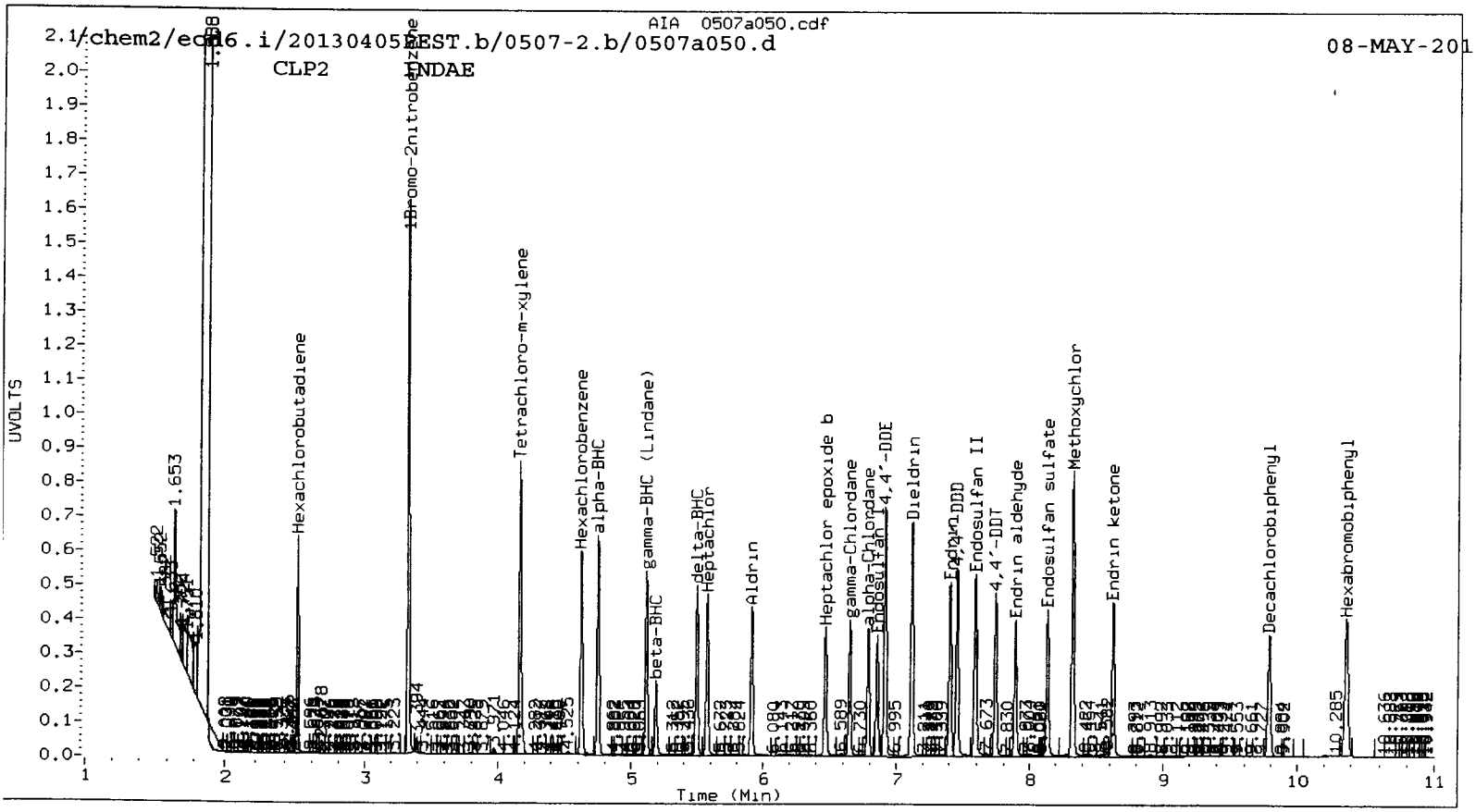
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.607
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
1.653
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/14/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a051.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a051.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 08-MAY-2013 02:11
Report Date: 05/10/2013 13:04
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	-0.004	4713362	3.330	-0.002	25685217	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.981	0.001	4355363	10.361	-0.005	12281080	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	3027111	4.165	-0.004	19352623	42.6945	42.5979	0.2	Tetrachloro-m-xylen
8.824	-0.007	2664426	9.786	-0.009	11696123	41.9102	40.1685	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	106.7	106.5	106.5~	150- 0
Decachlorobiphenyl	104.8	100.4	100.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

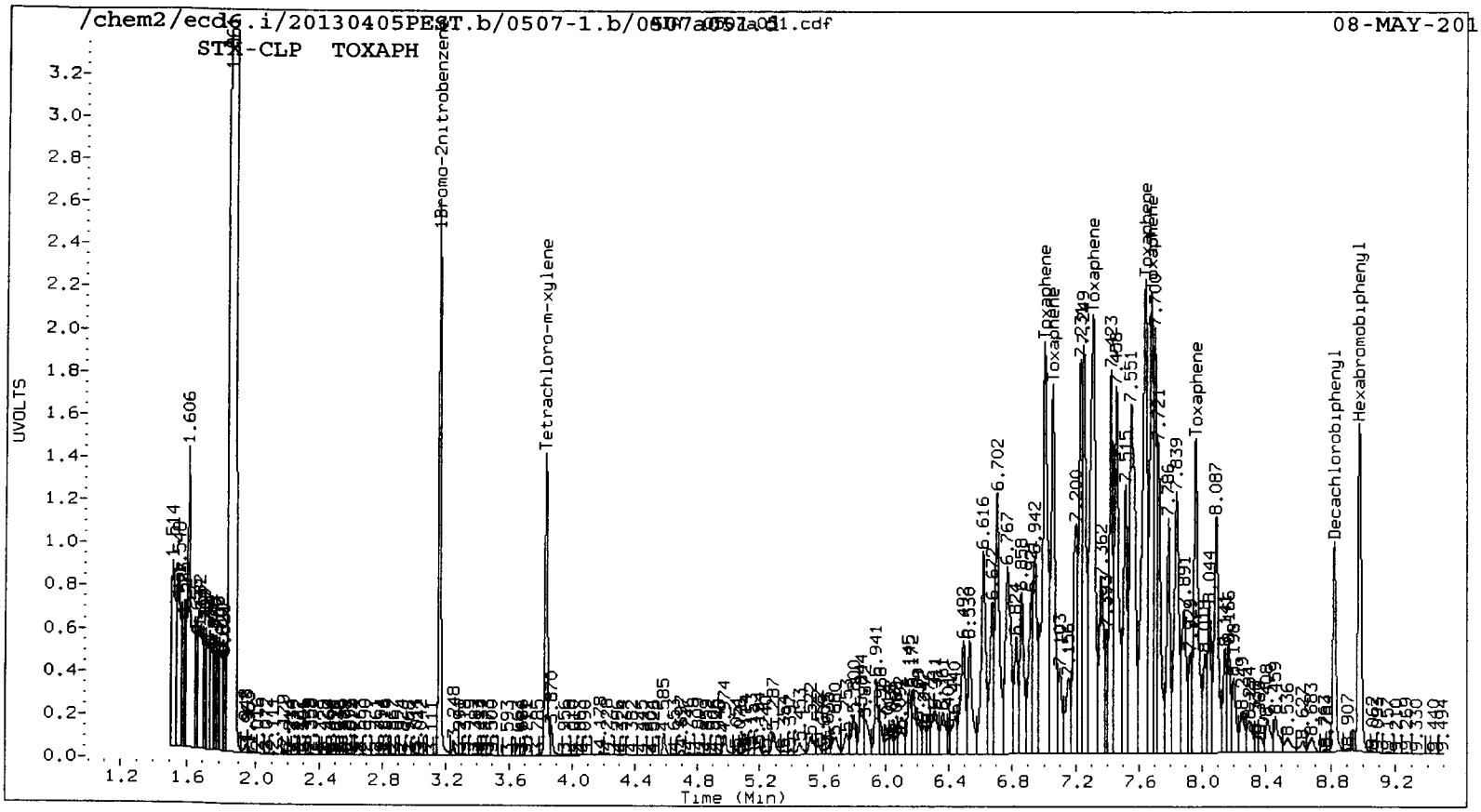
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4713362	-13.5
Hexabromobiphenyl	4807902	4355363	-9.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25685217	18.4
Hexabromobiphenyl	7681727	12281080	59.9

* 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	7.004	-0.007	9043486	3226.6	1	7.338	-0.006	31671887	2807.7
Toxaphene	2	7.056	-0.007	6414915	3363.1	2	7.662	-0.006	45287405	2683.0
Toxaphene	3	7.312	-0.008	9989078	3119.2	3	7.893	-0.005	47955413	2658.4
Toxaphene	4	7.638	-0.007	9862009	3053.2	4	8.361	-0.006	33574405	2575.7
Toxaphene	5	7.678	-0.007	6582209	3087.9	5	8.400	-0.006	42849708	2596.0
Toxaphene	6	7.958	-0.008	5557762	3037.1	NS	---			----
Total STX-CLPAve (6 peaks): 3147.858						Total CLP2Ave (5 peaks): 2664.145				RPD = 17
Corrected Ave (6 peaks): 3147.858						Corrected Ave (5 peaks): 2664.145				RPD = 17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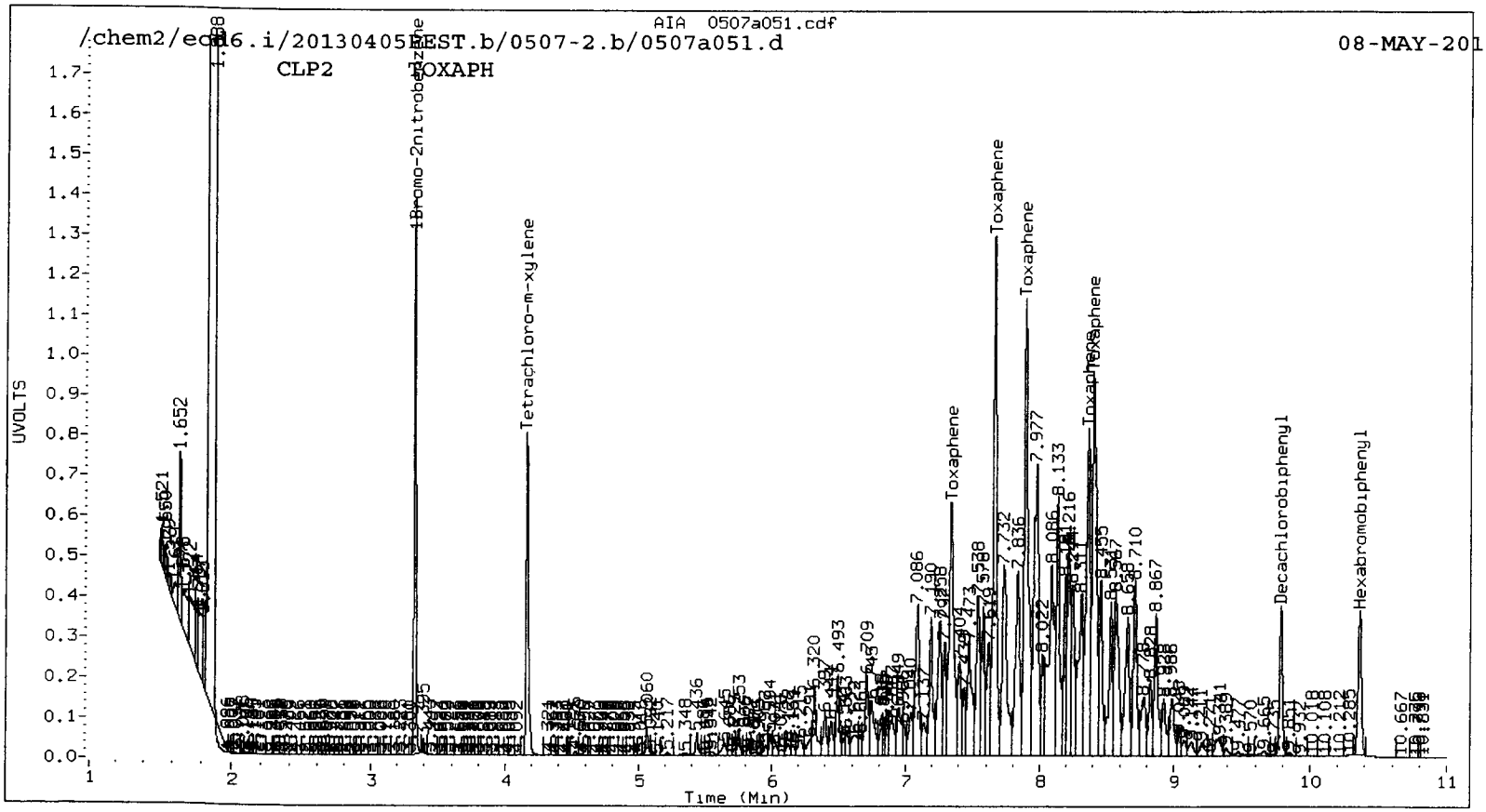
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.606
1.514
1.540
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 TOXAPH
UVOLTS
Time (Min)
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1.521
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a052.d ARI ID: WN27MBS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a052.d Client ID: WN27MBS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 02:28
Compound Sublist: wpest Report Date: 05/10/2013 13:04
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	-0.004	5310596	3.331	-0.002	27392372	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.321	-0.009	6359	4.749	-0.007	48414	~~0.0544~~	~~0.0726~~	28.6	alpha-BHC
4.658	-0.029	4204	5.205	0.020	44900	0.0898	0.1728	63.2*	beta-BHC
4.831	-0.027	7914	5.505	0.007	117193	0.0761	0.2068	92.4*	delta-BHC
4.606	-0.009	5163	5.091	-0.025	63146	0.0490	0.1076	74.9*	gamma-BHC (Lindane)
5.058	-0.008	9404	5.573	-0.008	79490	0.0931	0.1461	44.3*	Heptachlor
5.365	0.004	13232	5.943	0.022	132782	0.1335	0.2677	66.9*	Aldrin
5.945	0.009	8227	6.462	-0.013	67992	0.0908	0.1582	54.2*	Heptachlor epoxide b
6.301	-0.014	5754	----			0.0692	0.0000	---	Endosulfan I
6.527	-0.010	4795	----			0.0547	0.0000	---	Dieldrin
6.229	-0.006	10916	6.912	-0.009	111389	0.1519	0.2908	62.7*	4,4'-DDE
6.756	-0.001	8465	7.417	0.007	109677	0.1072	0.2778	88.6*	Endrin
6.947	-0.014	5353	7.568	-0.030	209251	0.0662	0.4826	151.8*	Endosulfan II
6.800	0.009	17388	7.447	-0.011	53148	0.2310	0.1272	57.9*	4,4'-DDD
7.718	-0.011	10287	8.131	-0.010	99945	0.1442	0.2776	63.2*	Endosulfan sulfate
7.057	0.008	6103	7.760	0.015	157136	0.0809	0.4143	134.7*	4,4'-DDT
7.448	-0.026	23057	8.318	-0.013	251156	0.6093	1.5975	89.6*	Methoxychlor
7.968	-0.017	28523	8.660	0.027	82673	0.3185	0.2245	34.6	Endrin ketone
7.321	-0.017	10401	7.887	-0.008	152413	0.1566	0.4457	96.0*	Endrin aldehyde
6.044	-0.011	4987	6.643	-0.014	38567	0.0539	0.0892	49.4*	gamma-Chlordane
6.173	-0.007	11592	6.796	0.001	40846	0.1301	0.1024	23.9	alpha-Chlordane
2.338	-0.002	16936	2.522	0.025	71229	0.1378	0.1358	1.5	Hexachlorobutadiene
4.176	-0.003	122721	4.625	-0.004	464990	1.4419	0.7573	62.3*	Hexachlorobenzene
5.828	-0.012	26838	6.371	-0.013	98831	0.3371	0.2793	18.7	Oxychlordane
5.876	-0.034	4361	6.613	-0.018	99085	0.0727	0.3810	135.9*	2,4-DDE
6.141	-0.021	8191	6.750	0.009	49359	0.0864	0.0885	2.5	trans-Nonachlor
6.375	-0.023	7337	7.109	-0.006	192346	0.1399	0.6579	129.9*	2,4-DDD
6.637	0.000	3758	7.374	-0.029	150470	0.0627	0.4851	154.2*	2,4-DDT
----			7.499	0.034	102511	0.0000	0.1947	---	cis-Nonachlor
7.641	-0.011	7350	8.615	-0.004	181524	~~0.1228~~	~~0.7560~~	144.1*	Mirex
8.974	-0.006	5089048	10.357	-0.009	14536366	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	0.000	28799	1.721	-0.011	5255882	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.571	-0.010	11492	7.309	-0.027	58152	~~0.0000~~	~~0.0000~~	---	Kepone
3.832	-0.004	2562830	4.163	-0.006	14250857	32.0812	29.4132	8.7	Tetrachloro-m-xylen
8.822	-0.009	2658671	9.785	-0.010	11902109	35.7905	34.5341	3.6	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	80.2	73.5	73.5	42-112
Decachlorobiphenyl	89.5	86.3	86.3	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

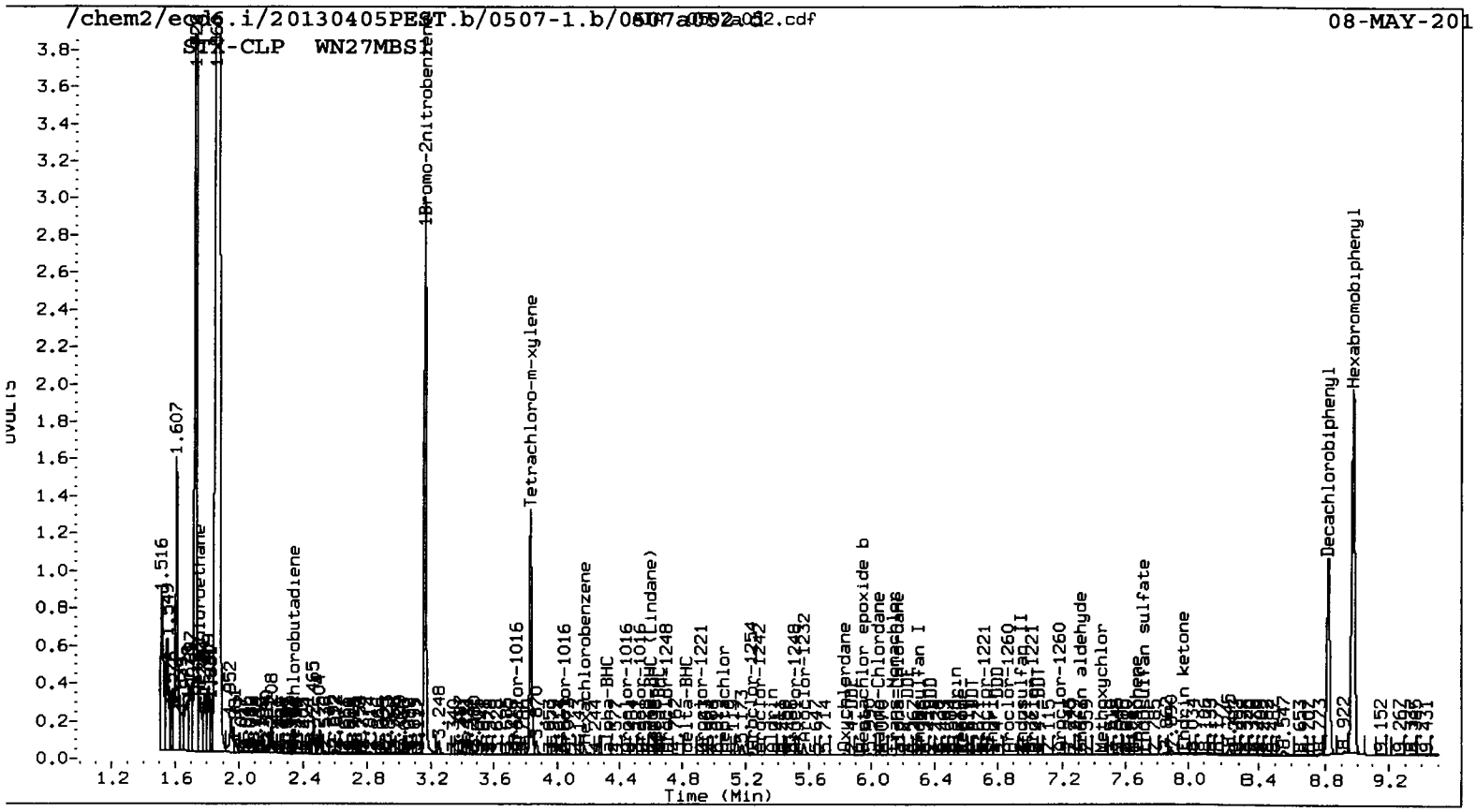
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5310596	-2.5
Hexabromobiphenyl	4807902	5089048	5.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27392372	26.2
Hexabromobiphenyl	7681727	14536366	89.2

* 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	7.018	0.006	13723	4.2	1	7.374	0.030	150470	11.3
Toxaphene	2	7.057	-0.006	6103	2.7	2	7.670	0.002	95001	4.8
Toxaphene	3	7.321	0.001	10401	2.8	3	7.887	-0.011	152413	7.1
Toxaphene	4	7.641	-0.003	7350	1.9	4	8.376	0.010	63586	4.1
Toxaphene	5	7.672	-0.012	11389	4.6	5	8.403	-0.003	69672	3.6
Toxaphene	6	7.968	0.002	28523	13.3	NS				----
Total STX-CLPAve (6 peaks): 4.928						Total CLP2Ave (5 peaks): 6.170				RPD = 22
Corrected Ave (5 peaks): 3.246						Corrected Ave (4 peaks): 4.895				RPD = 41*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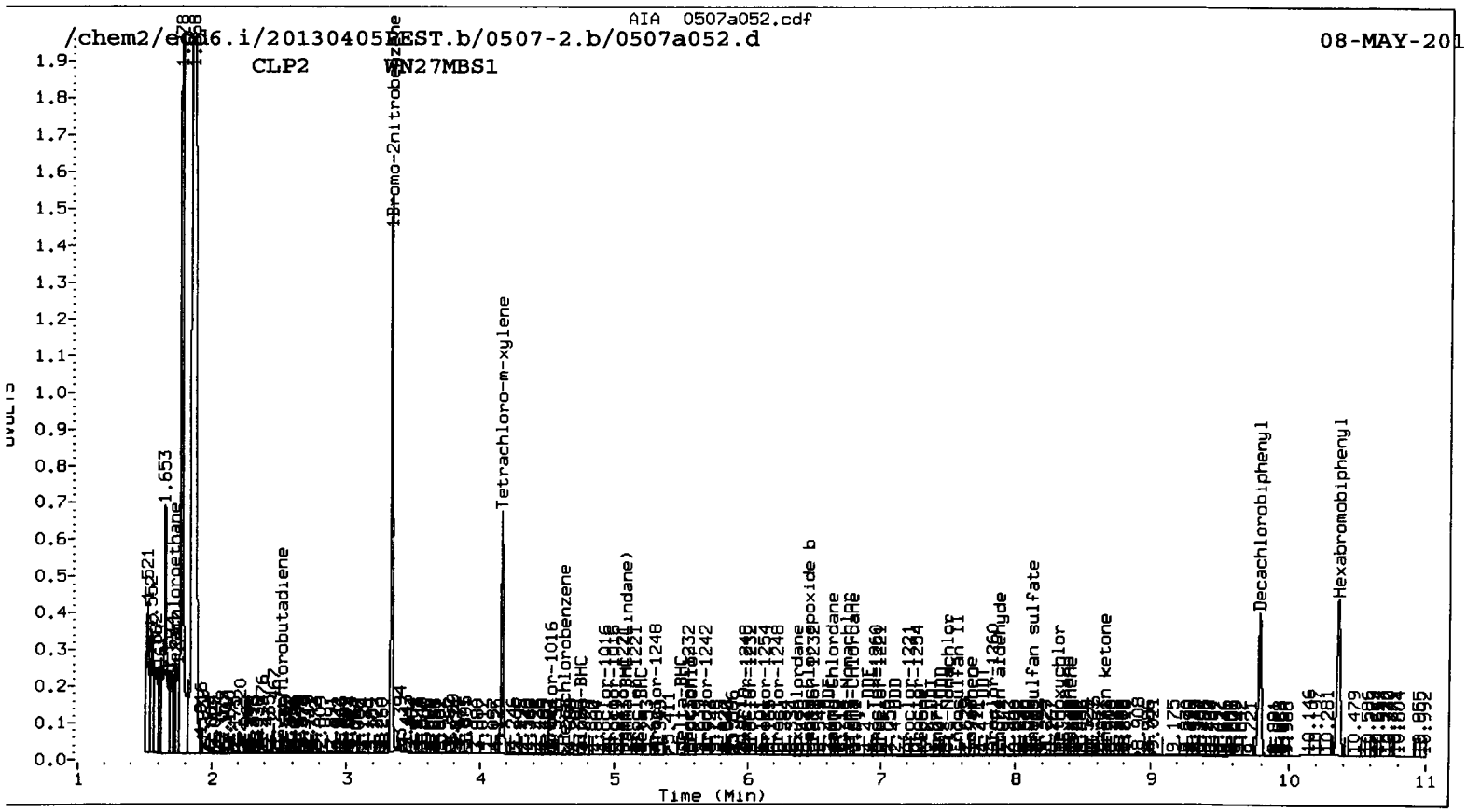
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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08-MAY-201
CLP2 WN27MBS1
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a053.d ARI ID: WN27LCSS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a053.d Client ID: WN27LCSS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 02:46
Compound Sublist: wpest Report Date: 05/10/2013 13:04
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
3.160	-0.004	5032757	3.330	-0.002	25467745	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.323	-0.007	2011505	4.750	-0.006	10927741	18.1717	17.6325	3.0	alpha-BHC
4.685	-0.002	826552	5.182	-0.003	4276172	18.6377	17.6961	5.2	beta-BHC
4.856	-0.003	1904477	5.494	-0.005	10364427	19.3298	19.6738	1.8	delta-BHC
4.608	-0.007	1936505	5.109	-0.008	9718026	19.3833	17.8151	8.4	gamma-BHC (Lindane)
5.057	-0.008	1819387	5.574	-0.008	9482475	19.0007	18.7464	1.3	Heptachlor
5.352	-0.009	1684246	5.913	-0.008	9058001	17.9287	19.6419	9.1	Aldrin
5.926	-0.010	1714672	6.467	-0.008	8507329	19.9696	21.2940	6.4	Heptachlor epoxide b
6.304	-0.011	1606984	6.855	-0.008	7777183	20.3952	22.3296	9.1	Endosulfan I
6.527	-0.010	3387052	7.112	-0.009	16189999	40.7613	46.3117	12.7	Dieldrin N
6.227	-0.008	3298938	6.914	-0.007	16010044	48.4555	44.9618	7.5	4,4'-DDE
6.745	-0.011	2969516	7.402	-0.008	12489401	40.4418	34.6491	15.4	Endrin
6.951	-0.009	2997056	7.591	-0.008	13462606	39.8365	34.0051	15.8	Endosulfan II
6.783	-0.007	2881486	7.451	-0.007	13138212	41.1588	34.4405	17.8	4,4'-DDD
7.719	-0.011	2600962	8.133	-0.008	11155921	39.2136	33.9331	14.4	Endosulfan sulfate
7.041	-0.008	2810570	7.739	-0.007	11513045	40.0577	33.2465	18.6	4,4'-DDT
7.465	-0.009	6425544	8.320	-0.010	21578633	182.5858	150.3299	19.4	Methoxychlor
7.974	-0.011	3221987	8.624	-0.009	9160236	38.6873	27.2400	34.7	Endrin ketone
7.328	-0.010	1849039	7.888	-0.007	7447932	29.9262	23.8530	22.6	Endrin aldehyde
6.046	-0.009	1782254	6.650	-0.008	8740696	20.3075	21.7400	6.8	gamma-Chlordane
6.170	-0.010	1701567	6.787	-0.008	8044827	20.1570	21.6849	7.3	alpha-Chlordane
2.338	-0.003	1659451	2.495	-0.002	6963441	14.2451	14.2750	0.2	Hexachlorobutadiene
4.176	-0.003	1398652	4.625	-0.004	9972575	17.3402	17.4685	0.7	Hexachlorobenzene
5.842	0.002	38703	6.389	0.004	29051	0.5227	0.0883	142.2*	Oxychlordane
5.881	-0.030	4345	6.587	-0.044	136721	0.0779	0.5654	151.6*	2,4-DDE
----			6.732	-0.009	56572	0.0000	0.1111	---	trans-Nonachlor
6.390	-0.007	35751	7.112	-0.003	16189999	0.7330	0.6521	195.2*	2,4-DDD
6.628	-0.008	17605	----			0.3157	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.661	0.008	18647	8.577	-0.042	294389	0.3349	1.3428	120.2*	Mirex
8.973	-0.007	4732756	10.358	-0.008	13272223	80.0000	80.0000	0.0	Hexabromobiphenyl
1.755	0.001	27453	1.721	-0.011	5450239	0.0000	0.0000	---	Hexachloroethane
6.592	0.011	3544	7.335	-0.002	63580	0.0000	0.0000	---	Kepone
3.832	-0.004	2566381	4.163	-0.006	14073262	33.8992	31.2418	8.2	Tetrachloro-m-xylen
8.822	-0.009	2781102	9.786	-0.010	12088735	40.2572	38.4165	4.7	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	84.7	78.1	78.1	42-112
Decachlorobiphenyl	100.6	96.0	96.0	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1617670.7	1386.0	1386.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1602307.7	1329.9	1329.9~	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	5032757	-7.6
Hexabromobiphenyl	4807902	4732756	-1.6

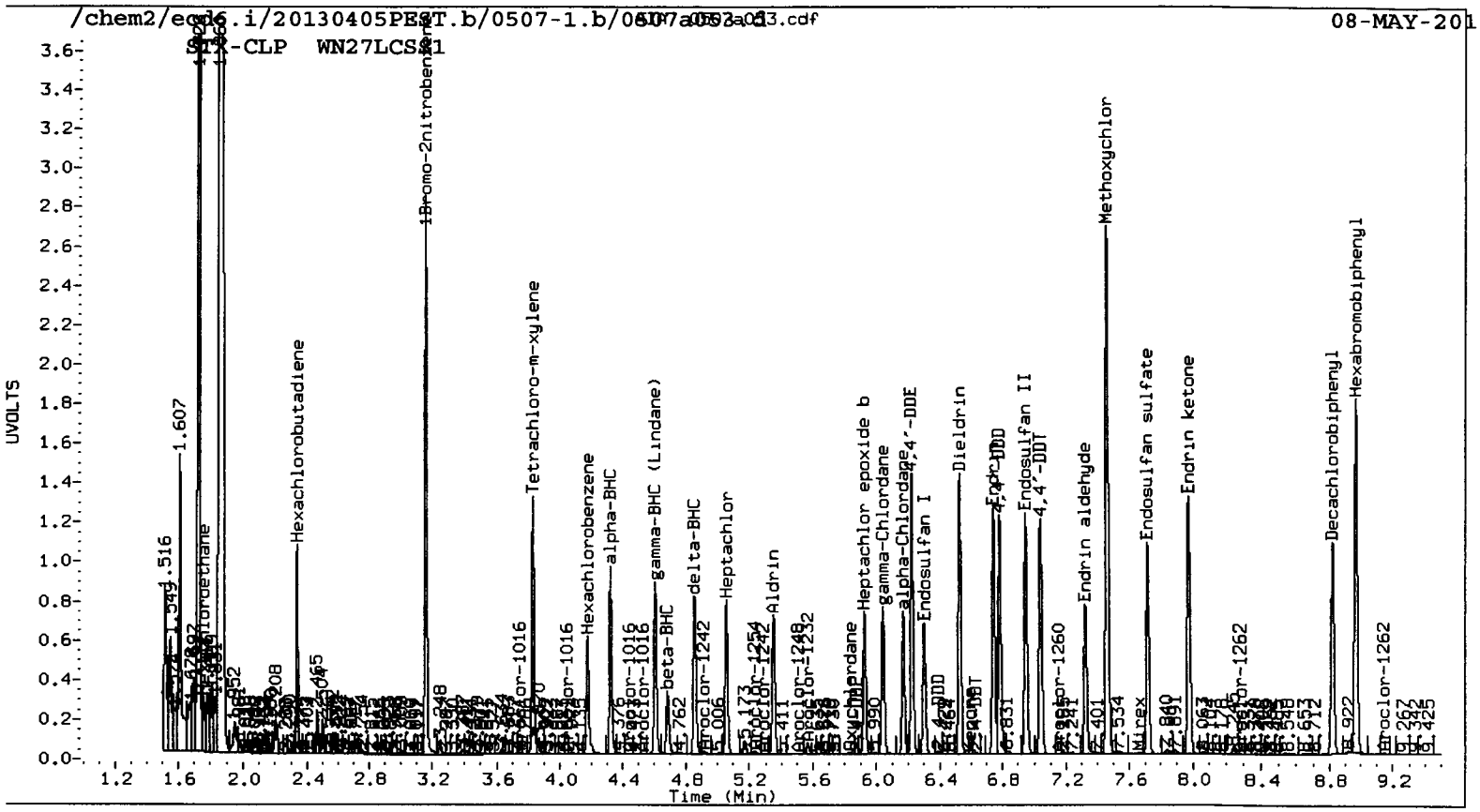
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25467745	17.4
Hexabromobiphenyl	7681727	13272223	72.8

* 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	7.041	0.029	2810570	922.8	1	7.335	-0.010	63580	5.2
Toxaphene	2	---			0.000	2	7.670	0.003	251677	13.8
Toxaphene	3	7.328	0.008	1849039	531.3	3	7.888	-0.010	7447932	382.0
Toxaphene	4	7.661	0.016	18647	5.3	4	8.320	-0.046	21578633	1531.8
Toxaphene	5	---			0.000	5	8.420	0.015	161075	9.0
Toxaphene	6	7.974	0.008	3221987	1620.3	NS	---			----

Total STX-CLPAve (4 peaks): 769.943 Total CLP2Ave (5 peaks): 388.375 RPD = 66*
Corrected Ave (3 peaks): 486.491 Corrected Ave (4 peaks): 102.519 RPD = 130*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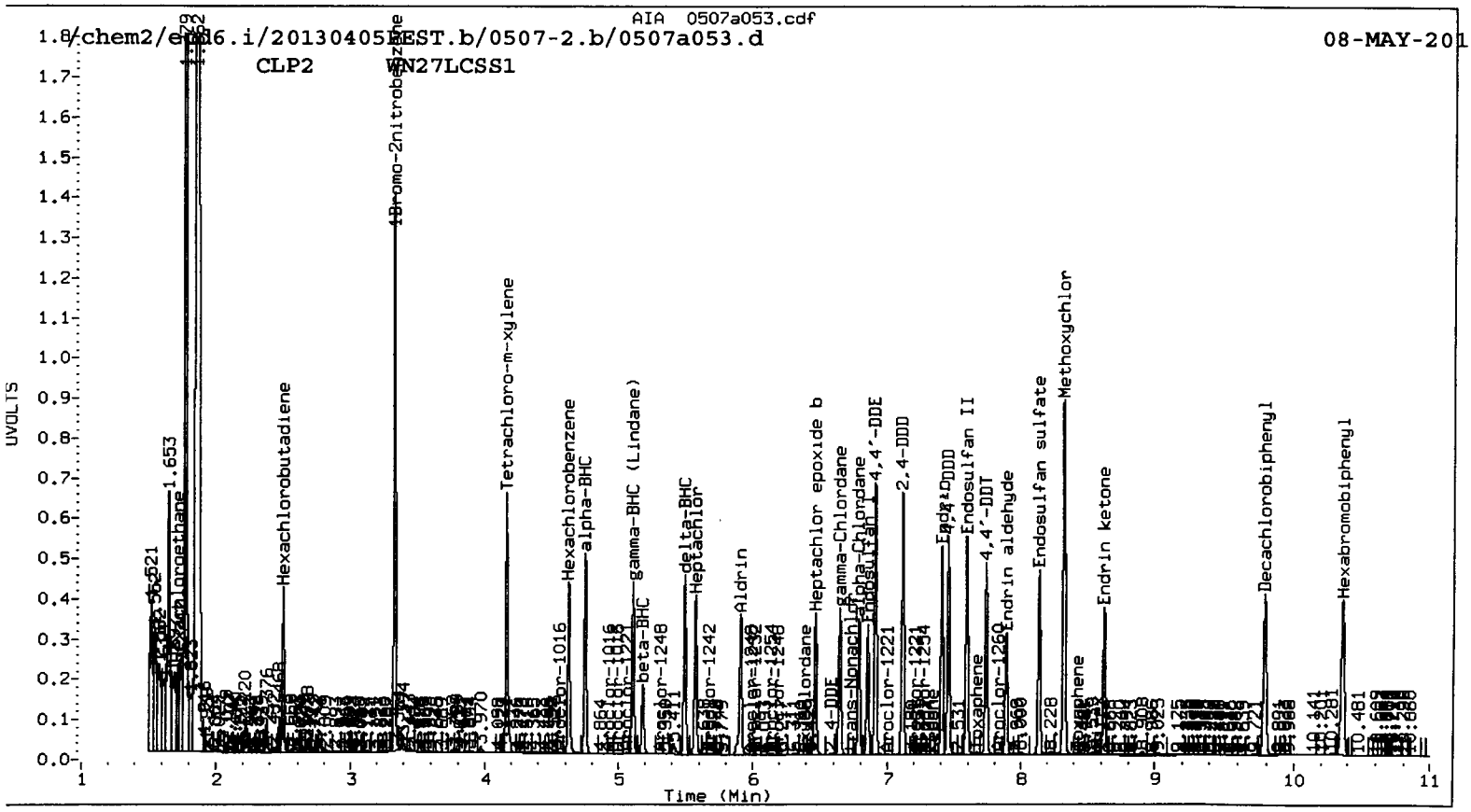
UVOLTS
Time (Min)
1.607
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 WN27LCSS1
UVOLTS
Time (Min)
1.653
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
2,4-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a059.d ARI ID: WN31A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a059.d Client ID: ES-TS-INF-20130424-
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 04:33
Compound Sublist: wpest Report Date: 05/10/2013 13:05
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
3.161	-0.004	6289988	3.330	-0.003	15376770	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.333	0.003	264479	4.740	-0.016	1400373	1.9117	3.7424	64.8*	alpha-BHC
4.689	0.001	210139	5.181	-0.004	719048	3.7913	4.9284 Y	26.1	beta-BHC
4.872	0.014	251114	5.508	0.010	58661403	~~2.0393~~	~~184.4252~~	195.6*	delta-BHC
4.615	0.001	145702	5.085	-0.031	1635748	~~1.1669~~	~~4.9665~~	123.9*	gamma-BHC (Lindane)
5.019	-0.047	21679629	5.583	0.001	404176	~~181.1563~~	~~1.3234~~	197.1*	Heptachlor
5.360	-0.001	51356	5.931	0.010	413647	~~0.4374~~	~~1.4856~~	109.0*	Aldrin
5.940	0.004	3675741	6.487	0.012	14173223	34.2523	58.7568 Y	52.7*	Heptachlor epoxide
6.308	-0.007	102553	6.861	-0.002	364133	~~1.0414~~	~~1.7316~~	49.8*	Endosulfan I
6.520	-0.017	92245	7.115	-0.006	78054	~~0.8882~~	~~0.3698~~	82.4*	Dieldrin
6.239	0.004	472730	6.955	0.035	3086840	5.5557	14.3579 Y	88.4*	4,4'-DDE
6.758	0.002	103139	7.425	0.015	419972	~~1.3492~~	~~2.2209~~	48.8*	Endrin
6.964	0.004	133655	7.634	0.035	351421	~~1.7064~~	~~1.6920~~	0.9	Endosulfan II
6.783	-0.008	217433	7.458	0.001	205496	~~2.9833~~	~~1.0268~~	97.6*	4,4'-DDD
7.720	-0.010	139940	8.186	0.046	12818173	~~2.0266~~	~~74.3181~~	189.4*	Endosulfan sulfate
7.032	-0.017	428857	7.779	0.033	688989	~~5.8712~~	~~3.7924~~	43.0*	4,4'-DDT
7.478	0.005	1486138	8.323	-0.007	1660823	~~40.5635~~	~~22.0544~~	59.1*	Methoxychlor
7.978	-0.007	175278	8.647	0.014	1898568	~~2.0216~~	10.7616	136.7*	Endrin ketone
7.350	0.011	138249	7.910	0.014	86000	2.1492	0.5250	121.5*	Endrin aldehyde
6.054	-0.001	203853	6.658	0.000	1333526	~~1.8585~~	~~5.4934~~	98.9*	gamma-Chlordane
6.180	0.000	142403	6.792	-0.004	219267	~~1.3497~~	~~0.9789~~	31.9	alpha-Chlordane
2.300	-0.041	142363	2.504	0.007	270170	~~0.9778~~	~~0.9173~~	6.4	Hexachlorobutadiene
4.177	-0.002	386854	4.612	-0.018	2825780	3.8375	8.1981	72.5*	Hexachlorobenzene
5.869	0.029	103473	6.364	-0.020	1111138	1.3422	5.5940	122.6*	Oxychlordane
----			6.627	-0.004	424665	0.0000	2.9088	---	2,4-DDE
6.140	-0.022	1417380	6.766	0.025	333268	15.4344	1.2479	170.1*	trans-Nonachlor
6.392	-0.005	123194	7.161	0.046	373618	2.4261	2.6680	9.5	2,4-DDD
6.645	0.009	687837	----			11.8470	0.0000	---	2,4-DDT
6.807	0.029	118972	7.499	0.034	789030	1.2257	3.1281	87.4*	cis-Nonachlor
7.623	-0.029	592795	8.597	-0.022	913394	~~10.2259~~	~~7.9415~~	25.1	Mirex
9.020	0.040	4927135	10.388	0.022	6962958	80.0000	80.0000 IS	0.0	Hexabromobiphenyl M
1.753	-0.001	95023	1.741	0.009	1076079	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.573	-0.008	90591	7.370	0.033	1836384	~~0.0000~~	0.0000	---	Kepone
3.844	0.008	780969	4.165	-0.004	633024	8.2539	2.3275	112.0*	Tetrachloro-m-xylene
8.846	0.015	2321136	9.818	0.023	4578644	32.2735	2.7735	168.3*	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	20.6	5.8	5.8~	42-112
Decachlorobiphenyl	80.7	6.9	6.9~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

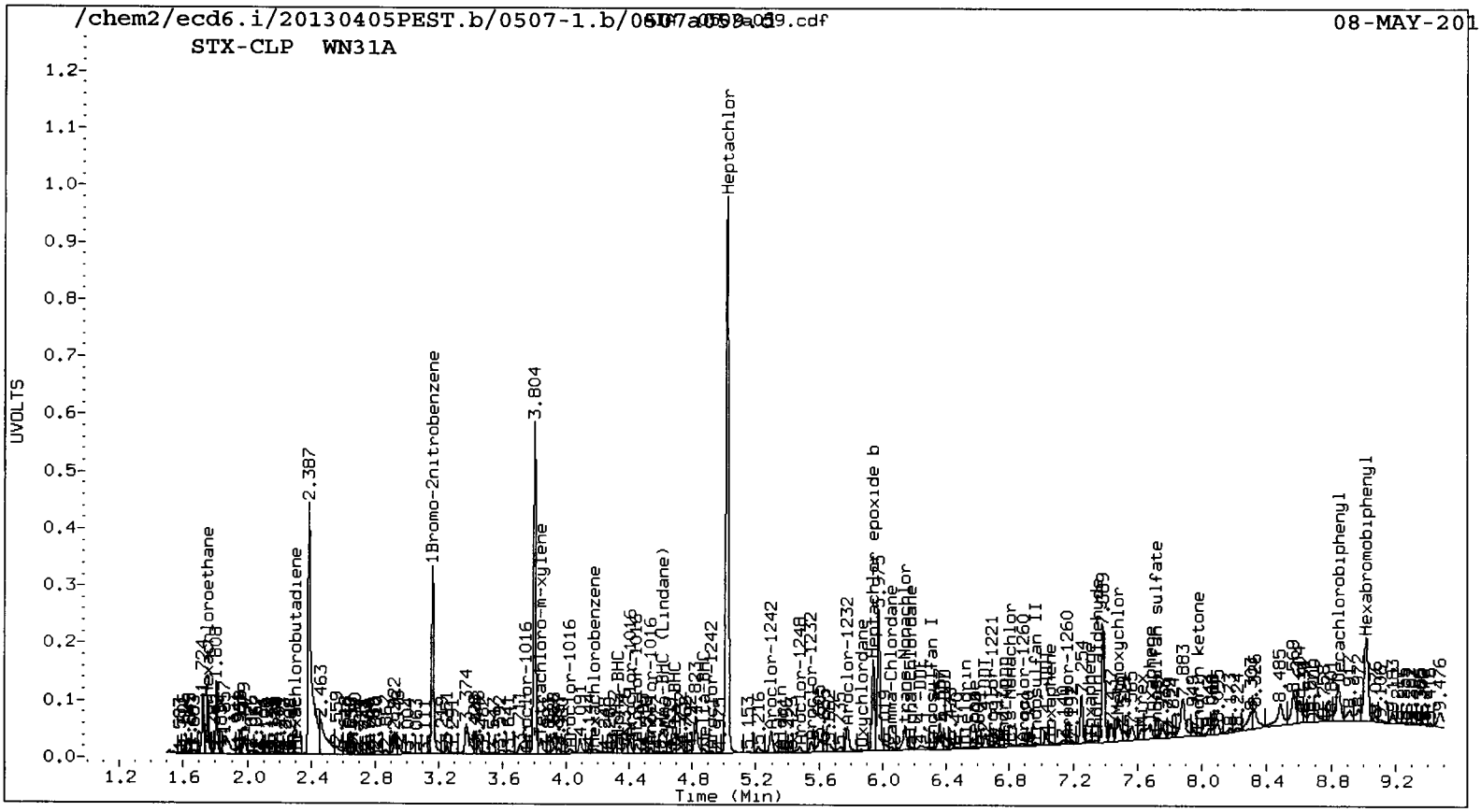
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6289988	15.4
Hexabromobiphenyl	4807902	4927135	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	15376770	-29.1
Hexabromobiphenyl	7681727	6962958	-9.4

* 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	7.032	0.020	428857	135.3	1	7.370	0.026	1836384	287.1
Toxaphene	2	7.059	-0.005	113234	52.5	2	7.679	0.011	1371581	143.3
Toxaphene	3	7.302	-0.019	110780	30.6	3	7.910	0.011	86000	8.4
Toxaphene	4	7.623	-0.021	592795	162.2	4	8.380	0.014	2451191	331.7
Toxaphene	5	7.678	-0.007	1279537	530.6	5	8.414	0.008	372074	39.8
Toxaphene	6	7.978	0.012	175278	84.7	NS	---			----
Total STX-CLPAve (6 peaks): 165.968						Total CLP2Ave (5 peaks): 162.057				RPD = 2
Corrected Ave (5 peaks): 93.041						Corrected Ave (3 peaks): 63.829				RPD = 37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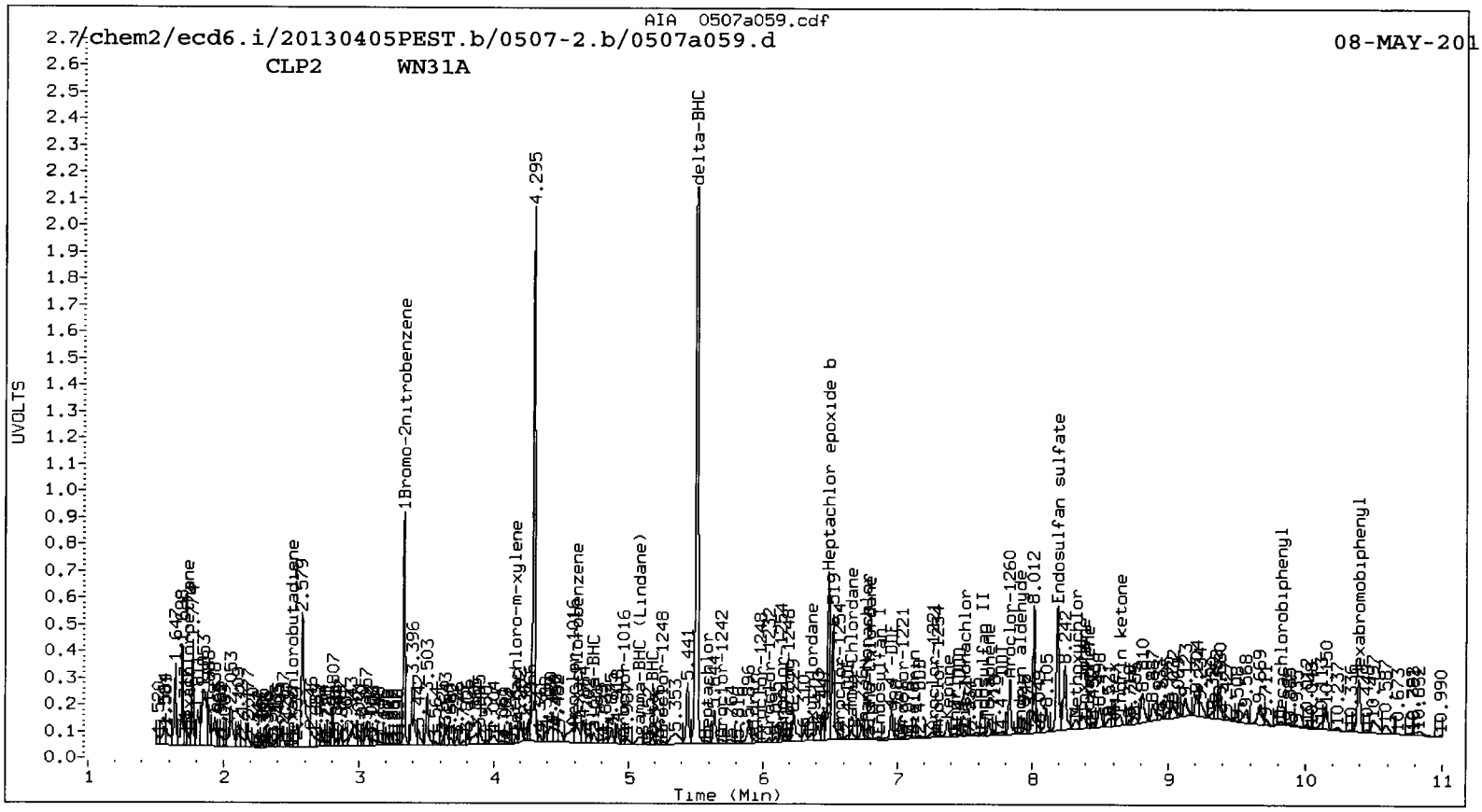
STX-CLP WN31A
UVOLTS
Time (Min)
Heptachlor
1Bromo-2nitrobenzene
3.804
2.387
2.463
Hexachlorobutadiene
Hexachloroethane
Hexachloro-m-xylene
Heptachlor epoxide b
Endosulfan sulfate
Endrin ketone
Hexabromobiphenyl
Decachlorobiphenyl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08-MAY-201
CLP2 WN31A
UVOLTS
Time (Min)
delta-BHC
4.295
1Bromo-2nitrobenzene
Heptachlor epoxide b
Endosulfan sulfate
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

KR 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a062.d ARI ID: WN27LCSDS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a062.d Client ID: WN27LCSDS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 05:27
Compound Sublist: wpest Report Date: 05/10/2013 13:16
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
3.160	-0.005	5599264	3.330	-0.002	26917886	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.324	-0.006	1859794	4.751	-0.006	8744290	15.1013	13.3493	12.3	alpha-BHC
4.686	-0.002	689882	5.183	-0.002	2997714	13.9821	11.7371	17.5	beta-BHC
4.856	-0.002	1643324	5.495	-0.004	7029610	14.9917	12.6248	17.1	delta-BHC
4.609	-0.006	1616779	5.109	-0.007	6864213	14.5457	11.9056	20.0	gamma-BHC (Lindane)
5.057	-0.008	998105	5.575	-0.007	4179117	9.3691	7.8168	18.1	Heptachlor
5.352	-0.009	1477278	5.913	-0.008	6571252	14.1345	13.4818	4.7	Aldrin
5.927	-0.010	1432254	6.468	-0.008	5103006	14.9928	12.0848	21.5	Heptachlor epoxide b
6.304	-0.010	1369976	6.856	-0.007	4318089	15.6281	11.7301	28.5	Endosulfan I
6.527	-0.010	2901610	7.113	-0.008	9184472	31.3863	24.8570	23.2	Dieldrin N
6.227	-0.008	2828925	6.914	-0.006	8995560	37.3478	23.9017	43.9*	4,4'-DDE
6.745	-0.011	1752463	7.403	-0.007	4631491	23.1964	17.5367	27.8	Endrin
6.951	-0.009	2378494	7.591	-0.007	8344704	30.7267	28.7675	6.6	Endosulfan II
6.783	-0.007	3106338	7.451	-0.006	8625156	43.1243	30.8587	33.2	4,4'-DDD
7.719	-0.010	1881533	8.133	-0.007	6316561	27.5703	26.2226	5.0	Endosulfan sulfate
7.033	-0.016	923824	7.739	-0.006	1475662	12.7970	5.8159	75.0*	4,4'-DDT
7.465	-0.008	1311832	8.321	-0.010	3380385	36.2296	32.1414	12.0	Methoxychlor
7.974	-0.011	2068196	8.625	-0.007	4861394	24.1359	19.7305	20.1	Endrin ketone
7.328	-0.010	1301622	7.888	-0.007	3927310	20.4747	17.1664	17.6	Endrin aldehyde
6.047	-0.009	1484675	6.651	-0.006	4996720	15.2052	11.7584	25.6	gamma-Chlordane
6.171	-0.009	1408179	6.788	-0.007	4435004	14.9937	11.3106	28.0	alpha-Chlordane
2.338	-0.003	1769426	2.495	-0.002	7109186	13.6523	13.7887	1.0	Hexachlorobutadiene
4.176	-0.003	1335402	4.626	-0.003	8630976	14.8810	14.3040	4.0	Hexachlorobenzene
5.843	0.003	11547	6.359	-0.026	61985	0.1516	0.1783	16.2	Oxychlordane
5.879	-0.031	6496	6.587	-0.043	103657	0.1132	0.4056	112.7*	2,4-DDE
----			6.719	-0.022	76181	0.0000	0.2043	---	trans-Nonachlor
6.391	-0.006	30276	7.113	-0.002	9184472	0.6033	46.9602	194.9*	2,4-DDD
6.636	0.000	17624	----			0.3071	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.660	0.008	30764	8.577	-0.041	423457	0.5370	2.6362	132.3*	Mirex
8.973	-0.006	4869522	10.359	-0.007	9724485	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.753	-0.001	27926	1.718	-0.013	4767655	0.0000	0.0000	---	Hexachloroethane
6.594	0.013	3092	7.337	0.001	283720	0.0000	0.0000	---	Kepone
3.833	-0.003	2482481	4.163	-0.005	13072473	29.4733	27.4567	7.1	Tetrachloro-m-xylen
8.822	-0.009	2318652	9.786	-0.009	6787495	32.6204	29.4390	10.3	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	73.7	68.6	68.6	42-112
Decachlorobiphenyl	81.6	73.6	73.6	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	927857.1	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	511880.5	0.0	0.0~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

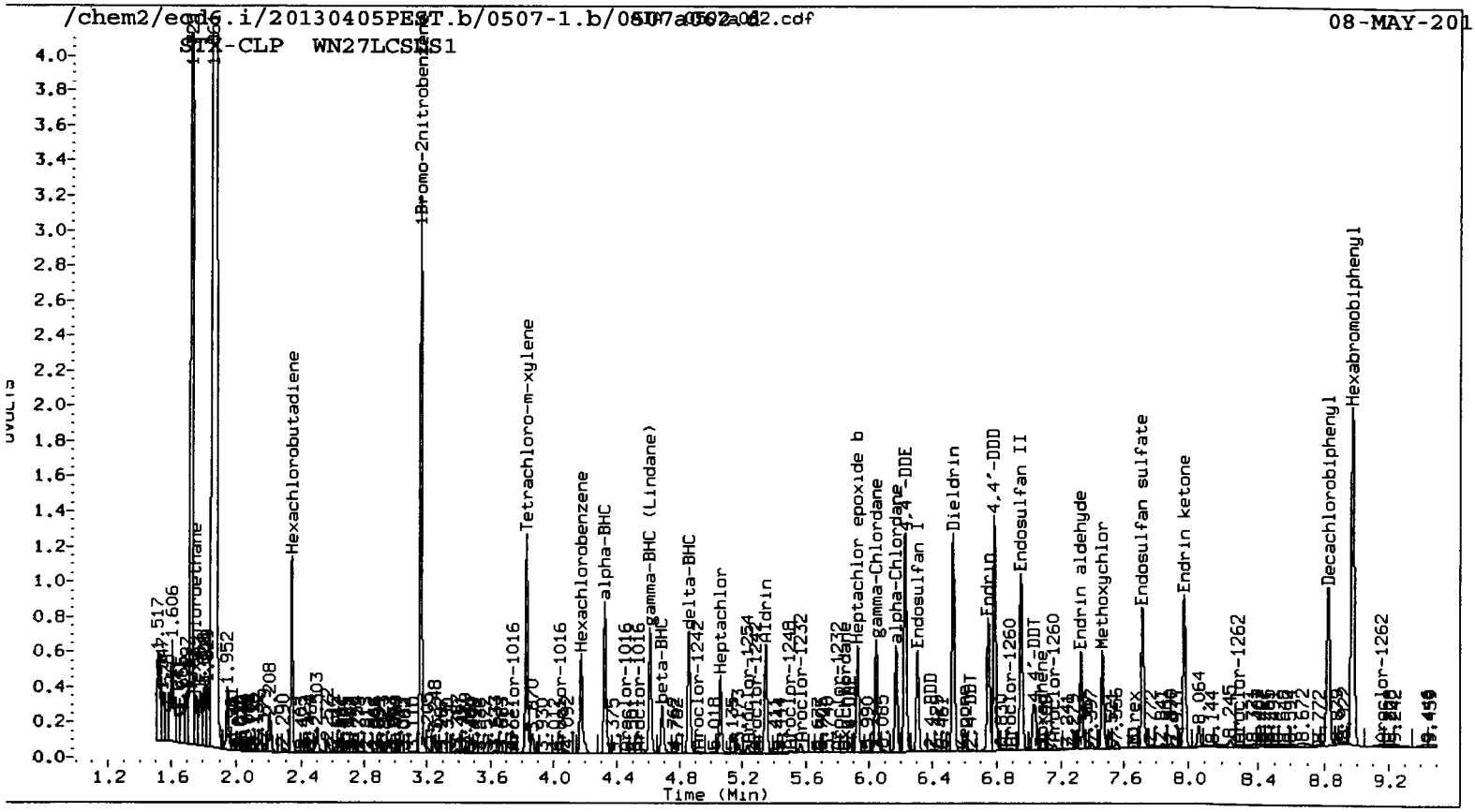
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5599264	2.8
Hexabromobiphenyl	4807902	4869522	1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26917886	24.0
Hexabromobiphenyl	7681727	9724485	26.6

* 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
Toxaphene	1	7.033	0.021	923824	294.8	1	7.337	-0.007	283720	31.8
Toxaphene	2	7.081	0.018	11643	5.5	2	7.673	0.006	278270	20.8
Toxaphene	3	7.328	0.008	1301622	363.5	3	7.888	-0.010	3927310	274.9
Toxaphene	4	7.660	0.016	30764	8.5	4	8.321	-0.045	3380385	327.5
Toxaphene	5	---			0.000	5	8.418	0.012	260404	19.9
Toxaphene	6	7.974	0.008	2068196	1010.9	NS	---			----
Total STX-CLPAve (5 peaks): 336.635						Total CLP2Ave (5 peaks): 134.991				RPD = 86*
Corrected Ave (4 peaks): 168.079						Corrected Ave (3 peaks): 24.169				RPD = 150*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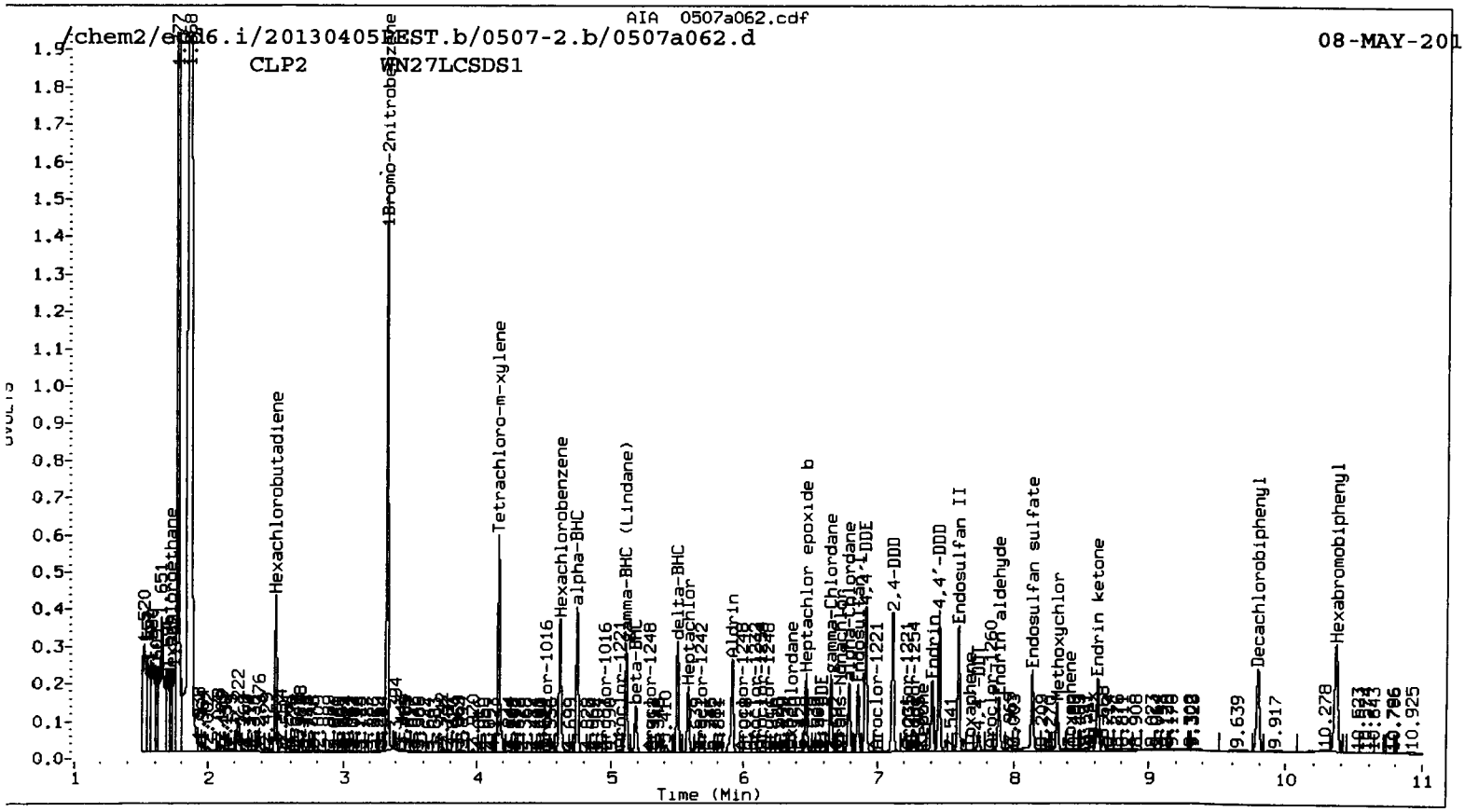
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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08-MAY-201
CLP2 WN27LCSDS1
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
2,4-DDD
Endosulfan I
Endrin
4,4'-DDD
Endosulfan II
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/10/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0507-1.b/0507a065.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0507-2.b/0507a065.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 08-MAY-2013 06:20
Report Date: 05/10/2013 13:05
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	-0.004	5388860	3.331	-0.002	27376233	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2316080	4.751	-0.005	12772675	19.5405	19.1726	1.9	alpha-BHC
4.686	-0.001	813165	5.184	-0.001	4475889	17.1242	17.2313	0.6	beta-BHC
4.857	-0.002	1924130	5.495	-0.004	10273402	18.2388	18.1415	0.5	delta-BHC
4.609	-0.006	1866455	5.110	-0.006	9820817	17.4476	16.7485	4.1	gamma-BHC (Lindane)
5.058	-0.008	1180926	5.575	-0.007	6197903	11.5180	11.3988	1.0	Heptachlor
5.352	-0.009	1916634	5.913	-0.008	9216301	19.0542	18.5920	2.5	Aldrin
5.926	-0.010	1664769	6.467	-0.008	7198947	18.1072	16.7629	7.7	Heptachlor epoxide b
6.304	-0.011	1564934	6.855	-0.008	6556979	18.5491	17.5138	5.7	Endosulfan I
6.526	-0.011	3364778	7.112	-0.009	13379055	37.8174	35.6030	6.0	Dieldrin
6.226	-0.009	2723249	6.913	-0.007	13593294	37.3564	35.5134	5.1	4,4'-DDE
6.745	-0.011	1912699	7.401	-0.009	6650415	24.7863	21.5471	14.0	Endrin
6.951	-0.009	2684280	7.591	-0.008	11823112	33.9496	34.8767	2.7	Endosulfan II
6.785	-0.006	3565299	7.451	-0.006	12941331	48.4576	39.6188	20.1	4,4'-DDD
7.719	-0.010	2192999	8.133	-0.007	7396698	31.4602	26.2752	18.0	Endosulfan sulfate
7.030	-0.019	1121093	7.738	-0.007	1808309	15.2039	6.0984	85.5*	4,4'-DDT
7.466	-0.008	1261315	8.320	-0.010	3855250	34.1037	31.3663	8.4	Methoxychlor
7.974	-0.011	2221098	8.624	-0.008	6008389	25.3766	20.8664	19.5	Endrin ketone
7.329	-0.010	2013546	7.888	-0.008	7147834	31.0089	26.7344	14.8	Endrin aldehyde
6.046	-0.009	1728416	6.650	-0.008	7461202	18.3926	17.2639	6.3	gamma-Chlordane
6.170	-0.010	1652441	6.788	-0.008	6782318	18.2815	17.0073	7.2	alpha-Chlordane
2.338	-0.003	2506227	2.495	-0.002	9837873	20.0923	18.7617	6.8	Hexachlorobutadiene
4.178	-0.001	1685057	4.627	-0.002	12682712	19.5105	20.6669	5.8	Hexachlorobenzene
8.975	-0.005	4973861	10.359	-0.007	11364621	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.003	3063574	4.164	-0.005	17867769	37.7925	36.9002	2.4	Tetrachloro-m-xylen
8.822	-0.009	2350339	9.786	-0.010	7996956	32.3726	29.6790	8.7	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	94.5	92.3	92.3~	115- 0
Decachlorobiphenyl	80.9	74.2	74.2~	115- 0

~ Indicates recovery outside QC Limits

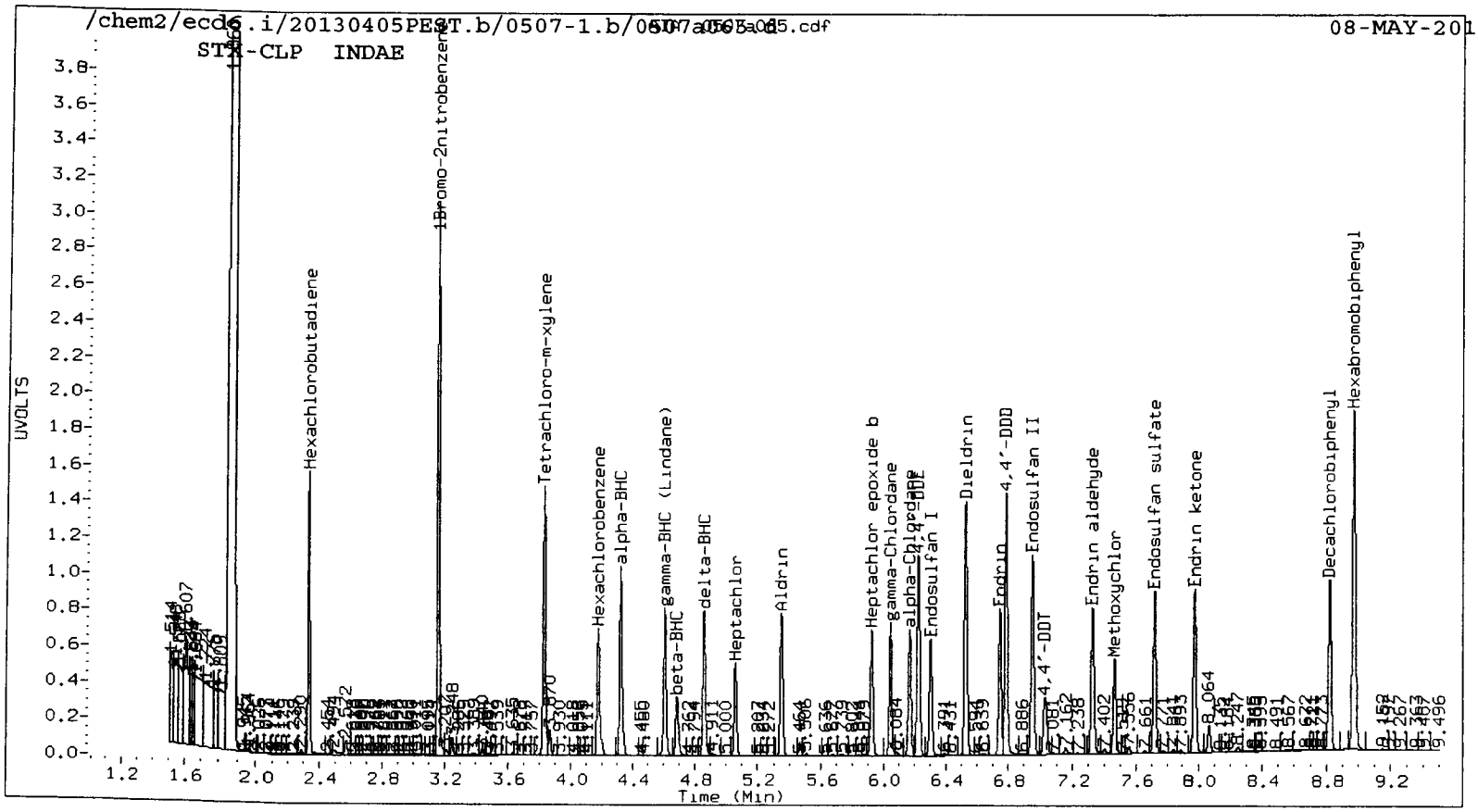
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	5388860	-1.1
Hexabromobiphenyl	4807902	4973861	3.5

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	27376233	26.1
Hexabromobiphenyl	7681727	11364621	47.9

* 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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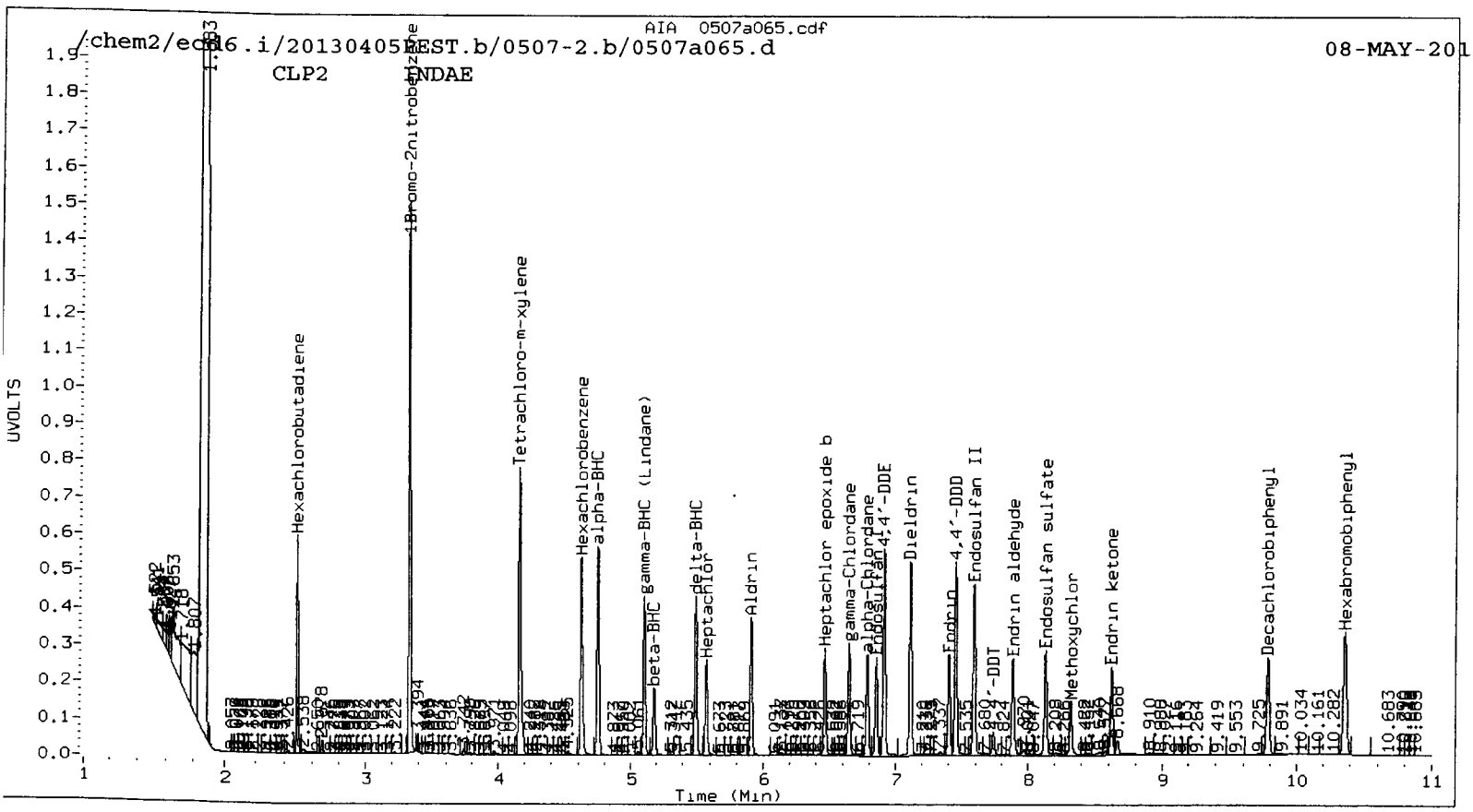
0507a065.cdf
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0507a065.cdf
08-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/08/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085684 Column Type: STXCCA

Column 2 Serial No.: 1094709 Column Type: STXCCB

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/0508-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	08-MAY-2013 17:15	0508a004.d	1	DS	
2	08-MAY-2013 17:32	0508a005.d	1	INDAE	
3	08-MAY-2013 17:50	0508a006.d	1	TOXAPH	
4	08-MAY-2013 18:08	0508a007.d	200	WN27A	CG-MH-010-20130423-
5	08-MAY-2013 18:26	0508a008.d	200	WN31A	ES-TS-INF-20130424-
6	08-MAY-2013 18:44	0508a009.d	1	DS	
7	08-MAY-2013 19:01	0508a010.d	1	INDAE	
8	08-MAY-2013 19:19	0508a011.d	1	TOXAPH	

YZ 5/10/13

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/0508-1.b/0508a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a005.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 08-MAY-2013 17:32
Report Date: 05/10/2013 13:22
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.161	-0.004	4606200	3.331	-0.002	24467634	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	1930374	4.751	-0.005	11160530	19.0537	18.7442	1.6	alpha-BHC
4.687	0.000	721020	5.183	-0.002	4187788	17.7637	18.0387	1.5	beta-BHC
4.858	0.000	1633556	5.496	-0.003	9492651	18.1155	18.7555	3.5	delta-BHC
4.610	-0.005	1716557	5.110	-0.006	9561781	18.7728	18.2452	2.9	gamma-BHC (Lindane)
5.059	-0.007	1663043	5.575	-0.007	9315321	18.9763	19.1687	1.0	Heptachlor
5.353	-0.008	1633974	5.913	-0.008	8840371	19.0043	19.9536	4.9	Aldrin
5.927	-0.009	1443567	6.467	-0.008	7388110	18.3691	19.2485	4.7	Heptachlor epoxide b
6.305	-0.010	1348603	6.855	-0.008	6508379	18.7010	19.4505	3.9	Endosulfan I
6.527	-0.010	2924751	7.112	-0.009	12527106	38.4572	37.2987	3.1	Dieldrin
6.227	-0.008	2310478	6.913	-0.007	13212562	37.0795	38.6222	4.1	4,4'-DDE
6.746	-0.011	2479491	7.402	-0.008	9293492	41.1261	33.6558	20.0	Endrin
6.952	-0.008	2395700	7.591	-0.008	9714592	38.7819	32.0308	19.1	Endosulfan II
6.787	-0.004	2392400	7.452	-0.005	9701605	41.6189	33.1976	22.5	4,4'-DDD
7.720	-0.009	1997932	8.133	-0.007	7682531	36.6854	30.5037	18.4	Endosulfan sulfate
7.043	-0.006	2276836	7.739	-0.006	8522227	39.5216	32.1247	20.6	4,4'-DDT
7.468	-0.005	5097210	8.321	-0.009	15690573	176.4007	142.6887	21.1	Methoxychlor
7.976	-0.009	2451568	8.625	-0.007	7958744	35.8508	30.8941	14.9	Endrin ketone
7.330	-0.009	1832190	7.888	-0.007	7332147	36.1149	30.6527	16.4	Endrin aldehyde
6.047	-0.008	1525523	6.650	-0.007	7576250	18.9919	19.6140	3.2	gamma-Chlordane
6.171	-0.009	1438587	6.787	-0.008	6813215	18.6198	19.1158	2.6	alpha-Chlordane
2.338	-0.003	2023476	2.495	-0.002	8381590	18.9785	17.8846	5.9	Hexachlorobutadiene
4.179	0.000	1421885	4.627	-0.003	11233375	19.2607	20.4812	6.1	Hexachlorobenzene
8.979	-0.001	3886005	10.360	-0.006	10167501	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2614968	4.164	-0.005	15638914	37.7396	36.1365	4.3	Tetrachloro-m-xylen
8.824	-0.007	1938706	9.786	-0.010	7220589	34.1782	29.9529	13.2	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	94.3	90.3	90.3~	115- 0
Decachlorobiphenyl	85.4	74.9	74.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

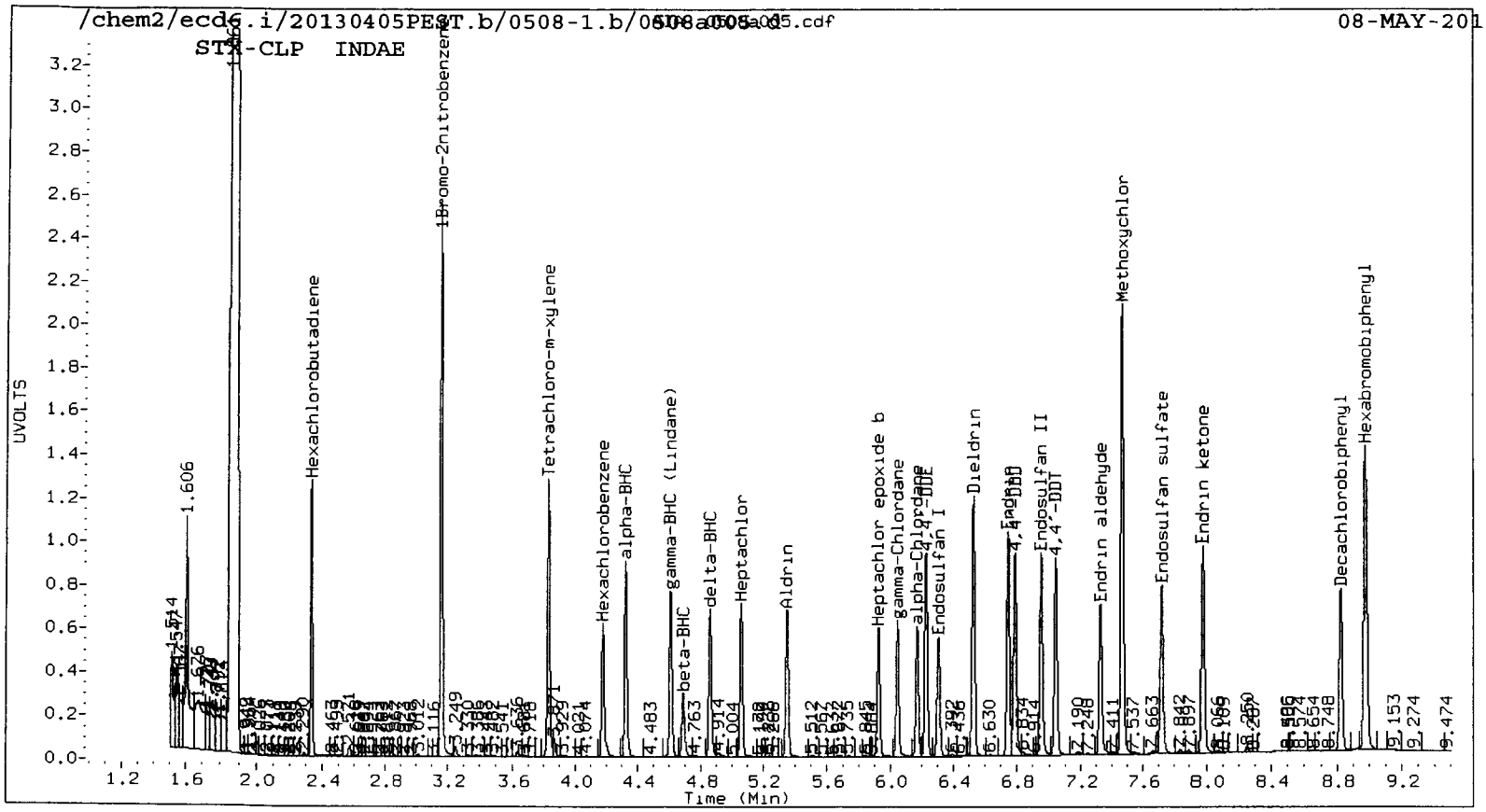
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4606200	-15.5
Hexabromobiphenyl	4807902	3886005	-19.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24467634	12.7
Hexabromobiphenyl	7681727	10167501	32.4

* 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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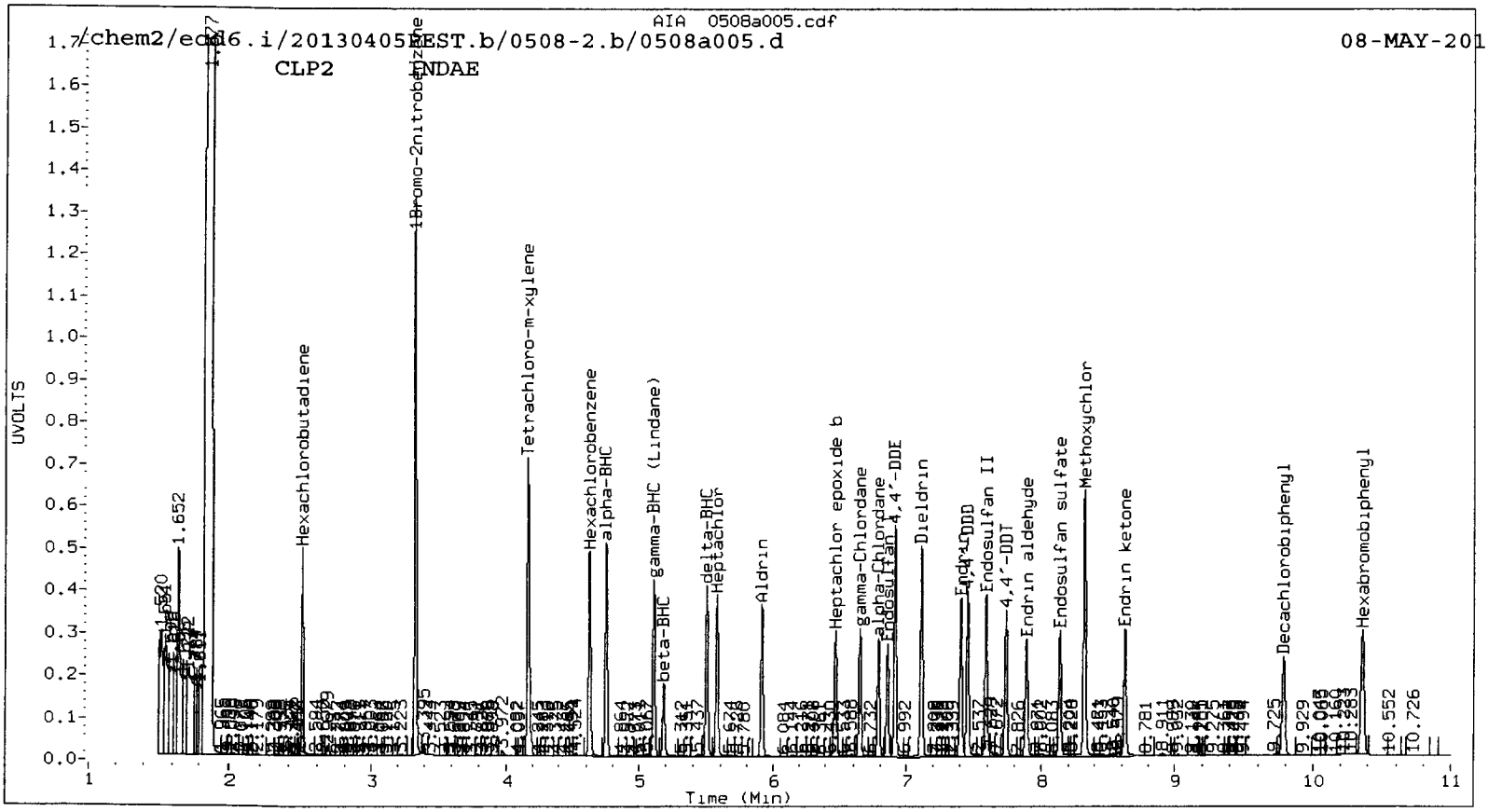
AIA 0508a005.cdf
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.606
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
1.652
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
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0508-1.b/0508a006.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 08-MAY-2013 17:50
Report Date: 05/10/2013 13:22
Compound Sublist: TOXAPH
Matrix: NONE
Instrument, Inj. Vol.: ecd6.i, 1ul
Dilution Factor: 1.000
Operator: ar

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.161	-0.004	4148076	3.331	-0.002	21770088	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.980	0.000	3606518	10.361	-0.005	9021897	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2664516	4.165	-0.004	16330995	42.7018	42.4115	0.7	Tetrachloro-m-xylen
8.824	-0.008	2187202	9.786	-0.009	7905621	41.5471	36.9588	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	106.8	106.0	106.0~	150- 0
Decachlorobiphenyl	103.9	92.4	92.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

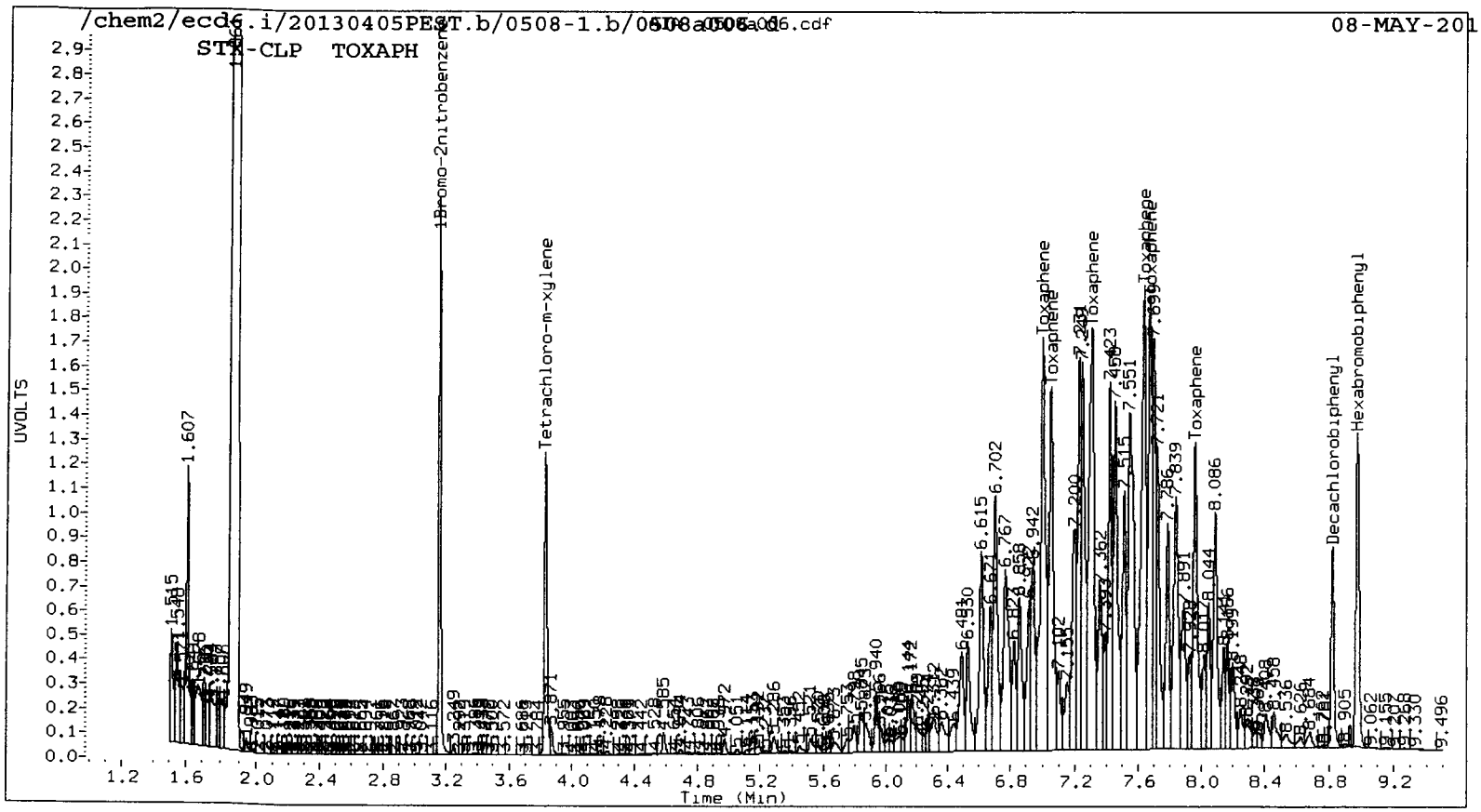
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4148076	-23.9
Hexabromobiphenyl	4807902	3606518	-25.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21770088	0.3
Hexabromobiphenyl	7681727	9021897	17.4

* 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	7.004	-0.008	7620340	3283.4	1	7.338	-0.006	22740967	2744.2	
Toxaphene	2	7.055	-0.008	5363042	3395.5	2	7.663	-0.005	33034594	2664.1	
Toxaphene	3	7.312	-0.008	8381971	3160.8	3	7.893	-0.006	34930764	2635.9	
Toxaphene	4	7.638	-0.006	8251913	3085.2	4	8.361	-0.006	23642264	2468.9	
Toxaphene	5	7.677	-0.008	5479550	3104.3	5	8.400	-0.006	30304896	2499.3	
Toxaphene	6	7.958	-0.008	4582547	3024.2	NS	---			----	
Total STX-CLPAve (6 peaks): 3175.562						Total CLP2Ave (5 peaks): 2602.478				RPD = 20	
Corrected Ave (6 peaks): 3175.562						Corrected Ave (5 peaks): 2602.478				RPD = 20	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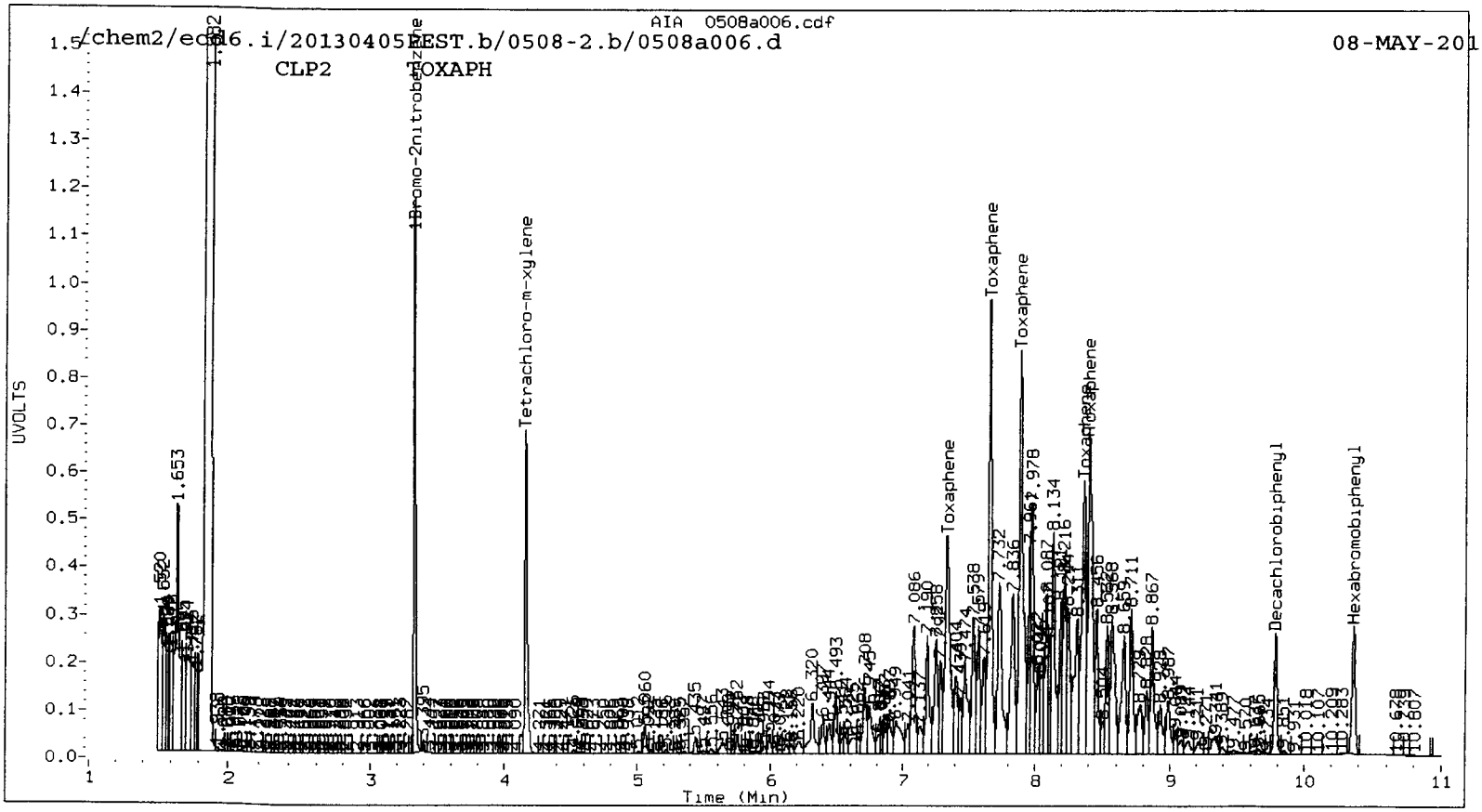
08-MAY-201
ST1-CLP TOXAPH
UVOLTS
Time (Min)
1.607
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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08-MAY-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.653
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0508-1.b/0508a008.d ARI ID: WN31A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a008.d Client ID: ES-TS-INF-20130424-
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 08-MAY-2013 18:26
Compound Sublist: wpest Report Date: 05/10/2013 13:22
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 200.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	5265221	3.330	-0.002	24219365	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.310	-0.020	24318	4.738	-0.018	167917	0.2100	0.2849	30.3	alpha-BHC
4.684	-0.003	14441	5.178	-0.007	80164	0.3112	0.3488	11.4	beta-BHC
4.841	-0.017	13800	5.502	0.003	5177619	0.1339	10.3348	194.9*	delta-BHC
4.613	-0.002	6205	5.140	0.024	46605	0.0594	0.0898	40.9*	gamma-BHC (Lindane)
5.093	0.028	6230	5.579	-0.003	102334	0.0622	0.2127	109.5*	Heptachlor
5.364	0.003	4106	5.927	0.007	67548	0.0418	0.1540	114.7*	Aldrin
5.934	-0.003	143049	6.482	0.006	1065761	1.5924	2.8051	55.2*	Heptachlor epoxide b
6.300	-0.015	5896	6.849	-0.013	20881	0.0715	0.0630	12.6	Endosulfan I
6.524	-0.013	2668	7.151	0.030	18055	0.0307	0.0543	55.6*	Dieldrin
6.226	-0.009	12751	6.949	0.028	197221	0.1790	0.5824	106.0*	4,4'-DDE
6.748	-0.008	10298	7.413	0.003	50428	0.1440	0.1882	26.6	Endrin
6.955	-0.006	7184	7.576	-0.023	57858	0.0981	0.1966	66.9*	Endosulfan II
----			7.447	-0.011	17072	0.0000	0.0602	---	4,4'-DDD
7.733	0.003	32676	8.132	-0.009	11775	0.5059	0.0482	165.2*	Endosulfan sulfate
7.047	-0.002	9456	7.745	-0.001	49440	0.1384	0.1921	32.5	4,4'-DDT
7.471	-0.003	60157	8.316	-0.015	119410	1.7555	1.1191	44.3*	Methoxychlor
7.965	-0.020	17010	8.633	0.001	108201	0.2098	0.4329	69.4*	Endrin ketone
7.341	0.002	5246	7.893	-0.002	17764	0.0872	0.0765	13.0	Endrin aldehyde
6.047	-0.009	5813	6.650	-0.007	138361	0.0633	0.3619	140.4*	gamma-Chlordane
6.170	-0.010	7731	6.787	-0.008	40317	0.0875	0.1143	26.5	alpha-Chlordane
2.336	-0.005	1383	2.480	-0.017	37466	0.0113	0.0808	150.7*	Hexachlorobutadiene
4.176	-0.003	26180	4.607	-0.022	691319	0.3102	1.2734	121.6*	Hexachlorobenzene
5.861	0.021	7780	6.360	-0.024	180734	0.1079	0.5777	137.0*	Oxychlordane
----			6.618	-0.013	76697	0.0000	0.3335	---	2,4-DDE
6.133	-0.029	74339	6.732	-0.009	186958	0.8655	0.4941	54.6*	trans-Nonachlor
6.379	-0.019	10718	7.078	-0.037	58200	0.2257	0.2933	26.1	2,4-DDD
6.634	-0.002	45471	----			0.8373	0.0000	---	2,4-DDT
6.779	0.001	16392	7.487	0.022	58497	0.1806	0.1637	9.8	cis-Nonachlor
7.637	-0.016	22486	8.586	-0.033	43827	0.4147	0.2689	42.6*	Mirex
8.975	-0.004	4608412	10.359	-0.007	9865983	80.0000	80.0000	0.0	Hexabromobiphenyl
1.754	-0.001	6390	1.721	-0.010	887838	0.0000	0.0000	---	Hexachloroethane
6.588	0.007	11114	7.362	0.026	179231	0.0000	0.0000	---	Kepone
3.843	0.006	61729	4.164	-0.004	135906	0.7794	0.3173	84.3*	Tetrachloro-m-xylene
8.818	-0.013	115906	9.793	-0.003	95394	1.7230	0.4078	123.4*	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	1.9	0.8	0.8~	42-112
Decachlorobiphenyl	4.3	1.0	1.0~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

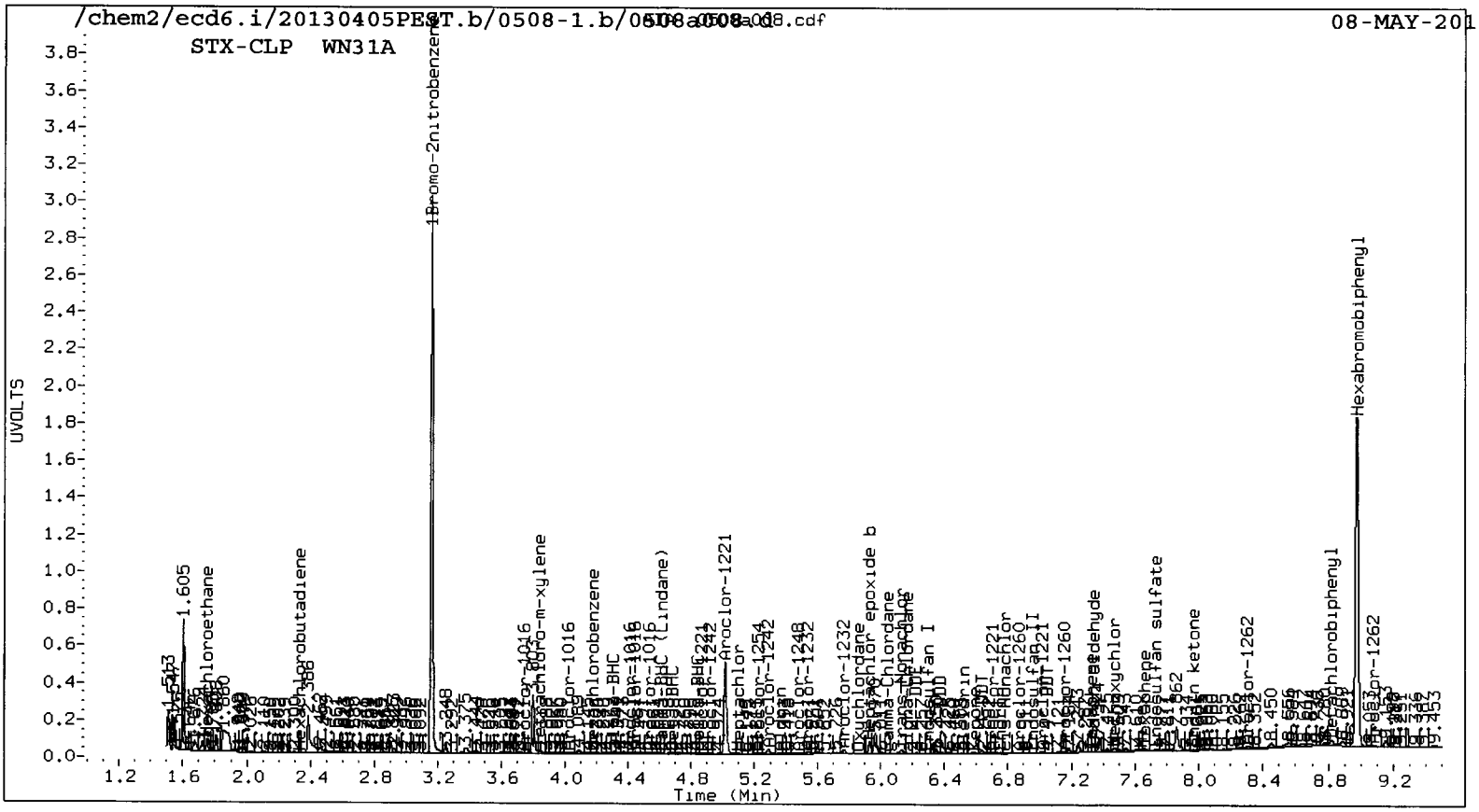
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5265221	-3.4
Hexabromobiphenyl	4807902	4608412	-4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24219365	11.6
Hexabromobiphenyl	7681727	9865983	28.4

* 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	7.018	0.006	24833	8.4	1	7.362	0.018	179231	19.8
Toxaphene	2	7.047	-0.017	9456	4.7	2	7.670	0.002	58450	4.3
Toxaphene	3	7.325	0.005	4532	1.3	3	7.893	-0.005	17764	1.2
Toxaphene	4	7.637	-0.008	22486	6.6	4	8.372	0.006	68903	6.6
Toxaphene	5	7.661	-0.023	41451	18.4	5	8.402	-0.004	26548	2.0
Toxaphene	6	7.965	-0.001	17010	8.8	NS	---			----
Total STX-CLPAve (6 peaks): 8.023						Total CLP2Ave (5 peaks): 6.779				RPD = 17
Corrected Ave (5 peaks): 5.952						Corrected Ave (4 peaks): 3.530				RPD = 51*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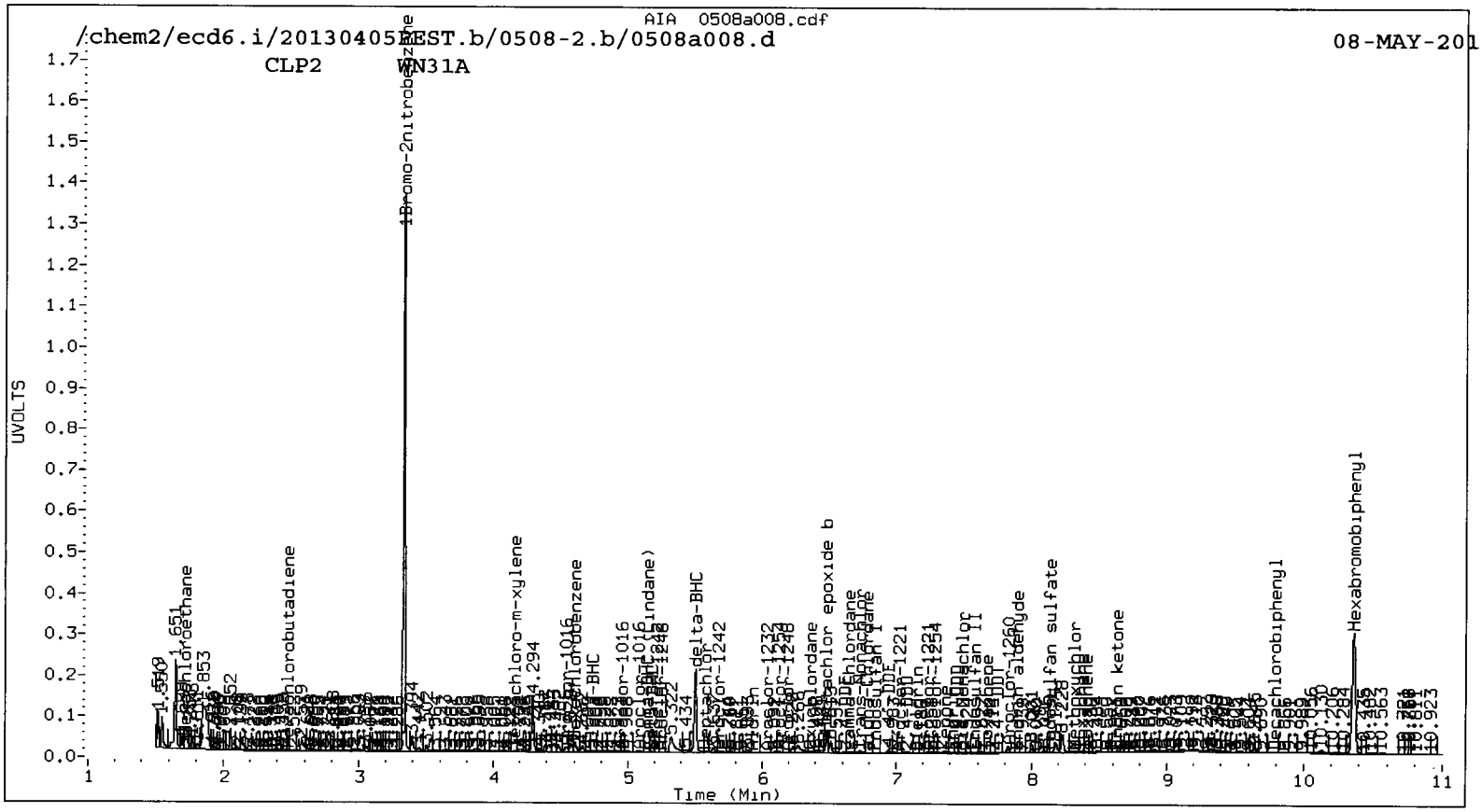
STX-CLP WN31A
UVOLTS
Time (Min)
1.605
1-Bromo-2nitrobenzene
Hexabromobiphenyl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08-MAY-201
CLP2 WN31A
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0508-1.b/0508a010.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a010.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 08-MAY-2013 19:01
Report Date: 05/10/2013 13:22
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	-0.005	4721528	3.330	-0.002	25124831	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	1969396	4.750	-0.006	11078020	18.9640	18.1189	4.6	alpha-BHC
4.687	0.000	718830	5.183	-0.002	4100329	17.2771	17.2000	0.4	beta-BHC
4.858	0.000	1620342	5.495	-0.004	9269192	17.5300	17.8349	1.7	delta-BHC
4.609	-0.005	1724864	5.109	-0.007	9472356	18.4029	17.6018	4.5	gamma-BHC (Lindane)
5.058	-0.007	1666374	5.575	-0.007	9084541	18.5499	18.2048	1.9	Heptachlor
5.352	-0.009	1636235	5.912	-0.008	8423557	18.5657	18.5155	0.3	Aldrin
5.926	-0.010	1428463	6.467	-0.009	7041322	17.7329	17.8651	0.7	Heptachlor epoxide b
6.304	-0.010	1333922	6.855	-0.008	6172845	18.0456	17.9652	0.4	Endosulfan I
6.526	-0.011	2843689	7.112	-0.009	12037768	36.4780	34.9042	4.4	Dieldrin
6.227	-0.008	2326531	6.913	-0.007	12558580	36.4251	35.7502	1.9	4,4'-DDE
6.745	-0.011	2443346	7.402	-0.008	8573818	40.9784	32.4611	23.2	Endrin
6.952	-0.008	2314647	7.591	-0.008	9325451	37.8875	32.1456	16.4	Endosulfan II
6.787	-0.003	2382710	7.453	-0.005	9090739	41.9124	32.5215	25.2	4,4'-DDD
7.720	-0.009	1935397	8.134	-0.006	7083106	35.9333	29.4022	20.0	Endosulfan sulfate
7.044	-0.005	2121164	7.740	-0.006	7514076	37.2298	29.6121	22.8	4,4'-DDT
7.469	-0.005	4908368	8.322	-0.008	14678948	171.7589	139.5577	20.7	Methoxychlor
7.976	-0.009	2362782	8.626	-0.007	7312992	34.9376	29.6779	16.3	Endrin ketone
7.329	-0.009	1772674	7.888	-0.007	6539684	35.3312	28.5826	21.1	Endrin aldehyde
6.046	-0.009	1501057	6.650	-0.007	7110995	18.2309	17.9280	1.7	gamma-Chlordane
6.170	-0.009	1411643	6.787	-0.008	6388176	17.8248	17.4544	2.1	alpha-Chlordane
2.337	-0.003	2097148	2.494	-0.003	8659589	19.1890	17.9944	6.4	Hexachlorobutadiene
4.179	0.000	1452233	4.627	-0.002	11104227	19.1913	19.7162	2.7	Hexachlorobenzene
8.980	0.000	3843165	10.361	-0.005	9725369	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2667396	4.163	-0.005	15563161	37.5560	35.0208	7.0	Tetrachloro-m-xylen
8.824	-0.007	1899206	9.787	-0.008	6911751	33.8550	29.9752	12.2	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	93.9	87.6	87.6~	115- 0
Decachlorobiphenyl	84.6	74.9	74.9~	115- 0

~ Indicates recovery outside QC Limits

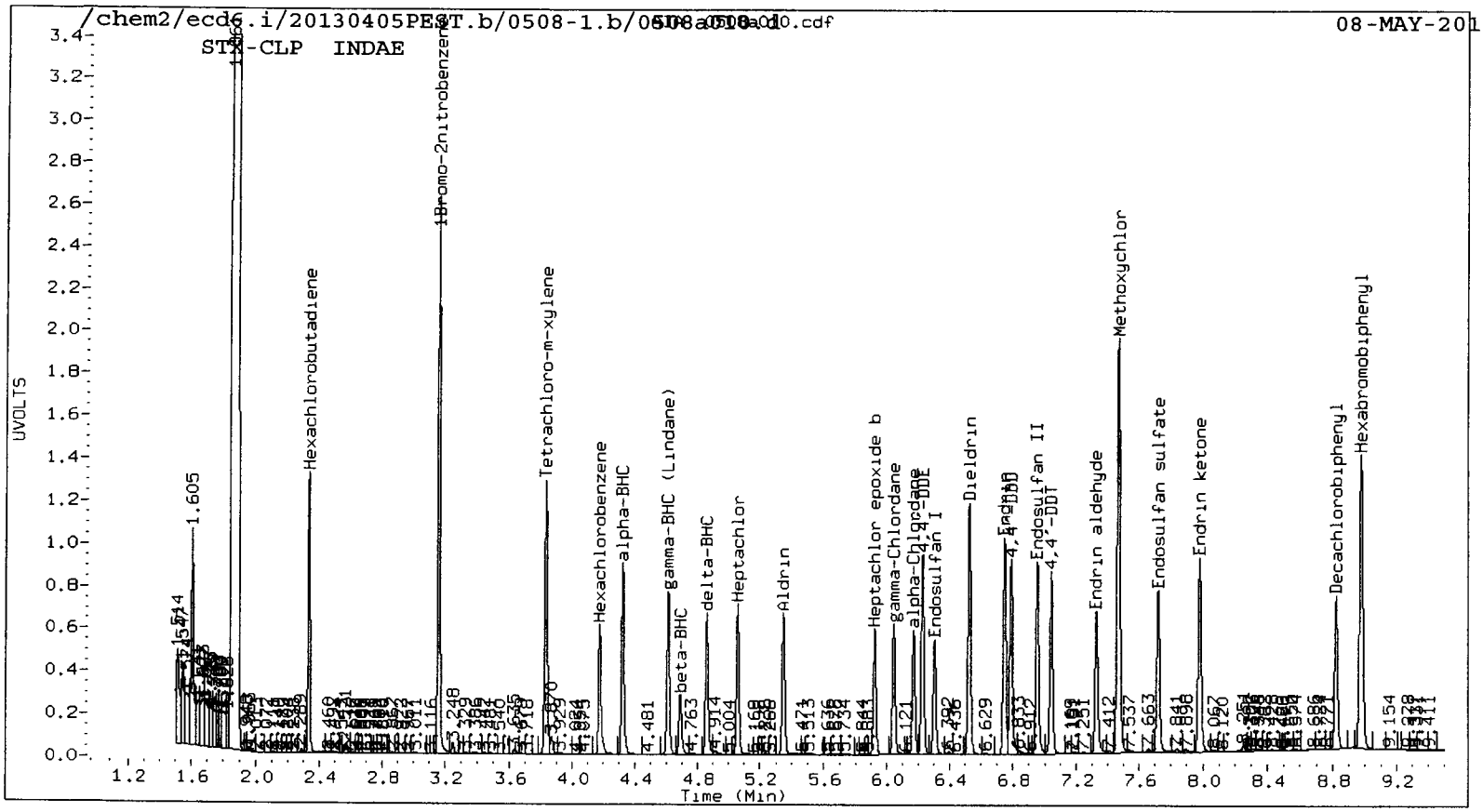
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	4721528	-13.3
Hexabromobiphenyl	4807902	3843165	-20.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	25124831	15.8
Hexabromobiphenyl	7681727	9725369	26.6

* 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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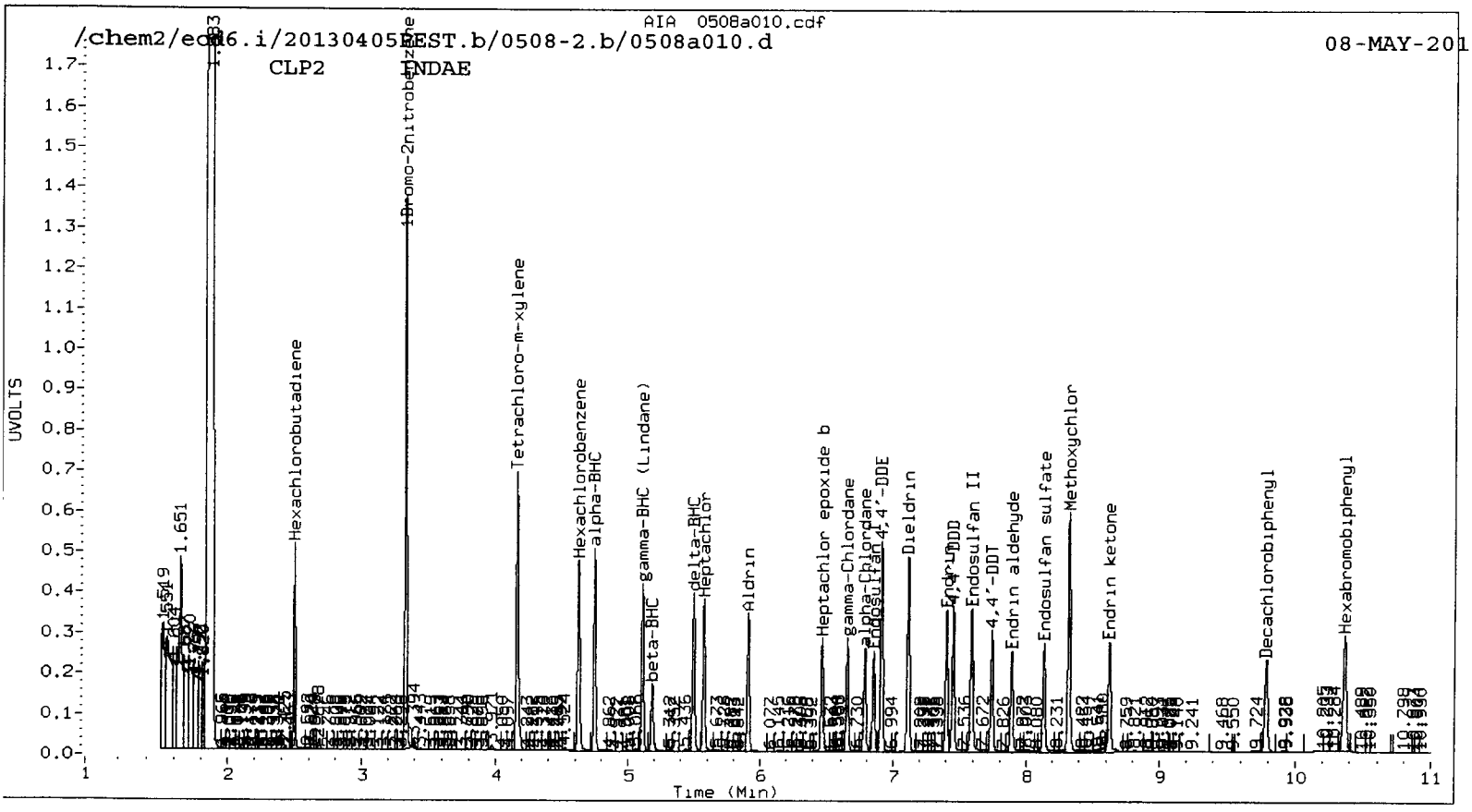
08-MAY-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.605
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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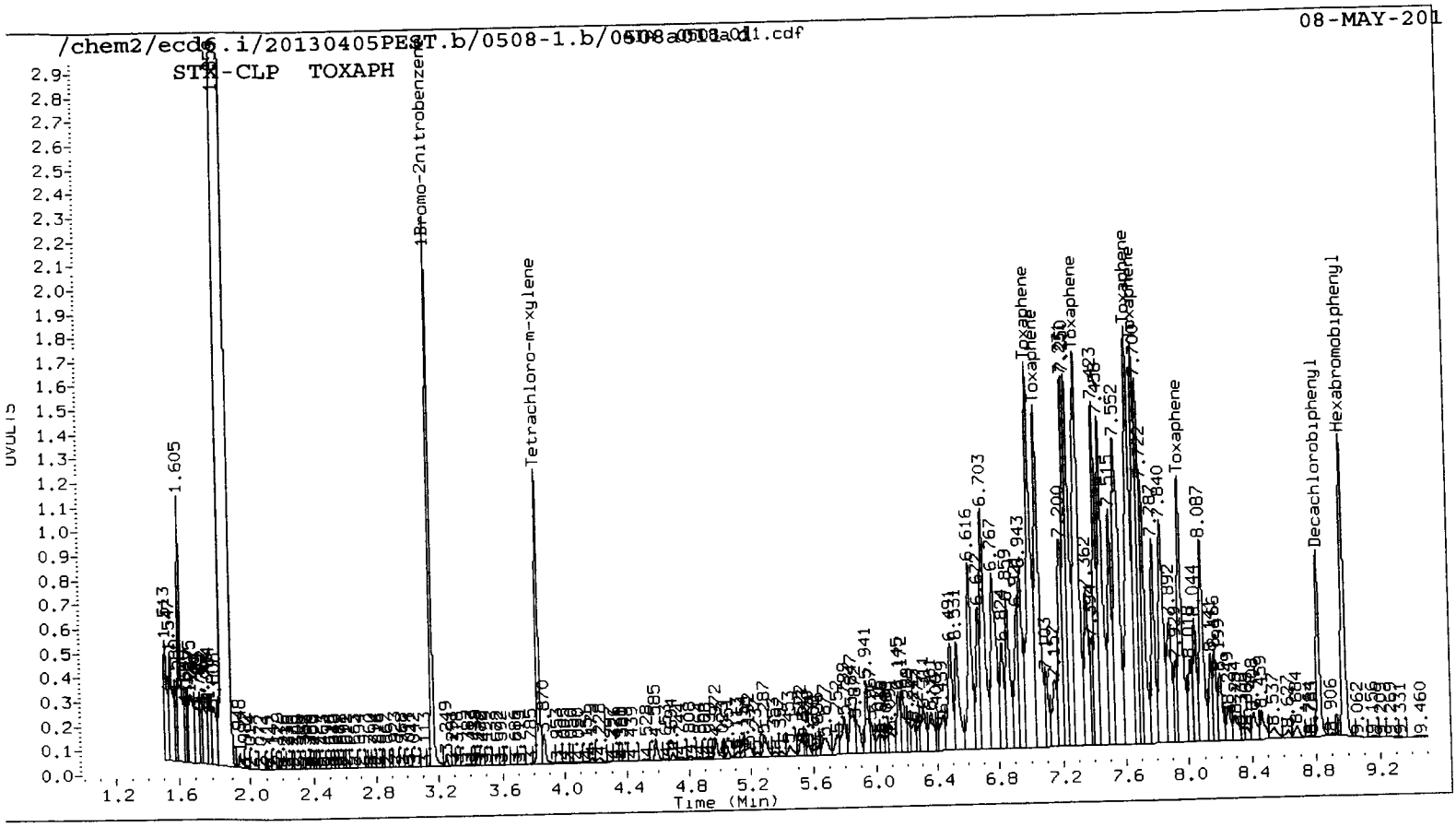
08-MAY-201
CLP2 INDAE
UVOLTS
Time (Min)
1.651
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

* 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	7.004	-0.007	7159546	3194.4	1	7.339	-0.005	21327189	2664.6
Toxaphene	2	7.056	-0.008	5116950	3354.7	2	7.663	-0.005	30901134	2580.1
Toxaphene	3	7.313	-0.008	7930453	3096.7	3	7.893	-0.005	31682003	2475.2
Toxaphene	4	7.638	-0.006	7634782	2955.8	4	8.361	-0.005	21152188	2287.0
Toxaphene	5	7.678	-0.006	4980709	2921.9	5	8.401	-0.005	26852867	2292.9
Toxaphene	6	7.959	-0.007	4101145	2802.6	NS	---			----
Total STX-CLPAve (6 peaks): 3054.344						Total CLP2Ave (5 peaks): 2459.968				RPD = 22
Corrected Ave (6 peaks): 3054.344						Corrected Ave (5 peaks): 2459.968				RPD = 22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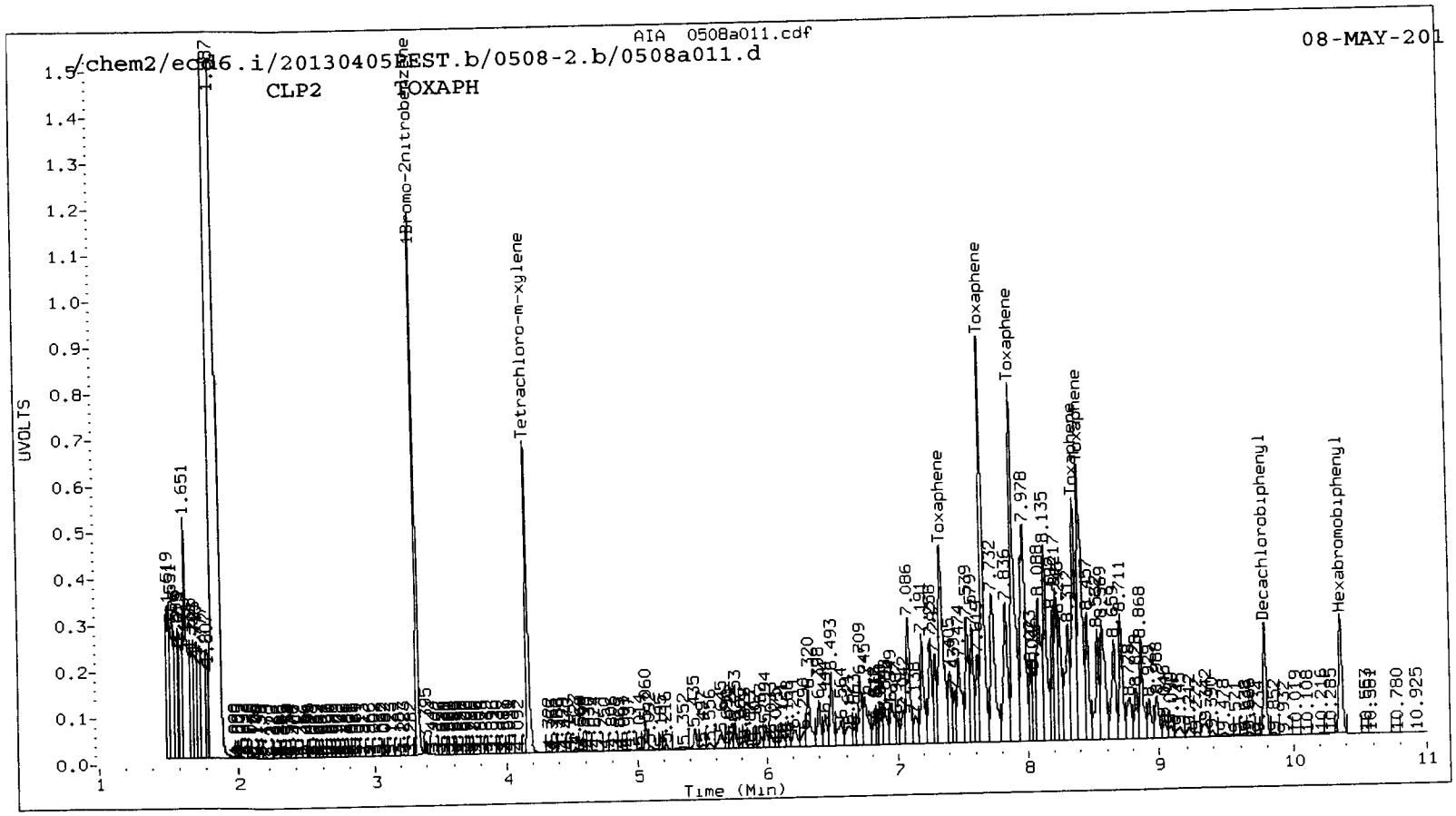
STX-CLP TOXAPH
08-MAY-201
UVOLTS
Time (Min)
1.605
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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/chem2/ecd6.i/20130405PEST.b/0508-2.b/0508a011.d
CLP2 TOXAPH
08-MAY-201
UVOLTS
Time (Min)
1.651
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

Analytical Chemists and Consultants

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) WQ14, WN27, WN31 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 WQ14	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	YL 05/02/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3
	SBSDup	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	YL 05/02/13 Analyst/Date
	~~QLS~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
2	WQ14 A	19.05	2.5mL	2.5mL	1mL	2.5mL	1mL		KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6
2	B	18.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
PSRM (SRM)	C	5.00	2.5mL	2.5mL	1mL	2.5mL	1mL		
2	WN27A	21.04	2.5mL	2.5mL	1mL	2.5mL	1mL		RS 05/03/13 Analyst/Date
2	Amb	21.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
2	Amd	21.04	2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 3 Pre-Cleanups
9	WN31 A	32.05	2.5mL	2.5mL	1mL	2.5mL	1mL		RS 5-4-13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 (3) Post Cleanups
			2.5mL	2.5mL	1mL	2.5mL	1mL		SP 5/6/13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
Analyst/Date	YL 05/02/13		RS 5-4-13	SP 5-6-13	SP 5-6-13	SP 5/4/13	SP 5/6/13	SP 5/3/13	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(2435-2)	2µg/mL	50µL	5/16/13	YL	SP
Spike	1(2674-4)	20µg/mL	63µL	10/31/13	YL	SP
~~QLS Spike~~	5( )	~~2µg/mL~~	~~25µL~~			

Extraction Time: 1420 Balance ID: B14642614

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate.
. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels).
. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike.
Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then
ool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in
ottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches
ove the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the
nnel and rinse with Hexane. 11. KD (Smaller Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate).
. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

09F
ge 1 of 2

A. Need Total Solids Y (N)
B: ~~Archive~~/Freeze (Y) N
WQ14 only

Revision 04
01/18/2013

WN31 : 01679

Reagent and Solutions Identification

(8082A) PCB – Soil / (Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WQ14, WN27, WN31

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8068 + jar date 4/19/13)	YL/
Neutral Glasswool: (I# 7998 + jar date 04/08/13)	05/02/13
1:1 Hexane/Acetone: (H# 164)	
80:20 Hexane/Acetone: (H# 162)	KD
Hexane: (I# 8203)	RR 05/03/13
KD Station:	
Hexane: (I# 8203) 8068 4/19/13	
Anhydrous Sodium Sulfate: (I# 7998 + jar date 04/08/13)	
Neutral Glasswool: (I# 7998 + jar date 04/08/13)	Vialing
	SP 5/4/13
Vialing Station:	
Hexane: (I# 8203)	
Concentrated Sulfuric Acid: (I# 8156)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 148)	
Sodium Sulfite: (I# 7764)	
Silica Gel (SPE) Darts: (I# 7914)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN31 Client ID: SAIC

Parameter: PCB PSDDA (4ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

PCB Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

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		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
1660	1980-1	5/16/13	1660	2009-2	5/16/13
1242	1980-4		1242	2009-5	
1248	1980-5		1248	2009-6	
1254	1980-6		1254	2009-7	
2162	1980-2		2162	2009-3	
3268	1980-3		3268	2009-4	

Detail problems, corrective actions and/or other pertinent information below:

Analyst: [signature] **Date:** 4/22/13

Reviewer: [signature] **Date:** 5/8/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130416.b/ical-1.b/0416a010.d
Level 2: /chem2/ecd5.i/20130416.b/ical-1.b/0416a011.d
Level 3: /chem2/ecd5.i/20130416.b/ical-1.b/0416a013.d
Level 4: /chem2/ecd5.i/20130416.b/ical-1.b/0416a009.d
Level 5: /chem2/ecd5.i/20130416.b/ical-1.b/0416a014.d
Level 6: /chem2/ecd5.i/20130416.b/ical-1.b/0416a012.d
Level 7: /chem2/ecd5.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	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03196	0.03196	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01009	0.01009	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01396	0.01396	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02633	0.02633	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08105	0.08105	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03590	0.03590	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
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	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04490	0.04490	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	0.01408	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04340	0.04340	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02193	0.02193	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02572	0.02572	0.000
7 Aroclor-1016(1)	0.03955	0.03567	0.03633	0.03270	0.03063	0.02855	+++++	0.03390	11.923
(2)	0.12941	0.11130	0.11263	0.10024	0.09377	0.08633	+++++	0.10561	14.598
(3)	0.05565	0.04757	0.04997	0.04413	0.04121	0.03772	+++++	0.04604	13.952
(4)	0.03698	0.03177	0.03580	0.03222	0.03013	0.02772	+++++	0.03244	10.686

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
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	RRF	% RSD
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05052	0.05052	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.05597	0.05597	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.07224	0.07224	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05114	0.05114	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07442	0.07442	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04939	0.04939	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.09915	0.09915	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10641	0.10641	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.04380	0.04380	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
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	RRF	% RSD
9 Aroclor-1260(1)	0.05313	0.04904	0.04640	0.04287	0.03896	0.03514	+++++	0.04426	14.968
(2)	0.05485	0.04889	0.04655	0.04330	0.03940	+++++	+++++	0.04660	12.522
(3)	0.12876	0.11945	0.11321	0.10525	0.09591	+++++	+++++	0.11252	11.250
(4)	0.06966	0.06211	0.06029	0.05680	0.05240	+++++	+++++	0.06025	10.676
(5)	0.03762	0.03152	0.03214	0.03037	0.02802	+++++	+++++	0.03193	11.106
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05136	0.05136	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13372	0.13372	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04748	0.04748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05697	0.05697	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
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	___ RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05591	0.05591	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.13029	0.13029	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13012	0.13012	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.11247	0.11247	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.32821	0.32821	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB1.m
Cal Date : 19-Apr-2013 11:21 van
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	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.44918	1.33361	1.34480	1.26920	1.23370	1.17740	+++++	1.30132	7.351
$ 13 Decachlorobiphenyl	1.53451	1.42137	1.28919	1.11511	1.01716	0.93667	+++++	1.21900	19.297

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130416.b/ical-2.b/0416a010.d
Level 2: /chem2/ecd5.i/20130416.b/ical-2.b/0416a011.d
Level 3: /chem2/ecd5.i/20130416.b/ical-2.b/0416a013.d
Level 4: /chem2/ecd5.i/20130416.b/ical-2.b/0416a009.d
Level 5: /chem2/ecd5.i/20130416.b/ical-2.b/0416a014.d
Level 6: /chem2/ecd5.i/20130416.b/ical-2.b/0416a012.d
Level 7: /chem2/ecd5.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	250.000 Level 7	RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00835	0.00835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01307	0.01307	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.00790	0.00790	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02385	0.02385	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01989	0.01989	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03907	0.03907	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
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	___ RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.01634							0.01634	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.01338							0.01338	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03437							0.03437	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.07332							0.07332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03073							0.03073	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.02528							0.02528	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.04475							0.04475	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03673							0.03673	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03780							0.03780	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
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	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04936	0.04936	0.000
7 Aroclor-1016(1)	0.06108	0.05107	0.04820	0.04243	0.03948	0.03622	+++++	0.04641	19.460
(2)	0.12457	0.10496	0.10034	0.08923	0.08662	0.08047	+++++	0.09770	16.334
(3)	0.03128	0.02702	0.02574	0.02395	0.02311	0.02174	+++++	0.02547	13.369
(4)	0.03037	0.02546	0.02403	0.02168	0.02073	0.01922	+++++	0.02358	17.016
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03682	0.03682	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04547	0.04547	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03515	0.03515	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07596	0.07596	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
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	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.04386	0.04386	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.06622	0.06622	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.05736	0.05736	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.13232	0.13232	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.08604	0.08604	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05172	0.05172	0.000
9 Aroclor-1260(1)	0.05772	0.04814	0.04595	0.04116	0.03847	0.03548	+++++	0.04449	17.956
(2)	0.06783	0.05774	0.05498	0.05001	0.04712	0.04368	+++++	0.05356	16.170
(3)	0.13865	0.11330	0.10897	0.09959	0.09428	0.08792	+++++	0.10712	16.835

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
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	RRF	% RSD
(4)	0.03762	0.03256	0.03123	0.02883	0.02738	0.02563	+++++	0.03054	14.024
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.13392	0.13392	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13215	0.13215	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10949	0.10949	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.32319	0.32319	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 14:05
End Cal Date : 16-APR-2013 17:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130416.b/PCB2.m
Cal Date : 19-Apr-2013 11:18 van
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	___ RRF	% RSD
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene	1.31190 +++++	1.18980	1.21250	1.14038	1.12553	1.08138		1.17691	6.877
$ 13 Decachlorobiphenyl	1.37415 +++++	1.18372	1.17159	1.04616	0.97512	0.90538		1.10935	15.252

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 4.16.13 Analysis: PCB Analyst: VB / YZ

Column 1 Serial No.: 196398 Column Type: ZB-5

Column 2 Serial No.: 182259 Column Type: ZB-35

GC Method: PCB ICal Date: 4.16.13 Injection Volume: 2 uL

IS	Ical/Ccal	ICV
2006-7	1980-1,6 1991-2	2009-2,7

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130416.b/ical-1.b
/chem2/ecd5.i/20130416.b/ical-2.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	16-APR-2013 13:45	0416a008.d	1	IB	
2	16-APR-2013 14:05	0416a009.d	1	AR1660 250	
3	16-APR-2013 14:25	0416a010.d	1	AR1660 20	
4	16-APR-2013 14:45	0416a011.d	1	AR1660 50	
5	16-APR-2013 15:05	0416a012.d	1	AR1660 1000	
6	16-APR-2013 15:25	0416a013.d	1	AR1660 100	
7	16-APR-2013 15:45	0416a014.d	1	AR1660 500	
8	16-APR-2013 16:05	0416a015.d	1	AR1242	
9	16-APR-2013 16:25	0416a016.d	1	AR1248	
10	16-APR-2013 16:46	0416a017.d	1	AR1254	
11	16-APR-2013 17:06	0416a018.d	1	AR2162	
12	16-APR-2013 17:26	0416a019.d	1	AR3268	
13	16-APR-2013 17:46	0416a020.d	1	AR1242 ICV	
14	16-APR-2013 18:07	0416a021.d	1	AR1248 ICV	
15	16-APR-2013 18:27	0416a022.d	1	AR1254 ICV	
16	16-APR-2013 18:47	0416a023.d	1	AR1660 ICV	
17	16-APR-2013 19:07	0416a024.d	1	AR2162 ICV	
18	16-APR-2013 19:27	0416a025.d	1	AR3268 ICV	

4.18.13

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.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a009.d
Data file 2: 20130416.b/ical-2.b/0416a009.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 250
Client ID:
Injection Date: 16-APR-2013 14:05
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	0.001	15435643	4.402	-0.001	4121479	19.5	19.4	0.7	Tetrachloro-m-xylen
12.828	0.001	22825918	13.203	-0.001	4253590	18.3	18.9	3.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	48.8	48.4
Decachlorobiphenyl	45.7	47.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48646950	0.0
Hexabromobiphenyl	81878684	81878684	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14456526	0.0
Hexabromobiphenyl	16263628	16263628	0.0

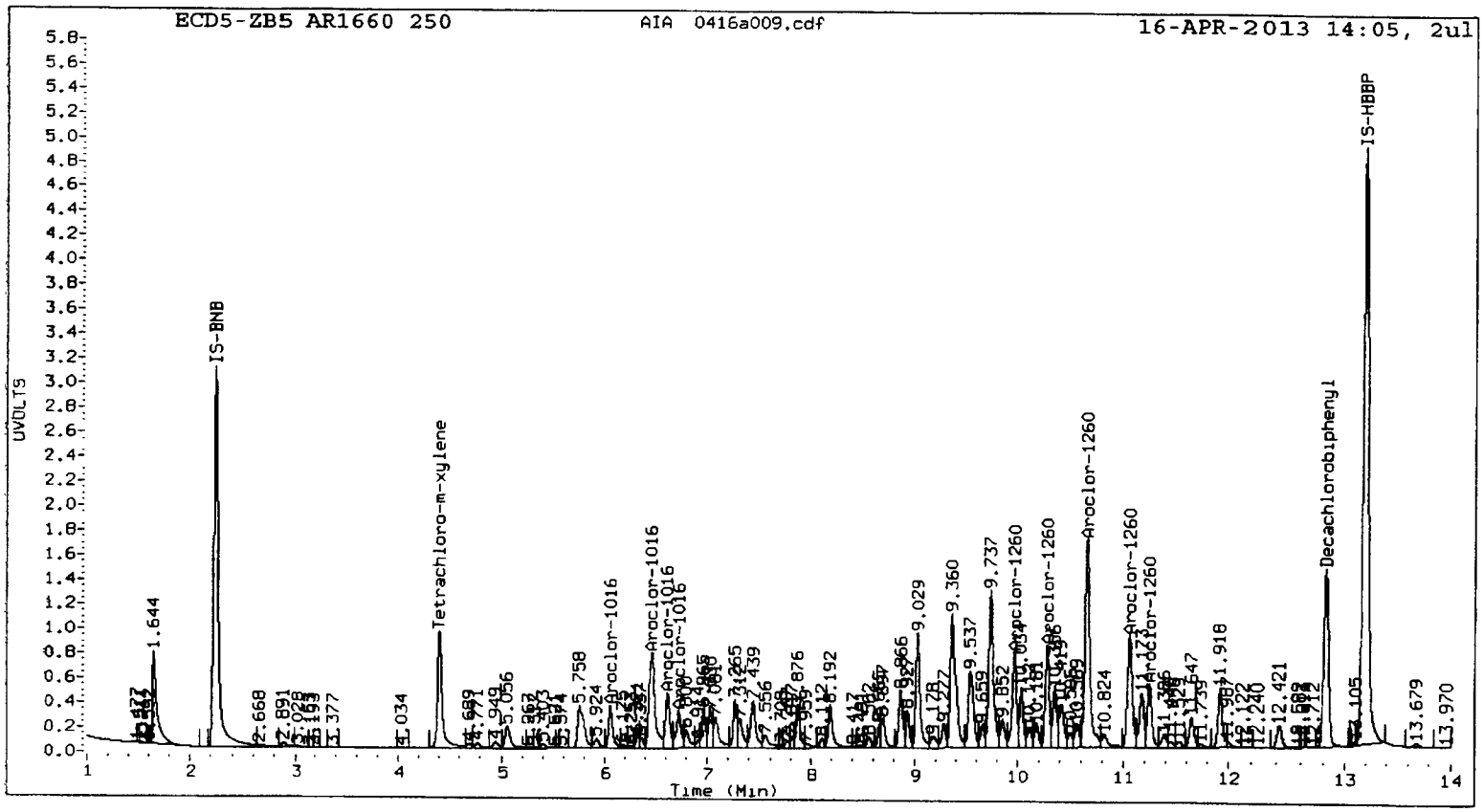
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

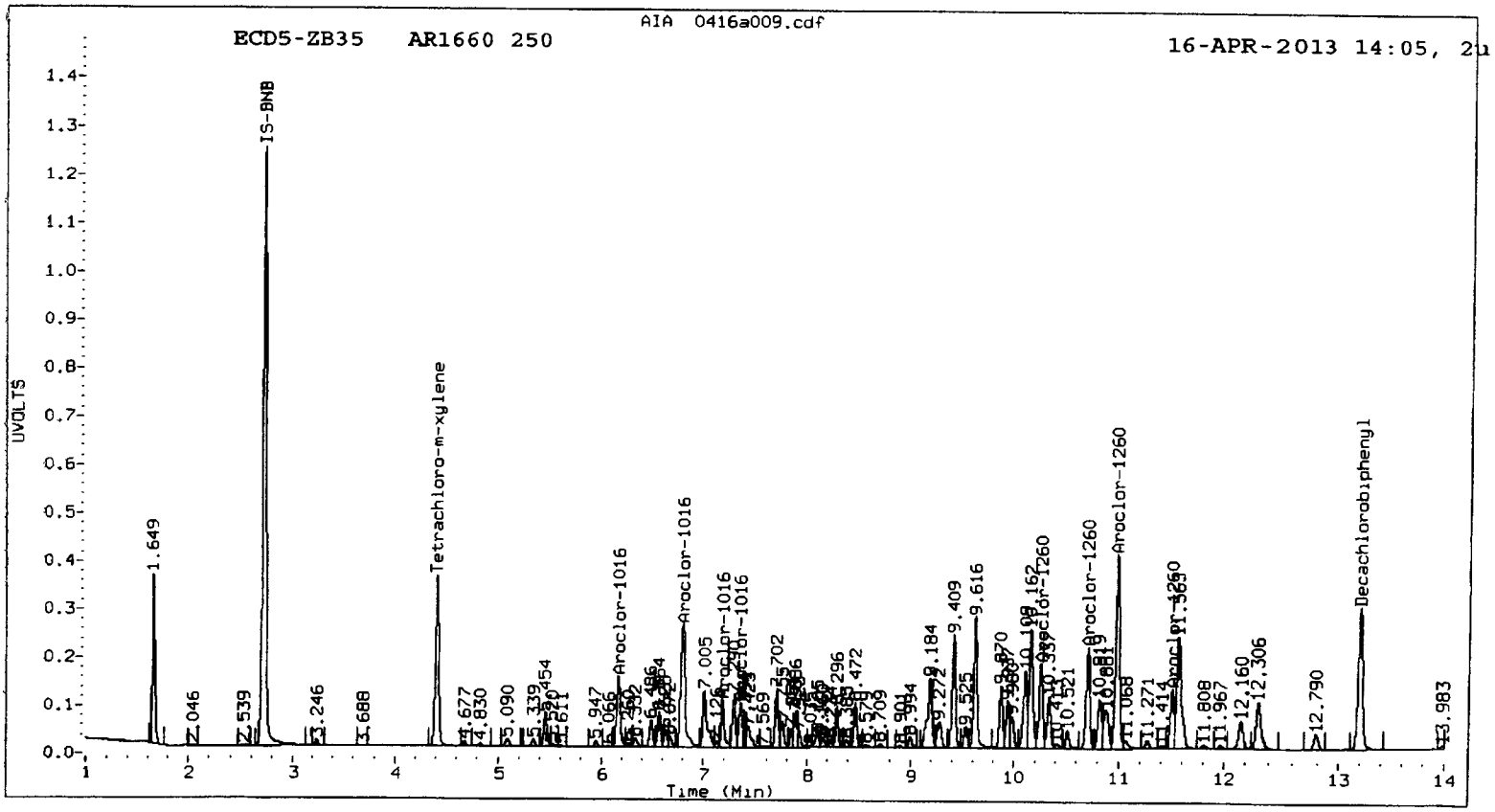
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.056	0.004	4971080	241.1	1	6.160	-0.001	1916939	228.6
Aroclor-1016	2	6.463	0.004	15239200	237.3	2	6.796	0.000	4031171	228.3
Aroclor-1016	3	6.612	0.004	6708948	239.6	3	7.181	0.000	1082154	235.1
Aroclor-1016	4	6.724	0.004	4898057	248.3	4	7.354	0.000	979509	229.8
	Total Col1Ave (4 peaks):				241.6		Total Col2Ave (4 peaks):			230.5 RPD = 5
	Corrected Ave (3 peaks):				239.3		Corrected Ave (3 peaks):			228.9 RPD = 4
Aroclor-1260	1	9.966	0.002	10968051	232.6	1	10.258	-0.001	2092083	231.3
Aroclor-1260	2	10.282	0.002	11078236	232.3	2	10.708	0.000	2541542	233.4
Aroclor-1260	3	10.658	0.003	26930223	233.9	3	10.983	-0.001	5061546	232.4
Aroclor-1260	4	11.059	0.003	14532581	235.7	4	11.503	-0.002	1465400	236.0
Aroclor-1260	5	11.247	0.002	7769906	237.7	NS	---			----
	Total Col1Ave (5 peaks):				234.4		Total Col2Ave (4 peaks):			233.3 RPD = 0
	Corrected Ave (4 peaks):				233.6		Corrected Ave (3 peaks):			232.4 RPD = 1

Total PCB Area Col1 (4.501 - 12.727) = 318231638 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 64033361 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660 250
AIA 0416a009.cdf
16-APR-2013 14:05, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)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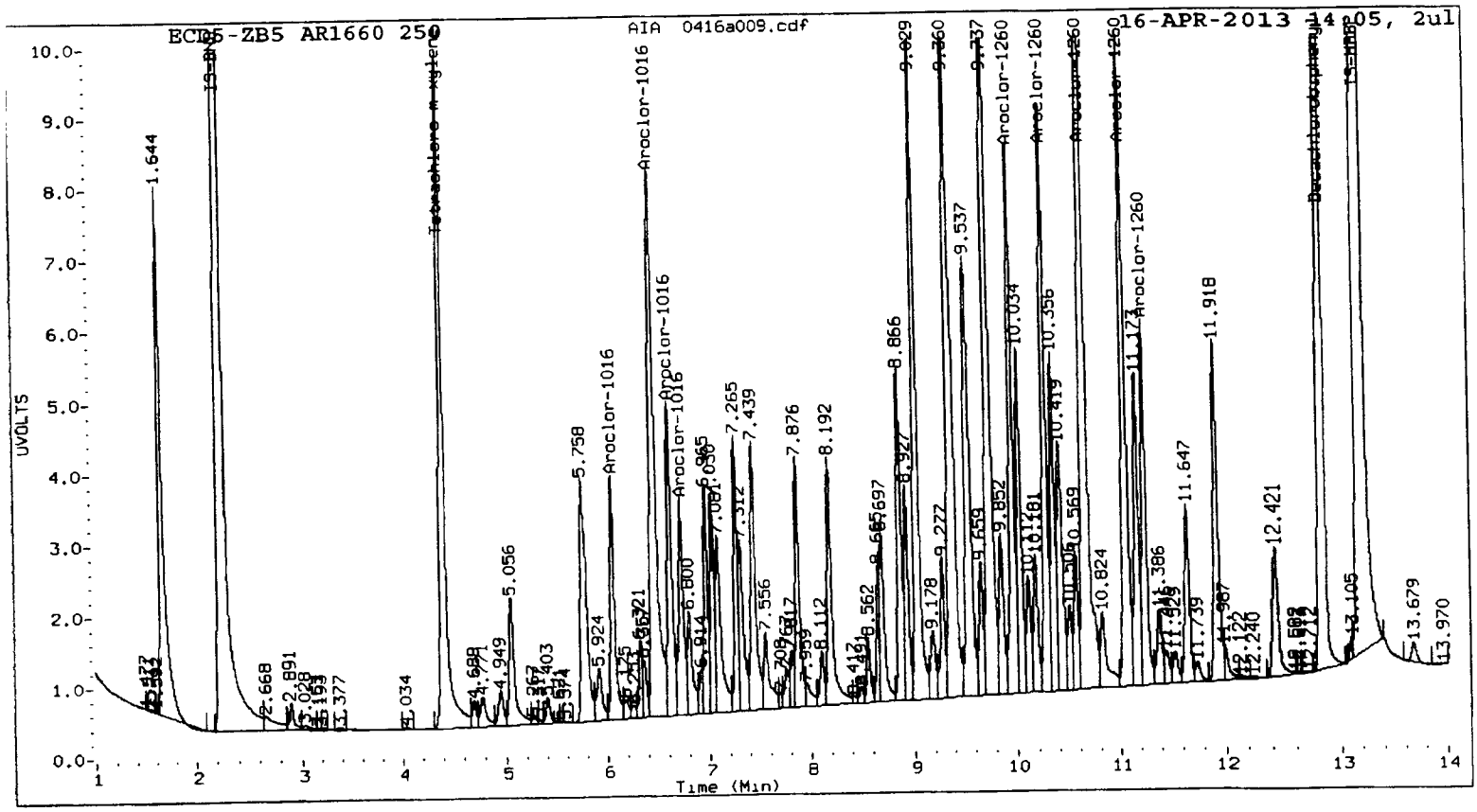
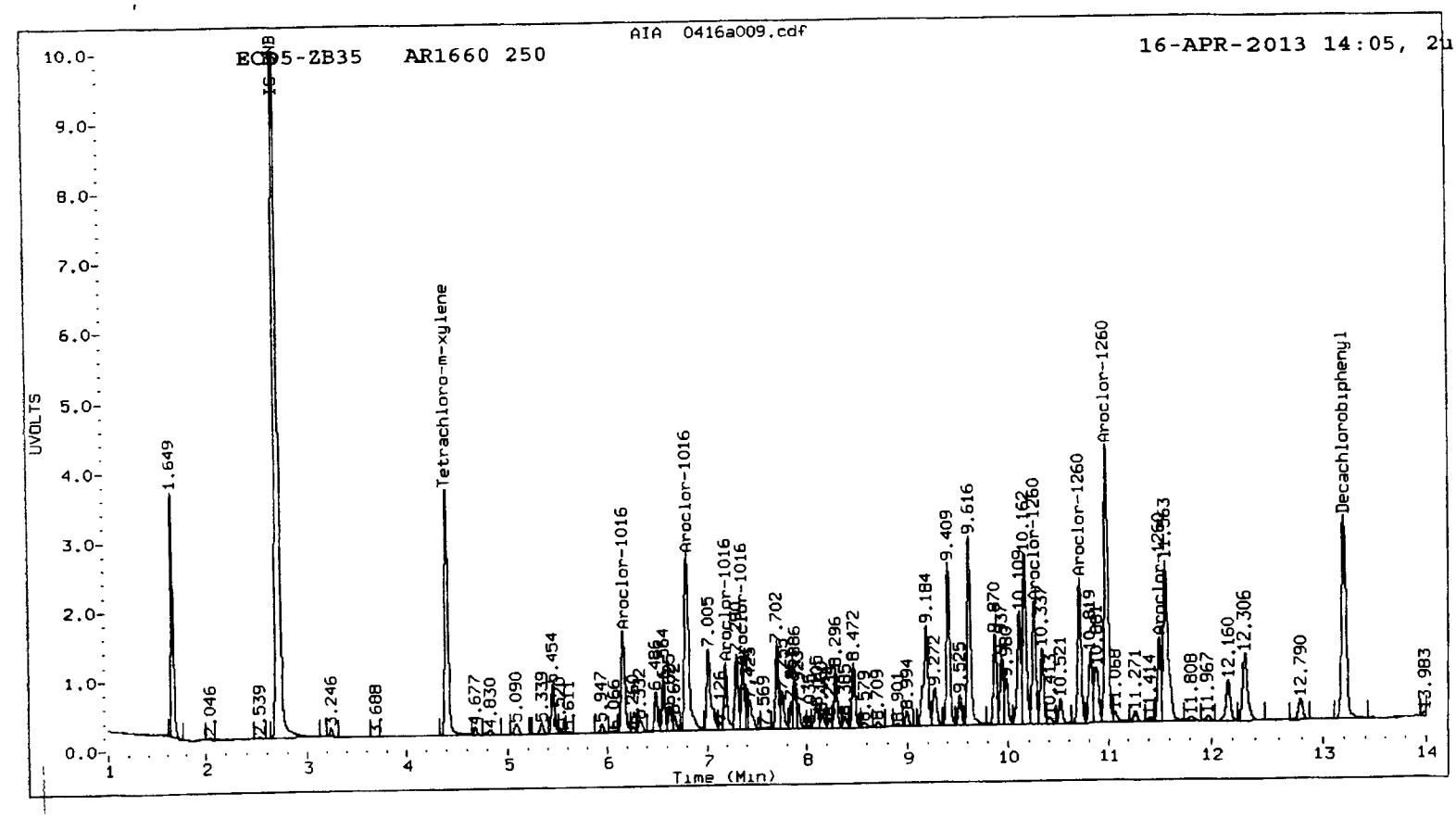
ECD5-ZB35 AR1660 250
16-APR-2013 14:05, 2u
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)


ECD5-ZB5 AR1660 250
AIA 0416a009.cdf
16-APR-2013 14:05, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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16-APR-2013 14:05, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a010.d
Data file 2: 20130416.b/ical-2.b/0416a010.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 20
Client ID:
Injection Date: 16-APR-2013 14:25
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.399	-0.002	1450153	4.405	0.001	379240	1.8	1.8	0.1	Tetrachloro-m-xylen
12.826	-0.001	2657197	13.204	0.000	452796	2.0	2.0	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.5	4.5
Decachlorobiphenyl	5.0	5.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50033552	2.9
Hexabromobiphenyl	81878684	86581362	5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14453887	0.0
Hexabromobiphenyl	16263628	16475546	1.3

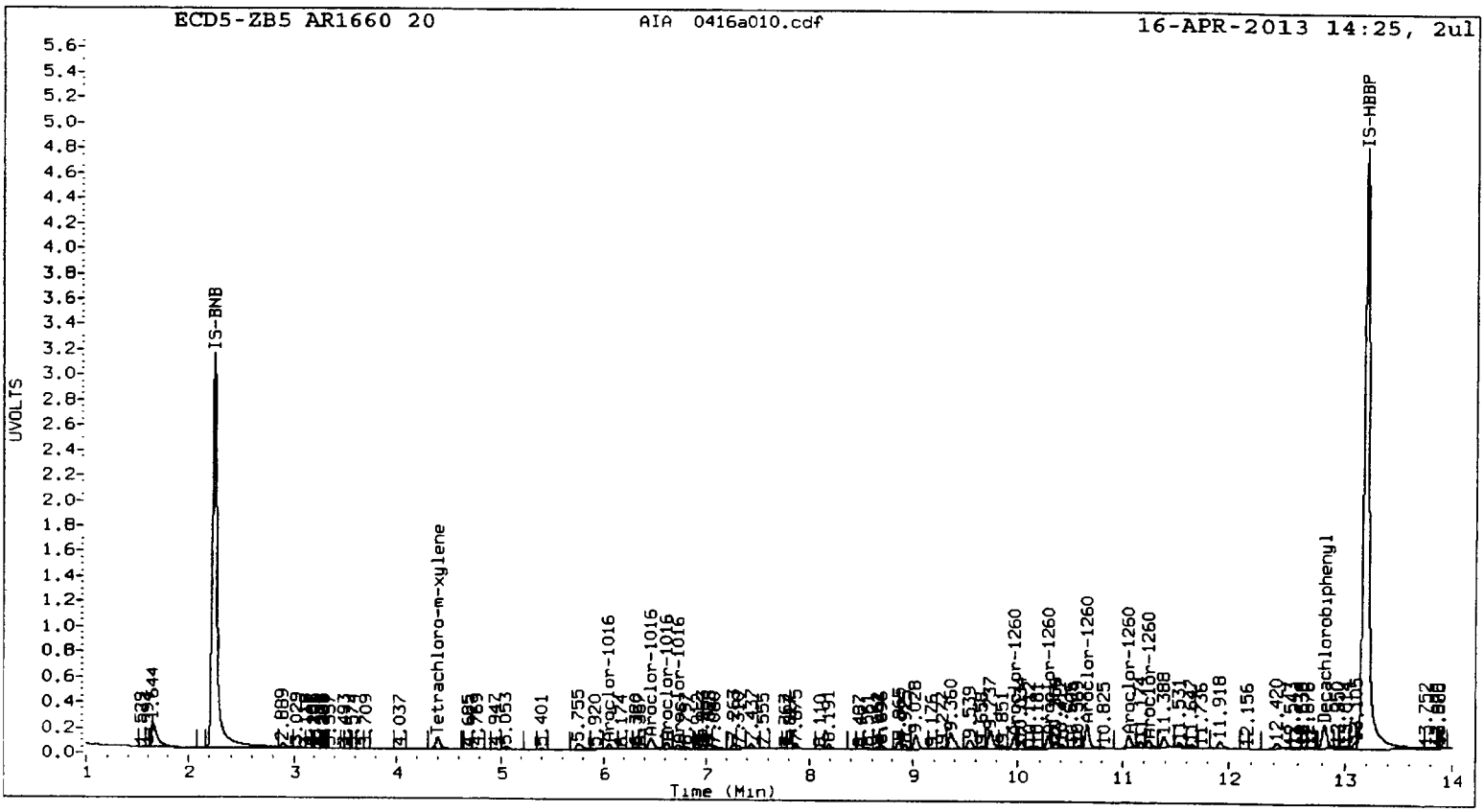
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	494662	23.3	1	6.161	0.000	220721	26.3
Aroclor-1016	2	6.462	0.003	1618660	24.5	2	6.797	0.001	450147	25.5
Aroclor-1016	3	6.612	0.003	696079	24.2	3	7.182	0.001	113028	24.6
Aroclor-1016	4	6.723	0.003	462608	22.8	4	7.355	0.001	109733	25.8
Total Col1Ave (4 peaks):					23.7	Total Col2Ave (4 peaks):				25.5 RPD = 7
Corrected Ave (3 peaks):					23.4	Corrected Ave (3 peaks):				25.3 RPD = 8
Aroclor-1260	1	9.966	0.002	1150090	23.1	1	10.259	0.000	237739	25.9
Aroclor-1260	2	10.282	0.002	1187319	23.5	2	10.710	0.001	279396	25.3
Aroclor-1260	3	10.659	0.003	2787092	22.9	3	10.987	0.003	571096	25.9
Aroclor-1260	4	11.060	0.004	1507804	23.1	4	11.507	0.002	154968	24.6
Aroclor-1260	5	11.248	0.003	814214	23.6	NS	---			----
Total Col1Ave (5 peaks):					23.2	Total Col2Ave (4 peaks):				25.5 RPD = 9
Corrected Ave (4 peaks):					23.2	Corrected Ave (3 peaks):				25.3 RPD = 9

Total PCB Area Col1 (4.501 - 12.727) = 34114669 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 7141245 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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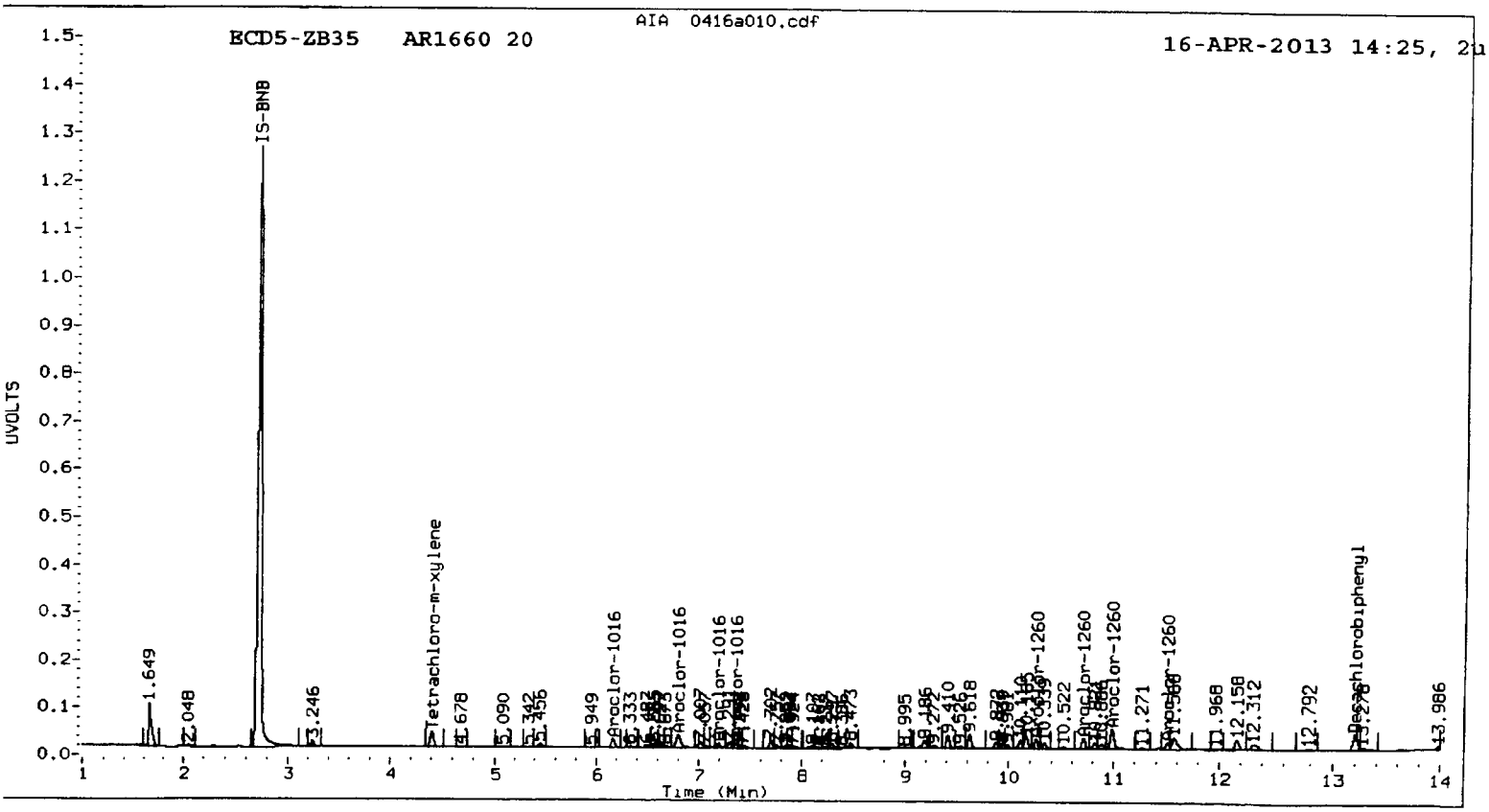
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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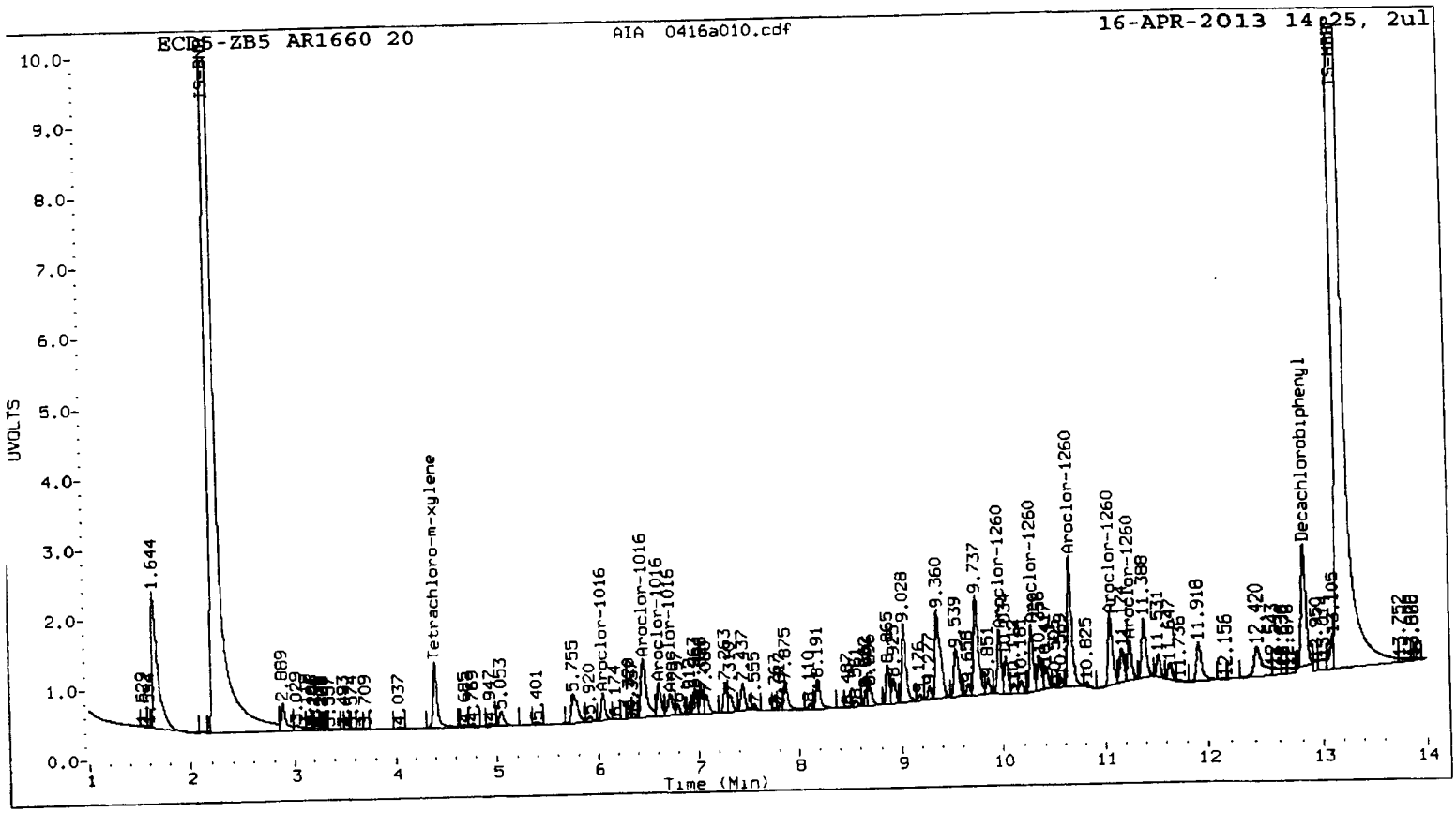
16-APR-2013 14:25, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
UVOLTS
Time (Min)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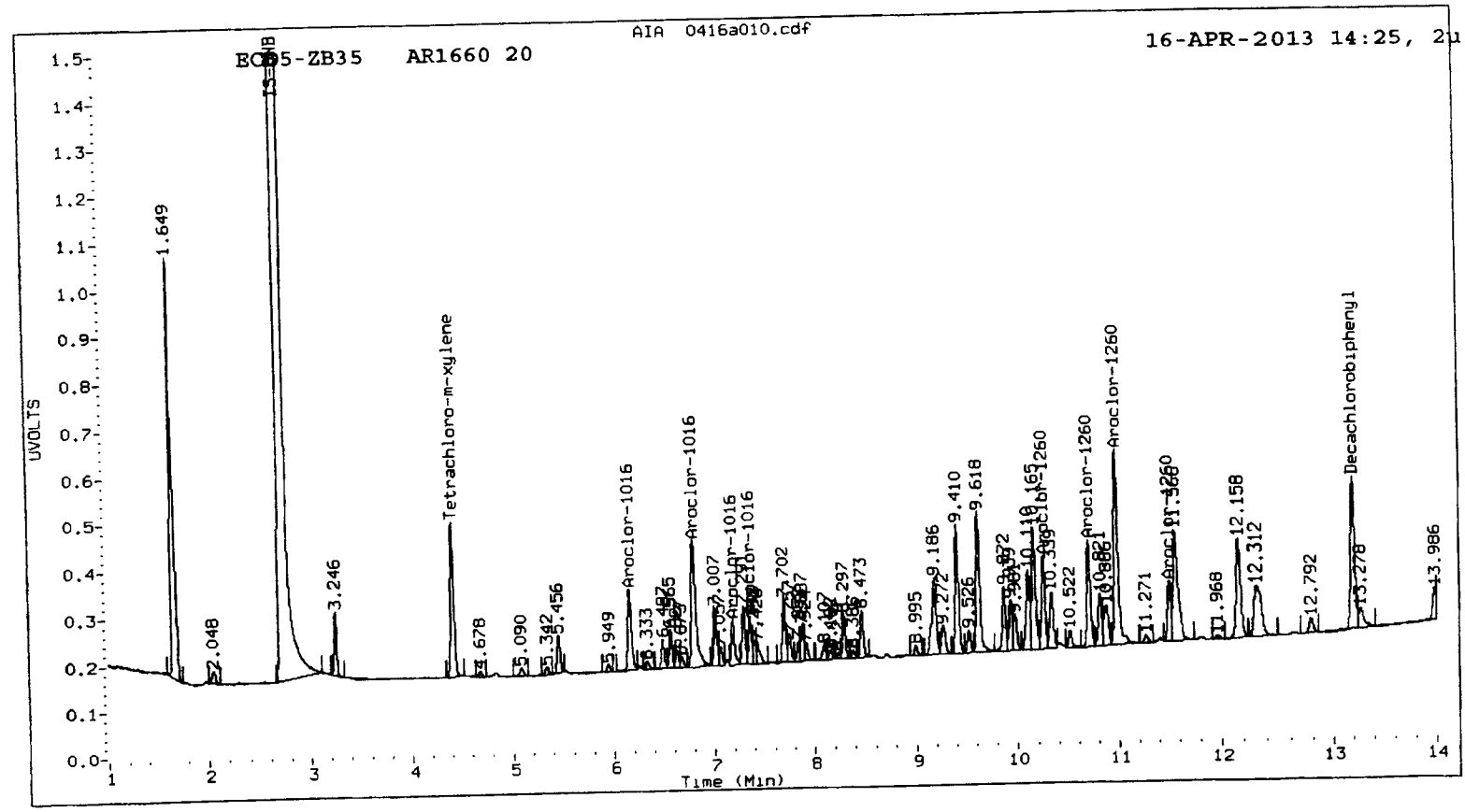
16-APR-2013 14:25, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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ECD5-ZB35 AR1660 20
16-APR-2013 14:25, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a011.d
Data file 2: 20130416.b/ical-2.b/0416a011.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 50
Client ID:
Injection Date: 16-APR-2013 14:45
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.400	-0.001	3368851	4.402	-0.001	871429	4.1	4.0	1.4	Tetrachloro-m-xylen
12.826	-0.001	6278690	13.204	-0.001	982993	4.7	4.3	8.9	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	10.2	10.1
Decachlorobiphenyl	11.7	10.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50522404	3.9
Hexabromobiphenyl	81878684	88346709	7.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14648372	1.3
Hexabromobiphenyl	16263628	16608531	2.1

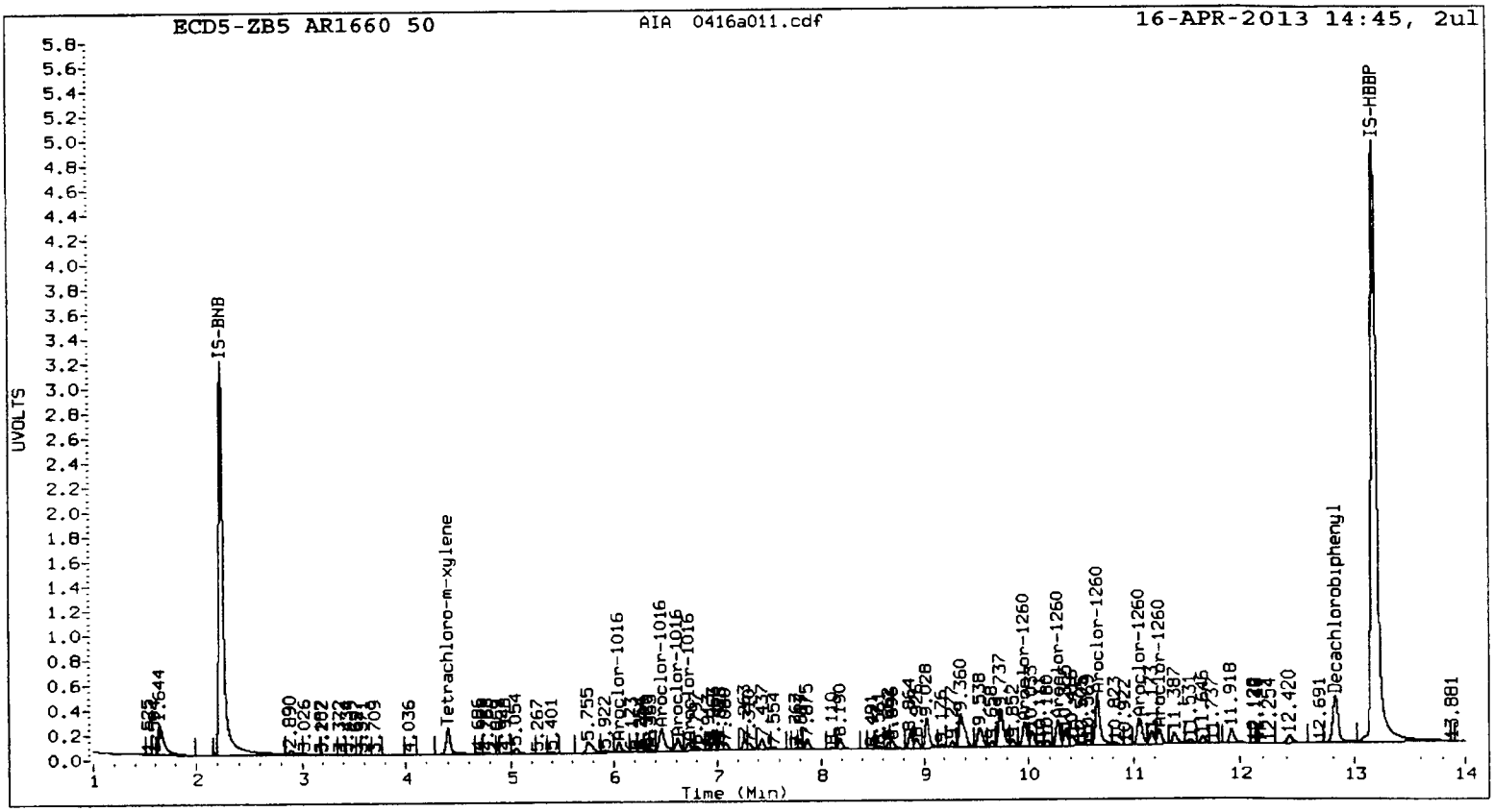
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	1126244	52.6	1	6.161	0.000	467567	55.0
Aroclor-1016	2	6.461	0.003	3514514	52.7	2	6.797	0.002	960918	53.7
Aroclor-1016	3	6.611	0.003	1502248	51.7	3	7.182	0.001	247387	53.0
Aroclor-1016	4	6.723	0.002	1003280	49.0	4	7.354	0.000	233129	54.0
	Total Col1Ave (4 peaks):				51.5	Total Col2Ave (4 peaks):			53.9	RPD = 5
	Corrected Ave (3 peaks):				51.1	Corrected Ave (3 peaks):			53.6	RPD = 5
Aroclor-1260	1	9.964	0.001	2707629	53.2	1	10.258	0.000	499754	54.1
Aroclor-1260	2	10.282	0.002	2699709	52.5	2	10.709	0.001	599377	53.9
Aroclor-1260	3	10.659	0.003	6595593	53.1	3	10.985	0.001	1176045	52.9
Aroclor-1260	4	11.059	0.003	3429495	51.5	4	11.506	0.001	337997	53.3
Aroclor-1260	5	11.247	0.002	1740219	49.3	NS	---			----
	Total Col1Ave (5 peaks):				51.9	Total Col2Ave (4 peaks):			53.6	RPD = 3
	Corrected Ave (4 peaks):				51.6	Corrected Ave (3 peaks):			53.4	RPD = 3

Total PCB Area Col1 (4.501 - 12.727) = 75065737 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 15085971 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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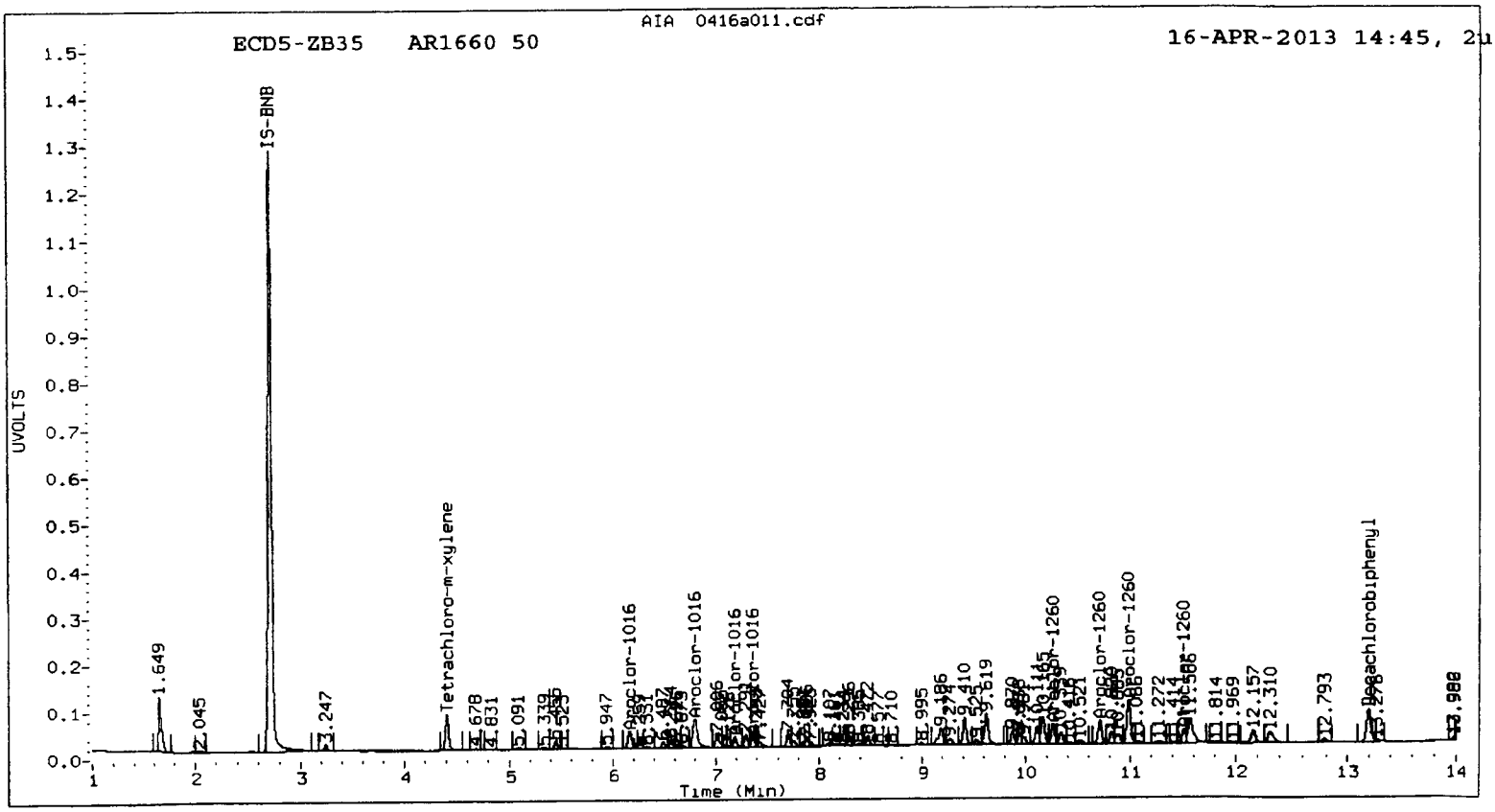
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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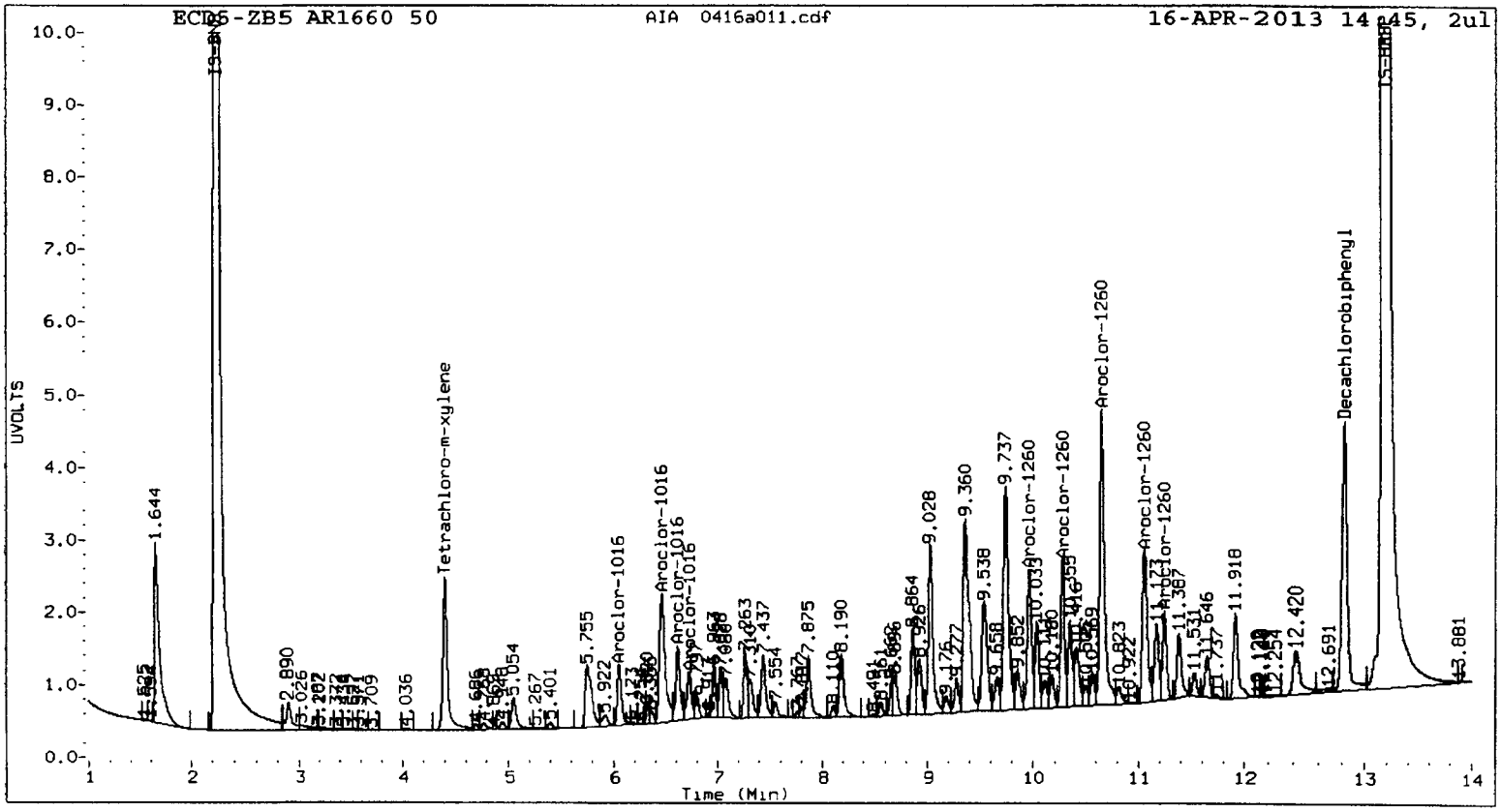
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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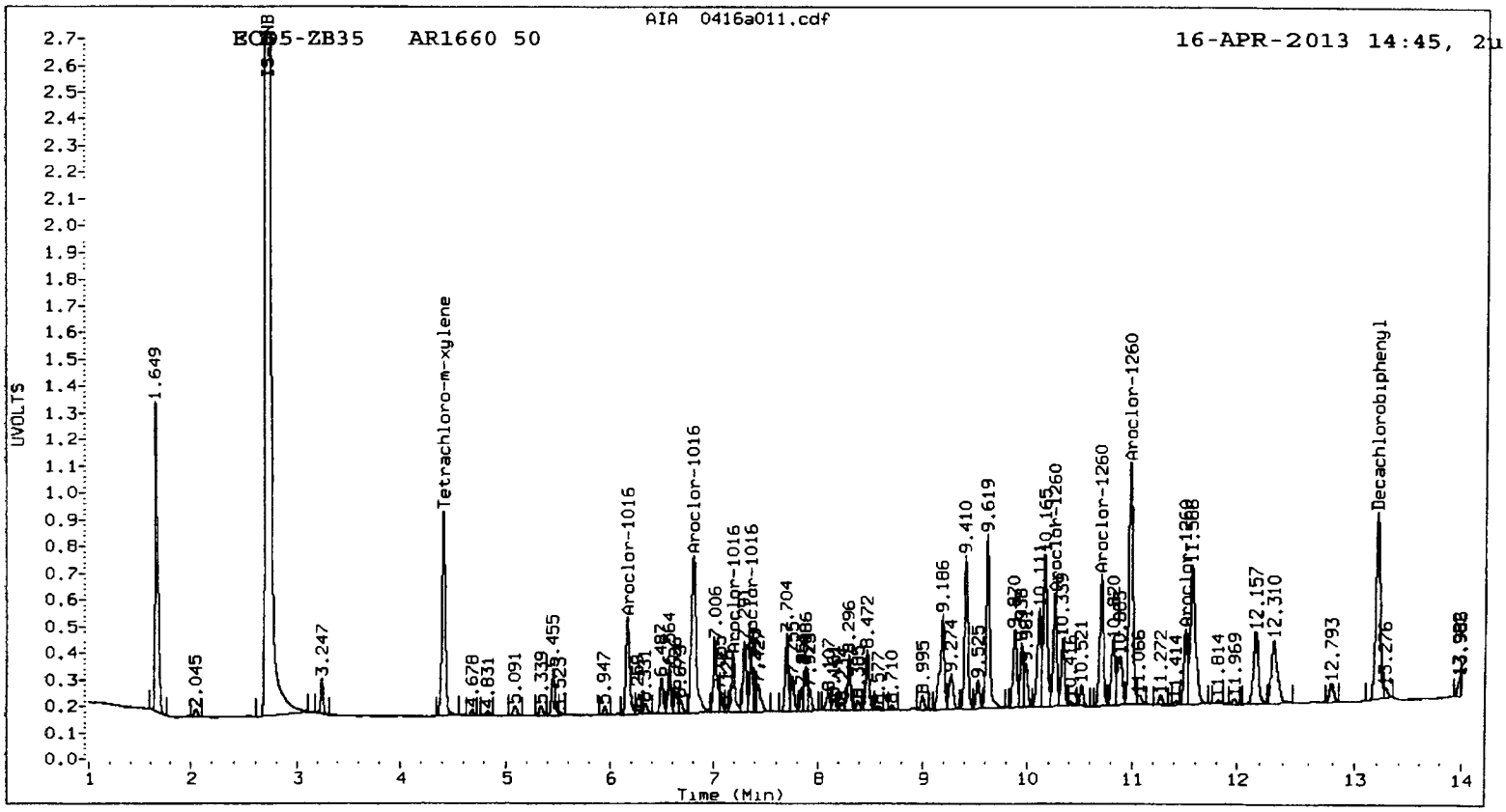
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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ECD5-ZB35 AR1660 50
16-APR-2013 14:45, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a012.d
Data file 2: 20130416.b/ical-2.b/0416a012.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 1000
Client ID:
Injection Date: 16-APR-2013 15:05
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.400	-0.001	56314884	4.403	-0.001	15543186	72.4	73.5	1.5	Tetrachloro-m-xylen
12.827	0.000	79380798	13.203	-0.002	15166727	61.5	65.3	6.0	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	181.0	183.8
Decachlorobiphenyl	153.7	163.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	47829881	-1.7
Hexabromobiphenyl	81878684	84747587	3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14373421	-0.6
Hexabromobiphenyl	16263628	16751848	3.0

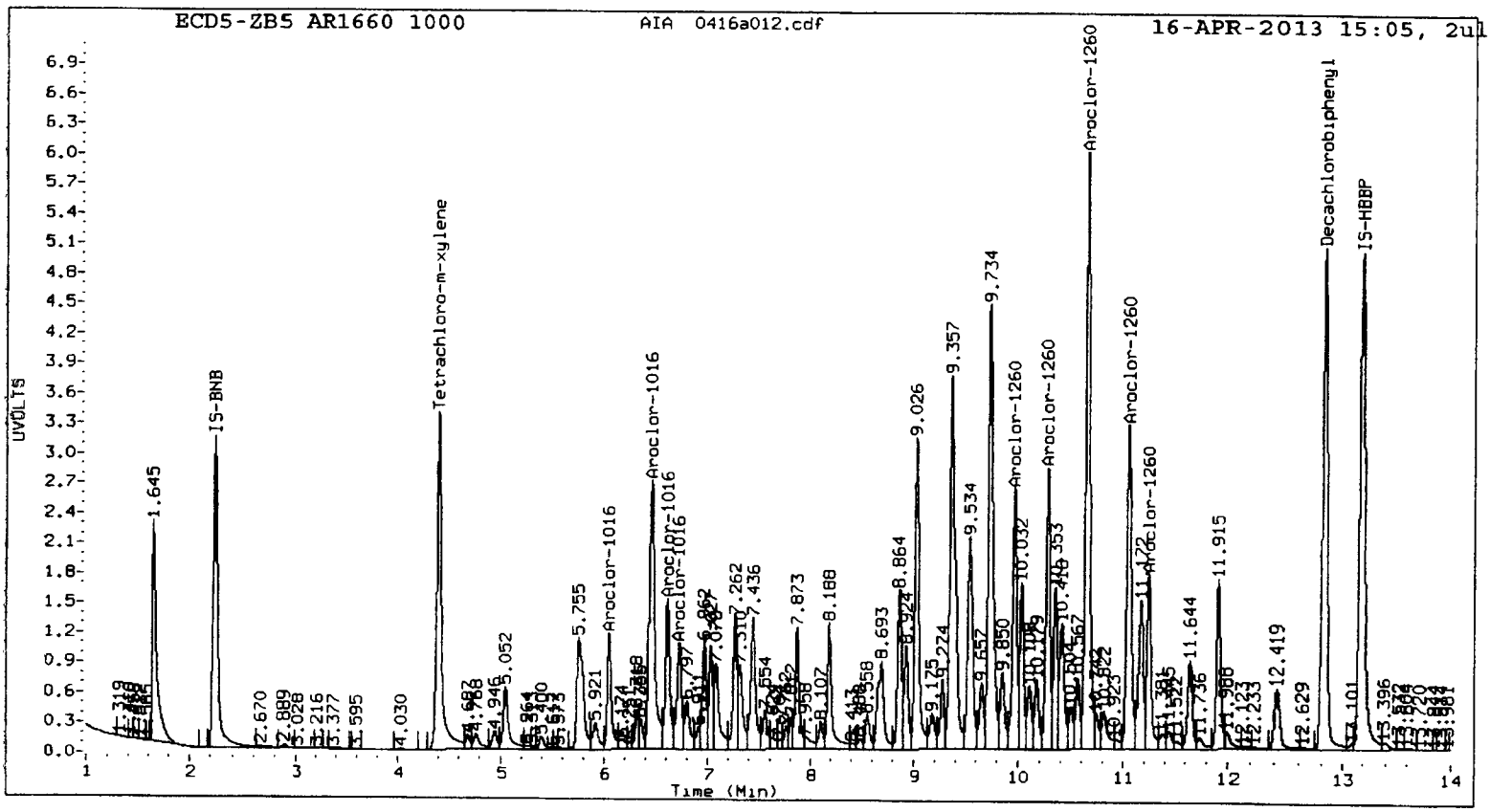
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.000	17066978	842.0	1	6.160	-0.001	6507335	780.3
Aroclor-1016	2	6.459	0.001	51616899	817.5	2	6.794	-0.002	14457644	823.6
Aroclor-1016	3	6.609	0.000	22552501	819.3	3	7.180	-0.001	3906266	853.5
Aroclor-1016	4	6.721	0.000	16572406	854.5	4	7.353	-0.001	3454027	815.2
Total Col1Ave (4 peaks):					833.3	Total Col2Ave (4 peaks):				818.2 RPD = 2
Corrected Ave (3 peaks):					826.2	Corrected Ave (3 peaks):				806.4 RPD = 2
Aroclor-1260	1	9.963	0.000	37224709	762.6	1	10.257	-0.002	7428470	797.4
Aroclor-1260	2	10.280	0.000	37718905	764.1	2	10.708	-0.001	9145661	815.5
Aroclor-1260	3	10.656	0.001	88513840	742.6	3	10.983	-0.001	18410396	820.8
Aroclor-1260	4	11.056	0.000	50597273	792.7	4	11.503	-0.002	5366701	839.1
Aroclor-1260	5	11.245	0.000	27326184	807.8	NS	---			----
Total Col1Ave (5 peaks):					774.0	Total Col2Ave (4 peaks):				818.2 RPD = 6
Corrected Ave (4 peaks):					765.5	Corrected Ave (3 peaks):				811.2 RPD = 6

Total PCB Area Col1 (4.501 - 12.727) = 1107201541 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 228854645 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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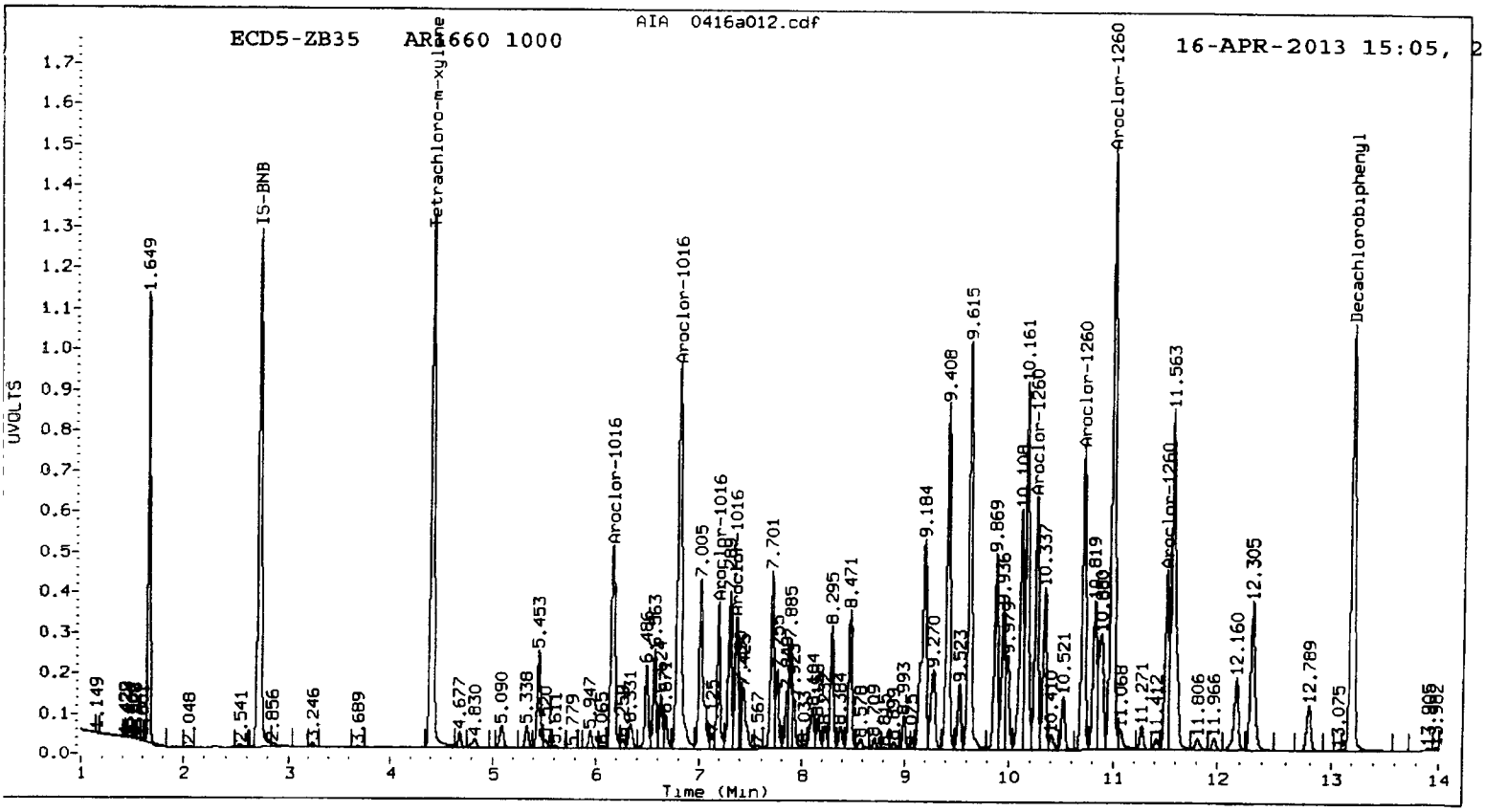
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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UVOLTS
Time (Min)
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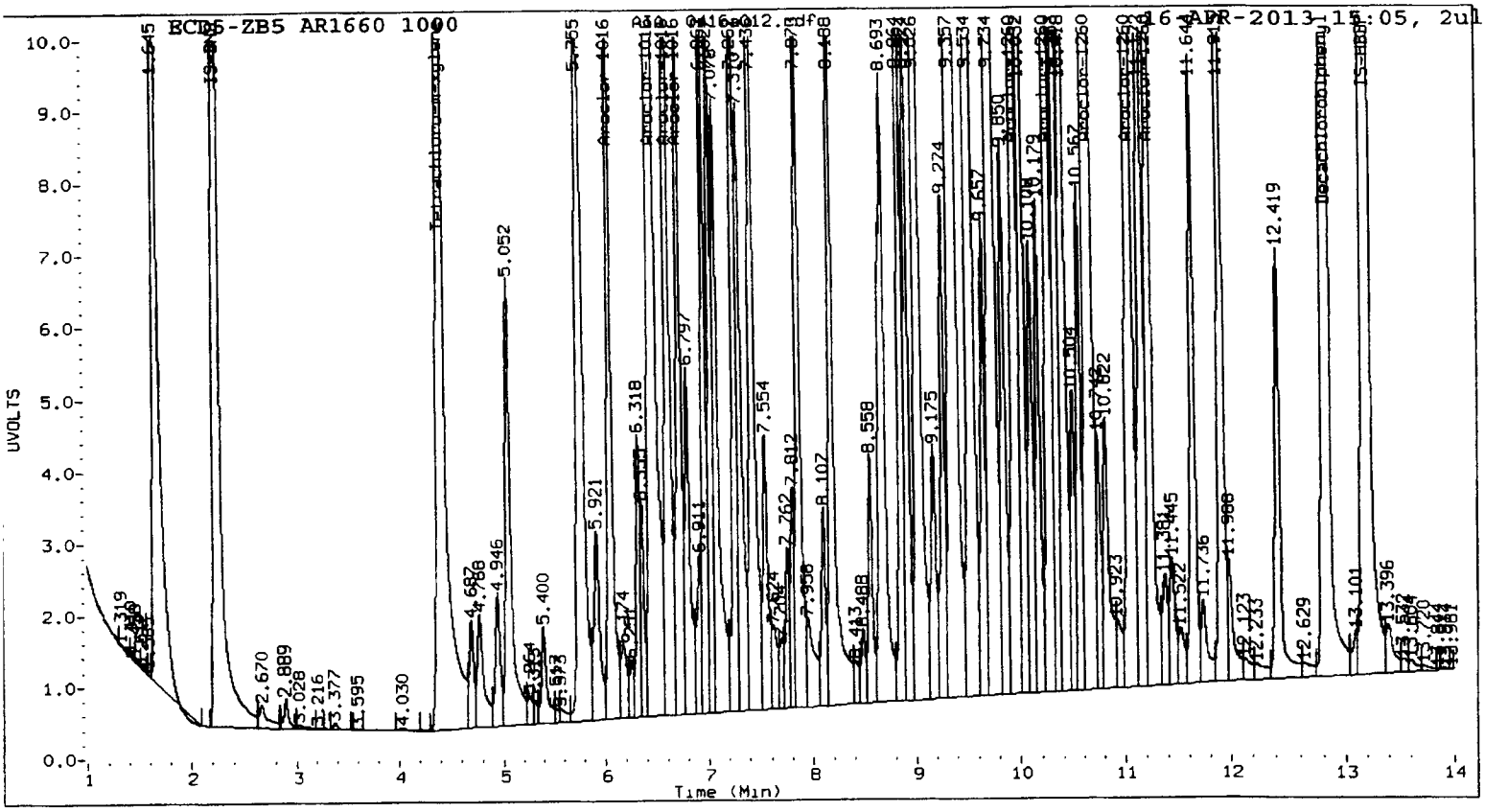
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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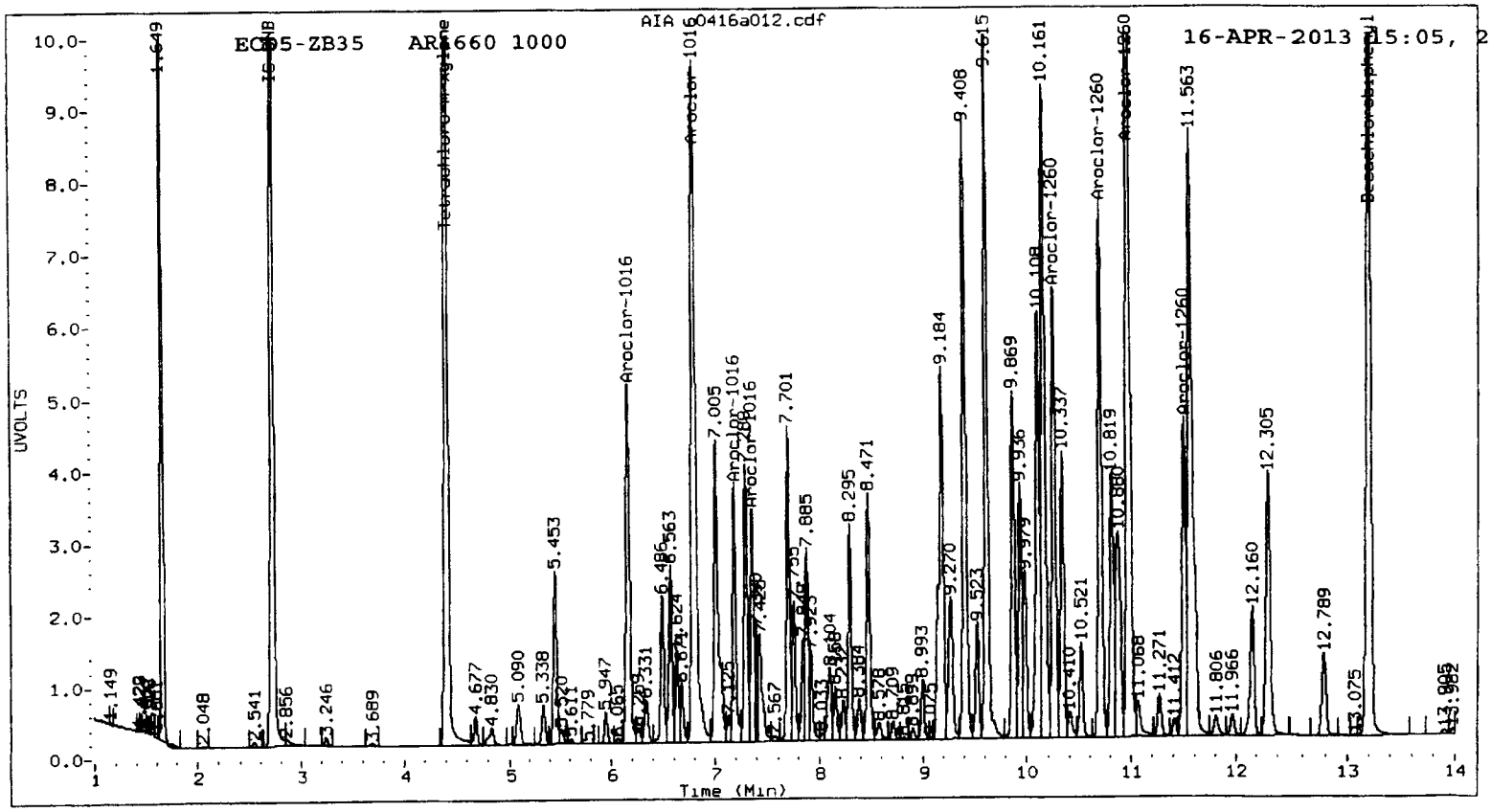
Time (Min)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Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a013.d
Data file 2: 20130416.b/ical-2.b/0416a013.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 100
Client ID:
Injection Date: 16-APR-2013 15:25
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.400	-0.001	6655668	4.403	0.000	1796284	8.3	8.2	0.3	Tetrachloro-m-xylen
12.826	-0.001	11218772	13.203	-0.001	1978613	8.5	8.4	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	20.7	20.6
Decachlorobiphenyl	21.2	21.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	49491748	1.7
Hexabromobiphenyl	81878684	87022078	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14814772	2.5
Hexabromobiphenyl	16263628	16888223	3.8

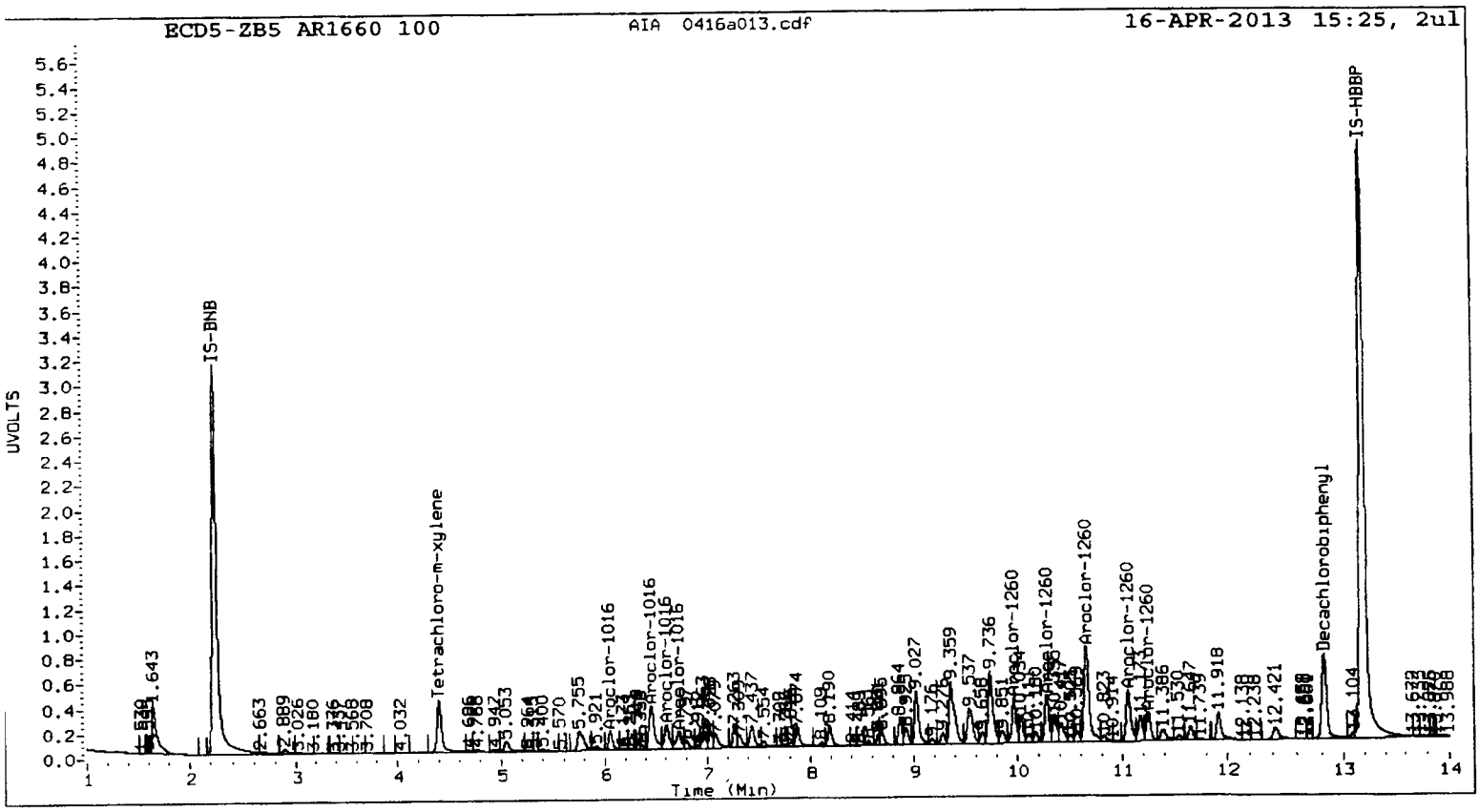
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

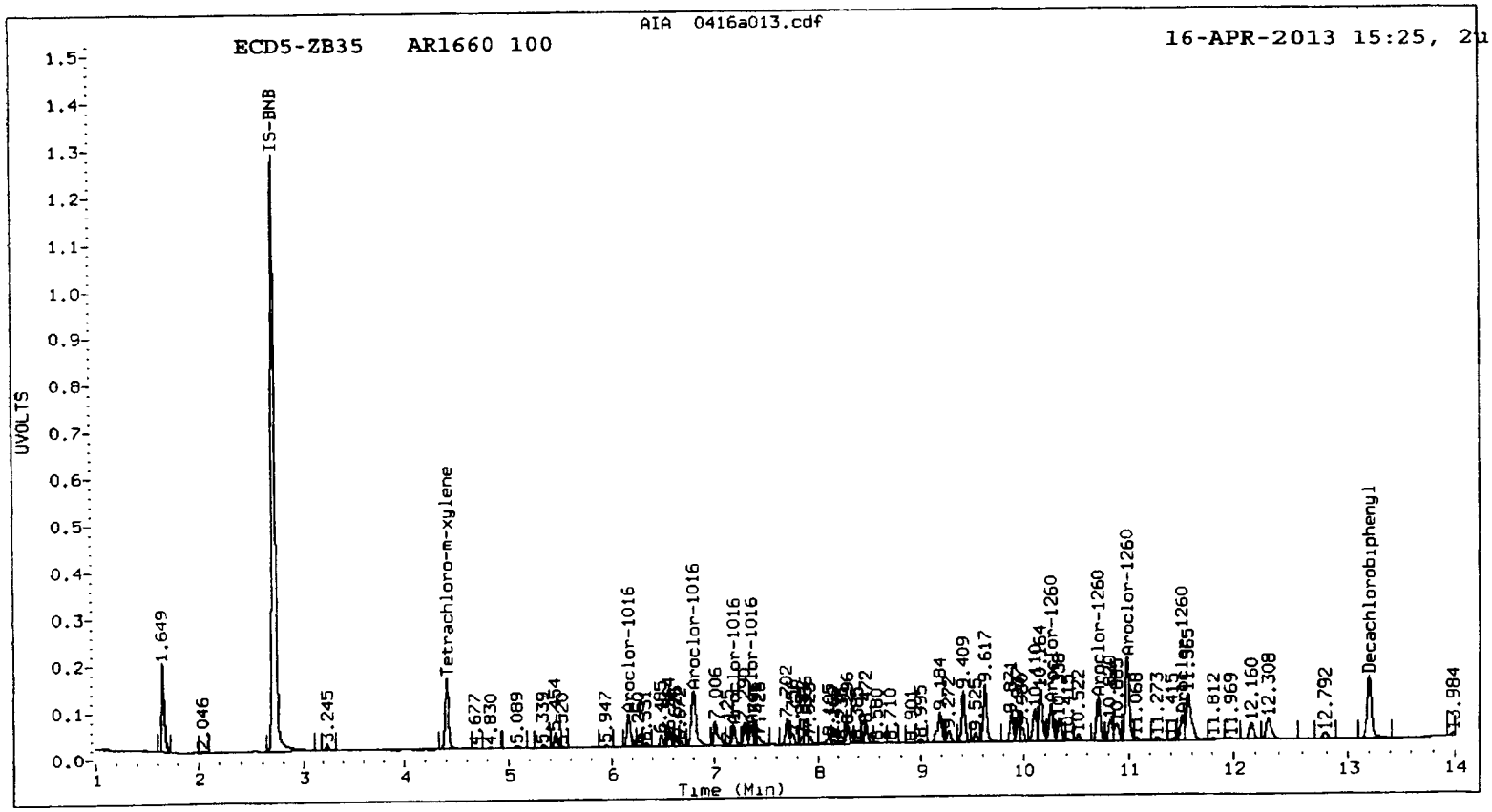
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	2247832	107.2	1	6.160	-0.001	892542	103.8
Aroclor-1016	2	6.461	0.003	6967688	106.6	2	6.796	0.000	1858090	102.7
Aroclor-1016	3	6.611	0.002	3091603	108.5	3	7.181	0.000	476659	101.0
Aroclor-1016	4	6.722	0.002	2214811	110.4	4	7.354	0.000	445027	101.9
Total Col1Ave (4 peaks):		108.2				Total Col2Ave (4 peaks):			102.4	RPD = 6
Corrected Ave (3 peaks):		107.4				Corrected Ave (3 peaks):			101.9	RPD = 5
Aroclor-1260	1	9.964	0.001	5047799	100.7	1	10.259	0.000	969916	103.3
Aroclor-1260	2	10.282	0.002	5063410	99.9	2	10.709	0.001	1160637	102.7
Aroclor-1260	3	10.659	0.003	12314379	100.6	3	10.985	0.001	2300349	101.7
Aroclor-1260	4	11.059	0.003	6558555	100.1	4	11.506	0.002	659340	102.3
Aroclor-1260	5	11.247	0.002	3496493	100.7	NS	---			----
Total Col1Ave (5 peaks):		100.4				Total Col2Ave (4 peaks):			102.5	RPD = 2
Corrected Ave (4 peaks):		100.3				Corrected Ave (3 peaks):			102.2	RPD = 2

Total PCB Area Col1 (4.501 - 12.727) = 145392043 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 29279549 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660 100
AIA 0416a013.cdf
16-APR-2013 15:25, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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16-APR-2013 15:25, 2u
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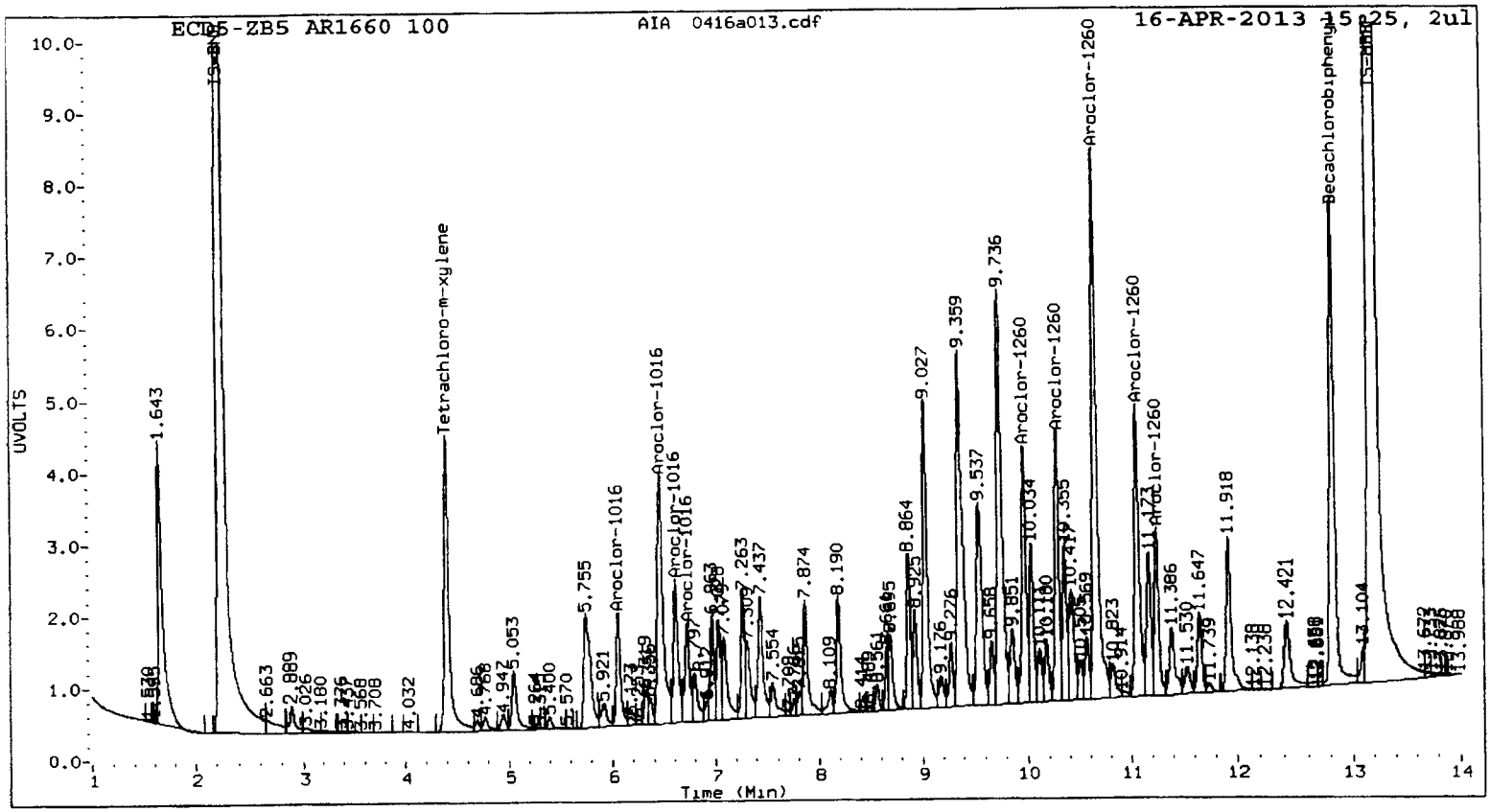
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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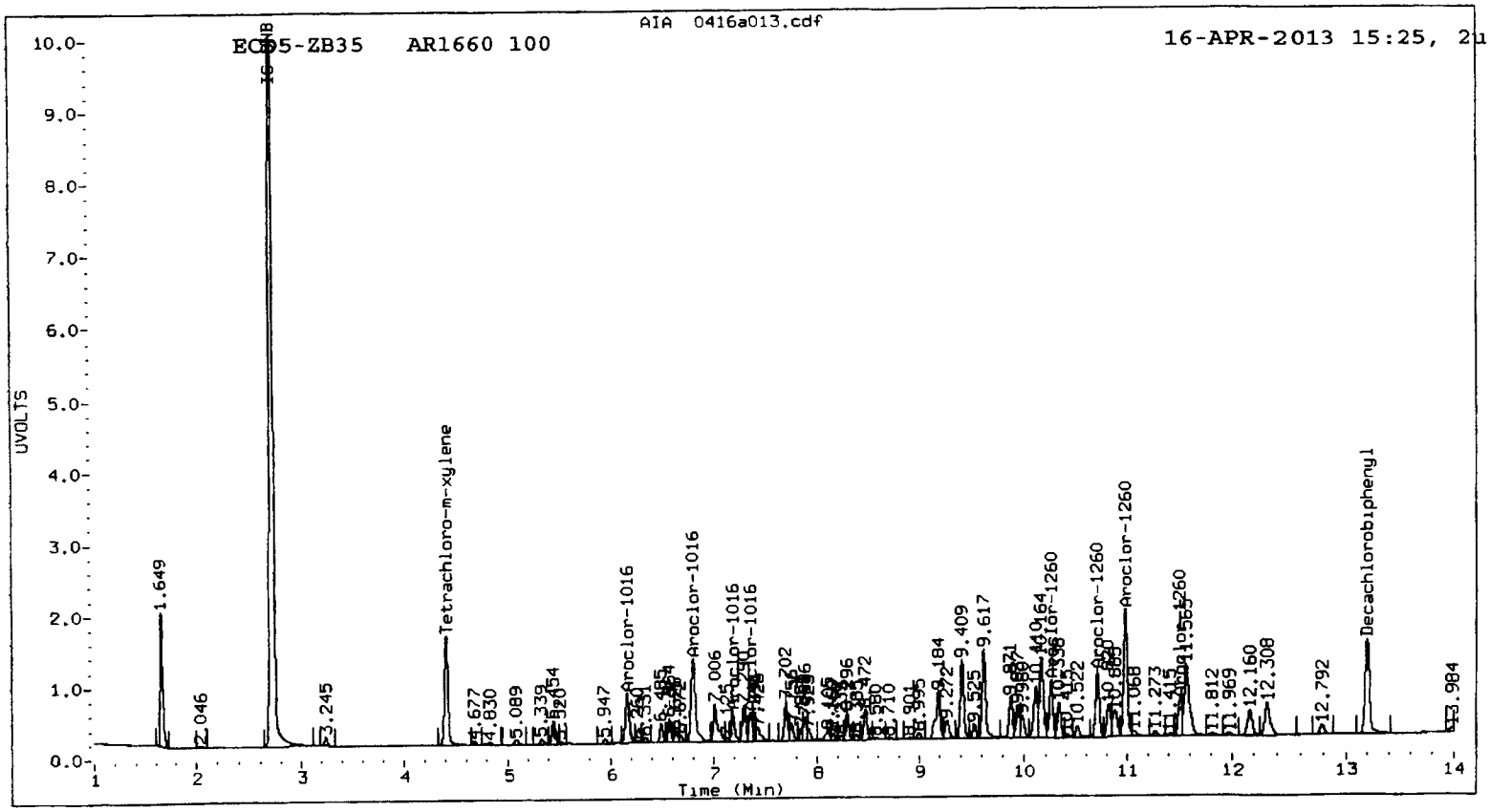
AIA 0416a013.cdf
16-APR-2013 15:25, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


AIA 0416a013.cdf
ECD5-ZB35 AR1660 100
16-APR-2013 15:25, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a014.d
Data file 2: 20130416.b/ical-2.b/0416a014.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 500
Client ID:
Injection Date: 16-APR-2013 15:45
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.399	-0.002	29899586	4.404	0.001	8270146	37.9	38.3	0.9	Tetrachloro-m-xylen
12.825	-0.002	42666676	13.202	-0.002	8223049	33.4	35.2	5.2	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	94.8	95.6
Decachlorobiphenyl	83.4	87.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48471309	-0.4
Hexabromobiphenyl	81878684	83893855	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14695511	1.7
Hexabromobiphenyl	16263628	16865680	3.7

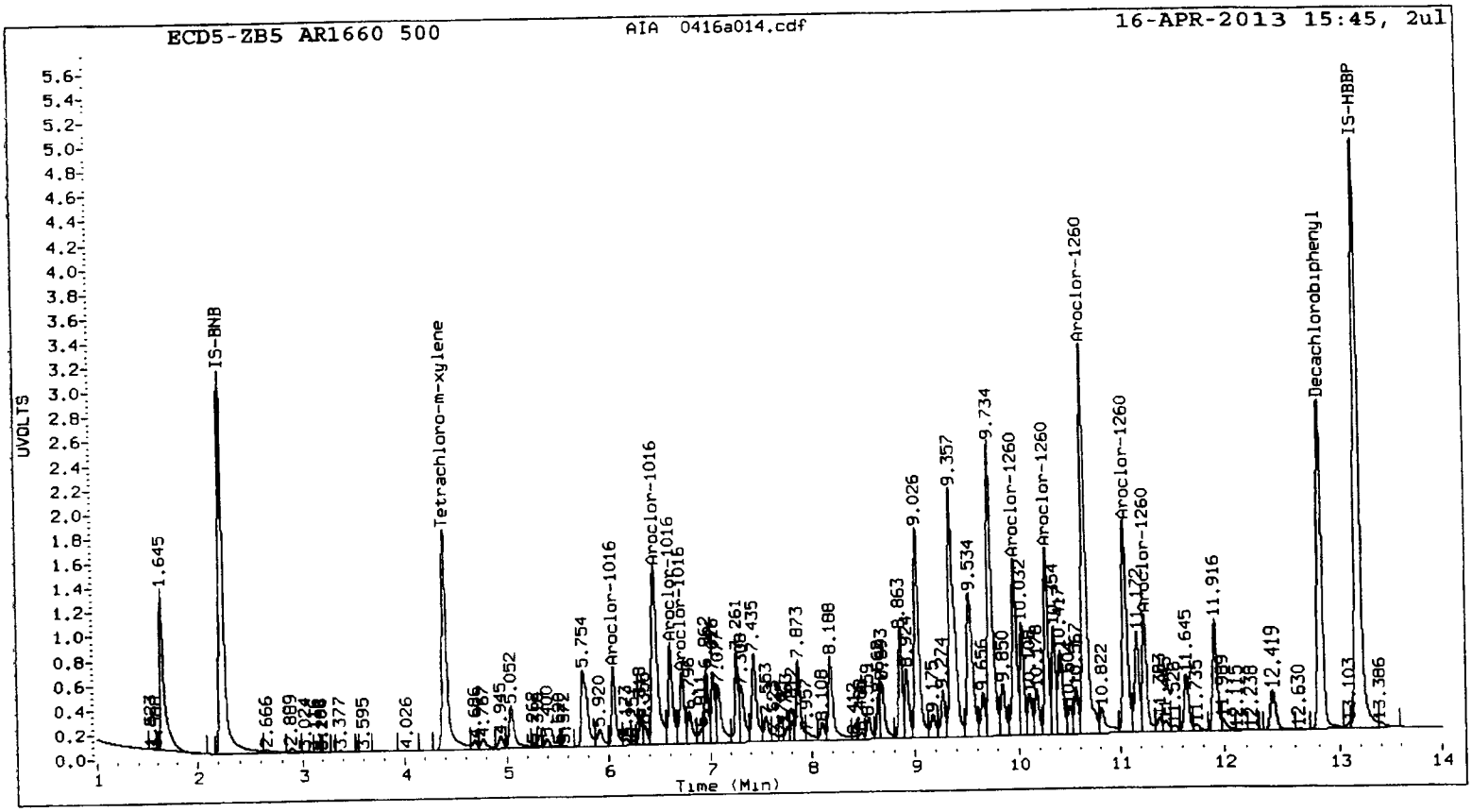
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

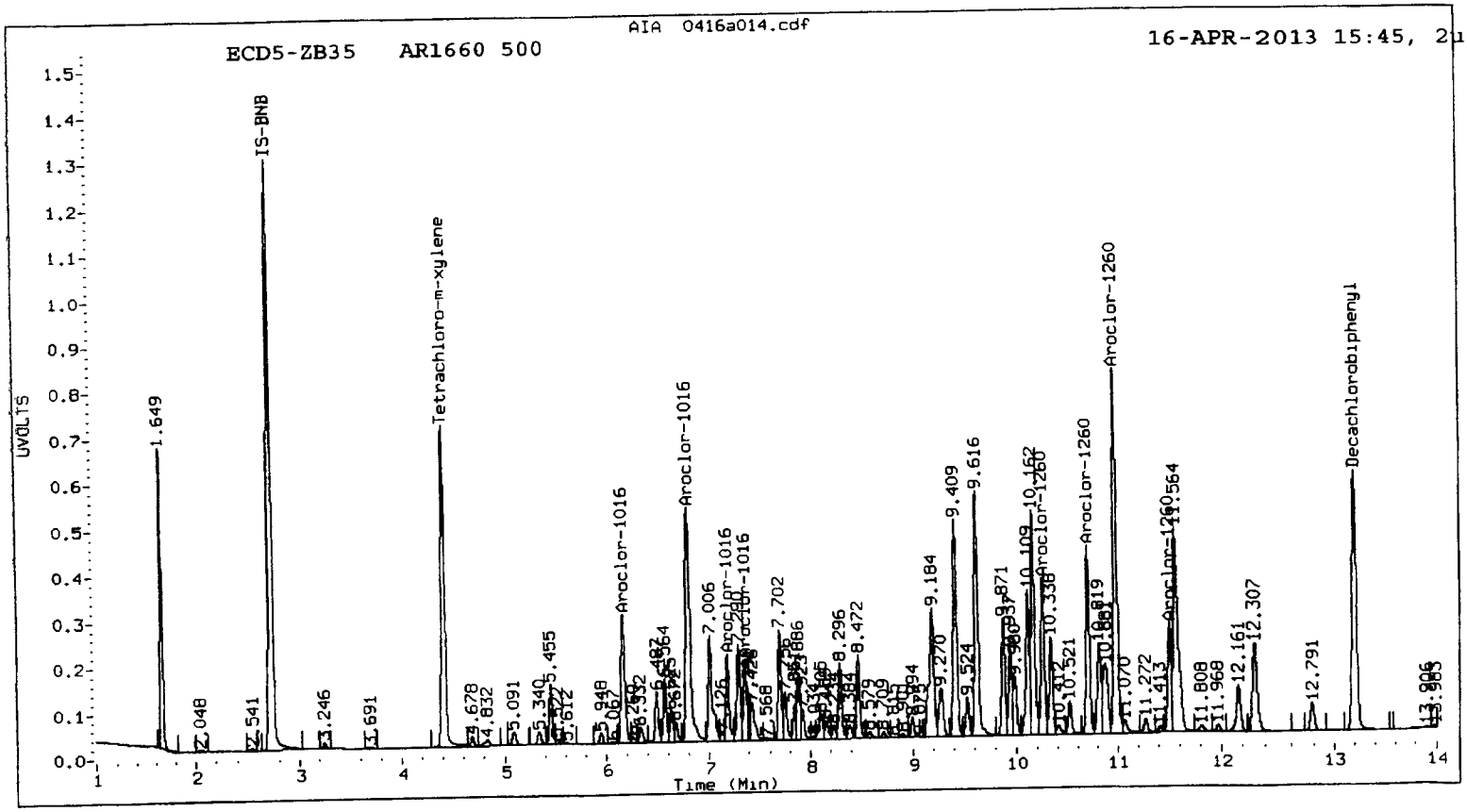
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.052	0.000	9280162	451.8	1	6.161	0.000	3626294	425.3
Aroclor-1016	2	6.458	0.000	28407314	443.9	2	6.796	0.000	7955554	443.3
Aroclor-1016	3	6.609	0.000	12484006	447.5	3	7.181	0.000	2122651	453.6
Aroclor-1016	4	6.720	0.000	9126889	464.4	4	7.354	0.000	1903999	439.5
Total Col1Ave (4 peaks):		451.9				Total Col2Ave (4 peaks):		440.4	RPD = 3	
Corrected Ave (3 peaks):		447.7				Corrected Ave (3 peaks):		436.0	RPD = 3	
Aroclor-1260	1	9.963	0.000	20426484	422.7	1	10.259	0.000	4055292	432.4
Aroclor-1260	2	10.280	0.000	20656871	422.7	2	10.709	0.000	4966879	439.9
Aroclor-1260	3	10.655	0.000	50291541	426.2	3	10.983	0.000	9938432	440.1
Aroclor-1260	4	11.056	0.000	27476201	434.9	4	11.505	0.000	2886443	448.3
Aroclor-1260	5	11.245	0.000	14690122	438.7	NS	---			----
Total Col1Ave (5 peaks):		429.0				Total Col2Ave (4 peaks):		440.2	RPD = 3	
Corrected Ave (4 peaks):		426.6				Corrected Ave (3 peaks):		437.5	RPD = 3	

Total PCB Area Col1 (4.501 - 12.727) = 598063876 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 124755230 Col2 Total PCB = 1.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660 500
AIA 0416a014.cdf
16-APR-2013 15:45, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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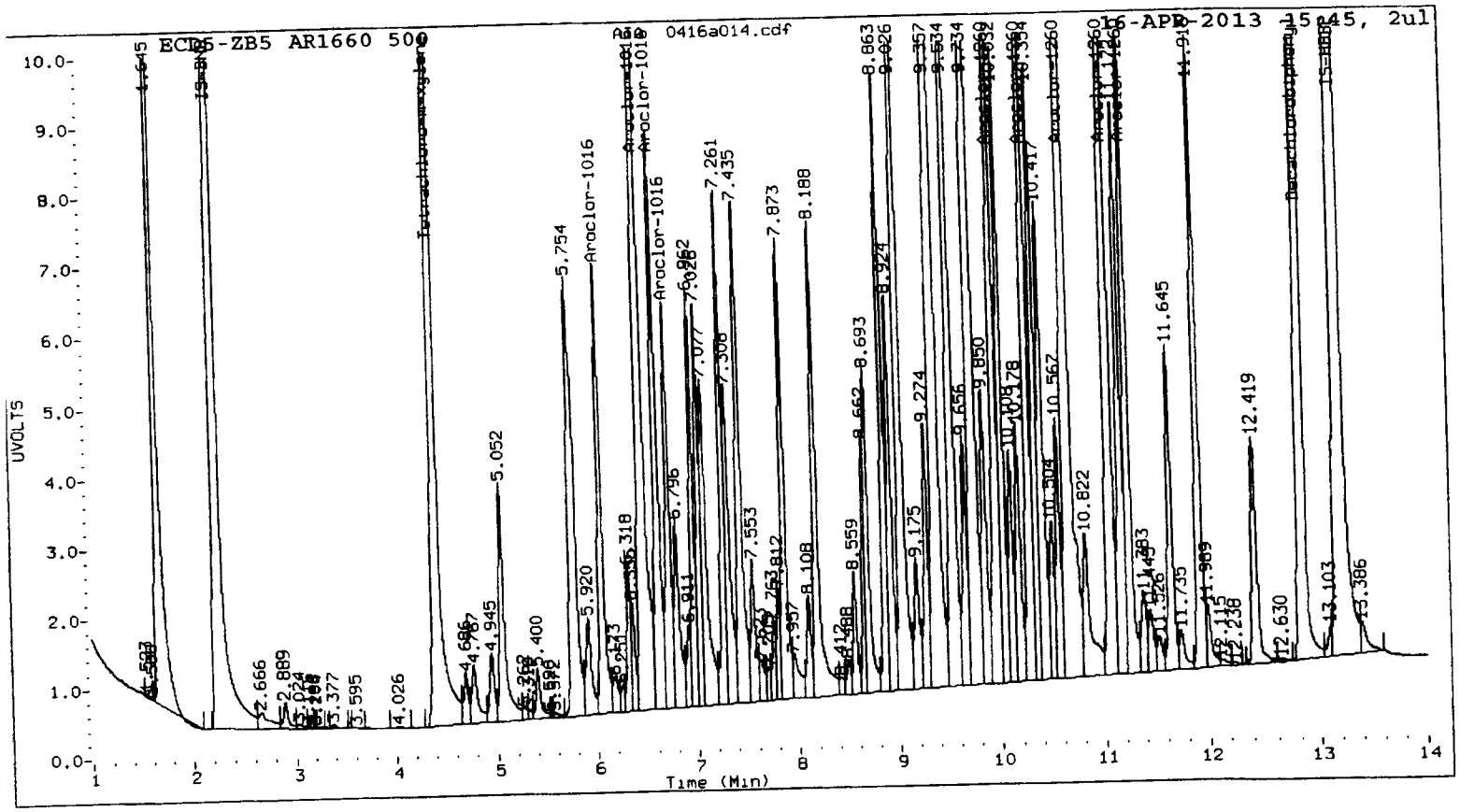
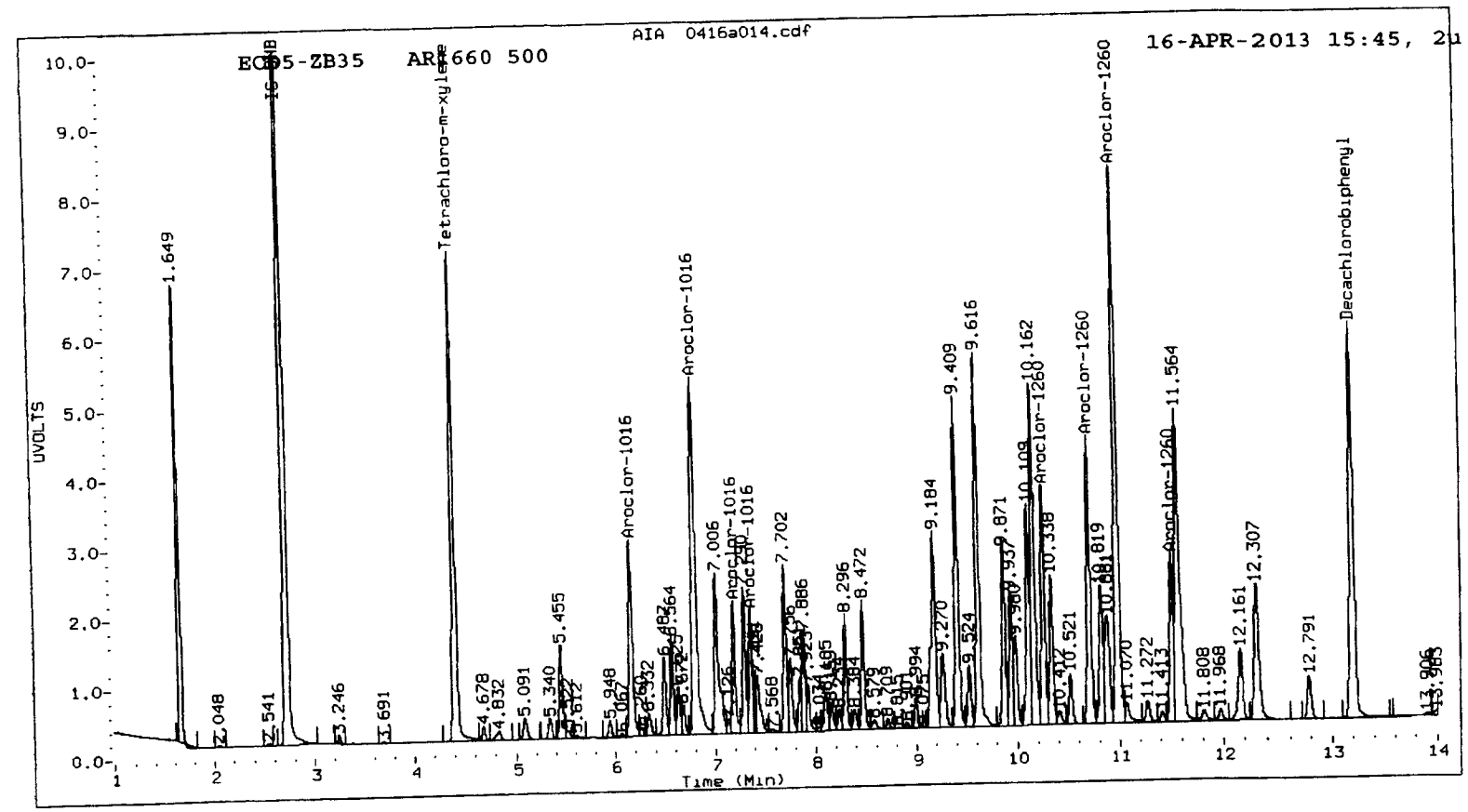
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB5 AR1660 500
AIA 0416a014.cdf
16-APR-2013 15:45, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 AR1660 500
AIA 0416a014.cdf
16-APR-2013 15:45, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a015.d
Data file 2: 20130416.b/ical-2.b/0416a015.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 16-APR-2013 16:05
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	-0.001	15476663	4.403	0.000	4191256	19.5	19.5	0.1	Tetrachloro-m-xylen
12.827	0.000	22745600	13.204	0.000	4356340	17.9	18.5	3.6	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	48.8	48.9
Decachlorobiphenyl	44.7	46.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48740551	0.2
Hexabromobiphenyl	81878684	82526190	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14577569	0.8
Hexabromobiphenyl	16263628	16939274	4.2

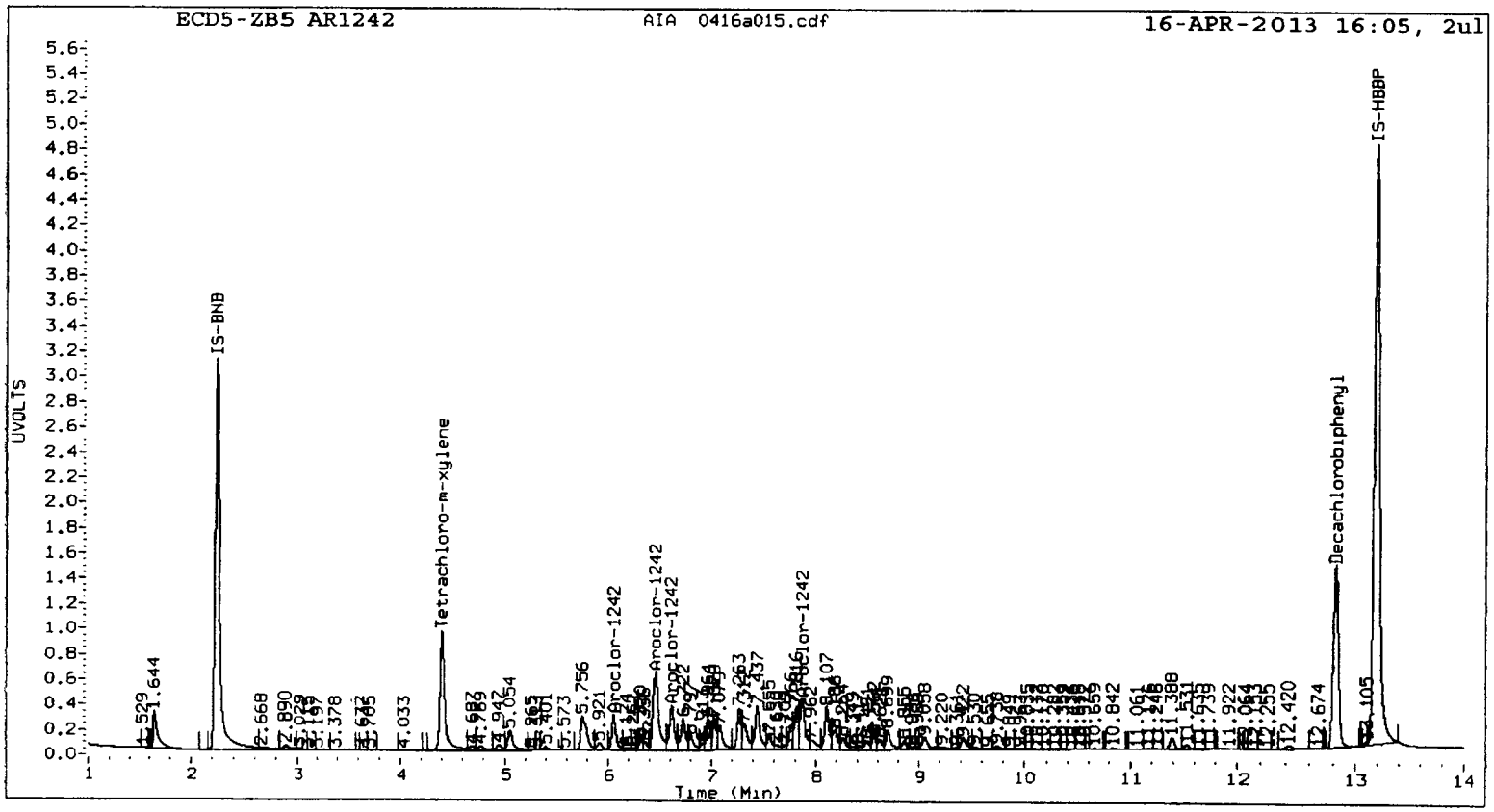
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

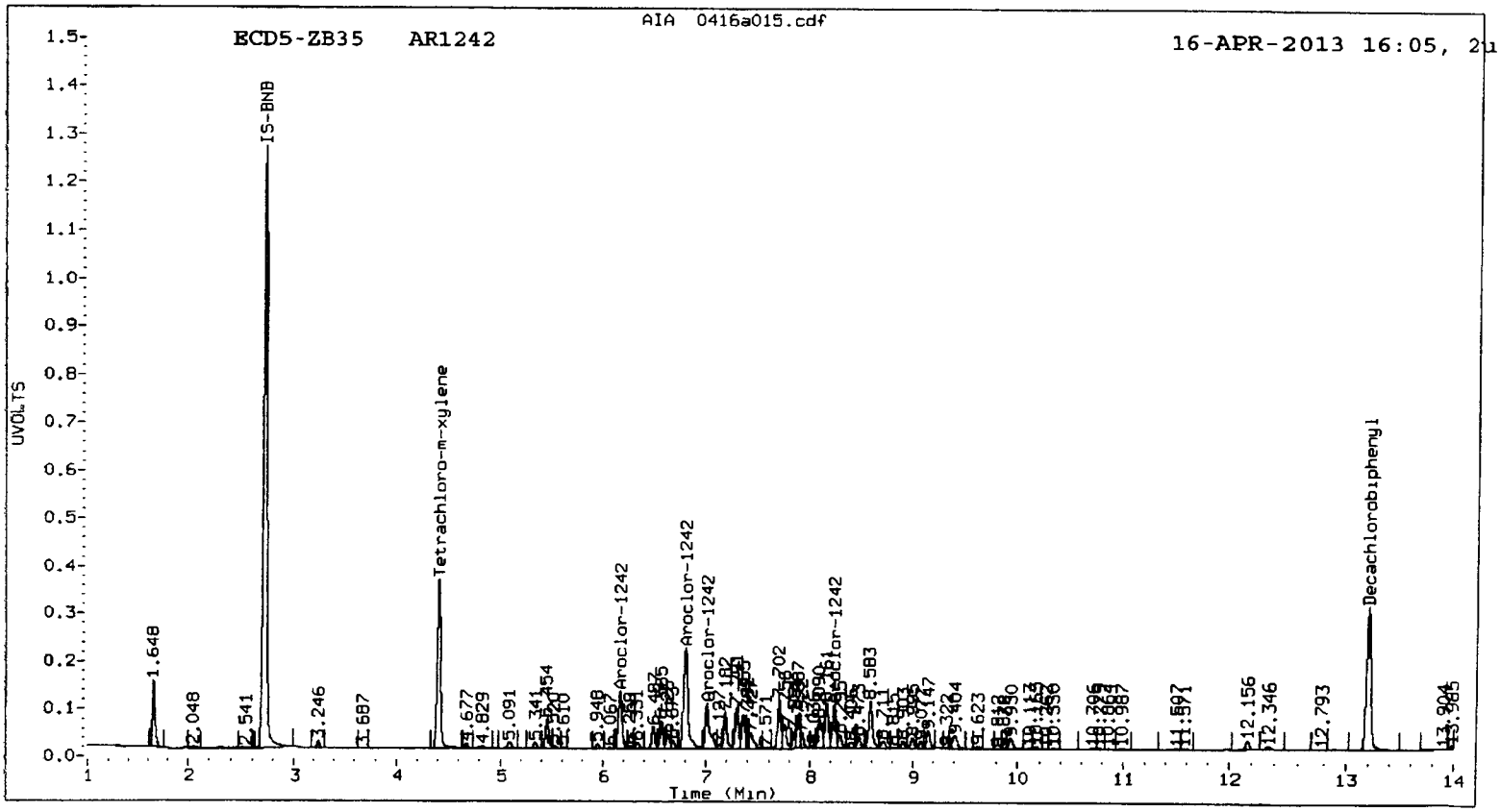
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.054	0.000	4010075	250.0	1	6.160	0.000	1565936	250.0
Aroclor-1242	2	6.461	0.000	12344357	250.0	2	6.797	0.000	3340234	250.0
Aroclor-1242	3	6.611	0.000	5467771	250.0	3	7.006	0.000	1399896	250.0
Aroclor-1242	4	7.870	0.000	6839059	250.0	4	8.236	0.000	1151658	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 115208487 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 24881228 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1242
AIA 0416a015.cdf
16-APR-2013 16:05, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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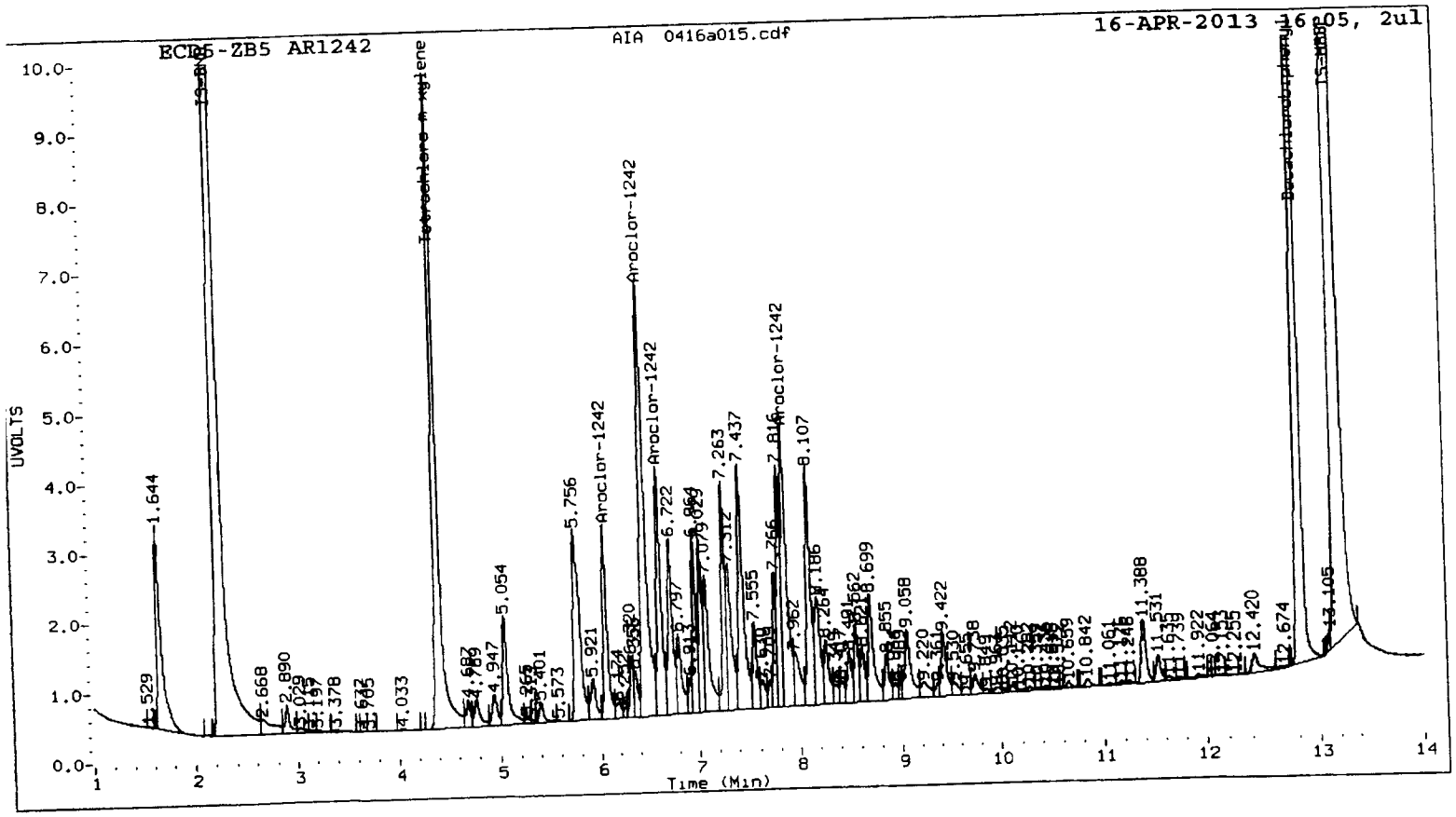
ECD5-ZB35 AR1242
16-APR-2013 16:05, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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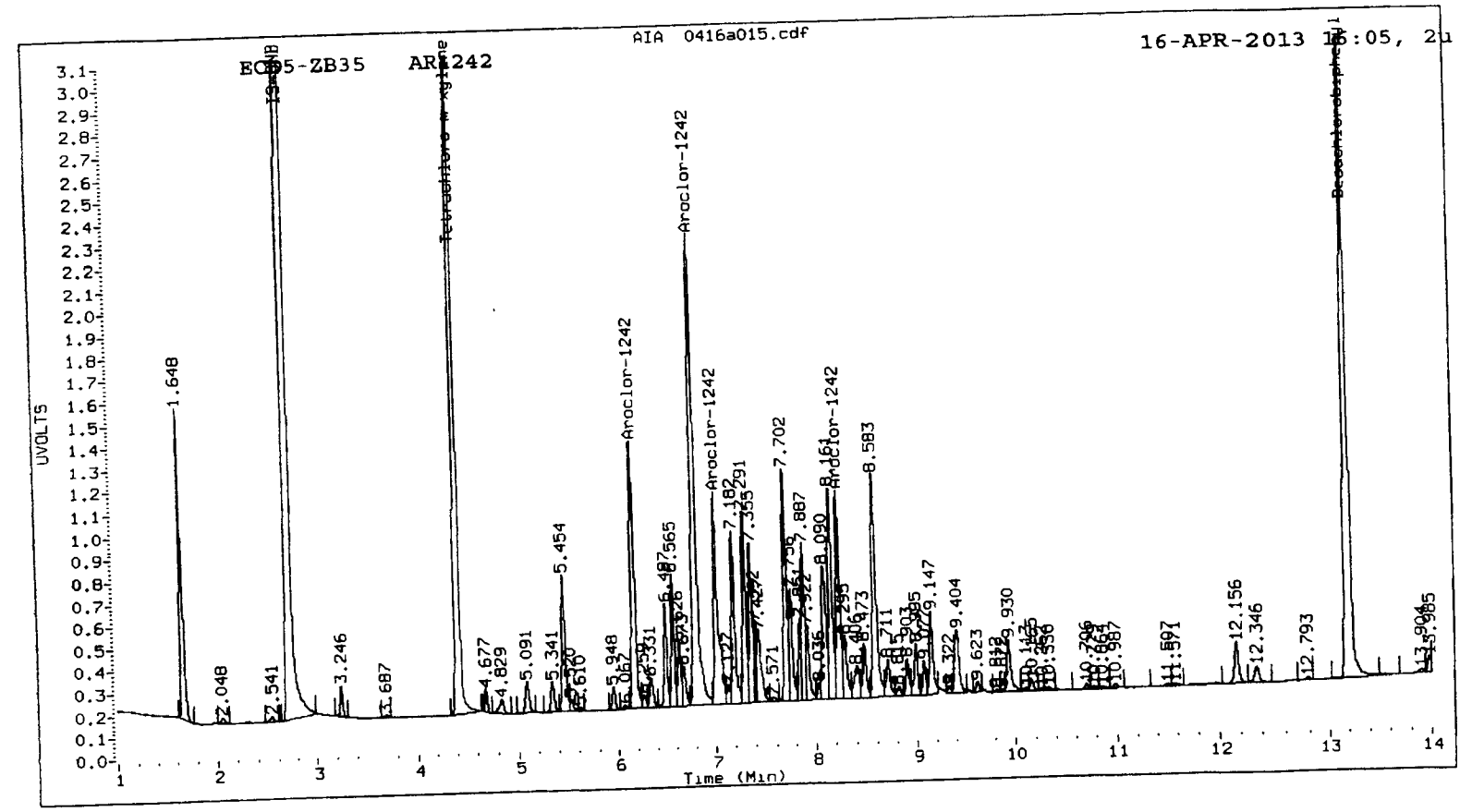
AIA 0416a015.cdf
16-APR-2013 16:05, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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16-APR-2013 16:05, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a016.d
Data file 2: 20130416.b/ical-2.b/0416a016.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 16-APR-2013 16:25
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	15352287	4.403	0.000	4274180	18.5	18.9	1.9	Tetrachloro-m-xylen
12.826	-0.001	22868834	13.203	-0.001	4397853	17.3	18.0	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	46.3	47.2
Decachlorobiphenyl	43.3	44.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50911859	4.7
Hexabromobiphenyl	81878684	85659578	4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15380233	6.4
Hexabromobiphenyl	16263628	17640987	8.5

* 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	6.459	0.000	8037513	250.0	1	6.793	0.000	2150915	250.0
Aroclor-1248	2	7.438	0.000	8904332	250.0	2	7.703	0.000	1765581	250.0
Aroclor-1248	3	7.870	0.000	11493663	250.0	3	8.236	0.000	1816783	250.0
Aroclor-1248	4	8.107	0.000	8135743	250.0	4	8.582	0.000	2372312	250.0

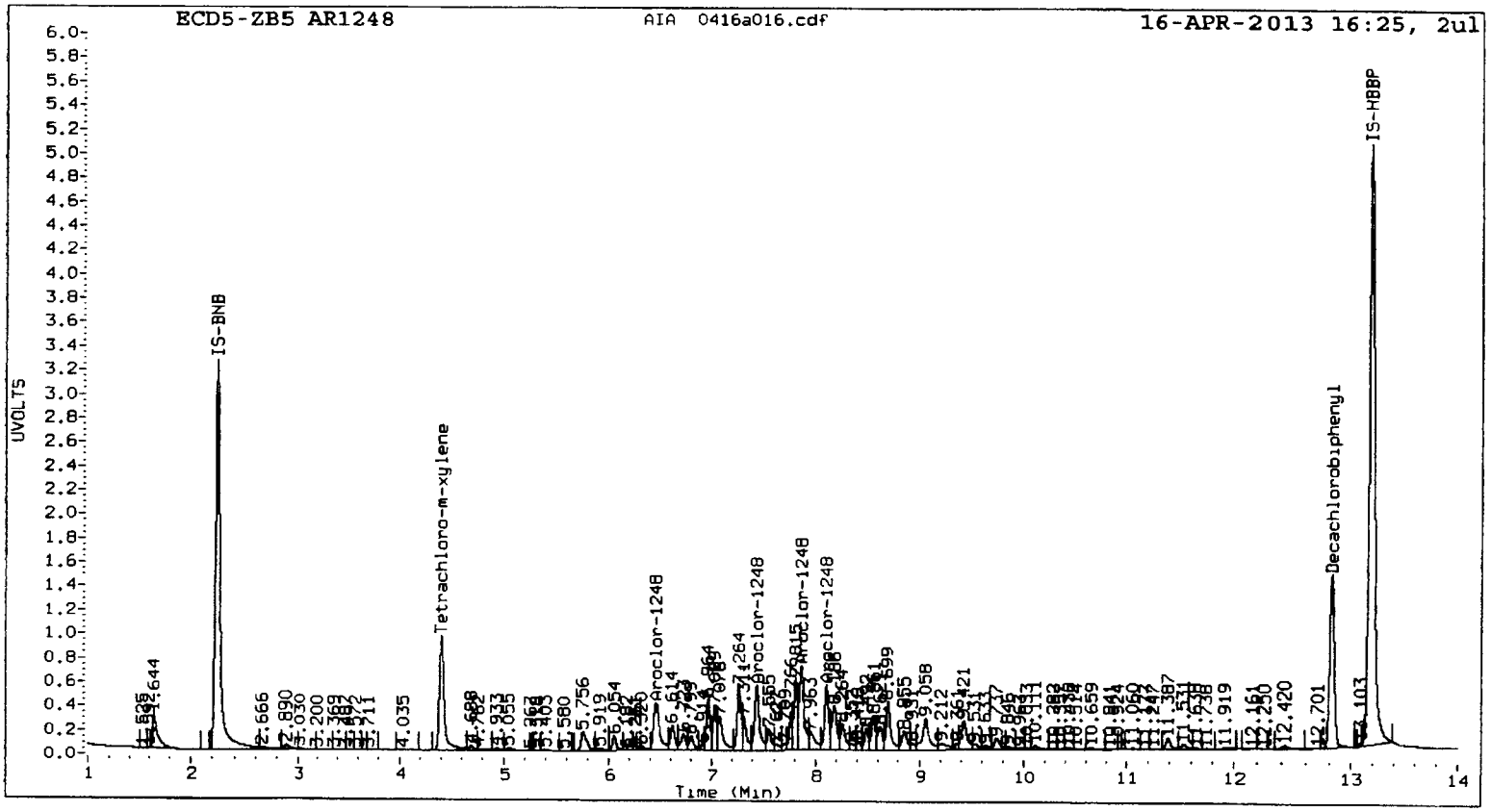
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 150129044 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 31215329 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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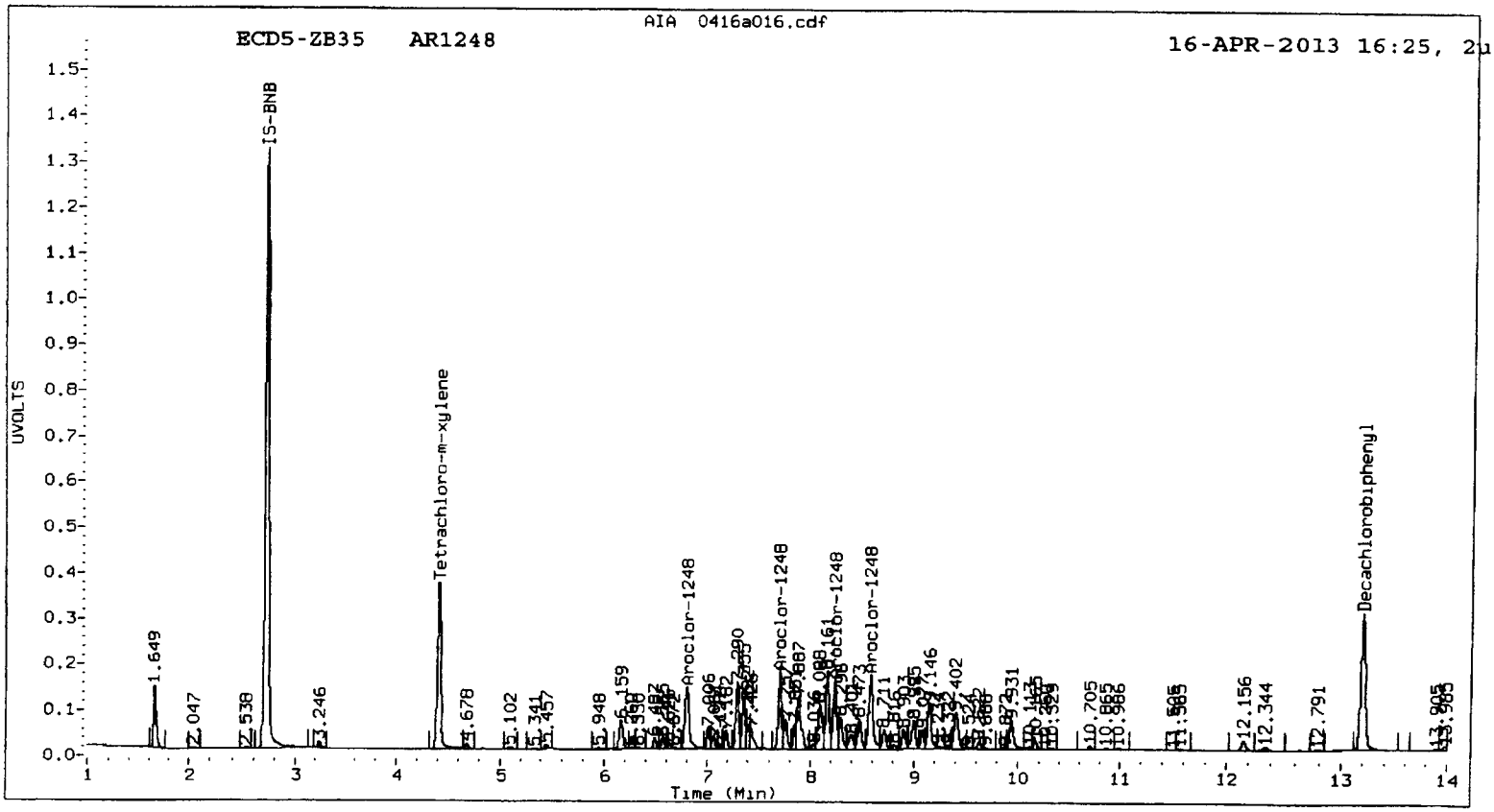
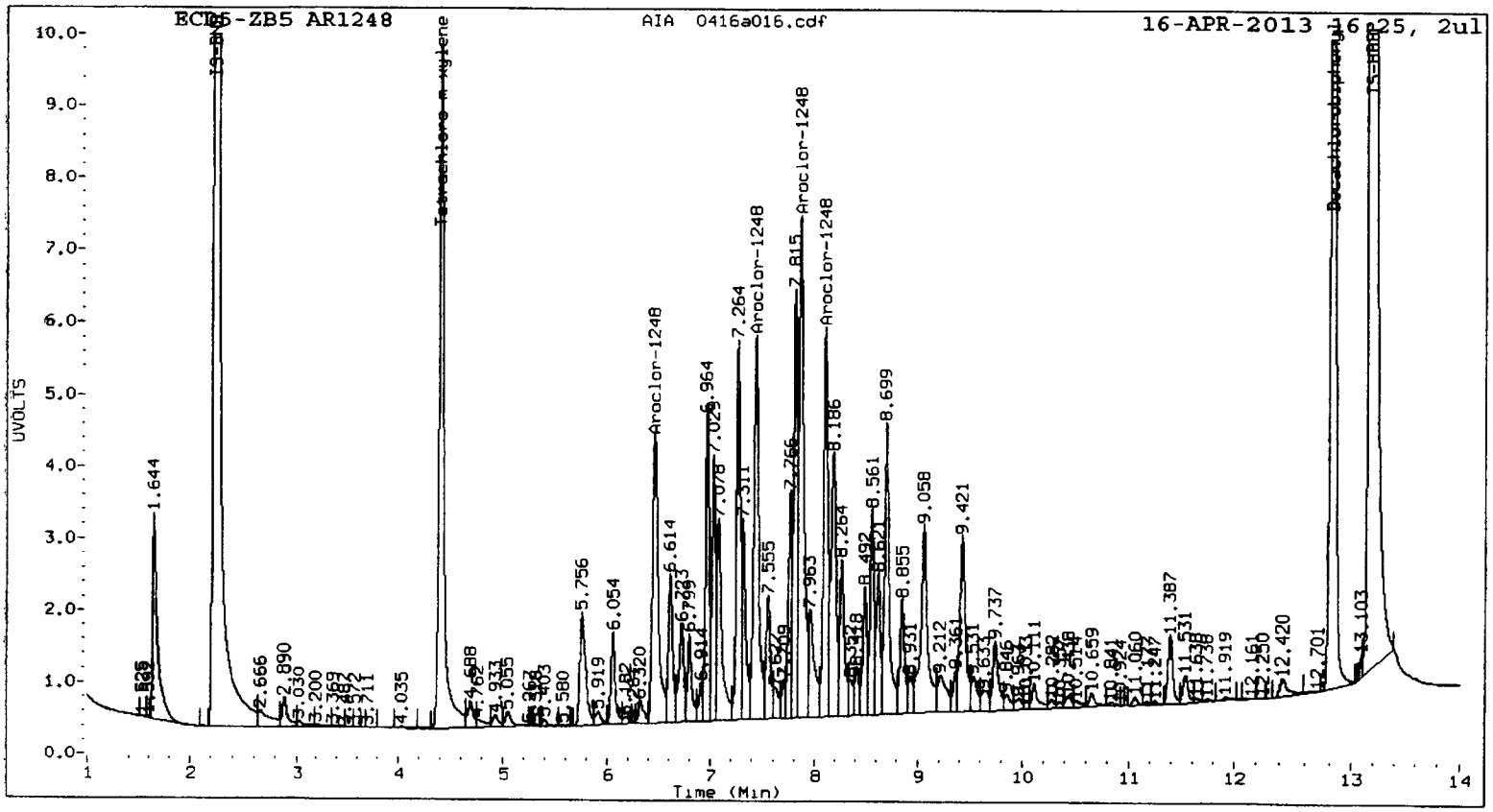
AIA 0416a016.cdf
16-APR-2013 16:25, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0416a016.cdf
ECD5-ZB35 AR1248
16-APR-2013 16:25, 2u
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
Time (Min)


ECD5-ZB5 AR1248
AIA 0416a016.cdf
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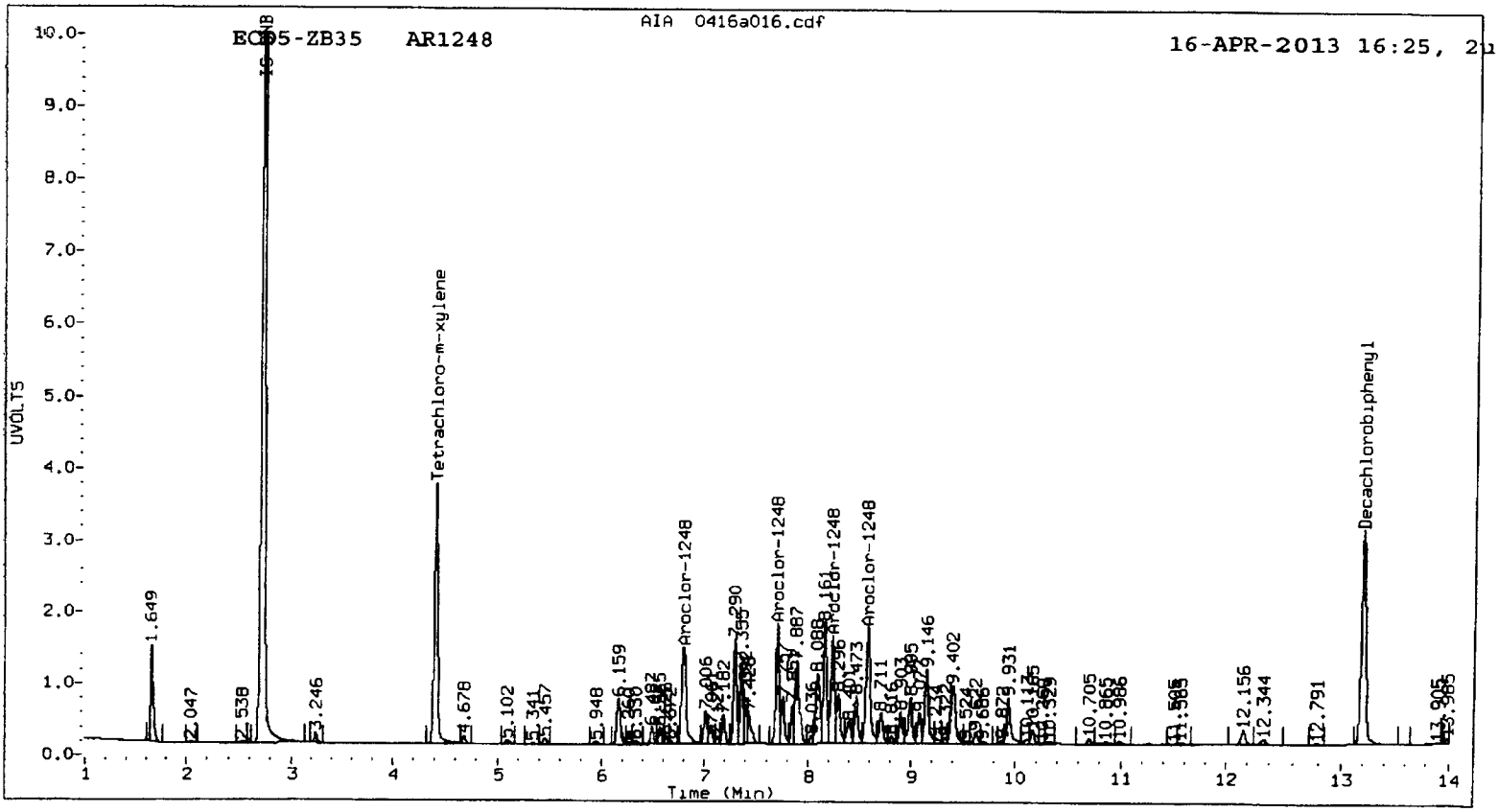
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl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AIA 0416a016.cdf
16-APR-2013 16:25, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a017.d
Data file 2: 20130416.b/ical-2.b/0416a017.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 16-APR-2013 16:46
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	15464997	4.403	0.000	4201484	19.4	19.5	0.1	Tetrachloro-m-xylen
12.828	0.001	23082667	13.203	-0.001	4408966	18.3	18.9	3.5	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	48.6	48.6
Decachlorobiphenyl	45.7	47.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48930377	0.6
Hexabromobiphenyl	81878684	81889180	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14676530	1.5
Hexabromobiphenyl	16263628	16779133	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#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1254	1	8.189	0.000	11379587	250.0	1	8.297	0.000	1688939	250.0
Aroclor-1254	2	8.561	0.000	7552211	250.0	2	8.472	0.000	2085307	250.0
Aroclor-1254	3	8.698	0.000	15160758	250.0	3	8.995	0.000	1612149	250.0
Aroclor-1254	4	9.051	0.000	16270432	250.0	4	9.146	0.000	3483716	250.0
Aroclor-1254	5	9.360	0.000	6696890	250.0	5	9.933	0.000	2011720	250.0

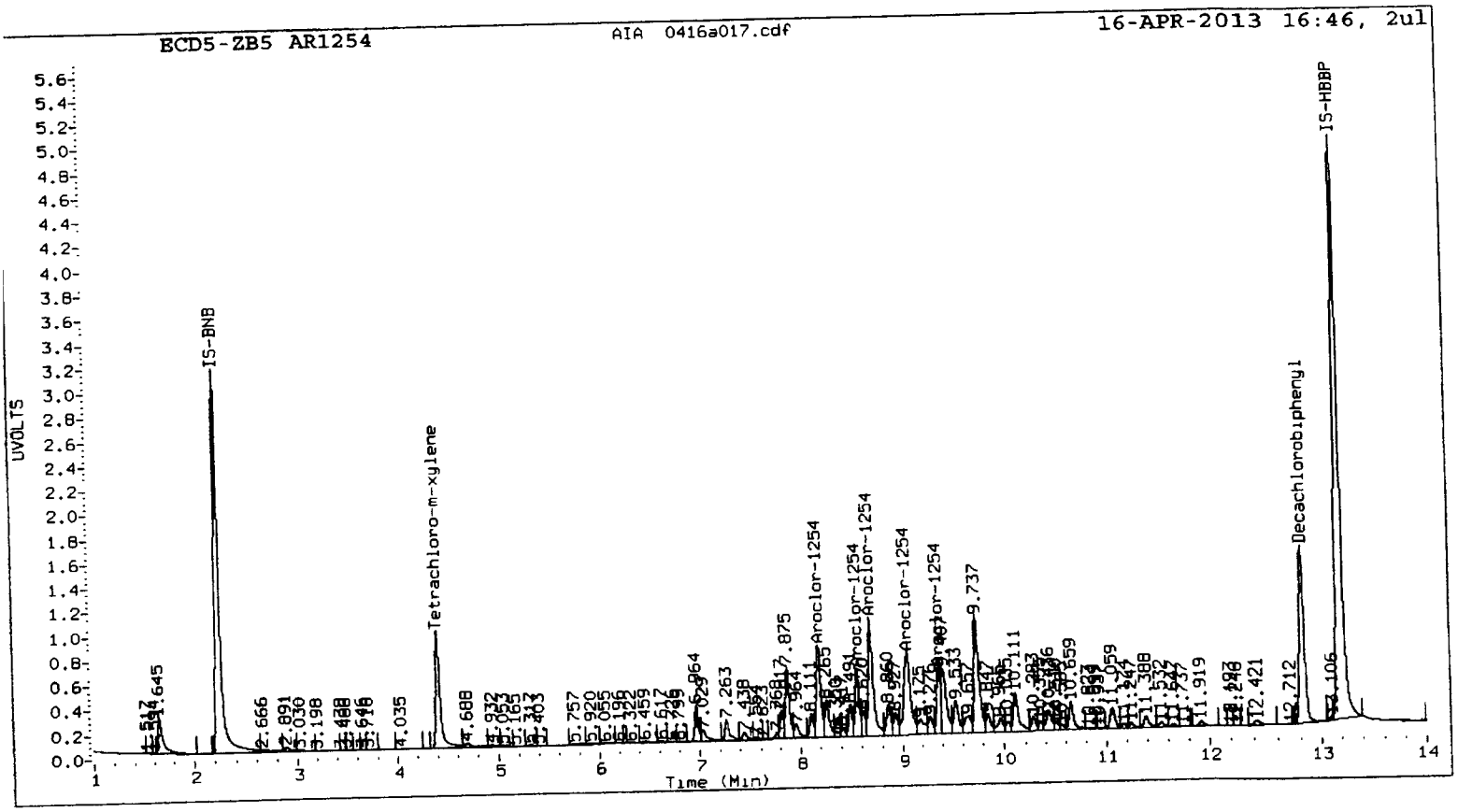
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 174031896 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 34261272 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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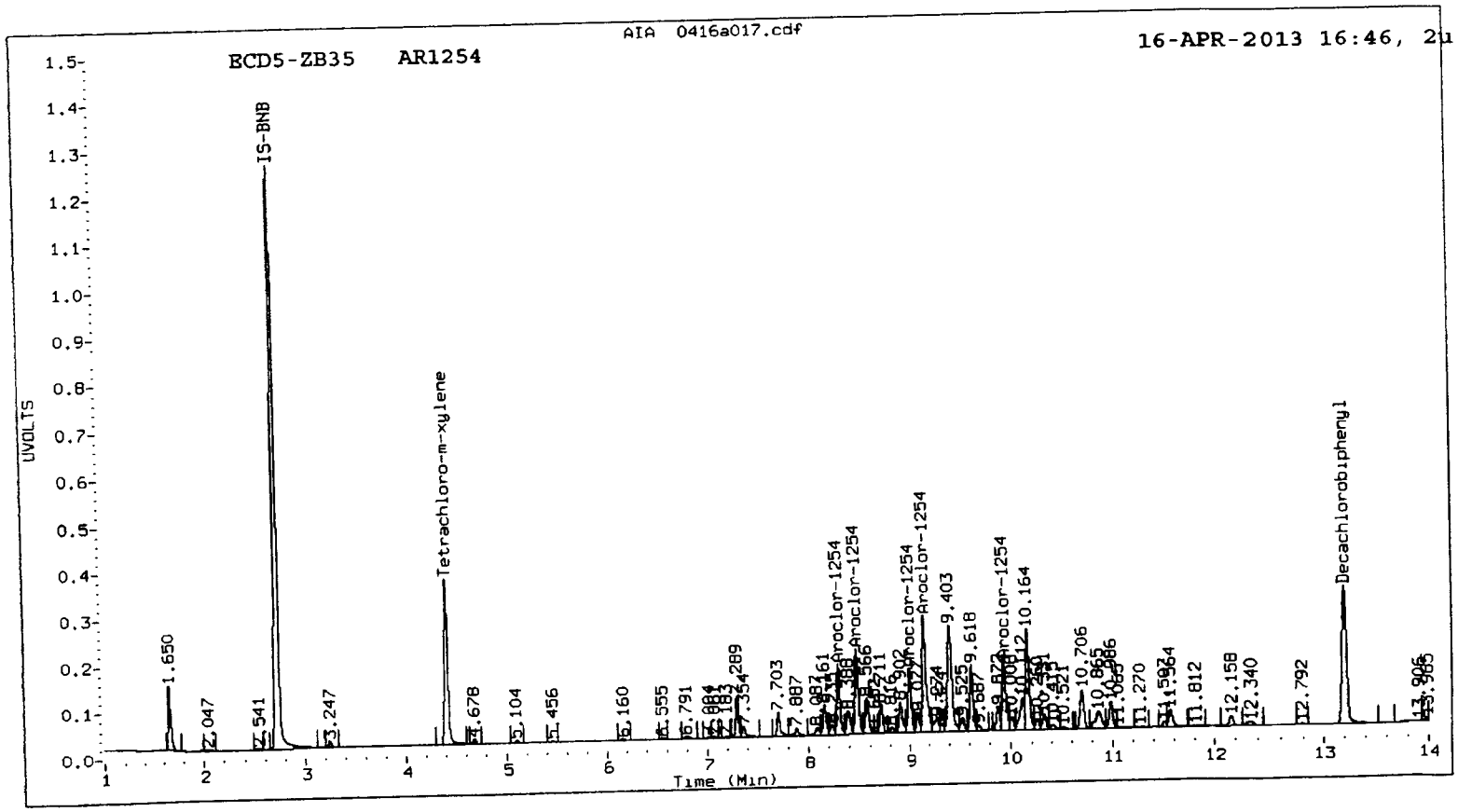
AIA 0416a017.cdf
16-APR-2013 16:46, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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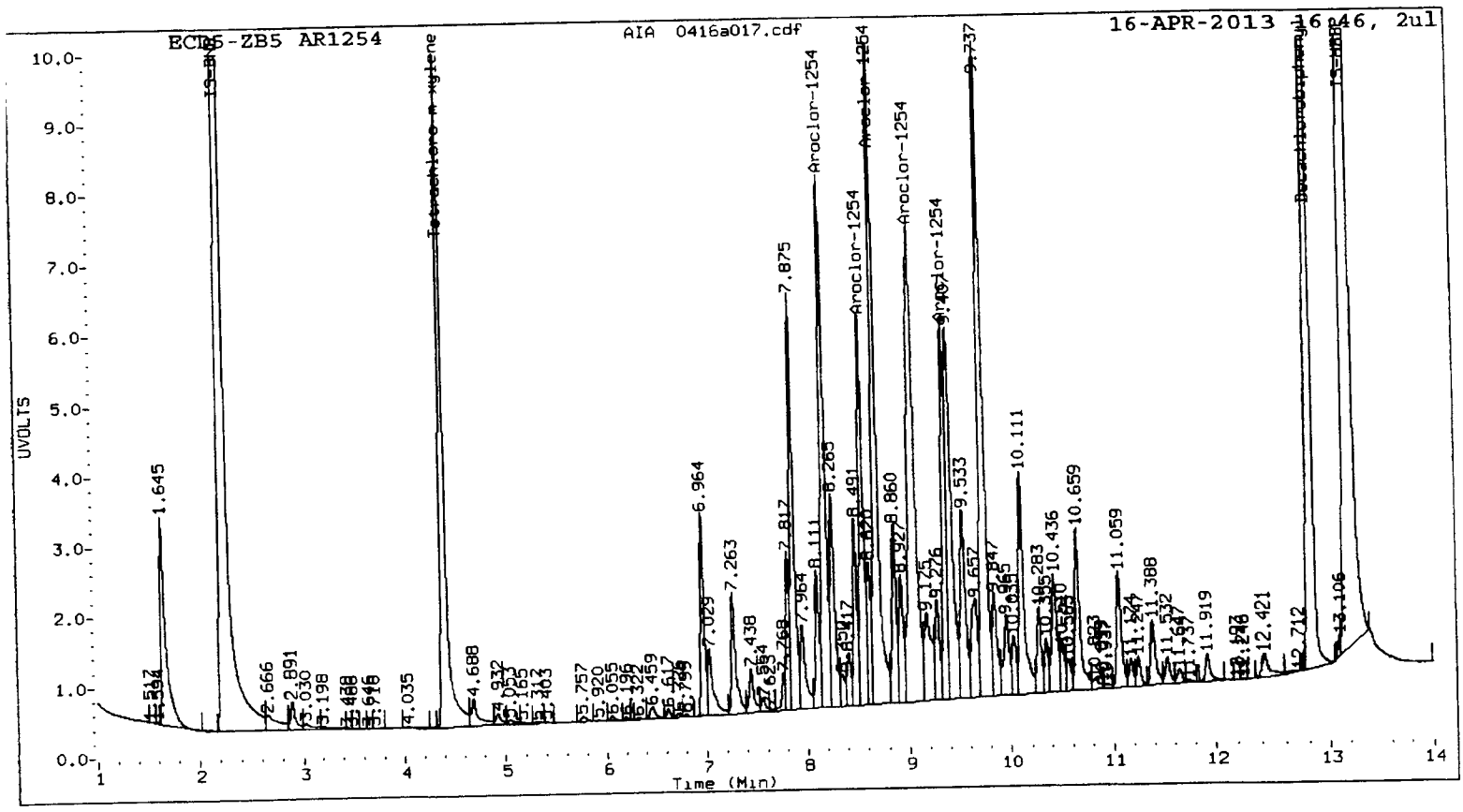
AIA 0416a017.cdf
16-APR-2013 16:46, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl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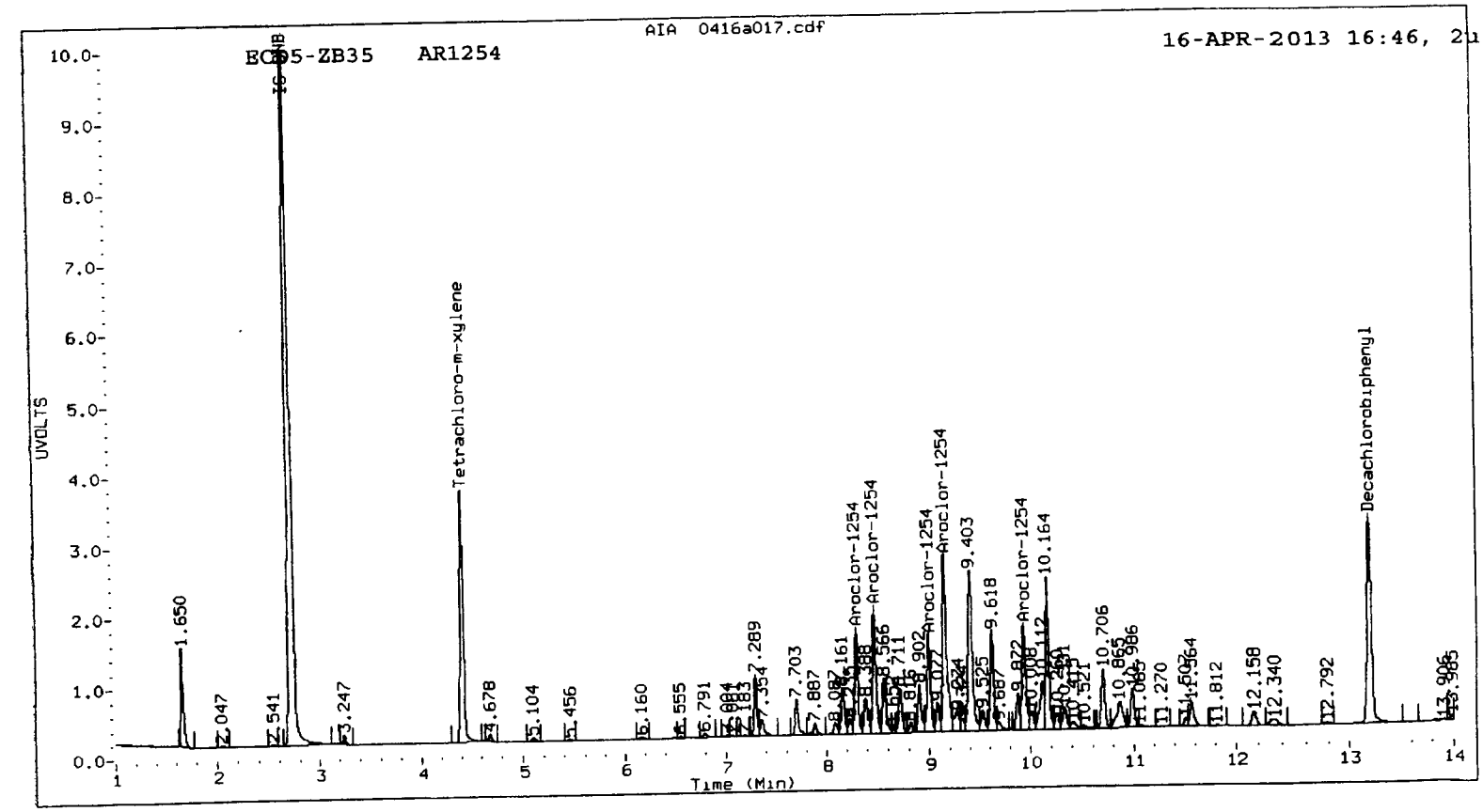
AIA 0416a017.cdf
16-APR-2013 16:46, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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ECD5-ZB35 AR1254
16-APR-2013 16:46, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a018.d
Data file 2: 20130416.b/ical-2.b/0416a018.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 16-APR-2013 17:06
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	0.000	15793637	4.404	0.001	4262188	19.9	20.2	1.3	Tetrachloro-m-xylen
12.828	0.001	22994462	13.204	0.000	4404761	18.1	18.7	3.3	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	49.8	50.4
Decachlorobiphenyl	45.2	46.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48787562	0.3
Hexabromobiphenyl	81878684	82562472	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14371825	-0.6
Hexabromobiphenyl	16263628	17005647	4.6

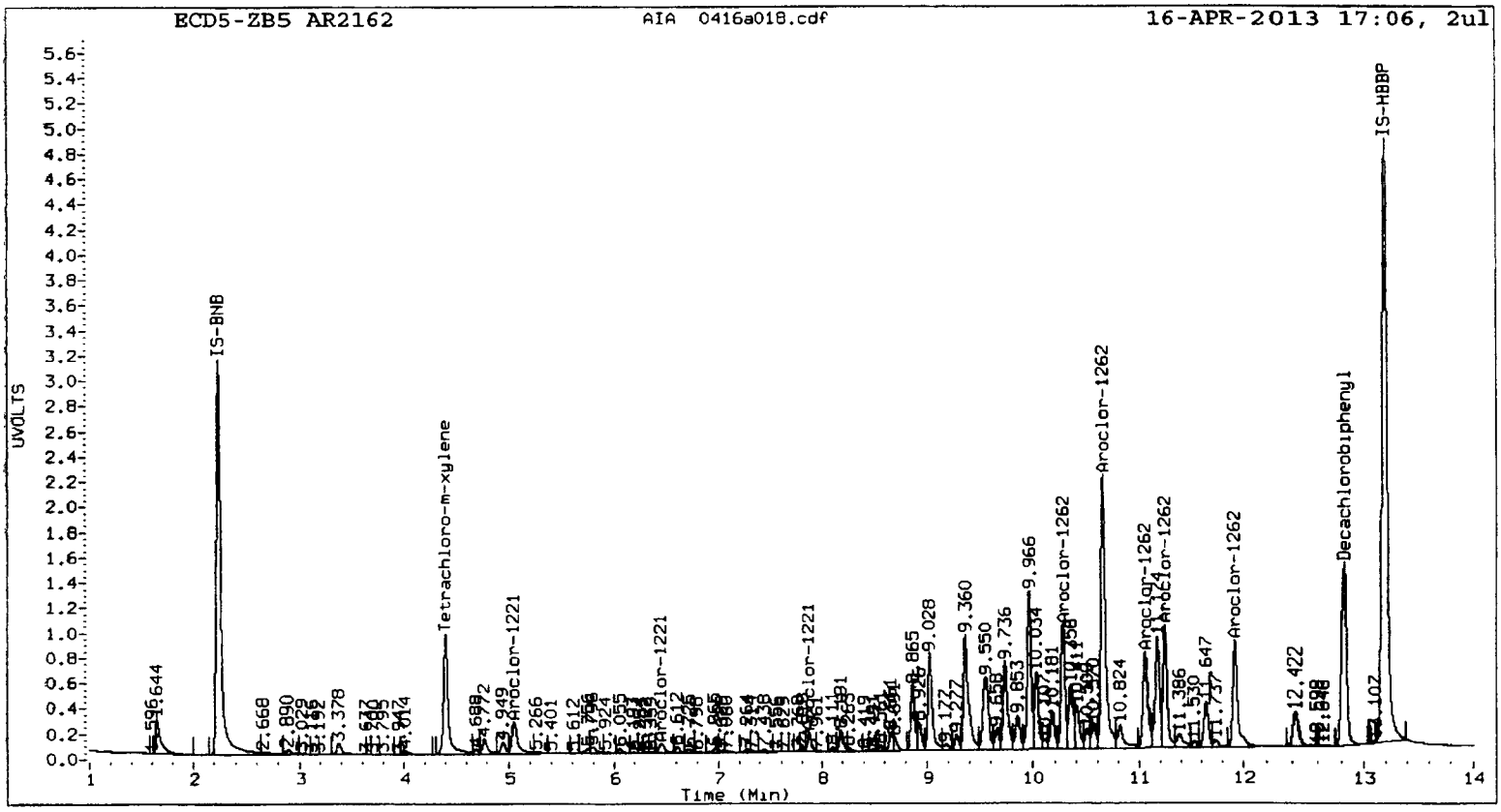
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

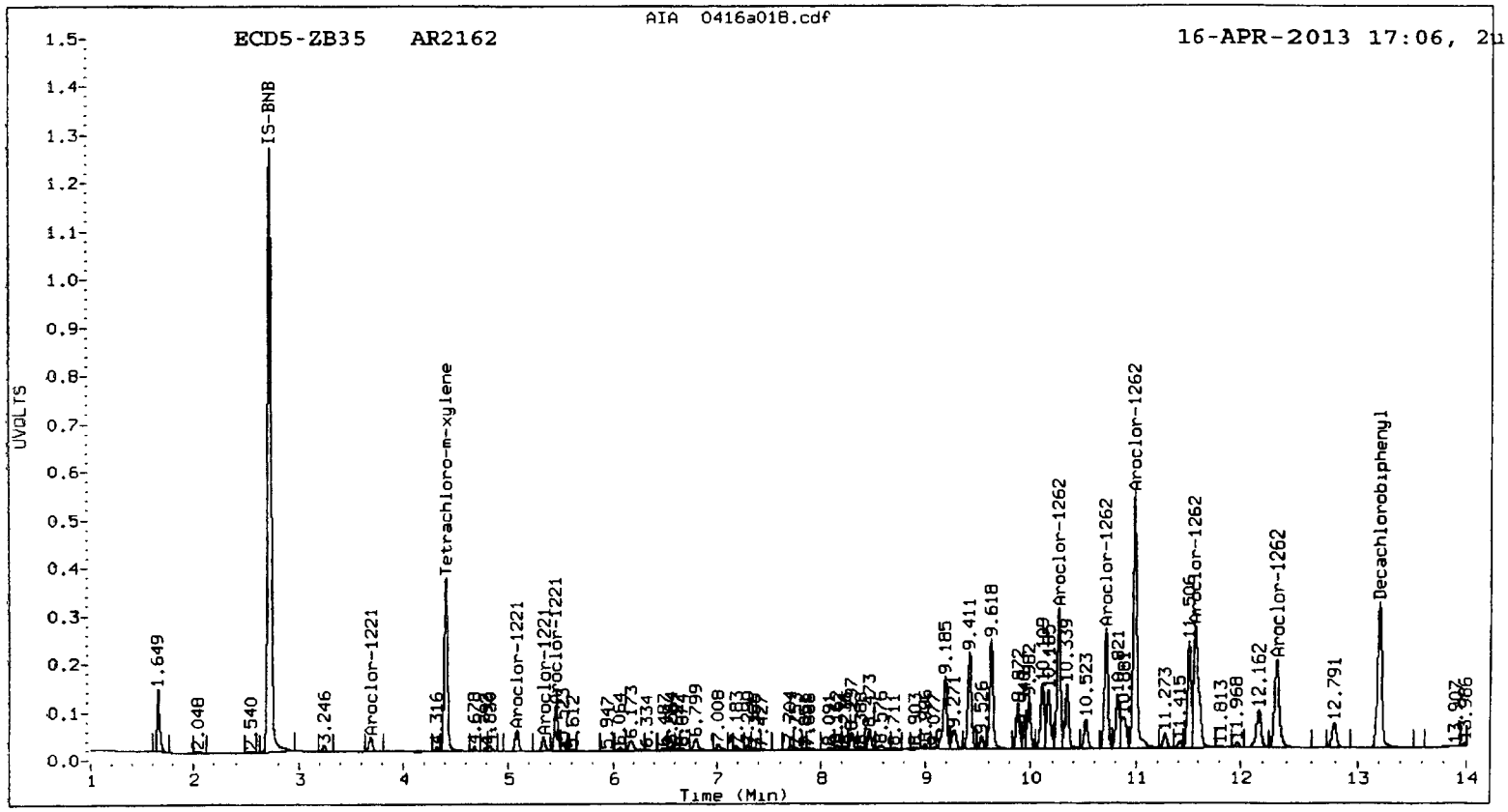
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	5.056	0.000	4872050	250.0	1	3.689	0.000	374918	250.0
Aroclor-1221	2	6.463	0.000	1538539	250.0	2	5.088	0.000	586977	250.0
Aroclor-1221	3	7.876	0.000	2128519	250.0	3	5.340	0.000	354713	250.0
Aroclor-1221	NS	---			----	4	5.455	0.000	1070993	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				250.0
Aroclor-1262	1	10.282	0.000	13250381	250.0	1	10.260	0.000	3519347	250.0
Aroclor-1262	2	10.659	0.000	34501090	250.0	2	10.711	0.000	3048342	250.0
Aroclor-1262	3	11.059	0.000	12249391	250.0	3	10.987	0.000	7031709	250.0
Aroclor-1262	4	11.247	0.000	14699916	250.0	4	11.567	0.000	4572516	250.0
Aroclor-1262	5	11.919	0.000	14425477	250.0	5	12.309	0.000	2748455	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):				250.0 RPD = 0

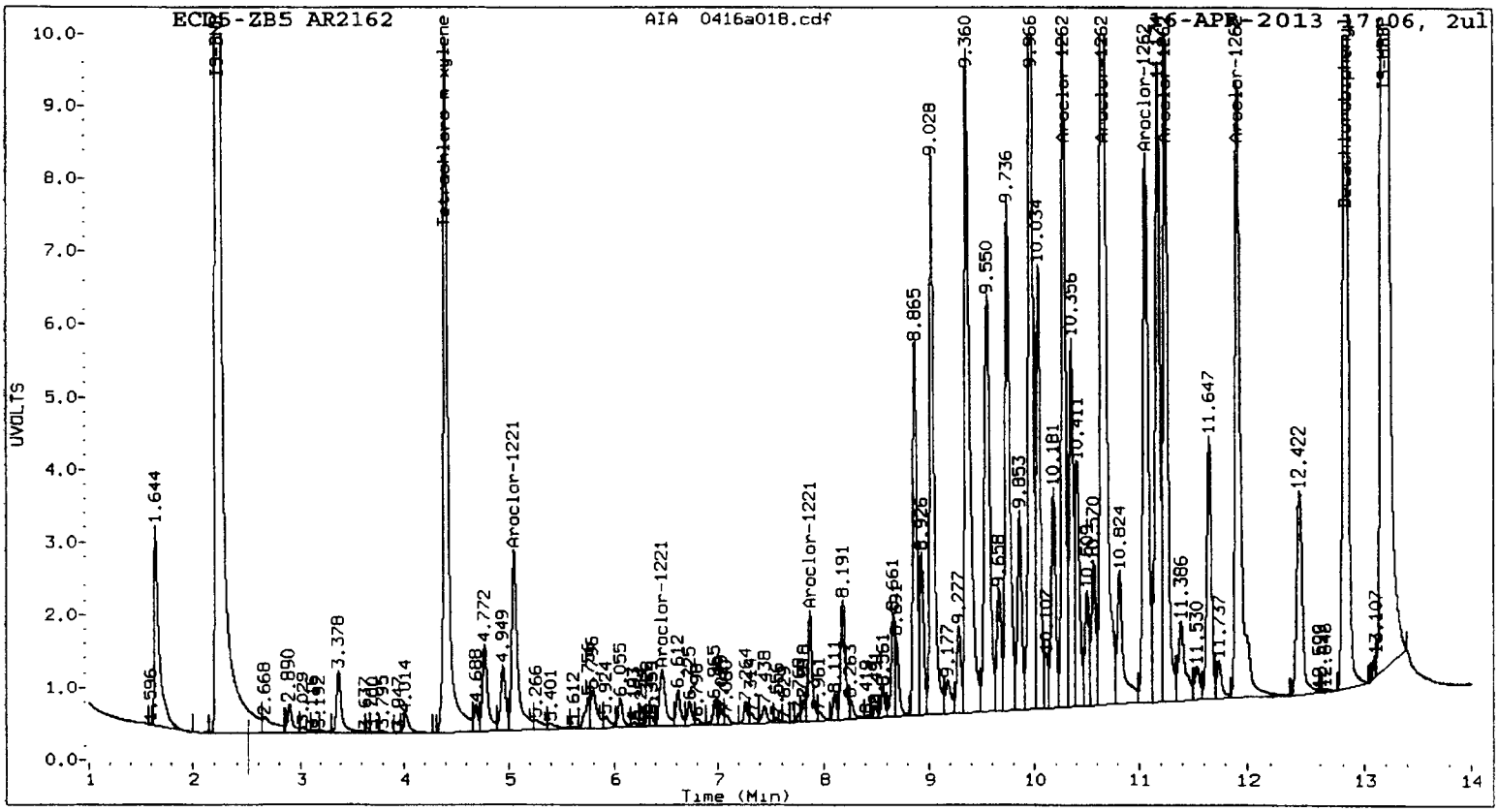
Total PCB Area Col1 (4.501 - 12.727) = 262741672 Col1 Total PCB = 0.4 ppm*

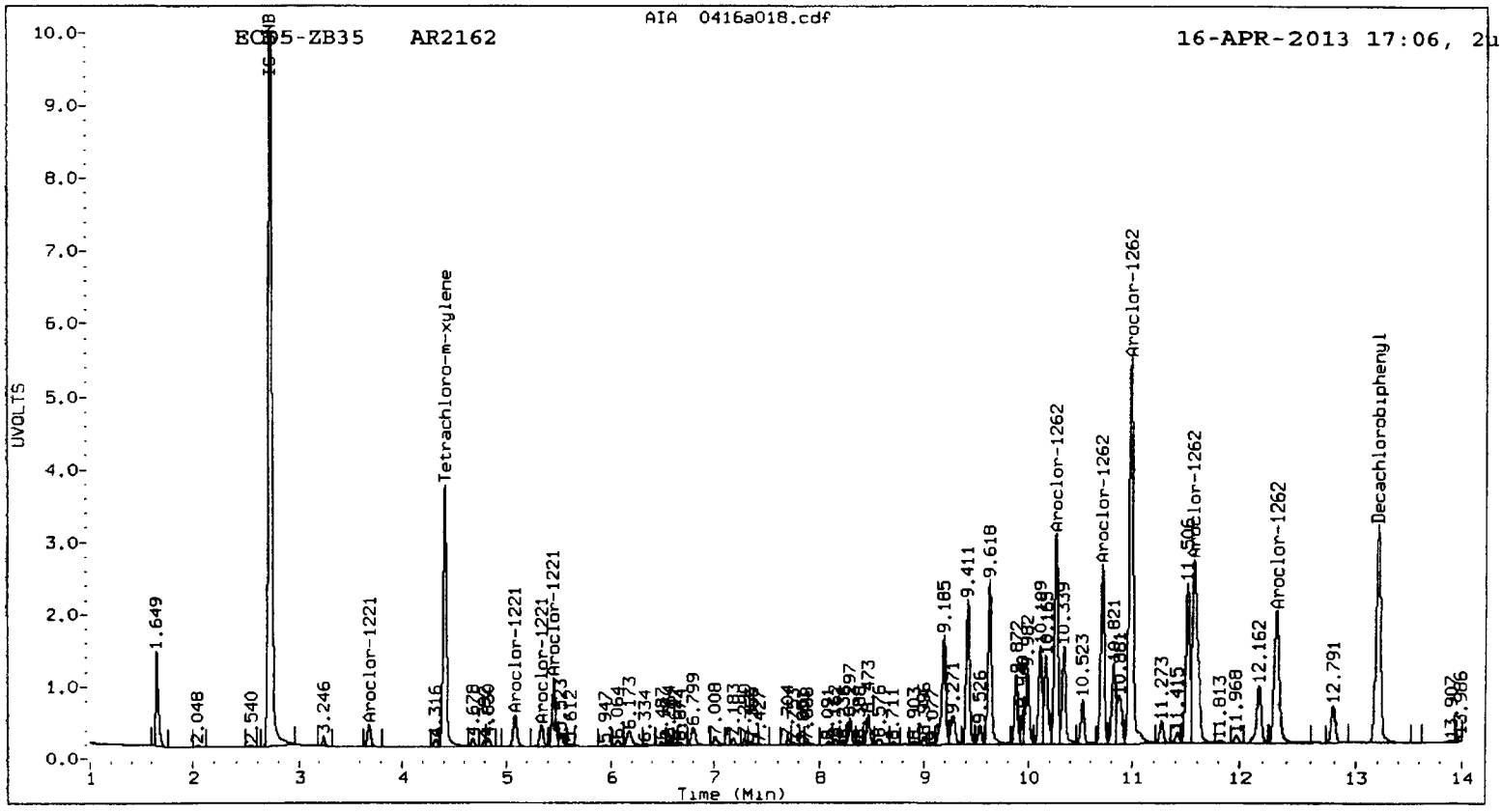
Total PCB Area Col2 (4.503 - 13.104) = 51561813 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR2162
AIA 0416a018.cdf
16-APR-2013 17:06, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0416a018.cdf
ECD5-ZB35 AR2162
16-APR-2013 17:06, 2u
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
Time (Min)


EC35-ZB5 AR2162
AIA 0416a018.cdf
16-APR-2013 17:06, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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EC35-ZB35 AR2162
16-APR-2013 17:06, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a019.d
Data file 2: 20130416.b/ical-2.b/0416a019.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 16-APR-2013 17:26
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	15722368	4.403	0.000	4286848	19.8	20.1	1.4	Tetrachloro-m-xylen
12.827	0.000	40900955	13.204	0.000	7801909	31.2	33.0	5.7	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	49.5	50.2
Decachlorobiphenyl	78.0	82.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48833507	0.4
Hexabromobiphenyl	81878684	86055260	5.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14519211	0.4
Hexabromobiphenyl	16263628	17039356	4.8

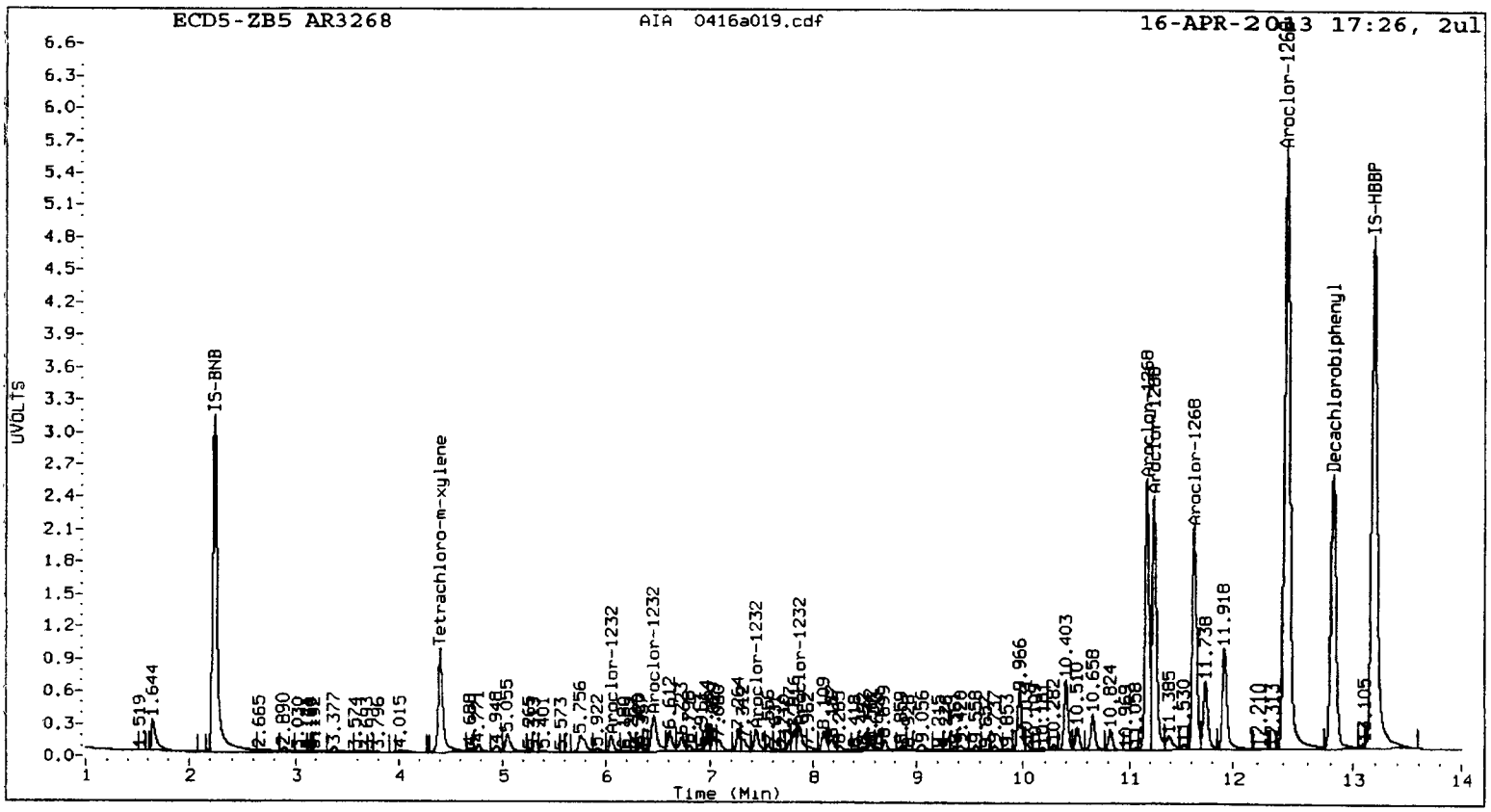
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

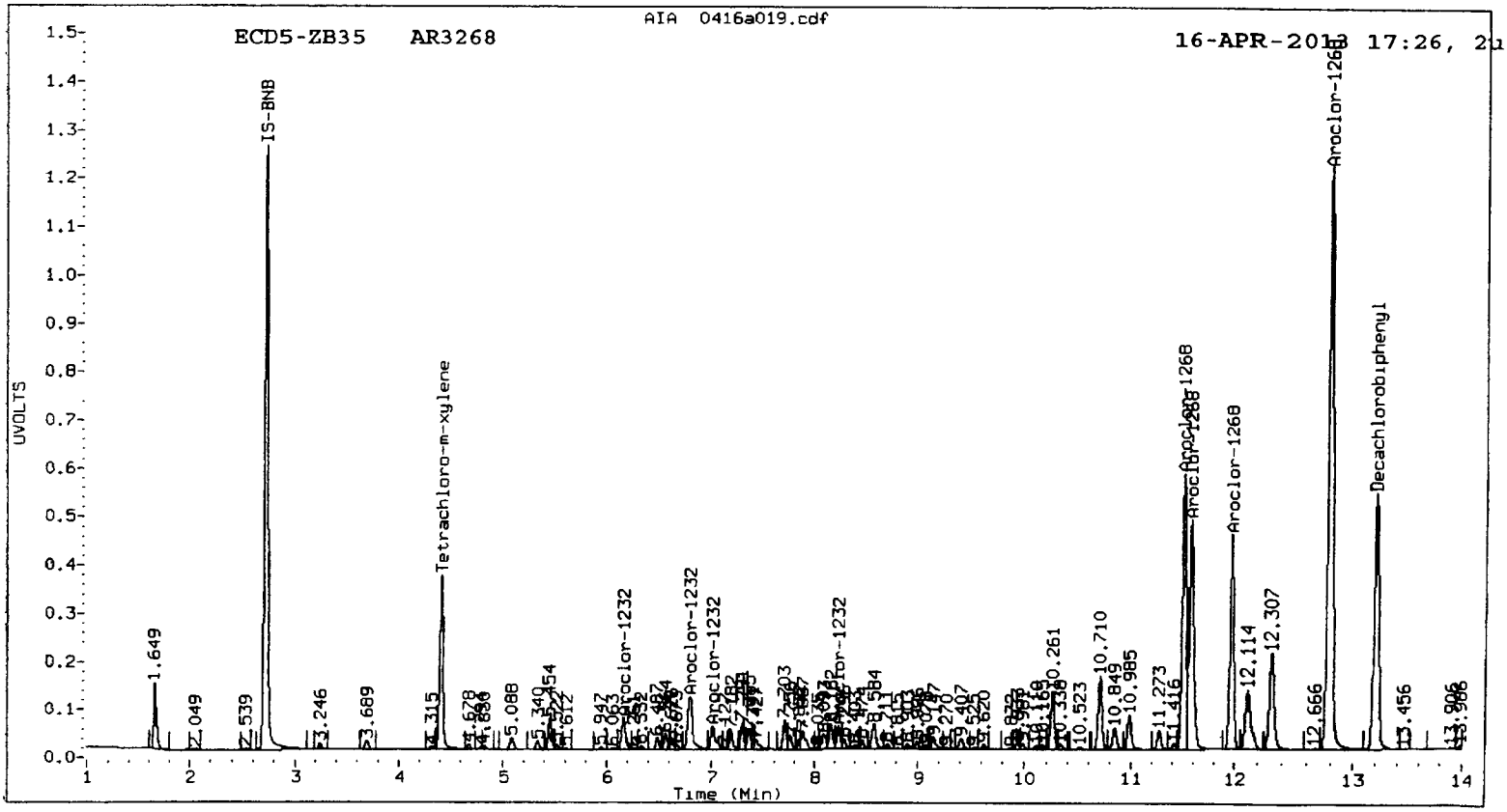
	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.054	0.000	2148591	250.0	1	6.161	0.000	902472	250.0
Aroclor-1232	2	6.461	0.000	6622721	250.0	2	6.797	0.000	1772848	250.0
Aroclor-1232	3	7.438	0.000	3346789	250.0	3	7.007	0.000	741236	250.0
Aroclor-1232	4	7.871	0.000	3924521	250.0	4	8.237	0.000	607059	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):			250.0	RPD = 0
Aroclor-1268	1	11.174	0.000	35037891	250.0	1	11.506	0.000	7130839	250.0
Aroclor-1268	2	11.245	0.000	34991258	250.0	2	11.573	0.000	7036727	250.0
Aroclor-1268	3	11.631	0.000	30246012	250.0	3	11.969	0.000	5830162	250.0
Aroclor-1268	4	12.421	0.000	88262841	250.0	4	12.792	0.000	17209139	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):			250.0	RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 312960672 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 62838135 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR3268
AIA 0416a019.cdf
16-APR-2013 17:26, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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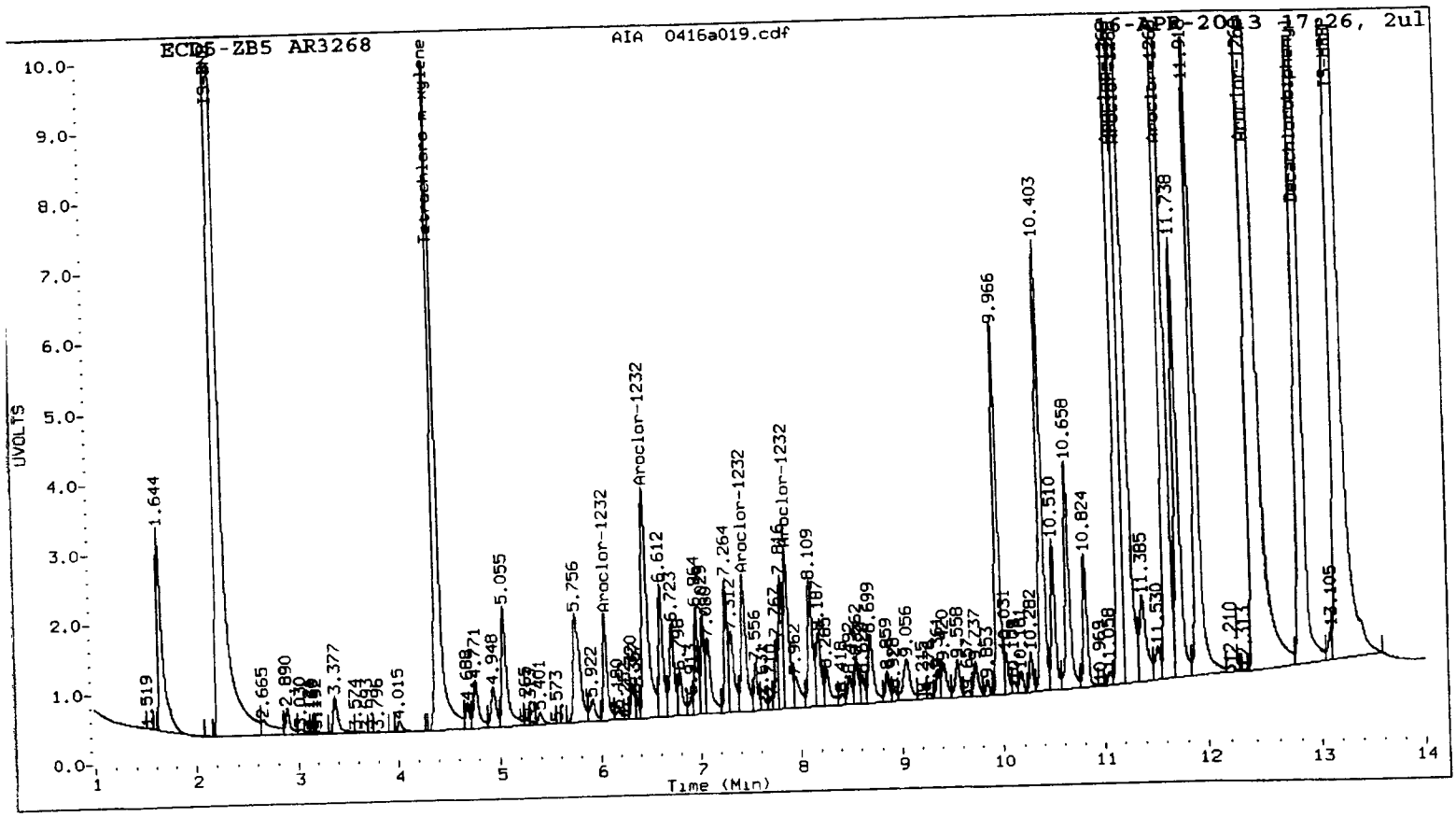
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl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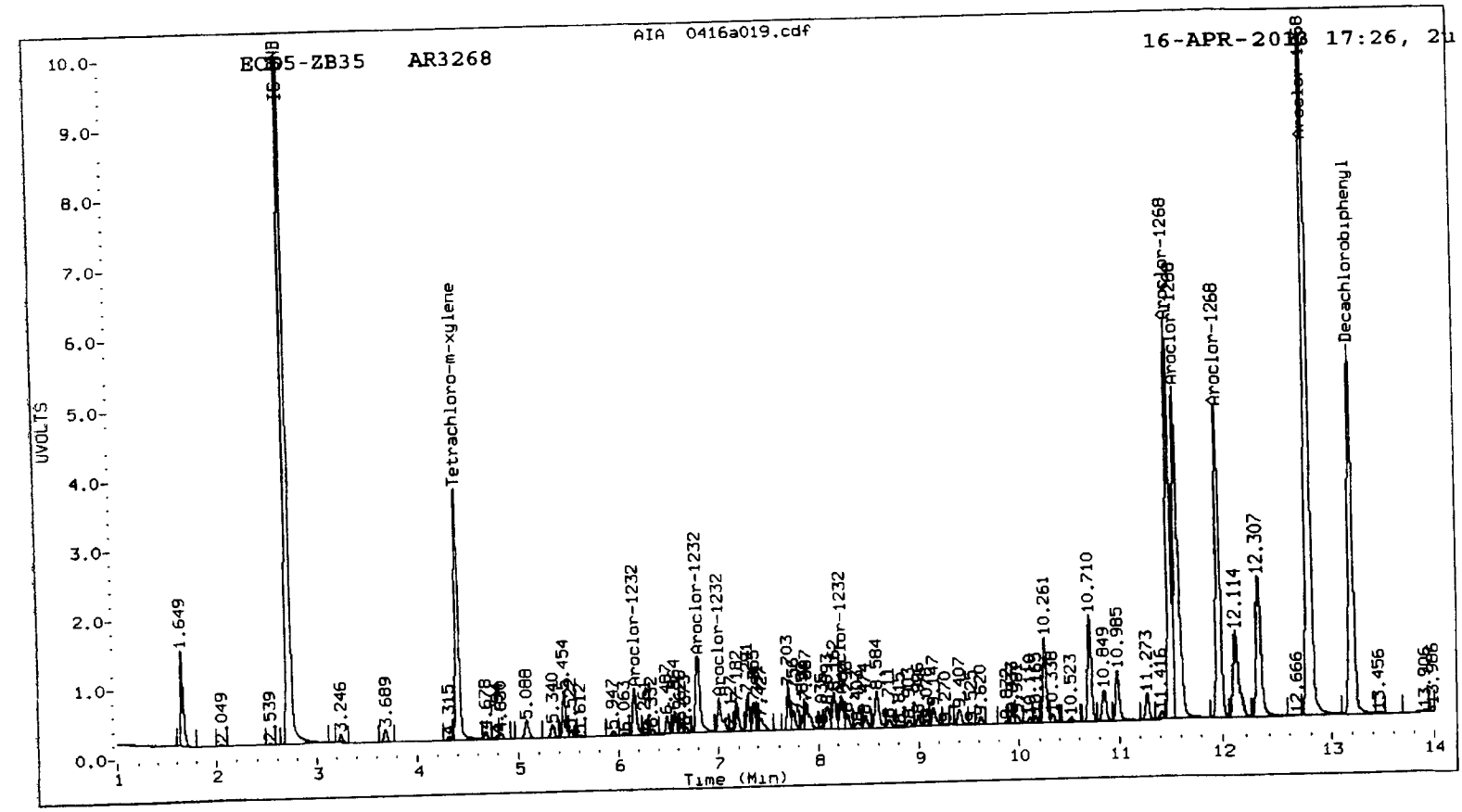
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl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16-APR-2013 17:26, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a020.d
Data file 2: 20130416.b/ical-2.b/0416a020.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 16-APR-2013 17:46
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	16593099	4.404	0.000	4541818	20.0	20.4	1.9	Tetrachloro-m-xylen
12.828	0.001	24694657	13.204	0.000	4668373	18.2	19.2	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.0	51.0
Decachlorobiphenyl	45.5	47.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	51001242	4.8
Hexabromobiphenyl	81878684	88986803	8.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15142458	4.7
Hexabromobiphenyl	16263628	17563296	8.0

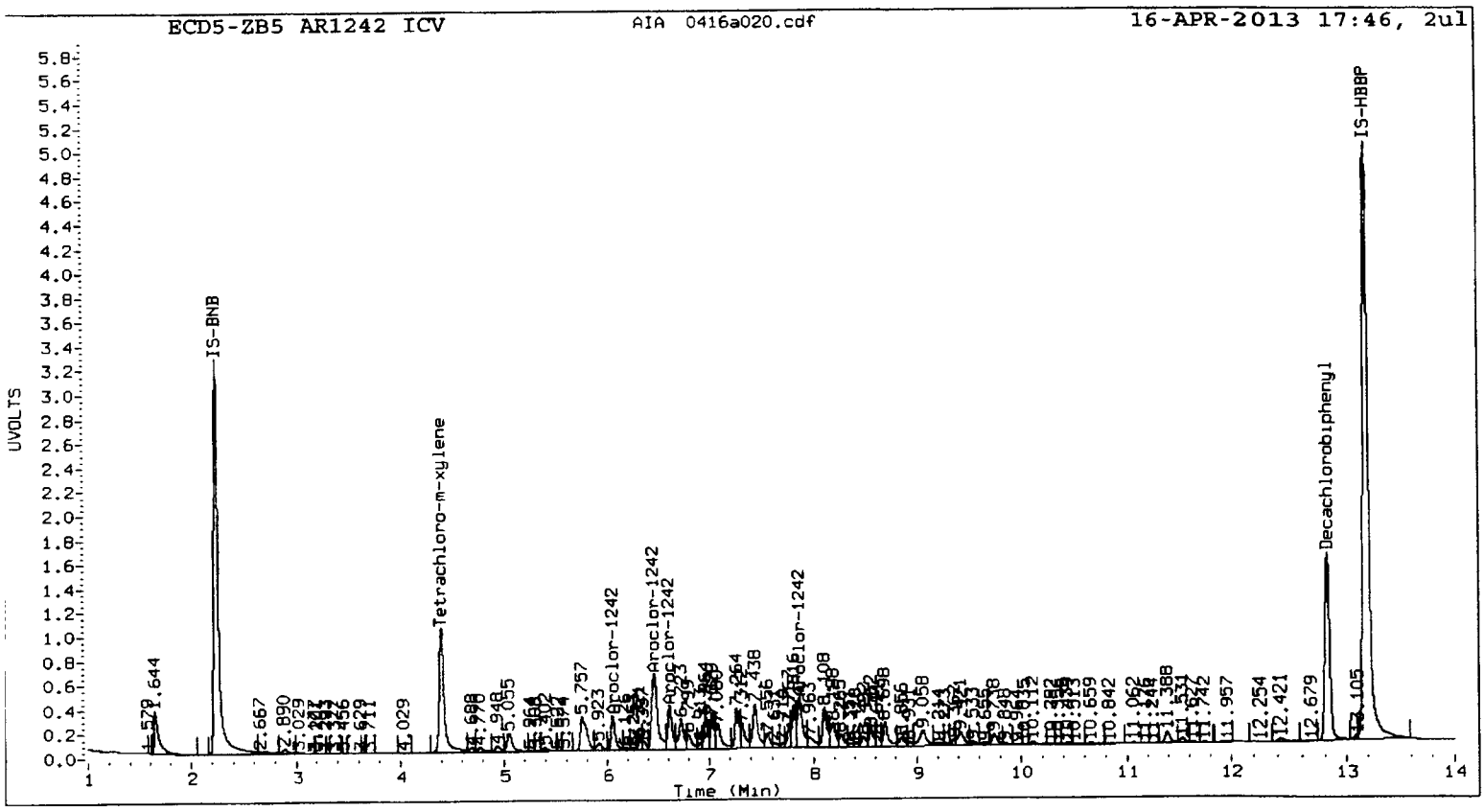
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

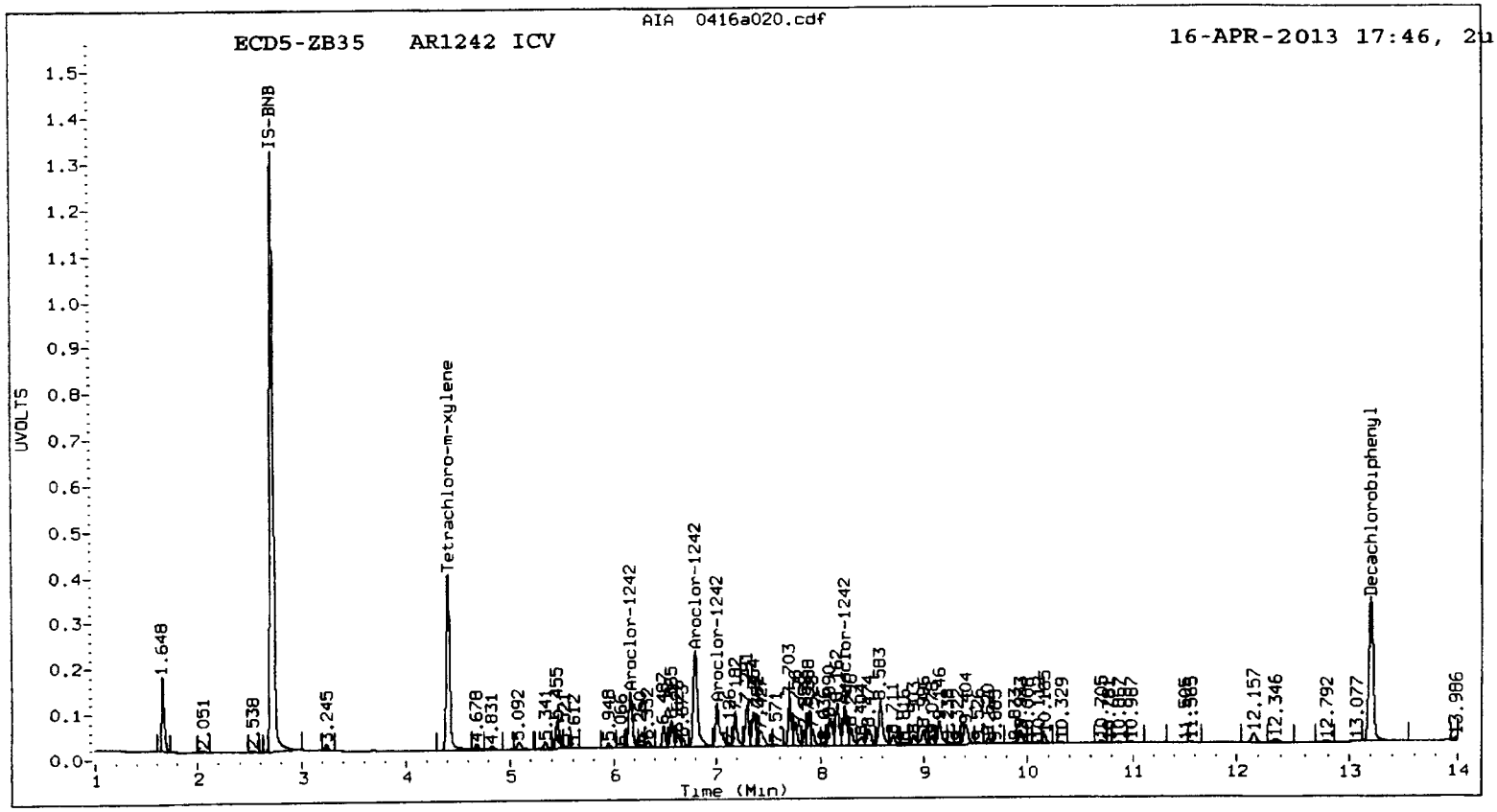
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	6.055	0.001	4081207	243.2	1	6.161	0.001	1591070	244.5
Aroclor-1242	2	6.462	0.001	12485251	241.6	2	6.796	0.000	3362730	242.3
Aroclor-1242	3	6.612	0.001	5514949	241.0	3	7.006	0.000	1407146	241.9
Aroclor-1242	4	7.871	0.002	6947363	242.7	4	8.236	0.000	1076976	225.1
Total Col1Ave (4 peaks):					242.1	Total Col2Ave (4 peaks):				238.5 RPD = 2
Corrected Ave (3 peaks):					241.8	Corrected Ave (3 peaks):				236.4 RPD = 2

Total PCB Area Col1 (4.501 - 12.727) = 124969121 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 26892197 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1242 ICV
AIA 0416a020.cdf
16-APR-2013 17:46, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


AIA 0416a020.cdf
ECD5-ZB35 AR1242 ICV
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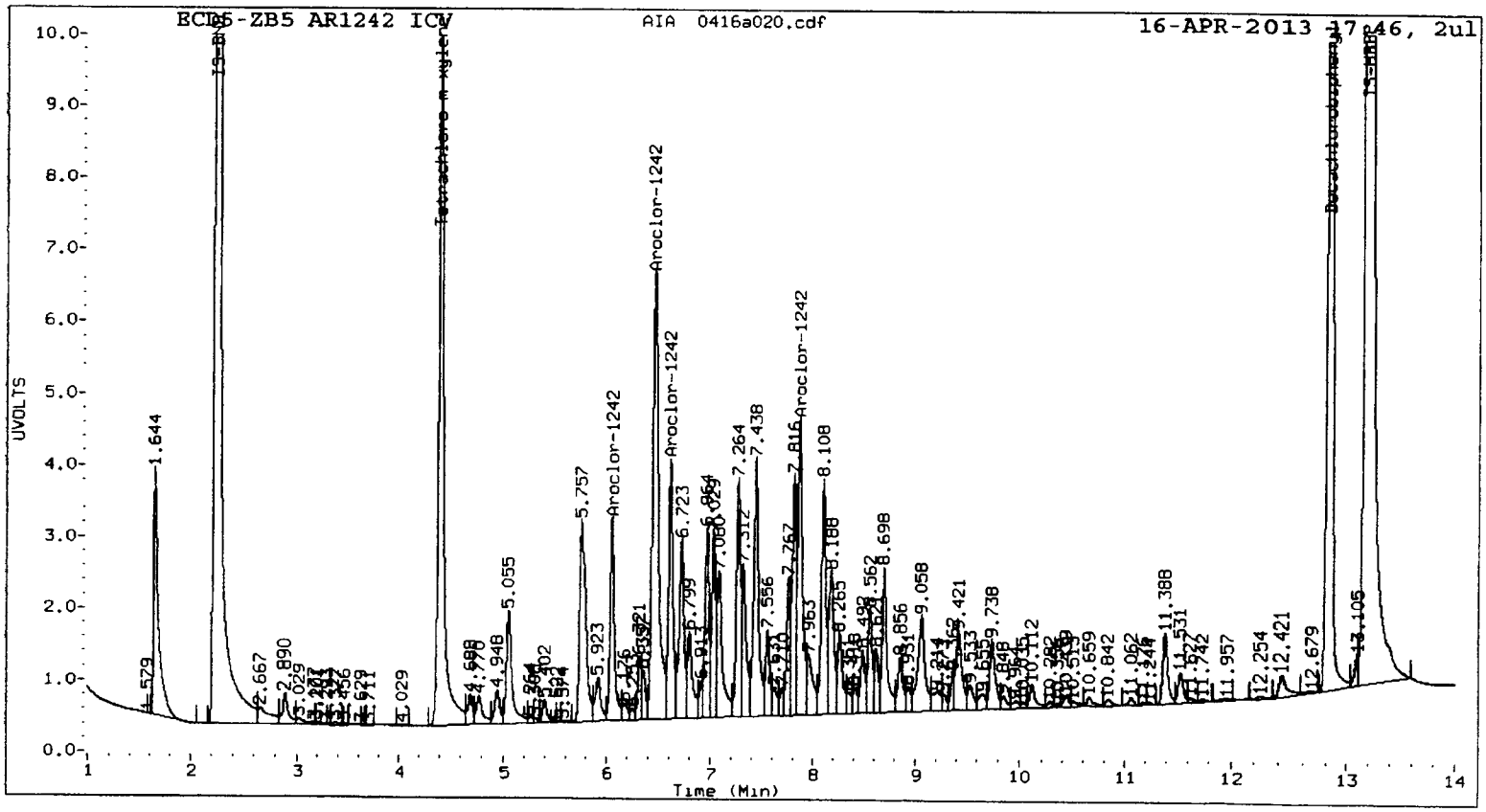
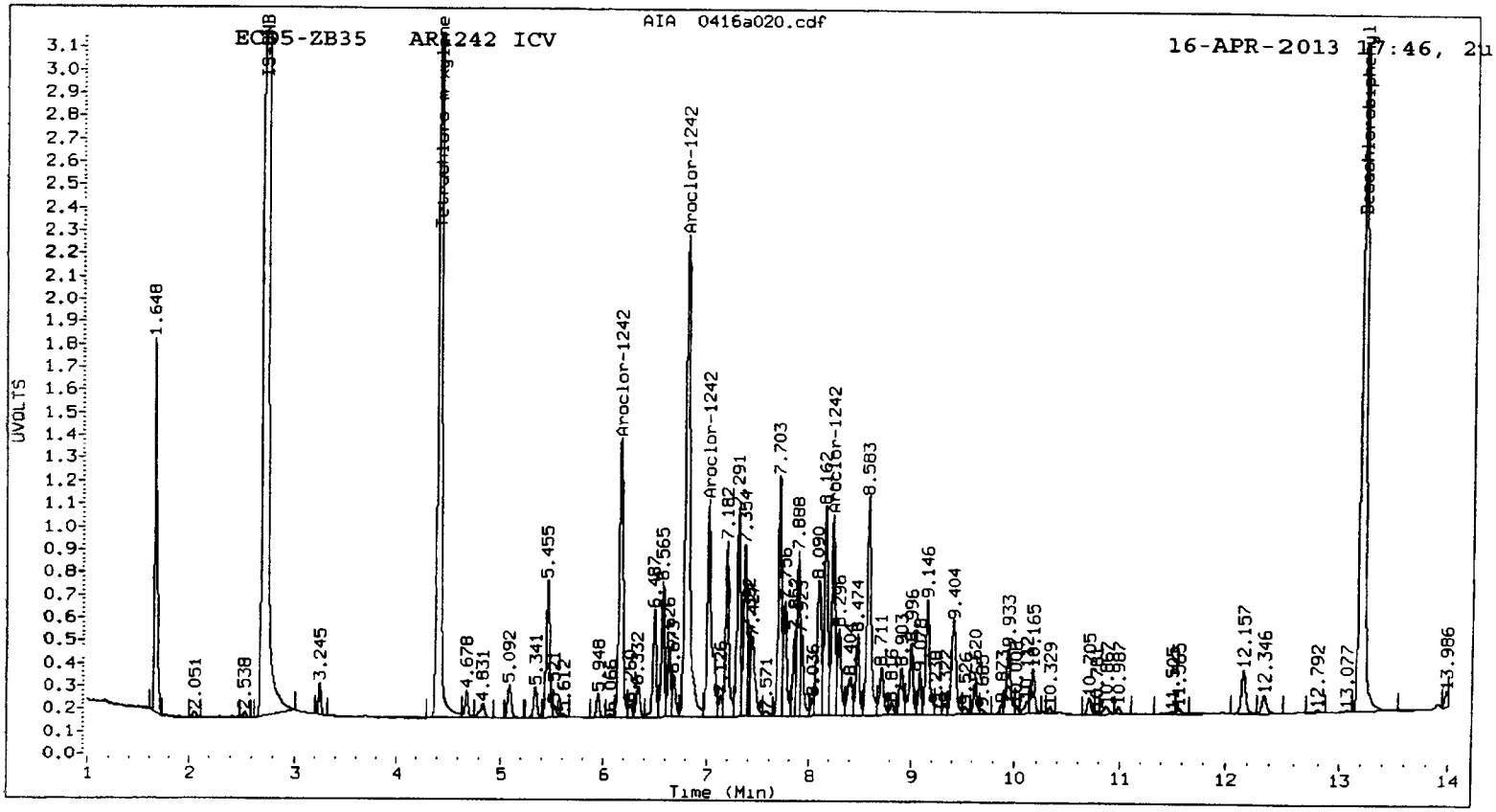
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl


EC05-ZB5 AR1242 ICV
AIA 0416a020.cdf
16-APR-2013 17:46, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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AIA 0416a020.cdf
16-APR-2013 17:46, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a021.d
Data file 2: 20130416.b/ical-2.b/0416a021.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 16-APR-2013 18:07
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	0.000	16434645	4.404	0.000	4510253	20.2	20.6	1.6	Tetrachloro-m-xylen
12.827	0.000	24565717	13.203	-0.001	4561520	18.6	19.3	3.5	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	50.6	51.4
Decachlorobiphenyl	46.5	48.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	49939659	2.7
Hexabromobiphenyl	81878684	86667397	5.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14906989	3.1
Hexabromobiphenyl	16263628	17073568	5.0

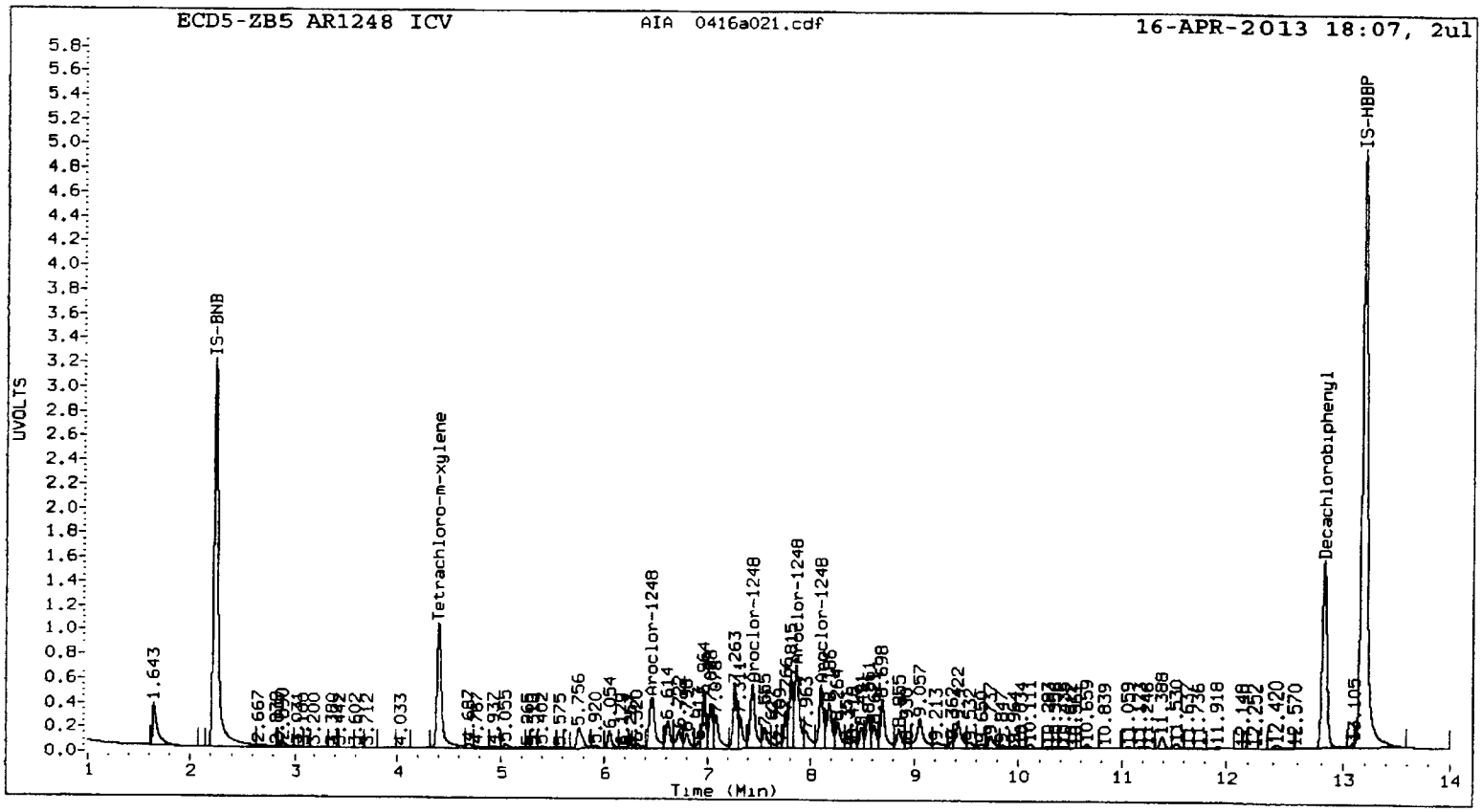
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

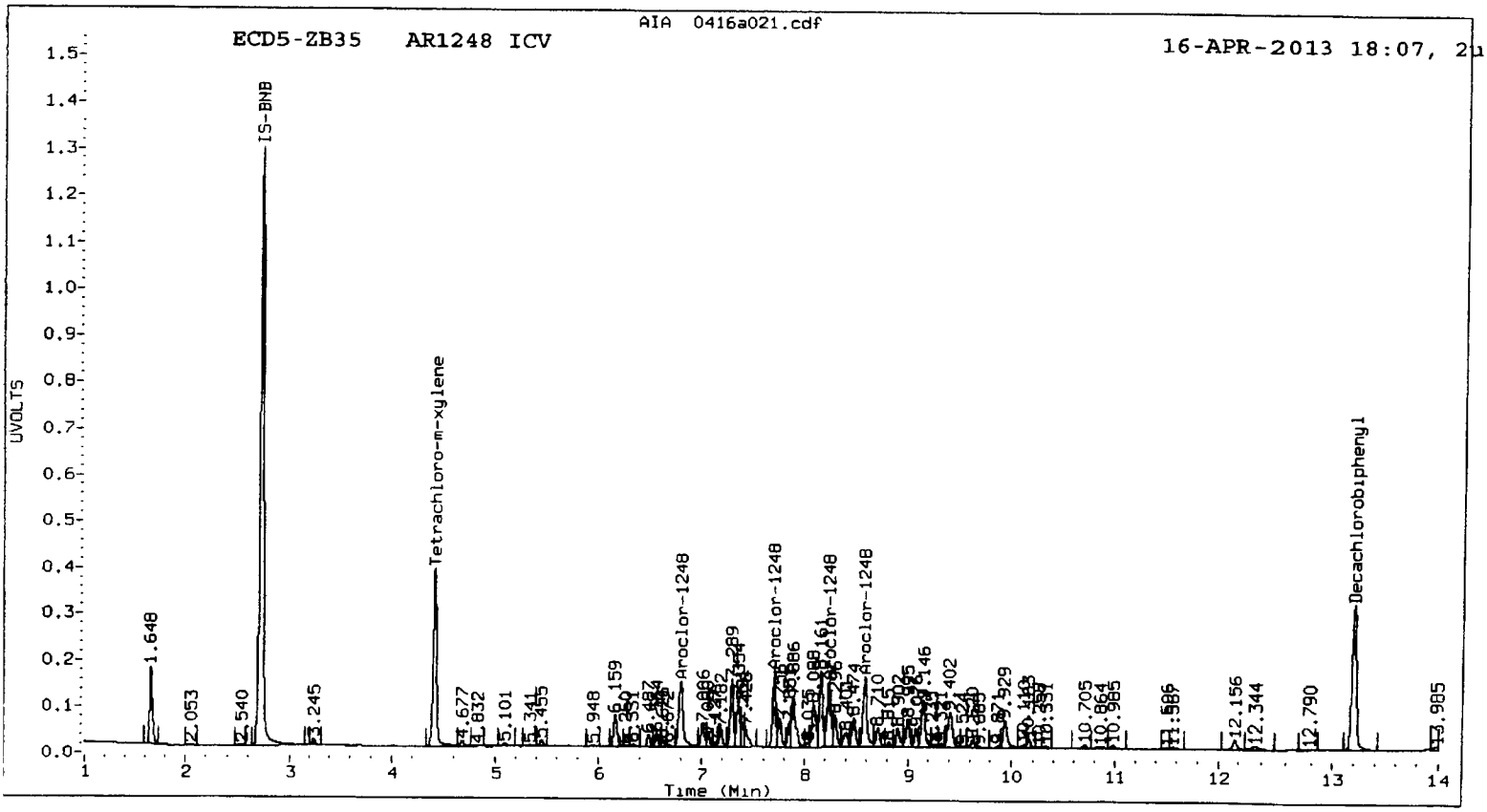
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.459	0.000	8519735	270.2	1	6.793	0.000	2238172	268.4
Aroclor-1248	2	7.437	0.000	8706566	249.2	2	7.703	0.000	1729076	252.6
Aroclor-1248	3	7.870	0.000	11200242	248.4	3	8.235	-0.001	1714155	243.4
Aroclor-1248	4	8.107	0.000	7781087	243.8	4	8.581	-0.001	2245475	244.1
Total Col1Ave (4 peaks):					252.9	Total Col2Ave (4 peaks):				252.1 RPD = 0
Corrected Ave (3 peaks):					247.1	Corrected Ave (3 peaks):				246.7 RPD = 0

Total PCB Area Col1 (4.501 - 12.727) = 151187427 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 31040298 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1248 ICV
AIA 0416a021.cdf
16-APR-2013 18:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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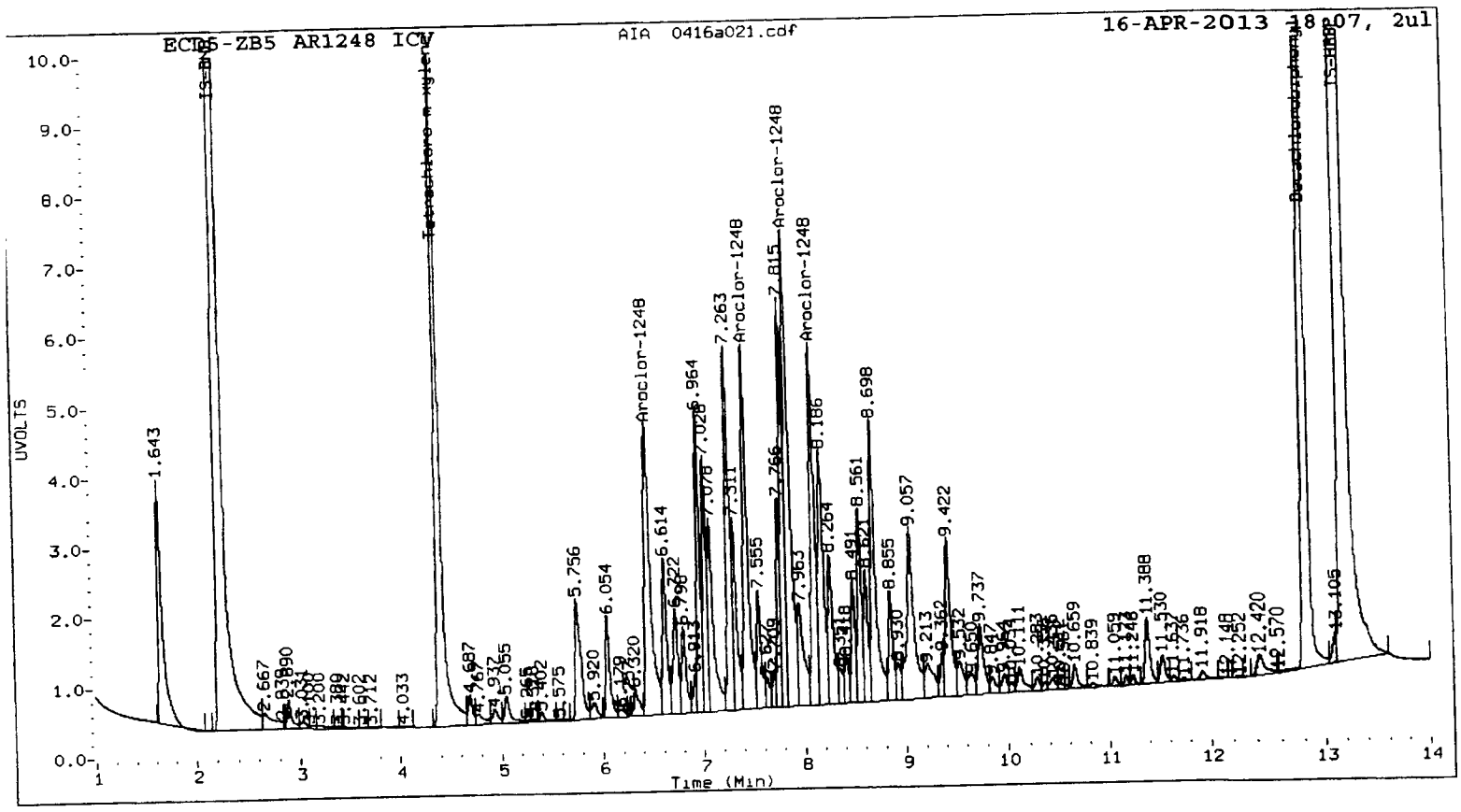
ECD5-ZB35 AR1248 ICV
16-APR-2013 18:07, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl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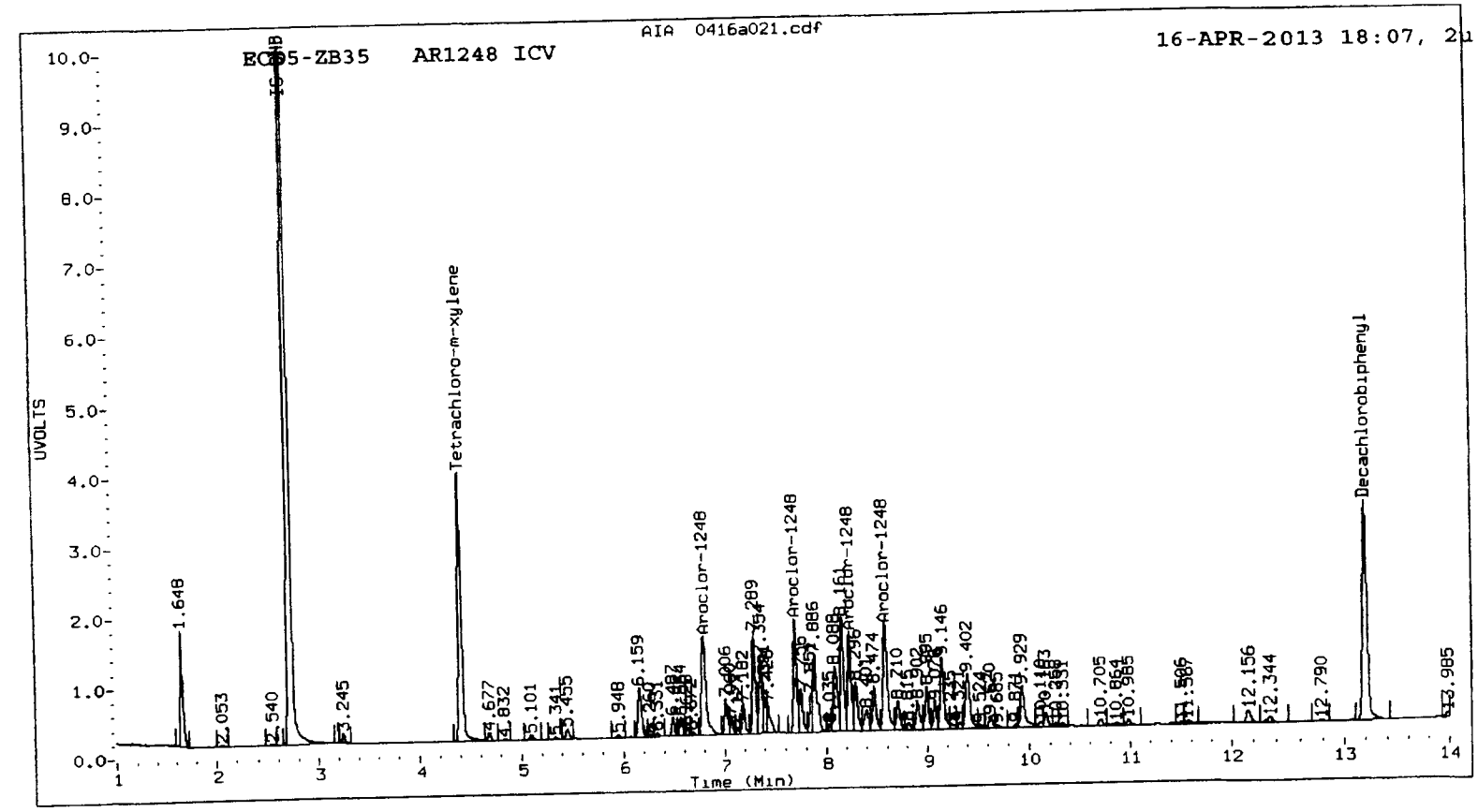
AIA 0416a021.cdf
16-APR-2013 18:07, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl


AIA 0416a021.cdf
ECD5-ZB35 AR1248 ICV
16-APR-2013 18:07, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a022.d
Data file 2: 20130416.b/ical-2.b/0416a022.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 16-APR-2013 18:27
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	16164684	4.403	0.000	4418878	19.7	20.0	1.8	Tetrachloro-m-xylen
12.827	0.000	24520854	13.203	-0.001	4631908	18.4	19.3	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.2	50.1
Decachlorobiphenyl	46.0	48.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50495612	3.8
Hexabromobiphenyl	81878684	87535490	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14997960	3.7
Hexabromobiphenyl	16263628	17267294	6.2

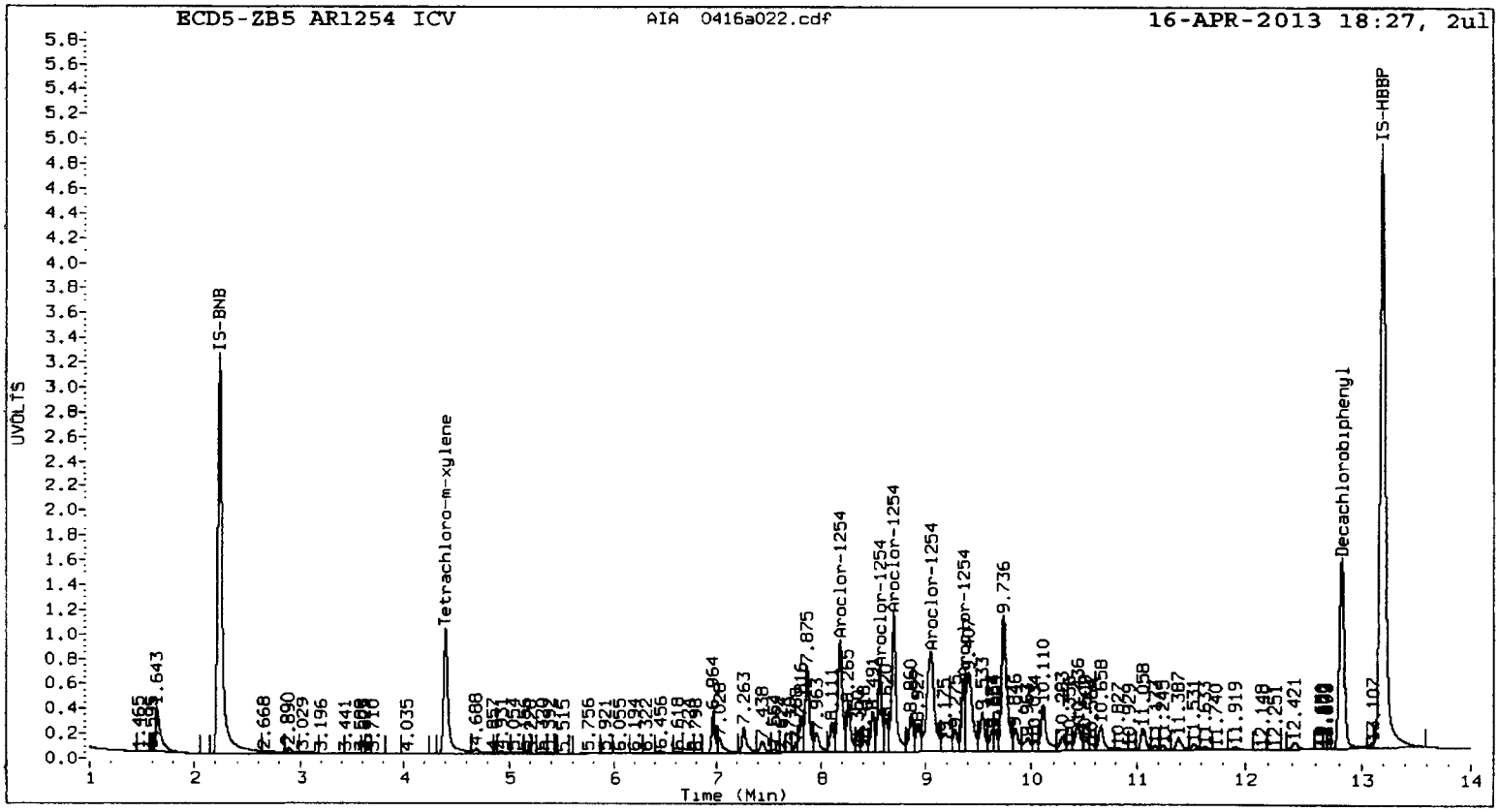
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

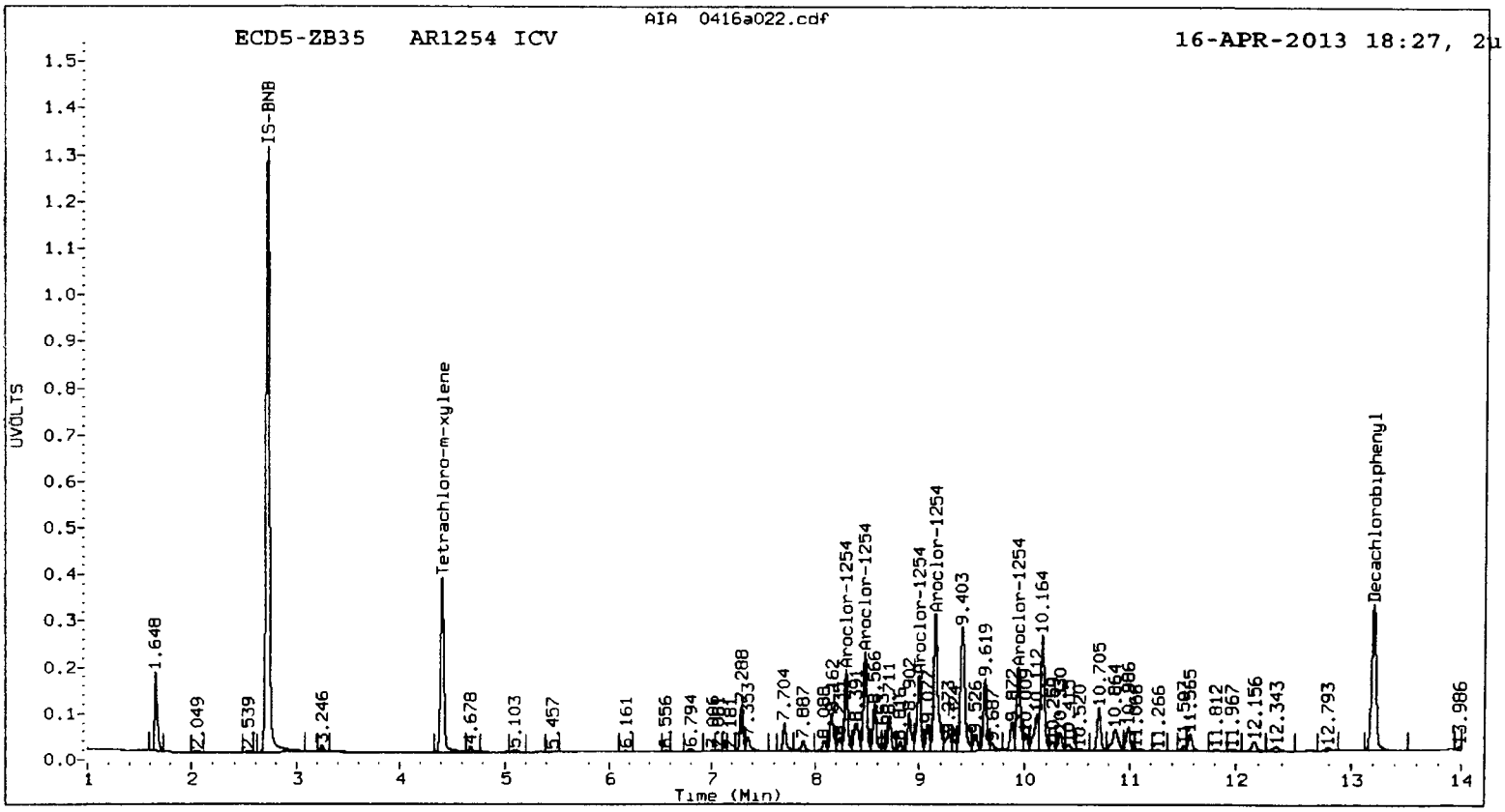
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.189	0.000	13390015	285.0	1	8.297	0.000	1960078	283.9
Aroclor-1254	2	8.561	0.000	9228818	296.0	2	8.472	0.001	2439852	286.2
Aroclor-1254	3	8.698	0.000	17570252	280.8	3	8.996	0.001	1952323	296.3
Aroclor-1254	4	9.052	0.001	19341435	288.0	4	9.146	0.000	4005354	281.3
Aroclor-1254	5	9.359	0.000	7190208	260.1	5	9.933	0.000	2428349	295.3
Total Col1Ave (5 peaks):					282.0	Total Col2Ave (5 peaks):				288.6 RPD = 2
Corrected Ave (4 peaks):					278.5	Corrected Ave (4 peaks):				286.7 RPD = 3

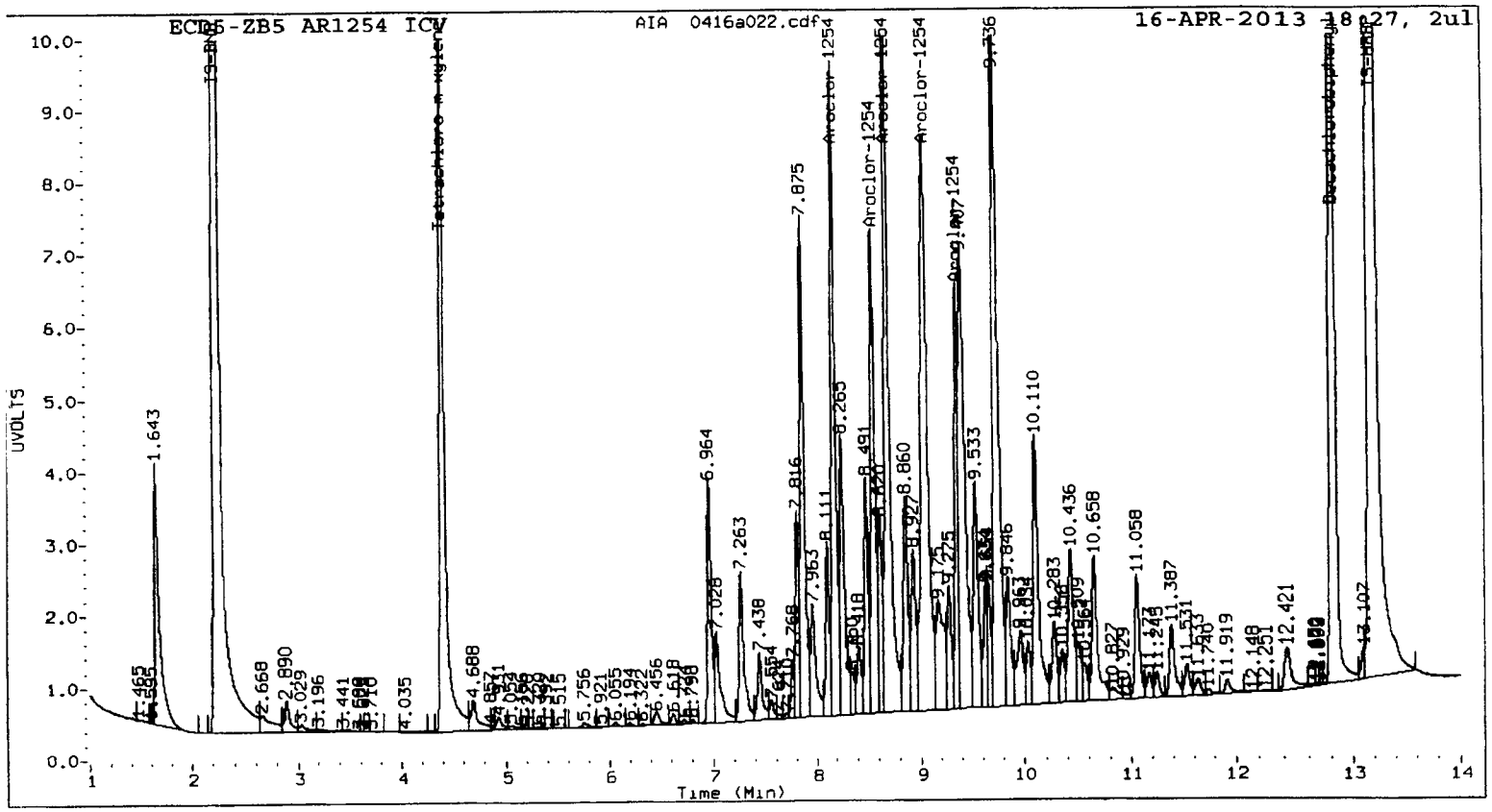
Total PCB Area Col1 (4.501 - 12.727) = 206139049 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 40952631 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1254 ICV
AIA 0416a022.cdf
16-APR-2013 18:27, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


AIA 0416a022.cdf
ECD5-ZB35 AR1254 ICV
16-APR-2013 18:27, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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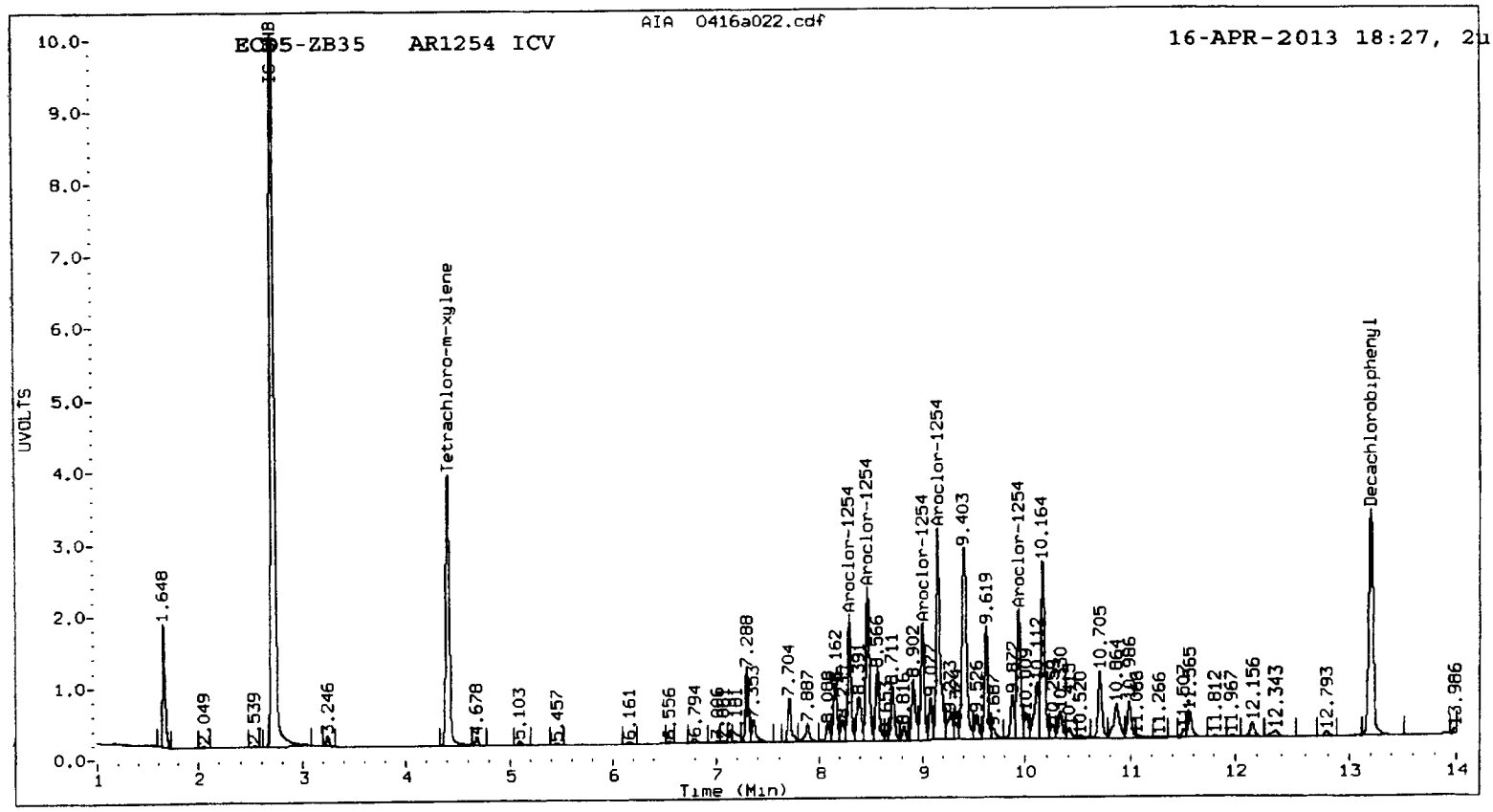
AIA 0416a022.cdf
16-APR-2013 18:27, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl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ECD5-ZB35 AR1254 ICV
16-APR-2013 18:27, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a023.d
Data file 2: 20130416.b/ical-2.b/0416a023.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 16-APR-2013 18:47
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	-0.001	16568304	4.404	0.000	4562337	21.0	20.6	2.3	Tetrachloro-m-xylen
12.827	0.000	24846551	13.203	-0.001	4697454	18.6	19.6	5.2	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	52.6	51.4
Decachlorobiphenyl	46.6	49.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48414554	-0.5
Hexabromobiphenyl	81878684	87556282	6.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15086663	4.4
Hexabromobiphenyl	16263628	17274152	6.2

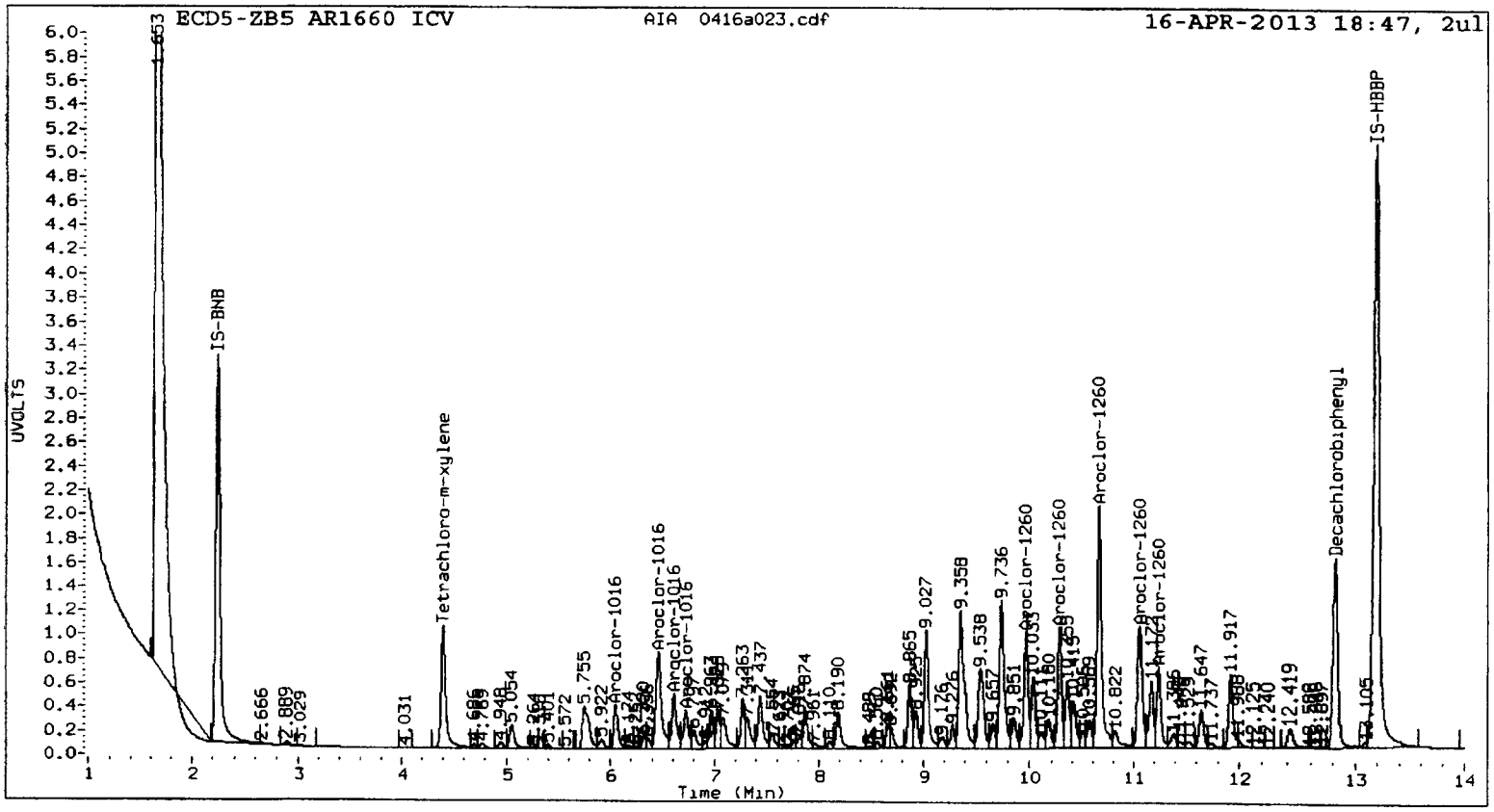
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

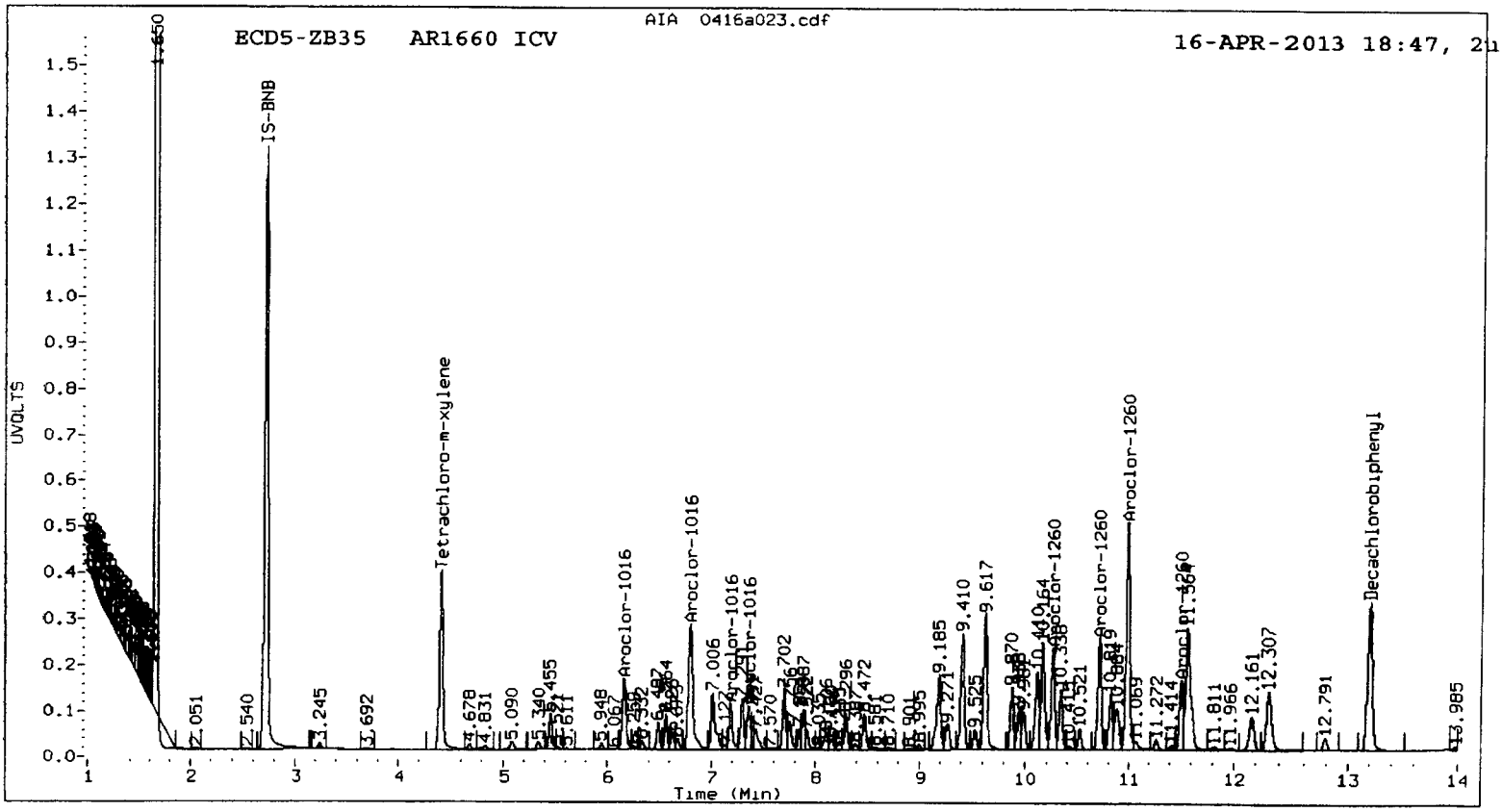
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.053	0.001	5117766	249.4	1	6.161	0.000	2031302	232.1
Aroclor-1016	2	6.460	0.002	15852374	248.0	2	6.796	0.001	4323605	234.7
Aroclor-1016	3	6.611	0.002	6989402	250.8	3	7.181	0.000	1141596	237.6
Aroclor-1016	4	6.722	0.001	5167449	263.2	4	7.354	0.000	1034796	232.7
Total Col1Ave (4 peaks):					252.9	Total Col2Ave (4 peaks):				234.3 RPD = 8
Corrected Ave (3 peaks):					249.4	Corrected Ave (3 peaks):				233.1 RPD = 7
Aroclor-1260	1	9.964	0.001	13526817	268.2	1	10.259	0.001	2668488	277.8
Aroclor-1260	2	10.281	0.001	13382415	262.4	2	10.709	0.001	3007211	260.0
Aroclor-1260	3	10.658	0.002	32513090	264.0	3	10.985	0.001	6251872	270.3
Aroclor-1260	4	11.059	0.003	16490263	250.1	4	11.506	0.001	1856520	281.5
Aroclor-1260	5	11.247	0.001	10128135	289.8	NS	---			----
Total Col1Ave (5 peaks):					266.9	Total Col2Ave (4 peaks):				272.4 RPD = 2
Corrected Ave (4 peaks):					261.2	Corrected Ave (3 peaks):				269.4 RPD = 3

Total PCB Area Col1 (4.501 - 12.727) = 346766707 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 71058121 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660 ICV
AIA 0416a023.cdf
16-APR-2013 18:47, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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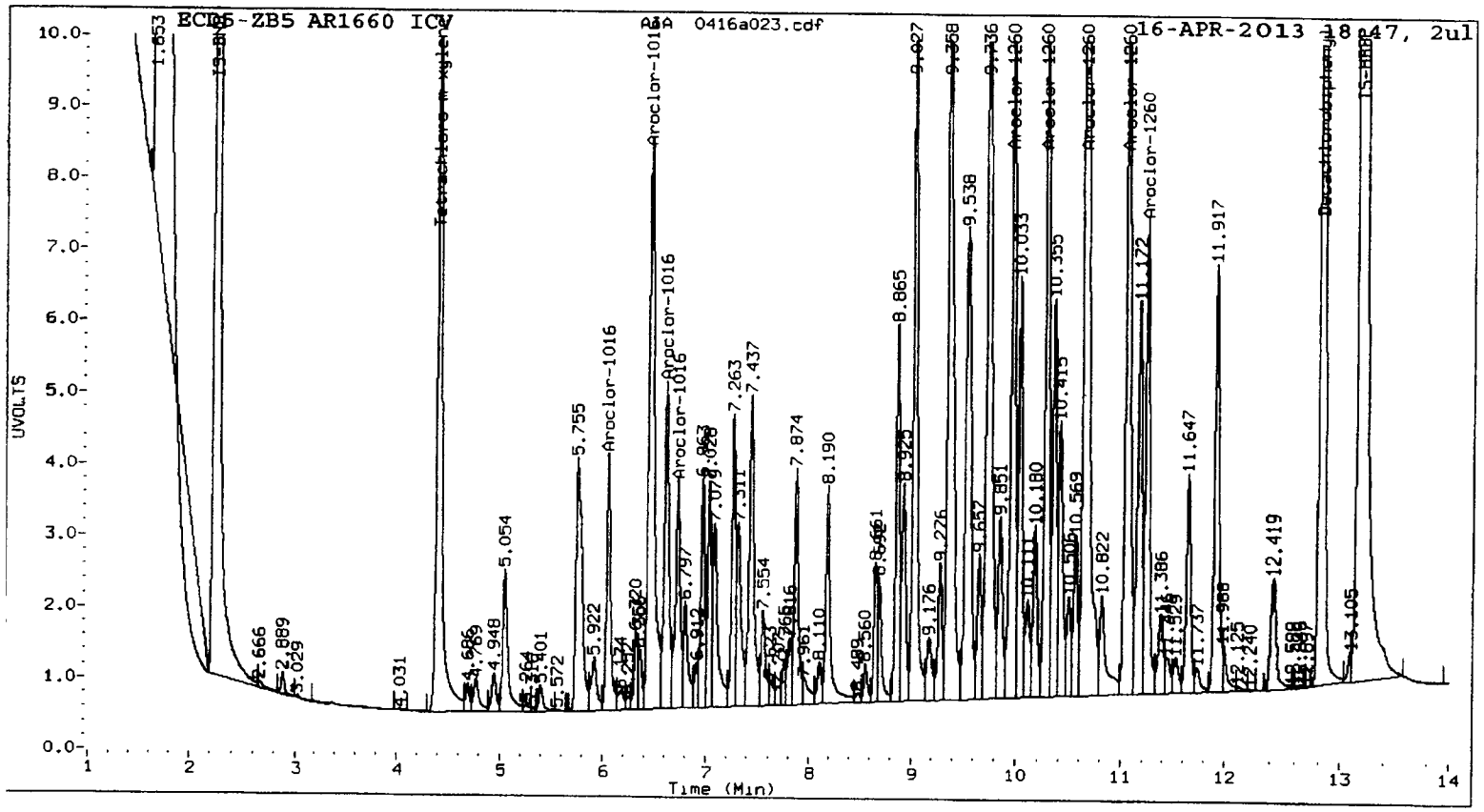
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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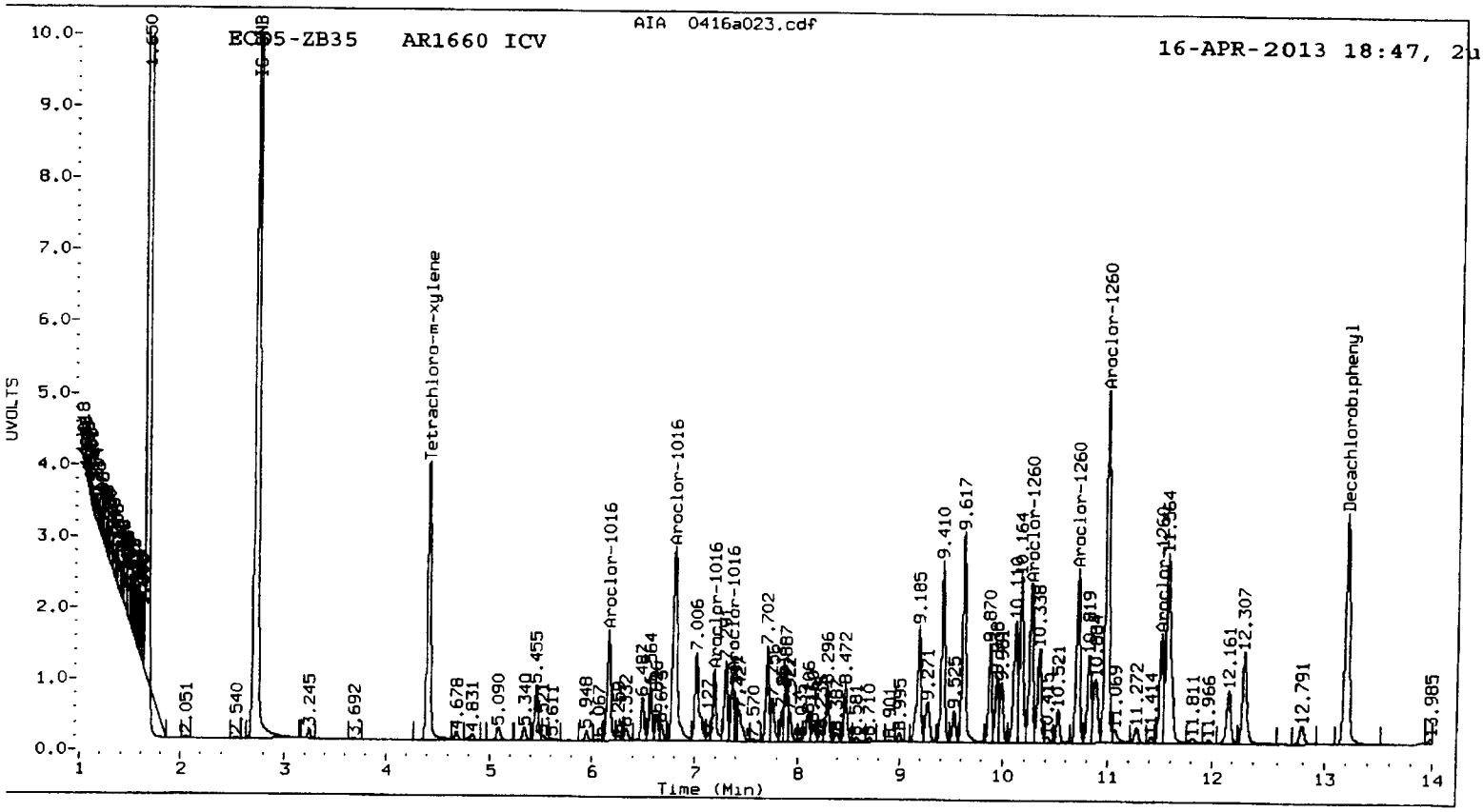
AIA 0416a023.cdf
16-APR-2013 18:47, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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AIA 0416a023.cdf
16-APR-2013 18:47, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a024.d
Data file 2: 20130416.b/ical-2.b/0416a024.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 16-APR-2013 19:07
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	-0.001	16731323	4.402	-0.001	4463472	20.4	20.5	0.7	Tetrachloro-m-xylen
12.826	-0.001	24327523	13.204	0.000	4603132	18.3	19.2	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.9	51.2
Decachlorobiphenyl	45.7	48.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	50527664	3.9
Hexabromobiphenyl	81878684	87430012	6.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14807065	2.4
Hexabromobiphenyl	16263628	17280448	6.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

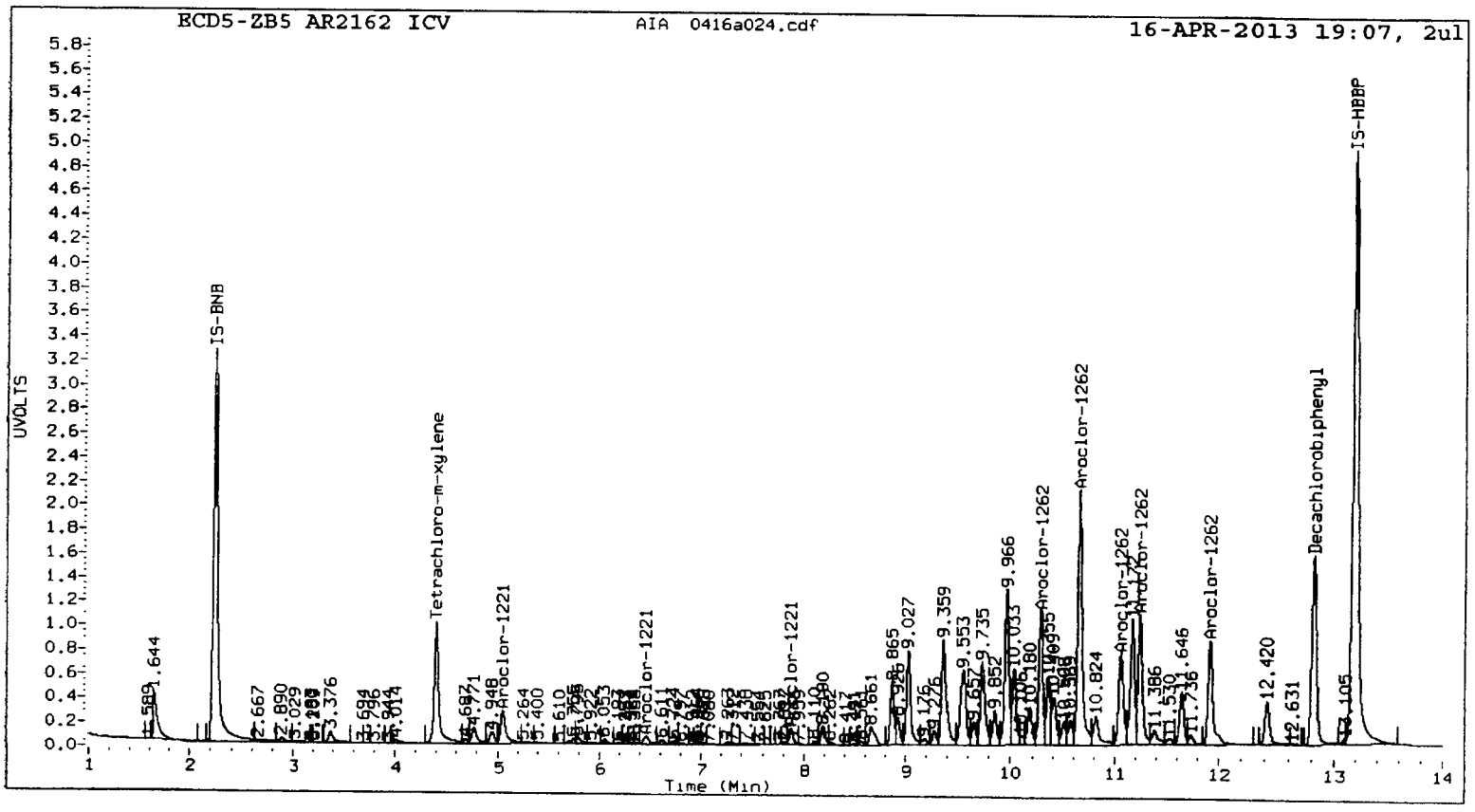
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	5.054	-0.001	5315388	263.4	1	3.689	0.000	394565	255.4
Aroclor-1221	2	6.462	-0.001	1341017	210.4	2	5.086	-0.002	630264	260.5
Aroclor-1221	3	7.875	-0.001	1972735	223.7	3	5.339	-0.002	380132	260.0
Aroclor-1221	NS	---			----	4	5.454	-0.001	1141731	258.7
	Total Col1Ave (3 peaks):			232.5		Total Col2Ave (4 peaks):			258.7	RPD = 11
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			258.0	
Aroclor-1262	1	10.282	0.000	15125347	269.5	1	10.259	-0.001	3594565	251.3
Aroclor-1262	2	10.658	-0.001	33777104	231.1	2	10.711	0.000	3476377	280.6
Aroclor-1262	3	11.059	0.000	12107792	233.4	3	10.985	-0.002	6548011	229.1
Aroclor-1262	4	11.246	0.000	16398471	263.4	4	11.569	0.001	4847257	260.8
Aroclor-1262	5	11.918	-0.001	14753400	241.4	5	12.307	-0.001	2797834	250.4
	Total Col1Ave (5 peaks):			247.8		Total Col2Ave (5 peaks):			254.4	RPD = 3
	Corrected Ave (4 peaks):			242.3		Corrected Ave (4 peaks):			247.9	RPD = 2

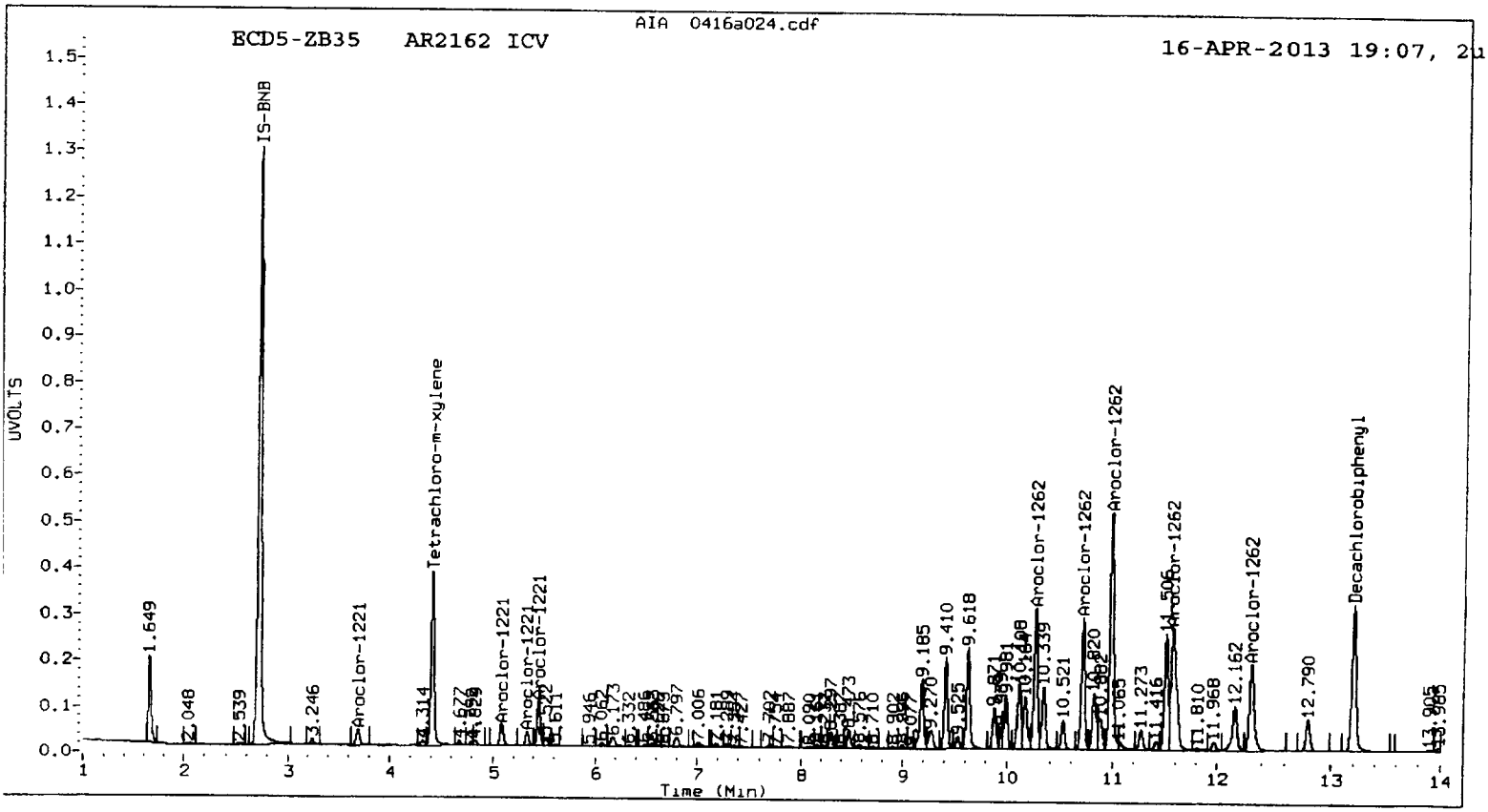
Total PCB Area Col1 (4.501 - 12.727) = 273780574 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.503 - 13.104) = 53081620 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR2162 ICV
AIA 0416a024.cdf
16-APR-2013 19:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR2162 ICV
AIA 0416a024.cdf
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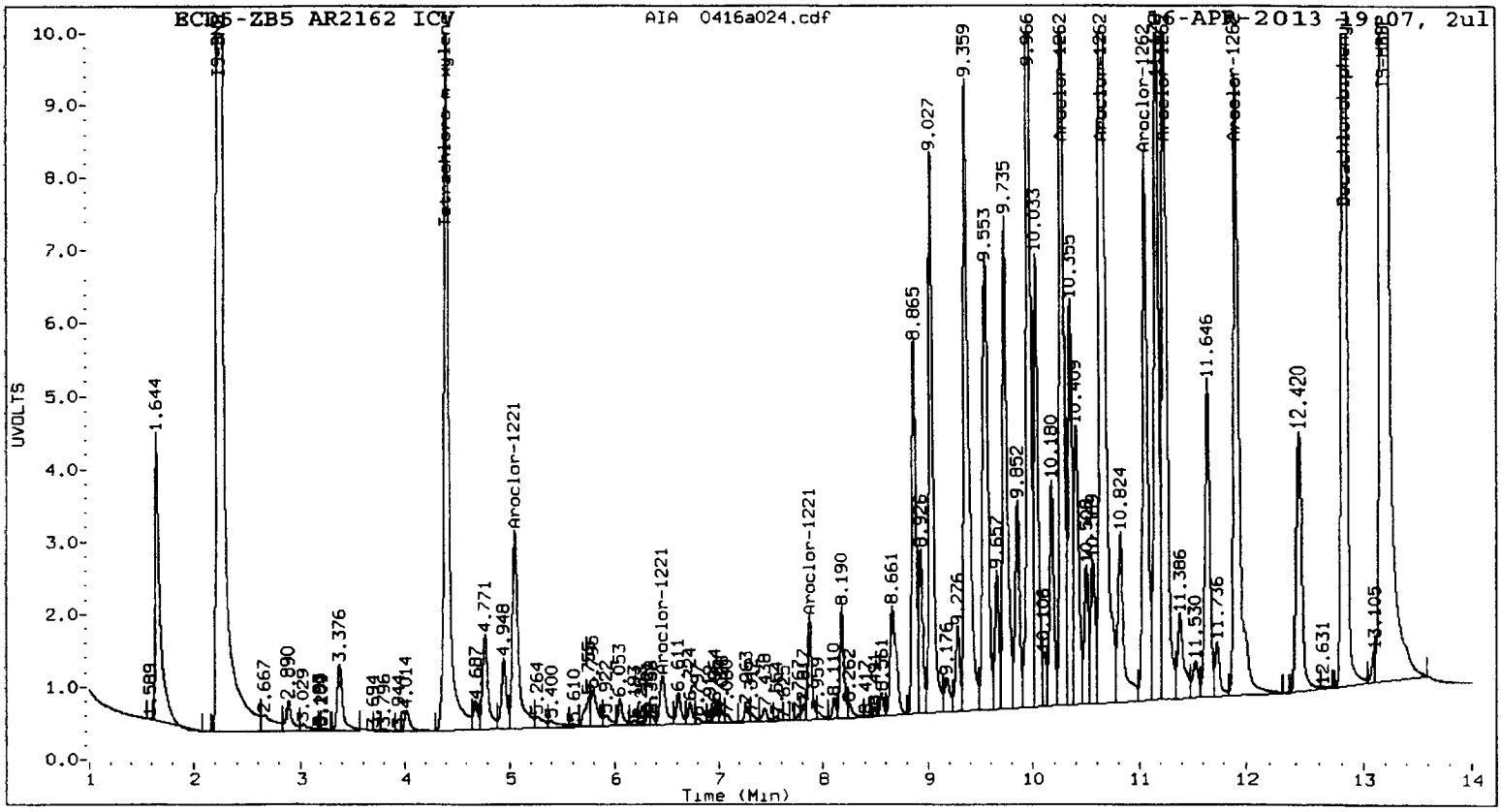
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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AIA 0416a024.cdf
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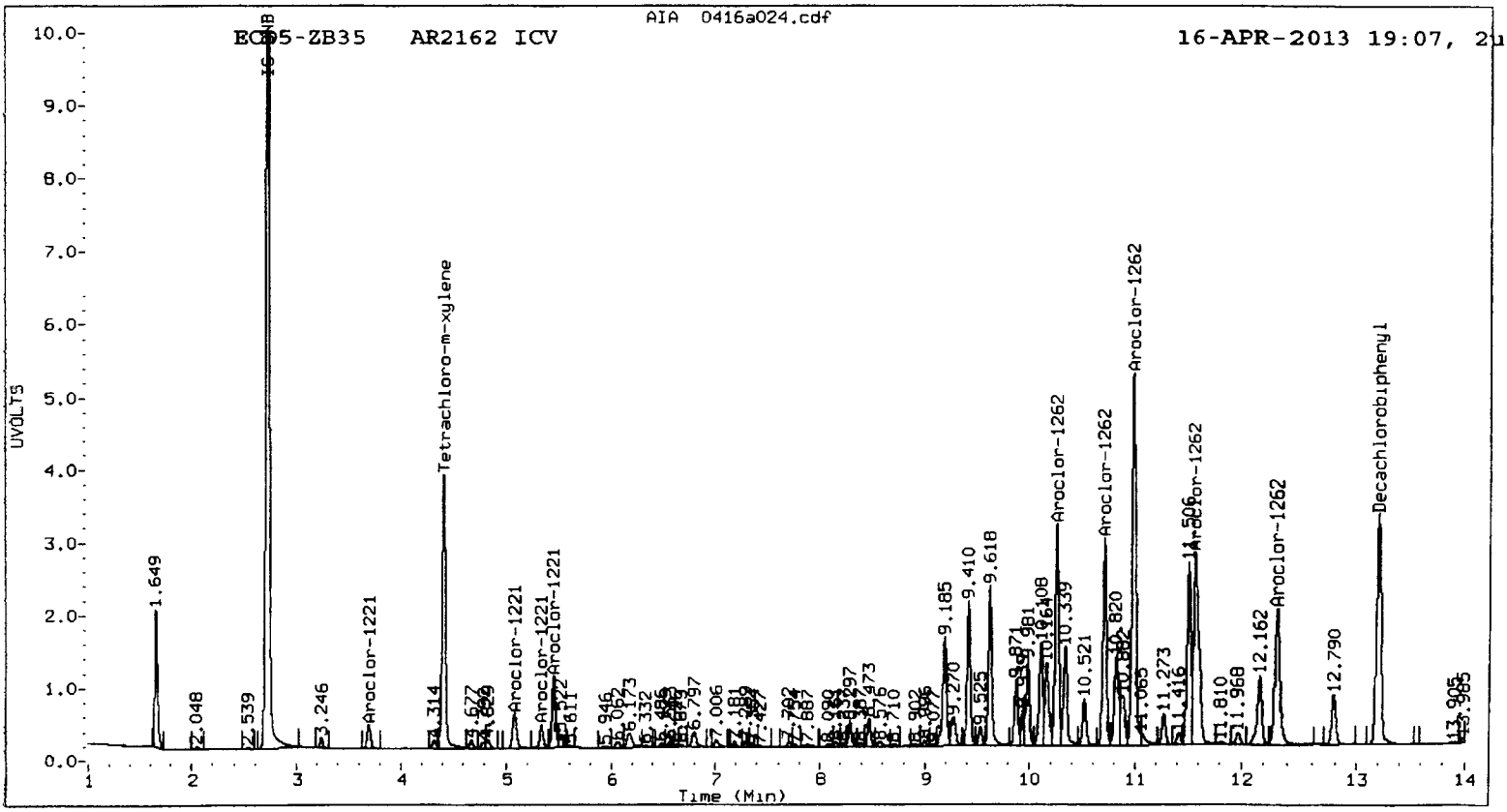
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl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EC35-ZB35 AR2162 ICV
16-APR-2013 19:07, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/ical-1.b/0416a025.d
Data file 2: 20130416.b/ical-2.b/0416a025.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 16-APR-2013 19:27
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.401	0.000	16523573	4.403	-0.001	4467196	19.6	19.9	1.3	Tetrachloro-m-xylen
12.827	0.000	38163496	13.203	-0.001	7222413	28.2	29.6	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.1	49.7
Decachlorobiphenyl	70.5	74.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	51740334	6.4
Hexabromobiphenyl	81878684	88870021	8.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15260632	5.6
Hexabromobiphenyl	16263628	17569147	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

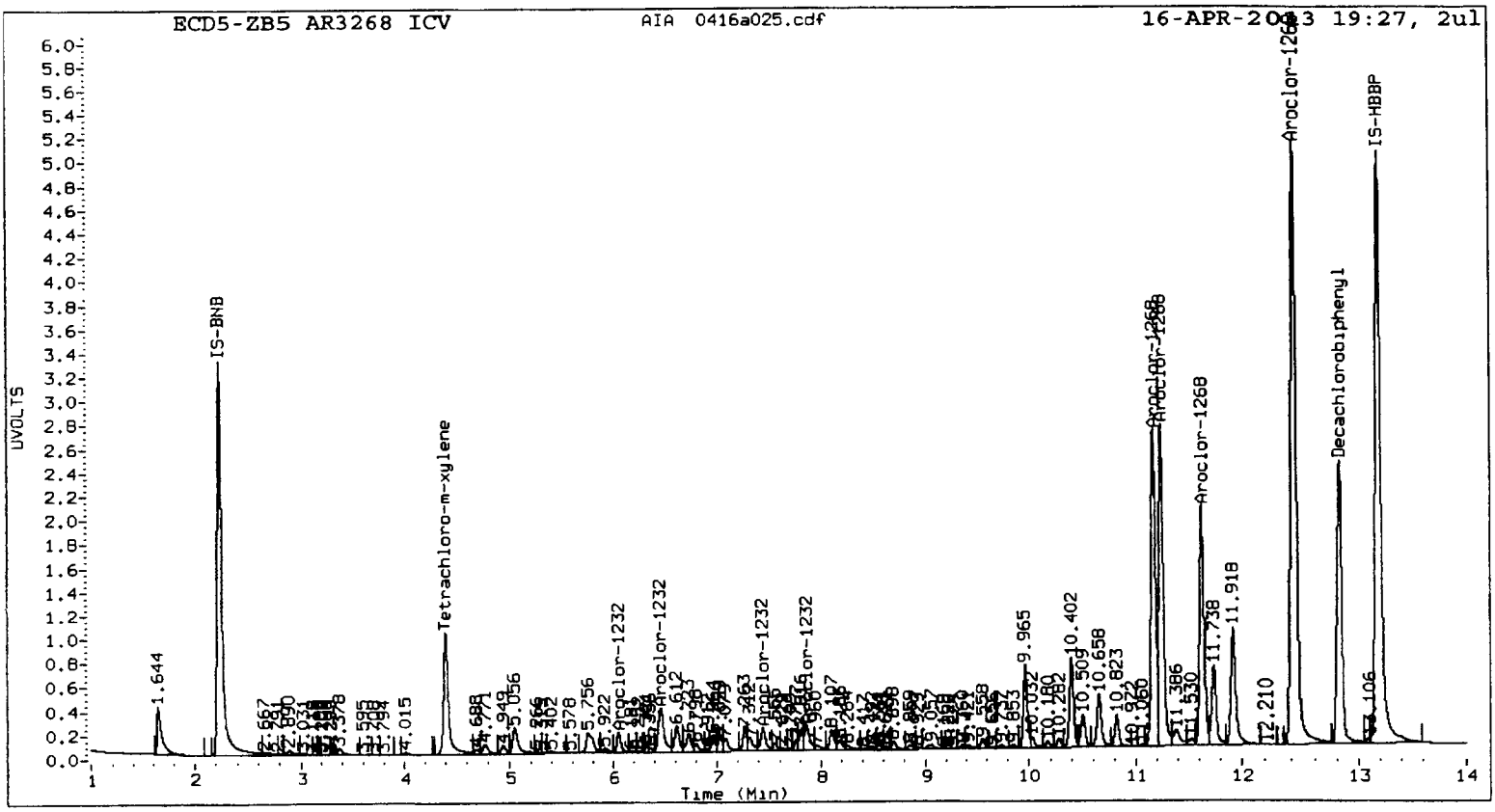
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.054	0.000	2451045	269.2	1	6.161	0.000	1011917	266.7
Aroclor-1232	2	6.462	0.000	7417711	264.3	2	6.796	-0.001	1958347	262.7
Aroclor-1232	3	7.438	0.000	3272559	230.7	3	7.006	-0.001	817922	262.5
Aroclor-1232	4	7.870	-0.001	3644887	219.1	4	8.236	-0.001	583770	228.7
Total Col1Ave (4 peaks):					245.8	Total Col2Ave (4 peaks):				255.2 RPD = 4
Corrected Ave (3 peaks):					238.0	Corrected Ave (3 peaks):				251.3 RPD = 5
Aroclor-1268	1	11.173	0.000	37443403	258.7	1	11.505	-0.001	7572443	257.5
Aroclor-1268	2	11.244	0.000	40652015	281.2	2	11.572	-0.001	8159229	281.1
Aroclor-1268	3	11.630	0.000	29361332	235.0	3	11.967	-0.001	5554407	231.0
Aroclor-1268	4	12.421	0.000	80417086	220.6	4	12.790	-0.002	15556403	219.2
Total Col1Ave (4 peaks):					248.9	Total Col2Ave (4 peaks):				247.2 RPD = 1
Corrected Ave (3 peaks):					238.1	Corrected Ave (3 peaks):				235.9 RPD = 1

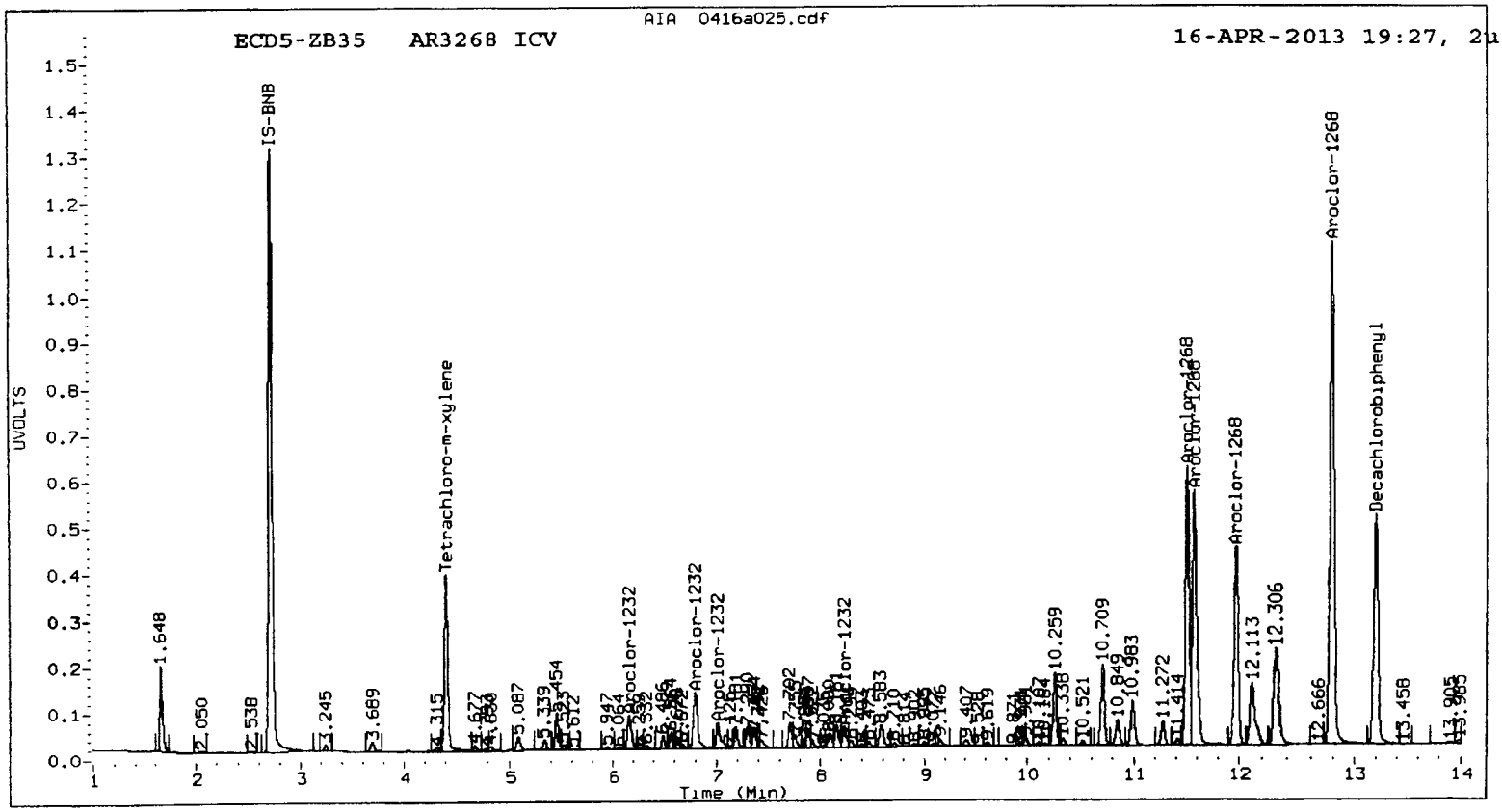
Total PCB Area Col1 (4.501 - 12.727) = 322597098 Col1 Total PCB = 0.5 ppm*

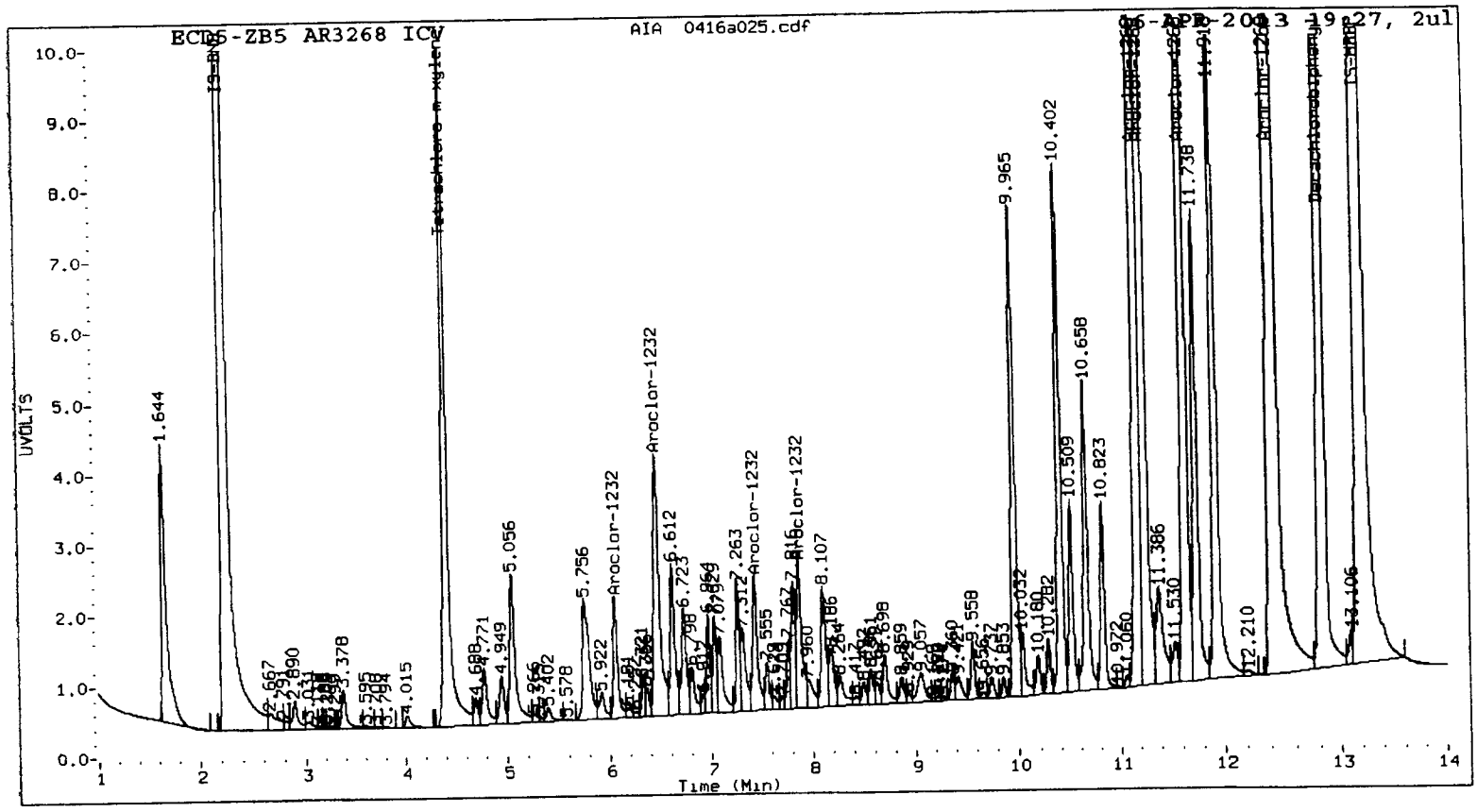
Total PCB Area Col2 (4.503 - 13.104) = 64195066 Col2 Total PCB = 0.5 ppm*

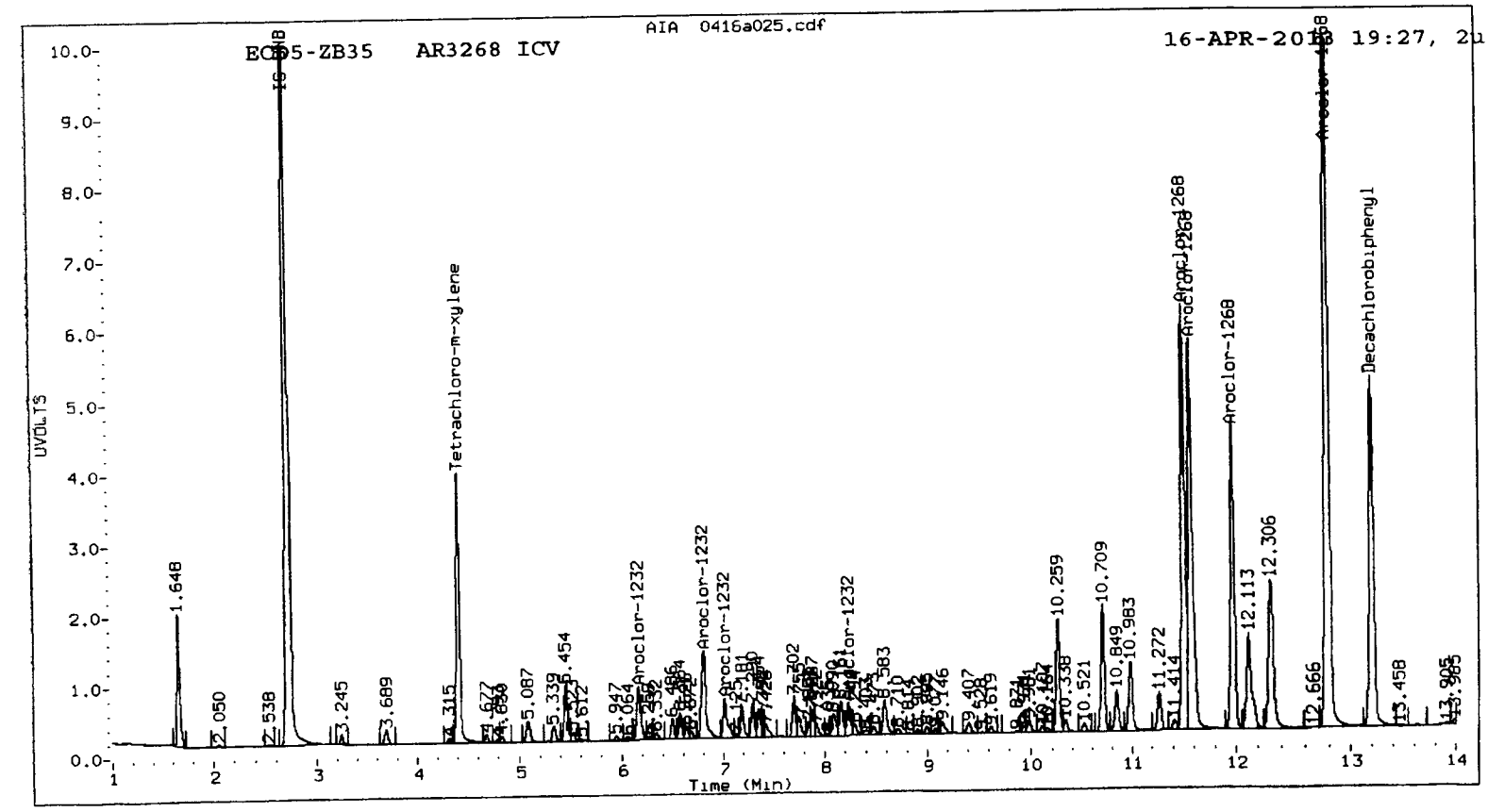
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR3268 ICV
AIA 0416a025.cdf
16-APR-2013 19:27, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
1.644
11.918
12.210


AIA 0416a025.cdf
ECD5-ZB35 AR3268 ICV
16-APR-2013 19:27, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
1.648
12.113
12.306


ECD5-ZB5 AR3268 ICV
AIA 0416a025.cdf
16-APR-2013 19:27, 2ul
UVOLTS
Time (Min)
1.644
Tetrachloro-m-xylene
5.056
5.756
Aroclor-1232
6.612
6.723
7.263
8.107
9.965
10.402
10.509
10.658
10.823
11.386
11.530
11.738
12.210
13.106


ECD5-ZB35 AR3268 ICV
AIA 0416a025.cdf
16-APR-2013 19:27, 2u
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
5.087
5.339
5.454
Aroclor-1232
Aroclor-1232
Aroclor-1232
10.259
10.709
10.849
10.983
11.272
11.414
Aroclor-1268
Aroclor-1268
12.113
12.306
Decachlorobiphenyl
12.666
13.458

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B ~~FID-4A~~ FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 05/07/13 Internal Standard ID 2006-1 Expiration 07/26/13

Endrin/DDT Breakdown <15%? ~~YES~~ / NO / NA
ICal Meets %RSD & r^2 Criteria ~~YES~~ / NO
Manual Integrations for ICal? YES / ~~NO~~
Minimum Response S/N Met ~~YES~~ / NO

ICV Exceeding ±20%? ~~YES~~ / NO
ICV Exceeding ±30%? ~~YES~~ / NO
Linear Fits Used? YES / ~~NO~~
Quadratic Fits Used? YES / ~~NO~~
Calibration Points Dropped? YES / ~~NO~~

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
IB	1982-2	05/16/13	AR1660	~~B207~~ B182	04/30/14
AR1660	B161	04/30/14	AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR3268	B194	
AR3268	B175				
BD	2067-1	05/16/13			
DDT-	1991-2	01/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JA **Date:** 05/07/13

Reviewer: VD **Date:** 5-8-13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd5.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1619	0507a003.d	IB		1	NO MANUAL INTEGRATION
1639	0507a004.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1659	0507a005.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1719	0507a006.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1739	0507a007.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1759	0507a008.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1819	0507a009.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1839	0507a010.d	AR1242		1	NO MANUAL INTEGRATION
1859	0507a011.d	AR1248		1	NO MANUAL INTEGRATION
1920	0507a012.d	AR1254		1	NO MANUAL INTEGRATION
1940	0507a013.d	AR2162		1	NO MANUAL INTEGRATION
2000	0507a014.d	AR3268		1	NO MANUAL INTEGRATION
2021	0507a015.d	AR1242	ICV	1	NO MANUAL INTEGRATION
2041	0507a016.d	AR1248	ICV	1	NO MANUAL INTEGRATION
2101	0507a017.d	AR1254	ICV	1	NO MANUAL INTEGRATION
2121	0507a018.d	AR1660	ICV	1	NO MANUAL INTEGRATION
2142	0507a019.d	AR2162	ICV	1	NO MANUAL INTEGRATION
2202	0507a020.d	AR3268	ICV	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	2.727	2.727	2.726	2.727	2.725	2.725	2.724	2.624-2.824	2.726	0.001
$ 2 Tetrachloro-m-xylene	4.414	4.413	4.413	4.414	4.413	4.412	4.412	4.312-4.512	4.413	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.694	3.594-3.794	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.165	6.066-6.266	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.167	6.067-6.267	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.800	6.700-6.900	+++++	+++++
7 Aroclor-1016	6.167	6.167	6.167	6.167	6.167	6.166	6.166	6.066-6.266	6.167	0.000
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.260	10.160-10.360	+++++	+++++
9 Aroclor-1260	10.261	10.262	10.262	10.260	10.262	10.260	10.260	10.160-10.360	10.261	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.507	11.407-11.607	+++++	+++++
$ 13 Decachlorobiphenyl	13.206	13.206	13.205	13.203	13.204	13.204	13.205	13.105-13.305	13.205	0.001
* 12 IS-HBBP	14.074	14.073	14.073	14.072	14.073	14.073	14.072	13.972-14.172	14.073	0.001
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.560	8.510-8.610	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.196-9.296	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.949	8.849-9.049	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.713	9.613-9.813	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.148	10.048-10.248	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.250	2.250	2.250	2.249	2.249	2.249	2.249	2.149-2.349	2.249	0.001
$ 1 Tetrachloro-m-xylene	4.412	4.411	4.411	4.410	4.411	4.411	4.411	4.311-4.511	4.411	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.064	4.964-5.164	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.059	5.959-6.159	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.060	5.960-6.160	+++++	+++++
7 Aroclor-1016	6.062	6.062	6.062	6.059	6.061	6.060	6.060	5.960-6.160	6.061	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.467	6.367-6.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.192	8.092-8.292	+++++	+++++
9 Aroclor-1260	9.968	9.968	9.968	9.967	9.967	9.967	9.967	9.867-10.067	9.967	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.283	10.183-10.383	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.175	11.075-11.275	+++++	+++++
$ 13 Decachlorobiphenyl	12.829	12.828	12.828	12.827	12.828	12.827	12.828	12.728-12.928	12.828	0.001
* 12 IS-HBBP	13.191	13.191	13.191	13.189	13.191	13.190	13.191	13.091-13.291	13.190	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.156	8.106-8.206	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.707	8.657-8.757	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.210	9.160-9.260	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.589	8.489-8.689	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.163	9.063-9.263	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.675	9.575-9.775	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-1.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-1.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-1.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-1.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-1.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-1.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-1.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-1.b/0507a021.d/0507a021.cdf

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03259	+++++	0.03259	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00997	+++++	0.00997	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	+++++	0.01408	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02881	+++++	0.02881	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08837	+++++	0.08837	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03943	+++++	0.03943	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04869	+++++	0.04869	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01482	+++++	0.01482	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04536	+++++	0.04536	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02357	+++++	0.02357	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02708	+++++	0.02708	0.000
7 Aroclor-1016(1)	0.04186	0.03922	0.03800	0.03458	0.03232	0.03038	+++++	+++++	0.03606	12.136
(2)	0.12934	0.12017	0.11740	0.10631	0.09981	0.09343	+++++	+++++	0.11108	12.195
(3)	0.05884	0.05458	0.05260	0.04727	0.04418	0.04111	+++++	+++++	0.04976	13.510
(4)	0.04321	0.04072	0.03932	0.03524	0.03340	0.03123	+++++	+++++	0.03718	12.437

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05630	+++++	0.05630	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06332	+++++	0.06332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.08051	+++++	0.08051	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05614	+++++	0.05614	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07461	+++++	0.07461	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04925	+++++	0.04925	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10267	+++++	0.10267	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10574	+++++	0.10574	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.03999	+++++	0.03999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
9 Aroclor-1260(1)	0.08092	0.07140	0.06872	0.06239	0.05721	0.05245	+++++	+++++	0.06551	15.742
(2)	0.07490	0.06756	0.06590	0.06047	0.05602	+++++	+++++	+++++	0.06497	11.060
(3)	0.17376	0.16180	0.15830	0.14675	0.13829	+++++	+++++	+++++	0.15578	8.810
(4)	0.08420	0.07867	0.07662	0.07158	0.06832	+++++	+++++	+++++	0.07588	8.154
(5)	0.04297	0.04212	0.04155	0.03881	0.03753	+++++	+++++	+++++	0.04060	5.708
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07490	+++++	0.07490	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.17600	+++++	0.17600	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05574	+++++	0.05574	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07824	+++++	0.07824	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06005	+++++					0.06005	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16835	+++++					0.16835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18617	+++++					0.18617	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13825	+++++					0.13825	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.38949	+++++					0.38949	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1111					1111	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1189					1189	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1453					1453	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1128					1128	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1294					1294	0.000
$ 1 Tetrachloro-m-xylene	1.27779	1.27691	1.30214	1.24444	1.19768	1.14335		
	+++++	+++++					1.24039	4.811
$ 13 Decachlorobiphenyl	1.45250	1.28741	1.22687	1.12094	1.06410	1.01848		
	+++++	+++++					1.19505	13.474

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-2.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-2.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-2.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-2.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-2.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-2.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-2.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-2.b/0507a021.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00820	+++++	0.00820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01373	+++++	0.01373	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.00748	+++++	0.00748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02352	+++++	0.02352	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02053	+++++	0.02053	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04099	+++++	0.04099	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01709	+++++	0.01709	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01434	+++++	0.01434	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03645	+++++	0.03645	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08006	+++++	0.08006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03345	+++++	0.03345	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02802	+++++	0.02802	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05013	+++++	0.05013	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04157	+++++	0.04157	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04304	+++++	0.04304	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05593	+++++	0.05593	0.000
7 Aroclor-1016(1)	0.05136	0.05104	0.04862	0.04453	0.04104	0.03730	+++++	+++++	0.04565	12.493
(2)	0.11167	0.10627	0.10431	0.09724	0.09163	0.08432	+++++	+++++	0.09924	10.221
(3)	0.02778	0.02695	0.02737	0.02574	0.02469	0.02316	+++++	+++++	0.02595	6.857
(4)	0.02758	0.02578	0.02560	0.02332	0.02231	0.02042	+++++	+++++	0.02417	10.869
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03879	+++++	0.03879	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04792	+++++	0.04792	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03671	+++++	0.03671	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07862	+++++	0.07862	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04427	+++++					0.04427	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11065	+++++					0.11065	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10118	+++++					0.10118	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18978	+++++					0.18978	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12335	+++++					0.12335	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05956	+++++					0.05956	0.000
9 Aroclor-1260(1)	0.08456	0.07842	0.07600	0.07099	0.06556	0.05983		
	+++++	+++++					0.07256	12.383
(2)	0.09657	0.09048	0.08853	0.08437	0.07825	0.07177		
	+++++	+++++					0.08500	10.489
(3)	0.16866	0.16707	0.16406	0.15713	0.14786	0.13685		
	+++++	+++++					0.15694	7.943

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.04850	0.04574	0.04367	0.04155	0.03920	0.03660		
	+++++	+++++					0.04254	10.221
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19311	+++++					0.19311	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18203	+++++					0.18203	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14408	+++++					0.14408	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.37318	+++++					0.37318	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	757					757	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	727					727	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1214					1214	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	916					916	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
$ 2 Tetrachloro-m-xylene	1.13790	1.10316	1.09698	1.08696	1.05825	1.00770		
	+++++	+++++					1.08183	4.115
$ 13 Decachlorobiphenyl	1.43878	1.24550	1.16217	1.06757	1.02392	0.96937		
	+++++	+++++					1.15122	14.943

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a003.d
Data file 2: 20130507.b/ical-2.b/0507a003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 07-MAY-2013 16:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	32061788	4.413	0.002	8759043	42.4	42.7	0.7	Tetrachloro-m-xylen
12.829	0.000	27295255	13.206	0.001	4923666	35.8	35.7	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.9	106.6
Decachlorobiphenyl	89.6	89.2

JE 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48807947	-0.3
Hexabromobiphenyl	50004151	51001521	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15184482	2.3
Hexabromobiphenyl	9345340	9588268	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

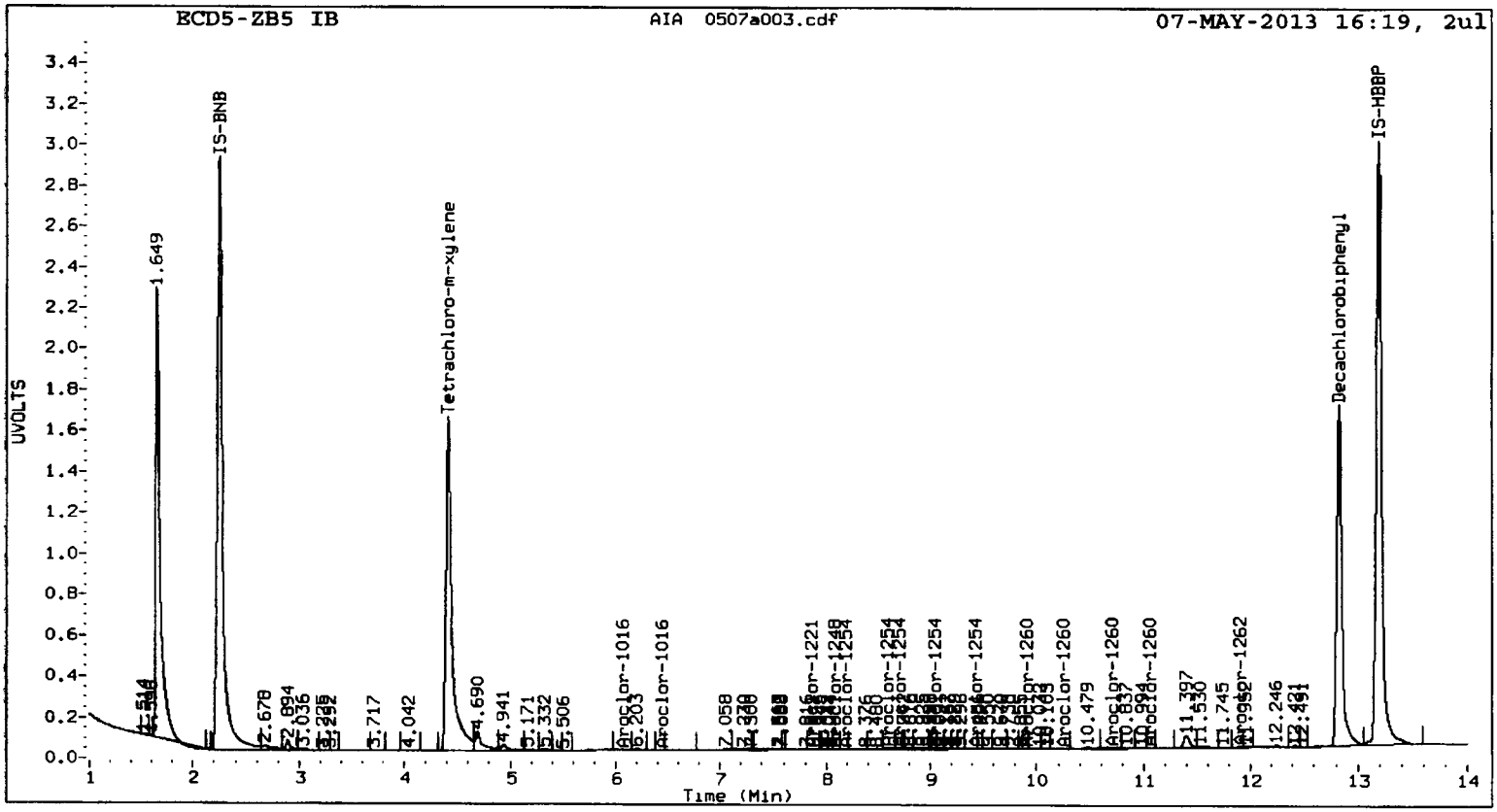
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.073	0.012	22097	1.0	1	---			0.0
Aroclor-1016	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.444	-0.024	12954	2.1	2	5.113	0.019	112267	43.1
Aroclor-1221	3	7.865	-0.013	88509	10.3	3	---			0.0
Aroclor-1221	NS	---			----	4	5.468	0.008	21627	4.8
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	6.073	0.012	22097	2.4	1	---			0.0
Aroclor-1232	2	6.444	-0.025	12954	0.5	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	7.865	-0.009	88509	5.4	4	---			0.0
		Total Col1Ave (3 peaks):		2.8			Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	6.073	0.013	22097	1.3	1	---			0.0
Aroclor-1242	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	7.865	-0.007	88509	3.0	4	---			0.0
		Total Col1Ave (3 peaks):		1.5			Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	6.444	-0.022	12954	0.4	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	7.865	-0.009	88509	1.8	3	---			0.0
Aroclor-1248	4	8.084	-0.027	42411	1.2	4	---			0.0
		Total Col1Ave (3 peaks):		1.1			Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	8.193	0.001	54179	1.2	1	---			0.0
Aroclor-1254	2	8.591	0.027	84538	2.8	2	---			0.0
Aroclor-1254	3	8.702	0.002	41716	0.7	3	---			0.0
Aroclor-1254	4	9.044	-0.009	43297	0.7	4	---			0.0
Aroclor-1254	5	9.430	0.068	73478	3.0	5	---			0.0
		Total Col1Ave (5 peaks):		1.7			Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	9.912	-0.055	26920	0.6	1	---			0.0
Aroclor-1260	2	10.257	-0.027	72723	1.8	2	---			0.0
Aroclor-1260	3	10.709	0.050	104804	1.1	3	---			0.0
Aroclor-1260	4	11.055	-0.003	13255	0.3	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Total Col1Ave (4 peaks):		0.9			Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	10.257	-0.026	72723	1.5	1	---			0.0
Aroclor-1262	2	10.709	0.051	104804	0.9	2	---			0.0
Aroclor-1262	3	11.055	-0.005	13255	0.4	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	11.906	-0.012	20784	0.5	5	---			0.0
		Total Col1Ave (4 peaks):		0.8			Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (4.511 - 12.728) = 7126262 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 766675 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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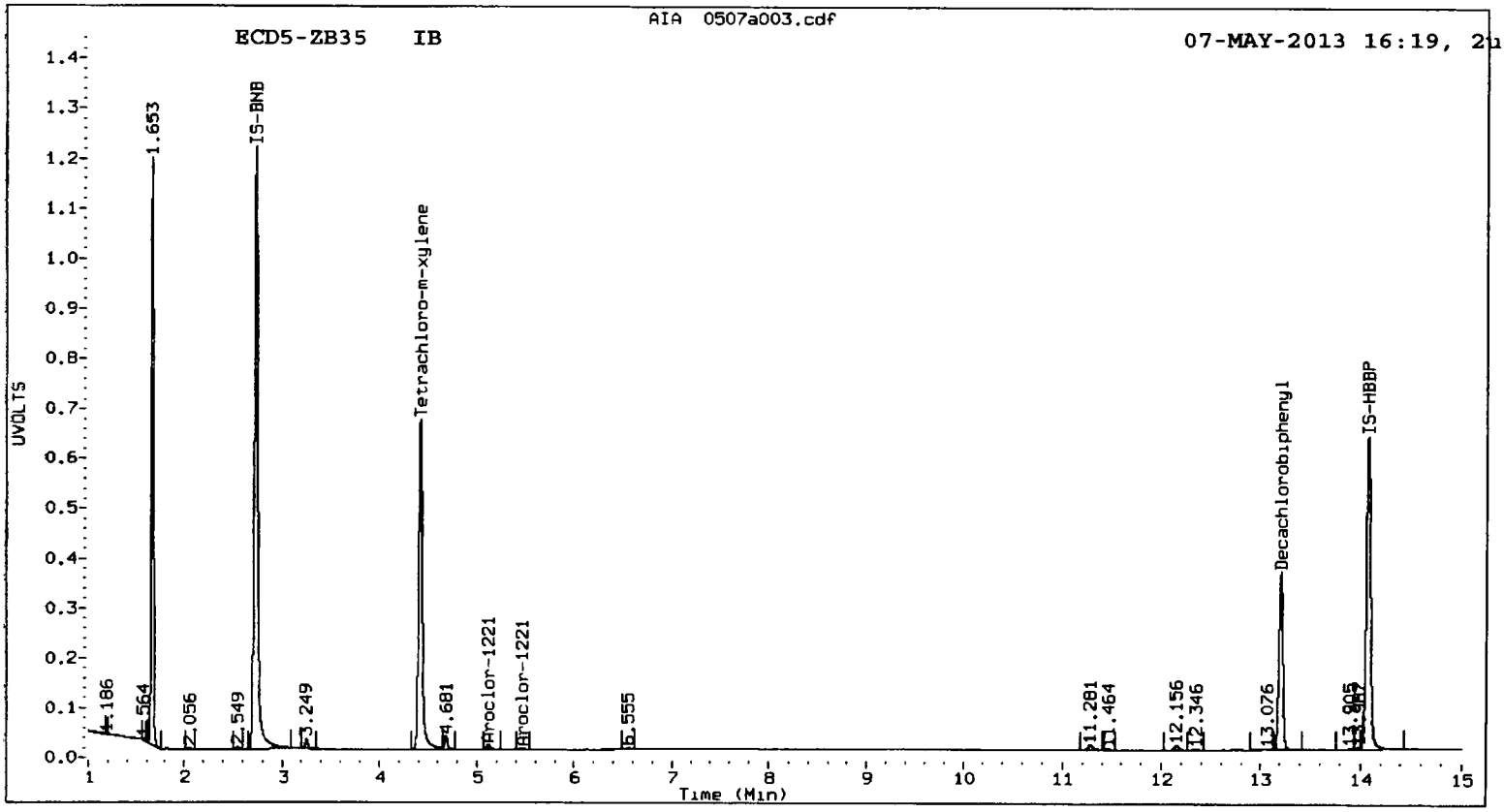
4.690
Aroclor-1016
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262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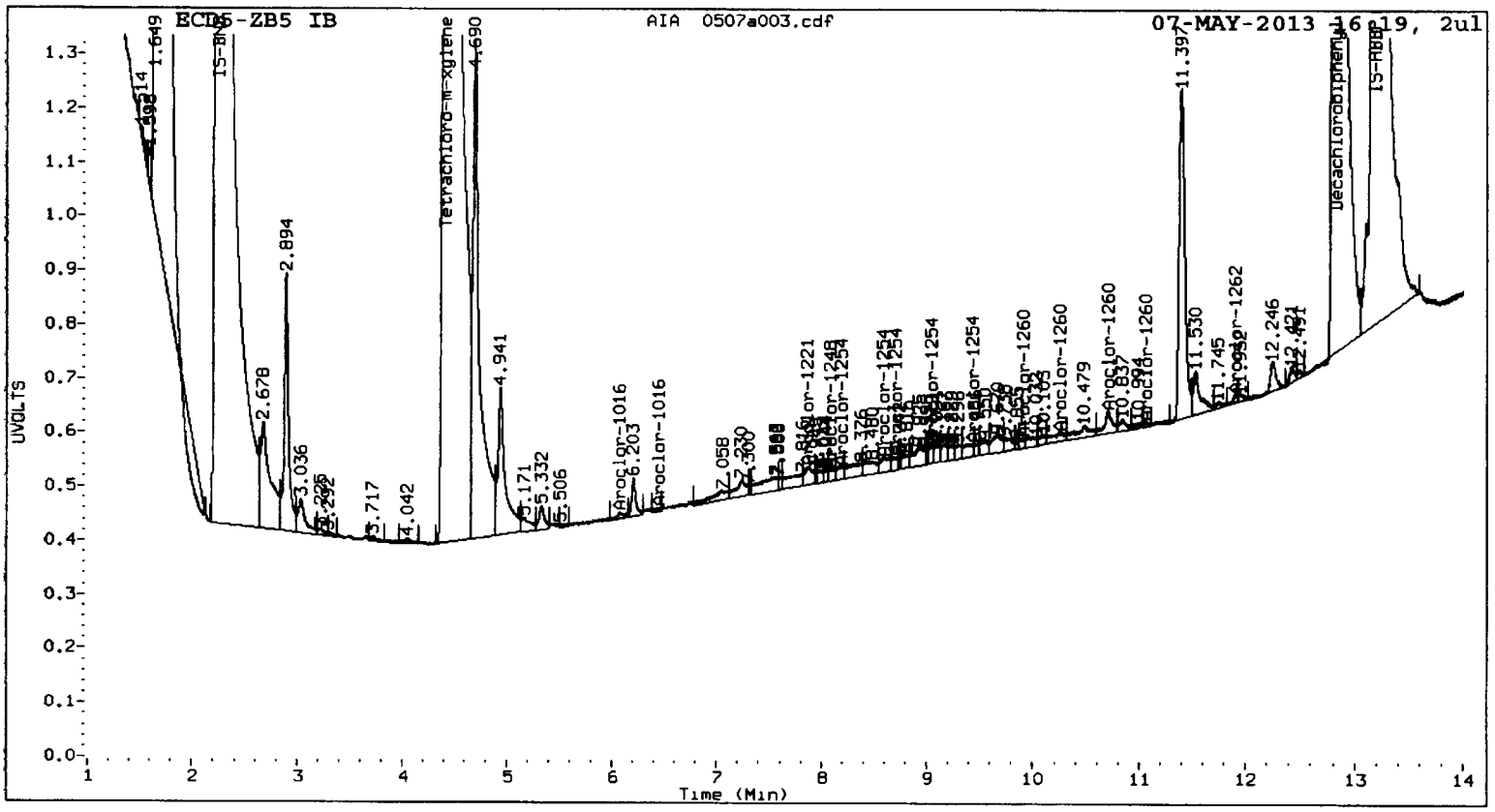
AIA 0507a003.cdf
07-MAY-2013 16:19, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.653
4.681
Aroclor-1221
Aroclor-1221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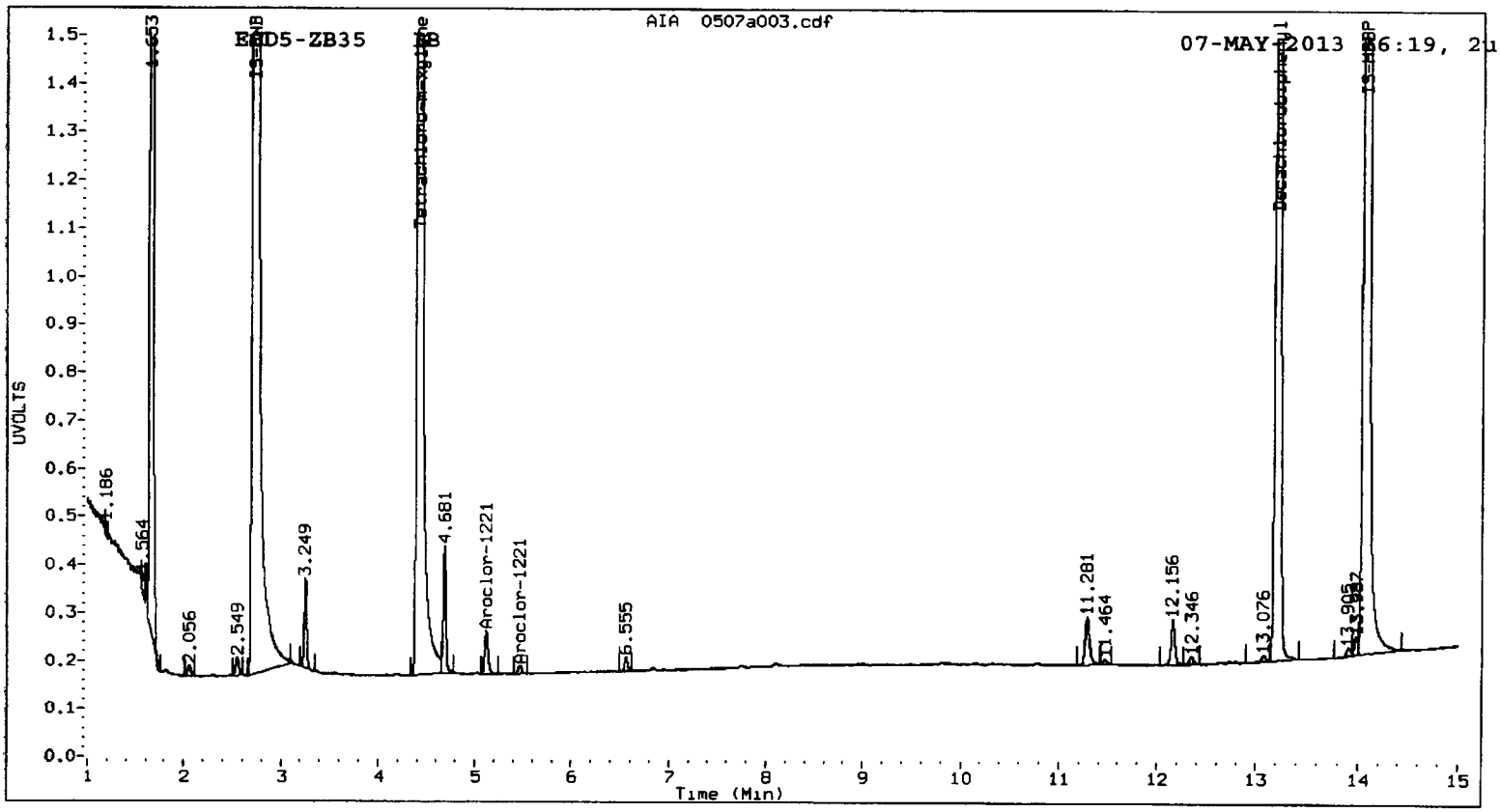
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1254
Aroclor-1260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AIA 0507a003.cdf
07-MAY-2013 16:19, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a004.d
Data file 2: 20130507.b/ical-2.b/0507a004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.412	0.002	15237305	4.414	0.002	4032555	20.1	20.1	0.1	Tetrachloro-m-xylen
12.829	0.000	14012855	13.206	0.000	2494212	18.8	18.5	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.2	50.2
Decachlorobiphenyl	46.9	46.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48977254	0.0
Hexabromobiphenyl	50004151	50004151	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14839715	0.0
Hexabromobiphenyl	9345340	9345340	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

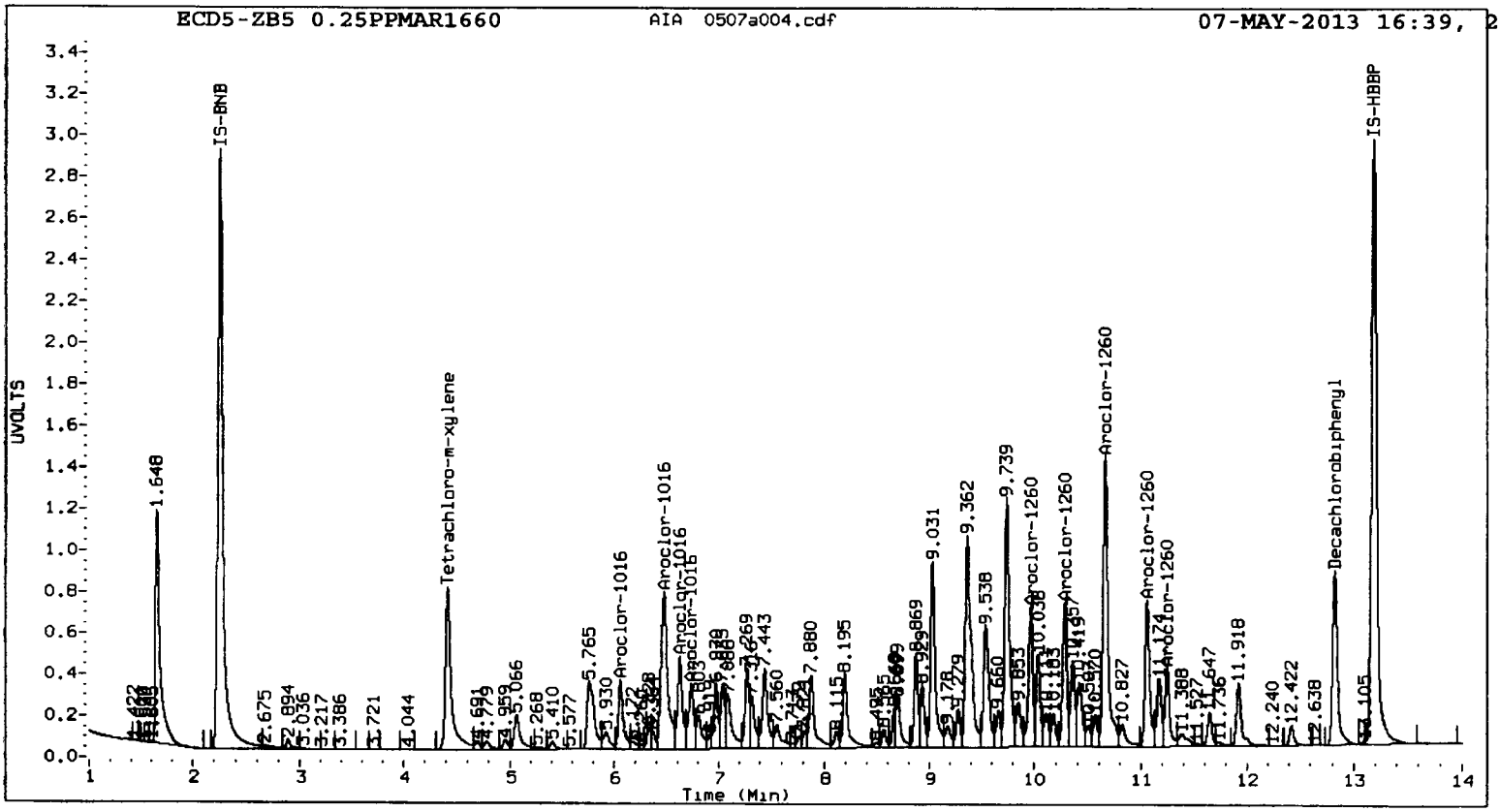
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	5292322	239.7	1	6.167	0.001	2064971	243.9
Aroclor-1016	2	6.470	0.002	16270732	239.3	2	6.803	0.002	4509319	245.0
Aroclor-1016	3	6.619	0.002	7234719	237.5	3	7.187	0.002	1193712	248.0
Aroclor-1016	4	6.731	0.003	5392918	236.9	4	7.360	0.002	1081244	241.2
Total Col1Ave (4 peaks):				238.3		Total Col2Ave (4 peaks):			244.5	RPD = 3
Corrected Ave (3 peaks):				237.9		Corrected Ave (3 peaks):			243.3	RPD = 2
Aroclor-1260	1	9.968	0.001	9749945	238.1	1	10.261	0.001	2073273	244.6
Aroclor-1260	2	10.284	0.001	9449895	232.7	2	10.711	0.001	2464050	248.2
Aroclor-1260	3	10.660	0.000	22932169	235.5	3	10.986	0.001	4588966	250.3
Aroclor-1260	4	11.059	0.001	11185744	235.8	4	11.507	0.002	1213324	244.1
Aroclor-1260	5	11.247	0.000	6064816	239.0	NS	---			----
Total Col1Ave (5 peaks):				236.2		Total Col2Ave (4 peaks):			246.8	RPD = 4
Corrected Ave (4 peaks):				235.5		Corrected Ave (3 peaks):			245.6	RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 301049488 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 65038970 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 16:39,
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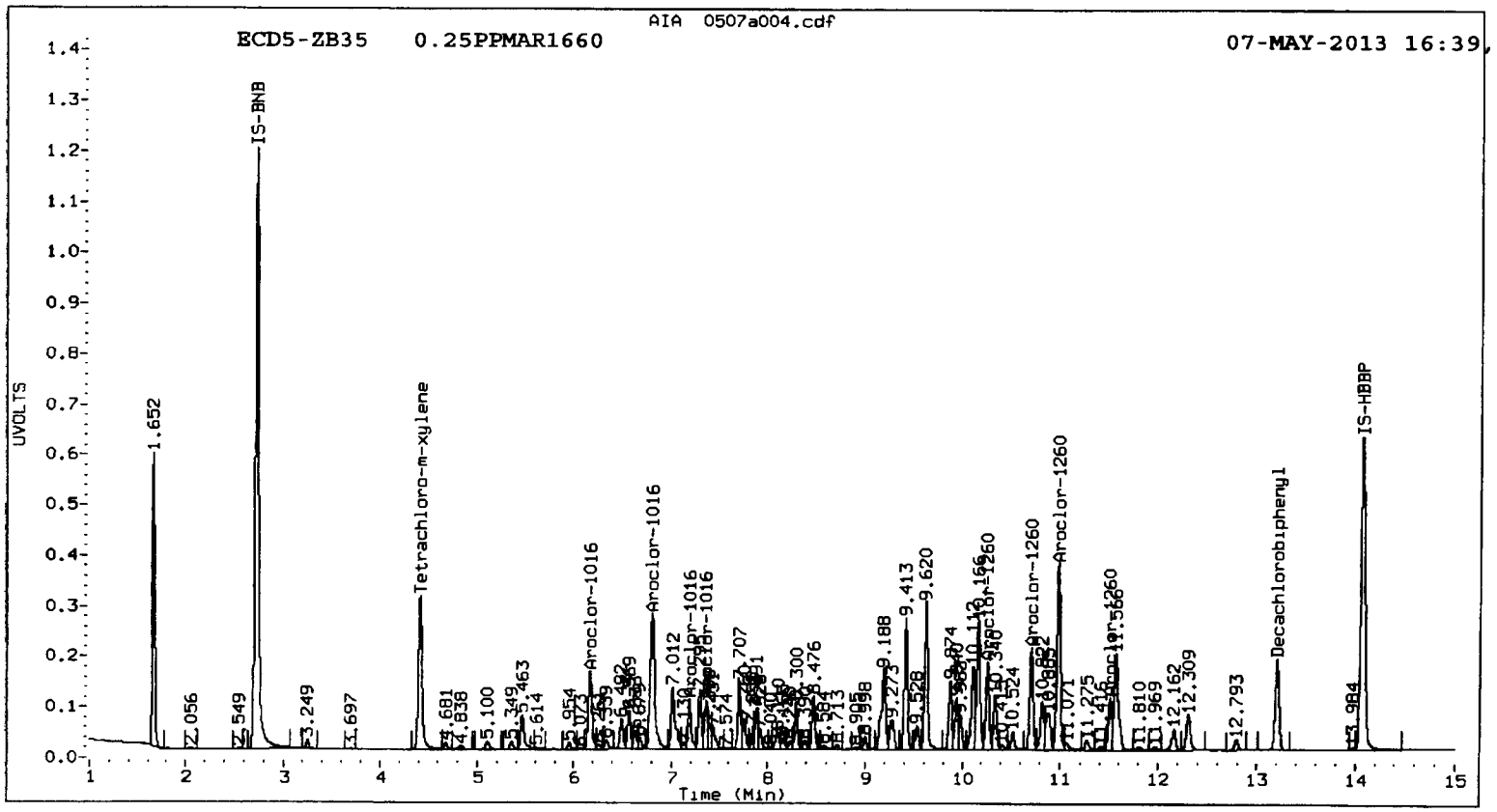
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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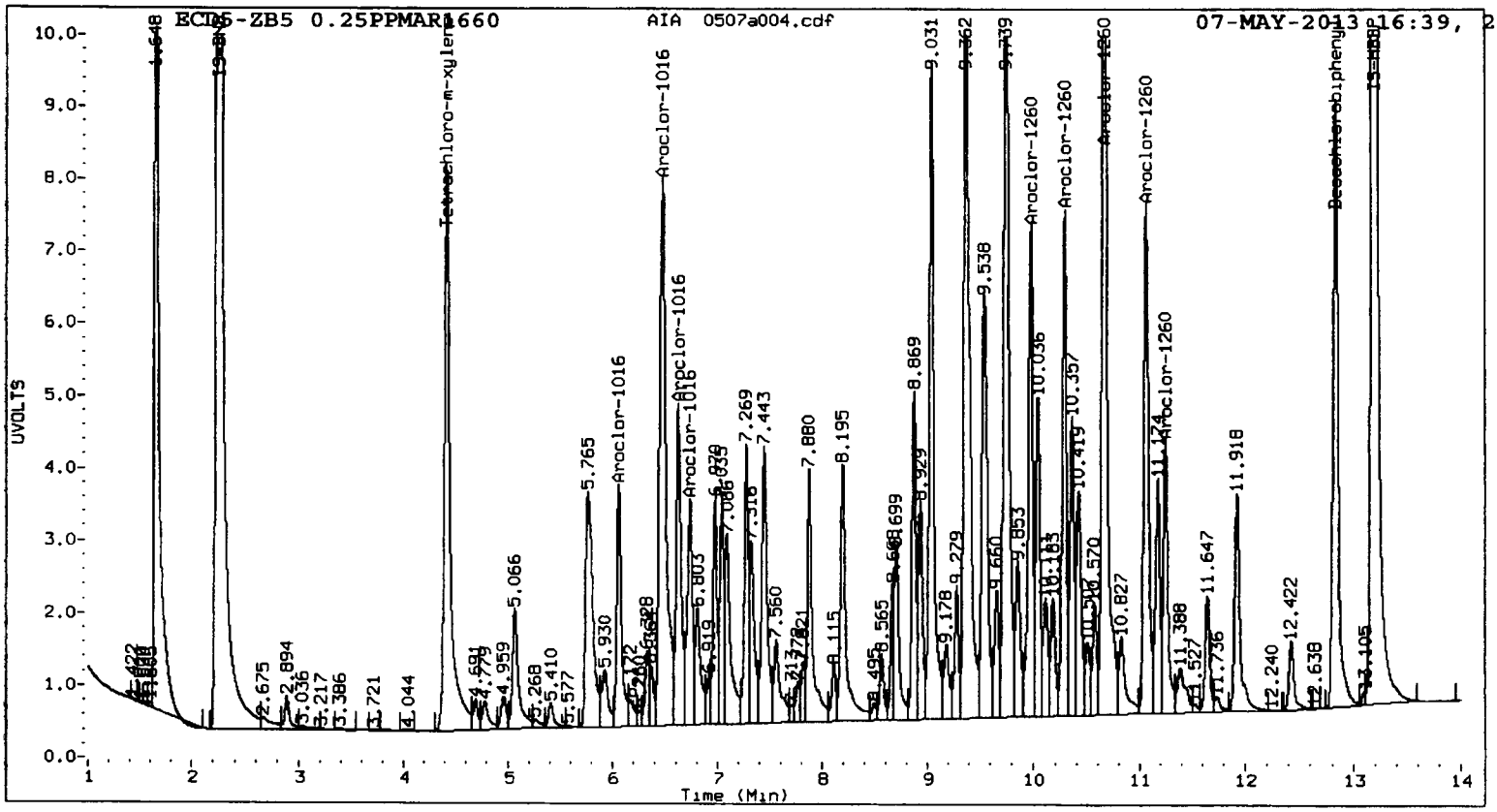
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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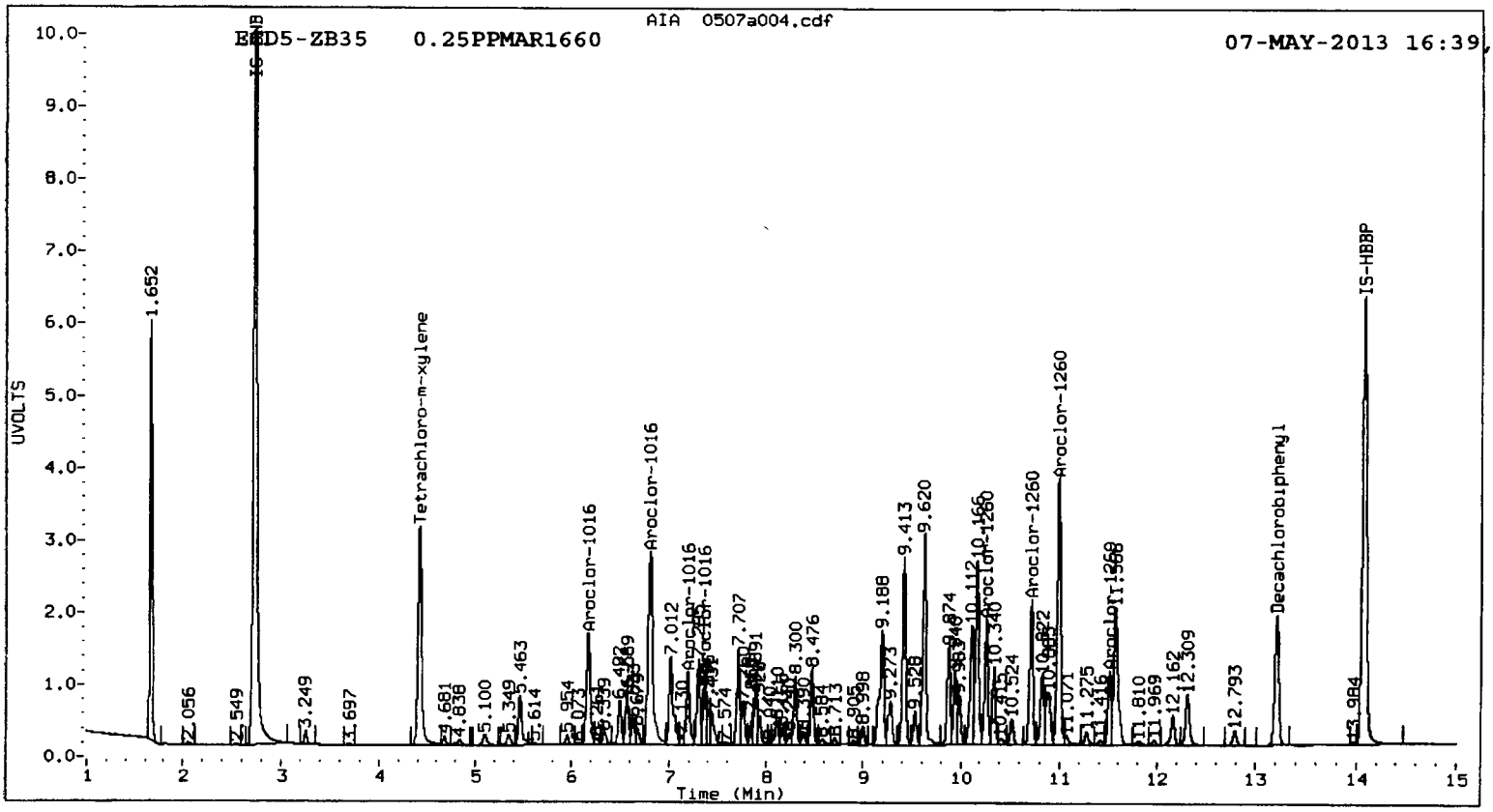
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a005.d
Data file 2: 20130507.b/ical-2.b/0507a005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.001	1277251	4.413	0.002	336292	1.6	1.7	2.1	Tetrachloro-m-xylen
12.828	0.000	1463829	13.206	0.001	269190	1.9	2.0	2.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.1	4.2
Decachlorobiphenyl	4.9	5.0

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49978735	2.0
Hexabromobiphenyl	50004151	50389911	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14776833	-0.4
Hexabromobiphenyl	9345340	9354827	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

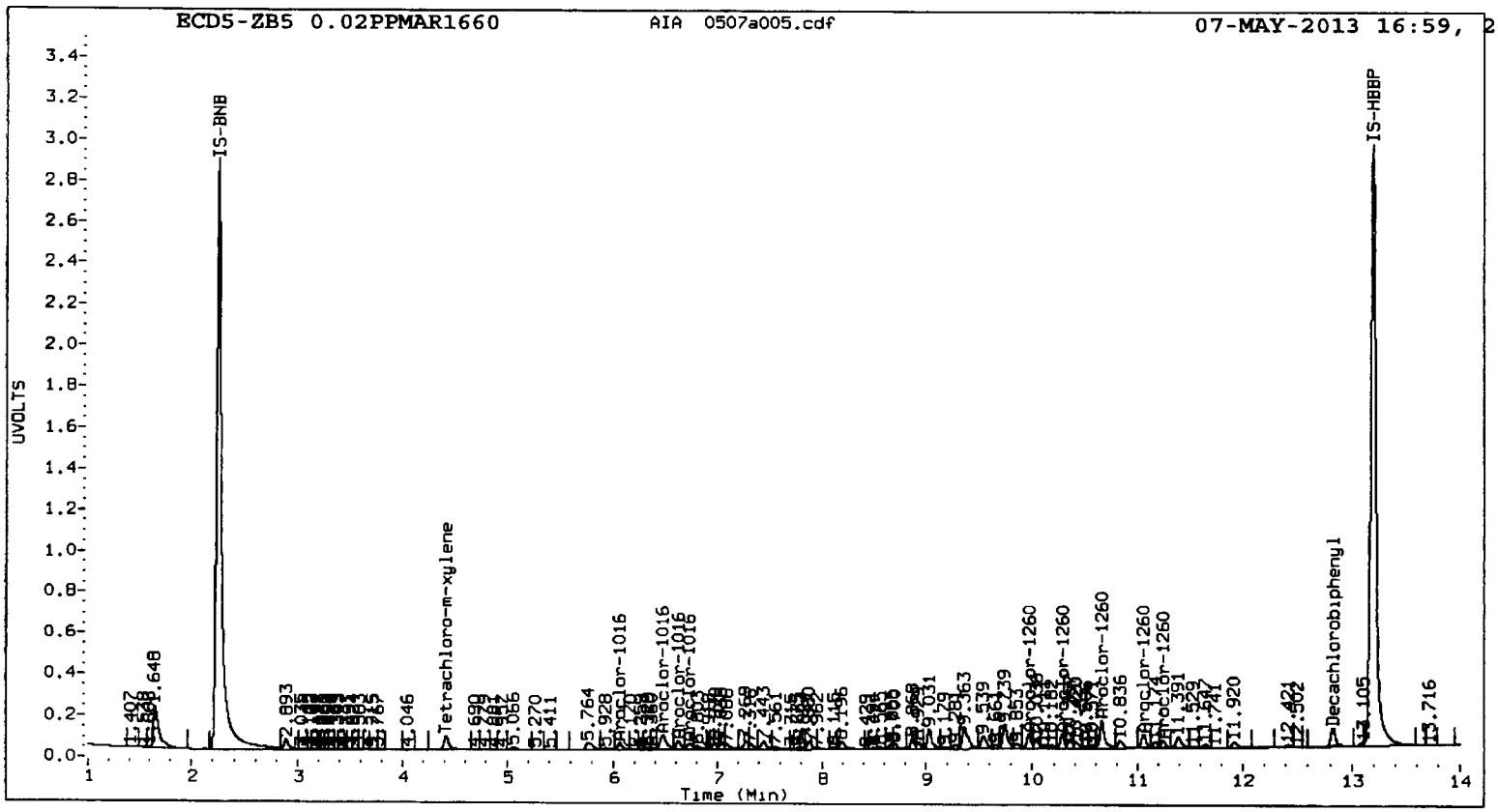
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.062	0.001	522973	23.2	1	6.167	0.001	189742	22.5
Aroclor-1016	2	6.471	0.003	1616098	23.3	2	6.805	0.004	412537	22.5
Aroclor-1016	3	6.620	0.004	735232	23.6	3	7.188	0.003	102632	21.4
Aroclor-1016	4	6.731	0.003	539914	23.2	4	7.360	0.002	101879	22.8
Total Col1Ave (4 peaks):					23.3	Total Col2Ave (4 peaks):				22.3 RPD = 5
Corrected Ave (3 peaks):					23.2	Corrected Ave (3 peaks):				22.1 RPD = 5
Aroclor-1260	1	9.968	0.001	1019399	24.7	1	10.262	0.002	197758	23.3
Aroclor-1260	2	10.284	0.001	943544	23.1	2	10.711	0.002	225842	22.7
Aroclor-1260	3	10.661	0.001	2188991	22.3	3	10.987	0.002	394454	21.5
Aroclor-1260	4	11.060	0.003	1060689	22.2	4	11.507	0.002	113428	22.8
Aroclor-1260	5	11.249	0.002	541330	21.2	NS	---			----
Total Col1Ave (5 peaks):					22.7	Total Col2Ave (4 peaks):				22.6 RPD = 0
Corrected Ave (4 peaks):					22.2	Corrected Ave (3 peaks):				22.3 RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 32498603 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 6010068 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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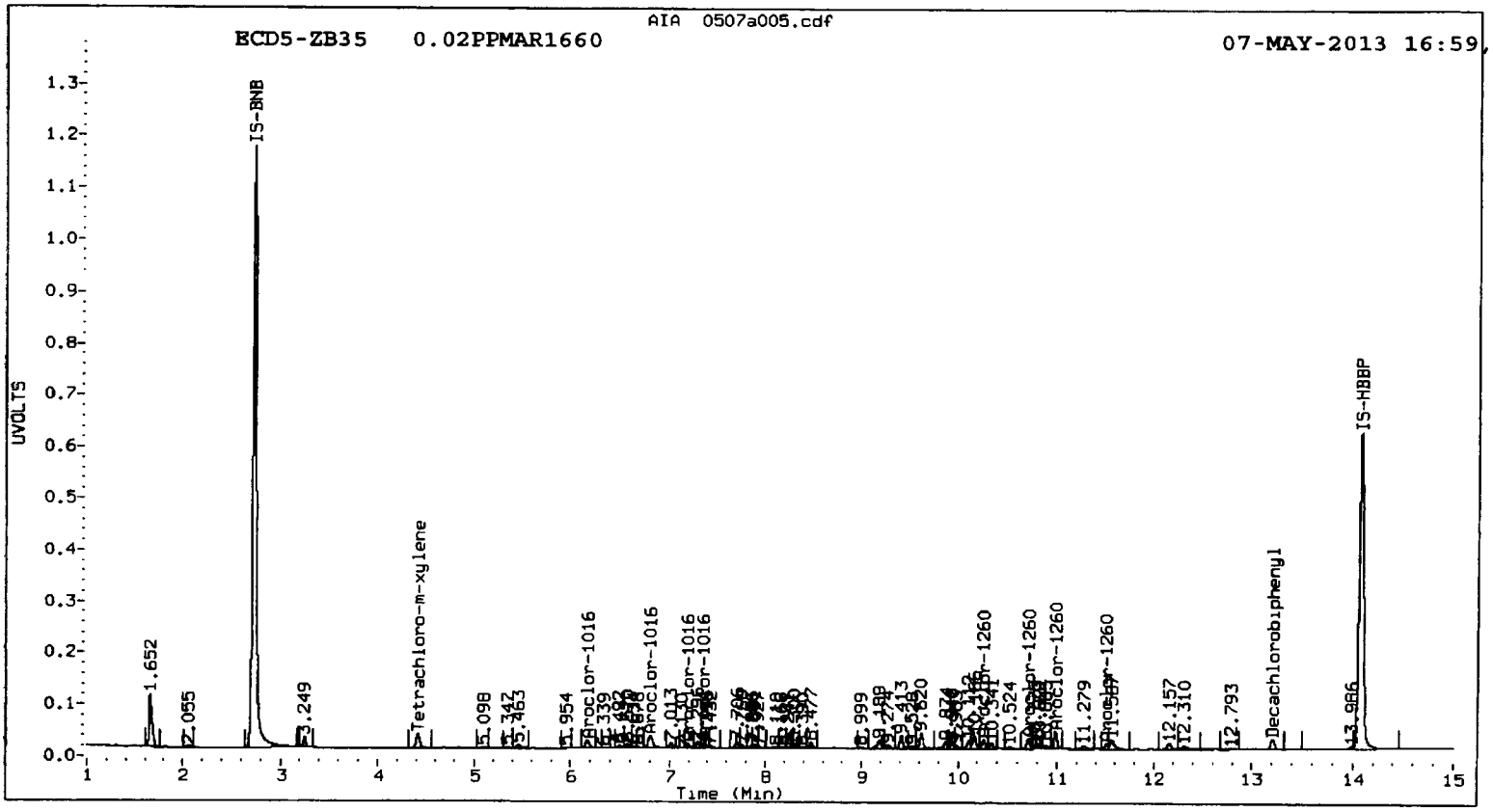
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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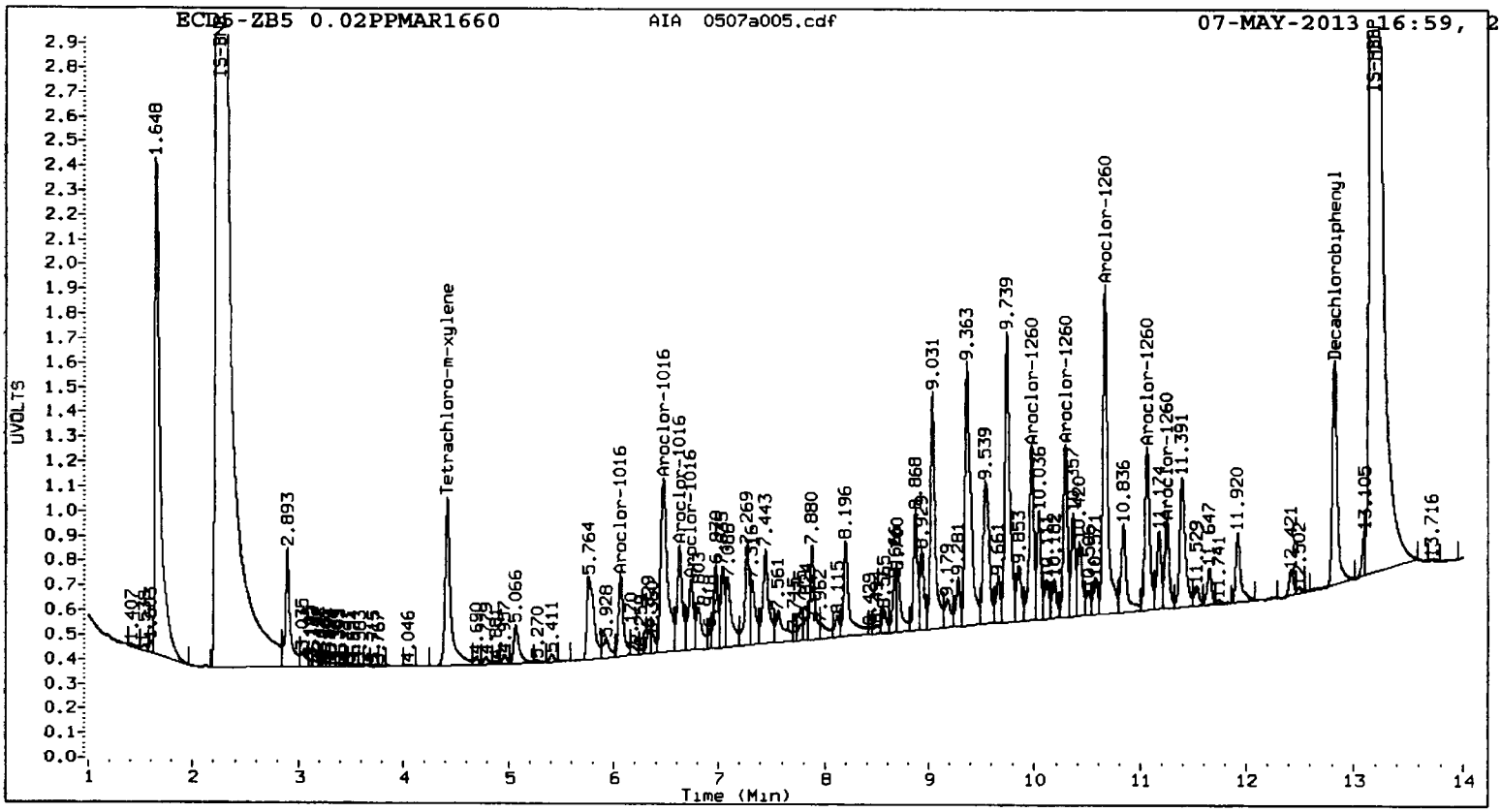
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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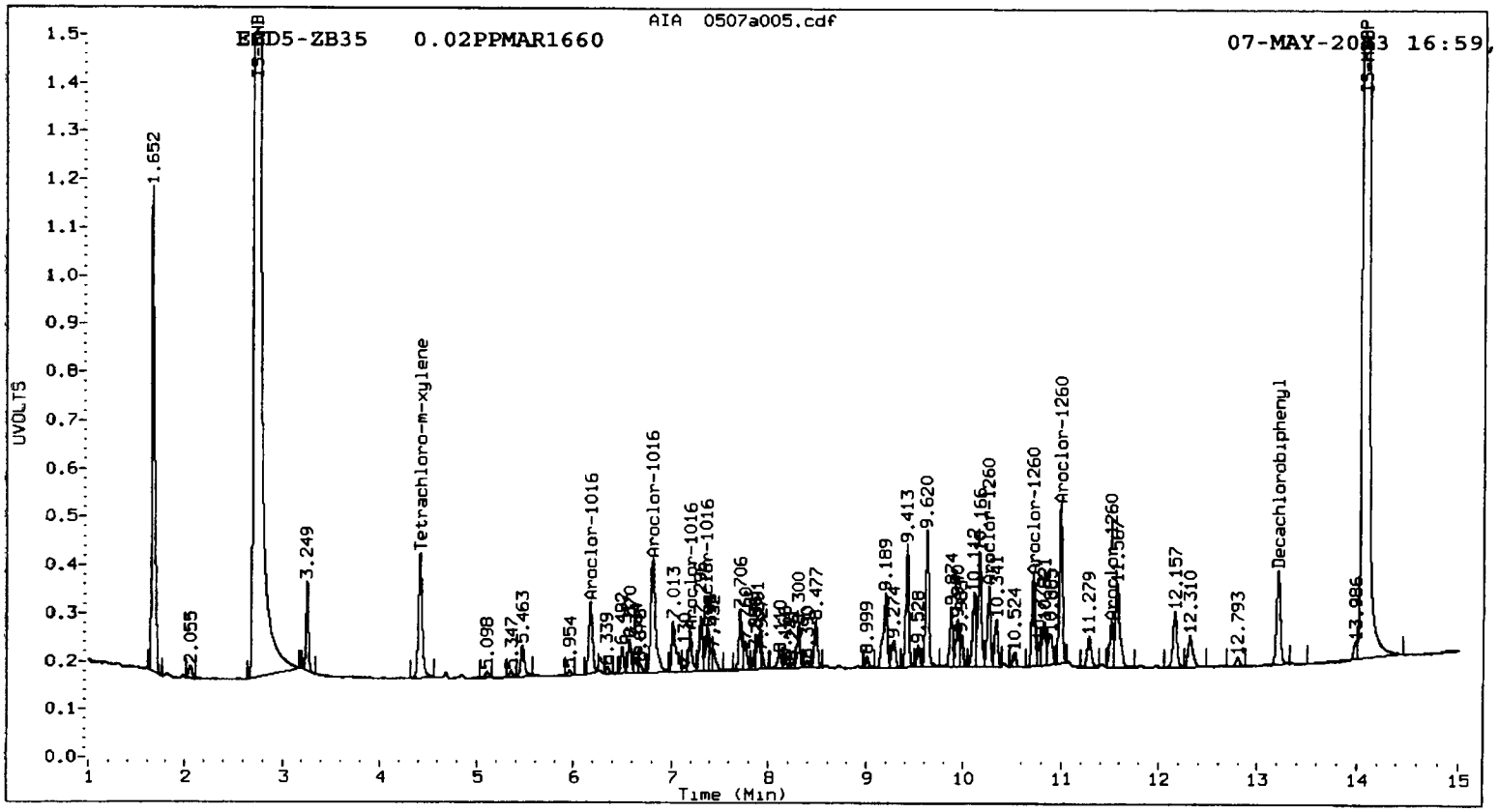
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
13.105
13.716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ECD5-ZB35 0.02PPMAR1660
07-MAY-2013 16:59,
UVOLTS
Time (Min)
1.652
3.249
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
13.986

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a006.d
Data file 2: 20130507.b/ical-2.b/0507a006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.001	3240306	4.413	0.001	828310	4.1	4.1	0.9	Tetrachloro-m-xylen
12.828	0.000	3422581	13.205	0.000	610804	4.3	4.3	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	10.3	10.2
Decachlorobiphenyl	10.8	10.8

JR 05/07/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50752482	3.6
Hexabromobiphenyl	50004151	53170067	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15017003	1.2
Hexabromobiphenyl	9345340	9808139	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

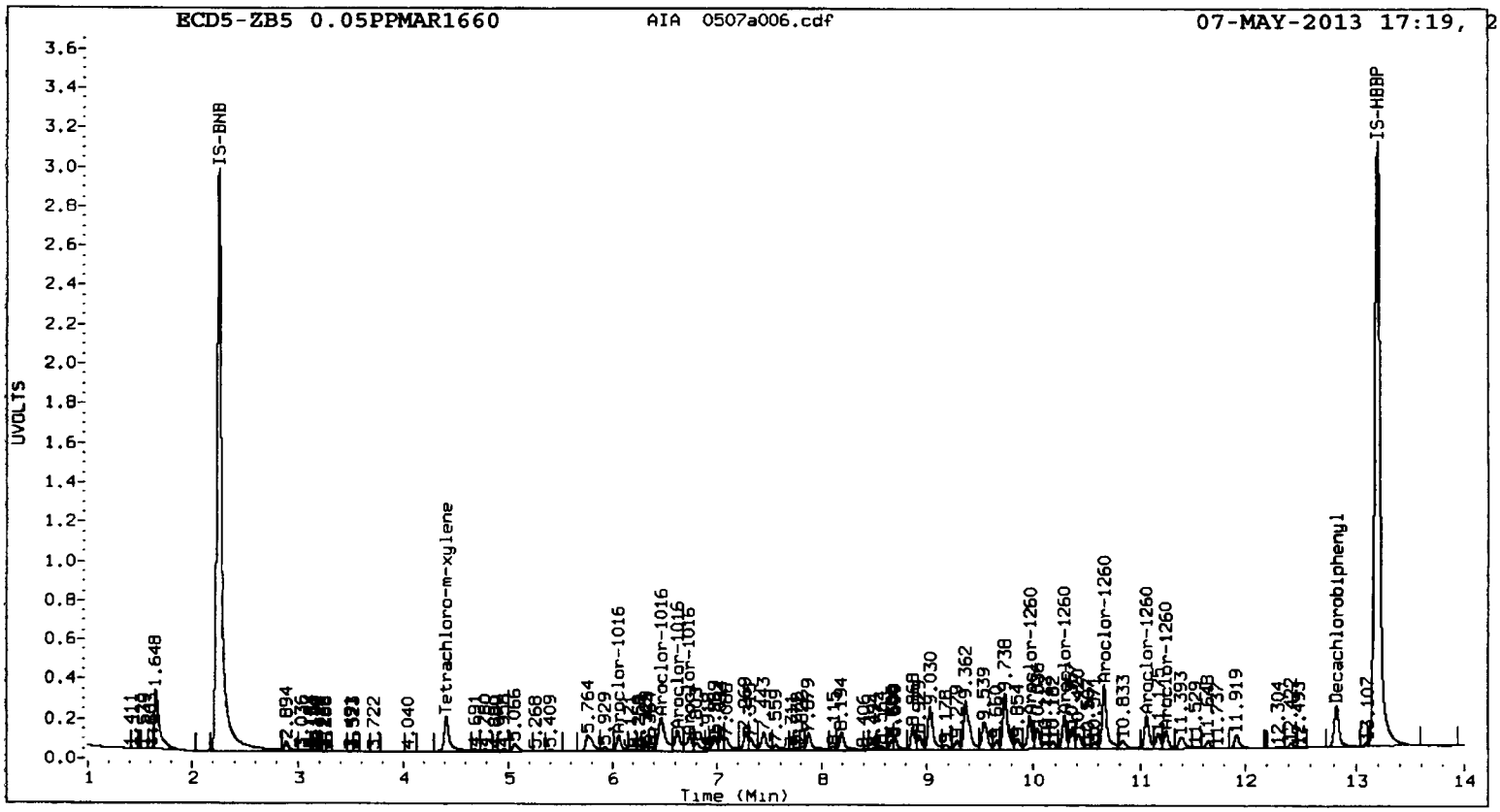
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	1244105	54.4	1	6.167	0.001	479006	55.9
Aroclor-1016	2	6.471	0.002	3811814	54.1	2	6.804	0.003	997455	53.5
Aroclor-1016	3	6.620	0.003	1731330	54.8	3	7.187	0.002	252974	51.9
Aroclor-1016	4	6.731	0.003	1291534	54.7	4	7.359	0.001	242005	53.3
	Total Col1Ave (4 peaks):				54.5	Total Col2Ave (4 peaks):				53.7 RPD = 2
	Corrected Ave (3 peaks):				54.4	Corrected Ave (3 peaks):				52.9 RPD = 3
Aroclor-1260	1	9.968	0.001	2372653	54.5	1	10.262	0.002	480726	54.0
Aroclor-1260	2	10.284	0.001	2245127	52.0	2	10.711	0.002	554671	53.2
Aroclor-1260	3	10.661	0.001	5376976	51.9	3	10.987	0.003	1024158	53.2
Aroclor-1260	4	11.059	0.002	2614350	51.8	4	11.507	0.002	280398	53.8
Aroclor-1260	5	11.248	0.001	1399830	51.9	NS	---			----
	Total Col1Ave (5 peaks):				52.4	Total Col2Ave (4 peaks):				53.6 RPD = 2
	Corrected Ave (4 peaks):				51.9	Corrected Ave (3 peaks):				53.4 RPD = 3

Total PCB Area Col1 (4.511 - 12.728) = 73710860 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 14729318 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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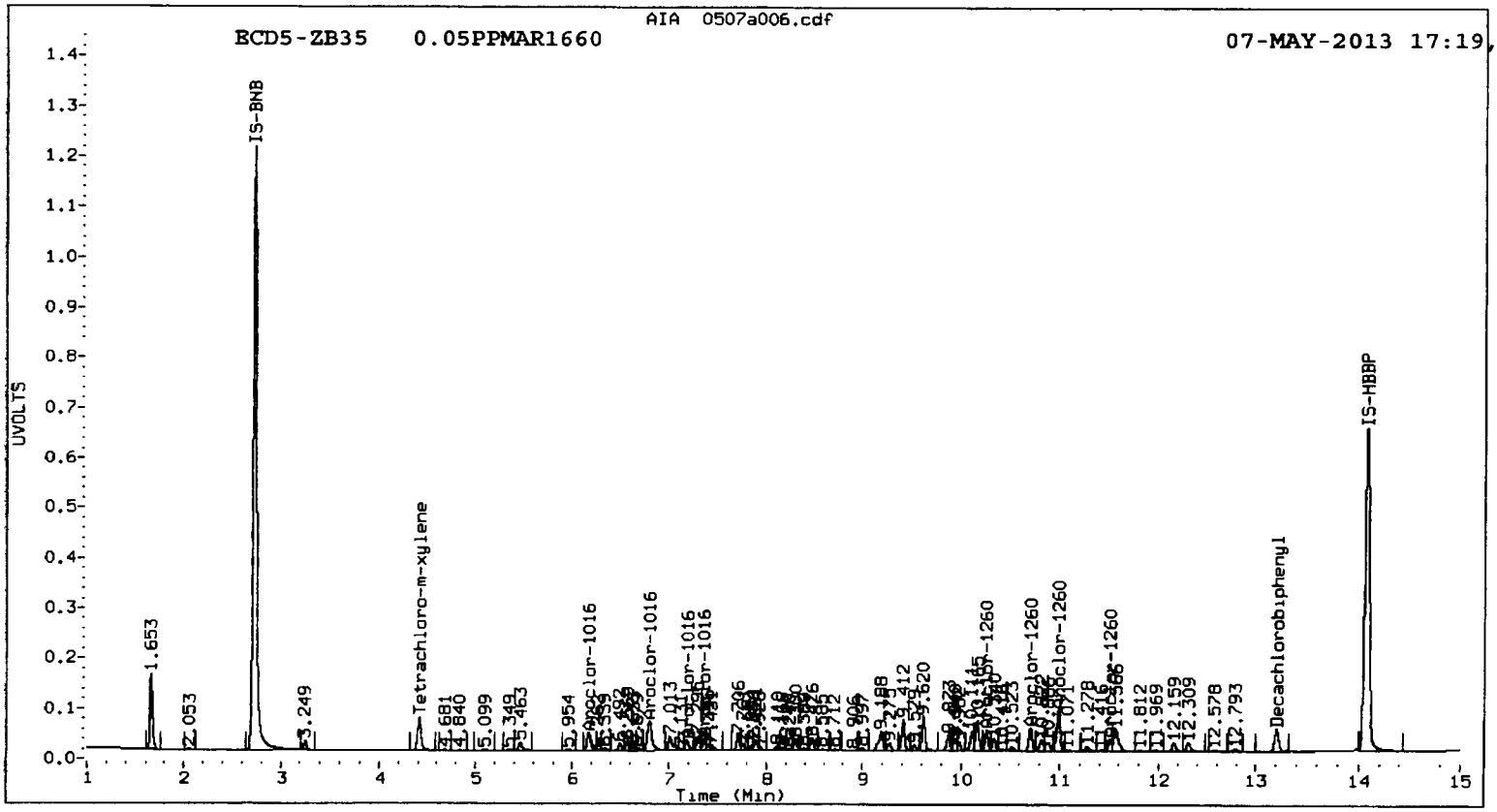
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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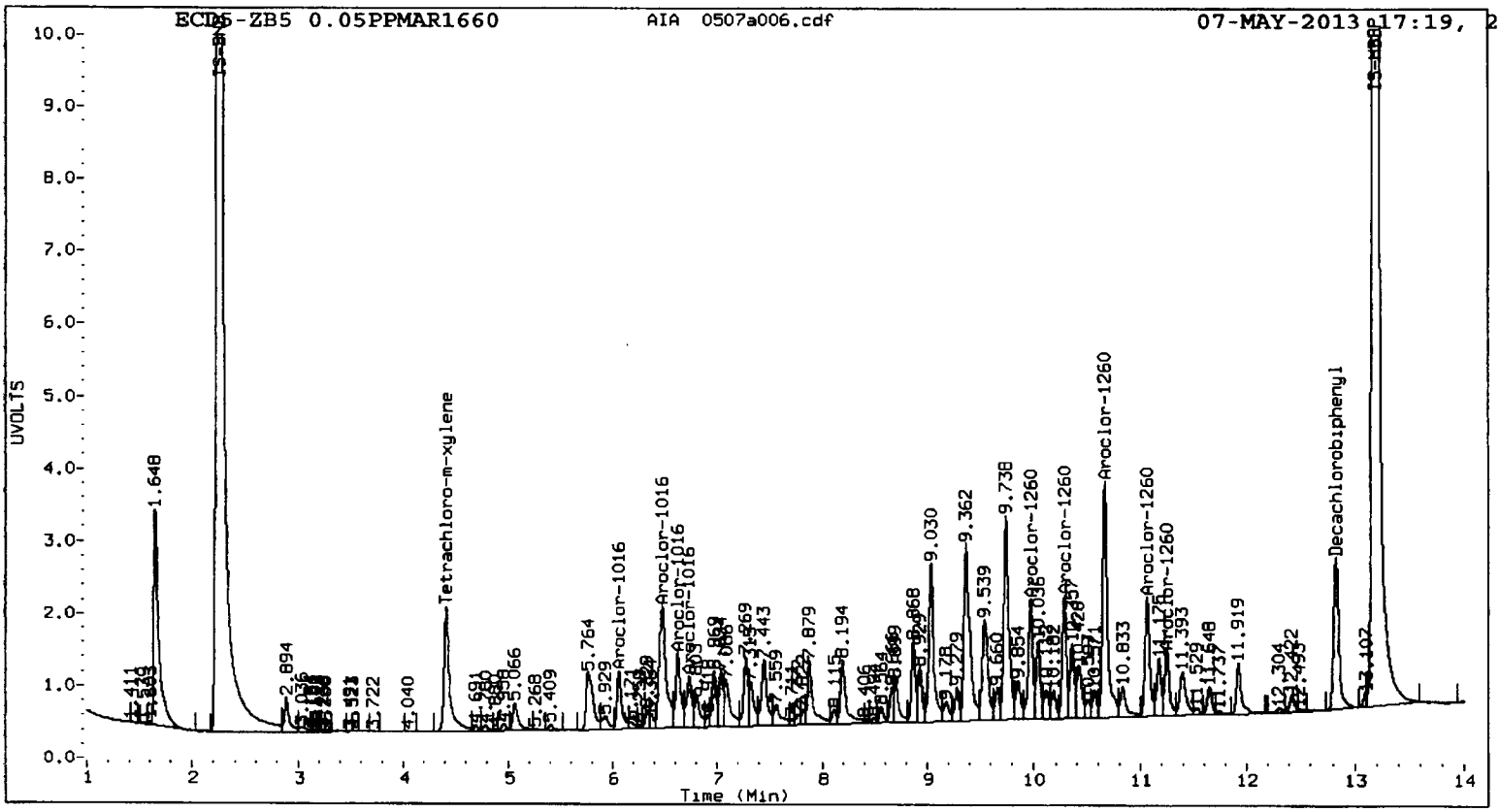
Time (Min)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Tetrachloro-m-xylene
Aroclor-1016
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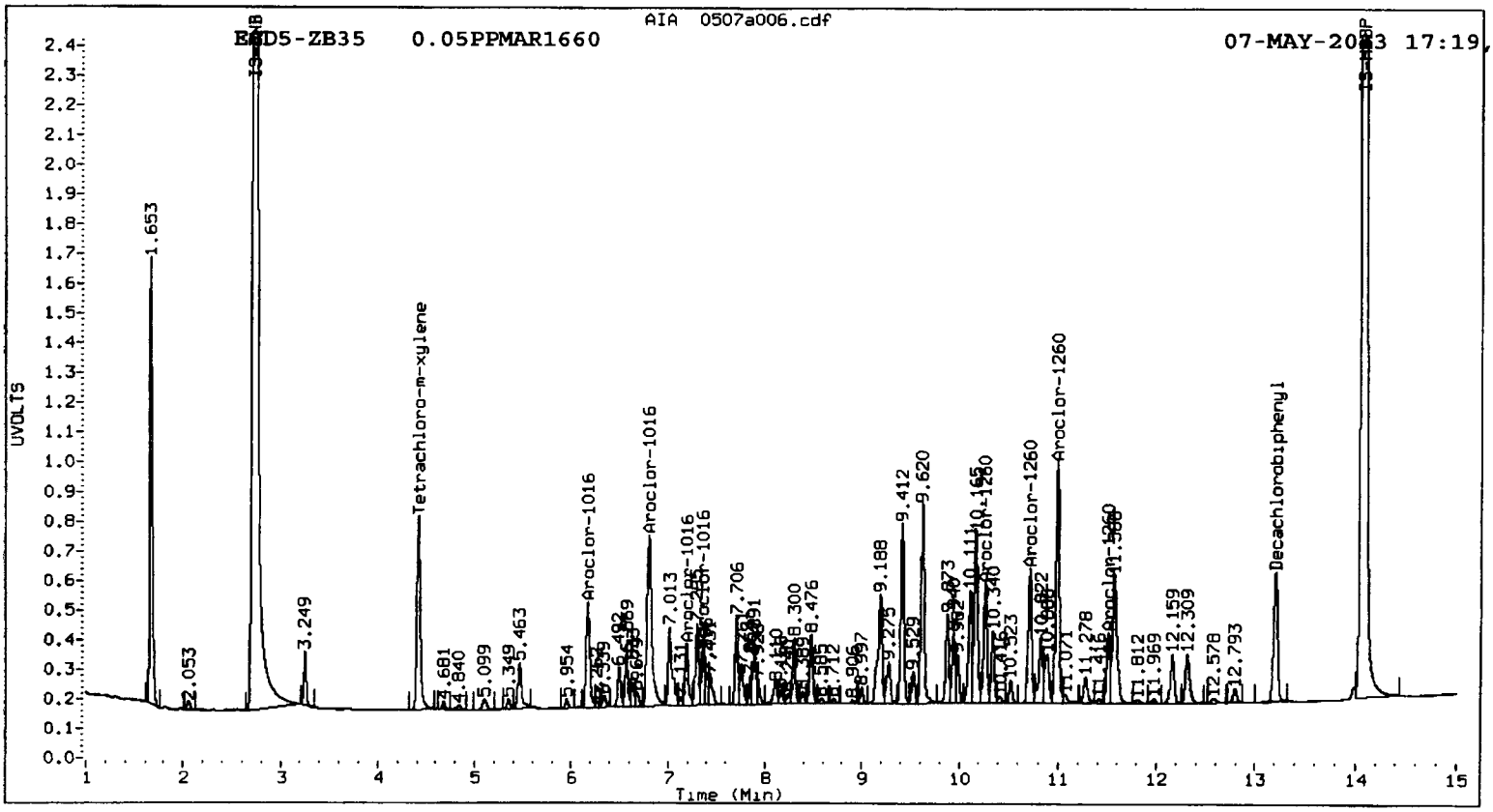
Decachlorobiphenyl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07-MAY-2013 17:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a007.d
Data file 2: 20130507.b/ical-2.b/0507a007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.410	0.000	56438104	4.414	0.003	14978631	73.7	74.5	1.0	Tetrachloro-m-xylen
12.827	-0.001	54253911	13.203	-0.002	9605990	68.2	67.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	184.4	186.3
Decachlorobiphenyl	170.5	168.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49361946	0.8
Hexabromobiphenyl	50004151	53269354	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14864205	0.2
Hexabromobiphenyl	9345340	9909484	6.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

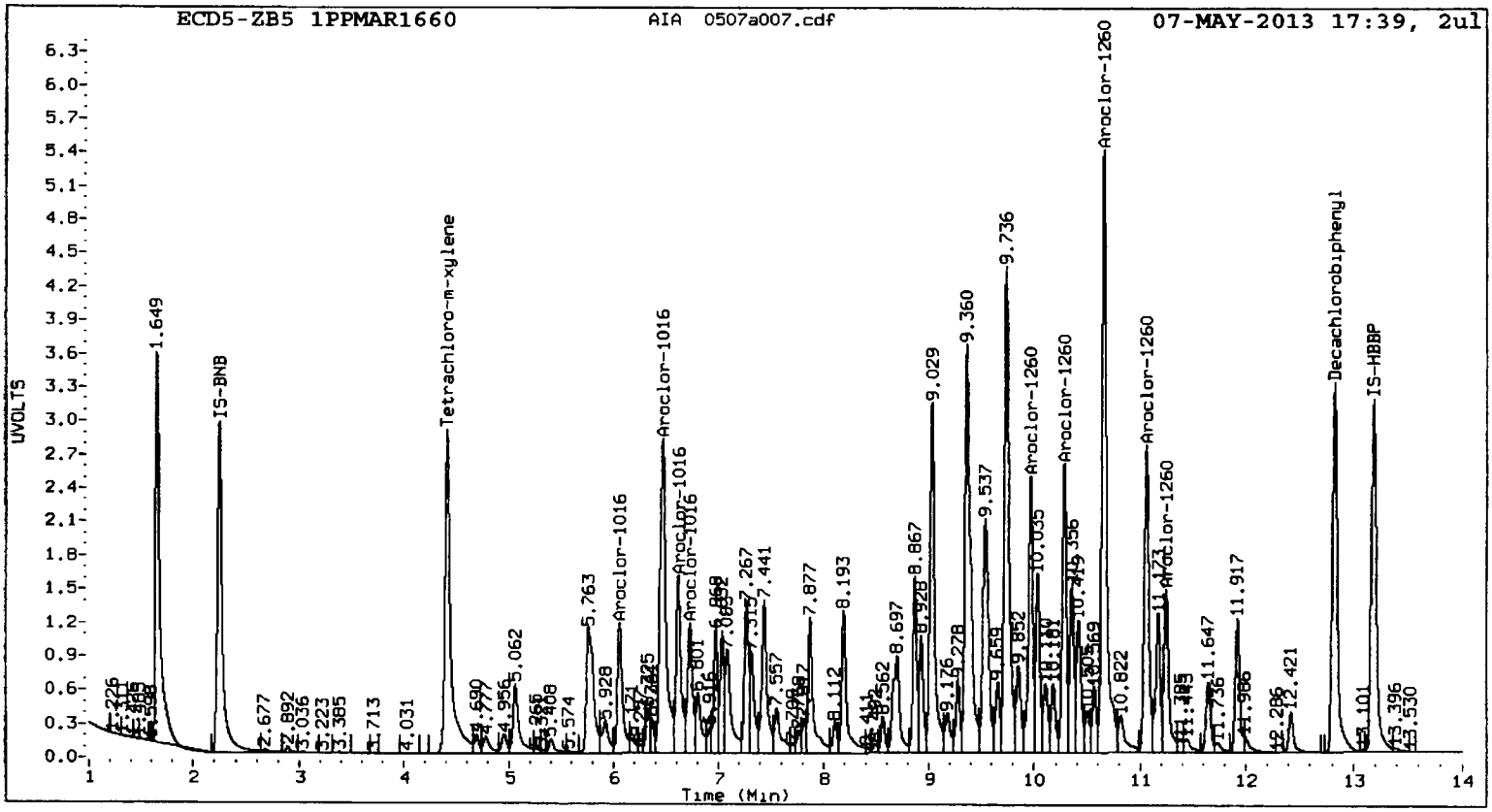
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.059	-0.001	18746470	842.5	1	6.167	0.001	6930745	817.2
Aroclor-1016	2	6.467	-0.002	57649136	841.1	2	6.801	0.000	15666487	849.6
Aroclor-1016	3	6.616	-0.001	25366020	826.1	3	7.186	0.000	4302384	892.4
Aroclor-1016	4	6.727	-0.001	19267159	839.8	4	7.359	0.001	3794728	845.1
Total Col1Ave (4 peaks):		837.4				Total Col2Ave (4 peaks):		851.1	RPD = 2	
Corrected Ave (3 peaks):		835.7				Corrected Ave (3 peaks):		837.3	RPD = 0	
Aroclor-1260	1	9.967	0.000	34921569	800.5	1	10.260	0.000	7411124	824.6
Aroclor-1260	2	10.283	-0.001	34401497	795.2	2	10.709	0.000	8889960	844.4
Aroclor-1260	3	10.659	0.000	86265488	831.6	3	10.986	0.001	16951381	872.0
Aroclor-1260	4	11.057	0.000	42604682	843.2	4	11.506	0.000	4533121	860.2
Aroclor-1260	5	11.247	0.000	23577619	872.2	NS	---			----
Total Col1Ave (5 peaks):		828.6				Total Col2Ave (4 peaks):		850.3	RPD = 3	
Corrected Ave (4 peaks):		817.6				Corrected Ave (3 peaks):		843.1	RPD = 3	

Total PCB Area Col1 (4.511 - 12.728) = 1078983721 Col1 Total PCB = 1.8 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 230522338 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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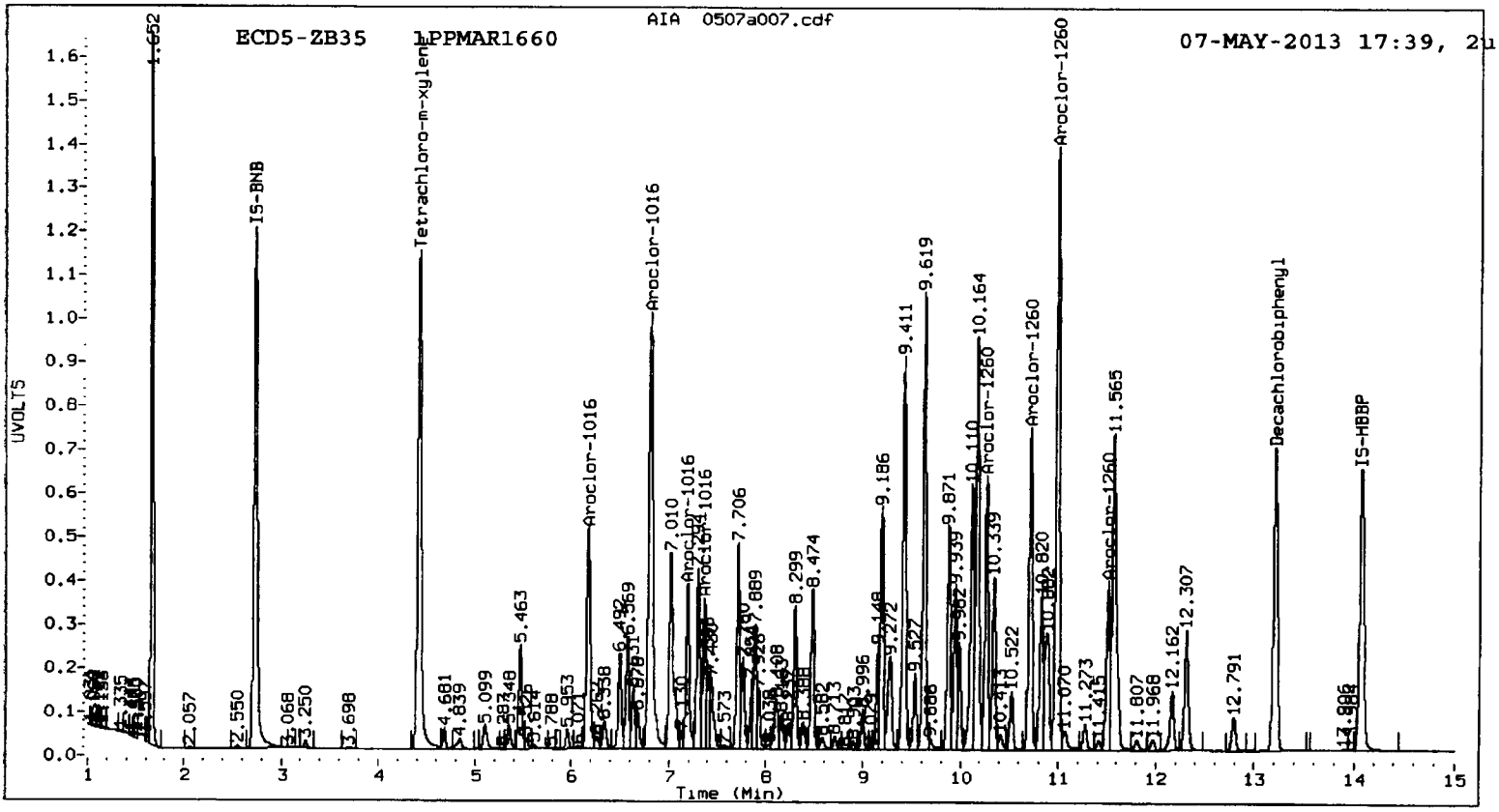
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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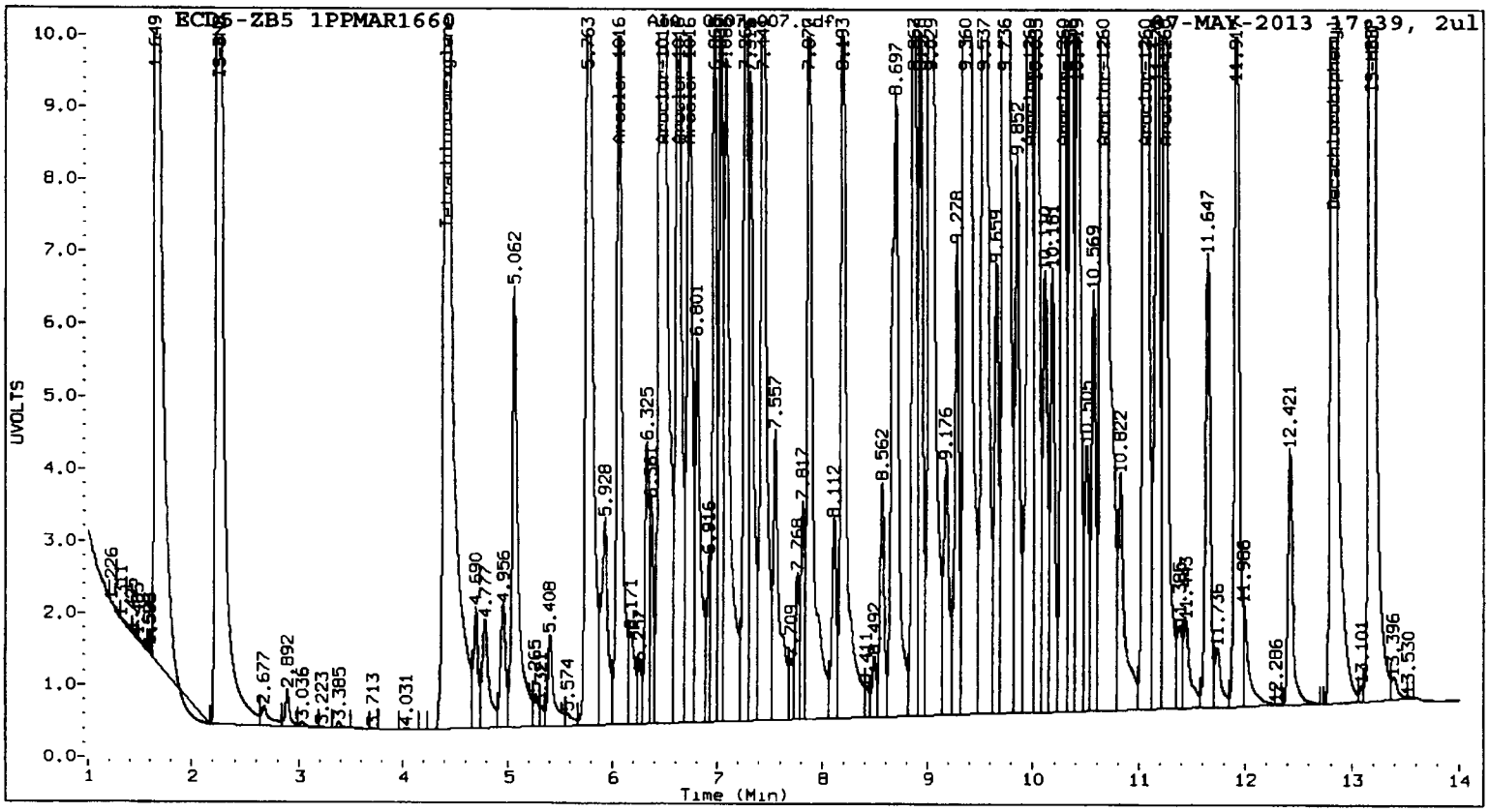
07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
1.652
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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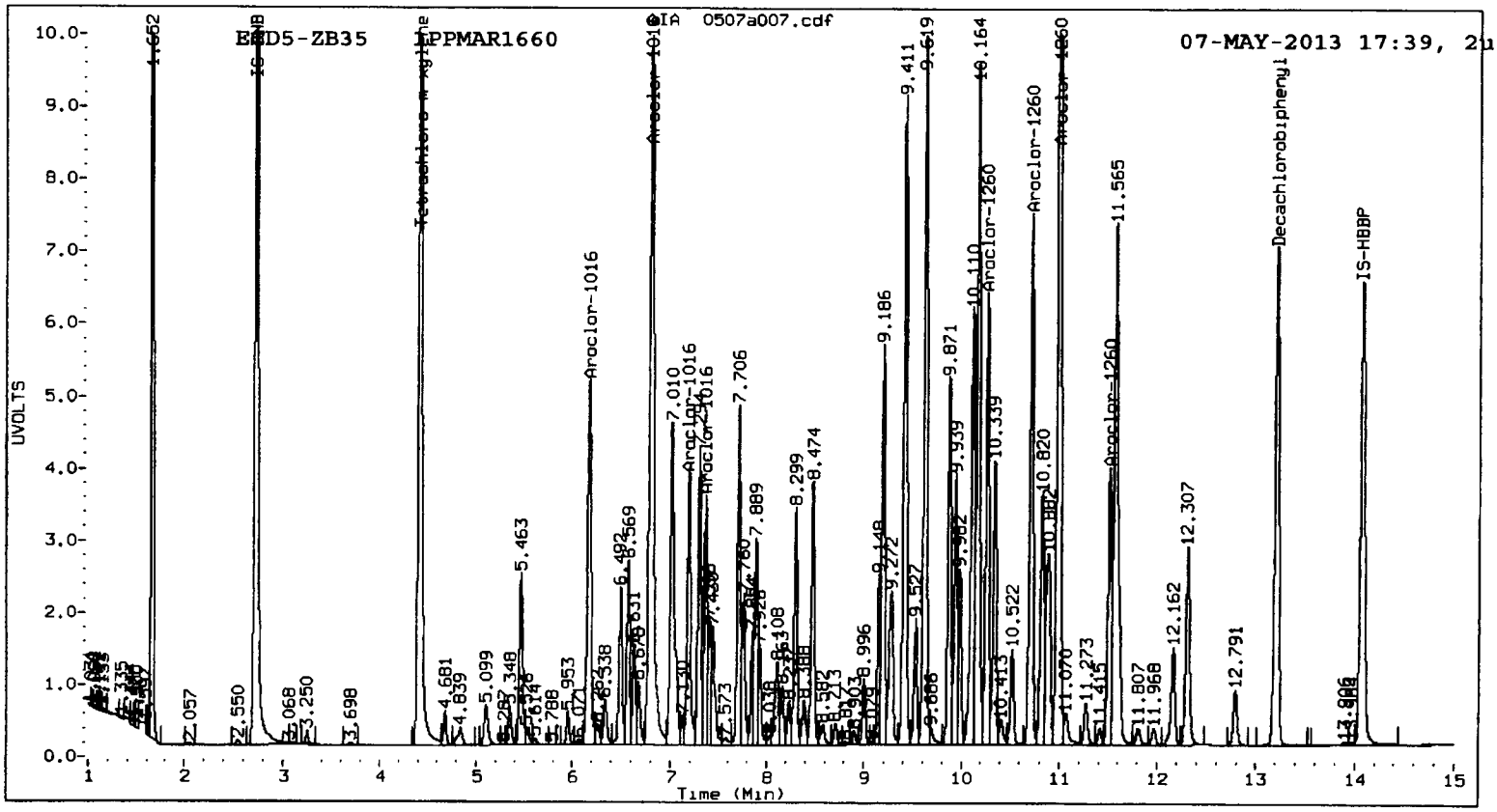
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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0507a007.cdf
07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a008.d
Data file 2: 20130507.b/ical-2.b/0507a008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	6731015	4.413	0.001	1684319	8.4	8.1	3.5	Tetrachloro-m-xylen
12.828	0.000	6587362	13.204	-0.001	1145480	8.2	8.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	21.0	20.3
Decachlorobiphenyl	20.5	20.2

15/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51692067	5.5
Hexabromobiphenyl	50004151	53692342	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15354151	3.5
Hexabromobiphenyl	9345340	9856374	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

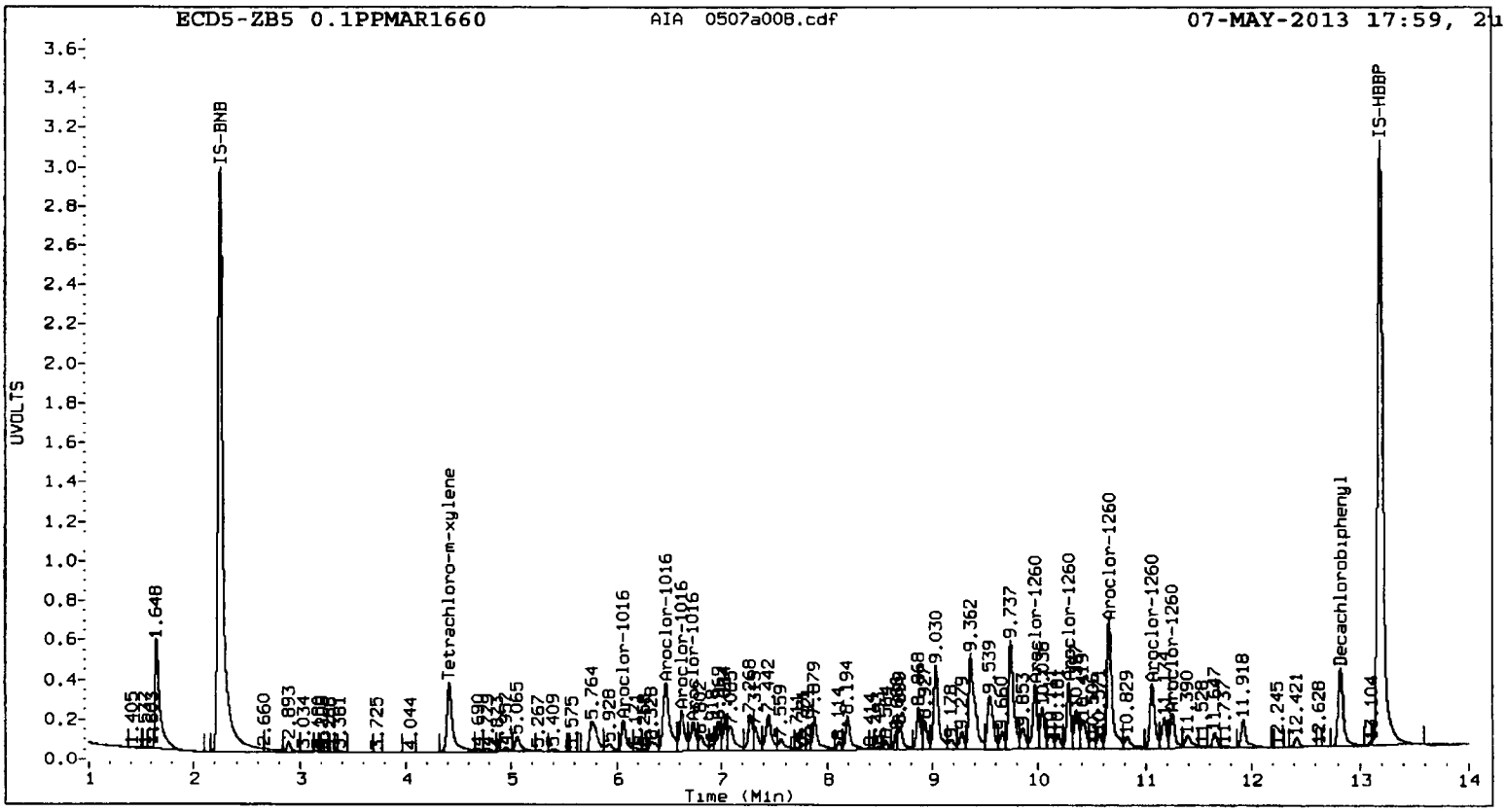
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.061	0.000	2455484	105.4	1	6.167	0.001	933103	106.5
Aroclor-1016	2	6.469	0.001	7585703	105.7	2	6.803	0.003	2002074	105.1
Aroclor-1016	3	6.619	0.002	3398868	105.7	3	7.187	0.002	525355	105.5
Aroclor-1016	4	6.730	0.002	2540359	105.7	4	7.359	0.001	491272	105.9
Total Col1Ave (4 peaks):					105.6	Total Col2Ave (4 peaks):			105.8	RPD = 0
Corrected Ave (3 peaks):					105.6	Corrected Ave (3 peaks):			105.5	RPD = 0
Aroclor-1260	1	9.967	0.001	4612344	104.9	1	10.262	0.002	936375	104.7
Aroclor-1260	2	10.284	0.001	4422973	101.4	2	10.710	0.001	1090787	104.2
Aroclor-1260	3	10.660	0.000	10624516	101.6	3	10.986	0.001	2021333	104.5
Aroclor-1260	4	11.059	0.001	5142675	101.0	4	11.507	0.002	538050	102.7
Aroclor-1260	5	11.248	0.001	2788613	102.3	NS	---			----
Total Col1Ave (5 peaks):					102.3	Total Col2Ave (4 peaks):			104.0	RPD = 2
Corrected Ave (4 peaks):					101.6	Corrected Ave (3 peaks):			103.8	RPD = 2

Total PCB Area Col1 (4.511 - 12.728) = 143086545 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 29038947 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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07-MAY-2013 17:59, 21
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
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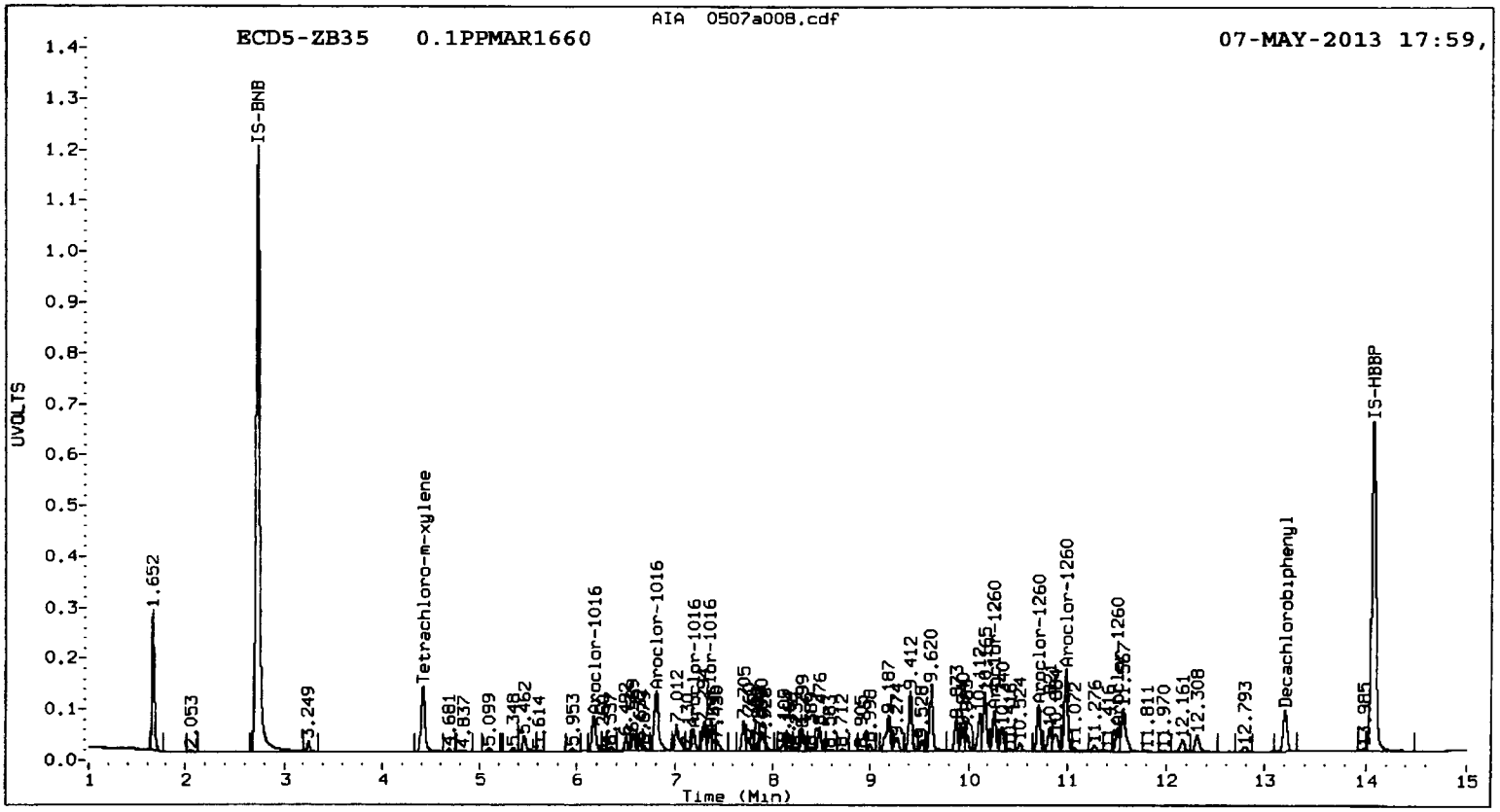
2.660
5.764
9.030
9.362
9.737
10.829
11.918
12.421
12.628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UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
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3.249
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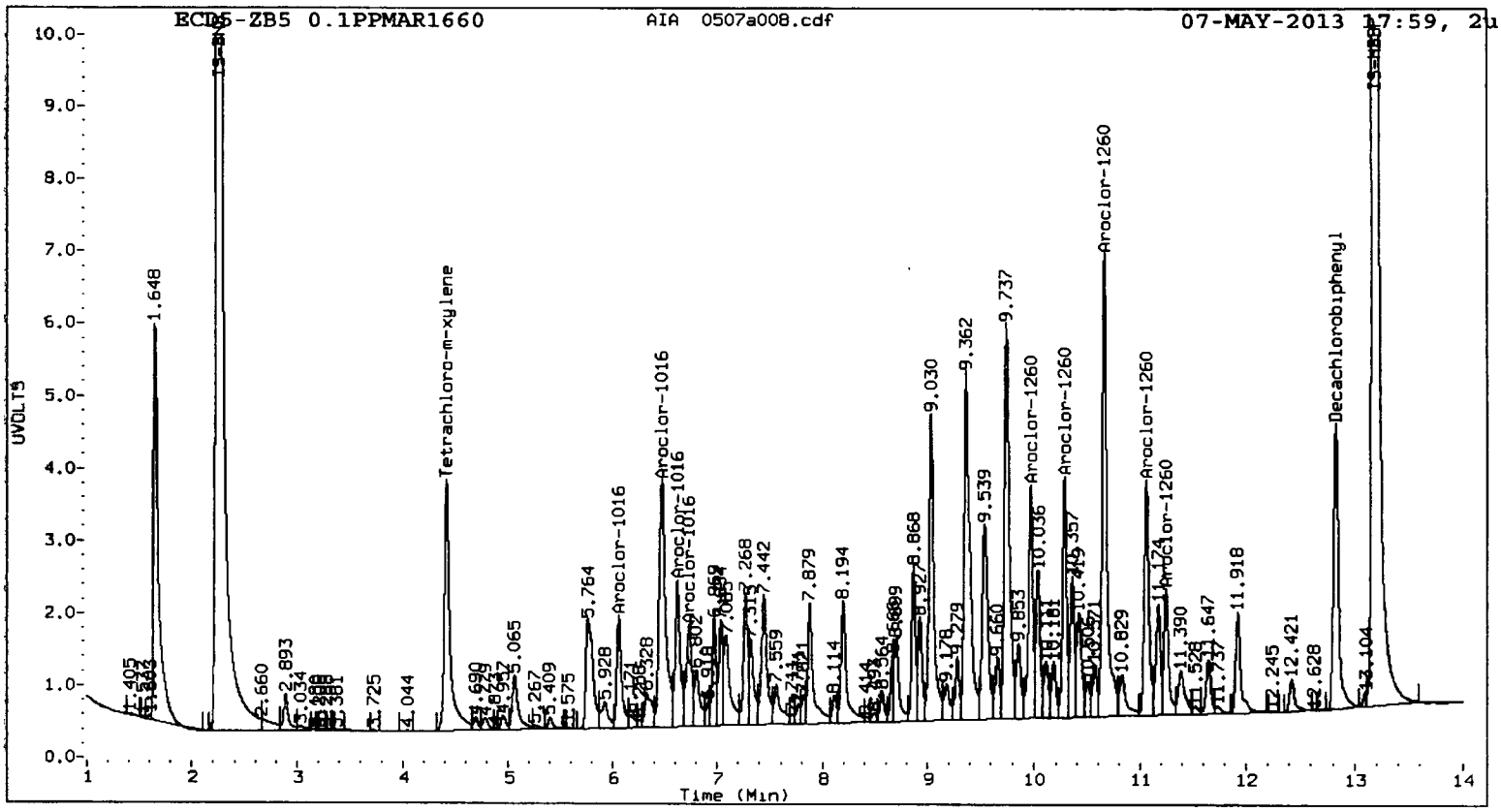
7.012
9.620
10.524
11.072
12.308
12.793
13.985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AIA 0507a008.cdf
07-MAY-2013 17:59, 2u
UVOLTS
Time (Min)
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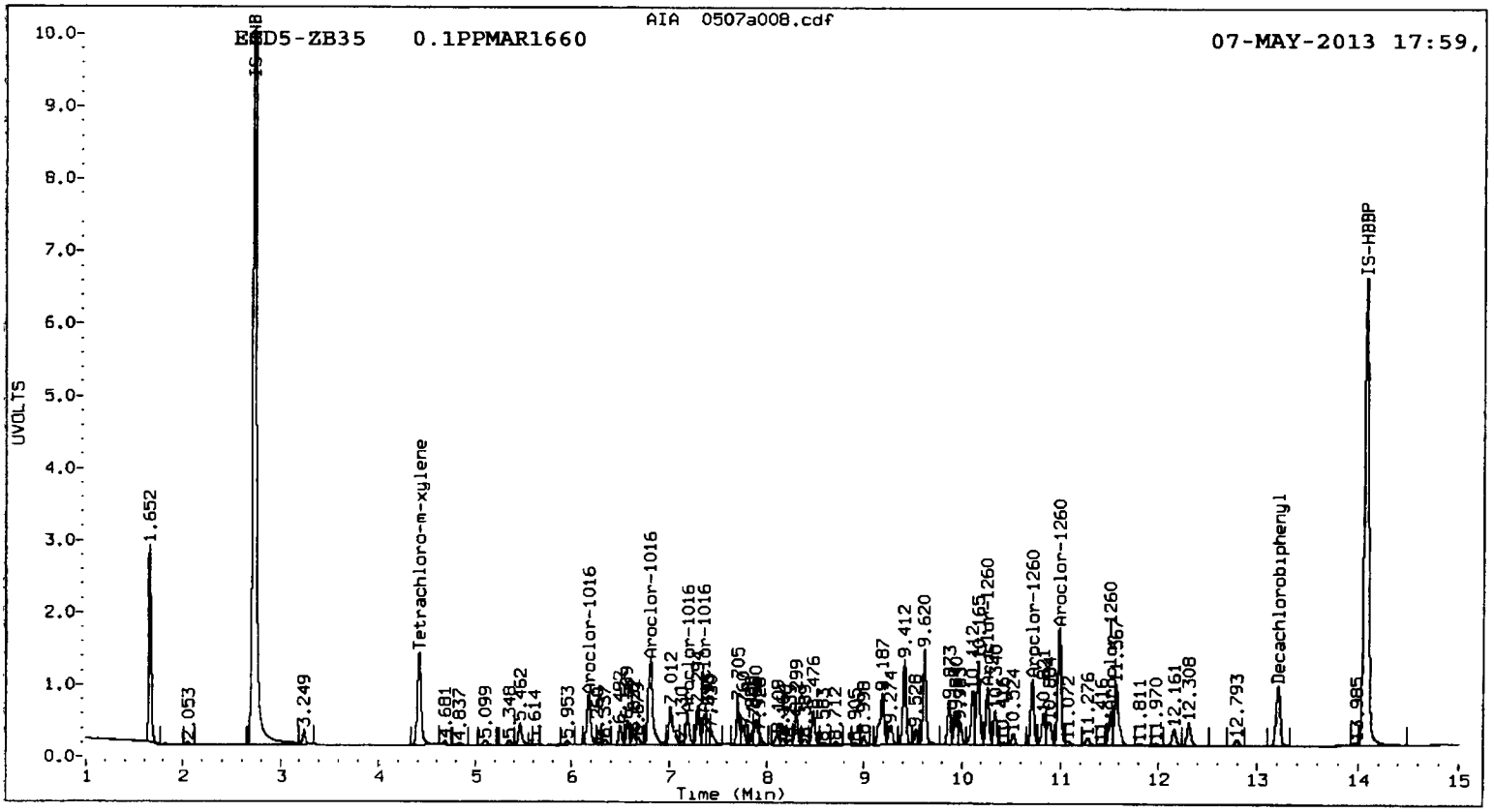
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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ECD5-ZB35 0.1PPMAR1660
07-MAY-2013 17:59,
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a009.d
Data file 2: 20130507.b/ical-2.b/0507a009.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 18:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	30263952	4.412	0.001	7879158	38.6	39.1	1.3	Tetrachloro-m-xylen
12.827	-0.001	28353890	13.204	-0.001	4992554	35.6	35.6	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.6	97.8
Decachlorobiphenyl	89.0	88.9

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50537542	3.2
Hexabromobiphenyl	50004151	53291913	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14890872	0.3
Hexabromobiphenyl	9345340	9751846	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

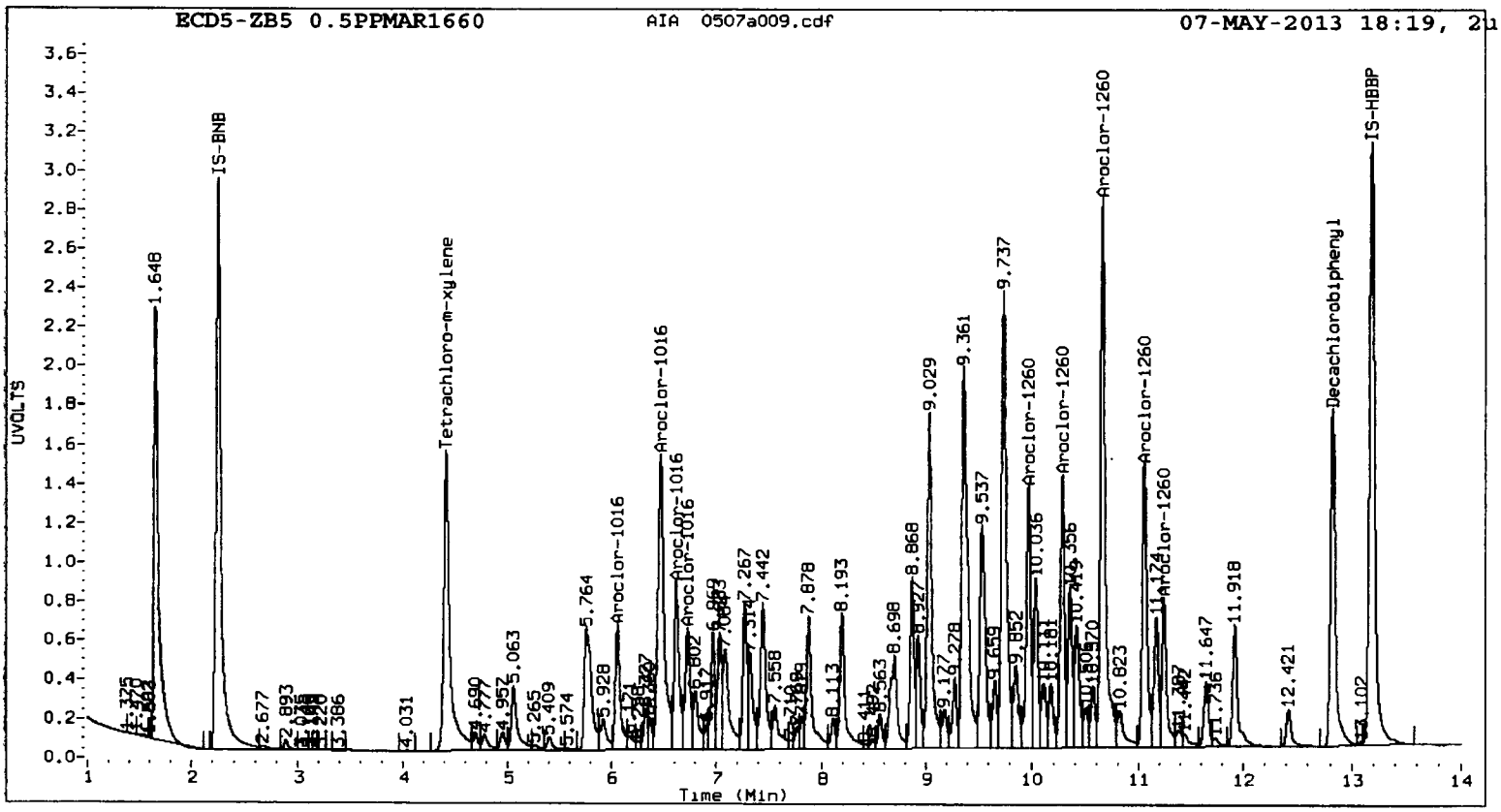
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	0.000	10209142	448.2	1	6.166	0.000	3819812	449.6
Aroclor-1016	2	6.469	0.000	31525506	449.3	2	6.801	0.000	8527560	461.6
Aroclor-1016	3	6.617	0.000	13954591	443.9	3	7.185	0.000	2297705	475.7
Aroclor-1016	4	6.728	0.000	10550969	449.2	4	7.358	0.000	2075939	461.5
Total Col1Ave (4 peaks):		447.6				Total Col2Ave (4 peaks):			462.1	RPD = 3
Corrected Ave (3 peaks):		447.1				Corrected Ave (3 peaks):			457.6	RPD = 2
Aroclor-1260	1	9.967	0.000	19054399	436.6	1	10.260	0.000	3995682	451.7
Aroclor-1260	2	10.284	0.000	18658025	431.1	2	10.709	0.000	4769094	460.3
Aroclor-1260	3	10.659	0.000	46060556	443.9	3	10.985	0.000	9011917	471.1
Aroclor-1260	4	11.058	0.000	22756673	450.2	4	11.505	0.000	2389092	460.7
Aroclor-1260	5	11.247	0.000	12499862	462.2	NS	---			----
Total Col1Ave (5 peaks):		444.8				Total Col2Ave (4 peaks):			461.0	RPD = 4
Corrected Ave (4 peaks):		440.4				Corrected Ave (3 peaks):			457.6	RPD = 4

Total PCB Area Col1 (4.511 - 12.728) = 589049282 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 124374053 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
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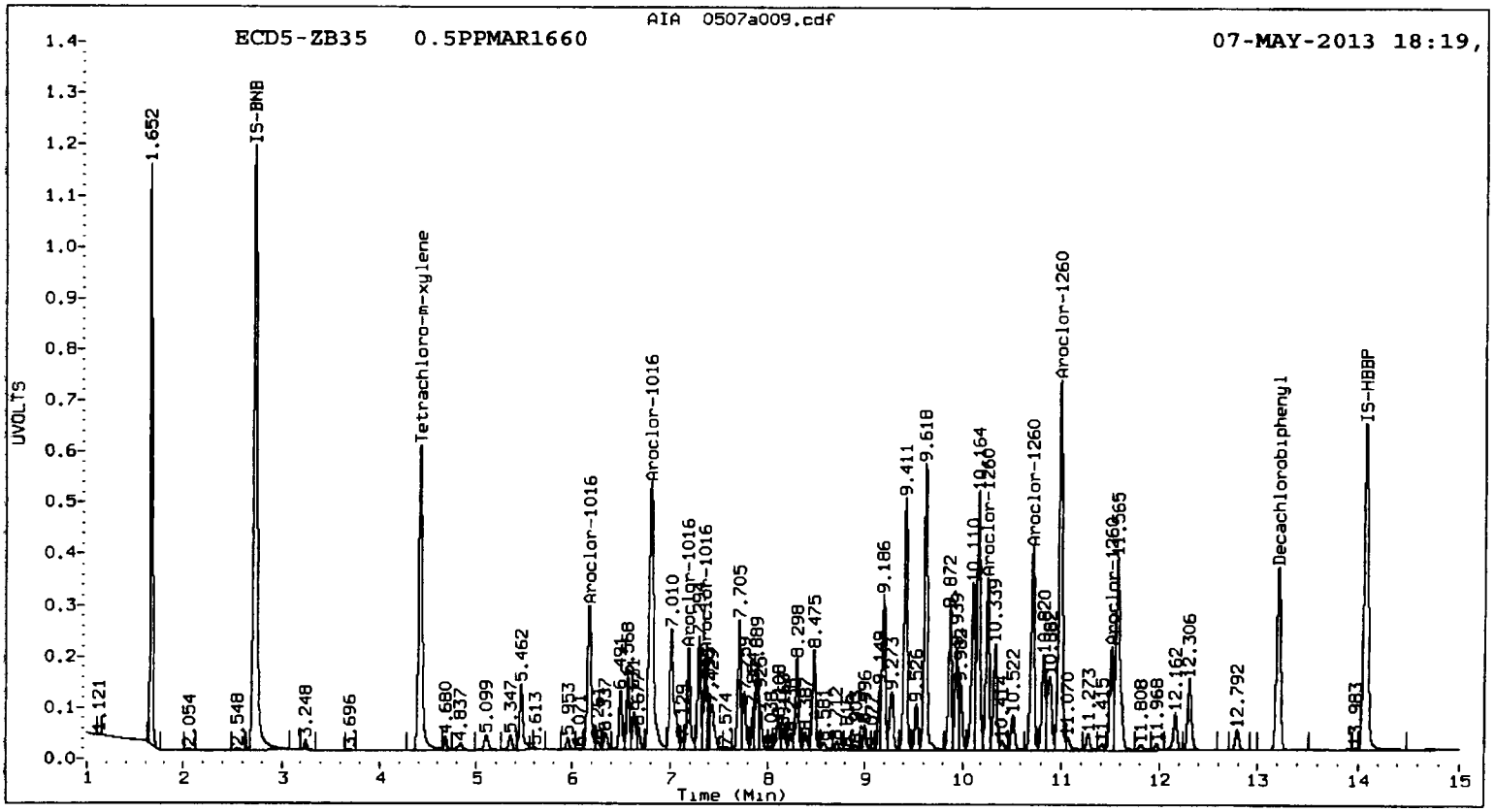
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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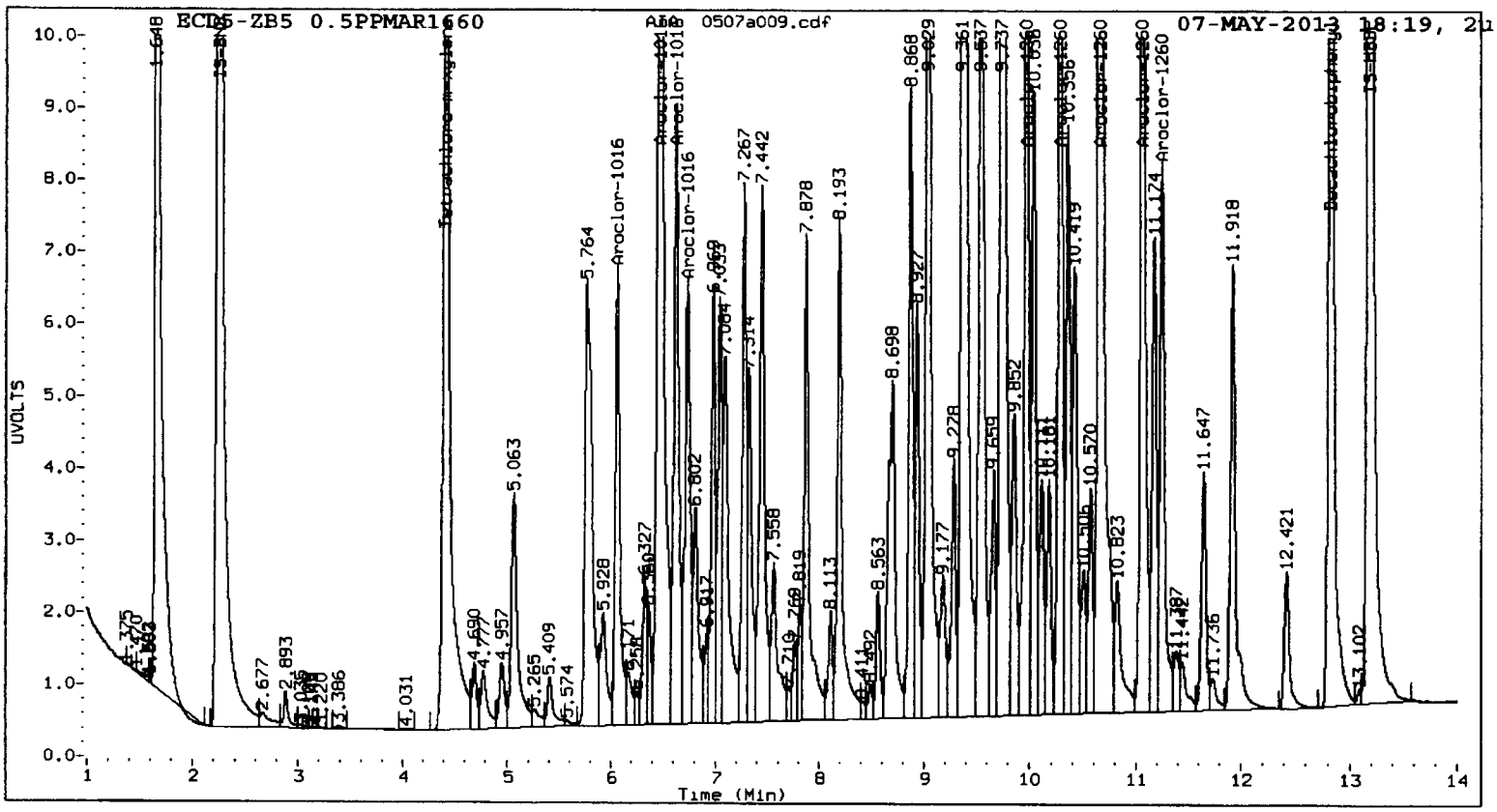
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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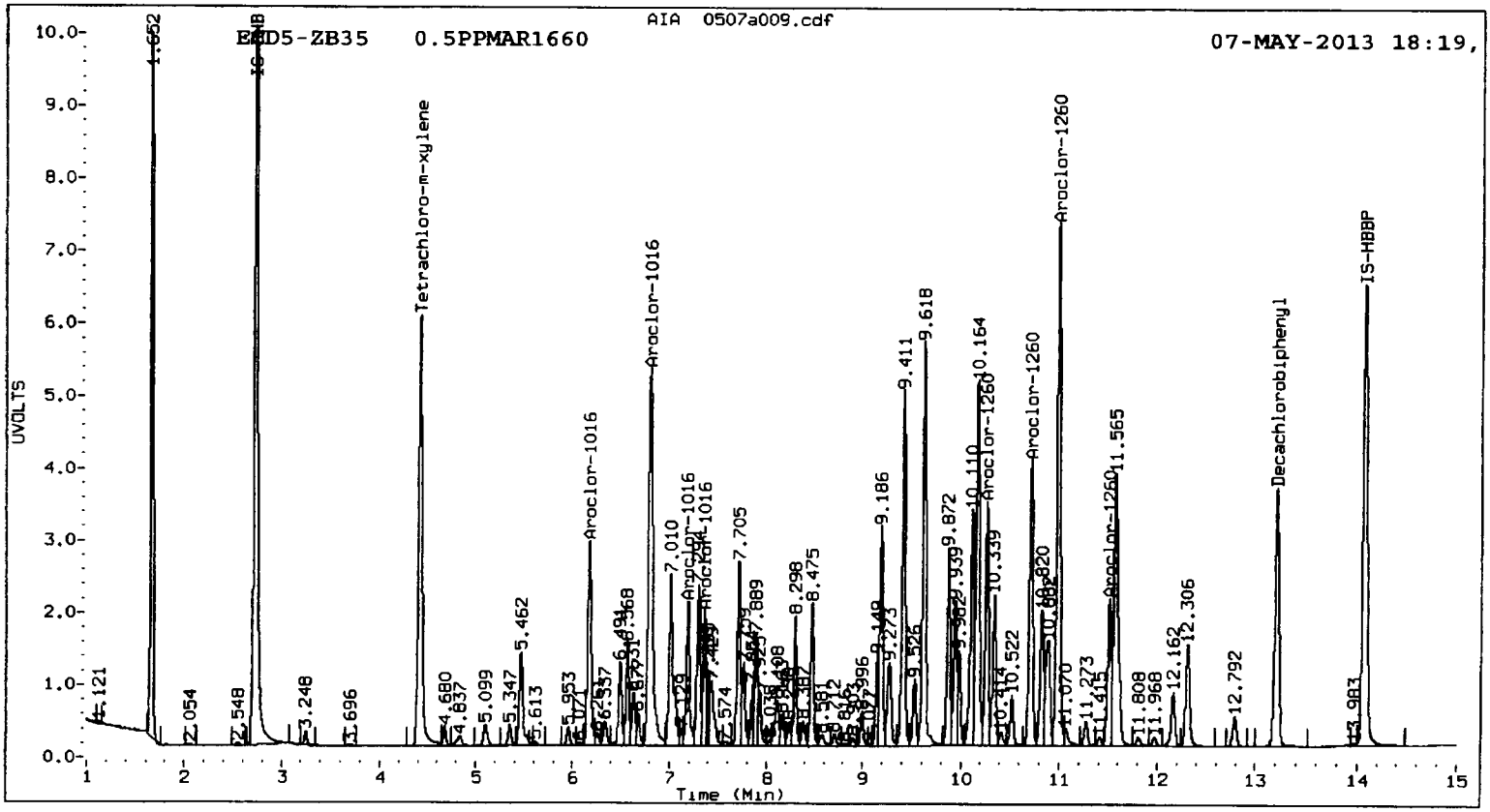
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 18:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a010.d
Data file 2: 20130507.b/ical-2.b/0507a010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 07-MAY-2013 18:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31274266	4.414	0.003	8134040	39.1	39.8	1.9	Tetrachloro-m-xylen
12.828	-0.001	31253738	13.204	-0.001	5452308	37.9	37.4	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.7	99.6
Decachlorobiphenyl	94.8	93.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51594521	5.3
Hexabromobiphenyl	50004151	55145987	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15094795	1.7
Hexabromobiphenyl	9345340	10120992	8.3

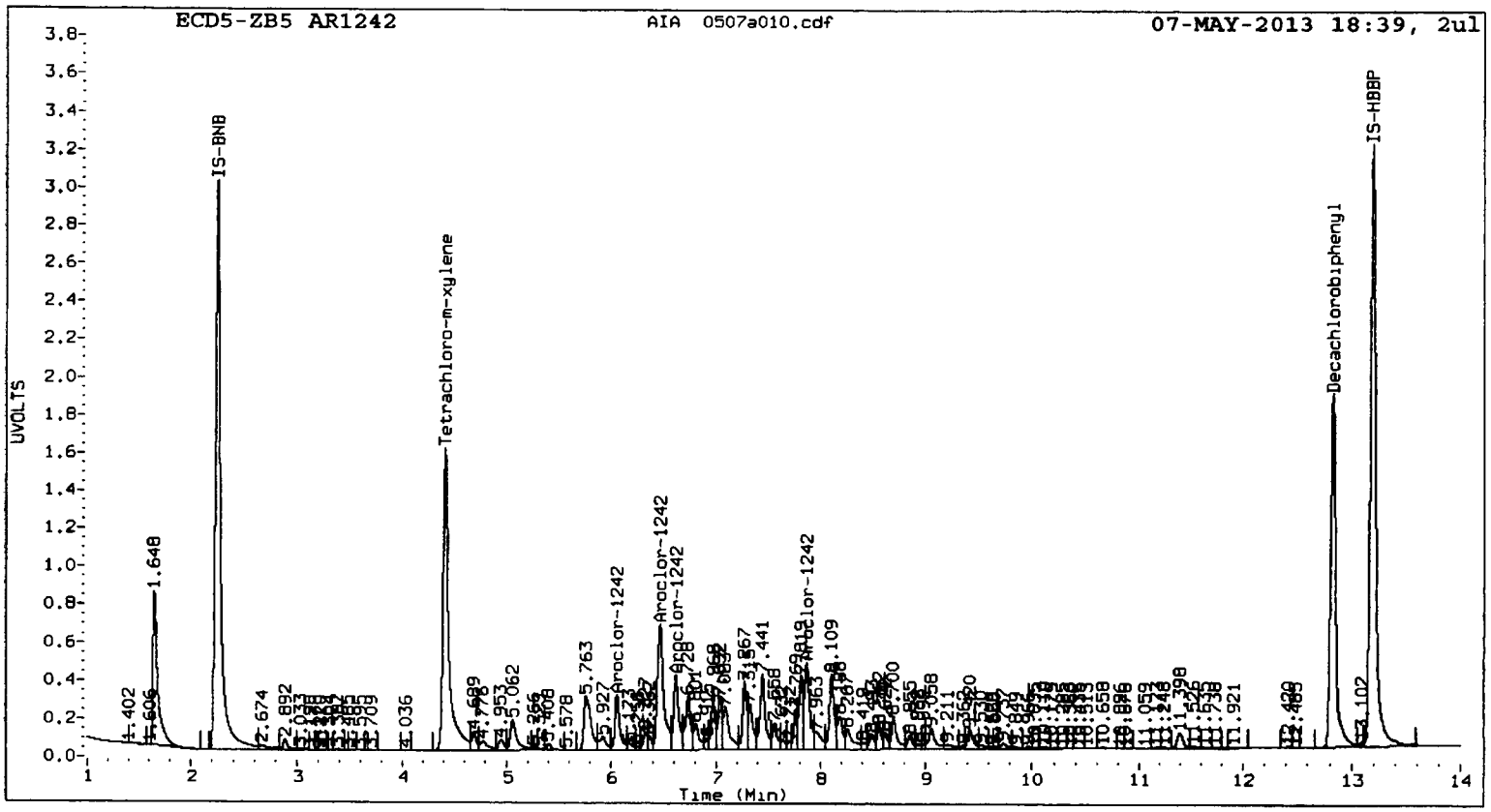
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.059	0.000	4645645	250.0	1	6.167	0.000	1719309	250.0
Aroclor-1242	2	6.468	0.000	14248309	250.0	2	6.803	0.000	3776677	250.0
Aroclor-1242	3	6.617	0.000	6357384	250.0	3	7.011	0.000	1577853	250.0
Aroclor-1242	4	7.873	0.000	7850170	250.0	4	8.239	0.000	1321956	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 132730122 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28500992 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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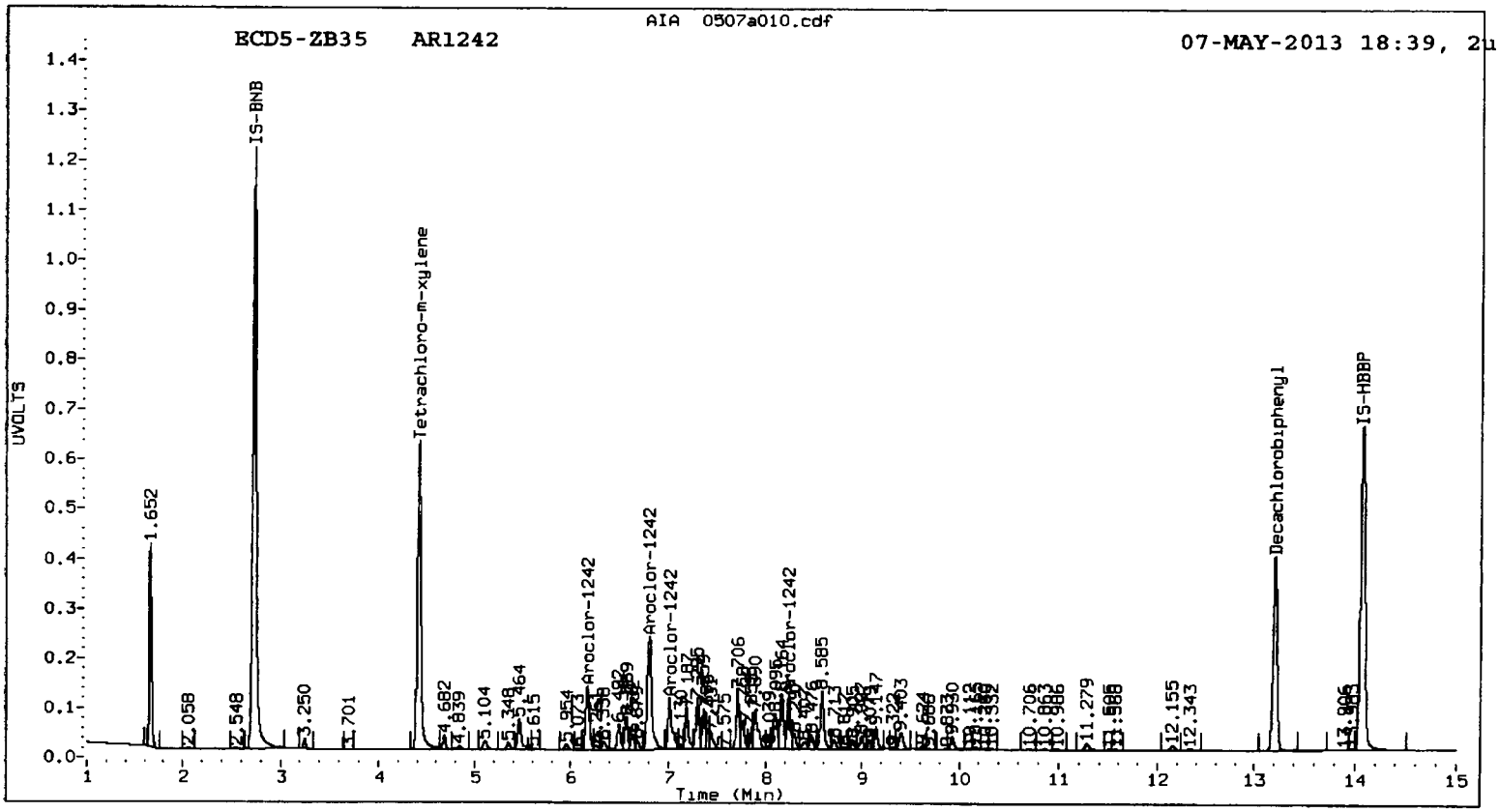
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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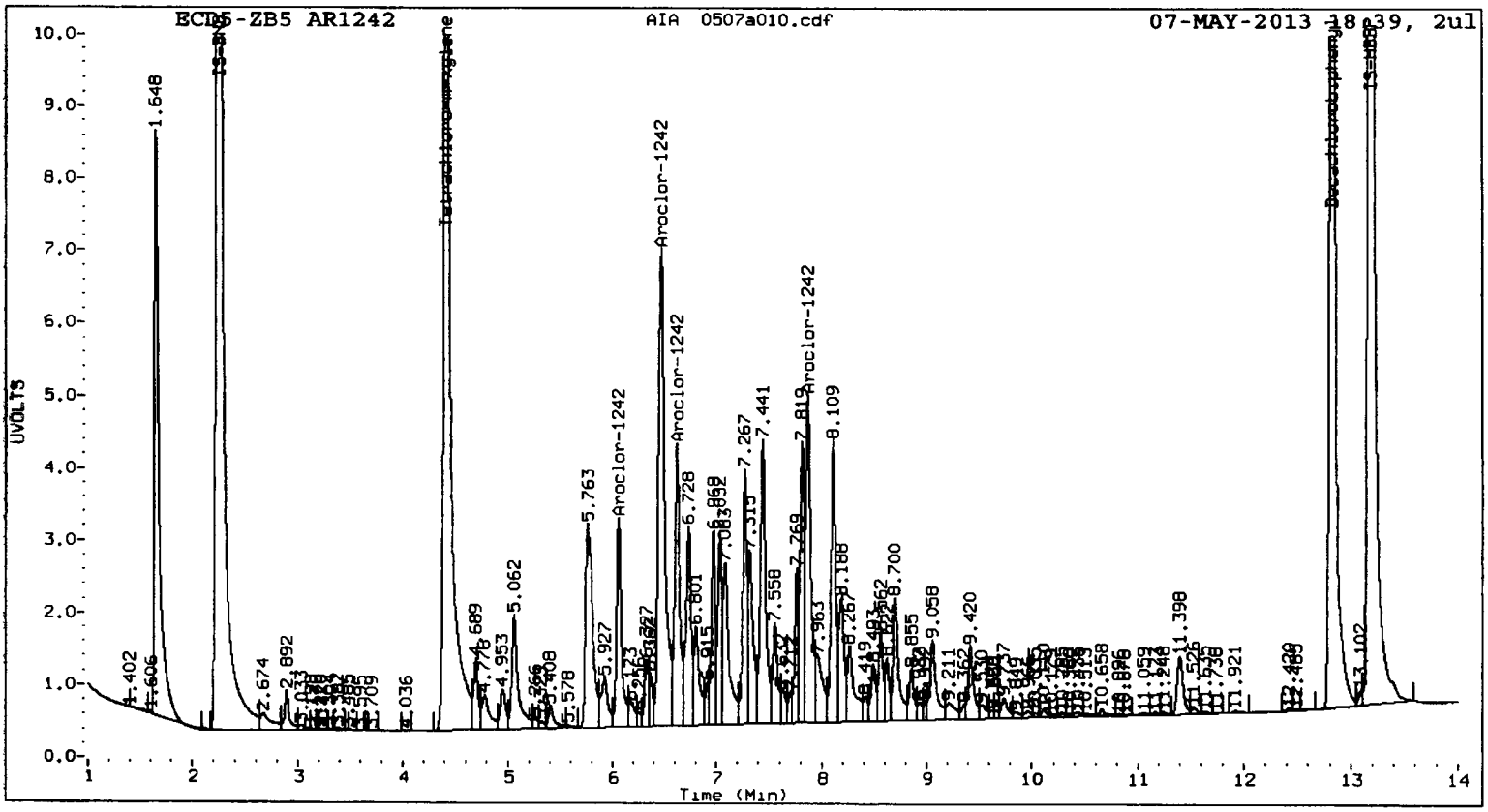
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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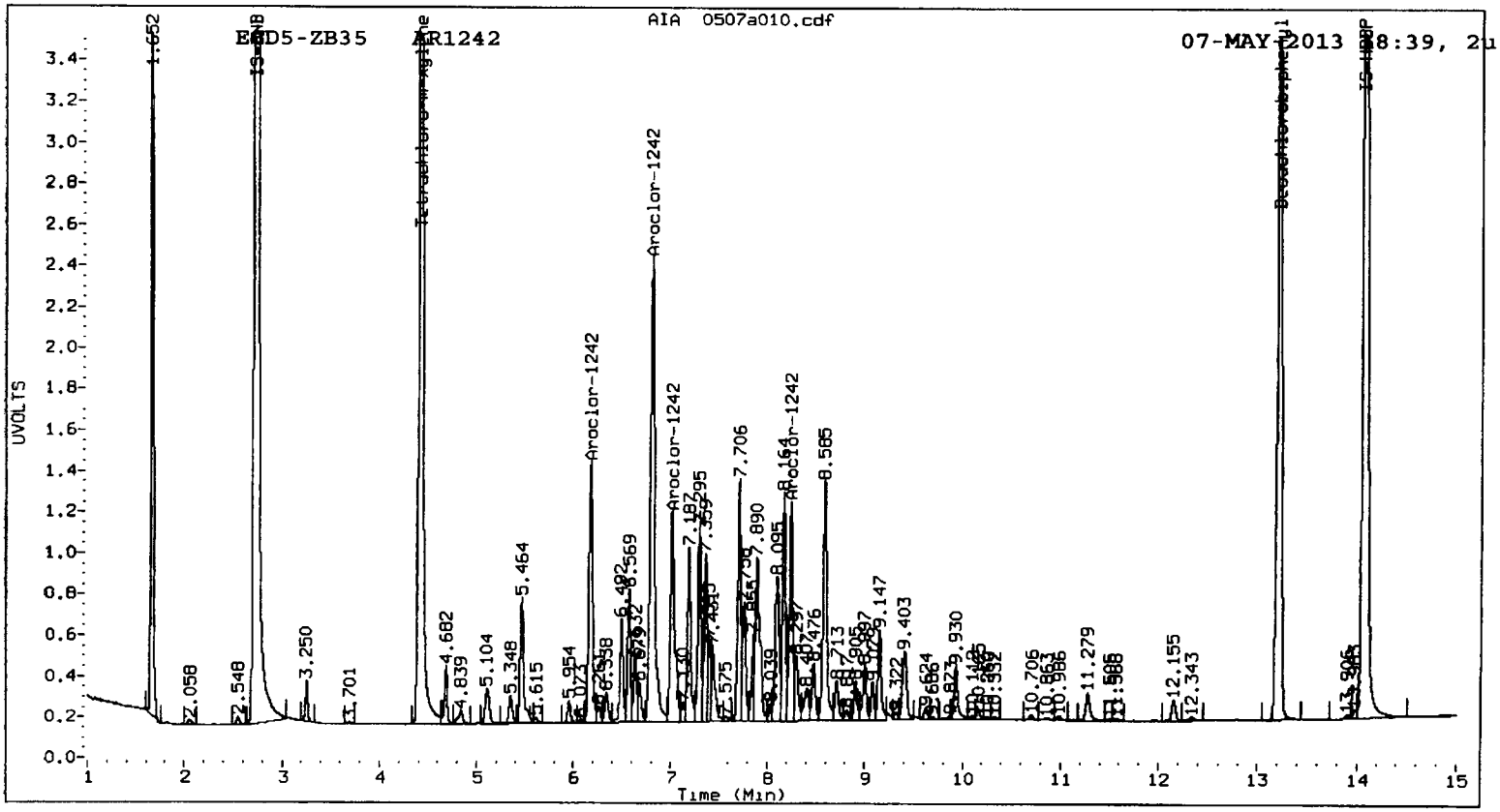
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a011.d
Data file 2: 20130507.b/ical-2.b/0507a011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 18:59
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31267686	4.412	0.000	8079724	38.2	39.1	2.2	Tetrachloro-m-xylen
12.828	0.000	29535239	13.204	-0.001	5138640	34.6	34.4	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.5	97.6
Decachlorobiphenyl	86.5	85.9

1 05/07/13 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52790343	7.8
Hexabromobiphenyl	50004151	57162764	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15297537	3.1
Hexabromobiphenyl	9345340	10392760	11.2

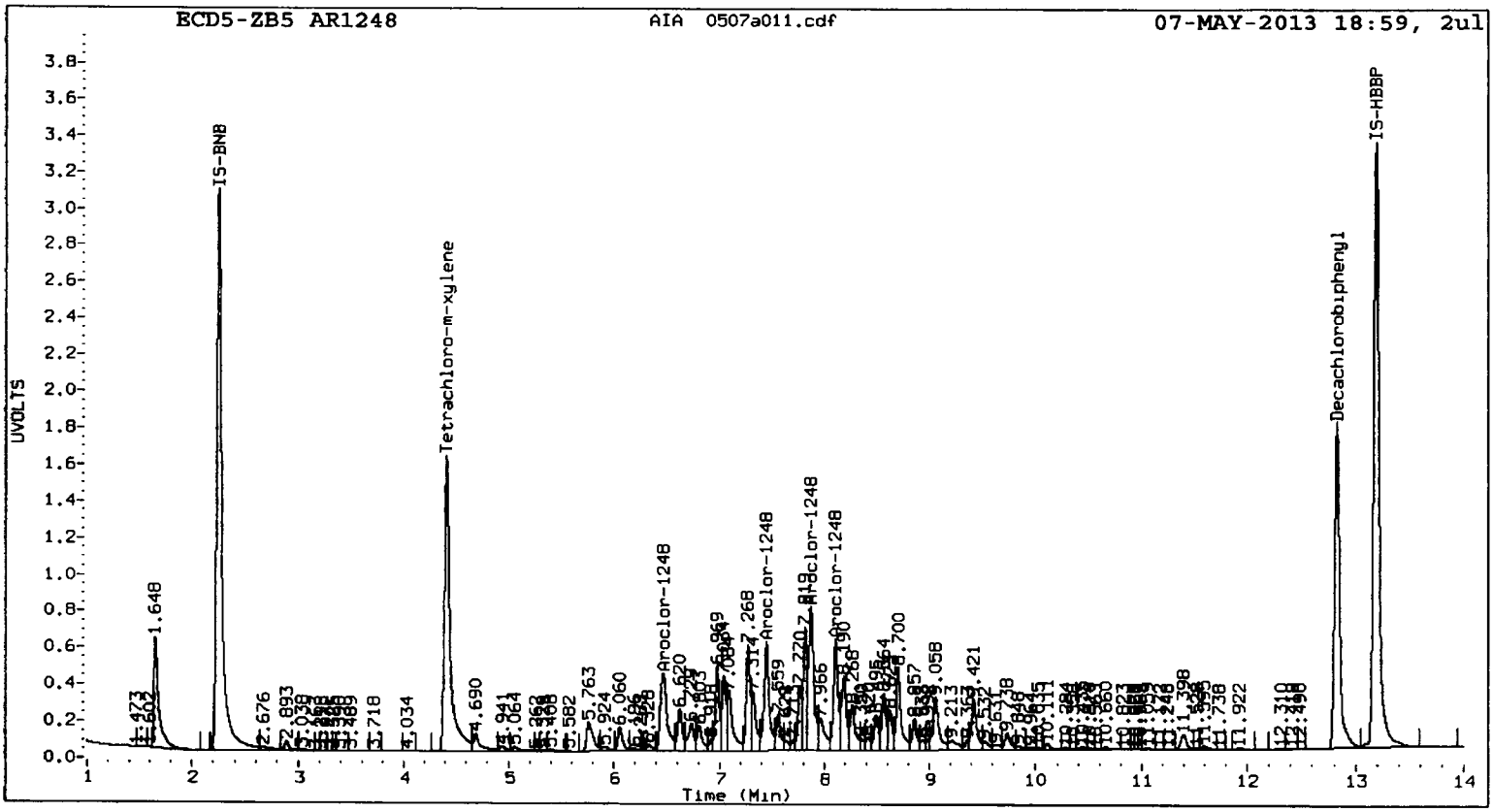
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

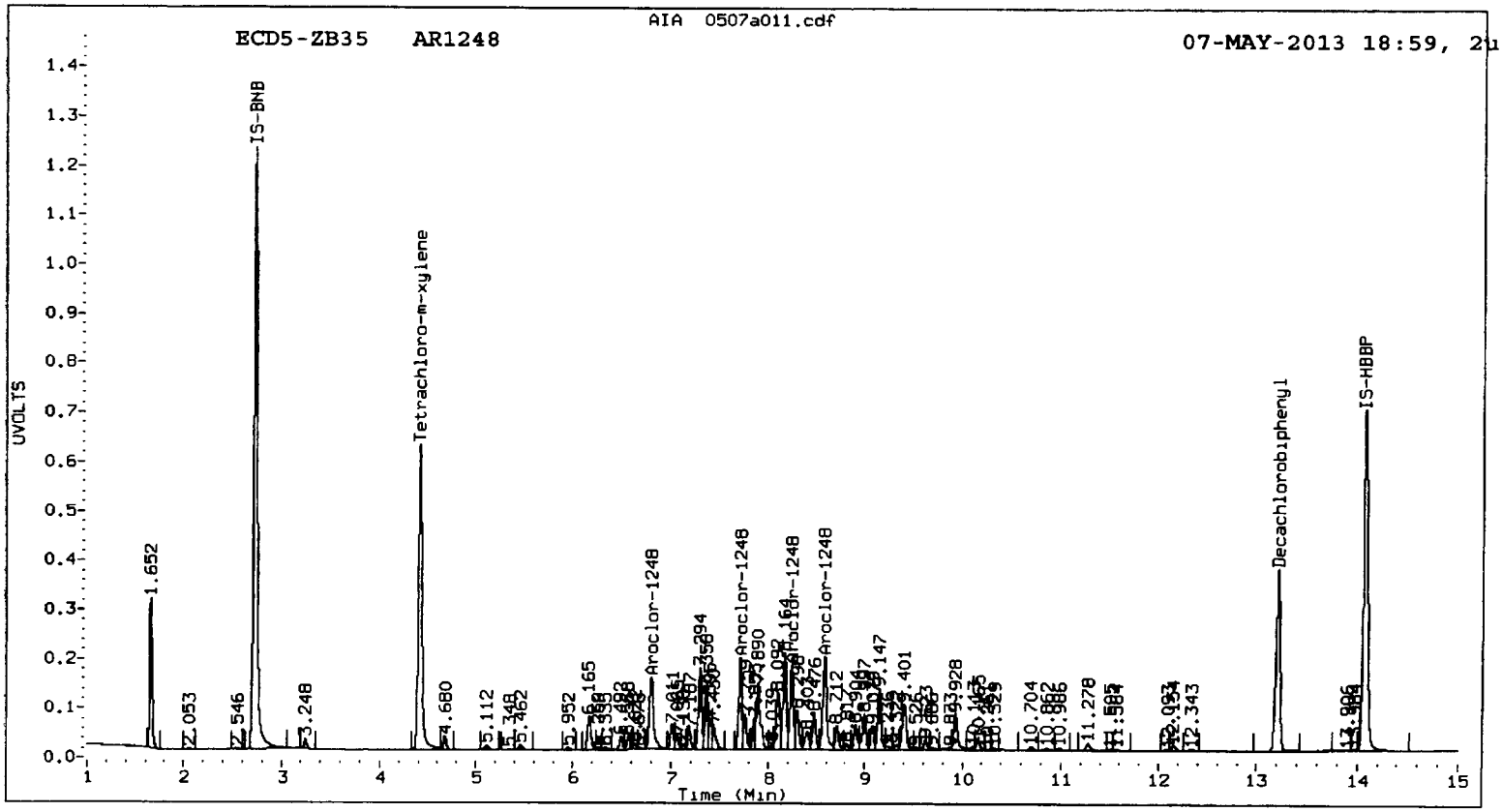
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	9288203	250.0	1	6.800	0.000	2396407	250.0
Aroclor-1248	2	7.442	0.000	10446110	250.0	2	7.706	0.000	1987417	250.0
Aroclor-1248	3	7.874	0.000	13282472	250.0	3	8.239	0.000	2057504	250.0
Aroclor-1248	4	8.110	0.000	9261094	250.0	4	8.584	0.000	2673699	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 170915176 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35045707 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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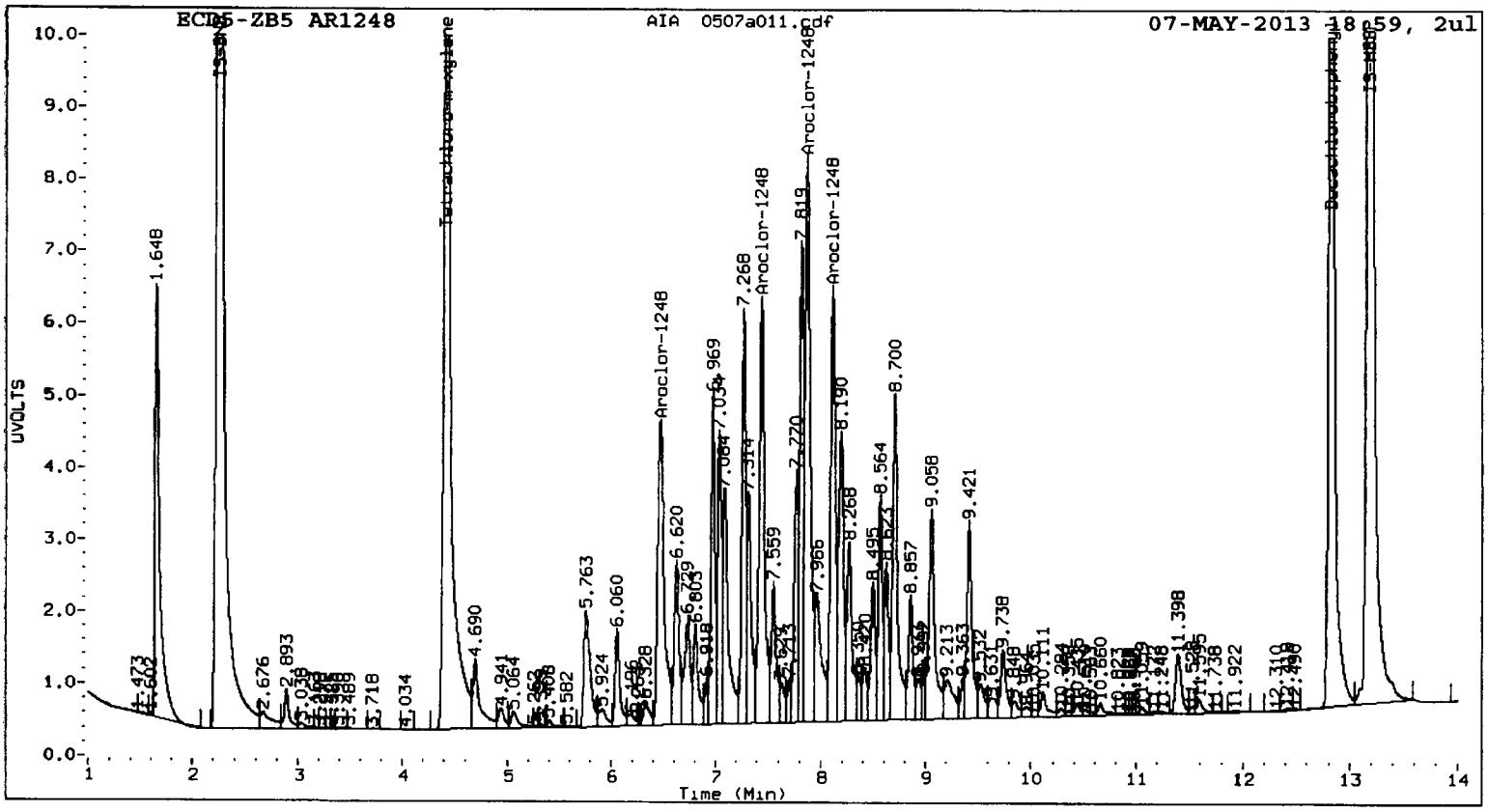
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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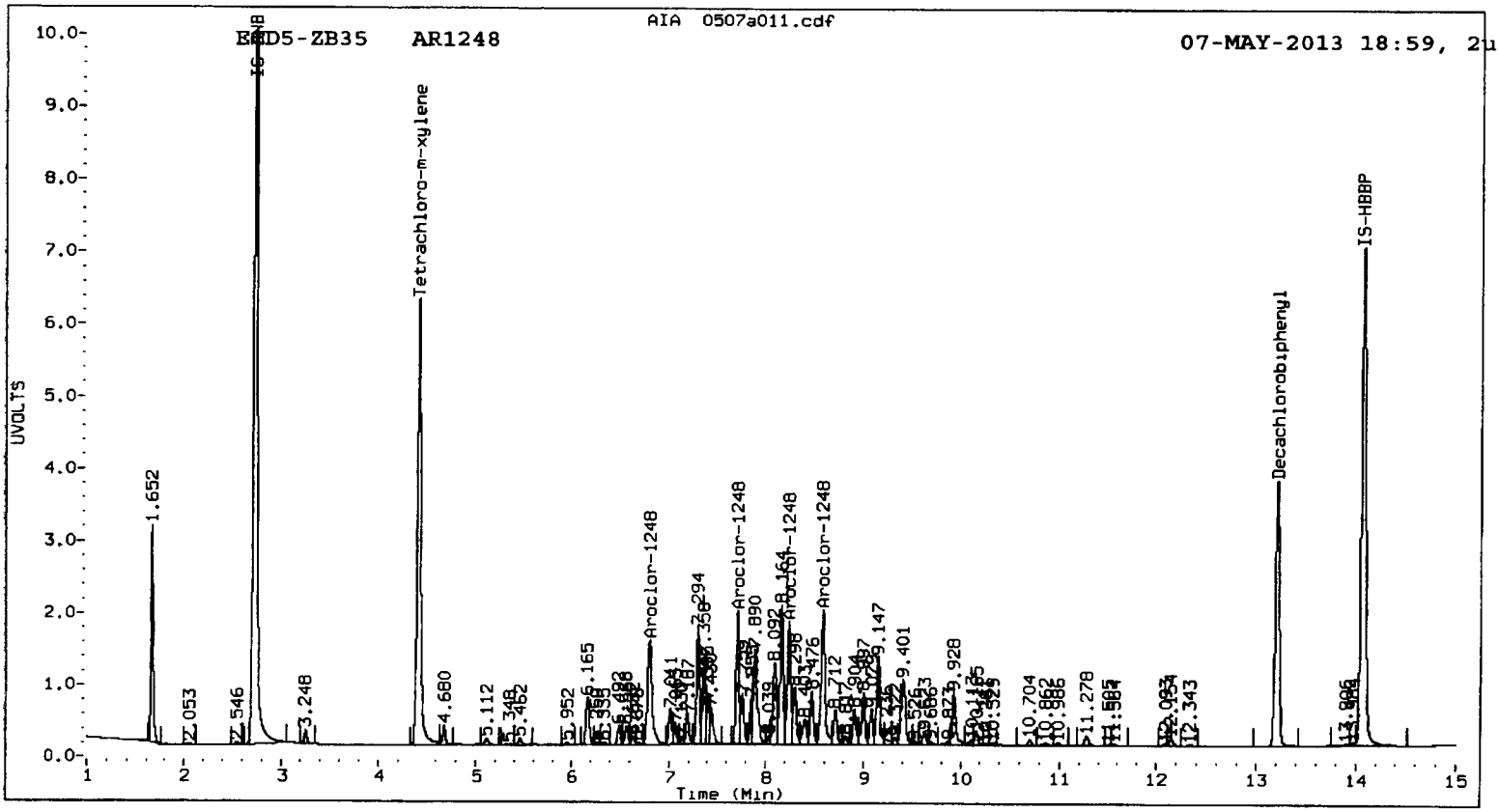
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a012.d
Data file 2: 20130507.b/ical-2.b/0507a012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 07-MAY-2013 19:20
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31597187	4.412	0.000	8169778	38.5	39.8	3.2	Tetrachloro-m-xylen
12.828	0.000	30575045	13.204	-0.001	5300158	35.4	35.2	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.3	99.4
Decachlorobiphenyl	88.4	87.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52930034	8.1
Hexabromobiphenyl	50004151	57859101	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15196733	2.4
Hexabromobiphenyl	9345340	10477901	12.1

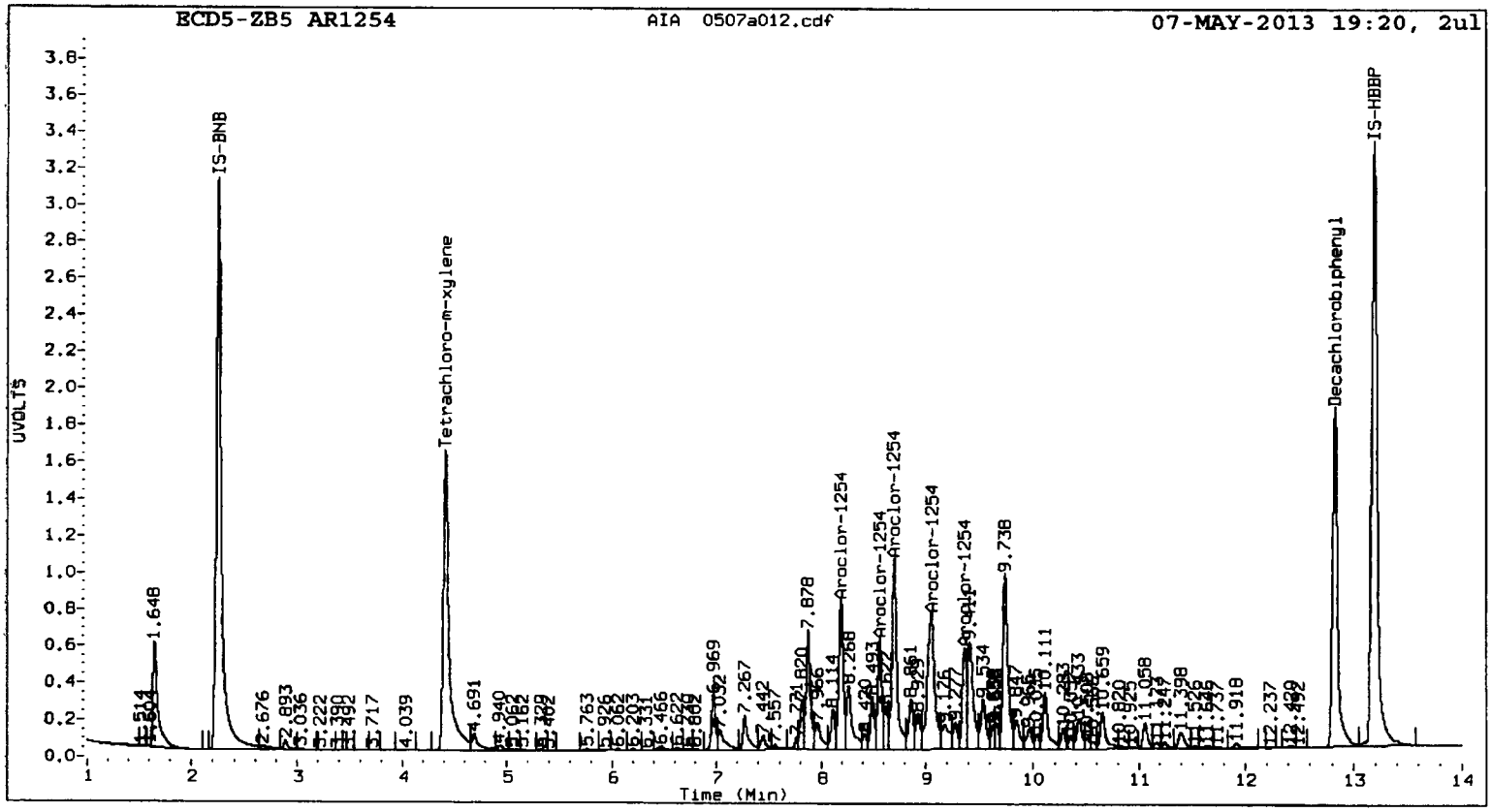
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.192	0.000	12340679	250.0	1	8.298	0.000	1842172	250.0
Aroclor-1254	2	8.564	0.000	8145566	250.0	2	8.475	0.000	2275796	250.0
Aroclor-1254	3	8.700	0.000	16981832	250.0	3	8.996	0.000	1743263	250.0
Aroclor-1254	4	9.053	0.000	17490326	250.0	4	9.147	0.000	3733641	250.0
Aroclor-1254	5	9.362	0.000	6614633	250.0	5	9.935	0.000	2102395	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 185172722 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 35929102 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
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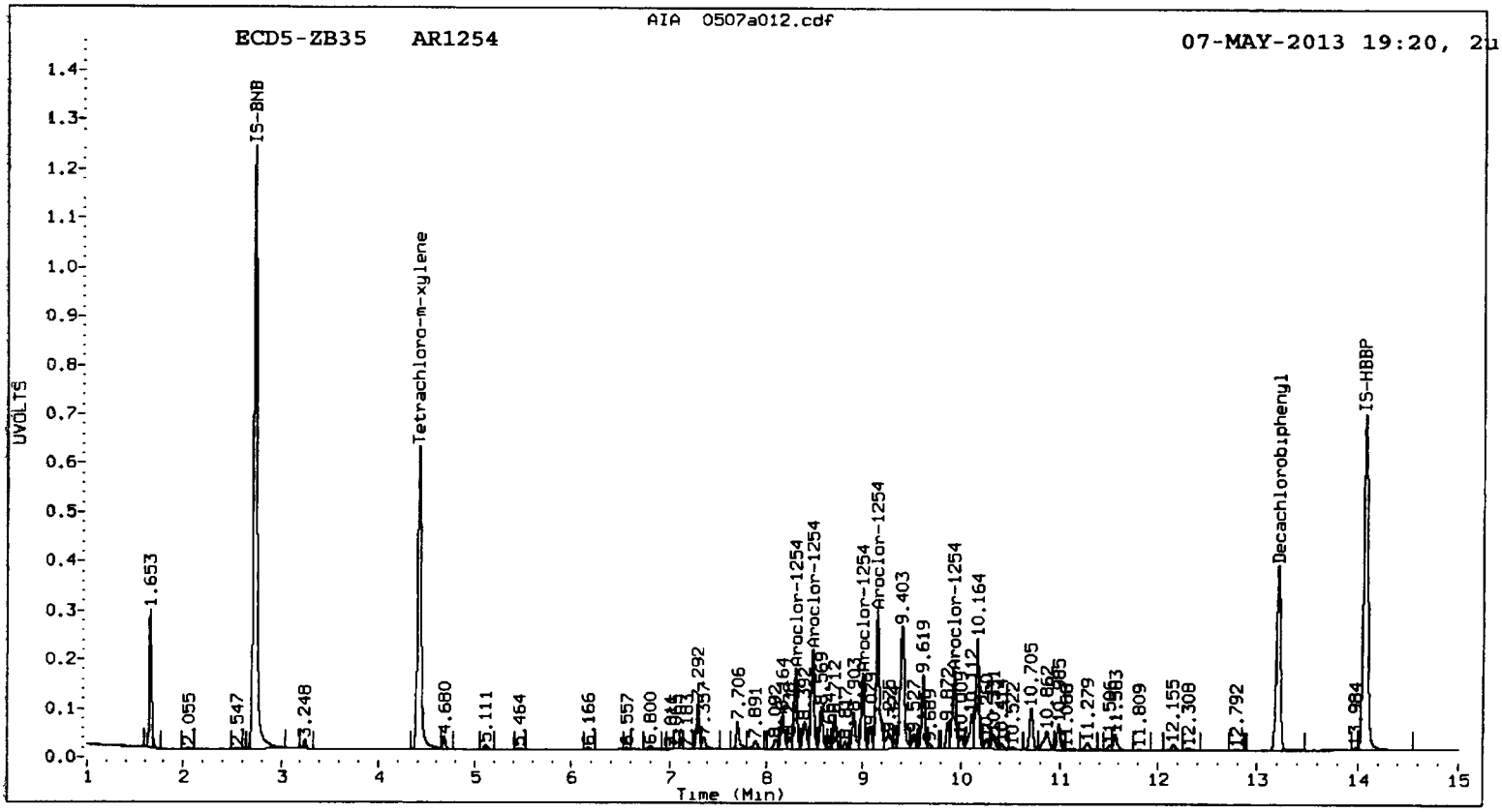
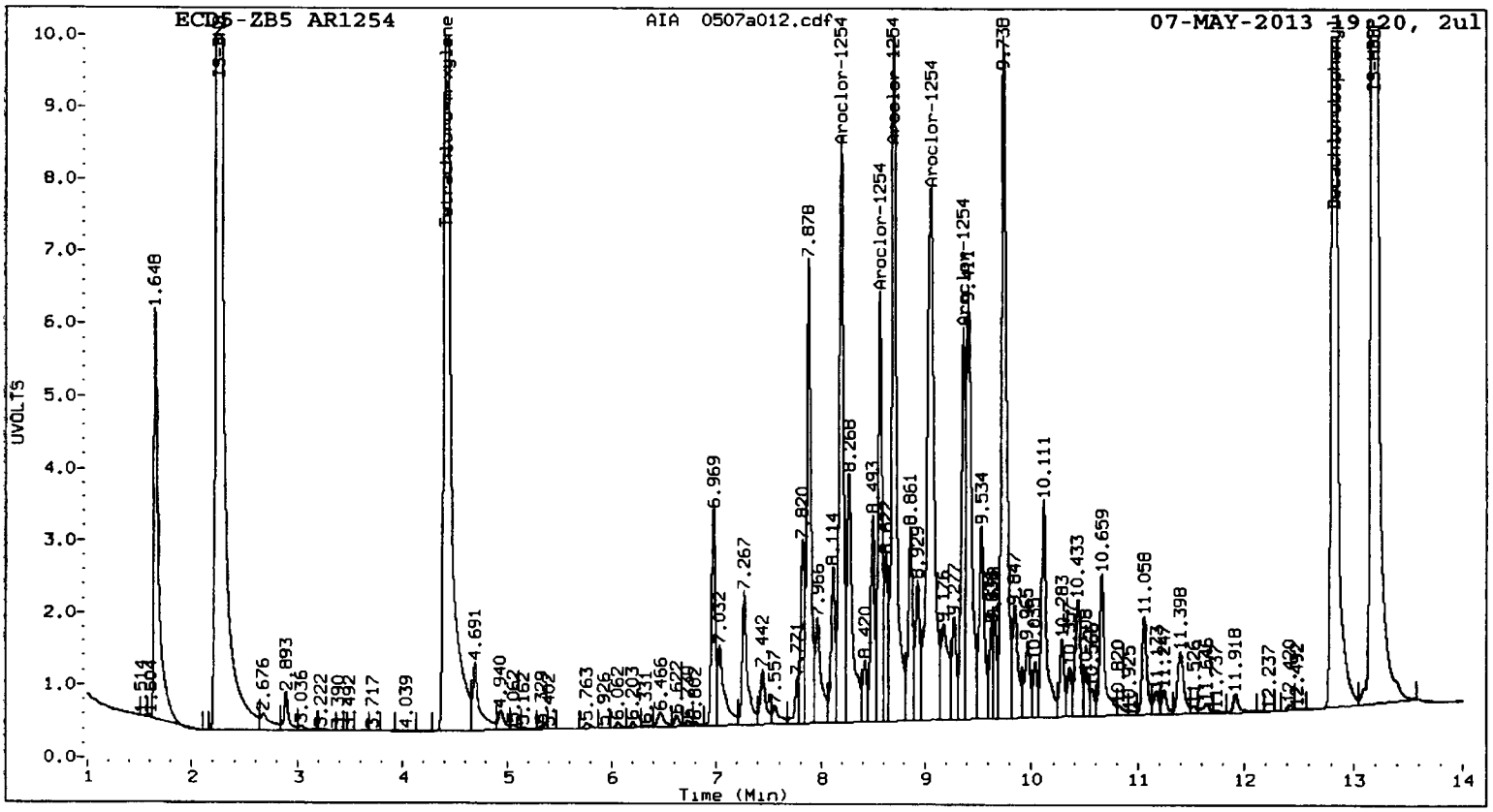
7.878
9.738
10.111


ECD5-ZB35 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
1.653
4.680
9.403
10.164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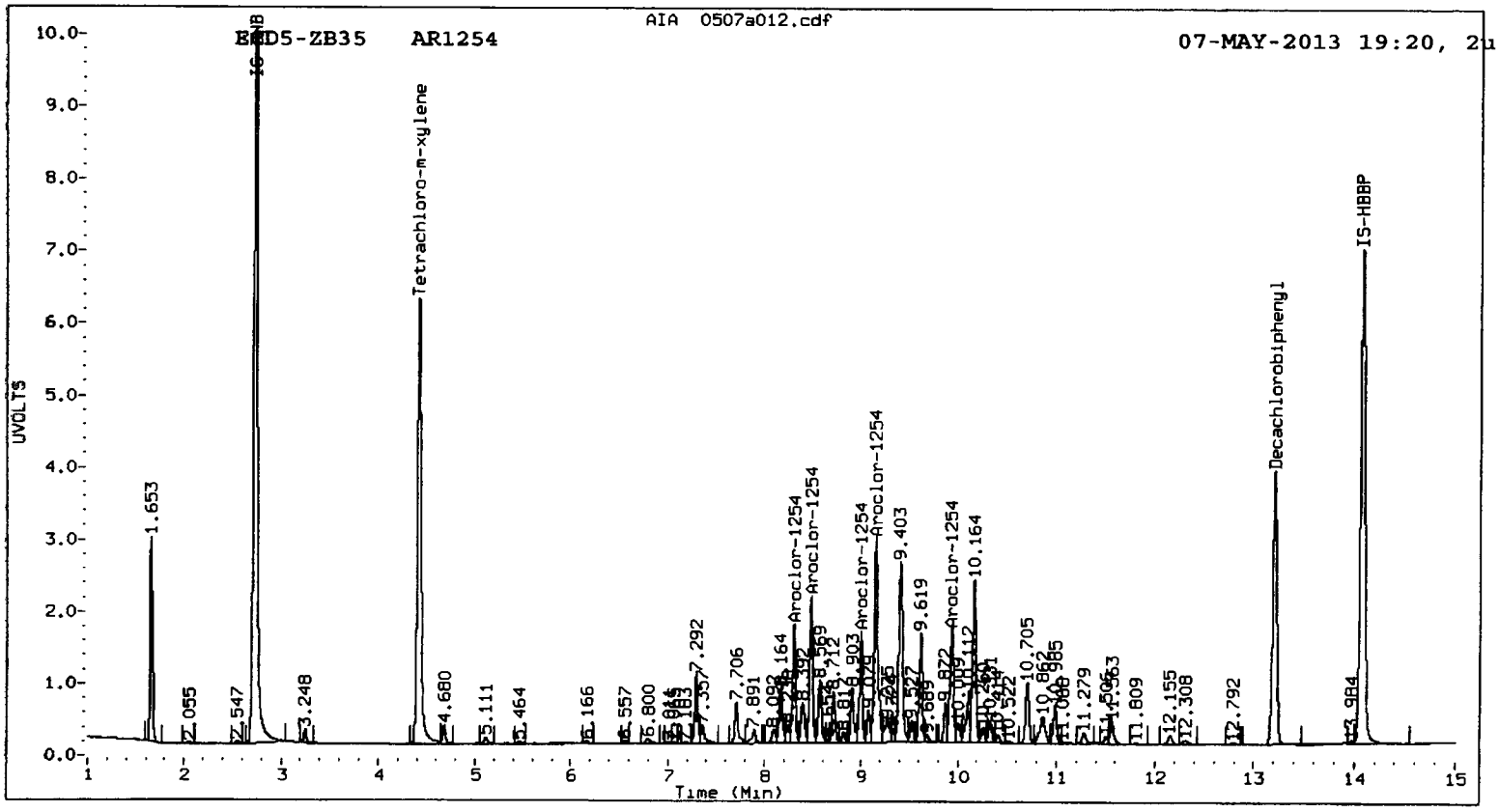
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a013.d
Data file 2: 20130507.b/ical-2.b/0507a013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 07-MAY-2013 19:40
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32354650	4.411	-0.001	8289820	38.8	40.0	2.9	Tetrachloro-m-xylen
12.828	-0.001	30623420	13.203	-0.002	5314887	35.1	34.9	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.1	99.9
Decachlorobiphenyl	87.9	87.2

1 05/09/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53739671	9.7
Hexabromobiphenyl	50004151	58323154	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15340978	3.4
Hexabromobiphenyl	9345340	10583916	13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

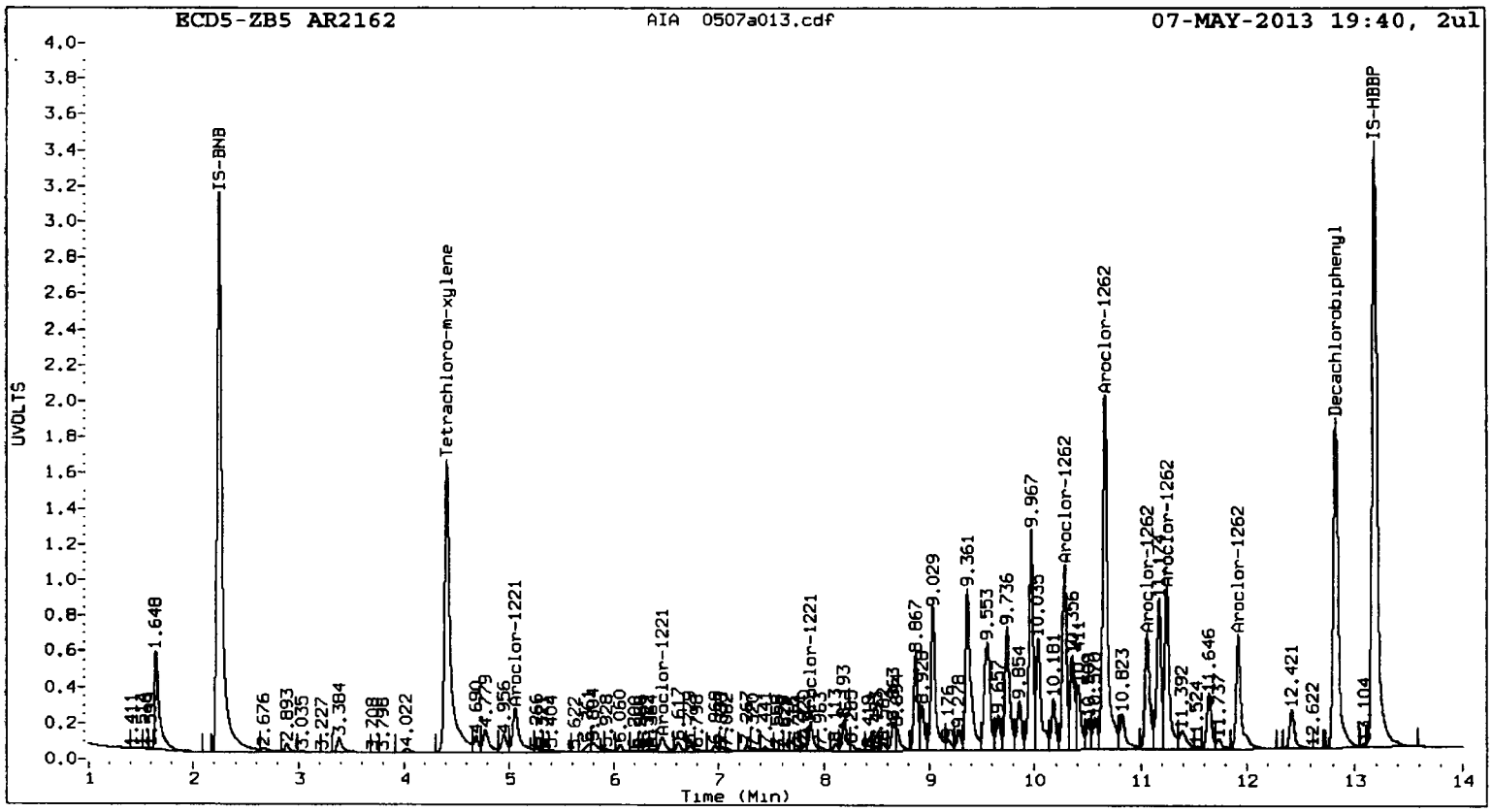
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	5.064	0.000	5473596	250.0	1	3.694	0.000	393179	250.0
Aroclor-1221	2	6.468	0.000	1674697	250.0	2	5.095	0.000	658077	250.0
Aroclor-1221	3	7.878	0.000	2364906	250.0	3	5.345	0.000	358396	250.0
Aroclor-1221	NS	---			----	4	5.460	0.000	1127517	250.0
	Total Col1Ave (3 peaks):				250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	10.283	0.000	13652093	250.0	1	10.260	0.000	3659800	250.0
Aroclor-1262	2	10.659	0.000	32077138	250.0	2	10.710	0.000	3346602	250.0
Aroclor-1262	3	11.059	0.000	10159557	250.0	3	10.985	0.000	6277067	250.0
Aroclor-1262	4	11.247	0.000	14260811	250.0	4	11.567	0.000	4079795	250.0
Aroclor-1262	5	11.918	0.000	10944344	250.0	5	12.306	0.000	1969832	250.0
	Total Col1Ave (5 peaks):				250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
	Corrected Ave (4 peaks):				250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 262283464 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 51791020 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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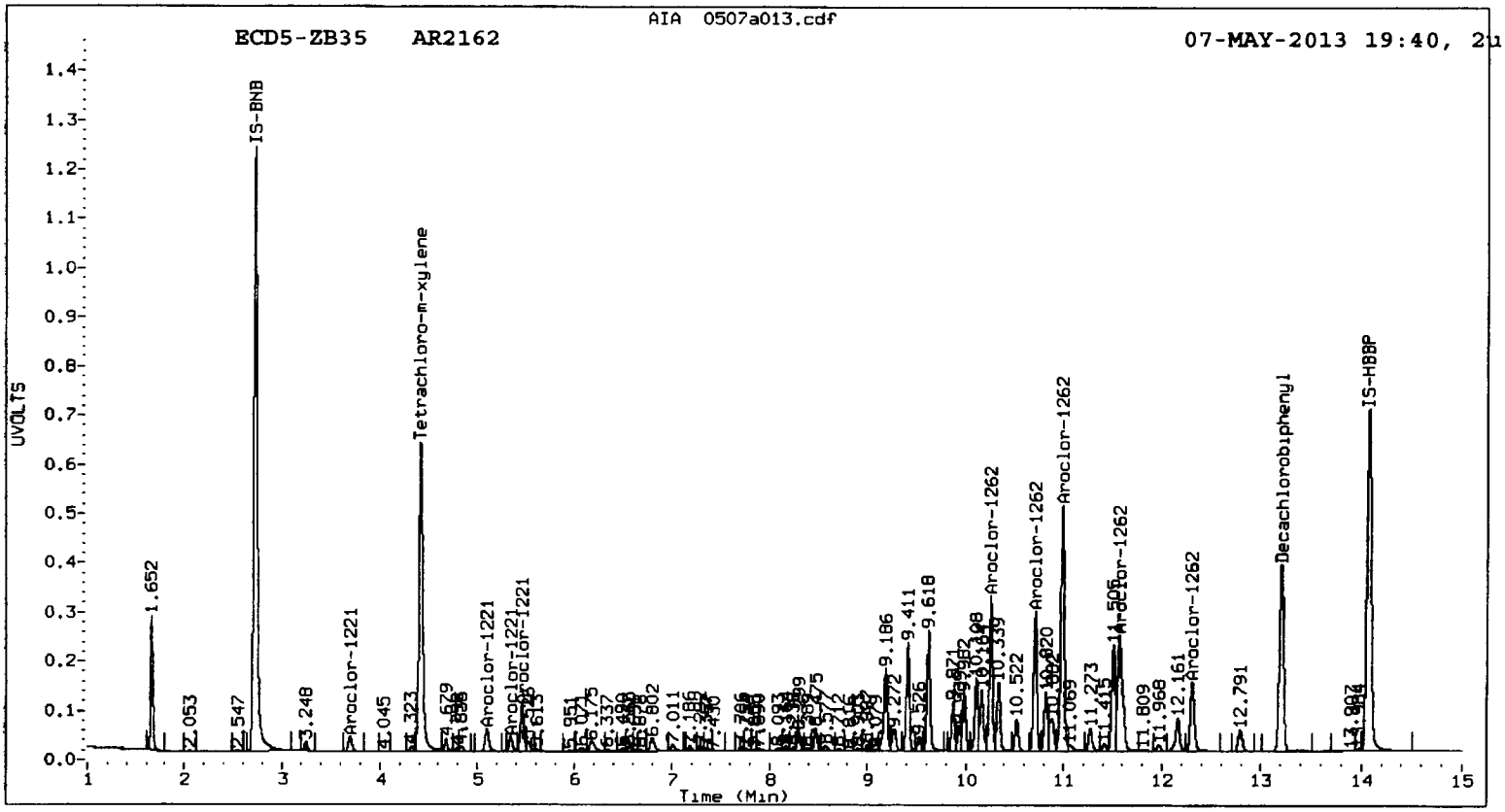
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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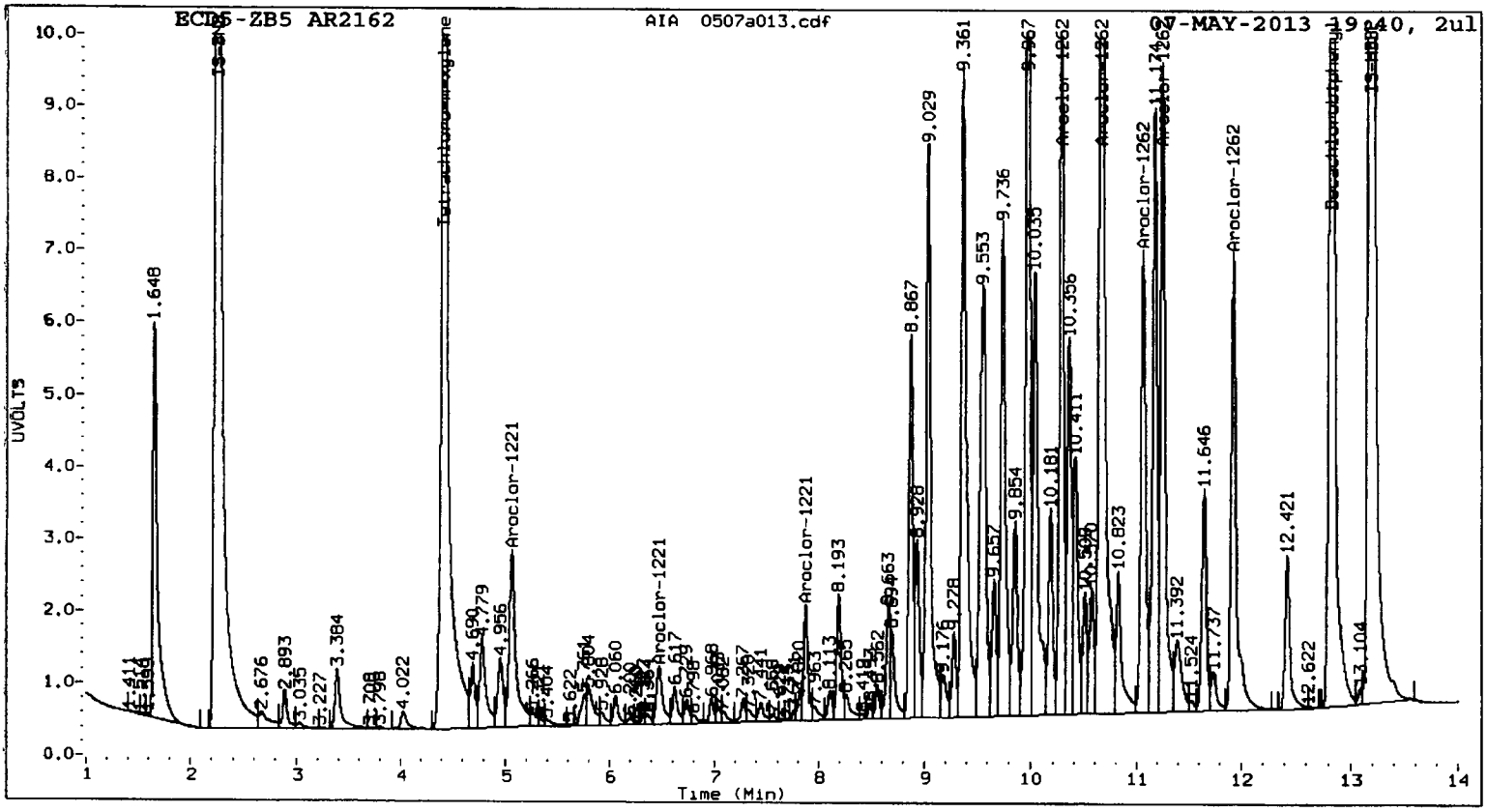
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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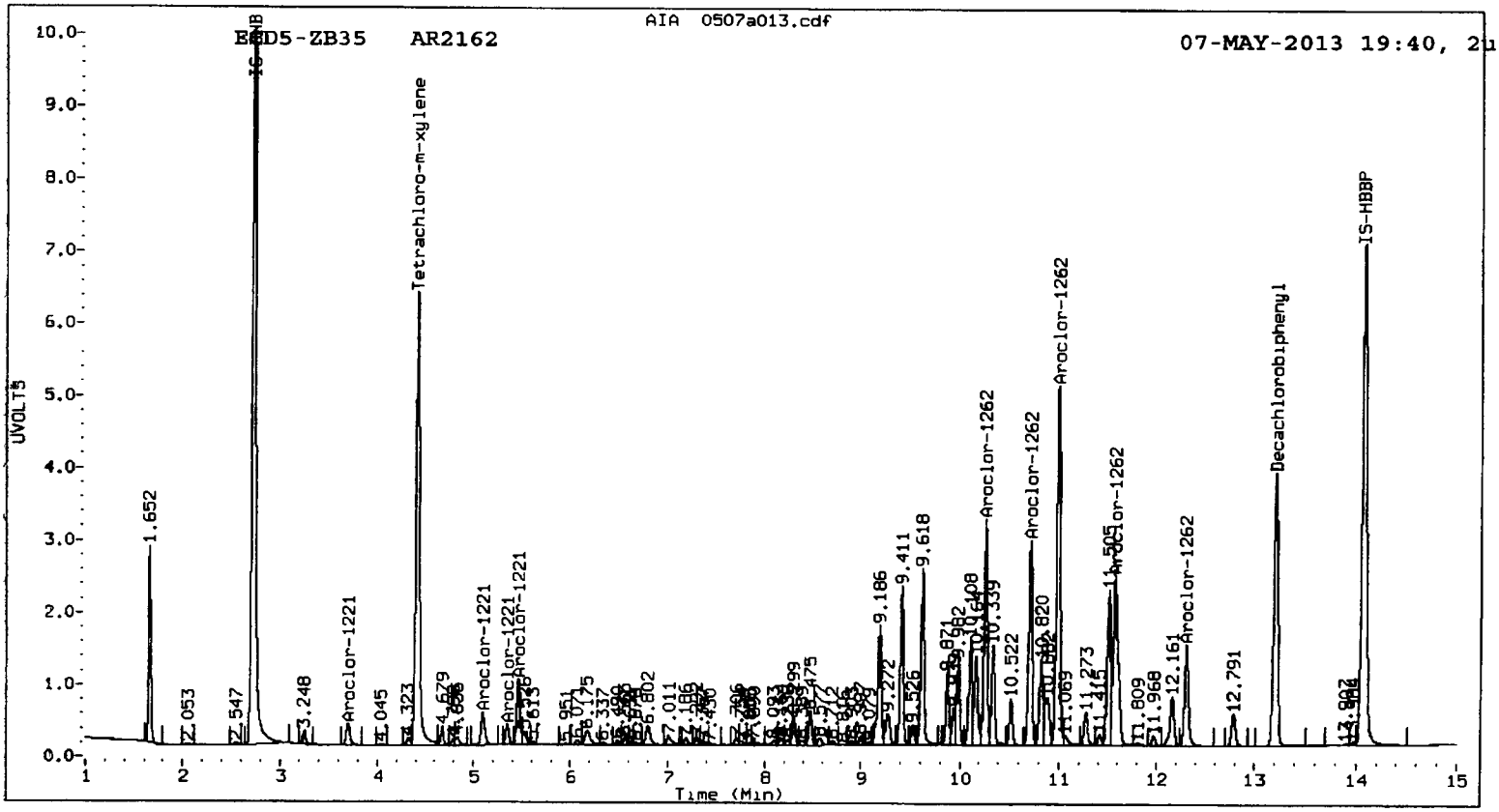
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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AIA 0507a013.cdf
07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a014.d
Data file 2: 20130507.b/ical-2.b/0507a014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 07-MAY-2013 20:00
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	31984640	4.412	0.000	8241550	38.7	40.0	3.2	Tetrachloro-m-xylen
12.828	0.000	43449498	13.205	0.000	7536002	50.6	49.8	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.8	100.0
Decachlorobiphenyl	126.5	124.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53262724	8.7
Hexabromobiphenyl	50004151	57460185	14.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15239954	2.7
Hexabromobiphenyl	9345340	10518547	12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

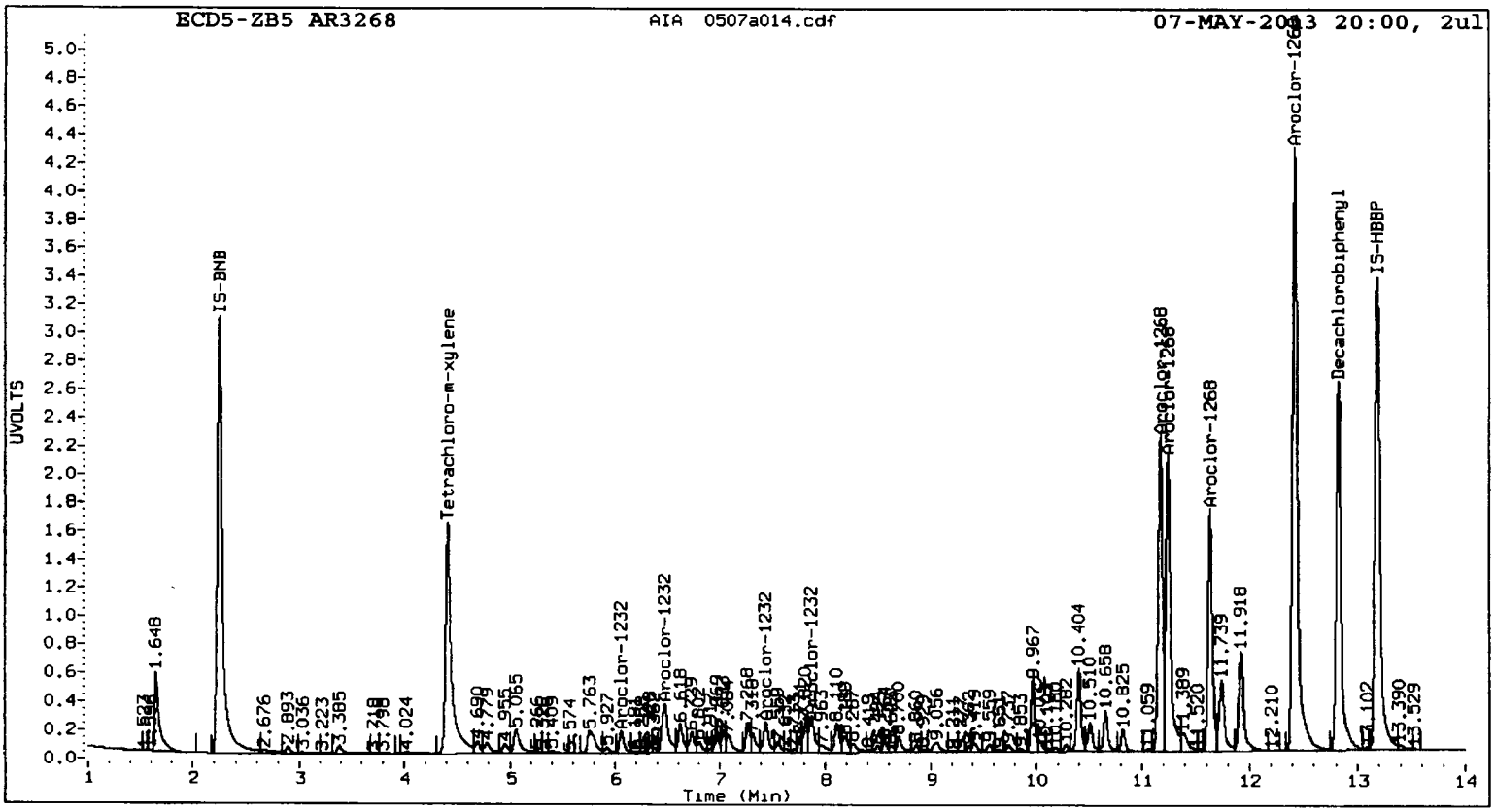
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.060	0.000	2466405	250.0	1	6.165	0.000	977839	250.0
Aroclor-1232	2	6.469	0.000	7549613	250.0	2	6.801	0.000	1952023	250.0
Aroclor-1232	3	7.442	0.000	3923778	250.0	3	7.011	0.000	813950	250.0
Aroclor-1232	4	7.874	0.000	4507818	250.0	4	8.239	0.000	683109	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	11.175	0.000	30229266	250.0	1	11.507	0.000	6347619	250.0
Aroclor-1268	2	11.246	0.000	33428922	250.0	2	11.573	0.000	5983248	250.0
Aroclor-1268	3	11.632	0.000	24825470	250.0	3	11.969	0.000	4735989	250.0
Aroclor-1268	4	12.422	0.000	69938717	250.0	4	12.792	0.000	12266670	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (4.511 - 12.728) = 288711386 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 55525050 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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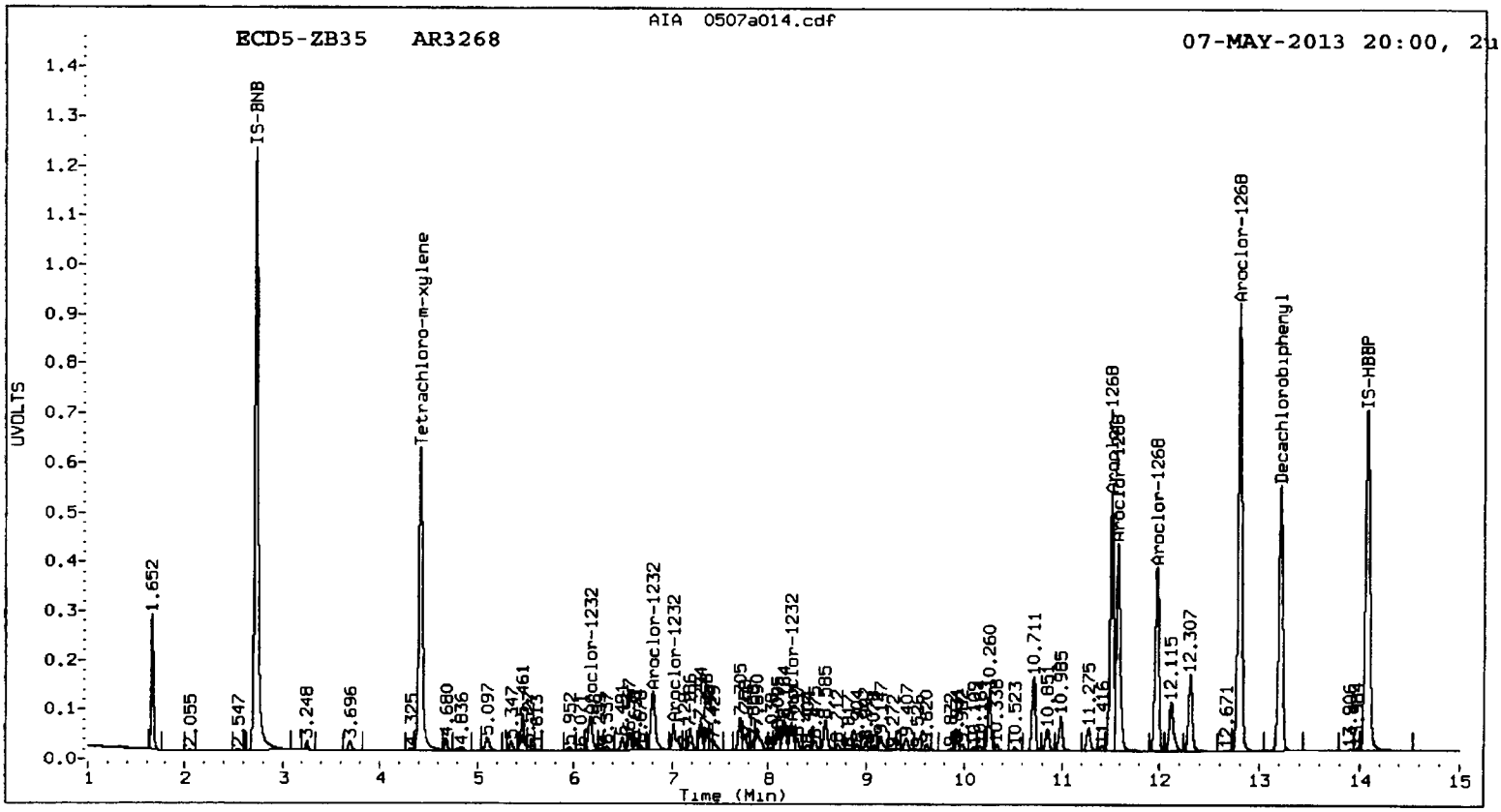
AIA 0507a014.cdf
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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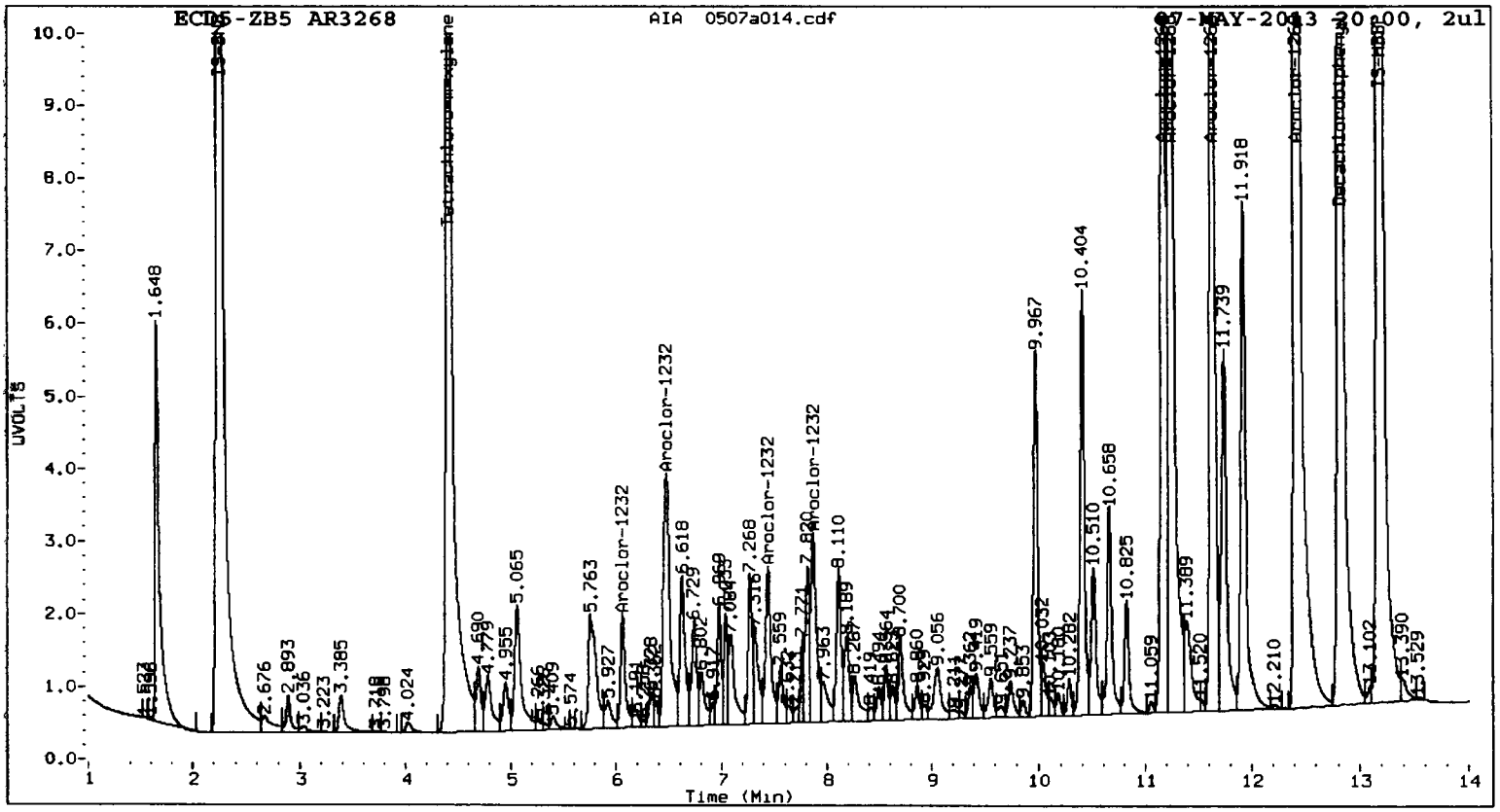
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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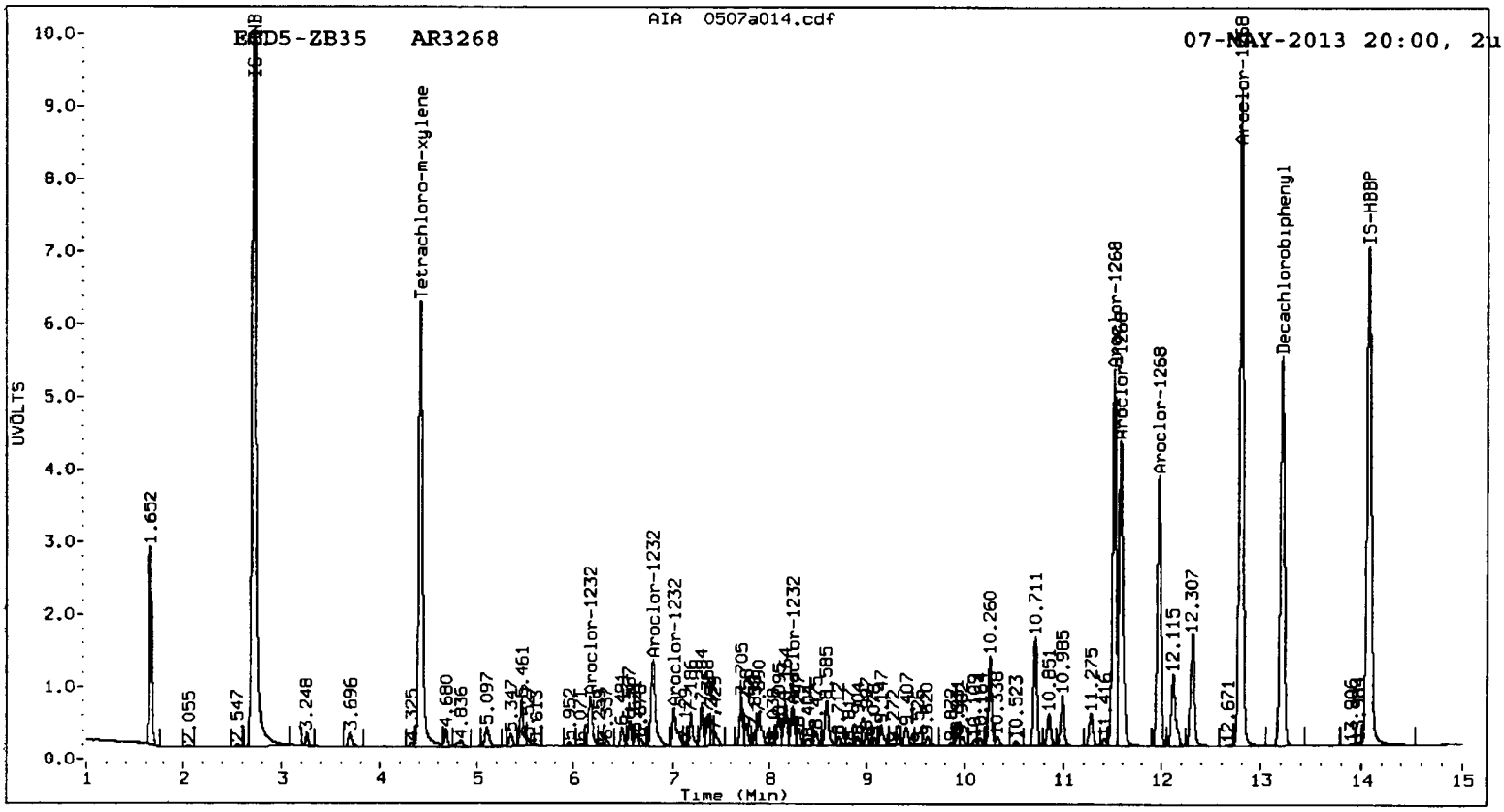
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a015.d
Data file 2: 20130507.b/ical-2.b/0507a015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 07-MAY-2013 20:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31924156	4.411	0.000	8216234	38.0	38.8	2.2	Tetrachloro-m-xylen
12.828	0.000	30828729	13.205	0.000	5320370	34.3	34.0	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.9	97.0
Decachlorobiphenyl	85.8	84.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54248541	10.8
Hexabromobiphenyl	50004151	60099807	20.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15658755	5.5
Hexabromobiphenyl	9345340	10888882	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.060	-0.001	4470855	182.8	1	6.166	0.000	1663757	186.2
Aroclor-1016	2	6.468	0.000	13617695	180.8	2	6.802	0.001	3565246	183.5
Aroclor-1016	3	6.617	0.001	6113829	181.2	3	7.185	0.000	947812	186.6
Aroclor-1016	4	6.729	0.001	4549783	180.4	4	7.358	0.000	881454	186.3
Total Col1Ave (4 peaks):					181.3	Total Col2Ave (4 peaks):				185.7 RPD = 2
Corrected Ave (3 peaks):					180.8	Corrected Ave (3 peaks):				185.4 RPD = 2
Aroclor-1221	1	5.063	-0.001	3230823	146.2	1	---			0.0
Aroclor-1221	2	6.468	0.000	13617695	2013.8	2	5.101	0.006	254025	94.5
Aroclor-1221	3	7.874	-0.004	7607955	796.7	3	5.346	0.001	163596	111.8
Aroclor-1221	NS	---			---	4	5.461	0.001	799065	173.6
Total Col1Ave (3 peaks):					985.6	Total Col2Ave (3 peaks):				126.6 RPD = 154*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	4470855	444.9	1	6.166	0.000	1663757	414.0
Aroclor-1232	2	6.468	-0.001	13617695	442.7	2	6.802	0.000	3565246	444.4
Aroclor-1232	3	7.442	0.000	6893473	431.2	3	7.009	-0.002	1501264	448.8
Aroclor-1232	4	7.874	0.000	7607955	414.3	4	8.238	-0.001	1167882	416.0
Total Col1Ave (4 peaks):					433.3	Total Col2Ave (4 peaks):				430.8 RPD = 1
Corrected Ave (3 peaks):					429.4	Corrected Ave (3 peaks):				424.8 RPD = 1
Aroclor-1242	1	6.060	0.000	4470855	228.8	1	6.166	-0.002	1663757	233.2
Aroclor-1242	2	6.468	0.000	13617695	227.2	2	6.802	-0.001	3565246	227.5
Aroclor-1242	3	6.617	0.001	6113829	228.7	3	7.009	-0.002	1501264	229.3
Aroclor-1242	4	7.874	0.001	7607955	230.4	4	8.238	-0.001	1167882	212.9
Total Col1Ave (4 peaks):					228.8	Total Col2Ave (4 peaks):				225.7 RPD = 1
Corrected Ave (3 peaks):					228.2	Corrected Ave (3 peaks):				223.2 RPD = 2
Aroclor-1248	1	6.468	0.002	13617695	356.7	1	6.802	0.002	3565246	363.4
Aroclor-1248	2	7.442	-0.001	6893473	160.5	2	7.705	-0.001	1266936	155.7
Aroclor-1248	3	7.874	-0.001	7607955	139.3	3	8.238	-0.001	1167882	138.6
Aroclor-1248	4	8.110	0.000	5502492	144.5	4	8.584	0.001	1486653	135.8
Total Col1Ave (4 peaks):					200.3	Total Col2Ave (4 peaks):				198.4 RPD = 1
Corrected Ave (3 peaks):					148.1	Corrected Ave (3 peaks):				143.4 RPD = 3
Aroclor-1254	1	8.190	-0.002	3647666	72.1	1	8.298	0.000	493209	65.0
Aroclor-1254	2	8.564	0.000	3121258	63.5	2	8.475	0.000	469897	50.1
Aroclor-1254	3	8.700	0.000	3853127	55.3	3	8.996	0.000	426802	59.4
Aroclor-1254	4	9.057	0.005	3495648	48.8	4	9.147	0.000	714252	46.4
Aroclor-1254	5	9.362	0.000	680929	25.1	5	9.930	-0.004	413402	47.7
Total Col1Ave (5 peaks):					53.0	Total Col2Ave (5 peaks):				53.7 RPD = 1
Corrected Ave (4 peaks):					48.2	Corrected Ave (4 peaks):				50.9 RPD = 5
Aroclor-1260	1	9.966	-0.001	248097	5.0	1	10.260	0.001	14609	1.5
Aroclor-1260	2	10.282	-0.001	177183	3.6	2	10.704	-0.005	88810	7.7
Aroclor-1260	3	10.658	-0.001	314580	2.7	3	10.985	0.001	50951	2.4
Aroclor-1260	4	11.058	0.000	188167	3.3	4	11.506	0.001	16977	2.9
Aroclor-1260	5	11.248	0.001	45330	1.5	NS	---			----
Total Col1Ave (5 peaks):					3.2	Total Col2Ave (4 peaks):				3.6 RPD = 11
Corrected Ave (4 peaks):					2.8	Corrected Ave (3 peaks):				2.3 RPD = 20
Aroclor-1262	1	10.282	0.000	177183	3.1	1	10.260	0.001	14609	1.0
Aroclor-1262	2	10.658	-0.001	314580	2.4	2	10.704	-0.006	88810	6.4
Aroclor-1262	3	11.058	-0.001	188167	4.5	3	10.985	0.000	50951	2.0
Aroclor-1262	4	11.248	0.001	45330	0.8	4	11.564	-0.003	37242	2.2
Aroclor-1262	5	11.923	0.005	55055	1.2	5	12.344	0.038	32722	4.0
Total Col1Ave (5 peaks):					2.4	Total Col2Ave (5 peaks):				3.1 RPD = 26
Corrected Ave (4 peaks):					1.9	Corrected Ave (4 peaks):				2.3 RPD = 20
Aroclor-1268	1	11.173	-0.002	51213	0.4	1	11.506	0.000	16977	0.6

Aroclor-1268 2	11.248	0.002	45330	0.3	2	11.564	-0.009	37242	1.5
Aroclor-1268 3	11.629	-0.004	63465	0.6	3	---			0.0
Aroclor-1268 4	12.419	-0.003	91475	0.3	4	12.791	-0.001	10921	0.2

Total Col1Ave (4 peaks): 0.4 Total Col2Ave (3 peaks): 0.8 RPD = 62*

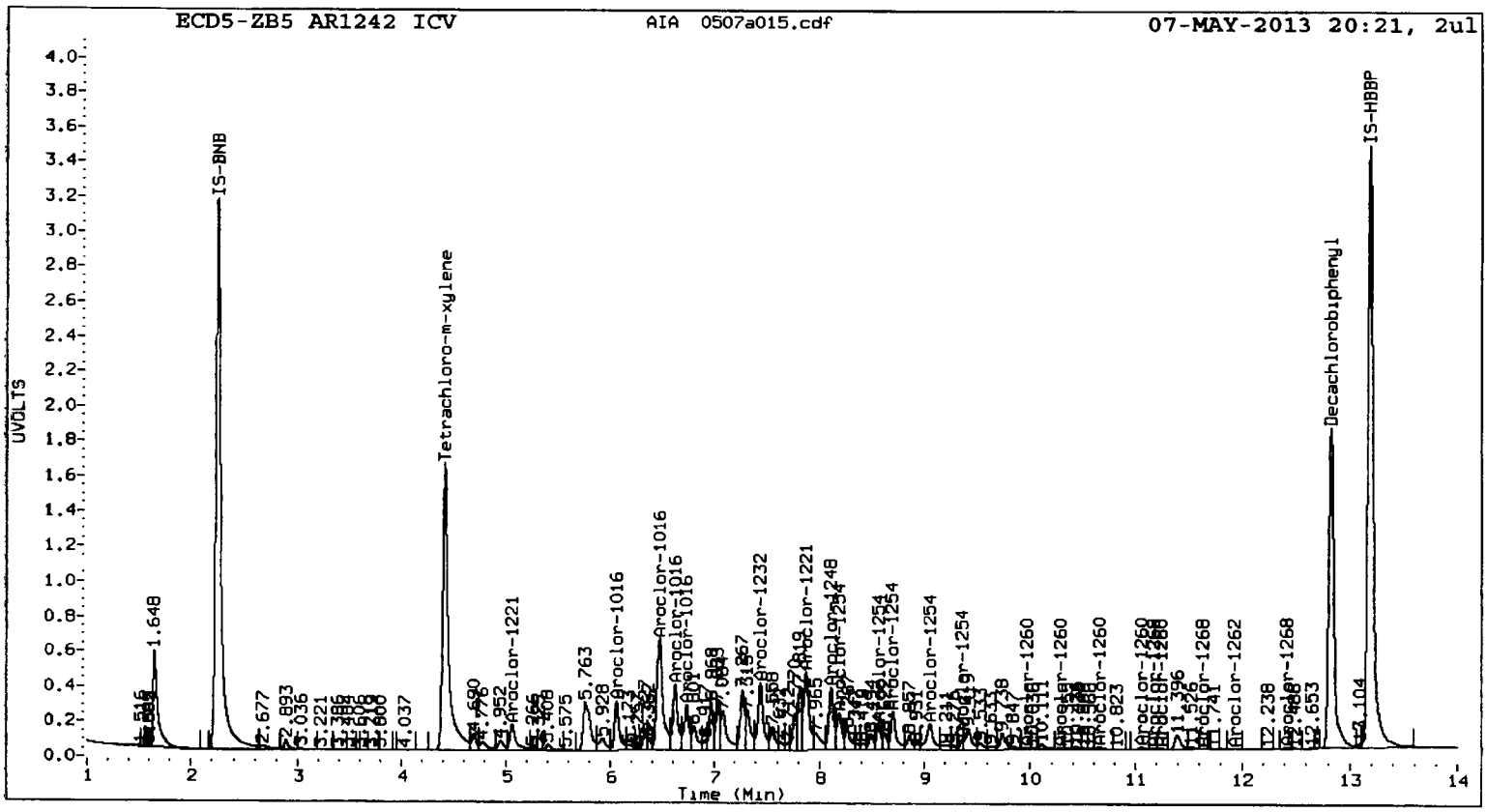
Corrected Ave (3 peaks): 0.3 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 136701149 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 28787302 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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Aroclor-1016
Aroclor-1221
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Aroclor-1248
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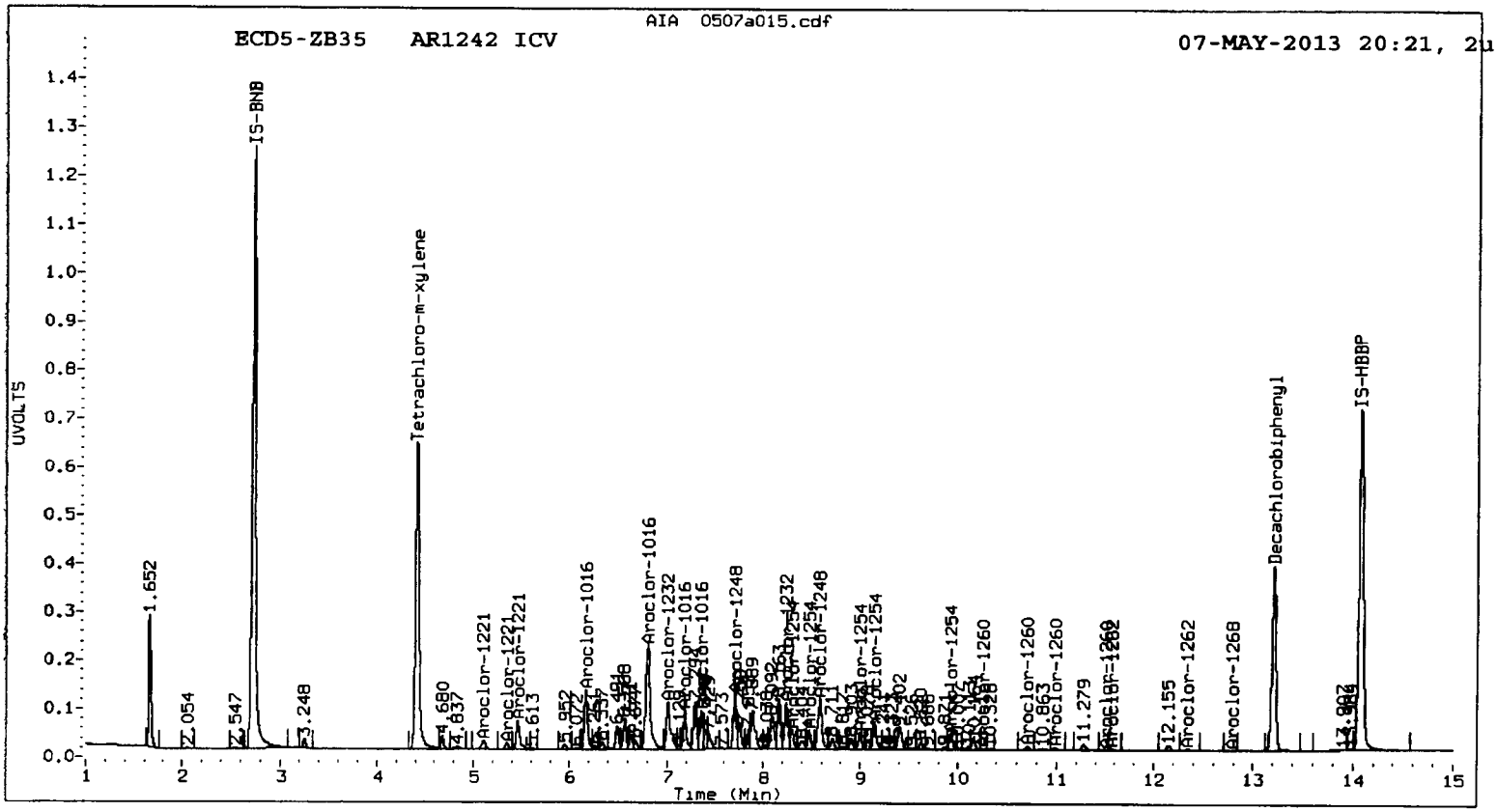
Aroclor-1260
Aroclor-1262
Aroclor-1268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07-MAY-2013 20:21, 2u
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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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2.054
2.547
3.248
4.680
4.837
5.952
Aroclor-1221
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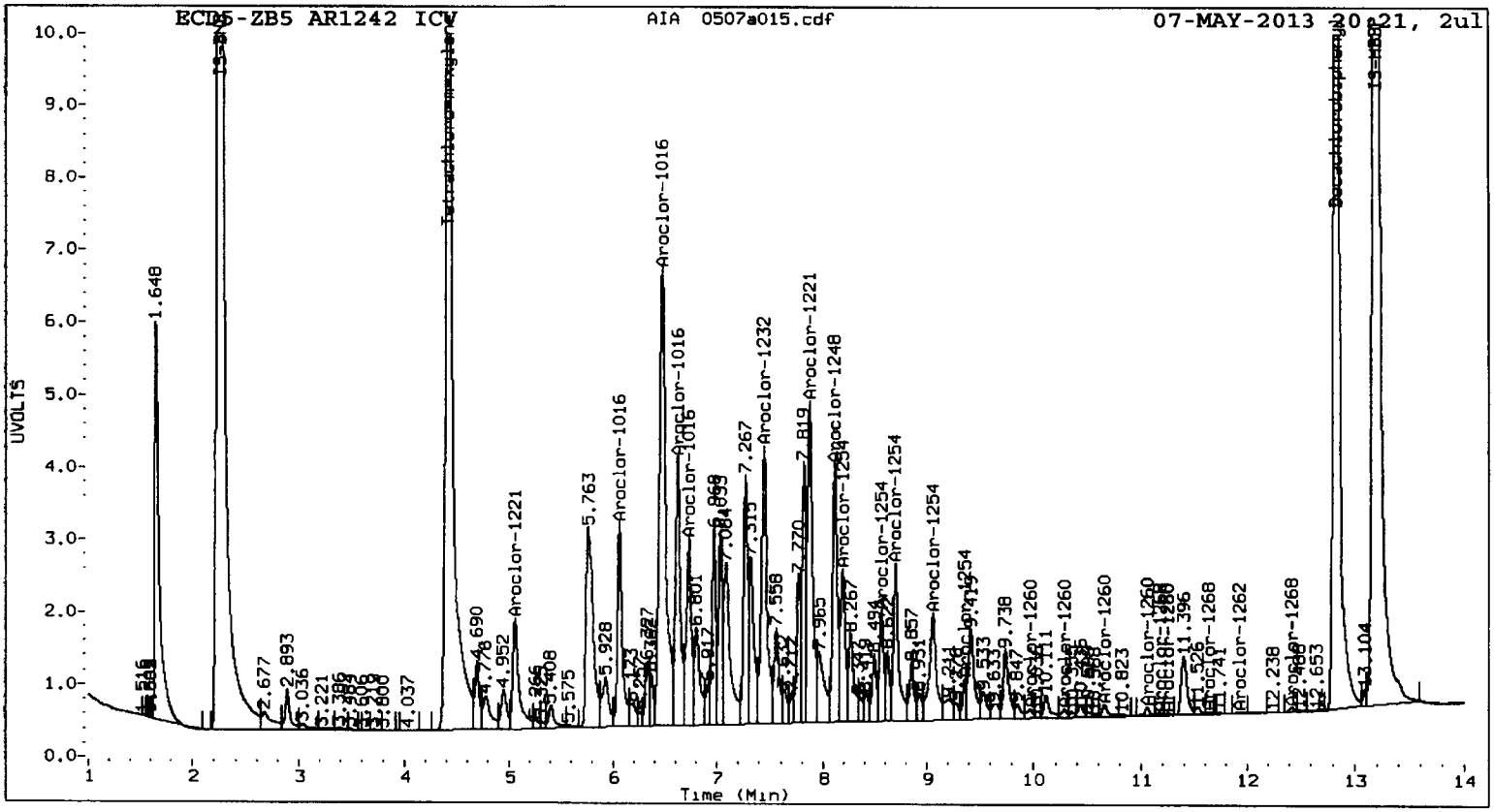
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Time (Min)
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Aroclor-1221
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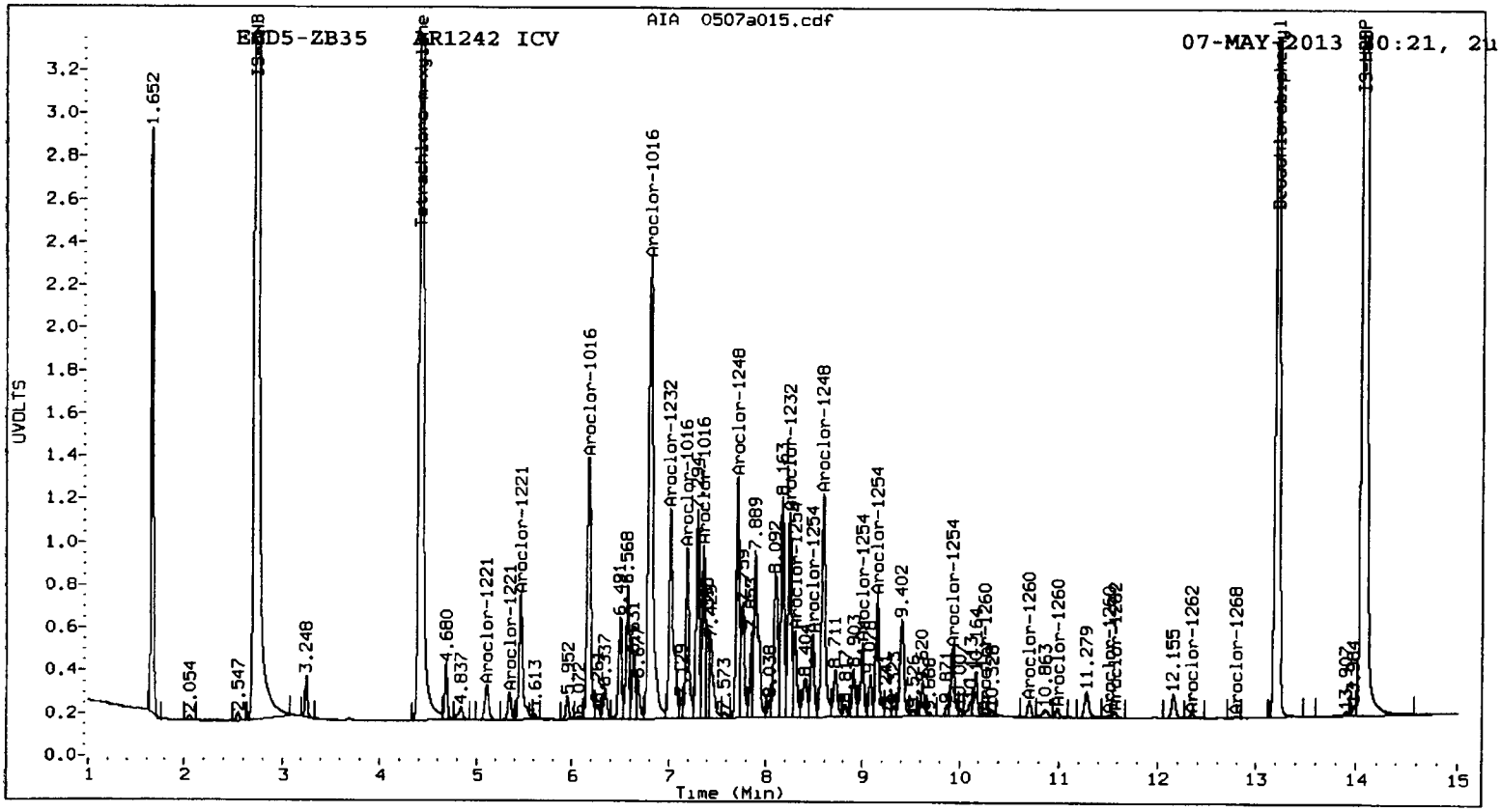
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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Time (Min)
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Tetrachloro-m-xylene
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Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a016.d
Data file 2: 20130507.b/ical-2.b/0507a016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 07-MAY-2013 20:41
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	30900777	4.412	0.000	7953899	37.1	38.1	2.5	Tetrachloro-m-xylen
12.828	0.000	31048472	13.203	-0.002	5334093	34.3	33.8	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	92.9	95.2
Decachlorobiphenyl	85.7	84.6

05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53651835	9.5
Hexabromobiphenyl	50004151	60660565	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15441440	4.1
Hexabromobiphenyl	9345340	10952020	17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	-0.001	2318537	95.9	1	6.163	-0.002	909531	103.2
Aroclor-1016	2	6.467	-0.002	9438131	126.7	2	6.800	-0.001	2390530	124.8
Aroclor-1016	3	6.619	0.002	3851669	115.4	3	7.186	0.000	515984	103.0
Aroclor-1016	4	6.729	0.001	2894284	116.1	4	7.358	0.000	1263898	270.9
Total Col1Ave (4 peaks):					113.5	Total Col2Ave (4 peaks):				150.5 RPD = 28
Corrected Ave (3 peaks):					109.1	Corrected Ave (3 peaks):				110.3 RPD = 1
Aroclor-1221	1	5.063	0.000	864224	39.5	1	---			0.0
Aroclor-1221	2	6.467	-0.001	9438131	1411.2	2	5.110	0.015	123396	46.6
Aroclor-1221	3	7.874	-0.004	12549915	1328.9	3	5.348	0.003	31614	21.9
Aroclor-1221	NS	---			----	4	5.462	0.001	185951	41.0
Total Col1Ave (3 peaks):					926.5	Total Col2Ave (3 peaks):				36.5 RPD = 185*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	2318537	233.3	1	6.163	-0.002	909531	229.5
Aroclor-1232	2	6.467	-0.002	9438131	310.3	2	6.800	-0.001	2390530	302.2
Aroclor-1232	3	7.441	0.000	9852880	623.2	3	7.010	-0.001	586053	177.7
Aroclor-1232	4	7.874	0.000	12549915	691.0	4	8.238	-0.001	1898417	685.7
Total Col1Ave (4 peaks):					464.4	Total Col2Ave (4 peaks):				348.8 RPD = 28
Corrected Ave (3 peaks):					388.9	Corrected Ave (3 peaks):				236.4 RPD = 49*
Aroclor-1242	1	6.060	0.000	2318537	120.0	1	6.163	-0.004	909531	129.3
Aroclor-1242	2	6.467	-0.001	9438131	159.3	2	6.800	-0.003	2390530	154.7
Aroclor-1242	3	6.619	0.003	3851669	145.7	3	7.010	-0.001	586053	90.8
Aroclor-1242	4	7.874	0.001	12549915	384.3	4	8.238	-0.001	1898417	351.0
Total Col1Ave (4 peaks):					202.3	Total Col2Ave (4 peaks):				181.4 RPD = 11
Corrected Ave (3 peaks):					141.6	Corrected Ave (3 peaks):				124.9 RPD = 13
Aroclor-1248	1	6.467	0.000	9438131	250.0	1	6.800	0.000	2390530	247.1
Aroclor-1248	2	7.441	-0.001	9852880	232.0	2	7.705	-0.001	1901637	237.0
Aroclor-1248	3	7.874	-0.001	12549915	232.4	3	8.238	-0.001	1898417	228.5
Aroclor-1248	4	8.110	0.000	8659425	230.0	4	8.584	0.000	2478354	229.6
Total Col1Ave (4 peaks):					236.1	Total Col2Ave (4 peaks):				235.5 RPD = 0
Corrected Ave (3 peaks):					231.8	Corrected Ave (3 peaks):				231.7 RPD = 0
Aroclor-1254	1	8.190	-0.003	6700207	133.9	1	8.298	0.000	911407	121.7
Aroclor-1254	2	8.563	0.000	4108008	124.4	2	8.476	0.001	848875	91.8
Aroclor-1254	3	8.700	0.000	7416000	107.7	3	8.996	0.000	845277	119.3
Aroclor-1254	4	9.057	0.005	6343972	89.5	4	9.147	0.000	1366372	90.0
Aroclor-1254	5	9.362	0.000	724814	27.0	5	9.929	-0.006	923605	108.1
Total Col1Ave (5 peaks):					96.5	Total Col2Ave (5 peaks):				106.2 RPD = 10
Corrected Ave (4 peaks):					87.1	Corrected Ave (4 peaks):				102.3 RPD = 16
Aroclor-1260	1	9.965	-0.002	449508	9.0	1	10.261	0.001	42393	4.3
Aroclor-1260	2	10.283	0.000	290261	5.9	2	10.705	-0.004	108079	9.3
Aroclor-1260	3	10.658	-0.001	538597	4.6	3	10.986	0.001	81136	3.8
Aroclor-1260	4	11.058	0.000	190563	3.3	4	11.505	0.000	34540	5.9
Aroclor-1260	5	11.248	0.001	168155	5.5	NS	---			----
Total Col1Ave (5 peaks):					5.7	Total Col2Ave (4 peaks):				5.8 RPD = 3
Corrected Ave (4 peaks):					4.8	Corrected Ave (3 peaks):				4.7 RPD = 3
Aroclor-1262	1	10.283	0.000	290261	5.1	1	10.261	0.001	42393	2.8
Aroclor-1262	2	10.658	0.000	538597	4.0	2	10.705	-0.005	108079	7.8
Aroclor-1262	3	11.058	-0.002	190563	4.5	3	10.986	0.000	81136	3.1
Aroclor-1262	4	11.248	0.000	168155	2.8	4	11.567	0.000	56086	3.3
Aroclor-1262	5	11.919	0.001	152715	3.4	5	12.341	0.035	50555	6.2
Total Col1Ave (5 peaks):					4.0	Total Col2Ave (5 peaks):				4.6 RPD = 16
Corrected Ave (4 peaks):					3.7	Corrected Ave (4 peaks):				3.9 RPD = 5
Aroclor-1268	1	11.173	-0.002	164171	1.3	1	11.505	-0.001	34540	1.3

Aroclor-1268	2	11.248	0.002	168155	1.2	2	11.567	-0.006	56086	2.3
Aroclor-1268	3	11.641	0.008	89736	0.9	3	---			0.0
Aroclor-1268	4	12.419	-0.002	102180	0.3	4	12.793	0.001	11794	0.2

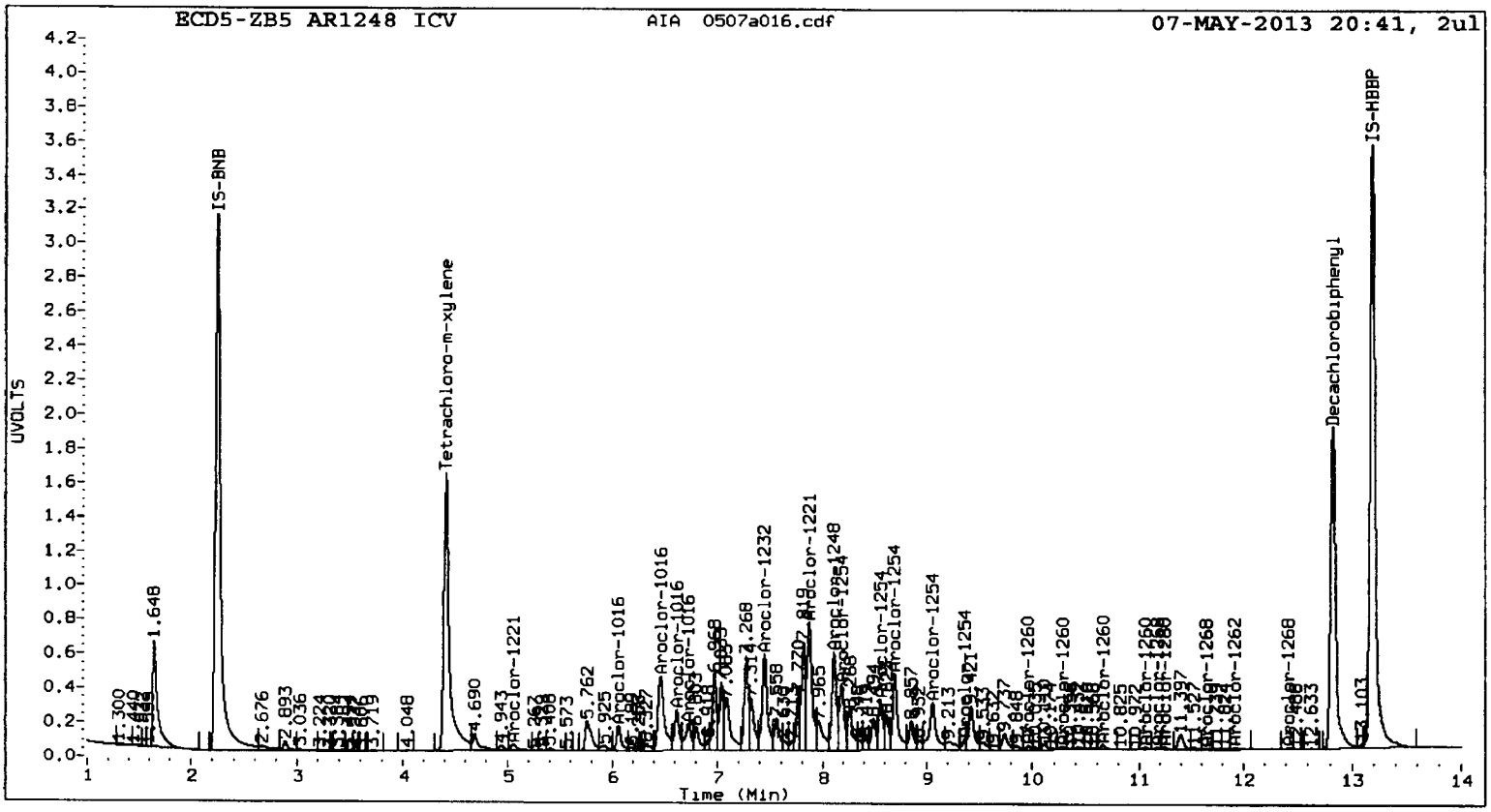
Total Col1Ave (4 peaks): 0.9 Total Col2Ave (3 peaks): 1.3 RPD = 31

Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (4.511 - 12.728) = 167287666 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 33824743 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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4.690
Aroclor-1016
Aroclor-1221
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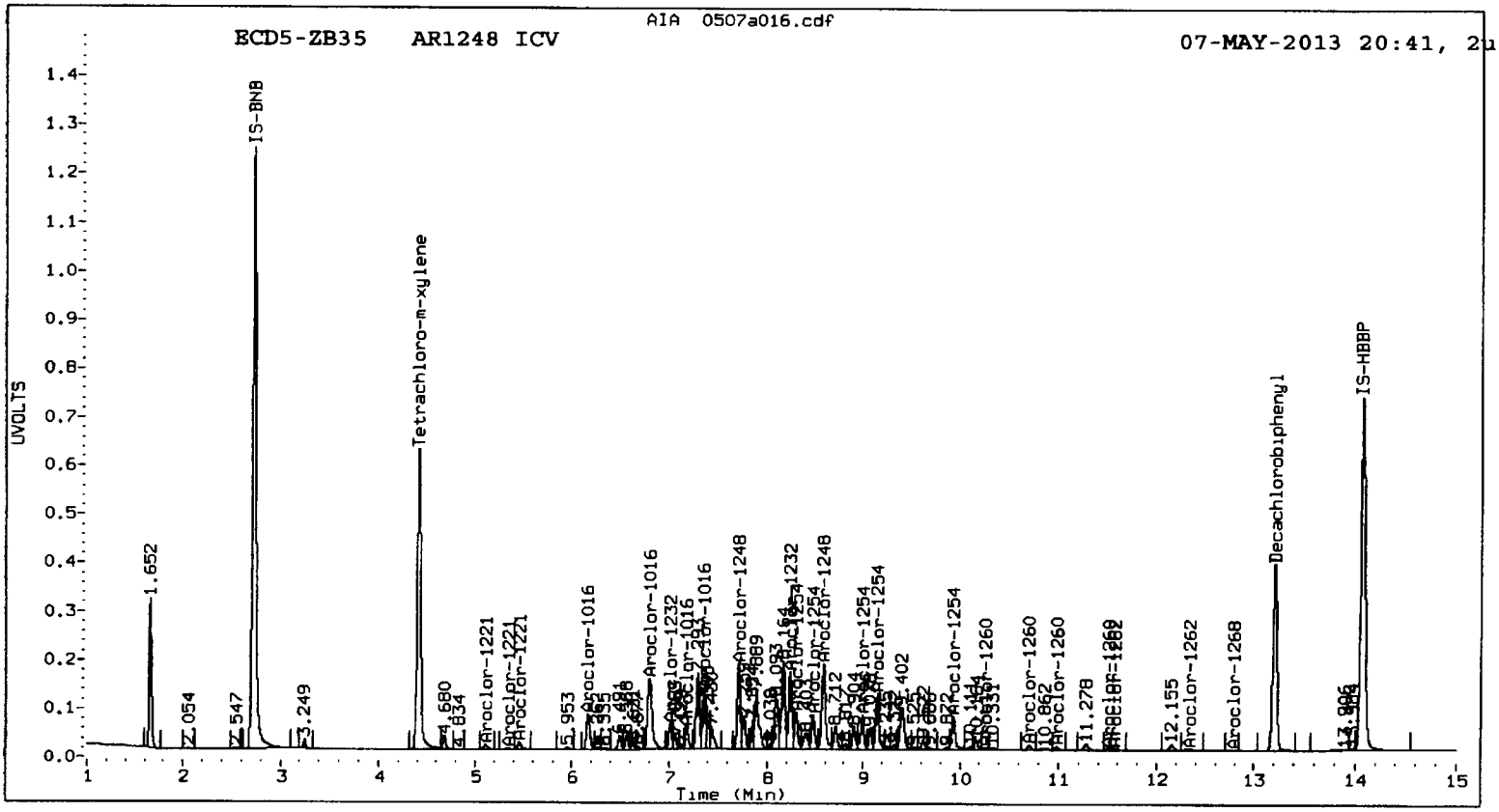
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Aroclor-1221
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Aroclor-1248
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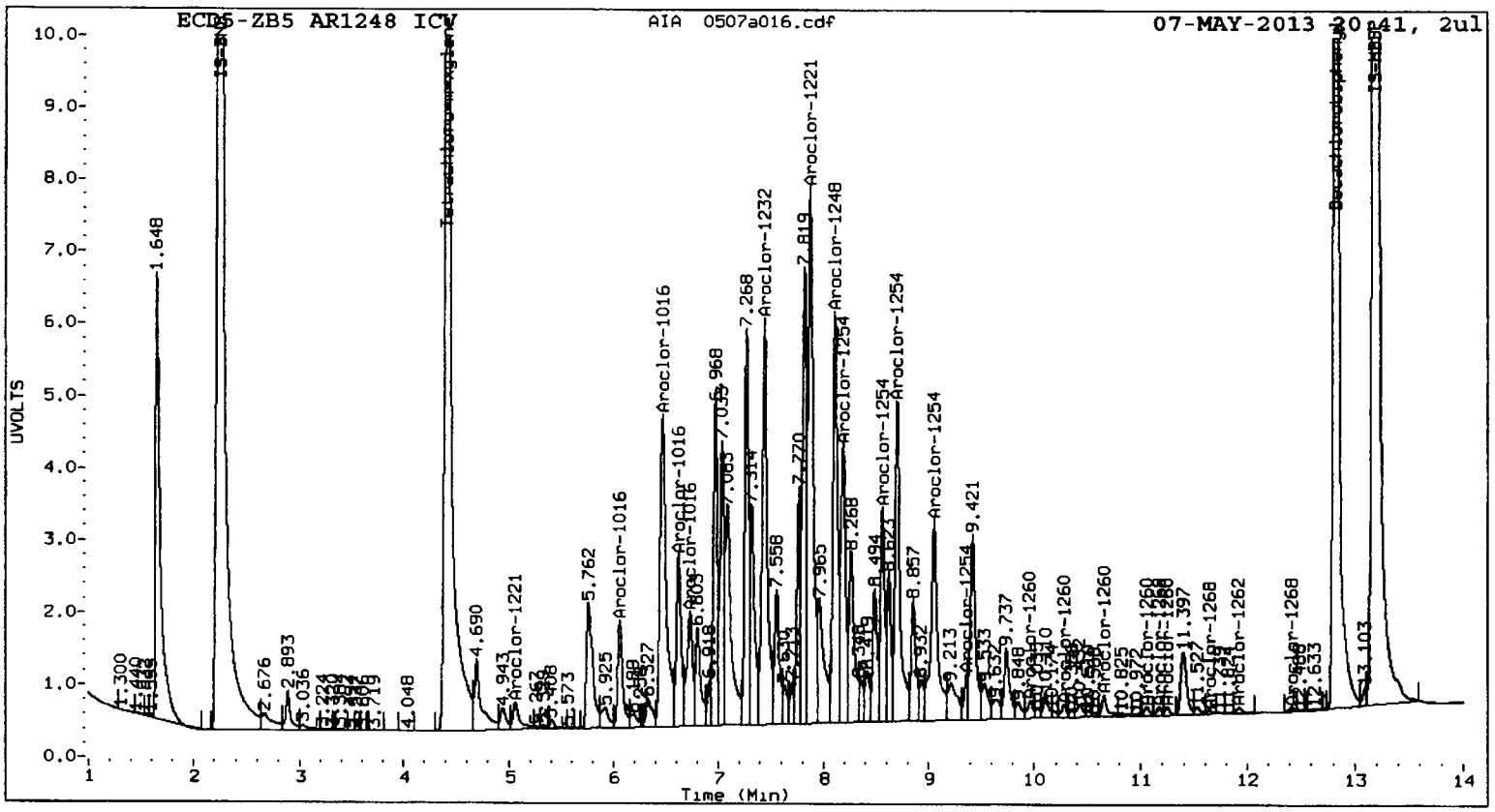
Aroclor-1262
Aroclor-1268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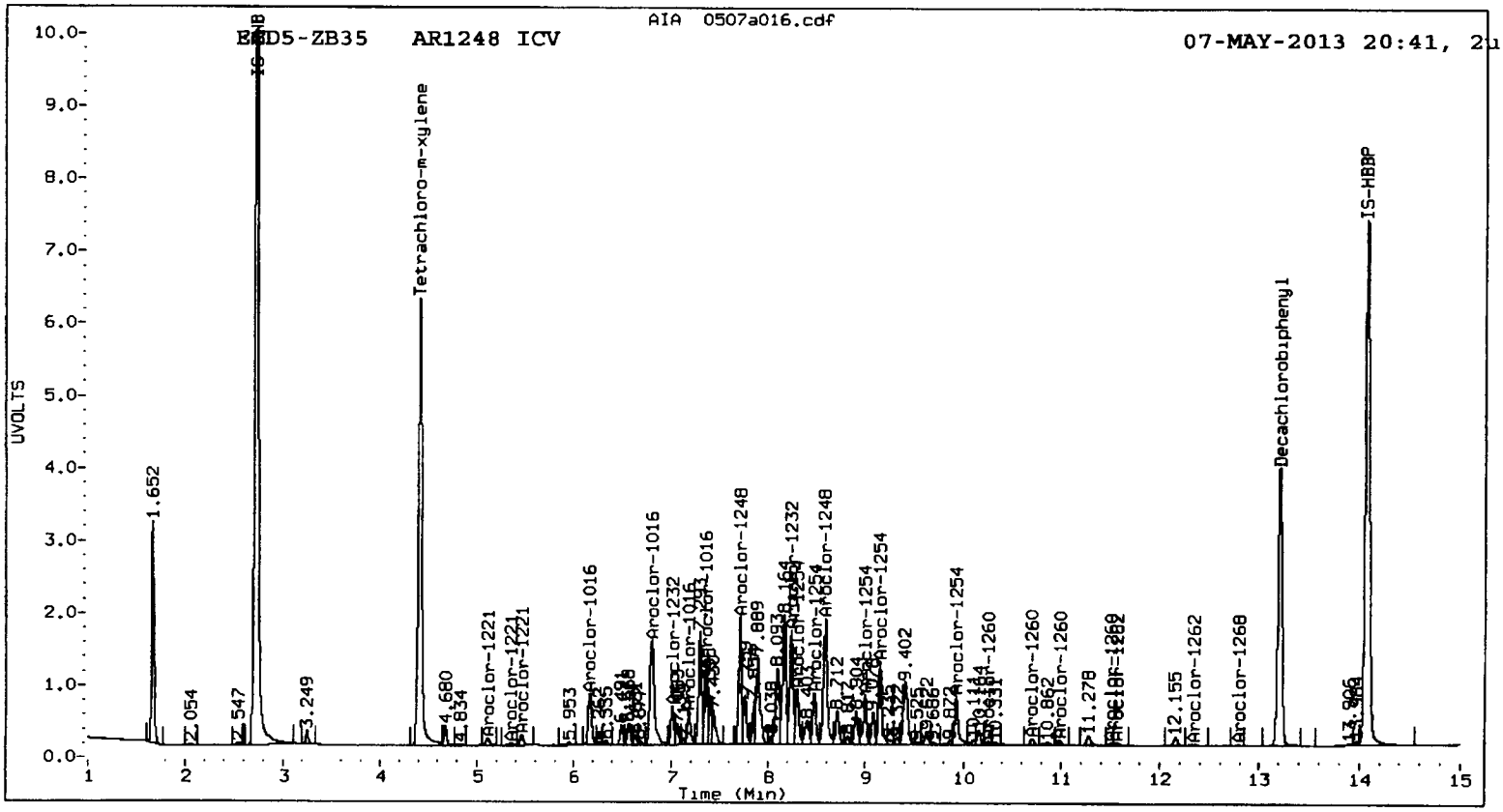
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a017.d
Data file 2: 20130507.b/ical-2.b/0507a017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 07-MAY-2013 21:01
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	31249884	4.411	0.000	8016298	37.6	38.6	2.7	Tetrachloro-m-xylen
12.828	0.000	30201361	13.205	-0.001	5162177	34.7	34.1	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.9	96.5
Decachlorobiphenyl	86.9	85.3

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53642771	9.5
Hexabromobiphenyl	50004151	58188446	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15360402	3.5
Hexabromobiphenyl	9345340	10510294	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.061	0.001	74537	3.1	1	6.163	-0.003	28483	3.2
Aroclor-1016	2	6.462	-0.007	337320	4.5	2	6.793	-0.007	84978	4.5
Aroclor-1016	3	6.623	0.006	206176	6.2	3	7.187	0.001	11814	2.4
Aroclor-1016	4	6.730	0.002	85227	3.4	4	7.357	-0.001	459146	98.9
	Total Col1Ave (4 peaks):				4.3	Total Col2Ave (4 peaks):				27.3 RPD = 145*
	Corrected Ave (3 peaks):				3.7	Corrected Ave (3 peaks):				3.4 RPD = 9
Aroclor-1221	1	5.059	-0.005	147002	6.7	1	---			0.0
Aroclor-1221	2	6.462	-0.007	337320	50.4	2	5.111	0.016	103036	39.1
Aroclor-1221	3	7.878	0.000	10714695	1134.7	3	---			0.0
Aroclor-1221	NS	---			----	4	5.465	0.004	27897	6.2
	Total Col1Ave (3 peaks):				397.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.001	74537	7.5	1	6.163	-0.002	28483	7.2
Aroclor-1232	2	6.462	-0.008	337320	11.1	2	6.793	-0.008	84978	10.8
Aroclor-1232	3	7.442	0.001	1732024	109.6	3	7.010	-0.001	15916	4.9
Aroclor-1232	4	7.878	0.004	10714695	590.0	4	8.237	-0.001	361750	131.4
	Total Col1Ave (4 peaks):				179.5	Total Col2Ave (4 peaks):				38.6 RPD = 129*
	Corrected Ave (3 peaks):				42.7	Corrected Ave (3 peaks):				7.6 RPD = 139*
Aroclor-1242	1	6.061	0.002	74537	3.9	1	6.163	-0.004	28483	4.1
Aroclor-1242	2	6.462	-0.006	337320	5.7	2	6.793	-0.010	84978	5.5
Aroclor-1242	3	6.623	0.006	206176	7.8	3	7.010	-0.001	15916	2.5
Aroclor-1242	4	7.878	0.006	10714695	328.2	4	8.237	-0.002	361750	67.2
	Total Col1Ave (4 peaks):				86.4	Total Col2Ave (4 peaks):				19.8 RPD = 125*
	Corrected Ave (3 peaks):				5.8	Corrected Ave (3 peaks):				4.0 RPD = 36
Aroclor-1248	1	6.462	-0.005	337320	8.9	1	6.793	-0.007	84978	8.8
Aroclor-1248	2	7.442	0.000	1732024	40.8	2	7.705	-0.001	756815	94.8
Aroclor-1248	3	7.878	0.004	10714695	198.5	3	8.237	-0.001	361750	43.8
Aroclor-1248	4	8.113	0.003	3375422	89.7	4	8.569	-0.015	1382582	128.7
	Total Col1Ave (4 peaks):				84.5	Total Col2Ave (4 peaks):				69.0 RPD = 20
	Corrected Ave (3 peaks):				46.5	Corrected Ave (3 peaks):				49.1 RPD = 6
Aroclor-1254	1	8.192	0.000	14171059	283.3	1	8.299	0.001	2103454	282.4
Aroclor-1254	2	8.563	0.000	9711755	294.1	2	8.475	0.000	2629736	285.8
Aroclor-1254	3	8.700	0.000	19370984	281.4	3	8.996	0.000	2093024	297.0
Aroclor-1254	4	9.054	0.002	20541352	289.7	4	9.148	0.001	4267118	282.7
Aroclor-1254	5	9.362	0.000	7016935	261.7	5	9.933	-0.001	2526495	297.2
	Total Col1Ave (5 peaks):				282.0	Total Col2Ave (5 peaks):				289.6 RPD = 2
	Corrected Ave (4 peaks):				279.0	Corrected Ave (4 peaks):				287.0 RPD = 3
Aroclor-1260	1	9.964	-0.003	1763734	37.0	1	10.260	0.000	214372	22.5
Aroclor-1260	2	10.284	0.000	1461583	30.9	2	10.704	-0.005	1157323	103.6
Aroclor-1260	3	10.658	-0.001	2962044	26.1	3	10.985	0.000	606704	29.4
Aroclor-1260	4	11.057	0.000	2253674	40.8	4	11.506	0.001	77148	13.8
Aroclor-1260	5	11.247	0.000	227786	7.7	NS	---			----
	Total Col1Ave (5 peaks):				28.5	Total Col2Ave (4 peaks):				42.3 RPD = 39
	Corrected Ave (4 peaks):				25.4	Corrected Ave (3 peaks):				21.9 RPD = 15
Aroclor-1262	1	10.284	0.001	1461583	26.8	1	10.260	0.000	214372	14.7
Aroclor-1262	2	10.658	0.000	2962044	23.1	2	10.704	-0.006	1157323	87.1
Aroclor-1262	3	11.057	-0.002	2253674	55.6	3	10.985	0.000	606704	24.3
Aroclor-1262	4	11.247	0.000	227786	4.0	4	11.563	-0.004	395081	24.4
Aroclor-1262	5	11.918	0.000	149251	3.4	5	12.340	0.034	39786	5.1
	Total Col1Ave (5 peaks):				22.6	Total Col2Ave (5 peaks):				31.1 RPD = 32
	Corrected Ave (4 peaks):				14.3	Corrected Ave (4 peaks):				17.1 RPD = 18
Aroclor-1268	1	11.171	-0.004	198308	1.6	1	11.506	0.000	77148	3.0
Aroclor-1268	2	11.247	0.001	227786	1.7	2	11.563	-0.010	395081	16.5

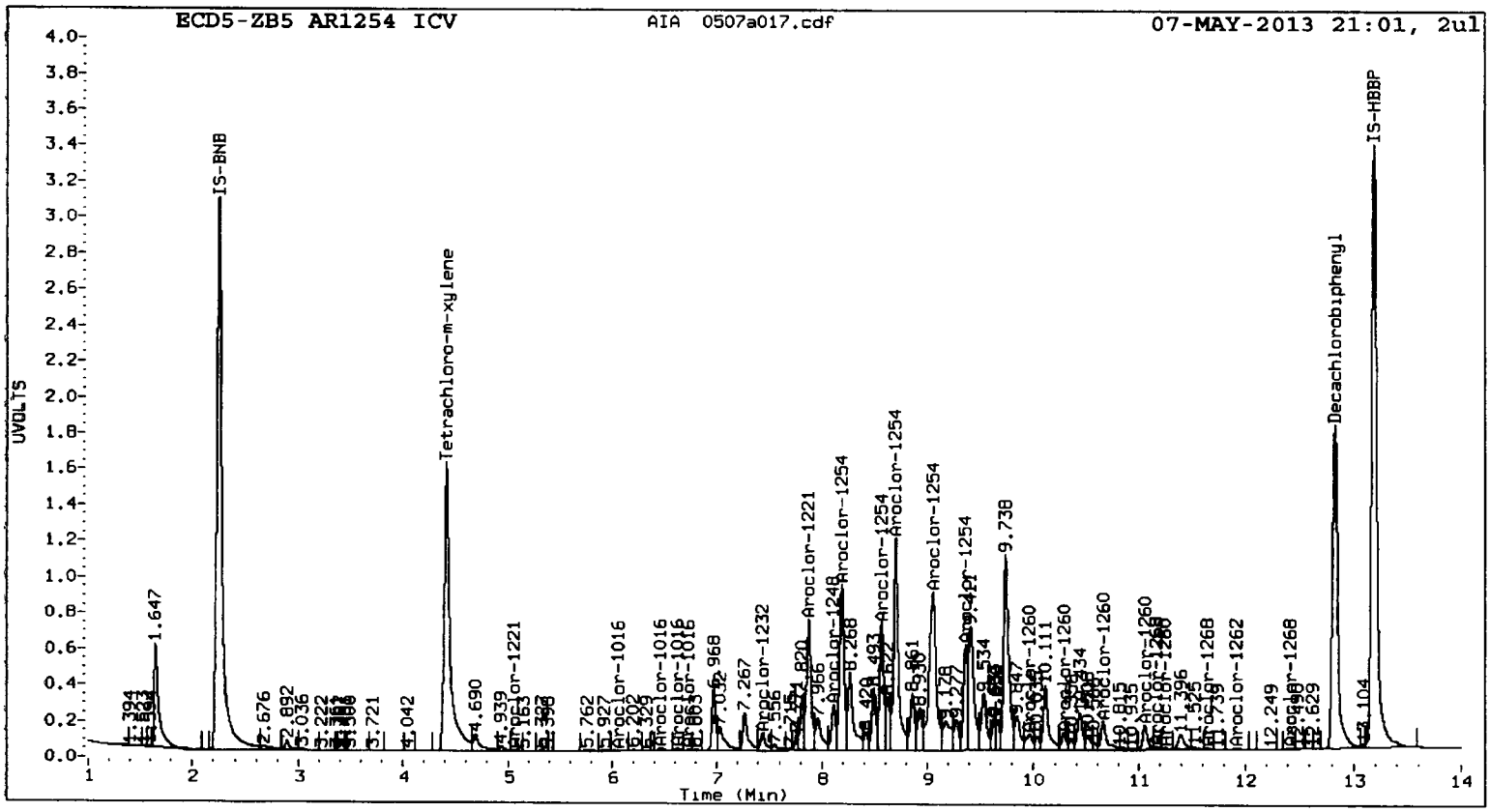
Aroclor-1268 3	11.643	0.011	109759	1.1	3	---	0.0
Aroclor-1268 4	12.420	-0.002	62105	0.2	4	---	0.0
Total Col1Ave (4 peaks):				1.2	Col2Ave: <3 Quant Peaks		

Total PCB Area Col1 (4.511 - 12.728) = 211898856 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 42309153 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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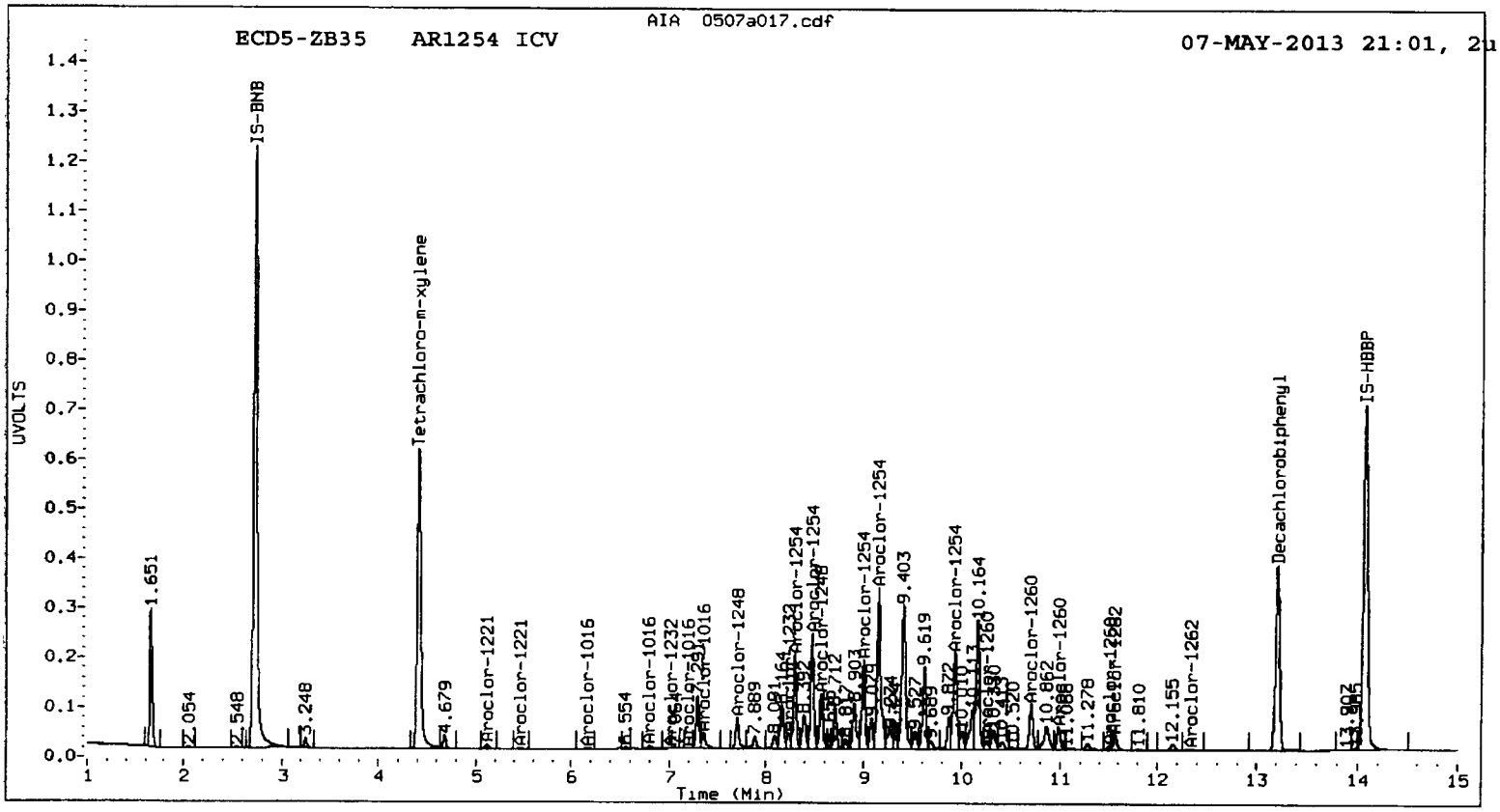
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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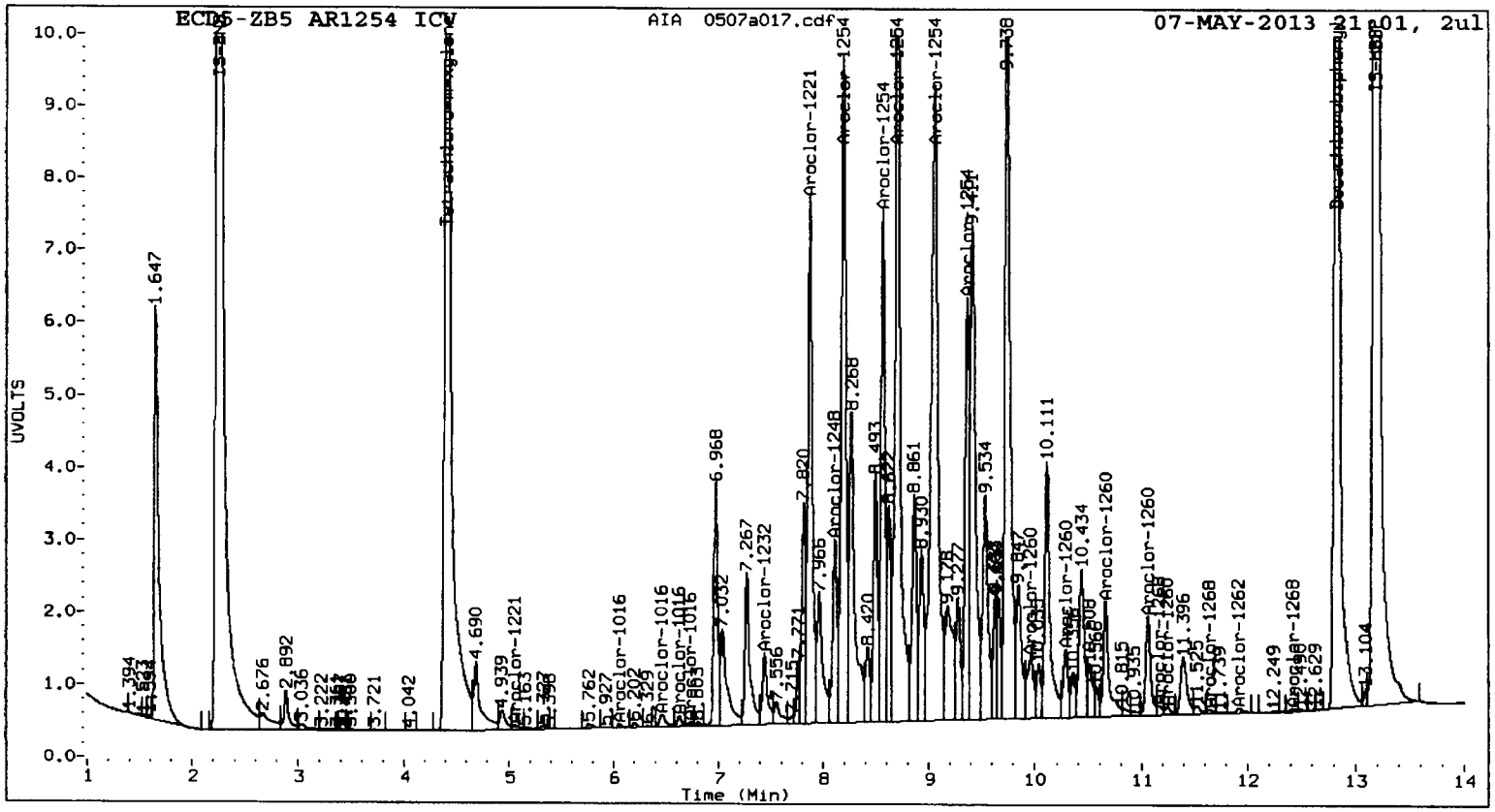
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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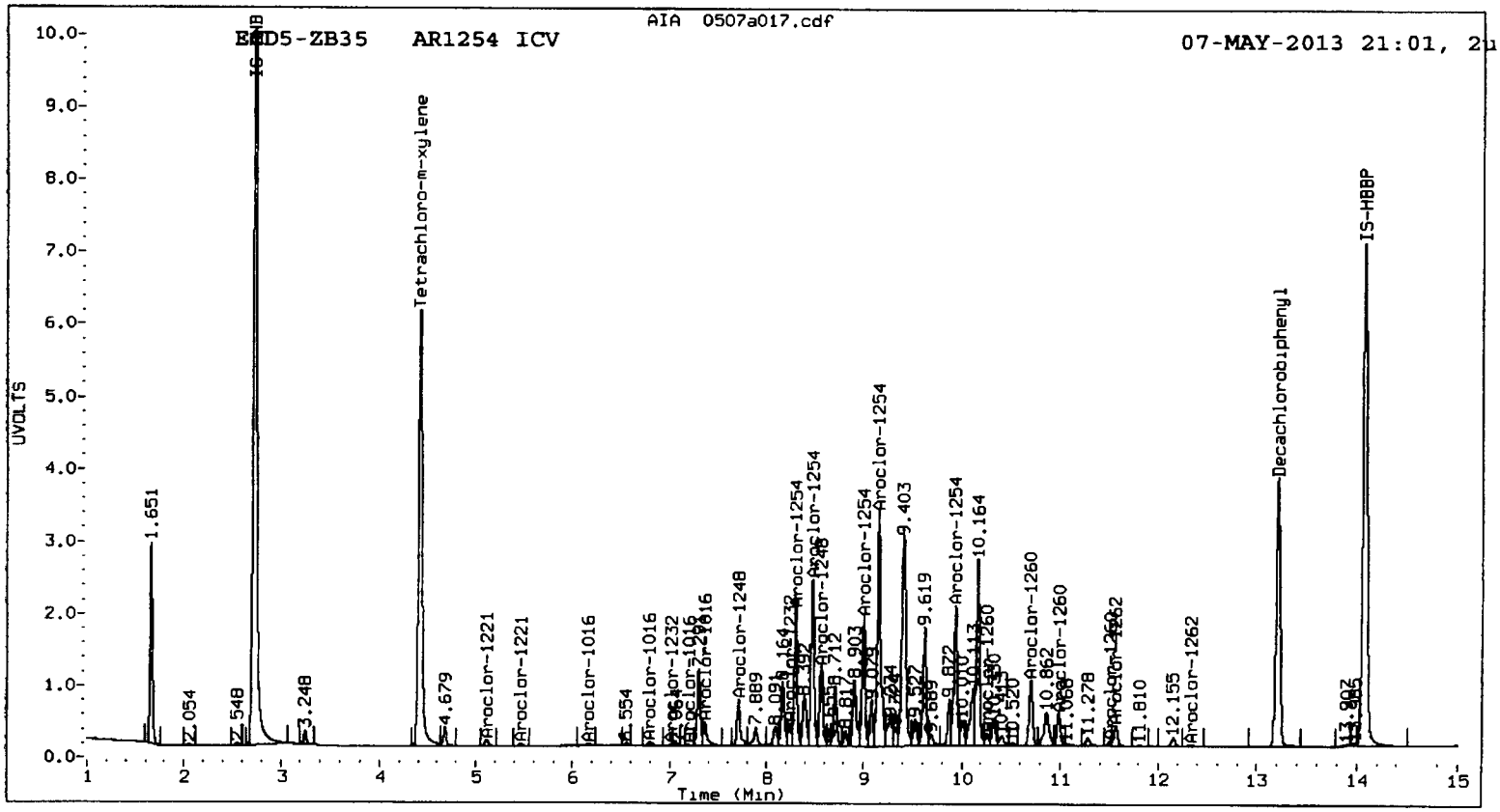
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Aroclor-1016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ECD5-ZB35 AR1254 ICV
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Aroclor-1016

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a018.d
Data file 2: 20130507.b/ical-2.b/0507a018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 07-MAY-2013 21:21
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	31767638	4.411	0.000	8077710	37.7	38.5	2.1	Tetrachloro-m-xylen
12.827	-0.001	30552007	13.205	0.000	5210574	34.7	34.1	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.2	96.2
Decachlorobiphenyl	86.8	85.3

M 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54355833	11.0
Hexabromobiphenyl	50004151	58930522	17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15522820	4.6
Hexabromobiphenyl	9345340	10608758	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	0.000	5710646	233.1	1	6.166	0.000	2083969	235.3
Aroclor-1016	2	6.468	0.000	17399600	230.5	2	6.800	0.000	4481969	232.8
Aroclor-1016	3	6.618	0.001	7785800	230.3	3	7.185	0.000	1171797	232.7
Aroclor-1016	4	6.729	0.001	5827980	230.7	4	7.357	-0.001	1070181	228.2
	Total Col1Ave (4 peaks):				231.1		Total Col2Ave (4 peaks):			232.2 RPD = 0
	Corrected Ave (3 peaks):				230.5		Corrected Ave (3 peaks):			231.2 RPD = 0
Aroclor-1221	1	5.063	0.000	4136002	186.8	1	3.696	0.001	11910	7.5
Aroclor-1221	2	6.468	0.000	17399600	2568.0	2	5.100	0.006	292561	109.8
Aroclor-1221	3	7.878	0.000	5153861	538.7	3	5.347	0.002	209236	144.2
Aroclor-1221	NS	---			----	4	5.461	0.001	1022087	224.0
	Total Col1Ave (3 peaks):				1097.8		Total Col2Ave (4 peaks):			121.4 RPD = 160*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			87.2
Aroclor-1232	1	6.060	0.000	5710646	567.2	1	6.166	0.000	2083969	523.1
Aroclor-1232	2	6.468	-0.001	17399600	564.6	2	6.800	-0.001	4481969	563.6
Aroclor-1232	3	7.442	0.000	8239430	514.4	3	7.010	-0.001	1862855	561.7
Aroclor-1232	4	7.878	0.004	5153861	280.1	4	8.237	-0.002	198387	71.3
	Total Col1Ave (4 peaks):				481.6		Total Col2Ave (4 peaks):			429.9 RPD = 11
	Corrected Ave (3 peaks):				453.0		Corrected Ave (3 peaks):			385.4 RPD = 16
Aroclor-1242	1	6.060	0.001	5710646	291.7	1	6.166	-0.002	2083969	294.7
Aroclor-1242	2	6.468	0.000	17399600	289.8	2	6.800	-0.002	4481969	288.5
Aroclor-1242	3	6.618	0.001	7785800	290.6	3	7.010	-0.001	1862855	287.0
Aroclor-1242	4	7.878	0.006	5153861	155.8	4	8.237	-0.002	198387	36.5
	Total Col1Ave (4 peaks):				257.0		Total Col2Ave (4 peaks):			226.7 RPD = 13
	Corrected Ave (3 peaks):				245.4		Corrected Ave (3 peaks):			204.0 RPD = 18
Aroclor-1248	1	6.468	0.001	17399600	454.8	1	6.800	0.001	4481969	460.8
Aroclor-1248	2	7.442	0.000	8239430	191.5	2	7.705	-0.001	1494414	185.3
Aroclor-1248	3	7.878	0.004	5153861	94.2	3	8.237	-0.002	198387	23.8
Aroclor-1248	4	8.113	0.003	956546	25.1	4	8.584	0.000	77790	7.2
	Total Col1Ave (4 peaks):				191.4		Total Col2Ave (4 peaks):			169.2 RPD = 12
	Corrected Ave (3 peaks):				103.6		Corrected Ave (3 peaks):			72.1 RPD = 36
Aroclor-1254	1	8.194	0.002	5604593	110.6	1	8.299	0.000	888811	118.1
Aroclor-1254	2	8.563	0.000	760107	22.7	2	8.475	0.000	906791	97.5
Aroclor-1254	3	8.696	-0.004	2725232	39.1	3	8.997	0.001	149462	21.0
Aroclor-1254	4	9.029	-0.024	14910986	207.5	4	9.187	0.040	2306321	151.2
Aroclor-1254	5	9.361	-0.001	20865390	767.9	5	9.939	0.004	1000144	116.4
	Total Col1Ave (5 peaks):				229.6		Total Col2Ave (5 peaks):			100.8 RPD = 78*
	Corrected Ave (4 peaks):				95.0		Corrected Ave (4 peaks):			88.3 RPD = 7
Aroclor-1260	1	9.967	0.000	12336540	255.6	1	10.261	0.001	2515434	261.4
Aroclor-1260	2	10.283	-0.001	11792031	246.4	2	10.710	0.001	2780218	246.7
Aroclor-1260	3	10.659	-0.001	28793615	250.9	3	10.986	0.001	5491310	263.9
Aroclor-1260	4	11.059	0.001	13292663	237.8	4	11.506	0.001	1529990	271.2
Aroclor-1260	5	11.247	0.000	8346657	279.1	NS	---			----
	Total Col1Ave (5 peaks):				254.0		Total Col2Ave (4 peaks):			260.8 RPD = 3
	Corrected Ave (4 peaks):				247.7		Corrected Ave (3 peaks):			257.3 RPD = 4
Aroclor-1262	1	10.283	0.000	11792031	213.7	1	10.261	0.001	2515434	171.4
Aroclor-1262	2	10.659	0.000	28793615	222.1	2	10.710	0.000	2780218	207.2
Aroclor-1262	3	11.059	-0.001	13292663	323.7	3	10.986	0.001	5491310	218.2
Aroclor-1262	4	11.247	0.000	8346657	144.8	4	11.565	-0.002	3586824	219.3
Aroclor-1262	5	11.918	0.000	7146896	161.6	5	12.307	0.001	1281460	162.3
	Total Col1Ave (5 peaks):				213.2		Total Col2Ave (5 peaks):			195.7 RPD = 9
	Corrected Ave (4 peaks):				185.5		Corrected Ave (4 peaks):			189.8 RPD = 2
Aroclor-1268	1	11.174	-0.001	6512368	52.5	1	11.506	-0.001	1529990	59.7

Aroclor-1268 2	11.247	0.001	8346657	60.9	2	11.565	-0.008	3586824	148.6
Aroclor-1268 3	11.648	0.015	3204605	31.5	3	11.967	-0.002	50714	2.7
Aroclor-1268 4	12.420	-0.001	1403153	4.9	4	12.792	0.000	228513	4.6

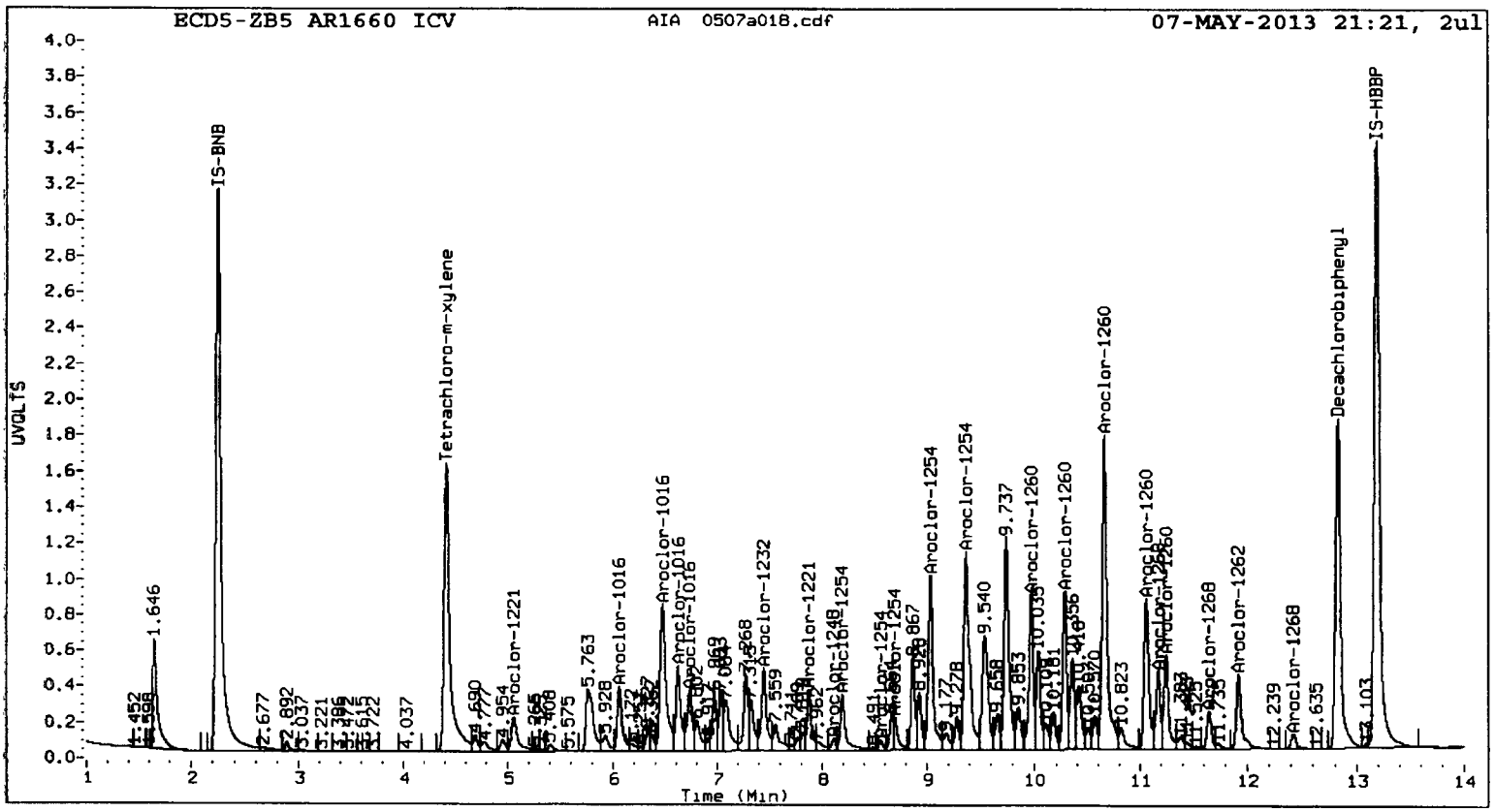
Total Col1Ave (4 peaks): 37.4 Total Col2Ave (4 peaks): 53.9 RPD = 36

Corrected Ave (3 peaks): 29.6 Corrected Ave (3 peaks): 22.3 RPD = 28

Total PCB Area Col1 (4.511 - 12.728) = 339033302 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 67437339 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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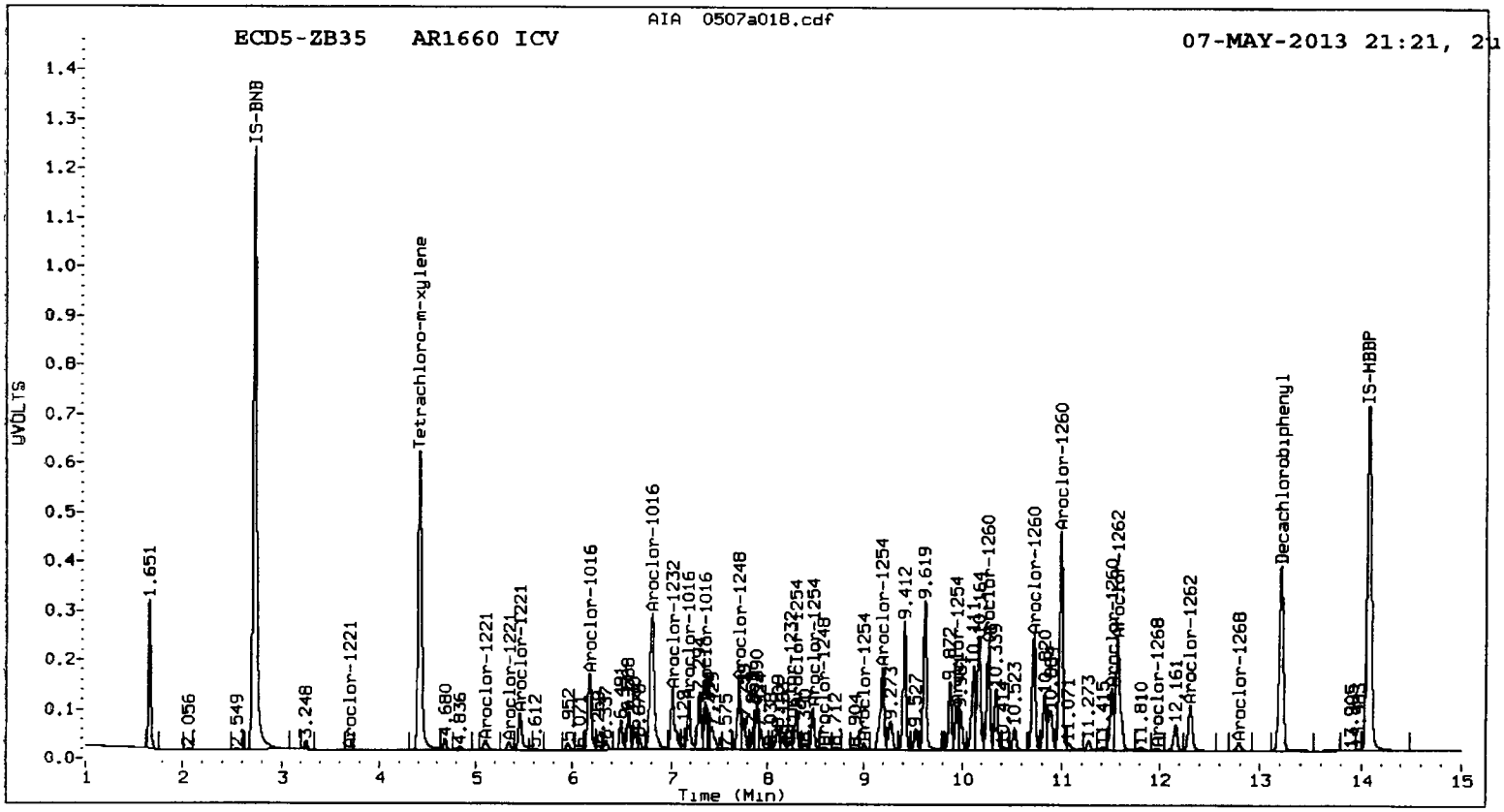
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
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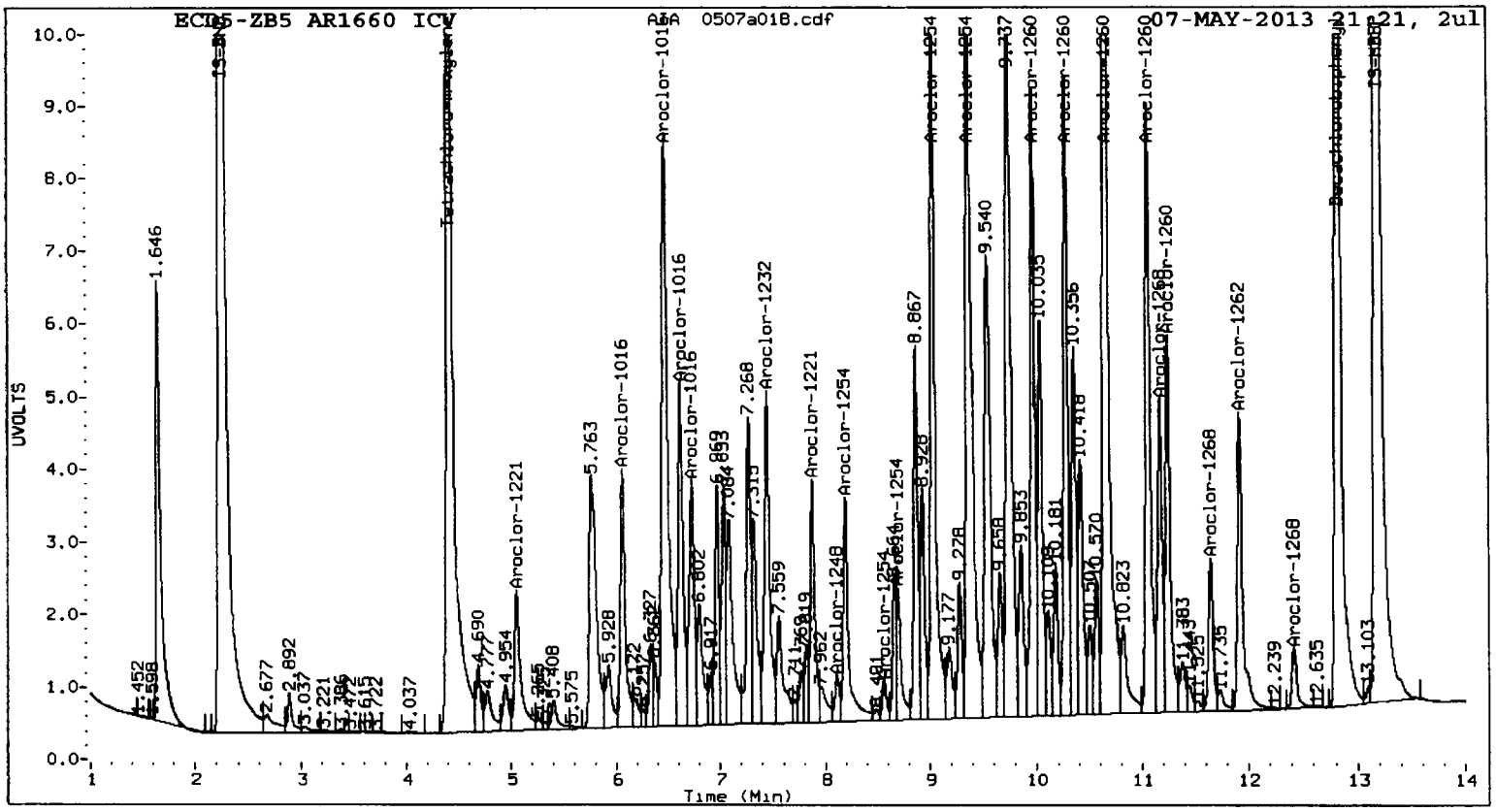
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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07-MAY-2013 21:21, 2ul
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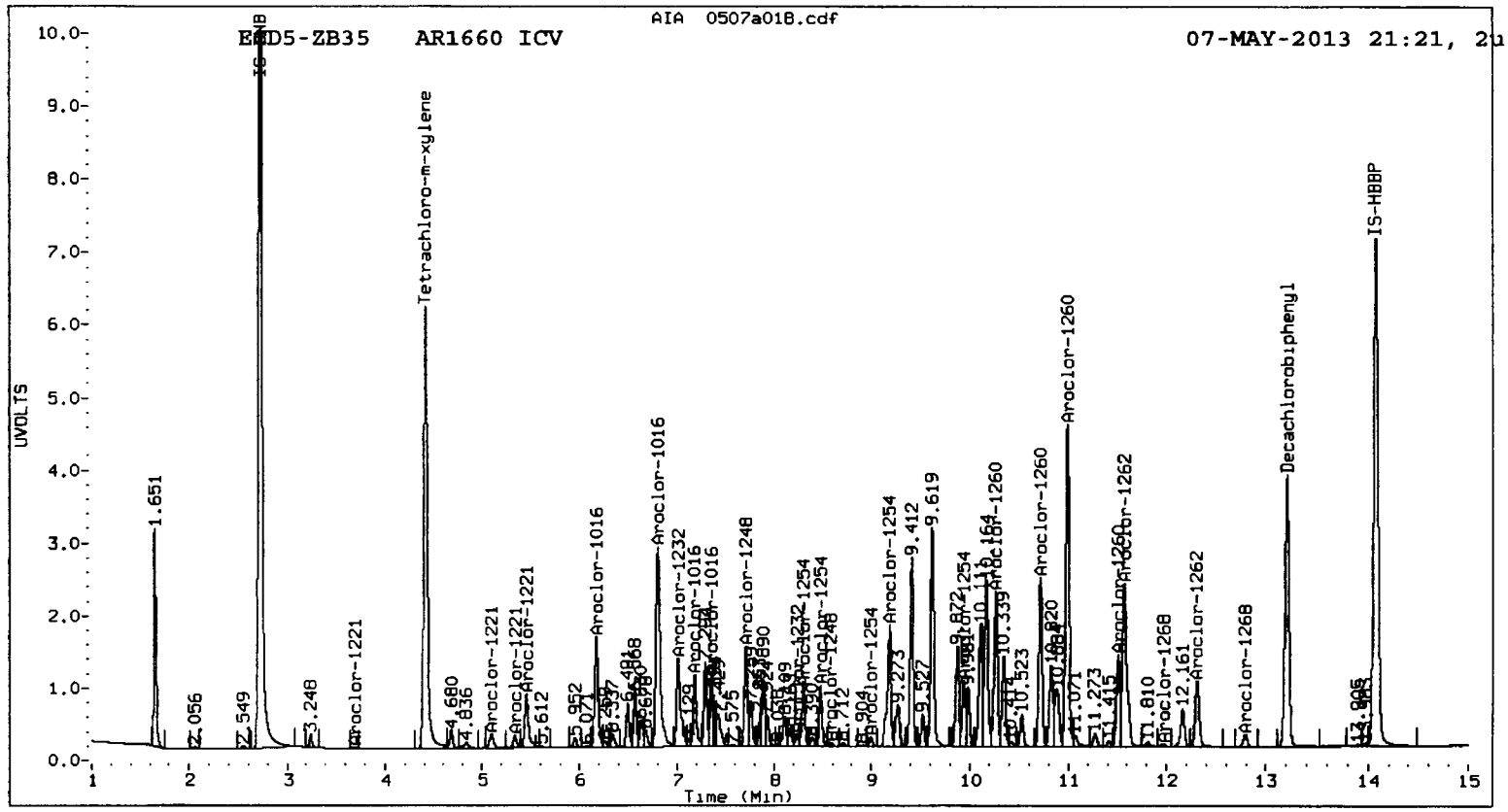
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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ECD5-ZB35 AR1660 ICV
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a019.d
Data file 2: 20130507.b/ical-2.b/0507a019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 07-MAY-2013 21:42
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	0.000	32723514	4.412	0.000	8175501	38.5	39.3	2.2	Tetrachloro-m-xylen
12.828	0.000	30887403	13.205	0.000	5217278	35.3	34.6	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.1	98.3
Decachlorobiphenyl	88.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54884040	12.1
Hexabromobiphenyl	50004151	58566252	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15378234	3.6
Hexabromobiphenyl	9345340	10470042	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	-0.001	613149	24.8	1	6.177	0.011	386723	44.1
Aroclor-1016	2	6.470	0.001	1448260	19.0	2	6.803	0.002	348544	18.3
Aroclor-1016	3	6.617	0.000	702982	20.6	3	7.186	0.001	92186	18.5
Aroclor-1016	4	6.729	0.001	468102	18.3	4	7.357	-0.001	67755	14.6
Total Col1Ave (4 peaks):					20.7	Total Col2Ave (4 peaks):				23.9 RPD = 14
Corrected Ave (3 peaks):					19.3	Corrected Ave (3 peaks):				17.1 RPD = 12
Aroclor-1221	1	5.064	0.000	5852175	261.7	1	3.696	0.002	409204	259.6
Aroclor-1221	2	6.470	0.002	1448260	211.7	2	5.095	0.001	683679	259.1
Aroclor-1221	3	7.878	0.000	2211598	228.9	3	5.346	0.001	375497	261.3
Aroclor-1221	NS	---			----	4	5.461	0.001	1172244	259.3
Total Col1Ave (3 peaks):					234.1	Total Col2Ave (4 peaks):				259.8 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				259.3
Aroclor-1232	1	6.060	-0.001	613149	60.3	1	6.177	0.011	386723	98.0
Aroclor-1232	2	6.470	0.001	1448260	46.5	2	6.803	0.002	348544	44.2
Aroclor-1232	3	7.441	0.000	391114	24.2	3	7.011	0.000	157577	48.0
Aroclor-1232	4	7.878	0.004	2211598	119.0	4	8.239	0.001	57476	20.8
Total Col1Ave (4 peaks):					62.5	Total Col2Ave (4 peaks):				52.8 RPD = 17
Corrected Ave (3 peaks):					43.7	Corrected Ave (3 peaks):				37.7 RPD = 15
Aroclor-1242	1	6.060	0.000	613149	31.0	1	6.177	0.009	386723	55.2
Aroclor-1242	2	6.470	0.002	1448260	23.9	2	6.803	0.000	348544	22.6
Aroclor-1242	3	6.617	0.000	702982	26.0	3	7.011	0.000	157577	24.5
Aroclor-1242	4	7.878	0.005	2211598	66.2	4	8.239	0.000	57476	10.7
Total Col1Ave (4 peaks):					36.8	Total Col2Ave (4 peaks):				28.3 RPD = 26
Corrected Ave (3 peaks):					27.0	Corrected Ave (3 peaks):				19.3 RPD = 33
Aroclor-1248	1	6.470	0.003	1448260	37.5	1	6.803	0.003	348544	36.2
Aroclor-1248	2	7.441	-0.001	391114	9.0	2	7.705	-0.001	87992	11.0
Aroclor-1248	3	7.878	0.004	2211598	40.0	3	8.239	0.000	57476	6.9
Aroclor-1248	4	8.113	0.003	478072	12.4	4	8.578	-0.005	115261	10.7
Total Col1Ave (4 peaks):					24.7	Total Col2Ave (4 peaks):				16.2 RPD = 42*
Corrected Ave (3 peaks):					19.6	Corrected Ave (3 peaks):				9.6 RPD = 69*
Aroclor-1254	1	8.194	0.002	2387711	46.6	1	8.299	0.000	421166	56.5
Aroclor-1254	2	8.563	0.000	484981	14.4	2	8.475	0.000	484426	52.6
Aroclor-1254	3	8.663	-0.037	3505604	49.8	3	8.997	0.000	101058	14.3
Aroclor-1254	4	9.029	-0.024	12603810	173.7	4	9.186	0.040	2047860	135.5
Aroclor-1254	5	9.361	-0.001	15873155	578.6	5	9.939	0.004	484038	56.9
Total Col1Ave (5 peaks):					172.6	Total Col2Ave (5 peaks):				63.2 RPD = 93*
Corrected Ave (4 peaks):					71.1	Corrected Ave (4 peaks):				45.1 RPD = 45*
Aroclor-1260	1	9.967	0.000	17243313	359.5	1	10.261	0.001	3588073	377.8
Aroclor-1260	2	10.282	-0.001	14266396	299.9	2	10.711	0.002	3379274	303.8
Aroclor-1260	3	10.659	0.000	31833903	279.1	3	10.986	0.001	6071825	295.6
Aroclor-1260	4	11.059	0.002	10098810	181.8	4	11.507	0.002	2715788	487.8
Aroclor-1260	5	11.248	0.001	14639139	492.6	NS	---			----
Total Col1Ave (5 peaks):					322.6	Total Col2Ave (4 peaks):				366.3 RPD = 13
Corrected Ave (4 peaks):					280.1	Corrected Ave (3 peaks):				325.7 RPD = 15
Aroclor-1262	1	10.282	0.000	14266396	260.2	1	10.261	0.001	3588073	247.8
Aroclor-1262	2	10.659	0.000	31833903	247.1	2	10.711	0.001	3379274	255.2
Aroclor-1262	3	11.059	0.000	10098810	247.5	3	10.986	0.001	6071825	244.5
Aroclor-1262	4	11.248	0.000	14639139	255.6	4	11.569	0.002	4096791	253.8
Aroclor-1262	5	11.917	-0.001	11001830	250.3	5	12.308	0.002	1957515	251.1
Total Col1Ave (5 peaks):					252.1	Total Col2Ave (5 peaks):				250.5 RPD = 1
Corrected Ave (4 peaks):					250.1	Corrected Ave (4 peaks):				249.3 RPD = 0
Aroclor-1268	1	11.173	-0.002	12852069	104.3	1	11.507	0.000	2715788	107.5

Aroclor-1268	2	11.248	0.002	14639139	107.4	2	11.569	-0.004	4096791	172.0
Aroclor-1268	3	11.648	0.016	5026777	49.7	3	11.970	0.001	170870	9.1
Aroclor-1268	4	12.421	0.000	3714076	13.0	4	12.792	0.000	626393	12.8

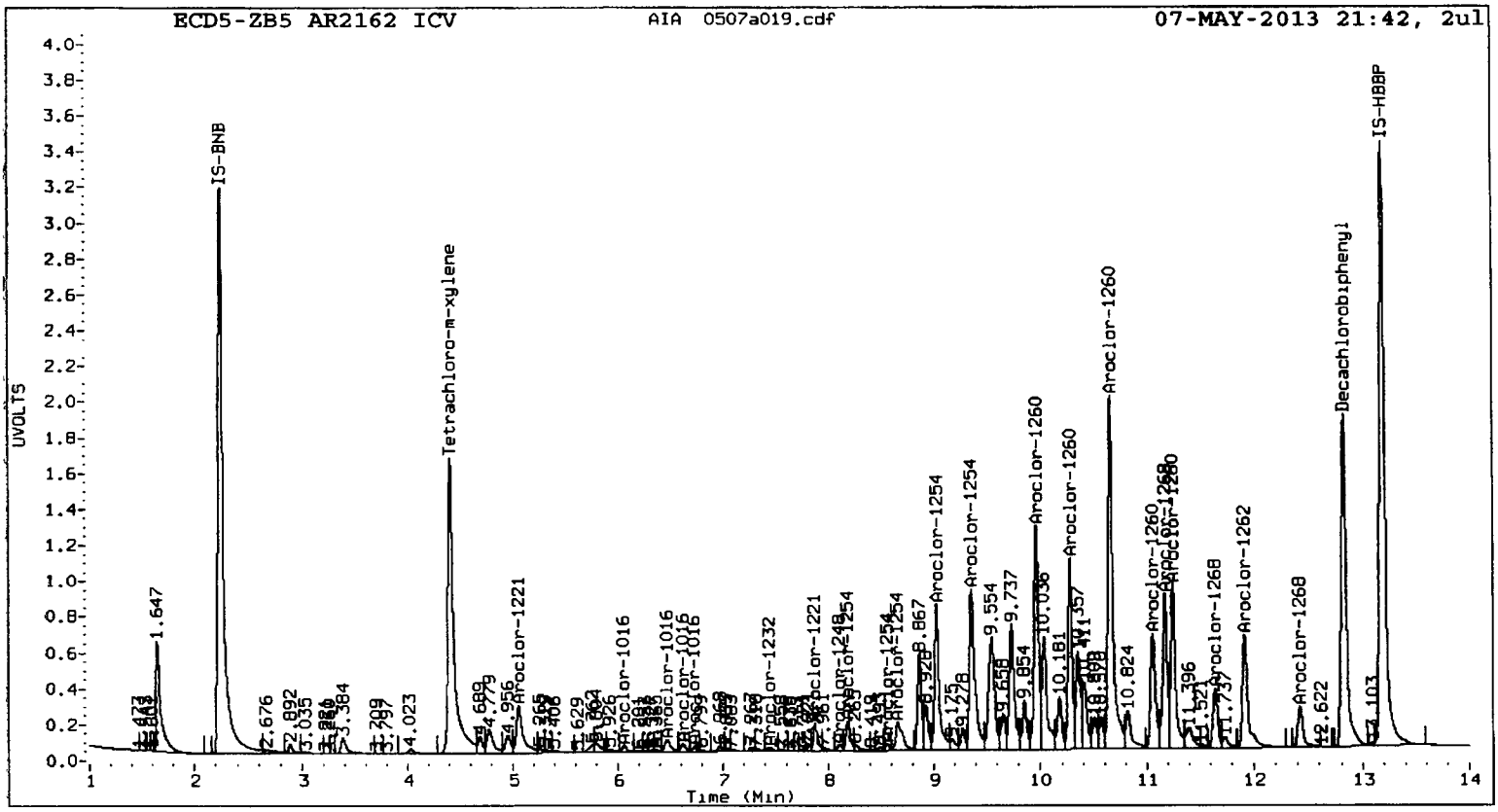
Total Col1Ave (4 peaks): 68.6 Total Col2Ave (4 peaks): 75.3 RPD = 9

Corrected Ave (3 peaks): 55.7 Corrected Ave (3 peaks): 43.1 RPD = 25

Total PCB Area Col1 (4.511 - 12.728) = 265426514 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 50390342 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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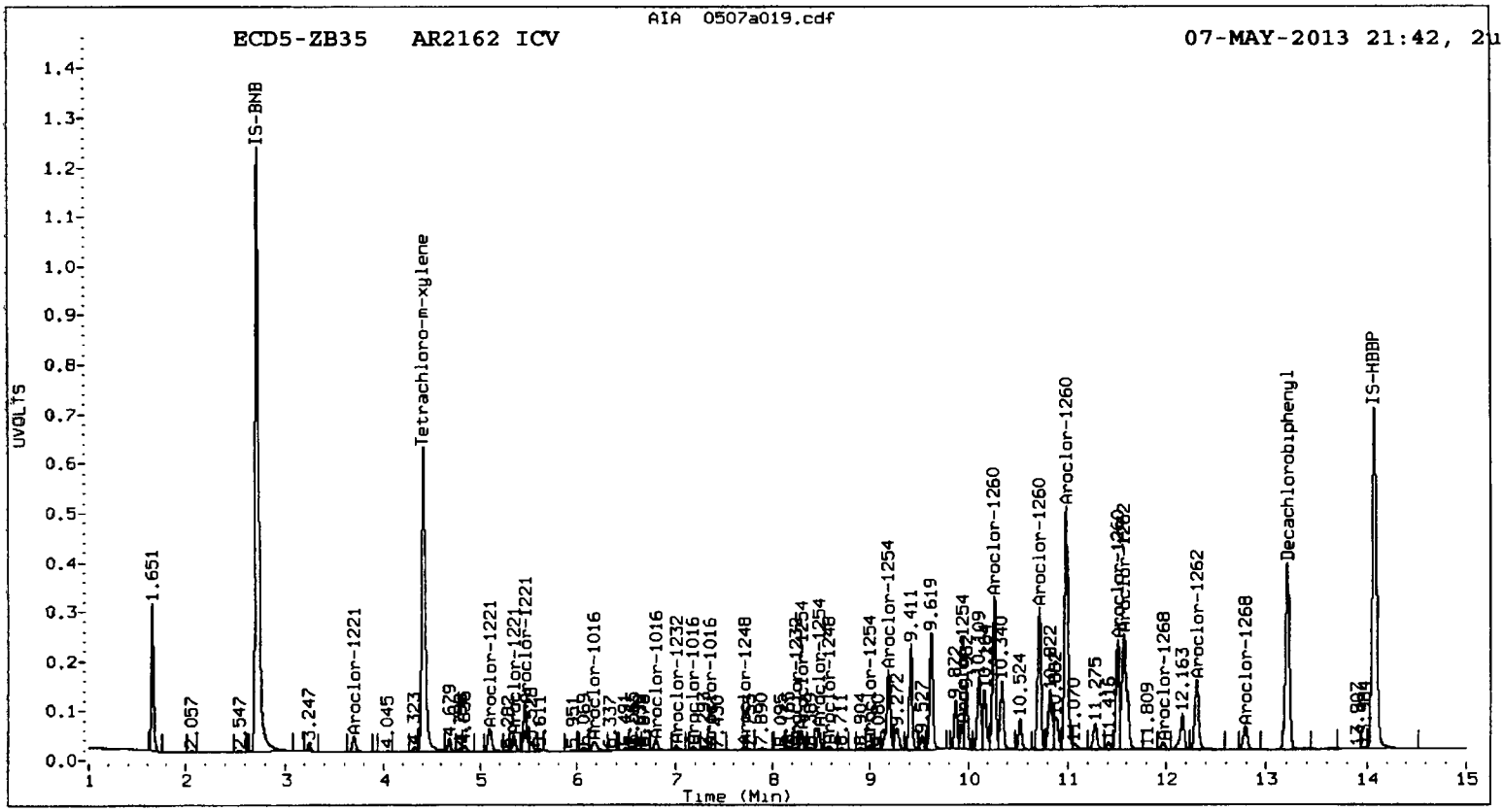
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
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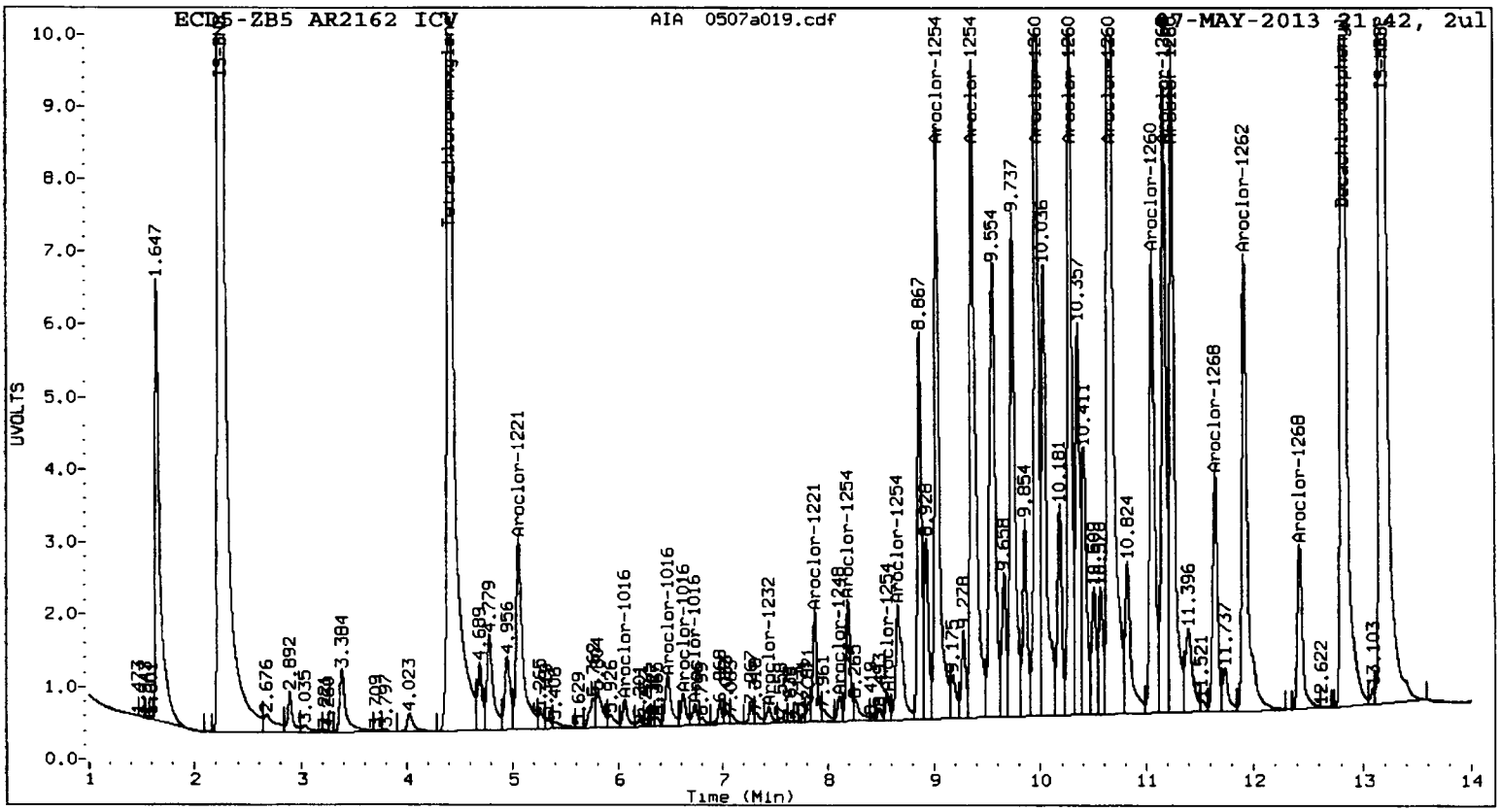
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
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Aroclor-1016
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Aroclor-1248
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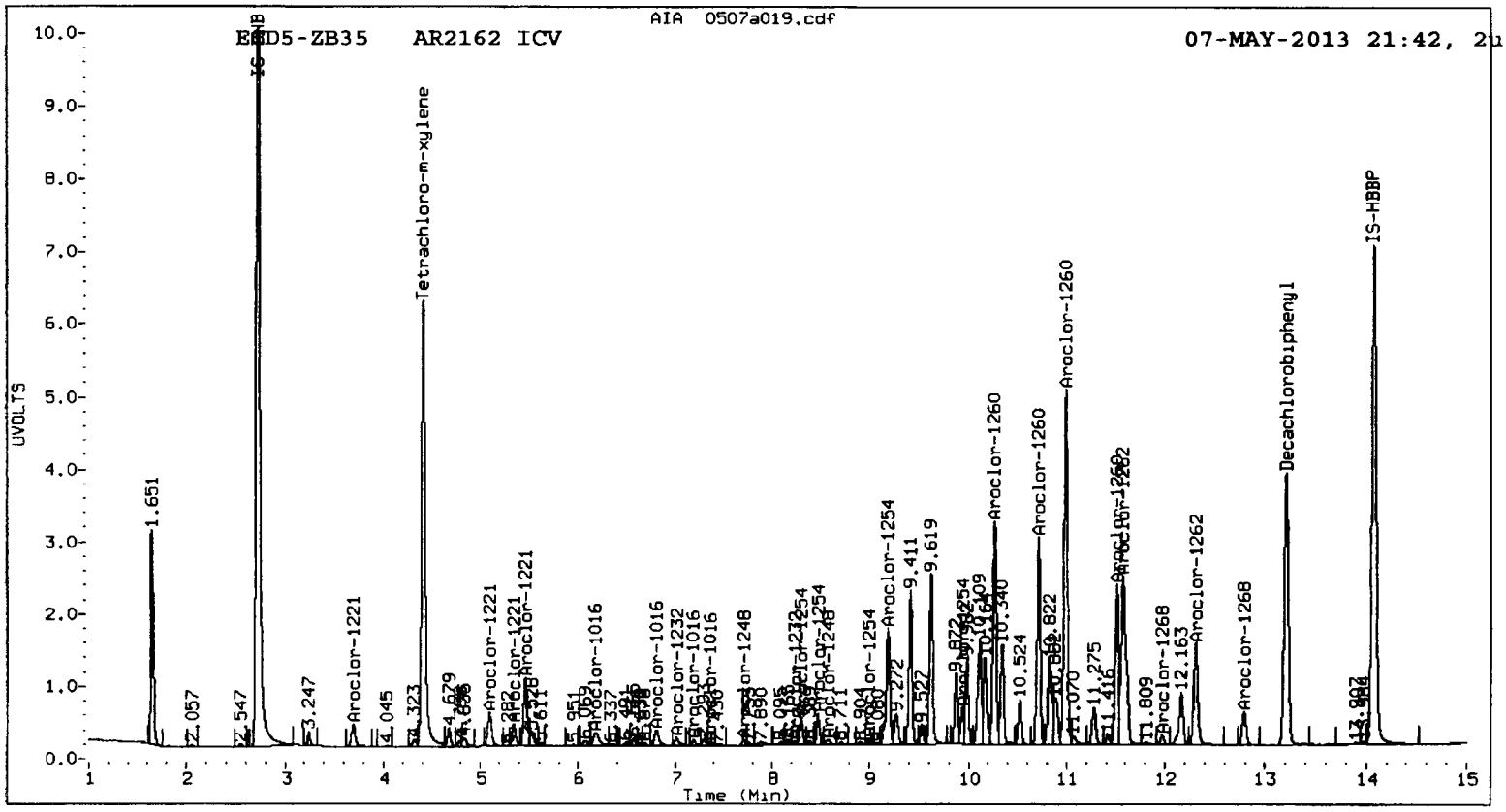
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a020.d
Data file 2: 20130507.b/ical-2.b/0507a020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 07-MAY-2013 22:02
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32178954	4.411	-0.001	8089911	37.9	39.1	3.0	Tetrachloro-m-xylen
12.827	-0.001	41292857	13.204	-0.001	6993423	45.8	45.1	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.8	97.7
Decachlorobiphenyl	114.6	112.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54747539	11.8
Hexabromobiphenyl	50004151	60316622	20.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15307215	3.2
Hexabromobiphenyl	9345340	10773388	15.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.060	-0.001	2754975	111.6	1	6.165	-0.001	1064635	121.9
Aroclor-1016	2	6.468	0.000	8293080	109.1	2	6.801	0.001	2096355	110.4
Aroclor-1016	3	6.617	0.000	3727765	109.5	3	7.186	0.000	553151	111.4
Aroclor-1016	4	6.729	0.001	2773984	109.0	4	7.357	-0.001	453332	98.0
	Total Col1Ave (4 peaks):				109.8	Total Col2Ave (4 peaks):				110.4 RPD = 1
	Corrected Ave (3 peaks):				109.2	Corrected Ave (3 peaks):				106.6 RPD = 2
Aroclor-1221	1	5.063	0.000	4449445	199.5	1	3.695	0.001	235147	149.8
Aroclor-1221	2	6.468	0.000	8293080	1215.2	2	5.097	0.002	434232	165.3
Aroclor-1221	3	7.874	-0.004	4148169	430.4	3	5.346	0.001	253609	177.3
Aroclor-1221	NS	---			----	4	5.461	0.000	945969	210.2
	Total Col1Ave (3 peaks):				615.0	Total Col2Ave (4 peaks):				175.7 RPD = 111*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				164.2
Aroclor-1232	1	6.060	-0.001	2754975	271.7	1	6.165	0.000	1064635	271.0
Aroclor-1232	2	6.468	-0.001	8293080	267.2	2	6.801	0.000	2096355	267.3
Aroclor-1232	3	7.441	0.000	3759089	233.0	3	7.010	-0.001	874326	267.4
Aroclor-1232	4	7.874	0.000	4148169	223.8	4	8.239	0.000	645903	235.3
	Total Col1Ave (4 peaks):				248.9	Total Col2Ave (4 peaks):				260.3 RPD = 4
	Corrected Ave (3 peaks):				241.3	Corrected Ave (3 peaks):				256.7 RPD = 6
Aroclor-1242	1	6.060	0.000	2754975	139.7	1	6.165	-0.002	1064635	152.7
Aroclor-1242	2	6.468	0.000	8293080	137.1	2	6.801	-0.001	2096355	136.8
Aroclor-1242	3	6.617	0.001	3727765	138.1	3	7.010	-0.001	874326	136.6
Aroclor-1242	4	7.874	0.001	4148169	124.5	4	8.239	0.000	645903	120.5
	Total Col1Ave (4 peaks):				134.9	Total Col2Ave (4 peaks):				136.6 RPD = 1
	Corrected Ave (3 peaks):				133.3	Corrected Ave (3 peaks):				131.3 RPD = 1
Aroclor-1248	1	6.468	0.002	8293080	215.2	1	6.801	0.002	2096355	218.6
Aroclor-1248	2	7.441	-0.001	3759089	86.7	2	7.705	-0.002	686789	86.3
Aroclor-1248	3	7.874	0.000	4148169	75.3	3	8.239	0.000	645903	78.4
Aroclor-1248	4	8.111	0.001	3087951	80.4	4	8.585	0.002	769968	71.9
	Total Col1Ave (4 peaks):				114.4	Total Col2Ave (4 peaks):				113.8 RPD = 1
	Corrected Ave (3 peaks):				80.8	Corrected Ave (3 peaks):				78.9 RPD = 2
Aroclor-1254	1	8.189	-0.003	1593730	31.2	1	8.297	-0.002	213975	28.8
Aroclor-1254	2	8.564	0.000	750392	22.3	2	8.476	0.001	185955	20.3
Aroclor-1254	3	8.700	0.001	1491908	21.2	3	8.996	0.000	159149	22.7
Aroclor-1254	4	9.035	-0.018	1725047	23.8	4	9.148	0.001	236498	15.7
Aroclor-1254	5	9.362	0.000	1079040	39.4	5	9.932	-0.003	135485	16.0
	Total Col1Ave (5 peaks):				27.6	Total Col2Ave (5 peaks):				20.7 RPD = 29
	Corrected Ave (4 peaks):				24.6	Corrected Ave (4 peaks):				18.7 RPD = 28
Aroclor-1260	1	9.967	0.000	9566796	193.7	1	10.260	0.000	2036369	208.4
Aroclor-1260	2	10.283	-0.001	1540353	31.4	2	10.711	0.002	2209727	193.1
Aroclor-1260	3	10.658	-0.001	7448068	63.4	3	10.985	0.000	1398883	66.2
Aroclor-1260	4	11.059	0.002	580097	10.1	4	11.505	0.000	6860604	1197.5
Aroclor-1260	5	11.246	-0.001	39714854	1297.5	NS	---			----
	Total Col1Ave (5 peaks):				319.2	Total Col2Ave (4 peaks):				416.3 RPD = 26
	Corrected Ave (4 peaks):				74.7	Corrected Ave (3 peaks):				155.9 RPD = 70*
Aroclor-1262	1	10.283	0.000	1540353	27.3	1	10.260	0.000	2036369	136.7
Aroclor-1262	2	10.658	0.000	7448068	56.1	2	10.711	0.001	2209727	162.2
Aroclor-1262	3	11.059	0.000	580097	13.8	3	10.985	-0.001	1398883	54.7
Aroclor-1262	4	11.246	-0.001	39714854	673.2	4	11.572	0.005	7134271	429.5
Aroclor-1262	5	11.918	0.000	12822548	283.2	5	12.307	0.001	2273742	283.5
	Total Col1Ave (5 peaks):				210.7	Total Col2Ave (5 peaks):				213.3 RPD = 1
	Corrected Ave (4 peaks):				95.1	Corrected Ave (4 peaks):				159.3 RPD = 50*
Aroclor-1268	1	11.174	-0.001	33104578	260.8	1	11.505	-0.001	6860604	263.8

Aroclor-1268 2	11.246	0.000	39714854	282.9	2	11.572	-0.001	7134271	291.0
Aroclor-1268 3	11.632	-0.001	24428545	234.4	3	11.969	0.000	4550691	234.5
Aroclor-1268 4	12.422	0.000	64120345	218.3	4	12.791	-0.002	11103711	220.9

Total Col1Ave (4 peaks): 249.1 Total Col2Ave (4 peaks): 252.6 RPD = 1

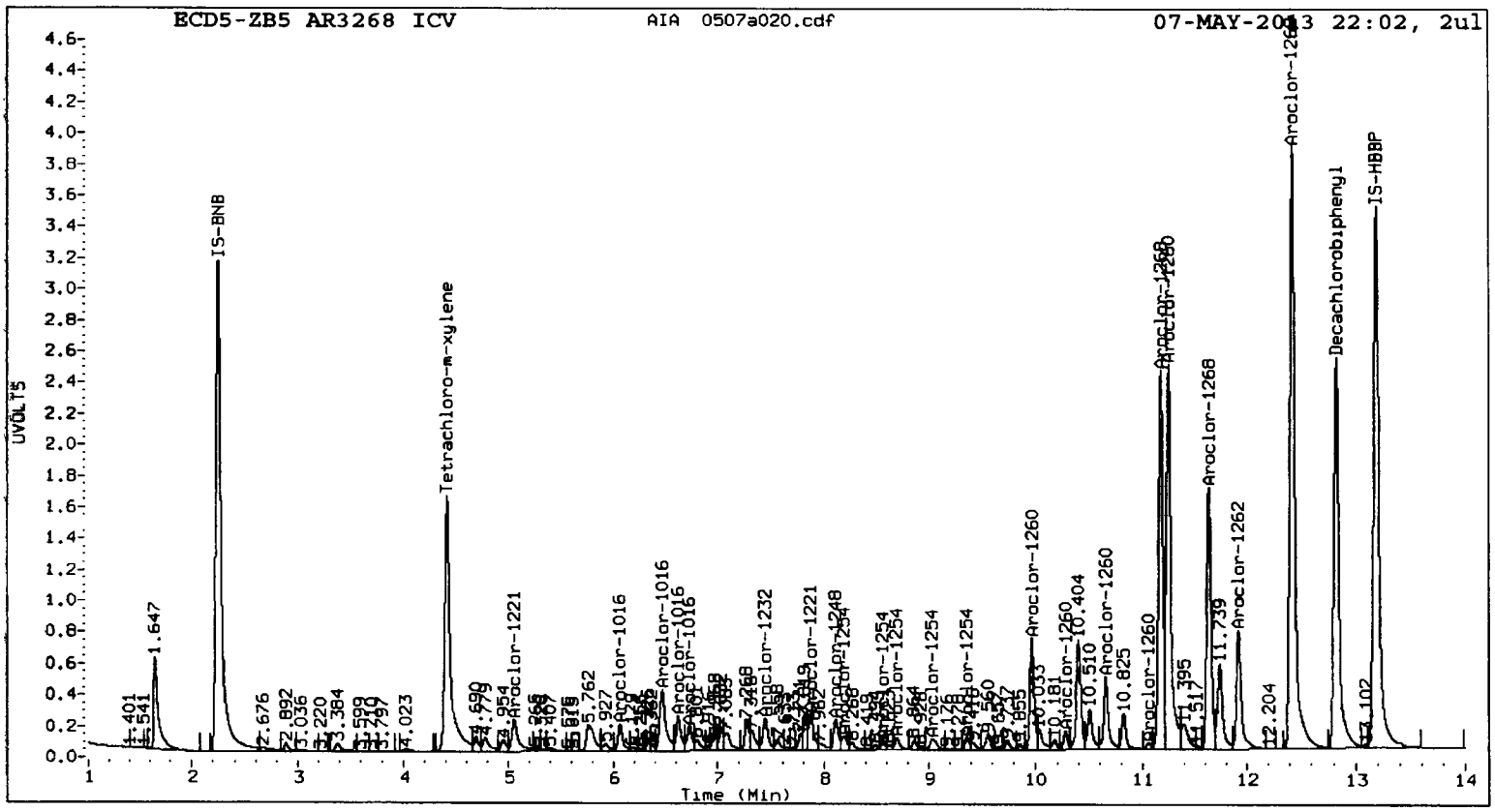
Corrected Ave (3 peaks): 237.8 Corrected Ave (3 peaks): 239.8 RPD = 1

Total PCB Area Col1 (4.511 - 12.728) = 308240732 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 58535775 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Aroclor-1221
Aroclor-1016
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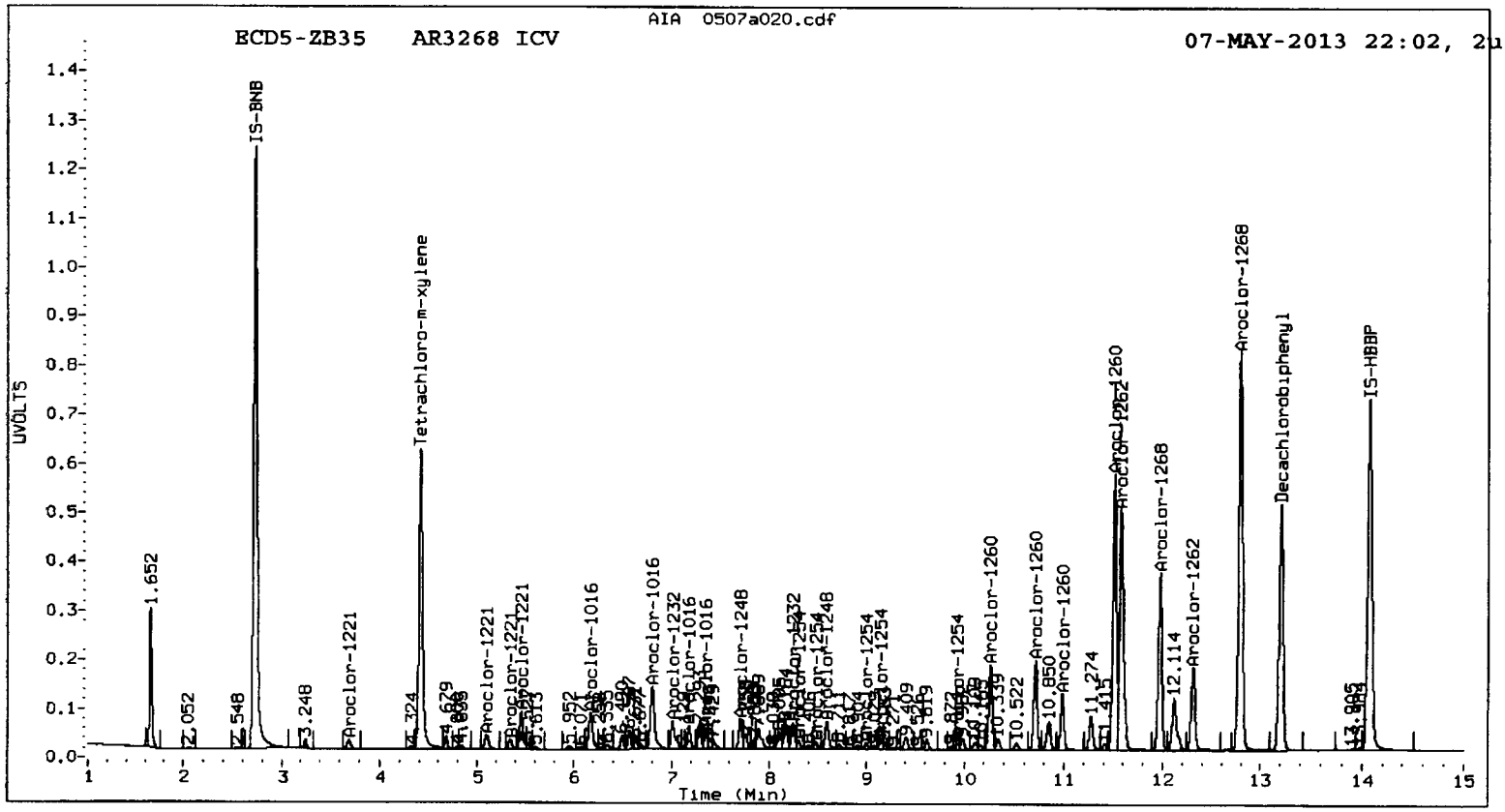
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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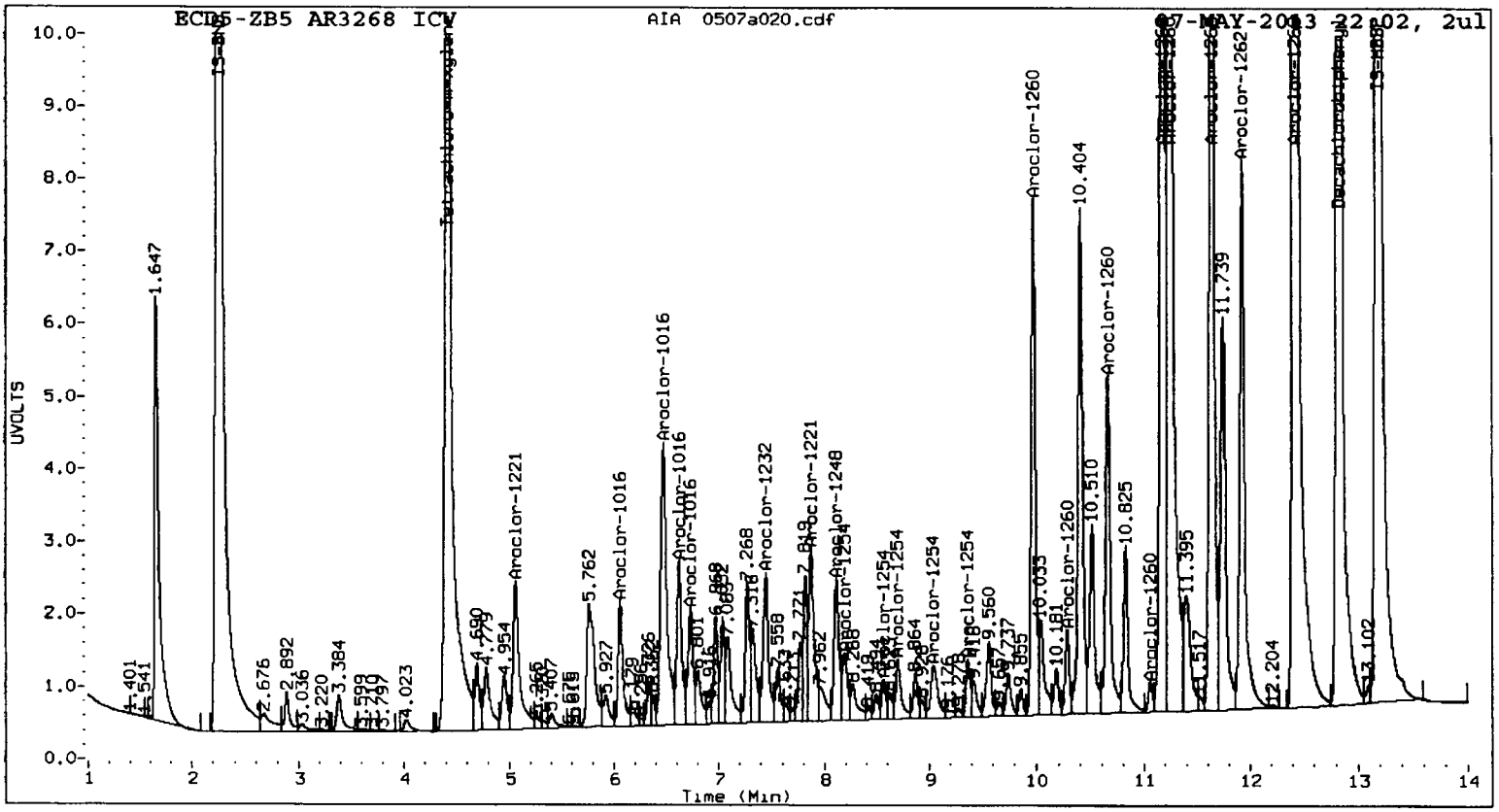
07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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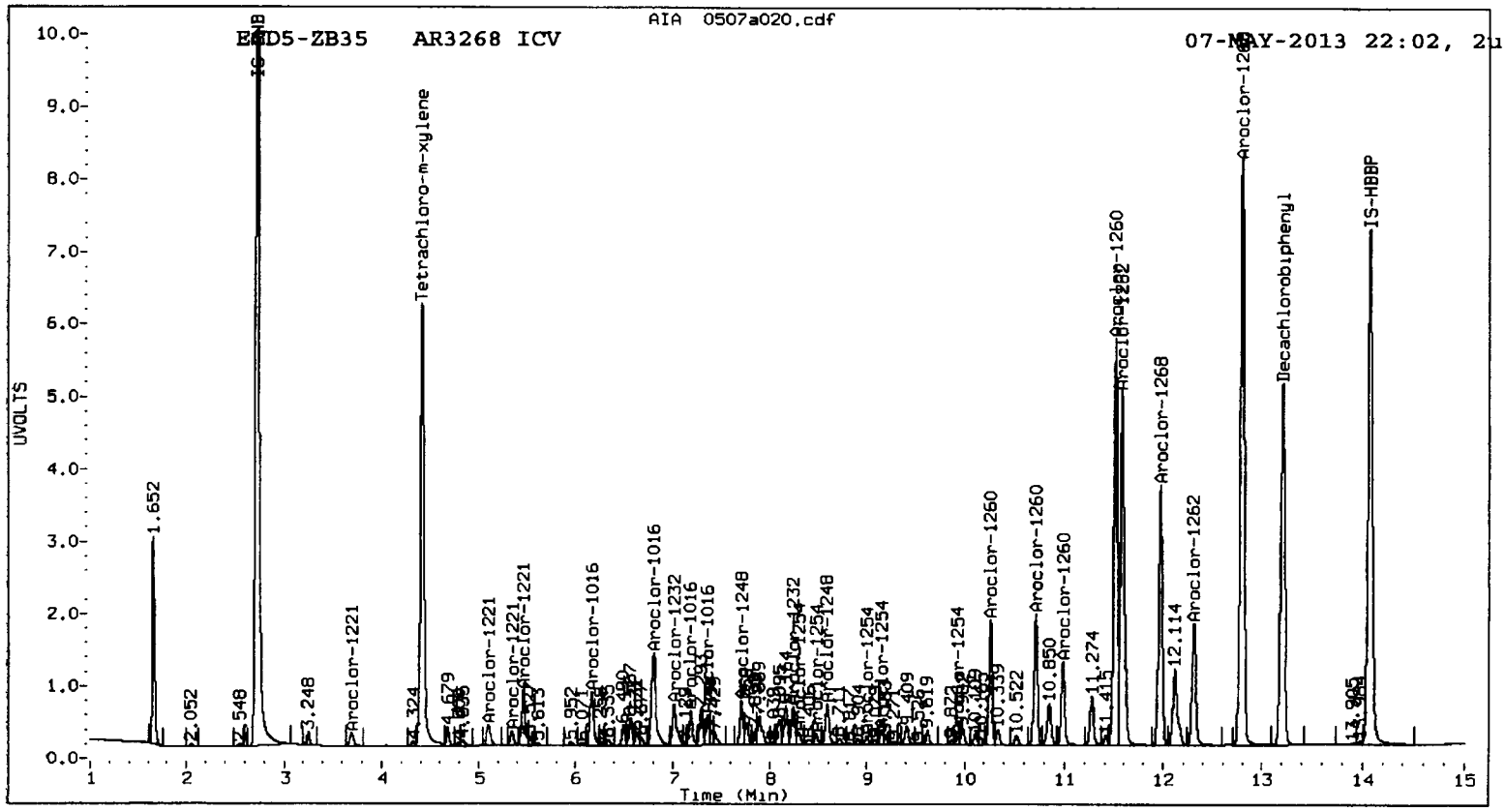
AIA 0507a020.cdf
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130507.b/ddt-1.b/0507a021.d ARI ID: 0.1 PPM DDTS

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.156	0.000	70648560	8.560	0.000	14556975	0.100	0.100	0.0	2,4-DDE
8.707	0.000	75652806	9.246	0.000	13980580	0.100	0.100	0.0	2,4-DDD
9.210	0.000	80992371	9.713	0.000	35257917	0.100	0.200#	66.7*	2,4-DDT
8.589	0.000	98960725	8.949	0.000	23356763	0.100	0.100	0.0	4,4-DDE
9.163	0.000	76831347	9.713	0.000	35257917	0.100	0.200#	66.7*	4,4-DDD
9.675	0.000	88164078	10.148	0.000	19956133	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 07-MAY-2013 22:43 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.590	867273
4,4-DDD	9.168	6982253
4,4-DDT	9.676	87775915

Col 1: 4,4-DDT Percent Breakdown = 8.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.950	168832
4,4-DDD/2,4-DDT	9.719	1384968
4,4-DDT	10.149	20474911

Col 2: 4,4-DDT Percent Breakdown = 7.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN2731 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 04/16/13 & 05/07/13 Analysis Start Date: 05/06/13

	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 have an oily matrix, oily matrix neg. affect calib. closing ccals failed low ~8% for 1st run and AR1260 ccals failed high ~3% on 05/08/13 HBBP failed low ~9% for closing ccals. cleaned liner and ran samples 2nd time. closing ccals failed low again for AR1248 & AR1016, AR1260 failed high again ~10% and HBBP failed low again ~9%. 05/08/13 re-curved and ran samples at 5X dil. closing AR1260 ccal fails low on column1, column2 is w/in qc. reporting first run and dilutions went w/ best fit. y-flags are for AR1016→1248 ranges misc. peaks throughout samples

(Review 1) Analyst: _____ **Date:** 05/08/13

(Review 2) Reviewer: _____ **Date:** 5/8/13

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a006.d
Data file 2: 20130416.b/0506-2.b/0506a006.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 06-MAY-2013 18:02
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.013	16705166	4.405	-0.010	4297255	21.2	20.5	3.3	Tetrachloro-m-xylen
12.823	-0.009	22847535	13.200	-0.007	4199104	18.1	19.5	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	53.0	51.3
Decachlorobiphenyl	45.3	48.7

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48419450	-0.5
Hexabromobiphenyl	81878684	82802662	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14233456	-1.5
Hexabromobiphenyl	16263628	15559769	-4.3

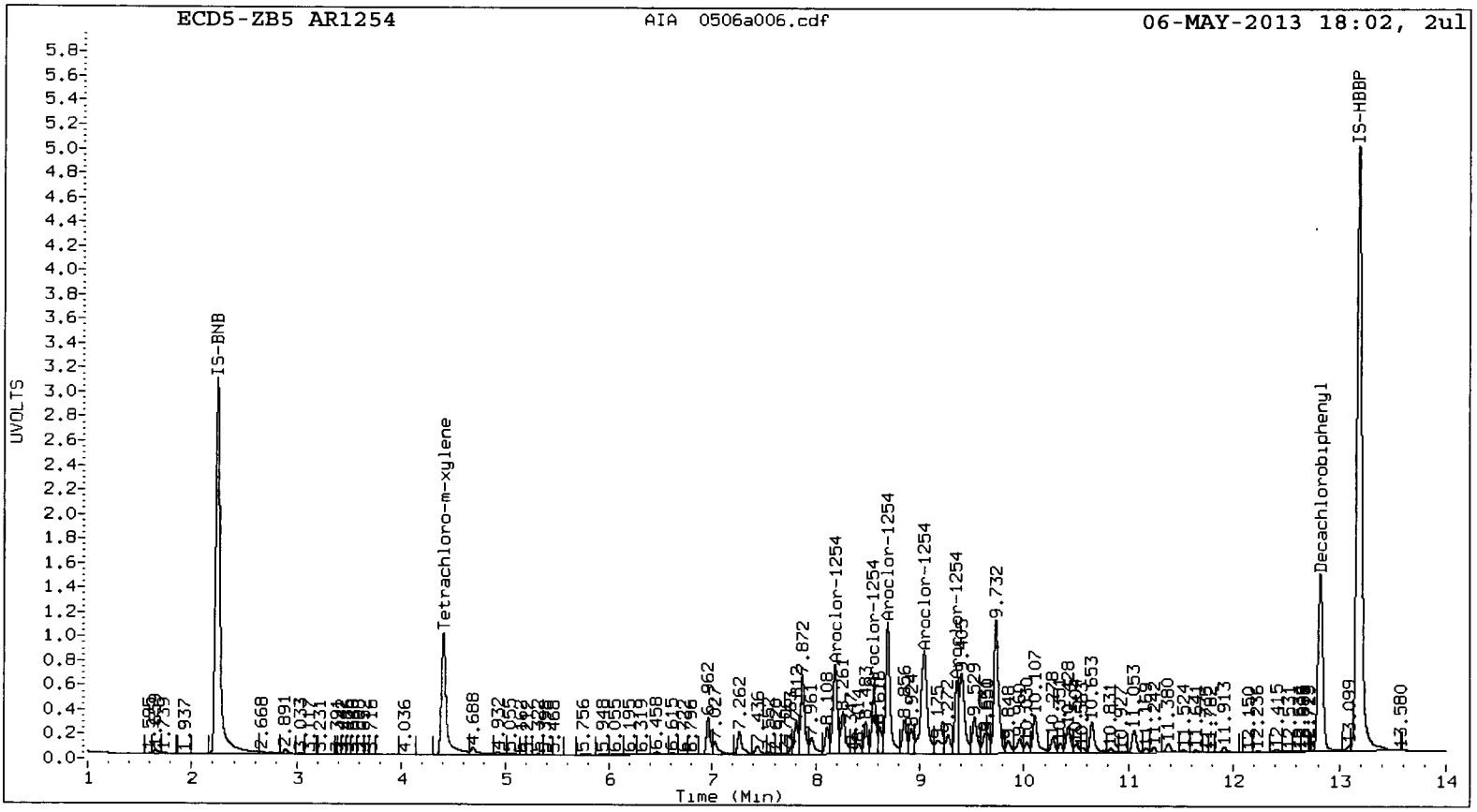
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254 1	8.185	-0.008	11026579	244.8	1	8.294	-0.003	1806751	275.8
Aroclor-1254 2	8.560	-0.007	6671623	223.2	2	8.470	-0.003	2242747	277.2
Aroclor-1254 3	8.694	-0.008	16439452	273.9	3	8.992	-0.003	1739201	278.1
Aroclor-1254 4	9.045	-0.008	18101172	281.1	4	9.144	-0.003	3363490	248.9
Aroclor-1254 5	9.356	-0.008	7288031	274.9	5	9.928	-0.002	2237002	286.7
Total Col1Ave (5 peaks):				259.6	Total Col2Ave (5 peaks):				273.3 RPD = 5
Corrected Ave (4 peaks):				254.2	Corrected Ave (4 peaks):				270.0 RPD = 6

Total PCB Area Col1 (4.515 - 12.732) = 182922660 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 37447371 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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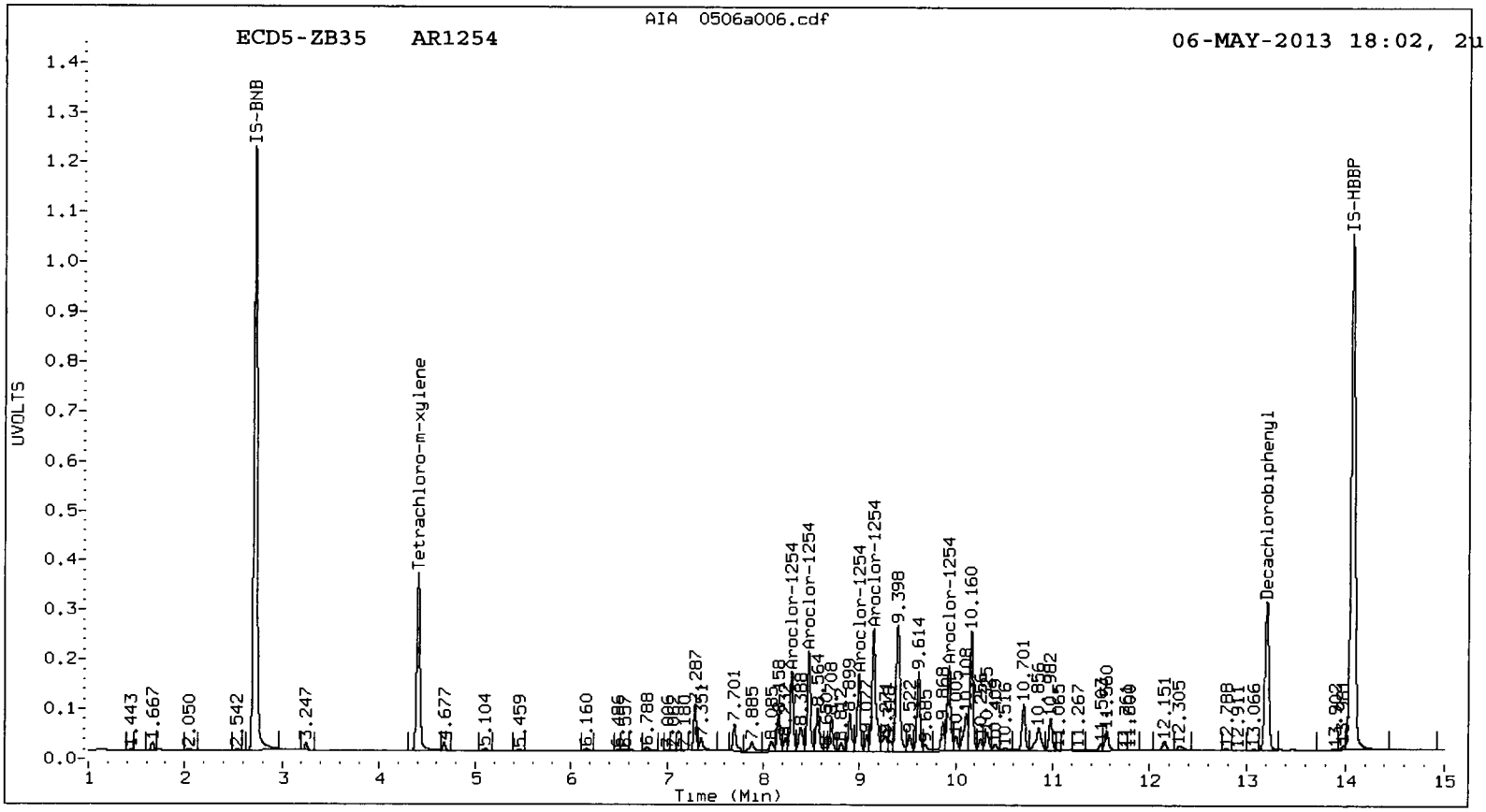
06-MAY-2013 18:02, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP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ECD5-ZB35 AR1254
06-MAY-2013 18:02, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a007.d
Data file 2: 20130416.b/0506-2.b/0506a007.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 06-MAY-2013 18:22
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.013	14880812	4.405	-0.010	3678755	21.5	19.7	8.6	Tetrachloro-m-xylen
12.824	-0.008	20493270	13.201	-0.007	3751843	18.1	19.5	7.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.7	49.3
Decachlorobiphenyl	45.3	48.8

1 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	42607777	-12.4
Hexabromobiphenyl	81878684	74194353	-9.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	12690692	-12.2
Hexabromobiphenyl	16263628	13855174	-14.8

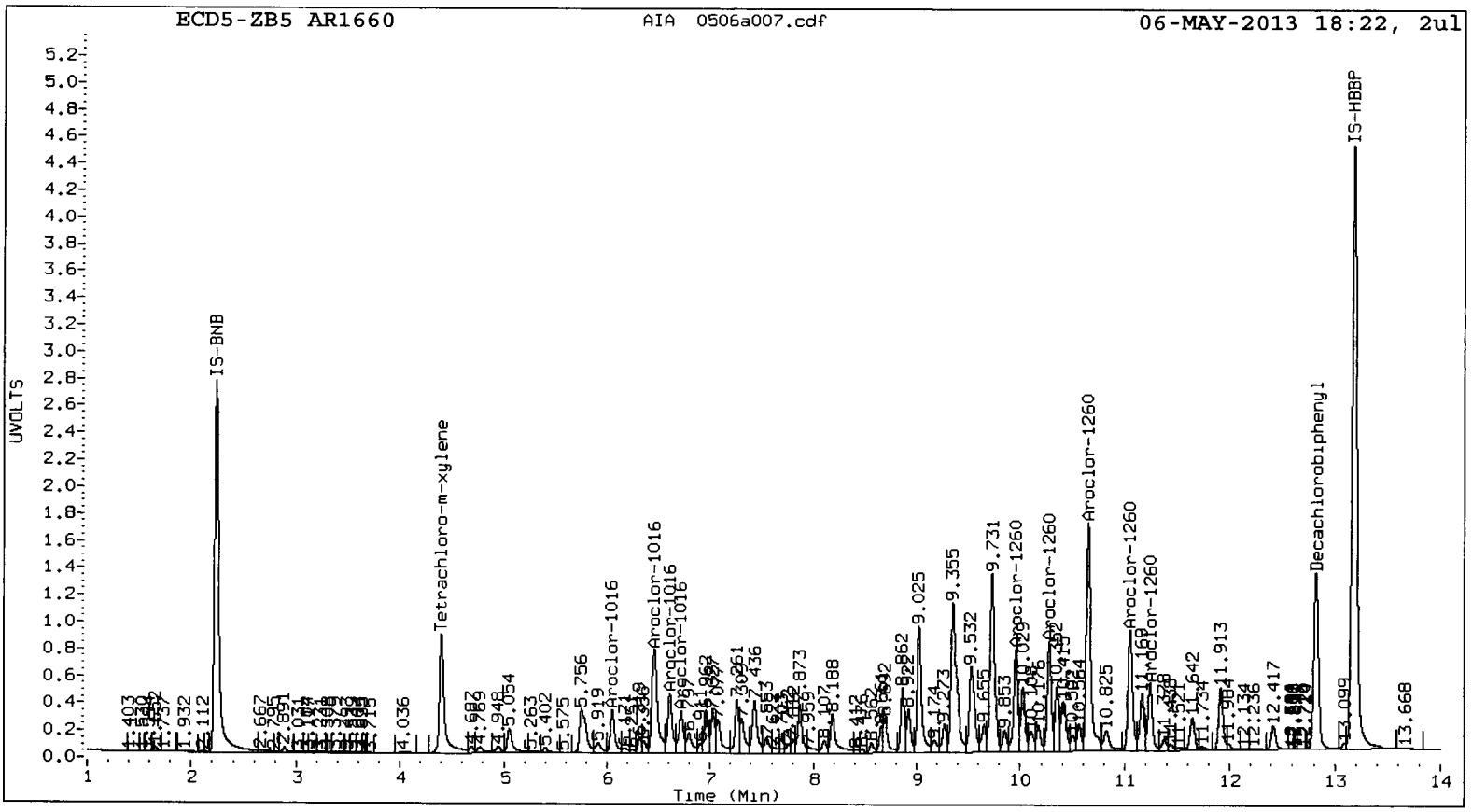
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.054	-0.010	4866489	269.5	1	6.161	-0.007	1789499	243.0
Aroclor-1016	2	6.461	-0.009	15157063	269.5	2	6.798	-0.006	3260703	210.4
Aroclor-1016	3	6.610	-0.010	6783103	276.6	3	7.180	-0.006	1060065	262.3
Aroclor-1016	4	6.721	-0.010	5007927	289.9	4	7.353	-0.007	951851	254.4
Total Col1Ave (4 peaks):		276.4				Total Col2Ave (4 peaks):			242.5	RPD = 13
Corrected Ave (3 peaks):		271.9				Corrected Ave (3 peaks):			236.0	RPD = 14
Aroclor-1260	1	9.962	-0.009	10762588	262.2	1	10.256	-0.007	2049259	266.0
Aroclor-1260	2	10.278	-0.009	10858288	251.3	2	10.706	-0.005	2565849	276.6
Aroclor-1260	3	10.653	-0.009	26222447	251.3	3	10.981	-0.006	4938178	266.2
Aroclor-1260	4	11.053	-0.008	13636148	244.0	4	11.502	-0.007	1466699	277.3
Aroclor-1260	5	11.242	-0.009	7416343	250.4	NS	---			----
Total Col1Ave (5 peaks):		251.8				Total Col2Ave (4 peaks):			271.5	RPD = 8
Corrected Ave (4 peaks):		249.3				Corrected Ave (3 peaks):			269.6	RPD = 8

Total PCB Area Col1 (4.515 - 12.732) = 320871080 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 63944613 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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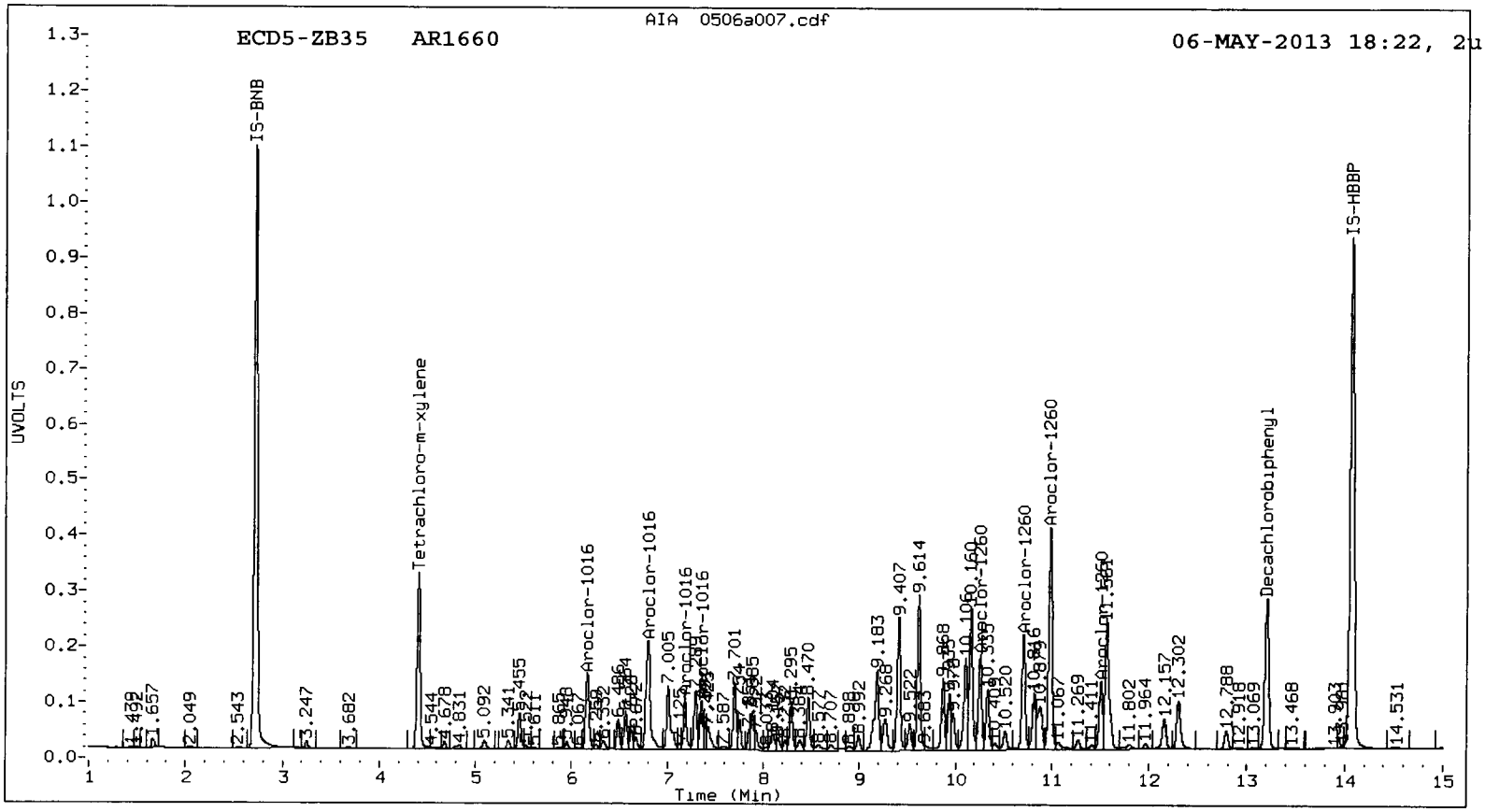
06-MAY-2013 18:22, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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ECD5-ZB35 AR1660
06-MAY-2013 18:22, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1016
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a009.d
Data file 2: 20130416.b/0506-2.b/0506a009.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WO14LCSS1
Client ID: WO14LCSS1
Injection Date: 06-MAY-2013 19:02
Ical Date: 16-APR-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.402	-0.013	29990175	4.407	-0.008	7371706	35.1	32.2	8.7	Tetrachloro-m-xylen
12.823	-0.009	46572010	13.202	-0.006	8592016	33.2	35.8	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	87.8	80.5
Decachlorobiphenyl	83.1	89.4

05/06/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	52490645	7.9
Hexabromobiphenyl	81878684	92004843	12.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	15566793	7.7
Hexabromobiphenyl	16263628	17329892	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount	
Aroclor-1016	1	6.053	-0.011	9392941	422.2	1	6.162	-0.007	3365217	372.6	
Aroclor-1016	2	6.460	-0.010	29330132	423.3	2	6.797	-0.006	7603775	400.0	
Aroclor-1016	3	6.610	-0.010	12920836	427.7	3	7.180	-0.006	2024068	408.3	
Aroclor-1016	4	6.721	-0.010	9689148	455.3	4	7.354	-0.006	1832539	399.3	
	Total Col1Ave (4 peaks):				432.1		Total Col2Ave (4 peaks):			395.1	RPD = 9
	Corrected Ave (3 peaks):				424.4		Corrected Ave (3 peaks):			390.6	RPD = 8
Aroclor-1221	1	5.054	-0.001	5960512	284.3	1	3.678	-0.011	184068	113.3	
Aroclor-1221	2	6.460	-0.004	29330132	4429.7	2	5.094	0.006	369982	145.5	
Aroclor-1221	3	7.872	-0.004	9829709	1073.1	3	5.343	0.002	348329	226.7	
Aroclor-1221	NS	---			----	4	5.457	0.002	1385483	298.6	
	Total Col1Ave (3 peaks):				1929.0		Total Col2Ave (4 peaks):			196.0	RPD = 163*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			161.8	
Aroclor-1232	1	6.053	-0.001	9392941	1016.8	1	6.162	0.000	3365217	869.5	
Aroclor-1232	2	6.460	-0.001	29330132	1030.0	2	6.797	0.001	7603775	1000.1	
Aroclor-1232	3	7.435	-0.003	12859687	893.7	3	7.005	-0.002	2675939	841.8	
Aroclor-1232	4	7.872	0.000	9829709	582.5	4	8.232	-0.005	326668	125.5	
	Total Col1Ave (4 peaks):				880.8		Total Col2Ave (4 peaks):			709.2	RPD = 22
	Corrected Ave (3 peaks):				831.0		Corrected Ave (3 peaks):			612.3	RPD = 30
Aroclor-1242	1	6.053	-0.003	9392941	543.7	1	6.162	0.001	3365217	503.1	
Aroclor-1242	2	6.460	-0.002	29330132	551.6	2	6.797	0.000	7603775	532.9	
Aroclor-1242	3	6.610	-0.002	12920836	548.6	3	7.005	0.000	2675939	447.5	
Aroclor-1242	4	7.872	0.004	9829709	333.7	4	8.232	-0.001	326668	66.4	
	Total Col1Ave (4 peaks):				494.4		Total Col2Ave (4 peaks):			387.5	RPD = 24
	Corrected Ave (3 peaks):				475.3		Corrected Ave (3 peaks):			339.0	RPD = 33
Aroclor-1248	1	6.460	-0.008	29330132	884.8	1	6.797	-0.002	7603775	873.2	
Aroclor-1248	2	7.435	-0.010	12859687	350.2	2	7.700	-0.007	2549378	356.7	
Aroclor-1248	3	7.872	-0.004	9829709	207.4	3	8.232	-0.007	326668	44.4	
Aroclor-1248	4	8.106	-0.005	2198802	65.5	4	8.577	-0.007	204105	21.3	
	Total Col1Ave (4 peaks):				377.0		Total Col2Ave (4 peaks):			323.9	RPD = 15
	Corrected Ave (3 peaks):				207.7		Corrected Ave (3 peaks):			140.8	RPD = 38
Aroclor-1254	1	8.187	-0.007	11681925	239.2	1	8.294	-0.003	1757648	245.3	
Aroclor-1254	2	8.556	-0.010	2567263	79.2	2	8.470	-0.004	1993193	225.3	
Aroclor-1254	3	8.691	-0.010	10874380	167.2	3	8.992	-0.003	548848	80.2	
Aroclor-1254	4	9.024	-0.029	26510827	379.7	4	9.144	-0.002	966852	65.4	
Aroclor-1254	5	9.354	-0.009	38701994	1346.8	5	9.934	0.004	2203358	258.2	
	Total Col1Ave (5 peaks):				442.4		Total Col2Ave (5 peaks):			174.9	RPD = 87*
	Corrected Ave (4 peaks):				216.3		Corrected Ave (4 peaks):			154.1	RPD = 34
Aroclor-1260	1	9.961	-0.010	20989314	412.4	1	10.256	-0.007	4028170	418.0	
Aroclor-1260	2	10.277	-0.009	21041092	392.6	2	10.706	-0.006	4979178	429.2	
Aroclor-1260	3	10.653	-0.009	51717807	399.7	3	10.981	-0.007	9973218	429.8	
Aroclor-1260	4	11.052	-0.009	27628349	398.7	4	11.502	-0.007	2908994	439.7	
Aroclor-1260	5	11.242	-0.009	14696880	400.2	NS	---			----	
	Total Col1Ave (5 peaks):				400.7		Total Col2Ave (4 peaks):			429.2	RPD = 7
	Corrected Ave (4 peaks):				397.8		Corrected Ave (3 peaks):			425.7	RPD = 7
Aroclor-1262	1	10.277	-0.005	21041092	356.2	1	10.256	-0.005	4028170	280.8	
Aroclor-1262	2	10.653	-0.006	51717807	336.3	2	10.706	-0.005	4979178	400.7	
Aroclor-1262	3	11.052	-0.007	27628349	506.0	3	10.981	-0.006	9973218	347.9	
Aroclor-1262	4	11.242	-0.004	14696880	224.3	4	11.561	-0.006	7108589	381.4	
Aroclor-1262	5	11.912	-0.007	13581991	211.2	5	12.304	-0.005	2674772	238.7	
	Total Col1Ave (5 peaks):				326.8		Total Col2Ave (5 peaks):			329.9	RPD = 1
	Corrected Ave (4 peaks):				282.0		Corrected Ave (4 peaks):			312.2	RPD = 10
Aroclor-1268	1	11.169	-0.005	11999227	80.1	1	11.502	-0.005	2908994	100.3	

Aroclor-1268 2	11.242	-0.002	14696880	98.2	2	11.561	-0.012	7108589	248.3
Aroclor-1268 3	11.643	0.012	7088763	54.8	3	11.965	-0.004	198653	8.4
Aroclor-1268 4	12.416	-0.005	4728074	12.5	4	12.789	-0.003	811576	11.6

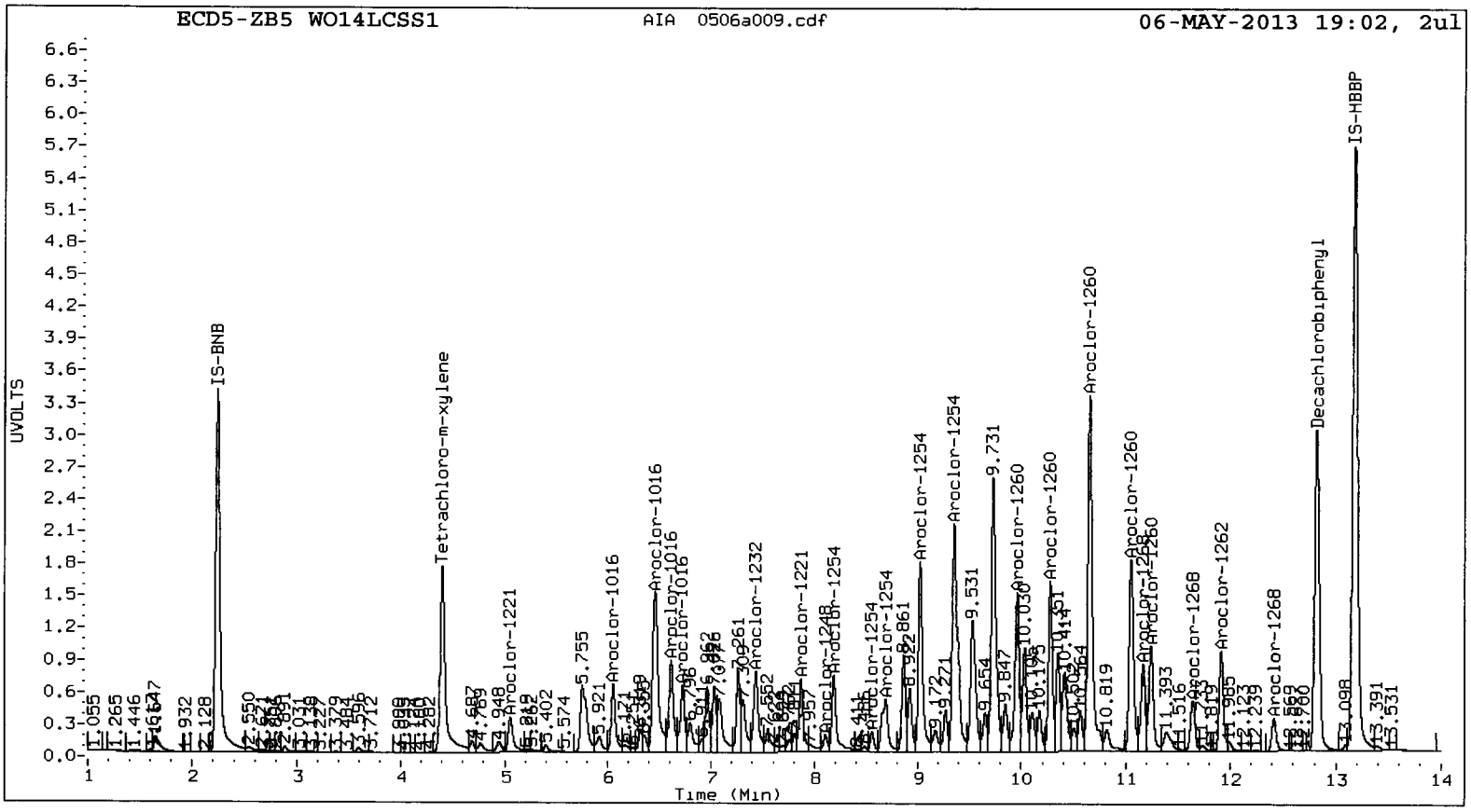
Total Col1Ave (4 peaks): 61.4 Total Col2Ave (4 peaks): 92.1 RPD = 40*

Corrected Ave (3 peaks): 49.1 Corrected Ave (3 peaks): 40.1 RPD = 20

Total PCB Area Col1 (4.515 - 12.732) = 616695797 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 122052726 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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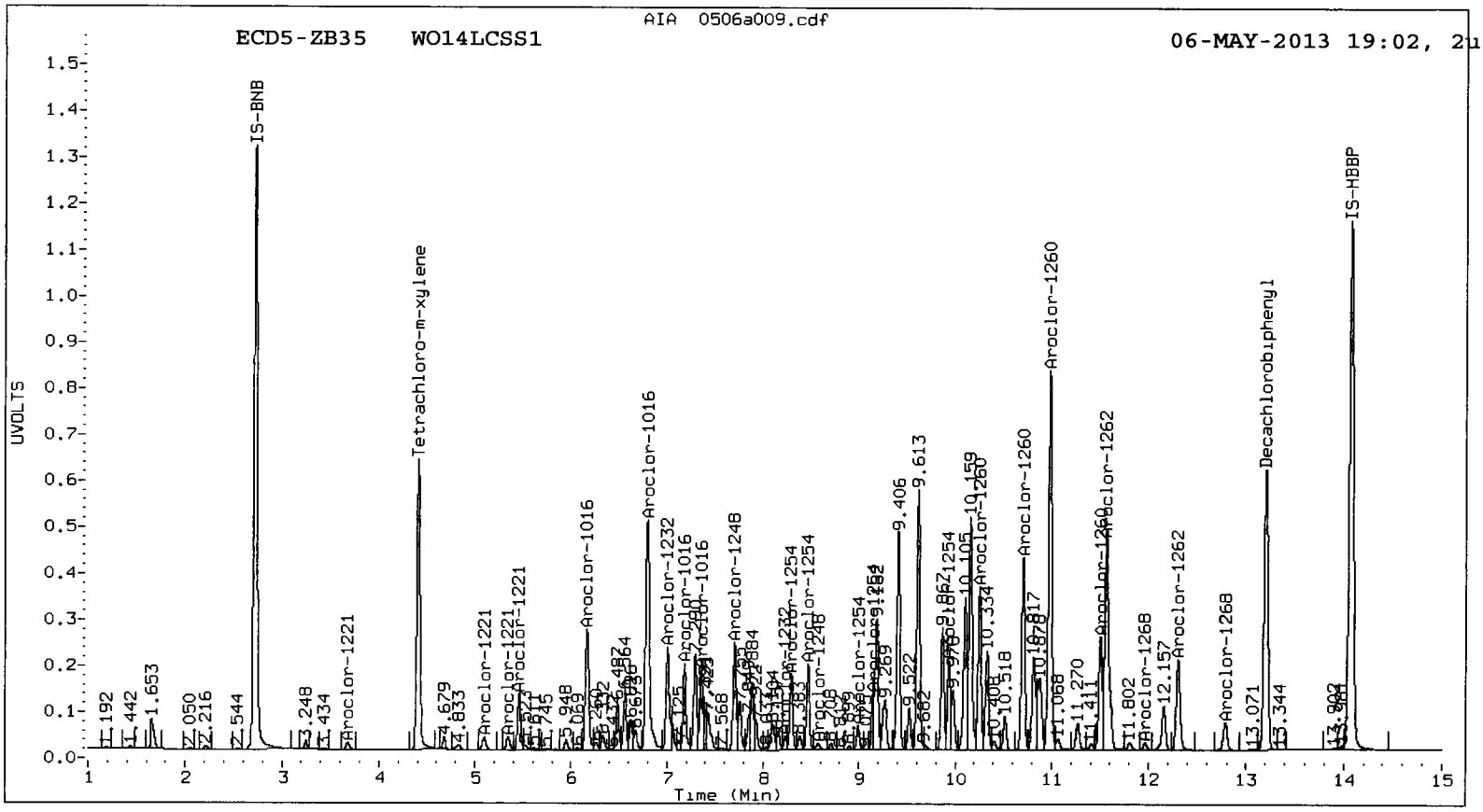
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Aroclor-1232
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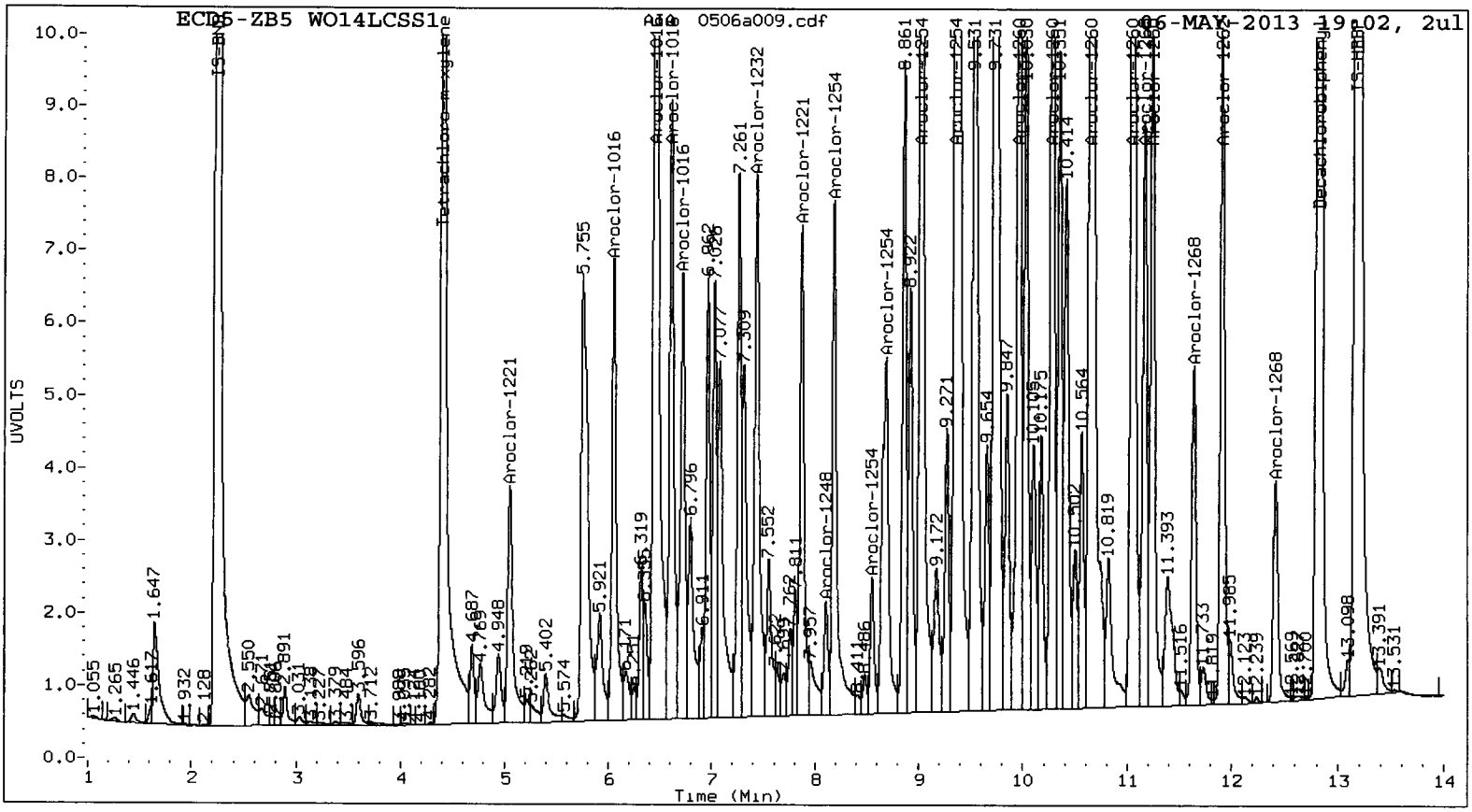
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Decachlorobiphenyl
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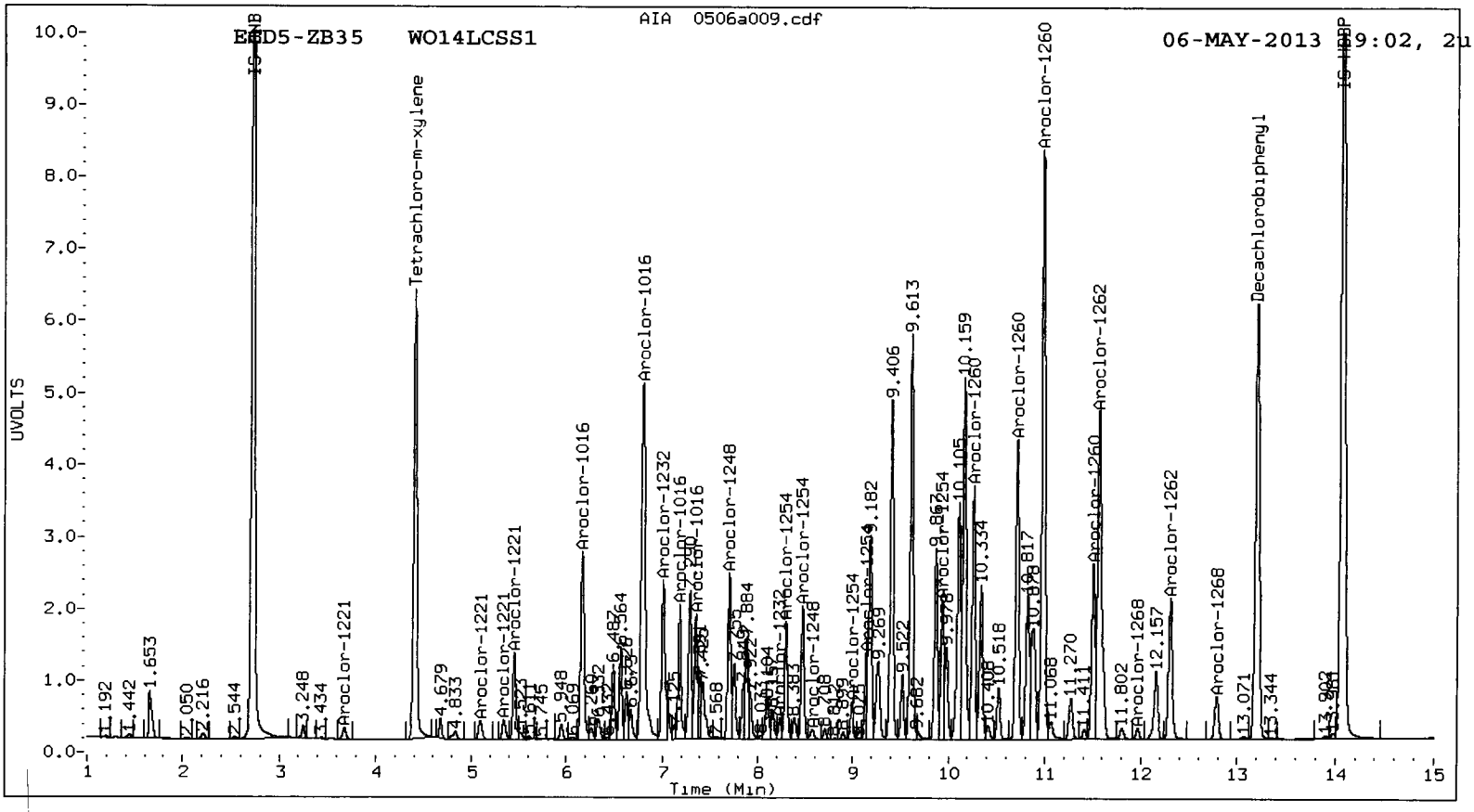
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Decachlorobiphenyl
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Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a010.d
Data file 2: 20130416.b/0506-2.b/0506a010.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WO14LCSDS1
Client ID: WO14LCSDS1
Injection Date: 06-MAY-2013 19:22
Ical Date: 16-APR-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.404	-0.011	28856646	4.407	-0.008	7126339	31.6	29.9	5.7	Tetrachloro-m-xylen
12.825	-0.007	47630604	13.202	-0.006	8763406	32.2	34.8	7.6	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	79.1	74.7
Decachlorobiphenyl	80.6	86.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	56059074	15.2
Hexabromobiphenyl	81878684	96999147	18.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	16206025	12.1
Hexabromobiphenyl	16263628	18174342	11.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.054	-0.009	9240539	388.9	1	6.161	-0.008	3277559	348.6
Aroclor-1016	2	6.461	-0.009	28916779	390.7	2	6.796	-0.007	7437952	375.8
Aroclor-1016	3	6.610	-0.010	12827579	397.6	3	7.180	-0.006	2001988	387.9
Aroclor-1016	4	6.721	-0.010	9615289	423.0	4	7.353	-0.007	1814466	379.8
Total Col1Ave (4 peaks):					400.1	Total Col2Ave (4 peaks):				373.0 RPD = 7
Corrected Ave (3 peaks):					392.4	Corrected Ave (3 peaks):				368.1 RPD = 6
Aroclor-1221	1	5.056	0.000	5837328	260.7	1	3.683	-0.006	47232	27.9
Aroclor-1221	2	6.461	-0.002	28916779	4089.3	2	5.092	0.004	360508	136.2
Aroclor-1221	3	7.872	-0.003	9763472	998.0	3	5.342	0.001	321200	200.8
Aroclor-1221	NS	---			----	4	5.456	0.001	1355545	280.6
Total Col1Ave (3 peaks):					1782.6	Total Col2Ave (4 peaks):				161.4 RPD = 167*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				121.6
Aroclor-1232	1	6.054	0.000	9240539	936.6	1	6.161	-0.001	3277559	813.4
Aroclor-1232	2	6.461	0.000	28916779	950.9	2	6.796	0.000	7437952	939.7
Aroclor-1232	3	7.436	-0.003	12802976	833.1	3	7.005	-0.002	3111163	940.1
Aroclor-1232	4	7.872	0.001	9763472	541.8	4	8.233	-0.004	323902	119.5
Total Col1Ave (4 peaks):					815.6	Total Col2Ave (4 peaks):				703.2 RPD = 15
Corrected Ave (3 peaks):					770.5	Corrected Ave (3 peaks):				624.2 RPD = 21
Aroclor-1242	1	6.054	-0.001	9240539	500.9	1	6.161	0.000	3277559	470.7
Aroclor-1242	2	6.461	-0.001	28916779	509.2	2	6.796	-0.001	7437952	500.8
Aroclor-1242	3	6.610	-0.002	12827579	509.9	3	7.005	-0.001	3111163	499.8
Aroclor-1242	4	7.872	0.005	9763472	310.3	4	8.233	0.000	323902	63.2
Total Col1Ave (4 peaks):					457.6	Total Col2Ave (4 peaks):				383.6 RPD = 18
Corrected Ave (3 peaks):					440.1	Corrected Ave (3 peaks):				344.6 RPD = 24
Aroclor-1248	1	6.461	-0.006	28916779	816.8	1	6.796	-0.003	7437952	820.5
Aroclor-1248	2	7.436	-0.009	12802976	326.5	2	7.701	-0.006	2549235	342.6
Aroclor-1248	3	7.872	-0.004	9763472	192.9	3	8.233	-0.006	323902	42.3
Aroclor-1248	4	8.107	-0.004	2233041	62.3	4	8.577	-0.006	195053	19.5
Total Col1Ave (4 peaks):					349.6	Total Col2Ave (4 peaks):				306.2 RPD = 13
Corrected Ave (3 peaks):					193.9	Corrected Ave (3 peaks):				134.8 RPD = 36
Aroclor-1254	1	8.187	-0.007	11633293	223.1	1	8.295	-0.002	1760077	235.9
Aroclor-1254	2	8.557	-0.010	2572371	74.3	2	8.470	-0.003	1994766	216.6
Aroclor-1254	3	8.692	-0.010	11134307	160.3	3	8.993	-0.002	2117087	297.3
Aroclor-1254	4	9.025	-0.028	27590075	370.0	4	9.145	-0.001	968174	62.9
Aroclor-1254	5	9.355	-0.008	40245382	1311.3	5	9.934	0.004	2226165	250.5
Total Col1Ave (5 peaks):					427.8	Total Col2Ave (5 peaks):				212.7 RPD = 67*
Corrected Ave (4 peaks):					206.9	Corrected Ave (4 peaks):				191.5 RPD = 8
Aroclor-1260	1	9.961	-0.009	21884109	407.8	1	10.256	-0.007	4139593	409.6
Aroclor-1260	2	10.278	-0.009	21765911	385.2	2	10.706	-0.006	5119258	420.7
Aroclor-1260	3	10.654	-0.008	50873951	372.9	3	10.981	-0.006	10261577	421.7
Aroclor-1260	4	11.053	-0.008	28647539	392.1	4	11.502	-0.007	3004834	433.0
Aroclor-1260	5	11.244	-0.007	15340594	396.2	NS	---			----
Total Col1Ave (5 peaks):					390.9	Total Col2Ave (4 peaks):				421.3 RPD = 7
Corrected Ave (4 peaks):					386.6	Corrected Ave (3 peaks):				417.3 RPD = 8
Aroclor-1262	1	10.278	-0.005	21765911	349.5	1	10.256	-0.005	4139593	275.2
Aroclor-1262	2	10.654	-0.005	50873951	313.8	2	10.706	-0.005	5119258	392.8
Aroclor-1262	3	11.053	-0.006	28647539	497.7	3	10.981	-0.006	10261577	341.4
Aroclor-1262	4	11.244	-0.003	15340594	222.1	4	11.561	-0.006	7323880	374.7
Aroclor-1262	5	11.913	-0.006	14060014	207.4	5	12.303	-0.006	2784550	237.0
Total Col1Ave (5 peaks):					318.1	Total Col2Ave (5 peaks):				324.2 RPD = 2
Corrected Ave (4 peaks):					273.2	Corrected Ave (4 peaks):				307.0 RPD = 12
Aroclor-1268	1	11.169	-0.004	12532266	79.3	1	11.502	-0.005	3004834	98.8

Aroclor-1268	2	11.244	-0.001	15340594	97.2	2	11.561	-0.013	7323880	244.0
Aroclor-1268	3	11.642	0.012	7424397	54.4	3	11.965	-0.004	203396	8.2
Aroclor-1268	4	12.416	-0.005	4913744	12.3	4	12.788	-0.004	833312	11.3

Total Col1Ave (4 peaks): 60.8 Total Col2Ave (4 peaks): 90.6 RPD = 39

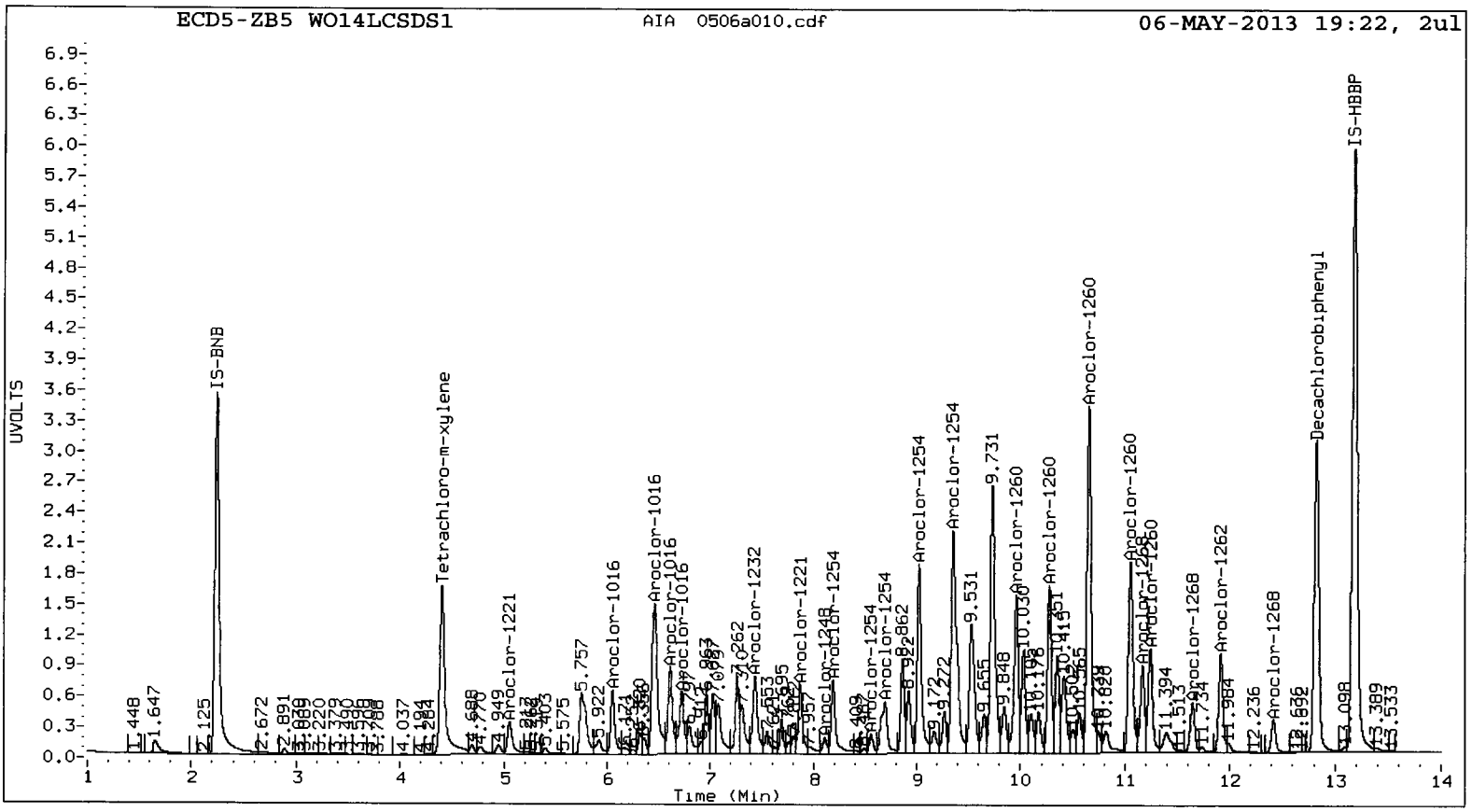
Corrected Ave (3 peaks): 48.7 Corrected Ave (3 peaks): 39.4 RPD = 21

Total PCB Area Col1 (4.515 - 12.732) = 633946424 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 125676263 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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Time (Min)
IS-BNB
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1232
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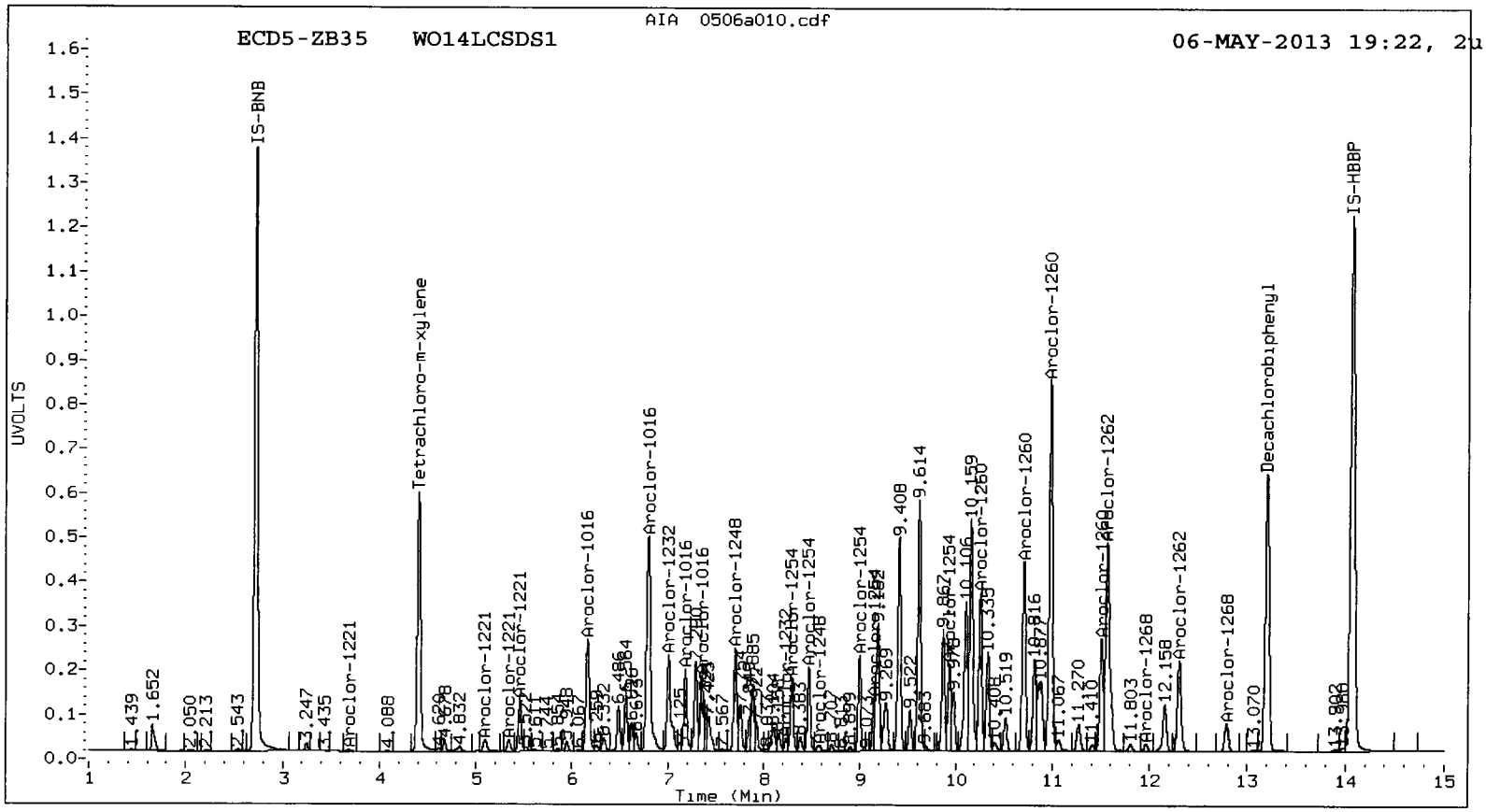
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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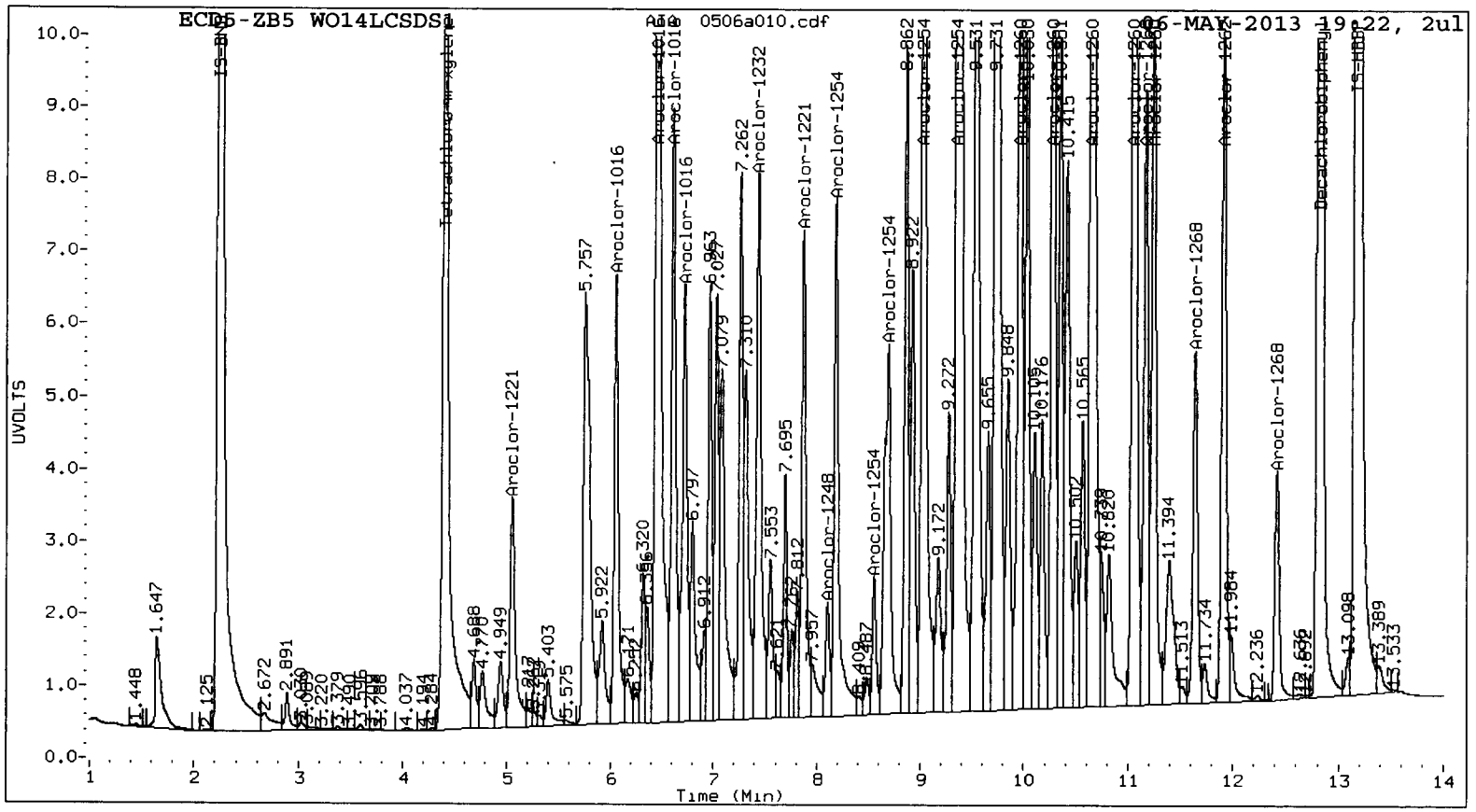
Decachlorobiphenyl
IS-HBBP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Aroclor-1221
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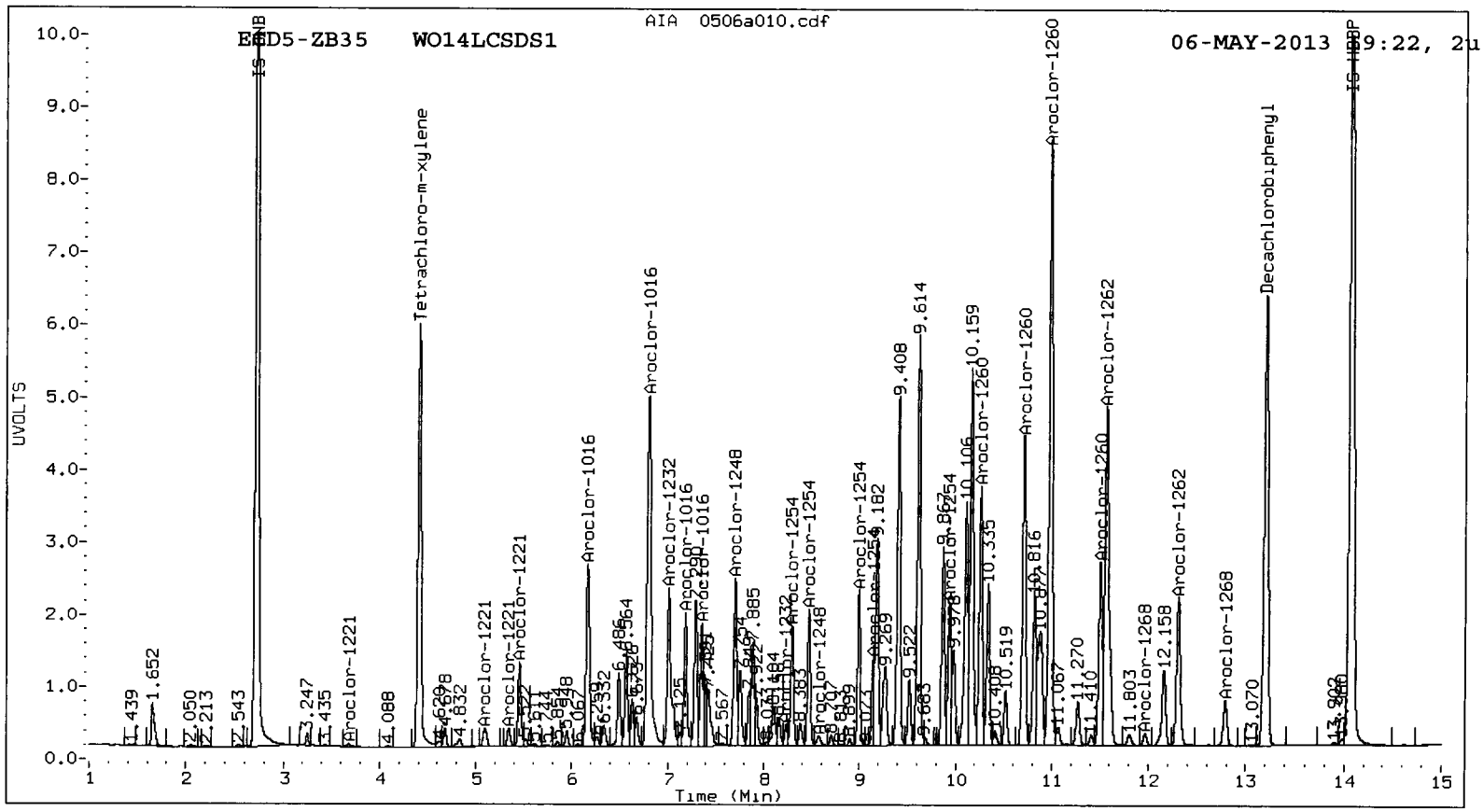
Decachlorobiphenyl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Time (Min)
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Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a014.d
Data file 2: 20130416.b/0506-2.b/0506a014.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 06-MAY-2013 20:43
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.404	-0.011	16974066	4.406	-0.009	4152325	21.3	20.1	6.1	Tetrachloro-m-xylen
12.824	-0.008	22589327	13.202	-0.006	4309485	18.2	20.7	12.8	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	53.3	50.2
Decachlorobiphenyl	45.6	51.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48909239	0.5
Hexabromobiphenyl	81878684	81323597	-0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14063095	-2.7
Hexabromobiphenyl	16263628	14993516	-7.8

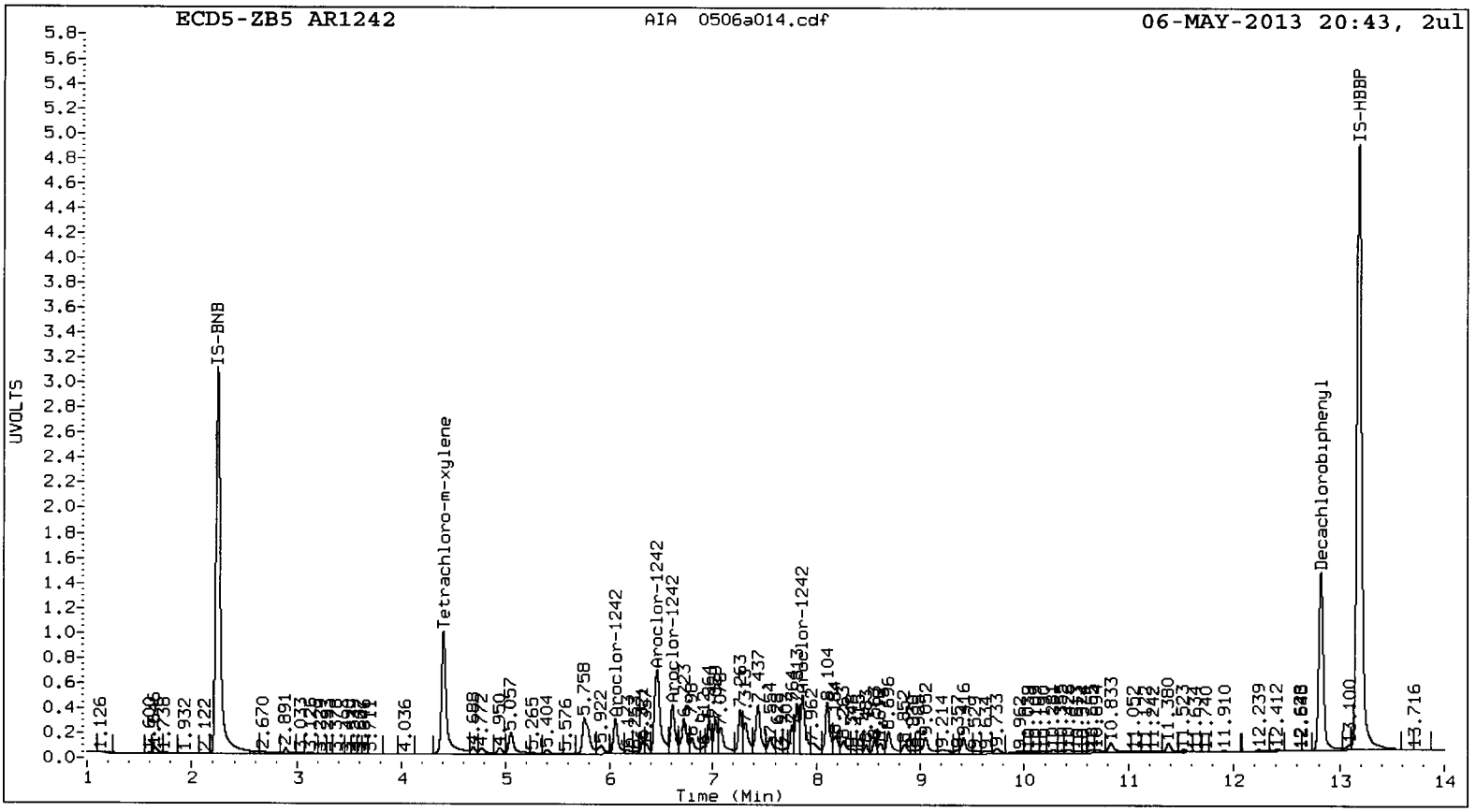
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.055	0.000	4390849	272.8	1	6.161	0.000	1554886	257.3
Aroclor-1242	2	6.462	0.000	13615429	274.8	2	6.798	0.000	2844223	220.7
Aroclor-1242	3	6.612	0.000	6111844	278.5	3	7.005	0.000	1422803	263.4
Aroclor-1242	4	7.867	0.000	7547288	274.9	4	8.233	0.000	1214547	273.3
Total Col1Ave (4 peaks):					275.3	Total Col2Ave (4 peaks):				253.7 RPD = 8
Corrected Ave (3 peaks):					274.2	Corrected Ave (3 peaks):				247.1 RPD = 10

Total PCB Area Col1 (4.515 - 12.732) = 138276385 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 26193252 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
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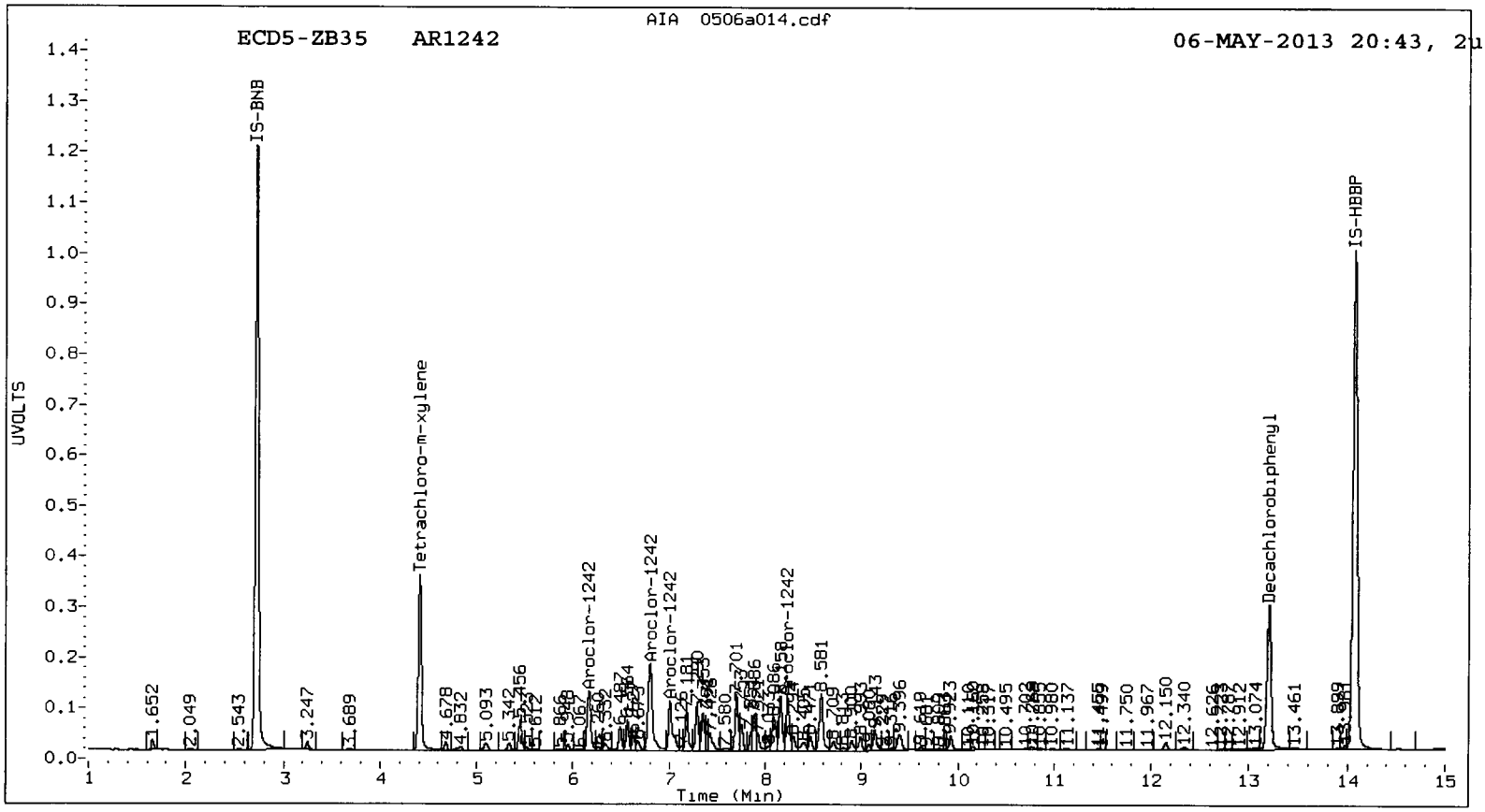
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a015.d
Data file 2: 20130416.b/0506-2.b/0506a015.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 06-MAY-2013 21:03
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.403	-0.012	15580491	4.405	-0.011	3796970	21.5	19.9	7.6	Tetrachloro-m-xylen
12.823	-0.008	21493406	13.200	-0.007	3805998	18.3	19.4	5.7	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	53.7	49.8
Decachlorobiphenyl	45.8	48.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	44586778	-8.3
Hexabromobiphenyl	81878684	76967556	-6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	12959627	-10.4
Hexabromobiphenyl	16263628	14141138	-13.1

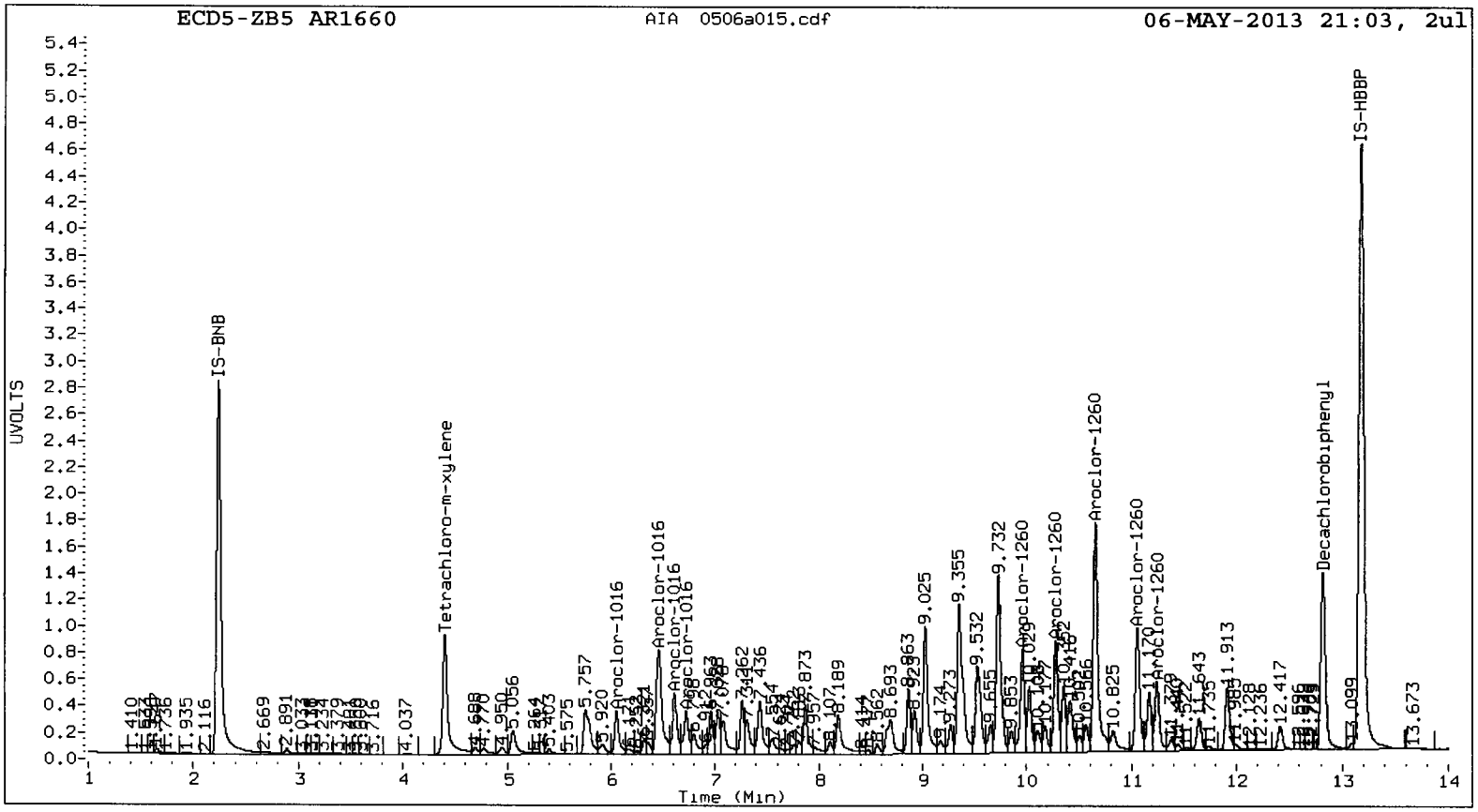
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.054	-0.009	4992632	264.2	1	6.160	-0.008	1800646	239.5
Aroclor-1016	2	6.462	-0.008	15773434	268.0	2	6.799	-0.005	3290991	207.9
Aroclor-1016	3	6.611	-0.009	7051536	274.8	3	7.181	-0.005	1067005	258.6
Aroclor-1016	4	6.723	-0.008	5212242	288.3	4	7.353	-0.007	959033	251.0
Total Col1Ave (4 peaks):		273.8				Total Col2Ave (4 peaks):			239.3	RPD = 13
Corrected Ave (3 peaks):		269.0				Corrected Ave (3 peaks):			232.8	RPD = 14
Aroclor-1260	1	9.962	-0.008	10961857	257.5	1	10.257	-0.007	2070806	263.3
Aroclor-1260	2	10.279	-0.008	11161782	249.0	2	10.706	-0.005	2584368	273.0
Aroclor-1260	3	10.654	-0.008	27513832	254.2	3	10.982	-0.005	5032062	265.8
Aroclor-1260	4	11.054	-0.007	14228119	245.4	4	11.502	-0.006	1485238	275.1
Aroclor-1260	5	11.243	-0.008	7947451	258.7	NS	---			----
Total Col1Ave (5 peaks):		252.9				Total Col2Ave (4 peaks):			269.3	RPD = 6
Corrected Ave (4 peaks):		251.5				Corrected Ave (3 peaks):			267.4	RPD = 6

Total PCB Area Col1 (4.515 - 12.732) = 333187228 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 64515442 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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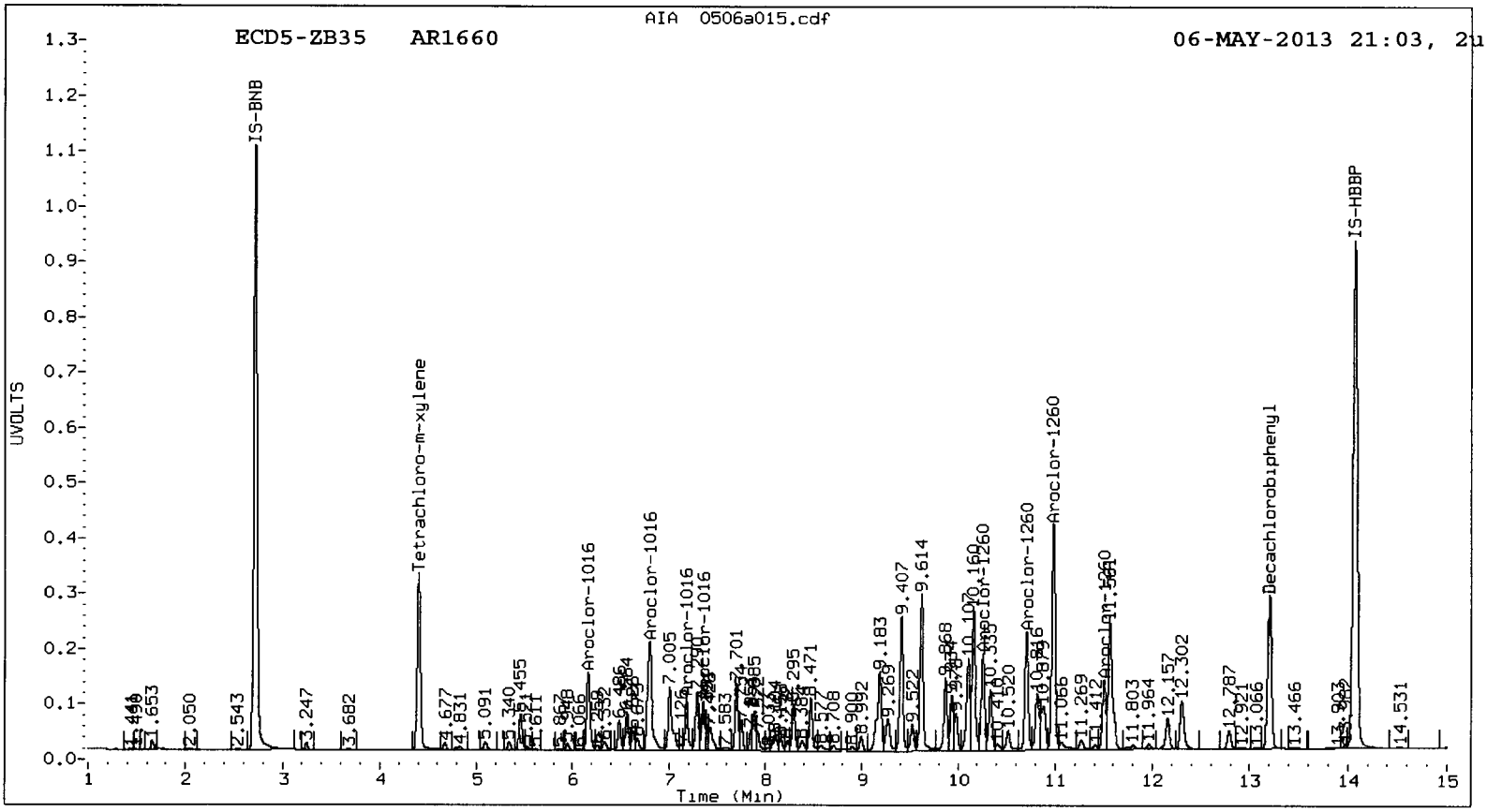
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a019.d
Data file 2: 20130416.b/0506-2.b/0506a019.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN31A
Client ID:
Injection Date: 06-MAY-2013 22:23
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.424	0.009	23968553	4.428	0.012	5807140	30.3	27.2	10.8	Tetrachloro-m-xylen
12.880	0.048	21255276	13.247	0.039	4493334	30.5	34.3	11.8	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	75.7	67.9
Decachlorobiphenyl	76.3	85.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	48641408	0.0
Hexabromobiphenyl	81878684	45720799	-44.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	14523544	0.5
Hexabromobiphenyl	16263628	9434284	-42.0

* 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-1016	1	6.073	0.009	2551132	123.8	1	6.187	0.019	1182265	140.3
Aroclor-1016	2	6.479	0.009	7774593	121.1	2	6.814	0.011	2080682	117.3
Aroclor-1016	3	6.629	0.009	1912018	68.3	3	7.194	0.008	1073724	232.2
Aroclor-1016	4	6.734	0.003	2198264	111.5	4	7.371	0.011	749266	175.0
	Total Col1Ave (4 peaks):				106.1		Total Col2Ave (4 peaks):			166.2 RPD = 44*
	Corrected Ave (3 peaks):				100.3		Corrected Ave (3 peaks):			144.2 RPD = 36
Aroclor-1221	1	5.080	0.024	755987	38.9	1	3.695	0.006	2661517	1756.2
Aroclor-1221	2	6.479	0.015	7774593	1267.1	2	5.118	0.031	307738	129.7
Aroclor-1221	3	7.890	0.014	8803020	1037.0	3	5.387	0.047	2778786	1938.0
Aroclor-1221	NS	---			----	4	5.498	0.043	5624249	1299.1
	Total Col1Ave (3 peaks):				781.0		Total Col2Ave (4 peaks):			1280.8 RPD = 48*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			1061.7
Aroclor-1232	1	6.073	0.019	2551132	298.0	1	6.187	0.026	1182265	327.4
Aroclor-1232	2	6.479	0.018	7774593	294.6	2	6.814	0.017	2080682	293.3
Aroclor-1232	3	7.452	0.014	6215639	466.1	3	7.025	0.018	1193965	402.6
Aroclor-1232	4	7.890	0.018	8803020	563.0	4	8.253	0.016	924045	380.4
	Total Col1Ave (4 peaks):				405.4		Total Col2Ave (4 peaks):			350.9 RPD = 14
	Corrected Ave (3 peaks):				352.9		Corrected Ave (3 peaks):			333.7 RPD = 6
Aroclor-1242	1	6.073	0.018	2551132	159.4	1	6.187	0.026	1182265	189.4
Aroclor-1242	2	6.479	0.017	7774593	157.8	2	6.814	0.016	2080682	156.3
Aroclor-1242	3	6.629	0.017	1912018	87.6	3	7.025	0.019	1193965	214.0
Aroclor-1242	4	7.890	0.023	8803020	322.4	4	8.253	0.020	924045	201.3
	Total Col1Ave (4 peaks):				181.8		Total Col2Ave (4 peaks):			190.3 RPD = 5
	Corrected Ave (3 peaks):				134.9		Corrected Ave (3 peaks):			182.4 RPD = 30
Aroclor-1248	1	6.479	0.011	7774593	253.1	1	6.814	0.014	2080682	256.1
Aroclor-1248	2	7.452	0.008	6215639	182.7	2	7.720	0.012	2535303	380.2
Aroclor-1248	3	7.890	0.014	8803020	200.4	3	8.253	0.014	924045	134.7
Aroclor-1248	4	8.114	0.003	14918338	479.8	4	8.622	0.039	3917019	437.1
	Total Col1Ave (4 peaks):				279.0		Total Col2Ave (4 peaks):			302.0 RPD = 8
	Corrected Ave (3 peaks):				212.1		Corrected Ave (3 peaks):			257.0 RPD = 19
Aroclor-1254	1	8.207	0.013	15491162	342.3	1	8.316	0.019	1558111	233.1
Aroclor-1254	2	8.605	0.039	23536720	783.8	2	8.506	0.033	4653283	563.7
Aroclor-1254	3	8.720	0.019	16634575	275.9	3	8.972	-0.023	4890405	766.4
Aroclor-1254	4	9.070	0.018	20621384	318.7	4	9.169	0.023	4300706	311.9
Aroclor-1254	5	9.398	0.034	24067722	903.8	5	9.908	-0.023	1493168	187.5
	Total Col1Ave (5 peaks):				524.9		Total Col2Ave (5 peaks):			413.5 RPD = 24
	Corrected Ave (4 peaks):				430.2		Corrected Ave (4 peaks):			324.0 RPD = 28
Aroclor-1260	1	10.002	0.032	4911968	194.2	1	10.296	0.033	1154750	220.1
Aroclor-1260	2	10.318	0.032	5119398	192.2	2	10.740	0.029	2147359	340.0
Aroclor-1260	3	10.615	-0.047	999858	15.5	3	11.026	0.039	3208209	254.0
Aroclor-1260	4	11.057	-0.004	7500381	217.8	4	11.487	-0.021	23704861	6581.0
Aroclor-1260	5	11.218	-0.033	5181586	283.9	NS	---			----
	Total Col1Ave (5 peaks):				180.7		Total Col2Ave (4 peaks):			1848.8 RPD = 164*
	Corrected Ave (4 peaks):				155.0		Corrected Ave (3 peaks):			271.4 RPD = 55*
Aroclor-1262	1	10.318	0.036	5119398	174.4	1	10.296	0.036	1154750	147.9
Aroclor-1262	2	10.615	-0.044	999858	13.1	2	10.740	0.030	2147359	317.4
Aroclor-1262	3	11.057	-0.002	7500381	276.4	3	11.026	0.039	3208209	205.6
Aroclor-1262	4	11.218	-0.029	5181586	159.1	4	11.601	0.034	2232734	220.0
Aroclor-1262	5	11.954	0.036	34535290	1080.8	5	12.350	0.042	1032693	169.3
	Total Col1Ave (5 peaks):				340.8		Total Col2Ave (5 peaks):			212.1 RPD = 47*
	Corrected Ave (4 peaks):				155.8		Corrected Ave (4 peaks):			185.7 RPD = 18
Aroclor-1268	1	11.218	0.045	5181586	69.6	1	11.487	-0.019	23704861	1501.0

Aroclor-1268 2	---			0.0	2	11.601	0.028	2232734	143.3
Aroclor-1268 3	11.688	0.058	2458305	38.2	3	12.009	0.041	268660	20.8
Aroclor-1268 4	12.472	0.051	3920546	20.9	4	12.762	-0.030	5476816	143.7

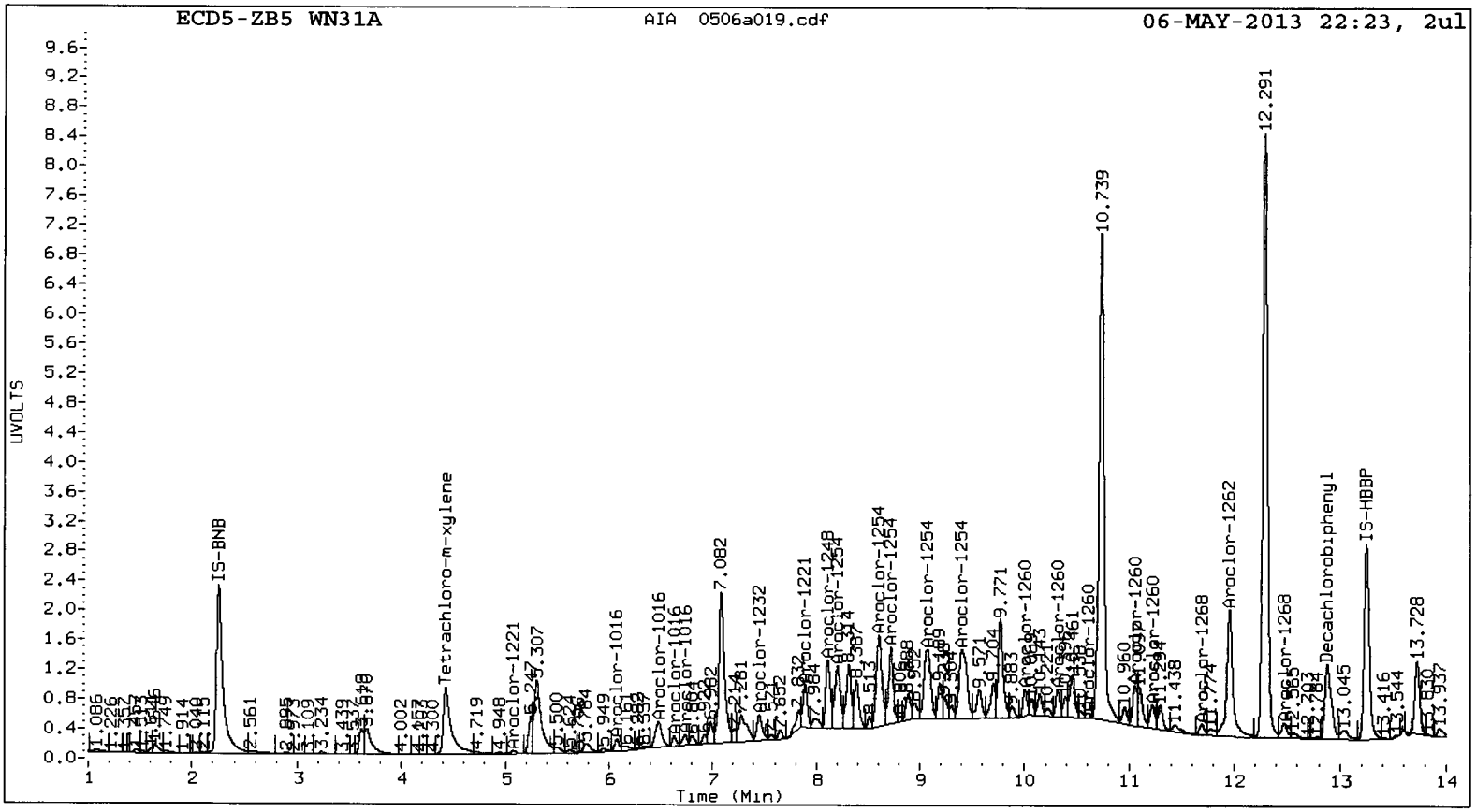
Total Col1Ave (3 peaks): 42.9 Total Col2Ave (4 peaks): 452.2 RPD = 165*

Corrected Ave: < 3 Peaks Corrected Ave (3 peaks): 102.6

Total PCB Area Col1 (4.515 - 12.732) = 696474639 Col1 Total PCB = 1.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 162451630 Col2 Total PCB = 1.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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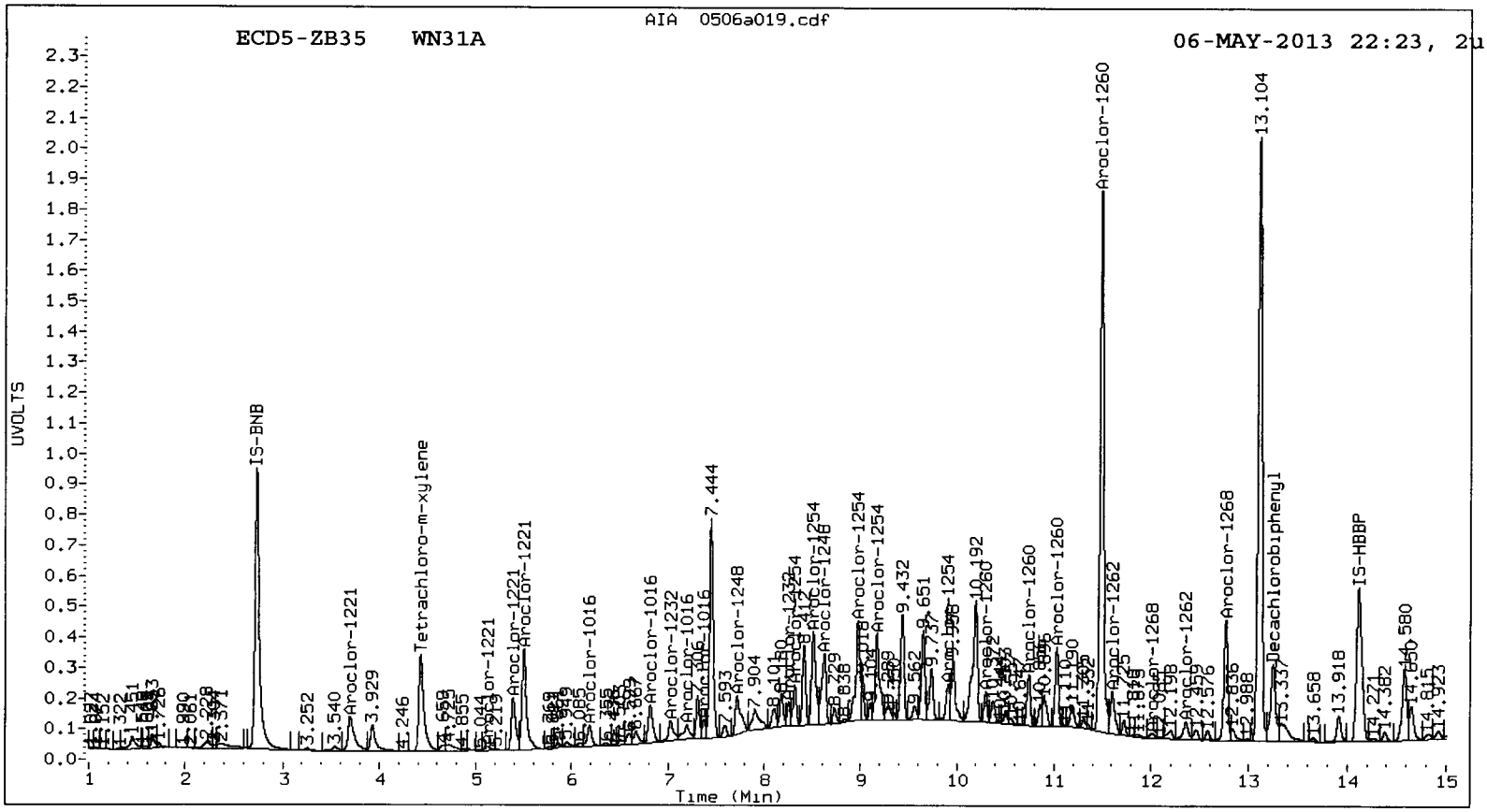
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Aroclor-1248
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IS-HBBP
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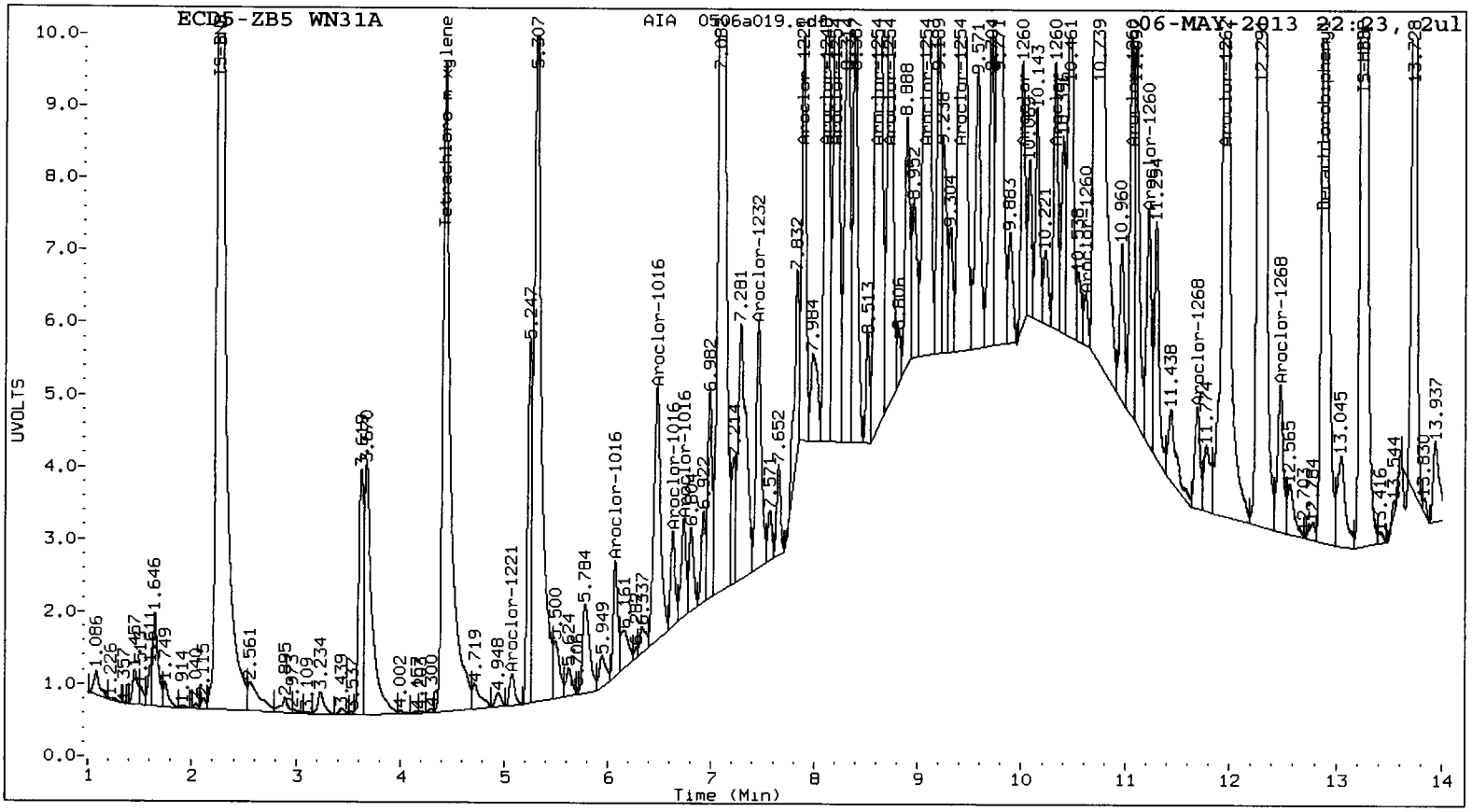
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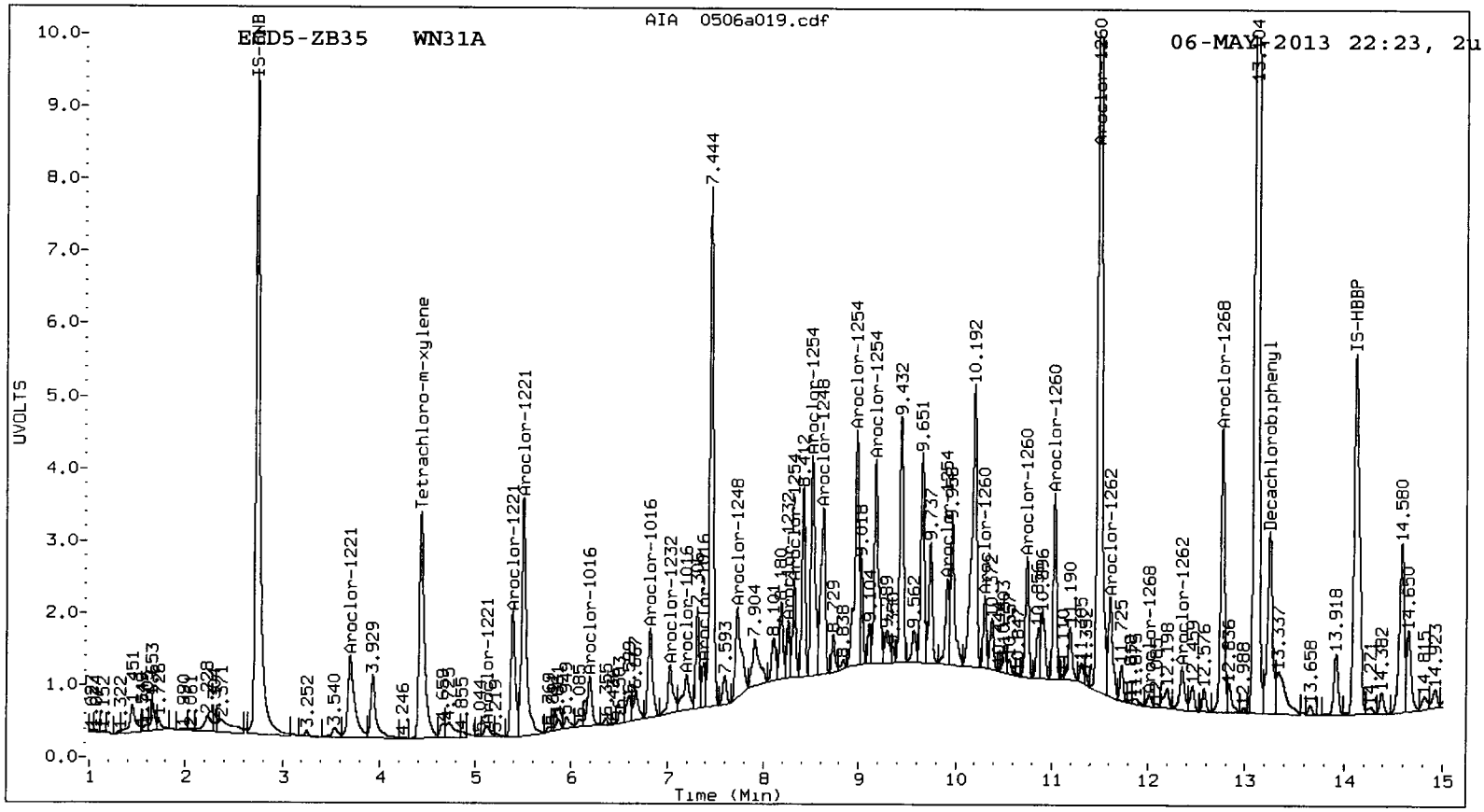
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Aroclor-1221
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Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a020.d
Data file 2: 20130416.b/0506-2.b/0506a020.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 06-MAY-2013 22:43
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.416	0.001	16927661	4.416	0.001	4257242	17.6	17.0	3.6	Tetrachloro-m-xylen
12.831	0.000	11582248	13.209	0.001	3866484	14.9	30.5	68.9*	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	44.0	42.4
Decachlorobiphenyl	37.2	76.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	59147946	21.6
Hexabromobiphenyl	81878684	51063965	-37.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	17050048	17.9
Hexabromobiphenyl	16263628	9128992	-43.9

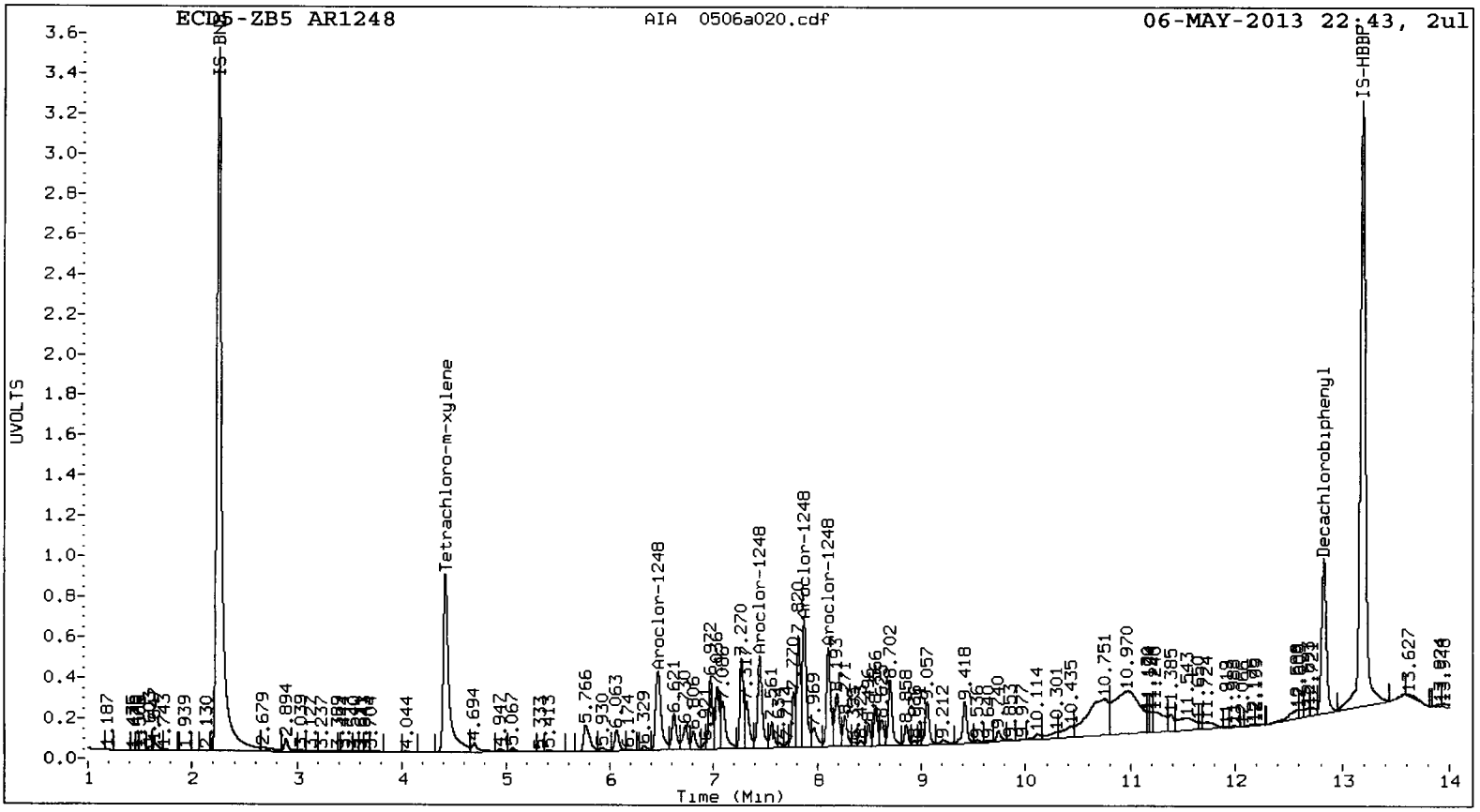
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.468	0.000	7428578	198.9	1	6.799	-0.001	1815046	190.3
Aroclor-1248	2	7.444	-0.001	7087384	171.3	2	7.707	0.000	1416463	180.9
Aroclor-1248	3	7.874	-0.002	9242921	173.0	3	8.237	-0.002	1460238	181.3
Aroclor-1248	4	8.110	-0.001	6583433	174.1	4	8.583	0.000	1769030	168.2
	Total Col1Ave (4 peaks):				179.3	Total Col2Ave (4 peaks):				180.2 RPD = 0
	Corrected Ave (3 peaks):				172.8	Corrected Ave (3 peaks):				176.8 RPD = 2

Total PCB Area Col1 (4.515 - 12.732) = 154491573 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 27768940 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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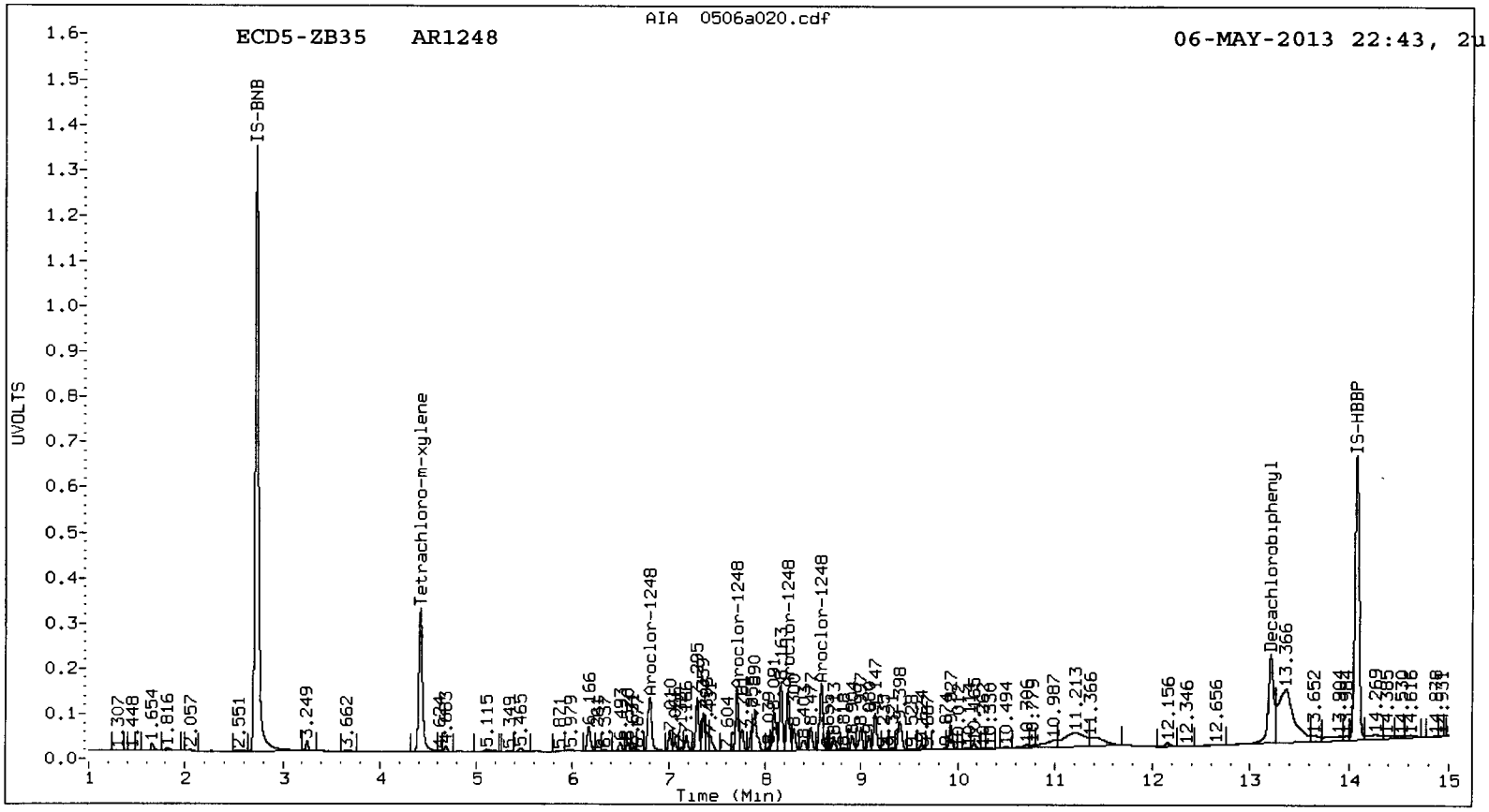
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0506-1.b/0506a021.d
Data file 2: 20130416.b/0506-2.b/0506a021.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 06-MAY-2013 23:03
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.415	0.001	14490045	4.416	0.001	3496338	20.3	18.9	7.3	Tetrachloro-m-xylen
12.832	0.000	9738176	13.207	-0.001	2881285	17.0	31.1	59.0*	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	50.7	47.1
Decachlorobiphenyl	42.4	77.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	43905947	-9.7
Hexabromobiphenyl	81878684	37691491	-54.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	12605877	-12.8
Hexabromobiphenyl	16263628	6673150	-59.0 <-

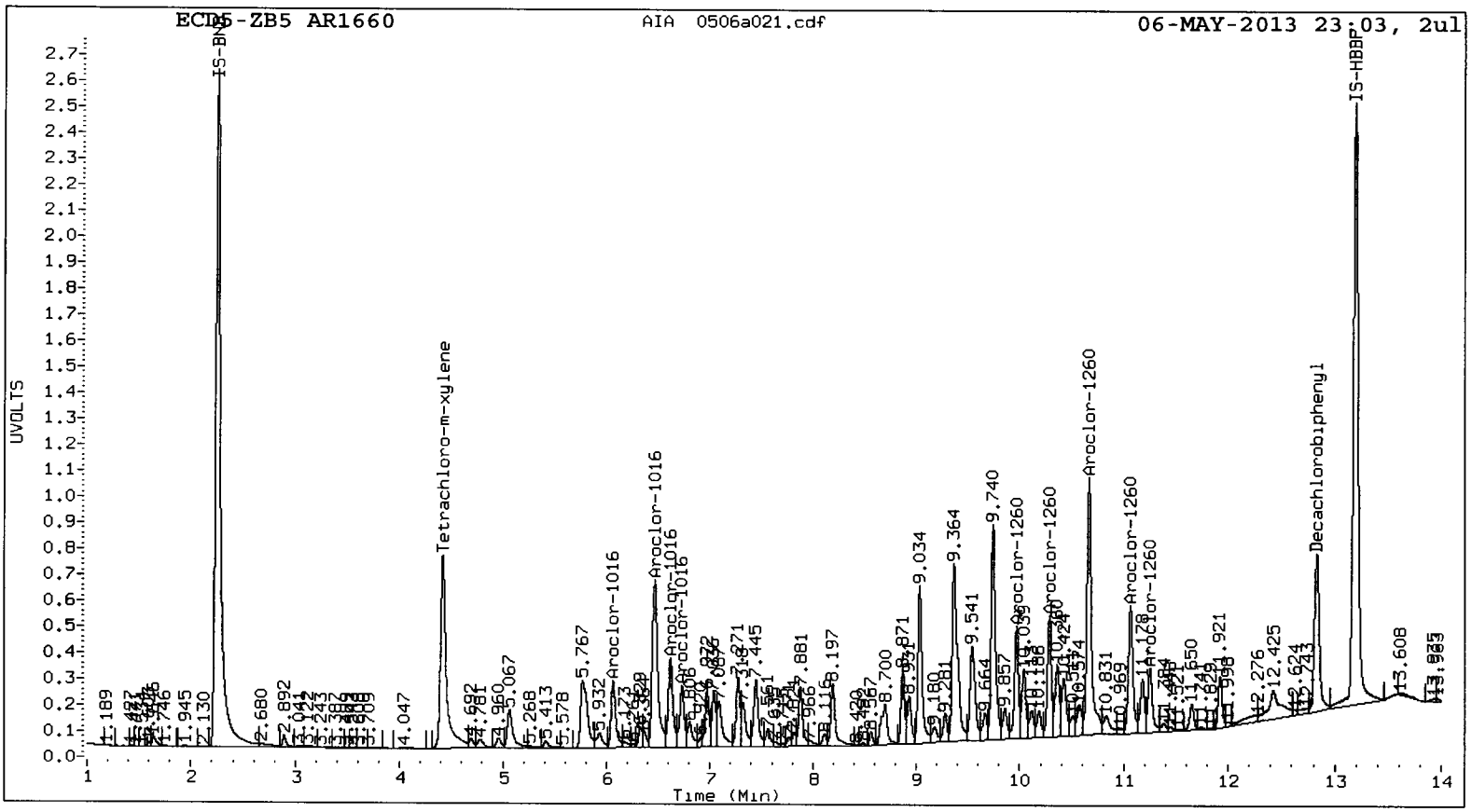
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.063	0.000	3906229	209.9	1	6.168	0.000	1477069	202.0
Aroclor-1016	2	6.471	0.000	12313832	212.4	2	6.803	0.000	2846129	184.9
Aroclor-1016	3	6.619	0.000	5174620	204.8	3	7.186	0.000	731174	182.2
Aroclor-1016	4	6.730	-0.001	3698517	207.8	4	7.360	0.000	653353	175.8
	Total Col1Ave (4 peaks):			208.7		Total Col2Ave (4 peaks):			186.2	RPD = 11
	Corrected Ave (3 peaks):			207.5		Corrected Ave (3 peaks):			180.9	RPD = 14
Aroclor-1260	1	9.970	0.000	5793014	277.8	1	10.263	0.000	1167257	314.6
Aroclor-1260	2	10.287	0.001	6206900	282.7	2	10.711	0.000	1448212	324.2
Aroclor-1260	3	10.662	0.000	15681988	295.8	3	10.986	-0.001	2704411	302.7
Aroclor-1260	4	11.061	0.000	7249176	255.4	4	11.508	-0.001	732070	287.3
Aroclor-1260	5	11.251	0.000	3813888	253.5	NS	---			----
	Total Col1Ave (5 peaks):			273.0		Total Col2Ave (4 peaks):			307.2	RPD = 12
	Corrected Ave (4 peaks):			267.4		Corrected Ave (3 peaks):			301.5	RPD = 12

Total PCB Area Col1 (4.515 - 12.732) = 199638634 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 38971945 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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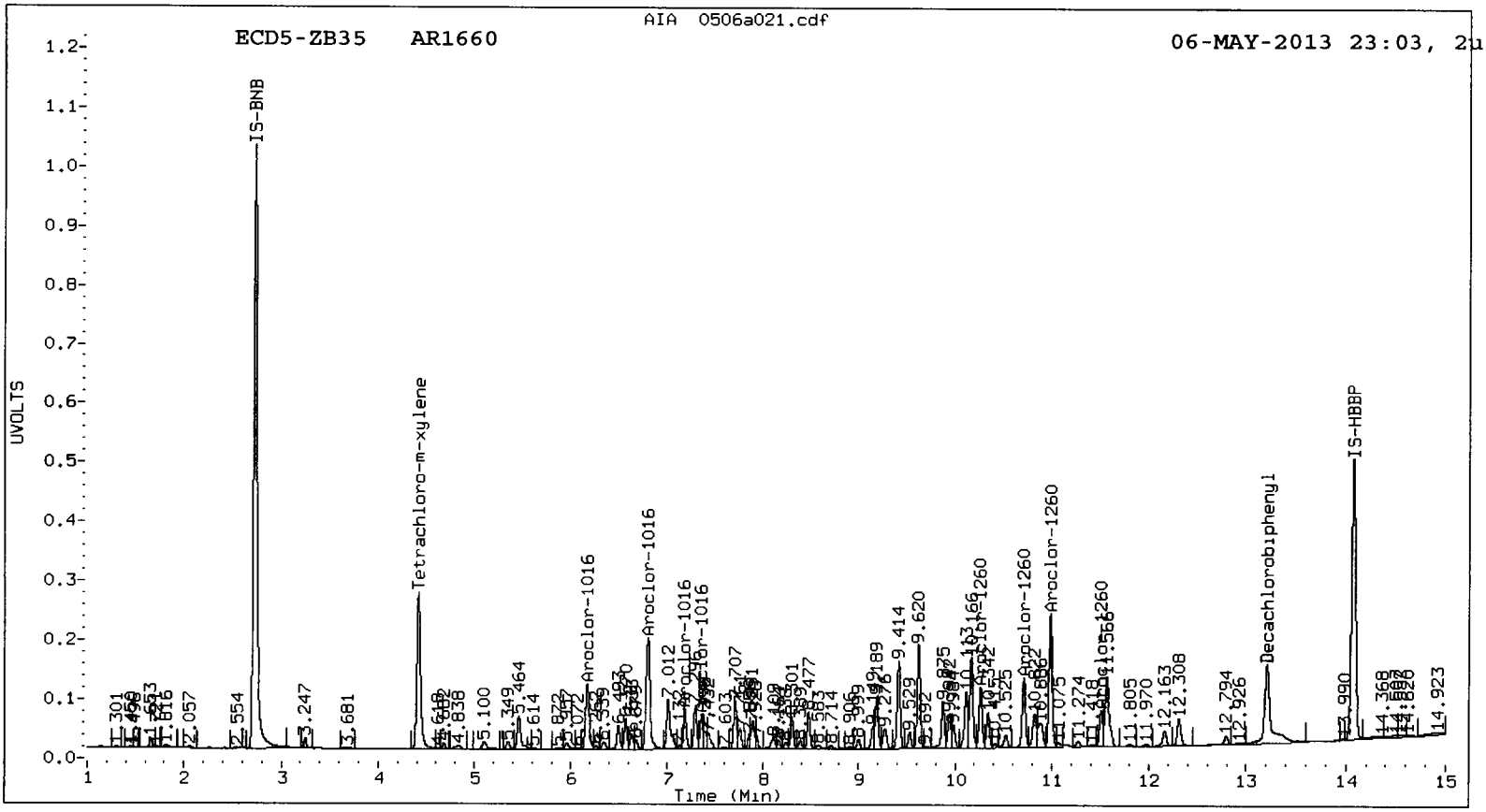
AIA 0506a021.cdf
06-MAY-2013 23:03, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0507-1.b/0507a006.d
Data file 2: 20130416.b/0507-2.b/0507a006.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 12:52
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.416	0.001	17442901	4.416	0.001	4586255	17.3	17.2	0.5	Tetrachloro-m-xylen
12.833	0.001	12171478	13.210	0.002	3315398	16.0	25.5	45.7*	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	43.3	43.1
Decachlorobiphenyl	40.1	63.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	61853261	27.1
Hexabromobiphenyl	81878684	49856336	-39.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	18074052	25.0
Hexabromobiphenyl	16263628	9376394	-42.3

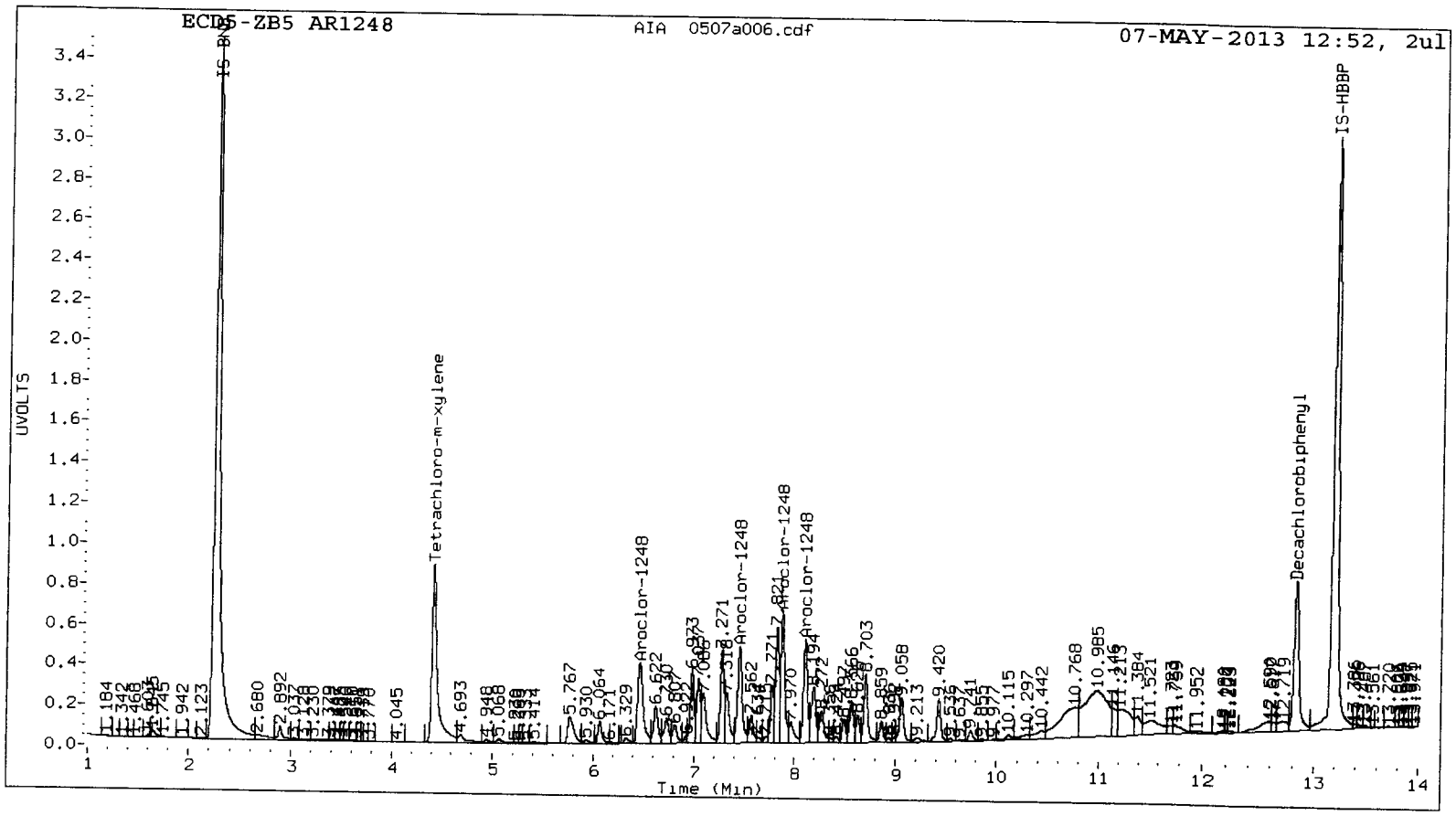
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	7730049	197.9	1	6.800	0.000	1995068	197.3
Aroclor-1248	2	7.445	0.000	7595019	175.5	2	7.707	0.000	1571020	189.3
Aroclor-1248	3	7.876	0.000	9866291	176.6	3	8.239	0.000	1625017	190.3
Aroclor-1248	4	8.111	0.000	6979086	176.5	4	8.583	0.000	1958590	175.6
Total Col1Ave (4 peaks):					181.6	Total Col2Ave (4 peaks):				188.1 RPD = 4
Corrected Ave (3 peaks):					176.2	Corrected Ave (3 peaks):				185.1 RPD = 5

Total PCB Area Col1 (4.515 - 12.732) = 162578303 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 31105425 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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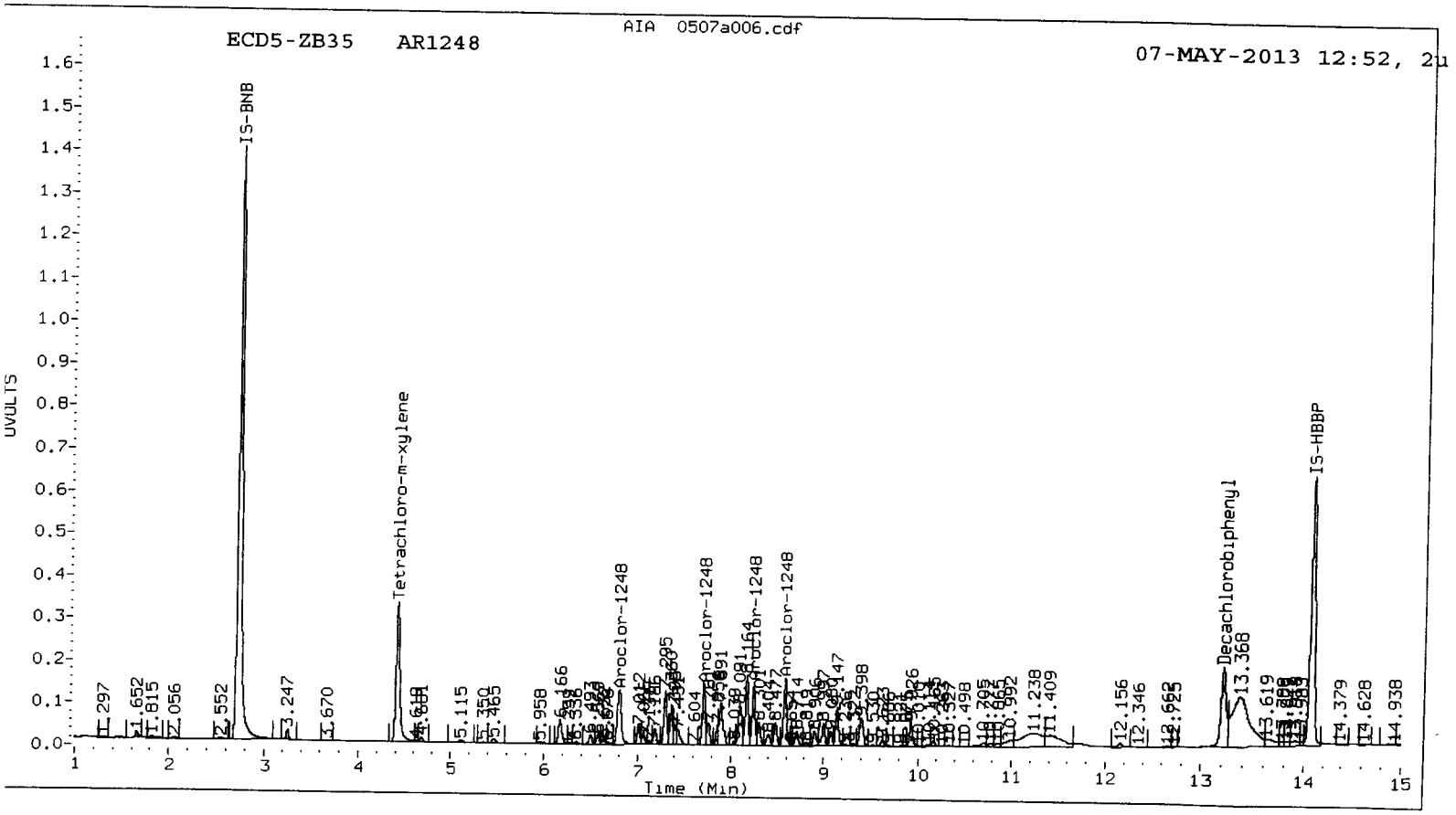
07-MAY-2013 12:52, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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07-MAY-2013 12:52, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130416.b/0507-1.b/0507a007.d
Data file 2: 20130416.b/0507-2.b/0507a007.d
Method: /chem2/ecd5.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 07-MAY-2013 13:12
Ical Date: 16-APR-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.415	0.000	14655093	4.415	0.000	3714487	19.9	19.1	4.2	Tetrachloro-m-xylen
12.832	0.000	10291694	13.208	0.000	2385763	19.2	25.6	28.8	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	49.8	47.7
Decachlorobiphenyl	47.9	64.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48646950	45254420	-7.0
Hexabromobiphenyl	81878684	35227046	-57.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14456526	13221188	-8.5
Hexabromobiphenyl	16263628	6715702	-58.7 <-

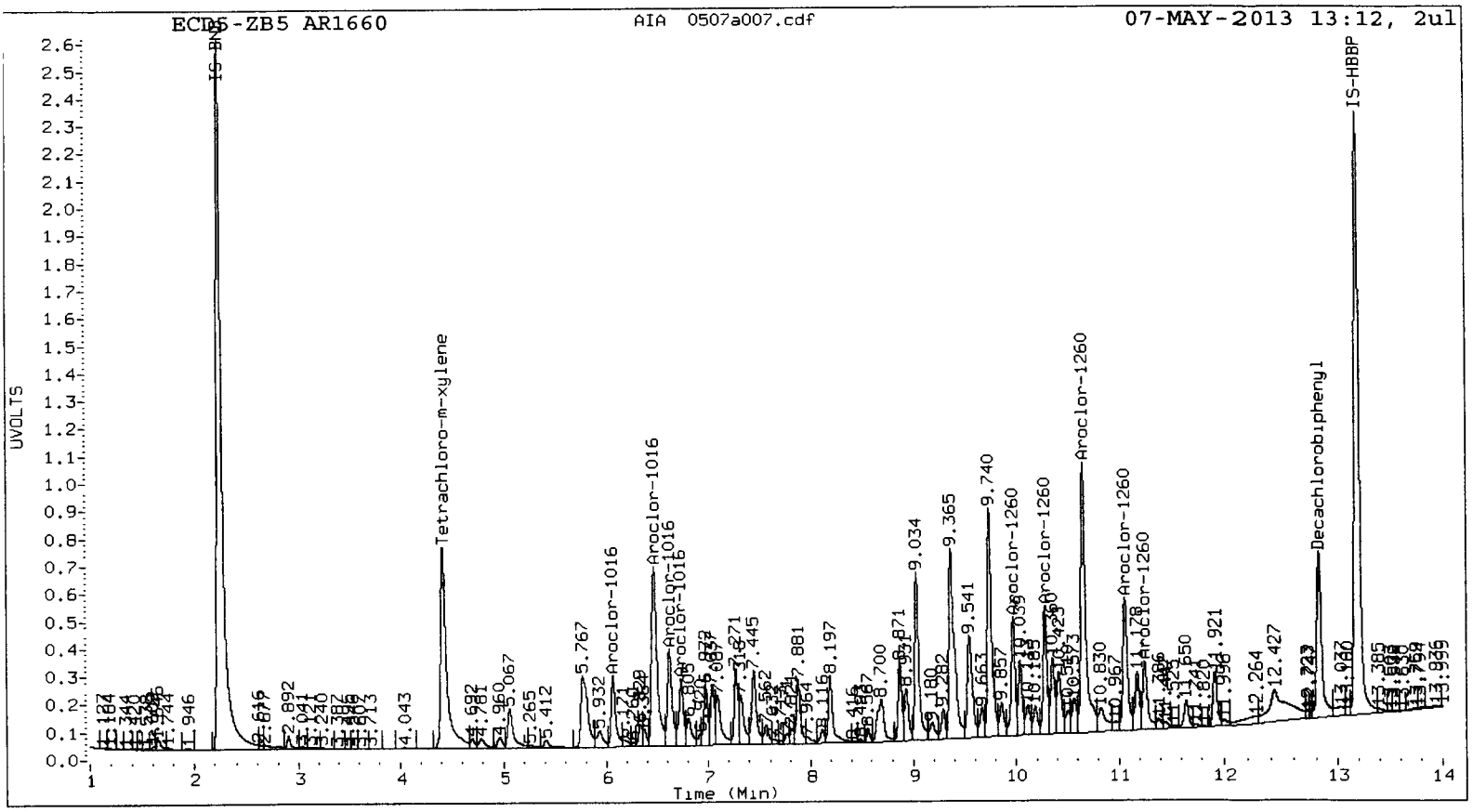
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.064	0.000	3993912	208.2	1	6.168	0.000	1572544	205.0
Aroclor-1016	2	6.470	0.000	12587309	210.7	2	6.803	0.000	3031352	187.7
Aroclor-1016	3	6.620	0.000	5357975	205.7	3	7.186	0.000	789071	187.4
Aroclor-1016	4	6.731	0.000	3804879	207.4	4	7.360	0.000	706852	181.4
	Total Col1Ave (4 peaks):				208.0		Total Col2Ave (4 peaks):			190.4 RPD = 9
	Corrected Ave (3 peaks):				207.1		Corrected Ave (3 peaks):			185.5 RPD = 11
Aroclor-1260	1	9.970	0.000	5879470	301.7	1	10.263	0.000	1243996	333.1
Aroclor-1260	2	10.286	0.000	6239676	304.1	2	10.711	0.000	1573291	349.9
Aroclor-1260	3	10.662	0.000	16306983	329.1	3	10.987	0.000	2826963	314.4
Aroclor-1260	4	11.061	0.000	7578279	285.6	4	11.508	0.000	763217	297.7
Aroclor-1260	5	11.251	0.000	4045420	287.7	NS	---			----
	Total Col1Ave (5 peaks):				301.7		Total Col2Ave (4 peaks):			323.8 RPD = 7
	Corrected Ave (4 peaks):				294.8		Corrected Ave (3 peaks):			315.1 RPD = 7

Total PCB Area Col1 (4.515 - 12.732) = 208545804 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.515 - 13.108) = 41851705 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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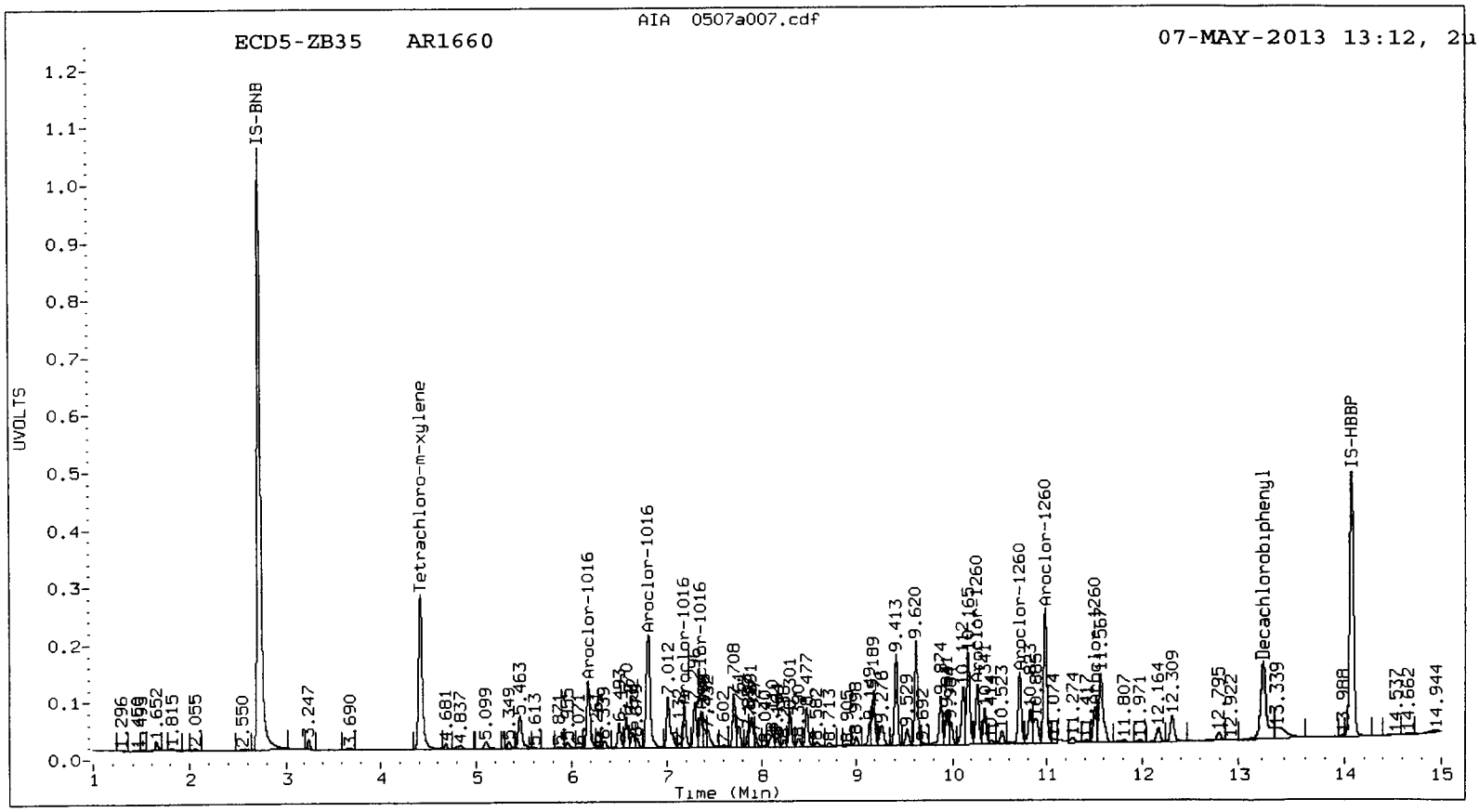
07-MAY-2013 13:12, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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07-MAY-2013 13:12, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a037.d
Data file 2: 20130507.b/0507-2.b/0507a037.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 08-MAY-2013 03:48
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.409	0.000	33642115	4.409	0.000	8182729	37.6	38.8	3.1	Tetrachloro-m-xylen
12.827	0.001	33931360	13.203	0.001	4696346	38.4	33.1	14.9	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	94.1	97.1
Decachlorobiphenyl	96.1	82.7

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57636312	17.7
Hexabromobiphenyl	50004151	59113555	18.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15578403	5.0
Hexabromobiphenyl	9345340	9865366	5.6

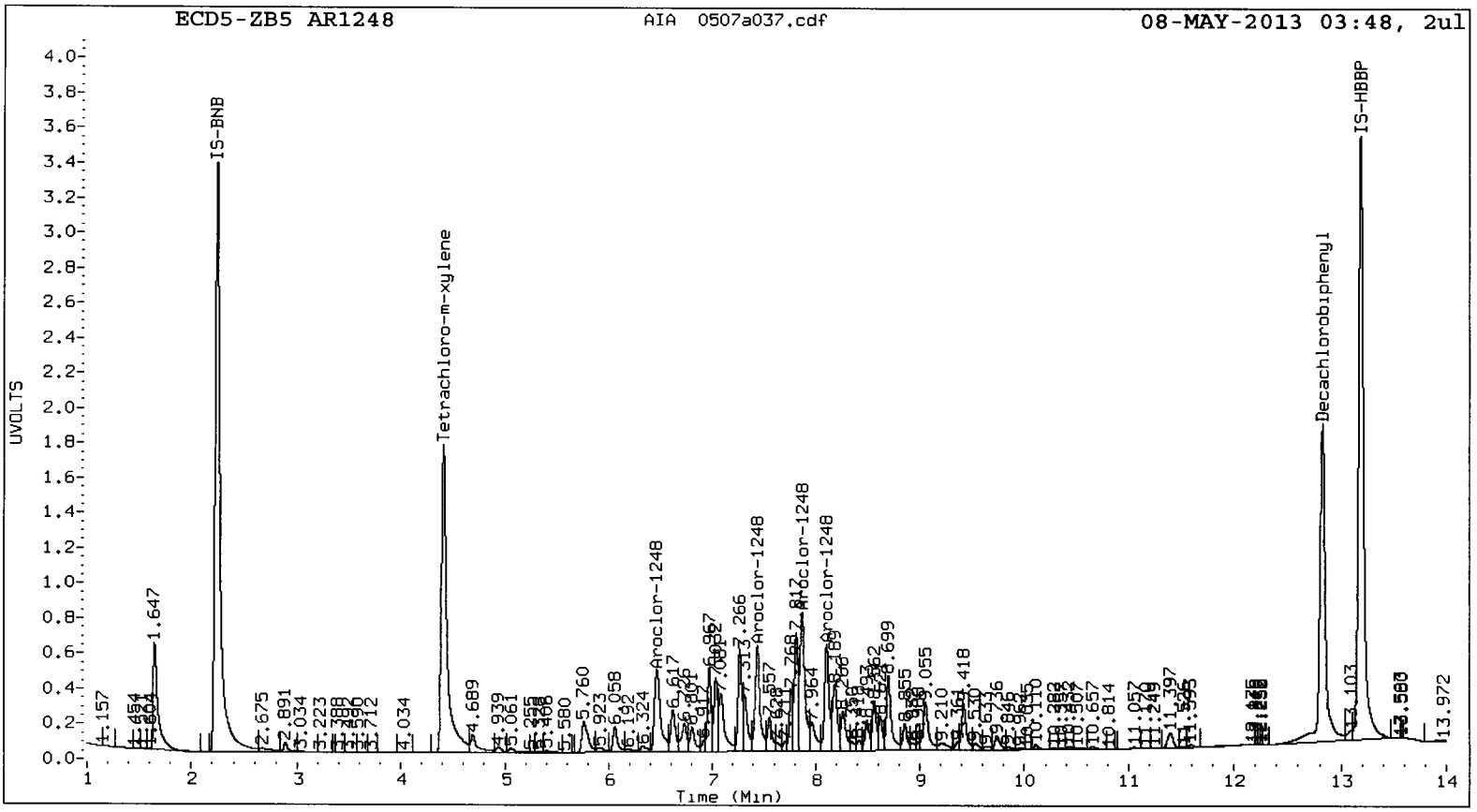
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.463	0.000	9791008	241.4	1	6.798	0.000	2369863	242.8
Aroclor-1248	2	7.440	0.000	10175518	223.0	2	7.704	0.000	1893975	234.0
Aroclor-1248	3	7.872	0.000	12748711	219.8	3	8.236	0.000	1923691	229.5
Aroclor-1248	4	8.108	0.000	8810805	217.8	4	8.581	0.000	2424631	222.6
Total Col1Ave (4 peaks):					225.5	Total Col2Ave (4 peaks):				232.2 RPD = 3
Corrected Ave (3 peaks):					220.2	Corrected Ave (3 peaks):				228.7 RPD = 4

Total PCB Area Col1 (4.508 - 12.726) = 161443926 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 32637626 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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08-MAY-2013 03:48, 2ul
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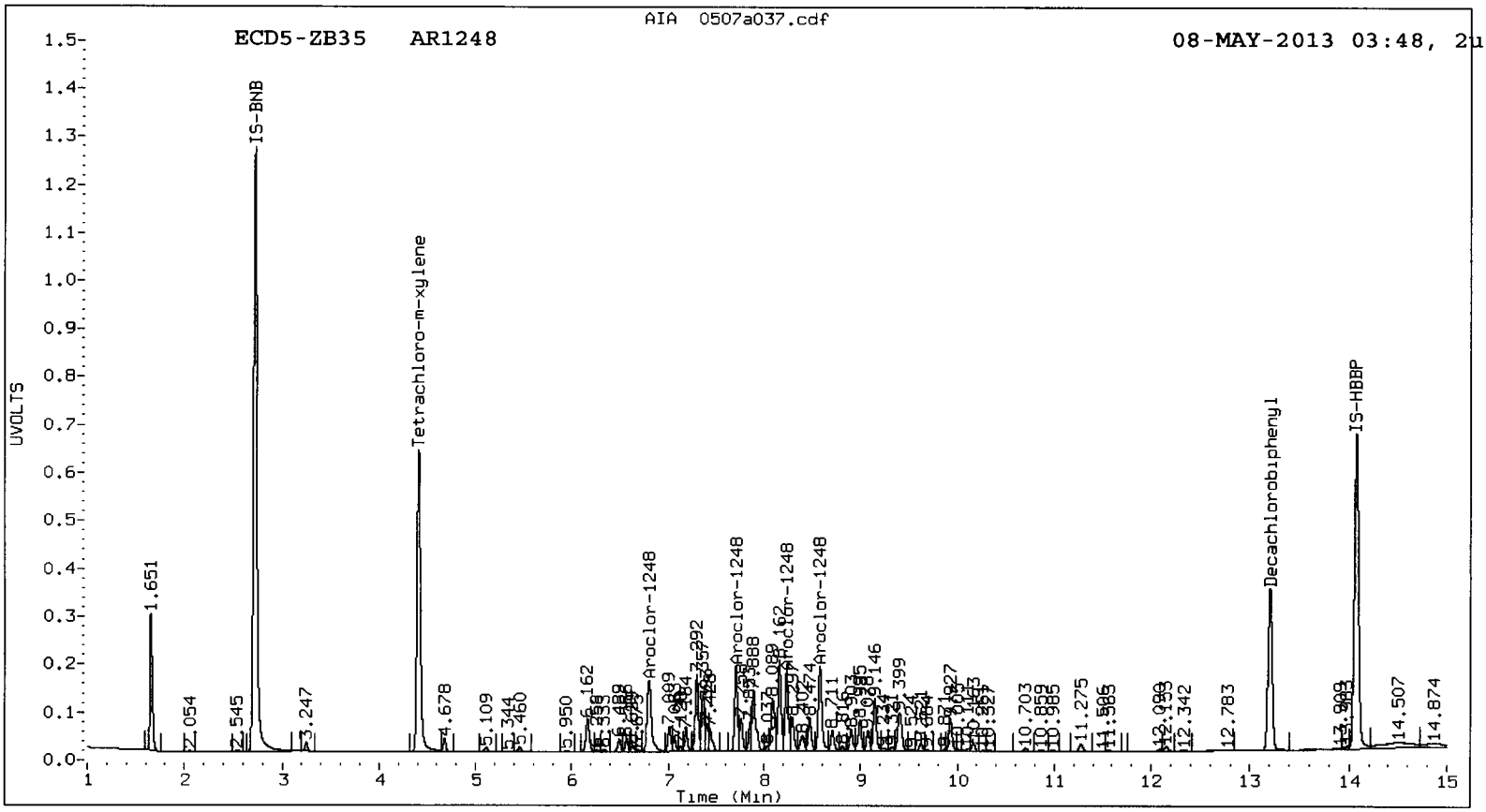
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP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08-MAY-2013 03:48, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a038.d
Data file 2: 20130507.b/0507-2.b/0507a038.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2013 04:08
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.408	0.000	33681045	4.409	0.000	8129847	38.0	38.9	2.4	Tetrachloro-m-xylen
12.826	0.000	33058871	13.203	0.000	4806869	36.7	33.9	8.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.9	97.2
Decachlorobiphenyl	91.8	84.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57225805	16.8
Hexabromobiphenyl	50004151	60264061	20.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15463967	4.2
Hexabromobiphenyl	9345340	9866019	5.6

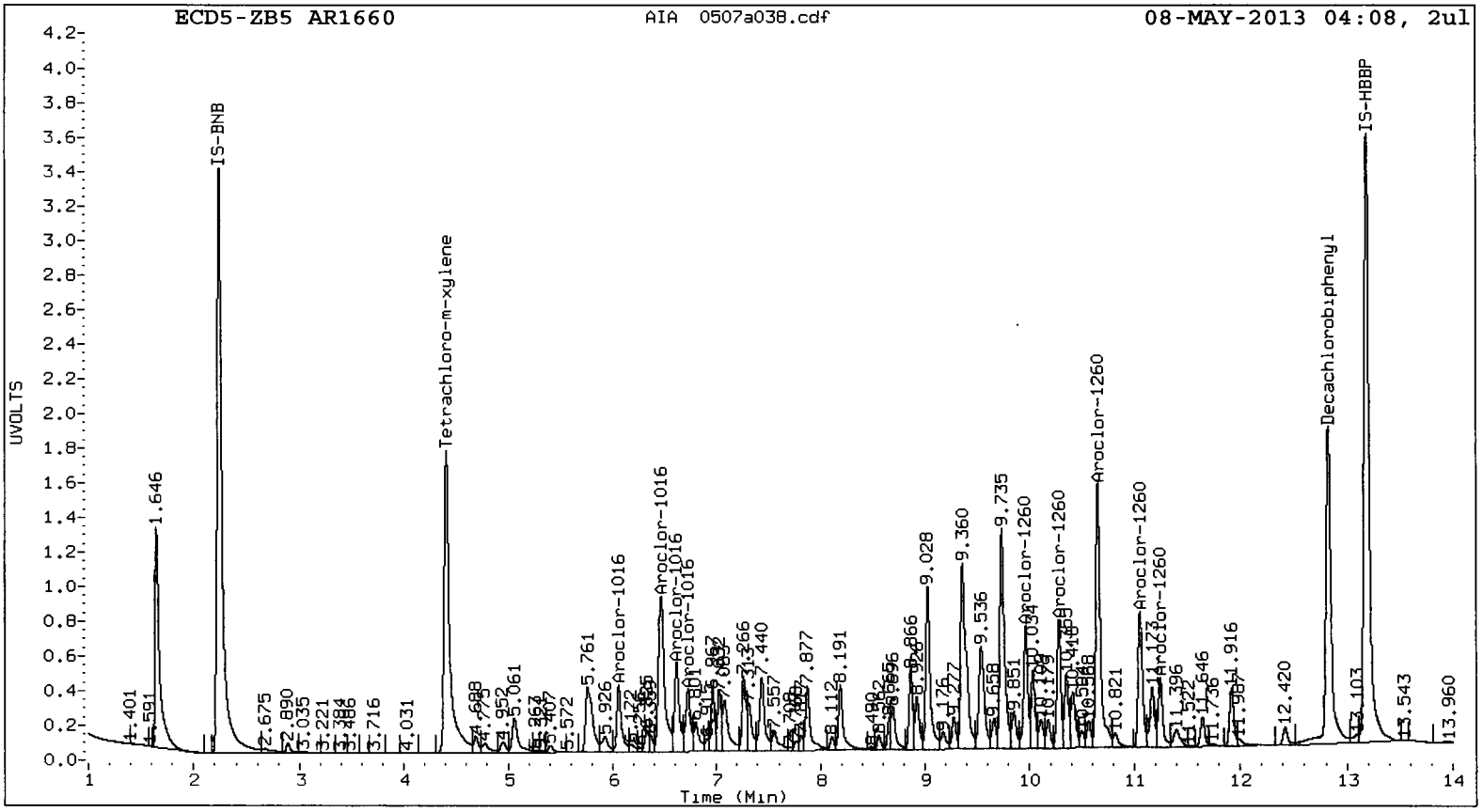
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.058	0.000	5985864	232.1	1	6.164	0.000	2121874	240.5
Aroclor-1016	2	6.465	0.000	18632171	234.5	2	6.799	0.000	4576994	238.6
Aroclor-1016	3	6.615	0.000	8192296	230.1	3	7.184	0.000	1177248	234.7
Aroclor-1016	4	6.727	0.000	6087788	228.9	4	7.356	0.000	1068000	228.6
	Total Col1Ave (4 peaks):				231.4		Total Col2Ave (4 peaks):			235.6 RPD = 2
	Corrected Ave (3 peaks):				230.4		Corrected Ave (3 peaks):			234.0 RPD = 2
Aroclor-1260	1	9.965	0.000	9863707	199.9	1	10.260	0.000	1905333	212.9
Aroclor-1260	2	10.282	0.000	9683196	197.8	2	10.709	0.000	2240560	213.8
Aroclor-1260	3	10.657	0.000	24153260	205.8	3	10.984	0.000	4305906	222.5
Aroclor-1260	4	11.057	0.000	11793614	206.3	4	11.505	0.000	1157650	220.7
Aroclor-1260	5	11.246	0.000	6281464	205.4	NS	---			----
	Total Col1Ave (5 peaks):				203.1		Total Col2Ave (4 peaks):			217.4 RPD = 7
	Corrected Ave (4 peaks):				202.2		Corrected Ave (3 peaks):			215.8 RPD = 6

Total PCB Area Col1 (4.508 - 12.726) = 314774418 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 61773550 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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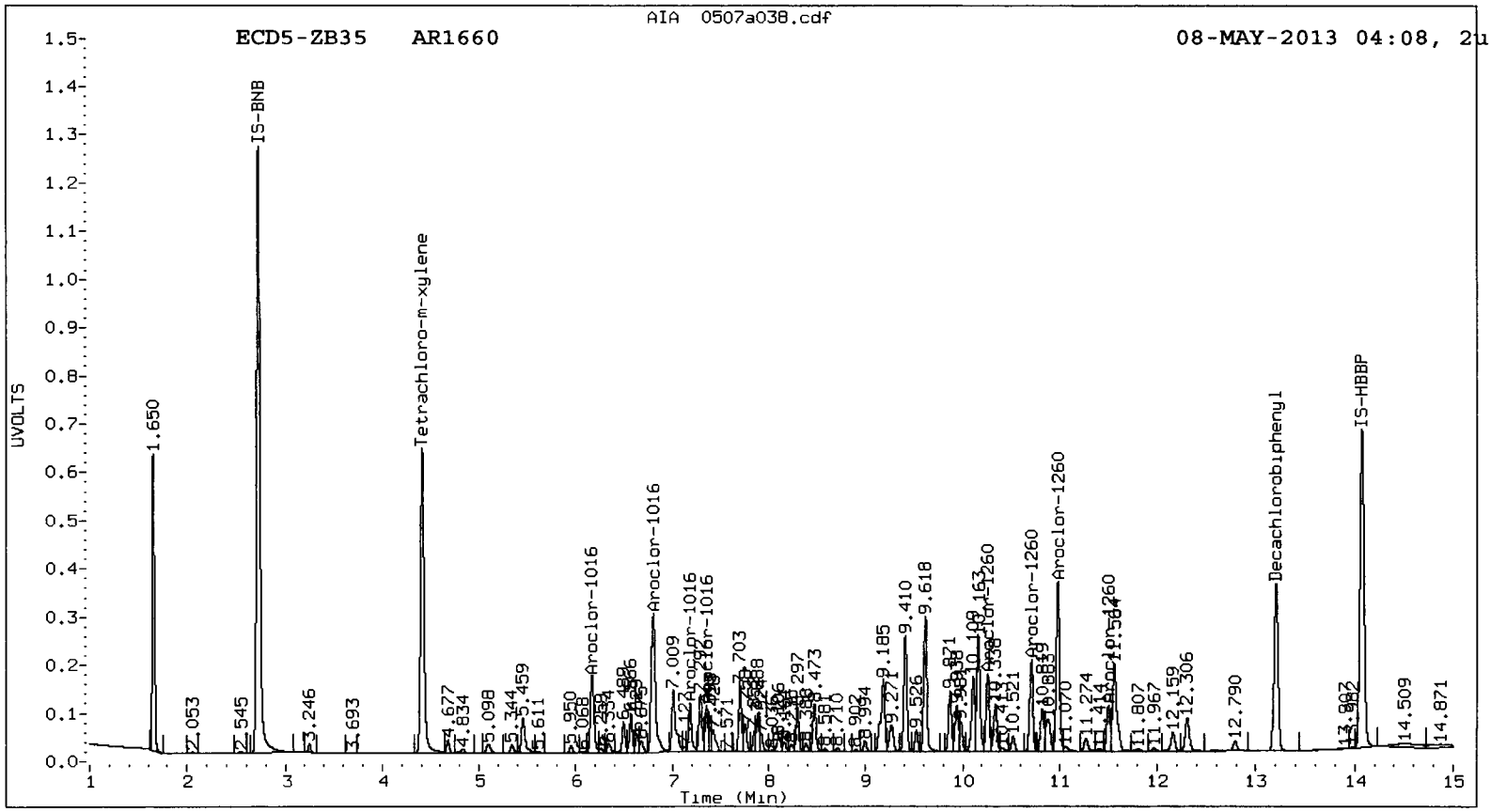
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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ECD5-ZB35 AR1660
08-MAY-2013 04:08, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a042.d
Data file 2: 20130507.b/0507-2.b/0507a042.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WN31A
Client ID:
Injection Date: 08-MAY-2013 05:30
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.410	0.001	4841952	4.412	0.003	1208739	6.3	6.6	3.8	Tetrachloro-m-xylen
12.845	0.019	6829711	13.216	0.013	1308059	8.8	9.5	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	79.3	82.4
Decachlorobiphenyl	110.3	119.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49200228	0.5
Hexabromobiphenyl	50004151	51794064	3.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	13559510	-8.6
Hexabromobiphenyl	9345340	9519479	1.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	6.060	0.002	538736	24.3	1	6.172	0.009	293358	37.9	
Aroclor-1016	2	6.466	0.001	1679570	24.6	2	6.799	0.000	532347	31.6	
Aroclor-1016	3	6.616	0.001	408927	13.4	3	7.184	0.001	253120	57.6	
Aroclor-1016	4	6.723	-0.004	506359	22.1	4	7.359	0.003	191060	46.6	
Total Col1Ave (4 peaks):					21.1	Total Col2Ave (4 peaks):				43.4	RPD = 69*
Corrected Ave (3 peaks):					19.9	Corrected Ave (3 peaks):				38.7	RPD = 64*
Aroclor-1221	1	5.064	0.001	182197	9.1	1	3.682	-0.013	539499	388.1	
Aroclor-1221	2	6.466	-0.002	1679570	273.9	2	5.106	0.011	53513	23.0	
Aroclor-1221	3	7.875	-0.003	2168024	250.3	3	5.371	0.026	638456	503.9	
Aroclor-1221	NS	---			----	4	5.484	0.023	1084677	272.1	
Total Col1Ave (3 peaks):					177.8	Total Col2Ave (4 peaks):				296.8	RPD = 50*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				227.7	
Aroclor-1232	1	6.060	0.000	538736	59.1	1	6.172	0.007	293358	84.3	
Aroclor-1232	2	6.466	-0.003	1679570	60.2	2	6.799	-0.002	532347	76.6	
Aroclor-1232	3	7.440	-0.002	1490071	102.8	3	7.013	0.002	288944	99.7	
Aroclor-1232	4	7.875	0.001	2168024	130.2	4	8.237	-0.002	218127	89.7	
Total Col1Ave (4 peaks):					88.1	Total Col2Ave (4 peaks):				87.6	RPD = 1
Corrected Ave (3 peaks):					74.0	Corrected Ave (3 peaks):				83.5	RPD = 12
Aroclor-1242	1	6.060	0.002	538736	30.4	1	6.172	0.008	293358	47.5	
Aroclor-1242	2	6.466	-0.001	1679570	30.9	2	6.799	-0.003	532347	39.2	
Aroclor-1242	3	6.616	-0.001	408927	16.9	3	7.013	0.003	288944	51.0	
Aroclor-1242	4	7.875	0.002	2168024	72.4	4	8.237	0.000	218127	45.9	
Total Col1Ave (4 peaks):					37.6	Total Col2Ave (4 peaks):				45.9	RPD = 20
Corrected Ave (3 peaks):					26.1	Corrected Ave (3 peaks):				44.2	RPD = 52*
Aroclor-1248	1	6.466	0.003	1679570	48.5	1	6.799	0.001	532347	62.7	
Aroclor-1248	2	7.440	0.000	1490071	38.3	2	7.704	0.000	413859	58.7	
Aroclor-1248	3	7.875	0.004	2168024	43.8	3	8.237	0.001	218127	29.9	
Aroclor-1248	4	8.098	-0.010	3670296	106.3	4	8.608	0.027	891979	94.1	
Total Col1Ave (4 peaks):					59.2	Total Col2Ave (4 peaks):				61.3	RPD = 4
Corrected Ave (3 peaks):					43.5	Corrected Ave (3 peaks):				50.4	RPD = 15
Aroclor-1254	1	8.191	-0.002	3954644	86.2	1	8.302	0.003	346961	52.8	
Aroclor-1254	2	8.589	0.025	5643148	186.3	2	8.488	0.013	1062495	130.8	
Aroclor-1254	3	8.702	0.002	4260884	67.5	3	9.001	0.004	356899	57.4	
Aroclor-1254	4	9.050	-0.003	5491622	84.4	4	9.150	0.004	815736	61.2	
Aroclor-1254	5	9.368	0.006	3825309	155.5	5	9.938	0.003	780380	104.0	
Total Col1Ave (5 peaks):					116.0	Total Col2Ave (5 peaks):				81.2	RPD = 35
Corrected Ave (4 peaks):					98.4	Corrected Ave (4 peaks):				68.8	RPD = 35
Aroclor-1260	1	9.973	0.008	1736198	40.9	1	10.270	0.010	351425	40.7	
Aroclor-1260	2	10.294	0.013	1784056	42.4	2	10.716	0.007	612256	60.5	
Aroclor-1260	3	10.707	0.050	35447964	351.5	3	10.996	0.012	986984	52.9	
Aroclor-1260	4	11.067	0.011	2676134	54.5	4	11.464	-0.041	6920405	1367.1	
Aroclor-1260	5	11.262	0.015	1617159	61.5	NS	---			----	
Total Col1Ave (5 peaks):					110.2	Total Col2Ave (4 peaks):				380.3	RPD = 110*
Corrected Ave (4 peaks):					49.8	Corrected Ave (3 peaks):				51.4	RPD = 3
Aroclor-1262	1	10.294	0.012	1784056	36.8	1	10.270	0.010	351425	26.7	
Aroclor-1262	2	10.707	0.049	35447964	311.1	2	10.716	0.006	612256	50.9	
Aroclor-1262	3	11.067	0.008	2676134	74.2	3	10.996	0.011	986984	43.7	
Aroclor-1262	4	11.262	0.014	1617159	31.9	4	11.574	0.007	711308	48.5	
Aroclor-1262	5	11.918	0.000	10569145	271.9	5	12.321	0.015	314890	44.4	
Total Col1Ave (5 peaks):					145.2	Total Col2Ave (5 peaks):				42.8	RPD = 109*
Corrected Ave (4 peaks):					103.7	Corrected Ave (4 peaks):				40.8	RPD = 87*
Aroclor-1268	1	11.188	0.013	1732631	15.9	1	11.464	-0.042	6920405	301.2	

Aroclor-1268	2	11.262	0.016	1617159	13.4	2	11.574	0.001	711308	32.8
Aroclor-1268	3	11.659	0.027	710799	7.9	3	11.979	0.010	76529	4.5
Aroclor-1268	4	12.435	0.013	1255520	5.0	4	12.802	0.010	195588	4.4

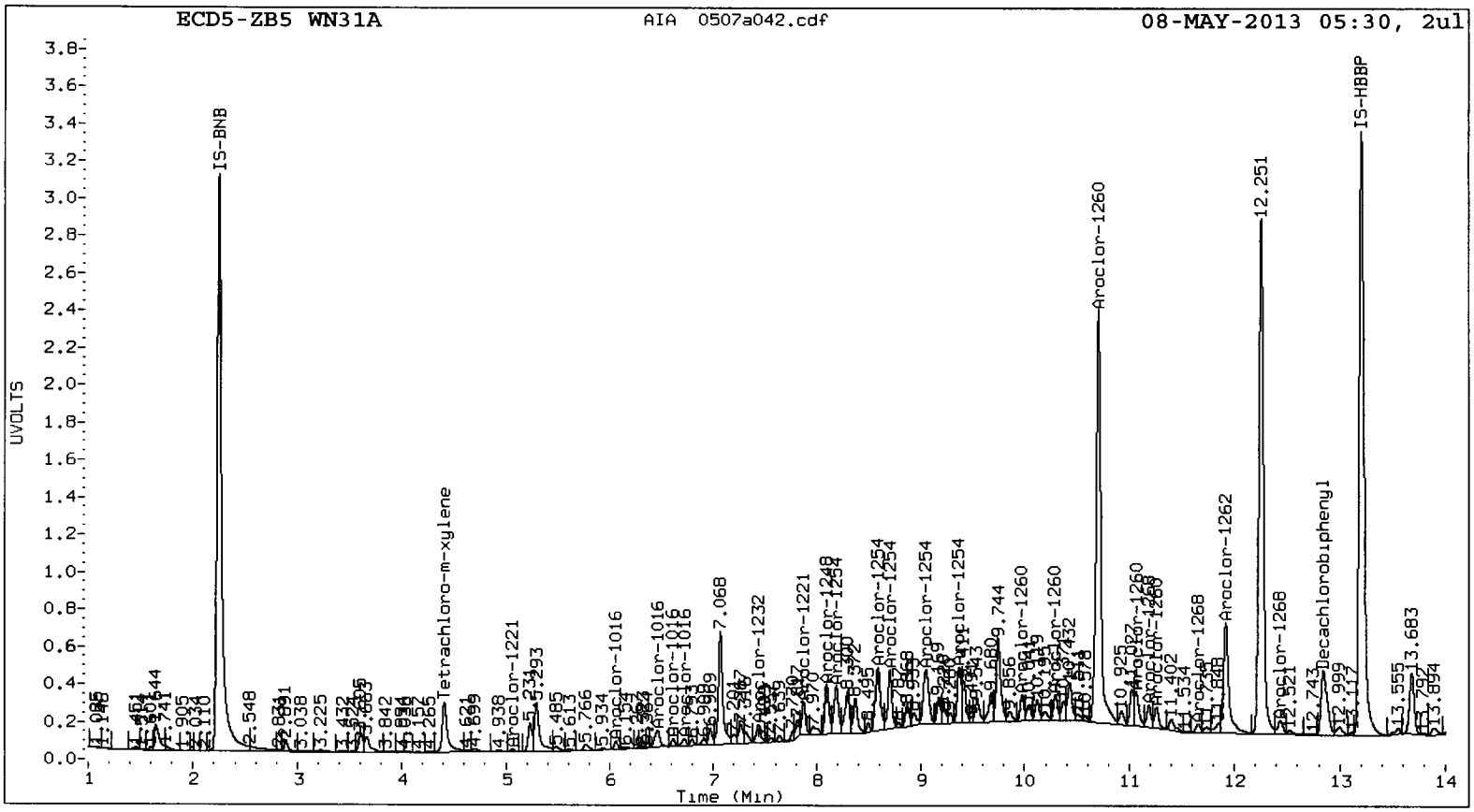
Total Col1Ave (4 peaks): 10.6 Total Col2Ave (4 peaks): 85.7 RPD = 156*

Corrected Ave (3 peaks): 8.8 Corrected Ave (3 peaks): 13.9 RPD = 45*

Total PCB Area Col1 (4.508 - 12.726) = 202689797 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.509 - 13.103) = 43341050 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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08-MAY-2013 05:30, 2ul
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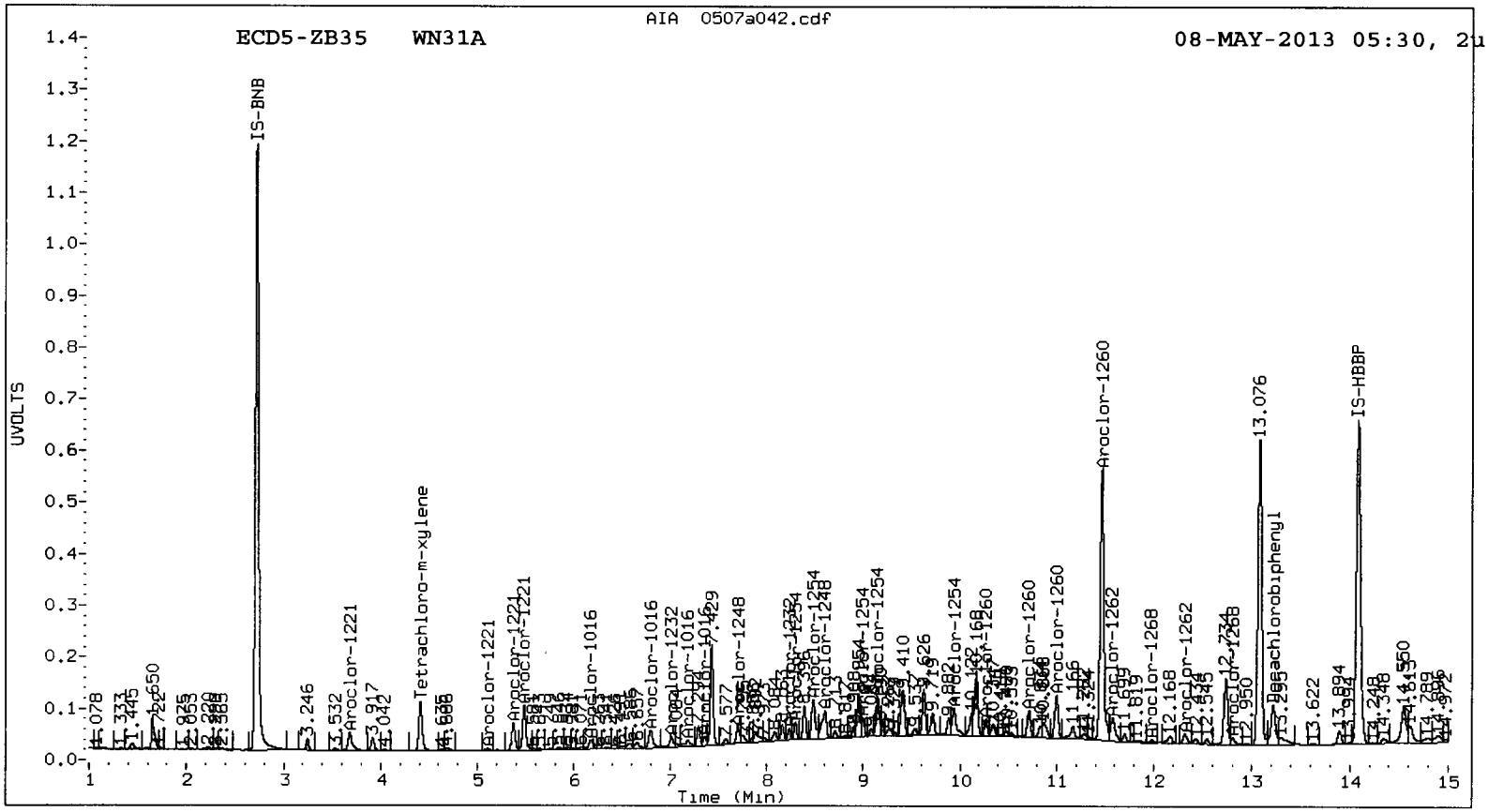
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
7.068
12.251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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
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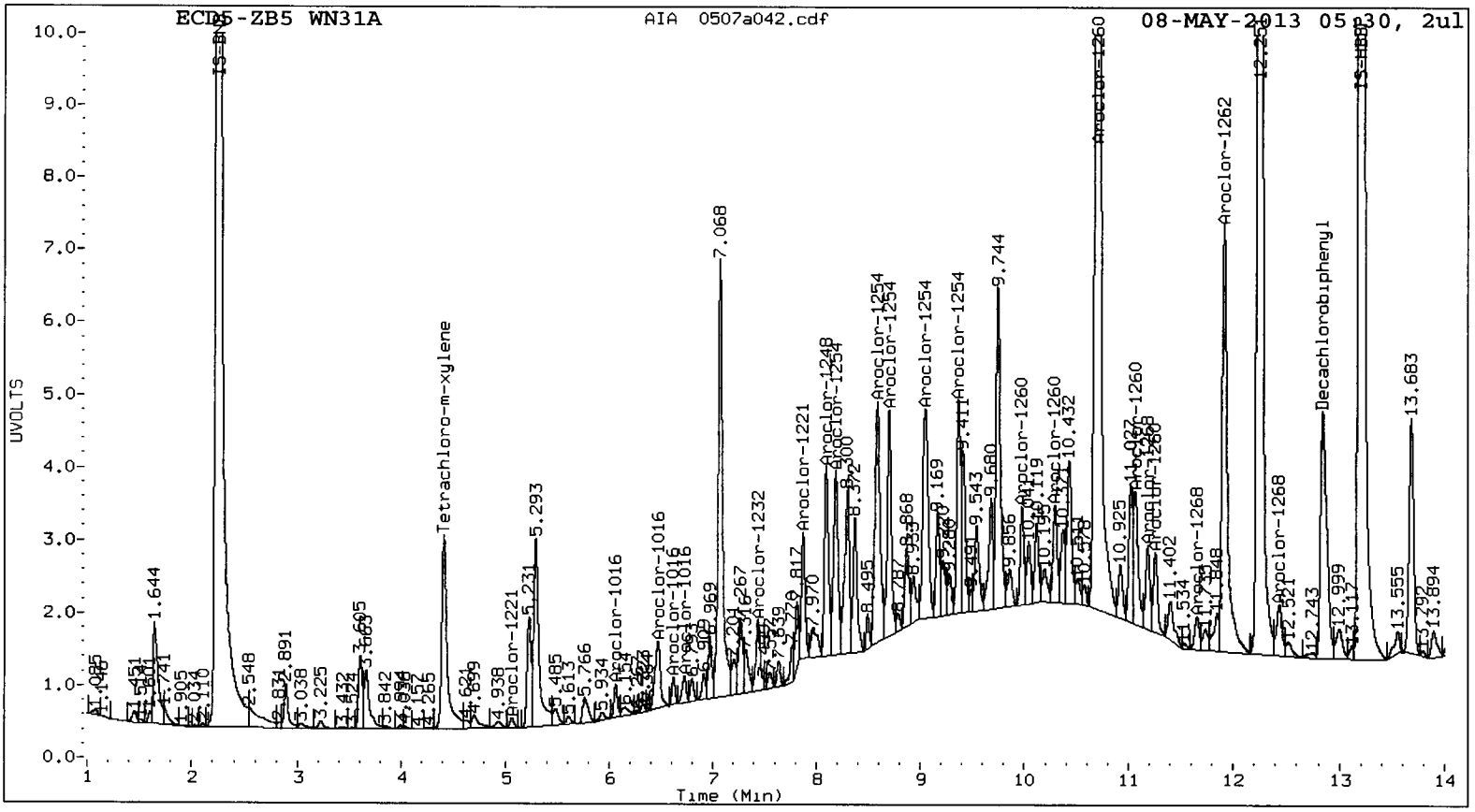
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
13.076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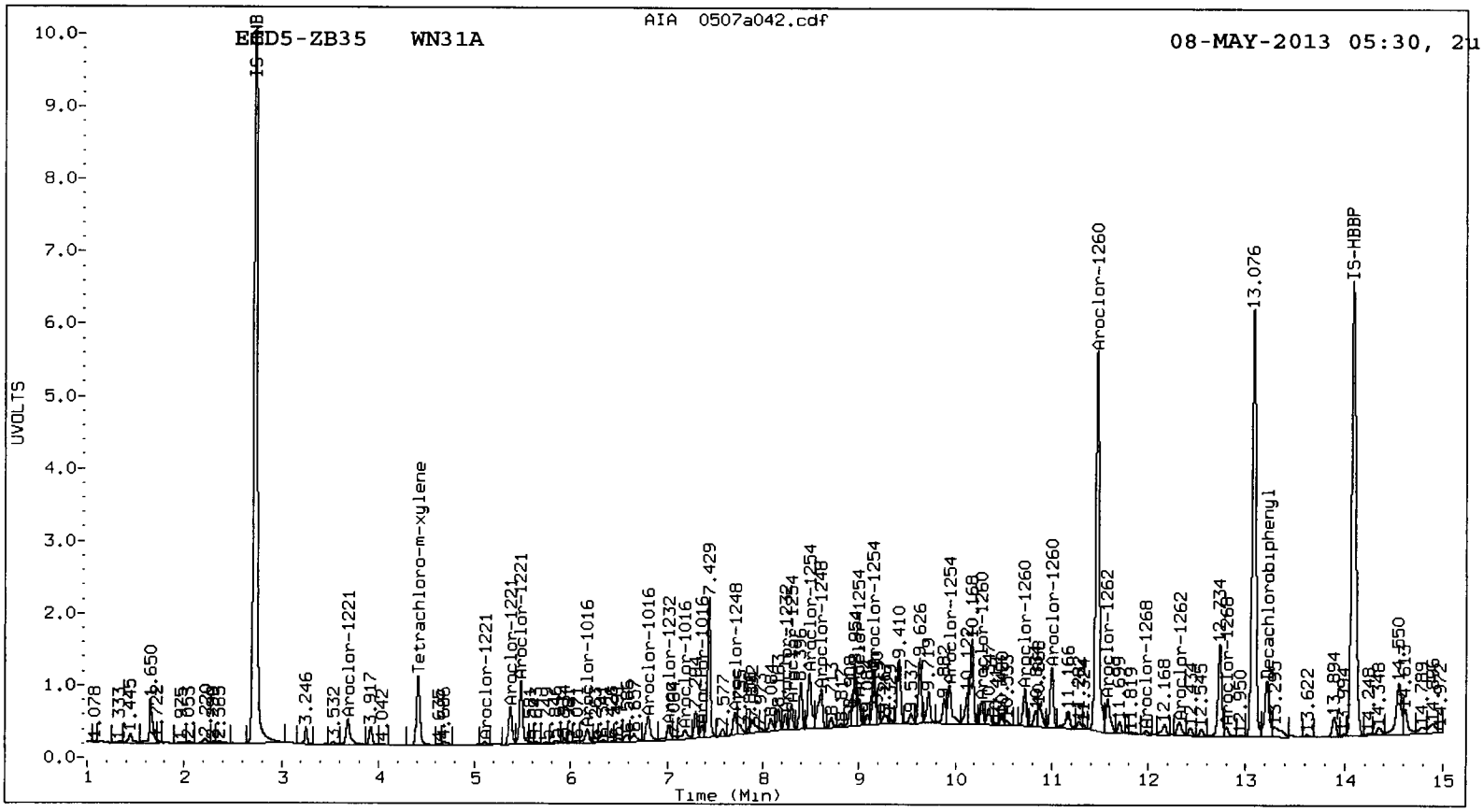
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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08-MAY-2013 05:30, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a045.d
Data file 2: 20130507.b/0507-2.b/0507a045.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 08-MAY-2013 06:30
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.409	0.000	34221471	4.409	-0.001	8213450	38.4	39.5	3.0	Tetrachloro-m-xylen
12.827	0.000	28713612	13.203	0.000	4488619	34.2	33.4	2.5	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	95.9	98.8
Decachlorobiphenyl	85.6	83.5

jt 5/14/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57538144	17.5
Hexabromobiphenyl	50004151	56147205	12.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15370880	3.6
Hexabromobiphenyl	9345340	9337721	-0.1

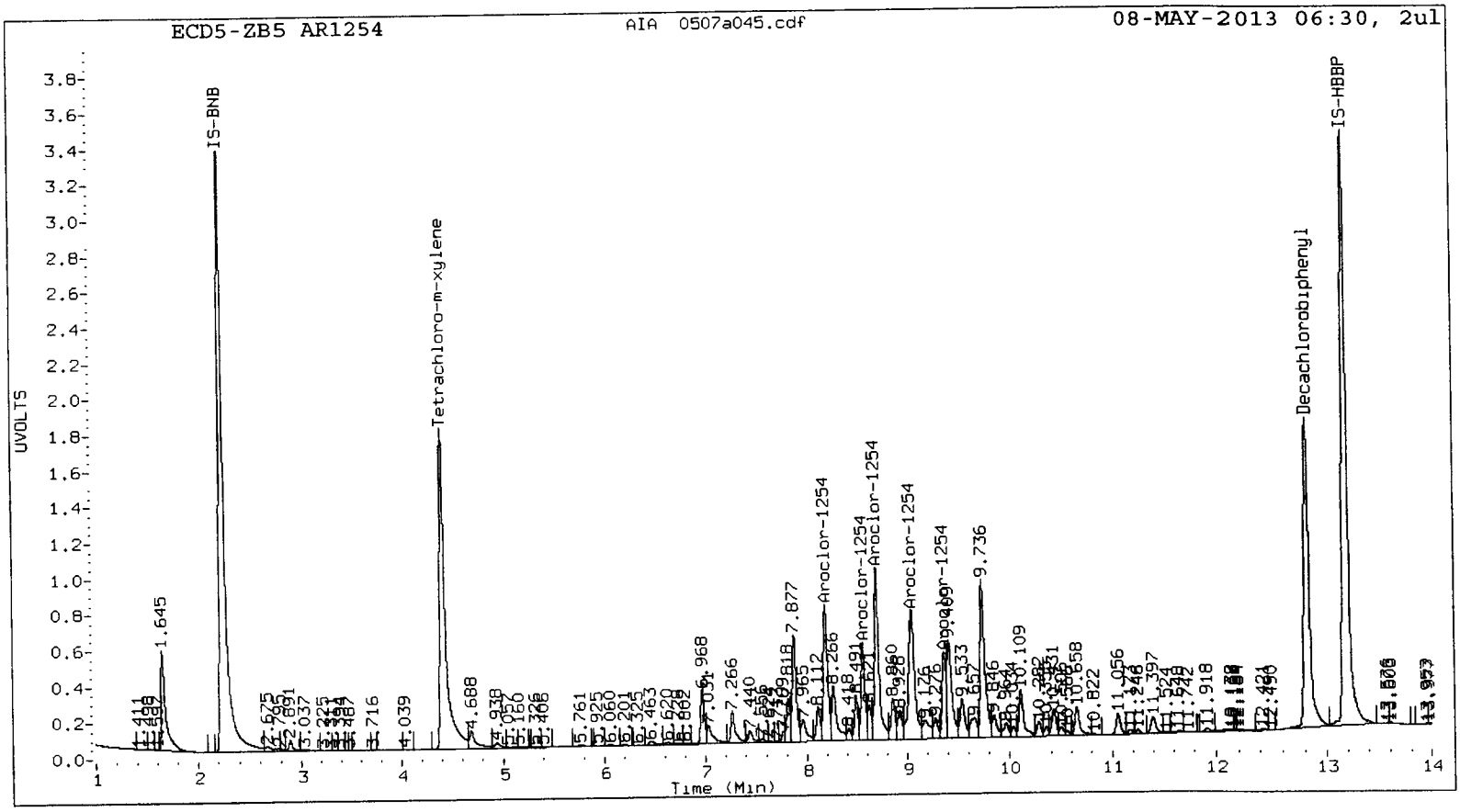
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	8.190	0.000	11076212	206.4	1	8.297	0.000	1585041	212.7
Aroclor-1254	2	8.561	0.000	7064963	199.5	2	8.473	0.000	1961874	213.1
Aroclor-1254	3	8.698	0.000	14842061	201.0	3	8.995	0.000	1439582	204.1
Aroclor-1254	4	9.050	0.000	15334962	201.6	4	9.145	0.000	3079059	203.8
Aroclor-1254	5	9.360	0.000	5683126	197.6	5	9.931	0.000	1708593	200.9
Total Col1Ave (5 peaks):					201.2	Total Col2Ave (5 peaks):				206.9 RPD = 3
Corrected Ave (4 peaks):					199.9	Corrected Ave (4 peaks):				205.4 RPD = 3

Total PCB Area Col1 (4.509 - 12.727) = 157493286 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.510 - 13.103) = 30161842 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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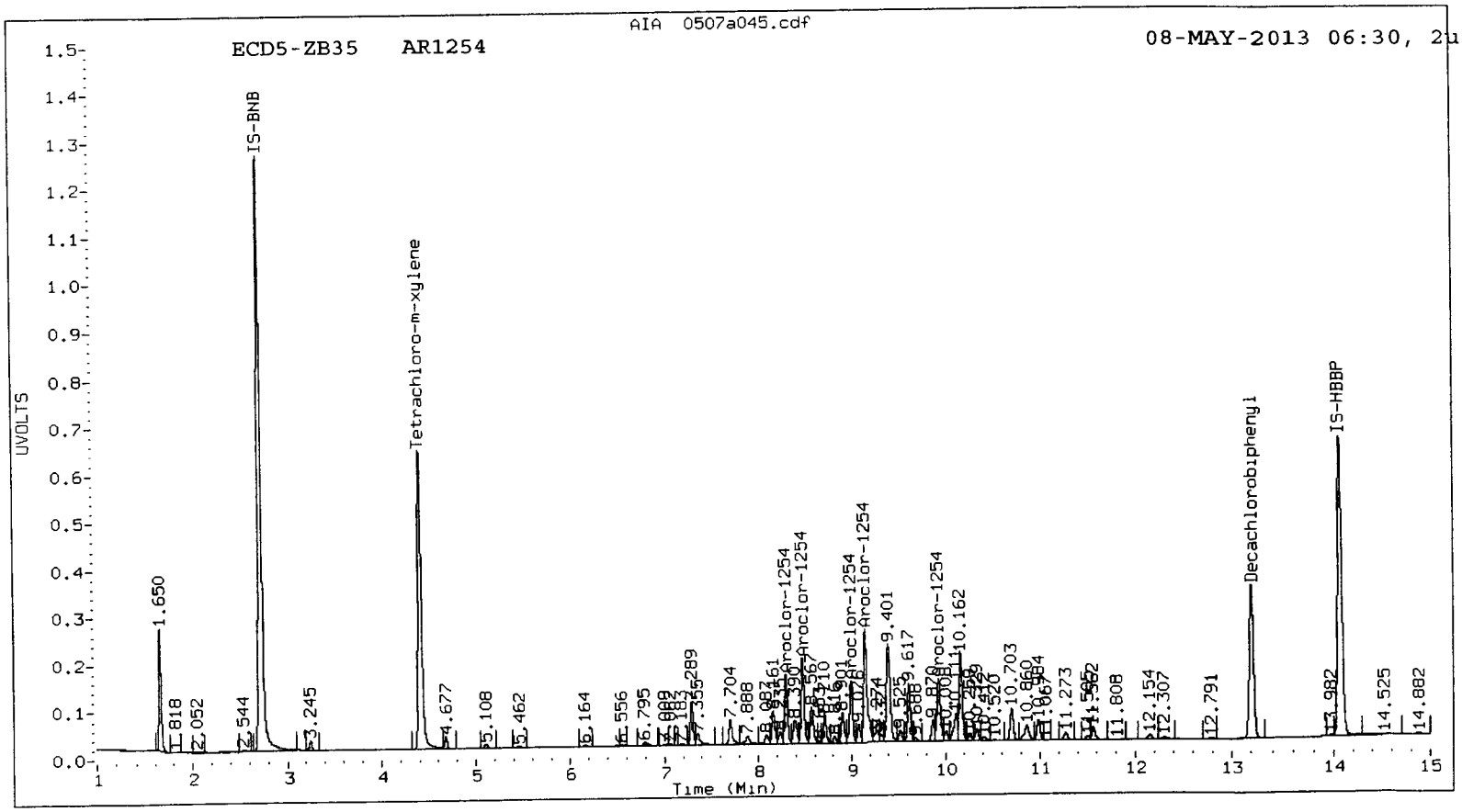
08-MAY-2013 06:30, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
1.645
4.688
7.877
9.736
10.109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08-MAY-2013 06:30, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
1.650
4.677
9.401
10.162

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0507-1.b/0507a046.d
Data file 2: 20130507.b/0507-2.b/0507a046.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 08-MAY-2013 06:51
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.408	0.000	33895635	4.410	0.000	8056746	37.9	38.9	2.7	Tetrachloro-m-xylen
12.827	0.000	30539880	13.203	0.000	4387828	34.6	32.7	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.7	97.2
Decachlorobiphenyl	86.5	81.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57738341	17.9
Hexabromobiphenyl	50004151	59085325	18.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15320524	3.2
Hexabromobiphenyl	9345340	9330725	-0.2

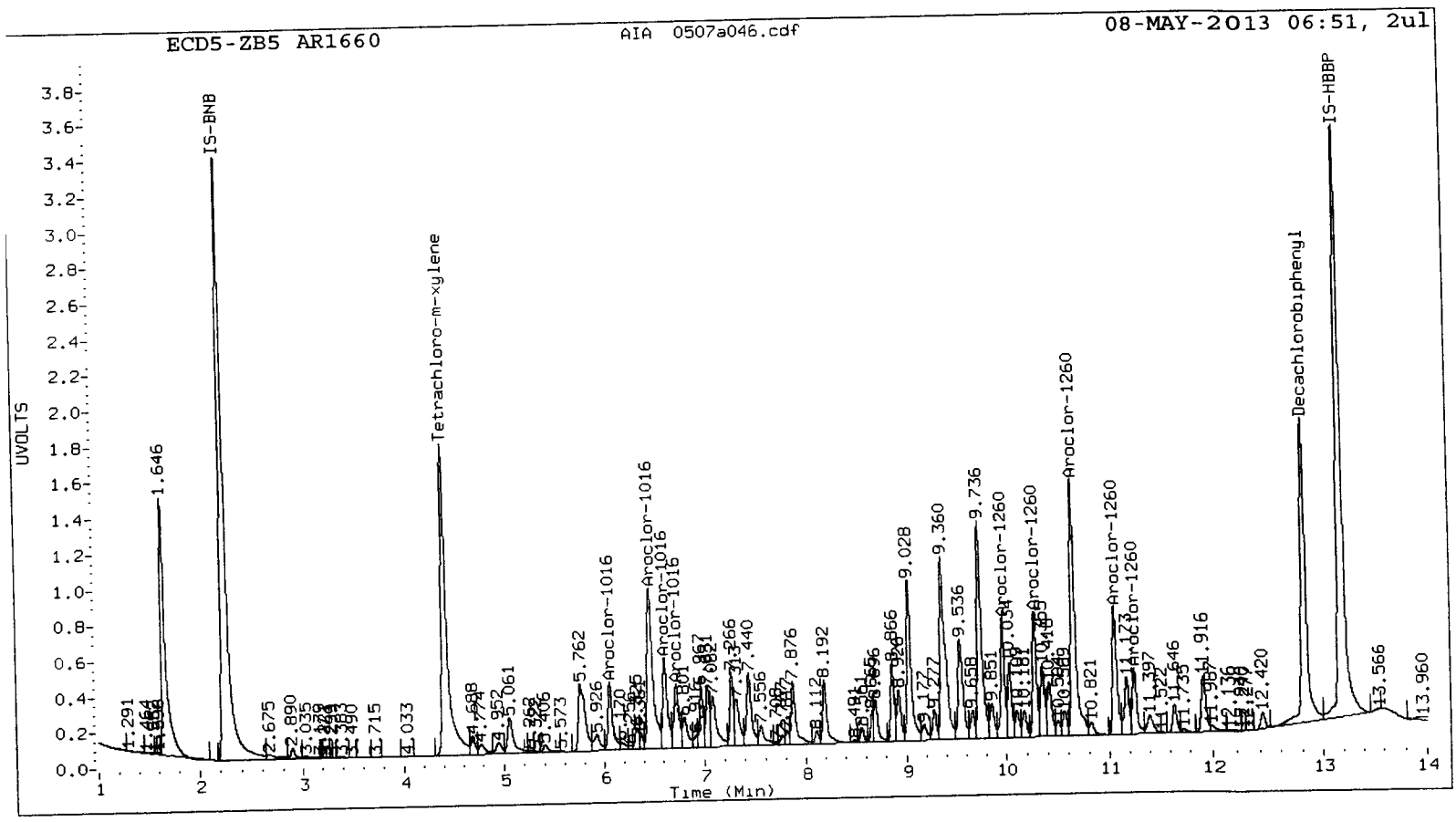
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.059	0.000	5992365	230.2	1	6.164	0.000	2107768	241.1
Aroclor-1016	2	6.467	0.000	18631806	232.4	2	6.800	0.000	4517241	237.7
Aroclor-1016	3	6.615	0.000	8130512	226.4	3	7.184	0.000	1165445	234.5
Aroclor-1016	4	6.727	0.000	6000978	223.6	4	7.356	0.000	1043877	225.5
Total Col1Ave (4 peaks):		228.2				Total Col2Ave (4 peaks):			234.7	RPD = 3
Corrected Ave (3 peaks):		226.7				Corrected Ave (3 peaks):			232.6	RPD = 3
Aroclor-1260	1	9.966	0.000	9172064	189.6	1	10.260	0.000	1729270	204.3
Aroclor-1260	2	10.282	0.000	9011332	187.8	2	10.709	0.000	2069618	208.8
Aroclor-1260	3	10.657	0.000	22422856	194.9	3	10.985	0.000	3983310	217.6
Aroclor-1260	4	11.056	0.000	10908980	194.7	4	11.505	0.000	1067534	215.1
Aroclor-1260	5	11.246	0.000	5779005	192.7	NS	---			----
Total Col1Ave (5 peaks):		191.9				Total Col2Ave (4 peaks):			211.5	RPD = 10
Corrected Ave (4 peaks):		191.2				Corrected Ave (3 peaks):			209.4	RPD = 9

Total PCB Area Col1 (4.508 - 12.727) = 297204921 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (4.510 - 13.103) = 58644422 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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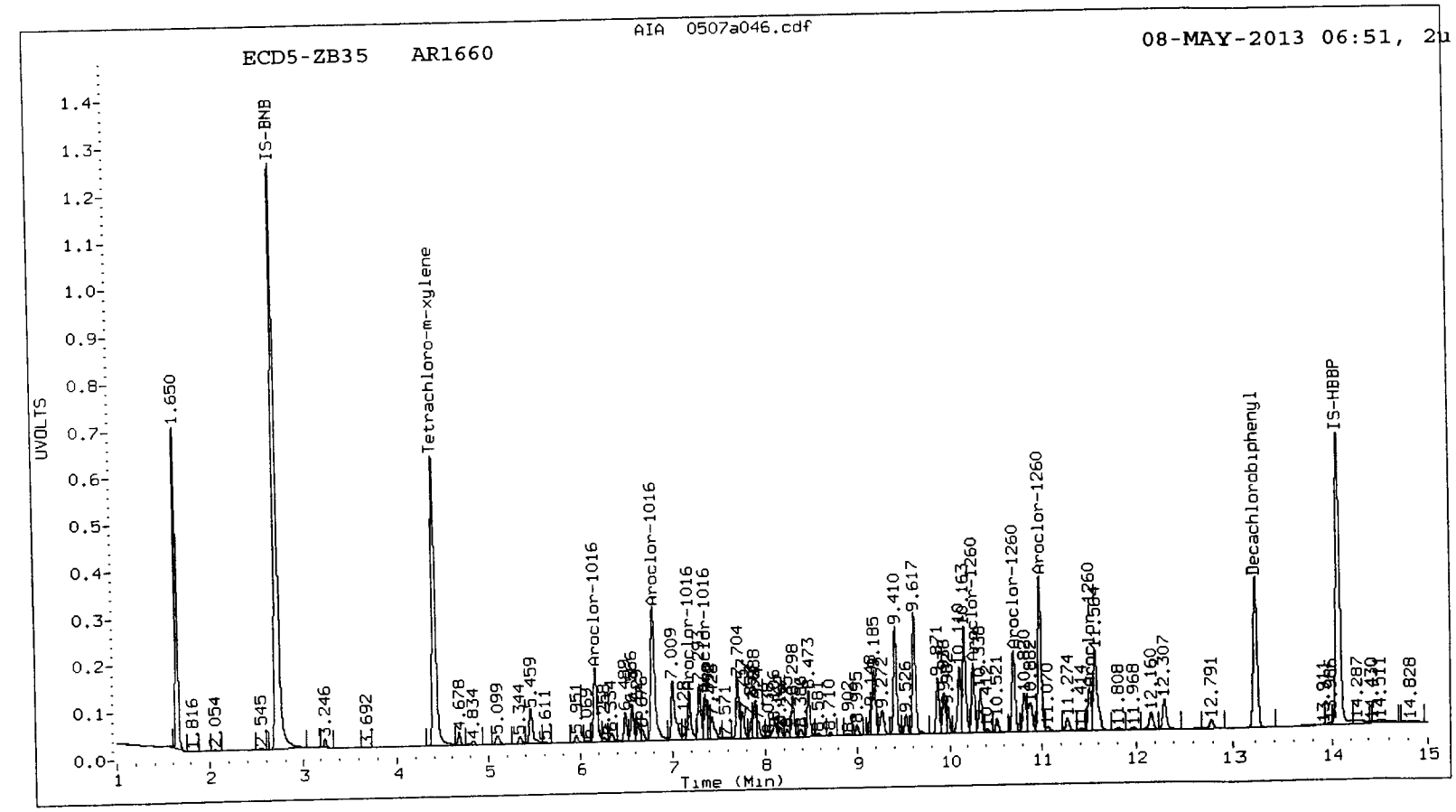
08-MAY-2013 06:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

Miscellaneous
Water/Soil/Sed/Tissue/Other
Separatory Funnel (3510C)/Liq-Liq (3520C)
Sonication (3550C)/Microwave (3546)
TissueMize (Modified 3550C)

Parameter TPHD

Preparation Test Misc # 1
ARI Job No(s) WN27, WN31

Batch set up by: ~~JH~~

Bottle #	ARI Sample I.D. WN27	Verify Client ID	Weight ~~or~~ ~~Volume~~ Extracted	~~Sonic Horn ID~~ + ~~Chk~~	~~KD~~	Turbo Vap 1 2 3	Clean-Up Y/(N)	Clean-Up Y/(N)	Clean-Up Y/(N)	~~KD~~	Turbo Vap (1)2 3	Final Effective Volume	Volume to Lab	Comments
	MB	Date YL 04/26/13	10.0g								↓	10 mL	1 mL	
	SB		10.0g								↓	↓	↓	
	~~SB~~													
	Dup.													
	~~QLS~~													
3	WN27A	↓	10.03								↓	↓	↓	
3	AMS		10.03											
3	AMSD		10.03											
9	WN31A		10.02											
													SP 4/30/13	
Analyst/Date:		YL 04/26/13 CT									SP 4/30/13	SP 4/30/13	SP 4/30/13	

	Standard	Standard ID	Volume	Expiration Date	Analyst	Witness
HCID	Surrogate 2,2,5,6	P (2031-4)	200 µL	10/24/13	YL	TH
	Spike		µL			
TPHD	Spike 15,000	11 (2028-3)	1,000 µL	10/16/13	YL	TH
	Spike		µL			
	~~QLS Spike~~		µL			
Extraction Time: 12:15		**Balance ID:** ~~B14/H24~~	**Liq/Liq Start:**		**Liq/Liq Stop:**	

SPECIAL INSTRUCTIONS:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WN27/WN31 Client ID: ~~4/3~~ SAIC
Analyst: JW Date: 4/30/13

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
WN27A	100	DCM/I8174	400	5				
Ams	↓	↓	↓	↓				
Amsd								
WN31A								

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WN31 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)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= A	AC 4/24/13
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). Extracted	
(Centrifuge#1 used for all Centrifugations) Sample to a 1.0mL final volume,	
based on sample pre-screen.	SA 4/25/13

TPHD Raw Data
Initial Calibration

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/13/13 Internal Standard ID N/A Expiration 11/27/13

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Diesel/AK102	2091-2	3/15/14	Diesel/AK102	2043-1	10/20/13
Motor Oil	2041-4	11/27/13	Motor Oil	2043-2	10/19/13
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JW **Date:** 4/16/13

Reviewer: [signature] **Date:** 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a006	0413a007	0413a008	0413a009	0413a010	0413a011
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	11:53	12:13	12:34	12:54	13:15	13:35

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
40	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
39	Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
36	JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
37	Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
38	Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
2	C8	1.165	1.136	1.132	1.133	1.135	1.134	1.134	1.034-1.234	1.139	0.013
3	C10	2.960	2.962	2.962	2.963	2.963	2.966	2.966	2.916-3.016	2.963	0.002
4	C12	3.905	3.904	3.905	3.906	3.907	3.910	3.910	3.860-3.960	3.906	0.002
5	C14	4.587	4.584	4.586	4.586	4.588	4.594	4.594	4.544-4.644	4.588	0.003
6	C16	5.170	5.167	5.168	5.171	5.171	5.178	5.178	5.128-5.228	5.171	0.004
7	C18	5.716	5.713	5.715	5.717	5.720	5.727	5.727	5.677-5.777	5.718	0.005
$ 8	o-terph	5.859	5.858	5.865	5.874	5.884	5.903	5.903	5.853-5.953	5.874	0.017
9	C20	6.268	6.263	6.265	6.266	6.268	6.274	6.274	6.224-6.324	6.267	0.004
10	C22	6.810	6.805	6.806	6.806	6.807	6.808	6.808	6.758-6.858	6.807	0.002
11	C24	7.324	7.320	7.319	7.321	7.318	7.319	7.319	7.269-7.369	7.320	0.002
12	C25	7.573	7.567	7.564	7.566	7.567	7.566	7.566	7.516-7.616	7.567	0.003

Reviewer 1 _____ Date: 4/16/13
Reviewer 2 _____ Date: 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.811	7.808	7.806	7.827	7.833	7.827	7.827	7.777-7.877	7.819	0.012
14 C28	8.266	8.260	8.259	8.261	8.261	8.258	8.258	8.208-8.308	8.261	0.003
$ 15 Triacon Surr	8.706	8.710	8.706	8.711	8.712	8.700	8.700	8.650-8.750	8.707	0.004
16 C32	9.093	9.097	9.073	9.082	9.094	9.090	9.090	9.040-9.140	9.088	0.009
17 C34	9.462	9.465	9.462	9.469	9.468	9.458	9.458	9.408-9.508	9.464	0.004
18 Filter Peak	11.449	11.438	11.447	11.432	11.448	11.449	11.449	11.349-11.549	11.444	0.007
19 C36	9.835	9.834	9.819	9.827	9.827	9.824	9.824	9.774-9.874	9.828	0.006
20 C38	10.178	10.182	10.193	10.156	10.189	10.179	10.179	10.129-10.229	10.179	0.013
21 C40	10.533	10.531	10.533	10.538	10.535	10.541	10.541	10.491-10.591	10.535	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a013	0413a014	0413a015	0413a016	0413a017	0413a018
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	14:16	14:36	14:57	15:17	15:38	15:58

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
	40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
	39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
	36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
	37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
	38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
	2 C8	1.180	1.166	1.100	1.178	1.128	1.143	1.143	1.044-1.244	1.149	0.032
	3 C10	2.964	2.961	2.963	2.963	2.962	2.962	2.962	2.912-3.012	2.963	0.001
	4 C12	3.904	3.903	3.904	3.904	3.903	3.905	3.905	3.854-3.954	3.904	0.001
	5 C14	4.585	4.583	4.603	4.569	4.583	4.584	4.584	4.534-4.634	4.585	0.011
	6 C16	5.184	5.188	5.164	5.167	5.183	5.166	5.166	5.116-5.216	5.175	0.011
	7 C18	5.729	5.730	5.730	5.733	5.731	5.734	5.734	5.684-5.784	5.731	0.002
$	8 o-terph	5.903	5.902	5.900	5.902	5.899	5.904	5.904	5.854-5.955	5.902	0.002
	9 C20	6.285	6.273	6.281	6.283	6.280	6.287	6.287	6.237-6.336	6.281	0.005
	10 C22	6.807	6.807	6.806	6.805	6.804	6.808	6.808	6.758-6.857	6.806	0.002
	11 C24	7.321	7.329	7.314	7.320	7.321	7.311	7.311	7.261-7.361	7.319	0.006
	12 C25	7.577	7.569	7.572	7.563	7.556	7.572	7.572	7.522-7.622	7.568	0.008

Reviewer 1 JW Date: 4/16/13
Reviewer 2 Date: 4/16/13

UNDER 21 CFR 58

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.813	7.831	7.834	7.825	7.819	7.830	7.830	7.779-7.880	7.825	0.008
14 C28	8.258	8.257	8.247	8.256	8.257	8.258	8.258	8.209-8.309	8.255	0.004
$ 15 Triacon Surr	8.669	8.677	8.684	8.696	8.719	8.747	8.747	8.697-8.797	8.698	0.029
16 C32	9.082	9.091	9.091	9.090	9.084	9.095	9.095	9.045-9.145	9.089	0.005
17 C34	9.463	9.455	9.460	9.455	9.454	9.449	9.449	9.399-9.499	9.456	0.005
18 Filter Peak	11.443	11.451	11.444	11.452	11.438	11.443	11.443	11.343-11.543	11.445	0.005
19 C36	9.816	9.824	9.820	9.830	9.816	9.820	9.820	9.770-9.870	9.821	0.005
20 C38	10.173	10.184	10.178	10.178	10.168	10.185	10.185	10.136-10.236	10.178	0.007
21 C40	10.541	10.538	10.543	10.539	10.542	10.543	10.543	10.493-10.593	10.541	0.002
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-APR-2013 09:47	0413a001.d	1	RINSE	
2	13-APR-2013 10:07	0413a002.d	1	RT0413	
3	13-APR-2013 10:27	0413a003.d	1	IB0413	
4	13-APR-2013 10:47	0413a004.d	1	DIESEL#1	
5	13-APR-2013 11:07	0413a005.d	1	MOIL#1	
6	13-APR-2013 11:53	0413a006.d	1	DIESEL50	
7	13-APR-2013 12:13	0413a007.d	1	DIESEL100	
8	13-APR-2013 12:34	0413a008.d	1	DIESEL250	
9	13-APR-2013 12:54	0413a009.d	1	DIESEL500	
10	13-APR-2013 13:15	0413a010.d	1	DIESEL1000	
11	13-APR-2013 13:35	0413a011.d	1	DIESEL2500	
12	13-APR-2013 13:56	0413a012.d	1	DIESELICV250	
13	13-APR-2013 14:16	0413a013.d	1	MOIL100	
14	13-APR-2013 14:36	0413a014.d	1	MOIL250	
15	13-APR-2013 14:57	0413a015.d	1	MOIL500	
16	13-APR-2013 15:17	0413a016.d	1	MOIL1000	
17	13-APR-2013 15:38	0413a017.d	1	MOIL2500	
18	13-APR-2013 15:58	0413a018.d	1	MOIL5000	
19	13-APR-2013 16:19	0413a019.d	1	MOILICV500	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

ARI Job No.: RINS Method: ftphfid4a.m Instrument: fid4a.i Date: 13-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0947	0413a001.d	RINSE		1	NO MANUAL INTEGRATION
1007	0413a002.d	RT0413		1	Toluene,
1027	0413a003.d	IB0413		1	NO MANUAL INTEGRATION
1047	0413a004.d	DIESEL#1		1	o-terph,
1107	0413a005.d	MOIL#1		1	NO MANUAL INTEGRATION
1153	0413a006.d	DIESEL50		1	o-terph,
1213	0413a007.d	DIESEL100		1	o-terph,
1234	0413a008.d	DIESEL250		1	o-terph,
1254	0413a009.d	DIESEL500		1	o-terph,
1315	0413a010.d	DIESEL1000		1	o-terph,
1335	0413a011.d	DIESEL2500		1	o-terph,
1356	0413a012.d	DIESELICV250		1	o-terph,
1416	0413a013.d	MOIL100		1	Triacon Surr,
1436	0413a014.d	MOIL250		1	Triacon Surr,
1457	0413a015.d	MOIL500		1	Triacon Surr,
1517	0413a016.d	MOIL1000		1	Triacon Surr,
1538	0413a017.d	MOIL2500		1	Triacon Surr,
1558	0413a018.d	MOIL5000		1	Triacon Surr,
1619	0413a019.d	MOILICV500		1	Triacon Surr,

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130413 Project:

Instrument ID: FID4A GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

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

* Values outside of QC limits.

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

Instrument: FID4A.I Project:

Calibration Date: 13-APR-2013 SDG No.: 20130413

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

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

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

FORM VI-Diesel

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a002.d ARI ID: RT0413
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 10:07
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.914	0.000	523273	404181	WATPHG	(Tol-C12)	1601919	103.09
C8	1.147	0.000	383436	378901	WATPHD	(C12-C24)	2482020	171.00
C10	2.967	0.000	554691	384061	WATPHM	(C24-C38)	3731338	274.28
C12	3.908	0.000	599973	392136	AK102	(C10-C25)	3297127	191.53
C14	4.587	0.000	632883	391482	AK103	(C25-C36)	3275864	355.99
C16	5.171	0.000	554416	390514				
C18	5.717	0.000	457643	373684				
C20	6.268	0.000	500619	352912				
C22	6.810	0.000	449542	363990	MIN.OIL	(C24-C38)	3731338	218.73
C24	7.326	0.000	451103	374543				
C25	7.574	0.000	428467	368739				
C26	7.826	0.000	1071962	1140709				
C28	8.269	0.000	451113	396216				
C32	9.081	0.000	434660	405330				
C34	9.457	0.000	423148	399566				
Filter Peak	11.442	0.000	2220	3573	CREOSOT	(C12-C22)	2071520	949.41 M
C36	9.823	0.000	376532	406269				
C38	10.179	0.000	384689	395168				
C40	10.533	0.000	339686	388792				
o-terph	5.861	0.000	933117	821007				
Triacon Surr	8.698	0.000	991072	1035385				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	821007	42.6	94.6
Triacontane	1035385	56.9	126.4

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

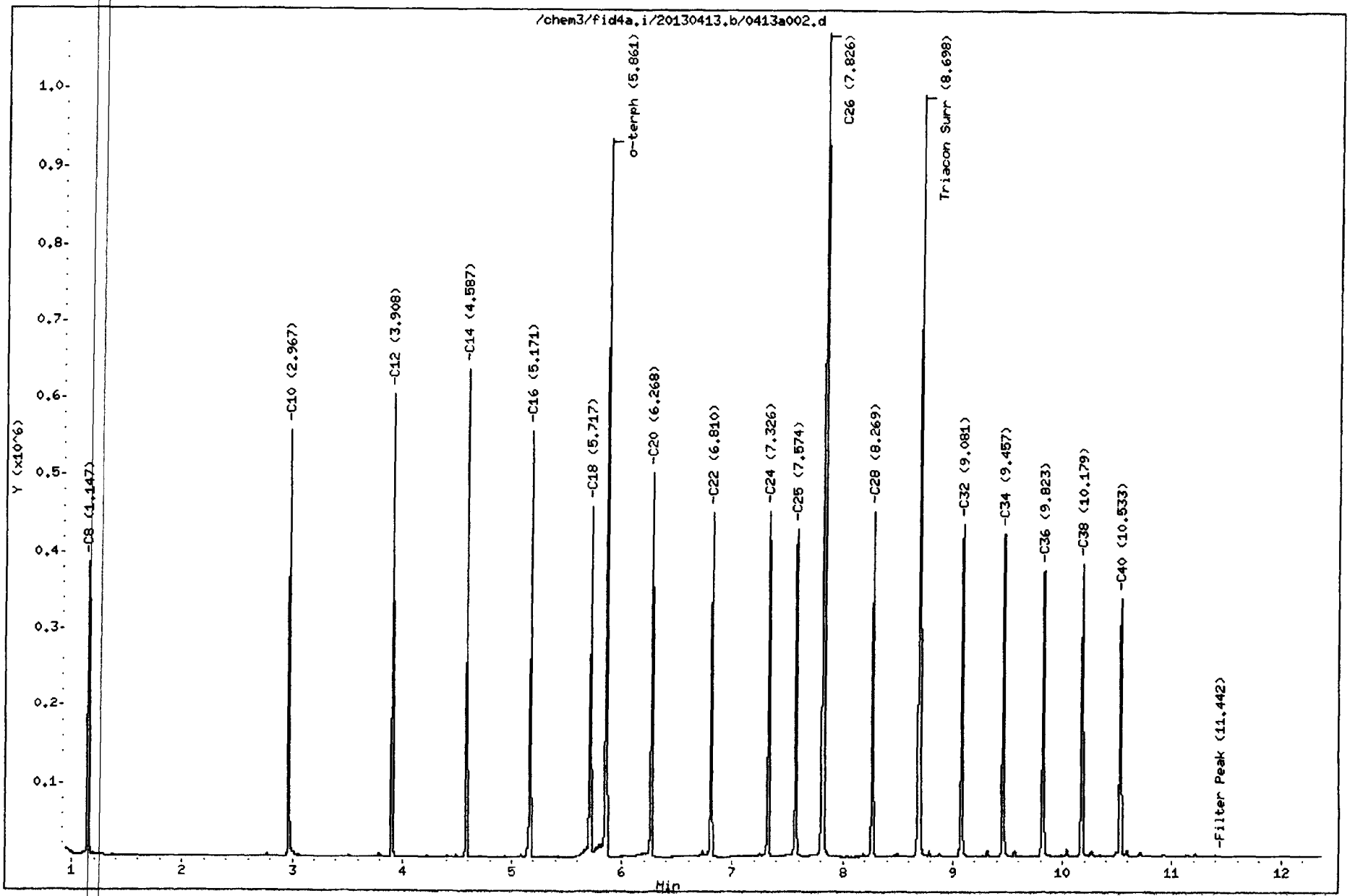
Data File: /chem3/fid4a.i/20130413.b/0413a002.d
Date : 13-APR-2013 10:07
Client ID:
Sample Info: RT0413

Column phase: RTX-1

Instrument: fid4a.i

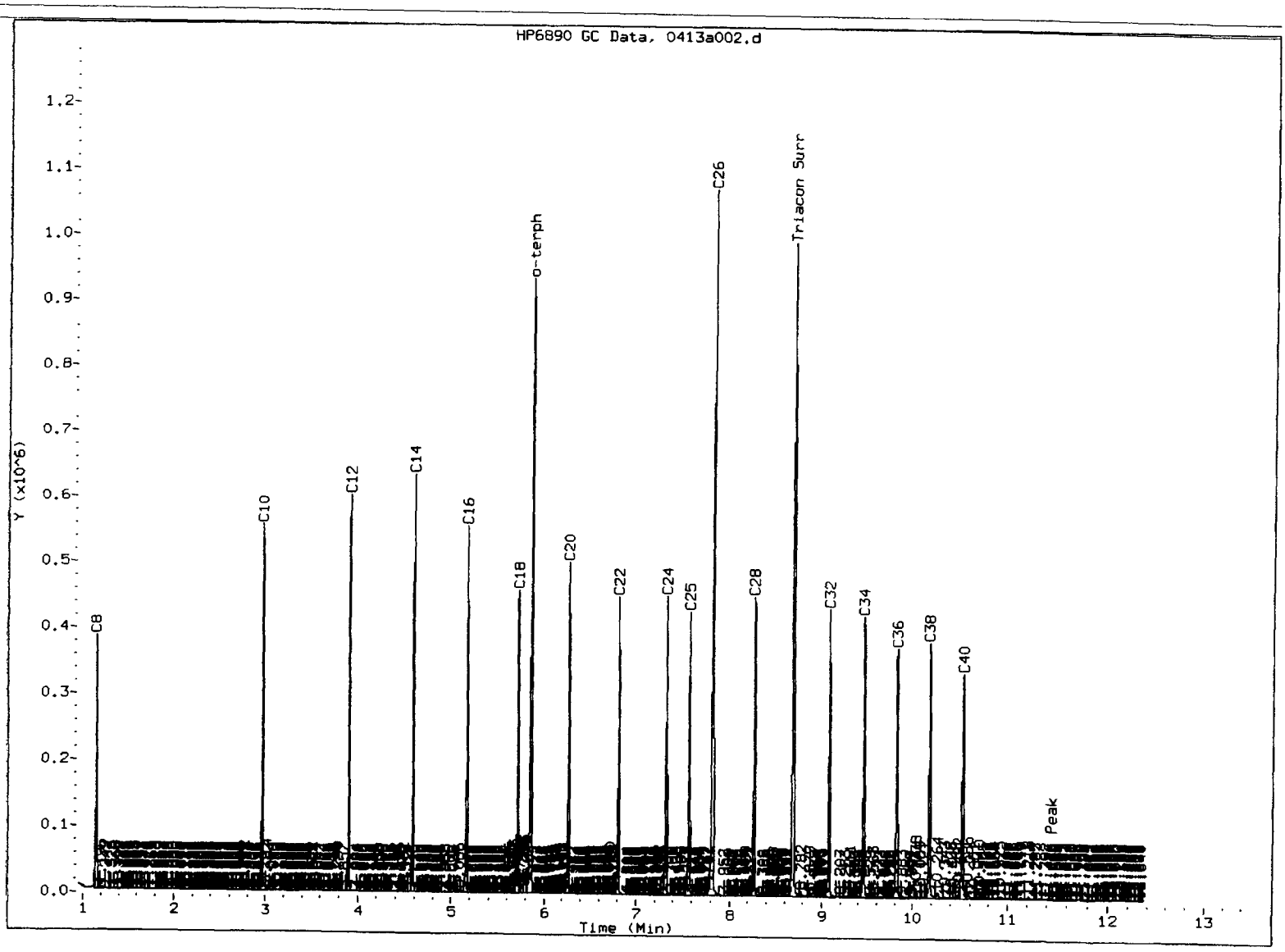
Operator: JR/VTS/JW
Column diameter: 0.25

JR 11/14/13



FID:4A-2C/RTX-1 RT0413

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JC Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a003.d ARI ID: IB0413
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 10:27
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17733	1.14
C8	1.102	-0.046	1135	2331	WATPHD	(C12-C24)	47239	3.25
C10	2.964	-0.004	232	237	WATPHM	(C24-C38)	117547	8.64
C12	3.905	-0.003	174	136	AK102	(C10-C25)	54060	3.14
C14	4.585	-0.003	110	101	AK103	(C25-C36)	90176	9.80
C16	5.167	-0.004	108	79				
C18	5.715	-0.002	160	177				
C20	6.261	-0.007	154	176				
C22	6.802	-0.008	133	182	MIN.OIL	(C24-C38)	117547	6.89
C24	7.321	-0.005	163	306				
C25	7.566	-0.008	139	147				
C26	7.807	-0.019	275	355				
C28	8.260	-0.009	813	902				
C32	9.055	-0.026	10958	9907				
C34	9.455	-0.002	490	696				
Filter Peak	11.440	-0.002	1869	927	CREOSOT	(C12-C22)	43412	19.90 M
C36	9.840	0.016	828	1744				
C38	10.165	-0.014	843	1177				
C40	10.527	-0.005	1196	569				
o-terph	5.863	0.002	1144381	871534				
Triacon Surr	8.687	-0.011	878761	820967				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871534	45.2	100.4
Triacontane	820967	45.1	100.3

JW 4/16/13

M Indicates the peak was manually integrated

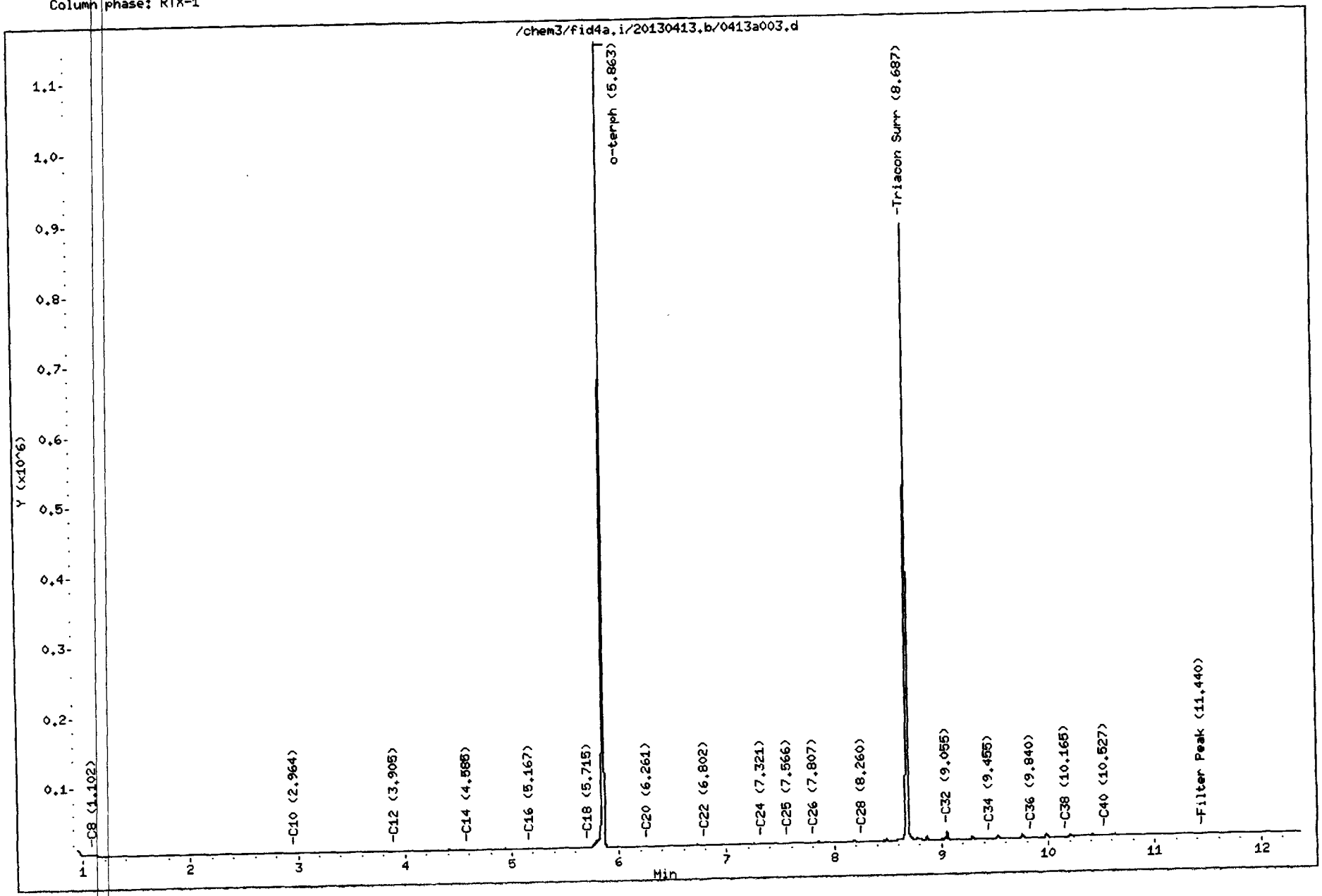
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

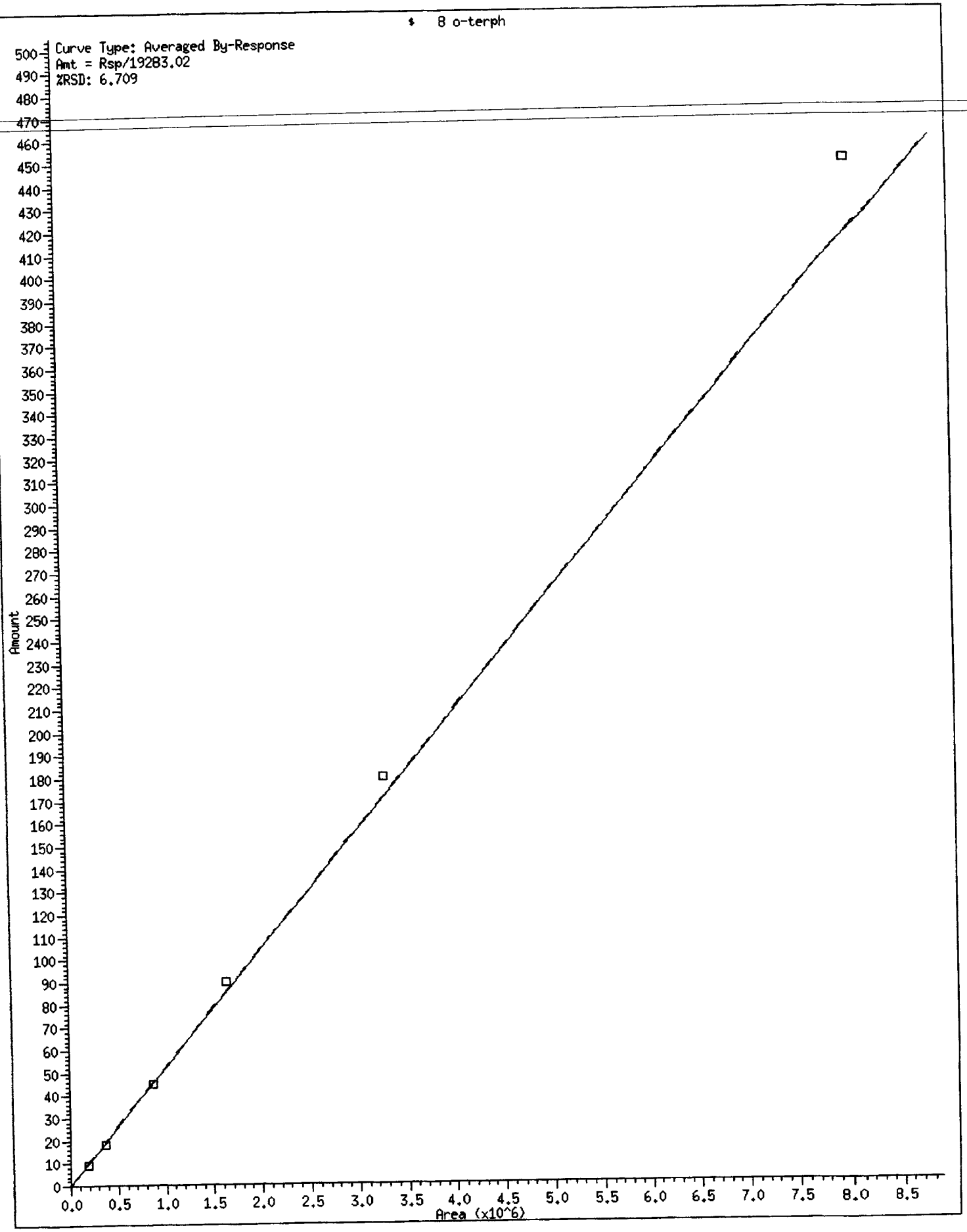
Data File: /chem3/fid4a.i/20130413.b/0413a003.d
Date : 13-APR-2013 10:27
Client ID:
Sample Info: IB0413

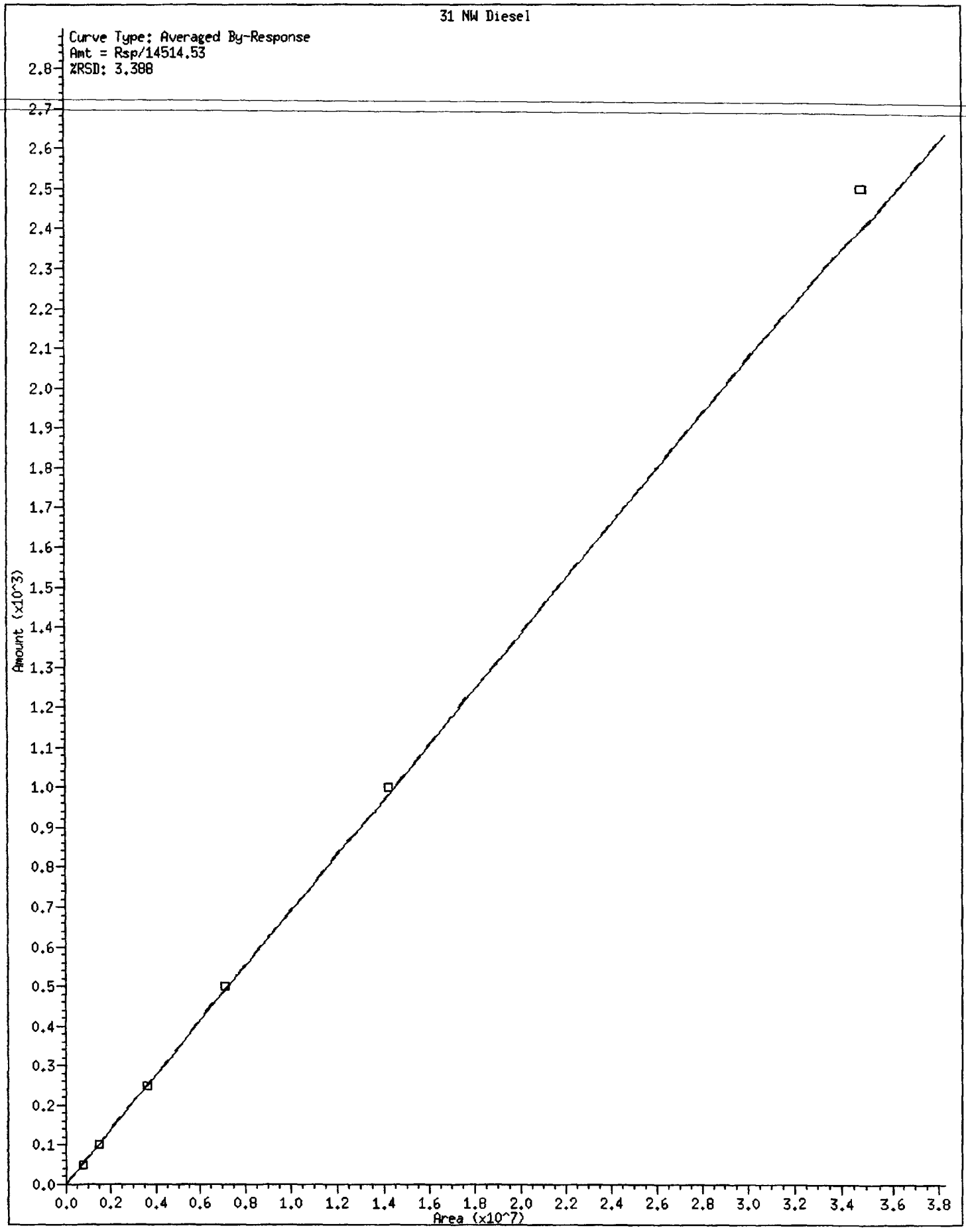
Instrument: fid4a.i

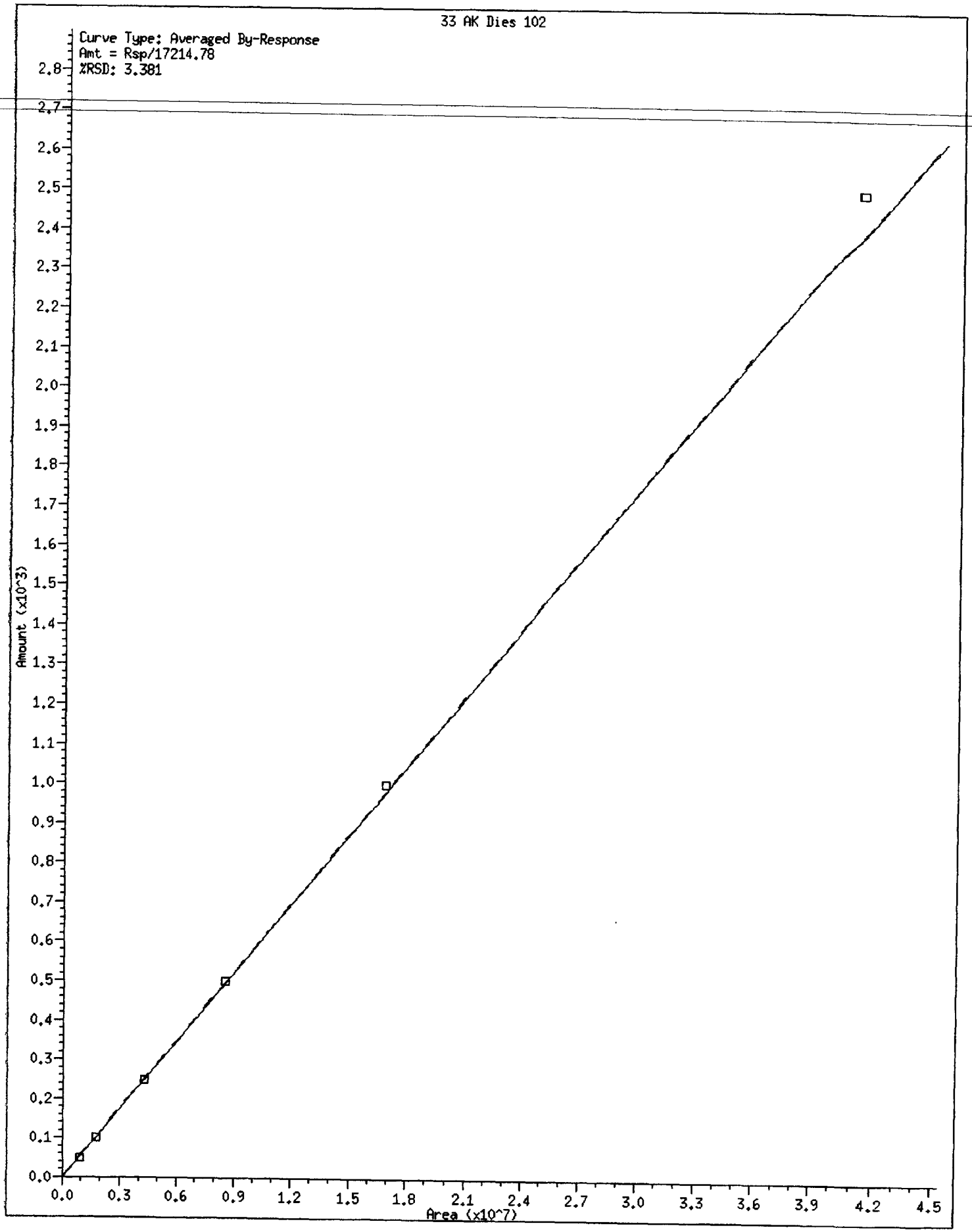
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1




8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/19283.02
%RSD: 6.709
Amount
Area (x10^6)


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/14514.53
%RSD: 3.388
Amount (x10^3)
Area (x10^7)
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
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


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/17214.78
%RSD: 3.381
Amount (x10^3)
Area (x10^7)
0.0
0.3
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
0.1
2.8

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a006.d ARI ID: DIESEL50
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 11:53
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	215268	13.85
C8	1.165	0.018	806	2277	WATPHD	(C12-C24)	759390	52.32
C10	2.960	-0.007	6459	4378	WATPHM	(C24-C38)	46996	3.45
C12	3.905	-0.003	11694	9658	AK102	(C10-C25)	899046	52.23
C14	4.587	0.000	16140	16680	AK103	(C25-C36)	27960	3.04
C16	5.170	-0.001	27596	20440				
C18	5.716	-0.001	21356	18380				
C20	6.268	0.000	14791	13160				
C22	6.810	0.000	6671	6517	MIN.OIL	(C24-C38)	46996	2.75
C24	7.324	-0.002	1715	1968				
C25	7.573	-0.001	706	926				
C26	7.811	-0.015	292	348				
C28	8.266	-0.003	63	56				
C32	9.093	0.012	127	99				
C34	9.462	0.005	225	183				
Filter Peak	11.449	0.007	1566	2590	CREOSOT	(C12-C22)	735404	337.05 M
C36	9.835	0.012	564	945				
C38	10.178	-0.001	736	362				
C40	10.533	0.000	1052	1464				
o-terph	5.859	-0.002	284403	187888				
Triacon Surr	8.706	0.008	114	152				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	187888	9.7	21.7 M
Triacontane	152	0.0	0.0

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

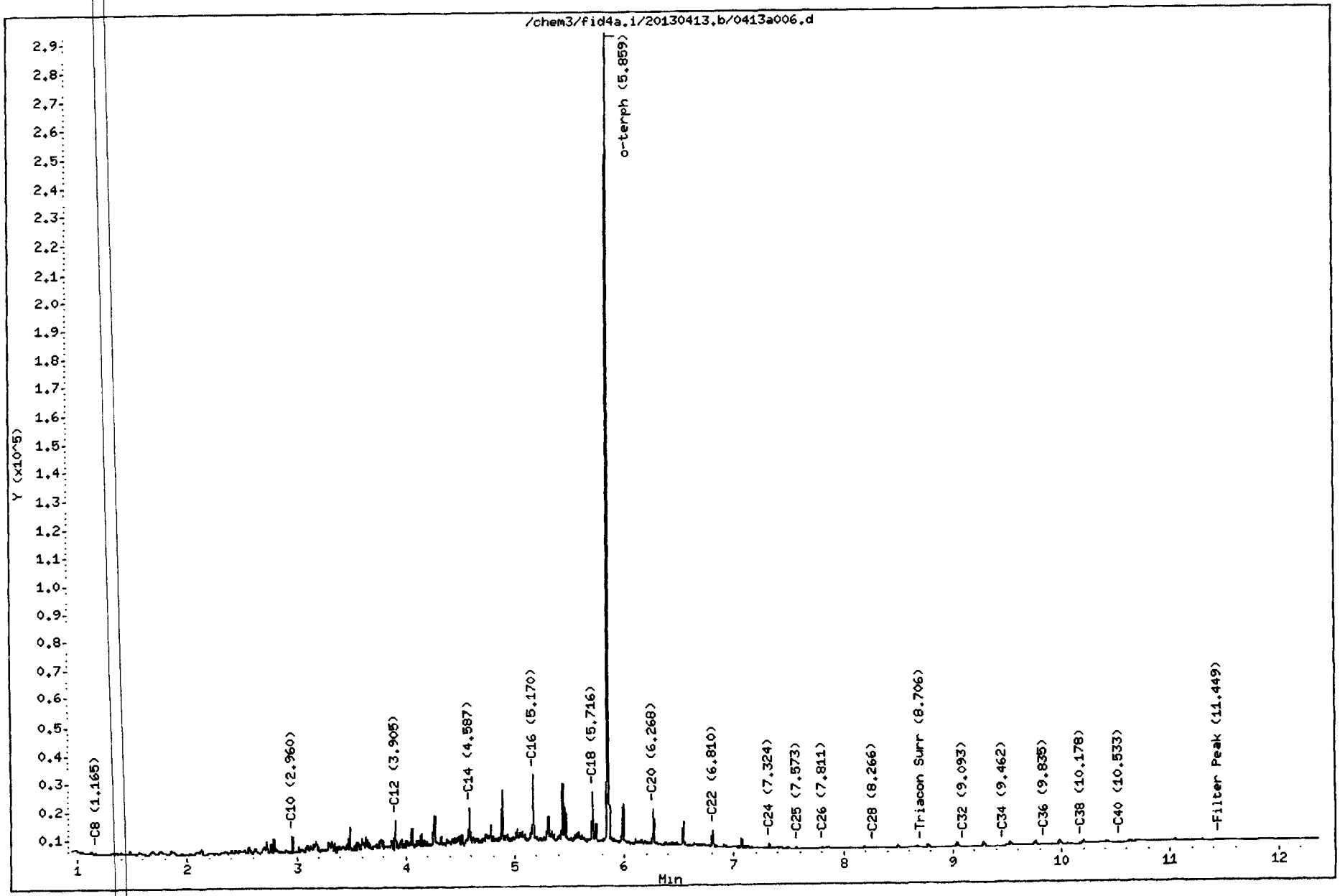
Data File: /chem3/fid4a.i/20130413.b/0413a006.d
Date : 13-APR-2013 11:53
Client ID:
Sample Info: DIESEL50

Column phase: RTX-1

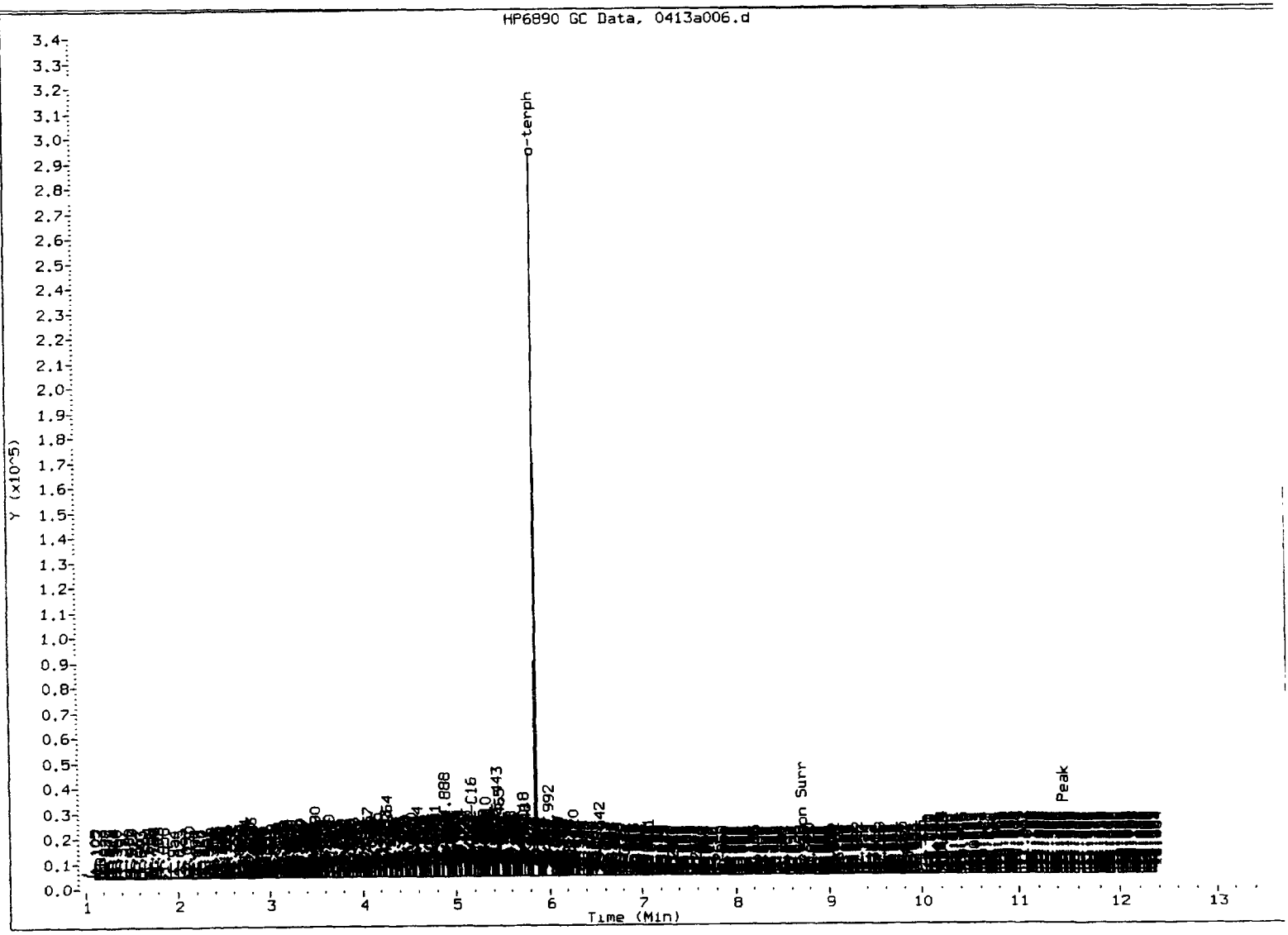
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

TSW 6/14/13



FID:4A-2C/RTX-1 DIESEL50 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a007.d ARI ID: DIESEL100
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:13
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	417109	26.84
C8	1.136	-0.011	1941	3621	WATPHD	(C12-C24)	1502097	103.49
C10	2.962	-0.006	12519	8727	WATPHM	(C24-C38)	33140	2.44
C12	3.904	-0.005	20914	18536	AK102	(C10-C25)	1783636	103.61
C14	4.584	-0.003	33061	32735	AK103	(C25-C36)	20259	2.20
C16	5.167	-0.004	55285	41238				
C18	5.713	-0.004	42269	37534				
C20	6.263	-0.005	27729	25804				
C22	6.805	-0.005	12584	15117	MIN.OIL	(C24-C38)	33140	1.94
C24	7.320	-0.007	3636	4226				
C25	7.567	-0.007	1377	1724				
C26	7.808	-0.019	569	662				
C28	8.260	-0.009	83	67				
C32	9.097	0.016	105	158				
C34	9.465	0.008	182	122				
Filter Peak	11.438	-0.004	1449	1863	CREOSOT	(C12-C22)	1453523	666.17 M
C36	9.834	0.010	329	216				
C38	10.182	0.003	520	346				
C40	10.531	-0.002	816	1416				
o-terph	5.858	-0.003	557960	373271				
Triacon Surr	8.710	0.012	49	51				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	373271	19.4	43.0 M
Triacontane	51	0.0	0.0

JL 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

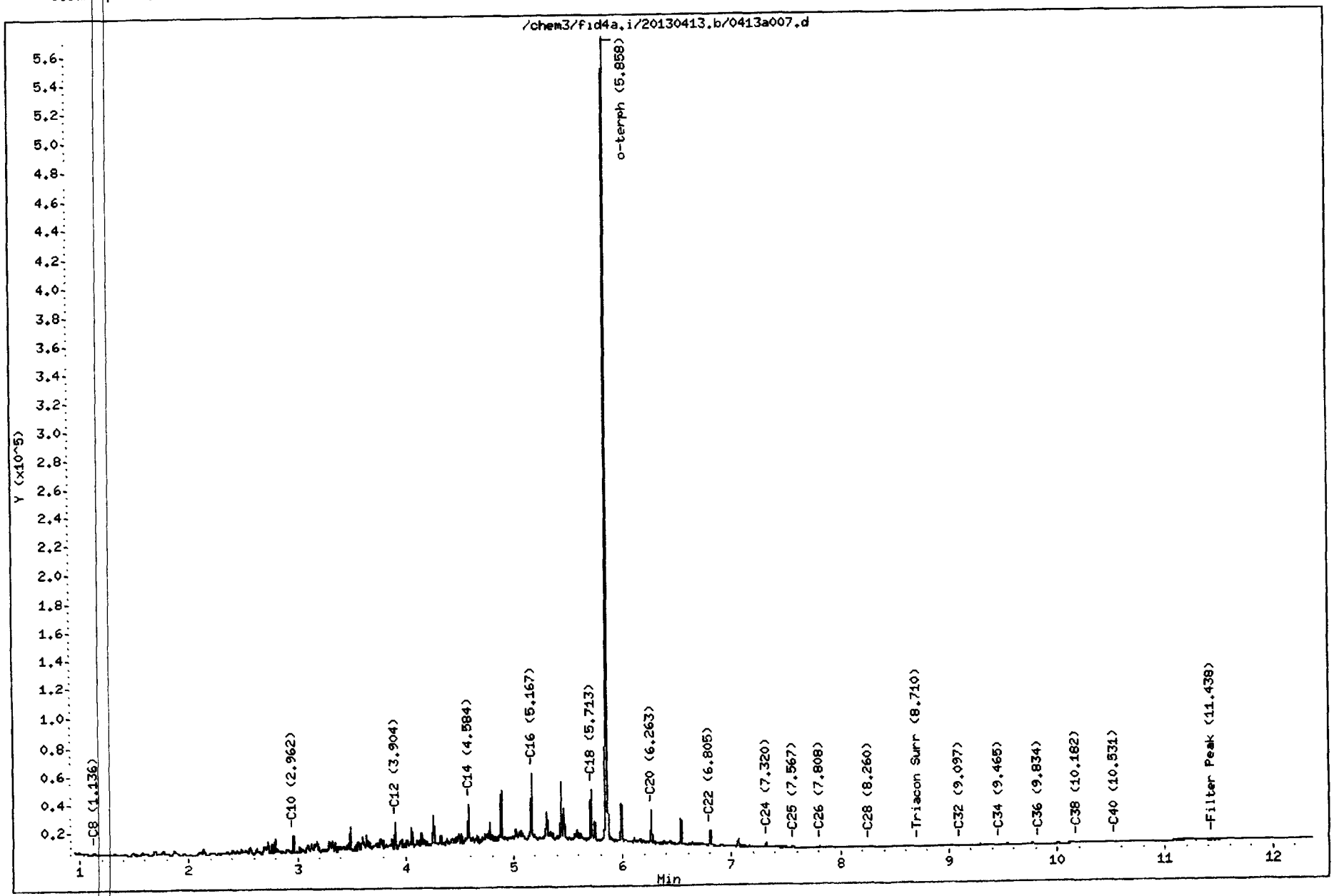
Data File: /chem3/fid4a.i/20130413.b/0413a007.d
Date : 13-APR-2013 12:13
Client ID:
Sample Info: DIESEL100

Column phase: RTX-1

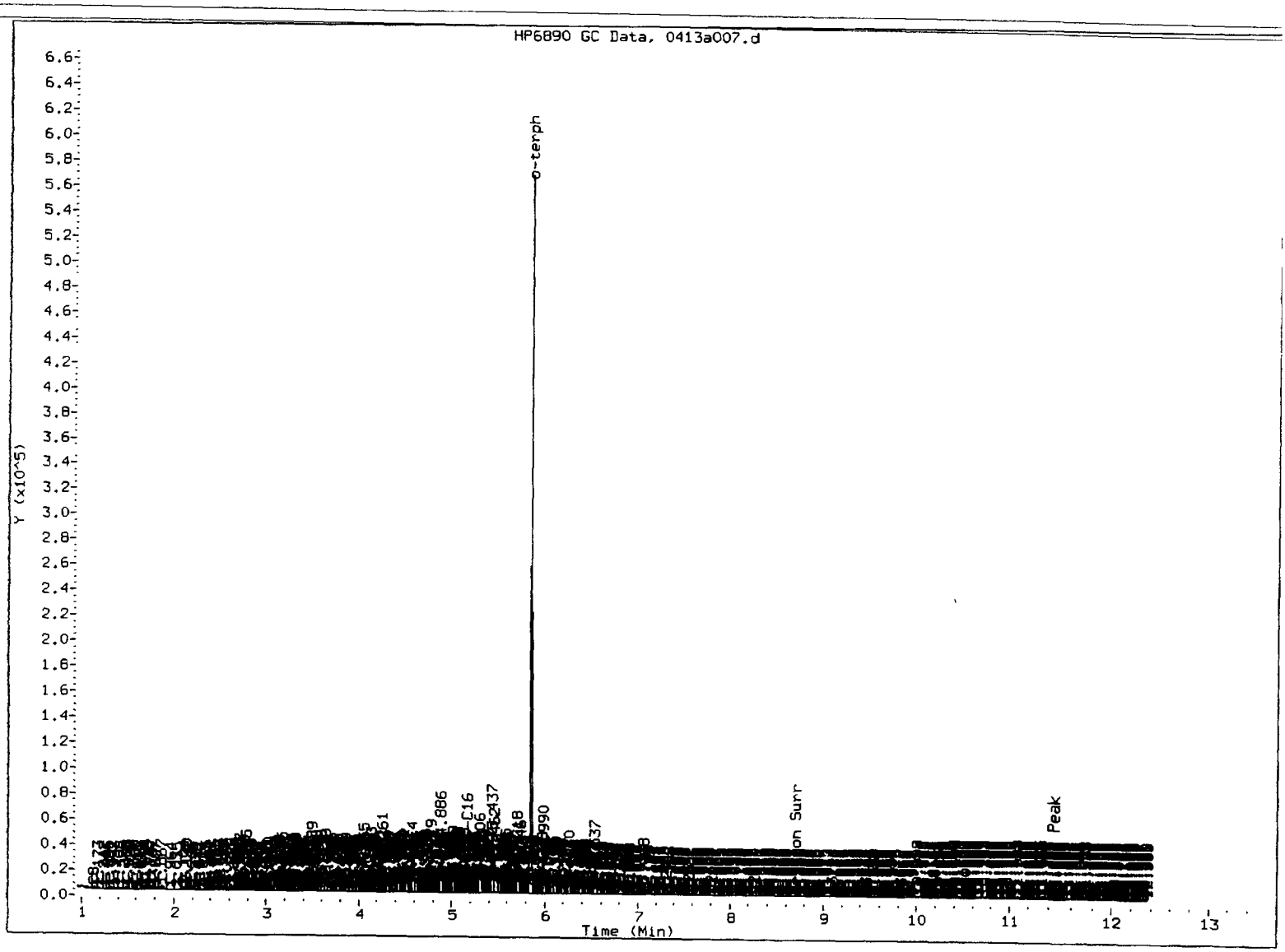
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JLC 4/16/13



FID:4A-2C/RTX-1 DIESEL100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JL Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a008.d ARI ID: DIESEL250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:34
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	986529	63.49
C8	1.132	-0.015	3781	5720	WATPHD	(C12-C24)	3619636	249.38
C10	2.962	-0.005	30152	20850	WATPHM	(C24-C38)	50857	3.74
C12	3.905	-0.003	49975	43741	AK102	(C10-C25)	4295925	249.55
C14	4.586	-0.002	76514	63530	AK103	(C25-C36)	30121	3.27
C16	5.168	-0.003	117704	98659				
C18	5.715	-0.002	94445	95631				
C20	6.265	-0.002	60449	59524				
C22	6.806	-0.004	28706	35806	MIN.OIL	(C24-C38)	50857	2.98
C24	7.319	-0.007	8050	9800				
C25	7.564	-0.010	3537	4263				
C26	7.806	-0.020	1367	1552				
C28	8.259	-0.010	179	167				
C32	9.073	-0.007	82	95				
C34	9.462	0.005	187	107				
Filter Peak	11.447	0.006	1441	1346	CREOSOT	(C12-C22)	3511755	1609.49 M
C36	9.819	-0.004	351	301				
C38	10.193	0.014	656	259				
C40	10.533	0.000	894	615				
o-terph	5.865	0.004	1088756	877347				
Triacon Surr	8.706	0.008	36	15				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	877347	45.5	101.1 M
Triacontane	15	0.0	0.0

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

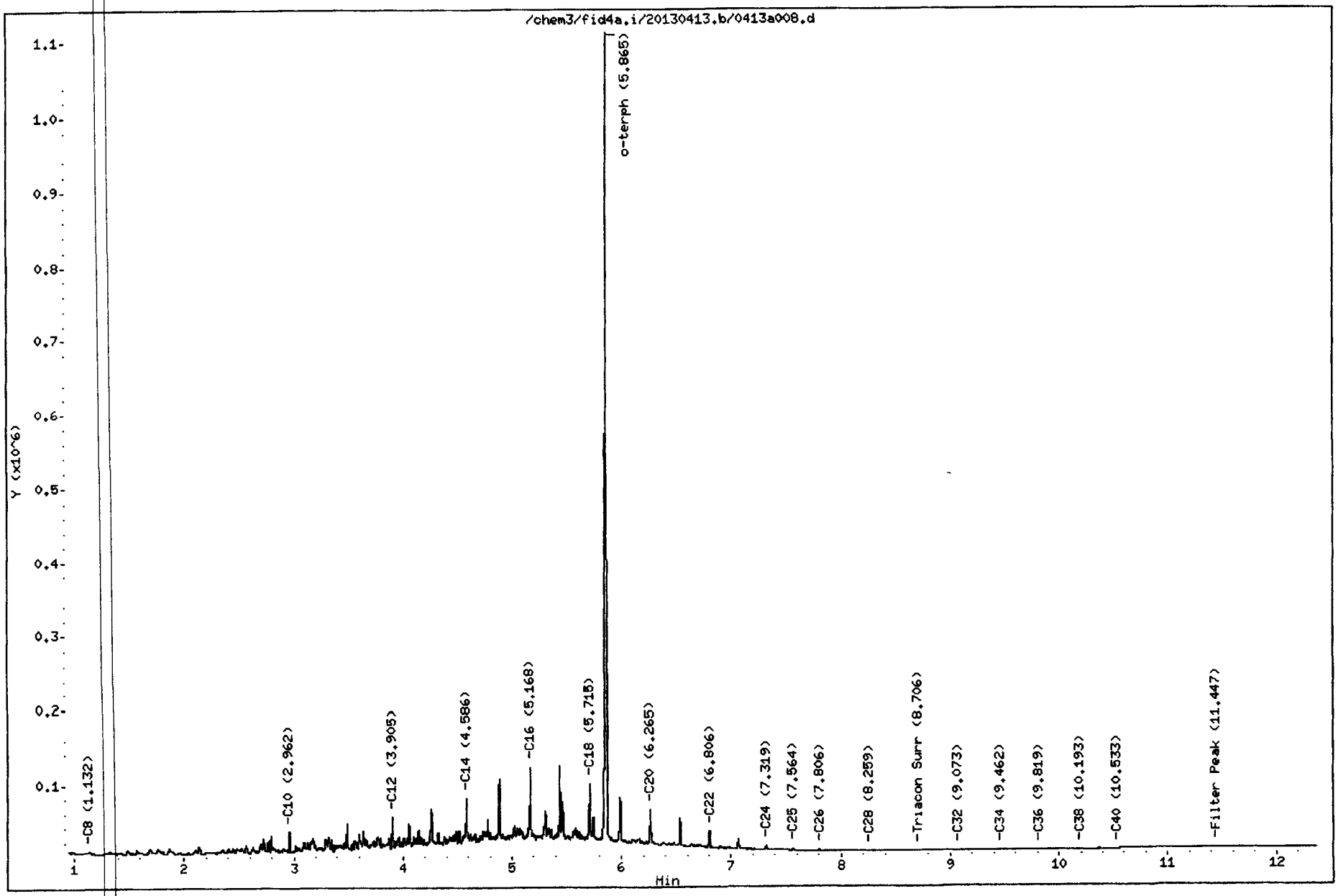
Data File: /chem3/fid4a.i/20130413.b/0413a008.d
Date : 13-APR-2013 12:34
Client ID:
Sample Info: DIESEL250

Column phase: RTX-1

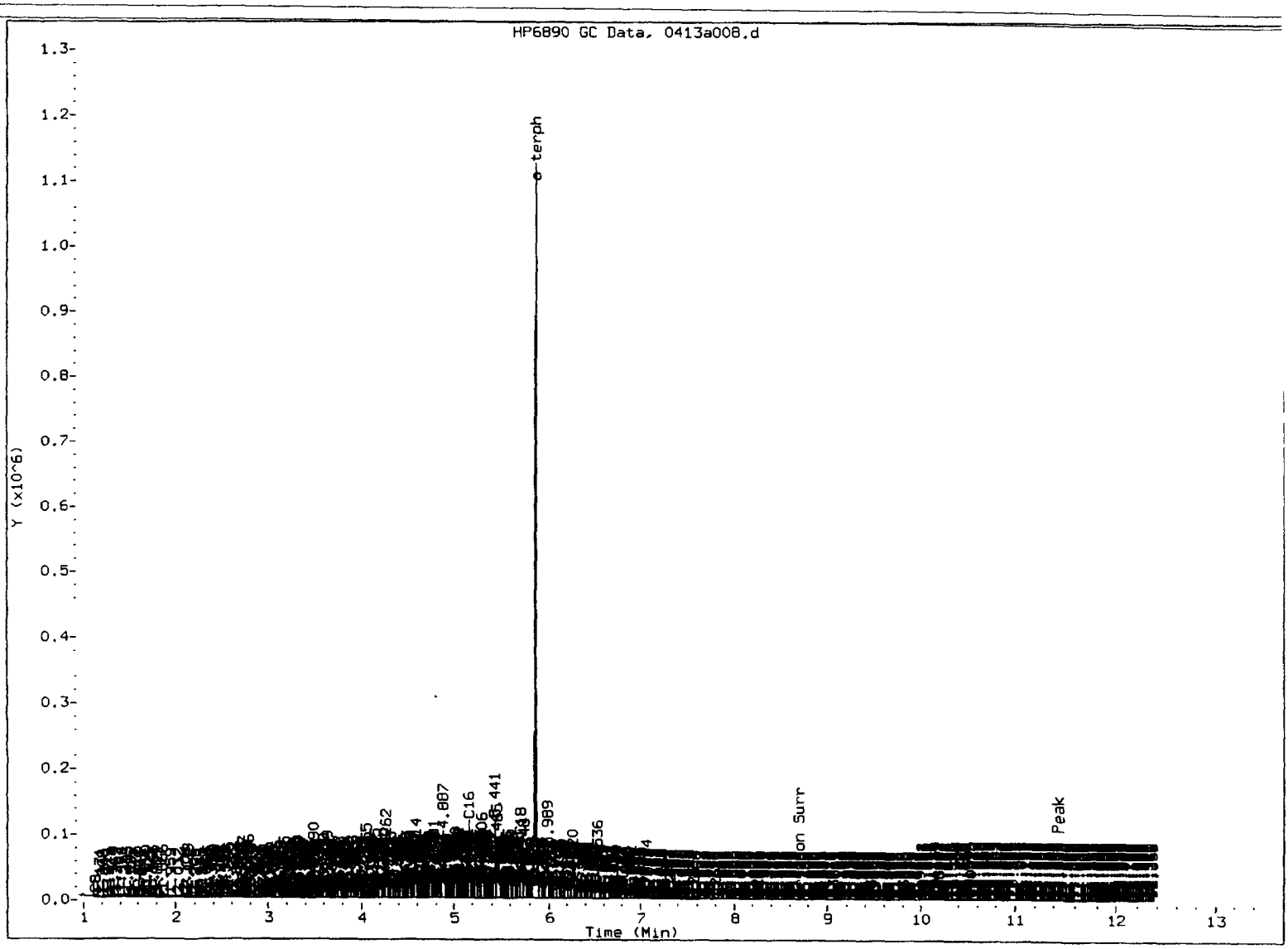
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

4/16/13



FID:4A-2C/RTX-1 DIESEL250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a009.d ARI ID: DIESEL500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:54
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1938503	124.75
C8	1.133	-0.014	6656	8984	WATPHD	(C12-C24)	7139483	491.89
C10	2.963	-0.005	60617	41059	WATPHM	(C24-C38)	73614	5.41
C12	3.906	-0.002	95786	86973	AK102	(C10-C25)	8473912	492.25
C14	4.586	-0.001	150874	130101	AK103	(C25-C36)	46507	5.05
C16	5.171	-0.001	221742	168860				
C18	5.717	0.000	183930	171594				
C20	6.266	-0.002	125277	138952				
C22	6.806	-0.004	61289	73010	MIN.OIL	(C24-C38)	73614	4.32
C24	7.321	-0.006	17056	16948				
C25	7.566	-0.008	7181	8056				
C26	7.827	0.001	795	590				
C28	8.261	-0.008	383	489				
C32	9.082	0.001	63	54				
C34	9.469	0.012	136	160				
Filter Peak	11.432	-0.010	1383	1663	CREOSOT	(C12-C22)	6912274	3168.01 M
C36	9.827	0.003	301	238				
C38	10.156	-0.023	477	399				
C40	10.538	0.005	798	1290				
o-terph	5.874	0.013	1524427	1652081				
Triacon Surr	8.711	0.013	30	9				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1652081	85.7	190.4 M
Triacontane	9	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW 4/16/13

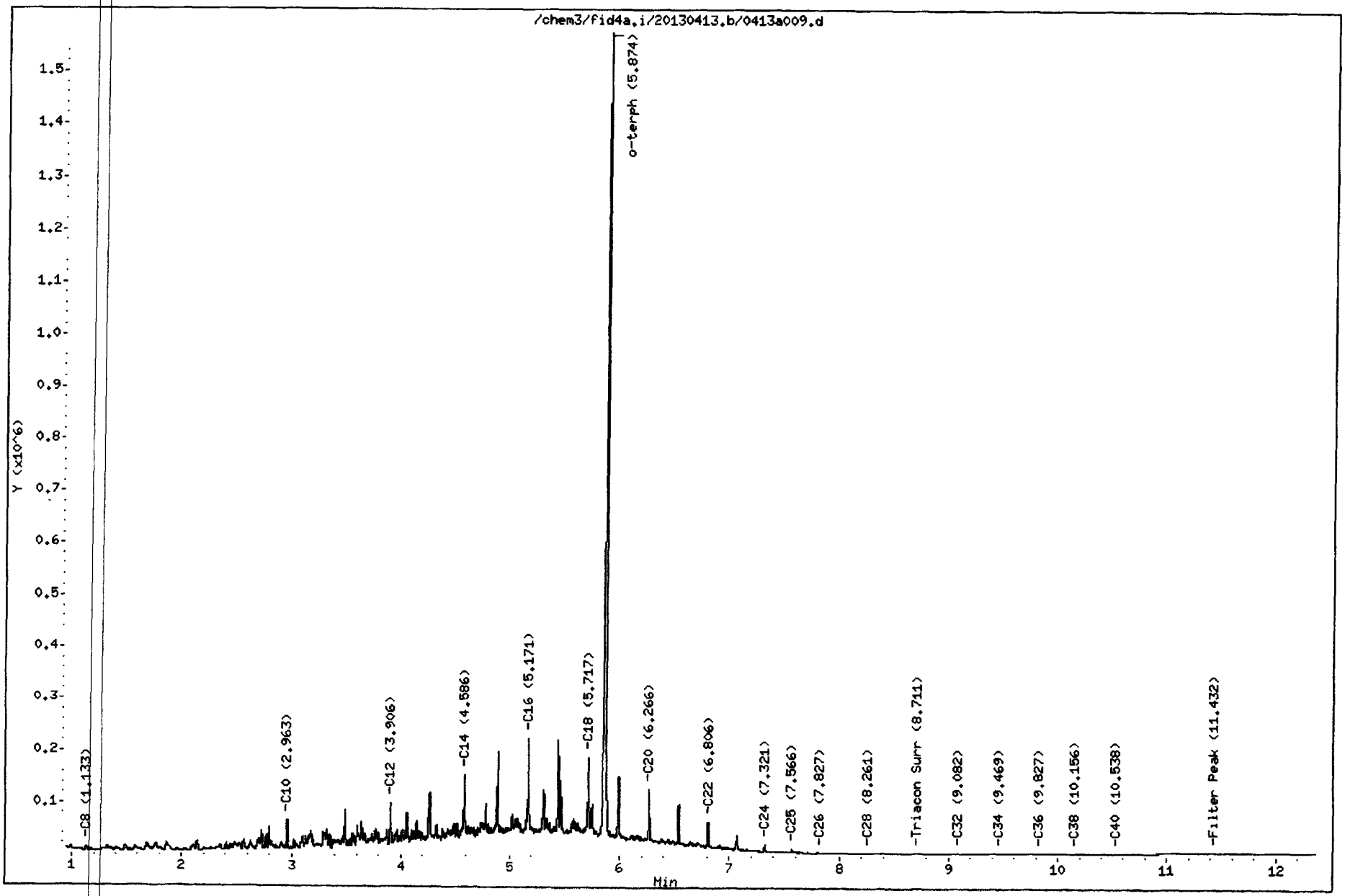
Data File: /chem3/fid4a.i/20130413.b/0413a009.d
Date : 13-APR-2013 12:54
Client ID:
Sample Info: DIESEL500

Column phase: RTX-1

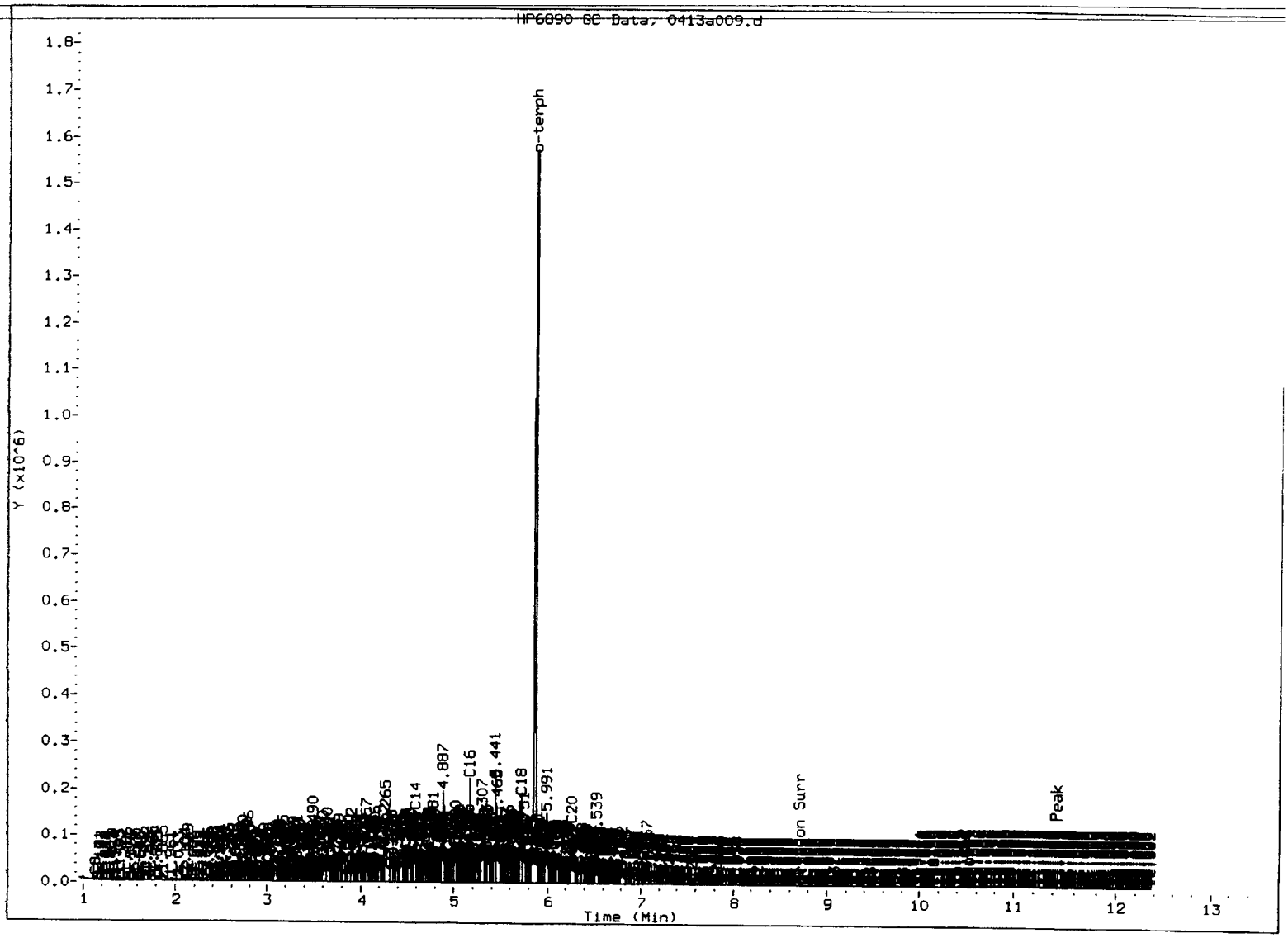
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

TJ 4/16/13



FID:4A-2C/RTX-1 DIESEL500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: SW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a010.d ARI ID: DIESEL1000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:15
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	3811929	245.31	
C8	1.135	-0.013	12353	15129	WATPHD	(C12-C24)	14226320	980.14	
C10	2.963	-0.004	115392	81567	WATPHM	(C24-C38)	139793	10.28	
C12	3.907	-0.001	182454	170588	AK102	(C10-C25)	16866110	979.75	
C14	4.588	0.001	281773	291443	AK103	(C25-C36)	86469	9.40	
C16	5.171	0.000	434741	342755					
C18	5.720	0.003	345674	355731					
C20	6.268	0.001	228816	234559					
C22	6.807	-0.003	107722	108430	MIN.OIL	(C24-C38)	139793	8.19	
C24	7.318	-0.008	31969	37766					
C25	7.567	-0.007	13295	16308					
C26	7.833	0.007	1443	522					
C28	8.261	-0.008	722	1112					
C32	9.094	0.014	29	7					
C34	9.468	0.011	112	107					
Filter Peak	11.448	0.007	1248	2720	CREOSOT	(C12-C22)	13802524	6325.92	M
C36	9.827	0.004	263	425					
C38	10.189	0.010	1014	1935					
C40	10.535	0.002	722	341					
o-terph	5.884	0.023	2512098	3297656					
Triacon Surr	8.712	0.014	48	18					

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	3297656	171.0	380.0	M
Triacontane	18	0.0	0.0	

JW 11/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

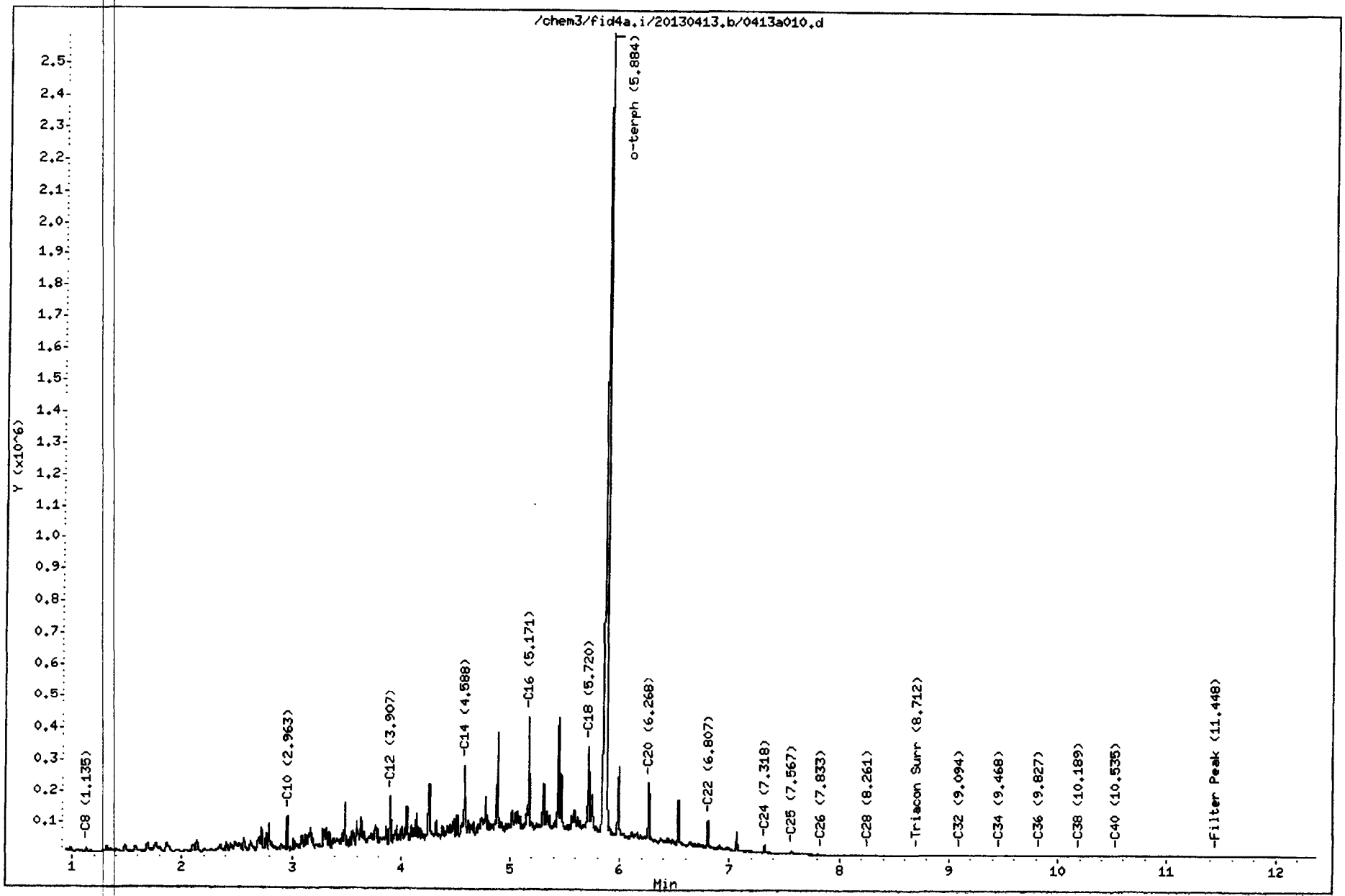
Data File: /chem3/fid4a.i/20130413.b/0413a010.d
Date : 13-APR-2013 13:15
Client ID:
Sample Info: DIESEL1000

Column phase: RTX-1

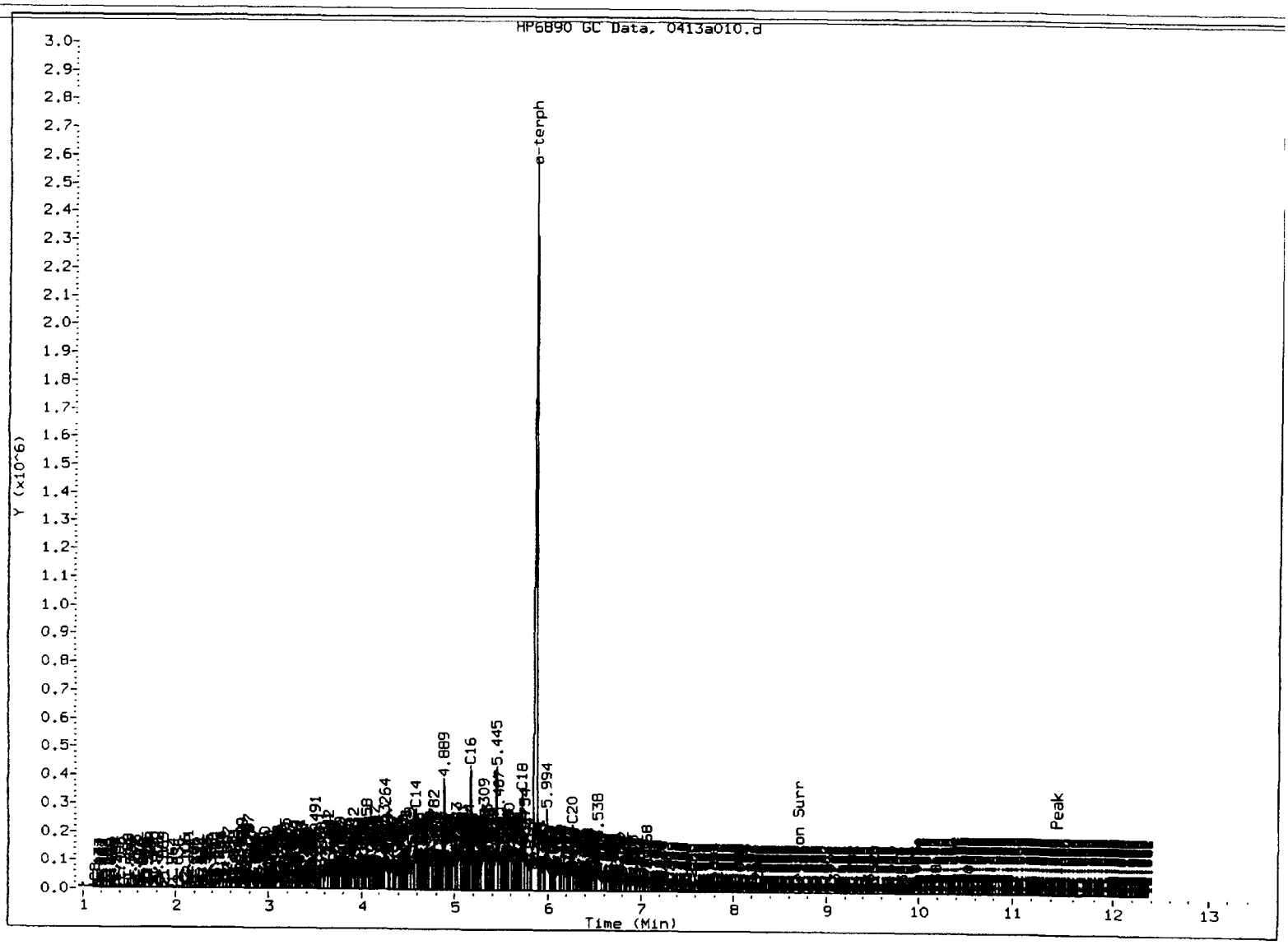
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JN31:01968



FID:4A-2C/RTX-1 DIESEL1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a011.d ARI ID: DIESEL2500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:35
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	9276455	596.96
C8	1.134	-0.014	24908	33472	WATPHD	(C12-C24)	34774294	2395.83
C10	2.966	-0.002	252738	198288	WATPHM	(C24-C38)	305862	22.48
C12	3.910	0.001	400759	415390	AK102	(C10-C25)	41212082	2393.99
C14	4.594	0.006	611687	862603	AK103	(C25-C36)	206426	22.43
C16	5.178	0.006	943821	808157				
C18	5.727	0.010	671328	895926				
C20	6.274	0.006	489579	628809				
C22	6.808	-0.002	247196	289857	MIN.OIL	(C24-C38)	305862	17.93
C24	7.319	-0.007	75373	82766				
C25	7.566	-0.008	34345	42458				
C26	7.827	0.000	4044	3418				
C28	8.258	-0.012	1977	3055				
C32	9.090	0.009	48	61				
C34	9.458	0.000	70	50				
Filter Peak	11.449	0.007	1134	1190	CREOSOT	(C12-C22)	33616551	15407.01 M
C36	9.824	0.000	185	139				
C38	10.179	0.000	554	1390				
C40	10.541	0.008	631	435				
o-terph	5.903	0.042	4136741	8059957				
Triacon Surr	8.700	0.002	141	189				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	8059957	418.0	928.8 M
Triacontane	189	0.0	0.0

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

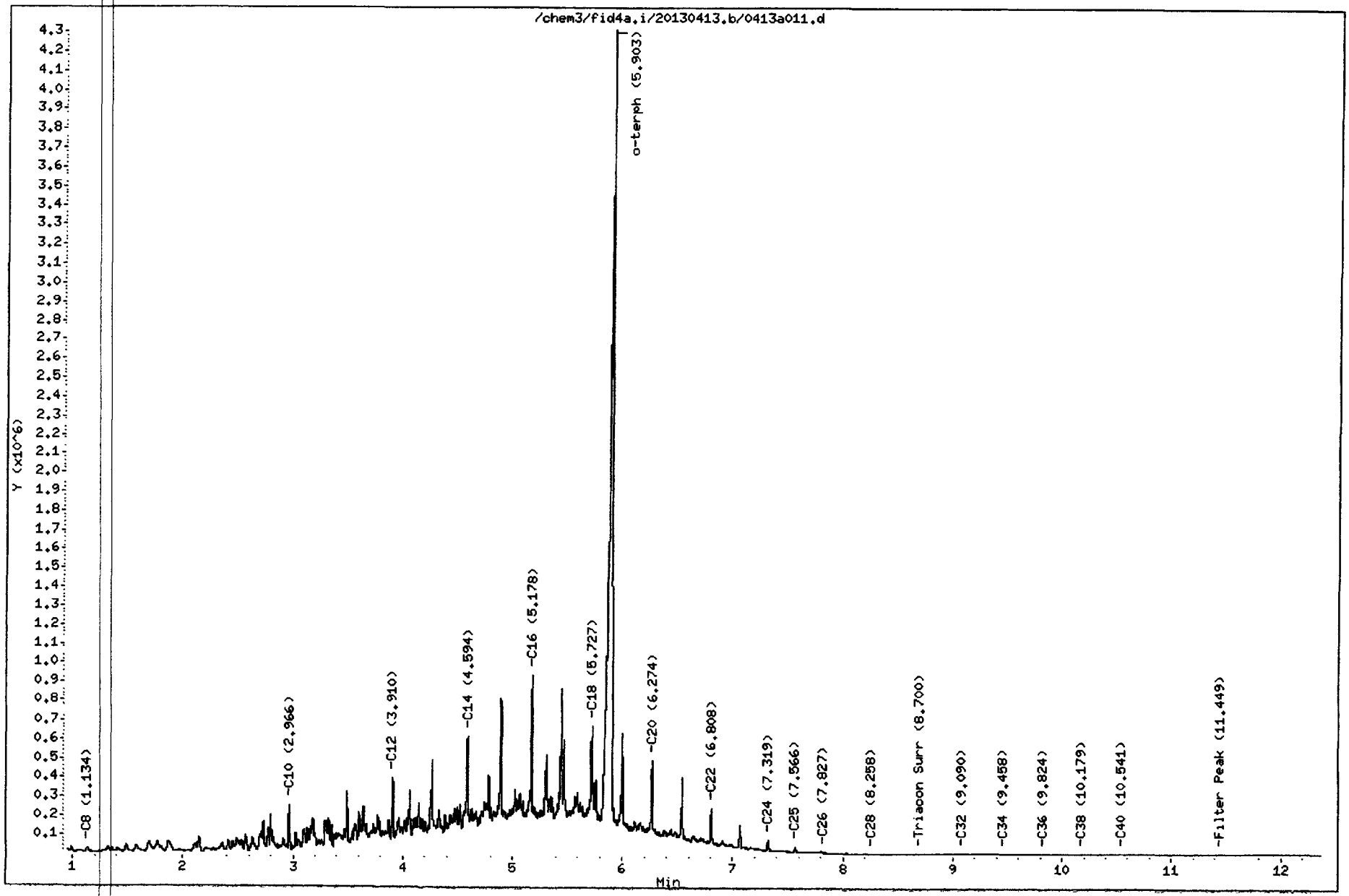
Data File: /chem3/fid4a.i/20130413.b/0413a011.d
Date : 13-APR-2013 13:35
Client ID:
Sample Info: DIESEL2500

Instrument: fid4a.i

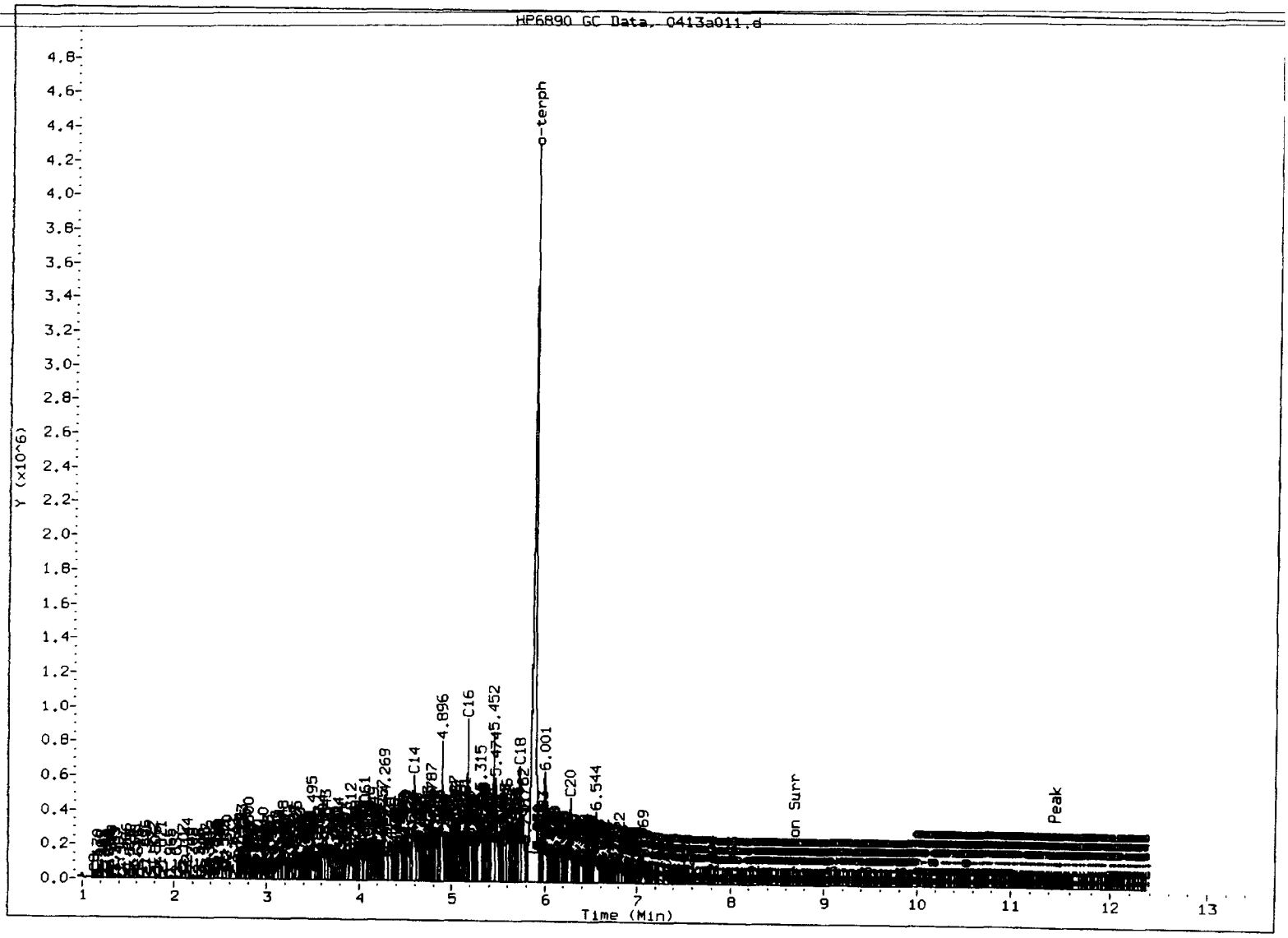
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1

JW 4/16/13



FID:4A-2C/RTX-1 DIESEL2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a012.d ARI ID: DIESELICV250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:56
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1350128	86.88
C8	1.140	-0.007	5894	7549	WATPHD	(C12-C24)	3336568	229.88
C10	2.964	-0.004	74183	48425	WATPHM	(C24-C38)	48278	3.55
C12	3.904	-0.004	80279	63955	AK102	(C10-C25)	4352962	252.86
C14	4.584	-0.004	91502	86727	AK103	(C25-C36)	29685	3.23
C16	5.167	-0.004	92428	91538				
C18	5.712	-0.005	64635	71687				
C20	6.261	-0.007	38864	46617				
C22	6.800	-0.010	19895	20409	MIN.OIL	(C24-C38)	48278	2.83
C24	7.317	-0.010	6621	7048				
C25	7.563	-0.011	3543	3438				
C26	7.839	0.013	511	944				
C28	8.257	-0.012	249	388				
C32	9.086	0.005	66	27				
C34	9.457	0.000	126	85				
Filter Peak	11.447	0.005	1300	1415	CREOSOT	(C12-C22)	3246102	1487.74 M
C36	9.826	0.003	279	175				
C38	10.165	-0.014	702	1540				
C40	10.542	0.010	811	690				
o-terph	5.863	0.002	1066499	883180				
Triacon Surr	8.703	0.005	33	42				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	883180	45.8	101.8 M
Triacontane	42	0.0	0.0

JW
4/16/13

M Indicates the peak was manually integrated

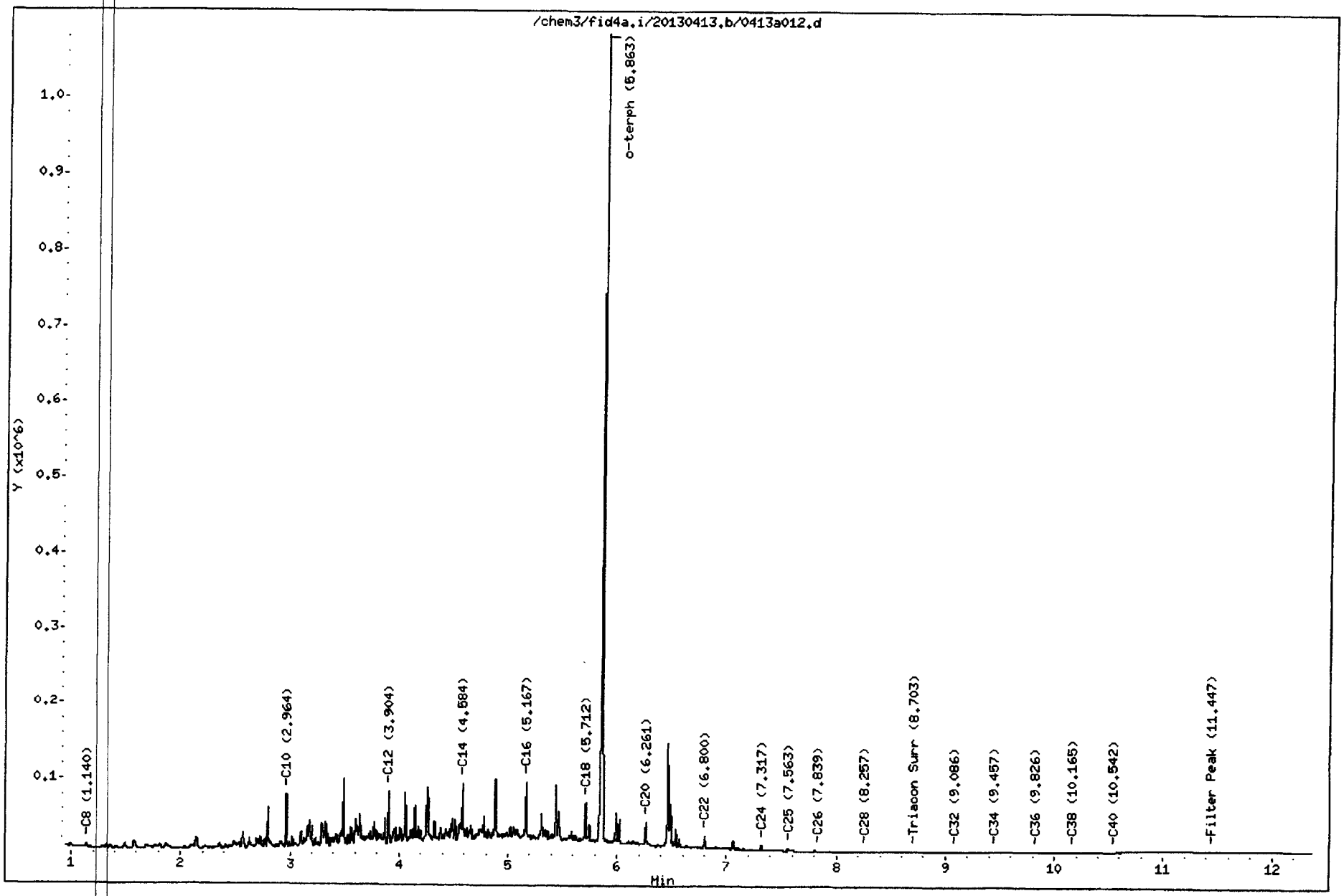
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a012.d
Date : 13-APR-2013 13:56
Client ID:
Sample Info: DIESELICV250

Column phase: RTX-1

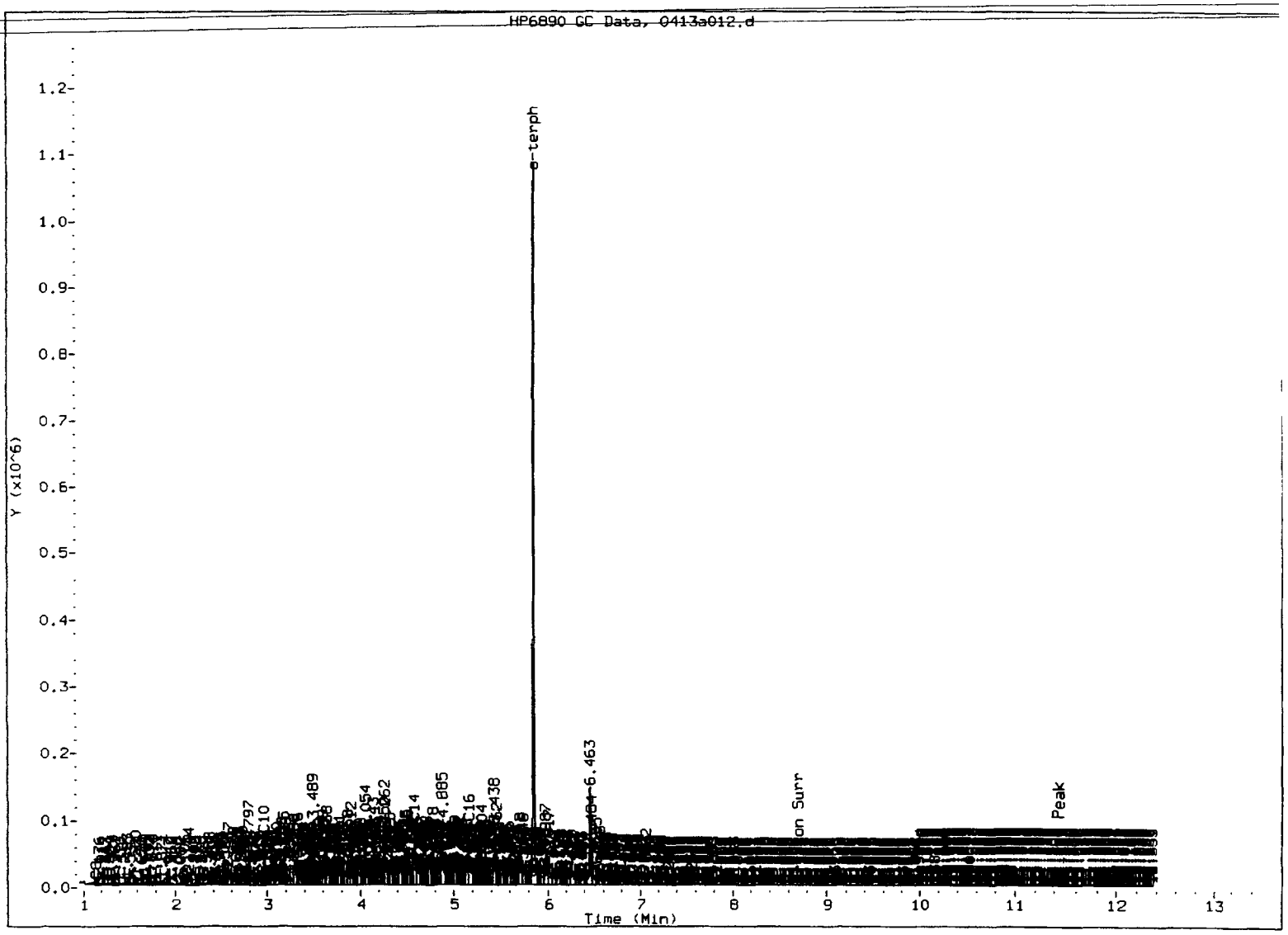
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



UN31:01971

FID:4A-2C/RTX-1 DIESELICV250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

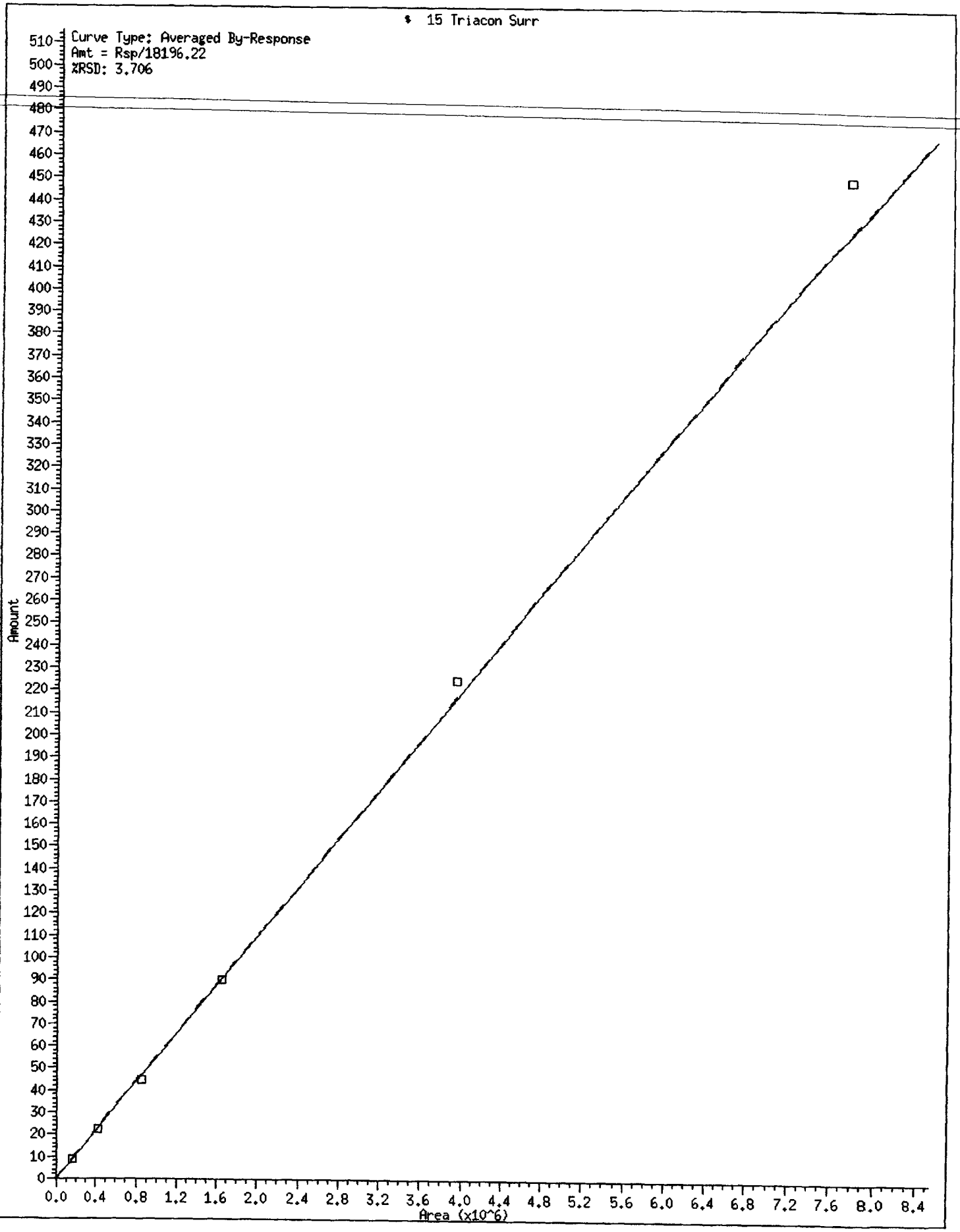
Instrument: FID4A.I Project:

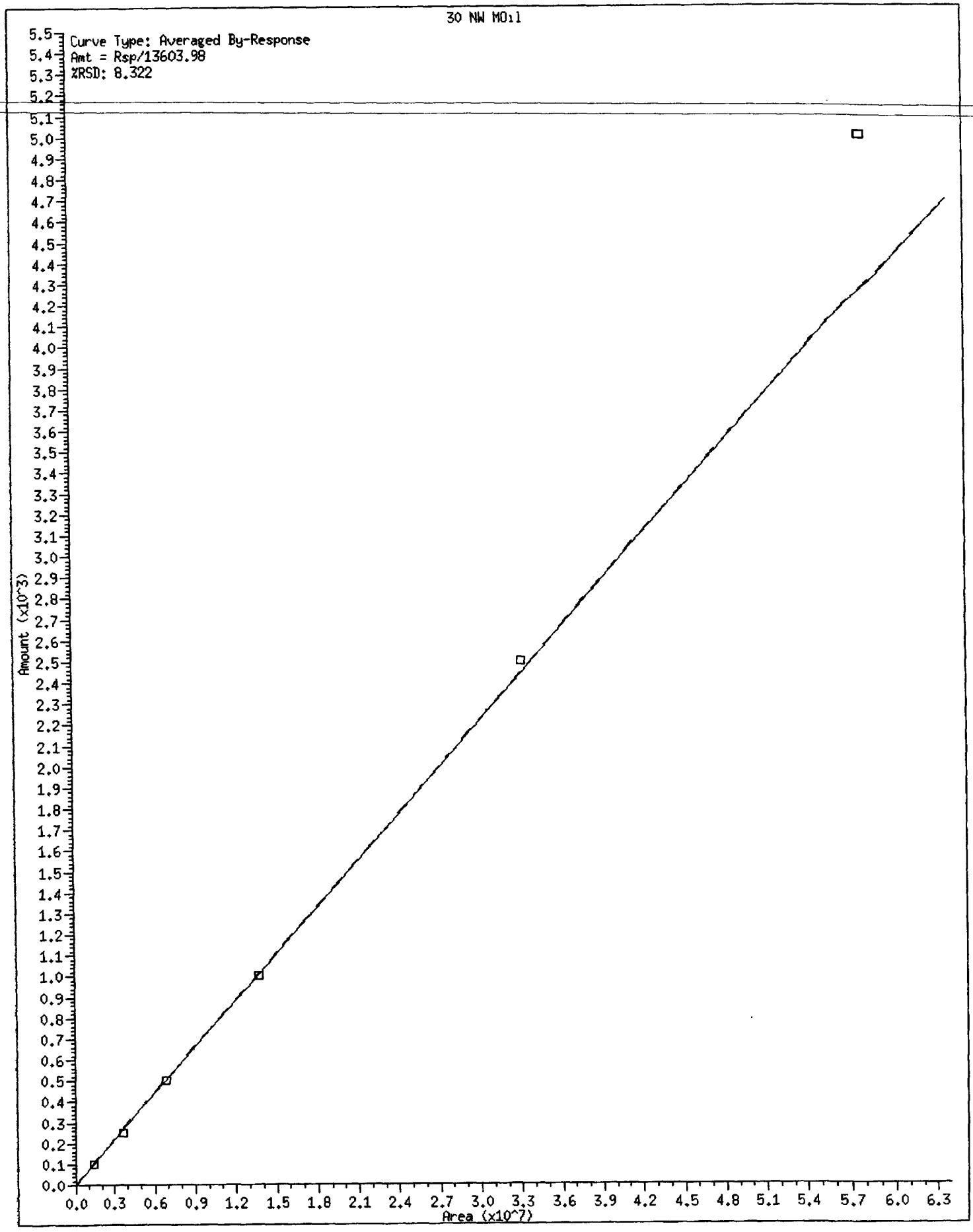
Calibration Date: 13-APR-2013 SDG No.: 20130413

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14286	14877	13594	13683	13271	11581	13549	8.3
Triac Surr	18499	18745	18903	18271	17525	17235	18196	3.7

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

Calibration Files	Analysis Time
0413a013.d	13-APR-2013 14:16
0413a014.d	13-APR-2013 14:36
0413a015.d	13-APR-2013 14:57
0413a016.d	13-APR-2013 15:17
0413a017.d	13-APR-2013 15:38
0413a018.d	13-APR-2013 15:58


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/18196.22
%RSD: 3.706
Amount
Area (x10^6)


30 NW M01
Curve Type: Averaged By-Response
Amt = Rsp/13603.98
%RSD: 8.322
Amount (x10^3)
Area (x10^7)
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a013.d ARI ID: MOIL100
~~Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m~~ ~~Client ID:~~
Instrument: fid4a.i Injection: 13-APR-2013 14:16
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	16170	1.04
C8	1.180	0.032	950	2566	WATPHD	(C12-C24)	122104	8.41
C10	2.964	-0.003	90	83	WATPHM	(C24-C38)	1428612	105.01
C12	3.904	-0.004	822	525	AK102	(C10-C25)	169178	9.83
C14	4.585	-0.002	65	50	AK103	(C25-C36)	1207097	131.18
C16	5.184	0.013	44	36				
C18	5.729	0.012	87	30				
C20	6.285	0.017	313	387				
C22	6.807	-0.003	1128	611	MIN.OIL	(C24-C38)	1428612	83.75
C24	7.321	-0.006	4504	4814				
C25	7.577	0.003	5951	7680				
C26	7.813	-0.013	6854	12383				
C28	8.258	-0.011	8227	2476				
C32	9.082	0.001	10258	10882				
C34	9.463	0.006	9755	5304				
Filter Peak	11.443	0.001	2846	2215	CREOSOT	(C12-C22)	34225	15.69 M
C36	9.816	-0.008	9988	8297				
C38	10.173	-0.005	8712	8389				
C40	10.541	0.008	7232	6974				
o-terph	5.903	0.042	129	130				
Triacon Surr	8.669	-0.029	213849	166491				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	130	0.0	0.0
Triacontane	166491	9.1	20.3 M

JW
4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

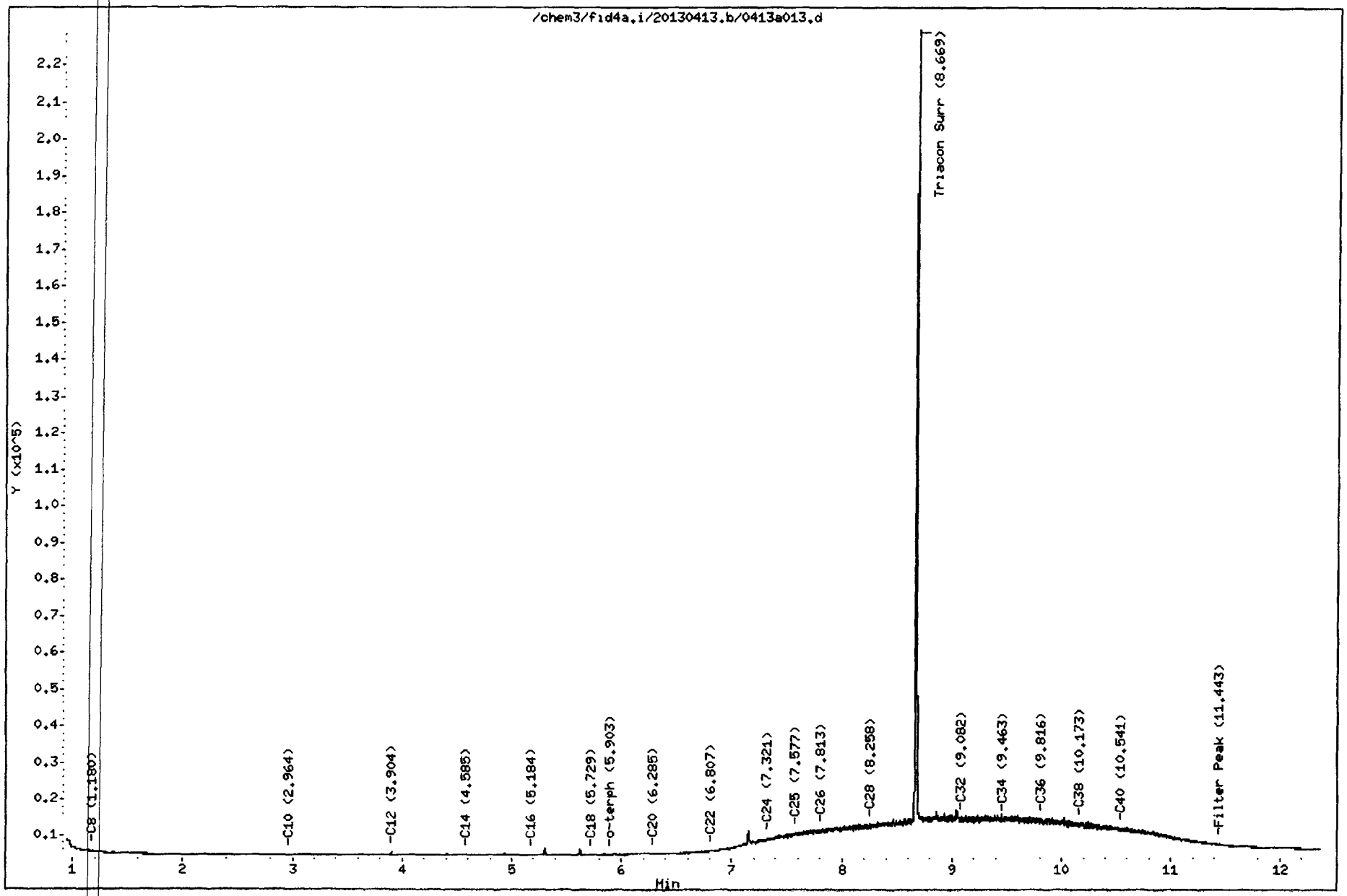
Data File: /chem3/fid4a.i/20130413.b/0413a013.d
Date : 13-APR-2013 14:16
Client ID:
Sample Info: MOIL100

Column phase: RTX-1

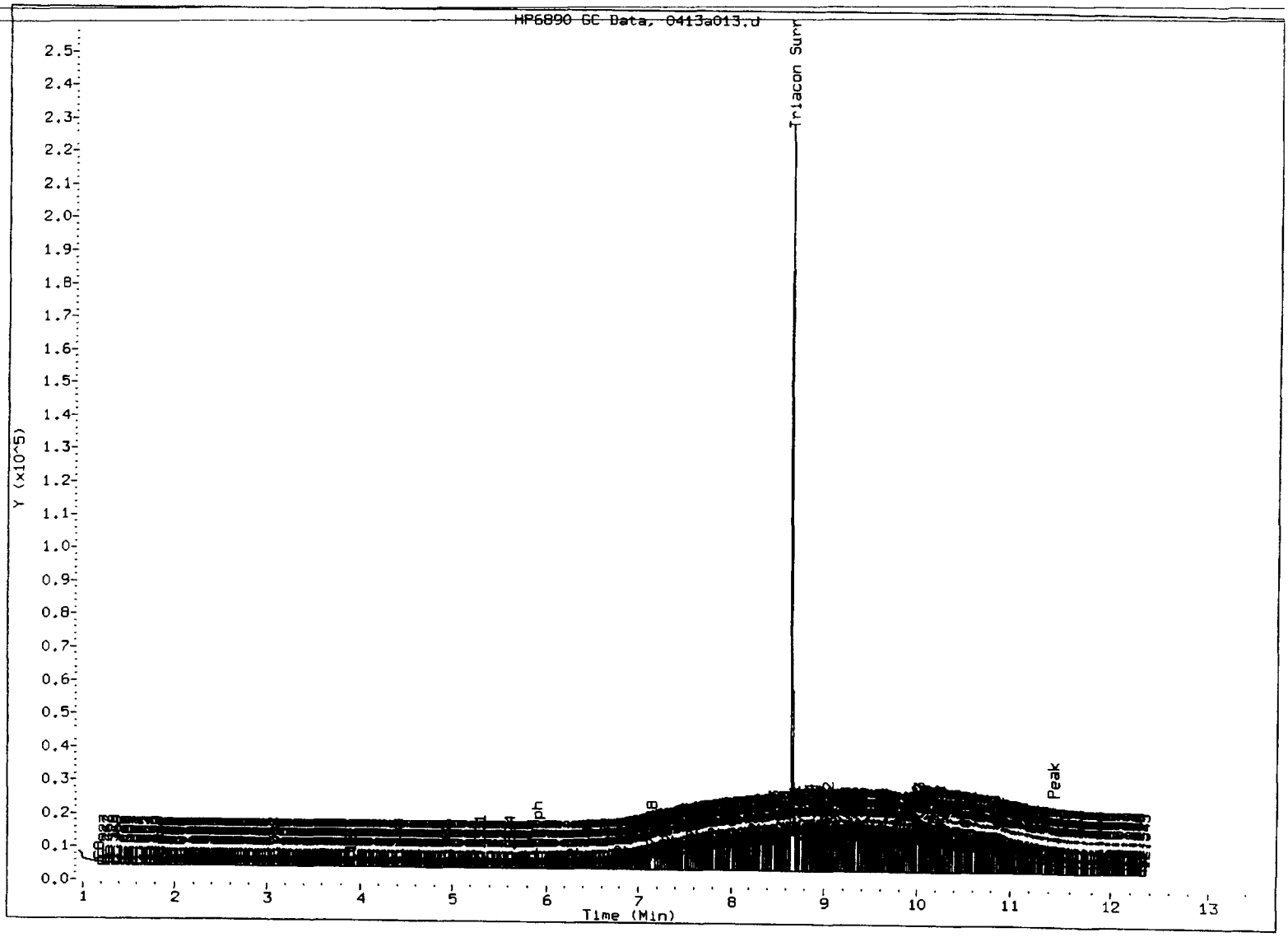
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

TSD 4/16/13



FID:4A-2C/RTX-1 MOIL100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a014.d ARI ID: MOIL250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 14:36
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	20237	1.30
C8	1.166	0.018	879	349	WATPHD	(C12-C24)	307705	21.20
C10	2.961	-0.006	163	125	WATPHM	(C24-C38)	3719215	273.39
C12	3.903	-0.005	1367	903	AK102	(C10-C25)	420555	24.43
C14	4.583	-0.005	76	70	AK103	(C25-C36)	3142992	341.55
C16	5.188	0.017	67	58				
C18	5.730	0.013	191	84				
C20	6.273	0.005	689	312				
C22	6.807	-0.004	2757	1621	MIN.OIL	(C24-C38)	3719215	218.02
C24	7.329	0.002	11003	6332				
C25	7.569	-0.005	14527	16476				
C26	7.831	0.004	16632	4908				
C28	8.257	-0.013	21369	8227				
C32	9.091	0.010	26334	25277				
C34	9.455	-0.003	26616	43678				
Filter Peak	11.451	0.009	4562	6091	CREOSOT	(C12-C22)	82787	37.94 M
C36	9.824	0.000	24339	31209				
C38	10.184	0.005	32819	59546				
C40	10.538	0.005	17060	23752				
o-terph	5.902	0.041	303	245				
Triacon Surr	8.677	-0.021	491117	421767				

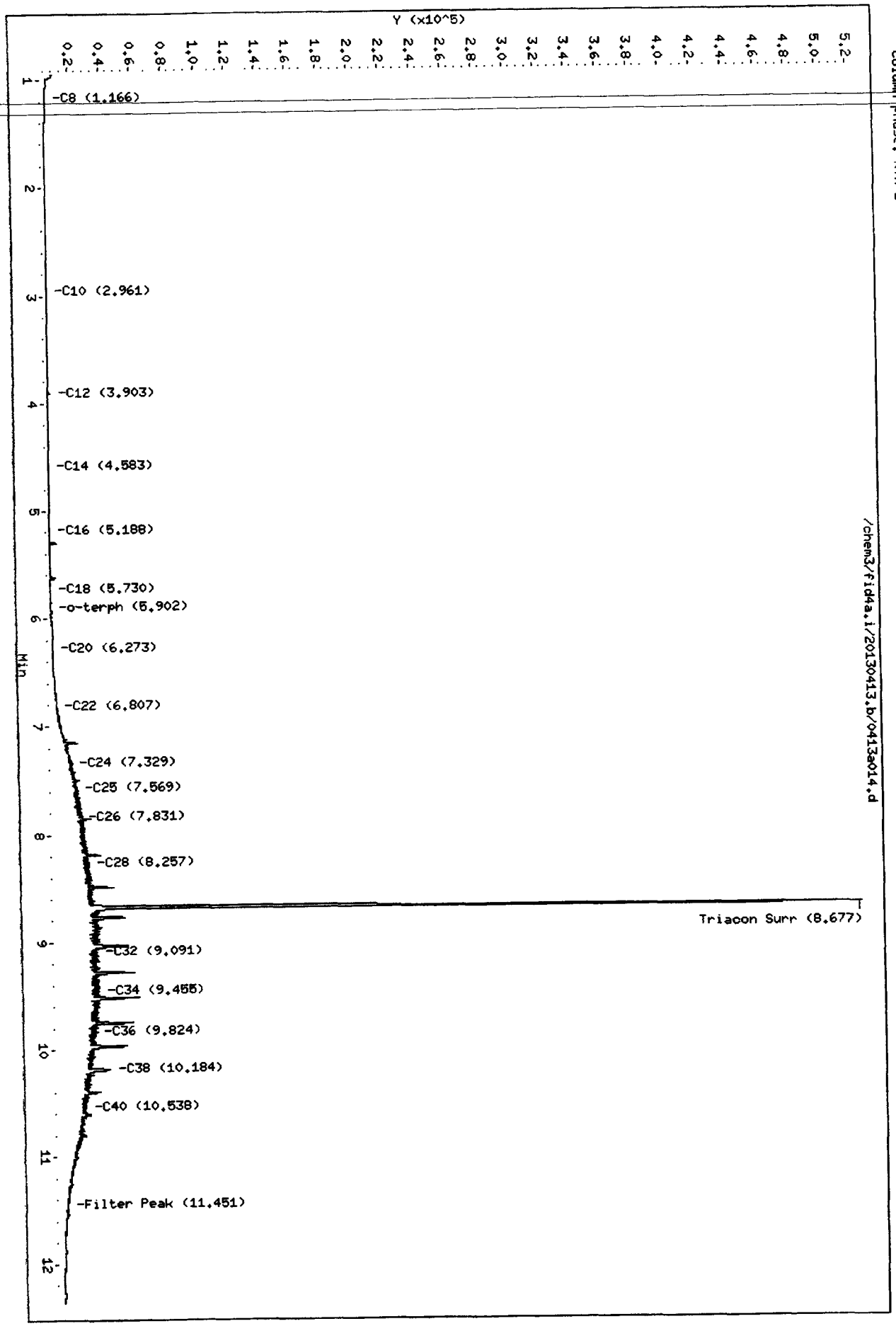
Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	245	0.0	0.0
Triacontane	421767	23.2	51.5 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



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Date : 13-APR-2013 14:36
Client ID:
Sample Info: MOIL250
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JN
Column diameter: 0.25

FW
4/16/13

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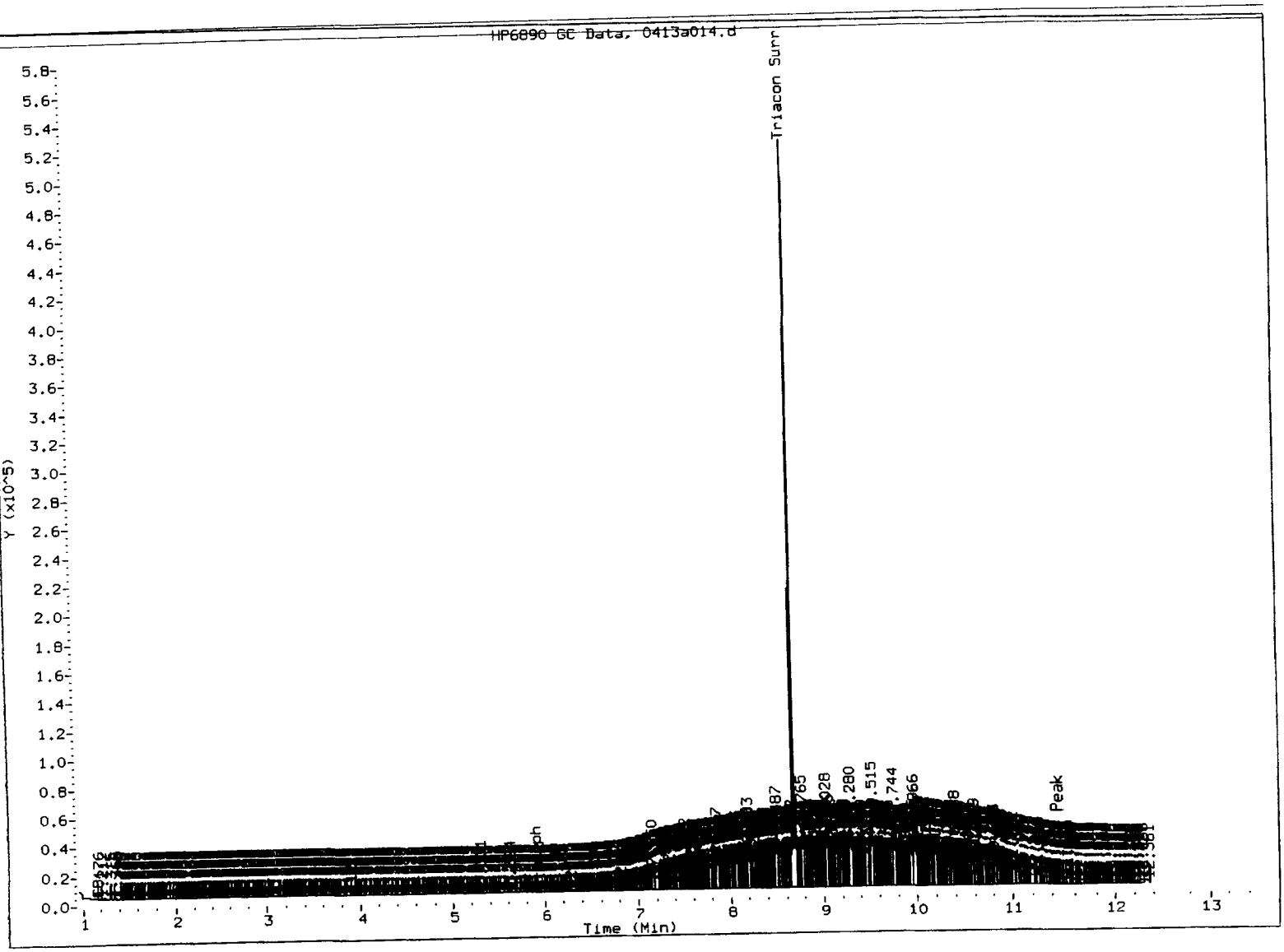
FID:4A-2C/RTX-1 MOIL250

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JL Date: 4/16/19

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a015.d ARI ID: MOIL500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 14:57
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	26511	1.71
C8	1.100	-0.047	1244	4785	WATPHD	(C12-C24)	582595	40.14
C10	2.963	-0.004	245	242	WATPHM	(C24-C38)	6796761	499.62
C12	3.904	-0.004	1353	860	AK102	(C10-C25)	780570	45.34
C14	4.603	0.015	66	55	AK103	(C25-C36)	5779080	628.02
C16	5.164	-0.007	156	146				
C18	5.730	0.013	343	254				
C20	6.281	0.014	1394	636				
C22	6.806	-0.004	5607	2253	MIN.OIL	(C24-C38)	6796761	398.43
C24	7.314	-0.012	21674	24615				
C25	7.572	-0.002	29371	15510				
C26	7.834	0.008	33783	10352				
C28	8.247	-0.022	44537	51498				
C32	9.091	0.010	49495	22975				
C34	9.460	0.003	49320	12419				
Filter Peak	11.444	0.002	6192	2625	CREOSOT	(C12-C22)	153949	70.56 M
C36	9.820	-0.004	46105	20897				
C38	10.178	-0.001	43137	30753				
C40	10.543	0.011	30917	18642				
o-terph	5.900	0.039	590	504				
Triacon Surr	8.684	-0.014	920547	850626				

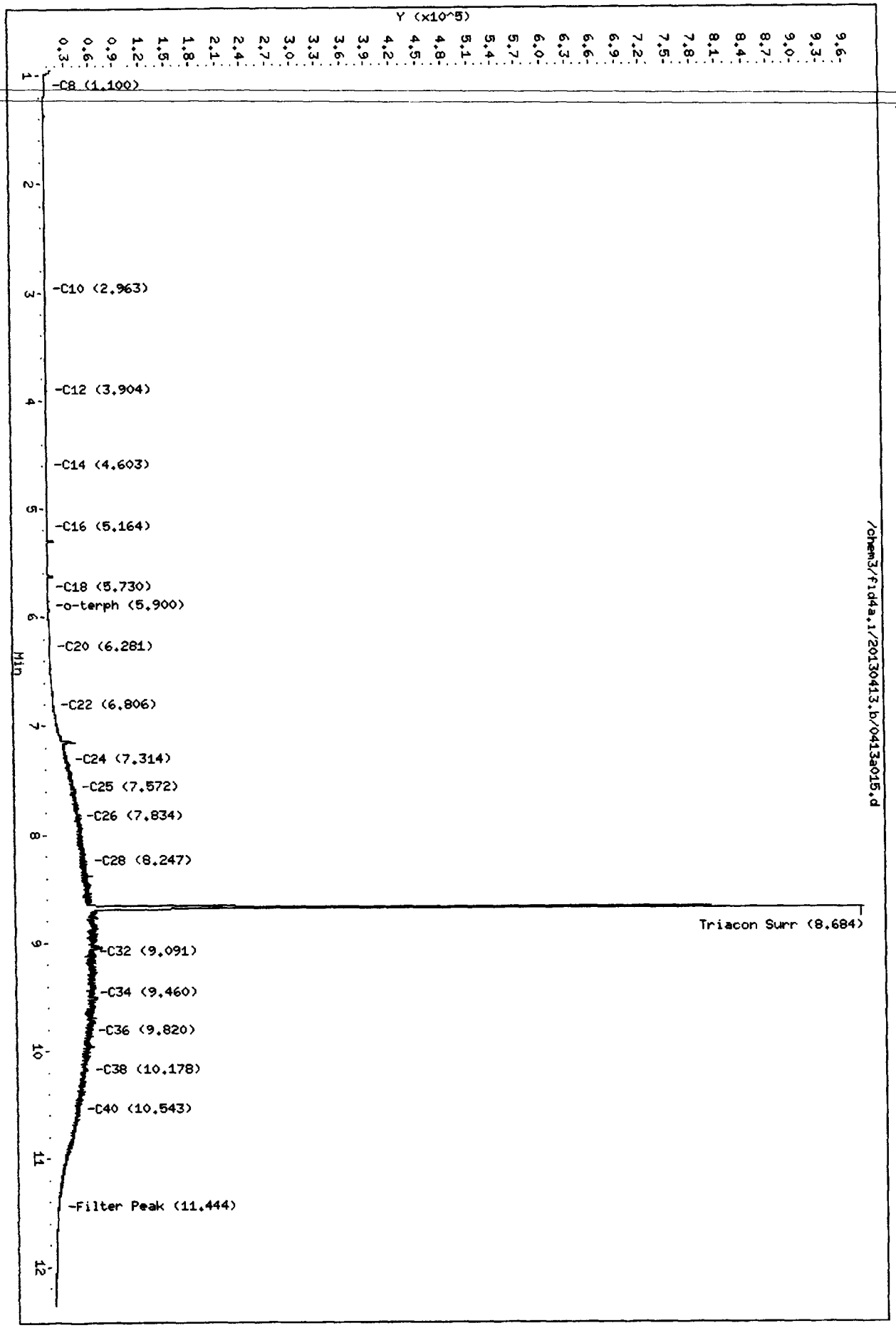
Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	504	0.0	0.1
Triacontane	850626	46.7	103.9 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013



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Date : 13-APR-2013 14:57
Client ID:
Sample Info: MOIL500
Column phase: RTX-1

Instrument: fid4a.i
Operator: JR/VTS/JW
Column diameter: 0.25

JW
4/16/13

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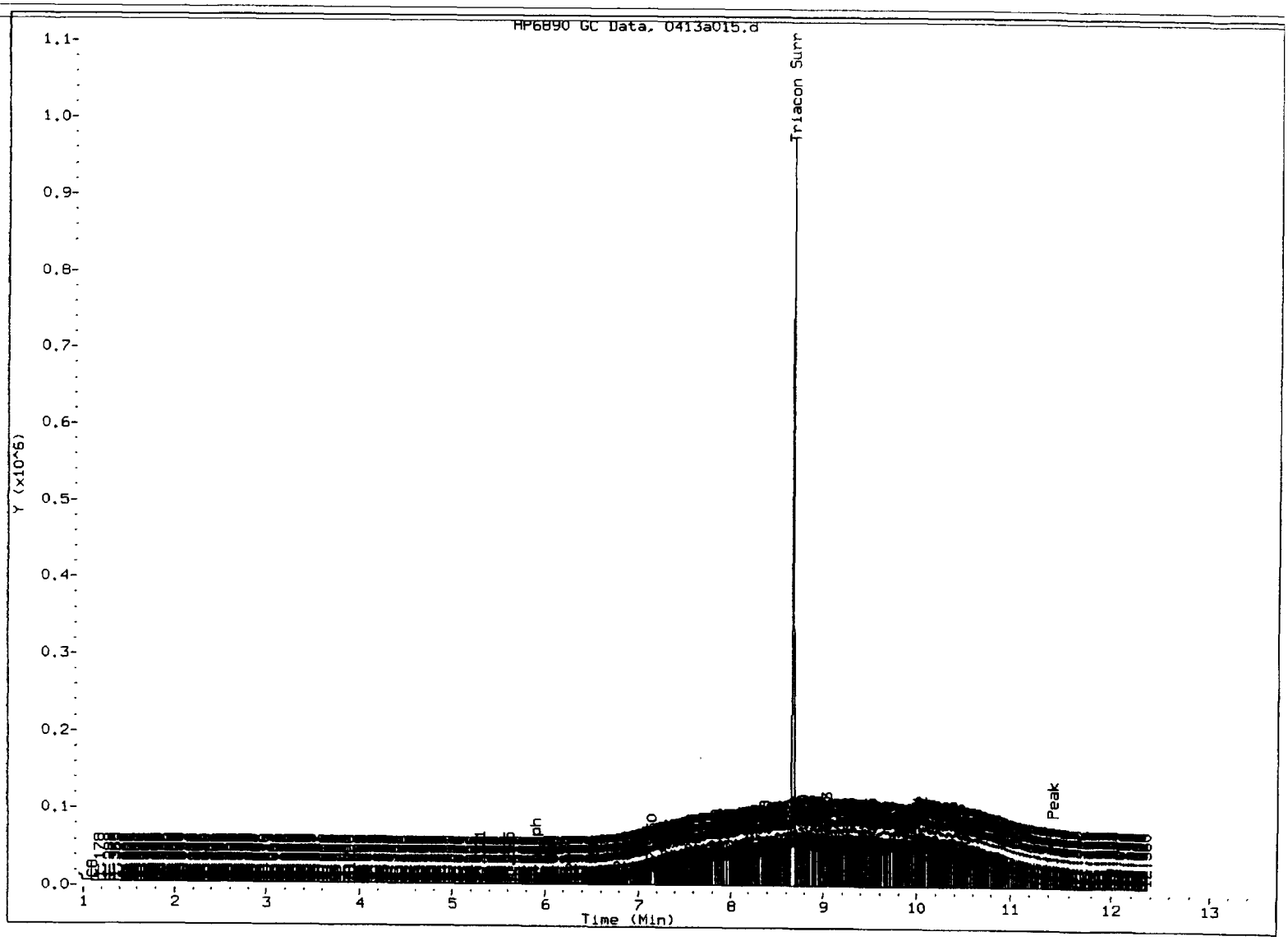
FID:4A-2C/RTX-1 MOIL500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a016.d ARI ID: MOIL1000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 15:17
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	32144	2.07
C8	1.178	0.031	1135	5780	WATPHD	(C12-C24)	1187416	81.81
C10	2.963	-0.005	498	473	WATPHM	(C24-C38)	13682887	1005.80
C12	3.904	-0.004	1016	818	AK102	(C10-C25)	1642208	95.40
C14	4.569	-0.018	1230	2767	AK103	(C25-C36)	11569970	1257.32
C16	5.167	-0.005	408	381				
C18	5.733	0.016	648	473				
C20	6.283	0.015	2709	1773				
C22	6.805	-0.006	11265	17820	MIN.OIL	(C24-C38)	13682887	802.09
C24	7.320	-0.007	41602	20838				
C25	7.563	-0.011	56243	35830				
C26	7.825	-0.001	71296	33239				
C28	8.256	-0.014	82383	53761				
C32	9.090	0.009	96645	53721				
C34	9.455	-0.002	98081	40550				
Filter Peak	11.452	0.010	4343	4334	CREOSOT	(C12-C22)	311440	142.74 M
C36	9.830	0.007	86063	45189				
C38	10.178	-0.001	77500	113868				
C40	10.539	0.006	53659	39892				
o-terph	5.902	0.041	1245	997				
Triacon Surr	8.696	-0.002	1366429	1644378				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	997	0.1	0.1
Triacontane	1644378	90.4	200.8 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a016.d

Date : 13-APR-2013 15:17

Client ID:

Sample Info: MOIL1000

Column phase: RTX-1

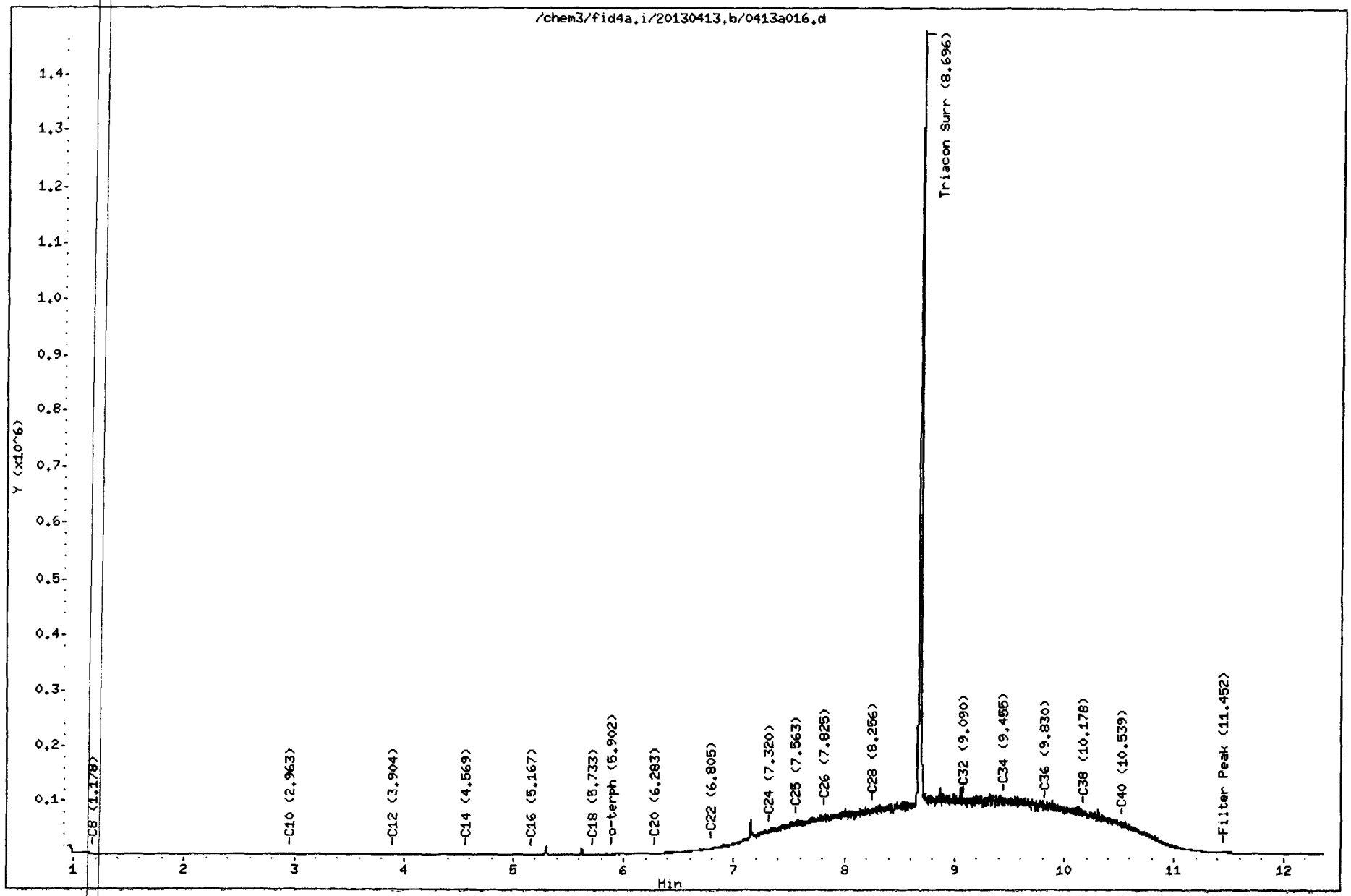
Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25

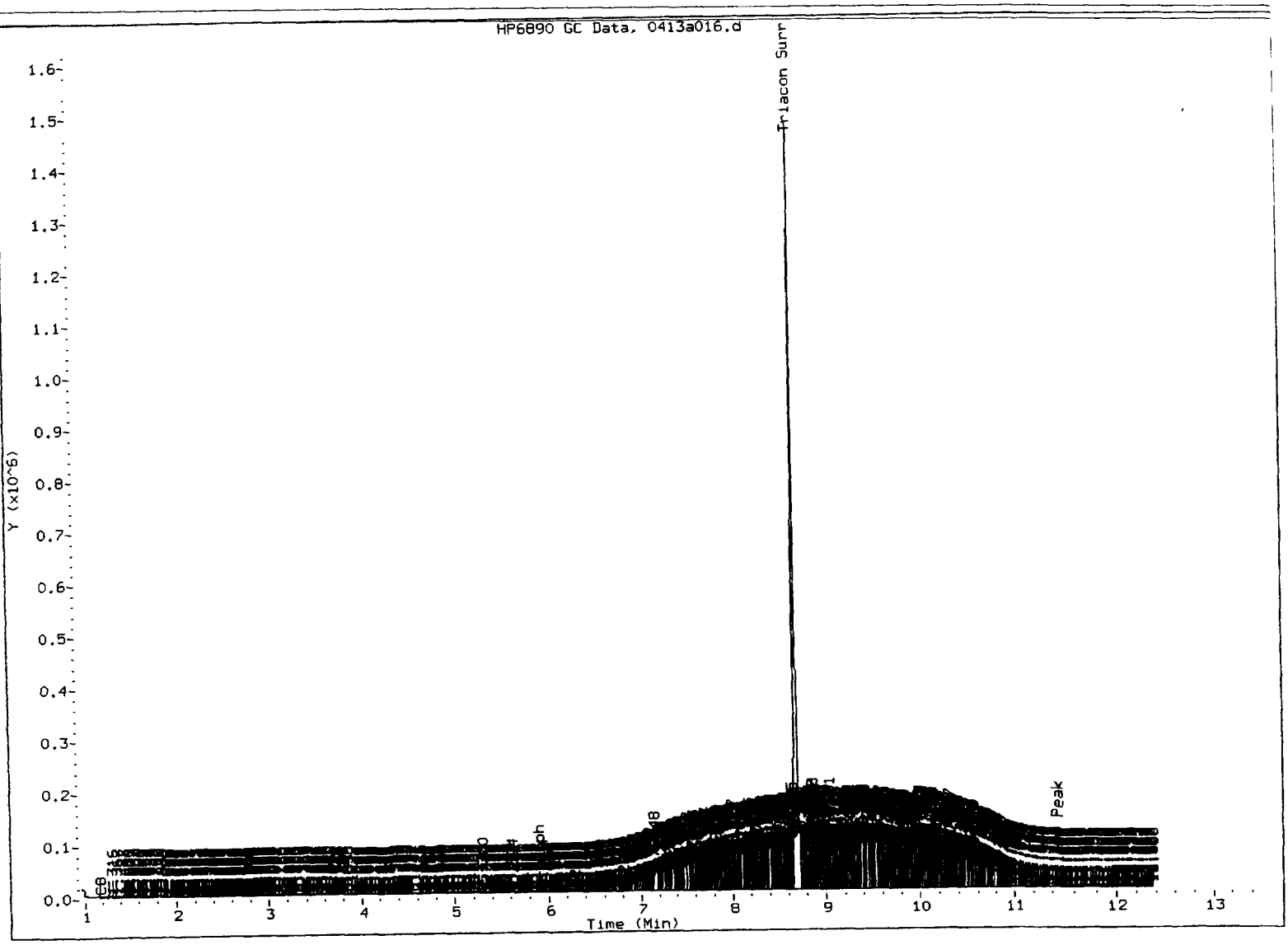
TJC 4/16/13

WNSL 01589



FID:4A-2C/RTX-1 MOIL1000

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a017.d ARI ID: MOIL2500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 15:38
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	83416	5.37
C8	1.128	-0.020	4071	14644	WATPHD	(C12-C24)	2852196	196.51
C10	2.962	-0.006	887	1383	WATPHM	(C24-C38)	33178660	2438.89
C12	3.903	-0.005	907	770	AK102	(C10-C25)	3930340	228.31
C14	4.583	-0.004	266	301	AK103	(C25-C36)	28698517	3118.70
C16	5.183	0.012	317	96				
C18	5.731	0.014	1594	802				
C20	6.280	0.012	6716	3634				
C22	6.804	-0.007	27575	14749	MIN.OIL	(C24-C38)	33178660	1944.94
C24	7.321	-0.005	107450	102577				
C25	7.556	-0.018	131816	144834				
C26	7.819	-0.007	168407	187381				
C28	8.257	-0.013	202786	100155				
C32	9.084	0.003	242006	169583				
C34	9.454	-0.003	243975	205114				
Filter Peak	11.438	-0.004	4315	8182	CREOSOT	(C12-C22)	738851	338.63 M
C36	9.816	-0.007	216552	209982				
C38	10.168	-0.011	129920	131960				
C40	10.542	0.009	30687	39671				
o-terph	5.899	0.038	2815	2393				
Triacon Surr	8.719	0.021	2510735	3943079				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2393	0.1	0.3
Triacontane	3943079	216.7	481.6 M

M Indicates the peak was manually integrated

JLW 4/16/13

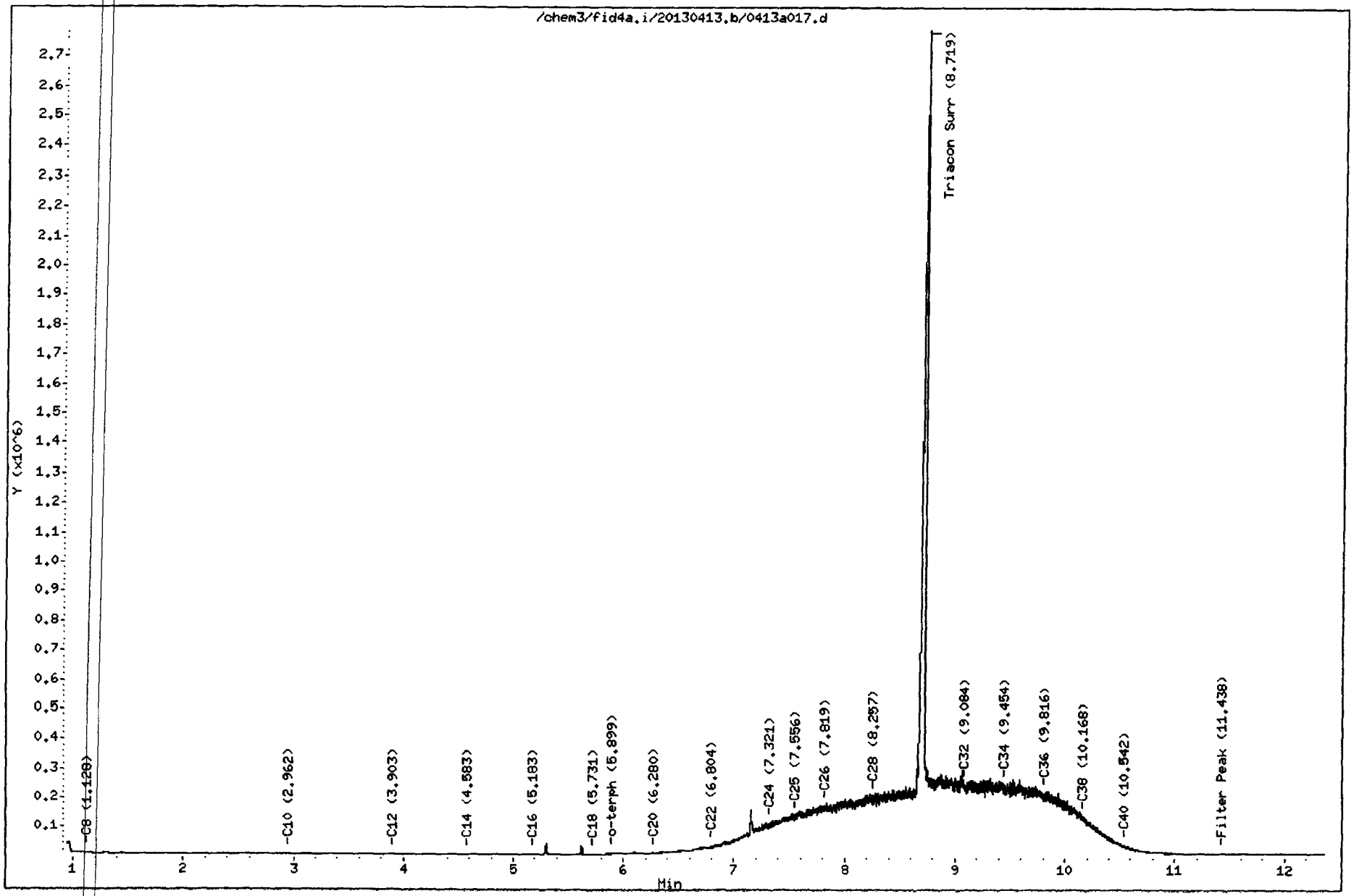
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a017.d
Date : 13-APR-2013 15:38
Client ID:
Sample Info: MOIL2500

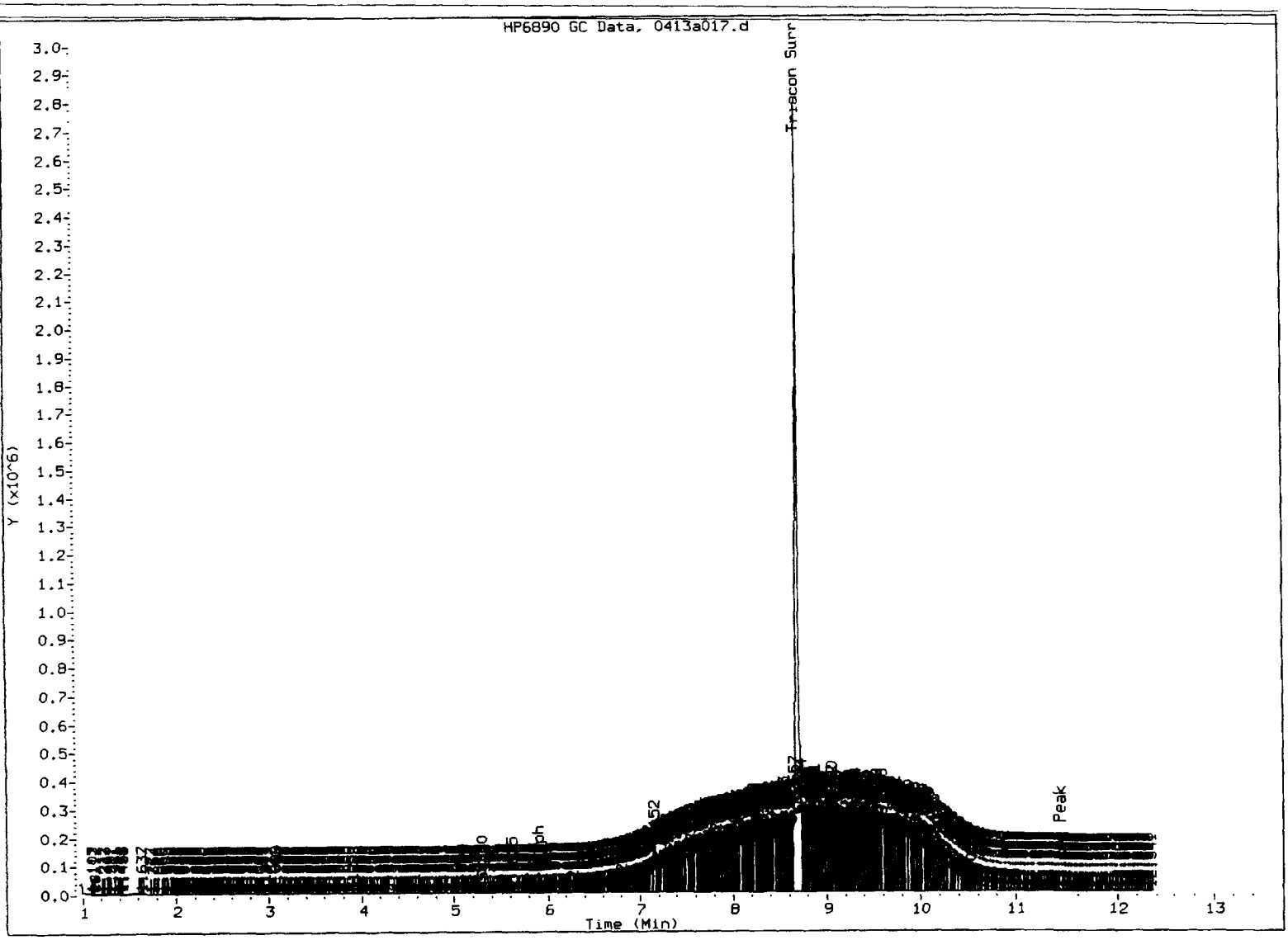
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a018.d ARI ID: MOIL5000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 15:58
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	244161	15.71
C8	1.143	-0.004	9812	13808	WATPHD	(C12-C24)	5664993	390.30
C10	2.962	-0.006	1119	1280	WATPHM	(C24-C38)	57905492	4256.51
C12	3.905	-0.004	838	1047	AK102	(C10-C25)	7402796	430.03
C14	4.584	-0.003	581	737	AK103	(C25-C36)	53984227	5866.53
C16	5.166	-0.005	1225	1541				
C18	5.734	0.016	3137	5027				
C20	6.287	0.019	13681	10731				
C22	6.808	-0.003	53624	26608	MIN.OIL	(C24-C38)	57905492	3394.43
C24	7.311	-0.015	190082	232659				
C25	7.572	-0.002	266765	199965				
C26	7.830	0.003	341666	162112				
C28	8.258	-0.011	390662	251200				
C32	9.095	0.014	497027	196106				
C34	9.449	-0.008	471783	471491				
Filter Peak	11.443	0.001	8530	6766	CREOSOT	(C12-C22)	1473907	675.52 M
C36	9.820	-0.003	267447	356349				
C38	10.185	0.007	48572	57747				
C40	10.543	0.010	15521	6156				
o-terph	5.904	0.043	5927	7458				
Triacon Surr	8.747	0.049	3448867	7755599				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	7458	0.4	0.9
Triacontane	7755599	426.2	947.2 M

JR 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

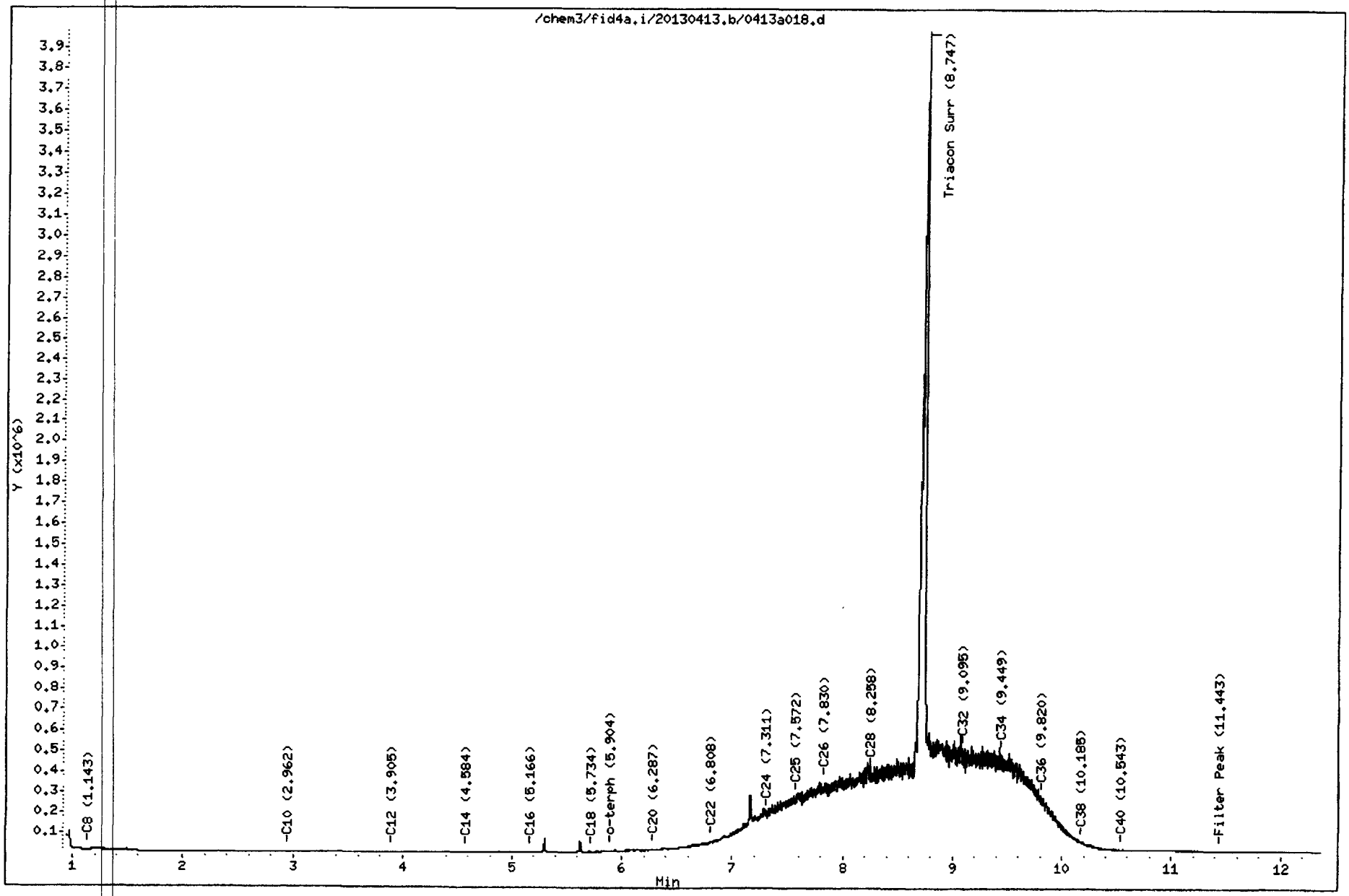
Data File: /chem3/fid4a.i/20130413.b/0413a018.d
Date : 13-APR-2013 15:58
Client ID:
Sample Info: MOIL5000

Column phase: RTX-1

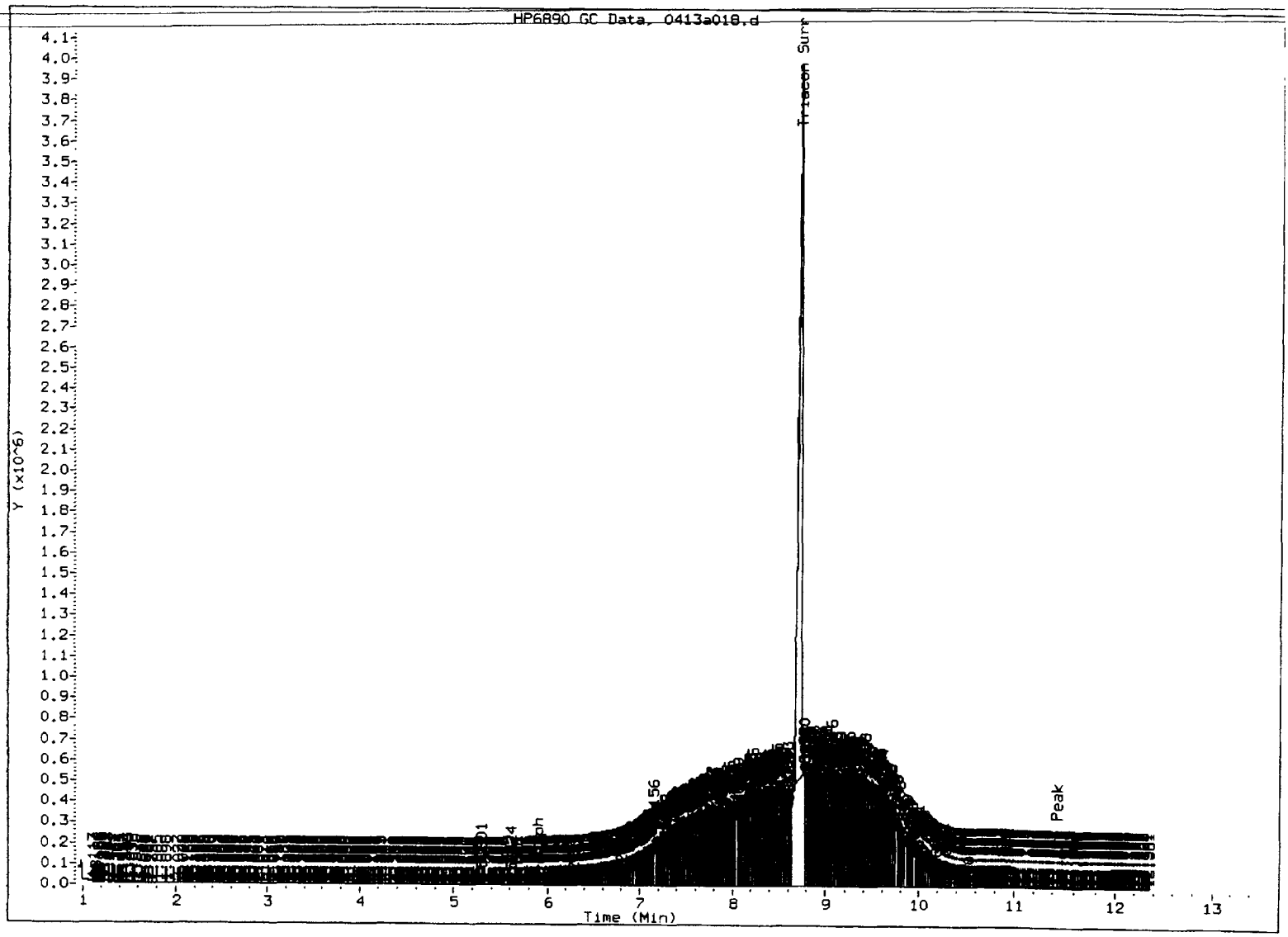
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 4/16/13



FID:4A-2C/RTX-1 MOIL5000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JLW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a019.d ARI ID: MOILICV500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 16:19
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17902	1.15
C8	1.158	0.011	898	1198	WATPHD	(C12-C24)	687706	47.38
C10	2.964	-0.004	207	178	WATPHM	(C24-C38)	6726037	494.42
C12	3.904	-0.004	96	186	AK102	(C10-C25)	899857	52.27
C14	4.594	0.007	65	65	AK103	(C25-C36)	5675797	616.80
C16	5.165	-0.006	314	358				
C18	5.735	0.018	436	657				
C20	6.290	0.023	1657	2232				
C22	6.806	-0.004	7399	2860	MIN.OIL	(C24-C38)	6726037	394.28
C24	7.315	-0.011	23586	20925				
C25	7.578	0.004	30874	35510				
C26	7.825	-0.001	32885	43912				
C28	8.255	-0.014	37444	17198				
C32	9.096	0.015	45972	43185				
C34	9.445	-0.012	48947	50794				
Filter Peak	11.444	0.003	7009	11665	CREOSOT	(C12-C22)	211443	96.91 M
C36	9.822	-0.001	49725	43813				
C38	10.189	0.010	42250	33643				
C40	10.540	0.008	32675	17032				
o-terph	5.902	0.041	787	812				
Triacon Surr	8.681	-0.017	736242	698013				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	812	0.0	0.1
Triacontane	698013	38.4	85.2 M

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

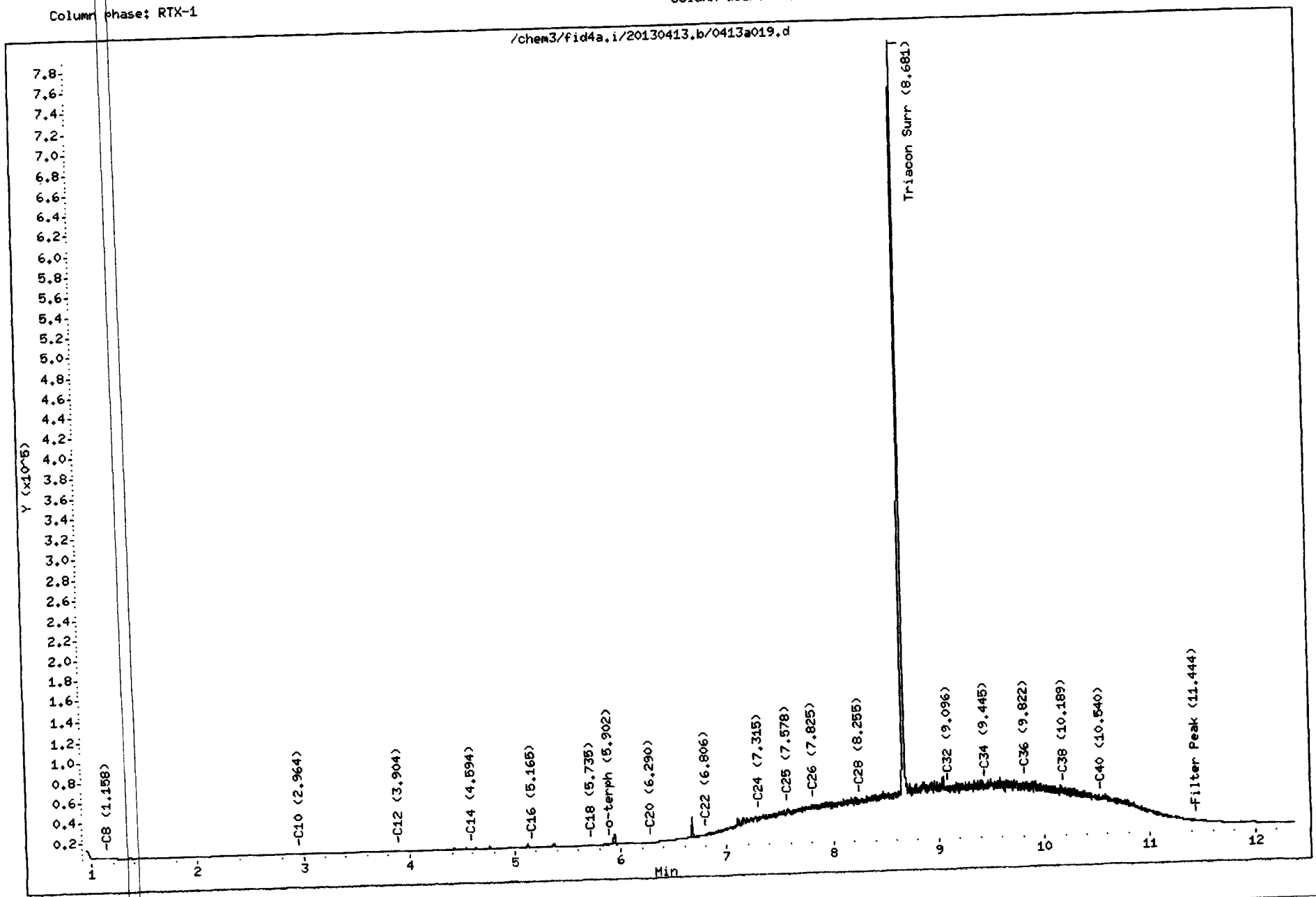
Data File: /chem3/fid4a.i/20130413.b/0413a019.d
Date : 13-APR-2013 16:19
Client ID:
Sample Info: MOILICV500

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

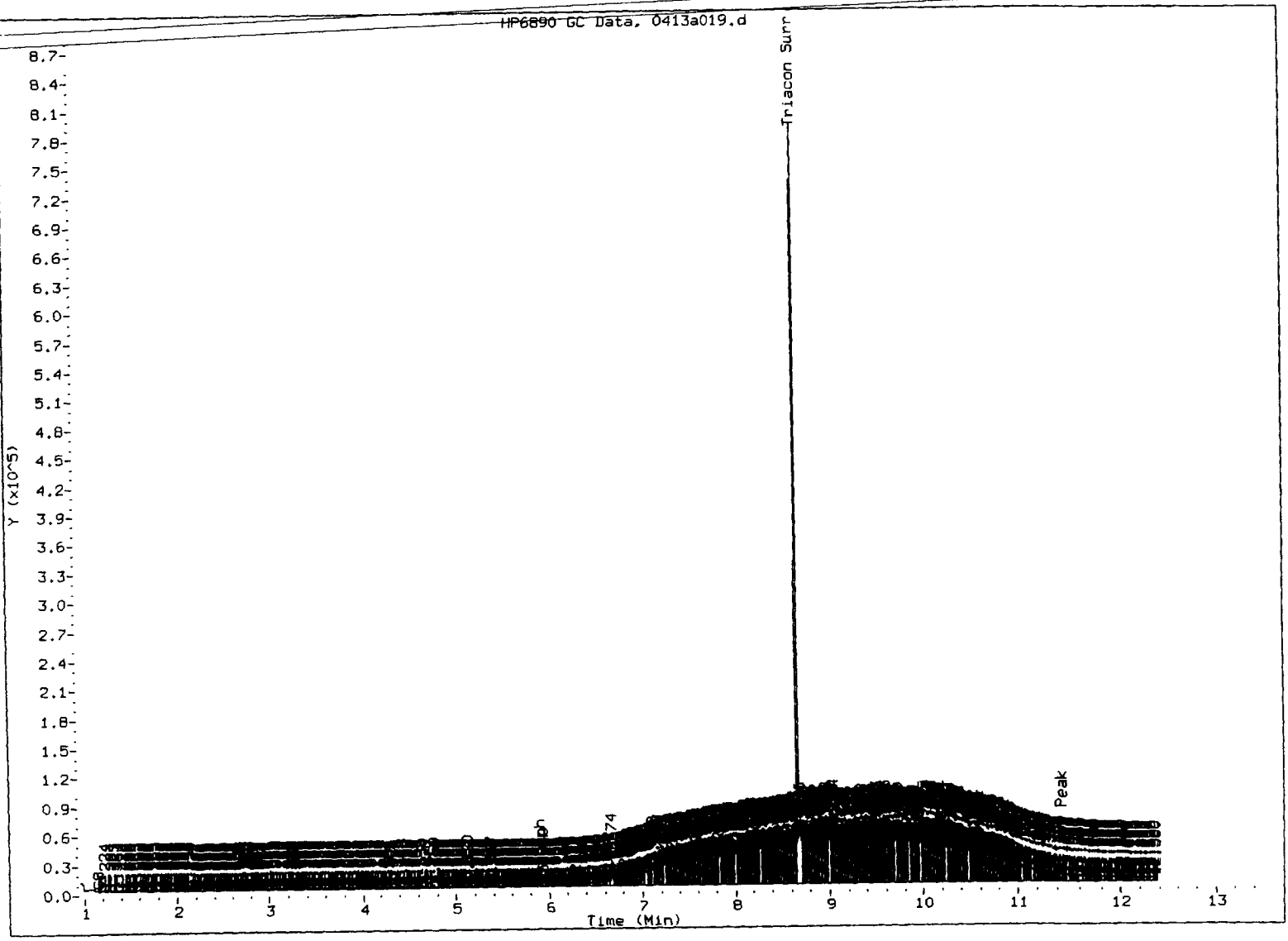
JW 4/16/13



UN31 : 01998

FID:4A-2C/RTX-1 MOILICV500

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WN27/WN31 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B (FID-4A) FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 4/13/13 Analysis Start Date: ~~5/~~ 4/30/13

	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

WN27A contains PRO/Motor oil. Diesel range inflated by motor oil
WN31A contains Diesel/Motor oil, diesel inflated by motor oil

(Review 1) Analyst: JW **Date:** 5/2/13

(Review 2) Reviewer: [signature] **Date:** 5/3

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

4/30/13 Analysis: TPHD Analyst: JW

mn 1 Serial No.: 1022005 Column Type: RTX-1

mn 2 Serial No.: _____ Column Type: _____

lethod: TPH ICal Date: 4/13/13 Injection Volume: 1uL

IS	Ical/Ccal	ICV
	2043-3,1	
	2091-2	
	2041-4	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130430.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	30-APR-2013 09:08	0430a001.d	1	RINSE	
2	30-APR-2013 09:28	0430a002.d	1	RINSE	
3	30-APR-2013 09:48	0430a003.d	1	RINSE	
4	30-APR-2013 10:09	0430a004.d	1	RT0430	
5	30-APR-2013 10:29	0430a005.d	1	IB0430	
6	30-APR-2013 10:49	0430a006.d	1	DIESEL#1	
7	30-APR-2013 11:10	0430a007.d	1	MOIL#1	
8	30-APR-2013 11:57	0430a008.d	1	WN88MBS1	WN88MBS1
9	30-APR-2013 12:17	0430a009.d	1	WN88LCSS1	WN88LCSS1
10	30-APR-2013 12:38	0430a010.d	1	WN88LCSDS1	WN88LCSDS1
11	30-APR-2013 12:59	0430a011.d	5	WN88A	TP1-2-3'
12	30-APR-2013 13:20	0430a012.d	5	WN88B	TP2A-2-3'
13	30-APR-2013 13:41	0430a013.d	5	WN88C	TP5A-2-3'
14	30-APR-2013 14:02	0430a014.d	1	WN88D	TP4A-2-3'
15	30-APR-2013 14:23	0430a015.d	5	WN88E	TP3A-1-1.5'
16	30-APR-2013 14:44	0430a016.d	5	WN88F	TP3B-1-1.5'
17	30-APR-2013 15:05	0430a017.d	5	WN88G	TP4B-1-1.5'
18	30-APR-2013 15:26	0430a018.d	1	DIESEL#2	
19	30-APR-2013 15:46	0430a019.d	1	MOIL#2	
20	30-APR-2013 16:07	0430a020.d	1	WN27MBS1	WN27MBS1
21	30-APR-2013 16:28	0430a021.d	1	WN27LCSS1	WN27LCSS1
22	30-APR-2013 16:49	0430a022.d	5	WN27A	CG-MH-010-20130423-
23	30-APR-2013 17:09	0430a023.d	5	WN27AMS	CG-MH-010-20130 MS
24	30-APR-2013 17:30	0430a024.d	5	WN27AMSD	CG-MH-010-20130 MSD
25	30-APR-2013 17:50	0430a025.d	5	WN31A	ES-TS-INF-20130424-
26	30-APR-2013 18:11	0430a026.d	1	DIESEL#3	
27	30-APR-2013 18:32	0430a027.d	1	MOIL#3	

JW

JW 5/2/13

very line must contain information or be lined out. Make all entries legible.
art a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130430.b

ARI Job No.: RT04 Method: ftphfid4a.m Instrument: fid4a.i Date: 30-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1009	0430a004.d	RT0430		1	Toluene, C8,
1029	0430a005.d	IB0430		1	NO MANUAL INTEGRATION
1526	0430a018.d	DIESEL#2	NPDES Samp	1	o-terph,
1546	0430a019.d	MOIL#2	NPDES Samp	1	Triacon Surr,
1607	0430a020.d	WN27MBS1	WN27MBS1	1	NO MANUAL INTEGRATION
1628	0430a021.d	WN27LCSS1	WN27LCSS1	1	o-terph,
1649	0430a022.d	WN27A	CG-MH-010-	5	o-terph, Triacon Surr,
1709	0430a023.d	WN27AMS	CG-MH-010-	5	o-terph, Triacon Surr,
1730	0430a024.d	WN27AMSD	CG-MH-010-	5	o-terph, Triacon Surr,
1750	0430a025.d	WN31A	ES-TS-INF-	5	o-terph, Triacon Surr,
1811	0430a026.d	DIESEL#3	NPDES Samp	1	o-terph,
1832	0430a027.d	MOIL#3	NPDES Samp	1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a004.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: RT0430
Client ID:
Injection: 30-APR-2013 10:09

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.791	0.000	530586	517053	WATPHG	(Tol-C12)	3249902	209.14
C8	1.002	0.000	424138	494701	WATPHD	(C12-C24)	2683779	184.90
C10	2.860	0.000	335032	304472	WATPHM	(C24-C38)	3980509	292.60
C12	3.824	0.000	451773	337542	AK102	(C10-C25)	3473341	201.77
C14	4.507	0.000	560456	411883	AK103	(C25-C36)	3507083	381.12
C16	5.088	0.000	588547	412865				
C18	5.625	0.000	469264	403474				
C20	6.166	0.000	418569	393800				
C22	6.706	0.000	476111	406078	MIN.OIL	(C24-C38)	3980509	233.34
C24	7.220	0.000	477739	416469				
C25	7.467	0.000	426053	405493				
C26	7.717	0.000	1058904	1238333				
C28	8.161	0.000	458837	426113				
C32	8.949	0.000	511246	425909				
C34	9.302	0.000	439116	428712				
Filter Peak	11.446	0.000	6729	5642	CREOSOT	(C12-C22)	2236396	1024.98 M
C36	9.644	0.000	482776	422232				
C38	9.976	0.000	482001	416163				
C40	10.298	0.000	410242	398523				
o-terph	5.759	0.000	919359	892893				
Triacon Surr	8.580	0.000	954204	1107890				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	892893	46.3	102.9
Triacontane	1107890	60.9	135.3

M Indicates the peak was manually integrated

JW 5/2/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a004.d
Date : 30-APR-2013 10:09
Client ID:
Sample Info: RT0430

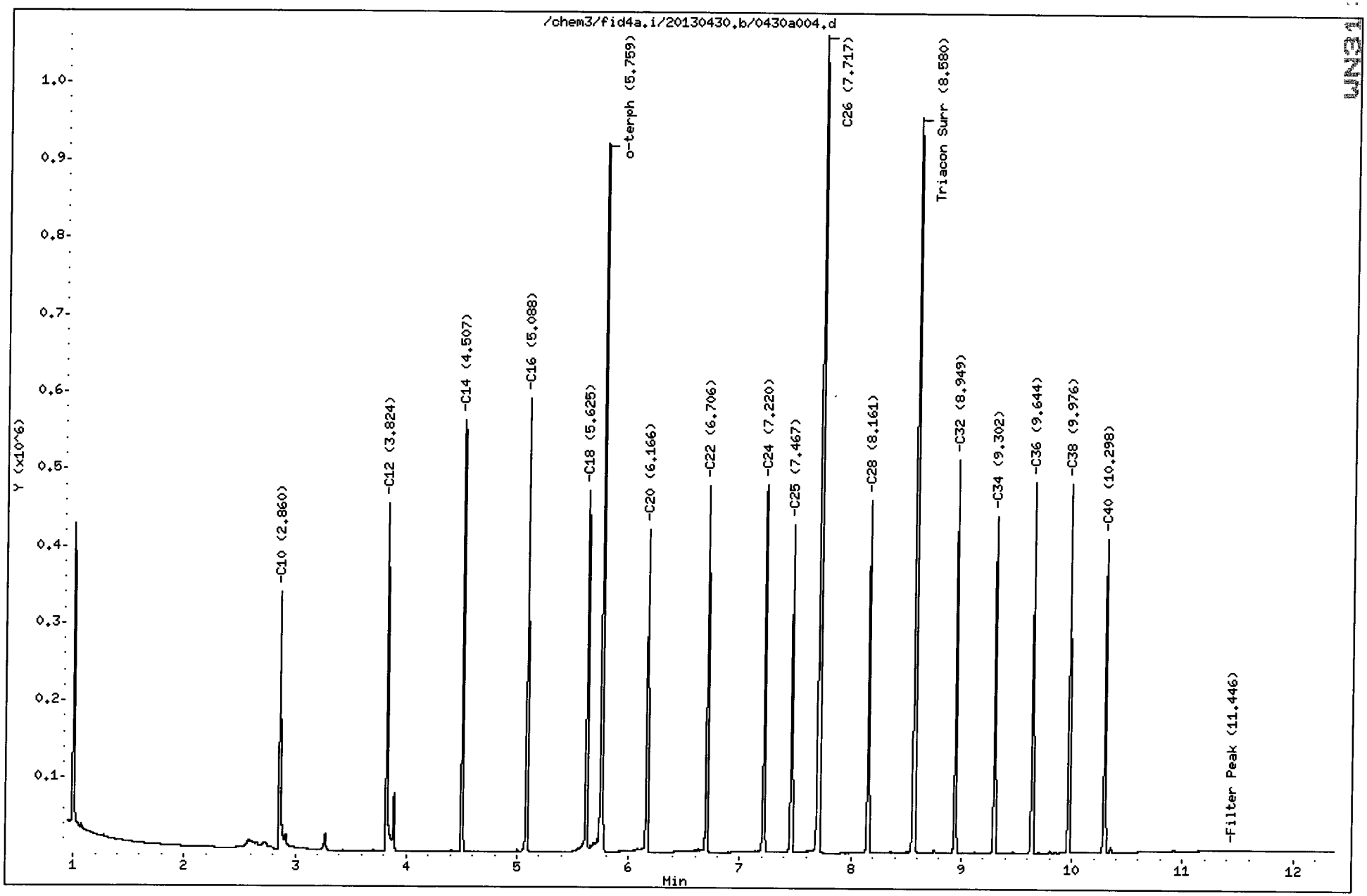
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

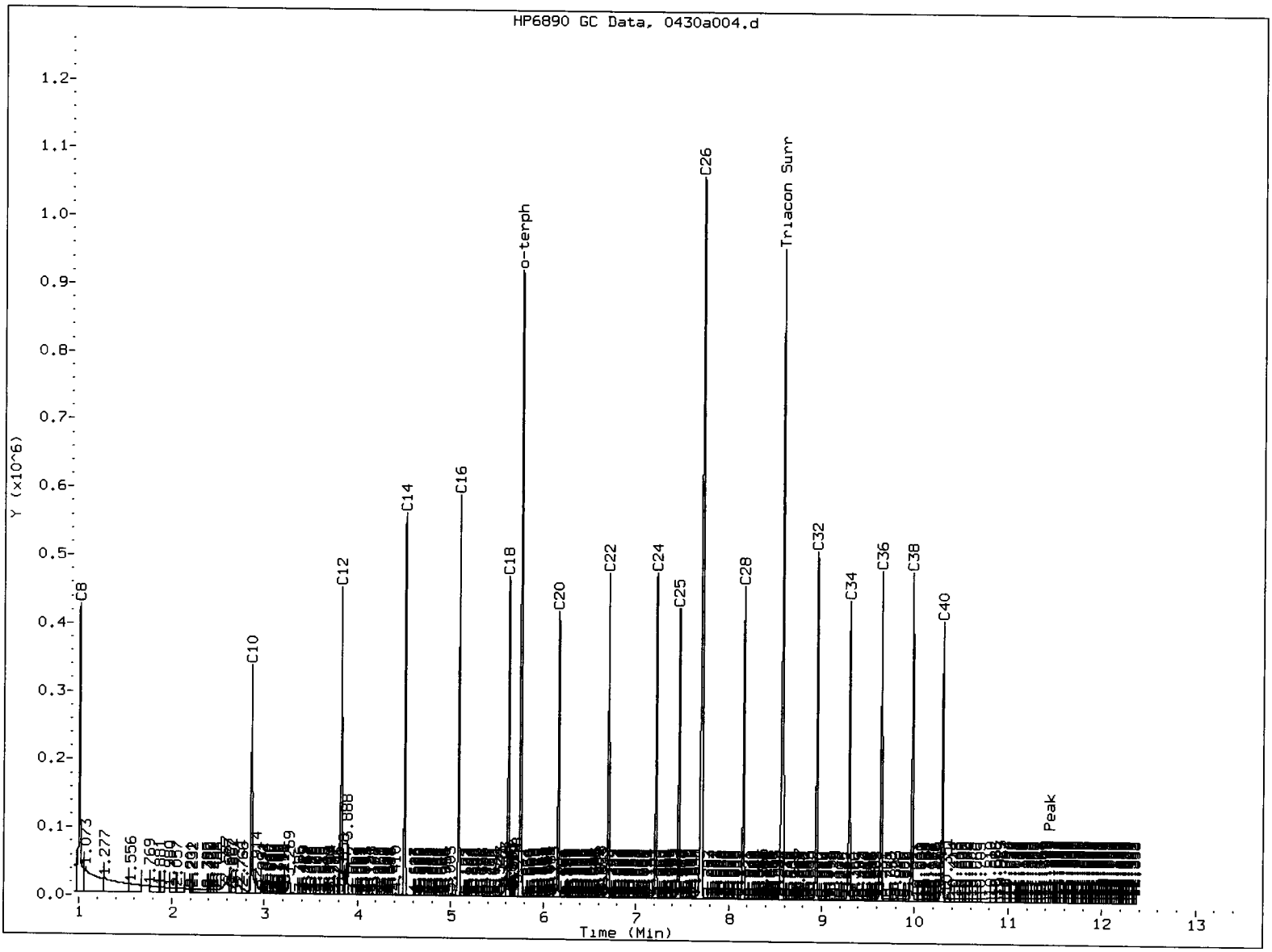
JW 5/2/13

UNJ31 : 02005



FID:4A-2C/RTX-1 RT0430

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a005.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: IB0430
Client ID:
Injection: 30-APR-2013 10:29

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	42325	2.72
C8	----				WATPHD	(C12-C24)	30703	2.12
C10	2.856	-0.004	678	1074	WATPHM	(C24-C38)	150582	11.07
C12	3.820	-0.004	49	28	AK102	(C10-C25)	49703	2.89
C14	4.504	-0.002	66	84	AK103	(C25-C36)	111499	12.12
C16	5.092	0.004	84	73				
C18	5.617	-0.008	155	226				
C20	6.164	-0.002	236	335				
C22	6.700	-0.006	262	348	MIN.OIL	(C24-C38)	150582	8.83
C24	7.216	-0.004	332	907				
C25	7.460	-0.006	367	600				
C26	7.718	0.001	336	149				
C28	8.167	0.005	773	878				
C32	8.954	0.005	11521	12049				
C34	9.310	0.008	1058	1055				
Filter Peak	11.442	-0.005	5444	7757	CREOSOT	(C12-C22)	24011	11.00 M
C36	9.639	-0.005	1406	1255				
C38	9.989	0.013	1914	3394				
C40	10.299	0.001	2525	3886				
o-terph	5.763	0.003	1096691	950201				
Triacon Surr	8.581	0.001	805528	877736				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	950201	49.3	109.5
Triacontane	877736	48.2	107.2

JW 5/2/13

M Indicates the peak was manually integrated

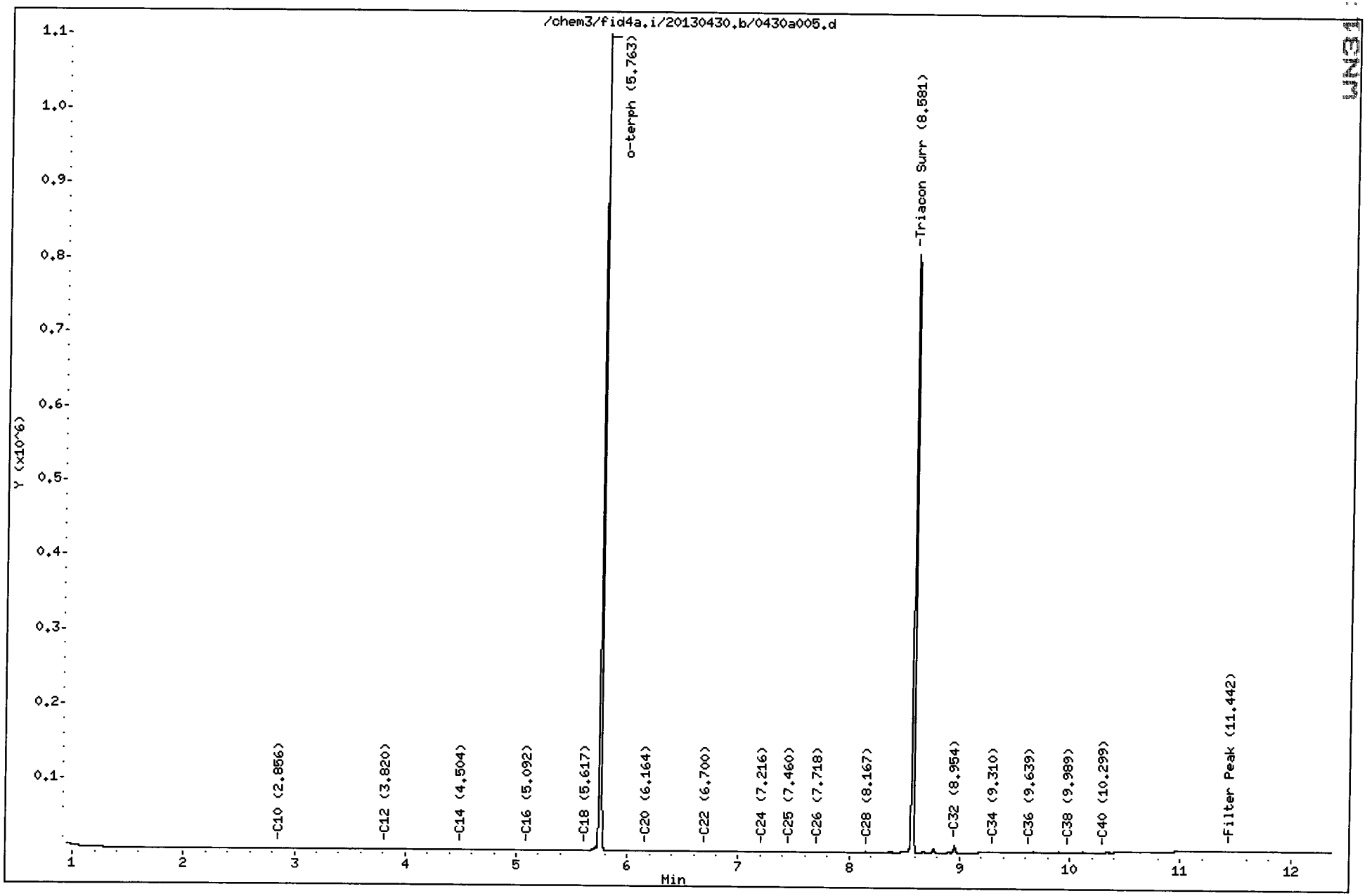
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a005.d
Date : 30-APR-2013 10:29
Client ID:
Sample Info: IB0430

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a018.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: DIESEL#2
Client ID:
Injection: 30-APR-2013 15:26

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	953221	61.34
C8	----				WATPHD	(C12-C24)	3730152	256.99
C10	2.857	-0.003	24519	19717	WATPHM	(C24-C38)	281847	20.72
C12	3.822	-0.002	43127	43187	AK102	(C10-C25)	4401823	255.70
C14	4.504	-0.002	77752	70943	AK103	(C25-C36)	199752	21.71
C16	5.086	-0.002	114482	103937				
C18	5.628	0.003	89923	98473				
C20	6.169	0.003	61410	89478				
C22	6.707	0.001	34939	34823	MIN.OIL	(C24-C38)	281847	16.52
C24	7.221	0.001	9017	11854				
C25	7.467	0.000	4759	8102				
C26	7.705	-0.012	2074	3564				
C28	8.162	0.000	1067	2039				
C32	8.952	0.003	1713	5484				
C34	9.305	0.003	2054	1981				
Filter Peak	11.454	0.008	8458	14524	CREOSOT	(C12-C22)	3588951	1644.87 M
C36	9.640	-0.004	2796	2375				
C38	9.974	-0.002	3666	2470				
C40	10.296	-0.002	4464	3976				
o-terph	5.768	0.009	1052100	941323				
Triacon Surr	8.580	0.000	1677	2647				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	941323	48.8	108.5 M
Triacontane	2647	0.1	0.3

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a018.d
Date : 30-APR-2013 15:26
Client ID:
Sample Info: DIESEL#2

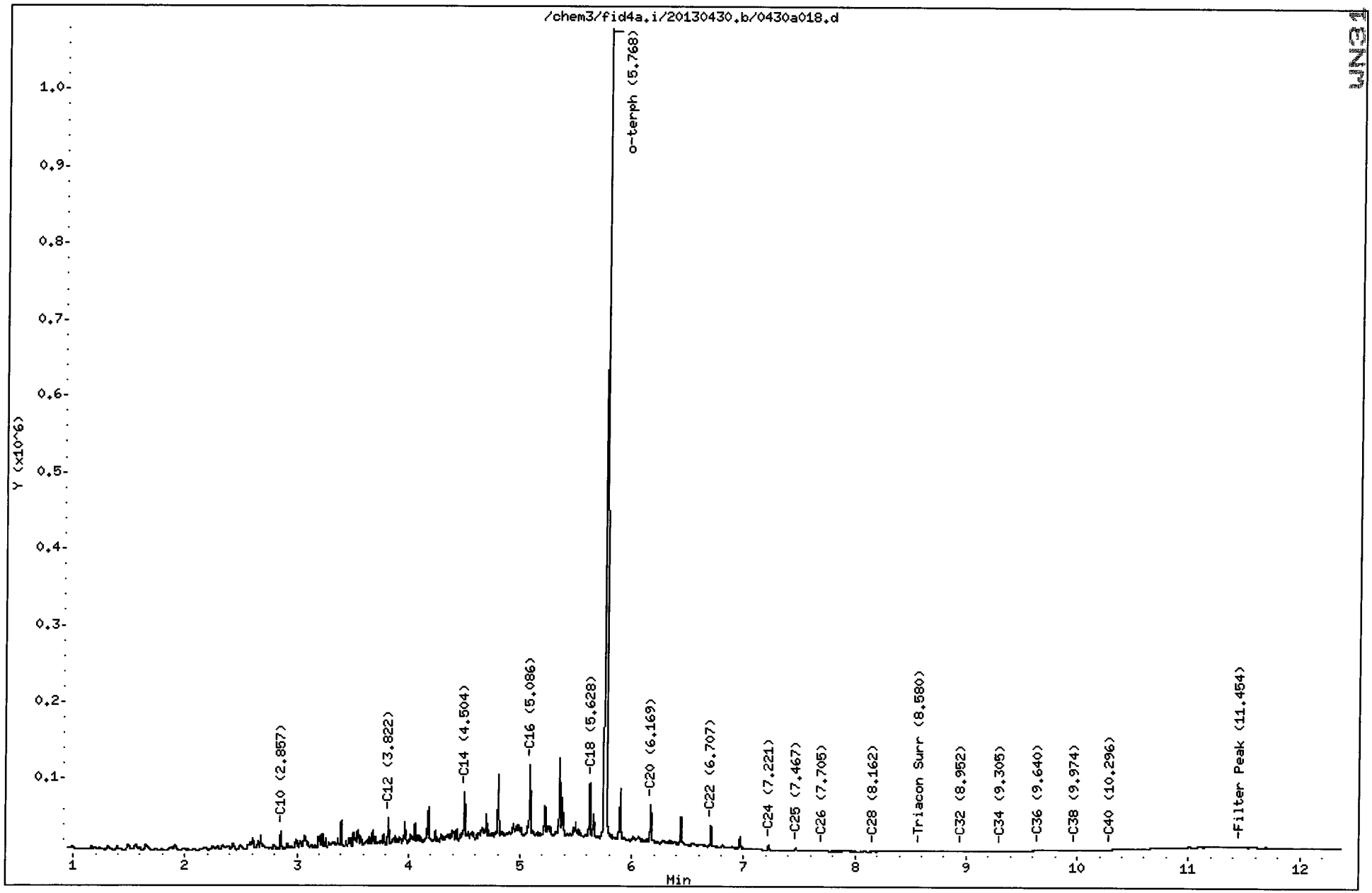
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

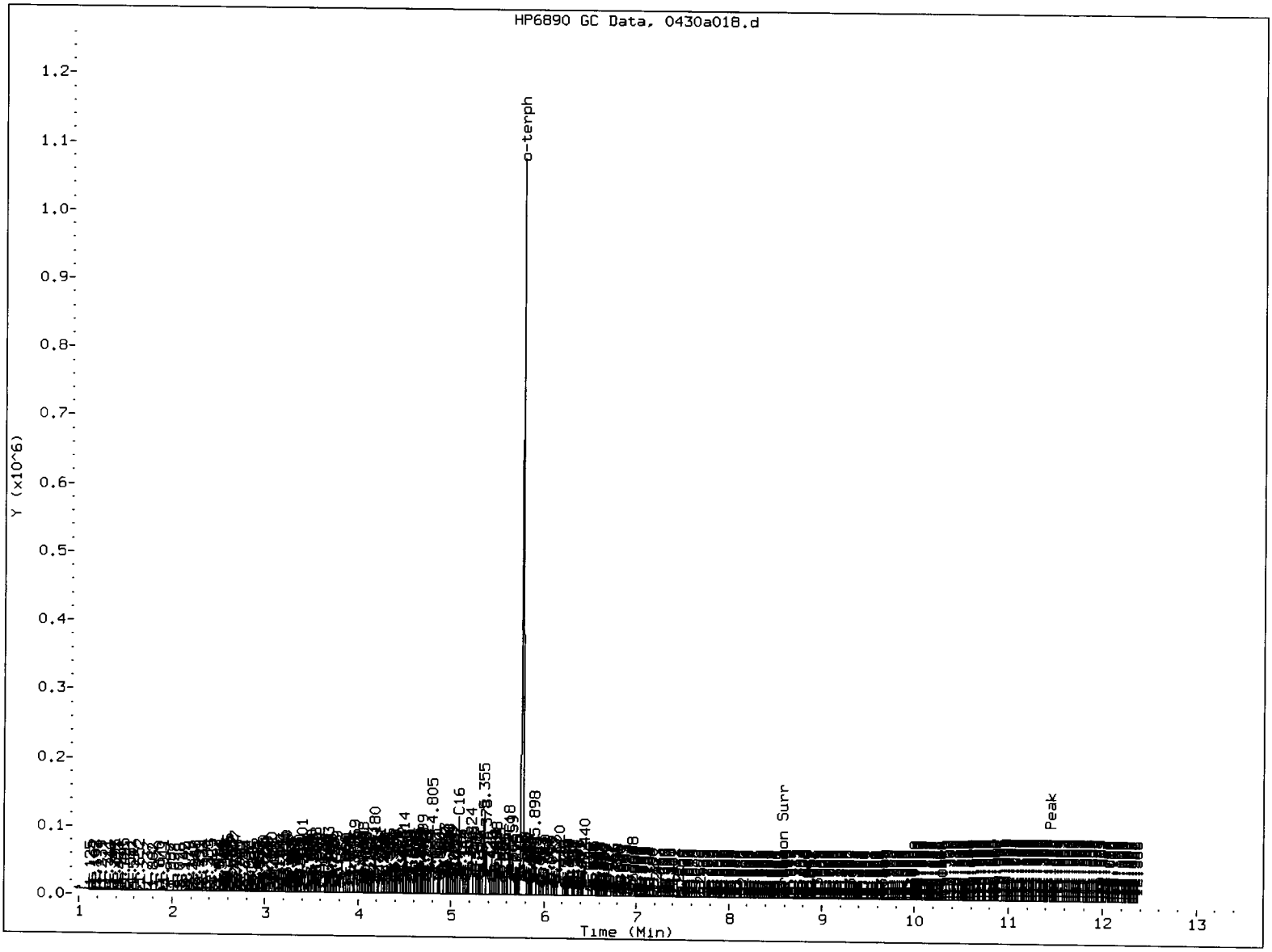
JW 5/2/13

JN31 02019



FID:4A-2C/RTX-1 DIESEL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a019.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: MOIL#2
Client ID:
Injection: 30-APR-2013 15:46

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	29761	1.92
C8	----				WATPHD	(C12-C24)	667971	46.02
C10	2.857	-0.003	267	431	WATPHM	(C24-C38)	6542031	480.89
C12	3.811	-0.013	153	229	AK102	(C10-C25)	837280	48.64
C14	4.505	-0.002	207	361	AK103	(C25-C36)	5678192	617.06
C16	5.086	-0.002	246	278				
C18	5.624	-0.001	613	957				
C20	6.172	0.006	1688	1186				
C22	6.696	-0.010	5853	10082	MIN.OIL	(C24-C38)	6542031	383.50
C24	7.221	0.001	23061	17142				
C25	7.467	0.000	29365	19592				
C26	7.718	0.001	37606	18454				
C28	8.166	0.005	41526	22036				
C32	8.953	0.004	51379	76001				
C34	9.295	-0.007	49515	51132				
Filter Peak	11.456	0.009	7138	5526	CREOSOT	(C12-C22)	180872	82.90 M
C36	9.639	-0.005	42949	47393				
C38	9.984	0.007	36025	40926				
C40	10.297	-0.001	16978	9397				
o-terph	5.754	-0.005	1043	2456				
Triacon Surr	8.601	0.021	797776	904929				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2456	0.1	0.3
Triacontane	904929	49.7	110.5 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a019.d
Date : 30-APR-2013 15:46
Client ID:
Sample Info: MOIL#2

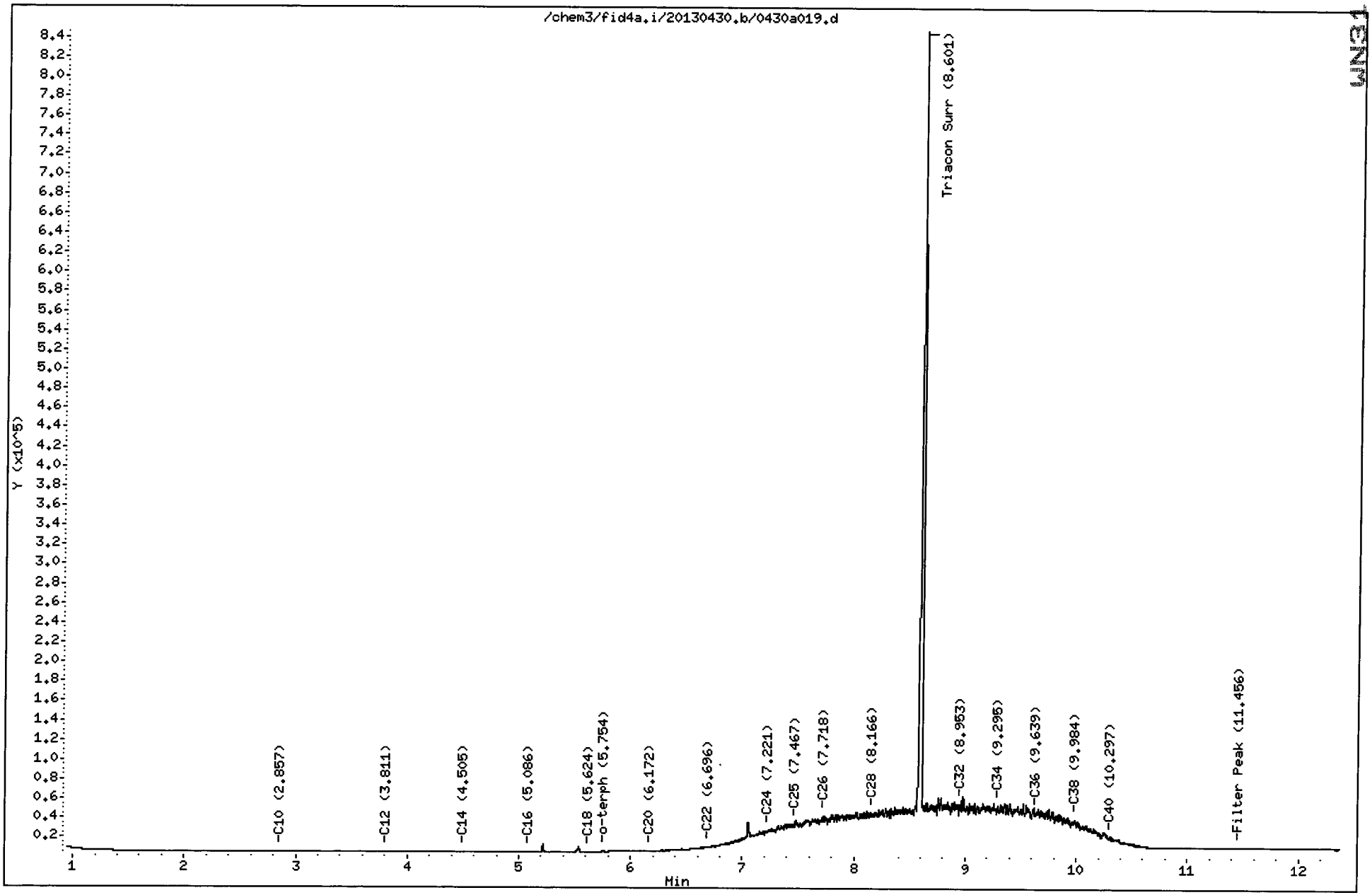
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

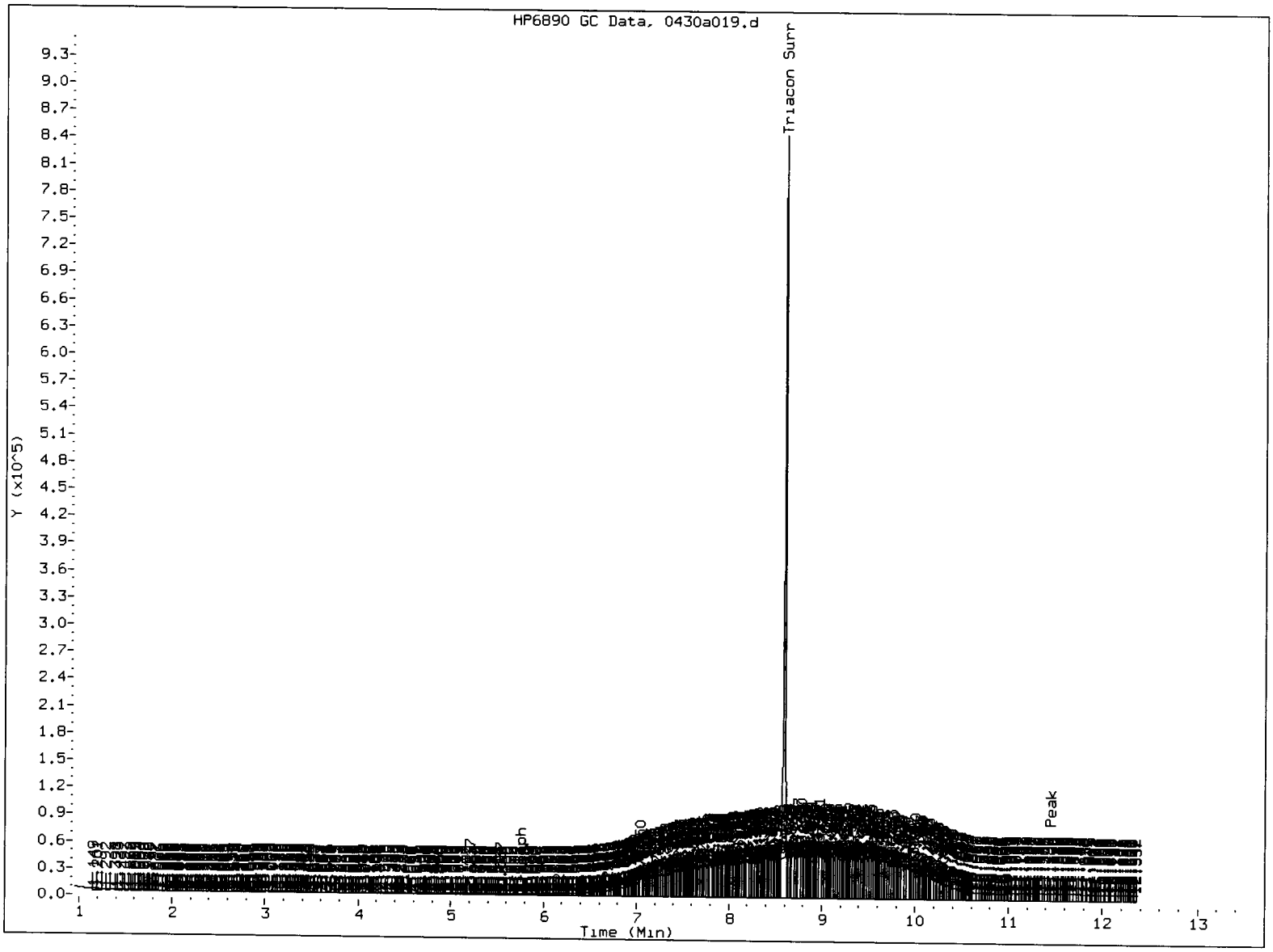
JW 5/2/13

WN31 : 022013



FID:4A-2C/RTX-1 MOIL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a020.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27MBS1
Client ID: WN27MBS1
Injection: 30-APR-2013 16:07

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	28892	1.86
C8	----				WATPHD	(C12-C24)	40470	2.79
C10	2.859	-0.001	288	273	WATPHM	(C24-C38)	166971	12.27
C12	3.824	0.000	87	99	AK102	(C10-C25)	46255	2.69
C14	4.505	-0.002	142	208	AK103	(C25-C36)	116933	12.71
C16	5.084	-0.004	120	153				
C18	5.618	-0.007	170	231				
C20	6.167	0.001	228	201				
C22	6.706	0.000	288	553	MIN.OIL	(C24-C38)	166971	9.79
C24	7.223	0.003	344	389				
C25	7.471	0.004	868	1843				
C26	7.706	-0.011	447	511				
C28	8.162	0.000	1498	2799				
C32	8.966	0.017	2816	6574				
C34	9.300	-0.002	1228	701				
Filter Peak	11.439	-0.007	5702	10586	CREOSOT	(C12-C22)	31367	14.38 M
C36	9.639	-0.006	1854	2742				
C38	9.980	0.003	2330	924				
C40	10.304	0.006	2529	2443				
o-terph	5.766	0.007	966879	896338				
Triacon Surr	8.596	0.015	770765	886271				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	896338	46.5	103.3
Triacontane	886271	48.7	108.2

JW
5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

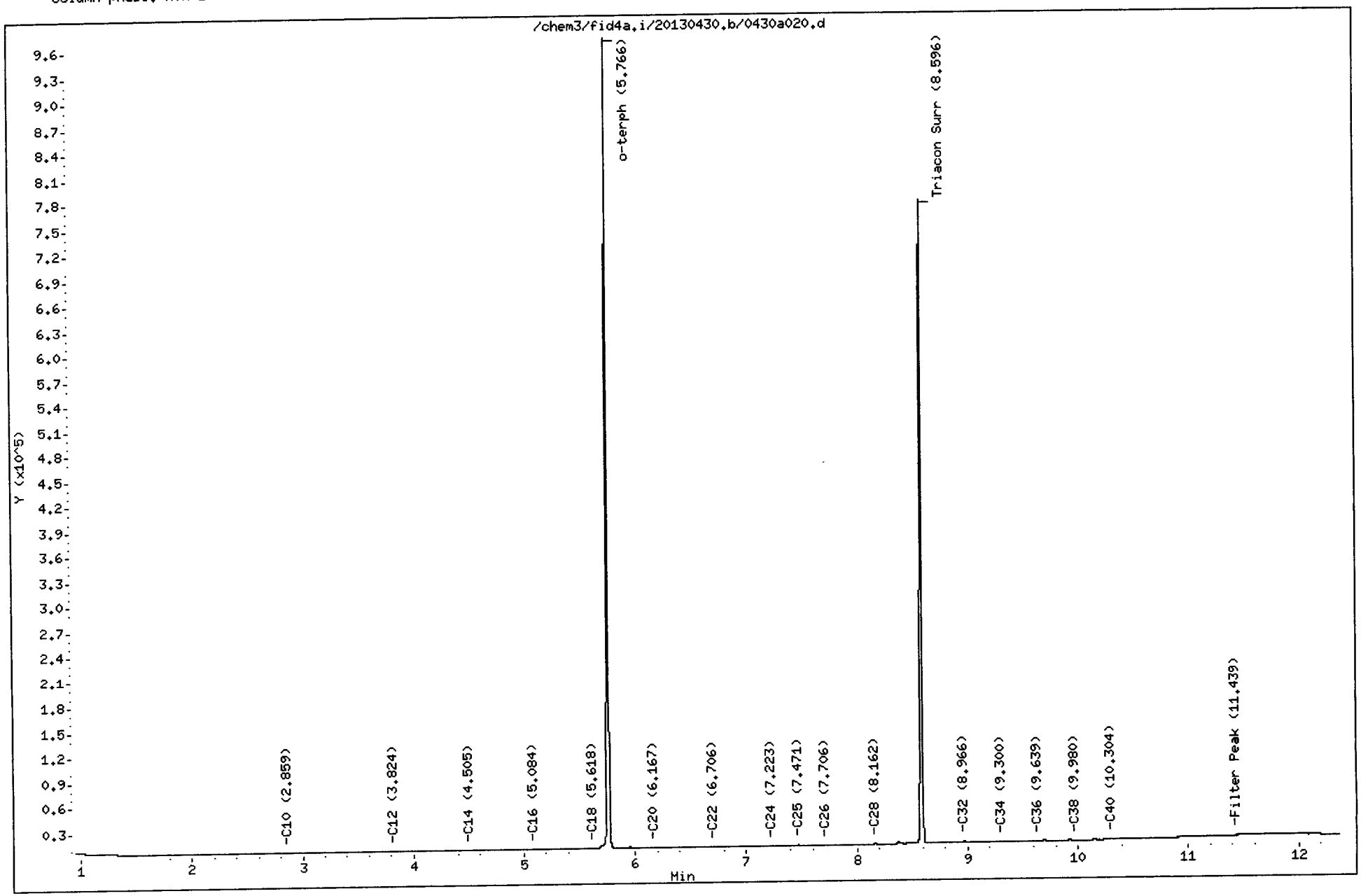
Data File: /chem3/fid4a.i/20130430.b/0430a020.d
Date : 30-APR-2013 16:07
Client ID: WN27MBS1
Sample Info: WN27MBS1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1

WN31 : 022016



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a021.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27LCSS1
Client ID: WN27LCSS1
Injection: 30-APR-2013 16:28

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	5329064	342.94
C8	----				WATPHD	(C12-C24)	21160063	1457.85
C10	2.864	0.004	127194	114558	WATPHM	(C24-C38)	242697	17.84
C12	3.825	0.001	208764	247097	AK102	(C10-C25)	24953162	1449.52
C14	4.509	0.002	356638	471720	AK103	(C25-C36)	148809	16.17
C16	5.092	0.004	566187	579121				
C18	5.632	0.008	436972	532045				
C20	6.175	0.010	329810	494631				
C22	6.711	0.005	178278	198175	MIN.OIL	(C24-C38)	242697	14.23
C24	7.220	0.000	45174	62156				
C25	7.468	0.001	21779	28158				
C26	7.706	-0.010	7869	10968				
C28	8.162	0.001	1444	2258				
C32	8.951	0.002	2281	1861				
C34	9.303	0.001	301	267				
Filter Peak	11.437	-0.009	3760	2546	CREOSOT	(C12-C22)	20443302	9369.50 M
C36	9.630	-0.014	714	1208				
C38	9.984	0.008	1279	508				
C40	10.297	-0.001	1461	581				
o-terph	5.769	0.010	865294	892806				
Triacon Surr	8.593	0.013	774627	842328				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	892806	46.3	102.9 M
Triacontane	842328	46.3	102.9

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a021.d

Date : 30-APR-2013 16:28

Client ID: WN27LCSS1

Sample Info: WN27LCSS1

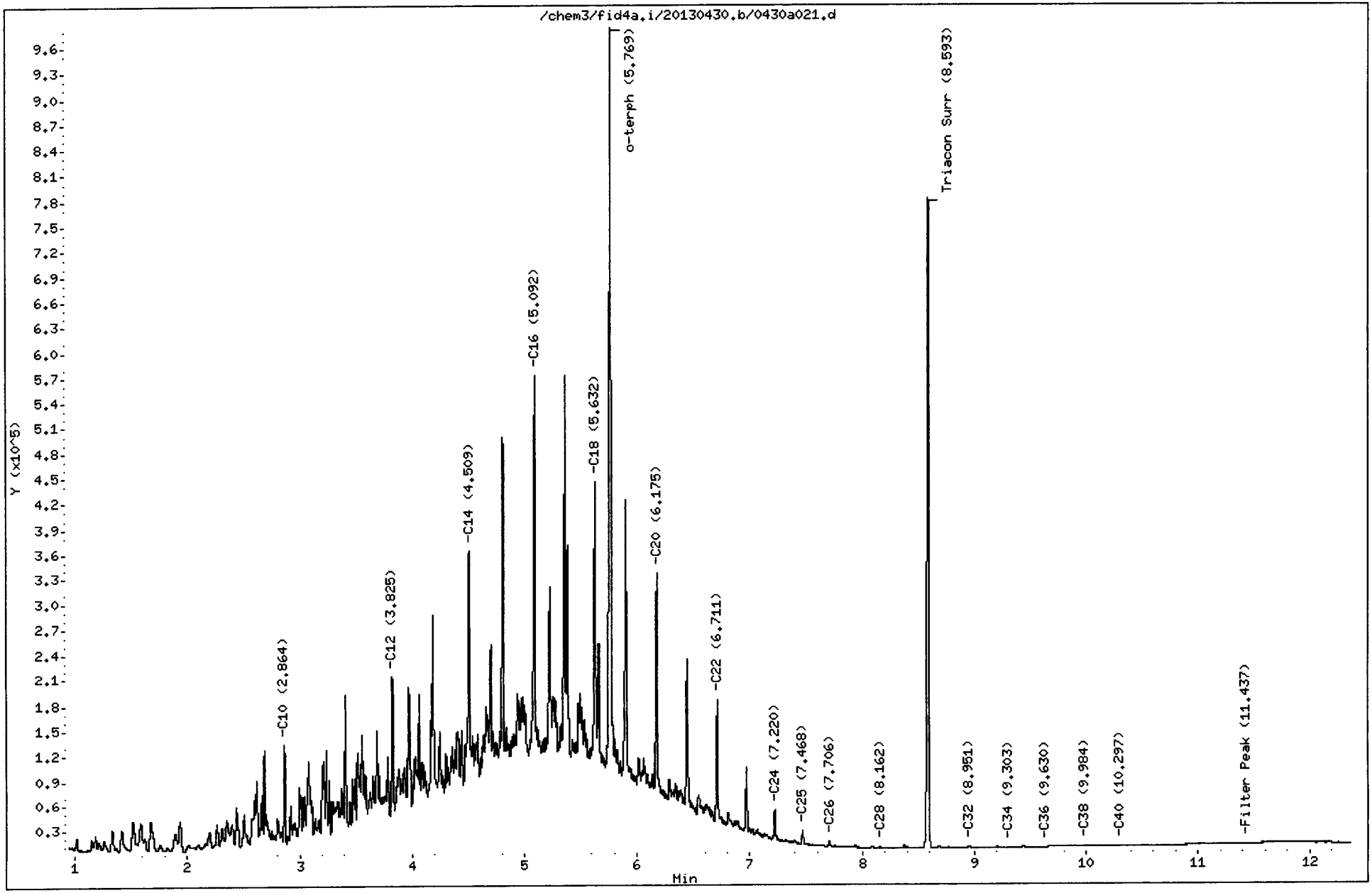
Instrument: fid4a.i

Operator: JR/VTS/JW

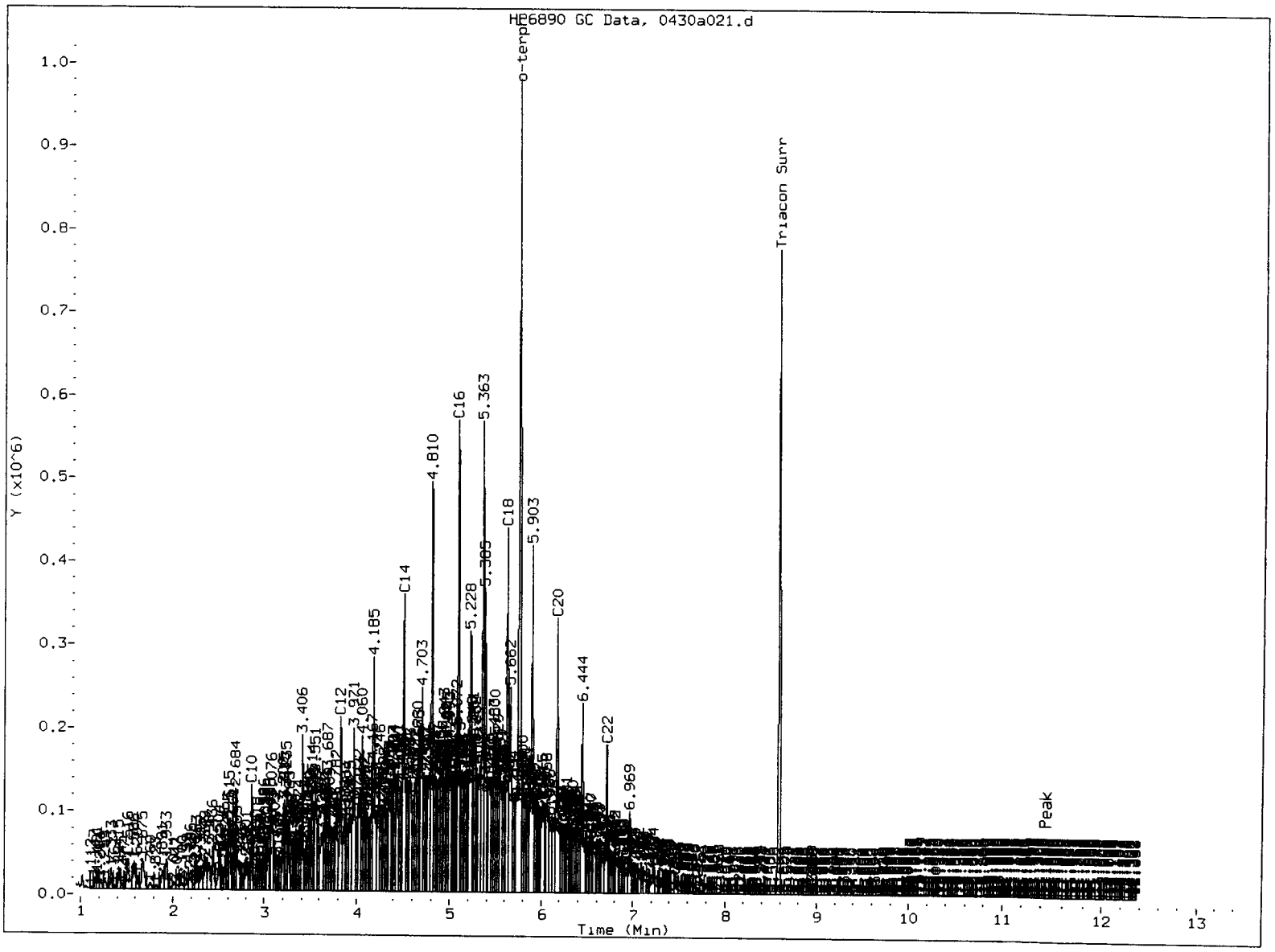
Column phase: RTX-1

Column diameter: 0.25

WN31 : 02013



FID:4A-2C/RTX-1 WN27LCSS1 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a022.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN27A
Client ID: CG-MH-010-20130423-
Injection: 30-APR-2013 16:49

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	68708	4.42
C8	----				WATPHD	(C12-C24)	3042092	209.59
C10	2.856	-0.004	487	453	WATPHM	(C24-C38)	10803438	794.14
C12	3.822	-0.002	625	796	AK102	(C10-C25)	3646056	211.80
C14	4.506	-0.001	1425	1247	AK103	(C25-C36)	9241632	1004.30
C16	5.088	0.000	4511	4614				
C18	5.622	-0.003	10768	17797				
C20	6.159	-0.007	17225	12951				
C22	6.697	-0.009	37927	62363	MIN.OIL	(C24-C38)	10803438	633.30
C24	7.225	0.005	55867	85155				
C25	7.456	-0.011	62994	48607				
C26	7.722	0.005	70891	75961				
C28	8.164	0.002	77715	49678				
C32	8.949	0.000	81037	106693				
C34	9.297	-0.005	66806	48991				
Filter Peak	11.448	0.002	6699	7436	CREOSOT	(C12-C22)	1722516	789.46 M
C36	9.633	-0.012	67727	131456				
C38	9.967	-0.009	48678	55639				
C40	10.303	0.004	22128	30128				
o-terph	5.758	-0.002	175089	139508				
Triacon Surr	8.589	0.009	164651	152880				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	139508	7.2	80.4 M
Triacontane	152880	8.4	93.4 M

JLO 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a022.d
Date : 30-APR-2013 16:49
Client ID: CG-MH-010-20130423-
Sample Info: WN27A,5

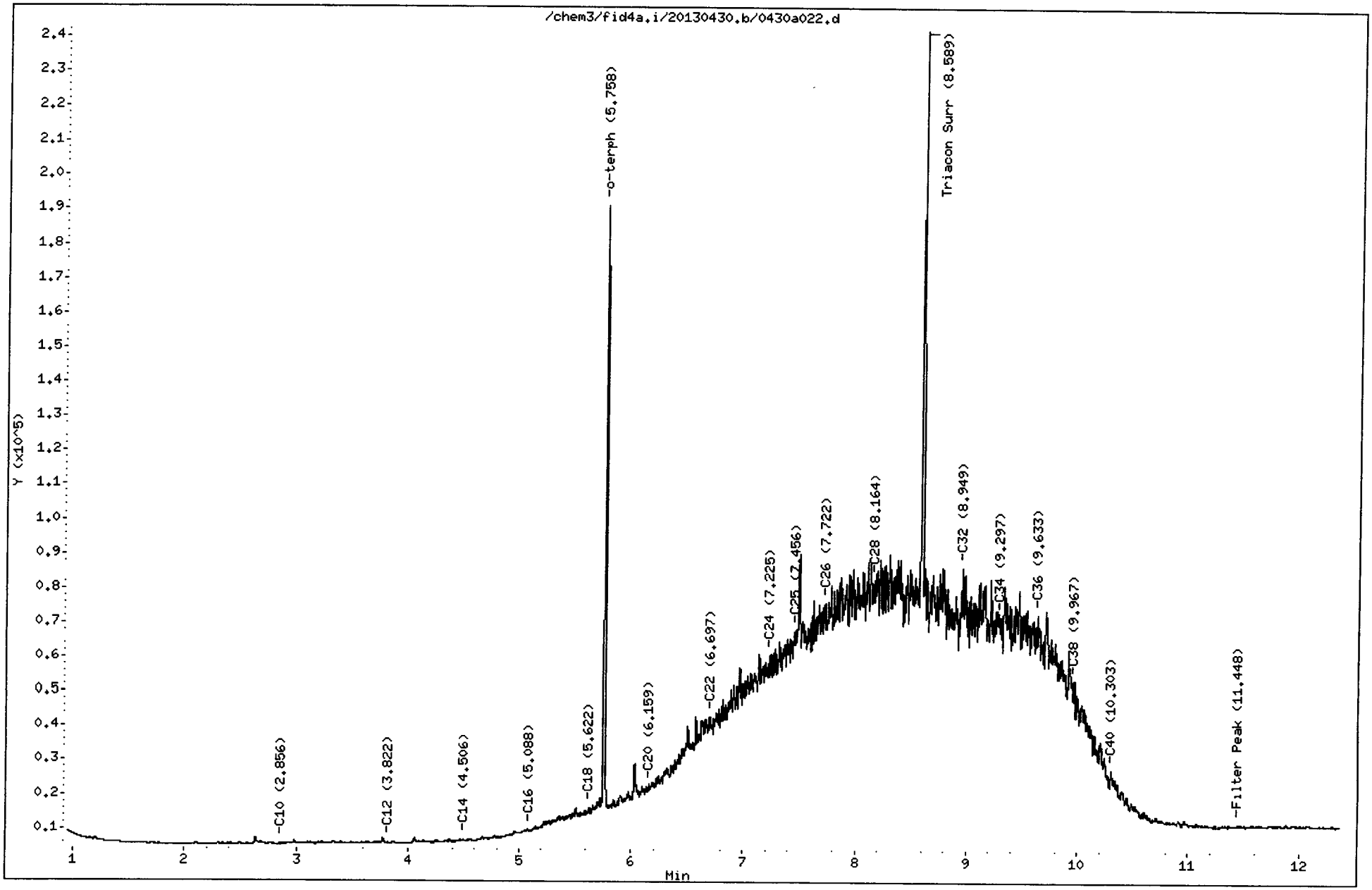
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

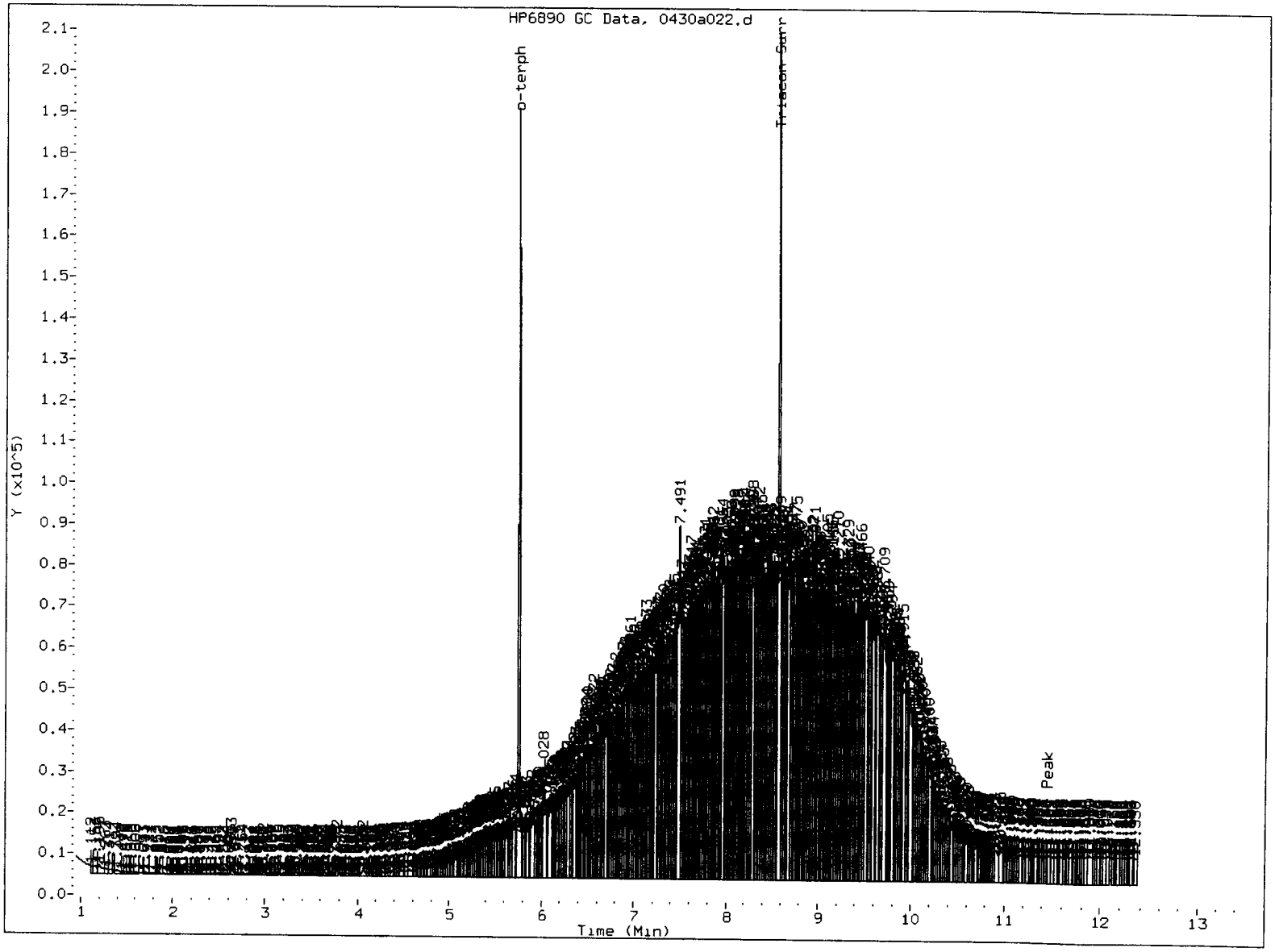
JW 5/2/13

WN31 : 022021



FID:4A-2C/RTX-1 WN27A

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a025.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: WN31A
Client ID: ES-TS-INF-20130424-
Injection: 30-APR-2013 17:50

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	521638	33.57
C8	----				WATPHD	(C12-C24)	13318311	917.58
C10	2.858	-0.001	2453	2490	WATPHM	(C24-C38)	32018844	2353.64
C12	3.823	-0.001	40161	40731	AK102	(C10-C25)	15162393	880.78
C14	4.506	-0.001	30621	36698	AK103	(C25-C36)	29851388	3243.98
C16	5.088	0.000	47299	56605				
C18	5.627	0.002	59808	102637				
C20	6.158	-0.008	57244	26760				
C22	6.701	-0.004	104508	74850	MIN.OIL	(C24-C38)	32018844	1876.95
C24	7.213	-0.007	181182	251550				
C25	7.477	0.010	206560	106505				
C26	7.713	-0.004	228086	117818				
C28	8.158	-0.003	275936	163745				
C32	8.946	-0.002	234130	121712				
C34	9.313	0.012	158877	49939				
Filter Peak	11.437	-0.009	11559	23589	CREOSOT	(C12-C22)	9114480	4177.31 M
C36	9.650	0.006	84070	100109				
C38	9.995	0.019	24845	13974				
C40	10.303	0.005	15621	10351				
o-terph	5.761	0.002	176779	161302				
Triacon Surr	8.602	0.022	183585	179875				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	161302	8.4	92.9 M
Triacontane	179875	9.9	109.8 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a025.d
Date : 30-APR-2013 17:50
Client ID: ES-TS-INF-20130424-
Sample Info: WN31A,5

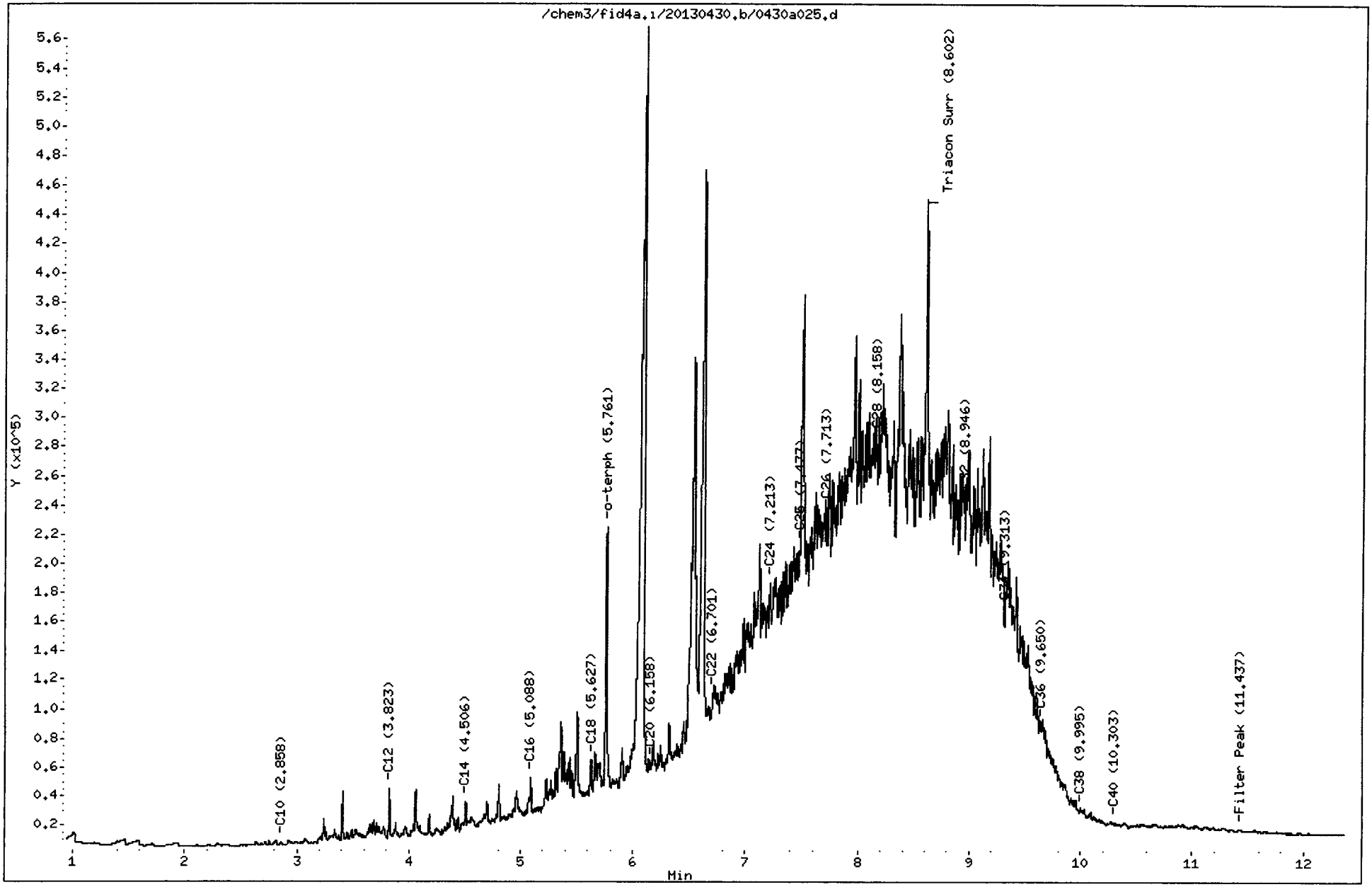
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

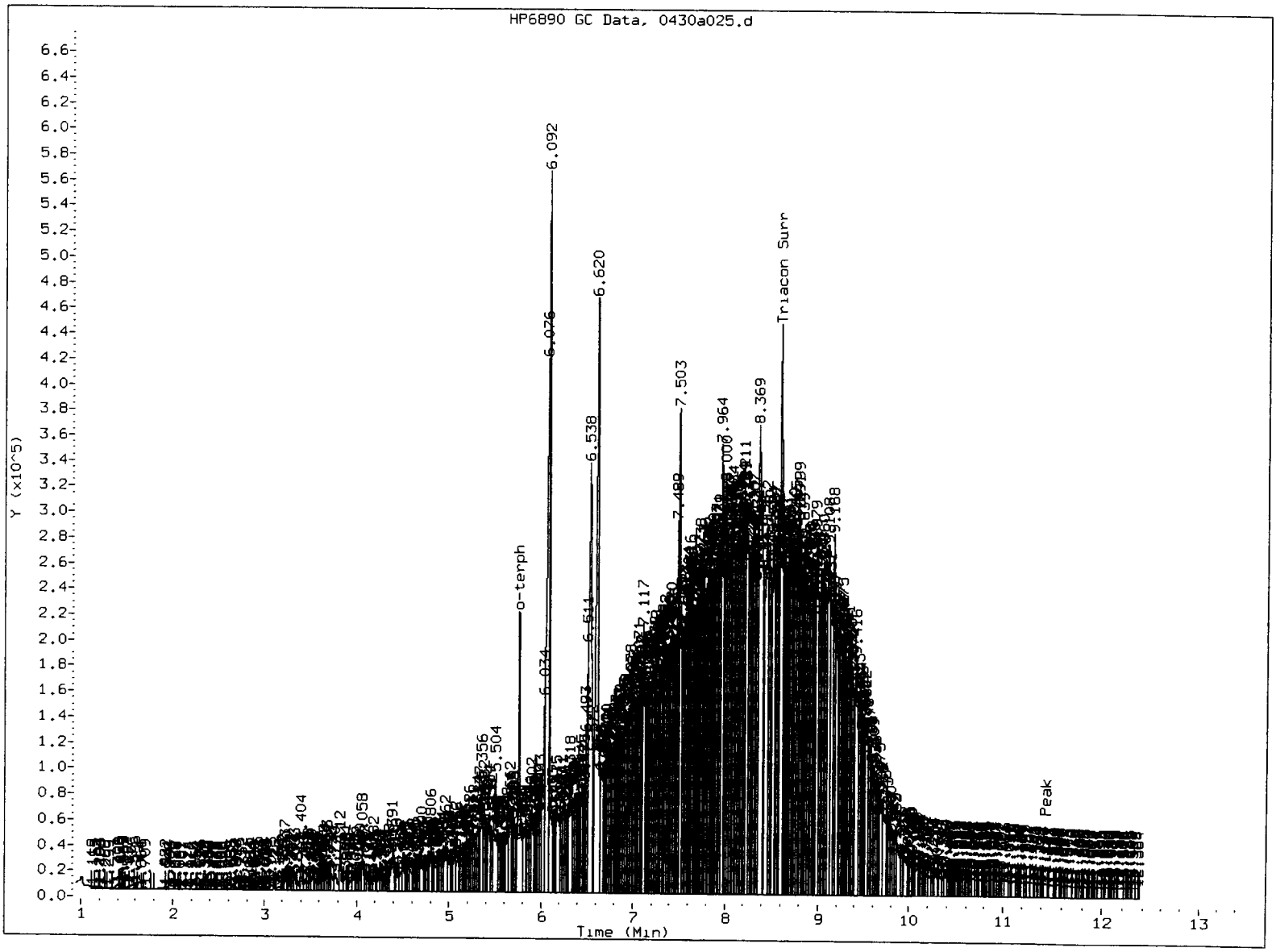
JC 5/2/13

WN31 : 020214



FID:4A-2C/RTX-1 WN31A

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a026.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: DIESEL#3
Client ID:
Injection: 30-APR-2013 18:11

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	942328	60.64
C8	----				WATPHD	(C12-C24)	3776818	260.21
C10	2.858	-0.002	23882	19614	WATPHM	(C24-C38)	173236	12.73
C12	3.823	-0.001	42404	42361	AK102	(C10-C25)	4446816	258.31
C14	4.505	-0.002	77569	68403	AK103	(C25-C36)	120294	13.07
C16	5.088	0.000	112980	91395				
C18	5.627	0.003	87456	105230				
C20	6.172	0.006	61085	68576				
C22	6.709	0.003	32406	40791	MIN.OIL	(C24-C38)	173236	10.16
C24	7.223	0.003	8602	10245				
C25	7.470	0.004	3790	6914				
C26	7.711	-0.005	1772	2055				
C28	8.169	0.008	646	1046				
C32	8.951	0.003	1109	3323				
C34	9.307	0.005	1281	610				
Filter Peak	11.450	0.004	6343	2907	CREOSOT	(C12-C22)	3640759	1668.62 M
C36	9.631	-0.013	1656	3290				
C38	9.982	0.006	2144	1358				
C40	10.307	0.009	3844	4278				
o-terph	5.770	0.011	1024888	947006				
Triacon Surr	8.580	0.000	1085	1836				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	947006	49.1	109.1 M
Triacontane	1836	0.1	0.2

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130430.b/0430a026.d
Date : 30-APR-2013 18:11
Client ID:
Sample Info: DIESEL#3

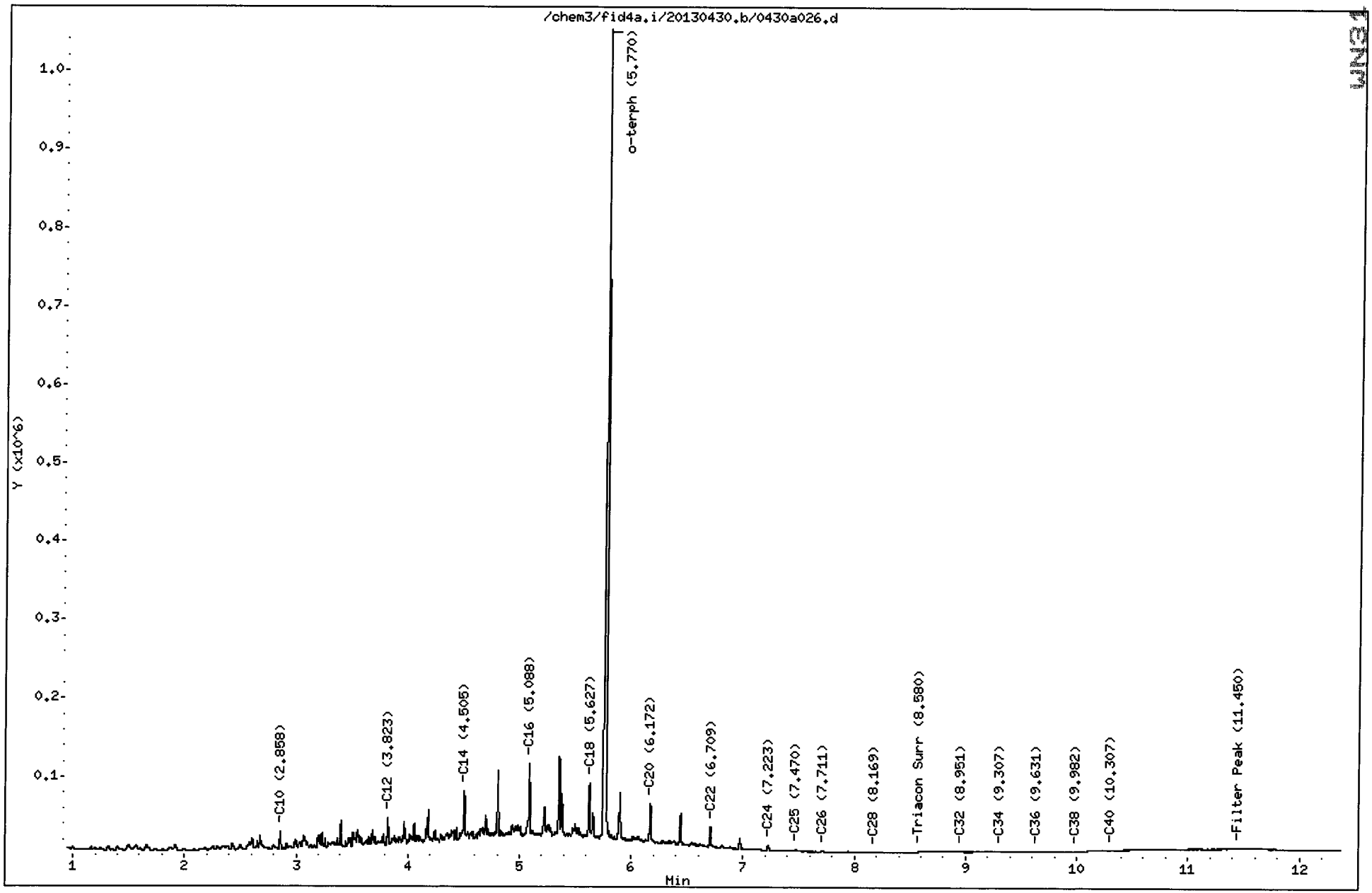
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

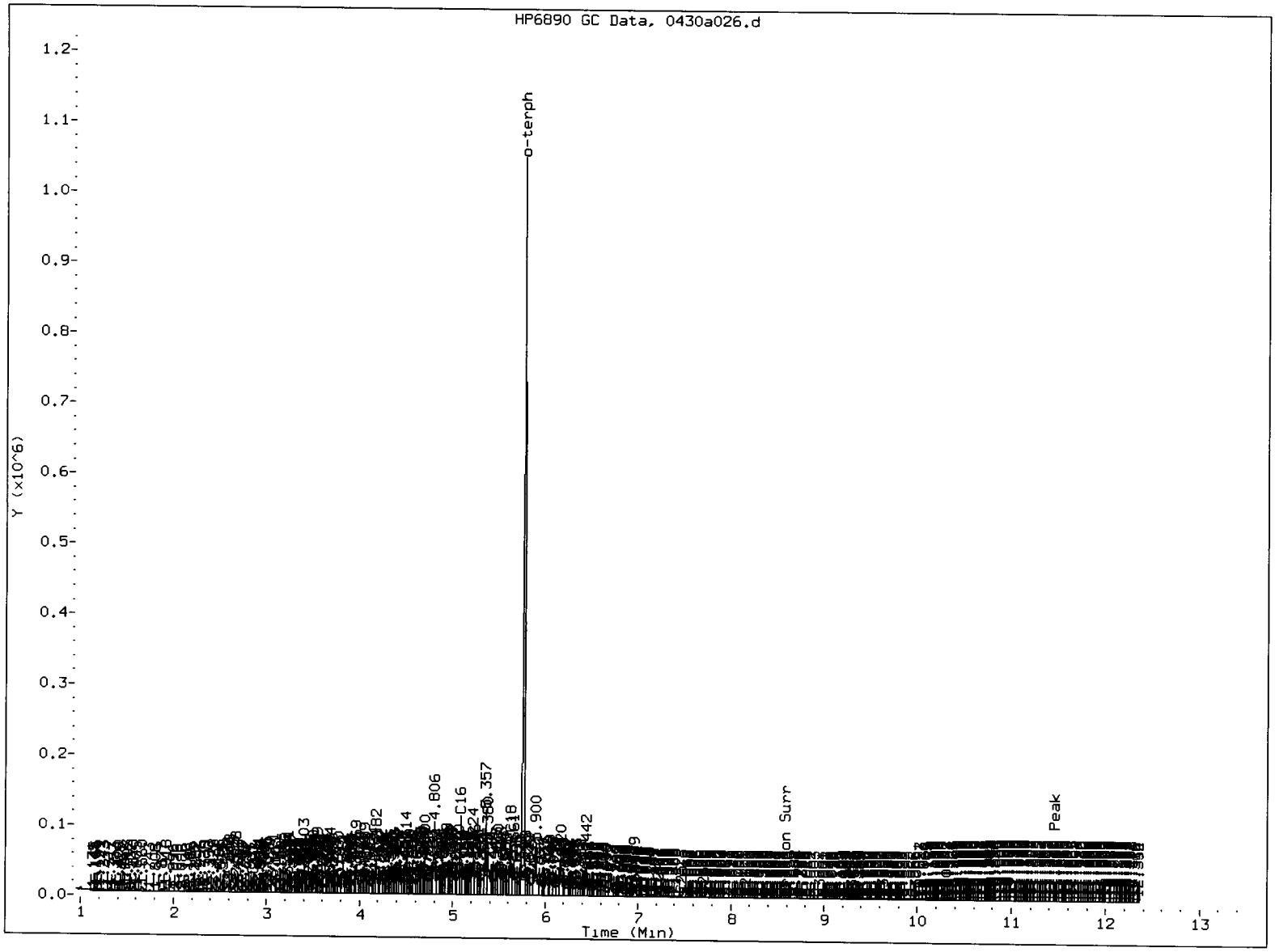
JW 5/2/13

WN31 : 02027



FID:4A-2C/RTX-1 DIESEL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/2/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130430.b/0430a027.d
Method: /chem3/fid4a.i/20130430.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/01/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: MOIL#3
Client ID:
Injection: 30-APR-2013 18:32

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	30235	1.95
C8	----				WATPHD	(C12-C24)	641539	44.20
C10	2.859	-0.001	303	571	WATPHM	(C24-C38)	6475200	475.98
C12	3.827	0.003	158	178	AK102	(C10-C25)	872367	50.68
C14	4.507	0.000	216	287	AK103	(C25-C36)	5605647	609.17
C16	5.087	-0.001	269	288				
C18	5.627	0.003	617	1260				
C20	6.173	0.007	1723	2970				
C22	6.704	-0.001	6343	4695	MIN.OIL	(C24-C38)	6475200	379.58
C24	7.229	0.010	22915	20558				
C25	7.467	0.000	30715	28333				
C26	7.714	-0.003	35204	40694				
C28	8.177	0.015	40540	33456				
C32	8.941	-0.008	55137	59710				
C34	9.300	-0.002	54174	51172				
Filter Peak	11.441	-0.005	5840	4167	CREOSOT	(C12-C22)	179871	82.44 M
C36	9.644	0.000	43210	44642				
C38	9.966	-0.010	34793	64323				
C40	10.286	-0.012	15106	22360				
o-terph	5.758	-0.001	1104	2101				
Triacon Surr	8.613	0.033	552246	902281				

Range Times: NW Diesel(3.824 - 7.220) AK102(2.86 - 7.47) Jet A(2.86 - 5.62)
NW M.Oil(7.22 - 9.98) AK103(7.47 - 9.64) OR Diesel(2.86 - 8.16)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2101	0.1	0.2
Triacontane	902281	49.6	110.2 M

JW 5/2/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

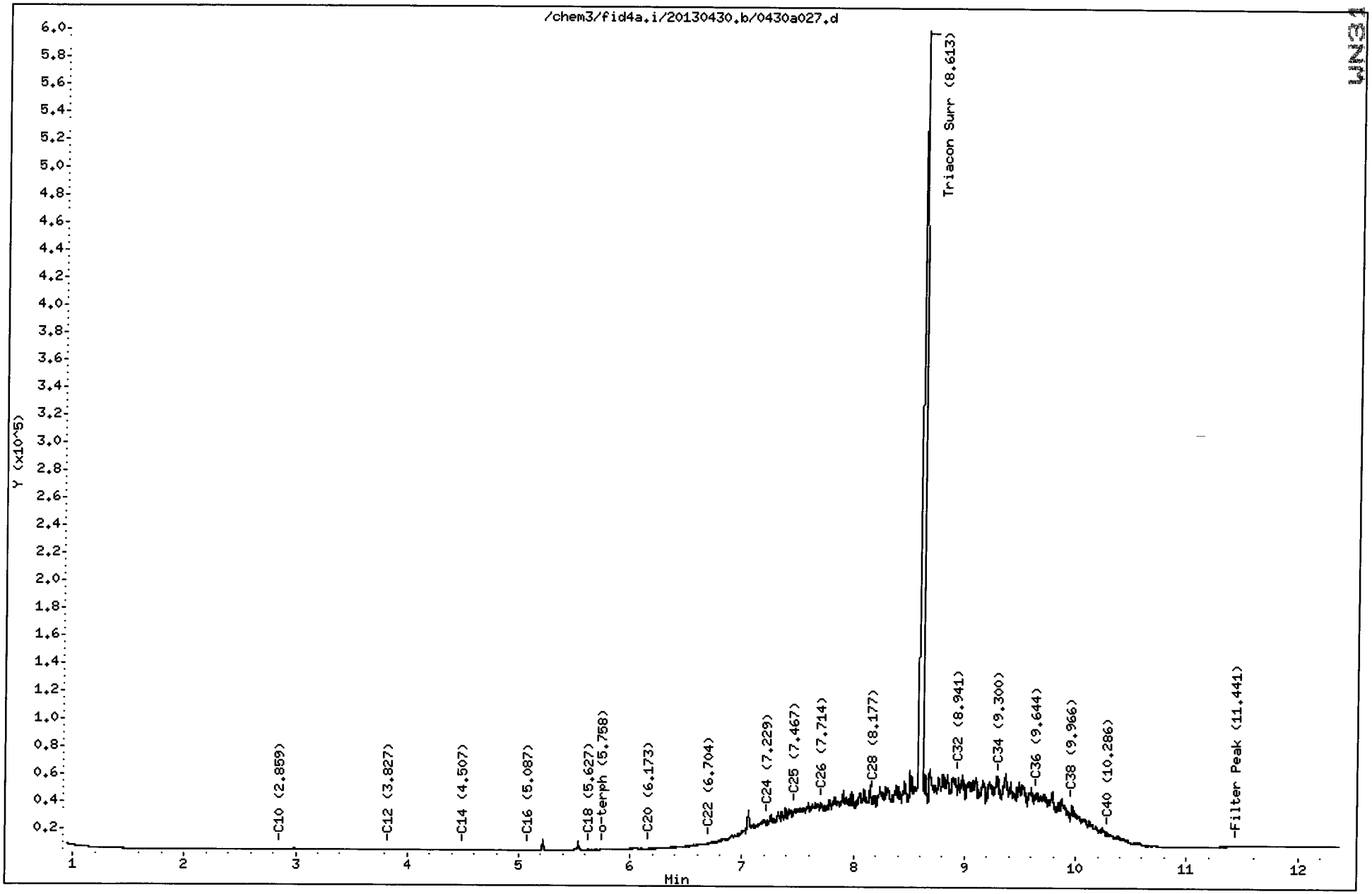
Data File: /chem3/fid4a.i/20130430.b/0430a027.d
Date : 30-APR-2013 18:32
Client ID:
Sample Info: MOIL#3

Column phase: RTX-1

Instrument: fid4a.i

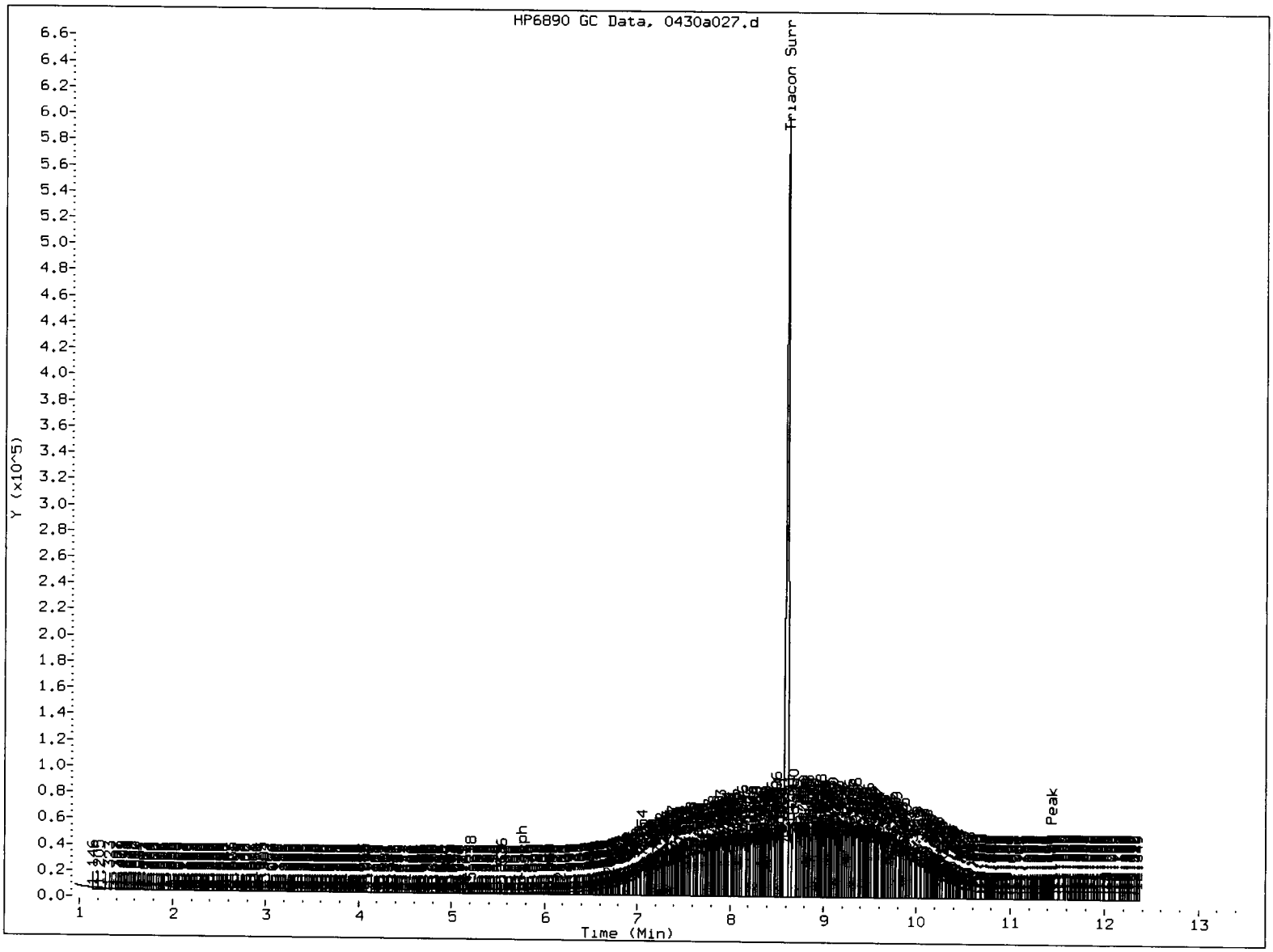
Operator: JR/VTS/JW
Column diameter: 0.25

JW 5/2/13



FID:4A-2C/RTX-1 MOIL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 5/2/13

TPHG Raw Data
Preparation Log

ARI Job ID: WN31, WN35

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
WN31	SAIC	4/25/13	N/A	[illegible]

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	
1	WN31A	1	—	✓	PE1695	34.27	28.200	6.07	5mL	900µl	
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22										4/25/13	
23											
				Balance ID:		40050016 PT120					

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WN31, WN35

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	VW2541	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	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD	
	0.000e+00 Level 7	Level 8							
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575			
	561	509					560	9.173	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
9 BENZENE	1572	1618	1515	1498	1392	1352	1307	1232	1436	9.456	
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
12 Toluene	1464	1522	1397	1472	1356	1326	1283	1207	1378	7.690	
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
14 ETHYLBENZENE	132	126	121	118	109	107	103	95.88000	114	10.830	
15 M/P-XYLENE	1612	1580	1476	1417	1290	1260	1226	1156	1377	12.313	
16 O-XYLENE	1504	1538	1492	1414	1330	1289	1249	1171	1373	9.739	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	___ RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

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:

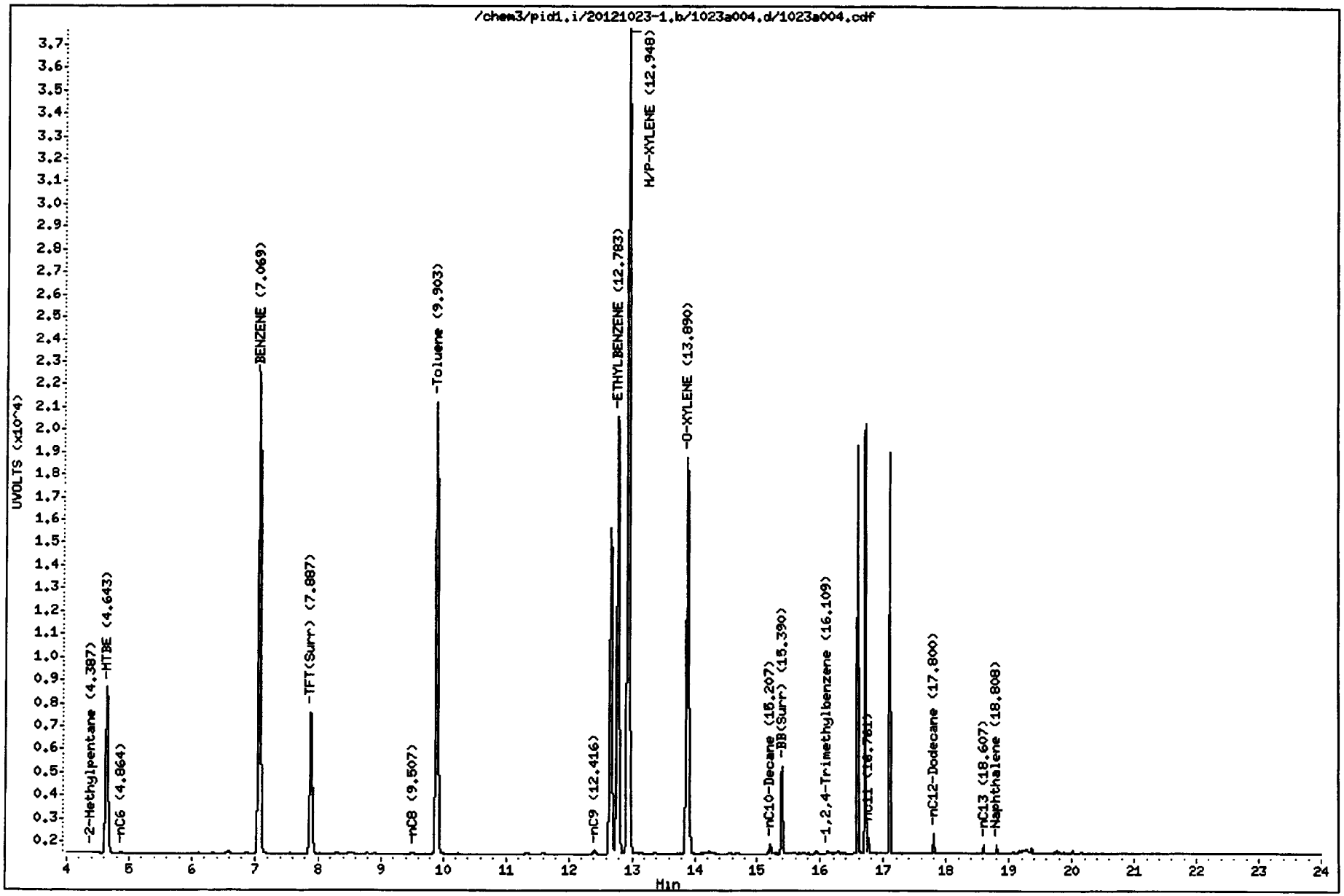
Sample Info: B 200

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:

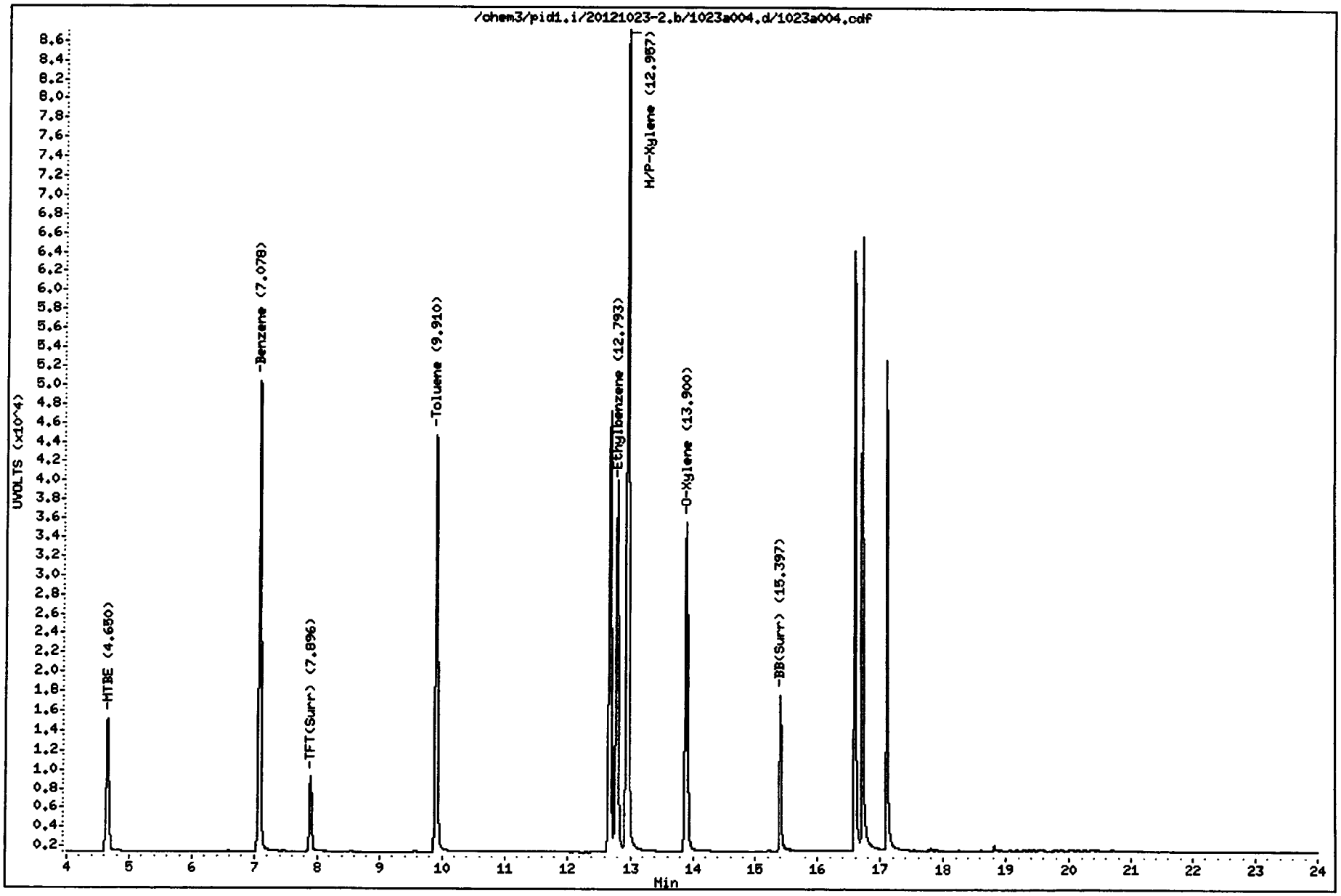
Sample Info: B 200

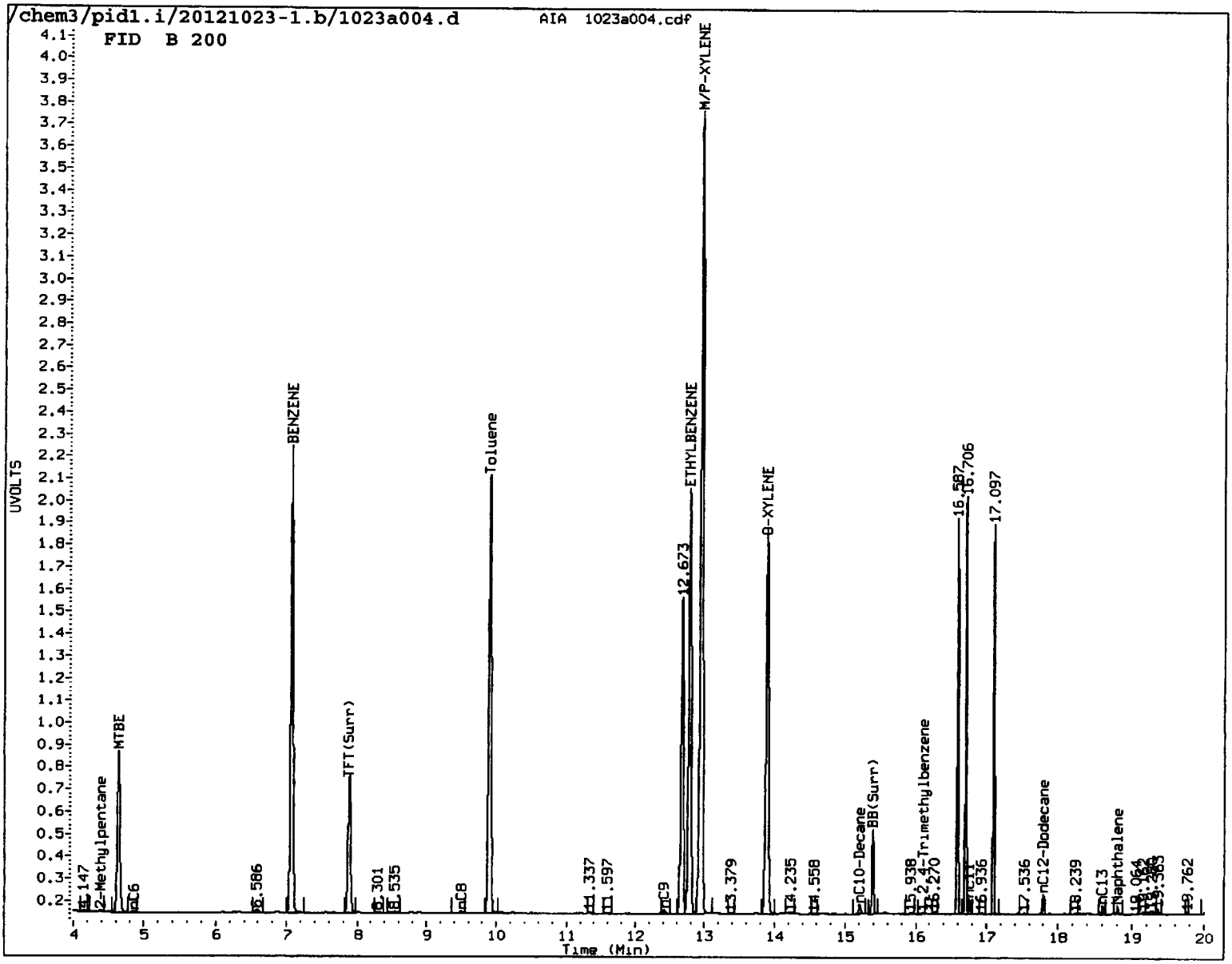
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



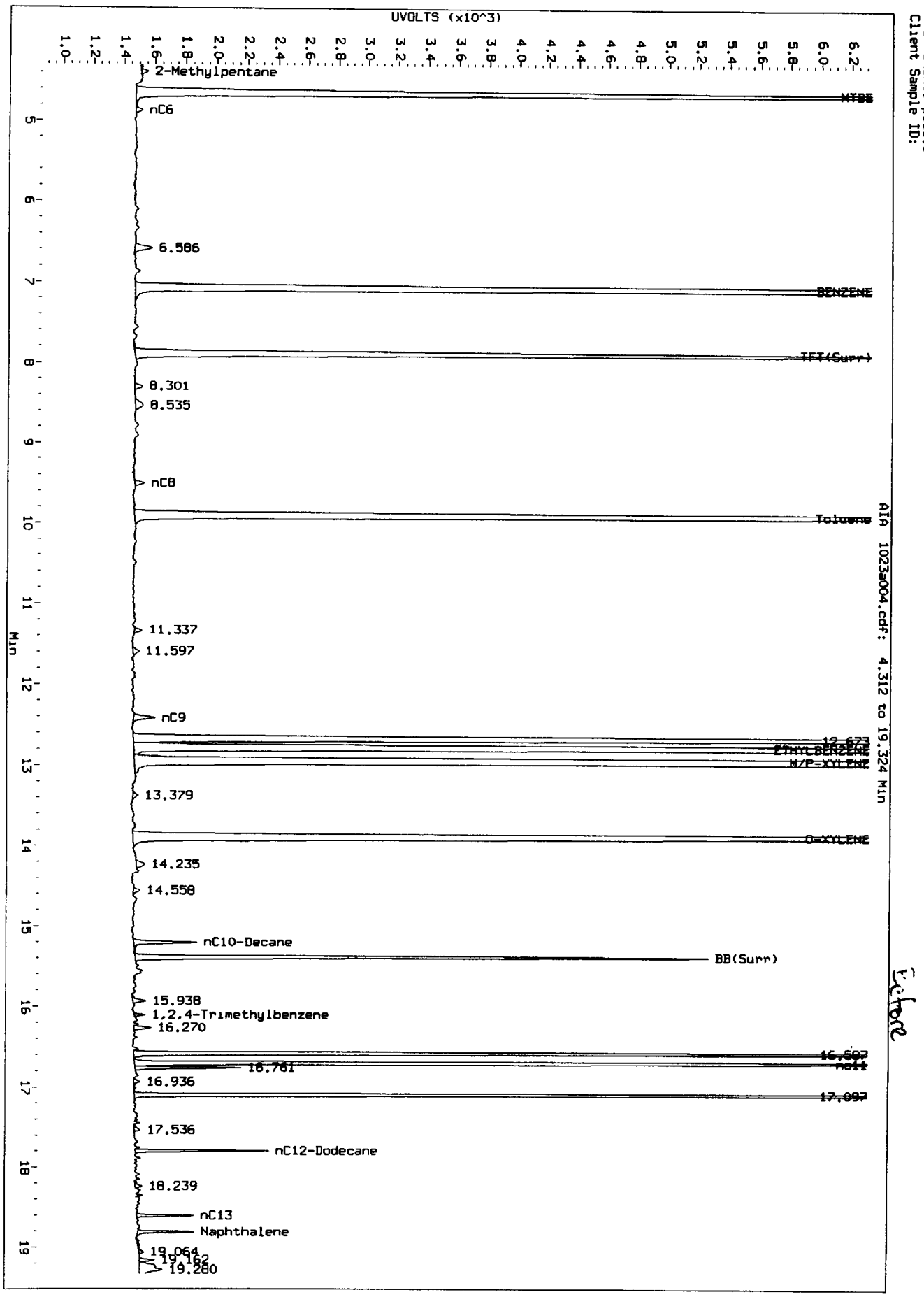


MANUAL INTEGRATION

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

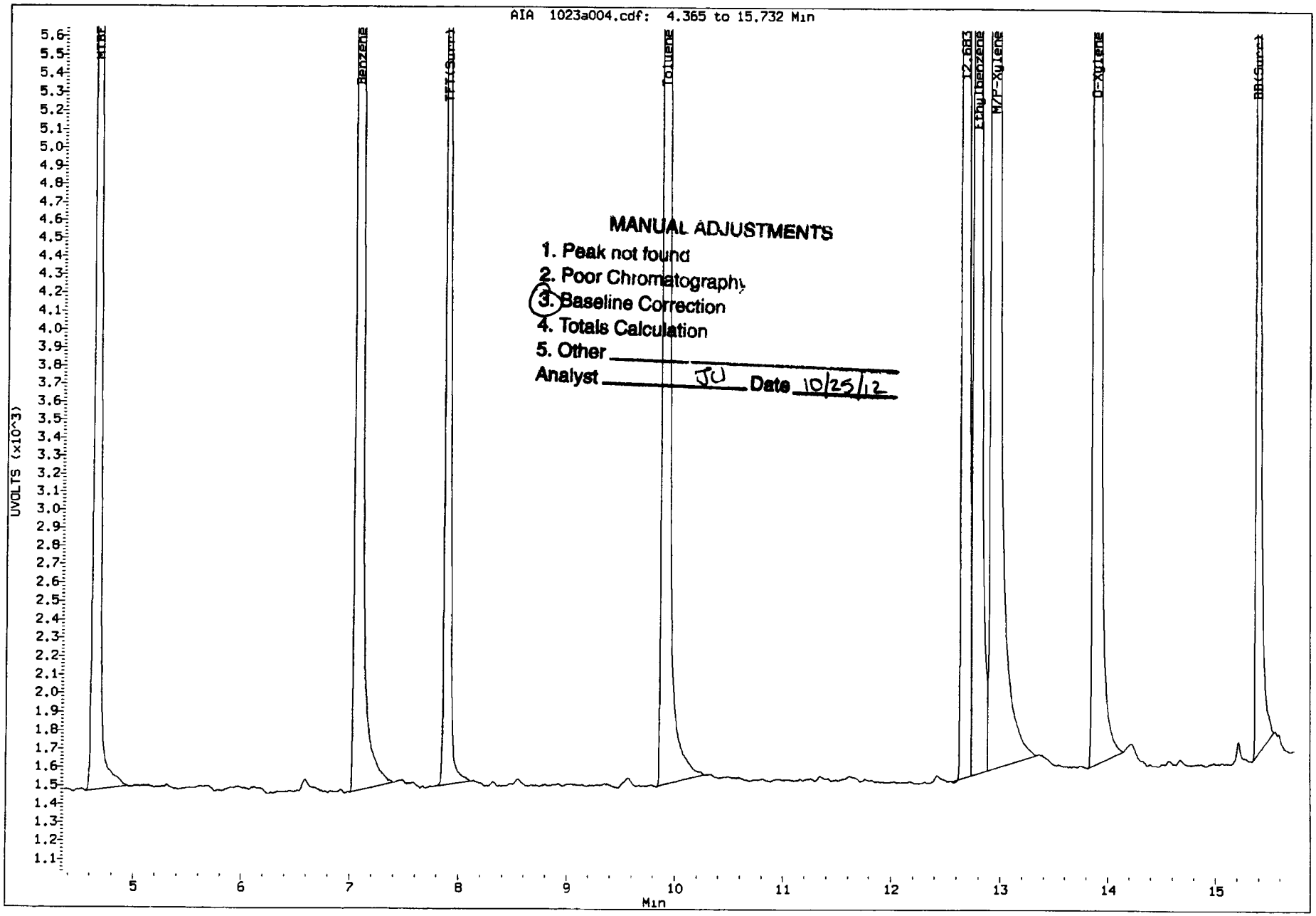
5. Other _____

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:
UVOLTS (x10^3)
Min
AIA 1023a004.cdf: 4.312 to 19.324 Min
2-Methylpentane
nC6
6.586
BENZENE
8.301
8.535
nC8
Toluene
11.337
11.597
nC9
ETHYLBENZENE
M/P-XYLENE
13.379
O-XYLENE
14.235
14.558
nC10-Decane
BB(Surr)
15.938
1,2,4-Trimethylbenzene
16.270
16.761
16.936
17.536
nC12-Dodecane
18.239
nC13
Naphthalene
19.064
19.162
19.280

Before

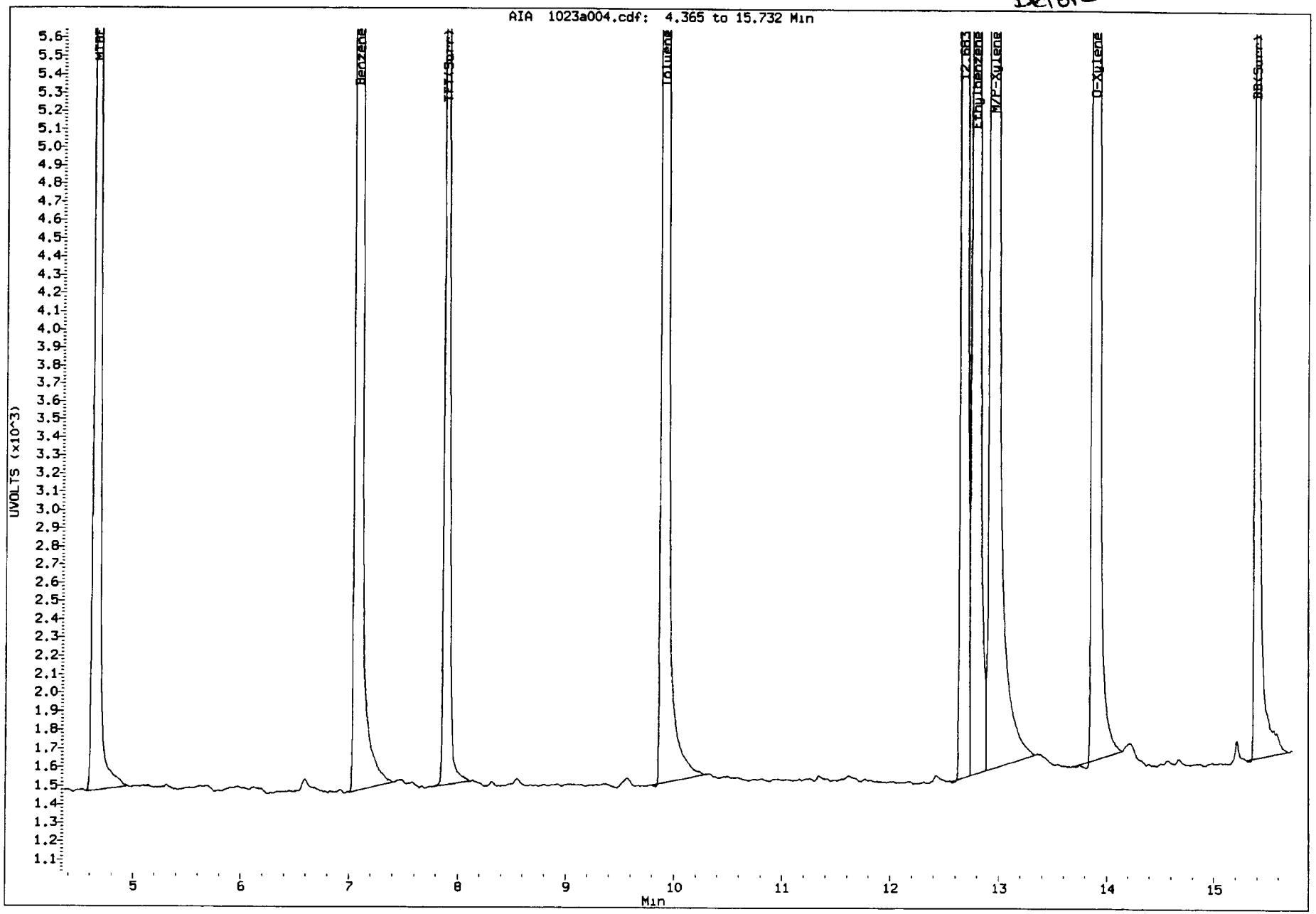
Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



JAN31 '13 02:18

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

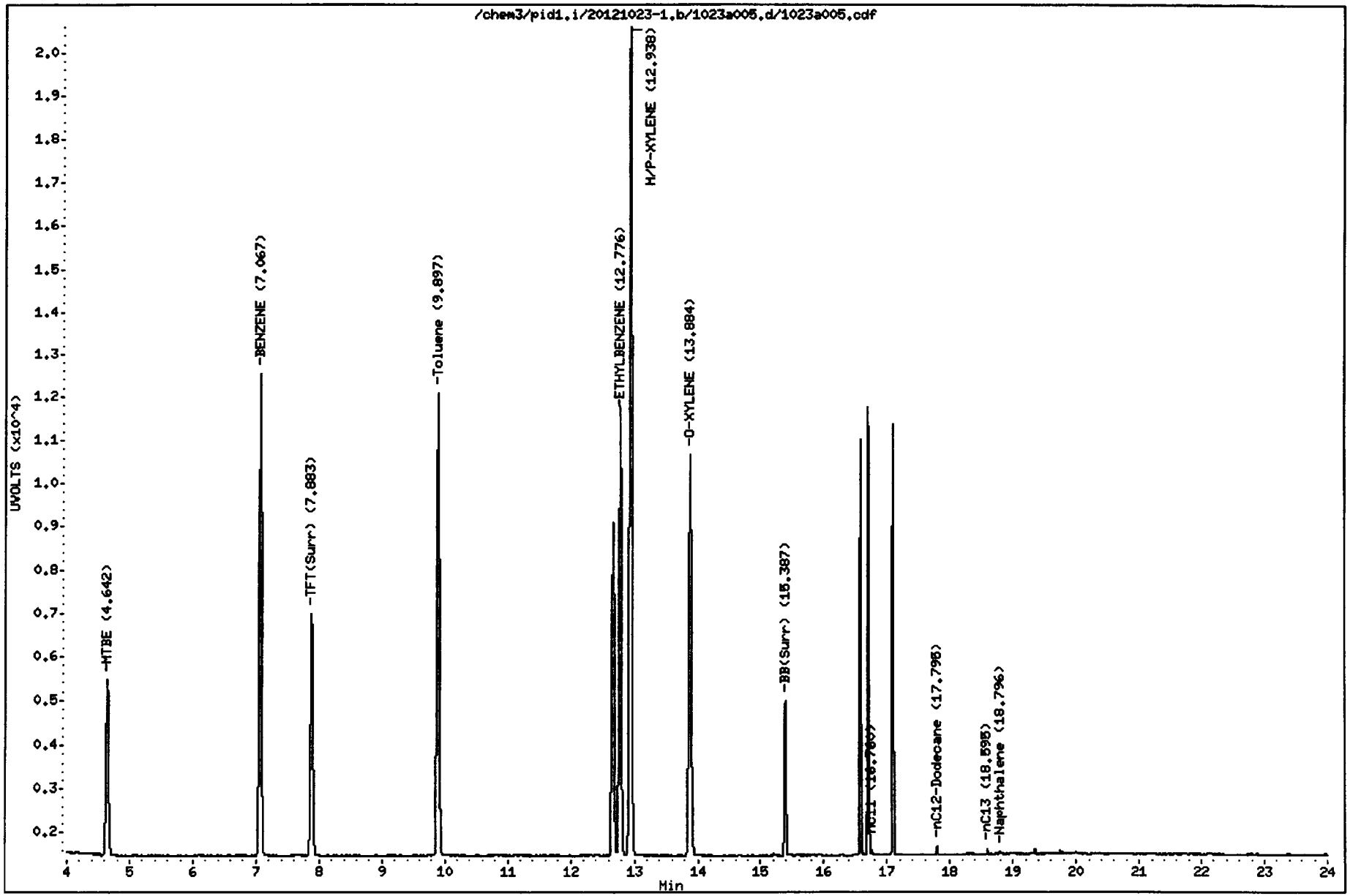
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UN31 : 02051



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

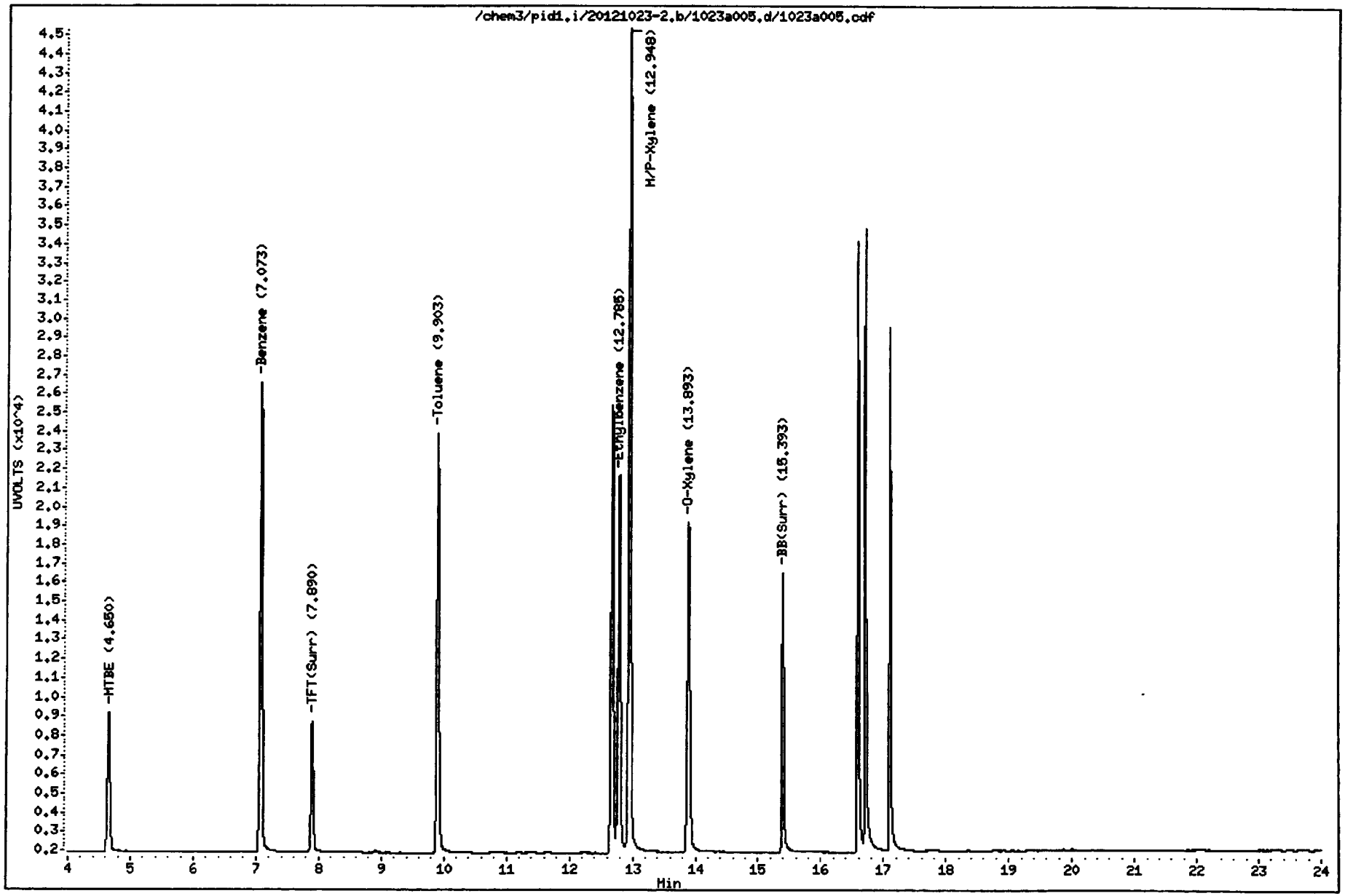
Sample Info: B 100

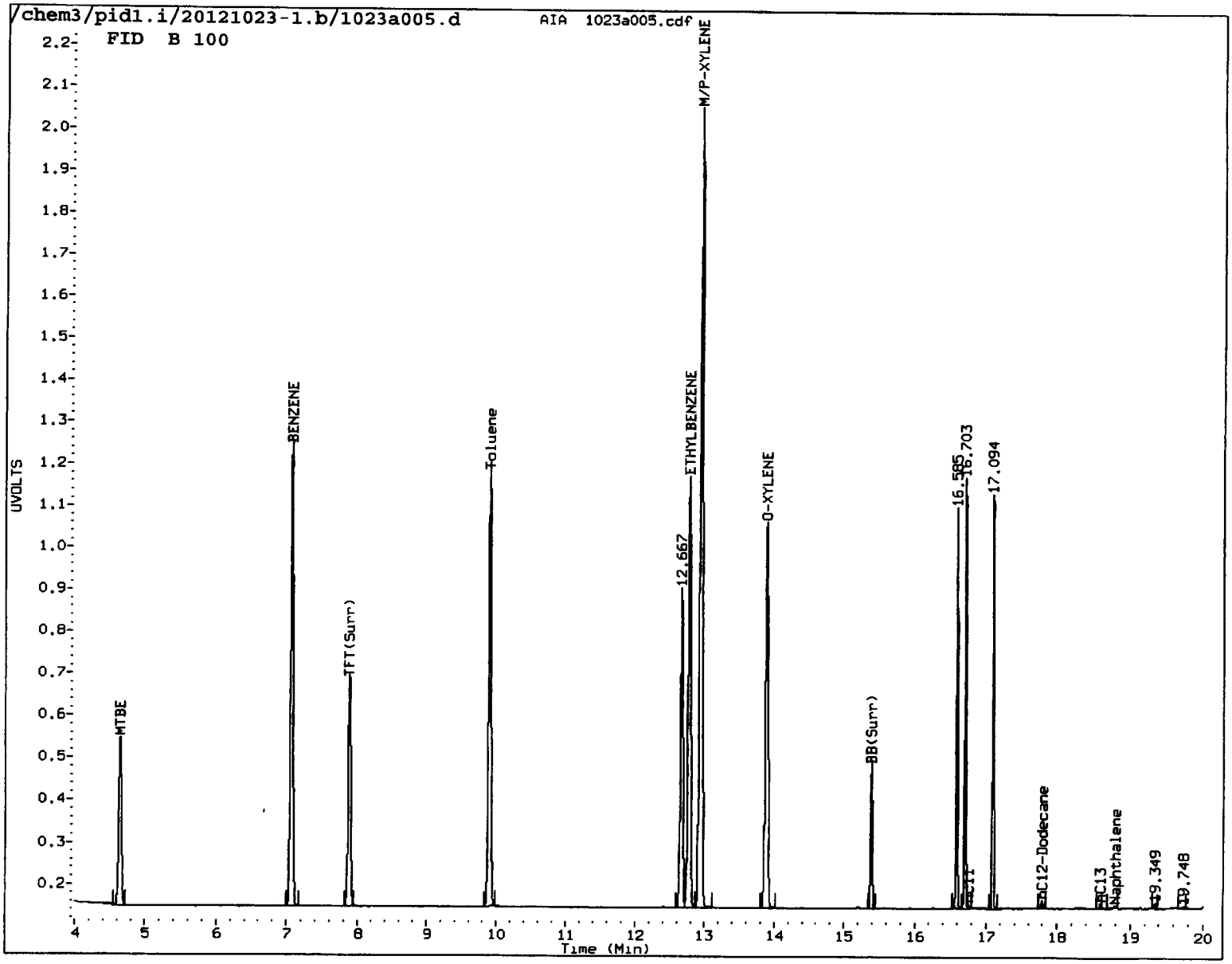
Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18





MANUAL INTEGRATION

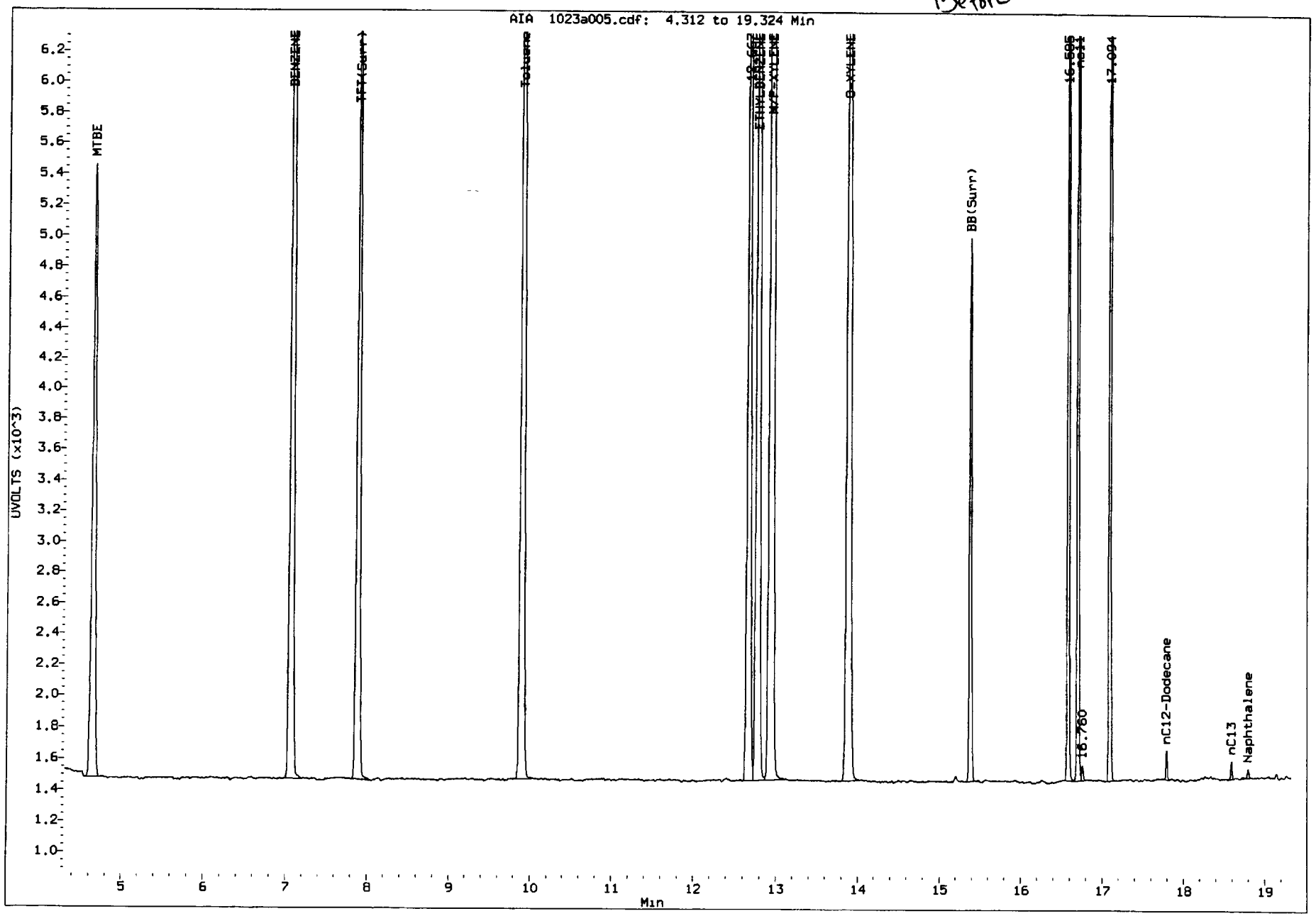
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

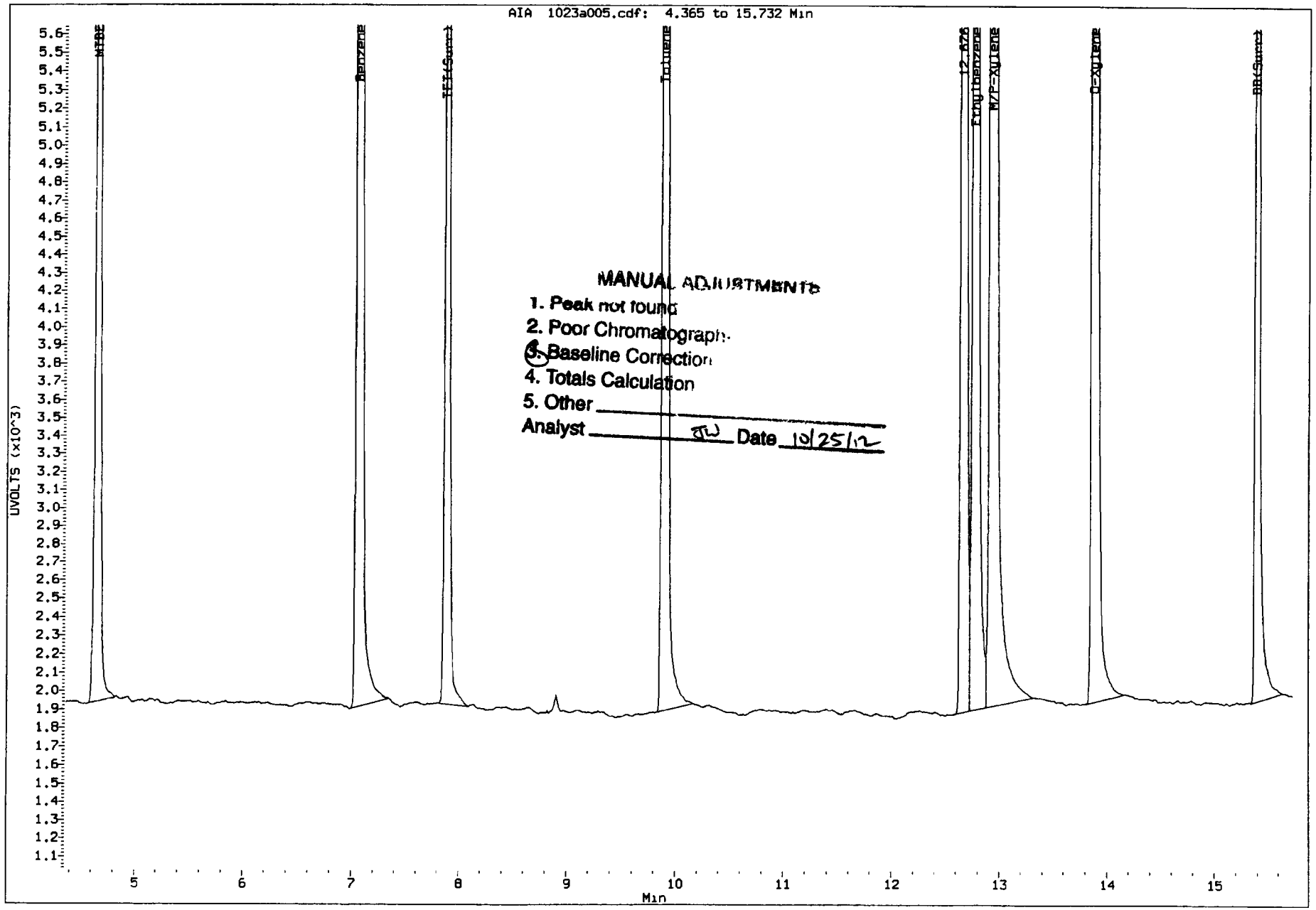
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

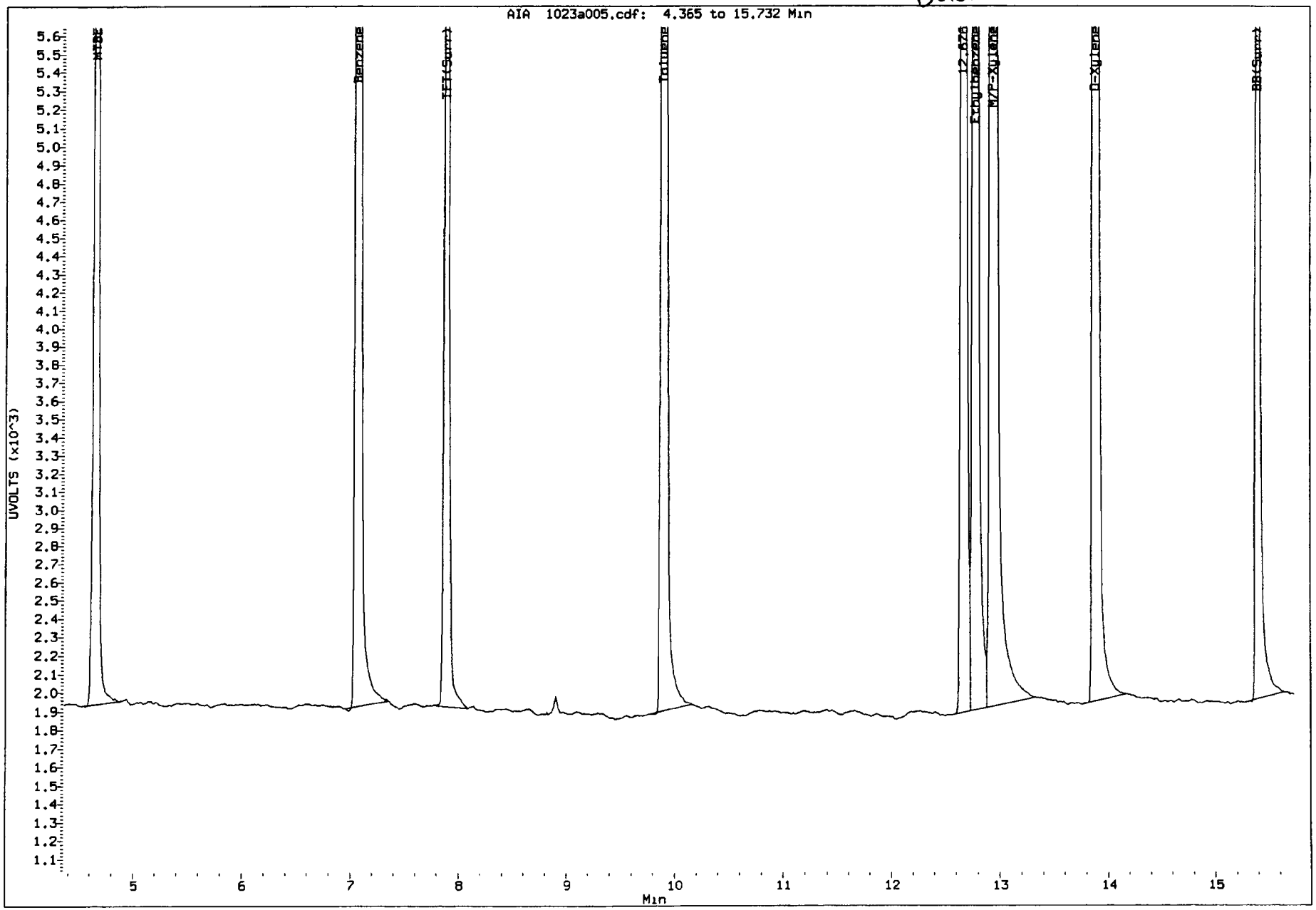


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



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)

JW 10/25/12

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

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:

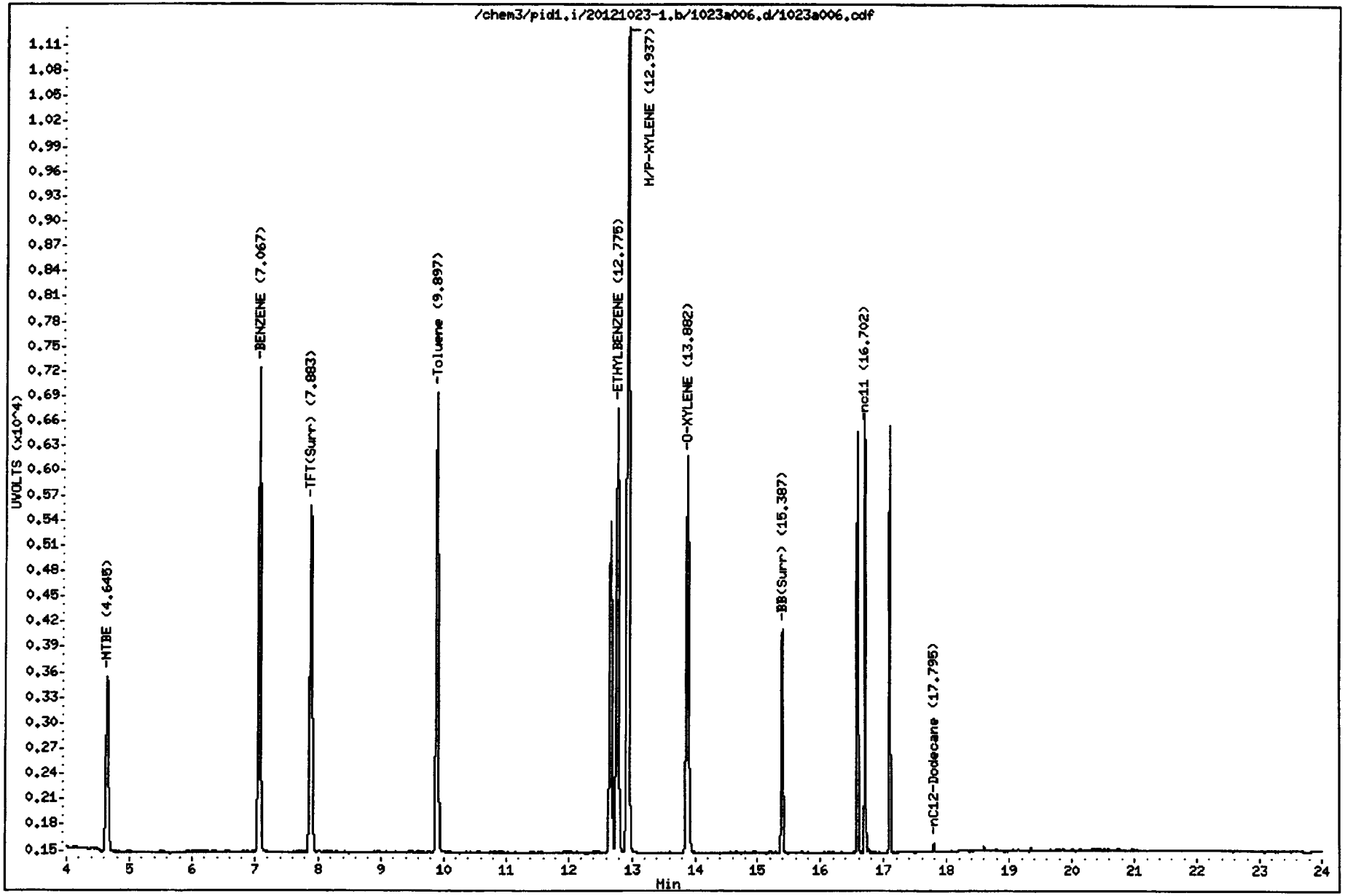
Sample Info: B 50

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:

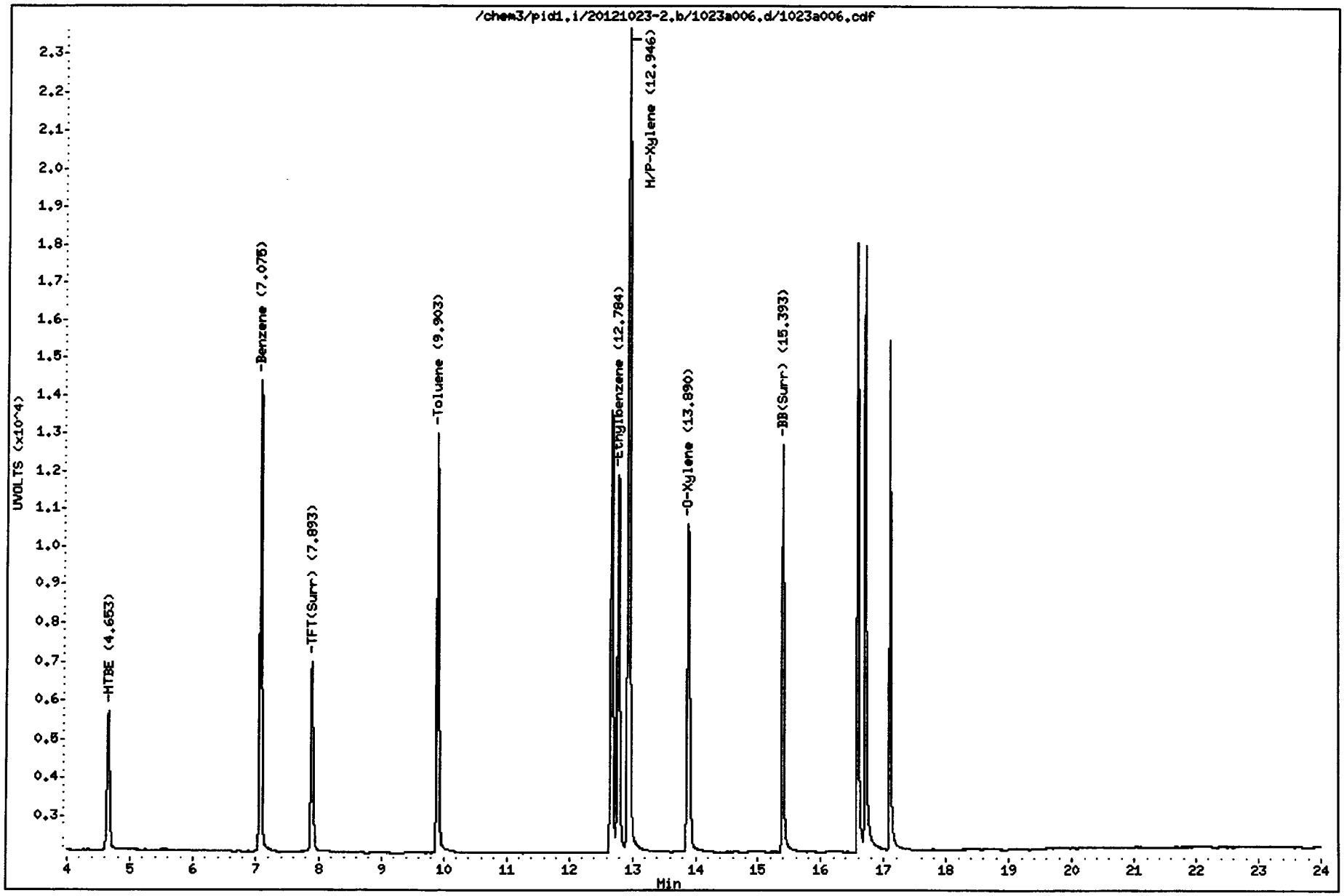
Sample Info: B 50

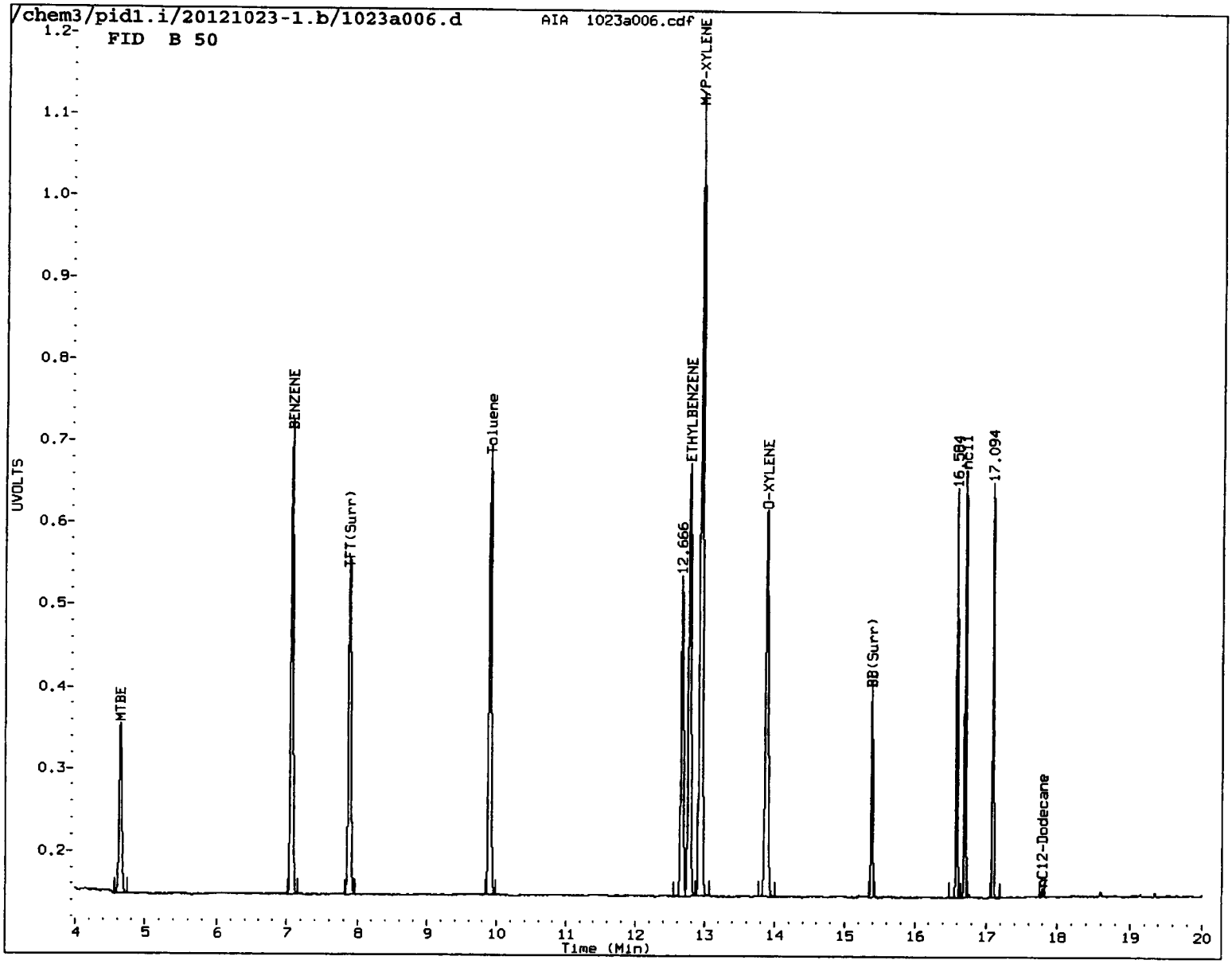
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

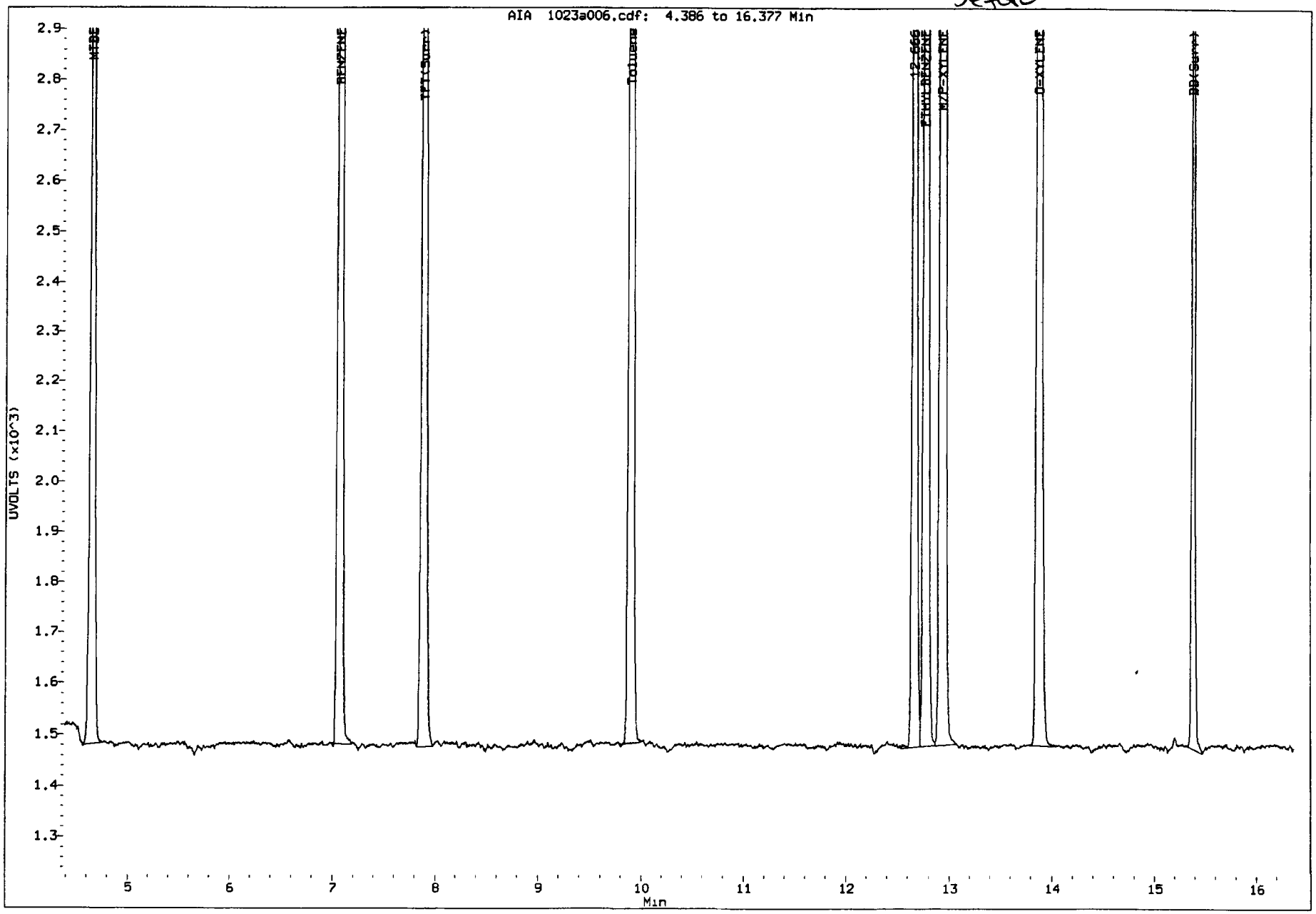
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

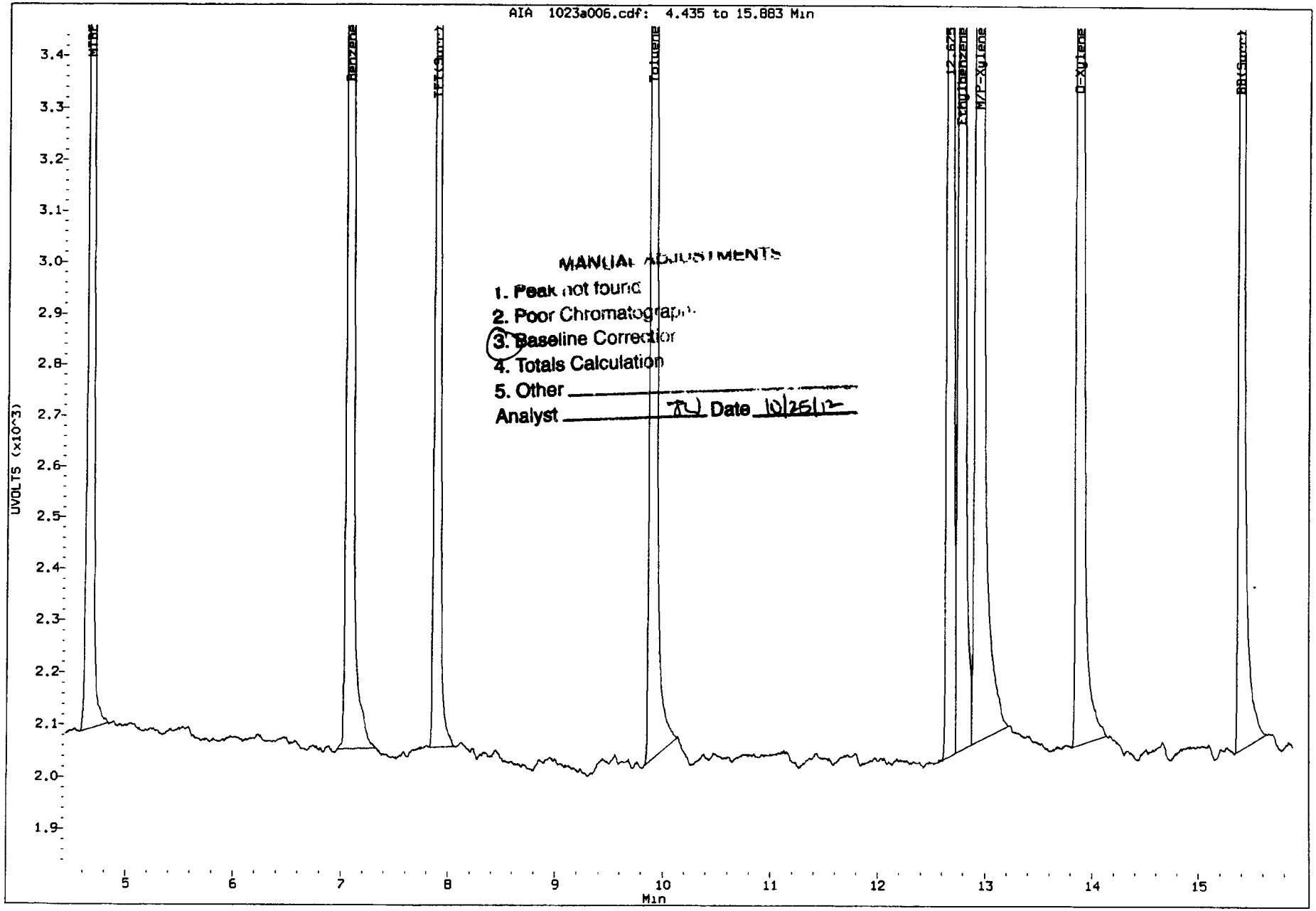
Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



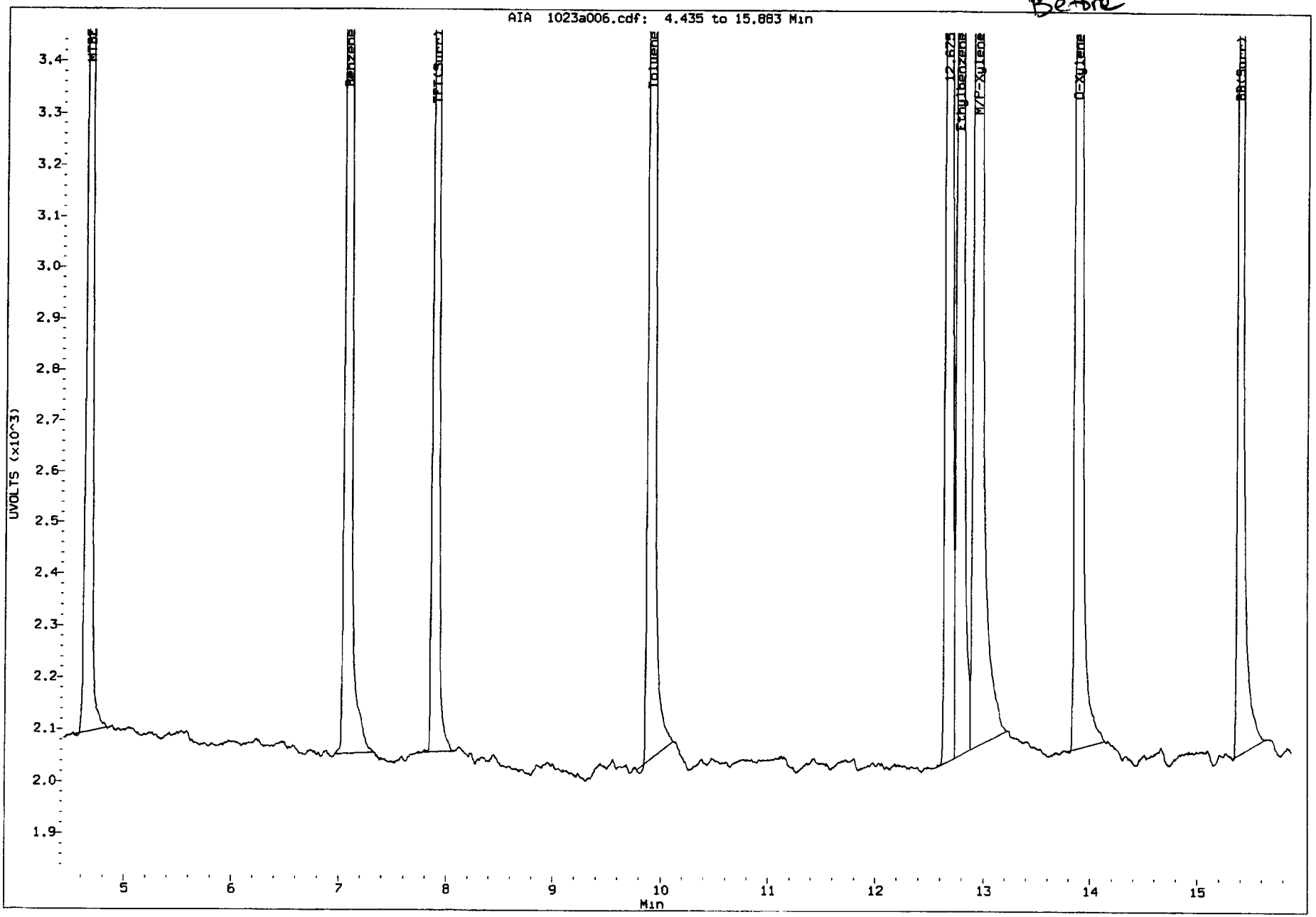
WN31 : 022061

Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

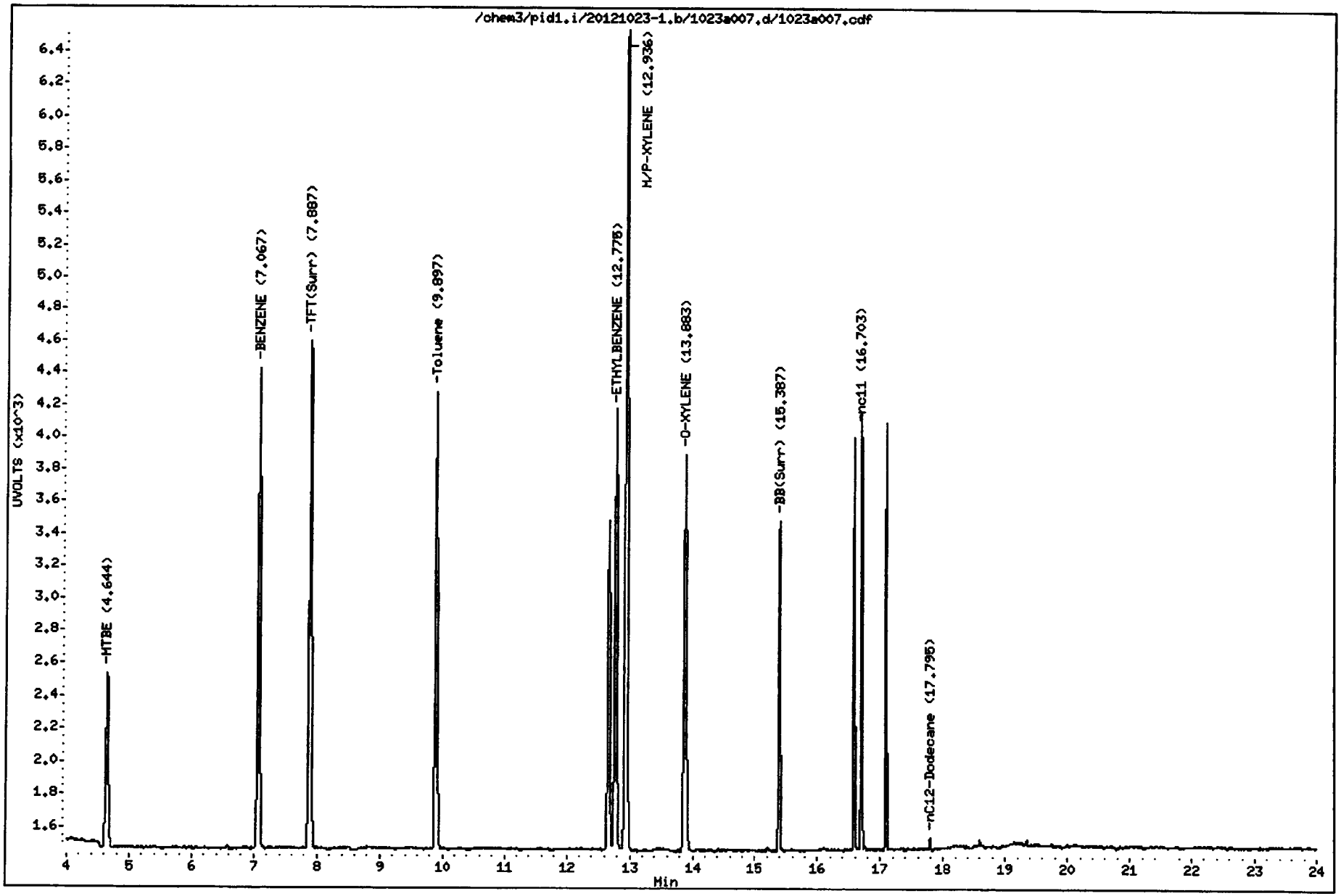
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18

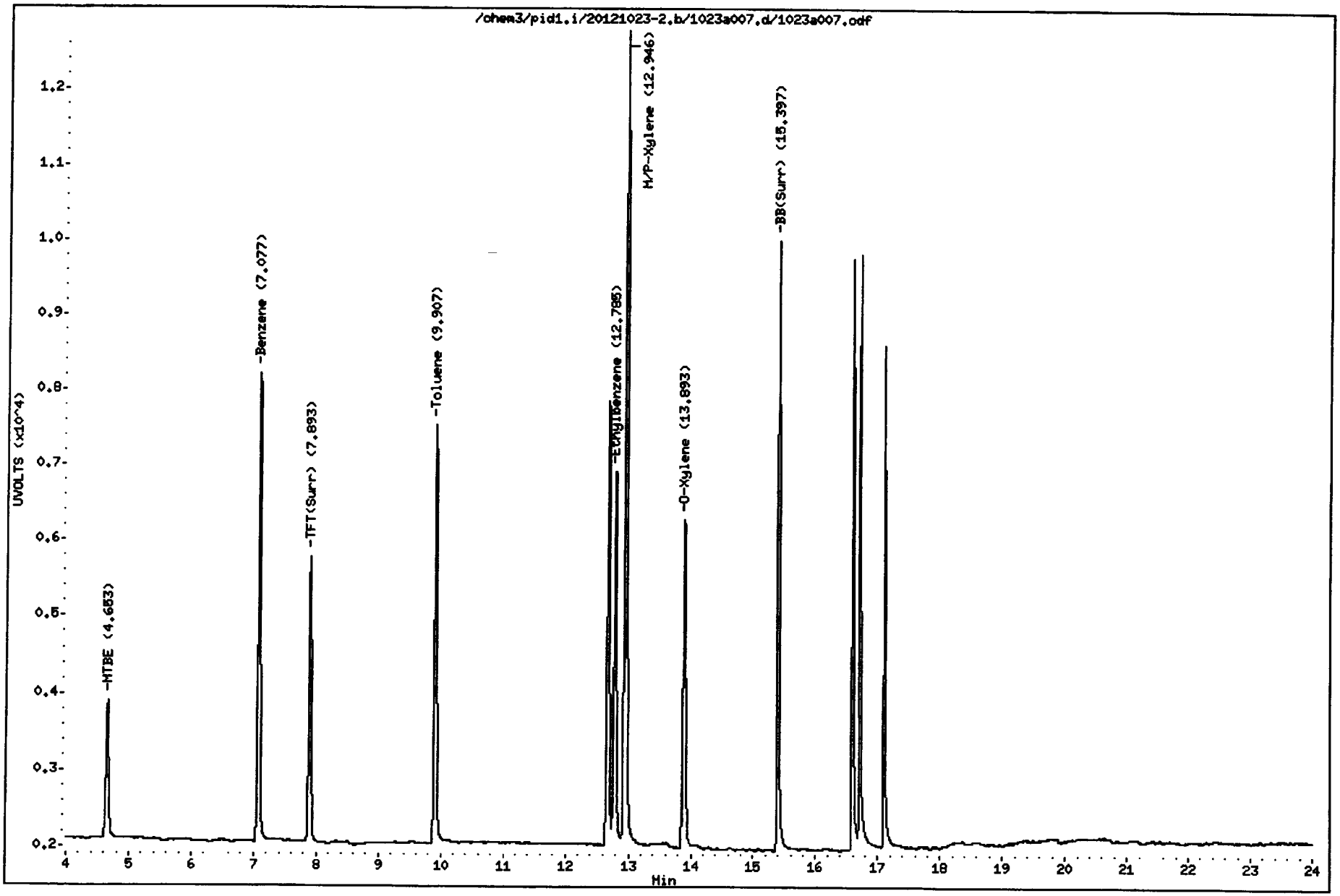


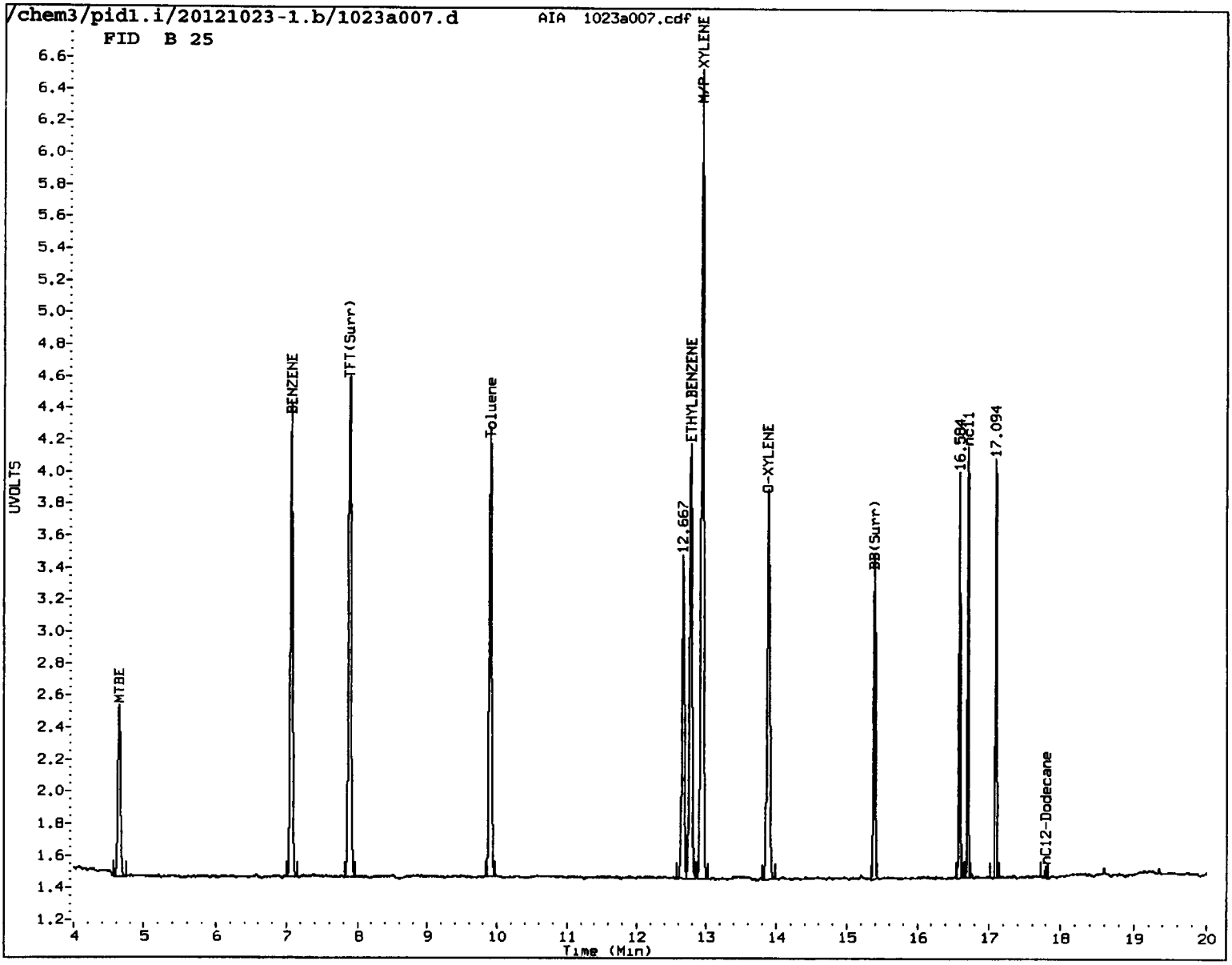
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

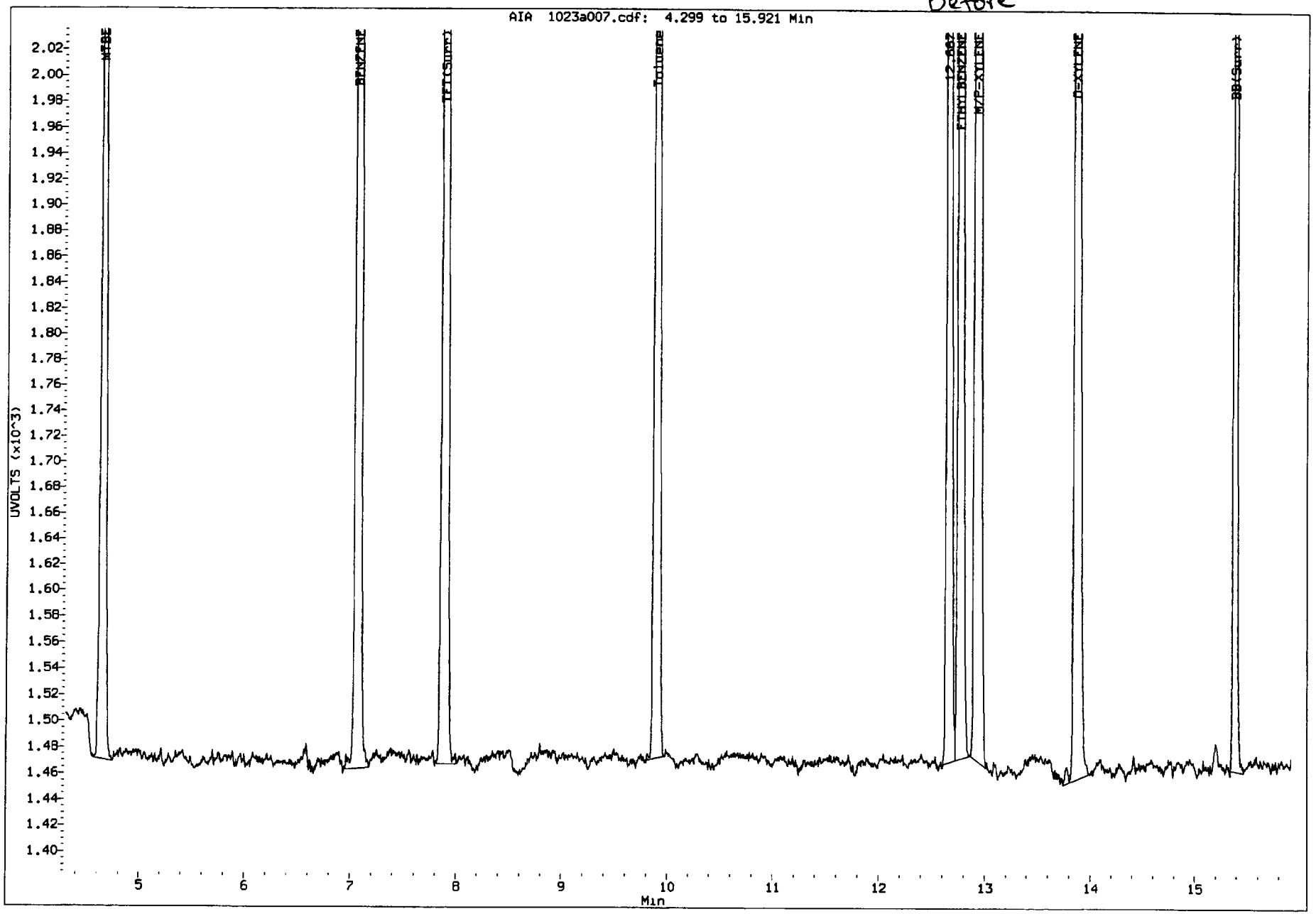
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

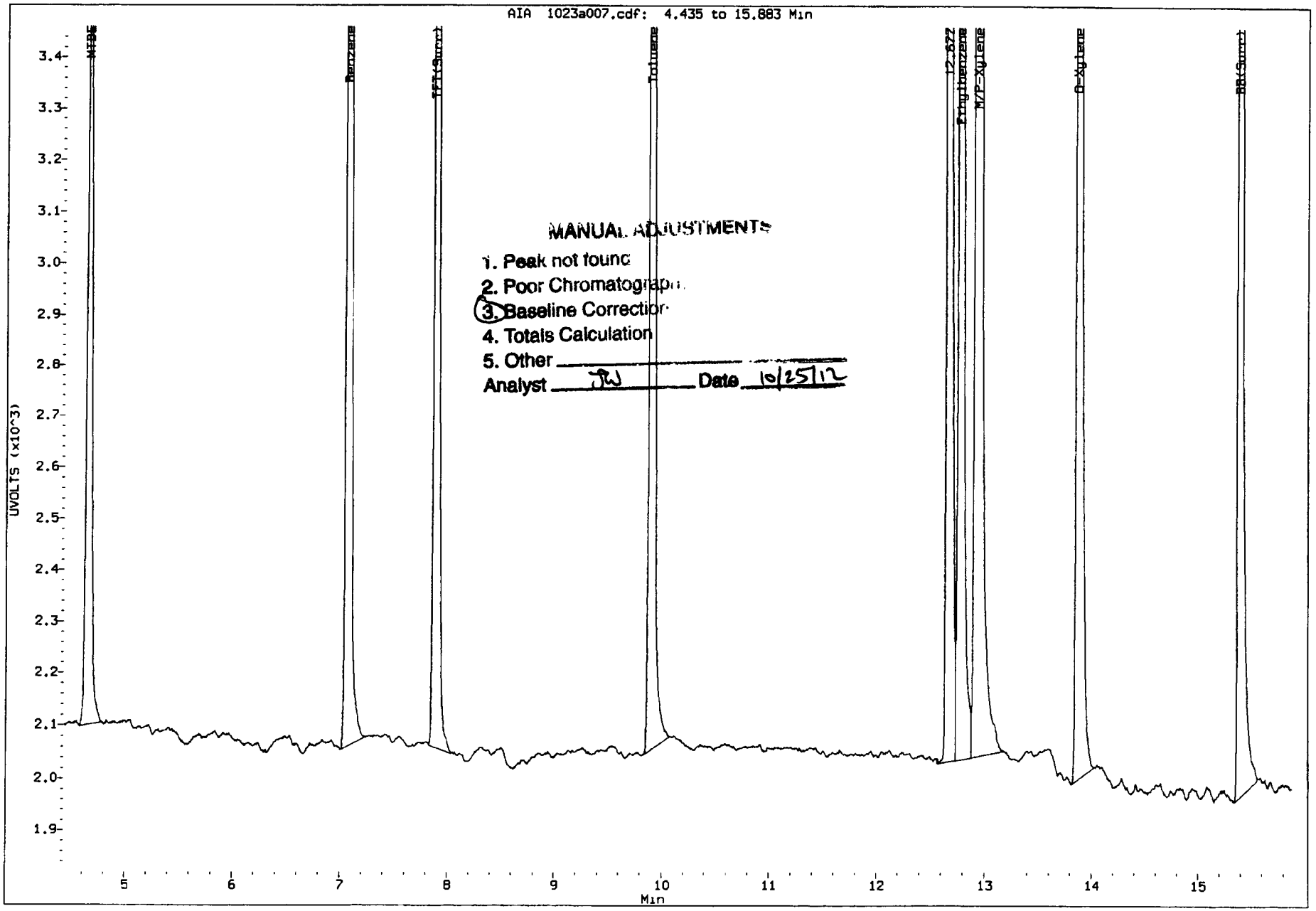
Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



UN31 : 02068

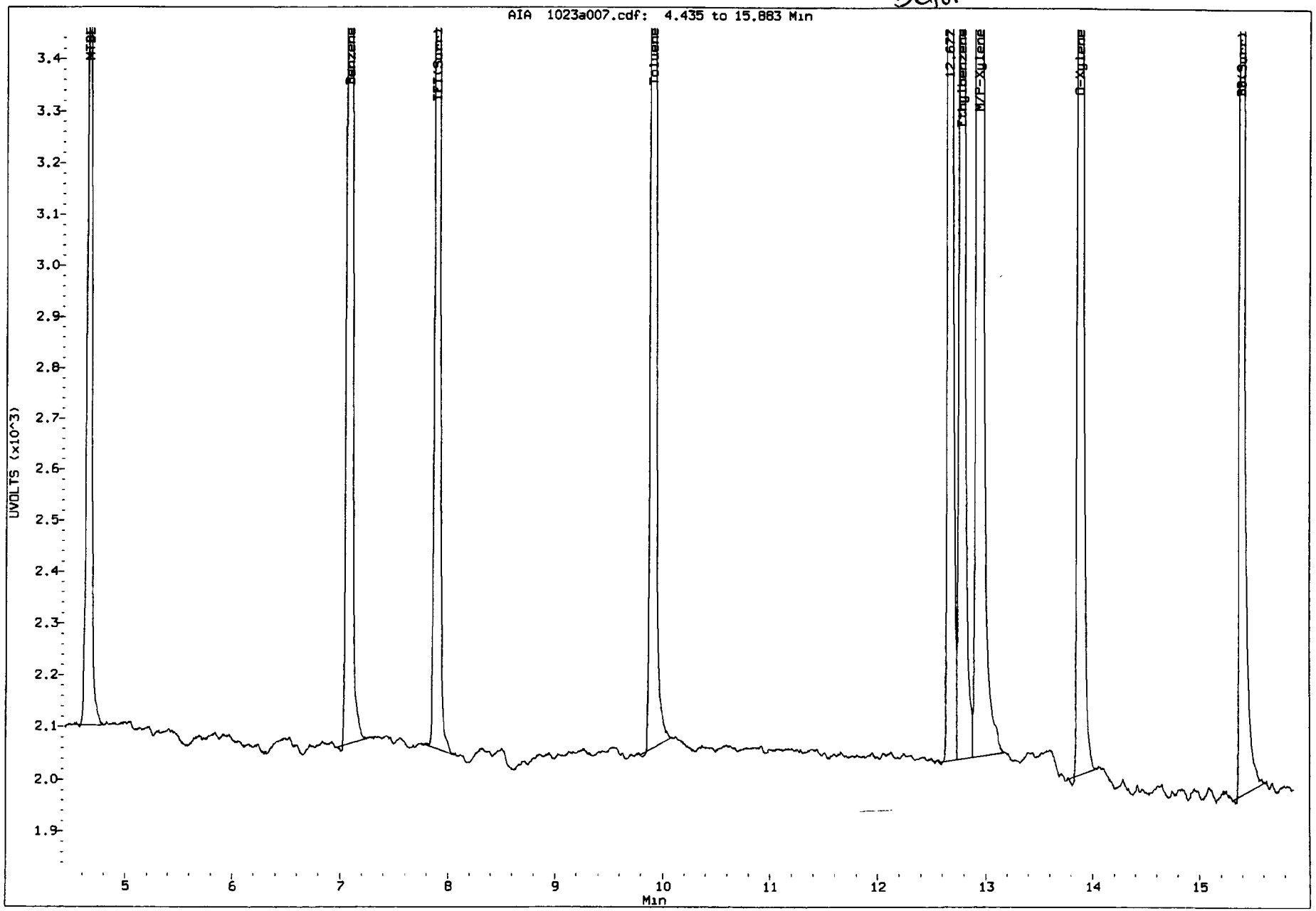
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



LJN21 62969

Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a008.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a008.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 5
Client ID:
Injection Date: 23-OCT-2012 19:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	2118	27080	67.0	TFT(Surr)
15.387	0.000	1387	11721	68.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	52469	0.147 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	51824	0.072 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	48775	0.084 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	52469	0.140 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	2516	66.4	TFT(Surr)
15.393	0.000	5386	66.9	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	1275	5.14N	Benzene
9.903	-0.003	1121	4.98N	Toluene
12.785	-0.002	1007	5.11	Ethylbenzene
12.945	0.002	2196	10.21	M/P-Xylene
13.893	0.003	856	5.10N	O-Xylene
4.647	-0.007	377	5.24N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

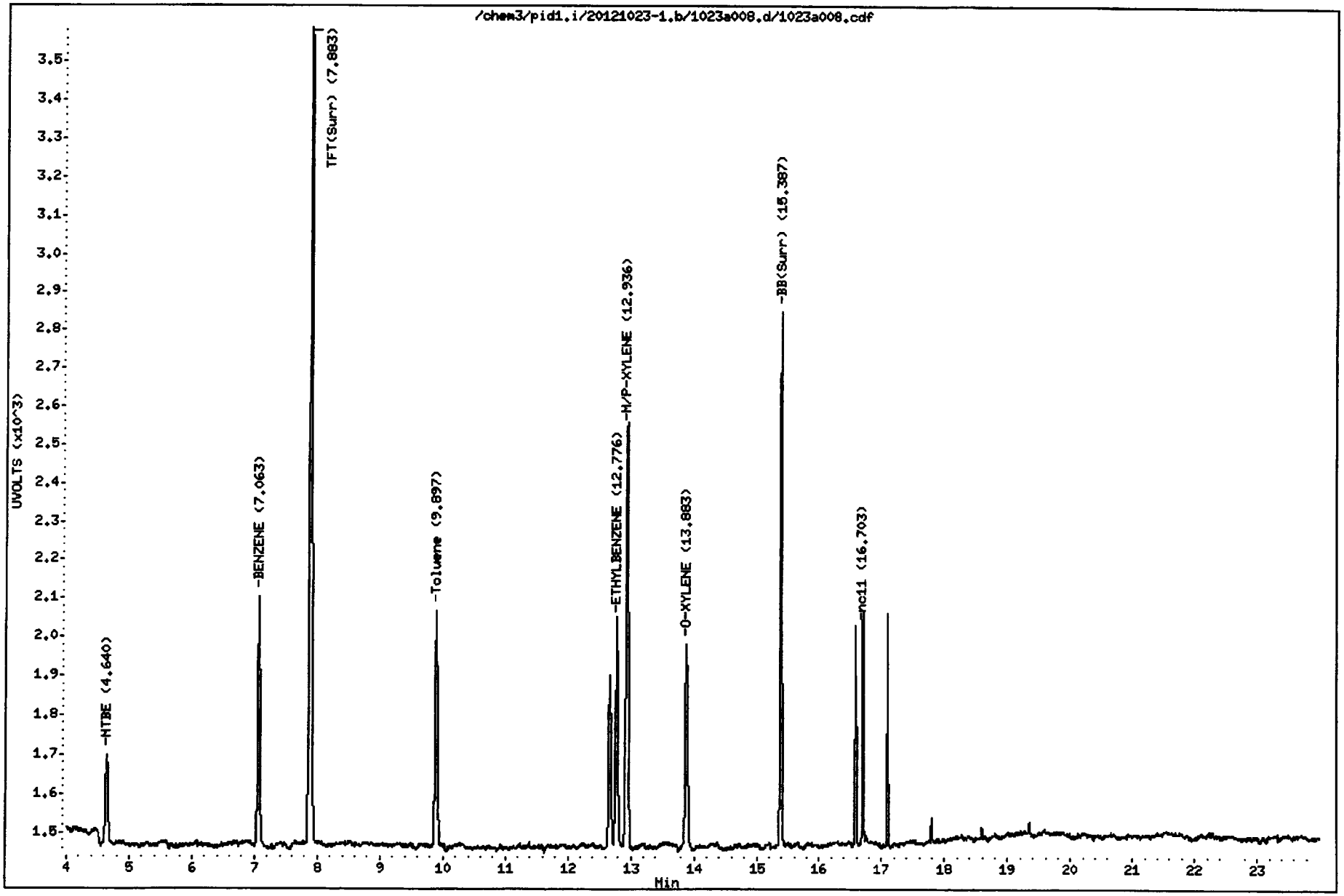
Sample Info: B 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

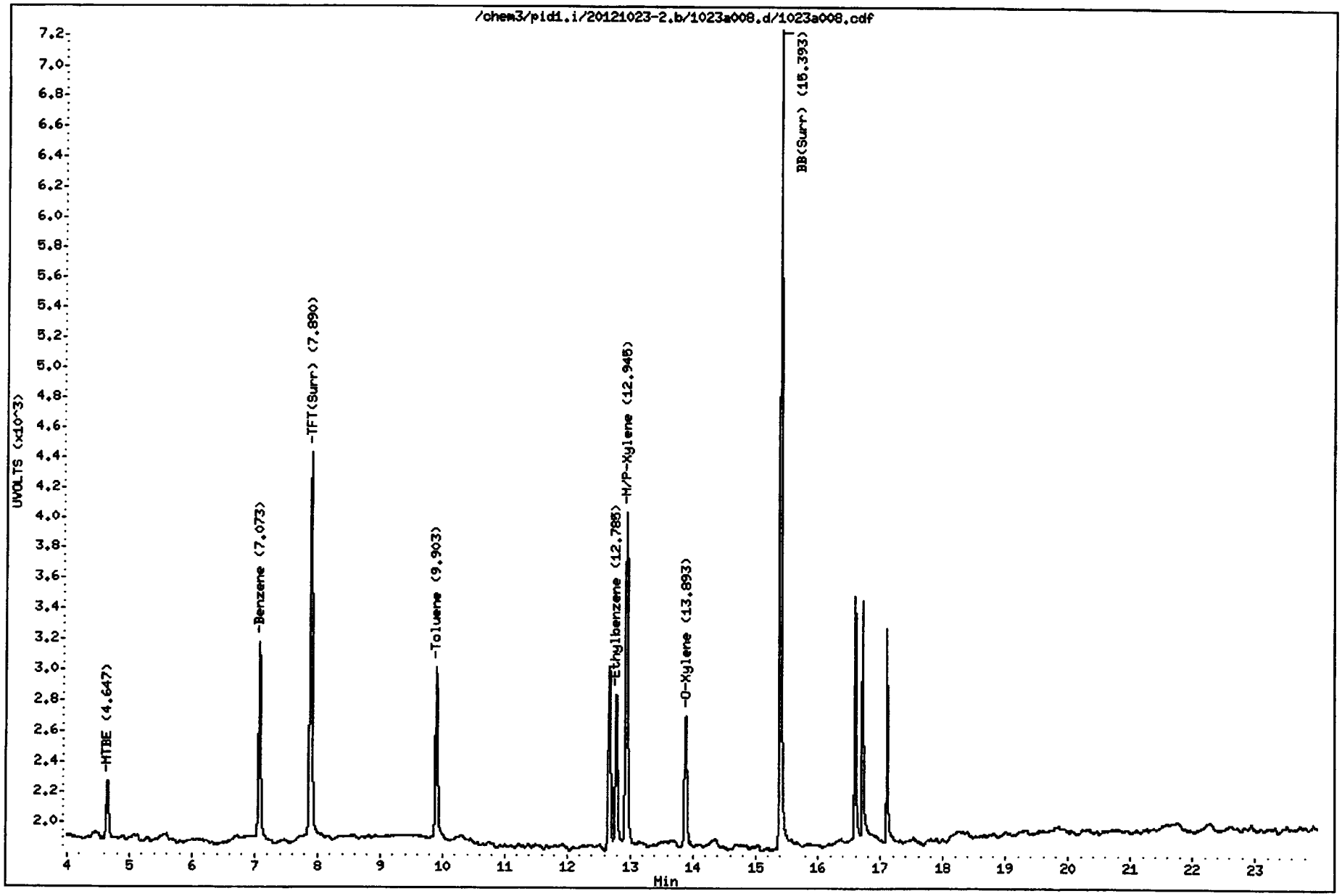
Sample Info: B 5

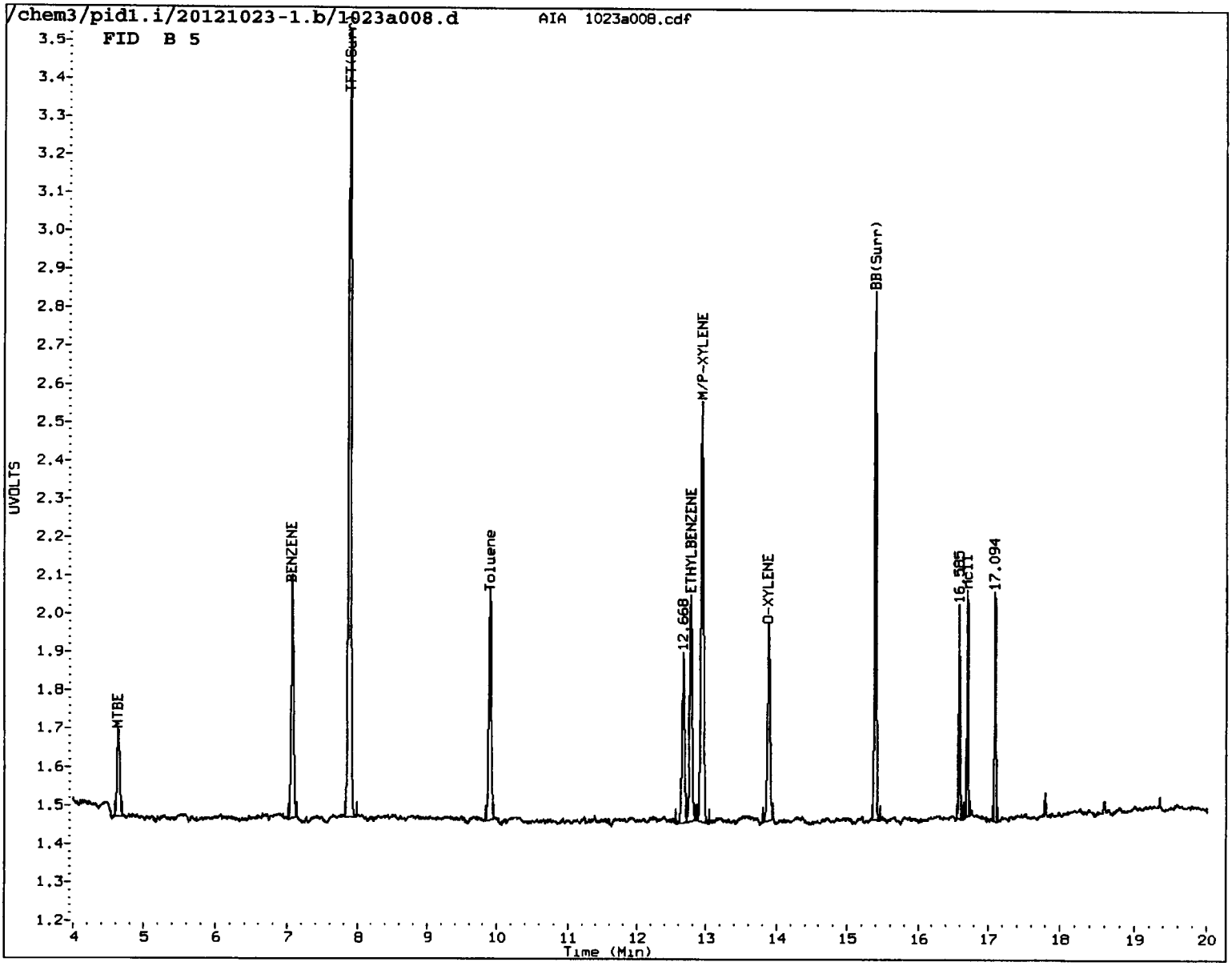
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

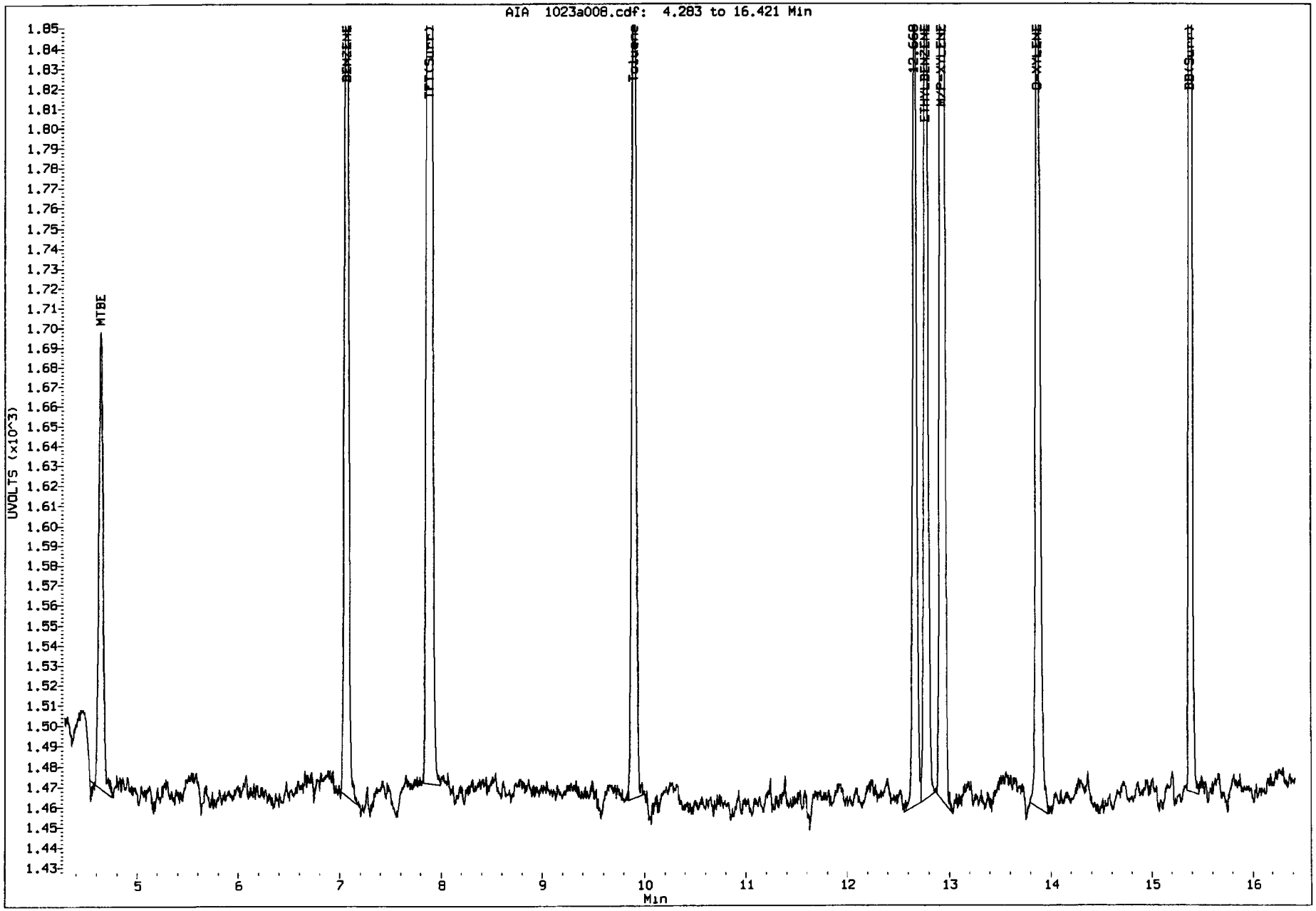
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

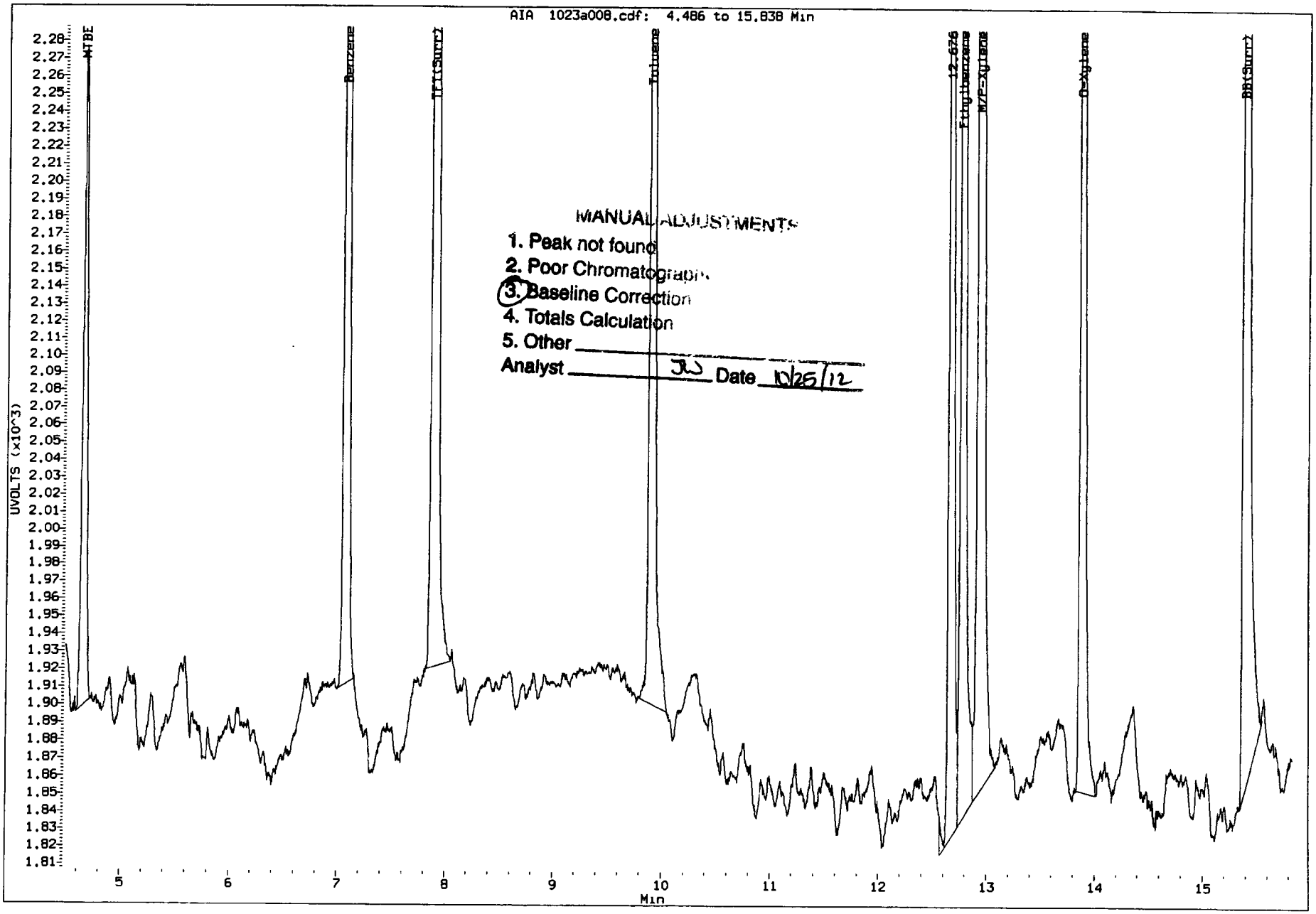
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before



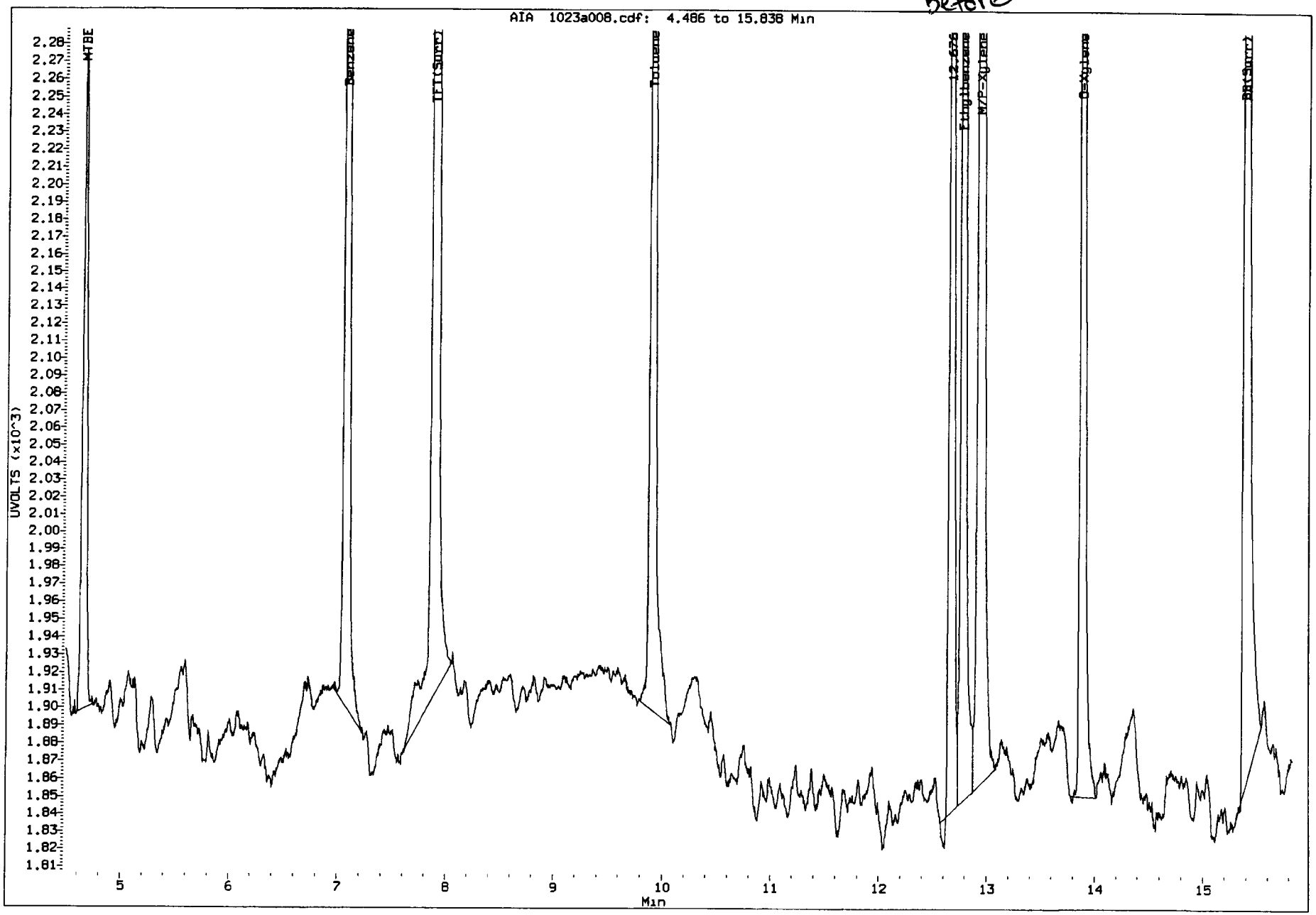
Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



WN31:02675

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:

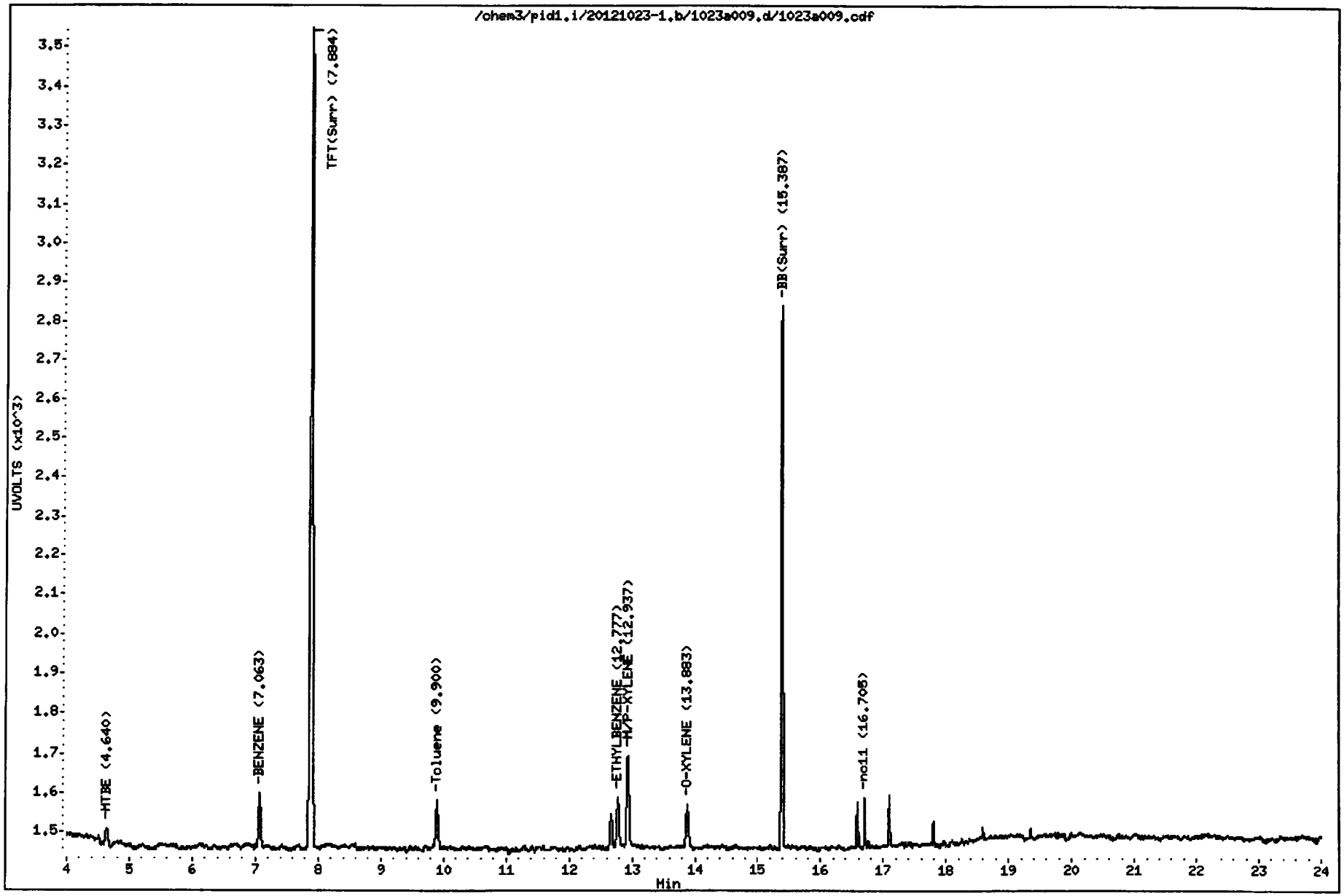
Sample Info: B 1

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:

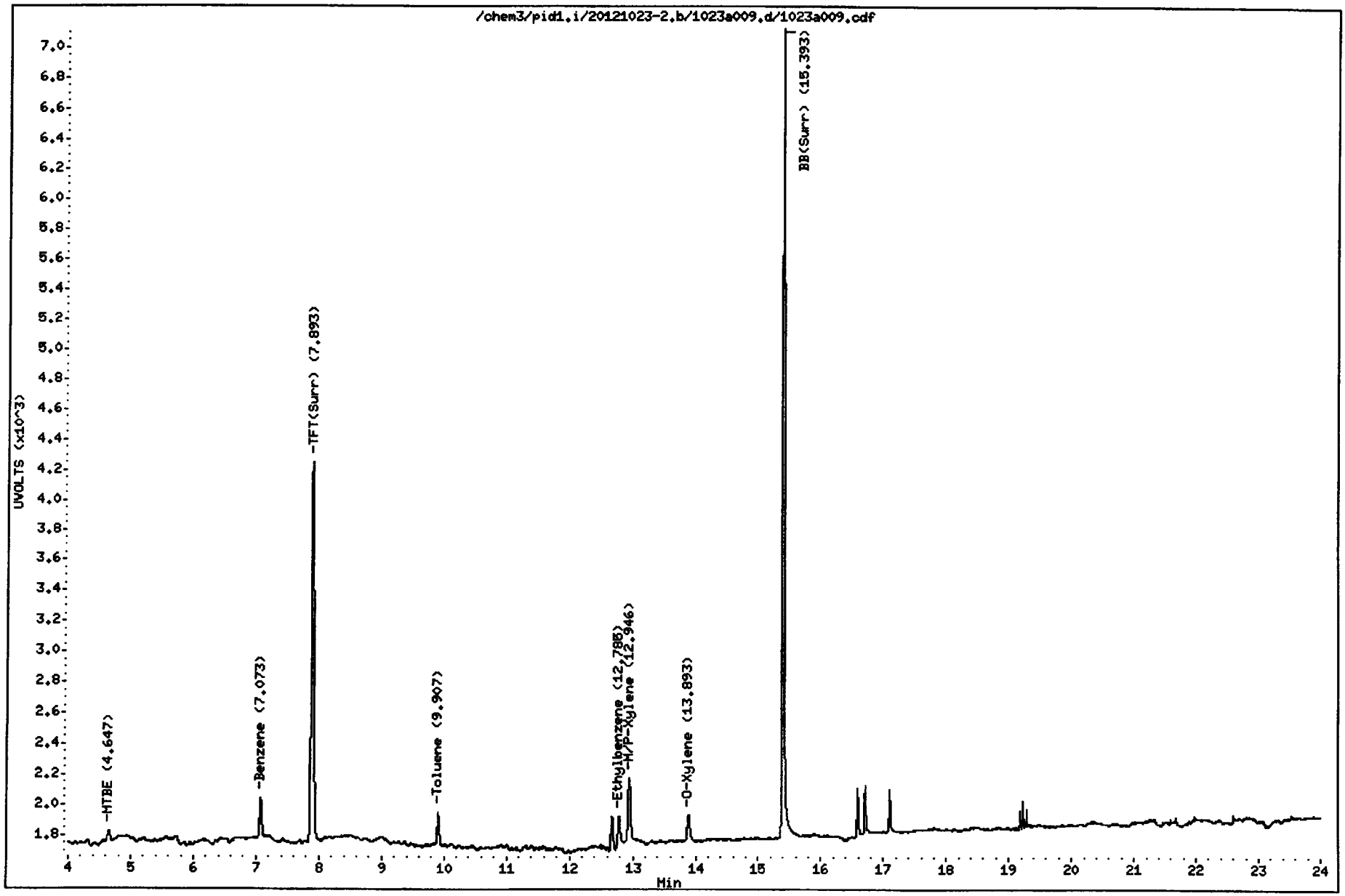
Sample Info: B 1

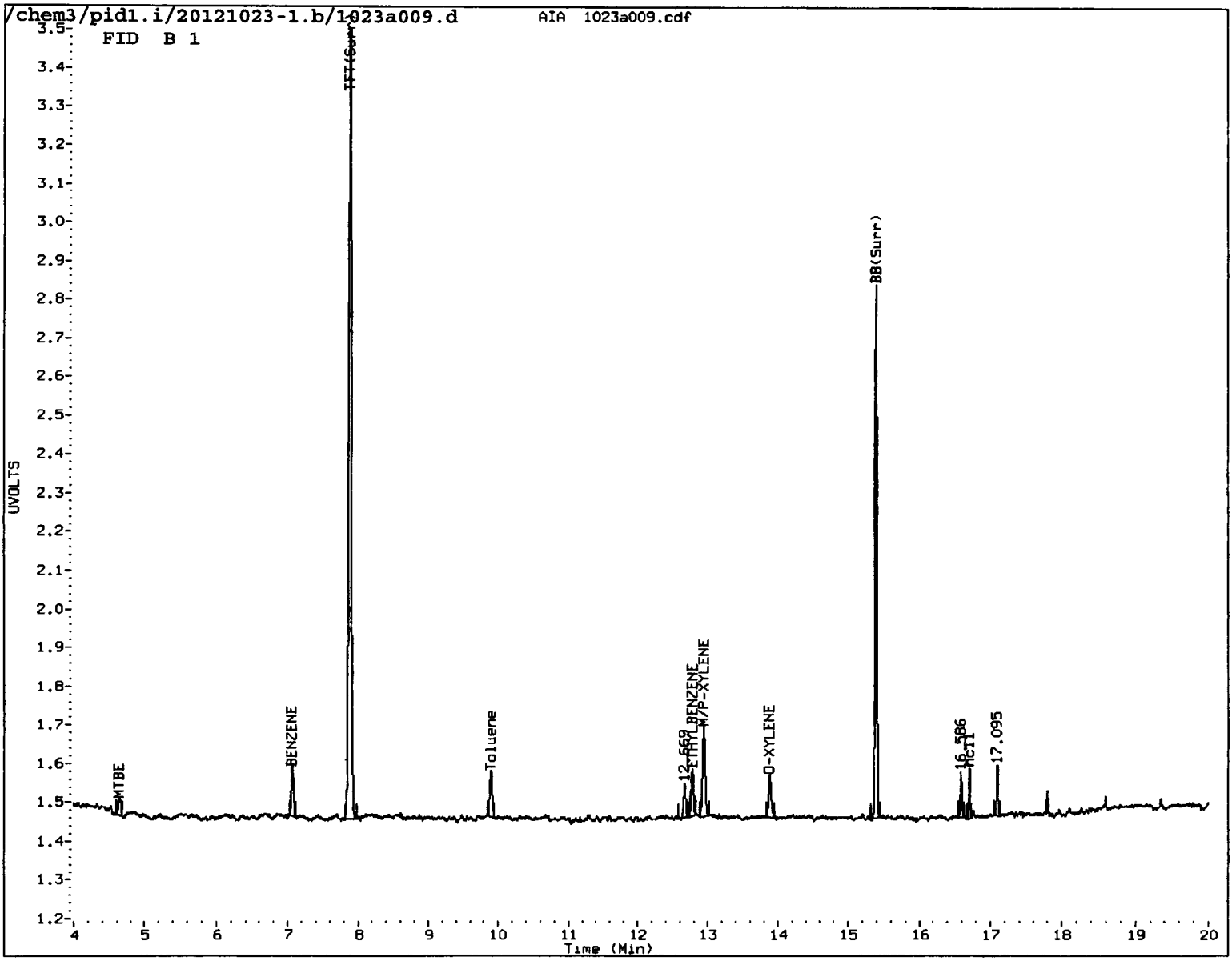
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

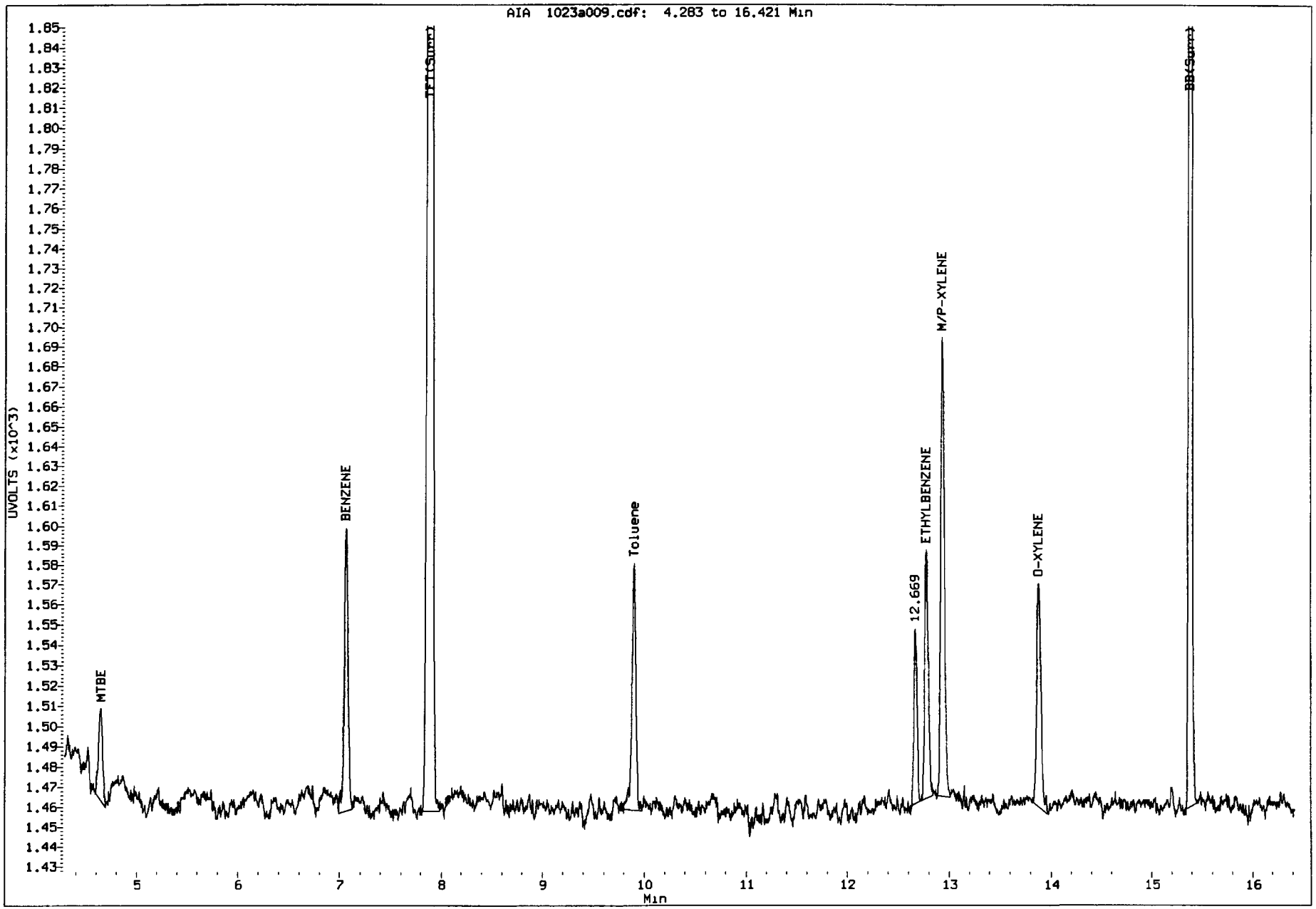
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

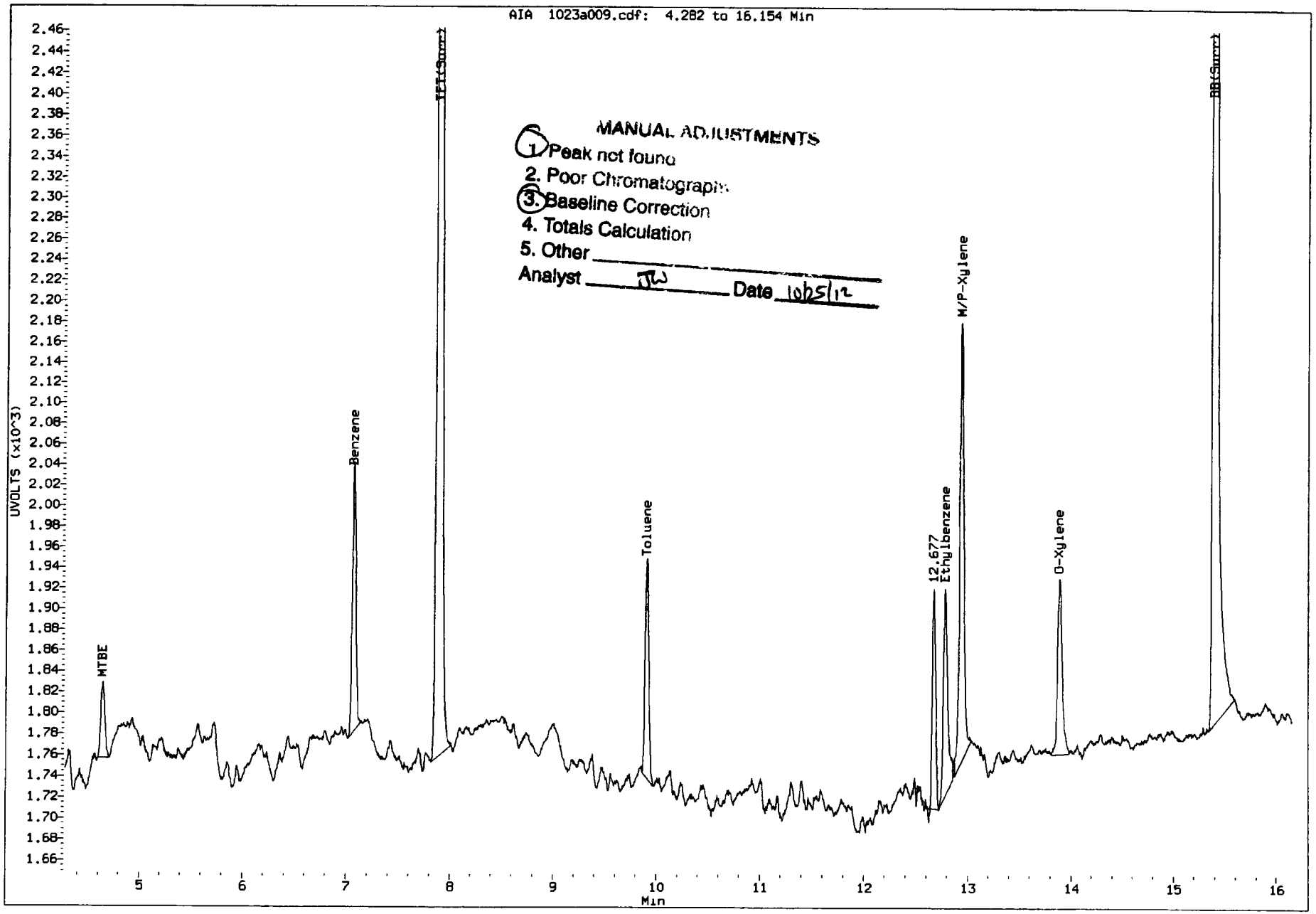
Data File: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



WN31 : 022082

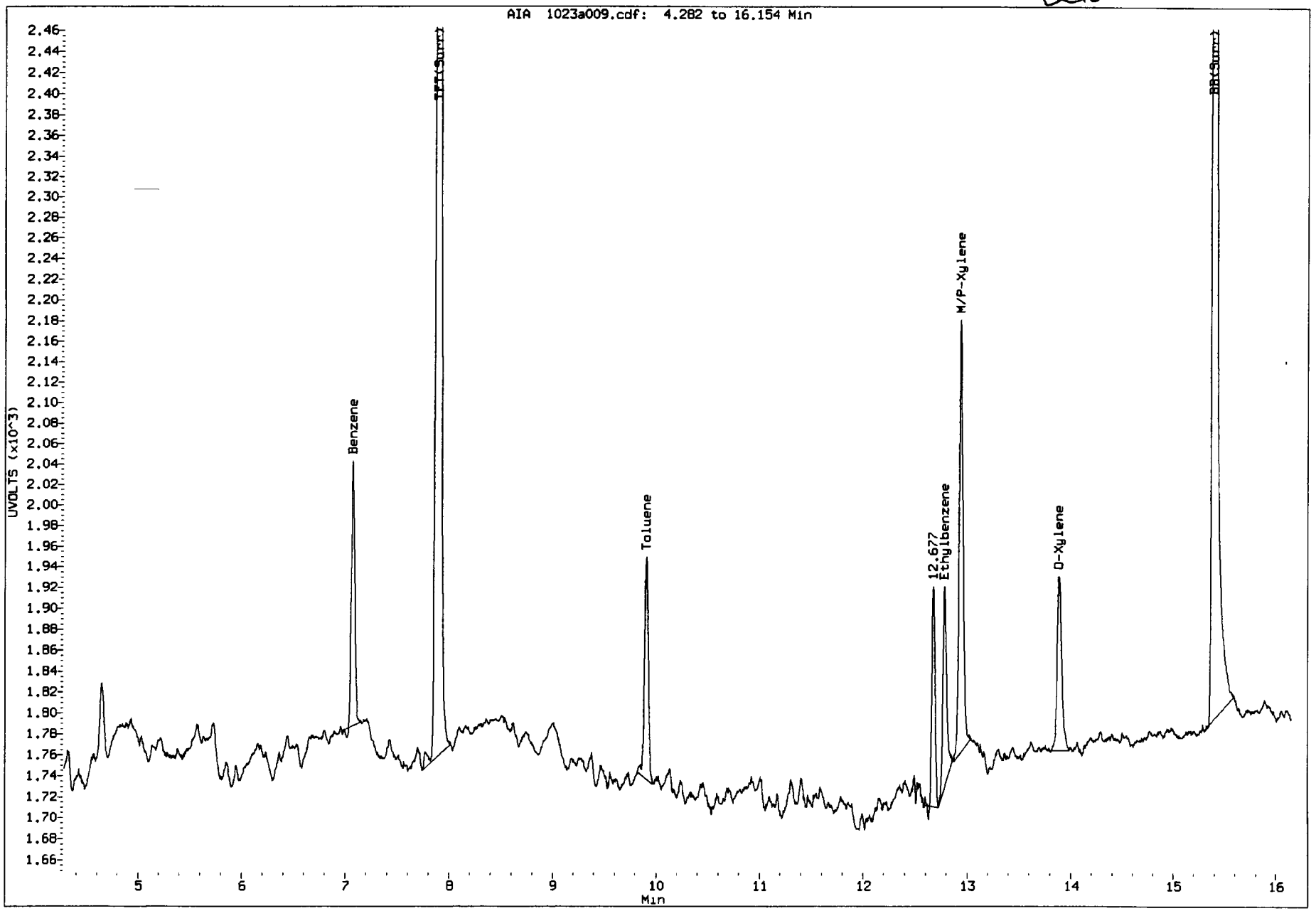
Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



WN31 : 02083

Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

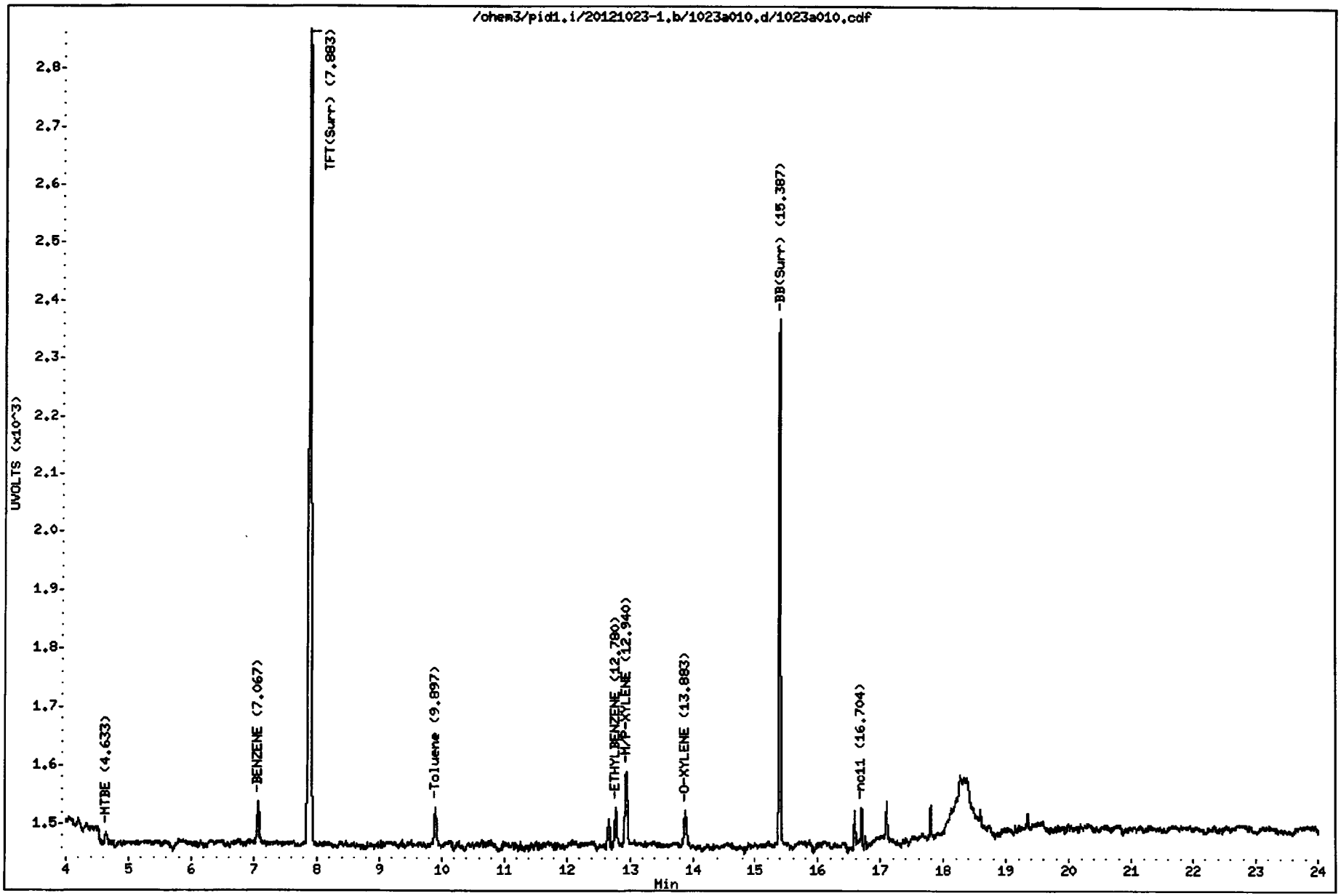
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

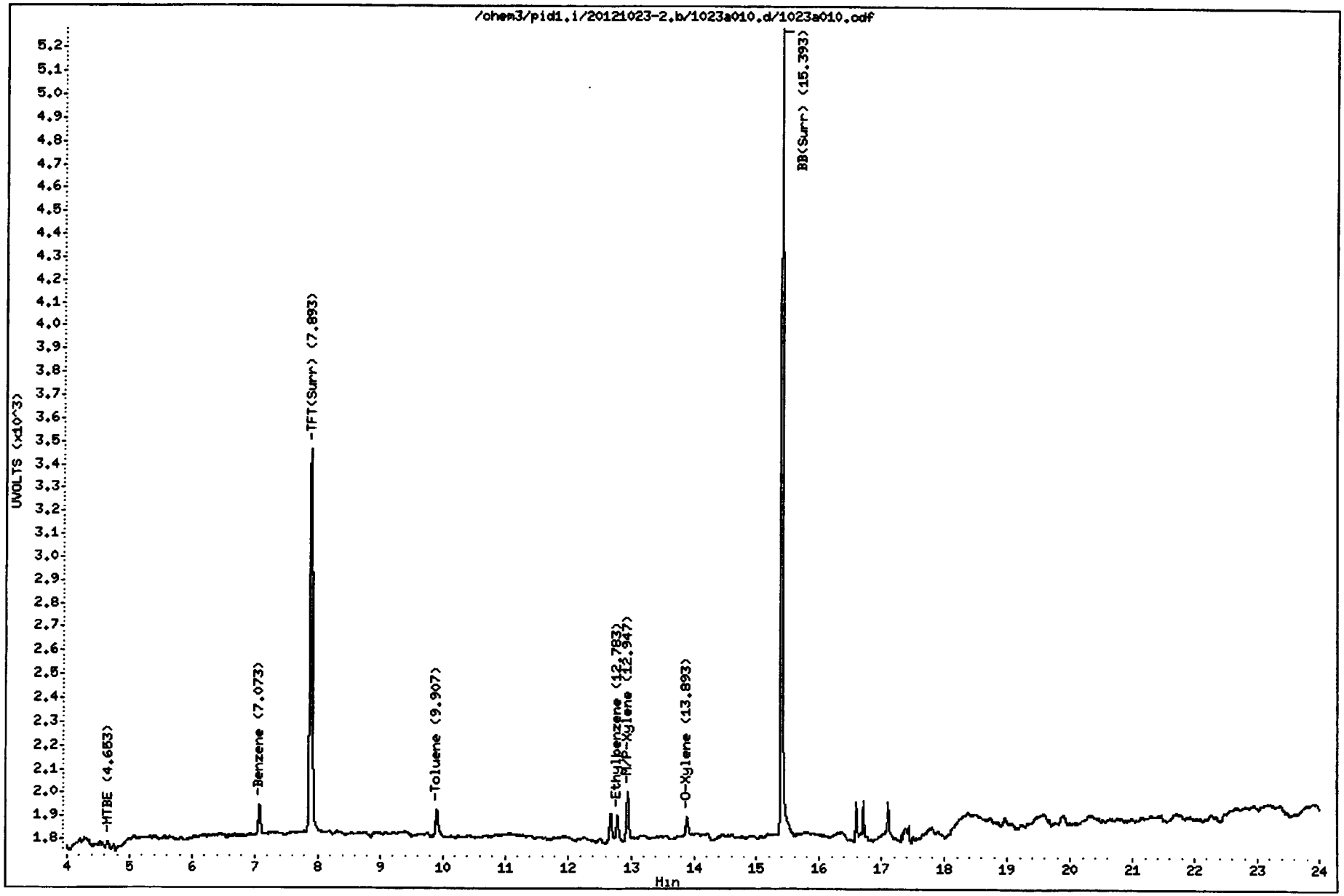
Sample Info: B 0.5

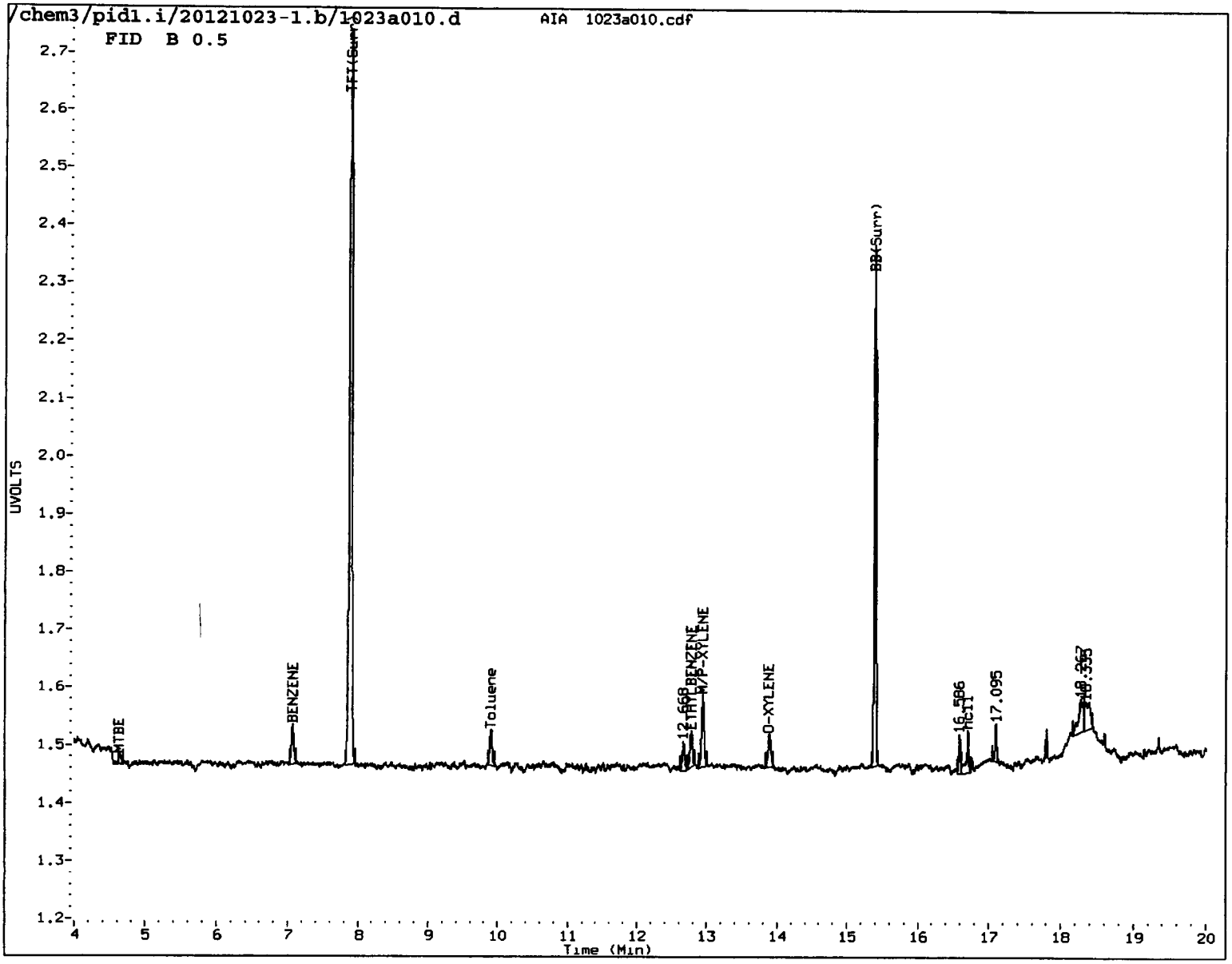
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

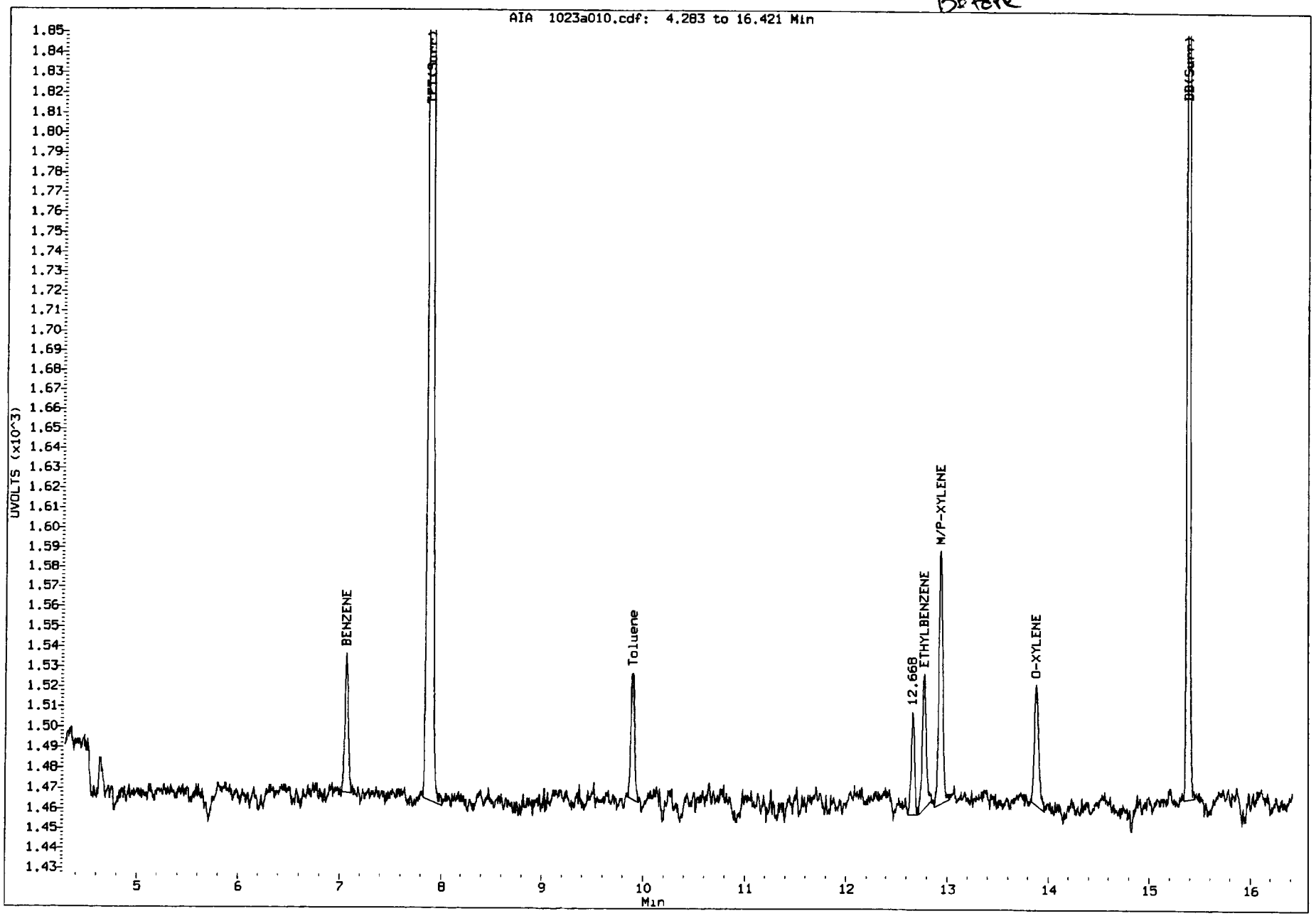
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

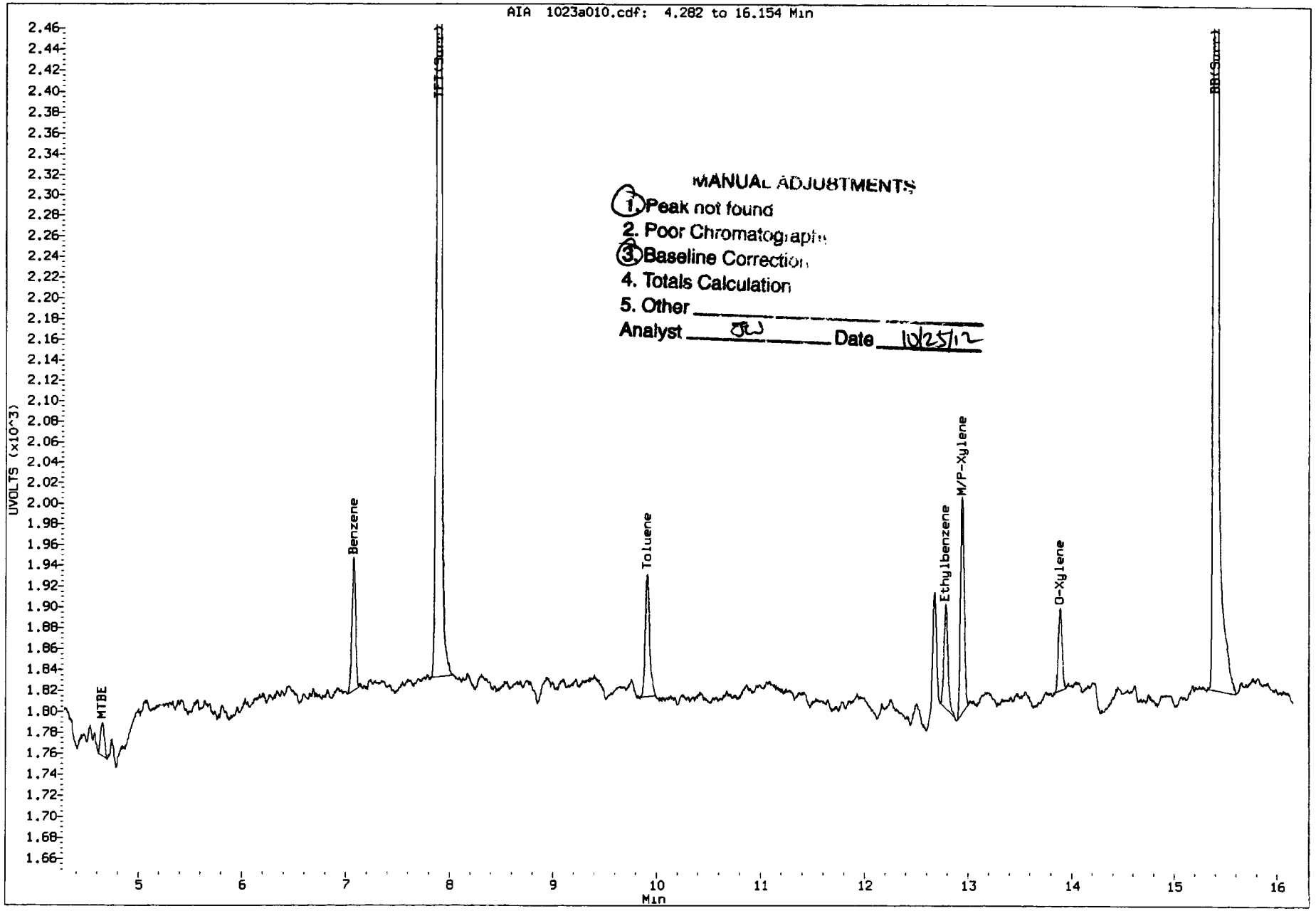
Data File: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:

Before

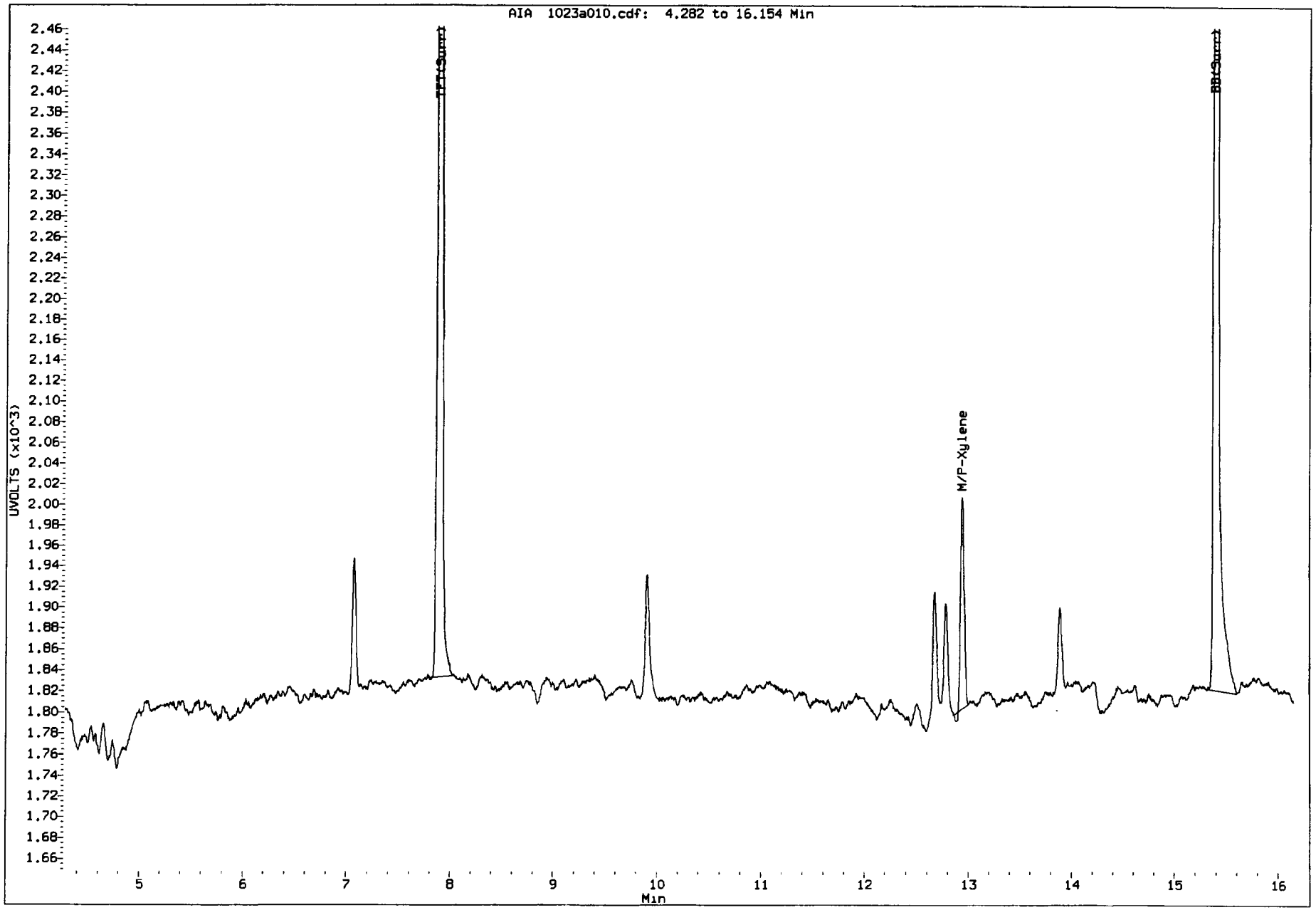


UN31 : 02089

Data File: /chem3/pid1.1/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.1
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a011.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a011.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.25
Client ID:
Injection Date: 23-OCT-2012 21:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	733	9325	23.3	TFT(Surr)
15.387	0.000	484	4042	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	2310	0.006 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	2530	0.003 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	2276	0.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	2718	0.007 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	855	22.6	TFT(Surr)
15.393	0.000	1790	22.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	57	0.23N	Benzene
9.907	0.000	64	0.28N	Toluene
12.787	0.000	48	0.24N	Ethylbenzene
12.943	0.000	108	0.50N	M/P-Xylene
13.890	0.000	40	0.24N	O-Xylene
ND	---	---	---	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

Sample Info: B 0.25

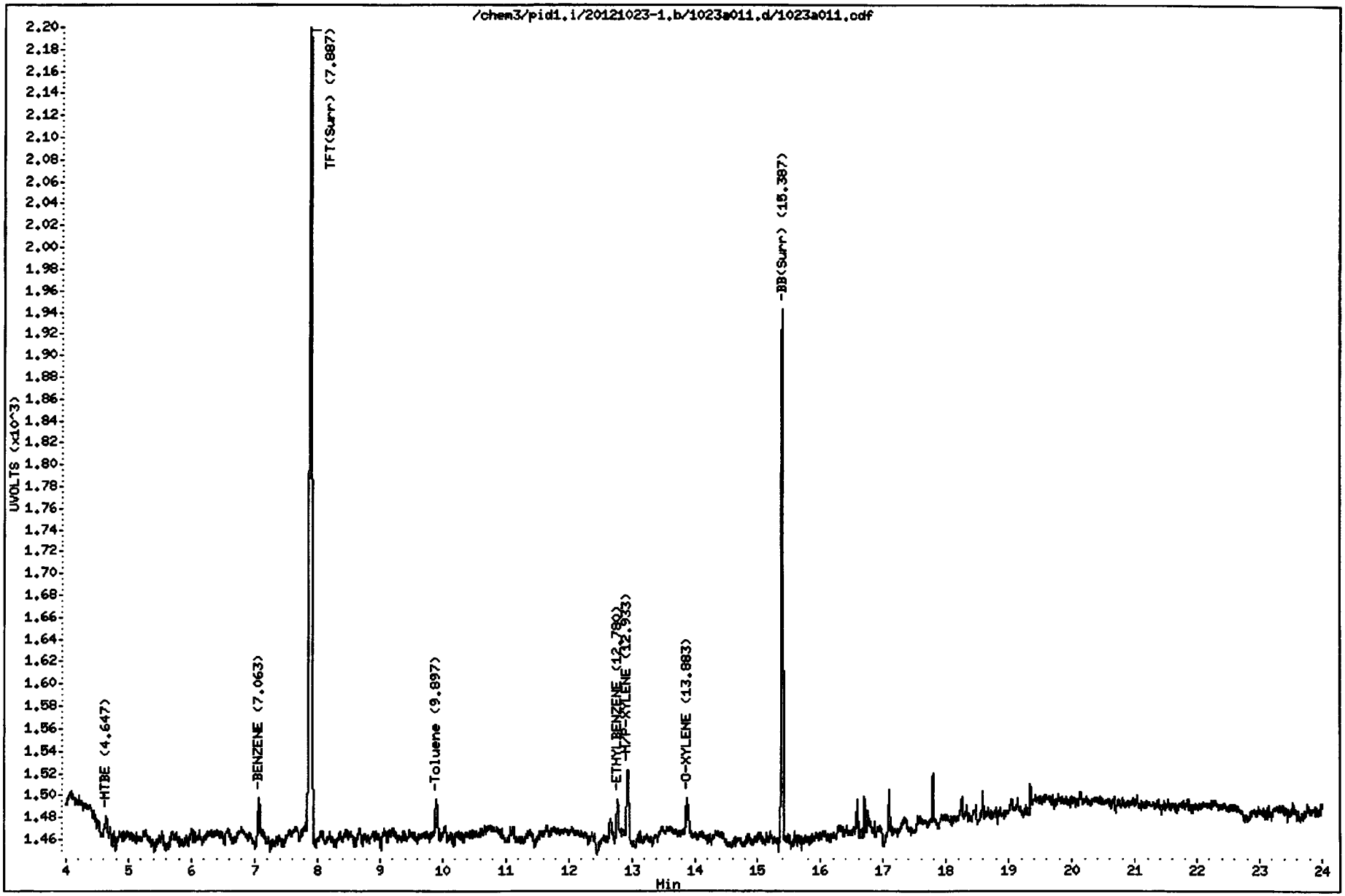
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

WN31 : 02093

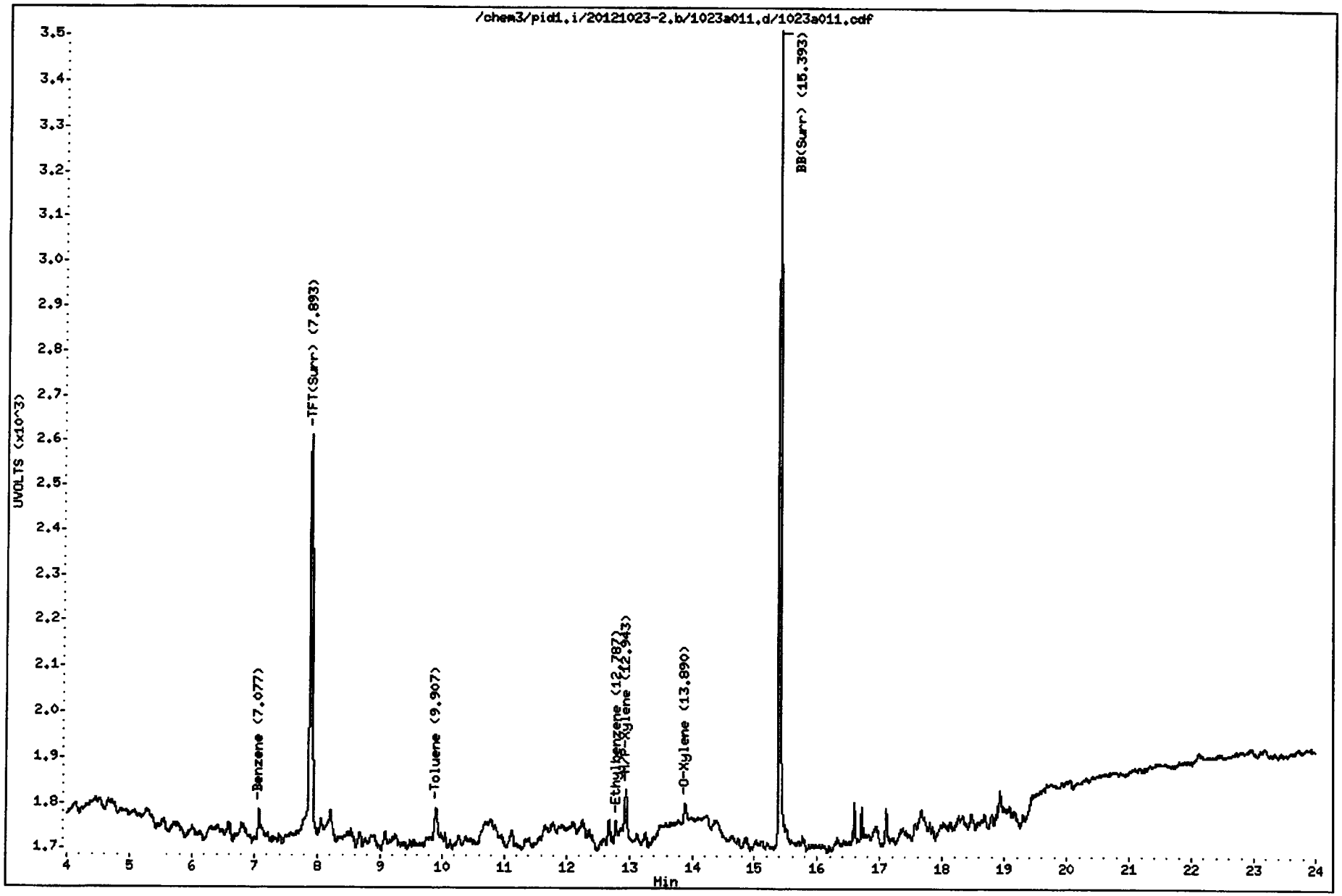


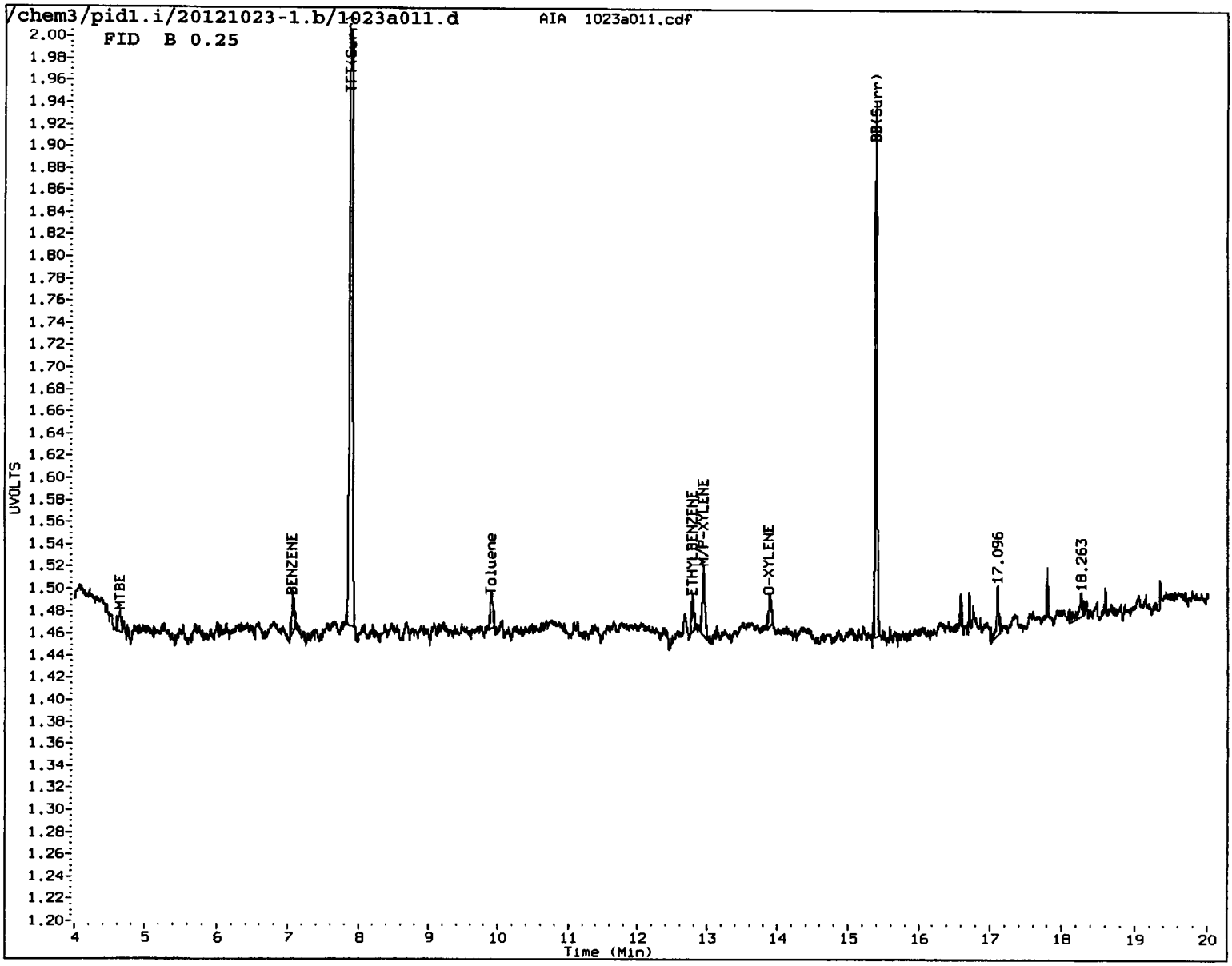
Data File: /chem3/pid1.i/20121023-2.b/1023a011.d
Date : 23-OCT-2012 21:15
Client ID:
Sample Info: B 0.25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

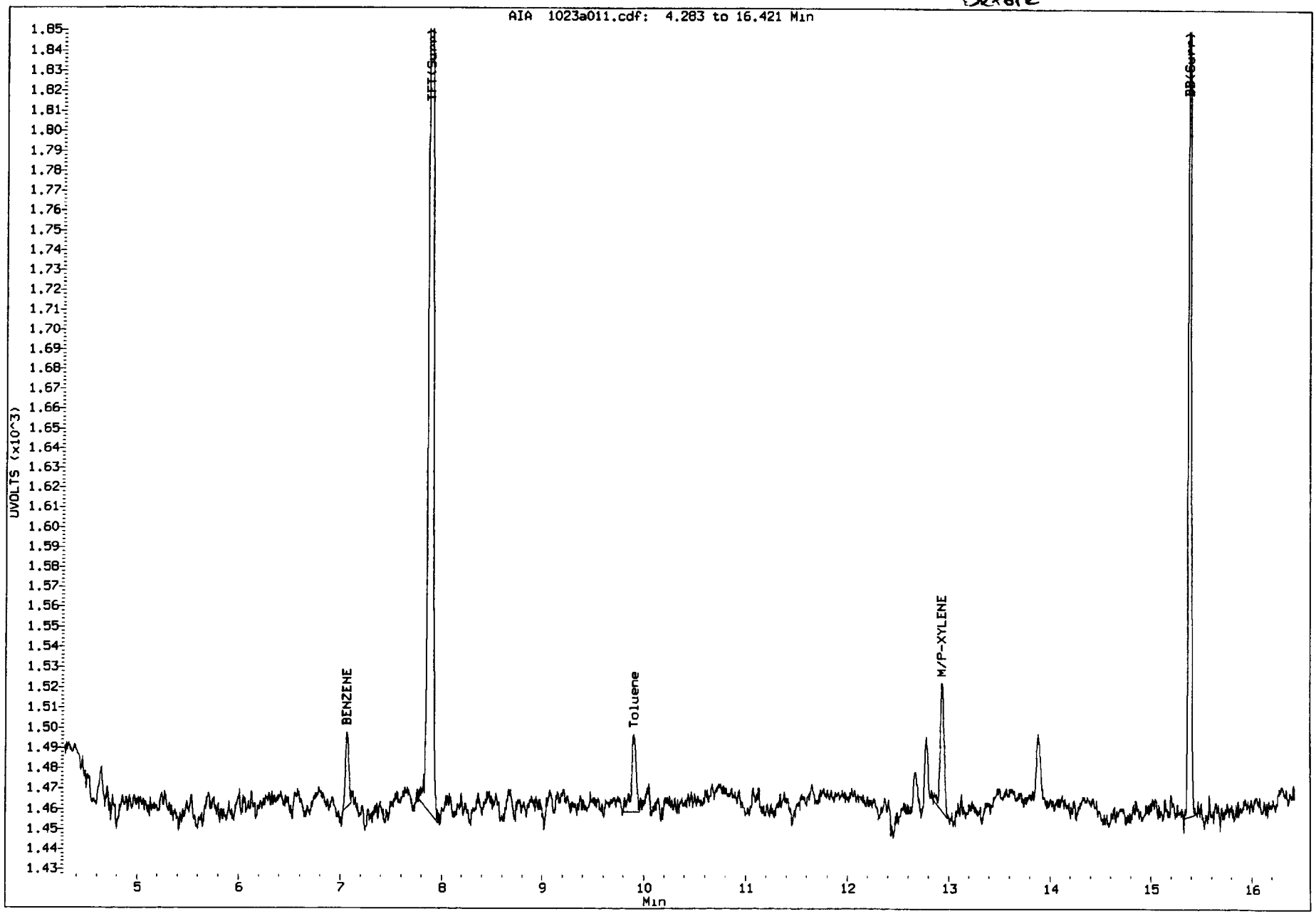
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

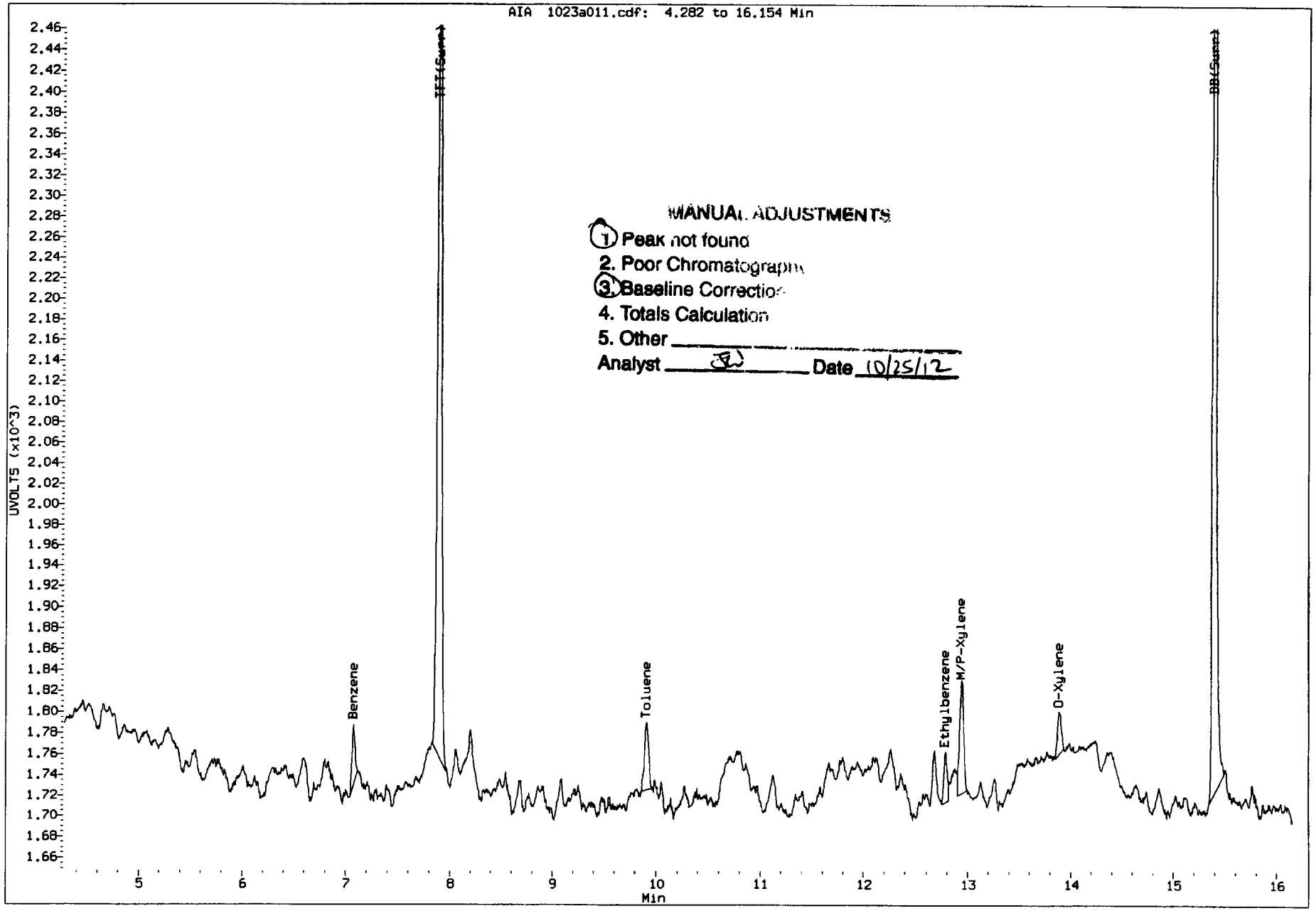
Data File: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



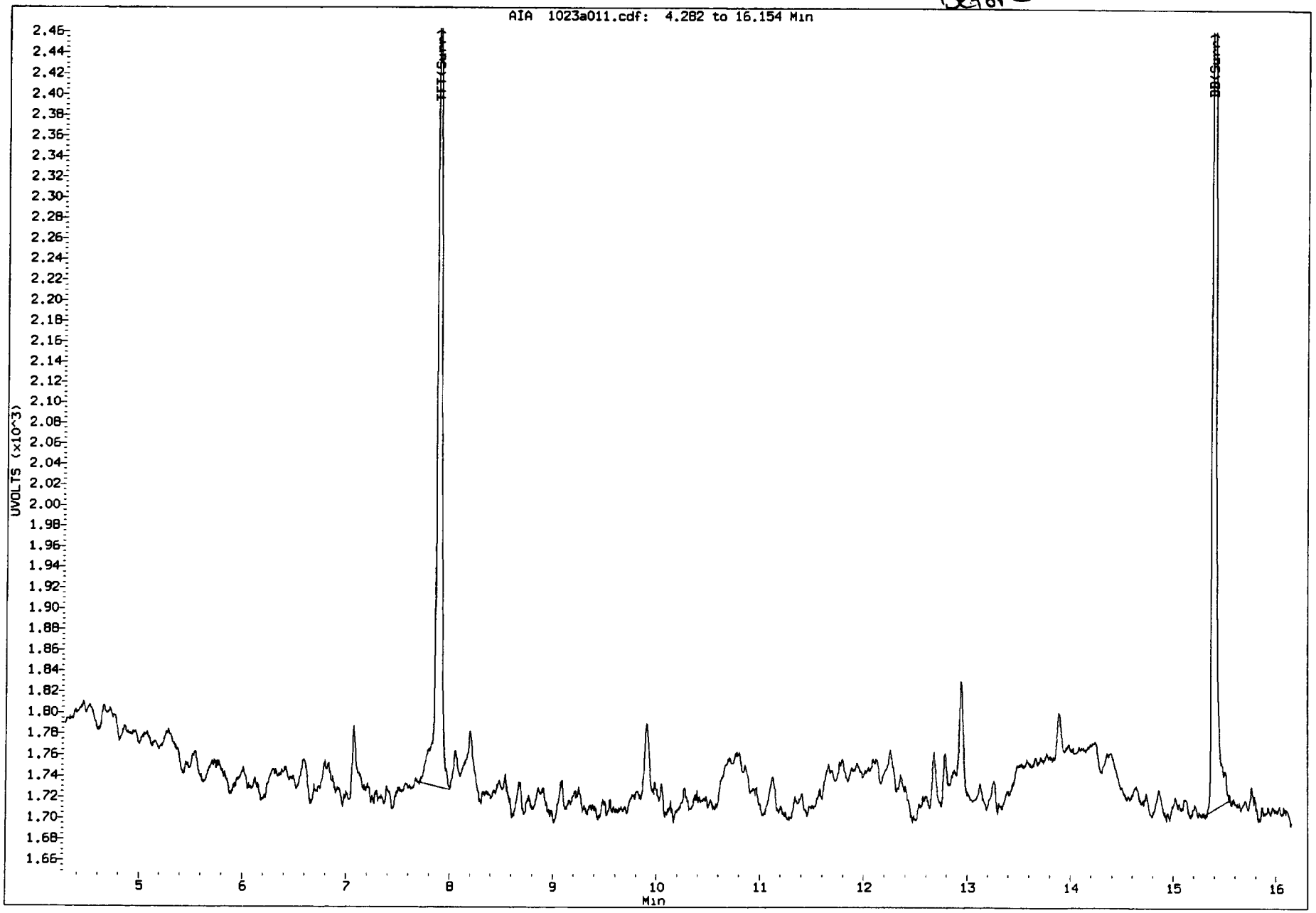
WN21:022096

Data File: /chem3/pid1.1/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.1
Client Sample ID:



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



UN31 : 02058

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

Page 1

Date : 23-OCT-2012 21:44

Client ID:

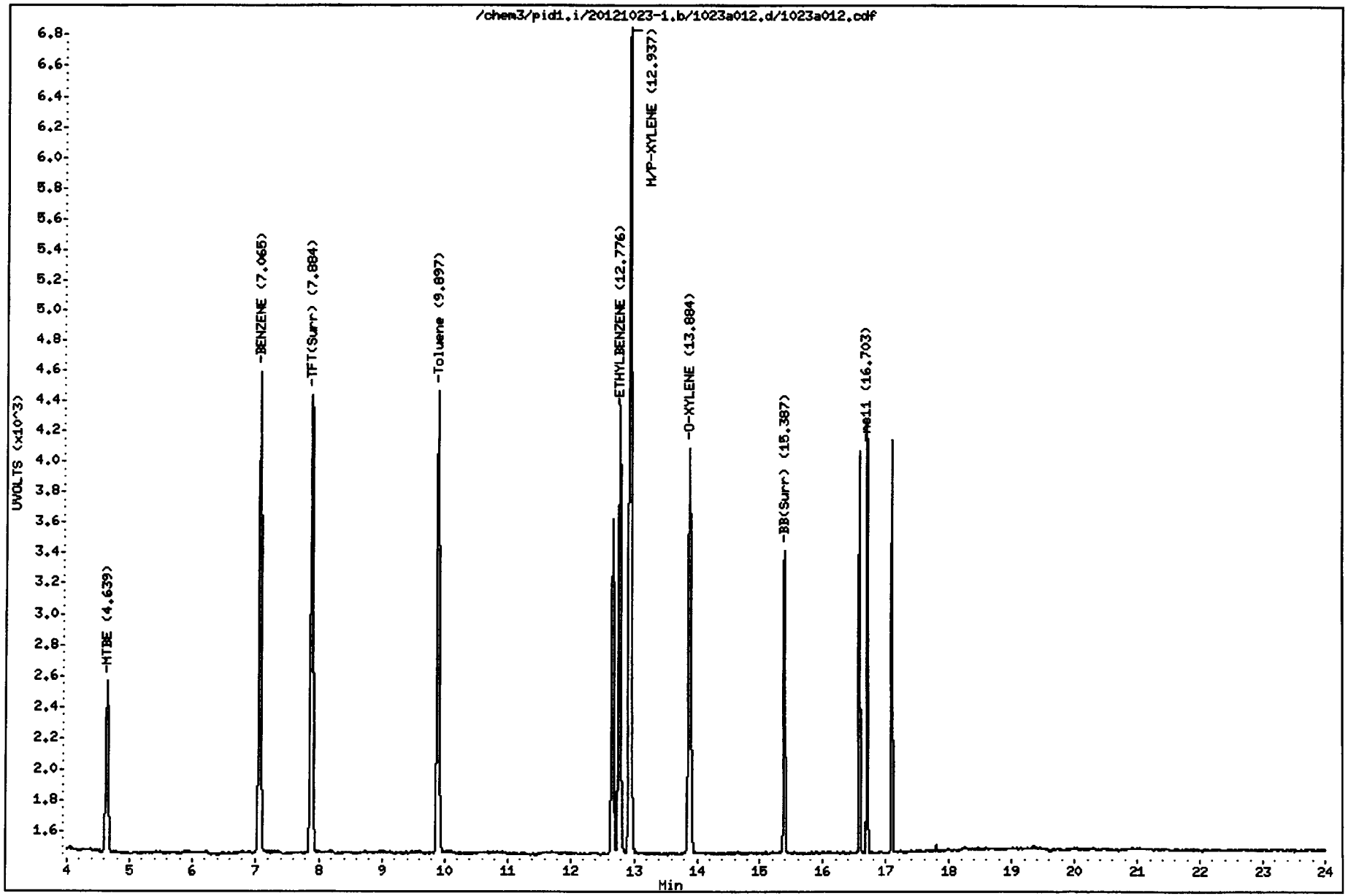
Instrument: pid1.i

Sample Info: BICV

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18

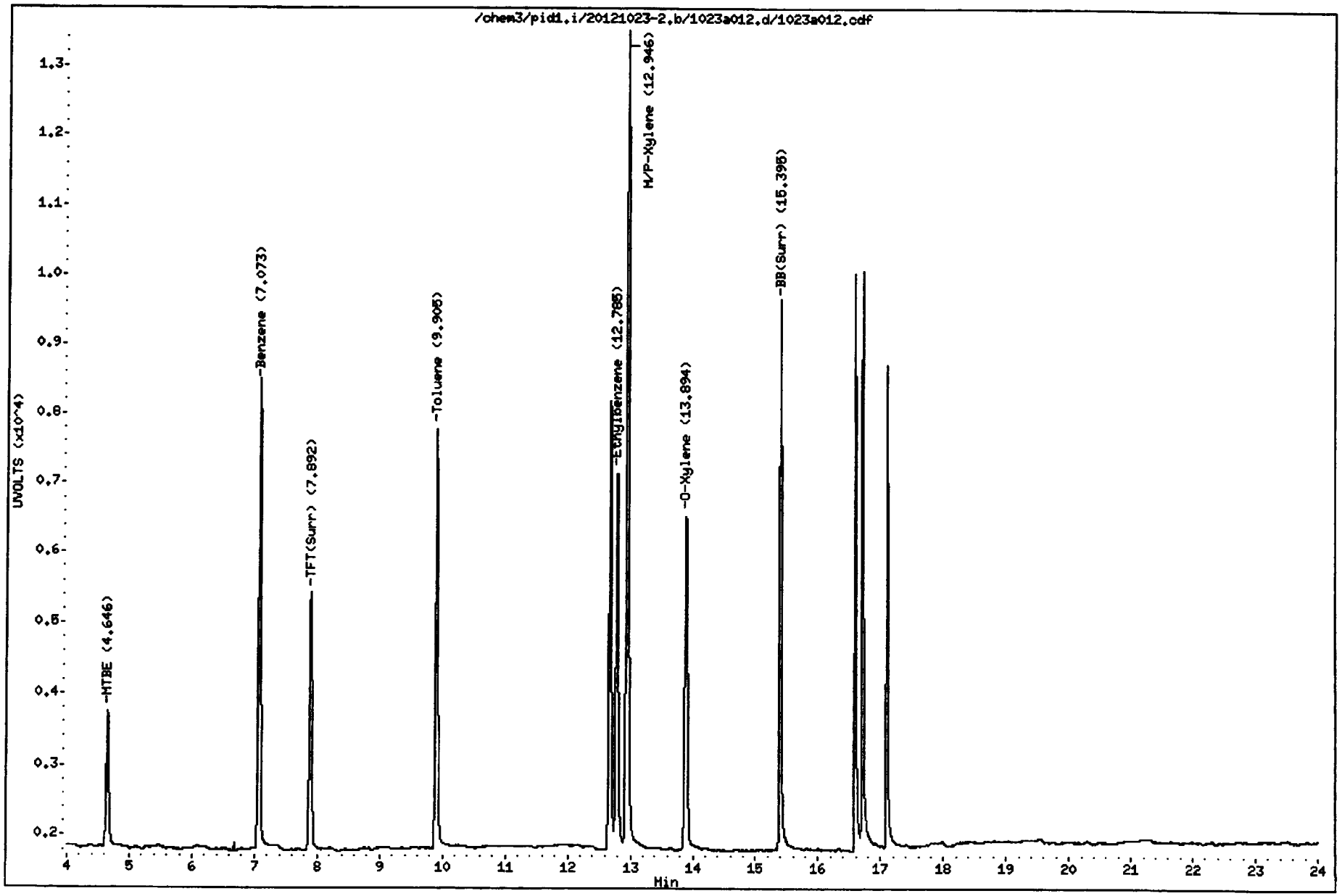


Data File: /chem3/pid1.i/20121023-2.b/1023a012.d
Date : 23-OCT-2012 21:44
Client ID:
Sample Info: BICV

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Report Date : 25-Oct-2012 17:27

WN31.82102

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

UN31:02104

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
	2 Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$	3 TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
	4 Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
	5 Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
	6 M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
	7 O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$	8 BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12
Reviewer 2 Date: 10/24/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20121023-1

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

Calibration Date: 23-OCT-2012 SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates Rel. Rec.	RF1 22	RF2 44	RF3 67	RF4 100	RF5 133	RF6 178	Ave RF	%RSD

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

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

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

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a002.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a002.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT1023+BCAL1
Client ID:
Injection Date: 23-OCT-2012 10:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3182	41284	101.0	TFT(Surr)
15.387	0.000	2019	16909	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	475541	1.328
8015C 2MP-TMB	(4.29 to 16.21)	723723	578928	0.800
AK101 nC6-nC10	(4.76 to 15.11)	582885	402341	0.690
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	504301	1.344

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.002	3856	101.8	TFT(Surr)
15.394	0.001	8138	101.1	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	-0.003	6292	25.37	Benzene
9.904	-0.002	5539	24.62	Toluene
12.784	-0.002	4977	25.24	Ethylbenzene
12.945	0.002	10971	51.03	M/P-Xylene
13.892	0.002	4338	25.85	O-Xylene
4.650	-0.003	1700	23.61	MTBE

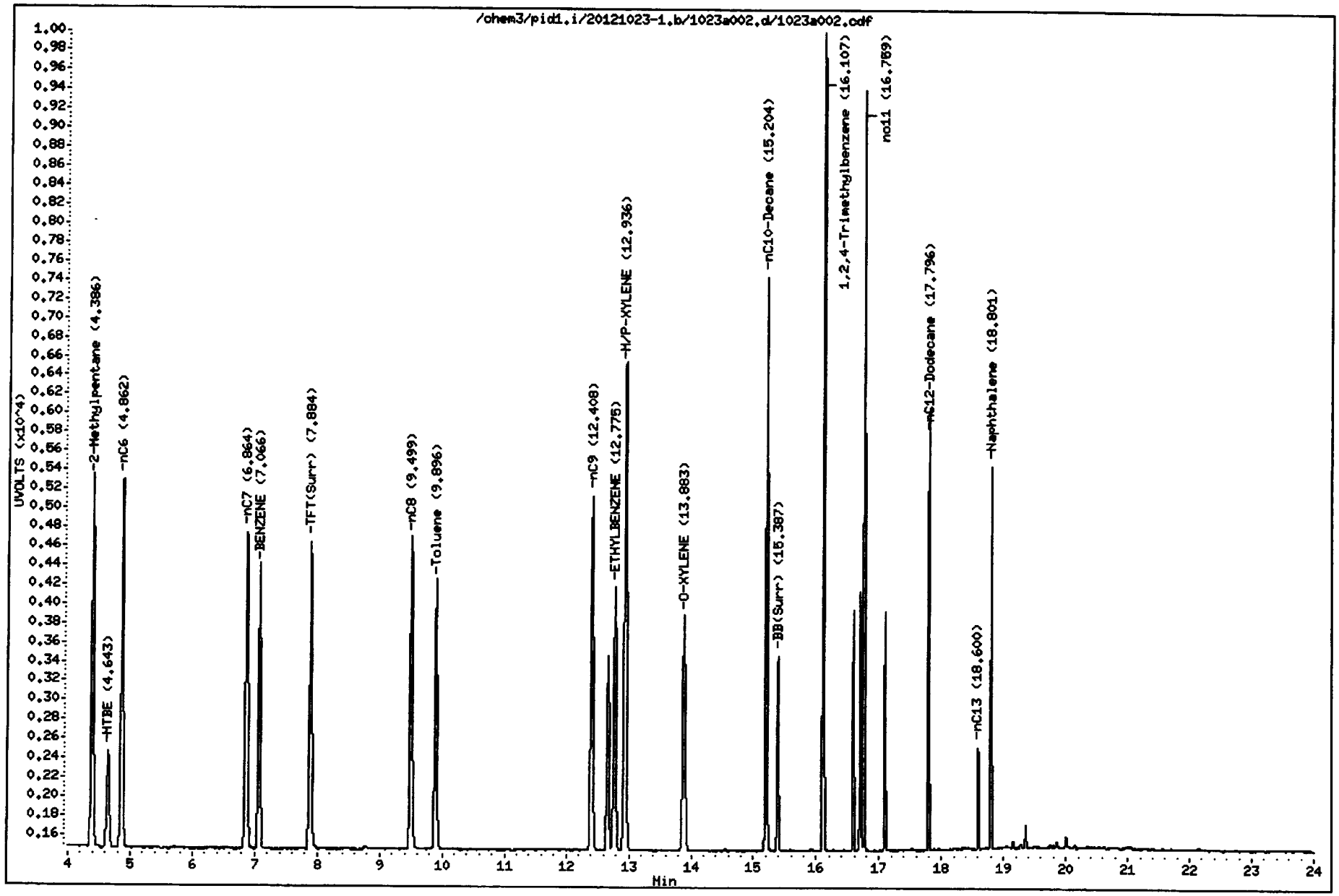
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18

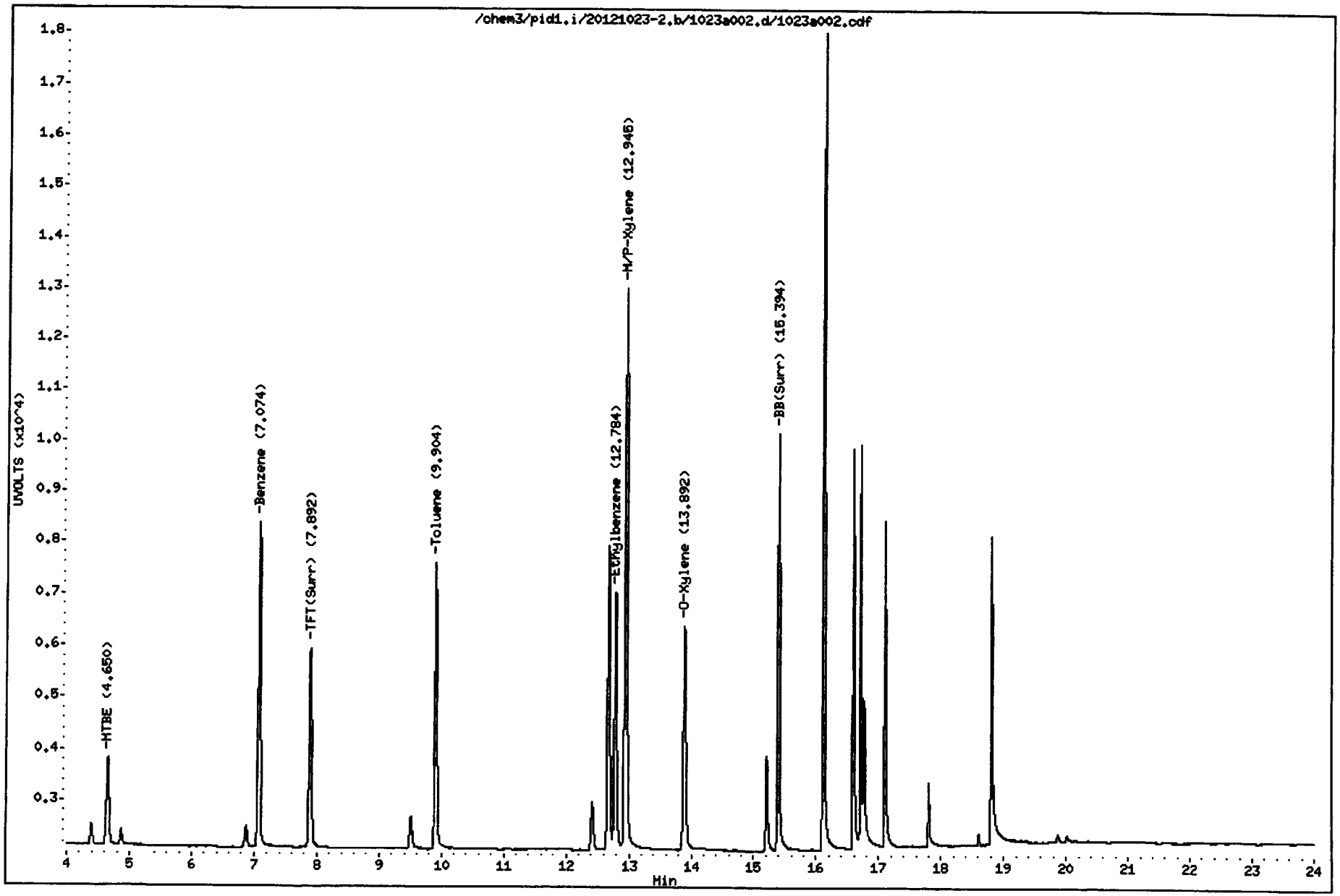


Data File: /chem3/pid1.i/20121023-2.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a013.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a013.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.10
Client ID:
Injection Date: 23-OCT-2012 22:13
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	2950	38720	93.7	TFT(Surr)
15.387	0.000	1950	16606	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	37102	0.104 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	74277	0.103 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	57914	0.099 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	39402	0.105 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3536	93.3	TFT(Surr)
15.395	0.001	7790	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.907	0.000	902	4.01	Toluene
12.785	-0.001	223	1.13	Ethylbenzene
12.948	0.005	914	4.25	M/P-Xylene
13.893	0.003	346	2.06	O-Xylene
ND	---	---	---	MTBE

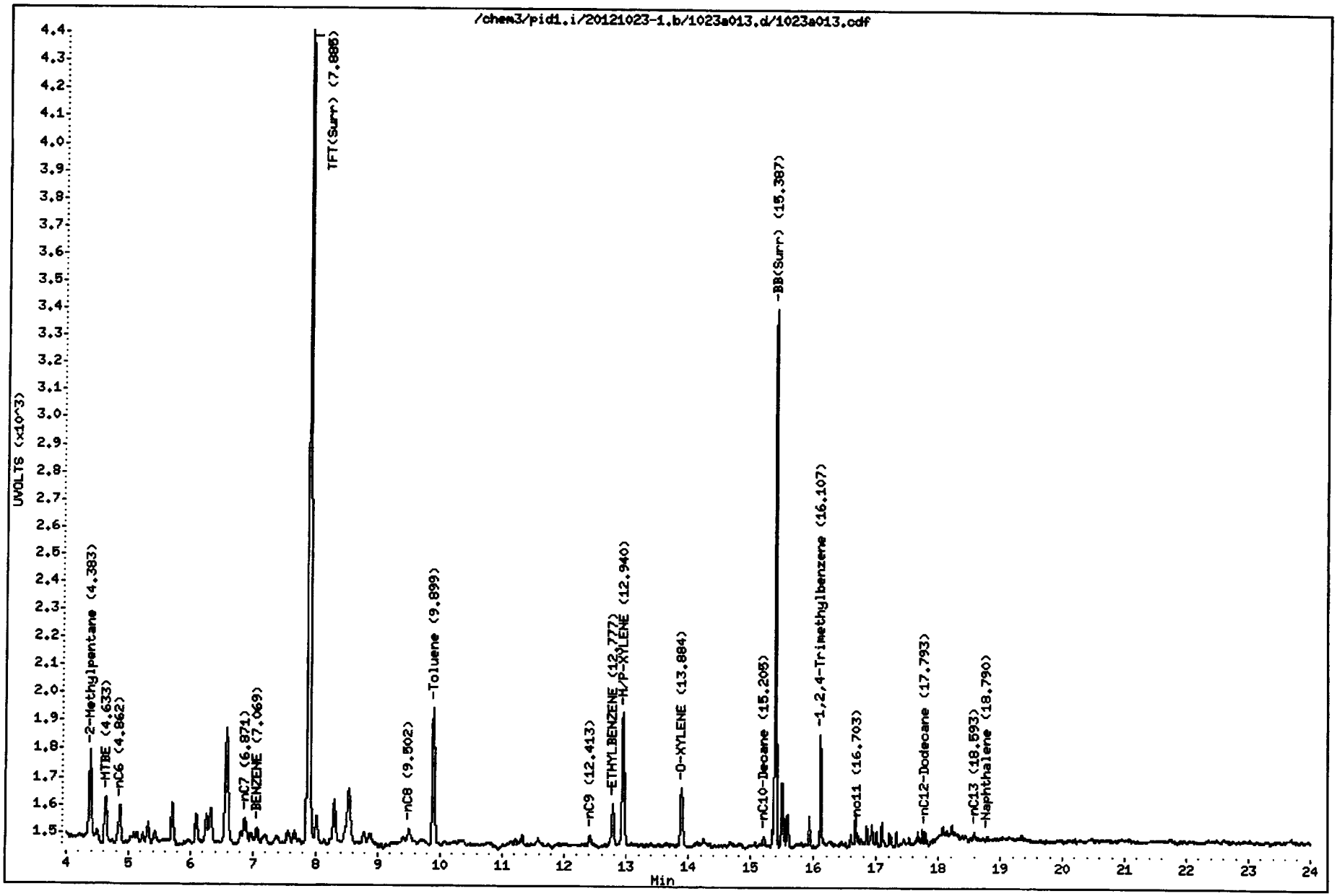
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

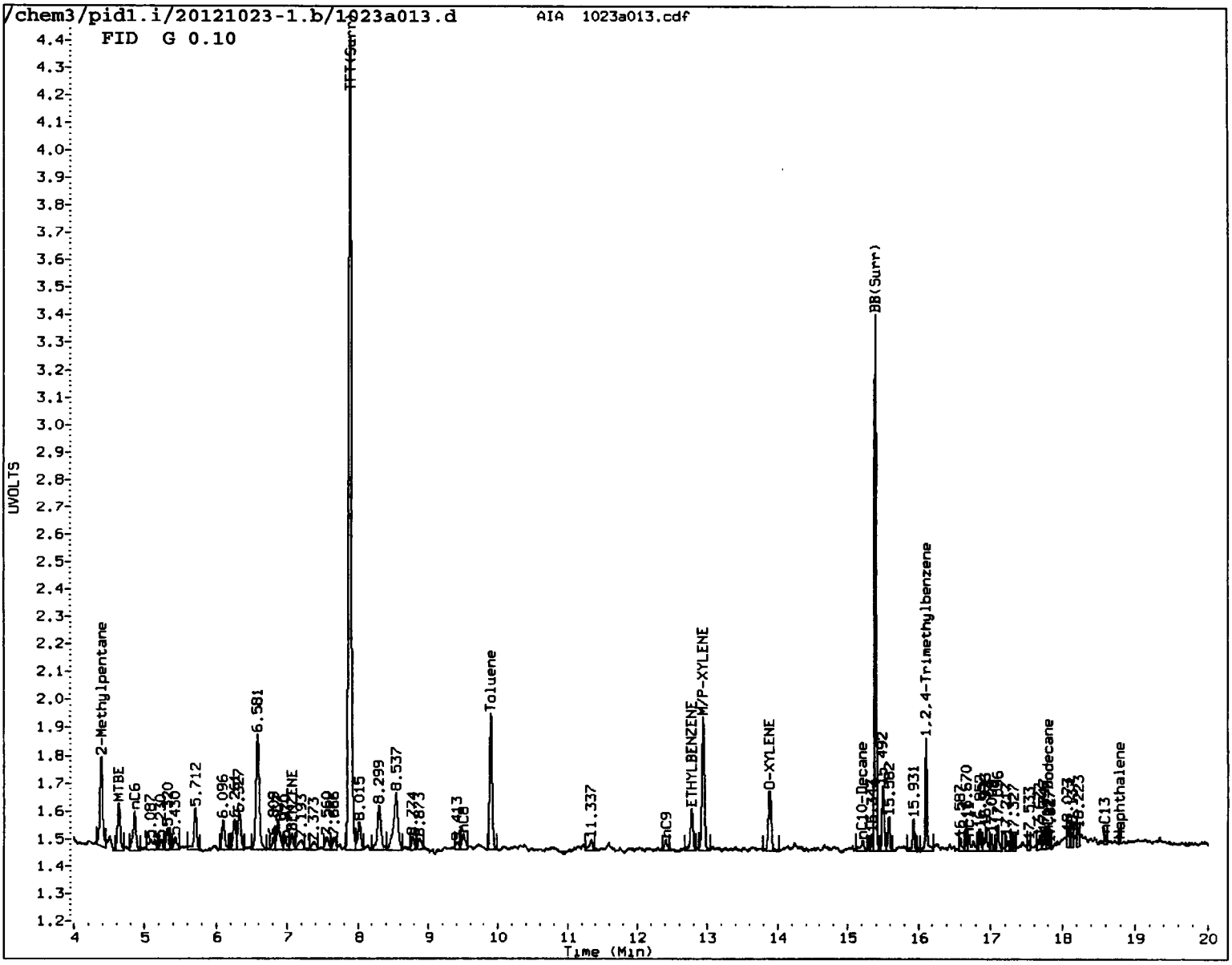
Data File: /chem3/pid1.i/20121023-1.b/1023a013.d
Date : 23-OCT-2012 22:13
Client ID:
Sample Info: G 0.10

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



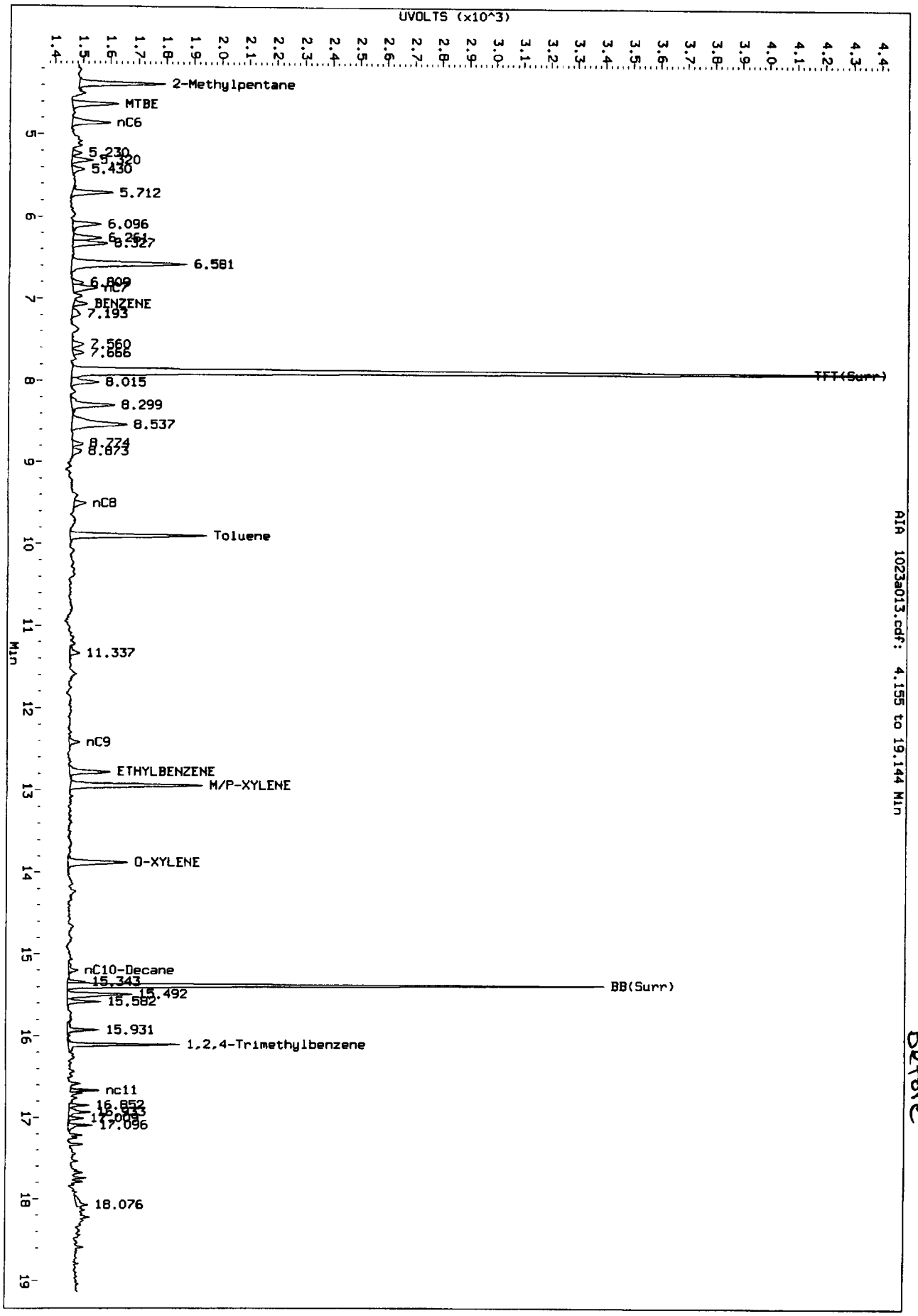


MANUAL INTEGRATION

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

5. Other _____

Analyst: 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:
UVOLTS (x10^3)
Min
AIA 1023a013.cdf: 4.155 to 19.144 Min
2-Methylpentane
MTBE
nC6
5.230
5.320
5.430
5.712
6.096
6.261
6.327
6.581
6.809
nC7
BENZENE
7.193
7.560
7.666
TFT(Surr)
8.015
8.299
8.537
8.774
8.873
nC8
Toluene
11.337
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
15.343
15.492
15.582
BB(Surr)
15.931
1,2,4-Trimethylbenzene
nc11
16.852
17.096
18.076

Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

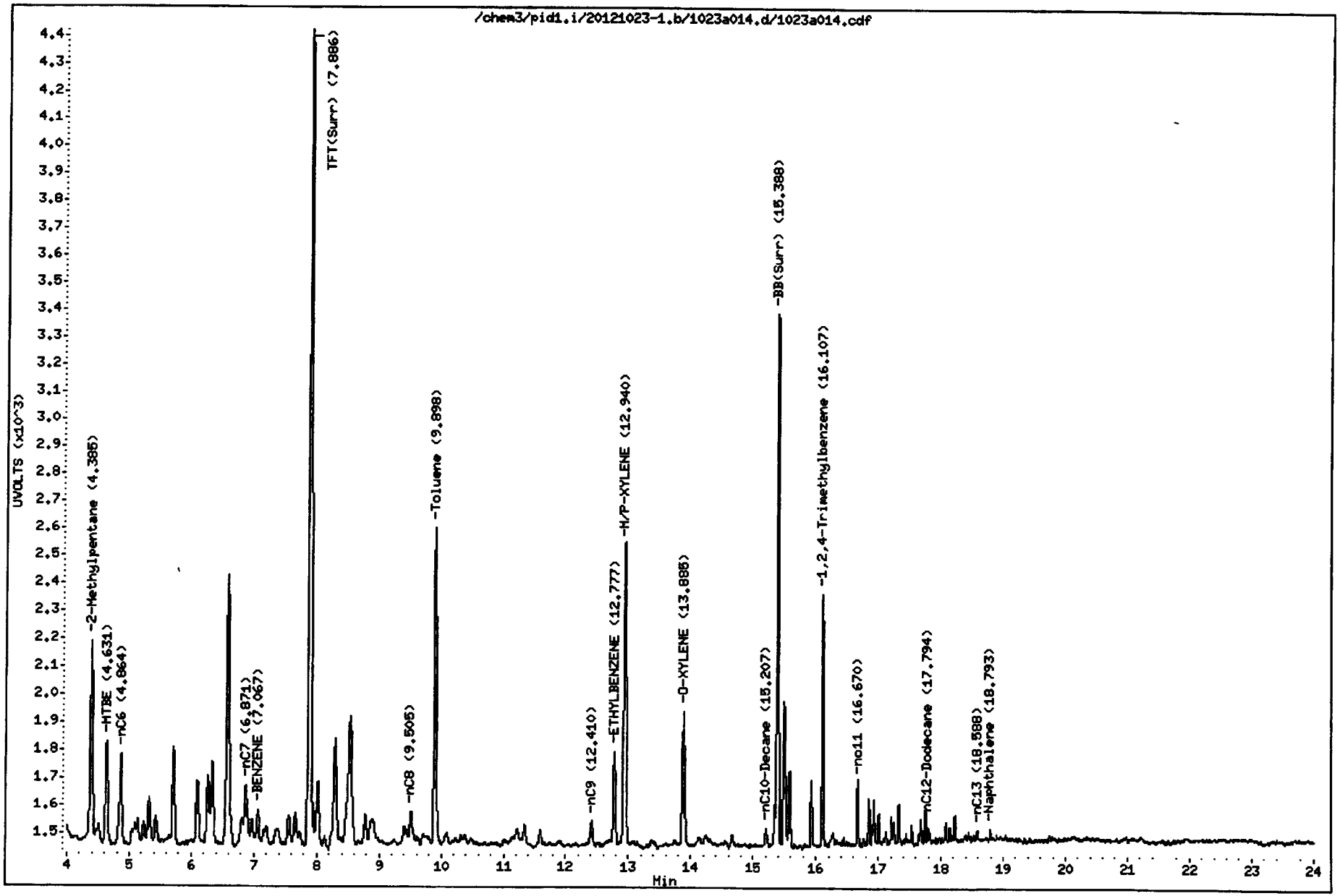
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

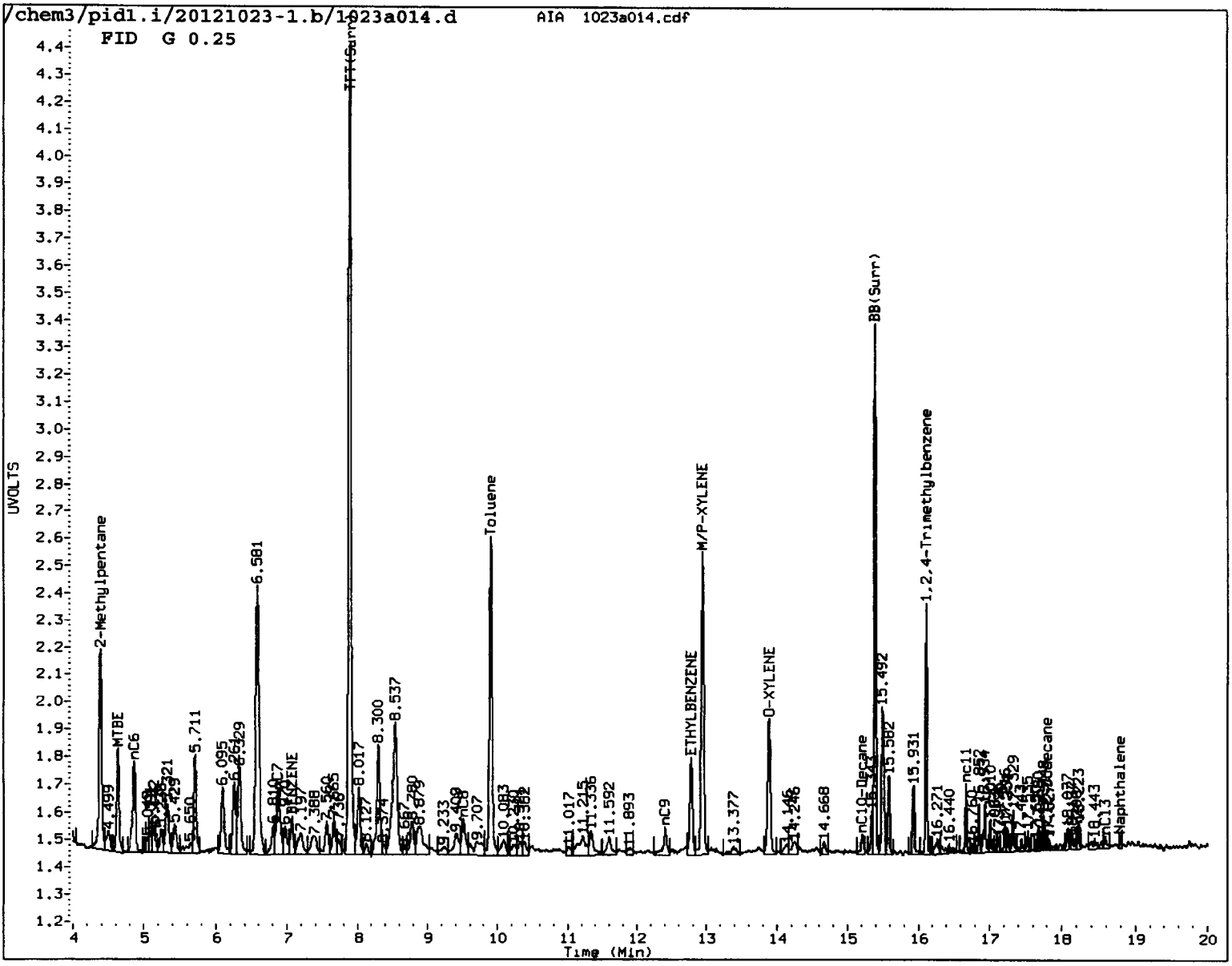
Data File: /chem3/pid1.i/20121023-1.b/1023a014.d
Date : 23-OCT-2012 22:42
Client ID:
Sample Info: G 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

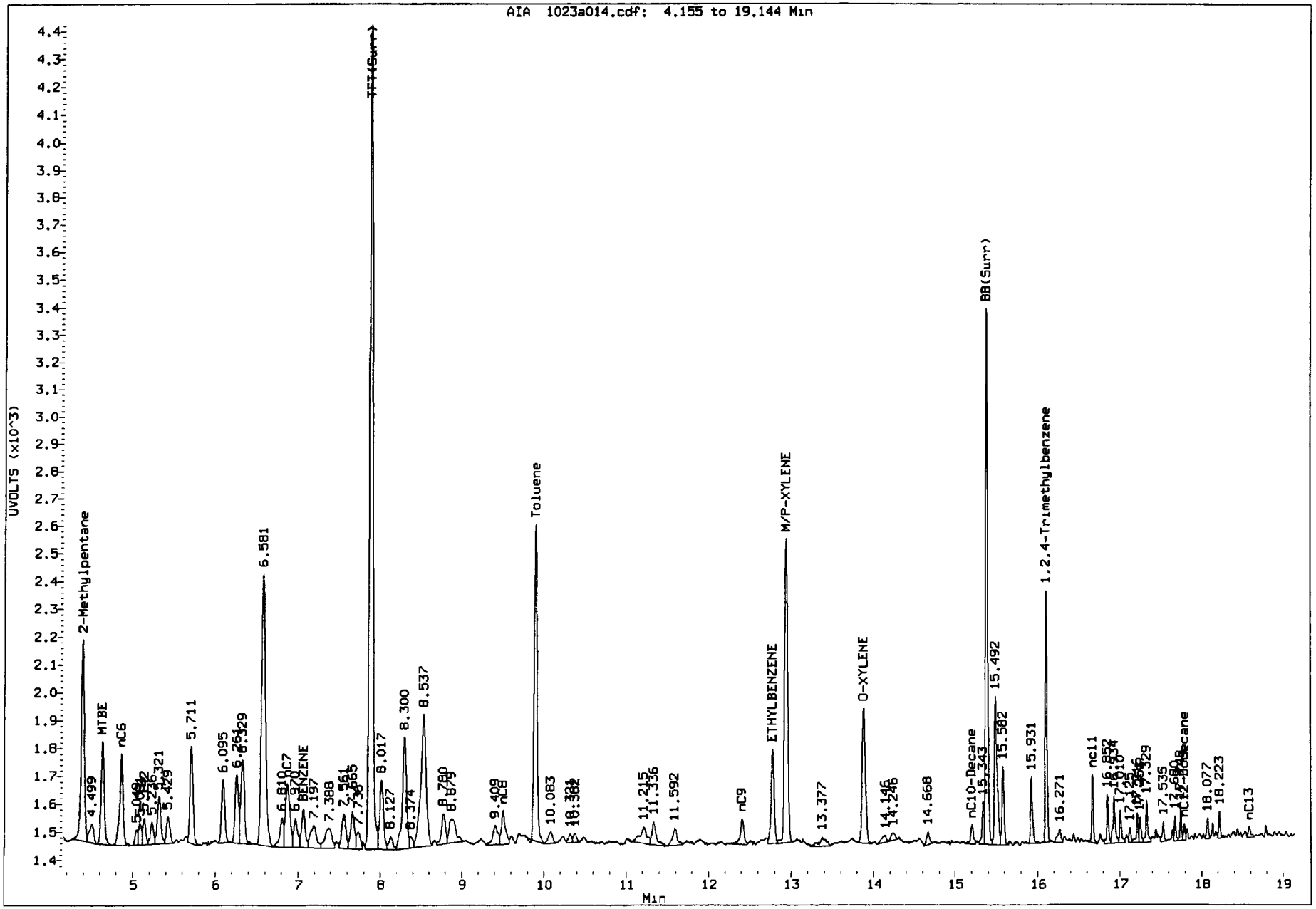
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d/1023a014.cdf
Injection Date: 23-OCT-2012 22:42
Instrument: pid1.i
Client Sample ID:

Before



UN31 : 02115

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a015.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a015.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 1.0
Client ID:
Injection Date: 23-OCT-2012 23:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	3079	44718	97.8	TFT(Surr)
15.387	0.000	1964	17721	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	358654	1.002 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	725276	1.002 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	585010	1.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	376837	1.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3709	97.9	TFT(Surr)
15.395	0.002	7881	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	965	3.89	Benzene
9.906	0.000	9089	40.40	Toluene
12.786	-0.001	2253	11.43	Ethylbenzene
12.949	0.006	9128	42.45	M/P-Xylene
13.894	0.004	3286	19.58	O-Xylene
4.635	-0.019	211	2.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a015.d

Date : 23-OCT-2012 23:11

Client ID:

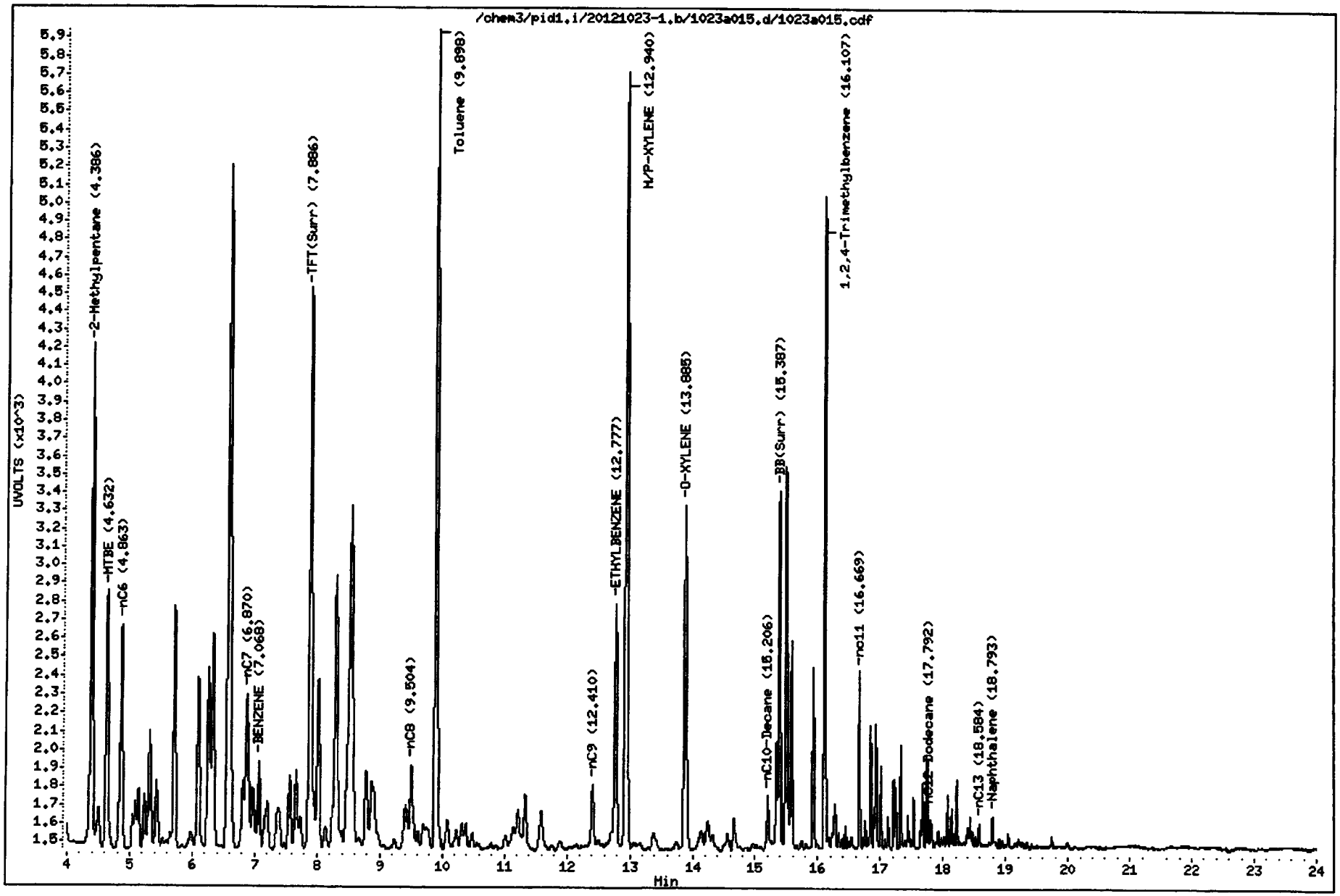
Sample Info: C 1.0

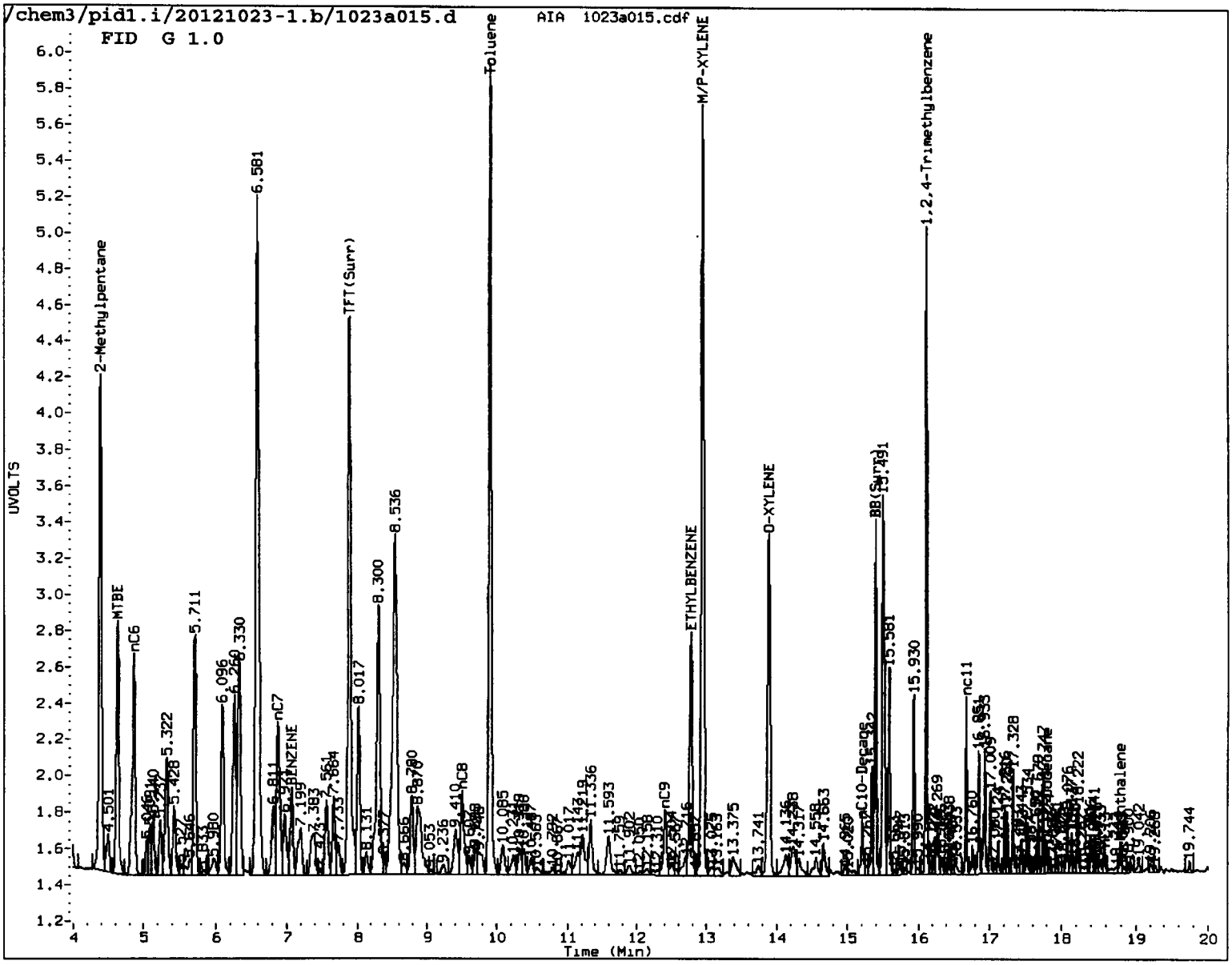
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



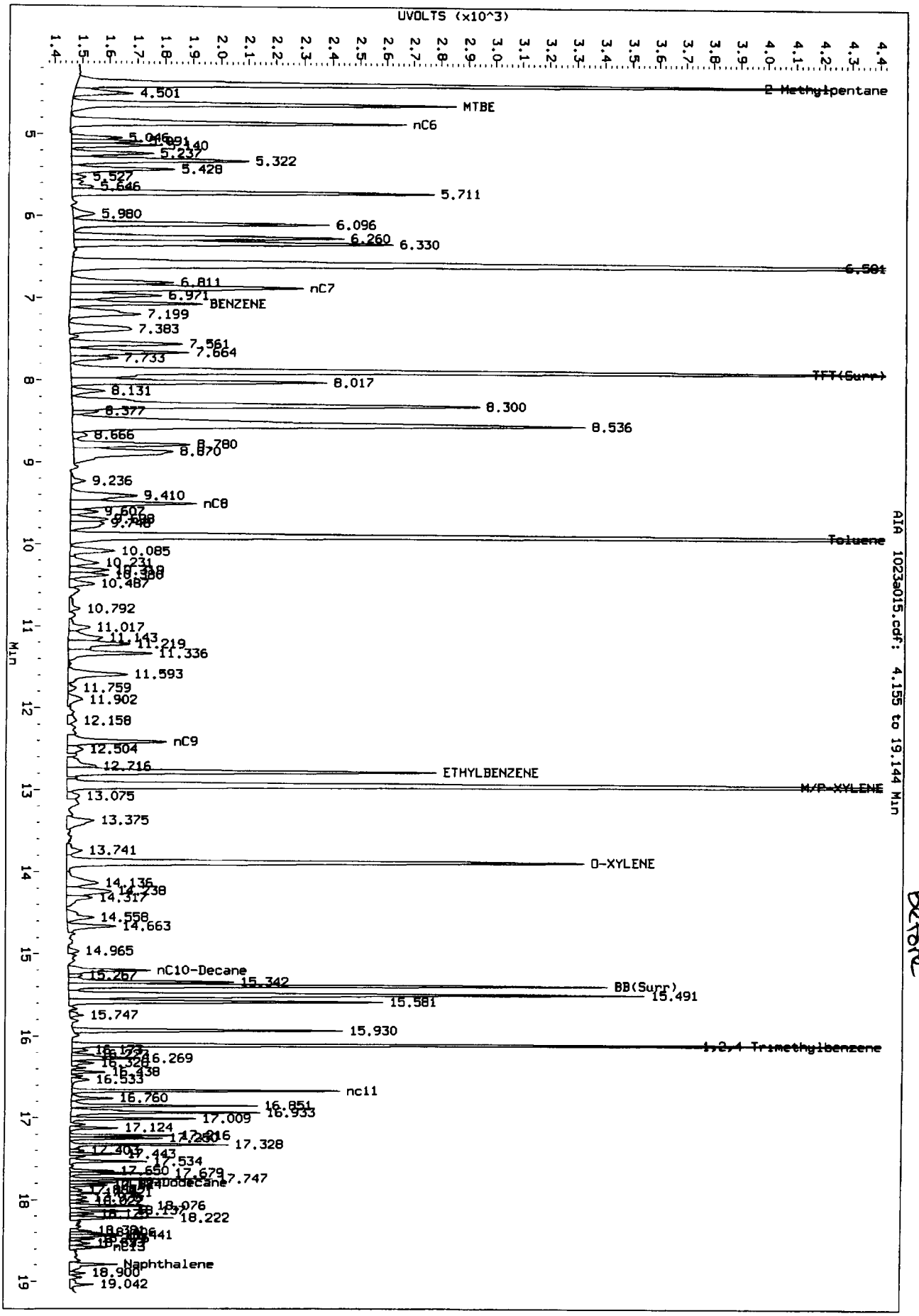


MANUAL INTEGRATION

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

5. Other _____

Analyst: JW Date: 10/25/12



Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.cdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:

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:

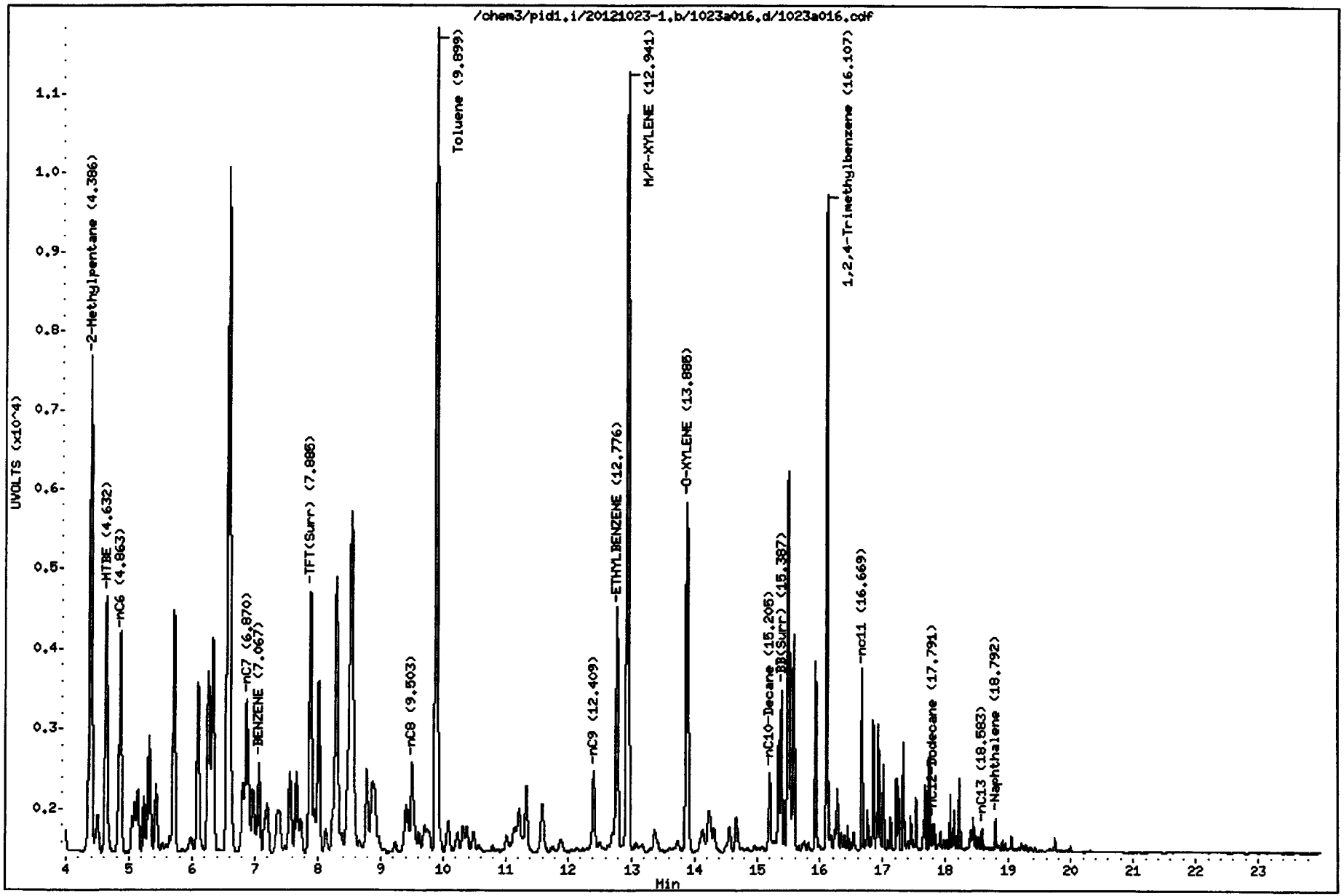
Sample Info: G 2.5

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:

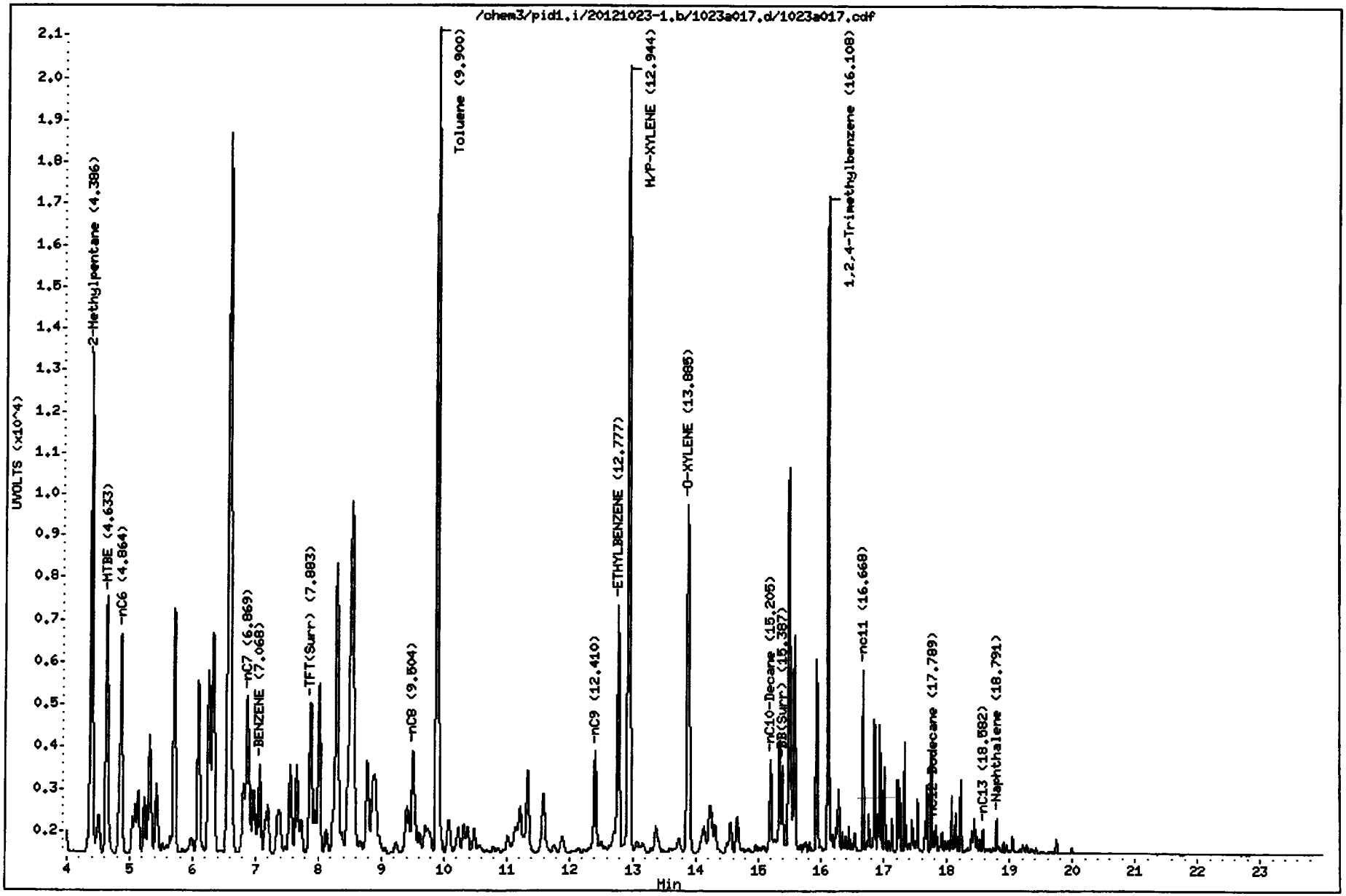
Sample Info: C 5.0

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 FID

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)

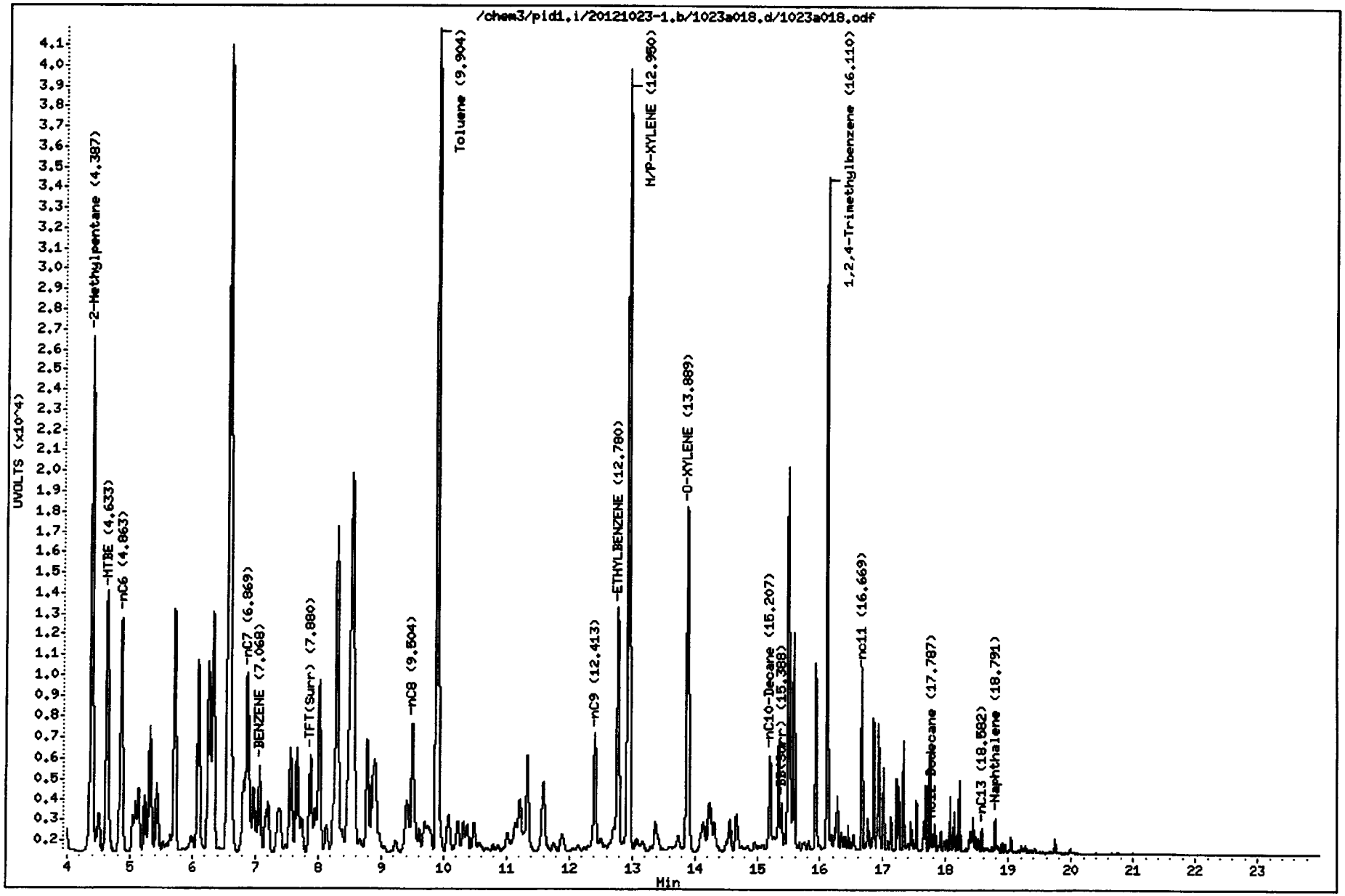
RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

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: C 10

Instrument: pid1.i

Operator: PC/JW
Column phase: RTX 502-2 FID
Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a019.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a019.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GICV
Client ID:
Injection Date: 24-OCT-2012 01:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3250	47497	103.2	TFT(Surr)
15.387	0.000	2019	19039	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	917898	2.563
8015C 2MP-TMB	(4.29 to 16.21)	723723	1759198	2.431
AK101 nC6-nC10	(4.76 to 15.11)	582885	1408754	2.417
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	972996	2.594

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3791	100.1	TFT(Surr)
15.395	0.002	8074	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2306	9.30	Benzene
9.907	0.000	22198	98.66	Toluene
12.785	-0.001	5582	28.31	Ethylbenzene
12.950	0.007	22656	105.37	M/P-Xylene
13.894	0.004	8207	48.90	O-Xylene
4.635	-0.019	542	7.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

Sample Info: GICV

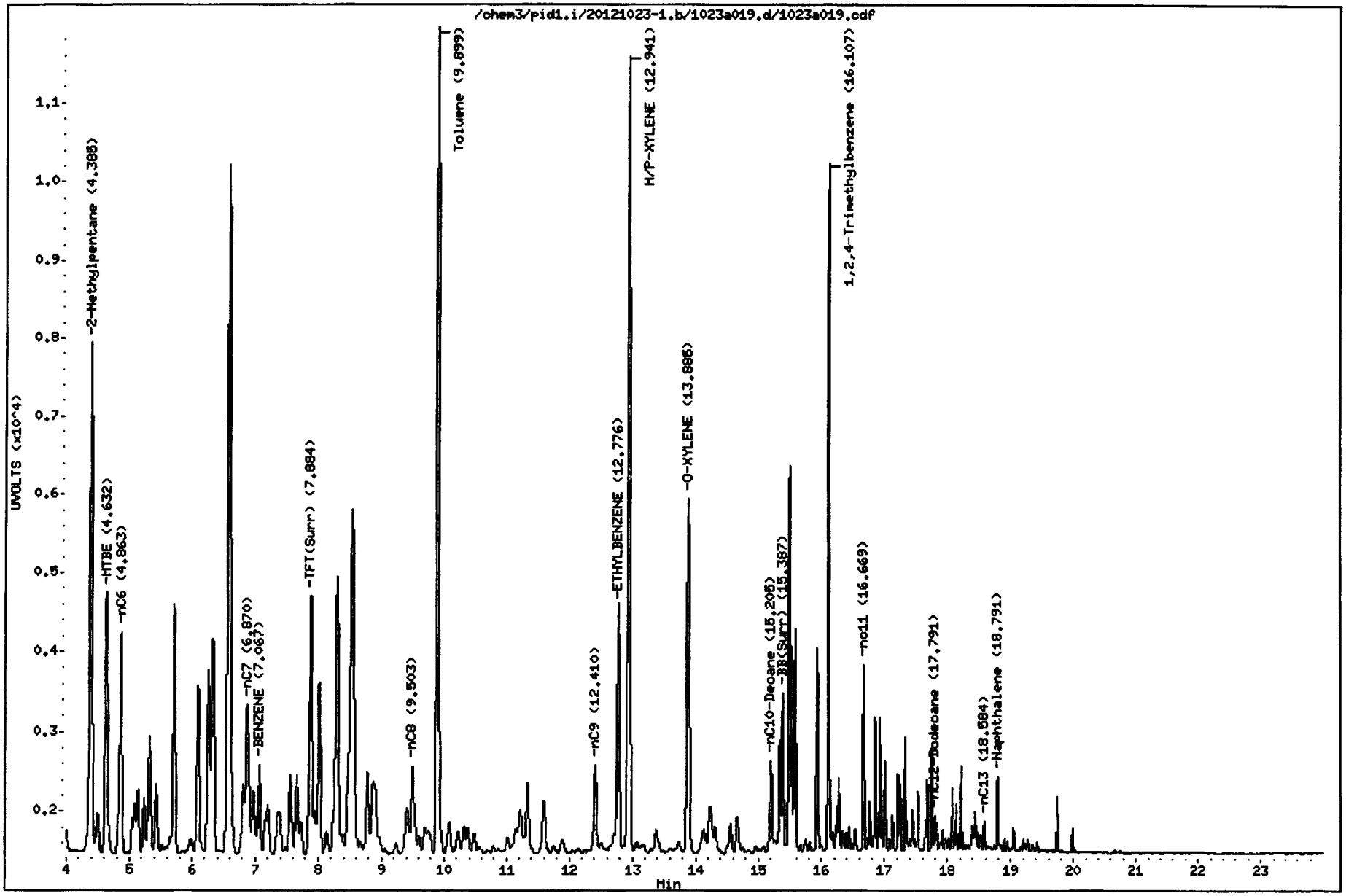
Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18

UN31 : 021128



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

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 confirmation of BTEX detection quantitation below as poor signal to noise ratio.
MTBE 0.25 level not used, below RL

Analyst: PL **Date:** 3/18/13

Reviewer: RB **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.: 82726 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
UW785-1	UW772-3	UW765-1

Document All Maintenance Tasks in StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	1402	0315a001.d	RINSE				1
2	1431	0315a002.d	BT/BCAL 1				1
3	1501	0315a003.d	BCAL 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 _____ Date: 3/18/13
Reviewer 2 _____ Date: 3/18/13

SW8260B_TCLP

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 HC Date: 3/18/13
Reviewer 2 BB 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	RRF	% RSD
	100.000 Level 8	200.000 Level 9						
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	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						
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.

PG 3/18/13

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

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)	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	

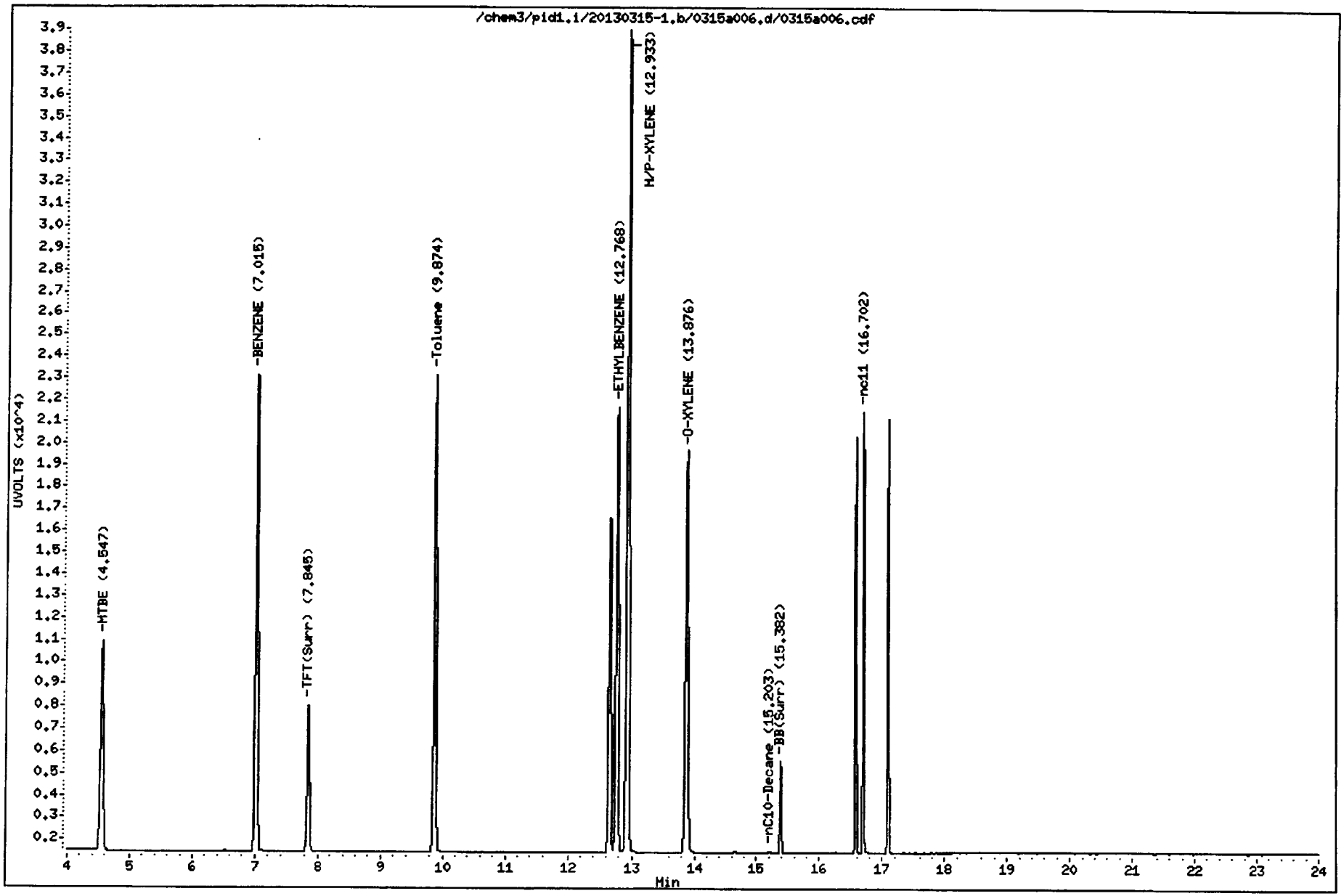
Data File: /chem3/pid1.i/20130315-1.b/0315a006.d
Date : 15-MAR-2013 16:43
Client ID: BTEX 200
Sample Info: BTEX 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18

WN31 : 02159

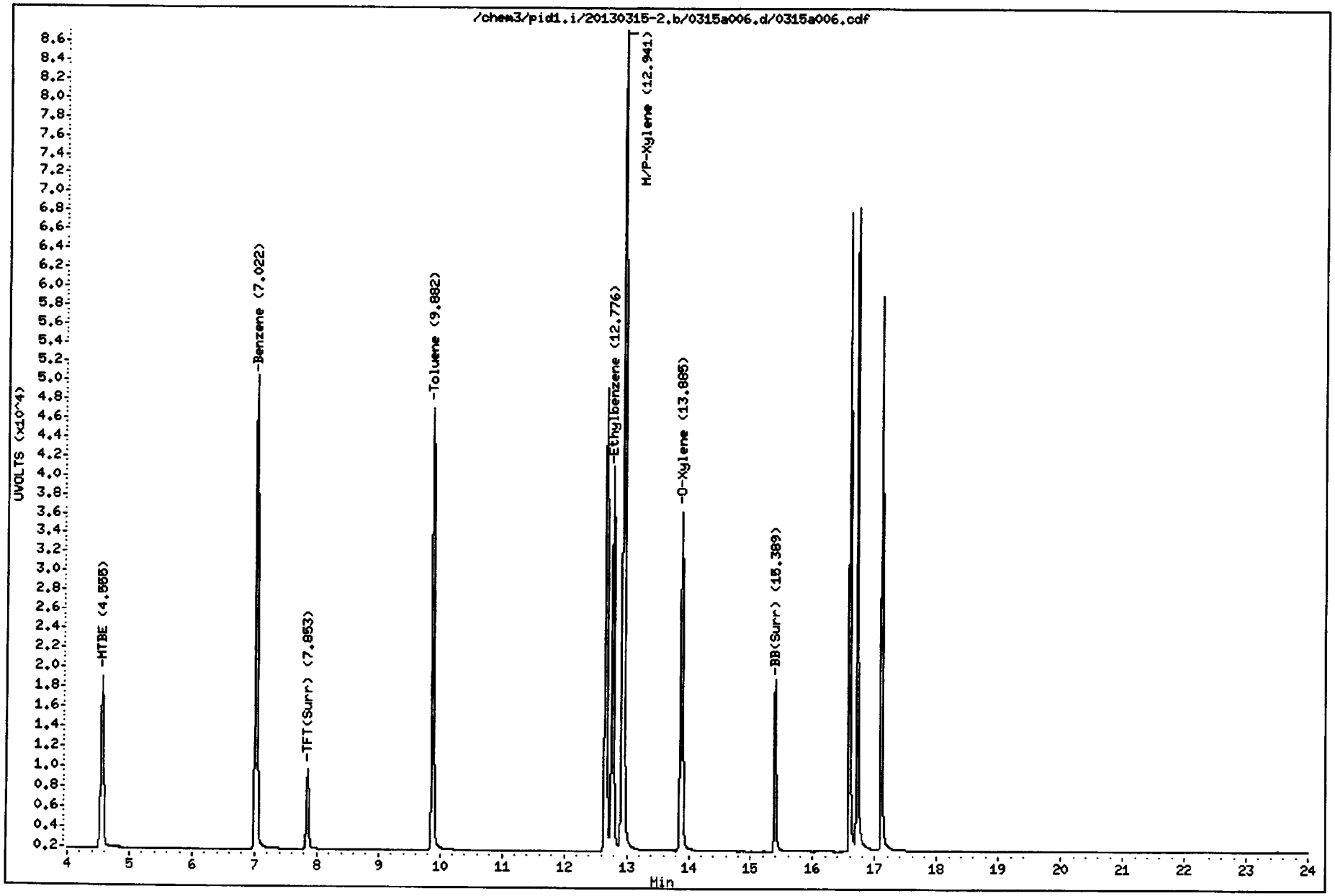


Data File: /chem3/pid1.i/20130315-2.b/0315a006.d
Date : 15-MAR-2013 16:43
Client ID: BTEX 200
Sample Info: BTEX 200

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



TST20 : TCNM

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

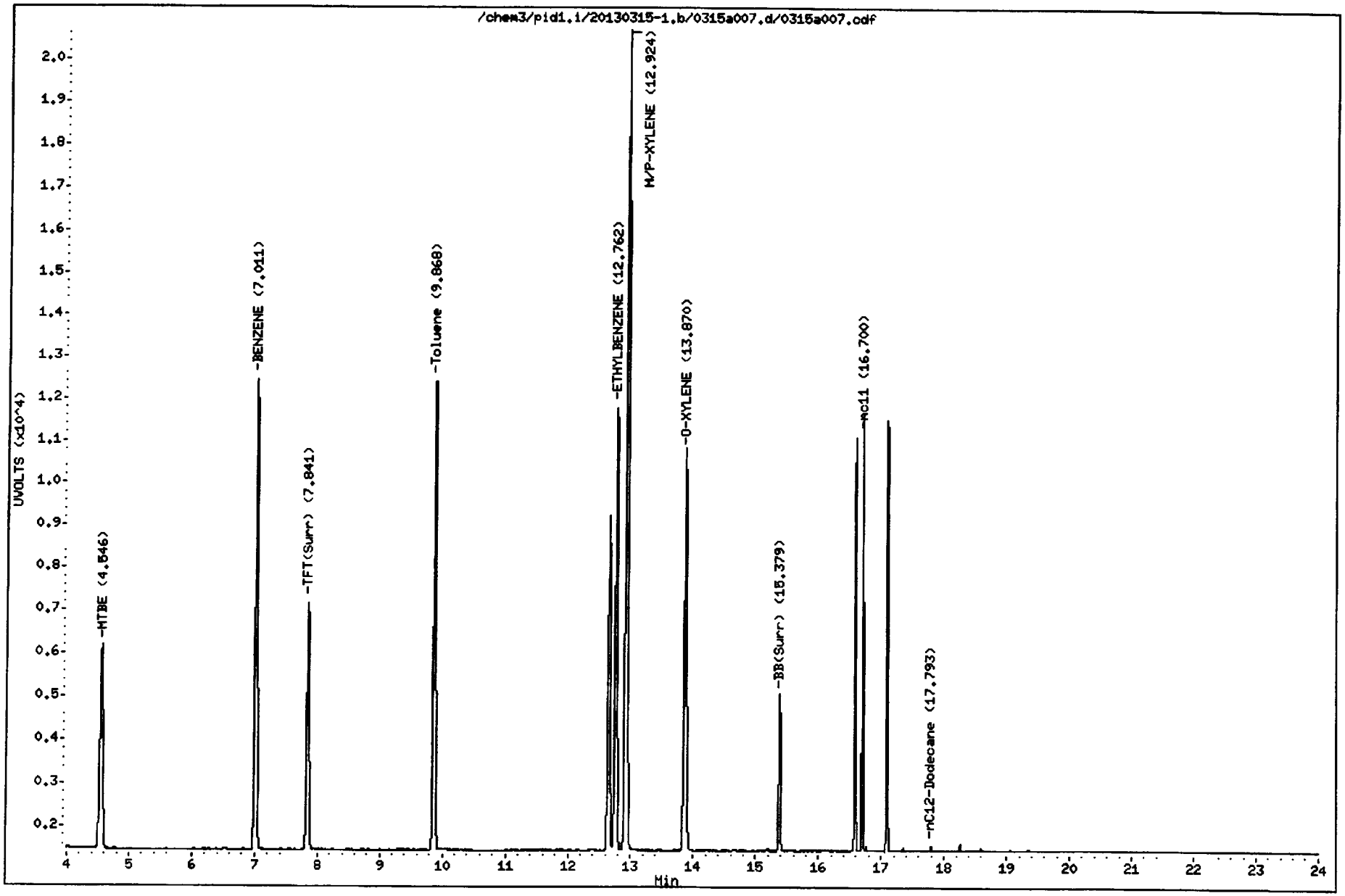
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.546	4.543	0.003	76514	100.000	90.46
9	BENZENE	7.011	7.008	0.003	135311	100.000	88.44
$ 10	TFT(Surr)	7.841	7.842	-0.001	5708	178.000	164.6
12	Toluene	9.868	9.867	0.001	131887	100.000	90.44
14	ETHYLBENZENE	12.762	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

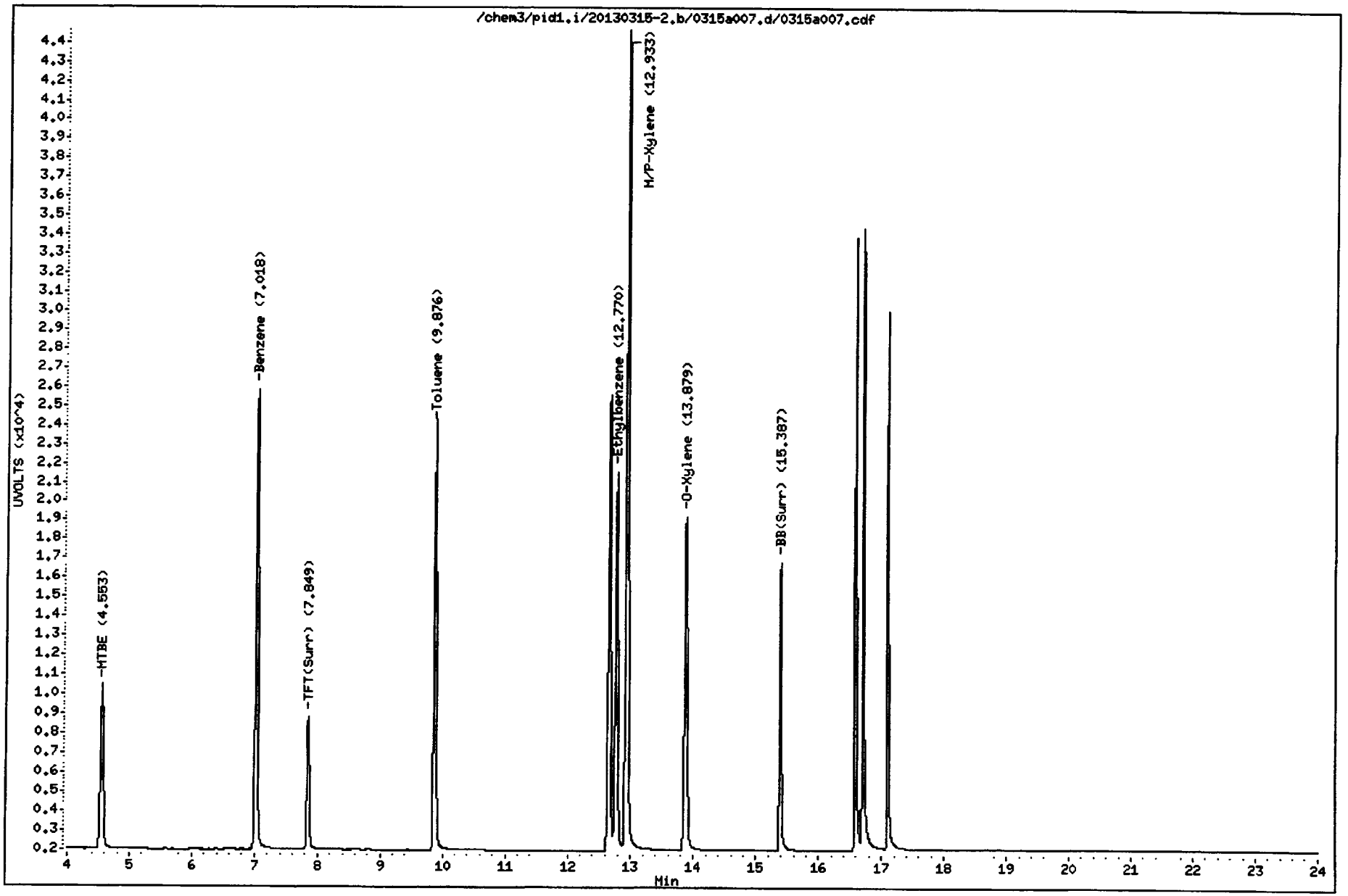
Sample Info: BTEX 100

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

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

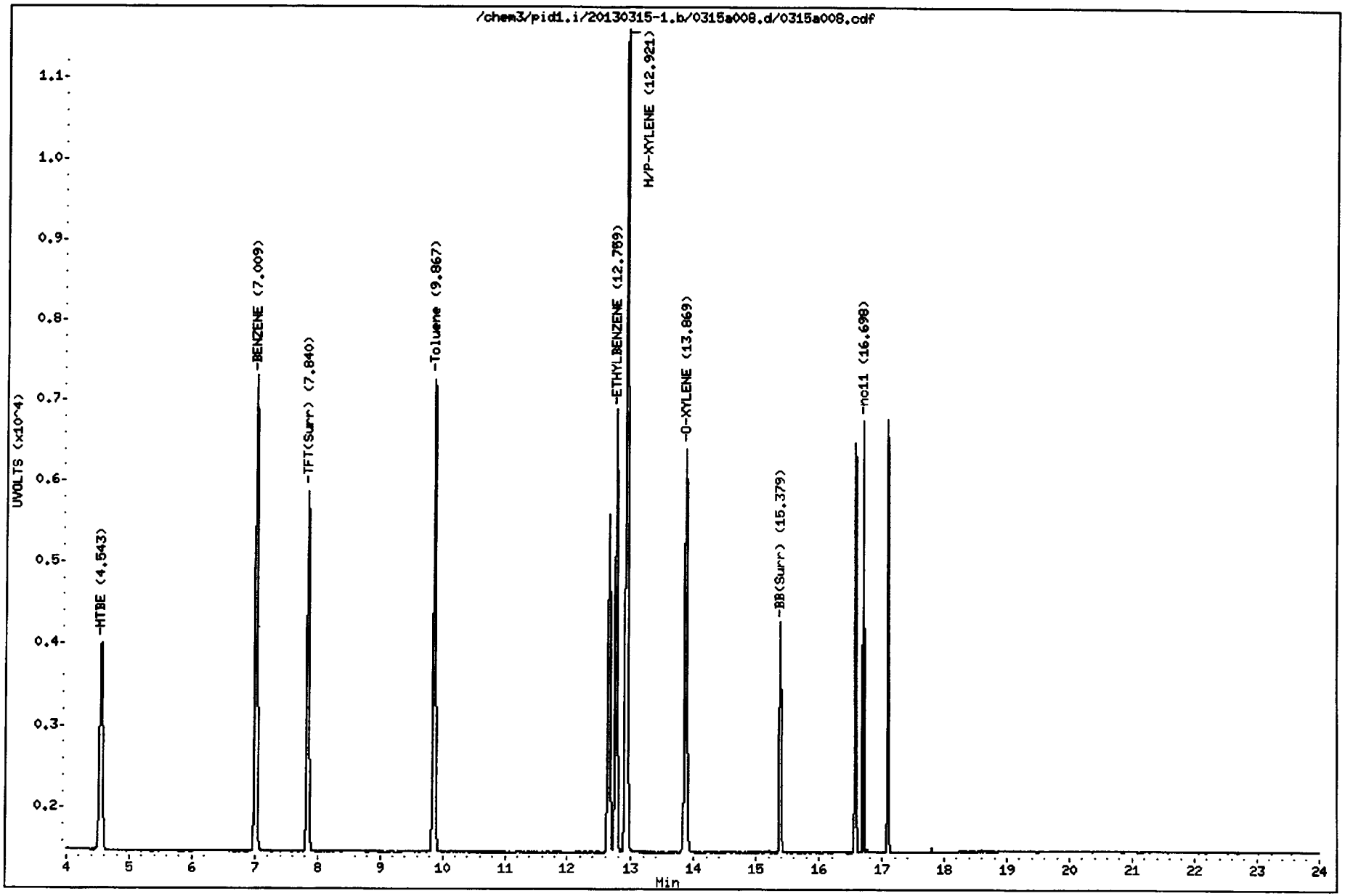
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

WN31:02153

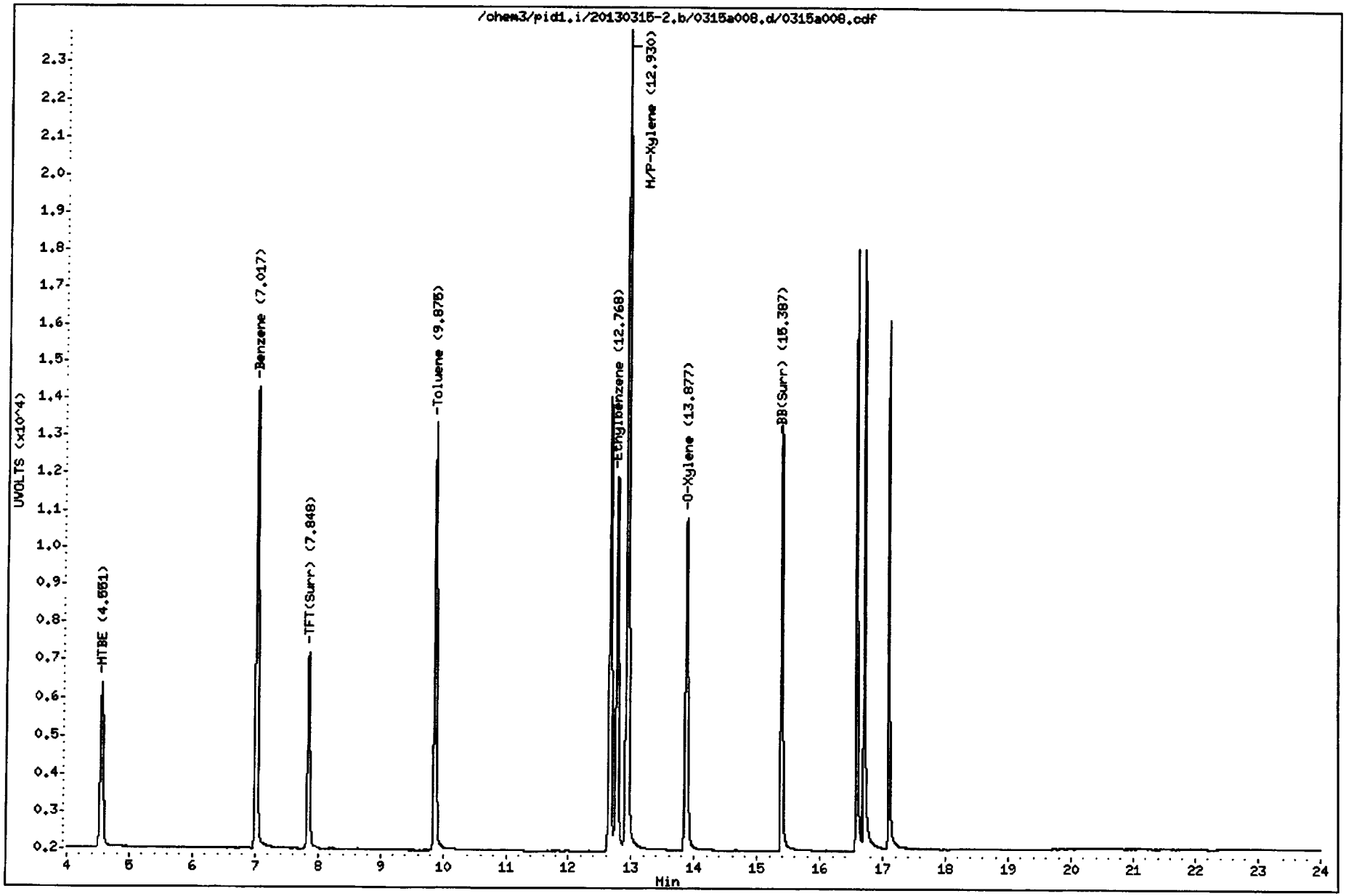


Data File: /chem3/pid1.i/20130315-2.b/0315a008.d
Date : 15-MAR-2013 17:42
Client ID: BTEX 50
Sample Info: BTEX 50

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

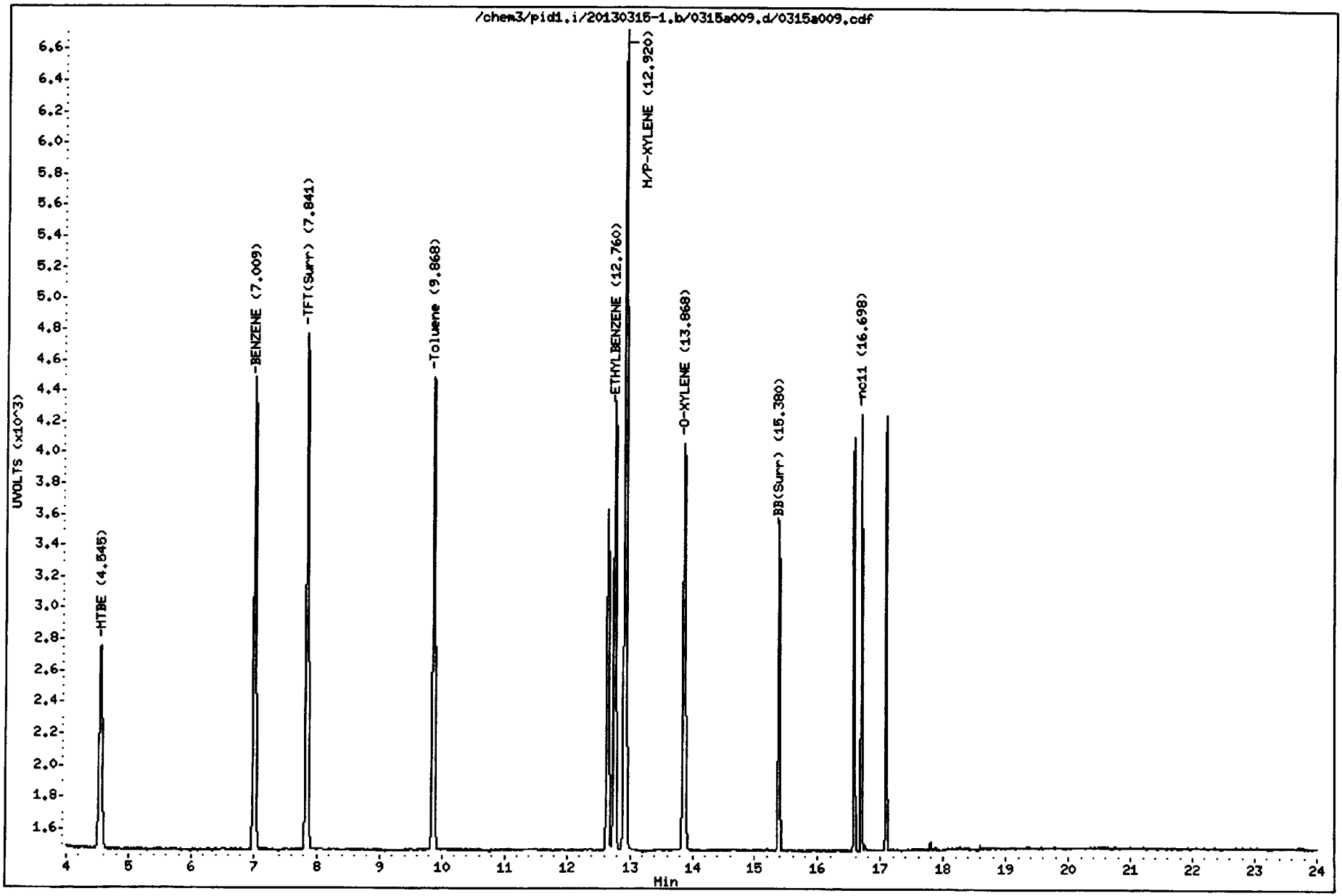
Sample Info: BTEX 25

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

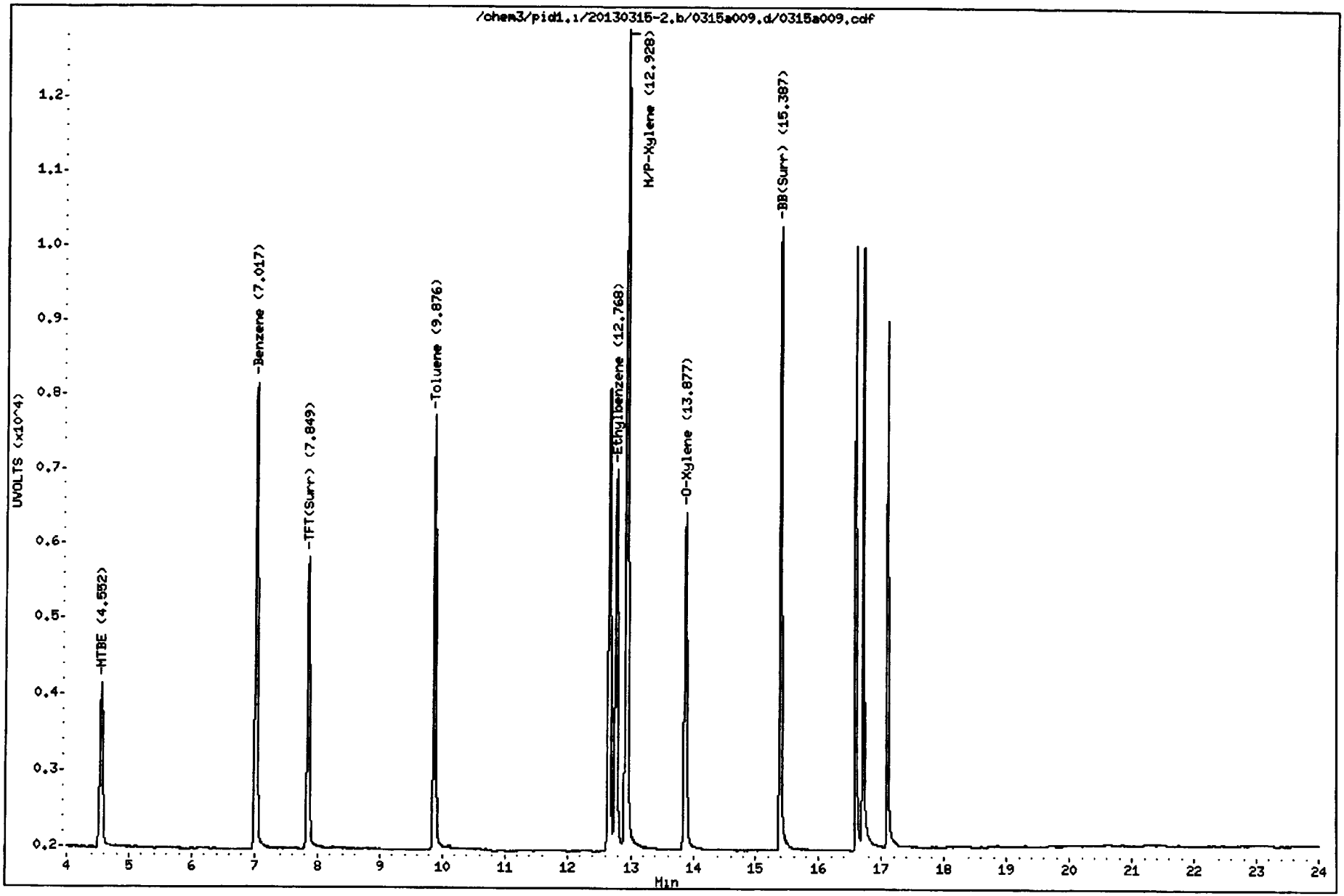
Sample Info: BTEX 25

Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 PID

Column diameter: 0.18



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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

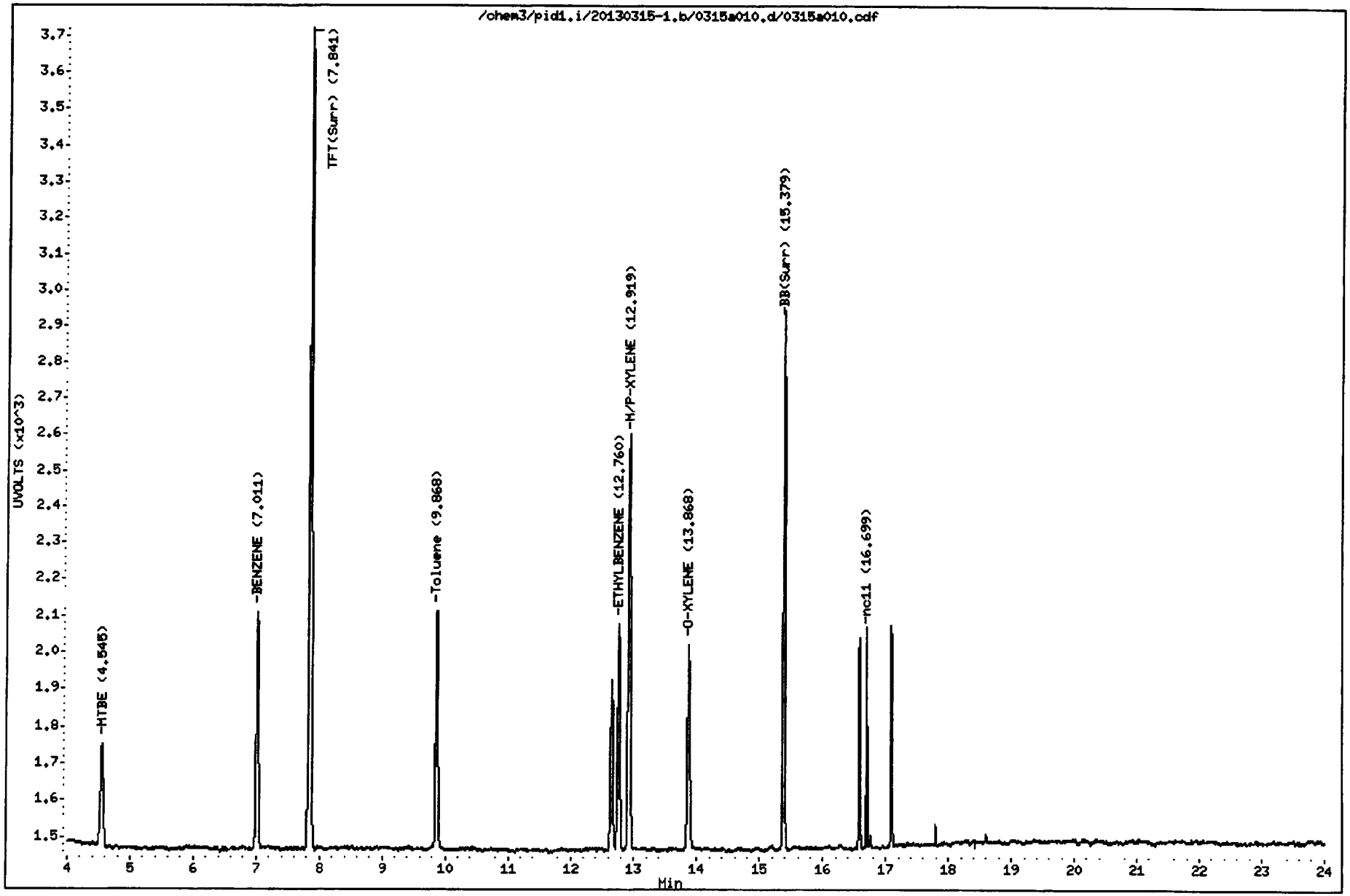
Sample Info: BTEX 5

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

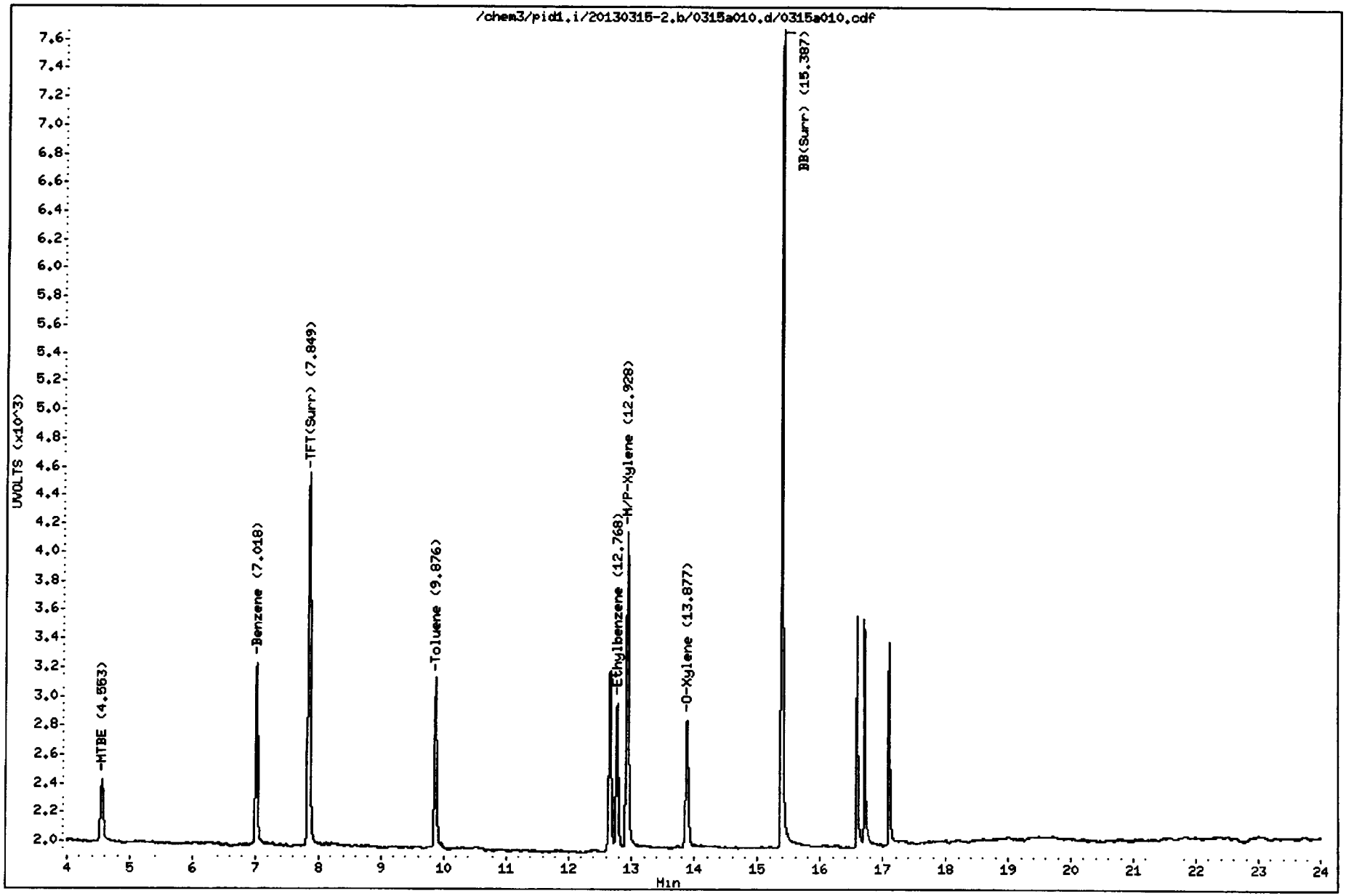
Sample Info: BTEX 5

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

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

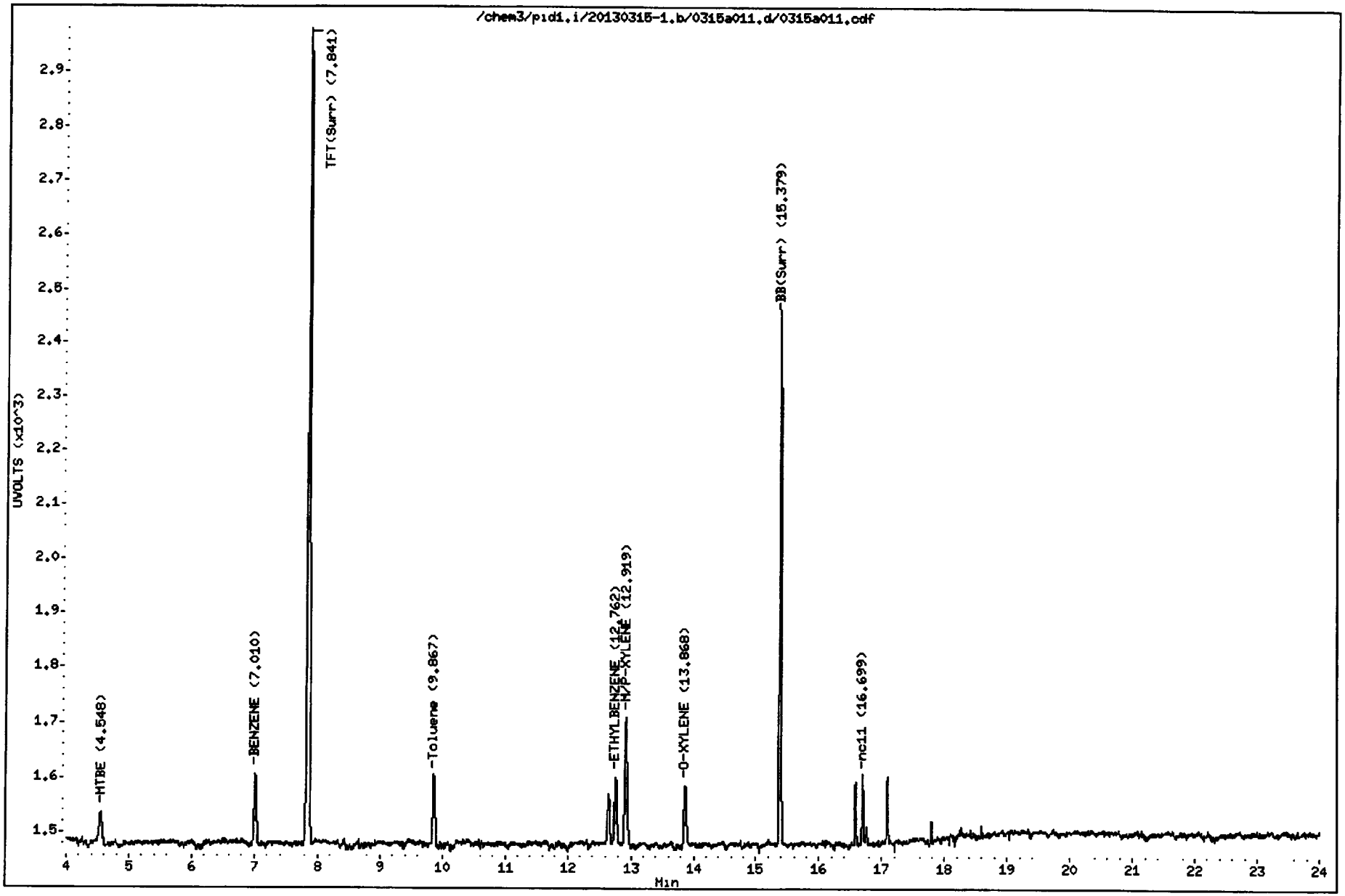
Sample Info: BTEX 1

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

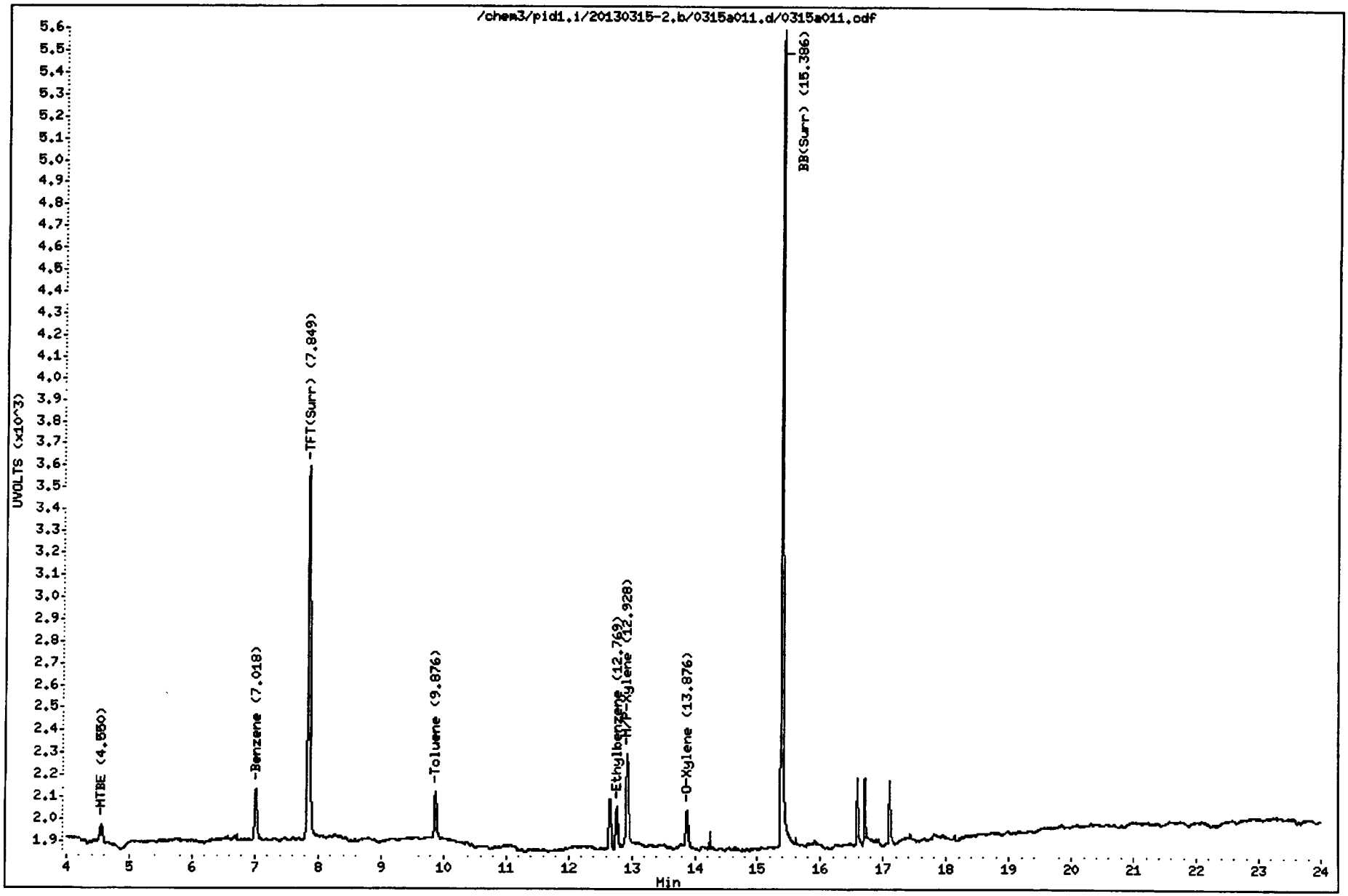
Sample Info: BTEX 1

Column phase: RTX 502-2 PID

Instrument: pid1.i

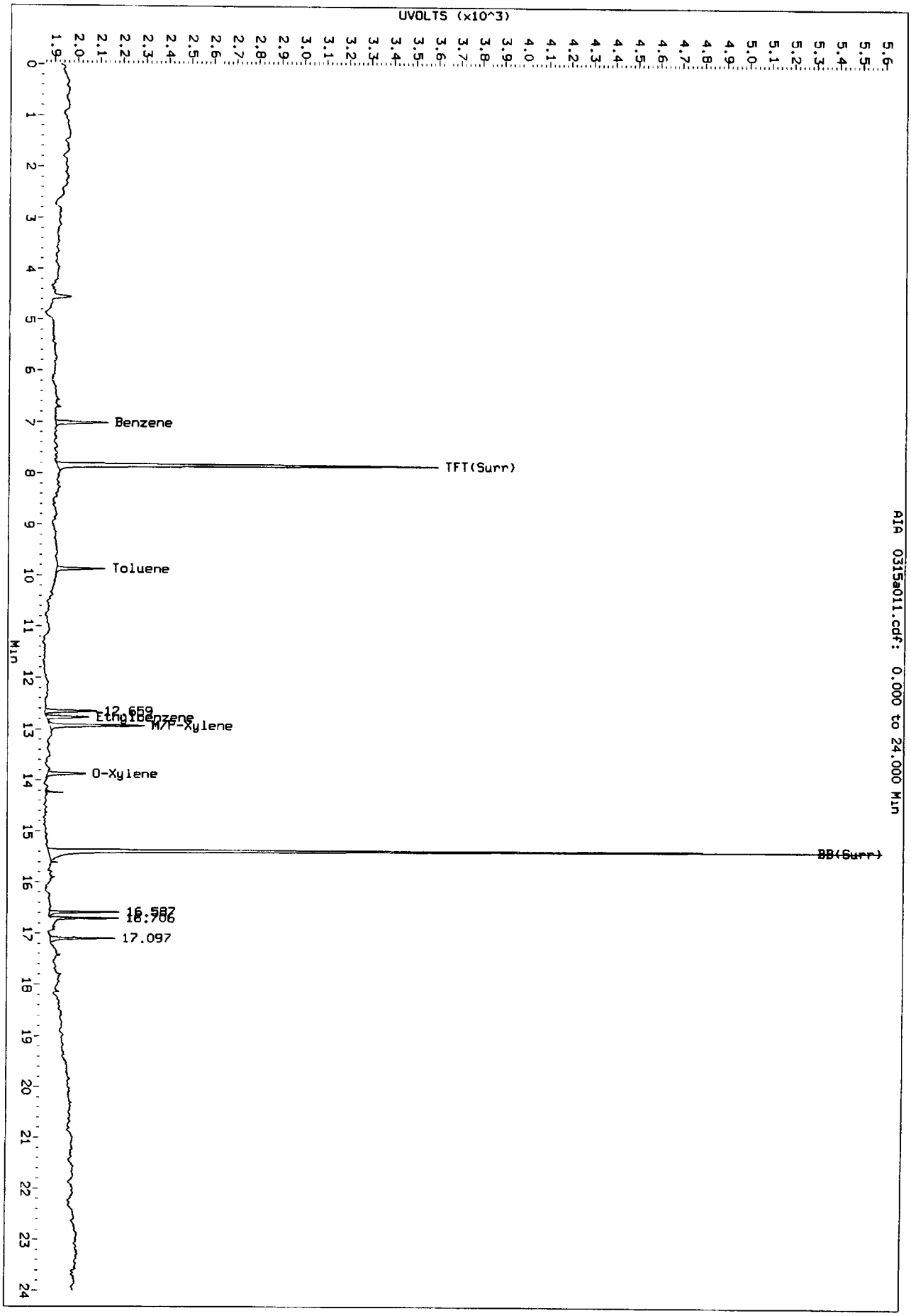
Operator: LH

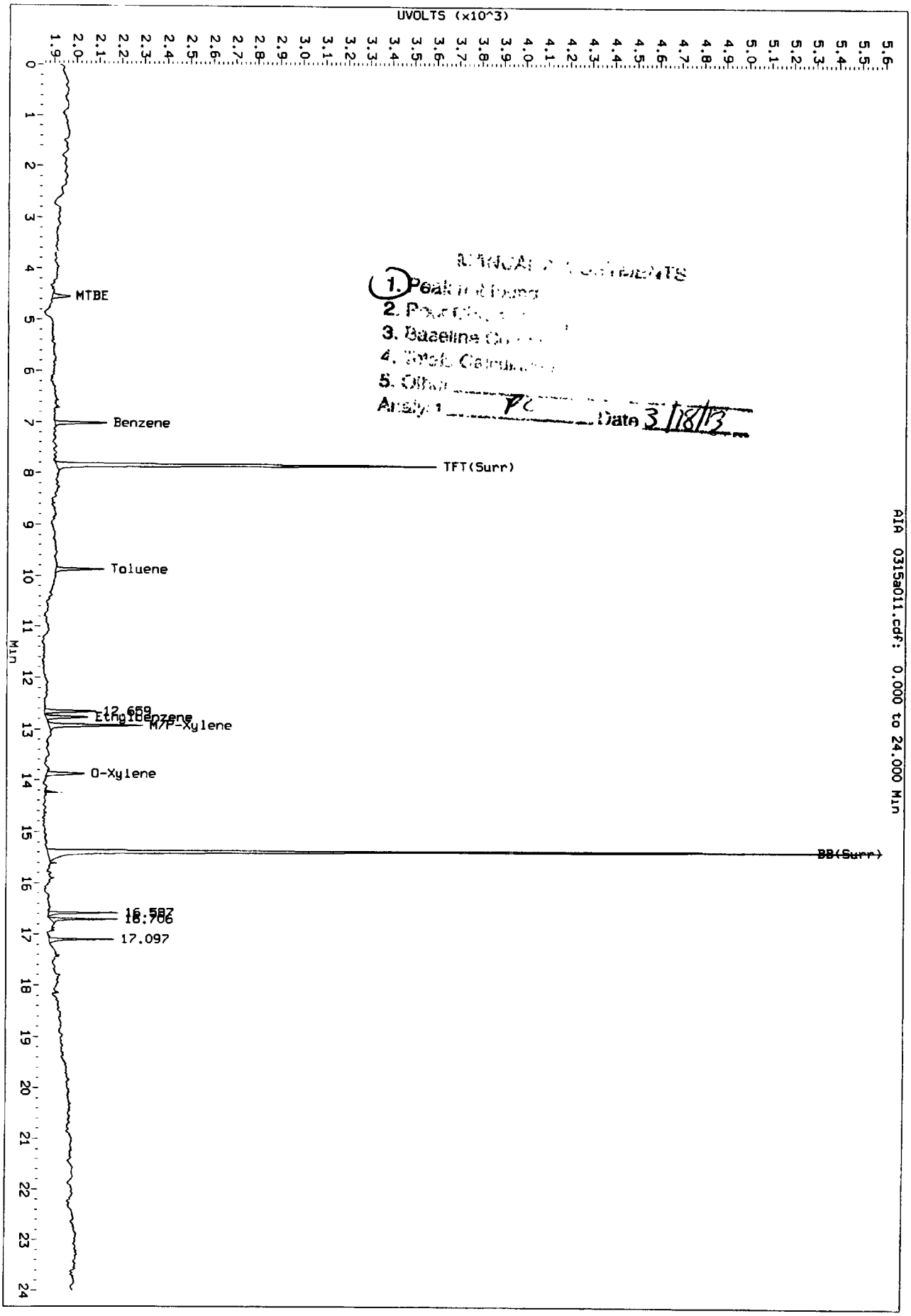
Column diameter: 0.18



PC 3/18/13

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





1. Peak
2.
3. Baseline
4.
5. Other

Analyst PC Date 3/18/13

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

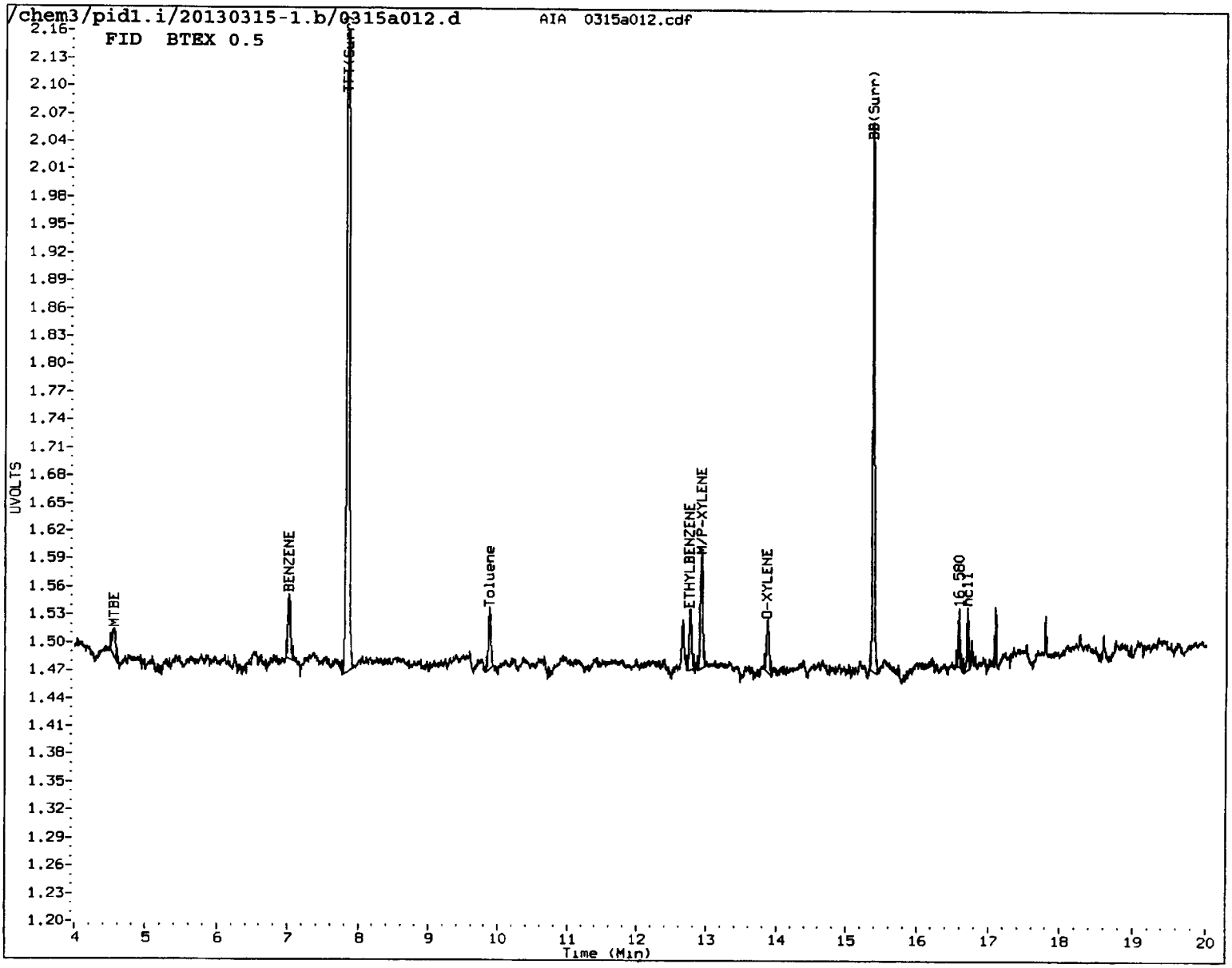
Concentration Formula: Amt * DF * CpndVariable

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

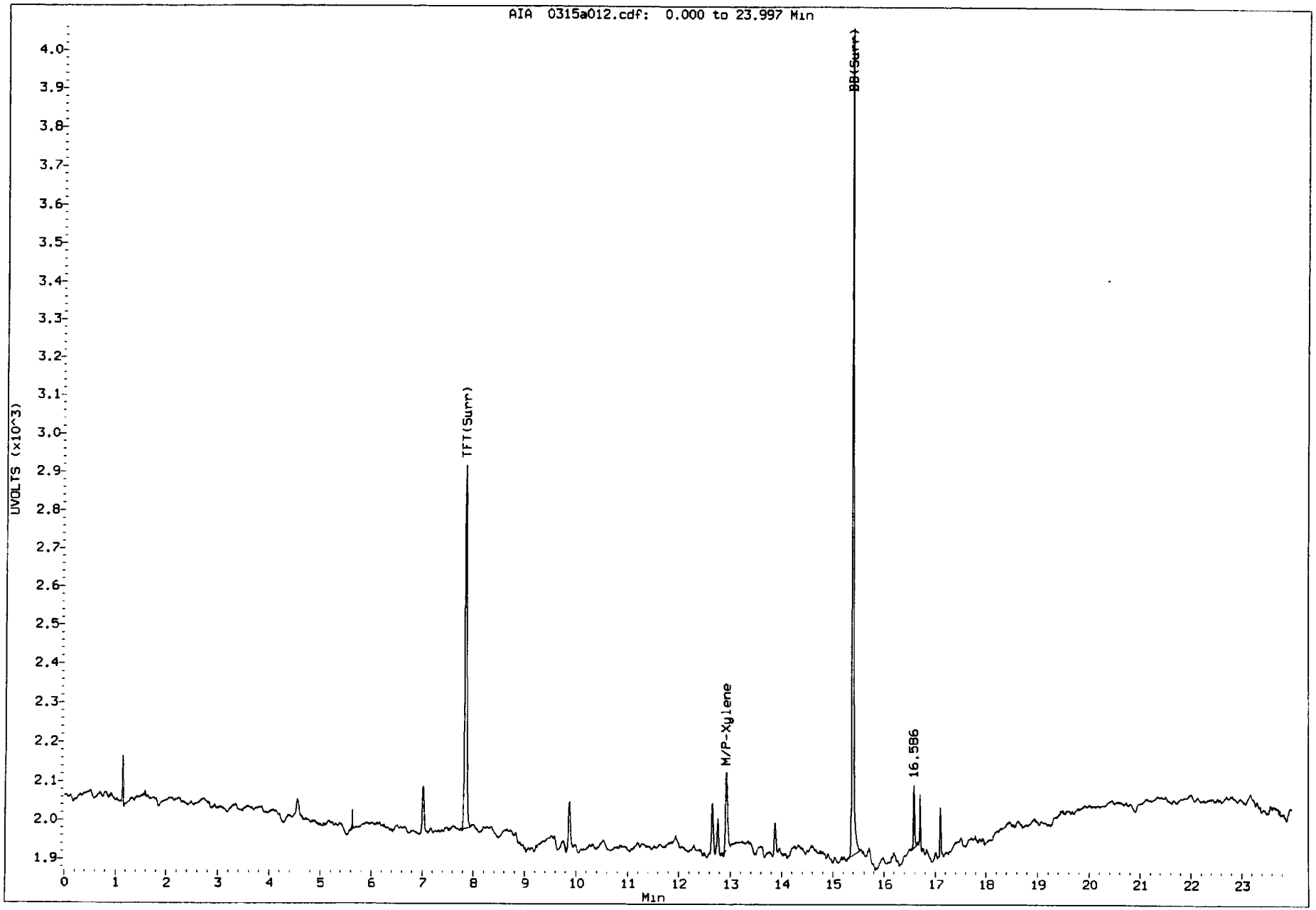
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

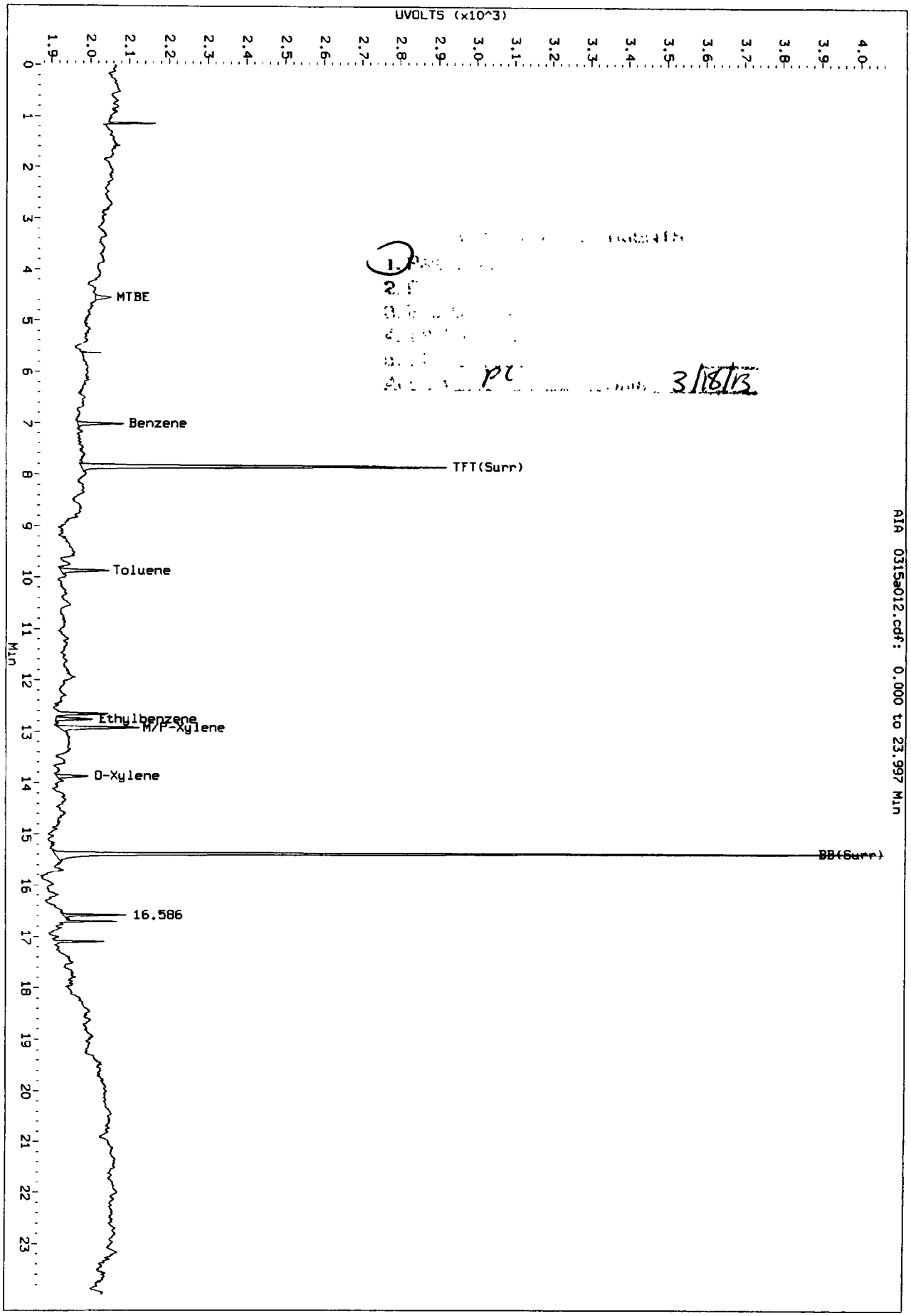
5. Other _____

Analyst: RC Date: 3/18/13

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



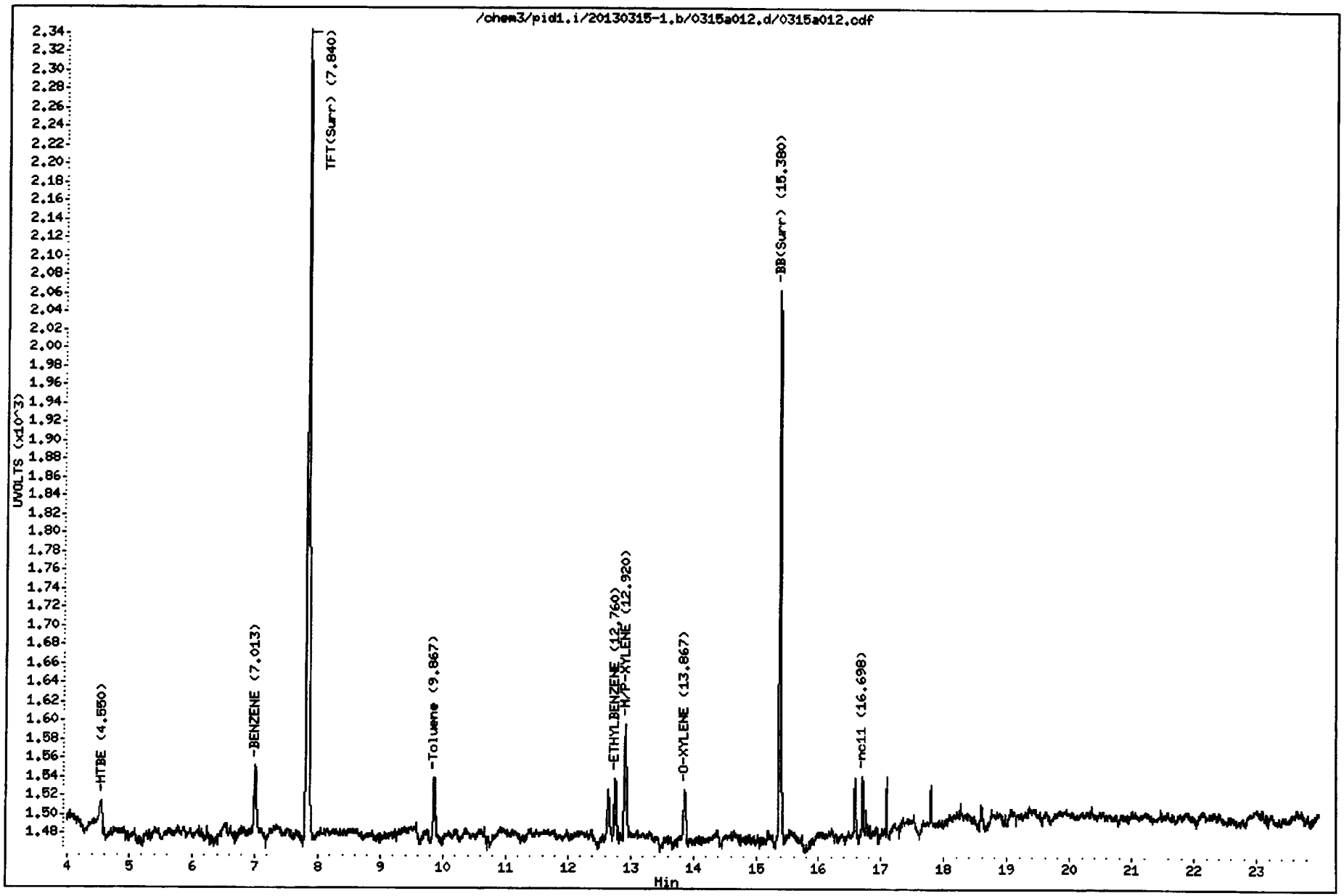

Data File: /chem3/pid1.i/20130315-2.b/0315a012.d/0315a012.cdf
Injection Date: 15-MAR-2013 19:39
Instrument: pid1.i
Client Sample ID: BTEX 0.5
UVOLTS (x10^3)
MTBE
Benzene
TFT(Surr)
Toluene
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.586
Min
AIA 0315a012.cdf: 0.000 to 23.997 Min

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

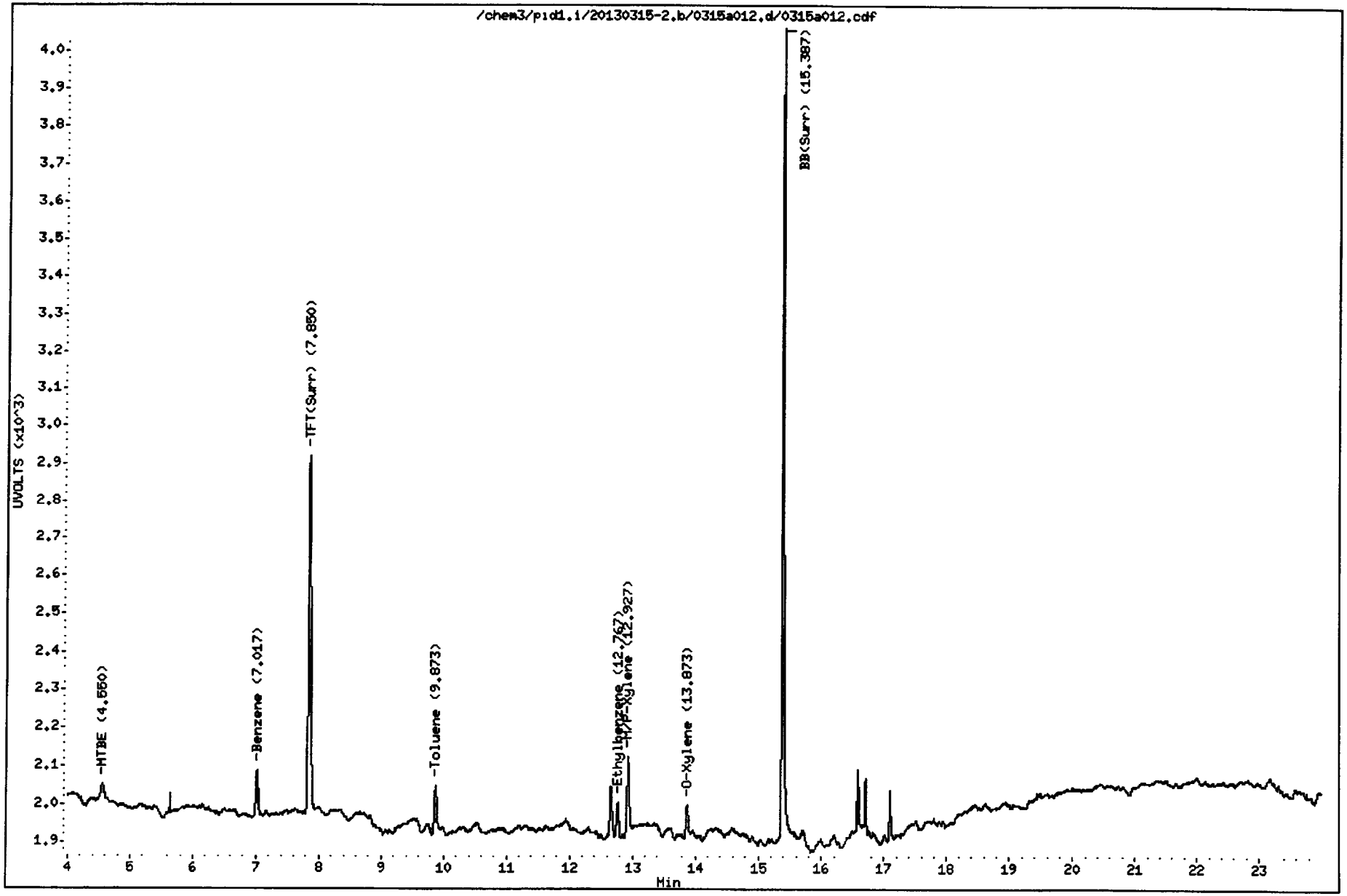
Sample Info: BTEX 0.5

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

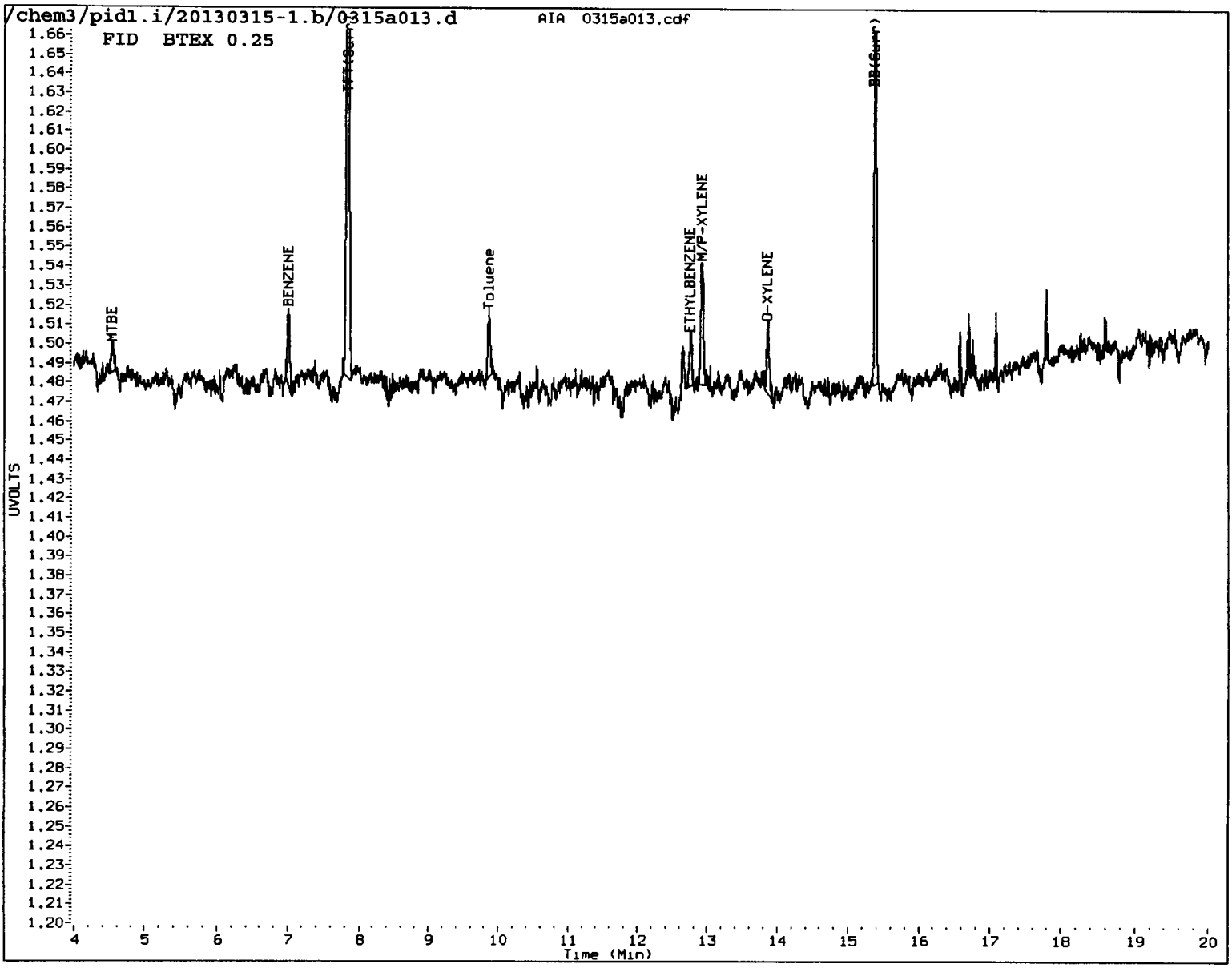
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
Compounds	RT	EXP RT	DLT RT	RESPONSE	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

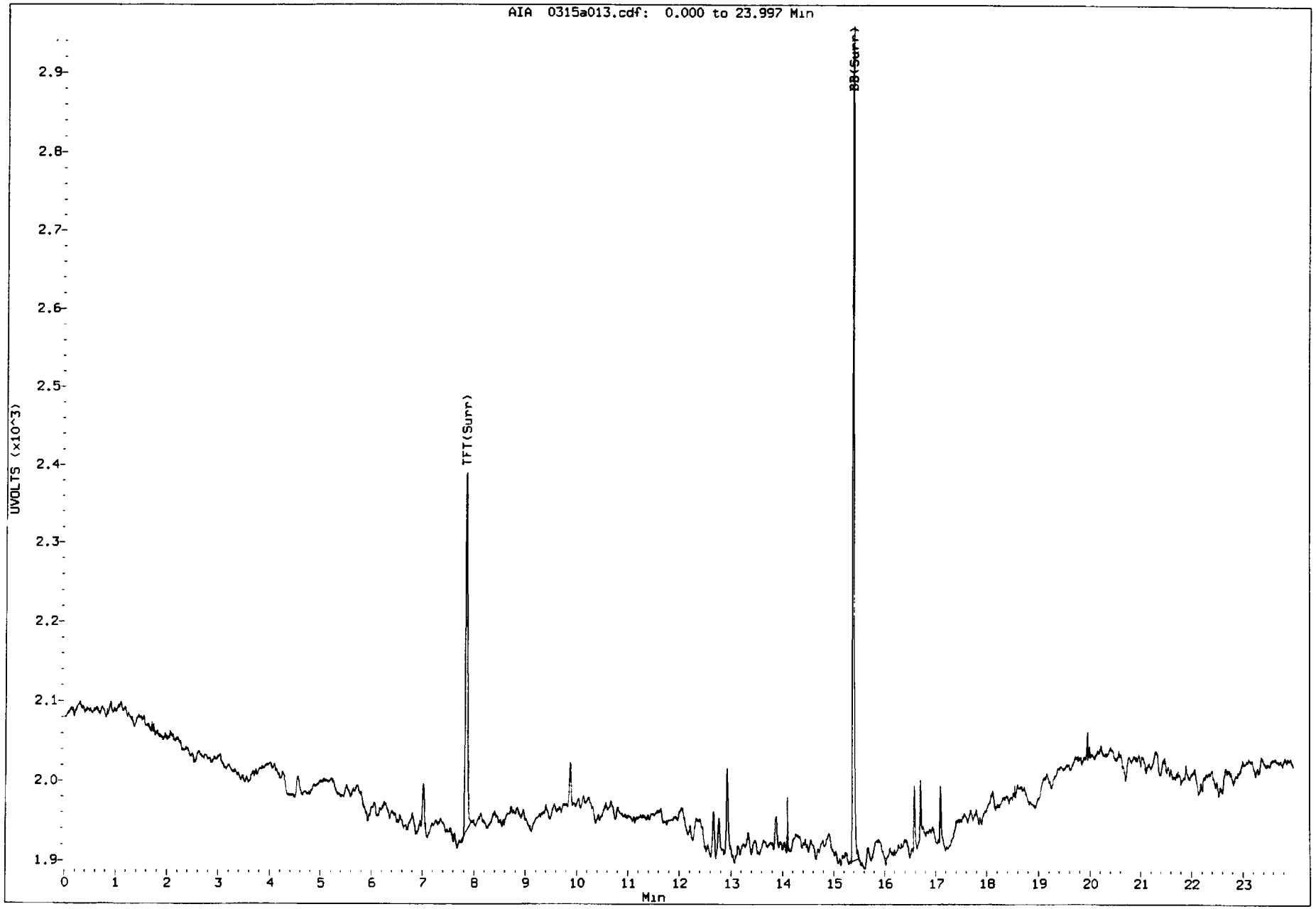
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VC 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



UNG1 : 02181

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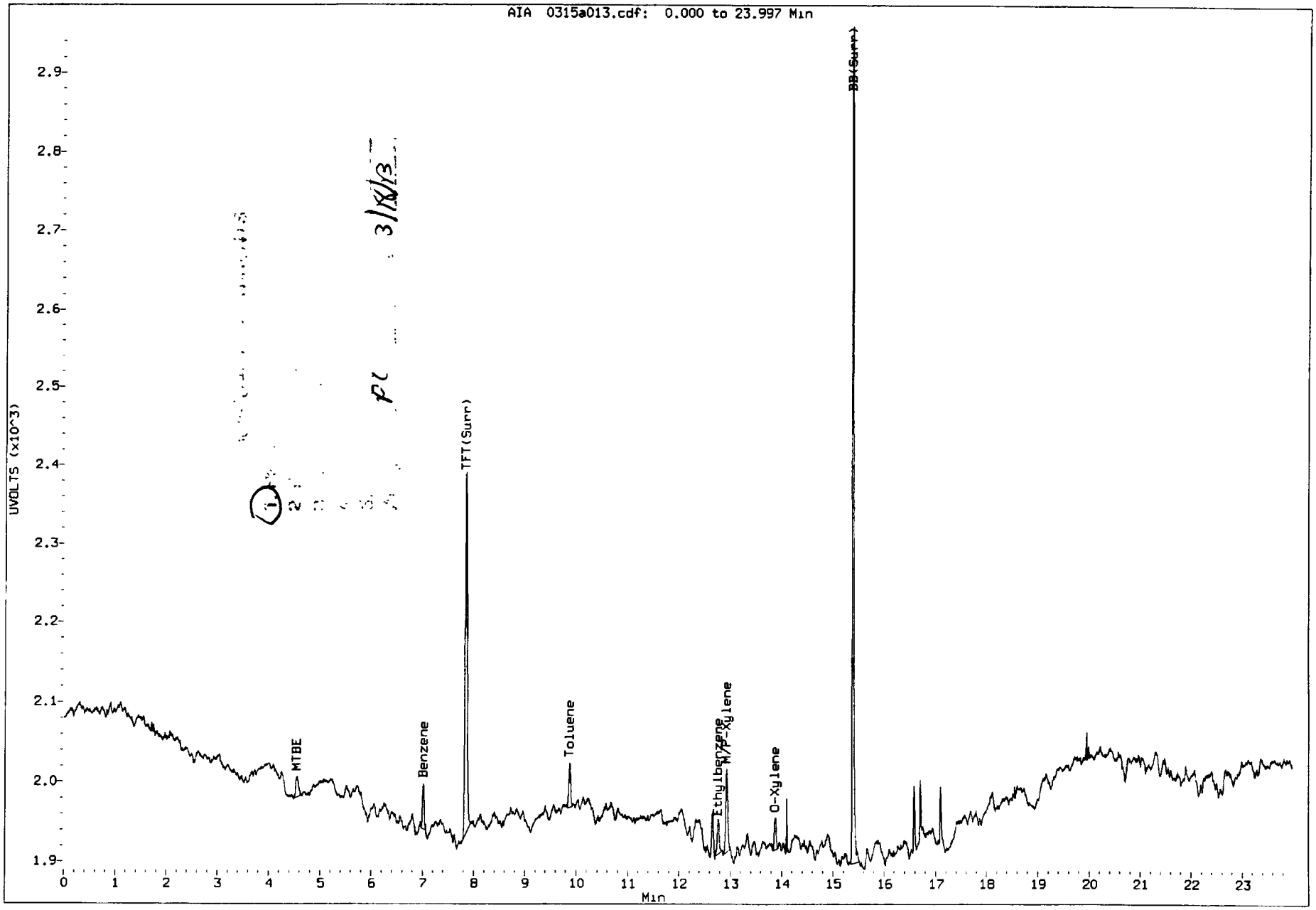
Injection Date: 15-MAR-2013 20:08
Instrument: pid1.i
Client Sample ID: BTEX 0.25



Data File: /chem3/pid1.i/20130315-1.b/0315a013.d

Date : 15-MAR-2013 20:08

Client ID: BTEX 0.25

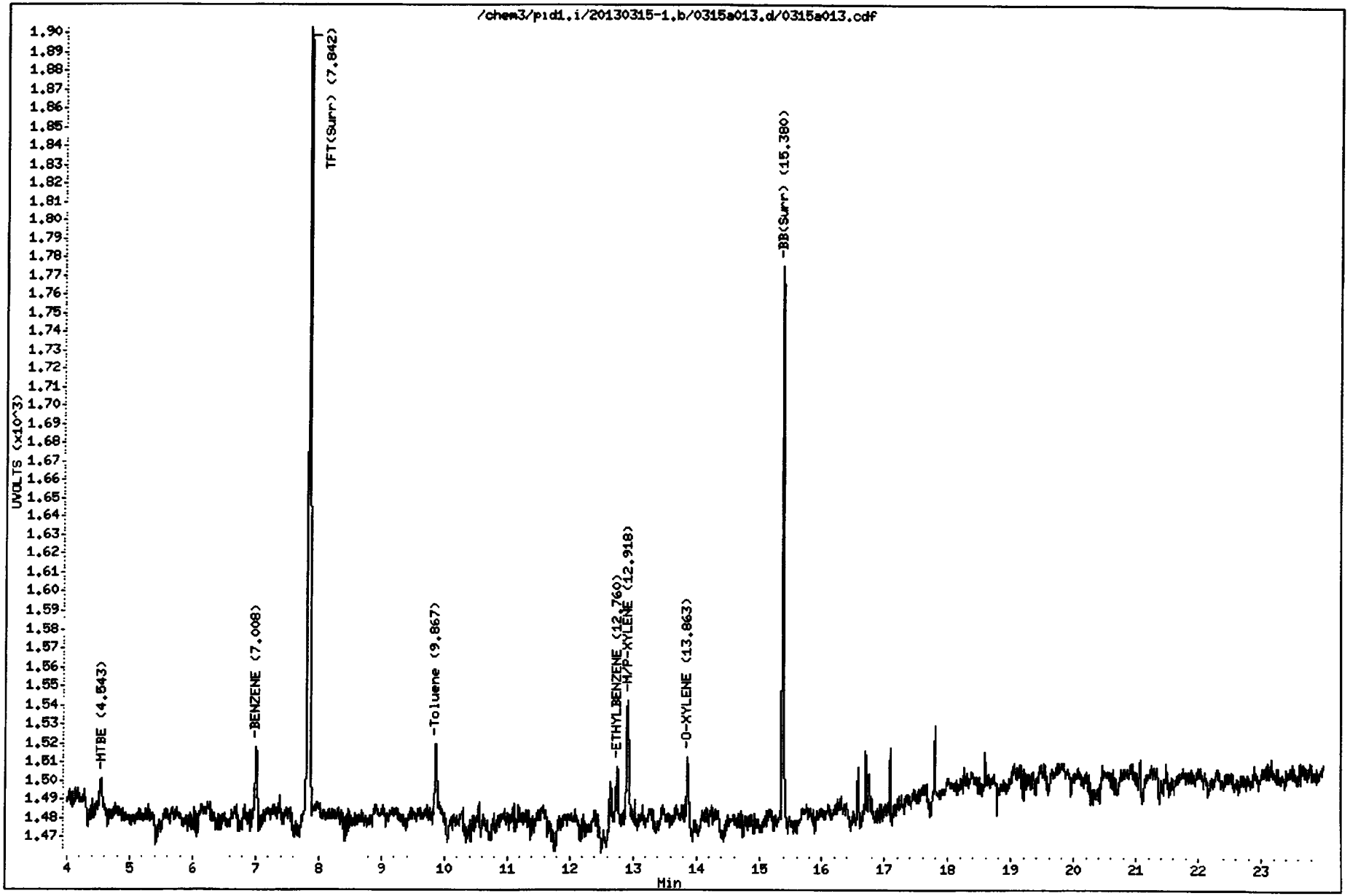
Sample Info: BTEX 0.25

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

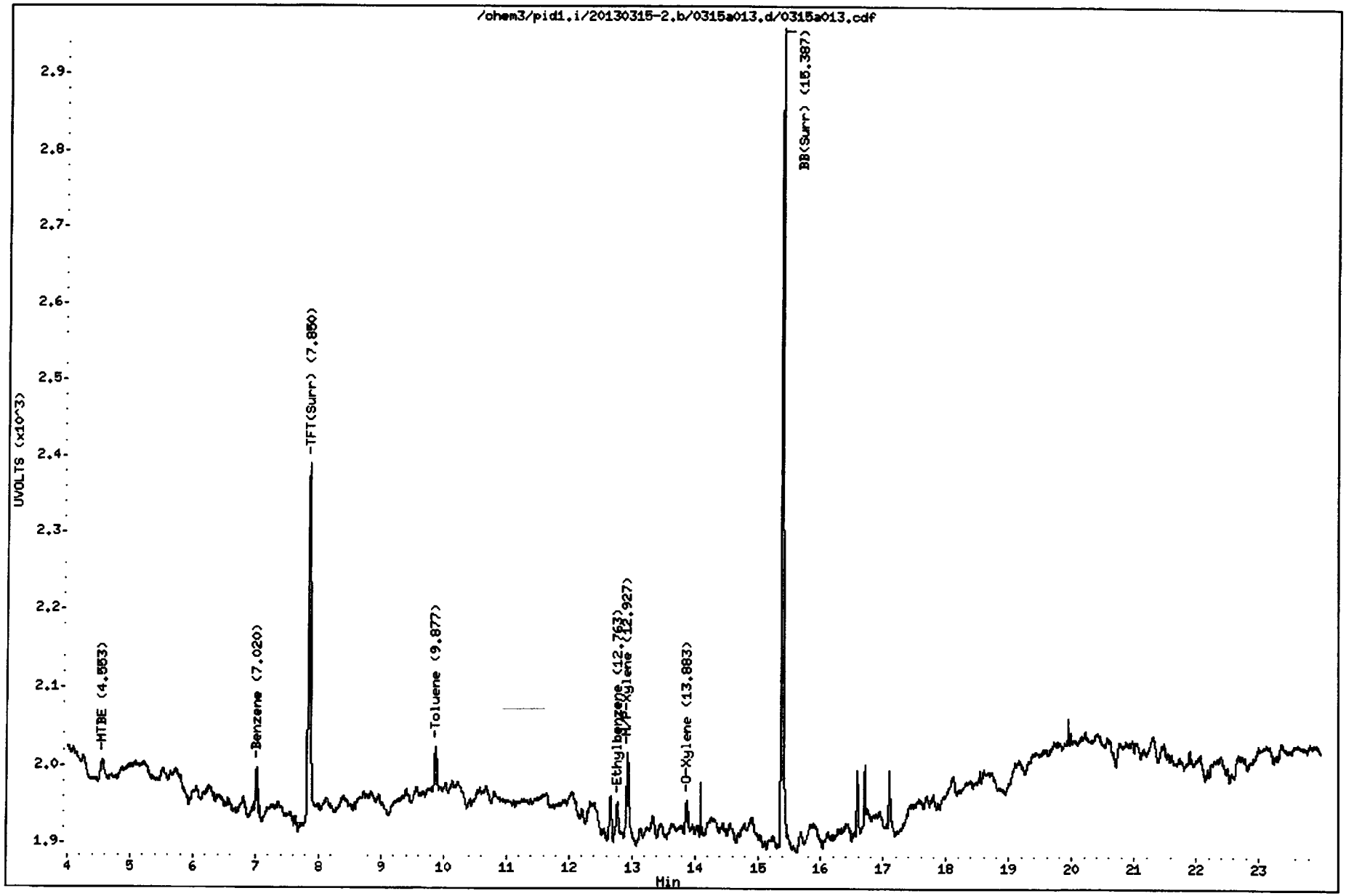
Sample Info: BTEX 0.25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



VG 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

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)	CONCENTRATIONS 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:

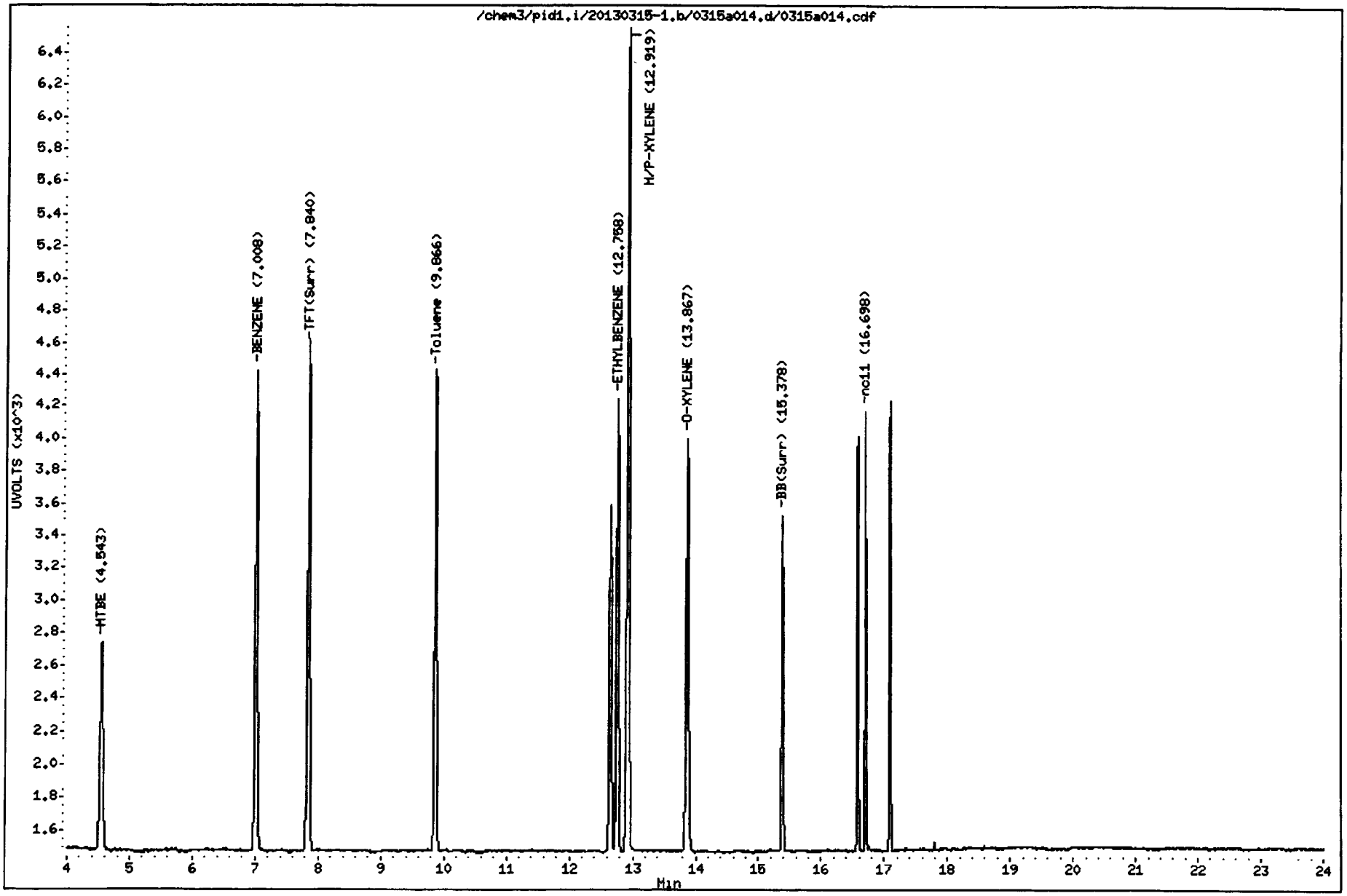
Sample Info: BTEX ICV 25

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

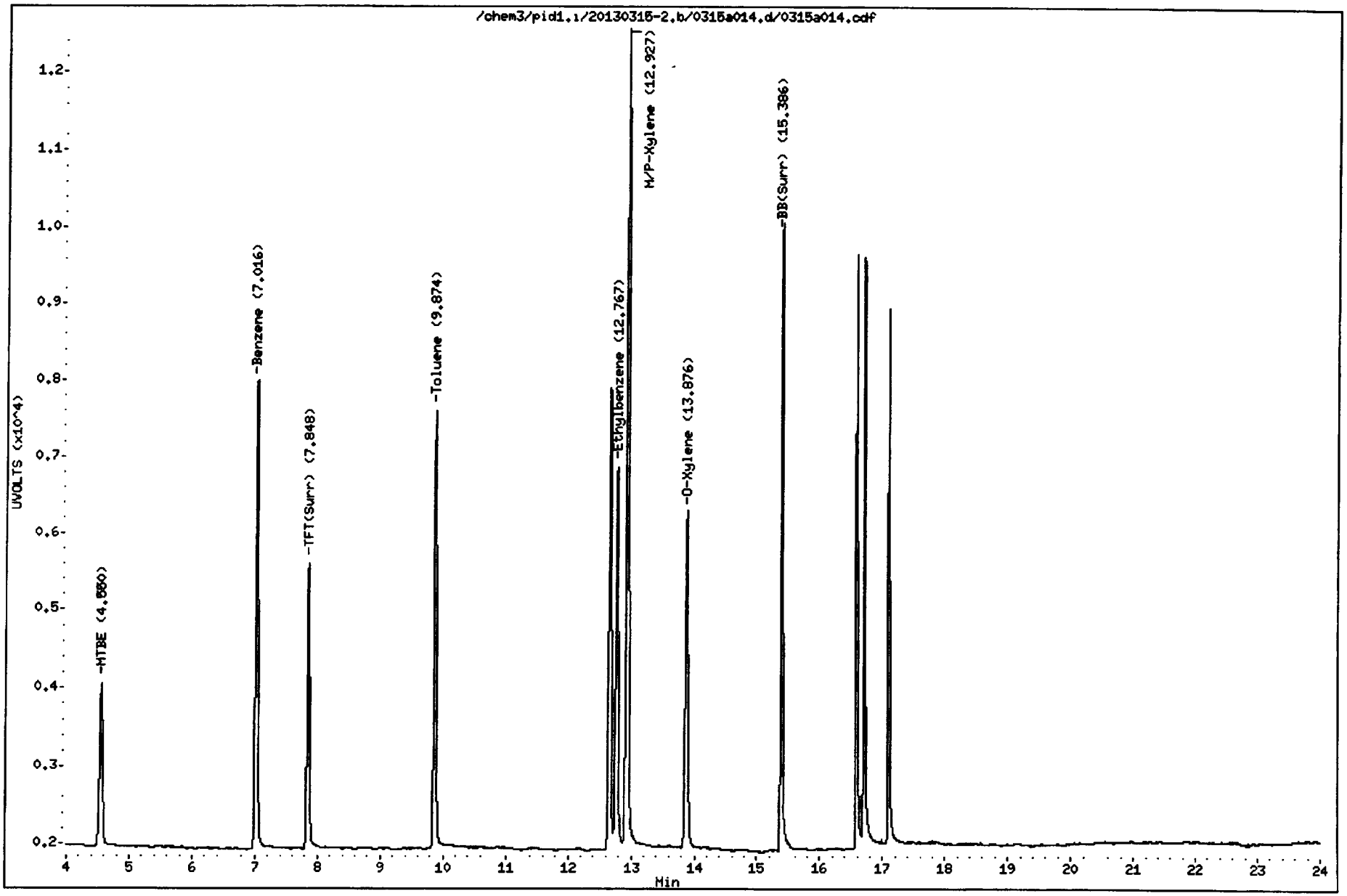
Sample Info: BTEX ICV 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



TPHG Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 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) 5mL Curve Date: 10/23/12, 3/15/13 Analysis Start Date: 4/25/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / (Y) / N / ✓	Method Blank In Control?	(Y) / N / ✓
BFB Tune Meets Criteria?	(NA) / Y / N /	Surrogate Recovery in Control?	(Y) / N / ✓
Internal STD within 50-200%?	(NA) / Y / N /	LCS / LCSD Recovery Met?	(Y) / N / ✓
CCAL Meets %D	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA /
ICAL Q flag applied?	NA / Y / (N) /	MS / MSD Recovery Met?	(NA) / Y / N /
CCAL Q Flag applied	NA / Y / (N) /	MS / MSD RPD ≤30%?	(NA) /
Manual Integrations?	(Y) / N / -	Samples Diluted?	Y / (N) /
Integration Summary?	(Y) / N / -	Special Analysis Request?	Y / (N) /

Bubbles/Headspace: (None) SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

5/1/13 D2

Detail problems, corrective actions and/or other pertinent information below:

(Review 1)Analyst: [signature] **Date:** 5/1/13

(Review 2)Reviewer: [signature] **Date:** 5/2

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 4/25/13 Analysis: BETX/MTBE/NAPH-6 Analyst: LH

Column 1 Serial No.: 8217206 Column Type: RTX-502.2

Column 2 Serial No.: — Column Type: —

GC Method: BETX ICal Date: 10/23/12, 3/15/13 Injection Volume: 5.0 µl

IS	Ical/Ccal	ICV
VW795-2	LL791-2 VW772-3 VW787-1	VW787-1
LH 5/1/13	LH 5/1/13	LH 5/1/13

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/pid1.i/20130425-1.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0818	0425a001.d	RINSE				1
2	0847	0425a002.d	RT/BCAL 1				1
3	0916	0425a003.d	GCAL 1				1
4	0946	0425a004.d	LCS0425				1
5	1015	0425a005.d	LCSD0425				1
6	1044	0425a006.d	MB0425				1
7	1119	0425a007.d	WN23H	EAL #146697		Soil	1
8	1149	0425a008.d	WN23I	EAL #146698			1
9	1218	0425a009.d	WN23J	EAL #146699			1
10	1248	0425a010.d	WN23K	EAL #146700			1
11	1317	0425a011.d	WN23L	EAL #146701			1
12	1347	0425a012.d	WN23M	EAL #146702			1
13	1416	0425a013.d	WN23N	EAL #146703			1
14	1446	0425a014.d	GCAL 2				1
15	1515	0425a015.d	WN23O	EAL #146704		Soil	1
16	1545	0425a016.d	WN23P	EAL #146705			1
17	1615	0425a017.d	WN23Q	EAL #146706			1
18	1644	0425a018.d	WN23R	EAL #146707			1
19	1714	0425a019.d	WN23S	EAL #146708			1
20	1744	0425a020.d	WN23T	EAL #146709			1
21	1813	0425a021.d	WN24A	EAL #146715			1
22	1843	0425a022.d	WN24B	EAL #146716			1
23	1912	0425a023.d	WN24C	EAL #146717		Soil	1
24	1942	0425a024.d	WN24D	EAL #146718			1
25	2012	0425a025.d	GCAL 3				1
26	2041	0425a026.d	WN31D	ES-TB-001-20130424-	2	42	1
27	2111	0425a027.d	WN08ARE			Soil	1
28	2140	0425a028.d	WN06A	Digestor #3 Sludge			1
29	2210	0425a029.d	WN06ADUP				1
30	2239	0425a030.d	GCAL 4				1
31	2308	0425a031.d	RINSE				1

LH 5/1/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130425-1.b

ARI Job No.: RT/B Method: FID.m Instrument: pid1.i Date: 25-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0847	0425a002.d	RT/BCAL 1	RT/BCAL 1	1	NO MANUAL INTEGRATION
0916	0425a003.d	GCAL 1	NPDES Samp	1	nC6, nC7, nC8, Toluene, nC9, nC10-Decane, nC12-Dodecane, Naphthalene, nc11, nC13, 2-Methylpentane, 1,2,4-Trimethylbenzene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
0946	0425a004.d	LCS0425	LCS0425	1	O-XYLENE,
1015	0425a005.d	LCSD0425	LCSD0425	1	NO MANUAL INTEGRATION
1044	0425a006.d	MB0425	MB0425	1	NO MANUAL INTEGRATION
1515	0425a015.d	WN23O	EAL #14670	1	NO MANUAL INTEGRATION
2012	0425a025.d	GCAL 3	NPDES Samp	1	nC6, nC7, nC8, Toluene, nC9, nC10-Decane, nC12-Dodecane, Naphthalene, nc11, nC13, 2-Methylpentane, 1,2,4-Trimethylbenzene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2041	0425a026.d	WN31D	ES-TB-001-	1	NO MANUAL INTEGRATION
2239	0425a030.d	GCAL 4	NPDES Samp	1	nC6, nC7, nC8, Toluene, nC9, nC10-Decane, nC12-Dodecane, Naphthalene, nc11, nC13, 2-Methylpentane, 1,2,4-Trimethylbenzene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),

Analytical Resources Inc.
BETX/Gas Quantitation Report

CNM 5/1/13

Data file 1: /chem3/pid1.i/20130425-1.b/0425a002.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a002.d
Method: /chem3/pid1.i/20130425-2.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: 25-APR-2013 08:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.834	0.000	3334	41009	96.1	TFT(Surr)
15.378	0.000	2099	17517	92.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	419820	1.172
8015C 2MP-TMB	(4.16 to 16.20)	723723	512614	0.708
AK101 nC6-nC10	(4.66 to 15.10)	582885	358351	0.615
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	441221	1.176

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
7.842	0.000	3811	96.0	TFT(Surr)
15.385	0.000	8152	92.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.010	0.000	5625	23.43	Benzene
9.870	0.000	5229	22.83	Toluene
12.765	0.000	4404	22.75	Ethylbenzene
12.926	0.000	9557	44.75	M/P-Xylene
13.874	0.000	3909	22.91	O-Xylene
4.549	0.000	1934	22.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130425-1.b/0425a002.d

Date : 25-APR-2013 08:47

Client ID:

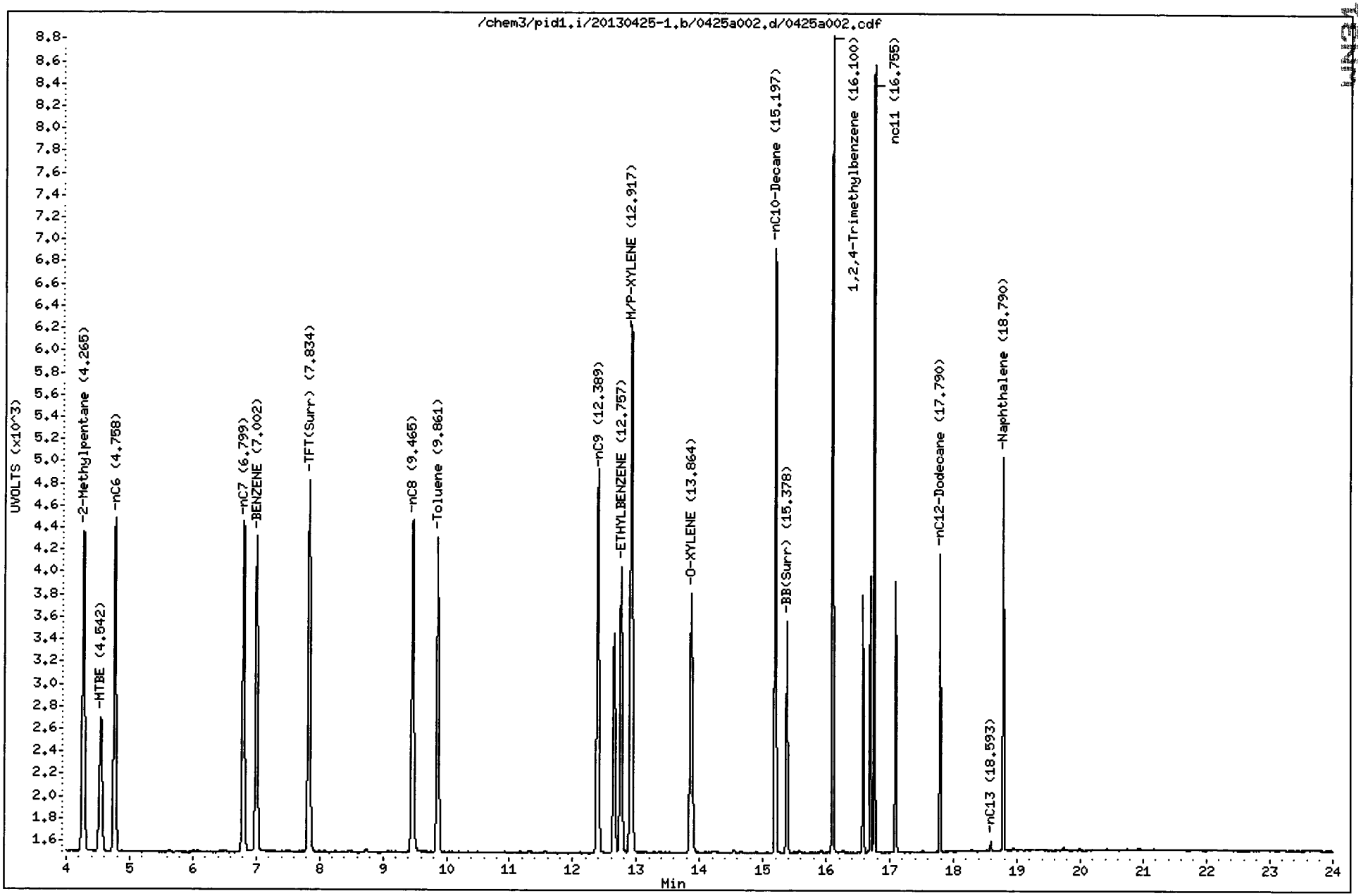
Sample Info: RT/BCAL 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



GM-5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130425-1.b/0425a003.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a003.d
Method: /chem3/pid1.i/20130425-2.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: 25-APR-2013 09:16
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.833	-0.001	3558	49101	102.6	TFT(Surr)
15.377	-0.001	2110	19855	92.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	850316	2.374 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	1673682	2.313 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	1364014	2.340 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	889838	2.372 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
7.843	0.001	3891	98.0	TFT(Surr)
15.386	0.001	8074	91.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.012	0.002	2103	8.76	Benzene
9.872	0.003	20820	90.91	Toluene
12.767	0.001	5033	26.00	Ethylbenzene
12.931	0.005	20137	94.30	M/P-Xylene
13.876	0.002	7285	42.70	O-Xylene
4.529	-0.020	326	3.87	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130425-1.b/0425a003.d

Date : 25-APR-2013 09:16

Client ID: GCAL 1

Sample Info: GCAL 1

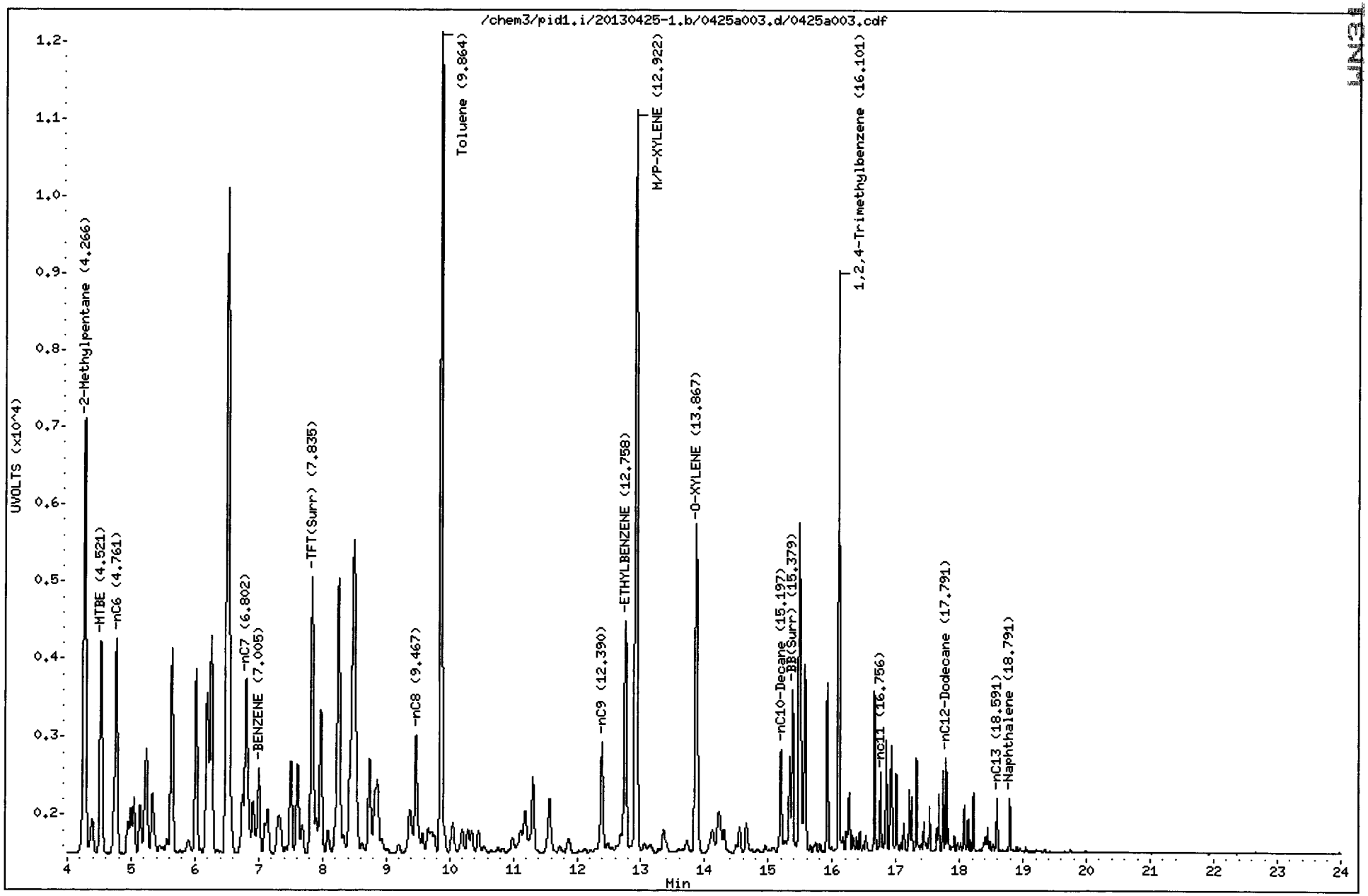
Column phase: RTX 502-2 FID

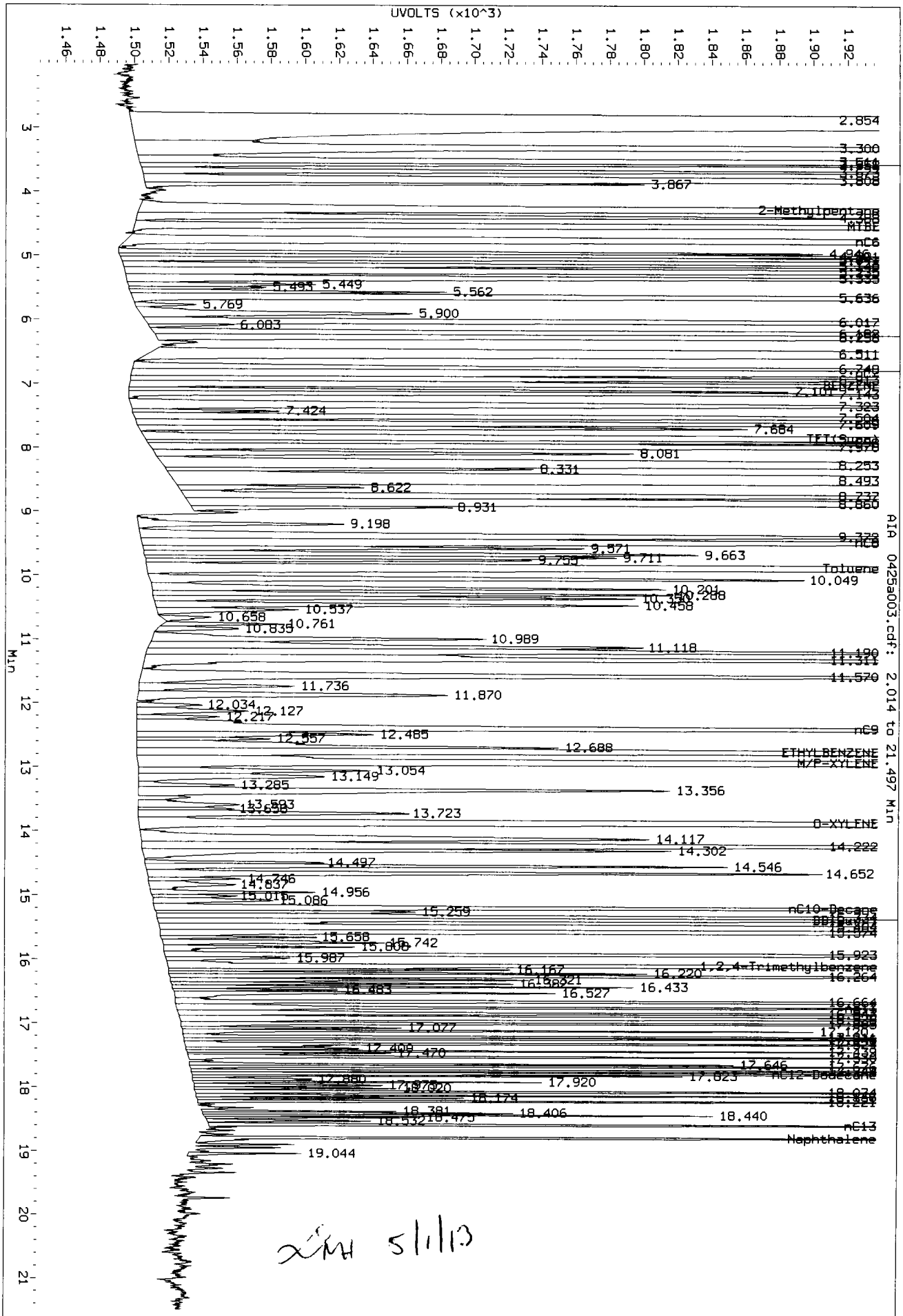
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

UN31 : 02199

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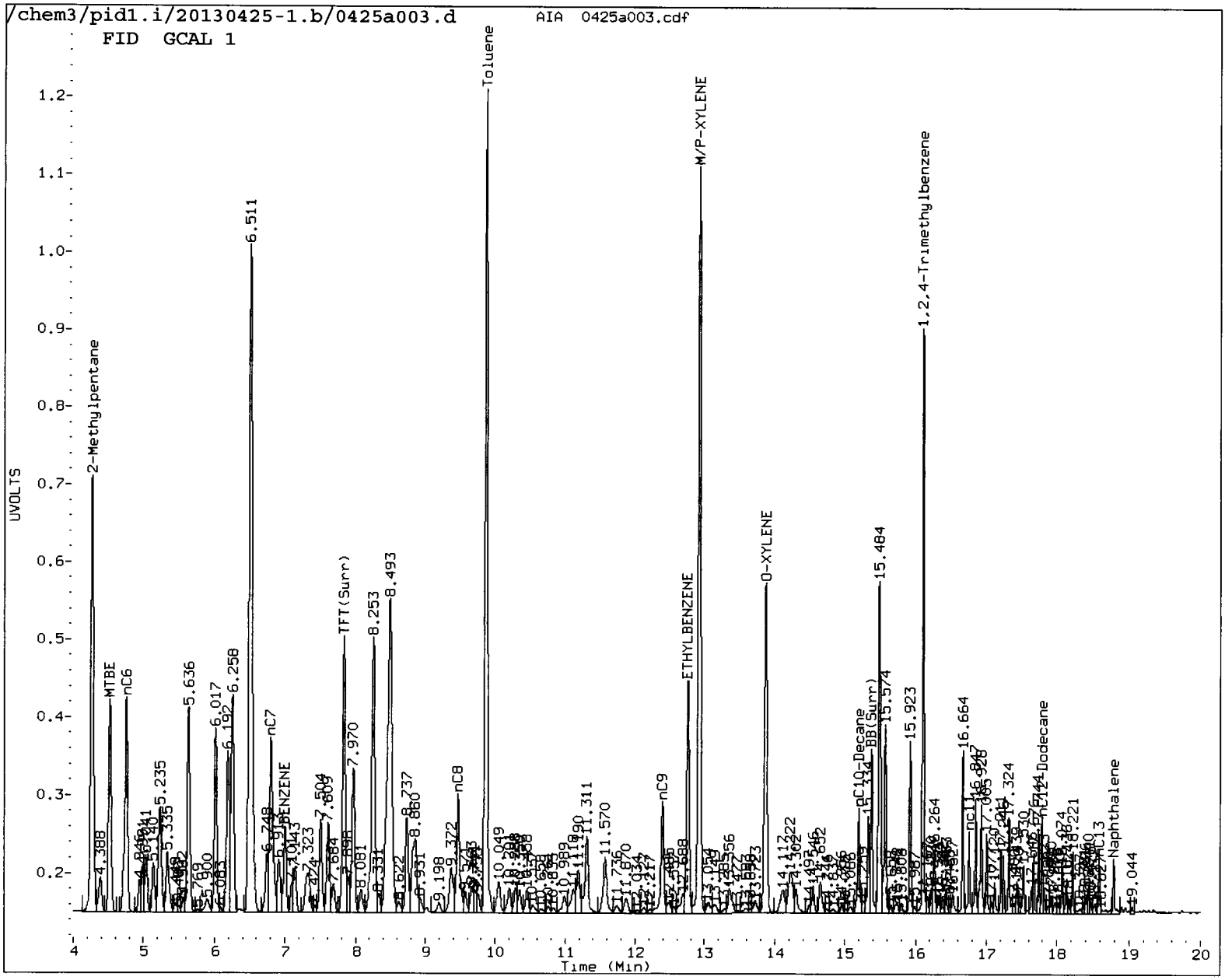
Injection Date: 25-APR-2013 09:16
Instrument: pid1.i
Client Sample ID: GCAL 1
UVOLTS (x10^3)
Min
AIA 0425a003.cdf: 2.014 to 21.497 Min
2.854
3.300
3.867
2=Methylpentane
MTBE
nC6
5.449
5.562
5.636
5.769
5.900
6.083
6.017
6.511
7.424
7.684
8.081
8.331
8.253
8.493
8.622
8.931
9.198
9.571
9.711
9.663
Toluene
10.049
10.537
10.658
10.761
10.989
11.118
11.570
11.736
11.870
12.034
12.127
12.217
nC9
12.485
12.688
ETHYLBENZENE
M/P-XYLENE
13.054
13.149
13.285
13.356
13.723
O-XYLENE
14.117
14.302
14.222
14.497
14.546
14.652
14.956
15.086
nC10-Decane
15.259
15.658
15.742
15.987
15.923
1,2,4-Trimethylbenzene
16.167
16.220
16.264
16.433
16.527
16.664
17.077
17.470
17.920
17.823
nC12-Dodecane
18.174
18.406
18.440
nC13
Naphthalene
19.044

5/1/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

5/1/13

Data file 1: /chem3/pid1.i/20130425-1.b/0425a004.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a004.d
Method: /chem3/pid1.i/20130425-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCS0425
Client ID:
Injection Date: 25-APR-2013 09:46
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.836	0.002	3370	45401	97.2	TFT(Surr)
15.379	0.001	2086	18144	91.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	345282	0.964 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	693389	0.958 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	561103	0.963 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	364469	0.972 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
7.844	0.002	3765	94.8	TFT(Surr)
15.386	0.001	7992	90.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.012	0.002	832	3.47	Benzene
9.872	0.003	8411	36.73	Toluene
12.767	0.001	1991	10.29	Ethylbenzene
12.930	0.004	8023	37.57	M/P-Xylene
13.876	0.002	2907	17.04	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/20130425-1.b/0425a004.d

Date : 25-APR-2013 09:46

Client ID:

Sample Info: LCS0425

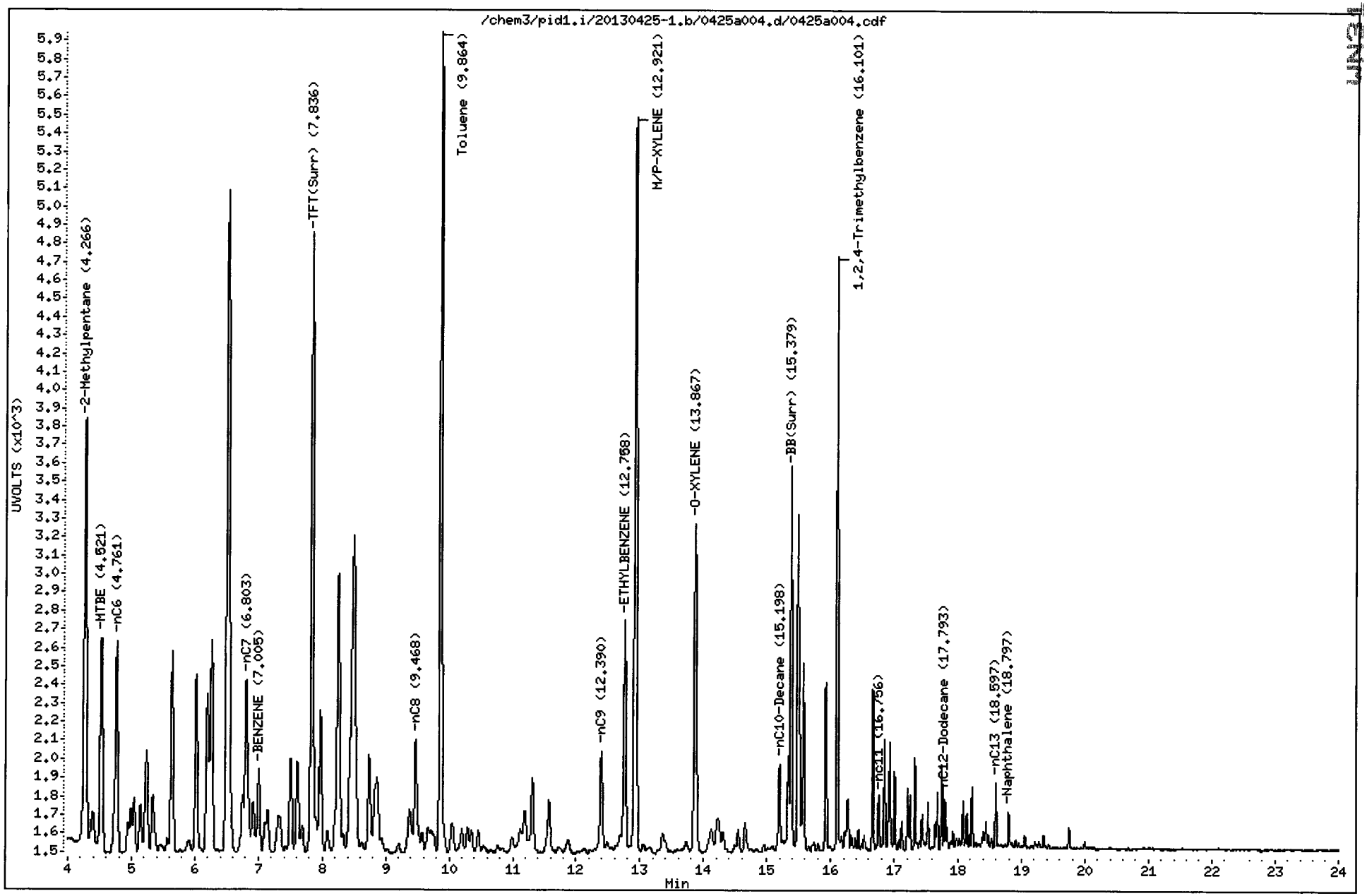
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

WN31 : 02203



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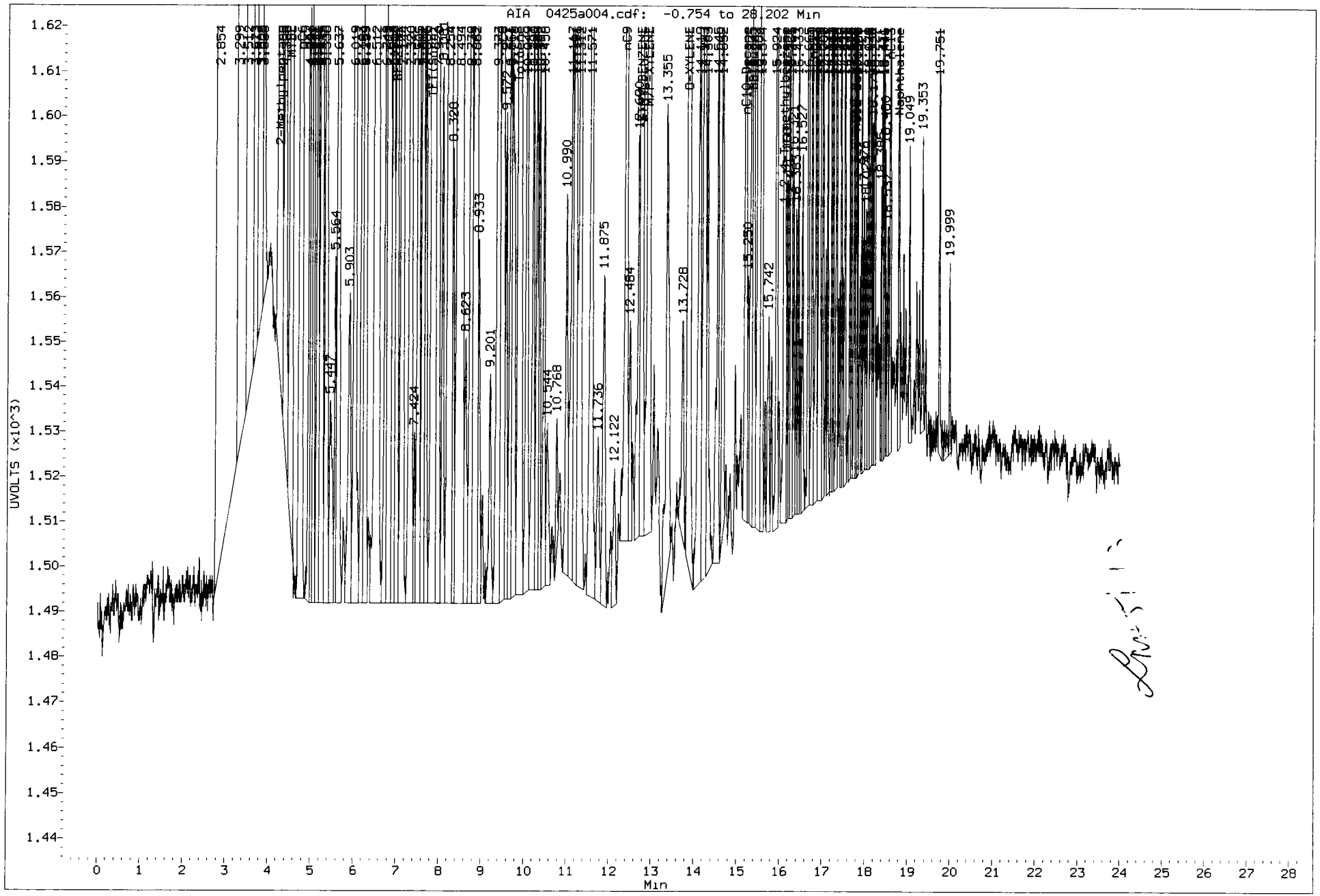
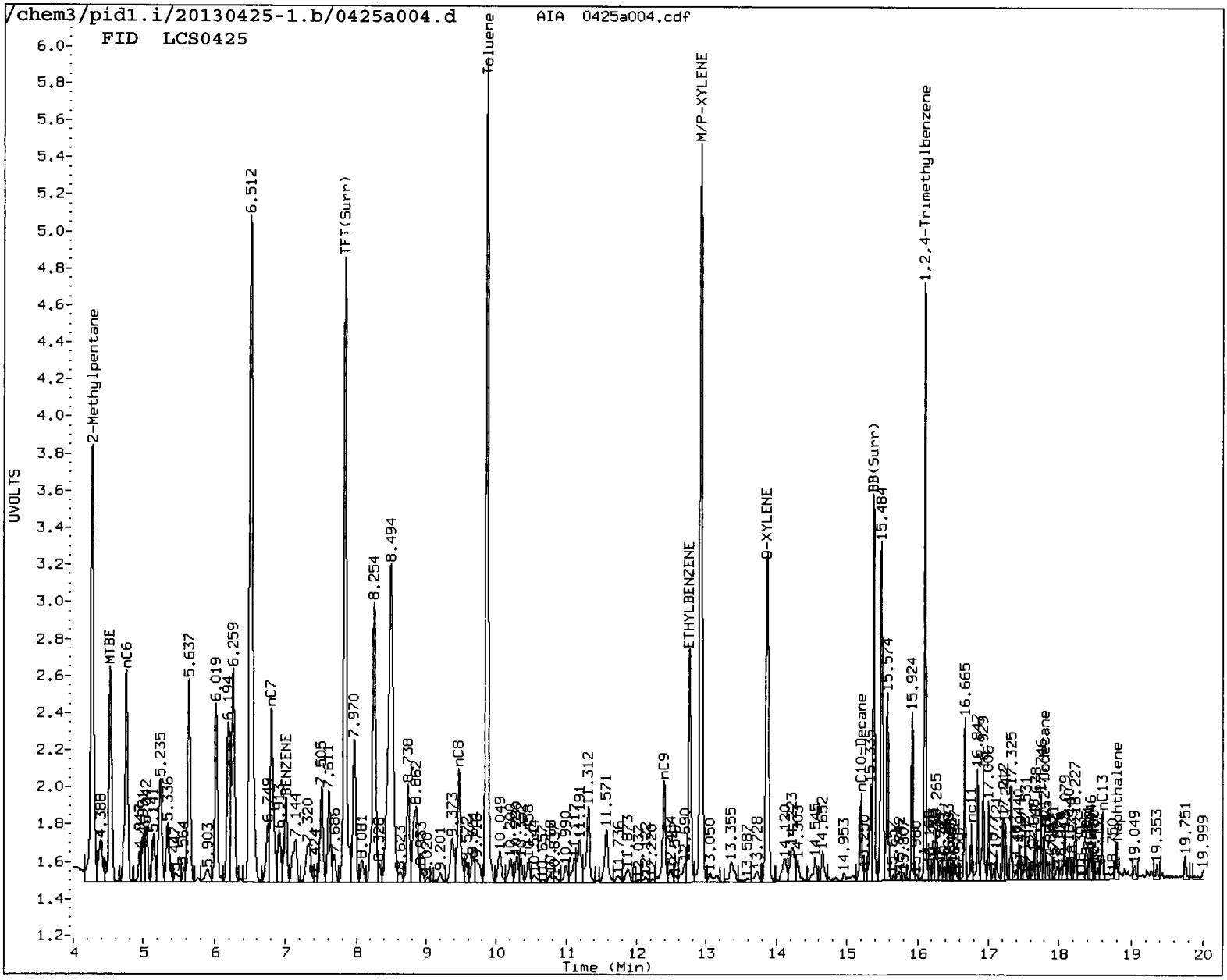
Injection Date: 25-APR-2013 09:46
Instrument: pid1.i
Client Sample ID: LCS0425



WN31 : 02201



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130425-1.b/0425a005.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a005.d
Method: /chem3/pid1.i/20130425-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCSD0425
Client ID:
Injection Date: 25-APR-2013 10:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.836	0.002	3363	45770	97.0	TFT(Surr)
15.380	0.001	2117	18363	92.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	354516	0.990 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	710244	0.981 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	572656	0.982 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	372802	0.994 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
7.844	0.003	3744	94.3	TFT(Surr)
15.387	0.001	8117	92.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.003	879	3.66	Benzene
9.873	0.003	8680	37.90	Toluene
12.767	0.001	2085	10.77	Ethylbenzene
12.930	0.004	8378	39.23	M/P-Xylene
13.876	0.002	3012	17.65	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/20130425-1.b/0425a005.d

Date : 25-APR-2013 10:15

Client ID:

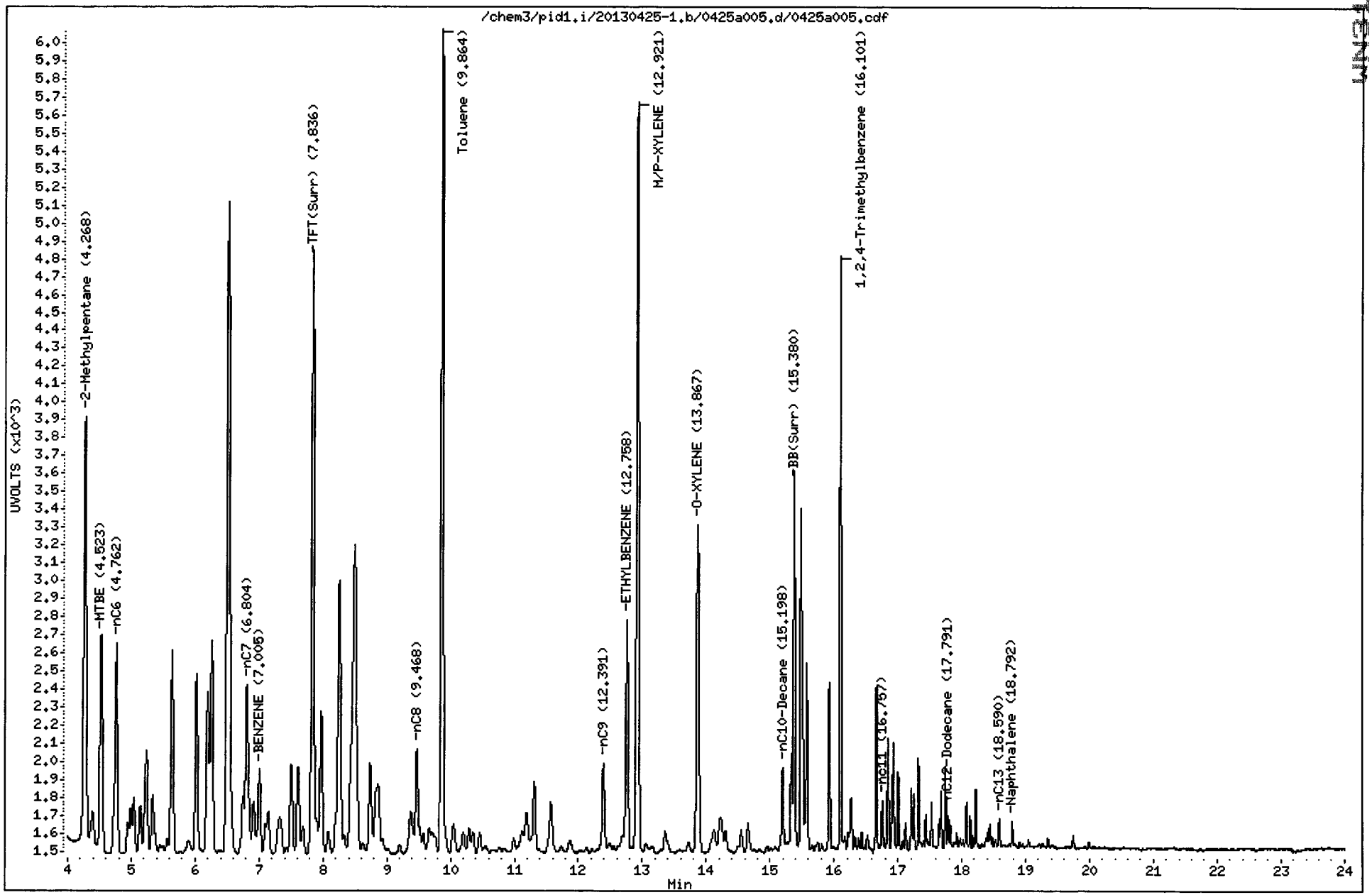
Sample Info: LCSD0425

Column phase: RTX 502-2 FID

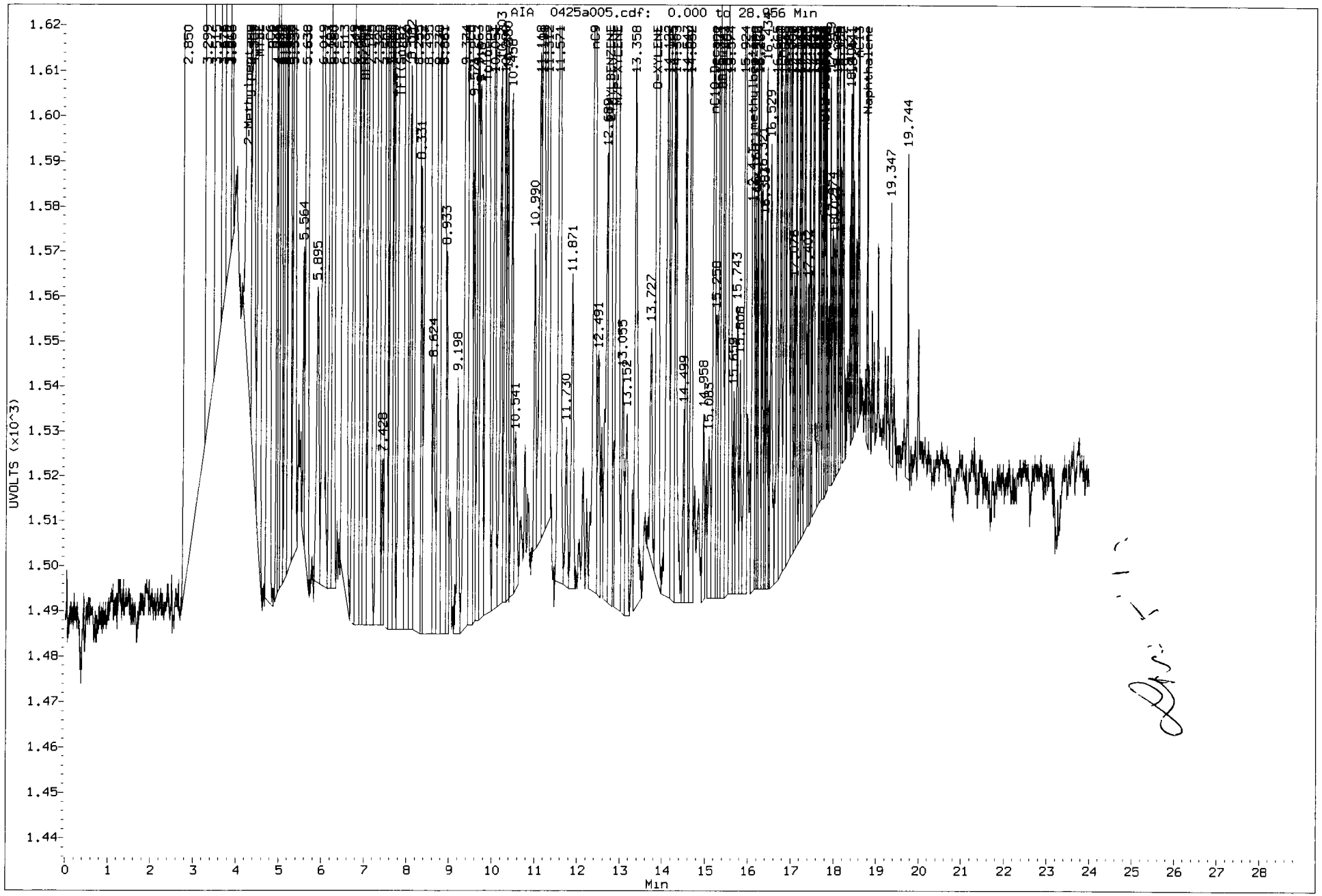
Instrument: pid1.i

Operator: LH

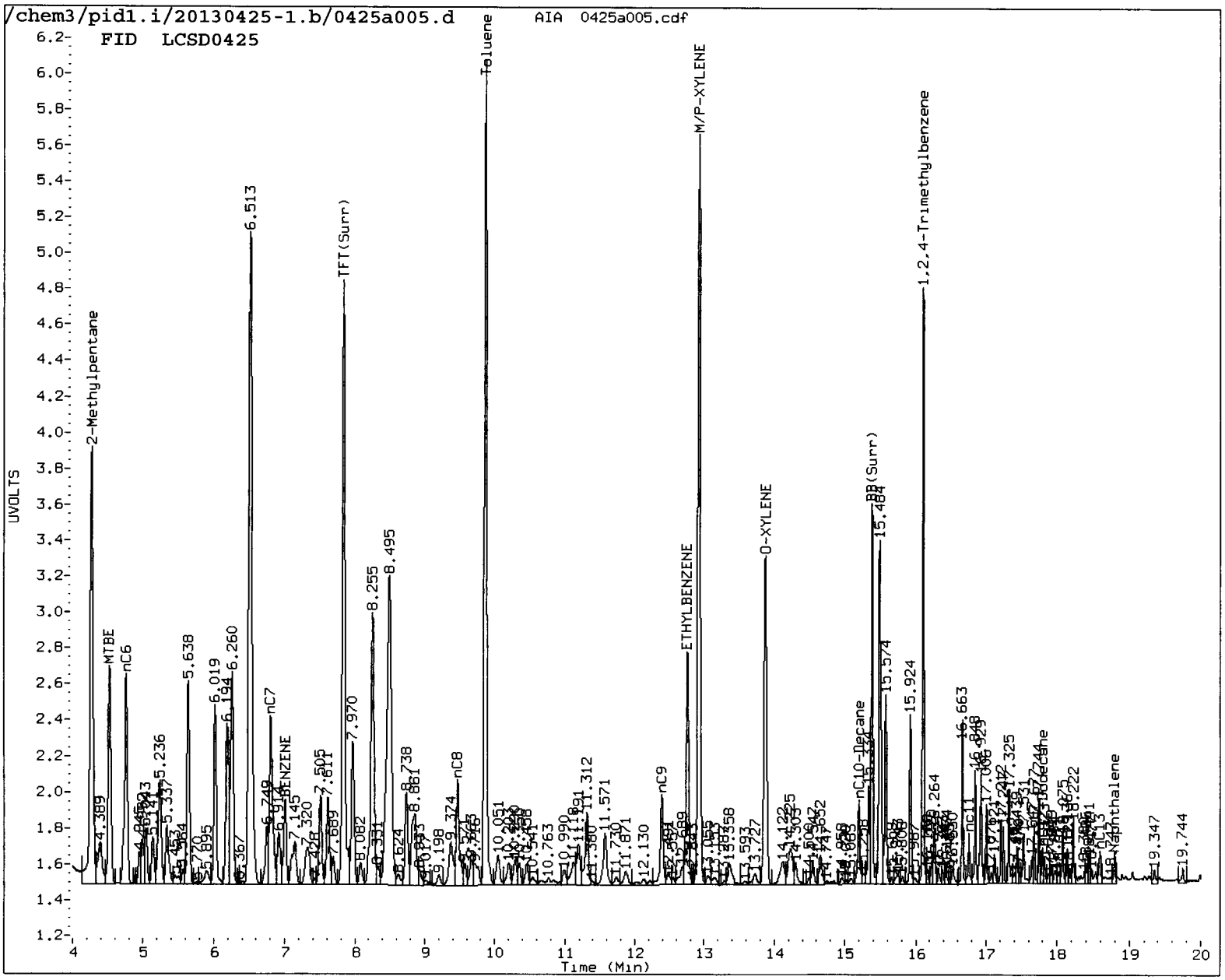
Column diameter: 0.18



Data File: /chem3/pid1.i/20130425-1.b/0425a005.d/0425a005.cdf
Injection Date: 25-APR-2013 10:15
Instrument: pid1.i
Client Sample ID: LCSD0425



UNS31 : 022208



MANUAL INTEGRATION

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

5. Other _____

Analyst: _____ Date: 5/1/13

5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130425-1.b/0425a006.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a006.d
Method: /chem3/pid1.i/20130425-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: MB0425
Client ID:
Injection Date: 25-APR-2013 10:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	0.003	3130	38111	90.2	TFT(Surr)
15.379	0.001	2027	16646	88.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	3480	0.010
8015C 2MP-TMB	(4.16 to 16.20)	723723	4217	0.006
AK101 nC6-nC10	(4.66 to 15.10)	582885	3339	0.006
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	3480	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.845	0.003	3516	88.6	TFT(Surr)
15.386	0.001	7662	87.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130425-1.b/0425a006.d

Date : 25-APR-2013 10:44

Client ID:

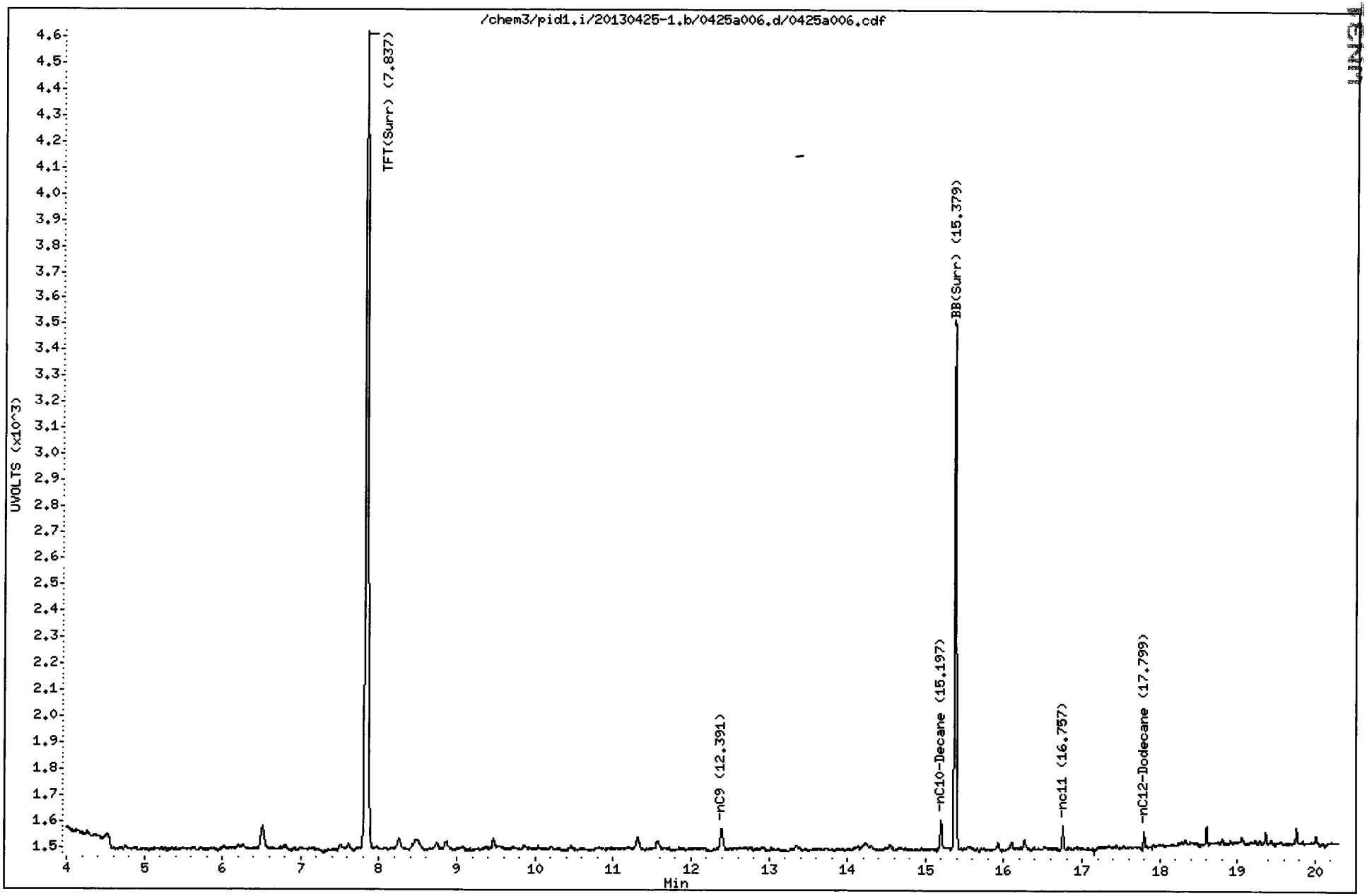
Sample Info: MB0425

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130425-1.b/0425a014.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a014.d
Method: /chem3/pid1.i/20130425-2.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: 25-APR-2013 14:46
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	0.003	3494	48243	100.7	TFT(Surr)
15.380	0.002	2095	18922	91.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	802524	2.241
8015C 2MP-TMB	(4.16 to 16.20)	723723	1565162	2.163
AK101 nC6-nC10	(4.66 to 15.10)	582885	1270652	2.180
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	836210	2.229 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.005	3797	95.7	TFT(Surr)
15.388	0.002	7990	90.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.015	0.005	2064	8.60	Benzene
9.876	0.006	20726	90.50	Toluene
12.769	0.003	4937	25.50	Ethylbenzene
12.933	0.007	19796	92.70	M/P-Xylene
13.878	0.004	7193	42.16	O-Xylene
4.534	-0.015	281	3.33	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130425-1.b/0425a014.d

Date : 25-APR-2013 14:46

Client ID: GCAL 2

Sample Info: GCAL 2

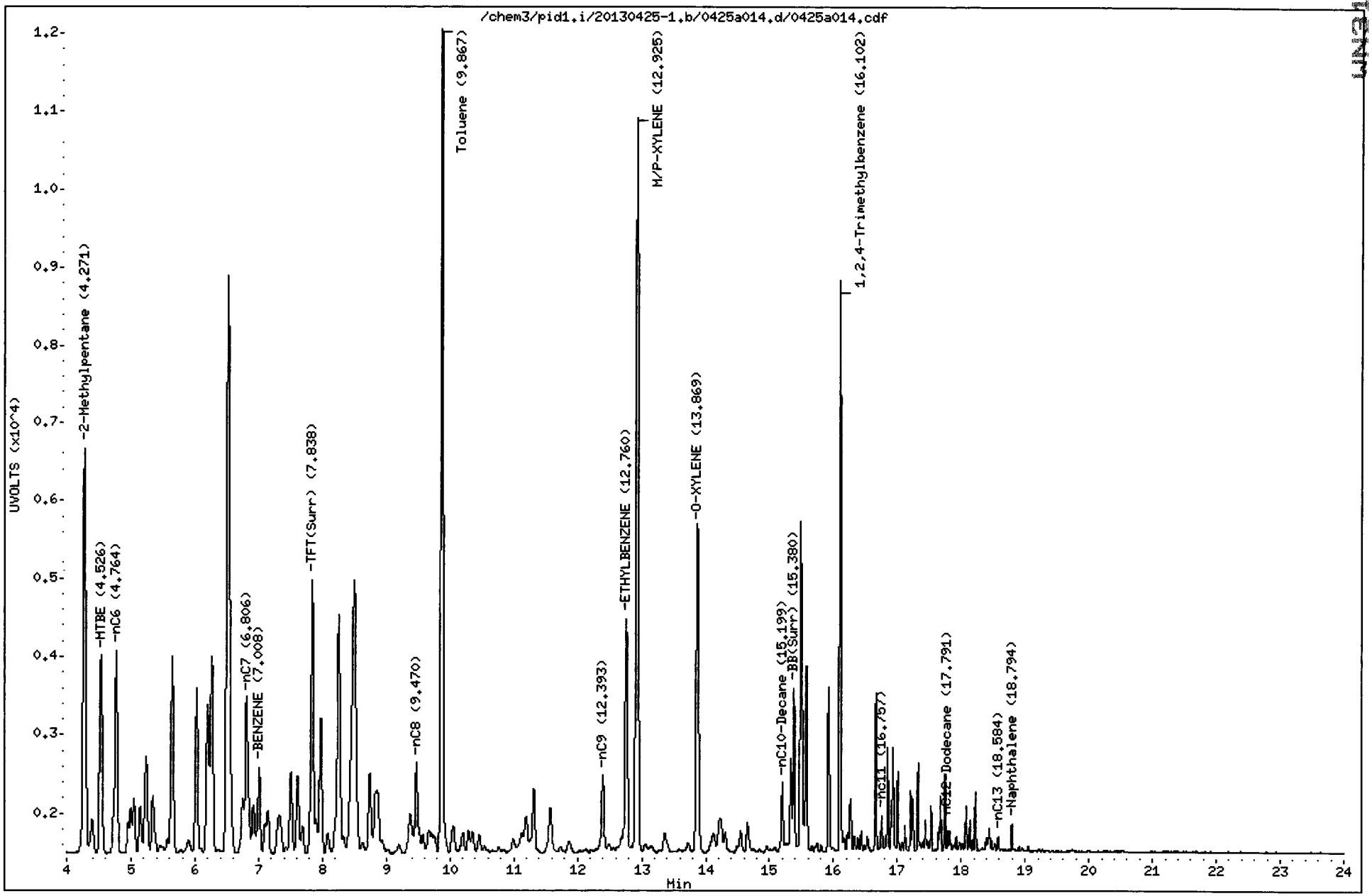
Column phase: RTX 502-2 FID

Instrument: pid1.i

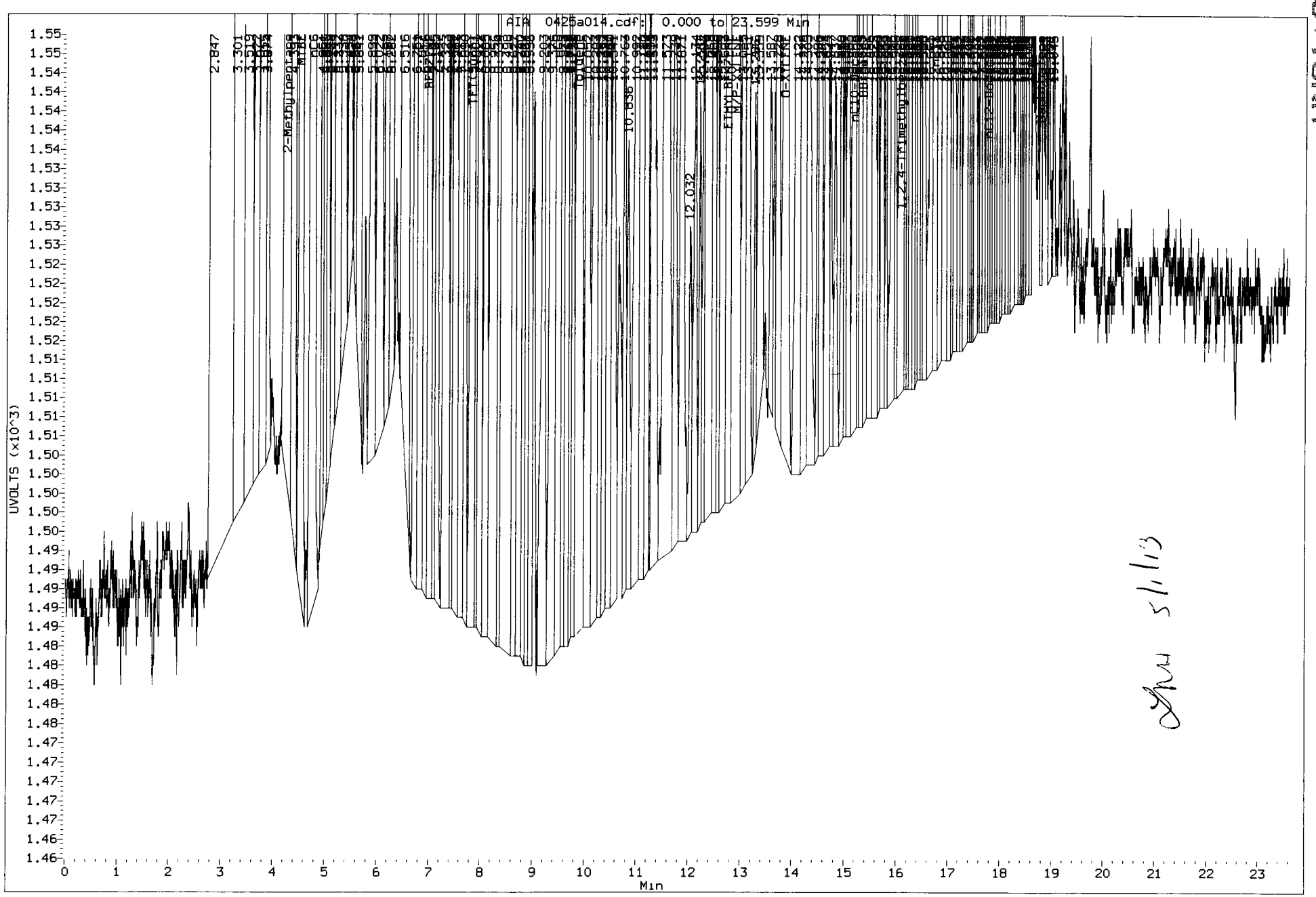
Operator: LH

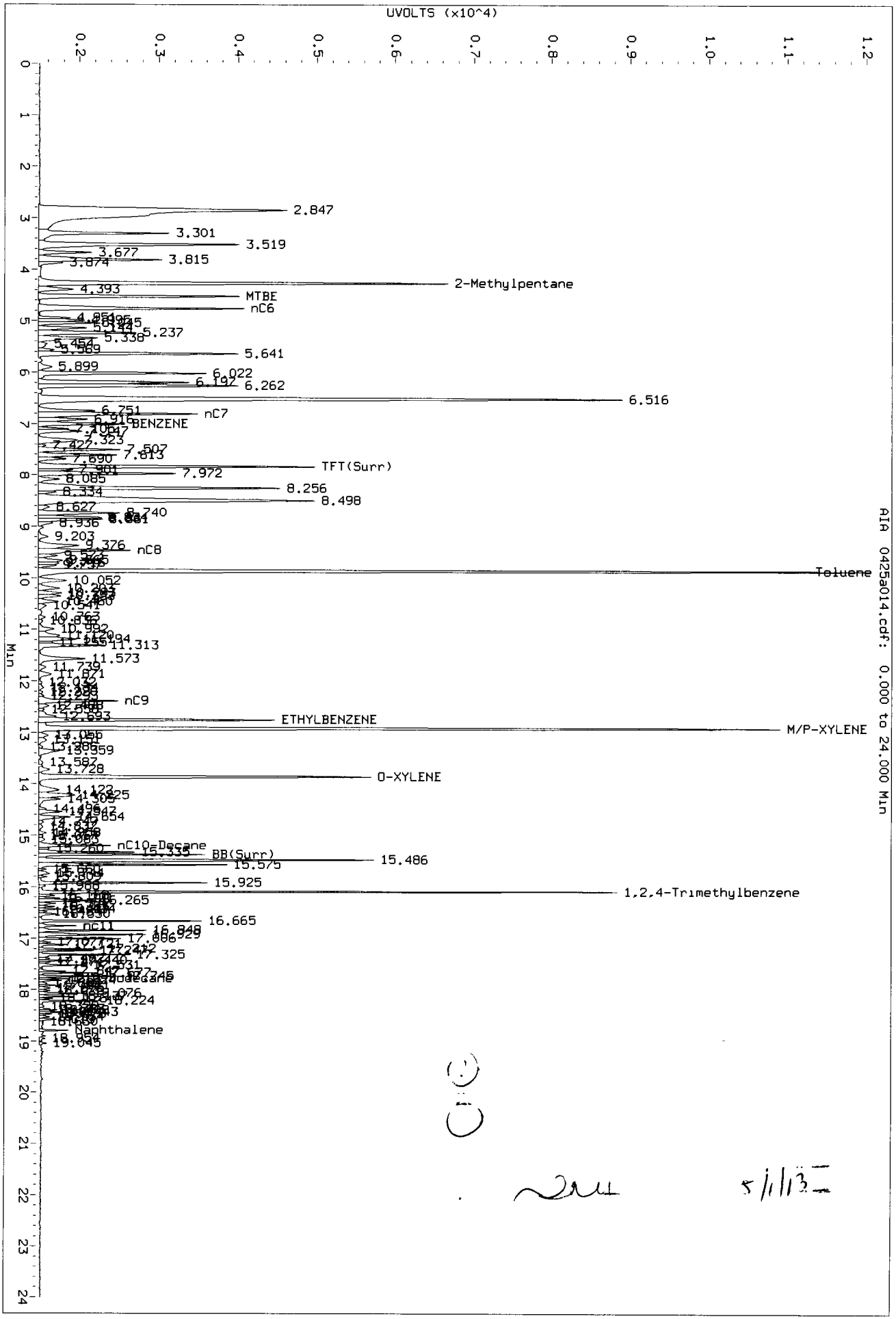
Column diameter: 0.18

UN31 : 02213



Data File: /chem3/pid1.i/20130425-1.b/0425a014.d/0425a014.cdf
Injection Date: 25-APR-2013 14:46
Instrument: pid1.i
Client Sample ID: GCAL 2





Data File: /chem3/pid1.i/20130425-1.b/0425a014.d/0425a014.cdf
Injection Date: 25-APR-2013 14:46
Instrument: pid1.i
Client Sample ID: NPDES Sampling

5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

5/1/13

Data file 1: /chem3/pid1.i/20130425-1.b/0425a025.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a025.d
Method: /chem3/pid1.i/20130425-2.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: 25-APR-2013 20:12
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.006	3330	45729	96.0	TFT(Surr)
15.380	0.002	2072	18791	90.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	813459	2.272
8015C 2MP-TMB	(4.16 to 16.20)	723723	1558060	2.153
AK101 nC6-nC10	(4.66 to 15.10)	582885	1260672	2.163
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	848070	2.261 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
7.847	0.005	3600	90.7	TFT(Surr)
15.388	0.003	7858	89.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	0.006	2117	8.82	Benzene
9.876	0.006	21190	92.53	Toluene
12.769	0.004	5103	26.36	Ethylbenzene
12.934	0.008	20445	95.74	M/P-Xylene
13.879	0.005	7298	42.78	O-Xylene
4.534	-0.015	271	3.21	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130425-1.b/0425a025.d

Date : 25-APR-2013 20:12

Client ID: GCAL 3

Sample Info: GCAL 3

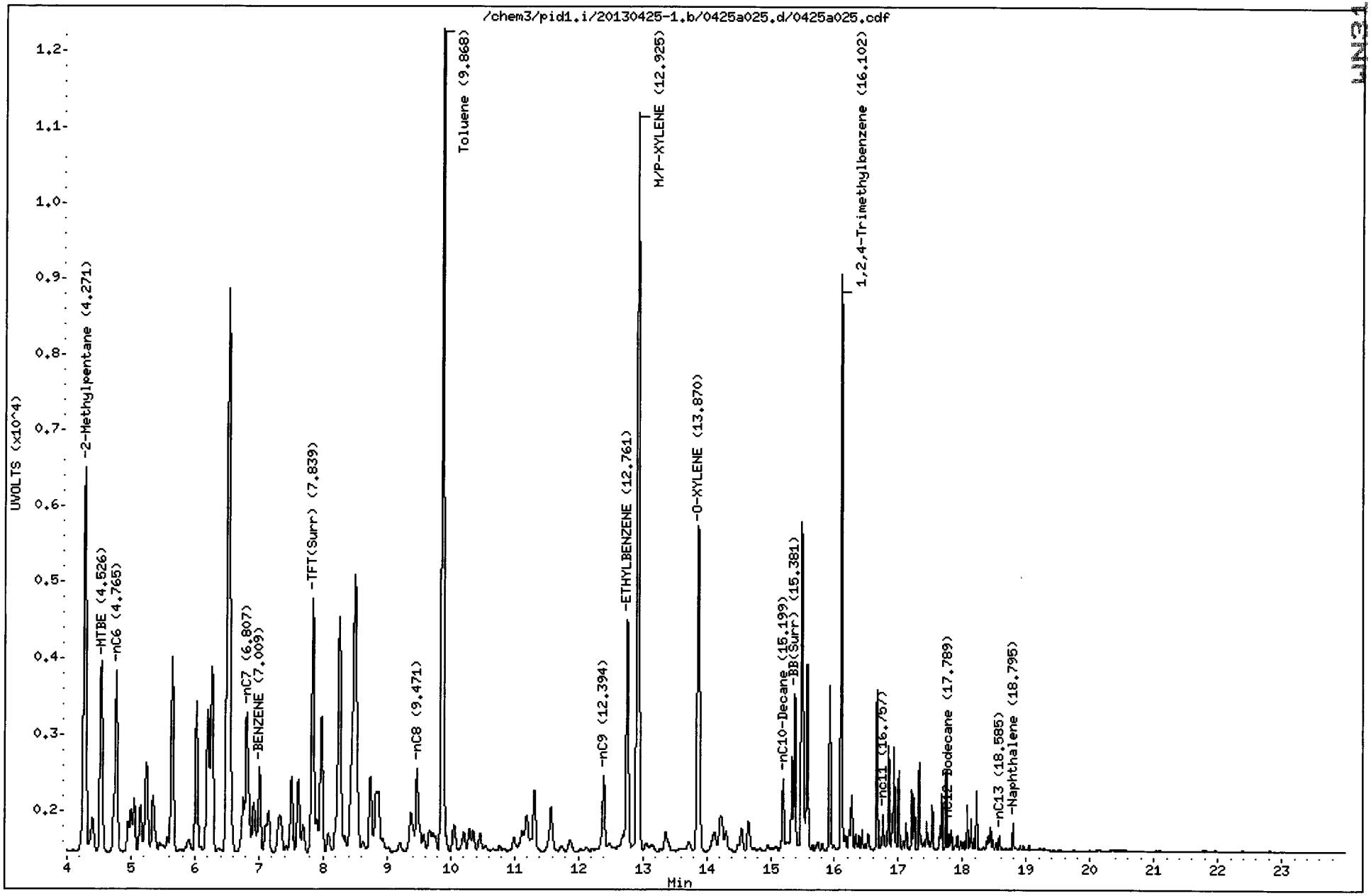
Instrument: pid1.i

Operator: LH

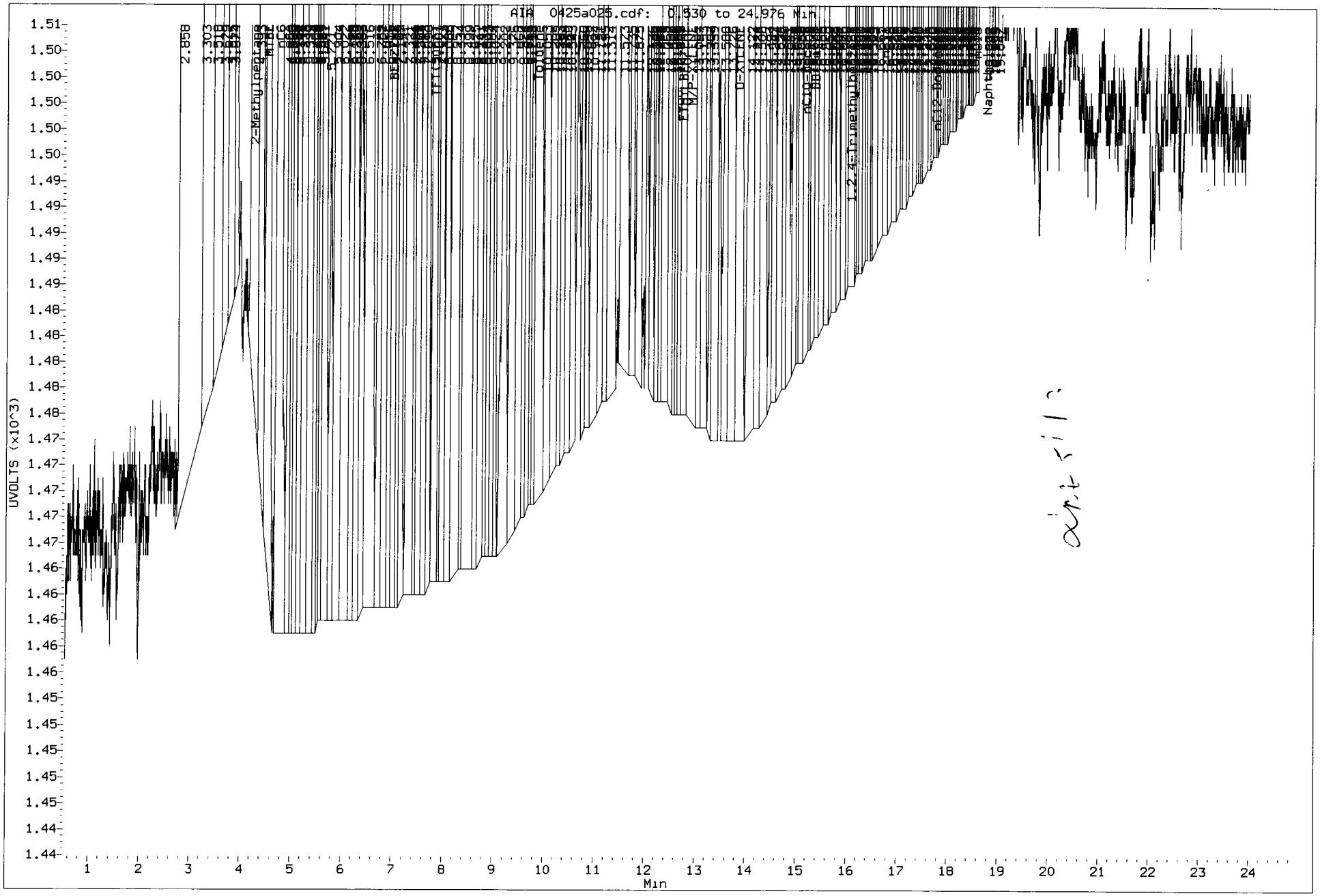
Column phase: RTX 502-2 FID

Column diameter: 0.18

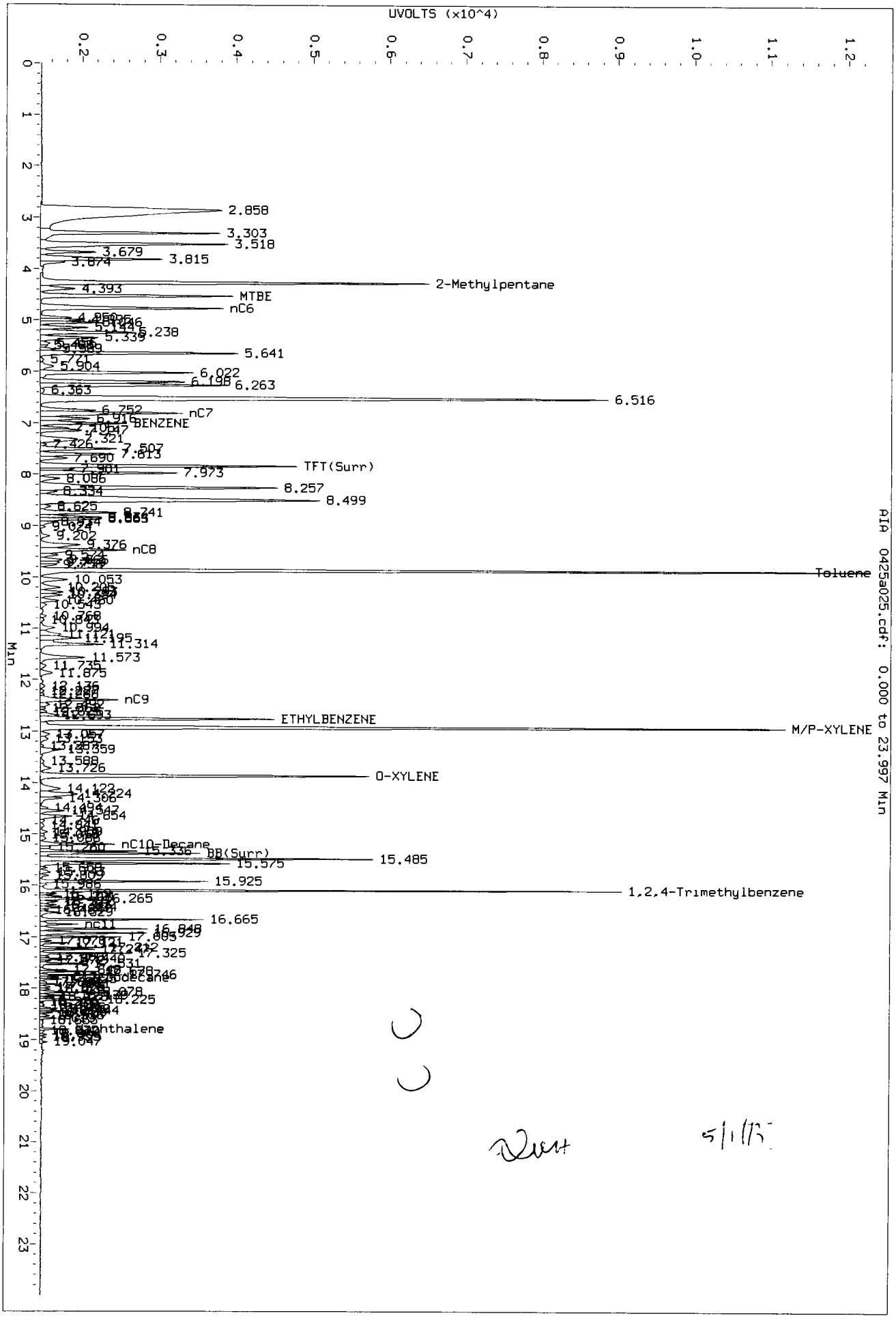
LN121 : 02217



Data File: /chem3/pid1.i/20130425-1.b/0425a025.d/0425a025.cdf
Injection Date: 25-APR-2013 20:12
Instrument: pid1.i
Client Sample ID: GCAL 3



UNS1 : 02218



Data File: /chem3/pid1.i/20130425-1.b/0425a025.d/0425a025.cdf
Injection Date: 25-APR-2013 20:12
Instrument: pid1.i
Client Sample ID: NPDES Sampling

5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130425-1.b/0425a026.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a026.d
Method: /chem3/pid1.i/20130425-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: WN31D
Client ID: ES-TB-001-20130424-
Injection Date: 25-APR-2013 20:41
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.005	3109	37873	89.6	TFT(Surr)
15.380	0.002	1953	16185	85.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	3875	0.011
8015C 2MP-TMB	(4.16 to 16.20)	723723	10157	0.014
AK101 nC6-nC10	(4.66 to 15.10)	582885	9636	0.017
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	3875	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.005	3447	86.8	TFT(Surr)
15.388	0.002	7456	84.8	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/20130425-1.b/0425a026.d

Date : 25-APR-2013 20:41

Client ID: ES-TB-001-20130424-

Sample Info: WN31D

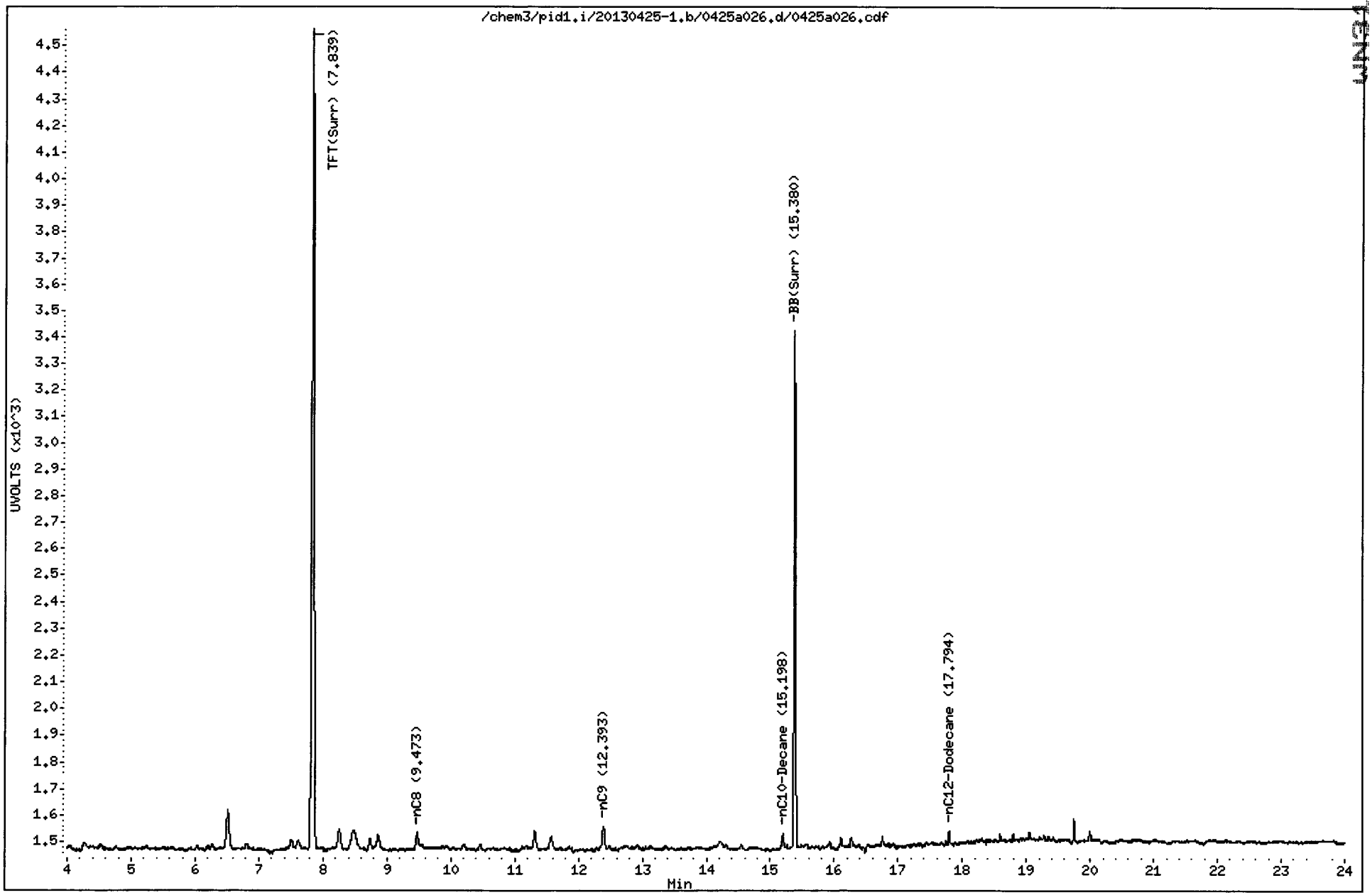
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

WN31 : 02221



Analytical Resources Inc.
BETX/Gas Quantitation Report

DLH 5/1/13

Data file 1: /chem3/pid1.i/20130425-1.b/0425a030.d
Data file 2: /chem3/pid1.i/20130425-2.b/0425a030.d
Method: /chem3/pid1.i/20130425-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: GCAL 4
Client ID:
Injection Date: 25-APR-2013 22:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	0.003	3227	44315	93.0	TFT(Surr)
15.380	0.002	2026	18188	88.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	761641	2.127
8015C 2MP-TMB	(4.16 to 16.20)	723723	1448530	2.001
AK101 nC6-nC10	(4.66 to 15.10)	582885	1169692	2.007
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	794652	2.119 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
7.845	0.003	3506	88.3	TFT(Surr)
15.387	0.001	7776	88.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.004	2078	8.66	Benzene
9.874	0.004	20603	89.97	Toluene
12.767	0.002	4868	25.15	Ethylbenzene
12.931	0.006	19583	91.70	M/P-Xylene
13.876	0.003	7165	42.00	O-Xylene
4.530	-0.018	252	2.99	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130425-1.b/0425a030.d

Date : 25-APR-2013 22:39

Client ID: GCAL 4

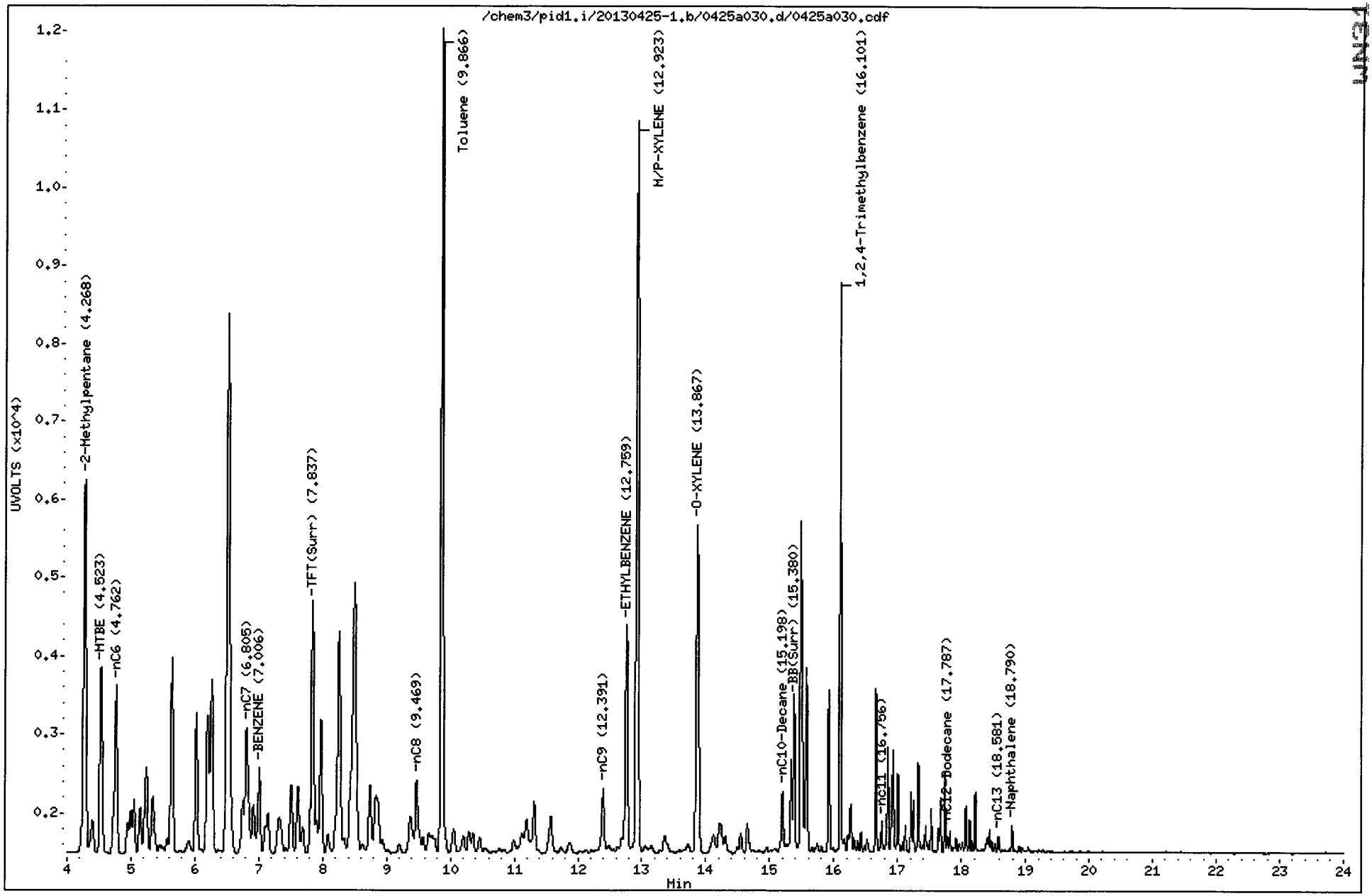
Sample Info: GCAL 4

Column phase: RTX 502-2 FID

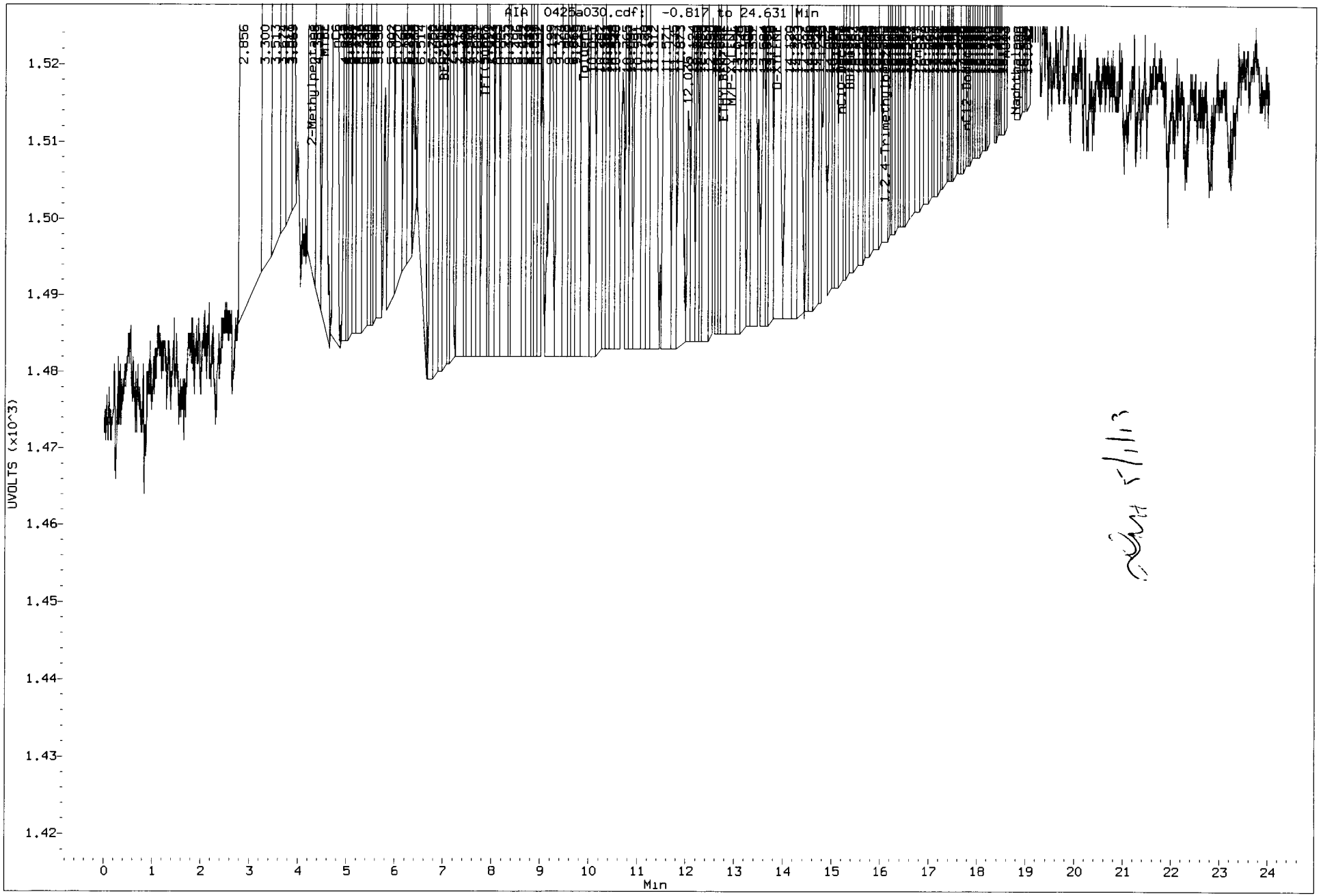
Instrument: pid1.i

Operator: LH

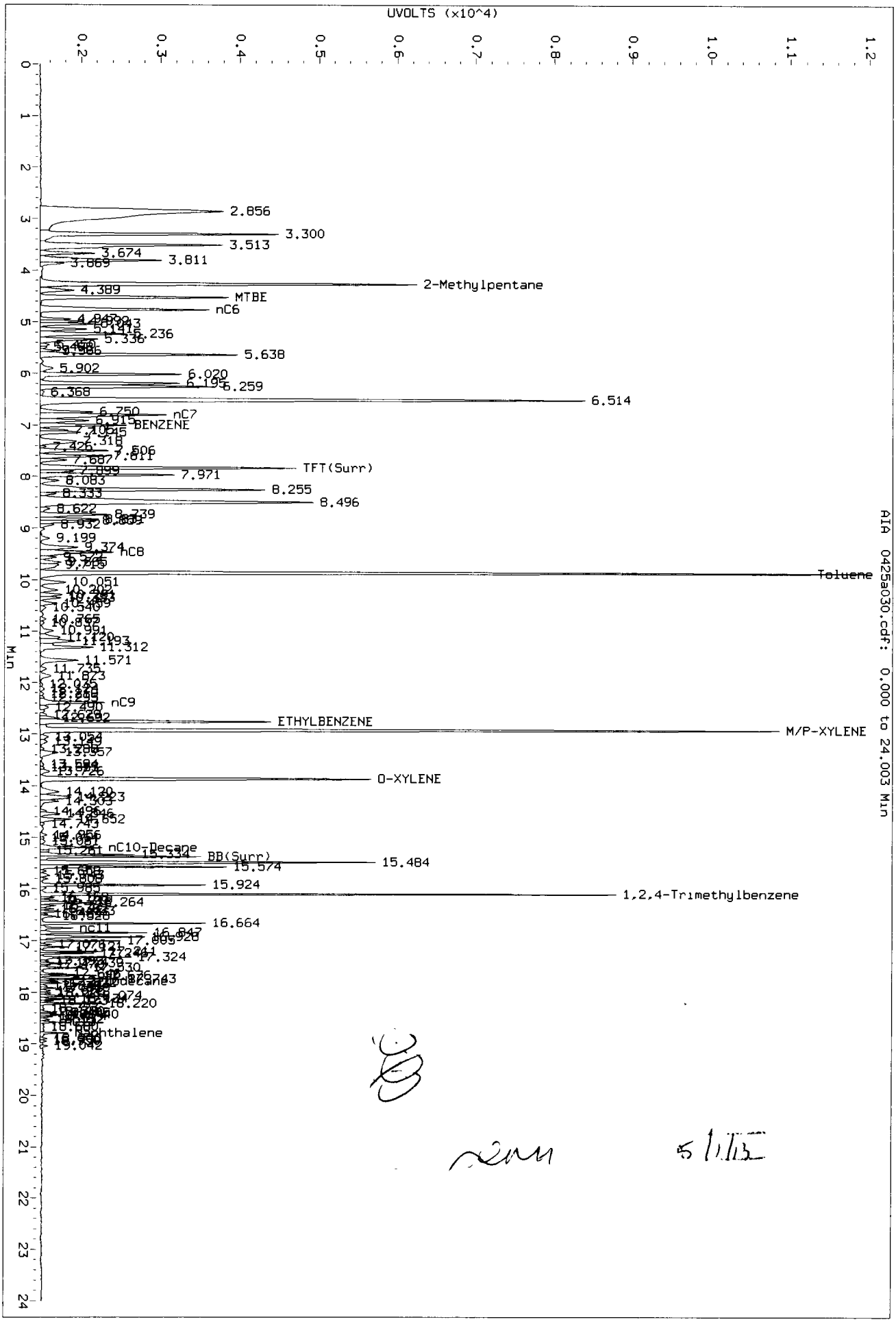
Column diameter: 0.18



Data File: /chem3/pid1.i/20130425-1.b/0425a030.d/0425a030.cdf
Injection Date: 25-APR-2013 22:39
Instrument: pid1.i
Client Sample ID: GCAL 4



UNA1 : 022214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Injection Date: 25-APR-2013 22:39
Instrument: pid1.i
Client Sample ID: NPDES Sampling
UVOLTS (x10^4)
AIA 0425a030.cdf: 0.000 to 24.003 Min
Min
2.856
3.300
3.513
3.674
3.811
2-Methylpentane
MTBE
nC6
5.336
5.638
5.902
6.020
6.259
6.514
nC7
BENZENE
TFT(Surr)
7.971
8.255
8.496
nC8
Toluene
11.312
11.571
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
BB(Surr)
15.484
15.574
15.924
1,2,4-Trimethylbenzene
16.664
17.324
18.220

WN31 : 02225

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WN31 Client ID: SAIC

METHOD: **NW-TPH(Gas)** **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 10/22/12, 3/15/13 Analysis Start Date: 4/26/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	(NA) / Y / N / ____	Method Blank In Control?	(Y) / N / ✓
BFB Tune Meets Criteria?	(NA) / Y / N / ____	Surrogate Recovery in Control?	(Y) / N / ✓
Internal STD within 50-200%?	(NA) / Y / N / ____	LCS / LCSD Recovery Met?	(Y) / N / ✓
CCAL Meets %D	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA / ____
ICAL Q flag applied?	NA / Y / (N) / ____	MS / MSD Recovery Met?	(NA) / Y / N / ____
CCAL Q Flag applied	NA / Y / (N) / ____	MS / MSD RPD ≤30%?	(NA) / ____
Manual Integrations?	(Y) / N / ____	Samples Diluted?	Y / (N) / ____
Integration Summary?	(Y) / N / ____	Special Analysis Request?	Y / (N) / ____

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

Curve 4 curve forms are with the water side of the work order.

(Review 1)Analyst: [signature] **Date:** 5/1/13

(Review 2)Reviewer: MW **Date:** 5/2

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 4/26/13 Analysis: BTX/NWTPH-G Analyst: PC

Column 1 Serial No.: 821726 Column Type: RTX-502.2

Column 2 Serial No.: Column Type:

GC Method: BETX ICal Date: 10/23/12, 3/15/13 Injection Volume: 5mL

IS	Ical/Ccal	ICV
VW795-2	VW791-2 VW792-3 VW787-1	VW787-1
4/5/13	5/1/13	5/1/13

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/pid1.i/20130426-1.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0956	0426a001.d	RINSE				1
2	1025	0426a002.d	RT/BCAL 1	RT/BCAL 1			1
3	1055	0426a003.d	GCAL 1	GCAL 1			1
4	1124	0426a004.d	LCS0426				1
5	1153	0426a005.d	LCSD0426				1
6	1222	0426a006.d	MB0426				1
7	1428	0426a007.d	MB0426				1
8	1538	0426a008.d	BTEX SOIL RL				1
9	1608	0426a009.d	GAS SOIL RL				1
10	1637	0426a010.d	WN31A	ES-TS-INF-20130424-		soil	1
11	1707	0426a011.d	WN40A	MW10-0413		"	1
12	1736	0426a012.d	WN40B	MW11-0413		"	1
13	1806	0426a013.d	WN40C	Trip Blanks		"	1
14	1835	0426a014.d	WN47A	EAL 146731		"	1
15	1905	0426a015.d	BCAL 2				1
16	1934	0426a016.d	GCAL 2				1
17	2004	0426a017.d	WN46A	EAL#146732		soil	1
18	2033	0426a018.d	WN46B	EAL#146733		"	1
19	2103	0426a019.d	WN46C	EAL#146734		"	1
20	2132	0426a020.d	WN46D	EAL#146735		"	1
21	2202	0426a021.d	WN46E	EAL#146736		"	1
22	2231	0426a022.d	WN46F	EAL#146737		"	1
23	2300	0426a023.d	WN46G	EAL#146738		soil	1
24	2329	0426a024.d	WN46H	EAL#146739		"	1
25	2359	0426a025.d	WN46I	EAL#146740		"	1
26	0028	0426a026.d	WN46J	EAL#146741		"	1
27	0058	0426a027.d	GCAL 3				1
28	0127	0426a028.d	WN46K	EAL#146742		soil	1
29	0156	0426a029.d	WN46L	EAL#146743		"	1
30	0225	0426a030.d	GCAL 4				1

5/1/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130426-1.b

ARI Job No.: RT/B Method: FID.m Instrument: pid1.i Date: 26-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1025	0426a002.d	RT/BCAL 1	RT/BCAL 1	1	NO MANUAL INTEGRATION
1055	0426a003.d	GCAL 1	LANDFILL D	1	NO MANUAL INTEGRATION
1124	0426a004.d	LCS0426		1	NO MANUAL INTEGRATION
1153	0426a005.d	LCSD0426		1	NO MANUAL INTEGRATION
1428	0426a007.d	MB0426		1	NO MANUAL INTEGRATION
1637	0426a010.d	WN31A	ES-TS-INF-	1	NO MANUAL INTEGRATION
1934	0426a016.d	GCAL 2	LANDFILL D	1	NO MANUAL INTEGRATION

VG 5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a002.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a002.d
Method: /chem3/pid1.i/20130426-2.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: RT/BCAL 1
Injection Date: 26-APR-2013 10:25
Matrix: WATER
Dilution Factor: 1.000

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.834	0.000	3172	38858	91.4	TFT(Surr)
15.377	0.000	1953	16735	85.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	423091	1.181
8015C 2MP-TMB	(4.17 to 16.20)	723723	518837	0.717
AK101 nC6-nC10	(4.66 to 15.10)	582885	358386	0.615
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	445234	1.187

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
7.842	0.000	3648	91.9	TFT(Surr)
15.384	0.000	7659	87.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.011	0.000	5538	23.07	Benzene
9.869	0.000	5136	22.43	Toluene
12.764	0.000	4360	22.52	Ethylbenzene
12.924	0.000	9532	44.64	M/P-Xylene
13.872	0.000	3841	22.51	O-Xylene
4.550	0.000	1865	22.11	MTBE

A Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130426-1.b/0426a002.d

Date : 26-APR-2013 10:25

Client ID: RT/BCAL 1

Sample Info: RT/BCAL 1

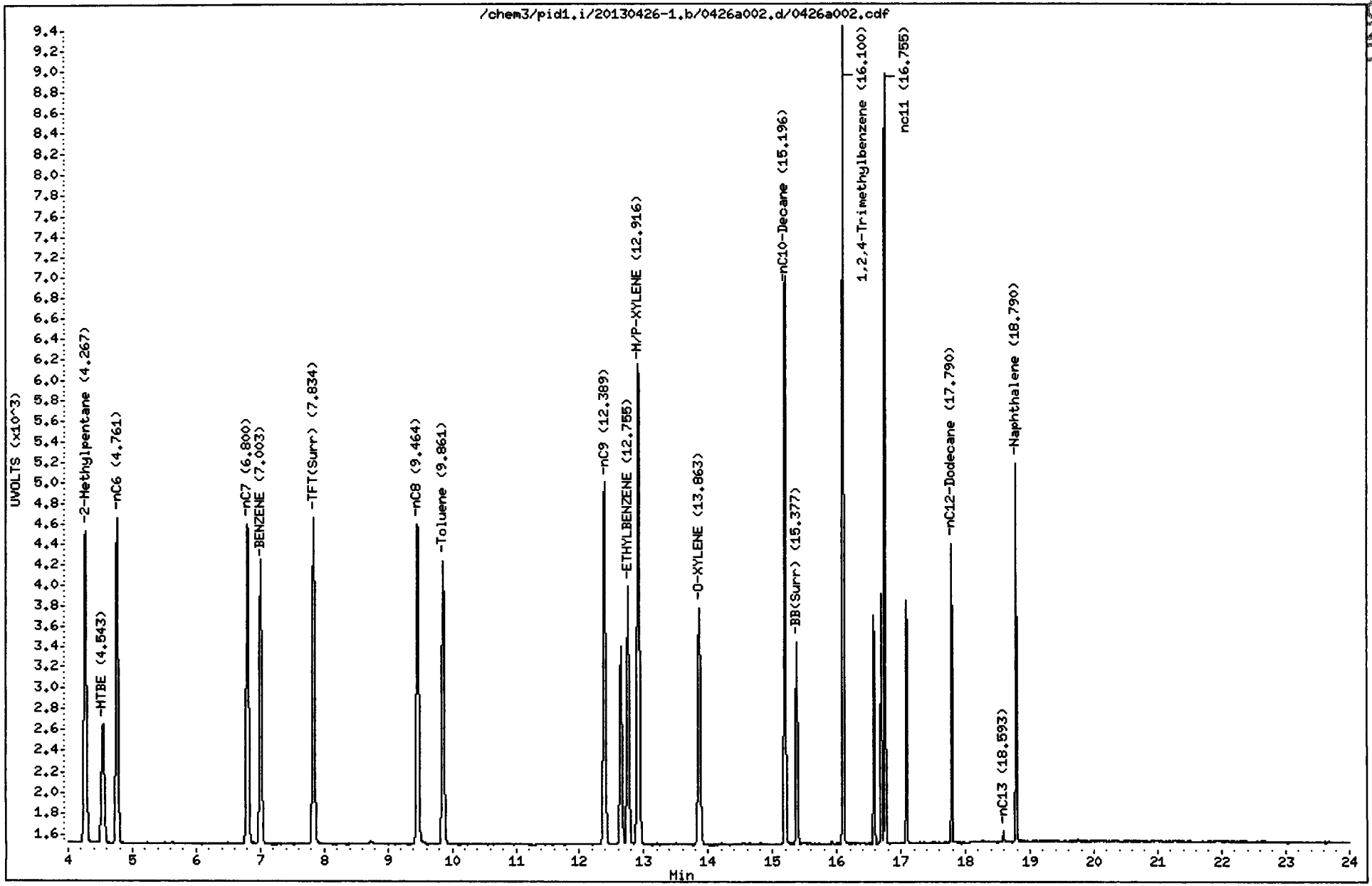
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

UN31 : 02230



KG 5/11/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a003.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a003.d
Method: /chem3/pid1.i/20130426-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: GCAL 1
Client ID: GCAL 1
Injection Date: 26-APR-2013 10:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.833	-0.001	3387	46618	97.6	TFT(Surr)
15.377	0.000	2024	18345	88.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	813796	2.272 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1607165	2.221 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	1308758	2.245 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	850296	2.267 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
7.841	-0.001	3722	93.8	TFT(Surr)
15.384	0.000	7735	88.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.011	0.000	2040	8.50	Benzene
9.871	0.001	20215	88.27	Toluene
12.764	0.000	4847	25.04	Ethylbenzene
12.928	0.004	19392	90.81	M/P-Xylene
13.872	0.000	6977	40.90	O-Xylene
4.529	-0.021	310	3.68	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130426-1.b/0426a003.d

Date : 26-APR-2013 10:55

Client ID: GCAL 1

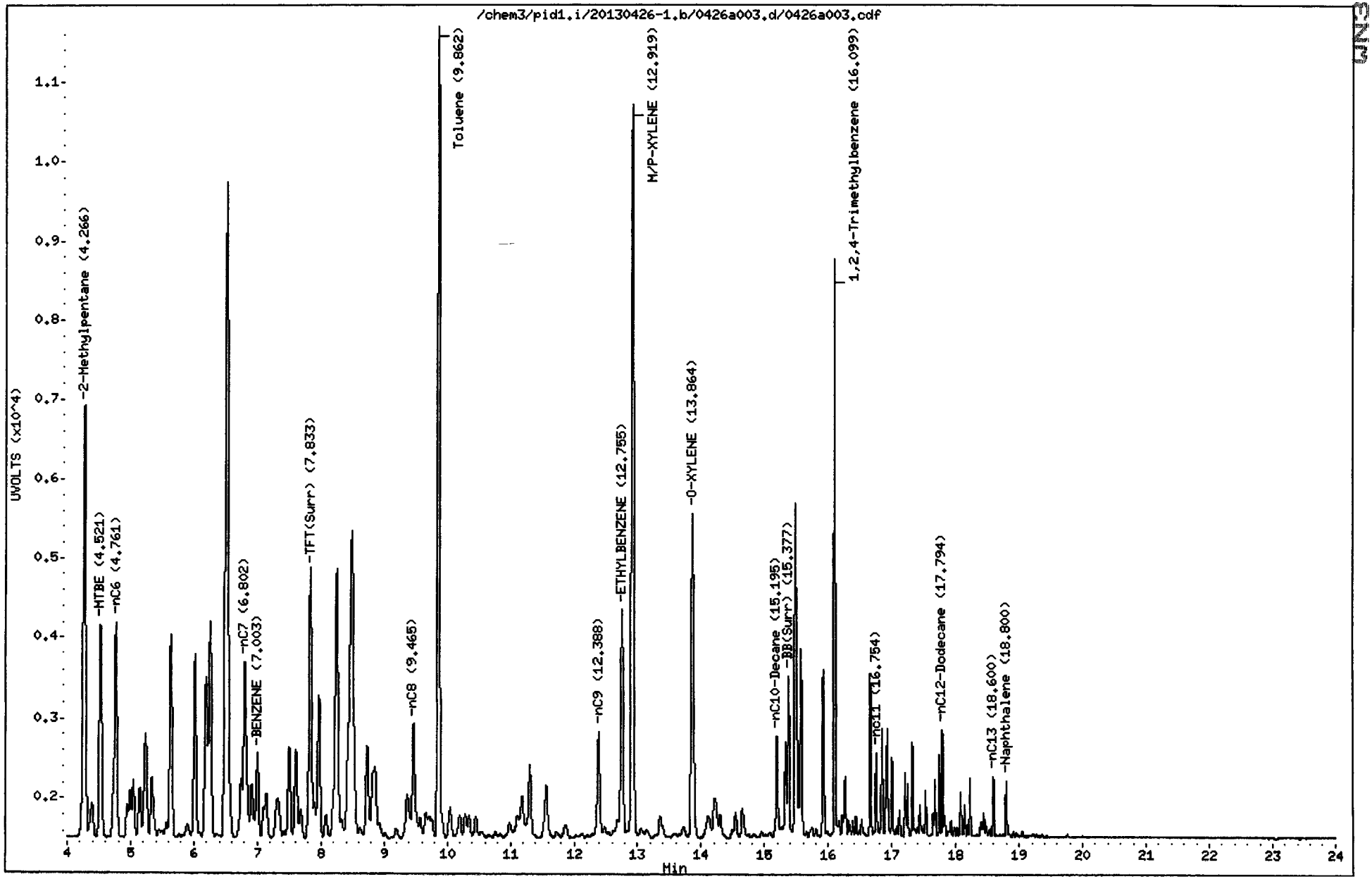
Sample Info: GCAL 1

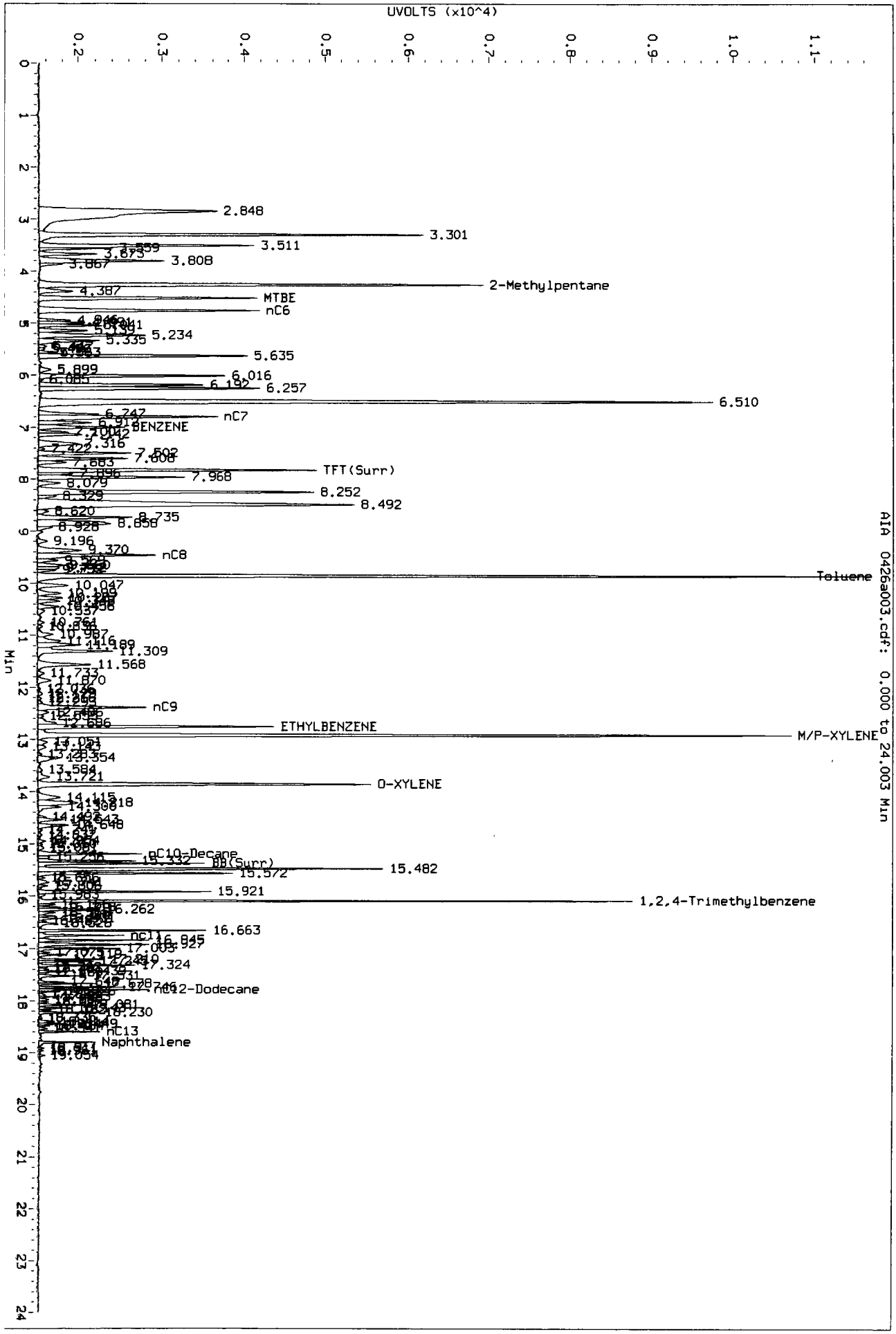
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18

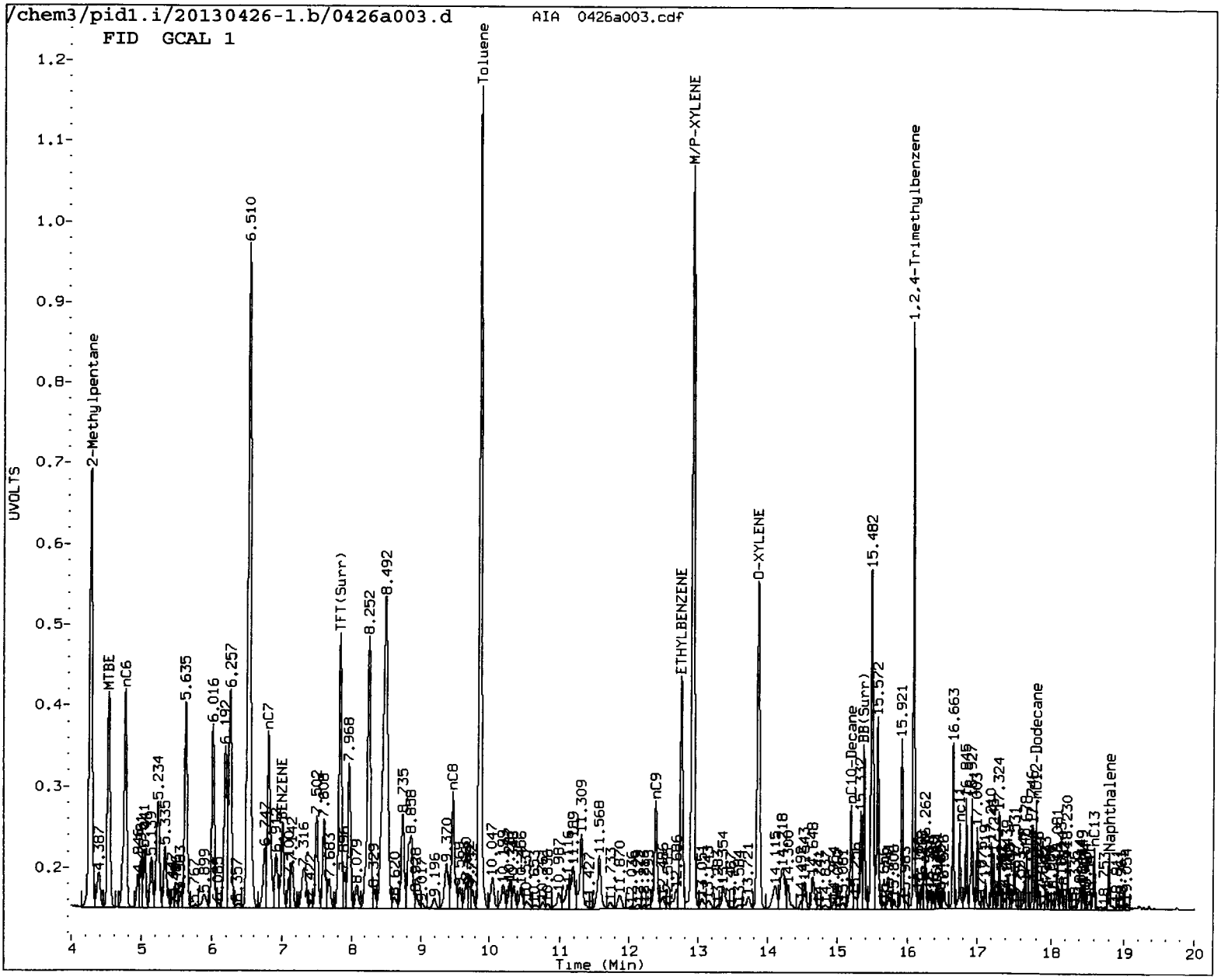




Data File: /chem3/pid1.i/20130426-1.b/0426a003.d/0426a003.cdf
Injection Date: 26-APR-2013 10:55
Instrument: pid1.i
Client Sample ID: GCAL 1

AIA 0426a003.cdf: 0.000 to 24.003 Min

PC 5/1/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: PL Date: 5/1/13

4/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a004.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a004.d
Method: /chem3/pid1.i/20130426-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCS0426
Client ID:
Injection Date: 26-APR-2013 11:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.834	-0.001	3217	43703	92.7	TFT(Surr)
15.376	-0.001	1965	17212	86.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	322671	0.901 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	669556	0.925 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	541898	0.930 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	340410	0.908 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
7.842	0.000	3623	91.3	TFT(Surr)
15.384	-0.001	7661	87.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.010	-0.001	821	3.42	Benzene
9.870	0.000	8150	35.59	Toluene
12.763	-0.001	1955	10.10	Ethylbenzene
12.926	0.002	7824	36.64	M/P-Xylene
13.872	0.000	2816	16.51	O-Xylene
ND	---	---	---	MTBE

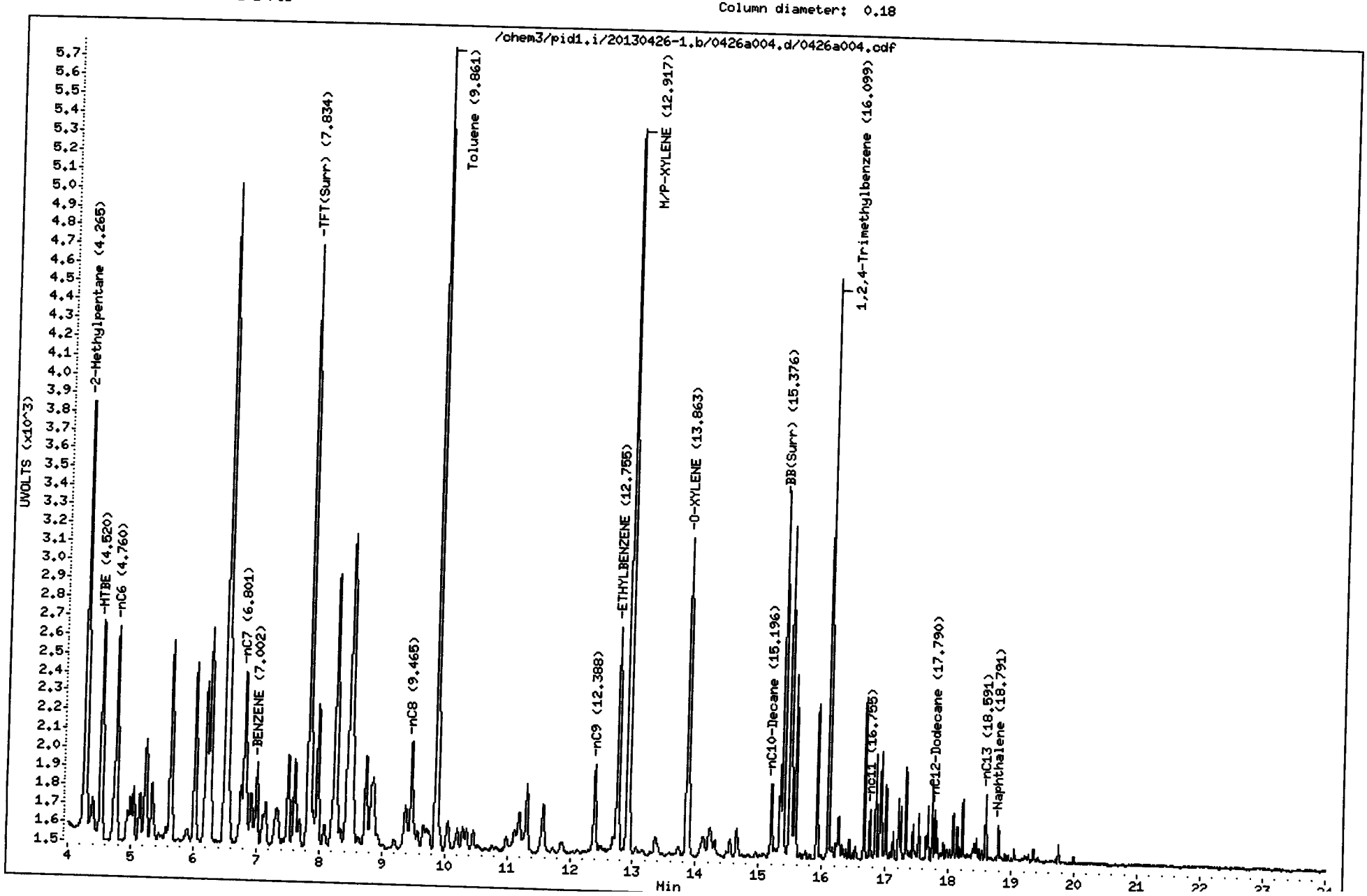
Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

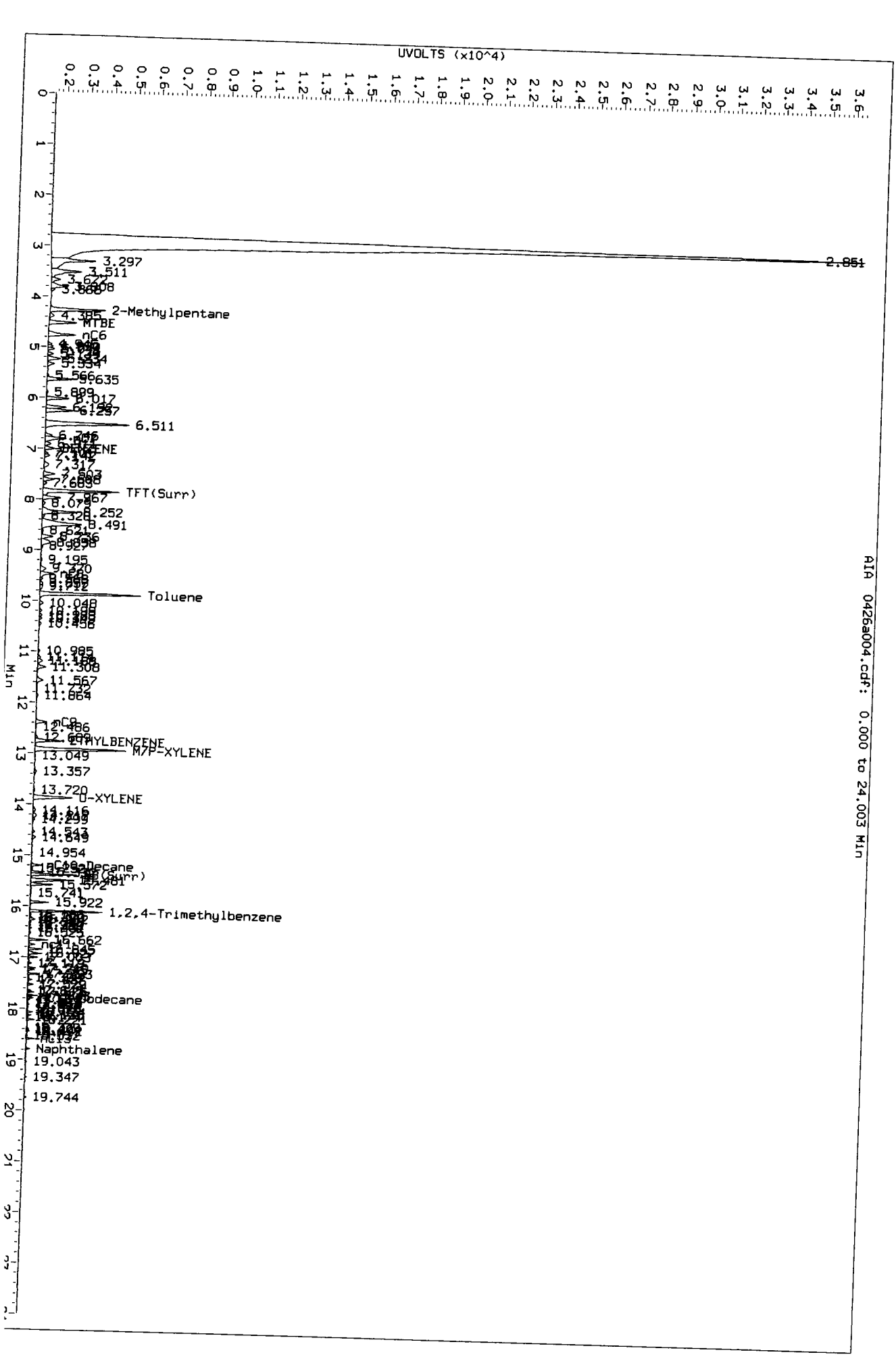
Data File: /chem3/pid1.i/20130426-1.b/0426a004.d
Date : 26-APR-2013 11:24
Client ID:
Sample Info: LCS0426

Instrument: pid1.i

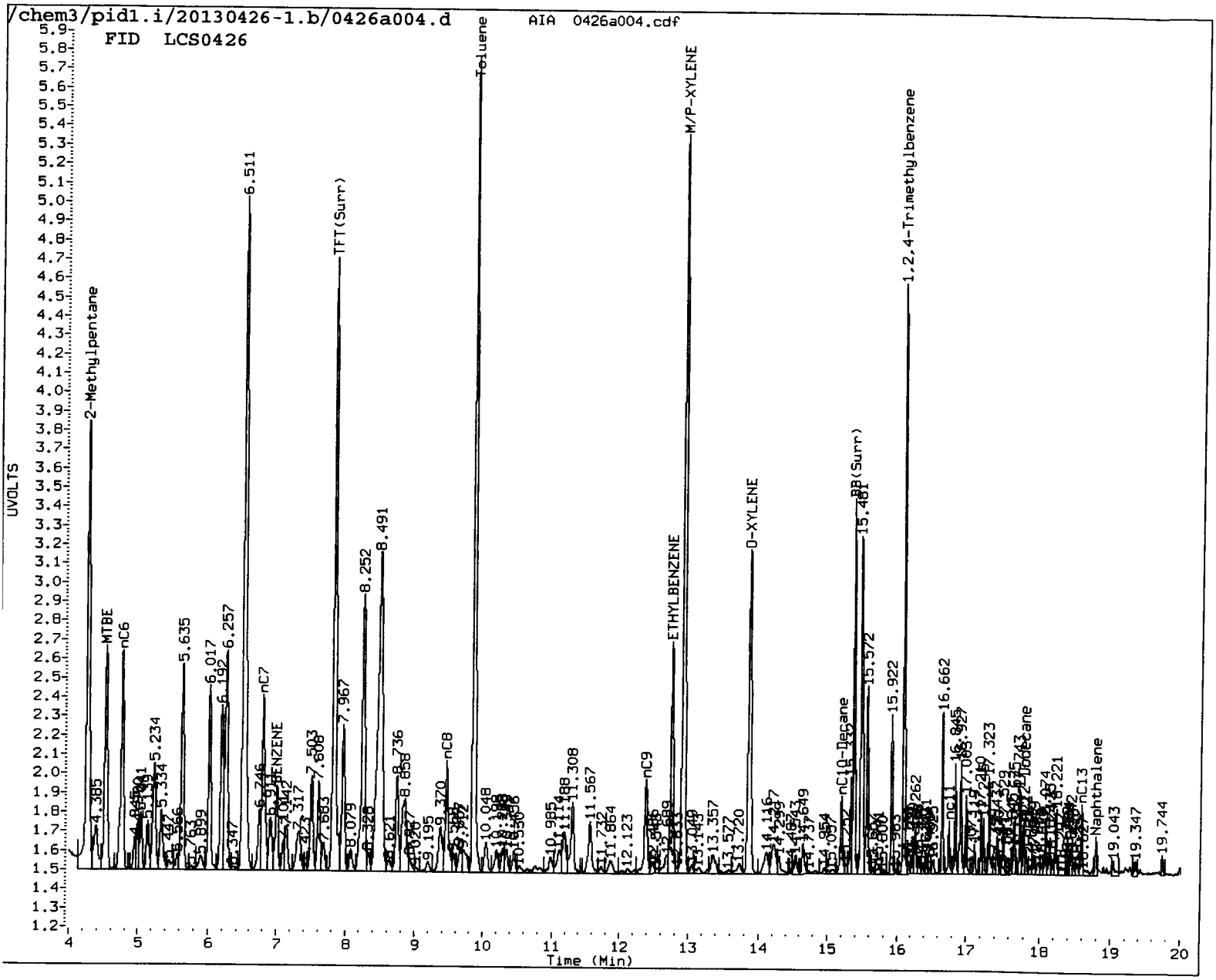
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID




UVOLTS (x10^4)
Min
2.851
3.297
3.511
2-Methylpentane
MTBE
nC6
6.511
TFT(Surr)
Toluene
M/P-XYLENE
O-XYLENE
15.922
1,2,4-Trimethylbenzene
Naphthalene
19.043
19.347
19.744
Data File: /chem3/pid1.i/20130426-1.b/0426a004.d/0426a004.cdf
Injection Date: 26-APR-2013 11:24
Instrument: pid1.i
Client Sample ID:
AIA 0426a004.cdf: 0.000 to 24.003 Min

PC 4/29/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: PC Date: 4/29/13

KC 4/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a005.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a005.d
Method: /chem3/pid1.i/20130426-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCSD0426
Client ID:
Injection Date: 26-APR-2013 11:53
Matrix: WATER
Dilution Factor: 1.000

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FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.833	-0.001	3002	40883	86.5	TFT(Surr)
15.376	-0.001	1875	16341	82.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	316450	0.884 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	643640	0.889 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	520102	0.892 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	333182	0.888 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

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PID Surrogates

RT	Shift	Response	%Rec	Compound
7.841	-0.001	3354	84.5	TFT(Surr)
15.384	0.000	7223	82.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.010	-0.001	784	3.27	Benzene
9.869	0.000	7814	34.12	Toluene
12.763	-0.001	1864	9.63	Ethylbenzene
12.926	0.002	7506	35.15	M/P-Xylene
13.872	0.000	2682	15.72	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

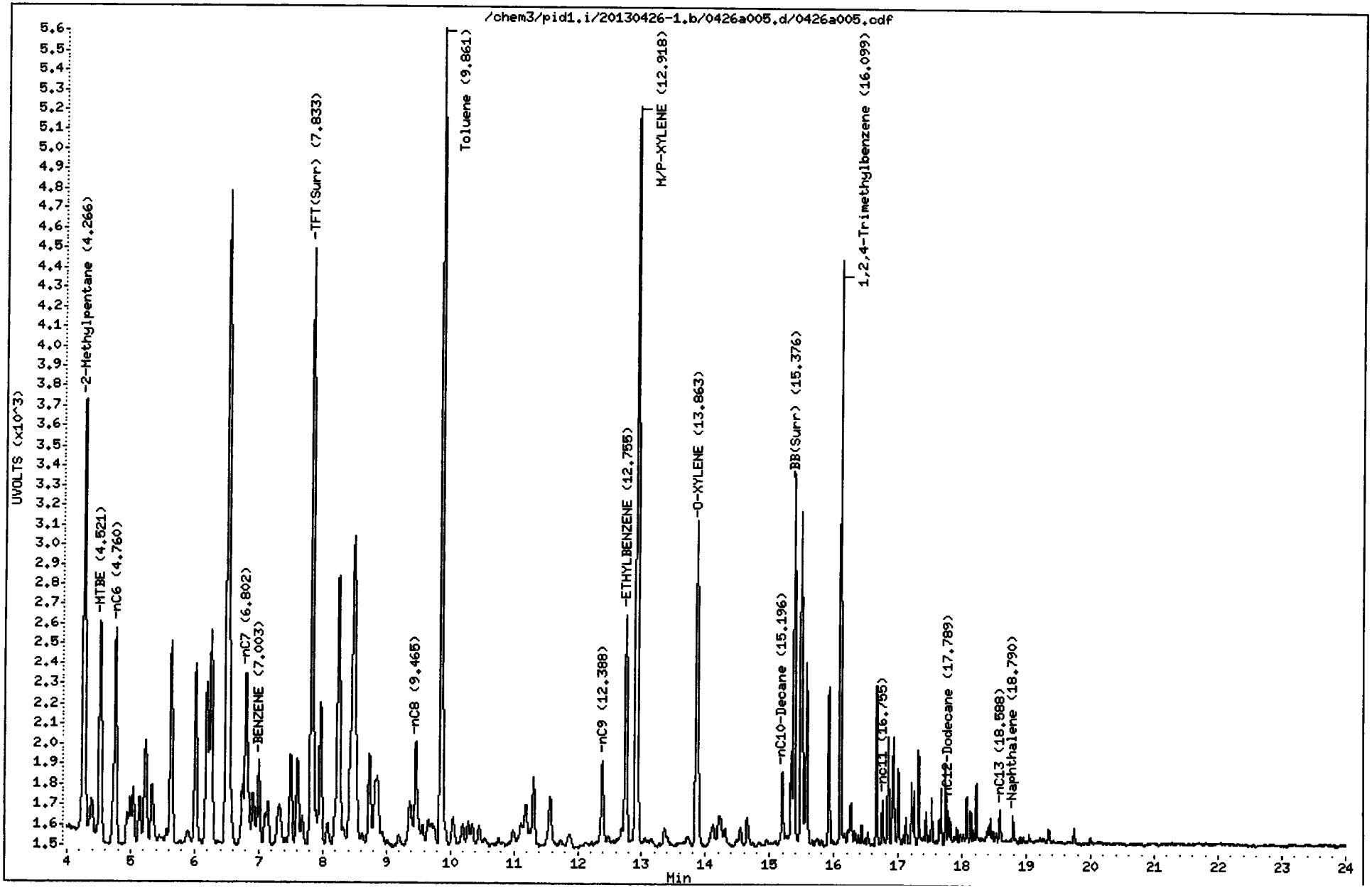
Data File: /chem3/pid1.i/20130426-1.b/0426a005.d
Date : 26-APR-2013 11:53
Client ID:
Sample Info: LCSD0426

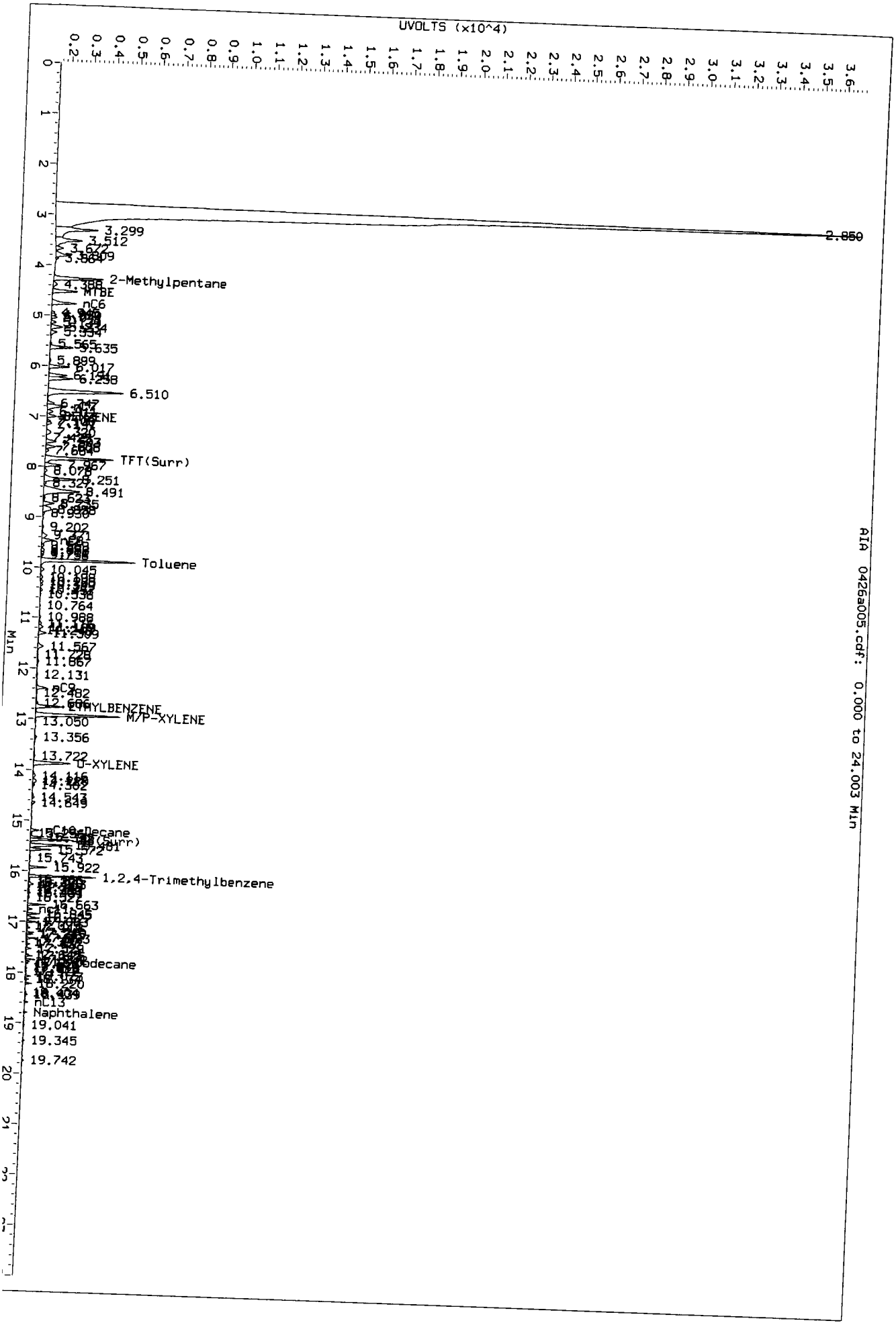
Instrument: pid1.i

Operator: PC
Column diameter: 0.18

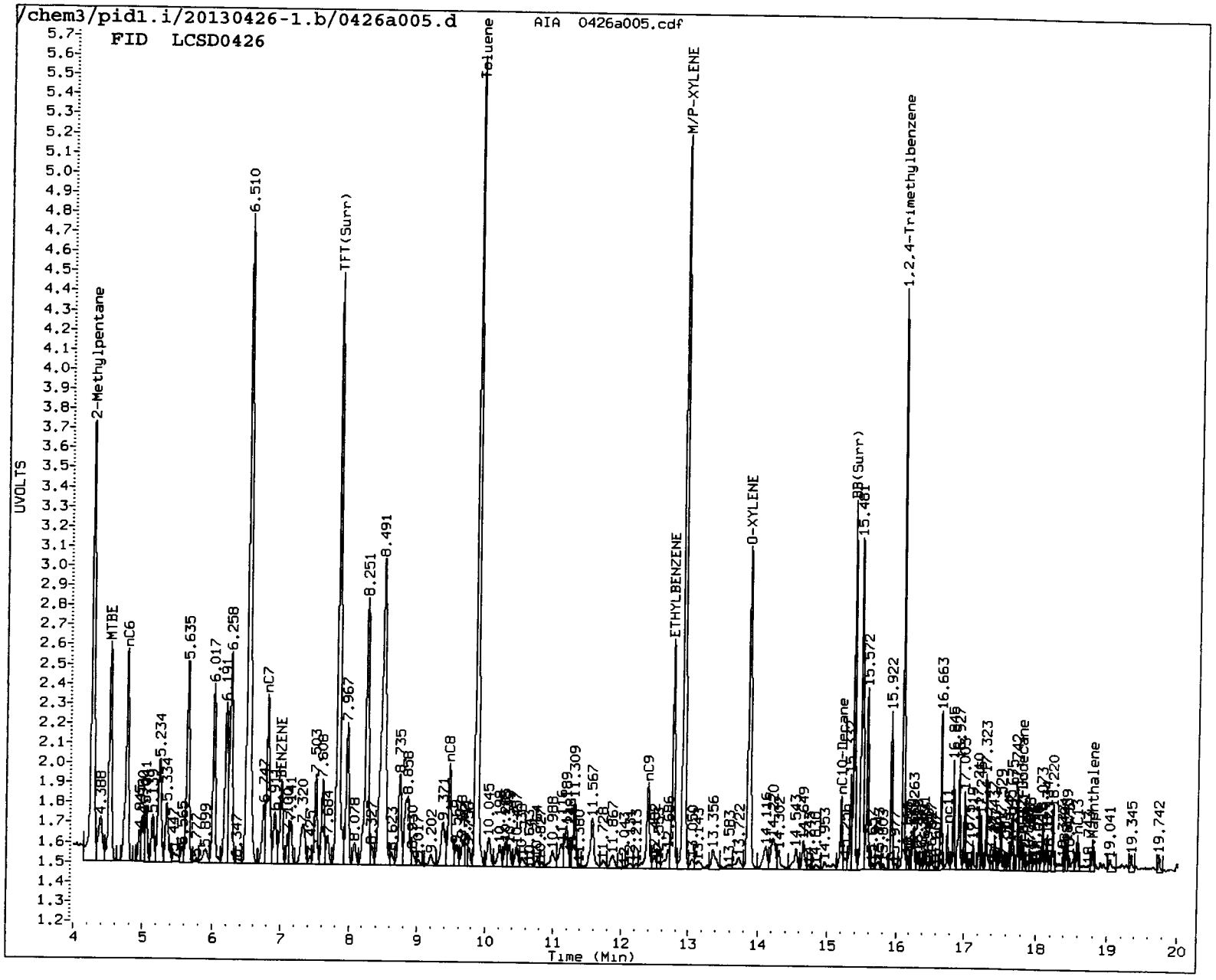
Column phase: RTX 502-2 FID

WN31 : 022149




UVOLTS (x10^4)
Min
Data File: /chem3/pid1.i/20130426-1.b/0426a005.d/0426a005.cdf
Injection Date: 26-APR-2013 11:53
Instrument: pid1.i
Client Sample ID:
AIA 0426a005.cdf: 0.000 to 24.003 Min
2.850
3.299
3.512
3.672
3.884
2-Methylpentane
MTBE
nC6
5.565
5.635
6.510
TFT(Surr)
8.251
8.491
Toluene
10.045
10.764
10.988
11.567
11.667
12.131
nC9
M/P-XYLENE
13.050
13.356
13.722
O-XYLENE
15.243
15.922
1,2,4-Trimethylbenzene
nC13
Naphthalene
19.041
19.345
19.742

BC 4/29/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: KC Date: 4/19/13

PC 4/29/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a007.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a007.d
Method: /chem3/pid1.i/20130426-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: MB0426
Client ID:
Injection Date: 26-APR-2013 14:28
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	0.003	3179	38669	91.6	TFT(Surr)
15.379	0.002	1953	16447	85.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

	Range	RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	2072	0.006
8015C 2MP-TMB	(4.17 to 16.20)	723723	634	0.001
AK101 nC6-nC10	(4.66 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	2490	0.007

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
7.845	0.003	3693	93.0	TFT(Surr)
15.386	0.002	7593	86.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

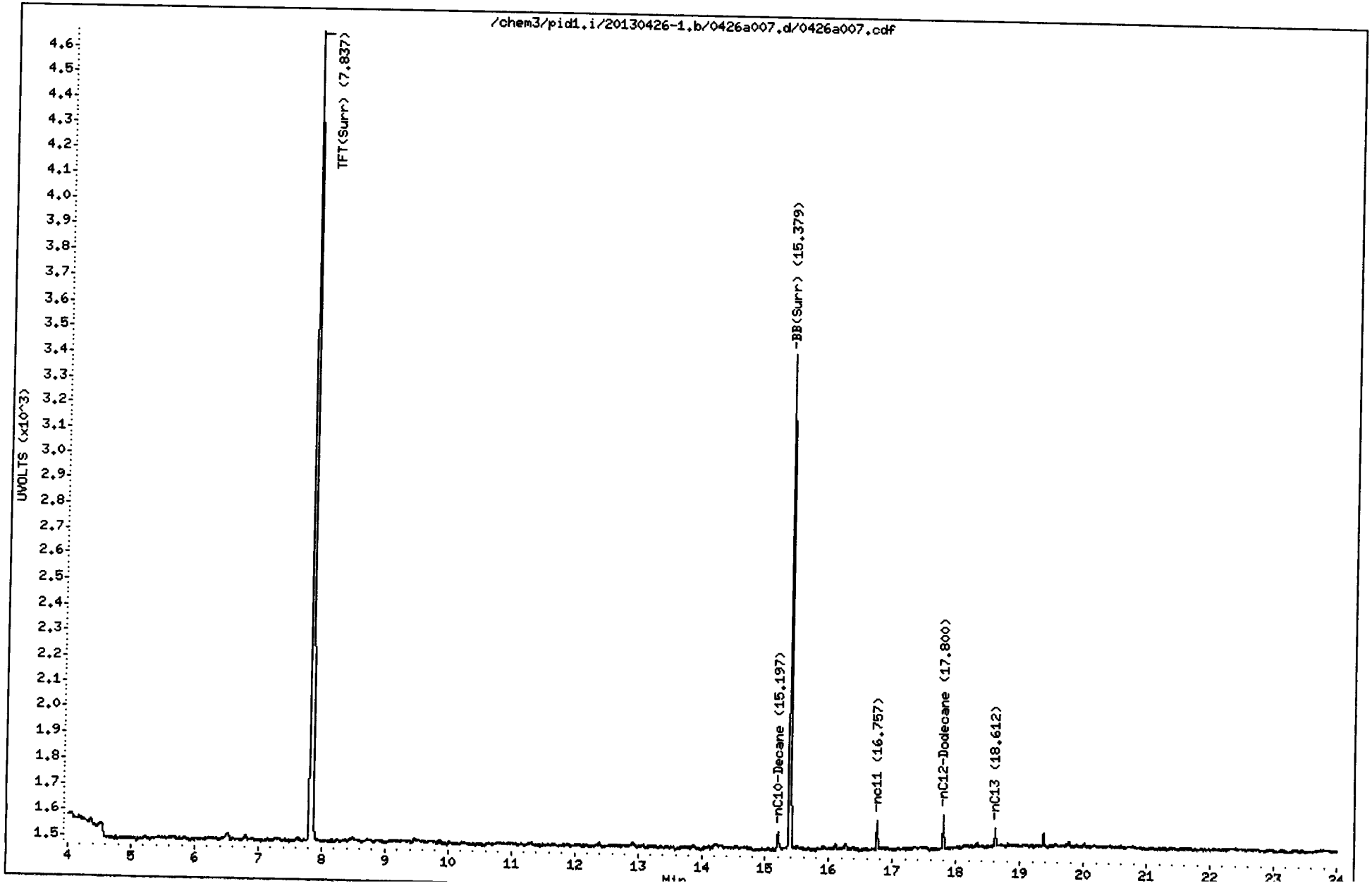
Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130426-1.b/0426a007.d
Date : 26-APR-2013 14:28
Client ID:
Sample Info: MB0426

Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID



JMA 5/1/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a010.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a010.d
Method: /chem3/pid1.i/20130426-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: WN31A
Client ID: ES-TS-INF-20130424-
Injection Date: 26-APR-2013 16:37
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.835	0.001	3005	36586	86.6	TFT(Surr)
15.378	0.001	2039	16897	89.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	23447	0.065
8015C 2MP-TMB	(4.17 to 16.20)	723723	18208	0.025
AK101 nC6-nC10	(4.66 to 15.10)	582885	17160	0.029
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	24725	0.066

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
7.843	0.001	3354	84.5	TFT(Surr)
15.385	0.001	7845	89.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.871	0.002	2105	9.19	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/20130426-1.b/0426a010.d

Date : 26-APR-2013 16:37

Client ID: ES-TS-INF-20130424-

Sample Info: WN31A

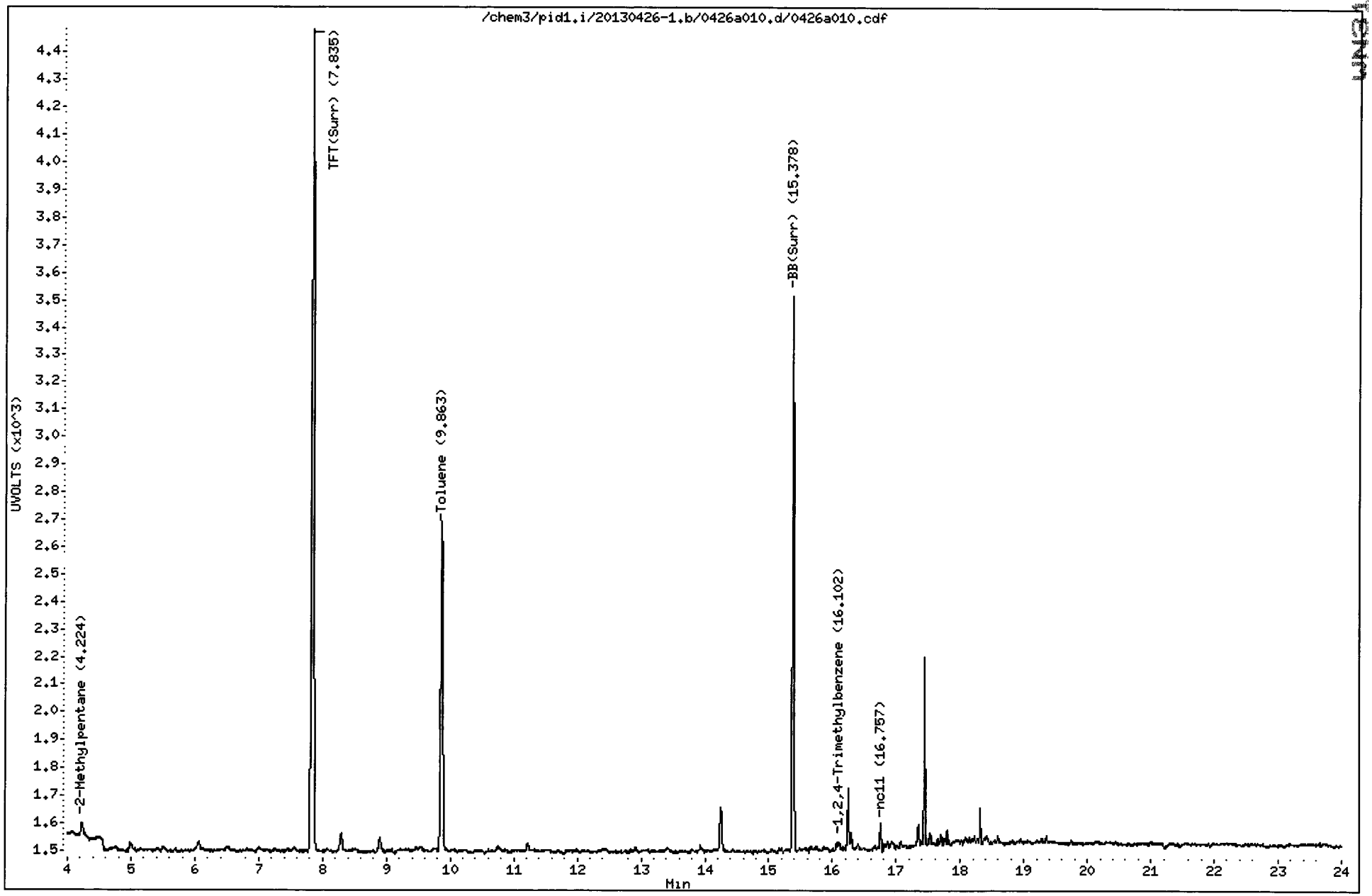
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

WN31 : 022416



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130426-1.b/0426a016.d
Data file 2: /chem3/pid1.i/20130426-2.b/0426a016.d
Method: /chem3/pid1.i/20130426-2.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: 26-APR-2013 19:34
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.836	0.002	3474	47975	100.2	TFT(Surr)
15.378	0.001	2097	19514	91.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	818032	2.284 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1608272	2.222 M
AK101 nC6-nC10	(4.66 to 15.10)	582885	1308648	2.245 M
NWTPHG Tol-Nap	(9.76 to 18.89)	375093	852457	2.273 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.845	0.003	3788	95.4	TFT(Surr)
15.387	0.002	8048	91.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.014	0.003	2059	8.58	Benzene
9.874	0.005	20680	90.30	Toluene
12.767	0.003	5005	25.85	Ethylbenzene
12.932	0.007	19942	93.38	M/P-Xylene
13.877	0.005	7202	42.21	O-Xylene
4.533	-0.018	277	3.28	MTBE

A Indicates Peak Area was used for quantitation instead of Height
M Indicates peak was manually integrated

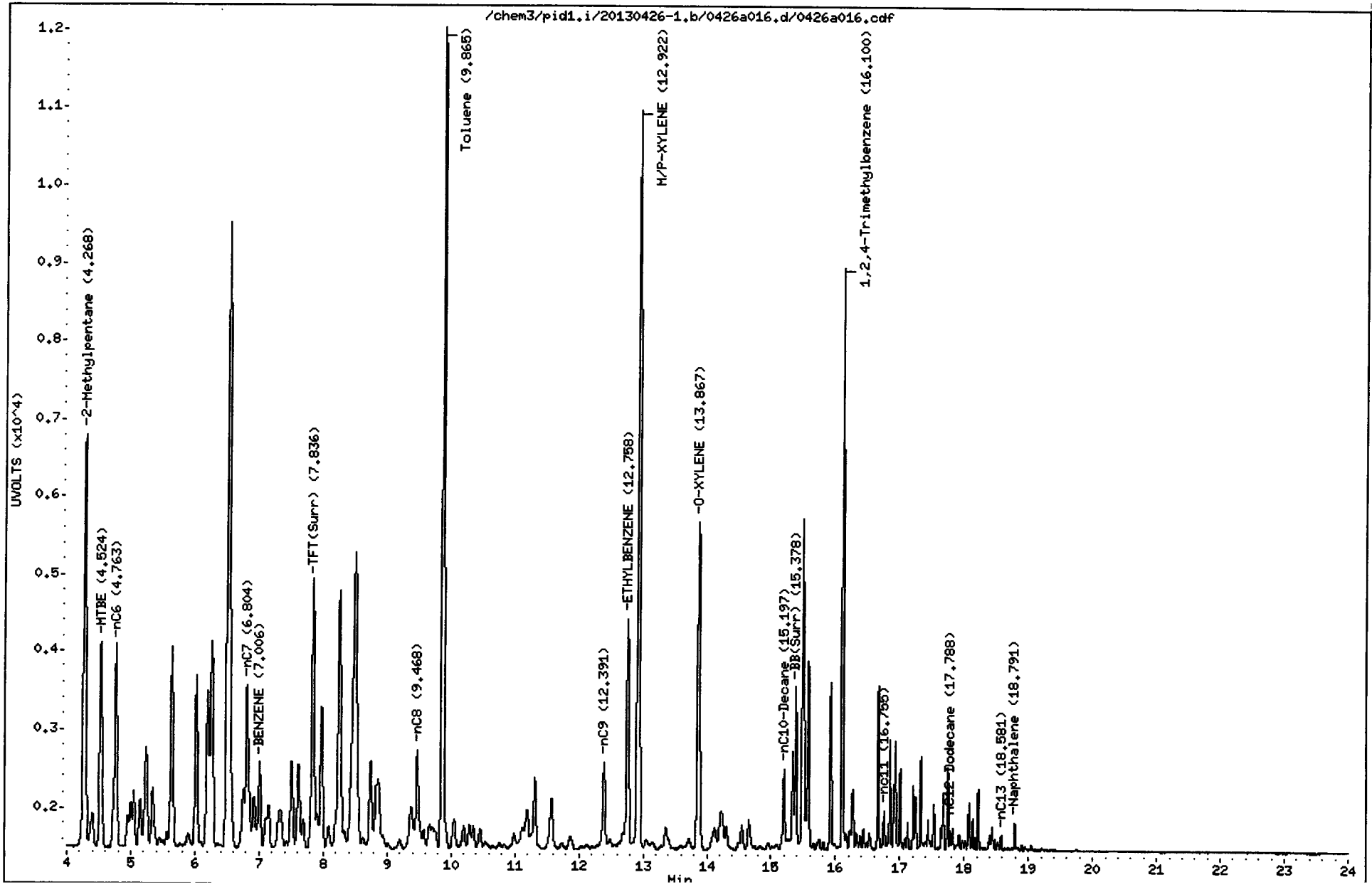
Data File: /chem3/pid1.i/20130426-1.b/0426a016.d
Date : 26-APR-2013 19:34
Client ID:
Sample Info: GCAL 2

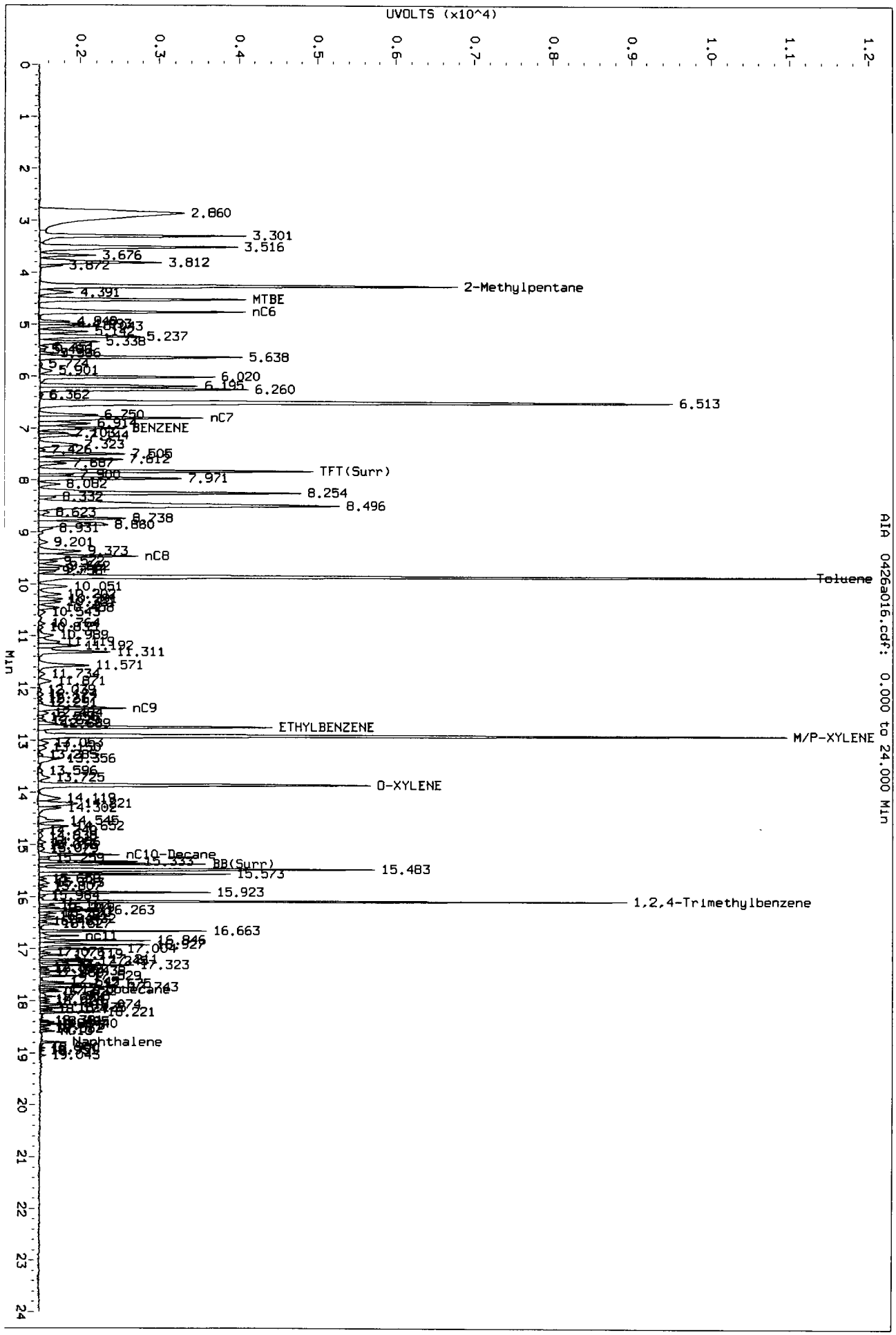
Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID

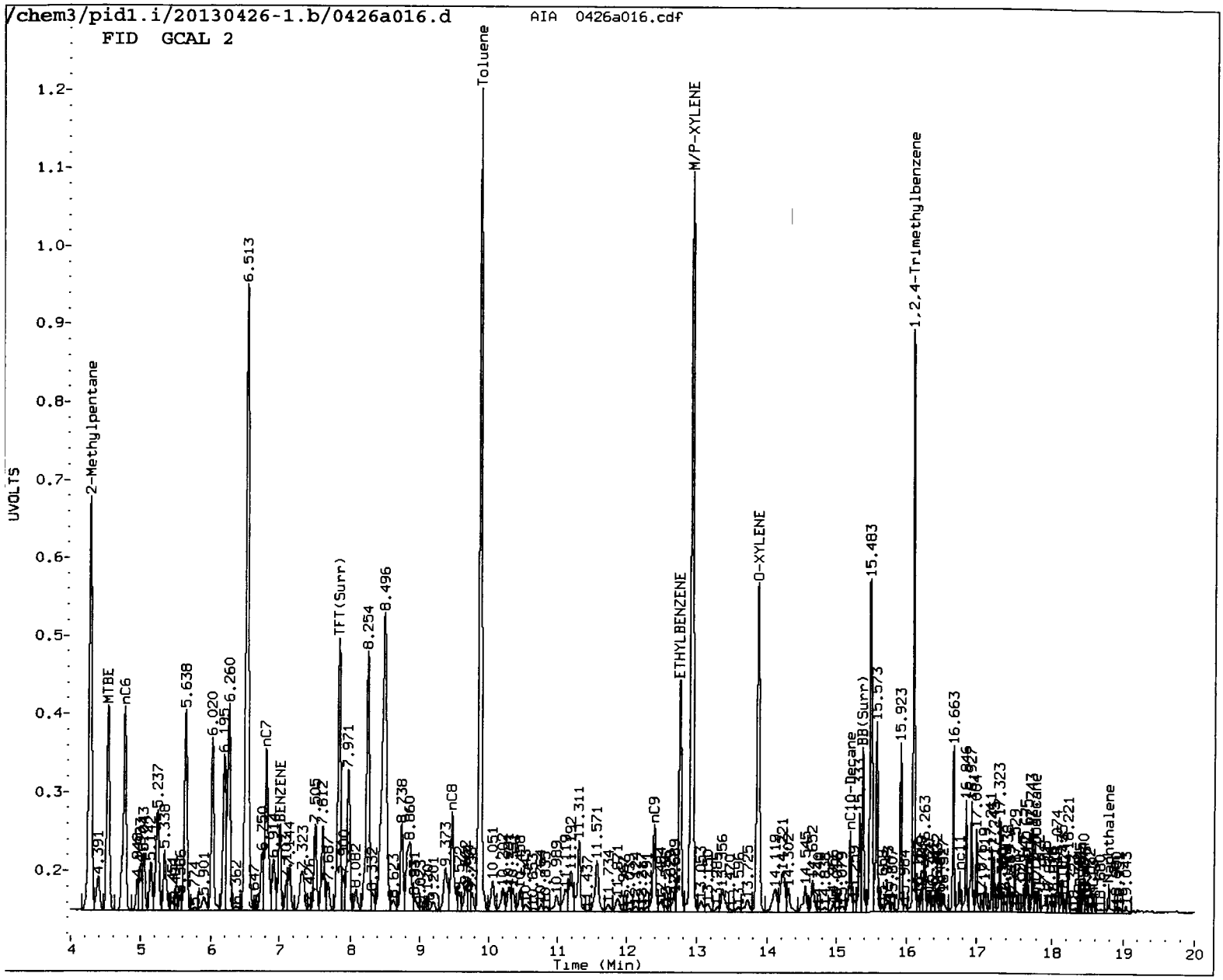
WN-1.02248





Data File: /chem3/pid1.i/20130426-1.b/0426a016.d/0426a016.cdf
Injection Date: 26-APR-2013 19:34
Instrument: pid1.i
Client Sample ID:

PC 5/1/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: JC Date: 5/11/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 4-25-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WN27 ASPK, MBISPK
WN31 ASPK, MBISPK

		Prepcode	SWC		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.	3001-10		
		Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag		50		2.0
	Al		200	200	
	As		200		10
	Ba		200	200	
	Be		50 ↓	50	
	Ca		1000	1000	
	Cd		50		2.0
	Co		50	50	
	Cr		50	50	
	Cu		50 ↓	50	
	Fe		200	200	
	K		1000	1000	
	Mg		1000	1000	
	Mn		50	50	
	Na		1000	1000	
	Ni		50	50	
	Pb		200		10
	Se		200		10
	Sr		50	50	
	Tl		200		10
	V		50	50	
	Zn		50 ↓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	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		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SWM	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.

UNG1 : 802252

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB **Date:** 04-25-13 **Time:** 1115

Matrix: Soil **Block ID:** #5 **Block Temp:** 95°C **Thermometer:** mp60

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Comments
WN31 A	7	-	1.049	50.0	1.038	50.0	
" Adup	7	-	1.046		1.037		
" ASpk	7	-	1.048		1.041		
" mBi	-	-	-		-		
" mBispk	-	-	-		-		
WN27 A	1	-	1.076		1.081		
" Adup	1	-	1.078		1.081		
" Aspk	1	-	1.075		1.080		
" mBi	-	-	-	↓	-	↓	
" mBispk	-	-	-	50.0	-	50.0	

CB
4-25-13

Chemical/Reagent ID: HNO_3: mp2473/I8169 H_2O_2: I8135 Tube lot #: mm01LKK0 HCl: I7971

WN31 : 02253

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm **Matrix:** Soil

Analyst: CB **Date:** 04-25-13

Bath Temp: 90°C **Start Time:** 1140 **End Time:** 1210

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WN31 A	7	–	0.218	50.0	5/08 1	Y	
" Adup	7	–	0.214		1		
" ASpk	7	–	0.216		1		
" MBl	–	–	–		1		
" MBlSpk	–	–	–		1		
WN27 A	1	–	0.217		5/08 1		
" Adup	1	–	0.216		1		
" ASpk	1	–	0.215		1		
" MBl	–	–	–		1		
" MBlSpk	–	–	–	50.0	1	Y	
				CB 4-25-13			

Chemical/Reagent ID:

HNO_3: I8169 **H_2SO_4:** I8044 **HCl:** –

5% $K_2S_2O_8$: MP2462 **5% $KMnO_4$:** MP2445 **Digest Tube Lot:** MH21KK08

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4.26.13

Final Volume 25

Final Volume (Hg):

Sample ID WN31 BSPK, MB25PK, CSPK, MB5PK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	REN	REN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	3021-15	3021-1	
	0.05	0.05	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25		
Be	25 ✓		
Ca			500
Cd	25 ✓		
Co	25		
Cr	25 ✓		
Cu	25 ✓		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25		
Zn	80 ✓		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

WN31 : 02255

Analytical Resources, Incorporated
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Digestion Log

All Corrections By DM 4-26-13

Analyst: DM Date: 4-26-13 Time: 0755

Matrix: Water Block ID: #12 Block Temp: 92°C Thermometer: MP5G

ARI Sample ID	Btl #	pH<2	Prep Code: REN Initial ~~Wt (g)~~ Vol (mL)	Prep Code: REN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
WN31 B	5	✓	50.0	25.0			
" BDUP	5	✓					
" BSPK	5	✓					
" MB2	—	✓					
" MB2SPK	—	✓					
" C	1	—					
" CDUP	1	—					
" CSPK	1	—					- Filtered in Lab
" MB5 MB2	—	—					
" MB5SPK MB2SPK	—	—	50.0	25.0			
				4-26-13	DM		

Chemical/Reagent ID: HNO3: IB1C9 H2O2: IB135 Tube Lot # MMOILKKD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

ALL Corrections By DM 4-26-13

Analyst: DM Date: 4-26-13 Time: 0755

Matrix: Water Block ID: #12 Block Temp: 92°C Thermometer: MP58

ARI Sample ID	Btl #	pH<2	Prep Code: REN Initial ~~Wt (g)~~ Vol (mL)	Prep Code: REN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
WN31 B	5	√	50.0	25.0			
" BDUP	5	√					
" BSPK	5	√					
" MB2	—	√					
" MB2SPK	—	√					
" C	1	—					
" CDUP	1	—					
" CSPK	1	—					- Filtered in Lab
" MB3 MB2	—	—					
" MB3SPK MB2SPK	—	—	50.0	25.0			
				4-26-13	DM		

Chemical/Reagent ID: HNO3: MP2472 IB1C9 MP2452 H2O2: IB135 Tube Lot # MMDILKKO

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Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WN31
Unacceptable Blank:	☐	Date of Event:	4-30-13
Unacceptable Duplicate:	☑	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	REN / SWN

Details of Problem/Recommended Corrective Action:

Sb, Zn high RPD in B, BDup REN

	Sb	Zn
B	0.589 ppb	18.87
BDup	0.817 ppb	23.676
	G.T IRL D.F	22.6% RPD

High RPD for Cd in A, ADup low %R Sb in AsL Post OK

A 0.95 ppb Cd ADup 1.683 ppb Cd

~~low~~ WN5-173

Samples Affected:

Corrective Action Taken:

Send

JK 5/1/13

Analyst Initials: AT **Supervisor:**

Date: 4-30-13 **Date:**

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 4-29-13

ICP 2	Analyst EA 4/29/13	Peer 4-30-13	Comment
Logbooks			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	Serlog ↓
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	WN07, WN80
Data			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysis Notes and CAFs	✓	✓	A.N. - WN07, WN80

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: 4-29-13 Analyst: BA

LR Date: 1-22-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			3028-3
		2			3031-7 Cd,Co stds only
		3			-8
		4			-9
		5			-10
		ICV			3024-9
		ICB			
		CRI			
		ICSA			
		ICSAB			
		HiPUR QC7M			
		SPEX QC21			
		DI Check			
		CCV1			
		CCB1			
		WN26 MB	SWC	2	
		3031-13 Check			New ICV soln
		WN26 ADUP	SWC	2	
		A			
		ASPK			
		B			
		C			
		MBSPK			
		CCV2			

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-29-13 Analyst: BA

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. BA 4-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB2			
		WN19 MB	SWC	2	PT samples
		MB	LEN	5	Ba,Ca↑ (AN)
	✓	F	↓	↓	Cd>LR
		A	SWC	2	
		CCV3			
		CCB3			
		WN07 MB1	TWC		
		MB2	LEN	5	Ba↑ (AN)
		WDUP			
		W			
		WSPK			
		TDUP	TWC		
		T			
		TSPK			
ZZZ		ZZZZZZ ~~TPOST~~			0.08 mL ICP Spk 3001-10
		MB1SPK			
		CCV4			
		CCB4			End WN07
		WN59 MB1	SWC	2	
		ADUP			
		A			
		ASPK			
		B			

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-29-13 Analyst: BA

LR Date: — Page: 3 of 4

All corrections made by analyst unless otherwise noted. BA 4-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WN59 C	SWC	2	
		↓ D	↓	↓	
		WN19 F	LEN	10	PT sample
		WN59 MBISPK	SWC	2	✓
		↓ MBISPD	↓	↓	✓
		CCV5			
		CCB5			End WN59
	✓	WN27 MBI	SWC	2	Wrong Samples (Prep)
	✓	ADUP			✓
	✓	A			
	✓	ASPK			✓ Be, Cu↓ (CAF) Zn STL
zzz	✓	zzzzzz APOST			0.08 mL ICP Spk 3001-10 Be, Cu OK Zn STL
	✓	↓ MBISPK	↓	↓	✓ Be, Cu↓ Zn↑(Co?)
		CCV6			
		CCB6			
		WN31 MBI	SWC	2	
		ADUP			✓
		A			
		ASPK			✓ Zn STL
zzz		zzzzzz APOST			0.08 mL ICP Spk 3001-10
		↓ MBISPK	↓	↓	✓
		CCV7			
		CCB7			End WN31
—	—	WN80 MB	LEN	5	BoA (A.N.) BA 4/29/13

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

4/29/2013 8:18:24 AM Hg ReAlign... Actual peak offset (nm): 0.004
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 4/29/2013 8:19:25 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/29/2013 7:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130429
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC012213.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: 4/29/2013 8:19:32 AM
Data Type: Original

Dilution: 1.000000X

BA

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

4/29/13

Analysis Begun

Start Time: 4/29/2013 8:44:09 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/29/2013 7:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130429
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: 4/29/2013 8:44:11 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	Conc.	Calib Units
ScA 357.253	2602965.2	7962.71	0.31%	100.0	%
ScR 361.383	373716.4	2875.32	0.77%	100.0	%
Ag 328.068†	-20.6	19.93	96.88%	[0.00]	mg/L
Al 308.215†	123.9	4.07	3.29%	[0.00]	mg/L
As 188.979†	-2.3	3.06	134.99%	[0.00]	mg/L
B 249.677†	-52.6	4.09	7.77%	[0.00]	mg/L
Ba 233.527†	-24.1	1.24	5.15%	[0.00]	mg/L
Be 313.042†	591.3	14.32	2.42%	[0.00]	mg/L
Ca 317.933†	16.5	13.46	81.75%	[0.00]	mg/L
Cd 228.802†	216.8	1.67	0.77%	[0.00]	mg/L
Co 228.616†	-110.9	1.87	1.69%	[0.00]	mg/L
Cr 267.716†	-71.2	4.67	6.55%	[0.00]	mg/L
Cu 324.752†	2363.2	22.67	0.96%	[0.00]	mg/L
Fe 273.955†	-39.6	0.77	1.95%	[0.00]	mg/L
K 766.490†	194.6	8.46	4.35%	[0.00]	mg/L
Mg 279.077†	167.0	7.80	4.67%	[0.00]	mg/L
Mn 257.610†	0.1	1.56	>999.9%	[0.00]	mg/L
Mo 202.031†	68.5	2.31	3.37%	[0.00]	mg/L
Na 589.592†	-239.2	19.08	7.97%	[0.00]	mg/L
Na 330.237†	74.5	5.98	8.03%	[0.00]	mg/L
Ni 231.604†	27.1	8.78	32.45%	[0.00]	mg/L
Pb 220.353†	-23.6	7.59	32.15%	[0.00]	mg/L
Sb 206.836†	6.1	2.55	41.64%	[0.00]	mg/L
Se 196.026†	-67.1	2.07	3.08%	[0.00]	mg/L
Si 288.158†	45.0	4.20	9.32%	[0.00]	mg/L
Sn 189.927†	-20.7	2.37	11.42%	[0.00]	mg/L
Sr 421.552†	344.2	34.68	10.07%	[0.00]	mg/L
Ti 334.903†	31.7	9.54	30.10%	[0.00]	mg/L
Tl 190.801†	-20.0	1.66	8.31%	[0.00]	mg/L
V 292.402†	14.7	11.26	76.56%	[0.00]	mg/L
Zn 206.200†	-5.4	1.97	36.22%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 4/29/2013 8:48:27 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected				Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2613334.8	71684.83	2.74%	100.4	%
ScR 361.383	374726.7	2296.23	0.61%	100.3	%
Ba 233.527†	55433.6	181.12	0.33%	[10]	mg/L
Cd 228.802†	227194.4	7435.88	3.27%	[10]	mg/L
Co 228.616†	306416.8	10199.02	3.33%	[10]	mg/L
Cr 267.716†	82189.8	416.20	0.51%	[10]	mg/L
Cu 324.752†	2533973.6	74841.43	2.95%	[10]	mg/L
Mn 257.610†	508256.4	2497.79	0.49%	[10]	mg/L
V 292.402†	1372482.6	37657.19	2.74%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3
Autosampler Location: 3
Date Collected: 4/29/2013 8:50:29 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	2608634.3	14642.08	0.56%	100.2	%
ScR 361.383	373204.3	2352.49	0.63%	99.86	%
Ag 328.068†	218938.3	1244.56	0.57%	[1.0]	mg/L
As 188.979†	13600.5	123.92	0.91%	[10]	mg/L
B 249.677†	60040.8	105.66	0.18%	[10]	mg/L
Be 313.042†	2848211.5	32539.06	1.14%	[5.0]	mg/L
Na 589.592†	568057.9	1514.36	0.27%	[50]	mg/L
Ni 231.604†	33680.4	112.61	0.33%	[10]	mg/L
Pb 220.353†	77922.1	766.43	0.98%	[10]	mg/L
Se 196.026†	15220.1	144.62	0.95%	[10]	mg/L
Sr 421.552†	4518615.9	14279.27	0.32%	[5]	mg/L
Tl 190.801†	17032.2	166.15	0.98%	[10]	mg/L
Zn 206.200†	39668.5	134.32	0.34%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4
Autosampler Location: 4
Date Collected: 4/29/2013 8:53:04 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2658902.9	10848.02	0.41%	102.1	%
ScR 361.383	382268.5	1483.20	0.39%	102.3	%
Mo 202.031†	183010.1	1106.98	0.60%	[10]	mg/L
Sb 206.836†	26004.9	124.79	0.48%	[10]	mg/L
Si 288.158†	13650.5	34.97	0.26%	[10]	mg/L
Sn 189.927†	49463.1	209.09	0.42%	[10]	mg/L
Ti 334.903†	254955.7	1070.44	0.42%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5
Autosampler Location: 5
Date Collected: 4/29/2013 8:55:20 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2485712.0	36658.27	1.47%	95.50	%
ScR 361.383	369863.2	793.37	0.21%	98.97	%
Al 308.215†	34082.4	364.92	1.07%	[30]	mg/L
Ca 317.933†	299355.6	297.39	0.10%	[30]	mg/L
Fe 273.955†	120147.1	225.37	0.19%	[100]	mg/L
K 766.490†	204261.9	307.68	0.15%	[100]	mg/L
Mg 279.077†	27737.0	337.75	1.22%	[30]	mg/L
Na 330.237†	3160.7	48.03	1.52%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	218900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1136	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1360	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6004	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	5543	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	569600	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	9979	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22720	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	30640	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8219	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	253400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1201	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2043	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	924.6	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	50830	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18300	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	11360	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	31.61	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3368	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7792	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2600	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1522	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1365	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4946	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	903700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	25500	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1703	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	137200	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3967	0.00000	1.000000	

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Analysis Begun

Start Time: 4/29/2013 9:05:33 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/29/2013 7:08:06 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130429
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 4/29/2013 9:05:35 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	2590179.4	99.51	%	0.432				0.43%
ScR 361.383	367811.6	98.42	%	1.329				1.35%
Ag 328.068†	232045.0	1.060	mg/L	0.0062	1.060	mg/L	0.0062	0.59%
Al 308.215†	2368.1	2.050	mg/L	0.0376	2.050	mg/L	0.0376	1.83%
As 188.979†	2714.6	2.027	mg/L	0.0164	2.027	mg/L	0.0164	0.81%
B 249.677†	6170.1	1.027	mg/L	0.0129	1.027	mg/L	0.0129	1.25%
Ba 233.527†	5801.5	1.046	mg/L	0.0163	1.046	mg/L	0.0163	1.56%
Be 313.042†	573708.9	1.007	mg/L	0.0166	1.007	mg/L	0.0166	1.65%
Ca 317.933†	20354.8	2.040	mg/L	0.0297	2.040	mg/L	0.0297	1.46%
Cd 228.802†	23876.1	1.040	mg/L	0.0032	1.040	mg/L	0.0032	0.30%
Co 228.616†	31181.6	1.016	mg/L	0.0035	1.016	mg/L	0.0035	0.35%
Cr 267.716†	8602.2	1.046	mg/L	0.0152	1.046	mg/L	0.0152	1.45%
Cu 324.752†	262827.0	1.037	mg/L	0.0031	1.037	mg/L	0.0031	0.30%
Fe 273.955†	2471.0	2.051	mg/L	0.0283	2.051	mg/L	0.0283	1.38%
K 766.490†	40541.6	19.85	mg/L	0.221	19.85	mg/L	0.221	1.11%
Mg 279.077†	1830.0	1.986	mg/L	0.0300	1.986	mg/L	0.0300	1.51%
Mn 257.610†	49986.7	0.9838	mg/L	0.01536	0.9838	mg/L	0.01536	1.56%
Mo 202.031†	18490.4	1.010	mg/L	0.0047	1.010	mg/L	0.0047	0.46%
Na 589.592†	578125.3	50.89	mg/L	0.721	50.89	mg/L	0.721	1.42%
Na 330.237†	1628.5	51.51	mg/L	0.568	51.51	mg/L	0.568	1.10%
Ni 231.604†	3463.2	1.028	mg/L	0.0159	1.028	mg/L	0.0159	1.55%
Pb 220.353†	15692.2	2.015	mg/L	0.0093	2.015	mg/L	0.0093	0.46%
Sb 206.836†	5419.7	2.082	mg/L	0.0048	2.082	mg/L	0.0048	0.23%
Se 196.026†	3051.4	2.004	mg/L	0.0161	2.004	mg/L	0.0161	0.81%
Si 288.158†	2782.4	2.033	mg/L	0.0227	2.033	mg/L	0.0227	1.12%
Sn 189.927†	4902.0	0.9925	mg/L	0.00669	0.9925	mg/L	0.00669	0.67%
Sr 421.552†	919250.6	1.017	mg/L	0.0142	1.017	mg/L	0.0142	1.40%
Ti 334.903†	26130.6	1.024	mg/L	0.0131	1.024	mg/L	0.0131	1.28%
Tl 190.801†	3562.9	2.084	mg/L	0.0108	2.084	mg/L	0.0108	0.52%
V 292.402†	137597.1	1.007	mg/L	0.0044	1.007	mg/L	0.0044	0.43%
Zn 206.200†	4018.2	1.013	mg/L	0.0171	1.013	mg/L	0.0171	1.68%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 4/29/2013 9:09:38 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.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2670526.8	102.6	%	0.19				0.19%
ScR 361.383	375077.4	100.4	%	0.65				0.64%
Ag 328.068†	51.0	0.00023	mg/L	0.000118	0.00023	mg/L	0.000118	50.77%
Al 308.215†	4.7	0.00413	mg/L	0.003924	0.00413	mg/L	0.003924	94.94%
As 188.979†	3.4	0.00256	mg/L	0.000159	0.00256	mg/L	0.000159	6.24%
B 249.677†	5.3	0.00088	mg/L	0.000657	0.00088	mg/L	0.000657	74.57%
Ba 233.527†	0.2	0.00004	mg/L	0.000541	0.00004	mg/L	0.000541	>999.9%
Be 313.042†	38.2	0.00007	mg/L	0.000005	0.00007	mg/L	0.000005	7.75%
Ca 317.933†	-0.4	-0.00004	mg/L	0.000266	-0.00004	mg/L	0.000266	678.17%
Cd 228.802†	3.3	0.00013	mg/L	0.000104	0.00013	mg/L	0.000104	80.05%
Co 228.616†	6.9	0.00023	mg/L	0.000082	0.00023	mg/L	0.000082	36.17%
Cr 267.716†	-6.1	-0.00074	mg/L	0.000360	-0.00074	mg/L	0.000360	48.96%
Cu 324.752†	60.9	0.00024	mg/L	0.000136	0.00024	mg/L	0.000136	56.46%
Fe 273.955†	-1.4	-0.00113	mg/L	0.001027	-0.00113	mg/L	0.001027	91.14%
K 766.490†	21.1	0.01034	mg/L	0.009263	0.01034	mg/L	0.009263	89.62%
Mg 279.077†	-8.1	-0.00880	mg/L	0.003412	-0.00880	mg/L	0.003412	38.76%
Mn 257.610†	8.9	0.00018	mg/L	0.000091	0.00018	mg/L	0.000091	52.04%
Mo 202.031†	12.5	0.00068	mg/L	0.000172	0.00068	mg/L	0.000172	25.29%
Na 589.592†	24.5	0.00216	mg/L	0.001045	0.00216	mg/L	0.001045	48.49%
Na 330.237†	-5.7	-0.1817	mg/L	0.44773	-0.1817	mg/L	0.44773	246.42%
Ni 231.604†	1.8	0.00052	mg/L	0.000302	0.00052	mg/L	0.000302	57.63%
Pb 220.353†	1.3	0.00016	mg/L	0.000603	0.00016	mg/L	0.000603	376.80%
Sb 206.836†	7.3	0.00281	mg/L	0.001153	0.00281	mg/L	0.001153	41.02%
Se 196.026†	5.8	0.00379	mg/L	0.002778	0.00379	mg/L	0.002778	73.37%
Si 288.158†	0.3	0.00019	mg/L	0.000518	0.00019	mg/L	0.000518	265.96%
Sn 189.927†	5.8	0.00118	mg/L	0.000505	0.00118	mg/L	0.000505	42.85%
Sr 421.552†	31.0	0.00003	mg/L	0.000026	0.00003	mg/L	0.000026	75.34%
Ti 334.903†	14.5	0.00057	mg/L	0.000383	0.00057	mg/L	0.000383	67.26%
Tl 190.801†	0.1	0.00008	mg/L	0.000802	0.00008	mg/L	0.000802	>999.9%
V 292.402†	15.7	0.00011	mg/L	0.000243	0.00011	mg/L	0.000243	218.90%
Zn 206.200†	-0.5	-0.00013	mg/L	0.000224	-0.00013	mg/L	0.000224	170.40%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/29/2013 9:13:53 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2710660.5	104.1	%	0.38				0.36%
ScR 361.383	381011.3	102.0	%	1.42				1.39%
Ag 328.068†	697.0	0.00318	mg/L	0.000103	0.00318	mg/L	0.000103	3.23%
Al 308.215†	63.2	0.05553	mg/L	0.001996	0.05553	mg/L	0.001996	3.60%
As 188.979†	66.9	0.04937	mg/L	0.001420	0.04937	mg/L	0.001420	2.88%
B 249.677†	114.4	0.01904	mg/L	0.000898	0.01904	mg/L	0.000898	4.71%
Ba 233.527†	18.5	0.00333	mg/L	0.000338	0.00333	mg/L	0.000338	10.15%
Be 313.042†	531.6	0.00093	mg/L	0.000035	0.00093	mg/L	0.000035	3.71%
Ca 317.933†	493.8	0.04948	mg/L	0.000448	0.04948	mg/L	0.000448	0.91%
Cd 228.802†	52.3	0.00203	mg/L	0.000110	0.00203	mg/L	0.000110	5.39%
Co 228.616†	102.1	0.00332	mg/L	0.000070	0.00332	mg/L	0.000070	2.11%
Cr 267.716†	38.0	0.00462	mg/L	0.000408	0.00462	mg/L	0.000408	8.84%
Cu 324.752†	446.4	0.00176	mg/L	0.000032	0.00176	mg/L	0.000032	1.79%
Fe 273.955†	59.4	0.04946	mg/L	0.002051	0.04946	mg/L	0.002051	4.15%
K 766.490†	974.0	0.4768	mg/L	0.02566	0.4768	mg/L	0.02566	5.38%
Mg 279.077†	39.7	0.04297	mg/L	0.000876	0.04297	mg/L	0.000876	2.04%
Mn 257.610†	53.8	0.00106	mg/L	0.000040	0.00106	mg/L	0.000040	3.73%
Mo 202.031†	91.0	0.00497	mg/L	0.000198	0.00497	mg/L	0.000198	3.98%
Na 589.592†	5344.1	0.4704	mg/L	0.00547	0.4704	mg/L	0.00547	1.16%
Na 330.237†	3.6	0.1134	mg/L	0.41333	0.1134	mg/L	0.41333	364.61%
Ni 231.604†	39.0	0.01158	mg/L	0.000489	0.01158	mg/L	0.000489	4.23%
Pb 220.353†	161.0	0.02068	mg/L	0.000361	0.02068	mg/L	0.000361	1.75%
Sb 206.836†	129.7	0.04989	mg/L	0.000734	0.04989	mg/L	0.000734	1.47%
Se 196.026†	78.3	0.05145	mg/L	0.000865	0.05145	mg/L	0.000865	1.68%
Si 288.158†	77.1	0.05644	mg/L	0.006059	0.05644	mg/L	0.006059	10.73%
Sn 189.927†	51.1	0.01037	mg/L	0.000047	0.01037	mg/L	0.000047	0.46%
Sr 421.552†	885.2	0.00098	mg/L	0.000046	0.00098	mg/L	0.000046	4.65%
Ti 334.903†	133.4	0.00522	mg/L	0.000194	0.00522	mg/L	0.000194	3.71%
Tl 190.801†	81.6	0.04787	mg/L	0.000804	0.04787	mg/L	0.000804	1.68%
V 292.402†	412.7	0.00302	mg/L	0.000066	0.00302	mg/L	0.000066	2.18%
Zn 206.200†	36.5	0.00920	mg/L	0.000522	0.00920	mg/L	0.000522	5.67%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/29/2013 9:18:10 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2623705.6	100.8	%	0.76				0.75%
ScR 361.383	371621.2	99.44	%	0.940				0.95%
Ag 328.068†	-308.2	-0.00077	mg/L	0.000154	-0.00077	mg/L	0.000154	20.02%
Al 308.215†	223861.1	197.0	mg/L	1.50	197.0	mg/L	1.50	0.76%
As 188.979†	61.4	0.03657	mg/L	0.000878	0.03657	mg/L	0.000878	2.40%
B 249.677†	81.2	0.01353	mg/L	0.001432	0.01353	mg/L	0.001432	10.58%
Ba 233.527†	138.7	-0.00178	mg/L	0.001149	-0.00178	mg/L	0.001149	64.56%
Be 313.042†	29.6	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	40.72%
Ca 317.933†	982148.9	98.43	mg/L	0.740	98.43	mg/L	0.740	0.75%
Cd 228.802†	66.9	0.00269	mg/L	0.000199	0.00269	mg/L	0.000199	7.38%
Co 228.616†	67.0	0.00216	mg/L	0.000192	0.00216	mg/L	0.000192	8.85%
Cr 267.716†	25.0	-0.00212	mg/L	0.000265	-0.00212	mg/L	0.000265	12.51%
Cu 324.752†	-1809.6	0.00128	mg/L	0.000139	0.00128	mg/L	0.000139	10.84%
Fe 273.955†	219191.2	182.4	mg/L	2.13	182.4	mg/L	2.13	1.17%
K 766.490†	40.7	0.01993	mg/L	0.007532	0.01993	mg/L	0.007532	37.80%
Mg 279.077†	94286.7	101.9	mg/L	0.48	101.9	mg/L	0.48	0.48%
Mn 257.610†	76.7	0.00014	mg/L	0.000176	0.00014	mg/L	0.000176	127.24%
Mo 202.031†	112.8	0.00501	mg/L	0.000107	0.00501	mg/L	0.000107	2.14%
Na 589.592†	116.1	0.01022	mg/L	0.004129	0.01022	mg/L	0.004129	40.42%
Na 330.237†	-20.1	-0.6310	mg/L	0.08009	-0.6310	mg/L	0.08009	12.69%
Ni 231.604†	1.6	0.00047	mg/L	0.000530	0.00047	mg/L	0.000530	112.64%
Pb 220.353†	-410.2	-0.00907	mg/L	0.001258	-0.00907	mg/L	0.001258	13.88%
Sb 206.836†	-42.6	-0.01648	mg/L	0.001445	-0.01648	mg/L	0.001445	8.77%
Se 196.026†	9.5	-0.01641	mg/L	0.001173	-0.01641	mg/L	0.001173	7.15%
Si 288.158†	-16.1	-0.00022	mg/L	0.003760	-0.00022	mg/L	0.003760	>999.9%
Sn 189.927†	-76.2	-0.00716	mg/L	0.001118	-0.00716	mg/L	0.001118	15.61%
Sr 421.552†	3641.4	0.00403	mg/L Cont.	0.000052	0.00403	mg/L	0.000052	1.30%
Ti 334.903†	294.3	0.00569	mg/L	0.000193	0.00569	mg/L	0.000193	3.40%
Tl 190.801†	-15.6	0.01498	mg/L	0.001101	0.01498	mg/L	0.001101	7.35%
V 292.402†	1544.5	0.00211	mg/L	0.000560	0.00211	mg/L	0.000560	26.58%
Zn 206.200†	-3.1	-0.00079	mg/L	0.000882	-0.00079	mg/L	0.000882	111.83%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/29/2013 9:22:27 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	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2618258.1	100.6	%	0.71				0.71%
ScR 361.383	374618.2	100.2	%	0.51				0.51%
Ag 328.068†	232075.2	1.061	mg/L	0.0066	1.061	mg/L	0.0066	0.62%
Al 308.215†	222871.5	196.2	mg/L	0.95	196.2	mg/L	0.95	0.48%
As 188.979†	1414.6	1.031	mg/L	0.0105	1.031	mg/L	0.0105	1.02%
B 249.677†	41.3	0.00466	mg/L	0.001249	0.00466	mg/L	0.001249	26.82%
Ba 233.527†	5829.7	1.025	mg/L	0.0156	1.025	mg/L	0.0156	1.53%
Be 313.042†	555564.8	0.9751	mg/L	0.00811	0.9751	mg/L	0.00811	0.83%
Ca 317.933†	980319.2	98.24	mg/L	0.479	98.24	mg/L	0.479	0.49%
Cd 228.802†	23373.0	1.024	mg/L	0.0084	1.024	mg/L	0.0084	0.82%
Co 228.616†	29196.5	0.9526	mg/L	0.00901	0.9526	mg/L	0.00901	0.95%
Cr 267.716†	8366.5	1.013	mg/L	0.0064	1.013	mg/L	0.0064	0.63%
Cu 324.752†	254931.0	1.015	mg/L	0.0056	1.015	mg/L	0.0056	0.55%
Fe 273.955†	219191.4	182.4	mg/L	1.21	182.4	mg/L	1.21	0.66%
K 766.490†	18.2	0.00891	mg/L	0.000738	0.00891	mg/L	0.000738	8.29%
Mg 279.077†	90374.0	97.64	mg/L	0.409	97.64	mg/L	0.409	0.42%
Mn 257.610†	47759.3	0.9385	mg/L	0.00455	0.9385	mg/L	0.00455	0.48%
Mo 202.031†	121.9	0.00545	mg/L	0.000407	0.00545	mg/L	0.000407	7.48%
Na 589.592†	83.0	0.00731	mg/L	0.001146	0.00731	mg/L	0.001146	15.68%
Na 330.237†	-14.5	-0.7411	mg/L	0.13286	-0.7411	mg/L	0.13286	17.93%
Ni 231.604†	3293.5	0.9779	mg/L	0.00956	0.9779	mg/L	0.00956	0.98%
Pb 220.353†	7037.9	0.9471	mg/L	0.00750	0.9471	mg/L	0.00750	0.79%
Sb 206.836†	2555.1	0.9722	mg/L	0.00958	0.9722	mg/L	0.00958	0.99%
Se 196.026†	1498.6	0.9611	mg/L	0.01136	0.9611	mg/L	0.01136	1.18%
Si 288.158†	-19.5	0.00022	mg/L	0.002679	0.00022	mg/L	0.002679	>999.9%
Sn 189.927†	-84.1	-0.00827	mg/L	0.000867	-0.00827	mg/L	0.000867	10.48%
Sr 421.552†	3589.2	0.00397	mg/L	Conf. 0.000014	0.00397	mg/L	0.000014	0.35%
Ti 334.903†	289.6	0.00532	mg/L	0.000336	0.00532	mg/L	0.000336	6.32%
Tl 190.801†	1617.7	0.9644	mg/L	0.00662	0.9644	mg/L	0.00662	0.69%
V 292.402†	133052.8	0.9648	mg/L	0.00572	0.9648	mg/L	0.00572	0.59%
Zn 206.200†	3808.2	0.9602	mg/L	0.00856	0.9602	mg/L	0.00856	0.89%

Sequence No.: 6
Sample ID: HiPurQC7M

Autosampler Location: 304
Date Collected: 4/29/2013 9:27:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: HiPurQC7M

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: HiPurQC7M

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2764277.2	106.2	%	0.15				0.14%
ScR 361.383	386264.1	103.4	%	0.69				0.66%
Ag 328.068†	216193.0	0.9875	mg/L	0.00144	0.9875	mg/L	0.00144	0.15%
Al 308.215†	2184.4	1.923	mg/L	0.0295	1.923	mg/L	0.0295	1.53%
As 188.979†	1.0	0.00073	mg/L	0.002456	0.00073	mg/L	0.002456	335.23%
B 249.677†	11864.4	1.976	mg/L	0.0149	1.976	mg/L	0.0149	0.75%
Ba 233.527†	11406.3	2.058	mg/L	0.0420	2.058	mg/L	0.0420	2.04%
Be 313.042†	-35.4	-0.00006	mg/L	0.000021	-0.00006	mg/L	0.000021	34.09%
Ca 317.933†	58.9	0.00590	mg/L	0.000734	0.00590	mg/L	0.000734	12.44%
Cd 228.802†	4.0	0.00017	mg/L	0.000142	0.00017	mg/L	0.000142	81.21%
Co 228.616†	13.1	0.00019	mg/L	0.000216	0.00019	mg/L	0.000216	111.20%
Cr 267.716†	-0.2	-0.00002	mg/L	0.000431	-0.00002	mg/L	0.000431	>999.9%
Cu 324.752†	79.6	0.00031	mg/L	0.000061	0.00031	mg/L	0.000061	19.39%
Fe 273.955†	5.6	0.00464	mg/L	0.001479	0.00464	mg/L	0.001479	31.89%
K 766.490†	39006.9	19.10	mg/L	0.186	19.10	mg/L	0.186	0.97%
Mg 279.077†	-1.9	-0.00203	mg/L	0.003223	-0.00203	mg/L	0.003223	159.09%
Mn 257.610†	1.3	0.00002	mg/L	0.000024	0.00002	mg/L	0.000024	143.64%
Mo 202.031†	4.1	0.00022	mg/L	0.000117	0.00022	mg/L	0.000117	52.57%
Na 589.592†	22225.8	1.956	mg/L	0.0128	1.956	mg/L	0.0128	0.65%
Na 330.237†	48.0	1.518	mg/L	0.1595	1.518	mg/L	0.1595	10.51%
Ni 231.604†	2.8	0.00083	mg/L	0.000220	0.00083	mg/L	0.000220	26.62%
Pb 220.353†	-1.5	0.00032	mg/L	0.000478	0.00032	mg/L	0.000478	148.42%
Sb 206.836†	-1.3	-0.00049	mg/L	0.001104	-0.00049	mg/L	0.001104	226.69%
Se 196.026†	9.8	0.00623	mg/L	0.004265	0.00623	mg/L	0.004265	68.51%
Si 288.158†	2678.6	1.962	mg/L	0.0150	1.962	mg/L	0.0150	0.77%
Sn 189.927†	-0.4	-0.00008	mg/L	0.000485	-0.00008	mg/L	0.000485	627.16%
Sr 421.552†	-29.9	-0.00003	mg/L	0.000011	-0.00003	mg/L	0.000011	33.27%
Ti 334.903†	-2.6	-0.00010	mg/L	0.000456	-0.00010	mg/L	0.000456	443.32%
Tl 190.801†	-2.0	-0.00118	mg/L	0.000799	-0.00118	mg/L	0.000799	67.87%
V 292.402†	2.3	0.00002	mg/L	0.000074	0.00002	mg/L	0.000074	437.67%
Zn 206.200†	1.8	0.00078	mg/L	0.000121	0.00078	mg/L	0.000121	15.58%

Sequence No.: 7
Sample ID: SPEXQC21

Autosampler Location: 305
Date Collected: 4/29/2013 9:32:07 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: SPEXQC21

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: SPEXQC21

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2753200.5	105.8	%	0.18				0.17%
ScR 361.383	380550.0	101.8	%	0.50				0.49%
Ag 328.068†	-44.6	0.00044	mg/L	0.000097	0.00044	mg/L	0.000097	22.13%
Al 308.215†	87.2	0.01062	mg/L	0.002942	0.01062	mg/L	0.002942	27.70%
As 188.979†	2597.6	1.972	mg/L	0.0089	1.972	mg/L	0.0089	0.45%
B 249.677†	68.5	0.00922	mg/L	0.000358	0.00922	mg/L	0.000358	3.88%
Ba 233.527†	2.8	-0.00010	mg/L	0.000362	-0.00010	mg/L	0.000362	345.45%
Be 313.042†	1081975.9	1.899	mg/L	0.0135	1.899	mg/L	0.0135	0.71%
Ca 317.933†	19542.7	1.958	mg/L	0.0158	1.958	mg/L	0.0158	0.81%
Cd 228.802†	44953.1	1.969	mg/L	0.0091	1.969	mg/L	0.0091	0.46%
Co 228.616†	60178.1	1.960	mg/L	0.0112	1.960	mg/L	0.0112	0.57%
Cr 267.716†	16433.2	1.998	mg/L	0.0180	1.998	mg/L	0.0180	0.90%
Cu 324.752†	474197.5	1.871	mg/L	0.0047	1.871	mg/L	0.0047	0.25%
Fe 273.955†	2445.9	2.025	mg/L	0.0162	2.025	mg/L	0.0162	0.80%
K 766.490†	-0.2	-0.00008	mg/L	0.015922	-0.00008	mg/L	0.015922	>999.9%
Mg 279.077†	1863.6	2.029	mg/L	0.0173	2.029	mg/L	0.0173	0.85%
Mn 257.610†	99420.0	1.956	mg/L	0.0128	1.956	mg/L	0.0128	0.65%
Mo 202.031†	34789.8	1.901	mg/L	0.0110	1.901	mg/L	0.0110	0.58%
Na 589.592†	262.1	0.02307	mg/L	0.004239	0.02307	mg/L	0.004239	18.37%
Na 330.237†	-8.7	-0.3270	mg/L	0.13861	-0.3270	mg/L	0.13861	42.39%
Ni 231.604†	6962.3	2.067	mg/L	0.0228	2.067	mg/L	0.0228	1.10%
Pb 220.353†	15091.8	1.938	mg/L	0.0138	1.938	mg/L	0.0138	0.71%
Sb 206.836†	5340.9	2.035	mg/L	0.0054	2.035	mg/L	0.0054	0.27%
Se 196.026†	2977.3	1.954	mg/L	0.0027	1.954	mg/L	0.0027	0.14%
Si 288.158†	54.6	0.04673	mg/L	0.007630	0.04673	mg/L	0.007630	16.33%
Sn 189.927†	-12.6	-0.00096	mg/L	0.000271	-0.00096	mg/L	0.000271	28.17%
Sr 421.552†	1811121.8	2.004	mg/L	0.0116	2.004	mg/L	0.0116	0.58%
Ti 334.903†	51202.8	2.006	mg/L	0.0151	2.006	mg/L	0.0151	0.76%
Tl 190.801†	3500.2	2.039	mg/L	0.0086	2.039	mg/L	0.0086	0.42%
V 292.402†	268695.9	1.967	mg/L	0.0148	1.967	mg/L	0.0148	0.75%
Zn 206.200†	8144.7	2.053	mg/L	0.0156	2.053	mg/L	0.0156	0.76%

Sequence No.: 8
Sample ID: DI CHECK

Autosampler Location: 306
Date Collected: 4/29/2013 9:36:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2816122.5	108.2	%	0.56				0.52%
ScR 361.383	400492.7	107.2	%	0.38				0.36%
Ag 328.068†	49.9	0.00023	mg/L	0.000187	0.00023	mg/L	0.000187	82.17%
Al 308.215†	0.4	0.00032	mg/L	0.010768	0.00032	mg/L	0.010768	>999.9%
As 188.979†	2.6	0.00190	mg/L	0.002410	0.00190	mg/L	0.002410	126.57%
B 249.677†	6.4	0.00106	mg/L	0.000651	0.00106	mg/L	0.000651	61.63%
Ba 233.527†	-0.6	-0.00011	mg/L	0.000087	-0.00011	mg/L	0.000087	81.44%
Be 313.042†	11.6	0.00002	mg/L	0.000009	0.00002	mg/L	0.000009	44.51%
Ca 317.933†	20.0	0.00200	mg/L	0.000931	0.00200	mg/L	0.000931	46.45%
Cd 228.802†	2.3	0.00009	mg/L	0.000101	0.00009	mg/L	0.000101	111.24%
Co 228.616†	19.5	0.00064	mg/L	0.000120	0.00064	mg/L	0.000120	18.85%
Cr 267.716†	-2.1	-0.00025	mg/L	0.000561	-0.00025	mg/L	0.000561	223.80%
Cu 324.752†	-89.5	-0.00035	mg/L	0.000081	-0.00035	mg/L	0.000081	23.01%
Fe 273.955†	3.0	0.00246	mg/L	0.000455	0.00246	mg/L	0.000455	18.48%
K 766.490†	24.2	0.01184	mg/L	0.005462	0.01184	mg/L	0.005462	46.12%
Mg 279.077†	-12.3	-0.01327	mg/L	0.003079	-0.01327	mg/L	0.003079	23.20%
Mn 257.610†	3.2	0.00006	mg/L	0.000046	0.00006	mg/L	0.000046	71.59%
Mo 202.031†	6.1	0.00033	mg/L	0.000210	0.00033	mg/L	0.000210	62.73%
Na 589.592†	-118.9	-0.01047	mg/L	0.001770	-0.01047	mg/L	0.001770	16.90%
Na 330.237†	-19.1	-0.6027	mg/L	0.13115	-0.6027	mg/L	0.13115	21.76%
Ni 231.604†	3.2	0.00096	mg/L	0.000690	0.00096	mg/L	0.000690	71.70%
Pb 220.353†	3.3	0.00042	mg/L	0.000245	0.00042	mg/L	0.000245	58.79%
Sb 206.836†	-7.6	-0.00293	mg/L	0.000493	-0.00293	mg/L	0.000493	16.83%
Se 196.026†	12.4	0.00814	mg/L	0.002143	0.00814	mg/L	0.002143	26.32%
Si 288.158†	5.9	0.00433	mg/L	0.010141	0.00433	mg/L	0.010141	234.09%
Sn 189.927†	-0.0	-0.00001	mg/L	0.000423	-0.00001	mg/L	0.000423	>999.9%
Sr 421.552†	28.1	0.00003	mg/L	0.000029	0.00003	mg/L	0.000029	94.91%
Ti 334.903†	2.3	0.00009	mg/L	0.000595	0.00009	mg/L	0.000595	666.09%
Tl 190.801†	2.1	0.00125	mg/L	0.000322	0.00125	mg/L	0.000322	25.73%
V 292.402†	4.6	0.00003	mg/L	0.000066	0.00003	mg/L	0.000066	204.12%
Zn 206.200†	-1.7	-0.00042	mg/L	0.000376	-0.00042	mg/L	0.000376	89.58%

Sequence No.: 9
Sample ID: CV

Autosampler Location: 7
Date Collected: 4/29/2013 9:40:40 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	2671604.4	102.6	%	0.38				0.37%
ScR 361.383	376595.7	100.8	%	1.78				1.77%
Ag 328.068†	225863.6	1.032	mg/L	0.0038	1.032	mg/L	0.0038	0.37%
Al 308.215†	2292.5	1.984	mg/L	0.0392	1.984	mg/L	0.0392	1.98%
As 188.979†	2637.1	1.969	mg/L	0.0077	1.969	mg/L	0.0077	0.39%
B 249.677†	6023.4	1.002	mg/L	0.0170	1.002	mg/L	0.0170	1.69%
Ba 233.527†	5720.9	1.032	mg/L	0.0163	1.032	mg/L	0.0163	1.58%
Be 313.042†	551823.4	0.9685	mg/L	0.01119	0.9685	mg/L	0.01119	1.16%
Ca 317.933†	19952.7	2.000	mg/L	0.0351	2.000	mg/L	0.0351	1.76%
Cd 228.802†	23158.3	1.009	mg/L	0.0021	1.009	mg/L	0.0021	0.21%
Co 228.616†	30482.3	0.9930	mg/L	0.00377	0.9930	mg/L	0.00377	0.38%
Cr 267.716†	8420.7	1.024	mg/L	0.0191	1.024	mg/L	0.0191	1.87%
Cu 324.752†	253976.2	1.002	mg/L	0.0024	1.002	mg/L	0.0024	0.24%
Fe 273.955†	2387.1	1.981	mg/L	0.0414	1.981	mg/L	0.0414	2.09%
K 766.490†	39482.0	19.33	mg/L	0.265	19.33	mg/L	0.265	1.37%
Mg 279.077†	1792.0	1.944	mg/L	0.0354	1.944	mg/L	0.0354	1.82%
Mn 257.610†	47985.7	0.9445	mg/L	0.01730	0.9445	mg/L	0.01730	1.83%
Mo 202.031†	17939.2	0.9802	mg/L	0.00400	0.9802	mg/L	0.00400	0.41%
Na 589.592†	564962.9	49.73	mg/L	0.674	49.73	mg/L	0.674	1.36%
Na 330.237†	1576.1	49.85	mg/L	0.786	49.85	mg/L	0.786	1.58%
Ni 231.604†	3425.2	1.017	mg/L	0.0181	1.017	mg/L	0.0181	1.78%
Pb 220.353†	15260.2	1.959	mg/L	0.0044	1.959	mg/L	0.0044	0.22%
Sb 206.836†	5255.9	2.019	mg/L	0.0084	2.019	mg/L	0.0084	0.42%
Se 196.026†	2959.2	1.943	mg/L	0.0127	1.943	mg/L	0.0127	0.66%
Si 288.158†	2681.5	1.960	mg/L	0.0293	1.960	mg/L	0.0293	1.49%
Sn 189.927†	4727.8	0.9572	mg/L	0.00466	0.9572	mg/L	0.00466	0.49%
Sr 421.552†	890831.7	0.9857	mg/L	0.01391	0.9857	mg/L	0.01391	1.41%
Ti 334.903†	25276.5	0.9901	mg/L	0.01421	0.9901	mg/L	0.01421	1.44%
Tl 190.801†	3492.1	2.042	mg/L	0.0077	2.042	mg/L	0.0077	0.38%
V 292.402†	133401.3	0.9765	mg/L	0.00246	0.9765	mg/L	0.00246	0.25%
Zn 206.200†	3948.1	0.9957	mg/L	0.01715	0.9957	mg/L	0.01715	1.72%

Sequence No.: 10
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/29/2013 9:44:45 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	2690039.5	103.3	%	0.09				0.09%
ScR 361.383	381433.7	102.1	%	0.45				0.44%
Ag 328.068†	64.9	0.00030	mg/L	0.000135	0.00030	mg/L	0.000135	45.40%
Al 308.215†	4.6	0.00401	mg/L	0.002724	0.00401	mg/L	0.002724	67.99%
As 188.979†	3.8	0.00278	mg/L	0.001166	0.00278	mg/L	0.001166	41.97%
B 249.677†	6.3	0.00104	mg/L	0.000413	0.00104	mg/L	0.000413	39.62%
Ba 233.527†	-1.4	-0.00025	mg/L	0.000398	-0.00025	mg/L	0.000398	159.88%
Be 313.042†	18.6	0.00003	mg/L	0.000037	0.00003	mg/L	0.000037	114.85%
Ca 317.933†	5.3	0.00054	mg/L	0.000937	0.00054	mg/L	0.000937	174.89%
Cd 228.802†	4.8	0.00019	mg/L	0.000174	0.00019	mg/L	0.000174	89.15%
Co 228.616†	6.5	0.00021	mg/L	0.000113	0.00021	mg/L	0.000113	53.60%
Cr 267.716†	2.6	0.00032	mg/L	0.000558	0.00032	mg/L	0.000558	176.89%
Cu 324.752†	90.2	0.00036	mg/L	0.000171	0.00036	mg/L	0.000171	47.97%
Fe 273.955†	2.3	0.00194	mg/L	0.001487	0.00194	mg/L	0.001487	76.70%
K 766.490†	-5.8	-0.00283	mg/L	0.010990	-0.00283	mg/L	0.010990	388.26%
Mg 279.077†	-6.2	-0.00674	mg/L	0.002827	-0.00674	mg/L	0.002827	41.94%
Mn 257.610†	7.6	0.00015	mg/L	0.000063	0.00015	mg/L	0.000063	41.72%
Mo 202.031†	15.9	0.00087	mg/L	0.000173	0.00087	mg/L	0.000173	19.97%
Na 589.592†	21.3	0.00187	mg/L	0.002510	0.00187	mg/L	0.002510	134.10%
Na 330.237†	-8.4	-0.2661	mg/L	0.31183	-0.2661	mg/L	0.31183	117.18%
Ni 231.604†	1.5	0.00046	mg/L	0.000123	0.00046	mg/L	0.000123	26.93%
Pb 220.353†	7.2	0.00092	mg/L	0.000667	0.00092	mg/L	0.000667	72.41%
Sb 206.836†	5.1	0.00195	mg/L	0.001451	0.00195	mg/L	0.001451	74.54%
Se 196.026†	7.9	0.00521	mg/L	0.001647	0.00521	mg/L	0.001647	31.63%
Si 288.158†	1.4	0.00102	mg/L	0.000742	0.00102	mg/L	0.000742	72.43%
Sn 189.927†	3.5	0.00071	mg/L	0.001029	0.00071	mg/L	0.001029	145.07%
Sr 421.552†	20.6	0.00002	mg/L	0.000008	0.00002	mg/L	0.000008	34.10%
Ti 334.903†	16.1	0.00063	mg/L	0.001055	0.00063	mg/L	0.001055	167.05%
Tl 190.801†	-0.4	-0.00025	mg/L	0.002460	-0.00025	mg/L	0.002460	>999.9%
V 292.402†	36.8	0.00027	mg/L	0.000267	0.00027	mg/L	0.000267	99.02%
Zn 206.200†	2.0	0.00050	mg/L	0.000525	0.00050	mg/L	0.000525	104.70%

Sequence No.: 11
Sample ID: WN26 MB SWC

Autosampler Location: 307
Date Collected: 4/29/2013 9:49:01 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 MB SWC

Analyte	Back Pressure	Flow
A11	219.0 kPa	0.75 L/min

Mean Data: WN26 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2693199.5	103.5	%	0.35				0.34%
ScR 361.383	382234.7	102.3	%	0.21				0.20%
Ag 328.068†	31.1	0.00014	mg/L	0.000170	0.00029	mg/L	0.000340	119.26%
Al 308.215†	54.6	0.04807	mg/L	0.004023	0.09613	mg/L	0.008045	8.37%
As 188.979†	1.7	0.00126	mg/L	0.002362	0.00252	mg/L	0.004725	187.26%
B 249.677†	-0.1	-0.00001	mg/L	0.000384	-0.00002	mg/L	0.000768	>999.9%
Ba 233.527†	3.5	0.00062	mg/L	0.000319	0.00125	mg/L	0.000638	51.21%
Be 313.042†	-13.7	-0.00002	mg/L	0.000022	-0.00005	mg/L	0.000045	92.98%
Ca 317.933†	687.4	0.06889	mg/L	0.001100	0.1378	mg/L	0.00220	1.60%
Cd 228.802†	5.1	0.00022	mg/L	0.000150	0.00043	mg/L	0.000301	69.73%
Co 228.616†	3.8	0.00012	mg/L	0.000070	0.00024	mg/L	0.000141	58.26%
Cr 267.716†	0.6	0.00008	mg/L	0.000276	0.00015	mg/L	0.000552	358.95%
Cu 324.752†	145.0	0.00057	mg/L	0.000168	0.00114	mg/L	0.000337	29.44%
Fe 273.955†	2.7	0.00222	mg/L	0.000749	0.00445	mg/L	0.001498	33.68%
K 766.490†	16.0	0.00782	mg/L	0.001453	0.01563	mg/L	0.002906	18.59%
Mg 279.077†	9.3	0.01004	mg/L	0.001749	0.02008	mg/L	0.003498	17.42%
Mn 257.610†	9.4	0.00019	mg/L	0.000079	0.00037	mg/L	0.000157	42.43%
Mo 202.031†	7.7	0.00042	mg/L	0.000284	0.00084	mg/L	0.000568	67.32%
Na 589.592†	-89.0	-0.00783	mg/L	0.003835	-0.01566	mg/L	0.007671	48.98%
Na 330.237†	-11.8	-0.3731	mg/L	0.15092	-0.7462	mg/L	0.30185	40.45%
Ni 231.604†	-2.0	-0.00059	mg/L	0.001004	-0.00118	mg/L	0.002009	170.20%
Pb 220.353†	11.8	0.00153	mg/L	0.000524	0.00306	mg/L	0.001049	34.26%
Sb 206.836†	1.2	0.00046	mg/L	0.000511	0.00093	mg/L	0.001022	109.92%
Se 196.026†	4.5	0.00297	mg/L	0.002627	0.00594	mg/L	0.005254	88.44%
Si 288.158†	36.7	0.02691	mg/L	0.004570	0.05383	mg/L	0.009141	16.98%
Sn 189.927†	1.4	0.00029	mg/L	0.000557	0.00058	mg/L	0.001115	193.08%
Sr 421.552†	17.3	0.00002	mg/L	0.000008	0.00004	mg/L	0.000016	41.16%
Ti 334.903†	32.0	0.00125	mg/L	0.000812	0.00250	mg/L	0.001623	64.90%
Tl 190.801†	-0.6	-0.00037	mg/L	0.001046	-0.00075	mg/L	0.002092	280.15%
V 292.402†	-6.8	-0.00005	mg/L	0.000067	-0.00010	mg/L	0.000134	134.61%
Zn 206.200†	0.1	0.00004	mg/L	0.000638	0.00008	mg/L	0.001276	>999.9%

Sequence No.: 12
Sample ID: 3031-13 Check

Autosampler Location: 308
Date Collected: 4/29/2013 9:53:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: 3031-13 Check

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: 3031-13 Check

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2667244.6	102.5	%	0.85				0.83%
ScR 361.383	370259.5	99.08	%	1.014				1.02%
Ag 328.068†	223400.7	1.021	mg/L	0.0029	1.021	mg/L	0.0029	0.28%
Al 308.215†	2379.3	2.060	mg/L	0.0152	2.060	mg/L	0.0152	0.74%
As 188.979†	2701.0	2.017	mg/L	0.0185	2.017	mg/L	0.0185	0.92%
B 249.677†	6207.0	1.033	mg/L	0.0079	1.033	mg/L	0.0079	0.77%
Ba 233.527†	5953.1	1.073	mg/L	0.0014	1.073	mg/L	0.0014	0.13%
Be 313.042†	567132.4	0.9954	mg/L	0.00797	0.9954	mg/L	0.00797	0.80%
Ca 317.933†	20676.0	2.072	mg/L	0.0148	2.072	mg/L	0.0148	0.72%
Cd 228.802†	23496.2	1.024	mg/L	0.0077	1.024	mg/L	0.0077	0.75%
Co 228.616†	30988.7	1.009	mg/L	0.0068	1.009	mg/L	0.0068	0.67%
Cr 267.716†	8735.1	1.062	mg/L	0.0088	1.062	mg/L	0.0088	0.83%
Cu 324.752†	251922.7	0.9940	mg/L	0.00380	0.9940	mg/L	0.00380	0.38%
Fe 273.955†	2472.4	2.052	mg/L	0.0225	2.052	mg/L	0.0225	1.10%
K 766.490†	40543.7	19.85	mg/L	0.103	19.85	mg/L	0.103	0.52%
Mg 279.077†	1861.4	2.020	mg/L	0.0250	2.020	mg/L	0.0250	1.24%
Mn 257.610†	49425.2	0.9728	mg/L	0.01227	0.9728	mg/L	0.01227	1.26%
Mo 202.031†	18204.6	0.9947	mg/L	0.00667	0.9947	mg/L	0.00667	0.67%
Na 589.592†	582997.8	51.31	mg/L	0.298	51.31	mg/L	0.298	0.58%
Na 330.237†	1639.8	51.86	mg/L	0.547	51.86	mg/L	0.547	1.05%
Ni 231.604†	3554.0	1.055	mg/L	0.0062	1.055	mg/L	0.0062	0.59%
Pb 220.353†	15546.0	1.996	mg/L	0.0149	1.996	mg/L	0.0149	0.75%
Sb 206.836†	5240.5	2.012	mg/L	0.0155	2.012	mg/L	0.0155	0.77%
Se 196.026†	3029.8	1.989	mg/L	0.0147	1.989	mg/L	0.0147	0.74%
Si 288.158†	2781.1	2.033	mg/L	0.0151	2.033	mg/L	0.0151	0.74%
Sn 189.927†	4816.3	0.9751	mg/L	0.00702	0.9751	mg/L	0.00702	0.72%
Sr 421.552†	915763.2	1.013	mg/L	0.0077	1.013	mg/L	0.0077	0.76%
Ti 334.903†	26005.6	1.019	mg/L	0.0071	1.019	mg/L	0.0071	0.70%
Tl 190.801†	3561.6	2.083	mg/L	0.0143	2.083	mg/L	0.0143	0.68%
V 292.402†	133509.2	0.9774	mg/L	0.00329	0.9774	mg/L	0.00329	0.34%
Zn 206.200†	4100.2	1.034	mg/L	0.0074	1.034	mg/L	0.0074	0.72%

Sequence No.: 13
Sample ID: WN26 ADUP SWC

Autosampler Location: 309
Date Collected: 4/29/2013 9:57:06 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2676629.6	102.8	%	0.45				0.44%
ScR 361.383	386010.4	103.3	%	0.82				0.79%
Ag 328.068†	-184.9	-0.00059	mg/L	0.000096	-0.00118	mg/L	0.000192	16.29%
Al 308.215†	51525.0	45.34	mg/L	0.552	90.68	mg/L	1.104	1.22%
As 188.979†	-204.3	-0.00177	mg/L	0.001432	-0.00354	mg/L	0.002863	80.93%
B 249.677†	15.8	0.00257	mg/L	0.000648	0.00514	mg/L	0.001296	25.21%
Ba 233.527†	673.3	0.1154	mg/L	0.00164	0.2309	mg/L	0.00329	1.42%
Be 313.042†	378.7	0.00056	mg/L	0.000008	0.00113	mg/L	0.000016	1.43%
Ca 317.933†	274980.8	27.56	mg/L	0.369	55.11	mg/L	0.739	1.34%
Cd 228.802†	25.3	0.00196	mg/L	0.000074	0.00392	mg/L	0.000149	3.79%
Co 228.616†	875.6	0.02090	mg/L	0.000313	0.04179	mg/L	0.000625	1.50%
Cr 267.716†	435.3	0.05317	mg/L	0.001022	0.1063	mg/L	0.00204	1.92%
Cu 324.752†	21542.5	0.08614	mg/L	0.000608	0.1723	mg/L	0.00122	0.71%
Fe 273.955†	48793.5	40.61	mg/L	0.422	81.22	mg/L	0.845	1.04%
K 766.490†	4107.4	2.011	mg/L	0.0270	4.022	mg/L	0.0540	1.34%
Mg 279.077†	5907.9	6.365	mg/L	0.0645	12.73	mg/L	0.129	1.01%
Mn 257.610†	16780.7	0.3298	mg/L	0.00295	0.6597	mg/L	0.00589	0.89%
Mo 202.031†	88.2	0.00449	mg/L	0.000130	0.00899	mg/L	0.000260	2.89%
Na 589.592†	66537.1	5.857	mg/L	0.1065	11.71	mg/L	0.213	1.82%
Na 330.237†	137.0	5.517	mg/L	0.1321	11.03	mg/L	0.264	2.39%
Ni 231.604†	96.0	0.02850	mg/L	0.000495	0.05700	mg/L	0.000991	1.74%
Pb 220.353†	-40.1	0.00494	mg/L	0.000524	0.00989	mg/L	0.001048	10.60%
Sb 206.836†	-17.1	-0.00310	mg/L	0.002423	-0.00621	mg/L	0.004847	78.10%
Se 196.026†	7.5	-0.00041	mg/L	0.002062	-0.00082	mg/L	0.004124	503.41%
Si 288.158†	1765.3	1.294	mg/L	0.0079	2.588	mg/L	0.0158	0.61%
Sn 189.927†	-36.5	-0.00427	mg/L	0.000283	-0.00853	mg/L	0.000567	6.64%
Sr 421.552†	241260.2	0.2670	mg/L	0.00350	0.5339	mg/L	0.00701	1.31%
Ti 334.903†	111226.5	4.361	mg/L	0.0516	8.722	mg/L	0.1031	1.18%
Tl 190.801†	10.6	0.01055	mg/L	0.001325	0.02109	mg/L	0.002650	12.56%
V 292.402†	33385.3	0.2390	mg/L	0.00131	0.4780	mg/L	0.00262	0.55%
Zn 206.200†	439.0	0.1109	mg/L	0.00023	0.2218	mg/L	0.00045	0.20%

Sequence No.: 14
Sample ID: WN26 A SWC

Autosampler Location: 310
Date Collected: 4/29/2013 10:01:07 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN26 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2660292.6	102.2	%	0.69	.			0.67%
ScR 361.383	377217.4	100.9	%	0.32				0.32%
Ag 328.068†	-257.7	-0.00091	mg/L	0.000246	-0.00181	mg/L	0.000491	27.12%
Al 308.215†	58118.5	51.14	mg/L	0.243	102.3	mg/L	0.49	0.48%
As 188.979†	-217.3	-0.00229	mg/L	0.005387	-0.00457	mg/L	0.010773	235.67%
B 249.677†	6.3	0.00099	mg/L	0.000733	0.00198	mg/L	0.001467	74.10%
Ba 233.527†	1201.4	0.2101	mg/L	0.00091	0.4202	mg/L	0.00183	0.43%
Be 313.042†	355.9	0.00052	mg/L	0.000006	0.00104	mg/L	0.000013	1.22%
Ca 317.933†	294152.9	29.48	mg/L	0.276	58.96	mg/L	0.552	0.94%
Cd 228.802†	19.1	0.00174	mg/L	0.000287	0.00349	mg/L	0.000574	16.47%
Co 228.616†	887.1	0.02079	mg/L	0.000242	0.04159	mg/L	0.000485	1.17%
Cr 267.716†	401.5	0.04905	mg/L	0.000497	0.09810	mg/L	0.000993	1.01%
Cu 324.752†	23344.8	0.09339	mg/L	0.001243	0.1868	mg/L	0.00249	1.33%
Fe 273.955†	53636.1	44.64	mg/L	0.176	89.28	mg/L	0.353	0.40%
K 766.490†	4776.0	2.338	mg/L	0.0040	4.676	mg/L	0.0081	0.17%
Mg 279.077†	6922.4	7.459	mg/L	0.0331	14.92	mg/L	0.066	0.44%
Mn 257.610†	18960.4	0.3727	mg/L	0.00154	0.7454	mg/L	0.00309	0.41%
Mo 202.031†	74.6	0.00372	mg/L	0.000161	0.00745	mg/L	0.000322	4.32%
Na 589.592†	69375.6	6.106	mg/L	0.0595	12.21	mg/L	0.119	0.97%
Na 330.237†	144.0	5.811	mg/L	0.2177	11.62	mg/L	0.435	3.75%
Ni 231.604†	103.9	0.03084	mg/L	0.001100	0.06168	mg/L	0.002201	3.57%
Pb 220.353†	-55.9	0.00426	mg/L	0.000634	0.00852	mg/L	0.001268	14.88%
Sb 206.836†	-21.8	-0.00462	mg/L	0.001388	-0.00924	mg/L	0.002776	30.06%
Se 196.026†	-1.1	-0.00675	mg/L	0.001967	-0.01350	mg/L	0.003934	29.13%
Si 288.158†	1411.6	1.035	mg/L	0.0059	2.070	mg/L	0.0117	0.57%
Sn 189.927†	-38.8	-0.00451	mg/L	0.000275	-0.00903	mg/L	0.000550	6.09%
Sr 421.552†	320984.8	0.3552	mg/L	0.00311	0.7104	mg/L	0.00622	0.88%
Ti 334.903†	117975.5	4.626	mg/L	0.0370	9.251	mg/L	0.0741	0.80%
Tl 190.801†	13.5	0.01273	mg/L	0.001047	0.02547	mg/L	0.002094	8.22%
V 292.402†	34465.9	0.2465	mg/L	0.00267	0.4930	mg/L	0.00533	1.08%
Zn 206.200†	476.1	0.1202	mg/L	0.00053	0.2404	mg/L	0.00106	0.44%

Sequence No.: 15
Sample ID: WN26 ASPK SWC

Autosampler Location: 311
Date Collected: 4/29/2013 10:05:23 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2658619.1	102.1	%	0.86				0.84%
ScR 361.383	376047.2	100.6	%	1.04				1.03%
Ag 328.068†	115700.6	0.5290	mg/L	0.00176	1.058	mg/L	0.0035	0.33%
Al 308.215†	60229.8	53.00	mg/L	0.775	106.0	mg/L	1.55	1.46%
As 188.979†	2532.4	2.013	mg/L	0.0152	4.025	mg/L	0.0304	0.76%
B 249.677†	10.0	0.00044	mg/L	0.001459	0.00088	mg/L	0.002917	331.67%
Ba 233.527†	12571.0	2.262	mg/L	0.0348	4.523	mg/L	0.0696	1.54%
Be 313.042†	276439.6	0.4851	mg/L	0.00589	0.9701	mg/L	0.01179	1.21%
Ca 317.933†	404637.7	40.55	mg/L	0.440	81.10	mg/L	0.879	1.08%
Cd 228.802†	11999.4	0.5181	mg/L	0.00411	1.036	mg/L	0.0082	0.79%
Co 228.616†	16206.9	0.5207	mg/L	0.00501	1.041	mg/L	0.0100	0.96%
Cr 267.716†	4631.2	0.5623	mg/L	0.00676	1.125	mg/L	0.0135	1.20%
Cu 324.752†	151371.5	0.5986	mg/L	0.00351	1.197	mg/L	0.0070	0.59%
Fe 273.955†	49935.8	41.56	mg/L	0.344	83.12	mg/L	0.689	0.83%
K 766.490†	24349.2	11.92	mg/L	0.199	23.84	mg/L	0.398	1.67%
Mg 279.077†	15950.7	17.23	mg/L	0.210	34.45	mg/L	0.421	1.22%
Mn 257.610†	40952.7	0.8057	mg/L	0.00677	1.611	mg/L	0.0135	0.84%
Mo 202.031†	89.9	0.00440	mg/L	0.000187	0.00881	mg/L	0.000374	4.25%
Na 589.592†	196032.5	17.25	mg/L	0.191	34.51	mg/L	0.383	1.11%
Na 330.237†	494.7	16.72	mg/L	0.335	33.43	mg/L	0.670	2.00%
Ni 231.604†	1831.1	0.5428	mg/L	0.00777	1.086	mg/L	0.0155	1.43%
Pb 220.353†	15543.2	2.007	mg/L	0.0148	4.014	mg/L	0.0297	0.74%
Sb 206.836†	-14.0	-0.00698	mg/L	0.001361	-0.01396	mg/L	0.002721	19.49%
Se 196.026†	3050.8	1.998	mg/L	0.0147	3.995	mg/L	0.0295	0.74%
Si 288.158†	1679.1	1.234	mg/L	0.0108	2.468	mg/L	0.0216	0.88%
Sn 189.927†	-47.9	-0.00545	mg/L	0.000148	-0.01091	mg/L	0.000296	2.71%
Sr 421.552†	736972.7	0.8155	mg/L	0.01099	1.631	mg/L	0.0220	1.35%
Ti 334.903†	113931.8	4.466	mg/L	0.0533	8.932	mg/L	0.1065	1.19%
Tl 190.801†	3454.2	2.028	mg/L	0.0175	4.055	mg/L	0.0350	0.86%
V 292.402†	99446.4	0.7225	mg/L	0.00432	1.445	mg/L	0.0086	0.60%
Zn 206.200†	2426.0	0.6120	mg/L	0.00842	1.224	mg/L	0.0168	1.38%

Sequence No.: 16
Sample ID: WN26 B SWC

Autosampler Location: 312
Date Collected: 4/29/2013 10:09:27 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2679617.1	102.9	%	0.60				0.59%
ScR 361.383	385428.8	103.1	%	0.58				0.56%
Ag 328.068†	-257.3	-0.00067	mg/L	0.000015	-0.00134	mg/L	0.000030	2.27%
Al 308.215†	92686.5	81.57	mg/L	0.358	163.1	mg/L	0.72	0.44%
As 188.979†	-157.3	0.04469	mg/L	0.002228	0.08938	mg/L	0.004457	4.99%
B 249.677†	48.9	0.00808	mg/L	0.000729	0.01616	mg/L	0.001458	9.02%
Ba 233.527†	2019.5	0.3565	mg/L	0.00282	0.7129	mg/L	0.00564	0.79%
Be 313.042†	818.3	0.00128	mg/L	0.000027	0.00255	mg/L	0.000055	2.15%
Ca 317.933†	547506.0	54.87	mg/L	0.116	109.7	mg/L	0.23	0.21%
Cd 228.802†	55.9	0.00313	mg/L	0.000201	0.00625	mg/L	0.000403	6.45%
Co 228.616†	911.6	0.02130	mg/L	0.000200	0.04261	mg/L	0.000401	0.94%
Cr 267.716†	709.0	0.08585	mg/L	0.001200	0.1717	mg/L	0.00240	1.40%
Cu 324.752†	53527.8	0.2128	mg/L	0.00197	0.4257	mg/L	0.00393	0.92%
Fe 273.955†	63342.8	52.72	mg/L	0.104	105.4	mg/L	0.21	0.20%
K 766.490†	3948.3	1.933	mg/L	0.0097	3.866	mg/L	0.0194	0.50%
Mg 279.077†	11430.9	12.33	mg/L	0.085	24.66	mg/L	0.170	0.69%
Mn 257.610†	27474.4	0.5400	mg/L	0.00117	1.080	mg/L	0.0023	0.22%
Mo 202.031†	218.9	0.01131	mg/L	0.000170	0.02262	mg/L	0.000341	1.51%
Na 589.592†	88397.9	7.781	mg/L	0.0270	15.56	mg/L	0.054	0.35%
Na 330.237†	192.1	7.350	mg/L	0.0860	14.70	mg/L	0.172	1.17%
Ni 231.604†	191.2	0.05675	mg/L	0.001139	0.1135	mg/L	0.00228	2.01%
Pb 220.353†	311.4	0.05912	mg/L	0.000709	0.1182	mg/L	0.00142	1.20%
Sb 206.836†	-32.0	-0.00808	mg/L	0.003385	-0.01616	mg/L	0.006771	41.91%
Se 196.026†	4.5	-0.00670	mg/L	0.004208	-0.01340	mg/L	0.008415	62.78%
Si 288.158†	2259.2	1.657	mg/L	0.0072	3.313	mg/L	0.0144	0.44%
Sn 189.927†	-42.5	-0.00311	mg/L	0.000347	-0.00622	mg/L	0.000694	11.16%
Sr 421.552†	449205.5	0.4971	mg/L	0.00140	0.9941	mg/L	0.00280	0.28%
Ti 334.903†	121877.3	4.777	mg/L	0.0142	9.554	mg/L	0.0284	0.30%
Tl 190.801†	24.8	0.01967	mg/L	0.002489	0.03934	mg/L	0.004979	12.66%
V 292.402†	65231.5	0.4704	mg/L	0.00485	0.9407	mg/L	0.00970	1.03%
Zn 206.200†	799.0	0.2017	mg/L	0.00199	0.4035	mg/L	0.00397	0.98%

Sequence No.: 17
Sample ID: WN26 C SWC

Autosampler Location: 313
Date Collected: 4/29/2013 10:13:28 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN26 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2712617.5	104.2	%	0.14				0.14%
ScR 361.383	386728.7	103.5	%	0.67				0.65%
Ag 328.068†	-511.6	-0.00188	mg/L	0.000099	-0.00377	mg/L	0.000198	5.25%
Al 308.215†	222926.5	196.2	mg/L	1.05	392.4	mg/L	2.10	0.54%
As 188.979†	-432.6	0.01059	mg/L	0.006778	0.02118	mg/L	0.013557	64.02%
B 249.677†	53.7	0.00867	mg/L	0.000390	0.01734	mg/L	0.000779	4.49%
Ba 233.527†	4461.1	0.7729	mg/L	0.00586	1.546	mg/L	0.0117	0.76%
Be 313.042†	1674.8	0.00272	mg/L	0.000015	0.00544	mg/L	0.000030	0.54%
Ca 317.933†	439037.1	44.00	mg/L	0.209	88.00	mg/L	0.419	0.48%
Cd 228.802†	90.5	0.00591	mg/L	0.000007	0.01183	mg/L	0.000013	0.11%
Co 228.616†	3288.4	0.09030	mg/L	0.000458	0.1806	mg/L	0.00092	0.51%
Cr 267.716†	2172.4	0.2655	mg/L	0.00130	0.5310	mg/L	0.00259	0.49%
Cu 324.752†	53938.2	0.2214	mg/L	0.00072	0.4428	mg/L	0.00144	0.32%
Fe 273.955†	259337.8	215.8	mg/L	0.56	431.7	mg/L	1.11	0.26%
K 766.490†	15062.8	7.374	mg/L	0.0498	14.75	mg/L	0.100	0.68%
Mg 279.077†	43894.6	47.35	mg/L	0.278	94.70	mg/L	0.556	0.59%
Mn 257.610†	193615.9	3.808	mg/L	0.0107	7.617	mg/L	0.0215	0.28%
Mo 202.031†	96.4	0.00474	mg/L	0.000243	0.00947	mg/L	0.000486	5.13%
Na 589.592†	29596.5	2.605	mg/L	0.0167	5.210	mg/L	0.0335	0.64%
Na 330.237†	-24.5	1.781	mg/L	0.2864	3.562	mg/L	0.5728	16.08%
Ni 231.604†	722.9	0.2146	mg/L	0.00098	0.4293	mg/L	0.00197	0.46%
Pb 220.353†	198.6	0.06724	mg/L	0.001821	0.1345	mg/L	0.00364	2.71%
Sb 206.836†	-56.6	-0.01612	mg/L	0.000848	-0.03224	mg/L	0.001695	5.26%
Se 196.026†	1.2	-0.02212	mg/L	0.006156	-0.04424	mg/L	0.012312	27.83%
Si 288.158†	2267.2	1.666	mg/L	0.0076	3.333	mg/L	0.0153	0.46%
Sn 189.927†	-70.1	-0.00869	mg/L	0.000289	-0.01738	mg/L	0.000579	3.33%
Sr 421.552†	435519.4	0.4819	mg/L	0.00193	0.9638	mg/L	0.00386	0.40%
Ti 334.903†	245191.9	9.614	mg/L	0.0329	19.23	mg/L	0.066	0.34%
Tl 190.801†	-19.2	0.01475	mg/L	0.006669	0.02949	mg/L	0.013338	45.23%
V 292.402†	71810.8	0.5086	mg/L	0.00164	1.017	mg/L	0.0033	0.32%
Zn 206.200†	1661.2	0.4191	mg/L	0.00235	0.8382	mg/L	0.00470	0.56%

Sequence No.: 18
Sample ID: WN26 MBSPK SWC

Autosampler Location: 314
Date Collected: 4/29/2013 10:17:30 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN26 MBSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN26 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2687654.4	103.3	%	0.31				0.30%
ScR 361.383	383136.8	102.5	%	0.50				0.48%
Ag 328.068†	119852.4	0.5477	mg/L	0.00389	1.095	mg/L	0.0078	0.71%
Al 308.215†	2405.8	2.110	mg/L	0.0171	4.220	mg/L	0.0343	0.81%
As 188.979†	2836.9	2.085	mg/L	0.0222	4.170	mg/L	0.0443	1.06%
B 249.677†	4.0	-0.00052	mg/L	0.000975	-0.00104	mg/L	0.001950	187.33%
Ba 233.527†	11824.2	2.133	mg/L	0.0107	4.265	mg/L	0.0215	0.50%
Be 313.042†	280376.4	0.4921	mg/L	0.00183	0.9842	mg/L	0.00365	0.37%
Ca 317.933†	98772.3	9.898	mg/L	0.0360	19.80	mg/L	0.072	0.36%
Cd 228.802†	11927.1	0.5137	mg/L	0.00450	1.027	mg/L	0.0090	0.88%
Co 228.616†	15531.5	0.5066	mg/L	0.00658	1.013	mg/L	0.0132	1.30%
Cr 267.716†	4376.6	0.5313	mg/L	0.00422	1.063	mg/L	0.0084	0.79%
Cu 324.752†	128138.9	0.5058	mg/L	0.00476	1.012	mg/L	0.0095	0.94%
Fe 273.955†	2466.8	2.050	mg/L	0.0214	4.101	mg/L	0.0428	1.04%
K 766.490†	20239.7	9.909	mg/L	0.0426	19.82	mg/L	0.085	0.43%
Mg 279.077†	9634.8	10.42	mg/L	0.075	20.84	mg/L	0.149	0.72%
Mn 257.610†	24707.9	0.4865	mg/L	0.00178	0.9729	mg/L	0.00355	0.37%
Mo 202.031†	32.4	0.00162	mg/L	0.000251	0.00325	mg/L	0.000503	15.47%
Na 589.592†	115797.7	10.19	mg/L	0.004	20.38	mg/L	0.007	0.04%
Na 330.237†	324.0	10.10	mg/L	0.174	20.20	mg/L	0.348	1.72%
Ni 231.604†	1791.9	0.5311	mg/L	0.00431	1.062	mg/L	0.0086	0.81%
Pb 220.353†	15763.8	2.024	mg/L	0.0178	4.048	mg/L	0.0355	0.88%
Sb 206.836†	11.8	-0.00083	mg/L	0.000846	-0.00166	mg/L	0.001691	102.07%
Se 196.026†	3132.5	2.057	mg/L	0.0217	4.115	mg/L	0.0434	1.05%
Si 288.158†	26.2	0.02209	mg/L	0.001894	0.04417	mg/L	0.003789	8.58%
Sn 189.927†	-16.0	-0.00241	mg/L	0.000441	-0.00481	mg/L	0.000883	18.34%
Sr 421.552†	455830.4	0.5044	mg/L	0.00020	1.009	mg/L	0.0004	0.04%
Ti 334.903†	130.1	0.00441	mg/L	0.000325	0.00882	mg/L	0.000651	7.37%
Tl 190.801†	3584.2	2.100	mg/L	0.0194	4.199	mg/L	0.0387	0.92%
V 292.402†	70115.4	0.5131	mg/L	0.00387	1.026	mg/L	0.0077	0.75%
Zn 206.200†	2026.9	0.5112	mg/L	0.00276	1.022	mg/L	0.0055	0.54%

Sequence No.: 19
Sample ID: CV2

Autosampler Location: 7
Date Collected: 4/29/2013 10:21:31 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	2654467.1	102.0	%	0.58				0.57%
ScR 361.383	378543.8	101.3	%	2.26				2.23%
Ag 328.068†	232317.1	1.061	mg/L	0.0105	1.061	mg/L	0.0105	0.99%
Al 308.215†	2336.1	2.022	mg/L	0.0452	2.022	mg/L	0.0452	2.24%
As 188.979†	2714.1	2.026	mg/L	0.0174	2.026	mg/L	0.0174	0.86%
B 249.677†	6121.7	1.018	mg/L	0.0223	1.018	mg/L	0.0223	2.19%
Ba 233.527†	5940.4	1.071	mg/L	0.0200	1.071	mg/L	0.0200	1.87%
Be 313.042†	556958.1	0.9775	mg/L	0.02839	0.9775	mg/L	0.02839	2.90%
Ca 317.933†	20340.4	2.038	mg/L	0.0448	2.038	mg/L	0.0448	2.20%
Cd 228.802†	23646.0	1.030	mg/L	0.0084	1.030	mg/L	0.0084	0.81%
Co 228.616†	31460.9	1.025	mg/L	0.0070	1.025	mg/L	0.0070	0.69%
Cr 267.716†	8573.7	1.043	mg/L	0.0249	1.043	mg/L	0.0249	2.38%
Cu 324.752†	259381.6	1.023	mg/L	0.0067	1.023	mg/L	0.0067	0.65%
Fe 273.955†	2397.0	1.989	mg/L	0.0472	1.989	mg/L	0.0472	2.37%
K 766.490†	39970.3	19.57	mg/L	0.473	19.57	mg/L	0.473	2.42%
Mg 279.077†	1828.1	1.984	mg/L	0.0508	1.984	mg/L	0.0508	2.56%
Mn 257.610†	48303.5	0.9507	mg/L	0.02666	0.9507	mg/L	0.02666	2.80%
Mo 202.031†	18354.9	1.003	mg/L	0.0089	1.003	mg/L	0.0089	0.88%
Na 589.592†	573123.0	50.45	mg/L	1.672	50.45	mg/L	1.672	3.31%
Na 330.237†	1601.7	50.66	mg/L	1.275	50.66	mg/L	1.275	2.52%
Ni 231.604†	3515.7	1.044	mg/L	0.0235	1.044	mg/L	0.0235	2.25%
Pb 220.353†	15687.7	2.014	mg/L	0.0173	2.014	mg/L	0.0173	0.86%
Sb 206.836†	5382.9	2.068	mg/L	0.0142	2.068	mg/L	0.0142	0.69%
Se 196.026†	3031.1	1.990	mg/L	0.0163	1.990	mg/L	0.0163	0.82%
Si 288.158†	2715.0	1.984	mg/L	0.0446	1.984	mg/L	0.0446	2.25%
Sn 189.927†	4851.6	0.9823	mg/L	0.00908	0.9823	mg/L	0.00908	0.92%
Sr 421.552†	900203.3	0.9961	mg/L	0.03075	0.9961	mg/L	0.03075	3.09%
Ti 334.903†	25543.6	1.001	mg/L	0.0313	1.001	mg/L	0.0313	3.12%
Tl 190.801†	3617.0	2.115	mg/L	0.0146	2.115	mg/L	0.0146	0.69%
V 292.402†	137300.4	1.005	mg/L	0.0086	1.005	mg/L	0.0086	0.85%
Zn 206.200†	4024.7	1.015	mg/L	0.0224	1.015	mg/L	0.0224	2.21%

Sequence No.: 20
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 4/29/2013 10:25:35 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
A11	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	2659738.2	102.2	%	0.17				0.16%
ScR 361.383	379393.4	101.5	%	0.70				0.69%
Ag 328.068†	40.2	0.00018	mg/L	0.000143	0.00018	mg/L	0.000143	77.87%
Al 308.215†	4.0	0.00353	mg/L	0.008211	0.00353	mg/L	0.008211	232.89%
As 188.979†	4.2	0.00312	mg/L	0.000442	0.00312	mg/L	0.000442	14.16%
B 249.677†	-8.3	-0.00138	mg/L	0.000906	-0.00138	mg/L	0.000906	65.86%
Ba 233.527†	-1.1	-0.00020	mg/L	0.000451	-0.00020	mg/L	0.000451	230.74%
Be 313.042†	49.5	0.00009	mg/L	0.000009	0.00009	mg/L	0.000009	10.51%
Ca 317.933†	18.0	0.00180	mg/L	0.001141	0.00180	mg/L	0.001141	63.36%
Cd 228.802†	11.3	0.00048	mg/L	0.000250	0.00048	mg/L	0.000250	52.08%
Co 228.616†	6.9	0.00023	mg/L	0.000176	0.00023	mg/L	0.000176	77.71%
Cr 267.716†	-1.0	-0.00012	mg/L	0.000339	-0.00012	mg/L	0.000339	272.51%
Cu 324.752†	182.0	0.00072	mg/L	0.000076	0.00072	mg/L	0.000076	10.57%
Fe 273.955†	-2.1	-0.00171	mg/L	0.001590	-0.00171	mg/L	0.001590	92.95%
K 766.490†	26.6	0.01304	mg/L	0.005788	0.01304	mg/L	0.005788	44.38%
Mg 279.077†	-2.6	-0.00279	mg/L	0.004384	-0.00279	mg/L	0.004384	157.02%
Mn 257.610†	7.3	0.00014	mg/L	0.000034	0.00014	mg/L	0.000034	23.75%
Mo 202.031†	16.1	0.00088	mg/L	0.000011	0.00088	mg/L	0.000011	1.23%
Na 589.592†	-13.7	-0.00121	mg/L	0.000816	-0.00121	mg/L	0.000816	67.42%
Na 330.237†	-5.8	-0.1819	mg/L	0.27647	-0.1819	mg/L	0.27647	151.98%
Ni 231.604†	3.8	0.00113	mg/L	0.001896	0.00113	mg/L	0.001896	167.69%
Pb 220.353†	4.4	0.00056	mg/L	0.000582	0.00056	mg/L	0.000582	103.55%
Sb 206.836†	5.8	0.00222	mg/L	0.001439	0.00222	mg/L	0.001439	64.89%
Se 196.026†	4.0	0.00260	mg/L	0.002376	0.00260	mg/L	0.002376	91.42%
Si 288.158†	-0.9	-0.00067	mg/L	0.003723	-0.00067	mg/L	0.003723	551.94%
Sn 189.927†	1.7	0.00035	mg/L	0.000625	0.00035	mg/L	0.000625	180.48%
Sr 421.552†	76.3	0.00008	mg/L	0.000019	0.00008	mg/L	0.000019	22.93%
Ti 334.903†	4.2	0.00016	mg/L	0.000608	0.00016	mg/L	0.000608	369.43%
Tl 190.801†	1.8	0.00107	mg/L	0.001099	0.00107	mg/L	0.001099	103.08%
V 292.402†	36.2	0.00026	mg/L	0.000328	0.00026	mg/L	0.000328	124.08%
Zn 206.200†	-1.8	-0.00046	mg/L	0.000401	-0.00046	mg/L	0.000401	87.77%

Sequence No.: 21
Sample ID: WM19 MB SWC

Autosampler Location: 315
Date Collected: 4/29/2013 10:29:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WM19 MB SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WM19 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2681826.1	103.0	%	0.18				0.18%
ScR 361.383	383151.8	102.5	%	0.91				0.89%
Ag 328.068†	60.6	0.00028	mg/L	0.000089	0.00055	mg/L	0.000179	32.25%
Al 308.215†	19.3	0.01702	mg/L	0.005586	0.03404	mg/L	0.011171	32.82%
As 188.979†	0.8	0.00062	mg/L	0.001117	0.00125	mg/L	0.002234	178.91%
B 249.677†	-2.0	-0.00034	mg/L	0.000912	-0.00067	mg/L	0.001824	271.32%
Ba 233.527†	0.5	0.00009	mg/L	0.000453	0.00019	mg/L	0.000906	478.30%
Be 313.042†	-8.9	-0.00002	mg/L	0.000015	-0.00003	mg/L	0.000030	95.11%
Ca 317.933†	300.8	0.03015	mg/L	0.001399	0.06029	mg/L	0.002798	4.64%
Cd 228.802†	5.0	0.00022	mg/L	0.000326	0.00043	mg/L	0.000652	150.84%
Co 228.616†	5.9	0.00019	mg/L	0.000013	0.00038	mg/L	0.000027	6.90%
Cr 267.716†	-7.4	-0.00090	mg/L	0.000217	-0.00180	mg/L	0.000433	24.11%
Cu 324.752†	203.9	0.00080	mg/L	0.000044	0.00161	mg/L	0.000088	5.46%
Fe 273.955†	3.3	0.00275	mg/L	0.000392	0.00551	mg/L	0.000783	14.22%
K 766.490†	18.2	0.00889	mg/L	0.002270	0.01778	mg/L	0.004539	25.52%
Mg 279.077†	0.4	0.00045	mg/L	0.002708	0.00090	mg/L	0.005416	604.74%
Mn 257.610†	6.9	0.00014	mg/L	0.000035	0.00027	mg/L	0.000070	25.84%
Mo 202.031†	2.2	0.00012	mg/L	0.000123	0.00024	mg/L	0.000247	103.40%
Na 589.592†	-143.1	-0.01259	mg/L	0.001486	-0.02519	mg/L	0.002973	11.80%
Na 330.237†	-15.9	-0.5019	mg/L	0.20839	-1.004	mg/L	0.4168	41.52%
Ni 231.604†	-2.2	-0.00066	mg/L	0.000894	-0.00132	mg/L	0.001788	135.09%
Pb 220.353†	0.6	0.00008	mg/L	0.000193	0.00016	mg/L	0.000387	245.08%
Sb 206.836†	-2.6	-0.00097	mg/L	0.001669	-0.00194	mg/L	0.003338	172.37%
Se 196.026†	6.7	0.00440	mg/L	0.001503	0.00879	mg/L	0.003006	34.19%
Si 288.158†	25.2	0.01845	mg/L	0.001544	0.03690	mg/L	0.003089	8.37%
Sn 189.927†	3.1	0.00062	mg/L	0.000519	0.00124	mg/L	0.001038	83.59%
Sr 421.552†	-7.6	-0.00001	mg/L	0.000024	-0.00002	mg/L	0.000048	285.49%
Ti 334.903†	20.4	0.00080	mg/L	0.000608	0.00160	mg/L	0.001217	76.20%
Tl 190.801†	-1.0	-0.00057	mg/L	0.000983	-0.00113	mg/L	0.001967	174.02%
V 292.402†	-0.8	-0.00001	mg/L	0.000112	-0.00002	mg/L	0.000223	>999.9%
Zn 206.200†	3.6	0.00091	mg/L	0.000756	0.00182	mg/L	0.001513	83.32%

Sequence No.: 22
Sample ID: WM19 MB LEN

Autosampler Location: 316
Date Collected: 4/29/2013 10:34:08 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WM19 MB LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WM19 MB LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2591314.9	99.55	%	0.150				0.15%
ScR 361.383	378002.8	101.1	%	0.12				0.12%
Ag 328.068†	18.8	0.00009	mg/L	0.000157	0.00043	mg/L	0.000783	181.85%
Al 308.215†	10.9	0.00959	mg/L	0.011695	0.04795	mg/L	0.058477	121.97%
As 188.979†	-0.0	0.00003	mg/L	0.001419	0.00015	mg/L	0.007096	>999.9%
B 249.677†	24.9	0.00415	mg/L	0.000226	0.02077	mg/L	0.001129	5.44%
Ba 233.527†	38.2	0.00689	mg/L	0.000018	0.03447	mg/L	0.000090	0.26%
Be 313.042†	33.9	0.00006	mg/L	0.000029	0.00030	mg/L	0.000143	48.14%
Ca 317.933†	616.4	0.06177	mg/L	0.001372	0.3088	mg/L	0.00686	2.22%
Cd 228.802†	16.2	0.00072	mg/L	0.000057	0.00358	mg/L	0.000284	7.92%
Co 228.616†	2.3	0.00007	mg/L	0.000076	0.00036	mg/L	0.000382	106.85%
Cr 267.716†	-1.0	-0.00013	mg/L	0.000194	-0.00063	mg/L	0.000970	152.89%
Cu 324.752†	341.4	0.00135	mg/L	0.000095	0.00674	mg/L	0.000476	7.07%
Fe 273.955†	12.7	0.01059	mg/L	0.001272	0.05294	mg/L	0.006360	12.01%
K 766.490†	37.0	0.01813	mg/L	0.012307	0.09063	mg/L	0.061533	67.90%
Mg 279.077†	6.0	0.00652	mg/L	0.003072	0.03259	mg/L	0.015358	47.12%
Mn 257.610†	9.1	0.00018	mg/L	0.000053	0.00090	mg/L	0.000267	29.70%
Mo 202.031†	6.2	0.00034	mg/L	0.000199	0.00168	mg/L	0.000996	59.36%
Na 589.592†	3378446.3	297.4	mg/L	1.08	1487	mg/L	5.38	0.36%
Na 330.237†	9439.5	298.7	mg/L	0.25	1493	mg/L	1.26	0.08%
Ni 231.604†	16.8	0.00498	mg/L	0.000886	0.02492	mg/L	0.004430	17.78%
Pb 220.353†	5.1	0.00066	mg/L	0.001174	0.00328	mg/L	0.005868	178.73%
Sb 206.836†	-2.8	-0.00105	mg/L	0.001206	-0.00527	mg/L	0.006028	114.30%
Se 196.026†	8.4	0.00552	mg/L	0.003017	0.02758	mg/L	0.015083	54.69%
Si 288.158†	28.2	0.02064	mg/L	0.001619	0.1032	mg/L	0.00809	7.84%
Sn 189.927†	1.1	0.00022	mg/L	0.000787	0.00111	mg/L	0.003935	355.59%
Sr 421.552†	172.9	0.00019	mg/L	0.000017	0.00096	mg/L	0.000084	8.79%
Ti 334.903†	27.3	0.00107	mg/L	0.000050	0.00533	mg/L	0.000251	4.71%
Tl 190.801†	1.6	0.00092	mg/L	0.001179	0.00458	mg/L	0.005893	128.57%
V 292.402†	3.7	0.00003	mg/L	0.000064	0.00013	mg/L	0.000319	248.92%
Zn 206.200†	26.1	0.00659	mg/L	0.000521	0.03293	mg/L	0.002604	7.91%

Sequence No.: 23
Sample ID: WM19 F LEN

Dilution: 5.000000X

Autosampler Location: 317
Date Collected: 4/29/2013 10:38:41 AM
Data Type: Original

Nebulizer Parameters: WM19 F LEN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WM19 F LEN

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2542451.8	97.68	%	0.169				0.17%
ScR 361.383	363332.4	97.22	%	1.082				1.11%
Ag 328.068†	34.0	0.00215	mg/L	0.000165	0.01076	mg/L	0.000825	7.67%
Al 308.215†	67.9	0.05959	mg/L	0.002590	0.2979	mg/L	0.01295	4.35%
As 188.979†	8348.7	6.111	mg/L	0.0066	30.56	mg/L	0.033	0.11%
B 249.677†	2444.3	0.4071	mg/L	0.00432	2.036	mg/L	0.0216	1.06%
Ba 233.527†	190.1	0.03429	mg/L	0.000836	0.1715	mg/L	0.00418	2.44%
Be 313.042†	55.5	0.00010	mg/L	0.000005	0.00049	mg/L	0.000027	5.52%
Ca 317.933†	3085091.1	309.2	mg/L	2.91	1546	mg/L	14.54	0.94%
Cd 228.802†	521792.9	22.93	mg/L	0.066	114.7	mg/L	0.33	0.29%
Co 228.616†	130.2	0.00419	mg/L	0.000054	0.02096	mg/L	0.000270	1.29%
Cr 267.716†	93.7	0.00669	mg/L	0.000346	0.03347	mg/L	0.001732	5.17%
Cu 324.752†	11842.6	0.04668	mg/L	0.000166	0.2334	mg/L	0.00083	0.36%
Fe 273.955†	-5.8	-0.00485	mg/L	0.004396	-0.02425	mg/L	0.021978	90.63%
K 766.490†	254010.2	124.4	mg/L	0.66	621.8	mg/L	3.29	0.53%
Mg 279.077†	8213.5	8.851	mg/L	0.1281	44.25	mg/L	0.641	1.45%
Mn 257.610†	7095.3	0.1389	mg/L	0.00187	0.6944	mg/L	0.00937	1.35%
Mo 202.031†	166.1	0.00543	mg/L	0.000394	0.02716	mg/L	0.001971	7.26%
Na 589.592†	4209833.1	370.5	mg/L	3.75	1853	mg/L	18.76	1.01%
Na 330.237†	11575.3	364.8	mg/L	4.29	1824	mg/L	21.45	1.18%
Ni 231.604†	50.4	0.01495	mg/L	0.000917	0.07474	mg/L	0.004584	6.13%
Pb 220.353†	19593.2	2.514	mg/L	0.0075	12.57	mg/L	0.037	0.30%
Sb 206.836†	11.5	0.00416	mg/L	0.001578	0.02078	mg/L	0.007889	37.96%
Se 196.026†	0.3	0.00018	mg/L	0.002776	0.00091	mg/L	0.013878	>999.9%
Si 288.158†	5862.1	4.371	mg/L	0.0621	21.85	mg/L	0.310	1.42%
Sn 189.927†	-78.7	0.00999	mg/L	0.000409	0.04995	mg/L	0.002046	4.10%
Sr 421.552†	478480.1	0.5295	mg/L	0.00258	2.647	mg/L	0.0129	0.49%
Ti 334.903†	756.0	0.01126	mg/L	0.000268	0.05632	mg/L	0.001339	2.38%
Tl 190.801†	52.9	0.03106	mg/L	0.003351	0.1553	mg/L	0.01675	10.79%
V 292.402†	10.1	0.00013	mg/L	0.000012	0.00067	mg/L	0.000062	9.25%
Zn 206.200†	18791.6	4.738	mg/L	0.0886	23.69	mg/L	0.443	1.87%

Sequence No.: 24
Sample ID: WM19 A SWC

Autosampler Location: 318
Date Collected: 4/29/2013 10:43:15 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WM19 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WM19 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2698046.3	103.7	%	0.61				0.59%
ScR 361.383	389467.1	104.2	%	0.41				0.39%
Ag 328.068†	116429.1	0.5323	mg/L	0.00317	1.065	mg/L	0.0063	0.60%
Al 308.215†	110180.2	96.96	mg/L	0.235	193.9	mg/L	0.47	0.24%
As 188.979†	1570.6	1.158	mg/L	0.0010	2.316	mg/L	0.0021	0.09%
B 249.677†	4317.1	0.7148	mg/L	0.00519	1.430	mg/L	0.0104	0.73%
Ba 233.527†	45849.8	8.262	mg/L	0.0284	16.52	mg/L	0.057	0.34%
Be 313.042†	357726.8	0.6278	mg/L	0.00552	1.256	mg/L	0.0110	0.88%
Ca 317.933†	368972.4	36.98	mg/L	0.149	73.95	mg/L	0.298	0.40%
Cd 228.802†	22783.9	0.9990	mg/L	0.00817	1.998	mg/L	0.0163	0.82%
Co 228.616†	70016.8	2.283	mg/L	0.0088	4.567	mg/L	0.0177	0.39%
Cr 267.716†	5655.1	0.6871	mg/L	0.00190	1.374	mg/L	0.0038	0.28%
Cu 324.752†	224505.5	0.8892	mg/L	0.00358	1.778	mg/L	0.0072	0.40%
Fe 273.955†	75471.5	62.81	mg/L	0.064	125.6	mg/L	0.13	0.10%
K 766.490†	99079.4	48.51	mg/L	0.148	97.01	mg/L	0.296	0.31%
Mg 279.077†	16970.0	18.32	mg/L	0.092	36.65	mg/L	0.185	0.50%
Mn 257.610†	227067.4	4.468	mg/L	0.0045	8.935	mg/L	0.0091	0.10%
Mo 202.031†	10640.6	0.5810	mg/L	0.00179	1.162	mg/L	0.0036	0.31%
Na 589.592†	314117.9	27.65	mg/L	0.379	55.30	mg/L	0.759	1.37%
Na 330.237†	887.5	26.83	mg/L	0.396	53.65	mg/L	0.793	1.48%
Ni 231.604†	10950.8	3.251	mg/L	0.0141	6.502	mg/L	0.0283	0.43%
Pb 220.353†	26035.4	3.364	mg/L	0.0118	6.728	mg/L	0.0236	0.35%
Sb 206.836†	830.0	0.3202	mg/L	0.00641	0.6404	mg/L	0.01283	2.00%
Se 196.026†	1301.1	0.8422	mg/L	0.00328	1.684	mg/L	0.0066	0.39%
Si 288.158†	2557.4	1.870	mg/L	0.0085	3.741	mg/L	0.0169	0.45%
Sn 189.927†	4854.5	0.9847	mg/L	0.00414	1.969	mg/L	0.0083	0.42%
Sr 421.552†	2642897.9	2.924	mg/L	0.0284	5.849	mg/L	0.0567	0.97%
Ti 334.903†	5236.8	0.2025	mg/L	0.00088	0.4049	mg/L	0.00175	0.43%
Tl 190.801†	1280.6	0.7444	mg/L	0.00490	1.489	mg/L	0.0098	0.66%
V 292.402†	104596.7	0.7628	mg/L	0.00462	1.526	mg/L	0.0092	0.61%
Zn 206.200†	17495.2	4.411	mg/L	0.0244	8.822	mg/L	0.0489	0.55%

Sequence No.: 25
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 4/29/2013 10:47:33 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	2683304.8	103.1	%	0.79				0.77%
ScR 361.383	379393.2	101.5	%	0.98				0.96%
Ag 328.068†	222338.8	1.016	mg/L	0.0071	1.016	mg/L	0.0071	0.70%
Al 308.215†	2314.8	2.004	mg/L	0.0348	2.004	mg/L	0.0348	1.73%
As 188.979†	2666.9	1.991	mg/L	0.0225	1.991	mg/L	0.0225	1.13%
B 249.677†	6087.7	1.013	mg/L	0.0104	1.013	mg/L	0.0104	1.02%
Ba 233.527†	5875.7	1.060	mg/L	0.0170	1.060	mg/L	0.0170	1.60%
Be 313.042†	555002.0	0.9741	mg/L	0.01516	0.9741	mg/L	0.01516	1.56%
Ca 317.933†	20223.4	2.027	mg/L	0.0213	2.027	mg/L	0.0213	1.05%
Cd 228.802†	23362.4	1.018	mg/L	0.0105	1.018	mg/L	0.0105	1.03%
Co 228.616†	31028.1	1.011	mg/L	0.0108	1.011	mg/L	0.0108	1.07%
Cr 267.716†	8516.1	1.036	mg/L	0.0102	1.036	mg/L	0.0102	0.99%
Cu 324.752†	251480.2	0.9922	mg/L	0.00676	0.9922	mg/L	0.00676	0.68%
Fe 273.955†	2380.6	1.976	mg/L	0.0162	1.976	mg/L	0.0162	0.82%
K 766.490†	39804.2	19.49	mg/L	0.274	19.49	mg/L	0.274	1.40%
Mg 279.077†	1815.9	1.970	mg/L	0.0256	1.970	mg/L	0.0256	1.30%
Mn 257.610†	47963.1	0.9440	mg/L	0.01466	0.9440	mg/L	0.01466	1.55%
Mo 202.031†	18125.3	0.9903	mg/L	0.01066	0.9903	mg/L	0.01066	1.08%
Na 589.592†	574168.5	50.54	mg/L	0.667	50.54	mg/L	0.667	1.32%
Na 330.237†	1594.2	50.42	mg/L	0.630	50.42	mg/L	0.630	1.25%
Ni 231.604†	3496.5	1.038	mg/L	0.0099	1.038	mg/L	0.0099	0.96%
Pb 220.353†	15461.3	1.985	mg/L	0.0220	1.985	mg/L	0.0220	1.11%
Sb 206.836†	5321.7	2.044	mg/L	0.0235	2.044	mg/L	0.0235	1.15%
Se 196.026†	2981.3	1.958	mg/L	0.0150	1.958	mg/L	0.0150	0.77%
Si 288.158†	2700.0	1.973	mg/L	0.0277	1.973	mg/L	0.0277	1.40%
Sn 189.927†	4763.7	0.9645	mg/L	0.01092	0.9645	mg/L	0.01092	1.13%
Sr 421.552†	897768.8	0.9934	mg/L	0.01432	0.9934	mg/L	0.01432	1.44%
Ti 334.903†	25425.3	0.9959	mg/L	0.01457	0.9959	mg/L	0.01457	1.46%
Tl 190.801†	3560.3	2.082	mg/L	0.0286	2.082	mg/L	0.0286	1.37%
V 292.402†	133069.2	0.9741	mg/L	0.00732	0.9741	mg/L	0.00732	0.75%
Zn 206.200†	3997.1	1.008	mg/L	0.0096	1.008	mg/L	0.0096	0.96%

Sequence No.: 26
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 4/29/2013 10:51:22 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	2720940.0	104.5	%	0.83				0.79%
ScR 361.383	387530.5	103.7	%	0.78				0.76%
Ag 328.068†	48.0	0.00022	mg/L	0.000288	0.00022	mg/L	0.000288	131.00%
Al 308.215†	5.5	0.00484	mg/L	0.003496	0.00484	mg/L	0.003496	72.30%
As 188.979†	3.9	0.00288	mg/L	0.003074	0.00288	mg/L	0.003074	106.87%
B 249.677†	10.2	0.00170	mg/L	0.000855	0.00170	mg/L	0.000855	50.41%
Ba 233.527†	2.7	0.00048	mg/L	0.000538	0.00048	mg/L	0.000538	111.13%
Be 313.042†	33.0	0.00006	mg/L	0.000057	0.00006	mg/L	0.000057	98.54%
Ca 317.933†	5.5	0.00055	mg/L	0.000391	0.00055	mg/L	0.000391	71.15%
Cd 228.802†	11.8	0.00050	mg/L	0.000141	0.00050	mg/L	0.000141	27.98%
Co 228.616†	9.3	0.00030	mg/L	0.000191	0.00030	mg/L	0.000191	63.00%
Cr 267.716†	3.7	0.00045	mg/L	0.000510	0.00045	mg/L	0.000510	113.16%
Cu 324.752†	132.1	0.00052	mg/L	0.000212	0.00052	mg/L	0.000212	40.71%
Fe 273.955†	3.5	0.00289	mg/L	0.000485	0.00289	mg/L	0.000485	16.76%
K 766.490†	26.4	0.01293	mg/L	0.012417	0.01293	mg/L	0.012417	96.06%
Mg 279.077†	-7.5	-0.00816	mg/L	0.006298	-0.00816	mg/L	0.006298	77.17%
Mn 257.610†	4.3	0.00008	mg/L	0.000105	0.00008	mg/L	0.000105	125.25%
Mo 202.031†	15.6	0.00085	mg/L	0.000118	0.00085	mg/L	0.000118	13.82%
Na 589.592†	222.6	0.01960	mg/L	0.002721	0.01960	mg/L	0.002721	13.89%
Na 330.237†	-8.9	-0.2830	mg/L	0.07351	-0.2830	mg/L	0.07351	25.98%
Ni 231.604†	0.0	0.00001	mg/L	0.000993	0.00001	mg/L	0.000993	>999.9%
Pb 220.353†	6.0	0.00077	mg/L	0.000558	0.00077	mg/L	0.000558	72.68%
Sb 206.836†	3.4	0.00130	mg/L	0.001163	0.00130	mg/L	0.001163	89.61%
Se 196.026†	6.5	0.00427	mg/L	0.003624	0.00427	mg/L	0.003624	84.96%
Si 288.158†	-0.7	-0.00051	mg/L	0.003011	-0.00051	mg/L	0.003011	594.29%
Sn 189.927†	2.7	0.00054	mg/L	0.000457	0.00054	mg/L	0.000457	84.53%
Sr 421.552†	96.9	0.00011	mg/L	0.000020	0.00011	mg/L	0.000020	18.38%
Ti 334.903†	11.6	0.00046	mg/L	0.000343	0.00046	mg/L	0.000343	75.35%
Tl 190.801†	2.5	0.00145	mg/L	0.000894	0.00145	mg/L	0.000894	61.41%
V 292.402†	37.9	0.00028	mg/L	0.000322	0.00028	mg/L	0.000322	115.73%
Zn 206.200†	-0.7	-0.00017	mg/L	0.000544	-0.00017	mg/L	0.000544	311.29%

Sequence No.: 27
Sample ID: WN07 MB1 TWC

Autosampler Location: 319
Date Collected: 4/29/2013 10:55:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 MB1 TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2743448.0	105.4	%	0.55				0.52%
ScR 361.383	390639.5	104.5	%	1.26				1.20%
Ag 328.068†	53.2	0.00024	mg/L	0.000120	0.00024	mg/L	0.000120	49.35%
Al 308.215†	10.6	0.00931	mg/L	0.007511	0.00931	mg/L	0.007511	80.64%
As 188.979†	0.3	0.00021	mg/L	0.000956	0.00021	mg/L	0.000956	461.03%
B 249.677†	0.7	0.00011	mg/L	0.000721	0.00011	mg/L	0.000721	652.93%
Ba 233.527†	0.4	0.00008	mg/L	0.000560	0.00008	mg/L	0.000560	742.15%
Be 313.042†	-25.4	-0.00004	mg/L	0.000029	-0.00004	mg/L	0.000029	65.48%
Ca 317.933†	53.0	0.00531	mg/L	0.001047	0.00531	mg/L	0.001047	19.70%
Cd 228.802†	9.3	0.00041	mg/L	0.000085	0.00041	mg/L	0.000085	20.90%
Co 228.616†	5.0	0.00016	mg/L	0.000122	0.00016	mg/L	0.000122	74.83%
Cr 267.716†	1.0	0.00012	mg/L	0.000967	0.00012	mg/L	0.000967	774.48%
Cu 324.752†	175.2	0.00069	mg/L	0.000034	0.00069	mg/L	0.000034	4.90%
Fe 273.955†	3.0	0.00251	mg/L	0.002115	0.00251	mg/L	0.002115	84.44%
K 766.490†	1.8	0.00091	mg/L	0.026597	0.00091	mg/L	0.026597	>999.9%
Mg 279.077†	-6.0	-0.00650	mg/L	0.005165	-0.00650	mg/L	0.005165	79.50%
Mn 257.610†	2.1	0.00004	mg/L	0.000082	0.00004	mg/L	0.000082	202.43%
Mo 202.031†	8.9	0.00049	mg/L	0.000355	0.00049	mg/L	0.000355	72.81%
Na 589.592†	5.6	0.00049	mg/L	0.001021	0.00049	mg/L	0.001021	207.53%
Na 330.237†	-10.0	-0.3170	mg/L	0.08973	-0.3170	mg/L	0.08973	28.31%
Ni 231.604†	2.1	0.00063	mg/L	0.000807	0.00063	mg/L	0.000807	127.93%
Pb 220.353†	6.0	0.00077	mg/L	0.000581	0.00077	mg/L	0.000581	75.43%
Sb 206.836†	-0.8	-0.00029	mg/L	0.002450	-0.00029	mg/L	0.002450	831.79%
Se 196.026†	6.7	0.00438	mg/L	0.004598	0.00438	mg/L	0.004598	104.87%
Si 288.158†	98.3	0.07204	mg/L	0.002401	0.07204	mg/L	0.002401	3.33%
Sn 189.927†	0.4	0.00009	mg/L	0.000524	0.00009	mg/L	0.000524	582.66%
Sr 421.552†	-29.8	-0.00003	mg/L	0.000017	-0.00003	mg/L	0.000017	52.97%
Ti 334.903†	11.7	0.00046	mg/L	0.000346	0.00046	mg/L	0.000346	75.81%
Tl 190.801†	-2.8	-0.00167	mg/L	0.001635	-0.00167	mg/L	0.001635	97.92%
V 292.402†	11.1	0.00008	mg/L	0.000151	0.00008	mg/L	0.000151	186.09%
Zn 206.200†	-1.8	-0.00044	mg/L	0.000624	-0.00044	mg/L	0.000624	142.49%

Sequence No.: 28
Sample ID: WN07 MB2 LEN

Autosampler Location: 320
Date Collected: 4/29/2013 10:59:55 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 MB2 LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 MB2 LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2649786.6	101.8	%	0.77				0.76%
ScR 361.383	386592.7	103.4	%	0.25				0.25%
Ag 328.068†	31.1	0.00014	mg/L	0.000215	0.00071	mg/L	0.001076	150.64%
Al 308.215†	9.5	0.00832	mg/L	0.005010	0.04161	mg/L	0.025052	60.21%
As 188.979†	1.9	0.00143	mg/L	0.001979	0.00713	mg/L	0.009894	138.76%
B 249.677†	118.6	0.01976	mg/L	0.000805	0.09879	mg/L	0.004027	4.08%
Ba 233.527†	108.7	0.01960	mg/L	0.000045	0.09800	mg/L	0.000225	0.23%
Be 313.042†	-19.6	-0.00003	mg/L	0.000017	-0.00017	mg/L	0.000083	48.40%
Ca 317.933†	1045.8	0.1048	mg/L	0.00073	0.5240	mg/L	0.00365	0.70%
Cd 228.802†	11.3	0.00049	mg/L	0.000119	0.00247	mg/L	0.000597	24.15%
Co 228.616†	5.7	0.00018	mg/L	0.000039	0.00092	mg/L	0.000196	21.38%
Cr 267.716†	1.2	0.00015	mg/L	0.000969	0.00073	mg/L	0.004845	661.75%
Cu 324.752†	256.3	0.00101	mg/L	0.000214	0.00506	mg/L	0.001069	21.13%
Fe 273.955†	3.4	0.00280	mg/L	0.000857	0.01402	mg/L	0.004284	30.56%
K 766.490†	75.5	0.03698	mg/L	0.011793	0.1849	mg/L	0.05897	31.89%
Mg 279.077†	14.9	0.01613	mg/L	0.006299	0.08066	mg/L	0.031496	39.05%
Mn 257.610†	3.8	0.00007	mg/L	0.000060	0.00037	mg/L	0.000298	79.67%
Mo 202.031†	3.9	0.00021	mg/L	0.000281	0.00106	mg/L	0.001404	132.25%
Na 589.592†	3281644.1	288.8	mg/L	1.48	1444	mg/L	7.38	0.51%
Na 330.237†	9168.5	290.1	mg/L	1.41	1450	mg/L	7.03	0.48%
Ni 231.604†	10.9	0.00323	mg/L	0.000123	0.01614	mg/L	0.000615	3.81%
Pb 220.353†	2.1	0.00027	mg/L	0.000629	0.00134	mg/L	0.003147	235.51%
Sb 206.836†	-6.5	-0.00249	mg/L	0.001679	-0.01245	mg/L	0.008396	67.43%
Se 196.026†	7.1	0.00468	mg/L	0.001422	0.02341	mg/L	0.007112	30.38%
Si 288.158†	41.7	0.03052	mg/L	0.002543	0.1526	mg/L	0.01271	8.33%
Sn 189.927†	-1.1	-0.00021	mg/L	0.000632	-0.00103	mg/L	0.003162	308.31%
Sr 421.552†	207.9	0.00023	mg/L	0.000005	0.00115	mg/L	0.000026	2.23%
Ti 334.903†	11.4	0.00044	mg/L	0.000924	0.00220	mg/L	0.004619	209.68%
Tl 190.801†	-3.8	-0.00222	mg/L	0.001065	-0.01112	mg/L	0.005323	47.87%
V 292.402†	1.9	0.00001	mg/L	0.000069	0.00007	mg/L	0.000344	481.23%
Zn 206.200†	54.3	0.01370	mg/L	0.000198	0.06849	mg/L	0.000989	1.44%

Sequence No.: 29
Sample ID: WN07 WDUP LEN

Autosampler Location: 321
Date Collected: 4/29/2013 11:04:28 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 WDUP LEN

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN07 WDUP LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2639051.2	101.4	%	0.18				0.18%
ScR 361.383	384694.9	102.9	%	0.70				0.68%
Ag 328.068†	-36.1	-0.00014	mg/L	0.000104	-0.00068	mg/L	0.000522	76.80%
Al 308.215†	118.3	0.1041	mg/L	0.00339	0.5204	mg/L	0.01695	3.26%
As 188.979†	11.3	0.00794	mg/L	0.003320	0.03968	mg/L	0.016599	41.83%
B 249.677†	56.7	0.00944	mg/L	0.000207	0.04722	mg/L	0.001034	2.19%
Ba 233.527†	1036.1	0.1864	mg/L	0.00118	0.9321	mg/L	0.00592	0.63%
Be 313.042†	29.1	0.00005	mg/L	0.000005	0.00025	mg/L	0.000024	9.26%
Ca 317.933†	43851.2	4.395	mg/L	0.0315	21.97	mg/L	0.157	0.72%
Cd 228.802†	33.0	0.00142	mg/L	0.000039	0.00710	mg/L	0.000194	2.73%
Co 228.616†	112.4	0.00364	mg/L	0.000085	0.01822	mg/L	0.000425	2.33%
Cr 267.716†	8.8	0.00107	mg/L	0.000030	0.00534	mg/L	0.000150	2.81%
Cu 324.752†	277.8	0.00125	mg/L	0.000124	0.00627	mg/L	0.000620	9.89%
Fe 273.955†	3868.2	3.220	mg/L	0.0276	16.10	mg/L	0.138	0.86%
K 766.490†	446.2	0.2184	mg/L	0.01983	1.092	mg/L	0.0992	9.08%
Mg 279.077†	289.4	0.3107	mg/L	0.00295	1.554	mg/L	0.0147	0.95%
Mn 257.610†	8396.9	0.1652	mg/L	0.00152	0.8260	mg/L	0.00758	0.92%
Mo 202.031†	19.7	0.00103	mg/L	0.000143	0.00513	mg/L	0.000717	14.00%
Na 589.592†	3186455.1	280.5	mg/L	1.89	1402	mg/L	9.47	0.67%
Na 330.237†	8689.2	274.7	mg/L	1.38	1374	mg/L	6.91	0.50%
Ni 231.604†	48.4	0.01438	mg/L	0.001323	0.07190	mg/L	0.006617	9.20%
Pb 220.353†	415.0	0.05312	mg/L	0.000262	0.2656	mg/L	0.00131	0.49%
Sb 206.836†	4.5	0.00173	mg/L	0.000174	0.00864	mg/L	0.000871	10.07%
Se 196.026†	8.4	0.00548	mg/L	0.003275	0.02742	mg/L	0.016375	59.71%
Si 288.158†	421.2	0.3086	mg/L	0.00405	1.543	mg/L	0.0203	1.31%
Sn 189.927†	-5.2	-0.00067	mg/L	0.000721	-0.00337	mg/L	0.003603	106.83%
Sr 421.552†	150930.3	0.1670	mg/L	0.00108	0.8350	mg/L	0.00539	0.65%
Ti 334.903†	23.1	0.00064	mg/L	0.000157	0.00322	mg/L	0.000785	24.40%
Tl 190.801†	3.0	0.00217	mg/L	0.001230	0.01087	mg/L	0.006148	56.54%
V 292.402†	115.3	0.00071	mg/L	0.000117	0.00354	mg/L	0.000583	16.45%
Zn 206.200†	2278.1	0.5743	mg/L	0.00466	2.872	mg/L	0.0233	0.81%

Sequence No.: 30
Sample ID: WN07 W LEN

Autosampler Location: 322
Date Collected: 4/29/2013 11:08:46 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 W LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 W LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2633515.0	101.2	%	0.16				0.16%
ScR 361.383	382926.2	102.5	%	0.62				0.61%
Ag 328.068†	24.7	0.00014	mg/L	0.000208	0.00071	mg/L	0.001038	146.79%
Al 308.215†	122.9	0.1081	mg/L	0.00481	0.5406	mg/L	0.02407	4.45%
As 188.979†	11.9	0.00834	mg/L	0.000912	0.04172	mg/L	0.004559	10.93%
B 249.677†	58.1	0.00968	mg/L	0.000862	0.04838	mg/L	0.004309	8.91%
Ba 233.527†	1052.7	0.1894	mg/L	0.00076	0.9471	mg/L	0.00379	0.40%
Be 313.042†	29.7	0.00005	mg/L	0.000011	0.00026	mg/L	0.000053	20.35%
Ca 317.933†	43920.2	4.401	mg/L	0.0142	22.01	mg/L	0.071	0.32%
Cd 228.802†	37.2	0.00160	mg/L	0.000070	0.00801	mg/L	0.000350	4.37%
Co 228.616†	108.6	0.00352	mg/L	0.000040	0.01760	mg/L	0.000199	1.13%
Cr 267.716†	8.4	0.00102	mg/L	0.000803	0.00512	mg/L	0.004014	78.46%
Cu 324.752†	282.7	0.00127	mg/L	0.000069	0.00637	mg/L	0.000347	5.45%
Fe 273.955†	3907.6	3.252	mg/L	0.0283	16.26	mg/L	0.141	0.87%
K 766.490†	419.4	0.2053	mg/L	0.01360	1.027	mg/L	0.0680	6.62%
Mg 279.077†	292.9	0.3145	mg/L	0.00175	1.572	mg/L	0.0087	0.56%
Mn 257.610†	8430.2	0.1659	mg/L	0.00100	0.8293	mg/L	0.00499	0.60%
Mo 202.031†	17.5	0.00091	mg/L	0.000101	0.00453	mg/L	0.000506	11.16%
Na 589.592†	3225850.5	283.9	mg/L	1.42	1420	mg/L	7.08	0.50%
Na 330.237†	8727.1	275.9	mg/L	0.49	1380	mg/L	2.44	0.18%
Ni 231.604†	52.2	0.01550	mg/L	0.001623	0.07748	mg/L	0.008114	10.47%
Pb 220.353†	420.6	0.05384	mg/L	0.000317	0.2692	mg/L	0.00158	0.59%
Sb 206.836†	-4.4	-0.00173	mg/L	0.000375	-0.00864	mg/L	0.001874	21.69%
Se 196.026†	7.4	0.00482	mg/L	0.003578	0.02408	mg/L	0.017889	74.29%
Si 288.158†	425.6	0.3118	mg/L	0.00415	1.559	mg/L	0.0208	1.33%
Sn 189.927†	-8.4	-0.00133	mg/L	0.000632	-0.00664	mg/L	0.003158	47.53%
Sr 421.552†	151678.2	0.1678	mg/L	0.00089	0.8392	mg/L	0.00443	0.53%
Ti 334.903†	23.3	0.00065	mg/L	0.000243	0.00325	mg/L	0.001216	37.36%
Tl 190.801†	0.8	0.00089	mg/L	0.002081	0.00445	mg/L	0.010406	233.79%
V 292.402†	121.3	0.00075	mg/L	0.000093	0.00375	mg/L	0.000467	12.44%
Zn 206.200†	2304.4	0.5810	mg/L	0.00323	2.905	mg/L	0.0162	0.56%

Sequence No.: 31
Sample ID: WN07 WSPK LEN

Autosampler Location: 323
Date Collected: 4/29/2013 11:13:04 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WN07 WSPK LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 WSPK LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2636425.0	101.3	%	0.69				0.68%
ScR 361.383	384387.6	102.9	%	0.57				0.55%
Ag 328.068†	46091.1	0.2106	mg/L	0.00067	1.053	mg/L	0.0034	0.32%
Al 308.215†	1041.8	0.9141	mg/L	0.00483	4.570	mg/L	0.0242	0.53%
As 188.979†	1139.9	0.8374	mg/L	0.00513	4.187	mg/L	0.0257	0.61%
B 249.677†	62.0	0.00986	mg/L	0.000336	0.04930	mg/L	0.001678	3.40%
Ba 233.527†	5707.0	1.029	mg/L	0.0090	5.144	mg/L	0.0448	0.87%
Be 313.042†	106825.1	0.1875	mg/L	0.00071	0.9374	mg/L	0.00353	0.38%
Ca 317.933†	82597.2	8.278	mg/L	0.0404	41.39	mg/L	0.202	0.49%
Cd 228.802†	4745.0	0.2043	mg/L	0.00117	1.022	mg/L	0.0059	0.57%
Co 228.616†	6059.7	0.1976	mg/L	0.00059	0.9881	mg/L	0.00297	0.30%
Cr 267.716†	1682.1	0.2042	mg/L	0.00115	1.021	mg/L	0.0057	0.56%
Cu 324.752†	50730.6	0.2004	mg/L	0.00017	1.002	mg/L	0.0008	0.08%
Fe 273.955†	4861.1	4.045	mg/L	0.0163	20.22	mg/L	0.082	0.40%
K 766.490†	8314.9	4.071	mg/L	0.0092	20.35	mg/L	0.046	0.23%
Mg 279.077†	3938.1	4.257	mg/L	0.0308	21.28	mg/L	0.154	0.72%
Mn 257.610†	17907.3	0.3524	mg/L	0.00108	1.762	mg/L	0.0054	0.31%
Mo 202.031†	31.9	0.00164	mg/L	0.000203	0.00818	mg/L	0.001015	12.41%
Na 589.592†	3274742.7	288.2	mg/L	1.23	1441	mg/L	6.13	0.43%
Na 330.237†	8900.6	281.4	mg/L	0.52	1407	mg/L	2.61	0.19%
Ni 231.604†	730.2	0.2165	mg/L	0.00059	1.082	mg/L	0.0029	0.27%
Pb 220.353†	6435.4	0.8260	mg/L	0.00309	4.130	mg/L	0.0155	0.37%
Sb 206.836†	2.3	-0.00118	mg/L	0.000972	-0.00590	mg/L	0.004859	82.37%
Se 196.026†	1262.2	0.8290	mg/L	0.00499	4.145	mg/L	0.0249	0.60%
Si 288.158†	422.6	0.3108	mg/L	0.00278	1.554	mg/L	0.0139	0.89%
Sn 189.927†	-14.9	-0.00232	mg/L	0.000684	-0.01162	mg/L	0.003418	29.42%
Sr 421.552†	329102.8	0.3642	mg/L	0.00098	1.821	mg/L	0.0049	0.27%
Ti 334.903†	32.6	0.00075	mg/L	0.000179	0.00373	mg/L	0.000897	24.03%
Tl 190.801†	1358.2	0.7960	mg/L	0.00415	3.980	mg/L	0.0207	0.52%
V 292.402†	27010.8	0.1975	mg/L	0.00051	0.9877	mg/L	0.00257	0.26%
Zn 206.200†	3093.5	0.7800	mg/L	0.00412	3.900	mg/L	0.0206	0.53%

Sequence No.: 32
Sample ID: WN07 TDUP TWC

Autosampler Location: 324
Date Collected: 4/29/2013 11:17:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 TDUP TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 TDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2642326.7	101.5	%	0.45				0.44%
ScR 361.383	378381.2	101.2	%	0.12				0.12%
Ag 328.068†	-19.3	0.00017	mg/L	0.000196	0.00017	mg/L	0.000196	115.02%
Al 308.215†	1135.4	0.9991	mg/L	0.00603	0.9991	mg/L	0.00603	0.60%
As 188.979†	1200.0	0.8798	mg/L	0.00292	0.8798	mg/L	0.00292	0.33%
B 249.677†	1645.8	0.2741	mg/L	0.00113	0.2741	mg/L	0.00113	0.41%
Ba 233.527†	921.4	0.1652	mg/L	0.00177	0.1652	mg/L	0.00177	1.07%
Be 313.042†	53.0	0.00009	mg/L	0.000012	0.00009	mg/L	0.000012	13.07%
Ca 317.933†	397586.9	39.84	mg/L	0.114	39.84	mg/L	0.114	0.29%
Cd 228.802†	109.4	-0.00011	mg/L	0.000229	-0.00011	mg/L	0.000229	200.62%
Co 228.616†	138.3	0.00444	mg/L	0.000121	0.00444	mg/L	0.000121	2.72%
Cr 267.716†	27.0	0.00213	mg/L	0.000246	0.00213	mg/L	0.000246	11.53%
Cu 324.752†	611.8	0.00269	mg/L	0.000147	0.00269	mg/L	0.000147	5.48%
Fe 273.955†	7981.0	6.643	mg/L	0.0342	6.643	mg/L	0.0342	0.51%
K 766.490†	6535.0	3.199	mg/L	0.0054	3.199	mg/L	0.0054	0.17%
Mg 279.077†	7507.4	8.112	mg/L	0.0016	8.112	mg/L	0.0016	0.02%
Mn 257.610†	57204.4	1.125	mg/L	0.0036	1.125	mg/L	0.0036	0.32%
Mo 202.031†	133.1	0.00680	mg/L	0.000249	0.00680	mg/L	0.000249	3.66%
Na 589.592†	1238625.2	109.0	mg/L	0.49	109.0	mg/L	0.49	0.45%
Na 330.237†	3396.3	107.3	mg/L	0.43	107.3	mg/L	0.43	0.40%
Ni 231.604†	29.6	0.00879	mg/L	0.000538	0.00879	mg/L	0.000538	6.12%
Pb 220.353†	0.1	-0.00007	mg/L	0.000414	-0.00007	mg/L	0.000414	563.74%
Sb 206.836†	10.4	0.00393	mg/L	0.002122	0.00393	mg/L	0.002122	53.97%
Se 196.026†	3.9	0.00241	mg/L	0.001304	0.00241	mg/L	0.001304	54.00%
Si 288.158†	24429.6	17.90	mg/L	0.115	17.90	mg/L	0.115	0.64%
Sn 189.927†	-40.0	-0.00475	mg/L	0.001207	-0.00475	mg/L	0.001207	25.41%
Sr 421.552†	769033.4	0.8510	mg/L	0.00439	0.8510	mg/L	0.00439	0.52%
Ti 334.903†	842.0	0.03065	mg/L	0.000221	0.03065	mg/L	0.000221	0.72%
Tl 190.801†	16.9	0.01077	mg/L	0.001350	0.01077	mg/L	0.001350	12.54%
V 292.402†	531.0	0.00371	mg/L	0.000036	0.00371	mg/L	0.000036	0.96%
Zn 206.200†	1824.5	0.4630	mg/L	0.00309	0.4630	mg/L	0.00309	0.67%

Sequence No.: 33
Sample ID: WN07 T TWC

Autosampler Location: 325
Date Collected: 4/29/2013 11:21:39 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 T TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 T TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2664856.2	102.4	%	0.33				0.32%
ScR 361.383	377616.2	101.0	%	0.26				0.26%
Ag 328.068†	-10.8	0.00021	mg/L	0.000221	0.00021	mg/L	0.000221	106.29%
Al 308.215†	1124.3	0.9894	mg/L	0.00446	0.9894	mg/L	0.00446	0.45%
As 188.979†	1182.5	0.8669	mg/L	0.00356	0.8669	mg/L	0.00356	0.41%
B 249.677†	1618.3	0.2695	mg/L	0.00079	0.2695	mg/L	0.00079	0.29%
Ba 233.527†	902.0	0.1617	mg/L	0.00173	0.1617	mg/L	0.00173	1.07%
Be 313.042†	37.0	0.00006	mg/L	0.000020	0.00006	mg/L	0.000020	31.67%
Ca 317.933†	394851.0	39.57	mg/L	0.396	39.57	mg/L	0.396	1.00%
Cd 228.802†	103.6	-0.00030	mg/L	0.000133	-0.00030	mg/L	0.000133	44.62%
Co 228.616†	130.5	0.00418	mg/L	0.000165	0.00418	mg/L	0.000165	3.94%
Cr 267.716†	22.1	0.00153	mg/L	0.000107	0.00153	mg/L	0.000107	7.04%
Cu 324.752†	592.7	0.00262	mg/L	0.000061	0.00262	mg/L	0.000061	2.32%
Fe 273.955†	8243.8	6.861	mg/L	0.0055	6.861	mg/L	0.0055	0.08%
K 766.490†	6402.8	3.135	mg/L	0.0079	3.135	mg/L	0.0079	0.25%
Mg 279.077†	7719.6	8.342	mg/L	0.0334	8.342	mg/L	0.0334	0.40%
Mn 257.610†	56118.5	1.104	mg/L	0.0096	1.104	mg/L	0.0096	0.87%
Mo 202.031†	127.4	0.00649	mg/L	0.000208	0.00649	mg/L	0.000208	3.20%
Na 589.592†	1235153.1	108.7	mg/L	0.57	108.7	mg/L	0.57	0.52%
Na 330.237†	3457.2	109.3	mg/L	0.24	109.3	mg/L	0.24	0.22%
Ni 231.604†	26.4	0.00783	mg/L	0.000327	0.00783	mg/L	0.000327	4.18%
Pb 220.353†	2.9	0.00027	mg/L	0.000134	0.00027	mg/L	0.000134	49.75%
Sb 206.836†	11.0	0.00417	mg/L	0.001441	0.00417	mg/L	0.001441	34.51%
Se 196.026†	2.4	0.00149	mg/L	0.005180	0.00149	mg/L	0.005180	348.30%
Si 288.158†	25316.3	18.55	mg/L	0.124	18.55	mg/L	0.124	0.67%
Sn 189.927†	-43.9	-0.00554	mg/L	0.000367	-0.00554	mg/L	0.000367	6.62%
Sr 421.552†	770332.2	0.8524	mg/L	0.00352	0.8524	mg/L	0.00352	0.41%
Ti 334.903†	844.5	0.03076	mg/L	0.000357	0.03076	mg/L	0.000357	1.16%
Tl 190.801†	18.1	0.01153	mg/L	0.001413	0.01153	mg/L	0.001413	12.26%
V 292.402†	518.9	0.00360	mg/L	0.000028	0.00360	mg/L	0.000028	0.79%
Zn 206.200†	1791.3	0.4547	mg/L	0.00194	0.4547	mg/L	0.00194	0.43%

Sequence No.: 34
Sample ID: WN07 TSPK TWC

Autosampler Location: 326
Date Collected: 4/29/2013 11:25:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 TSPK TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 TSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2632840.6	101.1	%	0.42				0.42%
ScR 361.383	383915.2	102.7	%	0.69				0.67%
Ag 328.068†	120572.2	0.5512	mg/L	0.00285	0.5512	mg/L	0.00285	0.52%
Al 308.215†	3425.8	3.008	mg/L	0.0249	3.008	mg/L	0.0249	0.83%
As 188.979†	4168.3	3.061	mg/L	0.0094	3.061	mg/L	0.0094	0.31%
B 249.677†	1602.9	0.2658	mg/L	0.00278	0.2658	mg/L	0.00278	1.04%
Ba 233.527†	12875.5	2.321	mg/L	0.0234	2.321	mg/L	0.0234	1.01%
Be 313.042†	285273.8	0.5007	mg/L	0.00259	0.5007	mg/L	0.00259	0.52%
Ca 317.933†	508951.2	51.00	mg/L	0.129	51.00	mg/L	0.129	0.25%
Cd 228.802†	12160.7	0.5185	mg/L	0.00202	0.5185	mg/L	0.00202	0.39%
Co 228.616†	15532.4	0.5065	mg/L	0.00267	0.5065	mg/L	0.00267	0.53%
Cr 267.716†	4270.7	0.5172	mg/L	0.00424	0.5172	mg/L	0.00424	0.82%
Cu 324.752†	133298.6	0.5265	mg/L	0.00265	0.5265	mg/L	0.00265	0.50%
Fe 273.955†	10599.8	8.819	mg/L	0.0580	8.819	mg/L	0.0580	0.66%
K 766.490†	26910.8	13.17	mg/L	0.159	13.17	mg/L	0.159	1.21%
Mg 279.077†	17262.8	18.66	mg/L	0.145	18.66	mg/L	0.145	0.78%
Mn 257.610†	81601.1	1.606	mg/L	0.0048	1.606	mg/L	0.0048	0.30%
Mo 202.031†	143.8	0.00723	mg/L	0.000310	0.00723	mg/L	0.000310	4.28%
Na 589.592†	1374288.3	121.0	mg/L	0.82	121.0	mg/L	0.82	0.68%
Na 330.237†	3817.8	120.5	mg/L	1.05	120.5	mg/L	1.05	0.87%
Ni 231.604†	1754.1	0.5199	mg/L	0.00334	0.5199	mg/L	0.00334	0.64%
Pb 220.353†	15494.0	1.989	mg/L	0.0099	1.989	mg/L	0.0099	0.50%
Sb 206.836†	21.9	0.00322	mg/L	0.001313	0.00322	mg/L	0.001313	40.74%
Se 196.026†	3190.8	2.096	mg/L	0.0122	2.096	mg/L	0.0122	0.58%
Si 288.158†	23349.6	17.11	mg/L	0.153	17.11	mg/L	0.153	0.89%
Sn 189.927†	-48.1	-0.00545	mg/L	0.000447	-0.00545	mg/L	0.000447	8.20%
Sr 421.552†	1239270.4	1.371	mg/L	0.0126	1.371	mg/L	0.0126	0.92%
Ti 334.903†	864.3	0.03076	mg/L	0.000366	0.03076	mg/L	0.000366	1.19%
Tl 190.801†	3560.6	2.087	mg/L	0.0039	2.087	mg/L	0.0039	0.19%
V 292.402†	71021.8	0.5195	mg/L	0.00166	0.5195	mg/L	0.00166	0.32%
Zn 206.200†	3776.9	0.9552	mg/L	0.00722	0.9552	mg/L	0.00722	0.76%

Sequence No.: 35
Sample ID: ~~WN07 TPOST TWC~~ ZZZZZZ
BA 4/29/13
Dilution: 1.000000X

Autosampler Location: 327
Date Collected: 4/29/2013 11:30:13 AM
Data Type: Original

Nebulizer Parameters: WN07 TPOST TWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN07 TPOST TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2614405.0	100.4	%	0.87				0.86%
ScR 361.383	373061.0	99.82	%	0.196				0.20%
Ag 328.068†	236330.8	1.080	mg/L	0.0070	1.080	mg/L	0.0070	0.65%
Al 308.215†	5798.4	5.089	mg/L	0.0408	5.089	mg/L	0.0408	0.80%
As 188.979†	6996.9	5.140	mg/L	0.0436	5.140	mg/L	0.0436	0.85%
B 249.677†	1613.5	0.2664	mg/L	0.00363	0.2664	mg/L	0.00363	1.36%
Ba 233.527†	24941.2	4.498	mg/L	0.0142	4.498	mg/L	0.0142	0.32%
Be 313.042†	560258.6	0.9833	mg/L	0.00398	0.9833	mg/L	0.00398	0.40%
Ca 317.933†	601502.5	60.28	mg/L	0.171	60.28	mg/L	0.171	0.28%
Cd 228.802†	23838.6	1.021	mg/L	0.0073	1.021	mg/L	0.0073	0.72%
Co 228.616†	30391.4	0.9911	mg/L	0.00829	0.9911	mg/L	0.00829	0.84%
Cr 267.716†	8528.9	1.034	mg/L	0.0049	1.034	mg/L	0.0049	0.47%
Cu 324.752†	262341.9	1.036	mg/L	0.0097	1.036	mg/L	0.0097	0.94%
Fe 273.955†	13031.2	10.84	mg/L	0.070	10.84	mg/L	0.070	0.64%
K 766.490†	47979.8	23.49	mg/L	0.146	23.49	mg/L	0.146	0.62%
Mg 279.077†	26800.6	28.98	mg/L	0.160	28.98	mg/L	0.160	0.55%
Mn 257.610†	106224.1	2.090	mg/L	0.0160	2.090	mg/L	0.0160	0.77%
Mo 202.031†	151.1	0.00749	mg/L	0.000427	0.00749	mg/L	0.000427	5.70%
Na 589.592†	1504659.7	132.4	mg/L	0.63	132.4	mg/L	0.63	0.47%
Na 330.237†	4133.6	130.4	mg/L	1.22	130.4	mg/L	1.22	0.94%
Ni 231.604†	3499.8	1.037	mg/L	0.0036	1.037	mg/L	0.0036	0.35%
Pb 220.353†	30473.9	3.912	mg/L	0.0345	3.912	mg/L	0.0345	0.88%
Sb 206.836†	37.0	0.00387	mg/L	0.001449	0.00387	mg/L	0.001449	37.44%
Se 196.026†	6292.7	4.133	mg/L	0.0373	4.133	mg/L	0.0373	0.90%
Si 288.158†	23586.6	17.29	mg/L	0.116	17.29	mg/L	0.116	0.67%
Sn 189.927†	-57.5	-0.00656	mg/L	0.001337	-0.00656	mg/L	0.001337	20.39%
Sr 421.552†	1713155.6	1.896	mg/L	0.0074	1.896	mg/L	0.0074	0.39%
Ti 334.903†	887.6	0.03102	mg/L	0.000931	0.03102	mg/L	0.000931	3.00%
Tl 190.801†	6922.7	4.056	mg/L	0.0333	4.056	mg/L	0.0333	0.82%
V 292.402†	139893.6	1.024	mg/L	0.0062	1.024	mg/L	0.0062	0.61%
Zn 206.200†	5770.7	1.458	mg/L	0.0052	1.458	mg/L	0.0052	0.35%

Sequence No.: 36
Sample ID: WN07 MB1SPK TWC

Autosampler Location: 328
Date Collected: 4/29/2013 11:33:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WN07 MB1SPK TWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN07 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2731184.0	104.9	%	0.52				0.50%
ScR 361.383	384970.8	103.0	%	0.13				0.13%
Ag 328.068†	115410.3	0.5274	mg/L	0.00135	0.5274	mg/L	0.00135	0.26%
Al 308.215†	2322.6	2.037	mg/L	0.0057	2.037	mg/L	0.0057	0.28%
As 188.979†	2741.5	2.015	mg/L	0.0063	2.015	mg/L	0.0063	0.31%
B 249.677†	5.5	-0.00022	mg/L	0.001533	-0.00022	mg/L	0.001533	691.40%
Ba 233.527†	11509.2	2.076	mg/L	0.0214	2.076	mg/L	0.0214	1.03%
Be 313.042†	272505.7	0.4783	mg/L	0.00517	0.4783	mg/L	0.00517	1.08%
Ca 317.933†	95465.1	9.567	mg/L	0.0313	9.567	mg/L	0.0313	0.33%
Cd 228.802†	11454.2	0.4933	mg/L	0.00158	0.4933	mg/L	0.00158	0.32%
Co 228.616†	14911.8	0.4864	mg/L	0.00089	0.4864	mg/L	0.00089	0.18%
Cr 267.716†	4249.2	0.5158	mg/L	0.00289	0.5158	mg/L	0.00289	0.56%
Cu 324.752†	123492.8	0.4875	mg/L	0.00231	0.4875	mg/L	0.00231	0.47%
Fe 273.955†	2378.8	1.977	mg/L	0.0037	1.977	mg/L	0.0037	0.19%
K 766.490†	19781.2	9.684	mg/L	0.0089	9.684	mg/L	0.0089	0.09%
Mg 279.077†	9316.5	10.08	mg/L	0.031	10.08	mg/L	0.031	0.31%
Mn 257.610†	23926.7	0.4711	mg/L	0.00250	0.4711	mg/L	0.00250	0.53%
Mo 202.031†	26.4	0.00130	mg/L	0.000100	0.00130	mg/L	0.000100	7.65%
Na 589.592†	114869.2	10.11	mg/L	0.080	10.11	mg/L	0.080	0.79%
Na 330.237†	316.2	9.859	mg/L	0.1915	9.859	mg/L	0.1915	1.94%
Ni 231.604†	1725.2	0.5113	mg/L	0.00388	0.5113	mg/L	0.00388	0.76%
Pb 220.353†	15153.4	1.945	mg/L	0.0072	1.945	mg/L	0.0072	0.37%
Sb 206.836†	4.3	-0.00356	mg/L	0.001450	-0.00356	mg/L	0.001450	40.74%
Se 196.026†	3009.6	1.977	mg/L	0.0105	1.977	mg/L	0.0105	0.53%
Si 288.158†	109.9	0.08334	mg/L	0.006208	0.08334	mg/L	0.006208	7.45%
Sn 189.927†	-15.5	-0.00234	mg/L	0.000262	-0.00234	mg/L	0.000262	11.20%
Sr 421.552†	446583.7	0.4942	mg/L	0.00248	0.4942	mg/L	0.00248	0.50%
Ti 334.903†	45.5	0.00112	mg/L	0.000235	0.00112	mg/L	0.000235	21.07%
Tl 190.801†	3466.3	2.030	mg/L	0.0132	2.030	mg/L	0.0132	0.65%
V 292.402†	67725.0	0.4957	mg/L	0.00020	0.4957	mg/L	0.00020	0.04%
Zn 206.200†	1950.7	0.4920	mg/L	0.00110	0.4920	mg/L	0.00110	0.22%

Sequence No.: 37
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 4/29/2013 11:37:33 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	2707143.6	104.0	%	0.17				0.16%
ScR 361.383	384797.3	103.0	%	0.70				0.68%
Ag 328.068†	227909.0	1.041	mg/L	0.0076	1.041	mg/L	0.0076	0.73%
Al 308.215†	2285.8	1.978	mg/L	0.0133	1.978	mg/L	0.0133	0.67%
As 188.979†	2642.9	1.974	mg/L	0.0051	1.974	mg/L	0.0051	0.26%
B 249.677†	6007.6	0.9995	mg/L	0.00710	0.9995	mg/L	0.00710	0.71%
Ba 233.527†	5791.1	1.044	mg/L	0.0054	1.044	mg/L	0.0054	0.52%
Be 313.042†	553424.9	0.9713	mg/L	0.00183	0.9713	mg/L	0.00183	0.19%
Ca 317.933†	19915.6	1.996	mg/L	0.0083	1.996	mg/L	0.0083	0.42%
Cd 228.802†	23087.4	1.006	mg/L	0.0021	1.006	mg/L	0.0021	0.21%
Co 228.616†	30621.1	0.9975	mg/L	0.00128	0.9975	mg/L	0.00128	0.13%
Cr 267.716†	8416.2	1.023	mg/L	0.0069	1.023	mg/L	0.0069	0.68%
Cu 324.752†	254500.2	1.004	mg/L	0.0043	1.004	mg/L	0.0043	0.43%
Fe 273.955†	2353.0	1.953	mg/L	0.0144	1.953	mg/L	0.0144	0.74%
K 766.490†	39466.2	19.32	mg/L	0.063	19.32	mg/L	0.063	0.33%
Mg 279.077†	1790.6	1.943	mg/L	0.0136	1.943	mg/L	0.0136	0.70%
Mn 257.610†	47750.5	0.9398	mg/L	0.00083	0.9398	mg/L	0.00083	0.09%
Mo 202.031†	17883.2	0.9771	mg/L	0.00306	0.9771	mg/L	0.00306	0.31%
Na 589.592†	571209.3	50.28	mg/L	0.085	50.28	mg/L	0.085	0.17%
Na 330.237†	1579.1	49.94	mg/L	0.149	49.94	mg/L	0.149	0.30%
Ni 231.604†	3432.9	1.019	mg/L	0.0106	1.019	mg/L	0.0106	1.04%
Pb 220.353†	15269.1	1.961	mg/L	0.0051	1.961	mg/L	0.0051	0.26%
Sb 206.836†	5247.6	2.016	mg/L	0.0036	2.016	mg/L	0.0036	0.18%
Se 196.026†	2956.7	1.941	mg/L	0.0038	1.941	mg/L	0.0038	0.19%
Si 288.158†	2690.1	1.966	mg/L	0.0128	1.966	mg/L	0.0128	0.65%
Sn 189.927†	4699.9	0.9516	mg/L	0.00586	0.9516	mg/L	0.00586	0.62%
Sr 421.552†	894657.6	0.9900	mg/L	0.00101	0.9900	mg/L	0.00101	0.10%
Ti 334.903†	25304.9	0.9912	mg/L	0.00188	0.9912	mg/L	0.00188	0.19%
Tl 190.801†	3504.4	2.049	mg/L	0.0075	2.049	mg/L	0.0075	0.37%
V 292.402†	134510.0	0.9845	mg/L	0.00393	0.9845	mg/L	0.00393	0.40%
Zn 206.200†	3934.1	0.9921	mg/L	0.00767	0.9921	mg/L	0.00767	0.77%

Sequence No.: 38
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/29/2013 11:41:37 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	2713680.8	104.3	%	0.05				0.05%
ScR 361.383	388927.4	104.1	%	0.59				0.57%
Ag 328.068†	38.2	0.00017	mg/L	0.000109	0.00017	mg/L	0.000109	62.71%
Al 308.215†	4.9	0.00425	mg/L	0.003102	0.00425	mg/L	0.003102	72.92%
As 188.979†	1.7	0.00130	mg/L	0.001748	0.00130	mg/L	0.001748	134.87%
B 249.677†	3.3	0.00055	mg/L	0.000956	0.00055	mg/L	0.000956	172.68%
Ba 233.527†	2.1	0.00037	mg/L	0.000263	0.00037	mg/L	0.000263	70.47%
Be 313.042†	45.9	0.00008	mg/L	0.000009	0.00008	mg/L	0.000009	10.59%
Ca 317.933†	13.8	0.00138	mg/L	0.000447	0.00138	mg/L	0.000447	32.42%
Cd 228.802†	8.9	0.00039	mg/L	0.000172	0.00039	mg/L	0.000172	44.75%
Co 228.616†	10.8	0.00035	mg/L	0.000144	0.00035	mg/L	0.000144	40.90%
Cr 267.716†	3.4	0.00041	mg/L	0.000380	0.00041	mg/L	0.000380	92.32%
Cu 324.752†	99.5	0.00039	mg/L	0.000055	0.00039	mg/L	0.000055	14.03%
Fe 273.955†	3.6	0.00298	mg/L	0.002093	0.00298	mg/L	0.002093	70.26%
K 766.490†	24.0	0.01177	mg/L	0.007852	0.01177	mg/L	0.007852	66.73%
Mg 279.077†	-7.1	-0.00771	mg/L	0.002486	-0.00771	mg/L	0.002486	32.25%
Mn 257.610†	7.5	0.00015	mg/L	0.000116	0.00015	mg/L	0.000116	78.22%
Mo 202.031†	12.2	0.00067	mg/L	0.000230	0.00067	mg/L	0.000230	34.46%
Na 589.592†	401.9	0.03537	mg/L	0.004746	0.03537	mg/L	0.004746	13.42%
Na 330.237†	-5.6	-0.1758	mg/L	0.21009	-0.1758	mg/L	0.21009	119.52%
Ni 231.604†	5.1	0.00151	mg/L	0.001294	0.00151	mg/L	0.001294	85.57%
Pb 220.353†	9.0	0.00115	mg/L	0.000303	0.00115	mg/L	0.000303	26.30%
Sb 206.836†	3.1	0.00119	mg/L	0.001335	0.00119	mg/L	0.001335	111.92%
Se 196.026†	5.6	0.00368	mg/L	0.002252	0.00368	mg/L	0.002252	61.22%
Si 288.158†	8.8	0.00644	mg/L	0.003117	0.00644	mg/L	0.003117	48.43%
Sn 189.927†	2.7	0.00054	mg/L	0.000582	0.00054	mg/L	0.000582	108.10%
Sr 421.552†	52.7	0.00006	mg/L	0.000002	0.00006	mg/L	0.000002	2.73%
Ti 334.903†	24.1	0.00095	mg/L	0.000382	0.00095	mg/L	0.000382	40.37%
Tl 190.801†	0.8	0.00046	mg/L	0.000219	0.00046	mg/L	0.000219	47.92%
V 292.402†	29.2	0.00021	mg/L	0.000201	0.00021	mg/L	0.000201	93.82%
Zn 206.200†	-0.2	-0.00004	mg/L	0.000221	-0.00004	mg/L	0.000221	542.92%

Sequence No.: 39
Sample ID: WN59 MB1 SWC

Autosampler Location: 329
Date Collected: 4/29/2013 11:45:53 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2737555.1	105.2	%	0.66				0.63%
ScR 361.383	390787.4	104.6	%	0.34				0.32%
Ag 328.068†	16.8	0.00008	mg/L	0.000248	0.00015	mg/L	0.000497	323.80%
Al 308.215†	3.8	0.00335	mg/L	0.004349	0.00671	mg/L	0.008698	129.65%
As 188.979†	1.0	0.00077	mg/L	0.001252	0.00154	mg/L	0.002504	162.92%
B 249.677†	1.7	0.00029	mg/L	0.000335	0.00057	mg/L	0.000671	116.62%
Ba 233.527†	0.8	0.00014	mg/L	0.000419	0.00028	mg/L	0.000839	296.16%
Be 313.042†	-3.7	-0.00001	mg/L	0.000028	-0.00001	mg/L	0.000057	432.71%
Ca 317.933†	81.9	0.00821	mg/L	0.000954	0.01642	mg/L	0.001909	11.62%
Cd 228.802†	5.1	0.00022	mg/L	0.000101	0.00045	mg/L	0.000203	45.45%
Co 228.616†	5.2	0.00017	mg/L	0.000067	0.00034	mg/L	0.000133	39.27%
Cr 267.716†	4.2	0.00052	mg/L	0.000280	0.00103	mg/L	0.000560	54.17%
Cu 324.752†	224.4	0.00089	mg/L	0.000012	0.00177	mg/L	0.000024	1.33%
Fe 273.955†	9.7	0.00807	mg/L	0.001045	0.01615	mg/L	0.002089	12.94%
K 766.490†	15.5	0.00760	mg/L	0.004151	0.01520	mg/L	0.008303	54.61%
Mg 279.077†	-6.8	-0.00730	mg/L	0.010530	-0.01461	mg/L	0.021060	144.16%
Mn 257.610†	15.3	0.00030	mg/L	0.000046	0.00060	mg/L	0.000092	15.19%
Mo 202.031†	3.6	0.00019	mg/L	0.000076	0.00039	mg/L	0.000152	38.99%
Na 589.592†	194.9	0.01716	mg/L	0.000401	0.03431	mg/L	0.000801	2.34%
Na 330.237†	-4.0	-0.1254	mg/L	0.33881	-0.2507	mg/L	0.67762	270.27%
Ni 231.604†	3.1	0.00092	mg/L	0.001250	0.00183	mg/L	0.002501	136.56%
Pb 220.353†	4.2	0.00054	mg/L	0.000714	0.00107	mg/L	0.001428	133.08%
Sb 206.836†	-0.2	-0.00008	mg/L	0.002293	-0.00016	mg/L	0.004586	>999.9%
Se 196.026†	10.7	0.00703	mg/L	0.002151	0.01405	mg/L	0.004301	30.60%
Si 288.158†	27.4	0.02006	mg/L	0.003212	0.04012	mg/L	0.006423	16.01%
Sn 189.927†	4.4	0.00089	mg/L	0.000312	0.00177	mg/L	0.000625	35.28%
Sr 421.552†	-1.1	-0.00000	mg/L	0.000041	-0.00000	mg/L	0.000081	>999.9%
Ti 334.903†	4.8	0.00019	mg/L	0.000198	0.00038	mg/L	0.000397	105.60%
Tl 190.801†	-0.5	-0.00027	mg/L	0.000777	-0.00054	mg/L	0.001554	289.62%
V 292.402†	6.9	0.00005	mg/L	0.000072	0.00010	mg/L	0.000145	139.52%
Zn 206.200†	-0.4	-0.00009	mg/L	0.000052	-0.00019	mg/L	0.000103	55.28%

Sequence No.: 40
Sample ID: WN59 ADUP SWC

Autosampler Location: 330
Date Collected: 4/29/2013 11:50:10 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2720324.7	104.5	%	0.68				0.65%
ScR 361.383	393751.4	105.4	%	0.64				0.61%
Ag 328.068†	40.6	0.00061	mg/L	0.000042	0.00122	mg/L	0.000083	6.84%
Al 308.215†	126939.0	111.7	mg/L	0.46	223.4	mg/L	0.93	0.42%
As 188.979†	83.0	0.2939	mg/L	0.00105	0.5878	mg/L	0.00210	0.36%
B 249.677†	246.3	0.04075	mg/L	0.000165	0.08150	mg/L	0.000331	0.41%
Ba 233.527†	4651.7	0.8050	mg/L	0.00371	1.610	mg/L	0.0074	0.46%
Be 313.042†	1036.5	0.00165	mg/L	0.000016	0.00331	mg/L	0.000031	0.95%
Ca 317.933†	449672.1	45.06	mg/L	0.323	90.13	mg/L	0.646	0.72%
Cd 228.802†	301.8	0.01325	mg/L	0.000186	0.02650	mg/L	0.000372	1.40%
Co 228.616†	3157.8	0.09086	mg/L	0.000346	0.1817	mg/L	0.00069	0.38%
Cr 267.716†	4639.3	0.5653	mg/L	0.00243	1.131	mg/L	0.0049	0.43%
Cu 324.752†	236704.2	0.9439	mg/L	0.00745	1.888	mg/L	0.0149	0.79%
Fe 273.955†	278119.4	231.5	mg/L	1.68	463.0	mg/L	3.37	0.73%
K 766.490†	21862.0	10.70	mg/L	0.046	21.41	mg/L	0.092	0.43%
Mg 279.077†	51936.2	56.04	mg/L	0.443	112.1	mg/L	0.89	0.79%
Mn 257.610†	196117.9	3.858	mg/L	0.0258	7.717	mg/L	0.0516	0.67%
Mo 202.031†	739.3	0.03984	mg/L	0.000487	0.07968	mg/L	0.000974	1.22%
Na 589.592†	118230.4	10.41	mg/L	0.053	20.81	mg/L	0.107	0.51%
Na 330.237†	287.6	9.821	mg/L	0.1080	19.64	mg/L	0.216	1.10%
Ni 231.604†	1269.9	0.3771	mg/L	0.00079	0.7541	mg/L	0.00159	0.21%
Pb 220.353†	20498.4	2.648	mg/L	0.0186	5.297	mg/L	0.0372	0.70%
Sb 206.836†	26.8	0.01618	mg/L	0.002409	0.03236	mg/L	0.004818	14.89%
Se 196.026†	-1.3	-0.01400	mg/L	0.002090	-0.02800	mg/L	0.004180	14.93%
Si 288.158†	4257.8	3.118	mg/L	0.0080	6.235	mg/L	0.0160	0.26%
Sn 189.927†	4466.2	0.9080	mg/L	0.00883	1.816	mg/L	0.0177	0.97%
Sr 421.552†	314135.3	0.3476	mg/L	0.00100	0.6952	mg/L	0.00199	0.29%
Ti 334.903†	175127.1	6.866	mg/L	0.0409	13.73	mg/L	0.082	0.60%
Tl 190.801†	-27.1	0.01253	mg/L	0.002058	0.02507	mg/L	0.004117	16.42%
V 292.402†	56115.1	0.3964	mg/L	0.00209	0.7927	mg/L	0.00418	0.53%
Zn 206.200†	15920.6	4.014	mg/L	0.0199	8.028	mg/L	0.0398	0.50%

Sequence No.: 41
Sample ID: WN59 A SWC

Autosampler Location: 331
Date Collected: 4/29/2013 11:54:12 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2724959.9	104.7	%	0.16				0.16%
ScR 361.383	389924.1	104.3	%	0.19				0.18%
Ag 328.068†	17.6	0.00052	mg/L	0.000358	0.00104	mg/L	0.000716	68.83%
Al 308.215†	126972.3	111.7	mg/L	0.41	223.5	mg/L	0.83	0.37%
As 188.979†	110.7	0.3123	mg/L	0.00310	0.6245	mg/L	0.00619	0.99%
B 249.677†	243.1	0.04021	mg/L	0.000438	0.08043	mg/L	0.000876	1.09%
Ba 233.527†	4737.3	0.8195	mg/L	0.00205	1.639	mg/L	0.0041	0.25%
Be 313.042†	1064.4	0.00170	mg/L	0.000005	0.00340	mg/L	0.000011	0.32%
Ca 317.933†	475349.5	47.64	mg/L	0.150	95.27	mg/L	0.301	0.32%
Cd 228.802†	294.3	0.01281	mg/L	0.000060	0.02562	mg/L	0.000120	0.47%
Co 228.616†	3161.7	0.09107	mg/L	0.000311	0.1821	mg/L	0.00062	0.34%
Cr 267.716†	4317.4	0.5263	mg/L	0.00260	1.053	mg/L	0.0052	0.49%
Cu 324.752†	235532.9	0.9396	mg/L	0.00241	1.879	mg/L	0.0048	0.26%
Fe 273.955†	286296.9	238.3	mg/L	1.41	476.6	mg/L	2.82	0.59%
K 766.490†	21802.9	10.67	mg/L	0.043	21.35	mg/L	0.086	0.40%
Mg 279.077†	52648.2	56.81	mg/L	0.229	113.6	mg/L	0.46	0.40%
Mn 257.610†	197133.1	3.878	mg/L	0.0208	7.757	mg/L	0.0415	0.54%
Mo 202.031†	728.7	0.03923	mg/L	0.000318	0.07846	mg/L	0.000635	0.81%
Na 589.592†	118790.5	10.46	mg/L	0.059	20.91	mg/L	0.118	0.56%
Na 330.237†	285.5	9.744	mg/L	0.1276	19.49	mg/L	0.255	1.31%
Ni 231.604†	1292.8	0.3838	mg/L	0.00328	0.7677	mg/L	0.00655	0.85%
Pb 220.353†	19297.4	2.494	mg/L	0.0074	4.988	mg/L	0.0147	0.29%
Sb 206.836†	13.8	0.01166	mg/L	0.001896	0.02331	mg/L	0.003793	16.27%
Se 196.026†	8.6	-0.00751	mg/L	0.006830	-0.01502	mg/L	0.013659	90.97%
Si 288.158†	4579.1	3.353	mg/L	0.0263	6.706	mg/L	0.0525	0.78%
Sn 189.927†	4450.3	0.9050	mg/L	0.00217	1.810	mg/L	0.0043	0.24%
Sr 421.552†	324745.1	0.3593	mg/L	0.00126	0.7187	mg/L	0.00252	0.35%
Ti 334.903†	173805.2	6.814	mg/L	0.0240	13.63	mg/L	0.048	0.35%
Tl 190.801†	-28.9	0.01238	mg/L	0.001444	0.02476	mg/L	0.002888	11.66%
V 292.402†	56384.5	0.3979	mg/L	0.00077	0.7957	mg/L	0.00155	0.19%
Zn 206.200†	15886.5	4.006	mg/L	0.0181	8.011	mg/L	0.0362	0.45%

Sequence No.: 42
Sample ID: WN59 ASPK SWC

Autosampler Location: 332
Date Collected: 4/29/2013 11:58:14 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2697618.6	103.6	%	0.40				0.38%
ScR 361.383	384124.3	102.8	%	0.31				0.30%
Ag 328.068†	110960.3	0.5075	mg/L	0.00162	1.015	mg/L	0.0032	0.32%
Al 308.215†	133593.4	117.6	mg/L	0.52	235.1	mg/L	1.04	0.44%
As 188.979†	2832.4	2.318	mg/L	0.0256	4.637	mg/L	0.0512	1.10%
B 249.677†	270.6	0.04366	mg/L	0.000211	0.08731	mg/L	0.000422	0.48%
Ba 233.527†	16560.0	2.952	mg/L	0.0271	5.905	mg/L	0.0543	0.92%
Be 313.042†	274690.7	0.4819	mg/L	0.00226	0.9639	mg/L	0.00452	0.47%
Ca 317.933†	592990.8	59.43	mg/L	0.420	118.9	mg/L	0.84	0.71%
Cd 228.802†	12287.1	0.5298	mg/L	0.00235	1.060	mg/L	0.0047	0.44%
Co 228.616†	18293.9	0.5843	mg/L	0.00267	1.169	mg/L	0.0053	0.46%
Cr 267.716†	8454.6	1.028	mg/L	0.0093	2.056	mg/L	0.0187	0.91%
Cu 324.752†	350414.8	1.393	mg/L	0.0050	2.786	mg/L	0.0099	0.36%
Fe 273.955†	284026.1	236.4	mg/L	2.56	472.8	mg/L	5.12	1.08%
K 766.490†	42429.0	20.77	mg/L	0.092	41.54	mg/L	0.184	0.44%
Mg 279.077†	65219.6	70.41	mg/L	0.562	140.8	mg/L	1.12	0.80%
Mn 257.610†	223721.2	4.402	mg/L	0.0363	8.803	mg/L	0.0725	0.82%
Mo 202.031†	856.4	0.04604	mg/L	0.000907	0.09209	mg/L	0.001814	1.97%
Na 589.592†	239957.0	21.12	mg/L	0.204	42.24	mg/L	0.407	0.96%
Na 330.237†	623.8	20.37	mg/L	0.421	40.73	mg/L	0.843	2.07%
Ni 231.604†	2980.2	0.8840	mg/L	0.01430	1.768	mg/L	0.0286	1.62%
Pb 220.353†	33827.6	4.361	mg/L	0.0229	8.721	mg/L	0.0459	0.53%
Sb 206.836†	25.8	0.01114	mg/L	0.005696	0.02228	mg/L	0.011393	51.14%
Se 196.026†	3070.4	2.003	mg/L	0.0054	4.006	mg/L	0.0107	0.27%
Si 288.158†	7839.4	5.745	mg/L	0.0167	11.49	mg/L	0.033	0.29%
Sn 189.927†	4356.6	0.8871	mg/L	0.01039	1.774	mg/L	0.0208	1.17%
Sr 421.552†	795180.5	0.8799	mg/L	0.00472	1.760	mg/L	0.0094	0.54%
Ti 334.903†	178336.0	6.991	mg/L	0.0382	13.98	mg/L	0.076	0.55%
Tl 190.801†	3288.7	1.955	mg/L	0.0111	3.910	mg/L	0.0222	0.57%
V 292.402†	120393.4	0.8665	mg/L	0.00253	1.733	mg/L	0.0051	0.29%
Zn 206.200†	17636.6	4.447	mg/L	0.0444	8.895	mg/L	0.0889	1.00%

Sequence No.: 43
Sample ID: WN59 B SWC

Autosampler Location: 333
Date Collected: 4/29/2013 12:00:34 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2740631.5	105.3	%	0.30				0.28%
ScR 361.383	395665.7	105.9	%	0.08				0.08%
Ag 328.068†	-190.6	-0.00051	mg/L	0.000045	-0.00101	mg/L	0.000090	8.92%
Al 308.215†	84931.0	74.74	mg/L	0.411	149.5	mg/L	0.82	0.55%
As 188.979†	-176.5	0.04919	mg/L	0.004898	0.09838	mg/L	0.009796	9.96%
B 249.677†	262.2	0.04351	mg/L	0.001292	0.08703	mg/L	0.002584	2.97%
Ba 233.527†	3736.7	0.6497	mg/L	0.00085	1.299	mg/L	0.0017	0.13%
Be 313.042†	659.9	0.00104	mg/L	0.000013	0.00207	mg/L	0.000026	1.25%
Ca 317.933†	416299.3	41.72	mg/L	0.336	83.44	mg/L	0.673	0.81%
Cd 228.802†	111.1	0.00576	mg/L	0.000191	0.01151	mg/L	0.000382	3.32%
Co 228.616†	1878.4	0.05192	mg/L	0.000216	0.1038	mg/L	0.00043	0.42%
Cr 267.716†	1535.5	0.1877	mg/L	0.00038	0.3754	mg/L	0.00075	0.20%
Cu 324.752†	59572.2	0.2420	mg/L	0.00029	0.4841	mg/L	0.00058	0.12%
Fe 273.955†	198776.8	165.4	mg/L	0.89	330.9	mg/L	1.78	0.54%
K 766.490†	9580.2	4.690	mg/L	0.0103	9.380	mg/L	0.0205	0.22%
Mg 279.077†	30335.1	32.71	mg/L	0.058	65.43	mg/L	0.116	0.18%
Mn 257.610†	338179.2	6.653	mg/L	0.0335	13.31	mg/L	0.067	0.50%
Mo 202.031†	190.0	0.00988	mg/L	0.000080	0.01976	mg/L	0.000160	0.81%
Na 589.592†	50375.8	4.434	mg/L	0.0117	8.868	mg/L	0.0233	0.26%
Na 330.237†	87.7	3.634	mg/L	0.0902	7.269	mg/L	0.1805	2.48%
Ni 231.604†	618.4	0.1836	mg/L	0.00172	0.3672	mg/L	0.00344	0.94%
Pb 220.353†	1786.9	0.2407	mg/L	0.00096	0.4814	mg/L	0.00193	0.40%
Sb 206.836†	-12.0	-0.00205	mg/L	0.001401	-0.00410	mg/L	0.002802	68.32%
Se 196.026†	8.2	-0.00342	mg/L	0.002120	-0.00683	mg/L	0.004240	62.07%
Si 288.158†	5291.7	3.880	mg/L	0.0091	7.761	mg/L	0.0181	0.23%
Sn 189.927†	-20.9	0.00025	mg/L	0.001562	0.00050	mg/L	0.003123	625.46%
Sr 421.552†	276859.2	0.3064	mg/L	0.00114	0.6127	mg/L	0.00229	0.37%
Ti 334.903†	134761.8	5.283	mg/L	0.0313	10.57	mg/L	0.063	0.59%
Tl 190.801†	-10.2	0.01446	mg/L	0.001298	0.02893	mg/L	0.002595	8.97%
V 292.402†	40326.1	0.2843	mg/L	0.00197	0.5686	mg/L	0.00394	0.69%
Zn 206.200†	8188.8	2.065	mg/L	0.0039	4.130	mg/L	0.0078	0.19%

Sequence No.: 44
Sample ID: WN59 C SWC

Autosampler Location: 334
Date Collected: 4/29/2013 12:04:35 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 C SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2726139.2	104.7	%	0.46				0.44%
ScR 361.383	394855.8	105.7	%	0.56				0.53%
Ag 328.068†	-242.3	-0.00078	mg/L	0.000125	-0.00156	mg/L	0.000250	16.03%
Al 308.215†	97730.8	86.01	mg/L	0.353	172.0	mg/L	0.71	0.41%
As 188.979†	-258.4	0.01575	mg/L	0.001710	0.03150	mg/L	0.003421	10.86%
B 249.677†	51.0	0.00827	mg/L	0.000675	0.01653	mg/L	0.001351	8.17%
Ba 233.527†	2303.6	0.3951	mg/L	0.00058	0.7902	mg/L	0.00116	0.15%
Be 313.042†	749.5	0.00119	mg/L	0.000005	0.00237	mg/L	0.000011	0.46%
Ca 317.933†	359194.3	36.00	mg/L	0.214	71.99	mg/L	0.427	0.59%
Cd 228.802†	72.4	0.00450	mg/L	0.000101	0.00901	mg/L	0.000203	2.25%
Co 228.616†	2139.7	0.05911	mg/L	0.000601	0.1182	mg/L	0.00120	1.02%
Cr 267.716†	3533.0	0.4294	mg/L	0.00256	0.8588	mg/L	0.00513	0.60%
Cu 324.752†	30587.6	0.1262	mg/L	0.00061	0.2523	mg/L	0.00123	0.49%
Fe 273.955†	166520.8	138.6	mg/L	0.88	277.2	mg/L	1.77	0.64%
K 766.490†	9703.4	4.750	mg/L	0.0173	9.501	mg/L	0.0345	0.36%
Mg 279.077†	38119.5	41.15	mg/L	0.156	82.30	mg/L	0.311	0.38%
Mn 257.610†	213249.3	4.195	mg/L	0.0250	8.390	mg/L	0.0500	0.60%
Mo 202.031†	117.8	0.00599	mg/L	0.000342	0.01198	mg/L	0.000683	5.70%
Na 589.592†	22192.1	1.953	mg/L	0.0237	3.907	mg/L	0.0473	1.21%
Na 330.237†	12.3	1.375	mg/L	0.1554	2.751	mg/L	0.3107	11.30%
Ni 231.604†	1034.1	0.3070	mg/L	0.00248	0.6141	mg/L	0.00496	0.81%
Pb 220.353†	797.5	0.1188	mg/L	0.00106	0.2377	mg/L	0.00213	0.89%
Sb 206.836†	-15.9	-0.00619	mg/L	0.001480	-0.01238	mg/L	0.002961	23.91%
Se 196.026†	3.4	-0.00789	mg/L	0.005432	-0.01578	mg/L	0.010864	68.86%
Si 288.158†	5335.2	3.913	mg/L	0.0190	7.826	mg/L	0.0381	0.49%
Sn 189.927†	53.3	0.01493	mg/L	0.000603	0.02986	mg/L	0.001205	4.04%
Sr 421.552†	208404.5	0.2306	mg/L	0.00105	0.4612	mg/L	0.00211	0.46%
Ti 334.903†	154343.0	6.051	mg/L	0.0243	12.10	mg/L	0.049	0.40%
Tl 190.801†	-10.0	0.01091	mg/L	0.003525	0.02183	mg/L	0.007049	32.30%
V 292.402†	39853.4	0.2825	mg/L	0.00206	0.5649	mg/L	0.00412	0.73%
Zn 206.200†	9346.0	2.357	mg/L	0.0132	4.714	mg/L	0.0264	0.56%

Sequence No.: 45
Sample ID: WN59 D SWC

Autosampler Location: 335
Date Collected: 4/29/2013 12:08:36 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 D SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN59 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2744395.3	105.4	%	0.11				0.10%
ScR 361.383	394333.5	105.5	%	0.56				0.53%
Ag 328.068†	-156.9	-0.00029	mg/L	0.000121	-0.00059	mg/L	0.000241	40.98%
Al 308.215†	114960.5	101.2	mg/L	0.44	202.3	mg/L	0.88	0.44%
As 188.979†	-203.0	0.05677	mg/L	0.001239	0.1135	mg/L	0.00248	2.18%
B 249.677†	93.8	0.01522	mg/L	0.001006	0.03044	mg/L	0.002012	6.61%
Ba 233.527†	5080.2	0.8909	mg/L	0.00817	1.782	mg/L	0.0163	0.92%
Be 313.042†	1017.1	0.00164	mg/L	0.000026	0.00327	mg/L	0.000052	1.58%
Ca 317.933†	468744.7	46.98	mg/L	0.170	93.95	mg/L	0.340	0.36%
Cd 228.802†	118.9	0.00637	mg/L	0.000180	0.01274	mg/L	0.000360	2.83%
Co 228.616†	5278.0	0.1614	mg/L	0.00042	0.3228	mg/L	0.00083	0.26%
Cr 267.716†	1851.3	0.2243	mg/L	0.00111	0.4486	mg/L	0.00223	0.50%
Cu 324.752†	34790.3	0.1444	mg/L	0.00032	0.2889	mg/L	0.00063	0.22%
Fe 273.955†	208379.8	173.4	mg/L	0.54	346.9	mg/L	1.07	0.31%
K 766.490†	11605.6	5.682	mg/L	0.0036	11.36	mg/L	0.007	0.06%
Mg 279.077†	41290.6	44.56	mg/L	0.186	89.12	mg/L	0.373	0.42%
Mn 257.610†	868469.5	17.09	mg/L	0.051	34.17	mg/L	0.102	0.30%
Mo 202.031†	131.6	0.00663	mg/L	0.000219	0.01325	mg/L	0.000437	3.30%
Na 589.592†	34465.0	3.034	mg/L	0.0124	6.067	mg/L	0.0248	0.41%
Na 330.237†	32.6	2.425	mg/L	0.1352	4.849	mg/L	0.2703	5.57%
Ni 231.604†	1274.0	0.3783	mg/L	0.00209	0.7566	mg/L	0.00418	0.55%
Pb 220.353†	1696.4	0.2360	mg/L	0.00144	0.4721	mg/L	0.00289	0.61%
Sb 206.836†	-23.2	-0.00603	mg/L	0.000255	-0.01207	mg/L	0.000511	4.23%
Se 196.026†	10.4	-0.00511	mg/L	0.001602	-0.01021	mg/L	0.003203	31.37%
Si 288.158†	4974.6	3.649	mg/L	0.0142	7.299	mg/L	0.0283	0.39%
Sn 189.927†	-60.1	-0.00708	mg/L	0.000507	-0.01416	mg/L	0.001014	7.16%
Sr 421.552†	227940.8	0.2522	mg/L	0.00064	0.5044	mg/L	0.00128	0.25%
Ti 334.903†	154970.2	6.075	mg/L	0.0231	12.15	mg/L	0.046	0.38%
Tl 190.801†	-15.3	0.01160	mg/L	0.000616	0.02319	mg/L	0.001231	5.31%
V 292.402†	50791.6	0.3615	mg/L	0.00052	0.7229	mg/L	0.00104	0.14%
Zn 206.200†	3996.8	1.008	mg/L	0.0109	2.016	mg/L	0.0219	1.08%

Sequence No.: 46
Sample ID: WM19 F LEN

Autosampler Location: 338
Date Collected: 4/29/2013 12:12:38 PM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WM19 F LEN

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WM19 F LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2622885.4	100.8	%	1.00				0.99%
ScR 361.383	374064.2	100.1	%	0.48				0.48%
Ag 328.068†	60.2	0.00126	mg/L	0.000149	0.01259	mg/L	0.001487	11.81%
Al 308.215†	53.6	0.04701	mg/L	0.004069	0.4701	mg/L	0.04069	8.66%
As 188.979†	4102.4	3.003	mg/L	0.0312	30.03	mg/L	0.312	1.04%
B 249.677†	1198.4	0.1996	mg/L	0.00237	1.996	mg/L	0.0237	1.19%
Ba 233.527†	90.8	0.01638	mg/L	0.000630	0.1638	mg/L	0.00630	3.85%
Be 313.042†	58.6	0.00010	mg/L	0.000007	0.00103	mg/L	0.000074	7.20%
Ca 317.933†	1520993.3	152.4	mg/L	0.38	1524	mg/L	3.78	0.25%
Cd 228.802†	264537.7	11.63	mg/L	0.157	116.3	mg/L	1.57	1.35%
Co 228.616†	86.7	0.00279	mg/L	0.000157	0.02794	mg/L	0.001568	5.61%
Cr 267.716†	47.8	0.00347	mg/L	0.000243	0.03469	mg/L	0.002432	7.01%
Cu 324.752†	5897.5	0.02325	mg/L	0.000344	0.2325	mg/L	0.00344	1.48%
Fe 273.955†	26.5	0.02206	mg/L	0.002291	0.2206	mg/L	0.02291	10.38%
K 766.490†	124556.5	60.98	mg/L	0.714	609.8	mg/L	7.14	1.17%
Mg 279.077†	4260.8	4.592	mg/L	0.0294	45.92	mg/L	0.294	0.64%
Mn 257.610†	3685.0	0.07215	mg/L	0.000458	0.7215	mg/L	0.00458	0.64%
Mo 202.031†	123.1	0.00493	mg/L	0.000179	0.04932	mg/L	0.001787	3.62%
Na 589.592†	2034700.6	179.1	mg/L	0.46	1791	mg/L	4.60	0.26%
Na 330.237†	5575.3	175.7	mg/L	1.22	1757	mg/L	12.21	0.69%
Ni 231.604†	27.5	0.00817	mg/L	0.001697	0.08169	mg/L	0.016969	20.77%
Pb 220.353†	10080.9	1.294	mg/L	0.0115	12.94	mg/L	0.115	0.89%
Sb 206.836†	10.2	0.00376	mg/L	0.000825	0.03759	mg/L	0.008253	21.95%
Se 196.026†	2.2	0.00146	mg/L	0.002604	0.01459	mg/L	0.026037	178.42%
Si 288.158†	2927.3	2.183	mg/L	0.0103	21.83	mg/L	0.103	0.47%
Sn 189.927†	-58.7	0.00091	mg/L	0.000925	0.00908	mg/L	0.009252	101.93%
Sr 421.552†	235768.8	0.2609	mg/L	0.00025	2.609	mg/L	0.0025	0.09%
Ti 334.903†	478.6	0.00970	mg/L	0.000482	0.09703	mg/L	0.004824	4.97%
Tl 190.801†	43.9	0.02580	mg/L	0.003105	0.2580	mg/L	0.03105	12.04%
V 292.402†	33.2	0.00027	mg/L	0.000097	0.00270	mg/L	0.000973	36.01%
Zn 206.200†	9313.3	2.348	mg/L	0.0142	23.48	mg/L	0.142	0.60%

Sequence No.: 47
Sample ID: WN59 MB1SPK SWC

Autosampler Location: 336
Date Collected: 4/29/2013 12:16:57 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2727254.7	104.8	%	0.16				0.15%
ScR 361.383	388149.7	103.9	%	0.76				0.73%
Ag 328.068†	115860.1	0.5294	mg/L	0.00318	1.059	mg/L	0.0064	0.60%
Al 308.215†	2323.1	2.038	mg/L	0.0148	4.075	mg/L	0.0295	0.72%
As 188.979†	2768.7	2.035	mg/L	0.0059	4.069	mg/L	0.0119	0.29%
B 249.677†	0.7	-0.00104	mg/L	0.000935	-0.00207	mg/L	0.001871	90.31%
Ba 233.527†	11417.8	2.059	mg/L	0.0288	4.119	mg/L	0.0576	1.40%
Be 313.042†	272215.2	0.4778	mg/L	0.00324	0.9555	mg/L	0.00649	0.68%
Ca 317.933†	95999.2	9.621	mg/L	0.0214	19.24	mg/L	0.043	0.22%
Cd 228.802†	11580.6	0.4987	mg/L	0.00150	0.9974	mg/L	0.00301	0.30%
Co 228.616†	15103.6	0.4926	mg/L	0.00220	0.9852	mg/L	0.00440	0.45%
Cr 267.716†	4265.8	0.5178	mg/L	0.00430	1.036	mg/L	0.0086	0.83%
Cu 324.752†	125051.1	0.4936	mg/L	0.00180	0.9873	mg/L	0.00359	0.36%
Fe 273.955†	2395.2	1.991	mg/L	0.0174	3.982	mg/L	0.0348	0.87%
K 766.490†	19792.8	9.690	mg/L	0.0613	19.38	mg/L	0.123	0.63%
Mg 279.077†	9367.2	10.13	mg/L	0.068	20.26	mg/L	0.136	0.67%
Mn 257.610†	24008.8	0.4727	mg/L	0.00037	0.9454	mg/L	0.00074	0.08%
Mo 202.031†	29.0	0.00145	mg/L	0.000048	0.00289	mg/L	0.000097	3.35%
Na 589.592†	113474.3	9.988	mg/L	0.0662	19.98	mg/L	0.132	0.66%
Na 330.237†	311.9	9.720	mg/L	0.1989	19.44	mg/L	0.398	2.05%
Ni 231.604†	1742.8	0.5166	mg/L	0.00534	1.033	mg/L	0.0107	1.03%
Pb 220.353†	15325.8	1.968	mg/L	0.0064	3.935	mg/L	0.0128	0.33%
Sb 206.836†	10.8	-0.00108	mg/L	0.000720	-0.00216	mg/L	0.001440	66.75%
Se 196.026†	3055.1	2.007	mg/L	0.0100	4.013	mg/L	0.0199	0.50%
Si 288.158†	35.1	0.02852	mg/L	0.002146	0.05704	mg/L	0.004292	7.53%
Sn 189.927†	-13.1	-0.00184	mg/L	0.000800	-0.00369	mg/L	0.001600	43.37%
Sr 421.552†	443692.6	0.4910	mg/L	0.00242	0.9819	mg/L	0.00483	0.49%
Ti 334.903†	54.9	0.00148	mg/L	0.000150	0.00297	mg/L	0.000299	10.09%
Tl 190.801†	3503.9	2.053	mg/L	0.0042	4.105	mg/L	0.0084	0.20%
V 292.402†	67916.3	0.4971	mg/L	0.00233	0.9941	mg/L	0.00466	0.47%
Zn 206.200†	1973.0	0.4976	mg/L	0.00340	0.9952	mg/L	0.00681	0.68%

Sequence No.: 48
Sample ID: WN59 MB1SPD SWC

Autosampler Location: 337
Date Collected: 4/29/2013 12:21:00 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN59 MB1SPD SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN59 MB1SPD SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2717166.2	104.4	%	0.51				0.49%
ScR 361.383	389314.4	104.2	%	0.33				0.32%
Ag 328.068†	116734.1	0.5334	mg/L	0.00552	1.067	mg/L	0.0110	1.03%
Al 308.215†	2371.3	2.080	mg/L	0.0119	4.160	mg/L	0.0239	0.57%
As 188.979†	2782.0	2.044	mg/L	0.0128	4.089	mg/L	0.0256	0.63%
B 249.677†	1.0	-0.00099	mg/L	0.000410	-0.00198	mg/L	0.000819	41.40%
Ba 233.527†	11745.5	2.118	mg/L	0.0091	4.237	mg/L	0.0183	0.43%
Be 313.042†	278556.1	0.4889	mg/L	0.00286	0.9778	mg/L	0.00572	0.58%
Ca 317.933†	98256.2	9.847	mg/L	0.0250	19.69	mg/L	0.050	0.25%
Cd 228.802†	11636.1	0.5011	mg/L	0.00523	1.002	mg/L	0.0105	1.04%
Co 228.616†	15188.7	0.4954	mg/L	0.00537	0.9908	mg/L	0.01074	1.08%
Cr 267.716†	4345.6	0.5275	mg/L	0.00152	1.055	mg/L	0.0030	0.29%
Cu 324.752†	125023.6	0.4935	mg/L	0.00293	0.9871	mg/L	0.00586	0.59%
Fe 273.955†	2433.7	2.023	mg/L	0.0095	4.046	mg/L	0.0189	0.47%
K 766.490†	20278.1	9.927	mg/L	0.0441	19.85	mg/L	0.088	0.44%
Mg 279.077†	9549.7	10.33	mg/L	0.036	20.66	mg/L	0.073	0.35%
Mn 257.610†	24520.7	0.4828	mg/L	0.00266	0.9655	mg/L	0.00531	0.55%
Mo 202.031†	25.2	0.00123	mg/L	0.000122	0.00247	mg/L	0.000243	9.85%
Na 589.592†	116337.4	10.24	mg/L	0.076	20.48	mg/L	0.152	0.74%
Na 330.237†	320.9	10.00	mg/L	0.106	20.01	mg/L	0.211	1.06%
Ni 231.604†	1772.1	0.5252	mg/L	0.00298	1.050	mg/L	0.0060	0.57%
Pb 220.353†	15430.7	1.981	mg/L	0.0173	3.962	mg/L	0.0346	0.87%
Sb 206.836†	2.9	-0.00425	mg/L	0.001449	-0.00849	mg/L	0.002899	34.14%
Se 196.026†	3076.2	2.020	mg/L	0.0130	4.041	mg/L	0.0261	0.64%
Si 288.158†	28.1	0.02342	mg/L	0.001677	0.04685	mg/L	0.003354	7.16%
Sn 189.927†	-14.1	-0.00202	mg/L	0.000457	-0.00403	mg/L	0.000913	22.65%
Sr 421.552†	454994.6	0.5035	mg/L	0.00194	1.007	mg/L	0.0039	0.39%
Ti 334.903†	55.3	0.00148	mg/L	0.000363	0.00296	mg/L	0.000727	24.51%
Tl 190.801†	3503.7	2.052	mg/L	0.0119	4.105	mg/L	0.0239	0.58%
V 292.402†	68223.1	0.4993	mg/L	0.00597	0.9987	mg/L	0.01194	1.20%
Zn 206.200†	2013.1	0.5077	mg/L	0.00114	1.015	mg/L	0.0023	0.22%

Sequence No.: 49
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 4/29/2013 12:25:01 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.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2716863.7	104.4	%	0.72				0.69%
ScR 361.383	382649.8	102.4	%	0.52				0.51%
Ag 328.068†	228468.3	1.044	mg/L	0.0088	1.044	mg/L	0.0088	0.85%
Al 308.215†	2299.1	1.990	mg/L	0.0053	1.990	mg/L	0.0053	0.27%
As 188.979†	2640.4	1.972	mg/L	0.0157	1.972	mg/L	0.0157	0.80%
B 249.677†	6050.2	1.007	mg/L	0.0010	1.007	mg/L	0.0010	0.10%
Ba 233.527†	5839.0	1.053	mg/L	0.0048	1.053	mg/L	0.0048	0.46%
Be 313.042†	552034.6	0.9688	mg/L	0.01056	0.9688	mg/L	0.01056	1.09%
Ca 317.933†	20133.5	2.018	mg/L	0.0035	2.018	mg/L	0.0035	0.17%
Cd 228.802†	23079.8	1.006	mg/L	0.0088	1.006	mg/L	0.0088	0.88%
Co 228.616†	30605.4	0.9970	mg/L	0.00761	0.9970	mg/L	0.00761	0.76%
Cr 267.716†	8496.7	1.033	mg/L	0.0015	1.033	mg/L	0.0015	0.15%
Cu 324.752†	253922.9	1.002	mg/L	0.0076	1.002	mg/L	0.0076	0.75%
Fe 273.955†	2378.5	1.974	mg/L	0.0095	1.974	mg/L	0.0095	0.48%
K 766.490†	39697.2	19.43	mg/L	0.105	19.43	mg/L	0.105	0.54%
Mg 279.077†	1807.8	1.961	mg/L	0.0060	1.961	mg/L	0.0060	0.31%
Mn 257.610†	47913.7	0.9430	mg/L	0.00832	0.9430	mg/L	0.00832	0.88%
Mo 202.031†	17873.6	0.9766	mg/L	0.00899	0.9766	mg/L	0.00899	0.92%
Na 589.592†	566993.8	49.91	mg/L	0.219	49.91	mg/L	0.219	0.44%
Na 330.237†	1584.3	50.10	mg/L	0.231	50.10	mg/L	0.231	0.46%
Ni 231.604†	3484.9	1.035	mg/L	0.0048	1.035	mg/L	0.0048	0.47%
Pb 220.353†	15303.4	1.965	mg/L	0.0158	1.965	mg/L	0.0158	0.81%
Sb 206.836†	5251.7	2.017	mg/L	0.0177	2.017	mg/L	0.0177	0.88%
Se 196.026†	2952.9	1.939	mg/L	0.0218	1.939	mg/L	0.0218	1.12%
Si 288.158†	2688.2	1.965	mg/L	0.0081	1.965	mg/L	0.0081	0.41%
Sn 189.927†	4718.1	0.9553	mg/L	0.01025	0.9553	mg/L	0.01025	1.07%
Sr 421.552†	891568.7	0.9866	mg/L	0.00579	0.9866	mg/L	0.00579	0.59%
Ti 334.903†	25304.1	0.9911	mg/L	0.00547	0.9911	mg/L	0.00547	0.55%
Tl 190.801†	3507.9	2.051	mg/L	0.0115	2.051	mg/L	0.0115	0.56%
V 292.402†	135034.1	0.9884	mg/L	0.00782	0.9884	mg/L	0.00782	0.79%
Zn 206.200†	3996.7	1.008	mg/L	0.0039	1.008	mg/L	0.0039	0.39%

Sequence No.: 50
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 4/29/2013 12:29:06 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	2715175.1	104.3	%	0.62				0.59%
ScR 361.383	388705.9	104.0	%	0.29				0.28%
Ag 328.068†	14.1	0.00006	mg/L	0.000093	0.00006	mg/L	0.000093	144.46%
Al 308.215†	-0.4	-0.00041	mg/L	0.005896	-0.00041	mg/L	0.005896	>999.9%
As 188.979†	0.1	0.00008	mg/L	0.002657	0.00008	mg/L	0.002657	>999.9%
B 249.677†	-3.7	-0.00061	mg/L	0.000721	-0.00061	mg/L	0.000721	117.48%
Ba 233.527†	0.9	0.00016	mg/L	0.000225	0.00016	mg/L	0.000225	138.03%
Be 313.042†	5.3	0.00001	mg/L	0.000040	0.00001	mg/L	0.000040	434.16%
Ca 317.933†	-0.2	-0.00002	mg/L	0.001485	-0.00002	mg/L	0.001485	>999.9%
Cd 228.802†	5.5	0.00024	mg/L	0.000175	0.00024	mg/L	0.000175	73.17%
Co 228.616†	8.0	0.00026	mg/L	0.000107	0.00026	mg/L	0.000107	41.38%
Cr 267.716†	-0.8	-0.00009	mg/L	0.000213	-0.00009	mg/L	0.000213	227.77%
Cu 324.752†	94.3	0.00037	mg/L	0.000120	0.00037	mg/L	0.000120	32.20%
Fe 273.955†	1.5	0.00125	mg/L	0.001155	0.00125	mg/L	0.001155	92.52%
K 766.490†	9.9	0.00485	mg/L	0.013114	0.00485	mg/L	0.013114	270.31%
Mg 279.077†	-7.3	-0.00784	mg/L	0.006049	-0.00784	mg/L	0.006049	77.16%
Mn 257.610†	0.8	0.00002	mg/L	0.000083	0.00002	mg/L	0.000083	504.01%
Mo 202.031†	10.5	0.00058	mg/L	0.000162	0.00058	mg/L	0.000162	28.13%
Na 589.592†	50.1	0.00441	mg/L	0.000868	0.00441	mg/L	0.000868	19.70%
Na 330.237†	-5.1	-0.1597	mg/L	0.32613	-0.1597	mg/L	0.32613	204.26%
Ni 231.604†	-0.9	-0.00028	mg/L	0.001390	-0.00028	mg/L	0.001390	498.10%
Pb 220.353†	10.5	0.00135	mg/L	0.001005	0.00135	mg/L	0.001005	74.51%
Sb 206.836†	6.5	0.00252	mg/L	0.002721	0.00252	mg/L	0.002721	108.00%
Se 196.026†	7.0	0.00462	mg/L	0.002831	0.00462	mg/L	0.002831	61.25%
Si 288.158†	1.7	0.00125	mg/L	0.001900	0.00125	mg/L	0.001900	151.41%
Sn 189.927†	3.3	0.00067	mg/L	0.000036	0.00067	mg/L	0.000036	5.34%
Sr 421.552†	28.1	0.00003	mg/L	0.000017	0.00003	mg/L	0.000017	54.61%
Ti 334.903†	29.8	0.00117	mg/L	0.000537	0.00117	mg/L	0.000537	46.01%
Tl 190.801†	0.2	0.00013	mg/L	0.001209	0.00013	mg/L	0.001209	960.59%
V 292.402†	13.2	0.00010	mg/L	0.000119	0.00010	mg/L	0.000119	125.07%
Zn 206.200†	0.5	0.00013	mg/L	0.000397	0.00013	mg/L	0.000397	309.70%

Sequence No.: 51
Sample ID: WN27 MB1 SWC

Dilution: 2.000000X

DL

Autosampler Location: 339
Date Collected: 4/29/2013 12:33:22 PM
Data Type: Original

Nebulizer Parameters: WN27 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2766713.8	106.3	%	0.53				0.50%
ScR 361.383	391515.1	104.8	%	0.14				0.14%
Ag 328.068†	60.5	0.00028	mg/L	0.000145	0.00055	mg/L	0.000290	52.39%
Al 308.215†	10.1	0.00886	mg/L	0.003203	0.01773	mg/L	0.006406	36.13%
As 188.979†	2.8	0.00205	mg/L	0.002294	0.00411	mg/L	0.004589	111.76%
B 249.677†	-3.8	-0.00064	mg/L	0.000660	-0.00127	mg/L	0.001321	103.84%
Ba 233.527†	-1.3	-0.00023	mg/L	0.000401	-0.00045	mg/L	0.000801	176.86%
Be 313.042†	-22.0	-0.00004	mg/L	0.000020	-0.00008	mg/L	0.000039	50.60%
Ca 317.933†	219.4	0.02198	mg/L	0.001040	0.04397	mg/L	0.002080	4.73%
Cd 228.802†	3.6	0.00015	mg/L	0.000170	0.00030	mg/L	0.000340	115.09%
Co 228.616†	4.8	0.00016	mg/L	0.000045	0.00031	mg/L	0.000091	29.17%
Cr 267.716†	2.7	0.00033	mg/L	0.000516	0.00065	mg/L	0.001031	158.19%
Cu 324.752†	61.7	0.00024	mg/L	0.000212	0.00049	mg/L	0.000424	87.03%
Fe 273.955†	4.4	0.00364	mg/L	0.002021	0.00729	mg/L	0.004042	55.48%
K 766.490†	22.7	0.01109	mg/L	0.008109	0.02218	mg/L	0.016217	73.11%
Mg 279.077†	-3.7	-0.00395	mg/L	0.006165	-0.00791	mg/L	0.012331	155.93%
Mn 257.610†	4.3	0.00009	mg/L	0.000110	0.00017	mg/L	0.000221	129.55%
Mo 202.031†	3.7	0.00020	mg/L	0.000189	0.00041	mg/L	0.000379	92.58%
Na 589.592†	-18.8	-0.00165	mg/L	0.002356	-0.00330	mg/L	0.004712	142.60%
Na 330.237†	-14.7	-0.4643	mg/L	0.41718	-0.9287	mg/L	0.83435	89.84%
Ni 231.604†	4.2	0.00124	mg/L	0.000949	0.00247	mg/L	0.001898	76.69%
Pb 220.353†	8.7	0.00112	mg/L	0.000499	0.00224	mg/L	0.000998	44.61%
Sb 206.836†	-1.2	-0.00045	mg/L	0.000320	-0.00090	mg/L	0.000641	70.97%
Se 196.026†	8.5	0.00561	mg/L	0.001022	0.01122	mg/L	0.002045	18.23%
Si 288.158†	33.0	0.02418	mg/L	0.002672	0.04836	mg/L	0.005343	11.05%
Sn 189.927†	2.7	0.00055	mg/L	0.000264	0.00110	mg/L	0.000528	48.13%
Sr 421.552†	-19.0	-0.00002	mg/L	0.000040	-0.00004	mg/L	0.000080	188.99%
Ti 334.903†	1.4	0.00006	mg/L	0.000800	0.00011	mg/L	0.001600	>999.9%
Tl 190.801†	0.1	0.00005	mg/L	0.001553	0.00011	mg/L	0.003107	>999.9%
V 292.402†	11.3	0.00008	mg/L	0.000054	0.00017	mg/L	0.000109	64.86%
Zn 206.200†	-2.4	-0.00060	mg/L	0.000331	-0.00120	mg/L	0.000661	55.18%

Sequence No.: 52
Sample ID: WN27 ADUP SWC

Dilution: 2.000000X

Del

Autosampler Location: 340
Date Collected: 4/29/2013 12:37:38 PM
Data Type: Original

Nebulizer Parameters: WN27 ADUP SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2756432.3	105.9	%	0.53				0.50%
ScR 361.383	395458.3	105.8	%	1.42				1.34%
Ag 328.068†	-148.1	-0.00018	mg/L	0.000078	-0.00036	mg/L	0.000155	42.86%
Al 308.215†	114790.6	101.0	mg/L	1.30	202.0	mg/L	2.61	1.29%
As 188.979†	-273.0	0.04183	mg/L	0.007654	0.08365	mg/L	0.015308	18.30%
B 249.677†	196.1	0.03248	mg/L	0.000554	0.06495	mg/L	0.001109	1.71%
Ba 233.527†	7860.3	1.386	mg/L	0.0172	2.772	mg/L	0.0344	1.24%
Be 313.042†	968.3	0.00152	mg/L	0.000047	0.00305	mg/L	0.000094	3.07%
Ca 317.933†	548642.6	54.98	mg/L	0.621	110.0	mg/L	1.24	1.13%
Cd 228.802†	277.8	0.01349	mg/L	0.000283	0.02699	mg/L	0.000567	2.10%
Co 228.616†	2402.6	0.06564	mg/L	0.000501	0.1313	mg/L	0.00100	0.76%
Cr 267.716†	2373.8	0.2909	mg/L	0.00474	0.5818	mg/L	0.00948	1.63%
Cu 324.752†	173187.6	0.6926	mg/L	0.00476	1.385	mg/L	0.0095	0.69%
Fe 273.955†	260580.5	216.9	mg/L	3.11	433.8	mg/L	6.21	1.43%
K 766.490†	15540.2	7.608	mg/L	0.0584	15.22	mg/L	0.117	0.77%
Mg 279.077†	35002.4	37.73	mg/L	0.540	75.47	mg/L	1.080	1.43%
Mn 257.610†	136008.9	2.675	mg/L	0.0394	5.351	mg/L	0.0788	1.47%
Mo 202.031†	439.5	0.02335	mg/L	0.000386	0.04671	mg/L	0.000771	1.65%
Na 589.592†	110309.8	9.709	mg/L	0.1146	19.42	mg/L	0.229	1.18%
Na 330.237†	281.5	8.709	mg/L	0.2224	17.42	mg/L	0.445	2.55%
Ni 231.604†	659.9	0.1959	mg/L	0.00196	0.3919	mg/L	0.00392	1.00%
Pb 220.353†	3556.5	0.4718	mg/L	0.00107	0.9436	mg/L	0.00215	0.23%
Sb 206.836†	-18.7	-0.00404	mg/L	0.004707	-0.00809	mg/L	0.009414	116.44%
Se 196.026†	2.9	-0.01002	mg/L	0.007100	-0.02004	mg/L	0.014200	70.88%
Si 288.158†	371.9	0.2768	mg/L	0.00131	0.5535	mg/L	0.00261	0.47%
Sn 189.927†	-23.4	0.00122	mg/L	0.001207	0.00244	mg/L	0.002414	99.04%
Sr 421.552†	325937.0	0.3607	mg/L	0.00422	0.7213	mg/L	0.00845	1.17%
Ti 334.903†	182625.0	7.160	mg/L	0.0972	14.32	mg/L	0.194	1.36%
Tl 190.801†	-20.0	0.01493	mg/L	0.001477	0.02986	mg/L	0.002953	9.89%
V 292.402†	59990.9	0.4238	mg/L	0.00328	0.8476	mg/L	0.00656	0.77%
Zn 206.200†	29291.3	7.384	mg/L	0.1096	14.77	mg/L	0.219	1.48%

Sequence No.: 53
Sample ID: WN27 A SWC

Dilution: 2.000000X

Del

Autosampler Location: 341
Date Collected: 4/29/2013 12:41:40 PM
Data Type: Original

Nebulizer Parameters: WN27 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2762691.8	106.1	%	0.42				0.40%
ScR 361.383	394551.0	105.6	%	0.83				0.79%
Ag 328.068†	-137.7	-0.00012	mg/L	0.000165	-0.00023	mg/L	0.000330	140.78%
Al 308.215†	116660.8	102.7	mg/L	0.57	205.3	mg/L	1.14	0.55%
As 188.979†	-265.7	0.05073	mg/L	0.004330	0.1015	mg/L	0.00866	8.53%
B 249.677†	206.6	0.03421	mg/L	0.001140	0.06841	mg/L	0.002280	3.33%
Ba 233.527†	8232.3	1.451	mg/L	0.0154	2.901	mg/L	0.0309	1.06%
Be 313.042†	958.5	0.00150	mg/L	0.000005	0.00300	mg/L	0.000009	0.31%
Ca 317.933†	564298.5	56.55	mg/L	0.351	113.1	mg/L	0.70	0.62%
Cd 228.802†	295.3	0.01423	mg/L	0.000085	0.02847	mg/L	0.000169	0.60%
Co 228.616†	2561.9	0.07065	mg/L	0.000703	0.1413	mg/L	0.00141	0.99%
Cr 267.716†	2538.0	0.3114	mg/L	0.00323	0.6228	mg/L	0.00646	1.04%
Cu 324.752†	168624.6	0.6753	mg/L	0.00119	1.351	mg/L	0.0024	0.18%
Fe 273.955†	280443.0	233.4	mg/L	1.53	466.8	mg/L	3.06	0.65%
K 766.490†	15806.6	7.738	mg/L	0.0351	15.48	mg/L	0.070	0.45%
Mg 279.077†	34675.9	37.37	mg/L	0.241	74.74	mg/L	0.483	0.65%
Mn 257.610†	148801.6	2.927	mg/L	0.0145	5.854	mg/L	0.0290	0.49%
Mo 202.031†	465.5	0.02475	mg/L	0.000385	0.04951	mg/L	0.000770	1.55%
Na 589.592†	115944.1	10.21	mg/L	0.035	20.41	mg/L	0.069	0.34%
Na 330.237†	291.9	9.384	mg/L	0.2104	18.77	mg/L	0.421	2.24%
Ni 231.604†	665.1	0.1975	mg/L	0.00153	0.3949	mg/L	0.00307	0.78%
Pb 220.353†	3394.7	0.4507	mg/L	0.00322	0.9013	mg/L	0.00643	0.71%
Sb 206.836†	-15.4	-0.00288	mg/L	0.001388	-0.00576	mg/L	0.002776	48.16%
Se 196.026†	3.2	-0.01001	mg/L	0.003067	-0.02002	mg/L	0.006135	30.64%
Si 288.158†	425.7	0.3162	mg/L	0.00209	0.6323	mg/L	0.00419	0.66%
Sn 189.927†	-15.1	0.00304	mg/L	0.000445	0.00609	mg/L	0.000890	14.63%
Sr 421.552†	346365.2	0.3833	mg/L	0.00136	0.7665	mg/L	0.00271	0.35%
Ti 334.903†	185340.8	7.266	mg/L	0.0342	14.53	mg/L	0.068	0.47%
Tl 190.801†	-21.8	0.01595	mg/L	0.002683	0.03191	mg/L	0.005366	16.82%
V 292.402†	62776.7	0.4433	mg/L	0.00187	0.8866	mg/L	0.00374	0.42%
Zn 206.200†	25082.3	6.323	mg/L	0.0638	12.65	mg/L	0.128	1.01%

Sequence No.: 54
Sample ID: WN27 ASPK SWC

Del

Dilution: 2.000000X

Autosampler Location: 342
Date Collected: 4/29/2013 12:45:42 PM
Data Type: Original

Nebulizer Parameters: WN27 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN27 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2747012.7	105.5	%	0.33				0.31%
ScR 361.383	393676.4	105.3	%	0.26				0.25%
Ag 328.068†	50495.4	0.2313	mg/L	0.00082	0.4626	mg/L	0.00164	0.35%
Al 308.215†	110223.2	96.99	mg/L	0.278	194.0	mg/L	0.56	0.29%
As 188.979†	43.8	0.2723	mg/L	0.00169	0.5446	mg/L	0.00338	0.62%
B 249.677†	195.4	0.03207	mg/L	0.001267	0.06415	mg/L	0.002534	3.95%
Ba 233.527†	12925.6	2.300	mg/L	0.0089	4.600	mg/L	0.0179	0.39%
Be 313.042†	128454.9	0.2253	mg/L	0.00042	0.4506	mg/L	0.00083	0.18%
Ca 317.933†	684375.3	68.58	mg/L	0.338	137.2	mg/L	0.68	0.49%
Cd 228.802†	5829.9	0.2567	mg/L	0.00091	0.5134	mg/L	0.00181	0.35%
Co 228.616†	9454.3	0.2957	mg/L	0.00118	0.5914	mg/L	0.00236	0.40%
Cr 267.716†	4257.6	0.5200	mg/L	0.00261	1.040	mg/L	0.0052	0.50%
Cu 324.752†	217511.1	0.8674	mg/L	0.00359	1.735	mg/L	0.0072	0.41%
Fe 273.955†	258122.0	214.8	mg/L	0.55	429.7	mg/L	1.10	0.26%
K 766.490†	15622.1	7.648	mg/L	0.0233	15.30	mg/L	0.047	0.31%
Mg 279.077†	32927.9	35.49	mg/L	0.124	70.98	mg/L	0.248	0.35%
Mn 257.610†	142896.7	2.811	mg/L	0.0075	5.622	mg/L	0.0151	0.27%
Mo 202.031†	4224.5	0.2300	mg/L	0.00089	0.4600	mg/L	0.00179	0.39%
Na 589.592†	114497.0	10.08	mg/L	0.050	20.16	mg/L	0.099	0.49%
Na 330.237†	306.3	9.019	mg/L	0.0873	18.04	mg/L	0.175	0.97%
Ni 231.604†	1403.2	0.4165	mg/L	0.00371	0.8331	mg/L	0.00741	0.89%
Pb 220.353†	5026.9	0.6597	mg/L	0.00332	1.319	mg/L	0.0066	0.50%
Sb 206.836†	9.5	0.00448	mg/L	0.002902	0.00896	mg/L	0.005803	64.76%
Se 196.026†	1105.2	0.7145	mg/L	0.00168	1.429	mg/L	0.0034	0.24%
Si 288.158†	414.8	0.3088	mg/L	0.00541	0.6175	mg/L	0.01082	1.75%
Sn 189.927†	-16.1	0.00383	mg/L	0.001657	0.00767	mg/L	0.003315	43.23%
Sr 421.552†	397273.3	0.4396	mg/L	0.00074	0.8792	mg/L	0.00148	0.17%
Ti 334.903†	182277.0	7.145	mg/L	0.0048	14.29	mg/L	0.010	0.07%
Tl 190.801†	374.5	0.2443	mg/L	0.00440	0.4887	mg/L	0.00881	1.80%
V 292.402†	88777.5	0.6348	mg/L	0.00235	1.270	mg/L	0.0047	0.37%
Zn 206.200†	35576.6	8.969	mg/L	0.0459	17.94	mg/L	0.092	0.51%

Sequence No.: 55
Sample ID: ~~WN27 APOST SWC~~ ZZZZZZ
TSA 4/29/13
Dilution: 2.000000X

Autosampler Location: 343
Date Collected: 4/29/2013 12:49:44 PM
Data Type: Original

Nebulizer Parameters: WN27 APOST SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2719127.0	104.5	%	0.12				0.11%
ScR 361.383	385849.4	103.2	%	0.65				0.63%
Ag 328.068†	113550.3	0.5194	mg/L	0.00211	1.039	mg/L	0.0042	0.41%
Al 308.215†	118346.4	104.1	mg/L	0.35	208.3	mg/L	0.70	0.33%
As 188.979†	2542.5	2.112	mg/L	0.0120	4.225	mg/L	0.0239	0.57%
B 249.677†	205.3	0.03281	mg/L	0.001469	0.06562	mg/L	0.002938	4.48%
Ba 233.527†	20165.7	3.604	mg/L	0.0141	7.208	mg/L	0.0282	0.39%
Be 313.042†	280497.4	0.4921	mg/L	0.00443	0.9842	mg/L	0.00885	0.90%
Ca 317.933†	656222.8	65.76	mg/L	0.259	131.5	mg/L	0.52	0.39%
Cd 228.802†	12531.2	0.5416	mg/L	0.00191	1.083	mg/L	0.0038	0.35%
Co 228.616†	17990.8	0.5740	mg/L	0.00130	1.148	mg/L	0.0026	0.23%
Cr 267.716†	6886.3	0.8391	mg/L	0.00497	1.678	mg/L	0.0099	0.59%
Cu 324.752†	293442.4	1.168	mg/L	0.0028	2.336	mg/L	0.0057	0.24%
Fe 273.955†	276907.2	230.5	mg/L	0.97	460.9	mg/L	1.93	0.42%
K 766.490†	37057.7	18.14	mg/L	0.093	36.28	mg/L	0.186	0.51%
Mg 279.077†	43725.2	47.16	mg/L	0.130	94.32	mg/L	0.259	0.27%
Mn 257.610†	171491.8	3.374	mg/L	0.0168	6.748	mg/L	0.0336	0.50%
Mo 202.031†	485.4	0.02571	mg/L	0.001041	0.05141	mg/L	0.002081	4.05%
Na 589.592†	236506.6	20.82	mg/L	0.049	41.63	mg/L	0.097	0.23%
Na 330.237†	632.3	19.99	mg/L	0.263	39.99	mg/L	0.525	1.31%
Ni 231.604†	2439.9	0.7236	mg/L	0.00536	1.447	mg/L	0.0107	0.74%
Pb 220.353†	18966.7	2.450	mg/L	0.0120	4.900	mg/L	0.0239	0.49%
Sb 206.836†	-8.0	-0.00551	mg/L	0.005475	-0.01102	mg/L	0.010950	99.36%
Se 196.026†	3120.2	2.037	mg/L	0.0093	4.074	mg/L	0.0186	0.46%
Si 288.158†	891.3	0.6601	mg/L	0.00494	1.320	mg/L	0.0099	0.75%
Sn 189.927†	-32.3	0.00032	mg/L	0.001825	0.00065	mg/L	0.003651	564.07%
Sr 421.552†	810590.6	0.8969	mg/L	0.00296	1.794	mg/L	0.0059	0.33%
Ti 334.903†	183715.7	7.202	mg/L	0.0302	14.40	mg/L	0.060	0.42%
Tl 190.801†	3386.8	2.012	mg/L	0.0009	4.024	mg/L	0.0018	0.05%
V 292.402†	129064.1	0.9288	mg/L	0.00173	1.858	mg/L	0.0035	0.19%
Zn 206.200†	26997.2	6.806	mg/L	0.0546	13.61	mg/L	0.109	0.80%

Sequence No.: 56
Sample ID: WN27 MB1SPK SWC

Dilution: 2.000000X

Autosampler Location: 344
Date Collected: 4/29/2013 12:52:50 PM
Data Type: Original

Nebulizer Parameters: WN27 MB1SPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WN27 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2786641.6	107.1	%	0.88				0.82%
ScR 361.383	393903.5	105.4	%	0.36				0.34%
Ag 328.068†	55445.4	0.2533	mg/L	0.00240	0.5066	mg/L	0.00480	0.95%
Al 308.215†	81.7	0.06411	mg/L	0.002447	0.1282	mg/L	0.00489	3.82%
As 188.979†	327.2	0.2398	mg/L	0.00444	0.4797	mg/L	0.00889	1.85%
B 249.677†	-3.8	-0.00088	mg/L	0.001027	-0.00177	mg/L	0.002054	116.10%
Ba 233.527†	1427.5	0.2575	mg/L	0.00058	0.5149	mg/L	0.00115	0.22%
Be 313.042†	128492.2	0.2255	mg/L	0.00058	0.4510	mg/L	0.00117	0.26%
Ca 317.933†	326.0	0.03267	mg/L	0.001972	0.06535	mg/L	0.003943	6.03%
Cd 228.802†	5504.3	0.2411	mg/L	0.00214	0.4822	mg/L	0.00429	0.89%
Co 228.616†	7368.8	0.2404	mg/L	0.00280	0.4809	mg/L	0.00560	1.16%
Cr 267.716†	2034.0	0.2474	mg/L	0.00124	0.4947	mg/L	0.00248	0.50%
Cu 324.752†	60621.3	0.2392	mg/L	0.00240	0.4784	mg/L	0.00481	1.00%
Fe 273.955†	119.2	0.09791	mg/L	0.004856	0.1958	mg/L	0.00971	4.96%
K 766.490†	10.9	0.00536	mg/L	0.010728	0.01072	mg/L	0.021456	200.20%
Mg 279.077†	6.9	0.00926	mg/L	0.006140	0.01851	mg/L	0.012280	66.34%
Mn 257.610†	11650.9	0.2293	mg/L	0.00055	0.4586	mg/L	0.00111	0.24%
Mo 202.031†	4498.0	0.2458	mg/L	0.00228	0.4915	mg/L	0.00456	0.93%
Na 589.592†	-1.9	-0.00017	mg/L	0.000707	-0.00034	mg/L	0.001414	417.75%
Na 330.237†	-8.9	-0.5174	mg/L	0.03404	-1.035	mg/L	0.0681	6.58%
Ni 231.604†	851.8	0.2529	mg/L	0.00162	0.5058	mg/L	0.00325	0.64%
Pb 220.353†	1925.0	0.2472	mg/L	0.00327	0.4944	mg/L	0.00654	1.32%
Sb 206.836†	647.8	0.2466	mg/L	0.00252	0.4933	mg/L	0.00504	1.02%
Se 196.026†	1164.7	0.7650	mg/L	0.00863	1.530	mg/L	0.0173	1.13%
Si 288.158†	33.6	0.02542	mg/L	0.005496	0.05083	mg/L	0.010991	21.62%
Sn 189.927†	2.7	0.00068	mg/L	0.000367	0.00136	mg/L	0.000733	53.83%
Sr 421.552†	252.5	0.00028	mg/L	0.000050	0.00056	mg/L	0.000101	18.00%
Ti 334.903†	155.7	0.00580	mg/L	0.000090	0.01160	mg/L	0.000179	1.55%
Tl 190.801†	425.8	0.2480	mg/L	0.00245	0.4960	mg/L	0.00490	0.99%
V 292.402†	32537.8	0.2383	mg/L	0.00193	0.4766	mg/L	0.00385	0.81%
Zn 206.200†	3154.8	0.7953	mg/L	0.00278	1.591	mg/L	0.0056	0.35%

Sequence No.: 57
Sample ID: CV 6
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 4/29/2013 12:56:51 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	2738452.4	105.2	%	0.44				0.42%
ScR 361.383	386275.7	103.4	%	0.55				0.53%
Ag 328.068†	225184.4	1.029	mg/L	0.0085	1.029	mg/L	0.0085	0.83%
Al 308.215†	2289.1	1.982	mg/L	0.0150	1.982	mg/L	0.0150	0.76%
As 188.979†	2629.7	1.964	mg/L	0.0124	1.964	mg/L	0.0124	0.63%
B 249.677†	6021.2	1.002	mg/L	0.0060	1.002	mg/L	0.0060	0.60%
Ba 233.527†	5811.7	1.048	mg/L	0.0078	1.048	mg/L	0.0078	0.75%
Be 313.042†	551869.6	0.9686	mg/L	0.00828	0.9686	mg/L	0.00828	0.85%
Ca 317.933†	20013.6	2.006	mg/L	0.0095	2.006	mg/L	0.0095	0.47%
Cd 228.802†	22976.8	1.001	mg/L	0.0056	1.001	mg/L	0.0056	0.56%
Co 228.616†	30452.2	0.9920	mg/L	0.00695	0.9920	mg/L	0.00695	0.70%
Cr 267.716†	8450.4	1.028	mg/L	0.0035	1.028	mg/L	0.0035	0.34%
Cu 324.752†	251725.8	0.9932	mg/L	0.00664	0.9932	mg/L	0.00664	0.67%
Fe 273.955†	2370.7	1.968	mg/L	0.0050	1.968	mg/L	0.0050	0.25%
K 766.490†	39553.2	19.36	mg/L	0.231	19.36	mg/L	0.231	1.20%
Mg 279.077†	1798.9	1.952	mg/L	0.0149	1.952	mg/L	0.0149	0.76%
Mn 257.610†	47667.1	0.9382	mg/L	0.00836	0.9382	mg/L	0.00836	0.89%
Mo 202.031†	17762.0	0.9705	mg/L	0.00734	0.9705	mg/L	0.00734	0.76%
Na 589.592†	565470.5	49.77	mg/L	0.503	49.77	mg/L	0.503	1.01%
Na 330.237†	1574.2	49.78	mg/L	0.130	49.78	mg/L	0.130	0.26%
Ni 231.604†	3461.5	1.028	mg/L	0.0079	1.028	mg/L	0.0079	0.77%
Pb 220.353†	15216.6	1.954	mg/L	0.0136	1.954	mg/L	0.0136	0.70%
Sb 206.836†	5217.9	2.004	mg/L	0.0154	2.004	mg/L	0.0154	0.77%
Se 196.026†	2936.4	1.928	mg/L	0.0212	1.928	mg/L	0.0212	1.10%
Si 288.158†	2676.6	1.956	mg/L	0.0118	1.956	mg/L	0.0118	0.60%
Sn 189.927†	4688.9	0.9493	mg/L	0.00990	0.9493	mg/L	0.00990	1.04%
Sr 421.552†	887729.0	0.9823	mg/L	0.01124	0.9823	mg/L	0.01124	1.14%
Ti 334.903†	25175.7	0.9861	mg/L	0.00877	0.9861	mg/L	0.00877	0.89%
Tl 190.801†	3491.3	2.042	mg/L	0.0163	2.042	mg/L	0.0163	0.80%
V 292.402†	133201.1	0.9750	mg/L	0.00774	0.9750	mg/L	0.00774	0.79%
Zn 206.200†	3968.7	1.001	mg/L	0.0037	1.001	mg/L	0.0037	0.37%

Sequence No.: 58
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 4/29/2013 1:00:55 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	2741855.2	105.3	%	0.18				0.17%
ScR 361.383	390296.7	104.4	%	0.92				0.88%
Ag 328.068†	106.5	0.00049	mg/L	0.000128	0.00049	mg/L	0.000128	26.24%
Al 308.215†	0.4	0.00030	mg/L	0.003997	0.00030	mg/L	0.003997	>999.9%
As 188.979†	1.7	0.00129	mg/L	0.001168	0.00129	mg/L	0.001168	90.60%
B 249.677†	5.2	0.00087	mg/L	0.001260	0.00087	mg/L	0.001260	144.44%
Ba 233.527†	-0.7	-0.00012	mg/L	0.000219	-0.00012	mg/L	0.000219	182.60%
Be 313.042†	86.8	0.00015	mg/L	0.000031	0.00015	mg/L	0.000031	20.28%
Ca 317.933†	10.7	0.00107	mg/L	0.001120	0.00107	mg/L	0.001120	104.29%
Cd 228.802†	13.1	0.00057	mg/L	0.000078	0.00057	mg/L	0.000078	13.67%
Co 228.616†	14.0	0.00046	mg/L	0.000201	0.00046	mg/L	0.000201	44.02%
Cr 267.716†	3.5	0.00043	mg/L	0.000188	0.00043	mg/L	0.000188	43.75%
Cu 324.752†	127.2	0.00050	mg/L	0.000108	0.00050	mg/L	0.000108	21.45%
Fe 273.955†	4.8	0.00400	mg/L	0.002260	0.00400	mg/L	0.002260	56.53%
K 766.490†	25.5	0.01249	mg/L	0.005346	0.01249	mg/L	0.005346	42.81%
Mg 279.077†	-6.3	-0.00681	mg/L	0.003604	-0.00681	mg/L	0.003604	52.91%
Mn 257.610†	11.9	0.00023	mg/L	0.000050	0.00023	mg/L	0.000050	21.47%
Mo 202.031†	27.5	0.00150	mg/L	0.000357	0.00150	mg/L	0.000357	23.76%
Na 589.592†	62.3	0.00548	mg/L	0.003288	0.00548	mg/L	0.003288	59.95%
Na 330.237†	-11.1	-0.3509	mg/L	0.18420	-0.3509	mg/L	0.18420	52.49%
Ni 231.604†	2.4	0.00073	mg/L	0.000800	0.00073	mg/L	0.000800	109.81%
Pb 220.353†	10.2	0.00131	mg/L	0.000269	0.00131	mg/L	0.000269	20.47%
Sb 206.836†	8.6	0.00331	mg/L	0.001581	0.00331	mg/L	0.001581	47.80%
Se 196.026†	10.5	0.00692	mg/L	0.002140	0.00692	mg/L	0.002140	30.91%
Si 288.158†	-2.8	-0.00208	mg/L	0.002981	-0.00208	mg/L	0.002981	143.12%
Sn 189.927†	7.5	0.00151	mg/L	0.000604	0.00151	mg/L	0.000604	40.04%
Sr 421.552†	176.6	0.00020	mg/L	0.000010	0.00020	mg/L	0.000010	5.15%
Ti 334.903†	30.5	0.00120	mg/L	0.000427	0.00120	mg/L	0.000427	35.70%
Tl 190.801†	1.2	0.00072	mg/L	0.000828	0.00072	mg/L	0.000828	115.56%
V 292.402†	58.1	0.00043	mg/L	0.000171	0.00043	mg/L	0.000171	40.19%
Zn 206.200†	-0.5	-0.00012	mg/L	0.000425	-0.00012	mg/L	0.000425	345.14%

Sequence No.: 59
Sample ID: WN31 MB1 SWC

Autosampler Location: 345
Date Collected: 4/29/2013 1:05:11 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2748559.7	105.6	%	0.77				0.73%
ScR 361.383	392272.1	105.0	%	0.30				0.29%
Ag 328.068†	20.3	0.00009	mg/L	0.000135	0.00019	mg/L	0.000271	145.56%
Al 308.215†	5.4	0.00475	mg/L	0.006470	0.00950	mg/L	0.012939	136.23%
As 188.979†	1.5	0.00112	mg/L	0.001597	0.00225	mg/L	0.003193	142.16%
B 249.677†	-3.3	-0.00055	mg/L	0.000845	-0.00110	mg/L	0.001691	154.06%
Ba 233.527†	5.2	0.00094	mg/L	0.000739	0.00188	mg/L	0.001478	78.76%
Be 313.042†	-9.5	-0.00002	mg/L	0.000016	-0.00003	mg/L	0.000032	95.05%
Ca 317.933†	74.6	0.00748	mg/L	0.000752	0.01496	mg/L	0.001505	10.06%
Cd 228.802†	5.2	0.00023	mg/L	0.000114	0.00045	mg/L	0.000228	50.65%
Co 228.616†	4.5	0.00015	mg/L	0.000125	0.00029	mg/L	0.000249	85.84%
Cr 267.716†	1.6	0.00019	mg/L	0.000234	0.00038	mg/L	0.000469	122.56%
Cu 324.752†	47.1	0.00019	mg/L	0.000074	0.00037	mg/L	0.000147	39.58%
Fe 273.955†	8.0	0.00665	mg/L	0.001151	0.01330	mg/L	0.002301	17.30%
K 766.490†	28.2	0.01378	mg/L	0.018583	0.02757	mg/L	0.037167	134.83%
Mg 279.077†	-7.1	-0.00773	mg/L	0.003976	-0.01546	mg/L	0.007951	51.43%
Mn 257.610†	5.8	0.00011	mg/L	0.000043	0.00023	mg/L	0.000086	37.26%
Mo 202.031†	3.6	0.00020	mg/L	0.000259	0.00039	mg/L	0.000518	132.33%
Na 589.592†	-126.0	-0.01109	mg/L	0.000759	-0.02218	mg/L	0.001517	6.84%
Na 330.237†	-13.9	-0.4407	mg/L	0.35233	-0.8814	mg/L	0.70465	79.95%
Ni 231.604†	2.9	0.00086	mg/L	0.000414	0.00172	mg/L	0.000828	48.24%
Pb 220.353†	4.9	0.00063	mg/L	0.000634	0.00126	mg/L	0.001269	100.72%
Sb 206.836†	-1.9	-0.00075	mg/L	0.003045	-0.00150	mg/L	0.006091	407.39%
Se 196.026†	5.9	0.00390	mg/L	0.000755	0.00779	mg/L	0.001510	19.37%
Si 288.158†	24.0	0.01760	mg/L	0.001734	0.03520	mg/L	0.003467	9.85%
Sn 189.927†	2.0	0.00040	mg/L	0.000272	0.00081	mg/L	0.000543	67.40%
Sr 421.552†	21.1	0.00002	mg/L	0.000020	0.00005	mg/L	0.000040	86.12%
Ti 334.903†	26.0	0.00102	mg/L	0.000640	0.00204	mg/L	0.001279	62.63%
Tl 190.801†	-2.4	-0.00141	mg/L	0.001499	-0.00282	mg/L	0.002998	106.19%
V 292.402†	4.3	0.00003	mg/L	0.000064	0.00006	mg/L	0.000127	204.98%
Zn 206.200†	1.9	0.00049	mg/L	0.000592	0.00098	mg/L	0.001183	120.57%

Sequence No.: 60
Sample ID: WN31 ADUP SWC

Autosampler Location: 346
Date Collected: 4/29/2013 1:09:28 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2722264.9	104.6	%	0.26				0.25%
ScR 361.383	393387.5	105.3	%	0.56				0.53%
Ag 328.068†	195.8	0.00117	mg/L	0.000291	0.00233	mg/L	0.000581	24.93%
Al 308.215†	61863.7	54.44	mg/L	0.097	108.9	mg/L	0.19	0.18%
As 188.979†	-113.3	0.03172	mg/L	0.002156	0.06345	mg/L	0.004313	6.80%
B 249.677†	327.1	0.05437	mg/L	0.000720	0.1087	mg/L	0.00144	1.32%
Ba 233.527†	13169.7	2.356	mg/L	0.0119	4.712	mg/L	0.0237	0.50%
Be 313.042†	493.3	0.00077	mg/L	0.000018	0.00154	mg/L	0.000035	2.29%
Ca 317.933†	288643.1	28.93	mg/L	0.152	57.85	mg/L	0.303	0.52%
Cd 228.802†	268.1	0.01246	mg/L	0.000182	0.02492	mg/L	0.000363	1.46%
Co 228.616†	1612.9	0.04634	mg/L	0.000090	0.09268	mg/L	0.000181	0.20%
Cr 267.716†	3282.1	0.4007	mg/L	0.00259	0.8014	mg/L	0.00517	0.65%
Cu 324.752†	201158.5	0.7997	mg/L	0.00431	1.599	mg/L	0.0086	0.54%
Fe 273.955†	161162.7	134.1	mg/L	0.94	268.3	mg/L	1.87	0.70%
K 766.490†	9554.3	4.677	mg/L	0.0327	9.355	mg/L	0.0655	0.70%
Mg 279.077†	21147.0	22.80	mg/L	0.133	45.59	mg/L	0.266	0.58%
Mn 257.610†	96351.5	1.895	mg/L	0.0102	3.791	mg/L	0.0204	0.54%
Mo 202.031†	1207.9	0.06564	mg/L	0.000385	0.1313	mg/L	0.00077	0.59%
Na 589.592†	38479.3	3.387	mg/L	0.0149	6.774	mg/L	0.0298	0.44%
Na 330.237†	89.8	2.569	mg/L	0.1470	5.139	mg/L	0.2941	5.72%
Ni 231.604†	793.3	0.2355	mg/L	0.00282	0.4711	mg/L	0.00564	1.20%
Pb 220.353†	2619.4	0.3434	mg/L	0.00152	0.6869	mg/L	0.00304	0.44%
Sb 206.836†	19.5	0.00588	mg/L	0.001912	0.01176	mg/L	0.003824	32.51%
Se 196.026†	4.9	-0.00323	mg/L	0.000814	-0.00647	mg/L	0.001628	25.16%
Si 288.158†	2608.1	1.913	mg/L	0.0039	3.826	mg/L	0.0078	0.20%
Sn 189.927†	145.3	0.03244	mg/L	0.000189	0.06488	mg/L	0.000378	0.58%
Sr 421.552†	180277.8	0.1995	mg/L	0.00026	0.3990	mg/L	0.00052	0.13%
Ti 334.903†	87215.0	3.419	mg/L	0.0123	6.838	mg/L	0.0247	0.36%
Tl 190.801†	-13.0	0.00881	mg/L	0.005013	0.01763	mg/L	0.010025	56.87%
V 292.402†	36239.7	0.2574	mg/L	0.00214	0.5148	mg/L	0.00427	0.83%
Zn 206.200†	16344.2	4.121	mg/L	0.0250	8.241	mg/L	0.0500	0.61%

Sequence No.: 61
Sample ID: WN31 A SWC

Autosampler Location: 347
Date Collected: 4/29/2013 1:13:30 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2728634.7	104.8	%	0.40				0.38%
ScR 361.383	390527.0	104.5	%	0.17				0.17%
Ag 328.068†	137.8	0.00090	mg/L	0.000124	0.00179	mg/L	0.000248	13.80%
Al 308.215†	61364.2	54.00	mg/L	0.120	108.0	mg/L	0.24	0.22%
As 188.979†	-113.2	0.02862	mg/L	0.003239	0.05725	mg/L	0.006478	11.32%
B 249.677†	293.5	0.04878	mg/L	0.001156	0.09756	mg/L	0.002312	2.37%
Ba 233.527†	12997.9	2.325	mg/L	0.0075	4.651	mg/L	0.0150	0.32%
Be 313.042†	491.7	0.00077	mg/L	0.000014	0.00154	mg/L	0.000029	1.87%
Ca 317.933†	285787.5	28.64	mg/L	0.098	57.28	mg/L	0.196	0.34%
Cd 228.802†	272.1	0.01267	mg/L	0.000298	0.02534	mg/L	0.000596	2.35%
Co 228.616†	1631.6	0.04711	mg/L	0.000211	0.09423	mg/L	0.000421	0.45%
Cr 267.716†	3831.7	0.4675	mg/L	0.00194	0.9350	mg/L	0.00389	0.42%
Cu 324.752†	179639.6	0.7147	mg/L	0.00352	1.429	mg/L	0.0070	0.49%
Fe 273.955†	158748.5	132.1	mg/L	0.22	264.3	mg/L	0.45	0.17%
K 766.490†	9660.6	4.730	mg/L	0.0301	9.459	mg/L	0.0601	0.64%
Mg 279.077†	21286.6	22.95	mg/L	0.060	45.90	mg/L	0.119	0.26%
Mn 257.610†	96184.1	1.892	mg/L	0.0065	3.784	mg/L	0.0130	0.34%
Mo 202.031†	1340.6	0.07289	mg/L	0.000304	0.1458	mg/L	0.00061	0.42%
Na 589.592†	38079.7	3.352	mg/L	0.0062	6.703	mg/L	0.0125	0.19%
Na 330.237†	91.2	2.606	mg/L	0.0503	5.213	mg/L	0.1006	1.93%
Ni 231.604†	929.8	0.2761	mg/L	0.00069	0.5521	mg/L	0.00139	0.25%
Pb 220.353†	2604.2	0.3417	mg/L	0.00104	0.6834	mg/L	0.00208	0.30%
Sb 206.836†	16.0	0.00357	mg/L	0.000641	0.00713	mg/L	0.001282	17.97%
Se 196.026†	8.1	-0.00106	mg/L	0.000477	-0.00213	mg/L	0.000953	44.82%
Si 288.158†	2137.8	1.568	mg/L	0.0042	3.137	mg/L	0.0085	0.27%
Sn 189.927†	168.9	0.03716	mg/L	0.000672	0.07433	mg/L	0.001343	1.81%
Sr 421.552†	178430.2	0.1974	mg/L	0.00054	0.3949	mg/L	0.00109	0.28%
Ti 334.903†	84926.5	3.329	mg/L	0.0048	6.658	mg/L	0.0097	0.15%
Tl 190.801†	-12.5	0.00889	mg/L	0.000960	0.01778	mg/L	0.001920	10.80%
V 292.402†	35498.4	0.2525	mg/L	0.00147	0.5049	mg/L	0.00294	0.58%
Zn 206.200†	16120.5	4.064	mg/L	0.0129	8.128	mg/L	0.0257	0.32%

Sequence No.: 62
Sample ID: WN31 ASPK SWC

Autosampler Location: 348
Date Collected: 4/29/2013 1:17:31 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WN31 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2729090.9	104.8	%	0.65				0.62%
ScR 361.383	392077.3	104.9	%	0.66				0.63%
Ag 328.068†	105973.1	0.4845	mg/L	0.00448	0.9690	mg/L	0.00897	0.93%
Al 308.215†	64008.6	56.32	mg/L	0.301	112.6	mg/L	0.60	0.53%
As 188.979†	2427.5	1.894	mg/L	0.0110	3.789	mg/L	0.0220	0.58%
B 249.677†	336.4	0.05485	mg/L	0.001001	0.1097	mg/L	0.00200	1.82%
Ba 233.527†	23780.7	4.270	mg/L	0.0371	8.540	mg/L	0.0742	0.87%
Be 313.042†	252318.8	0.4427	mg/L	0.00322	0.8855	mg/L	0.00644	0.73%
Ca 317.933†	379321.2	38.01	mg/L	0.090	76.03	mg/L	0.179	0.24%
Cd 228.802†	11291.5	0.4875	mg/L	0.00361	0.9751	mg/L	0.00723	0.74%
Co 228.616†	15705.8	0.5062	mg/L	0.00376	1.012	mg/L	0.0075	0.74%
Cr 267.716†	7188.7	0.8748	mg/L	0.00440	1.750	mg/L	0.0088	0.50%
Cu 324.752†	299558.6	1.188	mg/L	0.0070	2.376	mg/L	0.0139	0.59%
Fe 273.955†	160222.5	133.4	mg/L	1.21	266.7	mg/L	2.43	0.91%
K 766.490†	27535.2	13.48	mg/L	0.055	26.96	mg/L	0.110	0.41%
Mg 279.077†	30250.1	32.64	mg/L	0.261	65.28	mg/L	0.522	0.80%
Mn 257.610†	117673.4	2.315	mg/L	0.0183	4.630	mg/L	0.0366	0.79%
Mo 202.031†	1193.6	0.06473	mg/L	0.000615	0.1295	mg/L	0.00123	0.95%
Na 589.592†	144611.2	12.73	mg/L	0.015	25.46	mg/L	0.029	0.11%
Na 330.237†	388.1	11.85	mg/L	0.169	23.70	mg/L	0.337	1.42%
Ni 231.604†	2368.1	0.7023	mg/L	0.00527	1.405	mg/L	0.0105	0.75%
Pb 220.353†	16828.7	2.168	mg/L	0.0151	4.336	mg/L	0.0301	0.69%
Sb 206.836†	21.5	0.00168	mg/L	0.002015	0.00335	mg/L	0.004030	120.19%
Se 196.026†	2832.6	1.854	mg/L	0.0089	3.708	mg/L	0.0178	0.48%
Si 288.158†	1668.7	1.228	mg/L	0.0112	2.455	mg/L	0.0224	0.91%
Sn 189.927†	128.5	0.02978	mg/L	0.001429	0.05955	mg/L	0.002858	4.80%
Sr 421.552†	590922.8	0.6539	mg/L	0.00350	1.308	mg/L	0.0070	0.54%
Ti 334.903†	83811.6	3.285	mg/L	0.0195	6.570	mg/L	0.0390	0.59%
Tl 190.801†	3075.8	1.818	mg/L	0.0156	3.635	mg/L	0.0313	0.86%
V 292.402†	96583.4	0.6993	mg/L	0.00494	1.399	mg/L	0.0099	0.71%
Zn 206.200†	17956.2	4.527	mg/L	0.0358	9.054	mg/L	0.0715	0.79%

Sequence No.: 63
Sample ID: ~~WN31 APOST SWC~~ ZZZZZZ
BA 4/29/13
Dilution: 2.000000X

Autosampler Location: 349
Date Collected: 4/29/2013 1:21:33 PM
Data Type: Original

Nebulizer Parameters: WN31 APOST SWC

Analyte	Back Pressure	Flow
A11	219.0 kPa	0.75 L/min

Mean Data: WN31 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2735420.9	105.1	%	0.64				0.61%
ScR 361.383	384252.0	102.8	%	0.44				0.42%
Ag 328.068†	114551.5	0.5237	mg/L	0.00538	1.047	mg/L	0.0108	1.03%
Al 308.215†	64352.6	56.63	mg/L	0.032	113.3	mg/L	0.06	0.06%
As 188.979†	2696.5	2.094	mg/L	0.0046	4.189	mg/L	0.0092	0.22%
B 249.677†	300.8	0.04881	mg/L	0.000982	0.09763	mg/L	0.001965	2.01%
Ba 233.527†	25381.5	4.559	mg/L	0.0090	9.118	mg/L	0.0179	0.20%
Be 313.042†	278770.2	0.4892	mg/L	0.00288	0.9783	mg/L	0.00576	0.59%
Ca 317.933†	384632.5	38.55	mg/L	0.068	77.09	mg/L	0.136	0.18%
Cd 228.802†	12318.5	0.5317	mg/L	0.00200	1.063	mg/L	0.0040	0.38%
Co 228.616†	17095.2	0.5514	mg/L	0.00203	1.103	mg/L	0.0041	0.37%
Cr 267.716†	8207.9	0.9987	mg/L	0.00531	1.997	mg/L	0.0106	0.53%
Cu 324.752†	309316.2	1.227	mg/L	0.0098	2.453	mg/L	0.0196	0.80%
Fe 273.955†	160905.1	133.9	mg/L	0.11	267.8	mg/L	0.22	0.08%
K 766.490†	30323.8	14.85	mg/L	0.043	29.69	mg/L	0.085	0.29%
Mg 279.077†	31391.0	33.88	mg/L	0.120	67.75	mg/L	0.240	0.35%
Mn 257.610†	121058.2	2.382	mg/L	0.0047	4.764	mg/L	0.0093	0.20%
Mo 202.031†	1344.3	0.07295	mg/L	0.000670	0.1459	mg/L	0.00134	0.92%
Na 589.592†	156436.7	13.77	mg/L	0.077	27.54	mg/L	0.154	0.56%
Na 330.237†	428.7	13.12	mg/L	0.127	26.25	mg/L	0.253	0.97%
Ni 231.604†	2706.6	0.8027	mg/L	0.00475	1.605	mg/L	0.0095	0.59%
Pb 220.353†	18174.3	2.341	mg/L	0.0078	4.682	mg/L	0.0155	0.33%
Sb 206.836†	32.5	0.00453	mg/L	0.000997	0.00906	mg/L	0.001994	22.00%
Se 196.026†	3149.3	2.062	mg/L	0.0078	4.124	mg/L	0.0155	0.38%
Si 288.158†	2189.1	1.609	mg/L	0.0060	3.218	mg/L	0.0121	0.38%
Sn 189.927†	160.0	0.03621	mg/L	0.000602	0.07242	mg/L	0.001205	1.66%
Sr 421.552†	637522.9	0.7054	mg/L	0.00196	1.411	mg/L	0.0039	0.28%
Ti 334.903†	85584.6	3.354	mg/L	0.0011	6.709	mg/L	0.0021	0.03%
Tl 190.801†	3446.6	2.035	mg/L	0.0070	4.070	mg/L	0.0141	0.35%
V 292.402†	103600.4	0.7509	mg/L	0.00676	1.502	mg/L	0.0135	0.90%
Zn 206.200†	18379.3	4.634	mg/L	0.0199	9.268	mg/L	0.0397	0.43%

Sequence No.: 64
Sample ID: WN31 MB1SPK SWC

Autosampler Location: 350
Date Collected: 4/29/2013 1:25:37 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WN31 MB1SPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WN31 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2726219.2	104.7	%	0.26				0.25%
ScR 361.383	389928.8	104.3	%	0.59				0.57%
Ag 328.068†	114281.4	0.5222	mg/L	0.00145	1.044	mg/L	0.0029	0.28%
Al 308.215†	2260.9	1.983	mg/L	0.0054	3.966	mg/L	0.0108	0.27%
As 188.979†	2716.0	1.996	mg/L	0.0124	3.992	mg/L	0.0248	0.62%
B 249.677†	1.4	-0.00089	mg/L	0.000637	-0.00178	mg/L	0.001275	71.49%
Ba 233.527†	11394.6	2.055	mg/L	0.0098	4.110	mg/L	0.0196	0.48%
Be 313.042†	263575.2	0.4626	mg/L	0.00255	0.9252	mg/L	0.00511	0.55%
Ca 317.933†	93208.4	9.341	mg/L	0.0289	18.68	mg/L	0.058	0.31%
Cd 228.802†	11301.2	0.4866	mg/L	0.00164	0.9732	mg/L	0.00327	0.34%
Co 228.616†	14741.4	0.4808	mg/L	0.00209	0.9616	mg/L	0.00419	0.44%
Cr 267.716†	4120.7	0.5002	mg/L	0.00086	1.000	mg/L	0.0017	0.17%
Cu 324.752†	121704.7	0.4804	mg/L	0.00326	0.9609	mg/L	0.00653	0.68%
Fe 273.955†	2328.2	1.935	mg/L	0.0030	3.870	mg/L	0.0059	0.15%
K 766.490†	19375.0	9.485	mg/L	0.0616	18.97	mg/L	0.123	0.65%
Mg 279.077†	9100.7	9.842	mg/L	0.0204	19.68	mg/L	0.041	0.21%
Mn 257.610†	23229.0	0.4573	mg/L	0.00127	0.9147	mg/L	0.00254	0.28%
Mo 202.031†	29.9	0.00150	mg/L	0.000046	0.00299	mg/L	0.000091	3.06%
Na 589.592†	110177.4	9.698	mg/L	0.0142	19.40	mg/L	0.028	0.15%
Na 330.237†	296.8	9.248	mg/L	0.0484	18.50	mg/L	0.097	0.52%
Ni 231.604†	1683.4	0.4989	mg/L	0.00041	0.9979	mg/L	0.00082	0.08%
Pb 220.353†	14938.2	1.918	mg/L	0.0098	3.836	mg/L	0.0196	0.51%
Sb 206.836†	6.4	-0.00258	mg/L	0.000322	-0.00515	mg/L	0.000645	12.51%
Se 196.026†	2990.9	1.964	mg/L	0.0066	3.929	mg/L	0.0132	0.34%
Si 288.158†	31.6	0.02590	mg/L	0.003880	0.05180	mg/L	0.007759	14.98%
Sn 189.927†	-18.4	-0.00294	mg/L	0.000423	-0.00588	mg/L	0.000846	14.38%
Sr 421.552†	430680.3	0.4766	mg/L	0.00084	0.9531	mg/L	0.00167	0.18%
Ti 334.903†	91.8	0.00295	mg/L	0.000160	0.00590	mg/L	0.000320	5.42%
Tl 190.801†	3442.3	2.016	mg/L	0.0061	4.033	mg/L	0.0123	0.30%
V 292.402†	66440.5	0.4862	mg/L	0.00178	0.9725	mg/L	0.00355	0.37%
Zn 206.200†	1934.3	0.4878	mg/L	0.00122	0.9756	mg/L	0.00244	0.25%

Sequence No.: 65
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 4/29/2013 1:29:38 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.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2741360.7	105.3	%	0.96				0.91%
ScR 361.383	386451.2	103.4	%	1.17				1.13%
Ag 328.068†	227876.7	1.041	mg/L	0.0149	1.041	mg/L	0.0149	1.44%
Al 308.215†	2282.2	1.976	mg/L	0.0156	1.976	mg/L	0.0156	0.79%
As 188.979†	2620.8	1.957	mg/L	0.0202	1.957	mg/L	0.0202	1.03%
B 249.677†	6008.2	0.9996	mg/L	0.00798	0.9996	mg/L	0.00798	0.80%
Ba 233.527†	5862.3	1.057	mg/L	0.0058	1.057	mg/L	0.0058	0.54%
Be 313.042†	541297.2	0.9500	mg/L	0.01426	0.9500	mg/L	0.01426	1.50%
Ca 317.933†	19945.9	1.999	mg/L	0.0192	1.999	mg/L	0.0192	0.96%
Cd 228.802†	22863.0	0.9963	mg/L	0.00988	0.9963	mg/L	0.00988	0.99%
Co 228.616†	30451.2	0.9920	mg/L	0.00886	0.9920	mg/L	0.00886	0.89%
Cr 267.716†	8426.3	1.025	mg/L	0.0076	1.025	mg/L	0.0076	0.74%
Cu 324.752†	252466.3	0.9961	mg/L	0.01197	0.9961	mg/L	0.01197	1.20%
Fe 273.955†	2331.2	1.935	mg/L	0.0161	1.935	mg/L	0.0161	0.83%
K 766.490†	39411.2	19.29	mg/L	0.245	19.29	mg/L	0.245	1.27%
Mg 279.077†	1795.7	1.948	mg/L	0.0177	1.948	mg/L	0.0177	0.91%
Mn 257.610†	47132.8	0.9277	mg/L	0.01511	0.9277	mg/L	0.01511	1.63%
Mo 202.031†	17725.2	0.9685	mg/L	0.01016	0.9685	mg/L	0.01016	1.05%
Na 589.592†	565540.0	49.78	mg/L	0.597	49.78	mg/L	0.597	1.20%
Na 330.237†	1567.0	49.56	mg/L	0.373	49.56	mg/L	0.373	0.75%
Ni 231.604†	3471.8	1.031	mg/L	0.0028	1.031	mg/L	0.0028	0.28%
Pb 220.353†	15180.0	1.949	mg/L	0.0188	1.949	mg/L	0.0188	0.96%
Sb 206.836†	5197.7	1.996	mg/L	0.0209	1.996	mg/L	0.0209	1.05%
Se 196.026†	2926.6	1.922	mg/L	0.0177	1.922	mg/L	0.0177	0.92%
Si 288.158†	2663.3	1.946	mg/L	0.0186	1.946	mg/L	0.0186	0.96%
Sn 189.927†	4666.7	0.9449	mg/L	0.00733	0.9449	mg/L	0.00733	0.78%
Sr 421.552†	881702.8	0.9756	mg/L	0.01430	0.9756	mg/L	0.01430	1.47%
Ti 334.903†	25006.2	0.9795	mg/L	0.01502	0.9795	mg/L	0.01502	1.53%
Tl 190.801†	3492.1	2.042	mg/L	0.0184	2.042	mg/L	0.0184	0.90%
V 292.402†	134171.0	0.9821	mg/L	0.01466	0.9821	mg/L	0.01466	1.49%
Zn 206.200†	3954.8	0.9973	mg/L	0.00755	0.9973	mg/L	0.00755	0.76%

Sequence No.: 66
Sample ID: CB 7
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 4/29/2013 1:33:42 PM
Data Type: Original

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	2735685.9	105.1	%	0.72				0.68%
ScR 361.383	390294.8	104.4	%	1.01				0.96%
Ag 328.068†	78.0	0.00036	mg/L	0.000024	0.00036	mg/L	0.000024	6.75%
Al 308.215†	7.2	0.00633	mg/L	0.003860	0.00633	mg/L	0.003860	60.97%
As 188.979†	2.9	0.00216	mg/L	0.000712	0.00216	mg/L	0.000712	32.98%
B 249.677†	2.0	0.00033	mg/L	0.001443	0.00033	mg/L	0.001443	439.79%
Ba 233.527†	1.8	0.00033	mg/L	0.000037	0.00033	mg/L	0.000037	11.40%
Be 313.042†	78.6	0.00014	mg/L	0.000023	0.00014	mg/L	0.000023	16.80%
Ca 317.933†	8.3	0.00083	mg/L	0.001081	0.00083	mg/L	0.001081	129.65%
Cd 228.802†	13.5	0.00058	mg/L	0.000189	0.00058	mg/L	0.000189	32.39%
Co 228.616†	8.4	0.00027	mg/L	0.000221	0.00027	mg/L	0.000221	81.85%
Cr 267.716†	6.9	0.00084	mg/L	0.000484	0.00084	mg/L	0.000484	57.86%
Cu 324.752†	214.3	0.00085	mg/L	0.000091	0.00085	mg/L	0.000091	10.71%
Fe 273.955†	2.9	0.00245	mg/L	0.001094	0.00245	mg/L	0.001094	44.62%
K 766.490†	35.4	0.01732	mg/L	0.004900	0.01732	mg/L	0.004900	28.29%
Mg 279.077†	-5.4	-0.00583	mg/L	0.005049	-0.00583	mg/L	0.005049	86.62%
Mn 257.610†	10.4	0.00020	mg/L	0.000086	0.00020	mg/L	0.000086	41.86%
Mo 202.031†	16.0	0.00087	mg/L	0.000170	0.00087	mg/L	0.000170	19.48%
Na 589.592†	4.4	0.00039	mg/L	0.000395	0.00039	mg/L	0.000395	101.74%
Na 330.237†	-9.7	-0.3056	mg/L	0.12301	-0.3056	mg/L	0.12301	40.25%
Ni 231.604†	1.8	0.00053	mg/L	0.001643	0.00053	mg/L	0.001643	310.15%
Pb 220.353†	10.1	0.00129	mg/L	0.000307	0.00129	mg/L	0.000307	23.70%
Sb 206.836†	4.2	0.00161	mg/L	0.000487	0.00161	mg/L	0.000487	30.30%
Se 196.026†	9.2	0.00607	mg/L	0.000726	0.00607	mg/L	0.000726	11.96%
Si 288.158†	0.7	0.00049	mg/L	0.000489	0.00049	mg/L	0.000489	99.18%
Sn 189.927†	4.7	0.00094	mg/L	0.000694	0.00094	mg/L	0.000694	73.62%
Sr 421.552†	130.9	0.00014	mg/L	0.000023	0.00014	mg/L	0.000023	16.08%
Ti 334.903†	43.9	0.00172	mg/L	0.000235	0.00172	mg/L	0.000235	13.66%
Tl 190.801†	-1.7	-0.00102	mg/L	0.001843	-0.00102	mg/L	0.001843	179.95%
V 292.402†	27.8	0.00021	mg/L	0.000094	0.00021	mg/L	0.000094	45.86%
Zn 206.200†	1.4	0.00034	mg/L	0.000323	0.00034	mg/L	0.000323	94.19%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4-30-13

M1 ELAN	Analyst 5-1-13	Peer 5-1-13	Comment
Logbooks:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See Log
ICB/CCB	✓	✓	See Log
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	✓	✓	
Matrix Spikes	✓	✓	WW52 WW27 WW31
Matrix Duplicates	✓	✓	WW50 WW31
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst Notes and CAF's	✓	✓	CAF WW52 WW27 WW31

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 30 4-29-13 **Analyst:** [illegible] AK 5-1-13 **Page:** 1 **of** 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3029-1
		1			3030-1
		2			-2
		3			-0
		4			-3
		Rinse			
		STD			
zzz		zzzzzz ICV			no sample in stack 3023-4
		ICB			
		CCV1			
		CCB1			
		ZZZZZZ			^{53}Cr low
		STD			
		CCV2			
		CCB2			^{53}Cr low
		STD			
		CCV3			
		CCB3			
		Low check			^{53}Cr 51 high
		ICSA			
		ICSAB			
		LR2W			
		LR3W			
		CCV4			

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 30 4-29-13 **Analyst:** M **Page:** 2 of 5

All corrections made by analyst unless otherwise noted. My 4-30-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB4			
		STD0			
		CCV5			
		CCB5			
		WN27 MB1	SWN	20	
		WL69 A		100	Cr
		↓ B		100	↓
		WN27 ADup		20 ✓	RREr (Sc)
		↓ A		↓	↓ CAF
		↓ ASpk		↓	↓ Sb %R
		↓ APost		↓	0.06mLSpk#2 4.0 0.06mLSpk#1 1.0 Sb
		↓ MBISpk	↓	↓ ✓	
		CCV6			
		CCB6			
		STD0			
		CCV7			
		CCB7			As 78 Se ↓
		WN31 MB2	RBN	2	
		WN27 ADup	SWN	100	Cr
		↓ A	↓	↓	↓
		↓ ASpk	↓	↓	↓
		WN40 B	RBN	2	
		WN31 B Dup		✓	RR As, Se Zn, Sb, Cd high RPD
		↓ B	↓	↓	CAF

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 30 4-29-13 **Analyst:** AK **Page:** 3 **of** 5

All corrections made by analyst unless otherwise noted. AK 4-30-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WN31 BSpk	REN	2 ✓	RR As Se
ZZZ		~~ZZZZZ BPost~~	↓	↓	
		↓ MBSpk	↓	↓	
		CCV8			
		CCB8			^{62}Ni ↑ $As^{78}Se$ ↓
		WN31 MB3	REN	2	
		ADup	SUB	20	CC High RR
		A	↓	↓	CRA
		ASpk			Sb ↑ %R
		APost	↓	↓	0.06mL Spk#2 1:0 0.06mL Spk#1 1:0 Sb
		CDup	REN	2 ✓	RR As, Se
		C	↓	↓	↓
		CSpk		✓	↓
ZZZ		~~ZZZZZ CPost~~			
		↓ MB3Spk	↓	↓	
		CCV9			
		CCB9			^{62}Ni ↑
		WN31 MB1	SUB	20	
		WN40 MB1	REN	2	
		ADup	↓	↓ ✓	
		A			
		ASpk		✓	
ZZZ		~~ZZZZZ APost~~			
		WN52 B	↓	↓	

WN31 : 02337

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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 4-30-13 **Analyst:** M **Page:** 4 of 5

All corrections made by analyst unless otherwise noted. M 5-1-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
REN		WN52 C	REN	2	
		WN40 MBlspk	b	b	✓
		WN31 MBlspk	SWN	20	✓
		CCV 10			
		CCB 10			
		WN52 MB1	REN	2	
		WN48 A		10	
		b C		5	
		WN52 D		2	
		E			RR As 1/50
Dup		ADup			Sb, Pb high RPD
		A			CAF
		Aspk			As high %R
		A Post			0.06 mL spk #2 1/10 0.06 mL spk #1 1/10 AS
		MBlspk	D	D	
		CCV4			BCA
		CCB4			^{62}Ni ^{52}Cr ^{78}Se As-2 Se ↓
		WN52 MB2	REN	2	
		WN48 J		10	
		b L		5	
		WN52 G		2	
		H			
		MDup			
		b M		b	CAF

M 5-1-13

Instrument Tuning Report

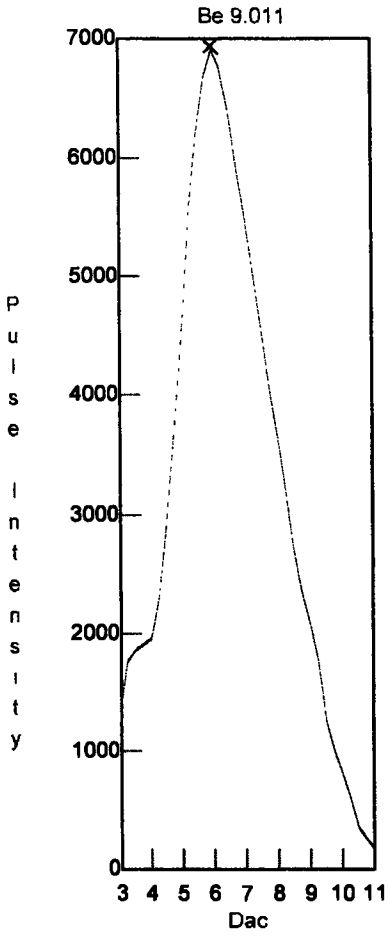
File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	9.125	2033	2165	0.704	
Mg	23.985	24.029	5654	2271	0.698	
Co	58.933	58.929	14149	2539	0.685	
In	114.904	114.929	27797	2982	0.703	
Pb	207.977	207.974	50435	3726	0.706	

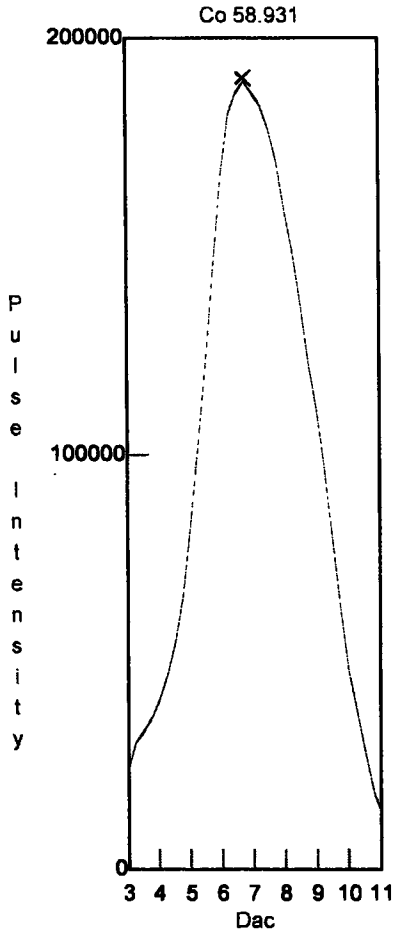
Instrument Tuning Report

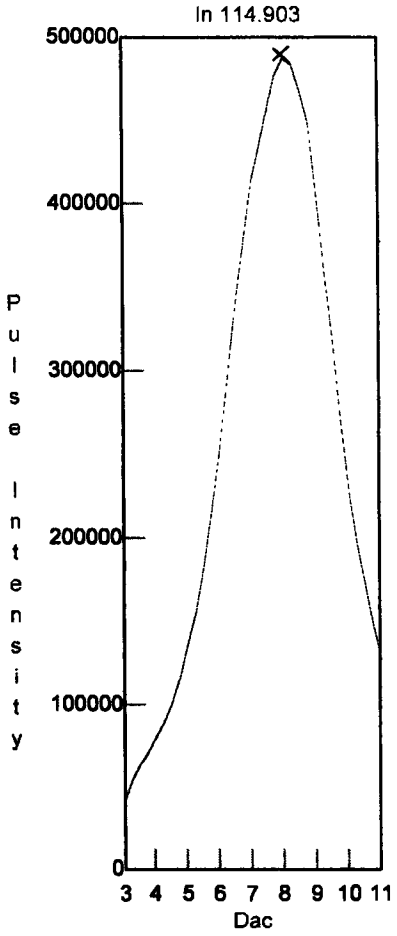
File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

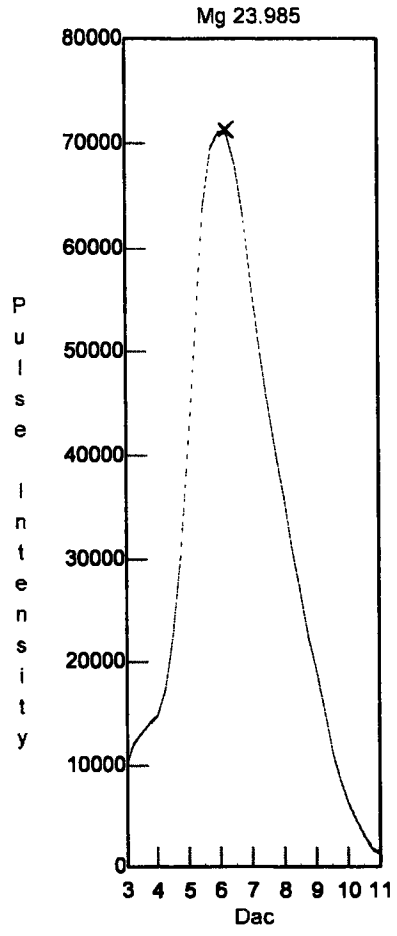
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	8.975	2024	2165	0.696	
Mg	23.985	23.979	5652	2271	0.705	
Co	58.933	58.929	14147	2539	0.683	
In	114.904	114.879	27790	2982	0.711	
Pb	207.977	208.026	50447	3726	0.702	

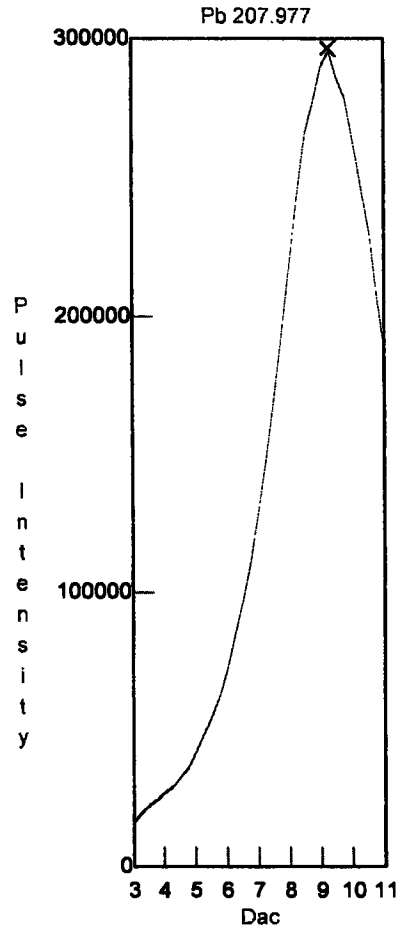


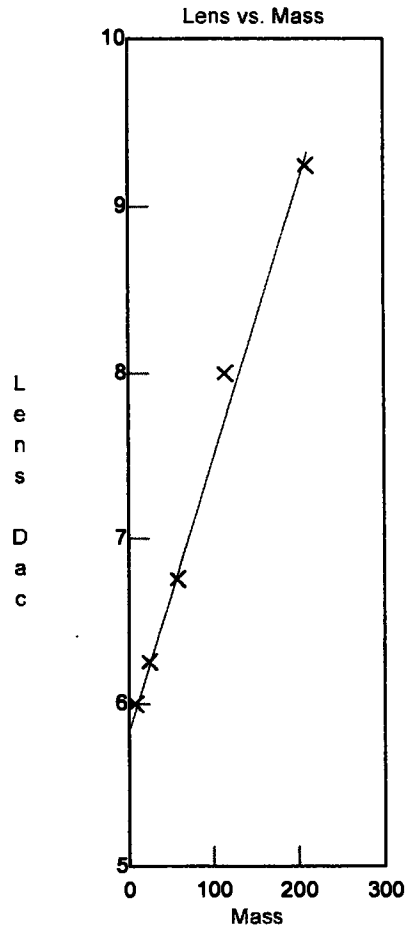
4-2013











Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, April 30, 2013 08:32:32
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1501
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

0.95

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	37440.441	580.523	1.551
	In	115	367469.623	4941.995	1.345
	Pb	208	246884.165	4535.286	1.837
⌈>	Ba	138	255866.824	3375.130	1.319
⌊	Ba++	69	0.011	0.000	2.415
⌈>	Ce	140	305140.872	3581.939	1.174
⌊	CeO	156	0.031	0.001	1.803
	Bkgd	220	5.251	1.046	19.920

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, April 30, 2013 08:33:37
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1502
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	34794.947	545.083	1.567
	In	115	344964.870	2551.682	0.740
	Pb	208	225816.217	2198.945	0.974
⌈>	Ba	138	243425.067	777.236	0.319
⌊	Ba++	69	0.011	0.000	2.380
⌈>	Ce	140	289762.953	4028.655	1.390
⌊	CeO	156	0.029	0.000	1.552
	Bkgd	220	8.501	2.054	24.164

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:05:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L				321928	0
⌊	Be	9		ug/L				3	78
	C	13		mg/L				3877	3
	Cl	37		mg/L				2028836	1
⌈>	Sc	45		ug/L				260685	0
|	V	51		ug/L				2398	11
|	V-1	51		ug/L				14379	0
|	Cr	52		ug/L				6372	3
|	Cr	53		ug/L				4551	2
|	Mn	55		ug/L				2053	26
⌊	Co	59		ug/L				52	21
⌈>	Ge	72		ug/L				279016	0
|	Ni	60		ug/L				420	37
|	Ni	62		ug/L				337	0
|	Cu	63		ug/L				679	11
|	Cu	65		ug/L				242	17
|	Zn	66		ug/L				1249	11
|	Zn	67		ug/L				473	3
|	Zn	68		ug/L				7831	0
|	As	75		ug/L				235	5
|	As-1	75		ug/L				8540	0
|	Se	82		ug/L				-5	160
|	Se	78		ug/L				8671	0
⌊	Mo	98		ug/L				133	9
	Y	89		ug/L				262660	0
	Kr	83		ug/L				162	4
⌈>	In	115		ug/L				307752	0
|	Ag	107		ug/L				20	27
|	Cd	111		ug/L				152	3
|	Cd	114		ug/L				20	12
|	Sb	121		ug/L				20	27
|	Sb	123		ug/L				14	15
|	Ba	135		ug/L				39	39
⌊	Ba	137		ug/L				65	21
⌈>	Tb	159		ug/L				378035	0
|	Tl	205		ug/L				67	17
|	Pb	208		ug/L				1398	23
|	Bi	209		ug/L				329363	0
|	Th	232		ug/L				41	32
⌊	U	238		ug/L				13	35

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:11:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			321928	331459	0
[	Be	9	10.000	ug/L	0.175	1	3	4368	1
	C	13		mg/L			3877	4958	3
	Cl	37		mg/L			2028836	2060604	0
[>	Sc	45		ug/L			260685	258915	0
[	V	51	10.000	ug/L	0.056	0	2398	118777	0
[	V-1	51	10.000	ug/L	0.100	0	14379	131326	0
[	Cr	52	10.000	ug/L	0.133	1	6372	107379	0
[	Cr	53	10.000	ug/L	0.274	2	4551	16147	1
[	Mn	55	10.000	ug/L	0.230	2	2053	165886	1
[	Co	59	10.000	ug/L	0.075	0	52	125486	0
[>	Ge	72		ug/L			279016	279445	1
[	Ni	60	10.000	ug/L	0.026	0	420	26311	0
[	Ni	62	10.000	ug/L	0.391	3	337	4100	3
[	Cu	63	10.000	ug/L	0.148	1	679	58003	0
[	Cu	65	10.000	ug/L	0.021	0	242	27243	1
[	Zn	66	10.000	ug/L	0.121	1	1249	17468	0
[	Zn	67	10.000	ug/L	0.273	2	473	3132	1
[	Zn	68	10.000	ug/L	0.143	1	7831	18912	1
[	As	75	10.000	ug/L	0.074	0	235	15959	1
[	As-1	75	10.000	ug/L	0.064	0	8540	23876	0
[	Se	82	10.000	ug/L	0.148	1	-5	1794	1
[	Se	78	10.000	ug/L	0.226	2	8671	12876	0
[	Mo	98	10.000	ug/L	0.100	1	133	58302	0
	Y	89		ug/L			262660	263919	0
	Kr	83		ug/L			162	169	6
[>	In	115		ug/L			307752	303810	1
[	Ag	107	10.000	ug/L	0.075	0	20	100580	1
[	Cd	111	10.000	ug/L	0.085	0	152	25358	0
[	Cd	114	10.000	ug/L	0.145	1	20	59384	0
[	Sb	121	10.000	ug/L	0.071	0	20	83988	0
[	Sb	123	10.000	ug/L	0.111	1	14	63443	0
[	Ba	135	10.000	ug/L	0.125	1	39	20878	1
[	Ba	137	10.000	ug/L	0.025	0	65	36239	1
[>	Tb	159		ug/L			378035	379838	0
[	Tl	205	10.000	ug/L	0.066	0	67	287604	0
[	Pb	208	10.000	ug/L	0.059	0	1398	397158	1
[	Bi	209		ug/L			329363	328751	0
[	Th	232	10.000	ug/L	0.070	0	41	469991	0
[	U	238	10.000	ug/L	0.026	0	13	515145	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:17:09
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			321928	336133	0
	Be	9	19.983	ug/L	0.118	0	3	8818	0
	C	13		mg/L			3877	4839	0
	Cl	37		mg/L			2028836	1975690	0
>	Sc	45		ug/L			260685	253309	0
	V	51	20.032	ug/L	0.193	0	2398	231904	1
	V-1	51	20.045	ug/L	0.223	1	14379	245601	0
	Cr	52	20.000	ug/L	0.193	0	6372	203912	1
	Cr	53	20.043	ug/L	0.349	1	4551	27422	0
	Mn	55	20.079	ug/L	0.173	0	2053	329020	0
	Co	59	19.975	ug/L	0.153	0	52	243970	0
>	Ge	72		ug/L			279016	271258	0
	Ni	60	20.086	ug/L	0.129	0	420	51771	0
	Ni	62	20.166	ug/L	0.318	1	337	7944	1
	Cu	63	20.021	ug/L	0.240	1	679	112530	0
	Cu	65	20.003	ug/L	0.096	0	242	52686	0
	Zn	66	20.183	ug/L	0.197	0	1249	34197	0
	Zn	67	20.263	ug/L	0.195	0	473	5980	1
	Zn	68	20.188	ug/L	0.371	1	7831	30147	0
	As	75	20.036	ug/L	0.125	0	235	31028	0
	As-1	75	20.054	ug/L	0.178	0	8540	38454	0
	Se	82	19.976	ug/L	0.101	0	-5	3467	0
	Se	78	20.022	ug/L	0.275	1	8671	16611	0
	Mo	98	20.097	ug/L	0.129	0	133	115848	0
	Y	89		ug/L			262660	258117	1
	Kr	83		ug/L			162	159	1
>	In	115		ug/L			307752	298413	0
	Ag	107	20.043	ug/L	0.046	0	20	199734	0
	Cd	111	20.074	ug/L	0.194	0	152	50595	1
	Cd	114	20.033	ug/L	0.202	1	20	117611	1
	Sb	121	20.026	ug/L	0.188	0	20	166077	1
	Sb	123	20.028	ug/L	0.092	0	14	125515	0
	Ba	135	20.022	ug/L	0.133	0	39	41203	0
	Ba	137	20.068	ug/L	0.176	0	65	72346	0
>	Tb	159		ug/L			378035	377227	0
	Tl	205	20.011	ug/L	0.300	1	67	572683	0
	Pb	208	20.015	ug/L	0.094	0	1398	790336	0
	Bi	209		ug/L			329363	323938	0
	Th	232	20.067	ug/L	0.105	0	41	949363	0
	U	238	20.060	ug/L	0.015	0	13	1038782	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:22:58
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			321928	339074	0
[	Be	9	49.699	ug/L	0.407	0	3	21474	1
	C	13		mg/L			3877	4032	2
	Cl	37		mg/L			2028836	1951087	0
[>	Sc	45		ug/L			260685	250802	0
[	V	51	49.834	ug/L	0.558	1	2398	558527	0
[	V-1	51	49.870	ug/L	0.526	1	14379	577110	0
[	Cr	52	49.867	ug/L	0.792	1	6372	487845	1
[	Cr	53	49.982	ug/L	0.502	1	4551	61069	0
[	Mn	55	49.845	ug/L	0.304	0	2053	793538	0
[	Co	59	49.792	ug/L	0.601	1	52	589808	1
[>	Ge	72		ug/L			279016	268159	0
[	Ni	60	49.772	ug/L	0.302	0	420	123415	0
[	Ni	62	49.728	ug/L	0.738	1	337	18400	0
[	Cu	63	49.738	ug/L	0.285	0	679	268394	0
[	Cu	65	49.739	ug/L	0.180	0	242	125888	0
[	Zn	66	49.964	ug/L	0.707	1	1249	81630	0
[	Zn	67	49.873	ug/L	0.538	1	473	13717	1
[	Zn	68	49.943	ug/L	0.630	1	7831	62327	0
[	As	75	49.847	ug/L	0.459	0	235	74835	0
[	As-1	75	49.845	ug/L	0.634	1	8540	81163	0
[	Se	82	49.847	ug/L	0.623	1	-5	8434	0
[	Se	78	49.833	ug/L	0.911	1	8671	28132	0
[	Mo	98	49.855	ug/L	0.411	0	133	279862	0
	Y	89		ug/L			262660	255226	0
	Kr	83		ug/L			162	160	5
[>	In	115		ug/L			307752	294098	0
[	Ag	107	49.761	ug/L	0.587	1	20	477237	0
[	Cd	111	49.853	ug/L	0.423	0	152	121824	0
[	Cd	114	49.855	ug/L	0.261	0	20	284307	0
[	Sb	121	49.912	ug/L	0.418	0	20	404327	0
[	Sb	123	49.995	ug/L	0.227	0	14	308621	0
[	Ba	135	49.926	ug/L	0.273	0	39	100458	0
[	Ba	137	49.835	ug/L	0.282	0	65	174103	0
[>	Tb	159		ug/L			378035	373107	0
[	Tl	205	49.955	ug/L	0.213	0	67	1407776	0
[	Pb	208	49.925	ug/L	0.070	0	1398	1933366	0
[	Bi	209		ug/L			329363	319425	0
[	Th	232	49.677	ug/L	0.323	0	41	2251705	0
[	U	238	49.723	ug/L	0.154	0	13	2478002	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:28:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			321928	340391	0
[	**Be**	**9**	**99.442**	ug/L	0.308	0	3	42343	0
	C	**13**		mg/L			3877	4991	1
	Cl	**37**		mg/L			2028836	1960083	0
[>	**Sc**	**45**		ug/L			260685	248162	0
[	**V**	**51**	**100.122**	ug/L	0.335	0	2398	1112561	0
[	**V-1**	**51**	**100.161**	ug/L	0.366	0	14379	1139121	0
[	**Cr**	**52**	**99.892**	ug/L	0.257	0	6372	957452	0
[	**Cr**	**53**	**100.026**	ug/L	0.374	0	4551	116685	0
[	**Mn**	**55**	**99.807**	ug/L	0.676	0	2053	1560296	1
[	**Co**	**59**	**99.902**	ug/L	0.611	0	52	1167070	0
[>	**Ge**	**72**		ug/L			279016	265074	0
[	**Ni**	**60**	**99.895**	ug/L	0.623	0	420	243602	0
[	**Ni**	**62**	**99.733**	ug/L	0.264	0	337	35841	0
[	**Cu**	**63**	**99.757**	ug/L	0.552	0	679	527212	0
[	**Cu**	**65**	**99.583**	ug/L	0.394	0	242	245511	0
[	**Zn**	**66**	**99.640**	ug/L	1.236	1	1249	157857	0
[	**Zn**	**67**	**99.917**	ug/L	1.279	1	473	26642	1
[	**Zn**	**68**	**99.851**	ug/L	0.591	0	7831	115214	0
[	**As**	**75**	**100.048**	ug/L	1.232	1	235	148487	0
[	**As-1**	**75**	**100.134**	ug/L	0.886	0	8540	153639	0
[	**Se**	**82**	**99.687**	ug/L	1.454	1	-5	16506	1
[	**Se**	**78**	**99.997**	ug/L	0.264	0	8671	47508	0
[	**Mo**	**98**	**100.127**	ug/L	0.972	0	133	557847	0
	Y	**89**		ug/L			262660	253047	1
	Kr	**83**		ug/L			162	177	4
[>	**In**	**115**		ug/L			307752	290538	0
[	**Ag**	**107**	**99.699**	ug/L	1.534	1	20	935205	1
[	**Cd**	**111**	**99.900**	ug/L	1.023	1	152	240226	0
[	**Cd**	**114**	**99.697**	ug/L	1.772	1	20	555989	1
[	**Sb**	**121**	**100.204**	ug/L	0.631	0	20	807371	0
[	**Sb**	**123**	**100.078**	ug/L	0.758	0	14	611879	0
[	**Ba**	**135**	**100.087**	ug/L	0.818	0	39	199491	0
[	**Ba**	**137**	**100.138**	ug/L	0.373	0	65	347145	0
[>	**Tb**	**159**		ug/L			378035	372555	1
[	**Tl**	**205**	**98.998**	ug/L	1.399	1	67	2695225	0
[	**Pb**	**208**	**99.485**	ug/L	0.895	0	1398	3780303	0
[	**Bi**	**209**		ug/L			329363	315898	1
[	**Th**	**232**	**99.935**	ug/L	1.072	1	41	4512945	0
[	**U**	**238**	**99.885**	ug/L	1.308	1	13	4951027	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse Sample
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:35:05
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			321928	345477	0
⌊	Be	9	0.016	ug/L	0.012	73	3	10	48
	C	13		mg/L			3877	3704	1
	Cl	37		mg/L			2028836	1982050	0
⌈>	Sc	45		ug/L			260685	248942	0
|	V	51	-0.030	ug/L	0.018	58	2398	1952	9
|	V-1	51	-0.230	ug/L	0.010	4	14379	11142	0
|	Cr	52	-0.046	ug/L	0.008	17	6372	5646	1
|	Cr	53	-0.683	ug/L	0.050	7	4551	3576	1
|	Mn	55	-0.080	ug/L	0.003	3	2053	701	6
⌊	Co	59	0.006	ug/L	0.001	13	52	118	7
⌈>	Ge	72		ug/L			279016	265023	0
|	Ni	60	-0.131	ug/L	0.007	5	420	81	20
|	Ni	62	-0.136	ug/L	0.061	45	337	272	8
|	Cu	63	-0.029	ug/L	0.004	13	679	494	3
|	Cu	65	-0.032	ug/L	0.006	18	242	150	9
|	Zn	66	-0.463	ug/L	0.023	4	1249	458	7
|	Zn	67	-0.592	ug/L	0.032	5	473	294	2
|	Zn	68	-0.745	ug/L	0.084	11	7831	6634	0
|	As	75	0.009	ug/L	0.027	311	235	236	16
|	As-1	75	-0.021	ug/L	0.032	151	8540	8081	0
|	Se	82	-0.018	ug/L	0.038	210	-5	-8	72
|	Se	78	-0.073	ug/L	0.074	101	8671	8208	0
⌊	Mo	98	0.006	ug/L	0.014	217	133	161	46
	Y	89		ug/L			262660	252298	0
	Kr	83		ug/L			162	163	2
⌈>	In	115		ug/L			307752	294523	0
|	Ag	107	0.011	ug/L	0.005	47	20	127	40
|	Cd	111	0.005	ug/L	0.003	65	152	157	4
|	Cd	114	0.005	ug/L	0.003	57	20	48	34
|	Sb	121	0.081	ug/L	0.021	25	20	678	24
|	Sb	123	0.082	ug/L	0.027	33	14	521	32
|	Ba	135	0.004	ug/L	0.003	67	39	45	11
⌊	Ba	137	0.001	ug/L	0.005	777	65	64	28
⌈>	Tb	159		ug/L			378035	372585	0
|	Tl	205	0.016	ug/L	0.004	28	67	488	24
|	Pb	208	-0.014	ug/L	0.003	18	1398	843	11
|	Bi	209		ug/L			329363	324443	0
|	Th	232	0.043	ug/L	0.014	32	41	1996	32
⌊	U	238	0.012	ug/L	0.003	22	13	585	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:42:02
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\042913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				343935	0
	Be	9		ug/L				9	32
	C	13		mg/L				3671	0
	Cl	37		mg/L				1974717	0
>	Sc	45		ug/L				246313	0
	V	51		ug/L				2058	17
	V-1	51		ug/L				10972	1
	Cr	52		ug/L				5720	2
	Cr	53		ug/L				3496	2
	Mn	55		ug/L				597	6
	Co	59		ug/L				61	20
>	Ge	72		ug/L				265693	0
	Ni	60		ug/L				74	10
	Ni	62		ug/L				268	5
	Cu	63		ug/L				427	4
	Cu	65		ug/L				139	13
	Zn	66		ug/L				448	9
	Zn	67		ug/L				264	3
	Zn	68		ug/L				6650	2
	As	75		ug/L				220	9
	As-1	75		ug/L				8107	0
	Se	82		ug/L				-7	128
	Se	78		ug/L				8254	0
	Mo	98		ug/L				66	7
	Y	89		ug/L				251930	0
	Kr	83		ug/L				163	1
>	In	115		ug/L				292229	1
	Ag	107		ug/L				67	22
	Cd	111		ug/L				134	11
	Cd	114		ug/L				23	3
	Sb	121		ug/L				195	11
	Sb	123		ug/L				134	24
	Ba	135		ug/L				27	15
	Ba	137		ug/L				54	2
>	Tb	159		ug/L				371120	0
	Tl	205		ug/L				184	15
	Pb	208		ug/L				583	6
	Bi	209		ug/L				324859	0
	Th	232		ug/L				587	19
	U	238		ug/L				154	15

Quantitative Analysis - Calibration Report

Sample Date/Time: Tuesday, April 30, 2013 09:42:02
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

Analyte	Mass	r Corr Coeff	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	0.9999	0.0013	10	20	50	100	
C	13							
Cl	37							
Sc	45							
V	51	1.0000	0.0447	10	20	50	100	
V-1	51	1.0000	0.0453	10	20	50	100	
Cr	52	1.0000	0.0384	10	20	50	100	
Cr	53	1.0000	0.0045	10	20	50	100	
Mn	55	1.0000	0.0629	10	20	50	100	
Co	59	1.0000	0.0471	10	20	50	100	
Ge	72							
Ni	60	1.0000	0.0092	10	20	50	100	
Ni	62	1.0000	0.0013	10	20	50	100	
Cu	63	1.0000	0.0199	10	20	50	100	
Cu	65	1.0000	0.0093	10	20	50	100	
Zn	66	1.0000	0.0059	10	20	50	100	
Zn	67	1.0000	0.0010	10	20	50	100	
Zn	68	1.0000	0.0041	10	20	50	100	
As	75	1.0000	0.0056	10	20	50	100	
As-1	75	1.0000	0.0055	10	20	50	100	
Se	82	1.0000	0.0006	10	20	50	100	
Se	78	1.0000	0.0015	10	20	50	100	
Mo	98	1.0000	0.0210	10	20	50	100	
Y	89							
Kr	83							
In	115							
Ag	107	1.0000	0.0323	10	20	50	100	
Cd	111	1.0000	0.0083	10	20	50	100	
Cd	114	1.0000	0.0192	10	20	50	100	
Sb	121	1.0000	0.0277	10	20	50	100	
Sb	123	1.0000	0.0210	10	20	50	100	
Ba	135	1.0000	0.0069	10	20	50	100	
Ba	137	1.0000	0.0119	10	20	50	100	
Tb	159							
Tl	205	0.9998	0.0731	10	20	50	100	
Pb	208	1.0000	0.1020	10	20	50	100	
Bi	209							
Th	232	1.0000	0.1212	10	20	50	100	
U	238	1.0000	0.1331	10	20	50	100	

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV-ZZZZZZ ND sample in place
Sample Dil Factor:
Comments: 44-3073
Sample Date/Time: Tuesday, April 30, 2013 09:47:50
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	362	7
[	Be	9	61.261	ug/L	17.447	28	9	27	29
	C	13		mg/L			3671	4799	0
	Cl	37		mg/L			1974717	989539	1
[>	Sc	45		ug/L			246313	2889	1
[	V	51	15.851	ug/L	2.343	14	2058	2068	13
[	V-1	51	70.841	ug/L	1.408	1	10972	9395	0
[	Cr	52	39.200	ug/L	1.074	2	5720	4413	2
[	Cr	53	214.141	ug/L	4.571	2	3496	2841	3
[	Mn	55	10.893	ug/L	0.220	2	597	1987	1
[	Co	59	0.277	ug/L	0.009	3	61	38	1
[>	Ge	72		ug/L			265693	160	6
[	Ni	60	22.244	ug/L	5.562	25	74	32	25
[	Ni	62	603.949	ug/L	72.270	11	268	130	5
[	Cu	63	67.756	ug/L	7.415	10	427	216	4
[	Cu	65	37.454	ug/L	9.916	26	139	55	19
[	Zn	66	59.021	ug/L	8.670	14	448	56	17
[	Zn	67	1024.048	ug/L	146.684	14	264	162	11
[	Zn	68	12611.648	ug/L	962.969	7	6650	8239	2
[	As	75	2607.384	ug/L	201.407	7	220	2337	1
[	As-1	75	11454.277	ug/L	778.288	6	8107	10077	1
[	Se	82	-487.275	ug/L	67.358	13	-7	-49	19
[	Se	78	42753.846	ug/L	2834.651	6	8254	10164	1
[	Mo	98	6.754	ug/L	1.519	22	66	22	21
	Y	89		ug/L			251930	33	20
	Kr	83		ug/L			163	1017	1
[>	In	115		ug/L			292229	38	34
[	Ag	107	23.406	ug/L	2.399	10	67	28	34
[	Cd	111	103.227	ug/L	48.387	46	134	29	16
[	Cd	114	44.562	ug/L	14.225	31	23	30	13
[	Sb	121	37.879	ug/L	12.469	32	195	37	17
[	Sb	123	46.571	ug/L	23.825	51	134	33	19
[	Ba	135	155.201	ug/L	68.606	44	27	36	3
[	Ba	137	70.527	ug/L	17.819	25	54	30	16
[>	Tb	159		ug/L			371120	32	16
[	Tl	205	36.528	ug/L	5.273	14	184	87	24
[	Pb	208	33.823	ug/L	3.532	10	583	110	7
[	Bi	209		ug/L			324859	42	9
[	Th	232	10.140	ug/L	0.405	3	587	40	17
[	U	238	7.391	ug/L	2.445	33	154	30	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 09:56:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	349140	0
[	Be	9	49.466	ug/L	0.513	1	9	21612	1
	C	13		mg/L			3671	5249	3
	Cl	37		mg/L			1974717	1937489	0
[>	Sc	45		ug/L			246313	242911	0
|	V	51	51.382	ug/L	0.548	1	2058	559773	1
|	V-1	51	51.306	ug/L	0.441	0	10972	575117	1
|	Cr	52	51.089	ug/L	0.442	0	5720	481932	1
|	Cr	53	50.858	ug/L	0.381	0	3496	59365	0
|	Mn	55	51.304	ug/L	0.766	1	597	784630	1
[	Co	59	51.655	ug/L	0.078	0	61	590706	0
[>	Ge	72		ug/L			265693	256885	0
|	Ni	60	51.196	ug/L	0.335	0	74	120863	0
|	Ni	62	51.901	ug/L	0.520	1	268	18173	0
|	Cu	63	52.055	ug/L	0.337	0	427	266694	0
|	Cu	65	52.588	ug/L	0.299	0	139	125659	0
|	Zn	66	51.798	ug/L	0.553	1	448	79364	1
|	Zn	67	50.946	ug/L	0.240	0	264	13198	0
|	Zn	68	52.193	ug/L	0.501	0	6650	61023	0
|	As	75	52.991	ug/L	0.450	0	220	76317	0
|	As-1	75	52.537	ug/L	0.473	0	8107	81833	0
|	Se	82	81.217	ug/L	0.437	0	-7	13030	0
|	Se	78	81.592	ug/L	0.545	0	8254	39032	0
[	Mo	98	50.828	ug/L	0.126	0	66	274443	0
	Y	89		ug/L			251930	243615	1
	Kr	83		ug/L			163	174	1
[>	In	115		ug/L			292229	282937	0
|	Ag	107	51.615	ug/L	0.449	0	67	471563	0
|	Cd	111	50.511	ug/L	0.251	0	134	118349	0
|	Cd	114	50.522	ug/L	0.688	1	23	274405	1
|	Sb	121	51.416	ug/L	0.470	0	195	403617	0
|	Sb	123	51.400	ug/L	0.358	0	134	306163	0
|	Ba	135	51.478	ug/L	0.807	1	27	99927	1
[	Ba	137	51.345	ug/L	0.854	1	54	173356	1
[>	Tb	159		ug/L			371120	362898	0
|	Tl	205	53.086	ug/L	0.976	1	184	1407980	0
|	Pb	208	52.838	ug/L	0.409	0	583	1955689	0
|	Bi	209		ug/L			324859	311939	0
|	Th	232	51.966	ug/L	0.509	0	587	2286669	1
[	U	238	51.971	ug/L	0.306	0	154	2509576	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:02:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Li**	**6**		ug/L			343935	351739	0
⌊	**Be**	**9**	**-0.003**	ug/L	0.004	133	9	8	22
	C	**13**		mg/L			3671	3747	0
	Cl	**37**		mg/L			1974717	1967649	0
⌈>	**Sc**	**45**		ug/L			246313	243452	0
⌈	**V**	**51**	**0.016**	ug/L	0.036	225	2058	2208	17
⌊	**V-1**	**51**	**-0.037**	ug/L	0.007	19	10972	10437	0
⌈	**Cr**	**52**	**-0.014**	ug/L	0.009	64	5720	5525	1
⌊	**Cr**	**53**	**-0.182**	ug/L	0.098	54	3496	3255	3
⌈	**Mn**	**55**	**0.004**	ug/L	0.002	50	597	648	4
⌊	**Co**	**59**	**0.000**	ug/L	0.001	267	61	65	19
⌈>	**Ge**	**72**		ug/L			265693	261138	0
⌈	**Ni**	**60**	**0.003**	ug/L	0.003	103	74	80	8
⌊	**Ni**	**62**	**-0.076**	ug/L	0.071	93	268	237	9
⌈	**Cu**	**63**	**0.005**	ug/L	0.000	7	427	443	1
⌊	**Cu**	**65**	**0.003**	ug/L	0.001	45	139	144	2
⌈	**Zn**	**66**	**0.011**	ug/L	0.023	202	448	458	8
⌈	**Zn**	**67**	**-0.011**	ug/L	0.106	946	264	257	10
⌊	**Zn**	**68**	**0.005**	ug/L	0.099	2078	6650	6540	1
⌈	**As**	**75**	**0.014**	ug/L	0.015	108	220	237	9
⌊	**As-1**	**75**	**0.022**	ug/L	0.046	206	8107	8000	0
⌈	**Se**	**82**	**-0.008**	ug/L	0.021	281	-7	-8	40
⌊	**Se**	**78**	**0.085**	ug/L	0.225	263	8254	8145	0
⌊	**Mo**	**98**	**0.003**	ug/L	0.004	106	66	83	23
	Y	**89**		ug/L			251930	248402	0
	Kr	**83**		ug/L			163	170	3
⌈>	**In**	**115**		ug/L			292229	287704	1
⌈	**Ag**	**107**	**0.002**	ug/L	0.003	167	67	81	30
⌈	**Cd**	**111**	**0.003**	ug/L	0.010	298	134	140	16
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	794	23	24	42
⌈	**Sb**	**121**	**0.006**	ug/L	0.007	110	195	240	21
⌊	**Sb**	**123**	**0.007**	ug/L	0.005	71	134	175	16
⌈	**Ba**	**135**	**0.007**	ug/L	0.007	102	27	40	33
⌊	**Ba**	**137**	**0.001**	ug/L	0.002	486	54	55	14
⌈>	**Tb**	**159**		ug/L			371120	365621	0
⌈	**Tl**	**205**	**0.002**	ug/L	0.003	185	184	223	34
⌊	**Pb**	**208**	**0.003**	ug/L	0.002	60	583	692	9
⌈	**Bi**	**209**		ug/L			324859	318664	1
⌊	**Th**	**232**	**0.008**	ug/L	0.006	72	587	953	28
⌊	**U**	**238**	**0.002**	ug/L	0.002	71	154	267	30

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:08:08
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	351775	0
[	Be	9	48.204	ug/L	0.506	1	9	21219	0
	C	13		mg/L			3671	3911	1
	Cl	37		mg/L			1974717	1953136	0
[>	Sc	45		ug/L			246313	245448	0
[	V	51	49.771	ug/L	0.179	0	2058	547943	0
[	V-1	51	49.796	ug/L	0.171	0	10972	564336	0
[	Cr	52	49.698	ug/L	0.326	0	5720	473854	0
[	Cr	53	49.780	ug/L	0.169	0	3496	58787	0
[	Mn	55	49.922	ug/L	0.416	0	597	771500	0
[	Co	59	49.180	ug/L	0.273	0	61	568279	0
[>	Ge	72		ug/L			265693	259813	0
[	Ni	60	49.813	ug/L	0.400	0	74	118941	0
[	Ni	62	50.268	ug/L	0.107	0	268	17810	0
[	Cu	63	50.269	ug/L	0.359	0	427	260490	0
[	Cu	65	50.304	ug/L	0.563	1	139	121575	0
[	Zn	66	50.752	ug/L	0.401	0	448	78656	0
[	Zn	67	50.699	ug/L	0.237	0	264	13285	0
[	Zn	68	51.319	ug/L	0.095	0	6650	60795	0
[	As	75	50.136	ug/L	0.222	0	220	73040	0
[	As-1	75	50.081	ug/L	0.050	0	8107	79269	0
[	Se	82	50.669	ug/L	0.084	0	-7	8219	0
[	Se	78	50.547	ug/L	0.525	1	8254	27529	1
[	Mo	98	49.789	ug/L	0.552	1	66	271894	0
	Y	89		ug/L			251930	248001	0
	Kr	83		ug/L			163	175	9
[>	In	115		ug/L			292229	285591	0
[	Ag	107	49.913	ug/L	0.433	0	67	460303	0
[	Cd	111	49.203	ug/L	0.408	0	134	116368	0
[	Cd	114	49.419	ug/L	0.295	0	23	270932	0
[	Sb	121	50.003	ug/L	0.055	0	195	396218	0
[	Sb	123	49.499	ug/L	0.281	0	134	297614	0
[	Ba	135	50.269	ug/L	0.307	0	27	98500	0
[	Ba	137	50.185	ug/L	0.351	0	54	171037	0
[>	Tb	159		ug/L			371120	370208	0
[	Tl	205	50.798	ug/L	0.310	0	184	1374589	0
[	Pb	208	50.382	ug/L	0.300	0	583	1902411	0
[	Bi	209		ug/L			324859	316791	0
[	Th	232	49.745	ug/L	0.111	0	587	2233062	0
[	U	238	50.509	ug/L	0.348	0	154	2488174	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:14:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			343935	354260	0
⌊	Be	9	-0.002	ug/L	0.003	209	9	9	15
	C	13		mg/L			3671	3711	2
	Cl	37		mg/L			1974717	1954417	0
⌈>	Sc	45		ug/L			246313	243146	0
|	V	51	-0.021	ug/L	0.011	49	2058	1803	6
|	V-1	51	-0.080	ug/L	0.010	12	10972	9951	1
|	Cr	52	-0.017	ug/L	0.002	9	5720	5490	0
|	Cr	53	-0.205	ug/L	0.041	20	3496	3225	1
|	Mn	55	0.001	ug/L	0.000	18	597	610	0
⌊	Co	59	0.001	ug/L	0.000	37	61	71	5
⌈>	Ge	72		ug/L			265693	259579	0
|	Ni	60	-0.001	ug/L	0.003	322	74	70	11
|	Ni	62	-0.012	ug/L	0.023	187	268	257	2
|	Cu	63	0.002	ug/L	0.000	19	427	427	0
|	Cu	65	-0.007	ug/L	0.004	55	139	118	8
|	Zn	66	0.022	ug/L	0.009	39	448	471	2
|	Zn	67	0.035	ug/L	0.062	177	264	267	6
|	Zn	68	0.024	ug/L	0.036	149	6650	6522	0
|	As	75	0.015	ug/L	0.012	82	220	236	7
|	As-1	75	-0.030	ug/L	0.053	176	8107	7878	0
|	Se	82	0.005	ug/L	0.043	812	-7	-6	109
|	Se	78	-0.120	ug/L	0.153	127	8254	8018	0
⌊	Mo	98	0.005	ug/L	0.004	86	66	91	25
	Y	89		ug/L			251930	245565	0
	Kr	83		ug/L			163	165	5
⌈>	In	115		ug/L			292229	283942	0
|	Ag	107	0.002	ug/L	0.002	102	67	86	24
|	Cd	111	0.008	ug/L	0.001	12	134	149	1
|	Cd	114	0.003	ug/L	0.002	46	23	41	20
|	Sb	121	0.008	ug/L	0.010	130	195	251	31
|	Sb	123	0.011	ug/L	0.007	63	134	195	20
|	Ba	135	0.003	ug/L	0.004	128	27	33	25
⌊	Ba	137	0.001	ug/L	0.004	495	54	55	24
⌈>	Tb	159		ug/L			371120	367463	0
|	Tl	205	0.003	ug/L	0.002	71	184	257	21
|	Pb	208	0.004	ug/L	0.002	60	583	717	12
|	Bi	209		ug/L			324859	321393	0
|	Th	232	0.017	ug/L	0.010	61	587	1331	35
⌊	U	238	0.003	ug/L	0.002	63	154	305	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~LOW CHECK~~ ZZZZZZ
Sample Dil Factor: #4-30-13
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:19:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			343935	357308	0
[	Be	9	0.161	ug/L	0.013	8	9	82	7
	C	13		mg/L			3671	4328	3
	Cl	37		mg/L			1974717	1963018	1
[>	Sc	45		ug/L			246313	246785	0
[	V	51	0.196	ug/L	0.014	7	2058	4222	3
[	V-1	51	0.106	ug/L	0.014	13	10972	12180	0
[	Cr	52	0.482	ug/L	0.012	2	5720	10298	0
[	Cr	53	0.184	ug/L	0.029	15	3496	3708	0
[	Mn	55	0.487	ug/L	0.002	0	597	8160	0
[	Co	59	0.206	ug/L	0.002	1	61	2451	0
[>	Ge	72		ug/L			265693	263305	0
[	Ni	60	0.480	ug/L	0.023	4	74	1235	4
[	Ni	62	0.355	ug/L	0.073	20	268	391	6
[	Cu	63	0.512	ug/L	0.012	2	427	3106	2
[	Cu	65	0.520	ug/L	0.014	2	139	1411	2
[	Zn	66	4.027	ug/L	0.068	1	448	6734	1
[	Zn	67	3.658	ug/L	0.098	2	264	1214	1
[	Zn	68	3.934	ug/L	0.186	4	6650	10807	1
[	As	75	0.225	ug/L	0.022	9	220	549	5
[	As-1	75	0.120	ug/L	0.021	17	8107	8207	0
[	Se	82	0.495	ug/L	0.058	11	-7	74	12
[	Se	78	0.201	ug/L	0.089	44	8254	8258	0
[	Mo	98	0.197	ug/L	0.004	1	66	1156	2
	Y	89		ug/L			251930	249343	1
	Kr	83		ug/L			163	173	5
[>	In	115		ug/L			292229	290342	1
[	Ag	107	0.192	ug/L	0.006	3	67	1867	1
[	Cd	111	0.110	ug/L	0.008	7	134	399	4
[	Cd	114	0.108	ug/L	0.004	3	23	627	4
[	Sb	121	0.179	ug/L	0.003	1	195	1638	2
[	Sb	123	0.189	ug/L	0.003	1	134	1288	2
[	Ba	135	0.491	ug/L	0.026	5	27	1003	3
[	Ba	137	0.482	ug/L	0.019	3	54	1721	2
[>	Tb	159		ug/L			371120	370549	0
[	Tl	205	0.210	ug/L	0.009	4	184	5882	3
[	Pb	208	0.102	ug/L	0.001	1	583	4440	1
[	Bi	209		ug/L			324859	323558	0
[	Th	232	0.206	ug/L	0.002	1	587	9849	1
[	U	238	0.206	ug/L	0.004	1	154	10325	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:26:44
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				351490	0
[	Be	9		ug/L				6	40
	C	13		mg/L				3778	1
	Cl	37		mg/L				1953277	0
[>	Sc	45		ug/L				244478	0
|	V	51		ug/L				2179	16
|	V-1	51		ug/L				9757	2
|	Cr	52		ug/L				5463	1
|	Cr	53		ug/L				3040	5
|	Mn	55		ug/L				573	3
[	Co	59		ug/L				41	16
[>	Ge	72		ug/L				261623	0
|	Ni	60		ug/L				69	8
|	Ni	62		ug/L				262	11
|	Cu	63		ug/L				391	4
|	Cu	65		ug/L				128	4
|	Zn	66		ug/L				451	4
|	Zn	67		ug/L				252	8
|	Zn	68		ug/L				6673	1
|	As	75		ug/L				247	21
|	As-1	75		ug/L				7957	0
|	Se	82		ug/L				-1	830
|	Se	78		ug/L				8104	0
[	Mo	98		ug/L				33	25
	Y	89		ug/L				248569	0
	Kr	83		ug/L				168	3
[>	In	115		ug/L				286252	0
|	Ag	107		ug/L				44	13
|	Cd	111		ug/L				146	3
|	Cd	114		ug/L				16	1
|	Sb	121		ug/L				66	12
|	Sb	123		ug/L				51	18
|	Ba	135		ug/L				32	12
[	Ba	137		ug/L				35	14
[>	Tb	159		ug/L				365903	1
|	Tl	205		ug/L				85	12
|	Pb	208		ug/L				557	6
|	Bi	209		ug/L				320639	1
|	Th	232		ug/L				327	21
[	U	238		ug/L				56	27

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:32:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			351490	379878	1
[	Be	9	46.681	ug/L	0.844	1	6	22185	1
	C	13		mg/L			3778	3960	2
	Cl	37		mg/L			1953277	1842352	0
[>	Sc	45		ug/L			244478	247581	0
[	V	51	49.757	ug/L	0.445	0	2179	552708	1
[	V-1	51	49.560	ug/L	0.270	0	9757	565460	1
[	Cr	52	50.246	ug/L	0.243	0	5463	482960	0
[	Cr	53	49.595	ug/L	0.823	1	3040	58652	0
[	Mn	55	50.330	ug/L	0.378	0	573	784527	0
[	Co	59	50.150	ug/L	0.633	1	41	584471	0
[>	Ge	72		ug/L			261623	258866	0
[	Ni	60	51.448	ug/L	0.066	0	69	122391	0
[	Ni	62	51.790	ug/L	0.678	1	262	18272	0
[	Cu	63	50.504	ug/L	0.176	0	391	260727	0
[	Cu	65	50.460	ug/L	0.513	1	128	121498	0
[	Zn	66	50.501	ug/L	0.379	0	451	77993	0
[	Zn	67	51.291	ug/L	0.591	1	252	13380	0
[	Zn	68	51.533	ug/L	0.447	0	6673	60921	0
[	As	75	50.180	ug/L	0.281	0	247	72868	0
[	As-1	75	50.611	ug/L	0.312	0	7957	79705	0
[	Se	82	53.628	ug/L	0.046	0	-1	8673	0
[	Se	78	55.358	ug/L	0.342	0	8104	29249	0
[	Mo	98	51.640	ug/L	0.265	0	33	280940	0
	Y	89		ug/L			248569	259041	0
	Kr	83		ug/L			168	161	2
[>	In	115		ug/L			286252	296140	0
[	Ag	107	49.916	ug/L	0.263	0	44	477312	0
[	Cd	111	50.014	ug/L	0.046	0	146	122665	0
[	Cd	114	50.018	ug/L	0.190	0	16	284339	0
[	Sb	121	48.446	ug/L	0.581	1	66	397940	1
[	Sb	123	48.321	ug/L	0.077	0	51	301182	0
[	Ba	135	49.930	ug/L	0.225	0	32	101455	0
[	Ba	137	49.843	ug/L	0.397	0	35	176123	0
[>	Tb	159		ug/L			365903	382936	0
[	Tl	205	51.870	ug/L	0.174	0	85	1451755	0
[	Pb	208	51.562	ug/L	0.400	0	557	2013834	0
[	Bi	209		ug/L			320639	330543	0
[	Th	232	51.185	ug/L	0.391	0	327	2376395	0
[	U	238	51.652	ug/L	0.688	1	56	2631728	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:38:51
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			351490	376738	2
[	Be	9	0.003	ug/L	0.004	110	6	8	22
	C	13		mg/L			3778	3743	2
	Cl	37		mg/L			1953277	1890455	0
[>	Sc	45		ug/L			244478	248309	0
[	V	51	0.001	ug/L	0.012	957	2179	2226	5
[	V-1	51	-0.169	ug/L	0.008	4	9757	8013	0
[	Cr	52	0.025	ug/L	0.017	67	5463	5787	2
[	Cr	53	-0.520	ug/L	0.022	4	3040	2504	1
[	Mn	55	0.003	ug/L	0.002	72	573	632	5
[	Co	59	0.002	ug/L	0.001	64	41	65	22
[>	Ge	72		ug/L			261623	259193	0
[	Ni	60	0.004	ug/L	0.005	150	69	77	16
[	Ni	62	-0.102	ug/L	0.019	18	262	224	2
[	Cu	63	0.002	ug/L	0.005	257	391	398	6
[	Cu	65	0.000	ug/L	0.007	2238	128	127	13
[	Zn	66	0.012	ug/L	0.007	61	451	466	2
[	Zn	67	-0.076	ug/L	0.078	103	252	231	8
[	Zn	68	0.274	ug/L	0.018	6	6673	6900	0
[	As	75	-0.026	ug/L	0.022	83	247	207	15
[	As-1	75	0.404	ug/L	0.012	2	7957	8457	0
[	Se	82	0.001	ug/L	0.046	3835	-1	-1	448
[	Se	78	1.509	ug/L	0.083	5	8104	8609	0
[	Mo	98	0.012	ug/L	0.004	31	33	101	20
	Y	89		ug/L			248569	258525	0
	Kr	83		ug/L			168	155	4
[>	In	115		ug/L			286252	292864	0
[	Ag	107	0.005	ug/L	0.002	35	44	90	17
[	Cd	111	0.008	ug/L	0.005	67	146	168	7
[	Cd	114	0.004	ug/L	0.001	34	16	39	19
[	Sb	121	0.019	ug/L	0.009	46	66	226	32
[	Sb	123	0.018	ug/L	0.002	11	51	164	7
[	Ba	135	0.002	ug/L	0.007	353	32	37	36
[	Ba	137	0.008	ug/L	0.001	18	35	63	7
[>	Tb	159		ug/L			365903	378104	0
[	Tl	205	0.007	ug/L	0.003	45	85	269	30
[	Pb	208	0.006	ug/L	0.002	31	557	788	8
[	Bi	209		ug/L			320639	334664	0
[	Th	232	0.022	ug/L	0.010	43	327	1365	32
[	U	238	0.005	ug/L	0.002	38	56	306	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:46:09
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				372846	1
[	Be	9		ug/L				3	33
	C	13		mg/L				3654	2
	Cl	37		mg/L				1915264	1
[>	Sc	45		ug/L				247568	1
[	V	51		ug/L				2050	8
[	V-1	51		ug/L				8477	0
[	Cr	52		ug/L				5621	0
[	Cr	53		ug/L				2690	2
[	Mn	55		ug/L				390	8
[	Co	59		ug/L				40	15
[>	Ge	72		ug/L				261201	0
[	Ni	60		ug/L				38	16
[	Ni	62		ug/L				242	5
[	Cu	63		ug/L				343	4
[	Cu	65		ug/L				82	6
[	Zn	66		ug/L				334	4
[	Zn	67		ug/L				211	10
[	Zn	68		ug/L				6668	1
[	As	75		ug/L				227	13
[	As-1	75		ug/L				8290	1
[	Se	82		ug/L				-8	103
[	Se	78		ug/L				8442	0
[	Mo	98		ug/L				35	7
	Y	89		ug/L				254415	0
	Kr	83		ug/L				169	2
[>	In	115		ug/L				290439	0
[	Ag	107		ug/L				38	10
[	Cd	111		ug/L				146	8
[	Cd	114		ug/L				18	21
[	Sb	121		ug/L				87	20
[	Sb	123		ug/L				61	22
[	Ba	135		ug/L				21	23
[	Ba	137		ug/L				26	14
[>	Tb	159		ug/L				374240	0
[	Tl	205		ug/L				105	22
[	Pb	208		ug/L				382	5
[	Bi	209		ug/L				328776	0
[	Th	232		ug/L				456	29
[	U	238		ug/L				84	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 10:54:19
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	364406	1
[	Be	9	47.692	ug/L	0.254	0	3	21741	0
	C	13		mg/L			3654	3957	3
	Cl	37		mg/L			1915264	1895227	0
[>	Sc	45		ug/L			247568	245893	0
[	V	51	49.903	ug/L	0.284	0	2050	550371	0
[	V-1	51	49.794	ug/L	0.215	0	8477	562801	0
[	Cr	52	50.252	ug/L	0.315	0	5621	479816	0
[	Cr	53	49.886	ug/L	0.462	0	2690	58194	1
[	Mn	55	50.216	ug/L	0.200	0	390	777253	0
[	Co	59	49.498	ug/L	0.459	0	40	572966	1
[>	Ge	72		ug/L			261201	260237	0
[	Ni	60	50.299	ug/L	0.498	0	38	120255	0
[	Ni	62	51.142	ug/L	0.179	0	242	18124	1
[	Cu	63	50.021	ug/L	0.502	1	343	259547	0
[	Cu	65	50.296	ug/L	0.441	0	82	121699	0
[	Zn	66	50.875	ug/L	0.264	0	334	78868	0
[	Zn	67	50.535	ug/L	1.421	2	211	13214	2
[	Zn	68	50.871	ug/L	0.077	0	6668	60549	0
[	As	75	50.204	ug/L	0.300	0	227	73267	0
[	As-1	75	49.821	ug/L	0.431	0	8290	79342	0
[	Se	82	52.980	ug/L	0.342	0	-8	8606	0
[	Se	78	51.725	ug/L	0.724	1	8442	28351	0
[	Mo	98	50.192	ug/L	0.736	1	35	274494	0
	Y	89		ug/L			254415	254200	0
	Kr	83		ug/L			169	173	2
[>	In	115		ug/L			290439	290015	0
[	Ag	107	49.478	ug/L	0.479	0	38	463339	1
[	Cd	111	49.927	ug/L	0.387	0	146	119918	0
[	Cd	114	50.046	ug/L	0.455	0	18	278619	1
[	Sb	121	48.950	ug/L	0.318	0	87	393776	0
[	Sb	123	49.016	ug/L	0.350	0	61	299204	0
[	Ba	135	49.853	ug/L	0.293	0	21	99193	0
[	Ba	137	50.049	ug/L	0.145	0	26	173185	0
[>	Tb	159		ug/L			374240	377410	0
[	Tl	205	51.804	ug/L	0.316	0	105	1428962	0
[	Pb	208	50.956	ug/L	0.207	0	382	1961311	0
[	Bi	209		ug/L			328776	321925	0
[	Th	232	50.442	ug/L	0.345	0	456	2308165	0
[	U	238	50.698	ug/L	0.269	0	84	2546010	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:00:38
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	367952	1
[	Be	9	0.006	ug/L	0.008	148	3	6	60
	C	13		mg/L			3654	3616	2
	Cl	37		mg/L			1915264	1924186	0
[>	Sc	45		ug/L			247568	244285	0
[	V	51	0.005	ug/L	0.044	848	2050	2078	22
[	V-1	51	-0.001	ug/L	0.005	821	8477	8358	1
[	Cr	52	0.001	ug/L	0.012	1316	5621	5555	1
[	Cr	53	-0.018	ug/L	0.126	719	2690	2636	5
[	Mn	55	0.004	ug/L	0.001	17	390	445	1
[	Co	59	0.002	ug/L	0.001	82	40	57	25
[>	Ge	72		ug/L			261201	258157	0
[	Ni	60	0.004	ug/L	0.004	98	38	47	19
[	Ni	62	-0.000	ug/L	0.019	7565	242	239	2
[	Cu	63	0.003	ug/L	0.003	111	343	354	4
[	Cu	65	0.008	ug/L	0.007	87	82	100	16
[	Zn	66	-0.002	ug/L	0.012	799	334	328	5
[	Zn	67	0.010	ug/L	0.083	850	211	211	9
[	Zn	68	-0.122	ug/L	0.085	69	6668	6462	1
[	As	75	0.028	ug/L	0.005	19	227	264	2
[	As-1	75	-0.046	ug/L	0.013	27	8290	8128	0
[	Se	82	0.034	ug/L	0.044	127	-8	-3	208
[	Se	78	-0.215	ug/L	0.050	23	8442	8261	0
[	Mo	98	0.009	ug/L	0.003	30	35	82	17
	Y	89		ug/L			254415	250211	0
	Kr	83		ug/L			169	171	2
[>	In	115		ug/L			290439	285382	0
[	Ag	107	0.005	ug/L	0.003	57	38	80	31
[	Cd	111	-0.002	ug/L	0.002	144	146	140	3
[	Cd	114	0.002	ug/L	0.001	40	18	28	15
[	Sb	121	0.018	ug/L	0.005	24	87	230	15
[	Sb	123	0.018	ug/L	0.008	46	61	169	30
[	Ba	135	0.001	ug/L	0.003	231	21	23	24
[	Ba	137	0.005	ug/L	0.002	35	26	43	14
[>	Tb	159		ug/L			374240	368811	0
[	Tl	205	0.006	ug/L	0.002	38	105	255	22
[	Pb	208	0.004	ug/L	0.002	50	382	526	14
[	Bi	209		ug/L			328776	326617	1
[	Th	232	0.020	ug/L	0.011	54	456	1326	36
[	U	238	0.004	ug/L	0.002	47	84	273	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:06:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	359227	0
[	Be	9	0.182	ug/L	0.012	6	3	85	5
	C	13		mg/L			3654	4326	1
	Cl	37		mg/L			1915264	1968057	0
[>	Sc	45		ug/L			247568	245662	0
[	V	51	0.164	ug/L	0.010	6	2050	3837	2
[	V-1	51	0.254	ug/L	0.010	4	8477	11237	1
[	Cr	52	0.504	ug/L	0.005	1	5621	10332	0
[	Cr	53	0.777	ug/L	0.008	0	2690	3533	0
[	Mn	55	0.503	ug/L	0.010	2	390	8154	1
[	Co	59	0.201	ug/L	0.004	2	40	2370	2
[>	Ge	72		ug/L			261201	262612	0
[	Ni	60	0.490	ug/L	0.016	3	38	1221	3
[	Ni	62	0.503	ug/L	0.092	18	242	420	7
[	Cu	63	0.533	ug/L	0.007	1	343	3132	0
[	Cu	65	0.518	ug/L	0.014	2	82	1348	1
[	Zn	66	4.071	ug/L	0.113	2	334	6678	3
[	Zn	67	3.657	ug/L	0.039	1	211	1162	0
[	Zn	68	3.778	ug/L	0.157	4	6668	10744	0
[	As	75	0.228	ug/L	0.003	1	227	562	0
[	As-1	75	-0.095	ug/L	0.027	28	8290	8198	0
[	Se	82	0.511	ug/L	0.069	13	-8	74	15
[	Se	78	-0.654	ug/L	0.066	10	8442	8233	0
[	Mo	98	0.198	ug/L	0.006	2	35	1125	2
	Y	89		ug/L			254415	250244	0
	Kr	83		ug/L			169	171	4
[>	In	115		ug/L			290439	289519	0
[	Ag	107	0.191	ug/L	0.005	2	38	1827	2
[	Cd	111	0.103	ug/L	0.010	9	146	392	6
[	Cd	114	0.103	ug/L	0.006	5	18	591	4
[	Sb	121	0.191	ug/L	0.006	3	87	1622	2
[	Sb	123	0.191	ug/L	0.004	2	61	1223	2
[	Ba	135	0.492	ug/L	0.020	4	21	998	4
[	Ba	137	0.491	ug/L	0.005	1	26	1724	0
[>	Tb	159		ug/L			374240	368074	0
[	Tl	205	0.211	ug/L	0.005	2	105	5768	1
[	Pb	208	0.111	ug/L	0.002	1	382	4531	1
[	Bi	209		ug/L			328776	323369	0
[	Th	232	0.212	ug/L	0.002	0	456	9923	1
[	U	238	0.206	ug/L	0.002	0	84	10153	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:11:34
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	355406	1
[	Be	9	0.001	ug/L	0.002	117	3	4	17
	C	13		mg/L			3654	16263	1
	Cl	37		mg/L			1915264	3238434	0
[>	Sc	45		ug/L			247568	236390	0
[	V	51	0.077	ug/L	0.037	48	2050	2772	14
[	V-1	51	0.452	ug/L	0.016	3	8477	12933	1
[	Cr	52	0.502	ug/L	0.024	4	5621	9923	2
[	Cr	53	1.684	ug/L	0.129	7	2690	4371	2
[	Mn	55	0.043	ug/L	0.002	4	390	1009	2
[	Co	59	0.019	ug/L	0.002	11	40	247	9
[>	Ge	72		ug/L			261201	254182	0
[	Ni	60	0.411	ug/L	0.018	4	38	997	4
[	Ni	62	3.597	ug/L	0.168	4	242	1464	3
[	Cu	63	0.429	ug/L	0.014	3	343	2506	2
[	Cu	65	0.552	ug/L	0.039	6	82	1383	6
[	Zn	66	1.264	ug/L	0.015	1	334	2231	0
[	Zn	67	1.374	ug/L	0.157	11	211	550	7
[	Zn	68	0.241	ug/L	0.116	48	6668	6738	1
[	As	75	0.092	ug/L	0.049	52	227	351	19
[	As-1	75	-0.170	ug/L	0.068	40	8290	7831	1
[	Se	82	-0.025	ug/L	0.052	211	-8	-12	65
[	Se	78	-0.862	ug/L	0.088	10	8442	7890	0
[	Mo	98	392.934	ug/L	1.638	0	35	2098836	0
	Y	89		ug/L			254415	240936	0
	Kr	83		ug/L			169	185	2
[>	In	115		ug/L			290439	271475	0
[	Ag	107	0.021	ug/L	0.005	21	38	222	19
[	Cd	111	0.042	ug/L	0.055	131	146	230	53
[	Cd	114	0.647	ug/L	0.014	2	18	3389	3
[	Sb	121	0.053	ug/L	0.003	5	87	481	5
[	Sb	123	0.052	ug/L	0.007	13	61	352	11
[	Ba	135	0.048	ug/L	0.007	14	21	109	11
[	Ba	137	0.040	ug/L	0.004	9	26	155	9
[>	Tb	159		ug/L			374240	363758	1
[	Tl	205	0.020	ug/L	0.002	9	105	631	8
[	Pb	208	0.033	ug/L	0.001	1	382	1580	0
[	Bi	209		ug/L			328776	300882	0
[	Th	232	0.022	ug/L	0.005	24	456	1427	15
[	U	238	0.000	ug/L	0.000	101	84	100	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:17:32
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			372846	357454	0
[	**Be**	**9**	**0.008**	ug/L	0.004	54	3	7	26
	C	**13**		mg/L			3654	16239	1
	Cl	**37**		mg/L			1915264	3178779	0
[>	**Sc**	**45**		ug/L			247568	232645	0
[	**V**	**51**	**-0.291**	ug/L	0.095	32	2050	-1101	89
[	**V-1**	**51**	**0.453**	ug/L	0.005	1	8477	12742	0
[	**Cr**	**52**	**19.994**	ug/L	0.177	0	5621	183806	0
[	**Cr**	**53**	**21.527**	ug/L	0.196	0	2690	25197	1
[	**Mn**	**55**	**19.479**	ug/L	0.096	0	390	285480	0
[	**Co**	**59**	**19.364**	ug/L	0.116	0	40	212090	0
[>	**Ge**	**72**		ug/L			261201	247882	0
[	**Ni**	**60**	**19.637**	ug/L	0.270	1	38	44743	0
[	**Ni**	**62**	**22.629**	ug/L	0.320	1	242	7766	0
[	**Cu**	**63**	**19.648**	ug/L	0.246	1	343	97309	0
[	**Cu**	**65**	**19.827**	ug/L	0.119	0	82	45746	1
[	**Zn**	**66**	**20.293**	ug/L	0.206	1	334	30157	1
[	**Zn**	**67**	**18.342**	ug/L	0.200	1	211	4697	1
[	**Zn**	**68**	**18.870**	ug/L	0.209	1	6668	25375	1
[	**As**	**75**	**19.483**	ug/L	0.087	0	227	27215	0
[	**As-1**	**75**	**19.625**	ug/L	0.073	0	8290	34539	0
[	**Se**	**82**	**0.016**	ug/L	0.081	492	-8	-5	211
[	**Se**	**78**	**-0.745**	ug/L	0.096	12	8442	7738	0
[	**Mo**	**98**	**389.791**	ug/L	4.026	1	35	2030433	1
	Y	**89**		ug/L			254415	237329	0
	Kr	**83**		ug/L			169	179	9
[>	**In**	**115**		ug/L			290439	265025	1
[	**Ag**	**107**	**19.706**	ug/L	0.197	1	38	168644	0
[	**Cd**	**111**	**20.146**	ug/L	0.168	0	146	44296	0
[	**Cd**	**114**	**20.728**	ug/L	0.066	0	18	105463	1
[	**Sb**	**121**	**0.056**	ug/L	0.004	7	87	488	7
[	**Sb**	**123**	**0.056**	ug/L	0.001	1	61	367	1
[	**Ba**	**135**	**0.054**	ug/L	0.005	8	21	117	8
[	**Ba**	**137**	**0.047**	ug/L	0.005	10	26	171	8
[>	**Tb**	**159**		ug/L			374240	358430	1
[	**Tl**	**205**	**0.020**	ug/L	0.003	13	105	628	10
[	**Pb**	**208**	**0.037**	ug/L	0.001	3	382	1707	3
[	**Bi**	**209**		ug/L			328776	296309	0
[	**Th**	**232**	**0.014**	ug/L	0.005	33	456	1053	19
[	**U**	**238**	**-0.000**	ug/L	0.000	302	84	76	15

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:23:29
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	351431	0
[	Be	9	189.900	ug/L	1.848	0	3	83480	1
	C	13		mg/L			3654	5960	3
	Cl	37		mg/L			1915264	1845118	0
[>	Sc	45		ug/L			247568	233222	0
[	V	51	199.061	ug/L	0.644	0	2050	2076471	0
[	V-1	51	199.215	ug/L	0.049	0	8477	2111671	0
[	Cr	52	197.461	ug/L	0.532	0	5621	1772716	0
[	Cr	53	198.020	ug/L	1.408	0	2690	211574	1
[	Mn	55	194.320	ug/L	1.652	0	390	2851660	0
[	Co	59	190.421	ug/L	0.187	0	40	2090543	0
[>	Ge	72		ug/L			261201	249236	0
[	Ni	60	189.411	ug/L	1.304	0	38	433618	0
[	Ni	62	191.890	ug/L	1.684	0	242	64489	0
[	Cu	63	189.921	ug/L	0.678	0	343	942930	0
[	Cu	65	190.599	ug/L	0.819	0	82	441482	0
[	Zn	66	191.276	ug/L	1.839	0	334	283110	0
[	Zn	67	190.554	ug/L	2.266	1	211	47167	0
[	Zn	68	192.458	ug/L	1.230	0	6668	201681	0
[	As	75	197.399	ug/L	0.219	0	227	275275	0
[	As-1	75	197.085	ug/L	0.493	0	8290	277231	0
[	Se	82	197.874	ug/L	2.841	1	-8	30809	1
[	Se	78	196.745	ug/L	1.067	0	8442	80701	0
[	Mo	98	198.450	ug/L	3.069	1	35	1039353	1
	Y	89		ug/L			254415	237387	0
	Kr	83		ug/L			169	199	1
[>	In	115		ug/L			290439	267364	0
[	Ag	107	195.526	ug/L	0.824	0	38	1687864	0
[	Cd	111	196.632	ug/L	2.389	1	146	434987	0
[	Cd	114	198.306	ug/L	1.520	0	18	1017716	0
[	Sb	121	200.336	ug/L	0.882	0	87	1485476	0
[	Sb	123	200.439	ug/L	1.499	0	61	1127775	0
[	Ba	135	204.399	ug/L	2.377	1	21	374851	0
[	Ba	137	205.450	ug/L	1.713	0	26	655327	0
[>	Tb	159		ug/L			374240	357060	1
[	Tl	205	196.680	ug/L	3.582	1	105	5131488	0
[	Pb	208	196.875	ug/L	2.464	1	382	7167235	0
[	Bi	209		ug/L			328776	285921	0
[	Th	232	202.746	ug/L	2.331	1	456	8775015	0
[	U	238	203.938	ug/L	4.546	2	84	9686711	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:29:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	343603	0
[	Be	9	281.508	ug/L	1.695	0	3	120990	0
	C	13		mg/L			3654	6331	2
	Cl	37		mg/L			1915264	1855505	0
[>	Sc	45		ug/L			247568	232059	0
[	V	51	298.847	ug/L	2.227	0	2050	3100903	0
[	V-1	51	298.787	ug/L	2.279	0	8477	3147352	0
[	Cr	52	295.391	ug/L	1.869	0	5621	2636073	0
[	Cr	53	295.343	ug/L	3.119	1	2690	312730	0
[	Mn	55	291.560	ug/L	3.752	1	390	4257000	0
[	Co	59	282.148	ug/L	3.849	1	40	3081980	0
[>	Ge	72		ug/L			261201	245618	0
[	Ni	60	281.977	ug/L	2.899	1	38	636154	0
[	Ni	62	285.530	ug/L	1.770	0	242	94458	0
[	Cu	63	279.918	ug/L	0.816	0	343	1369434	0
[	Cu	65	281.188	ug/L	1.416	0	82	641827	0
[	Zn	66	281.867	ug/L	2.300	0	334	410997	0
[	Zn	67	283.176	ug/L	1.247	0	211	68982	0
[	Zn	68	286.017	ug/L	0.329	0	6668	292329	0
[	As	75	294.481	ug/L	1.327	0	227	404593	0
[	As-1	75	294.175	ug/L	0.896	0	8290	403956	0
[	Se	82	290.931	ug/L	2.283	0	-8	44646	0
[	Se	78	289.470	ug/L	1.033	0	8442	113273	0
[	Mo	98	301.778	ug/L	0.567	0	35	1557639	0
	Y	89		ug/L			254415	233451	0
	Kr	83		ug/L			169	204	5
[>	In	115		ug/L			290439	266342	0
[	Ag	107	282.933	ug/L	2.610	0	38	2433005	0
[	Cd	111	291.340	ug/L	2.591	0	146	641979	0
[	Cd	114	291.963	ug/L	2.347	0	18	1492613	0
[	Sb	121	296.023	ug/L	3.114	1	87	2186513	0
[	Sb	123	298.570	ug/L	1.635	0	61	1673493	0
[	Ba	135	303.112	ug/L	0.811	0	21	553771	0
[	Ba	137	306.039	ug/L	2.843	0	26	972407	0
[>	Tb	159		ug/L			374240	353766	0
[	Tl	205	297.532	ug/L	0.726	0	105	7692664	0
[	Pb	208	293.456	ug/L	1.326	0	382	10585864	0
[	Bi	209		ug/L			328776	262310	0
[	Th	232	305.665	ug/L	1.316	0	456	13108935	0
[	U	238	307.728	ug/L	3.564	1	84	14484859	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:36:03
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			372846	348409	1
[	Be	9	47.968	ug/L	0.126	0	3	20908	1
	C	13		mg/L			3654	4084	1
	Cl	37		mg/L			1915264	1890556	0
[>	Sc	45		ug/L			247568	233650	0
[	V	51	49.642	ug/L	0.476	0	2050	520238	1
[	V-1	51	49.712	ug/L	0.494	0	8477	533915	1
[	Cr	52	49.875	ug/L	0.207	0	5621	452550	0
[	Cr	53	50.089	ug/L	0.319	0	2690	55512	0
[	Mn	55	49.570	ug/L	0.436	0	390	729049	0
[	Co	59	48.859	ug/L	0.431	0	40	537418	0
[>	Ge	72		ug/L			261201	248608	0
[	Ni	60	49.309	ug/L	0.423	0	38	112626	0
[	Ni	62	49.227	ug/L	0.832	1	242	16673	1
[	Cu	63	49.296	ug/L	0.188	0	343	244374	0
[	Cu	65	49.182	ug/L	0.655	1	82	113688	1
[	Zn	66	50.504	ug/L	0.455	0	334	74798	0
[	Zn	67	49.724	ug/L	0.390	0	211	12425	0
[	Zn	68	50.614	ug/L	0.463	0	6668	57583	0
[	As	75	50.115	ug/L	0.329	0	227	69870	0
[	As-1	75	49.653	ug/L	0.297	0	8290	75571	0
[	Se	82	51.077	ug/L	0.605	1	-8	7926	0
[	Se	78	49.462	ug/L	0.452	0	8442	26252	0
[	Mo	98	49.539	ug/L	0.115	0	35	258837	0
	Y	89		ug/L			254415	235309	0
	Kr	83		ug/L			169	173	1
[>	In	115		ug/L			290439	268741	0
[	Ag	107	50.318	ug/L	0.308	0	38	436637	0
[	Cd	111	49.823	ug/L	0.322	0	146	110891	0
[	Cd	114	50.677	ug/L	0.111	0	18	261430	0
[	Sb	121	50.971	ug/L	0.557	1	87	379960	1
[	Sb	123	50.726	ug/L	0.239	0	61	286925	0
[	Ba	135	50.820	ug/L	0.474	0	21	93698	0
[	Ba	137	51.055	ug/L	0.435	0	26	163707	0
[>	Tb	159		ug/L			374240	352671	0
[	Tl	205	51.920	ug/L	0.658	1	105	1338301	1
[	Pb	208	51.554	ug/L	0.364	0	382	1854250	0
[	Bi	209		ug/L			328776	306862	0
[	Th	232	51.982	ug/L	0.213	0	456	2222780	0
[	U	238	52.606	ug/L	0.229	0	84	2468657	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:42:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			372846	367105	1
[	**Be**	**9**	**0.015**	ug/L	0.001	10	3	10	6
	C	**13**		mg/L			3654	3639	0
	Cl	**37**		mg/L			1915264	1839113	0
[>	**Sc**	**45**		ug/L			247568	236744	0
[	**V**	**51**	**-0.008**	ug/L	0.011	147	2050	1879	6
[	**V-1**	**51**	**-0.090**	ug/L	0.006	7	8477	7146	0
[	**Cr**	**52**	**0.012**	ug/L	0.011	93	5621	5485	1
[	**Cr**	**53**	**-0.251**	ug/L	0.043	17	2690	2304	2
[	**Mn**	**55**	**0.013**	ug/L	0.002	18	390	568	6
[	**Co**	**59**	**0.009**	ug/L	0.002	20	40	133	15
[>	**Ge**	**72**		ug/L			261201	246935	0
[	**Ni**	**60**	**0.014**	ug/L	0.006	41	38	68	19
[	**Ni**	**62**	**-0.221**	ug/L	0.044	19	242	155	9
[	**Cu**	**63**	**0.002**	ug/L	0.007	476	343	332	10
[	**Cu**	**65**	**0.017**	ug/L	0.006	34	82	117	11
[	**Zn**	**66**	**-0.007**	ug/L	0.021	283	334	305	10
[	**Zn**	**67**	**0.023**	ug/L	0.027	113	211	205	3
[	**Zn**	**68**	**0.057**	ug/L	0.057	98	6668	6362	0
[	**As**	**75**	**0.008**	ug/L	0.019	241	227	225	11
[	**As-1**	**75**	**0.086**	ug/L	0.025	29	8290	7954	0
[	**Se**	**82**	**0.013**	ug/L	0.085	668	-8	-6	199
[	**Se**	**78**	**0.351**	ug/L	0.158	44	8442	8109	0
[	**Mo**	**98**	**0.037**	ug/L	0.015	40	35	226	33
	Y	**89**		ug/L			254415	243373	0
	Kr	**83**		ug/L			169	167	7
[>	**In**	**115**		ug/L			290439	280044	0
[	**Ag**	**107**	**0.018**	ug/L	0.009	49	38	195	40
[	**Cd**	**111**	**0.012**	ug/L	0.008	68	146	169	11
[	**Cd**	**114**	**0.009**	ug/L	0.006	61	18	68	45
[	**Sb**	**121**	**0.064**	ug/L	0.016	24	87	585	21
[	**Sb**	**123**	**0.083**	ug/L	0.040	48	61	548	43
[	**Ba**	**135**	**0.013**	ug/L	0.005	40	21	45	22
[	**Ba**	**137**	**0.011**	ug/L	0.003	27	26	61	16
[>	**Tb**	**159**		ug/L			374240	361081	0
[	**Tl**	**205**	**0.020**	ug/L	0.004	22	105	622	19
[	**Pb**	**208**	**0.013**	ug/L	0.005	38	382	848	22
[	**Bi**	**209**		ug/L			328776	322121	0
[	**Th**	**232**	**0.044**	ug/L	0.018	41	456	2360	33
[	**U**	**238**	**0.014**	ug/L	0.003	19	84	759	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:53:17
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L				365988	1
⌊	Be	9		ug/L				6	78
	C	13		mg/L				3664	1
	Cl	37		mg/L				1886360	0
⌈>	Sc	45		ug/L				235745	0
|	V	51		ug/L				2121	9
|	V-1	51		ug/L				7526	3
|	Cr	52		ug/L				5337	1
|	Cr	53		ug/L				2331	1
|	Mn	55		ug/L				377	3
⌊	Co	59		ug/L				50	5
⌈>	Ge	72		ug/L				248077	0
|	Ni	60		ug/L				42	16
|	Ni	62		ug/L				155	5
|	Cu	63		ug/L				303	4
|	Cu	65		ug/L				100	12
|	Zn	66		ug/L				315	8
|	Zn	67		ug/L				204	12
|	Zn	68		ug/L				6193	2
|	As	75		ug/L				256	8
|	As-1	75		ug/L				7960	0
|	Se	82		ug/L				2	233
|	Se	78		ug/L				8095	0
⌊	Mo	98		ug/L				70	22
	Y	89		ug/L				243424	1
	Kr	83		ug/L				161	7
⌈>	In	115		ug/L				276404	0
|	Ag	107		ug/L				66	10
|	Cd	111		ug/L				143	11
|	Cd	114		ug/L				18	28
|	Sb	121		ug/L				174	10
|	Sb	123		ug/L				152	18
|	Ba	135		ug/L				25	7
⌊	Ba	137		ug/L				37	10
⌈>	Tb	159		ug/L				361136	0
|	Tl	205		ug/L				179	16
|	Pb	208		ug/L				464	15
|	Bi	209		ug/L				318171	1
|	Th	232		ug/L				694	30
⌊	U	238		ug/L				154	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 11:59:05
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	354518	2
[	Be	9	47.790	ug/L	0.967	2	6	21193	0
	C	13		mg/L			3664	3911	1
	Cl	37		mg/L			1886360	1914297	0
[>	Sc	45		ug/L			235745	237715	1
[	V	51	49.452	ug/L	0.378	0	2121	527408	0
[	V-1	51	49.497	ug/L	0.389	0	7526	540308	0
[	Cr	52	49.743	ug/L	0.380	0	5337	459173	0
[	Cr	53	49.875	ug/L	0.386	0	2331	56012	0
[	Mn	55	49.696	ug/L	0.779	1	377	743564	1
[	Co	59	48.660	ug/L	0.396	0	50	544516	0
[>	Ge	72		ug/L			248077	250915	0
[	Ni	60	49.650	ug/L	0.699	1	42	114464	1
[	Ni	62	49.940	ug/L	0.713	1	155	16994	1
[	Cu	63	49.547	ug/L	0.076	0	303	247874	0
[	Cu	65	49.375	ug/L	0.025	0	100	115220	0
[	Zn	66	50.383	ug/L	0.520	1	315	75310	1
[	Zn	67	50.351	ug/L	0.480	0	204	12700	0
[	Zn	68	50.618	ug/L	0.113	0	6193	57981	0
[	As	75	49.836	ug/L	0.233	0	256	70171	0
[	As-1	75	49.482	ug/L	0.115	0	7960	76125	0
[	Se	82	51.427	ug/L	0.367	0	2	8066	0
[	Se	78	50.303	ug/L	0.283	0	8095	26887	0
[	Mo	98	49.401	ug/L	0.275	0	70	260549	0
	Y	89		ug/L			243424	239434	0
	Kr	83		ug/L			161	183	2
[>	In	115		ug/L			276404	272745	1
[	Ag	107	50.250	ug/L	0.350	0	66	442550	0
[	Cd	111	50.953	ug/L	0.385	0	143	115097	1
[	Cd	114	49.977	ug/L	0.122	0	18	261659	0
[	Sb	121	49.799	ug/L	0.385	0	174	376821	0
[	Sb	123	50.170	ug/L	0.655	1	152	288076	0
[	Ba	135	50.749	ug/L	0.423	0	25	94968	1
[	Ba	137	50.725	ug/L	0.380	0	37	165083	1
[>	Tb	159		ug/L			361136	359166	2
[	Tl	205	51.792	ug/L	0.647	1	179	1359464	0
[	Pb	208	51.155	ug/L	0.855	1	464	1873492	0
[	Bi	209		ug/L			318171	308590	0
[	Th	232	51.462	ug/L	1.009	1	694	2240780	0
[	U	238	52.429	ug/L	0.895	1	154	2505354	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:05:24
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			365988	367089	1
[	**Be**	**9**	**0.007**	ug/L	0.009	132	6	10	45
	C	**13**		mg/L			3664	3624	2
	Cl	**37**		mg/L			1886360	1842712	0
[>	**Sc**	**45**		ug/L			235745	237516	0
[	**V**	**51**	**0.003**	ug/L	0.017	655	2121	2164	7
[	**V-1**	**51**	**-0.037**	ug/L	0.012	32	7526	7182	1
[	**Cr**	**52**	**0.001**	ug/L	0.004	269	5337	5389	1
[	**Cr**	**53**	**-0.126**	ug/L	0.045	35	2331	2213	2
[	**Mn**	**55**	**0.004**	ug/L	0.002	40	377	439	4
[	**Co**	**59**	**0.002**	ug/L	0.002	78	50	78	26
[>	**Ge**	**72**		ug/L			248077	246817	0
[	**Ni**	**60**	**0.002**	ug/L	0.008	365	42	46	37
[	**Ni**	**62**	**-0.019**	ug/L	0.064	337	155	148	14
[	**Cu**	**63**	**-0.005**	ug/L	0.004	87	303	278	6
[	**Cu**	**65**	**0.002**	ug/L	0.005	284	100	104	10
[	**Zn**	**66**	**0.000**	ug/L	0.015	2940	315	314	7
[	**Zn**	**67**	**-0.033**	ug/L	0.074	223	204	195	8
[	**Zn**	**68**	**0.178**	ug/L	0.089	49	6193	6341	1
[	**As**	**75**	**-0.013**	ug/L	0.003	24	256	236	1
[	**As-1**	**75**	**0.079**	ug/L	0.061	76	7960	8027	1
[	**Se**	**82**	**-0.069**	ug/L	0.083	120	2	-7	166
[	**Se**	**78**	**0.346**	ug/L	0.202	58	8095	8181	1
[	**Mo**	**98**	**0.007**	ug/L	0.006	96	70	104	31
	Y	**89**		ug/L			243424	245072	1
	Kr	**83**		ug/L			161	172	4
[>	**In**	**115**		ug/L			276404	278351	0
[	**Ag**	**107**	**0.004**	ug/L	0.004	101	66	99	33
[	**Cd**	**111**	**0.003**	ug/L	0.007	230	143	151	10
[	**Cd**	**114**	**0.004**	ug/L	0.002	50	18	37	24
[	**Sb**	**121**	**0.012**	ug/L	0.008	67	174	269	23
[	**Sb**	**123**	**0.008**	ug/L	0.011	140	152	198	31
[	**Ba**	**135**	**0.001**	ug/L	0.002	119	25	28	11
[	**Ba**	**137**	**0.001**	ug/L	0.002	110	37	42	12
[>	**Tb**	**159**		ug/L			361136	360116	0
[	**Tl**	**205**	**0.005**	ug/L	0.003	66	179	306	28
[	**Pb**	**208**	**0.004**	ug/L	0.002	62	464	592	13
[	**Bi**	**209**		ug/L			318171	319378	0
[	**Th**	**232**	**0.019**	ug/L	0.011	55	694	1533	31
[	**U**	**238**	**0.003**	ug/L	0.001	39	154	299	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:10:51
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	368669	1
[	Be	9	-0.001	ug/L	0.003	250	6	6	20
	C	13		mg/L			3664	5787	0
	Cl	37		mg/L			1886360	1890169	0
[>	Sc	45		ug/L			235745	243220	1
[	V	51	-0.009	ug/L	0.008	93	2121	2094	5
[	V-1	51	0.002	ug/L	0.022	930	7526	7790	2
[	Cr	52	0.026	ug/L	0.020	77	5337	5746	2
[	Cr	53	0.060	ug/L	0.068	113	2331	2470	1
[	Mn	55	0.020	ug/L	0.004	18	377	691	8
[	Co	59	0.000	ug/L	0.001	202	50	55	12
[>	Ge	72		ug/L			248077	255796	0
[	Ni	60	0.004	ug/L	0.001	27	42	53	5
[	Ni	62	-0.014	ug/L	0.046	329	155	155	10
[	Cu	63	0.022	ug/L	0.003	11	303	426	3
[	Cu	65	0.028	ug/L	0.011	39	100	170	14
[	Zn	66	0.972	ug/L	0.040	4	315	1799	3
[	Zn	67	0.861	ug/L	0.072	8	204	428	4
[	Zn	68	0.755	ug/L	0.055	7	6193	7173	1
[	As	75	0.006	ug/L	0.022	345	256	273	12
[	As-1	75	-0.266	ug/L	0.057	21	7960	7835	0
[	Se	82	-0.102	ug/L	0.035	34	2	-13	42
[	Se	78	-1.034	ug/L	0.285	27	8095	7954	0
[	Mo	98	-0.001	ug/L	0.002	126	70	65	14
	Y	89		ug/L			243424	247700	0
	Kr	83		ug/L			161	179	4
[>	In	115		ug/L			276404	282800	0
[	Ag	107	-0.001	ug/L	0.001	99	66	60	11
[	Cd	111	-0.001	ug/L	0.004	474	143	144	7
[	Cd	114	0.001	ug/L	0.001	82	18	26	24
[	Sb	121	-0.004	ug/L	0.001	30	174	146	6
[	Sb	123	-0.007	ug/L	0.002	21	152	112	8
[	Ba	135	0.038	ug/L	0.002	5	25	100	4
[	Ba	137	0.036	ug/L	0.003	7	37	157	6
[>	Tb	159		ug/L			361136	366745	0
[	Tl	205	-0.001	ug/L	0.000	48	179	158	7
[	Pb	208	0.012	ug/L	0.001	6	464	932	3
[	Bi	209		ug/L			318171	322043	0
[	Th	232	0.002	ug/L	0.003	132	694	810	17
[	U	238	-0.001	ug/L	0.000	38	154	99	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL69 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:16:49
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	376307	0
[	Be	9	0.034	ug/L	0.010	30	6	22	22
	C	13		mg/L			3664	4844	1
	Cl	37		mg/L			1886360	1899541	0
[>	Sc	45		ug/L			235745	255519	0
[	V	51	3.799	ug/L	0.034	0	2121	45672	1
[	V-1	51	3.858	ug/L	0.006	0	7526	52793	0
[	Cr	52	5.362	ug/L	0.016	0	5337	58363	1
[	Cr	53	5.486	ug/L	0.099	1	2331	8872	1
[	Mn	55	103.571	ug/L	1.089	1	377	1665396	1
[	Co	59	0.738	ug/L	0.010	1	50	8929	1
[>	Ge	72		ug/L			248077	262466	1
[	Ni	60	3.564	ug/L	0.115	3	42	8635	2
[	Ni	62	4.111	ug/L	0.096	2	155	1614	2
[	Cu	63	2.316	ug/L	0.021	0	303	12425	2
[	Cu	65	2.369	ug/L	0.033	1	100	5884	0
[	Zn	66	8.803	ug/L	0.065	0	315	14038	1
[	Zn	67	8.249	ug/L	0.364	4	204	2356	3
[	Zn	68	8.447	ug/L	0.251	2	6193	15578	0
[	As	75	0.779	ug/L	0.019	2	256	1413	1
[	As-1	75	0.386	ug/L	0.053	13	7960	8976	0
[	Se	82	-0.048	ug/L	0.045	94	2	-4	158
[	Se	78	-1.462	ug/L	0.099	6	8095	7996	0
[	Mo	98	0.082	ug/L	0.001	0	70	526	1
	Y	89		ug/L			243424	270964	0
	Kr	83		ug/L			161	186	4
[>	In	115		ug/L			276404	289304	0
[	Ag	107	0.009	ug/L	0.002	17	66	150	10
[	Cd	111	0.059	ug/L	0.003	5	143	292	2
[	Cd	114	0.014	ug/L	0.002	12	18	94	10
[	Sb	121	-0.006	ug/L	0.001	9	174	134	3
[	Sb	123	-0.009	ug/L	0.001	16	152	106	8
[	Ba	135	8.097	ug/L	0.144	1	25	16093	1
[	Ba	137	8.112	ug/L	0.048	0	37	28035	0
[>	Tb	159		ug/L			361136	375384	0
[	Tl	205	0.004	ug/L	0.001	15	179	290	6
[	Pb	208	0.840	ug/L	0.004	0	464	32650	0
[	Bi	209		ug/L			318171	328824	0
[	Th	232	0.112	ug/L	0.005	4	694	5818	3
[	U	238	0.038	ug/L	0.000	0	154	2078	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL69 B SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:22:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			365988	374453	0
	Be	9	0.048	ug/L	0.006	13	6	29	10
	C	13		mg/L			3664	4812	1
	Cl	37		mg/L			1886360	1883722	0
>	Sc	45		ug/L			235745	256452	1
	V	51	4.575	ug/L	0.129	2	2121	54717	1
	V-1	51	4.606	ug/L	0.081	1	7526	61655	0
	Cr	52	8.078	ug/L	0.177	2	5337	85292	0
	Cr	53	8.030	ug/L	0.041	0	2331	11856	1
	Mn	55	90.341	ug/L	0.216	0	377	1458012	1
	Co	59	0.935	ug/L	0.012	1	50	11341	1
>	Ge	72		ug/L			248077	262539	0
	Ni	60	5.547	ug/L	0.016	0	42	13420	0
	Ni	62	6.124	ug/L	0.157	2	155	2325	1
	Cu	63	2.778	ug/L	0.020	0	303	14846	0
	Cu	65	2.888	ug/L	0.011	0	100	7152	0
	Zn	66	9.320	ug/L	0.051	0	315	14847	0
	Zn	67	8.926	ug/L	0.248	2	204	2533	2
	Zn	68	9.082	ug/L	0.015	0	6193	16263	0
	As	75	0.780	ug/L	0.022	2	256	1415	2
	As-1	75	0.421	ug/L	0.017	3	7960	9031	0
	Se	82	0.044	ug/L	0.059	132	2	10	92
	Se	78	-1.253	ug/L	0.122	9	8095	8079	0
	Mo	98	0.111	ug/L	0.003	2	70	689	2
	Y	89		ug/L			243424	274361	0
	Kr	83		ug/L			161	183	3
>	In	115		ug/L			276404	286629	0
	Ag	107	0.009	ug/L	0.001	14	66	155	7
	Cd	111	0.065	ug/L	0.006	9	143	302	5
	Cd	114	0.019	ug/L	0.003	15	18	125	12
	Sb	121	-0.010	ug/L	0.003	27	174	102	22
	Sb	123	-0.013	ug/L	0.001	11	152	77	12
	Ba	135	10.101	ug/L	0.072	0	25	19886	1
	Ba	137	10.145	ug/L	0.071	0	37	34728	0
>	Tb	159		ug/L			361136	373587	0
	Tl	205	0.004	ug/L	0.001	12	179	305	5
	Pb	208	0.908	ug/L	0.007	0	464	35075	0
	Bi	209		ug/L			318171	331147	0
	Th	232	0.148	ug/L	0.003	1	694	7421	1
	U	238	0.048	ug/L	0.002	3	154	2524	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:28:43
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	380645	0
[	Be	9	0.187	ug/L	0.025	13	6	95	13
	C	13		mg/L			3664	11520	1
	Cl	37		mg/L			1886360	1892844	1
[>	Sc	45		ug/L			235745	290798	1
[	V	51	39.023	ug/L	0.387	0	2121	509656	0
[	V-1	51	38.720	ug/L	0.294	0	7526	519067	1
[	Cr	52	26.396	ug/L	0.406	1	5337	301123	0
[	Cr	53	25.956	ug/L	0.387	1	2331	37036	1
[	Mn	55	254.666	ug/L	2.482	0	377	4659249	0
[	Co	59	5.761	ug/L	0.020	0	50	78917	1
[>	Ge	72		ug/L			248077	272483	1
[	Ni	60	19.942	ug/L	0.290	1	42	49947	0
[	Ni	62	26.356	ug/L	0.324	1	155	9820	1
[	Cu	63	69.564	ug/L	0.475	0	303	377786	1
[	Cu	65	70.234	ug/L	0.363	0	100	177929	0
[	Zn	66	751.761	ug/L	5.089	0	315	1215445	1
[	Zn	67	672.753	ug/L	8.416	1	204	181491	0
[	Zn	68	749.538	ug/L	5.464	0	6193	838413	1
[	As	75	5.571	ug/L	0.036	0	256	8768	0
[	As-1	75	5.160	ug/L	0.076	1	7960	16452	0
[	Se	82	0.174	ug/L	0.055	31	2	32	27
[	Se	78	-1.580	ug/L	0.303	19	8095	8253	1
[	Mo	98	2.146	ug/L	0.046	2	70	12363	1
	Y	89		ug/L			243424	410052	0
	Kr	83		ug/L			161	202	4
[>	In	115		ug/L			276404	295040	0
[	Ag	107	0.176	ug/L	0.003	1	66	1750	1
[	Cd	111	1.240	ug/L	0.051	4	143	3179	3
[	Cd	114	0.945	ug/L	0.021	2	18	5372	1
[	Sb	121	0.027	ug/L	0.002	9	174	410	4
[	Sb	123	0.026	ug/L	0.002	8	152	326	3
[	Ba	135	136.340	ug/L	1.787	1	25	275921	0
[	Ba	137	137.481	ug/L	1.675	1	37	483915	0
[>	Tb	159		ug/L			361136	392073	0
[	Tl	205	0.085	ug/L	0.001	0	179	2642	1
[	Pb	208	50.843	ug/L	0.326	0	464	2033071	0
[	Bi	209		ug/L			318171	336417	1
[	Th	232	1.162	ug/L	0.006	0	694	55958	0
[	U	238	0.329	ug/L	0.003	0	154	17334	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:34:42
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

pl Cr

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	382120	0
[	Be	9	0.225	ug/L	0.008	3	6	114	3
	C	13		mg/L			3664	12644	1
	Cl	37		mg/L			1886360	1924442	0
[>	Sc	45		ug/L			235745	290186	0
[	V	51	40.415	ug/L	0.118	0	2121	526670	0
[	V-1	51	40.218	ug/L	0.145	0	7526	537686	0
[	Cr	52	27.756	ug/L	0.129	0	5337	315682	0
[	Cr	53	27.657	ug/L	0.087	0	2331	39195	0
[	Mn	55	273.248	ug/L	1.473	0	377	4989173	1
[	Co	59	6.177	ug/L	0.011	0	50	84436	0
[>	Ge	72		ug/L			248077	277157 ✓	0
[	Ni	60	19.352	ug/L	0.082	0	42	49309	0
[	Ni	62	25.950	ug/L	0.500	1	155	9837	1
[	Cu	63	66.047	ug/L	0.430	0	303	364859	0
[	Cu	65	66.536	ug/L	0.408	0	100	171467	0
[	Zn	66	624.039	ug/L	0.911	0	315	1026335	0
[	Zn	67	562.431	ug/L	3.681	0	204	154386	0
[	Zn	68	623.371	ug/L	4.437	0	6193	710439	0
[	As	75	6.018	ug/L	0.042	0	256	9611	0
[	As-1	75	5.529	ug/L	0.083	1	7960	17295	0
[	Se	82	0.172	ug/L	0.080	46	2	33	42
[	Se	78	-1.870	ug/L	0.193	10	8095	8276	1
[	Mo	98	2.283	ug/L	0.010	0	70	13373	0
	Y	89		ug/L			243424	414487	0
	Kr	83		ug/L			161	211	0
[>	In	115		ug/L			276404	297677 ✓	0
[	Ag	107	0.190	ug/L	0.009	4	66	1892	4
[	Cd	111	1.287	ug/L	0.031	2	143	3322	2
[	Cd	114	0.980	ug/L	0.011	1	18	5619	0
[	Sb	121	0.033	ug/L	0.003	9	174	457	5
[	Sb	123	0.029	ug/L	0.001	2	152	344	1
[	Ba	135	138.801	ug/L	2.174	1	25	283418	1
[	Ba	137	138.671	ug/L	0.348	0	37	492491	0
[>	Tb	159		ug/L			361136	392550 ✓	1
[	Tl	205	0.087	ug/L	0.000	0	179	2696	1
[	Pb	208	47.583	ug/L	0.346	0	464	1905001	0
[	Bi	209		ug/L			318171	335794	1
[	Th	232	1.133	ug/L	0.013	1	694	54645	0
[	U	238	0.346	ug/L	0.007	2	154	18255	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:40:40
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

RRV

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	371141	1
[	Be	9	23.310	ug/L	0.969	4	6	10825	3
	C	13		mg/L			3664	9408	0
	Cl	37		mg/L			1886360	1936944	0
[>	Sc	45		ug/L			235745	290359	0
[	V	51	57.682	ug/L	0.427	0	2121	751019	0
[	V-1	51	57.448	ug/L	0.503	0	7526	764515	0
[	Cr	52	46.352	ug/L	0.093	0	5337	523098	0
[	Cr	53	46.077	ug/L	0.486	1	2331	63425	0
[	Mn	55	261.782	ug/L	1.748	0	377	4782577	0
[	Co	59	25.959	ug/L	0.114	0	50	354860	0
[>	Ge	72		ug/L			248077	274830	0
[	Ni	60	41.286	ug/L	0.108	0	42	104261	0
[	Ni	62	47.742	ug/L	0.203	0	155	17802	0
[	Cu	63	85.036	ug/L	0.364	0	303	465718	0
[	Cu	65	85.764	ug/L	0.742	0	100	219130	1
[	Zn	66	900.493	ug/L	6.111	0	315	1468404	0
[	Zn	67	808.576	ug/L	3.095	0	204	219990	0
[	Zn	68	896.146	ug/L	9.781	1	6193	1009718	0
[	As	75	29.638	ug/L	0.257	0	256	45822	0
[	As-1	75	28.366	ug/L	0.228	0	7960	51562	0
[	Se	82	72.839	ug/L	0.370	0	2	12512	0
[	Se	78	71.406	ug/L	0.291	0	8095	38042	0
[	Mo	98	23.354	ug/L	0.214	0	70	134951	0
	Y	89		ug/L			243424	398263	0
	Kr	83		ug/L			161	214	2
[>	In	115		ug/L			276404	293609	1
[	Ag	107	23.005	ug/L	0.138	0	66	218142	0
[	Cd	111	25.532	ug/L	0.506	1	143	62150	0
[	Cd	114	25.119	ug/L	0.441	1	18	141568	0
[	Sb	121	0.964	ug/L	0.009	0	174	8036	1
[	Sb	123	0.962	ug/L	0.009	0	152	6105	1
[	Ba	135	223.579	ug/L	0.911	0	25	450279	0
[	Ba	137	224.283	ug/L	2.840	1	37	785555	0
[>	Tb	159		ug/L			361136	388941	0
[	Tl	205	23.976	ug/L	0.207	0	179	681681	0
[	Pb	208	69.707	ug/L	1.091	1	464	2764749	0
[	Bi	209		ug/L			318171	331903	0
[	Th	232	25.093	ug/L	0.567	2	694	1183686	1
[	U	238	24.897	ug/L	0.424	1	154	1288512	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:46:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	372589	0
[	Be	9	23.836	ug/L	0.282	1	6	11115	0
	C	13		mg/L			3664	12449	2
	Cl	37		mg/L			1886360	1903807	0
[>	Sc	45		ug/L			235745	281711	1
|	V	51	61.636	ug/L	0.818	1	2121	778350	0
|	V-1	51	61.241	ug/L	0.821	1	7526	790066	0
|	Cr	52	49.905	ug/L	0.277	0	5337	545909	0
|	Cr	53	49.134	ug/L	0.308	0	2331	65434	0
|	Mn	55	291.594	ug/L	5.238	1	377	5168004	1
[	Co	59	28.107	ug/L	0.243	0	50	372775	1
[>	Ge	72		ug/L			248077	266905	0
|	Ni	60	44.391	ug/L	0.604	1	42	108862	1
|	Ni	62	51.120	ug/L	1.129	2	155	18500	2
|	Cu	63	90.844	ug/L	0.739	0	303	483153	0
|	Cu	65	91.349	ug/L	0.540	0	100	226658	0
|	Zn	66	698.089	ug/L	3.521	0	315	1105603	0
|	Zn	67	626.591	ug/L	2.843	0	204	165610	0
|	Zn	68	693.853	ug/L	7.400	1	6193	760735	0
|	As	75	32.466	ug/L	0.187	0	256	48721	0
|	As-1	75	31.242	ug/L	0.269	0	7960	54283	0
|	Se	82	82.774	ug/L	0.633	0	2	13809	0
|	Se	78	82.052	ug/L	1.013	1	8095	41153	0
[	Mo	98	26.956	ug/L	0.282	1	70	151263	0
	Y	89		ug/L			243424	400308	0
	Kr	83		ug/L			161	213	2
[>	In	115		ug/L			276404	288927	0
|	Ag	107	25.735	ug/L	0.190	0	66	240131	0
|	Cd	111	26.325	ug/L	0.400	1	143	63063	1
|	Cd	114	26.250	ug/L	0.064	0	18	145597	0
|	Sb	121	24.773	ug/L	0.074	0	174	198675	0
|	Sb	123	24.675	ug/L	0.260	1	152	150180	0
|	Ba	135	162.059	ug/L	1.772	1	25	321184	0
[	Ba	137	162.121	ug/L	1.233	0	37	558823	0
[>	Tb	159		ug/L			361136	383270	0
|	Tl	205	25.706	ug/L	0.102	0	179	720244	0
|	Pb	208	71.751	ug/L	0.213	0	464	2804567	0
|	Bi	209		ug/L			318171	325096	0
|	Th	232	26.733	ug/L	0.248	0	694	1242811	0
[	U	238	26.027	ug/L	0.112	0	154	1327470	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:52:37
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			365988	368149	0
[	Be	9	22.079	ug/L	0.117	0	6	10174	0
	C	13		mg/L			3664	5418	1
	Cl	37		mg/L			1886360	1948538	0
[>	Sc	45		ug/L			235745	253289	0
[	V	51	23.311	ug/L	0.033	0	2121	266121	0
[	V-1	51	23.335	ug/L	0.065	0	7526	275698	0
[	Cr	52	23.396	ug/L	0.160	0	5337	233172	1
[	Cr	53	23.469	ug/L	0.109	0	2331	29411	0
[	Mn	55	23.509	ug/L	0.373	1	377	375027	1
[	Co	59	23.357	ug/L	0.085	0	50	278535	0
[>	Ge	72		ug/L			248077	269941	0
[	Ni	60	23.607	ug/L	0.192	0	42	58574	0
[	Ni	62	23.850	ug/L	0.726	3	155	8819	2
[	Cu	63	24.630	ug/L	0.197	0	303	132725	0
[	Cu	65	24.581	ug/L	0.132	0	100	61766	0
[	Zn	66	77.442	ug/L	0.488	0	315	124350	0
[	Zn	67	70.976	ug/L	0.561	0	204	19169	0
[	Zn	68	77.280	ug/L	0.290	0	6193	91684	0
[	As	75	25.085	ug/L	0.264	1	256	38136	0
[	As-1	75	23.694	ug/L	0.342	1	7960	43729	1
[	Se	82	77.105	ug/L	0.378	0	2	13010	0
[	Se	78	75.821	ug/L	0.511	0	8095	39131	0
[	Mo	98	23.439	ug/L	0.151	0	70	133037	0
	Y	89		ug/L			243424	255219	0
	Kr	83		ug/L			161	203	3
[>	In	115		ug/L			276404	291348	0
[	Ag	107	24.297	ug/L	0.082	0	66	228622	0
[	Cd	111	23.849	ug/L	0.118	0	143	57627	0
[	Cd	114	23.881	ug/L	0.235	0	18	133566	0
[	Sb	121	23.690	ug/L	0.259	1	174	191588	0
[	Sb	123	23.779	ug/L	0.044	0	152	145953	0
[	Ba	135	23.878	ug/L	0.183	0	25	47744	0
[	Ba	137	24.097	ug/L	0.173	0	37	83794	0
[>	Tb	159		ug/L			361136	377178	0
[	Tl	205	24.733	ug/L	0.128	0	179	681944	0
[	Pb	208	24.358	ug/L	0.246	1	464	937251	0
[	Bi	209		ug/L			318171	328671	0
[	Th	232	23.939	ug/L	0.063	0	694	1095283	0
[	U	238	24.305	ug/L	0.430	1	154	1219871	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 12:58:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			365988	355302	1
[	**Be**	**9**	**48.900**	ug/L	0.242	0	6	21738	1
	C	**13**		mg/L			3664	4324	2
	Cl	**37**		mg/L			1886360	1947063	0
[>	**Sc**	**45**		ug/L			235745	244962	0
[	**V**	**51**	**49.531**	ug/L	0.413	0	2121	544374	0
[	**V-1**	**51**	**49.668**	ug/L	0.605	1	7526	558695	1
[	**Cr**	**52**	**50.034**	ug/L	0.205	0	5337	475929	0
[	**Cr**	**53**	**50.452**	ug/L	0.784	1	2331	58359	1
[	**Mn**	**55**	**49.834**	ug/L	0.432	0	377	768398	0
[	**Co**	**59**	**49.097**	ug/L	0.200	0	50	566177	0
[>	**Ge**	**72**		ug/L			248077	263016	0
[	**Ni**	**60**	**49.044**	ug/L	0.286	0	42	118520	0
[	**Ni**	**62**	**50.189**	ug/L	0.469	0	155	17901	0
[	**Cu**	**63**	**49.318**	ug/L	0.089	0	303	258628	0
[	**Cu**	**65**	**49.744**	ug/L	0.499	1	100	121678	1
[	**Zn**	**66**	**50.446**	ug/L	0.547	1	315	79040	1
[	**Zn**	**67**	**50.030**	ug/L	0.346	0	204	13229	0
[	**Zn**	**68**	**50.792**	ug/L	0.464	0	6193	60963	0
[	**As**	**75**	**50.161**	ug/L	0.137	0	256	74031	0
[	**As-1**	**75**	**49.944**	ug/L	0.137	0	7960	80463	0
[	**Se**	**82**	**50.774**	ug/L	0.544	1	2	8348	1
[	**Se**	**78**	**50.161**	ug/L	0.330	0	8095	28128	0
[	**Mo**	**98**	**49.012**	ug/L	0.258	0	70	270964	0
	Y	**89**		ug/L			243424	247910	0
	Kr	**83**		ug/L			161	203	1
[>	**In**	**115**		ug/L			276404	280076	0
[	**Ag**	**107**	**50.236**	ug/L	0.351	0	66	454331	0
[	**Cd**	**111**	**50.352**	ug/L	0.414	0	143	116794	0
[	**Cd**	**114**	**50.635**	ug/L	0.103	0	18	272233	0
[	**Sb**	**121**	**50.150**	ug/L	0.388	0	174	389683	0
[	**Sb**	**123**	**50.300**	ug/L	0.352	0	152	296611	0
[	**Ba**	**135**	**50.714**	ug/L	0.384	0	25	97453	1
[	**Ba**	**137**	**50.772**	ug/L	0.583	1	37	169671	0
[>	**Tb**	**159**		ug/L			361136	368124	1
[	**Tl**	**205**	**51.243**	ug/L	0.547	1	179	1378697	0
[	**Pb**	**208**	**50.311**	ug/L	0.603	1	464	1888796	0
[	**Bi**	**209**		ug/L			318171	311794	0
[	**Th**	**232**	**50.704**	ug/L	0.775	1	694	2263121	0
[	**U**	**238**	**51.240**	ug/L	0.306	0	154	2509891	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:04:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013b.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			365988	383680	1
	Be	9	0.001	ug/L	0.005	423	6	7	28
	C	13		mg/L			3664	3783	4
	Cl	37		mg/L			1886360	1816365	1
>	Sc	45		ug/L			235745	248488	0
	V	51	-0.019	ug/L	0.009	48	2121	2021	5
	V-1	51	-0.146	ug/L	0.014	9	7526	6293	2
	Cr	52	0.044	ug/L	0.006	12	5337	6041	0
	Cr	53	-0.364	ug/L	0.039	10	2331	2048	2
	Mn	55	0.010	ug/L	0.003	35	377	546	9
	Co	59	0.003	ug/L	0.003	86	50	93	37
>	Ge	72		ug/L			248077	263088	0
	Ni	60	-0.001	ug/L	0.001	163	42	42	7
	Ni	62	-0.171	ug/L	0.013	7	155	105	4
	Cu	63	-0.005	ug/L	0.005	93	303	296	8
	Cu	65	0.005	ug/L	0.007	125	100	119	13
	Zn	66	0.037	ug/L	0.010	28	315	391	4
	Zn	67	-0.072	ug/L	0.019	26	204	197	2
	Zn	68	0.382	ug/L	0.078	20	6193	6978	1
	As	75	0.005	ug/L	0.017	342	256	279	8
	As-1	75	0.274	ug/L	0.038	13	7960	8837	0
	Se	82	-0.001	ug/L	0.006	444	2	2	36
	Se	78	1.047	ug/L	0.120	11	8095	8993	0
	Mo	98	0.005	ug/L	0.008	151	70	105	43
	Y	89		ug/L			243424	258900	0
	Kr	83		ug/L			161	180	3
>	In	115		ug/L			276404	293240	0
	Ag	107	0.006	ug/L	0.004	59	66	130	28
	Cd	111	-0.002	ug/L	0.011	528	143	147	17
	Cd	114	0.004	ug/L	0.003	76	18	42	41
	Sb	121	0.010	ug/L	0.007	70	174	264	21
	Sb	123	0.007	ug/L	0.008	107	152	205	23
	Ba	135	0.003	ug/L	0.003	95	25	32	17
	Ba	137	0.009	ug/L	0.004	47	37	69	21
>	Tb	159		ug/L			361136	378185	1
	Tl	205	0.004	ug/L	0.004	94	179	297	34
	Pb	208	0.006	ug/L	0.004	65	464	705	19
	Bi	209		ug/L			318171	333233	0
	Th	232	0.015	ug/L	0.011	71	694	1411	34
	U	238	0.004	ug/L	0.002	50	154	372	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:13:10
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				374583	1
[	Be	9		ug/L				5	48
	C	13		mg/L				3727	1
	Cl	37		mg/L				1848526	0
[>	Sc	45		ug/L				248909	0
[	V	51		ug/L				1891	12
[	V-1	51		ug/L				6386	1
[	Cr	52		ug/L				5857	2
[	Cr	53		ug/L				2099	2
[	Mn	55		ug/L				454	4
[	Co	59		ug/L				53	8
[>	Ge	72		ug/L				261757	0
[	Ni	60		ug/L				45	27
[	Ni	62		ug/L				101	4
[	Cu	63		ug/L				292	14
[	Cu	65		ug/L				105	22
[	Zn	66		ug/L				401	7
[	Zn	67		ug/L				193	4
[	Zn	68		ug/L				6893	0
[	As	75		ug/L				266	5
[	As-1	75		ug/L				8833	0
[	Se	82		ug/L				-11	82
[	Se	78		ug/L				8982	0
[	Mo	98		ug/L				44	11
	Y	89		ug/L				259459	0
	Kr	83		ug/L				186	0
[>	In	115		ug/L				291463	0
[	Ag	107		ug/L				50	26
[	Cd	111		ug/L				145	4
[	Cd	114		ug/L				15	25
[	Sb	121		ug/L				111	28
[	Sb	123		ug/L				71	2
[	Ba	135		ug/L				36	21
[	Ba	137		ug/L				56	27
[>	Tb	159		ug/L				378929	1
[	Tl	205		ug/L				111	9
[	Pb	208		ug/L				590	11
[	Bi	209		ug/L				332212	0
[	Th	232		ug/L				447	26
[	U	238		ug/L				110	29

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:18:58
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	366032	0
[	Be	9	47.752	ug/L	0.520	1	5	21868	0
	C	13		mg/L			3727	4177	0
	Cl	37		mg/L			1848526	1870457	1
[>	Sc	45		ug/L			248909	246723	0
[	V	51	49.323	ug/L	0.196	0	1891	545663	0
[	V-1	51	49.507	ug/L	0.192	0	6386	559383	0
[	Cr	52	49.698	ug/L	0.177	0	5857	476396	0
[	Cr	53	50.272	ug/L	0.170	0	2099	58220	0
[	Mn	55	49.328	ug/L	0.367	0	454	766132	0
[	Co	59	49.180	ug/L	0.284	0	53	571225	0
[>	Ge	72		ug/L			261757	258917	0
[	Ni	60	50.343	ug/L	0.349	0	45	119763	0
[	Ni	62	50.465	ug/L	1.022	2	101	17656	2
[	Cu	63	49.934	ug/L	0.323	0	292	257739	0
[	Cu	65	50.020	ug/L	0.092	0	105	120444	0
[	Zn	66	50.164	ug/L	0.322	0	401	77443	0
[	Zn	67	51.284	ug/L	0.851	1	193	13323	1
[	Zn	68	50.833	ug/L	0.484	0	6893	60411	0
[	As	75	50.594	ug/L	0.094	0	266	73500	0
[	As-1	75	50.172	ug/L	0.370	0	8833	79960	0
[	Se	82	52.665	ug/L	0.173	0	-11	8510	0
[	Se	78	51.286	ug/L	0.835	1	8982	28557	0
[	Mo	98	50.551	ug/L	0.159	0	44	275085	0
	Y	89		ug/L			259459	251980	0
	Kr	83		ug/L			186	199	2
[>	In	115		ug/L			291463	285896	0
[	Ag	107	49.713	ug/L	0.672	1	50	458922	1
[	Cd	111	49.818	ug/L	0.237	0	145	117957	0
[	Cd	114	49.894	ug/L	0.220	0	15	273815	0
[	Sb	121	49.030	ug/L	0.287	0	111	388841	0
[	Sb	123	49.096	ug/L	0.349	0	71	295441	0
[	Ba	135	50.366	ug/L	0.323	0	36	98801	0
[	Ba	137	50.200	ug/L	0.303	0	56	171269	0
[>	Tb	159		ug/L			378929	373663	0
[	Tl	205	51.298	ug/L	0.452	0	111	1400961	0
[	Pb	208	50.950	ug/L	0.423	0	590	1941776	0
[	Bi	209		ug/L			332212	320318	0
[	Th	232	51.242	ug/L	0.095	0	447	2321555	0
[	U	238	51.750	ug/L	0.601	1	110	2573131	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:25:16
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	373822	0
[	Be	9	0.003	ug/L	0.002	55	5	6	10
	C	13		mg/L			3727	3798	1
	Cl	37		mg/L			1848526	1922344	0
[>	Sc	45		ug/L			248909	250700	0
[	V	51	0.011	ug/L	0.022	202	1891	2027	12
[	V-1	51	0.056	ug/L	0.010	18	6386	7066	1
[	Cr	52	-0.042	ug/L	0.010	23	5857	5500	2
[	Cr	53	0.105	ug/L	0.091	86	2099	2232	4
[	Mn	55	-0.000	ug/L	0.003	659	454	450	11
[	Co	59	0.002	ug/L	0.002	91	53	81	30
[>	Ge	72		ug/L			261757	266521	0
[	Ni	60	0.002	ug/L	0.002	88	45	50	7
[	Ni	62	-0.009	ug/L	0.024	274	101	100	8
[	Cu	63	0.004	ug/L	0.005	131	292	317	7
[	Cu	65	0.005	ug/L	0.005	95	105	121	10
[	Zn	66	-0.015	ug/L	0.002	13	401	385	0
[	Zn	67	0.025	ug/L	0.028	115	193	203	3
[	Zn	68	-0.435	ug/L	0.087	20	6893	6546	1
[	As	75	0.027	ug/L	0.027	100	266	312	13
[	As-1	75	-0.569	ug/L	0.029	5	8833	8163	0
[	Se	82	-0.004	ug/L	0.088	2411	-11	-12	122
[	Se	78	-2.153	ug/L	0.106	4	8982	8295	0
[	Mo	98	0.008	ug/L	0.003	31	44	92	16
	Y	89		ug/L			259459	256716	0
	Kr	83		ug/L			186	198	2
[>	In	115		ug/L			291463	290276	0
[	Ag	107	0.004	ug/L	0.004	104	50	88	45
[	Cd	111	0.003	ug/L	0.004	157	145	150	7
[	Cd	114	0.003	ug/L	0.002	54	15	32	28
[	Sb	121	0.016	ug/L	0.005	28	111	242	16
[	Sb	123	0.019	ug/L	0.007	36	71	184	22
[	Ba	135	0.001	ug/L	0.004	320	36	38	18
[	Ba	137	0.001	ug/L	0.004	311	56	60	20
[>	Tb	159		ug/L			378929	377873	0
[	Tl	205	0.006	ug/L	0.004	63	111	279	38
[	Pb	208	0.004	ug/L	0.004	105	590	726	20
[	Bi	209		ug/L			332212	331511	0
[	Th	232	0.020	ug/L	0.014	68	447	1368	46
[	U	238	0.005	ug/L	0.003	66	110	337	45

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:30:43
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	393103	0
[	Be	9	U 0.002	ug/L	0.011	532	5	6	78
	C	13		mg/L			3727	5510	2
	Cl	37		mg/L			1848526	1913798	0
[>	Sc	45		ug/L			248909	211939	1
[	V	51	0.060	ug/L	0.037	61	1891	2180	15
[	V-1	51	0.180	ug/L	0.019	10	6386	7168	1
[	Cr	52	U 0.111	ug/L	0.009	8	5857	5890	1
[	Cr	53	0.493	ug/L	0.071	14	2099	2260	3
[	Mn	55	0.024	ug/L	0.002	9	454	707	4
[	Co	59	-0.000	ug/L	0.002	1260	53	44	35
[>	Ge	72		ug/L			261757	277700	0
[	Ni	60	U -0.002	ug/L	0.002	91	45	43	11
[	Ni	62	-0.033	ug/L	0.027	80	101	95	10
[	Cu	63	0.007	ug/L	0.002	28	292	346	2
[	Cu	65	U 0.014	ug/L	0.007	45	105	149	11
[	Zn	66	0.178	ug/L	0.004	2	401	718	1
[	Zn	67	U 0.200	ug/L	0.054	26	193	260	6
[	Zn	68	-0.515	ug/L	0.073	14	6893	6731	1
[	As	75	U 0.015	ug/L	0.006	37	266	306	3
[	As-1	75	-0.844	ug/L	0.026	3	8833	8085	0
[	Se	82	0.092	ug/L	0.007	7	-11	4	28
[	Se	78	U -3.152	ug/L	0.076	2	8982	8232	0
[	Mo	98	0.004	ug/L	0.005	121	44	72	41
	Y	89		ug/L			259459	267055	0
	Kr	83		ug/L			186	185	2
[>	In	115		ug/L			291463	304738	0
[	Ag	107	U -0.002	ug/L	0.001	33	50	37	13
[	Cd	111	U -0.001	ug/L	0.005	494	145	148	8
[	Cd	114	-0.000	ug/L	0.000	254	15	15	12
[	Sb	121	0.003	ug/L	0.003	105	111	143	20
[	Sb	123	U 0.006	ug/L	0.001	15	71	114	5
[	Ba	135	-0.004	ug/L	0.000	11	36	30	2
[	Ba	137	-0.001	ug/L	0.005	487	56	55	29
[>	Tb	159		ug/L			378929	392189	0
[	Tl	205	U 0.002	ug/L	0.001	66	111	158	17
[	Pb	208	U -0.002	ug/L	0.001	42	590	532	6
[	Bi	209		ug/L			332212	344238	0
[	Th	232	0.007	ug/L	0.001	9	447	794	3
[	U	238	-0.000	ug/L	0.000	13	110	94	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ADUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:36:41
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	375159	1
[	Be	9	0.041	ug/L	0.012	29	5	24	24
	C	13		mg/L			3727	5325	2
	Cl	37		mg/L			1848526	1979427	0
[>	Sc	45		ug/L			248909	265093	0
[	V	51	8.676	ug/L	0.030	0	1891	104786	0
[	V-1	51	8.690	ug/L	0.017	0	6386	111107	0
[	Cr	52	5.789	ug/L	0.089	1	5857	65135	0
[	Cr	53	5.956	ug/L	0.095	1	2099	9381	0
[	Mn	55	56.501	ug/L	0.292	0	454	942837	0
[	Co	59	1.291	ug/L	0.016	1	53	16169	1
[>	Ge	72		ug/L			261757	277085	0
[	Ni	60	3.985	ug/L	0.023	0	45	10190	0
[	Ni	62	5.304	ug/L	0.137	2	101	2082	2
[	Cu	63	14.097	ug/L	0.027	0	292	78091	0
[	Cu	65	14.196	ug/L	0.094	0	105	36660	0
[	Zn	66	155.321	ug/L	0.644	0	401	255722	0
[	Zn	67	137.902	ug/L	0.469	0	193	37992	0
[	Zn	68	152.023	ug/L	1.295	0	6893	178820	0
[	As	75	1.172	ug/L	0.022	1	266	2097	1
[	As-1	75	0.251	ug/L	0.041	16	8833	9732	0
[	Se	82	0.136	ug/L	0.037	27	-11	11	55
[	Se	78	-3.317	ug/L	0.188	5	8982	8146	1
[	Mo	98	0.431	ug/L	0.010	2	44	2559	1
	Y	89		ug/L			259459	291256	0
	Kr	83		ug/L			186	201	2
[>	In	115		ug/L			291463	296928	0
[	Ag	107	0.037	ug/L	0.001	3	50	407	2
[	Cd	111	0.255	ug/L	0.010	3	145	773	3
[	Cd	114	0.190	ug/L	0.009	4	15	1099	4
[	Sb	121	0.004	ug/L	0.001	23	111	150	6
[	Sb	123	0.004	ug/L	0.002	60	71	98	15
[	Ba	135	27.262	ug/L	0.268	0	36	55557	0
[	Ba	137	27.074	ug/L	0.157	0	56	95960	0
[>	Tb	159		ug/L			378929	384815	0
[	Tl	205	0.018	ug/L	0.000	2	111	615	2
[	Pb	208	10.211	ug/L	0.057	0	590	401256	0
[	Bi	209		ug/L			332212	335317	1
[	Th	232	0.232	ug/L	0.003	1	447	11286	2
[	U	238	0.064	ug/L	0.001	1	110	3393	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:42:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	386733	1
[	Be	9	0.052	ug/L	0.006	12	5	30	8
	C	13		mg/L			3727	5499	1
	Cl	37		mg/L			1848526	1938865	0
[>	Sc	45		ug/L			248909	266493	0
[	V	51	9.506	ug/L	0.029	0	1891	115225	0
[	V-1	51	9.522	ug/L	0.035	0	6386	121733	0
[	Cr	52	6.510	ug/L	0.136	2	5857	72856	1
[	Cr	53	6.687	ug/L	0.119	1	2099	10313	1
[	Mn	55	65.280	ug/L	0.252	0	454	1095003	0
[	Co	59	1.453	ug/L	0.023	1	53	18281	1
[>	Ge	72		ug/L			261757	277880	0
[	Ni	60	4.322	ug/L	0.096	2	45	11078	1
[	Ni	62	5.628	ug/L	0.152	2	101	2209	2
[	Cu	63	14.456	ug/L	0.282	1	292	80297	1
[	Cu	65	14.661	ug/L	0.026	0	105	37967	0
[	Zn	66	137.999	ug/L	0.804	0	401	227897	0
[	Zn	67	123.815	ug/L	1.695	1	193	34228	0
[	Zn	68	137.163	ug/L	0.626	0	6893	162517	0
[	As	75	1.331	ug/L	0.024	1	266	2351	1
[	As-1	75	0.423	ug/L	0.082	19	8833	10022	0
[	Se	82	0.062	ug/L	0.064	103	-11	-1	960
[	Se	78	-3.342	ug/L	0.220	6	8982	8159	0
[	Mo	98	0.484	ug/L	0.009	1	44	2873	1
	Y	89		ug/L			259459	295073	1
	Kr	83		ug/L			186	204	3
[>	In	115		ug/L			291463	298570	0
[	Ag	107	0.038	ug/L	0.002	5	50	421	5
[	Cd	111	0.261	ug/L	0.018	6	145	792	5
[	Cd	114	0.214	ug/L	0.004	1	15	1245	2
[	Sb	121	0.003	ug/L	0.001	46	111	137	8
[	Sb	123	0.007	ug/L	0.001	12	71	119	4
[	Ba	135	30.056	ug/L	0.237	0	36	61588	0
[	Ba	137	29.929	ug/L	0.120	0	56	106663	0
[>	Tb	159		ug/L			378929	388834	1
[	Tl	205	0.018	ug/L	0.000	2	111	630	3
[	Pb	208	10.421	ug/L	0.107	1	590	413742	0
[	Bi	209		ug/L			332212	341061	0
[	Th	232	0.244	ug/L	0.000	0	447	11972	1
[	U	238	0.076	ug/L	0.001	0	110	4024	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN27 ASPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:48:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	367401	1
[	Be	9	4.720	ug/L	0.159	3	5	2173	2
	C	13		mg/L			3727	4822	2
	Cl	37		mg/L			1848526	1944834	0
[>	Sc	45		ug/L			248909	257332	0
[	V	51	12.902	ug/L	0.111	0	1891	150315	0
[	V-1	51	12.943	ug/L	0.102	0	6386	157404	0
[	Cr	52	10.450	ug/L	0.036	0	5857	109260	0
[	Cr	53	10.683	ug/L	0.050	0	2099	14613	0
[	Mn	55	59.319	ug/L	0.818	1	454	960775	0
[	Co	59	5.942	ug/L	0.045	0	53	72035	0
[>	Ge	72		ug/L			261757	268280	0
[	Ni	60	8.655	ug/L	0.175	2	45	21371	1
[	Ni	62	9.816	ug/L	0.065	0	101	3642	1
[	Cu	63	17.757	ug/L	0.150	0	292	95161	0
[	Cu	65	17.985	ug/L	0.028	0	105	44941	0
[	Zn	66	189.444	ug/L	0.642	0	401	301896	0
[	Zn	67	188.886	ug/L	0.428	0	193	45005	0
[	Zn	68	186.582	ug/L	1.822	0	6893	210885	0
[	As	75	6.136	ug/L	0.047	0	266	9475	0
[	As-1	75	5.261	ug/L	0.180	3	8833	16791	0
[	Se	82	15.376	ug/L	0.178	1	-11	2566	1
[	Se	78	12.925	ug/L	0.377	2	8982	14342	0
[	Mo	98	4.768	ug/L	0.064	1	44	26925	0
	Y	89		ug/L			259459	282958	1
	Kr	83		ug/L			186	210	2
[>	In	115		ug/L			291463	288922	0
[	Ag	107	4.674	ug/L	0.037	0	50	43649	0
[	Cd	111	5.272	ug/L	0.023	0	145	12743	0
[	Cd	114	5.205	ug/L	0.066	1	15	28881	1
[	Sb	121	0.190	ug/L	0.005	2	111	1629	2
[	Sb	123	0.197	ug/L	0.007	3	71	1269	3
[	Ba	135	45.133	ug/L	0.454	1	36	89477	0
[	Ba	137	45.587	ug/L	0.105	0	56	157185	0
[>	Tb	159		ug/L			378929	373585	0
[	Tl	205	5.045	ug/L	0.008	0	111	137846	0
[	Pb	208	14.582	ug/L	0.128	0	590	556038	0
[	Bi	209		ug/L			332212	326482	0
[	Th	232	5.188	ug/L	0.013	0	447	235411	0
[	U	238	5.186	ug/L	0.054	1	110	257912	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 13:54:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	375884	1
[	Be	9	0.044	ug/L	0.019	42	5	26	33
	C	13		mg/L			3727	6084	1
	Cl	37		mg/L			1848526	1872098	0
[>	Sc	45		ug/L			248909	288526	0
[	V	51	0.271	ug/L	0.016	5	1891	5692	3
[	V-1	51	0.317	ug/L	0.023	7	6386	11540	2
[	Cr	52	3.664	ug/L	0.050	1	5857	47366	1
[	Cr	53	3.667	ug/L	0.080	2	2099	7222	1
[	Mn	55	798.117	ug/L	4.603	0	454	14488370	0
[	Co	59	4.452	ug/L	0.049	1	53	60529	1
[>	Ge	72		ug/L			261757	259233	0
[	Ni	60	13.985	ug/L	0.055	0	45	33343	0
[	Ni	62	13.915	ug/L	0.168	1	101	4947	1
[	Cu	63	2.323	ug/L	0.019	0	292	12282	0
[	Cu	65	2.366	ug/L	0.038	1	105	5802	1
[	Zn	66	12.678	ug/L	0.134	1	401	19892	0
[	Zn	67	12.428	ug/L	0.048	0	193	3377	0
[	Zn	68	12.648	ug/L	0.146	1	6893	20177	0
[	As	75	0.345	ug/L	0.019	5	266	764	4
[	As-1	75	-0.635	ug/L	0.052	8	8833	7846	0
[	Se	82	0.157	ug/L	0.053	33	-11	14	60
[	Se	78	-3.447	ug/L	0.193	5	8982	7571	0
[	Mo	98	0.712	ug/L	0.013	1	44	3921	2
	Y	89		ug/L			259459	256120	0
	Kr	83		ug/L			186	188	1
[>	In	115		ug/L			291463	287651	1
[	Ag	107	0.148	ug/L	0.003	2	50	1420	2
[	Cd	111	0.122	ug/L	0.005	3	145	432	2
[	Cd	114	0.115	ug/L	0.006	4	15	651	6
[	Sb	121	0.095	ug/L	0.004	3	111	868	4
[	Sb	123	0.096	ug/L	0.004	4	71	649	5
[	Ba	135	35.338	ug/L	0.918	2	36	69736	0
[	Ba	137	35.798	ug/L	0.968	2	56	122859	0
[>	Tb	159		ug/L			378929	374962	0
[	Tl	205	0.029	ug/L	0.002	6	111	898	6
[	Pb	208	0.166	ug/L	0.000	0	590	6914	0
[	Bi	209		ug/L			332212	319204	0
[	Th	232	0.026	ug/L	0.001	4	447	1636	3
[	U	238	0.020	ug/L	0.001	2	110	1116	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 BDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:00:30
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	371913	2
[	Be	9	0.015	ug/L	0.005	34	5	12	17
	C	13		mg/L			3727	6106	3
	Cl	37		mg/L			1848526	4032836	1
[>	Sc	45		ug/L			248909	255291	1
[	V	51	0.932	ug/L	0.023	2	1891	12567	2
[	V-1	51	1.495	ug/L	0.034	2	6386	23834	3
[	Cr	52	0.292	ug/L	0.021	7	5857	8866	3
[	Cr	53	2.121	ug/L	0.117	5	2099	4604	4
[	Mn	55	43.048	ug/L	0.796	1	454	691992	3
[	Co	59	0.369	ug/L	0.007	1	53	4494	2
[>	Ge	72		ug/L			261757	256042	1
[	Ni	60	1.410	ug/L	0.020	1	45	3360	0
[	Ni	62	2.658	ug/L	0.373	14	101	1015	14
[	Cu	63	5.428	ug/L	0.103	1	292	27958	0
[	Cu	65	4.359	ug/L	0.022	0	105	10474	1
[	Zn	66	26.745	ug/L	0.088	0	401	41014	1
[	Zn	67	23.676	ug/L	0.494	2	193	6185	3
[	Zn	68	25.958	ug/L	0.121	0	6893	33805	1
[	As	75	1.070	ug/L	0.016	1	266	1793	1
[	As-1	75	-0.039	ug/L	0.031	79	8833	8585	0
[	Se	82	1.159	ug/L	0.010	0	-11	174	1
[	Se	78	-2.853	ug/L	0.083	2	8982	7703	1
[	Mo	98	0.712	ug/L	0.007	0	44	3874	0
	Y	89		ug/L			259459	262253	1
	Kr	83		ug/L			186	194	3
[>	In	115		ug/L			291463	281332	2
[	Ag	107	0.007	ug/L	0.003	42	50	107	21
[	Cd	111	0.027	ug/L	0.028	105	145	202	32
[	Cd	114	0.089	ug/L	0.004	4	15	495	1
[	Sb	121	0.817	ug/L	0.004	0	111	6484	2
[	Sb	123	0.815	ug/L	0.022	2	71	4889	2
[	Ba	135	7.833	ug/L	0.157	2	36	15144	1
[	Ba	137	7.905	ug/L	0.202	2	56	26573	1
[>	Tb	159		ug/L			378929	374727	1
[	Tl	205	0.005	ug/L	0.002	31	111	245	15
[	Pb	208	0.955	ug/L	0.010	1	590	37066	1
[	Bi	209		ug/L			332212	302909	1
[	Th	232	0.006	ug/L	0.001	20	447	709	8
[	U	238	0.052	ug/L	0.001	1	110	2708	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:06:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			374583	407857	1
	Be	9	0.006	ug/L	0.009	134	5	9	47
	C	13		mg/L			3727	5720	0
	Cl	37		mg/L			1848526	3806759	1
>	Sc	45		ug/L			248909	262717	1
	V	51	0.917	ug/L	0.026	2	1891	12759	1
	V-1	51	1.508	ug/L	0.063	4	6386	24669	1
	Cr	52	0.331	ug/L	0.017	5	5857	9516	2
	Cr	53	2.245	ug/L	0.171	7	2099	4884	3
	Mn	55	42.537	ug/L	0.354	0	454	703515	0
	Co	59	0.361	ug/L	0.011	3	53	4523	1
>	Ge	72		ug/L			261757	257520	0
	Ni	60	1.456	ug/L	0.030	2	45	3488	1
	Ni	62	2.687	ug/L	0.300	11	101	1030	10
	Cu	63	5.357	ug/L	0.014	0	292	27760	0
	Cu	65	4.245	ug/L	0.012	0	105	10262	0
	Zn	66	21.417	ug/L	0.076	0	401	33111	0
	Zn	67	18.870	ug/L	0.102	0	193	4996	1
	Zn	68	20.795	ug/L	0.171	0	6893	28586	0
	As	75	1.121	ug/L	0.032	2	266	1876	3
	As-1	75	0.176	ug/L	0.096	54	8833	8939	1
	Se	82	1.525	ug/L	0.130	8	-11	234	9
	Se	78	-1.908	ug/L	0.401	21	8982	8108	1
	Mo	98	0.740	ug/L	0.002	0	44	4050	1
	Y	89		ug/L			259459	278296	0
	Kr	83		ug/L			186	187	3
>	In	115		ug/L			291463	299657	0
	Ag	107	0.001	ug/L	0.001	99	50	64	19
	Cd	111	-0.002	ug/L	0.040	1870	145	144	70
	Cd	114	0.079	ug/L	0.003	3	15	470	4
	Sb	121	0.589	ug/L	0.005	0	111	5006	0
	Sb	123	0.580	ug/L	0.001	0	71	3732	0
	Ba	135	7.497	ug/L	0.084	1	36	15447	1
	Ba	137	7.490	ug/L	0.069	0	56	26833	1
>	Tb	159		ug/L			378929	393794	0
	Tl	205	0.002	ug/L	0.000	24	111	166	7
	Pb	208	0.824	ug/L	0.003	0	590	33698	1
	Bi	209		ug/L			332212	318646	1
	Th	232	0.009	ug/L	0.001	8	447	896	4
	U	238	0.050	ug/L	0.000	0	110	2744	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 BSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:12:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	379283	2
[	Be	9	21.880	ug/L	0.070	0	5	10385	2
	C	13		mg/L			3727	5678	0
	Cl	37		mg/L			1848526	3723859	0
[>	Sc	45		ug/L			248909	256466	2
[	V	51	24.106	ug/L	0.222	0	1891	278231	3
[	V-1	51	24.706	ug/L	0.182	0	6386	293499	2
[	Cr	52	22.721	ug/L	0.160	0	5857	229653	2
[	Cr	53	24.701	ug/L	0.266	1	2099	30833	2
[	Mn	55	65.265	ug/L	0.333	0	454	1053598	2
[	Co	59	22.607	ug/L	0.084	0	53	272982	2
[>	Ge	72		ug/L			261757	243100	1
[	Ni	60	25.837	ug/L	0.159	0	45	57735	2
[	Ni	62	27.566	ug/L	0.540	1	101	9099	3
[	Cu	63	29.216	ug/L	0.293	1	292	141711	2
[	Cu	65	28.185	ug/L	0.075	0	105	63765	2
[	Zn	66	94.619	ug/L	0.747	0	401	136833	2
[	Zn	67	87.455	ug/L	0.802	0	193	21202	1
[	Zn	68	93.782	ug/L	0.343	0	6893	99238	2
[	As	75	27.616	ug/L	0.169	0	266	37778	1
[	As-1	75	25.377	ug/L	0.340	1	8833	42023	1
[	Se	82	82.952	ug/L	0.509	0	-11	12592	2
[	Se	78	78.717	ug/L	0.478	0	8982	36692	1
[	Mo	98	27.922	ug/L	0.372	1	44	142679	2
	Y	89		ug/L			259459	262551	2
	Kr	83		ug/L			186	189	5
[>	In	115		ug/L			291463	278885	1
[	Ag	107	22.616	ug/L	0.328	1	50	203717	2
[	Cd	111	23.633	ug/L	0.135	0	145	54656	1
[	Cd	114	23.777	ug/L	0.278	1	15	127308	2
[	Sb	121	25.005	ug/L	0.146	0	111	193503	1
[	Sb	123	24.999	ug/L	0.164	0	71	146782	1
[	Ba	135	32.359	ug/L	0.544	1	36	61942	2
[	Ba	137	32.533	ug/L	0.301	0	56	108297	2
[>	Tb	159		ug/L			378929	370397	2
[	Tl	205	24.298	ug/L	0.063	0	111	657862	2
[	Pb	208	25.292	ug/L	0.084	0	590	955858	2
[	Bi	209		ug/L			332212	302242	2
[	Th	232	22.356	ug/L	0.143	0	447	1004306	2
[	U	238	26.875	ug/L	0.385	1	110	1324795	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WN31 BPOST REN~~ 222222
Sample Dil Factor: 2
Comments: ~~4~~ 4-3043
Sample Date/Time: Tuesday, April 30, 2013 14:18:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	351659	4
[	Be	9	22.263	ug/L	0.365	1	5	9795	4
	C	13		mg/L			3727	5671	0
	Cl	37		mg/L			1848526	3625722	0
[>	Sc	45		ug/L			248909	228349	3
[	V	51	25.282	ug/L	0.194	0	1891	259759	3
[	V-1	51	26.112	ug/L	0.154	0	6386	275875	3
[	Cr	52	24.311	ug/L	0.240	0	5857	218470	4
[	Cr	53	27.007	ug/L	0.122	0	2099	29841	3
[	Mn	55	66.325	ug/L	0.437	0	454	953407	3
[	Co	59	23.959	ug/L	0.238	0	53	257633	4
[>	Ge	72		ug/L			261757	224786	3
[	Ni	60	26.403	ug/L	0.159	0	45	54557	4
[	Ni	62	28.913	ug/L	0.328	1	101	8817	2
[	Cu	63	29.730	ug/L	0.173	0	292	133335	3
[	Cu	65	28.893	ug/L	0.204	0	105	60443	3
[	Zn	66	96.665	ug/L	0.860	0	401	129257	4
[	Zn	67	89.319	ug/L	0.857	0	193	20025	4
[	Zn	68	95.887	ug/L	0.291	0	6893	93688	3
[	As	75	28.109	ug/L	0.447	1	266	35567	4
[	As-1	75	26.266	ug/L	0.138	0	8833	39959	3
[	Se	82	83.313	ug/L	1.375	1	-11	11697	4
[	Se	78	80.651	ug/L	0.814	1	8982	34569	3
[	Mo	98	27.758	ug/L	0.222	0	44	131181	4
	Y	89		ug/L			259459	236954	4
	Kr	83		ug/L			186	191	5
[>	In	115		ug/L			291463	255961	4
[	Ag	107	23.203	ug/L	0.149	0	50	191814	4
[	Cd	111	23.884	ug/L	0.359	1	145	50715	5
[	Cd	114	23.941	ug/L	0.140	0	15	117629	3
[	Sb	121	25.378	ug/L	0.211	0	111	180263	4
[	Sb	123	25.313	ug/L	0.122	0	71	136403	3
[	Ba	135	33.130	ug/L	0.200	0	36	58188	3
[	Ba	137	33.010	ug/L	0.270	0	56	100868	4
[>	Tb	159		ug/L			378929	341003	4
[	Tl	205	24.890	ug/L	0.216	0	111	620258	3
[	Pb	208	25.856	ug/L	0.064	0	590	899618	4
[	Bi	209		ug/L			332212	276261	4
[	Th	232	26.522	ug/L	0.279	1	447	1096864	4
[	U	238	27.044	ug/L	0.212	0	110	1227208	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:24:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			374583	359701	2
⌊	Be	9	23.032	ug/L	0.388	1	5	10366	1
	C	13		mg/L			3727	4791	1
	Cl	37		mg/L			1848526	1849042	0
⌈>	Sc	45		ug/L			248909	228787	0
|	V	51	24.732	ug/L	0.329	1	1891	254587	1
|	V-1	51	24.836	ug/L	0.285	1	6386	263147	0
|	Cr	52	24.861	ug/L	0.137	0	5857	223677	0
|	Cr	53	25.188	ug/L	0.142	0	2099	28012	0
|	Mn	55	25.123	ug/L	0.467	1	454	362050	1
⌊	Co	59	24.763	ug/L	0.057	0	53	266740	0
⌈>	Ge	72		ug/L			261757	239275	0
|	Ni	60	25.432	ug/L	0.265	1	45	55932	0
|	Ni	62	26.847	ug/L	0.435	1	101	8723	1
|	Cu	63	26.167	ug/L	0.143	0	292	124947	0
|	Cu	65	25.995	ug/L	0.171	0	105	57891	0
|	Zn	66	80.081	ug/L	0.316	0	401	114030	0
|	Zn	67	73.420	ug/L	0.860	1	193	17549	1
|	Zn	68	79.399	ug/L	0.706	0	6893	83663	1
|	As	75	26.187	ug/L	0.360	1	266	35274	1
|	As-1	75	24.240	ug/L	0.075	0	8833	39875	0
|	Se	82	81.077	ug/L	0.952	1	-11	12112	0
|	Se	78	77.880	ug/L	0.527	0	8982	35818	0
⌊	Mo	98	25.709	ug/L	0.260	1	44	129308	1
	Y	89		ug/L			259459	237540	0
	Kr	83		ug/L			186	185	2
⌈>	In	115		ug/L			291463	272474	0
|	Ag	107	25.091	ug/L	0.343	1	50	220770	1
|	Cd	111	24.935	ug/L	0.529	2	145	56331	1
|	Cd	114	24.928	ug/L	0.159	0	15	130394	0
|	Sb	121	24.928	ug/L	0.229	0	111	188463	0
|	Sb	123	24.782	ug/L	0.137	0	71	142160	0
|	Ba	135	24.762	ug/L	0.121	0	36	46311	0
⌊	Ba	137	24.740	ug/L	0.195	0	56	80468	0
⌈>	Tb	159		ug/L			378929	351504	0
|	Tl	205	26.246	ug/L	0.149	0	111	674338	0
|	Pb	208	26.417	ug/L	0.053	0	590	947396	0
|	Bi	209		ug/L			332212	314952	0
|	Th	232	24.390	ug/L	0.173	0	447	1039680	0
⌊	U	238	27.327	ug/L	0.050	0	110	1278218	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:30:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			374583	331418	0
⌊	Be	9	49.501	ug/L	1.768	3	5	20522	2
	C	13		mg/L			3727	4147	0
	Cl	37		mg/L			1848526	1908669	1
⌈>	Sc	45		ug/L			248909	230940	2
|	V	51	49.645	ug/L	0.105	0	1891	514065	2
|	V-1	51	49.762	ug/L	0.174	0	6386	526248	1
|	Cr	52	50.170	ug/L	0.538	1	5857	450140	2
|	Cr	53	50.525	ug/L	0.321	0	2099	54762	2
|	Mn	55	50.233	ug/L	0.393	0	454	730211	1
⌊	Co	59	49.671	ug/L	0.299	0	53	540059	2
⌈>	Ge	72		ug/L			261757	241738	2
|	Ni	60	50.630	ug/L	0.460	0	45	112462	2
|	Ni	62	51.350	ug/L	0.697	1	101	16771	1
|	Cu	63	50.068	ug/L	0.345	0	292	241302	2
|	Cu	65	50.063	ug/L	0.355	0	105	112559	2
|	Zn	66	51.471	ug/L	0.454	0	401	74180	2
|	Zn	67	51.455	ug/L	0.882	1	193	12478	2
|	Zn	68	51.100	ug/L	1.139	2	6893	56658	2
|	As	75	50.515	ug/L	0.195	0	266	68519	2
|	As-1	75	49.983	ug/L	0.323	0	8833	74409	2
|	Se	82	51.984	ug/L	0.532	1	-11	7841	1
|	Se	78	50.171	ug/L	0.824	1	8982	26263	2
⌊	Mo	98	50.732	ug/L	0.169	0	44	257759	2
	Y	89		ug/L			259459	235212	1
	Kr	83		ug/L			186	188	5
⌈>	In	115		ug/L			291463	269964	2
|	Ag	107	49.963	ug/L	0.676	1	50	435620	3
|	Cd	111	50.526	ug/L	0.238	0	145	112956	2
|	Cd	114	50.315	ug/L	0.603	1	15	260692	1
|	Sb	121	49.660	ug/L	0.586	1	111	371822	1
|	Sb	123	49.617	ug/L	0.570	1	71	281886	1
|	Ba	135	49.501	ug/L	0.199	0	36	91690	2
⌊	Ba	137	50.105	ug/L	1.094	2	56	161362	0
⌈>	Tb	159		ug/L			378929	348710	1
|	Tl	205	52.162	ug/L	0.285	0	111	1329404	1
|	Pb	208	51.713	ug/L	0.198	0	590	1839219	1
|	Bi	209		ug/L			332212	304546	1
|	Th	232	52.180	ug/L	0.138	0	447	2206098	1
⌊	U	238	52.920	ug/L	0.387	0	110	2455635	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:36:40
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013c.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6	-	ug/L			374583	316540	1
[	Be	9	0.012	ug/L	0.010	87	5	9	43
	C	13		mg/L			3727	3636	2
	Cl	37		mg/L			1848526	2144673	0
[>	Sc	45		ug/L			248909	239174	1
[	V	51	0.004	ug/L	0.039	914	1891	1860	21
[	V-1	51	0.091	ug/L	0.031	34	6386	7117	3
[	Cr	52	-0.044	ug/L	0.004	8	5857	5226	0
[	Cr	53	0.235	ug/L	0.056	23	2099	2271	2
[	Mn	55	-0.002	ug/L	0.002	116	454	406	8
[	Co	59	-0.001	ug/L	0.000	29	53	43	4
[>	Ge	72		ug/L			261757	254415	0
[	Ni	60	0.001	ug/L	0.005	652	45	46	24
[	Ni	62	0.701	ug/L	0.105	14	101	338	10
[	Cu	63	0.026	ug/L	0.003	12	292	416	3
[	Cu	65	0.010	ug/L	0.008	80	105	125	14
[	Zn	66	0.020	ug/L	0.007	34	401	420	2
[	Zn	67	0.131	ug/L	0.062	47	193	220	7
[	Zn	68	-0.423	ug/L	0.062	14	6893	6261	0
[	As	75	0.067	ug/L	0.010	14	266	354	3
[	As-1	75	0.782	ug/L	0.036	4	8833	7495	0
[	Se	82	0.011	ug/L	0.051	446	-11	-9	89
[	Se	78	2.959	ug/L	0.181	6	8982	7615	1
[	Mo	98	0.005	ug/L	0.004	74	44	71	29
	Y	89		ug/L			259459	241753	0
	Kr	83		ug/L			186	205	1
[>	In	115		ug/L			291463	280966	0
[	Ag	107	0.004	ug/L	0.002	35	50	87	15
[	Cd	111	0.012	ug/L	0.001	5	145	168	1
[	Cd	114	0.002	ug/L	0.002	107	15	24	39
[	Sb	121	0.019	ug/L	0.004	23	111	254	13
[	Sb	123	0.020	ug/L	0.009	46	71	188	29
[	Ba	135	-0.002	ug/L	0.005	241	36	31	28
[	Ba	137	0.001	ug/L	0.004	375	56	58	23
[>	Tb	159		ug/L			378929	355066	0
[	Tl	205	0.010	ug/L	0.002	16	111	365	11
[	Pb	208	0.004	ug/L	0.000	6	590	697	1
[	Bi	209		ug/L			332212	315710	0
[	Th	232	0.027	ug/L	0.009	31	447	1584	23
[	U	238	0.002	ug/L	0.002	82	110	191	37

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB3 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:53:14
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			374583	375350	1
	Be	9	U 0.001	ug/L	0.003	356	5	5	24
	C	13		mg/L			3727	5203	1
	Cl	37		mg/L			1848526	1883943	1
>	Sc	45		ug/L			248909	180528	0
	V	51	0.072	ug/L	0.007	9	1891	1954	3
	V-1	51	0.102	ug/L	0.018	17	6386	5466	2
	Cr	52	0.310	ug/L	0.014	4	5857	6397	1
	Cr	53	U 0.396	ug/L	0.075	18	2099	1846	3
	Mn	55	0.021	ug/L	0.003	12	454	572	5
	Co	59	-0.000	ug/L	0.000	376	53	37	10
>	Ge	72		ug/L			261757	258099	0
	Ni	60	U 0.001	ug/L	0.004	495	45	47	19
	Ni	62	0.252	ug/L	0.031	12	101	187	5
	Cu	63	0.010	ug/L	0.007	69	292	337	10
	Cu	65	U 0.012	ug/L	0.005	44	105	133	9
	Zn	66	0.265	ug/L	0.021	7	401	801	4
	Zn	67	U 0.231	ug/L	0.092	39	193	249	9
	Zn	68	0.067	ug/L	0.059	88	6893	6867	0
	As	75	U 0.015	ug/L	0.031	206	266	284	15
	As-1	75	-0.374	ug/L	0.007	1	8833	8181	0
	Se	82	0.013	ug/L	0.029	224	-11	-8	51
	Se	78	U -1.429	ug/L	0.054	3	8982	8310	0
	Mo	98	0.002	ug/L	0.002	154	44	52	25
	Y	89		ug/L			259459	262260	0
	Kr	83		ug/L			186	183	5
>	In	115		ug/L			291463	298589	0
	Ag	107	U -0.002	ug/L	0.000	18	50	29	13
	Cd	111	0.005	ug/L	0.001	11	145	159	1
	Cd	114	U -0.000	ug/L	0.000	218	15	15	4
	Sb	121	-0.004	ug/L	0.002	60	111	82	22
	Sb	123	U -0.003	ug/L	0.001	33	71	55	10
	Ba	135	0.012	ug/L	0.002	21	36	61	8
	Ba	137	0.010	ug/L	0.004	37	56	93	13
>	Tb	159		ug/L			378929	380959	0
	Tl	205	U 0.002	ug/L	0.001	45	111	158	13
	Pb	208	U -0.000	ug/L	0.001	1087	590	589	8
	Bi	209		ug/L			332212	338958	0
	Th	232	0.002	ug/L	0.000	18	447	559	4
	U	238	-0.001	ug/L	0.000	9	110	49	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 14:59:12
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	378787	1
[	Be	9	0.086	ug/L	0.012	14	5	46	14
	C	13		mg/L			3727	16891	2
	Cl	37		mg/L			1848526	1893135	0
[>	Sc	45		ug/L			248909	270224	1
[	V	51	22.847	ug/L	0.141	0	1891	277936	1
[	V-1	51	22.933	ug/L	0.200	0	6386	287511	0
[	Cr	52	31.666	ug/L	0.170	0	5857	334771	1
[	Cr	53	31.571	ug/L	0.231	0	2099	40891	0
[	Mn	55	180.789	ug/L	1.684	0	454	3074049	1
[	Co	59	4.027	ug/L	0.035	0	53	51283	1
[>	Ge	72		ug/L			261757	266184	0
[	Ni	60	19.285	ug/L	0.057	0	45	47195	0
[	Ni	62	22.897	ug/L	0.231	1	101	8292	1
[	Cu	63	77.745	ug/L	0.267	0	292	412395	0
[	Cu	65	77.629	ug/L	0.749	0	105	192115	1
[	Zn	66	431.062	ug/L	2.981	0	401	681055	0
[	Zn	67	383.252	ug/L	1.462	0	193	101083	0
[	Zn	68	426.530	ug/L	1.698	0	6893	469319	0
[	As	75	2.986	ug/L	0.012	0	266	4714	0
[	As-1	75	2.386	ug/L	0.049	2	8833	12464	0
[	Se	82	0.275	ug/L	0.039	14	-11	34	18
[	Se	78	-2.041	ug/L	0.181	8	8982	8329	0
[	Mo	98	5.141	ug/L	0.091	1	44	28801	2
	Y	89		ug/L			259459	334341	0
	Kr	83		ug/L			186	204	1
[>	In	115		ug/L			291463	299052	0
[	Ag	107	0.194	ug/L	0.006	3	50	1922	2
[	Cd	111	1.886	ug/L	0.027	1	145	4813	1
[	Cd	114	1.683	ug/L	0.017	1	15	9677	1
[	Sb	121	0.235	ug/L	0.002	0	111	2059	0
[	Sb	123	0.242	ug/L	0.010	4	71	1592	3
[	Ba	135	220.486	ug/L	1.576	0	36	452302	0
[	Ba	137	219.840	ug/L	2.114	0	56	784371	1
[>	Tb	159		ug/L			378929	386492	1
[	Tl	205	0.063	ug/L	0.001	2	111	1900	0
[	Pb	208	36.501	ug/L	0.482	1	590	1438937	0
[	Bi	209		ug/L			332212	353306	0
[	Th	232	0.685	ug/L	0.007	1	447	32567	1
[	U	238	0.213	ug/L	0.001	0	110	11085	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:05:11
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	388962	0
[	Be	9	0.090	ug/L	0.006	7	5	49	6
	C	13		mg/L			3727	18212	1
	Cl	37		mg/L			1848526	1868424	0
[>	Sc	45		ug/L			248909	277411	0
[	V	51	22.529	ug/L	0.268	1	1891	281369	0
[	V-1	51	22.499	ug/L	0.220	0	6386	289710	0
[	Cr	52	30.949	ug/L	0.189	0	5857	336023	0
[	Cr	53	30.501	ug/L	0.120	0	2099	40638	0
[	Mn	55	178.351	ug/L	1.434	0	454	3113245	0
[	Co	59	3.908	ug/L	0.034	0	53	51097	0
[>	Ge	72		ug/L			261757	273100	0
[	Ni	60	18.836	ug/L	0.370	1	45	47291	1
[	Ni	62	21.826	ug/L	0.288	1	101	8115	1
[	Cu	63	68.921	ug/L	1.130	1	292	375088	0
[	Cu	65	69.421	ug/L	0.485	0	105	176268	0
[	Zn	66	408.401	ug/L	3.482	0	401	662026	0
[	Zn	67	370.534	ug/L	3.234	0	193	100269	0
[	Zn	68	409.854	ug/L	4.073	0	6893	462946	0
[	As	75	3.012	ug/L	0.065	2	266	4877	1
[	As-1	75	2.231	ug/L	0.096	4	8833	12557	0
[	Se	82	0.206	ug/L	0.129	62	-11	23	94
[	Se	78	-2.757	ug/L	0.180	6	8982	8255	0
[	Mo	98	5.201	ug/L	0.100	1	44	29897	2
	Y	89		ug/L			259459	339098	1
	Kr	83		ug/L			186	214	4
[>	In	115		ug/L			291463	303803	2
[	Ag	107	0.246	ug/L	0.007	2	50	2460	0
[	Cd	111	1.145	ug/L	0.031	2	145	3029	3
[	Cd	114	0.950	ug/L	0.019	1	15	5556	0
[	Sb	121	0.248	ug/L	0.000	0	111	2206	2
[	Sb	123	0.257	ug/L	0.006	2	71	1717	3
[	Ba	135	214.525	ug/L	2.331	1	36	447027	1
[	Ba	137	214.200	ug/L	2.257	1	56	776274	1
[>	Tb	159		ug/L			378929	394692	1
[	Tl	205	0.061	ug/L	0.000	0	111	1878	1
[	Pb	208	36.249	ug/L	0.255	0	590	1459456	1
[	Bi	209		ug/L			332212	362360	0
[	Th	232	0.596	ug/L	0.015	2	447	28955	2
[	U	238	0.221	ug/L	0.003	1	110	11720	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:11:10
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			374583	376411	1
⌊	Be	9	21.254	ug/L	0.726	3	5	10009	2
	C	13		mg/L			3727	15190	1
	Cl	37		mg/L			1848526	1828126	0
⌈>	Sc	45		ug/L			248909	262749	0
|	V	51	43.936	ug/L	0.126	0	1891	517860	0
|	V-1	51	43.883	ug/L	0.107	0	6386	528812	0
|	Cr	52	52.552	ug/L	0.434	0	5857	536105	0
|	Cr	53	52.021	ug/L	0.366	0	2099	64082	0
|	Mn	55	205.491	ug/L	0.524	0	454	3397425	0
⌊	Co	59	25.127	ug/L	0.201	0	53	310825	0
⌈>	Ge	72		ug/L			261757	259594	0
|	Ni	60	41.940	ug/L	0.220	0	45	100041	0
|	Ni	62	45.215	ug/L	0.150	0	101	15871	0
|	Cu	63	97.025	ug/L	1.239	1	292	501851	1
|	Cu	65	97.914	ug/L	0.602	0	105	236290	0
|	Zn	66	483.786	ug/L	4.837	0	401	745378	0
|	Zn	67	435.815	ug/L	1.082	0	193	112074	0
|	Zn	68	481.081	ug/L	2.375	0	6893	515365	0
|	As	75	27.011	ug/L	0.058	0	266	39465	0
|	As-1	75	25.218	ug/L	0.137	0	8833	44653	0
|	Se	82	76.148	ug/L	0.403	0	-11	12342	0
|	Se	78	73.121	ug/L	0.202	0	8982	37029	0
⌊	Mo	98	27.011	ug/L	0.078	0	44	147394	0
	Y	89		ug/L			259459	322749	1
	Kr	83		ug/L			186	202	6
⌈>	In	115		ug/L			291463	288628	0
|	Ag	107	21.507	ug/L	0.085	0	50	200470	0
|	Cd	111	24.368	ug/L	0.254	1	145	58321	0
|	Cd	114	23.934	ug/L	0.132	0	15	132616	0
|	Sb	121	2.571	ug/L	0.015	0	111	20685	0
|	Sb	123	2.580	ug/L	0.011	0	71	15742	0
|	Ba	136	242.974	ug/L	1.933	0	36	481056	0
⌊	Ba	137	243.593	ug/L	0.810	0	56	838818	0
⌈>	Tb	159		ug/L			378929	378057	0
|	Tl	205	22.958	ug/L	0.094	0	111	634423	0
|	Pb	208	59.779	ug/L	0.715	1	590	2304890	0
|	Bi	209		ug/L			332212	345590	0
|	Th	232	21.890	ug/L	0.195	0	447	1003627	0
⌊	U	238	24.227	ug/L	0.385	1	110	1218726	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:17:07
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	364565	1
[	Be	9	23.543	ug/L	0.201	0	5	10741	1
	C	13		mg/L			3727	17924	1
	Cl	37		mg/L			1848526	1821976	0
[>	Sc	45		ug/L			248909	256149	0
[	V	51	46.162	ug/L	0.385	0	1891	530300	0
[	V-1	51	46.195	ug/L	0.326	0	6386	542328	0
[	Cr	52	55.114	ug/L	0.610	1	5857	547805	0
[	Cr	53	54.847	ug/L	0.366	0	2099	65748	0
[	Mn	55	206.044	ug/L	2.594	1	454	3320837	0
[	Co	59	27.298	ug/L	0.154	0	53	329203	0
[>	Ge	72		ug/L			261757	250838	0
[	Ni	60	45.237	ug/L	0.351	0	45	104261	0
[	Ni	62	48.540	ug/L	1.105	2	101	16455	1
[	Cu	63	96.642	ug/L	1.436	1	292	482981	0
[	Cu	65	97.950	ug/L	0.629	0	105	228398	0
[	Zn	66	508.361	ug/L	3.923	0	401	756787	0
[	Zn	67	458.776	ug/L	3.244	0	193	113989	0
[	Zn	68	508.010	ug/L	4.393	0	6893	525468	0
[	As	75	30.144	ug/L	0.056	0	266	42528	0
[	As-1	75	28.280	ug/L	0.133	0	8833	47360	1
[	Se	82	85.660	ug/L	0.499	0	-11	13416	0
[	Se	78	82.913	ug/L	0.151	0	8982	39420	0
[	Mo	98	31.130	ug/L	0.162	0	44	164131	0
	Y	89		ug/L			259459	313788	0
	Kr	83		ug/L			186	209	1
[>	In	115		ug/L			291463	279330	0
[	Ag	107	25.399	ug/L	0.297	1	50	229099	0
[	Cd	111	26.307	ug/L	0.324	1	145	60920	0
[	Cd	114	25.799	ug/L	0.110	0	15	138340	0
[	Sb	121	25.133	ug/L	0.267	1	111	194790	0
[	Sb	123	25.193	ug/L	0.267	1	71	148147	0
[	Ba	135	244.961	ug/L	3.870	1	36	469332	0
[	Ba	137	246.791	ug/L	2.163	0	56	822420	0
[>	Tb	159		ug/L			378929	366701	0
[	Tl	205	25.904	ug/L	0.138	0	111	694335	0
[	Pb	208	63.047	ug/L	0.026	0	590	2357981	0
[	Bi	209		ug/L			332212	335895	0
[	Th	232	26.582	ug/L	0.165	0	447	1182047	0
[	U	238	26.591	ug/L	0.310	1	110	1297511	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:23:04
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	339667	0
[	Be	9	0.002	ug/L	0.003	151	5	5	24
	C	13		mg/L			3727	5788	0
	Cl	37		mg/L			1848526	3789838	0
[>	Sc	45		ug/L			248909	231441	1
[	V	51	0.691	ug/L	0.007	1	1891	8904	2
[	V-1	51	1.170	ug/L	0.044	3	6386	18197	0
[	Cr	52	0.216	ug/L	0.021	9	5857	7359	1
[	Cr	53	1.769	ug/L	0.165	9	2099	3803	2
[	Mn	55	42.660	ug/L	0.072	0	454	621589	1
[	Co	59	0.362	ug/L	0.014	3	53	3995	5
[>	Ge	72		ug/L			261757	236689	2
[	Ni	60	1.250	ug/L	0.018	1	45	2758	1
[	Ni	62	2.619	ug/L	0.185	7	101	924	5
[	Cu	63	3.749	ug/L	0.046	1	292	17936	3
[	Cu	65	2.669	ug/L	0.061	2	105	5964	1
[	Zn	66	14.126	ug/L	0.167	1	401	20198	3
[	Zn	67	12.259	ug/L	0.240	1	193	3044	2
[	Zn	68	13.868	ug/L	0.419	3	6893	19593	0
[	As	75	0.782	ug/L	0.052	6	266	1274	3
[	As-1	75	0.198	ug/L	0.067	33	8833	8244	1
[	Se	82	1.185	ug/L	0.150	12	-11	164	12
[	Se	78	-0.665	ug/L	0.229	34	8982	7888	1
[	Mo	98	0.669	ug/L	0.009	1	44	3366	3
	Y	89		ug/L			259459	244400	1
	Kr	83		ug/L			186	206	5
[>	In	115		ug/L			291463	261237	2
[	Ag	107	0.004	ug/L	0.003	65	50	79	29
[	Cd	111	-0.026	ug/L	0.017	63	145	72	46
[	Cd	114	0.029	ug/L	0.005	16	15	158	16
[	Sb	121	0.592	ug/L	0.008	1	111	4386	3
[	Sb	123	0.603	ug/L	0.010	1	71	3375	2
[	Ba	135	6.871	ug/L	0.049	0	36	12345	3
[	Ba	137	6.858	ug/L	0.049	0	56	21422	2
[>	Tb	159		ug/L			378929	350687	2
[	Tl	205	0.006	ug/L	0.000	5	111	244	5
[	Pb	208	0.488	ug/L	0.002	0	590	17991	2
[	Bi	209		ug/L			332212	282278	1
[	Th	232	0.029	ug/L	0.008	28	447	1656	24
[	U	238	0.042	ug/L	0.001	1	110	2079	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:29:01
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	337799	0
[	Be	9	0.013	ug/L	0.004	33	5	10	18
	C	13		mg/L			3727	5715	4
	Cl	37		mg/L			1848526	3740005	0
[>	Sc	45		ug/L			248909	230116	0
[	V	51	0.645	ug/L	0.011	1	1891	8376	0
[	V-1	51	1.199	ug/L	0.050	4	6386	18398	3
[	Cr	52	0.230	ug/L	0.010	4	5857	7446	0
[	Cr	53	2.021	ug/L	0.185	9	2099	4046	5
[	Mn	55	41.019	ug/L	0.614	1	454	594289	1
[	Co	59	0.369	ug/L	0.007	1	53	4046	2
[>	Ge	72		ug/L			261757	232506	0
[	Ni	60	1.227	ug/L	0.035	2	45	2661	3
[	Ni	62	2.380	ug/L	0.144	6	101	833	5
[	Cu	63	3.677	ug/L	0.043	1	292	17283	0
[	Cu	65	2.663	ug/L	0.002	0	105	5846	0
[	Zn	66	13.857	ug/L	0.189	1	401	19468	1
[	Zn	67	12.336	ug/L	0.304	2	193	3008	2
[	Zn	68	13.746	ug/L	0.312	2	6893	19135	1
[	As	75	0.829	ug/L	0.005	0	266	1314	0
[	As-1	75	0.202	ug/L	0.042	20	8833	8103	0
[	Se	82	1.281	ug/L	0.095	7	-11	176	7
[	Se	78	-0.744	ug/L	0.141	18	8982	7722	0
[	Mo	98	0.662	ug/L	0.017	2	44	3276	3
	Y	89		ug/L			259459	239494	0
	Kr	83		ug/L			186	201	8
[>	In	115		ug/L			291463	254648	0
[	Ag	107	0.006	ug/L	0.002	30	50	90	15
[	Cd	111	-0.036	ug/L	0.011	29	145	49	45
[	Cd	114	0.032	ug/L	0.004	12	15	168	11
[	Sb	121	0.575	ug/L	0.008	1	111	4158	1
[	Sb	123	0.570	ug/L	0.013	2	71	3117	1
[	Ba	135	6.828	ug/L	0.054	0	36	11958	1
[	Ba	137	6.726	ug/L	0.066	0	56	20480	0
[>	Tb	159		ug/L			378929	342204	0
[	Tl	205	0.004	ug/L	0.000	6	111	197	3
[	Pb	208	0.480	ug/L	0.003	0	590	17291	1
[	Bi	209		ug/L			332212	278027	0
[	Th	232	0.011	ug/L	0.002	22	447	857	12
[	U	238	0.041	ug/L	0.000	0	110	1959	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:34:57
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

RR As, Se

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	304916	2
[	Be	9	22.865	ug/L	0.281	1	5	8726	3
	C	13		mg/L			3727	5628	1
	Cl	37		mg/L			1848526	3624265	1
[>	Sc	45		ug/L			248909	210367	2
[	V	51	24.497	ug/L	0.216	0	1891	231849	2
[	V-1	51	25.288	ug/L	0.208	0	6386	246251	2
[	Cr	52	23.352	ug/L	0.254	1	5857	193480	3
[	Cr	53	25.929	ug/L	0.594	2	2099	26469	4
[	Mn	55	65.606	ug/L	1.053	1	454	868694	3
[	Co	59	22.879	ug/L	0.304	1	53	226574	2
[>	Ge	72		ug/L			261757	210408	2
[	Ni	60	24.852	ug/L	0.242	0	45	48071	3
[	Ni	62	27.277	ug/L	0.387	1	101	7794	3
[	Cu	63	27.255	ug/L	0.170	0	292	114422	2
[	Cu	65	26.257	ug/L	0.107	0	105	51418	2
[	Zn	66	87.238	ug/L	0.369	0	401	109200	2
[	Zn	67	80.141	ug/L	1.069	1	193	16831	2
[	Zn	68	86.506	ug/L	1.177	1	6893	79650	2
[	As	75	26.510	ug/L	0.192	0	266	31396	2
[	As-1	75	25.070	ug/L	0.309	1	8833	36016	1
[	Se	82	77.792	ug/L	0.539	0	-11	10220	3
[	Se	78	76.547	ug/L	0.480	0	8982	31081	2
[	Mo	98	26.675	ug/L	0.115	0	44	117984	2
	Y	89		ug/L			259459	213641	3
	Kr	83		ug/L			186	205	3
[>	In	115		ug/L			291463	229941	3
[	Ag	107	22.930	ug/L	0.323	1	50	170224	1
[	Cd	111	23.302	ug/L	0.176	0	145	44438	3
[	Cd	114	23.502	ug/L	0.079	0	15	103741	3
[	Sb	121	25.811	ug/L	0.259	1	111	164647	2
[	Sb	123	25.782	ug/L	0.458	1	71	124769	1
[	Ba	135	32.138	ug/L	0.526	1	36	50708	2
[	Ba	137	31.846	ug/L	0.086	0	56	87400	2
[>	Tb	159		ug/L			378929	307158	2
[	Tl	205	24.293	ug/L	0.071	0	111	545402	2
[	Pb	208	24.815	ug/L	0.103	0	590	777656	2
[	Bi	209		ug/L			332212	253202	2
[	Th	232	22.040	ug/L	0.109	0	447	821067	3
[	U	238	26.321	ug/L	0.379	1	110	1075928	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WN31 CPOST REN~~ zzzzzz
Sample Dil Factor: 2 ~~WN~~ M5173
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:40:53
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	311862	0
[	Be	9	23.550	ug/L	0.153	0	5	9190	0
	C	13		mg/L			3727	5711	3
	Cl	37		mg/L			1848526	3541636	0
[>	Sc	45		ug/L			248909	209170	1
[	V	51	25.699	ug/L	0.112	0	1891	241785	0
[	V-1	51	26.490	ug/L	0.109	0	6386	256247	0
[	Cr	52	24.722	ug/L	0.171	0	5857	203373	0
[	Cr	53	27.296	ug/L	0.283	1	2099	27606	1
[	Mn	55	65.706	ug/L	0.574	0	454	865024	0
[	Co	59	24.218	ug/L	0.128	0	53	238490	0
[>	Ge	72		ug/L			261757	208401	0
[	Ni	60	26.309	ug/L	0.205	0	45	50393	0
[	Ni	62	28.971	ug/L	0.174	0	101	8193	0
[	Cu	63	28.446	ug/L	0.058	0	292	118285	0
[	Cu	65	27.725	ug/L	0.169	0	105	53772	0
[	Zn	66	90.461	ug/L	0.689	0	401	112149	0
[	Zn	67	83.883	ug/L	0.272	0	193	17441	0
[	Zn	68	89.798	ug/L	0.435	0	6893	81689	0
[	As	75	27.776	ug/L	0.079	0	266	32574	0
[	As-1	75	26.321	ug/L	0.080	0	8833	37108	0
[	Se	82	82.163	ug/L	0.505	0	-11	10691	0
[	Se	78	81.057	ug/L	0.254	0	8982	32177	0
[	Mo	98	27.359	ug/L	0.437	1	44	119855	1
	Y	89		ug/L			259459	215459	0
	Kr	83		ug/L			186	199	1
[>	In	115		ug/L			291463	233178	1
[	Ag	107	23.425	ug/L	0.065	0	50	176394	1
[	Cd	111	24.134	ug/L	0.166	0	145	46664	1
[	Cd	114	24.305	ug/L	0.255	1	15	108788	0
[	Sb	121	25.512	ug/L	0.085	0	111	165060	1
[	Sb	123	25.534	ug/L	0.073	0	71	125345	1
[	Ba	135	32.630	ug/L	0.411	1	36	52211	0
[	Ba	137	32.626	ug/L	0.452	1	56	90791	0
[>	Tb	159		ug/L			378929	312791	0
[	Tl	205	25.249	ug/L	0.127	0	111	577275	0
[	Pb	208	25.764	ug/L	0.094	0	590	822227	0
[	Bi	209		ug/L			332212	254883	0
[	Th	232	26.589	ug/L	0.052	0	447	1008568	0
[	U	238	27.316	ug/L	0.234	0	110	1136950	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB3SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:46:50
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	303491	1
[	Be	9	22.844	ug/L	0.542	2	5	8673	0
	C	13		mg/L			3727	4861	1
	Cl	37		mg/L			1848526	1788135	0
[>	Sc	45		ug/L			248909	202786	2
[	V	51	24.193	ug/L	0.243	1	1891	220786	3
[	V-1	51	24.324	ug/L	0.223	0	6386	228553	3
[	Cr	52	24.357	ug/L	0.395	1	5857	194377	3
[	Cr	53	24.770	ug/L	0.293	1	2099	24448	3
[	Mn	55	24.516	ug/L	0.212	0	454	313194	3
[	Co	59	24.089	ug/L	0.268	1	53	230027	3
[>	Ge	72		ug/L			261757	209585	3
[	Ni	60	25.101	ug/L	0.168	0	45	48359	3
[	Ni	62	26.564	ug/L	0.115	0	101	7561	2
[	Cu	63	25.591	ug/L	0.171	0	292	107043	3
[	Cu	65	25.751	ug/L	0.198	0	105	50227	2
[	Zn	66	78.456	ug/L	0.607	0	401	97877	3
[	Zn	67	72.907	ug/L	0.767	1	193	15265	3
[	Zn	68	77.800	ug/L	0.075	0	6893	71916	3
[	As	75	25.645	ug/L	0.386	1	266	30273	4
[	As-1	75	24.597	ug/L	0.169	0	8833	35339	3
[	Se	82	77.617	ug/L	0.221	0	-11	10157	3
[	Se	78	77.762	ug/L	1.223	1	8982	31329	2
[	Mo	98	25.462	ug/L	0.088	0	44	112174	3
	Y	89		ug/L			259459	207081	3
	Kr	83		ug/L			186	191	8
[>	In	115		ug/L			291463	238047	2
[	Ag	107	24.284	ug/L	0.128	0	50	186701	2
[	Cd	111	24.295	ug/L	0.093	0	145	47958	2
[	Cd	114	24.148	ug/L	0.127	0	15	110361	2
[	Sb	121	24.321	ug/L	0.304	1	111	160672	3
[	Sb	123	24.257	ug/L	0.322	1	71	121596	3
[	Ba	135	24.110	ug/L	0.278	1	36	39400	3
[	Ba	137	24.315	ug/L	0.241	0	56	69094	2
[>	Tb	159		ug/L			378929	306172	1
[	Tl	205	25.849	ug/L	0.305	1	111	578565	2
[	Pb	208	25.747	ug/L	0.205	0	590	804337	2
[	Bi	209		ug/L			332212	273890	3
[	Th	232	24.012	ug/L	0.243	1	447	891669	2
[	U	238	26.484	ug/L	0.150	0	110	1079085	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:52:50
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	289306	1
[	Be	9	51.995	ug/L	0.688	1	5	18817	0
	C	13		mg/L			3727	4115	2
	Cl	37		mg/L			1848526	1885272	1
[>	Sc	45		ug/L			248909	222412	1
[	V	51	50.316	ug/L	0.594	1	1891	501736	1
[	V-1	51	50.384	ug/L	0.426	0	6386	513068	0
[	Cr	52	50.822	ug/L	0.275	0	5857	439037	1
[	Cr	53	51.018	ug/L	0.393	0	2099	53235	1
[	Mn	55	50.632	ug/L	0.213	0	454	708893	1
[	Co	59	49.984	ug/L	0.275	0	53	523340	1
[>	Ge	72		ug/L			261757	235379	1
[	Ni	60	50.547	ug/L	0.104	0	45	109320	1
[	Ni	62	51.488	ug/L	0.165	0	101	16375	1
[	Cu	63	50.369	ug/L	0.368	0	292	236340	0
[	Cu	65	50.350	ug/L	0.302	0	105	110217	1
[	Zn	66	51.487	ug/L	0.642	1	401	72248	1
[	Zn	67	51.329	ug/L	0.863	1	193	12120	0
[	Zn	68	51.895	ug/L	0.886	1	6893	55933	1
[	As	75	50.266	ug/L	0.385	0	266	66383	0
[	As-1	75	50.084	ug/L	0.274	0	8833	72576	0
[	Se	82	51.674	ug/L	0.482	0	-11	7590	0
[	Se	78	51.344	ug/L	0.134	0	8982	25981	1
[	Mo	98	51.158	ug/L	0.207	0	44	253070	0
	Y	89		ug/L			259459	229148	0
	Kr	83		ug/L			186	210	3
[>	In	115		ug/L			291463	263310	0
[	Ag	107	50.170	ug/L	0.481	0	50	426576	1
[	Cd	111	50.162	ug/L	0.231	0	145	109389	1
[	Cd	114	50.319	ug/L	0.217	0	15	254337	0
[	Sb	121	49.572	ug/L	0.244	0	111	362095	1
[	Sb	123	49.310	ug/L	0.327	0	71	273300	1
[	Ba	135	48.994	ug/L	0.415	0	36	88518	0
[	Ba	137	49.280	ug/L	0.317	0	56	154847	0
[>	Tb	159		ug/L			378929	331848	1
[	Tl	205	52.708	ug/L	0.564	1	111	1278300	0
[	Pb	208	52.195	ug/L	0.545	1	590	1766528	0
[	Bi	209		ug/L			332212	290680	0
[	Th	232	53.034	ug/L	0.610	1	447	2133671	0
[	U	238	53.591	ug/L	0.703	1	110	2366213	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 15:59:08
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			374583	298768	1
	Be	9	0.006	ug/L	0.004	62	5	6	21
	C	13		mg/L			3727	3816	1
	Cl	37		mg/L			1848526	2024764	3
>	Sc	45		ug/L			248909	239959	0
	V	51	0.008	ug/L	0.015	187	1891	1906	7
	V-1	51	0.026	ug/L	0.013	49	6386	6437	1
	Cr	52	-0.007	ug/L	0.002	30	5857	5583	0
	Cr	53	0.052	ug/L	0.063	120	2099	2080	3
	Mn	55	0.001	ug/L	0.002	199	454	451	5
	Co	59	0.001	ug/L	0.001	77	53	64	14
>	Ge	72		ug/L			261757	255270	1
	Ni	60	0.004	ug/L	0.004	124	45	52	19
	Ni	62	0.540	ug/L	0.046	8	101	284	6
	Cu	63	0.014	ug/L	0.002	14	292	355	3
	Cu	65	0.010	ug/L	0.007	68	105	127	13
	Zn	66	0.008	ug/L	0.007	87	401	403	1
	Zn	67	0.069	ug/L	0.098	142	193	205	11
	Zn	68	0.055	ug/L	0.240	437	6893	6779	3
	As	75	0.059	ug/L	0.026	44	266	344	11
	As-1	75	-0.391	ug/L	0.055	14	8833	8067	0
	Se	82	0.005	ug/L	0.116	2156	-11	-9	185
	Se	78	-1.492	ug/L	0.271	18	8982	8194	0
	Mo	98	0.005	ug/L	0.003	49	44	70	17
	Y	89		ug/L			259459	247330	0
	Kr	83		ug/L			186	207	6
>	In	115		ug/L			291463	290647	0
	Ag	107	0.004	ug/L	0.002	53	50	87	23
	Cd	111	0.005	ug/L	0.008	163	145	156	12
	Cd	114	0.002	ug/L	0.002	86	15	26	35
	Sb	121	0.019	ug/L	0.008	43	111	265	25
	Sb	123	0.022	ug/L	0.008	37	71	202	24
	Ba	135	0.000	ug/L	0.005	2109	36	36	27
	Ba	137	0.002	ug/L	0.002	81	56	63	8
>	Tb	159		ug/L			378929	353301	0
	Tl	205	0.009	ug/L	0.001	5	111	326	3
	Pb	208	0.004	ug/L	0.002	62	590	690	12
	Bi	209		ug/L			332212	316961	0
	Th	232	0.030	ug/L	0.007	21	447	1714	16
	U	238	0.004	ug/L	0.001	38	110	277	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:04:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	305072	1
[	Be	9	0.015	ug/L	0.006	38	5	10	21
	C	13		mg/L			3727	5197	1
	Cl	37		mg/L			1848526	2034319	3
[>	Sc	45		ug/L			248909	247823	0
[	V	51	0.022	ug/L	0.020	87	1891	2132	9
[	V-1	51	0.004	ug/L	0.015	335	6386	6407	2
[	Cr	52	0.044	ug/L	0.012	26	5857	6253	1
[	Cr	53	-0.014	ug/L	0.056	387	2099	2073	2
[	Mn	55	0.008	ug/L	0.002	22	454	574	4
[	Co	59	0.000	ug/L	0.001	475	53	56	23
[>	Ge	72		ug/L			261757	263658	0
[	Ni	60	0.003	ug/L	0.002	57	45	53	8
[	Ni	62	0.428	ug/L	0.081	18	101	254	11
[	Cu	63	0.050	ug/L	0.001	2	292	556	0
[	Cu	65	0.052	ug/L	0.008	15	105	234	8
[	Zn	66	0.722	ug/L	0.049	6	401	1533	4
[	Zn	67	0.615	ug/L	0.038	6	193	355	3
[	Zn	68	0.656	ug/L	0.009	1	6893	7648	0
[	As	75	0.080	ug/L	0.012	14	266	386	4
[	As-1	75	-0.533	ug/L	0.042	7	8833	8127	0
[	Se	82	0.058	ug/L	0.007	11	-11	-1	62
[	Se	78	-2.014	ug/L	0.127	6	8982	8260	0
[	Mo	98	0.002	ug/L	0.001	82	44	54	13
	Y	89		ug/L			259459	257978	1
	Kr	83		ug/L			186	217	1
[>	In	115		ug/L			291463	301533	0
[	Ag	107	0.001	ug/L	0.001	97	50	60	14
[	Cd	111	0.006	ug/L	0.010	160	145	164	14
[	Cd	114	0.002	ug/L	0.001	57	15	26	21
[	Sb	121	0.004	ug/L	0.002	62	111	147	14
[	Sb	123	0.006	ug/L	0.003	46	71	111	15
[	Ba	135	0.006	ug/L	0.003	44	36	50	12
[	Ba	137	0.007	ug/L	0.004	58	56	83	17
[>	Tb	159		ug/L			378929	368710	0
[	Tl	205	0.006	ug/L	0.001	22	111	267	13
[	Pb	208	0.005	ug/L	0.001	20	590	745	5
[	Bi	209		ug/L			332212	328514	0
[	Th	232	0.012	ug/L	0.003	21	447	992	12
[	U	238	0.001	ug/L	0.001	48	110	166	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:10:36
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			374583	309939	0
	Be	9	0.002	ug/L	0.005	205	5	5	35
	C	13		mg/L			3727	4898	1
	Cl	37		mg/L			1848526	1953921	0
>	Sc	45		ug/L			248909	187169	1
	V	51	0.108	ug/L	0.035	32	1891	2323	11
	V-1	51	0.163	ug/L	0.011	6	6386	6186	0
	Cr	52	0.258	ug/L	0.013	4	5857	6260	0
	Cr	53	0.430	ug/L	0.083	19	2099	1942	4
	Mn	55	0.083	ug/L	0.003	3	454	1317	3
	Co	59	0.002	ug/L	0.001	57	53	62	21
>	Ge	72		ug/L			261757	260960	0
	Ni	60	0.010	ug/L	0.001	12	45	70	4
	Ni	62	0.304	ug/L	0.043	14	101	207	7
	Cu	63	0.045	ug/L	0.001	3	292	523	1
	Cu	65	0.047	ug/L	0.008	16	105	218	8
	Zn	66	0.913	ug/L	0.028	3	401	1813	2
	Zn	67	0.790	ug/L	0.027	3	193	396	1
	Zn	68	0.837	ug/L	0.155	18	6893	7761	1
	As	75	0.047	ug/L	0.009	19	266	334	3
	As-1	75	-0.369	ug/L	0.033	8	8833	8279	0
	Se	82	0.042	ug/L	0.052	124	-11	-4	194
	Se	78	-1.386	ug/L	0.148	10	8982	8419	0
	Mo	98	-0.000	ug/L	0.000	24	44	42	1
	Y	89		ug/L			259459	257254	0
	Kr	83		ug/L			186	202	4
>	In	115		ug/L			291463	304130	0
	Ag	107	-0.001	ug/L	0.000	49	50	47	4
	Cd	111	0.007	ug/L	0.002	26	145	168	2
	Cd	114	0.002	ug/L	0.000	4	15	27	2
	Sb	121	0.040	ug/L	0.003	6	111	451	5
	Sb	123	0.042	ug/L	0.003	8	71	345	6
	Ba	135	0.002	ug/L	0.002	115	36	42	12
	Ba	137	0.006	ug/L	0.003	45	56	80	11
>	Tb	159		ug/L			378929	366384	0
	Tl	205	0.004	ug/L	0.000	12	111	215	6
	Pb	208	0.020	ug/L	0.000	0	590	1311	0
	Bi	209		ug/L			332212	328363	0
	Th	232	0.004	ug/L	0.001	32	447	598	9
	U	238	0.001	ug/L	0.000	43	110	133	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:16:35
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			374583	328613	1
	Be	9	0.017	ug/L	0.018	108	5	11	62
	C	13		mg/L			3727	5741	1
	Cl	37		mg/L			1848526	1934335	0
>	Sc	45		ug/L			248909	305968	1
	V	51	1.273	ug/L	0.020	1	1891	19728	0
	V-1	51	1.165	ug/L	0.021	1	6386	23991	1
	Cr	52	1.575	ug/L	0.028	1	5857	25687	0
	Cr	53	1.217	ug/L	0.023	1	2099	4266	1
	Mn	55	303.957	ug/L	3.281	1	454	5851135	0
	Co	59	0.740	ug/L	0.010	1	53	10730	1
>	Ge	72		ug/L			261757	265789	0
	Ni	60	2.525	ug/L	0.040	1	45	6211	1
	Ni	62	2.493	ug/L	0.070	2	101	993	2
	Cu	63	0.786	ug/L	0.021	2	292	4455	2
	Cu	65	0.791	ug/L	0.014	1	105	2061	1
	Zn	66	4.700	ug/L	0.083	1	401	7817	2
	Zn	67	6.098	ug/L	0.057	0	193	1799	1
	Zn	68	6.150	ug/L	0.122	1	6893	13655	0
	As	75	1.015	ug/L	0.023	2	266	1779	2
	As-1	75	0.343	ug/L	0.049	14	8833	9469	0
	Se	82	0.285	ug/L	0.022	7	-11	35	10
	Se	78	-2.150	ug/L	0.123	5	8982	8273	0
	Mo	98	0.352	ug/L	0.013	3	44	2008	3
	Y	89		ug/L			259459	263806	0
	Kr	83		ug/L			186	204	1
>	In	115		ug/L			291463	298683	1
	Ag	107	0.033	ug/L	0.001	2	50	372	3
	Cd	111	0.035	ug/L	0.001	2	145	235	2
	Cd	114	0.025	ug/L	0.002	6	15	157	7
	Sb	121	0.118	ug/L	0.004	3	111	1095	1
	Sb	123	0.118	ug/L	0.003	2	71	815	0
	Ba	135	64.733	ug/L	0.773	1	36	132663	2
	Ba	137	64.237	ug/L	1.092	1	56	228901	0
>	Tb	159		ug/L			378929	375317	0
	Tl	205	0.003	ug/L	0.001	32	111	202	15
	Pb	208	0.143	ug/L	0.001	0	590	6068	0
	Bi	209		ug/L			332212	325602	1
	Th	232	0.040	ug/L	0.003	6	447	2266	5
	U	238	0.010	ug/L	0.001	6	110	620	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:22:34
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	343503	0
[	Be	9	0.027	ug/L	0.006	23	5	16	15
	C	13		mg/L			3727	6136	1
	Cl	37		mg/L			1848526	1939582	0
[>	Sc	45		ug/L			248909	302374	0
[	V	51	1.286	ug/L	0.021	1	1891	19673	0
[	V-1	51	1.150	ug/L	0.016	1	6386	23503	0
[	Cr	52	1.639	ug/L	0.011	0	5857	26135	1
[	Cr	53	1.189	ug/L	0.065	5	2099	4178	2
[	Mn	55	309.618	ug/L	3.183	1	454	5890380	0
[	Co	59	0.757	ug/L	0.012	1	53	10844	0
[>	Ge	72		ug/L			261757	264607	0
[	Ni	60	2.534	ug/L	0.035	1	45	6205	1
[	Ni	62	2.376	ug/L	0.050	2	101	947	1
[	Cu	63	0.762	ug/L	0.004	0	292	4312	0
[	Cu	65	0.753	ug/L	0.020	2	105	1958	2
[	Zn	66	3.649	ug/L	0.028	0	401	6132	0
[	Zn	67	5.168	ug/L	0.223	4	193	1547	3
[	Zn	68	5.118	ug/L	0.090	1	6893	12482	0
[	As	75	1.013	ug/L	0.014	1	266	1767	0
[	As-1	75	0.366	ug/L	0.057	15	8833	9460	0
[	Se	82	0.216	ug/L	0.067	31	-11	24	45
[	Se	78	-2.157	ug/L	0.229	10	8982	8234	0
[	Mo	98	0.347	ug/L	0.002	0	44	1972	0
	Y	89		ug/L			259459	263769	0
	Kr	83		ug/L			186	200	0
[>	In	115		ug/L			291463	290791	0
[	Ag	107	0.033	ug/L	0.001	4	50	360	4
[	Cd	111	0.043	ug/L	0.010	23	145	248	9
[	Cd	114	0.023	ug/L	0.008	32	15	143	29
[	Sb	121	0.104	ug/L	0.004	3	111	950	3
[	Sb	123	0.103	ug/L	0.004	3	71	702	2
[	Ba	135	67.150	ug/L	0.156	0	36	133972	0
[	Ba	137	66.489	ug/L	1.023	1	56	230699	0
[>	Tb	159		ug/L			378929	372226	0
[	Tl	205	0.001	ug/L	0.000	34	111	138	6
[	Pb	208	0.138	ug/L	0.004	2	590	5799	2
[	Bi	209		ug/L			332212	319606	0
[	Th	232	0.024	ug/L	0.003	11	447	1506	7
[	U	238	0.010	ug/L	0.002	16	110	613	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:28:33
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	351413	1
[	Be	9	23.355	ug/L	0.237	1	5	10270	0
	C	13		mg/L			3727	5975	1
	Cl	37		mg/L			1848526	1922913	0
[>	Sc	45		ug/L			248909	309329	0
[	V	51	20.461	ug/L	0.180	0	1891	285161	0
[	V-1	51	20.363	ug/L	0.206	1	6386	293126	0
[	Cr	52	20.584	ug/L	0.044	0	5857	251648	0
[	Cr	53	20.267	ug/L	0.214	1	2099	30983	0
[	Mn	55	324.963	ug/L	2.857	0	454	6324640	0
[	Co	59	19.449	ug/L	0.138	0	53	283268	1
[>	Ge	72		ug/L			261757	259604	0
[	Ni	60	26.197	ug/L	0.351	1	45	62510	1
[	Ni	62	26.279	ug/L	0.439	1	101	9266	1
[	Cu	63	24.429	ug/L	0.180	0	292	126577	0
[	Cu	65	24.493	ug/L	0.062	0	105	59187	0
[	Zn	66	77.234	ug/L	0.677	0	401	119335	0
[	Zn	67	73.364	ug/L	0.385	0	193	19026	0
[	Zn	68	78.561	ug/L	0.284	0	6893	89883	0
[	As	75	26.318	ug/L	0.154	0	266	38461	0
[	As-1	75	24.511	ug/L	0.223	0	8833	43649	0
[	Se	82	76.741	ug/L	0.378	0	-11	12438	0
[	Se	78	73.732	ug/L	0.979	1	8982	37265	0
[	Mo	98	0.372	ug/L	0.010	2	44	2072	2
	Y	89		ug/L			259459	257609	1
	Kr	83		ug/L			186	199	2
[>	In	115		ug/L			291463	282489	0
[	Ag	107	21.290	ug/L	0.039	0	50	194223	0
[	Cd	111	24.447	ug/L	0.021	0	145	57266	0
[	Cd	114	24.311	ug/L	0.148	0	15	131838	0
[	Sb	121	0.169	ug/L	0.004	2	111	1433	1
[	Sb	123	0.172	ug/L	0.006	3	71	1090	3
[	Ba	135	94.771	ug/L	0.972	1	36	183659	0
[	Ba	137	94.961	ug/L	0.259	0	56	320079	0
[>	Tb	159		ug/L			378929	368929	0
[	Tl	205	25.314	ug/L	0.379	1	111	682675	1
[	Pb	208	25.134	ug/L	0.048	0	590	946067	0
[	Bi	209		ug/L			332212	313884	0
[	Th	232	23.580	ug/L	0.196	0	447	1055014	1
[	U	238	26.224	ug/L	0.129	0	110	1287448	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WN40 APOST REN~~ ZZZZZZ
Sample Dil Factor: 2
Comments: AJ 5113
Sample Date/Time: Tuesday, April 30, 2013 16:34:32
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	350326	1
[	Be	9	23.631	ug/L	0.325	1	5	10359	1
	C	13		mg/L			3727	6461	0
	Cl	37		mg/L			1848526	1923678	0
[>	Sc	45		ug/L			248909	288570	0
|	V	51	21.809	ug/L	0.137	0	1891	283423	0
|	V-1	51	21.701	ug/L	0.169	0	6386	290951	1
|	Cr	52	22.131	ug/L	0.128	0	5857	251889	0
|	Cr	53	21.772	ug/L	0.183	0	2099	30870	0
|	Mn	55	321.911	ug/L	2.560	0	454	5844891	0
[	Co	59	20.709	ug/L	0.082	0	53	281360	0
[>	Ge	72		ug/L			261757	251742	0
|	Ni	60	26.760	ug/L	0.270	1	45	61916	1
|	Ni	62	26.432	ug/L	0.459	1	101	9039	2
|	Cu	63	25.046	ug/L	0.106	0	292	125836	0
|	Cu	65	25.221	ug/L	0.400	1	105	59098	1
|	Zn	66	80.911	ug/L	0.508	0	401	121210	0
|	Zn	67	76.118	ug/L	0.962	1	193	19135	0
|	Zn	68	81.693	ug/L	0.642	0	6893	90373	1
|	As	75	27.112	ug/L	0.094	0	266	38414	0
|	As-1	75	25.341	ug/L	0.318	1	8833	43470	0
|	Se	82	78.644	ug/L	0.460	0	-11	12361	1
|	Se	78	75.967	ug/L	0.482	0	8982	36970	0
[	Mo	98	25.318	ug/L	0.308	1	44	133973	1
	Y	89		ug/L			259459	246683	0
	Kr	83		ug/L			186	211	6
[>	In	115		ug/L			291463	272630	0
|	Ag	107	24.613	ug/L	0.099	0	50	216699	0
|	Cd	111	24.635	ug/L	0.238	0	145	55691	1
|	Cd	114	24.472	ug/L	0.244	0	15	128072	0
|	Sb	121	24.885	ug/L	0.268	1	111	188239	0
|	Sb	123	24.945	ug/L	0.260	1	71	143175	0
|	Ba	135	92.310	ug/L	1.824	1	36	172640	1
[	Ba	137	92.326	ug/L	0.899	0	56	300324	0
[>	Tb	159		ug/L			378929	358172	0
|	Tl	205	25.764	ug/L	0.287	1	111	674531	1
|	Pb	208	25.446	ug/L	0.145	0	590	929904	0
|	Bi	209		ug/L			332212	304444	1
|	Th	232	25.866	ug/L	0.125	0	447	1123520	0
[	U	238	26.253	ug/L	0.086	0	110	1251272	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN52 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:40:29
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	341001	2
[	Be	9	0.011	ug/L	0.006	58	5	9	27
	C	13		mg/L			3727	6128	1
	Cl	37		mg/L			1848526	1864945	0
[>	Sc	45		ug/L			248909	245616	1
[	V	51	0.778	ug/L	0.030	3	1891	10399	1
[	V-1	51	0.704	ug/L	0.031	4	6386	14132	0
[	Cr	52	0.313	ug/L	0.008	2	5857	8727	1
[	Cr	53	0.098	ug/L	0.013	13	2099	2180	1
[	Mn	55	360.609	ug/L	4.046	1	454	5572380	1
[	Co	59	0.138	ug/L	0.003	2	53	1646	3
[>	Ge	72		ug/L			261757	237770	1
[	Ni	60	0.871	ug/L	0.004	0	45	1944	1
[	Ni	62	0.915	ug/L	0.036	3	101	384	2
[	Cu	63	0.833	ug/L	0.011	1	292	4208	0
[	Cu	65	0.525	ug/L	0.011	2	105	1256	0
[	Zn	66	1.008	ug/L	0.048	4	401	1785	3
[	Zn	67	1.448	ug/L	0.072	4	193	515	2
[	Zn	68	1.344	ug/L	0.162	12	6893	7563	2
[	As	75	2.869	ug/L	0.043	1	266	4056	2
[	As-1	75	2.532	ug/L	0.072	2	8833	11325	1
[	Se	82	0.245	ug/L	0.013	5	-11	26	7
[	Se	78	-1.044	ug/L	0.087	8	8982	7791	1
[	Mo	98	0.825	ug/L	0.018	2	44	4162	3
	Y	89		ug/L			259459	236539	1
	Kr	83		ug/L			186	190	1
[>	In	115		ug/L			291463	259020	0
[	Ag	107	0.003	ug/L	0.002	56	50	68	19
[	Cd	111	0.008	ug/L	0.017	209	145	146	24
[	Cd	114	0.027	ug/L	0.002	8	15	146	7
[	Sb	121	0.083	ug/L	0.006	6	111	693	6
[	Sb	123	0.082	ug/L	0.004	4	71	509	4
[	Ba	135	27.010	ug/L	0.228	0	36	48019	1
[	Ba	137	26.901	ug/L	0.396	1	56	83177	1
[>	Tb	159		ug/L			378929	343939	0
[	Tl	205	0.001	ug/L	0.000	32	111	120	4
[	Pb	208	0.239	ug/L	0.003	1	590	8913	1
[	Bi	209		ug/L			332212	286952	1
[	Th	232	0.031	ug/L	0.006	21	447	1684	16
[	U	238	0.026	ug/L	0.001	5	110	1269	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN52 C-ERN RED
Sample Dil Factor: 2 ~~5173~~
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:46:26
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			374583	322492	0
[	**Be**	**9**	**0.017**	ug/L	0.007	37	5	11	22
	C	**13**		mg/L			3727	6119	1
	Cl	**37**		mg/L			1848526	1861638	0
[>	**Sc**	**45**		ug/L			248909	247252	0
|	**V**	**51**	**0.894**	ug/L	0.022	2	1891	11758	2
|	**V-1**	**51**	**0.811**	ug/L	0.012	1	6386	15422	0
|	**Cr**	**52**	**0.508**	ug/L	0.009	1	5857	10636	1
|	**Cr**	**53**	**0.258**	ug/L	0.060	23	2099	2373	2
|	**Mn**	**55**	**1417.551**	ug/L	14.446	1	454	22051841	1
[	**Co**	**59**	**0.222**	ug/L	0.019	8	53	2639	8
[>	**Ge**	**72**		ug/L			261757	225651	0
|	**Ni**	**60**	**1.013**	ug/L	0.022	2	45	2138	2
|	**Ni**	**62**	**1.035**	ug/L	0.092	8	101	401	6
|	**Cu**	**63**	**1.381**	ug/L	0.008	0	292	6455	1
|	**Cu**	**65**	**0.834**	ug/L	0.018	2	105	1839	2
|	**Zn**	**66**	**1.570**	ug/L	0.032	2	401	2448	2
|	**Zn**	**67**	**2.013**	ug/L	0.081	4	193	615	3
|	**Zn**	**68**	**2.376**	ug/L	0.100	4	6893	8124	0
|	**As**	**75**	**1.512**	ug/L	0.023	1	266	2137	0
|	**As-1**	**75**	**1.379**	ug/L	0.057	4	8833	9321	0
|	**Se**	**82**	**0.300**	ug/L	0.065	21	-11	32	27
|	**Se**	**78**	**-0.041**	ug/L	0.150	369	8982	7729	0
[	**Mo**	**98**	**0.407**	ug/L	0.010	2	44	1969	1
	Y	**89**		ug/L			259459	223540	0
	Kr	**83**		ug/L			186	192	3
[>	**In**	**115**		ug/L			291463	243508	0
|	**Ag**	**107**	**-0.000**	ug/L	0.002	3311	50	41	30
|	**Cd**	**111**	**0.204**	ug/L	0.005	2	145	531	2
|	**Cd**	**114**	**0.217**	ug/L	0.006	2	15	1025	2
|	**Sb**	**121**	**0.078**	ug/L	0.007	8	111	621	6
|	**Sb**	**123**	**0.091**	ug/L	0.004	4	71	524	4
|	**Ba**	**135**	**31.115**	ug/L	0.433	1	36	51996	0
[	**Ba**	**137**	**31.166**	ug/L	0.361	1	56	90579	0
[>	**Tb**	**159**		ug/L			378929	326618	0
|	**Tl**	**205**	**-0.000**	ug/L	0.001	107	111	84	15
|	**Pb**	**208**	**0.076**	ug/L	0.002	3	590	3027	2
|	**Bi**	**209**	U	ug/L			332212	269454	0
|	**Th**	**232**	**0.020**	ug/L	0.002	7	447	1196	5
[	**U**	**238**	**0.057**	ug/L	0.002	2	110	2578	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN40 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:52:22
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	338991	0
[	Be	9	23.214	ug/L	0.247	1	5	9848	1
	C	13		mg/L			3727	4855	2
	Cl	37		mg/L			1848526	1900961	1
[>	Sc	45		ug/L			248909	224824	0
[	V	51	24.642	ug/L	0.266	1	1891	249274	1
[	V-1	51	24.663	ug/L	0.224	0	6386	256834	1
[	Cr	52	24.737	ug/L	0.171	0	5857	218734	0
[	Cr	53	24.802	ug/L	0.098	0	2099	27134	0
[	Mn	55	25.275	ug/L	0.097	0	454	357918	0
[	Co	59	24.682	ug/L	0.187	0	53	261255	0
[>	Ge	72		ug/L			261757	234183	0
[	Ni	60	25.450	ug/L	0.266	1	45	54780	1
[	Ni	62	25.698	ug/L	0.228	0	101	8176	0
[	Cu	63	26.120	ug/L	0.071	0	292	122066	0
[	Cu	65	26.008	ug/L	0.203	0	105	56687	0
[	Zn	66	80.073	ug/L	0.630	0	401	111591	0
[	Zn	67	73.718	ug/L	1.554	2	193	17244	1
[	Zn	68	79.547	ug/L	0.629	0	6893	82019	0
[	As	75	26.048	ug/L	0.333	1	266	34340	0
[	As-1	75	24.945	ug/L	0.454	1	8833	39930	0
[	Se	82	79.803	ug/L	0.598	0	-11	11668	0
[	Se	78	79.780	ug/L	0.977	1	8982	35714	0
[	Mo	98	0.004	ug/L	0.002	51	44	60	16
	Y	89		ug/L			259459	226890	0
	Kr	83		ug/L			186	201	5
[>	In	115		ug/L			291463	256949	0
[	Ag	107	25.382	ug/L	0.341	1	50	210617	1
[	Cd	111	25.179	ug/L	0.114	0	145	53643	0
[	Cd	114	24.910	ug/L	0.061	0	15	122873	0
[	Sb	121	-0.003	ug/L	0.002	51	111	75	15
[	Sb	123	0.002	ug/L	0.002	81	71	75	13
[	Ba	135	24.916	ug/L	0.281	1	36	43944	1
[	Ba	137	25.057	ug/L	0.098	0	56	76859	0
[>	Tb	159		ug/L			378929	335004	0
[	Tl	205	26.265	ug/L	0.182	0	111	643164	1
[	Pb	208	26.031	ug/L	0.167	0	590	889688	0
[	Bi	209		ug/L			332212	294257	0
[	Th	232	23.813	ug/L	0.135	0	447	967422	0
[	U	238	26.668	ug/L	0.290	1	110	1188788	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, April 30, 2013 16:58:18
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Li**	**6**		ug/L			374583	327596	1
⌊	**Be**	**9**	**22.977**	ug/L	0.164	0	5	9419	0
	C	**13**		mg/L			3727	4471	2
	Cl	**37**		mg/L			1848526	1930646	0
⌈>	**Sc**	**45**		ug/L			248909	220201	0
⌈	**V**	**51**	**24.296**	ug/L	0.172	0	1891	240737	0
⌈	**V-1**	**51**	**24.284**	ug/L	0.180	0	6386	247762	0
⌈	**Cr**	**52**	**24.539**	ug/L	0.279	1	5857	212552	0
⌈	**Cr**	**53**	**24.490**	ug/L	0.359	1	2099	26265	0
⌈	**Mn**	**55**	**24.675**	ug/L	0.255	1	454	342230	0
⌊	**Co**	**59**	**24.225**	ug/L	0.082	0	53	251145	0
⌈>	**Ge**	**72**		ug/L			261757	229076	1
⌈	**Ni**	**60**	**25.092**	ug/L	0.171	0	45	52831	0
⌈	**Ni**	**62**	**25.206**	ug/L	0.420	1	101	7846	1
⌈	**Cu**	**63**	**25.545**	ug/L	0.203	0	292	116776	0
⌈	**Cu**	**65**	**25.823**	ug/L	0.058	0	105	55058	1
⌈	**Zn**	**66**	**80.839**	ug/L	0.729	0	401	110193	0
⌈	**Zn**	**67**	**73.768**	ug/L	1.172	1	193	16879	0
⌈	**Zn**	**68**	**80.699**	ug/L	0.486	0	6893	81303	0
⌈	**As**	**75**	**26.253**	ug/L	0.339	1	266	33852	0
⌈	**As-1**	**75**	**24.817**	ug/L	0.383	1	8833	38897	0
⌈	**Se**	**82**	**81.820**	ug/L	1.581	1	-11	11701	1
⌈	**Se**	**78**	**80.668**	ug/L	1.259	1	8982	35234	0
⌊	**Mo**	**98**	**24.757**	ug/L	0.290	1	44	119203	0
	Y	**89**		ug/L			259459	223119	0
	Kr	**83**		ug/L			186	193	2
⌈>	**In**	**115**		ug/L			291463	249451	0
⌈	**Ag**	**107**	**25.149**	ug/L	0.151	0	50	202590	0
⌈	**Cd**	**111**	**24.840**	ug/L	0.337	1	145	51374	0
⌈	**Cd**	**114**	**24.976**	ug/L	0.148	0	15	119599	0
⌈	**Sb**	**121**	**24.641**	ug/L	0.170	0	111	170551	0
⌈	**Sb**	**123**	**24.859**	ug/L	0.135	0	71	130549	0
⌈	**Ba**	**135**	**24.940**	ug/L	0.180	0	36	42702	0
⌊	**Ba**	**137**	**25.212**	ug/L	0.104	0	56	75077	0
⌈>	**Tb**	**159**		ug/L			378929	326152	0
⌈	**Tl**	**205**	**26.119**	ug/L	0.376	1	111	622659	1
⌈	**Pb**	**208**	**25.906**	ug/L	0.080	0	590	862061	0
⌈	**Bi**	**209**		ug/L			332212	288840	0
⌈	**Th**	**232**	**25.856**	ug/L	0.176	0	447	1022666	0
⌊	**U**	**238**	**26.450**	ug/L	0.113	0	110	1147957	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV10
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 17:04:15
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	325474	0
[	Be	9	47.721	ug/L	0.198	0	5	19432	0
	C	13		mg/L			3727	4135	1
	Cl	37		mg/L			1848526	1899650	0
[>	Sc	45		ug/L			248909	219302	0
[	V	51	48.896	ug/L	0.579	1	1891	480796	0
[	V-1	51	49.133	ug/L	0.568	1	6386	493461	0
[	Cr	52	48.894	ug/L	0.103	0	5857	416679	0
[	Cr	53	49.652	ug/L	0.290	0	2099	51134	1
[	Mn	55	48.834	ug/L	0.172	0	454	674179	0
[	Co	59	47.737	ug/L	0.277	0	53	492820	0
[>	Ge	72		ug/L			261757	229001	0
[	Ni	60	48.682	ug/L	0.470	0	45	102431	0
[	Ni	62	48.922	ug/L	0.399	0	101	15142	0
[	Cu	63	49.152	ug/L	0.133	0	292	224400	0
[	Cu	65	49.115	ug/L	0.164	0	105	104603	0
[	Zn	66	49.743	ug/L	0.417	0	401	67924	1
[	Zn	67	49.608	ug/L	0.806	1	193	11403	1
[	Zn	68	50.121	ug/L	0.465	0	6893	52767	0
[	As	75	49.761	ug/L	0.317	0	266	63941	0
[	As-1	75	49.473	ug/L	0.408	0	8833	69844	0
[	Se	82	50.815	ug/L	0.172	0	-11	7262	0
[	Se	78	50.020	ug/L	0.607	1	8982	24828	0
[	Mo	98	49.099	ug/L	0.446	0	44	236317	1
	Y	89		ug/L			259459	215356	0
	Kr	83		ug/L			186	198	3
[>	In	115		ug/L			291463	244311	1
[	Ag	107	49.814	ug/L	0.581	1	50	392951	0
[	Cd	111	49.663	ug/L	0.650	1	145	100483	1
[	Cd	114	49.465	ug/L	0.254	0	15	231978	0
[	Sb	121	49.927	ug/L	0.695	1	111	338329	0
[	Sb	123	50.136	ug/L	0.357	0	71	257807	0
[	Ba	135	50.518	ug/L	0.562	1	36	84680	0
[	Ba	137	50.775	ug/L	0.666	1	56	148024	0
[>	Tb	159		ug/L			378929	320749	0
[	Tl	205	51.959	ug/L	0.505	0	111	1218031	0
[	Pb	208	51.499	ug/L	0.312	0	590	1684765	0
[	Bi	209		ug/L			332212	278713	0
[	Th	232	52.581	ug/L	0.337	0	447	2044856	1
[	U	238	53.463	ug/L	0.446	0	110	2281814	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB10
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, April 30, 2013 17:10:34
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\043013d.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			374583	331231	1
[	Be	9	0.002	ug/L	0.005	303	5	5	35
	C	13		mg/L			3727	3784	2
	Cl	37		mg/L			1848526	1889280	0
[>	Sc	45		ug/L			248909	217748	0
[	V	51	0.004	ug/L	0.022	593	1891	1692	13
[	V-1	51	0.020	ug/L	0.012	60	6386	5785	2
[	Cr	52	-0.024	ug/L	0.011	44	5857	4925	1
[	Cr	53	0.030	ug/L	0.036	118	2099	1865	1
[	Mn	55	0.013	ug/L	0.005	34	454	582	10
[	Co	59	-0.000	ug/L	0.001	1480	53	46	11
[>	Ge	72		ug/L			261757	226164	0
[	Ni	60	0.004	ug/L	0.002	37	45	47	6
[	Ni	62	0.196	ug/L	0.053	26	101	147	11
[	Cu	63	-0.002	ug/L	0.006	239	292	241	10
[	Cu	65	0.005	ug/L	0.003	53	105	101	5
[	Zn	66	0.022	ug/L	0.016	71	401	376	5
[	Zn	67	-0.002	ug/L	0.043	2369	193	166	6
[	Zn	68	-0.018	ug/L	0.045	256	6893	5939	0
[	As	75	0.073	ug/L	0.011	15	266	323	4
[	As-1	75	-0.186	ug/L	0.106	56	8833	7402	1
[	Se	82	0.014	ug/L	0.119	873	-11	-7	217
[	Se	78	-0.700	ug/L	0.435	62	8982	7526	1
[	Mo	98	0.008	ug/L	0.005	71	44	75	34
	Y	89		ug/L			259459	217056	0
	Kr	83		ug/L			186	194	7
[>	In	115		ug/L			291463	246948	0
[	Ag	107	0.005	ug/L	0.004	75	50	80	35
[	Cd	111	0.001	ug/L	0.011	1046	145	124	17
[	Cd	114	0.003	ug/L	0.002	51	15	27	26
[	Sb	121	0.019	ug/L	0.008	42	111	226	24
[	Sb	123	0.024	ug/L	0.010	41	71	182	27
[	Ba	135	0.001	ug/L	0.001	112	36	32	4
[	Ba	137	0.001	ug/L	0.004	715	56	49	22
[>	Tb	159		ug/L			378929	322856	0
[	Tl	205	0.005	ug/L	0.002	39	111	219	22
[	Pb	208	0.003	ug/L	0.002	70	590	611	11
[	Bi	209		ug/L			332212	287382	0
[	Th	232	0.030	ug/L	0.011	35	447	1537	26
[	U	238	0.003	ug/L	0.001	36	110	225	20

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 5-1-13

M1 ELAN	Analyst MS-2	Peer LA 5-2-13	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 QC			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	See log
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Narrative, Addendum and CAR's	—	—	

Analytical Resources, Incorporated
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ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 5-1-13 **Analyst:** AA **Page:** 1 **of** 5

All corrections made by analyst unless otherwise noted. AA 5/1/13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3029-1
		1			3020-1
		2			-2
		3			-0
		4			-3
		Rinse Sample			
		ICV			3023-4
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			
		LR200			
		LR300			
		CCV2			
		CCB2			
		WN3281 BDup	RSN	2 ✓	As Se
		B			
		BSpk		1	
		CDup		1	
		C			
		CSpk		1	
		WN52 F		~~2~~ 2	As

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Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 5/13 **Analyst:** KM **Page:** 2 **of** 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WN52 R	REN	2	As
DIL		E		50	
↓		Q		↓	
		CCV3			
		CCB3			
		WN53 MB1	REN	2	
		ADup			✓
		A			
		Aspk			✓
zzz		~~APost~~			
		KDup			✓
		K			
		Kspk			✓
zzz		~~KPost~~			
		MBlspk	↓	↓	✓
		CCV4			
		CCB4			
		WN53 MB2	REN	2	
		B			
		C			
		D			
		E			
		F			
		G	↓	↓	

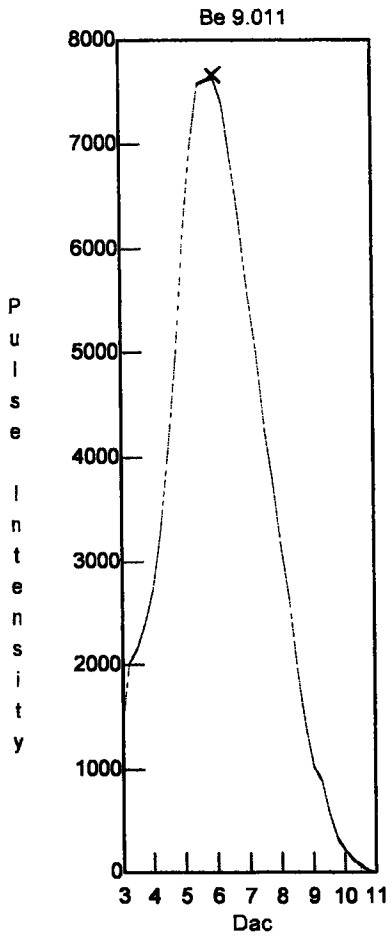
WN31 : 02425

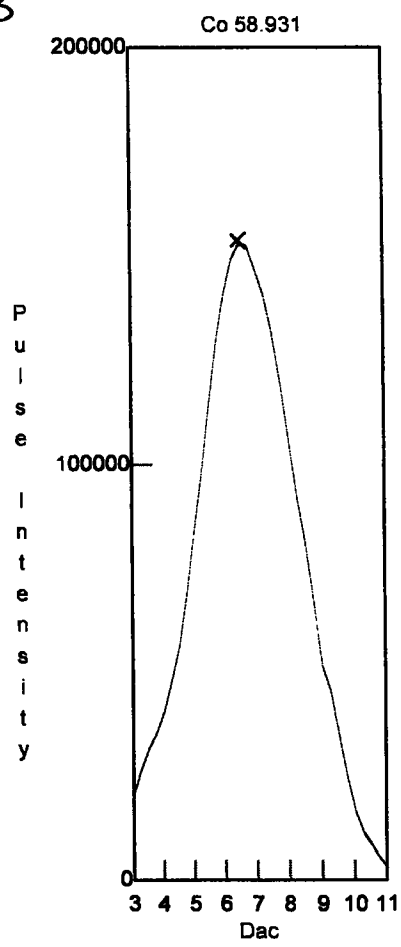
Instrument Tuning Report

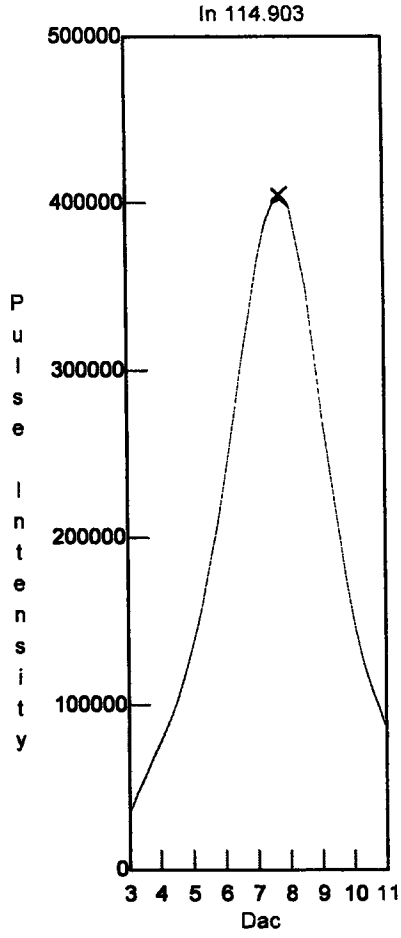
File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

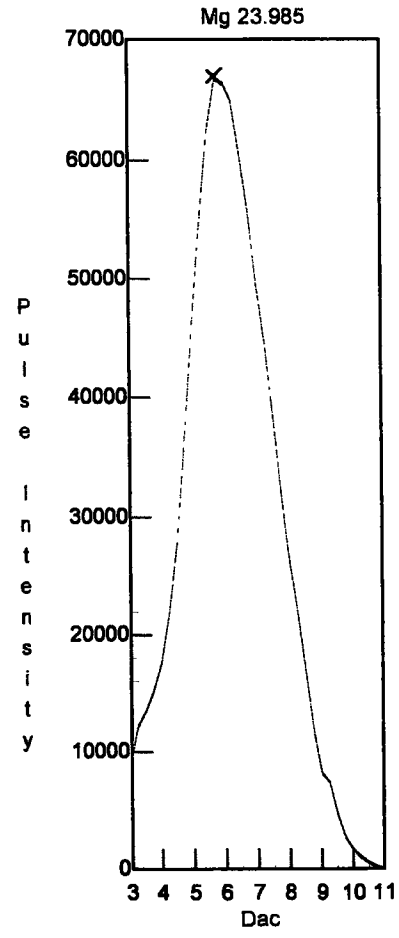
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	9.026	2026	2165	0.687	
Mg	23.985	24.029	5662	2271	0.692	
Co	58.933	58.929	14145	2539	0.683	
In	114.904	114.878	27783	2982	0.717	
Pb	207.977	207.926	50434	3726	0.713	

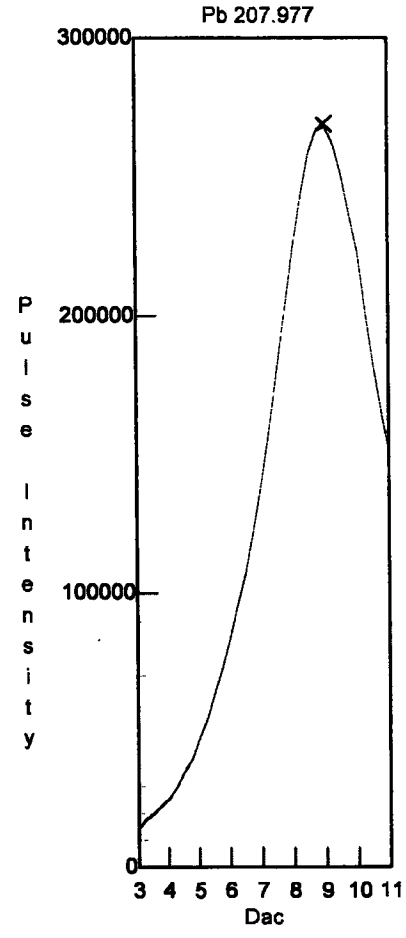
5-1-13

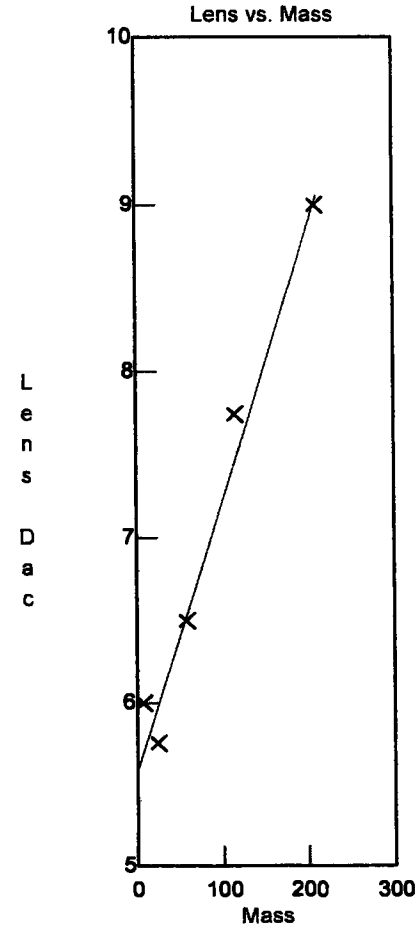












Daily Performance Report

Sample ID: Sample
Sample Date/Time: Wednesday, May 01, 2013 09:51:15
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1506
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

0.92

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	30973.025	460.291	1.486
	In	115	289739.327	2607.535	0.900
	Pb	208	209269.298	1659.603	0.793
⌈>	Ba	138	200675.628	2014.463	1.004
⌊	Ba++	69	0.011	0.000	2.310
⌈>	Ce	140	235623.312	2906.355	1.233
⌊	CeO	156	0.029	0.000	1.148
	Bkgd	220	5.751	2.092	36.377

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:16:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Ge	72		ug/L				219106	1
	As	75		ug/L				262	5
	As-1	75		ug/L				6150	0
	Se	82		ug/L				1	324
	Se	78		ug/L				6222	0
	Cl	37		mg/L				1671876	0
	Y	89		ug/L				245638	0
	Kr	83		ug/L				138	5
>	In	115		ug/L				281006	0
	Ag	107		ug/L				12	26
	Cd	111		ug/L				143	7
	Cd	114		ug/L				8	18
	Sb	121		ug/L				14	17
	Sb	123		ug/L				12	54
>	Tb	159		ug/L				332321	1
	Tl	205		ug/L				39	36
	Pb	208		ug/L				273	13
	Bi	209		ug/L				312404	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:21:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Ge	72		ug/L			219106	218281	0
|	As	75	10.000	ug/L	0.102	1	262	13283	1
|	As-1	75	10.000	ug/L	0.089	0	6150	18854	0
|	Se	82	10.000	ug/L	0.148	1	1	1587	1
[	Se	78	10.000	ug/L	0.202	2	6222	9918	0
	Cl	37		mg/L			1671876	1668921	0
	Y	89		ug/L			245638	247621	0
	Kr	83		ug/L			138	131	3
[>	In	115		ug/L			281006	281385	0
|	Ag	107	10.000	ug/L	0.052	0	12	91994	0
|	Cd	111	10.000	ug/L	0.021	0	143	23834	0
|	Cd	114	10.000	ug/L	0.099	0	8	55204	0
|	Sb	121	10.000	ug/L	0.079	0	14	76660	0
[	Sb	123	10.000	ug/L	0.108	1	12	57714	0
[>	Tb	159		ug/L			332321	331172	0
|	Tl	205	10.000	ug/L	0.027	0	39	274821	0
|	Pb	208	10.000	ug/L	0.022	0	273	378832	0
[	Bi	209		ug/L			312404	313246	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:25:56
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Ge**	**72**		ug/L			219106	215522	1
	As	**75**	**20.092**	ug/L	0.278	1	262	26570	0
	As-1	**75**	**20.036**	ug/L	0.267	1	6150	31408	0
	Se	**82**	**20.104**	ug/L	0.385	1	1	3217	0
	Se	**78**	**19.923**	ug/L	0.374	1	6222	13326	0
	Cl	**37**		mg/L			1671876	1685292	0
	Y	**89**		ug/L			245638	243253	0
	Kr	**83**		ug/L			138	131	3
>	**In**	**115**		ug/L			281006	276587	0
	Ag	**107**	**20.018**	ug/L	0.139	0	12	181648	0
	Cd	**111**	**20.033**	ug/L	0.159	0	143	47098	1
	Cd	**114**	**19.974**	ug/L	0.198	0	8	107820	0
	Sb	**121**	**20.057**	ug/L	0.304	1	14	152841	0
	Sb	**123**	**20.034**	ug/L	0.179	0	12	114422	0
>	**Tb**	**159**		ug/L			332321	329486	0
	Tl	**205**	**19.982**	ug/L	0.326	1	39	544405	1
	Pb	**208**	**19.978**	ug/L	0.096	0	273	749473	0
	Bi	**209**		ug/L			312404	307644	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:30:45
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	215652	0
|	**As**	**75**	**49.874**	ug/L	0.334	0	262	64806	0
|	**As-1**	**75**	**49.852**	ug/L	0.229	0	6150	68273	0
|	**Se**	**82**	**49.833**	ug/L	0.390	0	1	7846	0
L	**Se**	**78**	**49.757**	ug/L	0.215	0	6222	23707	0
	Cl	**37**		mg/L			1671876	1695944	0
	Y	**89**		ug/L			245638	244154	1
	Kr	**83**		ug/L			138	127	4
[>	**In**	**115**		ug/L			281006	275653	0
|	**Ag**	**107**	**49.867**	ug/L	0.364	0	12	445040	0
|	**Cd**	**111**	**49.976**	ug/L	0.808	1	143	116611	1
|	**Cd**	**114**	**49.952**	ug/L	0.565	1	8	267447	0
|	**Sb**	**121**	**50.069**	ug/L	0.588	1	14	382891	0
L	**Sb**	**123**	**50.012**	ug/L	0.479	0	12	284985	0
[>	**Tb**	**159**		ug/L			332321	327191	0
|	**Tl**	**205**	**49.947**	ug/L	0.356	0	39	1344094	1
|	**Pb**	**208**	**49.939**	ug/L	0.354	0	273	1848739	0
L	**Bi**	**209**		ug/L			312404	307129	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:35:35
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Ge	72		ug/L			219106	213019	0
|	As	75	99.960	ug/L	1.062	1	262	127866	0
|	As-1	75	100.054	ug/L	1.216	1	6150	129544	0
|	Se	82	99.720	ug/L	0.587	0	1	15365	0
L	Se	78	100.066	ug/L	1.145	1	6222	41054	0
	Cl	37		mg/L			1671876	1694198	0
	Y	89		ug/L			245638	241081	1
	Kr	83		ug/L			138	141	0
[>	In	115		ug/L			281006	271551	1
|	Ag	107	100.071	ug/L	0.497	0	12	881888	0
|	Cd	111	99.917	ug/L	1.688	1	143	228881	0
|	Cd	114	100.157	ug/L	1.837	1	8	531011	1
|	Sb	121	99.949	ug/L	0.510	0	14	751667	0
L	Sb	123	100.168	ug/L	1.034	1	12	565454	0
[>	Tb	159		ug/L			332321	324566	1
|	Tl	205	99.761	ug/L	0.483	0	39	2641979	1
|	Pb	208	99.875	ug/L	0.321	0	273	3652159	0
L	Bi	209		ug/L			312404	302181	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse Sample
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:40:24
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	215386	1
|	**As**	**75**	**-0.026**	ug/L	0.011	40	262	224	5
|	**As-1**	**75**	**-0.014**	ug/L	0.079	544	6150	6027	0
|	**Se**	**82**	**-0.049**	ug/L	0.037	76	1	-6	96
[	**Se**	**78**	**-0.069**	ug/L	0.276	396	6222	6091	0
	Cl	**37**		mg/L			1671876	1732532	0
	Y	**89**		ug/L			245638	243417	0
	Kr	**83**		ug/L			138	127	0
[>	**In**	**115**		ug/L			281006	276047	0
|	**Ag**	**107**	**0.008**	ug/L	0.001	18	12	80	14
|	**Cd**	**111**	**0.004**	ug/L	0.005	131	143	149	6
|	**Cd**	**114**	**0.002**	ug/L	0.001	54	8	19	30
|	**Sb**	**121**	**0.088**	ug/L	0.021	23	14	686	22
[	**Sb**	**123**	**0.086**	ug/L	0.017	19	12	504	18
[>	**Tb**	**159**		ug/L			332321	324587	0
|	**Tl**	**205**	**0.013**	ug/L	0.001	10	39	372	10
|	**Pb**	**208**	**0.006**	ug/L	0.001	11	273	496	5
[	**Bi**	**209**		ug/L			312404	310689	0

Quantitative Analysis - Calibration Report

Sample Date/Time: Wednesday, May 01, 2013 10:35:35
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

Analyte	Mass	r Corr Coeff	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Ge	72							
As	75	1.0000	0.0060	10	20	50	100	
As-1	75	1.0000	0.0058	10	20	50	100	
Se	82	1.0000	0.0007	10	20	50	100	
Se	78	1.0000	0.0016	10	20	50	100	
Cl	37							
Y	89							
Kr	83							
In	115							
Ag	107	1.0000	0.0325	10	20	50	100	
Cd	111	1.0000	0.0084	10	20	50	100	
Cd	114	1.0000	0.0195	10	20	50	100	
Sb	121	1.0000	0.0277	10	20	50	100	
Sb	123	1.0000	0.0208	10	20	50	100	
Tb	159							
Tl	205	1.0000	0.0816	10	20	50	100	
Pb	208	1.0000	0.1127	10	20	50	100	
Bi	209							

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:46:14
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Ge	72		ug/L			219106	206980	1
	As	75	53.415	ug/L	0.027	0	262	66510	1
	As-1	75	52.208	ug/L	0.293	0	6150	68461	1
	Se	82	83.754	ug/L	1.673	1	1	12538	1
	Se	78	83.036	ug/L	1.846	2	6222	34099	0
	Cl	37		mg/L			1671876	1687233	2
	Y	89		ug/L			245638	245281	1
	Kr	83		ug/L			138	122	8
>	In	115		ug/L			281006	276285	1
	Ag	107	50.955	ug/L	0.257	0	12	456878	0
	Cd	111	50.507	ug/L	0.321	0	143	117801	1
	Cd	114	50.669	ug/L	0.178	0	8	273354	1
	Sb	121	50.255	ug/L	0.513	1	14	384528	0
	Sb	123	50.449	ug/L	0.747	1	12	289744	0
>	Tb	159		ug/L			332321	324882	1
	Tl	205	52.555	ug/L	0.316	0	39	1393179	1
	Pb	208	53.246	ug/L	0.643	1	273	1949123	1
	Bi	209		ug/L			312404	312554	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:51:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Ge	72		ug/L			219106	209949	0
	As	75	-0.061	ug/L	0.013	21	262	175	9
	As-1	75	0.158	ug/L	0.014	8	6150	6086	0
	Se	82	0.028	ug/L	0.077	271	1	5	200
	Se	78	0.659	ug/L	0.064	9	6222	6189	0
	Cl	37		mg/L			1671876	1696512	0
	Y	89		ug/L			245638	250936	0
	Kr	83		ug/L			138	112	5
>	In	115		ug/L			281006	281941	0
	Ag	107	0.003	ug/L	0.000	8	12	42	5
	Cd	111	0.006	ug/L	0.004	71	143	157	5
	Cd	114	0.002	ug/L	0.000	5	8	21	3
	Sb	121	0.034	ug/L	0.004	12	14	279	11
	Sb	123	0.030	ug/L	0.008	25	12	189	24
>	Tb	159		ug/L			332321	327394	0
	Tl	205	0.004	ug/L	0.000	10	39	140	8
	Pb	208	0.005	ug/L	0.001	10	273	460	4
	Bi	209		ug/L			312404	325226	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 10:55:43
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Ge	72		ug/L			219106	210506	0
	As	75	50.445	ug/L	0.480	0	262	63892	0
	As-1	75	49.906	ug/L	0.551	1	6150	66815	0
	Se	82	53.508	ug/L	0.662	1	1	8147	0
	Se	78	51.954	ug/L	1.032	1	6222	23937	0
	Cl	37		mg/L			1671876	1715166	0
	Y	89		ug/L			245638	247514	1
	Kr	83		ug/L			138	130	11
>	In	115		ug/L			281006	281288	0
	Ag	107	48.798	ug/L	0.527	1	12	445461	0
	Cd	111	49.581	ug/L	0.182	0	143	117735	1
	Cd	114	49.605	ug/L	0.664	1	8	272438	0
	Sb	121	48.672	ug/L	0.511	1	14	379164	0
	Sb	123	48.495	ug/L	0.646	1	12	283570	0
>	Tb	159		ug/L			332321	330534	0
	Tl	205	51.126	ug/L	0.330	0	39	1378877	0
	Pb	208	51.343	ug/L	0.384	0	273	1912162	0
	Bi	209		ug/L			312404	315993	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:00:52
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	210716	0
|	**As**	**75**	**-0.049**	ug/L	0.016	32	262	191	10
|	**As-1**	**75**	**-0.033**	ug/L	0.041	123	6150	5874	0
|	**Se**	**82**	**-0.082**	ug/L	0.066	81	1	-10	92
[	**Se**	**78**	**-0.067**	ug/L	0.098	145	6222	5960	0
	Cl	**37**		mg/L			1671876	1744824	0
	Y	**89**		ug/L			245638	242597	0
	Kr	**83**		ug/L			138	128	3
[>	**In**	**115**		ug/L			281006	274902	0
|	**Ag**	**107**	**0.004**	ug/L	0.001	29	12	47	22
|	**Cd**	**111**	**0.005**	ug/L	0.007	138	143	152	10
|	**Cd**	**114**	**0.002**	ug/L	0.000	16	8	20	8
|	**Sb**	**121**	**0.031**	ug/L	0.004	13	14	246	13
[	**Sb**	**123**	**0.031**	ug/L	0.007	24	12	189	22
[>	**Tb**	**159**		ug/L			332321	323333	0
|	**Tl**	**205**	**0.004**	ug/L	0.000	5	39	132	3
|	**Pb**	**208**	**0.004**	ug/L	0.001	32	273	409	10
[	**Bi**	**209**		ug/L			312404	313182	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:05:12
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Ge	72		ug/L			219106	212761	0
	As	75	0.209	ug/L	0.010	5	262	521	2
	As-1	75	0.147	ug/L	0.016	10	6150	6153	0
	Se	82	0.572	ug/L	0.081	14	1	89	13
	Se	78	0.322	ug/L	0.070	21	6222	6154	0
	Cl	37		mg/L			1671876	1742863	0
	Y	89		ug/L			245638	242247	0
	Kr	83		ug/L			138	123	6
>	In	115		ug/L			281006	274670	1
	Ag	107	0.181	ug/L	0.005	2	12	1625	3
	Cd	111	0.112	ug/L	0.008	7	143	399	5
	Cd	114	0.103	ug/L	0.004	4	8	560	4
	Sb	121	0.207	ug/L	0.005	2	14	1587	1
	Sb	123	0.214	ug/L	0.010	4	12	1232	3
>	Tb	159		ug/L			332321	325007	0
	Tl	205	0.214	ug/L	0.000	0	39	5721	0
	Pb	208	0.110	ug/L	0.002	1	273	4284	0
	Bi	209		ug/L			312404	312733	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:09:31
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	207464	0
|	**As**	**75**	**0.017**	ug/L	0.014	86	262	269	6
|	**As-1**	**75**	**-0.022**	ug/L	0.024	105	6150	5797	0
|	**Se**	**82**	**-0.175**	ug/L	0.041	23	1	-24	25
L	**Se**	**78**	**-0.231**	ug/L	0.109	47	6222	5812	0
	Cl	**37**		mg/L			1671876	3032992	0
	Y	**89**		ug/L			245638	234318	0
	Kr	**83**		ug/L			138	145	3
[>	**In**	**115**		ug/L			281006	259327	1
|	**Ag**	**107**	**0.022**	ug/L	0.005	24	12	198	22
|	**Cd**	**111**	**0.058**	ug/L	0.016	27	143	258	14
|	**Cd**	**114**	**0.046**	ug/L	0.005	0	8	3279	0
|	**Sb**	**121**	**0.066**	ug/L	0.004	5	14	485	6
L	**Sb**	**123**	**0.064**	ug/L	0.002	3	12	358	4
[>	**Tb**	**159**		ug/L			332321	319540	0
|	**Tl**	**205**	**0.023**	ug/L	0.002	7	39	625	7
|	**Pb**	**208**	**0.035**	ug/L	0.001	1	273	1523	2
L	**Bi**	**209**		ug/L			312404	290795	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:14:20
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Ge	72		ug/L			219106	206396	0
|	As	75	18.883	ug/L	0.138	0	262	23605	0
|	As-1	75	19.448	ug/L	0.152	0	6150	29066	0
|	Se	82	-0.102	ug/L	0.035	34	1	-13	37
L	Se	78	-0.307	ug/L	0.023	7	6222	5757	0
	Cl	37		mg/L			1671876	3019260	0
	Y	89		ug/L			245638	228350	0
	Kr	83		ug/L			138	138	3
[>	In	115		ug/L			281006	254703	0
|	Ag	107	19.476	ug/L	0.212	1	12	160991	0
|	Cd	111	19.834	ug/L	0.154	0	143	42722	0
|	Cd	114	20.412	ug/L	0.112	0	8	101521	0
|	Sb	121	0.061	ug/L	0.001	1	14	442	1
L	Sb	123	0.070	ug/L	0.006	8	12	383	8
[>	Tb	159		ug/L			332321	315096	0
|	Tl	205	0.021	ug/L	0.001	3	39	584	2
|	Pb	208	0.037	ug/L	0.001	2	273	1564	2
L	Bi	209		ug/L			312404	285988	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:19:08
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	208315	0
|	**As**	**75**	**196.762**	ug/L	1.388	0	262	245904	0
|	**As-1**	**75**	**196.649**	ug/L	1.381	0	6150	243354	0
|	**Se**	**82**	**192.298**	ug/L	1.001	0	1	28975	0
L	**Se**	**78**	**191.461**	ug/L	1.334	0	6222	71417	0
	Cl	**37**		mg/L			1671876	1710853	0
	Y	**89**		ug/L			245638	228223	0
	Kr	**83**		ug/L			138	146	4
[>	**In**	**115**		ug/L			281006	257080	0
|	**Ag**	**107**	**192.888**	ug/L	1.628	0	12	1609303	1
|	**Cd**	**111**	**196.686**	ug/L	1.133	0	143	426451	0
|	**Cd**	**114**	**193.881**	ug/L	0.858	0	8	973210	0
|	**Sb**	**121**	**200.539**	ug/L	2.185	1	14	1427749	0
L	**Sb**	**123**	**201.651**	ug/L	0.497	0	12	1077717	0
[>	**Tb**	**159**		ug/L			332321	318041	1
|	**Tl**	**205**	**195.688**	ug/L	1.477	0	39	5078307	1
|	**Pb**	**208**	**194.270**	ug/L	0.797	0	273	6960965	1
L	**Bi**	**209**		ug/L			312404	276389	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:24:16
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Ge**	**72**		ug/L			219106	207827	0
|	**As**	**75**	**292.171**	ug/L	1.820	0	262	364159	0
|	**As-1**	**75**	**292.871**	ug/L	2.192	0	6150	358714	0
|	**Se**	**82**	**278.760**	ug/L	2.355	0	1	41902	0
⌊	**Se**	**78**	**279.811**	ug/L	3.989	1	6222	101398	0
	Cl	**37**		mg/L			1671876	1709308	0
	Y	**89**		ug/L			245638	228032	0
	Kr	**83**		ug/L			138	159	0
⌈>	**In**	**115**		ug/L			281006	252546	0
|	**Ag**	**107**	**287.919**	ug/L	2.082	0	12	2359790	0
|	**Cd**	**111**	**294.391**	ug/L	0.891	0	143	626990	0
|	**Cd**	**114**	**291.828**	ug/L	2.325	0	8	1439048	0
|	**Sb**	**121**	**304.323**	ug/L	2.099	0	14	2128547	0
⌊	**Sb**	**123**	**304.751**	ug/L	2.270	0	12	1600003	0
⌈>	**Tb**	**159**		ug/L			332321	315238	0
|	**Tl**	**205**	**292.132**	ug/L	1.151	0	39	7514022	0
|	**Pb**	**208**	**287.375**	ug/L	2.396	0	273	10205860	0
⌊	**Bi**	**209**		ug/L			312404	255387	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:29:25
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	207518	0
|	**As**	**75**	**49.847**	ug/L	0.542	1	262	62242	0
|	**As-1**	**75**	**49.720**	ug/L	0.564	1	6150	65644	0
|	**Se**	**82**	**49.240**	ug/L	0.567	1	1	7391	0
L	**Se**	**78**	**48.719**	ug/L	0.428	0	6222	22496	0
	Cl	**37**		mg/L			1671876	1710397	0
	Y	**89**		ug/L			245638	228437	1
	Kr	**83**		ug/L			138	131	8
[>	**In**	**115**		ug/L			281006	255543	0
|	**Ag**	**107**	**49.238**	ug/L	0.331	0	12	408344	0
|	**Cd**	**111**	**49.200**	ug/L	0.245	0	143	106137	0
|	**Cd**	**114**	**49.650**	ug/L	1.211	2	8	247714	1
|	**Sb**	**121**	**50.670**	ug/L	0.224	0	14	358619	0
L	**Sb**	**123**	**50.641**	ug/L	0.212	0	12	269038	0
[>	**Tb**	**159**		ug/L			332321	309477	0
|	**Tl**	**205**	**50.208**	ug/L	0.348	0	39	1267836	0
|	**Pb**	**208**	**50.422**	ug/L	0.437	0	273	1758229	0
L	**Bi**	**209**		ug/L			312404	291355	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:34:35
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	206677	0
|	**As**	**75**	**-0.044**	ug/L	0.026	59	262	193	16
|	**As-1**	**75**	**-0.129**	ug/L	0.037	28	6150	5647	0
|	**Se**	**82**	**-0.087**	ug/L	0.033	38	1	-11	43
|	**Se**	**78**	**-0.429**	ug/L	0.110	25	6222	5723	0
	Cl	**37**		mg/L			1671876	1728270	0
	Y	**89**		ug/L			245638	225279	0
	Kr	**83**		ug/L			138	125	3
[>	**In**	**115**		ug/L			281006	254867	1
|	**Ag**	**107**	**0.010**	ug/L	0.002	19	12	93	18
|	**Cd**	**111**	**0.005**	ug/L	0.004	83	143	141	5
|	**Cd**	**114**	**0.006**	ug/L	0.002	31	8	38	25
|	**Sb**	**121**	**0.082**	ug/L	0.008	9	14	591	9
|	**Sb**	**123**	**0.081**	ug/L	0.006	7	12	440	6
[>	**Tb**	**159**		ug/L			332321	307417	0
|	**Tl**	**205**	**0.010**	ug/L	0.001	11	39	288	10
|	**Pb**	**208**	**0.010**	ug/L	0.001	12	273	595	7
|	**Bi**	**209**		ug/L			312404	292851	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 BDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:39:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	204469	0
|	**As**	**75**	**0.992**	ug/L	0.027	2	262	1460	2
|	**As-1**	**75**	**0.788**	ug/L	0.018	2	6150	6674	0
|	**Se**	**82**	**0.906**	ug/L	0.092	10	1	135	10
L	**Se**	**78**	**0.266**	ug/L	0.072	27	6222	5895	0
	Cl	**37**		mg/L			1671876	3798759	1
	Y	**89**		ug/L			245638	243580	1
	Kr	**83**		ug/L			138	140	1
[>	**In**	**115**		ug/L			281006	259285	1
|	**Ag**	**107**	**0.016**	ug/L	0.003	18	12	143	16
|	**Cd**	**111**	**0.015**	ug/L	0.026	168	143	165	34
|	**Cd**	**114**	**0.094**	ug/L	0.006	6	8	483	7
|	**Sb**	**121**	**0.683**	ug/L	0.007	1	14	4914	0
L	**Sb**	**123**	**0.677**	ug/L	0.006	0	12	3658	0
[>	**Tb**	**159**		ug/L			332321	317700	0
|	**Tl**	**205**	**0.009**	ug/L	0.001	15	39	282	13
|	**Pb**	**208**	**0.841**	ug/L	0.011	1	273	30369	1
L	**Bi**	**209**		ug/L			312404	283821	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:44:12
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Ge**	**72**		ug/L			219106	210548	0
|	**As**	**75**	**1.023**	ug/L	0.060	5	262	1543	4
|	**As-1**	**75**	**0.711**	ug/L	0.088	12	6150	6778	1
|	**Se**	**82**	**1.080**	ug/L	0.077	7	1	165	7
⌊	**Se**	**78**	**0.019**	ug/L	0.082	427	6222	5985	0
	Cl	**37**		mg/L			1671876	3834234	0
	Y	**89**		ug/L			245638	253786	0
	Kr	**83**		ug/L			138	137	7
⌈>	**In**	**115**		ug/L			281006	268445	0
|	**Ag**	**107**	**0.007**	ug/L	0.001	13	12	73	10
|	**Cd**	**111**	**-0.007**	ug/L	0.052	756	143	121	96
|	**Cd**	**114**	**0.085**	ug/L	0.003	3	8	452	2
|	**Sb**	**121**	**0.659**	ug/L	0.009	1	14	4914	0
⌊	**Sb**	**123**	**0.680**	ug/L	0.014	1	12	3806	1
⌈>	**Tb**	**159**		ug/L			332321	327009	0
|	**Tl**	**205**	**0.005**	ug/L	0.001	12	39	184	9
|	**Pb**	**208**	**0.834**	ug/L	0.001	0	273	30997	0
⌊	**Bi**	**209**		ug/L			312404	290625	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 BSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:49:00
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Ge**	**72**		ug/L			219106	214818	0
|	**As**	**75**	**28.569**	ug/L	0.045	0	262	37040	0
|	**As-1**	**75**	**26.346**	ug/L	0.430	1	6150	38844	1
|	**Se**	**82**	**77.939**	ug/L	1.148	1	1	12111	1
⌊	**Se**	**78**	**76.006**	ug/L	0.446	0	6222	32914	0
	Cl	**37**		mg/L			1671876	3875817	0
	Y	**89**		ug/L			245638	261720	1
	Kr	**83**		ug/L			138	141	4
⌈>	**In**	**115**		ug/L			281006	279860	0
|	**Ag**	**107**	**23.513**	ug/L	0.270	1	12	213568	1
|	**Cd**	**111**	**24.069**	ug/L	0.141	0	143	56937	0
|	**Cd**	**114**	**23.880**	ug/L	0.330	1	8	130491	0
|	**Sb**	**121**	**26.065**	ug/L	0.152	0	14	202044	1
⌊	**Sb**	**123**	**26.060**	ug/L	0.285	1	12	151622	0
⌈>	**Tb**	**159**		ug/L			332321	336944	1
|	**Tl**	**205**	**23.852**	ug/L	0.461	1	39	655674	0
|	**Pb**	**208**	**24.964**	ug/L	0.254	1	273	947853	1
⌊	**Bi**	**209**		ug/L			312404	299147	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:53:49
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Ge**	**72**		ug/L			219106	209808	0
	As	**75**	**0.645**	ug/L	0.037	5	262	1062	4
	As-1	**75**	**0.419**	ug/L	0.054	12	6150	6399	1
	Se	**82**	**1.095**	ug/L	0.121	11	1	167	10
	Se	**78**	**0.386**	ug/L	0.085	21	6222	6091	1
	Cl	**37**		mg/L			1671876	3764970	0
	Y	**89**		ug/L			245638	265423	1
	Kr	**83**		ug/L			138	137	3
>	**In**	**115**		ug/L			281006	285901	0
	Ag	**107**	**0.006**	ug/L	0.001	14	12	65	12
	Cd	**111**	**-0.025**	ug/L	0.009	36	143	86	25
	Cd	**114**	**0.032**	ug/L	0.003	7	8	189	7
	Sb	**121**	**0.602**	ug/L	0.012	1	14	4782	1
	Sb	**123**	**0.596**	ug/L	0.014	2	12	3557	1
>	**Tb**	**159**		ug/L			332321	339028	0
	Tl	**205**	**0.056**	ug/L	0.011	19	39	1593	18
	Pb	**208**	**0.494**	ug/L	0.003	0	273	19156	0
	Bi	**209**		ug/L			312404	307243	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 11:58:39
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Ge**	**72**		ug/L			219106	213138	0
	As	**75**	**0.654**	ug/L	0.056	8	262	1090	5
	As-1	**75**	**0.351**	ug/L	0.071	20	6150	6416	0
	Se	**82**	**1.167**	ug/L	0.143	12	1	181	11
	Se	**78**	**0.136**	ug/L	0.173	126	6222	6100	0
	Cl	**37**		mg/L			1671876	3745689	0
	Y	**89**		ug/L			245638	271953	0
	Kr	**83**		ug/L			138	131	0
>	**In**	**115**		ug/L			281006	295716	0
	Ag	**107**	**0.006**	ug/L	0.001	9	12	66	7
	Cd	**111**	**-0.041**	ug/L	0.002	6	143	50	13
	Cd	**114**	**0.030**	ug/L	0.003	8	8	182	7
	Sb	**121**	**0.570**	ug/L	0.002	0	14	4682	0
	Sb	**123**	**0.582**	ug/L	0.009	1	12	3592	1
>	**Tb**	**159**		ug/L			332321	346579	1
	Tl	**205**	**0.021**	ug/L	0.002	7	39	635	6
	Pb	**208**	**0.487**	ug/L	0.011	2	273	19290	1
	Bi	**209**		ug/L			312404	317497	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN31 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 12:03:29
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Ge**	**72**		ug/L			219106	206140	1
	As	**75**	**28.073**	ug/L	0.420	1	262	34927	1
	As-1	**75**	**25.593**	ug/L	0.417	1	6150	36373	1
	Se	**82**	**80.141**	ug/L	0.932	1	1	11948	0
	Se	**78**	**77.599**	ug/L	0.589	0	6222	32122	1
	Cl	**37**		mg/L			1671876	3742018	0
	Y	**89**		ug/L			245638	264790	1
	Kr	**83**		ug/L			138	132	2
>	**In**	**115**		ug/L			281006	285417	1
	Ag	**107**	**22.878**	ug/L	0.293	1	12	211917	1
	Cd	**111**	**23.529**	ug/L	0.076	0	143	56770	1
	Cd	**114**	**23.487**	ug/L	0.074	0	8	130902	1
	Sb	**121**	**25.033**	ug/L	0.070	0	14	197890	1
	Sb	**123**	**25.057**	ug/L	0.179	0	12	148699	2
>	**Tb**	**159**		ug/L			332321	336703	0
	Tl	**205**	**24.226**	ug/L	0.210	0	39	665615	1
	Pb	**208**	**24.932**	ug/L	0.095	0	273	946022	1
	Bi	**209**		ug/L			312404	306815	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN52 F REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 12:08:19
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Ge**	**72**		ug/L			219106	202861	0
|	**As**	**75**	**0.991**	ug/L	0.034	3	262	1447	2
|	**As-1**	**75**	**0.844**	ug/L	0.069	8	6150	6687	0
|	**Se**	**82**	**1.444**	ug/L	0.045	3	1	213	3
⌊	**Se**	**78**	**1.047**	ug/L	0.142	13	6222	6109	0
	Cl	**37**		mg/L			1671876	2390901	0
	Y	**89**		ug/L			245638	314494	1
	Kr	**83**		ug/L			138	136	5
⌈>	**In**	**115**		ug/L			281006	290578	0
|	**Ag**	**107**	**0.016**	ug/L	0.002	11	12	165	10
|	**Cd**	**111**	**0.215**	ug/L	0.019	8	143	675	6
|	**Cd**	**114**	**0.246**	ug/L	0.002	0	8	1405	0
|	**Sb**	**121**	**0.117**	ug/L	0.005	4	14	957	4
⌊	**Sb**	**123**	**0.110**	ug/L	0.006	5	12	678	4
⌈>	**Tb**	**159**		ug/L			332321	334353	0
|	**Tl**	**205**	**0.062**	ug/L	0.014	22	39	1720	21
|	**Pb**	**208**	**0.286**	ug/L	0.004	1	273	11044	1
⌊	**Bi**	**209**		ug/L			312404	307002	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN52 R REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 01, 2013 12:13:08
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	205673	0
|	**As**	**75**	**0.799**	ug/L	0.024	3	262	1231	2
|	**As-1**	**75**	**0.506**	ug/L	0.035	6	6150	6377	0
|	**Se**	**82**	**1.288**	ug/L	0.136	10	1	193	10
L	**Se**	**78**	**0.395**	ug/L	0.080	20	6222	5974	0
	Cl	**37**		mg/L			1671876	2363454	0
	Y	**89**		ug/L			245638	304542	0
	Kr	**83**		ug/L			138	140	5
[>	**In**	**115**		ug/L			281006	294147	1
|	**Ag**	**107**	**0.013**	ug/L	0.001	9	12	132	7
|	**Cd**	**111**	**-0.056**	ug/L	0.028	50	143	11	605
|	**Cd**	**114**	**0.007**	ug/L	0.001	12	8	49	10
|	**Sb**	**121**	**0.111**	ug/L	0.002	2	14	917	2
L	**Sb**	**123**	**0.111**	ug/L	0.004	3	12	689	2
[>	**Tb**	**159**		ug/L			332321	335235	0
|	**Tl**	**205**	**0.022**	ug/L	0.002	9	39	645	8
|	**Pb**	**208**	**0.180**	ug/L	0.003	1	273	7080	1
L	**Bi**	**209**		ug/L			312404	305564	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN52 E REN
Sample Dil Factor: ~~10~~ 50
Comments: M513
Sample Date/Time: Wednesday, May 01, 2013 12:17:57
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Ge**	**72**		ug/L			219106	220735	0
	As	**75**	**84.499**	ug/L	0.356	0	262	112052	0
	As-1	**75**	**87.188**	ug/L	0.371	0	6150	117779	0
	Se	**82**	**-0.035**	ug/L	0.060	172	1	-3	243
	Se	**78**	**-0.657**	ug/L	0.011	1	6222	6030	0
	Cl	**37**		mg/L			1671876	1703822	0
	Y	**89**		ug/L			245638	264931	0
	Kr	**83**		ug/L			138	131	5
>	**In**	**115**		ug/L			281006	316101	0
	Ag	**107**	**0.002**	ug/L	0.000	29	12	29	15
	Cd	**111**	**0.009**	ug/L	0.007	75	143	185	10
	Cd	**114**	**0.002**	ug/L	0.001	46	8	19	23
	Sb	**121**	**0.012**	ug/L	0.001	7	14	125	6
	Sb	**123**	**0.013**	ug/L	0.001	9	12	96	7
>	**Tb**	**159**		ug/L			332321	343924	0
	Tl	**205**	**0.015**	ug/L	0.002	10	39	471	9
	Pb	**208**	**0.016**	ug/L	0.001	3	273	915	1
	Bi	**209**		ug/L			312404	339892	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WN52 Q REN
Sample Dil Factor: ~~10~~ 50
Comments: MS-1-3
Sample Date/Time: Wednesday, May 01, 2013 12:22:46
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Ge**	**72**		ug/L			219106	219008	0
	As	**75**	**82.759**	ug/L	0.414	0	262	108888	0
	As-1	**75**	**85.425**	ug/L	0.468	0	6150	114616	0
	Se	**82**	**-0.046**	ug/L	0.024	51	1	-5	66
	Se	**78**	**-0.515**	ug/L	0.184	35	6222	6033	0
	Cl	**37**		mg/L			1671876	1742187	0
	Y	**89**		ug/L			245638	262206	1
	Kr	**83**		ug/L			138	134	4
>	**In**	**115**		ug/L			281006	314310	0
	Ag	**107**	**0.001**	ug/L	0.000	35	12	22	13
	Cd	**111**	**0.013**	ug/L	0.002	17	143	194	2
	Cd	**114**	**0.001**	ug/L	0.000	52	8	13	15
	Sb	**121**	**0.012**	ug/L	0.001	5	14	123	5
	Sb	**123**	**0.012**	ug/L	0.002	18	12	92	15
>	**Tb**	**159**		ug/L			332321	341409	0
	Tl	**205**	**0.011**	ug/L	0.001	6	39	337	5
	Pb	**208**	**0.002**	ug/L	0.000	26	273	347	4
	Bi	**209**		ug/L			312404	337948	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 12:27:35
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	**Ge**	**72**		ug/L			219106	218708	0
|	**As**	**75**	**51.235**	ug/L	0.412	0	262	67418	0
|	**As-1**	**75**	**51.032**	ug/L	0.426	0	6150	70847	0
|	**Se**	**82**	**51.309**	ug/L	0.561	1	1	8117	0
⌊	**Se**	**78**	**50.624**	ug/L	0.738	1	6222	24392	0
	Cl	**37**		mg/L			1671876	1755519	0
	Y	**89**		ug/L			245638	257027	0
	Kr	**83**		ug/L			138	141	6
⌈>	**In**	**115**		ug/L			281006	300070	0
|	**Ag**	**107**	**50.374**	ug/L	0.429	0	12	490553	0
|	**Cd**	**111**	**49.948**	ug/L	0.541	1	143	126518	0
|	**Cd**	**114**	**50.149**	ug/L	0.229	0	8	293831	0
|	**Sb**	**121**	**50.012**	ug/L	0.242	0	14	415651	1
⌊	**Sb**	**123**	**50.007**	ug/L	0.125	0	12	311961	0
⌈>	**Tb**	**159**		ug/L			332321	332132	0
|	**Tl**	**205**	**52.872**	ug/L	0.368	0	39	1432860	0
|	**Pb**	**208**	**51.786**	ug/L	0.291	0	273	1938010	0
⌊	**Bi**	**209**		ug/L			312404	319203	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 01, 2013 12:32:45
Number of Replicates: 3
Method File: C:\Elandata\Method\2008GFA7.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\050113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Ge**	**72**		ug/L			219106	218038	0
|	**As**	**75**	**-0.041**	ug/L	0.025	62	262	208	15
|	**As-1**	**75**	**-0.094**	ug/L	0.049	52	6150	6001	0
|	**Se**	**82**	**-0.109**	ug/L	0.060	55	1	-15	60
[	**Se**	**78**	**-0.291**	ug/L	0.164	56	6222	6087	0
	Cl	**37**		mg/L			1671876	1780456	0
	Y	**89**		ug/L			245638	257026	1
	Kr	**83**		ug/L			138	139	2
[>	**In**	**115**		ug/L			281006	300818	1
|	**Ag**	**107**	**0.005**	ug/L	0.001	15	12	59	11
|	**Cd**	**111**	**0.005**	ug/L	0.005	107	143	165	8
|	**Cd**	**114**	**0.001**	ug/L	0.001	85	8	15	31
|	**Sb**	**121**	**0.026**	ug/L	0.005	17	14	230	16
[	**Sb**	**123**	**0.029**	ug/L	0.005	17	12	192	16
[>	**Tb**	**159**		ug/L			332321	330657	1
|	**Tl**	**205**	**0.008**	ug/L	0.001	6	39	247	4
|	**Pb**	**208**	**0.006**	ug/L	0.001	14	273	495	5
[	**Bi**	**209**		ug/L			312404	323735	0

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 4.26.13

	Analyst 4.26 DM	Peer 4-29-13	Comment
Logbook			
Analyst, Date, Method info	√	/	
Sample ID's	√	/	
Standard/QC solution ID's recorded	√	/	
Prep codes	√	/	
Dilution factors	√	/	
Crossouts/Corrections/Deletions	√	/	
Calibration			
Blank & Standard intensities	√	/	
Standard deviations	√	/	
Curve fit	√	/	
Calibration Verification			
ICV/CCV	√	/	
ICB/CCB	√	/	
Samples			
RSD's & SD's	√	/	
Internal Standards	—	—	
Carry-over	—	—	
Method QC			
CRI/CRA	√	/	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	√	/	
Matrix Spikes	√	/	
Matrix Duplicates	√	/	
Method Blanks	√	/	
Data			
Requested elements/isotope identified	√	/	
Correct samples identified for distribution	√	/	
Raw data match distributed data	√	/	
Data filename correct	√	/	
Notes	—	—	

Mercury Analysis Log

Analyst: DM Date: 4-26-13

Instrument: CETAC Page: 2 of 6

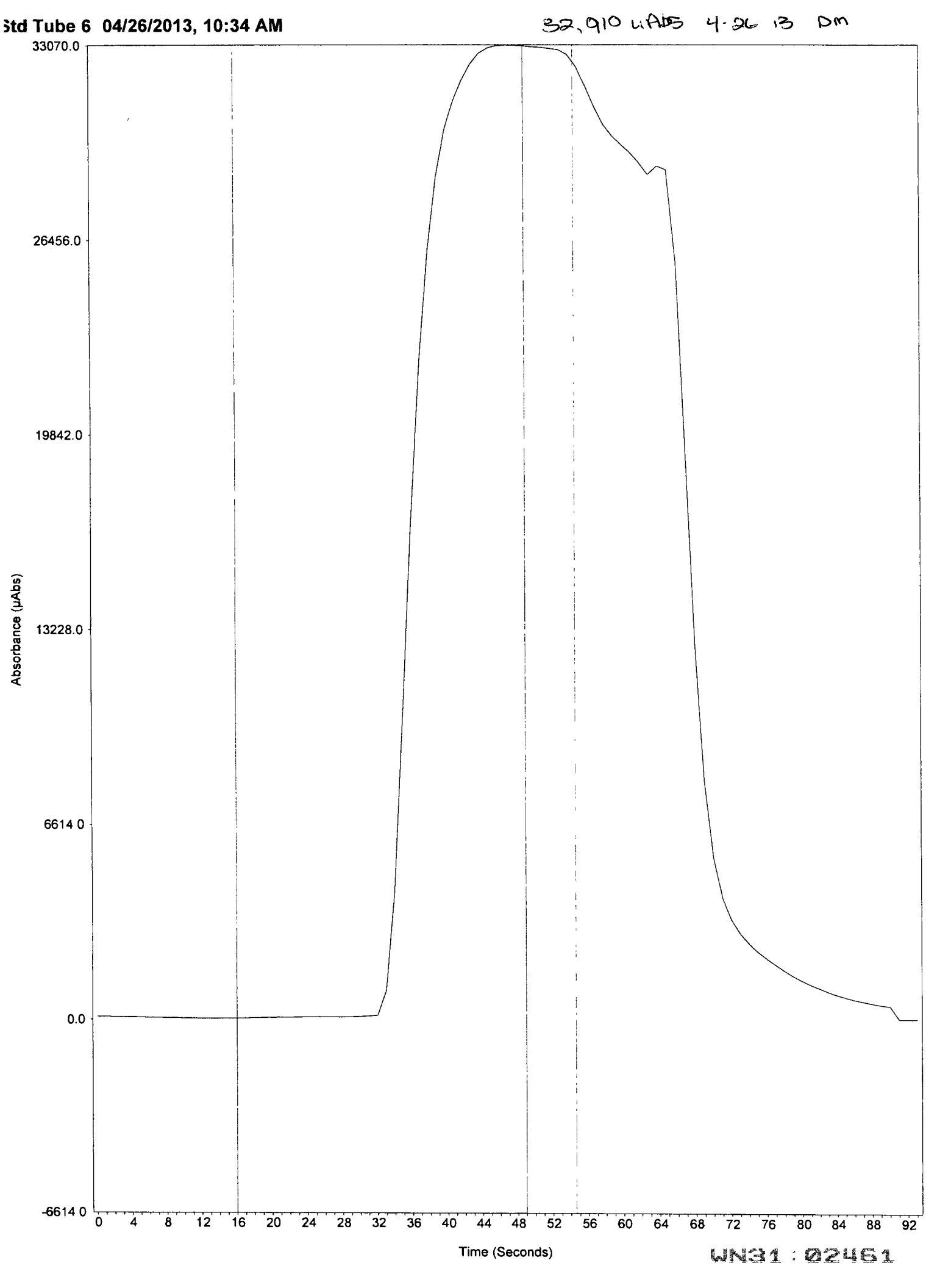
ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
STD 0.0	SMM	1X			
" 0.1					
" 0.5					
" 1.0					
" 2.0					
" 5.0					
" 10.0					
ICV			8.28	Begin CLP %R=104	✓
ICB			-0.01		✓
CCV1			4.9	%R=105	✓
CCB1			-0.01		✓
CRA			0.10		✓
WN31 MB1			0.01		✓
" MB1SPK			2.08	%R=104	✓
" A			0.52		
" ADUP			0.40		✓
" PSPK			1.58	%R=106	✓
WN27 MB1			0.01		✓
" MB1SPK			2.09	%R=105	✓
" A			0.29		
" ADUP			0.34		✓
CCV2			4.29	%R=107	✓
CCB2			-0.01		✓
WN27 PSPK			1.42	%R=113	✓
WN20 MB1			0.01		✓
" MB1SDK			2.05	%R=103	✓
" MB1SDD			2.13	%R=107	✓
" A			0.44		
" ADUP			0.46		✓
" PSPK	↓	↓	1.49	%R=105	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2484 14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3030-11 ICV/CCV: 59-6


Std Tube 6 04/26/2013, 10:34 AM
32,910 uAbs 4-26 13 DM
33070.0
26456.0
19842.0
13228.0
6614 0
0.0
-6614 0
Absorbance (µAbs)
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92
Time (Seconds)
WN31 : 02461

CETAC Hg Analysis Report - 13042600.DB - Friday, April 26, 2013, 3:03:18 PM

Analyst
Date Started Friday, April 26, 2013, 11:07:25
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:07	4.05	0.04	13400.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:09	-0.01	4.75	-43.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM19 A SWM	26-Apr-2013, 11:10	4.70	0.19	15500.00	20.00	- PT Sampk

4-29-13

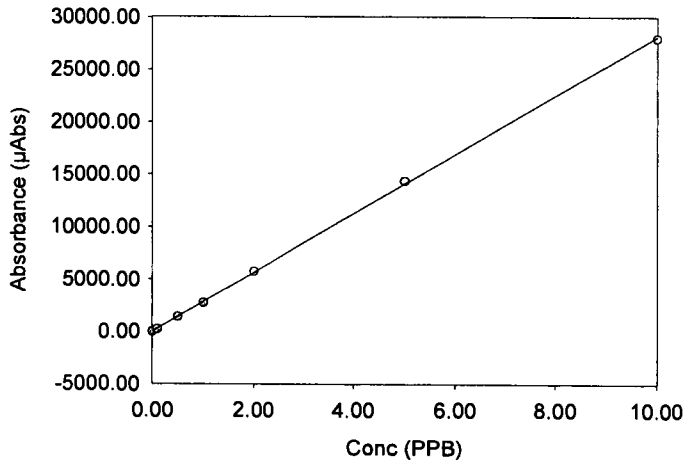
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:12	4.05	0.18	13300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:14	-0.00	18.30	-15.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	26-Apr-2013, 11:16	0.00	8.96	-33.50	1.00	
Standard #1	26-Apr-2013, 11:17	0.10	2.53	217.00	1.00	
Standard #2	26-Apr-2013, 11:19	0.50	0.17	1400.00	1.00	
Standard #3	26-Apr-2013, 11:20	1.00	0.82	2720.00	1.00	
Standard #4	26-Apr-2013, 11:22	2.00	0.18	5760.00	1.00	
Standard #5	26-Apr-2013, 11:24	5.00	0.09	14400.00	1.00	
Standard #6	26-Apr-2013, 11:25	10.00	0.11	28000.00	1.00	

SMM

Calibration Data



Int.	0.000
Slope	2817.346
Correlation	0 99989

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	26-Apr-2013, 11:29	8.28	0.51	23300.00	1.00	
ICB	26-Apr-2013, 11:31	-0.01	14.50	-40.40	1.00	

Bgm CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:32	4.19	0.14	11800.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:34	-0.01	5.72	-40.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	26-Apr-2013, 11:35	0.10	2.09	286.00	1.00	
WN31 MB1 SMM	26-Apr-2013, 11:37	0.01	6.64	25.70	1.00	
WN31 MB1SPK SMM	26-Apr-2013, 11:39	2.08	1.69	5860.00	1.00	
WN31 A SMM	26-Apr-2013, 11:40	0.32	1.06	912.00	1.00	

WN31 : 02462

Analyst
Date Started Friday, April 26, 2013, 11:42:22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WN31 ADUP SMM	26-Apr-2013, 11:42	0.40	1.46	1120.00	1.00	
WN31 ASPK SMM	26-Apr-2013, 11:43	1.38	0.20	3900.00	1.00	
WN27 MB1 SMM	26-Apr-2013, 11:45	0.01	8.50	21.70	1.00	
WN27 MB1SPK SMM	26-Apr-2013, 11:47	2.09	0.35	5900.00	1.00	
WN27 A SMM	26-Apr-2013, 11:48	0.29	0.14	828.00	1.00	
WN27 ADUP SMM	26-Apr-2013, 11:50	0.34	0.22	971.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 11:52	4.29	0.10	12100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 11:53	-0.01	6.32	-28.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WN27 ASPK SMM	26-Apr-2013, 11:55	1.42	0.34	3990.00	1.00	
WN20 MB1 SMM	26-Apr-2013, 11:57	0.01	20.00	21.40	1.00	
WN20 MB1SPK SMM	26-Apr-2013, 11:58	2.05	0.60	5780.00	1.00	
WN20 MB1SPD SMM	26-Apr-2013, 12:00	2.13	0.38	6010.00	1.00	
WN20 A SMM	26-Apr-2013, 12:01	0.44	0.13	1240.00	1.00	
WN20 ADUP SMM	26-Apr-2013, 12:03	0.46	0.66	1300.00	1.00	
WN20 ASPK SMM	26-Apr-2013, 12:05	1.49	0.19	4190.00	1.00	
WN20 B SMM	26-Apr-2013, 12:06	0.45	0.28	1270.00	1.00	
WN20 C SMM	26-Apr-2013, 12:08	0.43	0.10	1210.00	1.00	
WN20 D SMM	26-Apr-2013, 12:09	0.29	0.29	828.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 12:11	4.29	0.18	12100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 12:13	-0.00	57.90	-4.79	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WN20 E SMM	26-Apr-2013, 12:14	0.07	1.51	198.00	1.00	
WM89 MB1 SMM	26-Apr-2013, 12:16	0.00	34.80	9.44	1.00	
WM89 MB1SPK SMM	26-Apr-2013, 12:18	2.06	0.43	5810.00	1.00	
WM89 REF1 SMM	26-Apr-2013, 12:19	6.54	0.48	18400.00	5.00	
WM89 A SMM	26-Apr-2013, 12:21	0.04	3.01	117.00	1.00	
WM89 B SMM	26-Apr-2013, 12:22	0.05	1.08	140.00	1.00	
WM89 C SMM	26-Apr-2013, 12:24	0.26	0.88	728.00	1.00	
WM89 D SMM	26-Apr-2013, 12:26	0.13	1.31	366.00	1.00	
WM89 DDUP SMM	26-Apr-2013, 12:27	0.11	0.67	320.00	1.00	
WM89 DSPK SMM	26-Apr-2013, 12:29	1.19	0.37	3360.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	26-Apr-2013, 12:31	4.23	0.08	11900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	26-Apr-2013, 12:32	0.00	91.70	8.78	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM89 E SMM	26-Apr-2013, 12:34	0.11	0.85	320.00	1.00	
WN59 MB1 SMM	26-Apr-2013, 12:36	0.01	4.60	20.40	1.00	
WN59 MB1SPK SMM	26-Apr-2013, 12:37	1.98	0.21	5590.00	1.00	
WN59 MB1SPD SMM	26-Apr-2013, 12:39	2.08	0.18	5870.00	1.00	
WN59 A SMM	26-Apr-2013, 12:40	0.96	0.16	2690.00	1.00	
WN59 ADUP SMM	26-Apr-2013, 12:42	0.97	0.21	2720.00	1.00	
WN59 ASPK SMM	26-Apr-2013, 12:44	2.08	0.34	5860.00	1.00	
WN59 B SMM	26-Apr-2013, 12:45	0.13	1.60	377.00	1.00	
WN59 C SMM	26-Apr-2013, 12:47	0.05	2.90	141.00	1.00	
WN59 D SMM	26-Apr-2013, 12:48	0.16	0.23	447.00	1.00	

4-29-13

WN31 : 02463

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: 5mm Instrument: CETAC

Analyst: CB Date: 04-24-13

Bath Temp: 90°C Start Time: 0840 End Time: 0910

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	3030-11	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

Prep Code: _____ Instrument: _____

Analyst: _____ Date: _____

Bath Temp: _____ Start Time: _____ End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ H_2SO_4: _____ HCl: _____

5% $K_2S_2O_8$: _____ 5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mM Matrix: Soil

Analyst: CB Date: 04-25-13

Bath Temp: 90°C Start Time: 1140 End Time: 1210

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WN31 A	7	–	0.218	50.0	5/08 1	Y	
" Adup	7	–	0.214		1		
" ASpk	7	–	0.216		1		
" mBl	–	–	–		1		
" mBlSpk	–	–	–		1		
WN27 A	1	–	0.217		5/08 1		
" Adup	1	–	0.216		1		
" ASpk	1	–	0.215		1		
" mBl	–	–	–	↓	1	↓	
" mBlSpk	–	–	–	50.0	1	Y	
				CB			
				4-25-13			

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: –

5% $K_2S_2O_8$: mp2462 5% $KMnO_4$: mp2445 Digest Tube Lot: mH21KK08

Mercury Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WN31, WN35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4-24-13

Final Volume _____

Final Volume (Hg): 20

Sample ID WN35 AERA. MBSPK

Prepcode:				
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.:				
Vol Added (mL):				
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	TLM	CVA	1.0	0.22	307-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

WN35 · 13SN

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4-26-13

Final Volume _____

Final Volume (Hg): 20

Sample ID WN35 BSPK, MBSPK

		Prepcode:		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:			
		Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	DLM	CVA	1.0	0.02	3057-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TLM/DLM
Analyst: DM
Bath Temp: 95°c
Start Time: 0825
Matrix: Water
Date: 4·26·13
End Time: 1025

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WN35 A	1	✓	20.0	20.0	5/8 1	Y	
" DUP	1	✓			1		
" PSPK	1	✓			1		
" MB1	—	✓			1		
" MB1SPK	—	✓			1		
" B	1	—			1		
" BDUP	1	—			1		
" BSPK	1	—			1		— DLM
" MB2	—	—	↓	↓	1	↓	
" MB2SPK	—	—	20.0	20.0	1	Y	

4·26·13 DM

Chemical/Reagent ID:

HNO_3: JBKQ
H_2SO_4: JB044
HCl: —
5% $K_2S_2O_8$: MP2462
5% $KMnO_4$: MP2445
Digest Tube Lot: MMOILKKO

Mercury Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 5-02-13

Low Level	Analyst 5-2 DM	Peer 5-3-13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
QC			
ICV/CCV	✓	✓	See RUN LOG
ICB/CCB	✓	✓	
Analytical			
RSD's & SD's	✓	✓	See RUN LOG
Internal Standards	—	—	
Carry-over	—	—	
Matrix QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Miscellaneous	—	—	

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-02-13

Page: 1 of 7

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
STD 0.0	TLM	1x		
" 20.0				
" 50.0				
" 100.0				
" 200.0				
" 400.0				
" 1000.0				
ICV			507.77	Begin CLP %R=102 ✓
ICB			-2.92	✓
CCV1			516.46	%R=103 ✓
CCB1			-2.82	✓
CRA			20.28	✓
WN54 MB1			-1.44	✓
" MB1SPK			213.89	%R=107 ✓
" A			40.05	
" AOVP			37.69	✓
" AREP			147.08	%R=107 ✓
" B				
" C				
" D				
" E				
CCV2			516.85	%R=103 ✓
CCB2			-3.11	✓
WN54 F				H: RBD
" G				
" H				
" I				
" J				
" K				
" L				

Chemical/Reagent ID:

10% $SnCl_2$: MR2484

14% NH_2OH/NaCl: MR2477

Standard ID:

Standard: 3031-14

ICV/CCV: 3031-15

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-02-13

Page: 2 of 7

ARI Sample ID		Prep Code	Dilution	QC Data (ppb) ppt	Comments	
WN54	MBQ	TLM	1X	0.36		✓
"	MBZBPK			217.50	%R = 109	✓
"	M			28.50		
CCV3				516.97	%R = 103	✓
CCB3				-1.17		✓
WN54	MDUP			30.58		✓
"	MSPK			198.27	%R = 110	✓
"	N					
"	O					
"	P					
"	Q					
"	R					
"	S					
"	T					
"	U					
CCV4				514.79	%R = 103	✓
CCB4				0.55		✓
WN54	V					
"	W					
"	X					
CCV5				511.43	%R = 102	✓
CCB5				0.55		✓
WN55	MBI			0.75		✓
"	MBIBPK			209.26	%R = 105	✓
"	A			-1.99		
"	AOUP			-2.64	NO RPD: Undetected	✓
"	ASPK			103.88	%R = 104	✓
"	B					
"	C					
"	D	↓	↓			

Chemical/Reagent ID:

10% $SnCl_2$: MP2484

14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3091-14

ICV/CCV: 3081-15

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 5-02-13

Page: 3 of 7

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
WN55 E	TLM	1X		
" F				
CCV6			517.48	%R=103 ✓
CCB6			-0.86	✓
WN55 G				
" H				
" I				
" J				
" MB2			1.09	✓
" MB2SPK			207.30	%R=104 ✓
" K			-2.50	
" KDUP			-1.17	NO RPD: Undetected ✓
" KSPK			106.25	%R=106 ✓
" L				
CCV7			527.20	%R=105 ✓
CCB7			-2.15	✓
WN56 M				
" N				
" O				
" P				
" Q				
" R				
" S				
" T				
WN35 MB1			5.43	✓
" MB1SPK			213.58	%R=107 ✓
CCV8			536.07	%R=108 ✓
CCB8			0.31	✓
WN35 A			4.99	
" ADUP			6.00	NO RPD: Undetected ✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2484

14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 5031-14

ICV/CCV: 5031-15

Mercury Analysis Log

Analyst: TM

Instrument: CETAC

Date: 5-02-13

Page: 4 of 7

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
WN85 PBPK	TLM	1X	116.15	%R=116 ✓
" MB2	DLM		2.03	✓
" MB2SPK			220.01	%R=110 ✓
" B			0.96	
" BDUP			1.48	NO RPD: Undetected ✓
" BSPK			113.15	%R=113 ✓
CCV9	TLM		547.23	%R=109 ✓
CCB9			-1.02	END CLP ✓
WN93 MB1			-2.07	✓
" MB1SPK			229.16	%R=112 ✓
" A				
" B			3.58	
" BDUP			0.18	NO RPD: Undetected ✓
" BSPK			114.72	%R=115 ✓
" C				
" D				
" MB2			-3.66	✓
" MB2SPK			221.67	%R=111 ✓
CCV10			560.11	%R=112 High X
STD 0.0			5-3-13	
" 20.0				
" 50.0				
" 100.0				
" 200.0				
" 400.0				
" 1000.0				
ICV			514.43	Begin CLP %R=103 ✓
ICB			1.98	✓
CCV1			508.80	%R=105 ✓
CCB1			-0.03	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2484

14% NH_2OH/NaCl: MP2477

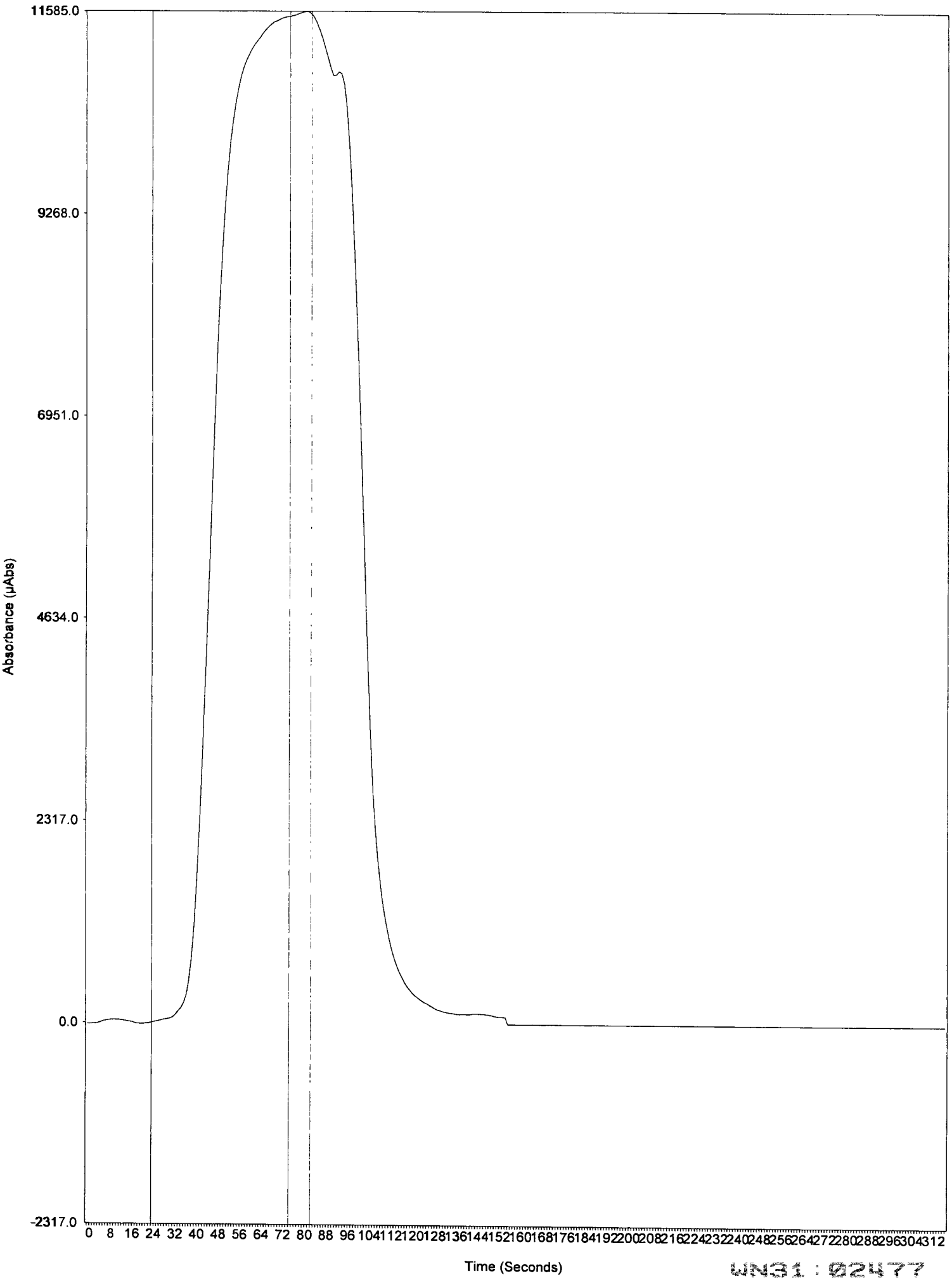
Standard ID:

Standard: 3031-14

ICV/CCV: 3031-15

Std Tube 6 05/02/2013, 7:51 AM

11.514 ug/ml 5-2-13 DM



WN31 : 02477

CETAC Hg Analysis Report - 13050200.DB - Thursday, May 02, 2013, 4:24:56 PM

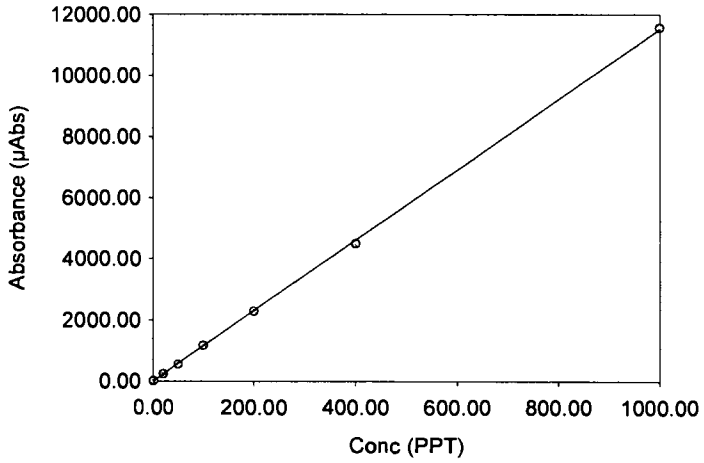
Analyst
Date Started Thursday, May 02, 2013, 07:51:00
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Std Tube 6	02-May-2013, 07:51	1000.00	0.18	11600.00	11547	11567	11590	11591	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	02-May-2013, 07:53	0.00	48.70	17.50	7	15	22	26	
Standard #1	02-May-2013, 07:56	20.00	3.53	233.00	223	232	234	243	
Standard #2	02-May-2013, 07:59	50.00	1.03	556.00	562	556	557	548	
Standard #3	02-May-2013, 08:01	100.00	0.29	1170.00	1170	1174	1177	1178	
Standard #4	02-May-2013, 08:04	200.00	0.48	2280.00	2267	2280	2289	2292	
Standard #5	02-May-2013, 08:07	400.00	0.45	4500.00	4471	4488	4506	4517	
Standard #6	02-May-2013, 08:10	1000.00	0.15	11600.00	11580	11604	11597	11566	

Calibration Data



Int.	0.000
Slope	11.535
Correlation	0.99991

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	02-May-2013, 08:13	508.00	0.09	5860.00	5852	5855	5860	5863	Ecg in CLP
ICB	02-May-2013, 08:16	-2.92	20.10	-33.70	-26	-30	-38	-41	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 08:19	516.00	0.11	5960.00	5964	5961	5957	5949	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 08:22	-2.82	9.70	-32.50	-37	-32	-29	-32	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	02-May-2013, 08:24	20.30	2.54	234.00	238	240	229	229	
WN54 MB1 TLM	02-May-2013, 08:27	-1.44	7.22	-16.60	-17	-15	-16	-18	
WN54 MB1SPK TLM	02-May-2013, 08:30	214.00	0.41	2470.00	2478	2473	2464	2454	
WN54 A TLM	02-May-2013, 08:32	40.10	0.89	462.00	462	468	460	459	
WN54 ADUP TLM	02-May-2013, 08:35	37.70	1.03	435.00	440	436	434	429	
WN54 ASPK TLM	02-May-2013, 08:38	147.00	0.23	1700.00	1691	1697	1699	1700	
WN54 B TLM	02-May-2013, 08:40	-2.93	6.92	-33.80	-37	-31	-33	-34	
WN54 C TLM	02-May-2013, 08:43	1.09	55.80	12.60	5	12	12	22	
WN54 D TLM	02-May-2013, 08:46	-1.01	10.60	-11.60	-11	-11	-11	-13	
WN54 E TLM	02-May-2013, 08:49	1.42	121.00	16.40	39	26	5	-5	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 08:51	517.00	0.12	5960.00	5951	5965	5967	5965	

CETAC Hg Analysis Report - 13050200.DB - Thursday, May 02, 2013, 4:24:57 PM

Analyst
Date Started Thursday, May 02, 2013, 08:54:30
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 08:54	-3.11	12.00	-35.90	-39	-39	-36	-30	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WN54 F TLM	02-May-2013, 08:57	25.00	5.37	288.00	307	292	283	271	Q
WN54 G TLM	02-May-2013, 08:59	-2.03	22.80	-23.40	-16	-23	-26	-29	
WN54 H TLM	02-May-2013, 09:02	1.98	11.50	22.80	26	24	21	20	
WN54 I TLM	02-May-2013, 09:05	1.99	31.00	22.90	31	27	17	16	
WN54 J TLM	02-May-2013, 09:07	1.50	11.10	17.30	18	16	16	20	
WN54 K TLM	02-May-2013, 09:10	0.55	81.00	6.39	8	1	3	13	
WN54 L TLM	02-May-2013, 09:13	13.90	2.79	160.00	166	161	158	156	
WN54 MB2 TLM	02-May-2013, 09:16	0.36	139.00	4.14	-3	7	10	3	
WN54 MB2SPK TLM	02-May-2013, 09:18	218.00	0.33	2510.00	2511	2517	2511	2497	
WN54 M TLM	02-May-2013, 09:21	28.50	0.41	329.00	328	328	329	330	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 09:24	517.00	0.07	5960.00	5967	5966	5964	5958	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 09:26	-1.17	46.60	-13.50	-9	-8	-15	-22	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WN54 MDUP TLM	02-May-2013, 09:29	30.60	2.40	353.00	363	356	350	343	
WN54 MSPK TLM	02-May-2013, 09:32	138.00	0.14	1600.00	1598	1593	1593	1596	
WN54 N TLM	02-May-2013, 09:35	-0.90	32.60	-10.40	-6	-10	-12	-14	
WN54 O TLM	02-May-2013, 09:37	-1.28	37.50	-14.80	-22	-16	-12	-10	
WN54 P TLM	02-May-2013, 09:40	1.07	42.30	12.30	18	16	10	6	
WN54 Q TLM	02-May-2013, 09:43	2.42	29.90	28.00	16	30	33	33	
WN54 R TLM	02-May-2013, 09:45	8.43	1.88	97.20	95	98	98	97	
WN54 S TLM	02-May-2013, 09:48	0.23	292.00	2.62	-8	2	9	8	
WN54 T TLM	02-May-2013, 09:51	0.34	84.30	3.87	6	-1	4	6	
WN54 U TLM	02-May-2013, 09:53	0.18	188.00	2.04	8	-0	-1	1	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 09:56	515.00	0.02	5940.00	5937	5940	5938	5938	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 09:59	-1.85	14.80	-21.40	-22	-20	-18	-26	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WN54 V TLM	02-May-2013, 10:02	-1.67	26.60	-19.20	-12	-21	-22	-23	
WN54 W TLM	02-May-2013, 10:04	2.72	9.42	31.40	35	33	29	29	
WN54 X TLM	02-May-2013, 10:07	1.45	41.50	16.70	26	17	9	15	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 10:10	511.00	0.23	5900.00	5882	5897	5908	5912	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 10:13	0.55	124.00	6.33	9	11	10	-5	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WN55 MB1 TLM	02-May-2013, 10:16	0.75	25.20	8.63	7	10	11	7	
WN55 MB1SPK TLM	02-May-2013, 10:18	209.00	0.30	2410.00	2406	2413	2413	2424	
WN55 A TLM	02-May-2013, 10:21	-1.99	34.80	-22.90	-12	-21	-28	-30	
WN55 ADUP TLM	02-May-2013, 10:24	-2.64	16.20	-30.50	-33	-36	-28	-25	
WN55 ASPK TLM	02-May-2013, 10:26	104.00	1.08	1200.00	1210	1207	1194	1182	
WN55 B TLM	02-May-2013, 10:29	-3.48	10.80	-40.10	-34	-41	-44	-41	
WN55 C TLM	02-May-2013, 10:32	1.89	39.10	21.80	13	17	23	33	
WN55 D TLM	02-May-2013, 10:35	-0.75	27.60	-8.62	-10	-6	-7	-11	
WN55 E TLM	02-May-2013, 10:37	2.32	32.30	26.70	36	32	23	17	

Analyst
Date Started Thursday, May 02, 2013, 10:40:26
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WN55 F TLM	02-May-2013, 10:40	-2.09	26.10	-24.10	-30	-28	-22	-16	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Standard	02-May-2013, 10:43	517.00	0.18	5970.00	5958	5963	5976	5981	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Blank	02-May-2013, 10:45	-0.86	23.50	-9.97	-8	-9	-11	-13	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
WN55 G TLM	02-May-2013, 10:48	0.03	909.00	0.30	-1	4	-1	-2	
WN55 H TLM	02-May-2013, 10:51	-3.14	17.00	-36.30	-39	-42	-36	-28	
WN55 I TLM	02-May-2013, 10:54	-0.07	1110.00	-0.78	5	7	-2	-12	
WN55 J TLM	02-May-2013, 10:56	-3.16	7.09	-36.50	-34	-35	-39	-39	
WN55 MB2 TLM	02-May-2013, 10:59	1.69	47.80	19.40	26	26	19	7	
WN55 MB2SPK TLM	02-May-2013, 11:02	207.00	0.31	2390.00	2397	2396	2392	2381	
WN55 K TLM	02-May-2013, 11:04	-2.50	2.46	-28.80	-29	-29	-29	-28	
WN55 KDUP TLM	02-May-2013, 11:07	-1.17	55.40	-13.50	-5	-11	-16	-22	
WN55 KSPK TLM	02-May-2013, 11:10	106.00	0.34	1230.00	1228	1230	1225	1220	
WN55 L TLM	02-May-2013, 11:12	0.05	903.00	0.57	-6	-0	4	5	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Standard	02-May-2013, 11:15	527.00	0.10	6080.00	6084	6087	6083	6073	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Blank	02-May-2013, 11:18	-2.15	14.50	-24.80	-29	-25	-20	-24	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
WN55 M TLM	02-May-2013, 11:21	-0.89	75.40	-10.30	-3	-6	-12	-21	
WN55 N TLM	02-May-2013, 11:23	1.67	41.00	19.20	8	19	25	25	
WN55 O TLM	02-May-2013, 11:26	1.01	83.60	11.70	-3	13	18	18	
WN55 P TLM	02-May-2013, 11:29	0.34	194.00	3.87	14	6	-1	-3	
WN55 Q TLM	02-May-2013, 11:31	-1.53	56.90	-17.70	-28	-24	-13	-6	
WN55 R TLM	02-May-2013, 11:34	-1.80	13.10	-20.70	-24	-20	-18	-21	
WN55 S TLM	02-May-2013, 11:37	-1.25	22.80	-14.50	-19	-15	-13	-11	
WN55 T TLM	02-May-2013, 11:40	1.70	17.90	19.60	22	22	19	15	
WN35 MB1 TLM	02-May-2013, 11:42	3.43	12.80	39.60	43	44	39	33	
WN35 MB1SPK TLM	02-May-2013, 11:45	214.00	0.20	2460.00	2459	2464	2470	2462	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Standard	02-May-2013, 11:48	538.00	0.12	6210.00	6198	6205	6209	6216	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Blank	02-May-2013, 11:50	0.31	70.20	3.56	2	4	7	2	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
WN35 A TLM	02-May-2013, 11:53	4.99	0.73	57.60	57	58	58	57	
WN35 ADUP TLM	02-May-2013, 11:56	6.00	13.80	69.30	78	75	67	57	
WN35 ASPK TLM	02-May-2013, 11:59	116.00	0.27	1340.00	1336	1337	1343	1343	
WN35 MB2 DLM	02-May-2013, 12:01	2.03	6.45	23.40	23	23	26	22	
WN35 MB2SPK DLM	02-May-2013, 12:04	220.00	0.20	2540.00	2534	2543	2542	2533	
WN35 B DLM	02-May-2013, 12:07	0.46	243.00	5.34	17	14	1	-11	
WN35 BDUP DLM	02-May-2013, 12:09	1.48	28.90	17.10	24	16	15	13	
WN35 BSPK DLM	02-May-2013, 12:12	113.00	0.06	1310.00	1304	1306	1306	1305	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Standard	02-May-2013, 12:15	547.00	0.12	6310.00	6301	6315	6319	6315	

Analyst
Date Started Thursday, May 02, 2013, 12:18:05
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 12:18	-1.02	40.00	-11.70	-7	-8	-15	-16	END CLP

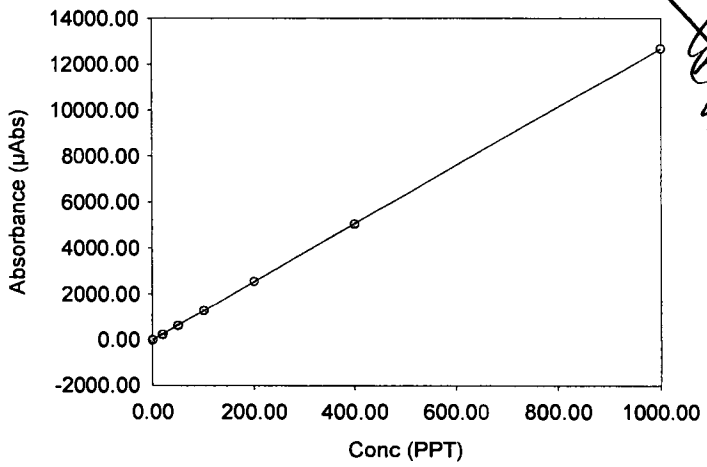
Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WN93 MB1 TLM	02-May-2013, 12:21	-2.07	8.34	-23.90	-27	-24	-22	-23	
WN93 MB1SPK TLM	02-May-2013, 12:23	224.00	0.20	2590.00	2587	2581	2583	2593	
WN93 A TLM	02-May-2013, 12:26	7.89	5.08	91.00	85	90	93	96	
WN93 B TLM	02-May-2013, 12:29	3.58	12.70	41.30	46	44	42	34	
WN93 BDUP TLM	02-May-2013, 12:31	0.18	88.40	2.07	4	2	2	-0	
WN93 BSPK TLM	02-May-2013, 12:34	115.00	0.15	1320.00	1322	1322	1326	1323	
WN93 C TLM	02-May-2013, 12:37	-0.79	144.00	-9.12	-18	-17	-11	10	
WN93 D TLM	02-May-2013, 12:39	6.39	8.80	73.70	71	69	71	83	
WN93 MB2 TLM	02-May-2013, 12:42	-3.66	8.22	-42.20	-37	-42	-45	-44	
WN93 MB2SPK TLM	02-May-2013, 12:45	222.00	0.23	2560.00	2549	2558	2563	2559	

Del CCV

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 12:47	560.00	0.22	6460.00	6442	6459	6472	6471	Q - HI %R

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	02-May-2013, 12:53	0.00	22.90	-15.90	-11	-16	-18	-19	
Standard #1	02-May-2013, 12:56	20.00	0.77	225.00	226	228	225	223	
Standard #2	02-May-2013, 12:58	50.00	0.90	613.00	605	613	616	617	
Standard #3	02-May-2013, 13:01	100.00	0.17	1270.00	1270	1272	1273	1276	
Standard #4	02-May-2013, 13:04	200.00	0.29	2540.00	2546	2545	2537	2530	
Standard #5	02-May-2013, 13:07	400.00	0.18	5040.00	5049	5048	5039	5029	
Standard #6	02-May-2013, 13:09	1000.00	0.13	12700.00	12673	12697	12710	12708	

Calibration Data



Int.	0.000
Slope	12.684
Correlation	0.99999

5-3-13

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	02-May-2013, 13:13	514.00	0.21	6520.00	6512	6517	6529	6542	BQ in CLP
ICB	02-May-2013, 13:15	1.93	29.70	24.50	33	28	21	16	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	02-May-2013, 13:18	524.00	0.16	6640.00	6629	6645	6651	6650	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	02-May-2013, 13:21	-0.03	1760.00	-0.33	-3	-5	-1	8	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	02-May-2013, 13:24	22.80	5.74	290.00	271	281	298	308	Q
WN93 MB1 TLM	02-May-2013, 13:26	1.26	49.00	15.90	23	22	13	6	
WN93 MB1SPK TLM	02-May-2013, 13:29	215.00	0.13	2730.00	2724	2727	2726	2733	
WN93 A TLM	02-May-2013, 13:32	10.50	4.26	133.00	141	135	129	126	

Analyst	
Date Created:	Wednesday, November 27, 2002
Worksheet	LOW LEVEL CALIB 20 TO 1000 PPT
Comment	
Sip Duration (Sec.):	55
Rinse Duration (Sec.):	100
Read Delay:	75
Integration Time/Replicate:	2.00
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	20
Baseline Point 1 End Time:	24
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	148
Baseline Point 2 End Time:	152
Gas Flow (ml/min):	30
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	2
Calibration Standard #1 Conc.:	20.00 PPT
Calibration Standard #2 Conc.:	50.00 PPT
Calibration Standard #3 Conc.:	100.00 PPT
Calibration Standard #4 Conc.:	200.00 PPT
Calibration Standard #5 Conc.:	400.00 PPT
Calibration Standard #6 Conc.:	1000.00 PPT
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 200, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 90% .. 110%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -20 .. 20,Stop

Analytical Resources, Incorporated
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Mercury Standard Prep Log

Prep Code: TWM Digested Instrument: CETAC
Analyst: CB 20.0 mL Date: 04-30-13
Bath Temp: 95 Start Time: 1210 End Time: 1410

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	–	0.00	100.0	0.0	1
STD1	3031-13	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		[illegible]	1
CRA	↓	0.01		0.1	1
ICB/CCB	–	0.00		0.0	1
ICV/LCS	54-6	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% $K_2S_2O_8$: MP2462 5% $KMnO_4$: MP2475

Digested 20.0mL

Prep Code: TLM Instrument: CETAC
Analyst: DM Date: 5-01-13
Bath Temp: 95°C Start Time: 1255 End Time: 1455

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	–	0.00	100.0	0.0	1
STD1	3031-14	0.02		0.02	1
STD2		0.05		0.05	1
STD3		0.10		0.1	1
STD4		0.20		0.2	1
STD5		~~0.50~~ 0.4		0.4	1
STD6		1.00		1.00	1
CRA	↓	0.02		0.02	1
ICB/CCB	–	0.00		0.0	1
ICV/LCS	3031-15	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:
HNO_3: I8169 H_2SO_4: I8044 HCl: –
5% $K_2S_2O_8$: MP2462 5% $KMnO_4$: MP2475

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TLM/DLM
Analyst: DM
Bath Temp: 95°c
Start Time: 0825
Matrix: Water
Date: 4-26-13
End Time: 1025

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WN35 A	1	✓	20.0	20.0	5/8 1	Y	
" ADUP	1	✓			1		
" AFSPK	1	✓			1		
" MB1	—	✓			1		
" MB1SPK	—	✓			1		
" B	1	—			1		
" BDUP	1	—			1		
" BFSPK	1	—			1		— DLM
" MB2	—	—			1		
" MB2SPK	—	—	20.0	20.0	1	Y	

4-26-13 DM

Chemical/Reagent ID:

HNO_3: JBKQ
H_2SO_4: JB044
HCl: —
5% $K_2S_2O_8$: MP2462
5% $KMnO_4$: MP2445
Digest Tube Lot: MM01LKK0

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WN31, WN35

4-25-13

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS) DATE: 4/25/2013

Methods : SM 2540 D-97, 2540 E-97 ANALYST: KE 6:04

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

make no entries to shaded cells
they are calculated !!

TSS (mg/l) calculated as:
Final dry wt (mg) = (minimum Dry Wt - Tare Wt)*1000
TSS = [(Final Dry Wt)/ ml Sample] * 1000
if dy wt < 1mg, TSS = <1mg / mL sample * 1000
with "<" flag

Loss on ignition (LOI) = TVSS (mg/L) calculated as:
LOI (mg) = Dry wt(mg) -((min ash wt - tare wt) * 1000)
TVSS (mg/L) = LOI / mL sample * 1000
if LOI <1mg, TVSS = <1mg / mL sample * 1000
with "<" flag

LCS source: *Cellulose, MP Biomedicals Lot# **6399J*** 0.05 grams to 1000 mL = **50** ***mg/L TSS***

SAMPLE ID	DISH #	filtered (mL)	TARE WT (grams)	DRY WT 104C (grams) 1	2	3	4	DryWT (mg)	TSS (mg/L)	ASH WT 550C (grams) 1	2	3	4	LOI (mg)	TVSS (mg/l)
Cal Weight ID			CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02	CV-02	CV-02		
Date & Time				4/25/13 7:24 KE	4/25/13 8:46 KE										
Cal Wt (g) 10.0000				10.0000	10.0000										
record weights to 4 places				Cal OK!	Cal OK!										
BLANK		1000	0.1243	0.1243	0.1243	STOP		0.0	< 1						
LCS # 00614-12		1000	0.1239	0.1733	0.1734	STOP		49.4	49.4	98.8%	% Recovery				
WM94 A1		840	0.1250	0.1289	0.1289	STOP		3.9	4.6						
WN31 B4		480	0.1238	0.1297	0.1296	STOP		5.8	12.1						
WN31 B4 dup		480	0.1237	0.1303	0.1300	STOP		6.3	13.1						
								RPD =	7.9%					*RPD =*	NA

WN31 : 13N4 98125

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TOTAL SUSPENDED (TSS) / TOTAL VOLATILE SUSPENDED SOLID(TVSS) BENCHSHEET

Analyst: (W)	Date/Time: 4-25-13 / 6:04	Oven #: 012	Muffle Furnace: 62790918520	Balance: 1123230597

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TSS (mg/L) calculated as:
Final Dry Weight (mg) = (Min Dry Weight – Tare Weight) * 1000
TSS = (Final Dry Weight) / (mL Sample) * 1000
If dry wt < 1 mg / mL sample * 1000 use "<" flag

Loss on Ignition (LOI) = TVSS (mg / L) is calculated as:
LOI (mg / L) = Dry Weight (mg) – [(Minimum Ash Weight – Tare Weight) * 1000]
TVSS (mg / L) = LOI / mL sample * 1,000
If LOI < 1 mg, TVSS = < 1 mg / mL sample * 1000 use "<" flag

LCS (Cellulose from MP Biochemicals) Lot #	6399J	0.0500 Gram to 1000 mL = 50 mg / L TSS					CV-02	CV-02		
Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02					
Date & Time:			4-25-13 7:24	4-25-13 8:46						
Cal Weight (10.0000g):			10.0000 (R)	10.0000 (W)						

Sample ID	Dish #	Filtered mL	Tare	Dry Weight 104°C (grams) 1	2	3	Dry Wt mg	TSS	Ash Weight 550°C 1	2	LOI - mg	TVSS mg/L
BLANK	P3761	1000	0.1243	0.1243	0.1243							
LCS #00614-12	P3762	1000	0.1239	0.1733	0.1734							
WMAU A1	P3763	840	0.1280	0.1289	0.1289							
WN31 B4	P3764	480	0.1238	0.1297	0.1296							
↓ MP B4	P3765	480	0.1237	0.1303	0.1300							

4-25-13 (R)

W
4-25-13

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 4/25/13 10:02

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : KE

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 ELECTRODE: Orion 011510 SN:KU9020 K= 1 cm-1

Direct Calibration		Cell Constant Adjustment	
1413 Calibration Standard	0.01 N KCl	*1413 Calibration Standard*	0.01N KCl
ARI #	**00613-06**	ARI #	
µS/cm =	1,413	*Current value* / *Cal Temp (°C)*	
Cal Temp (°C) =	19.9	*Expected*	
input µS =	**1277**	Adjust to / *Displayed*	
Cell constant =	**0.9931**	%	

Calibration Verification Standard *Record Certified Values*

Source: **RICCA CHEMICAL COMPANY** *µS / cm =* **1000**

Lot Number: **# 4110724** *TDS (mg/l) =*

Sample Data

(NOTE: if requested, switch MODE to read TDS) Enter dilution as mL final / mL sample

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	(µS/cm)	TDS (mg/L)	Notes & Flags
ICB		21.3		0.5		*OK!*
ICV		19.9		1007		*100.70%*
WN31 B2		20.2		1223		
WN31 B2 dup		20.2		1226		*RPD =0.24 %*
CCB		21.4		0.4		*OK!*
CCV		20.0		1004		*100.40%*
CCV 1302913		20.0		1019		*101.90%*

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 4-25-13

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : (A) 10:02

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 ELECTRODE: Orion 011510 SN:KU9020 K= 1 cm-1

Direct Calibration		Cell Constant Adjustment	
1413 Calibration Standard	0.01 N KCl	*1413 Calibration Standard*	0.01N KCl
ARI #	00613-06	ARI #	
µS/cm =	1,413	*Current value*	*Cal Temp (°C)*
Cal Temp (°C) =	19.9		*Expected*
input µS =	1423	Adjust to	*Displayed*
Cell constant =	0.9931		%

Calibration Verification Standard *Record Certified Values*

Source: RICCA CHEMICAL COMPANY *µS / cm =* 1000

Lot Number: # 4110724 *TDS (mg/l) =*

Sample Data

(NOTE: if requested, switch MODE to read TDS) Enter dilution as mL final / mL sample

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	TDS (mg/L)	Notes & Flags
ICB		21.3		0.5		
ICV		19.9		1007		
WN31 B2		20.2		1223		
WN31 B2		20.2		1226		
CCB		21.4		0.4		
CCV		20.0		1004		
Test CCV 1302913		20.0		1019		
CCB						
CCV						
				4-25-13 (A)		
CCB						
CCV						

WN31 : 02489

4-26-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 4/25/13 (A)

ANALYST: KE 8:02

Instrumentation

Drying Ovens: 12

Muffle Furnace: N / A

Analytical Balance: 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

4/25/2013 8:02 date/time in oven KE

4/26/2013 6:26 date/time out KE

elapsed hrs = 22.4

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	4/25/13 7:30 KE	4/25/13 6:48 KE	4/213 6:42 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	Cal OK!	Cal OK!	Cal OK!										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0412	1.0412			0.00							
WN27 A1		6.9598	1.0773	4.7116			3.63	61.78%						
WN31 A5		6.6489	1.0498	3.1754			2.13	37.96%						
WN31 A5 dup		6.8649	1.0595	3.2607			2.20	37.92%						
							RPD =	0.12%				RPD =	NA	
WN31 A5 trp		6.5616	1.0561	3.1318			2.08	37.70%						
							RSD =	0.37%				RSD =	NA	

UNC1 : 02155

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TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(A)

Analyst (W)	Date: 4-25-13	Oven ID:	Balance ID: 1123230597
Time in Oven: 8:02	Time Out of Oven: 6:24	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:	4-25-13 7:30	4-25-13 6:45	4-26-13 6:42						
Cal Weight (10.0000):	10.00000 (W)	10.00000 (W)	10.00000 (W)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	1	Ø	1.0412	1.0412						
WW27 A1	2	6.9598	1.0773	4.7116						
WW31 A6	3	6.0499	1.0498	3.1754						
" A6	4	6.9649	1.0595	3.2607						
" A6	5	6.5616	1.0561	3.1318						

4-25-13 (W)

TS-ZD - 1CH1 - 02151

J
4-26-13

TOC Solids Prep Log

DATE: 4/25/2013

ANALYST: KE 8:16

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			12.9876		12.9877	0.1 mg	
WN27 A1		-	13.0416	19.5499	16.6835	55.96%	
WN31 A6		-	13.0322	19.8538	15.7937	40.48%	
WN31 A6 dup		-	13.0237	19.9008	15.8201	40.66%	RPD = 0.45%
WN31 A6 trip		-	12.9879	19.9302	15.8219	40.82%	RSD = 0.42%
WN30 A1		-	13.0142	18.8233	16.2395	55.52%	
WN30 A1 dup		-	13.0472	19.6544	16.7405	55.90%	RPD = 0.68%
WN30 A1 trip		-	13.0428	18.9798	16.3674	56.00%	RSD = 0.45%
WN30 B1		-	12.9876	19.4466	16.3955	52.76%	
WN30 C1		-	13.0022	18.6597	15.7646	48.83%	
WN30 D1		-	12.9539	19.9390	16.7039	53.69%	
WN30 E1		+-	13.0185	18.8445	16.8250	65.34%	
WN30 F1		+-	13.0426	19.8994	18.2800	76.38%	
WN30 G1		+-	13.0324	20.5411	18.2755	69.83%	
WN30 H1		+-	12.9423	19.9625	18.3535	77.08%	
WN30 I 1		+-	13.0679	19.4927	18.8386	89.82%	
WN30 J 1		-	13.0440	18.6940	16.1434	54.86%	
WN30 K1		-	13.0005	19.1723	15.8816	46.68%	

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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 (W) 8/16 Date 4-25-13

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			12.9876	D	12.9877		
WN21 A1		-	13.0416	19.5499	16.6935		Very hot Sediment Black
WN31 B1		-	13.0322	19.8538	15.7937		Sediment + dust
↓ B1		-	13.0237	19.9008	15.8201		↓
↓ B1		-	12.9879	19.9302	15.8219		Sediment (thick) some bare
WN030 A1		-	13.0142	18.8233	16.2395		↓
∞ A1		^	13.0472	19.6544	16.7405		
↓ A1		=	13.0428	18.9798	16.3674		Sediment
B1		-	12.9876	19.4466	16.3955		↓
C1		-	13.0022	18.6597	15.7646		Sediment Smaller
D1		-	12.9539	19.9390	16.2039		↓
E1		+^	13.0185	18.8445	16.8250		thick Sed from Sandy Sediment
F1		+-	13.0426	19.8994	18.2800		↓
G1		+^	13.0324	20.5411	18.2755		↓
H1		+ ~	12.9423	19.9625	18.3535		Sand
I1		+-	13.0679	19.4927	18.8386		Sediment
J1		(1)* -	13.0440	18.6940	16.1434		↓
K1		(1)* -	13.0005	19.1723	15.9816		

4-25-13 (W)

WN31 : 02493

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pH Logbook

Meter ID: Accumet AR60

Calibration

04-24-13 (W)

Date:	4.24-13		Buffer	Source	Lot #	pH	Temp.
Time:	7:24		2.00	Ricca	1207705	2.00	19.4
Analyst:	(W)		4.00	Fisher	115547	4.00	19.3
			7.00	Ricca	1207552	7.02	19.4
			10.00	Fisher	126248	10.06	19.4
			12.00	Ricca	1212084	12.02	19.3
			Verification	Fisher	124864	7.03	19.6

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
(W)	9:48	ICV	7.04	7.03		(PE)	(W) ~~20.4~~
		WM07A	7.80	7.80			21.2
		↓ dup A	7.85	7.84			21.1
↓	↓	CCV	7.03	7.03		↓	20.3
CDE/CL	12:50	ICV	7.01	7.00			21.8
		WN28A'	7.90	7.90			22.1
		↓ A'-dup	7.93	7.94			22.0
		↓ B'	6.34	6.34			21.4
↓	↓	CCV	7.01	7.01			21.7
CW	15:20	ICV	7.00	7.00			22.0
		WN31B2	6.66	6.67			21.3
		~~ICV~~ dup	6.77	6.78			21.0
		CCV	7.00	7.00			22.0
		WN32A	8.75 → 7.14				20.1
		↓ B1	8.78 → ~~7.62~~		7.38		20.2
		↓ C1	8.95 → 7.27				21.3
		CCV	7.04	7.04			21.8
			4-24-13 (W)				
		CCV					

WN31 : 02494

MP 4/29/13

TOC, Aqueous Data Summary (Apollo 9000) DATE: 4/26/13 10:44
EPA 9060 A, SM 5310 B-00 ANALYST: map
Analysis Mode: **NPOC** *Instrument:* ***Apollo 9000***

Detection Limits (mgC/L)
MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data

Stock ID:	ARI 00137-12	factor (m):	1.820E+05	r²:	0.99956
Curve Date:	4/23/2013	intercept (b_{cal}):	26536	sys blk (b_{sys})	54322
Curve ID:	042313cal				

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	ERA 0409-12-01			ARI # 00128-6		
Conc:	5,000	*mg/L*		1,000	*mg/L*	
dilution:	1.00	*mL to*	mg C/ L	5.00	*mL to*	mg C/ L
Volume:	250	*mL =*	20.0	250	*mL =*	20

Sample Data

SAMPLE ID	Dilution Factor	Carbon (mg C/L) *enter Form as TC, TIC, NPOC* Form	# reps	mean	stdev	Measured	Report as	Notes: *will flag if RSD >5%*
ICV	1	NPOC	3	20.8413	0.27			
ICB	1	NPOC	3	0.7140	0.13			
1.5 ppm	1	NPOC	3	1.7079	0.28			
IC Sparge Check	1	NPOC	3	19.7271	0.22			
WN31 FB	1	**DOC**	2	0.4338	0.10			
WN31 B DOC	1	**DOC**	2	4.9377	0.30			
WN45 FB	1	**DOC**	2	0.2499	0.03			
WN45 G DOC	1	**DOC**	2	10.3092	0.06			
WN45 G DOCdup	1	**DOC**	2	10.0913	0.41			
WN45 G DOCms	1	**DOC**	2	30.0109	0.37			
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WN45 H DOC	1	**DOC**	2	12.4599	0.32			
WN45 I DOC	1	**DOC**	2	4.2830	0.34			
WN45 J DOC	**5**	**DOC**	2	10.5580	0.32			
WN45 K DOC	**5**	**DOC**	2	8.2379	0.16			
WN45 L DOC	**5**	**DOC**	2	9.0103	0.25			
CCV	1	NPOC	2	19.2330	0.08			
CCB	1	NPOC	2	0.3130	0.07			
WN51 A TOC	1	NPOC	2	0.8975	0.11			
WL98 A3 TOC	1	NPOC	2	4.7927	0.24			
WL98 B3 TOC	1	NPOC	2	8.9307	0.77			
WL98 B3 TOCdup	1	NPOC	2	9.1047	1.00			
WL98 B3 TOCms	1	NPOC	2	26.8172	0.80			
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WL98 C3	1	NPOC	2	3.6522	0.47			
WL98 D3	1	NPOC	2	3.5450	0.36			
WL98 E3	1	NPOC	2	5.4425	0.72			
WL98 F3	1	NPOC	2	4.2067	0.60			
WL98 G3	1	NPOC	2	4.4899	0.33			
WL98 H3	1	NPOC	2	1.9708	0.43			
WM22 A1 TOC	1	NPOC	2	4.9276	0.51			
WM22 A1 TOCdup	1	NPOC	2	4.9248	0.42			
WM22 A1 TOCms	1	NPOC	2	23.2809	0.45			
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WM22 B1 TOC	1	NPOC	2	4.9622	0.48			
WM22 C1 TOC	1	NPOC	2	1.7488	0.24			
WM22 D1 TOC	1	NPOC	2	2.4677	0.33			
WM22 E1 TOC	1	NPOC	2	6.0395	0.48			

Sample Data

SAMPLE ID	Dilution Factor	Carbon (mg C/L) enter Form as TC, TIC, NPOC						Notes:
		Form	# reps	mean	stdev	Measured	Report as	will flag if RSD >5%
WM22 F1 TOC	1	NPOC	2	1.0086	0.15			
WM22 G1 TOC	1	NPOC	2	3.8182	0.19			
CCV	1	NPOC	3	18.9397	0.34			
CCB	1	NPOC	3	0.2902	0.22			
WM40 A3 TOC	1	NPOC	2	3.7589	0.38			
WM40 B3 TOC	1	NPOC	2	6.5825	0.48			
WM40 C5 TOC	1	NPOC	2	3.2249	0.45			
WM40 C5 TOCdu	1	NPOC	2	3.1911	0.37			
WM40 C5 TOCms	1	NPOC	2	20.9155	0.20			
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WM40 D3 TOC	1	NPOC	2	3.1256	0.21			
CCV	1	NPOC	3	19.2420	0.80			
CCB	1	NPOC	3	0.2459	0.01			

Curve Stock ABI 00137-1

CVS STOCK 0409-12-01
ERA

Autosampler Setup File Print Date/Time: 2013/04/0026 13:08:40

C:\APOLLO.2\ASSETUP\042613B.SET

Rack Style -- 40 mL vial

#	Pos	Sample ID	Sample Type	Method ID	Reps	Status	Message
1	35	RINSE	Sample	TOC 0_50 ppm	3	Done	
2	29	ICV CCV	Cal. Verification	TOC 0_50 ppm	3	Done	
3	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	3	Done	
4	31	1.5 PPM	Cal. Verification	TOC 0_50 ppm	3	Done	
5	32	CHECK	Cal. Verification	TOC 0_50 ppm	3	Done	
6	1	WN31FB	Sample	TOC 0_50 ppm	2	Runni	DOC
7	2	WN31 B	Sample	TOC 0_50 ppm	2	Ready	
8	3	WN45FB	Sample	TOC 0_50 ppm	2	Ready	
9	4	WN45 G	Sample	TOC 0_50 ppm	2	Ready	
10	5	WN45 Gd	Sample	TOC 0_50 ppm	2	Ready	
11	6	WN45 G	Sample	TOC 0_50 ppm	2	Ready	0.1mL 500 0 TO 25
12	7	WN45 H	Sample	TOC 0_50 ppm	2	Ready	
13	8	WN45 I	Sample	TOC 0_50 ppm	2	Ready	
14	9	WN45 JD	Sample	TOC 0_50 ppm	2	Ready	5X FOAMY SAMPLE DILUTED
15	10	WN45 K	Sample	TOC 0_50 ppm	2	Ready	5X
16	11	WN45 L	Sample	TOC 0_50 ppm	2	Ready	5X
17	43	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Ready	
18	44	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Ready	
19	12	WN51 A	Sample	TOC 0_50 ppm	2	Ready	TOC
20	13	WL98 A3	Sample	TOC 0_50 ppm	2	Ready	
21	14	WL98 B3	Sample	TOC 0_50 ppm	2	Ready	
22	15	WL98 B3	Sample	TOC 0_50 ppm	2	Ready	
23	16	WL98 B3	Sample	TOC 0_50 ppm	2	Ready	20ppm
24	17	WL98 C3	Sample	TOC 0_50 ppm	2	Ready	
25	18	WL98 D3	Sample	TOC 0_50 ppm	2	Ready	
26	19	WL98 E3	Sample	TOC 0_50 ppm	2	Ready	
27	20	WL98 F3	Sample	TOC 0_50 ppm	2	Ready	
28	21	WL98 G3	Sample	TOC 0_50 ppm	2	Ready	
29	22	WL98 H3	Sample	TOC 0_50 ppm	2	Ready	
30	23	WM22 A1	Sample	TOC 0_50 ppm	2	Ready	
31	24	WM22 A1	Sample	TOC 0_50 ppm	2	Ready	
32	25	WM22 A1	Sample	TOC 0_50 ppm	2	Ready	20 ppm
33	26	WM22 B1	Sample	TOC 0_50 ppm	2	Ready	
34	27	WM22 C1	Sample	TOC 0_50 ppm	2	Ready	
35	28	WM22 D1	Sample	TOC 0_50 ppm	2	Ready	
36	29	WM22 E1	Sample	TOC 0_50 ppm	2	Ready	
37	30	WM22 F1	Sample	TOC 0_50 ppm	2	Ready	
38	31	WM22 G1	Sample	TOC 0_50 ppm	2	Ready	
39	43	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Ready	
40	44	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Ready	
41	32	WM40 A3	Sample	TOC 0_50 ppm	2	Ready	
42	33	WM40 B3	Sample	TOC 0_50 ppm	2	Ready	
43	34	WM40 C5	Sample	TOC 0_50 ppm	2	Ready	
44	35	WM40 C5	Sample	TOC 0_50 ppm	2	Ready	
45	36	WM40 C5	Sample	TOC 0_50 ppm	2	Ready	20ppm
46	37	WM40 D3	Sample	TOC 0_50 ppm	2	Ready	
47	43	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Ready	
48	44	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Ready	

End of Autosampler Setup File: 042613B

WN31 : 02497

Calibration Report Print Date/Time: 2013/04/29 6:42:41

Cal. Curve ID: 042313Cal
Created: 2013/04/23 15:01
Calibration Factor (m): 1.820e+05
Y Intercept (b): 26536
r-squared: 0.99956

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	61783	0.000	0.194		2013/04/23 13:25
1.5 ppm	178424	0.750	0.835		2013/04/23 13:43
5.0 ppm	486724	2.500	2.529		2013/04/23 14:01
10 ppm	901050	5.000	4.806		2013/04/23 14:20
25 ppm	2247418	12.500	12.206		2013/04/23 14:39
50 ppm	4608222	25.000	25.180		2013/04/23 14:58

Sample Blanks Report Print Date/Time: 2013/04/29 6:42:48

Blank Type	Value	Date & Time
TOC_TC Rng 1		
Blank 1	42315	2013/04/23 12:53
Blank 2	56218	2013/04/23 12:51
Blank 3	64433	2013/04/23 12:48
Average	54322	
TOC_TC Rng 2		
Blank 1		
Blank 2		
Blank 3		
Average		
TOC_TC Rng 3		
Blank 1		
Blank 2		
Blank 3		
Average		
IC Range 1		
Blank 1		
Blank 2		
Blank 3		
Average		
IC Range 2		
Blank 1		
Blank 2		
Blank 3		
Average		
IC Range 3		
Blank 1		
Blank 2		
Blank 3		
Average		

Detailed Analysis Report Print Date/Time: 2013/04/29 6:42:16

Sample ID: WN31FB DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 13:24
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5063	0.2532	100387	3.387	3.885	129
2	0.3613	0.1806	87192	3.437	3.934	125

<<<Statistics>>> Mean: 0.4338 Std Dev: 0.1025 RSD: 23.64

Sample ID: WN31 B DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 13:43
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.1469	2.5735	522572	3.837	4.333	151
2	4.7286	2.3643	484519	4.079	4.578	139

<<<Statistics>>> Mean: 4.9377 Std Dev: 0.2958 RSD: 5.99

Sample ID: WN45FB DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 14:01
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2714	0.1357	79011	4.455	4.951	121
2	0.2285	0.1143	75112	4.286	4.784	122

<<<Statistics>>> Mean: 0.2499 Std Dev: 0.0303 RSD: 12.14

Sample ID: WN45 G DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 14:20
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.3493	5.1746	995867	4.874	5.371	146
2	10.2691	5.1346	988576	4.703	5.201	148

<<<Statistics>>> Mean: 10.3092 Std Dev: 0.0567 RSD: 0.55

Sample ID: WN45 Gdup Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 14:38
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.3841	5.1920	999036	5.622	6.119	150
2	9.7985	4.8992	945757	5.607	6.105	145

<<<Statistics>>> Mean: 10.0913 Std Dev: 0.4141 RSD: 4.10

Sample ID: WN45 Gms 20 Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 14:58
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30.2711	15.1355	2808294	6.156	6.655	180
2	29.7508	14.8754	2760961	6.142	6.640	172

<<<Statistics>>> Mean: 30.0109 Std Dev: 0.3679 RSD: 1.23

Sample ID: WN45 H DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 15:17
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.6845	6.3423	1208324	6.465	6.965	148
2	12.2354	6.1177	1167462	6.316	6.814	141

<<<Statistics>>> Mean: 12.4599 Std Dev: 0.3176 RSD: 2.55

Sample ID: WN45 I DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 15:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.5243	2.2622	465933	6.377	6.876	140
2	4.0417	2.0208	422022	6.436	6.932	130

<<<Statistics>>> Mean: 4.2830 Std Dev: 0.3412 RSD: 7.97

Sample ID: WN45 JDOC 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 15:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.7834	5.3917	1035361	6.719	7.219	153
2	10.3326	5.1663	994351	6.670	7.167	149

<<<Statistics>>> Mean: 10.5580 Std Dev: 0.3188 RSD: 3.02

Sample ID: WN45 K DOC 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 16:13
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.3512	4.1756	814090	7.139	7.637	141
2	8.1245	4.0623	793467	6.998	7.496	143

<<<Statistics>>> Mean: 8.2379 Std Dev: 0.1603 RSD: 1.95

Sample ID: WN45 L DOC 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 16:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.1841	4.5920	889864	7.466	7.964	143
2	8.8364	4.4182	858233	7.295	7.793	143

<<<Statistics>>> Mean: 9.0103 Std Dev: 0.2459 RSD: 2.73

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 16:50
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.2882	9.6441	1781321	7.652	8.149	166
2	19.1778	9.5889	1771274	7.606	8.101	155

<<<Statistics>>> Mean: 19.2330 Std Dev: 0.0781 RSD: 0.41

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 17:08
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3623	0.1812	59497	7.762	8.254	118
2	0.2636	0.1318	50519	7.548	8.045	116

<<<Statistics>>> Mean: 0.3130 Std Dev: 0.0698 RSD: 22.30

Sample ID: WN51 A TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 17:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.9772	0.4886	143229	7.571	8.071	123
2	0.8179	0.4089	128732	7.406	7.903	121

<<<Statistics>>> Mean: 0.8975 Std Dev: 0.1126 RSD: 12.55

Sample ID: WL98 A3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 17:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.9602	2.4801	505585	7.915	8.414	132
2	4.6252	2.3126	475110	7.649	8.147	130

<<<Statistics>>> Mean: 4.7927 Std Dev: 0.2369 RSD: 4.94

Sample ID: WL98 B3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 18:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.4742	4.7371	916256	8.038	8.537	142
2	8.3872	4.1936	817369	7.852	8.350	140

<<<Statistics>>> Mean: 8.9307 Std Dev: 0.7686 RSD: 8.61

Sample ID: WL98 B3dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 18:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	9.8138	4.9069	947151	8.195	8.695	144
2	8.3957	4.1979	818141	8.018	8.516	137

<<<Statistics>>> Mean: 9.1047 Std Dev: 1.0027 RSD: 11.01

Sample ID: WL98 B3ms 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 18:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27.3812	13.6906	2545386	8.546	9.045	166
2	26.2531	13.1266	2442756	8.314	8.813	155

<<<Statistics>>> Mean: 26.8172 Std Dev: 0.7977 RSD: 2.97

Sample ID: WL98 C3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 18:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.9820	1.9910	416595	8.245	8.740	130
2	3.3223	1.6611	356574	7.938	8.433	127

<<<Statistics>>> Mean: 3.6522 Std Dev: 0.4665 RSD: 12.77

Sample ID: WL98 D3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 19:17
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.8022	1.9011	400238	7.959	8.457	131
2	3.2877	1.6439	353427	7.778	8.272	131

<<<Statistics>>> Mean: 3.5450 Std Dev: 0.3638 RSD: 10.26

Sample ID: WL98 E3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 19:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.9518	2.9759	595803	7.982	8.478	132
2	4.9331	2.4666	503124	7.658	8.158	134

<<<Statistics>>> Mean: 5.4425 Std Dev: 0.7203 RSD: 13.24

Sample ID: WL98 F3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 19:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.6343	2.3172	475940	7.720	8.218	130
2	3.7791	1.8895	398129	7.414	7.912	129

<<<Statistics>>> Mean: 4.2067 Std Dev: 0.6047 RSD: 14.38

Sample ID: WL98 G3 TOC
Mode: TOC

Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Filename: 04261307
Timestamp: 2013/04/26 20:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.7215	2.3607	483868	7.287	7.786	133
2	4.2583	2.1292	441733	7.017	7.514	130

<<<Statistics>>> Mean: 4.4899 Std Dev: 0.3275 RSD: 7.29

Sample ID: WL98 H3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 20:29
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.2730	1.1365	261114	6.599	7.094	126
2	1.6687	0.8344	206138	6.510	7.006	121

<<<Statistics>>> Mean: 1.9708 Std Dev: 0.4273 RSD: 21.68

Sample ID: WM22 A1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 20:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.2874	2.6437	535357	6.291	6.791	132
2	4.5678	2.2839	469883	6.010	6.508	129

<<<Statistics>>> Mean: 4.9276 Std Dev: 0.5088 RSD: 10.33

Sample ID: WM22 A1dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 21:06
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.2220	2.6110	529404	6.047	6.545	132
2	4.6276	2.3138	475327	5.769	6.265	132

<<<Statistics>>> Mean: 4.9248 Std Dev: 0.4203 RSD: 8.53

Sample ID: WM22 A1ms 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 21:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23.5966	11.7983	2201068	5.841	6.335	176
2	22.9653	11.4827	2143639	5.818	6.318	157

<<<Statistics>>> Mean: 23.2809 Std Dev: 0.4464 RSD: 1.92

Sample ID: WM22 B1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 21:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.3049	2.6525	536950	5.774	6.273	134
2	4.6196	2.3098	474597	5.570	6.068	130

<<<Statistics>>> Mean: 4.9622 Std Dev: 0.4846 RSD: 9.77

Sample ID: WM22 C1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.9158	0.9579	228613	5.530	6.029	127
2	1.5819	0.7909	198234	5.428	5.922	125

<<<Statistics>>> Mean: 1.7488 Std Dev: 0.2361 RSD: 13.50

Sample ID: WM22 D1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.7011	1.3506	300061	5.420	5.919	134
2	2.2343	1.1171	257592	5.401	5.895	125

<<<Statistics>>> Mean: 2.4677 Std Dev: 0.3301 RSD: 13.38

Sample ID: WM22 E1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.3783	3.1891	634599	5.500	6.000	137
2	5.7006	2.8503	572948	5.336	5.833	133

<<<Statistics>>> Mean: 6.0395 Std Dev: 0.4792 RSD: 7.93

Sample ID: WM22 F1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:56
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.1174	0.5587	155980	5.233	5.732	124
2	0.8997	0.4498	136172	5.143	5.636	121

<<<Statistics>>> Mean: 1.0086 Std Dev: 0.1539 RSD: 15.26

Sample ID: WM22 G1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 23:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.9545	1.9773	414095	5.530	6.028	135
2	3.6820	1.8410	389301	5.479	5.979	132

<<<Statistics>>> Mean: 3.8182 Std Dev: 0.1927 RSD: 5.05

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 23:34

Operator ID: MIKE Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.1782	9.5891	1771313	5.753	6.253	190
2	18.7012	9.3506	1727919	5.891	6.388	161

<<<Statistics>>> Mean: 18.9397 Std Dev: 0.3373 RSD: 1.78

Sample ID: ICB CCB Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 23:52
Operator ID: MIKE Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.4443	0.2221	66955	5.932	6.426	121
2	0.1361	0.0681	38921	5.980	6.478	113

<<<Statistics>>> Mean: 0.2902 Std Dev: 0.2179 RSD: 75.10

Sample ID: WM40 A3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/27 00:10
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.0310	2.0155	421047	6.309	6.806	132
2	3.4868	1.7434	371538	6.281	6.780	126

<<<Statistics>>> Mean: 3.7589 Std Dev: 0.3848 RSD: 10.24

Sample ID: WM40 B3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/27 00:28
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.9226	3.4613	684116	6.424	6.924	146
2	6.2424	3.1212	622242	6.575	7.073	134

<<<Statistics>>> Mean: 6.5825 Std Dev: 0.4810 RSD: 7.31

Sample ID: WM40 C5 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/27 00:46
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.5436	1.7718	376707	6.879	7.379	129
2	2.9062	1.4531	318715	6.793	7.286	127

<<<Statistics>>> Mean: 3.2249 Std Dev: 0.4507 RSD: 13.98

Sample ID: WM40 C5dup Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/27 01:05
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.4559	1.7279	368726	7.090	7.590	128
2	2.9264	1.4632	320560	6.854	7.351	130

<<<Statistics>>> Mean: 3.1911 Std Dev: 0.3744 RSD: 11.73

Sample ID: WM40 C5ms 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 01:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.0558	10.5279	1969919	7.260	7.755	160
2	20.7752	10.3876	1944392	7.006	7.505	168

<<<Statistics>>> Mean: 20.9155 Std Dev: 0.1984 RSD: 0.95

Sample ID: WM40 D3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 01:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.2728	1.6364	352076	7.168	7.664	134
2	2.9785	1.4893	325298	7.152	7.647	128

<<<Statistics>>> Mean: 3.1256 Std Dev: 0.2081 RSD: 6.66

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 02:02
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.8061	9.9030	1828435	7.197	7.695	211
2	18.6779	9.3390	1725799	7.364	7.862	162

<<<Statistics>>> Mean: 19.2420 Std Dev: 0.7978 RSD: 4.15

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 02:20
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2536	0.1268	49605	7.366	7.860	113
2	0.2382	0.1191	48207	7.110	7.607	115

<<<Statistics>>> Mean: 0.2459 Std Dev: 0.0109 RSD: 4.43

Sample ID: IC BLANK
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE

Mode: IC
Filename: 04260718
Timestamp: 2013/04/26 07:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5376	0.2688	47408	3.706	3.906	141
2	0.3925	0.1962	34614	3.725	3.925	137
3	0.4760	0.2380	41979	3.595	3.794	143

<<<Statistics>>> Mean: 0.4687 Std Dev: 0.0728 RSD: 15.54

Sample ID: IC CVS
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE

Mode: IC
Filename: 04260718
Timestamp: 2013/04/26 07:52
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29.2978	14.6489	2583771	3.697	3.897	181
2	24.1698	12.0849	2131535	3.826	4.025	173
3	20.9198	10.4599	1844915	3.893	4.091	171

<<<Statistics>>> Mean: 24.7958 Std Dev: 4.2239 RSD: 17.03

Sample ID: IC CVS
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE
Mode: IC
Filename: 04260801
Timestamp: 2013/04/26 08:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16.2511	8.1255	1433181	4.027	4.226	230

Sample ID: IC BLANK
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE
Mode: IC
Filename: 04260816
Timestamp: 2013/04/26 08:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5509	0.2755	48585	4.469	4.668	143

Sample ID: IC CVSnew
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE
Mode: IC
Filename: 04260816
Timestamp: 2013/04/26 08:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.2549	10.6274	1874465	4.848	5.047	181

Sample ID: WN51 A6
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE
Mode: IC
Filename: 04260839
Timestamp: 2013/04/26 08:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.1436	2.5718	453616	4.896	5.096	183

Sample ID: IC CVSnew
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE
Mode: IC
Filename: 04260839
Timestamp: 2013/04/26 08:57
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.1034	10.5517	1861109	5.314	5.511	176

Sample ID: IC BLANK
Method: IC 0 - 20 ppmC
Cal. Curve: 092112 IC Cal
Operator ID: MIKE
Mode: IC
Filename: 04260839
Timestamp: 2013/04/26 09:06
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.7390	0.3695	65172	5.425	5.623	149

Sample ID: RINSE
Mode: TOC

Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Filename: 04260958
Timestamp: 2013/04/26 10:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.0125	1.0063	237416	4.992	5.490	143
2	1.1581	0.5791	159684	4.951	5.450	138
3	0.8389	0.4195	130646	4.897	5.395	135

<<<Statistics>>> Mean: 1.3365 Std Dev: 0.6068 RSD: 45.40

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Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04260958
Timestamp: 2013/04/26 10:44
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.1481	10.5741	1950532	5.661	6.157	180
2	20.7415	10.3708	1913540	5.660	6.157	178
3	20.6344	10.3172	1903797	5.702	6.201	175

<<<Statistics>>> Mean: 20.8413 Std Dev: 0.2710 RSD: 1.30

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04260958
Timestamp: 2013/04/26 11:06
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.8144	0.4072	100629	6.223	6.721	126
2	0.7594	0.3797	95627	6.120	6.619	129
3	0.5682	0.2841	78225	6.159	6.657	124

<<<Statistics>>> Mean: 0.7140 Std Dev: 0.1292 RSD: 18.10

Sample ID: 1.5 PPM
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04260958
Timestamp: 2013/04/26 11:29
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.9348	0.9674	202555	6.743	7.242	137
2	1.4015	0.7007	154040	6.859	7.354	122
3	1.7875	0.8937	189156	6.543	7.040	130

<<<Statistics>>> Mean: 1.7079 Std Dev: 0.2754 RSD: 16.13

Sample ID: CHECK
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04260958
Timestamp: 2013/04/26 11:53
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.8983	9.9492	1836826	7.307	7.807	182
2	19.7990	9.8995	1827795	7.295	7.795	174
3	19.4841	9.7420	1799140	7.203	7.702	165

<<<Statistics>>> Mean: 19.7271 Std Dev: 0.2162 RSD: 1.10

Sample ID: WN31FB DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 13:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5063	0.2532	100387	3.387	3.885	129
2	0.3613	0.1806	87192	3.437	3.934	125

<<<Statistics>>> Mean: 0.4338 Std Dev: 0.1025 RSD: 23.64

Sample ID: WN31 B DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 13:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.1469	2.5735	522572	3.837	4.333	151
2	4.7286	2.3643	484519	4.079	4.578	139

<<<Statistics>>> Mean: 4.9377 Std Dev: 0.2958 RSD: 5.99

Sample ID: WN45FB DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 14:01
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2714	0.1357	79011	4.455	4.951	121
2	0.2285	0.1143	75112	4.286	4.784	122

<<<Statistics>>> Mean: 0.2499 Std Dev: 0.0303 RSD: 12.14

Sample ID: WN45 G DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 14:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.3493	5.1746	995867	4.874	5.371	146
2	10.2691	5.1346	988576	4.703	5.201	148

<<<Statistics>>> Mean: 10.3092 Std Dev: 0.0567 RSD: 0.55

Sample ID: WN45 Gdup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 14:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.3841	5.1920	999036	5.622	6.119	150
2	9.7985	4.8992	945757	5.607	6.105	145

<<<Statistics>>> Mean: 10.0913 Std Dev: 0.4141 RSD: 4.10

Sample ID: WN45 Gms 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 14:58
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30.2711	15.1355	2808294	6.156	6.655	180
2	29.7508	14.8754	2760961	6.142	6.640	172

<<<Statistics>>> Mean: 30.0109 Std Dev: 0.3679 RSD: 1.23

Sample ID: WN45 H DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 15:17
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.6845	6.3423	1208324	6.465	6.965	148
2	12.2354	6.1177	1167462	6.316	6.814	141

<<<Statistics>>> Mean: 12.4599 Std Dev: 0.3176 RSD: 2.55

Sample ID: WN45 I DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 15:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.5243	2.2622	465933	6.377	6.876	140
2	4.0417	2.0208	422022	6.436	6.932	130

<<<Statistics>>> Mean: 4.2830 Std Dev: 0.3412 RSD: 7.97

Sample ID: WN45 JDOC 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 15:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.7834	5.3917	1035361	6.719	7.219	153
2	10.3326	5.1663	994351	6.670	7.167	149

<<<Statistics>>> Mean: 10.5580 Std Dev: 0.3188 RSD: 3.02

Sample ID: WN45 K DOC 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 16:13
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.3512	4.1756	814090	7.139	7.637	141
2	8.1245	4.0623	793467	6.998	7.496	143

<<<Statistics>>> Mean: 8.2379 Std Dev: 0.1603 RSD: 1.95

Sample ID: WN45 L DOC 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 16:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.1841	4.5920	889864	7.466	7.964	143
2	8.8364	4.4182	858233	7.295	7.793	143

<<<Statistics>>> Mean: 9.0103 Std Dev: 0.2459 RSD: 2.73

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 16:50
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

				Baseline	Baseline	Time
1	19.2882	9.6441	1781321	7.652	8.149	166
2	19.1778	9.5889	1771274	7.606	8.101	155

<<<Statistics>>> Mean: 19.2330 Std Dev: 0.0781 RSD: 0.41

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 17:08
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3623	0.1812	59497	7.762	8.254	118
2	0.2636	0.1318	50519	7.548	8.045	116

<<<Statistics>>> Mean: 0.3130 Std Dev: 0.0698 RSD: 22.30

Sample ID: WN51 A TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 17:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.9772	0.4886	143229	7.571	8.071	123
2	0.8179	0.4089	128732	7.406	7.903	121

<<<Statistics>>> Mean: 0.8975 Std Dev: 0.1126 RSD: 12.55

Sample ID: WL98 A3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 17:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.9602	2.4801	505585	7.915	8.414	132
2	4.6252	2.3126	475110	7.649	8.147	130

<<<Statistics>>> Mean: 4.7927 Std Dev: 0.2369 RSD: 4.94

Sample ID: WL98 B3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 18:03
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.4742	4.7371	916256	8.038	8.537	142
2	8.3872	4.1936	817369	7.852	8.350	140

<<<Statistics>>> Mean: 8.9307 Std Dev: 0.7686 RSD: 8.61

Sample ID: WL98 B3dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 18:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.8138	4.9069	947151	8.195	8.695	144
2	8.3957	4.1979	818141	8.018	8.516	137

<<<Statistics>>> Mean: 9.1047 Std Dev: 1.0027 RSD: 11.01

Sample ID: WL98 B3ms 20 Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 18:40
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27.3812	13.6906	2545386	8.546	9.045	166
2	26.2531	13.1266	2442756	8.314	8.813	155

<<<Statistics>>> Mean: 26.8172 Std Dev: 0.7977 RSD: 2.97

Sample ID: WL98 C3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 18:59
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.9820	1.9910	416595	8.245	8.740	130
2	3.3223	1.6611	356574	7.938	8.433	127

<<<Statistics>>> Mean: 3.6522 Std Dev: 0.4665 RSD: 12.77

Sample ID: WL98 D3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 19:17
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.8022	1.9011	400238	7.959	8.457	131
2	3.2877	1.6439	353427	7.778	8.272	131

<<<Statistics>>> Mean: 3.5450 Std Dev: 0.3638 RSD: 10.26

Sample ID: WL98 E3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 19:35
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.9518	2.9759	595803	7.982	8.478	132
2	4.9331	2.4666	503124	7.658	8.158	134

<<<Statistics>>> Mean: 5.4425 Std Dev: 0.7203 RSD: 13.24

Sample ID: WL98 F3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 19:53
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.6343	2.3172	475940	7.720	8.218	130
2	3.7791	1.8895	398129	7.414	7.912	129

<<<Statistics>>> Mean: 4.2067 Std Dev: 0.6047 RSD: 14.38

Sample ID: WL98 G3 TOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04261307
Cal. Curve: 042313Cal Timestamp: 2013/04/26 20:11
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.7215	2.3607	483868	7.287	7.786	133

2	4.2583	2.1292	441733	7.017	7.514	130

<<<Statistics>>> Mean: 4.4899 Std Dev: 0.3275 RSD: 7.29

Sample ID: WL98 H3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 20:29
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.2730	1.1365	261114	6.599	7.094	126
2	1.6687	0.8344	206138	6.510	7.006	121

<<<Statistics>>> Mean: 1.9708 Std Dev: 0.4273 RSD: 21.68

Sample ID: WM22 A1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 20:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.2874	2.6437	535357	6.291	6.791	132
2	4.5678	2.2839	469883	6.010	6.508	129

<<<Statistics>>> Mean: 4.9276 Std Dev: 0.5088 RSD: 10.33

Sample ID: WM22 A1dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 21:06
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.2220	2.6110	529404	6.047	6.545	132
2	4.6276	2.3138	475327	5.769	6.265	132

<<<Statistics>>> Mean: 4.9248 Std Dev: 0.4203 RSD: 8.53

Sample ID: WM22 A1ms 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 21:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23.5966	11.7983	2201068	5.841	6.335	176
2	22.9653	11.4827	2143639	5.818	6.318	157

<<<Statistics>>> Mean: 23.2809 Std Dev: 0.4464 RSD: 1.92

Sample ID: WM22 B1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 21:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.3049	2.6525	536950	5.774	6.273	134
2	4.6196	2.3098	474597	5.570	6.068	130

<<<Statistics>>> Mean: 4.9622 Std Dev: 0.4846 RSD: 9.77

Sample ID: WM22 C1
Method: TOC 0_50 ppm
Mode: TOC
Filename: 04261307

Cal. Curve: 042313Cal
Operator ID: MIKE
Timestamp: 2013/04/26 22:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.9158	0.9579	228613	5.530	6.029	127
2	1.5819	0.7909	198234	5.428	5.922	125

<<<Statistics>>> Mean: 1.7488 Std Dev: 0.2361 RSD: 13.50

Sample ID: WM22 D1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.7011	1.3506	300061	5.420	5.919	134
2	2.2343	1.1171	257592	5.401	5.895	125

<<<Statistics>>> Mean: 2.4677 Std Dev: 0.3301 RSD: 13.38

Sample ID: WM22 E1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.3783	3.1891	634599	5.500	6.000	137
2	5.7006	2.8503	572948	5.336	5.833	133

<<<Statistics>>> Mean: 6.0395 Std Dev: 0.4792 RSD: 7.93

Sample ID: WM22 F1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 22:56
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.1174	0.5587	155980	5.233	5.732	124
2	0.8997	0.4498	136172	5.143	5.636	121

<<<Statistics>>> Mean: 1.0086 Std Dev: 0.1539 RSD: 15.26

Sample ID: WM22 G1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 23:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.9545	1.9773	414095	5.530	6.028	135
2	3.6820	1.8410	389301	5.479	5.979	132

<<<Statistics>>> Mean: 3.8182 Std Dev: 0.1927 RSD: 5.05

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 23:34
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.1782	9.5891	1771313	5.753	6.253	190
2	18.7012	9.3506	1727919	5.891	6.388	161

<<<Statistics>>> Mean: 18.9397 Std Dev: 0.3373 RSD: 1.78

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/26 23:52
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.4443	0.2221	66955	5.932	6.426	121
2	0.1361	0.0681	38921	5.980	6.478	113

<<<Statistics>>> Mean: 0.2902 Std Dev: 0.2179 RSD: 75.10

Sample ID: WM40 A3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 00:10
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.0310	2.0155	421047	6.309	6.806	132
2	3.4868	1.7434	371538	6.281	6.780	126

<<<Statistics>>> Mean: 3.7589 Std Dev: 0.3848 RSD: 10.24

Sample ID: WM40 B3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 00:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.9226	3.4613	684116	6.424	6.924	146
2	6.2424	3.1212	622242	6.575	7.073	134

<<<Statistics>>> Mean: 6.5825 Std Dev: 0.4810 RSD: 7.31

Sample ID: WM40 C5 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 00:46
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.5436	1.7718	376707	6.879	7.379	129
2	2.9062	1.4531	318715	6.793	7.286	127

<<<Statistics>>> Mean: 3.2249 Std Dev: 0.4507 RSD: 13.98

Sample ID: WM40 C5dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 01:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.4559	1.7279	368726	7.090	7.590	128
2	2.9264	1.4632	320560	6.854	7.351	130

<<<Statistics>>> Mean: 3.1911 Std Dev: 0.3744 RSD: 11.73

Sample ID: WM40 C5ms 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 01:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.0558	10.5279	1969919	7.260	7.755	160
2	20.7752	10.3876	1944392	7.006	7.505	168

<<<Statistics>>> Mean: 20.9155 Std Dev: 0.1984 RSD: 0.95

Sample ID: WM40 D3 TOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 01:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.2728	1.6364	352076	7.168	7.664	134
2	2.9785	1.4893	325298	7.152	7.647	128

<<<Statistics>>> Mean: 3.1256 Std Dev: 0.2081 RSD: 6.66

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 02:02
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.8061	9.9030	1828435	7.197	7.695	211
2	18.6779	9.3390	1725799	7.364	7.862	162

<<<Statistics>>> Mean: 19.2420 Std Dev: 0.7978 RSD: 4.15

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04261307
Timestamp: 2013/04/27 02:20
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2536	0.1268	49605	7.366	7.860	113
2	0.2382	0.1191	48207	7.110	7.607	115

<<<Statistics>>> Mean: 0.2459 Std Dev: 0.0109 RSD: 4.43

TOC EPA 9060 No: 8764
Data Analyst: Mike Perkins Analyzed by: MAP
Comments: Date Analyzed: 4/25/13
Print Date: 4/30/13 12:46 Time Analyzed: 7:34

MR 4/30

	ARI ID / Client ID	DF	Raw	Calc		RL	SPK	REC/RPD
1.	ICVR ERA 0409-12-01	1.0	19.6	19.6		1.50	20.0	98.00
2.	ICB	1.0	0.50	< 1.50	U	1.50		
3.	LOW	1.0	1.64	1.64		1.50	1.50	109.33
4.	WL49A	10.	6.56	65.6		15.0		
5.	WL49A DUP	10.	6.55	65.5		15.0		0.15
6.	WL49A MS	10.	11.3	113.		15.0	50.0	94.80
7.	WL49B	5.0	21.4	107.		7.50		
8.	WL49B DUP	5.0	20.4	102.		7.50		4.78
9.	WM84A	1.0	4.44	4.44		1.50		
10.	WM84A DUP	1.0	4.20	4.20		1.50		5.56
11.	WM84A MS	1.0	24.6	24.6		1.50	20.0	100.80
12.	WM84B	1.0	5.11	5.11		1.50		
13.	WM84C	1.0	41.5	41.5		1.50		
14.	WM84C DUP	5.0	7.26	36.3		7.50		13.37
15.	WM84D	1.0	12.9	12.9		1.50		
16.	WN31B	1.0	5.61	5.61		1.50		
17.	CCVR	1.0	20.0	20.0		1.50	20.0	100.00
18.	CCB	1.0	0.11	< 1.50	U	1.50		

TOC, Aqueous Data Summary (Apollo 9000) DATE: 4/25/13 7:34

EPA 9060 A, SM 5310 B-00 ANALYST: map

Analysis Mode: **NPOC** *Instrument:* ***Apollo 9000***

Detection Limits (mgC/L)

MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data

Stock ID:	ARI 00136-10	factor (m):	1.820E+05	r^2:	0.99956
Curve Date:	4/23/2013	intercept (b_{cal}):	26536	sys blk (b_{sys})	54322
Curve ID:	042313CAL				

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	**ERA 0409-12-01**			**ARI # 00128-6**		
Conc:	5,000	*mg/L*		1,000	*mg/L*	
dilution:	1.00	*mL to*	mg C/ L	5.00	*mL to*	mg C/ L
Volume:	250	*mL =*	20.0	250	*mL =*	20

Sample Data **USED AUTOSAMPLER SPARGE OPTION WITH 1 DROP 1+1 H2SO4 TO EACH VIAL FOR TOC**

SAMPLE ID	Dilution Factor	Carbon (mg C/L) enter Form as TC, TIC, NPOC						Notes: will flag if RSD >5%
		Form	# reps	mean	stdev	Measured	Report as	
ICV	1	NPOC	2	19.6087	0.02			
ICB	1	NPOC	2	0.4985	0.07			
1.5 ppm	1	NPOC	2	1.6407	0.04			
IC Sparge Check	1	NPOC	2	19.5467	0.07			
WL49 A1	10	NPOC	2	6.5615	0.20			
WL49 A1dup	10	NPOC	2	6.5504	0.22			
WL49 A1ms	10	NPOC	2	11.3468	0.13			
Spike at	0.200	*mL of*	5,000	*ppm Std to*	20.00	*mL =*	50.0	*mg/L*
WL49 B1	5	NPOC	1	21.4376				
WL49 B1	5	NPOC	1	20.4331				
WM84 A6	1	NPOC	2	4.4354	0.30			
WM84 A6dup	1	NPOC	2	4.1999	0.63			
WM84 A6ms	1	NPOC	2	24.5767	0.13			
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WM84 B6	1	NPOC	2	5.1119	0.03			
WM84 C6	1	NPOC	1	41.4643				
WM84 C6	5	NPOC	2	7.2588	0.11			
WM84 D6	1	NPOC	2	12.9292	0.56			
Rinse	1	NPOC	2					
WL04 MB2	1	NPOC	2	-0.1344	0.12			
WL04 B	5	NPOC	1	~~105.7503~~				
WL04 B	5	NPOC	1	~~80.4994~~				
WL04 B	10	NPOC	1	~~55.4912~~				
WL04 B	10	NPOC	1	37.8791				
WL04 B	25	NPOC	2	15.4253				
WN31 B1	1	NPOC	2	5.6062				
CCV	1	NPOC	2	20.0335	0.19			
CCB	1	NPOC	2	0.1088	0.06			
INFORMATIONAL ADD-ONS FOR BOD EVALUATION								
WN32 A	500	NPOC	1	24.7980				
WN32 B	2500	NPOC	1	35.1905				
WN32 C	500	NPOC	1	2.6474				

4-25-13 AUTOSAMPLER SPARGE
Added 1 drop 1+1 H_2SO_4 to each vial

Autosampler Setup File Print Date/Time: 2013/04/0025 9:59:45

C:\APOLLO.2\ASSETUP\042513A.SET

Rack Style -- 40 mL vial

#	Pos	Sample ID	Sample Type	Method ID	Reps	Status	Message
1	35	RINSE	Sample	TOC 0_50 ppm	5	Done	
2	29	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Runni	
3..	30.	ICB CCB.	Cal. Verification...	TOC 0_50 ppm.....	2..	Done..	
4	31	1.5 PPM	Cal. Verification	TOC 0_50 ppm	2	Done	
5	32	CHECK	Cal. Verification	TOC 0_50 ppm	2	Done	
6..	1..	WL49 A1.	Sample.....	TOC 0_50 ppm.....	2..	Runni.	10X
7	2	WL49 A1	Sample	TOC 0_50 ppm	2	Ready	10X
8	3	WL49 A1	Sample	TOC 0_50 ppm	2	Ready	~~20ppm~~ 10X 0.2 mL to 20
9..	4..	WL49 B1.	Sample.....	TOC 0_50 ppm.....	1..	Ready.	} 5X 2 x 1 rep
10	4	WL49 B1	Sample	TOC 0_50 ppm	1	Ready	}
11	5	WM84 A6	Sample	TOC 0_50 ppm	2	Ready	
12.	6..	WM84 A6.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	dup
13	7	WM84 A6	Sample	TOC 0_50 ppm	2	Ready	20ppm
14	8	WM84 B6	Sample	TOC 0_50 ppm	2	Ready	
15.	9..	WM84 C6.	Sample.....	TOC 0_50 ppm.....	1..	Ready.	} 2 x 1 rep
16	9	WM84 C6	Sample	TOC 0_50 ppm	1	Ready	}
17	10	WM84 C6	Sample	TOC 0_50 ppm	2	Ready	5X
18.	11.	WM84 D6.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	PARTICULATES
19	35	RINSE	Sample	TOC 0_50 ppm	2	Ready	
20	12	WL04 MB	Sample	TOC 0_50 ppm	2	Ready	WL04/WJ81 SPLP MB 2
21.	13.	WL04 B .	Sample.....	TOC 0_50 ppm.....	1..	Ready.	WL04/WJ81 highly particulated
22	13	WL04 B	Sample	TOC 0_50 ppm	1	Ready	
23	14	WL04 B	Sample	TOC 0_50 ppm	1	Ready	
24.	14.	WL04 B .	Sample.....	TOC 0_50 ppm.....	1..	Ready.	10X
25	15	WL04 B	Sample	TOC 0_50 ppm	2	Ready	25X
26	16	WN31 B1	Sample	TOC 0_50 ppm	2	Ready	
27.	29.	ICV CCV.	Cal. Verification...	TOC 0_50 ppm.....	2..	Ready.	
28	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Ready	

End of Autosampler Setup File: 042513A

4/25/2013 SAMPLES FOR TOC ANALYSIS

ALL SAMPLES EXCEPT INITIAL QC SET RUN BY AUTOSAMPLER SPARGE TO INSURE MIXING OF PARTICULATES

WL49 AT 5X WITH HIGH PARTICULATES - USED 2 REP x 1 TO AVOID SUBSAMPLE IN IC reactor

WM84 C6 - HIGH PARTICULATES, 2x1 rep for full strength, 1x2 reps for 5x dil.

WL04 B - SPLP EXTRACT - VERY HIGH PARTICULATES, USED 2x1 REP FOR 5X 2x1 rep for 10X, AND 1x2 reps for 25X

WN31 : 02520

Autosampler Setup File Print Date/Time: 2013/04/0025 16:45:15

C:\APOLLO.2\ASSETUP\042513A.SET

Rack Style -- 40 mL vial

#	Pos	Sample ID	Sample Type	Method ID	Reps	Status	Message
1	35	RINSE	Sample	TOC 0_50 ppm	5	Done	
2	29	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Skip	
3	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Done	
4	31	1.5 PPM	Cal. Verification	TOC 0_50 ppm	2	Done	
5	32	CHECK	Cal. Verification	TOC 0_50 ppm	2	Done	
6	1	WL49 A1	Sample	TOC 0_50 ppm	2	Done	
7	2	WL49 A1	Sample	TOC 0_50 ppm	2	Done	
8	3	WL49 A1	Sample	TOC 0_50 ppm	2	Done	20ppm
9	4	WL49 B1	Sample	TOC 0_50 ppm	1	Done	
10	4	WL49 B1	Sample	TOC 0_50 ppm	1	Done	
11	5	WM84 A6	Sample	TOC 0_50 ppm	2	Done	
12	6	WM84 A6	Sample	TOC 0_50 ppm	2	Done	
13	7	WM84 A6	Sample	TOC 0_50 ppm	2	Done	20ppm
14	8	WM84 B6	Sample	TOC 0_50 ppm	2	Done	
15	9	WM84 C6	Sample	TOC 0_50 ppm	1	Done	
16	9	WM84 C6	Sample	TOC 0_50 ppm	1	Done	
17	10	WM84 C6	Sample	TOC 0_50 ppm	2	Done	
18	11	WM84 D6	Sample	TOC 0_50 ppm	2	Done	
19	35	RINSE	Sample	TOC 0_50 ppm	2	Done	
20	12	WL04 MB	Sample	TOC 0_50 ppm	2	Done	
21	13	WL04 B .	Sample	TOC 0_50 ppm	1	Done	
22	13	WL04 B	Sample	TOC 0_50 ppm	1	Done	
23	14	WL04 B	Sample	TOC 0_50 ppm	1	Done	
24	14	WL04 B .	Sample	TOC 0_50 ppm	1	Done	
25	15	WL04 B	Sample	TOC 0_50 ppm	2	Done	
26	16	WN31 B1	Sample	TOC 0_50 ppm	2	Done	
27	29	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Done	
28	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Done	
29	1	WN32 A	Sample	TOC 0_50 ppm	1	Done	
30	2	WN32 B .	Sample	TOC 0_50 ppm	1	Done	
31	3	WN32 C	Sample	TOC 0_50 ppm	1	Done	
32	35	RINSE	Sample	TOC 0_50 ppm	5	Done	

End of Autosampler Setup File: 042513A

WN31 : 02521

Calibration Report Print Date/Time: 2013/04/25 16:50:29

Cal. Curve ID: 042313Cal
Created: 2013/04/23 15:01
Calibration Factor (m): 1.820e+05
Y Intercept (b): 26536
r-squared: 0.99956

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	61783	0.000	0.194		2013/04/23 13:25
1.5 ppm	178424	0.750	0.835		2013/04/23 13:43
5.0 ppm	486724	2.500	2.529		2013/04/23 14:01
10 ppm	901050	5.000	4.806		2013/04/23 14:20
25 ppm	2247418	12.500	12.206		2013/04/23 14:39
50 ppm	4608222	25.000	25.180		2013/04/23 14:58

Sample Blanks Report Print Date/Time: 2013/04/25 16:50:36

Blank Type	Value	Date & Time
TOC_TC Rng 1		
Blank 1	42315	2013/04/23 12:53
Blank 2	56218	2013/04/23 12:51
Blank 3	64433	2013/04/23 12:48
Average	54322	
TOC_TC Rng 2		
Blank 1		
Blank 2		
Blank 3		
Average		
TOC_TC Rng 3		
Blank 1		
Blank 2		
Blank 3		
Average		
IC Range 1		
Blank 1		
Blank 2		
Blank 3		
Average		
IC Range 2		
Blank 1		
Blank 2		
Blank 3		
Average		
IC Range 3		
Blank 1		
Blank 2		
Blank 3		
Average		

Detailed Analysis Report Print Date/Time: 2013/04/25 16:44:36

Sample ID: WL49 A1 10X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 10:15
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.7061	3.3530	664422	8.352	8.850	145
2	6.4168	3.2084	638103	8.403	8.903	130

<<<Statistics>>> Mean: 6.5615 Std Dev: 0.2046 RSD: 3.12

Sample ID: WL49 A1 dup 10X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 10:31
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.7045	3.3523	664278	8.770	9.266	142
2	6.3963	3.1981	636239	8.763	9.262	136

<<<Statistics>>> Mean: 6.5504 Std Dev: 0.2179 RSD: 3.33

Sample ID: WL49 Alms 10X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 10:47
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.4405	5.7203	1095146	9.405	9.904	146
2	11.2531	5.6265	1078095	9.382	9.878	148

<<<Statistics>>> Mean: 11.3468 Std Dev: 0.1325 RSD: 1.17

Sample ID: WL49 B1 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 11:00
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.4376	10.7188	2004655	10.006	10.504	214

Sample ID: WL49 B1 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 11:12
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.4331	10.2165	1913265	10.193	10.691	201

Sample ID: WM84 A6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 11:27
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.6505	2.3253	477414	9.704	10.199	140
2	4.2204	2.1102	438285	9.415	9.909	142

<<<Statistics>>> Mean: 4.4354 Std Dev: 0.3041 RSD: 6.86

Sample ID: WM84 A6dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 11:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.6474	2.3237	477125	9.519	10.014	146
2	3.7523	1.8761	395694	9.485	9.984	138

<<<Statistics>>> Mean: 4.1999 Std Dev: 0.6329 RSD: 15.07

Sample ID: WM84 A6ms
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 12:00
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24.3083	12.1542	2265821	9.795	10.294	174
2	24.8452	12.4226	2314667	9.614	10.114	165

<<<Statistics>>> Mean: 24.5767 Std Dev: 0.3796 RSD: 1.54

Sample ID: WM84 B6
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 12:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.1339	2.5670	521391	9.798	10.295	153
2	5.0900	2.5450	517393	9.574	10.070	145

<<<Statistics>>> Mean: 5.1119 Std Dev: 0.0310 RSD: 0.61

Sample ID: WM84 C6
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 12:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	41.4643	20.7321	3826620	10.169	10.666	196

Sample ID: WM84 C6
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 12:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36.6734	18.3367	3390762	10.082	10.581	196

Sample ID: WM84 C6 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 12:55
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7.3358	3.6679	721714	9.869	10.367	150
2	7.1818	3.5909	707702	9.637	10.135	145

<<<Statistics>>> Mean: 7.2588 Std Dev: 0.1089 RSD: 1.50

Sample ID: WM84 D6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:12
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.3250	6.6625	1266587	9.987	10.484	193
2	12.5335	6.2667	1194580	9.819	10.318	186
<<<Statistics>>>	Mean: 12.9292	Std Dev: 0.5597	RSD: 4.33			

Sample ID: RINSE Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:27
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.2287	-0.1144	33511	9.933	10.431	115
2	-0.2098	-0.1049	35235	9.727	10.223	114
<<<Statistics>>>	Mean: -0.2192	Std Dev: 0.0134	RSD: -6.10			

Sample ID: WL04 MB2 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:42
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.0474	-0.0237	50014	9.819	10.318	116
2	-0.2213	-0.1106	34192	9.655	10.152	110
<<<Statistics>>>	Mean: -0.1344	Std Dev: 0.1230	RSD: -91.53			

Sample ID: WL04 B 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:56
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	105.7503	52.8751	9675173	12.451	12.943	232

Sample ID: WL04 B 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 14:07
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	80.4994	40.2497	7377925	12.288	12.780	220

Sample ID: WL04 B 10X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 14:19
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	55.4912	27.7456	5102754	11.441	11.939	225

Sample ID: WL04 B 10X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 14:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37.8791	18.9396	3500452	11.490	11.983	211

Sample ID: WL04 B 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 14:48
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.7887	9.8943	1854640	10.731	11.230	209
2	11.0619	5.5309	1060699	10.026	10.519	201

<<<Statistics>>> Mean: 15.4253 Std Dev: 6.1708 RSD: 40.00

Sample ID: WN31 B1
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.7077	2.8539	573592	9.968	10.468	138
2	5.5047	2.7524	555124	9.781	10.278	133

<<<Statistics>>> Mean: 5.6062 Std Dev: 0.1435 RSD: 2.56

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:19
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.1690	10.0845	1861449	9.927	10.427	172
2	19.8980	9.9490	1836797	9.813	10.311	157

<<<Statistics>>> Mean: 20.0335 Std Dev: 0.1916 RSD: 0.96

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:34
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1509	0.0754	40260	9.912	10.410	113
2	0.0666	0.0333	32596	9.650	10.150	110

<<<Statistics>>> Mean: 0.1088 Std Dev: 0.0596 RSD: 54.81

Sample ID: WN32 A 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

100 X pre-dilution

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24.7980	12.3990	2310374	9.880	10.379	165

Sample ID: WN32 B 25X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

100x Predilution

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	35.4905	17.7452	3283144	10.158	10.655	182

Sample ID: WN32 C 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

100 x Predilution

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 16:10
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.6474	1.3237	295176	10.018	10.513	122

Sample ID: RINSE
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 16:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.2307	-0.1154	33332	10.216	10.714	112
2	-0.2311	-0.1156	33293	9.964	10.461	111
3	-0.2089	-0.1045	35314	9.709	10.209	113
4	-0.2154	-0.1077	34729	9.632	10.128	110
5	-0.1601	-0.0800	39758	9.449	9.947	114

<<<Statistics>>> Mean: -0.2092 Std Dev: 0.0291 RSD: -13.92

Run starts here

Sample ID: RINSE
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250704
Timestamp: 2013/04/25 07:34
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	3.6357	1.8179	385090	4.888	5.385	159
2	2.1036	1.0518	245704	5.131	5.630	150
3	1.4699	0.7349	188046	5.429	5.928	137
4	1.4261	0.7131	184065	5.342	5.842	141
5	1.1591	0.5795	159772	5.485	5.981	133

<<<Statistics>>> Mean: 1.9589 Std Dev: 0.9994 RSD: 51.02

Sample ID: RINSE
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250745
Timestamp: 2013/04/25 08:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.8406	0.4203	130799	6.557	7.054	136
2	0.5374	0.2687	103209	6.534	7.031	130
3	0.3707	0.1854	88051	6.384	6.880	126
4	0.3736	0.1868	88307	6.371	6.869	129
5	0.2846	0.1423	80218	6.428	6.923	132

<<<Statistics>>> Mean: 0.4814 Std Dev: 0.2207 RSD: 45.84

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04250745
Timestamp: 2013/04/25 08:35
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.6214	9.8107	1811631	8.007	8.505	174
2	19.5959	9.7979	1809313	7.952	8.450	179

<<<Statistics>>> Mean: 19.6087 Std Dev: 0.0180 RSD: 0.09

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250745
Timestamp: 2013/04/25 08:52
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5490	0.2745	76478	9.059	9.556	122
2	0.4479	0.2240	67285	8.919	9.415	124

<<<Statistics>>> Mean: 0.4985 Std Dev: 0.0715 RSD: 14.34

Sample ID: 1.5 PPM
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250745
Timestamp: 2013/04/25 09:11
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.6683	0.8342	178314	9.865	10.359	127
2	1.6132	0.8066	173304	9.589	10.087	129

<<<Statistics>>> Mean: 1.6407 Std Dev: 0.0390 RSD: 2.37

Sample ID: CHECK
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250745
Timestamp: 2013/04/25 09:30
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.4999	9.7499	1800577	10.900	11.400	171
2	19.5935	9.7968	1809098	10.585	11.083	172

<<<Statistics>>> Mean: 19.5467 Std Dev: 0.0662 RSD: 0.34

Sample ID: WL49 A1 10X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 10:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.7061	3.3530	664422	8.352	8.850	145
2	6.4168	3.2084	638103	8.403	8.903	130

<<<Statistics>>> Mean: 6.5615 Std Dev: 0.2046 RSD: 3.12

Sample ID: WL49 A1 dup 10X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 10:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6.7045	3.3523	664278	8.770	9.266	142
2	6.3963	3.1981	636239	8.763	9.262	136

<<<Statistics>>> Mean: 6.5504 Std Dev: 0.2179 RSD: 3.33

Sample ID: WL49 Alms 10X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 10:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.4405	5.7203	1095146	9.405	9.904	146
2	11.2531	5.6265	1078095	9.382	9.878	148

<<<Statistics>>> Mean: 11.3468 Std Dev: 0.1325 RSD: 1.17

Sample ID: WL49 B1 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 11:00
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21.4376	10.7188	2004655	10.006	10.504	214

Sample ID: WL49 B1 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 11:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.4331	10.2165	1913265	10.193	10.691	201

Sample ID: WM84 A6
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 11:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.6505	2.3253	477414	9.704	10.199	140
2	4.2204	2.1102	438285	9.415	9.909	142

<<<Statistics>>> Mean: 4.4354 Std Dev: 0.3041 RSD: 6.86

Sample ID: WM84 A6dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 11:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.6474	2.3237	477125	9.519	10.014	146
2	3.7523	1.8761	395694	9.485	9.984	138

<<<Statistics>>> Mean: 4.1999 Std Dev: 0.6329 RSD: 15.07

Sample ID: WM84 A6ms
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 12:00
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24.3083	12.1542	2265821	9.795	10.294	174
2	24.8452	12.4226	2314667	9.614	10.114	165

<<<Statistics>>> Mean: 24.5767 Std Dev: 0.3796 RSD: 1.54

Sample ID: WM84 B6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 12:15
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.1339	2.5670	521391	9.798	10.295	153
2	5.0900	2.5450	517393	9.574	10.070	145
<<<Statistics>>>	Mean: 5.1119	Std Dev: 0.0310	RSD: 0.61			

Sample ID: WM84 C6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 12:28
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	41.4643	20.7321	3826620	10.169	10.666	196

Sample ID: WM84 C6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 12:40
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36.6734	18.3367	3390762	10.082	10.581	196

Sample ID: WM84 C6 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 12:55
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7.3358	3.6679	721714	9.869	10.367	150
2	7.1818	3.5909	707702	9.637	10.135	145
<<<Statistics>>>	Mean: 7.2588	Std Dev: 0.1089	RSD: 1.50			

Sample ID: WM84 D6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:12
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.3250	6.6625	1266587	9.987	10.484	193
2	12.5335	6.2667	1194580	9.819	10.318	186
<<<Statistics>>>	Mean: 12.9292	Std Dev: 0.5597	RSD: 4.33			

Sample ID: RINSE Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:27
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.2287	-0.1144	33511	9.933	10.431	115
2	-0.2098	-0.1049	35235	9.727	10.223	114
<<<Statistics>>>	Mean: -0.2192	Std Dev: 0.0134	RSD: -6.10			

Sample ID: WL04 MB2 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:42
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.0474	-0.0237	50014	9.819	10.318	116
2	-0.2213	-0.1106	34192	9.655	10.152	110

<<<Statistics>>> Mean: -0.1344 Std Dev: 0.1230 RSD: -91.53

Sample ID: WL04 B 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 13:56
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	105.7503	52.8751	9675173	12.451	12.943	232

Sample ID: WL04 B 5X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 14:07
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	80.4994	40.2497	7377925	12.288	12.780	220

Sample ID: WL04 B 10X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 14:19
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	55.4912	27.7456	5102754	11.441	11.939	225

Sample ID: WL04 B 10X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 14:31
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37.8791	18.9396	3500452	11.490	11.983	211

Sample ID: WL04 B25X Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 14:48
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.7887	9.8943	1854640	10.731	11.230	209
2	11.0619	5.5309	1060699	10.026	10.519	201

<<<Statistics>>> Mean: 15.4253 Std Dev: 6.1708 RSD: 40.00

Sample ID: WN31 B1 Mode: TOC
Method: TOC 0_50 ppm Filename: 04250957
Cal. Curve: 042313Cal Timestamp: 2013/04/25 15:02
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.7077	2.8539	573592	9.968	10.468	138
2	5.5047	2.7524	555124	9.781	10.278	133

<<<Statistics>>> Mean: 5.6062 Std Dev: 0.1435 RSD: 2.56

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:19
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.1690	10.0845	1861449	9.927	10.427	172
2	19.8980	9.9490	1836797	9.813	10.311	157

<<<Statistics>>> Mean: 20.0335 Std Dev: 0.1916 RSD: 0.96

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:34
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1509	0.0754	40260	9.912	10.410	113
2	0.0666	0.0333	32596	9.650	10.150	110

<<<Statistics>>> Mean: 0.1088 Std Dev: 0.0596 RSD: 54.81

Sample ID: WN32 A 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
100 X pre dilution
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24.7980	12.3990	2310374	9.880	10.379	165

Sample ID: WN32 B 25X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
100 X pre-dilution
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 15:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	35.4905	17.7452	3283144	10.158	10.655	182

Sample ID: WN32 C 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
100 X pre-dilution
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 16:10
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.6474	1.3237	295176	10.018	10.513	122

Sample ID: RINSE
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04250957
Timestamp: 2013/04/25 16:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.2307	-0.1154	33332	10.216	10.714	112

2	-0.2311	-0.1156	33293	9.964	10.461	111
3	-0.2089	-0.1045	35314	9.709	10.209	113
4	-0.2154	-0.1077	34729	9.632	10.128	110
5	-0.1601	-0.0800	39758	9.449	9.947	114

<<<Statistics>>> Mean: -0.2092 Std Dev: 0.0291 RSD: -13.92

W

4-30-13

TOC, Solids Data Analysis

DATE: 4/29/2013

Instrument: Apollo 1 — ANALYST: KE 6:02

Mode: NPOC *Inlet:* Boat

Spike Std = 2,500 *ppm C* — Balance ID:

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
10.0	13.3	11.1				11.5	14.9%	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~~	~~886~~	~~886~~	~~88.60%~~
ICV				1.00		40.0	929	929	92.90%
Blank				1.00		40.0	-42.53	-43	Blank OK
NIST 1941B				1.00		1.1	26851	26,851	89.80%
~~WN20 A2~~			-	~~1.00~~		~~0.8~~	~~72485~~	~~72,485~~	~~Range OK!~~
Silica Blanks 1				1.00		51.8	9.97	10	Low Scale
Silica Blanks 2				1.00		50.7	13.34	13	Low Scale
Silica Blanks 3				1.00		50.6	11.12	11	Low Scale
WN20 A2	16.8	165.9	89.87%	9.88		1.5	10089	99,527	Range OK!
WN20 A2 dup	16.8	165.8	89.87%	9.87		1.5	9173	90,427	RPD=9.6%
WN20 A2 trp	16.7	164.8	89.87%	9.87		1.4	6916	68,147	RSD=18.8%
WN20 A2 ms	16.8	165.9	89.87%	9.88	10	1.6	24385	240,700	Range OK!
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*154,297*	*ppm*		*91%*	
WN20 B2	15.9	158.6	89.97%	9.97		1.8	7804	77,741	Range OK!
CCV				1.00		40.0	990	990	99.00%
Blank				1.00		40.0	-49.84	-50	Blank OK
WN20 C2	13.1	127.1	89.69%	9.70		1.6	8979	87,017	Range OK!
WN20 D2	19.2	190.9	89.94%	9.94		2.8	9386	93,220	Range OK!
W220 E2				1.00		1.5	21667	21,667	Range OK!

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean sllica 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
WN31 A6	16.1	158.1	89.82%	9.82		1.5	18755	184,071	*Range OK!*
WN31 A6 dup	16.7	164.5	89.85%	9.85		1.5	18254	179,706	*RPD=2.4%*
WN31 A6 trp	16.1	158.3	89.83%	9.83		1.8	16927	166,330	*RSD=5.2%*
~~WN31 A6 ms~~	~~16.1~~	~~158.1~~	~~89.82%~~	~~9.82~~	~~10~~	~~1.3~~	~~32518~~	~~319,221~~	~~*Range OK!*~~
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*0.1*~~	~~*mg samp=*~~	~~*188,844*~~	~~*ppm*~~		~~*72%*~~	
WN31 A6 ms	16.1	158.1	89.82%	9.82	10	1.5	31416	308,400	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*163,665*	*ppm*		*76%*	
WN30 B1				1.00		1.7	47347	47,347	*Range OK!*
WN30 C1				1.00		1.3	59168	59,168	*Range OK!*
CCV				1.00		40.0	1014	1,014	*101.40%*
Blank				1.00		40.0	-47.99	-48	*Blank OK*
WN30 A1				1.00		1.0	30525	30,525	*Range OK!*
WN30 A1 dup				1.00		1.0	29536	29,536	*RPD=3.3%*
WN30 A1 trp				1.00		1.0	23487	23,487	*RSD=13.7%*
~~WN30 A1 ms~~			-	~~1.00~~	~~10~~	~~1.0~~	~~44361~~	~~44,361~~	~~*Range OK!*~~
~~*Spike =*~~	~~*0.025*~~	~~*mg C to*~~	~~*1.0*~~	~~*mg samp=*~~	~~*25,000*~~	~~*ppm*~~		~~*56%*~~	
WN30 A1 ms				1.00	20	1.5	57113	57,113	*Range OK!*
Spike =	*0.05*	*mg C to*	*1.5*	*mg samp=*	*33,333*	*ppm*		*80%*	
WN30 D1				1.00		1.7	9846	9,846	*Range OK!*
WN30 E1				1.00		1.0	31151	31,151	*Range OK!*
WN30 F1				1.00		1.2	17509	17,509	*Range OK!*
WN30 G1				1.00		1.2	19441	19,441	*Range OK!*
~~NIST 1941B~~			-	~~1.00~~		~~1.2~~	~~19771~~	~~19,771~~	~~*66.12%*~~
NIST 1941B				1.00		1.5	25638	25,638	*85.75%*
CCV				1.00		40.0	1015	1,015	*101.50%*
Blank				1.00		40.0	-46.84	-47	*Blank OK*

Analytical Resources, Incorporated
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(1) 4-29-13 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 2

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler	
Standards:	Source		Conc (ppm)	Analyst:	(1)
Calibration:	ARI -001360-02		5000	Date:	4-29-13
Verification:	ERA -040912-01		5000 to 1000 for CVS	Time:	6:02
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			
LCV			40			
ICB			40			
NBS 1941 B			1.1			
WN20 A2			0.8			High Bkd Hold Time
SB (1) A2	1		(1) ~~0.8~~ 51.8			
(1) A2	2		50.7			
(1) A2	3		50.6			
WN20 A2	16.8	16.59	1.5			
DP A2	16.8	16.58	1.5			
VP A2	16.7	16.48	1.4			
MS A2	16.8	16.59	1.6	2500	10	
D2	15.9	15.86	1.9			
CCV			40			
CCB			40			
WN20 C2	13.1	12.21	1.6			
D2	19.2	19.09	2.8			
E2	(1) ~~19.~~		1.5			
WN21 A6	16.1	15.81	1.5			
DP A6	16.2	16.45	1.5			
VP A6	16.1	15.83	1.8			
MS A6	16.1	15.81	1.3/1.5	2500	10	2 misfires
WN30 B1			1.7			
C1			1.3			
CCV (1)			40			
CCB			40			
~~WN30 D1~~			~~1.0~~	~~4-29-13 (W)~~		
B1			1.0			
DP A1			1.0			
VP A1			1.0			
MS A1			1.0	2500	10	Low
MS A1			1.5	2500	20	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

①4-29-13①

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler		
Standards:	Source	Conc (ppm)	Analyst:	(h)	
Calibration:	ARI – 001336-09	5000	Date:	4-29-13	
Verification:	ERA – 0409-12-01	5000 to 1000 for CVS	Time:	6:02	
SRM:	NBS (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146954145	
Sample Sequence:					

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
WN30 D1			~~1.0~~ 1.7			
E1			1.0			
F1			1.2			
G1			1.2			
H1			1.0	4-29-13 (w)		
NBS1941 B			12/15			
CCV			40			
CCB			40			

4-29-13 (h)

4-29-13 (4)

Detailed Analysis Report Print Date/Time: 2013/04/29 13:48:02

4-29-13 (2)

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290602
Timestamp: 2013/04/29 06:06
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	885.7054	35.4282	5116134	20.236	21.235	133

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290609
Timestamp: 2013/04/29 06:15
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	929.0577	37.1623	5352692	20.328	21.324	130

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290628
Timestamp: 2013/04/29 06:31
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-42.5269	-1.7011	51116	20.599	20.479	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290637
Timestamp: 2013/04/29 06:41
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26851.3223	29.5365	4312405	20.352	21.350	214

Sample ID: WN20 A2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290650
Timestamp: 2013/04/29 06:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	72484.7734	57.9878	7910448	20.518	21.512	160

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290715
Timestamp: 2013/04/29 07:17
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.9689	0.5164	70443	21.200	22.193	57

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290722
Timestamp: 2013/04/29 07:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.3435	0.6765	92287	21.320	22.313	59

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290729
Timestamp: 2013/04/29 07:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11.1222	0.5628	76773	21.407	22.399	58

Sample ID: WN20 A2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290737
Timestamp: 2013/04/29 07:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10088.6475	15.1330	2064375	21.618	22.615	103

Sample ID: WN20 A2 DUP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290752
Timestamp: 2013/04/29 08:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9172.8730	13.7593	1876986	24.357	25.353	104

Sample ID: WN20 A2 TRIP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290818
Timestamp: 2013/04/29 08:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6915.5029	9.6817	1320736	25.230	26.228	92

Sample ID: WN20 A2 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290823
Timestamp: 2013/04/29 08:26
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24384.7676	39.0156	5322344	25.554	26.551	136

Sample ID: WN20 B2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290842
Timestamp: 2013/04/29 08:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7803.9609	14.0471	1916249	27.882	28.878	114

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290849
Timestamp: 2013/04/29 08:53
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

				Baseline	Baseline	Time
1	989.7512	39.5900	5683873	28.749	29.749	154

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290855
Timestamp: 2013/04/29 08:58
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-49.8357	-1.9934	11235	29.486	29.583	120

Last Message: Low Sample Detected

Sample ID: WN20 C2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290901
Timestamp: 2013/04/29 09:04
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8978.9258	14.3663	1959786	29.620	30.614	104

Sample ID: WN20 D2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290906
Timestamp: 2013/04/29 09:09
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9386.4082	26.2819	3585269	29.759	30.755	121

Sample ID: WN20 E2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290921
Timestamp: 2013/04/29 09:24
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21667.0293	32.5005	4433584	29.842	30.842	132

Sample ID: WN21 A6
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04290951
Timestamp: 2013/04/29 09:57
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18755.0879	28.1326	3837732	29.891	30.890	114

Sample ID: WN21 A6 DUP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291003
Timestamp: 2013/04/29 10:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18253.7012	27.3806	3735137	30.083	31.080	121

Sample ID: WN21 A6 TRIP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291011
Timestamp: 2013/04/29 10:16
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16927.1660	30.4689	4156436	30.224	31.213	118

Sample ID: WN21 A6 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291025
Timestamp: 2013/04/29 10:29
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	32518.3262	42.2738	5766813	30.733	31.731	137

Sample ID: WN21 A6 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291038
Timestamp: 2013/04/29 10:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31416.3633	47.1245	6428527	31.285	32.285	162

Sample ID: WN30 B1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291123
Timestamp: 2013/04/29 11:28
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	47347.0000	80.4899	10980085	32.766	33.764	190

Sample ID: WN30 C1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291137
Timestamp: 2013/04/29 11:41
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	59168.3438	76.9188	10492937	32.810	33.810	185

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291143
Timestamp: 2013/04/29 11:48
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1013.8937	40.5557	5815610	32.916	33.914	135

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291151
Timestamp: 2013/04/29 11:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-47.9850	-1.9194	21333	32.729	32.669	120

Last Message: Low Sample Detected

Sample ID: WN30 A1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04291202
Timestamp: 2013/04/29 12:05
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	30525.4375	30.5254	4164148	32.775	33.775	128

Sample ID: WN30 A1 DP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291212
Timestamp: 2013/04/29 12:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29535.9707	29.5360	4029170	32.855	33.852	131

Sample ID: WN30 A1 TRIP
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291217
Timestamp: 2013/04/29 12:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23487.0547	23.4871	3204003	32.982	33.981	113

Sample ID: WN30 A1 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291223
Timestamp: 2013/04/29 12:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	44360.6406	44.3606	6051487	32.800	33.799	130

Sample ID: WN30 A1 MS
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291233
Timestamp: 2013/04/29 12:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	57112.7930	85.6692	11686621	32.730	33.722	193

Sample ID: WN30 D1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291241
Timestamp: 2013/04/29 12:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9846.3135	16.7387	2283426	32.678	33.675	99

Sample ID: WN30 E1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291257
Timestamp: 2013/04/29 13:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31150.8516	31.1509	4249465	32.135	33.131	128

Sample ID: WN30 F1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291304
Timestamp: 2013/04/29 13:08
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17509.3008	21.0112	2866252	32.066	33.065	113

Sample ID: WN30 G1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291312
Timestamp: 2013/04/29 13:15
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19441.1094	23.3293	3182487	32.382	33.375	127

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291318
Timestamp: 2013/04/29 13:25
Sample Type: Cal. Verification

low 4-29-13 (10)

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19770.6855	23.7248	3519608	32.557	33.554	226

Last Message: Out of Calibration

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291330
Timestamp: 2013/04/29 13:36
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25638.4746	38.4577	5529405	33.322	34.319	288

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291336
Timestamp: 2013/04/29 13:41
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1014.7619	40.5905	5820347	33.674	34.673	164

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04291342
Timestamp: 2013/04/29 13:46
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-46.8447	-1.8738	27556	34.252	34.452	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

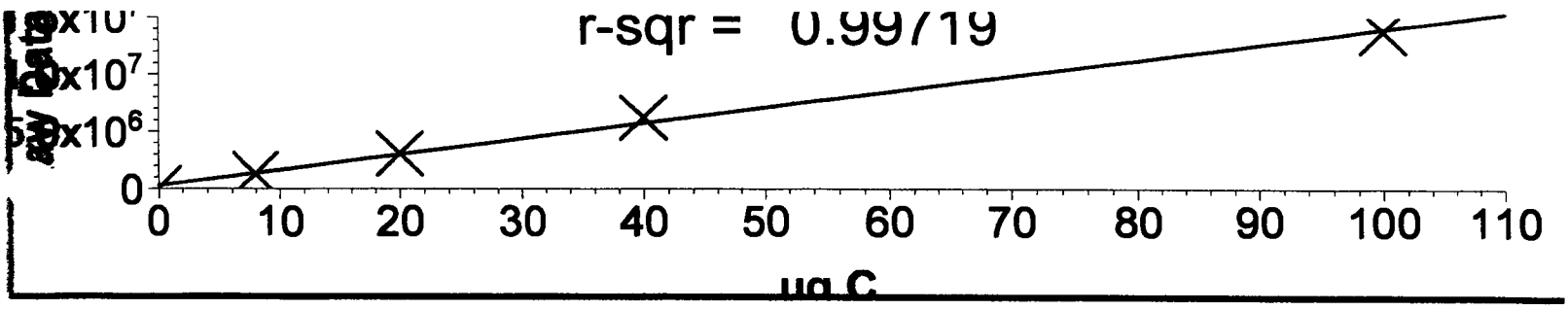
Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1069.2297	42.7692	6117558	49.225	51.488	300

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


r-sqr = 0.99719
x10^7
x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 5/6/13 11:20

pH meter verification **pH meter ID: ACCUMET AR60** **Buret ID:** 01G30627 Analyst: UW

Buffer pH **7.00** **pH Probe ID :** AR60

Measured pH 7.02 *Calibration OK* **Acid ARI ID:**

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: *00138-5*

grams Na2CO3 =	**0.6250**	*to*	**250**	*ml DI*
Normality Na2CO3 =	0.0472			
Assumed Acid Normality =	**0.02**			
Standardized Acid Normality=	0.0210	***OK!***		

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	11.20	0.021
2	0.00	5	11.20	0.021
3	0.00	5	11.23	0.021
AVERAGE	0.00			0.021

Partitioning Calculations

T=Total, P=Phenolphthalein

Obs	*HCO3*	*CO3*	*OH*
P =0	T	0	0
P< 0.5T	T - 2P	2P	0
P= 0.5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: *00138-6*

grams Na2CO3 =	**0.6259**	*grams in*	**250**	*mL =*	*mg/L CaCO3* *2362*
dilution:	**5.0**	*mL to*	**95**	*CVS =*	**124.3**
DQL Std (2ppm)	*dilute*	**0.085**	*mL stock to 100 mL DI =*		**2.0**

Laboratory Control Standard (LCS)

Source: *ERA P206-506* *mg/L CaCO3* **41.90**

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample *(shaded cells are calculated, make no entries)*

low level = {{{(2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4			ALK (mg CaCO3/l)			Partitioning (mg/l CaCO3)			(mg/l)
					pH=8.3	pH =4.5	pH=4.2	Phenolph	TOT HIGH	TOT LOW	HCO3	CO3	OH	FREE CO2
ICV		10.18	100	21.8	5.39	11.20	0.00	56.7	117.8		*94.8% OK!*			
ICB		3.94	100	21.8	0.00	0.00	0.00	0.0		0.0	0.0	0.0	0.0	0.0
DQL Std (2ppm)		7.35	100	22.4	0.00	0.19	0.21	0.0		1.8				
LCS		8.63	50	22.3	0.59	1.92	2.00	12.4	40.4		*96.4% OK!*			
WN31 B3		6.63	100	21.4	0.00	4.28	0.00	0.0	45.0		45.0	0.0	0.0	21.1
WN31 B3 dup		6.63	100	21.4	0.00	4.29	0.00	0.0	45.1		45.1	0.0	0.0	21.2
RPD =									*0.2%*		*0.2%*			*0.2%*
WN51 A4		7.11	100	21.6	0.00	1.70	1.87	0.0		16.1	16.1	0.0	0.0	2.5
WN51 A4 dup		7.10	100	21.8	0.00	1.72	1.84	0.0		16.8	16.8	0.0	0.0	2.7
RPD =										*4.5%*	*4.5%*			*6.8%*
WO85 A1		7.31	100	22.0	0.00	8.86	0.00	0.0	93.2		93.2	0.0	0.0	9.1
WO85 A1 dup		7.29	100	22.2	0.00	8.91		0.0	93.7		93.7	0.0	0.0	9.6
RPD =									*0.6%*		*0.6%*			*5.2%*
WO89 A4		5.75	100	21.7	0.00	0.97	1.10	0.0		8.8	8.8	0.0	0.0	31.4
WO89 A4 dup		5.70	100	21.6	0.00	0.96	1.11	0.0		8.5	8.5	0.0	0.0	34.0
RPD =										*3.6%*	*3.6%*			*7.9%*
WO89 B4		5.47	100	21.5	0.00	1.16	1.32	0.0		10.5	10.5	0.0	0.0	71.3
WO89 C3		7.02	100	21.7	0.00	5.54	0.00	0.0	58.3		58.3	0.0	0.0	11.1
CCV		10.26	100	23.2	5.42	11.28	0.00	57.0	118.7		*95.5% OK!*			0.0
WO89 D3		6.42	100	21.9	0.00	3.24	0.00	0.0	34.1		34.1	0.0	0.0	25.9
WO89 E4		6.73	100	21.9	0.00	4.07	0.00	0.0	42.8		42.8	0.0	0.0	15.9
WO89 F4		6.55	100	21.9	0.00	2.77	0.00	0.0	29.1		29.1	0.0	0.0	16.4
WO89 G4		6.95	100	21.9	0.00	2.59	0.00	0.0	27.2		27.2	0.0	0.0	6.1
WO89 H4		6.99	100	21.8	0.00	3.15	0.00	0.0	33.1		33.1	0.0	0.0	6.8
WO89 I3		6.30	100	21.9	0.00	6.33	0.00	0.0	66.6		66.6	0.0	0.0	66.8
CCV		10.26	100	23.4	5.45	11.28	0.00	57.3	118.7		*95.5% OK!*		0.0	0.0

ALKALINITY BENCHSHEET

methods: **SM 2320 B-97**

Date/Time: 5-6-13 11:20

Analyst: CW

pH meter verification — pH meter ID: **ACCUMET AR60** — Buret ID: **01G30627**

Buffer pH: **7.00** — pH Probe ID: **AR60**

Measured pH: 7.02 — must agree within 0.1 pH un — Acid ARI ID:

Standardization of acid titrant *(titration to pH 4.5)*

ARI ID: 00138-5

grams Na2CO3 =	0.6258	to	250 ml DI
Normality Na2CO3 =	0.0472		
Assumed Acid Normality =	0.02		
Standardized Acid Normality=			

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	11.20	
2	0.00	5	11.20	
3	0.00	5	11.23	
AVERAGE				

Partitioning Calculations

T=Total, P=Phenolphthalein

Obs	HCO3	CO3	OH
P =0	T	0	0
P< 0.5T	T - 2P	2P	0
P= 0.5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: 00138-6 — mg/L CaCO3

grams Na2CO3 = 0.6259 — grams in 250 — mL = ####### — CVS = ____

dilution: 5 — mL to 95

DQL Std (2ppm) — dilute — mL stock to 100 mL DI =

Laboratory Control Standard (LCS)

Source: ERA P 206-506 — mg/L CaCO3: ~~49.20~~ 41.9

SAMPLE DATA

Alk (mg/L CaCO3 = [(mL acid X Nacid) X 50,000] / mL sample

low level = {((2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

(shaded cells are calculated, make no entries)

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
ICV		10.18	100	21.8	5.39	11.20	0.00							
ICB		3.94	100	21.8	0.00	0.00	0.00							
DQL Std (2ppm)		7.35	100	22.4	0.00	0.19	0.21							
LCS		8.63	50	22.3	0.59	1.92	2.00							
WN31 DJ		6.63	100	21.4	0.00	4.28	0.00							
↓ BJ dup		6.63	"	21.4	"	4.29	0.00							
WN31 AH		7.11		21.6		1.70	1.87							
↓ AH dup		7.10		21.8		1.72	1.84							
WD85 AI		7.21		22.0		9.86	0.00							
↓ AI dup		7.29		22.2		8.91	0.00							
WD89 AH		5.75		21.7		0.97	1.10							
↓ AH dup		5.70		21.6		0.96	1.11							
BH		5.47		21.5		1.16	1.32							
↓ CB		7.02		21.7	↓	5.54	0.00							
CCV		10.26		23.2	5.42	11.28	0.00							
DJ		6.42		21.9	0.00	3.24	0.00							
EH		6.73		21.9	"	4.07	"							
FH		6.55		21.9		2.72								
GH		6.95		21.9		2.59								
HH		6.99		21.8		3.15								
↓ IJ		6.30		21.9	↓	6.38								
CCV		10.26	↓	23.4	5.45	11.28	↓							
↓ 5-6-13														
CCV														

05529 : 13NM

Amount Summary

Sequence Details

Name:	**APR2513RR**	*Calibration:*	**MAR2313RR** **ARI # 613-02**
Directory:	**Instrument Data\2013 DATA\APR 2013**	*Calibration exp:*	**5/23/2013**
Data Vault:	**ChromeleonLocal**	*Queue Start:*	4/25/2013 10:42
No. of Injections:	**28.000**	*User:*	**RR**

Sequence Table

		ERA 130312	ERA 210312	ERA 490412	ERA 370911	ERA 240312	ERA 230511	ERA 030112
Name	Dilution	Amount n.a. Fluoride	Amount n.a. Chloride	Amount n.a. Nitrite	Amount n.a. Bromide	Amount n.a. Sulfate	Amount n.a. Nitrate	Amount n.a. Phosphate
RINSE	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ICV	1.0	3.029	3.021	3.052	3.036	3.148	2.995	3.031
%R=		**101.0%**	**100.7%**	**101.7%**	**101.2%**	**104.9%**	**99.8%**	**101.0%**
ICB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LOW	1.0	0.086	0.100	0.075	0.083	0.098	0.081	0.088
		0.051	321.154	n.a.	1.005	n.a.		n.a.
		0.050	321.015	n.a.	0.985	n.a.		n.a.
%RPD=		**0.86%**	**0.04%**		**2.01%**		**0.33%**	
		2.291	319.715	1.989	3.068	n.a.		1.781
%R=		**114.6%**		**99.4%**	**103.2%**		**102.7%**	**89.0%**
SPK=	**0.055mL*200ppm/5.5mL**	**=2ppm**						
			63.347	0.276	n.a.	n.a.	n.a.	3.308
			7.238	n.a.	n.a.	17.742	0.289	n.a.
			58.128	n.a.	n.a.	26.210	n.a.	3.008
		n.a.	n.a.	0.013	639.643	n.a.		n.a.
		0.272	581.888	n.a.	1.806	n.a.		n.a.
		0.261	582.570	n.a.	1.841	n.a.		n.a.
%RPD=		**4.16%**	**0.12%**		**1.90%**			
CCV	1.0	3.019	3.143	3.046	3.015	3.134	2.991	2.728
%R=		**100.6%**	**104.8%**	**101.5%**	**100.5%**	**104.5%**	**99.7%**	**90.9%**
CCB	1.0	n.a.	0.100	n.a.	n.a.	n.a.	n.a.	n.a.
		2.123	578.927	1.964	3.896	n.a.		n.a.
%R=		**92.5%**		**98.2%**	**104.5%**		**99.1%**	
SPK=	**0.055mL*200ppm/5.5mL**	**=2ppm**						
		0.230	1200.315	n.a.	3.925	n.a.		n.a.
		0.228	392.362	n.a.	1.145	n.a.		n.a.
		n.a.	n.a.	n.a.	639.504	n.a.		n.a.
		0.201	9.724	n.a.	0.062		n.a.	n.a.
WN45 B2	1.0	0.151	5.385	n.a.	n.a.	n.a.	n.a.	n.a.
WN45 C2	1.0	0.185	4.068	n.a.	n.a.	7.687	n.a.	n.a.
WN45 D2	1.0	0.291	36.889	n.a.	0.752	26.947	0.030	n.a.
WN45 E2	1.0	0.255	41.394	n.a.	0.740	n.a.	n.a.	n.a.
WN45 F2	1.0	0.243	44.831	n.a.	0.723	n.a.	n.a.	n.a.
CCV	1.0	3.026	3.072	3.039	2.998	3.133	2.986	2.836
%R=		**100.9%**	**102.4%**	**101.3%**	**99.9%**	**104.4%**	**99.5%**	**94.5%**
CCB	1.0	n.a.	0.071	n.a.	n.a.	n.a.	n.a.	n.a.
STOP	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

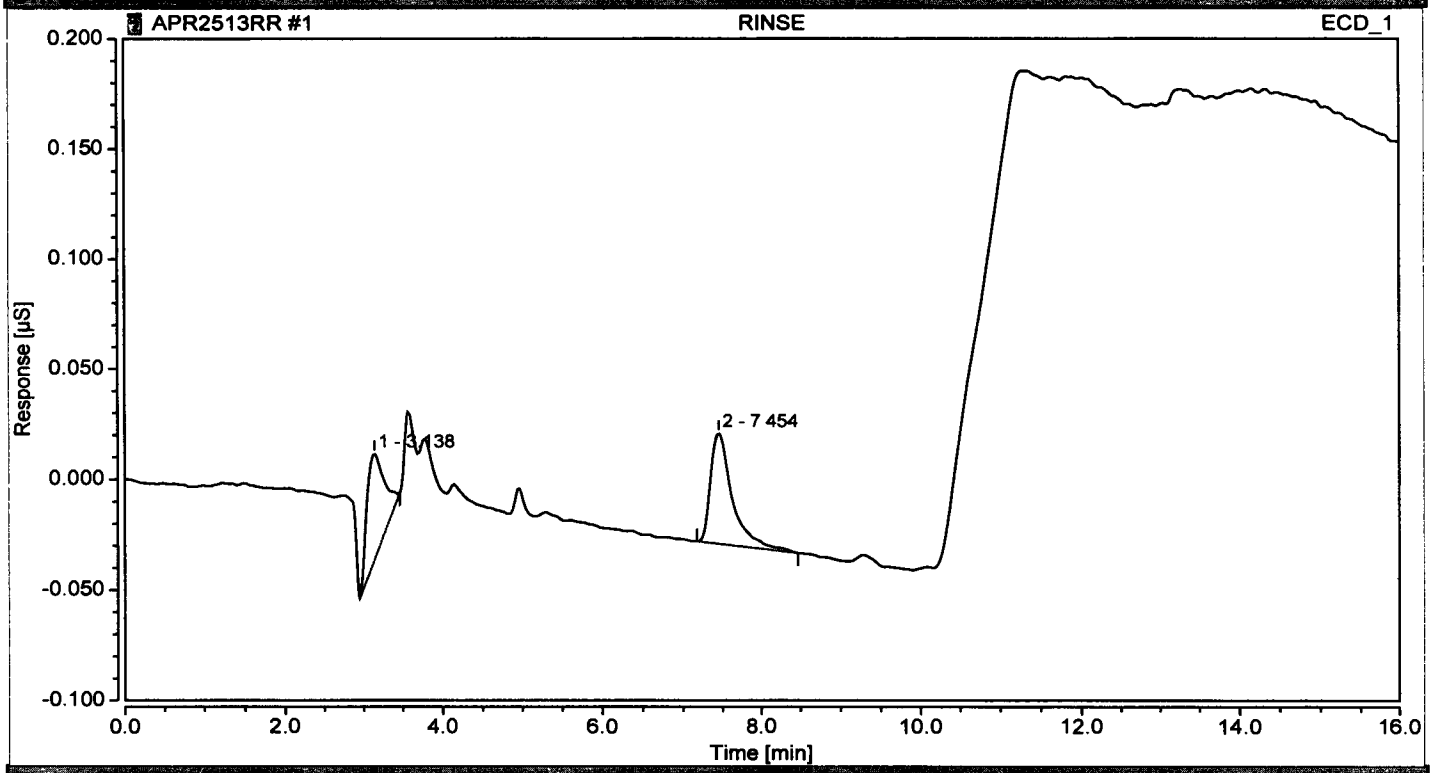
Sequence Details

Name:	**APR2513RR**	*Queue Start:*	**2013-04-25T10:42:01-**
Directory:	**Instrument Data\2013 DATA\APR 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**28**		

No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE					25/Apr/13 10:42:01
2	ICV					
3	ICB					
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28	STOP		Unknown			25/Apr/13 19:40:16

Injection Results

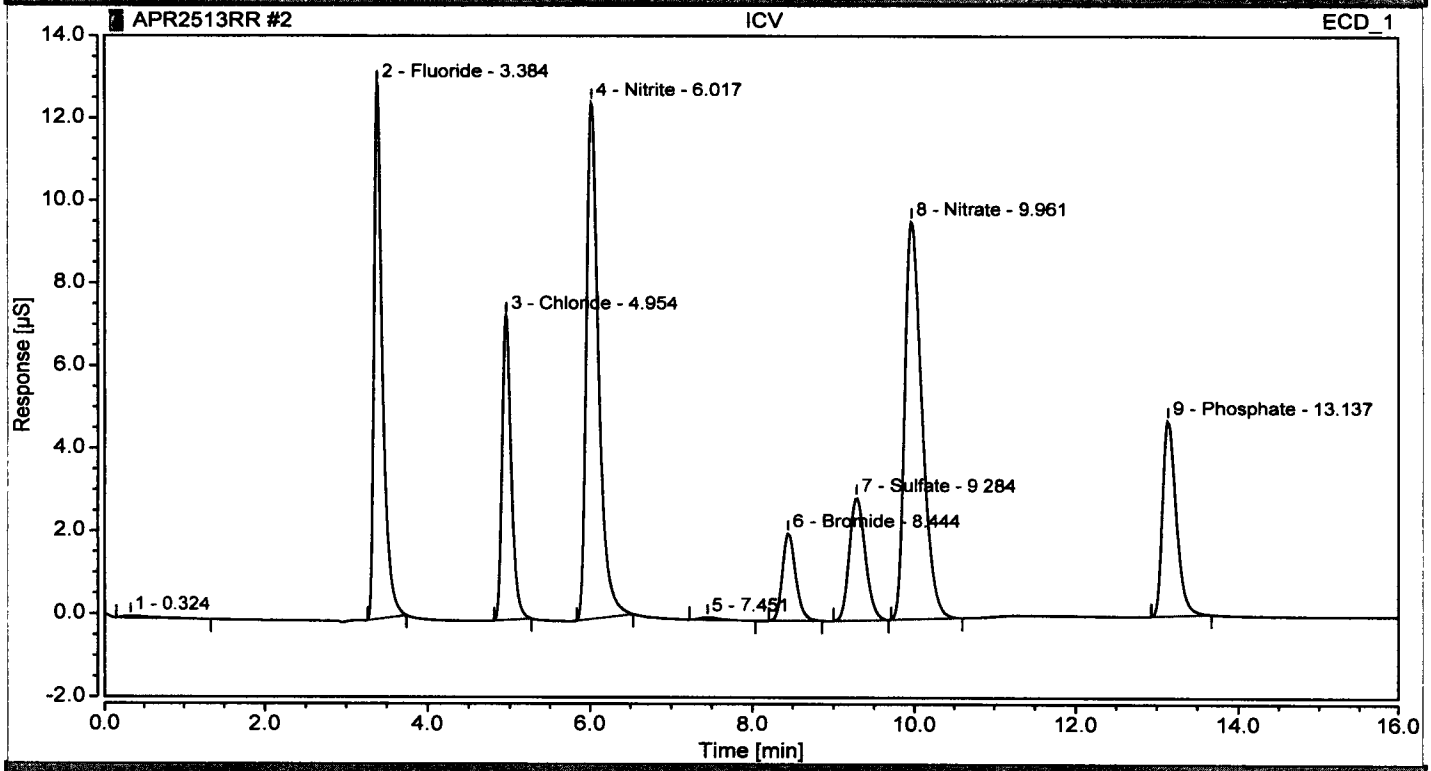
Injection Name:	*RINSE*	Inject Number:	1
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 10:42*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.				FALSE	n.a.
n.a.	Fluoride	1.0	n.a.			n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.			n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.			n.a.	n.a.	n.a.
2		1.0	n.a.				FALSE	n.a.
n.a.	Bromide	1.0	n.a.			n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.			n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.			n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.			n.a.	n.a.	n.a.

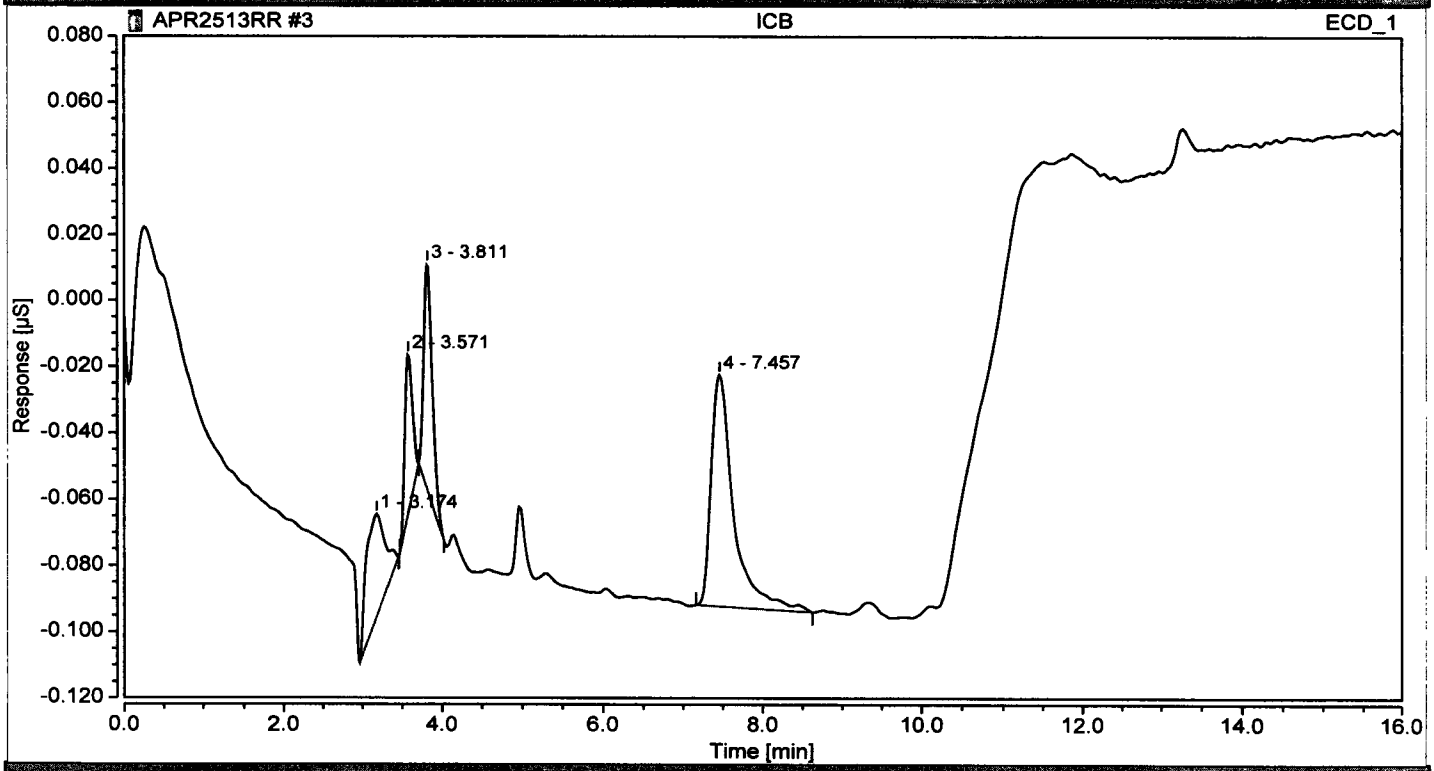
Chromatogram and Results

Injection Name:	*ICV*	Inject Number:	2
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 11:00*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	0.32	0.022	0.297	FALSE	n.a.
2	Fluoride	1.0	3.025	3.38	1.000	13.976	FALSE	0.98
3	Chloride	1.0	3.021	4.95	2.000	8.870	FALSE	0.68
4	Nitrite	1.0	3.052	6.02	2.000	12.116	FALSE	1.74
5		1.0	n.a.	7.45	0.000	0.000	FALSE	n.a.
6	Bromide	1.0	3.036	8.44	0.001	2.116	FALSE	1.20
7	Sulfate	1.0	3.069	9.28	0.001	2.972	FALSE	4.93
8	Nitrate	1.0	2.996	9.96	2.000	8.621	FALSE	-0.18
9	Phosphate	1.0	3.031	13.14	0.001	1.758	FALSE	1.02

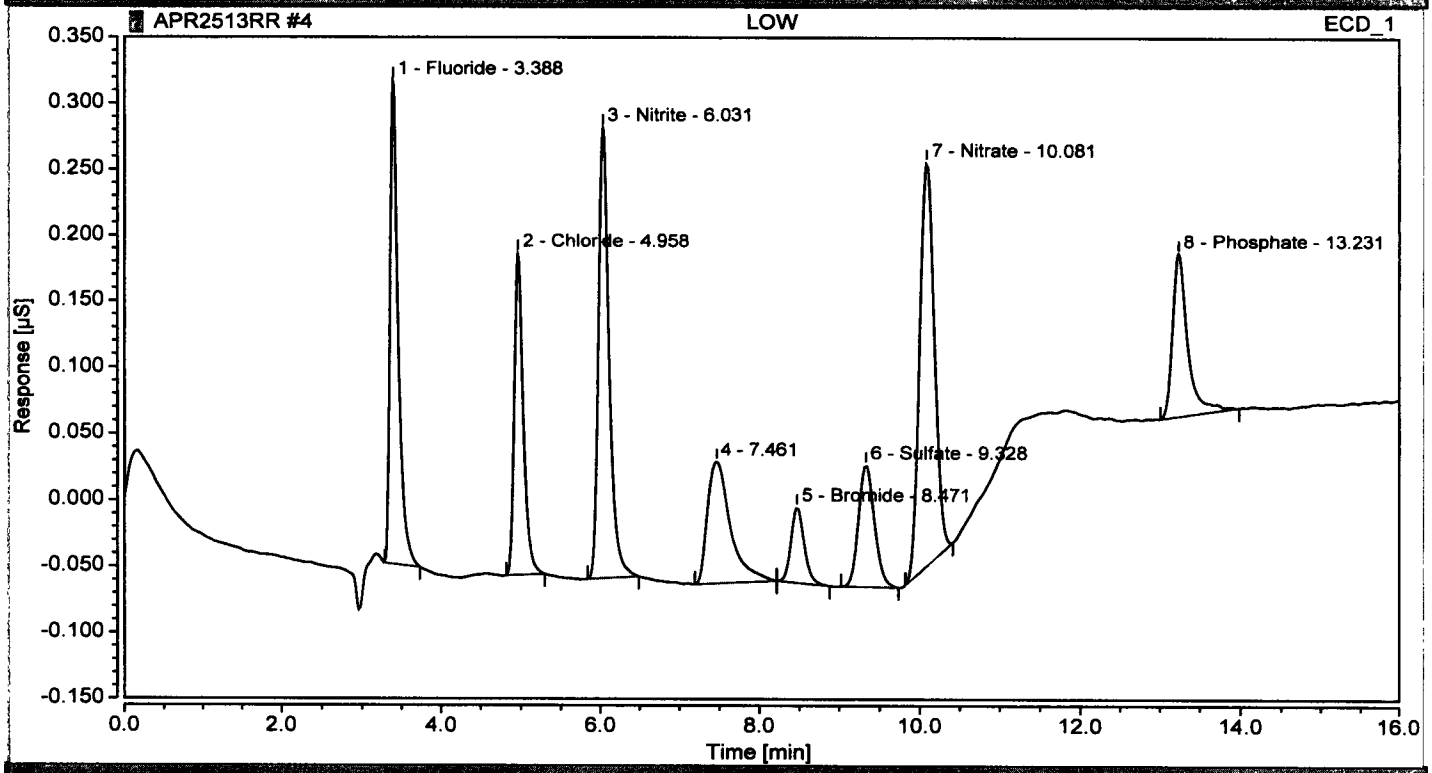
Injection Name:	*ICB*	Inject Number:	3
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 11:20*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	3.17	0.009	0.031	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	3.57	0.005	0.026	FALSE	n.a.
3		1.0	n.a.	3.81	0.006	0.036	FALSE	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		1.0	n.a.	7.46	0.074	0.070	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

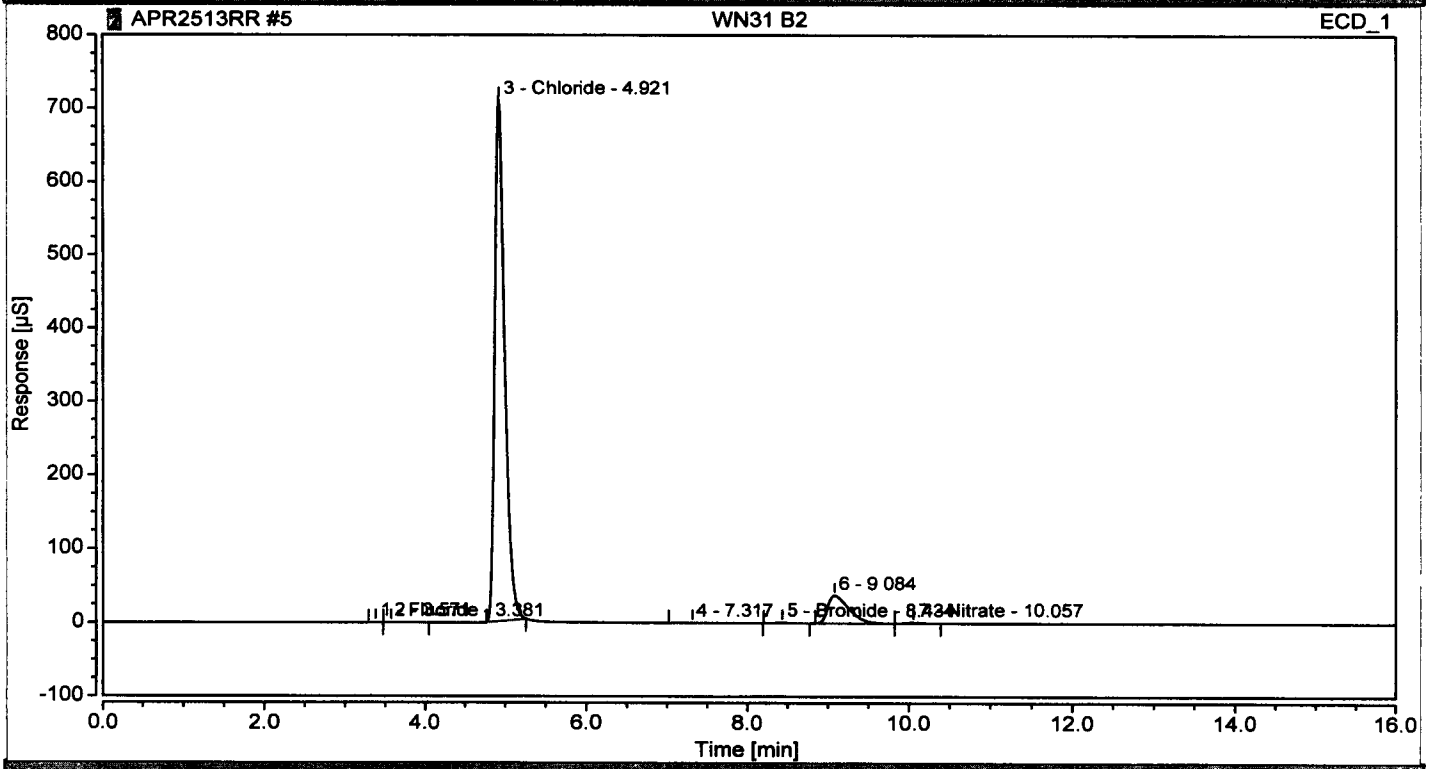
Chromatogram and Results

Injection Name:	*LOW*	Inject Number:	4
Vial Number:	*4*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 11:39*		



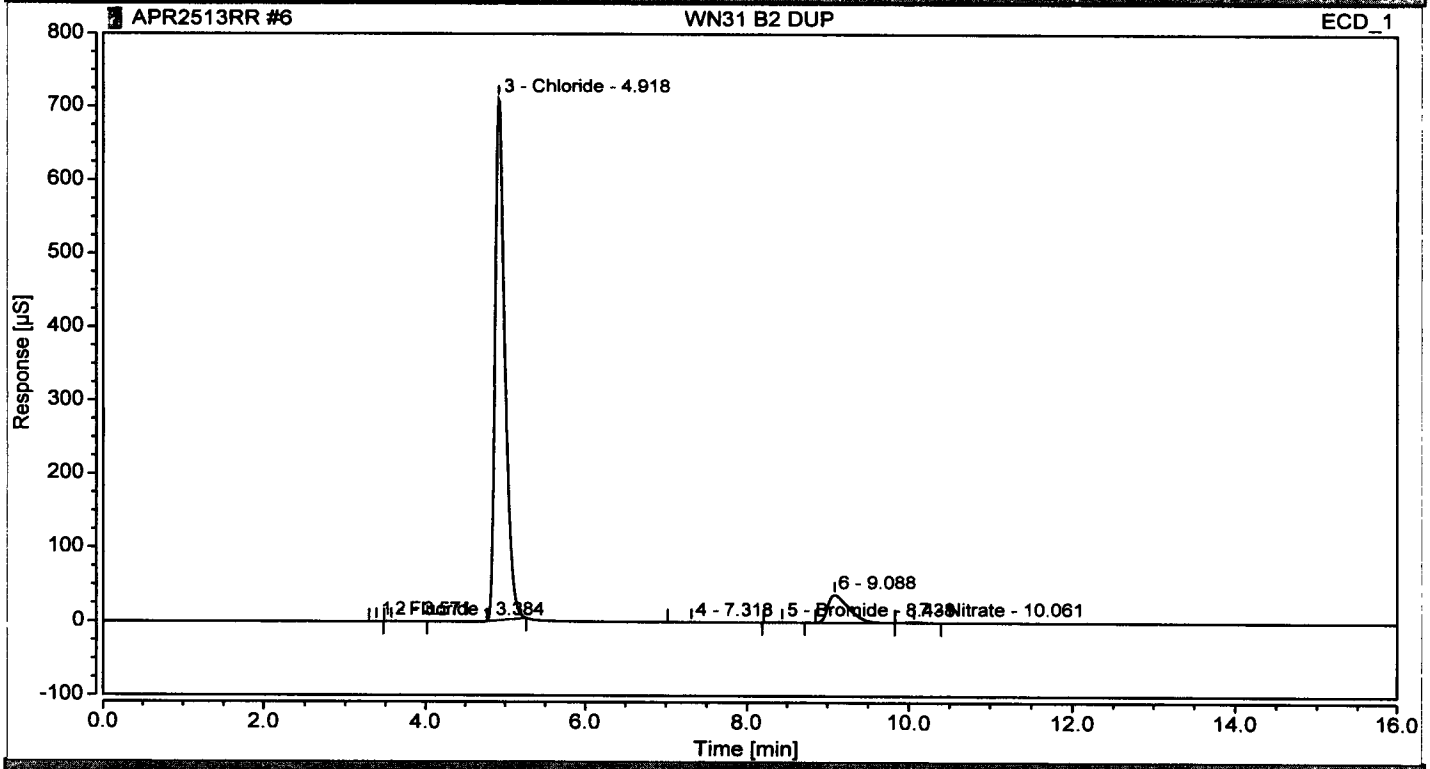
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.080	3.39	0.044	0.326	FALSE	n.a.
2	Chloride	1.0	0.108	4.96	0.060	0.302	FALSE	n.a.
3	Nitrite	1.0	0.076	6.03	0.042	0.234	FALSE	n.a.
4		1.0	n.a.	7.46	0.015	0.077	FALSE	n.a.
5	Bromide	1.0	0.083	8.47	0.045	0.157	FALSE	n.a.
6	Sulfate	1.0	0.095	9.33	0.053	0.151	FALSE	n.a.
7	Nitrate	1.0	0.091	10.08	0.050	0.305	FALSE	n.a.
8	Phosphate	1.0	0.098	13.23	0.057	0.125	FALSE	n.a.

Injection Name:	*WN31 B2*	Inject Number:	5
Vial Number:	*5*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 11:58*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0						
2								
3	Chloride	1.0						
n.a.	Nitrite	1.0						
4								
5	Bromide	1.0						
6		1.0						
n.a.	Sulfate	1.0						
7	Nitrate	1.0						
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WN31 B2 DUP*	Inject Number:	6
Vial Number:	*6*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 12:18*		

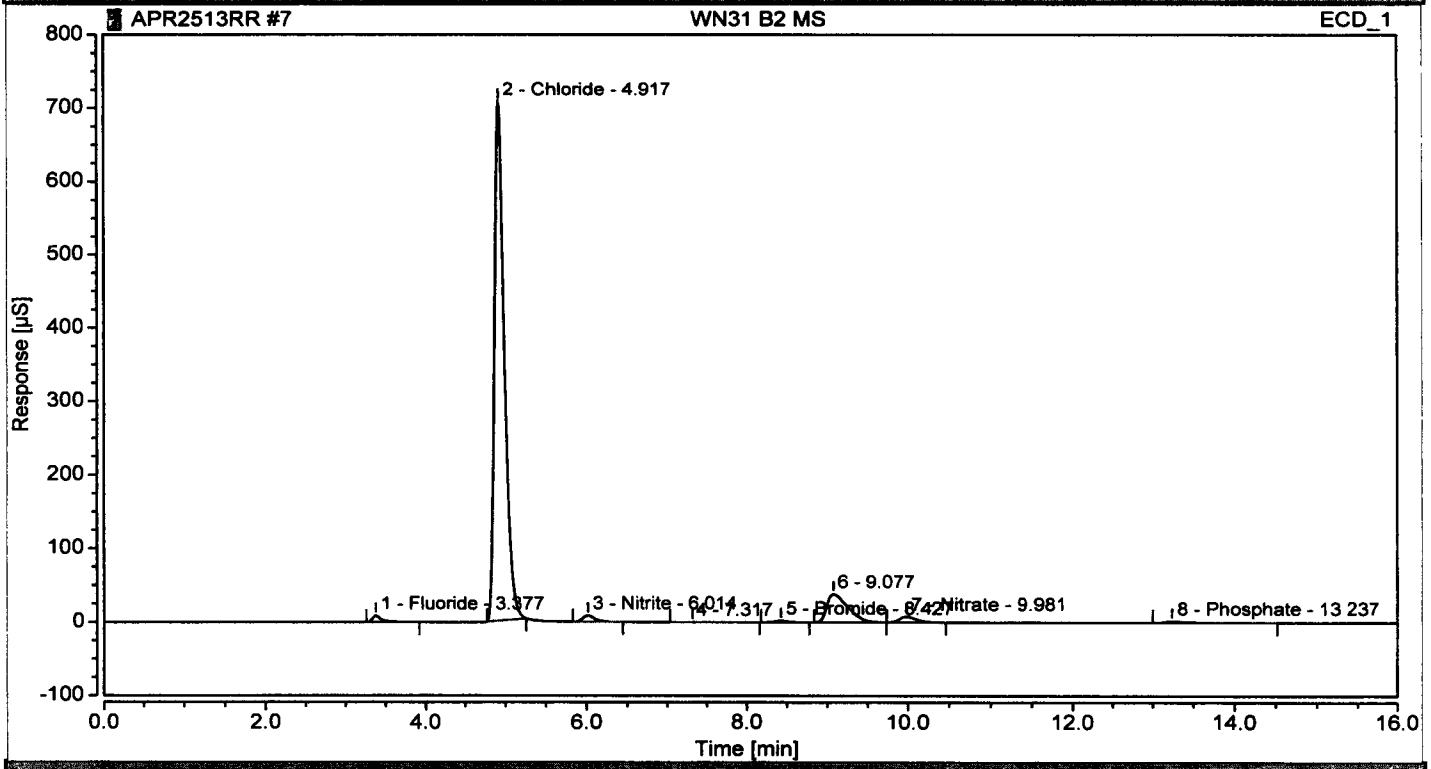


No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.050	3.38	0.026	0.298	FALSE	n.a.
2		1.0		3.97	0.062	0.369	FALSE	n.a.
3	Chloride	1.0	0.219	4.92	0.100	0.691	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		1.0		7.32	0.012	0.096	FALSE	n.a.
5	Bromide	1.0		8.44	0.11	0.700	FALSE	n.a.
6		1.0		9.09	0.105	0.758	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	Nitrate	1.0	0.222	10.06	0.222	1.036	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

Injection Name:	*WN31 B2 MS*	Inject Number:	7
Vial Number:	*7*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 12:37*		

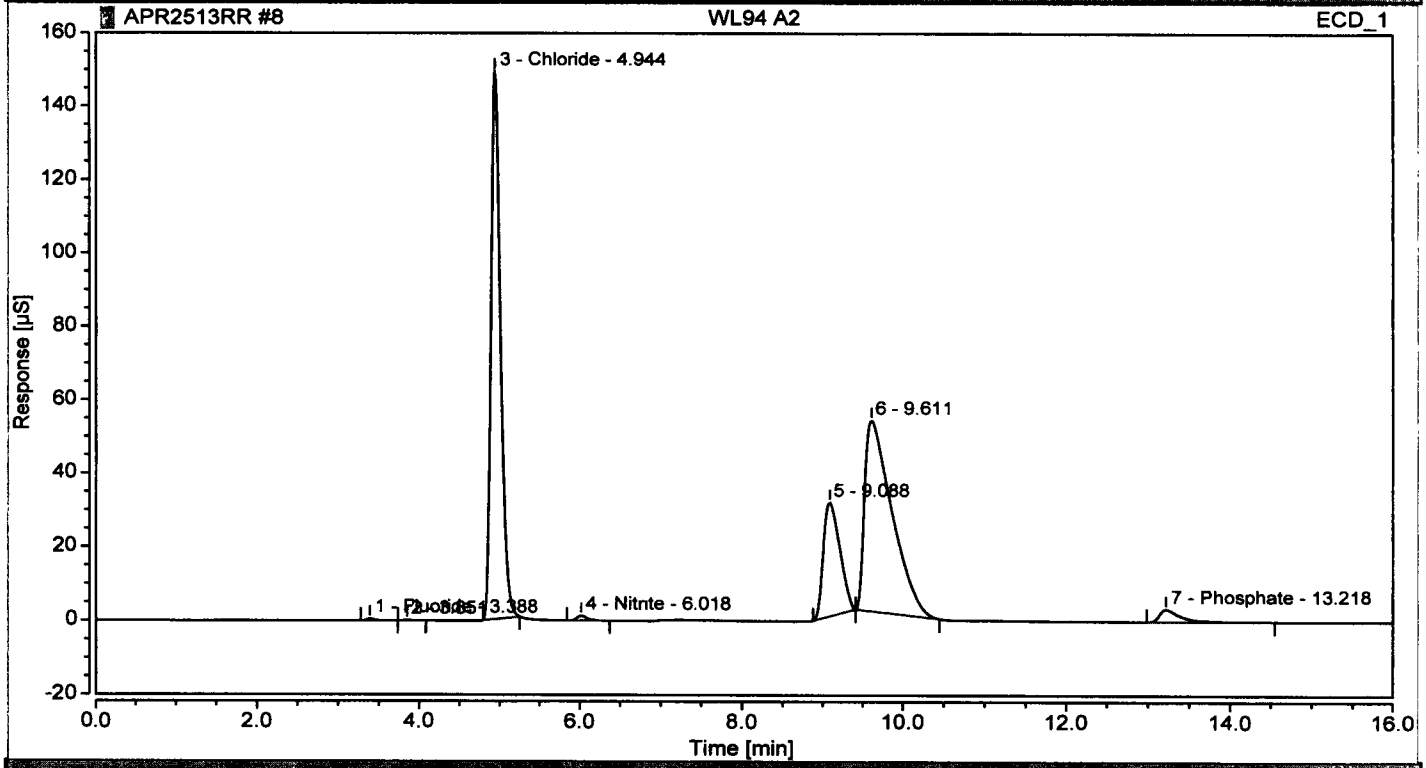
Chromatogram



Integration

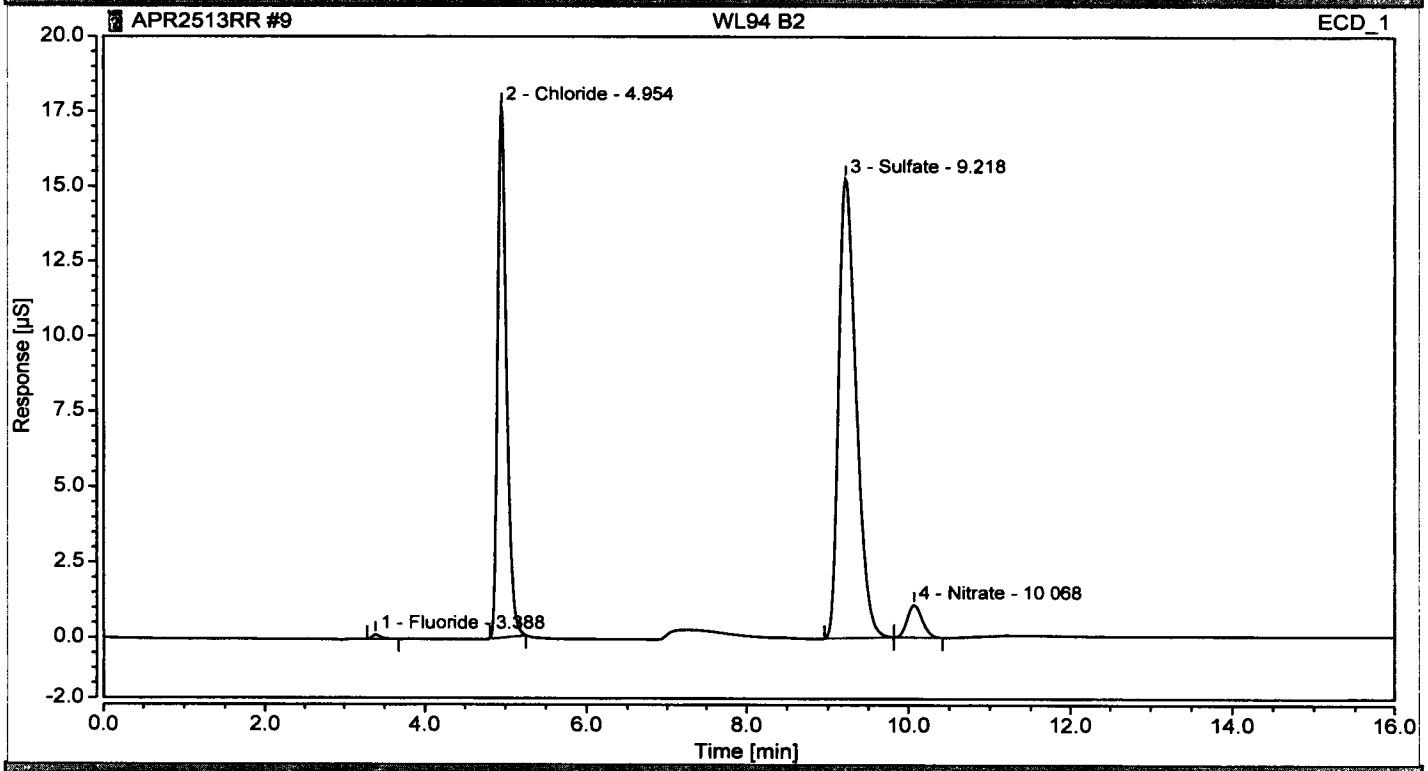
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.291	3.38	0.164	3.674	FALSE	n.a.
2	Chloride	1.0	20.388	4.92	7.300	708.995	FALSE	n.a.
3	Nitrite	1.0	1.003	6.01	0.436	9.886	FALSE	n.a.
4	[illegible]	1.0	0.000	7.32	0.106	0.180	FALSE	n.a.
5	Bromide	1.0	0.000	8.42	0.000	0.000	FALSE	n.a.
6	[illegible]	1.0	0.000	9.08	0.206	3.966	FALSE	n.a.
n.a.	Sulfate	1.0	0.000	9.98	0.000	0.000	n.a.	n.a.
7	Nitrate	1.0	1.230	9.98	0.864	7.917	FALSE	n.a.
8	Phosphate	1.0	0.781	13.24	0.347	1.885	FALSE	n.a.

Injection Name:	*WL94 A2*	Inject Number:	8
Vial Number:	*8*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 12:57*		



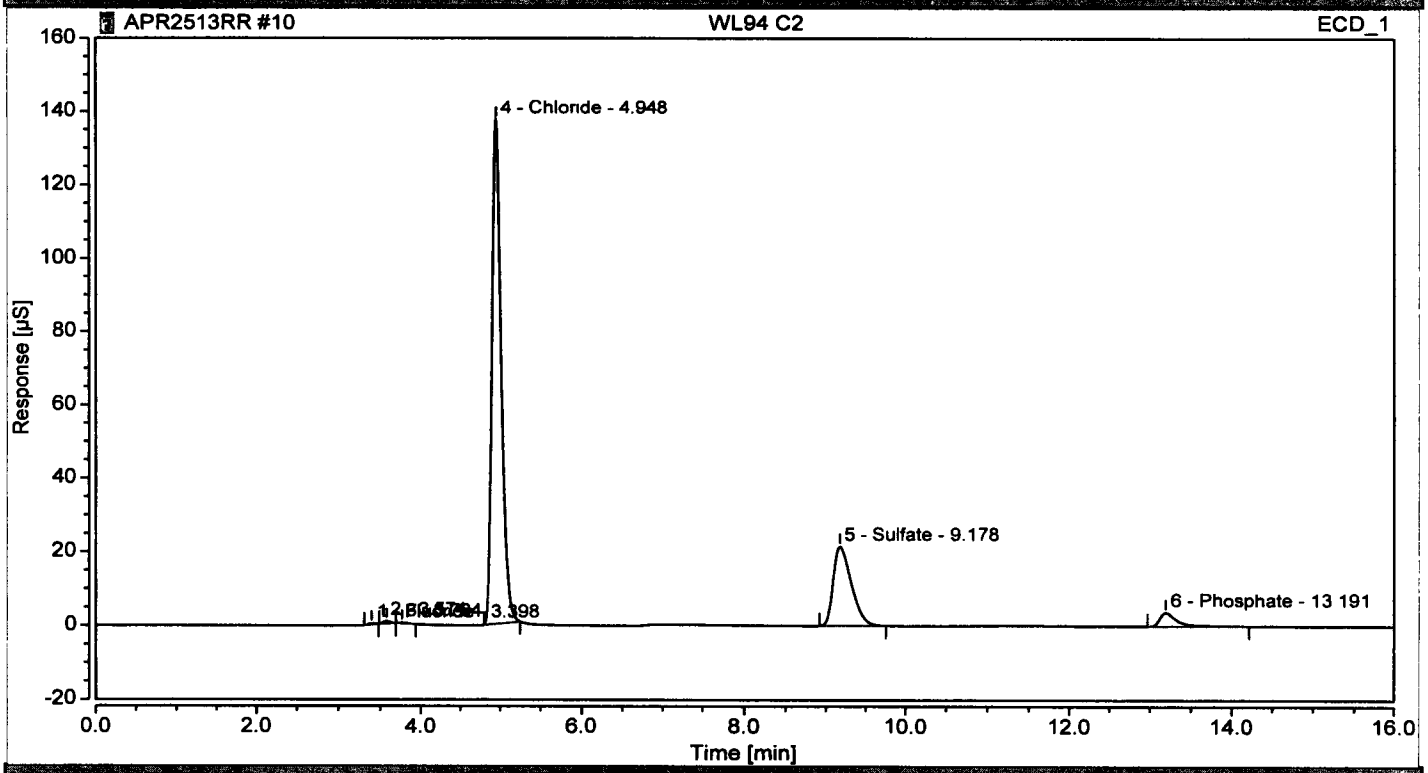
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.000	3.388	0.0000	0.000	FALSE	n.a.
2		1.0	0.000	3.851	0.0000	0.000	FALSE	n.a.
3	Chloride	1.0	3.308	4.944	0.0950	0.000	FALSE	n.a.
4	Nitrite	1.0	0.000	6.018	0.0000	0.000	FALSE	n.a.
n.a.	Bromide	1.0	0.000	8.000	0.0000	0.000	n.a.	n.a.
5		1.0	0.000	9.088	0.0000	0.000	FALSE	n.a.
n.a.	Sulfate	1.0	0.000	9.000	0.0000	0.000	n.a.	n.a.
6		1.0	0.000	9.611	0.0000	0.000	FALSE	n.a.
n.a.	Nitrate	1.0	0.000	11.000	0.0000	0.000	n.a.	n.a.
7	Phosphate	1.0	3.308	13.22	1.017	0.000	FALSE	n.a.

Injection Name:	*WL94 B2*	Inject Number:	9
Vial Number:	*9*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 13:17*		



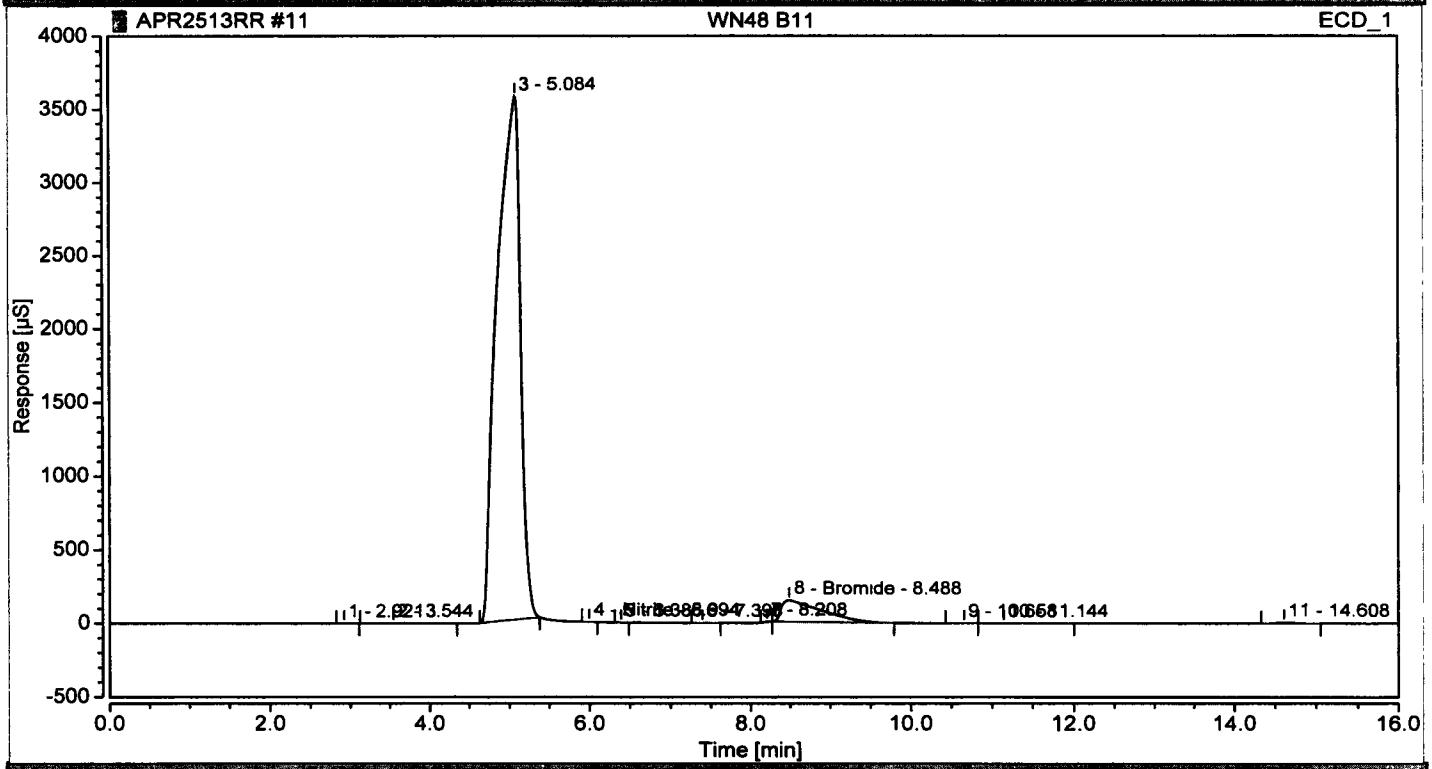
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.053	3.38	0.017	0.148	FALSE	n.a.
2	Chloride	1.0	7.239	4.95	3.277	17.886	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	1.0	17.709	9.22	7.816	13.206	FALSE	n.a.
4	Nitrate	1.0	9.291	10.07	0.231	1.010	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WL94 C2*	Inject Number:	10
Vial Number:	*10*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 13:36*		



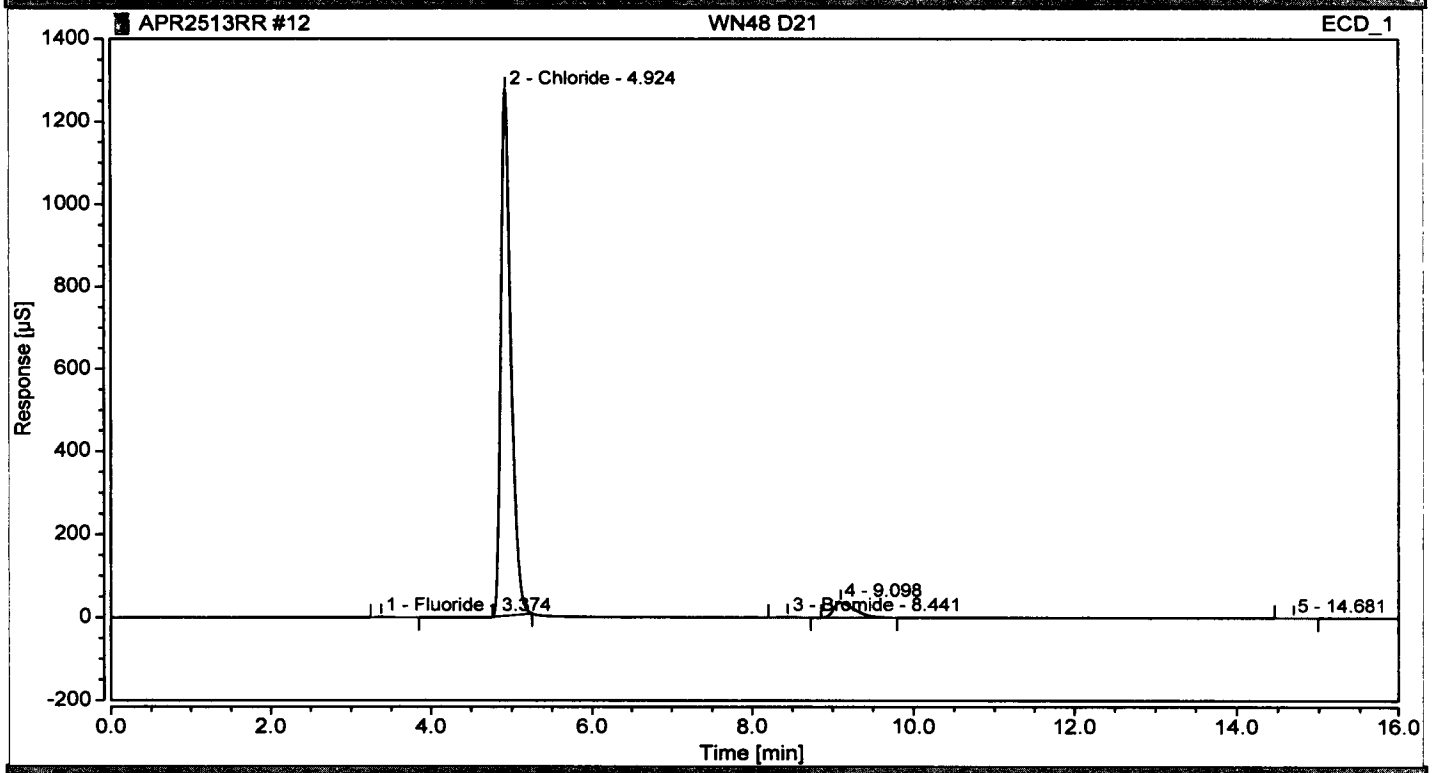
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride						FALSE	n.a.
2							FALSE	n.a.
3							FALSE	n.a.
4	Chloride						FALSE	n.a.
n.a.	Nitrite				n.a.	n.a.	n.a.	n.a.
n.a.	Bromide				n.a.	n.a.	n.a.	n.a.
5	Sulfate						FALSE	n.a.
n.a.	Nitrate				n.a.	n.a.	n.a.	n.a.
6	Phosphate						FALSE	n.a.

Injection Name:	*WN48 B11*	Inject Number:	11
Vial Number:	*11*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*25/04/13 13:56*		



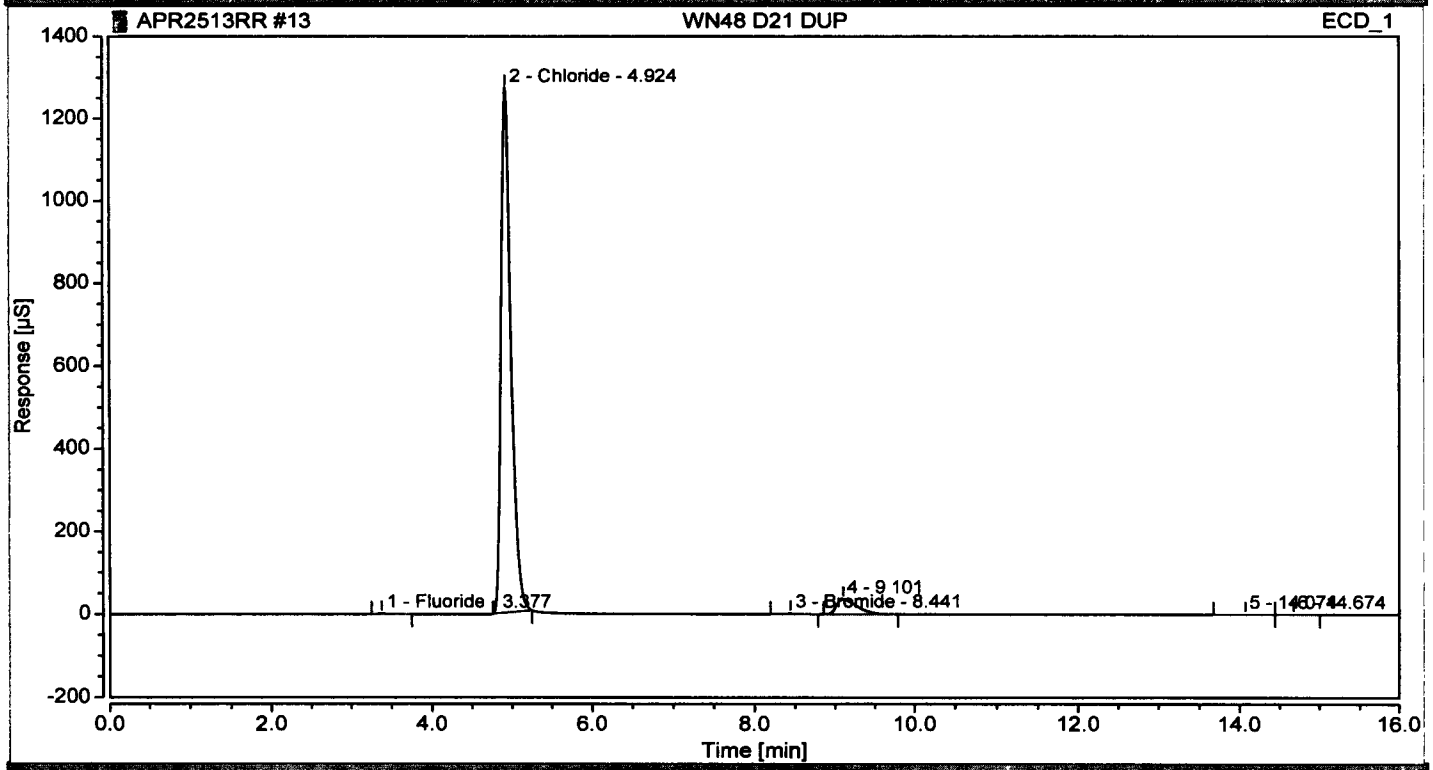
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	2.192	0.021	0.307	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	3.564	0.379	0.960	FALSE	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0					FALSE	n.a.
4	Nitrite	1.0					FALSE	n.a.
5		1.0					FALSE	n.a.
6								n.a.
7								n.a.
8	Bromide							n.a.
n.a.	Sulfate							n.a.
n.a.	Nitrate							n.a.
9							FALSE	n.a.
10		1.0	n.a.	13.[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11		1.0	n.a.	14.61	1.495	6.309	FALSE	n.a.

Injection Name:	*WN48 D21*	Inject Number:	12
Vial Number:	*12*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 14:16*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.272	3.37	0.140	1.031	FALSE	n.a.
2	Chloride	1.0	581.866	4.92	193.057	1272.358	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Bromide	1.0	0.000	8.44	0.240	1.203	FALSE	n.a.
4		1.0	0.000	9.10	0.062	35.809	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		1.0	n.a.	14.66	0.008	0.041	FALSE	n.a.

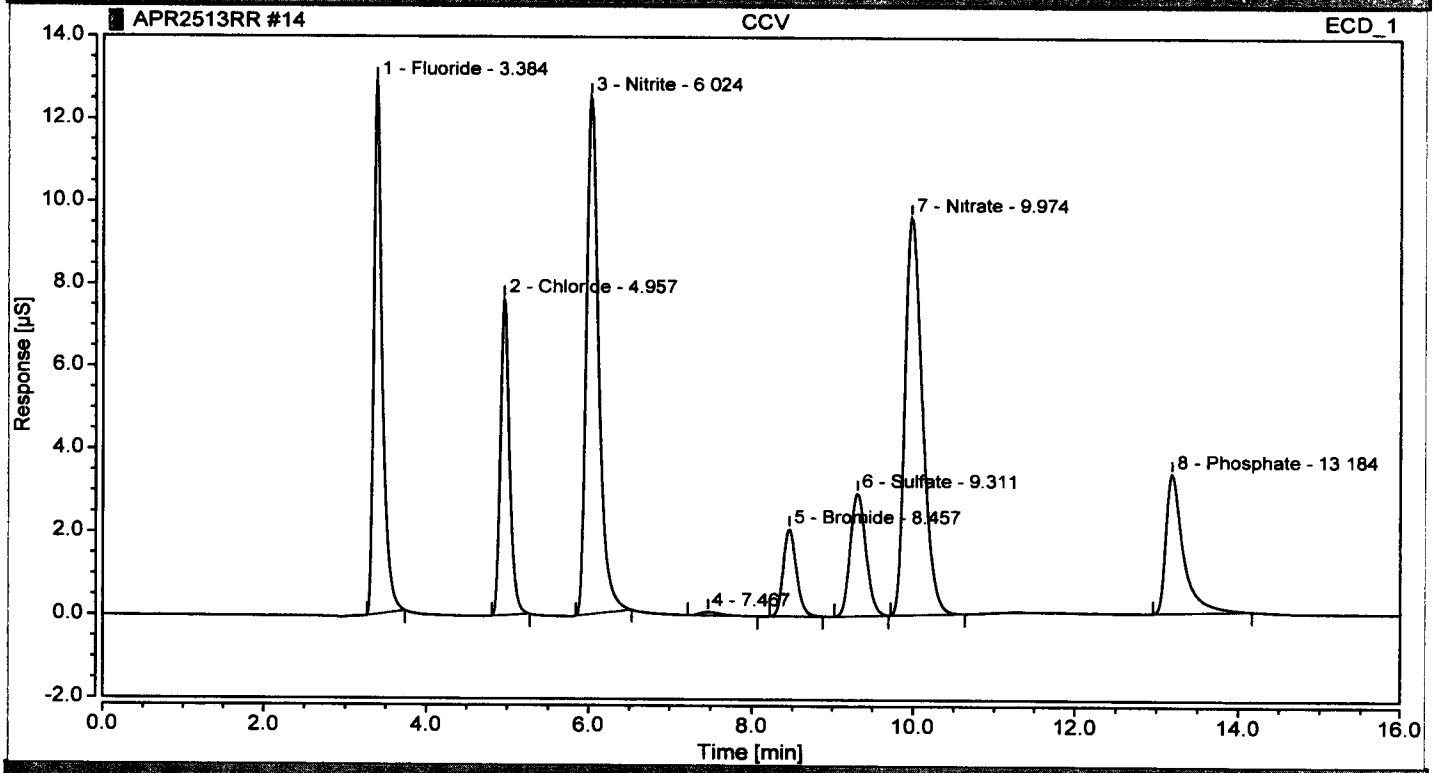
Injection Name:	*WN48 D21 DUP*	Inject Number:	13
Vial Number:	*13*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 14:37*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.261	3.38	0.195	1.000	FALSE	n.a.
2	Chloride	1.0	862.570	4.92	1364.282	1270.183	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Bromide	1.0	0.814	8.44	0.244	0.084	FALSE	n.a.
4		1.0	0.000	9.10	0.000	0.000	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		1.0	n.a.	14.67	0.005	0.013	FALSE	n.a.
6		1.0	n.a.	14.67	0.009	0.041	FALSE	n.a.

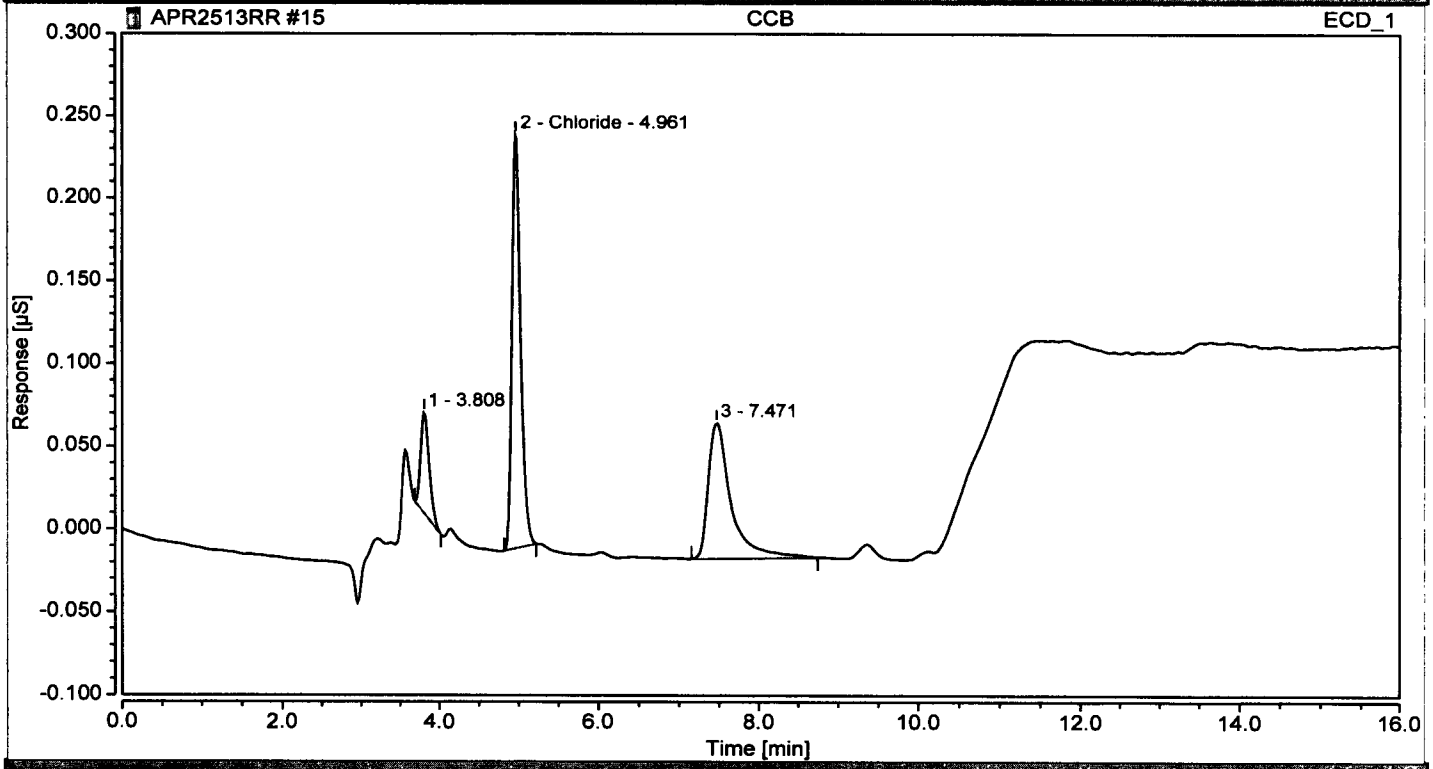
Chromatogram and Results

Injection Name:	*CCV*	Inject Number:	14
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 14:57*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.016	3.384	0.0930	12.905	FALSE	0.64
2	Chloride	1.0	7.148	4.957	0.0966	7.849	FALSE	4.76
3	Nitrite	1.0	3.047	6.024	0.0966	12.974	FALSE	1.53
4		1.0	0.000	7.467	0.0000	0.000	FALSE	n.a.
5	Bromide	1.0	49.75	8.457	0.1000	2.507	FALSE	0.50
6	Sulfate	1.0	20.54	9.311	0.0974	2.868	FALSE	4.46
7	Nitrate	1.0	2.969	9.974	0.0966	3.611	FALSE	-0.31
8	Phosphate	1.0	2.728	13.184	0.0638	3.388	FALSE	-9.06

Injection Name:	*CCB*	Inject Number:	15
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	APR2513RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*25/04/13 15:17*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	3.81	0.065	0.061	FALSE	n.a.
2	Chloride	1.0	0.700	4.96	0.021	0.230	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.47	0.027	0.013	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Name:	**APR2713RR**	*Calibration:*	**MAR2313RR**	**ARI # 613-02**
Directory:	**Instrument Data\2013 DATA\APR 2013**	*Calibration exp:*	**5/23/2013**	
Data Vault:	**ChromeleonLocal**	*Queue Start:*	4/27/2013 12:40	
No. of Injections:	**44.000**	*User:*	**RR**	

		ERA 130312	ERA 210312	ERA 490412	ERA 370911	ERA 240312	ERA 230511	ERA 030112
Name	Dilution	Amount n.a. Fluoride	Amount n.a. Chloride	Amount n.a. Nitrite	Amount n.a. Bromide	Amount n.a. Sulfate	Amount n.a. Nitrate	Amount n.a. Phosphate
RINSE	1.0	n.a.	0.020	n.a.	n.a.	n.a.	n.a.	n.a.
ICV	1.0	3.029	3.021	3.035	3.054	3.130	2.995	2.909
%R=		**101.0%**	**100.7%**	**101.2%**	**101.8%**	**104.3%**	**99.8%**	**97.0%**
ICB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LOW	1.0	0.088	0.110	0.068	0.081	0.096	0.080	0.093
		0.712			n.a.			n.a.
		0.711			n.a.			n.a.
%RPD=		**0.22%**	**0.35%**			**0.35%**	**0.21%**	
		2.695			1.860			1.802
%R=		**99.1%**	**100.3%**	**97.4%**	**93.0%**	**100.5%**	**100.5%**	**90.1%**
SPK=	**0.055mL*200ppm/5.5mL**	**=2ppm**						
		0.781			n.a.			n.a.
		0.679			n.a.			n.a.
		0.771			n.a.			n.a.
		0.535			n.a.			n.a.
		0.792			n.a.			n.a.
		0.779			n.a.			n.a.
CCV	1.0	3.011	3.006	3.012	3.007	3.102	2.982	2.865
%R=		**100.4%**	**100.2%**	**100.4%**	**100.2%**	**103.4%**	**99.4%**	**95.5%**
CCB	1.0	0.011	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		0.792			n.a.			n.a.
		0.777			n.a.			n.a.
		n.a.	324.593	n.a.	0.858		0.199	n.a.
		n.a.	324.151	n.a.	0.856		0.188	n.a
%RPD=			**0.14%**		**0.24%**	**0.07%**	**5.64%**	
		n.a.	320.015	n.a.	0.784		0.154	n.a.
%R=						**108.0%**		
SPK=	**0.02mL*10000ppm/5mL**	**=40ppm**						
		n.a.		n.a.	n.a.	43.261	n.a.	n.a.
		n.a.		n.a.	n.a.	43.898	n.a.	n.a.
%RPD=			**0.02%**			**1.46%**		
		n.a.		n.a.	n.a.	58.870	n.a.	n.a.
%R=			**97.8%**					
SPK=	**0.2mL*10000ppm/5mL**	**=400ppm**						
		n.a.	4.669	n.a.	n.a.		n.a.	n.a.
		0.155	3.835	n.a.	n.a.		n.a.	0.127
CCV	1.0	3.006	3.001	3.013	2.991	3.093	2.976	2.876
%R=		**100.2%**	**100.0%**	**100.4%**	**99.7%**	**103.1%**	**99.2%**	**95.9%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		0.140	35.785	n.a.	0.586		n.a.	n.a.
		0.120	40.157	n.a.	0.572		n.a.	n.a.
		0.113	43.286	n.a.	0.554		n.a.	n.a.
		n.a.	3843.545	n.a.	9.959		n.a.	n.a.
		0.430	594.353	n.a.	1.360		n.a.	n.a.
		0.421	590.644	n.a.	1.353		n.a.	n.a.
%RPD=		**2.08%**	**0.63%**		**0.55%**	**0.67%**		
		n.a.	586.374	n.a.	1.272		n.a.	n.a.
%R=						**108.1%**		
SPK=	**0.02mL*10000ppm/5mL**	**=40ppm**						
		n.a.	1197.441	n.a.	2.829		n.a.	n.a.

[redacted]		n.a.	381.176	n.a.	n.a.	[redacted]	n.a.	n.a.
[redacted]		n.a.	3782.874	n.a.	9.699	[redacted]	n.a.	n.a.
CCV	1.0	3.004	3.008	3.008	2.989	3.091	2.978	2.861
%R=		**100.1%**	**100.3%**	**100.3%**	**99.6%**	**103.0%**	**99.3%**	**95.4%**
CCB	1.0	0.011	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
ERA 230511	250.0	n.a.	n.a.	n.a.	n.a.	895.755	990.484	n.a.
ERA 220912	250.0	n.a.	n.a.	n.a.	n.a.	23.621	1003.450	n.a.
CCV	1.0	3.016	3.001	3.003	2.983	3.090	2.980	2.876
%R=		**100.5%**	**100.0%**	**100.1%**	**99.4%**	**103.0%**	**99.3%**	**95.9%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
STOP	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Sequence Overview

Sequence

Name:	**APR2713RR**	*Queue Start:*	**2013-04-27T12:40:18-**
Directory:	**Instrument Data\2013 DATA\APR 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**44**		

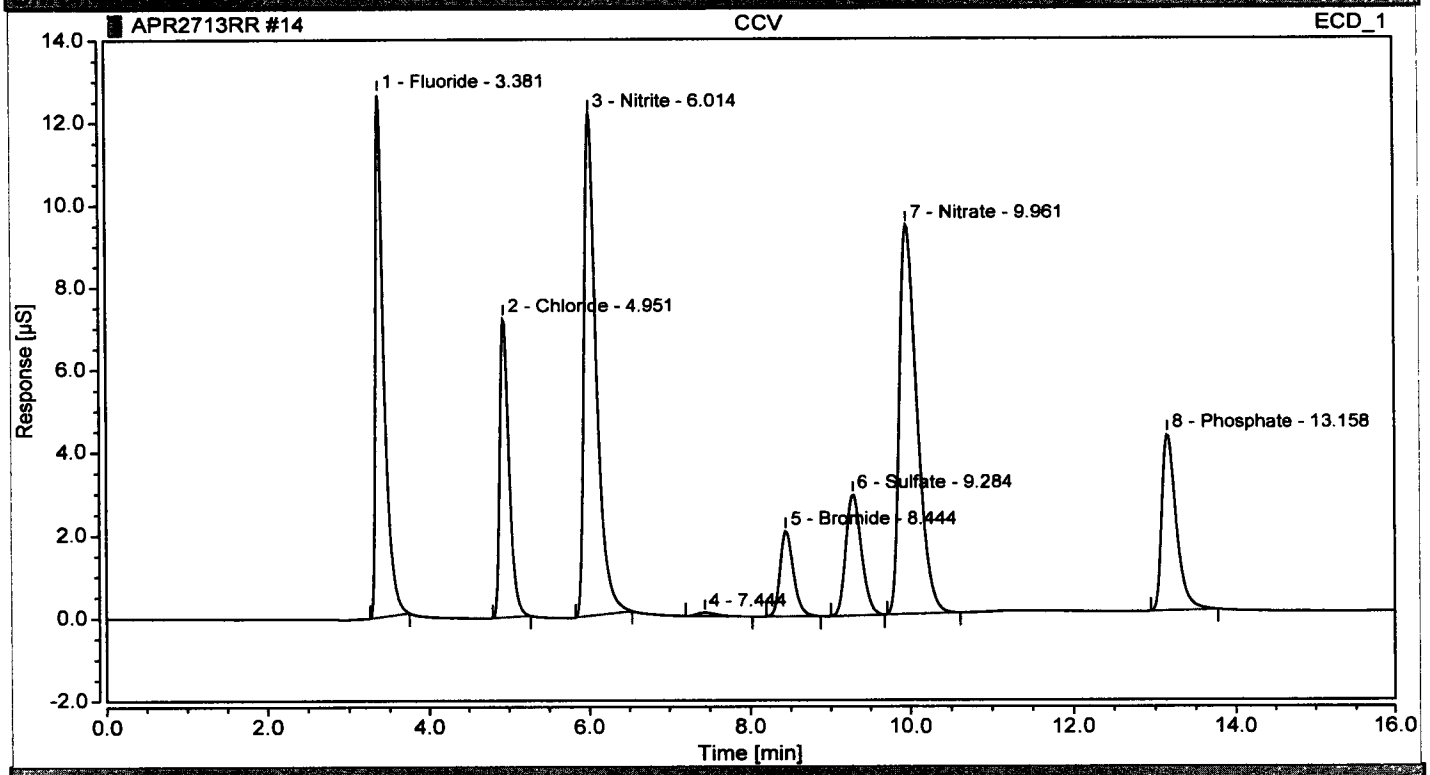
List

No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	1	Unknown		1.0	27/Apr/13 12:40:18
2	ICV	2	Check Standard	03	1.0	27/Apr/13 12:59:11
3	ICB	3	Blank		1.0	27/Apr/13 13:18:21
4	LCM	4	Unknown		1.0	27/Apr/13 13:37:37
5	WN31-01	5	Unknown		1.0	27/Apr/13 13:56:59
6	WN31-01 DUP	6	Unknown		1.0	27/Apr/13 14:16:28
7	WN31-01 MS	7	Unknown		1.0	27/Apr/13 14:35:58
8	WN31-02	8	Unknown		1.0	27/Apr/13 14:55:37
9	WN31-02 DUP	9	Unknown		1.0	27/Apr/13 15:15:20
10	WN31-02 MS	10	Unknown		1.0	27/Apr/13 15:35:10
11	WN31-03	11	Unknown		1.0	27/Apr/13 15:55:05
12	WN31-04	12	Unknown		1.0	27/Apr/13 16:15:05
13	WN31-05	13	Unknown		1.0	27/Apr/13 16:35:11
14	WN31-06	14	Unknown		1.0	27/Apr/13 16:55:22
15	CCV	15	Check Standard	03	1.0	27/Apr/13 17:15:57
16	CCB	16	Blank		1.0	27/Apr/13 17:36:39
17	WN31-07	17	Unknown		1.0	27/Apr/13 17:57:08
18	WN31-08	18	Unknown		1.0	27/Apr/13 18:17:40
19	WN31-09	19	Unknown		1.0	27/Apr/13 18:38:18
20	WN31-09 MS	20	Unknown		1.0	27/Apr/13 18:58:01
21	WN31-10	21	Unknown		1.0	27/Apr/13 19:19:50
22	WN31-10 DUP	22	Unknown		1.0	27/Apr/13 19:39:09
23	WN31-10 MS	23	Unknown		1.0	27/Apr/13 19:58:34
24	WN31-11	24	Unknown		1.0	27/Apr/13 20:18:06
25	WN31-12	25	Unknown		1.0	27/Apr/13 20:37:43
26	CCV	26	Check Standard	03	1.0	27/Apr/13 20:57:24
27	CCB	27	Blank		1.0	27/Apr/13 21:17:50
28	WN31-13	28	Unknown		1.0	27/Apr/13 21:38:24
29	WN31-14	29	Unknown		1.0	27/Apr/13 21:58:24
30	WN31-15	30	Unknown		1.0	27/Apr/13 22:18:26
31	WN31-16	31	Unknown		1.0	27/Apr/13 22:38:31
32	WN31-17	32	Unknown		1.0	27/Apr/13 22:58:39
33	WN31-18	33	Unknown		1.0	27/Apr/13 23:18:52
34	WN31-19	34	Unknown		1.0	27/Apr/13 23:39:08
35	WN31-20	35	Unknown		1.0	27/Apr/13 23:59:28
36	WN31-21	36	Unknown		1.0	28/Apr/13 00:19:52
37	WN31-22	37	Unknown		1.0	28/Apr/13 00:40:20
38	WN31-23	38	Unknown		1.0	28/Apr/13 01:00:52
39	CCV	39	Check Standard	03	1.0	28/Apr/13 01:21:26
40	CCB	40	Blank		1.0	28/Apr/13 01:42:09
41	WN31-24	41	Unknown		1.0	28/Apr/13 02:02:52
42	CCV	42	Check Standard	03	1.0	28/Apr/13 02:22:06
43	CCB	43	Blank		1.0	28/Apr/13 02:41:50

44	STOP	1	Unknown		1.0	28/Apr/13 03:01:44

Check Standard Results

Injection Name:	*CCV*	Inject Number:	14
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	APR2713RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 16:55*		



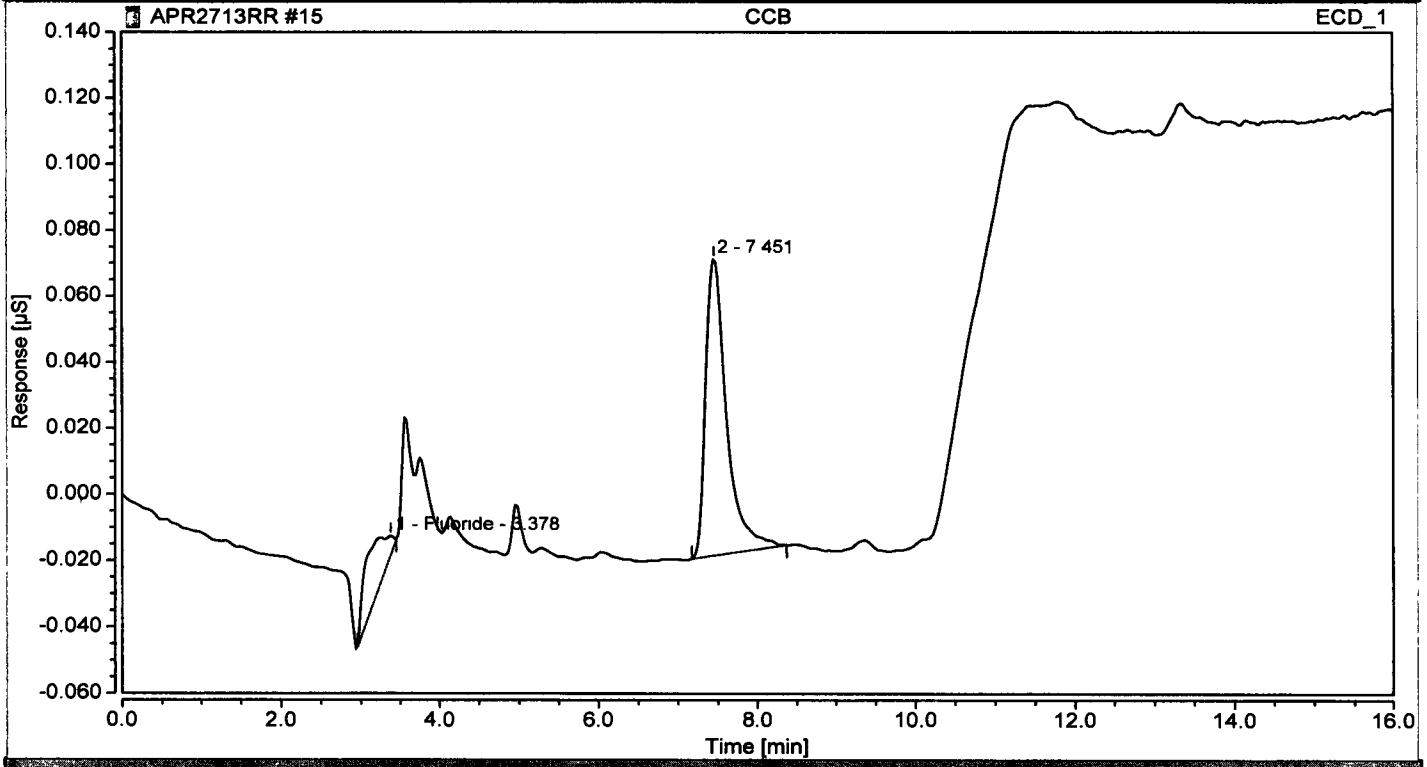
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.001	3.381	0.6524	12.674	FALSE	0.35
2	Chloride	1.0	3.006	4.951	0.9346	7.227	FALSE	0.18
3	Nitrite	1.0	3.014	6.014	1.1734	12.171	FALSE	0.38
4	n.a.	n.a.	n.a.	7.444	0.0324	0.664	FALSE	n.a.
5	Bromide	1.0	3.007	8.444	0.8151	2.067	FALSE	0.24
6	Sulfate	1.0	3.002	9.284	0.8680	2.923	FALSE	3.41
7	Nitrate	1.0	2.982	9.961	1.2240	9.428	FALSE	-0.62
8	Phosphate	1.0	2.995	13.158	0.8801	4.266	FALSE	4.51

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	15
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	APR2713RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 17:15*		

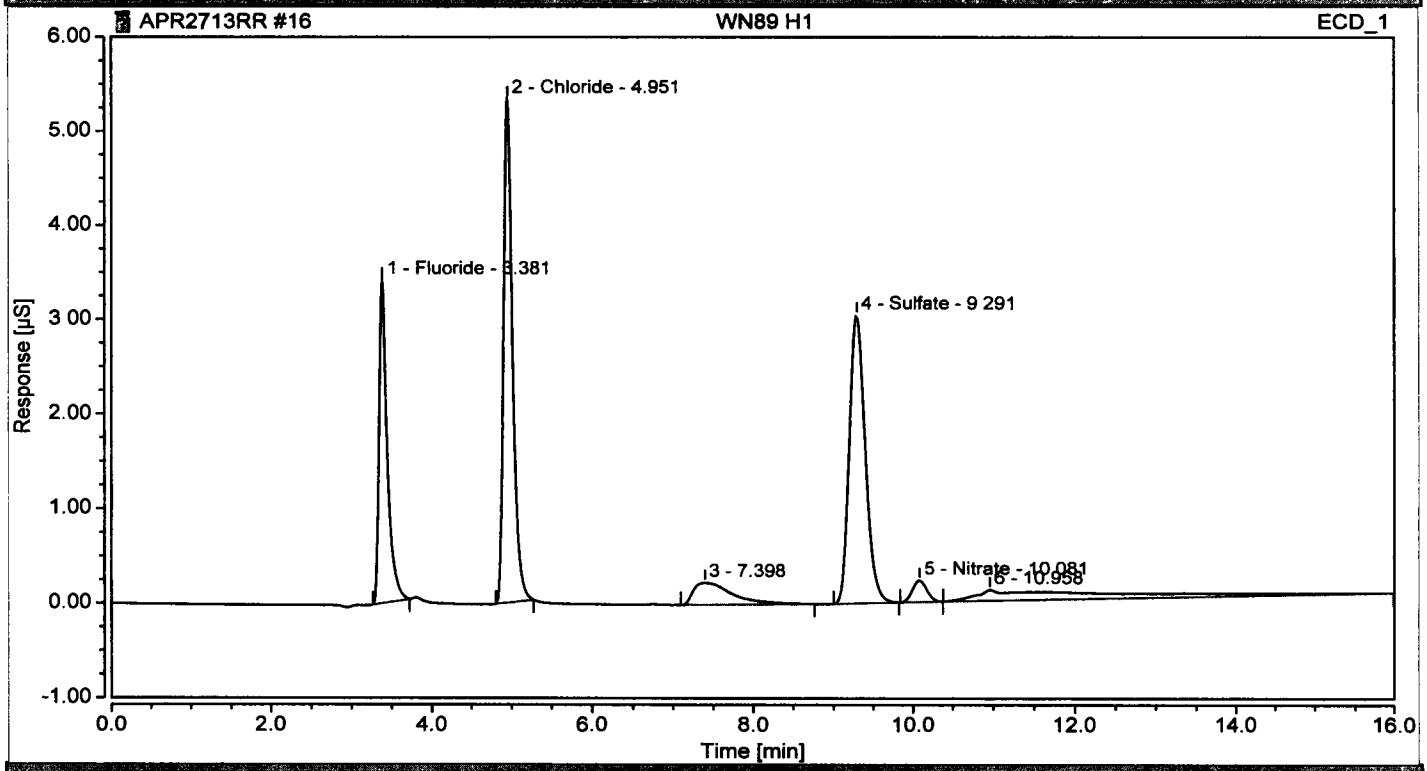
Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.001	3.38	0.006	0.006	FALSE	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	n.a.	0.028	0.090	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WN89 H1*	Inject Number:	16
Vial Number:	*14*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 17:36*		



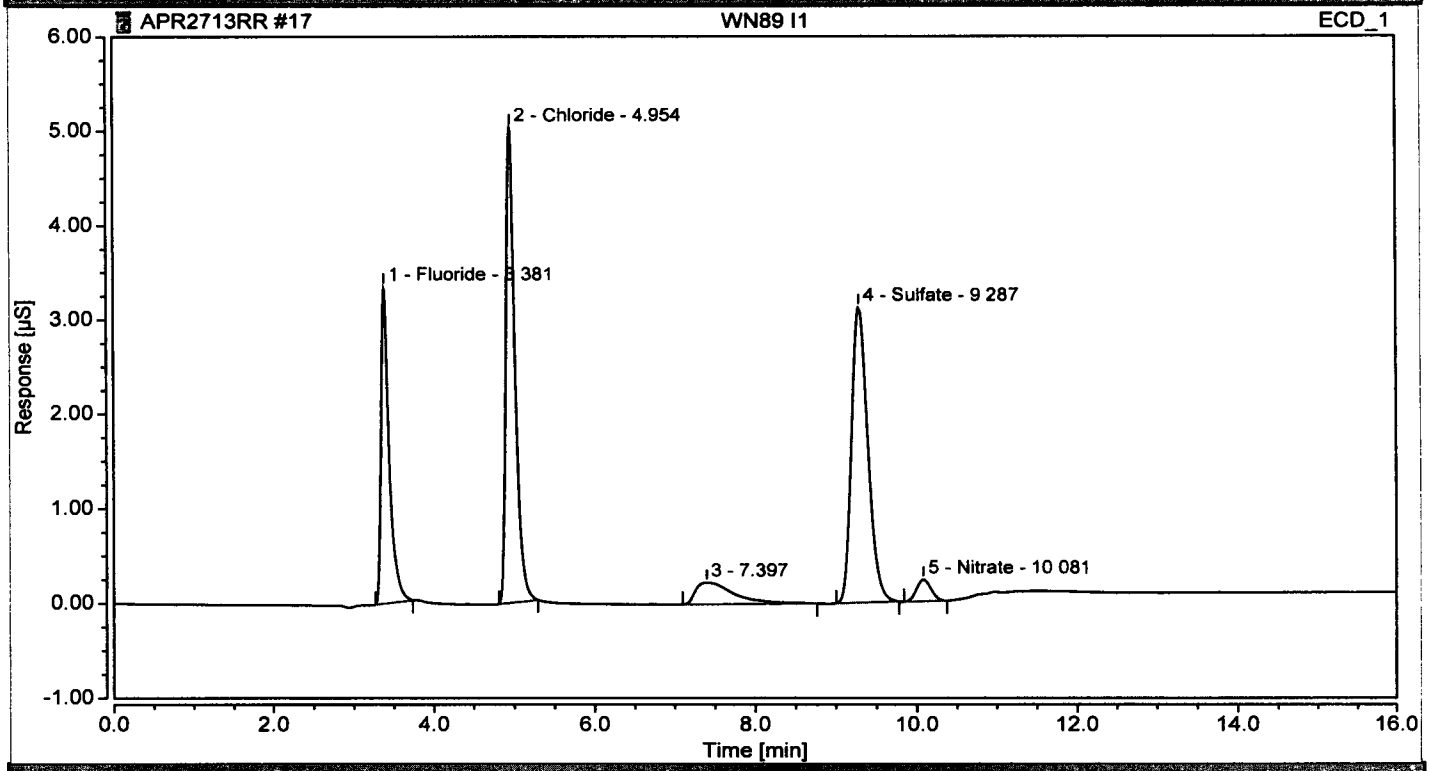
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.759	3.381	0.409	3.419	FALSE	n.a.
2	Chloride	1.0	2.203	4.951	0.895	5.337	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.398	0.131	0.291	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	2.000	9.291	1.710	2.000	FALSE	n.a.
5	Nitrate	1.0	0.010	10.081	0.018	0.027	FALSE	n.a.
6		1.0	n.a.	10.958	0.228	0.113	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatography Results

Injection Details

Injection Name:	*WN89 I1*	Inject Number:	17
Vial Number:	*15*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 17:57*		

Chromatogram



Integration

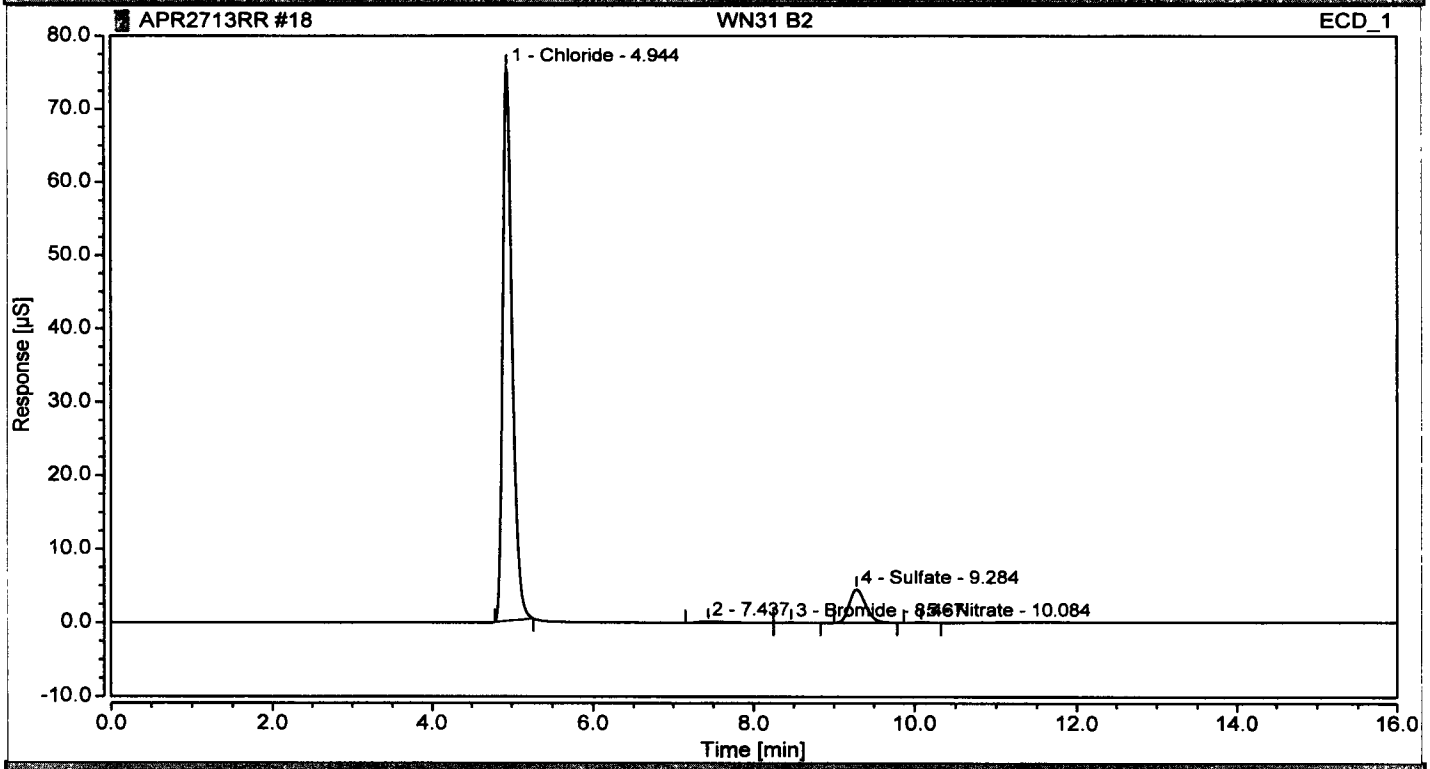
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.777	3.38	0.401	3.354	FALSE	n.a.
2	Chloride	1.0	2.084	4.95	0.959	5.030	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.40	0.128	0.228	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	4.288	9.29	0.727	3.126	FALSE	n.a.
5	Nitrate	1.0	0.959	10.08	0.048	0.227	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatograms and Results

Injection Details

Injection Name:	*WN31 B2*	Inject Number:	18
Vial Number:	*16*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*27/04/13 18:17*		

Chromatogram



Integration Results

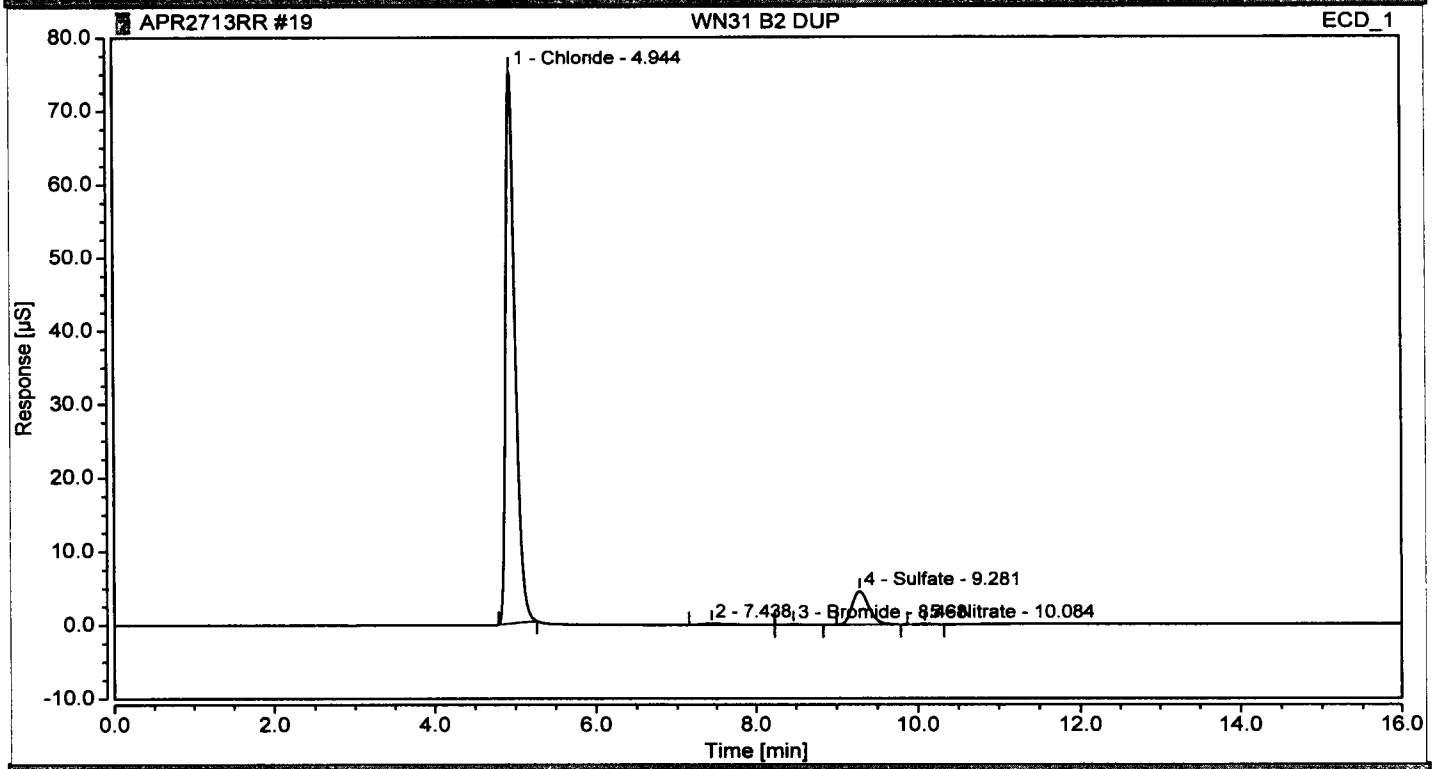
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	10.0	324.695	4.94	10.212	75.463	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		10.0	n.a.	7.44	0.003	0.160	FALSE	n.a.
3	Bromide	10.0	0.958	8.47	0.011	0.059	FALSE	n.a.
4	Sulfate	10.0	49.454	9.28	1.093	5.575	FALSE	n.a.
5	Nitrate	10.0	0.199	10.08	0.010	0.082	FALSE	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatography Results

Injection Details

Injection Name:	*WN31 B2 DUP*	Inject Number:	19
Vial Number:	*17*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 18:38*		

Chromatogram



Integration

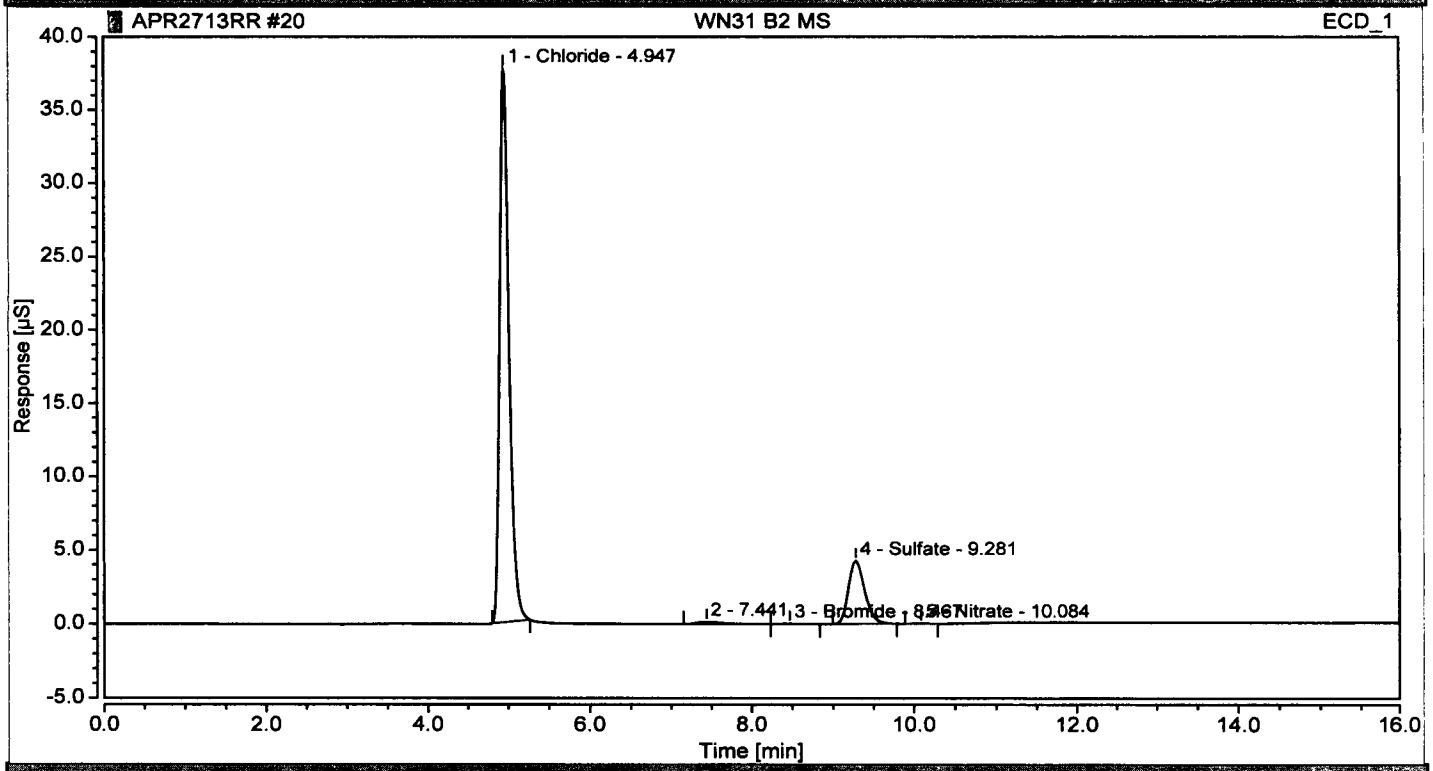
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	10.0	329.251	4.94	19.196	6.342	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	[illegible]	10.0	n.a.	7.44	0.063	0.161	FALSE	n.a.
3	Bromide	10.0	0.659	8.06	0.014	0.068	FALSE	n.a.
4	Sulfate	10.0	45.969	9.28	1.062	4.839	FALSE	n.a.
5	Nitrate	10.0	0.168	10.08	0.016	0.077	FALSE	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WN31 B2 MS*	Inject Number:	20
Vial Number:	*18*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*20.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 18:59*		

Chromatogram



Integration

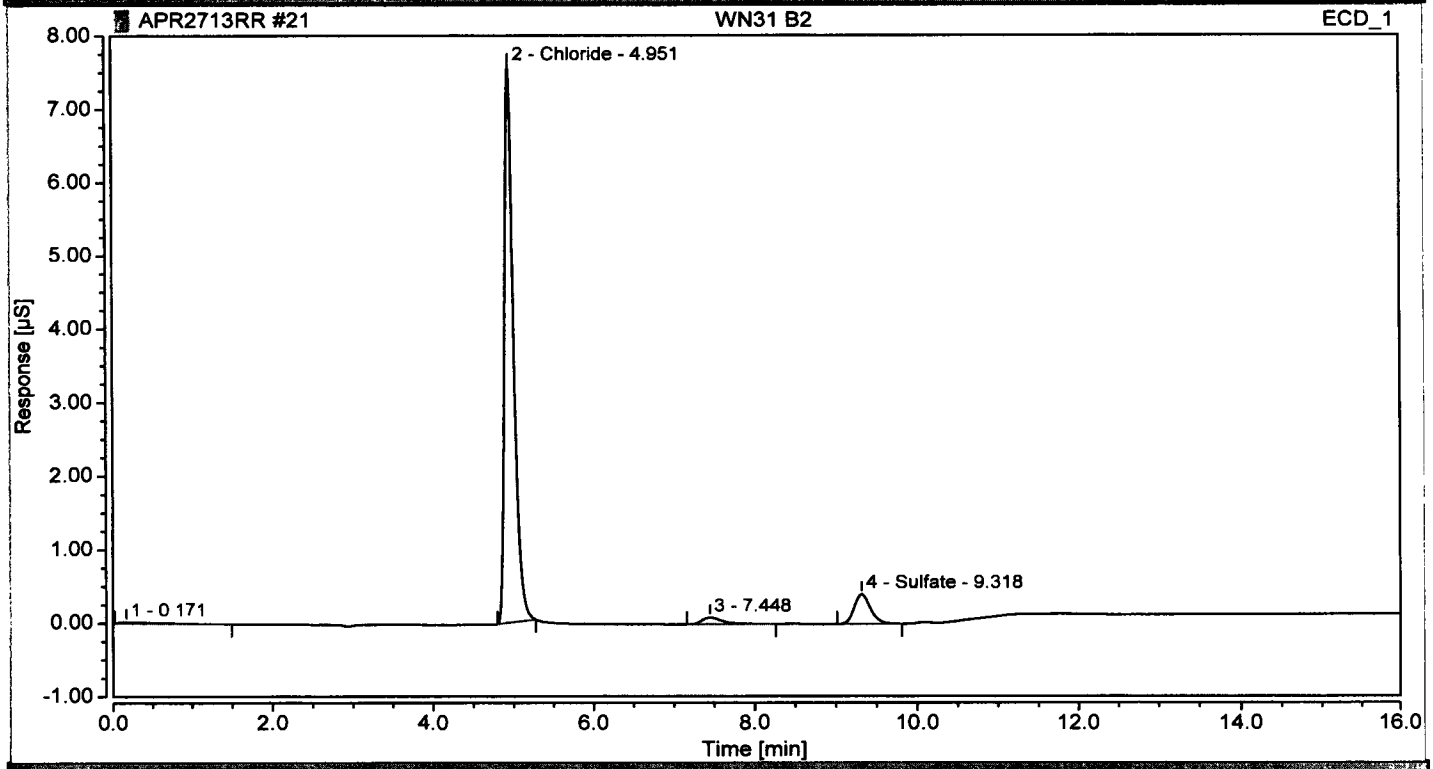
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	20.0	320.15	4.95	9.034	57.755	FALSE	n.a.
n.a.	Nitrite	20.0	0.0	0.0	0.0	0.0	n.a.	n.a.
2		20.0	n.a.	7.44	0.047	0.435	FALSE	n.a.
3	Bromide	20.0	0.784	8.47	0.005	0.027	FALSE	n.a.
4	Sulfate	20.0	82.801	9.28	0.996	4.259	FALSE	n.a.
5	Nitrate	20.0	0.164	10.08	0.006	0.034	FALSE	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatography Results

Injection Details

Injection Name:	*WN31 B2*	Inject Number:	21
Vial Number:	*19*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*100.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 19:19*		

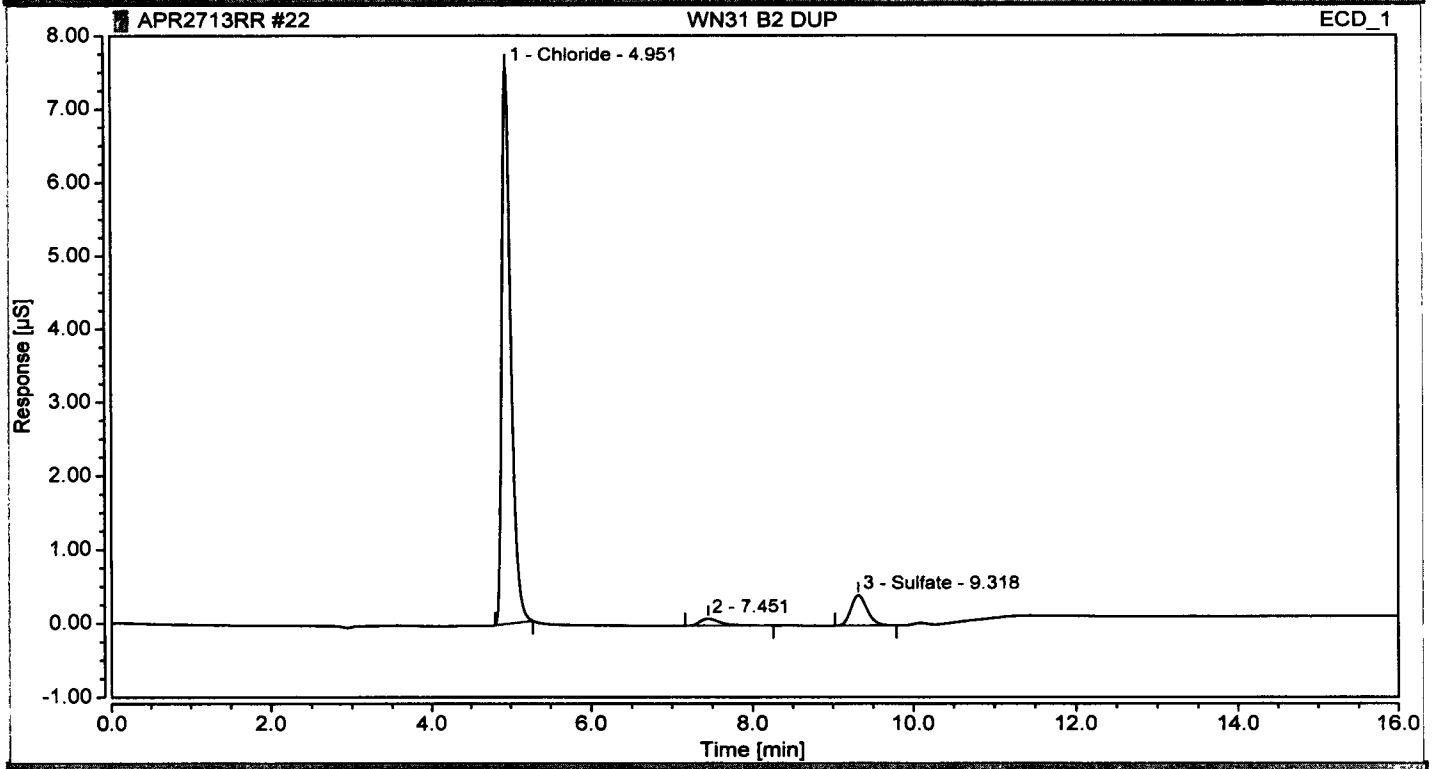
Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	[illegible]	[illegible] 100.0	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Chloride	[illegible] 100.0	315.997	4.95	0.093	[illegible]	FALSE	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	[illegible]	100.0	n.a.	7.45	0.027	0.001	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	100.0	43.281	9.32	0.003	0.405	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

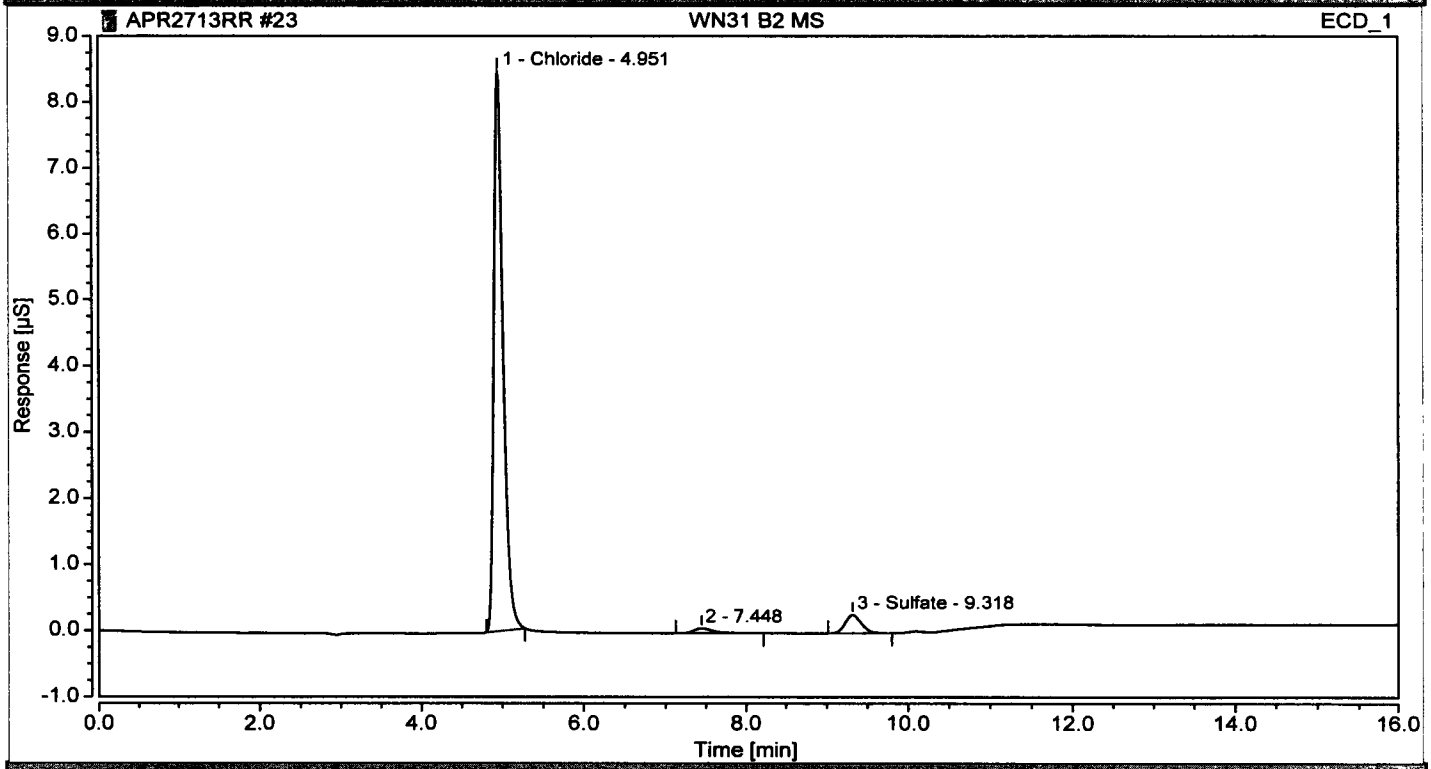
Injection Name:	*WN31 B2 DUP*	Inject Number:	22
Vial Number:	*20*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*100.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*27/04/13 19:39*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	100.0	0.15	4.95	0.992	7.583	FALSE	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		100.0	n.a.	7.45	0.026	0.093	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	100.0	3.86	9.32	0.062	0.412	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatographic Results

Injection Name:	*WN31 B2 MS*	Inject Number:	23
Vial Number:	*21*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*200.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*27/04/13 19:58*		



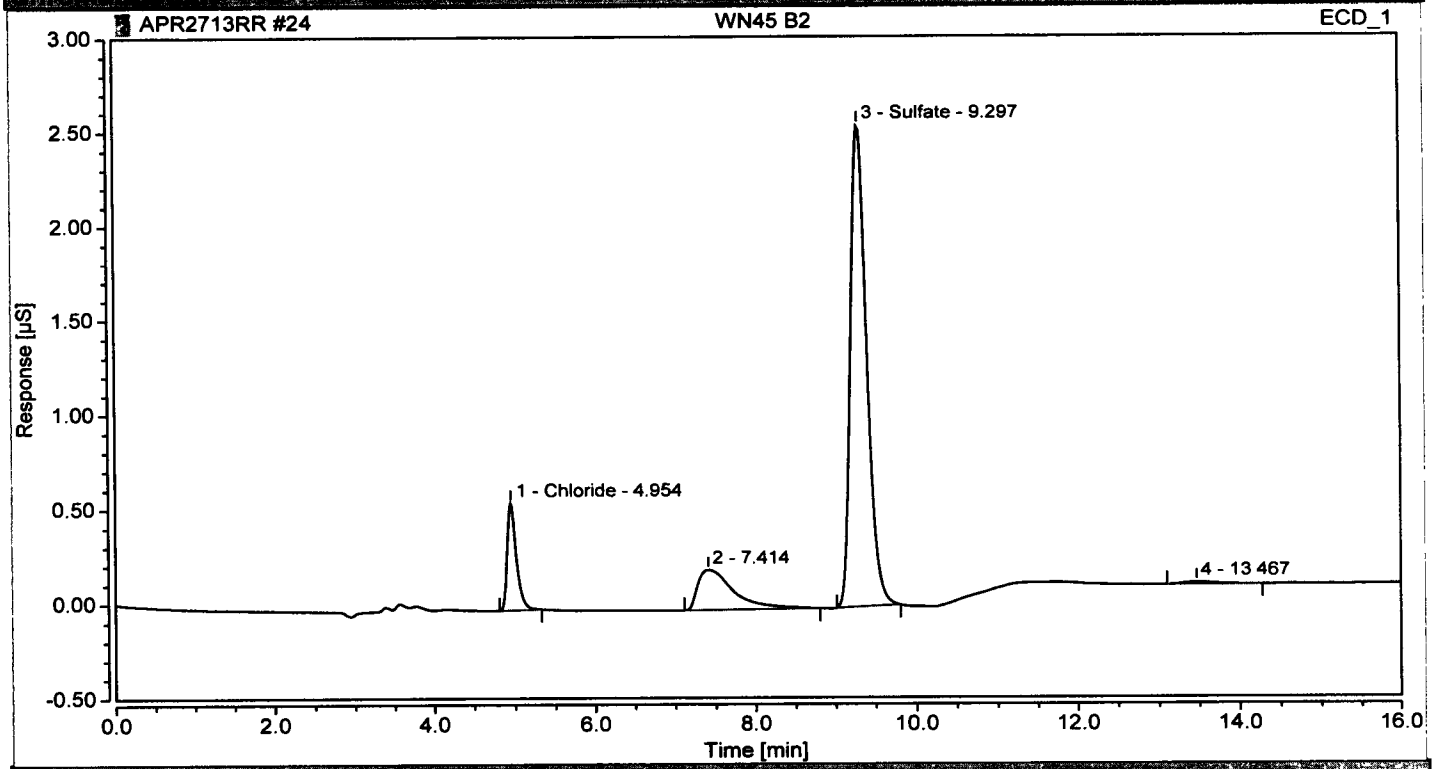
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	200.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	200.0	706.566	4.95	1.111	8.481	FALSE	n.a.
n.a.	Nitrite	200.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		200.0	n.a.	7.45	0.020	0.070	FALSE	n.a.
n.a.	Bromide	200.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	200.0	88.870	9.32	0.063	0.275	FALSE	n.a.
n.a.	Nitrate	200.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	200.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WN45 B2*	Inject Number:	24
Vial Number:	*22*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*20.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodai*		
Injection Date/Time:	*27/04/13 20:18*		

Chromatogram



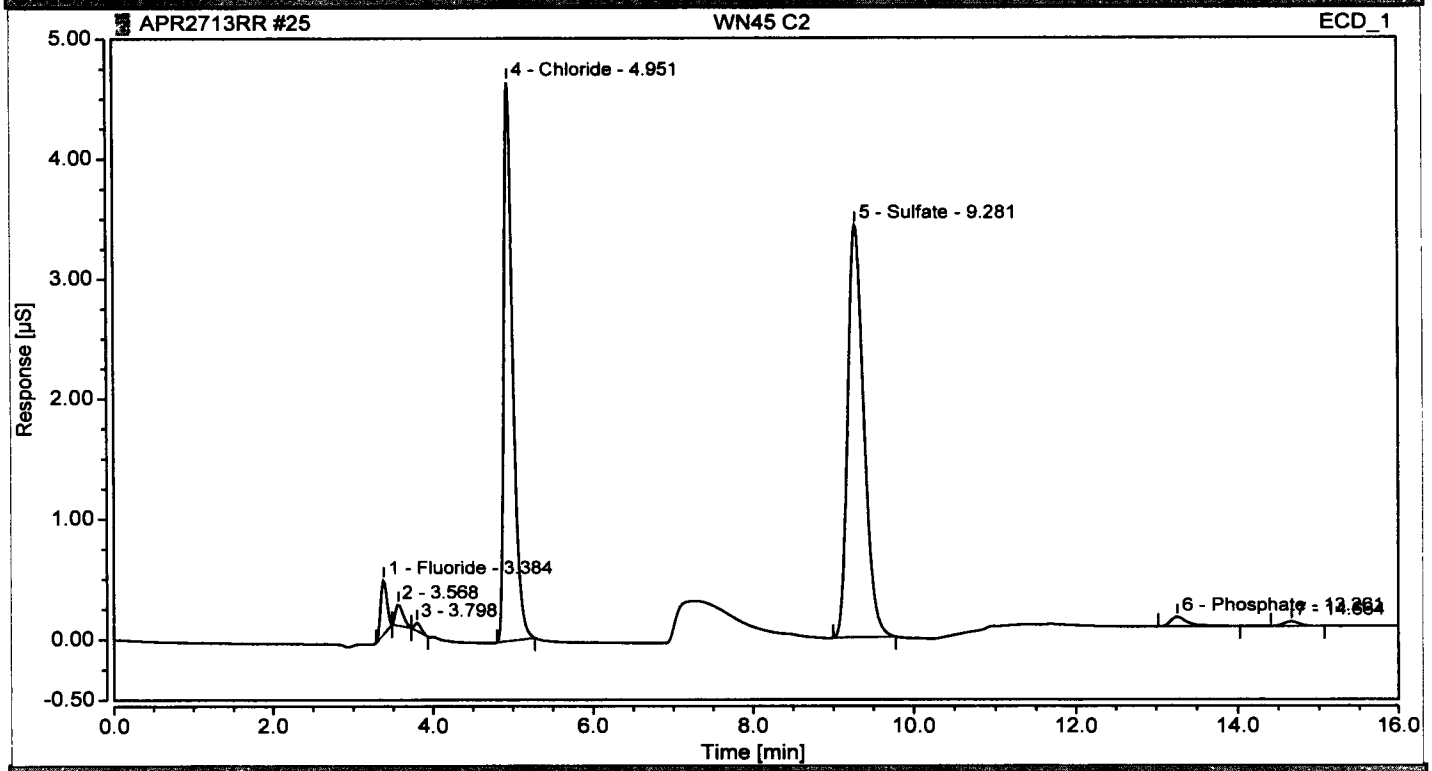
Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	20.0	4.669	4.95	0.073	0.566	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		20.0	n.a.	7.41	0.109	0.211	FALSE	n.a.
n.a.	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	20.0	25.896	9.30	0.890	2.552	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		20.0	n.a.	13.47	0.006	0.012	FALSE	n.a.

Injection Details

Injection Name:	*WN45 C2*	Inject Number:	25
Vial Number:	*23*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 20:37*		

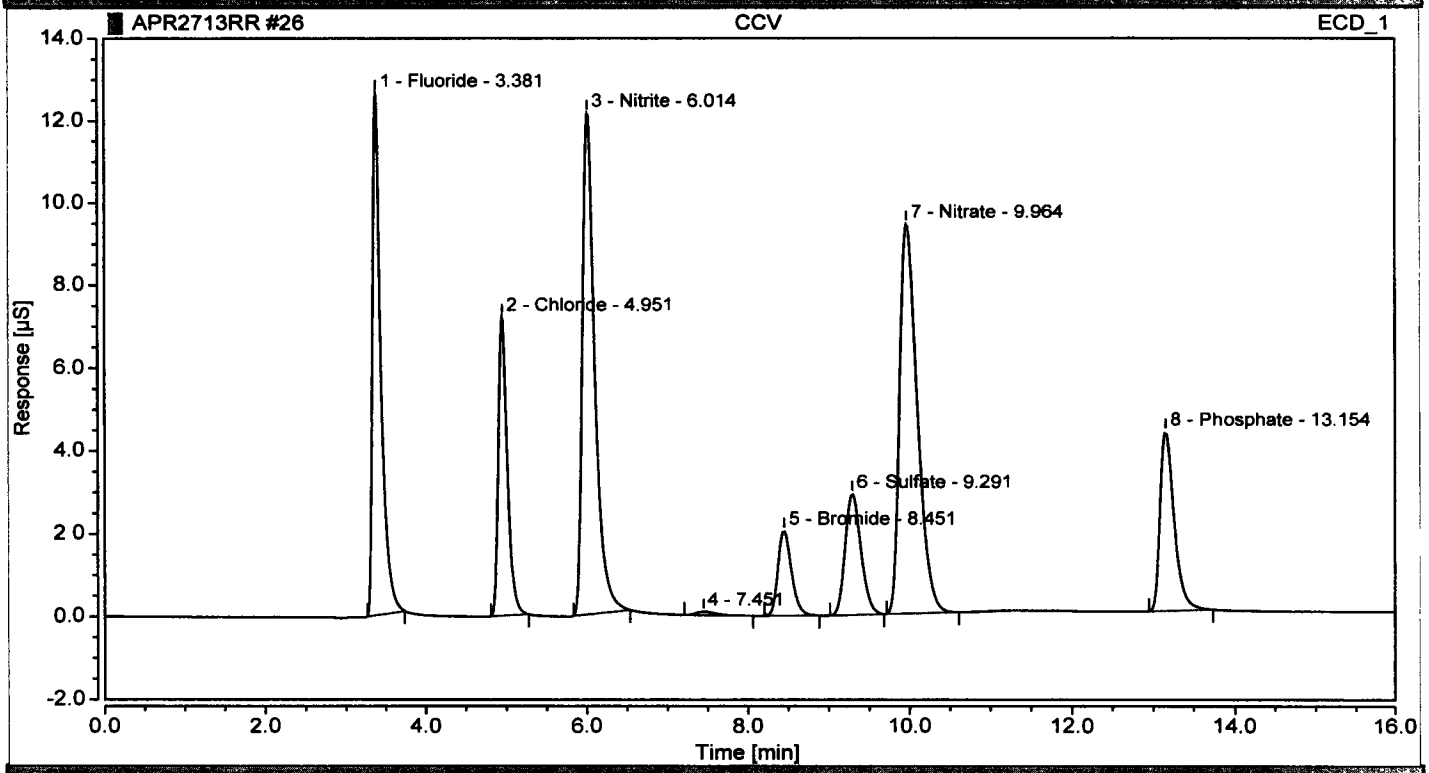
Chromatogram



Integration

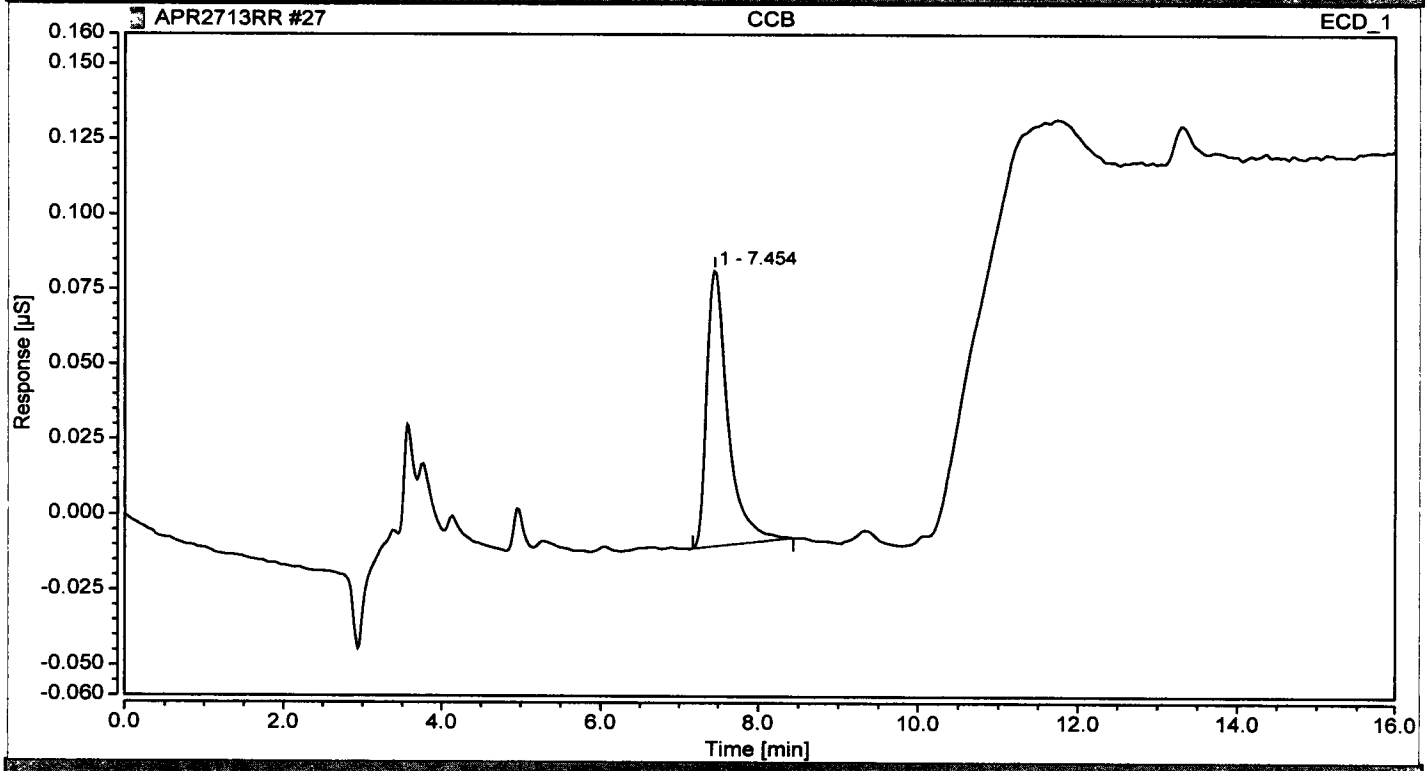
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.165	3.384	0.010	0.046	FALSE	n.a.
2		2.0	n.a.	3.568	0.019	0.074	FALSE	n.a.
3		2.0	0.07	3.80	0.008	0.027	FALSE	n.a.
4	Chloride	2.0	3.015	4.951	0.403	4.856	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	2.0	7.474	9.281	0.999	3.405	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	Phosphate	2.0	0.127	12.361	0.009	0.028	FALSE	n.a.
7		2.0	n.a.	14.664	0.009	0.039	FALSE	n.a.

Injection Name:	*CCV*	Inject Number:	26
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	APR2713RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 20:57*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.006	3.381	0.552	12.660	FALSE	0.20
2	Chloride	1.0	3.001	4.95	0.944	17.202	FALSE	0.05
3	Nitrite	1.0	3.013	6.014	2.174	12.144	FALSE	0.42
4		1.0	n.a.	7.451	0.023	0.084	FALSE	n.a.
5	Bromide	1.0	2.991	8.451	0.897	12.053	FALSE	-0.30
6	Sulfate	1.0	3.093	9.291	0.685	2.978	FALSE	3.11
7	Nitrate	1.0	2.976	9.964	2.928	11.948	FALSE	-0.81
8	Phosphate	1.0	2.876	13.154	0.864	4.334	FALSE	-4.12

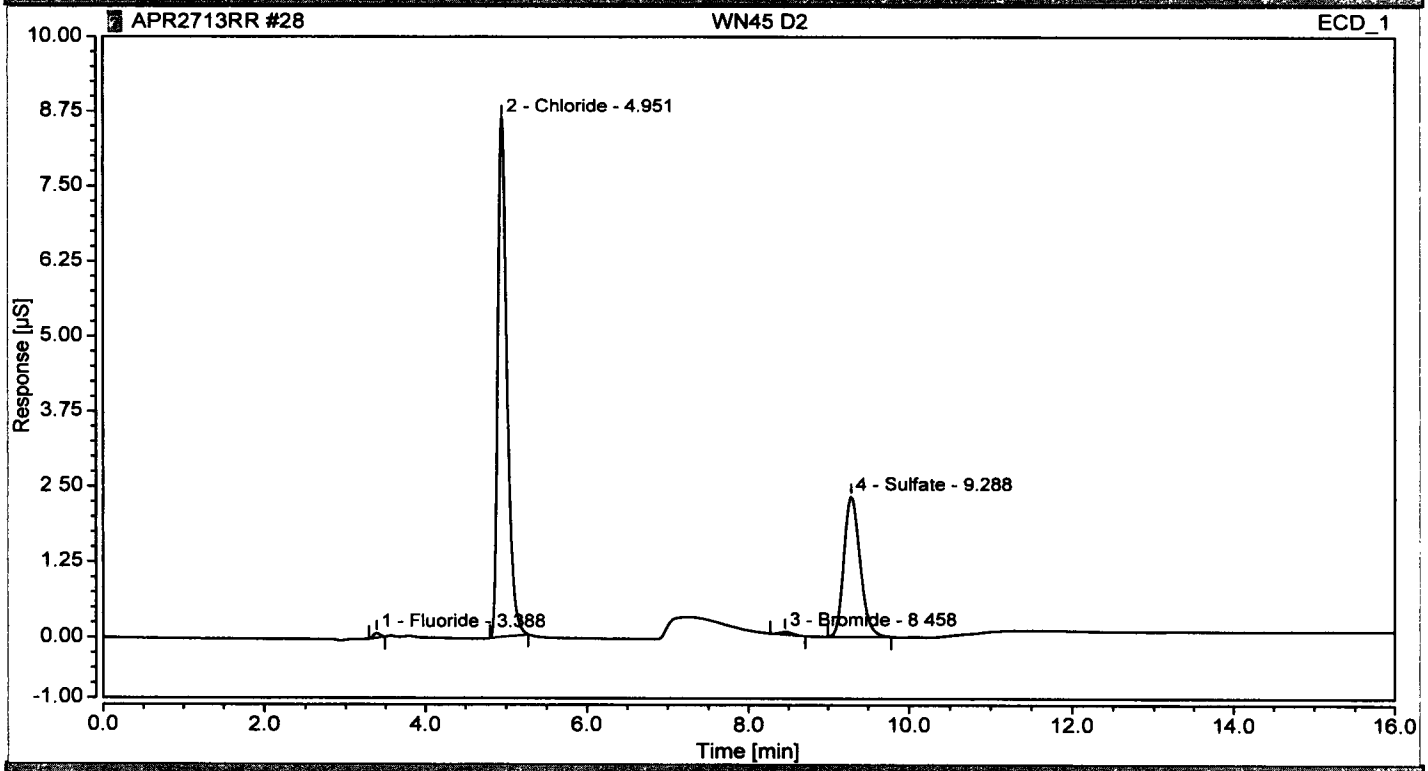
Injection Name:	*CCB*	Inject Number:	27
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	APR2713RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 21:17*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.45	0.029	0.092	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram

Injection Name:	*WN45 D2*	Inject Number:	28
Vial Number:	*24*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR2713RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/04/13 21:38*		



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	0.160	3.39	0.907	0.076	FALSE	n.a.
2	Chloride	10.0	35.785	4.95	1.26	6.527	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Bromide	10.0	0.556	8.46	0.068	0.044	FALSE	n.a.
4	Sulfate	10.0	25.122	9.29	0.690	0.382	FALSE	n.a.
n.a.	Nitrate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WN31, WN35

ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WN31 ARI Sample No. A Client Sample No. ES-TS-INF-20130424-S

Set-up Date: 05/01/2013 Sample Description: clayey organic fines & debris, oily sheen & residue, foul odor

Sieve Set # 2 1 JA Date Sieved: 5/2/13

SOLIDS CONTENT

Moisture Content	Initials kb
Container No.	136
Tare Weight	1.4842
Wet Weight + Tare	19.1161
Dry Weight + Tare	8.4785 JA

Test Sample	Initials kb
Container No.	136
Tare Weight	50.4398
Wet Weight + Tare	81.8873
Washed Sample Dry Weight + Tare	57.6284

SIEVE ANALYSIS
Initials JA

Sieve Size	Weight Retained
Tare	50.5101
4	50.5133 JA
10	50.6046
18	51.0403
35	52.2980
60	53.4413
120	54.9735
230	56.4167
PAN	1.0094

SEDIGRAPH ANALYSIS
Initials KS
Date Sedigraphed 5-3-2013

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI Water

Beaker ID	31A

* SAMPLE IMMEDIATELY FLOCCULATES AFTER ~~HOMOG~~ HOMOGENIZATION

Sample: ES-TS-INF-20130424-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN31\WN31A2.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: 5/3/2013 12:50:53PM
Reported: 5/13/2013 7:21:03AM
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: 110 / 92 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	95.3	0.7	117.79691
917.3	0.125	94.6	0.8	104.98660
866.0	0.208	93.8	0.8	93.56941
817.5	0.291	93.0	0.8	83.39382
771.8	0.374	92.1	0.8	74.32482
728.6	0.457	91.3	0.9	66.24207
687.9	0.540	90.4	0.9	59.03831
649.4	0.623	89.5	0.9	52.61795
613.1	0.706	88.6	0.9	46.89579
578.8	0.789	87.8	0.9	41.79592
546.4	0.872	86.9	0.8	37.25065
515.8	0.955	86.1	0.8	33.19968
487.0	1.038	85.3	0.8	29.58925
459.7	1.121	84.6	0.8	26.37144
434.0	1.204	83.8	0.7	23.50357
409.7	1.287	83.1	0.7	20.94758
386.8	1.370	82.4	0.7	18.66955
365.2	1.453	81.7	0.7	16.63926
344.7	1.536	80.9	0.7	14.82975
325.5	1.619	80.2	0.7	13.21703
307.3	1.702	79.4	0.8	11.77969
290.1	1.786	78.7	0.8	10.49866
273.8	1.869	77.9	0.8	9.35694
258.5	1.952	77.0	0.8	8.33938
244.1	2.035	76.1	0.9	7.43248
230.4	2.118	75.2	0.9	6.62421
217.5	2.201	74.2	1.0	5.90383
205.4	2.284	73.2	1.0	5.26179
193.9	2.367	72.2	1.0	4.68958
183.0	2.450	71.2	1.0	4.17959
172.8	2.533	70.1	1.1	3.72507
163.1	2.616	69.1	1.1	3.31997
154.0	2.699	68.0	1.1	2.95892
145.4	2.782	66.9	1.1	2.63714
137.2	2.865	65.9	1.1	2.35036
129.6	2.948	64.8	1.0	2.09476
122.3	3.031	63.8	1.0	1.86696
115.5	3.114	62.8	1.0	1.66393
109.0	3.197	61.8	1.0	1.48298
102.9	3.280	60.8	1.0	1.32170

Sample: ES-TS-INF-20130424-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN31\WN31A2.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: 5/3/2013 12:50:53PM
Reported: 5/13/2013 7:21:03AM
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: 110 / 92 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	59.7	1.0	1.17797
91.73	3.447	58.7	1.0	1.04987
86.60	3.530	57.8	1.0	0.93569
81.75	3.613	56.8	1.0	0.83394
77.18	3.696	55.9	0.9	0.74325
72.86	3.779	54.9	0.9	0.66242
68.79	3.862	54.1	0.9	0.59038
64.94	3.945	53.2	0.8	0.52618
61.31	4.028	52.7	0.5	0.46896
57.88	4.111	54.1	-1.4	0.41796
54.64	4.194	55.9	-1.8	0.37251
51.58	4.277	58.2	-2.4	0.33200
48.70	4.360	61.2	-3.0	0.29589
45.97	4.443	64.5	-3.3	0.26371
43.40	4.526	67.5	-3.1	0.23504
40.97	4.609	69.8	-2.2	0.20948
38.68	4.692	70.4	-0.6	0.18670
36.52	4.775	68.8	1.6	0.16639
34.47	4.858	64.5	4.3	0.14830
32.55	4.941	57.7	6.8	0.13217
30.73	5.024	49.0	8.7	0.11780
29.01	5.107	39.6	9.4	0.10499
27.38	5.191	30.7	8.9	0.09357
25.85	5.274	23.3	7.3	0.08339
24.41	5.357	18.0	5.3	0.07432
23.04	5.440	14.7	3.3	0.06624
21.75	5.523	12.8	1.9	0.05904
20.54	5.606	11.8	1.1	0.05262
19.39	5.689	11.1	0.7	0.04690
18.30	5.772	10.5	0.5	0.04180
17.28	5.855	10.1	0.4	0.03725
16.31	5.938	9.9	0.2	0.03320
15.40	6.021	9.8	0.1	0.02959
14.54	6.104	9.8	0.0	0.02637
13.72	6.187	9.7	0.0	0.02350
12.96	6.270	9.6	0.1	0.02095
12.23	6.353	9.4	0.2	0.01867
11.55	6.436	9.1	0.3	0.01664
10.90	6.519	8.8	0.3	0.01483
10.29	6.602	8.6	0.2	0.01322

Sample: ES-TS-INF-20130424-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN31\WN31A2.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: 5/3/2013 12:50:53PM
Reported: 5/13/2013 7:21:03AM
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: 110 / 92 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	8.4	0.2	0.01178
9.173	6.768	8.3	0.1	0.01050
8.660	6.851	8.3	0.0	0.00936
8.175	6.935	8.3	0.0	0.00834
7.718	7.018	8.3	-0.1	0.00743
7.286	7.101	8.4	-0.1	0.00662
6.879	7.184	8.4	0.0	0.00590
6.494	7.267	8.3	0.1	0.00526
6.131	7.350	8.1	0.2	0.00469
5.788	7.433	7.8	0.3	0.00418
5.464	7.516	7.4	0.4	0.00373
5.158	7.599	7.1	0.4	0.00332
4.870	7.682	6.8	0.3	0.00296
4.597	7.765	6.6	0.2	0.00264
4.340	7.848	6.5	0.1	0.00235
4.097	7.931	6.5	0.0	0.00209
3.868	8.014	6.5	-0.1	0.00187
3.652	8.097	6.6	-0.1	0.00166
3.447	8.180	6.8	-0.1	0.00148
3.255	8.263	6.9	-0.1	0.00132
3.073	8.346	7.0	-0.1	0.00118
2.901	8.429	7.1	-0.1	0.00105
2.738	8.512	7.1	0.0	0.00094
2.585	8.595	7.1	0.1	0.00083
2.441	8.679	6.9	0.1	0.00074
2.304	8.762	6.8	0.2	0.00066
2.175	8.845	6.6	0.2	0.00059
2.054	8.928	6.5	0.1	0.00053
1.939	9.011	6.4	0.1	0.00047
1.830	9.094	6.3	0.1	0.00042
1.728	9.177	6.3	0.1	0.00037
1.631	9.260	6.2	0.0	0.00033
1.540	9.343	6.2	0.0	0.00030
1.454	9.426	6.2	0.0	0.00026
1.372	9.509	6.3	0.0	0.00024
1.296	9.592	6.3	0.0	0.00021
1.223	9.675	6.3	0.0	0.00019
1.155	9.758	6.3	0.0	0.00017
1.090	9.841	6.5	-0.1	0.00015
1.029	9.924	6.7	-0.2	0.00013

Sample: ES-TS-INF-20130424-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN31\WN31A2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
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Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 110 / 92 kCnts/s
Reynolds Number: 0.42

Report by Size Table

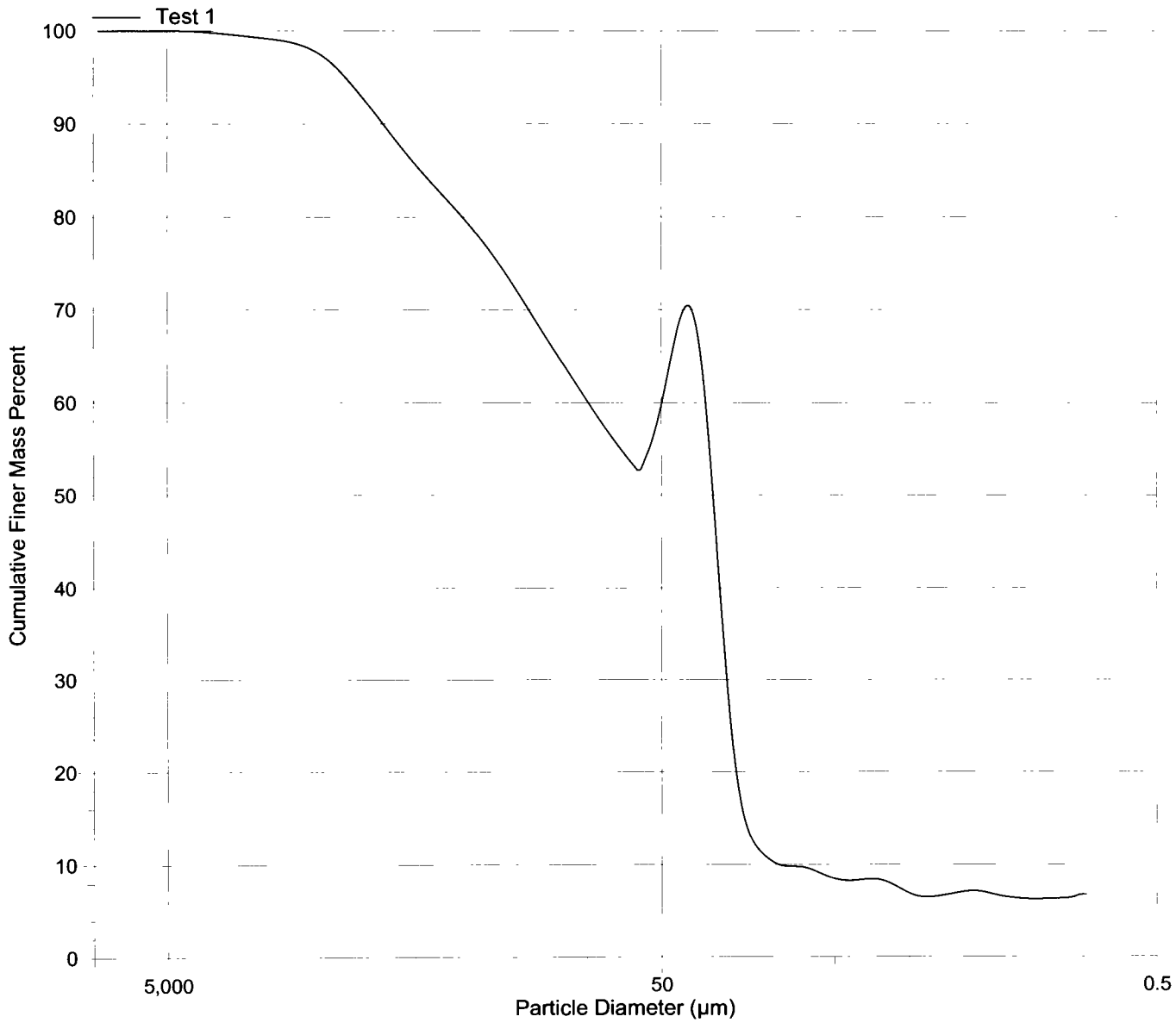
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	52.8	11.4
4750	100.0	0.0	31.00	50.4	2.4
2000	99.2	0.8	15.60	9.8	40.6
1000	95.7	3.5	7.800	8.3	1.5
500.0	85.7	10.0	3.900	6.5	1.8
250.0	76.5	9.2	2.000	6.5	0.1
125.0	64.2	12.3	1.000	6.7	-0.3

Sample: ES-TS-INF-20130424-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WN31\WN31A2.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: 5/3/2013 12:50:53PM
Reported: 5/13/2013 7:21:03AM
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: 110 / 92 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample ID: ES-MH-001-20130424-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_008-D5	Date Extracted:	13-Aug-2013
Date Collected:	24-Apr-2013	pH	6	QC Batch No.:	11228	Date Analyzed:	16-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	3.22			ES PCB-1	80.7
PCB-81 344'5-TeCB	ND	3.66			ES PCB-3	83.9
PCB-105 233'44'-PeCB	EMPC		3.05	J	ES PCB-4	90
PCB-114 2344'5-PeCB	ND	1.96			ES PCB-15	92.9
PCB-118 23'44'5-PeCB	EMPC		6.51	J B	ES PCB-19	94.5
PCB-123 23'44'5'-PeCB	ND	1.99			ES PCB-37	87.6
PCB-126 33'44'5-PeCB	ND	2.53			ES PCB-54	94.2
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	2.41		C	ES PCB-77	86.9
PCB-167 23'44'55'-HxCB	ND	1.73			ES PCB-81	87
PCB-169 33'44'55'-HxCB	ND	2			ES PCB-104	108
PCB-189 233'44'55'-HpCB	ND	2.29			ES PCB-105	99.4
					ES PCB-114	97.1
TEQs (WHO M/H)					ES PCB-118	97.8
					ES PCB-123	96.2
ND = 0	0		0.000287		ES PCB-126	101
ND = 0.5 x DL	0.157		0.157		ES PCB-153	90.3
ND = DL	0.314		0.314		ES PCB-155	91.7
					ES PCB-156/157	87.7
Totals					ES PCB-167	86.6
Mono-CBs	ND	2.42			ES PCB-169	87.6
Di-CBs	12.1				ES PCB-170	89.1
Tri-CBs	48.7				ES PCB-180	92.8
Tetra-CBs	87		92.7		ES PCB-188	102
Penta-CBs	78.7		92.2		ES PCB-189	91.8
Hexa-CBs	40.6		66.6		ES PCB-202	98.8
Hepta-CBs	3.66		25.3		ES PCB-205	87.3
Octa-CBs	ND	1.9			ES PCB-206	93.8
Nona-CBs	ND	3.19			ES PCB-208	94
Deca-CB	ND	1.4			ES PCB-209	89.2
					CS PCB-28	91.3
Total PCB (Mono-Deca)	271		338		CS PCB-111	102
					CS PCB-178	112

Checkcode: 437-381-SBQ

SGS AP PCB 2013 Rev. 2.0

Report Created: 19-Aug-2013 12:40 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

T: 910 794-1613
F: 910 794-3919
www.us.sgs.com

Sample ID: ES-MH-001-20130424-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_008-D5	Date Extracted:	13-Aug-2013
Date Collected:	24-Apr-2013	pH	6	QC Batch No.:	11228	Date Analyzed:	16-Aug-2013
		Units	pg/L	Checkcode:	437-381-SBQ	Time Analyzed:	00:28:01

Mono	Conc.	Qualifiers
PCB-1	(2.2)	
PCB-2	(2.53)	
PCB-3	(2.65)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(6.92)	
PCB-10	(4.41)	
PCB-9	(6.67)	
PCB-7	(5.91)	
PCB-6	(6.23)	
PCB-5	(6.26)	
PCB-8	(6.01)	
PCB-14	(5.29)	
PCB-11	12.1	B
PCB-13/12	(6.14)	C
PCB-15	(5.85)	
Conc.	12.1	
EMPC	12.1	

Tri	Conc.	Qualifiers
PCB-19	28	
PCB-30/18	(4.09)	C
PCB-17	(4.76)	
PCB-27	14.3	
PCB-24	(3.74)	
PCB-16	(6.24)	
PCB-32	6.32	J
PCB-34	(4.33)	
PCB-23	(4.26)	
PCB-26/29	(4.23)	C
PCB-25	(4.15)	
PCB-31	(4.01)	
PCB-28/20	(4.29)	C
PCB-21/33	(4.17)	C
PCB-22	(4.54)	
PCB-36	(4.16)	
PCB-39	(3.97)	
PCB-38	(4.45)	
PCB-35	(4.59)	
PCB-37	(4.54)	
Conc.	48.7	
EMPC	48.7	

Tetra	Conc.	Qualifiers
PCB-54	(2.86)	
PCB-50/53	33.1	C
PCB-45	(5.49)	
PCB-51	(4.95)	
PCB-46	(6.07)	
PCB-52	22.2	
PCB-73	(3.74)	
PCB-43	(6.13)	
PCB-69/49	7.54	J C
PCB-48	(5)	
PCB-44/47/65	12.3	J B C
PCB-59/62/75	(3.66)	C
PCB-42	(5.48)	
PCB-41	(6.42)	
PCB-71/40	7.38	J C
PCB-64	4.58	J

Tetra	Conc.	Qualifiers
PCB-72	(3.42)	
PCB-68	(3.22)	
PCB-57	(3.54)	
PCB-58	(3.47)	
PCB-67	(3.29)	
PCB-63	(3.18)	
PCB-61/70/74/76	[5.66]	J B EMPC C
PCB-66	(3.79)	
PCB-55	(3.61)	
PCB-56	(3.72)	
PCB-60	(3.62)	
PCB-80	(3.13)	
PCB-79	(3.21)	
PCB-78	(3.82)	
PCB-81	(3.66)	
PCB-77	(3.22)	
Conc.	87	
EMPC	92.7	

Totals	Conc.	EMPC
Mono-Tri	60.8	60.8
Tetra-Hexa	206	252
Hepta-Deca	3.66	25.3
Mono-Deca	271	338

2714 Exchange Drive
Wilmington, NC 28405, USA

Tel: +1 910 794-1613
Fax: +1 910 794-3919
www.us.sgs.com

Sample ID: ES-MH-001-20130424-W — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.58)		PCB-109/119/86/97/125/87	9.9	J C	PCB-155	(1.26)		PCB-165	(1.75)	
PCB-96	(1.87)		PCB-117	(2.19)		PCB-152	(1.38)		PCB-146	(2.05)	
PCB-103	(2.61)		PCB-116/85	(2.56)	C	PCB-150	(1.36)		PCB-161	(1.62)	
PCB-94	(3.05)		PCB-110	20.4		PCB-136	[2.4]	J EMPC	PCB-153/168	13.1	J C
PCB-95	26		PCB-115	(2.19)		PCB-145	(1.44)		PCB-141	2.92	J
PCB-100/93	(2.74)	C	PCB-82	(3.46)		PCB-148	(2.09)		PCB-130	(2.51)	
PCB-102	(2.71)		PCB-111	(2.03)		PCB-151/135	6.8	J C	PCB-137	(1.94)	
PCB-98	(2.98)		PCB-120	(2.02)		PCB-154	(1.88)		PCB-164	(1.76)	
PCB-88	(3.07)		PCB-108/124	(2.24)	C	PCB-144	(2.1)		PCB-163/138/129	[17.8]	J EMPC C
PCB-91	(2.59)		PCB-107	(2.12)		PCB-147/149	15.4	J C	PCB-160	(1.76)	
PCB-84	7.1	J	PCB-123	(1.99)		PCB-134	(2.61)		PCB-158	(1.56)	
PCB-89	(3.13)		PCB-106	(2.22)		PCB-143	(2.18)		PCB-128/166	2.41	J C
PCB-121	(2.06)		PCB-118	[6.51]	J B EMPC	PCB-139/140	(2.05)	C	PCB-159	(1.83)	
PCB-92	(2.97)		PCB-122	(2.34)		PCB-131	(2.45)		PCB-162	(1.84)	
PCB-113/90/101	15.4	J C	PCB-114	(1.96)		PCB-142	(2.42)		PCB-167	(1.73)	
PCB-83	(3.45)		PCB-105	[3.05]	J EMPC	PCB-132	[5.86]	J EMPC	PCB-156/157	(2.41)	C
PCB-99	[3.93]	J EMPC	PCB-127	(2.23)		PCB-133	(2.24)		PCB-169	(2)	
PCB-112	(2.06)		PCB-126	(2.53)							
			Conc.	78.7					**Conc.**	40.6	
			EMPC	92.2					**EMPC**	66.6	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.67)		PCB-174	[5.1]	J EMPC	PCB-202	(1.74)		PCB-208	(2.55)	
PCB-179	(1.84)		PCB-177	[2.82]	EMPC	PCB-201	(1.55)		PCB-207	(2.47)	
PCB-184	(1.87)		PCB-181	(2.45)		PCB-204	(1.64)		PCB-206	(3.82)	
PCB-176	(1.7)		PCB-171/173	(2.81)	C	PCB-197	(1.5)				
PCB-186	(1.8)		PCB-172	(2.72)		PCB-200	(1.66)		**Conc.**	0	
PCB-178	(2.5)		PCB-192	(2.07)		PCB-198/199	(2.31)	C	**EMPC**	0	
PCB-175	(2.47)		PCB-180/193	[8.33]	J EMPC C	PCB-196	(2.23)				
PCB-187	[5.33]	J EMPC	PCB-191	(1.97)		PCB-203	(2.12)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.24)		PCB-170	(3.13)		PCB-195	(2.85)		PCB-209	(1.4)	
PCB-183	3.66	J	PCB-190	(2.29)		PCB-194	(2.6)				
PCB-185	(2.46)		PCB-189	(2.29)		PCB-205	(2.06)				
			Conc.	3.66		**Conc.**	0				
			EMPC	25.3		**EMPC**	0				

Attachment F-5
Ecology Inspection Report

State of Washington Department of Ecology
Northwest Regional Office

STORMWATER COMPLIANCE INSPECTION REPORT

WADOE Stormwater Compliance Inspection Form (last file update 4-04.)

Facility Type:
☒ Industrial ☐ Boatyard
☐ Construction ☐ S & G

Section A: General Data

Inspection Date	NPDES Permit #	County	Receiving Waters
4/24/2013	**WAR002641**	King	Duwamish River

Discharges to: Surface Water ☒ Ground Water ☐ | Weather at time of inspection: Mostly Sunny

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Emerald Services Inc. - Corporate 7343 E. Marginal Way S. Seattle, WA 98108	8:00 am	1-01-10
	Exit Time 12:30 pm	Permit Expiration Date 1-01-15

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Sheila Smith/ Environmental Coordinator/
Michele Riggs/Biodegradable Technical Specialist/1-877-994-4466
Jerry Bartlett/Chief Environmntal & Sustainabilty Officer/206-832-3005

Other Participants:
Christine Nancarrow, SAIC
Corey Wilson, SAIC

Name, Address of Responsible Official/Title/Phone and Fax Number.
Sheila Smith/ Environmental Coordinator/ 253-370-7912
7343 E. Marginal Way South
Seattle, WA 98108
Phone Number 253-370-7912 Fax Contacted? ☒Yes ☐ No

	Yes	No
Samples Taken?	☒	☐
Photos Taken?	☒	☐

Section C: Areas Evaluated During Inspection.

☒	NPDES Permit Available	☒	Wet & Dry Season Inspection Reports	☒	Operations & Maintenance	☐	Effluent/Receiving Water
☒	Storm Water Pollution Prevention Plan Available	☐	Employee Training Records	☒	Oil/Water Separator	☐	Pretreatment
☐	SPCC Plan & Equipment	☐	Compliance Schedules	☐	Solid Waste Disposal	☐	Laboratory
☐	Erosion and Sediment Control Plans	☒	Monitoring Plan	☒	Catch Basins	☐	0.5 inch Inspection Logs
☒	DMR Submittals	☒	Fuel/Chemical Storage	☐	Track out / Wheel wash	☒	Wash Pad
☐		☐		☐		☐	
☐		☐		☐		☐	

Section D: Summary of Findings/Comments

Background:

This compliance inspection was conducted as part of a Department of Ecology inspection program to control the potential sources of pollutants discharged to the Duwamish Waterway through storm drainage systems. The previous Department of Ecology, Water Quality Program compliance inspection at this facility was October 2, 2010. As part of this inspection, storm drain lines and structures were reviewed and compared with existing site maps and source trace samples of catch basin solids and stormwater were collected. Ecology will review sample results and consider the need to monitor for additional parameters or conduct further source tracing.

Inspection/Observations:

I met with Sheila Smith, Environmental Coordinator, Michele Riggs, Biodegradable Technical Specialist and Jerry Bartlett, Chief Environmental & Sustainability Officer to go over the permit paperwork and explain the sampling. Ms. Smith is the responsible official for NPDES permit compliance. The current Stormwater Pollution Prevention Plan (SWPPP) was reviewed and looked thorough. The SWPPP certification form was signed and dated in March 2013. The monthly inspection reports looked complete and well done.

The site is approximately 5 acres. Main warehouse is used to store wastes waiting to be transferred to another facility. Other industrial activities include; truck repair and maintenance, mobile fueling, truck staging, equipment storage, truck and food waste container washing and the transfer of hazardous/dangerous wastes. Rubber mats are used to cover the strip drain at the loading dock during transfers.

The truck wash pad is covered (see Photo # 5) and wastewater is directed to the sanitary sewer with King County Industrial Waste approval. The operation and maintenance of this system needs to be included as a section of the SWPPP and depicted on the site map. The site map looked good but it did not include the green tank parked next to the covered truck wash pad (see Photo #6). The site map also needs to be reviewed to make sure it includes all 12 elements required by the permit (condition # S3.B.1 (a-l)).

Wastes are transferred between trucks and the warehouse. Truck maintenance takes place in the north 3 bays of the main building. There are no known connections between the interior floor drains and the storm drain system.

Some trucks are staged at the facility with enough food wastes in the rear hopper that birds are attracted. Birds spread food wastes and droppings onto the pavement (see Photo # 2). Hoppers are covered with plastic tarps in an effort to minimize bird problem. The facility should develop a better system to prevent birds from spreading food wastes from trucks parked there.

The storm filter treatment vault is used to treat all facility stormwater run-off except the roof. The facility should sample and analyze roof run-off to confirm that pollutants are not going to the river without treatment.

The storm filter treatment vault was sampled for solids. Ecology will review sample results and consider the need to monitor for additional parameters or conduct further source tracing. All samples results will be shared with Emerald Services once available.

The storm drain catch basins nearest the truck wash pad need to be provided with robust inlet protection.

All drums and totes at the facility must be determined to be empty or be provided with cover and containment.

Issues & Requirements:

The following must be completed in order to come into compliance with your Industrial Stormwater Permit:

- The Site Map in the Stormwater Pollution Prevention Plan (SWPPP) must be updated to meet permit condition S3.

Contact Robert Wright at 206-909-6640 with any questions or concerns regarding this report.

Name(s) and Signatures of Inspector(s)	Agency/Office/Telephone	Date
Robert Wright 7-9-13	WA Dept. of Ecology/ NW Regional Office/ 425-649-7060 3190 160th Ave SE, Bellevue, WA 98008-5452	6-17-13
Signature of Management Q A Reviewer	Agency/Office/Phone and Fax Numbers WA Dept. of Ecology/NWRO/ (425) 649-7000 Fax (425) 649-7098	7/15/13

ANNOUNCED Inspection

Emerald Services-Corporate, Seattle WAR-002641
April 24, 2013

#1. DESCRIPTION: Wastes are transferred between trucks and the warehouse. Truck maintenance takes place in the north 3 bays of the main building. There are no known connections between the interior floor drains and the storm drain system.

#2. DESCRIPTION: Some trucks are staged at the facility with enough food wastes in the rear hopper that birds are attracted. Birds spread food wastes and droppings on to the pavement. Hoppers are covered with plastic tarps in an effort to minimize bird problem. The facility should develop a better system to prevent birds from spreading truck hopper food wastes from trucks parked here.

#3. DESCRIPTION: The storm filter treatment vault is located in the ground near orange cones. All stormwater from the site flows to the storm filter treatment system except what comes off the roof. The facility should sample and analyze roof run-off to confirm that pollutants are not going to the river without treatment.

#4. DESCRIPTION: The storm filter treatment vault was sampled for solids. Ecology will review sample results and consider the need to monitor for additional parameters or conduct further source tracing. All samples results will be shared with Emerald Services once available.

Emerald Services-Corporate, Seattle **WAR-002641**
April 24, 2013

#5. DESCRIPTION: This covered wash bay has drains that tie into the sanitary sewer. The facility must be diligent to prevent overspray or drag-out of wastewater into the area tributary to the storm drainage system. Wastewater is not permitted to be discharged to surface waters or storm drains.

#6. DESCRIPTION: This portable tank is used to store washwater from the covered truck wash pad. Washwater is reused and/or discharged to the sanitary sewer. The operation and maintenance of this system needs included as a section of the SWPPP and depicted on the site map.

#7. DESCRIPTION: The storm drain catch basins nearest the truck wash pad need to be provided with robust inlet protection.

#8. DESCRIPTION: All drums and totes at the facility must be determined to be empty or be provided with cover and containment