Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

Toxics Cleanup Program
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Washington State Department of Ecology
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Appendix C
Independent Metals

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

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

Table of Contents

Figures

Tables

Attachments

C-1 Introduction and Background

Facility Name	Independent Metals
Address	**Plant 2** 816 S Kenyon Street Seattle, WA 98108 **Plant 1** 747 S Monroe Street Seattle, WA 98108 **7th Avenue Dirt Storage Lot (Plant 1 Storage)** Southeast Corner of 7th Avenue S and S Monroe Street
NPDES Permit Type	Individual NPDES Permit
NPDES Permit No.	WAR009725
Permit Monitoring Requirements	Turbidity, pH, oil sheen, total copper, total zinc, total lead, total mercury, total petroleum hydrocarbons, total PCBs
SIC Code	5093: Scrap and Waste Materials 3728: Aircraft Parts and Equipment, NEC
Inspection Date	April 10, 2013
Grab Samples	2 Water Samples; 2 Solids Samples
Sample ID(s)	IM-CB-01-20130410-S IM-CB-02-20130410-S IM-MH-01-20130410-W IM-SW-01-20130410-W
Water Sample Analytes	PCB Congeners, SVOCs (including phthalates and PAHs), pesticides, metals, mercury, pH, specific conductance, anions, alkalinity, TOC/DOC, TSS
Solids Sample Analytes	Dioxins/furans (CB-01), PCB Aroclors, SVOCs (including phthalates and PAHs), pesticides, TPH-Diesel and Motor Oil, TPH-Gasoline, metals, mercury, TOC, total solids, grain size
Split Samples	Yes

Independent Metals operates a scrap metal sorting and handling facility at 816 S Kenyon Street, known as Plant 2. Trucks carrying scrap metal enter through an access gate on 8th Avenue S and S Kenyon Street. These materials can include ferrous and non-ferrous metals, cars, trucks, heavy machinery shells, and metal construction. The facility also accepts raw materials by barge. Scrap is unloaded, sorted, and then cut or sheared to a manageable size. Most of the heavy scrap metal processing at the facility takes place outdoors. Items received with incidental oils are cleaned and the recovered oils are sent to an oil recycler. Once the scrap is broken down, it is transferred inside the warehouse to a scrap processor. Finished scrap metal is loaded onto trucks and exits the facility via the street access points. The property includes a paved process yard, dock for barge loading/unloading, parking areas, and three buildings, as well as an area occupied by

heavy equipment temporarily stored by Silver Bay Logging (Nisqually 2010). A facility map is presented in Figure C-1.

Independent Metals also operates Plant 1 at 747 S Monroe Street and the 7th Avenue Dirt Storage Lot along 7th Avenue S between S Monroe and S Elmgrove Streets. The majority of stormwater at Plant 1 discharges to the combined sewer system through an oil water separator. Stormwater from the area on S Monroe Street, in front of the two entrance/exit gates, flows west into the public storm drain system on 7th Avenue S. The 7th Avenue Dirt Storage Lot is used to store drop boxes, bins, containers, and trailers. In 2012, Ecology required Independent Metals to apply for coverage under the facility's Industrial Stormwater General Permit (ISGP) for Plant 1 and the Dirt Lot (Ecology 2012a).

C-1.1 Stormwater Conveyance and Treatment System

According to a Stormwater Pollution Prevention Plan (SWPPP) prepared in February 2010, the southern portion of the Plant 2 property conveys stormwater to the combined sewer system via sheet flow. Catch basins on 8th Avenue S are connected to the combined sewer system. A single catch basin drains the interior yard and eastern roof drains. Stormwater from the Silver Bay Logging storage area at the northern portion of the property also drains to this catch basin. The catch basin is routed to an oil water separator (installed in 2008), which is connected to a holding tank. In 2009, the facility installed a StormwateRx Treatment system that was designed to meet the Western Washington Stormwater Manual requirements. Independent Metals installed the system downstream of the holding tank. The treatment system consists of a modified sand filter and is designed to remove heavy metals, oil and grease, and suspended solids. The treatment system discharges treated stormwater to the Lower Duwamish Waterway (LDW) via Outfall 01 (Nisqually 2010) .

C-1.2 Recent Compliance History

On January 25, 2012, an Ecology inspector observed a significant petroleum sheen on the majority of stormwater puddles at the 7th Avenue Dirt Storage Lot. Ecology collected a sample of the stormwater that was observed flowing into the nearby storm drain catch basin on 7th Avenue S. Polychlorinated biphenyl (PCB) concentrations in the stormwater sample were 7 micrograms per liter (µg/L). The storage lot was not covered under the facility's ISGP (Ecology 2012a).

On April 26, 2012, an Ecology inspector observed auto shredder residue overflowing the ecology block walls and falling onto the riverbank at Plant 2. During the investigation, Ecology also discovered that the stormwater treatment system at Plant 2 was overflowing poorly treated industrial stormwater into the LDW. Ecology issued Notice of Violation No. 9248 to Independent Metals on July 24, 2012 (Ecology 2012b).

On January 25, 2013, Ecology issued Administrative Order No. 9636 to Independent Metals. The Order required the facility to take the following corrective actions (Ecology 2013):

1. Complete and submit a Modification of Permit Coverage for National Pollutant Discharge Elimination System (NPDES) ISGP No. WAR009725. Independent Metals

Plant 2, to expand coverage to include Plant 1 and the 7th Avenue Dirt Storage Lot between S Monroe and S Elmgrove Streets.

2. Cease and desist the storage of scrap metal containers, bins, and/or drop boxes that do not have tight fitting lids at the 7th Avenue Dirt Storage Lot.
3. Develop a SWPPP (within 30 days of receipt of the Order) for Plant 1 and the 7th Avenue Dirt Storage Lot that includes sampling locations and procedures.
4. Beginning the 1st quarter of 2013, begin sampling for all permit parameters.
5. Sample and analyze for total PCBs, using U.S. Environmental Protection Agency (EPA) SW-846 Method 8082 with a method detection limit of 0.03 µg/L at all discharge sampling locations.
6. Size the StormwateRx treatment system at a hydraulic load rate of no greater than 1 gallon per minute per square foot of media surface area.
7. Develop and submit to Ecology a Standard Operating Procedure for transferring materials from vessels and/or barges to facility docks.
8. Cease and desist using soap and/or surfactants at Plant 2 in all areas tributary to the treatment system, on the dock, or any area that could get into the river.
9. Prevent any and all materials from getting onto the river bank or outside the bunkers and/or bins at Plant 2.

Prior to the April 2013 inspection, Independent Metals submitted permit modification forms, revised the facility's SWPPP to include Plant 1 and the 7th Avenue Dirt Storage Lot, began sampling for total PCBs at all locations, and placed berms around Plant 1 to prevent discharge to the public storm drain system (Independent Metals 2013).

According to Independent Metals' 2012 ISGP Annual Report Form, the facility exceeded benchmarks for zinc at Plant 2 during the 1st quarter of 2012, triggering a Level One Corrective Action. Independent Metals changed the media in the treatment system at Plant 2 to address the benchmark exceedance. Based on available Discharge Monitoring Reports (DMRs), the facility also exceeded benchmarks for zinc at Plant 2 during the 1st quarter of 2013. Independent Metals also exceeded the benchmark for zinc and copper at the 7th Avenue Dirt Storage Lot during the 4th quarter of 2012, triggering a Level Two Corrective Action. The planned response to the Level Two Corrective Action included sloping the Dirt Lot to prevent runoff to the public storm drain system on 7th Avenue S. The annual report indicated the sloping of the Dirt Lot was completed in the 2nd quarter of 2013 (Independent Metals 2013). Based on available DMRs, the facility exceeded benchmarks for turbidity at the 7th Avenue Dirt Storage Lot during the 1st quarter of 2013.

At the time of this report, no additional information was available regarding the remaining corrective actions.

C-2 Inspection and Sampling

C-2.1 April 2013 Stormwater Compliance Inspection

On April 10, 2013, Ecology conducted a stormwater compliance inspection at Independent Metals Plant 2 and the 7th Avenue Dirt Storage Lot. 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 Figures C-2a and C-2b using geographic information system software. An inspection photographic log and field documentation are presented in Attachments C-1 and C-2, respectively.

The field team inspected the following stormwater conveyance structures at Independent Metals Plant 2 and the 7th Avenue Dirt Storage Lot (Figure C-2a and C-2b): stormwater treatment system (MH-01) and catch basin 01 (CB-01) at Plant 2; and catch basin 02 (CB-02) and standing surface water 01 (SW-01) at the 7th Avenue Dirt Storage lot. Locations CB-01 and CB-02 contained sufficient sampleable solids to collect solids grab samples. Sufficient water volume was available at MH-01 and SW-01 to collect water grab samples.

An Independent Metals representative requested that the inspection team collect a sample from a location upstream and offsite from the 7th Avenue Dirt Storage Lot. Ecology and Leidos investigated catch basin 03 (CB-03) to determine if the upstream/offsite location contained sufficient sampleable material (Figure C-2b). The sampling team determined the location was not sampleable.

C-2.2 Stormwater Conveyance System Sampling

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

C-2.2.1 Water Sample

Water sample IM-MH-01-20130410-W was collected from the stormwater treatment system located on the eastern portion of the facility along the bank of the LDW (MH-01; Figure C-2a, Attachment C-1). The sample location is representative of stormwater discharge from Independent Metals Plant 2 to the LDW. The water sample was collected from the sampling port located on the effluent discharge line of the treatment system. The treatment system is connected to Outfall 01 (LDW Outfall 2110) on the bank of the LDW. Ecology inspectors observed a black foamy discharge from Outfall 01 after Leidos had collected the water sample from the treatment system.

Water sample IM-SW-01-20130410-W was collected from standing water at the 7th Avenue Dirt Storage Lot (Figure C-2b, Attachment C-1). The sample location is representative of stormwater discharge from the dirt storage lot used by Independent Metals to store empty shipping containers. The stormwater is conveyed to the public storm drain system located along 7th Avenue S.

C-2.2.2 Solids Samples

Solids sample IM-CB-01-20130410-S was collected from CB-01 located in the central portion of the processing yard at Independent Metals Plant 2 (Figure C-2a, Attachment C-1). Stormwater from CB-01 is conveyed to the treatment system described in Section G-1.1. Prior to the sample collection, a filter sock and catch basin insert were removed from CB-01. An Independent Metals employee who observed the sample collection indicated the catch basin was cleaned weekly. The depth of solids in the catch basin was approximately 6 inches. The sample consisted of dark brown silt and clay. After multiple grab attempts, sufficient sample volume was obtained to perform all analyses, with the exception of VOCs. The fine-grained nature of the sample matrix made VOC sample collection unattainable. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

Solids sample SD-CB-02-20130410-S was collected from catch basin CB-02, which is adjacent to 7th Avenue S (Figure C-2b, Attachment C-1). The catch basin contained cobbles and gravel similar in size and color to material observed in the dirt storage lot. The catch basin conveys stormwater to the public storm drain system located along 7th Avenue S. The sample was collected from the corners of the catch basin where finer grain size material was located. The sample consisted of cobble, gravel, and brown coarse- to medium-sized sand. No odor was detected during sample collection. Sufficient sample volume was obtained for metals, SVOCs, PCB Aroclors, and pesticides. Per discussion with Ecology, dioxin/furan and VOC analyses were not requested for this sample.

C-3 Results

C-3.1 Chemical Analysis

Ecology collected two water and two solids samples during the April 10, 2013 stormwater compliance inspection at Independent Metals. Analytical methods, chemical results and regulatory criteria are presented in Tables C-1 through C-8.

All chemical results were independently validated by EcoChem, Inc. of Seattle, WA. A summary-level, 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).

C-3.2 Inspection Results and Permit Compliance Requirements

The Ecology inspection report was not available for review.

C-4 References

Ecology (Washington Department of Ecology). 2012a. Notice of Penalty Incurred and Due, Penalty Docket No. 9248. Issued by the State of Washington, Department of Ecology to Independent Metals Company. July 17, 2012.

Ecology. 2012b. Recommendation for Enforcement Action, Water Quality Program, Notice of Penalty Docket No. 9248. July 17, 2012.

Ecology. 2013. Administrative Order Docket No. 9636. Issued by the State of Washington, Department of Ecology to Independent Metals Company. January 24, 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.

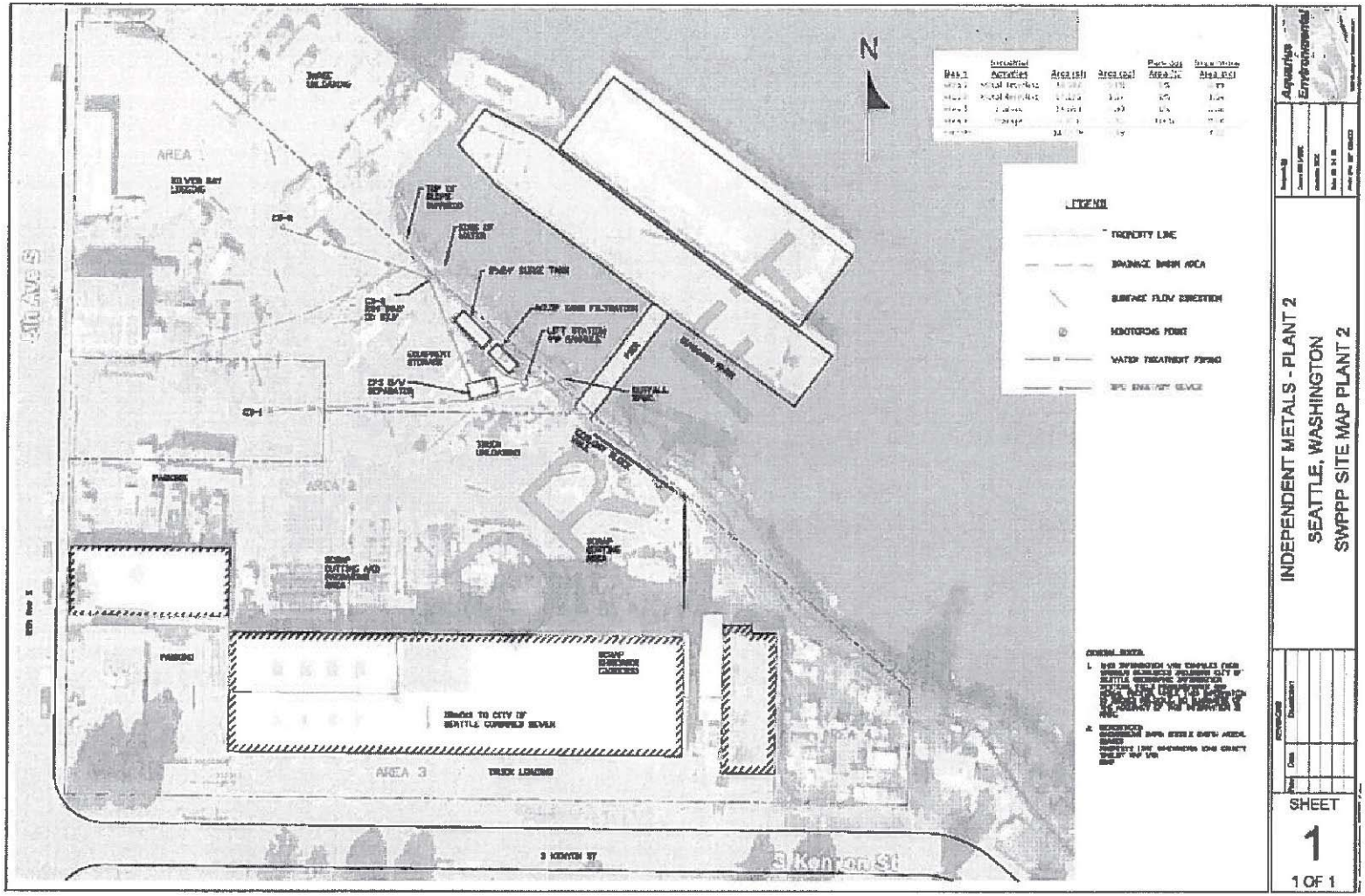
Independent Metals. 2013. Industrial Stormwater General Permit, Annual Report Form, Permit No. WAR-009725, Independent Metals. May 2, 2013.

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.

Nisqually. 2010. Stormwater Pollution Prevention Plan for Independent Metals, 816 S Kenyan St, Seattle, WA. February 2010.

Figures

Appendix B Site Map



Source: Nisqually 2010 [08074]

Figure C–1. Independent Metals Plant 2 Facility SWPPP Map

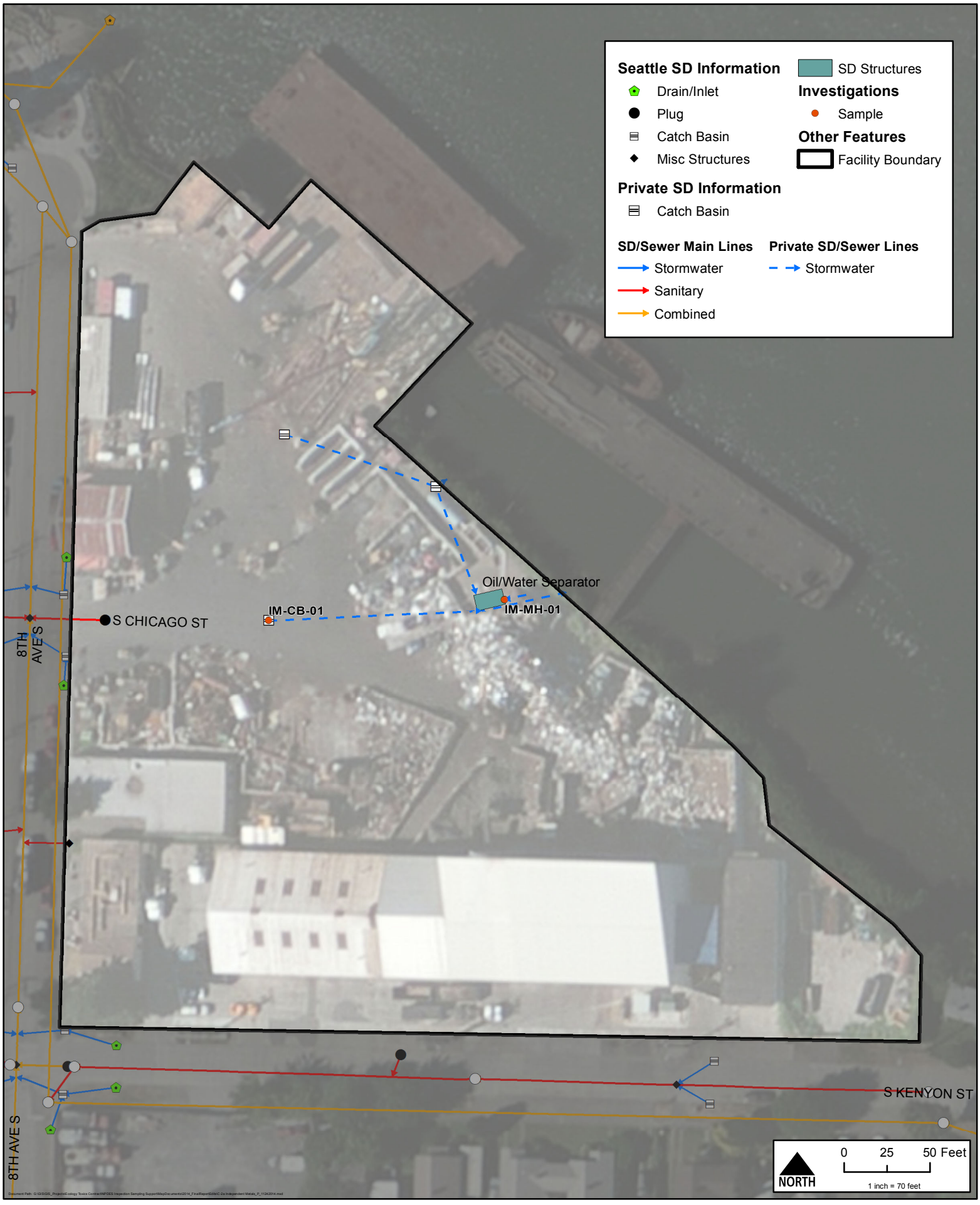


Figure C–2a. Independent Metals Plant 2 Inspection and Sample Locations

leidos

Figure C–2b. Independent Metals 7th Avenue Dirt Storage Lot Inspection and Sample Locations

DEPARTMENT OF ECOLOGY State of Washington

Tables

Table C-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date		IM-MH-01	IM-SW-01
Analyte	**Units**	**4/10/2013**	**4/10/2013**
Metals (Total)			
Antimony	µg/L	E200.8	E200.8
Arsenic	µg/L	E200.8	E200.8
Beryllium	µg/L	E200.8	E200.8
Cadmium	µg/L	E200.8	E200.8
Chromium	µg/L	E200.8	E200.8
Copper	µg/L	E200.8	E200.8
Lead	µg/L	E200.8	E200.8
Mercury	µg/L	SW7470A	SW7470A
Nickel	µg/L	E200.8	E200.8
Selenium	µg/L	E200.8	E200.8
Silver	µg/L	E200.8	E200.8
Thallium	µg/L	E200.8	E200.8
Zinc	µg/L	E200.8	E200.8
Metals (Dissolved)			
Antimony	µg/L	E200.8	E200.8
Arsenic	µg/L	E200.8	E200.8
Beryllium	µg/L	E200.8	E200.8
Cadmium	µg/L	E200.8	E200.8
Chromium	µg/L	E200.8	E200.8
Copper	µg/L	E200.8	E200.8
Lead	µg/L	E200.8	E200.8
Mercury	µg/L	SW7470A	SW7470A
Nickel	µg/L	E200.8	E200.8
Selenium	µg/L	E200.8	E200.8
Silver	µg/L	E200.8	E200.8
Thallium	µg/L	E200.8	E200.8
Zinc	µg/L	E200.8	E200.8
PAHs			
1-Methylnaphthalene	µg/L	SW8270DSIM	SW8270DSIM
2-Chloronaphthalene	µg/L	SW8270D	SW8270D
2-Methylnaphthalene	µg/L	SW8270DSIM	SW8270DSIM
Acenaphthene	µg/L	SW8270DSIM	SW8270DSIM
Acenaphthylene	µg/L	SW8270DSIM	SW8270DSIM
Anthracene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(a)anthracene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(a)pyrene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(b)fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(g,h,i)perylene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(k)fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Chrysene	µg/L	SW8270DSIM	SW8270DSIM
Dibenz(a,h)anthracene	µg/L	SW8270DSIM	SW8270DSIM
Dibenzofuran	µg/L	SW8270DSIM	SW8270DSIM
Fluoranthene	µg/L	SW8270DSIM	SW8270DSIM

Table C-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date		IM-MH-01	IM-SW-01
Analyte	**Units**	**4/10/2013**	**4/10/2013**
Fluorene	µg/L	SW8270DSIM	SW8270DSIM
Indeno(1,2,3-cd)pyrene	µg/L	SW8270DSIM	SW8270DSIM
Naphthalene	µg/L	SW8270DSIM	SW8270DSIM
Phenanthrene	µg/L	SW8270DSIM	SW8270DSIM
Pyrene	µg/L	SW8270DSIM	SW8270DSIM
Total Benzofluoranthenes	µg/L	SW8270DSIM	SW8270DSIM
Total HPAHs	µg/L	SW8270DSIM	SW8270DSIM
Total LPAHs	µg/L	SW8270DSIM	SW8270DSIM
Total PAHs	µg/L	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*0	µg/L	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*0.5	µg/L	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*1	µg/L	SW8270DSIM	SW8270DSIM
Phthalates			
bis(2-Ethylhexyl)phthalate	µg/L	SW8270D	SW8270D
Butylbenzylphthalate	µg/L	SW8270D	SW8270D
Di-n-Butylphthalate	µg/L	SW8270D	SW8270D
Diethylphthalate	µg/L	SW8270D	SW8270D
Dimethylphthalate	µg/L	SW8270D	SW8270D
Di-n-Octyl phthalate	µg/L	SW8270D	SW8270D
Phenols			
2,3,4,6-Tetrachlorophenol	µg/L	SW8270D	SW8270D
2,4,5-Trichlorophenol	µg/L	SW8270D	SW8270D
2,4,6-Trichlorophenol	µg/L	SW8270D	SW8270D
2,4-Dichlorophenol	µg/L	SW8270D	SW8270D
2,4-Dimethylphenol	µg/L	SW8270D	SW8270D
2,4-Dinitrophenol	µg/L	SW8270D	SW8270D
2-Chlorophenol	µg/L	SW8270D	SW8270D
2-Methylphenol	µg/L	SW8270D	SW8270D
2-Nitrophenol	µg/L	SW8270D	SW8270D
4,6-Dinitro-2-Methylphenol	µg/L	SW8270D	SW8270D
4-Chloro-3-methylphenol	µg/L	SW8270D	SW8270D
4-Methylphenol	µg/L	SW8270D	SW8270D
4-Nitrophenol	µg/L	SW8270D	SW8270D
Pentachlorophenol	µg/L	SW8270D	SW8270D
Phenol	µg/L	SW8270D	SW8270D
Other SVOCs			
1,2,4-Trichlorobenzene	µg/L	SW8270D	SW8270D
1,2-Dichlorobenzene	µg/L	SW8270D	SW8270D
1,2-Diphenylhydrazine	µg/L	SW8270D	SW8270D
1,3-Dichlorobenzene	µg/L	SW8270D	SW8270D
1,4-Dichlorobenzene	µg/L	SW8270D	SW8270D
2,4-Dinitrotoluene	µg/L	SW8270D	SW8270D
2,6-Dinitrotoluene	µg/L	SW8270D	SW8270D
2-Nitroaniline	µg/L	SW8270D	SW8270D

Table C-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date		IM-MH-01	IM-SW-01
Analyte	**Units**	**4/10/2013**	**4/10/2013**
3,3'-Dichlorobenzidine	µg/L	SW8270D	SW8270D
3-Nitroaniline	µg/L	SW8270D	SW8270D
4-Bromophenyl-phenylether	µg/L	SW8270D	SW8270D
4-Chloroaniline	µg/L	SW8270D	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D	SW8270D
4-Nitroaniline	µg/L	SW8270D	SW8270D
Aniline	µg/L	SW8270D	SW8270D
Azobenzene	µg/L	SW8270D	SW8270D
Benzoic Acid	µg/L	SW8270D	SW8270D
Benzyl Alcohol	µg/L	SW8270D	SW8270D
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	µg/L	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D	SW8270D
Carbazole	µg/L	SW8270D	SW8270D
Hexachlorobenzene	µg/L	SW8081B	SW8081B
Hexachlorobutadiene	µg/L	SW8081B	SW8081B
Hexachlorocyclopentadiene	µg/L	SW8270D	SW8270D
Hexachloroethane	µg/L	SW8270D	SW8270D
Isophorone	µg/L	SW8270D	SW8270D
Nitrobenzene	µg/L	SW8270D	SW8270D
N-Nitrosodimethylamine	µg/L	SW8270D	SW8270D
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D	SW8270D
N-Nitrosodiphenylamine	µg/L	SW8270D	SW8270D
N-Nitrosomethylethylamine	µg/L	na	na
PCB Aroclors			
PCB Aroclors	µg/L	SW8082A	SW8082A
PCB Congeners			
PCB Congeners	pg/L	1668C	1668C
Pesticides			
Pesticides	µg/L	SW8081B	SW8081B
Conventionals			
Alkalinity	mg/L CaCO3	SM2320	SM2320
Bicarbonate	mg/L CaCO3	SM2320	SM2320
Carbonate	mg/L CaCO3	SM2320	SM2320
Chloride	mg/L	EPA300.0	EPA300.0
Conductivity	µmhos/cm	EPA120.1	EPA120.1
Dissolved Organic Carbon	mg/L	SM5310B	SM5310B
Hydroxide	mg/L CaCO3	SM2320	SM2320
Nitrate + Nitrite	mg-N/L	na	na
N-Nitrate	mg-N/L	EPA300.0	EPA300.0
N-Nitrite	mg-N/L	EPA300.0	EPA300.0
pH	std units	SM4500H	SM4500H
Sulfate	mg/L	EPA300.0	EPA300.0

Table C-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date		IM-MH-01	IM-SW-01
Analyte	**Units**	**4/10/2013**	**4/10/2013**
Total Organic Carbon	mg/L	SM5310B	SM5310B
Total Suspended Solids	mg/L	SM2540D	SM2540D

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

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

Table C-2. Water Quality Data
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-MH-01	IM-SW-01
Collection Date			4/10/2013	4/10/2013
Analyte	**WA NPDES ISGP**	**Unit**	**Result**	**Result**
Field Parameters				
Flow	--	Yes/No	Yes	No
pH	5.0 to 9.0	std units	6.93	**9.21**
Conductivity	--	mS/cm	1,020	209
Temperature	--	degrees C	11.0	20.8
Total Dissolved Solids	--	g/L	0.6	0.14
Turbidity	25	NTU	**113**	> **999**
Oil & Grease	No visible sheen	Yes/No	No	No
Dissolved Oxygen	--	mg/L	na	na

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

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

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

Table C-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Independent Metals

Location ID						IM-MH-01					IM-SW-01				
Collection Date						4/10/2013					4/10/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Metals (µg/L)															
Antimony	--	--	--	--	--	4.5					3.7 J				
Arsenic	150	36	69	--	--	1.0					***99***	2.8	1.4		
Beryllium	--	--	--	--	--	< 0.5 U					1.9				
Cadmium	2.1	9.4	42	--	--	0.5					5.2				
Chromium	--	--	--	--	--	0.9					177				
Copper	14	3.7	5.8	--	--	***17***	4.6	2.9			***820***	220	140		
Lead	81.6	8.5	221	--	--	**16.7**	2				***725***	85	3.3		
Mercury	1.4	0.025	2.1	--	--	**0.0605 J**	2.4				**0.91 J**	36			
Nickel	--	8.3	75	--	--	**28.2**	3.4				***268***	32	3.6		
Selenium	5	71	291	--	--	< 2.0 U					< 2.0 U				
Silver	3.8	--	2.2	--	--	< 0.2 U					1.0				
Thallium	--	--	--	--	--	< 0.2 U					0.3				
Zinc	117	86	95	--	--	***280 J***	3.3	2.9			***2,340 J***	27	25		
Dissolved Metals (µg/L)															
Antimony		--	--	4,300	640	4.2					20.3 J				
Arsenic		36	69	--	--	1.1					10.4				
Beryllium		--	--	--	--	< 0.5 U					< 0.2 U				
Cadmium		9.3	42	--	--	0.1					< 0.1 U				
Chromium		--	--	--	--	0.5					19.8				
Copper		3.1	4.8	--	--	1.4					***7.2***	2.3	1.5		
Lead		8.1	210	--	--	4.4					0.2				
Mercury		0.025	1.8	0.15	--	< 0.02 U					< 0.02 U				
Nickel		8.2	74	4,600	4,600	**27.5**	3.4				1.0				
Selenium		71	290	--	4,200	< 2.0 U					< 0.5 U				
Silver		--	1.9	--	--	< 0.2 U					< 0.2 U				
Thallium		--	--	6.3	0.47	< 0.2 U					< 0.2 U				
Zinc		81	90	--	26,000	71					< 4.0 U				
PAHs (µg/L)															
1-Methylnaphthalene		--	--	--	--	< 0.01 U					< 0.2 U				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U					< 1.0 U				
2-Methylnaphthalene		--	--	--	--	< 0.01 U					< 0.2 U				
Acenaphthene		--	--	--	990	< 0.01 U					< 0.2 U				
Acenaphthylene		--	--	--	--	< 0.01 U					< 0.2 U				
Anthracene		--	--	110,000	40,000	< 0.01 U					0.81				
Benzo(a)anthracene		--	--	0.031	0.018	0.017					**2.2**			71	122

Table C-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Independent Metals

Location ID						IM-MH-01					IM-SW-01				
Collection Date						4/10/2013					4/10/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Benzo(a)pyrene		--	--	0.031	0.018	< 0.01 U					**1.9**			61	106
Benzo(b)fluoranthene		--	--	0.031	0.018	< 0.01 U					**2.5**			81	139
Benzo(g,h,i)perylene		--	--	--	--	< 0.01 U					1.8				
Benzo(k)fluoranthene		--	--	0.031	0.018	< 0.01 U					**1.2**			39	67
Chrysene		--	--	0.031	0.018	< 0.01 U					**4.7**			152	261
Dibenz(a,h)anthracene		--	--	0.031	0.018	< 0.01 U					**0.32**			10	18
Dibenzofuran		--	--	--	--	< 0.01 U					< 0.2 U				
Fluoranthene		--	--	370	140	0.018					7.2				
Fluorene		--	--	14,000	5,300	< 0.01 U					0.23				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	< 0.01 U					**1.2**			39	67
Naphthalene		--	--	--	--	0.036					< 0.2 U				
Phenanthrene		--	--	--	--	< 0.01 U					1.8				
Pyrene		--	--	11,000	4,000	0.023					6.6				
Total Benzofluoranthenes		--	--	--	--	< 0.02 U					4.7				
Total HPAHs		--	--	--	--	0.058					31				
Total LPAHs		--	--	--	--	0.036					2.8				
Total PAHs		--	--	--	--	0.094					33				
cPAHs, nd RL*0		--	--	--	--	0.0017					2.8				
cPAHs, nd RL*0.5		--	--	--	--	0.0088					2.8				
cPAHs, nd RL*1		--	--	--	--	0.016					2.8				
Phthalates (µg/L)															
bis(2-Ethylhexyl)phthalate		--	--	5.9	2.2	< 1.0 U					**7.2**			1.2	3.3
Butylbenzylphthalate		--	--	--	1,900	< 1.0 U					< 1.0 U				
Di-n-Butylphthalate		--	--	12,000	4,500	< 1.0 U					< 1.0 U				
Diethylphthalate		--	--	120,000	44,000	< 1.0 U					< 1.0 U				
Dimethylphthalate		--	--	2,900,000	1,100,000	< 1.0 U					< 1.0 U				
Di-n-Octyl phthalate		--	--	--	--	< 1.0 U					< 1.0 U				
Phenols (µg/L)															
2,3,4,6-Tetrachlorophenol		--	--	--	--	< 1.0 U					< 1.0 U				
2,4,5-Trichlorophenol		--	--	--	3,600	< 5.0 U					< 5.0 U				
2,4,6-Trichlorophenol		--	--	6.5	2.4	< 3.0 U					< 3.0 U				
2,4-Dichlorophenol		--	--	790	290	< 3.0 U					< 3.0 U				
2,4-Dimethylphenol		--	--	--	850	< 3.0 U					< 3.0 U				
2,4-Dinitrophenol		--	--	14,000	5,300	< 20 U					< 20 U				
2-Chlorophenol		--	--	--	150	< 1.0 U					< 1.0 U				
2-Methylphenol		--	--	--	--	< 1.0 U					< 1.0 U				

Table C-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Independent Metals

Location ID						IM-MH-01					IM-SW-01				
Collection Date						4/10/2013					4/10/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
2-Nitrophenol		--	--	--	--	< 3.0 U					< 3.0 U				
4,6-Dinitro-2-Methylphenol		--	--	765	280	< 10 U					< 10 U				
4-Chloro-3-methylphenol		--	--	--	--	< 3.0 U					< 3.0 U				
4-Methylphenol		--	--	--	--	1.2 J					< 2.0 U				
4-Nitrophenol		--	--	--	--	< 10 U					< 10 U				
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**					**< 10 U**				
Phenol		--	--	4,600,000	860,000	< 1.0 U					< 1.0 U				
Other SVOCs (µg/L)															
1,2,4-Trichlorobenzene		--	--	--	70	< 1.0 U					< 1.0 U				
1,2-Dichlorobenzene		--	--	17,000	1,300	< 1.0 U					< 1.0 U				
1,2-Diphenylhydrazine		--	--	0.54	0.2	**< 1.0 U**					**< 1.0 U**				
1,3-Dichlorobenzene		--	--	2,600	960	< 1.0 U					< 1.0 U				
1,4-Dichlorobenzene		--	--	2,600	190	< 1.0 U					< 1.0 U				
2,4-Dinitrotoluene		--	--	9.1	3.4	< 3.0 U					< 3.0 U				
2,6-Dinitrotoluene		--	--	--	--	< 3.0 U					< 3.0 U				
2-Nitroaniline		--	--	--	--	< 3.0 U					< 3.0 U				
3,3'-Dichlorobenzidine		--	--	0.077	0.028	**< 5.0 U**					**< 5.0 U**				
3-Nitroaniline		--	--	--	--	< 3.0 U					< 3.0 U				
4-Bromophenyl-phenylether		--	--	--	--	< 1.0 U					< 1.0 U				
4-Chloroaniline		--	--	--	--	< 5.0 U					< 5.0 U				
4-Chlorophenyl-phenylether		--	--	--	--	< 1.0 U					< 1.0 U				
4-Nitroaniline		--	--	--	--	< 3.0 U					< 3.0 U				
Aniline		--	--	--	--	< 1.0 U					< 1.0 U				
Azobenzene		--	--	--	--	< 1.0 U					< 1.0 U				
Benzoic Acid		--	--	--	--	9.9 J					< 20 U				
Benzyl Alcohol		--	--	--	--	< 2.0 U					< 2.0 U				
2,2'-Oxybis(1-Chloropropane)		--	--	170,000	65,000	< 1.0 U					< 1.0 U				
bis(2-Chloroethoxy) Methane		--	--	--	--	< 1.0 U					< 1.0 U				
Bis-(2-Chloroethyl) Ether		--	--	1.4	0.53	< 1.0 U					< 1.0 U				
Carbazole		--	--	--	--	< 1.0 U					< 1.0 U				
Hexachlorobenzene		--	--	0.00077	0.00029	**< 0.05 U**					**< 0.05 U**				
Hexachlorobutadiene		--	--	50	18	< 0.05 U					< 0.05 U				
Hexachlorocyclopentadiene		--	--	17,000	1,100	< 5.0 U					< 5.0 U				
Hexachloroethane		--	--	8.9	3.3	< 2.0 U					< 2.0 U				
Isophorone		--	--	600	960	< 1.0 U					< 1.0 U				
Nitrobenzene		--	--	1,900	690	< 1.0 U					< 1.0 U				

Table C-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Independent Metals

Location ID						IM-MH-01						IM-SW-01					
Collection Date						4/10/2013						4/10/2013					
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO		Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	
N-Nitrosodimethylamine		--	--	8.1	3	< 3.0 U						< 3.0 U					
N-Nitroso-Di-N-Propylamine		--	--	--	0.51	< 1.0 U						< 1.0 U					
N-Nitrosodiphenylamine		--	--	16	6	< 1.0 U						< 1.0 U					
PCB Aroclors (µg/L)																	
Aroclor 1016		--	--	--	--	< 0.01 U						< 0.2 U					
Aroclor 1221		--	--	--	--	< 0.01 U						< 0.2 U					
Aroclor 1232		--	--	--	--	< 0.01 U						< 0.2 U					
Aroclor 1242		--	--	--	--	< 0.01 U						< 0.2 U					
Aroclor 1248		--	--	--	--	0.024 JN						0.8					
Aroclor 1254		--	--	--	--	0.01						0.54					
Aroclor 1260		--	--	--	--	0.007 J						0.6					
Aroclor 1262		--	--	--	--	< 0.01 U						< 0.2 U					
Aroclor 1268		--	--	--	--	< 0.01 U						< 0.2 U					
Total PCB Aroclors		0.03	10	0.00017	0.000064	**0.041 JN**	1.4		241	641		**1.9**	63		11,177	29,688	
Pesticides (µg/L)																	
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**						**< 0.1 U**					
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**						**< 0.1 U**					
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**						**< 0.1 U**					
Total DDTs		0.001	0.13	--	--	**< 0.1 U**						**< 0.1 U**					
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**						**< 0.05 U**					
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**						**< 0.05 U**					
beta-BHC		--	--	0.046	0.017	**< 0.05 U**						**< 0.05 U**					
cis-Chlordane		--	--	--	--	< 0.05 U						< 0.05 U					
delta-BHC		--	--	--	--	< 0.05 U						< 0.05 U					
Dieldrin		--	--	0.00014	0.000054	**< 0.1 U**						**< 0.1 U**					
Endosulfan I		0.0087	0.034	2.0	89	***< 0.05 U***						***< 0.05 U***					
Endosulfan II		0.0087	0.034	2.0	89	***< 0.1 U***						***< 0.1 U***					
Endosulfan Sulfate		0.0087	0.034	2.0	89	***< 0.1 U***						***< 0.1 U***					
Endrin		0.0023	0.037	0.81	0.06	***< 0.1 U***						***< 0.1 U***					
Endrin Aldehyde		--	--	0.81	0.3	< 0.1 U						< 0.1 U					
Endrin Ketone		--	--	--	--	< 0.1 U						< 0.1 U					
Heptachlor		0.0036	0.053	0.00021	0.000079	**< 0.05 U**						**< 0.05 U**					
Heptachlor Epoxide		--	--	0.00011	0.000039	**< 0.05 U**						**< 0.05 U**					
gamma-BHC (Lindane)		--	0.16	0.063	1.8	< 0.05 U						< 0.05 U					
Methoxychlor		--	--	--	--	< 0.5 U						< 0.5 U					
Toxaphene		0.0002	0.21	0.00075	0.00028	***< 5.0 U***						***< 5.0 U***					

Table C-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Independent Metals

Location ID						IM-MH-01					IM-SW-01				
Collection Date						4/10/2013					4/10/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
trans-Chlordane		--	--	--	--	< 0.05 U					< 0.05 U				
Total aldrin/dieldrin		0.0019	0.71	--	--	**< 0.1 U**					**< 0.1 U**				
Total Chlordane		0.004	0.09	0.00059	0.00081	**< 0.05 U**					**< 0.05 U**				

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

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

< - not detected
µg/L - micrograms per liter
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EF - exceedance factor (sample result/criteria value)
HHO - Human Health - Consumption of Organisms Only
HPAHs - high molecular weight polycyclic aromatic 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 C-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Independent Metals

Location ID					IM-MH-01						IM-SW-01				
Collection Date					4/10/2013						4/10/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total PCB Congeners (µg/L)[a]	0.03	10	0.00017	0.000064	0.00983 CJ			58	154	**0.302** J	10.1		1776	4719
Total PCB Congeners (pg/L)[a]					9,830 CJ					302,000 J				
(pg/L)[b]					9,890 CJ					302,000 J				
Total Monochlorobiphenyl (pg/L)[a]					53.8					201				
Estimated Total Monochlorobiphenyl (pg/L)[b]					53.8					201				
PCB-1					44.5					122				
PCB-2					1.96 J					13.9				
PCB-3					7.35 J					65.2				
Total Dichlorobiphenyl (pg/L)[a]					960					12,300				
Estimated Total Dichlorobiphenyl (pg/L)[b]					973					12,300				
PCB-4					429					1,770				
PCB-5					6.63 J					98.1				
PCB-6					44.1					1,020				
PCB-7					11.6					169				
PCB-8					310					5,020				
PCB-9					18.2					322				
PCB-10					38.2					87.8				
PCB-11					< 12.0 U					709				
PCB-12/13					6.28 CJ					352 C				
PCB-14					< 1.59 U					< 2.16 U				
PCB-15					96.4					2,720				
Total Trichlorobiphenyl (pg/L)[a]					3,740					64,000				
Estimated Total Trichlorobiphenyl (pg/L)[b]					3,740					64,000				
PCB-16					438					4,660				
PCB-17					404					3,840				
PCB-18/30					803 C					8,380 C				
PCB-19					159					831				
PCB-20/28					514 C					12,300 C				
PCB-21/33					184 C					7,960 C				
PCB-22					157					5,160				
PCB-23					< 2.34 U					11.3				
PCB-24					12.3					152				
PCB-25					32.4					961				
PCB-26/29					56.4 C					2,080 C				
PCB-27					69.0					648				
PCB-31					486					10,700				
PCB-32					378					2,730				
PCB-34					< 2.41 U					31.9				
PCB-35					< 2.47 U					206				
PCB-36					< 2.30 U					< 5.47 U				
PCB-37					47.9					3,400				
PCB-38					< 2.41 U					< 5.73 U				
PCB-39					< 2.18 U					39.5				

Table C-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Independent Metals

Location ID					IM-MH-01						IM-SW-01				
Collection Date					4/10/2013						4/10/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO		Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Tetrachlorobiphenyl (pg/L)[a]					2,380						68,600				
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					2,400						68,600				
PCB-40/71					216 C						5,180 C				
PCB-41					54.4						1,460				
PCB-42					125						2,940				
PCB-43					20.5						444				
PCB-44/47/65					363 C						10,300 C				
PCB-45					82.2						1,920				
PCB-46					37.0						792				
PCB-48					107						2,570				
PCB-49/69					234 C						5,410 C				
PCB-50/53					61.2 C						1,470 C				
PCB-51					< 25.2 U						446				
PCB-52					365						11,100				
PCB-54					0.977 J						22.2				
PCB-55					2.50 J						106				
PCB-56					60.0						2,260				
PCB-57					1.31 J						38.6				
PCB-58					< 0.962 U						12.8				
PCB-59/62/75					34.1 C						989 C				
PCB-60					31.3						1,210				
PCB-61/70/74/76					263 C						9,770 C				
PCB-63					7.16 J						224				
PCB-64					171						4,270				
PCB-66					125						4,720				
PCB-67					6.24 J						269				
PCB-68					< 0.895 U						< 17.3 U				
PCB-72					1.19 J						38.2				
PCB-73					1.79 J						36.9				
PCB-77					5.83 J						467				
PCB-78					< 1.00 U						< 4.99 U				
PCB-79					< 1.17 U						49.0				
PCB-80					< 0.858 U						< 4.26 U				
PCB-81					< 0.964 U						22.8				
Total Pentachlorobiphenyl (pg/L)[a]					1,200						55,600				
Estimated Total Pentachlorobiphenyl (pg/L)[b]					1,200						55,600				
PCB-82					28.7						1,200				
PCB-83					10.9						440				
PCB-84					47.7						2,470				
PCB-85/116					28.1 C						1,150 C				
PCB-86/87/97/109/119/125					140 C						5,900 C				
PCB-88					< 1.12 U						< 5.86 U				
PCB-89					< 3.10 U						111				
PCB-90/101/113					182 C						7,810 C				
PCB-91					27.8						1,030				

Table C-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Independent Metals

Location ID					IM-MH-01						IM-SW-01					
Collection Date					4/10/2013						4/10/2013					
Analyte	WA WQC Marine		NTR WQC Human Health	NR WQC Human Health	Result	EF					Result	EF				
	Chronic	Acute	Organism	Organism		WA MC	WA MA	NTR HHO	NR HHO			WA MC	WA MA	NTR HHO	NR HHO	
PCB-92					33.2						1,410					
PCB-93/100					2.19 CJ						84.9 C					
PCB-94					< 1.04 U						47.1					
PCB-95					127						7,180					
PCB-96					2.71 J						98.7					
PCB-98					< 1.18 U						< 6.17 U					
PCB-99					80.2						3,120					
PCB-102					7.52 J						257					
PCB-103					1.24 J						40.5					
PCB-104					< 0.457 U						< 0.618 U					
PCB-105					60.6						3,270					
PCB-106					< 0.770 U						< 4.03 U					
PCB-107					11.5						499					
PCB-108/124					7.52 CJ						329 C					
PCB-110					230						11,500					
PCB-111					< 0.715 U						< 3.74 U					
PCB-112					< 0.731 U						< 3.83 U					
PCB-114					4.21 J						157					
PCB-115					4.79 J						182					
PCB-117					6.47 J						235					
PCB-118					147						6,810					
PCB-120					< 0.710 U						< 3.72 U					
PCB-121					< 0.717 U						< 3.75 U					
PCB-122					3.02 J						114					
PCB-123					2.69 J						121					
PCB-126					< 0.741 U						46.2					
PCB-127					< 0.799 U						< 4.11 U					
Total Hexachlorobiphenyl (pg/L)[a]					890						54,300					
Estimated Total Hexachlorobiphenyl (pg/L)[b]					890						54,400					
PCB-128/166					38.5 C						2,210 C					
PCB-129/138/163					227 C						12,600 C					
PCB-130					14.6						801					
PCB-131					3.88 J						170					
PCB-132					67.4						4,260					
PCB-133					2.18 J						158					
PCB-134					12.3						675					
PCB-135/151					52.3 C						3,990 C					
PCB-136					16.9						1,470					
PCB-137					13.6						575					
PCB-139/140					3.59 CJ						202 C					
PCB-141					36.3						2,270					
PCB-142					< 0.650 U						< 0.818 U					
PCB-143					1.16 J						54.9					
PCB-144					7.61 J						578					
PCB-145					< 0.497 U						5.41 J					

Table C-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Independent Metals

Location ID					IM-MH-01						IM-SW-01					
Collection Date					4/10/2013						4/10/2013					
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO		Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	
PCB-146					24.1						1,600					
PCB-147/149					143 C						9,880 C					
PCB-148					< 0.611 U						6.96 J					
PCB-150					< 0.470 U						12.1					
PCB-152					< 0.476 U						8.47					
PCB-153/168					153 C						8,800 C					
PCB-154					1.31 J						88.3					
PCB-155					< 0.450 U						< 0.505 U					
PCB-156/157					27.3 C						1,310 C					
PCB-158					22.1						1,180					
PCB-159					< 0.659 U						132					
PCB-160					< 0.485 U						< 0.610 U					
PCB-161					< 0.470 U						2.24 J					
PCB-162					< 0.623 U						41.8					
PCB-164					13.1						835					
PCB-165					< 0.524 U						< 0.66 U					
PCB-167					8.37						422					
PCB-169					< 0.764 U						< 4.11 U					
Total Heptachlorobiphenyl (pg/L)[a]					377						35,400					
Estimated Total Heptachlorobiphenyl (pg/L)[b]					388 J						35,400					
PCB-170					37.3						3,210					
PCB-171/173					12.6 CJ						1,190 C					
PCB-172					6.33 J						661					
PCB-174					49.6						5,360					
PCB-175					1.82 J						209					
PCB-176					< 5.45 U						478					
PCB-177					24.0						2,620					
PCB-178					9.49						781					
PCB-179					21.7						1,910					
PCB-180/193					105 C						8,190 C					
PCB-181					< 0.927 U						39.8					
PCB-182					< 0.875 U						51.3					
PCB-183					28.5						2,440					
PCB-184					< 0.540 U						5.98 J					
PCB-185					< 5.41 U						669					
PCB-186					< 0.507 U						< 0.774 U					
PCB-187					71.7						6,710					
PCB-188					< 0.483 U						8.97					
PCB-189					1.51 J						106					
PCB-190					7.90 J						641					
PCB-191					< 0.765 U						153					
PCB-192					< 0.802 U						< 5.02 U					

Table C-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Independent Metals

Location ID					IM-MH-01					IM-SW-01				
Collection Date					4/10/2013					4/10/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Octachlorobiphenyl (pg/L)[a]					188					10,200				
Estimated Total Octachlorobiphenyl (pg/L)[b]					196 J					10,200				
PCB-194					37.8					2,410				
PCB-195					13.1					1,040				
PCB-196					21.1					932				
PCB-197					1.74 J					88.7				
PCB-198/199					55.0 C					2,570 C				
PCB-200					7.61 J					402				
PCB-201					< 6.54 U					400				
PCB-202					13.3					778				
PCB-203					38.3					1,450				
PCB-204					< 0.535 U					< 0.961 U				
PCB-205					< 1.61 U					98.9				
Total Nonachlorobiphenyl (pg/L)[a]					43.4					1,600				
Estimated Total Nonachlorobiphenyl (pg/L)[b]					43.4					1,610				
PCB-206					31.4					1,170				
PCB-207					4.26 J					132				
PCB-208					7.70 J					300				
Decachlorobiphenyl (pg/L)					< 4.04 U					146				
PCB-209					< 4.04 U					146				
PCB TEQ, nd SDL*0					0.00813 J					5.04				
PCB TEQ, nd SDL*0.5					0.0568 J					5.10				
PCB TEQ, nd SDL*1					0.105 J					5.16				

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 "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 C-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-MH-01	IM-SW-01
Collection Date			4/10/2013	4/10/2013
Analyte	WA NPDES ISGP	Unit	Result	Result
Conventionals				
Alkalinity	--	mg/L CaCO3	149	767
Bicarbonate	--	mg/L CaCO3	149	724
Carbonate	--	mg/L CaCO3	< 1.0 U	43.4
Chloride	--	mg/L	55	8.4
Conductivity	--	µmhos/cm	929	200
Dissolved Organic Carbon	--	mg/L	73.9 J	9.65
Hydroxide	--	mg/L CaCO3	< 1.0 U	< 1.0 U
N-Nitrate	--	mg-N/L	< 0.1 U	0.1
pH	5-9	std units	6.37	8.99
Sulfate	--	mg/L	234	36.8
Total Organic Carbon	--	mg/L	65.6 J	107
Total Suspended Solids	--	mg/L	9.3	2,120

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 C-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date	IM-CB-01	IM-CB-02
Analyte	**4/10/2013**	**4/10/2013**
Metals (Total) (mg/kg)		
Antimony	EPA200.8	EPA200.8
Arsenic	EPA200.8	EPA200.8
Beryllium	SW6010C	SW6010C
Cadmium	EPA200.8	EPA200.8
Chromium	EPA200.8	EPA200.8
Copper	SW6010C	SW6010C
Lead	EPA200.8	EPA200.8
Mercury	SW7471A	SW7471A
Nickel	EPA200.8	EPA200.8
Selenium	EPA200.8	EPA200.8
Silver	EPA200.8	EPA200.8
Thallium	EPA200.8	EPA200.8
Zinc	SW6010C	SW6010C
PAHs (µg/kg)		
1-Methylnaphthalene	SW8270D	SW8270D
2-Chloronaphthalene	SW8270D	SW8270D
2-Methylnaphthalene	SW8270D	SW8270D
Acenaphthene	SW8270D	SW8270D
Acenaphthylene	SW8270D	SW8270D
Anthracene	SW8270D	SW8270D
Benzo(a)anthracene	SW8270D	SW8270D
Benzo(a)pyrene	SW8270D	SW8270D
Benzo(g,h,i)perylene	SW8270D	SW8270D
Chrysene	SW8270D	SW8270D
Dibenz(a,h)anthracene	SW8270D	SW8270D
Dibenzofuran	SW8270D	SW8270D
Fluoranthene	SW8270D	SW8270D
Fluorene	SW8270D	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D	SW8270D
Naphthalene	SW8270D	SW8270D
Phenanthrene	SW8270D	SW8270D
Pyrene	SW8270D	SW8270D
Total Benzofluoranthenes	SW8270D	SW8270D
Total HPAHs	SW8270D	SW8270D
Total LPAHs	SW8270D	SW8270D
Total PAHs	SW8270D	SW8270D
cPAHs, nd RL*0	SW8270D	SW8270D
cPAHs, nd RL*0.5	SW8270D	SW8270D
cPAHs, nd RL*1	SW8270D	SW8270D
Phthalates (µg/kg)		
bis(2-Ethylhexyl)phthalate	SW8270D	SW8270D
Butylbenzylphthalate	SW8270DSIM	SW8270DSIM
Di-n-Butylphthalate	SW8270D	SW8270D
Diethylphthalate	SW8270DSIM	SW8270DSIM

Table C-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date	IM-CB-01	IM-CB-02
Analyte	**4/10/2013**	**4/10/2013**
Dimethylphthalate	SW8270DSIM	SW8270DSIM
Di-n-Octyl phthalate	SW8270D	SW8270D
Phenols (µg/kg)		
2,4,5-Trichlorophenol	SW8270D	SW8270D
2,4,6-Trichlorophenol	SW8270D	SW8270D
2,4-Dichlorophenol	SW8270D	SW8270D
2,4-Dimethylphenol	SW8270DSIM	SW8270DSIM
2,4-Dinitrophenol	SW8270D	SW8270D
2-Chlorophenol	SW8270D	SW8270D
2-Methylphenol	SW8270DSIM	SW8270DSIM
2-Nitrophenol	SW8270D	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D	SW8270D
4-Chloro-3-methylphenol	SW8270D	SW8270D
4-Methylphenol	SW8270D	SW8270D
4-Nitrophenol	SW8270D	SW8270D
Pentachlorophenol	SW8270DSIM	SW8270DSIM
Phenol	SW8270D	SW8270D
Other SVOCs (µg/kg)		
1,2,4-Trichlorobenzene	SW8270DSIM	SW8270DSIM
1,2-Dichlorobenzene	SW8270DSIM	SW8270DSIM
1,3-Dichlorobenzene	SW8270DSIM	SW8270DSIM
1,4-Dichlorobenzene	SW8270DSIM	SW8270DSIM
2,4-Dinitrotoluene	SW8270D	SW8270D
2,6-Dinitrotoluene	SW8270D	SW8270D
2-Nitroaniline	SW8270D	SW8270D
3,3'-Dichlorobenzidine	SW8270D	R
3-Nitroaniline	SW8270D	SW8270D
4-Bromophenyl-phenylether	SW8270D	SW8270D
4-Chloroaniline	SW8270D	SW8270D
4-Chlorophenyl-phenylether	SW8270D	SW8270D
4-Nitroaniline	SW8270D	SW8270D
Aniline	SW8270D	R
Benzoic Acid	SW8270D	R
Benzyl Alcohol	SW8270D	SW8270D
2,2'-Oxybis(1-Chloropropane)	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D	SW8270D
Carbazole	SW8270D	SW8270D
Hexachlorobenzene	SW8081B	SW8270DSIM
Hexachlorobutadiene	SW8081B	SW8270DSIM
Hexachlorocyclopentadiene	SW8270D	R
Hexachloroethane	SW8270D	SW8270D
Isophorone	SW8270D	SW8270D
Nitrobenzene	SW8270D	SW8270D
N-Nitrosodimethylamine	SW8270DSIM	SW8270DSIM

Table C-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Independent Metals

Location ID / Collection Date	IM-CB-01	IM-CB-02
Analyte	**4/10/2013**	**4/10/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM	SW8270DSIM
N-Nitrosodiphenylamine	SW8270DSIM	SW8270DSIM
PCB Aroclors (µg/kg)		
PCB Aroclors	SW8082A	SW8082A
Pesticides (µg/kg)		
Pesticides	SW8081B	SW8081B
VOCs (µg/kg)		
VOCs	na	na
TPHs (mg/kg)		
Gasoline-Range Hydrocarbons	NWTPHG	na
Diesel-Range Hydrocarbons	NWTPHD	na
Motor Oil-Range Hydrocarbons	NWTPHD	na
Dioxins and Furans (ng/kg)		
Dioxins and Furans	EPA 1613B	na
Grain size (%)		
Grain size	PSEP-PS	PSEP-PS
Conventionals (%)		
Total Organic Carbon	PLUMB81TC	PLUMB81TC
Total Solids	SM2540B	SM2540B

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

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

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)								
Antimony	--	--	3.1 J			< 0.2 UJ		
Arsenic	57	93	18.5			3.9		
Beryllium	--	--	< 0.9 U			0.1		
Cadmium	5.1	6.7	**19.6**	3.8	2.9	0.3		
Chromium	260	270	163			20.8		
Copper	390	390	**833**	2.1	2.1	48.3		
Lead	450	530	**2,000**	4.4	3.8	20.9		
Mercury	0.41	0.59	**2.62**	6.4	4.4	< 0.02 U		
Nickel	--	--	178			31		
Selenium	--	--	< 0.9 U			< 0.6 U		
Silver	6.1	6.1	3.0			< 0.2 U		
Thallium	--	--	< 0.3 U			< 0.2 U		
Zinc	410	960	**7,340**	18	7.6	251		
PAHs (µg/kg)								
1-Methylnaphthalene	--	--	7,600			< 19 U		
2-Chloronaphthalene	--	--	< 530 U			< 19 U		
2-Methylnaphthalene	670	1,400	**12,000**	18	8.6	< 19 U		
Acenaphthene	500	730	**740**	1.5	1.0	< 19 U		
Acenaphthylene	1,300	1,300	< 530 U			< 19 U		
Anthracene	960	4,400	850			18 J		
Benzo(a)anthracene	1,300	1,600	**2,500**	1.9	1.6	47		
Benzo(a)pyrene	1,600	3,000	**2,200**	1.4		46		
Benzo(g,h,i)perylene	670	720	**1,500**	2.2	2.1	39		
Chrysene	1,400	2,800	**3,600**	2.6	1.3	83		
Dibenz(a,h)anthracene	230	540	**660**	2.9	1.2	16 J		
Dibenzofuran	540	700	**1,500**	2.8	2.1	< 19 U		
Fluoranthene	1,700	2,500	**8,700**	5.1	3.5	130		
Fluorene	540	1,000	**3,300**	6.1	3.3	< 19 U		
Indeno(1,2,3-cd)pyrene	600	690	**1,200**	2.0	1.7	24		
Naphthalene	2,100	2,400	**6,000**	2.9	2.5	16 J		
Phenanthrene	1,500	5,400	**11,000**	7.3	2.0	95		
Pyrene	2,600	3,300	**7,900**	3.0	2.4	130		
Total Benzofluoranthenes	3,200	3,600	**4,300**	1.3	1.2	95		
Total HPAHs	12,000	17,000	**33,000**	2.8	1.9	610 J		
Total LPAHs	5,200	13,000	**22,000**	4.2	1.7	130 J		
Total PAHs	--	--	54,000			740 J		
cPAHs, nd RL*0	1,000	--	**3,100**	3.1		65 J		
cPAHs, nd RL*0.5	1,000	--	**3,100**	3.1		65 J		
cPAHs, nd RL*1	1,000	--	**3,100**	3.1		65 J		
Phthalates (µg/kg)								
bis(2-Ethylhexyl)phthalate	1,300	1,900	**45,000**	35	24	340		
Butylbenzylphthalate	63	900	**7,200 J**	110	8.0	**75 J**	1.2	

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Di-n-Butylphthalate	1,400	5,100	**3,100**	2.2		17 J		
Diethylphthalate	200	1,200	120 J			< 4.7 U		
Dimethylphthalate	71	160	**290**	4.1	1.8	5.4		
Di-n-Octyl phthalate	6,200	--	2,300			< 19 U		
Phenols (µg/kg)								
2,4,5-Trichlorophenol	--	--	< 2,600 U			< 94 U		
2,4,6-Trichlorophenol	--	--	< 2,600 U			< 94 U		
2,4-Dichlorophenol	--	--	< 5,300 U			< 190 U		
2,4-Dimethylphenol	29	29	**< 530 U**			< 19 U		
2,4-Dinitrophenol	--	--	< 23,000 U			< 800 U		
2-Chlorophenol	--	--	< 530 U			< 19 U		
2-Methylphenol	63	63	**88 J**	1.4	1.4	< 4.7 U		
2-Nitrophenol	--	--	< 2,600 U			< 94 U		
4,6-Dinitro-2-Methylphenol	--	--	< 5,300 U			< 190 U		
4-Chloro-3-methylphenol	--	--	< 2,600 U			< 94 U		
4-Methylphenol	670	670	**1,500**	2.2	2.2	< 19 U		
4-Nitrophenol	--	--	< 2,600 U			< 94 U		
Pentachlorophenol	360	690	**< 1,300 UJ**			< 47 UJ		
Phenol	420	1,200	**3,000**	7.1	2.5	17 J		
Other SVOCs (µg/kg)								
1,2,4-Trichlorobenzene	31	51	**< 130 U**			< 4.7 U		
1,2-Dichlorobenzene	35	50	**< 130 U**			< 4.7 U		
1,3-Dichlorobenzene	--	--	< 130 U			< 4.7 U		
1,4-Dichlorobenzene	110	120	**< 130 U**			< 4.7 U		
2,4-Dinitrotoluene	--	--	< 2,600 U			< 94 U		
2,6-Dinitrotoluene	--	--	< 2,600 U			< 94 U		
2-Nitroaniline	--	--	< 2,600 U			< 94 U		
3,3'-Dichlorobenzidine	--	--	< 4,000 U			R		
3-Nitroaniline	--	--	< 2,600 U			< 94 U		
4-Bromophenyl-phenylether	--	--	< 530 U			< 19 U		
4-Chloroaniline	--	--	< 7,200 U			< 250 U		
4-Chlorophenyl-phenylether	--	--	< 530 U			< 19 U		
4-Nitroaniline	--	--	< 2,600 U			< 94 U		
Aniline	--	--	< 14,000 U			R		
Benzoic Acid	650	650	**< 11,000 U**			R		
Benzyl Alcohol	57	73	**< 530 UJ**			**520 J**	9.1	7.1
2,2'-Oxybis(1-Chloropropane)	--	--	< 530 U			< 19 U		
bis(2-Chloroethoxy) Methane	--	--	< 530 U			< 19 U		
Bis-(2-Chloroethyl) Ether	--	--	< 530 U			< 19 U		
Carbazole	--	--	< 530 U			24		
Hexachlorobenzene	22	70	**< 36 U**			< 4.7 U		
Hexachlorobutadiene	11	120	**< 18 U**			< 4.7 U		
Hexachlorocyclopentadiene	--	--	< 11,000 U			R		

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Hexachloroethane	--	--	< 530 U			< 19 U		
Isophorone	--	--	< 530 U			< 19 U		
Nitrobenzene	--	--	< 530 U			< 19 U		
N-Nitrosodimethylamine	--	--	< 660 U			< 23 U		
N-Nitroso-Di-N-Propylamine	--	--	< 320 U			< 11 U		
N-Nitrosodiphenylamine	28	40	**< 530 U**			5.8 J		
PCB Aroclors (µg/kg)								
Aroclor 1016	--	--	< 140 U			< 3.7 U		
Aroclor 1221	--	--	< 140 U			< 3.7 U		
Aroclor 1232	--	--	< 140 U			< 3.7 U		
Aroclor 1242	--	--	4,300			< 3.7 U		
Aroclor 1248	--	--	< 140 U			24		
Aroclor 1254	--	--	2,100			15		
Aroclor 1260	--	--	< 140 U			15		
Aroclor 1262	--	--	2,100			< 3.7 U		
Aroclor 1268	--	--	< 140 U			< 3.7 U		
Total PCB Aroclors	130	1,000	**8,500**	65	8.5	54		
Pesticides (µg/kg)								
4,4'-DDD	--	--	< 240 U			< 9.2 U		
4,4'-DDE	--	--	< 90 U			< 9.2 U		
4,4'-DDT	--	--	< 250 UJ			< 9.2 UJ		
Total DDTs	--	--	< 250 U			< 9.2 U		
Aldrin	--	--	< 56 U			< 4.6 U		
alpha-BHC	--	--	< 9.0 U			< 4.6 U		
beta-BHC	--	--	< 9.0 U			< 4.6 U		
cis-Chlordane	--	--	< 33 U			< 4.6 U		
delta-BHC	--	--	< 56 U			< 4.6 U		
Dieldrin	--	--	< 37 U			< 9.2 UJ		
Endosulfan I	--	--	< 9.0 U			< 4.6 U		
Endosulfan II	--	--	< 18 U			< 9.2 U		
Endosulfan Sulfate	--	--	< 210 U			< 9.2 U		
Endrin	--	--	< 18 U			< 9.2 U		
Endrin Aldehyde	--	--	< 88 U			< 9.2 U		
Endrin Ketone	--	--	< 180 UJ			< 9.2 UJ		
Heptachlor	--	--	< 54 UJ			< 4.6 UJ		
Heptachlor Epoxide	--	--	< 18 U			< 9.2 U		
gamma-BHC (Lindane)	--	--	< 50 U			< 4.6 U		
Methoxychlor	--	--	< 320 UJ			< 46 UJ		
Toxaphene	--	--	< 1,800 UJ			< 920 UJ		
trans-Chlordane	--	--	< 63 U			< 4.6 U		
Total aldrin/dieldrin	--	--	< 56 U			< 9.2 U		
Total Chlordane	--	--	< 63 U			< 4.6 U		

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
VOCs (µg/kg)								
1,1,1,2-Tetrachloroethane	--	--	na			na		
1,1,1-Trichloroethane	--	--	na			na		
1,1,2,2-Tetrachloroethane	--	--	na			na		
1,1,2-Trichloro-1,2,2-trifluoroethar	--	--	na			na		
1,1,2-Trichloroethane	--	--	na			na		
1,1-Dichloroethane	--	--	na			na		
1,1-Dichloroethene	--	--	na			na		
1,1-Dichloropropene	--	--	na			na		
1,2,3-Trichlorobenzene	--	--	na			na		
1,2,3-Trichloropropane	--	--	na			na		
1,2,4-Trimethylbenzene	--	--	na			na		
1,2-Dibromo-3-chloropropane	--	--	na			na		
1,2-Dibromoethane	--	--	na			na		
1,2-Dichloroethane	--	--	na			na		
1,2-Dichloropropane	--	--	na			na		
1,3,5-Trimethylbenzene	--	--	na			na		
1,3-Dichloropropane	--	--	na			na		
2,2-Dichloropropane	--	--	na			na		
2-Chloroethylvinylether	--	--	na			na		
2-Chlorotoluene	--	--	na			na		
2-Hexanone	--	--	na			na		
4-Chlorotoluene	--	--	na			na		
Acetone	--	--	na			na		
Acrolein	--	--	na			na		
Acrylonitrile	--	--	na			na		
Benzene	--	--	na			na		
Bromobenzene	--	--	na			na		
Bromochloromethane	--	--	na			na		
Bromoethane	--	--	na			na		
Bromoform	--	--	na			na		
Bromomethane	--	--	na			na		
Carbon Disulfide	--	--	na			na		
Carbon Tetrachloride	--	--	na			na		
Chlorobenzene	--	--	na			na		
Dibromochloromethane	--	--	na			na		
Chloroethane	--	--	na			na		
Chloroform	--	--	na			na		
Chloromethane	--	--	na			na		
cis-1,2-Dichloroethene	--	--	na			na		
cis-1,3-Dichloropropene	--	--	na			na		
Dibromomethane	--	--	na			na		
Bromodichloromethane	--	--	na			na		

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Dichlorodifluoromethane	--	--	na			na		
Ethylbenzene	--	--	na			na		
Isopropylbenzene	--	--	na			na		
m,p-Xylene	--	--	na			na		
2-Butanone	--	--	na			na		
Iodomethane	--	--	na			na		
4-Methyl-2-Pentanone (MIBK)	--	--	na			na		
Methyl tert-Butyl Ether	--	--	na			na		
Methylene Chloride	--	--	na			na		
n-Butylbenzene	--	--	na			na		
n-Propylbenzene	--	--	na			na		
o-Xylene	--	--	na			na		
4-Isopropyltoluene	--	--	na			na		
sec-Butylbenzene	--	--	na			na		
Styrene	--	--	na			na		
tert-Butylbenzene	--	--	na			na		
Tetrachloroethene	--	--	na			na		
Toluene	--	--	na			na		
Total Xylenes	--	--	na			na		
trans-1,2-Dichloroethene	--	--	na			na		
trans-1,3-Dichloropropene	--	--	na			na		
trans-1,4-Dichloro-2-butene	--	--	na			na		
Trichloroethene	--	--	na			na		
Trichlorofluoromethane	--	--	na			na		
Vinyl Acetate	--	--	na			na		
Vinyl Chloride	--	--	na			na		
TPH (mg/kg)								
Gasoline-Range Hydrocarbons	30/100	--	57			na		
Diesel-Range Hydrocarbons	2,000	--	**28,000**	14		na		
Motor Oil-Range Hydrocarbons	2,000	--	**56,000**	28		na		
Dioxins and Furans (ng/kg)								
2,3,7,8-TCDD	--	--	2.45			na		
1,2,3,7,8-PeCDD	--	--	11.9			na		
1,2,3,4,7,8-HxCDD	--	--	11.4			na		
1,2,3,6,7,8-HxCDD	--	--	46.8			na		
1,2,3,7,8,9-HxCDD	--	--	23.9			na		
1,2,3,4,6,7,8-HpCDD	--	--	1,080			na		
OCDD	--	--	10,900 J			na		
2,3,7,8-TCDF	--	--	33.1			na		
1,2,3,7,8-PeCDF	--	--	19.4			na		
2,3,4,7,8-PeCDF	--	--	41.3			na		
1,2,3,4,7,8-HxCDF	--	--	46.7			na		
1,2,3,6,7,8-HxCDF	--	--	29.6			na		

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,2,3,7,8,9-HxCDF	--	--	11.8			na		
2,3,4,6,7,8-HxCDF	--	--	41.1			na		
1,2,3,4,6,7,8-HpCDF	--	--	246			na		
1,2,3,4,7,8,9-HpCDF	--	--	24.7			na		
OCDF	--	--	614			na		
Dioxin/Furan TEQ, nd SDL*0	25	--	**68.7 J**	2.7		na		
Dioxin/Furan TEQ, nd SDL*0.5	25	--	**68.7 J**	2.7		na		
Dioxin/Furan TEQ, nd SDL*1	25	--	**68.7 J**	2.7		na		
Total TCDD	--	--	44.3 J			na		
Total TCDF	--	--	386 J			na		
Total PeCDD	--	--	82.9			na		
Total PeCDF	--	--	423 J			na		
Total HxCDD	--	--	320			na		
Total HxCDF	--	--	480			na		
Total HpCDD	--	--	2,040			na		
Total HpCDF	--	--	663			na		
Grain size (%)								
> 10 Phi Clay	--	--	2.5			0.9		
8-9 Phi Clay	--	--	1.7			0.8		
9-10 Phi Clay	--	--	2.9			0.6		
Very Fine Silt	--	--	3.8			1.3		
Fine Silt	--	--	16			1.4		
Medium Silt	--	--	36			2.4		
Coarse Silt	--	--	2.6			1.8		
Total Fines	--	--	65.5			9.2		
Very Fine Sand	--	--	7.0			4.9		
Fine Sand	--	--	6.8			9.6		
Medium Sand	--	--	6.3			15.1		
Coarse Sand	--	--	4.4			11.5		
Very Coarse Sand	--	--	3.1			8.8		
Gravel	--	--	6.9			40.9		
Conventionals (%)								
Total Organic Carbon	--	--	12.2			1.09		
Total Solids	--	--	54.82			84.6		

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

Table C-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-01			IM-CB-02		
Collection Date			4/10/2013			4/10/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET

% - percent
< - not detected
2LAET - Second Lowest Apparent Effects Threshold
AET - Apparent Effects Threshold
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
CSL - Cleanup Screening Level
EF - exceedance factor (sample result/criteria value)
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
J - estimated concentration
LAET - Lowest Apparent Effects Threshold
LDW - Lower Duwamish Waterway
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
MTCA - Model Toxics Control Act
na - not analyzed
nc - not calculated
nd - non-detect
ng/kg - nanograms per kilogram
NPDES - National Pollutant Discharge Elimination Syst
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 Stand
SQS - Sediment Quality Standard
SVOCs - semivolatile organic compounds
TEQ - toxic equivalency
TPH - total petroleum hydrocarbons
U - not detected
VOCs - volatile organic compounds

Table C-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria
NPDES Inspection Sampling Support: Independent Metals

Location ID			IM-CB-02		
Collection Date			4/10/2013		
Analyte	SMS Criteria		Result	EF	
	SQS	CSL		SQS	CSL
PAHs (mg/kg OC)					
2-Methylnaphthalene	38	64	< 1.7 U		
Acenaphthene	16	57	< 1.7 U		
Acenaphthylene	66	66	< 1.7 U		
Anthracene	220	1,200	1.7 J		
Benzo(a)anthracene	110	270	4.3		
Benzo(a)pyrene	99	210	4.2		
Benzo(g,h,i)perylene	31	78	3.6		
Chrysene	110	460	7.6		
Dibenz(a,h)anthracene	12	33	1.5 J		
Dibenzofuran	15	58	< 1.7 U		
Fluoranthene	160	1,200	12		
Fluorene	23	79	< 1.7 U		
Indeno(1,2,3-cd)pyrene	34	88	2.2		
Naphthalene	99	170	1.5 J		
Phenanthrene	100	480	8.7		
Pyrene	1,000	1,400	12		
Total Benzofluoranthenes	230	450	8.7		
Total HPAHs	960	5,300	56 J		
Total LPAHs	370	780	12 J		
Phthalates (mg/kg OC)					
bis(2-Ethylhexyl)phthalate	47	78	31		
Butylbenzylphthalate	4.9	64	**6.9 J**	1.4	
Di-n-Butylphthalate	220	1,700	1.6 J		
Diethylphthalate	61	110	< 0.43 U		
Dimethylphthalate	53	53	0.5		
Di-n-Octyl phthalate	58	4,500	< 1.7 U		
Other SVOCs (mg/kg OC)					
1,2,4-Trichlorobenzene	0.81	1.8	< 0.43 U		
1,2-Dichlorobenzene	2.3	2.3	< 0.43 U		
1,4-Dichlorobenzene	3.1	9	< 0.43 U		
Hexachlorobenzene	0.38	2.3	**< 0.43 U**		
Hexachlorobutadiene	3.9	6.2	< 0.43 U		
N-Nitrosodiphenylamine	11	11	0.53 J		
PCB Aroclors (mg/kg OC)					
Total PCB Aroclors	12	65	5.0		

Table C-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria NPDES Inspection Sampling Support: Independent Metals

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

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

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

Results in **bold** exceed the SQS.

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

< - not detected

CSL - Cleanup Screening Level

EF - exceedance factor (sample result/criteria value)

J - estimated concentration

mg/kg - milligrams per kilogram

NPDES - National Pollutant Discharge Elimination System

OC - organic carbon

PAHs - polycyclic aromatic hydrocarbons

PCBs - polychlorinated biphenyls

SMS - Washington State Sediment Management Standards

SQS - Sediment Quality Standard

SVOCs - semivolatile organic compounds

TOC - total organic carbon

U - not detected

Attachment C-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: IM-CB-01	**N↘** 
Structure Type: Catch Basin	
General Location: Central portion of facility	
Characteristics: 4.5 ft to bottom of structure Catch basin insert and filter sock	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: IM-CB-01-20130410-S	
Drainage Information:	
All stormwater in the process yard drains to IM-CB-01. Scrap metal is received, sorted, processed, and exported at the storage yard. Stormwater is conveyed from IM-CB-01 to an oil water separator. Stormwater is then conveyed to a stormwater treatment system and discharged to the LDW via Outfall 1.	**N←** 

Conveyance Structure Information	
Structure Identification Number: IM-MH-01	**N↑** 
Structure Type: Stormwater Treatment System	
General Location: Eastern portion of facility along the riverbank of the LDW	
Characteristics: StormwaterRx Treatment System	
Pump Capacity (gpm): Unknown	
Design Storm: Unknown	
Access: Sample port Open top	
Volume Gauge: No	
Sample ID: IM-MH-01-20130410-W	
Drainage Information:	
Stormwater at the facility is conveyed to IM-CB-01. After passing through an oil water separator, stormwater is conveyed to the stormwater treatment system. Stormwater passes through the modified sand filter treatment system and is discharged to the LDW via Outfall 01. Sample IM-MH-01 was collected from the sampling port on the effluent line of the treatment system.	**N↑** 

Conveyance Structure Information	
Structure Identification Number: 7th Avenue Dirt Storage Lot	**N↙**
Structure Type: Dirt Storage Lot	
General Location: East of 7th Avenue S between S Monroe and S Elmgrove Street	
Characteristics: Dirt and gravel container storage lot	
Pump Capacity (gpm): --	
Design Storm: --	
Access: Open lot	
Volume Gauge: No	
Sample ID: GR-SW-01-20130410-W GR-CB-02-20130410-S	
Drainage Information	
Independent Metals uses the 7th Avenue Dirt Storage Lot to store bins and containers holding materials waiting to be processed or exported. The lot is composed of dirt and gravel with no private drainage structures. During periods of heavy rain, stormwater from the facility sheet flows to the public storm drain system on 7Th Avenue S.	**N←** 

Conveyance Structure Information	
Structure Identification Number: 7th Avenue Dirt Storage Lot	**N←** 
Structure Type: Dirt Storage Lot	
General Location: East of 7th Avenue S between S Monroe and S Elmgrove Street	
Characteristics: Dirt and gravel storage lot	
Pump Capacity (gpm): --	
Design Storm: --	
Access: --	
Volume Gauge: No	
Sample ID: GR-SW-01-20130410-W GR-CB-02-20130410-S	
Drainage Information	
Sample GR-SW-01 collected from standing water in the 7th Avenue Dirt Storage Lot. Sample GR-CB-02 collected from catch basin located on 7th Avenue S which is adjacent to the 7th Avenue Dirt Storage Lot. Stormwater from the dirt storage lot sheet flows to catch basin during rain events. Independent Metals received heavy rain during the morning of April 10, 2013.	**N←** 

Attachment C-2
Field Documentation

SAIC
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SURFACE WATER SAMPLING FORM

Client: Department of Ecology **Site:** Independent Metals **Job #:** 209977

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
IM-MH-01-20130410-W	1003	4/10/13	Y	6.93	1.02 ☐ S/cm	11.6	0.6 g/L	113-115	No	Collected from Treatment Effluent
IM-SW-01-20130410-W	1409	4/10/13	N	9.21	0.209 ☐ S/cm	20.8	0.14 g/L	>999.0	No	Puddle in gravel Container Storage lot
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
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					☐ S/cm					

Sample Date:_____/_____/2013

SAIC
From Science to Solutions

Sediment Collection Form

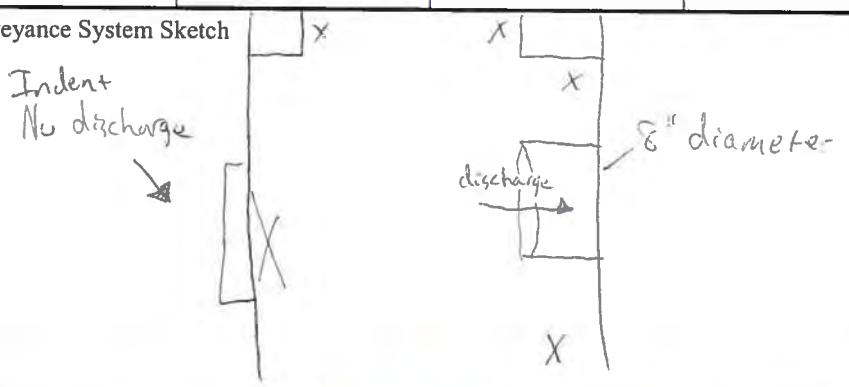
Project: NPDES Sampling Support **Location ID:** IM-CB-02

Facility Name: Independent Metals Plant 1 **Sample ID:** IM-CB-02-20130410-S

Sampled By: CW CN **Date:** 4 / 10 / 2013 **Time:** 1504

Structure Type:	Dimensions:	Standing Water:	Flow:
CB	W 16" L 30"	Y / (N)	Y (N)

Conveyance System Sketch



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

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

NOTES: Catch Basin is located in the Street
No influent. Piping 8" Pipe conveys SW east underneath dirt parking lot
BW indicated potential PCB source from a container that was stored Southeastern portion of property
Water Sample collected from puddle directly east of CB
Puddle is approximately 21' x 9' ↳IM-SW-01-20130410-W

Recorded By/Date: Corey Wilson 4/10/13 **Reviewed By/Date:**

Version2 -030311

SAIC
From Science to Solutions

Sediment Collection Form

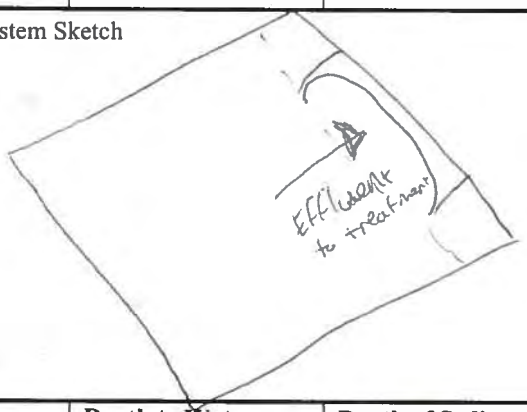
Project: NPDES Sampling Support **Location ID:** IM-CB-01

Facility Name: IM Plant 2 **Sample ID:** IM-CB-01-20130410-S

Sampled By: CW CN **Date:** 4 / 10 / 2013 **Time:** 1140

Structure Type:	Dimensions:	Standing Water:	Flow:
CB	W____ L____	~~Y / N~~	(Y) / N

Conveyance System Sketch ↑N



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
~4-5 ft	~3 ft	~6 in	Discrete / Composite *(circle one)*

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

NOTES: Catch basin had filter and Sediment Sock. Sock and filter setup removed prior to sampling

Employee at IM indicated catch basin is cleaned out on Monday Mornings

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

Version2 -030311

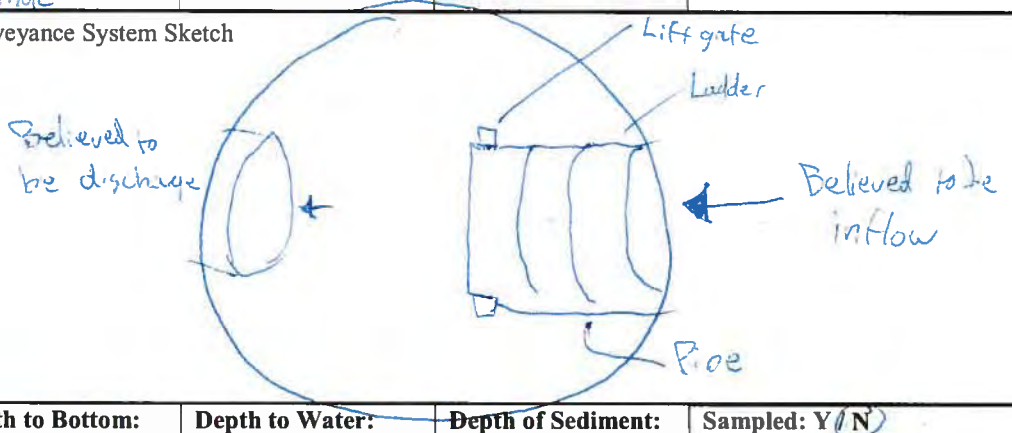
SAIC
From Science to Solutions

Sediment Collection Form

Project: NPDES Sampling Support
Location ID: MH-Unknown
Facility Name: S Elmgore and 7th Avenue S
Sample ID: —
Sampled By: — **Date:** 4 / 10 / 2013 **Time:** 1615

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

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / (N)
10.5 ft	— ft	5-10 in	Discrete / Composite *(circle one)*

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

NOTES: Unknown Manhole 2' diameter
Unable to positively identify storm drain directions or influent/effluent
Located on the SE Corner of S Elmgore St + 7th Avenue S
Potentially part of 7th Avenue SD system or 8th Avenue S CSO

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

Version2 -030311

Lain

IND. METALS 4/10/13

0603 CN arrives at field office (FO)
CW purchasing ice
0621 CW arrives at FO.
Package 1 bottle sets
Decon new equip
packaged ice
Renewed Ind Metals Information
0747 M. Alam arrives at FO.
Load truck w/ supplies
0759 Telecon w/ B. Wright; he's stuck in traffic will meet @ Ind. Metals
0807 M. Alam MOB to Tullys
0812 CN/CW MOB to Tullys
0821 MA/CN/CW MOB to Ind. Metals
0828 BW arrives @ site
0845 CN/CW/MK arrive @ site
King County Sewer -
Ship canal Industrial Waste in Fremont
dave.haberman@kingcounty.gov
email info
0913 Conducted Health + Safety meeting
0934 Met w/ Luke (IM); escort for day
0921 Begin tour of facility
Facility very active.

Ind. Metals 4/10/13

- visible oil sheen oil sheen at entry way.
- Assorted Scrap pile on South side of entry way on Ave S
- Ecology block walls used to contain scrap yards

0944 At water treatment system
- OWS conveys to wet system pumps to baker tank Aquip BX; Discharges post treatment

0944 Back at Truck prepping for samples

1003 Begin water Sample collection from treatment system collecting from effluent port. IM-MH-01-20130410-W
- Collected Split PCB Congeners
- " " SVOCs, PAHs
  PCBs
  Alkalinity
  Metals

Ind. Metals 4/10/13

1014
Water Quality
pH - 6.93
Cond - 1.02 S/cm
Turb - 113-115
DO - 13.14
C° - 11.6
TDS - 0.6 g/L
Smell - Sulfur
Color - light brown
Clarity - cloudy

1023 - Black foamy discharge observed from outfall. MA captured photo doc

1058 BW requests PCB Analysis 8082 will add Method 8082 to COC and discuss w/ Lab

1137 Sediment Sample Collected at CB-01

1140 John Allen (consultant for IM) on site and requests split samples for all locations

Ind. Metals 4/10/13

1300 Sample collection completed
JA ~~requested~~ CHW 4/16/13 told SAIC that they will use Spectrum Analytical Labs in Tacoma, WA
ph: 253.272.4850
1310 CN calling Spectrum Labs
Continue labelling prep
MOB to Plant #1 / Storage lot
Discuss conveyance system, does not match City map provided by SPU.
1340 John Allen offsite

Not to Scale

Ind. Metals 4/10/13

1409 Begin surface water sampling
Parameters collected

pH	9.21	
Cond	0.209	
Turb	>999.0	
DO	10.95	mg/L
Temp	20.8	°C
Sal	0.0	
TDS	0.14	g/L
ORP	42	

1428 Begin sample collection of SW-01-20130410-S
1504 Began sample collection of IM-CB-02-20130410-S
1530 MA (Ecology) offsite
1538 Completed Sed. Collection form

1549 Collected GPS coordinates for
IM-CB-02 located in street on 7th Ave S
IM-SW-01 Puddle approximately 2'x9'
Collected on north central side of Puddle
IM-MH-01 - collected from manhole N of puddle; CB-02 may tie in to IM-MH-01

Ind. Metals 4/10/13

1629 GPS Collected from Unknown-MH located at S Elmgrove + 7th Avenues

1631 BW (Ecology offsite)

1641 SAIC Stop at Independent Metals to discuss split sample COC and delivery to the lab

1708 Leaving Independent Metals, Plant 2 MOB to F.O. to package coolers, decon equipment.
Prep bottle sets for tomorrow
Finalize COC / Bottles in cooler.

1937 MOB from F.O.

End of Day

CW 4/10/13

Attachment C-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WL491	Turn-around Requested: Standard 15d	Date: 4.10.13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 2	
Client Contact: **Christine Nancarrow**		No. of Coolers:	Cooler Temps:
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: C/CW		

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

Sample ID	Date	Time	Matrix	No. Containers	SVOCs (EPA 8270)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: Total Metals (EPA)	Notes/Comments: PCB Aroclors (EPA 8082)
IM-MH-01-20130410-W	4.10.13	1003	H_2O	15	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IM-SW-01-20130410-W	4.10.13	1428	H_2O	14	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
IM-TB-01-20130410-W	4.10.13	NA	H_2O	1													see page 2	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
* Please do not disregard samples w/out written authorization from PM.	(Signature) C Nancarrow	(Signature)	(Signature)	(Signature)
** Requires Lab Filtering upon arrival	Printed Name: C NANCARROW	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
	Company: SAIC	Company: ART	Company:	Company:
	Date & Time: 4.11.13 @ 0731	Date & Time: 4-11-13 731	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 releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Date: 4.10.13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 2 of 2
Client Contact: **Christine Nancarrow**		No. of Coolers: Cooler Temps:
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CN/CW	

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

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/2008)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	Notes/Comments: TPH-6mS (TPH-6x.)
					Analysis Requested (Sediment Sample)											
IM-CB-01-20130410-S	4.10.13	1157	Sed.	10	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
IM-CB-02-20130410-S	4.10.13	1504	Sed.	5	✓	✓	✓				✓	✓	✓	✓	✓	~~✓~~
IM-TB-01-20130410-W	4.10.13	NA	H_2O	1												✓

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
*Please do not disregard samples w/out written authorization from P.M.	C Nancarrow			
	Printed Name: C NANCARROW	Printed Name: Jay Lu Stratton	Printed Name:	Printed Name:
	Company: SAIC	Company: ART	Company:	Company:
	Date & Time: 4.11.13 @0731	Date & Time: 4-11-13 731	Date & Time:	Date & Time:

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

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

Attachment C-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 WL49, WL65

Client: SAIC

Project: 209977 NPDES Sampling Support

BC

Signature

April-26-2013

Date

Table of Contents: ARI Job WL49, WL65

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

April-26-2013
Date

Table of Contents: ARI Job WL49, WL65

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

April-26-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

May 1, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job Nos.: WL49 & WL65

Dear Christine:

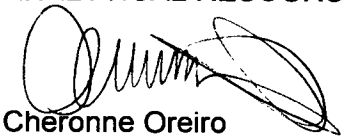
Please find enclosed the Chain-of-Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

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 WL49_WL65

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WL49, WL65

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WL4	Turn-around Requested: Standard 15d	Date: 4.10.13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 2	
Client Contact: **Christine Nancarrow**		No. of Coolers:	Cooler Temps:
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW/EW		

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

Sample ID	Date	Time	Matrix	No Containers	SVOCs (EPA 8270)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: Total Metals (EPA)	Notes/Comments: PCB Aroclors (EPA 8082)
IM-MH-01-20130410-W	4.10.13	1003	H_2O	15		✓		✓		✓		✓		✓		✓	~~✓~~	✓
IM-SW-01-20130410-W	4.10.13	1428	H_2O	14		✓		✓		✓		✓		✓		✓		✓
IM-TB-01-20130410-W	4.10.13	NA	H_2O	1													See page 2	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by (Signature)	Received by (Signature)
* Please do not discard samples w/out written authorization from PM.	Printed Name: CNANCARROW	Printed Name: Taylor Streeter	Printed Name:	Printed Name
** Requires LAB Altering upon arrival	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 4.11.13 @ 0731	Date & Time: 4-11-13 731	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

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

Date: 4.10.13
Page: 2 of 2
No. of Coolers:
Cooler Temps:

Sample ID	Date	Time	Matrix	No Containers	PCB Aroclors (EPA 8082)	SVOCs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	TPH-Gas (TPH-Gx)	Notes/Comments
IM-CB-01-20130410-S	4.10.13	1157	Sed	10	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	
IM-CB-02-20130410-S	4.10.13	1504	Sed.	5	✓	✓	✓				✓	✓	✓	✓	✓	~~Hold~~	
IM-TB-01-20130410-W	4.10.13	NA	H_2O	1								✓				✓	

Comments/Special Instructions	Relinquished by:	Received by	Relinquished by	Received by:
* Please do not disregard samples w/out written authorization from P.M.	(Signature) C Nancarrow	(Signature)	(Signature)	(Signature)
	Printed Name: C NANCARROW	Printed Name: Jay Lu Streeter	Printed Name:	Printed Name
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 4.11.13 @0731	Date & Time: 4-11-13 731	Date & Time	Date & Time

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SAIC Project Name: NPDES Sampling Support

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

Assigned ARI Job No: WL49 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): 5.8 3.C

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877432

Cooler Accepted by: [illegible] Date: 4.11.13 Time: 731

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) 4V
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: AV Date: 4/11/13 Time: 1627

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
lm-MH-01-20130410-S ~~Lm-MH~~			
	lm-CB-01-20130410-S		

Additional Notes, Discrepancies, & Resolutions:

Per PM waters logged for SIMPNA

By: AV Date: 4/11/13

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

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

WL49 00005

PRESERVATION VERIFICATION 04/11/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WL49**

Inquiry Number: NONE
Analysis Requested: 04/11/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: Lv4
Deliverables:

PC: Cheronne
VTSR: 04/11/13

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
13-7779 **WL49A**	IM-MH-01-20130410-W						TOT P pass					*					N					
13-7780 **WL49B**	IM-SW-01-20130410-W						TOT F *					*					N	pH	<2	MP2452	2.0mL	04-11-13/NB
13-7781 **WL49C**	IM-MH-01-20130410-W						DIS F					~~*~~				N						
13-7782 **WL49D**	IM-SW-01-20130410-W						~~DIS~~ F					~~*~~				N						

P=Pass F=Fail

B has a weak preservation

TOC/DOC conv to determine preservation

Sample B preserved in lab.
Samples C-D filtered & preserved in lab.
-NB 04-11-13

Checked By AV Date 4/11/13

PRESERVATION VERIFICATION 04/11/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WL49**

Inquiry Number: NONE
Analysis Requested: 04/11/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: Lv4
Deliverables:

PC: Cheronne
VTSR: 04/11/13

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
13-7779 **WL49A**	IM-MH-01-20130410-W						TOT ~~Pass~~					*					N					
13-7780 **WL49B**	IM-SW-01-20130410-W						~~F~~ TOT *					*					N					
13-7781 **WL49C**	IM-MH-01-20130410-W						DIS ~~F~~					~~*~~				N						
13-7782 **WL49D**	IM-SW-01-20130410-W						~~DIS~~ ~~F~~					~~*~~				N						

P=Pass F=Fail

B has a weak preservation

TOC/DOC conv to determine preservation

DOC filtered on arrival in lab.
W 4-11-13

Checked By AV Date 4/11/13

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 4465 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)	5.8 3.C	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#	90877652

Cooler Accepted by _____ Date 4.11.13 Time 731

Complete custody forms and attach all shipping documents

Log-In Phase:

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

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

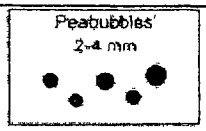
Samples Logged by AV Date: 4/11/13 Time: 1627

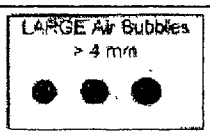
*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
Im-MH-01-20130410-S	~~Im-MH-01-20130410-S~~		
	Im-CB-01-20130410-S		

Additional Notes, Discrepancies, & Resolutions:

By _____ Date: _____





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

WL119 : 00009

PRESERVATION VERIFICATION 04/11/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WL65**

Inquiry Number: NONE
Analysis Requested: 04/11/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: Lv4
Deliverables:

PC: Cheronne
VTSR: 04/11/13

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
13-7786 **WL65A**	IM-MH-01-20130410-W						TOT P															
13-7787 **WL65B**	IM-SW-01-20130410-W						TOT P*											pH	<2	MP2452	2.0mL	04-11-13/NB
13-7788 **WL65C**	IM-MH-01-20130410-W						DIS F									N						
13-7789 **WL65D**	IM-SW-01-20130410-W						DIS F									N						

P=Pass F=Fail

B has a week preservation

Sample B preserved in lab.

Samples C-D filtered & preserved in lab.
– NB 04-11-13

Checked By _____ Date _____

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WL49, WL65

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job Nos.: WL49 & WL65

Sample Receipt

Two water samples and two sediment samples were received on April 11, 2013 under ARI jobs WL49 and WL65. The cooler temperatures measured by IR thermometer following ARI SOP were 3.6 and 5.8°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270D

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

Initial calibrations were within method requirements.

The water continuing calibration (CCAL) on 4/19/13 fell outside the 20% control limit low for 2,2'-Oxybis(1-Chloropropane), 3-Nitroaniline, and N-Nitrosodimethylamine. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

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

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

The LCS and LCSD percent recoveries of 4-Chloroaniline and 3-Nitroaniline were outside the control limits high for **LCS-041613**. All other percent recoveries were within control limits. No corrective action was taken.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **IM-CB-02-20130410-S**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW78270

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

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Butylbenzylphthalate, and fell out low for Benyzl Alcohol and Pentachlorophenol. All detected results for these compounds have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

The LCS percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries of Benzyl Alcohol were outside advisory control limits for sample **IM-CB-02-20130410-S**. No corrective action is required for matrix QC.

Low-Level PAHs by SW8270D-SIM

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

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

The surrogate percent recoveries were within control limits.

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

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. SRM PSR was analyzed as a reference material.

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

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

Pesticides by SW8081

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

Initial calibrations were within method requirements.

The water continuing calibrations (CCALs) on 4/22/13 fell outside the 20% control limit low for 4,4'-DDT, Methoxychlor, and Endrin Aldehyde on the second column, but were within control limits on the first column. The Toxaphene CCALs on 4/22/13 fell outside the control limit low on first column, but were within the control limit on the second column. No corrective action was taken.

The sediment samples were initially analyzed on 4/24/13 at a ten-fold dilution due to dark color of extracts. The initial CCAL on 4/24/13 fell outside the 20% control limit low for Hexachlorobutadiene on the first column but was within the control limit on the second column. The closing CCAL on 4/24/13 fell outside the 20% control limit for several compounds on both columns. The closing Toxaphene CCAL on 4/24/13 fell outside the control limit low and the 4/24/13 closing Endrin breakdown was outside control limits. The sediment samples were re-analyzed on 4/25/13 at higher dilutions. All 4/25/13 CCALs and Endrin breakdowns were within control limits. Both sets of data have been reported. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **IM-CB-02-20130410-S**. No corrective action is required for matrix QC.

Aroclor PCBs by SW8082

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

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 4/16/13 at 19:53 was outside the 20% control limit high for Aroclor 1260 on the first column, but was within the control limit on the second column. The CCAL on 4/16/13 at 20:54 was outside the control limit high on the first column, but was within the control limit on the second column. No corrective action was taken.

The internal standard area of Hexabromobiphenyl was outside the control limits high for the initial analysis of sample **IM-CB-01-20130410-S** on both columns. The sample was re-analyzed at a dilution and all internal standards were within control limits. Only the re-analysis data have been reported. No further corrective action was taken.

The surrogate percent recoveries of Decachlorobiphenyl and Tetrachlorometaxylene were outside the control limits high for sample **IM-CB-01-20130410-S**. All other surrogate percent recoveries were within control limits. No corrective action is required for matrix QC.

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

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

NWTPH-Dx

The sample 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 **IM-CB-01-20130410-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 RPDs of antimony and silver were outside the 20% control limit for sample **IM-CB-01-20130410-S**. 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 recovery of total mercury fell outside the control limit low for sample **IM-MH-01-20130410-W**. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPDs were within control limits.

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.:** WL49
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

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

Released by: E Gabrielle Dobbs — Technician — Date: April 29, 2013

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

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WL49
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	IM-MH-01-20130410-W	WL49A	13-7779	Water	04/10/13 10:03	04/11/13 07:31
2.	IM-SW-01-20130410-W	WL49B	13-7780	Water	04/10/13 14:28	04/11/13 07:31
3.	IM-MH-01-20130410-W	WL49C	13-7781	Water	04/10/13 10:03	04/11/13 07:31
4.	IM-SW-01-20130410-W	WL49D	13-7782	Water	04/10/13 14:28	04/11/13 07:31
5.	IM-TB-01-20130410-W	WL49E	13-7783	Water	04/10/13	04/11/13 07:31
6.	IM-CB-01-20130410-S	WL49F	13-7784	Sediment	04/10/13 11:57	04/11/13 07:31
7.	IM-CB-02-20130410-S	WL49G	13-7785	Sediment	04/10/13 15:04	04/11/13 07:31

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WL65
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	IM-MH-01-20130410-W	WL65A	13-7786	Water	04/10/13 10:03	04/11/13 07:31
2.	IM-SW-01-20130410-W	WL65B	13-7787	Water	04/10/13 14:28	04/11/13 07:31
3.	IM-MH-01-20130410-W	WL65C	13-7788	Water	04/10/13 10:03	04/11/13 07:31
4.	IM-SW-01-20130410-W	WL65D	13-7789	Water	04/10/13 14:28	04/11/13 07:31

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

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							**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol							32 – **100**	27 – **100**	≤ 40
Phenol-d_5							32 – 101	29 – **100**	≤ 40
2-Chlorophenol-d_4							36 – 101	31 – **100**	≤ 40
1,2-Dichlorobenzene-d_4							37 – **100**	32 – **100**	≤ 40
Nitrobenzene-d_5							33 –102	30 – **100**	≤ 40
2-Fluorobiphenyl							35 –101	35 – **100**	≤ 40
2,4,6-Tribromophenol							23 – 133	24 – 134	≤ 40
p-Terphenyl-d_{14}							42 – 124	37 – 111	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

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

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

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[1] ng/L	LOD[1] ng/L	LOQ[1] ng/L	LCS Control Limit[2]	Replicate RPD[3]
Naphthalene	0.85	5	10	37 – 90	≤ 40
2-Methylnaphthalene	0.72	5	10	39 – 90	≤ 40
Acenaphthylene	0.81	5	10	35 – 95	≤ 40
Acenaphthene	0.83	5	10	38 – 94	≤ 40
Dibenzofuran	0.94	5	10	36 – 94	≤ 40
Fluorene	1.41	5	10	41 – 102	≤ 40
Phenanthrene	1.01	5	10	41 – 101	≤ 40
Anthracene	0.58	5	10	28 – 101	≤ 40
Fluoranthene	0.92	5	10	49 – 114	≤ 40
Pyrene	0.70	5	10	42 - 114	≤ 40
Benzo(a)anthracene	1.27	5	10	42 – 111	≤ 40
Chrysene	1.57	5	10	46 – 106	≤ 40
Benzo(b)fluoranthene	2.54	5	10	39 – 119	≤ 40
Benzo(k)fluoranthene	0.85	5	10	50 – 117	≤ 40
Benzo(j)fluoranthene	1.65	5	10	30 – 160[4]	≤ 40
Benzo(a)pyrene	1.14	5	10	20 – 99	≤ 40
Indeno(1,2,3-cd)pyrene	1.82	5	10	32 – 113	≤ 40
Dibenz(a,h)anthracene	0.97	5	10	30 – 113	≤ 40
Benzo(g,h,i)perylene	1.87	5	10	27 – 113	≤ 40
1-Methylnaphthalene	0.88	5	10	38 – 95	≤ 40
Perylene	3.21	5	10	30 – 160[4]	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
2-Methylnapthalene-d_{10}			40 – 93	35 – 94	≤ 40
Dibenzo(a,h)anthracene-d_{14}			31 – 115	26 – 115	≤ 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 data from all samples prepared between 4/1/11 through 3/31/12.

(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) Default limits pending generation of historic limits for Benzo(j)fluoranthene.

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

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

ARI Bench Sheet	Extraction	DL[1]	LOD[1]	LOQ[1]	Analyte	Spike Recovery Control Limits (%)[2,3]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
Aqueous Samples (Separatory Funnel Extraction – EPA Method 3510C)									
01-3018F	500 to 5 mL	0.130 µg/L	0.5 µg/L	1 µg/L	Aroclor 1016	45 – 121	--	--	≤ 40
		0.147 µg/L	0.5 µg/L	1 µg/L	Aroclor 1260	54 – 129	--	--	
		--	--	--	TCMX	--	40 – 118	38 – 118	
		--	--	--	DCBP	--	41 – 111	29 – 118	
02-3021F	500 to 1 mL	0.0175 µg/L	0.05 µg/L	0.1 µg/L	Aroclor 1016	36 – **100**	--	--	≤ 40
		0.0174 µg/L	0.05 µg/L	0.1 µg/L	Aroclor 1260	41 – 113	--	--	
		--	--	--	TCMX	--	29 – **100**	25 – **100**	
		--	--	--	DCBP	--	39 – 116	**10** – 128	
03-3022F	1000 to 0.5 mL[5]	0.00248 µg/L	0.005 µg/L	0.01 µg/L	Aroclor 1016	44 – 117	--	--	≤ 40
		0.00276 µg/L	0.005 µg/L	0.01 µg/L	Aroclor 1260	46 – 131	--	--	
		--	--	--	TCMX	--	31 – **100**	21 – **100**	
		--	--	--	DCBP	--	32 – 108	19 – 111	
TCLP Extract (Separatory Funnel Extraction – EPA Method 3510C)									
04-3023F	100 to 10 mL	1.30 µg/L[8]	5 µg/L	10 µg/L	Aroclor 1016	30 – 160	--	--	≤ 40
		1.47 µg/L[8]	5 µg/L	10 µg/L	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	
Tissue Samples (Tissuemizer / Blender Extraction – EPA Method 3550C Modified) – Concentrations in µg/kg as received (wet weight)									
09-3029F	10 g to 5 mL	2.92 µg/kg[6]	25 µg/kg	50 µg/kg	Aroclor 1016	30 – 160			≤ 40
		3.91 µg/kg[6]	25 µg/kg	50 µg/kg	Aroclor 1260	30 – 160			
		--	--	--	TCMX		30 – 160	30 – 160	
		--	--	--	DCBP		30 – 160	30 – 160	
10-3027F	25 g to 5 mL	2.37 µg/kg[7]	10 µg/kg	20 µg/kg	Aroclor 1016	30 – 160			≤ 40
		1.06 µg/kg[7]	10 µg/kg	20 µg/kg	Aroclor 1260	30 – 160			
		--	--	--	TCMX		30 – 160	30 – 160	
		--	--	--	DCBP		30 – 160	30 – 160	
11-3030F	25 g to 1 mL	2.37[7] µg/kg	2 µg/kg	4 µg/kg	Aroclor 1016	30 – 160			≤ 40
		1.06[7] µg/kg	2 µg/kg	4 µg/kg	Aroclor 1260	30 – 160			
		--	--	--	TCMX		30 – 160	30 – 160	
		--	--	--	DCBP		30 – 160	30 – 160	

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

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

(5) Low level extraction solvent is hexane instead of Methylene Chloride.
(6) LOD Study SM10
(7) MDL Study QZ25
(8) Based on 500 to 5 mL water extraction until sufficient TCLP data is collected to calculate LOD.

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

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

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

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

Analytical Resources, Incorporated
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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	
Aqueous Samples – No Extract Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.022	0.05	0.1	64-112	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.022	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.044	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [9]	0.1	0.2	60-120 [6]	60-120	50-150	
Aqueous Samples – With Acid and/or Silica Gel Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.039	0.05	0.1	61-104	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.042	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.010	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [8]	0.1	0.2	60-120 [6]	60-120	50-150	
Solid Matrix Samples – No Extract Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.35	2.5	5	62-119	50-150	50-150	≤ 40
DIESMI	DRO – NWTPH-Dext Jet A	2.22 [11]	2.5	5	60 – 130 [8]	50-150	50-150	
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.43	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	2.48	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [9]	5	10	60-120 [6]	60-120	50-150	
Solid Matrix Samples – With Acid and/or Silica Gel Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

(1) DL (Detection Limit) and LOD (Limit of Detection) as defined in ARI SOP 1018S.
(2) Limit of Quantitation as defined in ARI SOP 1018S. The spike concentration used to determine the DL and the concentration of the lowest standard used to calibrate the GC-FID instrument.
(3) All surrogate recovery limits are specified in the published methods (AK102, AK103 & NWTPH-Dext). The surrogate standard is o-Terphenyl.
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(5) DRO = Diesel Range Organics and RRO = Residual Range Organics as defined in the methods referenced in footnote 3.
(6) Method specified LCS acceptance limits.
(7) Method specified reporting limits
(8) Default LCS control limits pending calculation of historic limits
(9) MDL study QD55 completed 2/12/10
(10) MDL study QD35 completed 1/29/10
(11) LOD Study UI44 completed 2/28/12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Criteria
Gasoline and BTEX

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

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

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

(4) Default control limits pending sufficient data to calculate historic limits.

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
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Spike Recovery Control Limits for Conventional Wet Chemistry
Effective 5/1/09

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

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

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-MH-01-20130410-W
SAMPLE

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/16/13
Date Analyzed: 04/19/13 15:00
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	0.44	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.26	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.25	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.50	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.47	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.41	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.44	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.33	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.22	1.0	< 1.0 U
106-44-5	**4-Methylphenol**	**0.54**	**2.0**	**1.2 J**
621-64-7	N-Nitroso-Di-N-Propylamine	0.36	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.61	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.49	1.0	< 1.0 U
78-59-1	Isophorone	0.26	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.98	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.63	3.0	< 3.0 U
65-85-0	**Benzoic Acid**	**8.6**	**20**	**9.9 J**
111-91-1	bis(2-Chloroethoxy) Methane	0.25	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.50	1.0	< 1.0 U
91-20-3	Naphthalene	0.33	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.60	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	0.92	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.24	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.9	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.2	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.7	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.34	1.0	< 1.0 U
88-74-4	2-Nitroaniline	0.78	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.1	3.0	< 3.0 U
83-32-9	Acenaphthene	0.35	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	5.5	20	< 20 U
100-02-7	4-Nitrophenol	2.9	10	< 10 U
132-64-9	Dibenzofuran	0.20	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.3	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.3	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-MH-01-20130410-W
SAMPLE

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Date Analyzed: 04/19/13 15:00

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.41	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.34	1.0	< 1.0 U
86-73-7	Fluorene	0.27	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.4	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	4.9	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.39	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.26	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.34	1.0	< 1.0 U
87-86-5	Pentachlorophenol	2.7	10	< 10 U
85-01-8	Phenanthrene	0.28	1.0	< 1.0 U
86-74-8	Carbazole	0.25	1.0	< 1.0 U
120-12-7	Anthracene	0.30	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.30	1.0	< 1.0 U
206-44-0	Fluoranthene	0.29	1.0	< 1.0 U
129-00-0	Pyrene	0.38	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.40	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.37	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	1.0	< 1.0 U
218-01-9	Chrysene	0.40	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	0.42	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.44	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.44	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.46	1.0	< 1.0 U
62-53-3	Aniline	0.47	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	1.2	3.0	< 3.0 U
103-33-3	Azobenzene	0.21	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	0.20	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	2.3	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	79.2%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	74.4%
d5-Phenol	40.0%	2-Fluorophenol	49.1%
2,4,6-Tribromophenol	105%	d4-2-Chlorophenol	76.8%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-SW-01-20130410-W SAMPLE

Lab Sample ID: WL49B
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/16/13
Date Analyzed: 04/19/13 15:35
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	0.44	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.26	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.25	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.50	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.47	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.41	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.44	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.33	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.22	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.54	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.36	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.61	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.49	1.0	< 1.0 U
78-59-1	Isophorone	0.26	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.98	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.63	3.0	< 3.0 U
65-85-0	Benzoic Acid	8.6	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.25	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.50	1.0	< 1.0 U
91-20-3	Naphthalene	0.33	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.60	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	0.92	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.24	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.9	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.2	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.7	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.34	1.0	< 1.0 U
88-74-4	2-Nitroaniline	0.78	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.1	3.0	< 3.0 U
83-32-9	Acenaphthene	0.35	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	5.5	20	< 20 U
100-02-7	4-Nitrophenol	2.9	10	< 10 U
132-64-9	Dibenzofuran	0.20	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.3	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.3	3.0	< 3.0 U

Lab Sample ID: WL49B
LIMS ID: 13-7780
Matrix: Water
Date Analyzed: 04/19/13 15:35

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.41	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.34	1.0	< 1.0 U
86-73-7	Fluorene	0.27	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.4	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	4.9	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.39	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.26	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.34	1.0	< 1.0 U
87-86-5	Pentachlorophenol	2.7	10	< 10 U
85-01-8	**Phenanthrene**	**0.28**	**1.0**	**0.5 J**
86-74-8	Carbazole	0.25	1.0	< 1.0 U
120-12-7	Anthracene	0.30	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.30	1.0	< 1.0 U
206-44-0	**Fluoranthene**	**0.29**	**1.0**	**2.9**
129-00-0	**Pyrene**	**0.38**	**1.0**	**2.5**
85-68-7	Butylbenzylphthalate	0.40	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	**Benzo(a)anthracene**	**0.37**	**1.0**	**0.9 J**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1.0**	**1.0**	**7.2**
218-01-9	**Chrysene**	**0.40**	**1.0**	**2.0**
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	**Benzo(a)pyrene**	**0.42**	**1.0**	**0.7 J**
193-39-5	Indeno(1,2,3-cd)pyrene	0.44	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.44	1.0	< 1.0 U
191-24-2	**Benzo(g,h,i)perylene**	**0.46**	**1.0**	**0.7 J**
62-53-3	Aniline	0.47	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	1.2	3.0	< 3.0 U
103-33-3	Azobenzene	0.21	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	0.20	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	2.3	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	64.4%
d14-p-Terphenyl	65.2%	d4-1,2-Dichlorobenzene	57.6%
d5-Phenol	27.5%	2-Fluorophenol	32.3%
2,4,6-Tribromophenol	57.3%	d4-2-Chlorophenol	47.7%

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: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-041613	78.0%	79.2%	90.4%	74.8%	38.7%	52.0%	93.1%	77.6%	0
LCS-041613	78.4%	89.6%	99.2%	69.2%	38.9%	51.5%	112%	77.1%	0
LCSD-041613	77.6%	89.2%	101%	68.0%	38.4%	50.9%	114%	75.2%	0
IM-MH-01-20130410-	79.2%	80.0%	86.0%	74.4%	40.0%	49.1%	105%	76.8%	0
IM-SW-01-20130410-	62.0%	64.4%	65.2%	57.6%	27.5%	32.3%	57.3%	47.7%	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: 13-7779 to 13-7780

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-01-20130410-S
SAMPLE

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 20:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.13 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 44.4%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**230**	**530**	**3,000**
111-44-4	Bis-(2-Chloroethyl) Ether	89	530	< 530 U
95-57-8	2-Chlorophenol	63	530	< 530 U
541-73-1	1,3-Dichlorobenzene	70	530	< 530 U
106-46-7	1,4-Dichlorobenzene	76	530	< 530 U
100-51-6	Benzyl Alcohol	160	530	< 530 U
95-50-1	1,2-Dichlorobenzene	66	530	< 530 U
95-48-7	2-Methylphenol	140	530	< 530 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	100	530	< 530 U
106-44-5	**4-Methylphenol**	**180**	**530**	**1,500**
621-64-7	N-Nitroso-Di-N-Propylamine	89	530	< 530 U
67-72-1	Hexachloroethane	78	530	< 530 U
98-95-3	Nitrobenzene	110	530	< 530 U
78-59-1	Isophorone	76	530	< 530 U
88-75-5	2-Nitrophenol	1000	2,600	< 2,600 U
105-67-9	2,4-Dimethylphenol	92	1,100	< 1,100 U
65-85-0	Benzoic Acid	2700	11,000	< 11,000 U
111-91-1	bis(2-Chloroethoxy) Methane	53	530	< 530 U
120-83-2	2,4-Dichlorophenol	570	5,300	< 5,300 U
120-82-1	1,2,4-Trichlorobenzene	92	530	< 530 U
91-20-3	**Naphthalene**	**73**	**530**	**6,000**
106-47-8	4-Chloroaniline	590	7,200	< 7,200 U
87-68-3	Hexachlorobutadiene	120	530	< 530 U
59-50-7	4-Chloro-3-methylphenol	400	2,600	< 2,600 U
91-57-6	**2-Methylnaphthalene**	**81**	**530**	**12,000**
77-47-4	Hexachlorocyclopentadiene	1800	11,000	< 11,000 U
88-06-2	2,4,6-Trichlorophenol	590	2,600	< 2,600 U
95-95-4	2,4,5-Trichlorophenol	570	2,600	< 2,600 U
91-58-7	2-Chloronaphthalene	70	530	< 530 U
88-74-4	2-Nitroaniline	490	2,600	< 2,600 U
131-11-3	Dimethylphthalate	77	530	< 530 U
208-96-8	Acenaphthylene	150	530	< 530 U
99-09-2	3-Nitroaniline	600	2,600	< 2,600 U
83-32-9	**Acenaphthene**	**87**	**530**	**740**
51-28-5	2,4-Dinitrophenol	2900	23,000	< 23,000 U
100-02-7	4-Nitrophenol	920	2,600	< 2,600 U
132-64-9	**Dibenzofuran**	**110**	**530**	**1,500**
606-20-2	2,6-Dinitrotoluene	810	2,600	< 2,600 U
121-14-2	2,4-Dinitrotoluene	520	2,600	< 2,600 U
84-66-2	Diethylphthalate	970	1,300	< 1,300 U
7005-72-3	4-Chlorophenyl-phenylether	140	530	< 530 U
86-73-7	**Fluorene**	**120**	**530**	**3,300**
100-01-6	4-Nitroaniline	1000	2,600	< 2,600 U

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Date Analyzed: 04/24/13 20:14

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	560	5,300	< 5,300 U
86-30-6	N-Nitrosodiphenylamine	140	530	< 530 U
101-55-3	4-Bromophenyl-phenylether	130	530	< 530 U
118-74-1	Hexachlorobenzene	110	530	< 530 U
87-86-5	Pentachlorophenol	1300	5,300	< 5,300 U
85-01-8	**Phenanthrene**	**97**	**530**	**11,000**
86-74-8	Carbazole	71	530	< 530 U
120-12-7	**Anthracene**	**120**	**530**	**850**
84-74-2	**Di-n-Butylphthalate**	**220**	**530**	**3,100**
206-44-0	**Fluoranthene**	**77**	**530**	**8,700**
129-00-0	**Pyrene**	**52**	**530**	**7,900**
85-68-7	**Butylbenzylphthalate**	**160**	**530**	**6,600**
91-94-1	3,3'-Dichlorobenzidine	470	4,000	< 4,000 U
56-55-3	**Benzo(a)anthracene**	**87**	**530**	**2,500**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**390**	**660**	**45,000**
218-01-9	**Chrysene**	**100**	**530**	**3,600**
117-84-0	**Di-n-Octyl phthalate**	**160**	**530**	**2,300**
50-32-8	**Benzo(a)pyrene**	**140**	**530**	**2,200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**120**	**530**	**1,200**
53-70-3	**Dibenz(a,h)anthracene**	**110**	**530**	**660**
191-24-2	**Benzo(g,h,i)perylene**	**120**	**530**	**1,500**
62-53-3	Aniline	1100	14,000	< 14,000 U
62-75-9	N-Nitrosodimethylamine	370	2,600	< 2,600 U
90-12-0	**1-Methylnaphthalene**	**71**	**530**	**7,600**
TOTBFA	**Total Benzofluoranthenes**	**73**	**1,100**	**4,300**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.8%	2-Fluorobiphenyl	69.0%
d14-p-Terphenyl	66.0%	d4-1,2-Dichlorobenzene	58.2%
d5-Phenol	72.8%	2-Fluorophenol	63.2%
2,4,6-Tribromophenol	54.4%	d4-2-Chlorophenol	64.4%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
SAMPLE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 20:51
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**8.1**	**19**	**17 J**
111-44-4	Bis-(2-Chloroethyl) Ether	3.1	19	< 19 U
95-57-8	2-Chlorophenol	2.2	19	< 19 U
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.7	19	< 19 U
100-51-6	**Benzyl Alcohol**	**5.7**	**19**	**520**
95-50-1	1,2-Dichlorobenzene	2.3	19	< 19 U
95-48-7	2-Methylphenol	4.9	19	< 19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.5	19	< 19 U
106-44-5	4-Methylphenol	6.2	19	< 19 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.1	19	< 19 U
67-72-1	Hexachloroethane	2.8	19	< 19 U
98-95-3	Nitrobenzene	3.8	19	< 19 U
78-59-1	Isophorone	2.7	19	< 19 U
88-75-5	2-Nitrophenol	36	94	< 94 U
105-67-9	2,4-Dimethylphenol	3.2	37	< 37 U
65-85-0	Benzoic Acid	94	370	< 370 U
111-91-1	bis(2-Chloroethoxy) Methane	1.9	19	< 19 U
120-83-2	2,4-Dichlorophenol	20	190	< 190 U
120-82-1	1,2,4-Trichlorobenzene	3.3	19	< 19 U
91-20-3	**Naphthalene**	**2.6**	**19**	**16 J**
106-47-8	4-Chloroaniline	21	250	< 250 U
87-68-3	Hexachlorobutadiene	4.3	19	< 19 U
59-50-7	4-Chloro-3-methylphenol	14	94	< 94 U
91-57-6	2-Methylnaphthalene	2.9	19	< 19 U
77-47-4	Hexachlorocyclopentadiene	62	370	< 370 U
88-06-2	2,4,6-Trichlorophenol	21	94	< 94 U
95-95-4	2,4,5-Trichlorophenol	20	94	< 94 U
91-58-7	2-Chloronaphthalene	2.5	19	< 19 U
88-74-4	2-Nitroaniline	17	94	< 94 U
131-11-3	Dimethylphthalate	2.7	19	< 19 U
208-96-8	Acenaphthylene	5.3	19	< 19 U
99-09-2	3-Nitroaniline	21	94	< 94 U
83-32-9	Acenaphthene	3.1	19	< 19 U
51-28-5	2,4-Dinitrophenol	100	800	< 800 U
100-02-7	4-Nitrophenol	32	94	< 94 U
132-64-9	Dibenzofuran	3.8	19	< 19 U
606-20-2	2,6-Dinitrotoluene	29	94	< 94 U
121-14-2	2,4-Dinitrotoluene	18	94	< 94 U
84-66-2	Diethylphthalate	34	47	< 47 U
7005-72-3	4-Chlorophenyl-phenylether	4.9	19	< 19 U
86-73-7	Fluorene	4.1	19	< 19 U
100-01-6	4-Nitroaniline	35	94	< 94 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
SAMPLE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Date Analyzed: 04/24/13 20:51

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	20	190	< 190 U
86-30-6	N-Nitrosodiphenylamine	5.0	19	< 19 U
101-55-3	4-Bromophenyl-phenylether	4.7	19	< 19 U
118-74-1	Hexachlorobenzene	4.0	19	< 19 U
87-86-5	Pentachlorophenol	45	190	< 190 U
85-01-8	**Phenanthrene**	**3.4**	**19**	**95**
86-74-8	**Carbazole**	**2.5**	**19**	**24**
120-12-7	**Anthracene**	**4.2**	**19**	**18 J**
84-74-2	**Di-n-Butylphthalate**	**7.6**	**19**	**17 J**
206-44-0	**Fluoranthene**	**2.7**	**19**	**130**
129-00-0	**Pyrene**	**1.8**	**19**	**130**
85-68-7	**Butylbenzylphthalate**	**5.7**	**19**	**62**
91-94-1	3,3'-Dichlorobenzidine	17	140	< 140 U
56-55-3	**Benzo(a)anthracene**	**3.1**	**19**	**47**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**14**	**23**	**340**
218-01-9	**Chrysene**	**3.5**	**19**	**83**
117-84-0	Di-n-Octyl phthalate	5.5	19	< 19 U
50-32-8	**Benzo(a)pyrene**	**5.1**	**19**	**46**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.4**	**19**	**24**
53-70-3	**Dibenz(a,h)anthracene**	**4.0**	**19**	**16 J**
191-24-2	**Benzo(g,h,i)perylene**	**4.1**	**19**	**39**
62-53-3	Aniline	37	500	< 500 U
62-75-9	N-Nitrosodimethylamine	13	94	< 94 U
90-12-0	1-Methylnaphthalene	2.5	19	< 19 U
TOTBFA	**Total Benzofluoranthenes**	**2.6**	**37**	**95**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	62.2%
d14-p-Terphenyl	64.2%	d4-1,2-Dichlorobenzene	53.2%
d5-Phenol	69.2%	2-Fluorophenol	58.0%
2,4,6-Tribromophenol	42.5%	d4-2-Chlorophenol	59.6%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
IM-CB-01-20130410-	70.8%	69.0%	66.0%	58.2%	72.8%	63.2%	54.4%	64.4%	0
MB-041813	61.0%	55.2%	66.0%	51.6%	62.3%	56.4%	47.2%	55.5%	0
LCS-041813	65.4%	55.6%	67.8%	54.8%	70.0%	65.5%	51.3%	59.9%	0
IM-CB-02-20130410-	60.8%	62.2%	64.2%	53.2%	69.2%	58.0%	42.5%	59.6%	0
IM-CB-02-20130410- MS	65.2%	64.8%	67.8%	56.2%	74.1%	63.6%	50.1%	63.5%	0
IM-CB-02-20130410- MSD	64.8%	67.8%	68.6%	57.2%	74.8%	62.9%	48.3%	63.9%	0

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

Prep Method: SW3546
Log Number Range: 13-7784 to 13-7785

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: IM-CB-02-20130410-S
MS/MSD

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted MS/MSD: 04/18/13

Date Analyzed MS: 04/24/13 21:27
MSD: 04/24/13 22:04
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 10.69 g-dry-wt
MSD: 10.68 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 18.1 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	17 J	329	468	66.7%	340	468	69.0%	3.3%
Bis-(2-Chloroethyl) Ether	< 19 U	332	468	70.9%	364	468	77.8%	9.2%
2-Chlorophenol	< 19 U	281	468	60.0%	290	468	62.0%	3.2%
1,3-Dichlorobenzene	< 19 U	271	468	57.9%	276	468	59.0%	1.8%
1,4-Dichlorobenzene	< 19 U	276	468	59.0%	282	468	60.3%	2.2%
Benzyl Alcohol	520	283 Q	468	NA	297 Q	468	NA	4.8%
1,2-Dichlorobenzene	< 19 U	284	468	60.7%	288	468	61.5%	1.4%
2-Methylphenol	< 19 U	311	468	66.5%	311	468	66.5%	0.0%
2,2'-Oxybis(1-Chloropropane)	< 19 U	299	468	63.9%	307	468	65.6%	2.6%
4-Methylphenol	< 19 U	625	935	66.8%	652	936	69.7%	4.2%
N-Nitroso-Di-N-Propylamine	< 19 U	349	468	74.6%	370	468	79.1%	5.8%
Hexachloroethane	< 19 U	291	468	62.2%	296	468	63.2%	1.7%
Nitrobenzene	< 19 U	313	468	66.9%	321	468	68.6%	2.5%
Isophorone	< 19 U	333	468	71.2%	346	468	73.9%	3.8%
2-Nitrophenol	< 94 U	278	468	59.4%	286	468	61.1%	2.8%
2,4-Dimethylphenol	< 37 U	627	1400	44.8%	802	1400	57.3%	24.5%
Benzoic Acid	< 370 U	241 J	2570	9.4%	144 J	2570	5.6%	50.4%
bis(2-Chloroethoxy) Methane	< 19 U	334	468	71.4%	352	468	75.2%	5.2%
2,4-Dichlorophenol	< 190 U	1090	1400	77.9%	1120	1400	80.0%	2.7%
1,2,4-Trichlorobenzene	< 19 U	295	468	63.0%	311	468	66.5%	5.3%
Naphthalene	16 J	281	468	56.6%	284	468	57.3%	1.1%
4-Chloroaniline	< 250 U	242 J	1400	17.3%	285	1400	20.4%	16.3%
Hexachlorobutadiene	< 19 U	295	468	63.0%	303	468	64.7%	2.7%
4-Chloro-3-methylphenol	< 94 U	1100	1400	78.6%	1140	1400	81.4%	3.6%
2-Methylnaphthalene	< 19 U	307	468	65.6%	319	468	68.2%	3.8%
Hexachlorocyclopentadiene	< 370 U	97.3 JQ	1400	7.0%	84.3 JQ	1400	6.0%	14.3%
2,4,6-Trichlorophenol	< 94 U	881	1400	62.9%	914	1400	65.3%	3.7%
2,4,5-Trichlorophenol	< 94 U	969	1400	69.2%	1030	1400	73.6%	6.1%
2-Chloronaphthalene	< 19 U	320	468	68.4%	336	468	71.8%	4.9%
2-Nitroaniline	< 94 U	1130	1400	80.7%	1260	1400	90.0%	10.9%
Dimethylphthalate	< 19 U	355	468	75.9%	370	468	79.1%	4.1%
Acenaphthylene	< 19 U	284	468	60.7%	304	468	65.0%	6.8%
3-Nitroaniline	< 94 U	515	1400	36.8%	599	1400	42.8%	15.1%
Acenaphthene	< 19 U	309	468	66.0%	321	468	68.6%	3.8%
2,4-Dinitrophenol	< 800 U	753 J	2570	29.3%	695 J	2570	27.0%	8.0%
4-Nitrophenol	< 94 U	958	1400	68.4%	1010	1400	72.1%	5.3%
Dibenzofuran	< 19 U	319	468	68.2%	336	468	71.8%	5.2%
2,6-Dinitrotoluene	< 94 U	1020	1400	72.9%	1060	1400	75.7%	3.8%
2,4-Dinitrotoluene	< 94 U	947	1400	67.6%	990	1400	70.7%	4.4%
Diethylphthalate	< 47 U	320	468	68.4%	336	468	71.8%	4.9%
4-Chlorophenyl-phenylether	< 19 U	326	468	69.7%	384	468	82.1%	16.3%
Fluorene	< 19 U	298	468	63.7%	324	468	69.2%	8.4%
4-Nitroaniline	< 94 U	723	1400	51.6%	767	1400	54.8%	5.9%
4,6-Dinitro-2-Methylphenol	< 190 U	1260	2570	49.0%	1220	2570	47.5%	3.2%
N-Nitrosodiphenylamine	< 19 U	355	468	75.9%	376	468	80.3%	5.7%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: IM-CB-02-20130410-S
MS/MSD

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Date Analyzed MS: 04/24/13 21:27
MSD: 04/24/13 22:04

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 19 U	343	468	73.3%	366	468	78.2%	6.5%
Hexachlorobenzene	< 19 U	306	468	65.4%	308	468	65.8%	0.7%
Pentachlorophenol	< 190 U	428	1400	30.6%	399	1400	28.5%	7.0%
Phenanthrene	95	361	468	56.8%	379	468	60.7%	4.9%
Carbazole	24	429	468	86.5%	456	468	92.3%	6.1%
Anthracene	18 J	313	468	63.0%	327	468	66.0%	4.4%
Di-n-Butylphthalate	17 J	379	468	77.4%	401	468	82.1%	5.6%
Fluoranthene	130	405	468	58.8%	423	468	62.6%	4.3%
Pyrene	130	399	468	57.5%	434	468	65.0%	8.4%
Butylbenzylphthalate	62	501	468	93.8%	657	468	127%	26.9%
3,3'-Dichlorobenzidine	< 140 U	52.4 JQ	1400	3.7%	79.6 JQ	1400	5.7%	41.2%
Benzo(a)anthracene	47	317	468	57.7%	336	468	61.8%	5.8%
bis(2-Ethylhexyl)phthalate	340	638	468	63.7%	682	468	73.1%	6.7%
Chrysene	83	344	468	55.8%	367	468	60.7%	6.5%
Di-n-Octyl phthalate	< 19 U	327	468	69.9%	349	468	74.6%	6.5%
Benzo(a)pyrene	46	330	468	60.7%	346	468	64.1%	4.7%
Indeno(1,2,3-cd)pyrene	24	283	468	55.3%	261	468	50.6%	8.1%
Dibenz(a,h)anthracene	16 J	275	468	55.3%	262	468	52.6%	4.8%
Benzo(g,h,i)perylene	39	267	468	48.7%	236	468	42.1%	12.3%
Aniline	< 500 U	107 J	1400	7.6%	130 J	1400	9.3%	19.4%
N-Nitrosodimethylamine	< 94 U	818	1400	58.4%	795	1400	56.8%	2.9%
1-Methylnaphthalene	< 19 U	329	468	70.3%	341	468	72.9%	3.6%
Total Benzofluoranthenes	95	665	935	61.0%	686	936	63.1%	3.1%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 21:27
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.1	19	---
111-44-4	Bis-(2-Chloroethyl) Ether	3.1	19	---
95-57-8	2-Chlorophenol	2.2	19	---
541-73-1	1,3-Dichlorobenzene	2.5	19	---
106-46-7	1,4-Dichlorobenzene	2.7	19	---
100-51-6	Benzyl Alcohol	5.7	19	---
95-50-1	1,2-Dichlorobenzene	2.3	19	---
95-48-7	2-Methylphenol	4.9	19	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.5	19	---
106-44-5	4-Methylphenol	6.2	19	---
621-64-7	N-Nitroso-Di-N-Propylamine	3.1	19	---
67-72-1	Hexachloroethane	2.8	19	---
98-95-3	Nitrobenzene	3.8	19	---
78-59-1	Isophorone	2.7	19	---
88-75-5	2-Nitrophenol	36	94	---
105-67-9	2,4-Dimethylphenol	3.2	37	---
65-85-0	Benzoic Acid	94	370	---
111-91-1	bis(2-Chloroethoxy) Methane	1.9	19	---
120-83-2	2,4-Dichlorophenol	20	190	---
120-82-1	1,2,4-Trichlorobenzene	3.3	19	---
91-20-3	Naphthalene	2.6	19	---
106-47-8	4-Chloroaniline	21	250	---
87-68-3	Hexachlorobutadiene	4.3	19	---
59-50-7	4-Chloro-3-methylphenol	14	94	---
91-57-6	2-Methylnaphthalene	2.9	19	---
77-47-4	Hexachlorocyclopentadiene	62	370	---
88-06-2	2,4,6-Trichlorophenol	21	94	---
95-95-4	2,4,5-Trichlorophenol	20	94	---
91-58-7	2-Chloronaphthalene	2.5	19	---
88-74-4	2-Nitroaniline	17	94	---
131-11-3	Dimethylphthalate	2.7	19	---
208-96-8	Acenaphthylene	5.3	19	---
99-09-2	3-Nitroaniline	21	94	---
83-32-9	Acenaphthene	3.1	19	---
51-28-5	2,4-Dinitrophenol	100	800	---
100-02-7	4-Nitrophenol	32	94	---
132-64-9	Dibenzofuran	3.8	19	---
606-20-2	2,6-Dinitrotoluene	29	94	---
121-14-2	2,4-Dinitrotoluene	18	94	---
84-66-2	Diethylphthalate	34	47	---
7005-72-3	4-Chlorophenyl-phenylether	4.9	19	---
86-73-7	Fluorene	4.1	19	---
100-01-6	4-Nitroaniline	35	94	---

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Date Analyzed: 04/24/13 21:27

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	20	190	---
86-30-6	N-Nitrosodiphenylamine	5.0	19	---
101-55-3	4-Bromophenyl-phenylether	4.7	19	---
118-74-1	Hexachlorobenzene	4.0	19	---
87-86-5	Pentachlorophenol	45	190	---
85-01-8	Phenanthrene	3.4	19	---
86-74-8	Carbazole	2.5	19	---
120-12-7	Anthracene	4.2	19	---
84-74-2	Di-n-Butylphthalate	7.6	19	---
206-44-0	Fluoranthene	2.7	19	---
129-00-0	Pyrene	1.8	19	---
85-68-7	Butylbenzylphthalate	5.7	19	---
91-94-1	3,3'-Dichlorobenzidine	17	140	---
56-55-3	Benzo(a)anthracene	3.1	19	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	23	---
218-01-9	Chrysene	3.5	19	---
117-84-0	Di-n-Octyl phthalate	5.5	19	---
50-32-8	Benzo(a)pyrene	5.1	19	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.4	19	---
53-70-3	Dibenz(a,h)anthracene	4.0	19	---
191-24-2	Benzo(g,h,i)perylene	4.1	19	---
62-53-3	Aniline	37	500	---
62-75-9	N-Nitrosodimethylamine	13	94	---
90-12-0	1-Methylnaphthalene	2.5	19	---
TOTBFA	Total Benzofluoranthenes	2.6	37	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	67.8%	d4-1,2-Dichlorobenzene	56.2%
d5-Phenol	74.1%	2-Fluorophenol	63.6%
2,4,6-Tribromophenol	50.1%	d4-2-Chlorophenol	63.5%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

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

Sample Amount: 10.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.1	19	---
111-44-4	Bis-(2-Chloroethyl) Ether	3.1	19	---
95-57-8	2-Chlorophenol	2.2	19	---
541-73-1	1,3-Dichlorobenzene	2.5	19	---
106-46-7	1,4-Dichlorobenzene	2.7	19	---
100-51-6	Benzyl Alcohol	5.7	19	---
95-50-1	1,2-Dichlorobenzene	2.3	19	---
95-48-7	2-Methylphenol	4.9	19	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.5	19	---
106-44-5	4-Methylphenol	6.2	19	---
621-64-7	N-Nitroso-Di-N-Propylamine	3.1	19	---
67-72-1	Hexachloroethane	2.8	19	---
98-95-3	Nitrobenzene	3.8	19	---
78-59-1	Isophorone	2.7	19	---
88-75-5	2-Nitrophenol	36	94	---
105-67-9	2,4-Dimethylphenol	3.2	38	---
65-85-0	Benzoic Acid	95	380	---
111-91-1	bis(2-Chloroethoxy) Methane	1.9	19	---
120-83-2	2,4-Dichlorophenol	20	190	---
120-82-1	1,2,4-Trichlorobenzene	3.3	19	---
91-20-3	Naphthalene	2.6	19	---
106-47-8	4-Chloroaniline	21	250	---
87-68-3	Hexachlorobutadiene	4.3	19	---
59-50-7	4-Chloro-3-methylphenol	14	94	---
91-57-6	2-Methylnaphthalene	2.9	19	---
77-47-4	Hexachlorocyclopentadiene	62	380	---
88-06-2	2,4,6-Trichlorophenol	21	94	---
95-95-4	2,4,5-Trichlorophenol	20	94	---
91-58-7	2-Chloronaphthalene	2.5	19	---
88-74-4	2-Nitroaniline	17	94	---
131-11-3	Dimethylphthalate	2.7	19	---
208-96-8	Acenaphthylene	5.3	19	---
99-09-2	3-Nitroaniline	21	94	---
83-32-9	Acenaphthene	3.1	19	---
51-28-5	2,4-Dinitrophenol	100	800	---
100-02-7	4-Nitrophenol	32	94	---
132-64-9	Dibenzofuran	3.8	19	---
606-20-2	2,6-Dinitrotoluene	29	94	---
121-14-2	2,4-Dinitrotoluene	18	94	---
84-66-2	Diethylphthalate	34	47	---
7005-72-3	4-Chlorophenyl-phenylether	5.0	19	---
86-73-7	Fluorene	4.1	19	---
100-01-6	4-Nitroaniline	35	94	---

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

ANALYTICAL RESOURCES INCORPORATED

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Date Analyzed: 04/24/13 22:04

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	20	190	---
86-30-6	N-Nitrosodiphenylamine	5.0	19	---
101-55-3	4-Bromophenyl-phenylether	4.7	19	---
118-74-1	Hexachlorobenzene	4.0	19	---
87-86-5	Pentachlorophenol	45	190	---
85-01-8	Phenanthrene	3.4	19	---
86-74-8	Carbazole	2.5	19	---
120-12-7	Anthracene	4.2	19	---
84-74-2	Di-n-Butylphthalate	7.6	19	---
206-44-0	Fluoranthene	2.7	19	---
129-00-0	Pyrene	1.8	19	---
85-68-7	Butylbenzylphthalate	5.7	19	---
91-94-1	3,3'-Dichlorobenzidine	17	140	---
56-55-3	Benzo(a)anthracene	3.1	19	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	23	---
218-01-9	Chrysene	3.5	19	---
117-84-0	Di-n-Octyl phthalate	5.5	19	---
50-32-8	Benzo(a)pyrene	5.1	19	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.4	19	---
53-70-3	Dibenz(a,h)anthracene	4.0	19	---
191-24-2	Benzo(g,h,i)perylene	4.1	19	---
62-53-3	Aniline	37	510	---
62-75-9	N-Nitrosodimethylamine	13	94	---
90-12-0	1-Methylnaphthalene	2.5	19	---
TOTBFA	Total Benzofluoranthenes	2.6	38	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.8%	2-Fluorobiphenyl	67.8%
d14-p-Terphenyl	68.6%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	74.8%	2-Fluorophenol	62.9%
2,4,6-Tribromophenol	48.3%	d4-2-Chlorophenol	63.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-041613
LCS/LCSD

Lab Sample ID: LCS-041613
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted LCS/LCSD: 04/16/13

Date Analyzed LCS: 04/19/13 13:50
LCSD: 04/19/13 14:25
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	9.2	25.0	36.8%	9.3	25.0	37.2%	1.1%
Bis-(2-Chloroethyl) Ether	17.9	25.0	71.6%	17.4	25.0	69.6%	2.8%
2-Chlorophenol	20.0	25.0	80.0%	19.9	25.0	79.6%	0.5%
1,3-Dichlorobenzene	17.0	25.0	68.0%	16.9	25.0	67.6%	0.6%
1,4-Dichlorobenzene	17.6	25.0	70.4%	17.4	25.0	69.6%	1.1%
Benzyl Alcohol	18.4	25.0	73.6%	18.4	25.0	73.6%	0.0%
1,2-Dichlorobenzene	17.7	25.0	70.8%	17.6	25.0	70.4%	0.6%
2-Methylphenol	17.6	25.0	70.4%	17.5	25.0	70.0%	0.6%
2,2'-Oxybis(1-Chloropropane)	16.1 Q	25.0	64.4%	15.8 Q	25.0	63.2%	1.9%
4-Methylphenol	35.0	50.0	70.0%	35.0	50.0	70.0%	0.0%
N-Nitroso-Di-N-Propylamine	18.1	25.0	72.4%	18.0	25.0	72.0%	0.6%
Hexachloroethane	15.0	25.0	60.0%	14.6	25.0	58.4%	2.7%
Nitrobenzene	20.0	25.0	80.0%	20.1	25.0	80.4%	0.5%
Isophorone	20.6	25.0	82.4%	20.9	25.0	83.6%	1.4%
2-Nitrophenol	22.3	25.0	89.2%	22.8	25.0	91.2%	2.2%
2,4-Dimethylphenol	51.2	75.0	68.3%	50.5	75.0	67.3%	1.4%
Benzoic Acid	48.7	138	35.3%	52.0	138	37.7%	6.6%
bis(2-Chloroethoxy) Methane	18.9	25.0	75.6%	19.0	25.0	76.0%	0.5%
2,4-Dichlorophenol	60.8	75.0	81.1%	61.3	75.0	81.7%	0.8%
1,2,4-Trichlorobenzene	18.4	25.0	73.6%	18.8	25.0	75.2%	2.2%
Naphthalene	21.4	25.0	85.6%	21.4	25.0	85.6%	0.0%
4-Chloroaniline	134	75.0	179%	139	75.0	185%	3.7%
Hexachlorobutadiene	15.4	25.0	61.6%	15.4	25.0	61.6%	0.0%
4-Chloro-3-methylphenol	64.3	75.0	85.7%	64.6	75.0	86.1%	0.5%
2-Methylnaphthalene	22.0	25.0	88.0%	22.0	25.0	88.0%	0.0%
Hexachlorocyclopentadiene	50.6	75.0	67.5%	52.2	75.0	69.6%	3.1%
2,4,6-Trichlorophenol	68.4	75.0	91.2%	70.2	75.0	93.6%	2.6%
2,4,5-Trichlorophenol	73.1	75.0	97.5%	75.3	75.0	100%	3.0%
2-Chloronaphthalene	27.8	25.0	111%	27.4	25.0	110%	1.4%
2-Nitroaniline	78.7	75.0	105%	80.9	75.0	108%	2.8%
Dimethylphthalate	23.4	25.0	93.6%	24.0	25.0	96.0%	2.5%
Acenaphthylene	24.7	25.0	98.8%	24.9	25.0	99.6%	0.8%
3-Nitroaniline	189 Q	75.0	252%	195 Q	75.0	260%	3.1%
Acenaphthene	23.7	25.0	94.8%	23.7	25.0	94.8%	0.0%
2,4-Dinitrophenol	124	138	89.9%	131	138	94.9%	5.5%
4-Nitrophenol	46.4	75.0	61.9%	47.7	75.0	63.6%	2.8%
Dibenzofuran	26.7	25.0	107%	26.6	25.0	106%	0.4%
2,6-Dinitrotoluene	72.5	75.0	96.7%	74.0	75.0	98.7%	2.0%
2,4-Dinitrotoluene	73.5	75.0	98.0%	75.2	75.0	100%	2.3%
Diethylphthalate	26.5	25.0	106%	26.7	25.0	107%	0.8%
4-Chlorophenyl-phenylether	24.3	25.0	97.2%	24.7	25.0	98.8%	1.6%
Fluorene	28.4	25.0	114%	28.4	25.0	114%	0.0%
4-Nitroaniline	102	75.0	136%	105	75.0	140%	2.9%
4,6-Dinitro-2-Methylphenol	113	138	81.9%	118	138	85.5%	4.3%
N-Nitrosodiphenylamine	21.0	25.0	84.0%	21.8	25.0	87.2%	3.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCS-041613**
 LCS/LCSD

Lab Sample ID: LCS-041613 QC Report No: WL49-SAIC
LIMS ID: 13-7779 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed LCS: 04/19/13 13:50
LCSD: 04/19/13 14:25

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	21.3	25.0	85.2%	21.3	25.0	85.2%	0.0%
Hexachlorobenzene	19.7	25.0	78.8%	20.2	25.0	80.8%	2.5%
Pentachlorophenol	70.2	75.0	93.6%	71.2	75.0	94.9%	1.4%
Phenanthrene	22.1	25.0	88.4%	22.5	25.0	90.0%	1.8%
Carbazole	28.6	25.0	114%	29.7	25.0	119%	3.8%
Anthracene	21.8	25.0	87.2%	22.3	25.0	89.2%	2.3%
Di-n-Butylphthalate	21.4	25.0	85.6%	21.9	25.0	87.6%	2.3%
Fluoranthene	24.2	25.0	96.8%	24.7	25.0	98.8%	2.0%
Pyrene	25.4	25.0	102%	26.5	25.0	106%	4.2%
Butylbenzylphthalate	24.3	25.0	97.2%	24.9	25.0	99.6%	2.4%
3,3'-Dichlorobenzidine	62.6	75.0	83.5%	63.7	75.0	84.9%	1.7%
Benzo(a)anthracene	25.4	25.0	102%	26.5	25.0	106%	4.2%
bis(2-Ethylhexyl)phthalate	22.8	25.0	91.2%	23.3	25.0	93.2%	2.2%
Chrysene	24.5	25.0	98.0%	25.3	25.0	101%	3.2%
Di-n-Octyl phthalate	22.8	25.0	91.2%	23.2	25.0	92.8%	1.7%
Benzo(a)pyrene	23.3	25.0	93.2%	24.0	25.0	96.0%	3.0%
Indeno(1,2,3-cd)pyrene	23.9	25.0	95.6%	24.7	25.0	98.8%	3.3%
Dibenz(a,h)anthracene	24.2	25.0	96.8%	24.9	25.0	99.6%	2.9%
Benzo(g,h,i)perylene	24.0	25.0	96.0%	24.7	25.0	98.8%	2.9%
Aniline	55.3	75.0	73.7%	53.8	75.0	71.7%	2.7%
1,2-Diphenylhydrazine	23.3	25.0	93.2%	23.2	25.0	92.8%	0.4%
N-Nitrosodimethylamine	32.1 Q	75.0	42.8%	32.4 Q	75.0	43.2%	0.9%
Azobenzene	23.3	25.0	93.2%	23.2	25.0	92.8%	0.4%
2,3,4,6-Tetrachlorophenol	28.3	25.0	113%	29.5	25.0	118%	4.2%
1-Methylnaphthalene	21.8	25.0	87.2%	22.0	25.0	88.0%	0.9%
Total Benzofluoranthenes	46.4	50.0	92.8%	48.0	50.0	96.0%	3.4%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	78.4%	77.6%
2-Fluorobiphenyl	89.6%	89.2%
d14-p-Terphenyl	99.2%	101%
d4-1,2-Dichlorobenzene	69.2%	68.0%
d5-Phenol	38.9%	38.4%
2-Fluorophenol	51.5%	50.9%
2,4,6-Tribromophenol	112%	114%
d4-2-Chlorophenol	77.1%	75.2%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 05/01/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 19:37
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-041813
LAB CONTROL

Lab Sample ID: LCS-041813
LIMS ID: 13-7785
Matrix: Sediment
Date Analyzed: 04/24/13 19:37

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

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

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

Reported in µg/kg (ppb)

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WL49MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL49

Project: NPDES SAMPLING SUPPO

Lab File ID: 04191303

Date Extracted: 04/16/13

Instrument ID: NT6

Date Analyzed: 04/19/13

Matrix: LIQUID

Time Analyzed: 1316

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WL49LCSW1	WL49LCSW1	04191304	04/19/13
02	WL49LCSDW1	WL49LCSDW1	04191305	04/19/13
03	IM-MH-01-2013041	WL49A	04191306	04/19/13
04	IM-SW-01-2013041	WL49B	04191307	04/19/13
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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-041613**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-041613
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/16/13
Date Analyzed: 04/19/13 13:16
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	0.44	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.26	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.25	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.50	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.47	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.41	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.44	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.33	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.22	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.54	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.36	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.61	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.49	1.0	< 1.0 U
78-59-1	Isophorone	0.26	1.0	< 1.0 U
88-75-5	2-Nitrophenol	0.98	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.63	3.0	< 3.0 U
65-85-0	Benzoic Acid	8.6	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.25	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	1.1	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.50	1.0	< 1.0 U
91-20-3	Naphthalene	0.33	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.7	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.60	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	0.92	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.24	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.9	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	1.2	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.7	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.34	1.0	< 1.0 U
88-74-4	2-Nitroaniline	0.78	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.26	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.27	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.1	3.0	< 3.0 U
83-32-9	Acenaphthene	0.35	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	5.5	20	< 20 U
100-02-7	4-Nitrophenol	2.9	10	< 10 U
132-64-9	Dibenzofuran	0.20	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.3	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.3	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-041613**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-041613 QC Report No: WL49-SAIC
LIMS ID: 13-7779 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 04/19/13 13:16

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.41	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.34	1.0	< 1.0 U
86-73-7	Fluorene	0.27	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.4	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	4.9	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.39	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.26	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.34	1.0	< 1.0 U
87-86-5	Pentachlorophenol	2.7	10	< 10 U
85-01-8	Phenanthrene	0.28	1.0	< 1.0 U
86-74-8	Carbazole	0.25	1.0	< 1.0 U
120-12-7	Anthracene	0.30	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.30	1.0	< 1.0 U
206-44-0	Fluoranthene	0.29	1.0	< 1.0 U
129-00-0	Pyrene	0.38	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.40	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.37	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	1.0	< 1.0 U
218-01-9	Chrysene	0.40	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	0.42	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.44	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.44	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.46	1.0	< 1.0 U
62-53-3	Aniline	0.47	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	1.2	3.0	< 3.0 U
103-33-3	Azobenzene	0.21	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	0.20	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	2.3	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	78.0%	2-Fluorobiphenyl	79.2%
d14-p-Terphenyl	90.4%	d4-1,2-Dichlorobenzene	74.8%
d5-Phenol	38.7%	2-Fluorophenol	52.0%
2,4,6-Tribromophenol	93.1%	d4-2-Chlorophenol	77.6%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPO

Lab File ID: WL49MB

Date Extracted: 04/18/13

Instrument ID: NT10

Date Analyzed: 04/24/13

Matrix: SOLID

Time Analyzed: 1900

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

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

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

Sample ID: MB-041813
METHOD BLANK

Lab Sample ID: MB-041813
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 19:00
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-041813
METHOD BLANK

Lab Sample ID: MB-041813
LIMS ID: 13-7785
Matrix: Sediment
Date Analyzed: 04/24/13 19:00

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

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

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

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

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: 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: 04/19/13 DFTPP Injection Time: 1129

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	42.3
68	Less than 2.0% of mass 69	0.5 (1.2)1
69	Mass 69 relative abundance	39.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	10.0 - 80.0% of mass 198	47.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 60.0% of mass 198	24.6
365	Greater than 1.0% of mass 198	2.86
441	0.0 - 24.0% of mass 442	11.8 (14.4)2
442	50.0 - 200.0% of mass 198	82.4
443	15.0 - 24.0% of mass 442	16.2 (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	CC0419	CC0419	04191301	04/19/13	1129
02	WL49MBW1	WL49MBW1	04191303	04/19/13	1316
03	WL49LCSW1	WL49LCSW1	04191304	04/19/13	1350
04	WL49LCSDW1	WL49LCSDW1	04191305	04/19/13	1425
05	IM-MH-01-2013041	WL49A	04191306	04/19/13	1500
06	IM-SW-01-2013041	WL49B	04191307	04/19/13	1535
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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: 01/25/13 DFTPP Injection Time: 1243

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	39.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.9
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.9
365	Greater than 1.0% of mass 198	4.43
441	0.0 - 24.0% of mass 442	16.5 (15.1)2
442	50.0 - 200.0% of mass 198	109.2
443	15.0 - 24.0% of mass 442	21.8 (20.0)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0125A	IC0125A	01/25/13	1259
02		IC0125B	IC0125B	01/25/13	1336
03		IC0125C	IC0125C	01/25/13	1413
04		IC0125D	IC0125D	01/25/13	1450
05		IC0125E	IC0125E	01/25/13	1527
06		IC0125F	IC0125F	01/25/13	1603
07		IC0125H	IC0125H	01/25/13	1716
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 04/24/13 DFTPP Injection Time: 1730

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.0
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	26.7
365	Greater than 1.0% of mass 198	3.93
441	0.0 - 24.0% of mass 442	16.4 (15.4)2
442	50.0 - 200.0% of mass 198	107.0
443	15.0 - 24.0% of mass 442	20.3 (18.9)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0424	CC0424	04/24/13	1746
02	WL49MBS1	WL49MBS1	WL49MB	04/24/13	1900
03	WL49LCSS1	WL49LCSS1	WL49SB	04/24/13	1937
04	IM-CB-01-2013041	WL49F	WL49F	04/24/13	2014
05	IM-CB-02-2013041	WL49G	WL49G	04/24/13	2051
06	IM-CB-02-201304	WL49GMS	WL49GMS	04/24/13	2127
07	IM-CB-02-201304	WL49GMSD	WL49GMSD	04/24/13	2204
08	GR-CB-07-2013041	WL67A	WL67A	04/24/13	2241
09	GR-WS-05-2013041	WL67B	WL67B	04/24/13	2318
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 04/25/13 DFTPP Injection Time: 1106

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

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0425	CC0425	04/25/13	1121
02	GR-WS-05-2013041	WL67B	WL67B2	04/25/13	1158
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6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 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: WL49 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
1,2-Diphenylhydrazine										
Benzidine			0.109	0.082	0.088	0.102	0.104		0.097	11.7
p-Cymene										
Caffeine										
Retene	0.534	0.493	0.523	0.475	0.434	0.416	0.424		0.471	10.2
Perylene	0.893	0.823	0.856	0.739	0.681	0.632	0.618		0.749	14.8

(1) Cannot be seperated from Diphenylamine

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

FORM VI SV-7

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 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
3-beta-Coprostanol										
Cholesterol										
beta-Sitosterol										
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
Guaiacol	1.246	1.159	1.233	1.073	0.911	0.812	0.848		1.040	17.6
4,5-Dichloroguaiacol	0.242	0.249	0.276	0.264	0.231	0.219	0.230		0.244	8.3
4,5,6-Trichloroguaiacol	0.169	0.185	0.212	0.207	0.184	0.172	0.179		0.187	8.8
3,4,5-Trichloroguaiacol	0.115	0.118	0.127	0.122	0.109	0.099	0.109		0.114	8.3
Tetrachloroguaiacol	0.101	0.109	0.125	0.109	0.101	0.093	0.096		0.105	10.1
Azobenzene (1,2-DP-Hydrazine	1.598	1.419	1.455	1.244	1.130	1.028	0.996		1.267	18.2
Biphenyl	1.506	1.365	1.246	1.056	0.902	0.793	0.820		1.098	0.992
Diphenyl Oxide	0.973	0.827	0.872	0.781	0.695	0.650	0.652		0.778	15.6
Beta-Pinene										
Tributyl Phosphate	1.072	0.947	0.987	0.841	0.735	0.631	0.656		0.838	0.992
Dibutyl Phenyl Phosphate	0.570	0.579	0.648	0.574	0.511	0.490	0.330		0.529	19.2
Butyl Diphenyl Phosphate	0.213	0.200	0.210	0.187	0.170	0.156	0.153		0.184	13.6
Triphenyl Phosphate	0.175	0.163	0.192	0.183	0.170	0.166	0.175		0.175	5.7
7,12-Dimethylbenz(a)anthrace										
2,3,4,6-Tetrachlorophenol	0.211	0.277	0.332	0.308	0.301	0.276	0.293		0.285	13.3
Quinoline										
Furfuraldehyde										
Acetophenone	2.148	1.978	2.146	1.850	1.732	1.639	1.685		1.882	11.3
3,4-Dimethylphenol										
Safrole										
N-Tetradecane										
2-Isopropylnaphthalene										
N-Hexadecane										
1-Methylfluorene										
Dibenzothiophene										
1-Methylphenanthrene										
3,6-Dimethylphenanthrene										
Butylatedhydroxytoluene	1.143	0.989	1.018	0.903	0.740	0.642	0.614		0.864	0.996
2,3,5,6-Tetrachlorophenol										
2,3,4,5-tetrachlorophenol										
Chlorobenzilate										
Isodrin										

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

FORM VI SV-8

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 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
Diallate A										
Diallate B										
1,2-Dibromo-3-Chloropropane										
1,4-Dioxane	0.708	0.626	0.687	0.616	0.601	0.585	0.621	0.747	0.649	8.9
alpha-Terpineol	0.299	0.289	0.283	0.250	0.232	0.216	0.211		0.254	14.3
4,4'-DDE										
4,4'-DDD										
4,4'-DDT										
Dieldrin										
TCMX										
DCBP										
1,2,4,5-Tetrachlorobenzene	0.597	0.500	0.533	0.472	0.449	0.429	0.439		0.488	12.3
Benzo(e)pyrene										
Chlorpyrifos										
Diazinon										
Kelthane										
Methyl Parathion										
Ethyl Parathion										
Ethion										
4-Nonylphenol										
Tetraethyl Tin										
1,2,3-Trichloronaphthalene										
1,2,3,4-Tetrachloronapthalen										
1,2,3,5,8-Pentachloronaphtha										
1,2,3,4,6,7-Hexachloronaphth										
1,2,3,4,5,6,7-Heptachloronap										
Octachloronaphthalene										
2,2',4,4',5-Pentabromobiphen										
Pentachlorobenzene	0.540	0.449	0.484	0.430	0.395	0.371	0.397		0.438	13.4
4-tert-Butylphenol										
N,N-Dimethylaniline										
2,3-Dimethylaniline										
2,4-Dimethylaniline										
2,5-Dimethylaniline										
2,6-Dimethylaniline										
3,4-Dimethylaniline										
3,5-Dimethylaniline										

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

FORM VI SV-9

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 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
p-Benzoquinone	0.050	0.070	0.090	0.087	0.080	0.079	0.077		0.076	17.4
2-Benzyl-4-Chlorophenol	0.156	0.168	0.196	0.176	0.157	0.148	0.159		0.166	9.6
n-Decane										
n-Octadecane										
3,4,6-Trichloroguaiacol	0.431	0.474	0.530	0.501	0.419	0.415	0.423		0.456	10.0
4,6-Dichloroguaiacol	0.499	0.534	0.613	0.576	0.506	0.480	0.491		0.528	9.3
3,4-Dichloroguaiacol	0.439	0.428	0.498	0.466	0.406	0.385	0.409		0.433	8.9
4-Chloroguaiacol	0.486	0.549	0.650	0.624	0.558	0.497	0.568		0.562	10.7
Carbaryl	0.397	0.475	0.561	0.491	0.464	0.426	0.421		0.462	11.9
Total Benzofluoranthenes	1.078	1.027	1.108	0.895	0.836	0.757	0.744		0.921	16.4
2,6-Dichlorophenol		0.961	1.018	0.964	0.820	0.767	0.783		0.886	12.2
N-Nitrosomethylethylamine		0.667	0.696	0.684	0.626	0.632	0.660		0.661	4.2
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
p-Cresol-d4										
Anthracene-d10										
Fluoranthene-d10										
Dibenz(a,h)anthracene-d14										
Diphenyl-d10										
D10-1-methylnaphthalene										
d8-1,4-Dioxane	0.675	0.597	0.660	0.604	0.587	0.548	0.579		0.607	7.4

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

FORM VI SV-10

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

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

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be seperated from Diphenylamine

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

FORM VI SV-2

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
2,3,4,6-Tetrachlorophenol	0.329	0.344	0.373	0.382	0.393	0.392	0.395	0.372	7.0
Total Benzofluoranthenes	1.238	1.131	1.130	1.111	1.140	1.118	1.120	1.141	3.8
2-Fluorophenol	1.346	1.221	1.319	1.250	1.327	1.274	1.216	1.279	4.1
Phenol-d5	1.640	1.529	1.548	1.558	1.646	1.601	1.589	1.587	2.8
2-Chlorophenol-d4	1.454	1.368	1.391	1.344	1.389	1.367	1.306	1.374	3.3
1,2-Dichlorobenzene-d4	1.188	0.999	1.001	0.957	0.978	0.992	0.953	1.010	8.0
Nitrobenzene-d5	0.395	0.354	0.368	0.361	0.372	0.367	0.368	0.369	3.5
2-Fluorobiphenyl	1.492	1.363	1.371	1.342	1.369	1.328	1.341	1.372	4.0
2,4,6-Tribromophenol	0.243	0.241	0.254	0.262	0.263	0.262	0.262	0.255	3.8
Terphenyl-d14	0.805	0.736	0.790	0.761	0.768	0.774	0.743	0.768	3.2

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 04/19/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1129

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.597	1.416	0.800	AVRG	-11.3	
Bis(2-Chloroethyl)ether	1.387	1.166	0.700	AVRG	-15.9	
2-Chlorophenol	1.278	1.169	0.800	AVRG	-8.5	
1,3-Dichlorobenzene	1.492	1.396	0.010	AVRG	-6.4	
1,4-Dichlorobenzene	1.453	1.378	0.010	AVRG	-5.2	
1,2-Dichlorobenzene	1.389	1.278	0.010	AVRG	-8.0	
Benzyl alcohol	0.870	0.743	0.010	AVRG	-14.6	
2,2'-oxybis(1-Chloropropane)	2.204	1.705	0.010	AVRG	-22.6	<-
2-Methylphenol	1.211	1.058	0.700	AVRG	-12.6	
Hexachloroethane	0.588	0.523	0.300	AVRG	-11.0	
N-Nitroso-di-n-propylamine	1.041	0.898	0.500	AVRG	-13.7	
4-Methylphenol	1.198	1.100	0.600	AVRG	-8.2	
Nitrobenzene	0.384	0.354	0.200	AVRG	-7.8	
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	0.309	0.200	AVRG	-8.0	
Bis(2-Chloroethoxy)methane	0.439	0.380	0.300	AVRG	-13.4	
2,4-Dichlorophenol	0.259	0.257	0.200	AVRG	-0.8	
1,2,4-Trichlorobenzene	0.322	0.306	0.010	AVRG	-5.0	
Naphthalene	25.00	24.22	0.700	2ORDR	-3.1	
Benzoic acid	0.291	0.250	0.010	AVRG	-14.1	
4-Chloroaniline	25.00	20.97	0.010	2ORDR	-16.1	
Hexachlorobutadiene	0.196	0.193	0.010	AVRG	-1.5	
4-Chloro-3-methylphenol	0.275	0.264	0.200	AVRG	-4.0	
2-Methylnaphthalene	0.486	0.453	0.400	AVRG	-6.8	
Hexachlorocyclopentadiene	0.321	0.342	0.050	AVRG	6.5	
2,4,6-Trichlorophenol	0.336	0.317	0.200	AVRG	-5.6	
2,4,5-Trichlorophenol	0.332	0.334	0.200	AVRG	0.6	
2-Chloronaphthalene	25.00	25.29	0.800	2ORDR	1.2	
2-Nitroaniline	0.296	0.275	0.010	AVRG	-7.1	
Acenaphthylene	1.578	1.421	0.900	AVRG	-9.9	
Dimethylphthalate	1.204	1.060	0.010	AVRG	-12.0	
2,6-Dinitrotoluene	0.257	0.261	0.200	AVRG	1.6	
Acenaphthene	1.021	0.896	0.900	AVRG	-12.2	*
3-Nitroaniline	25.00	19.40	0.010	2ORDR	-22.4	<-
2,4-Dinitrophenol	0.184	0.194	0.010	AVRG	5.4	
Dibenzofuran	1.336	1.217	0.800	AVRG	-8.9	

<- 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: WL49 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 04/19/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1129

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.130	0.156	0.010	AVRG	20.0	
2,4-Dinitrotoluene	0.348	0.341	0.200	AVRG	-2.0	
Fluorene	25.00	25.66	0.900	2ORDR	2.6	
4-Chlorophenyl-phenylether	0.586	0.563	0.400	AVRG	-3.9	
Diethylphthalate	1.115	1.062	0.010	AVRG	-4.8	
4-Nitroaniline	0.196	0.175	0.010	AVRG	-10.7	
4,6-Dinitro-2-methylphenol	0.144	0.137	0.010	AVRG	-4.9	
N-Nitrosodiphenylamine(1)	0.544	0.460	0.010	AVRG	-15.4	
4-Bromophenyl-phenylether	0.219	0.192	0.100	AVRG	-12.3	
Hexachlorobenzene	0.226	0.198	0.100	AVRG	-12.4	
Pentachlorophenol	0.134	0.118	0.050	AVRG	-11.9	
Phenanthrene	0.989	0.828	0.700	AVRG	-16.3	
Anthracene	0.991	0.835	0.700	AVRG	-15.7	
Carbazole	25.00	25.10	0.010	2ORDR	0.4	
Di-n-butylphthalate	1.249	1.028	0.010	AVRG	-17.7	
Fluoranthene	1.041	0.931	0.600	AVRG	-10.6	
Pyrene	1.092	0.939	0.600	AVRG	-14.0	
Butylbenzylphthalate	0.534	0.464	0.010	AVRG	-13.1	
Benzo(a)anthracene	0.912	0.846	0.800	AVRG	-7.2	
3,3'-Dichlorobenzidine	0.251	0.222	0.010	AVRG	-11.6	
Chrysene	0.931	0.801	0.700	AVRG	-14.0	
bis(2-Ethylhexyl)phthalate	0.589	0.517	0.010	AVRG	-12.2	
Di-n-octylphthalate	0.944	0.831	0.010	AVRG	-12.0	
Benzo(b)fluoranthene	25.00	25.30	0.700	2ORDR	1.2	
Benzo(k)fluoranthene	25.00	19.90	0.700	2ORDR	-20.4	<-
Benzo(a)pyrene	0.855	0.768	0.700	AVRG	-10.2	
Indeno(1,2,3-cd)pyrene	1.029	0.961	0.500	AVRG	-6.6	
Dibenzo(a,h)anthracene	0.810	0.782	0.400	AVRG	-3.4	
Benzo(g,h,i)perylene	0.880	0.845	0.500	AVRG	-4.0	
N-Nitrosodimethylamine	0.942	0.744	0.010	AVRG	-21.0	<-
Aniline	1.770	1.456	0.010	AVRG	-17.7	
Benzidine	0.097		0.010	AVRG		
Pyridine	1.494	1.290	0.010	AVRG	-13.6	
1-methylnaphthalene	0.494	0.460	0.010	AVRG	-6.9	
Azobenzene (1,2-DP-Hydrazine	1.267	1.095	0.010	AVRG	-13.6	
Total Benzofluoranthenes	0.921	0.801	0.010	AVRG	-13.0	

(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: WL49 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 04/19/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1129

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
2,3,4,6-Tetrachlorophenol	0.285	0.283	0.010	AVRG	-0.7	
2,6-Dichlorophenol	0.886	0.874	0.010	AVRG	-1.4	
N-Nitrosomethylethylamine	0.661	0.520	0.010	AVRG	-21.3	<-
2-Fluorophenol	1.296	1.094	0.010	AVRG	-15.6	
Phenol-d5	1.517	1.390	0.010	AVRG	-8.4	
2-Chlorophenol-d4	1.282	1.137	0.010	AVRG	-11.3	
1,2-Dichlorobenzene-d4	0.902	0.754	0.010	AVRG	-16.4	
Nitrobenzene-d5	0.401	0.341	0.010	AVRG	-15.0	
2-Fluorobiphenyl	1.262	1.040	0.010	AVRG	-17.6	
2,4,6-Tribromophenol	0.158	0.157	0.010	AVRG	-0.6	
Terphenyl-d14	0.702	0.574	0.010	AVRG	-18.2	

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10

Cont. Calib. Date: 04/24/13

Init. Calib. Date: 01/25/13

Cont. Calib. Time: 1746

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

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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 04/19/13

		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	464116	7.94	1756453	9.98	1083823	12.83
	UPPER LIMIT		8.44		10.48		13.33
	LOWER LIMIT		7.44		9.48		12.33
01	WL49MBW1	360069	7.93	1299628	9.97	748382	12.82
02	WL49LCSW1	386864	7.93	1433725	9.98	775873	12.83
03	WL49LCSDW1	410727	7.93	1494249	9.98	812538	12.83
04	IM-MH-01-201	356961	7.94	1302849	9.97	805341	12.83
05	IM-SW-01-201	395808	7.93	1420927	9.97	841821	12.82
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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: WL49 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 04/19/13

		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	1888610	15.19	1943161	19.48	1979670	21.63
	UPPER LIMIT		15.69		19.98		22.13
	LOWER LIMIT		14.69		18.98		21.13
01	WL49MBW1	1217740	15.18	1223081	19.47	1177680	21.62
02	WL49LCSW1	1431401	15.19	1324584	19.48	1417108	21.62
03	WL49LCSDW1	1498680	15.19	1368705	19.48	1462650	21.62
04	IM-MH-01-201	1320655	15.19	1496973	19.48	1535490	21.63
05	IM-SW-01-201	1424411	15.18	1521308	19.48	1497945	21.64
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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: WL49 | Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 | Cont. Cal Date: 04/19/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	2026355	21.09				
	UPPER LIMIT	4052710					
	LOWER LIMIT	1013178					
	CCAL	2354831	20.63				
	UPPER LIMIT		21.13				
	LOWER LIMIT		20.13				
01	WL49MBW1	1656401	20.63				
02	WL49LCSW1	1768186	20.63				
03	WL49LCSDW1	1826924	20.62				
04	IM-MH-01-201	1854200	20.63				
05	IM-SW-01-201	1794757	20.63				
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

FORM VIII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL67

Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0125A

Ical Date: 01/25/13

Instrument ID: NT10

Cont. Cal Date: 04/24/13

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

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

* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

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

* Values outside of QC limits.

FORM VIII SV-2

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

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

* Values outside of QC limits.

FORM VIII SV-3

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IM-CB-01-20130410-S**
Extraction Method: SW3546 **SAMPLE**
Page 1 of 1

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 20:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 1.13 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 44.4 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**54**	**130**	**600**
106-46-7	1,4-Dichlorobenzene	32	130	< 130 U
120-82-1	1,2,4-Trichlorobenzene	49	130	< 130 U
118-74-1	Hexachlorobenzene	33	130	< 130 U
87-68-3	Hexachlorobutadiene	25	130	< 130 U
131-11-3	**Dimethylphthalate**	**36**	**130**	**290**
84-66-2	**Diethylphthalate**	**87**	**130**	**120 J**
85-68-7	**Butylbenzylphthalate**	**77**	**130**	**7,200 Q**
95-48-7	**2-Methylphenol**	**48**	**130**	**88 J**
105-67-9	2,4-Dimethylphenol	77	530	< 530 U
86-30-6	N-Nitrosodiphenylamine	37	530	< 530 U
100-51-6	Benzyl Alcohol	190	530	< 530 U
87-86-5	Pentachlorophenol	380	1,300	< 1,300 U
95-50-1	1,2-Dichlorobenzene	29	130	< 130 U
541-73-1	1,3-Dichlorobenzene	35	130	< 130 U
621-64-7	N-Nitroso-Di-N-Propylamine	250	320	< 320 U
62-75-9	N-Nitrosodimethylamine	84	660	< 660 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	64.8%
d14-p-Terphenyl	69.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IM-CB-02-20130410-S**
Extraction Method: SW3546 **SAMPLE**
Page 1 of 1

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 20:51
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 18.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**1.9**	**4.7**	**14**
106-46-7	1,4-Dichlorobenzene	1.1	4.7	< 4.7 U
120-82-1	1,2,4-Trichlorobenzene	1.7	4.7	< 4.7 U
118-74-1	Hexachlorobenzene	1.2	4.7	< 4.7 U
87-68-3	Hexachlorobutadiene	0.90	4.7	< 4.7 U
131-11-3	**Dimethylphthalate**	**1.3**	**4.7**	**5.4**
84-66-2	Diethylphthalate	3.0	4.7	< 4.7 U
85-68-7	**Butylbenzylphthalate**	**2.7**	**4.7**	**75 Q**
95-48-7	2-Methylphenol	1.7	4.7	< 4.7 U
105-67-9	2,4-Dimethylphenol	2.7	19	< 19 U
86-30-6	**N-Nitrosodiphenylamine**	**1.3**	**19**	**5.8 J**
100-51-6	**Benzyl Alcohol**	**6.6**	**19**	**690 EQ**
87-86-5	Pentachlorophenol	13	47	< 47 U
95-50-1	1,2-Dichlorobenzene	1.0	4.7	< 4.7 U
541-73-1	1,3-Dichlorobenzene	1.2	4.7	< 4.7 U
621-64-7	N-Nitroso-Di-N-Propylamine	8.9	11	< 11 U
62-75-9	N-Nitrosodimethylamine	2.9	23	< 23 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	58.4%
d14-p-Terphenyl	57.4%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	FPH	TER	TOT OUT
IM-CB-01-20130410-S	64.8%	69.6%	0
MB-041813	55.5%	59.6%	0
LCS-041813	64.3%	60.4%	0
IM-CB-02-20130410-S	58.4%	57.4%	0
IM-CB-02-20130410-S MS	64.0%	60.2%	0
IM-CB-02-20130410-S MSD	61.3%	63.6%	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: 13-7784 to 13-7785

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IM-CB-02-20130410-S**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted MS/MSD: 04/18/13

Sample Amount MS: 10.69 g-dry-wt
MSD: 10.68 g-dry-wt

Date Analyzed MS: 04/24/13 21:27
MSD: 04/24/13 22:04

Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL

Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ

Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	14	268	468	54.3%	265	468	53.6%	1.1%
1,4-Dichlorobenzene	< 4.7 U	266	468	56.8%	270	468	57.7%	1.5%
1,2,4-Trichlorobenzene	< 4.7 U	282	468	60.3%	292	468	62.4%	3.5%
Hexachlorobenzene	< 4.7 U	292	468	62.4%	304	468	65.0%	4.0%
Hexachlorobutadiene	< 4.7 U	286	468	61.1%	298	468	63.7%	4.1%
Dimethylphthalate	5.4	334	468	70.2%	344	468	72.4%	2.9%
Diethylphthalate	< 4.7 U	308	468	65.8%	316	468	67.5%	2.6%
Butylbenzylphthalate	75 Q	534 Q	468	98.1%	719 Q	468	138%	29.5%
2-Methylphenol	< 4.7 U	306	468	65.4%	320	468	68.4%	4.5%
2,4-Dimethylphenol	< 19 U	599	1400	42.8%	784	1400	56.0%	26.8%
N-Nitrosodiphenylamine	5.8 J	372	468	78.2%	388	468	81.7%	4.2%
Benzyl Alcohol	690 EQ	331 Q	468	NA	317 Q	468	NA	4.3%
Pentachlorophenol	< 47 U	488 Q	1400	34.9%	453 Q	1400	32.4%	7.4%
1,2-Dichlorobenzene	< 4.7 U	272	468	58.1%	276	468	59.0%	1.5%
1,3-Dichlorobenzene	< 4.7 U	262	468	56.0%	264	468	56.4%	0.8%
N-Nitroso-Di-N-Propylamine	< 11 U	323	468	69.0%	337	468	72.0%	4.2%
N-Nitrosodimethylamine	< 23 U	772	1400	55.1%	737	1400	52.6%	4.6%

Reported in µg/kg (ppb)

NA-No recovery due to high concentration (> 4X) of analyte in original sample, calculated negative recovery, or undetected spike.
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IM-CB-02-20130410-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 21:27
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 18.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	1.9	4.7	---
106-46-7	1,4-Dichlorobenzene	1.1	4.7	---
120-82-1	1,2,4-Trichlorobenzene	1.7	4.7	---
118-74-1	Hexachlorobenzene	1.2	4.7	---
87-68-3	Hexachlorobutadiene	0.90	4.7	---
131-11-3	Dimethylphthalate	1.3	4.7	---
84-66-2	Diethylphthalate	3.0	4.7	---
85-68-7	Butylbenzylphthalate	2.7	4.7	---
95-48-7	2-Methylphenol	1.7	4.7	---
105-67-9	2,4-Dimethylphenol	2.7	19	---
86-30-6	N-Nitrosodiphenylamine	1.3	19	---
100-51-6	Benzyl Alcohol	6.6	19	---
87-86-5	Pentachlorophenol	13	47	---
95-50-1	1,2-Dichlorobenzene	1.0	4.7	---
541-73-1	1,3-Dichlorobenzene	1.2	4.7	---
621-64-7	N-Nitroso-Di-N-Propylamine	8.9	11	---
62-75-9	N-Nitrosodimethylamine	2.9	23	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	64.0%
d14-p-Terphenyl	60.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: IM-CB-02-20130410-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

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

Sample Amount: 10.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 18.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	1.9	4.7	---
106-46-7	1,4-Dichlorobenzene	1.1	4.7	---
120-82-1	1,2,4-Trichlorobenzene	1.7	4.7	---
118-74-1	Hexachlorobenzene	1.2	4.7	---
87-68-3	Hexachlorobutadiene	0.90	4.7	---
131-11-3	Dimethylphthalate	1.3	4.7	---
84-66-2	Diethylphthalate	3.1	4.7	---
85-68-7	Butylbenzylphthalate	2.7	4.7	---
95-48-7	2-Methylphenol	1.7	4.7	---
105-67-9	2,4-Dimethylphenol	2.7	19	---
86-30-6	N-Nitrosodiphenylamine	1.3	19	---
100-51-6	Benzyl Alcohol	6.6	19	---
87-86-5	Pentachlorophenol	13	47	---
95-50-1	1,2-Dichlorobenzene	1.0	4.7	---
541-73-1	1,3-Dichlorobenzene	1.2	4.7	---
621-64-7	N-Nitroso-Di-N-Propylamine	8.9	11	---
62-75-9	N-Nitrosodimethylamine	2.9	23	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	61.3%
d14-p-Terphenyl	63.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-041813**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-041813
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/18/13
Date Analyzed LCS: 04/24/13 19:37
Instrument/Analyst LCS: NT10/YZ

Sample Amount LCS: 10.00 g-dry-wt
Final Extract Volume LCS: 1.0 mL
Dilution Factor LCS: 1.00

Analyte	LCS		Spike Added	Recovery
Dibenz(a,h)anthracene	309		500	61.8%
1,4-Dichlorobenzene	280		500	56.0%
1,2,4-Trichlorobenzene	286		500	57.2%
Hexachlorobenzene	274		500	54.8%
Hexachlorobutadiene	285		500	57.0%
Dimethylphthalate	316		500	63.2%
Diethylphthalate	308		500	61.6%
Butylbenzylphthalate	436	Q	500	87.2%
2-Methylphenol	309		500	61.8%
2,4-Dimethylphenol	579		1500	38.6%
N-Nitrosodiphenylamine	335		500	67.0%
Benzyl Alcohol	269	Q	500	53.8%
Pentachlorophenol	841	Q	1500	56.1%
1,2-Dichlorobenzene	288		500	57.6%
1,3-Dichlorobenzene	275		500	55.0%
N-Nitroso-Di-N-Propylamine	318		500	63.6%
N-Nitrosodimethylamine	858		1500	57.2%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

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

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WL67
Project: NPDES SAMPLING SUPPO

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

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

Matrix: SOLID
Time Analyzed: 1900

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

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: MB-041813
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/18/13
Date Analyzed: 04/24/13 19:00
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.2	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.9	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.96	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.3	5.0	< 5.0 U
84-66-2	Diethylphthalate	3.3	5.0	< 5.0 U
85-68-7	Butylbenzylphthalate	2.9	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.8	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	2.9	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	Benzyl Alcohol	7.0	20	< 20 U
87-86-5	Pentachlorophenol	14	50	< 50 U
95-50-1	1,2-Dichlorobenzene	1.1	5.0	< 5.0 U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	< 5.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.5	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.2	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	55.5%
d14-p-Terphenyl	59.6%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 01/25/13 DFTPP Injection Time: 1243

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	24.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	39.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.9
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	28.9
365	Greater than 1.0% of mass 198	4.43
441	0.0 - 24.0% of mass 442	16.5 (15.1)2
442	50.0 - 200.0% of mass 198	109.2
443	15.0 - 24.0% of mass 442	21.8 (20.0)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0125A	IC0125A	01/25/13	1259
02		IC0125C	IC0125C	01/25/13	1413
03		IC0125E	IC0125E	01/25/13	1527
04		IC0125F	IC0125F	01/25/13	1603
05		IC0125G	IC0125G	01/25/13	1640
06		IC0125H	IC0125H	01/25/13	1716
07		IC0125I	IC0125I	01/25/13	1753
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 04/24/13 DFTPP Injection Time: 1730

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.0
68	Less than 2.0% of mass 69	0.6 (1.7)1
69	Mass 69 relative abundance	33.3
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	26.7
365	Greater than 1.0% of mass 198	3.93
441	0.0 - 24.0% of mass 442	16.4 (15.4)2
442	50.0 - 200.0% of mass 198	107.0
443	15.0 - 24.0% of mass 442	20.3 (18.9)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0424A	CC0424A	04/24/13	1823
02	WL49MBS1	WL49MBS1	WL49MB	04/24/13	1900
03	WL49LCSS1	WL49LCSS1	WL49SB	04/24/13	1937
04	IM-CB-01-2013041	WL49F	WL49F	04/24/13	2014
05	IM-CB-02-2013041	WL49G	WL49G	04/24/13	2051
06	IM-CB-02-201304	WL49GMS	WL49GMS	04/24/13	2127
07	IM-CB-02-201304	WL49GMSD	WL49GMSD	04/24/13	2204
08	GR-CB-07-2013041	WL67A	WL67A	04/24/13	2241
09	GR-WS-05-2013041	WL67B	WL67B	04/24/13	2318
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be seperated from Diphenylamine

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC — Client: SAIC

ARI Job No: WL67 — Project: NPDES SAMPLING SUPPORT

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

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

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

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL67 Project: NPDES SAMPLING SUPPORT

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

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

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

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

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: SAIC

ARI Job No: WL67 — Project: NPDES SAMPLING SUPPORT

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

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

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

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: IM-MH-01-20130410-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized: MW
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/15/13
Date Analyzed: 04/19/13 19:49
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**	**0.036**
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**	**0.018**
129-00-0	**Pyrene**	**0.00070**	**0.010**	**0.023**
56-55-3	**Benzo(a)anthracene**	**0.0013**	**0.010**	**0.017**
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	68.3%
d10-2-Methylnaphthalene	68.7%
d14-Dibenzo(a,h)anthracen	52.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: IM-SW-01-20130410-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WL49B
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized: MW
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/15/13
Date Analyzed: 04/20/13 16:21
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	0.017	0.20	< 0.20 U
91-57-6	2-Methylnaphthalene	0.014	0.20	< 0.20 U
90-12-0	1-Methylnaphthalene	0.018	0.20	< 0.20 U
208-96-8	Acenaphthylene	0.016	0.20	< 0.20 U
83-32-9	Acenaphthene	0.017	0.20	< 0.20 U
86-73-7	**Fluorene**	**0.028**	**0.20**	**0.23**
85-01-8	**Phenanthrene**	**0.020**	**0.20**	**1.8**
120-12-7	**Anthracene**	**0.012**	**0.20**	**0.81**
206-44-0	**Fluoranthene**	**0.018**	**0.20**	**7.2**
129-00-0	**Pyrene**	**0.014**	**0.20**	**6.6**
56-55-3	**Benzo(a)anthracene**	**0.025**	**0.20**	**2.2**
218-01-9	**Chrysene**	**0.031**	**0.20**	**4.7**
205-99-2	**Benzo(b)fluoranthene**	**0.051**	**0.20**	**2.5**
207-08-9	**Benzo(k)fluoranthene**	**0.017**	**0.20**	**1.2**
50-32-8	**Benzo(a)pyrene**	**0.023**	**0.20**	**1.9**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**0.036**	**0.20**	**1.2**
53-70-3	**Dibenz(a,h)anthracene**	**0.019**	**0.20**	**0.32**
191-24-2	**Benzo(g,h,i)perylene**	**0.037**	**0.20**	**1.8**
132-64-9	Dibenzofuran	0.019	0.20	< 0.20 U
TOTBFA	**Total Benzofluoranthenes**	**0.051**	**0.40**	**4.7**

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	86.0%
d10-2-Methylnaphthalene	60.3%
d14-Dibenzo(a,h)anthracen	49.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	FLN	MNP	DBA	TOT OUT
MB-041513	82.7%	71.3%	74.0%	0
LCS-041513	79.0%	71.0%	73.0%	0
LCSD-041513	77.0%	68.3%	74.7%	0
IM-MH-01-20130410-W	68.3%	68.7%	52.7%	0
IM-SW-01-20130410-W	86.0%	60.3%	49.7%	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: 13-7779 to 13-7780

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-041513**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-041513
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/15/13

Date Analyzed LCS: 04/19/13 16:55
LCSD: 04/19/13 17:24
Instrument/Analyst LCS: NT11/VTS
LCSD: NT11/VTS

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	0.203	0.300	67.7%	0.200	0.300	66.7%	1.5%
2-Methylnaphthalene	0.202	0.300	67.3%	0.201	0.300	67.0%	0.5%
1-Methylnaphthalene	0.202	0.300	67.3%	0.201	0.300	67.0%	0.5%
Acenaphthylene	0.200	0.300	66.7%	0.202	0.300	67.3%	1.0%
Acenaphthene	0.201	0.300	67.0%	0.202	0.300	67.3%	0.5%
Fluorene	0.210	0.300	70.0%	0.211	0.300	70.3%	0.5%
Phenanthrene	0.200	0.300	66.7%	0.200	0.300	66.7%	0.0%
Anthracene	0.182	0.300	60.7%	0.181	0.300	60.3%	0.6%
Fluoranthene	0.218	0.300	72.7%	0.220	0.300	73.3%	0.9%
Pyrene	0.205	0.300	68.3%	0.210	0.300	70.0%	2.4%
Benzo(a)anthracene	0.212	0.300	70.7%	0.215	0.300	71.7%	1.4%
Chrysene	0.208	0.300	69.3%	0.216	0.300	72.0%	3.8%
Benzo(b)fluoranthene	0.201	0.300	67.0%	0.214	0.300	71.3%	6.3%
Benzo(k)fluoranthene	0.204	0.300	68.0%	0.213	0.300	71.0%	4.3%
Benzo(a)pyrene	0.170	0.300	56.7%	0.172	0.300	57.3%	1.2%
Indeno(1,2,3-cd)pyrene	0.209	0.300	69.7%	0.219	0.300	73.0%	4.7%
Dibenz(a,h)anthracene	0.205	0.300	68.3%	0.215	0.300	71.7%	4.8%
Benzo(g,h,i)perylene	0.199	0.300	66.3%	0.209	0.300	69.7%	4.9%
Dibenzofuran	0.199	0.300	66.3%	0.200	0.300	66.7%	0.5%
Total Benzofluoranthenes	0.609	0.900	67.7%	0.638	0.900	70.9%	4.7%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	79.0%	77.0%
d10-2-Methylnaphthalene	71.0%	68.3%
d14-Dibenzo(a,h)anthracene	73.0%	74.7%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WL62MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WL49

Project: NPDES SAMPLING

Lab File ID: WL62MB

Date Extracted: 04/15/13

Instrument ID: NT11

Date Analyzed: 04/19/13

Matrix: LIQUID

Time Analyzed: 1626

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WL62LCSW1	WL62LCSW1	WL62SB	04/19/13
02	WL62LCSDW1	WL62LCSDW1	WL62SBD	04/19/13
03	IM-MH-01-2013041	WL49A	WL49A	04/19/13
04	IM-SW-01-2013041	WL49B	WL49B	04/20/13
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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-041513**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-041513 QC Report No: WL49-SAIC
LIMS ID: 13-7779 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 04/23/13 Date Received: NA

Date Extracted: 04/15/13 Sample Amount: 500 mL
Date Analyzed: 04/19/13 16:26 Final Extract Volume: 0.50 mL
Instrument/Analyst: NT11/VTS Dilution Factor: 1.00

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

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	82.7%
d10-2-Methylnaphthalene	71.3%
d14-Dibenzo(a,h)anthracen	74.0%

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
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 04/19/13 DFTPP Injection Time: 1510

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	40.3
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	10.0 - 80.0% of mass 198	49.5
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	24.6
365	Greater than 1.0% of mass 198	3.01
441	0.0 - 24.0% of mass 442	13.0 (14.7)2
442	50.0 - 200.0% of mass 198	88.4
443	15.0 - 24.0% of mass 442	17.4 (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		SIM 250	CC0419	04/19/13	1526
02	WL62MBW1	WL62MBW1	WL62MB	04/19/13	1626
03	WL62LCSW1	WL62LCSW1	WL62SB	04/19/13	1655
04	WL62LCSDW1	WL62LCSDW1	WL62SBD	04/19/13	1724
05	IM-MH-01-2013041	WL49A	WL49A	04/19/13	1949
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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: 04/20/13 DFTPP Injection Time: 1523

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	35.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	40.9
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	51.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 60.0% of mass 198	24.0
365	Greater than 1.0% of mass 198	2.75
441	0.0 - 24.0% of mass 442	12.4 (14.9)2
442	50.0 - 200.0% of mass 198	83.2
443	15.0 - 24.0% of mass 442	15.4 (18.5)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	CC0420	04/20/13	1539
02	IM-SW-01-2013041	WL49B	WL49B	04/20/13	1621
03					
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 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: WL49 Project: NPDES SAMPLING

Instrument ID: NT11 Cont. Calib. Date: 04/19/13

Init. Calib. Date: 02/23/13 Cont. Calib. Time: 1526

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.095	1.030	0.700	AVRG	-5.9
2-Methylnaphthalene	0.685	0.644	0.400	AVRG	-6.0
Acenaphthylene	1.786	1.711	0.900	AVRG	-4.2
Acenaphthene	1.179	1.093	0.900	AVRG	-7.3
Dibenzofuran	1.717	1.548	0.800	AVRG	-9.8
Fluorene	1.282	1.227	0.900	AVRG	-4.3
Phenanthrene	1.235	1.116	0.700	AVRG	-9.6
Anthracene	1.159	1.091	0.700	AVRG	-5.9
Fluoranthene	1.221	1.193	0.600	AVRG	-2.3
Pyrene	1.675	1.500	0.600	AVRG	-10.4
Benzo(a)anthracene	1.384	1.281	0.800	AVRG	-7.4
Chrysene	1.430	1.282	0.700	AVRG	-10.3
Benzo(b)fluoranthene	1.585	1.347	0.700	AVRG	-15.0
Benzo(k)fluoranthene	1.724	1.564	0.700	AVRG	-9.3
Benzo(j)fluoranthene	1.749	1.546	0.010	AVRG	-11.6
Benzo(a)pyrene	1.338	1.210	0.700	AVRG	-9.6
Indeno(1,2,3-cd)pyrene	1.646	1.534	0.500	AVRG	-6.8
Dibenzo(a,h)anthracene	1.324	1.217	0.400	AVRG	-8.1
Benzo(g,h,i)perylene	1.473	1.317	0.500	AVRG	-10.6
1-methylnaphthalene	0.689	0.638	0.010	AVRG	-7.4
Perylene	1.524	1.337	0.010	AVRG	-12.3
2-Methylnaphthalene-d10	0.633	0.596	0.010	AVRG	-5.8
Dibenzo(a,h)anthracene-d14	1.143	1.058	0.010	AVRG	-7.4
Fluoranthene-d10	1.037	1.013	0.010	AVRG	-2.3

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING

Instrument ID: NT11 Cont. Calib. Date: 04/20/13

Init. Calib. Date: 02/23/13 Cont. Calib. Time: 1539

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.095	1.019	0.700	AVRG	-6.9
2-Methylnaphthalene	0.685	0.638	0.400	AVRG	-6.9
Acenaphthylene	1.786	1.716	0.900	AVRG	-3.9
Acenaphthene	1.179	1.096	0.900	AVRG	-7.0
Dibenzofuran	1.717	1.558	0.800	AVRG	-9.3
Fluorene	1.282	1.221	0.900	AVRG	-4.8
Phenanthrene	1.235	1.091	0.700	AVRG	-11.6
Anthracene	1.159	1.120	0.700	AVRG	-3.4
Fluoranthene	1.221	1.177	0.600	AVRG	-3.6
Pyrene	1.675	1.508	0.600	AVRG	-10.0
Benzo(a)anthracene	1.384	1.289	0.800	AVRG	-6.9
Chrysene	1.430	1.281	0.700	AVRG	-10.4
Benzo(b)fluoranthene	1.585	1.384	0.700	AVRG	-12.7
Benzo(k)fluoranthene	1.724	1.539	0.700	AVRG	-10.7
Benzo(j)fluoranthene	1.749	1.528	0.010	AVRG	-12.6
Benzo(a)pyrene	1.338	1.215	0.700	AVRG	-9.2
Indeno(1,2,3-cd)pyrene	1.646	1.502	0.500	AVRG	-8.7
Dibenzo(a,h)anthracene	1.324	1.192	0.400	AVRG	-10.0
Benzo(g,h,i)perylene	1.473	1.294	0.500	AVRG	-12.2
1-methylnaphthalene	0.689	0.631	0.010	AVRG	-8.4
Perylene	1.524	1.321	0.010	AVRG	-13.3
2-Methylnaphthalene-d10	0.633	0.591	0.010	AVRG	-6.6
Dibenzo(a,h)anthracene-d14	1.143	1.041	0.010	AVRG	-8.9
Fluoranthene-d10	1.037	1.020	0.010	AVRG	-1.6

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING

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

Instrument ID: NT11 Cont. Cal Date: 04/19/13

		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	221636	6.19	126615	9.16	207851	11.81
	UPPER LIMIT		6.69		9.66		12.31
	LOWER LIMIT		5.69		8.66		11.31
01	WL62MBW1	216319	6.19	122810	9.16	203960	11.82
02	WL62LCSW1	217333	6.19	127416	9.16	209207	11.81
03	WL62LCSDW1	217401	6.19	126884	9.16	209496	11.81
04	IM-MH-01-201	218986	6.19	131492	9.16	207304	11.81
05							
06							
07							
08							
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15							
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21							
22							
23							
24							
25							

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

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

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING

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

Instrument ID: NT11 Cont. Cal Date: 04/19/13

		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	163937	16.52	143004	19.13		
	UPPER LIMIT		17.02		19.63		
	LOWER LIMIT		16.02		18.63		
01	WL62MBW1	162533	16.52	140454	19.14		
02	WL62LCSW1	164185	16.52	143352	19.13		
03	WL62LCSDW1	159374	16.52	136632	19.13		
04	IM-MH-01-201	160343	16.52	183617	19.13		
05							
06							
07							
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20							
21							
22							
23							
24							
25							

IS4 = Chrysene-d12
IS5 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING

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

Instrument ID: NT11 Cont. Cal Date: 04/20/13

		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	224629	6.19	128517	9.16	214796	11.81
	UPPER LIMIT		6.69		9.66		12.31
	LOWER LIMIT		5.69		8.66		11.31
01	IM-SW-01-201	212414	6.19	125643	9.16	206607	11.81
02							
03							
04							
05							
06							
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21							
22							
23							
24							
25							

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

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WL49 Project: NPDES SAMPLING

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

Instrument ID: NT11 Cont. Cal Date: 04/20/13

		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	168013	16.52	146468	19.13		
	UPPER LIMIT		17.02		19.63		
	LOWER LIMIT		16.02		18.63		
01	IM-SW-01-201	160010	16.52	146631	19.14		
02							
03							
04							
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21							
22							
23							
24							
25							

IS4 = Chrysene-d12
IS5 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: IM-CB-01-20130410-S**

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/19/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/15/13
Date Analyzed: 04/16/13 15:37
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	0.74	0.65-0.89		0.200	33.1	
2,3,7,8-TCDD	0.66	0.65-0.89		0.200	2.45	
1,2,3,7,8-PeCDF	1.53	1.32-1.78		0.999	19.4	
2,3,4,7,8-PeCDF	1.49	1.32-1.78		0.999	41.3	
1,2,3,7,8-PeCDD	1.56	1.32-1.78		0.999	11.9	
1,2,3,4,7,8-HxCDF	1.18	1.05-1.43		0.999	46.7	
1,2,3,6,7,8-HxCDF	1.17	1.05-1.43		0.999	29.6	
2,3,4,6,7,8-HxCDF	1.17	1.05-1.43		0.999	41.1	
1,2,3,7,8,9-HxCDF	1.19	1.05-1.43		0.999	11.8	
1,2,3,4,7,8-HxCDD	1.22	1.05-1.43		0.999	11.4	
1,2,3,6,7,8-HxCDD	1.24	1.05-1.43		0.999	46.8	
1,2,3,7,8,9-HxCDD	1.21	1.05-1.43		0.999	23.9	
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20		0.999	246	
1,2,3,4,7,8,9-HpCDF	0.94	0.88-1.20		0.999	24.7	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		0.999	1,080	
OCDF	0.86	0.76-1.02		2.00	614	
OCDD	0.89	0.76-1.02		2.00	10,900	E

Homologue Group	EDL	RL	Result	
Total TCDF		0.999	386	EMPC
Total TCDD		0.999	44.3	EMPC
Total PeCDF		2.00	423	EMPC
Total PeCDD		0.999	82.9	
Total HxCDF		2.00	480	
Total HxCDD		2.00	320	
Total HpCDF		2.00	663	
Total HpCDD		2.00	2,040	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 68.7

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 68.7

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-01-20130410-S

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/19/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/15/13
Date Analyzed: 04/16/13 15:37
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	33.0	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	47.1	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	58.4	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	59.0	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	67.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	73.3	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	70.9	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	71.3	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	73.6	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	74.5	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	72.5	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	53.3	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	54.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20	55.5	23-140	
13C-OCDD	0.90	0.76-1.02	31.4	17-157	
37Cl4-2,3,7,8-TCDD			54.5	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-041513**

Lab Sample ID: OPR-041513 QC Report No: WK49-SAIC
LIMS ID: 13-7221 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: Date Sampled: NA
Reported: 04/19/13 Date Received: NA

Date Extracted: 04/15/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 04/16/13 13:53 Final Extract Volume: 20 uL
Instrument/Analyst: AS1/PK Dilution Factor: 1.00
Acid Cleanup: Yes Silica-Florisil Cleanup: Yes
Silica-Carbon Cleanup: No

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.73	0.65-0.89	0.200	21.8
2,3,7,8-TCDD	0.76	0.65-0.89	0.200	19.2
1,2,3,7,8-PeCDF	1.50	1.32-1.78	1.00	99.5
2,3,4,7,8-PeCDF	1.47	1.32-1.78	1.00	101
1,2,3,7,8-PeCDD	1.55	1.32-1.78	1.00	96.5
1,2,3,4,7,8-HxCDF	1.20	1.05-1.43	1.00	97.8
1,2,3,6,7,8-HxCDF	1.18	1.05-1.43	1.00	97.6
2,3,4,6,7,8-HxCDF	1.20	1.05-1.43	1.00	103
1,2,3,7,8,9-HxCDF	1.20	1.05-1.43	1.00	98.5
1,2,3,4,7,8-HxCDD	1.23	1.05-1.43	1.00	96.6
1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	1.00	92.6
1,2,3,7,8,9-HxCDD	1.23	1.05-1.43	1.00	98.4
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20	1.00	119
1,2,3,4,7,8,9-HpCDF	1.00	0.88-1.20	1.00	101
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	1.00	98.7
OCDF	0.87	0.76-1.02	2.00	199
OCDD	0.88	0.76-1.02	2.00	199

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	25.0	EMPC
Total TCDD		1.00	19.8	EMPC
Total PeCDF		2.00	210	EMPC
Total PeCDD		1.00	97.5	
Total HxCDF		2.00	400	
Total HxCDD		2.00	288	EMPC
Total HpCDF		2.00	224	
Total HpCDD		2.00	104	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: OPR-041513

Lab Sample ID: OPR-041513
LIMS ID: 13-7221
Matrix: Sediment
Data Release Authorized: MW
Reported: 04/19/13

QC Report No: WK49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/15/13
Date Analyzed: 04/16/13 13:53
Instrument/Analyst: AS1/PK

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

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	97.0	22-152	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	93.0	20-175	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	97.6	21-192	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	95.3	13-328	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	94.6	21-227	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	91.8	19-202	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	94.4	21-159	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	88.5	22-176	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	92.0	17-205	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	92.2	21-193	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	89.6	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	84.2	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	89.5	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	92.4	26-166	
13C-OCDD	0.89	0.76-1.02	79.6	13-198	
37Cl4-2,3,7,8-TCDD			97.3	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-041513**
Page 1 of 1

Lab Sample ID: OPR-041513
LIMS ID: 13-7221
Matrix: Sediment
Data Release Authorized:
Reported: 04/19/13

QC Report No: WK49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/15/13
Date Analyzed: 04/16/13 13:53
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	21.8	20.0	109	75-158
2,3,7,8-TCDD	19.2	20.0	96.0	67-158
1,2,3,7,8-PeCDF	99.5	100	99.5	80-134
2,3,4,7,8-PeCDF	101	100	101	68-160
1,2,3,7,8-PeCDD	96.5	100	96.5	70-142
1,2,3,4,7,8-HxCDF	97.8	100	97.8	72-134
1,2,3,6,7,8-HxCDF	97.6	100	97.6	84-130
2,3,4,6,7,8-HxCDF	103	100	103	70-156
1,2,3,7,8,9-HxCDF	98.5	100	98.5	78-130
1,2,3,4,7,8-HxCDD	96.6	100	96.6	70-164
1,2,3,6,7,8-HxCDD	92.6	100	92.6	76-134
1,2,3,7,8,9-HxCDD	98.4	100	98.4	64-162
1,2,3,4,6,7,8-HpCDF	119	100	119	82-132
1,2,3,4,7,8,9-HpCDF	101	100	101	78-138
1,2,3,4,6,7,8-HpCDD	98.7	100	98.7	70-140
OCDF	199	200	99.5	63-170
OCDD	199	200	99.5	78-144

Reported in pg/g

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

Blank No.
WK49MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WK49 Project: NPDES

Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL Lab Sample ID: WK49MBS

Sample wt/vol: 10 (g/ml) g Lab File ID: 13041604

Water Sample Prep: (sep/spe) Date Received: 05-APR-13

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 15-APR-13

Instrument ID: AUTOSPEC1 Date Analyzed: 16-APR-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WK49OPR	WK49OPR	13041605	04/16/13
GR-MH-03-20130404	WK49E	13041606	04/16/13
IM-CB-01-20130410	WL49F	13041607	04/16/13
GR-MH-03-20130404	WK49E 10X	13041817	04/19/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-041513**

Lab Sample ID: MB-041513
LIMS ID: 13-7221
Matrix: Sediment
Data Release Authorized: MW
Reported: 04/19/13

QC Report No: WK49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/15/13
Date Analyzed: 04/16/13 13:02
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	0.63	0.65-0.89		0.200	0.0200	JEMPC
2,3,7,8-TCDD	0.07	0.65-0.89		0.200	0.120	JEMPC
1,2,3,7,8-PeCDF	1.15	1.32-1.78		1.00	0.0260	JEMPC
2,3,4,7,8-PeCDF		1.32-1.78	0.0340	1.00	< 0.0340	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0380	1.00	< 0.0380	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0300	1.00	< 0.0300	U
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	0.0300	1.00	< 0.0300	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0360	1.00	< 0.0360	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0480	1.00	< 0.0480	U
1,2,3,6,7,8-HxCDD	0.68	1.05-1.43		1.00	0.0560	JEMPC
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0520	1.00	< 0.0520	U
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20		1.00	1.15	
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0680	1.00	< 0.0680	U
1,2,3,4,6,7,8-HpCDD	0.97	0.88-1.20		1.00	1.64	
OCDF	0.86	0.76-1.02		2.00	4.61	
OCDD	0.91	0.76-1.02		2.00	12.9	

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	0.0462	EMPC
Total TCDD		1.00	0.150	EMPC
Total PeCDF		2.00	0.0267	EMPC
Total PeCDD	0.0380	1.00	0.128	EMPC
Total HxCDF	0.0360	2.00	0.744	EMPC
Total HxCDD		2.00	0.371	EMPC
Total HpCDF		2.00	4.31	
Total HpCDD		2.00	4.84	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.16

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.20

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-041513**

Lab Sample ID: MB-041513
LIMS ID: 13-7221
Matrix: Sediment
Data Release Authorized:
Reported: 04/19/13

QC Report No: WK49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/15/13
Date Analyzed: 04/16/13 13:02
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	112	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	104	25-164	
13C-1,2,3,7,8-PeCDF	1.54	1.32-1.78	120	24-185	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	111	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	110	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	105	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	111	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	102	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	107	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	110	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	105	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	99.1	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	107	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	111	23-140	
13C-OCDD	0.89	0.76-1.02	93.8	17-157	
37Cl4-2,3,7,8-TCDD			107	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: WK49 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13041602

Instrument ID: AUTOSPEC1 Date Analyzed: 16-APR-13

Time Analyzed: 1111

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	23.78	27.23
TCDF	22.51	27.48
PeCDD	29.01	32.13
PeCDF	27.35	32.52
HxCDD	34.23	36.95
HxCDF	33.43	37.40
HpCDD	39.99	41.26
HpCDF	39.46	42.14

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

Standard No.
TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: WK49
GC Column: RTX-DIOXIN2 ID: .25 mm
Instrument: AUTOSPEC1

Contract: SAIC
Project: NPDES
Lab File ID: 13041603
Date Analyzed: 16-APR-13
Time Analyzed: 1202

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

1278-TCDD/2378-TCDD: 12.6

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

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

3467-TCDF/2378-TCDF: 12.0

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

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

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WK49 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	13041602	04/16/13	1111
ISC01	ISC	13041603	04/16/13	1202
WK49MB	WK49MBS	13041604	04/16/13	1302
WK49OPR	WK49OPR	13041605	04/16/13	1353
GR-MH-03-20130404	WK49E	13041606	04/16/13	1445
IM-CB-01-20130410	WL49F	13041607	04/16/13	1537
CS3	CS3	13041608	04/16/13	1630

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

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WK49 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	13041812	04/18/13	1938
GR-MH-03-20130404	WK49E 10X	13041817	04/19/13	0011
CS3	CS3	13041818	04/19/13	0104

6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WK49	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:	WK49	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:	WK49	Case No .	NPDES
TO No		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID.	AUTOSPEC1	Lab File ID	13041602
Date Analysed	16-Apr-13	Time Analysed	11 11 46
Init Calib.Date.	12-MAR-13	Init.Calib.Time:	15 01

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1 00	0.98	1.5		0.79		0 65 - 0.89
2378-TCDF	304/306	0 85	0 76	11.5		0 74		0.65 - 0.89
12378-PeCDF	340/342	0.90	0 84	7.5		1 49		1 32 - 1.78
12378-PeCDD	356/358	0.97	0.95	2.1		1 53		1.32 - 1.78
23478-PeCDF	340/342	0.89	0.85	4 5		1 48		1 32 - 1.78
123478-HxCDF	374/376	1.08	1 02	5 7		1.18		1 05 - 1.43
123678-HxCDF	374/376	1.04	1.01	2.9		1 17		1 05 - 1.43
123478-HxCDD	390/392	0.95	0 94	0.8		1.24		1 05 - 1.43
123678-HxCDD	390/392	0.87	0.88	-1.5		1.25		1.05 - 1 43
123789-HxCDD	390/392	0.92	0 87	5.3		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.12	1 03	8.7		1.20		1.05 - 1.43
123789-HxCDF	374/376	0.97	0 93	4 7		1.18		1.05 - 1.43
1234678-HpCDF	408/410	1.22	1 15	6.4		0 99		0.89 - 1.21
1234678-HpCDD	424/426	0.96	0.95	0.8		1 04		0.89 - 1 21
1234789-HpCDF	408/410	1 22	1.15	6.5		1.00		0.89 - 1 21
OCDD	458/460	0.93	0 97	-4.4		0.88		0.76 - 1 02
OCDF	442/444	1.04	0 96	8.4		0.86		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	1.00	0 96	4.1		0.78		0.65 - 0 89
13C-12378-PeCDD	368/370	0.71	0 70	0.3		1 57		1 32 - 1.78
13C-123478-HxCDD	402/404	0.98	1.02	-3.5		1 26		1.05 - 1 43
13C-123678-HxCDD	402/404	1.04	1.10	-4.9		1.25		1.05 - 1 43
13C-1234678-HpCDD	436/438	0.89	0.83	8.0		1.05		0.89 - 1.21
13C-OCDD	470/472	0 84	0.77	8.5		0.90		0.76 - 1.02
13C-2378-TCDF	316/318	1 43	1.32	8.5		0 77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.07	1.03	4.2		1.55		1 32 - 1 78
13C-23478-PeCDF	352/354	1 03	0.97	7.2		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.12	1.12	-0 6		0.51		0.43 - 0 59
13C-123678-HxCDF	384/386	1.17	1.22	-3.9		0 52		0.43 - 0 59
13C-234678-HxCDF	384/386	1.07	1 11	-3.3		0 53		0.43 - 0.59
13C-123789-HxCDF	384/386	1.08	0.99	8.2		0 52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.95	0.90	6 6		0 45		0 37 - 0 51
13C-1234789-HpCDF	418/420	0.80	0.69	15.8		0.45		0 37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.06	1.00	6.3		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:	WK49	Case No.:	NPDES
TO No .		SDG No.:	
GC Column.	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13041602
Date Analysed	16-Apr-13	Time Analysed	11:11:46
Init.Calib.Date:	12-MAR-13	Init.Calib.Time:	15:01

Target Analytes	RRT#	RT
2378-TCDD	1 00	26.65
2378-TCDF	1 00	26.00
12378-PeCDF	1.00	30 14
12378-PeCDD	1.00	31.74
23478-PeCDF	1.00	31.49
123478-HxCDF	1.00	35 16
123678-HxCDF	1.00	35.30
123478-HxCDD	1 00	36.39
123678-HxCDD	1.00	36.52
123789-HxCDD	1 01	36.95
234678-HxCDF	1.00	36.26
123789-HxCDF	1.00	37 40
1234678-HpCDF	1.00	39 45
1234678-HpCDD	1 00	41 26
1234789-HpCDF	1 00	42.14
OCDD	1 00	47.15
OCDF	1 01	47.42

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26 62
13C-12378-PeCDD	1.23	31 72
13C-123478-HxCDD	0 98	36.37
13C-123678-HxCDD	0.99	36.50
13C-1234678-HpCDD	1.12	41.23
13C-OCDD	1.28	47 12
13C-2378-TCDF	1.01	25.99
13C-12378-PeCDF	1 17	30 12
13C-23478-PeCDF	1.22	31.47
13C-123478-HxCDF	0.95	35.14
13C-123678-HxCDF	0.96	35.29
13C-234678-HxCDF	0.98	36 23
13C-123789-HxCDF	1.01	37 39
13C-1234678-HpCDF	1.07	39.44
13C-1234789-HpCDF	1 14	42 12

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.63

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.81
13C-123789-HxCDD	0.00	36.93

(#) 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	WK49	Case No	NPDES
TO No		SDG No	
GC Column.	RTX-DIOXIN2	ID (mm)	.25
Instrument ID	AUTOSPEC1	Lab File ID	13041608
Date Analysed	16-Apr-13	Time Analysed	16 30 07
Init Calib Date·	12-MAR-13	Init.Calib Time·	15·01

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.00	0.98	1.5		0.75		0.65 - 0.89
2378-TCDF	304/306	0.85	0 76	10.8		0.73		0 65 - 0.89
12378-PeCDF	340/342	0 89	0.84	6.6		1.51		1 32 - 1.78
12378-PeCDD	356/358	0 95	0.95	0.2		1.55		1.32 - 1.78
23478-PeCDF	340/342	0.90	0.85	6.1		1 52		1.32 - 1 78
123478-HxCDF	374/376	1.04	1.02	2.2		1 19		1.05 - 1 43
123678-HxCDF	374/376	1.03	1.01	1.5		1.17		1 05 - 1.43
123478-HxCDD	390/392	0.95	0 94	0.6		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.87	0.88	-2 0		1.24		1 05 - 1.43
123789-HxCDD	390/392	0.92	0 87	5 6		1 21		1.05 - 1.43
234678-HxCDF	374/376	1.11	1 03	7.7		1 18		1.05 - 1 43
123789-HxCDF	374/376	0.98	0 93	5.5		1.19		1.05 - 1.43
1234678-HpCDF	408/410	1 21	1.15	5.4		0 99		0.89 - 1 21
1234678-HpCDD	424/426	0.95	0.95	0.5		1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.21	1.15	5.7		0 99		0.89 - 1 21
OCDD	458/460	0 94	0.97	-3.2		0.88		0.76 - 1.02
OCDF	442/444	1 04	0.96	8.2		0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	1.00	0.96	4.0		0.77		0 65 - 0.89
13C-12378-PeCDD	368/370	0.76	0.70	8.4		1 55		1.32 - 1.78
13C-123478-HxCDD	402/404	0 98	1.02	-3.5		1 26		1.05 - 1.43
13C-123678-HxCDD	402/404	1 03	1.10	-6.3		1.24		1.05 - 1 43
13C-1234678-HpCDD	436/438	0 73	0.83	-12 5		1.04		0.89 - 1.21
13C-OCDD	470/472	0.50	0.77	-35.3		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.40	1.32	5.9		0.77		0.65 - 0 89
13C-12378-PeCDF	352/354	1.09	1.03	5.9		1 56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.08	0.97	11.6		1.55		1.32 - 1.78
13C-123478-HxCDF	384/386	1.12	1.12	-0.2		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.16	1.22	-4.3		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.06	1.11	-4.3		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.05	0.99	5 8		0 52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.81	0.90	-9.7		0 45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.62	0 69	-9.9		0.44		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1 06	1.00	6.4		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	0.77		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:	WK49	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID.	AUTOSPEC1	Lab File ID:	13041608
Date Analysed	16-Apr-13	Time Analysed	16:30:07
Init.Calib.Date:	12-MAR-13	Init.Calib.Time:	15:01

Target Analytes	RRT#	RT
2378-TCDD	1 00	26 62
2378-TCDF	1 00	25 97
12378-PeCDF	1.00	30 12
12378-PeCDD	1 00	31.72
23478-PeCDF	1 00	31.47
123478-HxCDF	1.00	35.15
123678-HxCDF	1.00	35.30
123478-HxCDD	1.00	36 38
123678-HxCDD	1.00	36 51
123789-HxCDD	1.01	36 94
234678-HxCDF	1.00	36 25
123789-HxCDF	1.00	37.39
1234678-HpCDF	1 00	39.45
1234678-HpCDD	1 00	41 25
1234789-HpCDF	1.00	42.14
OCDD	1.00	47.15
OCDF	1.01	47.42

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.60
13C-12378-PeCDD	1 23	31 71
13C-123478-HxCDD	0.98	36.36
13C-123678-HxCDD	0 99	36.49
13C-1234678-HpCDD	1.12	41 24
13C-OCDD	1 28	47.13
13C-2378-TCDF	1.01	25 96
13C-12378-PeCDF	1.17	30 11
13C-23478-PeCDF	1.22	31.46
13C-123478-HxCDF	0.95	35 13
13C-123678-HxCDF	0.96	35.28
13C-234678-HxCDF	0.98	36.23
13C-123789-HxCDF	1 01	37 38
13C-1234678-HpCDF	1.07	39.44
13C-1234789-HpCDF	1.14	42.12

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1 03	26 62

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25 78
13C-123789-HxCDD	0.00	36 92

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

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: IM-MH-01-20130410-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/16/13
Date Analyzed: 04/22/13 21:18
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: 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	60.8%
Tetrachlorometaxylene	60.5%

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

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: IM-SW-01-20130410-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WL49B
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/16/13
Date Analyzed: 04/22/13 21:37
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: 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	61.8%
Tetrachlorometaxylene	52.2%

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

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

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-041613	52.2%	62.0%	0
LCS-041613	57.0%	60.5%	0
LCSD-041613	54.2%	58.8%	0
IM-MH-01-20130410-W	60.8%	60.5%	0
IM-SW-01-20130410-W	61.8%	52.2%	0

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

Prep Method: SW3510C
Log Number Range: 13-7779 to 13-7780

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-01-20130410-S
SAMPLE

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 15:33
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.98 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 44.4%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	1.5	9.0	< 9.0 U
319-85-7	beta-BHC	2.5	9.0	< 9.0 U
319-86-8	delta-BHC	1.5	56	< 56 Y
58-89-9	gamma-BHC (Lindane)	0.86	50	< 50 Y
76-44-8	Heptachlor	2.4	54	< 54 Y
309-00-2	Aldrin	0.99	9.0	< 56 Y
1024-57-3	Heptachlor Epoxide	1.5	18	< 18 U
959-98-8	Endosulfan I	1.3	9.0	< 9.0 U
60-57-1	Dieldrin	1.8	37	< 37 Y
72-55-9	4,4'-DDE	2.2	90	< 90 Y
72-20-8	Endrin	3.9	18	< 18 U
33213-65-9	Endosulfan II	2.1	18	< 18 U
72-54-8	4,4'-DDD	2.4	240	< 240 Y
1031-07-8	Endosulfan Sulfate	3.4	210	< 210 Y
50-29-3	4,4'-DDT	3.4	250	< 250 Y
72-43-5	Methoxychlor	13	320	< 320 Y
53494-70-5	Endrin Ketone	2.1	180	< 180 Y
7421-93-4	Endrin Aldehyde	3.9	88	< 88 Y
5103-74-2	trans-Chlordane	1.4	63	< 63 Y
5103-71-9	cis-Chlordane	0.91	33	< 33 Y
8001-35-2	Toxaphene	620	1800	< 1,800 U
118-74-1	Hexachlorobenzene	1.7	36	< 36 Y
87-68-3	Hexachlorobutadiene	2.5	18	< 18 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	95.2%
Tetrachlorometaxylene	103%

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

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-01-20130410-S
DILUTION

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/25/13 12:56
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.98 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 500
Silica Gel: Yes

Percent Moisture: 44.4%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	73	450	< 450 U
319-85-7	beta-BHC	120	450	< 450 U
319-86-8	delta-BHC	73	450	< 450 U
58-89-9	gamma-BHC (Lindane)	43	450	< 450 U
76-44-8	Heptachlor	120	450	< 450 U
309-00-2	Aldrin	49	450	< 450 U
1024-57-3	Heptachlor Epoxide	76	900	< 900 U
959-98-8	Endosulfan I	64	450	< 450 U
60-57-1	Dieldrin	90	900	< 900 U
72-55-9	4,4'-DDE	110	900	< 900 U
72-20-8	Endrin	190	900	< 900 U
33213-65-9	Endosulfan II	100	900	< 900 U
72-54-8	4,4'-DDD	120	900	< 900 U
1031-07-8	Endosulfan Sulfate	170	900	< 900 U
50-29-3	4,4'-DDT	170	900	< 900 U
72-43-5	Methoxychlor	630	4500	< 4,500 U
53494-70-5	Endrin Ketone	110	900	< 900 U
7421-93-4	Endrin Aldehyde	200	900	< 900 U
5103-74-2	trans-Chlordane	69	450	< 450 U
5103-71-9	cis-Chlordane	46	450	< 450 U
8001-35-2	Toxaphene	31000	90000	< 90,000 U
118-74-1	Hexachlorobenzene	84	900	< 900 U
87-68-3	Hexachlorobutadiene	120	900	< 900 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
SAMPLE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 15:53
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.74	4.6	< 4.6 U
319-85-7	beta-BHC	1.3	4.6	< 4.6 U
319-86-8	delta-BHC	0.75	4.6	< 4.6 U
58-89-9	gamma-BHC (Lindane)	0.44	4.6	< 4.6 U
76-44-8	Heptachlor	1.2	4.6	< 4.6 U
309-00-2	Aldrin	0.51	4.6	< 4.6 U
1024-57-3	Heptachlor Epoxide	0.78	9.2	< 9.2 U
959-98-8	Endosulfan I	0.66	4.6	< 4.6 U
60-57-1	Dieldrin	0.92	9.2	< 9.2 U
72-55-9	4,4'-DDE	1.1	9.2	< 9.2 U
72-20-8	Endrin	2.0	9.2	< 9.2 U
33213-65-9	Endosulfan II	1.1	9.2	< 9.2 U
72-54-8	4,4'-DDD	1.2	9.2	< 9.2 U
1031-07-8	Endosulfan Sulfate	1.8	9.2	< 9.2 U
50-29-3	4,4'-DDT	1.8	9.2	< 9.2 U
72-43-5	Methoxychlor	6.4	46	< 46 U
53494-70-5	Endrin Ketone	1.1	9.2	< 9.2 U
7421-93-4	Endrin Aldehyde	2.0	9.2	< 9.2 U
5103-74-2	trans-Chlordane	0.71	4.6	< 4.6 U
5103-71-9	cis-Chlordane	0.47	4.6	< 4.6 U
8001-35-2	Toxaphene	320	920	< 920 U
118-74-1	Hexachlorobenzene	0.86	9.2	< 9.2 U
87-68-3	Hexachlorobutadiene	1.3	9.2	< 9.2 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	108%
Tetrachlorometaxylene	81.5%

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

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
DILUTION

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/25/13 13:14
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 500
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	37	230	< 230 U
319-85-7	beta-BHC	64	230	< 230 U
319-86-8	delta-BHC	38	230	< 230 U
58-89-9	gamma-BHC (Lindane)	22	230	< 230 U
76-44-8	Heptachlor	61	230	< 230 U
309-00-2	Aldrin	25	230	< 230 U
1024-57-3	Heptachlor Epoxide	39	460	< 460 U
959-98-8	Endosulfan I	33	230	< 230 U
60-57-1	Dieldrin	46	460	< 460 U
72-55-9	4,4'-DDE	57	460	< 460 U
72-20-8	Endrin	99	460	< 460 U
33213-65-9	Endosulfan II	53	460	< 460 U
72-54-8	4,4'-DDD	62	460	< 460 U
1031-07-8	Endosulfan Sulfate	88	460	< 460 U
50-29-3	4,4'-DDT	88	460	< 460 U
72-43-5	Methoxychlor	320	2300	< 2,300 U
53494-70-5	Endrin Ketone	55	460	< 460 U
7421-93-4	Endrin Aldehyde	100	460	< 460 U
5103-74-2	trans-Chlordane	35	230	< 230 U
5103-71-9	cis-Chlordane	23	230	< 230 U
8001-35-2	Toxaphene	16000	46000	< 46,000 U
118-74-1	Hexachlorobenzene	43	460	< 460 U
87-68-3	Hexachlorobutadiene	63	460	< 460 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
IM-CB-01-20130410-S	95.2%	103%	0
IM-CB-01-20130410-S DL	D	D	0
MB-041913	82.0%	70.2%	0
LCS-041913	83.2%	72.5%	0
IM-CB-02-20130410-S	108%	81.5%	0
IM-CB-02-20130410-S DL	D	D	0
IM-CB-02-20130410-S MS	115%	79.0%	0
IM-CB-02-20130410-S MSD	68.2%	78.5%	0

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

Prep Method: SW3546
Log Number Range: 13-7784 to 13-7785

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: IM-CB-02-20130410-S
MS/MSD

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted MS/MSD: 04/19/13

Date Analyzed MS: 04/24/13 16:13
MSD: 04/24/13 16:33
Instrument/Analyst MS: ECD6/YZ
MSD: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount MS: 13.2 g-dry-wt
MSD: 13.5 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 10.0
MSD: 10.0
Silica Gel: Yes

Percent Moisture: 18.1%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 4.59	2.48 JP	3.79	65.4%	2.84 J	3.71	76.5%	13.5%
beta-BHC	< 4.59	2.90 J	3.79	76.5%	8.02 JP	3.71	216%	93.8%
delta-BHC	< 4.59	1.68 JP	3.79	44.3%	2.95 JP	3.71	79.5%	54.9%
gamma-BHC (Lindane)	< 4.59	2.18 J	3.79	57.5%	2.95 J	3.71	79.5%	30.0%
Heptachlor	< 4.59	2.60 J	3.79	68.6%	5.97 JP	3.71	161%	78.6%
Aldrin	< 4.59	2.81 J	3.79	74.1%	2.84 J	3.71	76.5%	1.1%
Heptachlor Epoxide	< 9.19	3.03 J	3.79	79.9%	3.11 J	3.71	83.8%	2.6%
Endosulfan I	< 4.59	2.10 JP	3.79	55.4%	2.63 JP	3.71	70.9%	22.4%
Dieldrin	< 9.19	4.68 J	7.58	61.7%	4.74 J	7.41	64.0%	1.3%
4,4'-DDE	< 9.19	6.41 JP	7.58	84.6%	6.56 JP	7.41	88.5%	2.3%
Endrin	< 9.19	5.17 JP	7.58	68.2%	4.93 JP	7.41	66.5%	4.8%
Endosulfan II	< 9.19	4.11 J	7.58	54.2%	5.13 J	7.41	69.2%	22.1%
4,4'-DDD	< 9.19	6.03 J	7.58	79.6%	6.21 J	7.41	83.8%	2.9%
Endosulfan Sulfate	< 9.19	3.83 JP	7.58	50.5%	4.61 J	7.41	62.2%	18.5%
4,4'-DDT	< 9.19	4.59 J	7.58	60.6%	6.39 J	7.41	86.2%	32.8%
Methoxychlor	< 45.9	18.0 J	37.9	47.5%	18.9 J	37.1	50.9%	4.9%
Endrin Ketone	< 9.19	7.34 JP	7.58	96.8%	5.82 J	7.41	78.5%	23.1%
Endrin Aldehyde	< 9.19	2.67 J	7.58	35.2%	3.54 JP	7.41	47.8%	28.0%
trans-Chlordane	< 4.59	3.09 J	3.79	81.5%	3.39 J	3.71	91.4%	9.3%
cis-Chlordane	< 4.59	2.81 JP	3.79	74.1%	3.09 JP	3.71	83.3%	9.5%
Hexachlorobenzene	< 9.19	3.81 J	3.79	101%	3.60 J	3.71	97.0%	5.7%
Hexachlorobutadiene	< 9.19	3.07 J	3.79	81.0%	3.00 J	3.71	80.9%	2.3%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

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

Sample Amount: 13.2 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.77	4.7	---
319-85-7	beta-BHC	1.3	4.7	---
319-86-8	delta-BHC	0.78	4.7	---
58-89-9	gamma-BHC (Lindane)	0.45	4.7	---
76-44-8	Heptachlor	1.3	4.7	---
309-00-2	Aldrin	0.52	4.7	---
1024-57-3	Heptachlor Epoxide	0.81	9.5	---
959-98-8	Endosulfan I	0.68	4.7	---
60-57-1	Dieldrin	0.95	9.5	---
72-55-9	4,4'-DDE	1.2	9.5	---
72-20-8	Endrin	2.0	9.5	---
33213-65-9	Endosulfan II	1.1	9.5	---
72-54-8	4,4'-DDD	1.3	9.5	---
1031-07-8	Endosulfan Sulfate	1.8	9.5	---
50-29-3	4,4'-DDT	1.8	9.5	---
72-43-5	Methoxychlor	6.6	47	---
53494-70-5	Endrin Ketone	1.1	9.5	---
7421-93-4	Endrin Aldehyde	2.1	9.5	---
5103-74-2	trans-Chlordane	0.73	4.7	---
5103-71-9	cis-Chlordane	0.48	4.7	---
8001-35-2	Toxaphene	330	950	< 950 U
118-74-1	Hexachlorobenzene	0.89	9.5	---
87-68-3	Hexachlorobutadiene	1.3	9.5	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	115%
Tetrachlorometaxylene	79.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: IM-CB-02-20130410-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 16:33
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.75	4.6	---
319-85-7	beta-BHC	1.3	4.6	---
319-86-8	delta-BHC	0.76	4.6	---
58-89-9	gamma-BHC (Lindane)	0.44	4.6	---
76-44-8	Heptachlor	1.2	4.6	---
309-00-2	Aldrin	0.51	4.6	---
1024-57-3	Heptachlor Epoxide	0.79	9.3	---
959-98-8	Endosulfan I	0.67	4.6	---
60-57-1	Dieldrin	0.93	9.3	---
72-55-9	4,4'-DDE	1.1	9.3	---
72-20-8	Endrin	2.0	9.3	---
33213-65-9	Endosulfan II	1.1	9.3	---
72-54-8	4,4'-DDD	1.3	9.3	---
1031-07-8	Endosulfan Sulfate	1.8	9.3	---
50-29-3	4,4'-DDT	1.8	9.3	---
72-43-5	Methoxychlor	6.5	46	---
53494-70-5	Endrin Ketone	1.1	9.3	---
7421-93-4	Endrin Aldehyde	2.0	9.3	---
5103-74-2	trans-Chlordane	0.71	4.6	---
5103-71-9	cis-Chlordane	0.47	4.6	---
8001-35-2	Toxaphene	320	930	< 930 U
118-74-1	Hexachlorobenzene	0.87	9.3	---
87-68-3	Hexachlorobutadiene	1.3	9.3	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	68.2%
Tetrachlorometaxylene	78.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-041613**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-041613 QC Report No: WL49-SAIC
LIMS ID: 13-7779 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: 04/10/13
Reported: 04/29/13 Date Received: 04/11/13

Date Extracted LCS/LCSD: 04/16/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 04/22/13 20:23 Final Extract Volume LCS: 5.0 mL
LCSD: 04/22/13 20:43 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/YZ Dilution Factor LCS: 1.00
LCSD: ECD6/YZ LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: Yes
Florisil Cleanup: No Silica Gel: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.149	0.200	74.5%	0.146	0.200	73.0%	2.0%
beta-BHC	0.145	0.200	72.5%	0.139	0.200	69.5%	4.2%
delta-BHC	0.156	0.200	78.0%	0.149	0.200	74.5%	4.6%
gamma-BHC (Lindane)	0.154	0.200	77.0%	0.152	0.200	76.0%	1.3%
Heptachlor	0.129	0.200	64.5%	0.129	0.200	64.5%	0.0%
Aldrin	0.129	0.200	64.5%	0.130	0.200	65.0%	0.8%
Heptachlor Epoxide	0.159	0.200	79.5%	0.159	0.200	79.5%	0.0%
Endosulfan I	0.161	0.200	80.5%	0.161	0.200	80.5%	0.0%
Dieldrin	0.325	0.400	81.2%	0.325	0.400	81.2%	0.0%
4,4'-DDE	0.372	0.400	93.0%	0.367	0.400	91.8%	1.4%
Endrin	0.311	0.400	77.8%	0.308	0.400	77.0%	1.0%
Endosulfan II	0.309 P	0.400	77.2%	0.304 P	0.400	76.0%	1.6%
4,4'-DDD	0.336	0.400	84.0%	0.332	0.400	83.0%	1.2%
Endosulfan Sulfate	0.306	0.400	76.5%	0.287	0.400	71.8%	6.4%
4,4'-DDT	0.268	0.400	67.0%	0.263	0.400	65.8%	1.9%
Methoxychlor	1.30	2.00	65.0%	1.27	2.00	63.5%	2.3%
Endrin Ketone	0.306	0.400	76.5%	0.297	0.400	74.2%	3.0%
Endrin Aldehyde	0.207	0.400	51.8%	0.217	0.400	54.2%	4.7%
trans-Chlordane	0.158	0.200	79.0%	0.158	0.200	79.0%	0.0%
cis-Chlordane	0.157	0.200	78.5%	0.156	0.200	78.0%	0.6%
Hexachlorobenzene	0.124	0.200	62.0%	0.120	0.200	60.0%	3.3%
Hexachlorobutadiene	0.0859	0.200	43.0%	0.0870	0.200	43.5%	1.3%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	57.0%	54.2%
Tetrachlorometaxylene	60.5%	58.8%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-041913
LAB CONTROL

Lab Sample ID: LCS-041913
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

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

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

Percent Moisture: NA

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

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	83.2%
Tetrachlorometaxylene	72.5%

Reported in µg/kg (ppb)

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WL74MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: FLOYD-SNIDER

ARI Job No.: WL49
Project: POT-PIER 4

Lab Sample ID: WL74MBW1
Lab File ID: 0422A028

Date Extracted: 04/16/13
Matrix: LIQUID

Date Analyzed: 04/22/13
Instrument ID: ECD6

Time Analyzed: 2005
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	WL74LCSW1	WL74LCSW1	04/22/13
02	WL74LCSDW1	WL74LCSDW1	04/22/13
03	IM-MH-01-20130410-W	WL49A	04/22/13
04	IM-SW-01-20130410-W	WL49B	04/22/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-041613**
Extraction Method: SW3510C **METHOD BLANK**

Page 1 of 1
Lab Sample ID: MB-041613 QC Report No: WL49-SAIC
LIMS ID: 13-7779 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 04/29/13 Date Received: NA

Date Extracted: 04/16/13 Sample Amount: 500 mL
Date Analyzed: 04/22/13 20:05 Final Extract Volume: 5.0 mL
Instrument/Analyst: ECD6/YZ 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	52.2%
Tetrachlorometaxylene	62.0%

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WL49MBS1
Lab File ID: 0424A008

Date Extracted: 04/19/13
Matrix: SOLID

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

Time Analyzed: 1434
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WL49LCSS1	WL49LCSS1	04/24/13
02	IM-CB-01-20130410-S	WL49F	04/24/13
03	IM-CB-02-20130410-S	WL49G	04/24/13
04	IM-CB-02-201304 MS	WL49GMS	04/24/13
05	IM-CB-02-201304 MSD	WL49GMSD	04/24/13
06	GR-CB-07-20130411-S	WL67A	04/24/13
07	GR-WS-05-20130411-S	WL67B	04/24/13
08	IM-CB-01-20130410-S	WL49F	04/25/13
09	IM-CB-02-20130410-S	WL49G	04/25/13
10	GR-CB-07-20130411-S	WL67A	04/25/13
11	GR-WS-05-20130411-S	WL67B	04/25/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: MB-041913
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/29/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/19/13
Date Analyzed: 04/24/13 14:34
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

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

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.081	0.50	< 0.50 U
319-85-7	beta-BHC	0.14	0.50	< 0.50 U
319-86-8	delta-BHC	0.082	0.50	< 0.50 U
58-89-9	gamma-BHC (Lindane)	0.048	0.50	< 0.50 U
76-44-8	Heptachlor	0.13	0.50	< 0.50 U
309-00-2	Aldrin	0.055	0.50	< 0.50 U
1024-57-3	Heptachlor Epoxide	0.085	1.0	< 1.0 U
959-98-8	Endosulfan I	0.072	0.50	< 0.50 U
60-57-1	Dieldrin	0.10	1.0	< 1.0 U
72-55-9	4,4'-DDE	0.12	1.0	< 1.0 U
72-20-8	Endrin	0.22	1.0	< 1.0 U
33213-65-9	Endosulfan II	0.12	1.0	< 1.0 U
72-54-8	4,4'-DDD	0.14	1.0	< 1.0 U
1031-07-8	Endosulfan Sulfate	0.19	1.0	< 1.0 U
50-29-3	4,4'-DDT	0.19	1.0	< 1.0 U
72-43-5	Methoxychlor	0.70	5.0	< 5.0 U
53494-70-5	Endrin Ketone	0.12	1.0	< 1.0 U
7421-93-4	Endrin Aldehyde	0.22	1.0	< 1.0 U
5103-74-2	trans-Chlordane	0.077	0.50	< 0.50 U
5103-71-9	cis-Chlordane	0.051	0.50	< 0.50 U
8001-35-2	Toxaphene	35	100	< 100 U
118-74-1	Hexachlorobenzene	0.094	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.14	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	82.0%
Tetrachlorometaxylene	70.2%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

COMPOUND	RT OF STANDARDS							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.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Calibration Date: 04/05/13

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

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: DL74

Analysis Date: 22-APR-2013 19:12 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.231	78379
Endrin	6.752	6799775
4,4'-DDD	6.788	691741
4,4'-DDT	7.046	5696954
Endrin ketone	7.980	514200
Endrin aldehyde	7.335	175228

DDT Percent Breakdown = 11.9 %
((78379+691741) * 100)/(78379+691741+5696954)

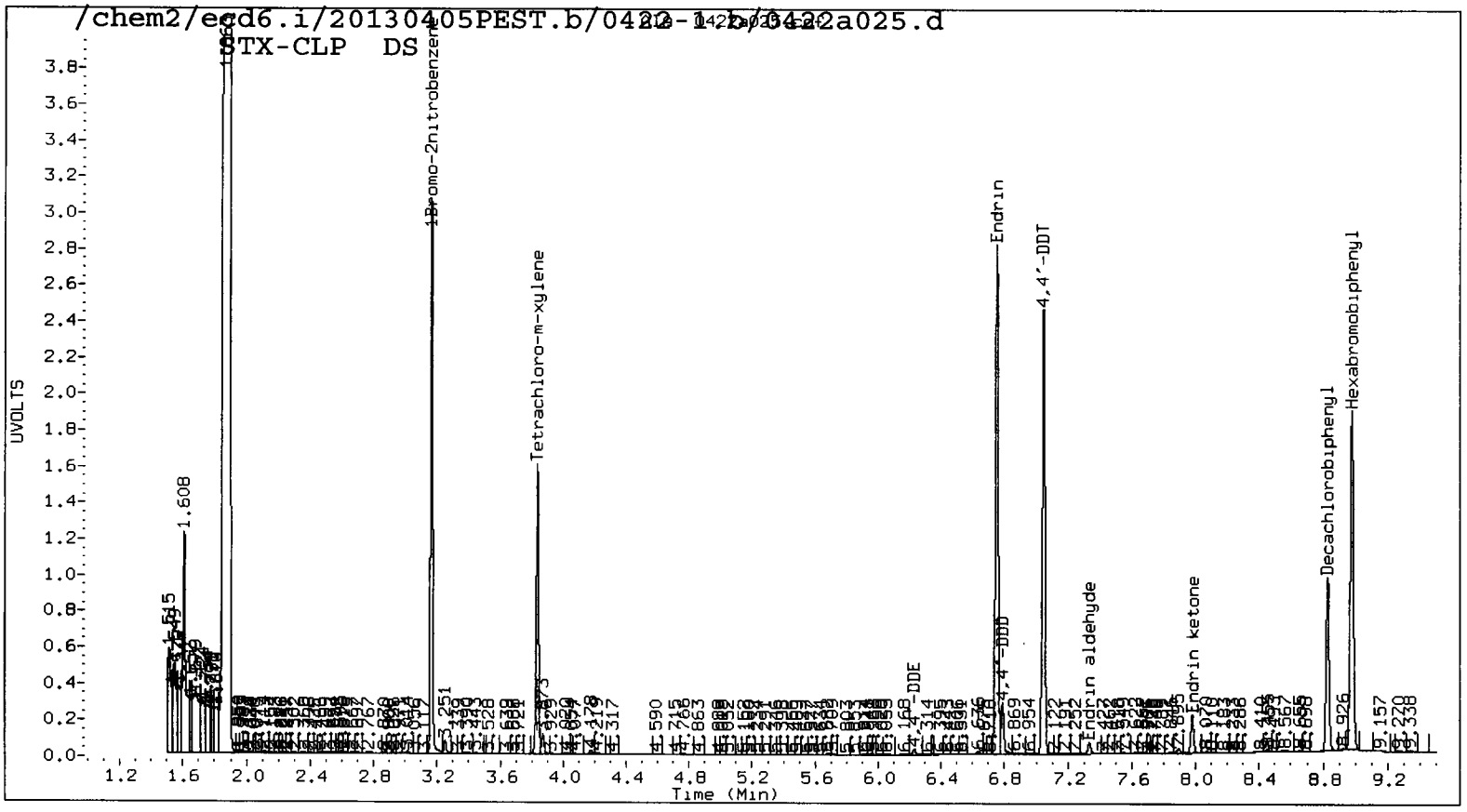
Endrin Percent Breakdown = 9.2 %
((175228+514200) * 100)/(175228+514200+6799775)

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

COMPOUND	RT	AREA
4,4'-DDE	6.918	399255
Endrin	7.408	24186302
4,4'-DDD	7.456	2414289
4,4'-DDT	7.745	20257244
Endrin ketone	8.631	1564157
Endrin aldehyde	7.894	545241

DDT Percent Breakdown = 12.2 %
((399255+2414289) * 100)/(399255+2414289+20257244)

Endrin Percent Breakdown = 8.0 %
((545241+1564157) * 100)/(545241+1564157+24186302)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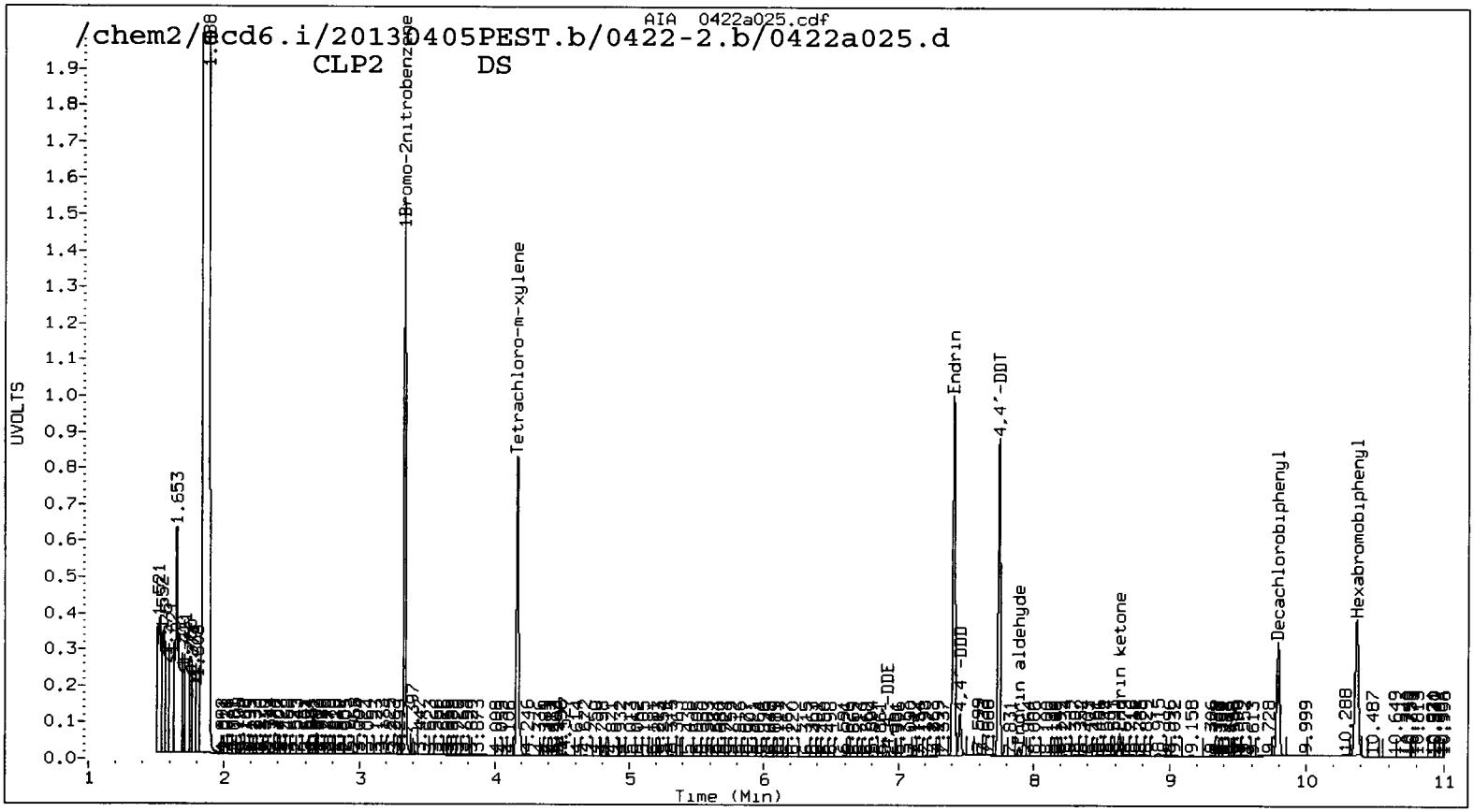
TX-CLP DS
UVOLTS
Time (Min)
1.608
Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
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Bromo-2nitrobenzene
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.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/22/13,1930

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.33	4.28	4.38	21.6	20.0	7.8
beta-BHC	4.69	4.64	4.74	19.7	20.0	-1.3
delta-BHC	4.86	4.81	4.91	20.7	20.0	3.5
gamma-BHC (Lindane)	4.61	4.56	4.66	21.3	20.0	6.7
Heptachlor	5.06	5.02	5.12	20.3	20.0	1.6
Aldrin	5.36	5.31	5.41	21.0	20.0	4.8
Heptachlor epoxide b	5.93	5.89	5.99	20.6	20.0	3.0
Endosulfan I	6.31	6.26	6.36	20.6	20.0	2.8
Dieldrin	6.53	6.49	6.59	42.4	40.0	5.9
4,4'-DDE	6.23	6.18	6.28	40.7	40.0	1.8
Endrin	6.75	6.71	6.81	41.4	40.0	3.4
Endosulfan II	6.96	6.91	7.01	39.4	40.0	-1.5
4,4'-DDD	6.79	6.74	6.84	43.9	40.0	9.7
Endosulfan sulfate	7.72	7.68	7.78	39.4	40.0	-1.6
4,4'-DDT	7.05	7.00	7.10	35.7	40.0	-10.8
Methoxychlor	7.47	7.42	7.52	172.4	200.0	-13.8
Endrin ketone	7.98	7.93	8.03	39.3	40.0	-1.8
Endrin aldehyde	7.33	7.29	7.39	36.1	40.0	-9.8
gamma-Chlordane	6.05	6.01	6.11	20.8	20.0	3.9
alpha-Chlordane	6.18	6.13	6.23	20.6	20.0	3.0
Hexachlorobutadiene	2.34	2.29	2.39	20.7	20.0	3.6
Hexachlorobenzene	4.18	4.13	4.23	21.1	20.0	5.4
Tetrachloro-m-xylene	3.84	3.79	3.89	41.6	40.0	3.9
Decachlorobiphenyl	8.83	8.78	8.88	36.8	40.0	-8.0

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/22/13,1930

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	21.2	20.0	6.1	
beta-BHC	5.18	5.13	5.23	19.9	20.0	-0.5	
delta-BHC	5.50	5.45	5.55	20.5	20.0	2.3	
gamma-BHC (Lindane)	5.11	5.07	5.17	21.0	20.0	4.9	
Heptachlor	5.58	5.53	5.63	19.7	20.0	-1.4	
Aldrin	5.92	5.87	5.97	20.5	20.0	2.4	
Heptachlor epoxide b	6.47	6.43	6.53	20.4	20.0	2.0	
Endosulfan I	6.86	6.81	6.91	20.5	20.0	2.5	
Dieldrin	7.12	7.07	7.17	40.6	40.0	1.5	
4,4'-DDE	6.92	6.87	6.97	39.9	40.0	-0.2	
Endrin	7.41	7.36	7.46	34.8	40.0	-12.9	
Endosulfan II	7.60	7.55	7.65	34.1	40.0	-14.8	
4,4'-DDD	7.46	7.41	7.51	36.5	40.0	-8.8	
Endosulfan sulfate	8.14	8.09	8.19	34.2	40.0	-14.4	
4,4'-DDT	7.74	7.70	7.80	29.9	40.0	-25.4	<-
Methoxychlor	8.33	8.28	8.38	147.9	200.0	-26.0	<-
Endrin ketone	8.63	8.58	8.68	33.8	40.0	-15.5	
Endrin aldehyde	7.89	7.85	7.95	31.4	40.0	-21.6	<-
gamma-Chlordane	6.65	6.61	6.71	20.5	20.0	2.3	
alpha-Chlordane	6.79	6.75	6.85	20.3	20.0	1.5	
Hexachlorobutadiene	2.50	2.45	2.55	17.3	20.0	-13.4	
Hexachlorobenzene	4.63	4.58	4.68	21.3	20.0	6.6	
Tetrachloro-m-xylene	4.17	4.12	4.22	39.1	40.0	-2.3	
Decachlorobiphenyl	9.79	9.75	9.85	34.4	40.0	-13.9	

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/22/13,1947

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	1940	2500	-22.4	<-
Toxaphene -2	7.67	7.62	7.72	1850	2500	-26.0	<-
Toxaphene -3	7.90	7.85	7.95	1820	2500	-27.2	<-
Toxaphene -4	8.37	8.32	8.42	1690	2500	-32.4	<-
Toxaphene -5	8.41	8.36	8.46	1570	2500	-37.2	<-

AVERAGE %D = 29.0

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/22/13,1947

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	7.01	6.96	7.06	2190	2500	-12.4	
Toxaphene -2	7.06	7.01	7.11	2210	2500	-11.6	
Toxaphene -3	7.32	7.27	7.37	2080	2500	-16.8	
Toxaphene -4	7.64	7.59	7.69	2070	2500	-17.2	
Toxaphene -5	7.68	7.63	7.73	1940	2500	-22.4	<-
Toxaphene -6	7.96	7.92	8.02	1920	2500	-23.2	<-

AVERAGE %D = 17.3

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: DL74

Analysis Date: 22-APR-2013 23:42 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.231	83994
Endrin	6.751	6678650
4,4'-DDD	6.788	730196
4,4'-DDT	7.046	5628811
Endrin ketone	7.980	503423
Endrin aldehyde	7.334	171300

DDT Percent Breakdown = 12.6 %
((83994+730196) * 100)/(83994+730196+5628811)

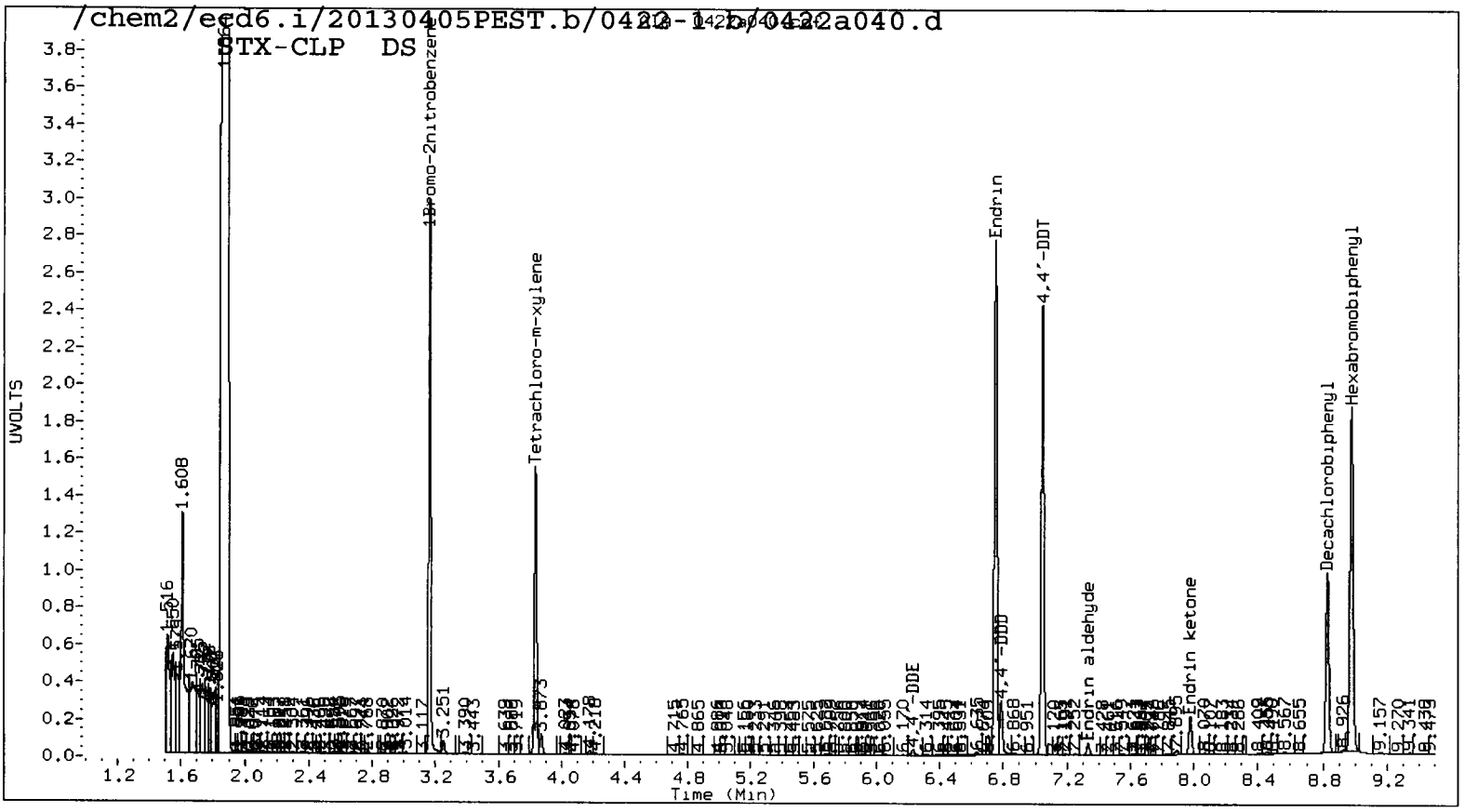
Endrin Percent Breakdown = 9.2 %
((171300+503423) * 100)/(171300+503423+6678650)

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

COMPOUND	RT	AREA
4,4'-DDE	6.917	449181
Endrin	7.408	26421801
4,4'-DDD	7.455	2834699
4,4'-DDT	7.744	21963934
Endrin ketone	8.630	1649053
Endrin aldehyde	7.893	634593

DDT Percent Breakdown = 13.0 %
((449181+2834699) * 100)/(449181+2834699+21963934)

Endrin Percent Breakdown = 8.0 %
((634593+1649053) * 100)/(634593+1649053+26421801)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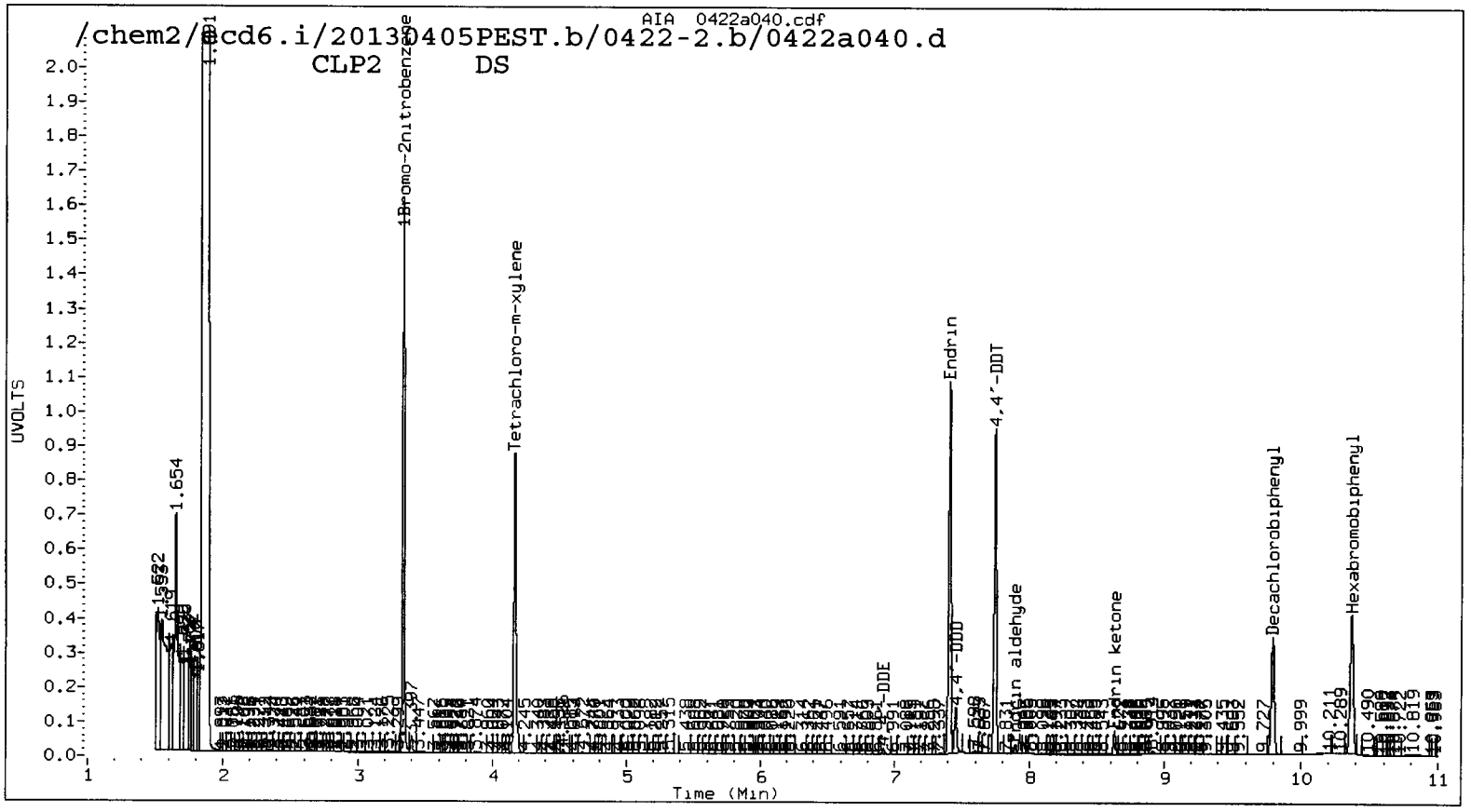
STX-CLP DS
UVOLTS
Time (Min)
1.608
Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDD
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.654
Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDD
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.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/22/13,2359

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.33	4.28	4.38	21.7	20.0	8.5
beta-BHC	4.69	4.64	4.74	19.8	20.0	-1.1
delta-BHC	4.86	4.81	4.91	20.5	20.0	2.4
gamma-BHC (Lindane)	4.61	4.56	4.66	21.4	20.0	7.2
Heptachlor	5.06	5.02	5.12	20.1	20.0	0.4
Aldrin	5.36	5.31	5.41	21.1	20.0	5.7
Heptachlor epoxide b	5.93	5.89	5.99	20.8	20.0	4.0
Endosulfan I	6.31	6.26	6.36	20.8	20.0	3.8
Dieldrin	6.53	6.49	6.59	42.7	40.0	6.8
4,4'-DDE	6.23	6.18	6.28	40.7	40.0	1.8
Endrin	6.75	6.71	6.81	39.8	40.0	-0.6
Endosulfan II	6.96	6.91	7.01	38.5	40.0	-3.8
4,4'-DDD	6.79	6.74	6.84	43.6	40.0	9.1
Endosulfan sulfate	7.73	7.68	7.78	38.6	40.0	-3.5
4,4'-DDT	7.05	7.00	7.10	33.5	40.0	-16.2
Methoxychlor	7.47	7.42	7.52	163.2	200.0	-18.4
Endrin ketone	7.98	7.93	8.03	38.9	40.0	-2.7
Endrin aldehyde	7.33	7.29	7.39	35.4	40.0	-11.4
gamma-Chlordane	6.05	6.01	6.11	21.0	20.0	5.1
alpha-Chlordane	6.18	6.13	6.23	20.8	20.0	4.2
Hexachlorobutadiene	2.34	2.29	2.39	21.1	20.0	5.5
Hexachlorobenzene	4.18	4.13	4.23	21.2	20.0	6.2
Tetrachloro-m-xylene	3.84	3.79	3.89	41.3	40.0	3.2
Decachlorobiphenyl	8.83	8.78	8.88	36.8	40.0	-8.0

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: INDAE Date/Time Analyzed: 04/22/13,2359

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.75	4.71	4.81	21.7	20.0	8.4	
beta-BHC	5.19	5.13	5.23	20.5	20.0	2.6	
delta-BHC	5.50	5.45	5.55	20.7	20.0	3.4	
gamma-BHC (Lindane)	5.11	5.07	5.17	21.4	20.0	7.2	
Heptachlor	5.58	5.53	5.63	20.1	20.0	0.4	
Aldrin	5.92	5.87	5.97	21.3	20.0	6.7	
Heptachlor epoxide b	6.47	6.43	6.53	21.2	20.0	6.0	
Endosulfan I	6.86	6.81	6.91	21.4	20.0	7.1	
Dieldrin	7.12	7.07	7.17	42.8	40.0	6.9	
4,4'-DDE	6.92	6.87	6.97	42.0	40.0	4.9	
Endrin	7.41	7.36	7.46	34.3	40.0	-14.3	
Endosulfan II	7.60	7.55	7.65	34.1	40.0	-14.7	
4,4'-DDD	7.46	7.41	7.51	37.3	40.0	-6.8	
Endosulfan sulfate	8.14	8.09	8.19	33.4	40.0	-16.4	
4,4'-DDT	7.74	7.70	7.80	28.2	40.0	-29.6	<-
Methoxychlor	8.33	8.28	8.38	138.9	200.0	-30.6	<-
Endrin ketone	8.63	8.58	8.68	33.7	40.0	-15.8	
Endrin aldehyde	7.89	7.85	7.95	31.1	40.0	-22.2	<-
gamma-Chlordane	6.66	6.61	6.71	21.3	20.0	6.3	
alpha-Chlordane	6.79	6.75	6.85	21.3	20.0	6.5	
Hexachlorobutadiene	2.50	2.45	2.55	16.8	20.0	-16.0	
Hexachlorobenzene	4.63	4.58	4.68	21.8	20.0	9.0	
Tetrachloro-m-xylene	4.17	4.12	4.22	39.8	40.0	-0.5	
Decachlorobiphenyl	9.79	9.75	9.85	34.6	40.0	-13.5	

FORM VII PEST-2

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/23/13,0017

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	1980	2500	-20.8	<-
Toxaphene -2	7.67	7.62	7.72	1860	2500	-25.6	<-
Toxaphene -3	7.90	7.85	7.95	1830	2500	-26.8	<-
Toxaphene -4	8.37	8.32	8.42	1720	2500	-31.2	<-
Toxaphene -5	8.40	8.36	8.46	1580	2500	-36.8	<-

AVERAGE %D = 28.2

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 04/23/13,0017

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	7.01	6.96	7.06	2150	2500	-14.0	
Toxaphene -2	7.06	7.01	7.11	2200	2500	-12.0	
Toxaphene -3	7.32	7.27	7.37	2080	2500	-16.8	
Toxaphene -4	7.64	7.59	7.69	2060	2500	-17.6	
Toxaphene -5	7.68	7.63	7.73	1950	2500	-22.0	<-
Toxaphene -6	7.96	7.92	8.02	1900	2500	-24.0	<-

AVERAGE %D = 17.7

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: WL67

Analysis Date: 24-APR-2013 13:40 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.228	95194
Endrin	6.749	9164933
4,4'-DDD	6.785	221287
4,4'-DDT	7.043	8980053
Endrin ketone	7.976	290765
Endrin aldehyde	7.331	173410

DDT Percent Breakdown = 3.4 %
((95194+221287) * 100)/(95194+221287+8980053)

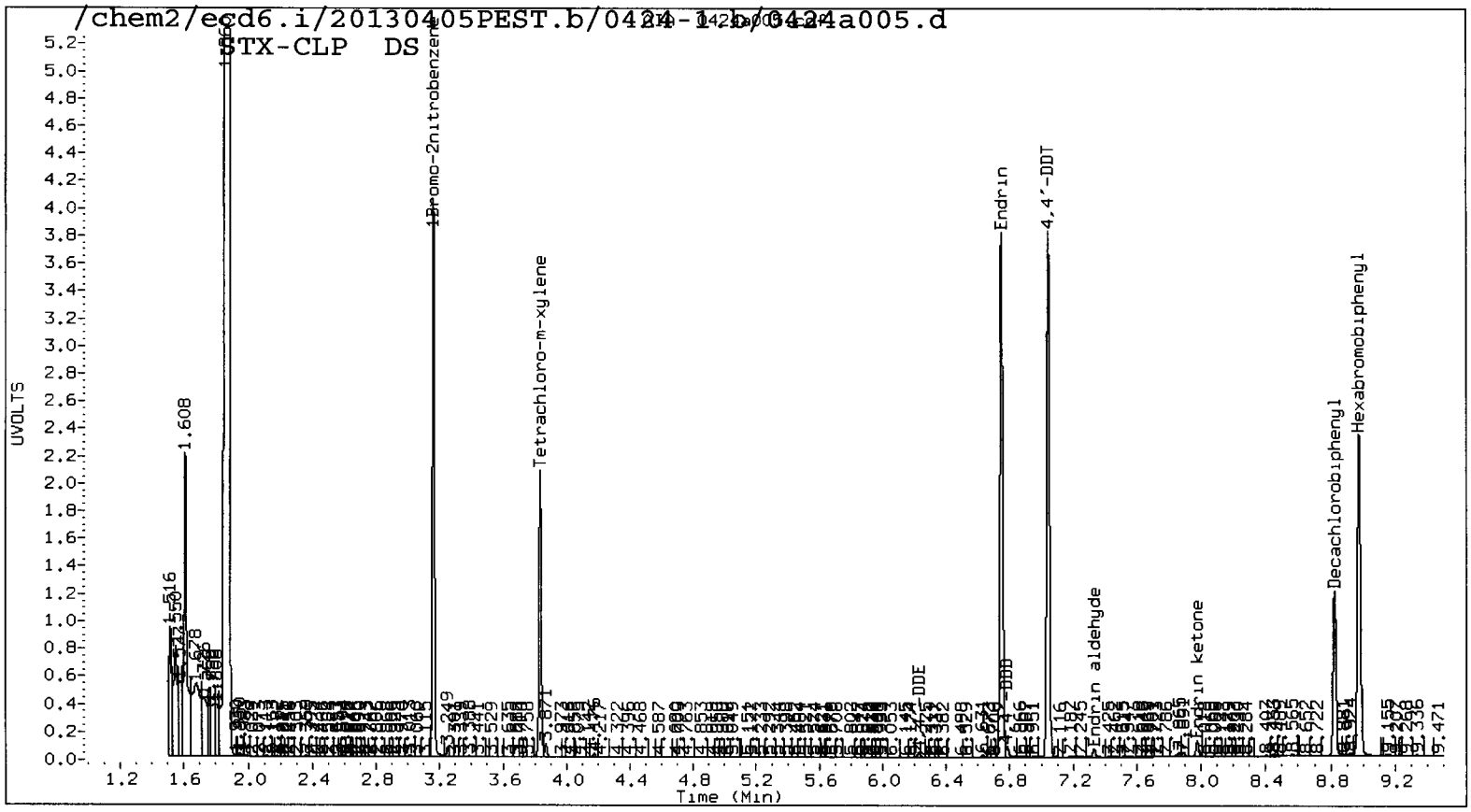
Endrin Percent Breakdown = 4.8 %
((173410+290765) * 100)/(173410+290765+9164933)

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

COMPOUND	RT	AREA
4,4'-DDE	6.915	568319
Endrin	7.406	34141349
4,4'-DDD	7.453	1628871
4,4'-DDT	7.742	32301955
Endrin ketone	8.628	908368
Endrin aldehyde	7.891	847786

DDT Percent Breakdown = 6.4 %
((568319+1628871) * 100)/(568319+1628871+32301955)

Endrin Percent Breakdown = 4.9 %
((847786+908368) * 100)/(847786+908368+34141349)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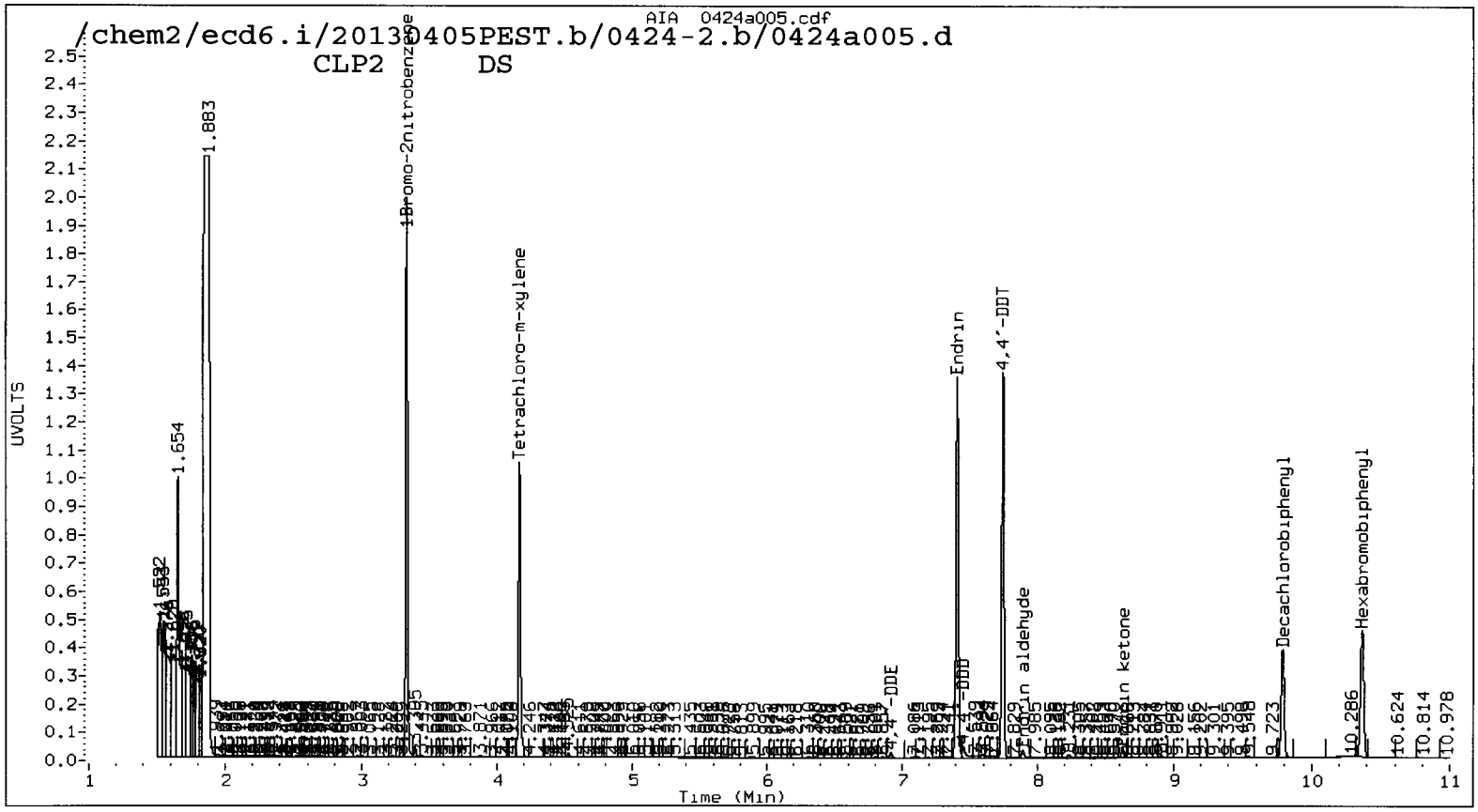
STX-CLP DS
UVOLTS
Time (Min)
1.608
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.883
1.654
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

FORM VII PEST-2

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 1.0

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 15.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: WL67

Analysis Date: 24-APR-2013 17:31 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.229	291284
Endrin	6.750	5648822
4,4'-DDD	6.787	2173778
4,4'-DDT	7.045	1648963
Endrin ketone	7.979	1055308
Endrin aldehyde	7.333	123445

DDT Percent Breakdown = 59.9 %
((291284+2173778) * 100)/(291284+2173778+1648963)

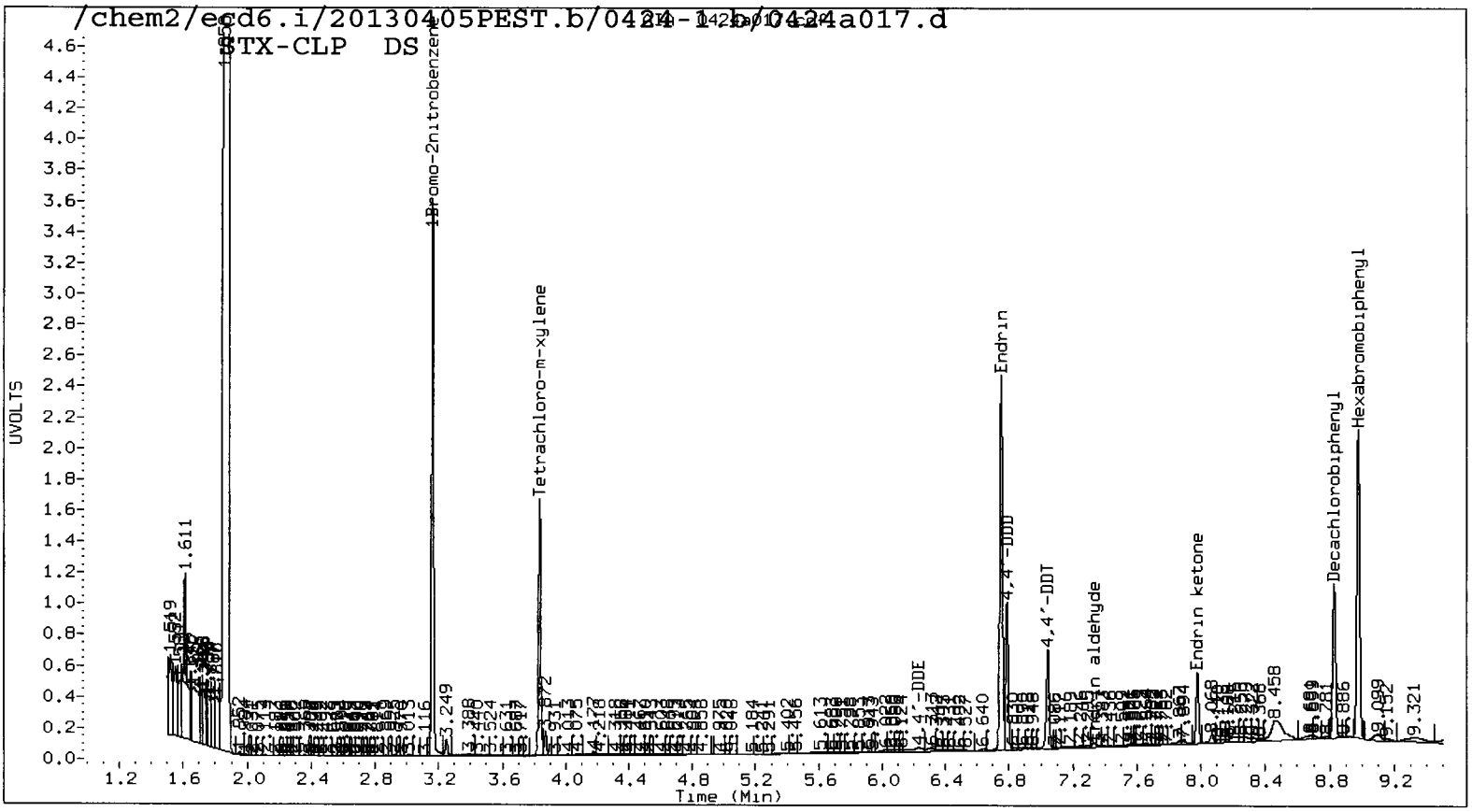
Endrin Percent Breakdown = 17.3 %
((123445+1055308) * 100)/(123445+1055308+5648822)

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

COMPOUND	RT	AREA
4,4'-DDE	6.915	189134
Endrin	7.406	12955564
4,4'-DDD	7.455	5273040
4,4'-DDT	7.742	5598880
Endrin ketone	8.629	3448691
Endrin aldehyde	7.892	219915

DDT Percent Breakdown = 49.4 %
((189134+5273040) * 100)/(189134+5273040+5598880)

Endrin Percent Breakdown = 22.1 %
((219915+3448691) * 100)/(219915+3448691+12955564)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STX-CLP DS
UVOLTS
Time (Min)
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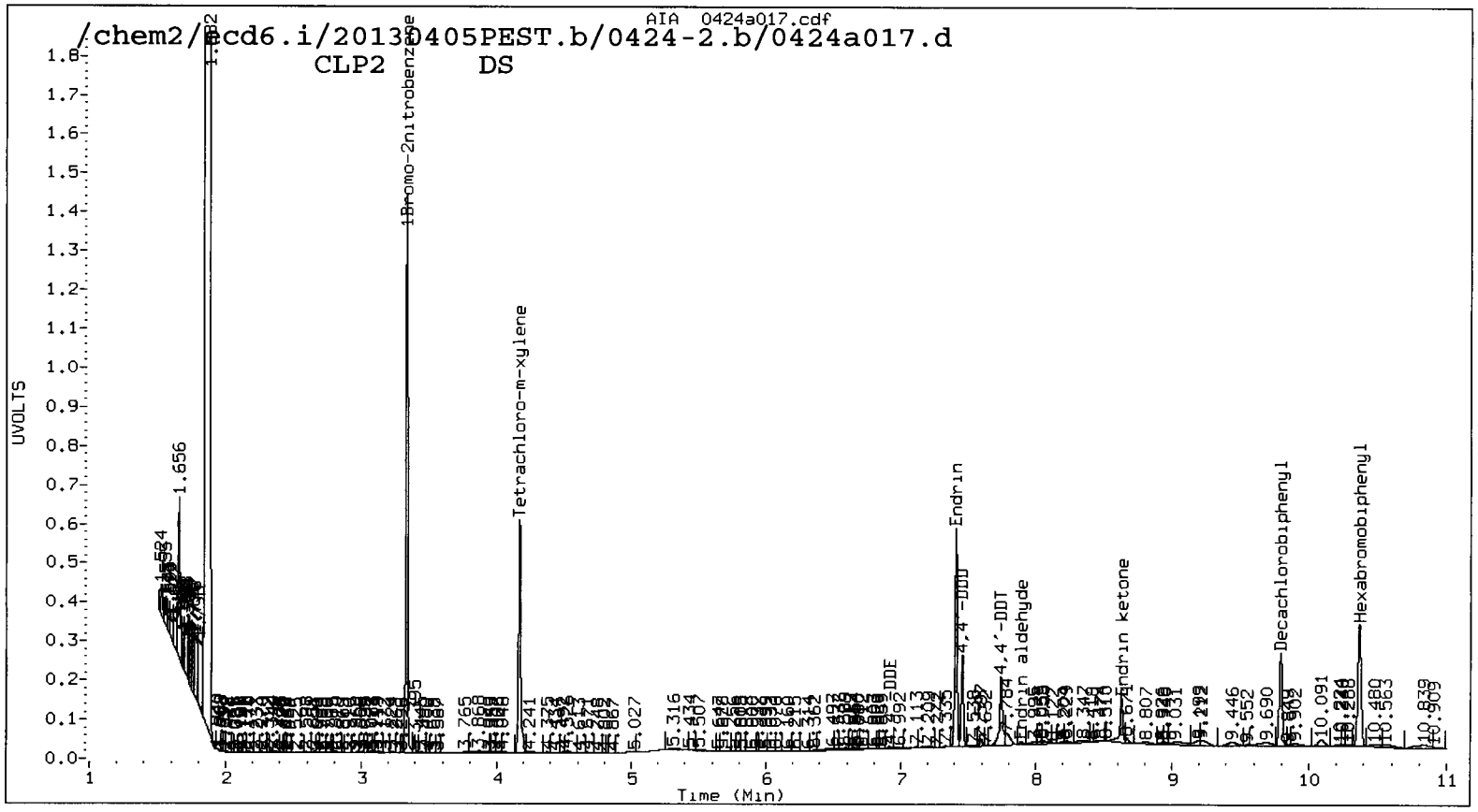
3.249
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
9.321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CLP2 DS
UVOLTS
Time (Min)
1.656
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 71.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 71.8

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

YZ 4/29/13

Lab ID: DS ARI Job No.: WL67

Analysis Date: 25-APR-2013 11:59 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.229	59068
Endrin	6.749	5669487
4,4'-DDD	6.786	174784
4,4'-DDT	7.044	5774865
Endrin ketone	7.977	301752
Endrin aldehyde	7.332	241848

DDT Percent Breakdown = 3.9 %
((59068+174784) * 100)/(59068+174784+5774865)

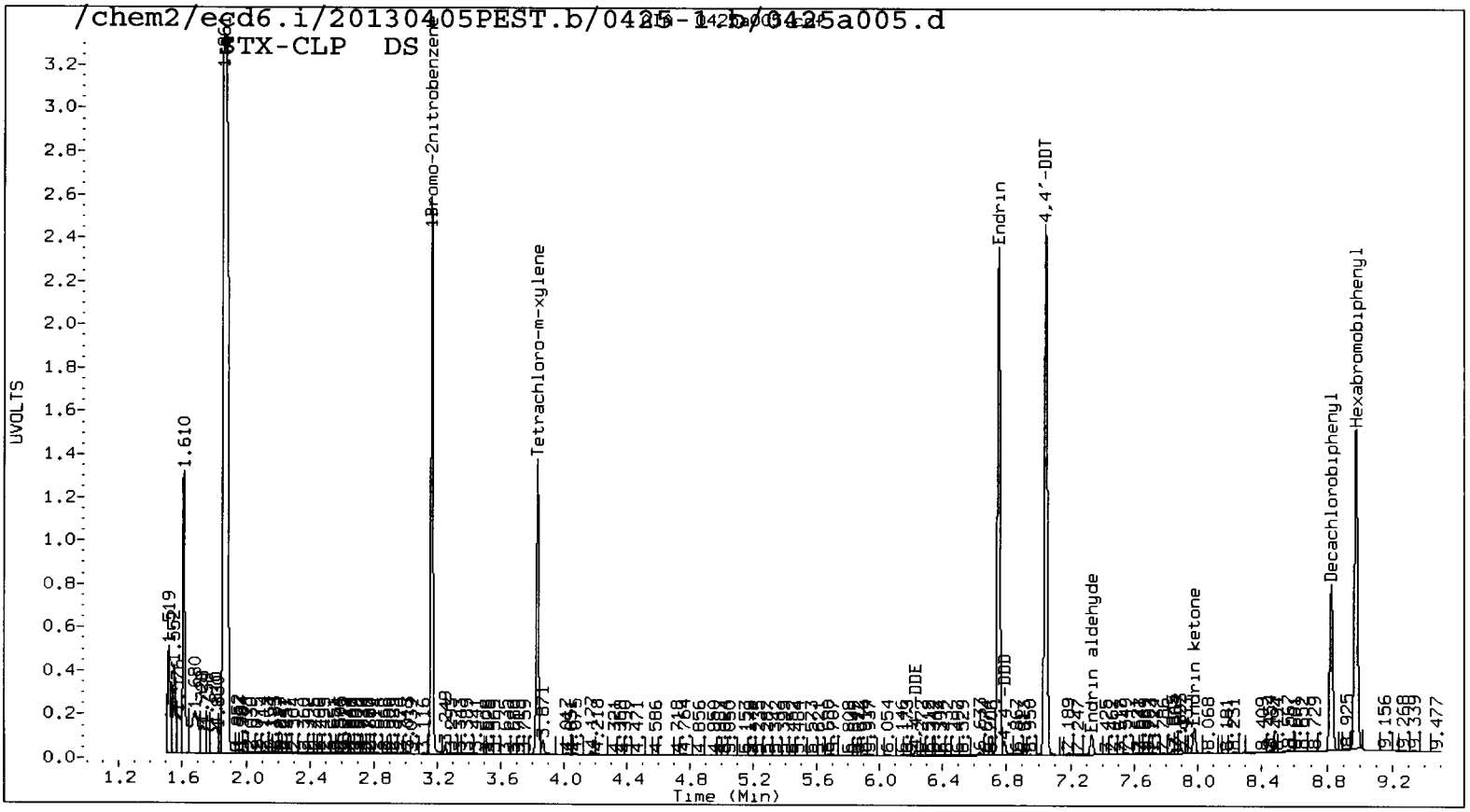
Endrin Percent Breakdown = 8.7 %
((241848+301752) * 100)/(241848+301752+5669487)

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

COMPOUND	RT	AREA
4,4'-DDE	6.916	311577
Endrin	7.406	20857435
4,4'-DDD	7.454	1150527
4,4'-DDT	7.742	20019512
Endrin ketone	8.627	947172
Endrin aldehyde	7.891	1049245

DDT Percent Breakdown = 6.8 %
((311577+1150527) * 100)/(311577+1150527+20019512)

Endrin Percent Breakdown = 8.7 %
((1049245+947172) * 100)/(1049245+947172+20857435)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STX-CLP DS
UVOLTS
Time (Min)
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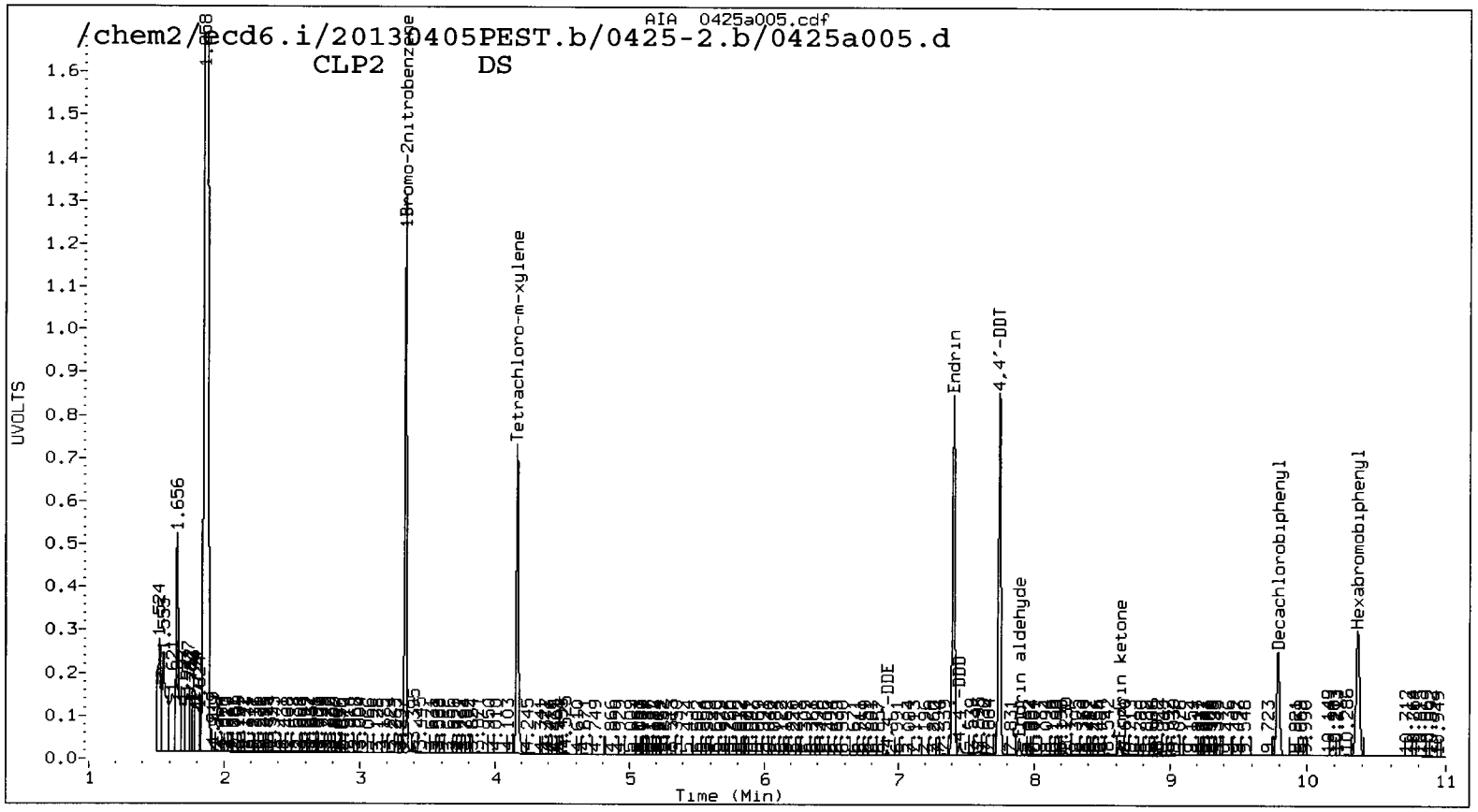
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
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Bromo-2nitrobenzene
Tetrachloro-m-xylene
DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 2.4

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 16.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: WL67

Analysis Date: 25-APR-2013 14:08 Init. Calib. Date: 05-APR-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.231	62953
Endrin	6.750	5539843
4,4'-DDD	6.788	221504
4,4'-DDT	7.045	5373906
Endrin ketone	7.979	284312
Endrin aldehyde	7.333	202385

DDT Percent Breakdown = 5.0 %
((62953+221504) * 100)/(62953+221504+5373906)

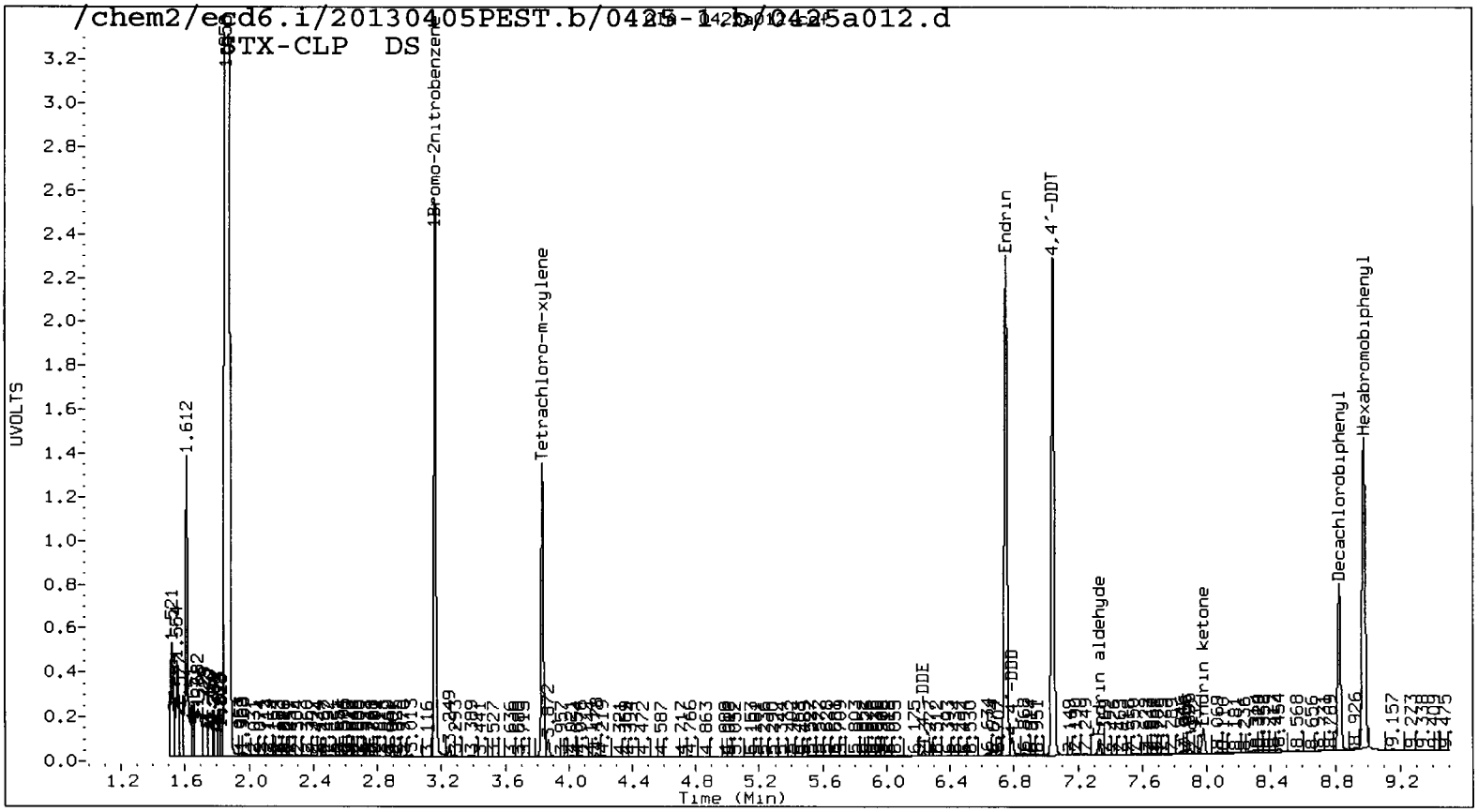
Endrin Percent Breakdown = 8.1 %
((202385+284312) * 100)/(202385+284312+5539843)

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

COMPOUND	RT	AREA
4,4'-DDE	6.916	283109
Endrin	7.405	19881329
4,4'-DDD	7.454	1250430
4,4'-DDT	7.742	18893389
Endrin ketone	8.628	923658
Endrin aldehyde	7.892	895387

DDT Percent Breakdown = 7.5 %
((283109+1250430) * 100)/(283109+1250430+18893389)

Endrin Percent Breakdown = 8.4 %
((895387+923658) * 100)/(895387+923658+19881329)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STX-CLP DS
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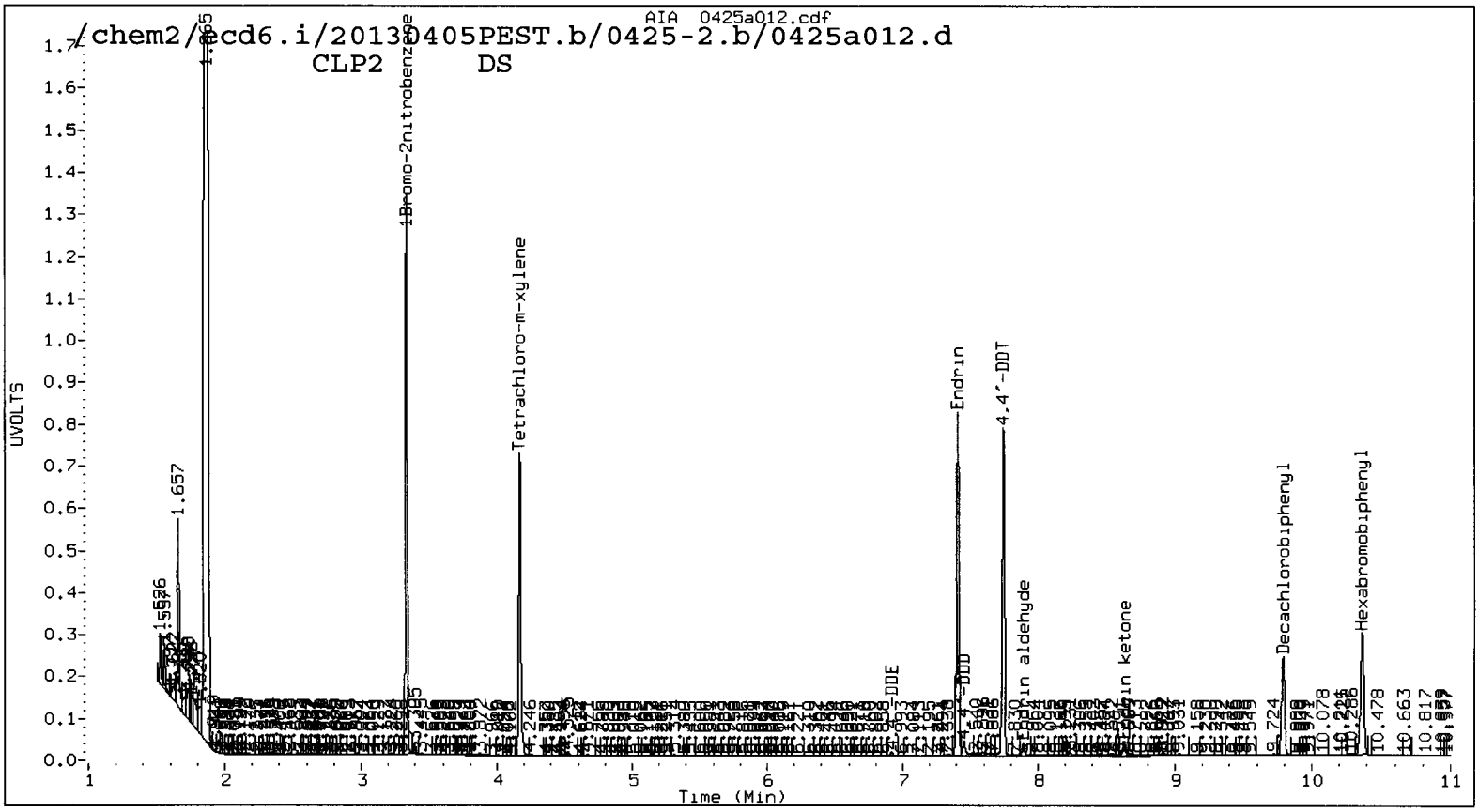
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
DDE
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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CLP2 DS
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1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
DDE
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 2.3

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

AVERAGE %D = 17.0

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

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

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

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

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

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

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

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

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

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING SUPPORT

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

Init. Calib. Date: 04/05/13

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

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

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

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

* Indicates value outside QC Limits

PCB Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-MH-01-20130410-W
SAMPLE

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/16/13
Date Analyzed: 04/22/13 16:57
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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

CAS Number	Analyte	DL	LOQ	Result
12674-11-2	Aroclor 1016	0.0025	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.0028	0.010	< 0.010 U
12672-29-6	**Aroclor 1248**	**0.0028**	**0.010**	**0.024 P**
11097-69-1	**Aroclor 1254**	**0.0028**	**0.010**	**0.010**
11096-82-5	**Aroclor 1260**	**0.0028**	**0.010**	**0.0070 J**
11104-28-2	Aroclor 1221	0.0028	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.0028	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.0028	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.0028	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	79.5%
Tetrachlorometaxylene	65.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-SW-01-20130410-W
SAMPLE

Lab Sample ID: WL49B
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/16/13
Date Analyzed: 04/22/13 17:40
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 20.0
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	DL	LOQ	Result
12674-11-2	Aroclor 1016	0.050	0.20	< 0.20 U
53469-21-9	Aroclor 1242	0.055	0.20	< 0.20 U
12672-29-6	**Aroclor 1248**	**0.055**	**0.20**	**0.80**
11097-69-1	**Aroclor 1254**	**0.055**	**0.20**	**0.54**
11096-82-5	**Aroclor 1260**	**0.055**	**0.20**	**0.60**
11104-28-2	Aroclor 1221	0.055	0.20	< 0.20 U
11141-16-5	Aroclor 1232	0.055	0.20	< 0.20 U
37324-23-5	Aroclor 1262	0.055	0.20	< 0.20 U
11100-14-4	Aroclor 1268	0.055	0.20	< 0.20 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.5%
Tetrachlorometaxylene	74.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-041613	64.5%	32-108	57.8%	31-100	0
LCS-041613	67.8%	32-108	50.8%	31-100	0
LCSD-041613	73.0%	32-108	59.2%	31-100	0
IM-MH-01-20130410-W	79.5%	19-111	65.2%	21-100	0
IM-SW-01-20130410-W	99.5%	19-111	74.5%	21-100	0

Prep Method: SW3510C
Log Number Range: 13-7779 to 13-7780

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-01-20130410-S
SAMPLE

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/23/13 21:11
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 6.99 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 20.0
Silica Gel: Yes

Percent Moisture: 44.4%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	36	140	< 140 U
53469-21-9	**Aroclor 1242**	**49**	**140**	**4,300**
12672-29-6	Aroclor 1248	49	140	< 140 U
11097-69-1	**Aroclor 1254**	**49**	**140**	**2,100**
11096-82-5	Aroclor 1260	49	140	< 140 U
11104-28-2	Aroclor 1221	49	140	< 140 U
11141-16-5	Aroclor 1232	49	140	< 140 U
37324-23-5	**Aroclor 1262**	**49**	**140**	**2,100**
11100-14-4	Aroclor 1268	49	140	< 140 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	132%
Tetrachlorometaxylene	110%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
SAMPLE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

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

Sample Amount: 13.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.94	3.7	< 3.7 U
53469-21-9	Aroclor 1242	1.3	3.7	< 3.7 U
12672-29-6	**Aroclor 1248**	**1.3**	**3.7**	**24**
11097-69-1	**Aroclor 1254**	**1.3**	**3.7**	**15**
11096-82-5	**Aroclor 1260**	**1.3**	**3.7**	**15**
11104-28-2	Aroclor 1221	1.3	3.7	< 3.7 U
11141-16-5	Aroclor 1232	1.3	3.7	< 3.7 U
37324-23-5	Aroclor 1262	1.3	3.7	< 3.7 U
11100-14-4	Aroclor 1268	1.3	3.7	< 3.7 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	84.5%
Tetrachlorometaxylene	84.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
IM-CB-01-20130410-S	132%*	37-128	110%*	45-102	2
MB-041913	89.2%	64-105	74.5%	54-100	0
LCS-041913	95.0%	64-105	78.5%	54-100	0
IM-CB-02-20130410-S	84.5%	37-128	84.8%	45-102	0
IM-CB-02-20130410-S MS	89.2%	37-128	82.5%	45-102	0
IM-CB-02-20130410-S MSD	83.8%	37-128	87.8%	45-102	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-7784 to 13-7785

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: IM-CB-02-20130410-S
MS/MSD

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted MS/MSD: 04/19/13

Date Analyzed MS: 04/23/13 19:43
MSD: 04/23/13 20:05
Instrument/Analyst MS: ECD7/JGR
MSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 13.1 g-dry-wt
MSD: 13.4 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 18.1%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 3.7 U	80.9	95.9	84.4%	83.4	93.9	88.8%	3.0%
Aroclor 1260	15	85.8	95.9	73.8%	88.7	93.9	78.5%	3.3%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/23/13 19:43
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.97	3.8	---
53469-21-9	Aroclor 1242	1.3	3.8	< 3.8 U
12672-29-6	**Aroclor 1248**	**1.3**	**3.8**	**55**
11097-69-1	**Aroclor 1254**	**1.3**	**3.8**	**46**
11096-82-5	Aroclor 1260	1.3	3.8	---
11104-28-2	Aroclor 1221	1.3	3.8	< 3.8 U
11141-16-5	Aroclor 1232	1.3	3.8	< 3.8 U
37324-23-5	Aroclor 1262	1.3	3.8	< 3.8 U
11100-14-4	Aroclor 1268	1.3	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	89.2%
Tetrachlorometaxylene	82.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-02-20130410-S
MATRIX SPIKE DUP

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted: 04/19/13
Date Analyzed: 04/23/13 20:05
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.4 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.95	3.7	---
53469-21-9	Aroclor 1242	1.3	3.7	< 3.7 U
12672-29-6	**Aroclor 1248**	**1.3**	**3.7**	**78 P**
11097-69-1	**Aroclor 1254**	**1.3**	**3.7**	**47**
11096-82-5	Aroclor 1260	1.3	3.7	---
11104-28-2	Aroclor 1221	1.3	3.7	< 3.7 U
11141-16-5	Aroclor 1232	1.3	3.7	< 3.7 U
37324-23-5	Aroclor 1262	1.3	3.7	< 3.7 U
11100-14-4	Aroclor 1268	1.3	3.7	< 3.7 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	83.8%
Tetrachlorometaxylene	87.8%

FORM I

IM_10 : 00216

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-041613
LCS/LCSD

Lab Sample ID: LCS-041613
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 04/16/13
Date Analyzed LCS: 04/22/13 16:13
LCSD: 04/22/13 16:35
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.039	0.050	78.0%	0.042	0.050	84.0%	7.4%
Aroclor 1260	0.040	0.050	80.0%	0.043	0.050	86.0%	7.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	67.8%	73.0%
Tetrachlorometaxylene	50.8%	59.2%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-041913
LAB CONTROL

Lab Sample ID: LCS-041913
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

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

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

Percent Moisture: NA

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

PCB Surrogate Recovery

Decachlorobiphenyl	95.0%
Tetrachlorometaxylene	78.5%

Results reported in µg/kg (ppb)

PCB METHOD BLANK SUMMARY

BLANK NO.

WL49MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WL49MBW1
Lab File ID: 0422A012

Date Extracted: 04/16/13
Matrix: LIQUID

Date Analyzed: 04/22/13
Instrument ID: ECD7

Time Analyzed: 1551
GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WL49LCSW1	WL49LCSW1	04/22/13
02	WL49LCSDW1	WL49LCSDW1	04/22/13
03	IM-MH-01-20130410-W	WL49A	04/22/13
04	IM-SW-01-20130410-W	WL49B	04/22/13
05	IM-SW-01-20130410-W	WL49B	04/22/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-041613
METHOD BLANK

Lab Sample ID: MB-041613
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/23/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/16/13
Date Analyzed: 04/22/13 15:51
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

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

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

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.5%
Tetrachlorometaxylene	57.8%

PCB METHOD BLANK SUMMARY

BLANK NO. WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WL49MBS1
Lab File ID: 0423A005

Date Extracted: 04/19/13
Matrix: SOLID

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

Time Analyzed: 1754
GC Columns: ZB5/ZB35

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

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

ALL RUNS ARE DUAL COLUMN

FORM IV PCB

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: MB-041913
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

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

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

Percent Moisture: NA

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

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	89.2%
Tetrachlorometaxylene	74.5%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 04/16/13

SURROGATES

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

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

AROCLOR AVERAGE %RSD = 9.0

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

AROCLOR AVERAGE %RSD = 7.1

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 04/16/13

SURROGATES

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

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	6.55- 6.75	0.0236	0.0212	0.0197	0.0170	0.0158	0.0146	0.0186	18.5
2	7.43- 7.63	0.0540	0.0457	0.0419	0.0367	0.0347	0.0325	0.0409	19.6
3	8.24- 8.44	0.1006	0.0865	0.0810	0.0725	0.0701	0.0678	0.0798	15.6
4	9.31- 9.51	0.0318	0.0274	0.0257	0.0228	0.0219	0.0209	0.0251	16.3

AROCLOR AVERAGE %RSD = 17.5

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

AROCLOR AVERAGE %RSD = 11.8

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 04/16/13

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

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

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

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	8.250	8.15- 8.35	0.04360
2	8.871	8.77- 8.97	0.02774
3	9.411	9.31- 9.51	0.03854
4	9.880	9.78- 9.98	0.05133

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.221	10.12-10.32	0.04767
2	10.611	10.51-10.71	0.02881
3	10.753	10.65-10.85	0.05688
4	11.113	11.01-11.21	0.06046
5	11.810	11.71-11.91	0.05707

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

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

6G
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 04/16/13

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

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

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

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	7.530	7.43- 7.63	0.01635
2	8.341	8.24- 8.44	0.04205
3	8.942	8.84- 9.04	0.02999
4	10.352	10.25-10.45	0.04073

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 04/16/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.055	9.95-10.15	0.02578
2	10.239	10.14-10.34	0.03193
3	10.936	10.84-11.04	0.05208
4	11.189	11.09-11.29	0.05172
5	11.961	11.86-12.06	0.03841

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

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

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1660 ICV Time Analyzed :1953

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1016-1	7.73	7.64	7.84	257.1	250.0	2.8	
Aroclor-1016-2	8.25	8.16	8.36	258.5	250.0	3.4	
Aroclor-1016-3	8.44	8.34	8.54	260.4	250.0	4.2	
Aroclor-1016-4	8.86	8.77	8.97	253.5	250.0	1.4	

AVERAGE %D = 2.9

Date Analyzed :04/16/13

Lab Standard ID: AR1660 ICV Time Analyzed :1953

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Aroclor-1260-1	12.04	11.94	12.14	316.1	250.0	26.4	<-
Aroclor-1260-2	12.36	12.26	12.46	307.3	250.0	22.9	
Aroclor-1260-3	12.73	12.63	12.83	310.6	250.0	24.2	
Aroclor-1260-4	13.13	13.03	13.23	291.1	250.0	16.4	
Aroclor-1260-5	13.30	13.21	13.41	334.9	250.0	34.0	<-

AVERAGE %D = 24.8

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1660 ICV Time Analyzed :1953

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.66	6.55	6.75	261.8	250.0	4.7
Aroclor-1016-2	7.54	7.43	7.63	243.8	250.0	-2.5
Aroclor-1016-3	8.35	8.24	8.44	245.4	250.0	-1.8
Aroclor-1016-4	9.42	9.31	9.51	255.0	250.0	2.0

AVERAGE %D = 2.8

Date Analyzed :04/16/13

Lab Standard ID: AR1660 ICV Time Analyzed :1953

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.97	11.86	12.06	231.3	250.0	-7.5
Aroclor-1260-2	12.52	12.41	12.61	295.5	250.0	18.2
Aroclor-1260-3	12.79	12.68	12.88	305.9	250.0	22.3
Aroclor-1260-4	13.35	13.24	13.44	304.8	250.0	21.9

AVERAGE %D = 17.5

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1242 ICV Time Analyzed :2013

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	7.73	7.64	7.84	250.1	250.0	0.0
Aroclor-1242-2	8.25	8.16	8.36	249.8	250.0	-0.1
Aroclor-1242-3	8.44	8.34	8.54	251.0	250.0	0.4
Aroclor-1242-4	9.40	9.31	9.51	254.2	250.0	1.7

AVERAGE %D = 0.6

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING

GC Column: ZB35
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1242 ICV
Time Analyzed :2013

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.66	6.54	6.74	249.0	250.0	-0.4
Aroclor-1242-2	7.54	7.42	7.62	256.5	250.0	2.6
Aroclor-1242-3	8.35	8.23	8.43	252.0	250.0	0.8
Aroclor-1242-4	9.42	9.30	9.50	253.4	250.0	1.4

AVERAGE %D = 1.3

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL49

Project: NPDES SAMPLING

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1248 ICV

Time Analyzed :2034

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	8.24	8.15	8.35	238.3	250.0	-4.7
Aroclor-1248-2	8.86	8.77	8.97	227.3	250.0	-9.1
Aroclor-1248-3	9.40	9.31	9.51	219.9	250.0	-12.0
Aroclor-1248-4	9.88	9.78	9.98	217.7	250.0	-12.9

AVERAGE %D = 9.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING

GC Column: ZB35
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1248 ICV
Time Analyzed :2034

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	7.54	7.43	7.63	253.7	250.0	1.5
Aroclor-1248-2	8.35	8.24	8.44	238.3	250.0	-4.7
Aroclor-1248-3	8.95	8.84	9.04	227.2	250.0	-9.1
Aroclor-1248-4	10.36	10.25	10.45	218.9	250.0	-12.4

AVERAGE %D = 6.9

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1254 ICV Time Analyzed :2054

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.22	10.12	10.32	298.0	250.0	19.2
Aroclor-1254-2	10.61	10.51	10.71	311.4	250.0	24.5
Aroclor-1254-3	10.75	10.65	10.85	294.8	250.0	17.9
Aroclor-1254-4	11.11	11.01	11.21	303.0	250.0	21.2
Aroclor-1254-5	11.81	11.71	11.91	297.2	250.0	18.9

AVERAGE %D = 20.3

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL49

Project: NPDES SAMPLING

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/16/13

Lab Standard ID: AR1254 ICV

Time Analyzed :2054

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.06	9.95	10.15	288.4	250.0	15.3
Aroclor-1254-2	10.25	10.14	10.34	292.6	250.0	17.0
Aroclor-1254-3	10.94	10.84	11.04	286.8	250.0	14.7
Aroclor-1254-4	11.21	11.09	11.29	297.9	250.0	19.2
Aroclor-1254-5	11.97	11.86	12.06	290.9	250.0	16.4

AVERAGE %D = 16.5

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1242 Time Analyzed :1507

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	7.74	7.63	7.83	239.2	250.0	-4.3
Aroclor-1242-2	8.26	8.15	8.35	247.3	250.0	-1.1
Aroclor-1242-3	8.44	8.34	8.54	241.1	250.0	-3.6
Aroclor-1242-4	9.41	9.31	9.51	235.8	250.0	-5.7

AVERAGE %D = 3.7

FORM VII PCB

WL49: 000236A rev A 6/26/13 A

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1242 Time Analyzed :1507

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.64	6.54	6.74	241.1	250.0	-3.6
Aroclor-1242-2	7.52	7.42	7.62	241.8	250.0	-3.3
Aroclor-1242-3	8.33	8.23	8.43	243.4	250.0	-2.6
Aroclor-1242-4	9.40	9.30	9.50	285.1	250.0	14.0

AVERAGE %D = 5.9

FORM VII PCB

WL49: 002360B ~~002288B~~ rev A 6/26/13

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1660 Time Analyzed :1529

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.73	7.64	7.84	237.1	250.0	-5.2
Aroclor-1016-2	8.25	8.16	8.36	246.0	250.0	-1.6
Aroclor-1016-3	8.44	8.35	8.55	240.0	250.0	-4.0
Aroclor-1016-4	8.87	8.77	8.97	239.1	250.0	-4.4

AVERAGE %D = 3.8

Date Analyzed :04/22/13

Lab Standard ID: AR1660 Time Analyzed :1529

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	236.0	250.0	-5.6
Aroclor-1260-2	12.36	12.26	12.46	240.3	250.0	-3.9
Aroclor-1260-3	12.73	12.63	12.83	243.6	250.0	-2.6
Aroclor-1260-4	13.13	13.03	13.23	248.4	250.0	-0.6
Aroclor-1260-5	13.30	13.21	13.41	228.0	250.0	-8.8

AVERAGE %D = 4.3

WL49: 00236C rev A 6/26/13

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1660 Time Analyzed :1529

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.54	6.74	232.5	250.0	-7.0
Aroclor-1016-2	7.53	7.42	7.62	229.6	250.0	-8.2
Aroclor-1016-3	8.34	8.23	8.43	232.6	250.0	-6.9
Aroclor-1016-4	9.41	9.30	9.50	254.1	250.0	1.6

AVERAGE %D = 5.9

Date Analyzed :04/22/13

Lab Standard ID: AR1660 Time Analyzed :1529

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	240.8	250.0	-3.7
Aroclor-1260-2	12.50	12.39	12.59	250.8	250.0	0.3
Aroclor-1260-3	12.77	12.66	12.86	243.1	250.0	-2.8
Aroclor-1260-4	13.33	13.23	13.43	248.4	250.0	-0.6

AVERAGE %D = 1.8

WL49: 002360 ~~002358~~ rev A 6/26/13

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL49

Project: NPDES SAMPLING

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1248

Time Analyzed :1846

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	8.25	8.15	8.35	247.2	250.0	-1.1
Aroclor-1248-2	8.87	8.77	8.97	247.9	250.0	-0.8
Aroclor-1248-3	9.41	9.31	9.51	244.8	250.0	-2.1
Aroclor-1248-4	9.88	9.78	9.98	233.3	250.0	-6.7

AVERAGE %D = 2.7

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WL49

Project: NPDES SAMPLING

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1248

Time Analyzed :1846

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	7.53	7.43	7.63	247.2	250.0	-1.1
Aroclor-1248-2	8.34	8.24	8.44	249.3	250.0	-0.3
Aroclor-1248-3	8.94	8.84	9.04	250.9	250.0	0.4
Aroclor-1248-4	10.35	10.25	10.45	242.4	250.0	-3.0

AVERAGE %D = 1.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WL49
Project: NPDES SAMPLING

GC Column: ZB5
Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1660
Time Analyzed :1908

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	238.3	250.0	-4.7
Aroclor-1016-2	8.26	8.16	8.36	248.0	250.0	-0.8
Aroclor-1016-3	8.44	8.34	8.54	241.8	250.0	-3.3
Aroclor-1016-4	8.87	8.77	8.97	241.3	250.0	-3.5

AVERAGE %D = 3.1

Date Analyzed :04/22/13

Lab Standard ID: AR1660
Time Analyzed :1908

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	241.3	250.0	-3.5
Aroclor-1260-2	12.36	12.26	12.46	242.1	250.0	-3.1
Aroclor-1260-3	12.73	12.63	12.83	243.4	250.0	-2.6
Aroclor-1260-4	13.13	13.03	13.23	247.6	250.0	-1.0
Aroclor-1260-5	13.31	13.21	13.41	226.9	250.0	-9.2

AVERAGE %D = 3.9

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/22/13

Lab Standard ID: AR1660 Time Analyzed :1908

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.55	6.75	232.5	250.0	-7.0
Aroclor-1016-2	7.53	7.43	7.63	229.8	250.0	-8.1
Aroclor-1016-3	8.34	8.24	8.44	233.7	250.0	-6.5
Aroclor-1016-4	9.41	9.31	9.51	256.4	250.0	2.6

AVERAGE %D = 6.1

Date Analyzed :04/22/13

Lab Standard ID: AR1660 Time Analyzed :1908

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.86	12.06	247.9	250.0	-0.8
Aroclor-1260-2	12.51	12.41	12.61	259.2	250.0	3.7
Aroclor-1260-3	12.78	12.68	12.88	250.7	250.0	0.3
Aroclor-1260-4	13.34	13.24	13.44	251.9	250.0	0.8

AVERAGE %D = 1.4

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1254 Time Analyzed :1710

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

AVERAGE %D = 1.7

FORM VII PCB

6/26/13
WL49:00240A rev A

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1254 Time Analyzed :1710

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.05	9.94	10.14	251.2	250.0	0.5
Aroclor-1254-2	10.24	10.13	10.33	254.8	250.0	1.9
Aroclor-1254-3	10.93	10.82	11.02	253.2	250.0	1.3
Aroclor-1254-4	11.19	11.08	11.28	257.3	250.0	2.9
Aroclor-1254-5	11.96	11.85	12.05	246.6	250.0	-1.3

AVERAGE %D = 1.6

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	239.6	250.0	-4.2
Aroclor-1016-2	8.25	8.16	8.36	248.2	250.0	-0.7
Aroclor-1016-3	8.44	8.35	8.55	242.7	250.0	-2.9
Aroclor-1016-4	8.87	8.77	8.97	242.5	250.0	-3.0

AVERAGE %D = 2.7

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	243.5	250.0	-2.6
Aroclor-1260-2	12.36	12.26	12.46	247.3	250.0	-1.1
Aroclor-1260-3	12.73	12.63	12.83	250.1	250.0	0.0
Aroclor-1260-4	13.13	13.03	13.23	254.2	250.0	1.7
Aroclor-1260-5	13.31	13.21	13.41	233.2	250.0	-6.7

AVERAGE %D = 2.4

6/26/13

WL49:00240C rev A

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.54	6.74	234.3	250.0	-6.3
Aroclor-1016-2	7.53	7.42	7.62	231.0	250.0	-7.6
Aroclor-1016-3	8.34	8.23	8.43	233.9	250.0	-6.4
Aroclor-1016-4	9.41	9.30	9.50	259.1	250.0	3.6

AVERAGE %D = 6.0

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :1732

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	248.0	250.0	-0.8
Aroclor-1260-2	12.50	12.39	12.59	258.3	250.0	3.3
Aroclor-1260-3	12.77	12.66	12.86	249.4	250.0	-0.2
Aroclor-1260-4	13.34	13.23	13.43	256.8	250.0	2.7

AVERAGE %D = 1.8

10/26/13
WL49: 002401Drev AN

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1248 Time Analyzed :2301

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

AVERAGE %D = 1.3

WL49:00240Erev 6/20/13 AJ

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1248 Time Analyzed :2301

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

AVERAGE %D = 1.3

6/26/13 AV

WL49: 00240Frev

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	240.3	250.0	-3.9
Aroclor-1016-2	8.26	8.16	8.36	250.2	250.0	0.1
Aroclor-1016-3	8.45	8.35	8.55	244.0	250.0	-2.4
Aroclor-1016-4	8.87	8.77	8.97	243.6	250.0	-2.6

AVERAGE %D = 2.2

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	273.5	250.0	9.4
Aroclor-1260-2	12.36	12.26	12.46	274.0	250.0	9.6
Aroclor-1260-3	12.73	12.63	12.83	273.7	250.0	9.5
Aroclor-1260-4	13.13	13.03	13.23	275.4	250.0	10.2
Aroclor-1260-5	13.31	13.21	13.41	251.7	250.0	0.7

AVERAGE %D = 7.9

6/26/13

WLH9:00240G rev AV

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 20130416 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 04/16/13

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.65	6.54	6.74	235.4	250.0	-5.8
Aroclor-1016-2	7.53	7.42	7.62	233.9	250.0	-6.4
Aroclor-1016-3	8.34	8.23	8.43	236.8	250.0	-5.3
Aroclor-1016-4	9.41	9.30	9.50	264.3	250.0	5.7

AVERAGE %D = 5.8

Date Analyzed :04/23/13

Lab Standard ID: AR1660 Time Analyzed :2323

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.96	11.85	12.05	277.3	250.0	10.9
Aroclor-1260-2	12.50	12.39	12.59	284.1	250.0	13.6
Aroclor-1260-3	12.77	12.66	12.86	276.4	250.0	10.6
Aroclor-1260-4	13.33	13.23	13.43	277.8	250.0	11.1

AVERAGE %D = 11.6

6/26/13
WL49:00240H rev A

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES

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

Init. Calib. Date: 04/16/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546				
02		AR1660 .25	04/16/13	1606	5591339	2.771	4375297	14.854
03		AR1660 .02	04/16/13	1627	5596271	2.772	4352111	14.855
04		AR1660 .05	04/16/13	1647	5580646	2.770	4394416	14.855
05		AR1660 1	04/16/13	1708	5497548	2.771	4450563	14.850
06		AR1660 0.1	04/16/13	1729	5547889	2.771	4450577	14.853
07		AR1660 0.5	04/16/13	1749	5500666	2.772	4448503	14.851
08		AR1242	04/16/13	1810	5416449	2.772	4295436	14.854
09		AR1248	04/16/13	1830	5269055	2.770	4171971	14.855
10		AR1254	04/16/13	1851	5495311	2.769	4409997	14.854
11		AR2162	04/16/13	1911	5446032	2.772	4395558	14.854
12		AR3268	04/16/13	1932	5579954	2.772	4509857	14.855
13		AR1660 ICV	04/16/13	1953	5325274	2.770	4313581	14.855
14		AR1242 ICV	04/16/13	2013	5508987	2.771	4423479	14.855
15		AR1248 ICV	04/16/13	2034	5656162	2.771	4633321	14.852
16		AR1254 ICV	04/16/13	2054	5751969	2.772	4697181	14.855
17		AR2162 ICV	04/16/13	2115	5806766	2.771	4739232	14.853
18		AR3268 ICV	04/16/13	2135	5678965	2.770	4626646	14.854
19		DDTS 0.1	04/16/13	2156	5513871	2.769		
20	ZZZZZ	ZZZZZ	04/16/13	2216	5805570	2.770		
21		AR1242	04/22/13	1507	7552804	2.779	6375087	14.853
22		AR1660	04/22/13	1529	7304553	2.777	6248618	14.851
23	WL49MBW1	WL49MBW1	04/22/13	1551	7865811	2.777	6909126	14.850
24	WL49LCSW1	WL49LCSW1	04/22/13	1613	8069070	2.775	7080711	14.850
25	WL49LCSDW1	WL49LCSDW1	04/22/13	1635	8089173	2.780	7079892	14.851
26	IM-MH-01-201	WL49A	04/22/13	1657	7272389	2.778	6334744	14.851
27	IM-SW-01-201	WL49B	04/22/13	1718	7199853	2.781	4778340	14.861
28	IM-SW-01-201	WL49B	04/22/13	1740	7397082	2.784	5345772	14.852
29		AR1248	04/22/13	1846	6896105	2.781	5204261	14.852
30		AR1660	04/22/13	1908	7181593	2.780	5529473	14.851

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

* Indicates value outside QC Limits

WL49:00241 rev 6/26/13 AN

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES

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

Init. Calib. Date: 04/16/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546	20136*	3.292		
02		AR1660 .25	04/16/13	1606	8525322	3.214	6077527	15.246
03		AR1660 .02	04/16/13	1627	8598192	3.216	5984997	15.248
04		AR1660 .05	04/16/13	1647	8596607	3.214	6084847	15.248
05		AR1660 1	04/16/13	1708	8542994	3.216	6408602	15.245
06		AR1660 0.1	04/16/13	1729	8580903	3.215	6158519	15.246
07		AR1660 0.5	04/16/13	1749	8487736	3.215	6324175	15.246
08		AR1242	04/16/13	1810	8375773	3.215	5833847	15.246
09		AR1248	04/16/13	1830	8150106	3.214	5682178	15.247
10		AR1254	04/16/13	1851	8458741	3.212	5993280	15.247
11		AR2162	04/16/13	1911	8381800	3.215	5896928	15.246
12		AR3268	04/16/13	1932	8556043	3.214	6168153	15.247
13		AR1660 ICV	04/16/13	1953	8177137	3.214	5796454	15.246
14		AR1242 ICV	04/16/13	2013	8450305	3.214	5884105	15.246
15		AR1248 ICV	04/16/13	2034	8702323	3.215	6212763	15.245
16		AR1254 ICV	04/16/13	2054	8808751	3.215	6232306	15.247
17		AR2162 ICV	04/16/13	2115	8866116	3.213	6276279	15.245
18		AR3268 ICV	04/16/13	2135	8638794	3.212	6054334	15.246
19		DDTS 0.1	04/16/13	2156	8408899	3.211		
20	ZZZZZ	ZZZZZ	04/16/13	2216	8797710	3.211		
21		AR1242	04/22/13	1507	9881232	3.191	7055371	15.236
22		AR1660	04/22/13	1529	9577921	3.203	6994575	15.236
23	WL49MBW1	WL49MBW1	04/22/13	1551	10386197	3.204	7939966	15.236
24	WL49LCSW1	WL49LCSW1	04/22/13	1613	10416476	3.203	8196943	15.236
25	WL49LCSDW1	WL49LCSDW1	04/22/13	1635	10508404	3.207	8184358	15.237
26	IM-MH-01-201	WL49A	04/22/13	1657	9678988	3.206	7763500	15.236
27	IM-SW-01-201	WL49B	04/22/13	1718	9255959	3.208	8557414	15.243
28	IM-SW-01-201	WL49B	04/22/13	1740	9977274	3.210	7620163	15.236
29		AR1248	04/22/13	1846	9348953	3.208	6378531	15.237
30		AR1660	04/22/13	1908	9586496	3.207	6676451	15.237

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

* Indicates value outside QC Limits

WL49:0024Drev 6/26/13 AV

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES

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

Init. Calib. Date: 04/16/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546				
02		AR1660 .25	04/16/13	1606	5591339	2.771	4375297	14.854
03		AR1660 .02	04/16/13	1627	5596271	2.772	4352111	14.855
04		AR1660 .05	04/16/13	1647	5580646	2.770	4394416	14.855
05		AR1660 1	04/16/13	1708	5497548	2.771	4450563	14.850
06		AR1660 0.1	04/16/13	1729	5547889	2.771	4450577	14.853
07		AR1660 0.5	04/16/13	1749	5500666	2.772	4448503	14.851
08		AR1242	04/16/13	1810	5416449	2.772	4295436	14.854
09		AR1248	04/16/13	1830	5269055	2.770	4171971	14.855
10		AR1254	04/16/13	1851	5495311	2.769	4409997	14.854
11		AR2162	04/16/13	1911	5446032	2.772	4395558	14.854
12		AR3268	04/16/13	1932	5579954	2.772	4509857	14.855
13		AR1660 ICV	04/16/13	1953	5325274	2.770	4313581	14.855
14		AR1242 ICV	04/16/13	2013	5508987	2.771	4423479	14.855
15		AR1248 ICV	04/16/13	2034	5656162	2.771	4633321	14.852
16		AR1254 ICV	04/16/13	2054	5751969	2.772	4697181	14.855
17		AR2162 ICV	04/16/13	2115	5806766	2.771	4739232	14.853
18		AR3268 ICV	04/16/13	2135	5678965	2.770	4626646	14.854
19		DDTS 0.1	04/16/13	2156	5513871	2.769		
20	ZZZZZ	ZZZZZ	04/16/13	2216	5805570	2.770		
21		AR1242	04/22/13	1507	7552804	2.779	6375087	14.853
22		AR1660	04/22/13	1529	7304553	2.777	6248618	14.851
23	WL49MBW1	WL49MBW1	04/22/13	1551	7865811	2.777	6909126	14.850
24	WL49LCSW1	WL49LCSW1	04/22/13	1613	8069070	2.775	7080711	14.850
25	WL49LCSDW1	WL49LCSDW1	04/22/13	1635	8089173	2.780	7079892	14.851
26	IM-MH-01-201	WL49A	04/22/13	1657	7272389	2.778	6334744	14.851
27	IM-SW-01-201	WL49B	04/22/13	1718	7199853	2.781	4778340	14.861
28	IM-SW-01-201	WL49B	04/22/13	1740	7397082	2.784	5345772	14.852
29		AR1248	04/22/13	1846	6896105	2.781	5204261	14.852
30		AR1660	04/22/13	1908	7181593	2.780	5529473	14.851

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

* Indicates value outside QC Limits

6/24/13 A
WL49:00242Arev

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES

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

Init. Calib. Date: 04/16/13

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546	20136*	3.292		
02		AR1660 .25	04/16/13	1606	8525322	3.214	6077527	15.246
03		AR1660 .02	04/16/13	1627	8598192	3.216	5984997	15.248
04		AR1660 .05	04/16/13	1647	8596607	3.214	6084847	15.248
05		AR1660 1	04/16/13	1708	8542994	3.216	6408602	15.245
06		AR1660 0.1	04/16/13	1729	8580903	3.215	6158519	15.246
07		AR1660 0.5	04/16/13	1749	8487736	3.215	6324175	15.246
08		AR1242	04/16/13	1810	8375773	3.215	5833847	15.246
09		AR1248	04/16/13	1830	8150106	3.214	5682178	15.247
10		AR1254	04/16/13	1851	8458741	3.212	5993280	15.247
11		AR2162	04/16/13	1911	8381800	3.215	5896928	15.246
12		AR3268	04/16/13	1932	8556043	3.214	6168153	15.247
13		AR1660 ICV	04/16/13	1953	8177137	3.214	5796454	15.246
14		AR1242 ICV	04/16/13	2013	8450305	3.214	5884105	15.246
15		AR1248 ICV	04/16/13	2034	8702323	3.215	6212763	15.245
16		AR1254 ICV	04/16/13	2054	8808751	3.215	6232306	15.247
17		AR2162 ICV	04/16/13	2115	8866116	3.213	6276279	15.245
18		AR3268 ICV	04/16/13	2135	8638794	3.212	6054334	15.246
19		DDTS 0.1	04/16/13	2156	8408899	3.211		
20	ZZZZZ	ZZZZZ	04/16/13	2216	8797710	3.211		
21		AR1242	04/22/13	1507	9881232	3.191	7055371	15.236
22		AR1660	04/22/13	1529	9577921	3.203	6994575	15.236
23	WL49MBW1	WL49MBW1	04/22/13	1551	10386197	3.204	7939966	15.236
24	WL49LCSW1	WL49LCSW1	04/22/13	1613	10416476	3.203	8196943	15.236
25	WL49LCSDW1	WL49LCSDW1	04/22/13	1635	10508404	3.207	8184358	15.237
26	IM-MH-01-201	WL49A	04/22/13	1657	9678988	3.206	7763500	15.236
27	IM-SW-01-201	WL49B	04/22/13	1718	9255959	3.208	8557414	15.243
28	IM-SW-01-201	WL49B	04/22/13	1740	9977274	3.210	7620163	15.236
29		AR1248	04/22/13	1846	9348953	3.208	6378531	15.237
30		AR1660	04/22/13	1908	9586496	3.207	6676451	15.237

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

* Indicates value outside QC Limits

WL49-00242Brev 6/26/13 AN

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/16/13

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

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	5591339	2.771	4375297	14.854
				UPPER LIMIT	11182678	2.871	8750594	14.954
				LOWER LIMIT	2795670	2.671	2187648	14.754
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	04/16/13	1546				
02		AR1660 .25	04/16/13	1606	5591339	2.771	4375297	14.854
03		AR1660 .02	04/16/13	1627	5596271	2.772	4352111	14.855
04		AR1660 .05	04/16/13	1647	5580646	2.770	4394416	14.855
05		AR1660 1	04/16/13	1708	5497548	2.771	4450563	14.850
06		AR1660 0.1	04/16/13	1729	5547889	2.771	4450577	14.853
07		AR1660 0.5	04/16/13	1749	5500666	2.772	4448503	14.851
08		AR1242	04/16/13	1810	5416449	2.772	4295436	14.854
09		AR1248	04/16/13	1830	5269055	2.770	4171971	14.855
10		AR1254	04/16/13	1851	5495311	2.769	4409997	14.854
11		AR2162	04/16/13	1911	5446032	2.772	4395558	14.854
12		AR3268	04/16/13	1932	5579954	2.772	4509857	14.855
13		AR1660 ICV	04/16/13	1953	5325274	2.770	4313581	14.855
14		AR1242 ICV	04/16/13	2013	5508987	2.771	4423479	14.855
15		AR1248 ICV	04/16/13	2034	5656162	2.771	4633321	14.852
16		AR1254 ICV	04/16/13	2054	5751969	2.772	4697181	14.855
17		AR2162 ICV	04/16/13	2115	5806766	2.771	4739232	14.853
18		AR3268 ICV	04/16/13	2135	5678965	2.770	4626646	14.854
19		DDTS 0.1	04/16/13	2156	5513871	2.769		
20	ZZZZZ	ZZZZZ	04/16/13	2216	5805570	2.770		
21	ZZZZZ	ZZZZZ	04/23/13	1626	7483794	2.776	5651246	14.853
22	ZZZZZ	ZZZZZ	04/23/13	1648	8091175	2.774	6264824	14.851
23		AR1254	04/23/13	1710	7676793	2.776	6025884	14.851
24		AR1660	04/23/13	1732	7130069	2.780	5697247	14.850
25	WL49MBS1	WL49MBS1	04/23/13	1754	7579277	2.780	6537300	14.850
26	WL49LCSS1	WL49LCSS1	04/23/13	1816	7448891	2.780	6465787	14.850
27	ZZZZZ	ZZZZZ	04/23/13	1838	7571939	2.780	6644829	14.851
28	IM-CB-01-201	WL49F	04/23/13	1859	7220412	2.793	10880104*	14.902
29	IM-CB-02-201	WL49G	04/23/13	1921	7500732	2.788	4716599	14.856
30	IM-CB-02-201	WL49GMS	04/23/13	1943	7616089	2.784	5014043	14.854
31	IM-CB-02-201	WL49GMSD	04/23/13	2005	7653577	2.785	4927850	14.855
32	GR-CB-07-201	WL67A	04/23/13	2027	7869105	2.789	13402977*	14.892

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

* Indicates value outside QC Limits

FORM 8

PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/16/13

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

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

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

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

IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/16/13

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

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

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

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

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WL49 Project: NPDES SAMPLING

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

Init. Calib. Date: 04/16/13

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

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

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

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

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: WL49-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 04/11/13

Data Release Authorized: MW
Reported: 04/24/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-041713	Method Blank	04/20/13	1.0	Diesel	< 50 U	50	14
13-7784		FID3B		Motor Oil	< 100 U	100	25
				HC ID	---		
				o-Terphenyl	104%		
WL49F	IM-CB-01-20130410-S	04/20/13	50	**Diesel**	**28,000**	4,400	1,200
13-7784		FID3B		**Motor Oil**	**56,000**	8,800	2,200
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	D		

Reported in mg/kg (ppm)

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

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
041713MBS	104%	0
041713LCS	105%	0
IM-CB-01-20130410-S	D	0
IM-CB-01-20130410-S MS	D	0
IM-CB-01-20130410-S MSD	D	0

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

Prep Method: SW3546
Log Number Range: 13-7784 to 13-7784

WL49: 249R BC 5/14/13

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: IM-CB-01-20130410-S
MS/MSD

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 05/09/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Date Extracted MS/MSD: 04/17/13

Date Analyzed MS: 04/20/13 21:47
MSD: 04/20/13 22:06
Instrument/Analyst MS: FID3B/VTS
MSD: FID3B/VTS

Sample Amount MS: 5.65 g-dry-wt
MSD: 5.71 g-dry-wt
Final Extract Volume MS: 10 mL
MSD: 10 mL
Dilution Factor MS: 50.0
MSD: 50.0
Percent Moisture: 44.4%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	28,000	29,900	2,650	NA	27,200	2,630	NA	9.5%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	D	D

Results reported in mg/kg
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.
RPD calculated using sample concentrations per SW846.

WL49: 249A

BC 5/14/13

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-041713
LAB CONTROL

Lab Sample ID: LCS-041713
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/24/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 04/17/13
Date Analyzed: 04/20/13 21:09
Instrument/Analyst: FID3B/VTS

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 10 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	1,530	1,500	102%

TPHD Surrogate Recovery

o-Terphenyl	105%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WL49
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 04/11/13 209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-7784-041713MB1	Method Blank	10.0 g	10.0 mL	-	04/17/13
13-7784-041713LCS1	Lab Control	10.0 g	10.0 mL	-	04/17/13
13-7784-WL49F	IM-CB-01-20130410-S	5.69 g	10.0 mL	D	04/17/13
13-7784-WL49FMS	IM-CB-01-20130410-S	5.65 g	10.0 mL	D	04/17/13
13-7784-WL49FMSD	IM-CB-01-20130410-S	5.71 g	10.0 mL	D	04/17/13

Basis: D=Dry Weight W=As Received

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WL49MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project No.: NPDES SAMPLING

Date Extracted: 04/17/13 Matrix: SOLID

Date Analyzed : 04/20/13 Instrument ID : FID3B

Time Analyzed : 2050

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WL49LCSS1	WL49LCSS1	04/20/13
02	IM-CB-01-201	WL49F	04/20/13
03	IM-CB-01-201	WL49FMS	04/20/13
04	IM-CB-01-201	WL49FMSD	04/20/13
05			
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FORM IV TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES SAMPLING

Calibration Date: 22-MAR-2013 SDG No.: WL49

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

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

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

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

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES SAMPLING

Calibration Date: 13-APR-2013 SDG No.: WL49

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

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

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

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 22-MAR-2013

Project: NPDES SAMPLING

CCal Date: 20-APR-2013

SDG No.: WL49

Analysis Time: 18:55

Lab ID: DIESEL#1

Instrument: FID3B.I

Lab File Name: 0420b014.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2724004	240.2	250	-3.9
AK102 (C10-C25)	3266386	236.8	250	-5.3
ITDIES (C10-C24)	3259946	236.4	250	-5.4
Terphenyl	670720	46.2	45	2.7

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES SAMPLING

CCal Date: 20-APR-2013
SDG No.: WL49

Analysis Time: 19:15
Lab ID: MOIL#1

Instrument: FID3B.I
Lab File Name: 0420b015.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5160494	467.9	500	-6.4
AK103 (C25-C36)	4444349	607.4	500	21.5
n-Triacontane	630530	41.3	45	-8.3

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 22-MAR-2013
Project: NPDES SAMPLING

CCal Date: 20-APR-2013
SDG No.: WL49

Analysis Time: 23:22
Lab ID: DIESEL#2

Instrument: FID3B.I
Lab File Name: 0420b028.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2839394	250.4	250	0.2
AK102 (C10-C25)	3387384	245.6	250	-1.8
ITDIES (C10-C24)	3380261	245.1	250	-1.9
Terphenyl	694882	47.9	45	6.4

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES SAMPLING

CCal Date: 20-APR-2013
SDG No.: WL49

Analysis Time: 23:40
Lab ID: MOIL#2

Instrument: FID3B.I
Lab File Name: 0420b029.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	4963711	450.1	500	-10.0
AK103 (C25-C36)	4249888	580.8	500	16.2
n-Triacontane	635493	41.6	45	-7.6

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project: NPDES SAMPLING

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.76 TRIAC: 6.79

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

QC LIMITS

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

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project: NPDES SAMPLING

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.76

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

QC LIMITS

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

* Values outside of QC limits.

FORM VIII TPH

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project: NPDES SAMPLING

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.73

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	RT	RT	04/20/13	1816	4.68	6.73
02	ZZZZZ	ZZZZZ	04/20/13	1836	4.68	6.73
03	NPDES SAMPLI	DIESEL#1	04/20/13	1855	4.68	6.72
04	NPDES SAMPLI	MOIL#1	04/20/13	1915	4.67	6.73
05	WL49MBS1	WL49MBS1	04/20/13	2050	4.68	6.73
06	WL49LCSS1	WL49LCSS1	04/20/13	2109	4.69	6.73
07	IM-CB-01-201	WL49F	04/20/13	2128		
08	IM-CB-01-201	WL49FMS	04/20/13	2147		
09	IM-CB-01-201	WL49FMSD	04/20/13	2206		
10	NPDES SAMPLI	DIESEL#2	04/20/13	2322	4.68	6.72
11	NPDES SAMPLI	MOIL#2	04/20/13	2340	4.69	6.73

	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: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result	LOQ	DL
MB-042213	Method Blank	04/22/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-7783		PID1		HC ID	---		
				Trifluorotoluene	90.5%		
				Bromobenzene	88.2%		
WL49E	IM-TB-01-201304104	04/22/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-7783		PID1		HC ID	---		
				Trifluorotoluene	89.1%		
				Bromobenzene	86.3%		

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: WL49
Matrix: Water

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	TFT	BBZ	TOT OUT
MB-042213	90.5%	88.2%	0
LCS-042213	84.7%	80.9%	0
LCSD-042213	90.9%	86.6%	0
IM-TB-01-20130410-	89.1%	86.3%	0

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

Log Number Range: 13-7783 to 13-7783

FORM II TPHG

WL 49 0826

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

ARI ID	Client ID	Analysis Date	Range	Result	RL	MDL
MB-042213	Method Blank	04/22/13	Gasoline	< 5.0 U	5.0	1.7
13-7784		PID1	HC ID	---		
			Trifluorotoluene	90.5%		
			Bromobenzene	88.2%		
WL49F	IM-CB-01-201304104	04/22/13	**Gasoline**	**57**	**9.6**	**3.2**
13-7784		PID1	HC ID	GAS		
			Trifluorotoluene	80.4%		
			Bromobenzene	79.7%		

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: WL49
Matrix: Sediment

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-042213	NA	90.5%	88.2%	0
LCS-042213	NA	84.7%	80.9%	0
LCSD-042213	NA	90.9%	86.6%	0
IM-CB-01-20130410-S	NA	80.4%	79.7%	0

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

Log Number Range: 13-7784 to 13-7784

FORM II TPHG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG

Sample ID: LCS-042213
LAB CONTROL SAMPLE

Lab Sample ID: LCS-042213
LIMS ID: 13-7783
Matrix: Water
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 04/22/13 10:52
LCSD: 04/22/13 11:21
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

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	0.87	1.00	87.0%	0.87	1.00	87.0%	0.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	84.7%	90.9%
Bromobenzene	80.9%	86.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-042213
LAB CONTROL SAMPLE

Lab Sample ID: LCS-042213
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/25/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 04/22/13 10:52
LCSD: 04/22/13 11:21
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	43.4	50.0	86.8%	43.4	50.0	86.8%	0.0%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	84.7%	90.9%
Bromobenzene	80.9%	86.6%

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0422

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 04/22/13 Matrix: SOIL

Time Analyzed : 1151 Instrument ID : PID1

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0422	LCS0422	04/22/13
02	LCSD0422	LCSD0422	04/22/13
03	IM-TB-01-201	WL49E	04/22/13
04	IM-CB-01-201	WL49F	04/22/13
05			
06			
07			
08			
09			
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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.: WL49

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: 22-APR-2013 SDG No.: WL49

Lab File Name: 0422a003.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	780735	2.18	2.50	-12.8
AKGas (C6-C10)	1247981	2.14	2.50	-14.4
NWGas (Tol-Nap)	816425	2.18	2.50	-12.9
8015C (2MP-TMB)	1527436	2.11	2.50	-15.6

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

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 22-APR-2013
SDG No.: WL49

Lab File Name: 0422a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46412	97.4	100.0	-2.6
Bromobenzene	18468	89.9	100.0	-10.1

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

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

CCal Date: 22-APR-2013 SDG No.: WL49

Lab File Name: 0422a014.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	801536	2.24	2.50	-10.5
AKGas (C6-C10)	1304950	2.24	2.50	-10.4
NWGas (Tol-Nap)	828526	2.21	2.50	-11.6
8015C (2MP-TMB)	1605117	2.22	2.50	-11.3

* 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: 22-APR-2013
SDG No.: WL49

Lab File Name: 0422a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46778	98.1	100.0	-1.9
Bromobenzene	18866	90.1	100.0	-9.9

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: 22-APR-2013
SDG No.: WL49

Lab File Name: 0422a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D	
WAGas (Tol-C12)	732169	2.04	2.50	-18.2	
AKGas (C6-C10)	1154744	1.98	2.50	-20.8	
NWGas (Tol-Nap)	760384	2.03	2.50	-18.9	
8015C (2MP-TMB)	1426042	1.97	2.50	-21.2	<-

* 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: 22-APR-2013
SDG No.: WL49

Lab File Name: 0422a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	44177	92.0	100.0	-8.0
Bromobenzene	17931	87.0	100.0	-13.0

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

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

	METHOD SURROGATE RT S1 : 7.89 S2 : 15.39						
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		RINSE	10/23/12	0941		
02		RT1023+BCAL1	10/23/12	1010	7.88	15.39
03		GCAL1	10/23/12	1039	7.88	15.39
04		B 200	10/23/12	1750	7.89	15.39
05		B 100	10/23/12	1820	7.88	15.39
06		B 50	10/23/12	1849	7.88	15.39
07		B 25	10/23/12	1918	7.89	15.39
08		B 5	10/23/12	1947	7.88	15.39
09		B 1	10/23/12	2016	7.88	15.39
10		B 0.5	10/23/12	2045	7.88	15.39
11		B 0.25	10/23/12	2115	7.89	15.39
12		BICV	10/23/12	2144	7.88	15.39
13		G 0.10	10/23/12	2213	7.89	15.39
14		G 0.25	10/23/12	2242	7.89	15.39
15		G 1.0	10/23/12	2311	7.89	15.39
16		G 2.5	10/23/12	2340	7.88	15.39
17		G 5.0	10/24/12	0010	7.88	15.39
18		G 10	10/24/12	0039	7.88	15.39
19		GICV	10/24/12	0108	7.88	15.39

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 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 #	S2 RT #
01	BTEX 200	BTEX 200	03/15/13	1643	7.85	15.39
02	BTEX 100	BTEX 100	03/15/13	1712	7.85	15.39
03	BTEX 50	BTEX 50	03/15/13	1742	7.85	15.39
04	BTEX 25	BTEX 25	03/15/13	1811	7.85	15.39
05	BTEX 5	BTEX 5	03/15/13	1840	7.85	15.39
06	BTEX 1	BTEX 1	03/15/13	1909	7.85	15.39
07	BTEX 0.5	BTEX 0.5	03/15/13	1939	7.85	15.39
08	BTEX 0.25	BTEX 0.25	03/15/13	2008	7.85	15.39
09	BTEX ICV 25	BTEX ICV 25	03/15/13	2037	7.85	15.39

QC LIMITS

S1 = TFT(Surr) (+/- 0.05 MINUTES)
S2 = BB(Surr) (+/- 0.05 MINUTES)

* Values outside of QC limits.

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WL49 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 04/22/13

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

	METHOD SURROGATE RT S1 : 7.83 S2 : 15.37					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	RT/BCAL 1	RT/BCAL 1	04/22/13	0954	7.83	15.37
02	NPDES SAMPLI	GCAL 1	04/22/13	1023	7.83	15.37
03	LCS0422	LCS0422	04/22/13	1052	7.83	15.37
04	LCSD0422	LCSD0422	04/22/13	1121	7.83	15.37
05	MB0422	MB0422	04/22/13	1151	7.83	15.37
06	NPDES SAMPLI	GCAL 2	04/22/13	1644	7.83	15.37
07	IM-TB-01-201	WL49E	04/22/13	1841	7.83	15.37
08	IM-CB-01-201	WL49F	04/22/13	1910	7.83	15.37
09	NPDES SAMPLI	GCAL 3	04/22/13	2206	7.83	15.37

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
IM-MH-01-20130410-	WL49A	13-7779	
IM-MH-01-20130410-D	WL49ADUP	13-7779	
IM-MH-01-20130410-S	WL49ASPK	13-7779	
IM-SW-01-20130410-	WL49B	13-7780	
PBW	WL49MB1	13-7780	
LCSW	WL49MB1SPK	13-7780	
IM-MH-01-20130410-	WL49C	13-7781	
IM-MH-01-20130410-D	WL49CDUP	13-7781	
IM-MH-01-20130410-S	WL49CSPK	13-7781	
IM-SW-01-20130410-	WL49D	13-7782	
PBW	WL49MB2	13-7782	
LCSW	WL49MB2SPK	13-7782	
IM-CB-01-20130410-	WL49F	13-7784	
IM-CB-01-20130410-D	WL49FDUP	13-7784	
IM-CB-01-20130410-S	WL49FSPK	13-7784	
IM-CB-02-20130410-	WL49G	13-7785	
PBS	WL49MB3	13-7785	
LCSS	WL49MB3SPK	13-7785	

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: 4/22/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: IM-MH-01-20130410-W
SAMPLE

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.010	0.2	**4.5**	
200.8	04/15/13	200.8	04/19/13	**7440-38-2**	**Arsenic**	0.048	0.5	**1.0**	
200.8	04/15/13	200.8	04/18/13	7440-41-7	Beryllium	0.052	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.010	0.1	**0.5**	
200.8	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.045	0.5	**0.9**	
200.8	04/15/13	200.8	04/18/13	**7440-50-8**	**Copper**	0.158	0.5	**17.0**	
200.8	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.046	0.1	**16.7**	
200.8	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.079	0.5	**28.2**	
200.8	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.13	2	2	U
200.8	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	**7440-66-6**	**Zinc**	1.2	10	**280**	

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: IM-SW-01-20130410-W
SAMPLE

Lab Sample ID: WL49B
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.010	0.2	**3.7**	
200.8	04/15/13	200.8	04/19/13	**7440-38-2**	**Arsenic**	0.24	1	**99**	
200.8	04/15/13	200.8	04/18/13	**7440-41-7**	**Beryllium**	0.021	0.2	**1.9**	
200.8	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.010	0.1	**5.2**	
200.8	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.11	1	**177**	
200.8	04/15/13	200.8	04/18/13	**7440-50-8**	**Copper**	1.58	5	**820**	
200.8	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.115	0.2	**725**	
200.8	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.079	0.5	**268**	
200.8	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.64	2	2	U
200.8	04/15/13	200.8	04/18/13	**7440-22-4**	**Silver**	0.008	0.2	**1.0**	
200.8	04/15/13	200.8	04/18/13	**7440-28-0**	**Thallium**	0.004	0.2	**0.3**	
200.8	04/15/13	200.8	04/18/13	**7440-66-6**	**Zinc**	5.0	40	**2,340**	

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IM-MH-01-20130410-W
MATRIX SPIKE

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	4.5	28.9	25.0	97.6%	
Arsenic	200.8	1.0	24.6	25.0	94.4%	
Beryllium	200.8	0.5 U	22.9	25.0	91.6%	
Cadmium	200.8	0.5	24.2	25.0	94.8%	
Chromium	200.8	0.9	23.1	25.0	88.8%	
Copper	200.8	17.0	40.3	25.0	93.2%	
Lead	200.8	16.7	37.2	25.0	82.0%	
Nickel	200.8	28.2	52.3	25.0	96.4%	
Selenium	200.8	2 U	69	80	86.2%	
Silver	200.8	0.2 U	21.8	25.0	87.2%	
Thallium	200.8	0.2 U	20.6	25.0	82.4%	
Zinc	200.8	280	340	80	75.0%	

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
TOTAL METALS
Page 1 of 1

Sample ID: IM-MH-01-20130410-W
DUPLICATE

Lab Sample ID: WL49A
LIMS ID: 13-7779
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	4.5	4.7	4.3%	+/- 20%	
Arsenic	200.8	1.0	1.0	0.0%	+/- 0.5	L
Beryllium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Cadmium	200.8	0.5	0.6	18.2%	+/- 20%	
Chromium	200.8	0.9	0.8	11.8%	+/- 0.5	L
Copper	200.8	17.0	20.6	19.1%	+/- 20%	
Lead	200.8	16.7	16.8	0.6%	+/- 20%	
Nickel	200.8	28.2	30.0	6.2%	+/- 20%	
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	280	280	0.0%	+/- 20%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WL49LCS
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.2	25.0	101%	
Arsenic	200.8	29.9	25.0	120%	
Beryllium	200.8	25.5	25.0	102%	
Cadmium	200.8	25.6	25.0	102%	
Chromium	200.8	24.7	25.0	98.8%	
Copper	200.8	26.7	25.0	107%	
Lead	200.8	25.3	25.0	101%	
Nickel	200.8	26.0	25.0	104%	
Selenium	200.8	73.8	80.0	92.2%	
Silver	200.8	26.8	25.0	107%	
Thallium	200.8	23.7	25.0	94.8%	
Zinc	200.8	82	80	102%	

Reported in µg/L

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

ANALYTICAL RESOURCES INCORPORATED

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

Lab Sample ID: WL49MB
LIMS ID: 13-7780
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-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	04/15/13	200.8	04/18/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/15/13	200.8	04/18/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	04/15/13	200.8	04/18/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-66-6	Zinc	0.50	4	4	U

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: IM-MH-01-20130410-W
SAMPLE

Lab Sample ID: WL49C
LIMS ID: 13-7781
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.010	0.2	**4.2**	
200.8	04/15/13	200.8	04/18/13	**7440-38-2**	**Arsenic**	0.048	0.5	**1.1**	
200.8	04/15/13	200.8	04/18/13	7440-41-7	Beryllium	0.052	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.010	0.1	**0.1**	
200.8	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.045	0.5	**0.5**	
200.8	04/15/13	200.8	04/18/13	**7440-50-8**	**Copper**	0.158	0.5	**1.4**	
200.8	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.046	0.1	**4.4**	
200.8	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.079	0.5	**27.5**	
200.8	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.13	2	2	U
200.8	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	**7440-66-6**	**Zinc**	0.50	4	**71**	

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: IM-SW-01-20130410-W
SAMPLE

Lab Sample ID: WL49D
LIMS ID: 13-7782
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.010	0.2	**20.3**	
200.8	04/15/13	200.8	04/18/13	**7440-38-2**	**Arsenic**	0.048	0.2	**10.4**	
200.8	04/15/13	200.8	04/18/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.045	0.5	**19.8**	
200.8	04/15/13	200.8	04/18/13	**7440-50-8**	**Copper**	0.158	0.5	**7.2**	
200.8	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.046	0.1	**0.2**	
200.8	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.0**	
200.8	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-66-6	Zinc	0.50	4	4	U

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: IM-MH-01-20130410-W
MATRIX SPIKE

Lab Sample ID: WL49C
LIMS ID: 13-7781
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	4.2	29.4	25.0	101%	
Arsenic	200.8	1.1	27.8	25.0	107%	
Beryllium	200.8	0.5 U	23.8	25.0	95.2%	
Cadmium	200.8	0.1	24.2	25.0	96.4%	
Chromium	200.8	0.5	23.6	25.0	92.4%	
Copper	200.8	1.4	25.8	25.0	97.6%	
Lead	200.8	4.4	26.0	25.0	86.4%	
Nickel	200.8	27.5	54.2	25.0	107%	
Selenium	200.8	2 U	75	80.0	93.8%	
Silver	200.8	0.2 U	23.8	25.0	95.2%	
Thallium	200.8	0.2 U	21.2	25.0	84.8%	
Zinc	200.8	71	138	80.0	83.8%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: IM-MH-01-20130410-W
DUPLICATE

Lab Sample ID: WL49C
LIMS ID: 13-7781
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	4.2	4.4	4.7%	+/- 20%	
Arsenic	200.8	1.1	1.2	8.7%	+/- 0.5	L
Beryllium	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Cadmium	200.8	0.1	0.2	66.7%	+/- 0.1	L
Chromium	200.8	0.5	0.6	18.2%	+/- 0.5	L
Copper	200.8	1.4	1.5	6.9%	+/- 0.5	L
Lead	200.8	4.4	4.6	4.4%	+/- 20%	
Nickel	200.8	27.5	27.7	0.7%	+/- 20%	
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	71	75	5.5%	+/- 20%	

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: WL49LCS
LIMS ID: 13-7782
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-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	24.7	25.0	98.8%	
Arsenic	200.8	26.8	25.0	107%	
Beryllium	200.8	23.7	25.0	94.8%	
Cadmium	200.8	23.8	25.0	95.2%	
Chromium	200.8	23.3	25.0	93.2%	
Copper	200.8	24.4	25.0	97.6%	
Lead	200.8	23.8	25.0	95.2%	
Nickel	200.8	24.2	25.0	96.8%	
Selenium	200.8	71.9	80.0	89.9%	
Silver	200.8	25.4	25.0	102%	
Thallium	200.8	22.6	25.0	90.4%	
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: WL49MB
LIMS ID: 13-7782
Matrix: Water
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-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	04/15/13	200.8	04/18/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	04/15/13	200.8	04/18/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	04/15/13	200.8	04/18/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	04/15/13	200.8	04/18/13	7440-66-6	Zinc	0.50	4	4	U

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IM-CB-01-20130410-S
SAMPLE

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Percent Total Solids: 54.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	04/15/13	200.8	04/18/13	**7440-36-0**	**Antimony**	0.022	0.3	**3.1**	
3050B	04/15/13	200.8	04/18/13	**7440-38-2**	**Arsenic**	0.15	0.3	**18.5**	
3050B	04/15/13	6010C	04/16/13	7440-41-7	Beryllium	0.091	0.9	0.9	U
3050B	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.021	0.2	**19.6**	
3050B	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.066	0.9	**163**	
3050B	04/15/13	6010C	04/16/13	**7440-50-8**	**Copper**	0.46	2	**833**	
3050B	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.41	0.9	**2,000**	
CLP	04/15/13	7471A	04/19/13	**7439-97-6**	**Mercury**	0.0017	0.03	**2.62**	
3050B	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.085	0.9	**178**	
3050B	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.17	0.9	0.9	U
3050B	04/15/13	200.8	04/18/13	**7440-22-4**	**Silver**	0.014	0.3	**3.0**	
3050B	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.0052	0.3	0.3	U
3050B	04/15/13	6010C	04/16/13	**7440-66-6**	**Zinc**	1.1	9	**7,340**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: IM-CB-02-20130410-S**
Page 1 of 1 **SAMPLE**

Lab Sample ID: WL49G
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Percent Total Solids: 88.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	04/15/13	200.8	04/18/13	7440-36-0	Antimony	0.014	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	**7440-38-2**	**Arsenic**	0.097	0.2	**3.9**	
3050B	04/15/13	6010C	04/16/13	**7440-41-7**	**Beryllium**	0.011	0.1	**0.1**	
3050B	04/15/13	200.8	04/18/13	**7440-43-9**	**Cadmium**	0.013	0.1	**0.3**	
3050B	04/15/13	200.8	04/18/13	**7440-47-3**	**Chromium**	0.042	0.6	**20.8**	
3050B	04/15/13	6010C	04/16/13	**7440-50-8**	**Copper**	0.055	0.2	**48.3**	
3050B	04/15/13	200.8	04/18/13	**7439-92-1**	**Lead**	0.052	0.1	**20.9**	
CLP	04/15/13	7471A	04/19/13	7439-97-6	Mercury	0.0012	0.02	0.02	U
3050B	04/15/13	200.8	04/18/13	**7440-02-0**	**Nickel**	0.055	0.6	**31.0**	
3050B	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.11	0.6	0.6	U
3050B	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.0089	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.0033	0.2	0.2	U
3050B	04/15/13	6010C	04/16/13	**7440-66-6**	**Zinc**	0.13	1	**251**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: IM-CB-01-20130410-S
MATRIX SPIKE

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	3.1	4.7	43.0	3.7%	N
Arsenic	200.8	18.5	63.2	43.0	104%	
Beryllium	6010C	0.9 U	89.9	91.3	98.5%	
Cadmium	200.8	19.6	62.4	43.0	99.5%	
Chromium	200.8	163	206	43.0	100%	
Copper	6010C	833	896	91.3	69.0%	H
Lead	200.8	2,000	2,010	43.0	23.3%	H
Mercury	7471A	2.62	3.19	0.334	171%	H
Nickel	200.8	178	253	43.0	174%	H
Selenium	200.8	0.9 U	125	138	90.6%	
Silver	200.8	3.0	40.1	43.0	86.3%	
Thallium	200.8	0.3 U	37.7	43.0	87.7%	
Zinc	6010C	7,340	7,490	91.3	164%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: IM-CB-01-20130410-S
DUPLICATE

Lab Sample ID: WL49F
LIMS ID: 13-7784
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	3.1	3.9	22.9%	+/- 20%	*
Arsenic	200.8	18.5	19.0	2.7%	+/- 20%	
Beryllium	6010C	0.9 U	0.9 U	0.0%	+/- 0.9	L
Cadmium	200.8	19.6	19.9	1.5%	+/- 20%	
Chromium	200.8	163	168	3.0%	+/- 20%	
Copper	6010C	833	826	0.8%	+/- 20%	
Lead	200.8	2,000	2,060	3.0%	+/- 20%	
Mercury	7471A	2.62	3.12	17.4%	+/- 20%	
Nickel	200.8	178	175	1.7%	+/- 20%	
Selenium	200.8	0.9 U	0.9 U	0.0%	+/- 0.9	L
Silver	200.8	3.0	2.2	30.8%	+/- 20%	*
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Zinc	6010C	7,340	7,680	4.5%	+/- 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: WL49LCS
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.2	25.0	101%	
Arsenic	200.8	29.7	25.0	119%	
Beryllium	6010C	51.6	50.0	103%	
Cadmium	200.8	25.5	25.0	102%	
Chromium	200.8	24.6	25.0	98.4%	
Copper	6010C	52.9	50.0	106%	
Lead	200.8	25.3	25.0	101%	
Mercury	7471A	0.54	0.50	108%	
Nickel	200.8	25.7	25.0	103%	
Selenium	200.8	77.3	80.0	96.6%	
Silver	200.8	27.0	25.0	108%	
Thallium	200.8	24.0	25.0	96.0%	
Zinc	6010C	54	50	108%	

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: WL49MB
LIMS ID: 13-7785
Matrix: Sediment
Data Release Authorized:
Reported: 04/22/13

QC Report No: WL49-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	04/15/13	200.8	04/18/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	04/15/13	6010C	04/16/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	04/15/13	200.8	04/18/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	04/15/13	200.8	04/18/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	04/15/13	6010C	04/16/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	04/15/13	7471A	04/19/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	04/15/13	200.8	04/18/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	04/15/13	200.8	04/19/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	04/15/13	200.8	04/18/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	04/15/13	200.8	04/18/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	04/15/13	6010C	04/16/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WL49

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS041811	50.0	49.89	**99.8**	50.0	49.07	**98.1**	49.10	**98.2**	49.56	**99.1**	49.98	**100.0**	50.10	**100.2**
Arsenic	AS	PMS	MS041811	50.0	49.96	**99.9**	50.0	49.50	**99.0**	50.24	**100.5**	52.72	**105.4**	52.66	**105.3**	52.18	**104.4**
Beryllium	BE	ICP	IP041671	1000.0	1000.78	**100.1**	1000.0	1017.32	**101.7**	1007.73	**100.8**	997.14	**99.7**	1006.80	**100.7**	996.41	**99.6**
Beryllium	BE	PMS	MS041811	50.0	50.71	**101.4**	50.0	50.46	**100.9**	49.35	**98.7**	50.94	**101.9**	50.86	**101.7**	51.79	**103.6**
Cadmium	CD	PMS	MS041811	50.0	48.33	**96.7**	50.0	49.66	**99.3**	49.70	**99.4**	50.95	**101.9**	50.78	**101.6**	50.81	**101.6**
Chromium	CR	PMS	MS041811	50.0	47.91	**95.8**	50.0	49.01	**98.0**	49.16	**98.3**	48.29	**96.6**	49.09	**98.2**	49.83	**99.7**
Copper	CU	PMS	MS041811	50.0	50.06	**100.1**	50.0	50.79	**101.6**	50.33	**100.7**	51.22	**102.4**	50.14	**100.3**	49.63	**99.3**
Copper	CU	ICP	IP041671	1000.0	1005.98	**100.6**	1000.0	1060.27	**106.0**	1047.23	**104.7**	1046.03	**104.6**	1065.77	**106.6**	1053.95	**105.4**
Lead	PB	PMS	MS041811	50.0	49.04	**98.1**	50.0	49.60	**99.2**	48.90	**97.8**	48.46	**96.9**	48.16	**96.3**	48.29	**96.6**
Mercury	HG	CVA	HG041901	8.0	8.20	**102.5**	4.0	4.11	**102.8**	4.10	**102.5**	4.04	**101.0**	4.05	**101.3**	4.05	**101.3**
Nickel	NI	PMS	MS041811	50.0	49.47	**98.9**	50.0	50.48	**101.0**	49.85	**99.7**	50.32	**100.6**	50.86	**101.7**	49.66	**99.3**
Silver	AG	PMS	MS041811	50.0	50.07	**100.1**	50.0	50.57	**101.1**	51.77	**103.5**	52.68	**105.4**	52.15	**104.3**	53.35	**106.7**
Thallium	TL	PMS	MS041811	50.0	49.76	**99.5**	50.0	50.98	**102.0**	46.01	**92.0**	46.02	**92.0**	45.65	**91.3**	45.44	**90.9**
Zinc	ZN	ICP	IP041671	1000.0	1015.85	**101.6**	1000.0	1044.61	**104.5**	1053.78	**105.4**	1046.53	**104.7**	1059.17	**105.9**	1037.08	**103.7**
Zinc	ZN	PMS	MS041811	50.0	50.10	**100.2**	50.0	49.54	**99.1**	50.66	**101.3**	51.97	**103.9**	50.98	**102.0**	50.62	**101.2**

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WL49

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS041811	50.0	50.86	**101.7**	50.55	**101.1**	49.87	**99.7**						
Arsenic	AS	PMS	MS041811	50.0	53.81	**107.6**	52.99	**106.0**	54.81	**109.6**						
Beryllium	BE	ICP	IP041671	1000.0	1020.36	**102.0**	1015.54	**101.6**	1032.40	**103.2**	1034.01	**103.4**	1037.90	**103.8**	1023.15	**102.3**
Beryllium	BE	PMS	MS041811	50.0	51.82	**103.6**	52.59	**105.2**	51.22	**102.4**						
Cadmium	CD	PMS	MS041811	50.0	51.37	**102.7**	50.67	**101.3**	51.20	**102.4**						
Chromium	CR	PMS	MS041811	50.0	49.78	**99.6**	49.66	**99.3**	49.96	**99.9**						
Copper	CU	PMS	MS041811	50.0	51.15	**102.3**	50.39	**100.8**	50.96	**101.9**						
Copper	CU	ICP	IP041671	1000.0	1056.03	**105.6**	1043.21	**104.3**	1061.20	**106.1**	1064.64	**106.5**	1057.74	**105.8**	1056.48	**105.6**
Lead	PB	PMS	MS041811	50.0	48.00	**96.0**	49.43	**98.9**	47.91	**95.8**						
Mercury	HG	CVA	HG041901	4.0	4.01	**100.3**										
Nickel	NI	PMS	MS041811	50.0	50.72	**101.4**	49.11	**98.2**	49.63	**99.3**						
Silver	AG	PMS	MS041811	50.0	53.16	**106.3**	54.50	**109.0**	54.54	**109.1**						
Thallium	TL	PMS	MS041811	50.0	45.57	**91.1**	47.00	**94.0**	45.77	**91.5**						
Zinc	ZN	ICP	IP041671	1000.0	1055.96	**105.6**	1050.37	**105.0**	1065.96	**106.6**	1067.88	**106.8**	1056.21	**105.6**	1047.21	**104.7**
Zinc	ZN	PMS	MS041811	50.0	52.89	**105.8**	50.30	**100.6**	51.07	**102.1**						

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WL49

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	PMS	MS041912	50.0	49.08	**98.2**	50.0	49.63	**99.3**	48.66	**97.3**	48.27	**96.5**	49.46	**98.9**		
Selenium	SE	PMS	MS041912	80.0	77.32	**96.7**	50.0	50.37	**100.7**	49.94	**99.9**	49.79	**99.6**	50.76	**101.5**		

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WL49

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS041811	0.2	0.20	**100.0**										
Arsenic	AS	PMS	MS041811	0.2	0.11	**55.0**										
Beryllium	BE	PMS	MS041811	0.2	0.20	**100.0**										
Beryllium	BE	ICP	IP041671	1.0	1.02	**102.0**	1.02	**102.0**	1.03	**103.0**						
Cadmium	CD	PMS	MS041811	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS041811	0.5	0.53	**106.0**										
Copper	CU	ICP	IP041671	2.0	2.10	**105.0**	2.41	**120.5**	2.13	**106.5**						
Copper	CU	PMS	MS041811	0.5	0.52	**104.0**										
Lead	PB	PMS	MS041811	0.1	0.10	**100.0**										
Mercury	HG	CVA	HG041901	0.1	0.11	**110.0**										
Nickel	NI	PMS	MS041811	0.5	0.53	**106.0**										
Silver	AG	PMS	MS041811	0.2	0.22	**110.0**										
Thallium	TL	PMS	MS041811	0.2	0.20	**100.0**										
Zinc	ZN	ICP	IP041671	10.0	9.43	**94.3**	10.63	**106.3**	9.67	**96.7**						
Zinc	ZN	PMS	MS041811	4.0	4.02	**100.5**										

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: WL49

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	MS041912	0.2	0.19	**95.0**										
Selenium	SE	PMS	MS041912	0.5	0.51	**102.0**										

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

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS041811	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS041811	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	ICP	IP041671	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	BE	PMS	MS041811	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	MS041811	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS041811	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS041811	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	IP041671	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Lead	PB	PMS	MS041811	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Mercury	HG	CVA	HG041901	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS041811	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS041811	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS041811	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	ICP	IP041671	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	ZN	PMS	MS041811	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

UNITS: ug/L

SDG: WL49

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS041811	60.0	0.2	0.2	U	0.2	U	0.2	U						
Arsenic	AS	PMS	MS041811	10.0	0.2	0.2	U	0.2	U	0.2	U						
Beryllium	BE	ICP	IP041671	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	BE	PMS	MS041811	5.0	0.2	0.2	U	0.2	U	0.2	U						
Cadmium	CD	PMS	MS041811	5.0	0.1	0.1	U	0.1	U	0.1	U						
Chromium	CR	PMS	MS041811	10.0	0.5	0.5	U	0.5	U	0.5	U						
Copper	CU	PMS	MS041811	25.0	0.5	0.5	U	0.5	U	0.5	U						
Copper	CU	ICP	IP041671	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Lead	PB	PMS	MS041811	3.0	0.1	0.1	U	0.1	U	0.1	U						
Mercury	HG	CVA	HG041901	0.2	0.1	0.1	U										
Nickel	NI	PMS	MS041811	40.0	0.5	0.5	U	0.5	U	0.5	U						
Silver	AG	PMS	MS041811	10.0	0.2	0.2	U	0.2	U	0.2	U						
Thallium	TL	PMS	MS041811	10.0	0.2	0.2	U	0.2	U	0.2	U						
Zinc	ZN	ICP	IP041671	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Zinc	ZN	PMS	MS041811	20.0	4.0	4.0	U	4.0	U	4.0	U						

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WL49

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	PMS	MS041912	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U		
Selenium	SE	PMS	MS041912	5.0	0.5	0.5	U	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: IP041671

SDG: WL49

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	208460.6	205466.3	**102.7**	204050.4	203703.9	**101.9**	201160.5	201746.5	**100.9**
Antimony		1000	-9.1	1016.5	**101.7**	-8.7	1022.5	**102.3**	-9.9	1015.0	**101.5**
Arsenic		1000	33.8	1080.1	**108.0**	32.0	1086.5	**108.7**	32.9	1085.7	**108.6**
Barium		1000	-3.0	1051.0	**105.1**	-3.6	1059.8	**106.0**	-3.7	1043.1	**104.3**
Beryllium		1000	0.2	1000.6	**100.1**	0.1	988.3	**98.8**	0.1	1000.9	**100.1**
Boron			14.9	4.1		14.1	1.0		14.2	3.4	
Cadmium		1000	3.2	1064.0	**106.4**	3.1	1065.5	**106.6**	3.2	1034.3	**103.4**
Calcium	100000	100000	105050.1	103326.5	**103.3**	103988.9	103619.4	**103.6**	103680.1	103789.7	**103.8**
Chromium		1000	-4.4	1054.8	**105.5**	-4.2	1047.7	**104.8**	-3.9	1055.4	**105.5**
Cobalt		1000	2.0	990.5	**99.1**	2.0	1006.4	**100.6**	2.0	994.3	**99.4**
Copper		1000	1.8	1032.5	**103.3**	1.7	1063.4	**106.3**	1.5	1049.2	**104.9**
Iron	200000	200000	194316.2	193236.2	**96.6**	189316.8	189088.0	**94.5**	190553.6	191421.4	**95.7**
Lead		1000	-13.3	985.0	**98.5**	-13.1	994.2	**99.4**	-15.1	989.3	**98.9**
Magnesium	100000	100000	108737.1	102670.4	**102.7**	107725.0	103172.0	**103.2**	106339.0	102698.5	**102.7**
Manganese		1000	0.3	997.8	**99.8**	0.4	979.6	**98.0**	0.2	986.2	**98.6**
Molybdenum			4.8	5.0		5.0	4.5		4.9	4.7	
Nickel		1000	0.3	999.8	**100.0**	1.2	1007.2	**100.7**	0.7	1008.0	**100.8**
Potassium			28.2	29.2		30.0	23.6		14.7	-32.9	
Selenium		1000	-16.3	1002.8	**100.3**	-23.3	1015.7	**101.6**	-24.0	1019.8	**102.0**
Silicon			0.0	-5.6		-1.2	-7.1		-2.6	-7.7	
Silver		1000	-0.5	1047.3	**104.7**	-0.5	1100.0	**110.0**	-0.6	1071.5	**107.2**
Sodium			23.1	12.6		19.1	11.1		16.3	11.0	
Strontium			4.2	4.1		4.1	4.1		4.0	4.1	
Thallium		1000	15.0	988.7	**98.9**	15.5	1006.4	**100.6**	13.1	989.7	**99.0**
Tin			-10.1	-9.7		-11.9	-12.2		-11.6	-10.0	
Titanium			4.4	4.3		3.9	3.6		4.1	3.9	
Vanadium		1000	0.0	985.6	**98.6**	-1.0	1019.1	**101.9**	-0.7	999.8	**100.0**
Zinc		1000	-1.5	993.1	**99.3**	-0.8	994.1	**99.4**	-1.7	1005.1	**100.5**

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS041811

SDG: WL49

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	18.7	**93.5**						
Barium			0.0	0.1							
Cadmium		20	0.1	20.0	**100.0**						
Chromium		20	0.5	19.2	**96.0**						
Cobalt		20	0.0	19.6	**98.0**						
Copper		20	0.7	20.5	**102.5**						
Manganese		20	0.1	18.3	**91.5**						
Molybdenum	400	400	475.3	499.0	**124.8**						
Nickel		20	0.4	19.7	**98.5**						
Selenium			-0.1	-0.2							
Silver		20	0.0	20.7	**103.5**						
Vanadium			0.1	-0.1							
Zinc		20	0.9	19.6	**98.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49

ICS SOURCE: I.V.

RUNID: MS041912

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.4	**97.0**						
Cadmium		20	0.1	19.9	**99.5**						
Copper		20	0.8	20.2	**101.0**						
Nickel		20	0.3	19.9	**99.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	21.1	**105.5**						
Zinc		20	0.9	19.3	**96.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WL49

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	IM-CB-01-20130410-	WL49FPOST	MS041811	517.92	B	36.20	B	500	Sediment	**96.3**
Copper	IM-CB-01-20130410-	WL49FPOST	IP041671	14868.63		9131.20		5000	Sediment	**114.7**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Beryllium	BE	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	1/22/2013
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	1/22/2013
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	1/22/2013

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 1/22/2013

SDG: WL49

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	13.7020120	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0911890	0.0000000	-1.1057220	1.4447090	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1795110	0.0000000	0.0000000	0.1469350
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.5964570	0.0000000	0.0000000	0.0000000	0.0000000	0.1385480	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.1250000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0309050
Cobalt	228.62	0.0000000	0.0000000	0.1133150	0.0000000	0.0000000	0.0000000	0.0000000	-0.0333930	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1698980	-0.0211960	0.0000000	-0.0491600
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.7025530	0.0000000	0.0000000
Lead	220.35	-0.2707930	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.8104440	1.2410760	0.0536970
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1060020	0.0000000	-1.4277330	-1.1381670	0.0000000	0.5549620
Manganese	257.61	0.0049690	0.0000000	0.0000000	0.0000000	0.0038740	0.0000000	0.0125790	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0117860	0.0000000	0.0000000	0.0509920	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.1149780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4775670	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.2795240	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0054570	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.9747620	0.3985520	0.0000000	-0.1326730
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0837380	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0594390	0.0000000	0.0000000	0.1892210	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.3335490	0.0000000	0.0501910
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1801790	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 1/22/2013

SDG: WL49

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: WL49

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IM-CB-01-20130410-	WL49F	1.004	0.0	50.0
IM-CB-01-20130410-D	WL49FDUP	1.006	0.0	50.0
IM-CB-01-20130410-S	WL49FSPK	1.004	0.0	50.0
IM-CB-02-20130410-	WL49G	1.026	0.0	50.0
PBS	WL49MB3	1.000	0.0	50.0
LCSS	WL49MB3SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IM-MH-01-20130410-	WL49A	0.000	50.0	25.0
IM-MH-01-20130410-D	WL49ADUP	0.000	50.0	25.0
IM-MH-01-20130410-S	WL49ASPK	0.000	50.0	25.0
IM-SW-01-20130410-	WL49B	0.000	50.0	25.0
IM-MH-01-20130410-	WL49C	0.000	50.0	25.0
IM-MH-01-20130410-D	WL49CDUP	0.000	50.0	25.0
IM-MH-01-20130410-S	WL49CSPK	0.000	50.0	25.0
IM-SW-01-20130410-	WL49D	0.000	50.0	25.0
PBW	WL49MB1	0.000	50.0	25.0
LCSW	WL49MB1SPK	0.000	50.0	25.0
PBW	WL49MB2	0.000	50.0	25.0
LCSW	WL49MB2SPK	0.000	50.0	25.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IM-CB-01-20130410-	WL49F	1.062	0.0	50.0
IM-CB-01-20130410-D	WL49FDUP	1.058	0.0	50.0
IM-CB-01-20130410-S	WL49FSPK	1.066	0.0	50.0
IM-CB-02-20130410-	WL49G	1.021	0.0	50.0
PBS	WL49MB3	1.000	0.0	50.0
LCSS	WL49MB3SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL49

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IM-CB-01-20130410-	WL49F	0.277	0.0	50.0
IM-CB-01-20130410-D	WL49FDUP	0.279	0.0	50.0
IM-CB-01-20130410-S	WL49FSPK	0.274	0.0	50.0
IM-CB-02-20130410-	WL49G	0.246	0.0	50.0
PBS	WL49MB3	0.200	0.0	50.0
LCSW	WL49MB3SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/16/2013

SDG: WL49 | RUNID: IP041671 | METHOD: ICP | END DATE: 4/16/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08401							X					X																		X
S2	S2	1.00	08443												X																		
S3	S3	1.00	08463							X																							X
S4	S4	1.00	08491																														
S5	S5	1.00	08512																														
ICV	ICV	1.00	08580							X					X																		X
ICB	ICB	1.00	09015							X					X																		X
CRI	CRII	1.00	09060							X					X																		X
ICSA	ICSAI	1.00	09102							X					X																		X
ICSAB	ICSABI	1.00	09144							X					X																		X
CCV	CCV1	1.00	09183							X					X																		X
CCB	CCB1	1.00	09223							X					X																		X
ZZZZZZ	WL68MB1	2.00	09265																														
ZZZZZZ	WL68B	2.00	09310																														
ZZZZZZ	WL68A-L	10.00	09351																														
ZZZZZZ	WL68A	2.00	09391																														
ZZZZZZ	WL68ADUP	2.00	09431																														
ZZZZZZ	WL68ASPK	2.00	09471																														
ZZZZZZ	ZZZZZZ	2.00	09502																														
ZZZZZZ	WL68REF1	2.00	09532																														
ZZZZZZ	WL68MB1SPK	2.00	09573																														
CCV	CCV2	1.00	10013							X					X																		X
CCB	CCB2	1.00	10053							X					X																		X
ZZZZZZ	WL68B	5.00	10095																														
ZZZZZZ	WL68A-L	50.00	10135																														
ZZZZZZ	WL68A	10.00	10175																														
ZZZZZZ	WL68ADUP	10.00	10215																														
ZZZZZZ	WL68ASPK	10.00	10255																														
ZZZZZZ	WL68APOST	10.00	10295																														
CCV	CCV3	1.00	10340							X					X																		X
CCB	CCB3	1.00	10380							X					X																		X
CRI	CRIF	1.00	10422							X					X																		X
ICSA	ICSAF	1.00	10463							X					X																		X
ICSAB	ICSABF	1.00	10505							X					X																		X
CCV	CCV4	1.00	10545							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/16/2013

SDG: WL49 | RUNID: IP041671 | METHOD: ICP | END DATE: 4/16/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCB	CCB4	1.00	10590							X					X																		X
ZZZZZZ	WL74MB1	2.00	11031																														
ZZZZZZ	WL74B	2.00	11073																														
ZZZZZZ	WL74C	2.00	11113																														
ZZZZZZ	WL74J-L	10.00	11153																														
ZZZZZZ	WL74J	2.00	11195																														
ZZZZZZ	WL74JDUP	2.00	11235																														
ZZZZZZ	WL74JSPK	2.00	11275																														
ZZZZZZ	WL74JPOST	2.00	11315																														
ZZZZZZ	WL74REF1	2.00	11360																														
ZZZZZZ	WL74MB1SPK	2.00	11400																														
CCV	CCV5	1.00	11440							X					X																		X
CCB	CCB5	1.00	11480							X					X																		X
ZZZZZZ	WL74D	2.00	11522																														
ZZZZZZ	WL74E	2.00	11562																														
ZZZZZZ	WL74F	2.00	12003																														
ZZZZZZ	WL74G	2.00	12043																														
ZZZZZZ	WL74H	2.00	12083																														
ZZZZZZ	WL74I	2.00	12123																														
CCV	CCV6	1.00	12163							X					X																		X
CCB	CCB6	1.00	12203							X					X																		X
CRI	CRIF1	1.00	12245							X					X																		X
ICSA	ICSAF1	1.00	12291							X					X																		X
ICSAB	ICSABF1	1.00	12332							X					X																		X
CCV	CCV7	1.00	12373							X					X																		X
CCB	CCB7	1.00	12413							X					X																		X
PBS	WL49MB3	2.00	12455							X					X																		X
IM-CB-02-20130410-	WL49G	2.00	12500							X					X																		X
IM-CB-01-20130410-D	WL49FDUP	5.00	12541																														
IM-CB-01-20130410-	WL49F	5.00	12581																														
IM-CB-01-20130410-S	WL49FSPK	5.00	13021																														
ZZZZZZ	ZZZZZZ	5.00	13061																														
LCSS	WL49MB3SPK	2.00	13102							X					X																		X
CCV	CCV8	1.00	13142							X					X																		X
CCB	CCB8	1.00	13182							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 4/16/2013

SDG: WL49 | RUNID: IP041671 | METHOD: ICP | END DATE: 4/16/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WL67MB1	2.00	13224																														
ZZZZZZ	WL67B	5.00	13270																														
ZZZZZZ	WL67ADUP	5.00	13310																														
ZZZZZZ	WL67A	5.00	13350																														
ZZZZZZ	WL67ASPK	5.00	13390																														
ZZZZZZ	WL67APOST	5.00	13430																														
ZZZZZZ	WL67MB1SPK	2.00	13470																														
CCV	CCV9	1.00	13511							X					X																		X
CCB	CCB9	1.00	13551							X					X																		X
ZZZZZZ	WL86MB	1.00	13593																														
ZZZZZZ	WL86A	5.00	14034																														
ZZZZZZ	WL86MBSPK	1.00	14080																														
CCV	CCV10	1.00	14120							X					X																		X
CCB	CCB10	1.00	14160							X					X																		X
IM-CB-01-20130410-D	WL49FDUP	10.00	14201							X					X																		X
IM-CB-01-20130410-	WL49F	10.00	14242							X					X																		X
IM-CB-01-20130410-S	WL49FSPK	10.00	14282							X					X																		X
IM-CB-01-20130410-A	WL49FPOST	10.00	14322												X																		
ZZZZZZ	WL86A	10.00	14362																														
CCV	CCV11	1.00	14405							X					X																		X
CCB	CCB11	1.00	14445							X					X																		X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/18/2013

SDG: WL49 | RUNID: MS041811 | METHOD: PMS | END DATE: 4/18/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09040		X		X			X		X		X	X								X	X	X					X			X
S1	S1	1.00	09080		X		X			X		X		X	X								X	X	X					X			X
S2	S2	1.00	09120		X		X			X		X		X	X								X	X	X					X			X
S3	S3	1.00	09170		X		X			X		X		X	X								X	X	X					X			X
S4	S4	1.00	09210		X		X			X		X		X	X								X	X	X					X			X
S5	S5	1.00	09270																														
ZZZZZZ	Rinse sampl	1.00	09340																														
ICV	MICV	1.00	09410		X		X			X		X		X	X								X	X	X					X			X
ICB	ICB	1.00	09480		X		X			X		X		X	X								X	X	X					X			X
CCV	MCCV1	1.00	09520		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB1	1.00	09590		X		X			X		X		X	X								X	X	X					X			X
CRI	MCRI	1.00	10030		X		X			X		X		X	X								X	X	X					X			X
CRI	MCRI	1.00	10100		X		X			X		X		X	X								X	X	X					X			X
ICSA	ICSAI	1.00	10140		X		X			X		X		X	X								X	X	X					X			X
ICSAB	ICSABI	1.00	10200		X		X			X		X		X	X								X	X	X					X			X
ZZZZZZ	LR200	1.00	10270																														
ZZZZZZ	LR300	1.00	10340																														
ZZZZZZ	B1	1.00	10410																														
CCV	MCCV2	1.00	10470		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB2	1.00	10540		X		X			X		X		X	X								X	X	X					X			X
PBW	WL49MB1	2.00	11020		X		X			X		X		X	X								X	X	X					X			X
IM-MH-01-20130410-D	WL49ADUP	2.00	11060																														
IM-MH-01-20130410-	WL49A	2.00	11100		X							X		X	X								X	X	X					X			
IM-MH-01-20130410-S	WL49ASPK	2.00	11140		X							X		X	X								X	X	X					X			
IM-MH-01-20130410-D	WL49CDUP	2.00	11180		X		X					X		X	X								X	X	X					X			X
IM-MH-01-20130410-	WL49C	2.00	11220		X		X					X		X	X								X	X	X					X			X
IM-MH-01-20130410-S	WL49CSPK	2.00	11270		X		X					X		X	X								X	X	X					X			X
IM-SW-01-20130410-	WL49B	2.00	11310		X					X		X											X		X					X			
IM-SW-01-20130410-	WL49D	2.00	11350		X		X			X		X		X	X								X	X	X					X			X
LCSW	WL49MB1SPK	2.00	11390		X		X			X		X		X	X								X	X	X					X			X
CCV	MCCV3	1.00	11440		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB3	1.00	11510		X		X			X		X		X	X								X	X	X					X			X
PBW	WL49MB2	2.00	11570		X		X			X		X		X	X								X	X	X					X			X
PBS	WL49MB3	20.00	12010		X		X					X		X									X	X	X					X			
IM-CB-02-20130410-	WL49G	20.00	12050		X		X					X		X									X	X	X					X			

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/18/2013

SDG: WL49 | RUNID: MS041811 | METHOD: PMS | END DATE: 4/18/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
IM-CB-01-20130410-D	WL49FDUP	20.00	12090		X		X					X		X									X		X					X			
IM-CB-01-20130410-	WL49F	20.00	12130		X		X					X		X									X		X					X			
IM-CB-01-20130410-S	WL49FSPK	20.00	12170		X		X					X		X									X		X					X			
IM-CB-01-20130410-A	WL49FPOST	20.00	12210																						X								
ZZZZZZ	WL68B	20.00	12250																														
LCSS	WL49MB3SPK	20.00	12310		X		X					X		X									X	X	X					X			
LCSW	WL49MB2SPK	2.00	12350		X		X			X		X		X	X								X	X	X					X			X
CCV	MCCV4	1.00	12390		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB4	1.00	12460		X		X			X		X		X	X								X	X	X					X			X
ZZZZZZ	WL68MB1	20.00	12530																														
ZZZZZZ	WL68B	50.00	12570																														
ZZZZZZ	WL67B	50.00	13010																														
ZZZZZZ	WL67B	20.00	13050																														
ZZZZZZ	WL68A-L	100.00	13090																														
ZZZZZZ	WL68A	20.00	13130																														
ZZZZZZ	WL68ADUP	20.00	13170																														
ZZZZZZ	WL68ASPK	20.00	13210																														
ZZZZZZ	WL68APOST	20.00	13260																														
ZZZZZZ	WL68MB1SPK	20.00	13300																														
CCV	MCCV5	1.00	13350		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB5	1.00	13420		X		X			X		X		X	X								X	X	X					X			X
ZZZZZZ	WL67MB1	20.00	13480																														
ZZZZZZ	WL67ADUP	50.00	13520																														
ZZZZZZ	WL67A	50.00	13570																														
ZZZZZZ	WL67ASPK	50.00	14010																														
ZZZZZZ	WL67ADUP	20.00	14050																														
ZZZZZZ	WL67A	20.00	14090																														
ZZZZZZ	WL67ASPK	20.00	14130																														
ZZZZZZ	WL67APOST	20.00	14170																														
ZZZZZZ	WL68REF1	50.00	14210																														
ZZZZZZ	WL67MB1SPK	20.00	14250																														
CCV	MCCV6	1.00	14310		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB6	1.00	14370		X		X			X		X		X	X								X	X	X					X			X
ZZZZZZ	WL68A-L	500.00	14470																														
ZZZZZZ	WL68A	100.00	14510																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/18/2013

SDG: WL49 | RUNID: MS041811 | METHOD: PMS | END DATE: 4/18/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WL68ADUP	100.00	14550																														
ZZZZZZ	WL68ASPK	100.00	14590																														
ZZZZZZ	ZZZZZZ	100.00	15030																														
IM-CB-01-20130410-D	WL49FDUP	100.00	15070																					X									
IM-CB-01-20130410-	WL49F	100.00	15110																					X									
IM-CB-01-20130410-S	WL49FSPK	100.00	15150																					X									
IM-SW-01-20130410-	WL49B	20.00	15190												X																		X
IM-SW-01-20130410-	WL49B	5.00	15240											X										X									
CCV	MCCV7	1.00	15290		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB7	1.00	15360		X		X			X		X		X	X								X	X	X					X			X
IM-MH-01-20130410-D	WL49ADUP	5.00	15400							X																							X
IM-MH-01-20130410-	WL49A	5.00	15440							X																							X
IM-MH-01-20130410-S	WL49ASPK	5.00	15480							X																							X
ZZZZZZ	ZZZZZZ	5.00	15520																														
IM-MH-01-20130410-D	WL49ADUP	2.00	15560		X							X		X	X								X	X	X					X			
IM-MH-01-20130410-D	WL49CDUP	5.00	16000							X																							
IM-MH-01-20130410-	WL49C	5.00	16050							X																							
IM-MH-01-20130410-S	WL49CSPK	5.00	16090							X																							
ZZZZZZ	ZZZZZZ	5.00	16130																														
CCV	MCCV8	1.00	16170		X		X			X		X		X	X								X	X	X					X			X
CCB	CCB8	1.00	16240		X		X			X		X		X	X								X	X	X					X			X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/19/2013

SDG: WL49 | RUNID: MS041912 METHOD: PMS | END DATE: 4/19/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10210				X																			X							
S1	S1	1.00	10250				X																			X							
S2	S2	1.00	10280				X																			X							
S3	S3	1.00	10320				X																			X							
S4	S4	1.00	10360				X																			X							
S5	S5	1.00	10420																														
ZZZZZZ	Rinse samp1	1.00	10480																														
ICV	MICV	1.00	10540				X																			X							
ICB	ICB	1.00	11000				X																			X							
CCV	MCCV1	1.00	11040				X																			X							
CCB	CCB1	1.00	11100				X																			X							
CRI	MCRI	1.00	11140				X																			X							
ICSA	ICSAI	1.00	11170				X																			X							
ICSAB	ICSABI	1.00	11230				X																			X							
ZZZZZZ	B1	1.00	11290																														
CCV	MCCV2	1.00	11340				X																			X							
CCB	CCB2	1.00	11400				X																			X							
PBW	WL49MB1	2.00	11460																							X							
IM-MH-01-20130410-D	WL49ADUP	2.00	11490				X																			X							
IM-MH-01-20130410-	WL49A	2.00	11530				X																			X							
IM-MH-01-20130410-S	WL49ASPK	2.00	11570				X																			X							
IM-MH-01-20130410-D	WL49CDUP	2.00	12000																							X							
IM-MH-01-20130410-	WL49C	2.00	12040																							X							
IM-MH-01-20130410-S	WL49CSPK	2.00	12070																							X							
IM-SW-01-20130410-	WL49B	10.00	12110				X																			X							
IM-SW-01-20130410-	WL49D	2.00	12140																							X							
LCSW	WL49MB1SPK	2.00	12180																							X							
CCV	MCCV3	1.00	12220				X																			X							
CCB	CCB3	1.00	12290				X																			X							
PBW	WL49MB2	2.00	12320																							X							
PBS	WL49MB3	20.00	12360																							X							
IM-CB-02-20130410-	WL49G	20.00	12390																							X							
IM-CB-01-20130410-D	WL49FDUP	20.00	12430																							X							
IM-CB-01-20130410-	WL49F	20.00	12460																							X							
IM-CB-01-20130410-S	WL49FSPK	20.00	12500																							X							

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 4/19/2013

SDG: WL49 | RUNID: MS041912 | METHOD: PMS | END DATE: 4/19/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WL74D	20.00	12530																														
ZZZZZZ	WL74E	20.00	12570																														
LCSS	WL49MB3SPK	20.00	13010																							X							
LCSW	WL49MB2SPK	2.00	13040																							X							
CCV	MCCV4	1.00	13090				X																			X							
CCB	CCB4	1.00	13150				X																			X							

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/19/2013

SDG: WL49 | RUNID: HG041901 | METHOD: CVA | END DATE: 4/19/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	09452														X																
S0.1	S0.1	1.00	09470														X																
S0.5	S0.5	1.00	09484														X																
S1	S1	1.00	09501														X																
S2	S2	1.00	09515														X																
S5	S5	1.00	09533														X																
S10	S10	1.00	09551														X																
ICV	AICV	1.00	09581														X																
ICB	ICB	1.00	09595														X																
CCV	ACCV1	1.00	10012														X																
CCB	CCB1	1.00	10030														X																
CRA	CRA	1.00	10044														X																
ZZZZZZ	WM16MB1	1.00	10062																														
ZZZZZZ	WM16MB1SPK	1.00	10075																														
ZZZZZZ	WM16MB1SPD	1.00	10093																														
ZZZZZZ	WM16A	1.00	10111																														
ZZZZZZ	WM16ADUP	1.00	10124																														
ZZZZZZ	WM16ASPK	1.00	10142																														
ZZZZZZ	WM16B	1.00	10160																														
ZZZZZZ	WM16C	1.00	10173																														
ZZZZZZ	WM16D	1.00	10191																														
CCV	ACCV2	1.00	10205														X																
CCB	CCB2	1.00	10223														X																
PBW	WL49MB3	1.00	10241														X																
LCSW	WL49MB3SPK	1.00	10254														X																
IM-CB-01-20130410-	WL49F	1.00	10272														X																
IM-CB-01-20130410-D	WL49FDUP	1.00	10290														X																
IM-CB-01-20130410-S	WL49FSPK	1.00	10303														X																
IM-CB-02-20130410-	WL49G	1.00	10321														X																
ZZZZZZ	WL68MB1	1.00	10335																														
ZZZZZZ	WL68MB1SPK	1.00	10352																														
ZZZZZZ	WL68REF1	5.00	10370																														
ZZZZZZ	WL68A	1.00	10384																														
CCV	ACCV3	1.00	10402														X																
CCB	CCB3	1.00	10420														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/19/2013

SDG: WL49 | RUNID: HG041901 | METHOD: CVA | END DATE: 4/19/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WL68ADUP	1.00	10434																														
ZZZZZZ	WL68ASPK	1.00	10452																														
ZZZZZZ	WL68B	1.00	10465																														
ZZZZZZ	WM28MB1	1.00	10483																														
ZZZZZZ	WM28MB1SPK	1.00	10501																														
ZZZZZZ	WM28A	1.00	10514																														
ZZZZZZ	WM28ADUP	1.00	10532																														
ZZZZZZ	WM28ASPK	1.00	10550																														
ZZZZZZ	WM28B	1.00	10563																														
ZZZZZZ	WM28C	1.00	10581																														
CCV	ACCV4	1.00	10595														X																
CCB	CCB4	1.00	11013														X																
ZZZZZZ	WM28D	1.00	11031																														
ZZZZZZ	WM28E	1.00	11045																														
CCV	ACCV5	1.00	11063														X																
CCB	CCB5	1.00	11081														X																
IM-CB-01-20130410-	WL49F	1.00	11100																														
IM-CB-01-20130410-D	WL49FDUP	1.00	11114																														
IM-CB-01-20130410-S	WL49FSPK	1.00	11131																														
ZZZZZZ	WL68A	1.00	11145																														
ZZZZZZ	WL68ADUP	1.00	11162																														
ZZZZZZ	WL68ASPK	1.00	11180																														
ZZZZZZ	WM28A	1.00	11193																														
ZZZZZZ	WM28ADUP	1.00	11211																														
ZZZZZZ	WM28ASPK	1.00	11225																														
CCV	ACCV6	1.00	11243														X																
CCB	CCB6	1.00	11261														X																

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL65

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
IM-MH-01-20130410-	WL65A	13-7786	
IM-MH-01-20130410-D	WL65ADUP	13-7786	
IM-MH-01-20130410-S	WL65ASPK	13-7786	
IM-SW-01-20130410-	WL65B	13-7787	
PBW	WL65MB1	13-7787	
LCSW	WL65MB1SPK	13-7787	
IM-MH-01-20130410-	WL65C	13-7788	
IM-MH-01-20130410-D	WL65CDUP	13-7788	
IM-MH-01-20130410-S	WL65CSPK	13-7788	
IM-SW-01-20130410-	WL65D	13-7789	
PBW	WL65MB2	13-7789	
LCSW	WL65MB2SPK	13-7789	

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: 4/19/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 04/18/13
Date Received: 04/11/13
Page 1 of 1

QC Report No: WL65-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
IM-MH-01-20130410-W WL65A 13-7786	04/10/13	Water	04/15/13 04/18/13	**20.0**	**60.5**
IM-SW-01-20130410-W WL65B 13-7787	04/10/13	Water	04/15/13 04/18/13	**20.0**	**910**
MB-041513 Method Blank	NA	Water	04/15/13 04/18/13	20.0	20.0 U

Reported in ng/L

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

FORM-I

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: IM-MH-01-20130410-W
MATRIX SPIKE

Lab Sample ID: WL65A
LIMS ID: 13-7786
Matrix: Water
Data Release Authorized:
Reported: 04/18/13

QC Report No: WL65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	60.5	91.0	100	30.5%	N

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: IM-MH-01-20130410-W DUPLICATE

Lab Sample ID: WL65A
LIMS ID: 13-7786
Matrix: Water
Data Release Authorized:
Reported: 04/18/13

QC Report No: WL65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	60.5	60.2	0.5%	+/- 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
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WL65LCS
LIMS ID: 13-7787
Matrix: Water
Data Release Authorized:
Reported: 04/18/13

QC Report No: WL65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

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

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 04/18/13
Date Received: 04/11/13
Page 1 of 1

QC Report No238: WL65-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
IM-MH-01-20130410-W WL65C 13-7788	04/10/13	Water	04/15/13 04/18/13	20.0	20.0 U
IM-SW-01-20130410-W WL65D 13-7789	04/10/13	Water	04/15/13 04/18/13	20.0	20.0 U
MB-041513 Method Blank	NA	Water	04/15/13 04/18/13	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: IM-MH-01-20130410-W
MATRIX SPIKE

Lab Sample ID: WL65C
LIMS ID: 13-7788
Matrix: Water
Data Release Authorized:
Reported: 04/18/13

QC Report No: WL65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	122	100	122%	

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%

WL10-08236

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: IM-MH-01-20130410-W DUPLICATE

Lab Sample ID: WL65C
LIMS ID: 13-7788
Matrix: Water
Data Release Authorized:
Reported: 04/18/13

QC Report No: WL65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

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

Reported in ng/L

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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WL65LCS
LIMS ID: 13-7789
Matrix: Water
Data Release Authorized:
Reported: 04/18/13

QC Report No: WL65-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	201	200	100%	

Reported in ng/L

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

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL65

UNITS:ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG041801	500.0	495.00	**99.0**	500.0	501.00	**100.2**	499.00	**99.8**	512.00	**102.4**	500.00	**100.0**		

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

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL65

UNITS: ng/L

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Mercury	HG	CVL	HG041801		20.0	22.60	**113.0**										

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: WL65

UNITS: ng/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG041801	25.0	20.0	20.0	U	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: WL65

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: WL65

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IM-MH-01-20130410-	WL65A	0.000	20.0	20.0
IM-MH-01-20130410-D	WL65ADUP	0.000	20.0	20.0
IM-MH-01-20130410-S	WL65ASPK	0.000	20.0	20.0
IM-SW-01-20130410-	WL65B	0.000	20.0	20.0
PBW	WL65MB1	0.000	20.0	20.0
LCSW	WL65MB1SPK	0.000	20.0	20.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WL65

ANALYSIS METHOD: CVL

ARI PREP CODE: DLM

PREPDATE: 4/15/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
IM-MH-01-20130410-	WL65C	0.000	20.0	20.0
IM-MH-01-20130410-D	WL65CDUP	0.000	20.0	20.0
IM-MH-01-20130410-S	WL65CSPK	0.000	20.0	20.0
IM-SW-01-20130410-	WL65D	0.000	20.0	20.0
PBW	WL65MB2	0.000	20.0	20.0
LCSW	WL65MB2SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 4/18/2013

SDG: WL65 | RUNID: HG041801 | METHOD: CVL | END DATE: 4/18/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10461														X																
S20	S20	1.00	10485														X																
S50	S50	1.00	10513														X																
S100	S100	1.00	10541														X																
S200	S200	1.00	10565														X																
S400	S400	1.00	10594														X																
S1000	S1000	1.00	11022														X																
ICV	AICV	1.00	11063														X																
ICB	ICB	1.00	11091														X																
CCV	ACCV1	1.00	11120														X																
CCB	CCB1	1.00	11144														X																
CRA	CRA	1.00	11173														X																
PBW	WL65MB1	1.00	11201														X																
LCSW	WL65MB1SPK	1.00	11225														X																
IM-MH-01-20130410-	WL65A	1.00	11253														X																
IM-MH-01-20130410-D	WL65ADUP	1.00	11281														X																
IM-MH-01-20130410-S	WL65ASPK	1.00	11305														X																
IM-SW-01-20130410-	WL65B	1.00	11333														X																
PBW	WL65MB2	1.00	11362														X																
LCSW	WL65MB2SPK	1.00	11390														X																
IM-MH-01-20130410-	WL65C	1.00	11414														X																
CCV	ACCV2	1.00	11443														X																
CCB	CCB2	1.00	11471														X																
IM-MH-01-20130410-D	WL65CDUP	1.00	11495														X																
IM-MH-01-20130410-S	WL65CSPK	1.00	11523														X																
IM-SW-01-20130410-	WL65D	1.00	11551														X																
CCV	ACCV3	1.00	11580														X																
CCB	CCB3	1.00	12004														X																
IM-MH-01-20130410-	WL65A	1.00	12034																														
IM-MH-01-20130410-D	WL65ADUP	1.00	12062																														
IM-MH-01-20130410-S	WL65ASPK	1.00	12090																														
CCV	ACCV4	1.00	12114														X																
CCB	CCB4	1.00	12143														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

SAMPLE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Client ID: IM-MH-01-20130410-W
ARI ID: 13-7779 WL49A

Analyte	Date Batch	Method	Units	RL	Sample
pH	04/11/13 041113#1	SM4500H	std units	0.01	6.37
Alkalinity	04/18/13 041813#1	SM 2320	mg/L CaCO3	1.0	149
Carbonate	04/18/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	04/18/13	SM 2320	mg/L CaCO3	1.0	149
Hydroxide	04/18/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	04/12/13 041213#1	EPA 120.1	umhos/cm	1.00	929
Total Suspended Solids	04/12/13 041213#1	SM2540D	mg/L	1.6	9.3
Chloride	04/11/13 041113#1	EPA 300.0	mg/L	2.0	55.0
N-Nitrate	04/11/13 041113#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
N-Nitrite	04/11/13 041113#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Sulfate	04/11/13 041113#1	EPA 300.0	mg/L	5.0	234
Total Organic Carbon	04/25/13 042513#1	SM5310B	mg/L	15.0	65.6
Dissolved Organic Carbon	04/23/13 042313#1	SM5310B	mg/L	15.0	73.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Client ID: IM-SW-01-20130410-W
ARI ID: 13-7780 WL49B

Analyte	Date Batch	Method	Units	RL	Sample
pH	04/11/13 041113#1	SM4500H	std units	0.01	8.99
Alkalinity	04/18/13 041813#1	SM 2320	mg/L CaCO3	1.0	767
Carbonate	04/18/13	SM 2320	mg/L CaCO3	1.0	43.4
Bicarbonate	04/18/13	SM 2320	mg/L CaCO3	1.0	724
Hydroxide	04/18/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	04/12/13 041213#1	EPA 120.1	umhos/cm	1.00	200
Total Suspended Solids	04/12/13 041213#1	SM2540D	mg/L	40.0	2,120
Chloride	04/11/13 041113#1	EPA 300.0	mg/L	0.2	8.4
N-Nitrate	04/11/13 041113#1	EPA 300.0	mg-N/L	0.1	0.1
N-Nitrite	04/11/13 041113#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Sulfate	04/11/13 041113#1	EPA 300.0	mg/L	1.0	36.8
Total Organic Carbon	04/25/13 042513#1	SM5310B	mg/L	7.50	107
Dissolved Organic Carbon	04/23/13 042313#1	SM5310B	mg/L	7.50	9.65

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Client ID: IM-CB-01-20130410-S
ARI ID: 13-7784 WL49F

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/12/13 041213#1	SM2540B	Percent	0.01	54.82
Total Organic Carbon	04/18/13 041813#1	Plumb,1981	Percent	0.196	12.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Client ID: IM-CB-02-20130410-S
ARI ID: 13-7785 WL49G

Analyte	Date	Method	Units	RL	Sample
Total Solids	04/12/13 041213#1	SM2540B	Percent	0.01	84.60
Total Organic Carbon	04/18/13 041813#1	Plumb,1981	Percent	0.020	1.09

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WL49A Client ID: IM-MH-01-20130410-W							
Chloride	EPA 300.0	04/11/13	mg/L	55.0	105	50.0	100.0%
N-Nitrate	EPA 300.0	04/11/13	mg-N/L	< 0.1	1.8	2.0	90.0%
N-Nitrite	EPA 300.0	04/11/13	mg-N/L	< 0.1	2.0	2.0	100.0%
Sulfate	EPA 300.0	04/11/13	mg/L	234	432	200	99.0%
Total Organic Carbon	SM5310B	04/25/13	mg/L	65.6	113	50.0	94.8%
Dissolved Organic Carbon	SM5310B	04/23/13	mg/L	73.9	124	50.0	100.2%

MS/MSD RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WL49F Client ID: IM-CB-01-20130410-S						
Total Organic Carbon	04/18/13	Percent	12.2	22.9	11.7	91.7%

REPLICATE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WL49A Client ID: IM-MH-01-20130410-W						
pH	SM4500H	04/11/13	std units	6.37	6.32	0.05
Alkalinity	SM 2320	04/18/13	mg/L CaCO3	149	148	0.7%
Carbonate	SM 2320	04/18/13	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	04/18/13	mg/L CaCO3	149	148	0.7%
Hydroxide	SM 2320	04/18/13	mg/L CaCO3	< 1.0	< 1.0	NA
Conductivity	EPA 120.1	04/12/13	umhos/cm	929	931	0.2%
Chloride	EPA 300.0	04/11/13	mg/L	55.0	55.1	0.2%
N-Nitrate	EPA 300.0	04/11/13	mg-N/L	< 0.1	< 0.1	NA
N-Nitrite	EPA 300.0	04/11/13	mg-N/L	< 0.1	< 0.1	NA
Sulfate	EPA 300.0	04/11/13	mg/L	234	232	0.9%
Total Organic Carbon	SM5310B	04/25/13	mg/L	65.6	65.5	0.2%
Dissolved Organic Carbo	SM5310B	04/23/13	mg/L	73.9	75.5	2.1%
ARI ID: WL49B Client ID: IM-SW-01-20130410-W						
Alkalinity	SM 2320	04/18/13	mg/L CaCO3	767	765	0.3%
Carbonate	SM 2320	04/18/13	mg/L CaCO3	43.4	45.4	4.5%
Bicarbonate	SM 2320	04/18/13	mg/L CaCO3	724	720	0.6%
Hydroxide	SM 2320	04/18/13	mg/L CaCO3	< 1.0	< 1.0	NA
Total Suspended Solids	SM2540D	04/12/13	mg/L	2,120	2,440	14.0%
Total Organic Carbon	SM5310B	04/25/13	mg/L	107	102	4.8%

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

REPLICATE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 04/10/13
Date Received: 04/11/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WL49F Client ID: IM-CB-01-20130410-S					
Total Solids	04/12/13	Percent	54.82	53.34 53.49	1.5%
Total Organic Carbon	04/18/13	Percent	12.2	11.6 13.8	9.1%

LAB CONTROL RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/30/13

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	04/11/13	std units	6.97	7.00	0.03
Total Suspended Solids SM2540D	ICVL	04/12/13	mg/L	49.5	50.0	99.0%

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

LAB CONTROL RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

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

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	04/18/13	Percent	0.097	0.100	97.0%

METHOD BLANK RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/30/13

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

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	04/12/13	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	04/12/13	mg/L	< 1.0 U	
Chloride	EPA 300.0	04/11/13	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	04/11/13	mg-N/L	< 0.1 U	
N-Nitrite	EPA 300.0	04/11/13	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	04/11/13	mg/L	< 0.1 U	
Total Organic Carbon	SM5310B	04/25/13	mg/L	< 1.50 U	
Dissolved Organic Carbon	SM5310B	04/23/13	mg/L	< 1.50 U	
		04/23/13		< 1.50 U	FB
		04/23/13		< 1.50 U	FB
		04/23/13		< 1.50 U	FB
		04/23/13		< 1.50 U	FB

FB Filtration Blank

METHOD BLANK RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

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

Analyte	Date	Units	Blank	QC ID
Total Solids	04/12/13	Percent	< 0.01 U	ICB
Total Organic Carbon	04/18/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 04/30/13

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

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity	SM 2320	04/18/13	mg/L CaCO3	41.3	41.9	98.6%
ERA #P114506		04/18/13		39.3	41.9	93.8%
Conductivity	EPA 120.1	04/12/13	umhos/cm	1,010	1,000	101.0%
Ricca #4110724						
Chloride	EPA 300.0	04/11/13	mg/L	3.0	3.0	100.0%
ERA 210312						
N-Nitrate	EPA 300.0	04/11/13	mg-N/L	3.0	3.0	100.0%
EAR 230511						
N-Nitrite	EPA 300.0	04/11/13	mg-N/L	3.0	3.0	100.0%
ERA 490412						
Sulfate	EPA 300.0	04/11/13	mg/L	3.1	3.0	103.3%
ERA 240312						
Total Organic Carbon	SM5310B	04/25/13	mg/L	19.6	20.0	98.0%
ERA 0409-12-01						
Dissolved Organic Carbon	SM5310B	04/23/13	mg/L	19.8	20.0	99.0%
ERA 0409-12-01						

STANDARD REFERENCE RESULTS-CONVENTIONALS
WL49-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 04/30/13

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

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	04/18/13	Percent	2.77	2.99	92.6%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WL49, WL65

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
IM-CB-01-20130410-S	100.0	97.0	93.1	90.0	85.6	79.3	72.5	65.5	62.9	26.9	10.9	7.1	5.4	2.5
IM-CB-02-20130410-S	100.0	74.7	59.1	50.3	38.8	23.6	14.1	9.2	7.4	5.0	3.6	2.3	1.5	0.9

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.

WL49

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
IM-CB-01-20130410-S	6.9	3.1	4.4	6.3	6.8	7.0	2.6	36.0	16.0	3.8	1.7	2.9	2.5	65.5
IM-CB-02-20130410-S	40.9	8.8	11.5	15.1	9.6	4.9	1.8	2.4	1.4	1.3	0.8	0.6	0.9	9.2

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WL49

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 :	WL49-1

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
IM-CB-01-20130410-S	4/10/2013	4/22/2013	4/25/2013		12.2
IM-CB-02-20130410-S	4/10/2013	4/22/2013	4/25/2013		9 9

* 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: WL49, WL65

Total Solids Targets-Extractions
Data By: Steve Potter
Created: 4/15/13

Worklist: 4364
Analyst: SDP
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WL49F	10.00	55.6	17.99
2.	WL49G	10.00	81.9	12.21

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/12/13

Worklist: 4248
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.	WL49F 13-7784 IM-CB-01-20130410-S	1.18	15.63	9.22	55.6	NR
2.	WL49G 13-7785 IM-CB-02-20130410-S	1.18	15.63	13.02	81.9	NR

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 4/12/13

Worklist: 4248
Analyst: AC
Comments:

Oven ID: Φ15

Balance ID: B13978992

Samples In: Date: 4-12-13 Time: 17:55 Temp: 1φ4°C Analyst: AC

Samples Out: Date: 4/15/13 Time: 06:38 Temp: 189° Analyst: RF

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WL49F 13-7784 IM-CB-01-20130410-S	1.18	~~14.40~~ 15.63 AC 4-12-13		9.27	NR
2.	WL49G 13-7785 IM-CB-02-20130410-S	1.18	15.63		13.82	NR

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 4/25/13

Worklist: 8035
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1. WL49F 13-7784	_____	_____		% 54.6

Worklist ID: 8035 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: DM Date: 4/16/13
Date: 04/16/13 Data Analyst: CB

Solids Determination performed on 04/15/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WL49	F	IM-CB-01-20130410-S	0.995	10.397	6.126	54.57
WL49	G	IM-CB-02-20130410-S	0.979	10.309	9.190	88.01

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Total Solids Bench Sheet

Laboratory Section metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 04-15-13 Time: 1025 Temp: 101°C Analyst: CB

Removed from Oven: Date: 04-16-13 Time: 0725 Temp: 102°C Analyst: CB

ARI Sample ID		Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WL74	B	0.982	10.170	9.601	—	√
"	C	1.000	10.306	9.805	—	√
"	D	0.990	10.672	9.330	—	√
"	E	0.986	10.630	10.287	—	√
"	F	0.983	10.241	9.788	—	√
"	G	0.973	10.220	8.564	—	√
"	I	0.978	10.458	8.634	—	√
"	J	0.995	10.422	8.709	—	√
"	H	0.993	10.184	8.465	—	√
WL67	A	1.005	10.836	4.817	—	√
"	B	1.000	10.363	3.172	—	√
WL49	F	0.995	10.397	6.126	—	√
"	G	0.979	10.309	9.190	—	√
			CB			
			4-15-13			

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

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Organic Extractions Benchsheet

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

Preparation Test BAN # 1 (BANWSI) In-House (1.0-5.0ppb)

ARI Job No(s) WL49 Page 1 of 1 Batch set up by: ~~SW~~

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WL49 MBW	500mL	0.5mL	0.5mL		ML 4/16/13
	↓ SBW	500mL	0.5mL	0.5mL		
	↓ SBW Dup	500mL	0.5mL	0.5mL	3	
	~~QLS~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~		
3	WL49 A	500mL	0.5mL	0.5mL		
4	↓ B	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		RA
		500mL	0.5mL	0.5mL		4/18/13
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap 1 2 3
		500mL	0.5mL	0.5mL		
		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	SR 4/18/13	SR 4/18/13
Analyst/Date		ML 4/16/13	SR 4/18/13	SR 4/18/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2084-3)	100/150µg/mL	125µL	7/02/13	ML	ML
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	125µL	1/29/14	ML	ML
Base Spike	56 (2063-2)	200µg/mL	125µL	7/31/13	ML	ML
~~Benzidine Spike~~	~~39 ( )~~	~~500µg/mL~~	~~125µL~~			
Acid Spike	38 (2074-1)	100/200µg/mL	125µL	7/31/13	ML	ML
~~QLS Spike~~ (Freezer)	~~14 ( )~~	~~10-100µg/mL~~	~~50µL~~			
Extraction Time:	13:10					

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) WL49

(8270D) BAN Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8174) 1:1 Sulfuric Acid/DI H2O: (H# 110) 10 N Sodium Hydroxide: (H# 049) Anhydrous Sodium Sulfate: (I# 8065 + jar date 4/14/13)	Sep Funnel M 4/16/13
KD Station: Methylene Chloride: (I# 8174)	KD RR 4/18/13
Vialing Station: Methylene Chloride: (I# 8174)	Vialing SP 4/18/13

Analytical Resources, Incorporated
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Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49

Client ID: SAIC

Parameter: BAN

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= A - Light gray, B light tan turbid	NL 4/16/13
☒ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) B ~ 3% particulates	NL 4/16/13
☐ Emulsions (%)=	
☒ Other (Details)= Sept funnels used for ~~SBLK~~ NL 4/16/13 SBLD, A, B Ext'd	NL 4/16/13
1 cycles with 1X Acetone & 2X DCM.	
- Ext'd A, B: ~ thin ~ 10% emulsion, samples centrifuged	NL 4/16/13
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

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(8270D) BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

ARI Job No(s) WL49, WL67 Page 1 of 1 PSDDA (5-20ppb) Batch set up by: ~~SH~~

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
	WL49 MBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 (2) 3 CT 4/18/13 Analyst/Date
	↓ SBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1ml~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C 1 2 3 4 5 6 RR 4/19/13 Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 (2) 3 WW 4/19/13 Analyst/Date
7	WL49 F	2.03	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	
3	↓ G	13.05	(1:1) (Y) / N	1mL	1mL		GPC Prep Filter (1:1) WW 4/19/13 Analyst/Date
3	↓ GMS	13.05	(1:1) (Y) / N	1mL	1mL		
3	↓ GMSL	13.04	(1:1) (Y) / N	1mL	1mL		
8	WL67 A	8.06	(1:1) (Y) / N	1mL	1mL	See Analyst Notes	Post GPC KD 80-85°C 1 2 3 4 5 6 RR 4/22/13 Analyst/Date
8	↓ B	6.05	(1:1) (Y) / N	1mL	1mL	↓	
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap (1) 2 3 AC 4-22-13 Analyst/Date
Analyst/Date CT 4/19/13			WW 4/19/13	AC	AC		

4-22-13 4-22-13

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2084-3)	100/150µg/mL	50µL	7/02/13	CT	TH
Full List Spike (Freezer)	7 (2063-5)	100µg/mL	50µL	1/29/14	CT	TH
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	CT	TH
Acid Spike	38(2074-1)	100/150µg/mL	50µL	7/31/13	CT	TH
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			
Extraction Time: 13:48			Balance ID: B1466261G			

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)

WL49 DOCS

(8270D) BAN/SIM SVOA PSDDA–Soil/(Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WL49, WL67

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Pre-Deactivated Sodium Sulfate: (H# 110) Anhydrous Sodium Sulfate: (I# 8490 + jar date 4/12/13) 1:1 Methylene Chloride/Acetone: (H# 159) Methylene Chloride: (I# 8174) Pre-Deactivated Glas swool: (H# 144)	Microwave CT 04/18/13
Pre-GPC KD Station: Pre-Deactivated Glas swool: (H# 144) Anhydrous Sodium Sulfate: (I# 8490 + jar date 03/14/13) Methylene Chloride: (I# 8174)	Pre-GPC KD RR 04/19/13
GPC Filter Prep: Methylene Chloride: (I# 8174)	GPC Filter Prep 4/19/13
GPC Station: Acetone: (I# 8783) Methylene Chloride: (I# 8174)	GPC 4/19/13
Post GPC KD Station: Methylene Chloride: (I# 8174)	Post GPC KD RR 04/22/13
Vialing Station: Methylene Chloride: (I# 8242) Hexane: (I#)	Vialing AC 4-22-13

Analytical Resources, Incorporated
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Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 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)= gt	AC 4-12-13
☐ Standing Water Homogenized (Shared samples)=	↓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? 30% small-med. = g	
☐ Organics (Leaves/sticks/grass)= 10% = sticks = g+ AC 4-12-13	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GCMS analyst, (Centrifuge#1 used for all Centrifugations) reduced extraction weight for Sample 'F', based on Sample pre-screen.	JH 4/17/13

3056F

Revision 009
08/14/12

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

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	2013-2	8/5/13	Supelco	2014-1	8/13/13
↓	2014-1	12/6/13	↓	2017-1	12/6/13
↓	2015-1	12/5/13	↓	2018-1	12/4/13
in house stock	2061-1	12/4/13	in house stock	2061-1	12/4/13
Cambridge	18031	1/23/14	Cambridge	18031	1/23/14
SPEX & Restek	2007-2	10/4/13	Aldrich	2018-2	7/2/13
Aldrich	2018-2	7/2/13			

Detail problems, corrective actions and/or other pertinent information below:

Quadratic curve fit used: Butylated hydroxy toluene, Tributyl Phosphate, Biphenyl, Naphthalene, 4-Chloroaniline, 2-chloronaphthalene, 3-Nitroaniline, Fluorene, Carbazole, Benzo(b,K) fluoranthene, 4-Bromophenyl

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 meet min response factor and out of %c limit on 2nd ICV.

Analyst: _____ Date: 03/7/13

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.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
177 p-Benzoquinone	0.05008	0.07043	0.09004	0.08723	0.08034	0.07949		
	0.07703	+++++					0.07638	17.383
168 Pentachlorobenzene	0.54002	0.44946	0.48381	0.42999	0.39543	0.37082		
	0.39690	+++++					0.43806	13.414
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
133 Butylatedhydroxytoluene	1.14333	0.98886	1.01757	0.90348	0.73978	0.64214		
	0.61393	+++++					0.86416	23.429 <-
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

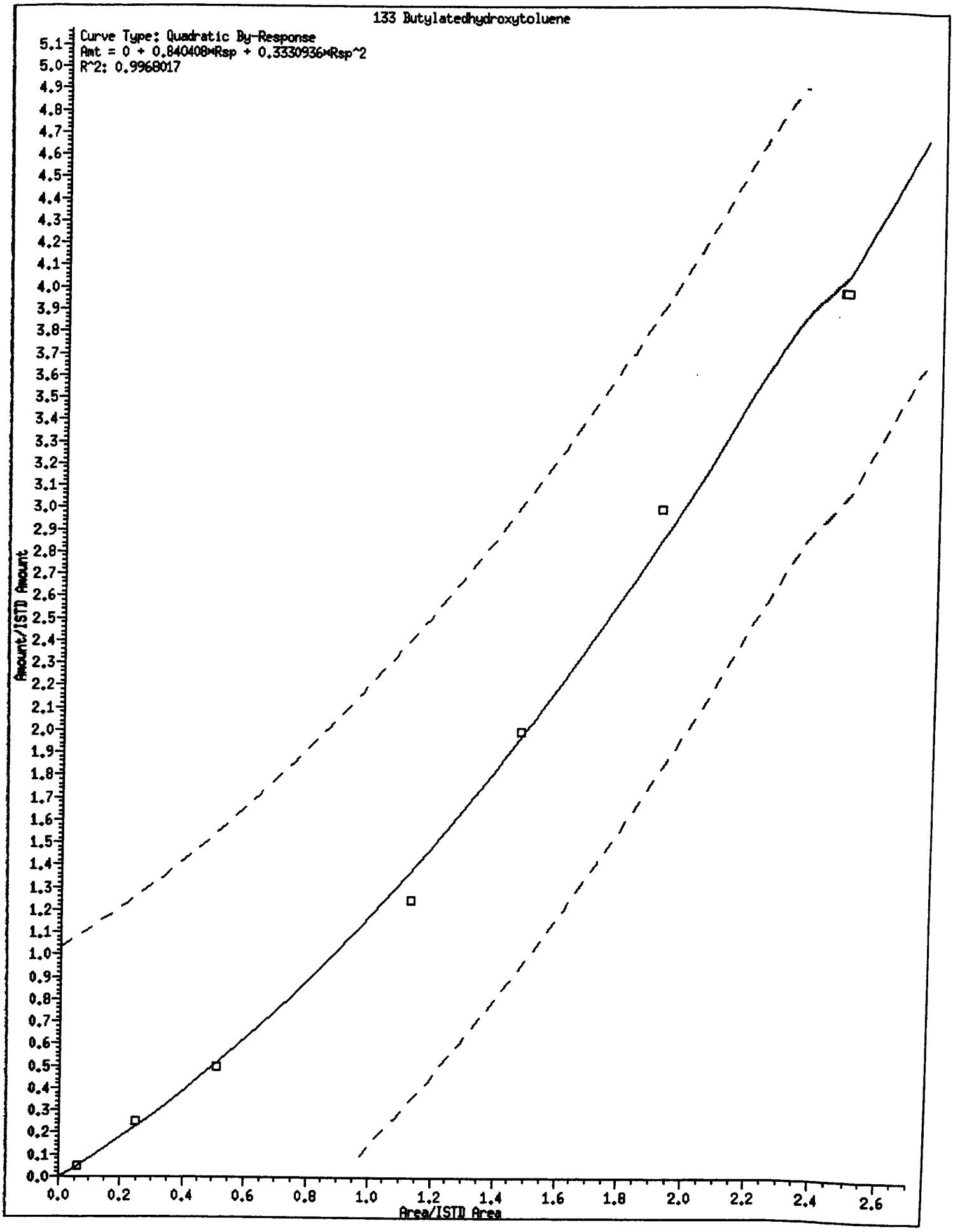
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

DZ 03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
133 Butylatedhydroxytoluene	55856	240649	644369	1140696	1474910	1855173					
	2177090	+++++					QUAD	0.000e+00	0.84041	0.33309	0.99680
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00


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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 alpha-Terpineol	0.29935	0.28907	0.28287	0.25012	0.23154	0.21632		
	0.21106	+++++					0.25433	14.269
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
123 Acetophenone	2.14833	1.97774	2.14601	1.85029	1.73200	1.63910		
	1.68468	+++++					1.88259	11.294
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 1,4-Dioxane	0.70789	0.62615	0.68743	0.61563	0.60104	0.58481		
	0.62088	0.74708					0.64887	8.913
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.21112	0.27662	0.33189	0.30795	0.30141	0.27621		
	0.29312	+++++					0.28547	13.312

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
178 2-Benzyl-4-Chlorophenol	0.15564	0.16773	0.19566	0.17601	0.15696	0.14827			
	0.15928	+++++					0.16565	9.643	
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
118 Triphenyl Phosphate	0.17525	0.16342	0.19227	0.18313	0.17027	0.16645			
	0.17518	+++++					0.17514	5.680	
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561			
	0.15293	+++++					0.18415	13.621	
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019			
	0.32986	+++++					0.52887	19.190	
115 Tributyl Phosphate	1.07204	0.94669	0.98668	0.84143	0.73508	0.63101			
	0.65635	+++++					0.83847	20.377	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045			
	0.65225	+++++					0.77860	15.566	
112 Biphenyl	1.50584	1.36472	1.24623	1.05635	0.90153	0.79289			
	0.81967	+++++					1.09818	25.495	<-

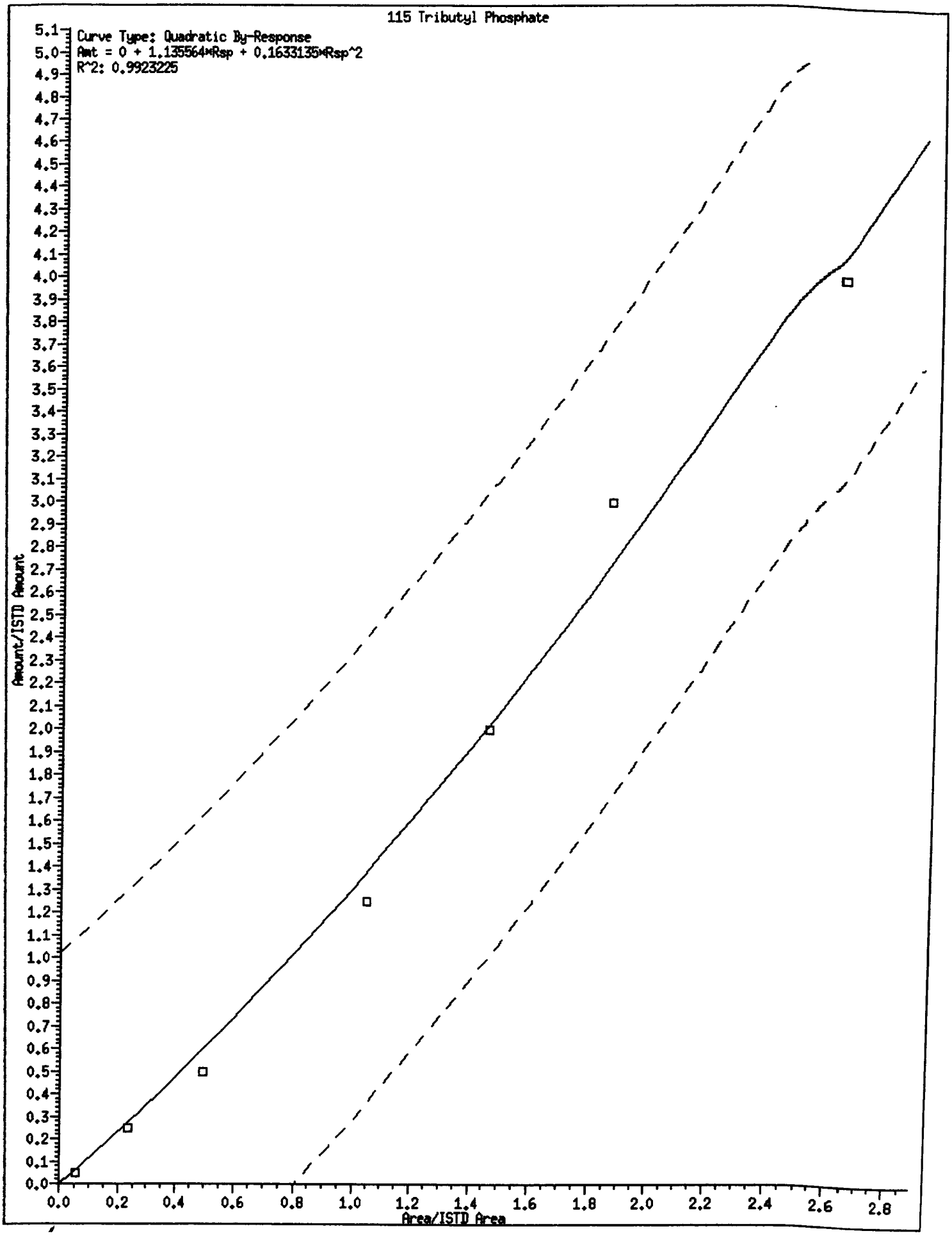
Analytical Resources, Inc.

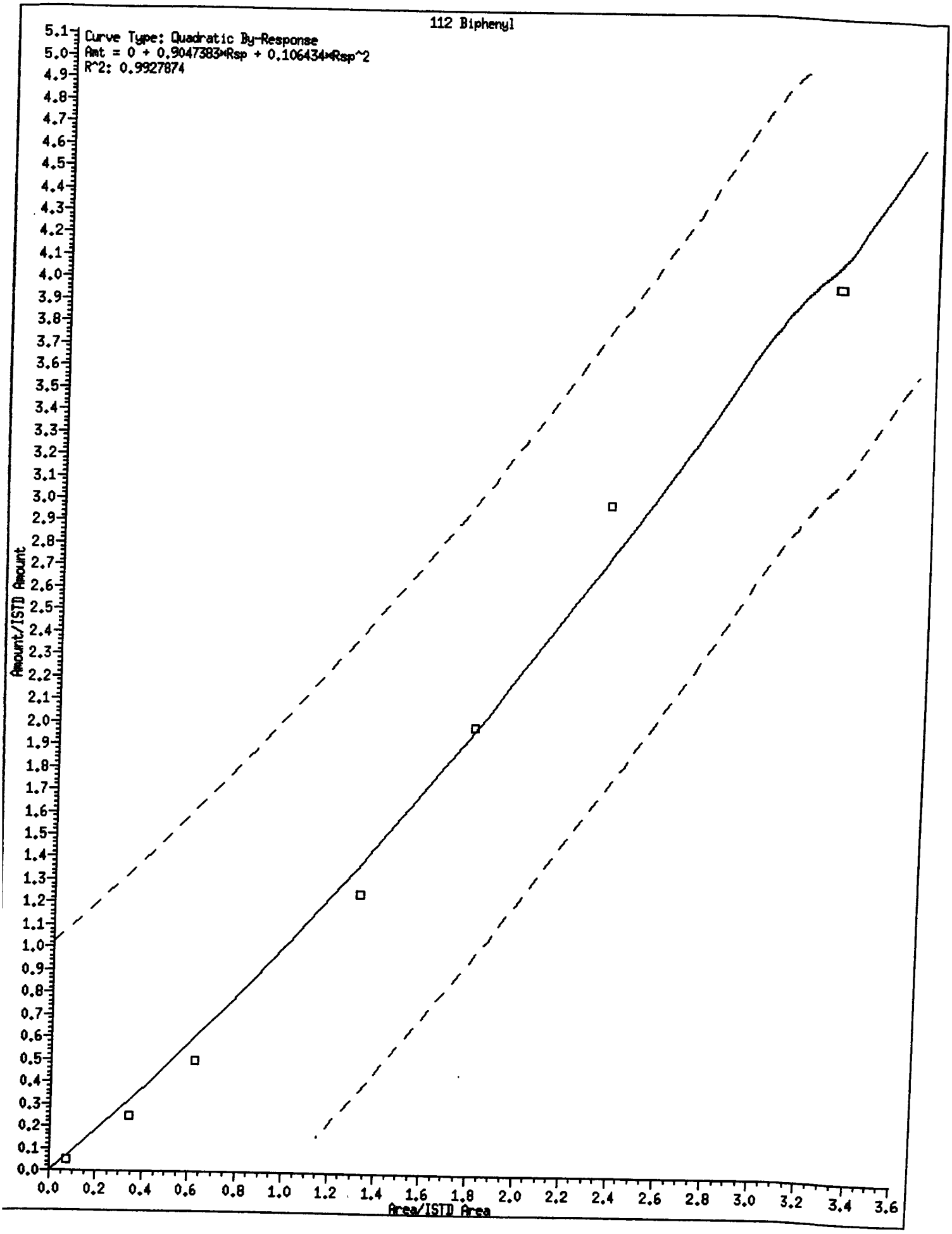
INITIAL CALIBRATION DATA

art Cal Date : 05-MAR-2013 18:33
d Cal Date : 06-MAR-2013 16:18
ant Method : ISTD
igin : Force
rget Version : 3.50
tegrator : HP RTE
thod file : /chem2/nt6.i/20130306.b/SW846030613.m
l Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561					
	0.15293	+++++					AVRG		0.18415		13.62056
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019					
	0.32986	+++++					AVRG		0.52887		19.19001
115 Tributyl Phosphate	82254	364951	993217	1753043	2401166	3026027					
	3817283	+++++					QUAD	0.000e+00	1.13556	0.16331	0.99232
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045					
	0.65225	+++++					AVRG		0.77860		15.56612
112 Biphenyl	73566	332118	789168	1333701	1797394	2290712					
	2906690	+++++					QUAD	0.000e+00	0.90474	0.10643	0.99279
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761					
	0.99651	+++++					AVRG		1.26720		18.16759


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


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.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
106 Guaiacol	1.24586	1.15918	1.23291	1.07310	0.91138	0.81234		
	0.84782	+++++					1.04037	17.558
105 1-methylnaphthalene	0.61050	0.56976	0.56450	0.48433	0.43716	0.40010		
	0.39230	+++++					0.49409	17.868
151 1,2,4,5-Tetrachlorobenzene	0.59727	0.49980	0.53345	0.47181	0.44897	0.42889		
	0.43944	+++++					0.48852	12.333
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Phenol	1.76224	1.73918	1.83003	1.55412	1.48613	1.36745		
	1.44212	+++++					1.59733	11.217
4 Bis(2-Chloroethyl)ether	1.60048	1.46370	1.59535	1.35339	1.28082	1.18687		
	1.22983	+++++					1.38721	12.206
6 2-Chlorophenol	1.37831	1.35510	1.48160	1.27414	1.21027	1.10283		
	1.14376	+++++					1.27800	10.632
7 1,3-Dichlorobenzene	1.81681	1.60019	1.72092	1.47702	1.37550	1.23803		
	1.21973	+++++					1.49260	15.521
9 1,4-Dichlorobenzene	1.82032	1.55518	1.67185	1.43038	1.32574	1.19194		
	1.17353	+++++					1.45271	16.773
11 Benzyl alcohol	0.87814	0.94410	0.96815	0.88893	0.80130	0.76972		
	0.84099	+++++					0.87019	8.282
12 1,2-Dichlorobenzene	1.75726	1.52316	1.60555	1.35410	1.23587	1.09413		
	1.15115	+++++					1.38875	17.850
13 2-Methylphenol	1.25131	1.27565	1.40693	1.22918	1.16820	1.08763		
	1.05956	+++++					1.21121	9.799

Analytical Resources, Inc.

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
14 2,2'-oxybis(1-Chloropropane)	2.65572	2.34667	2.53456	2.16149	2.04249	1.89075		
	1.79656	+++++					2.20404	14.652
15 4-Methylphenol	1.24172	1.26860	1.42287	1.24234	1.15506	1.05073		
	1.00274	+++++					1.19772	11.861
16 N-Nitroso-di-n-propylamine	1.19534	1.07425	1.16253	1.02032	0.96375	0.91446		
	0.95659	+++++					1.04103	10.318
17 Hexachloroethane	0.69948	0.61914	0.67843	0.57825	0.54358	0.50067		
	0.49368	+++++					0.58761	13.924
19 Nitrobenzene	0.47644	0.42369	0.44826	0.37521	0.34533	0.30829		
	0.31169	+++++					0.38413	17.393
20 Isophorone	0.78131	0.68897	0.74735	0.63483	0.61575	0.59471		
	0.62384	+++++					0.66954	10.685
21 2-Nitrophenol	0.14475	0.18211	0.21326	0.18617	0.18391	0.16934		
	0.16463	+++++					0.17774	11.981
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039		
	0.29443	+++++					0.33613	10.045
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399		
	0.37262	+++++					0.43930	14.803

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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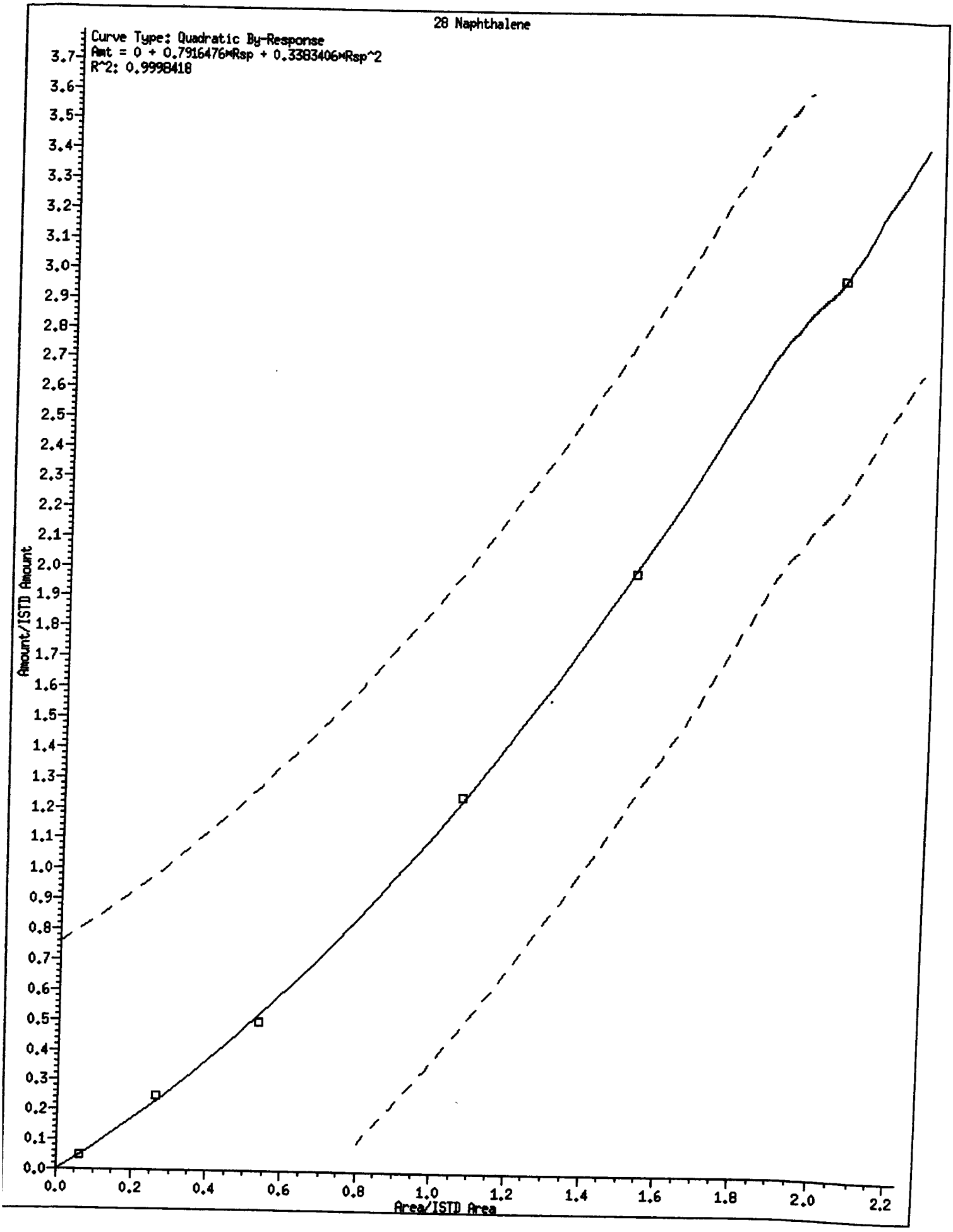
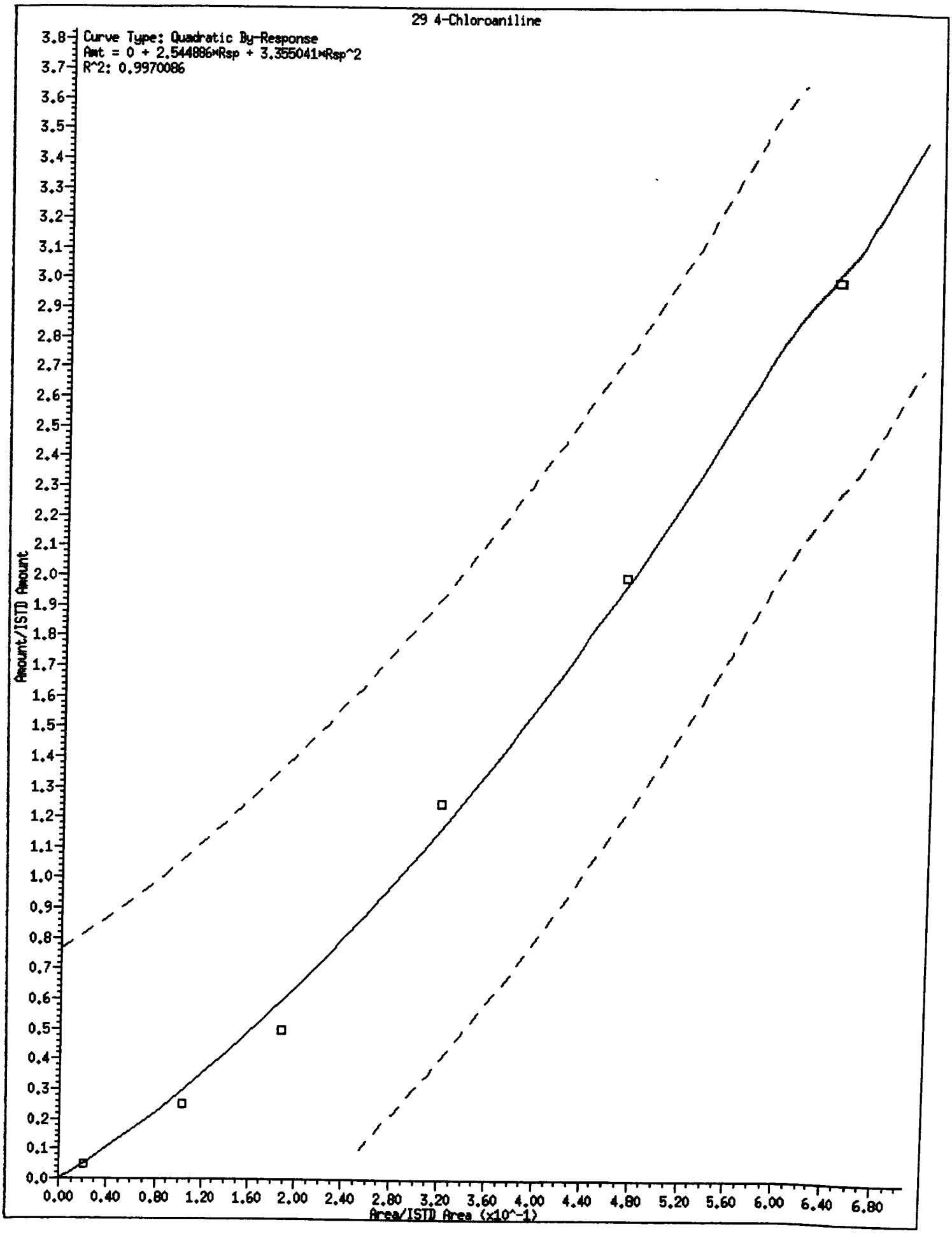
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039					
	0.29443	+++++					AVRG		0.33613		10.04487
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399					
	0.37262	+++++					AVRG		0.43930		14.80298
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513					
	0.30610	+++++					AVRG		0.29097		13.82096
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391					
	0.23074	+++++					AVRG		0.25883		11.35002
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919					
	0.26929	+++++					AVRG		0.32219		15.98220
28 Naphthalene	106156	433038	1122405	1841435	2641007	3435418					
	+++++	+++++					QUAD	0.000e+00	0.79165	0.33834	0.99984
29 4-Chloroaniline	34256	171000	395736	551083	820986	1089759					
	+++++	+++++					QUAD	0.000e+00	2.54489	3.35504	0.99701


28 Naphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 0.7916476*Rsp + 0.3383406*Rsp^2
R^2: 0.9998418
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
0.1
0.3
0.5
0.7
0.9
1.1
1.3
1.5
1.7
1.9
2.1
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7


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)

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960			
	0.35029	+++++					0.33621	7.521	
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623			
	0.31812	+++++					0.33167	14.969	
37 2-Chloronaphthalene	1.30198	1.09706	1.09950	0.90253	0.81425	0.74840			
	0.76882	+++++					0.96179	21.687	<-
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154			
	0.30102	+++++					0.29567	13.698	
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418			
	1.07862	+++++					1.20372	13.790	
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430			
	1.26069	+++++					1.57756	19.869	
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578			
	0.24419	+++++					0.25718	9.659	
43 3-Nitroaniline	0.21873	0.26028	0.21928	0.19165	0.17183	0.14368			
	0.14011	+++++					0.19222	22.831	<-
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034			
	0.84339	+++++					1.02139	18.356	

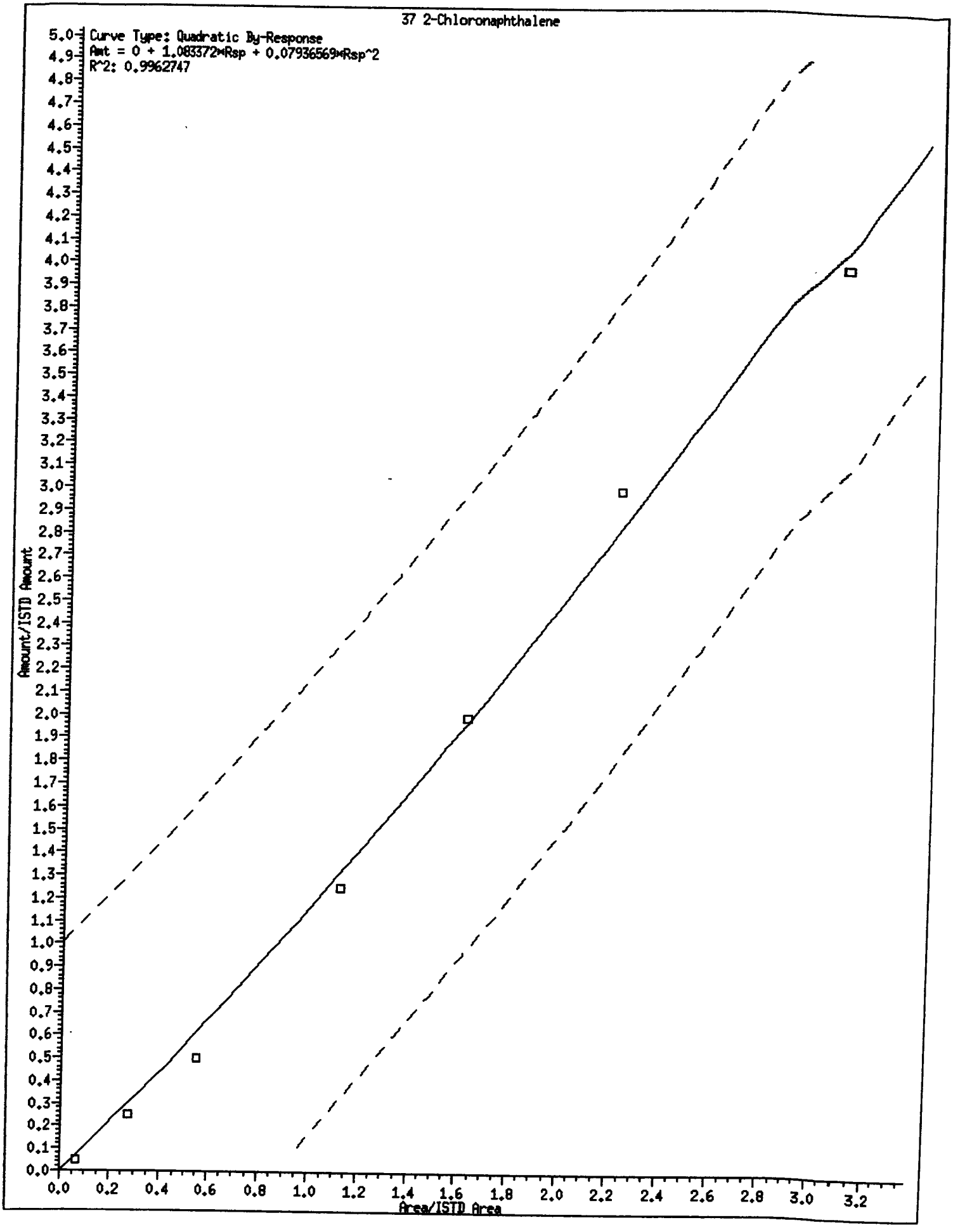
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients 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

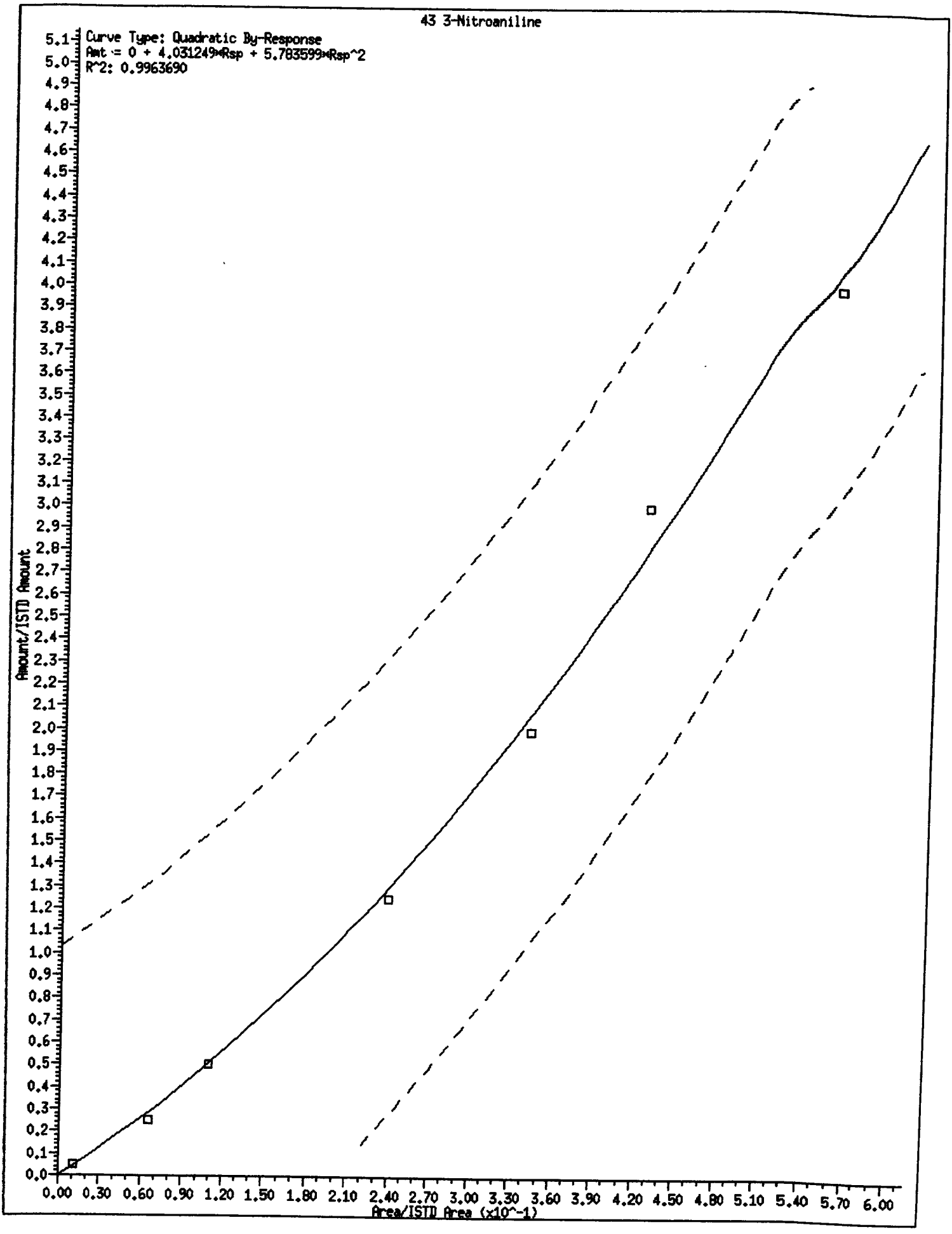
Analytical Resources, Inc.

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	Coefficients m1	Coefficients m2	%RSD or R^2
	80 Level 7	0.2000 Level 8									
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154					
	0.30102	+++++					AVRG		0.29567		13.69777
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418					
	1.07862	+++++					AVRG		1.20372		13.78953
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430					
	1.26069	+++++					AVRG		1.57756		19.86859
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578					
	0.24419	+++++					AVRG		0.25718		9.65852
43 3-Nitroaniline	10686	63342	138858	241966	342573	415090					
	496848	+++++					QUAD	0.000e+00	4.03125	5.78360	0.99637
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034					
	0.84339	+++++					AVRG		1.02139		18.35615
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201					
	0.20527	+++++					AVRG		0.18369		19.49624


43 3-Nitroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 4.031249*Rsp + 5.783599*Rsp^2
R^2: 0.9963690
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201		
	0.20527	+++++					0.18369	19.496
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741		
	1.07080	+++++					1.33585	19.072
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815		
	0.12271	+++++					0.13065	10.521
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554		
	0.33475	+++++					0.34786	9.712
49 Fluorene	1.42570	1.19230	1.22127	1.02020	0.88746	0.80652		
	0.82304	+++++					1.05379	22.212 <-
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432		
	0.91979	+++++					1.11525	16.797
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871		
	0.49545	+++++					0.58637	18.257
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748		
	0.19900	+++++					0.19616	7.581
53 4,6-Dinitro-2-methylphenol	+++++	0.12093	0.16337	0.14567	0.14760	0.14183		
	0.14470	+++++					0.14402	9.462

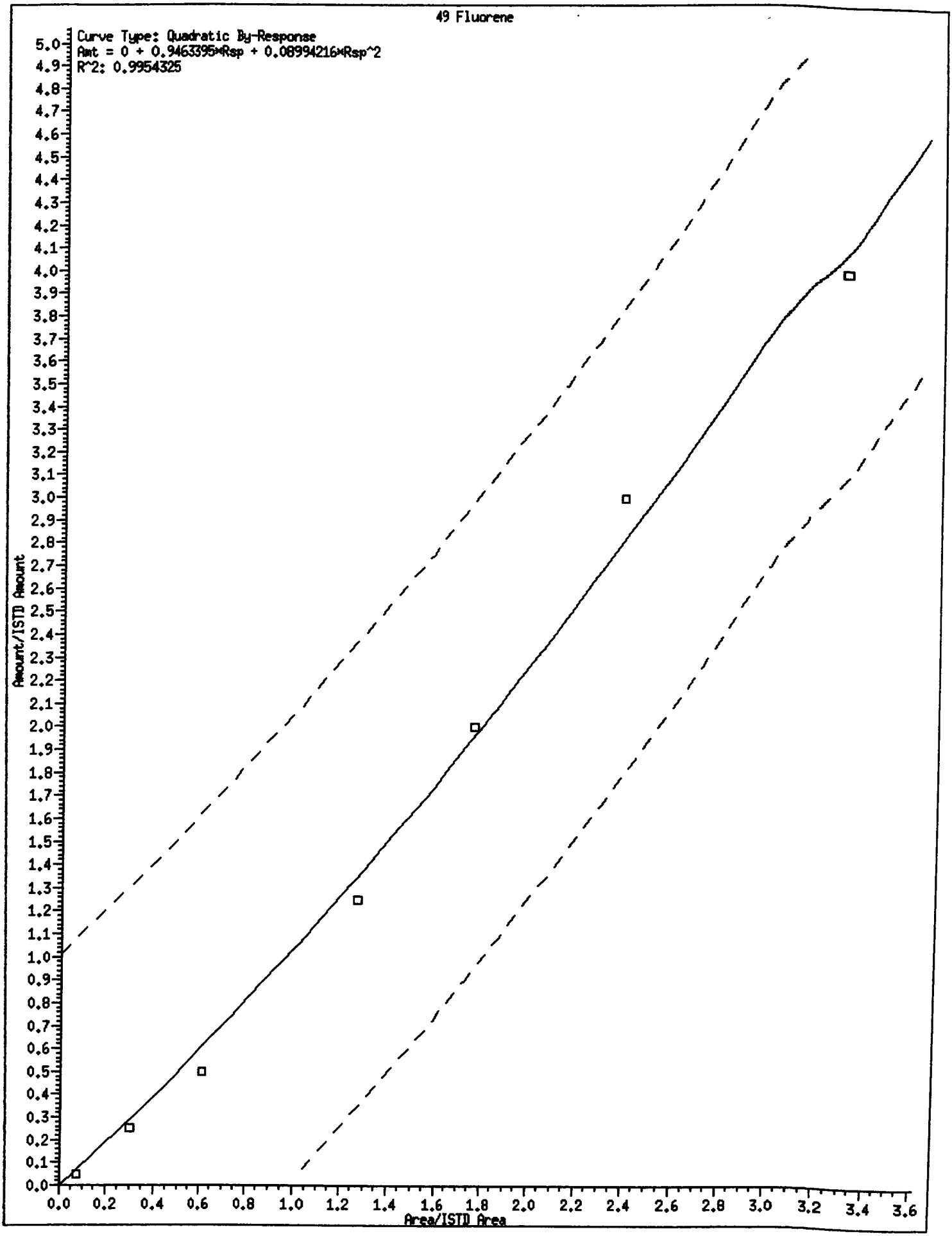
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

03/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients 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

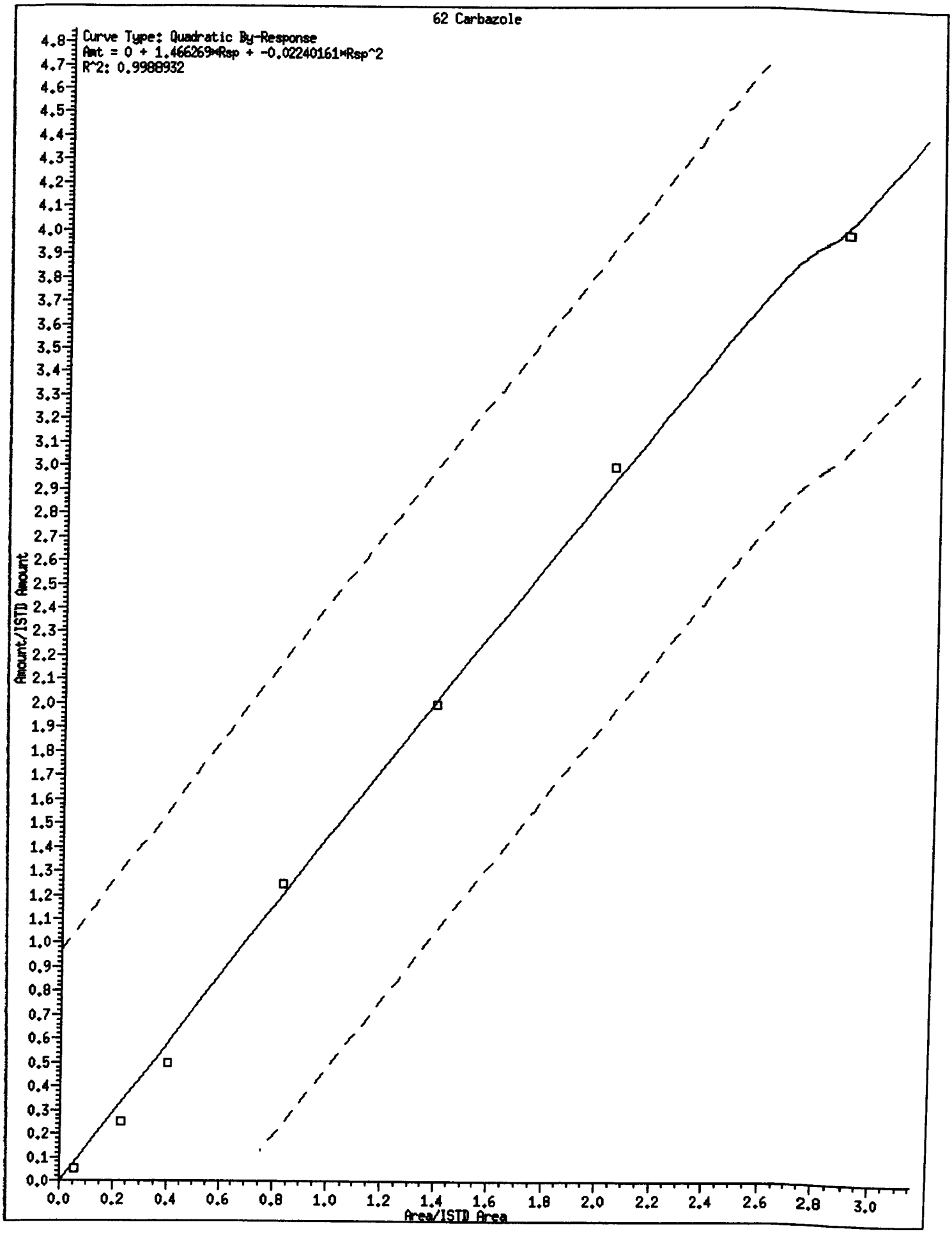
Analytical Resources, Inc.

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 <-

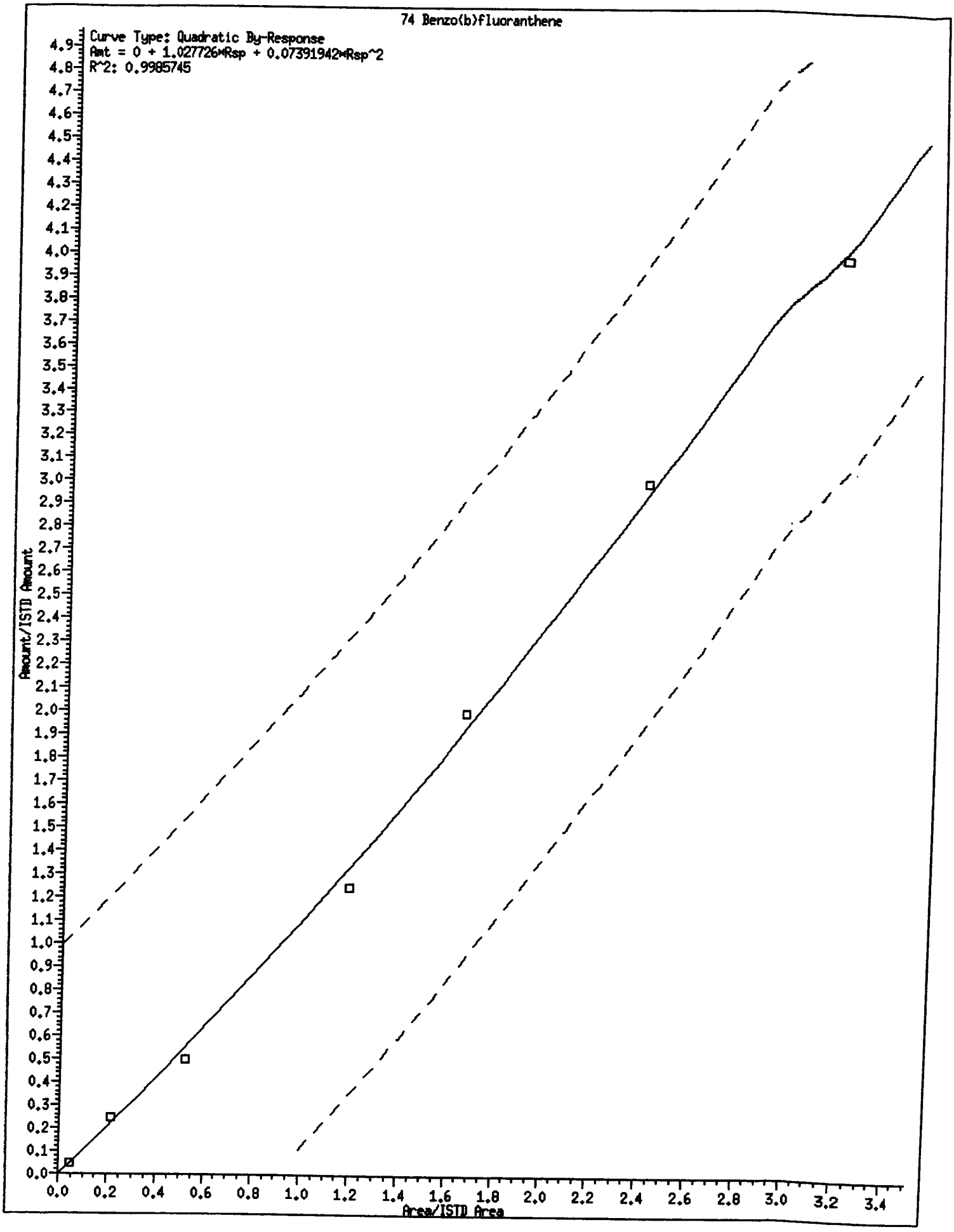
Analytical Resources, Inc.

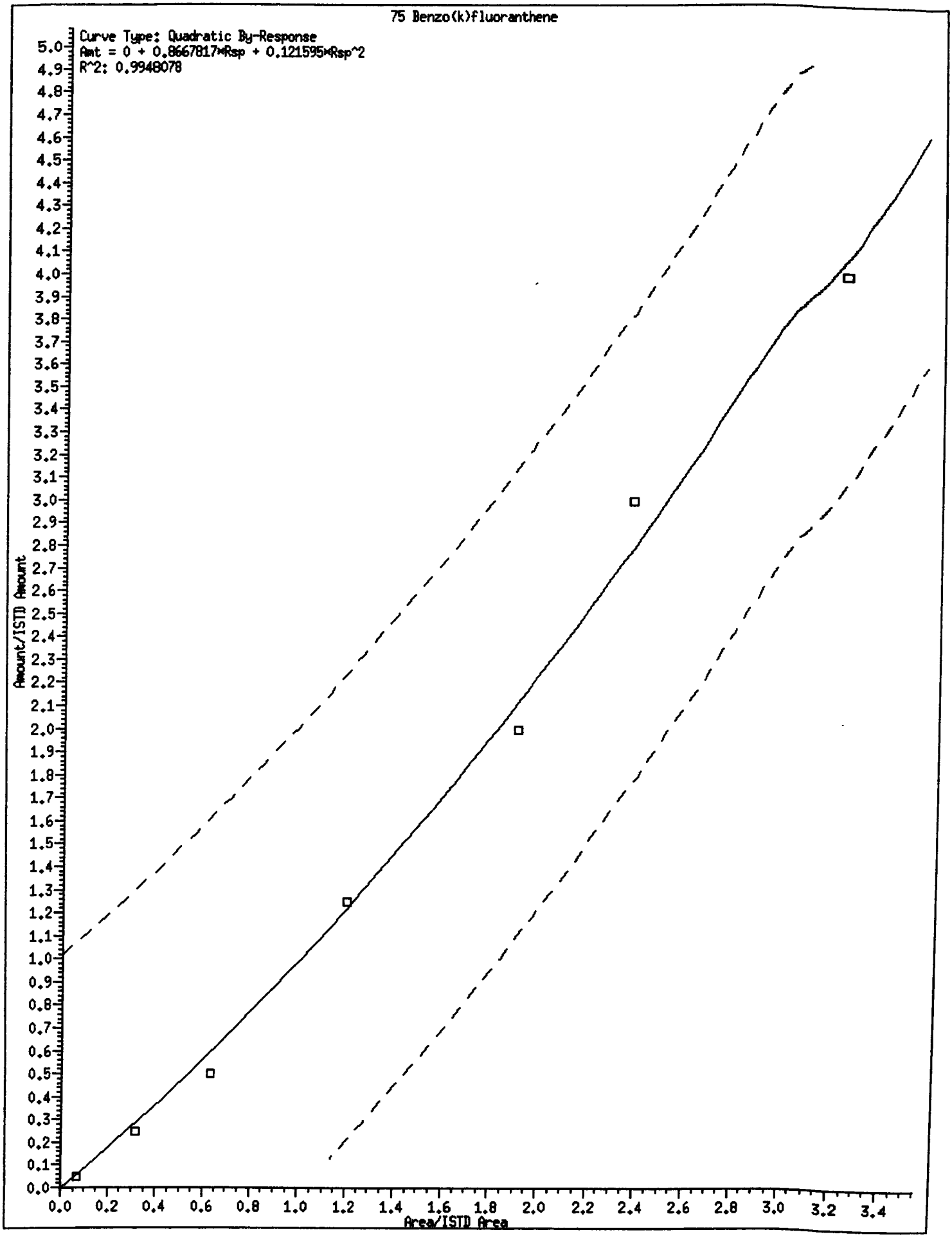
INITIAL CALIBRATION DATA

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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

3/14/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
98 Retene	0.53443	0.49274	0.52286	0.47522	0.43428	0.41626		
	0.42376	+++++					0.47136	10.167
99 Perylene	0.89315	0.82306	0.85562	0.73941	0.68087	0.63164		
	0.61789	+++++					0.74881	14.764
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
103 Pyridine	1.43098	1.46786	1.75118	1.62729	1.38945	1.33587		
	1.45312	+++++					1.49368	9.708
187 Total Benzofluoranthenes	1.07820	1.02709	1.10775	0.89502	0.83617	0.75745		
	0.74383	+++++					0.92079	16.402
188 2,6-Dichlorophenol	+++++	0.96091	1.01753	0.96424	0.81971	0.76745		
	0.78343	+++++					0.88554	12.162

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
189 N-Nitrosomethylethylamine	+++++	0.66719	0.69607	0.68402	0.62566	0.63220		
	0.65967	+++++					0.66080	4.214
$ 1 2-Fluorophenol	1.39745	1.38536	1.43699	1.22316	1.19684	1.13577		
	+++++	+++++					1.29593	9.697
$ 137 d8-1,4-Dioxane	0.67499	0.59708	0.66029	0.60426	0.58702	0.54859		
	0.57883	+++++					0.60730	7.416
$ 2 Phenol-d5	1.70898	1.71151	1.70189	1.39938	1.32653	1.25371		
	+++++	+++++					1.51700	14.086
$ 5 2-Chlorophenol-d4	1.46722	1.39820	1.43146	1.20537	1.12780	1.06397		
	+++++	+++++					1.28234	13.386
$ 10 1,2-Dichlorobenzene-d4	1.12248	1.02541	1.00084	0.82678	0.76090	0.67878		
	+++++	+++++					0.90253	19.127
$ 18 Nitrobenzene-d5	0.46223	0.43430	0.44112	0.37325	0.35728	0.33980		
	+++++	+++++					0.40133	12.653
$ 36 2-Fluorobiphenyl	1.60650	1.45970	1.33685	1.11210	1.06628	0.99323		
	+++++	+++++					1.26244	19.285
$ 55 2,4,6-Tribromophenol	0.14826	0.17093	0.17863	0.15638	0.14826	0.14641		
	+++++	+++++					0.15815	8.575

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
$ 66 Terphenyl-d14	0.83641	0.80990	0.75366	0.63080	0.60631	0.57508		
	+++++	+++++					0.70203	15.953
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	++++
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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

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

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

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

03/07/13

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

Report Date : 07-Mar-2013 11:40

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-5MSi

Instrument Tune (.U or .CT.): 12.10.14 EM Voltage: 1647

Calibration File: [illegible] Curve Date: 3/6/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2053-1, 2054-1~~	~~2056-1, 2057-1~~
	~~2055-1, 2061-1~~	~~2059-1, 2061-1~~
	~~18031, 2027-2~~	~~18031 2053-1~~
	~~2058-2~~	~~2058-2~~

Document All Maintenance Tasks in StarLIMS

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

	Time	Filename	LabID	ClientId	DF															
1	1216	03061301.D	IC250306	IC250306	1	8.39	458117	10.42	1718341	13.29	1010041	15.66	1666734	19.98	1675752	22.14	1637524	21.09	2026355
2	1251	03061302.D	IC020306	IC020306	1	8.38	469293	10.42	1660759	13.28	977166	15.65	1519395	19.97	1581424	22.13	1491570	21.08	2063915
3	1325	03061303.D	IC10306	IC10306	1	8.38	473521	10.42	1687458	13.28	977079	15.66	1534533	19.97	1440185	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

[illegible]

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

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

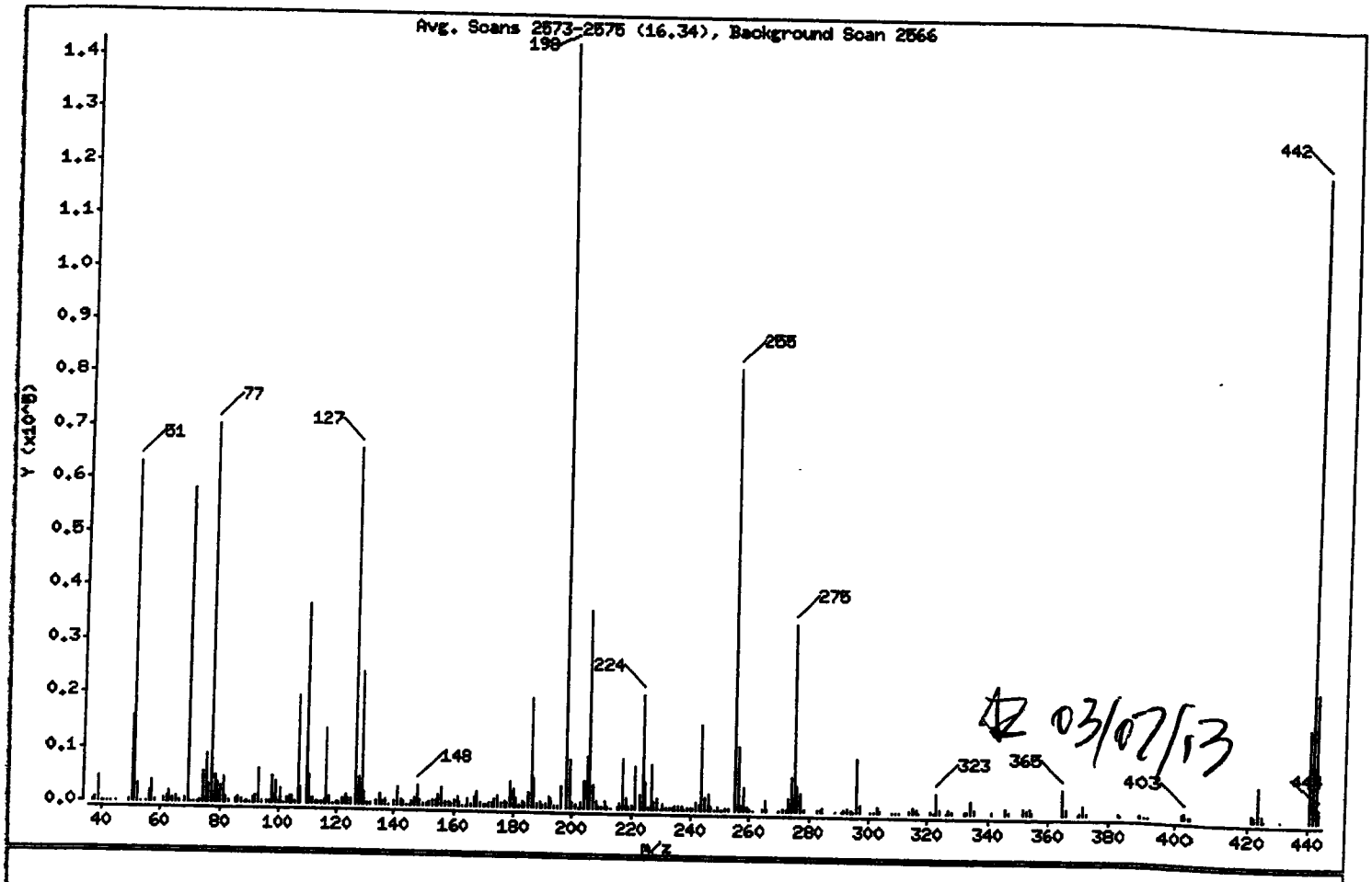
Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



03/07/13

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	6385
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	3489
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	3694	156.00	3281	230.00	87	328.00	319

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

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	486	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	2389	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	5316	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

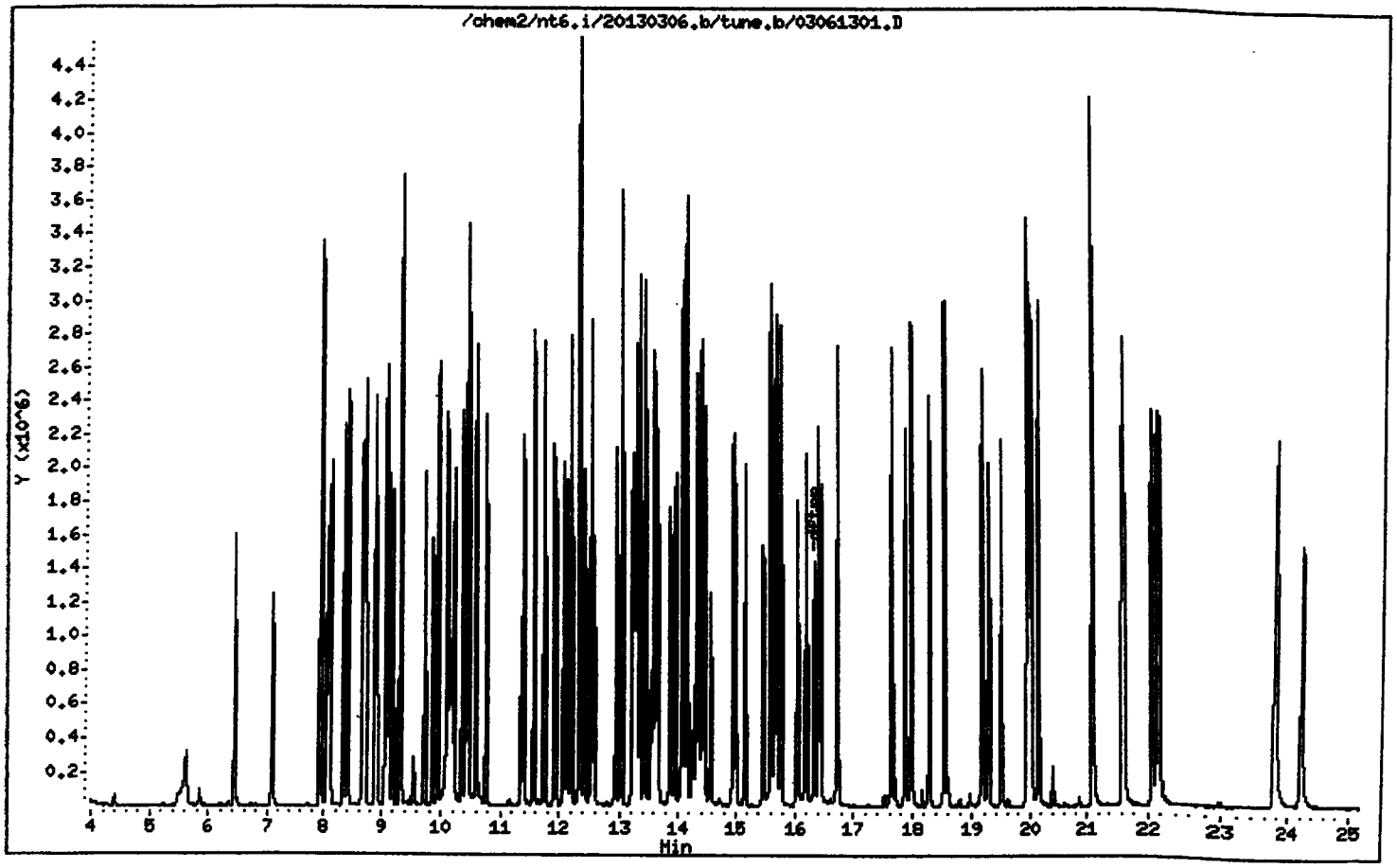
Instrument: nt6.i

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

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

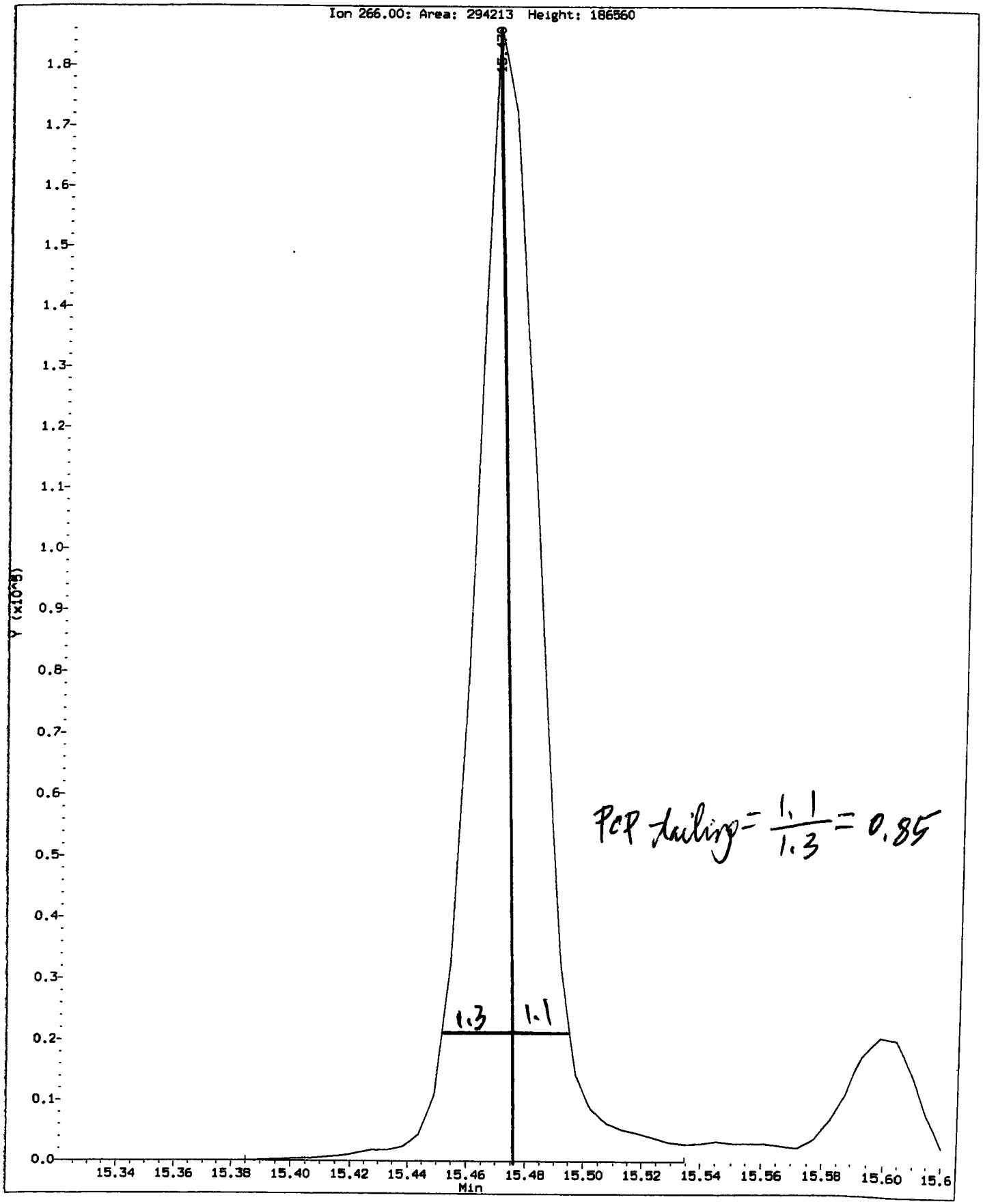
$$\text{DDT Percent Breakdown} = \frac{(0 + 12007) * 100}{(0 + 12007 + 647493)}$$

DDT Percent Breakdown = 1.8 %

03/07/13

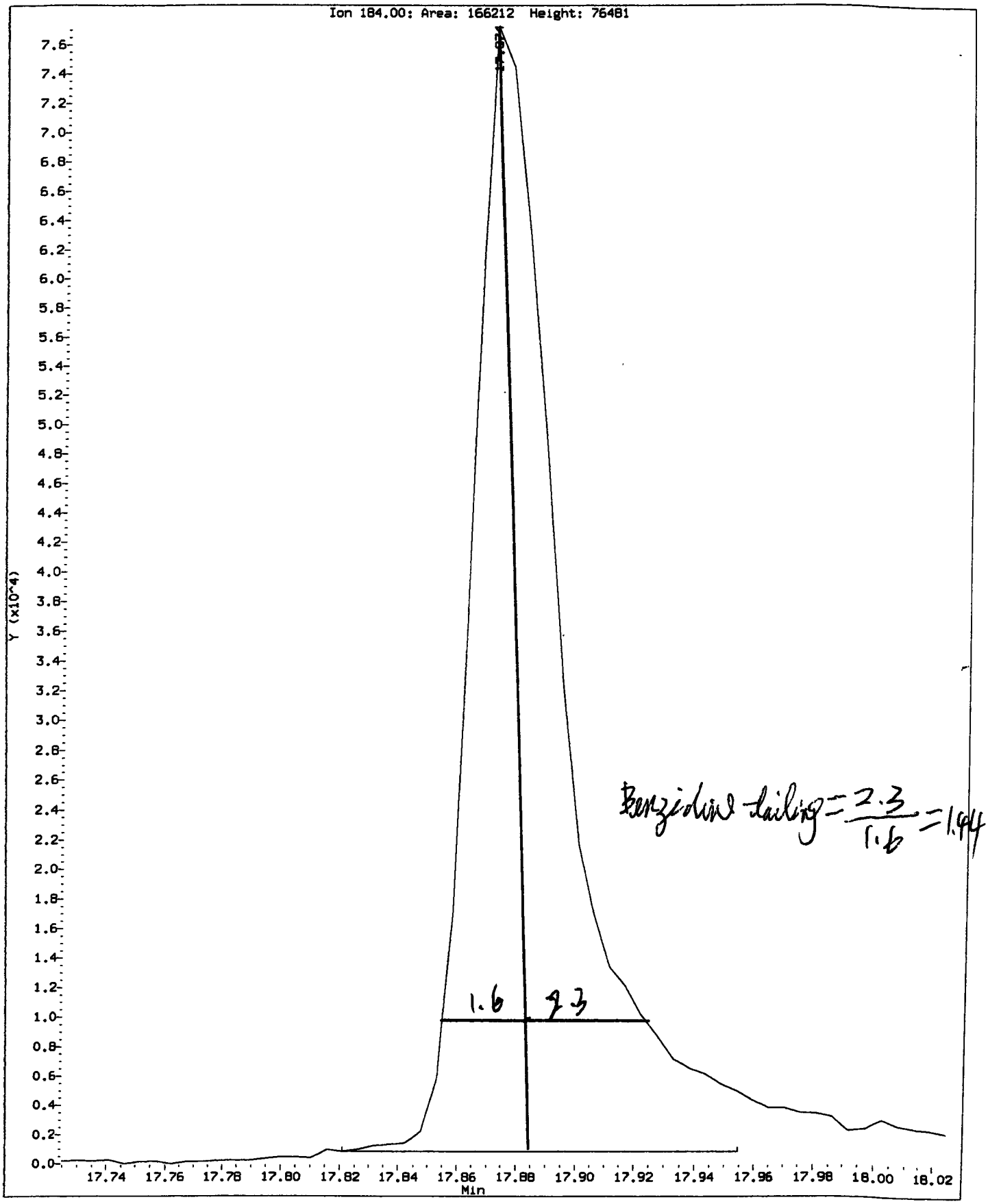
Data File: /chem2/nt6.i/20130306.b/ddt.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: DDT0306

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.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	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

		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

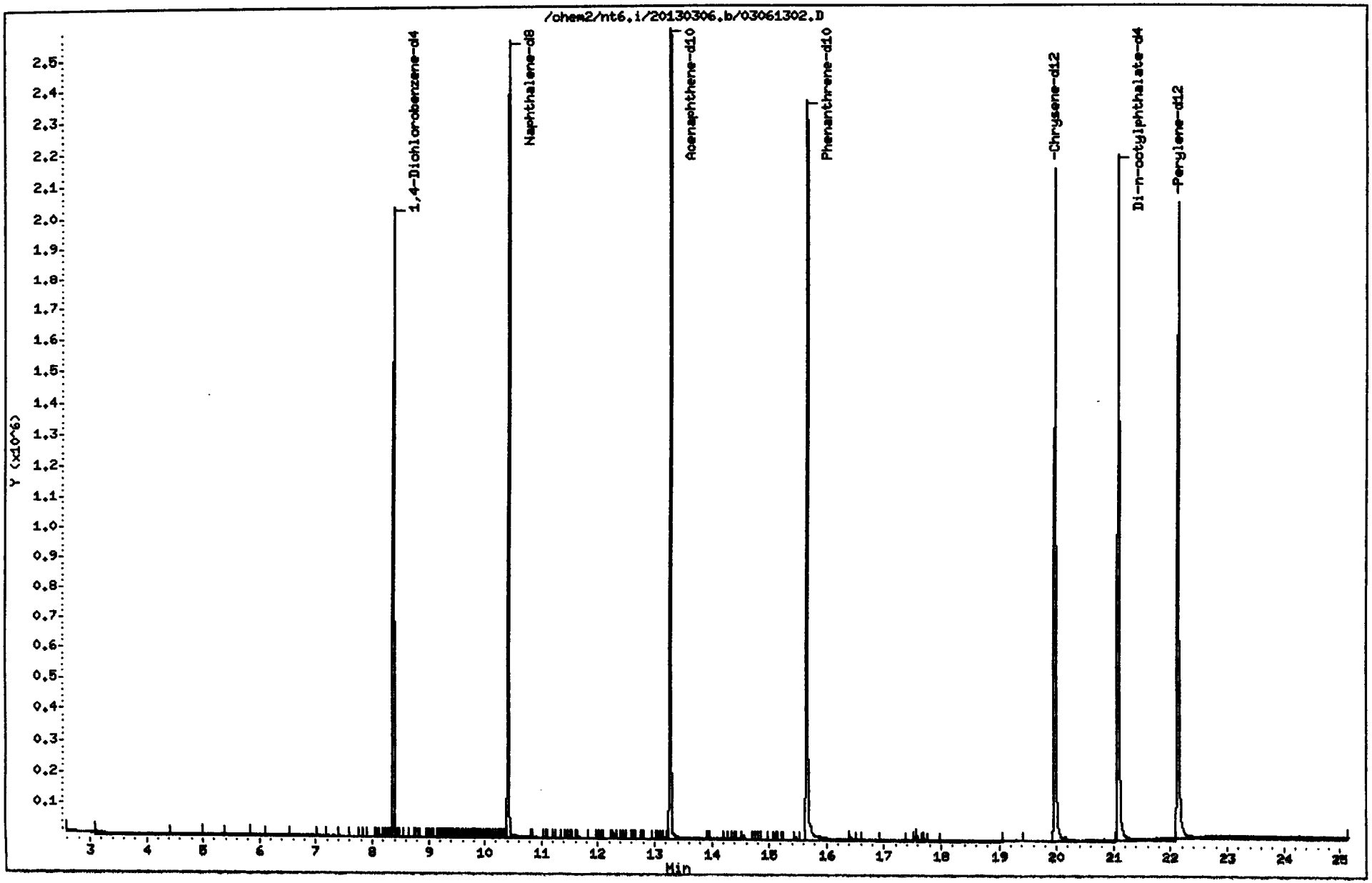
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/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)	AMOUNTS 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)	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

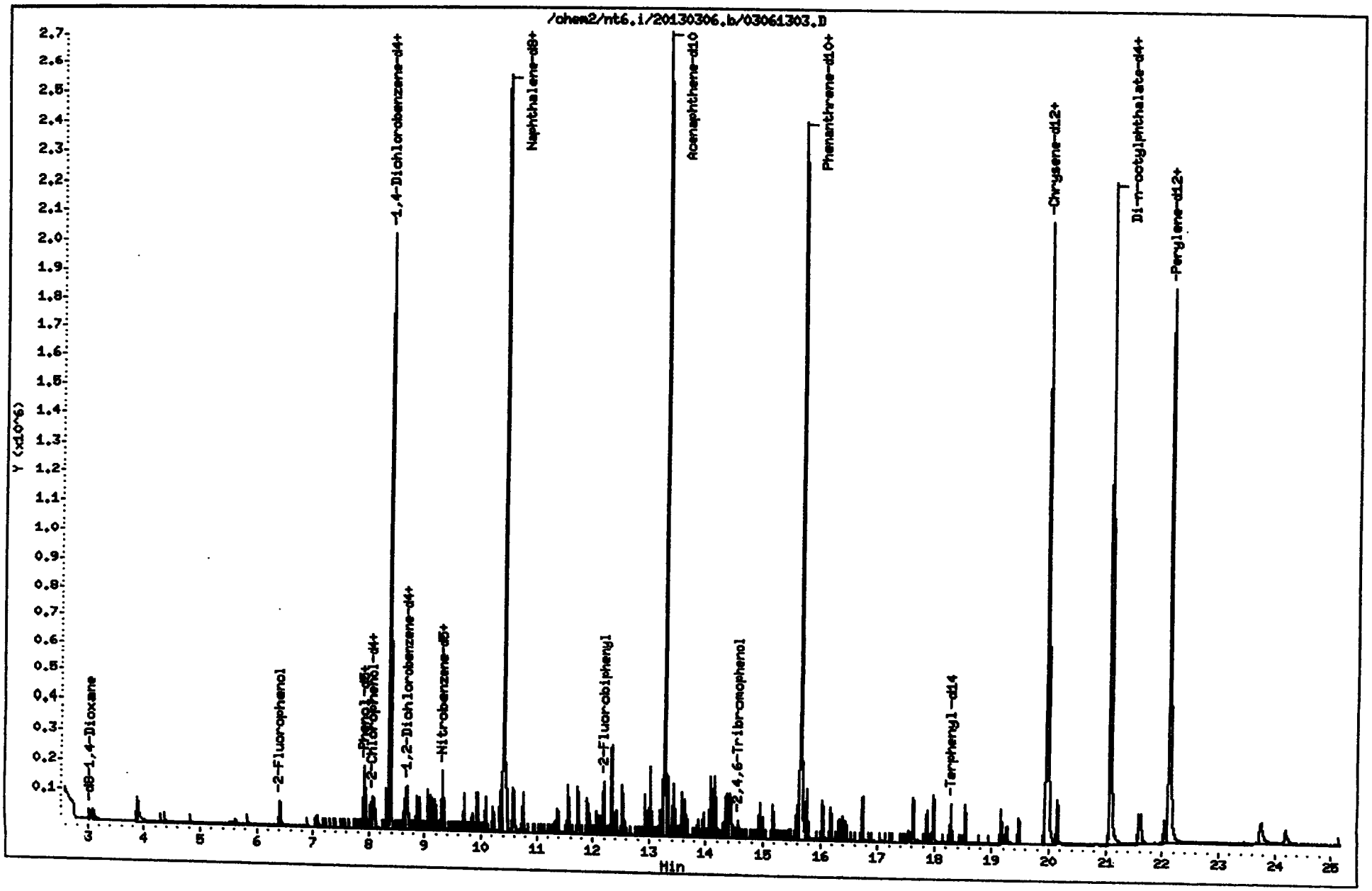
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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

Instrument: nt6.i

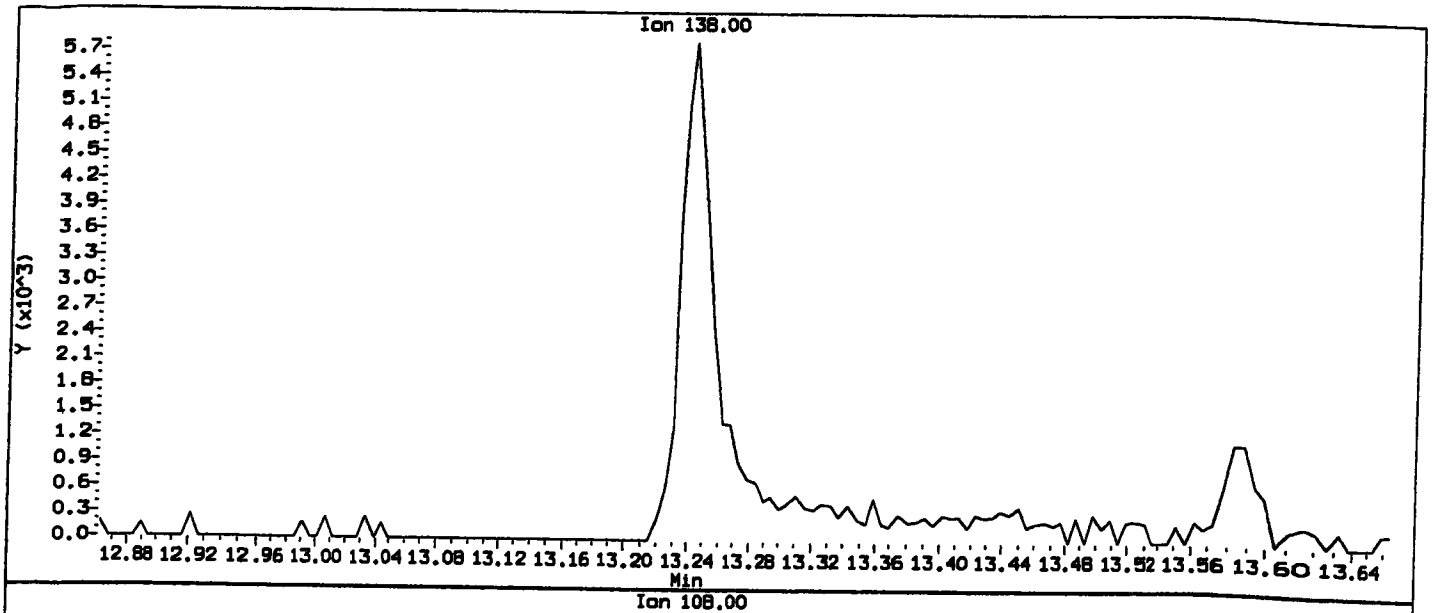
Operator: JZ
Column diameter: 0.32

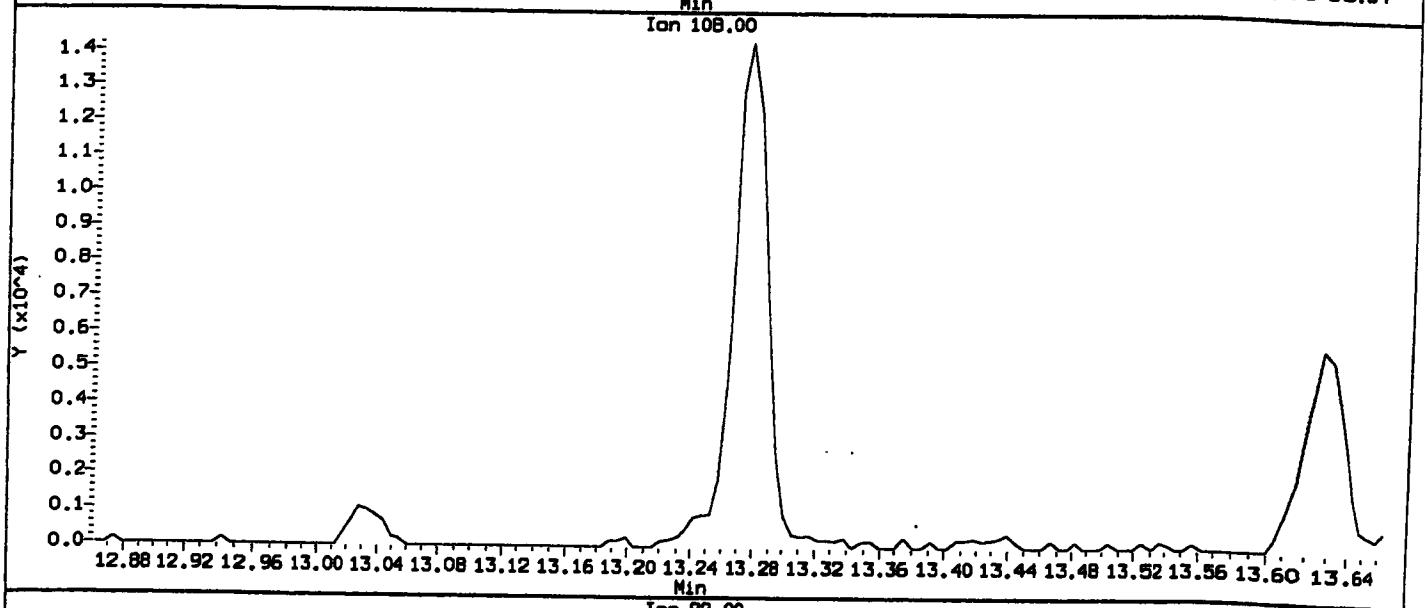
Column phase: ZB-5msi

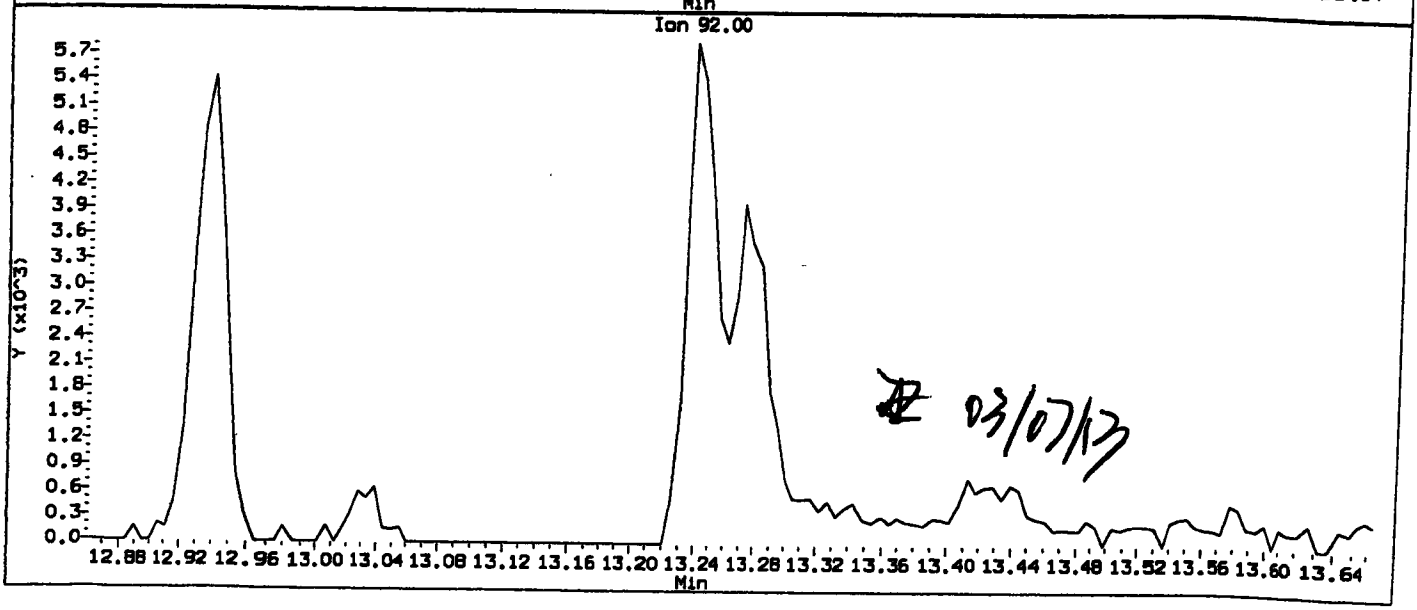


Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

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



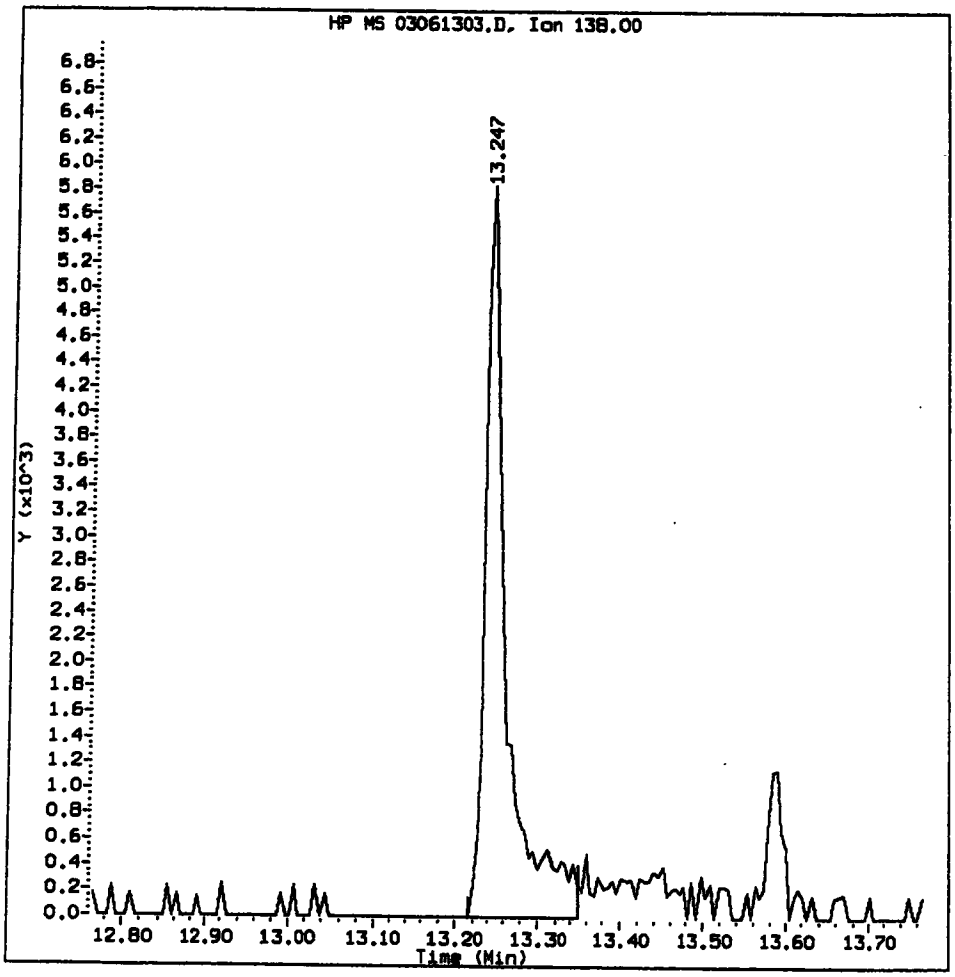




3/07/13

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

3-Nitroaniline Amount: 0.90 Area: 10686



MANUAL INTEGRATION for 3-Nitroaniline

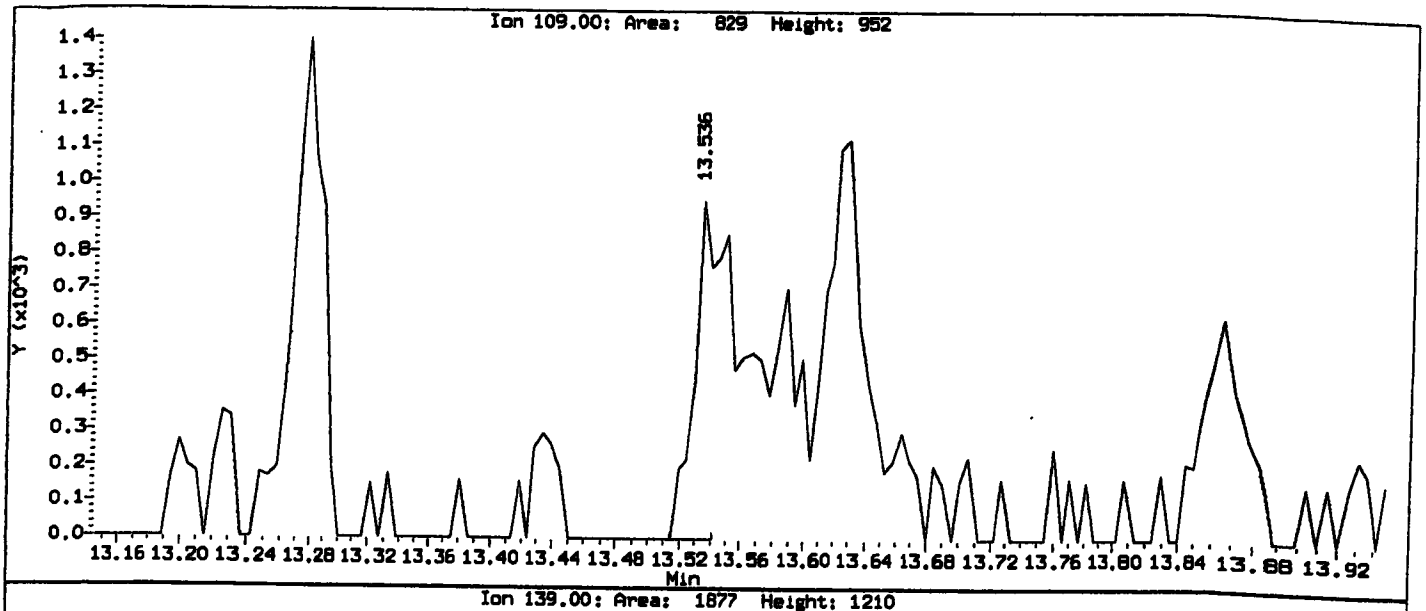
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

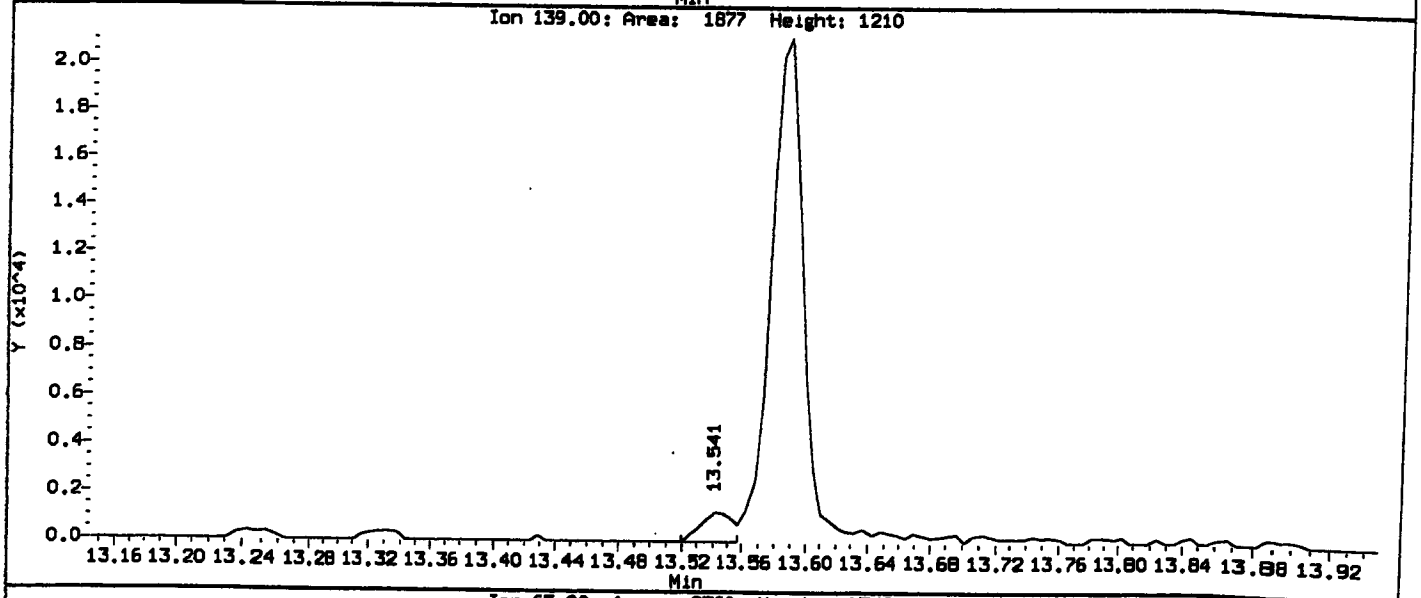
5. Other _____

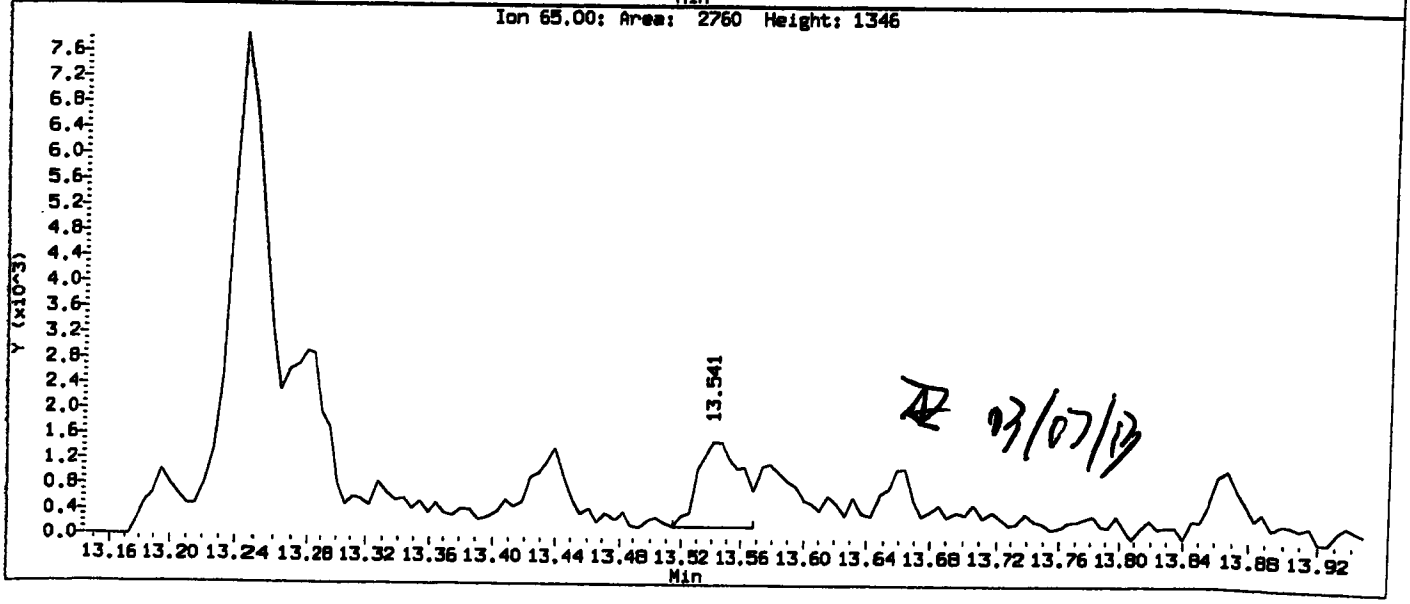
Analyst: _____ Date: 03/07/13

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



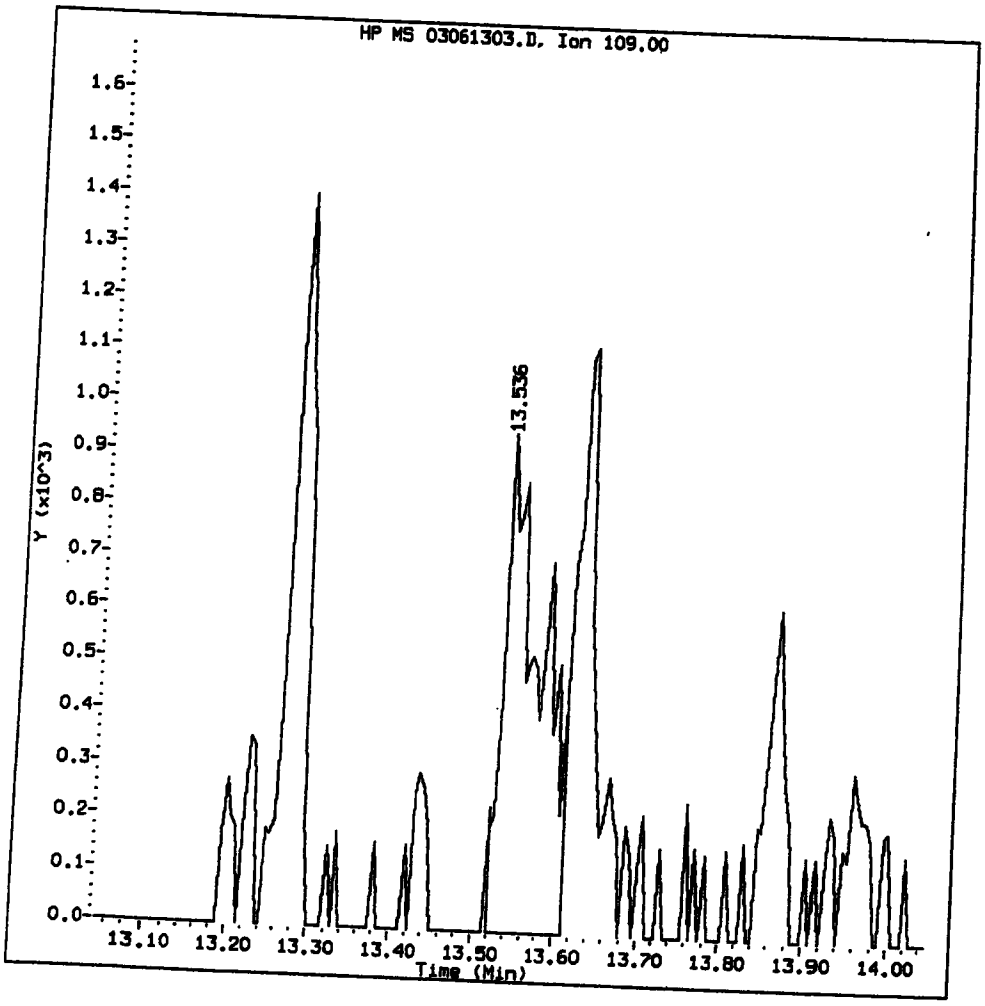




13/07/13

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

4-Nitrophenol Amount: 0.48 Area: 3036



MANUAL INTEGRATION for 4-Nitrophenol

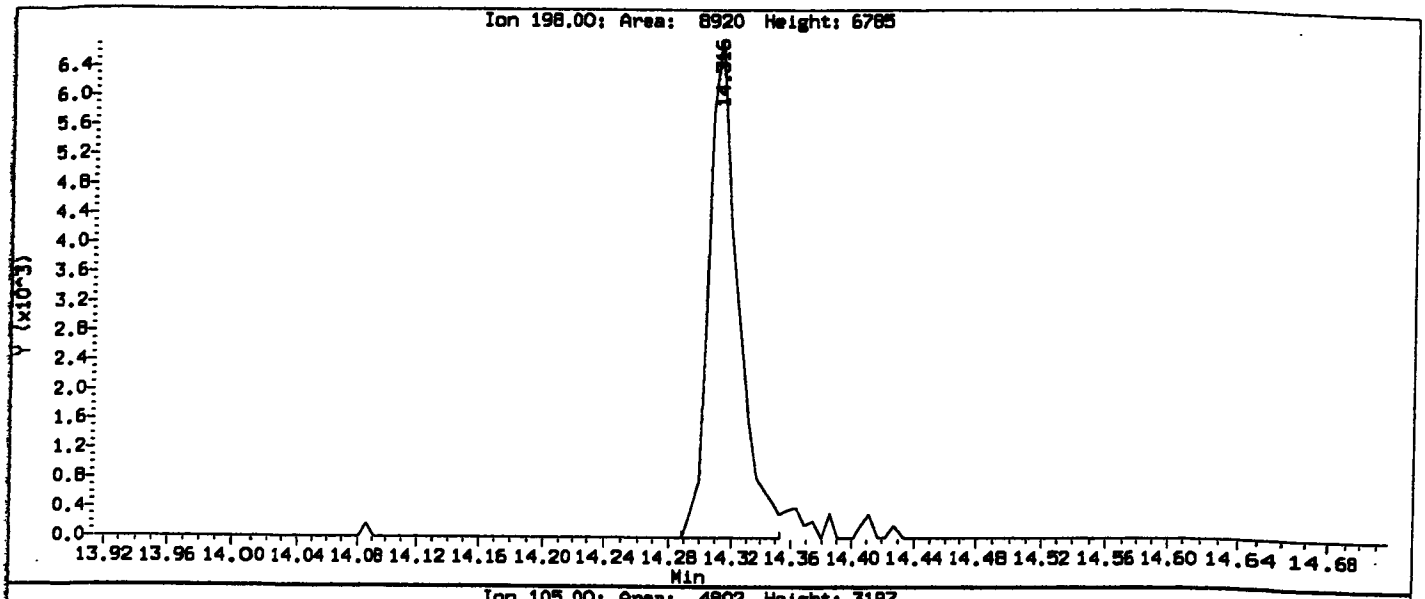
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

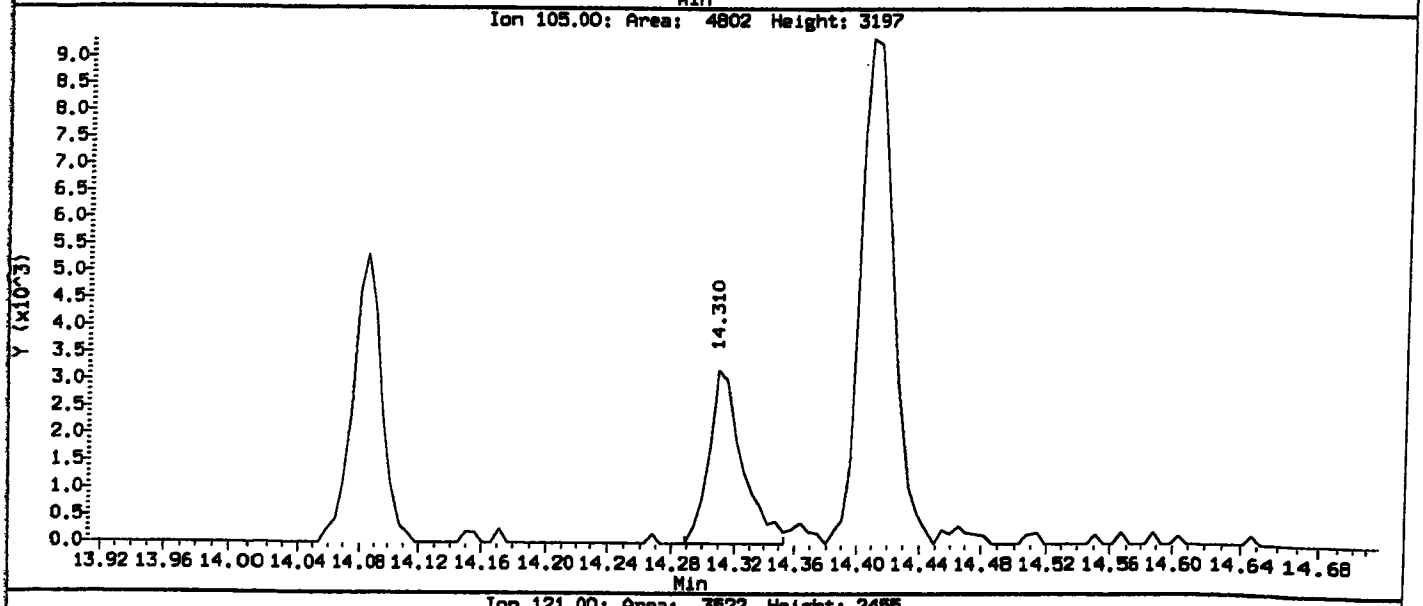
5. Other _____

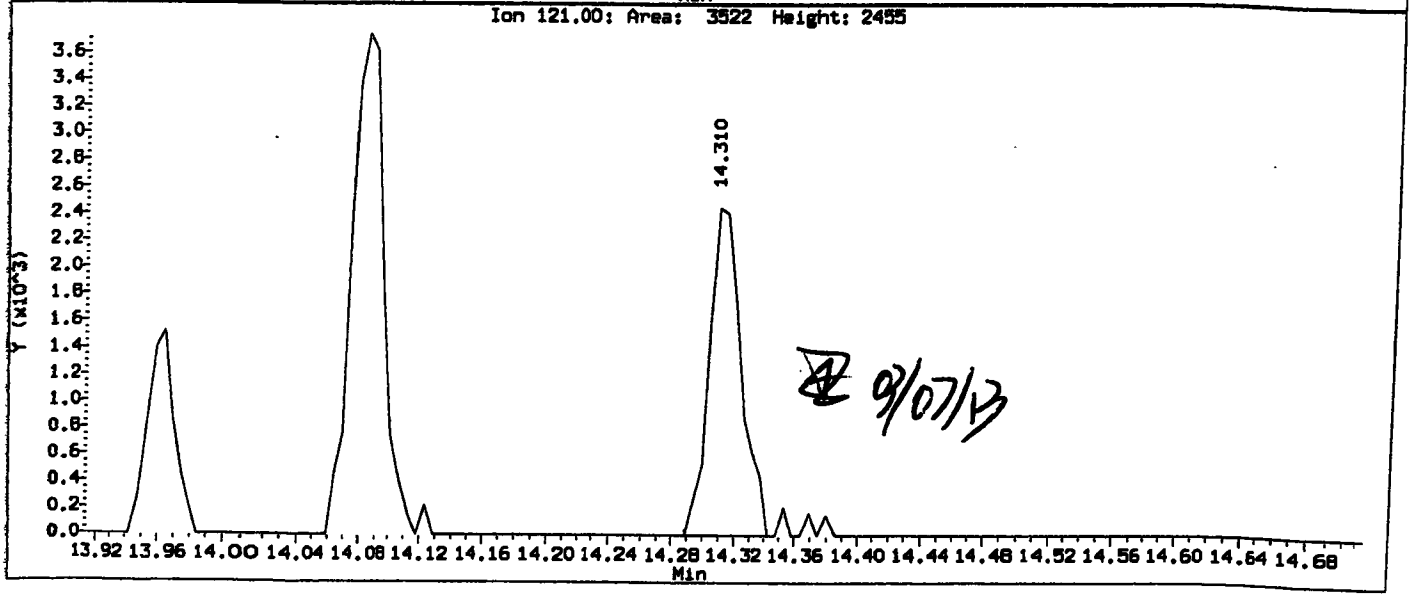
Analyst: _____ Date: 03/07/13

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



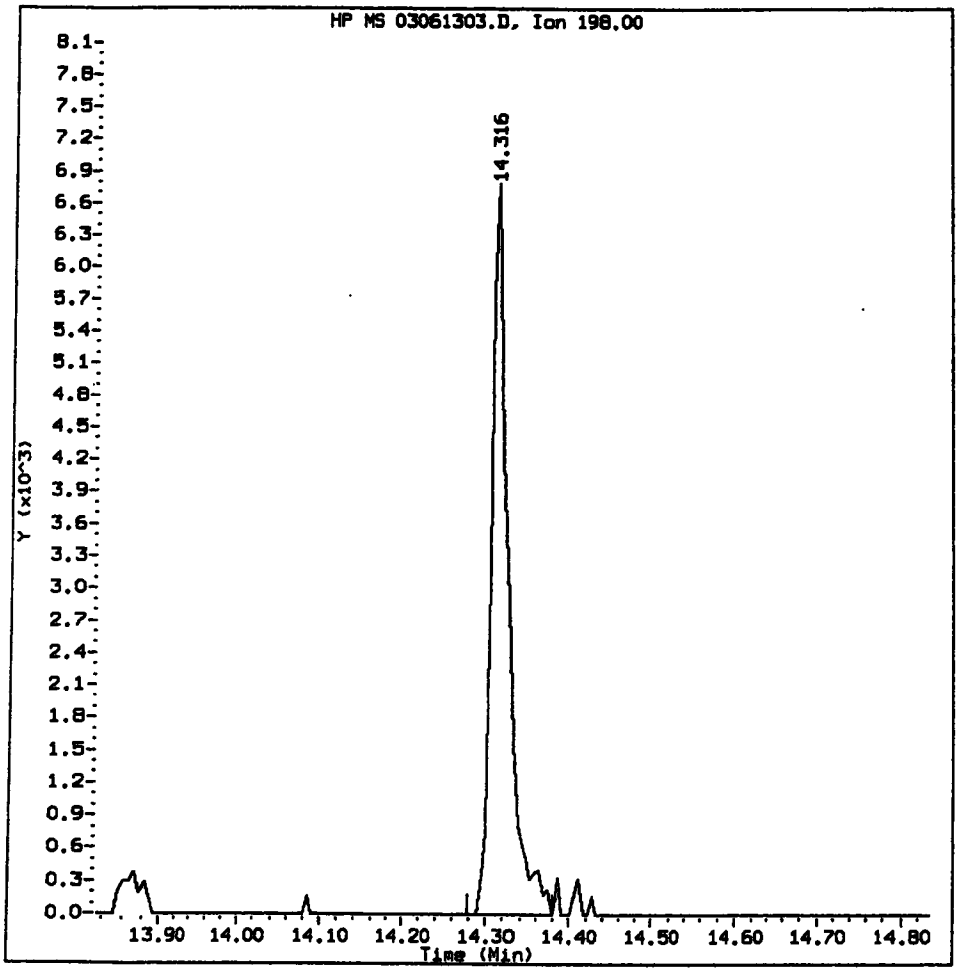




9/07/13

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

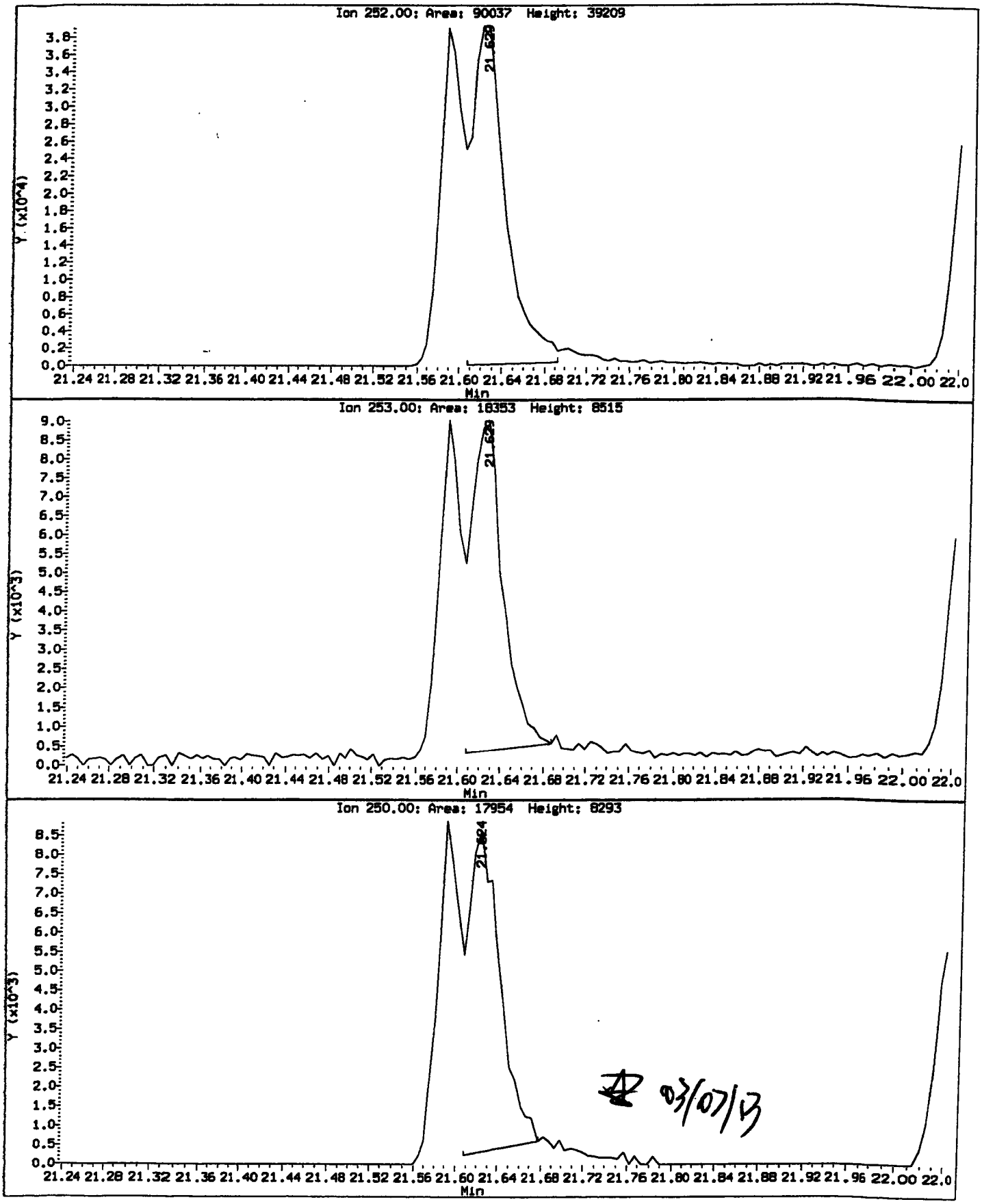
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

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

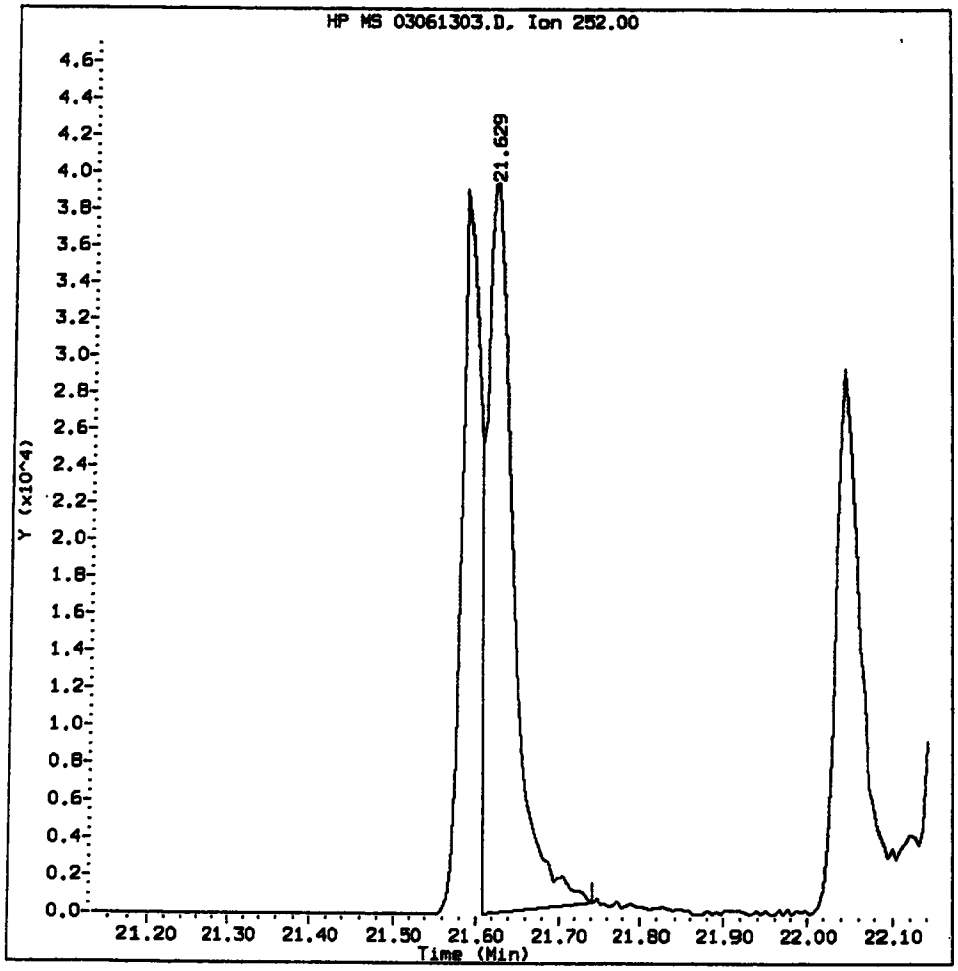
Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



03/07/13

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

Benzo(k)fluoranthene Amount: 1.22 Area: 92998



MANUAL INTEGRATION for Benzo(k)fluoranthene

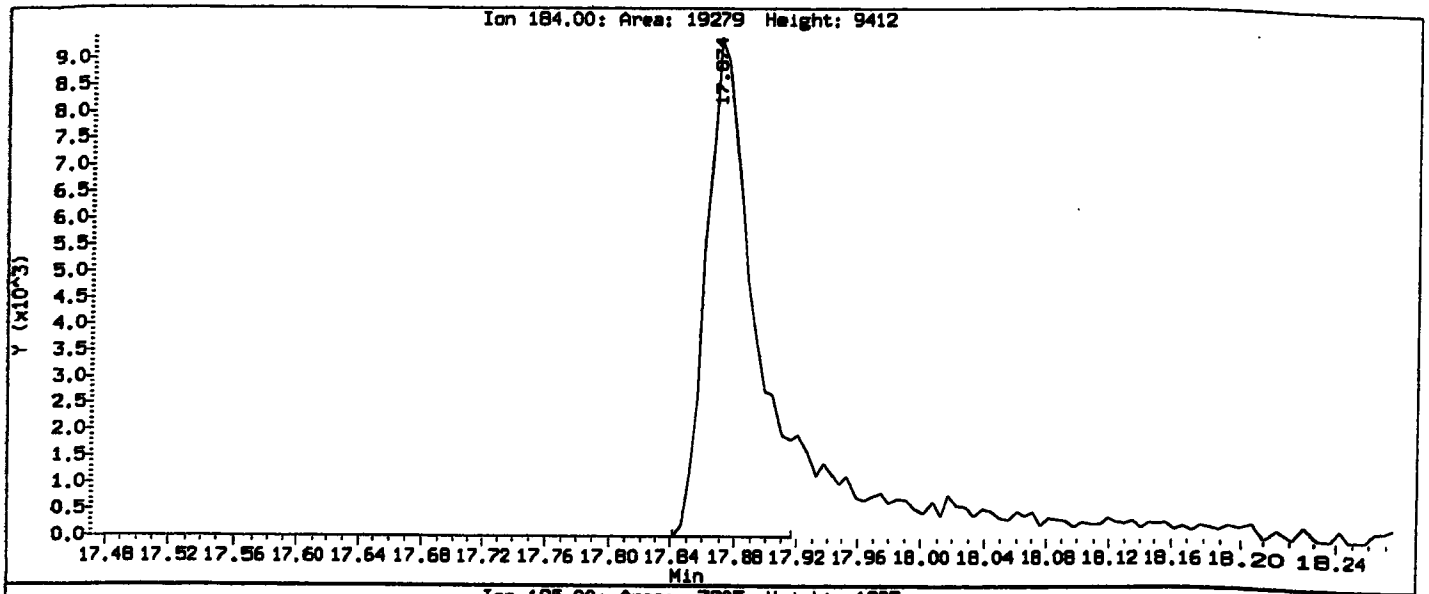
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

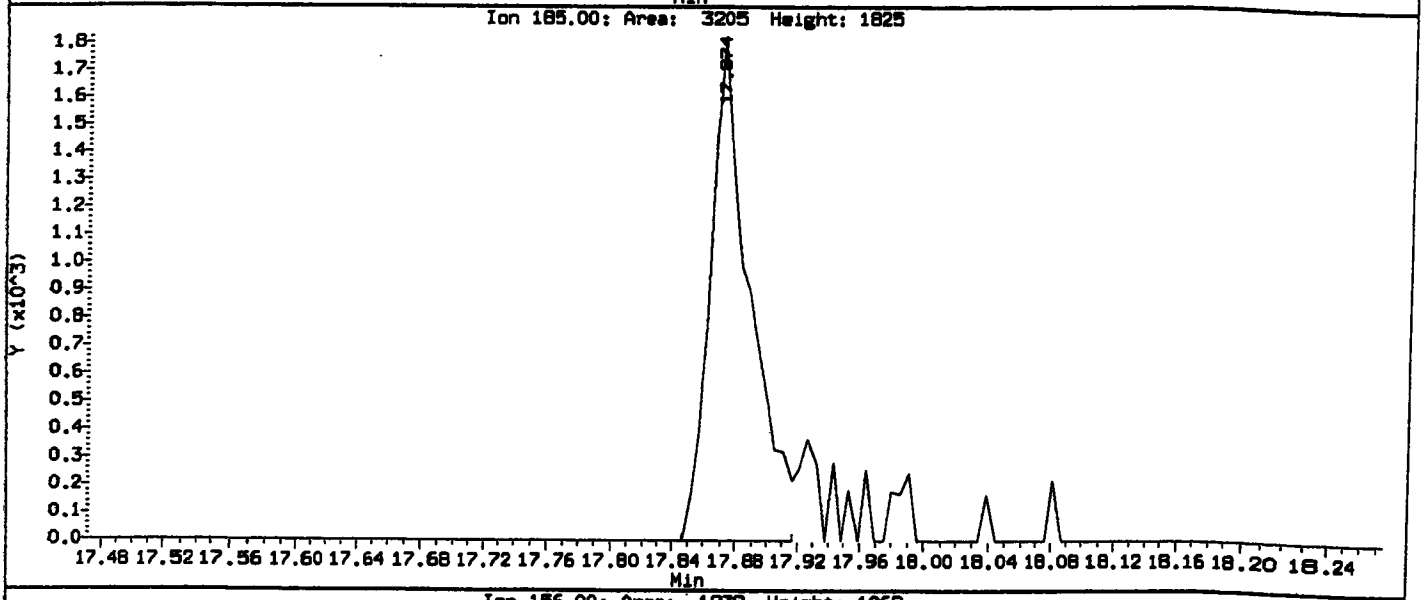
5. Other _____

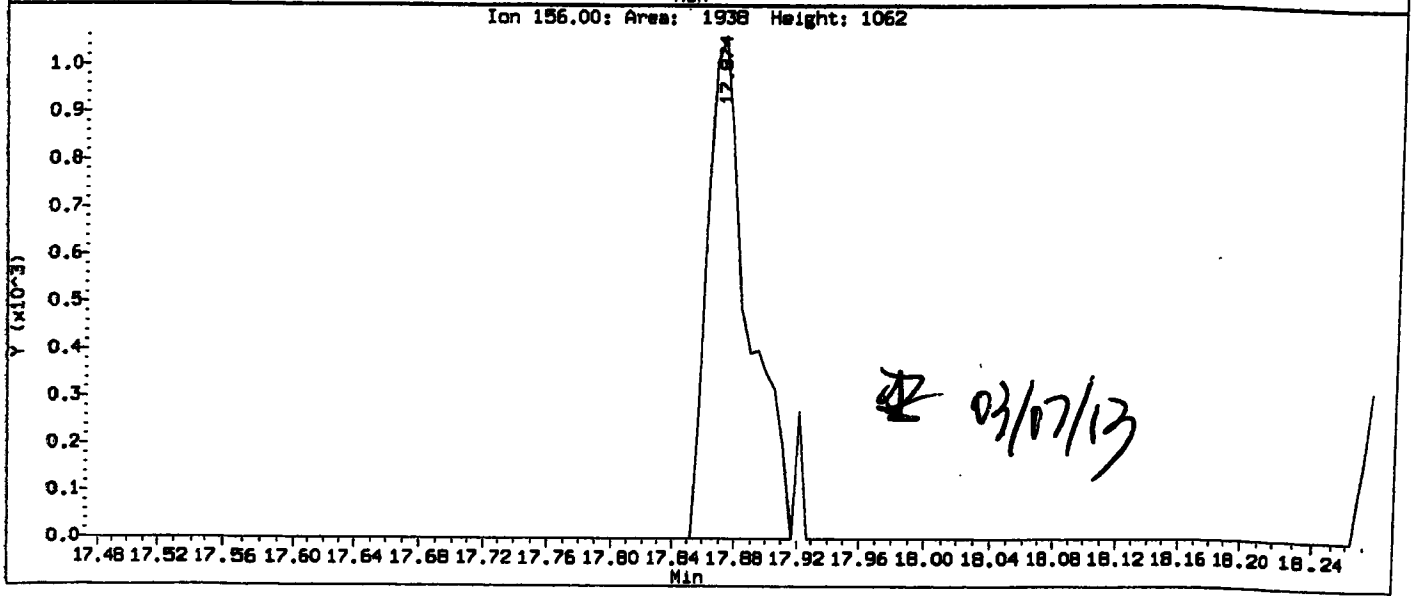
Analyst: _____ Date: 03/07/13

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

Compound: Benzidine
CAS Number:



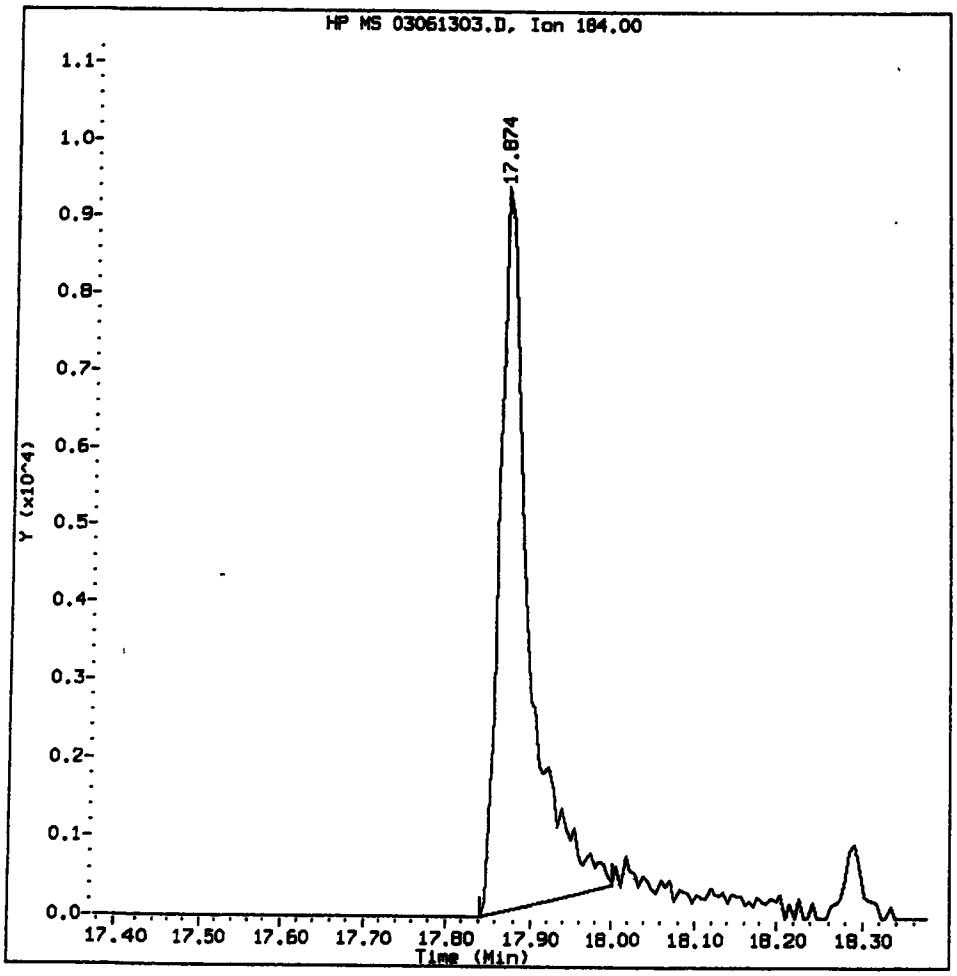




03/07/13

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

Benzidine Amount: 3.15 Area: 22120



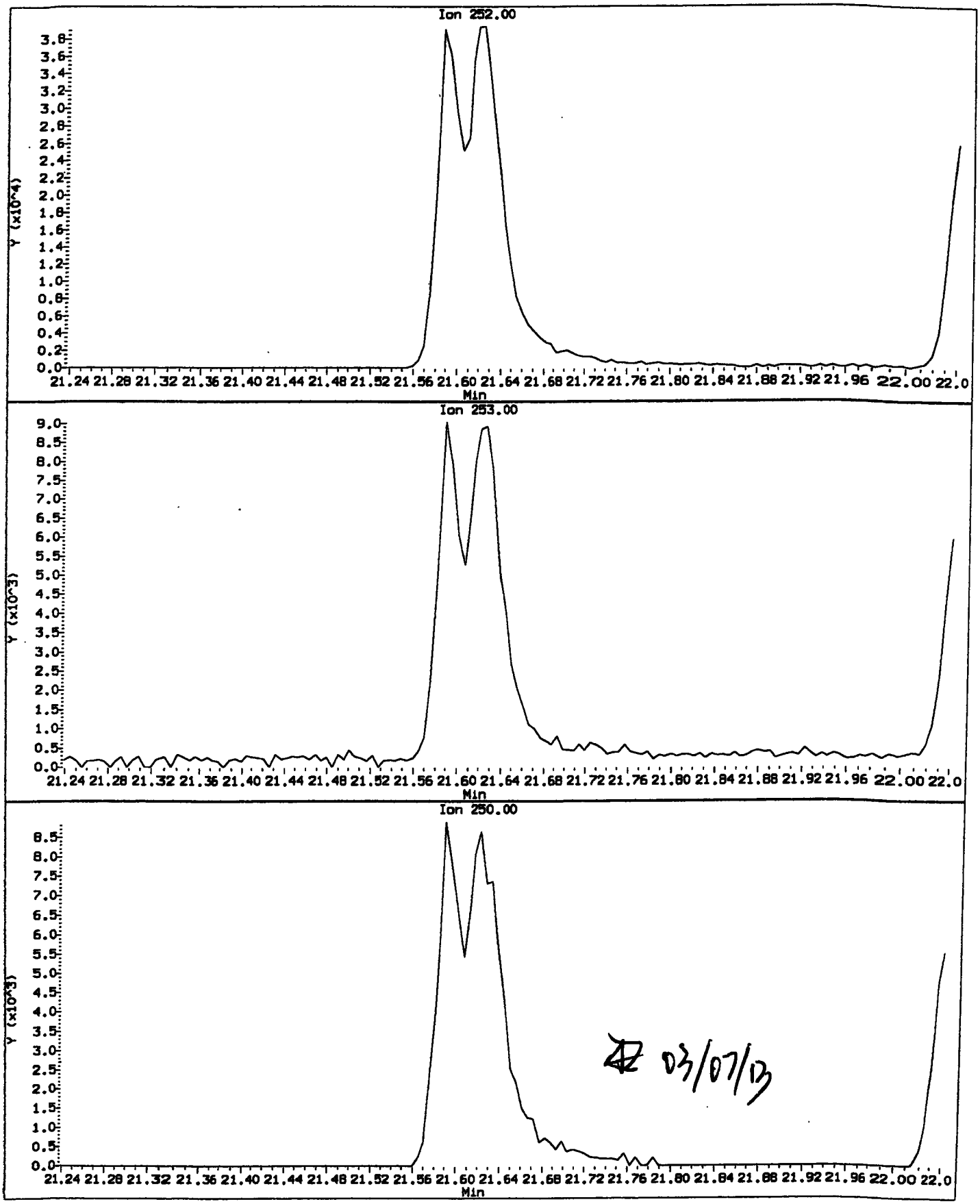
MANUAL INTEGRATION for Benzidine

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

Analyst: _____ Date: 03/07/13

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

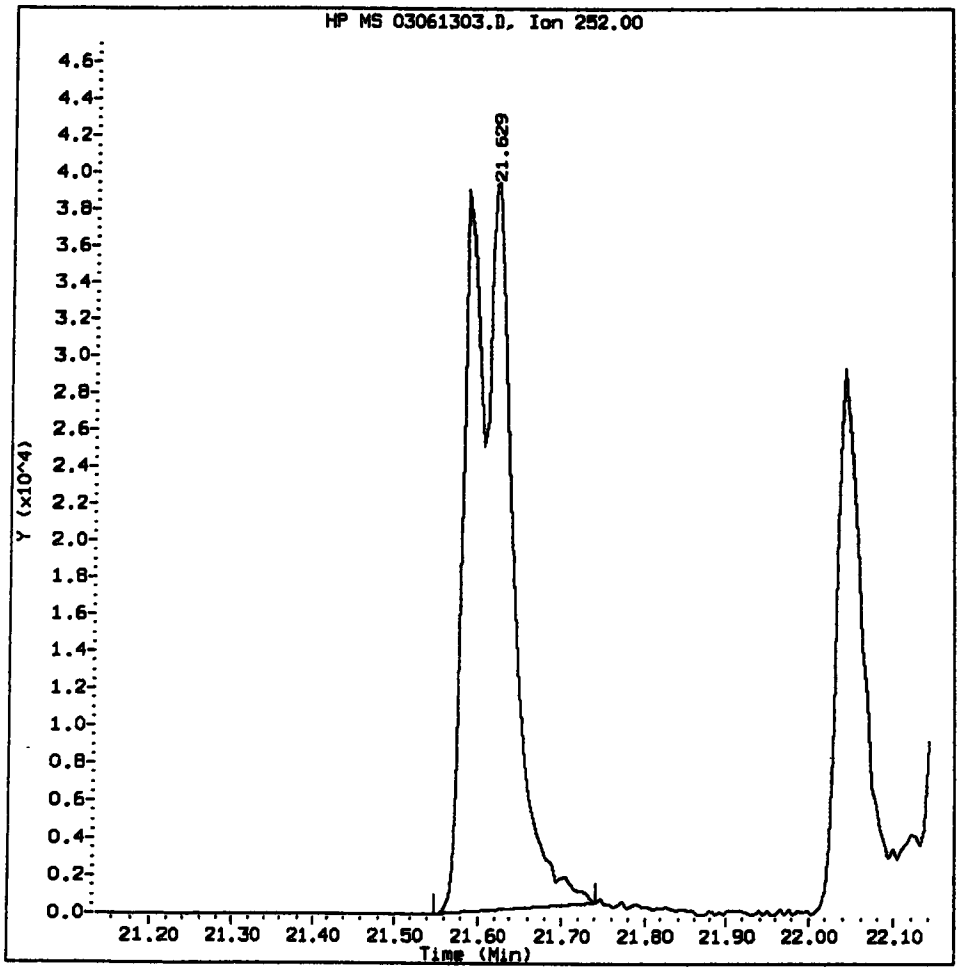
Compound: Total Benzofluoranthenes
CAS Number:



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

OK 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061304.D
Report Date: 07-Mar-2013 11:56

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

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	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)	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.

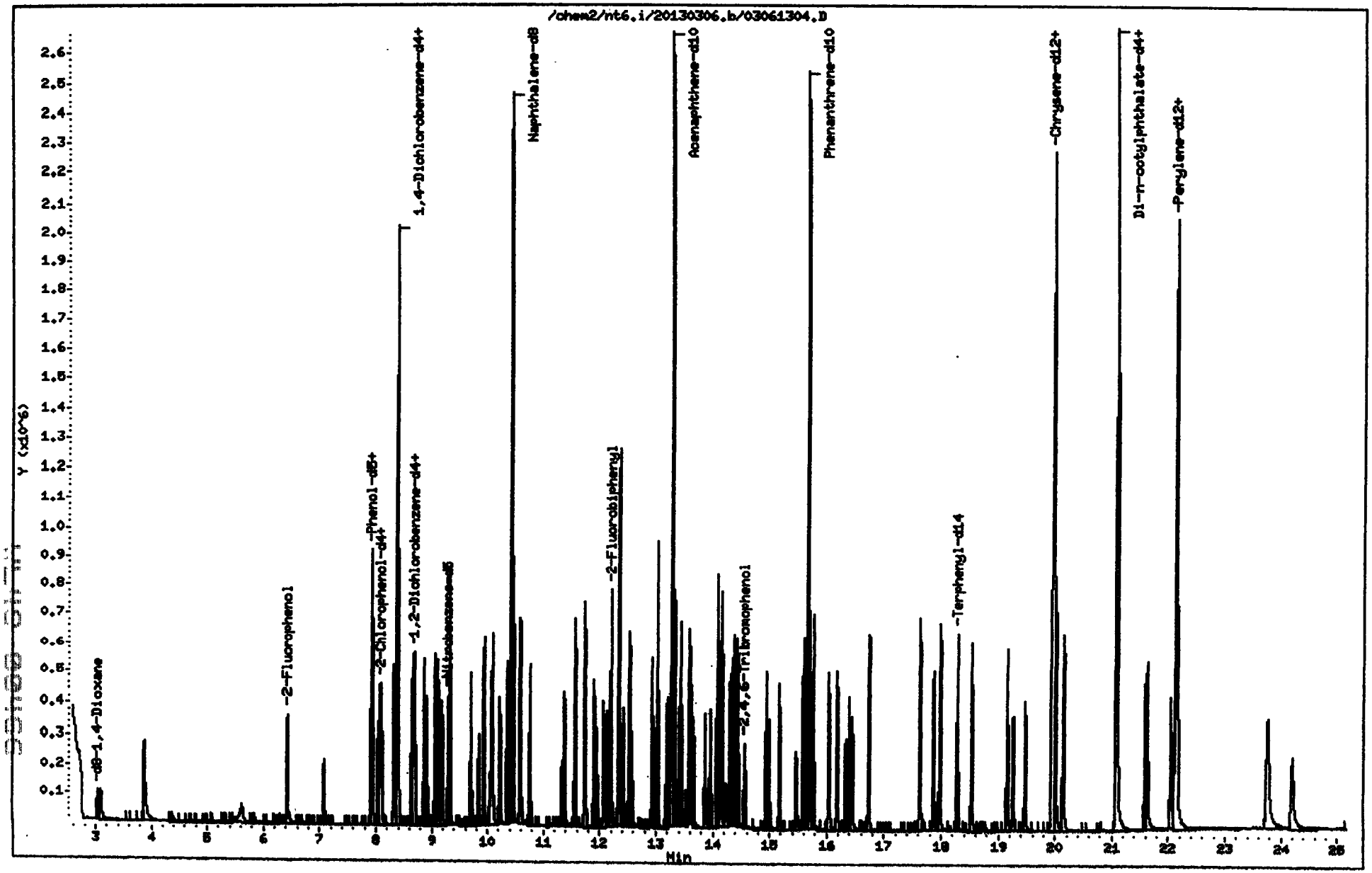
Data File: /chem2/nt6.i/20130306.b/03061304.D
Date : 06-MAR-2013 14:00
Client ID: IC50306
Sample Info: IC50306,

Instrument: nt6.i

Operator: JZ

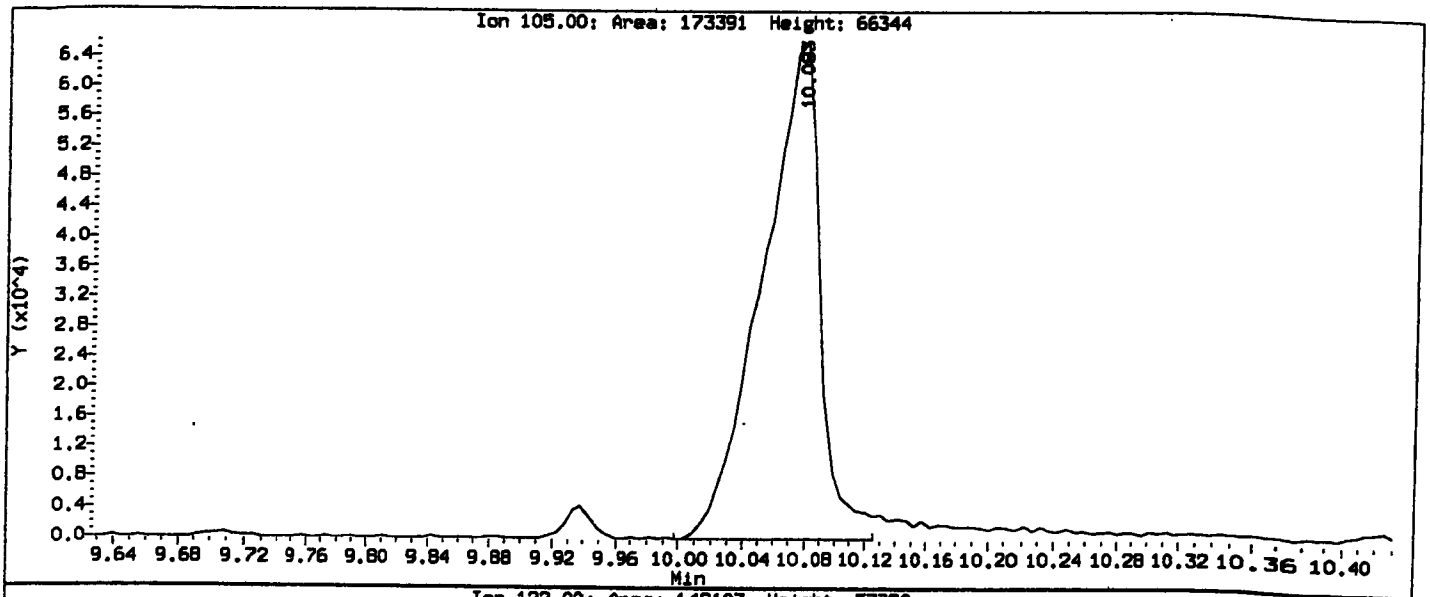
Column phase: ZB-5msi

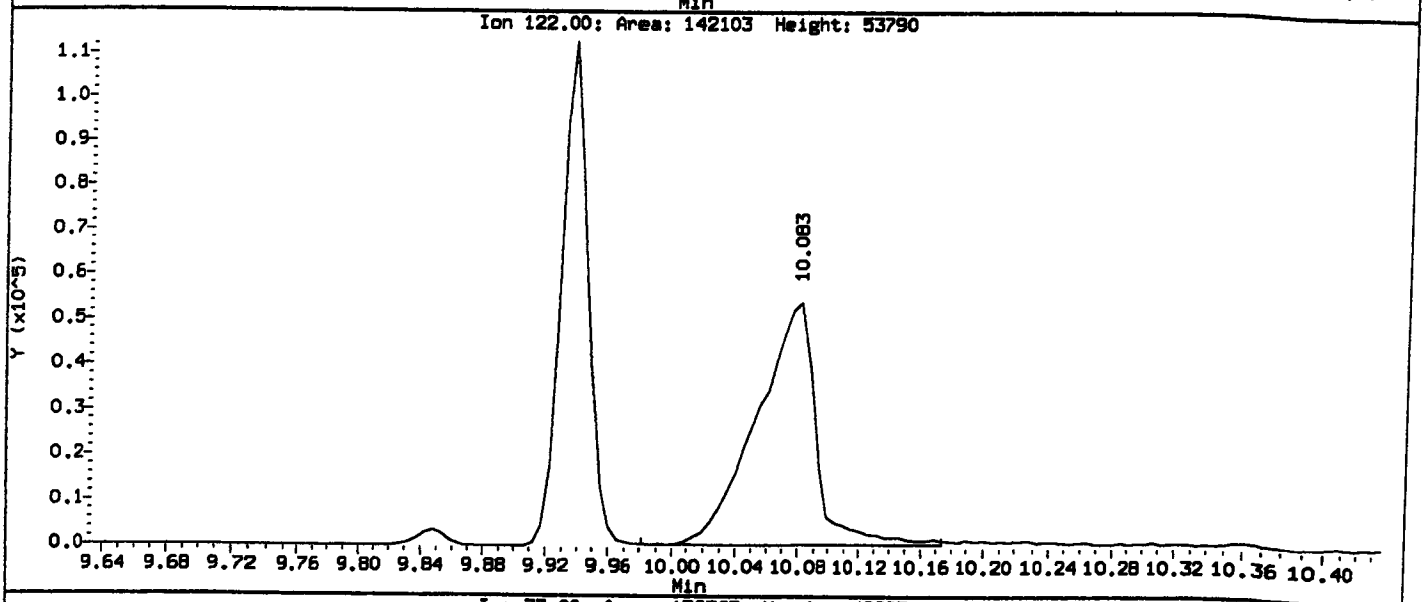
Column diameter: 0.32

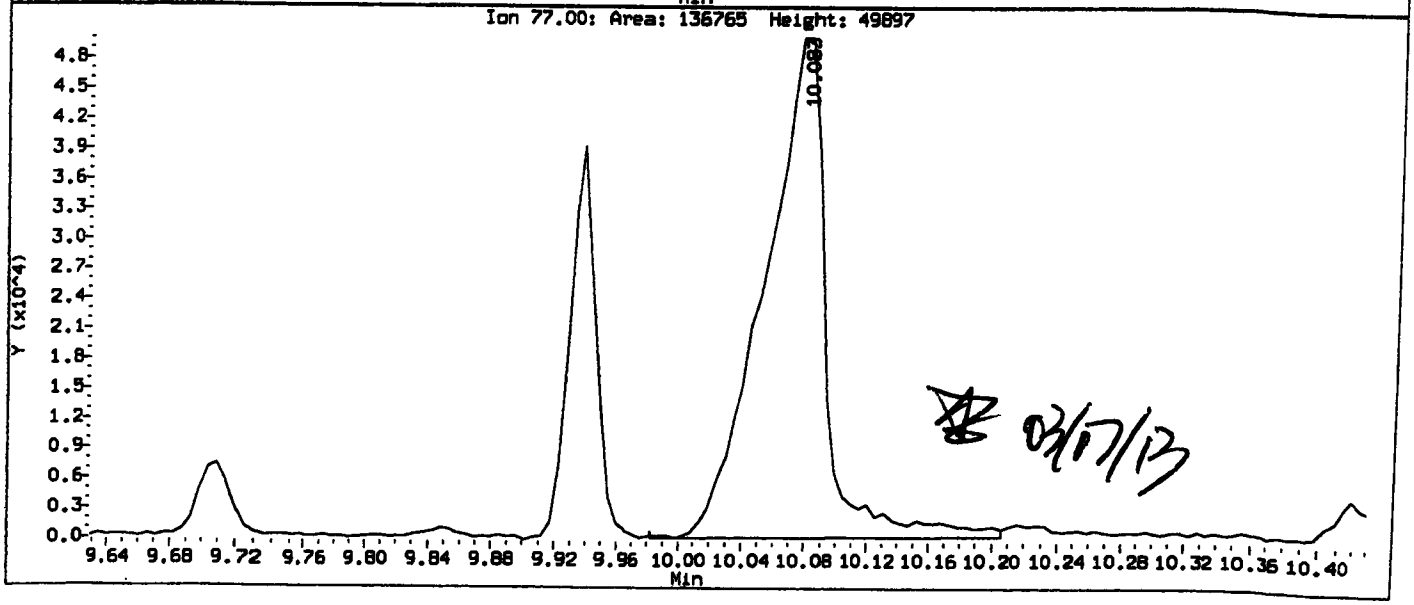


Data File: /chem2/nt6.i/20130306.b/03061304.D
Injection Date: 06-MAR-2013 14:00
Instrument: nt6.i
Client Sample ID: IC50306

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



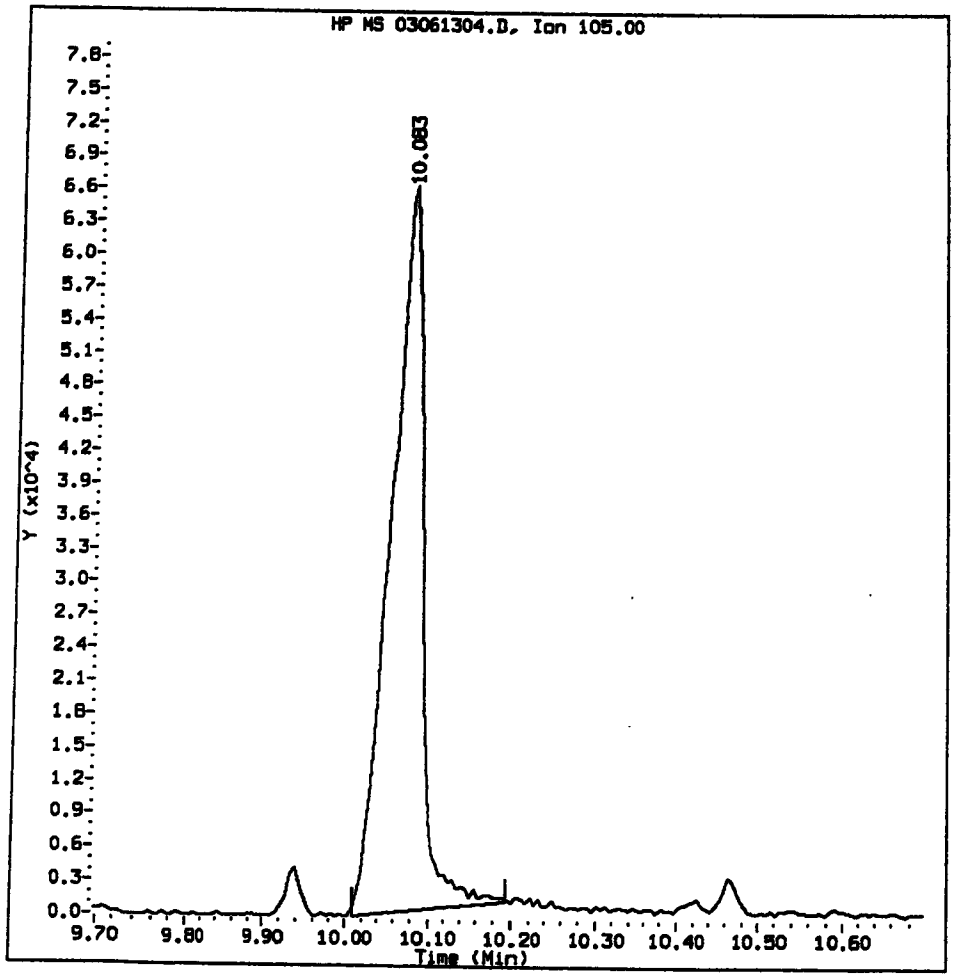




3/7/13

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

Benzoic acid Amount: 7.23 Area: 174391



MANUAL INTEGRATION for Benzoic acid

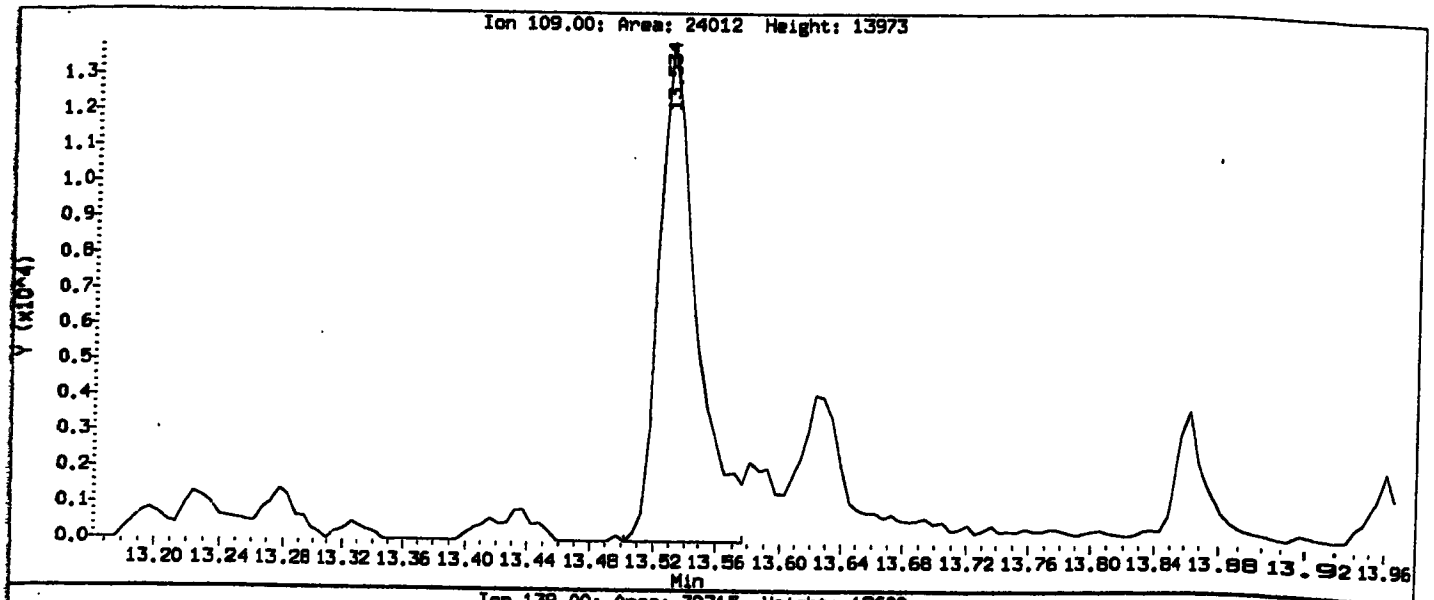
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

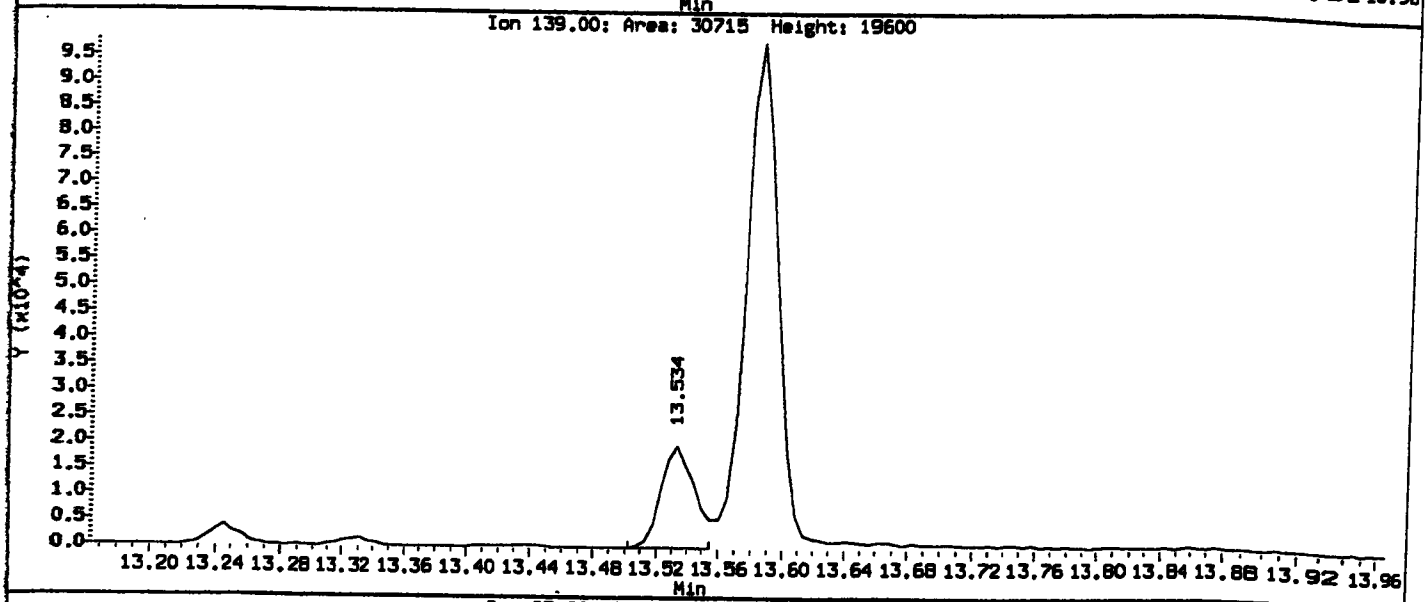
5. Other _____

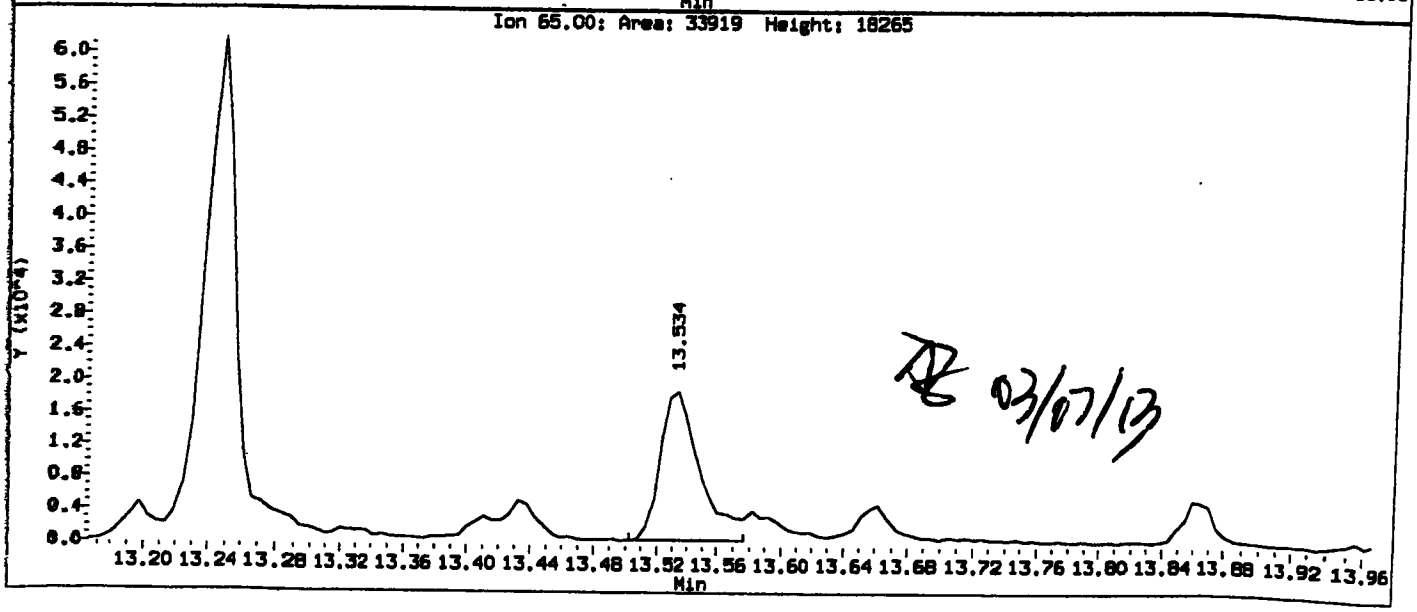
Analyst: _____ Date: 02/07/13

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



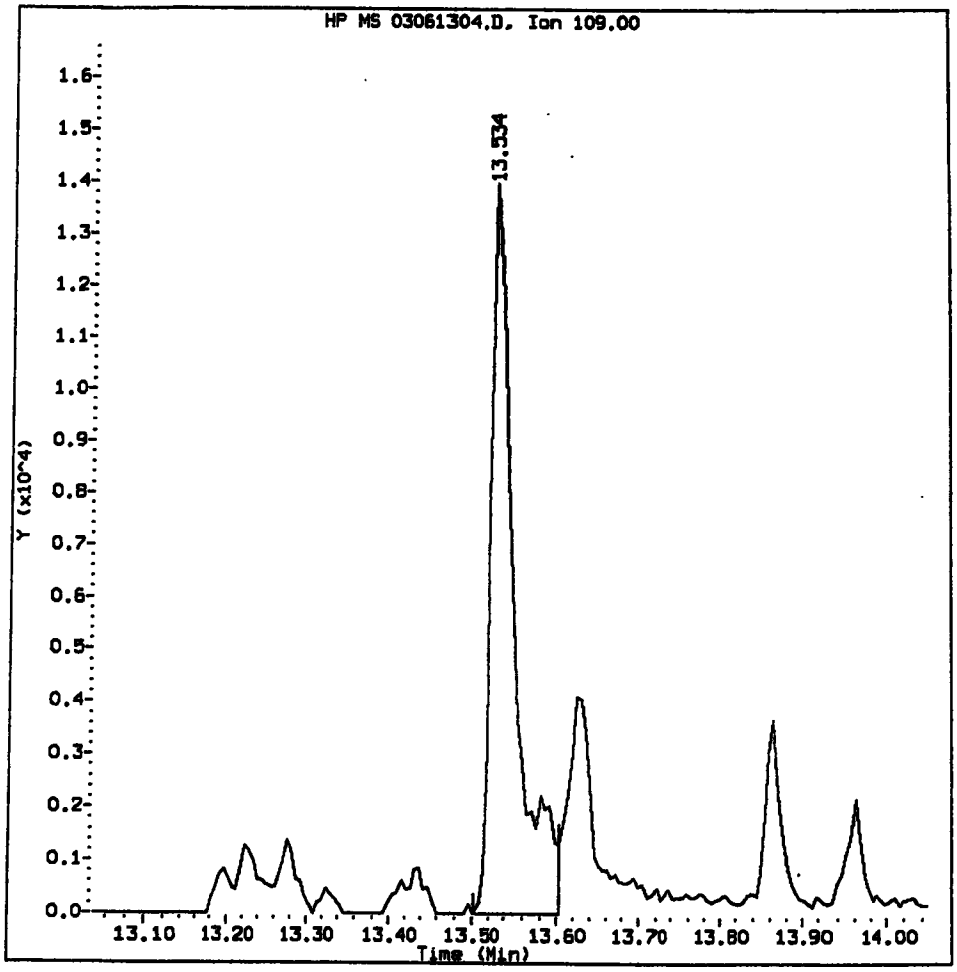




03/07/13

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

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 ME

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

AR 03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.432	6.432	(0.767)	409606	10.0000	11.09
$	2 Phenol-d5	99	7.927	7.933	(0.946)	485114	10.0000	11.22
	3 Phenol	94	7.943	7.954	(0.948)	521638	10.0000	11.46
$	5 2-Chlorophenol-d4	132	8.082	8.082	(0.964)	408030	10.0000	11.16
	4 Bis(2-Chloroethyl)ether	93	8.045	8.050	(0.960)	454744	10.0000	11.50
	6 2-Chlorophenol	128	8.104	8.109	(0.967)	422320	10.0000	11.59
	7 1,3-Dichlorobenzene	146	8.323	8.328	(0.993)	490538	10.0000	11.53
*	8 1,4-Dichlorobenzene-d4	152	8.382	8.387	(1.000)	570088	20.0000	
	9 1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	476551	10.0000	11.51
$	10 1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.036)	285284	10.0000	11.09
	12 1,2-Dichlorobenzene	146	8.702	8.707	(1.038)	457651	10.0000	11.56
	11 Benzyl alcohol	108	8.649	8.654	(1.032)	275965	10.0000	11.13
	14 2,2'-oxybis(1-Chloropropane)	45	8.910	8.916	(1.063)	722460	10.0000	11.50
	13 2-Methylphenol	108	8.873	8.878	(1.059)	401038	10.0000	11.62
	17 Hexachloroethane	117	9.188	9.193	(1.096)	193382	10.0000	11.55
	16 N-Nitroso-di-n-propylamine	70	9.124	9.135	(1.089)	331372	10.0000	11.17
	15 4-Methylphenol	108	9.103	9.108	(1.086)	405580	10.0000	11.88
$	18 Nitrobenzene-d5	82	9.306	9.311	(0.893)	463288	10.0000	10.99
	19 Nitrobenzene	77	9.332	9.343	(0.895)	470788	10.0000	11.67
	20 Isophorone	82	9.706	9.717	(0.931)	784907	10.0000	11.16
	21 2-Nitrophenol	139	9.845	9.851	(0.945)	223980	10.0000	12.00
	22 2,4-Dimethylphenol	107	9.941	9.947	(0.954)	406831	10.0000	11.52
	23 Bis(2-Chloroethoxy)methane	93	10.091	10.096	(0.968)	524076	10.0000	11.36
	24 Benzoic acid	105	10.144	10.198	(0.973)	669262	20.0000	21.92
	25 2,4-Dichlorophenol	162	10.219	10.230	(0.981)	328904	10.0000	12.10
	26 1,2,4-Trichlorobenzene	180	10.358	10.363	(0.994)	387548	10.0000	11.45
*	27 Naphthalene-d8	136	10.422	10.422	(1.000)	2100513	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.449	10.454	(1.003)	1122405	10.0000	10.39
	29 4-Chloroaniline	127	10.582	10.588	(1.015)	395736	10.0000	11.97
	30 Hexachlorobutadiene	225	10.764	10.764	(1.033)	234707	10.0000	11.40
	31 4-Chloro-3-methylphenol	107	11.378	11.384	(1.092)	347605	10.0000	12.04
	32 2-Methylnaphthalene	141	11.565	11.571	(1.110)	594073	10.0000	11.63
	33 Hexachlorocyclopentadiene	237	11.945	11.950	(0.899)	228802	10.0000	11.24
	34 2,4,6-Trichlorophenol	196	12.073	12.078	(0.909)	231449	10.0000	10.87
	35 2,4,5-Trichlorophenol	196	12.126	12.137	(0.913)	254387	10.0000	12.11
$	36 2-Fluorobiphenyl	172	12.206	12.212	(0.919)	846552	10.0000	10.59
	37 2-Chloronaphthalene	162	12.345	12.356	(0.930)	696255	10.0000	12.39
	38 2-Nitroaniline	65	12.570	12.580	(0.946)	214601	10.0000	11.46
	39 Dimethylphthalate	163	12.938	12.949	(0.974)	850044	10.0000	11.15
	40 Acenaphthylene	152	13.024	13.034	(0.981)	1152396	10.0000	11.54
	41 2,6-Dinitrotoluene	165	13.040	13.045	(0.982)	190803	10.0000	11.72
*	42 Acenaphthene-d10	164	13.280	13.286	(1.000)	1266491	20.0000	
	43 3-Nitroaniline	138	13.254	13.264	(0.998)	138858	10.0000	10.28
	44 Acenaphthene	153	13.328	13.334	(1.004)	725512	10.0000	11.22
	45 2,4-Dinitrophenol	184	13.414	13.424	(1.010)	256578	20.0000	22.06
	46 Dibenzofuran	168	13.590	13.595	(1.023)	963887	10.0000	11.39
	47 4-Nitrophenol	109	13.537	13.547	(1.019)	94565	10.0000	11.43
	48 2,4-Dinitrotoluene	165	13.665	13.676	(1.029)	260744	10.0000	11.84
	50 Diethylphthalate	149	14.092	14.098	(1.061)	851918	10.0000	12.06
	49 Fluorene	166	14.146	14.156	(1.065)	773364	10.0000	12.23
	51 4-Chlorophenyl-phenylether	204	14.167	14.172	(1.067)	421621	10.0000	11.35
	52 4-Nitroaniline	138	14.242	14.252	(1.072)	114126	10.0000	9.188
	53 4,6-Dinitro-2-methylphenol	198	14.317	14.333	(0.914)	328910	20.0000	22.69
	54 N-Nitrosodiphenylamine	169	14.365	14.375	(0.917)	637709	10.0000	11.32
$	55 2,4,6-Tribromophenol	330	14.568	14.573	(1.097)	113119	10.0000	11.30
	56 4-Bromophenyl-phenylether	248	14.947	14.952	(0.955)	252399	10.0000	11.42
	57 Hexachlorobenzene	284	15.171	15.182	(0.969)	256679	10.0000	11.27
	58 Pentachlorophenol	266	15.465	15.470	(0.988)	151470	10.0000	11.27
*	59 Phenanthrene-d10	188	15.658	15.663	(1.000)	2013244	20.0000	
	60 Phenanthrene	178	15.690	15.700	(1.002)	1109716	10.0000	11.14
	61 Anthracene	178	15.764	15.770	(1.007)	1165266	10.0000	11.68
	62 Carbazole	167	16.037	16.047	(1.024)	804312	10.0000	11.64
	63 Di-n-butylphthalate	149	16.737	16.747	(1.069)	1462335	10.0000	11.63
	64 Fluoranthene	202	17.629	17.639	(1.126)	1248849	10.0000	11.92
	65 Pyrene	202	17.987	17.992	(0.901)	1303708	10.0000	11.52
$	66 Terphenyl-d14	244	18.286	18.291	(0.916)	780843	10.0000	10.74
	67 Butylbenzylphthalate	149	19.157	19.167	(0.959)	651451	10.0000	11.77
	68 Benzo(a)anthracene	228	19.942	19.953	(0.999)	1072977	10.0000	11.36
*	69 Chrysene-d12	240	19.969	19.979	(1.000)	2072136	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.937	19.953	(0.998)	305076	10.0000	11.74
	71 Chrysene	228	20.006	20.017	(1.002)	1128707	10.0000	11.70
	72 bis(2-Ethylhexyl)phthalate	149	20.140	20.150	(0.956)	894958	10.0000	11.54
*	134 Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	2636581	20.0000	
	73 Di-n-octylphthalate	149	21.085	21.096	(1.000)	1365050	10.0000	10.97

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

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

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

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

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT 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

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT 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

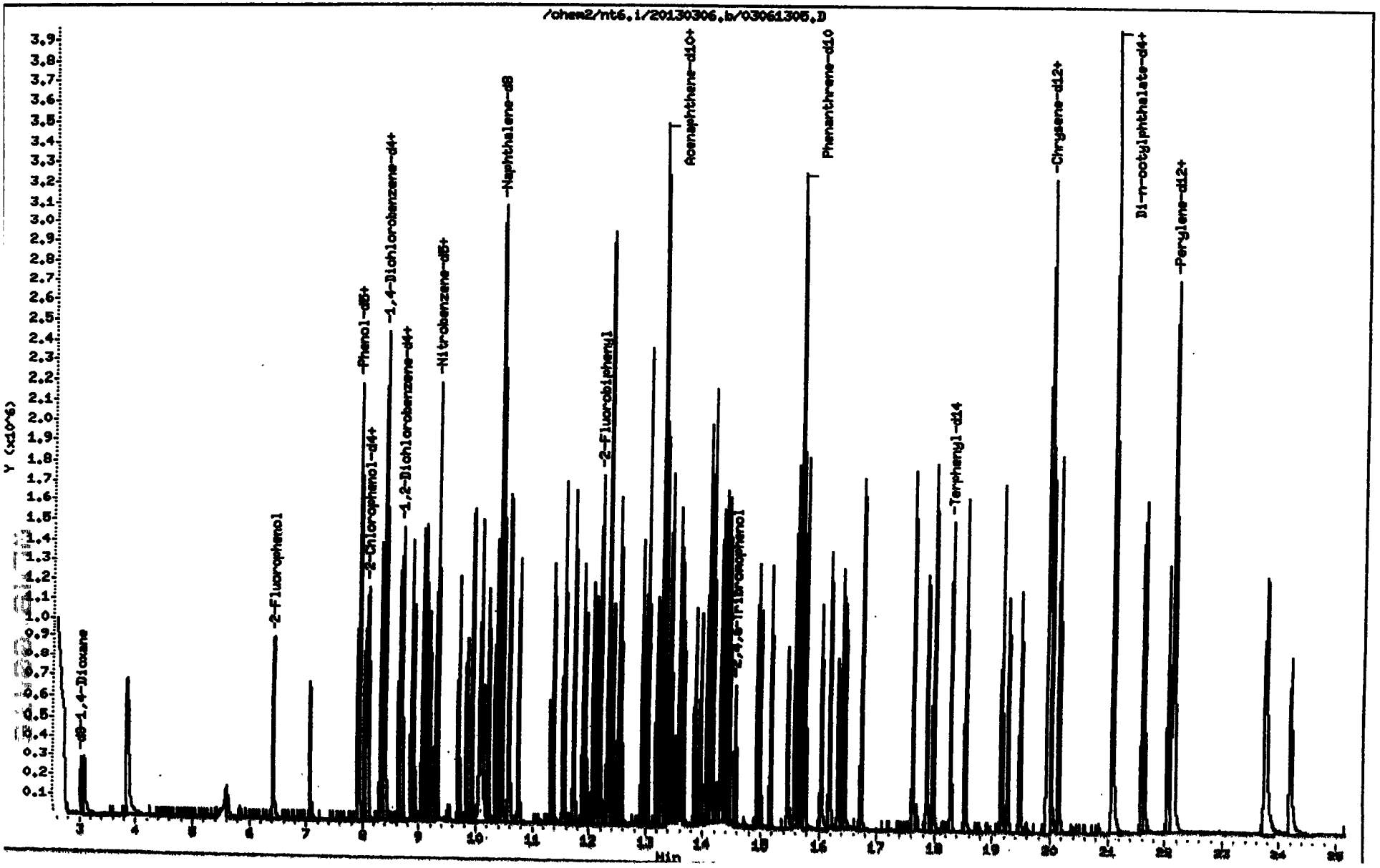
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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



Lab ID: IC100306 Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061301.D
Lab Smp Id: IC250306 Client Smp ID: IC250306
Inj Date : 06-MAR-2013 12:16
Operator : JZ Inst ID: nt6.i
Smp Info : IC250306
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

JZ 03/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.432	6.432	(0.767)	700440	25.0000	23.60	
$	2 Phenol-d5	99	7.933	7.933	(0.946)	801352	25.0000	23.06	
	3 Phenol	94	7.954	7.954	(0.948)	889960	25.0000	24.32	
$	5 2-Chlorophenol-d4	132	8.082	8.082	(0.964)	690249	25.0000	23.50	
	4 Bis(2-Chloroethyl)ether	93	8.050	8.050	(0.960)	775014	25.0000	24.39	
	6 2-Chlorophenol	128	8.109	8.109	(0.967)	729630	25.0000	24.92	
	7 1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	845812	25.0000	24.74	
*	8 1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	458117	20.0000		
	9 1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	819102	25.0000	24.62	
$	10 1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.035)	473455	25.0000	22.90	(H)
	12 1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	775420	25.0000	24.38	
	11 Benzyl alcohol	108	8.654	8.654	(1.032)	509044	25.0000	25.54	
	14 2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	1237768	25.0000	24.52	
	13 2-Methylphenol	108	8.878	8.878	(1.059)	703888	25.0000	25.37	
	17 Hexachloroethane	117	9.193	9.193	(1.096)	331130	25.0000	24.60	
	16 N-Nitroso-di-n-propylamine	70	9.135	9.135	(1.089)	584280	25.0000	24.50	
	15 4-Methylphenol	108	9.108	9.108	(1.086)	711421	25.0000	25.93	
$	18 Nitrobenzene-d5	82	9.311	9.311	(0.893)	801723	25.0000	23.25	
	19 Nitrobenzene	77	9.343	9.343	(0.896)	805918	25.0000	24.42	
	20 Isophorone	82	9.717	9.717	(0.932)	1363565	25.0000	23.70	
	21 2-Nitrophenol	139	9.851	9.851	(0.945)	399887	25.0000	26.19	
	22 2,4-Dimethylphenol	107	9.947	9.947	(0.954)	711080	25.0000	24.62	
	23 Bis(2-Chloroethoxy)methane	93	10.096	10.096	(0.969)	910222	25.0000	24.12	
	24 Benzoic acid	105	10.198	10.198	(0.978)	1318002	50.0000	52.76	
	25 2,4-Dichlorophenol	162	10.230	10.230	(0.982)	588303	25.0000	26.46	
	26 1,2,4-Trichlorobenzene	180	10.363	10.363	(0.994)	665788	25.0000	24.05	
*	27 Naphthalene-d8	136	10.422	10.422	(1.000)	1718341	20.0000		

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.454	10.454	(1.003)	1841435	25.0000	24.74
	29 4-Chloroaniline	127	10.588	10.588	(1.016)	551083	25.0000	23.22
	30 Hexachlorobutadiene	225	10.764	10.764	(1.033)	412907	25.0000	24.51
	31 4-Chloro-3-methylphenol	107	11.384	11.384	(1.092)	616289	25.0000	26.09
	32 2-Methylnaphthalene	141	11.571	11.571	(1.110)	1032469	25.0000	24.71
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	439183	25.0000	27.06
	34 2,4,6-Trichlorophenol	196	12.078	12.078	(0.909)	432718	25.0000	25.48
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	441206	25.0000	26.34
$	36 2-Fluorobiphenyl	172	12.212	12.212	(0.919)	1404089	25.0000	22.02
	37 2-Chloronaphthalene	162	12.356	12.356	(0.930)	1139487	25.0000	26.46
	38 2-Nitroaniline	65	12.580	12.580	(0.947)	397884	25.0000	26.65
	39 Dimethylphthalate	163	12.949	12.949	(0.975)	1466956	25.0000	24.13
	40 Acenaphthylene	152	13.034	13.034	(0.981)	1904411	25.0000	23.90
	41 2,6-Dinitrotoluene	165	13.045	13.045	(0.982)	328738	25.0000	25.31
*	42 Acenaphthene-d10	164	13.286	13.286	(1.000)	1010041	20.0000	
	43 3-Nitroaniline	138	13.264	13.264	(0.998)	241966	25.0000	26.00
	44 Acenaphthene	153	13.334	13.334	(1.004)	1232398	25.0000	23.89
	45 2,4-Dinitrophenol	184	13.424	13.424	(1.010)	496821	50.0000	53.56
	46 Dibenzofuran	168	13.595	13.595	(1.023)	1655296	25.0000	24.54
	47 4-Nitrophenol	109	13.547	13.547	(1.020)	178575	25.0000	27.06
	48 2,4-Dinitrotoluene	165	13.676	13.676	(1.029)	452448	25.0000	25.75
	50 Diethylphthalate	149	14.098	14.098	(1.061)	1399966	25.0000	24.86
	49 Fluorene	166	14.156	14.156	(1.066)	1288051	25.0000	27.06
	51 4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	716110	25.0000	24.18
	52 4-Nitroaniline	138	14.252	14.252	(1.073)	226139	25.0000	22.83
	53 4,6-Dinitro-2-methylphenol	198	14.333	14.333	(0.915)	606968	50.0000	50.57
	54 N-Nitrosodiphenylamine	169	14.375	14.375	(0.918)	1086875	25.0000	23.31 (M)
$	55 2,4,6-Tribromophenol	330	14.573	14.573	(1.097)	197436	25.0000	24.72
	56 4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	442782	25.0000	24.21
	57 Hexachlorobenzene	284	15.182	15.182	(0.969)	444526	25.0000	23.57
	58 Pentachlorophenol	266	15.470	15.470	(0.988)	283481	25.0000	25.48
*	59 Phenanthrene-d10	188	15.663	15.663	(1.000)	1666734	20.0000	
	60 Phenanthrene	178	15.700	15.700	(1.002)	1809085	25.0000	21.94
	61 Anthracene	178	15.770	15.770	(1.007)	1943905	25.0000	23.54
	62 Carbazole	167	16.047	16.047	(1.025)	1387020	25.0000	24.09
	63 Di-n-butylphthalate	149	16.747	16.747	(1.069)	2414175	25.0000	23.19
	64 Fluoranthene	202	17.639	17.639	(1.126)	2140710	25.0000	24.68
	65 Pyrene	202	17.992	17.992	(0.901)	2209020	25.0000	24.14
$	66 Terphenyl-d14	244	18.291	18.291	(0.916)	1321332	25.0000	22.46
	67 Butylbenzylphthalate	149	19.167	19.167	(0.959)	1118097	25.0000	24.98
	68 Benzo(a)anthracene	228	19.953	19.953	(0.999)	1857209	25.0000	24.31
*	69 Chrysene-d12	240	19.979	19.979	(1.000)	1675752	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.953	19.953	(0.999)	502648	25.0000	23.91
	71 Chrysene	228	20.017	20.017	(1.002)	1876324	25.0000	24.06
	72 bis(2-Ethylhexyl)phthalate	149	20.150	20.150	(0.956)	1493223	25.0000	25.04
*	134 Di-n-octylphthalate-d4	153	21.085	21.085	(1.000)	2026355	20.0000	
	73 Di-n-octylphthalate	149	21.096	21.096	(1.000)	2368328	25.0000	24.75

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS 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)	1637824	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

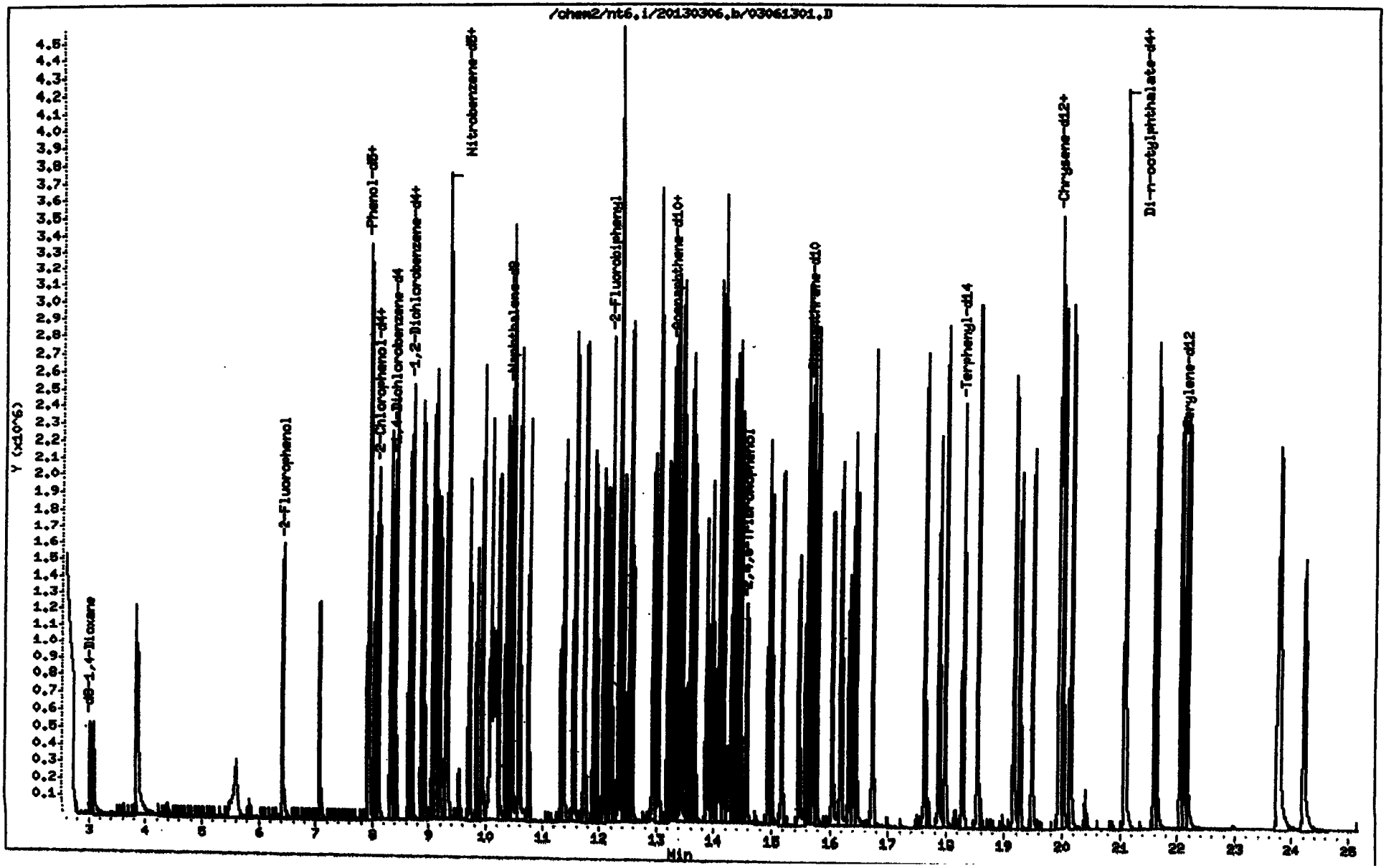
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061301.D
Date : 06-MAR-2013 12:16
Client ID: IC250306
Sample Info: IC250306

Instrument: nt6.i

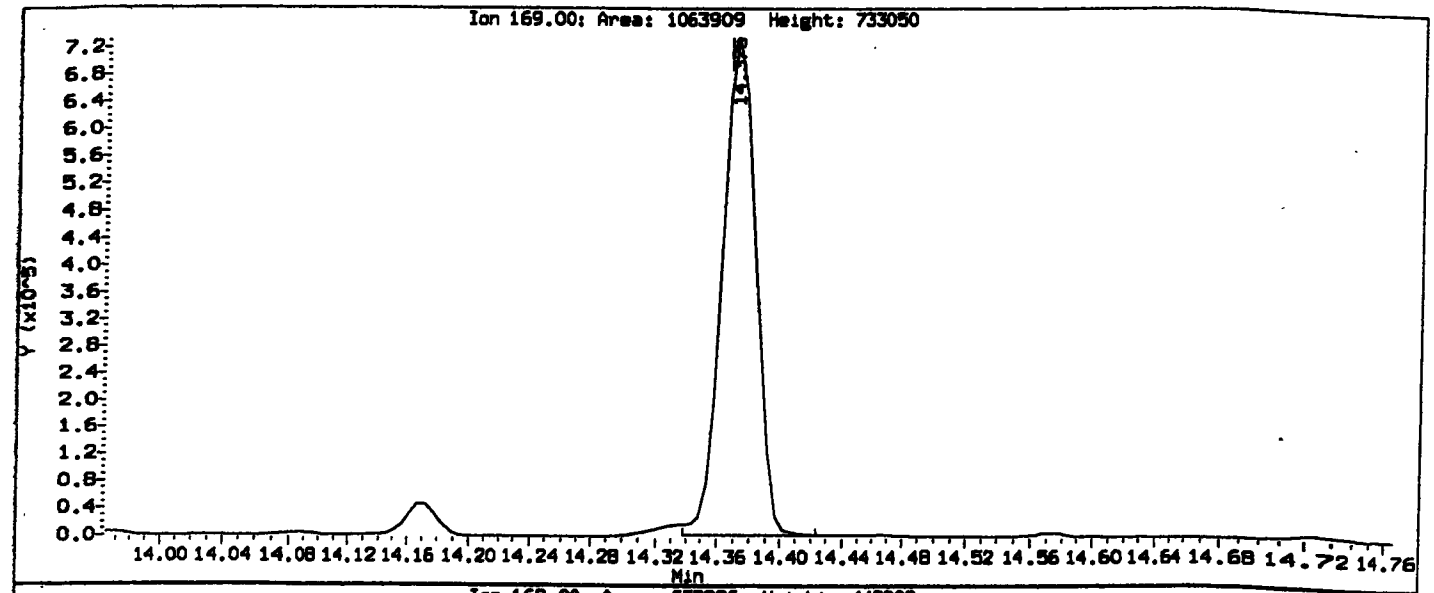
Operator: JZ
Column diameter: 0.32

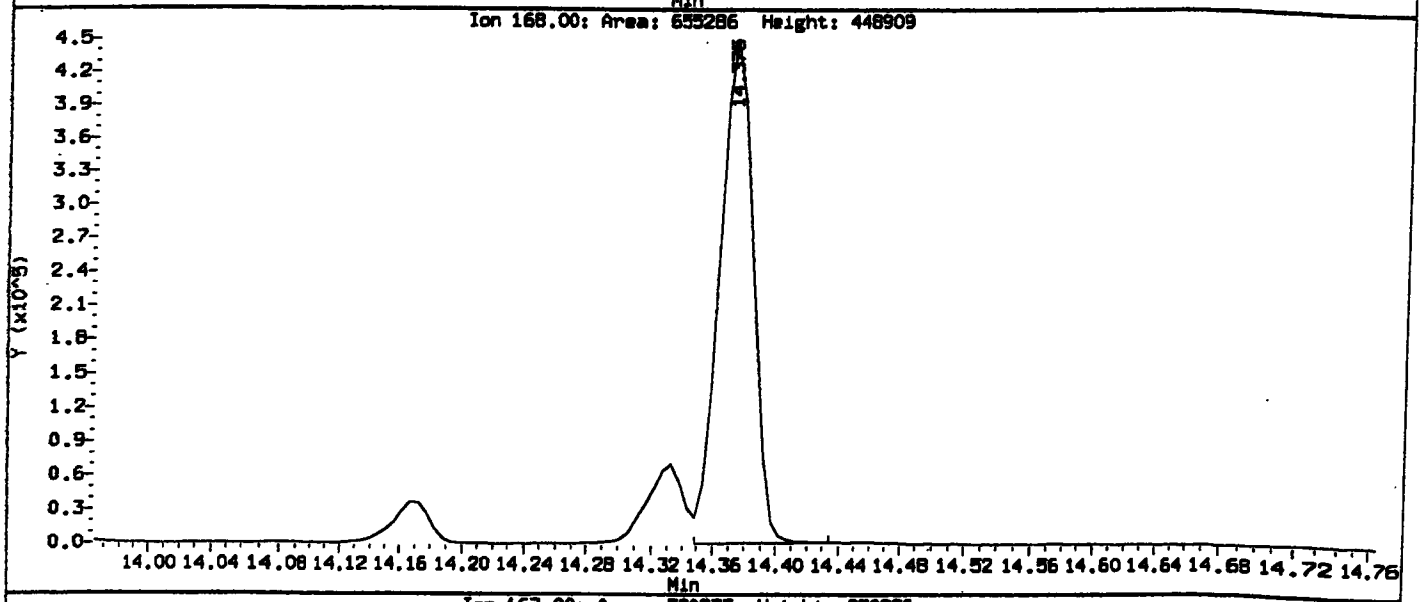
Column phase: ZB-5msi

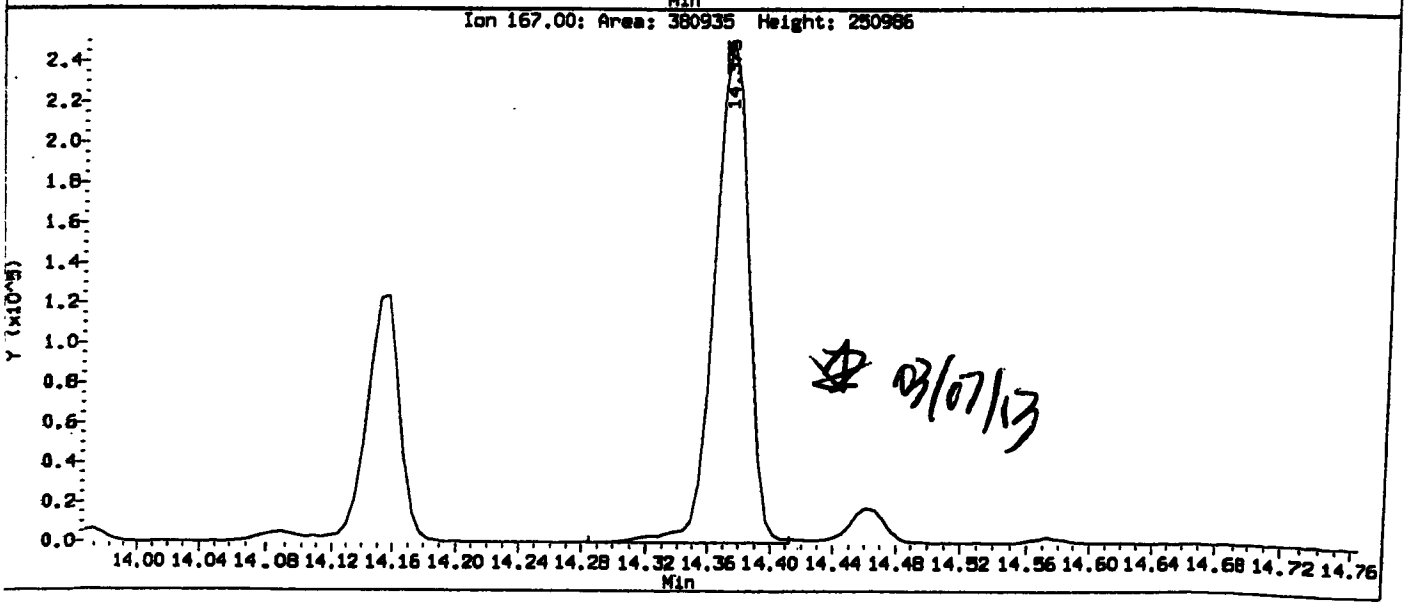


Data File: /chem2/nt6.i/20130306.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: IC250306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



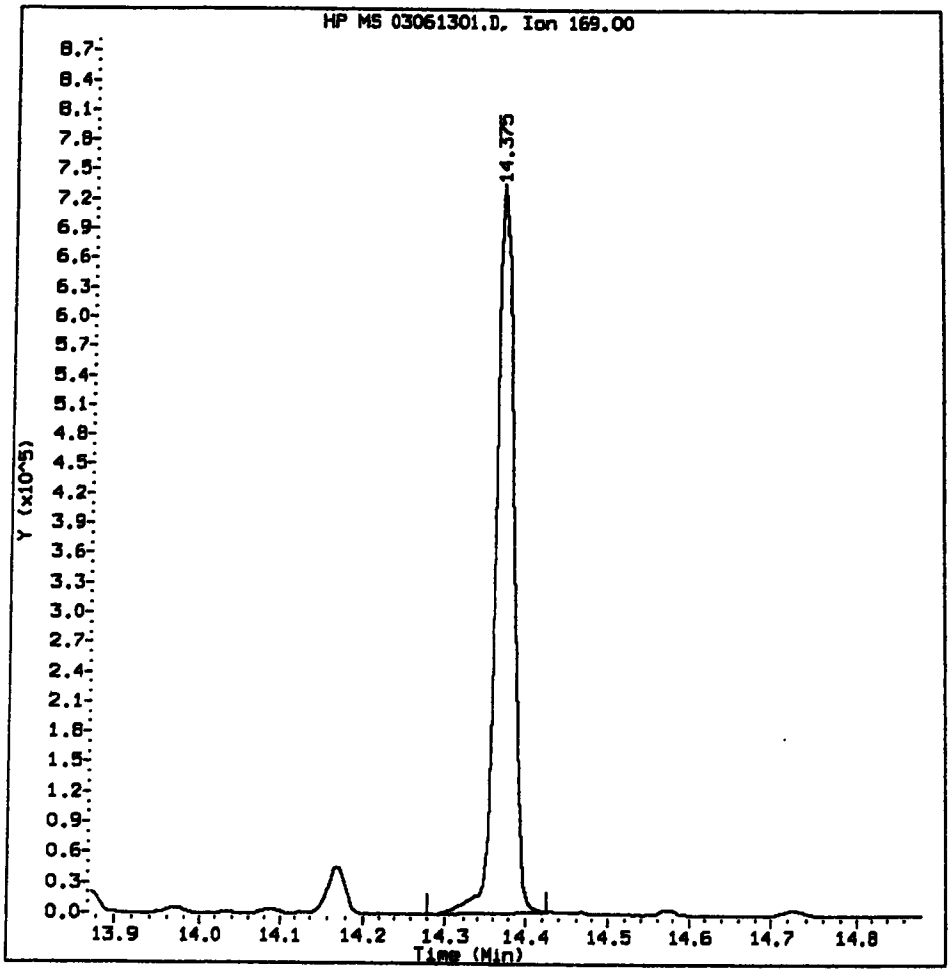




03/07/13

IC250306, /chem2/nt6.i/20130306.b/03061301.D

N-Nitrosodiphenylamine Amount: 23.31 Area: 1086875



MANUAL INTEGRATION for N-Nitrosodiphenylamine

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

5. Other _____

Analyst: _____ Date: 03/07/13

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)	958539	40.0000	40.36	
	32 2-Methylnaphthalene	141	11.568	11.571	(1.110)	1465439	40.0000	34.98	
	33 Hexachlorocyclopentadiene	237	11.947	11.950	(0.899)	665905	40.0000	41.58	
	34 2,4,6-Trichlorophenol	196	12.081	12.078	(0.910)	682992	40.0000	40.76	
	35 2,4,5-Trichlorophenol	196	12.134	12.137	(0.914)	693411	40.0000	41.95	
$	36 2-Fluorobiphenyl	172	12.209	12.212	(0.919)	2125857	40.0000	33.78	
	37 2-Chloronaphthalene	162	12.359	12.356	(0.930)	1623373	40.0000	39.49	
	38 2-Nitroaniline	65	12.583	12.580	(0.947)	592401	40.0000	40.20	
	39 Dimethylphthalate	163	12.952	12.949	(0.975)	2195089	40.0000	36.59	
	40 Acenaphthylene	152	13.032	13.034	(0.981)	2734694	40.0000	34.78	
	41 2,6-Dinitrotoluene	165	13.048	13.045	(0.982)	488547	40.0000	38.11	
*	42 Acenaphthene-d10	164	13.283	13.286	(1.000)	996854	20.0000		
	43 3-Nitroaniline	138	13.262	13.264	(0.998)	342573	40.0000	41.36	(M)
	44 Acenaphthene	153	13.336	13.334	(1.004)	1794261	40.0000	35.24	
	45 2,4-Dinitrophenol	184	13.433	13.424	(1.011)	774315	80.0000	84.57	
	46 Dibenzofuran	168	13.598	13.595	(1.024)	2363050	40.0000	35.49	
	47 4-Nitrophenol	109	13.545	13.547	(1.020)	262854	40.0000	40.36	
	48 2,4-Dinitrotoluene	165	13.678	13.676	(1.030)	690237	40.0000	39.81	
	50 Diethylphthalate	149	14.106	14.098	(1.062)	2067081	40.0000	37.19	
	49 Fluorene	166	14.154	14.156	(1.066)	1769346	40.0000	39.26	
	51 4-Chlorophenyl-phenylether	204	14.170	14.172	(1.067)	1029522	40.0000	35.23	
	52 4-Nitroaniline	138	14.261	14.252	(1.074)	391191	40.0000	40.01	
	53 4,6-Dinitro-2-methylphenol	198	14.341	14.333	(0.916)	964307	80.0000	81.99	
	54 N-Nitrosodiphenylamine	169	14.378	14.375	(0.918)	1576736	40.0000	34.50	(M)
$	55 2,4,6-Tribromophenol	330	14.576	14.573	(1.097)	295587	40.0000	37.50	
	56 4-Bromophenyl-phenylether	248	14.950	14.952	(0.955)	672353	40.0000	37.51	
	57 Hexachlorobenzene	284	15.179	15.182	(0.969)	671036	40.0000	36.31	
	58 Pentachlorophenol	266	15.473	15.470	(0.988)	443042	40.0000	40.64	
*	59 Phenanthrene-d10	188	15.660	15.663	(1.000)	1633268	20.0000		
	60 Phenanthrene	178	15.703	15.700	(1.003)	2729819	40.0000	33.78	
	61 Anthracene	178	15.772	15.770	(1.007)	2745113	40.0000	33.93	
	62 Carbazole	167	16.045	16.047	(1.025)	2297956	40.0000	40.37	
	63 Di-n-butylphthalate	149	16.745	16.747	(1.069)	3399020	40.0000	33.32	
	64 Fluoranthene	202	17.631	17.639	(1.126)	3061055	40.0000	36.01	
	65 Pyrene	202	17.995	17.992	(0.901)	3123892	40.0000	35.65	
$	66 Terphenyl-d14	244	18.289	18.291	(0.915)	1945507	40.0000	34.55	
	67 Butylbenzylphthalate	149	19.159	19.167	(0.959)	1609814	40.0000	37.57	
	68 Benzo(a)anthracene	228	19.950	19.953	(0.999)	2678240	40.0000	36.61	
*	69 Chrysene-d12	240	19.977	19.979	(1.000)	1604385	20.0000		
	70 3,3'-Dichlorobenzidine	252	19.945	19.953	(0.998)	740264	40.0000	36.78	
	71 Chrysene	228	20.014	20.017	(1.002)	2694539	40.0000	36.09	
	72 bis(2-Ethylhexyl)phthalate	149	20.142	20.150	(0.956)	2120847	40.0000	37.84	
*	134 Di-n-octylphthalate-d4	153	21.072	21.085	(1.000)	1904606	20.0000		
	73 Di-n-octylphthalate	149	21.088	21.096	(1.001)	3383339	40.0000	37.62	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.606	21.609	(0.976)	2694359	40.0000	38.62
75	Benzo(k)fluoranthene	252	21.638	21.641	(0.978)	3090941	40.0000	42.35
187	Total Benzofluoranthenes	252	21.638	21.641	(0.978)	5374417	80.0000	72.61
76	Benzo(a)pyrene	252	22.049	22.057	(0.996)	2636463	40.0000	38.39
* 77	Perylene-d12	264	22.130	22.137	(1.000)	1606852	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.759	23.767	(1.074)	3212593	40.0000	38.87
79	Dibenzo(a,h)anthracene	278	23.786	23.788	(1.075)	2558263	40.0000	39.31
80	Benzo(g,h,i)perylene	276	24.224	24.226	(1.095)	2850182	40.0000	40.32
90	N-Nitrosodimethylamine	74	3.902	3.889	(0.465)	837250	40.0000	38.41
103	Pyridine	79	3.854	3.851	(0.460)	1286192	40.0000	37.21
91	Aniline	93	7.941	7.938	(0.947)	1374340	40.0000	33.56
105	1-methylnaphthalene	141	11.744	11.747	(1.127)	1506021	40.0000	35.39
93	Benzidine	184	17.872	17.874	(0.895)	284218	40.0000	36.33
111	Azobenzene (1,2-DP-Hydrazine)	77	14.426	14.423	(1.086)	2252849	40.0000	35.67
143	1,4-Dioxane	88	3.106	3.103	(0.370)	556372	40.0000	37.05
$ 137	d8-1,4-Dioxane	96	3.047	3.039	(0.363)	543400	40.0000	38.66
144	alpha-Terpineol	59	10.473	10.470	(1.005)	797649	40.0000	36.41
177	p-Benzoquinone	82	7.086	7.083	(0.680)	276763	40.0000	42.07
98	Retene	219	18.540	18.548	(0.928)	1393516	40.0000	36.85
99	Perylene	252	22.167	22.175	(1.002)	2188116	40.0000	36.37
133	Butylatedhydroxytoluene	205	13.443	13.440	(1.012)	1474910	40.0000	39.45
115	Tributyl Phosphate	99	14.469	14.461	(0.924)	2401166	40.0000	40.45
116	Dibutyl Phenyl Phosphate	175	16.194	16.192	(1.034)	1669656	40.0000	38.66
117	Butyl Diphenyl Phosphate	94	17.877	17.880	(0.895)	545870	40.0000	36.95
118	Triphenyl Phosphate	326	19.480	19.482	(0.975)	546364	40.0000	38.89
123	Acetophenone	105	9.079	9.076	(1.083)	1603289	40.0000	36.80
168	Pentachlorobenzene	250	13.641	13.638	(1.027)	788366	40.0000	36.11
113	Diphenyl Oxide	170	12.535	12.538	(0.944)	1385867	40.0000	35.71
112	Biphenyl	154	12.343	12.345	(0.929)	1797394	40.0000	39.55
120	2,3,4,6-Tetrachlorophenol	232	13.871	13.873	(1.044)	600924	40.0000	42.23
151	1,2,4,5-Tetrachlorobenzene	216	11.910	11.907	(0.897)	895114	40.0000	36.76
110	Tetrachloroguaiacol	247	15.601	15.599	(0.996)	658192	80.0000	76.80
109	3,4,5-Trichloroguaiacol	213	13.967	13.969	(0.892)	357175	40.0000	38.28
181	3,4,6-Trichloroguaiacol	211	14.090	14.087	(1.680)	388170	40.0000	36.75
108	4,5,6-Trichloroguaiacol	213	14.998	15.000	(1.129)	368030	40.0000	39.47
184	3,4-Dichloroguaiacol	192	12.423	12.425	(1.482)	376077	40.0000	37.51
107	4,5-Dichloroguaiacol	192	13.208	13.205	(0.994)	919744	80.0000	75.51
182	4,6-Dichloroguaiacol	192	13.208	13.205	(1.575)	936857	80.0000	76.60
185	4-Chloroguaiacol	115	11.338	11.336	(1.352)	258479	20.0000	19.88
186	Carbaryl	144	16.462	16.459	(1.051)	1517584	40.0000	40.21
178	2-Benzyl-4-Chlorophenol	218	16.413	16.411	(1.048)	512701	40.0000	37.90
106	Guaiacol	124	9.335	9.332	(1.113)	843648	40.0000	35.04
188	2,6-Dichlorophenol	162	10.601	10.598	(1.264)	758794	40.0000	37.03
189	N-Nitrosomethylethylamine	88	5.622	5.620	(0.671)	579162	40.0000	37.87

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061306.D
Lab Smp Id: IC40306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC400306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

	COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	458117	229058	916234	462843	1.03
27	Naphthalene-d8	1718341	859170	3436682	1722510	0.24
42	Acenaphthene-d10	1010041	505020	2020082	996854	-1.31
59	Phenanthrene-d10	1666734	833367	3333468	1633268	-2.01
69	Chrysene-d12	1675752	837876	3351504	1604385	-4.26
134	Di-n-octylphthala	2026355	1013178	4052710	1904606	-6.01
77	Perylene-d12	1637524	818762	3275048	1606852	-1.87

	COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27	Naphthalene-d8	10.42	9.92	10.92	10.42	0.03
42	Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.02
59	Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.02
69	Chrysene-d12	19.98	19.48	20.48	19.98	-0.01
134	Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77	Perylene-d12	22.14	21.64	22.64	22.13	-0.04

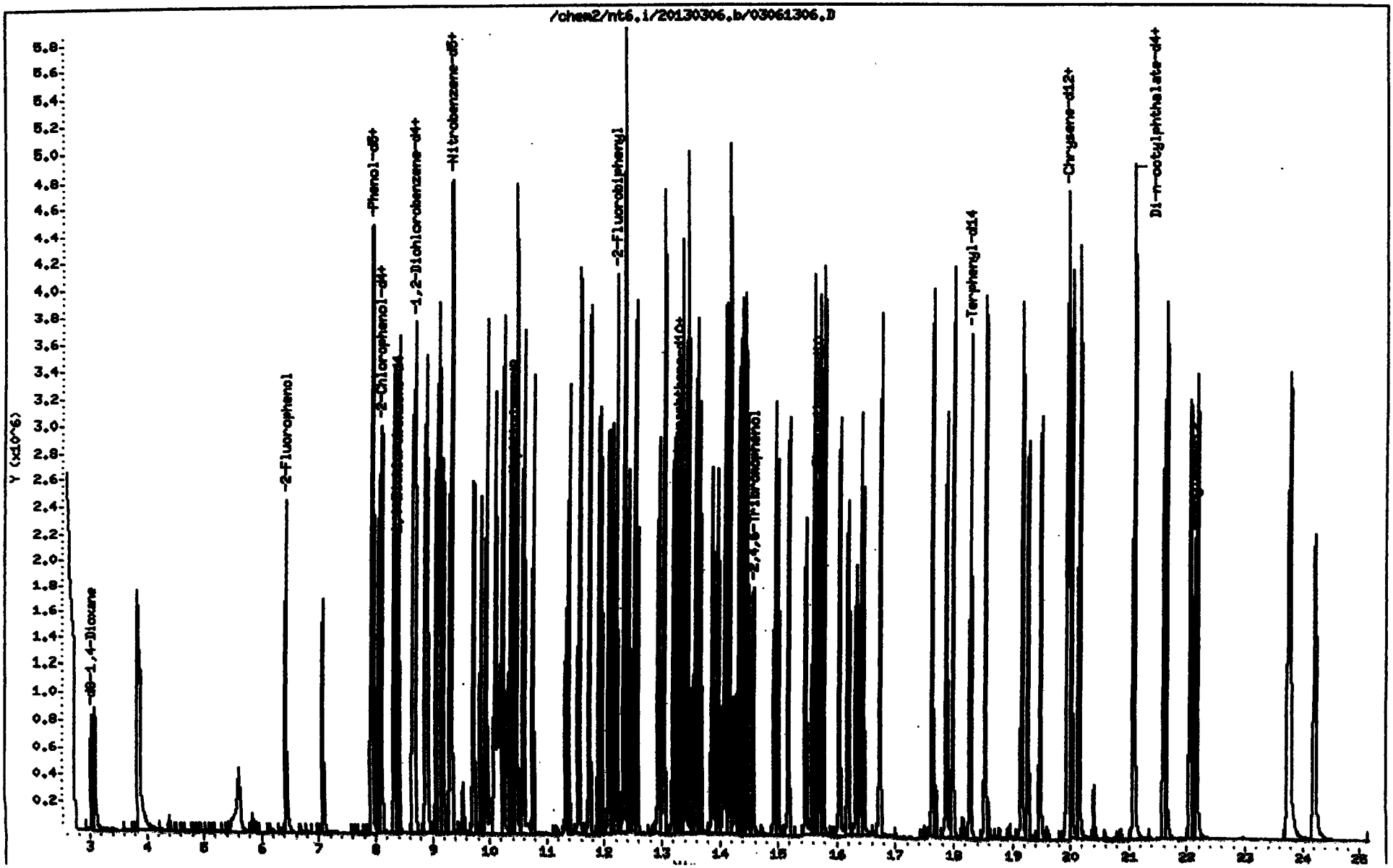
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061306.D
Date : 06-MAR-2013 15:09
Client ID: IC400306
Sample Info: IC40306,

Instrument: nt6.i

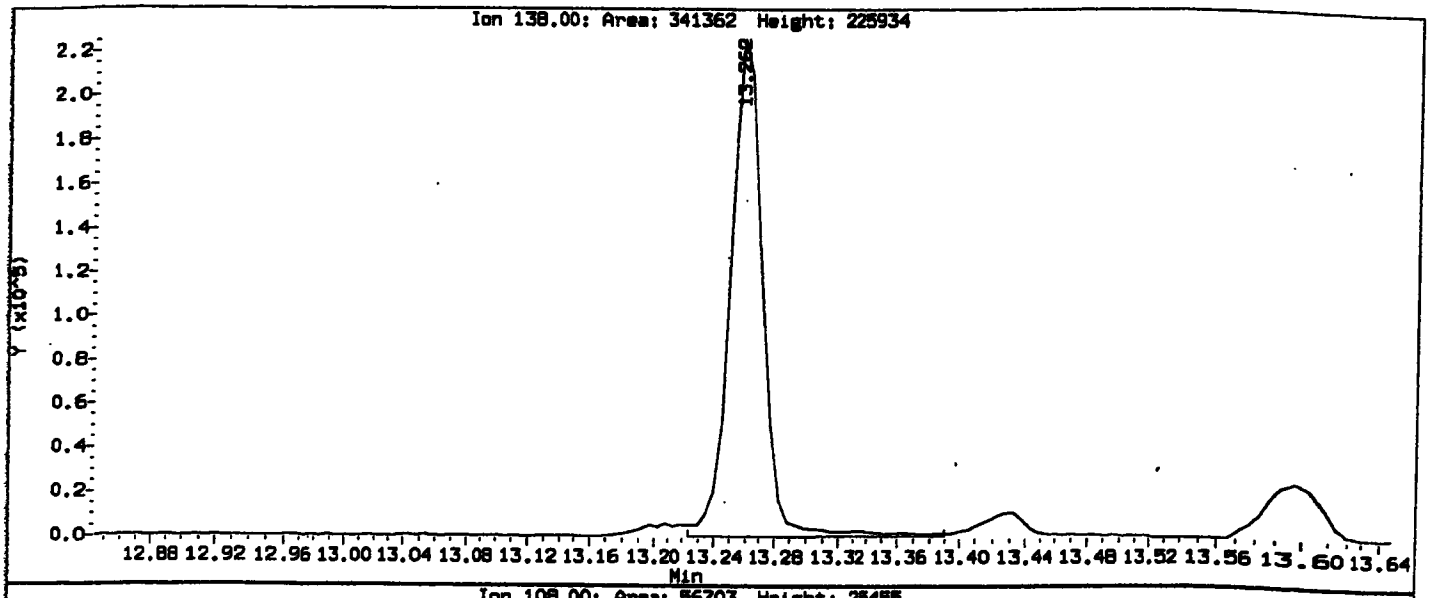
Operator: JZ
Column diameter: 0.32

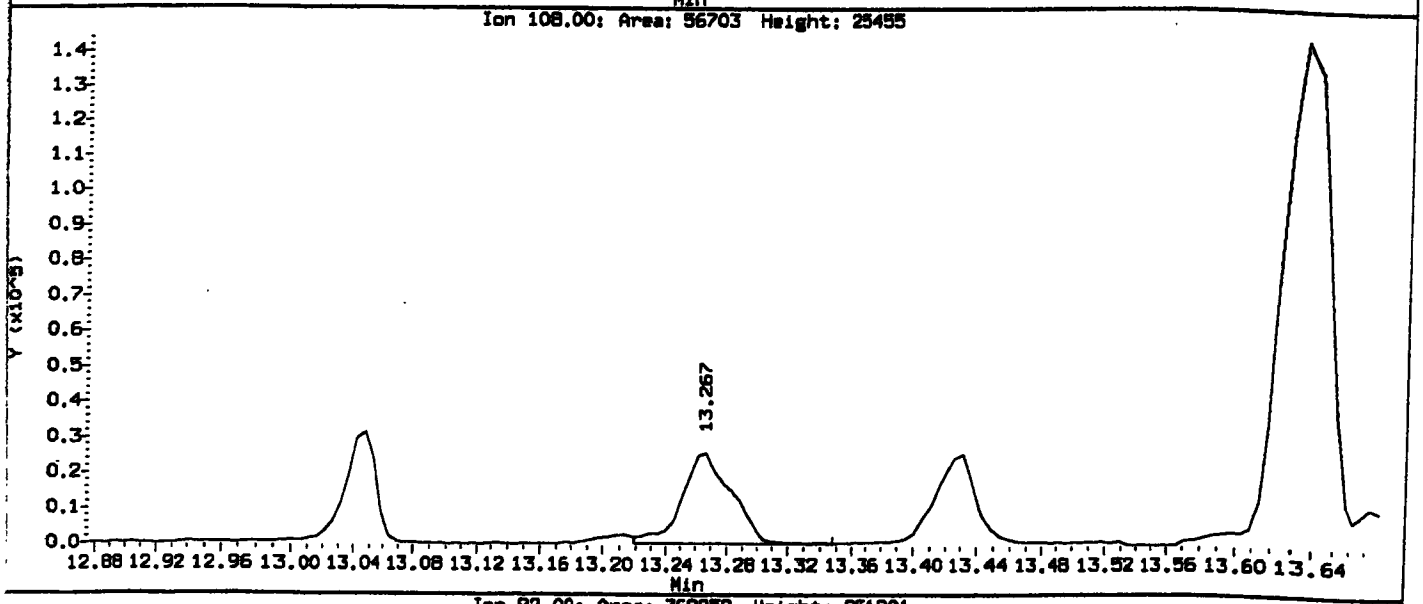
Column phase: ZB-5msi

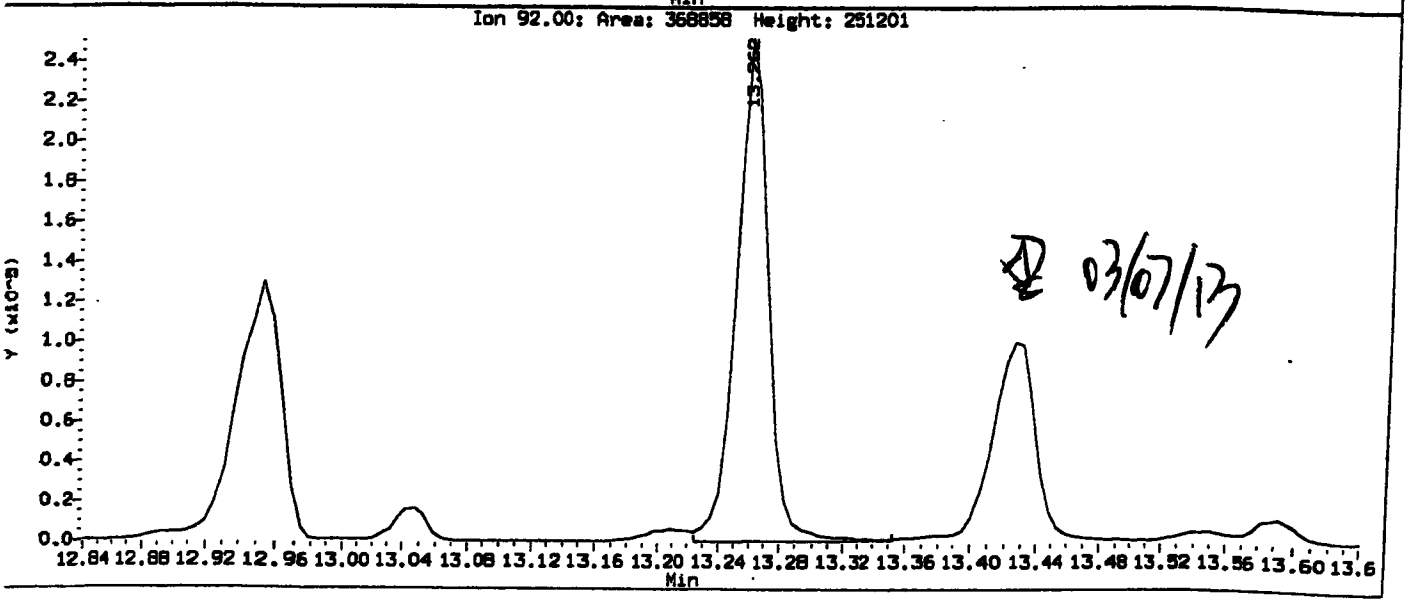


Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

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



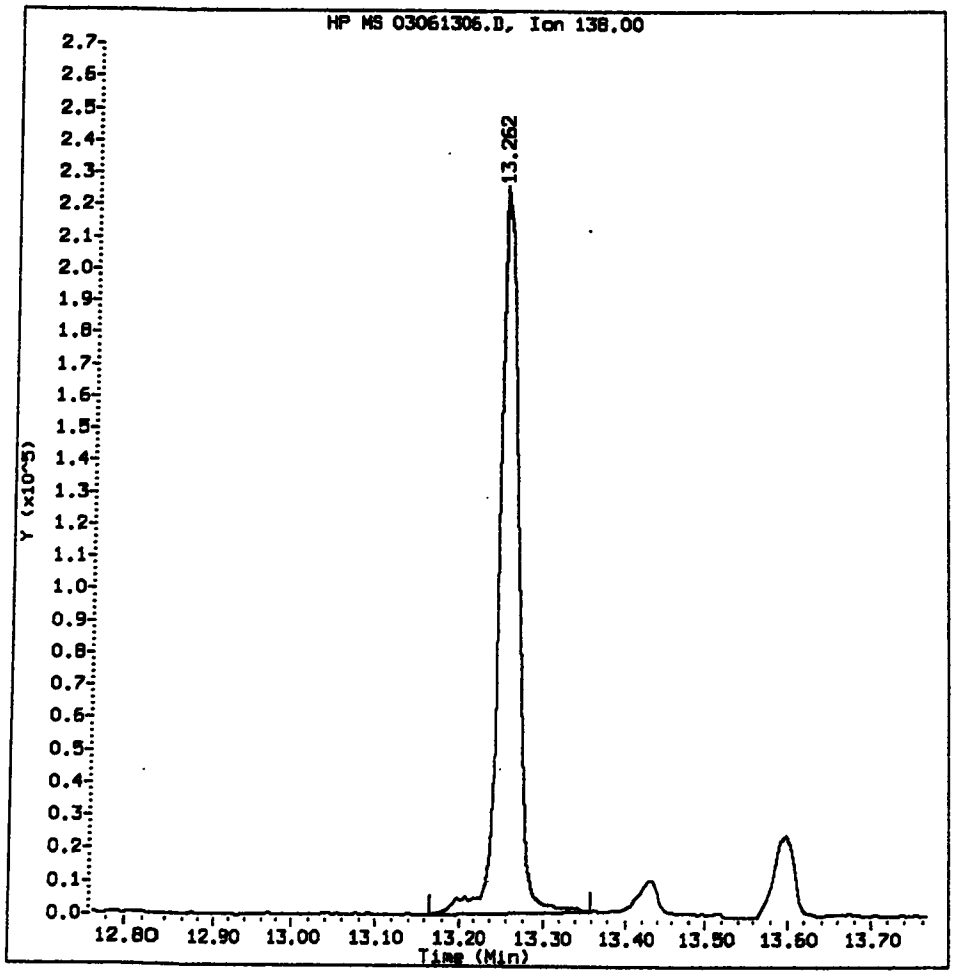




D 03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

3-Nitroaniline Amount: 41.36 Area: 342573



MANUAL INTEGRATION for 3-Nitroaniline

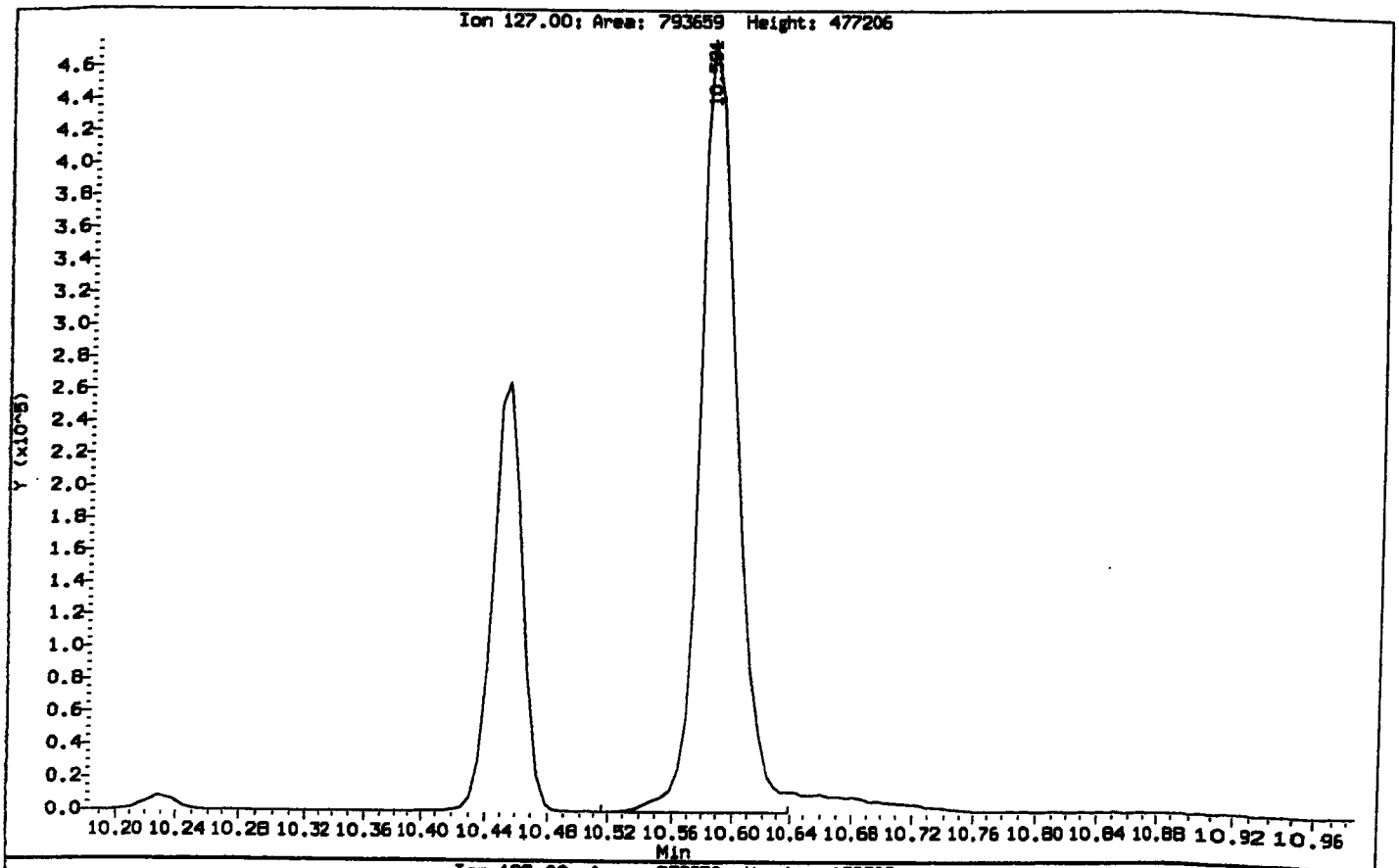
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

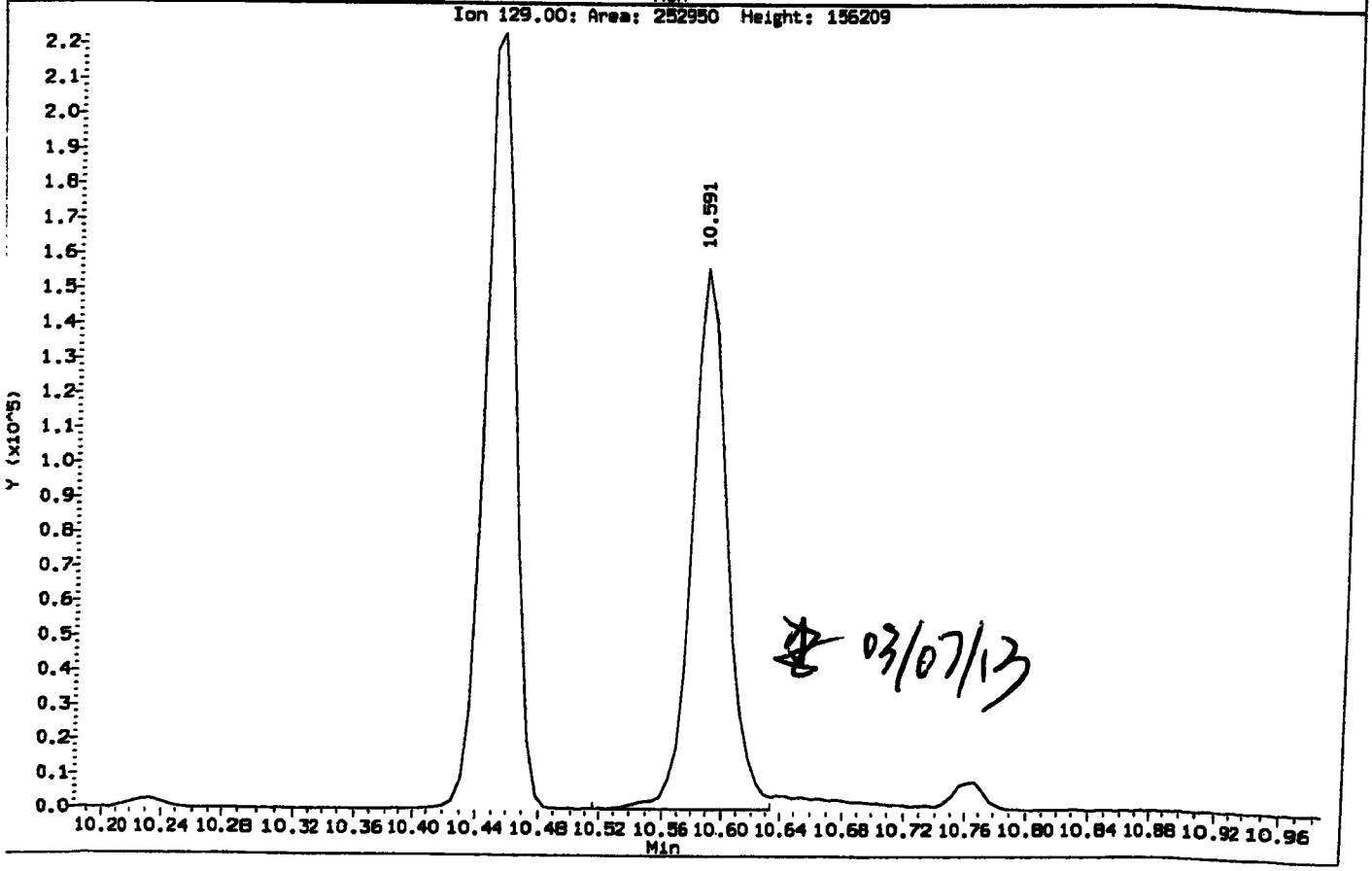
5. Other _____

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: 4-Chloroaniline
CAS Number: 106-47-8

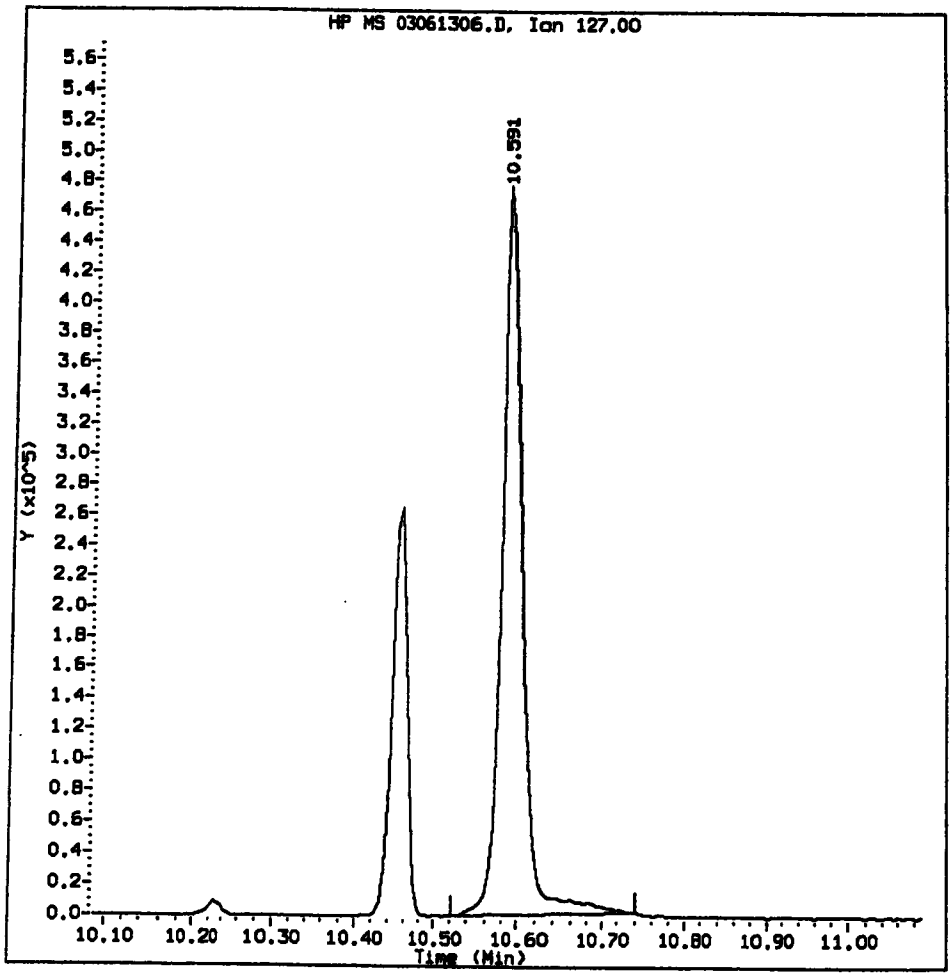




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

4-Chloroaniline Amount: 39.50 Area: 820986



MANUAL INTEGRATION for 4-Chloroaniline

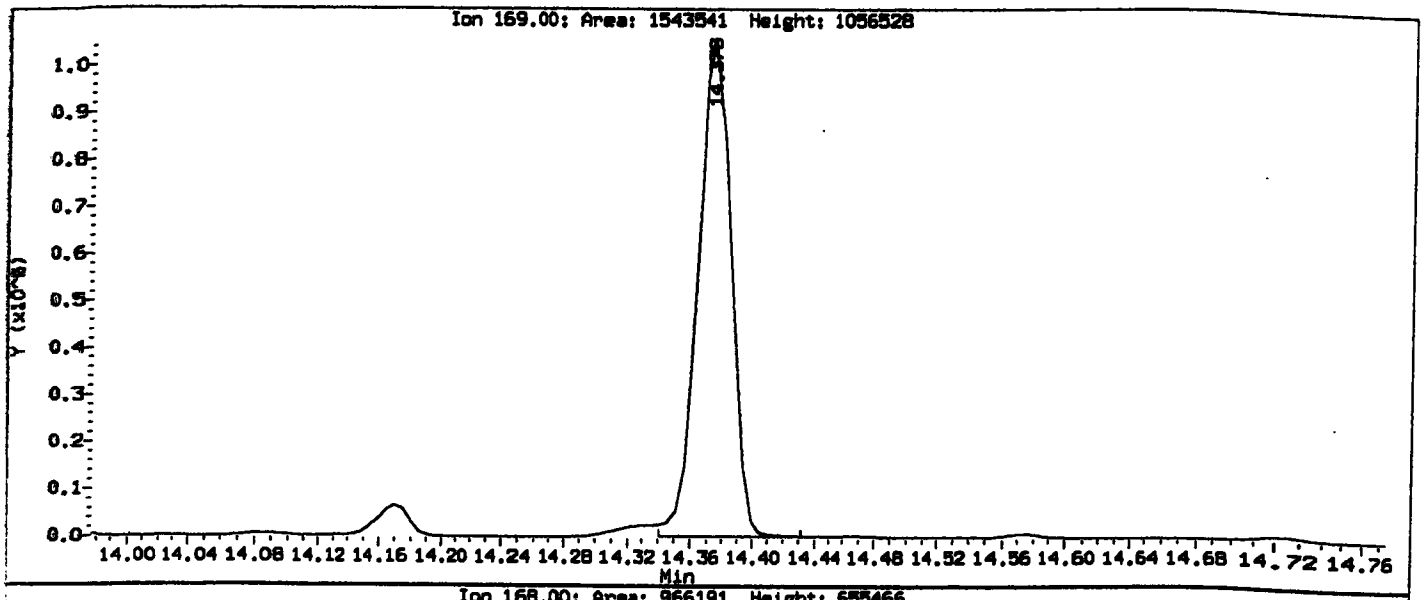
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

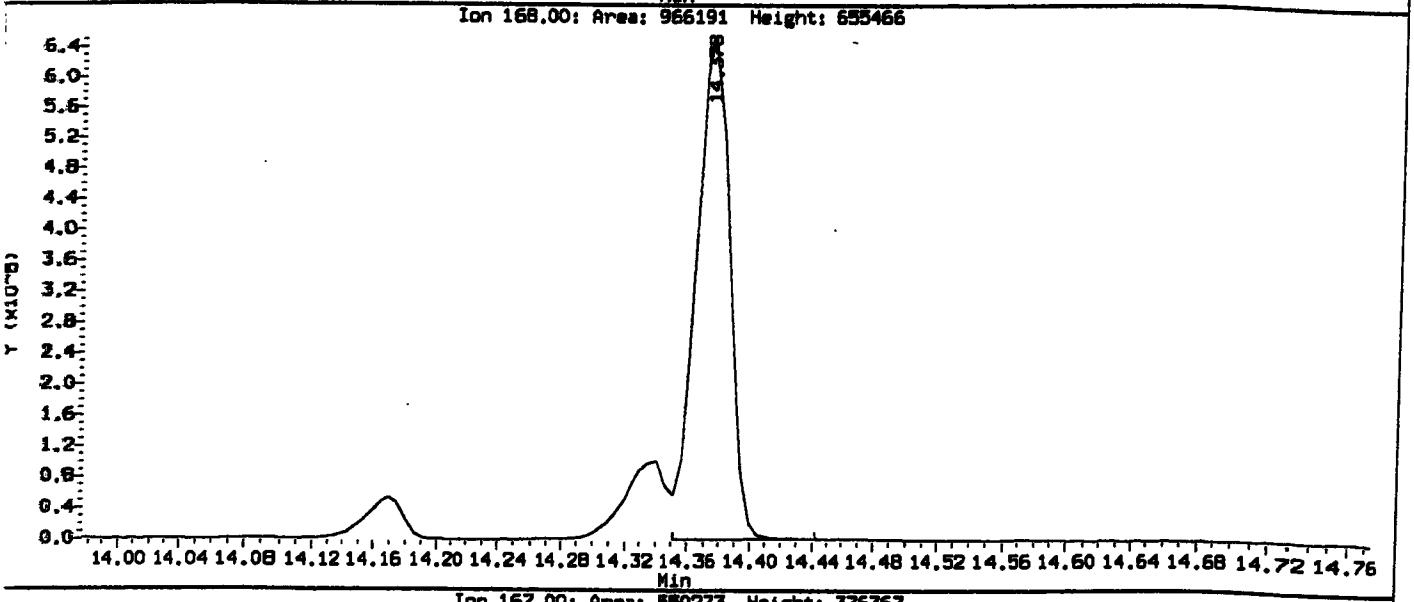
5. Other _____

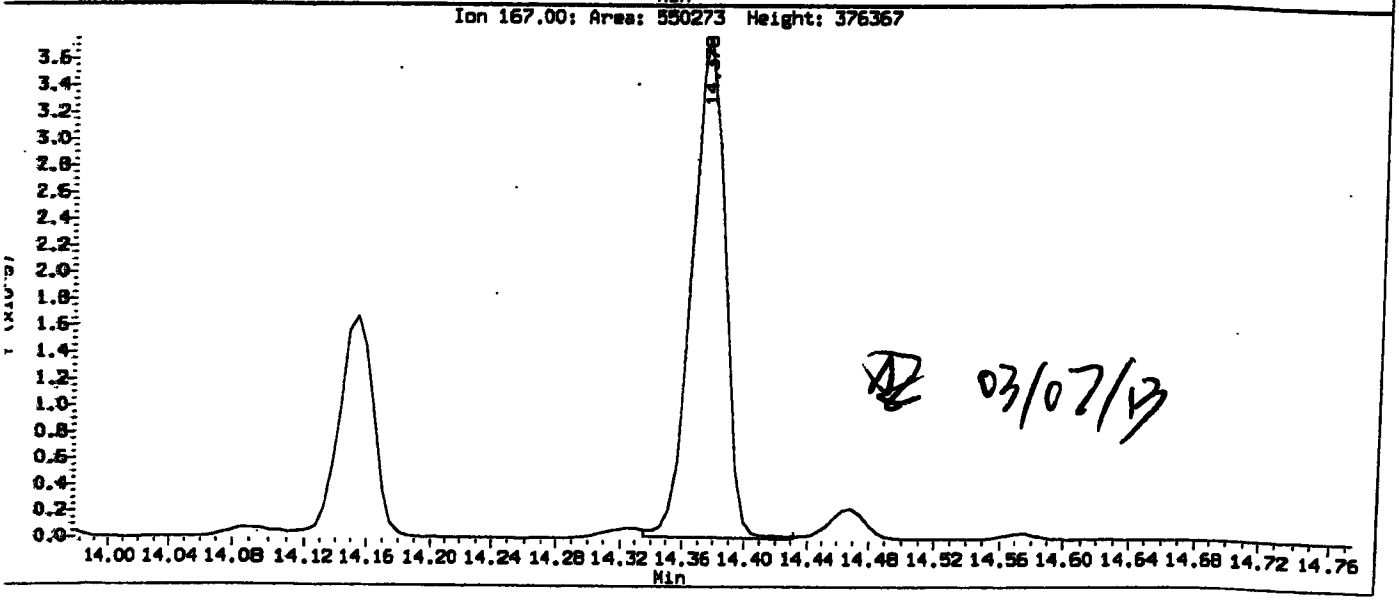
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



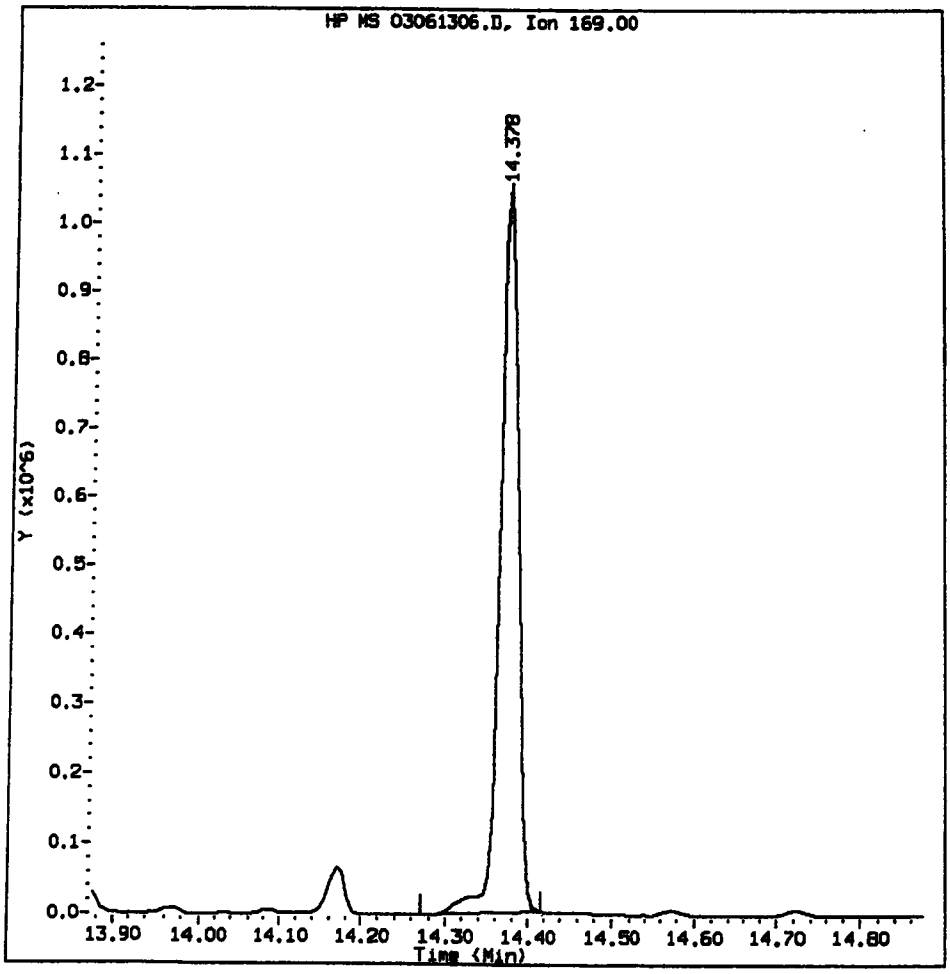




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

N-Nitrosodiphenylamine Amount: 34.50 Area: 1576736



MANUAL INTEGRATION for N-Nitrosodiphenylamine

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

5. Other _____

Analyst: _____ Date: 03/07/13

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

JZ 03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.442	6.432	(0.768)	1543969	60.0000	52.58
$	2 Phenol-d5	99	7.949	7.933	(0.948)	1704303	60.0000	49.59
	3 Phenol	94	7.970	7.954	(0.950)	1858925	60.0000	51.37
$	5 2-Chlorophenol-d4	132	8.093	8.082	(0.965)	1446368	60.0000	49.78
	4 Bis(2-Chloroethyl)ether	93	8.061	8.050	(0.961)	1613442	60.0000	51.34
	6 2-Chlorophenol	128	8.114	8.109	(0.968)	1499188	60.0000	51.78
	7 1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	1682990	60.0000	49.77
*	8 1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	453135	20.0000	
	9 1,4-Dichlorobenzene	146	8.414	8.408	(1.003)	1620328	60.0000	49.23
$	10 1,2-Dichlorobenzene-d4	152	8.686	8.681	(1.036)	922731	60.0000	45.12
	12 1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	1487370	60.0000	47.27
	11 Benzyl alcohol	108	8.665	8.654	(1.033)	1046357	60.0000	53.07
	14 2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	2570296	60.0000	51.47
	13 2-Methylphenol	108	8.889	8.878	(1.060)	1478529	60.0000	53.88
	17 Hexachloroethane	117	9.194	9.193	(1.096)	680617	60.0000	51.12
	16 N-Nitroso-di-n-propylamine	70	9.151	9.135	(1.091)	1243123	60.0000	52.71
	15 4-Methylphenol	108	9.124	9.108	(1.088)	1428361	60.0000	52.64
$	18 Nitrobenzene-d5	82	9.316	9.311	(0.893)	1726673	60.0000	50.80
	19 Nitrobenzene	77	9.354	9.343	(0.897)	1566587	60.0000	48.15
	20 Isophorone	82	9.733	9.717	(0.933)	3022002	60.0000	53.29
	21 2-Nitrophenol	139	9.856	9.851	(0.945)	860516	60.0000	57.17
	22 2,4-Dimethylphenol	107	9.952	9.947	(0.954)	1526425	60.0000	53.62
	23 Bis(2-Chloroethoxy)methane	93	10.107	10.096	(0.969)	1900431	60.0000	51.08
	24 Benzoic acid	105	10.294	10.198	(0.987)	2999389	120.000	121.8 (M)
	25 2,4-Dichlorophenol	162	10.235	10.230	(0.982)	1188590	60.0000	54.22
	26 1,2,4-Trichlorobenzene	180	10.369	10.363	(0.994)	1367908	60.0000	50.13
*	27 Naphthalene-d8	136	10.428	10.422	(1.000)	1693833	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.460	10.454	(1.003)	3435418	60.0000	59.95
	29 4-Chloroaniline	127	10.599	10.588	(1.016)	1089759	60.0000	60.52
	30 Hexachlorobutadiene	225	10.764	10.764	(1.032)	854336	60.0000	51.45
	31 4-Chloro-3-methylphenol	107	11.389	11.384	(1.092)	1259730	60.0000	54.10
	32 2-Methylnaphthalene	141	11.576	11.571	(1.110)	1966974	60.0000	47.75
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	962426	60.0000	62.20
	34 2,4,6-Trichlorophenol	196	12.084	12.078	(0.910)	981135	60.0000	60.61
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	942806	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)	2162178	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)	2133817	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)	ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.609	21.609	(0.976)	3947727	60.0000	59.03
75	Benzo(k)fluoranthene	252	21.646	21.641	(0.978)	3893557	60.0000	55.88 (H)
187	Total Benzofluoranthenes	252	21.646	21.641	(0.978)	7344864	120.000	98.66
76	Benzo(a)pyrene	252	22.057	22.057	(0.997)	3613860	60.0000	52.32
* 77	Perylene-d12	264	22.132	22.137	(1.000)	1616143	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	4556930	60.0000	54.82
79	Dibenzo(a,h)anthracene	278	23.799	23.788	(1.075)	3652156	60.0000	55.79
80	Benzo(g,h,i)perylene	276	24.237	24.226	(1.095)	3993414	60.0000	56.17
90	N-Nitrosodimethylamine	74	3.921	3.889	(0.467)	1197674	60.0000	56.13
103	Pyridine	79	3.867	3.851	(0.461)	1815991	60.0000	53.66
91	Aniline	93	7.943	7.938	(0.947)	1893346	60.0000	47.22
105	1-methylnaphthalene	141	11.747	11.747	(1.127)	2033113	60.0000	48.59
93	Benzidine	184	17.869	17.874	(0.894)	480405	60.0000	63.08
111	Azobenzene (1,2-DP-Hydrazine)	77	14.429	14.423	(1.086)	2968844	60.0000	48.66
143	1,4-Dioxane	88	3.125	3.103	(0.373)	794994	60.0000	54.08
$ 137	d8-1,4-Dioxane	96	3.061	3.039	(0.365)	745761	60.0000	54.20
144	alpha-Terpineol	59	10.481	10.470	(1.005)	1099224	60.0000	51.03
177	p-Benzoquinone	82	7.089	7.083	(0.680)	403946	60.0000	62.45
98	Retene	219	18.548	18.548	(0.928)	1950387	60.0000	52.99
99	Perylene	252	22.175	22.175	(1.002)	3062481	60.0000	50.61
133	Butylatedhydroxytoluene	205	13.446	13.440	(1.012)	1855173	60.0000	57.10
115	Tributyl Phosphate	99	14.477	14.461	(0.924)	3026027	60.0000	54.70
116	Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	2350712	60.0000	55.61
117	Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	729085	60.0000	50.70
118	Triphenyl Phosphate	326	19.482	19.482	(0.975)	779896	60.0000	57.02
123	Acetophenone	105	9.087	9.076	(1.083)	2228195	60.0000	52.24
168	Pentachlorobenzene	250	13.644	13.638	(1.027)	1071312	60.0000	50.79
113	Diphenyl Oxide	170	12.538	12.538	(0.944)	1879194	60.0000	50.12
112	Biphenyl	154	12.351	12.345	(0.930)	2290712	60.0000	55.09
120	2,3,4,6-Tetrachlorophenol	232	13.879	13.873	(1.045)	798003	60.0000	58.05
151	1,2,4,5-Tetrachlorobenzene	216	11.913	11.907	(0.897)	1239101	60.0000	52.68
110	Tetrachloroguaiacol	247	15.609	15.599	(0.997)	894026	120.000	106.6
109	3,4,5-Trichloroguaiacol	213	13.975	13.969	(0.892)	475254	60.0000	52.05
181	3,4,6-Trichloroguaiacol	211	14.092	14.087	(1.680)	564659	60.0000	54.61
108	4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	496468	60.0000	55.12
184	3,4-Dichloroguaiacol	192	12.431	12.425	(1.482)	523084	60.0000	53.28
107	4,5-Dichloroguaiacol	192	13.216	13.205	(0.995)	1265428	120.000	107.5
182	4,6-Dichloroguaiacol	192	13.216	13.205	(1.576)	1304327	120.000	108.9
185	4-Chloroguaiacol	115	11.341	11.336	(1.352)	337977	30.0000	26.55
186	Carbaryl	144	16.470	16.459	(1.052)	2040898	60.0000	55.25
178	2-Benzyl-4-Chlorophenol	218	16.421	16.411	(1.048)	711018	60.0000	53.70
106	Guaiacol	124	9.343	9.332	(1.114)	1104296	60.0000	46.85
188	2,6-Dichlorophenol	162	10.604	10.598	(1.264)	1043274	60.0000	52.00
189	N-Nitrosomethylethylamine	88	5.625	5.620	(0.671)	859420	60.0000	57.40

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061307.D
Lab Smp Id: IC60306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC600306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	453135	-1.09
27 Naphthalene-d8	1718341	859170	3436682	1693833	-1.43
42 Acenaphthene-d10	1010041	505020	2020082	963022	-4.66
59 Phenanthrene-d10	1666734	833367	3333468	1598516	-4.09
69 Chrysene-d12	1675752	837876	3351504	1561828	-6.80
134 Di-n-octylphthala	2026355	1013178	4052710	1777444	-12.28
77 Perylene-d12	1637524	818762	3275048	1616143	-1.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.42	9.92	10.92	10.43	0.05
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.02

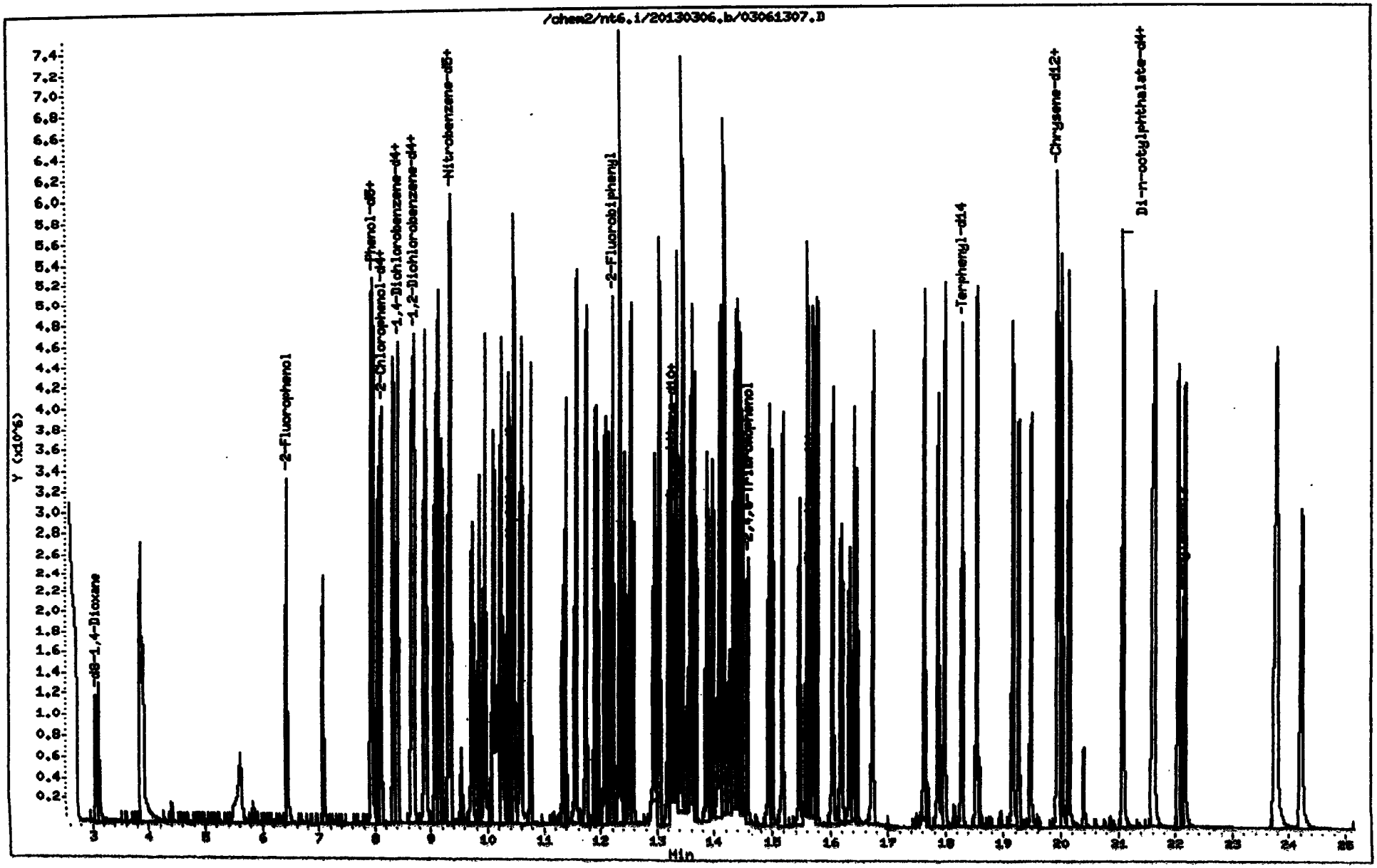
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061307.D
Date : 06-MAR-2013 15:43
Client ID: IC600306
Sample Info: IC60306,

Instrument: nt6.i

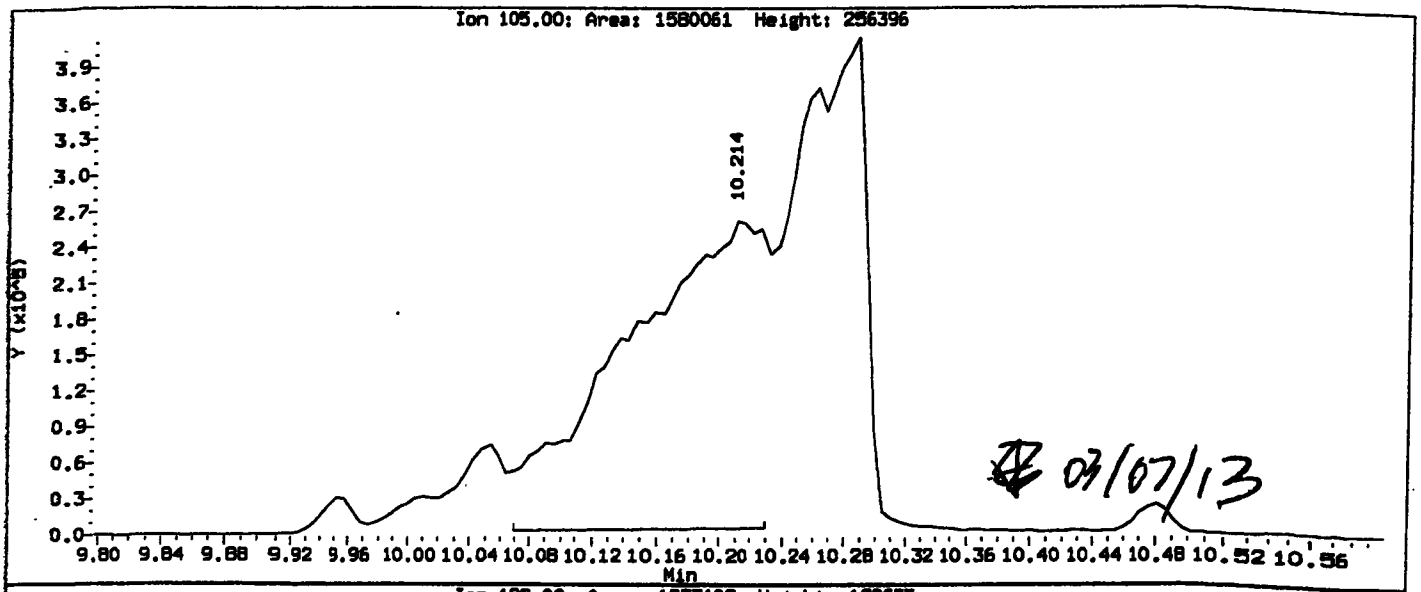
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi

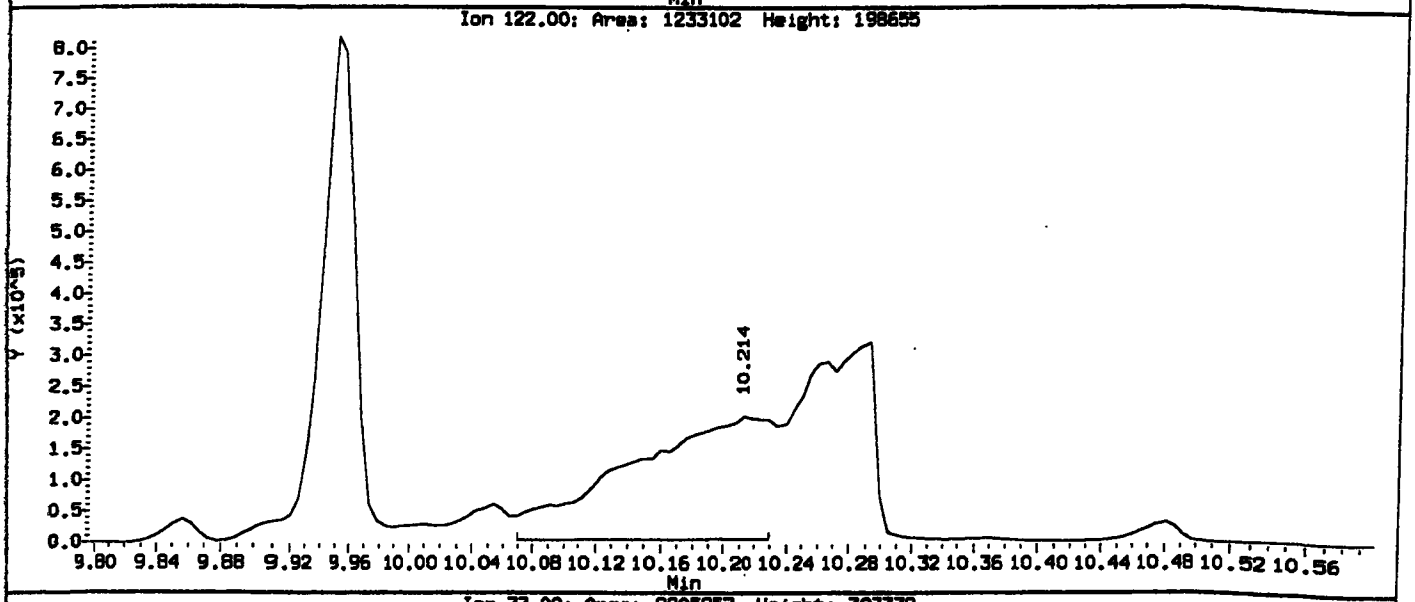


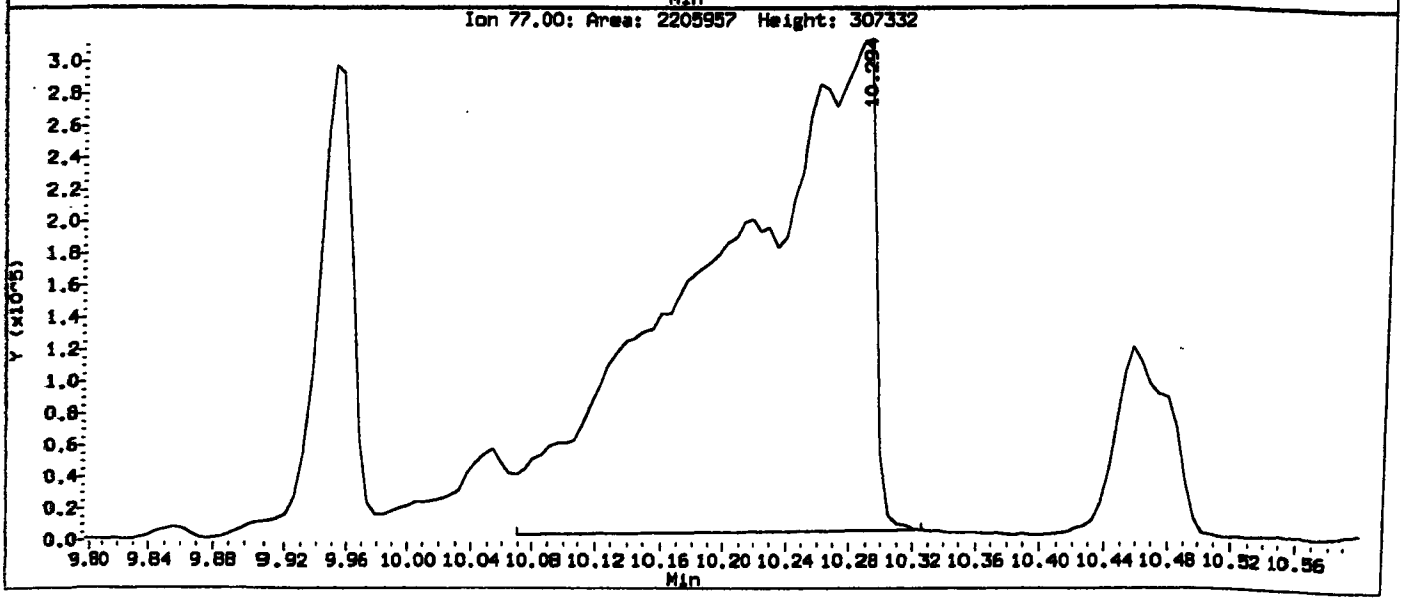
Data File: /chem2/nt6.i/20130306A.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

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



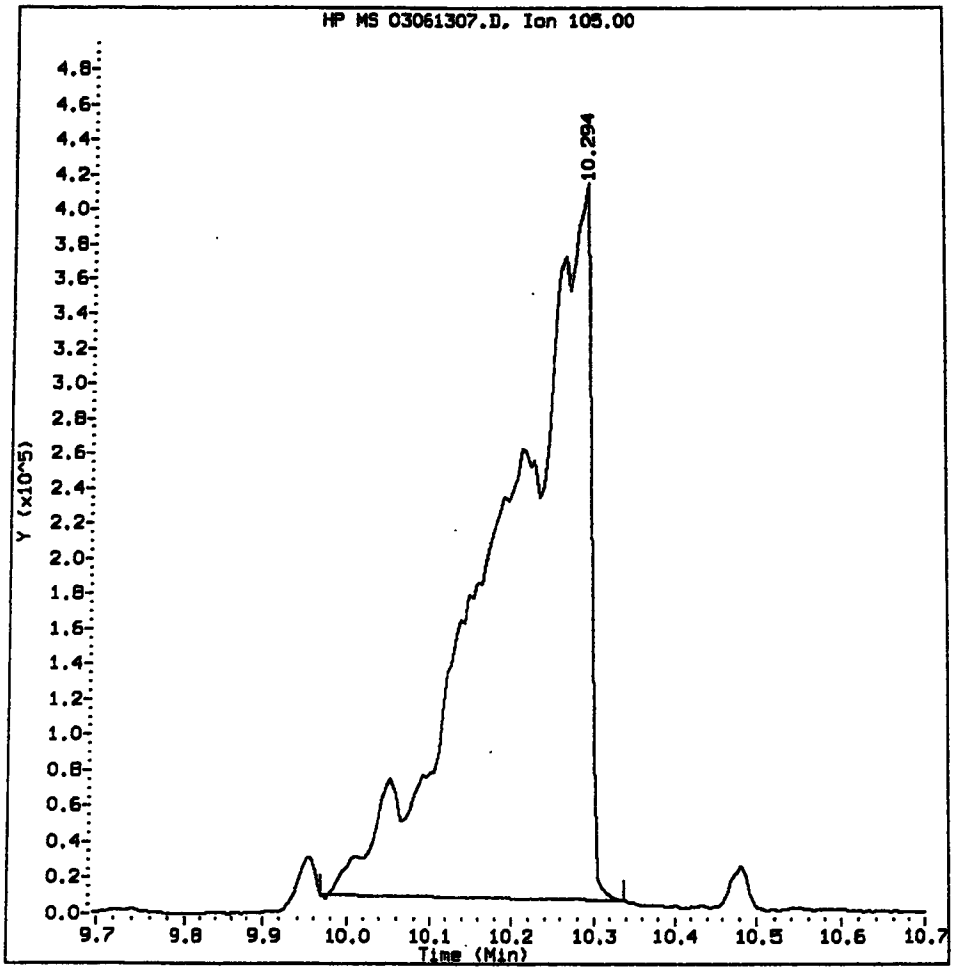
03/07/13





IC60306, /chem2/nt6.i/20130306.b/03061307.D

Benzoic acid Amount: 121.80 Area: 2999389



MANUAL INTEGRATION for Benzoic acid

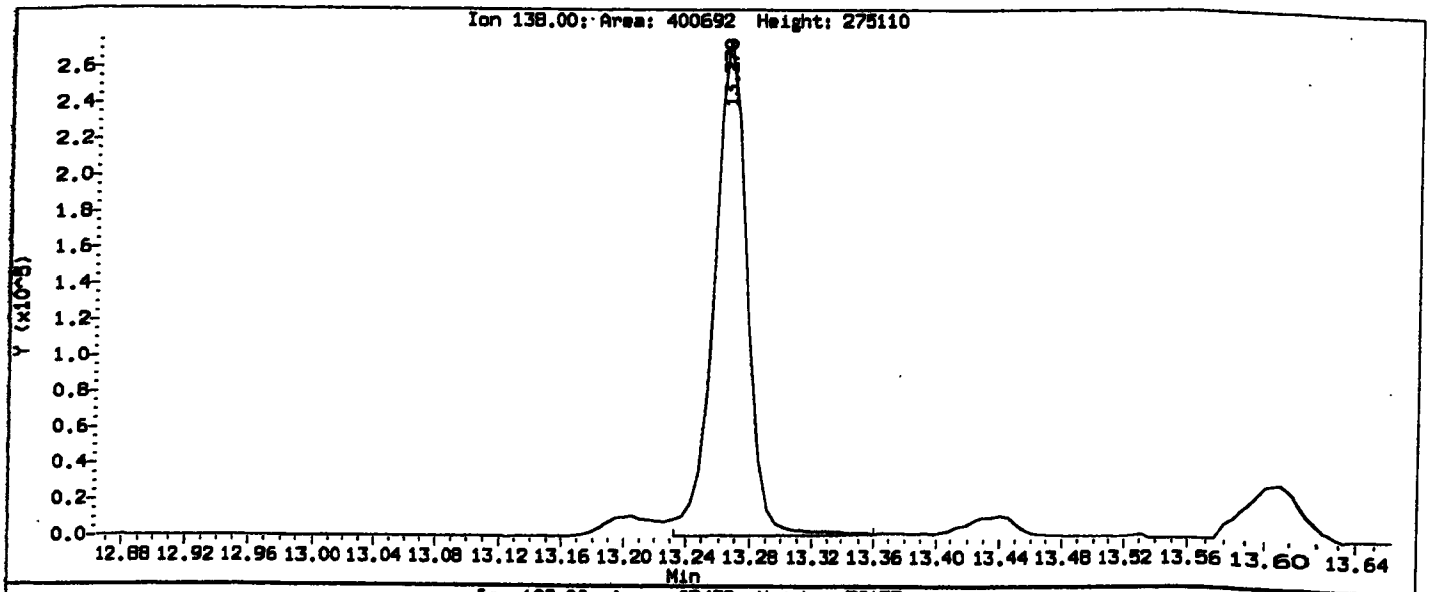
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

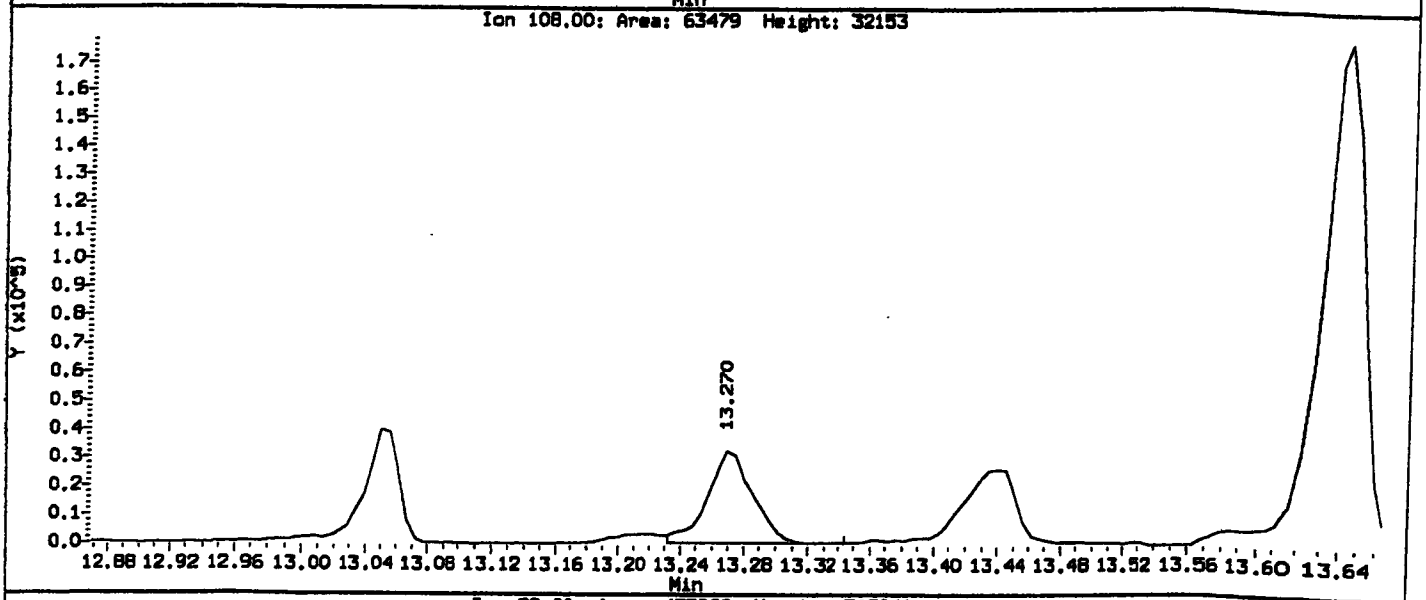
5. Other _____

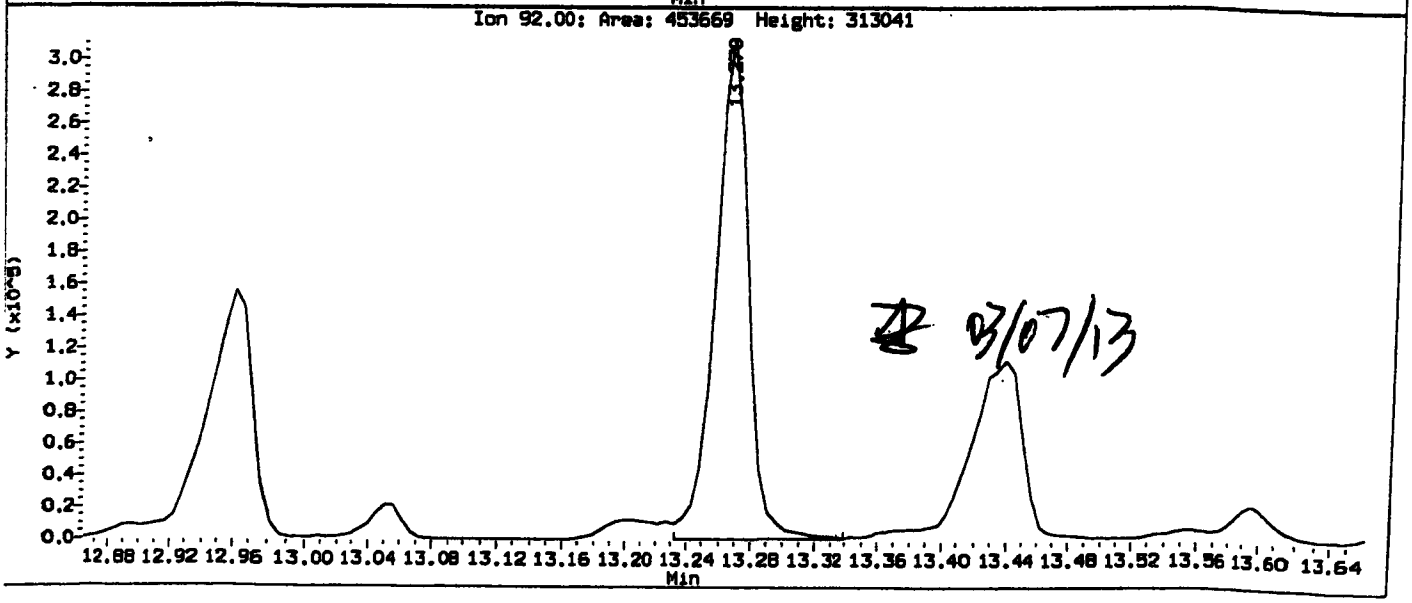
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

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



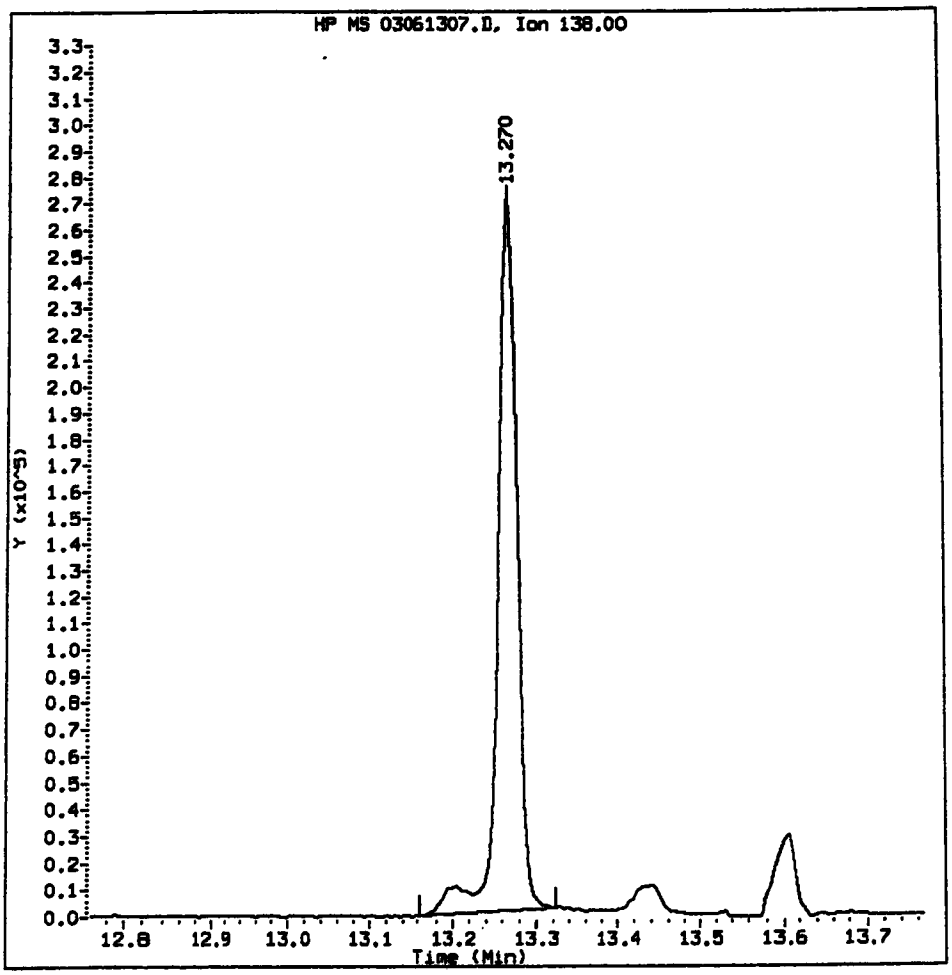




3/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

3-Nitroaniline Amount: 56.15 Area: 415090



MANUAL INTEGRATION for 3-Nitroaniline

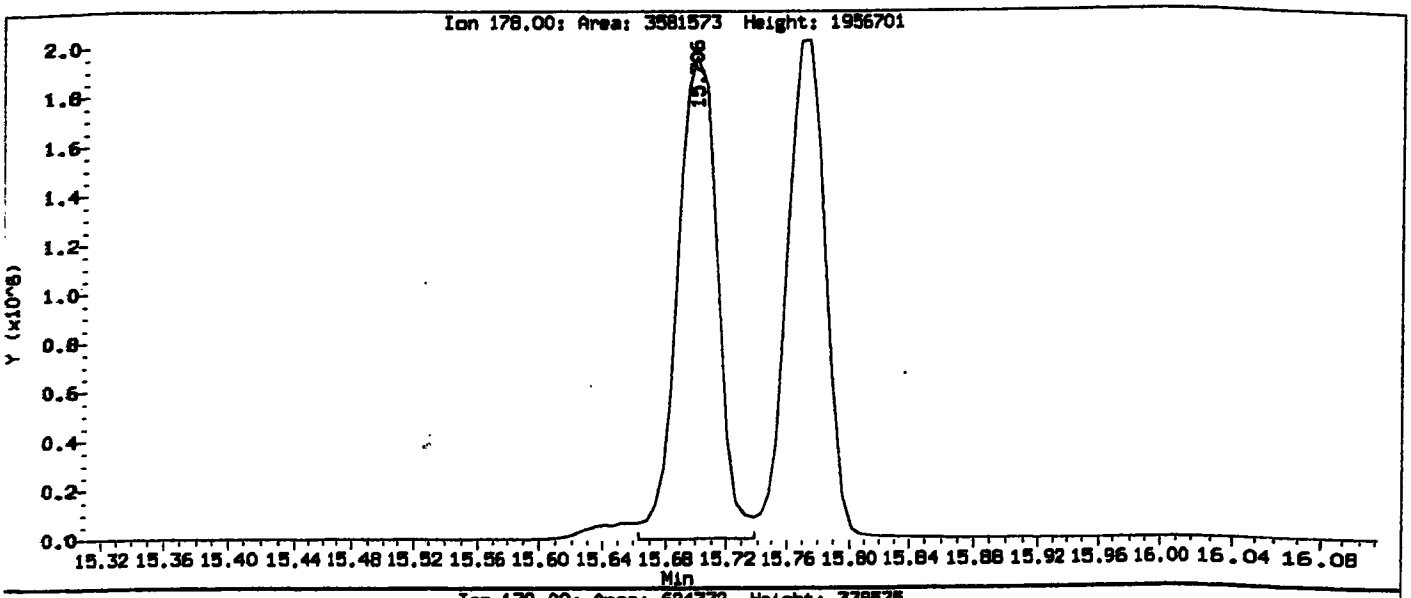
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

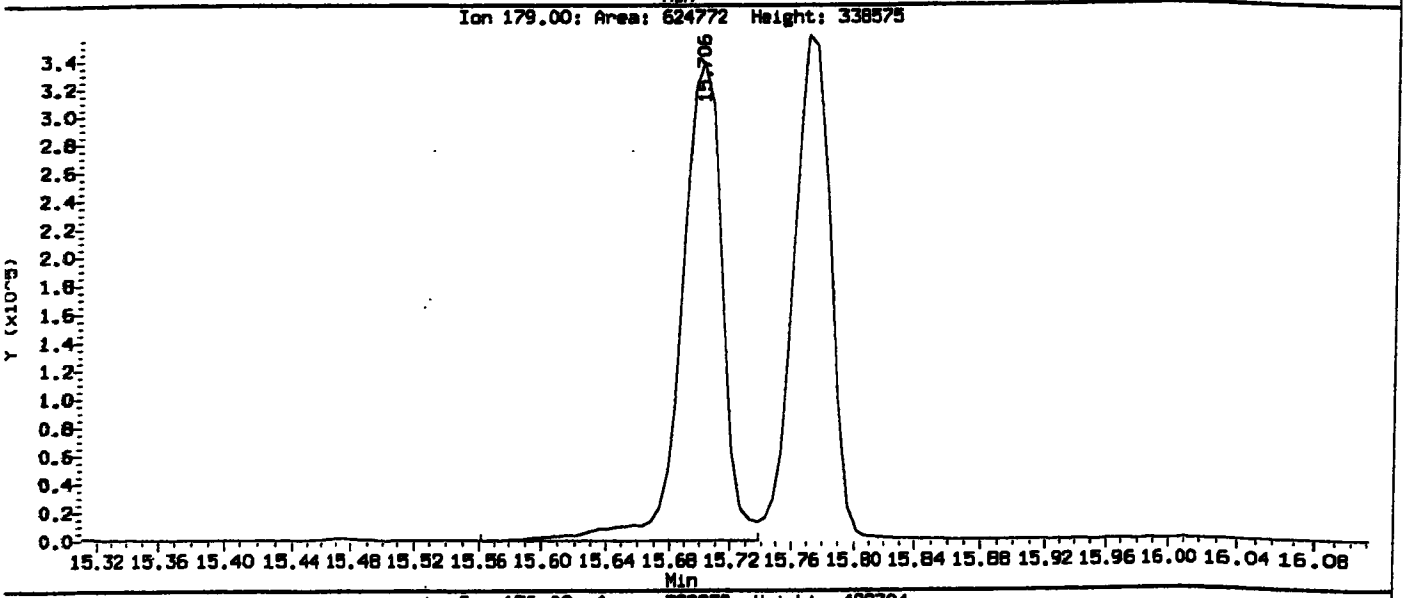
5. Other _____

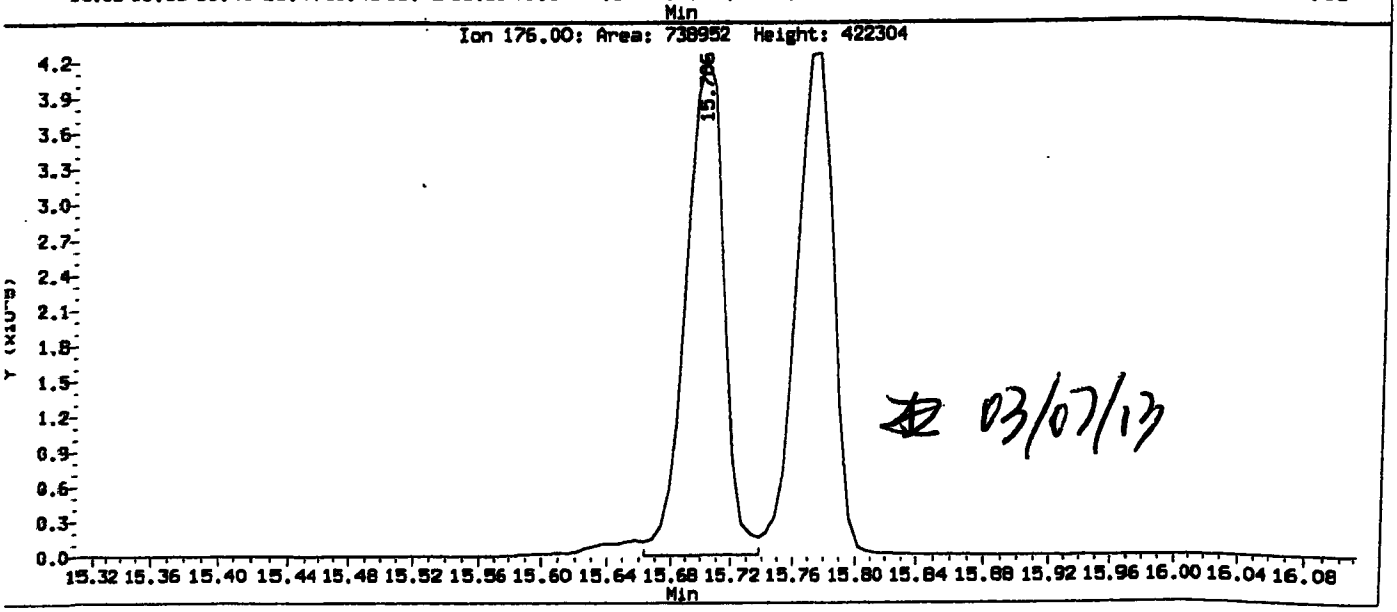
Analyst: AD Date: 3/7/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: Phenanthrene
CAS Number: 85-01-8



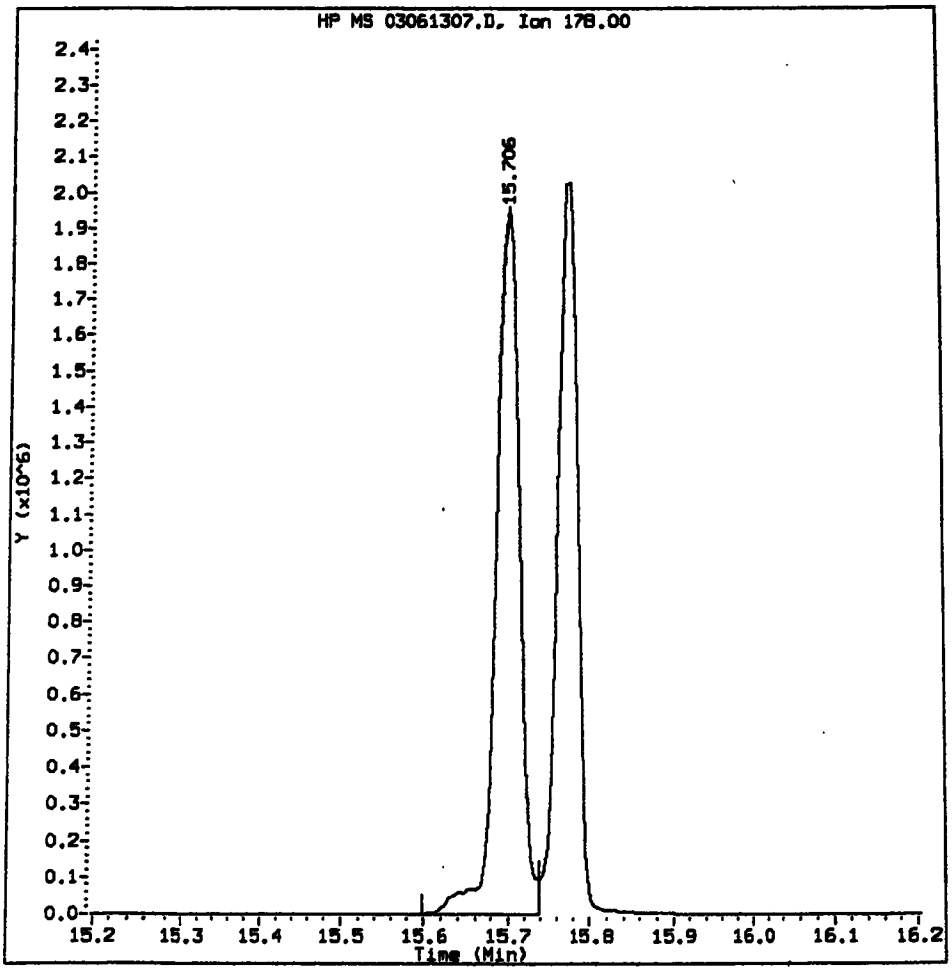




03/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

Phenanthrene Amount: 46.89 Area: 3708136



MANUAL INTEGRATION for Phenanthrene

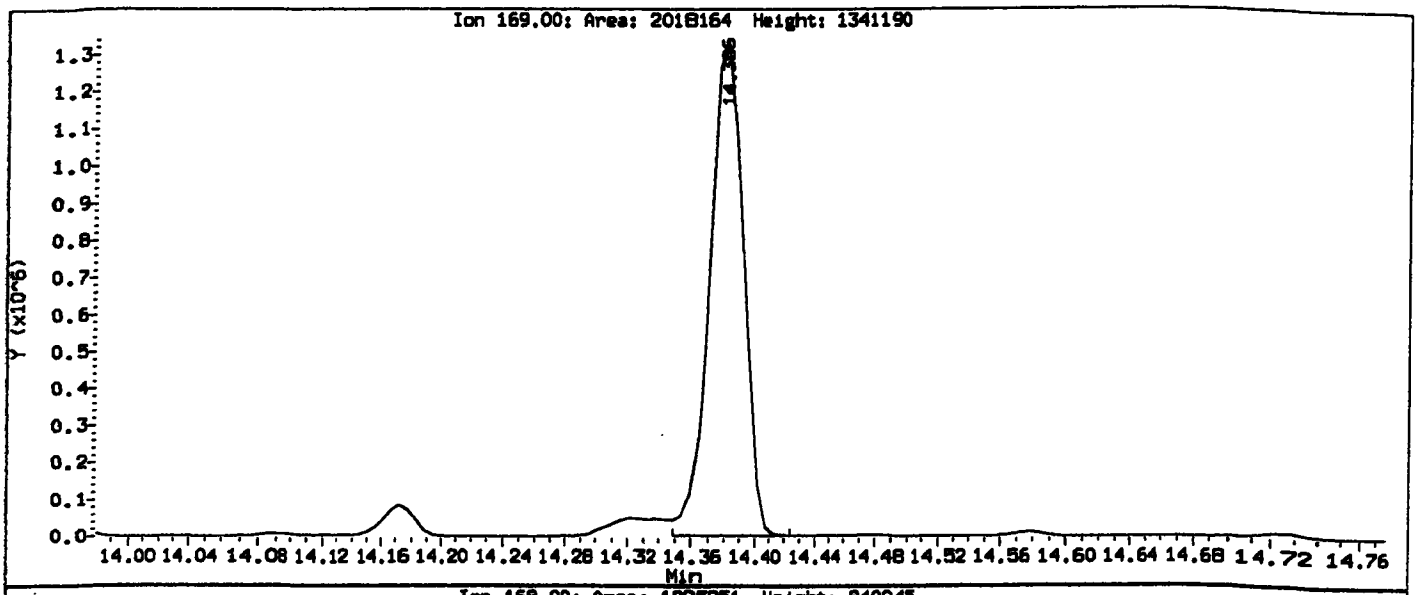
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

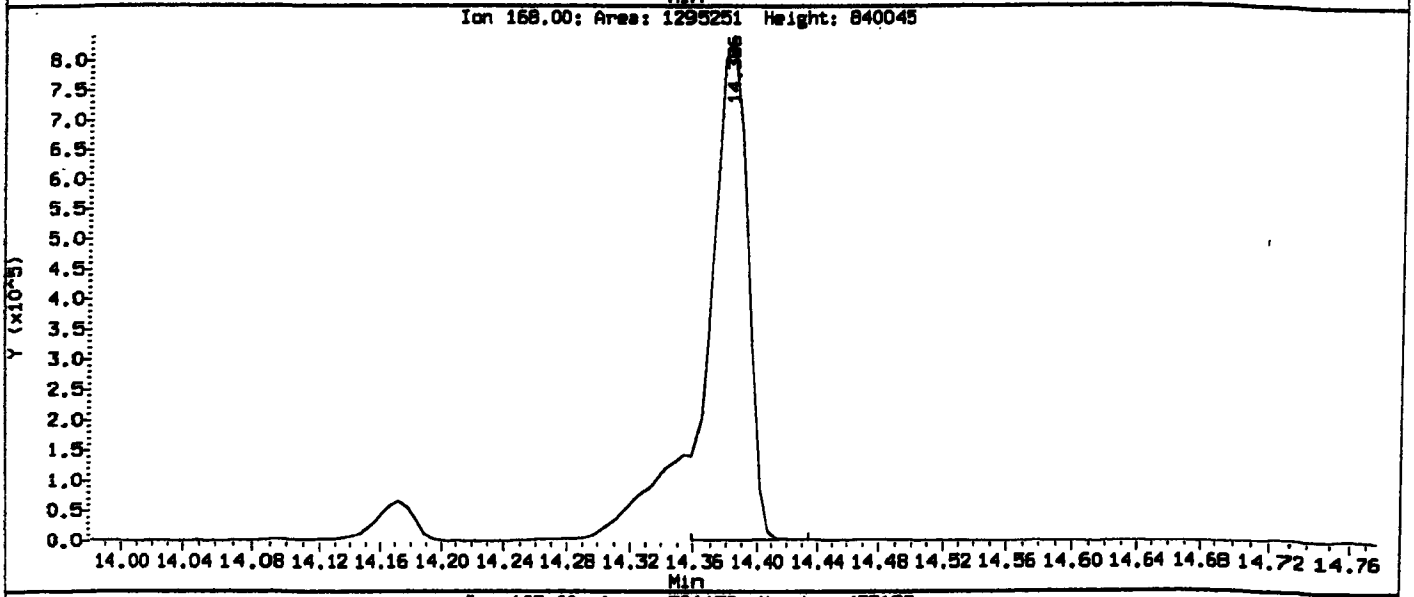
5. Other _____

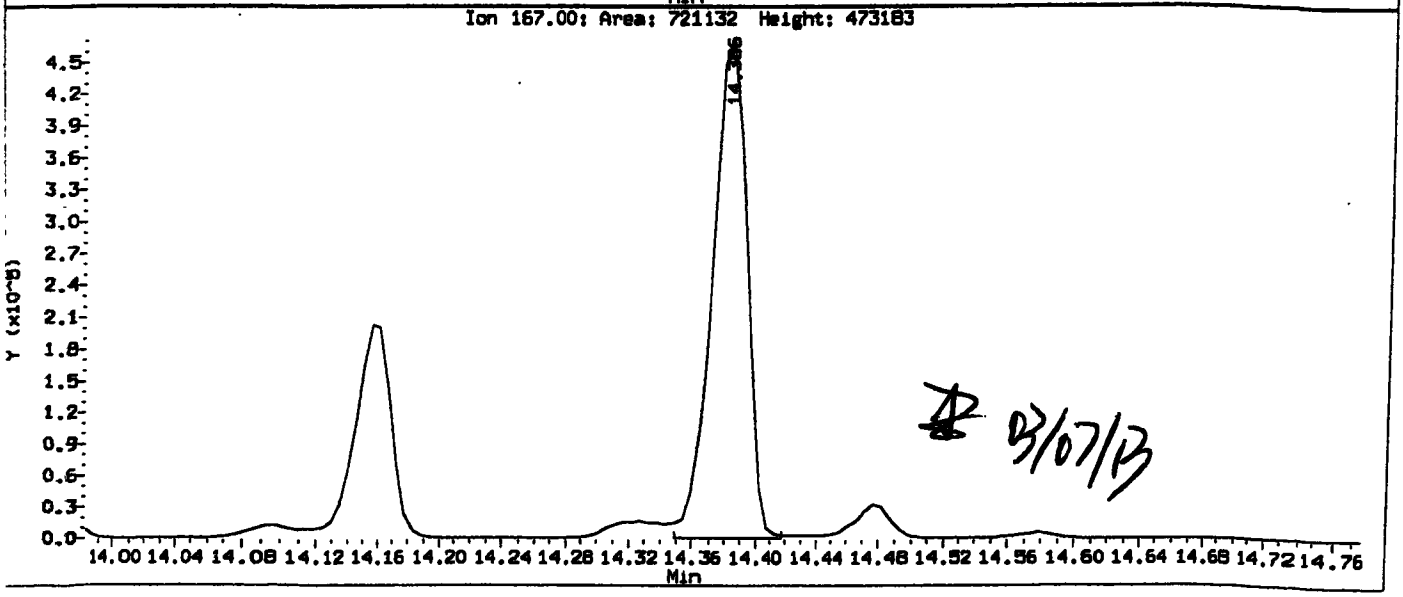
Analyst: _____ Date: 03/07/13

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



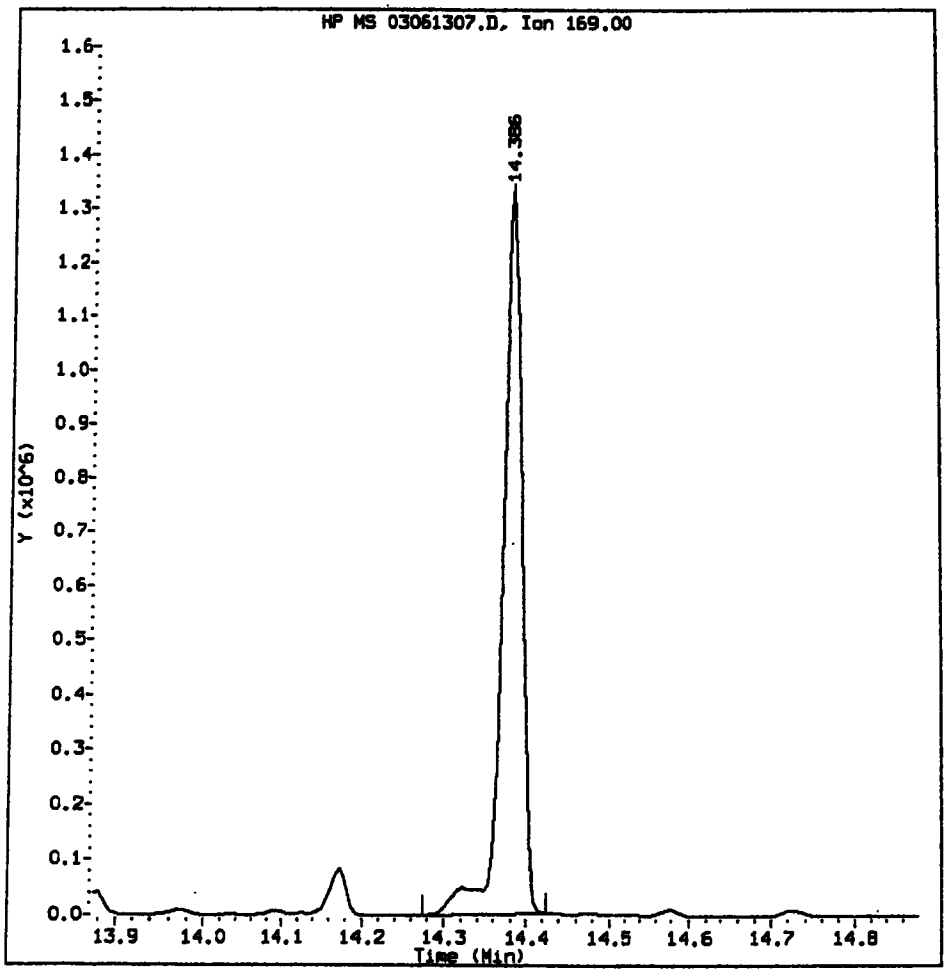




D 03/07/13

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: 3/07/13

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

	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	

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28	Naphthalene	128	10.463	10.454	(1.004)	4129583	80.0000	86.89
	29	4-Chloroaniline	127	10.602	10.588	(1.017)	1419444	80.0000	99.06
	30	Hexachlorobutadiene	225	10.768	10.764	(1.033)	1076533	80.0000	69.13
	31	4-Chloro-3-methylphenol	107	11.393	11.384	(1.093)	1599016	80.0000	73.23
	32	2-Methylnaphthalene	141	11.580	11.571	(1.111)	2389384	80.0000	61.85
	33	Hexachlorocyclopentadiene	237	11.948	11.950	(0.899)	1256994	80.0000	88.25
	34	2,4,6-Trichlorophenol	196	12.087	12.078	(0.910)	1242196	80.0000	83.35
	35	2,4,5-Trichlorophenol	196	12.141	12.137	(0.914)	1128101	80.0000	76.73
$	36	2-Fluorobiphenyl	172	Compound Not Detected.					
	37	2-Chloronaphthalene	162	12.360	12.356	(0.930)	2726374	80.0000	81.65
	38	2-Nitroaniline	65	12.595	12.580	(0.948)	1067475	80.0000	81.45
	39	Dimethylphthalate	163	12.969	12.949	(0.976)	3824957	80.0000	71.69
	40	Acenaphthylene	152	13.038	13.034	(0.981)	4470626	80.0000	63.93
	41	2,6-Dinitrotoluene	165	13.060	13.045	(0.983)	865930	80.0000	75.96
*	42	Acenaphthene-d10	164	13.289	13.286	(1.000)	886542	20.0000	
	43	3-Nitroaniline	138	13.273	13.264	(0.999)	496848	80.0000	81.26 (M)
	44	Acenaphthene	153	13.348	13.334	(1.004)	2990801	80.0000	66.06
	45	2,4-Dinitrophenol	184	13.455	13.424	(1.012)	1455877	160.000	178.8
	46	Dibenzofuran	168	13.610	13.595	(1.024)	3797229	80.0000	64.13
	47	4-Nitrophenol	109	13.567	13.547	(1.021)	435155	80.0000	75.14
	48	2,4-Dinitrotoluene	165	13.690	13.676	(1.030)	1187085	80.0000	76.98
	50	Diethylphthalate	149	14.112	14.098	(1.062)	3261747	80.0000	65.98
	49	Fluorene	166	14.165	14.156	(1.066)	2918650	80.0000	81.81
	51	4-Chlorophenyl-phenylether	204	14.176	14.172	(1.067)	1756954	80.0000	67.60
	52	4-Nitroaniline	138	14.288	14.252	(1.075)	705690	80.0000	81.16
	53	4,6-Dinitro-2-methylphenol	198	14.358	14.333	(0.916)	1683138	160.000	160.8
	54	N-Nitrosodiphenylamine	169	14.390	14.375	(0.918)	2609924	80.0000	64.16 (M)
$	55	2,4,6-Tribromophenol	330	Compound Not Detected.					
	56	4-Bromophenyl-phenylether	248	14.956	14.952	(0.955)	1183353	80.0000	74.16
	57	Hexachlorobenzene	284	15.186	15.182	(0.969)	1239812	80.0000	75.36
	58	Pentachlorophenol	266	15.480	15.470	(0.988)	833386	80.0000	85.88
*	59	Phenanthrene-d10	188	15.667	15.663	(1.000)	1453987	20.0000	
	60	Phenanthrene	178	15.709	15.700	(1.003)	4601992	80.0000	63.97
	61	Anthracene	178	15.784	15.770	(1.008)	4251383	80.0000	59.02
	62	Carbazole	167	16.057	16.047	(1.025)	4177813	80.0000	80.56
	63	Di-n-butylphthalate	149	16.751	16.747	(1.069)	5262499	80.0000	57.95
	64	Fluoranthene	202	17.643	17.639	(1.126)	4925676	80.0000	65.09
	65	Pyrene	202	18.001	17.992	(0.901)	5041196	80.0000	66.18
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	19.171	19.167	(0.959)	2514680	80.0000	67.51
	68	Benzo(a)anthracene	228	19.956	19.953	(0.999)	4549328	80.0000	71.54
*	69	Chrysene-d12	240	19.983	19.979	(1.000)	1394767	20.0000	
	70	3,3'-Dichlorobenzidine	252	19.951	19.953	(0.998)	1228873	80.0000	70.24
	71	Chrysene	228	20.026	20.017	(1.002)	4316537	80.0000	66.49
	72	bis(2-Ethylhexyl)phthalate	149	20.149	20.150	(0.956)	3297035	80.0000	71.04
*	134	Di-n-octylphthalate-d4	153	21.078	21.085	(1.000)	1577157	20.0000	
	73	Di-n-octylphthalate	149	21.089	21.096	(1.000)	5201474	80.0000	69.85

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	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.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	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

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.02
27 Naphthalene-d8	10.42	9.92	10.92	10.43	0.04
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.03
59 Phenanthrene-d10	15.66	15.16	16.16	15.67	0.02
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.02
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.03
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.01

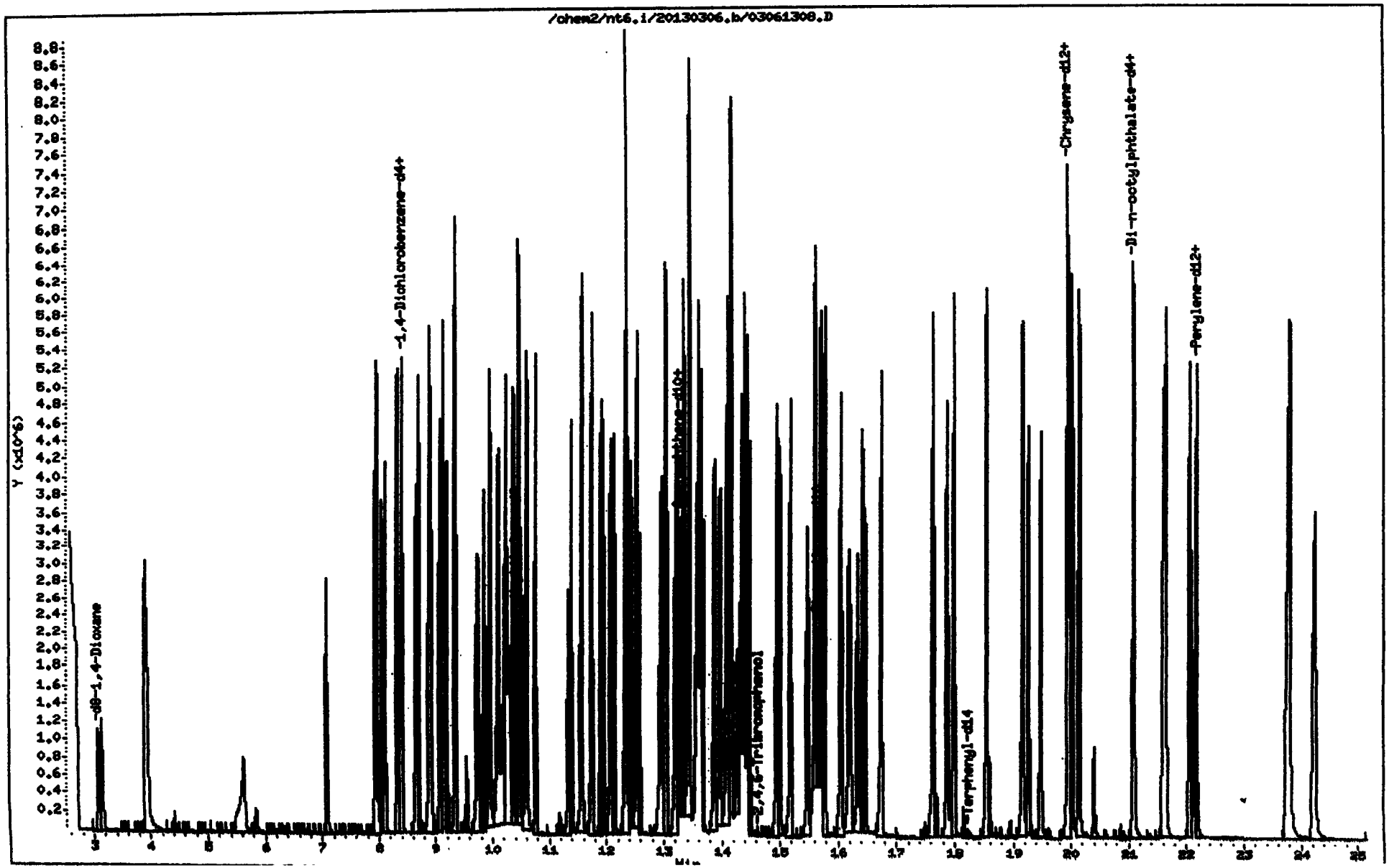
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061308.D
Date : 06-MAR-2013 16:18
Client ID: IC800306
Sample Info: IC80306,

Instrument: nt6.i

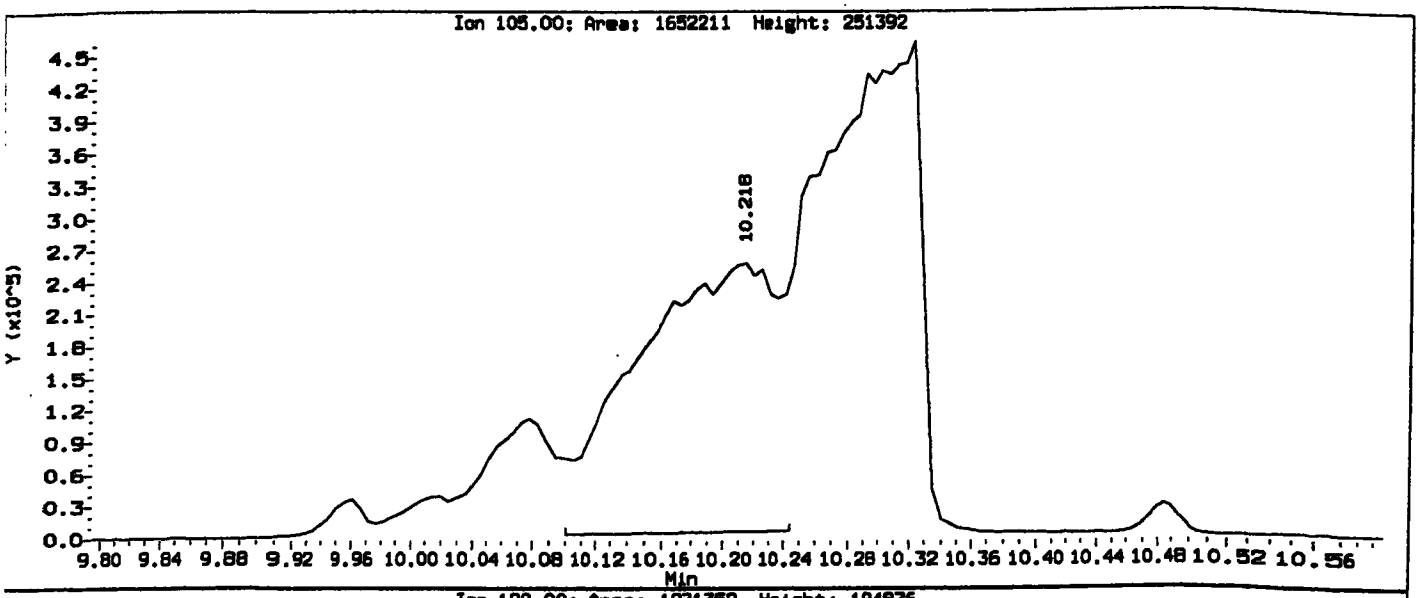
Operator: JZ
Column diameter: 0.32

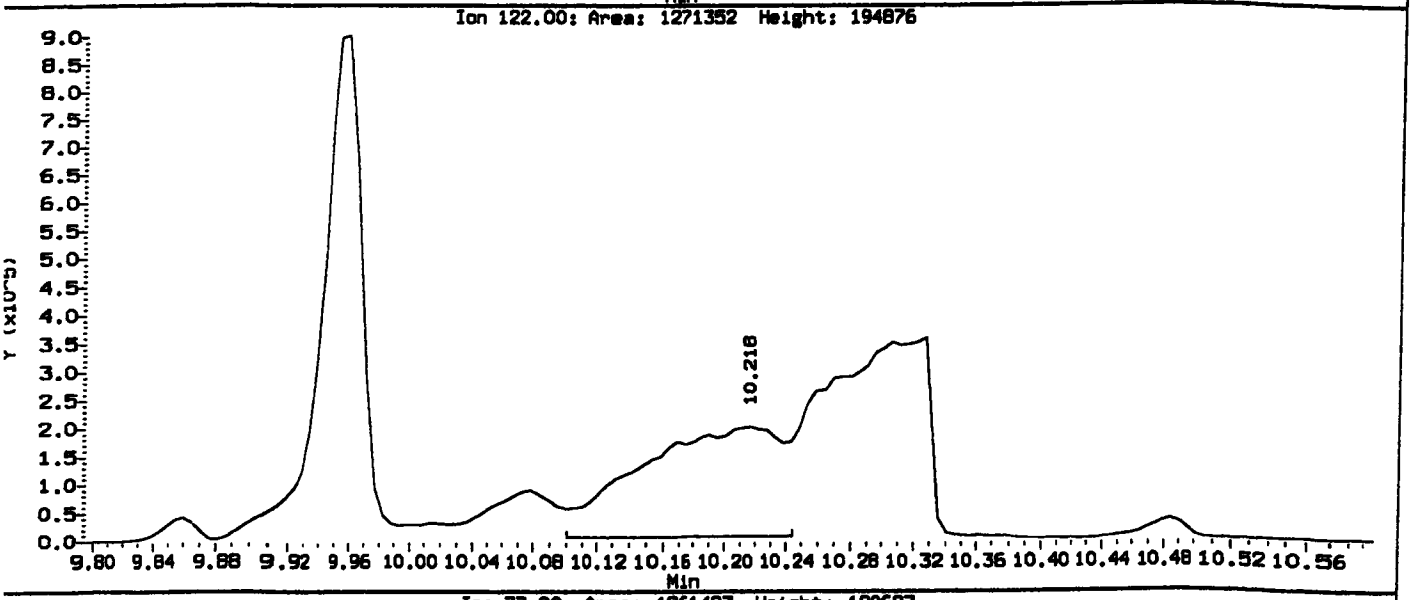
Column phase: ZB-5msi

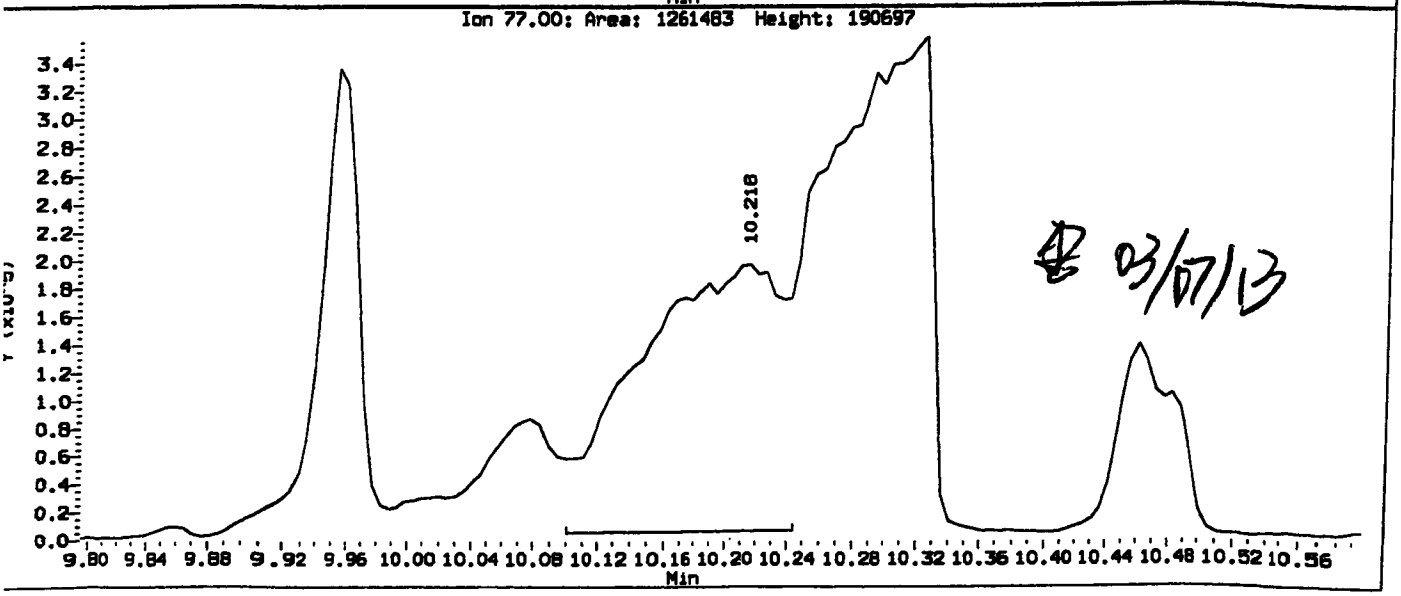


Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: IC800306

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



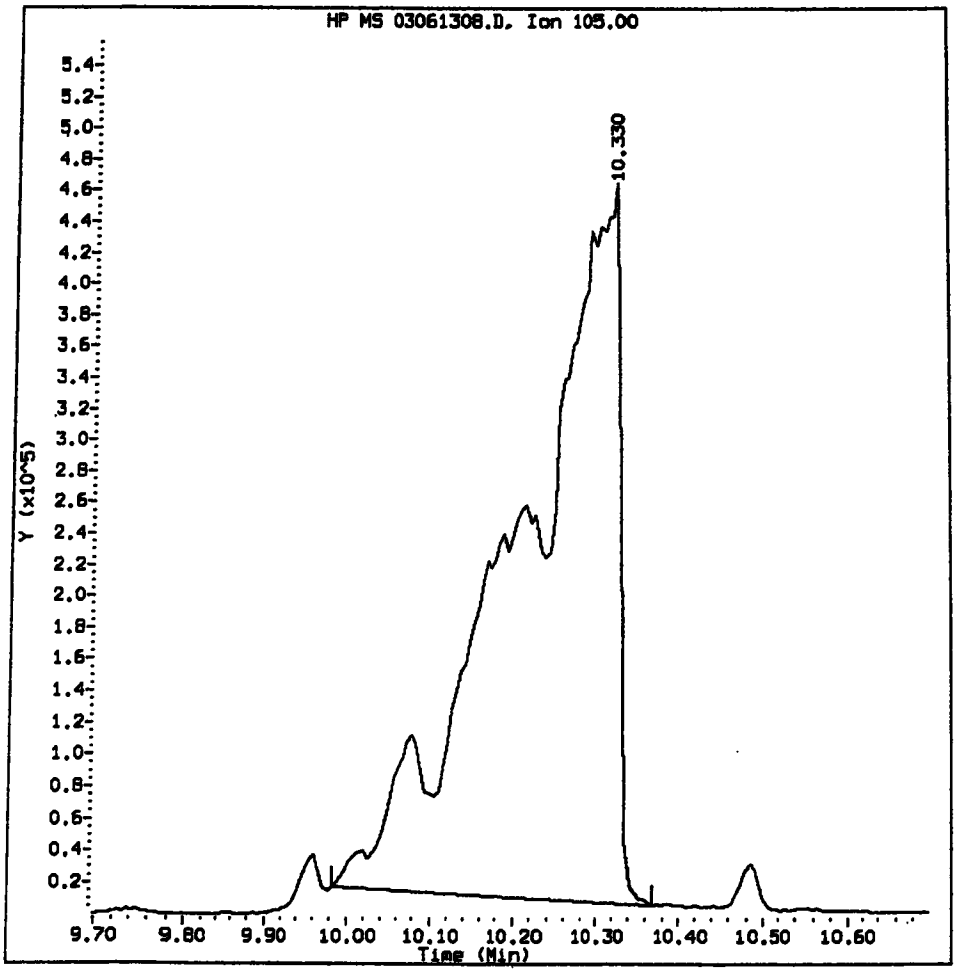




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

Benzoic acid Amount: 168.44 Area: 3889953



MANUAL INTEGRATION for Benzoic acid

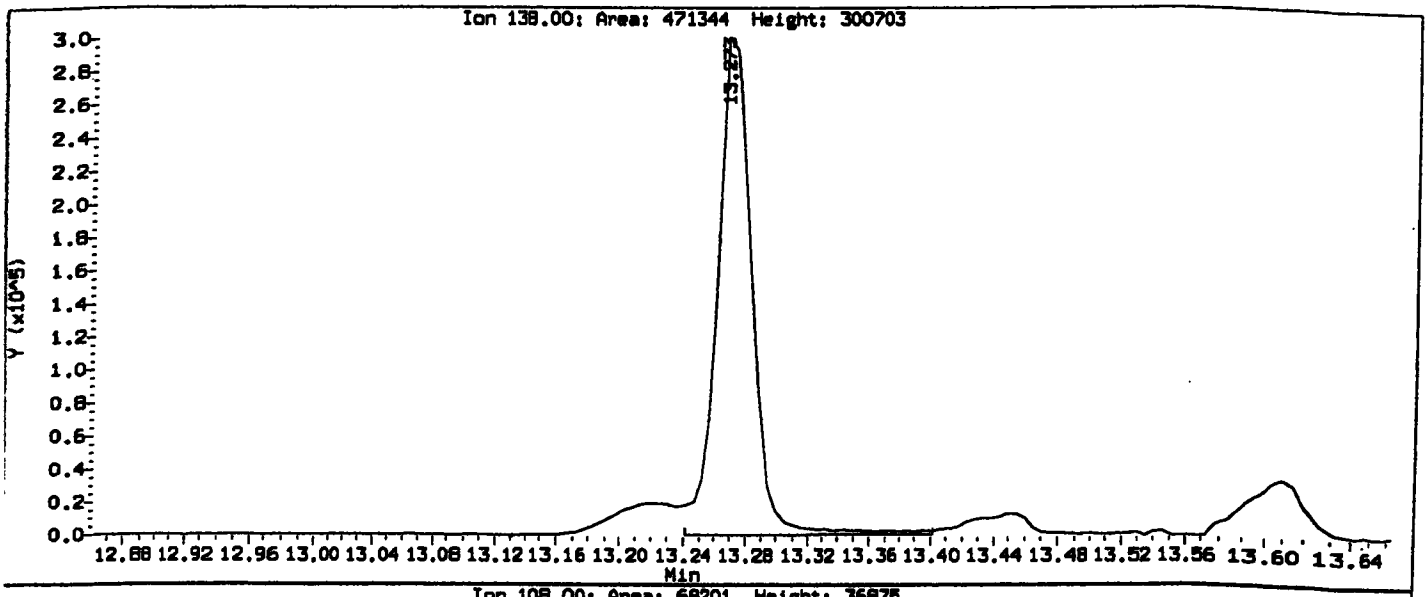
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

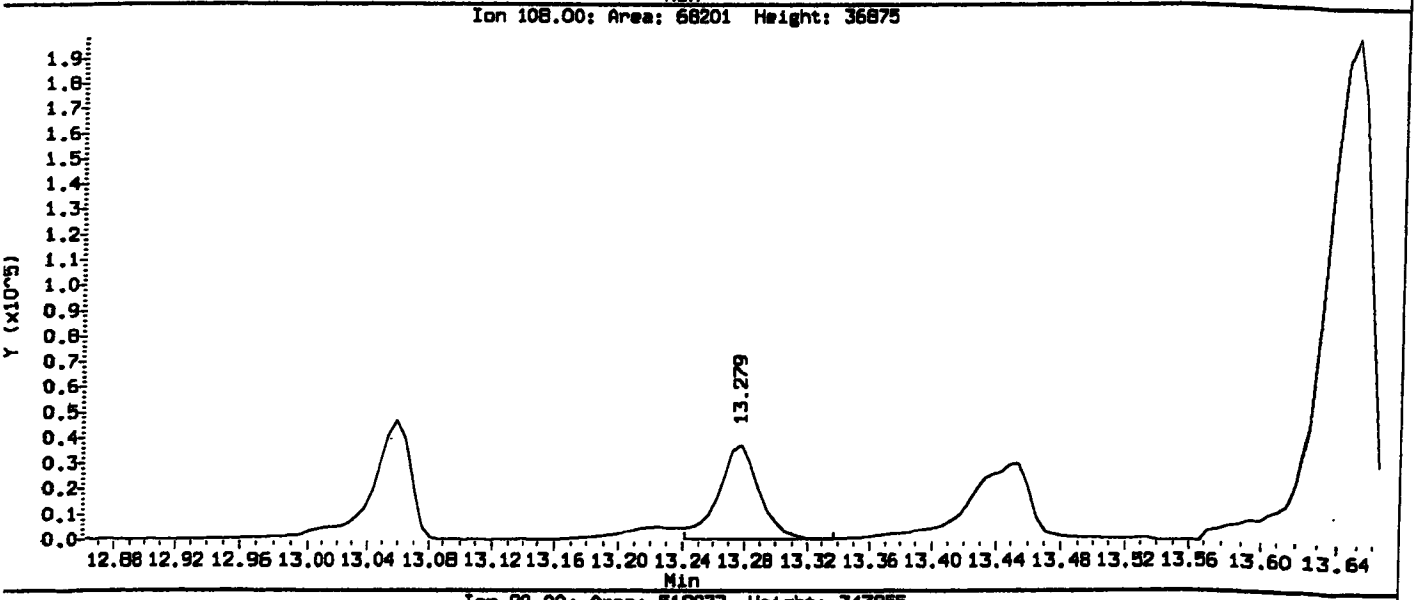
5. Other _____

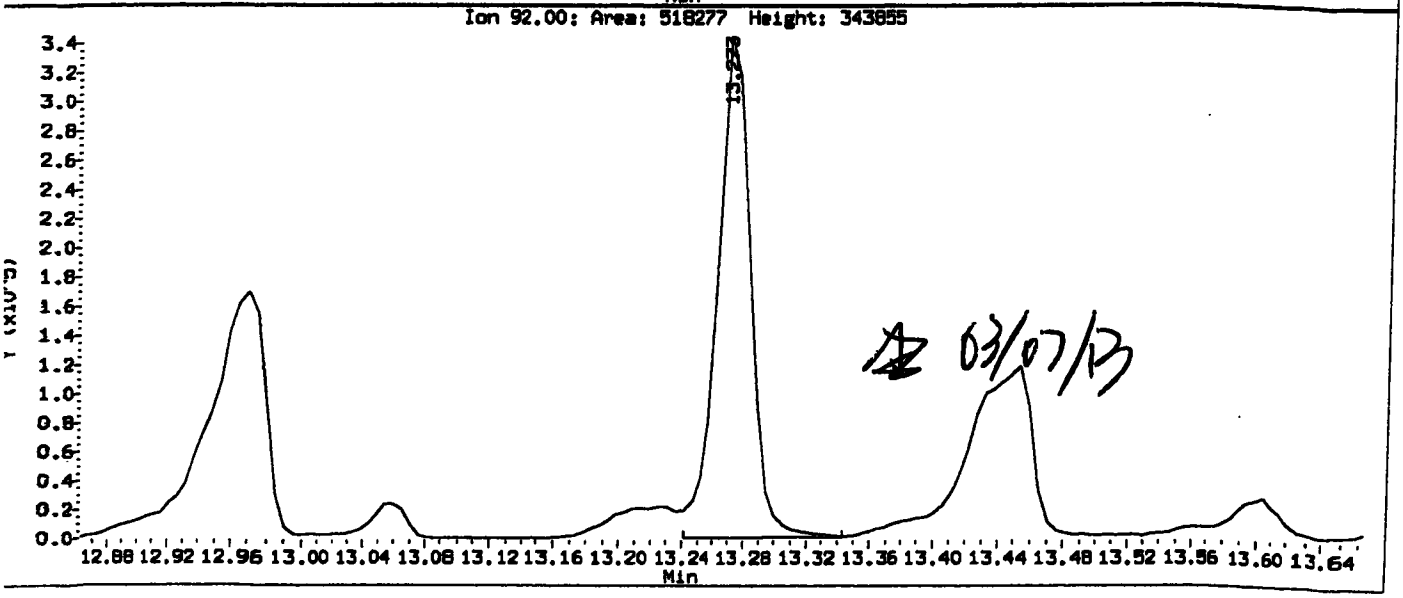
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: IC800306

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





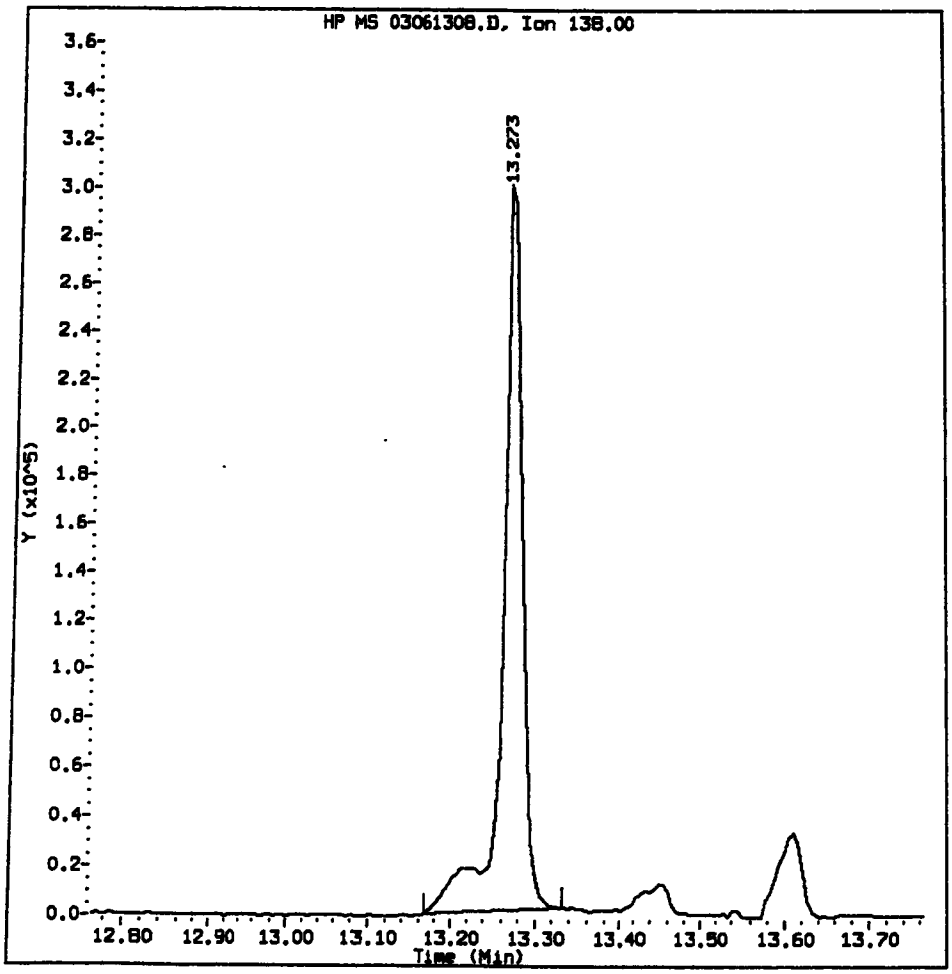


03/07/13

WL#9 : 00523

IC80306, /chem2/nt6.i/20130306.b/03061308.D

3-Nitroaniline Amount: 81.26 Area: 496848



MANUAL INTEGRATION for 3-Nitroaniline

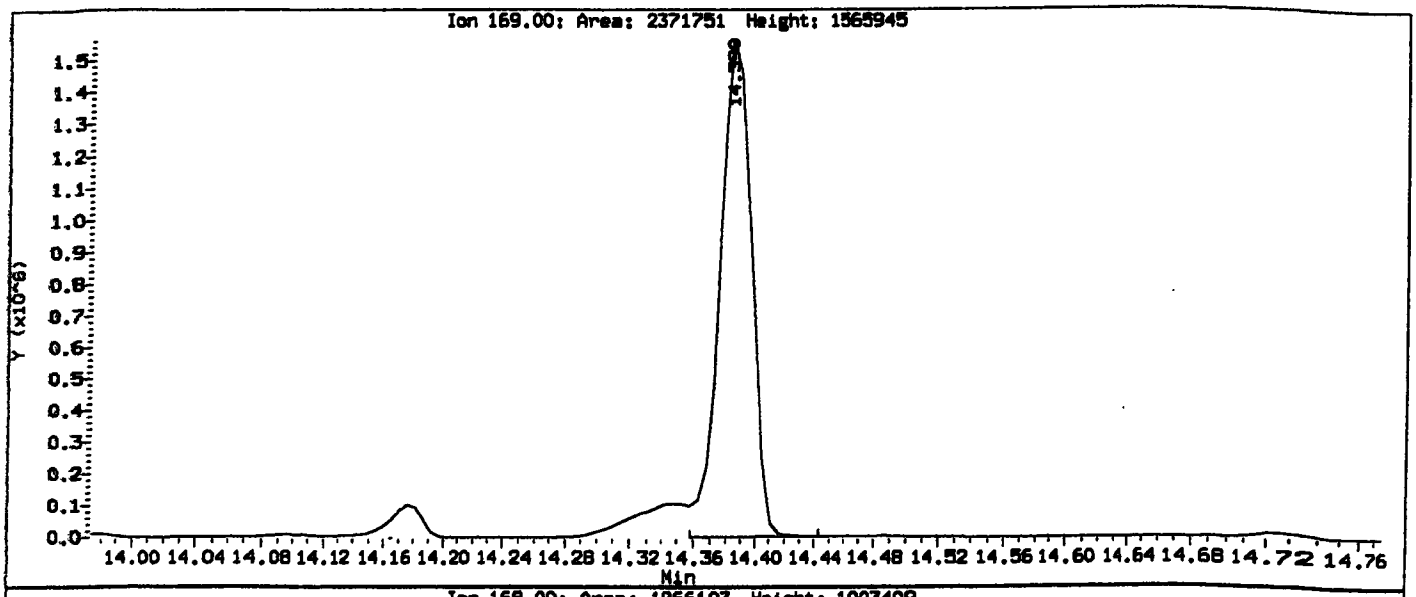
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

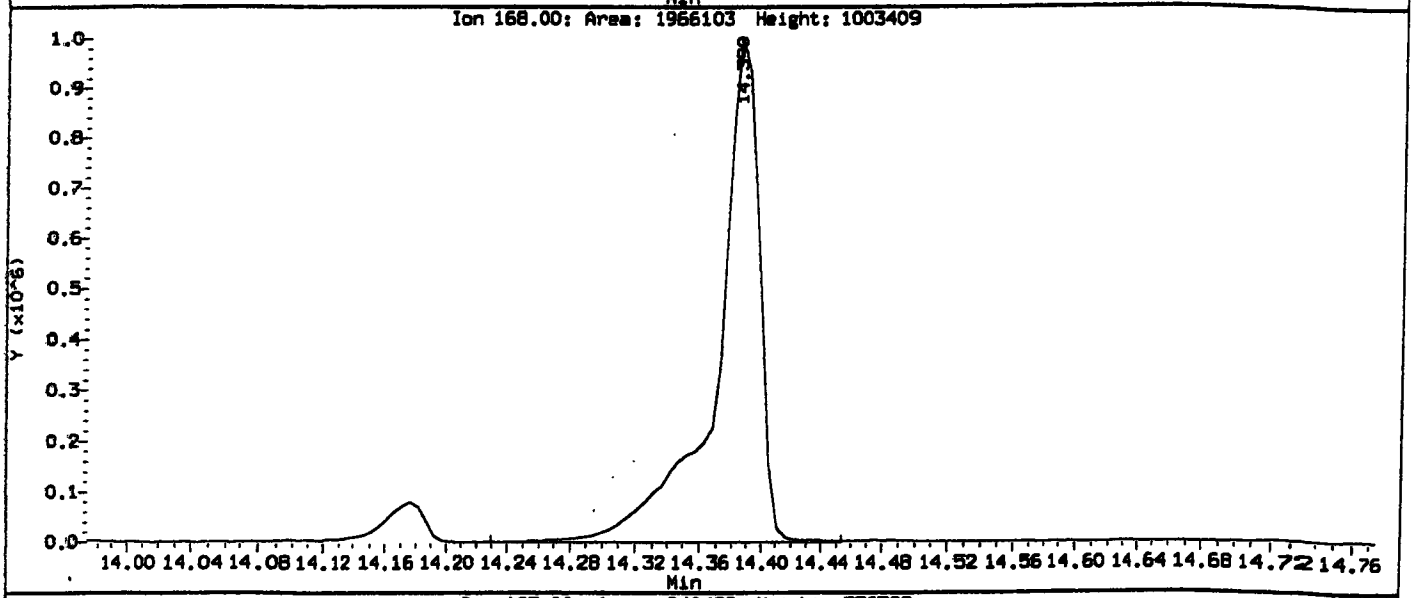
5. Other _____

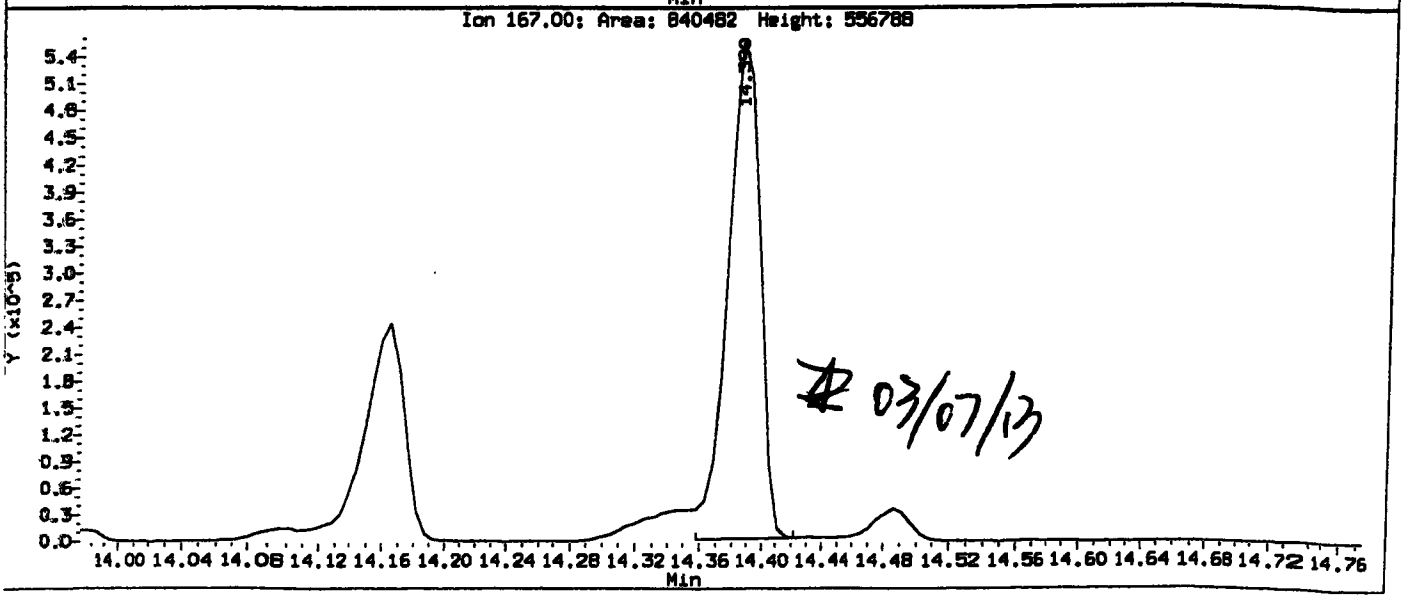
Analyst: _____ Date: 03/07/13

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



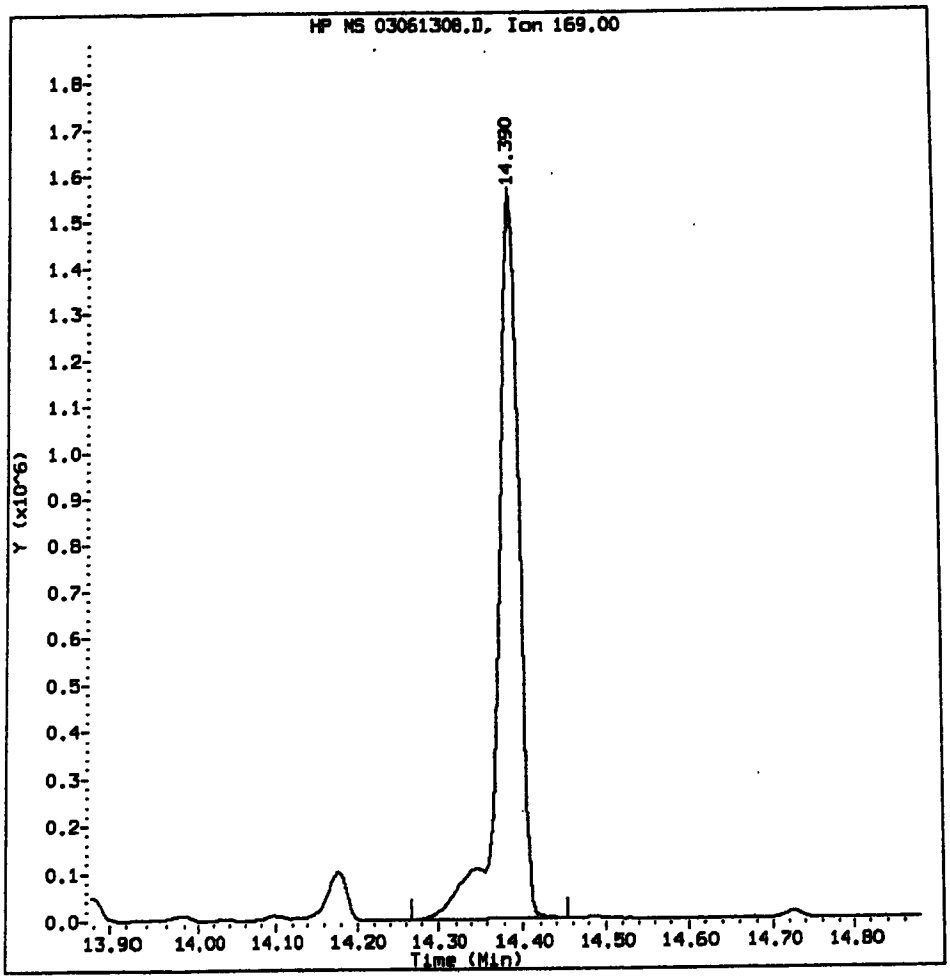




03/07/13

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)	CONCENTRATIONS FINAL (ug/L)
107	4,5-Dichloroguaiacol	192	13.203	13.220	(0.994)	600400	52.2673	52.27
182	4,6-Dichloroguaiacol	192	13.203	13.220	(1.575)	597711	51.8329	51.83
185	4-Chloroguaiacol	115	11.333	11.345	(1.352)	158010	12.8882	12.89
186	Carbaryl	144	16.451	16.473	(1.051)	922128	26.9774	26.98
178	2-Benzyl-4-Chlorophenol	218	16.403	16.425	(1.048)	320599	26.1670	26.17
106	Guaiacol	124	9.330	9.347	(1.113)	546489	24.0770	24.08

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

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.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	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

		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	-0.02
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

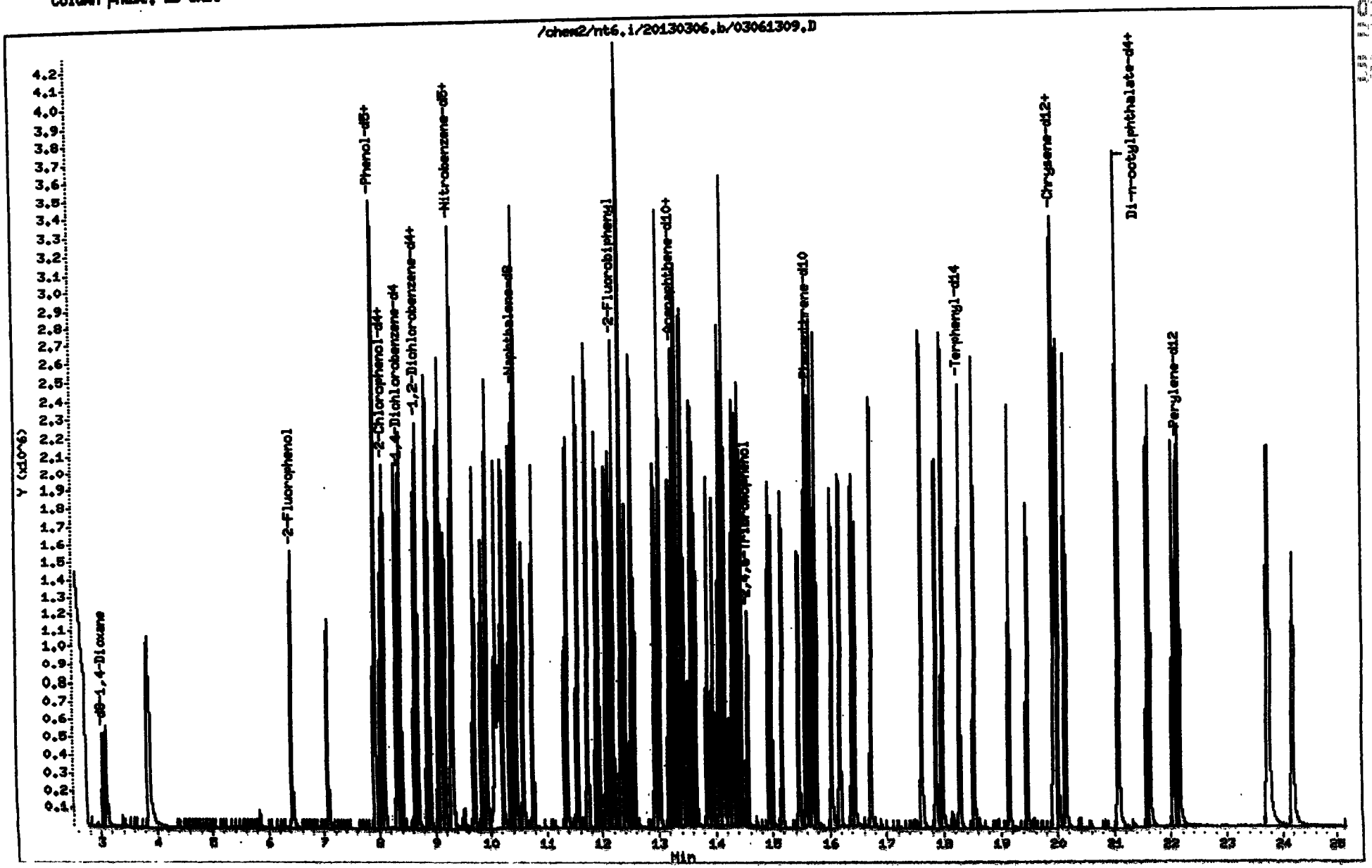
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	25.00	28.07	112.28	70-130
44	Acenaphthene	25.00	23.53	94.12	70-130
45	2,4-Dinitrophenol	50.00	55.57	111.14	70-130
46	Dibenzofuran	25.00	23.18	92.70	70-130
47	4-Nitrophenol	25.00	28.01	112.05	70-130
48	2,4-Dinitrotoluene	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



O-ELUTION SUMMARY FOR FILE - 03061309.D

ab 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

DR 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): 01/25/13 Internal Standard ID 1998-2 Expiration 07/02/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	2086-2	02/07/13	Ultra	2055-1	12/05/13
	2050-1	02/07/13		2054-1	12/31/13
	2050-2	2/10/13		2053-2	02/13/13
	2064-2	~~01/25/13~~ 01/25/14			
	1998-4	07/02/13			

Detail problems, corrective actions and/or other pertinent information below:

- Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine — quadratic fit used
- Low point of the curve dropped for Benzoic acid, 2,4 Dinitrophenol 4 Nitrophenol, Benzidine, Carbazole.
- 4,6 - Dinitro -2- methylephenol Icv >30%

Analyst: YZ **Date:** 01/28/13

Reviewer: VD **Date:** 1/29/13

02/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 2013/01/25 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN2 Column No: 247358 Column Type: ZB5 MSI

Instrument Tune (.U or .CT.): 12130414 EM Voltage: 1500

Calibration File: DF0125 Curve Date: 01/25/13 Injection Vol.: 1 uL
DF 0125A

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2036-2	~~2062-1~~
	2050-1	2055-1
	2050-2	2054-1
	2064-2	2053-2
	1996-4	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130125.b

	Time	Filename	LabID	ClientId	DF										
1	1243	df0125.d	DFTPP	DFTPP	1	NO ISTDS FOUND									
2	1259	ic0125a.d	IC0125A		1	9.08	46623	11.76	176976	15.66	110672	18.94	188290	24.01	213681	26.51	206584	25.10	266159
3	1336	ic0125b.d	IC0125B		1	9.09	43831	11.76	165229	15.66	106731	18.95	180838	24.02	200009	26.52	199837	25.10	268158
4	1413	ic0125c.d	IC0125C		1	9.08	44358	11.75	169256	15.66	101836	18.93	170953	24.01	193229	26.51	179488	25.10	216688
5	1450	ic0125d.d	IC0125D		1	9.08	42972	11.76	163867	15.66	107661	18.94	182628	24.01	203223	26.52	202904	25.10	260852
6	1527	ic0125e.d	IC0125E		1	9.08	48868	11.75	183261	15.66	111683	18.94	191397	24.00	212807	26.51	206726	25.10	246669
7	1603	ic0125f.d	IC0125F		1	9.08	46627	11.75	174830	15.66	108024	18.94	188194	24.01	208655	26.51	204198	25.10	269963
8	1716	ic0125h.d	IC0125H		1	9.09	45029	11.75	169265	15.66	103177	18.94	178445	24.00	202095	26.50	191018	25.09	218395
9	1810	icv0125.d	ICV0125		1	9.09	40184	11.75	150675	15.66	93376	18.94	157911	24.01	186248	26.51	179038	25.10	217021
10	1902	df0125a.d	DFTPP	DFTPP	1	NO ISTDS FOUND													
11	1917	cc0125.d	CC0125		1	9.08	46521	11.75	170588	15.66	106773	18.94	184813	24.01	206971	26.51	204624	25.10	251016
12	1984	wa01mb.d	WA01MB1		1	9.08	40065	11.75	153504	15.66	91793	18.94	159313	24.00	174429	26.50	159429	25.10	196633
13	2030	wa01mb.d	WA01LCS1		1	9.08	42127	11.75	159458	15.66	99822	18.94	171977	24.01	196575	26.51	185431	25.10	237586
14	2106	wa01qls.d	WA01QLS		1	9.08	43091	11.75	167213	15.66	100580	18.94	174603	24.01	190229	26.50	172299	25.10	215779
15	2142	wa01a.d	WA01A		1	9.08	43275	11.75	164288	15.66	97953	18.94	166607	24.01	188349	26.52	188692	25.11	242528
16	2219	wa01b.d	WA01B		1	9.08	43764	11.75	170747	15.66	105608	18.94	179683	24.01	196588	26.52	190190	25.10	259392
17	2255	wa01c.d	WA01C		1	9.09	44751	11.75	171938	15.66	102652	18.94	175182	24.01	197188	26.52	187564	25.11	240873
18	2331	wa01d.d	WA01D		1	9.08	40012	11.76	155975	15.66	93741	18.95	162795	24.02	184984	26.55	137219	25.12	241290
19	0008	wa01e.d	WA01E		1	9.08	42943	11.76	164582	15.66	96689	18.95	166756	24.02	185290	26.52	159850	25.11	242382
20	0044	wa01f.d	WA01F		1	9.08	45587	11.76	175719	15.66	106499	18.95	185346	24.02	203487	26.53	168521	25.11	268784
21	0121	wa01g.d	WA01G		1	9.08	45396	11.76	172840	15.66	103775	18.95	176189	24.02	197623	26.52	164129	25.11	263119
22	0157	wa01gms.d	WA01GMS		1	9.09	43139	11.76	161806	15.67	99580	18.95	169688	24.02	199335	26.52	167266	25.11	264345
23	0233	wa01gmsd.d	WA01GMSD		1	9.08	41082	11.76	153488	15.67	92479	18.95	161564	24.02	186526	26.53	158512	25.11	246361

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

YZ 02/28/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0125a	ic0125b	ic0125c	ic0125d	ic0125e	ic0125f	ic0125h
INJ.DATE:	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013
INJ.TIME:	12:59	13:36	14:13	14:50	15:27	16:03	17:16

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.719	6.728	6.720	6.728	6.720	6.719	6.720	6.719	3.719-9.719	6.722	0.004
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 YC Date: 01/28/13

Reviewer 2 VB Date: 1/29/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	25.100	25.100	25.100	25.100	25.100	25.100	25.093	25.100	22.100-28.100	25.099	0.003
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.467	16.476	16.460	16.468	16.460	16.467	16.460	16.467	13.467-19.467	16.466	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.224	17.240	17.217	17.233	17.217	17.224	17.217	17.224	14.224-20.224	17.225	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
	105 1-methylnaphthalene	13.551	13.551	13.543	13.551	13.543	13.551	13.544	13.551	10.551-16.551	13.548	0.004
	151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
	152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
	153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
	154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
	155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
	156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
	157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
	158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
	159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
	160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
	161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
	162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
	163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
	164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
	165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
	166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
	167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$	2 Phenol-d5	8.435	8.451	8.428	8.435	8.428	8.427	8.428	8.435	5.435-11.435	8.433	0.009
	3 Phenol	8.458	8.474	8.451	8.459	8.451	8.451	8.451	8.458	5.458-11.458	8.456	0.009
	4 Bis(2-Chloroethyl)ethe	8.620	8.629	8.621	8.621	8.621	8.620	8.621	8.620	5.620-11.620	8.622	0.003
$	5 2-Chlorophenol-d4	8.698	8.706	8.698	8.698	8.698	8.698	8.698	8.698	5.698-11.698	8.699	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.729	8.737	8.729	8.729	8.729	8.729	8.729	8.729	5.729-11.729	8.730	0.003
	7 1,3-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	6.015-12.015	9.015	0.000
*	8 1,4-Dichlorobenzene-d4	9.085	9.085	9.085	9.085	9.085	9.085	9.085	9.085	6.085-12.085	9.085	0.000
	9 1,4-Dichlorobenzene	9.116	9.124	9.116	9.116	9.116	9.116	9.116	9.116	6.116-12.116	9.117	0.003
$	10 1,2-Dichlorobenzene-d4	9.465	9.473	9.465	9.473	9.465	9.465	9.465	9.465	6.465-12.465	9.467	0.004
	11 Benzyl alcohol	9.387	9.403	9.387	9.395	9.387	9.387	9.388	9.387	6.387-12.387	9.391	0.006
	12 1,2-Dichlorobenzene	9.496	9.504	9.496	9.496	9.496	9.496	9.496	9.496	6.496-12.496	9.497	0.003
	13 2-Methylphenol	9.651	9.659	9.644	9.652	9.644	9.643	9.644	9.651	6.651-12.651	9.648	0.006
	14 2,2'-oxybis(1-Chloropr	9.721	9.729	9.714	9.721	9.721	9.721	9.722	9.721	6.721-12.721	9.721	0.005
	15 4-Methylphenol	9.938	9.954	9.939	9.947	9.939	9.938	9.939	9.938	6.938-12.938	9.942	0.006
	16 N-Nitroso-di-n-propyla	10.000	10.016	10.001	10.001	10.001	9.993	9.993	10.000	7.000-13.000	10.001	0.008
	17 Hexachloroethane	10.132	10.133	10.125	10.133	10.133	10.132	10.133	10.132	7.132-13.132	10.132	0.003
$	18 Nitrobenzene-d5	10.264	10.273	10.257	10.265	10.265	10.264	10.257	10.264	7.264-13.264	10.263	0.005
	19 Nitrobenzene	10.303	10.311	10.296	10.303	10.296	10.295	10.296	10.303	7.303-13.303	10.300	0.006
	20 Isophorone	10.792	10.816	10.785	10.800	10.785	10.784	10.785	10.792	7.792-13.792	10.792	0.012
	21 2-Nitrophenol	10.978	10.986	10.978	10.978	10.978	10.978	10.978	10.978	7.978-13.978	10.979	0.003
	22 2,4-Dimethylphenol	11.070	11.078	11.063	11.071	11.063	11.063	11.063	11.070	8.070-14.070	11.067	0.006
	23 Bis(2-Chloroethoxy)met	11.278	11.286	11.279	11.279	11.279	11.278	11.271	11.278	8.278-14.278	11.279	0.004
	24 Benzoic acid	11.325	11.487	11.163	11.402	11.217	11.271	11.186	11.325	8.325-14.325	11.293	0.119
	25 2,4-Dichlorophenol	11.471	11.487	11.471	11.479	11.471	11.471	11.464	11.471	8.471-14.471	11.473	0.007
	26 1,2,4-Trichlorobenzene	11.671	11.672	11.664	11.672	11.664	11.671	11.664	11.671	8.671-14.671	11.668	0.004
*	27 Naphthalene-d8	11.756	11.757	11.749	11.757	11.749	11.749	11.749	11.756	8.756-14.756	11.752	0.004
	28 Naphthalene	11.795	11.803	11.795	11.795	11.795	11.795	11.795	11.795	8.795-14.795	11.796	0.003
	29 4-Chloroaniline	11.965	11.981	11.957	11.965	11.957	11.957	11.957	11.965	8.965-14.965	11.963	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.212	12.212	12.205	12.212	12.212	12.212	12.205	12.212	9.212-15.212	12.210	0.004
	31 4-Chloro-3-methylpheno	13.025	13.033	13.017	13.025	13.017	13.017	13.017	13.025	10.025-16.025	13.022	0.006
	32 2-Methylnaphthalene	13.311	13.311	13.303	13.311	13.311	13.311	13.311	13.311	10.311-16.311	13.310	0.003
	33 Hexachlorocyclopentadi	13.822	13.830	13.822	13.830	13.822	13.822	13.822	13.822	10.822-16.822	13.824	0.004
	34 2,4,6-Trichlorophenol	13.992	14.000	13.992	14.000	13.992	13.992	13.992	13.992	10.992-16.992	13.994	0.004
	35 2,4,5-Trichlorophenol	14.069	14.078	14.070	14.070	14.062	14.069	14.070	14.069	11.069-17.069	14.070	0.005
$	36 2-Fluorobiphenyl	14.178	14.178	14.170	14.178	14.170	14.170	14.170	14.178	11.178-17.178	14.174	0.004
	37 2-Chloronaphthalene	14.379	14.387	14.371	14.379	14.379	14.379	14.379	14.379	11.379-17.379	14.379	0.005
	38 2-Nitroaniline	14.681	14.697	14.673	14.681	14.673	14.673	14.674	14.681	11.681-17.681	14.679	0.009
	39 Dimethylphthalate	15.176	15.192	15.169	15.176	15.169	15.168	15.169	15.176	12.176-18.176	15.174	0.009
	40 Acenaphthylene	15.315	15.324	15.316	15.316	15.316	15.316	15.316	15.315	12.315-18.315	15.317	0.003
	41 2,6-Dinitrotoluene	15.308	15.324	15.300	15.316	15.300	15.308	15.300	15.308	12.308-18.308	15.308	0.009
*	42 Acenaphthene-d10	15.664	15.664	15.656	15.664	15.656	15.664	15.656	15.664	12.664-18.664	15.660	0.004
	43 3-Nitroaniline	15.609	15.625	15.594	15.618	15.594	15.602	15.594	15.609	12.609-18.609	15.605	0.013
	44 Acenaphthene	15.733	15.741	15.726	15.733	15.726	15.733	15.726	15.733	12.733-18.733	15.731	0.006
	45 2,4-Dinitrophenol	15.834	15.865	15.826	15.842	15.826	15.826	15.826	15.834	12.834-18.834	15.835	0.014
	46 Dibenzofuran	16.089	16.105	16.081	16.097	16.081	16.089	16.089	16.089	13.089-19.089	16.090	0.008
	47 4-Nitrophenol	15.980	16.012	15.973	15.989	15.973	15.973	15.973	15.980	12.980-18.980	15.982	0.014
	48 2,4-Dinitrotoluene	16.181	16.197	16.174	16.190	16.174	16.174	16.174	16.181	13.181-19.181	16.181	0.009
	49 Fluorene	16.862	16.870	16.854	16.870	16.854	16.862	16.855	16.862	13.862-19.862	16.861	0.007
	50 Diethylphthalate	16.761	16.785	16.754	16.769	16.754	16.761	16.754	16.761	13.761-19.761	16.763	0.011
	51 4-Chlorophenyl-phenyle	16.877	16.885	16.870	16.878	16.870	16.877	16.870	16.877	13.877-19.877	16.875	0.006
	52 4-Nitroaniline	16.985	17.024	16.963	16.994	16.970	16.978	16.963	16.985	13.985-19.985	16.982	0.022
	53 4,6-Dinitro-2-methylph	17.086	17.117	17.070	17.101	17.078	17.078	17.071	17.086	14.086-20.086	17.086	0.017

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.155	17.163	17.148	17.155	17.148	17.147	17.148	17.155	14.155-20.155	17.152	0.006
$	55 2,4,6-Tribromophenol	17.440	17.448	17.433	17.441	17.433	17.440	17.433	17.440	14.440-20.440	17.438	0.006
	56 4-Bromophenyl-phenylet	17.965	17.965	17.957	17.965	17.957	17.957	17.957	17.965	14.965-20.965	17.961	0.004
	57 Hexachlorobenzene	18.289	18.289	18.281	18.282	18.281	18.281	18.274	18.289	15.289-21.289	18.283	0.005
	58 Pentachlorophenol	18.676	18.684	18.669	18.676	18.669	18.676	18.669	18.676	15.676-21.676	18.674	0.006
*	59 Phenanthrene-d10	18.939	18.947	18.932	18.939	18.939	18.939	18.940	18.939	15.939-21.939	18.939	0.005
	60 Phenanthrene	18.986	19.001	18.986	18.994	18.986	18.986	18.986	18.986	15.986-21.986	18.989	0.006
	61 Anthracene	19.086	19.094	19.079	19.086	19.079	19.086	19.079	19.086	16.086-22.086	19.084	0.006
	62 Carbazole	19.434	19.442	19.435	19.442	19.435	19.434	19.435	19.434	16.434-22.434	19.437	0.004
	63 Di-n-butylphthalate	20.293	20.301	20.293	20.293	20.293	20.293	20.294	20.293	17.293-23.293	20.294	0.003
	64 Fluoranthene	21.399	21.400	21.392	21.400	21.392	21.392	21.392	21.399	18.399-24.399	21.395	0.004
	65 Pyrene	21.817	21.825	21.810	21.818	21.810	21.810	21.810	21.817	18.817-24.817	21.814	0.006
$	66 Terphenyl-d14	22.135	22.135	22.127	22.135	22.127	22.135	22.127	22.135	19.135-25.135	22.131	0.004
	67 Butylbenzylphthalate	23.079	23.080	23.079	23.080	23.072	23.079	23.072	23.079	20.079-26.079	23.077	0.004
	68 Benzo(a)anthracene	23.977	23.986	23.978	23.985	23.978	23.977	23.970	23.977	20.977-26.977	23.979	0.005
*	69 Chrysene-d12	24.008	24.017	24.009	24.009	24.001	24.008	24.001	24.008	21.008-27.008	24.007	0.005
	70 3,3'-Dichlorobenzidine	23.954	23.970	23.954	23.962	23.947	23.954	23.947	23.954	20.954-26.954	23.955	0.008
	71 Chrysene	24.055	24.063	24.047	24.055	24.047	24.047	24.048	24.055	21.055-27.055	24.052	0.006
	72 bis(2-Ethylhexyl)phtha	24.117	24.125	24.117	24.117	24.117	24.117	24.117	24.117	21.117-27.117	24.118	0.003
	73 Di-n-octylphthalate	25.108	25.116	25.108	25.108	25.108	25.108	25.108	25.108	22.108-28.108	25.109	0.003
	74 Benzo(b)fluoranthene	25.804	25.813	25.797	25.805	25.797	25.797	25.789	25.804	22.804-28.804	25.800	0.008
	75 Benzo(k)fluoranthene	25.843	25.859	25.836	25.843	25.836	25.835	25.836	25.843	22.843-28.843	25.841	0.009
	187 Total Benzofluoranthen	25.843	25.859	25.797	25.843	25.836	25.835	25.836	25.843	22.843-28.843	25.836	0.019
	76 Benzo(a)pyrene	26.401	26.416	26.393	26.401	26.393	26.393	26.393	26.401	23.401-29.401	26.399	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/ABN.m
Batch File: /chem1/nt10.i/20130125.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.509	26.517	26.509	26.517	26.509	26.509	26.502	26.509	23.509-29.509	26.510	0.005
	78 Indeno(1,2,3-cd)pyrene	28.942	28.958	28.926	28.942	28.926	28.934	28.919	28.942	25.942-31.942	28.935	0.013
	79 Dibenzo(a,h)anthracene	28.957	28.989	28.950	28.973	28.950	28.957	28.942	28.957	25.957-31.957	28.960	0.016
	80 Benzo(g,h,i)perylene	29.648	29.680	29.633	29.657	29.625	29.641	29.633	29.648	26.648-32.648	29.645	0.018
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.442	4.457	4.450	4.450	4.442	4.434	4.442	4.442	1.442-7.442	4.445	0.008
	91 Aniline	8.512	8.521	8.505	8.513	8.505	8.512	8.505	8.512	5.512-11.512	8.510	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.655	21.655	21.647	21.655	21.647	21.655	21.648	21.655	18.655-24.655	21.652	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.429	18.429-24.429	+++++	+++++
	99 Perylene	26.563	26.579	26.556	26.564	26.556	26.556	26.548	26.563	23.563-29.563	26.560	0.010
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.457	4.450	4.496	4.457	4.473	4.457	4.481	4.457	1.457-7.457	4.467	0.017
	188 2,6-Dichlorophenol	11.980	11.988	11.973	11.988	11.973	11.980	11.973	11.980	8.980-14.980	11.979	0.007
	189 N-Nitrosomethylethylam	5.901	5.917	5.909	5.909	5.909	5.909	5.909	5.901	2.901-8.901	5.909	0.005

Analytical Resources, Inc.

Averaged.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130125.b/ic0125c.d
Level 2: /chem1/nt10.i/20130125.b/ic0125h.d
Level 3: /chem1/nt10.i/20130125.b/ic0125e.d
Level 4: /chem1/nt10.i/20130125.b/ic0125f.d
Level 5: /chem1/nt10.i/20130125.b/ic0125a.d
Level 6: /chem1/nt10.i/20130125.b/ic0125d.d
Level 7: /chem1/nt10.i/20130125.b/ic0125b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	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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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	
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.32876	0.34403	0.37326	0.38202	0.39296	0.39166	0.39526	AVRG		0.37257		7.03242	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.68712	0.61568	0.61713	0.60970	0.62479	0.62906						
	0.62899						AVRG		0.63035		4.13400	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	1.85175	1.68940	1.64707	1.63733	1.68988	1.61673					
	1.56109						AVRG		1.67046		5.47002
4 Bis(2-Chloroethyl)ether	1.40493	1.30334	1.30347	1.24707	1.28325	1.21128					
	1.14349						AVRG		1.27098		6.47097

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6 / 20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
6 2-Chlorophenol	1.59520	1.46146	1.47707	1.40489	1.45513	1.41902					
	1.36285						AVRG		1.45366		5.06063
7 1,3-Dichlorobenzene	1.83372	1.63504	1.58082	1.51847	1.53497	1.52312					
	1.44646						AVRG		1.58180		7.92392
9 1,4-Dichlorobenzene	1.82470	1.55544	1.60187	1.50303	1.51800	1.51039					
	1.45049						AVRG		1.56627		7.86403
11 Benzyl alcohol	0.84043	0.76875	0.79217	0.77311	0.81313	0.81712					
	0.79116						AVRG		0.79941		3.20420
12 1,2-Dichlorobenzene	1.73768	1.52346	1.51327	1.44648	1.47158	1.44915					
	1.40064						AVRG		1.50604		7.32876
13 2-Methylphenol	1.34993	1.22001	1.24558	1.22322	1.30059	1.26671					
	1.22080						AVRG		1.26098		3.89432
14 2,2'-oxybis(1-Chloropropane)	0.48018	0.44753	0.44284	0.44270	0.44800	0.44534					
	0.42355						AVRG		0.44716		3.75395

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.34226	1.29197	1.31371	1.30699	1.33604	1.31349					
	1.27512						AVRG		1.31137		1.78362
16 N-Nitroso-di-n-propylamine	0.91573	0.79575	0.85580	0.81875	0.86236	0.84584					
	0.80313						AVRG		0.84248		4.90461
17 Hexachloroethane	0.67992	0.60175	0.63806	0.59248	0.60974	0.61412					
	0.59743						AVRG		0.61907		4.95719
19 Nitrobenzene	0.38734	0.34048	0.34857	0.34062	0.34785	0.34389					
	0.34151						AVRG		0.35004		4.79352
20 Isophorone	0.63301	0.56793	0.60847	0.59443	0.62728	0.61846					
	0.62125						AVRG		0.61012		3.68947
21 2-Nitrophenol	0.19332	0.18421	0.20543	0.20796	0.21920	0.21663					
	0.21298						AVRG		0.20568		6.19855
22 2,4-Dimethylphenol	0.37623	0.34842	0.35856	0.34561	0.35338	0.34129					
	0.33058						AVRG		0.35058		4.10928

Analytical Resources, Inc.

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Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
23 Bis(2-Chloroethoxy)methane	0.42114	0.39616	0.38461	0.37952	0.38304	0.36431						
	0.36096						AVRG		0.38425		5.27643	
24 Benzoic acid	+++++	0.16802	0.24258	0.27289	0.30536	0.30569						
	0.31370						AVRG		0.26804		20.82037	<-
25 2,4-Dichlorophenol	0.31804	0.29394	0.30839	0.30694	0.31451	0.30586						
	0.29711						AVRG		0.30640		2.81805	
26 1,2,4-Trichlorobenzene	0.40294	0.36312	0.35495	0.33490	0.33893	0.32931						
	0.31675						AVRG		0.34870		8.17173	
28 Naphthalene	1.17113	1.06629	1.04085	1.00184	1.01216	1.00690						
	0.98667						AVRG		1.04083		6.08299	
29 4-Chloroaniline	0.43597	0.40727	0.41596	0.40868	0.42429	0.41696						
	0.42308						AVRG		0.41889		2.36753	
30 Hexachlorobutadiene	0.23385	0.21233	0.22032	0.21378	0.21418	0.21548						
	0.21128						AVRG		0.21732		3.61019	

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6 / 20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.26481	0.27149	0.29550	0.29260	0.31285	0.31892					
	0.31685						AVRG		0.29615		7.33327
32 2-Methylnaphthalene	0.73829	0.66758	0.67440	0.65675	0.70171	0.68317					
	0.68851						AVRG		0.68720		3.90226
33 Hexachlorocyclopentadiene	0.44473	0.40757	0.44583	0.44429	0.47974	0.46666					
	0.46906						AVRG		0.45113		5.27242
34 2,4,6-Trichlorophenol	0.37875	0.37012	0.40921	0.40113	0.41623	0.41485					
	0.41565						AVRG		0.40085		4.72757
35 2,4,5-Trichlorophenol	0.37884	0.39598	0.42331	0.43767	0.44881	0.45127					
	0.44592						AVRG		0.42597		6.65640
37 2-Chloronaphthalene	1.23689	1.06915	1.09647	1.07749	1.10903	1.07360					
	1.07168						AVRG		1.10490		5.43307
38 2-Nitroaniline	0.21672	0.22323	0.25658	0.26793	0.28461	0.28174					
	0.28315						AVRG		0.25914		11.03790

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
39 Dimethylphthalate	1.30877	1.22841	1.23078	1.18054	1.21915	1.17353						
	1.12753						AVRG		1.20981		4.72547	
40 Acenaphthylene	1.86378	1.82126	1.85629	1.80591	1.82377	1.74121						
	1.70079						AVRG		1.80186		3.32697	
41 2,6-Dinitrotoluene	0.25669	0.25630	0.27994	0.28469	0.29374	0.28380						
	0.27957						AVRG		0.27639		5.20021	
43 3-Nitroaniline	0.22713	0.25471	0.29079	0.27321	0.26059	0.26304						
	0.21716						AVRG		0.25523		10.01066	
44 Acenaphthene	1.18524	1.13444	1.11843	1.08189	1.09441	1.06919						
	1.05036						AVRG		1.10485		4.11445	
45 2,4-Dinitrophenol	+++++	0.11441	0.16472	0.20765	0.24305	0.24872						
	0.25284						AVRG		0.20523		27.11606	<-
46 Dibenzofuran	1.68997	1.54872	1.56513	1.49747	1.52707	1.47995						
	1.44776						AVRG		1.53658		5.12483	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.09998	0.13026	0.16110	0.17953	0.17551						
	0.17902						AVRG		0.15424		21.05350	<-
48 2,4-Dinitrotoluene	0.31718	0.34651	0.38077	0.38891	0.40653	0.39149						
	0.38462						AVRG		0.37372		8.26839	
49 Fluorene	1.40265	1.35139	1.32070	1.30322	1.29668	1.24547						
	1.21601						AVRG		1.30516		4.79174	
50 Diethylphthalate	1.35866	1.23097	1.28760	1.26224	1.29138	1.23346						
	1.20698						AVRG		1.26733		4.00618	
51 4-Chlorophenyl-phenylether	0.64889	0.64348	0.63067	0.59203	0.60007	0.57862						
	0.56392						AVRG		0.60824		5.43948	
52 4-Nitroaniline	0.24294	0.27239	0.27818	0.26676	0.27205	0.28138						
	0.27241						AVRG		0.26944		4.67658	
53 4,6-Dinitro-2-methylphenol	0.11263	0.13500	0.16003	0.16959	0.18328	0.18067						
	0.18008						AVRG		0.16018		16.77594	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
54 N-Nitrosodiphenylamine	0.52611	0.48647	0.51232	0.47864	0.47347	0.45779	0.43800	AVRG		0.48183		6.27832	
56 4-Bromophenyl-phenylether	0.24194	0.21358	0.21802	0.21684	0.22551	0.22344	0.22256	AVRG		0.22313		4.15933	
57 Hexachlorobenzene	0.30710	0.28329	0.28763	0.27321	0.27683	0.27013	0.26191	AVRG		0.28001		5.22545	
58 Pentachlorophenol	0.15074	0.16509	0.18887	0.18922	0.20807	0.20324	0.20185	AVRG		0.18673		11.42453	
60 Phenanthrene	1.20922	1.07453	1.06296	1.00313	1.06202	1.02943	1.02293	AVRG		1.06632		6.37828	
61 Anthracene	1.11703	1.02015	1.06543	1.04831	1.10358	1.09925	1.06181	AVRG		1.07365		3.21436	
62 Carbazole	0.94108	0.86167	0.87784	0.65476	0.51676	0.65824	0.74419	AVRG		0.75065		20.14812	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.11890	0.99204	1.07832	1.11232	1.23021	1.24150					
	1.24670						AVRG		1.14571		8.47014
64 Fluoranthene	1.28527	1.12599	1.21902	1.18994	1.27165	1.24630					
	1.25777						AVRG		1.22799		4.50231
65 Pyrene	1.17011	1.06492	1.14258	1.13631	1.15430	1.15777					
	1.14963						AVRG		1.13938		3.03479
67 Butylbenzylphthalate	0.41650	0.36082	0.43017	0.43330	0.46321	0.46708					
	0.45389						AVRG		0.43214		8.44745
68 Benzo(a)anthracene	1.19920	1.07431	1.12286	1.10780	1.09980	1.11248					
	1.09644						AVRG		1.11613		3.55235
70 3,3'-Dichlorobenzidine	0.58480	0.52082	0.47361	0.38174	0.35778	0.46977					
	0.47574						AVRG		0.46632		16.63286
71 Chrysene	1.13171	1.02241	1.01786	0.97103	0.98519	0.98069					
	0.96753						AVRG		1.01092		5.68546

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.59458	0.50606	0.51947	0.53003	0.53141	0.51142					
	0.50438						AVRG		0.52819		5.90419
73 Di-n-octylphthalate	1.15851	1.02427	0.98247	0.92974	0.93393	0.91460					
	0.88657						AVRG		0.97573		9.48185
74 Benzo(b)fluoranthene	1.20608	1.10628	1.09252	1.14920	1.14101	1.20366					
	1.21674						AVRG		1.15936		4.33609
75 Benzo(k)fluoranthene	1.42017	1.25965	1.28978	1.20526	1.26889	1.16546					
	1.15821						AVRG		1.25249		7.17965
187 Total Benzofluoranthenes	1.23756	1.13080	1.13020	1.11091	1.13997	1.11859					
	1.12045						AVRG		1.14121		3.81526
76 Benzo(a)pyrene	1.07669	0.94944	0.97894	0.98320	1.01372	1.00840					
	1.00814						AVRG		1.00265		3.95585
78 Indeno(1,2,3-cd)pyrene	1.25868	1.15059	1.21659	1.22284	1.27651	1.27173					
	1.25832						AVRG		1.23647		3.58261

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
79 Dibenzo(a,h)anthracene	0.97137	0.92360	0.98583	0.98269	1.00428	1.00142						
	0.98469						AVRG		0.97912		2.75358	
80 Benzo(g,h,i)perylene	1.08126	1.00992	1.04627	1.04488	1.08346	1.07955						
	1.08065						AVRG		1.06086		2.64699	
90 N-Nitrosodimethylamine	0.83322	0.73286	0.74717	0.73648	0.79641	0.75614						
	0.72459						AVRG		0.76098		5.20213	
91 Aniline	4.03355	3.60799	3.69841	3.54445	3.67007	3.46281						
	3.21579						AVRG		3.60472		6.90741	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
93 Benzidine	+++++	0.37327	0.35642	0.20770	0.16127	0.19301						
	0.22575						AVRG		0.25290		35.35224	<-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
99 Perylene	1.31908	1.13841	1.15956	1.11360	1.11501	1.11215	1.10824						
								AVRG		1.15229		6.58107	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.66617	0.65238	0.65710	0.63694	0.68053	0.63792	0.61262						
								AVRG		0.64909		3.42053	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.30451	0.28895	0.29558	0.29116	0.30141	0.30051						
	0.30173						AVRG		0.29769		1.97814	
189 N-Nitrosomethylethylamine	0.56360	0.54392	0.55233	0.53833	0.57892	0.55478						
	0.53912						AVRG		0.55300		2.63905	
$ 1 2-Fluorophenol	1.34632	1.22090	1.31944	1.24951	1.32743	1.27358						
	1.21571						AVRG		1.27898		4.13634	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.63984	1.52897	1.54799	1.55779	1.64552	1.60078						
	1.58876						AVRG		1.58709		2.83567	
$ 5 2-Chlorophenol-d4	1.45363	1.36836	1.39076	1.34459	1.38932	1.36694						
	1.30596						AVRG		1.37422		3.31230	
$ 10 1,2-Dichlorobenzene-d4	1.18806	0.99936	1.00074	0.95728	0.97859	0.99252						
	0.95272						AVRG		1.00989		8.00955	

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.39550	0.35376	0.36820	0.36061	0.37202	0.36662					
	0.36760						AVRG		0.36919		3.53490
$ 36 2-Fluorobiphenyl	1.49260	1.36294	1.37060	1.34186	1.36884	1.32778					
	1.34117						AVRG		1.37225		4.04118
$ 55 2,4,6-Tribromophenol	0.24314	0.24083	0.25407	0.26157	0.26265	0.26204					
	0.26253						AVRG		0.25526		3.75063
$ 66 Terphenyl-d14	0.80516	0.73645	0.78962	0.76124	0.76780	0.77440					
	0.74332						AVRG		0.76828		3.16113
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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	20 Level 7										
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

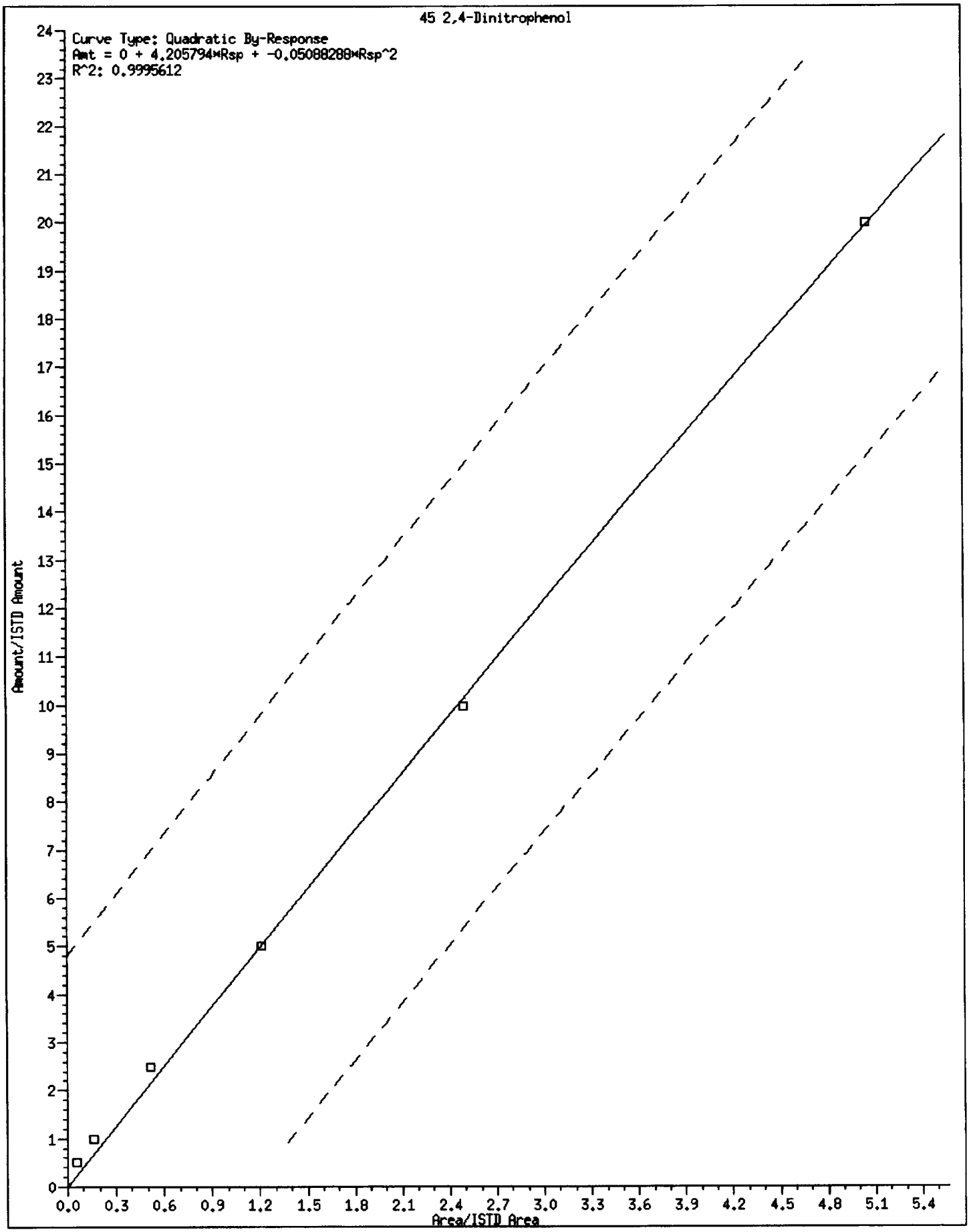
Analytical Resources, Inc.

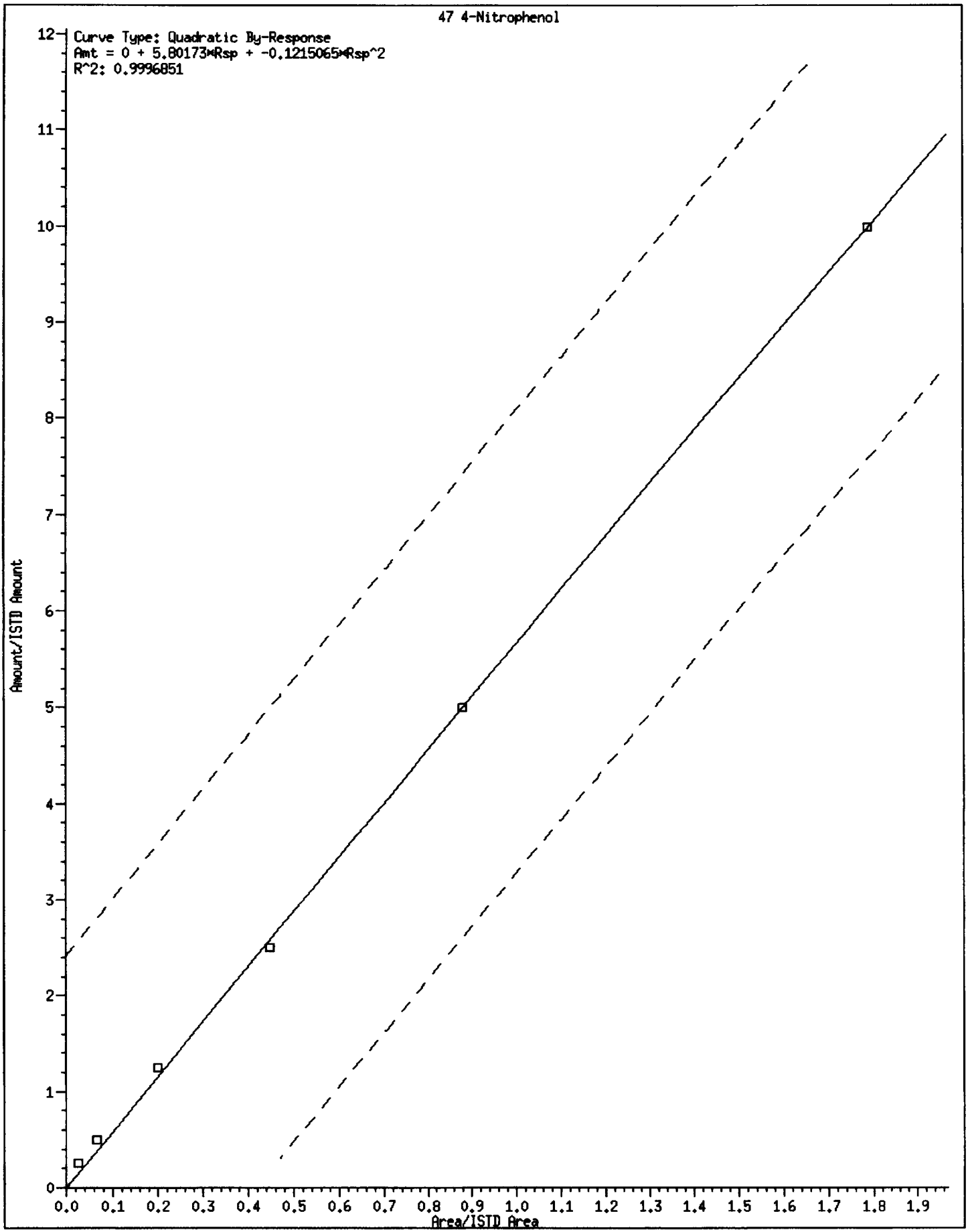
INITIAL CALIBRATION DATA

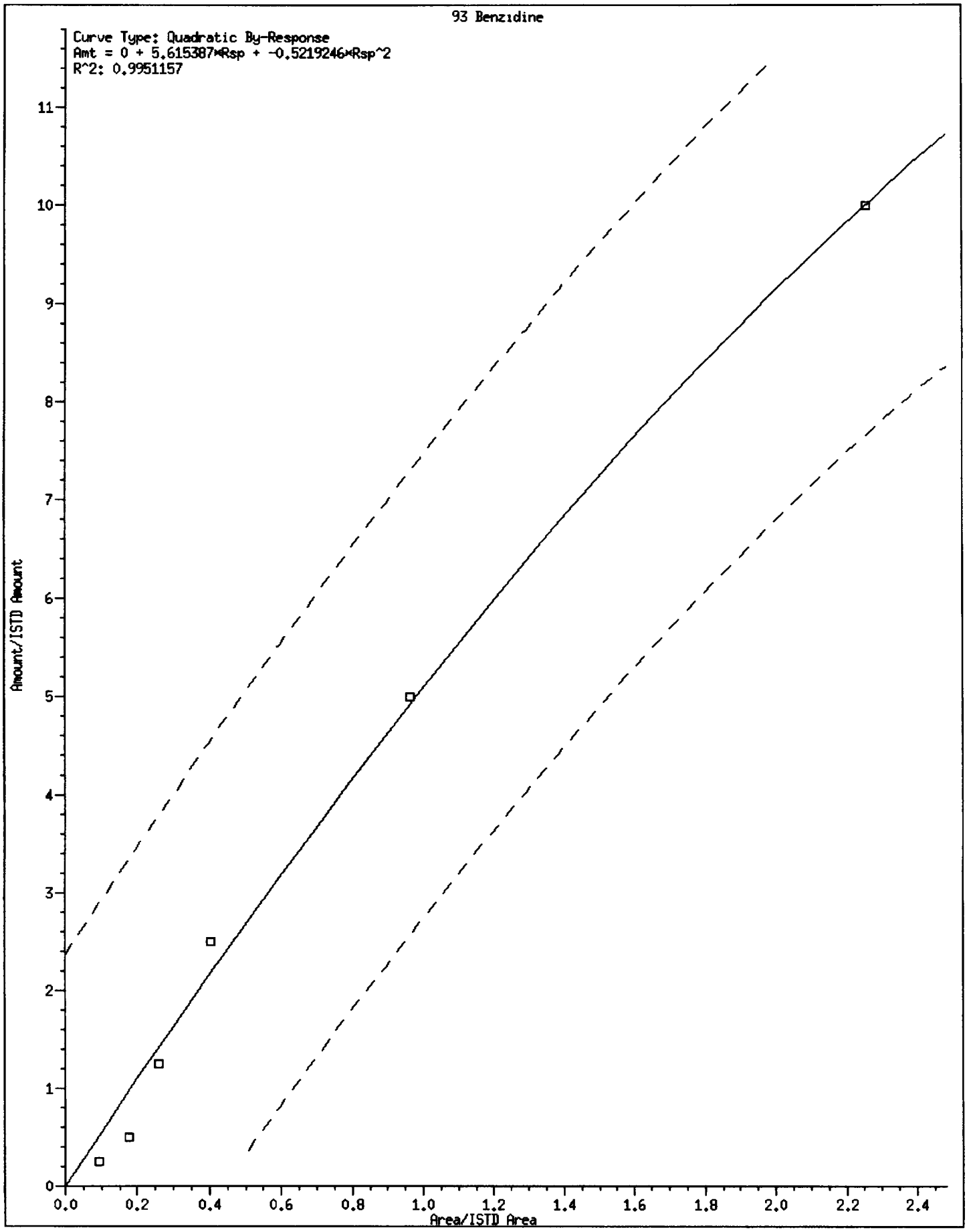
Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 12:34 yev

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

24 Benzoic acid
Curve Type: Quadratic By_Response
Amt = 0 + 3.8643888*Rsp + -0.0317157878*Rsp^2
R^2: 0.9997742
Amount/ISTD Amount
Area/ISTD Area
0.0 0.4 0.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6 4.0 4.4 4.8 5.2 5.6 6.0 6.4 6.8
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 4.205794*Rsp + -0.05088288*Rsp^2
R^2: 0.9995612
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4


47 4-Nitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 5.80173*Rsp + -0.1215065*Rsp^2
R^2: 0.9996851
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9


93 Benzidine
Curve Type: Quadratic By-Response
Amt = 0 + 5.615387*Rsp + -0.5219246*Rsp^2
R^2: 0.9951157
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130125.b/ic0125c.d
Level 2: /chem1/nt10.i/20130125.b/ic0125h.d
Level 3: /chem1/nt10.i/20130125.b/ic0125e.d
Level 4: /chem1/nt10.i/20130125.b/ic0125f.d
Level 5: /chem1/nt10.i/20130125.b/ic0125a.d
Level 6: /chem1/nt10.i/20130125.b/ic0125d.d
Level 7: /chem1/nt10.i/20130125.b/ic0125b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	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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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.32876	0.34403	0.37326	0.38202	0.39296	0.39166	0.39526						
								AVRG		0.37257		7.03242	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	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)	1.19800	1.13498	1.18460	1.15565	1.17192	1.12589	1.07570	AVRG		1.14954		3.61126	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.68712	0.61568	0.61713	0.60970	0.62479	0.62906	0.62899	AVRG		0.63035		4.13400	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	1.85175	1.68940	1.64707	1.63733	1.68988	1.61673					
	1.56109						AVRG		1.67046		5.47002
4 Bis(2-Chloroethyl)ether	1.40493	1.30334	1.30347	1.24707	1.28325	1.21128					
	1.14349						AVRG		1.27098		6.47097

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Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.59520	1.46146	1.47707	1.40489	1.45513	1.41902					
	1.36285						AVRG		1.45366		5.06063
7 1,3-Dichlorobenzene	1.83372	1.63504	1.58082	1.51847	1.53497	1.52312					
	1.44646						AVRG		1.58180		7.92392
9 1,4-Dichlorobenzene	1.82470	1.55544	1.60187	1.50303	1.51800	1.51039					
	1.45049						AVRG		1.56627		7.86403
11 Benzyl alcohol	0.84043	0.76875	0.79217	0.77311	0.81313	0.81712					
	0.79116						AVRG		0.79941		3.20420
12 1,2-Dichlorobenzene	1.73768	1.52346	1.51327	1.44648	1.47158	1.44915					
	1.40064						AVRG		1.50604		7.32876
13 2-Methylphenol	1.34993	1.22001	1.24558	1.22322	1.30059	1.26671					
	1.22080						AVRG		1.26098		3.89432
14 2,2'-oxybis(1-Chloropropane)	0.48018	0.44753	0.44284	0.44270	0.44800	0.44534					
	0.42355						AVRG		0.44716		3.75395

Analytical Resources, Inc.

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Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.34226	1.29197	1.31371	1.30699	1.33604	1.31349					
	1.27512						AVRG		1.31137		1.78362
16 N-Nitroso-di-n-propylamine	0.91573	0.79575	0.85580	0.81875	0.86236	0.84584					
	0.80313						AVRG		0.84248		4.90461
17 Hexachloroethane	0.67992	0.60175	0.63806	0.59248	0.60974	0.61412					
	0.59743						AVRG		0.61907		4.95719
19 Nitrobenzene	0.38734	0.34048	0.34857	0.34062	0.34785	0.34389					
	0.34151						AVRG		0.35004		4.79352
20 Isophorone	0.63301	0.56793	0.60847	0.59443	0.62728	0.61846					
	0.62125						AVRG		0.61012		3.68947
21 2-Nitrophenol	0.19332	0.18421	0.20543	0.20796	0.21920	0.21663					
	0.21298						AVRG		0.20568		6.19855
22 2,4-Dimethylphenol	0.37623	0.34842	0.35856	0.34561	0.35338	0.34129					
	0.33058						AVRG		0.35058		4.10928

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.42114	0.39616	0.38461	0.37952	0.38304	0.36431					
	0.36096						AVRG		0.38425		5.27643
24 Benzoic acid	+++++	14218	44455	119275	270210	507039					
	1036662						QUAD	0.000e+00	3.38439	-0.03172	0.99977
25 2,4-Dichlorophenol	0.31804	0.29394	0.30839	0.30694	0.31451	0.30586					
	0.29711						AVRG		0.30640		2.81805
26 1,2,4-Trichlorobenzene	0.40294	0.36312	0.35495	0.33490	0.33893	0.32931					
	0.31675						AVRG		0.34870		8.17173
28 Naphthalene	1.17113	1.06629	1.04085	1.00184	1.01216	1.00690					
	0.98667						AVRG		1.04083		6.08299
29 4-Chloroaniline	0.43597	0.40727	0.41596	0.40868	0.42429	0.41696					
	0.42308						AVRG		0.41889		2.36753
30 Hexachlorobutadiene	0.23385	0.21233	0.22032	0.21378	0.21418	0.21548					
	0.21128						AVRG		0.21732		3.61019

Analytical Resources, Inc.

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Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.26481	0.27149	0.29550	0.29260	0.31285	0.31892					
	0.31685						AVRG		0.29615		7.33327
32 2-Methylnaphthalene	0.73829	0.66758	0.67440	0.65675	0.70171	0.68317					
	0.68851						AVRG		0.68720		3.90226
33 Hexachlorocyclopentadiene	0.44473	0.40757	0.44583	0.44429	0.47974	0.46666					
	0.46906						AVRG		0.45113		5.27242
34 2,4,6-Trichlorophenol	0.37875	0.37012	0.40921	0.40113	0.41623	0.41485					
	0.41565						AVRG		0.40085		4.72757
35 2,4,5-Trichlorophenol	0.37884	0.39598	0.42331	0.43767	0.44881	0.45127					
	0.44592						AVRG		0.42597		6.65640
37 2-Chloronaphthalene	1.23689	1.06915	1.09647	1.07749	1.10903	1.07360					
	1.07168						AVRG		1.10490		5.43307
38 2-Nitroaniline	0.21672	0.22323	0.25658	0.26793	0.28461	0.28174					
	0.28315						AVRG		0.25914		11.03790

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
39 Dimethylphthalate	1.30877	1.22841	1.23078	1.18054	1.21915	1.17353					
	1.12753						AVRG		1.20981		4.72547
40 Acenaphthylene	1.86378	1.82126	1.85629	1.80591	1.82377	1.74121					
	1.70079						AVRG		1.80186		3.32697
41 2,6-Dinitrotoluene	0.25669	0.25630	0.27994	0.28469	0.29374	0.28380					
	0.27957						AVRG		0.27639		5.20021
43 3-Nitroaniline	0.22713	0.25471	0.29079	0.27321	0.26059	0.26304					
	0.21716						AVRG		0.25523		10.01066
44 Acenaphthene	1.18524	1.13444	1.11843	1.08189	1.09441	1.06919					
	1.05036						AVRG		1.10485		4.11445
45 2,4-Dinitrophenol	+++++	5902	18391	56078	134737	267779					
	539709						QUAD	0.000e+00	4.20579	-0.05088	0.99956
46 Dibenzofuran	1.68997	1.54872	1.56513	1.49747	1.52707	1.47995					
	1.44776						AVRG		1.53658		5.12483

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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	+++++	2579	7272	21754	49763	94479					
	191069						QUAD	0.000e+00	5.80173	-0.12151	0.99969
48 2,4-Dinitrotoluene	0.31718	0.34651	0.38077	0.38891	0.40653	0.39149					
	0.38462						AVRG		0.37372		8.26839
49 Fluorene	1.40265	1.35139	1.32070	1.30322	1.29668	1.24547					
	1.21601						AVRG		1.30516		4.79174
50 Diethylphthalate	1.35866	1.23097	1.28760	1.26224	1.29138	1.23346					
	1.20698						AVRG		1.26733		4.00618
51 4-Chlorophenyl-phenylether	0.64889	0.64348	0.63067	0.59203	0.60007	0.57862					
	0.56392						AVRG		0.60824		5.43948
52 4-Nitroaniline	0.24294	0.27239	0.27818	0.26676	0.27205	0.28138					
	0.27241						AVRG		0.26944		4.67658
53 4,6-Dinitro-2-methylphenol	0.11263	0.13500	0.16003	0.16959	0.18328	0.18067					
	0.18008						AVRG		0.16018		16.77594

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.52611	0.48647	0.51232	0.47864	0.47347	0.45779					
	0.43800						AVRG		0.48183		6.27832
56 4-Bromophenyl-phenylether	0.24194	0.21358	0.21802	0.21684	0.22551	0.22344					
	0.22256						AVRG		0.22313		4.15933
57 Hexachlorobenzene	0.30710	0.28329	0.28763	0.27321	0.27683	0.27013					
	0.26191						AVRG		0.28001		5.22545
58 Pentachlorophenol	0.15074	0.16509	0.18887	0.18922	0.20807	0.20324					
	0.20185						AVRG		0.18673		11.42453
60 Phenanthrene	1.20922	1.07453	1.06296	1.00313	1.06202	1.02943					
	1.02293						AVRG		1.06632		6.37828
61 Anthracene	1.11703	1.02015	1.06543	1.04831	1.10358	1.09925					
	1.06181						AVRG		1.07365		3.21436
62 Carbazole	+++++	0.86167	0.87784	0.64971	0.51676	0.65824					
	0.73841						AVRG		0.71710		19.25543

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.11890	0.99204	1.07832	1.11232	1.23021	1.24150					
	1.24670						AVRG		1.14571		8.47014
64 Fluoranthene	1.28527	1.12599	1.21902	1.18994	1.27165	1.24630					
	1.25777						AVRG		1.22799		4.50231
65 Pyrene	1.17011	1.06492	1.14258	1.13631	1.15430	1.15777					
	1.14963						AVRG		1.13938		3.03479
67 Butylbenzylphthalate	0.41650	0.36082	0.43017	0.43330	0.46321	0.46708					
	0.45389						AVRG		0.43214		8.44745
68 Benzo(a)anthracene	1.19920	1.07431	1.12286	1.10780	1.09980	1.11248					
	1.09644						AVRG		1.11613		3.55235
70 3,3'-Dichlorobenzidine	0.58480	0.52082	0.47361	0.38174	0.35778	0.46977					
	0.47574						AVRG		0.46632		16.63286
71 Chrysene	1.13171	1.02241	1.01786	0.97103	0.98519	0.98069					
	0.96753						AVRG		1.01092		5.68546

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
72 bis(2-Ethylhexyl)phthalate	0.59458	0.50606	0.51947	0.53003	0.53141	0.51142	0.50438					
								AVRG		0.52819		5.90419
73 Di-n-octylphthalate	1.15851	1.02427	0.98247	0.92974	0.93393	0.91460	0.88657					
								AVRG		0.97573		9.48185
74 Benzo(b)fluoranthene	1.20608	1.10628	1.09252	1.14920	1.14101	1.20366	1.21674					
								AVRG		1.15936		4.33609
75 Benzo(k)fluoranthene	1.42017	1.25965	1.28978	1.20526	1.26889	1.16546	1.15821					
								AVRG		1.25249		7.17965
187 Total Benzofluoranthenes	1.23756	1.13080	1.13020	1.11091	1.13997	1.11859	1.12045					
								AVRG		1.14121		3.81526
76 Benzo(a)pyrene	1.07669	0.94944	0.97894	0.98320	1.01372	1.00840	1.00814					
								AVRG		1.00265		3.95585
78 Indeno(1,2,3-cd)pyrene	1.25868	1.15059	1.21659	1.22284	1.27651	1.27173	1.25832					
								AVRG		1.23647		3.58261

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.97137	0.92360	0.98583	0.98269	1.00428	1.00142					
	0.98469						AVRG		0.97912		2.75358
80 Benzo(g,h,i)perylene	1.08126	1.00992	1.04627	1.04488	1.08346	1.07955					
	1.08065						AVRG		1.06086		2.64699
90 N-Nitrosodimethylamine	0.83322	0.73286	0.74717	0.73648	0.79641	0.75614					
	0.72459						AVRG		0.76098		5.20213
91 Aniline	4.03355	3.60799	3.69841	3.54445	3.67007	3.46281					
	3.21579						AVRG		3.60472		6.90741
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	18859	37924	54172	86152	196119					
	451512						QUAD	0.000e+00	5.61539	-0.52192	0.99512
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
99 Perylene	1.31908	1.13841	1.15956	1.11360	1.11501	1.11215						
	1.10824						AVRG		1.15229		6.58107	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.66617	0.65238	0.65710	0.63694	0.68053	0.63792						
	0.61262						AVRG		0.64909		3.42053	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	0.30451	0.28895	0.29558	0.29116	0.30141	0.30051						
	0.30173						AVRG		0.29769		1.97814	
189 N-Nitrosomethylethylamine	0.56360	0.54392	0.55233	0.53833	0.57892	0.55478						
	0.53912						AVRG		0.55300		2.63905	
$ 1 2-Fluorophenol	1.34632	1.22090	1.31944	1.24951	1.32743	1.27358						
	1.21571						AVRG		1.27898		4.13634	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.63984	1.52897	1.54799	1.55779	1.64552	1.60078						
	1.58876						AVRG		1.58709		2.83567	
$ 5 2-Chlorophenol-d4	1.45363	1.36836	1.39076	1.34459	1.38932	1.36694						
	1.30596						AVRG		1.37422		3.31230	
$ 10 1,2-Dichlorobenzene-d4	1.18806	0.99936	1.00074	0.95728	0.97859	0.99252						
	0.95272						AVRG		1.00989		8.00955	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.39550	0.35376	0.36820	0.36061	0.37202	0.36662					
	0.36760						AVRG		0.36919		3.53490
$ 36 2-Fluorobiphenyl	1.49260	1.36294	1.37060	1.34186	1.36884	1.32778					
	1.34117						AVRG		1.37225		4.04118
$ 55 2,4,6-Tribromophenol	0.24314	0.24083	0.25407	0.26157	0.26265	0.26204					
	0.26253						AVRG		0.25526		3.75063
$ 66 Terphenyl-d14	0.80516	0.73645	0.78962	0.76124	0.76780	0.77440					
	0.74332						AVRG		0.76828		3.16113
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2013 12:59
End Cal Date : 25-JAN-2013 17:16
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/ABN.m
Cal Date : 28-Jan-2013 13:10 yev

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

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YE 01/28/13

Data file : /chem1/nt10.i/20130125.b/ic0125a.d
Lab Smp Id: IC0125A
Inj Date : 25-JAN-2013 12:59
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 12:59 Cal File: ic0125a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.719	6.720	(0.740)	77361	5.00000	5.189
$	2 Phenol-d5	99	8.435	8.428	(0.928)	95899	5.00000	5.184
	3 Phenol	94	8.458	8.451	(0.931)	98484	5.00000	5.058
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	80968	5.00000	5.055
	4 Bis(2-Chloroethyl)ether	93	8.620	8.621	(0.949)	74786	5.00000	5.048
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	84803	5.00000	5.005
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	89456	5.00000	4.852
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	46623	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	88467	5.00000	4.846
$	10 1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	57031	5.00000	4.845
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	85762	5.00000	4.886
	11 Benzyl alcohol	108	9.387	9.388	(1.033)	47388	5.00000	5.086
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	26109	5.00000	5.009
	13 2-Methylphenol	108	9.651	9.644	(1.062)	75797	5.00000	5.157
	17 Hexachloroethane	117	10.132	10.133	(1.115)	35535	5.00000	4.925
	16 N-Nitroso-di-n-propylamine	70	10.000	9.993	(1.101)	50257	5.00000	5.118
	15 4-Methylphenol	108	9.938	9.939	(1.094)	77863	5.00000	5.094
$	18 Nitrobenzene-d5	82	10.264	10.257	(0.873)	82299	5.00000	5.038
	19 Nitrobenzene	77	10.303	10.296	(0.876)	76953	5.00000	4.969
	20 Isophorone	82	10.792	10.785	(0.918)	138769	5.00000	5.141
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	48492	5.00000	5.329
	22 2,4-Dimethylphenol	107	11.070	11.063	(0.942)	156350	10.0000	10.08
	23 Bis(2-Chloroethoxy)methane	93	11.278	11.271	(0.959)	84737	5.00000	4.984
	24 Benzoic acid	105	11.325	11.186	(0.963)	270210	20.0000	20.37
	25 2,4-Dichlorophenol	162	11.471	11.464	(0.976)	139155	10.0000	10.26
	26 1,2,4-Trichlorobenzene	180	11.671	11.664	(0.993)	74980	5.00000	4.860
*	27 Naphthalene-d8	136	11.756	11.749	(1.000)	176978	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.003)	223912	5.00000	4.862
	29 4-Chloroaniline	127	11.965	11.957	(1.018)	187727	10.0000	10.13
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	47381	5.00000	4.928
	31 4-Chloro-3-methylphenol	107	13.025	13.017	(1.108)	138421	10.0000	10.56
	32 2-Methylnaphthalene	142	13.311	13.311	(1.132)	155233	5.00000	5.106
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.882)	132975	10.0000	10.63
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.893)	115372	10.0000	10.38
	35 2,4,5-Trichlorophenol	196	14.069	14.070	(0.898)	124402	10.0000	10.54
$	36 2-Fluorobiphenyl	172	14.178	14.170	(0.905)	189707	5.00000	4.988
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	153701	5.00000	5.019
	38 2-Nitroaniline	65	14.681	14.674	(0.937)	78889	10.0000	10.98
	39 Dimethylphthalate	163	15.176	15.169	(0.969)	168962	5.00000	5.039
	40 Acenaphthylene	152	15.315	15.316	(0.978)	252756	5.00000	5.061
	41 2,6-Dinitrotoluene	165	15.308	15.300	(0.977)	81419	10.0000	10.63
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	110872	4.00000	
	43 3-Nitroaniline	138	15.609	15.594	(0.997)	72229	10.0000	10.21
	44 Acenaphthene	153	15.733	15.726	(1.004)	151674	5.00000	4.953
	45 2,4-Dinitrophenol	184	15.834	15.826	(1.011)	134737	20.0000	20.14
	46 Dibenzofuran	168	16.089	16.089	(1.027)	211637	5.00000	4.969
	47 4-Nitrophenol	109	15.980	15.973	(1.020)	49763	10.0000	10.32
	48 2,4-Dinitrotoluene	165	16.181	16.174	(1.033)	112681	10.0000	10.88
	50 Diethylphthalate	149	16.761	16.754	(1.070)	178972	5.00000	5.095
	49 Fluorene	166	16.862	16.855	(1.077)	179707	5.00000	4.968
	51 4-Chlorophenyl-phenylether	204	16.877	16.870	(1.077)	83164	5.00000	4.933
	52 4-Nitroaniline	138	16.985	16.963	(1.084)	75406	10.0000	10.10
	53 4,6-Dinitro-2-methylphenol	198	17.086	17.071	(0.902)	172550	20.0000	22.88
	54 N-Nitrosodiphenylamine	169	17.155	17.148	(0.906)	111436	5.00000	4.913
$	55 2,4,6-Tribromophenol	330	17.440	17.433	(1.113)	36401	5.00000	5.145
	56 4-Bromophenyl-phenylether	248	17.965	17.957	(0.949)	53077	5.00000	5.053
	57 Hexachlorobenzene	284	18.289	18.274	(0.966)	65155	5.00000	4.943
	58 Pentachlorophenol	266	18.676	18.669	(0.986)	97943	10.0000	11.14
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	188290	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	249959	5.00000	4.980
	61 Anthracene	178	19.086	19.079	(1.008)	259741	5.00000	5.139
	62 Carbazole	167	19.434	19.435	(1.026)	121626	5.00000	3.449
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	289545	5.00000	5.369
	64 Fluoranthene	202	21.399	21.392	(1.130)	299299	5.00000	5.178
	65 Pyrene	202	21.817	21.810	(0.909)	308315	5.00000	5.065
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	205081	5.00000	4.997
	67 Butylbenzylphthalate	149	23.079	23.072	(0.961)	123724	5.00000	5.360
	68 Benzo(a)anthracene	228	23.977	23.970	(0.999)	293758	5.00000	4.927
*	69 Chrysene-d12	240	24.008	24.001	(1.000)	213681	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.954	23.947	(0.998)	191126	10.0000	7.672
	71 Chrysene	228	24.055	24.048	(1.002)	263146	5.00000	4.873
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	175471	5.00000	5.030
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	264159	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	308384	5.00000	4.786

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.804	25.789	(0.973)	297496	5.00000	4.921
	75 Benzo(k)fluoranthene	252	25.843	25.836	(0.975)	330837	5.00000	5.065
	76 Benzo(a)pyrene	252	26.401	26.393	(0.996)	264308	5.00000	5.055
*	77 Perylene-d12	264	26.509	26.502	(1.000)	208584	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.942	28.919	(1.092)	332825	5.00000	5.162
	79 Dibenzo(a,h)anthracene	278	28.957	28.942	(1.092)	261845	5.00000	5.128
	80 Benzo(g,h,i)perylene	276	29.648	29.633	(1.118)	282491	5.00000	5.107
	90 N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	92827	10.0000	10.47
	91 Aniline	93	8.512	8.505	(0.937)	213887	5.00000	5.091
	93 Benzidine	184	21.655	21.648	(0.902)	86152	10.0000	8.717
	103 Pyridine	79	4.457	4.481	(0.491)	79321	10.0000	10.48
	105 1-methylnaphthalene	142	13.551	13.544	(1.153)	138218	5.00000	4.956
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.224	17.217	(1.100)	162417	5.00000	5.097
	187 Total Benzofluoranthenes	252	25.843	25.836	(0.975)	594451	10.0000	9.989
	99 Perylene	252	26.563	26.548	(1.002)	290716	5.00000	4.838
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	16.467	16.460	(1.051)	54461	5.00000	5.274
	188 2,6-Dichlorophenol	162	11.980	11.973	(1.019)	133358	10.0000	10.12
	189 N-Nitrosomethylethylamine	88	5.901	5.909	(0.650)	67477	10.0000	10.47

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125a.d
Lab Smp Id: IC0125A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	46623	0.00
27 Naphthalene-d8	176978	88489	353956	176978	0.00
42 Acenaphthene-d10	110872	55436	221744	110872	0.00
59 Phenanthrene-d10	188290	94145	376580	188290	0.00
69 Chrysene-d12	213681	106840	427362	213681	0.00
134 Di-n-octylphthala	264159	132080	528318	264159	0.00
77 Perylene-d12	208584	104292	417168	208584	0.00

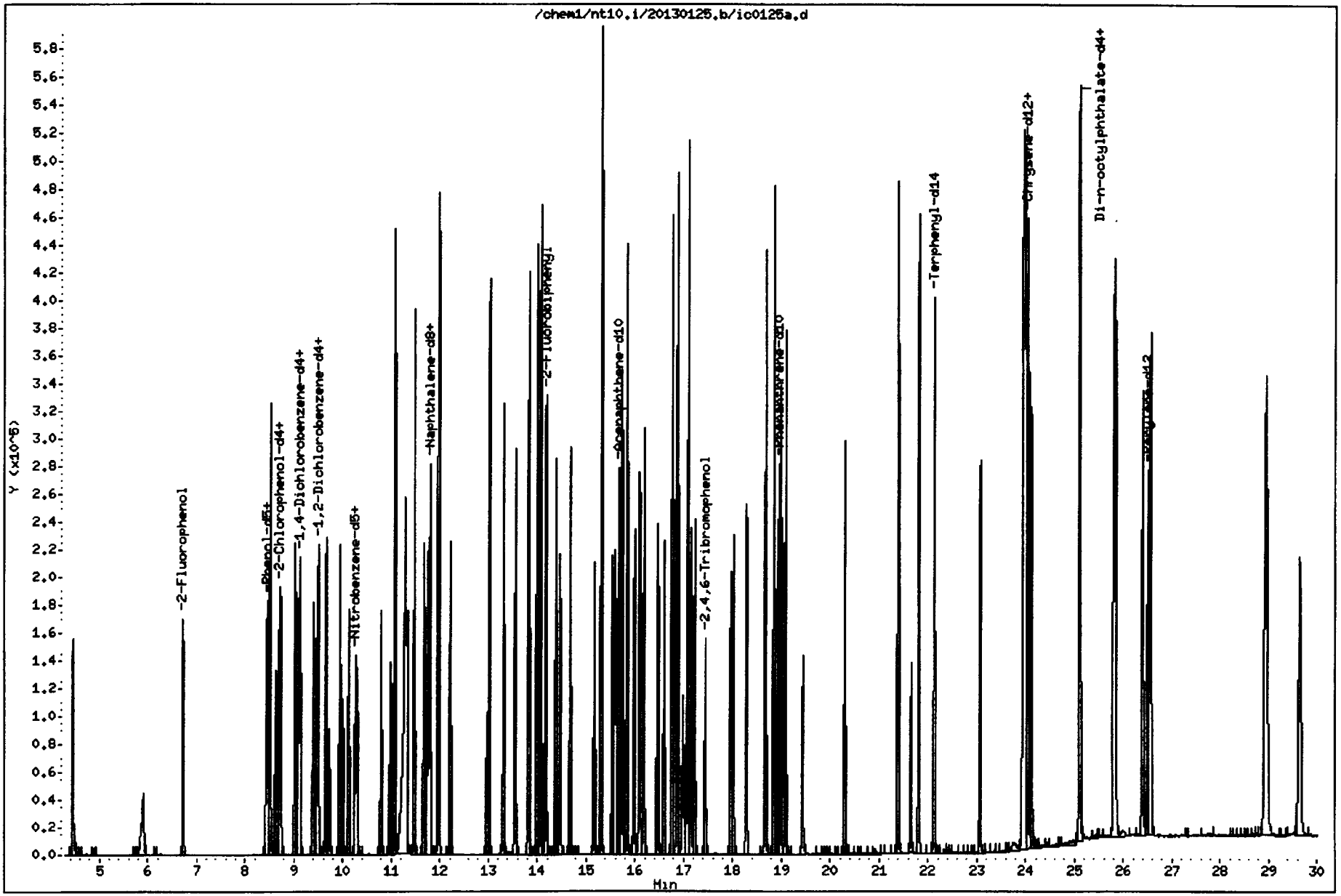
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.76	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

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

Data File: /chem1/nt10.i/20130125.b/ic0125a.d
Date : 25-JAN-2013 12:59
Client ID:
Sample Info: IC0125A

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125a.d

Lab ID: IC0125A, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 4/28/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125b.d
Lab Smp Id: IC0125B
Inj Date : 25-JAN-2013 13:36
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 13:36 Cal File: ic0125b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.728	6.720	(0.741)	264606	20.0000	19.01
$	2 Phenol-d5	99	8.451	8.428	(0.930)	345802	20.0000	20.02
	3 Phenol	94	8.474	8.451	(0.933)	339779	20.0000	18.69
$	5 2-Chlorophenol-d4	132	8.706	8.698	(0.958)	284249	20.0000	19.01
	4 Bis(2-Chloroethyl)ether	93	8.629	8.621	(0.950)	248887	20.0000	17.99
	6 2-Chlorophenol	128	8.737	8.729	(0.962)	296632	20.0000	18.75
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	314829	20.0000	18.29
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	43531	4.00000	
	9 1,4-Dichlorobenzene	146	9.124	9.116	(1.004)	315706	20.0000	18.52
$	10 1,2-Dichlorobenzene-d4	152	9.473	9.465	(1.043)	207364	20.0000	18.87
	12 1,2-Dichlorobenzene	146	9.504	9.496	(1.046)	304856	20.0000	18.60
	11 Benzyl alcohol	108	9.403	9.388	(1.035)	172201	20.0000	19.79
	14 2,2'-oxybis(1-Chloropropane)	121	9.729	9.722	(1.071)	92188	20.0000	18.94
	13 2-Methylphenol	108	9.659	9.644	(1.063)	265714	20.0000	19.36
	17 Hexachloroethane	117	10.133	10.133	(1.115)	130033	20.0000	19.30
	16 N-Nitroso-di-n-propylamine	70	10.016	9.993	(1.103)	174805	20.0000	19.07
	15 4-Methylphenol	108	9.954	9.939	(1.096)	277537	20.0000	19.45
$	18 Nitrobenzene-d5	82	10.273	10.257	(0.874)	303692	20.0000	19.91
	19 Nitrobenzene	77	10.311	10.296	(0.877)	282133	20.0000	19.51
	20 Isophorone	82	10.816	10.785	(0.920)	513246	20.0000	20.37
	21 2-Nitrophenol	139	10.986	10.978	(0.934)	175952	20.0000	20.71
	22 2,4-Dimethylphenol	107	11.078	11.063	(0.942)	546216	40.0000	37.72
	23 Bis(2-Chloroethoxy)methane	93	11.286	11.271	(0.960)	298208	20.0000	18.79
	24 Benzoic acid	105	11.487	11.186	(0.977)	1036662	80.0000	79.94(M)
	25 2,4-Dichlorophenol	162	11.487	11.464	(0.977)	490916	40.0000	38.79
	26 1,2,4-Trichlorobenzene	180	11.672	11.664	(0.993)	261680	20.0000	18.17
*	27 Naphthalene-d8	136	11.757	11.749	(1.000)	165229	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	11.803	11.795	(1.004)	815133	20.0000	18.96
29	4-Chloroaniline	127	11.981	11.957	(1.019)	699058	40.0000	40.40
30	Hexachlorobutadiene	225	12.212	12.205	(1.039)	174544	20.0000	19.44
31	4-Chloro-3-methylphenol	107	13.033	13.017	(1.109)	523532	40.0000	42.80
32	2-Methylnaphthalene	142	13.311	13.311	(1.132)	568813	20.0000	20.04
33	Hexachlorocyclopentadiene	237	13.830	13.822	(0.883)	500637	40.0000	41.59
34	2,4,6-Trichlorophenol	196	14.000	13.992	(0.894)	443629	40.0000	41.48
35	2,4,5-Trichlorophenol	196	14.078	14.070	(0.899)	475930	40.0000	41.87
$ 36	2-Fluorobiphenyl	172	14.178	14.170	(0.905)	715720	20.0000	19.55
37	2-Chloronaphthalene	162	14.387	14.379	(0.918)	571909	20.0000	19.40
38	2-Nitroaniline	65	14.697	14.674	(0.938)	302207	40.0000	43.71
39	Dimethylphthalate	163	15.192	15.169	(0.970)	601710	20.0000	18.64
40	Acenaphthylene	152	15.324	15.316	(0.978)	907637	20.0000	18.88
41	2,6-Dinitrotoluene	165	15.324	15.300	(0.978)	298383	40.0000	40.46
* 42	Acenaphthene-d10	164	15.664	15.656	(1.000)	106731	4.00000	
43	3-Nitroaniline	138	15.625	15.594	(0.998)	231778	40.0000	34.03
44	Acenaphthene	153	15.741	15.726	(1.005)	560530	20.0000	19.01
45	2,4-Dinitrophenol	184	15.865	15.826	(1.013)	539709	80.0000	79.87
46	Dibenzofuran	168	16.105	16.089	(1.028)	772605	20.0000	18.84
47	4-Nitrophenol	109	16.012	15.973	(1.022)	191069	40.0000	39.99
48	2,4-Dinitrotoluene	165	16.197	16.174	(1.034)	410508	40.0000	41.17
50	Diethylphthalate	149	16.785	16.754	(1.072)	644112	20.0000	19.05
49	Fluorene	166	16.870	16.855	(1.077)	648932	20.0000	18.63
51	4-Chlorophenyl-phenylether	204	16.885	16.870	(1.078)	300938	20.0000	18.54
52	4-Nitroaniline	138	17.024	16.963	(1.087)	290742	40.0000	40.44
53	4,6-Dinitro-2-methylphenol	198	17.117	17.071	(0.903)	650220	80.0000	89.94
54	N-Nitrosodiphenylamine	169	17.163	17.148	(0.906)	395375	20.0000	18.18
$ 55	2,4,6-Tribromophenol	330	17.448	17.433	(1.114)	140098	20.0000	20.57
56	4-Bromophenyl-phenylether	248	17.965	17.957	(0.948)	200896	20.0000	19.95
57	Hexachlorobenzene	284	18.289	18.274	(0.965)	236417	20.0000	18.71
58	Pentachlorophenol	266	18.684	18.669	(0.986)	364411	40.0000	43.24
* 59	Phenanthrene-d10	188	18.947	18.940	(1.000)	180535	4.00000	
60	Phenanthrene	178	19.001	18.986	(1.003)	923370	20.0000	19.19
61	Anthracene	178	19.094	19.079	(1.008)	958468	20.0000	19.78
62	Carbazole	167	19.442	19.435	(1.026)	666542	20.0000	19.71(M)
63	Di-n-butylphthalate	149	20.301	20.294	(1.071)	1125365	20.0000	21.76
64	Fluoranthene	202	21.400	21.392	(1.129)	1135359	20.0000	20.49
65	Pyrene	202	21.825	21.810	(0.909)	1149677	20.0000	20.18
$ 66	Terphenyl-d14	244	22.135	22.127	(0.922)	743352	20.0000	19.35
67	Butylbenzylphthalate	149	23.080	23.072	(0.961)	453914	20.0000	21.01
68	Benzo(a)anthracene	228	23.986	23.970	(0.999)	1096487	20.0000	19.65
* 69	Chrysene-d12	240	24.017	24.001	(1.000)	200009	4.00000	
70	3,3'-Dichlorobenzidine	252	23.970	23.947	(0.998)	951529	40.0000	40.81
71	Chrysene	228	24.063	24.048	(1.002)	967573	20.0000	19.14
72	bis(2-Ethylhexyl)phthalate	149	24.125	24.117	(0.961)	668708	20.0000	19.10
* 134	Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	265158	4.00000	
73	Di-n-octylphthalate	149	25.116	25.108	(1.001)	1175410	20.0000	18.17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.813	25.789	(0.973)	1215752	20.0000	20.99
75	Benzo(k)fluoranthene	252	25.859	25.836	(0.975)	1157269	20.0000	18.49
76	Benzo(a)pyrene	252	26.416	26.393	(0.996)	1007316	20.0000	20.11
* 77	Perylene-d12	264	26.517	26.502	(1.000)	199837	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.958	28.919	(1.092)	1257296	20.0000	20.35
79	Dibenzo(a,h)anthracene	278	28.989	28.942	(1.093)	983890	20.0000	20.11
80	Benzo(g,h,i)perylene	276	29.680	29.633	(1.119)	1079771	20.0000	20.37
90	N-Nitrosodimethylamine	74	4.457	4.442	(0.491)	315420	40.0000	38.09
91	Aniline	93	8.521	8.505	(0.938)	699933	20.0000	17.84
93	Benzidine	184	21.655	21.648	(0.902)	451512	40.0000	40.07
103	Pyridine	79	4.450	4.481	(0.490)	266680	40.0000	37.75
105	1-methylnaphthalene	142	13.551	13.544	(1.153)	519637	20.0000	19.96
111	Azobenzene (1,2-DP-Hydrazine)	77	17.240	17.217	(1.101)	574054	20.0000	18.72
187	Total Benzofluoranthenes	252	25.859	25.836	(0.975)	2239076	40.0000	39.27
99	Perylene	252	26.579	26.548	(1.002)	1107338	20.0000	19.24
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.476	16.460	(1.052)	210935	20.0000	21.22
188	2,6-Dichlorophenol	162	11.988	11.973	(1.020)	498549	40.0000	40.54
189	N-Nitrosomethylethylamine	88	5.917	5.909	(0.651)	234684	40.0000	39.00

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125b.d
Lab Smp Id: IC0125B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

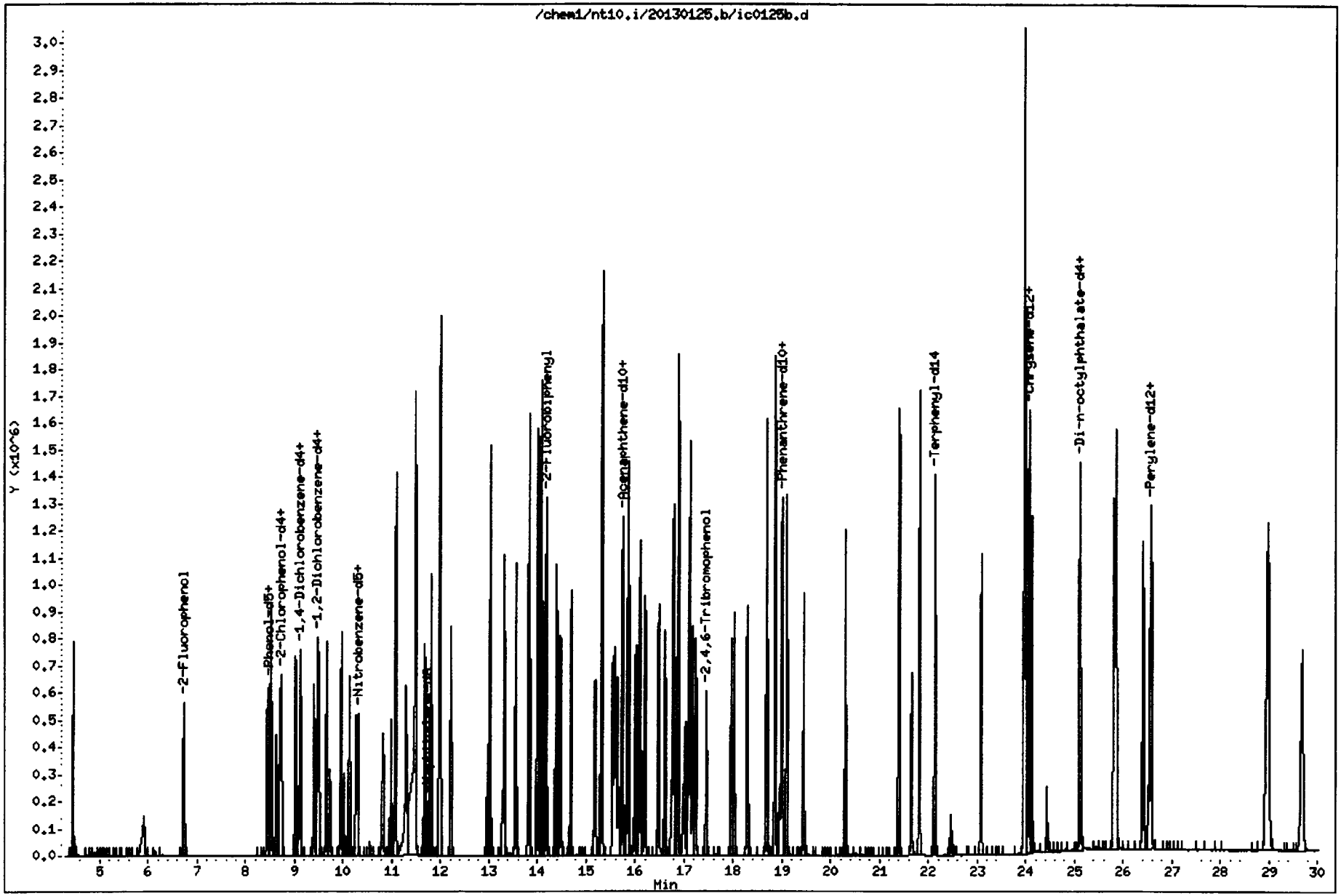
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	43531	-6.63
27 Naphthalene-d8	176978	88489	353956	165229	-6.64
42 Acenaphthene-d10	110872	55436	221744	106731	-3.73
59 Phenanthrene-d10	188290	94145	376580	180535	-4.12
69 Chrysene-d12	213681	106840	427362	200009	-6.40
134 Di-n-octylphthala	264159	132080	528318	265158	0.38
77 Perylene-d12	208584	104292	417168	199837	-4.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.09	0.01
27 Naphthalene-d8	11.76	11.26	12.26	11.76	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.95	0.04
69 Chrysene-d12	24.01	23.51	24.51	24.02	0.03
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.52	0.03

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

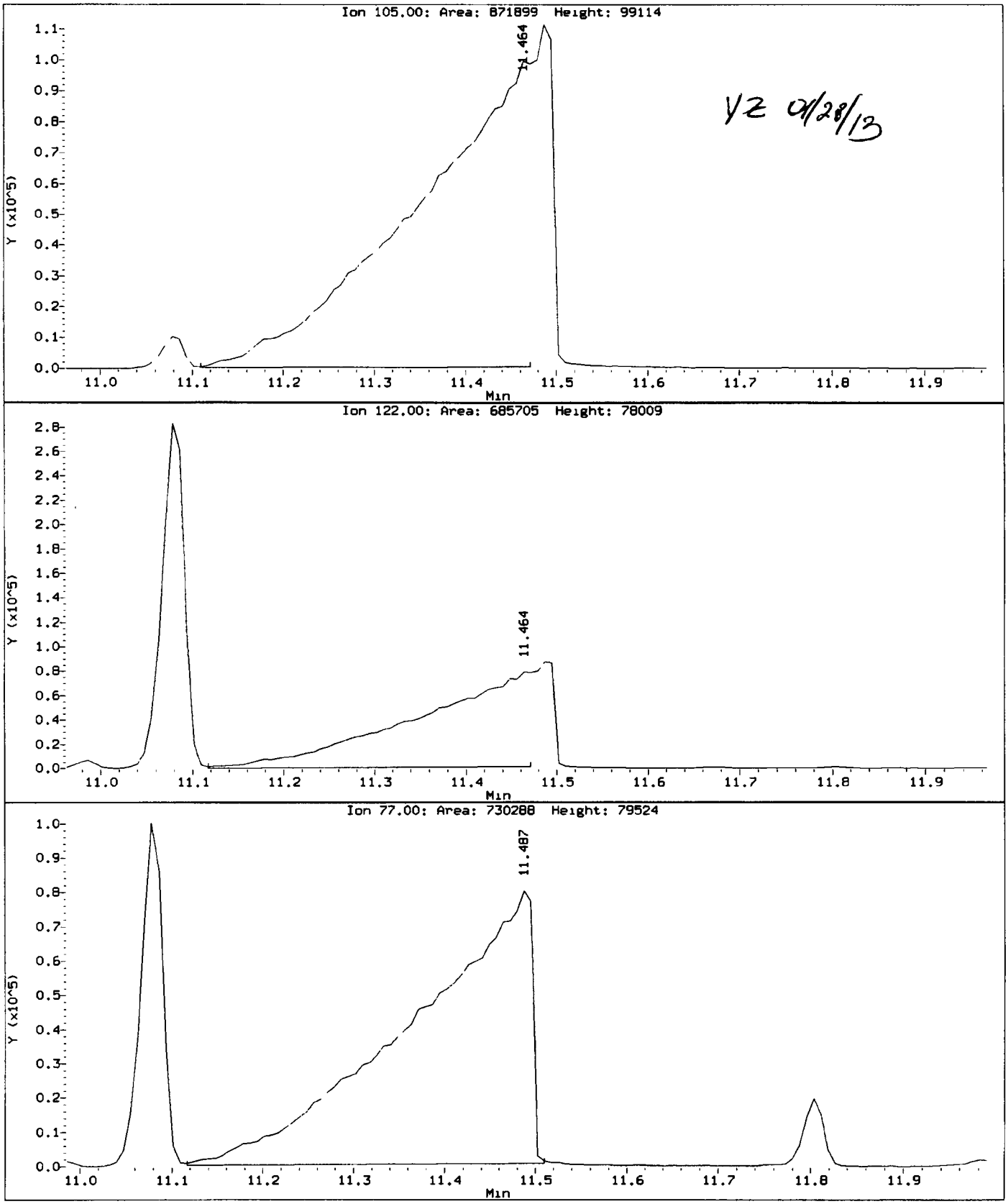
Data File: /chem1/nt10.i/20130125.b/ic0125b.d
Date : 26-JAN-2013 13:36
Client ID:
Sample Info: IC0125B

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



Data File: /chem1/nt10.1/20130125.b/1c0125b.d
Injection Date: 25-JAN-2013 13:36
Instrument: nt10.1
Client Sample ID:

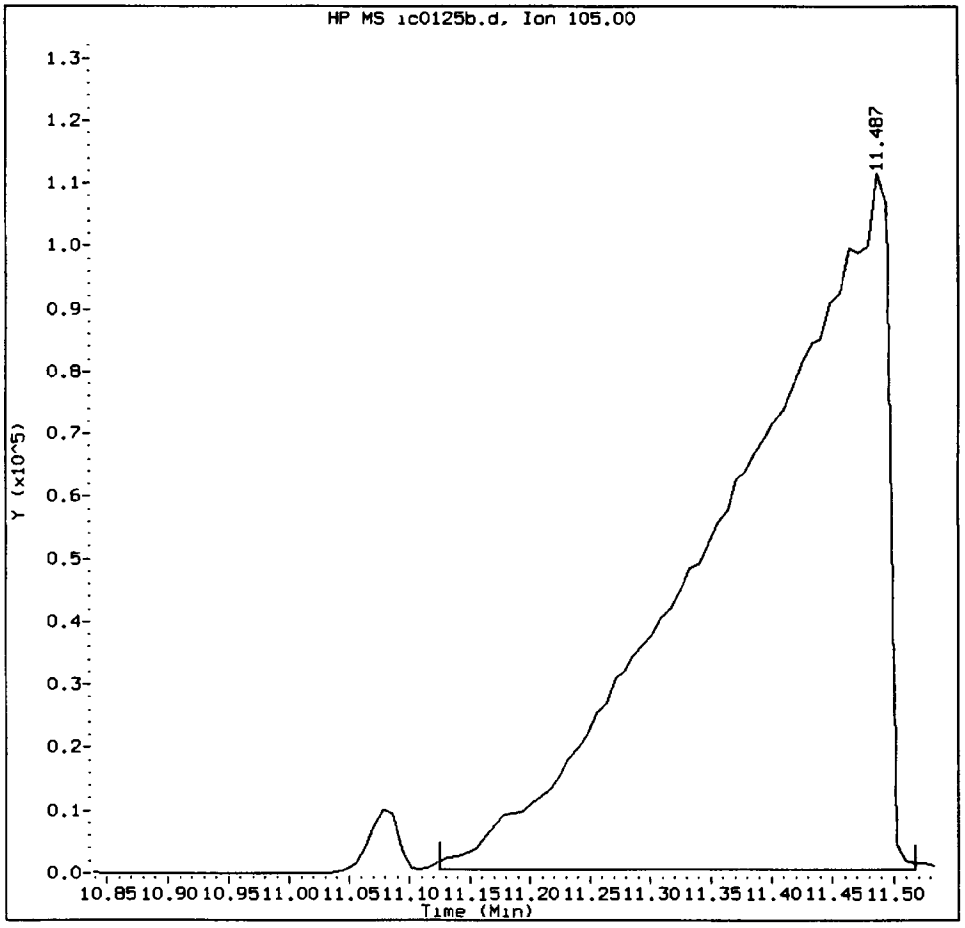
Compound: Benzoic acid
CAS Number: 65-85-0



YZ 01/28/13

IC0125B, /chem1/nt10.i/20130125.b/ic0125b.d

Benzoic acid Amount: 79.94 Area: 1036662



MANUAL INTEGRATION for Benzoic acid

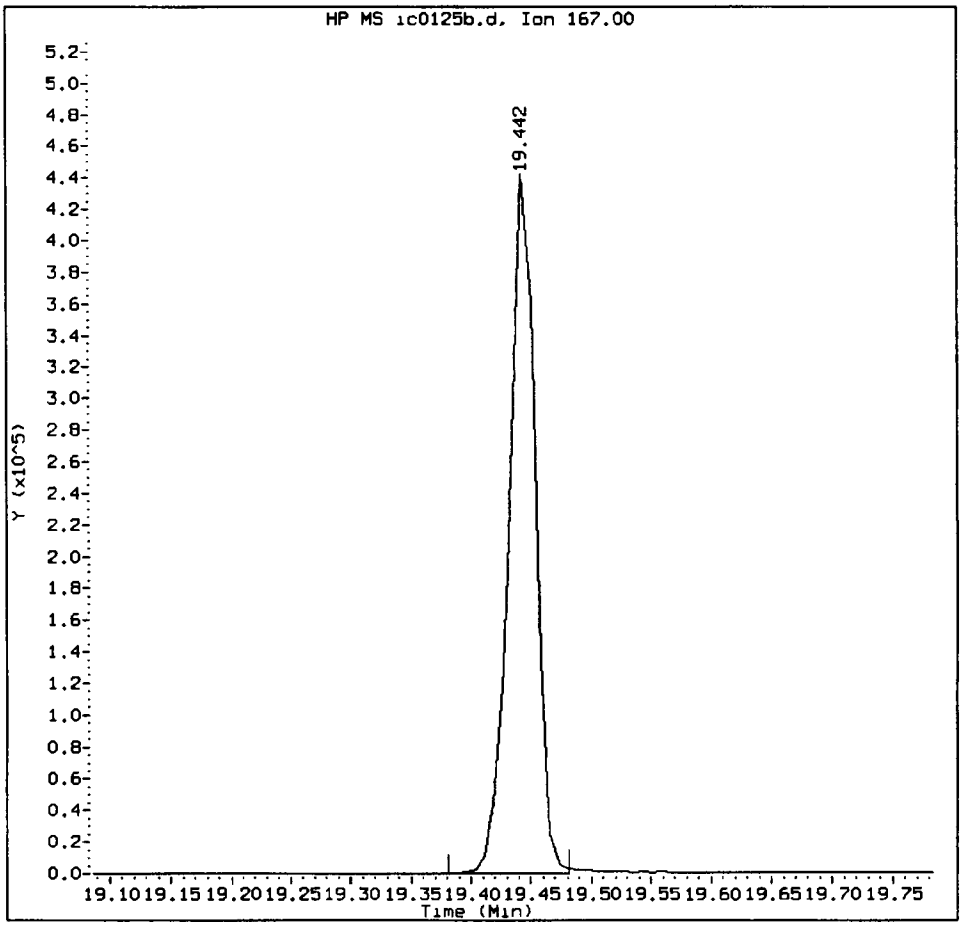
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 01/28/13

IC0125B, /chem1/nt10.i/20130125.b/ic0125b.d

Carbazole Amount: 19.71 Area: 666542



MANUAL INTEGRATION for Carbazole

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

5. Other _____

Analyst: YZ Date: 01/28/13

CO-ELUTION SUMMARY FOR FILE - ic0125b.d

Lab ID: IC0125B, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS
15.324	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

YZ 01/28/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125c.d
Lab Smp Id: IC0125C
Inj Date : 25-JAN-2013 14:13
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 14:13 Cal File: ic0125c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.720	6.720	(0.740)	2986	0.20000	0.2105
$	2	Phenol-d5	99	8.428	8.428	(0.928)	3637	0.20000	0.2066
	3	Phenol	94	8.451	8.451	(0.930)	4107	0.20000	0.2217
$	5	2-Chlorophenol-d4	132	8.698	8.698	(0.957)	3224	0.20000	0.2116
	4	Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	3116	0.20000	0.2211
	6	2-Chlorophenol	128	8.729	8.729	(0.961)	3538	0.20000	0.2195
	7	1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	4067	0.20000	0.2319
*	8	1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	44358	4.00000	
	9	1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	4047	0.20000	0.2330
$	10	1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	2635	0.20000	0.2353
	12	1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	3854	0.20000	0.2308
	11	Benzyl alcohol	108	9.387	9.388	(1.033)	1864	0.20000	0.2103
	14	2,2'-oxybis(1-Chloropropane)	121	9.714	9.722	(1.069)	1065	0.20000	0.2148
	13	2-Methylphenol	108	9.644	9.644	(1.062)	2994	0.20000	0.2141
	17	Hexachloroethane	117	10.125	10.133	(1.114)	1508	0.20000	0.2197
	16	N-Nitroso-di-n-propylamine	70	10.001	9.993	(1.101)	2031	0.20000	0.2174
	15	4-Methylphenol	108	9.939	9.939	(1.094)	2977	0.20000	0.2047
$	18	Nitrobenzene-d5	82	10.257	10.257	(0.873)	3347	0.20000	0.2143
	19	Nitrobenzene	77	10.296	10.296	(0.876)	3278	0.20000	0.2213
	20	Isophorone	82	10.785	10.785	(0.918)	5357	0.20000	0.2075
	21	2-Nitrophenol	139	10.978	10.978	(0.934)	1636	0.20000	0.1880
	22	2,4-Dimethylphenol	107	11.063	11.063	(0.942)	6368	0.40000	0.4293
	23	Bis(2-Chloroethoxy)methane	93	11.279	11.271	(0.960)	3564	0.20000	0.2192
	24	Benzoic acid	105	11.163	11.186	(0.950)	4260	0.80000	0.3406(M)
	25	2,4-Dichlorophenol	162	11.471	11.464	(0.976)	5383	0.40000	0.4152
	26	1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	3410	0.20000	0.2311
*	27	Naphthalene-d8	136	11.749	11.749	(1.000)	169256	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.004)	9911	0.20000	0.2250
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	7379	0.40000	0.4163
	30 Hexachlorobutadiene	225	12.205	12.205	(1.039)	1979	0.20000	0.2152
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	4482	0.40000	0.3577
	32 2-Methylnaphthalene	142	13.303	13.311	(1.132)	6248	0.20000	0.2149
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.883)	4529	0.40000	0.3943
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.894)	3857	0.40000	0.3779
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.899)	3858	0.40000	0.3557
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	7600	0.20000	0.2175
	37 2-Chloronaphthalene	162	14.371	14.379	(0.918)	6298	0.20000	0.2239
	38 2-Nitroaniline	65	14.673	14.674	(0.937)	2207	0.40000	0.3345
	39 Dimethylphthalate	163	15.169	15.169	(0.969)	6664	0.20000	0.2164
	40 Acenaphthylene	152	15.316	15.316	(0.978)	9490	0.20000	0.2069
	41 2,6-Dinitrotoluene	165	15.300	15.300	(0.977)	2614	0.40000	0.3715
*	42 Acenaphthene-d10	164	15.656	15.656	(1.000)	101836	4.00000	
	43 3-Nitroaniline	138	15.594	15.594	(0.996)	2313	0.40000	0.3560(M)
	44 Acenaphthene	153	15.726	15.726	(1.004)	6035	0.20000	0.2146
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.011)	1345	0.80000	0.2222
	46 Dibenzofuran	168	16.081	16.089	(1.027)	8605	0.20000	0.2200
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	692	0.40000	0.1577
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	3230	0.40000	0.3395
	50 Diethylphthalate	149	16.754	16.754	(1.070)	6918	0.20000	0.2144
	49 Fluorene	166	16.854	16.855	(1.077)	7142	0.20000	0.2149
	51 4-Chlorophenyl-phenylether	204	16.870	16.870	(1.078)	3304	0.20000	0.2134
	52 4-Nitroaniline	138	16.963	16.963	(1.083)	2474	0.40000	0.3607
	53 4,6-Dinitro-2-methylphenol	198	17.070	17.071	(0.902)	3851	0.80000	0.5625
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.906)	4497	0.20000	0.2184
$	55 2,4,6-Tribromophenol	330	17.433	17.433	(1.113)	1238	0.20000	0.1905
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.949)	2068	0.20000	0.2169
	57 Hexachlorobenzene	284	18.281	18.274	(0.966)	2625	0.20000	0.2193
	58 Pentachlorophenol	266	18.669	18.669	(0.986)	2577	0.40000	0.3229
*	59 Phenanthrene-d10	188	18.932	18.940	(1.000)	170953	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.003)	10336	0.20000	0.2268
	61 Anthracene	178	19.079	19.079	(1.008)	9548	0.20000	0.2081
	62 Carbazole	167	19.435	19.435	(1.027)	8044	0.20000	0.2513
	63 Di-n-butylphthalate	149	20.293	20.294	(1.072)	9564	0.20000	0.1953
	64 Fluoranthene	202	21.392	21.392	(1.130)	10986	0.20000	0.2093
	65 Pyrene	202	21.810	21.810	(0.908)	11305	0.20000	0.2054
$	66 Terphenyl-d14	244	22.127	22.127	(0.922)	7779	0.20000	0.2096
	67 Butylbenzylphthalate	149	23.079	23.072	(0.961)	4024	0.20000	0.1928
	68 Benzo(a)anthracene	228	23.978	23.970	(0.999)	11586	0.20000	0.2149
*	69 Chrysene-d12	240	24.009	24.001	(1.000)	193229	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.954	23.947	(0.998)	11300	0.40000	0.5016
	71 Chrysene	228	24.047	24.048	(1.002)	10934	0.20000	0.2239
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	6441	0.20000	0.2251
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	216658	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	12550	0.20000	0.2375

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.797	25.789	(0.973)	10822	0.20000	0.2081
75	Benzo(k)fluoranthene	252	25.836	25.836	(0.975)	12743	0.20000	0.2268
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	9661	0.20000	0.2148
* 77	Perylene-d12	264	26.509	26.502	(1.000)	179458	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.926	28.919	(1.091)	11294	0.20000	0.2036
79	Dibenzo(a,h)anthracene	278	28.950	28.942	(1.092)	8716	0.20000	0.1984
80	Benzo(g,h,i)perylene	276	29.633	29.633	(1.118)	9702	0.20000	0.2038
90	N-Nitrosodimethylamine	74	4.450	4.442	(0.490)	3696	0.40000	0.4380
91	Aniline	93	8.505	8.505	(0.936)	8946	0.20000	0.2238
93	Benzidine	184	21.647	21.648	(0.902)	8735	0.40000	1.011
103	Pyridine	79	4.496	4.481	(0.495)	2955	0.40000	0.4105
105	1-methylnaphthalene	142	13.543	13.544	(1.153)	5815	0.20000	0.2180
111	Azobenzene (1,2-DP-Hydrazine)	77	17.217	17.217	(1.100)	6100	0.20000	0.2084
187	Total Benzofluoranthenes	252	25.797	25.836	(0.973)	22209	0.40000	0.4338
99	Perylene	252	26.556	26.548	(1.002)	11836	0.20000	0.2289
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.460	16.460	(1.051)	1674	0.20000	0.1765
188	2,6-Dichlorophenol	162	11.973	11.973	(1.019)	5154	0.40000	0.4092
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	2500	0.40000	0.4077

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125c.d
Lab Smp Id: IC0125C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	44358	-4.86
27 Naphthalene-d8	176978	88489	353956	169256	-4.36
42 Acenaphthene-d10	110872	55436	221744	101836	-8.15
59 Phenanthrene-d10	188290	94145	376580	170953	-9.21
69 Chrysene-d12	213681	106840	427362	193229	-9.57
134 Di-n-octylphthala	264159	132080	528318	216658	-17.98
77 Perylene-d12	208584	104292	417168	179458	-13.96

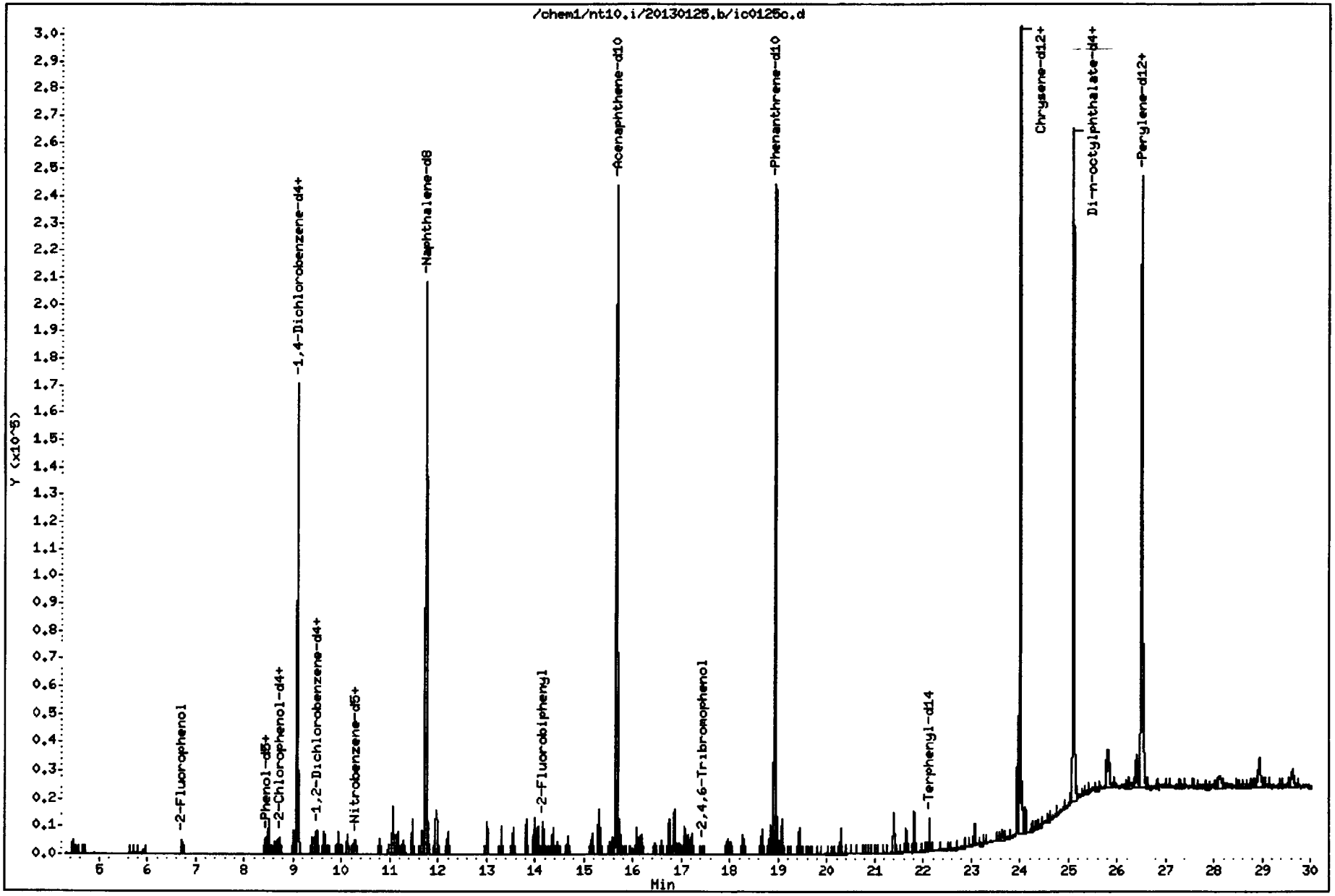
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.06
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	-0.05
59 Phenanthrene-d10	18.94	18.44	19.44	18.93	-0.04
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

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

Data File: /chem1/nt10.i/20130125.b/ic0125c.d
Date : 25-JAN-2013 14:13
Client ID:
Sample Info: IC0125C

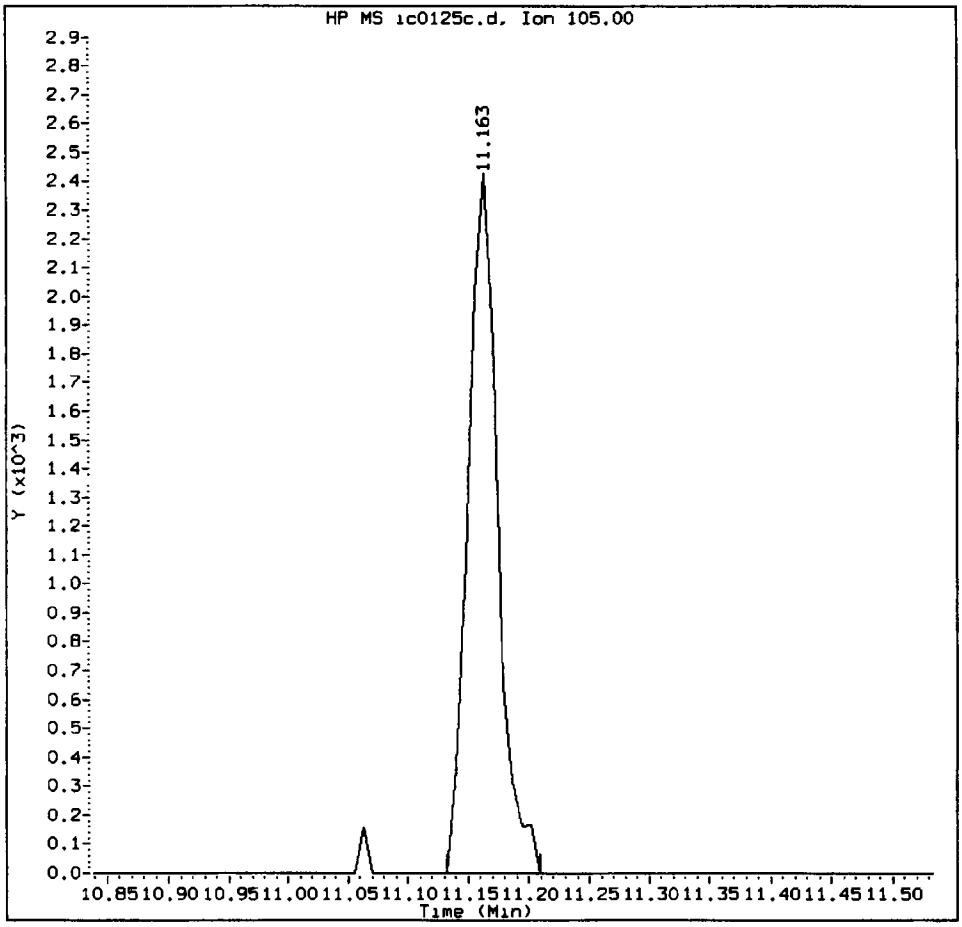
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0125C, /chem1/nt10.i/20130125.b/ic0125c.d

Benzoic acid Amount: 0.34 Area: 4260



MANUAL INTEGRATION for Benzoic acid

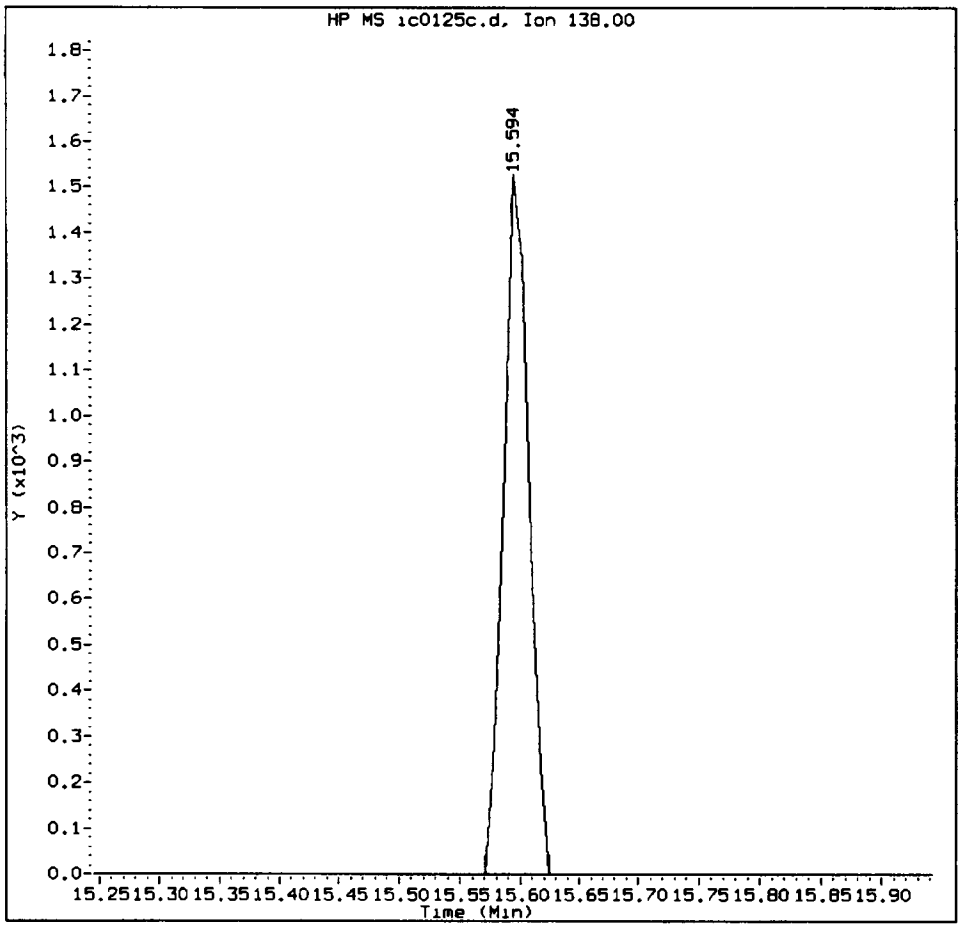
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 02/28/13

IC0125C, /chem1/nt10.i/20130125.b/ic0125c.d

3-Nitroaniline Amount: 0.36 Area: 2313



MANUAL INTEGRATION for 3-Nitroaniline

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

5. Other _____

Analyst: YZ Date: 01/28/13

CO-ELUTION SUMMARY FOR FILE - ic0125c.d

Lab ID: IC0125C, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 01/28/13

Data file : /chem1/nt10.i/20130125.b/ic0125d.d
Lab Smp Id: IC0125D
Inj Date : 25-JAN-2013 14:50
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 14:50 Cal File: ic0125d.d
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.728	6.720	(0.740)	136821	10.0000	9.958
$	2 Phenol-d5	99	8.435	8.428	(0.928)	171972	10.0000	10.09
	3 Phenol	94	8.459	8.451	(0.931)	173685	10.0000	9.678
$	5 2-Chlorophenol-d4	132	8.698	8.698	(0.957)	146850	10.0000	9.947
	4 Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	130128	10.0000	9.530
	6 2-Chlorophenol	128	8.729	8.729	(0.961)	152445	10.0000	9.762
	7 1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	163629	10.0000	9.629
*	8 1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	42972	4.00000	
	9 1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	162261	10.0000	9.643
$	10 1,2-Dichlorobenzene-d4	152	9.473	9.465	(1.043)	106626	10.0000	9.828
	12 1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	155682	10.0000	9.622
	11 Benzyl alcohol	108	9.395	9.388	(1.034)	87783	10.0000	10.22
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	47843	10.0000	9.959
	13 2-Methylphenol	108	9.652	9.644	(1.062)	136083	10.0000	10.05
	17 Hexachloroethane	117	10.133	10.133	(1.115)	65975	10.0000	9.920
	16 N-Nitroso-di-n-propylamine	70	10.001	9.993	(1.101)	90869	10.0000	10.04
	15 4-Methylphenol	108	9.947	9.939	(1.095)	141108	10.0000	10.02
$	18 Nitrobenzene-d5	82	10.265	10.257	(0.873)	152027	10.0000	9.931
	19 Nitrobenzene	77	10.303	10.296	(0.876)	142601	10.0000	9.824
	20 Isophorone	82	10.800	10.785	(0.919)	256454	10.0000	10.14
	21 2-Nitrophenol	139	10.978	10.978	(0.934)	89829	10.0000	10.53
	22 2,4-Dimethylphenol	107	11.071	11.063	(0.942)	283047	20.0000	19.47
	23 Bis(2-Chloroethoxy)methane	93	11.279	11.271	(0.959)	151067	10.0000	9.481
	24 Benzoic acid	105	11.402	11.186	(0.970)	507039	40.0000	40.20
	25 2,4-Dichlorophenol	162	11.479	11.464	(0.976)	253663	20.0000	19.96
	26 1,2,4-Trichlorobenzene	180	11.672	11.664	(0.993)	136553	10.0000	9.444
*	27 Naphthalene-d8	136	11.757	11.749	(1.000)	165867	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.003)	417528	10.0000	9.674
	29 4-Chloroaniline	127	11.965	11.957	(1.018)	345799	20.0000	19.91
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	89353	10.0000	9.916
	31 4-Chloro-3-methylphenol	107	13.025	13.017	(1.108)	264492	20.0000	21.54
	32 2-Methylnaphthalene	142	13.311	13.311	(1.132)	283288	10.0000	9.941
	33 Hexachlorocyclopentadiene	237	13.830	13.822	(0.883)	251203	20.0000	20.69
	34 2,4,6-Trichlorophenol	196	14.000	13.992	(0.894)	223317	20.0000	20.70
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.898)	242921	20.0000	21.19
$	36 2-Fluorobiphenyl	172	14.178	14.170	(0.905)	357374	10.0000	9.676
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	288962	10.0000	9.717
	38 2-Nitroaniline	65	14.681	14.674	(0.937)	151663	20.0000	21.74
	39 Dimethylphthalate	163	15.176	15.169	(0.969)	315858	10.0000	9.700
	40 Acenaphthylene	152	15.316	15.316	(0.978)	468651	10.0000	9.663
	41 2,6-Dinitrotoluene	165	15.316	15.300	(0.978)	152771	20.0000	20.54
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	107661	4.00000	
	43 3-Nitroaniline	138	15.618	15.594	(0.997)	141594	20.0000	20.61
	44 Acenaphthene	153	15.733	15.726	(1.004)	287776	10.0000	9.677
	45 2,4-Dinitrophenol	184	15.842	15.826	(1.011)	267779	40.0000	40.58
	46 Dibenzofuran	168	16.097	16.089	(1.028)	398333	10.0000	9.631
	47 4-Nitrophenol	109	15.989	15.973	(1.021)	94479	20.0000	19.99
	48 2,4-Dinitrotoluene	165	16.190	16.174	(1.034)	210743	20.0000	20.95
	50 Diethylphthalate	149	16.769	16.754	(1.071)	331988	10.0000	9.733
	49 Fluorene	166	16.870	16.855	(1.077)	335222	10.0000	9.543
	51 4-Chlorophenyl-phenylether	204	16.878	16.870	(1.077)	155738	10.0000	9.513
	52 4-Nitroaniline	138	16.994	16.963	(1.085)	151466	20.0000	20.89
	53 4,6-Dinitro-2-methylphenol	198	17.101	17.071	(0.903)	329949	40.0000	45.12
	54 N-Nitrosodiphenylamine	169	17.155	17.148	(0.906)	209012	10.0000	9.501
$	55 2,4,6-Tribromophenol	330	17.441	17.433	(1.113)	70530	10.0000	10.27
	56 4-Bromophenyl-phenylether	248	17.965	17.957	(0.949)	102014	10.0000	10.01
	57 Hexachlorobenzene	284	18.282	18.274	(0.965)	123331	10.0000	9.647
	58 Pentachlorophenol	266	18.676	18.669	(0.986)	185585	20.0000	21.77
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	182628	4.00000	
	60 Phenanthrene	178	18.994	18.986	(1.003)	470008	10.0000	9.654
	61 Anthracene	178	19.086	19.079	(1.008)	501886	10.0000	10.24
	62 Carbazole	167	19.442	19.435	(1.027)	300533	10.0000	8.787
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	566831	10.0000	10.84
	64 Fluoranthene	202	21.400	21.392	(1.130)	569024	10.0000	10.15
	65 Pyrene	202	21.818	21.810	(0.909)	588216	10.0000	10.16
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	393438	10.0000	10.08
	67 Butylbenzylphthalate	149	23.080	23.072	(0.961)	237303	10.0000	10.81
	68 Benzo(a)anthracene	228	23.985	23.970	(0.999)	565205	10.0000	9.967
*	69 Chrysene-d12	240	24.009	24.001	(1.000)	203223	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.962	23.947	(0.998)	477339	20.0000	20.15
	71 Chrysene	228	24.055	24.048	(1.002)	498249	10.0000	9.701
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	333510	10.0000	9.682
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	260852	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	596440	10.0000	9.374

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.805	25.789	(0.973)	610570	10.0000	10.38
75	Benzo(k)fluoranthene	252	25.843	25.836	(0.975)	591193	10.0000	9.305
76	Benzo(a)pyrene	252	26.401	26.393	(0.996)	511521	10.0000	10.06
* 77	Perylene-d12	264	26.517	26.502	(1.000)	202904	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.942	28.919	(1.091)	645100	10.0000	10.29
79	Dibenzo(a,h)anthracene	278	28.973	28.942	(1.093)	507978	10.0000	10.23
80	Benzo(g,h,i)perylene	276	29.657	29.633	(1.118)	547612	10.0000	10.18
90	N-Nitrosodimethylamine	74	4.450	4.442	(0.490)	162464	20.0000	19.87
91	Aniline	93	8.513	8.505	(0.937)	372010	10.0000	9.606
93	Benzidine	184	21.655	21.648	(0.902)	196119	20.0000	19.73
103	Pyridine	79	4.457	4.481	(0.491)	137064	20.0000	19.66
105	1-methylnaphthalene	142	13.551	13.544	(1.153)	260850	10.0000	9.979
111	Azobenzene (1,2-DP-Hydrazine)	77	17.233	17.217	(1.100)	303035	10.0000	9.794
187	Total Benzofluoranthenes	252	25.843	25.836	(0.975)	1134836	20.0000	19.60
99	Perylene	252	26.564	26.548	(1.002)	564148	10.0000	9.652
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.468	16.460	(1.051)	105417	10.0000	10.51
188	2,6-Dichlorophenol	162	11.988	11.973	(1.020)	249221	20.0000	20.19
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	119200	20.0000	20.06

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125d.d
Lab Smp Id: IC0125D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	42972	-7.83
27 Naphthalene-d8	176978	88489	353956	165867	-6.28
42 Acenaphthene-d10	110872	55436	221744	107661	-2.90
59 Phenanthrene-d10	188290	94145	376580	182628	-3.01
69 Chrysene-d12	213681	106840	427362	203223	-4.89
134 Di-n-octylphthala	264159	132080	528318	260852	-1.25
77 Perylene-d12	208584	104292	417168	202904	-2.72

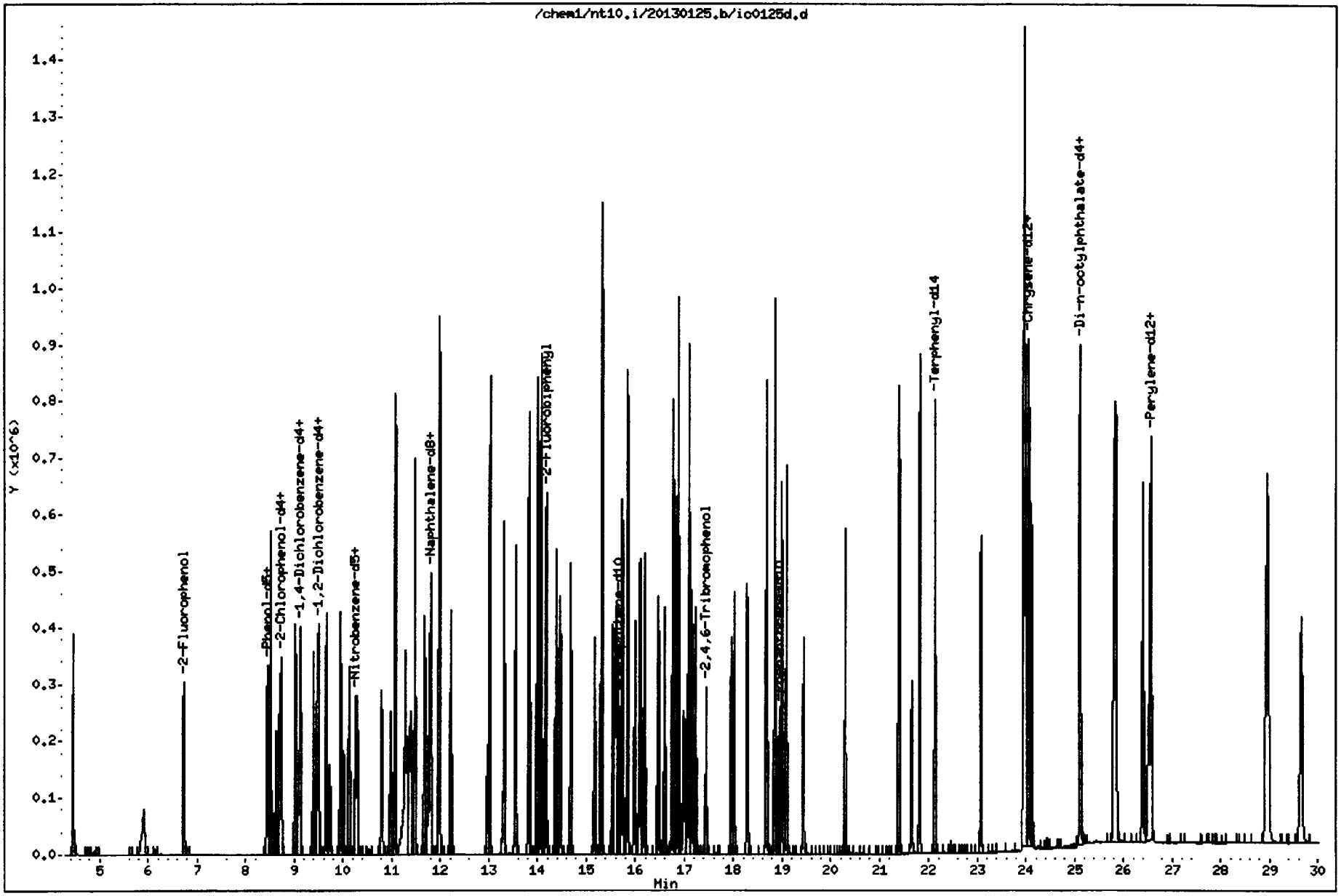
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.76	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.52	0.03

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

Data File: /chem1/nt10.i/20130125.b/ic0125d.d
Date : 25-JAN-2013 14:50
Client ID:
Sample Info: IC0125D

Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0125d.d

Lab ID: IC0125D, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS
15.316	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

YZ 01/28/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125e.d
Lab Smp Id: IC0125E
Inj Date : 25-JAN-2013 15:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 15:27 Cal File: ic0125e.d
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.720	6.720	(0.740)	16113	1.00000	1.032
$	2	Phenol-d5	99	8.428	8.428	(0.928)	18904	1.00000	0.9754
	3	Phenol	94	8.451	8.451	(0.930)	20114	1.00000	0.9860
$	5	2-Chlorophenol-d4	132	8.698	8.698	(0.957)	16984	1.00000	1.012
	4	Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	15918	1.00000	1.026
	6	2-Chlorophenol	128	8.729	8.729	(0.961)	18038	1.00000	1.016
	7	1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	19305	1.00000	0.9994
*	8	1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	48848	4.00000	
	9	1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	19562	1.00000	1.023
$	10	1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	12221	1.00000	0.9909
	12	1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	18480	1.00000	1.005
	11	Benzyl alcohol	108	9.387	9.388	(1.033)	9674	1.00000	0.9909
	14	2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	5408	1.00000	0.9903
	13	2-Methylphenol	108	9.644	9.644	(1.062)	15211	1.00000	0.9878
	17	Hexachloroethane	117	10.133	10.133	(1.115)	7792	1.00000	1.031
	16	N-Nitroso-di-n-propylamine	70	10.001	9.993	(1.101)	10451	1.00000	1.016
	15	4-Methylphenol	108	9.939	9.939	(1.094)	16043	1.00000	1.002
$	18	Nitrobenzene-d5	82	10.265	10.257	(0.874)	16869	1.00000	0.9973
	19	Nitrobenzene	77	10.296	10.296	(0.876)	15970	1.00000	0.9958
	20	Isophorone	82	10.785	10.785	(0.918)	27877	1.00000	0.9973
	21	2-Nitrophenol	139	10.978	10.978	(0.934)	9412	1.00000	0.9988
	22	2,4-Dimethylphenol	107	11.063	11.063	(0.942)	32855	2.00000	2.046
	23	Bis(2-Chloroethoxy)methane	93	11.279	11.271	(0.960)	17621	1.00000	1.001
	24	Benzoic acid	105	11.217	11.186	(0.955)	44455	4.00000	3.276
	25	2,4-Dichlorophenol	162	11.471	11.464	(0.976)	28258	2.00000	2.013
	26	1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	16262	1.00000	1.018
*	27	Naphthalene-d8	136	11.749	11.749	(1.000)	183261	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.004)	47687	1.00000	1.000
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	38115	2.00000	1.986
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	10094	1.00000	1.014
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	27077	2.00000	1.996
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	30898	1.00000	0.9814
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.883)	24889	2.00000	1.977
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.894)	22845	2.00000	2.042
	35 2,4,5-Trichlorophenol	196	14.062	14.070	(0.898)	23632	2.00000	1.988
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	38258	1.00000	0.9988
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	30606	1.00000	0.9924
	38 2-Nitroaniline	65	14.673	14.674	(0.937)	14324	2.00000	1.980
	39 Dimethylphthalate	163	15.169	15.169	(0.969)	34355	1.00000	1.017
	40 Acenaphthylene	152	15.316	15.316	(0.978)	51815	1.00000	1.030
	41 2,6-Dinitrotoluene	165	15.300	15.300	(0.977)	15628	2.00000	2.026
*	42 Acenaphthene-d10	164	15.656	15.656	(1.000)	111653	4.00000	
	43 3-Nitroaniline	138	15.594	15.594	(0.996)	16234	2.00000	2.279
	44 Acenaphthene	153	15.726	15.726	(1.004)	31219	1.00000	1.012
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.011)	18391	4.00000	2.766
	46 Dibenzofuran	168	16.081	16.089	(1.027)	43688	1.00000	1.019
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	7272	2.00000	1.509
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	21257	2.00000	2.038
	50 Diethylphthalate	149	16.754	16.754	(1.070)	35941	1.00000	1.016
	49 Fluorene	166	16.854	16.855	(1.077)	36865	1.00000	1.012
	51 4-Chlorophenyl-phenylether	204	16.870	16.870	(1.078)	17604	1.00000	1.037
	52 4-Nitroaniline	138	16.970	16.963	(1.084)	15530	2.00000	2.065
	53 4,6-Dinitro-2-methylphenol	198	17.078	17.071	(0.902)	30630	4.00000	3.996
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.905)	24514	1.00000	1.063
$	55 2,4,6-Tribromophenol	330	17.433	17.433	(1.113)	7092	1.00000	0.9953
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	10432	1.00000	0.9771
	57 Hexachlorobenzene	284	18.281	18.274	(0.965)	13763	1.00000	1.027
	58 Pentachlorophenol	266	18.669	18.669	(0.986)	18075	2.00000	2.023
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	191397	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	50862	1.00000	0.9969
	61 Anthracene	178	19.079	19.079	(1.007)	50980	1.00000	0.9923
	62 Carbazole	167	19.435	19.435	(1.026)	42004	1.00000	1.172
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	51597	1.00000	0.9412
	64 Fluoranthene	202	21.392	21.392	(1.129)	58329	1.00000	0.9927
	65 Pyrene	202	21.810	21.810	(0.909)	60787	1.00000	1.003
$	66 Terphenyl-d14	244	22.127	22.127	(0.922)	42009	1.00000	1.028
	67 Butylbenzylphthalate	149	23.072	23.072	(0.961)	22886	1.00000	0.9955
	68 Benzo(a)anthracene	228	23.978	23.970	(0.999)	59738	1.00000	1.006
*	69 Chrysene-d12	240	24.001	24.001	(1.000)	212807	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.947	23.947	(0.998)	50394	2.00000	2.031
	71 Chrysene	228	24.047	24.048	(1.002)	54152	1.00000	1.007
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	32034	1.00000	0.9835
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	246669	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	60586	1.00000	1.007

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	25.797	25.789	(0.973)	56463	1.00000	0.9423
	75 Benzo(k)fluoranthene	252	25.836	25.836	(0.975)	66658	1.00000	1.030
	76 Benzo(a)pyrene	252	26.393	26.393	(0.996)	50593	1.00000	0.9764
*	77 Perylene-d12	264	26.509	26.502	(1.000)	206726	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.926	28.919	(1.091)	62875	1.00000	0.9839
	79 Dibenzo(a,h)anthracene	278	28.950	28.942	(1.092)	50949	1.00000	1.007
	80 Benzo(g,h,i)perylene	276	29.625	29.633	(1.118)	54073	1.00000	0.9863
	90 N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	18249	2.00000	1.964
	91 Aniline	93	8.505	8.505	(0.936)	45165	1.00000	1.026
	93 Benzidine	184	21.647	21.648	(0.902)	37924	2.00000	3.937
	103 Pyridine	79	4.473	4.481	(0.492)	16049	2.00000	2.025
	105 1-methylnaphthalene	142	13.543	13.544	(1.153)	28274	1.00000	0.9790
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.217	17.217	(1.100)	33066	1.00000	1.031
	187 Total Benzofluoranthenes	252	25.836	25.836	(0.975)	116821	2.00000	1.981
	99 Perylene	252	26.556	26.548	(1.002)	59928	1.00000	1.006
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	16.460	16.460	(1.051)	10419	1.00000	1.002
	188 2,6-Dichlorophenol	162	11.973	11.973	(1.019)	27084	2.00000	1.986
	189 N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	13490	2.00000	1.998

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125e.d
Lab Smp Id: IC0125E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	48848	4.77
27 Naphthalene-d8	176978	88489	353956	183261	3.55
42 Acenaphthene-d10	110872	55436	221744	111653	0.70
59 Phenanthrene-d10	188290	94145	376580	191397	1.65
69 Chrysene-d12	213681	106840	427362	212807	-0.41
134 Di-n-octylphthala	264159	132080	528318	246669	-6.62
77 Perylene-d12	208584	104292	417168	206726	-0.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.06
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	-0.05
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.00	-0.03
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

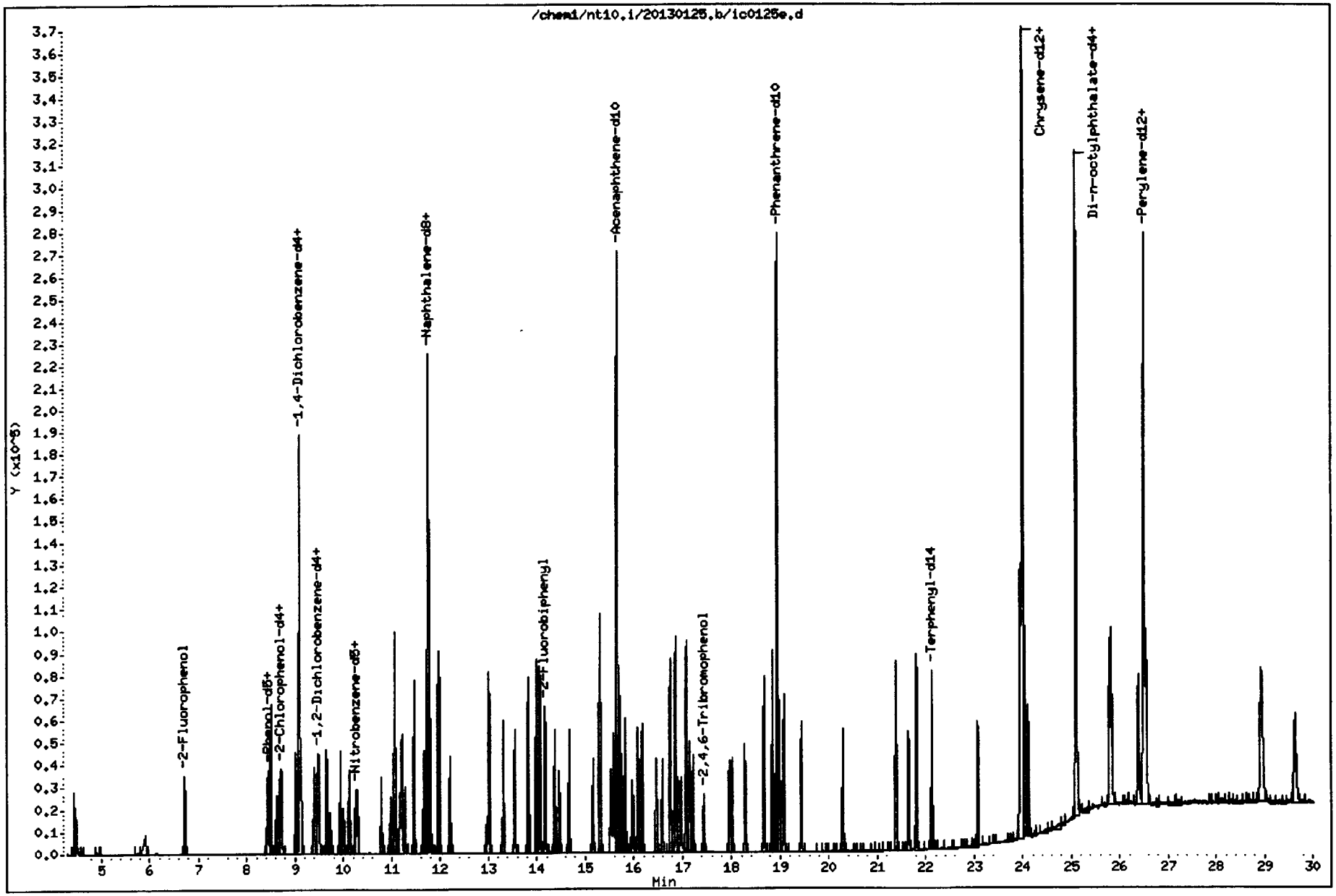
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/ic0125e.d
Date : 25-JAN-2013 15:27
Client ID:
Sample Info: IC0125E

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125e.d

Lab ID: IC0125E, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 01/28/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125f.d
Lab Smp Id: IC0125F
Inj Date : 25-JAN-2013 16:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125F
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 16:03 Cal File: ic0125f.d
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.719	6.720	(0.740)	36413	2.50000	2.442
$	2	Phenol-d5	99	8.427	8.428	(0.928)	45397	2.50000	2.454
	3	Phenol	94	8.451	8.451	(0.930)	47715	2.50000	2.450
$	5	2-Chlorophenol-d4	132	8.698	8.698	(0.957)	39184	2.50000	2.446
	4	Bis(2-Chloroethyl)ether	93	8.620	8.621	(0.949)	36342	2.50000	2.453
	6	2-Chlorophenol	128	8.729	8.729	(0.961)	40941	2.50000	2.416
	7	1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	44251	2.50000	2.400
*	8	1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	46627	4.00000	
	9	1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	43801	2.50000	2.399
$	10	1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	27897	2.50000	2.370
	12	1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	42153	2.50000	2.401
	11	Benzyl alcohol	108	9.387	9.388	(1.033)	22530	2.50000	2.418
	14	2,2'-oxybis(1-Chloropropane)	121	9.721	9.722	(1.070)	12901	2.50000	2.475
	13	2-Methylphenol	108	9.643	9.644	(1.062)	35647	2.50000	2.425
	17	Hexachloroethane	117	10.132	10.133	(1.115)	17266	2.50000	2.393
	16	N-Nitroso-di-n-propylamine	70	9.993	9.993	(1.100)	23860	2.50000	2.430
	15	4-Methylphenol	108	9.938	9.939	(1.094)	38088	2.50000	2.492
$	18	Nitrobenzene-d5	82	10.264	10.257	(0.874)	39403	2.50000	2.442
	19	Nitrobenzene	77	10.295	10.296	(0.876)	37219	2.50000	2.433
	20	Isophorone	82	10.784	10.785	(0.918)	64953	2.50000	2.436
	21	2-Nitrophenol	139	10.978	10.978	(0.934)	22724	2.50000	2.528
	22	2,4-Dimethylphenol	107	11.063	11.063	(0.942)	75528	5.00000	4.929
	23	Bis(2-Chloroethoxy)methane	93	11.278	11.271	(0.960)	41470	2.50000	2.469
	24	Benzoic acid	105	11.271	11.186	(0.959)	119275	10.0000	9.177
	25	2,4-Dichlorophenol	162	11.471	11.464	(0.976)	67077	5.00000	5.009
	26	1,2,4-Trichlorobenzene	180	11.671	11.664	(0.993)	36594	2.50000	2.401
*	27	Naphthalene-d8	136	11.749	11.749	(1.000)	174830	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.004)	109470	2.50000	2.406
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	89311	5.00000	4.878
	30 Hexachlorobutadiene	225	12.212	12.205	(1.039)	23360	2.50000	2.459
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	63944	5.00000	4.940
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	71762	2.50000	2.389
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.882)	59993	5.00000	4.924
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.893)	54164	5.00000	5.003
	35 2,4,5-Trichlorophenol	196	14.069	14.070	(0.898)	59098	5.00000	5.137
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	90596	2.50000	2.445
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	72747	2.50000	2.438
	38 2-Nitroaniline	65	14.673	14.674	(0.937)	36178	5.00000	5.170
	39 Dimethylphthalate	163	15.168	15.169	(0.968)	79704	2.50000	2.440
	40 Acenaphthylene	152	15.316	15.316	(0.978)	121926	2.50000	2.506
	41 2,6-Dinitrotoluene	165	15.308	15.300	(0.977)	38442	5.00000	5.150
*	42 Acenaphthene-d10	164	15.664	15.656	(1.000)	108024	4.00000	
	43 3-Nitroaniline	138	15.602	15.594	(0.996)	36892	5.00000	5.352
	44 Acenaphthene	153	15.733	15.726	(1.004)	73044	2.50000	2.448
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.010)	56078	10.0000	8.678
	46 Dibenzofuran	168	16.089	16.089	(1.027)	101102	2.50000	2.436
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	21754	5.00000	4.654
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	52515	5.00000	5.203
	50 Diethylphthalate	149	16.761	16.754	(1.070)	85220	2.50000	2.490
	49 Fluorene	166	16.862	16.855	(1.076)	87987	2.50000	2.496
	51 4-Chlorophenyl-phenylether	204	16.877	16.870	(1.077)	39971	2.50000	2.433
	52 4-Nitroaniline	138	16.978	16.963	(1.084)	36020	5.00000	4.950
	53 4,6-Dinitro-2-methylphenol	198	17.078	17.071	(0.902)	79873	10.0000	10.59
	54 N-Nitrosodiphenylamine	169	17.147	17.148	(0.905)	56358	2.50000	2.483
$	55 2,4,6-Tribromophenol	330	17.440	17.433	(1.113)	17660	2.50000	2.562
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	25532	2.50000	2.430
	57 Hexachlorobenzene	284	18.281	18.274	(0.965)	32170	2.50000	2.439
	58 Pentachlorophenol	266	18.676	18.669	(0.986)	44559	5.00000	5.067
*	59 Phenanthrene-d10	188	18.939	18.940	(1.000)	188394	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	118115	2.50000	2.352
	61 Anthracene	178	19.086	19.079	(1.008)	123434	2.50000	2.441
	62 Carbazole	167	19.434	19.435	(1.026)	76501	2.50000	2.168(M)
	63 Di-n-butylphthalate	149	20.293	20.294	(1.071)	130971	2.50000	2.427
	64 Fluoranthene	202	21.392	21.392	(1.129)	140111	2.50000	2.423
	65 Pyrene	202	21.810	21.810	(0.908)	148186	2.50000	2.493
$	66 Terphenyl-d14	244	22.135	22.127	(0.922)	99273	2.50000	2.477
	67 Butylbenzylphthalate	149	23.079	23.072	(0.961)	56506	2.50000	2.507
	68 Benzo(a)anthracene	228	23.977	23.970	(0.999)	144467	2.50000	2.481
*	69 Chrysene-d12	240	24.008	24.001	(1.000)	208655	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.954	23.947	(0.998)	99566	5.00000	4.093
	71 Chrysene	228	24.047	24.048	(1.002)	126632	2.50000	2.401
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	82805	2.50000	2.509
*	134 Di-n-octylphthalate-d4	153	25.100	25.093	(1.000)	249963	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	145251	2.50000	2.382

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.797	25.789	(0.973)	146665	2.50000	2.478
75	Benzo(k)fluoranthene	252	25.835	25.836	(0.975)	153820	2.50000	2.406
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	125480	2.50000	2.452
* 77	Perylene-d12	264	26.509	26.502	(1.000)	204198	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.934	28.919	(1.091)	156063	2.50000	2.472
79	Dibenzo(a,h)anthracene	278	28.957	28.942	(1.092)	125414	2.50000	2.509
80	Benzo(g,h,i)perylene	276	29.641	29.633	(1.118)	133352	2.50000	2.462
90	N-Nitrosodimethylamine	74	4.434	4.442	(0.488)	42925	5.00000	4.839
91	Aniline	93	8.512	8.505	(0.937)	103292	2.50000	2.458
93	Benzidine	184	21.655	21.648	(0.902)	54172	5.00000	5.691
103	Pyridine	79	4.457	4.481	(0.491)	37123	5.00000	4.906
105	1-methylnaphthalene	142	13.551	13.544	(1.153)	66621	2.50000	2.418
111	Azobenzene (1,2-DP-Hydrazine)	77	17.224	17.217	(1.100)	78024	2.50000	2.513
187	Total Benzofluoranthenes	252	25.835	25.836	(0.975)	283558	5.00000	4.867
99	Perylene	252	26.556	26.548	(1.002)	142122	2.50000	2.416
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.467	16.460	(1.051)	25792	2.50000	2.563
188	2,6-Dichlorophenol	162	11.980	11.973	(1.020)	63629	5.00000	4.890
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	31376	5.00000	4.867

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125f.d
Lab Smp Id: IC0125F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

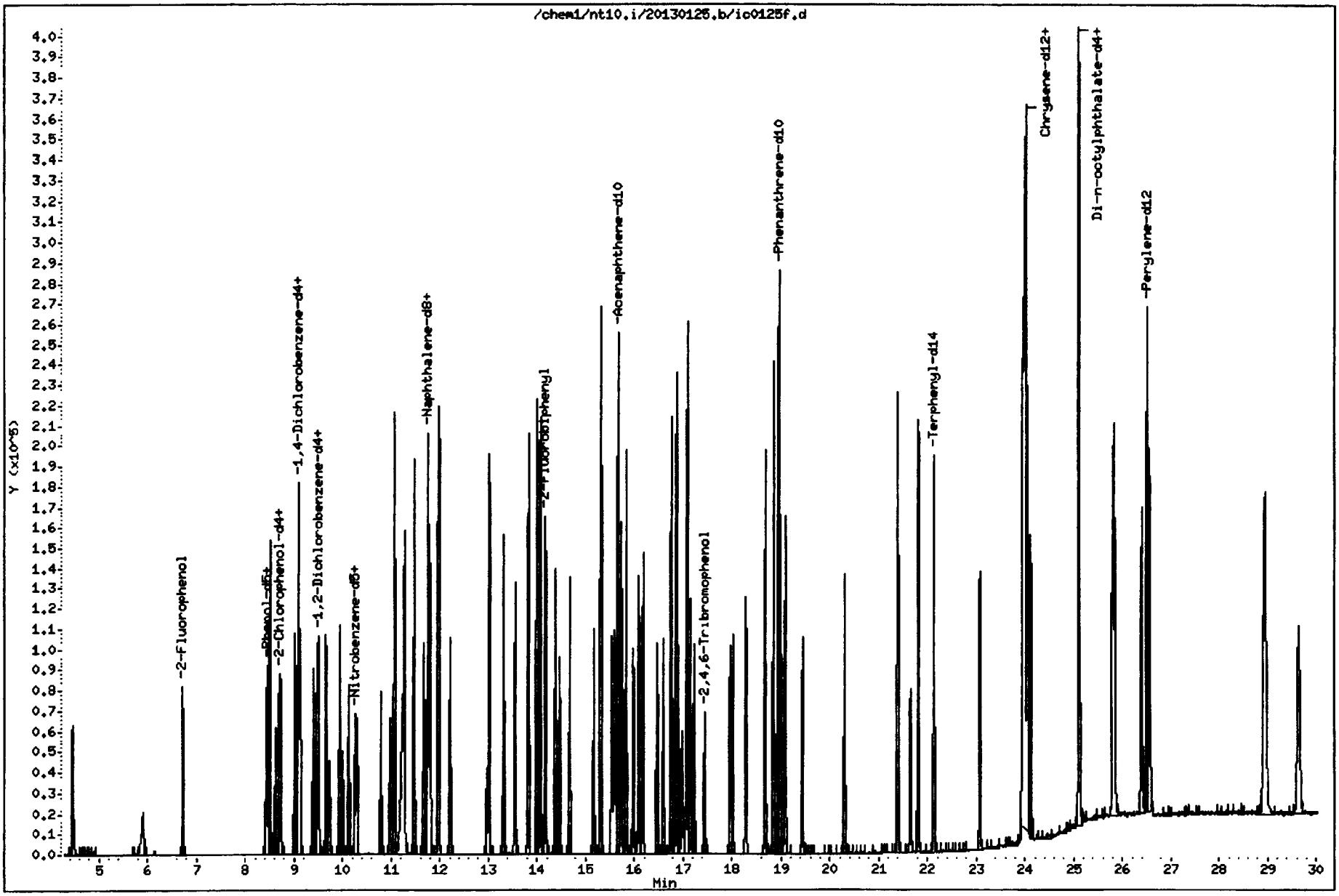
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	46627	0.01
27 Naphthalene-d8	176978	88489	353956	174830	-1.21
42 Acenaphthene-d10	110872	55436	221744	108024	-2.57
59 Phenanthrene-d10	188290	94145	376580	188394	0.06
69 Chrysene-d12	213681	106840	427362	208655	-2.35
134 Di-n-octylphthala	264159	132080	528318	249963	-5.37
77 Perylene-d12	208584	104292	417168	204198	-2.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.07
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

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

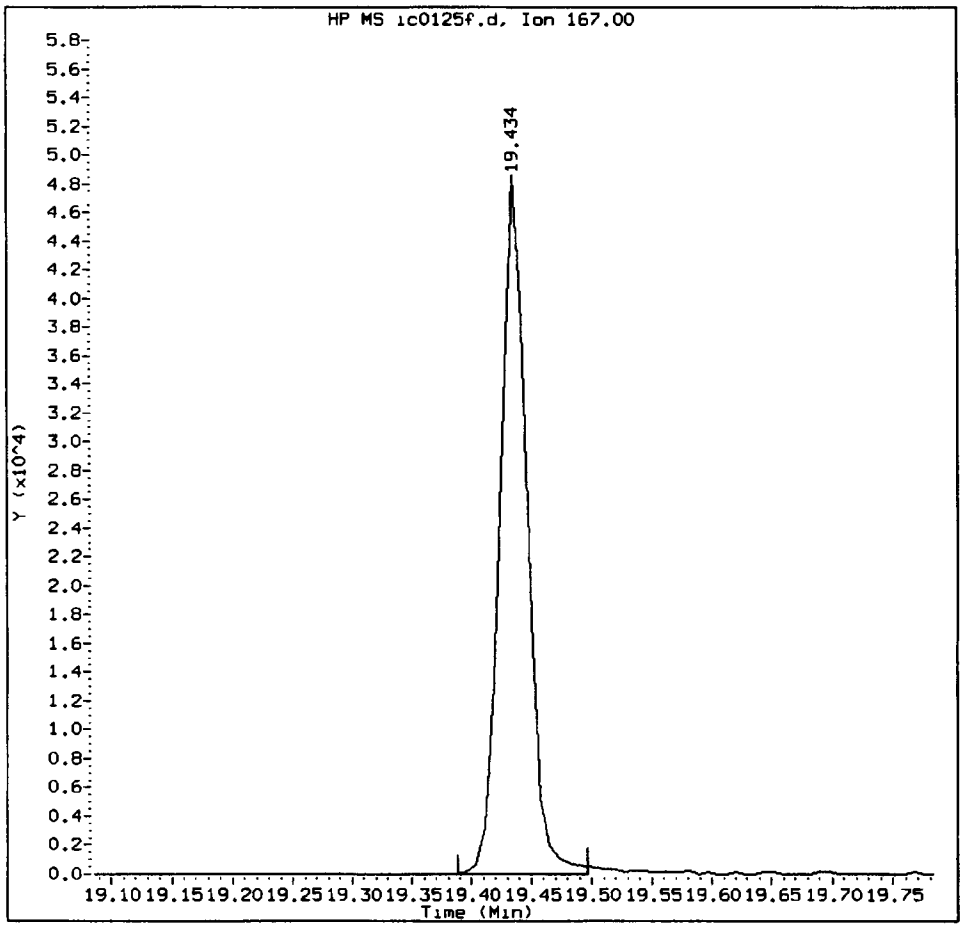
Data File: /chem1/nt10.i/20130125.b/ic0125f.d
Date : 25-JAN-2013 16:03
Client ID:
Sample Info: IC0125F

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0125F, /chem1/nt10.i/20130125.b/ic0125f.d

Carbazole Amount: 2.17 Area: 76501



MANUAL INTEGRATION for Carbazole

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

5. Other _____

Analyst: YZ Date: 04/28/13

CO-ELUTION SUMMARY FOR FILE - ic0125f.d

Lab ID: IC0125F, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 01/29/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/ic0125h.d
Lab Smp Id: IC0125H
Inj Date : 25-JAN-2013 17:16
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125H
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 12:45 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.720	6.720	(0.740)	6872	0.50000	0.4773
$	2	Phenol-d5	99	8.428	8.428	(0.928)	8606	0.50000	0.4817
	3	Phenol	94	8.451	8.451	(0.930)	9509	0.50000	0.5057
$	5	2-Chlorophenol-d4	132	8.698	8.698	(0.957)	7702	0.50000	0.4979
	4	Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	7336	0.50000	0.5127
	6	2-Chlorophenol	128	8.729	8.729	(0.961)	8226	0.50000	0.5027
	7	1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	9203	0.50000	0.5168
*	8	1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	45029	4.00000	
	9	1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	8755	0.50000	0.4965
$	10	1,2-Dichlorobenzene-d4	152	9.465	9.465	(1.042)	5625	0.50000	0.4948
	12	1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	8575	0.50000	0.5058
	11	Benzyl alcohol	108	9.388	9.388	(1.033)	4327	0.50000	0.4808
	14	2,2'-oxybis(1-Chloropropane)	121	9.722	9.722	(1.070)	2519	0.50000	0.5004
	13	2-Methylphenol	108	9.644	9.644	(1.062)	6867	0.50000	0.4838
	17	Hexachloroethane	117	10.133	10.133	(1.115)	3387	0.50000	0.4860
	16	N-Nitroso-di-n-propylamine	70	9.993	9.993	(1.100)	4479	0.50000	0.4723
	15	4-Methylphenol	108	9.939	9.939	(1.094)	7272	0.50000	0.4926
$	18	Nitrobenzene-d5	82	10.257	10.257	(0.873)	7484	0.50000	0.4791
	19	Nitrobenzene	77	10.296	10.296	(0.876)	7203	0.50000	0.4863
	20	Isophorone	82	10.785	10.785	(0.918)	12015	0.50000	0.4654
	21	2-Nitrophenol	139	10.978	10.978	(0.934)	3897	0.50000	0.4478
	22	2,4-Dimethylphenol	107	11.063	11.063	(0.942)	14742	1.00000	0.9938
	23	Bis(2-Chloroethoxy)methane	93	11.271	11.271	(0.959)	8381	0.50000	0.5155
	24	Benzoic acid	105	11.186	11.186	(0.952)	14218	2.00000	1.136
	25	2,4-Dichlorophenol	162	11.464	11.464	(0.976)	12437	1.00000	0.9593
	26	1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	7682	0.50000	0.5207
*	27	Naphthalene-d8	136	11.749	11.749	(1.000)	169245	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.004)	22558	0.50000	0.5122
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	17232	1.00000	0.9723
	30 Hexachlorobutadiene	225	12.205	12.205	(1.039)	4492	0.50000	0.4885
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	11487	1.00000	0.9167
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	14123	0.50000	0.4857
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.883)	10513	1.00000	0.9035
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.894)	9547	1.00000	0.9233
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.899)	10214	1.00000	0.9296
$	36 2-Fluorobiphenyl	172	14.170	14.170	(0.905)	17578	0.50000	0.4966
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	13789	0.50000	0.4838
	38 2-Nitroaniline	65	14.674	14.674	(0.937)	5758	1.00000	0.8614
	39 Dimethylphthalate	163	15.169	15.169	(0.969)	15843	0.50000	0.5077
	40 Acenaphthylene	152	15.316	15.316	(0.978)	23489	0.50000	0.5054
	41 2,6-Dinitrotoluene	165	15.300	15.300	(0.977)	6611	1.00000	0.9273
*	42 Acenaphthene-d10	164	15.656	15.656	(1.000)	103177	4.00000	
	43 3-Nitroaniline	138	15.594	15.594	(0.996)	6570	1.00000	0.9979
	44 Acenaphthene	153	15.726	15.726	(1.004)	14631	0.50000	0.5134
	45 2,4-Dinitrophenol	184	15.826	15.826	(1.011)	5902	2.00000	0.9617
	46 Dibenzofuran	168	16.089	16.089	(1.028)	19974	0.50000	0.5039
	47 4-Nitrophenol	109	15.973	15.973	(1.020)	2579	1.00000	0.5798
	48 2,4-Dinitrotoluene	165	16.174	16.174	(1.033)	8938	1.00000	0.9272
	50 Diethylphthalate	149	16.754	16.754	(1.070)	15876	0.50000	0.4857
	49 Fluorene	166	16.855	16.855	(1.077)	17429	0.50000	0.5177
	51 4-Chlorophenyl-phenylether	204	16.870	16.870	(1.078)	8299	0.50000	0.5290
	52 4-Nitroaniline	138	16.963	16.963	(1.083)	7026	1.00000	1.011
	53 4,6-Dinitro-2-methylphenol	198	17.071	17.071	(0.901)	12045	2.00000	1.686
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.905)	10851	0.50000	0.5048
$	55 2,4,6-Tribromophenol	330	17.433	17.433	(1.113)	3106	0.50000	0.4717
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	4764	0.50000	0.4786
	57 Hexachlorobenzene	284	18.274	18.274	(0.965)	6319	0.50000	0.5059
	58 Pentachlorophenol	266	18.669	18.669	(0.986)	7365	1.00000	0.8841
*	59 Phenanthrene-d10	188	18.940	18.940	(1.000)	178445	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	23968	0.50000	0.5038
	61 Anthracene	178	19.079	19.079	(1.007)	22755	0.50000	0.4751
	62 Carbazole	167	19.435	19.435	(1.026)	19220	0.50000	0.5751
	63 Di-n-butylphthalate	149	20.294	20.294	(1.071)	22128	0.50000	0.4329
	64 Fluoranthene	202	21.392	21.392	(1.129)	25116	0.50000	0.4585
	65 Pyrene	202	21.810	21.810	(0.909)	26902	0.50000	0.4673
$	66 Terphenyl-d14	244	22.127	22.127	(0.922)	18604	0.50000	0.4793
	67 Butylbenzylphthalate	149	23.072	23.072	(0.961)	9115	0.50000	0.4175
	68 Benzo(a)anthracene	228	23.970	23.970	(0.999)	27139	0.50000	0.4813
*	69 Chrysene-d12	240	24.001	24.001	(1.000)	202095	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.947	23.947	(0.998)	26314	1.00000	1.117
	71 Chrysene	228	24.048	24.048	(1.002)	25828	0.50000	0.5057
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	13815	0.50000	0.4790
*	134 Di-n-octylphthalate-d4	153	25.093	25.093	(1.000)	218395	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.001)	27962	0.50000	0.5249

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	25.789	25.789	(0.973)	26415	0.50000	0.4771
75	Benzo(k)fluoranthene	252	25.836	25.836	(0.975)	30077	0.50000	0.5029
76	Benzo(a)pyrene	252	26.393	26.393	(0.996)	22670	0.50000	0.4735
* 77	Perylene-d12	264	26.502	26.502	(1.000)	191018	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.919	28.919	(1.091)	27473	0.50000	0.4653
79	Dibenzo(a,h)anthracene	278	28.942	28.942	(1.092)	22053	0.50000	0.4716
80	Benzo(g,h,i)perylene	276	29.633	29.633	(1.118)	24114	0.50000	0.4760
90	N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	8250	1.00000	0.9630
91	Aniline	93	8.505	8.505	(0.936)	20308	0.50000	0.5005
93	Benzidine	184	21.648	21.648	(0.902)	18859	1.00000	2.078
103	Pyridine	79	4.481	4.481	(0.493)	7344	1.00000	1.005
105	1-methylnaphthalene	142	13.544	13.544	(1.153)	13025	0.50000	0.4884
111	Azobenzene (1,2-DP-Hydrazine)	77	17.217	17.217	(1.100)	14638	0.50000	0.4937
187	Total Benzofluoranthenes	252	25.836	25.836	(0.975)	54001	1.00000	0.9909
99	Perylene	252	26.548	26.548	(1.002)	27182	0.50000	0.4940
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.460	16.460	(1.051)	4437	0.50000	0.4617
188	2,6-Dichlorophenol	162	11.973	11.973	(1.019)	12226	1.00000	0.9706
189	N-Nitrosomethylethylamine	88	5.909	5.909	(0.650)	6123	1.00000	0.9836

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125h.d
Lab Smp Id: IC0125H
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 12:59

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	45029	-3.42
27 Naphthalene-d8	176978	88489	353956	169245	-4.37
42 Acenaphthene-d10	110872	55436	221744	103177	-6.94
59 Phenanthrene-d10	188290	94145	376580	178445	-5.23
69 Chrysene-d12	213681	106840	427362	202095	-5.42
134 Di-n-octylphthala	264159	132080	528318	218395	-17.32
77 Perylene-d12	208584	104292	417168	191018	-8.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.09	0.01
27 Naphthalene-d8	11.76	11.26	12.26	11.75	-0.06
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	-0.05
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.00	-0.03
134 Di-n-octylphthala	25.10	24.60	25.60	25.09	-0.03
77 Perylene-d12	26.51	26.01	27.01	26.50	-0.03

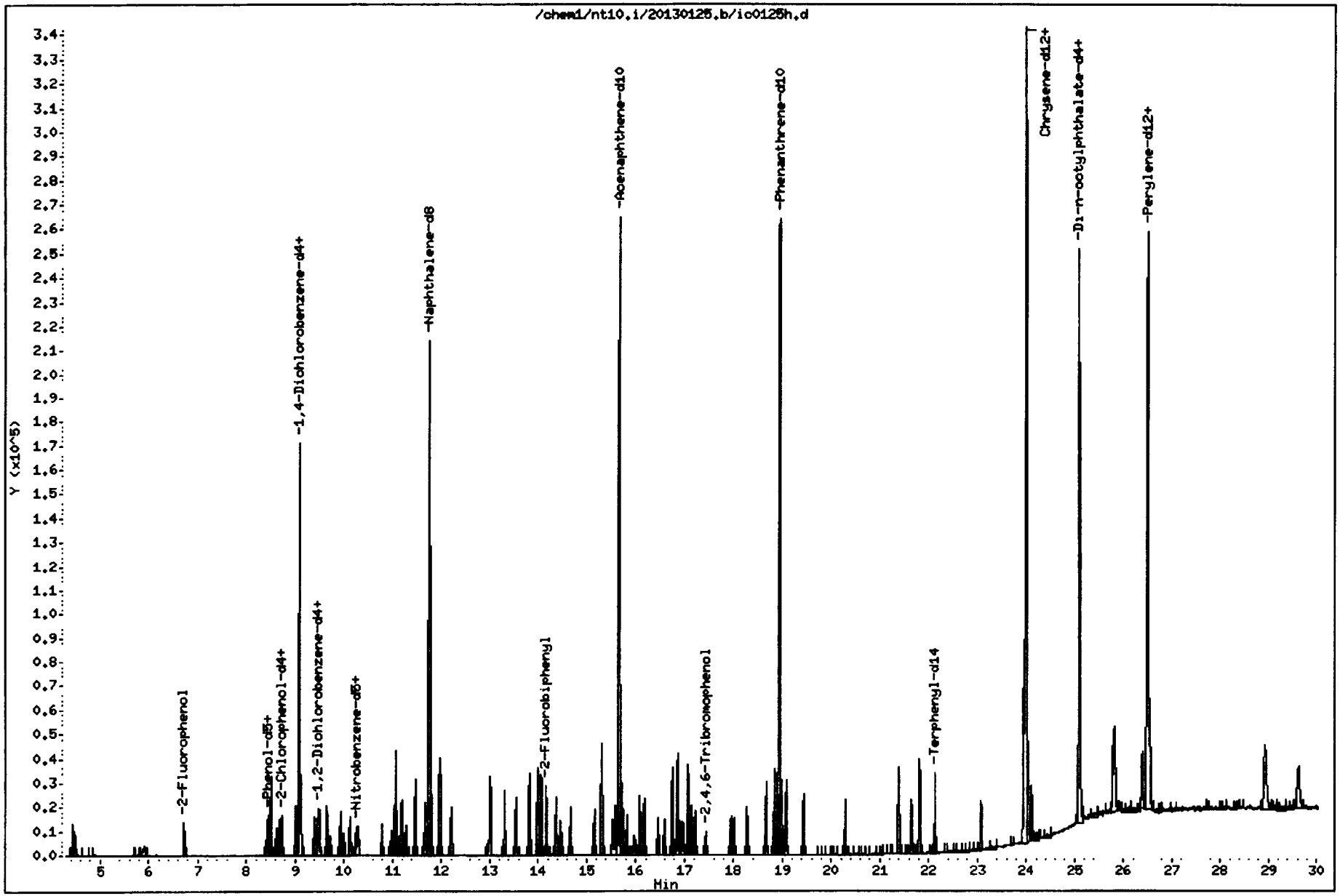
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/ic0125h.d
Date : 25-JAN-2013 17:16
Client ID:
Sample Info: IC0125H

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125h.d

Lab ID: IC0125H, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130125.b/icv0125.d
Lab Smp Id: ICV0125
Inj Date : 25-JAN-2013 18:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ICV0125
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130125.b/ABN.m
Meth Date : 28-Jan-2013 14:27 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.451	8.451	(0.930)	90240	5.37736	5.377
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.621	8.621	(0.949)	67005	5.24779	5.248
6	2-Chlorophenol	128	8.729	8.729	(0.961)	76426	5.23342	5.233
7	1,3-Dichlorobenzene	146	9.015	9.015	(0.992)	81987	5.15942	5.159
* 8	1,4-Dichlorobenzene-d4	152	9.085	9.085	(1.000)	40184	4.00000	
9	1,4-Dichlorobenzene	146	9.116	9.116	(1.003)	80089	5.08994	5.090
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.496	9.496	(1.045)	78072	5.16020	5.160
11	Benzyl alcohol	108	9.388	9.387	(1.033)	37478	4.66673	4.667
14	2,2'-oxybis(1-Chloropropane)	121	9.721	9.721	(1.070)	23386	5.20590	5.206
13	2-Methylphenol	108	9.644	9.644	(1.062)	72173	5.69736	5.697
17	Hexachloroethane	117	10.125	10.125	(1.114)	32416	5.21225	5.212
16	N-Nitroso-di-n-propylamine	70	10.001	10.001	(1.101)	44778	5.29068	5.291
15	4-Methylphenol	108	9.939	9.939	(1.094)	75643	5.74184	5.742
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.296	10.296	(0.876)	68075	5.16288	5.163
20	Isophorone	82	10.792	10.792	(0.919)	123290	5.36454	5.365
21	2-Nitrophenol	139	10.978	10.978	(0.934)	43581	5.62514	5.625
22	2,4-Dimethylphenol	107	11.071	11.070	(0.942)	149122	11.2920	11.29
23	Bis(2-Chloroethoxy)methane	93	11.279	11.279	(0.960)	75953	5.24749	5.247
24	Benzoic acid	105	11.333	11.332	(0.965)	260337	23.0115	23.01
25	2,4-Dichlorophenol	162	11.471	11.471	(0.976)	132923	11.5168	11.52
26	1,2,4-Trichlorobenzene	180	11.664	11.664	(0.993)	67351	5.12757	5.128
* 27	Naphthalene-d8	136	11.749	11.749	(1.000)	150675	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	28 Naphthalene	128	11.795	11.795	(1.004)	187621	4.78541	4.785
	29 4-Chloroaniline	127	11.957	11.957	(1.018)	153482	9.72700	9.727
	30 Hexachlorobutadiene	225	12.212	12.212	(1.039)	43061	5.26029	5.260
	31 4-Chloro-3-methylphenol	107	13.017	13.017	(1.108)	133464	11.9640	11.96
	32 2-Methylnaphthalene	142	13.311	13.311	(1.133)	125970	4.86634	4.866
	33 Hexachlorocyclopentadiene	237	13.822	13.822	(0.882)	112957	10.7260	10.73
	34 2,4,6-Trichlorophenol	196	13.992	13.992	(0.893)	112602	12.0334	12.03
	35 2,4,5-Trichlorophenol	196	14.070	14.070	(0.898)	126526	12.7240	12.72
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	14.379	14.379	(0.918)	140953	5.46481	5.465
	38 2-Nitroaniline	65	14.673	14.673	(0.937)	65450	10.8194	10.82
	39 Dimethylphthalate	163	15.169	15.169	(0.968)	152463	5.39846	5.398
	40 Acenaphthylene	152	15.316	15.316	(0.978)	205925	4.89568	4.896
	41 2,6-Dinitrotoluene	165	15.308	15.308	(0.977)	74654	11.5706	11.57
*	42 Acenaphthene-d10	164	15.664	15.664	(1.000)	93376	4.00000	
	43 3-Nitroaniline	138	15.602	15.610	(0.996)	70409	11.8173	11.82
	44 Acenaphthene	153	15.734	15.733	(1.004)	127159	4.93024	4.930
	45 2,4-Dinitrophenol	184	15.834	15.834	(1.011)	130506	23.1152	23.12
	46 Dibenzofuran	168	16.089	16.089	(1.027)	176205	4.91232	4.912
	47 4-Nitrophenol	109	15.981	15.981	(1.020)	46091	11.3367	11.34
	48 2,4-Dinitrotoluene	165	16.182	16.182	(1.033)	100886	11.5642	11.56
	50 Diethylphthalate	149	16.762	16.761	(1.070)	149613	5.05715	5.057
	49 Fluorene	166	16.862	16.862	(1.076)	149065	4.89256	4.893
	51 4-Chlorophenyl-phenylether	204	16.870	16.878	(1.077)	76545	5.39097	5.391
	52 4-Nitroaniline	138	16.978	16.986	(1.084)	68248	10.8505	10.85
	53 4,6-Dinitro-2-methylphenol	198	17.086	17.086	(0.902)	170570	26.9732	26.97(R)
	54 N-Nitrosodiphenylamine	169	17.148	17.148	(0.905)	103308	5.43113	5.431
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.957	17.957	(0.948)	48685	5.52706	5.527
	57 Hexachlorobenzene	284	18.282	18.281	(0.965)	60692	5.49033	5.490
	58 Pentachlorophenol	266	18.677	18.676	(0.986)	93039	12.6214	12.62
*	59 Phenanthrene-d10	188	18.940	18.939	(1.000)	157911	4.00000	
	60 Phenanthrene	178	18.986	18.986	(1.002)	207268	4.92372	4.924
	61 Anthracene	178	19.079	19.086	(1.007)	213272	5.03174	5.032
	62 Carbazole	167	19.435	19.435	(1.026)	140507	4.96322	4.963
	63 Di-n-butylphthalate	149	20.294	20.293	(1.071)	261975	5.79204	5.792
	64 Fluoranthene	202	21.392	21.392	(1.129)	251144	5.18054	5.181
	65 Pyrene	202	21.810	21.817	(0.908)	256428	4.83356	4.834
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	23.072	23.079	(0.961)	114331	5.68210	5.682
	68 Benzo(a)anthracene	228	23.978	23.978	(0.999)	251589	4.84113	4.841
*	69 Chrysene-d12	240	24.009	24.009	(1.000)	186248	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.955	23.954	(0.998)	167305	7.70530	7.705
	71 Chrysene	228	24.047	24.055	(1.002)	226455	4.81098	4.811
	72 bis(2-Ethylhexyl)phthalate	149	24.117	24.117	(0.961)	162652	5.67579	5.676
*	134 Di-n-octylphthalate-d4	153	25.100	25.100	(1.000)	217021	4.00000	
	73 Di-n-octylphthalate	149	25.108	25.108	(1.000)	278132	5.25388	5.254

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.797	25.797	(0.973)	260552	5.02102	5.021
75	Benzo(k)fluoranthene	252	25.844	25.843	(0.975)	269345	4.80452	4.805
76	Benzo(a)pyrene	252	26.401	26.401	(0.996)	216125	4.81584	4.816
* 77	Perylene-d12	264	26.509	26.509	(1.000)	179038	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.934	28.942	(1.091)	278396	5.03032	5.030
79	Dibenzo(a,h)anthracene	278	28.958	28.965	(1.092)	222187	5.06986	5.070
80	Benzo(g,h,i)perylene	276	29.657	29.641	(1.119)	235666	4.96313	4.963
90	N-Nitrosodimethylamine	74	4.442	4.442	(0.489)	79113	10.3486	10.35
91	Aniline	93	8.505	8.505	(0.936)	165967	4.58307	4.583
93	Benzidine	184	21.655	21.655	(0.902)	99836	11.4404	11.44
103	Pyridine	79	4.457	4.457	(0.491)	67216	10.3079	10.31
105	1-methylnaphthalene	142	13.544	13.543	(1.153)	117579	4.95182	4.952
111	Azobenzene (1,2-DP-Hydrazine)	77	17.225	17.225	(1.100)	149907	5.58630	5.586
187	Total Benzofluoranthenes	252	25.844	25.843	(0.975)	501763	9.82305	9.823
99	Perylene	252	26.556	26.563	(1.002)	228097	4.42254	4.423
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: icv0125.d
Lab Smp Id: ICV0125
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 19:17

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	40184	-13.81
27 Naphthalene-d8	176978	88489	353956	150675	-14.86
42 Acenaphthene-d10	110872	55436	221744	93376	-15.78
59 Phenanthrene-d10	188290	94145	376580	157911	-16.13
69 Chrysene-d12	213681	106840	427362	186248	-12.84
134 Di-n-octylphthala	264159	132080	528318	217021	-17.84
77 Perylene-d12	208584	104292	417168	179038	-14.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
134 Di-n-octylphthala	25.10	24.60	25.60	25.10	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG:
Sample Matrix: NONE Fraction: SV
Lab Smp Id: ICV0125
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3	Phenol	5.000	5.377	107.55	
4	Bis(2-Chloroethyl)	5.000	5.248	104.96	
6	2-Chlorophenol	5.000	5.233	104.67	
7	1,3-Dichlorobenzen	5.000	5.159	103.19	
9	1,4-Dichlorobenzen	5.000	5.090	101.80	
11	Benzyl alcohol	5.000	4.667	93.33	
12	1,2-Dichlorobenzen	5.000	5.160	103.20	
13	2-Methylphenol	5.000	5.697	113.95	
14	2,2'-oxybis(1-Chlo	5.000	5.206	104.12	
15	4-Methylphenol	5.000	5.742	114.84	
16	N-Nitroso-di-n-pro	5.000	5.291	105.81	
17	Hexachloroethane	5.000	5.212	104.25	
19	Nitrobenzene	5.000	5.163	103.26	
20	Isophorone	5.000	5.365	107.29	
21	2-Nitrophenol	5.000	5.625	112.50	
22	2,4-Dimethylphenol	10.00	11.29	112.92	
23	Bis(2-Chloroethoxy	5.000	5.247	104.95	
24	Benzoic acid	20.00	23.01	115.06	
25	2,4-Dichlorophenol	10.00	11.52	115.17	
26	1,2,4-Trichloroben	5.000	5.128	102.55	
28	Naphthalene	5.000	4.785	95.71	
29	4-Chloroaniline	10.00	9.727	97.27	
30	Hexachlorobutadien	5.000	5.260	105.21	
31	4-Chloro-3-methylp	10.00	11.96	119.64	
32	2-Methylnaphthalen	5.000	4.866	97.33	
33	Hexachlorocyclopen	10.00	10.73	107.26	
34	2,4,6-Trichlorophe	10.00	12.03	120.33	
35	2,4,5-Trichlorophe	10.00	12.72	127.24	
37	2-Chloronaphthalen	5.000	5.465	109.30	
38	2-Nitroaniline	10.00	10.82	108.19	
39	Dimethylphthalate	5.000	5.398	107.97	
40	Acenaphthylene	5.000	4.896	97.91	
41	2,6-Dinitrotoluene	10.00	11.57	115.71	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	11.82	118.17	
44	Acenaphthene	5.000	4.930	98.60	
45	2,4-Dinitrophenol	20.00	23.12	115.58	
46	Dibenzofuran	5.000	4.912	98.25	
47	4-Nitrophenol	10.00	11.34	113.37	
48	2,4-Dinitrotoluene	10.00	11.56	115.64	
49	Fluorene	5.000	4.893	97.85	
50	Diethylphthalate	5.000	5.057	101.14	
51	4-Chlorophenyl-phe	5.000	5.391	107.82	
52	4-Nitroaniline	10.00	10.85	108.50	
53	4,6-Dinitro-2-meth	20.00	26.97	134.87*	
54	N-Nitrosodiphenyla	5.000	5.431	108.62	
56	4-Bromophenyl-phen	5.000	5.527	110.54	
57	Hexachlorobenzene	5.000	5.490	109.81	
58	Pentachlorophenol	10.00	12.62	126.21	
60	Phenanthrene	5.000	4.924	98.47	
61	Anthracene	5.000	5.032	100.63	
63	Di-n-butylphthalat	5.000	5.792	115.84	
64	Fluoranthene	5.000	5.181	103.61	
65	Pyrene	5.000	4.834	96.67	
67	Butylbenzylphthala	5.000	5.682	113.64	
68	Benzo(a)anthracene	5.000	4.841	96.82	
70	3,3'-Dichlorobenzi	10.00	7.705	77.05	
71	Chrysene	5.000	4.811	96.22	
72	bis(2-Ethylhexyl)p	5.000	5.676	113.52	
73	Di-n-octylphthalat	5.000	5.254	105.08	
74	Benzo(b)fluoranthe	5.000	5.021	100.42	
75	Benzo(k)fluoranthe	5.000	4.805	96.09	
76	Benzo(a)pyrene	5.000	4.816	96.32	
78	Indeno(1,2,3-cd)py	5.000	5.030	100.61	
79	Dibenzo(a,h)anthra	5.000	5.070	101.40	
80	Benzo(g,h,i)peryle	5.000	4.963	99.26	
90	N-Nitrosodimethyla	10.00	10.35	103.49	
91	Aniline	5.000	4.583	91.66	
93	Benzidine	10.00	11.44	114.40	
105	1-methylnaphthalen	5.000	4.952	99.04	
120	2,3,4,6-Tetrachlo	5.000	0.000	*	
151	1,2,4,5-Tetrachlo	5.000	0.000	*	
110	Tetrachloroguaiac	10.00	0.000	*	
109	3,4,5-Trichlorogu	5.000	0.000	*	
181	3,4,6-Trichlorogu	5.000	0.000	*	
108	4,5,6-Trichlorogu	5.000	0.000	*	
184	3,4-Dichloroguaia	5.000	0.000	*	
107	4,5-Dichloroguaia	10.00	0.000	*	
182	4,6-Dichloroguaia	10.00	0.000	*	
185	4-Chloroguaiacol	2.500	0.000	*	
106	Guaiacol	5.000	0.000	*	

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG:
Sample Matrix: NONE Fraction: SV
Lab Smp Id: ICV0125
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130125.b/ABN.m
Misc Info:

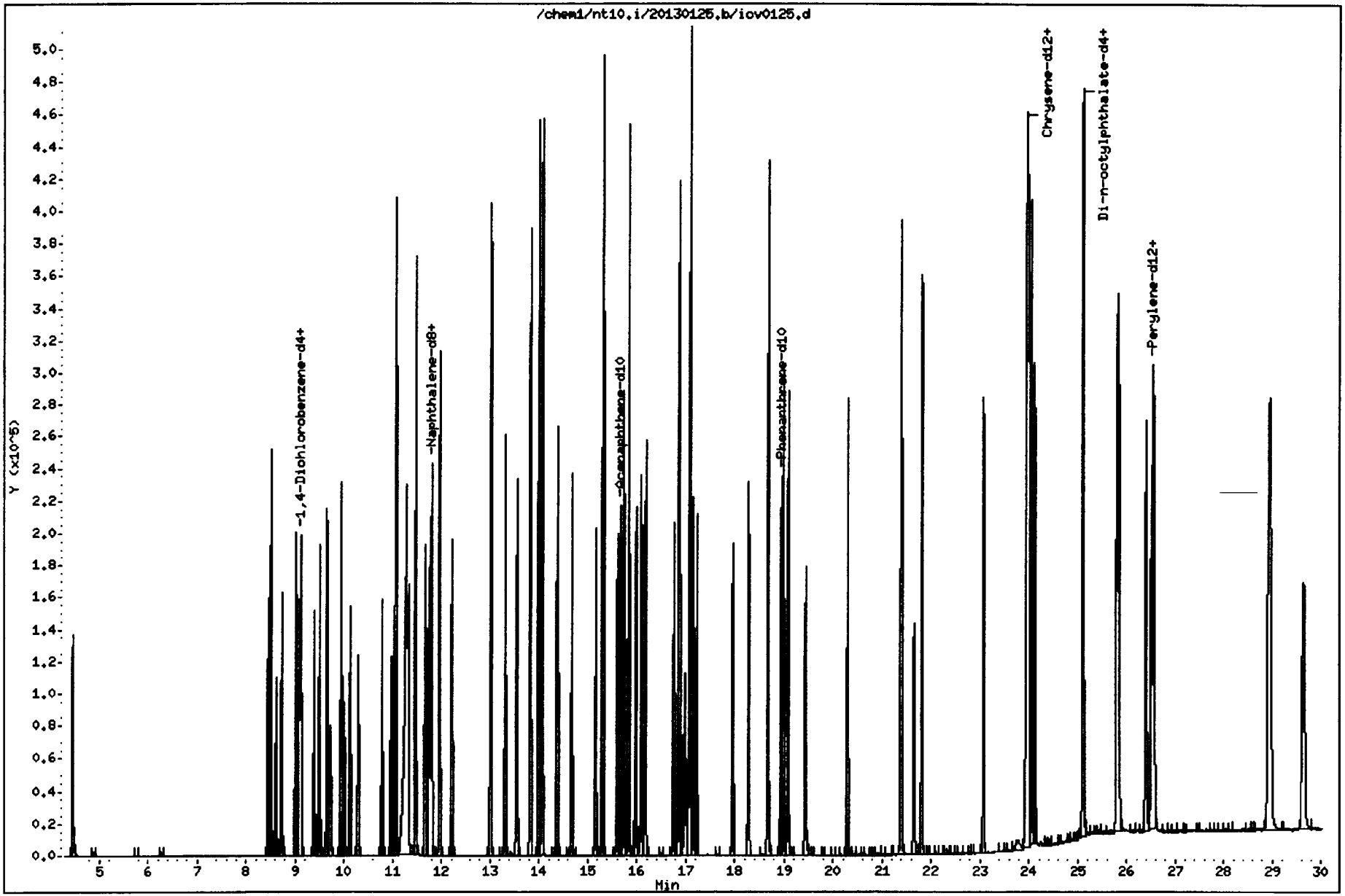
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.000	*	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130125.b/icv0125.d
Date : 25-JAN-2013 18:30
Client ID:
Sample Info: ICV0125

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - icv0125.d

Lab ID: ICV0125, Method: ABN.m, Instrument: nt10.i, Date: 25-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

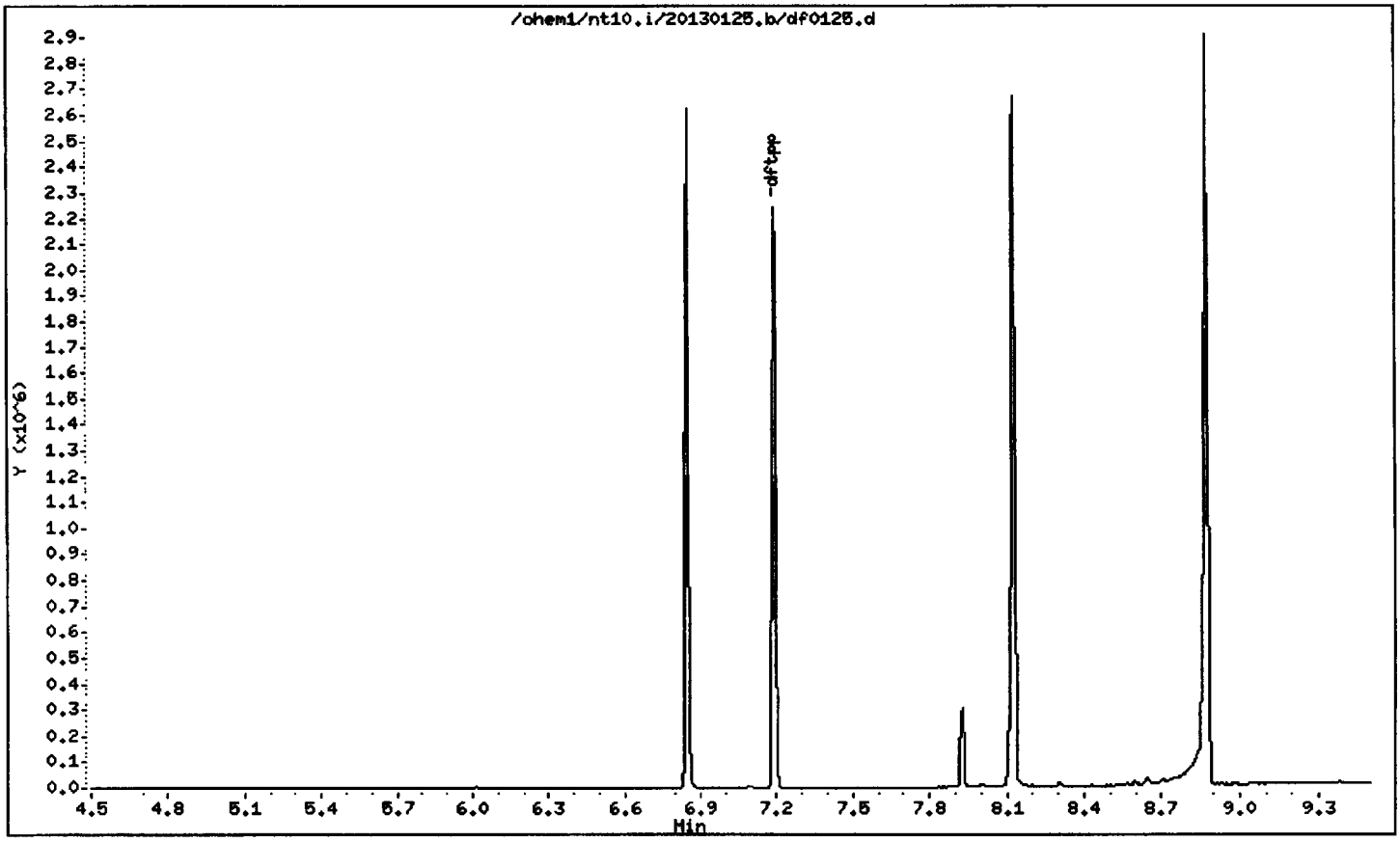
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

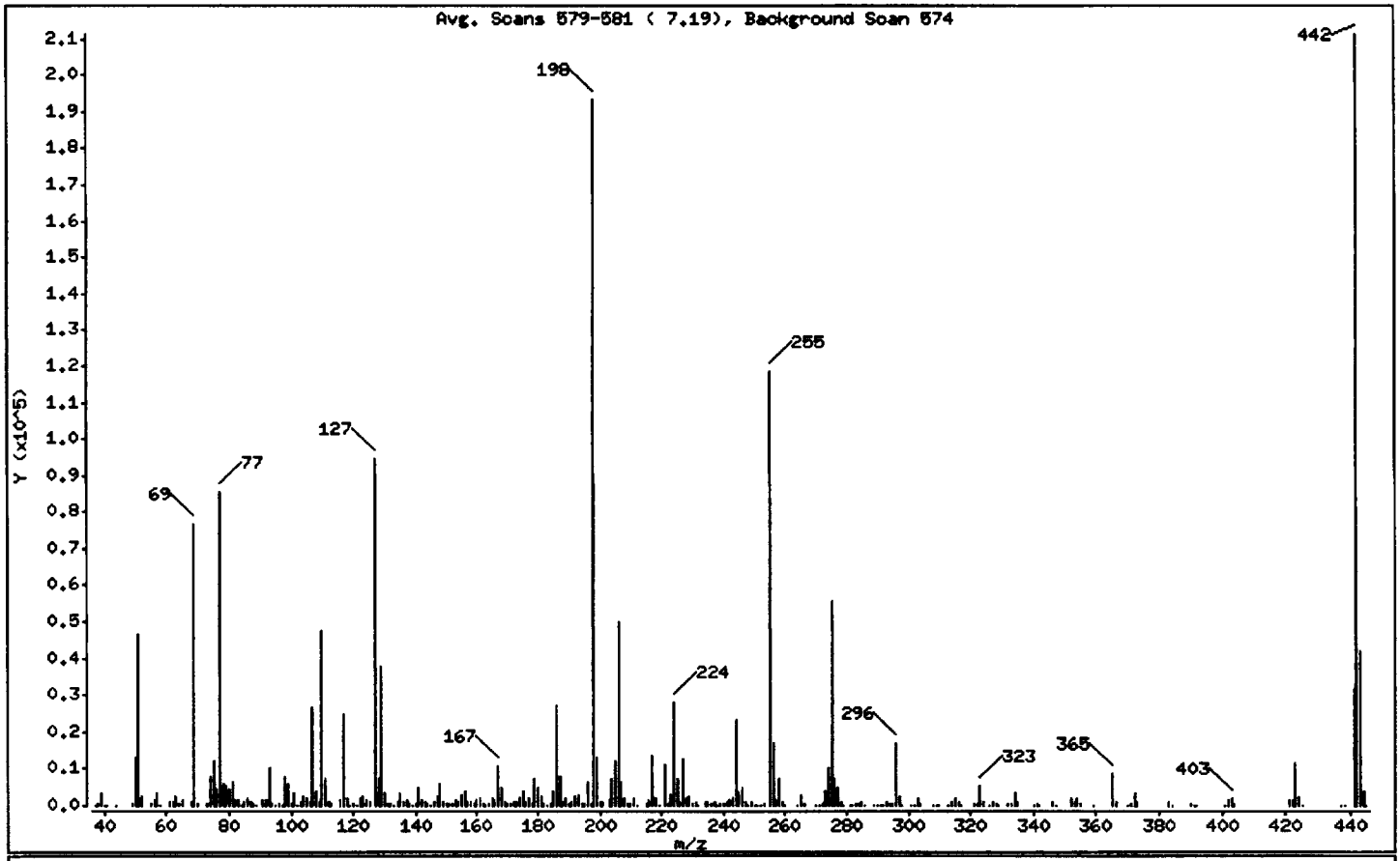
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	24.19
68	Less than 2.00% of mass 69	0.61 (1.54)
69	Mass 69 relative abundance	39.80
70	Less than 2.00% of mass 69	0.19 (0.49)
127	10.00 - 80.00% of mass 198	48.91
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	28.93
365	Greater than 1.00% of mass 198	4.43
441	0.01 - 24.00% of mass 442	16.45 (15.06)
442	50.00 - 200.00% of mass 198	109.23
443	15.00 - 24.00% of mass 442	21.82 (19.98)

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5MSI

Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	197	129.00	37936	204.00	7247	290.00	134
38.00	705	130.00	3252	205.00	12071	291.00	73
39.00	3533	131.00	616	206.00	50152	292.00	193
40.00	113	132.00	309	207.00	6355	293.00	1040
41.00	57	133.00	201	208.00	1855	294.00	300
44.00	41	134.00	1063	209.00	685	295.00	432
49.00	407	135.00	3189	210.00	390	296.00	17168
50.00	12941	136.00	1177	211.00	2076	297.00	2409
51.00	46792	137.00	1570	212.00	126	298.00	117
52.00	2479	138.00	318	215.00	691	301.00	186
55.00	299	139.00	141	216.00	1249	302.00	228
56.00	1601	140.00	439	217.00	13670	303.00	1845
57.00	3595	141.00	5058	218.00	1710	304.00	531
58.00	186	142.00	1565	219.00	125	308.00	197
61.00	736	143.00	1108	221.00	10937	309.00	121
62.00	914	144.00	315	222.00	480	310.00	187
63.00	2618	145.00	214	223.00	3072	313.00	153
64.00	316	146.00	882	224.00	28320	314.00	792
65.00	1300	147.00	2615	225.00	7216	315.00	2023
68.00	1189	148.00	6026	226.00	852	316.00	1067
69.00	76976	149.00	1129	227.00	12743	317.00	159
70.00	375	150.00	301	228.00	1719	321.00	538
73.00	705	151.00	726	229.00	2389	322.00	299
74.00	7863	152.00	293	230.00	329	323.00	5388
75.00	12207	153.00	1577	231.00	1021	324.00	1013
76.00	4289	154.00	1181	232.00	167	326.00	50
77.00	85576	155.00	2757	233.00	188	327.00	1029
78.00	5655	156.00	4011	234.00	771	328.00	558
79.00	5556	157.00	812	235.00	861	329.00	60
80.00	4359	158.00	873	236.00	627	332.00	351
81.00	6233	159.00	710	237.00	1022	333.00	548
82.00	1534	160.00	1489	238.00	110	334.00	3620
83.00	1401	161.00	2161	239.00	541	335.00	964
84.00	112	162.00	649	240.00	417	340.00	51
85.00	1085	163.00	146	241.00	730	341.00	679

Date : 25-JAN-2013 12:43

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1703	164.00	290	242.00	1687	342.00	153
87.00	795	165.00	1882	243.00	1735	346.00	1164
88.00	279	166.00	1494	244.00	23312	347.00	162
89.00	81	167.00	10689	245.00	3158	352.00	1760
91.00	1338	168.00	4694	246.00	4620	353.00	1209
92.00	1519	169.00	848	247.00	978	354.00	1709
93.00	9994	170.00	329	248.00	181	355.00	309
94.00	646	171.00	378	249.00	862	359.00	64
95.00	134	172.00	865	250.00	149	365.00	8589
96.00	471	173.00	1141	251.00	169	366.00	1203
97.00	212	174.00	2026	252.00	221	370.00	156
98.00	7840	175.00	3911	253.00	585	371.00	436
99.00	5867	176.00	1174	255.00	118624	372.00	3166
100.00	531	177.00	1772	256.00	17216	373.00	730
101.00	3503	178.00	645	257.00	1329	383.00	830
102.00	180	179.00	7329	258.00	7275	384.00	228
103.00	1140	180.00	4831	259.00	1188	390.00	433
104.00	2300	181.00	2296	260.00	200	391.00	237
105.00	2067	182.00	354	261.00	142	392.00	163
106.00	732	183.00	241	264.00	186	401.00	177
107.00	26848	184.00	572	265.00	2938	402.00	1244
108.00	4043	185.00	3662	266.00	493	403.00	1787
109.00	744	186.00	27072	270.00	126	404.00	646
110.00	47768	187.00	7673	271.00	234	421.00	1637
111.00	7142	188.00	763	272.00	384	422.00	1574
112.00	909	189.00	1730	273.00	3889	423.00	11637
113.00	338	190.00	326	274.00	10079	424.00	2495
116.00	1403	191.00	859	275.00	55952	425.00	200
117.00	24664	192.00	2439	276.00	7415	437.00	50
118.00	1723	193.00	2782	277.00	4869	438.00	71
119.00	207	194.00	548	278.00	775	441.00	31824
120.00	344	195.00	439	279.00	140	442.00	211264
121.00	108	196.00	6210	281.00	108	443.00	42208
122.00	1841	197.00	402	282.00	139	444.00	4074
123.00	2656	198.00	193408	283.00	558	445.00	209

Date : 25-JAN-2013 12:43

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

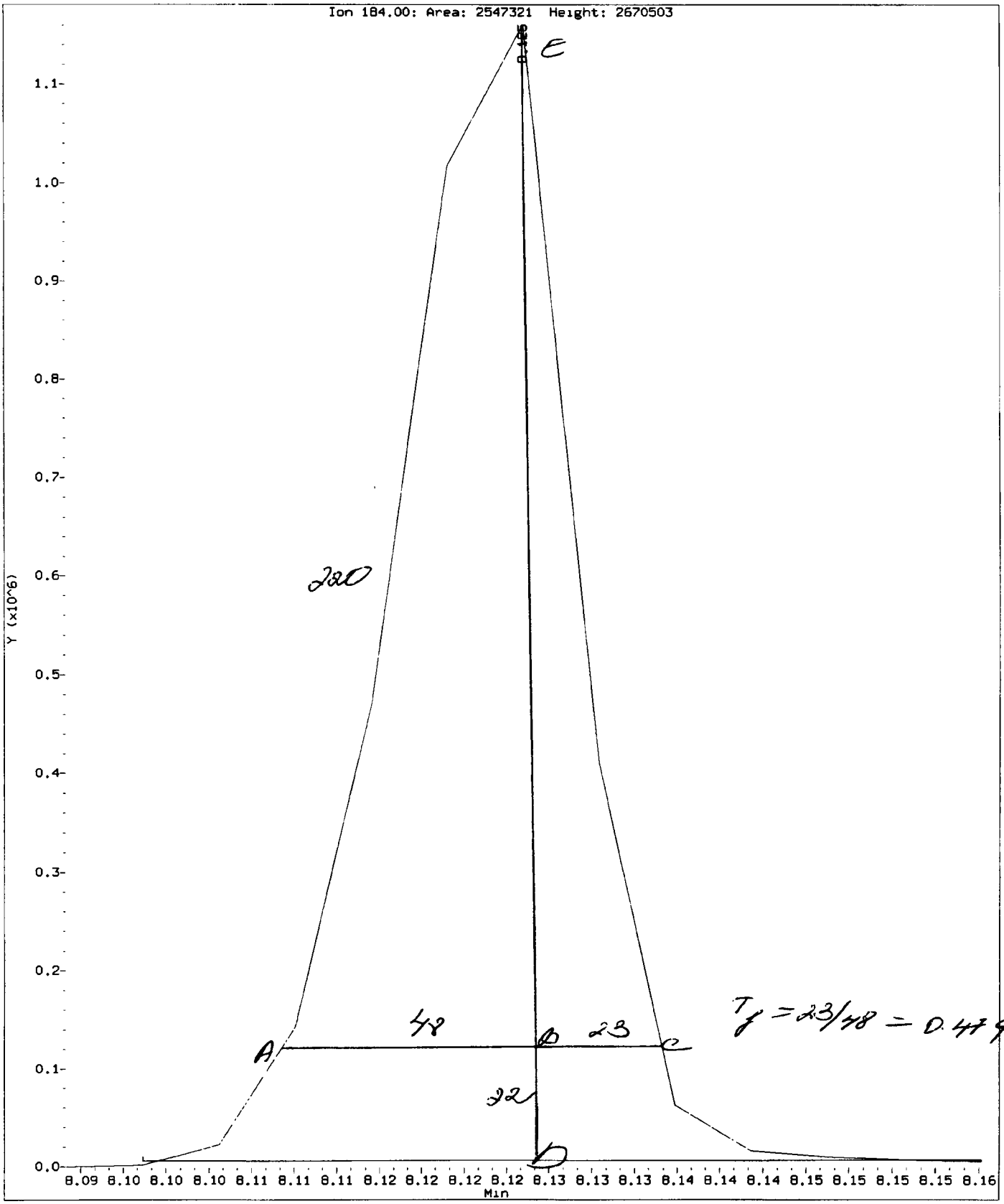
Column phase: ZB-5msi Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1219	199.00	12893	284.00	387		
125.00	1090	200.00	1075	285.00	813		
127.00	94600	201.00	925	286.00	126		
128.00	7116	203.00	1424	289.00	147		

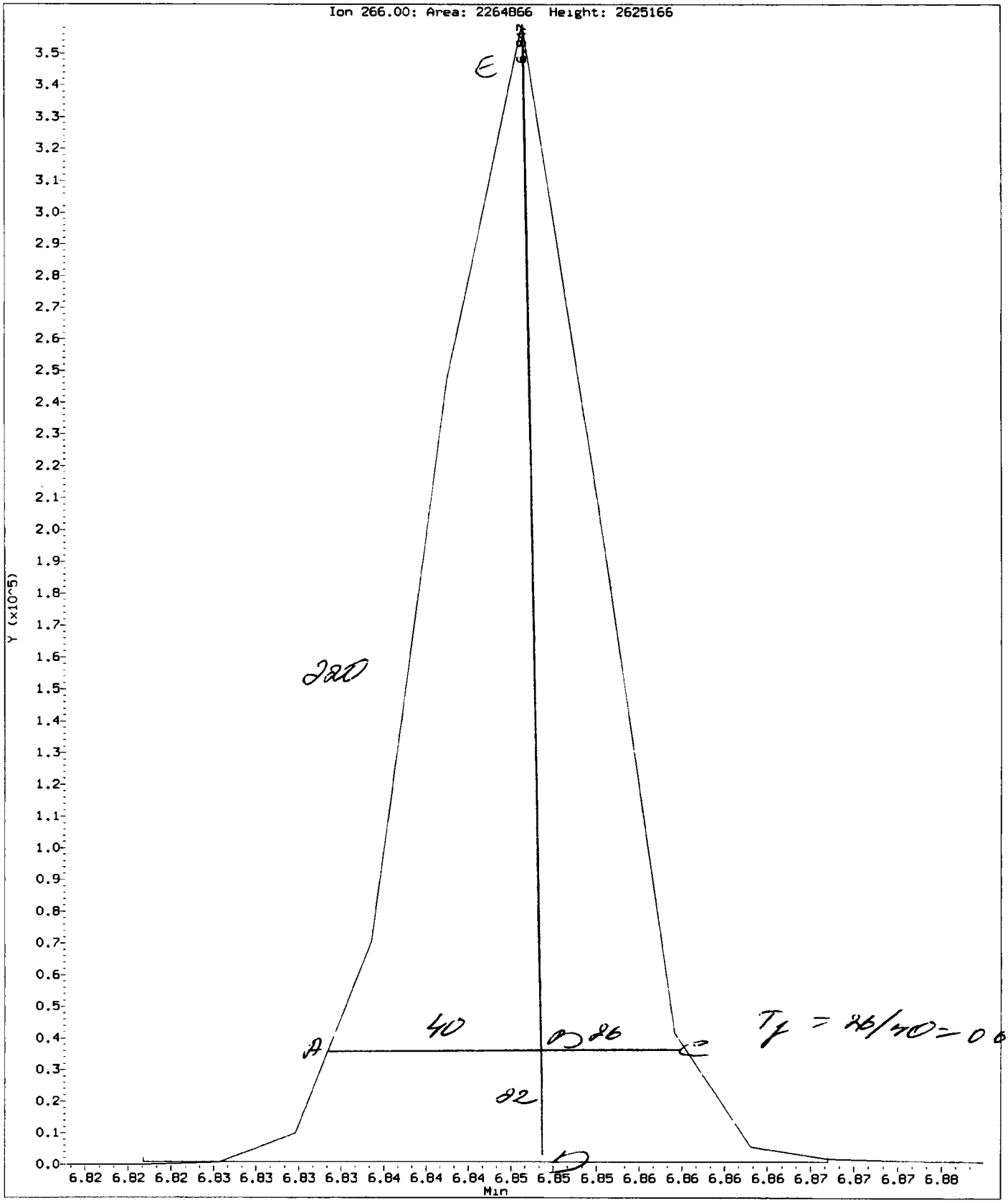
Data File: /chem1/nt10.1/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130125.b/ddt.b/df0125.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130125.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 25-JAN-2013 12:43 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.847	2264865
Benzidine	8.125	2547321
4,4'-DDE	8.307	1813
4,4'-DDD	8.644	5130
4,4'-DDT	8.874	537797

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1813 + 5130) * 100}{(\ 1813 + 5130 + 537797)}$$

DDT Percent Breakdown = 1.3 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: VA49 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) (**8270D**(SVOA)) **8270D**(OP-Pest)

Instrument: NT-4 (NT-6) NT-8 NT-10 NT11 NT12

Curve Date: 3/6/13 Analysis Start Date: 4/19/13

	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? (Per Reprocessed GPC)	(Y) / N / ✓
ICAL Q Flag applied?	(N/A) / Y / N / ✓	LCS / LCSD RPD ≤ 30%?	(NA) / <10%
CCAL Q flag applied?	(Y) / N / ✓	MS / MSD Recovery in Control?	(N/A) / Y / N / N/A
Surrogate Recovery met?	(Y) / N / ✓	MS / MSD RPD ≤ 30%?	(NA) / N/A
Manual Integrations?	Y / (N) / ✓	Samples Diluted?	Y / (N) / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ✓

Detail problems, corrective actions and/or other pertinent information below.

Samples A+B + MB/LCS/LCSD.

LCS/LCSD: Multiple compounds out of QC limits @ high bias with samples "ND".

Forms included

(Review 1) Analyst: [signature] **Date:** 04/23/13

(Review 2) Reviewer: [signature] **Date:** 4/25/13

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 4/19/13 Analysis: 8270D Analyst: [illegible]

GC Program: [illegible] Column No: 734149 Column Type: ZB-5MS

Instrument Tune (.U or .CT.): 121919 EM Voltage: 1694

Calibration File: 04191301 Curve Date: 3/4/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2023-1, 2024-1~~	
	~~2025-1, 2026-1~~	
	~~2030-1, 2027-2~~	
	~~2028-2~~	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt6.i/20130419.b

	Time	Filename	LabID	ClientId	DF											
1	1129	04191301.d	CC0419	CC0419	1	7.94	464116	9.98	1756453	12.83	1083823	15.19	1888610	19.48	1943161	21.63	1979670	20.63	2354831
2	1241	04191302.d	2092-2	2092-2	4	7.93	335655	9.97	1232109	12.82	716555	15.18	1205157	19.47	1238556	20.63	1691931	21.62	1194965
3	1316	04191303.d	WL49MBW1	WL49MBW1	1	7.93	360069	9.97	1299628	12.82	748382	15.18	1217740	19.47	1223081	20.63	1656401	21.62	1177680
4	1350	04191304.d	WL49LCSW1	WL49LCSW1	1	7.93	386864	9.98	1433725	12.83	775873	15.19	1431401	19.48	1324584	20.63	1768186	21.62	1417108
5	1425	04191305.d	WL49LCSDW1	WL49LCSDW1	1	7.93	410727	9.98	1494249	12.83	812538	15.19	1498680	19.48	1368705	20.62	1826924	21.62	1462650
6	1500	04191306.d	WL49A	IM-MH-01-201	1	7.94	356961	9.97	1302849	12.83	805341	15.19	1320655	19.48	1496973	20.63	1854200	21.63	1535490
7	1535	04191307.d	WL49B	IM-SW-01-201	1	7.93	395808	9.97	1420927	12.82	841821	15.18	1424411	19.48	1521308	20.63	1794757	21.64	1497945
8	1650	04191308.d	WL74MBW1	WL74MBW1	1	7.94	359979	9.97	1319833	12.83	784697	15.19	1312345	19.48	1363279	20.63	1834191	21.62	1371403
9	1731	04191309.d	WL74LCSW1	WL74LCSW1	1	7.94	354164	9.98	1311463	12.83	717305	15.19	1347262	19.48	1265248	20.63	1724405	21.63	1505480
10	1806	04191310.d	WL74LCSDW1	WL74LCSDW1	1	7.94	383928	9.98	1413176	12.83	779634	15.19	1434530	19.48	1329007	20.63	1797838	21.62	1570325
11	1840	04191311.d	WL74QLS	WL74QLS	1	7.93	425337	9.97	1524759	12.82	901712	15.18	1511787	19.47	1556181	20.62	2117178	21.62	1625130
12	1915	04191312.d	WL74A	DMMU-P4-ER	1	7.93	373952	9.97	1337413	12.82	784537	15.18	1282467	19.47	1333918	20.62	1803942	21.62	1387443
13	1949	04191313.d	WL72G	LM13-02-0003	1	9.97	1260797	12.82	750256	15.18	1241604	19.47	1272229	21.61	1296005				
14	2023	04191314.d	WL72H	LM13-02-0004	1	9.97	1336817	12.82	811292	15.18	1365004	19.47	1395136	21.62	1449837				
15	2058	04191315.d	WL72I	LM13-02-0006	1	9.97	1797851	12.82	1114426	15.18	1855041	19.47	1962840	21.62	1998102				
16	2132	04191316.d	WL72J	LM13-02-0007	1	9.97	1251271	12.82	724342	15.18	1185583	19.47	1207120	21.61	1247552				
17	2206	04191317.d	WL72K	LM13-02-0009	1	9.97	1161593	12.82	681657	15.18	1112603	19.47	1158283	21.61	1215981				
18	2240	04191318.d	WL72L	LM13-02-0010	1	9.97	1178686	12.82	716338	15.18	1189752	19.47	1237775	21.61	1264963				
19	2314	04191319.d	WL72M	LM13-02-0011	1	9.97	1248526	12.81	739171	15.18	1213647	19.47	1225471	21.61	1251326				

04/23/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130419.b

ARI Job No.: CC04 Method: SW846030613.m Instrument: nt6.i Date: 19-APR-2013

04/23/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1129	04191301.d	CC0419	CC0419	1	NO MANUAL INTEGRATION
1316	04191303.d	WL49MBW1	WL49MBW1	1	NO MANUAL INTEGRATION
1350	04191304.d	WL49LCSW1	WL49LCSW1	1	NO MANUAL INTEGRATION
1425	04191305.d	WL49LCSDW1	WL49LCSDW1	1	NO MANUAL INTEGRATION
1500	04191306.d	WL49A	IM-MH-01-2	1	NO MANUAL INTEGRATION
1535	04191307.d	WL49B	IM-SW-01-2	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130419.b

Instrument: nt6.i Date: 19-APR-2013 Method: SW846030613.m

INITIAL CAL: 05-MAR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 19-APR-2013

Compound	%D
2,2'-oxybis(1-Chloropropane)	-22.6
3-Nitroaniline	-22.4
Benzo(k)fluoranthene	-20.4
N-Nitrosodimethylamine	-21.0
N-Nitrosomethylethylamine	-21.2

04/23/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 04191301.d
Analysis Type:
Lab Sample ID: CC0419
Method: /chem2/nt6.i/20130419.b/SW846030613.m

Injection Date: 19-APR-2013 11:29
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

04/23/13

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.29593	1.09429	1.09429	0.010	-15.55923	20.00000	Averaged	
$ 2 Phenol-d5	1.51700	1.39030	1.39030	0.010	-8.35191	20.00000	Averaged	
3 Phenol	1.59733	1.41598	1.41598	0.010	-11.35325	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.28234	1.13735	1.13735	0.010	-11.30619	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.38721	1.16567	1.16567	0.010	-15.97003	20.00000	Averaged	
6 2-Chlorophenol	1.27800	1.16892	1.16892	0.010	-8.53528	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.49260	1.39635	1.39635	0.010	-6.44870	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.45271	1.37772	1.37772	0.010	-5.16201	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	0.90253	0.75396	0.75396	0.010	-16.46167	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.38875	1.27834	1.27834	0.010	-7.94974	20.00000	Averaged	
11 Benzyl alcohol	0.87019	0.74349	0.74349	0.010	-14.56029	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	2.20404	1.70512	1.70512	0.010	-22.63641	20.00000	Averaged	<-
13 2-Methylphenol	1.21121	1.05753	1.05753	0.010	-12.68776	20.00000	Averaged	
17 Hexachloroethane	0.58761	0.52281	0.52281	0.010	-11.02680	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	1.04103	0.89790	0.89790	0.005	-13.74957	20.00000	Averaged	
15 4-Methylphenol	1.19772	1.10023	1.10023	0.010	-8.14012	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.40133	0.34101	0.34101	0.010	-15.02988	20.00000	Averaged	
19 Nitrobenzene	0.38413	0.35426	0.35426	0.010	-7.77487	20.00000	Averaged	
20 Isophorone	0.66954	0.56121	0.56121	0.010	-16.17951	20.00000	Averaged	
21 2-Nitrophenol	0.17774	0.16957	0.16957	0.010	-4.59687	20.00000	Averaged	
22 2,4-Dimethylphenol	0.33613	0.30913	0.30913	0.010	-8.03237	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43930	0.38002	0.38002	0.010	-13.49365	20.00000	Averaged	
24 Benzoic acid	0.29097	0.25002	0.25002	0.010	-14.07343	20.00000	Averaged	
25 2,4-Dichlorophenol	0.25883	0.25689	0.25689	0.010	-0.74679	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.32219	0.30599	0.30599	0.010	-5.02623	20.00000	Averaged	
28 Naphthalene	24.21863	25.00000	0.84355	0.010	-3.12549	20.00000	Quadratic	
29 4-Chloroaniline	20.97244	25.00000	0.23704	0.010	-16.11025	20.00000	Quadratic	
30 Hexachlorobutadiene	0.19606	0.19345	0.19345	0.010	-1.33385	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.27493	0.26366	0.26366	0.010	-4.09956	20.00000	Averaged	
32 2-Methylnaphthalene	0.48637	0.45262	0.45262	0.010	-6.94077	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.32133	0.34223	0.34223	0.010	6.50467	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.33621	0.31668	0.31668	0.010	-5.80798	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.33167	0.33427	0.33427	0.010	0.78310	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.26244	1.04006	1.04006	0.010	-17.61517	20.00000	Averaged	
37 2-Chloronaphthalene	25.29464	25.00000	0.86535	0.010	1.17857	20.00000	Quadratic	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 04191301.d
Analysis Type:
Lab Sample ID: CC0419
Method: /chem2/nt6.i/20130419.b/SW846030613.m

Injection Date: 19-APR-2013 11:29
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	0.27512	0.27512	0.010	-6.95026	20.00000	Averaged	
39 Dimethylphthalate	1.20372	1.05965	1.05965	0.010	-11.96878	20.00000	Averaged	
40 Acenaphthylene	1.57756	1.42095	1.42095	0.010	-9.92788	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.25718	0.26104	0.26104	0.010	1.50294	20.00000	Averaged	
43 3-Nitroaniline	19.39895	25.00000	0.15139	0.010	-22.40420	20.00000	Quadratic	<-
44 Acenaphthene	1.02139	0.89603	0.89603	0.010	-12.27305	20.00000	Averaged	
45 2,4-Dinitrophenol	0.18369	0.19372	0.19372	0.010	5.45921	20.00000	Averaged	
46 Dibenzofuran	1.33585	1.21745	1.21745	0.010	-8.86326	20.00000	Averaged	
47 4-Nitrophenol	0.13065	0.15625	0.15625	0.010	19.59570	20.00000	Averaged	
48 2,4-Dinitrotoluene	0.34786	0.34083	0.34083	0.010	-2.02310	20.00000	Averaged	
50 Diethylphthalate	1.11525	1.06245	1.06245	0.010	-4.73382	20.00000	Averaged	
49 Fluorene	25.65657	25.00000	0.97217	0.010	2.62626	20.00000	Quadratic	
51 4-Chlorophenyl-phenylether	0.58637	0.56323	0.56323	0.010	-3.94622	20.00000	Averaged	
52 4-Nitroaniline	0.19616	0.17541	0.17541	0.010	-10.57670	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	0.14402	0.13676	0.13676	0.010	-5.03602	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.54375	0.45978	0.45978	0.010	-15.44205	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.15815	0.15732	0.15732	0.010	-0.52408	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.21950	0.19156	0.19156	0.010	-12.73174	20.00000	Averaged	
57 Hexachlorobenzene	0.22630	0.19767	0.19767	0.010	-12.65314	20.00000	Averaged	
58 Pentachlorophenol	0.13351	0.11830	0.11830	0.010	-11.39183	20.00000	Averaged	
60 Phenanthrene	0.98950	0.82848	0.82848	0.010	-16.27267	20.00000	Averaged	
61 Anthracene	0.99076	0.83536	0.83536	0.010	-15.68530	20.00000	Averaged	
62 Carbazole	25.10181	25.00000	0.69398	0.010	0.40724	20.00000	Quadratic	
63 Di-n-butylphthalate	1.24906	1.02825	1.02825	0.010	-17.67809	20.00000	Averaged	
64 Fluoranthene	1.04092	0.93090	0.93090	0.010	-10.57014	20.00000	Averaged	
65 Pyrene	1.09227	0.93903	0.93903	0.010	-14.02940	20.00000	Averaged	
$ 66 Terphenyl-d14	0.70203	0.57394	0.57394	0.010	-18.24571	20.00000	Averaged	
67 Butylbenzylphthalate	0.53411	0.46380	0.46380	0.010	-13.16471	20.00000	Averaged	
68 Benzo(a)anthracene	0.91184	0.84615	0.84615	0.010	-7.20336	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.25087	0.22177	0.22177	0.010	-11.59947	20.00000	Averaged	
71 Chrysene	0.93085	0.80109	0.80109	0.010	-13.93971	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.58852	0.51731	0.51731	0.010	-12.09946	20.00000	Averaged	
73 Di-n-octylphthalate	0.94433	0.83140	0.83140	0.010	-11.95894	20.00000	Averaged	
74 Benzo(b)fluoranthene	25.29915	25.00000	0.91018	0.010	1.19661	20.00000	Quadratic	
75 Benzo(k)fluoranthene	19.89773	25.00000	0.80469	0.010	-20.40908	20.00000	Quadratic	<-

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 04191301.d
Analysis Type:
Lab Sample ID: CC0419
Method: /chem2/nt6.i/20130419.b/SW846030613.m

Injection Date: 19-APR-2013 11:29
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	0.80115	0.80115	0.010	-12.99271	20.00000	Averaged	
76 Benzo(a)pyrene	0.85485	0.76760	0.76760	0.010	-10.20616	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.02877	0.96147	0.96147	0.010	-6.54246	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.81005	0.78245	0.78245	0.010	-3.40730	20.00000	Averaged	
80 Benzo(g,h,i)perylene	0.87980	0.84501	0.84501	0.010	-3.95443	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.94183	0.74396	0.74396	0.010	-21.00950	20.00000	Averaged	<-
103 Pyridine	1.49368	1.28999	1.28999	0.010	-13.63677	20.00000	Averaged	
91 Aniline	1.76984	1.45584	1.45584	0.010	-17.74136	20.00000	Averaged	
105 1-methylnaphthalene	0.49409	0.45961	0.45961	0.010	-6.97962	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.26720	1.09544	1.09544	0.010	-13.55377	20.00000	Averaged	
143 1,4-Dioxane	0.64887	0.59582	0.59582	0.010	-8.17562	20.00000	Averaged	
$ 137 d8-1,4-Dioxane	0.60730	0.56916	0.56916	0.010	-6.27944	20.00000	Averaged	
144 alpha-Terpineol	0.25433	0.22514	0.22514	0.010	-11.47890	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.28547	0.28267	0.28267	0.010	-0.98189	20.00000	Averaged	
188 2,6-Dichlorophenol	0.88554	0.87434	0.87434	0.010	-1.26474	20.00000	Averaged	
189 N-Nitrosomethylethylamine	0.66080	0.52043	0.52043	0.010	-21.24319	20.00000	Averaged	<-

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130419.b/04191301.d
Lab Smp Id: CC0419 Client Smp ID: CC0419
Inj Date : 19-APR-2013 11:29
Operator : JZ Inst ID: nt6.i
Smp Info : CC0419
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130419.b/SW846030613.m
Meth Date : 23-Apr-2013 15:03 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
Processing Host: cserv3

04/23/13

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.004	6.004	(0.756)	634848	25.0000	21.11
$	2	Phenol-d5	99	7.553	7.553	(0.952)	806577	25.0000	22.91
	3	Phenol	94	7.575	7.575	(0.954)	821473	25.0000	22.16
$	5	2-Chlorophenol-d4	132	7.649	7.649	(0.964)	659830	25.0000	22.17
	4	Bis(2-Chloroethyl)ether	93	7.617	7.617	(0.960)	676257	25.0000	21.01
	6	2-Chlorophenol	128	7.676	7.676	(0.967)	678143	25.0000	22.87
	7	1,3-Dichlorobenzene	146	7.874	7.874	(0.992)	810085	25.0000	23.39
*	8	1,4-Dichlorobenzene-d4	152	7.938	7.938	(1.000)	464116	20.0000	
	9	1,4-Dichlorobenzene	146	7.965	7.965	(1.003)	799276	25.0000	23.71
$	10	1,2-Dichlorobenzene-d4	152	8.232	8.232	(1.037)	437406	25.0000	20.88
	12	1,2-Dichlorobenzene	146	8.253	8.253	(1.040)	741625	25.0000	23.01
	11	Benzyl alcohol	108	8.237	8.237	(1.038)	431331	25.0000	21.36
	14	2,2'-oxybis(1-Chloropropane)	45	8.483	8.483	(1.069)	989218	25.0000	19.34
	13	2-Methylphenol	108	8.488	8.488	(1.069)	613523	25.0000	21.83
	17	Hexachloroethane	117	8.739	8.739	(1.101)	303306	25.0000	22.24
	16	N-Nitroso-di-n-propylamine	70	8.707	8.707	(1.097)	520909	25.0000	21.56
	15	4-Methylphenol	108	8.723	8.723	(1.099)	638291	25.0000	22.96
$	18	Nitrobenzene-d5	82	8.873	8.873	(0.889)	748712	25.0000	21.24
	19	Nitrobenzene	77	8.900	8.900	(0.892)	777811	25.0000	23.06
	20	Isophorone	82	9.279	9.279	(0.930)	1232171	25.0000	20.96
	21	2-Nitrophenol	139	9.412	9.412	(0.943)	372303	25.0000	23.85
	22	2,4-Dimethylphenol	107	9.546	9.546	(0.957)	678726	25.0000	22.99
	23	Bis(2-Chloroethoxy)methane	93	9.674	9.674	(0.969)	834360	25.0000	21.63
	24	Benzoic acid	105	9.834	9.834	(0.986)	1097867	50.0000	42.96
	25	2,4-Dichlorophenol	162	9.808	9.808	(0.983)	564024	25.0000	24.81
	26	1,2,4-Trichlorobenzene	180	9.920	9.920	(0.994)	671826	25.0000	23.74

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	27 Naphthalene-d8	136	9.979	9.979	(1.000)	1756453	20.0000	
	28 Naphthalene	128	10.005	10.005	(1.003)	1852080	25.0000	24.22
	29 4-Chloroaniline	127	10.166	10.166	(1.019)	520445	25.0000	20.97
	30 Hexachlorobutadiene	225	10.326	10.326	(1.035)	424726	25.0000	24.67
	31 4-Chloro-3-methylphenol	107	10.994	10.994	(1.102)	578873	25.0000	23.98
	32 2-Methylnaphthalene	141	11.127	11.127	(1.115)	993747	25.0000	23.26
	33 Hexachlorocyclopentadiene	237	11.501	11.501	(0.897)	463644	25.0000	26.63
	34 2,4,6-Trichlorophenol	196	11.651	11.651	(0.908)	429037	25.0000	23.55
	35 2,4,5-Trichlorophenol	196	11.715	11.715	(0.913)	452857	25.0000	25.20
$	36 2-Fluorobiphenyl	172	11.768	11.768	(0.918)	1409056	25.0000	20.60
	37 2-Chloronaphthalene	162	11.902	11.902	(0.928)	1172359	25.0000	25.29
	38 2-Nitroaniline	65	12.148	12.148	(0.947)	372728	25.0000	23.26
	39 Dimethylphthalate	163	12.516	12.516	(0.976)	1435595	25.0000	22.01
	40 Acenaphthylene	152	12.575	12.575	(0.980)	1925068	25.0000	22.52
	41 2,6-Dinitrotoluene	165	12.607	12.607	(0.983)	353657	25.0000	25.38
*	42 Acenaphthene-d10	164	12.826	12.826	(1.000)	1083823	20.0000	
	43 3-Nitroaniline	138	12.831	12.831	(1.000)	205094	25.0000	19.40
	44 Acenaphthene	153	12.874	12.874	(1.004)	1213926	25.0000	21.93
	45 2,4-Dinitrophenol	184	12.986	12.986	(1.012)	524883	50.0000	52.73
	46 Dibenzofuran	168	13.141	13.141	(1.025)	1649377	25.0000	22.78
	47 4-Nitrophenol	109	13.168	13.168	(1.027)	211690	25.0000	29.90
	48 2,4-Dinitrotoluene	165	13.232	13.232	(1.032)	461744	25.0000	24.49
	50 Diethylphthalate	149	13.665	13.665	(1.065)	1439392	25.0000	23.82
	49 Fluorene	166	13.691	13.691	(1.067)	1317079	25.0000	25.66
	51 4-Chlorophenyl-phenylether	204	13.718	13.718	(1.070)	763056	25.0000	24.01
	52 4-Nitroaniline	138	13.820	13.820	(1.077)	237647	25.0000	22.36
	53 4,6-Dinitro-2-methylphenol	198	13.884	13.884	(0.914)	645739	50.0000	47.48
	54 N-Nitrosodiphenylamine	169	13.932	13.932	(0.917)	1085431	25.0000	21.14
$	55 2,4,6-Tribromophenol	330	14.119	14.119	(1.101)	213129	25.0000	24.87
	56 4-Bromophenyl-phenylether	248	14.493	14.493	(0.954)	452218	25.0000	21.82
	57 Hexachlorobenzene	284	14.712	14.712	(0.968)	466641	25.0000	21.84
	58 Pentachlorophenol	266	15.022	15.022	(0.989)	279275	25.0000	22.15
*	59 Phenanthrene-d10	188	15.193	15.193	(1.000)	1888610	20.0000	
	60 Phenanthrene	178	15.225	15.225	(1.002)	1955854	25.0000	20.93
	61 Anthracene	178	15.299	15.299	(1.007)	1972080	25.0000	21.08
	62 Carbazole	167	15.588	15.588	(1.026)	1638317	25.0000	25.10
	63 Di-n-butylphthalate	149	16.304	16.304	(1.073)	2427461	25.0000	20.58
	64 Fluoranthene	202	17.153	17.153	(1.129)	2197622	25.0000	22.36
	65 Pyrene	202	17.506	17.506	(0.899)	2280863	25.0000	21.49
$	66 Terphenyl-d14	244	17.826	17.826	(0.915)	1394067	25.0000	20.44
	67 Butylbenzylphthalate	149	18.708	18.708	(0.960)	1126540	25.0000	21.71
	68 Benzo(a)anthracene	228	19.456	19.456	(0.999)	2055265	25.0000	23.20
*	69 Chrysene-d12	240	19.482	19.482	(1.000)	1943161	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.472	19.472	(0.999)	538675	25.0000	22.10
	71 Chrysene	228	19.525	19.525	(1.002)	1945805	25.0000	21.52
	72 bis(2-Ethylhexyl)phthalate	149	19.701	19.701	(0.955)	1522727	25.0000	21.98
*	134 Di-n-octylphthalate-d4	153	20.631	20.631	(1.000)	2354831	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
73	Di-n-octylphthalate	149	20.642	20.642	(1.001)	2447245	25.0000	22.01
74	Benzo(b)fluoranthene	252	21.106	21.106	(0.976)	2252330	25.0000	25.30
75	Benzo(k)fluoranthene	252	21.138	21.138	(0.977)	1991273	25.0000	19.90
187	Total Benzofluoranthenes	252	21.138	21.138	(0.977)	3965036	50.0000	43.50
76	Benzo(a)pyrene	252	21.550	21.550	(0.996)	1899489	25.0000	22.45
* 77	Perylene-d12	264	21.630	21.630	(1.000)	1979670	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.078	23.078	(1.067)	2379234	25.0000	23.36
79	Dibenzo(a,h)anthracene	278	23.099	23.099	(1.068)	1936244	25.0000	24.15
80	Benzo(g,h,i)perylene	276	23.468	23.468	(1.085)	2091043	25.0000	24.01
90	N-Nitrosodimethylamine	74	3.226	3.226	(0.406)	431604	25.0000	19.75
103	Pyridine	79	3.183	3.183	(0.401)	748381	25.0000	21.59
91	Aniline	93	7.500	7.500	(0.945)	844601	25.0000	20.56
105	1-methylnaphthalene	141	11.293	11.293	(1.132)	1009097	25.0000	23.26
111	Azobenzene (1,2-DP-Hydrazine)	77	13.969	13.969	(1.089)	1484084	25.0000	21.61
143	1,4-Dioxane	88	2.542	2.542	(0.320)	345660	25.0000	22.96
$ 137	d8-1,4-Dioxane	96	2.494	2.494	(0.314)	330195	25.0000	23.43
144	alpha-Terpineol	59	10.043	10.043	(1.006)	494305	25.0000	22.13
120	2,3,4,6-Tetrachlorophenol	232	13.430	13.430	(1.047)	382957	25.0000	24.75
188	2,6-Dichlorophenol	162	10.171	10.171	(1.281)	507246	25.0000	24.68
189	N-Nitrosomethylethylamine	88	5.112	5.112	(0.644)	301922	25.0000	19.69

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 04191301.d
Lab Smp Id: CC0419
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-

Calibration Date: 19-APR-2013
Calibration Time: 10:18
Client Smp ID: CC0419
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	464116	1.31
27 Naphthalene-d8	1718341	859170	3436682	1756453	2.22
42 Acenaphthene-d10	1010041	505020	2020082	1083823	7.30
59 Phenanthrene-d10	1666734	833367	3333468	1888610	13.31
69 Chrysene-d12	1675752	837876	3351504	1943161	15.96
134 Di-n-octylphthala	2026355	1013178	4052710	2354831	16.21
77 Perylene-d12	1637524	818762	3275048	1979670	20.89

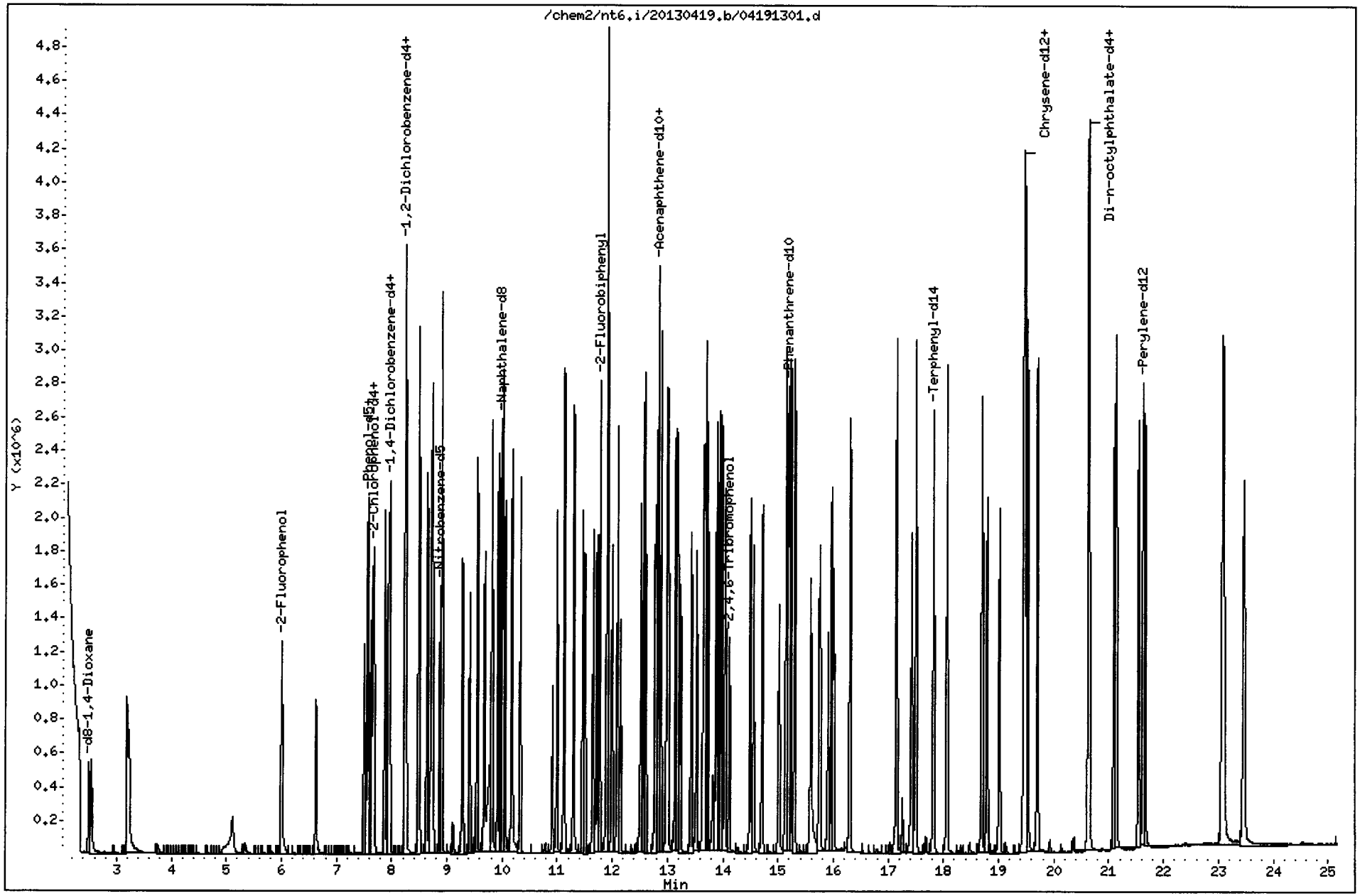
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.94	7.44	8.44	7.94	0.00
27 Naphthalene-d8	9.98	9.48	10.48	9.98	0.00
42 Acenaphthene-d10	12.83	12.33	13.33	12.83	0.00
59 Phenanthrene-d10	15.19	14.69	15.69	15.19	0.00
69 Chrysene-d12	19.48	18.98	19.98	19.48	0.00
134 Di-n-octylphthala	20.63	20.13	21.13	20.63	0.00
77 Perylene-d12	21.63	21.13	22.13	21.63	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/20130419.b/04191301.d
Date : 19-APR-2013 11:29
Client ID: CC0419
Sample Info: CC0419

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 04191301.d

Lab ID: CC0419, Method: SW846030613.m, Instrument: nt6.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem2/nt6.i/20130419.b/tune.b/04191301.d

Date : 19-APR-2013 11:29

Client ID: DFTPP0419

Instrument: nt6.i

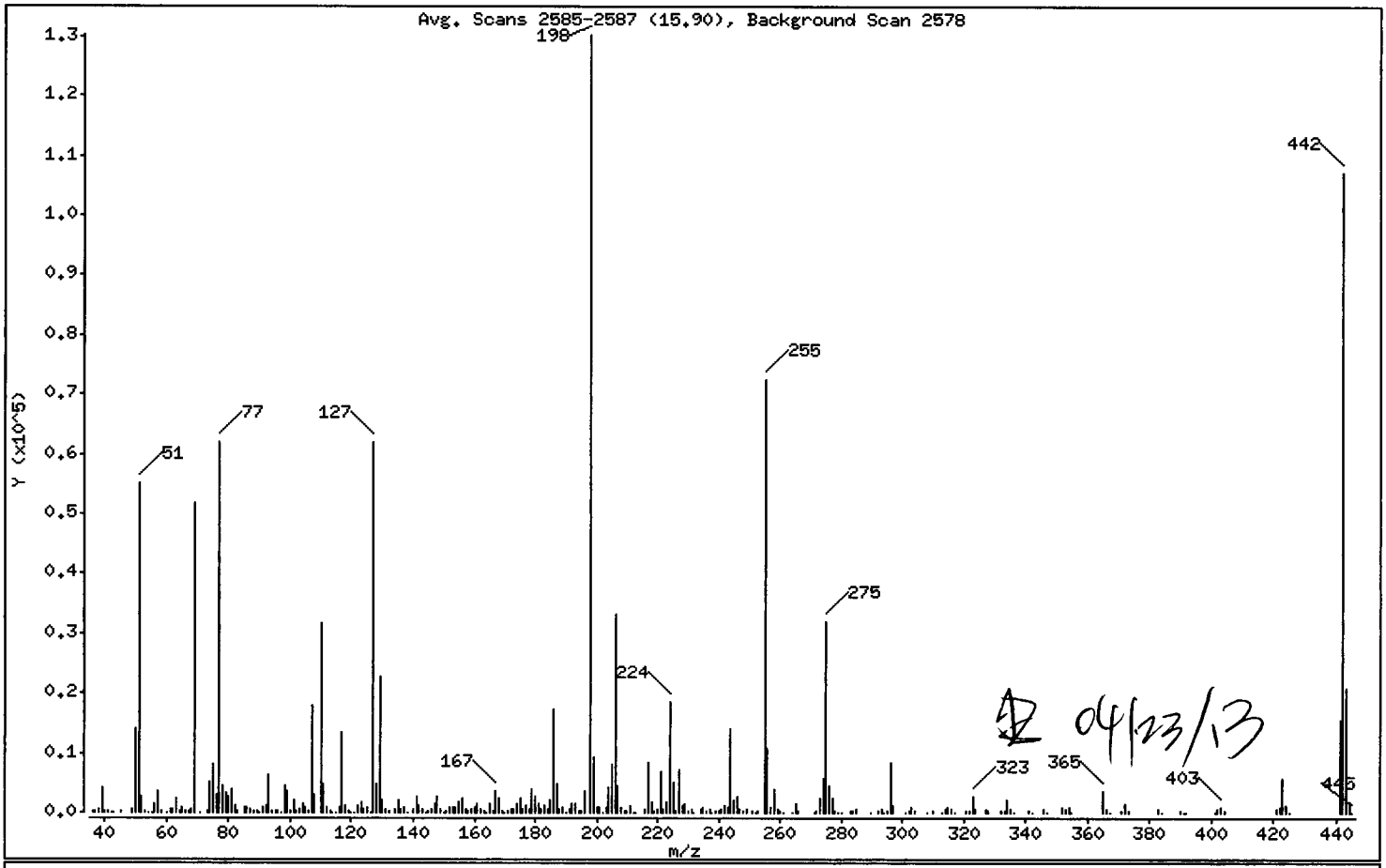
Sample Info: DFTPP0419

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	42.34
68	Less than 2.00% of mass 69	0.49 (1.22)
69	Mass 69 relative abundance	39.87
70	Less than 2.00% of mass 69	0.00 (0.00)
127	10.00 - 80.00% of mass 198	47.54
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.15
275	10.00 - 60.00% of mass 198	24.62
365	Greater than 1.00% of mass 198	2.86
441	0.01 - 24.00% of mass 442	11.84 (14.37)
442	50.00 - 200.00% of mass 198	82.38
443	15.00 - 24.00% of mass 442	16.20 (19.66)

Date : 19-APR-2013 11:29

Client ID: DFTPP0419 Instrument: nt6.i

Sample Info: DFTPP0419

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 04191301.d
Spectrum: Avg. Scans 2585-2587 (15.90), Background Scan 2578
Location of Maximum: 198.00
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	221	117.00	13392	192.00	1601	276.00	4448
37.00	278	118.00	1191	193.00	1588	277.00	2477
38.00	674	119.00	171	194.00	432	278.00	394
39.00	4101	120.00	113	195.00	206	279.00	54
40.00	368	121.00	50	196.00	3717	280.00	55
41.00	185	122.00	1101	198.00	130248	283.00	420
42.00	63	123.00	1832	199.00	9309	284.00	217
43.00	109	124.00	588	200.00	786	285.00	471
44.00	41	125.00	828	201.00	883	290.00	86
45.00	229	126.00	20	202.00	112	292.00	196
49.00	476	127.00	61920	203.00	995	293.00	540
50.00	14037	128.00	4673	204.00	4284	294.00	80
51.00	55152	129.00	22720	205.00	8101	295.00	215
52.00	2725	130.00	2118	206.00	33320	296.00	8465
53.00	305	131.00	466	207.00	4570	297.00	1321
54.00	63	132.00	303	208.00	1008	301.00	61
55.00	111	134.00	587	209.00	358	302.00	176
56.00	1430	135.00	2121	210.00	292	303.00	1006
57.00	3676	136.00	671	211.00	1172	304.00	273
58.00	226	137.00	819	212.00	68	308.00	60
60.00	72	138.00	148	213.00	53	310.00	156
61.00	688	140.00	643	216.00	590	313.00	58
62.00	632	141.00	2820	217.00	8405	314.00	611
63.00	2275	142.00	1083	218.00	1874	315.00	922
64.00	332	143.00	602	219.00	344	316.00	479
65.00	1021	144.00	104	220.00	603	317.00	104
66.00	172	145.00	187	221.00	7013	321.00	363
67.00	219	146.00	613	222.00	721	322.00	152
68.00	634	147.00	1518	223.00	1885	323.00	2796
69.00	51936	148.00	2702	224.00	18648	324.00	478
71.00	66	149.00	739	225.00	5116	327.00	515
73.00	348	150.00	10	226.00	440	328.00	284
74.00	5053	151.00	410	227.00	7186	332.00	208
75.00	8100	152.00	791	228.00	1114	333.00	359
76.00	2869	153.00	927	229.00	1525	334.00	2035

Data File: /chem2/nt6.i/20130419.b/tune.b/04191301.d

Date : 19-APR-2013 11:29

Client ID: DFTPP0419

Instrument: nt6.i

Sample Info: DFTPP0419

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 04191301.d
Spectrum: Avg. Scans 2585-2587 (15.90), Background Scan 2578
Location of Maximum: 198.00
Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	62080	154.00	848	230.00	201	335.00	457
78.00	4419	155.00	1732	231.00	718	336.00	52
79.00	3402	156.00	2424	232.00	143	341.00	296
80.00	2554	157.00	589	233.00	95	342.00	58
81.00	3979	158.00	423	234.00	484	346.00	606
82.00	1077	159.00	575	235.00	828	347.00	136
83.00	322	160.00	895	236.00	437	352.00	848
85.00	765	161.00	1532	237.00	597	353.00	672
86.00	882	162.00	494	238.00	82	354.00	865
87.00	491	163.00	194	239.00	308	355.00	78
88.00	369	164.00	92	240.00	254	365.00	3728
89.00	193	165.00	1417	241.00	524	366.00	577
90.00	146	166.00	223	242.00	1150	367.00	64
91.00	910	167.00	3528	243.00	807	371.00	294
92.00	1131	168.00	2437	244.00	13944	372.00	1576
93.00	6214	169.00	423	245.00	2084	373.00	345
94.00	433	170.00	108	246.00	2713	383.00	475
95.00	227	171.00	318	247.00	565	384.00	97
96.00	440	172.00	493	248.00	221	390.00	232
97.00	120	173.00	577	249.00	577	391.00	74
98.00	4628	174.00	1421	251.00	239	392.00	54
99.00	3496	175.00	2537	252.00	76	401.00	50
100.00	441	176.00	715	253.00	340	402.00	661
101.00	2196	177.00	1055	255.00	72504	403.00	916
102.00	256	178.00	490	256.00	10845	404.00	353
103.00	643	179.00	4004	257.00	1047	421.00	695
104.00	1445	180.00	2738	258.00	4005	422.00	761
105.00	1021	181.00	1610	259.00	670	423.00	5678
106.00	307	182.00	533	260.00	197	424.00	1260
107.00	17856	183.00	1190	261.00	56	425.00	108
108.00	2877	184.00	523	264.00	127	441.00	15424
110.00	31872	185.00	2090	265.00	1512	442.00	107304
111.00	4812	186.00	17224	266.00	363	443.00	21096
112.00	1014	187.00	4911	271.00	132	444.00	1934
113.00	155	188.00	650	272.00	245	445.00	53

Data File: /chem2/nt6.i/20130419.b/tune.b/04191301.d

Date : 19-APR-2013 11:29

Client ID: DFTPP0419

Instrument: nt6.i

Sample Info: DFTPP0419

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 04191301.d

Spectrum: Avg. Scans 2585-2587 (15.90), Background Scan 2578

Location of Maximum: 198.00

Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	107	189.00	1006	273.00	2492		
115.00	84	190.00	61	274.00	5662		
116.00	767	191.00	547	275.00	32072		

Data File: /chem2/nt6.i/20130419.b/tune.b/04191301.d

Date : 19-APR-2013 11:29

Client ID: DFTPP0419

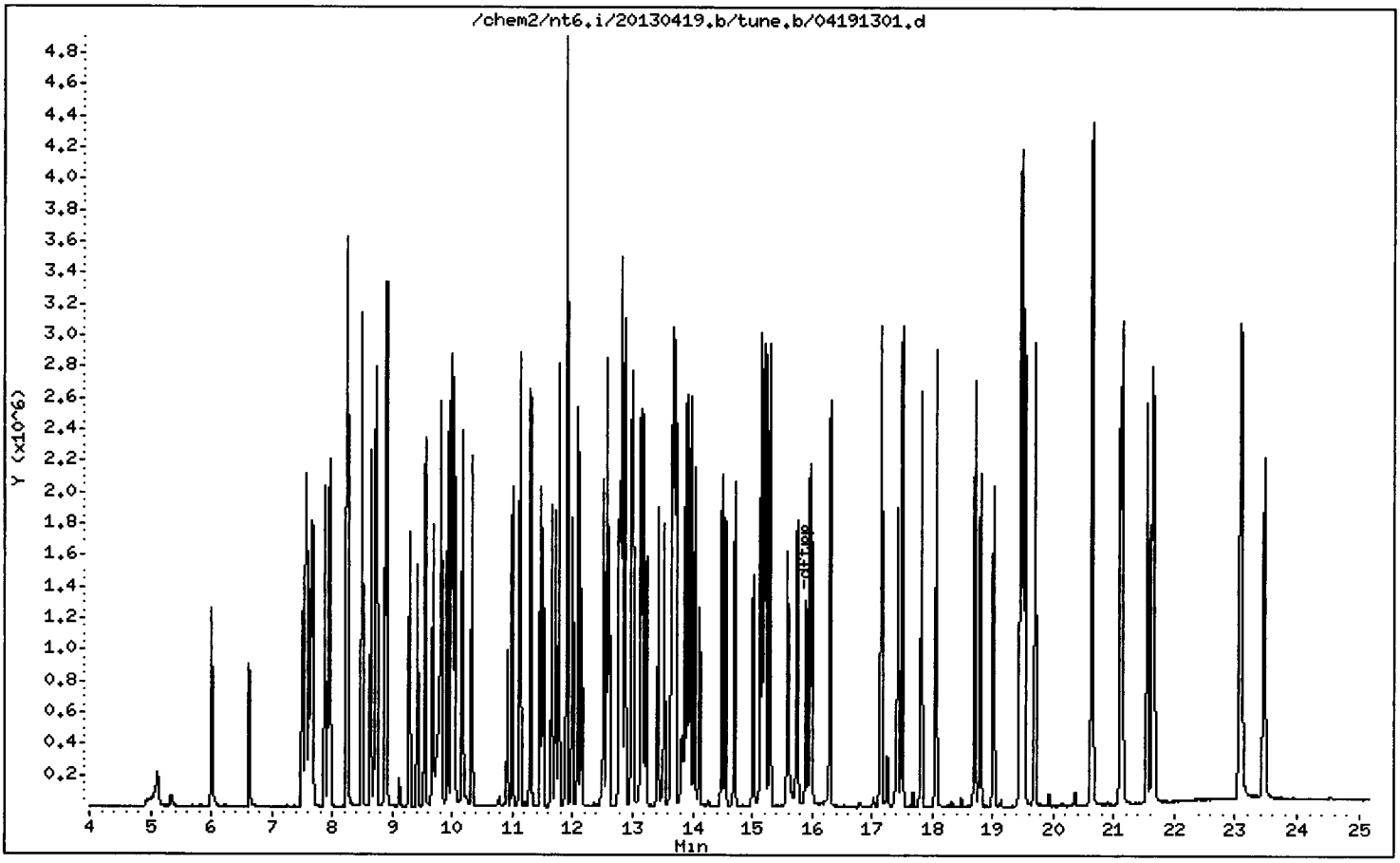
Instrument: nt6.i

Sample Info: DFTPP0419

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/20130419.b/ddt.b/04191301.d ARI ID: DDT
Method: /chem2/nt6.i/20130419.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 19-APR-2013 11:29 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.022	286077
Benzidine	17.410	117577
4,4'-DDE	----	----
4,4'-DDD	18.323	8622
4,4'-DDT	18.799	736659

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

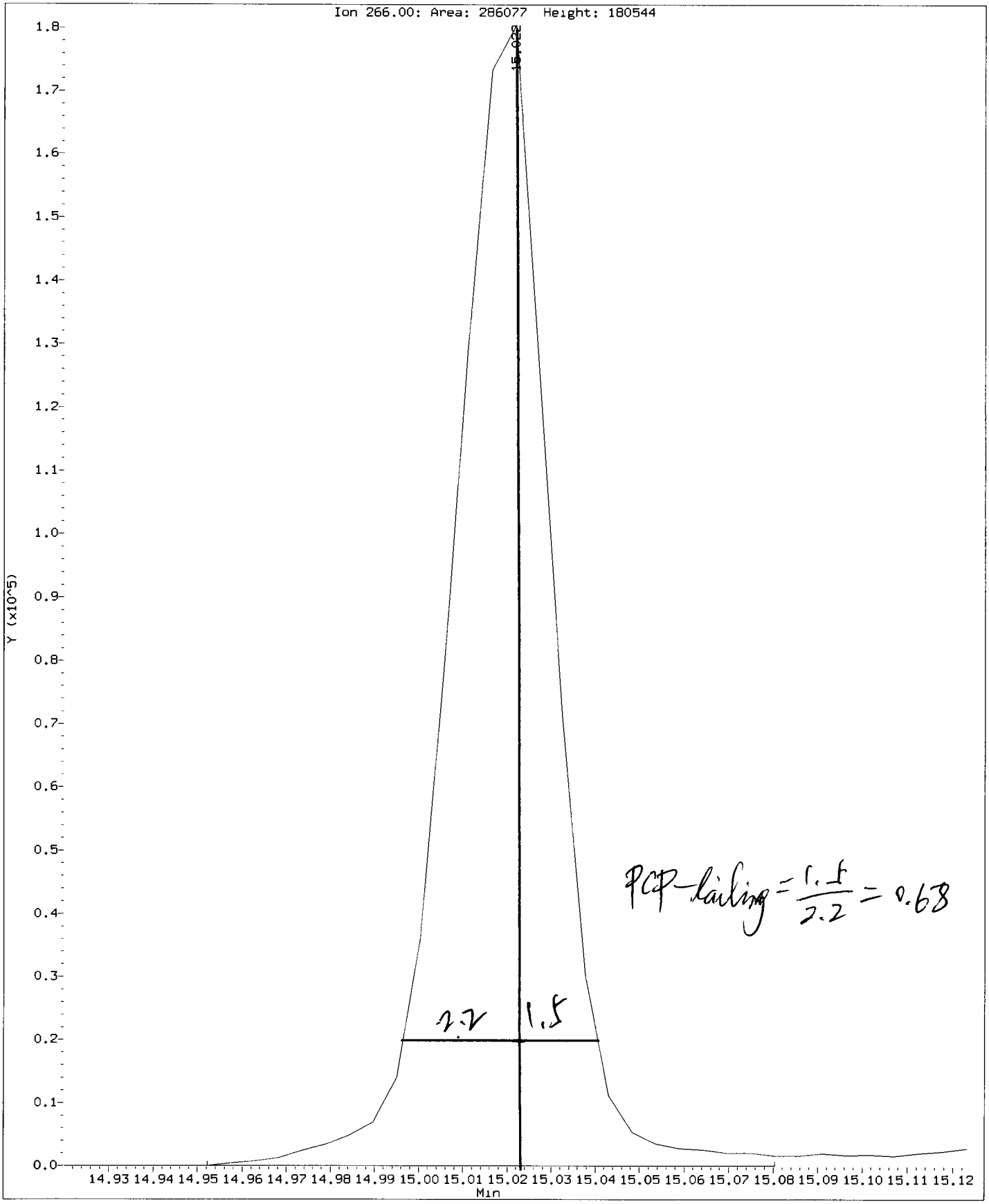
$$\text{DDT Percent Breakdown} = \frac{(0 + 8622) * 100}{(0 + 8622 + 736659)}$$

DDT Percent Breakdown = 1.2 %

OB R 09/23/13

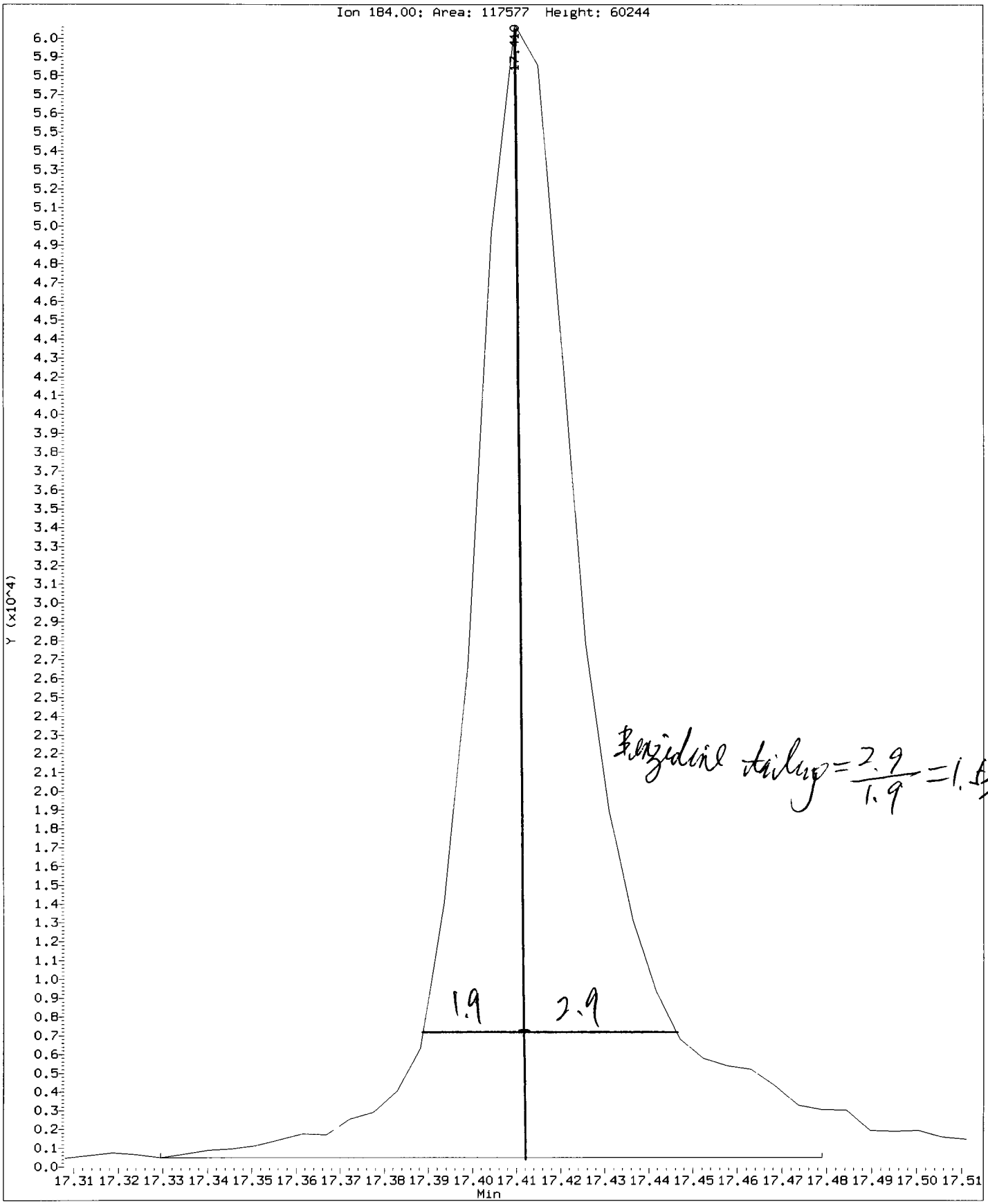
Data File: /chem2/nt6.i/20130419.b/ddt.b/04191301.d
Injection Date: 19-APR-2013 11:29
Instrument: nt6.i
Client Sample ID: DDT0419

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.1/20130419.b/ddt.b/04191301.d
Injection Date: 19-APR-2013 11:29
Instrument: nt6.1
Client Sample ID: DDT0419

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130419.b/04191306.d
Lab Smp Id: WL49A Client Smp ID: IM-MH-01-20130410-W
Inj Date : 19-APR-2013 15:00
Operator : JZ Inst ID: nt6.i
Smp Info : WL49A
Misc Info : 13-7779
Comment : 1ul Injection
Method : /chem2/nt6.i/20130419.b/SW846030613.m
Meth Date : 23-Apr-2013 14:31 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPHDR.sub
Target Version: 3.50

04/23/13

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	6.009	6.004	(0.757)	425381	18.3910	18.39
$	2 Phenol-d5	99	7.569	7.553	(0.954)	405753	14.9860	14.99
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.655	7.649	(0.964)	658042	28.7515	28.75
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.938	7.938	(1.000)	356961	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.237	8.232	(1.038)	298943	18.5582	18.56
	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	8.739	8.723	(1.101)	25525	1.19404	1.194
$	18 Nitrobenzene-d5	82	8.867	8.873	(0.889)	518276	19.8242	19.82
	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	9.877	9.834	(0.990)	187584	9.89659	9.897
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.973	9.979	(1.000)	1302849	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	11.768	11.768	(0.918)	1016409	19.9943	19.99
	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	12.826	12.826	(1.000)	805341	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	14.124	14.119	(1.101)	250354	39.3140	39.31
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	15.021	15.022	(0.989)	11363	1.28892	1.289
*	59 Phenanthrene-d10	188	15.187	15.193	(1.000)	1320655	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.					

		QUANT SIG				CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.821	17.826	(0.915)	1131851	21.5403	21.54
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.477	19.482	(1.000)	1496973	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	20.631	20.631	(1.000)	1854200	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.630	21.630	(1.000)	1535490	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.					
	187 Total Benzofluoranthenes	252	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.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 04191306.d
Lab Smp Id: WL49A
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

Calibration Date: 19-APR-2013
Calibration Time: 11:29
Client Smp ID: IM-MH-01-2013041
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	356961	-22.08
27 Naphthalene-d8	1718341	859170	3436682	1302849	-24.18
42 Acenaphthene-d10	1010041	505020	2020082	805341	-20.27
59 Phenanthrene-d10	1666734	833367	3333468	1320655	-20.76
69 Chrysene-d12	1675752	837876	3351504	1496973	-10.67
134 Di-n-octylphthala	2026355	1013178	4052710	1854200	-8.50
77 Perylene-d12	1637524	818762	3275048	1535490	-6.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.94	7.44	8.44	7.94	0.00
27 Naphthalene-d8	9.98	9.48	10.48	9.97	-0.06
42 Acenaphthene-d10	12.83	12.33	13.33	12.83	0.00
59 Phenanthrene-d10	15.19	14.69	15.69	15.19	-0.04
69 Chrysene-d12	19.48	18.98	19.98	19.48	-0.03
134 Di-n-octylphthala	20.63	20.13	21.13	20.63	0.00
77 Perylene-d12	21.63	21.13	22.13	21.63	0.00

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

Analytical Resources, Inc.

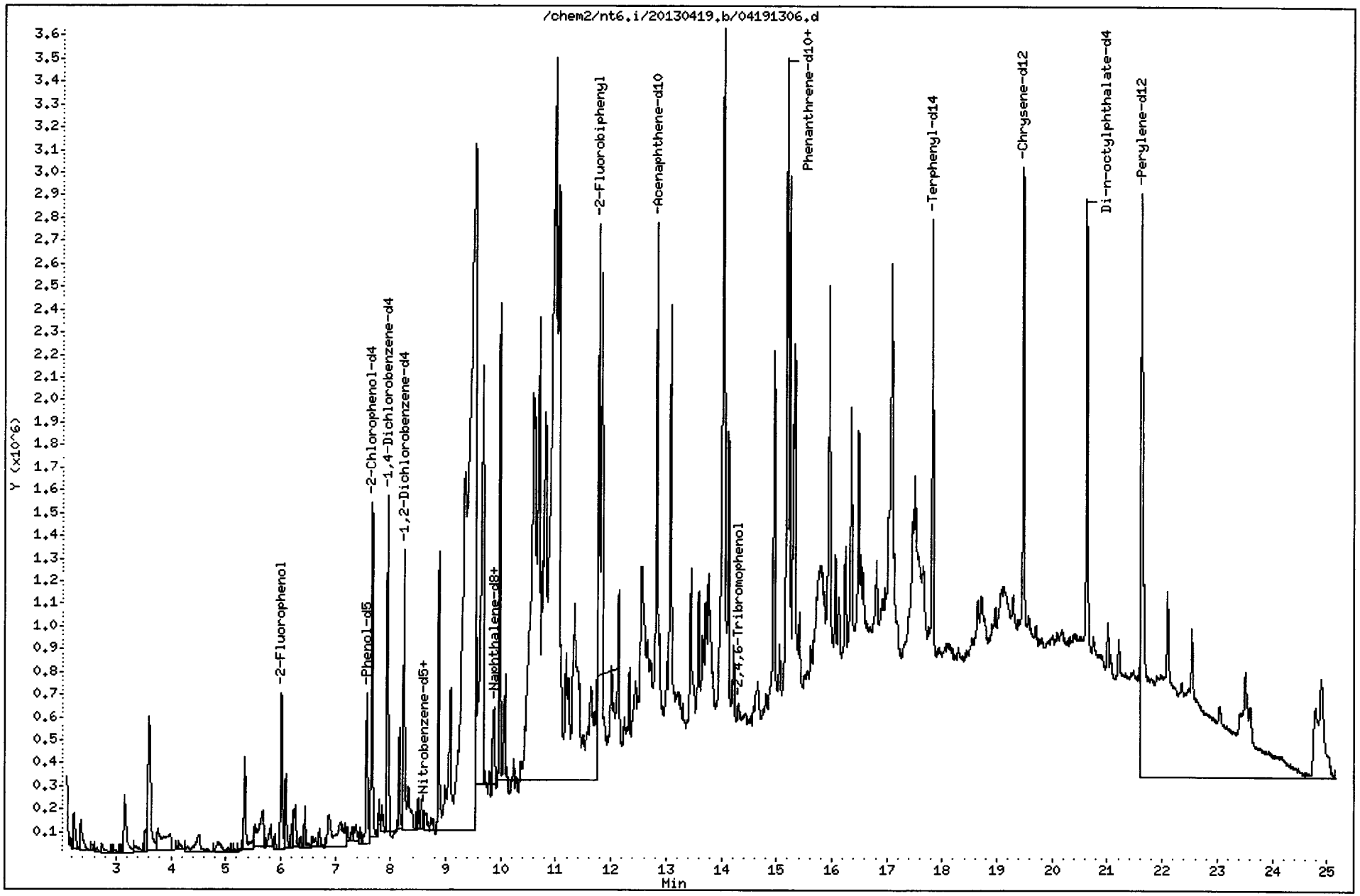
RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WL49A
Client Smp ID: IM-MH-01-20130410-W
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPHDR.sub
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.39	49.04	23-100
$ 2 Phenol-d5	37.50	14.99	39.96	16-106
$ 5 2-Chlorophenol-d4	37.50	28.75	76.67	33-100
$ 10 1,2-Dichlorobenzen	25.00	18.56	74.23	27-100
$ 18 Nitrobenzene-d5	25.00	19.82	79.30	34-101
$ 36 2-Fluorobiphenyl	25.00	19.99	79.98	38-100
$ 55 2,4,6-Tribromophen	37.50	39.31	104.84	31-128
$ 66 Terphenyl-d14	25.00	21.54	86.16	27-122

Data File: /chem2/nt6.i/20130419.b/04191306.d
Date : 19-APR-2013 15:00
Client ID: IM-MH-01-20130410-W
Sample Info: WL49A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130419.b/04191306.d

Date : 19-APR-2013 15:00

Client ID: IM-MH-01-20130410-W

Instrument: nt6.i

Sample Info: WL49A

Volume Injected (uL): 1.0

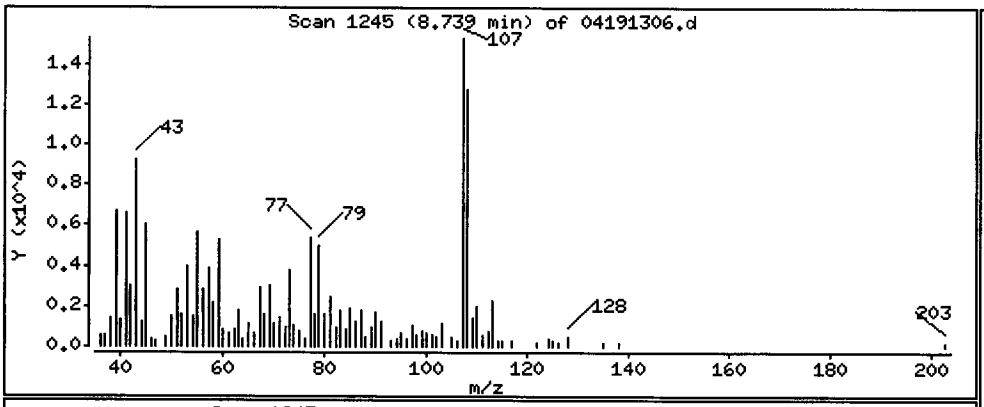
Operator: JZ

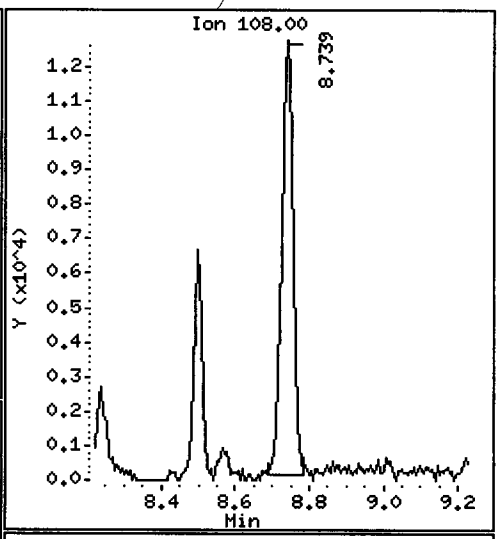
Column phase: ZB-5msi

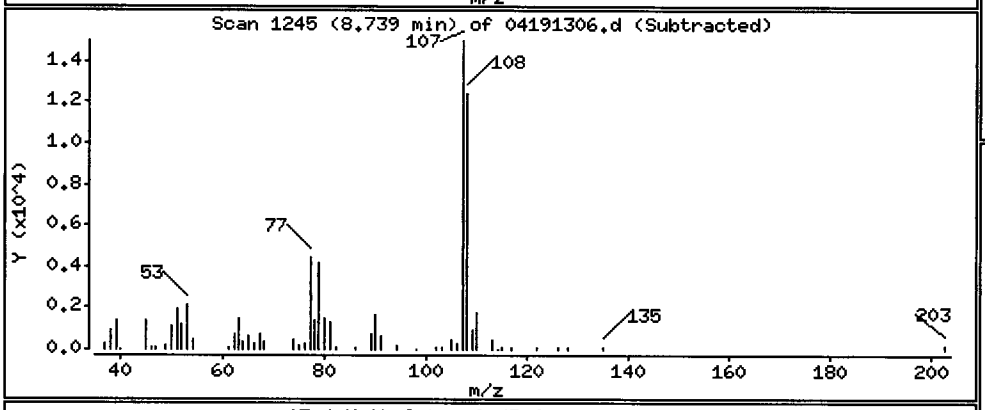
Column diameter: 0.32

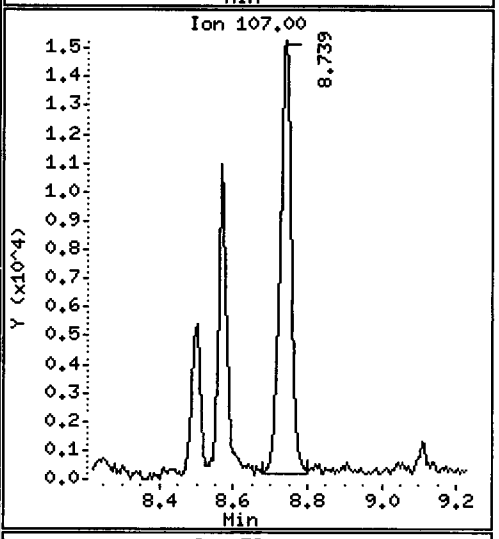
15 4-Methylphenol

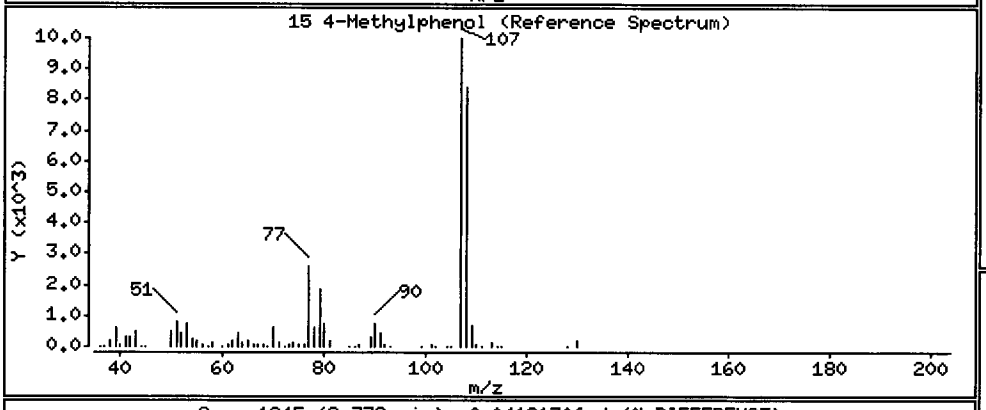
Concentration: 1.194 ug/L

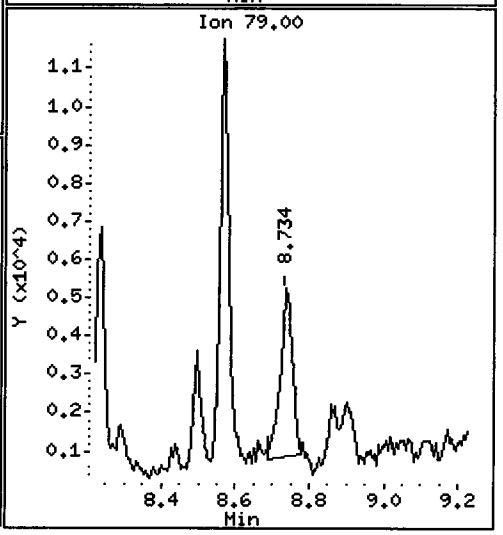


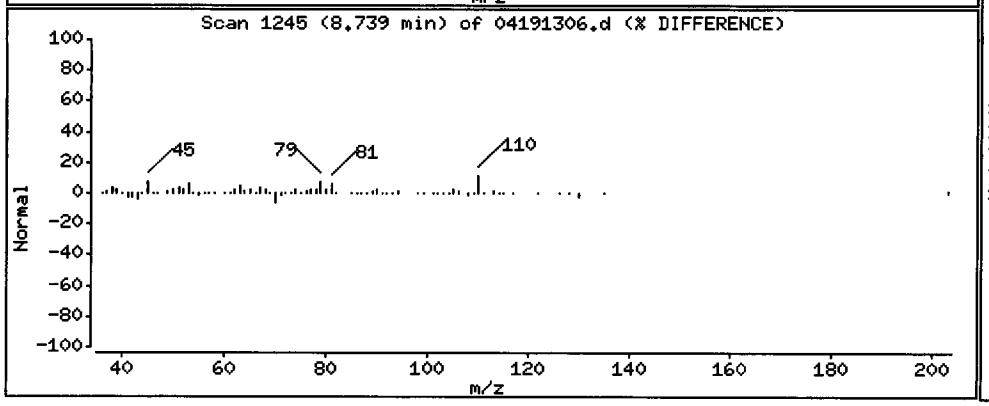












Data File: /chem2/nt6.i/20130419.b/04191306.d

Date : 19-APR-2013 15:00

Client ID: IM-MH-01-20130410-W

Instrument: nt6.i

Sample Info: WL49A

Volume Injected (uL): 1.0

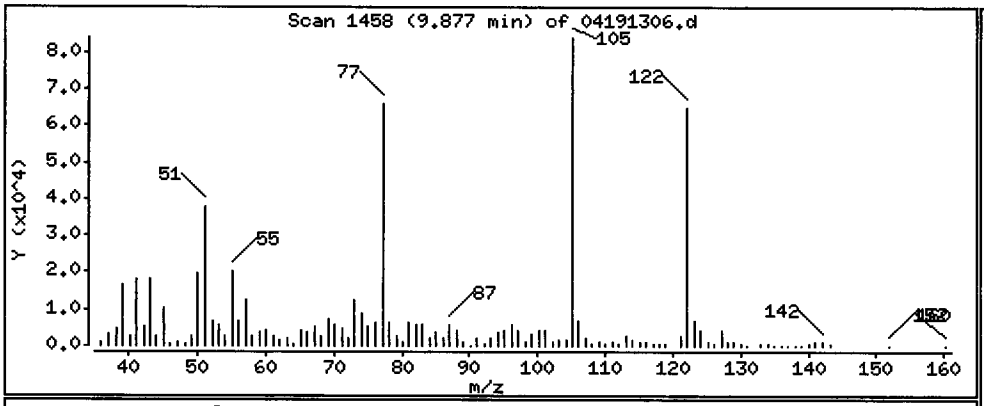
Operator: JZ

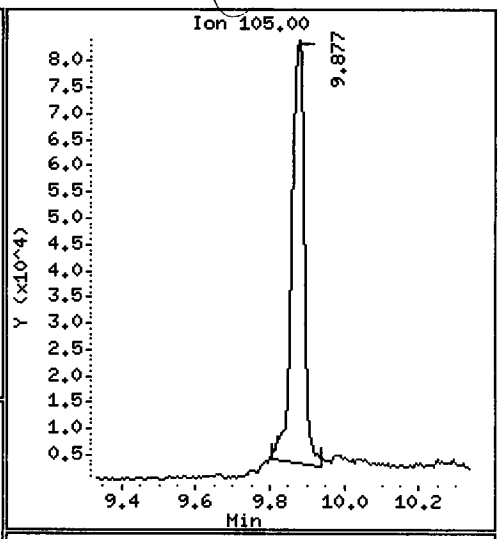
Column phase: ZB-5msi

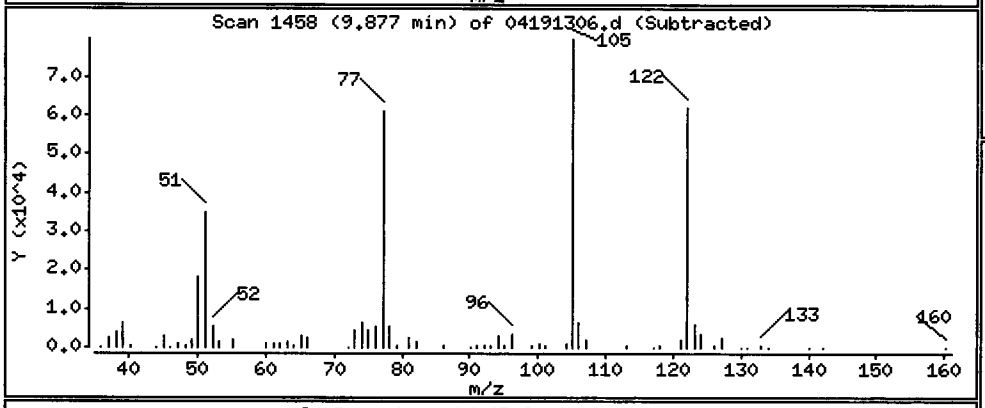
Column diameter: 0.32

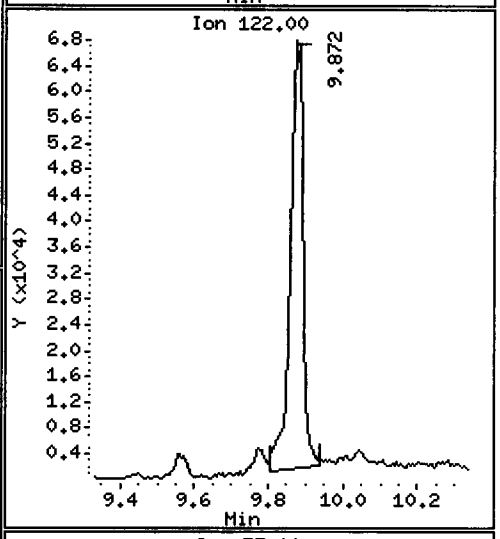
24 Benzoic acid

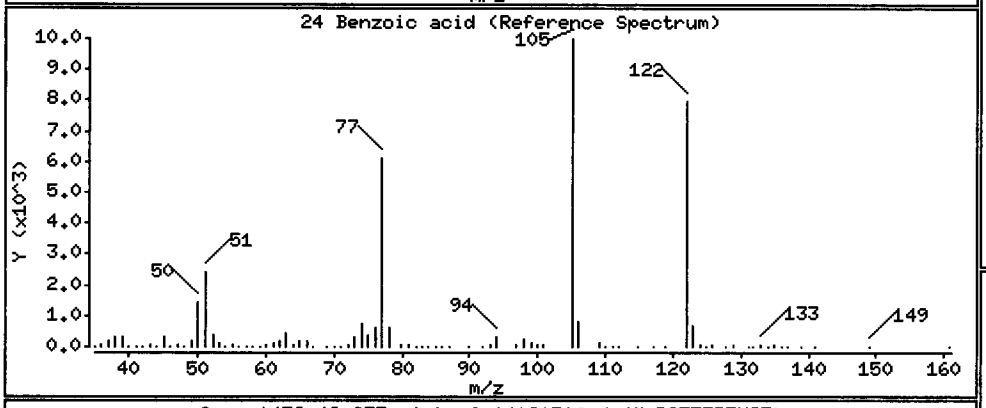
Concentration: 9.897 ug/L

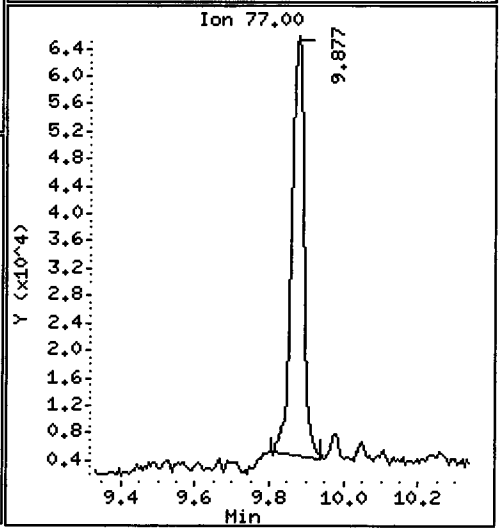


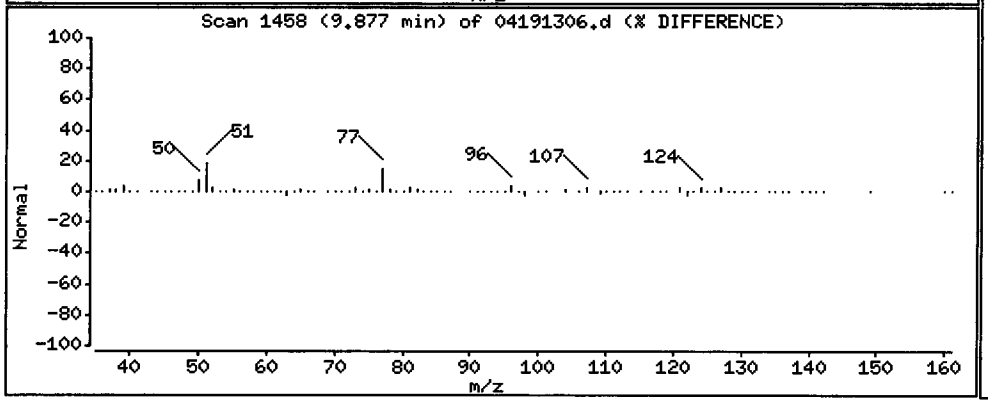












Data File: /chem2/nt6.i/20130419.b/04191306.d

Date : 19-APR-2013 15:00

Client ID: IM-MH-01-20130410-W

Instrument: nt6.i

Sample Info: WL49A

Volume Injected (uL): 1.0

Operator: JZ

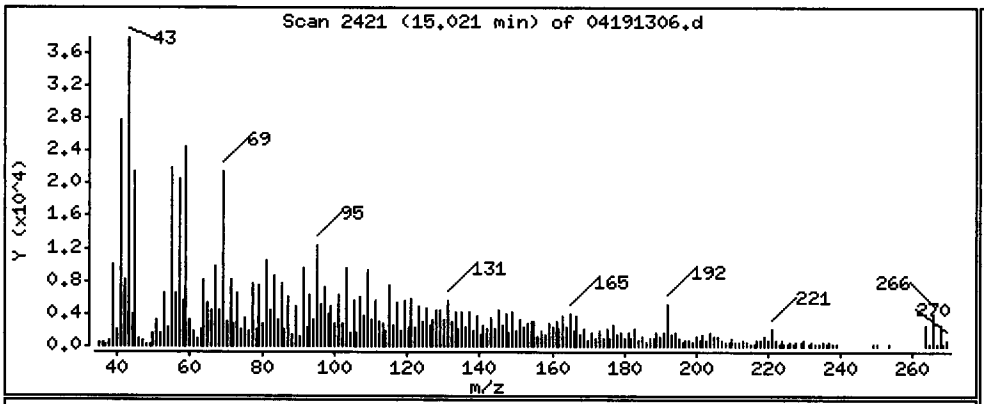
Column phase: ZB-5msi

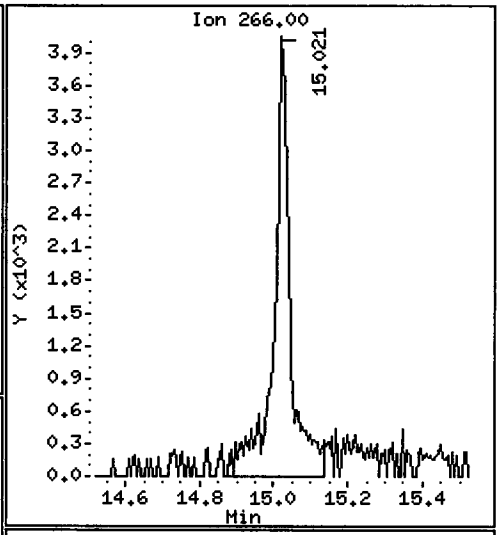
Column diameter: 0.32

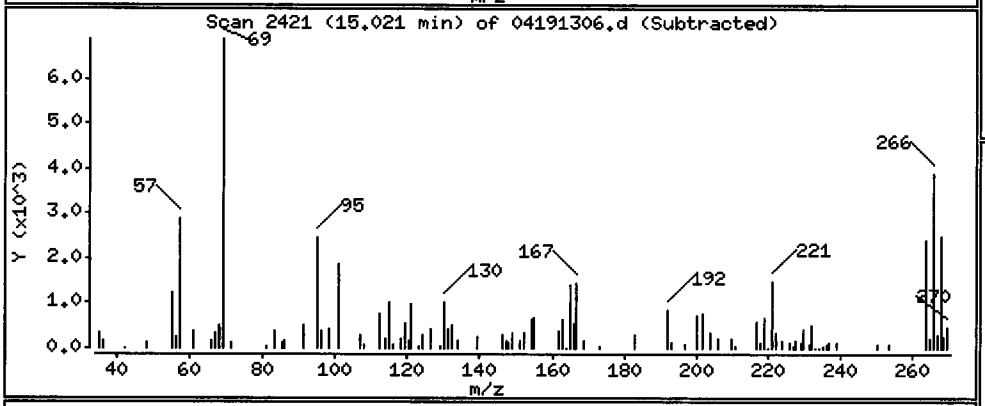
58 Pentachlorophenol

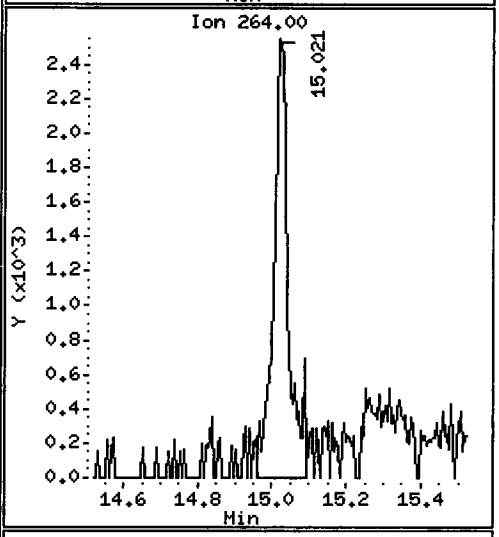
Concentration: 1.289 ug/L

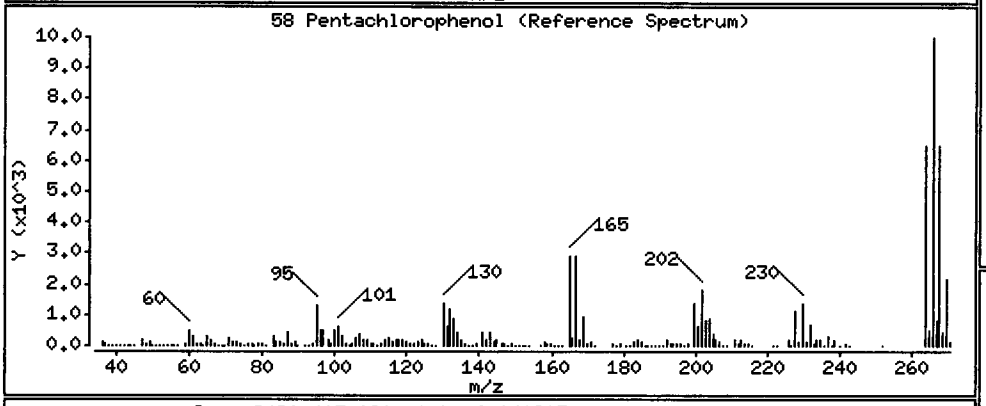
LMM

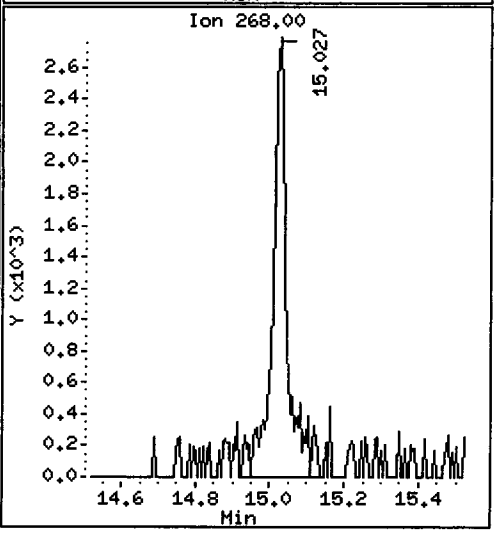


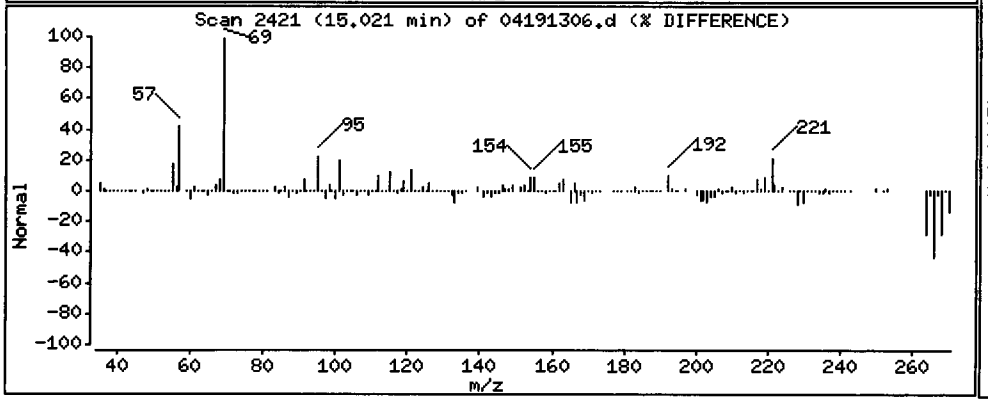












CO-ELUTION SUMMARY FOR FILE - 04191306.d

Lab ID: WL49A, Method: SW846030613.m, Instrument: nt6.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130419.b/04191307.d
Lab Smp Id: WL49B Client Smp ID: IM-SW-01-20130410-W
Inj Date : 19-APR-2013 15:35
Operator : JZ Inst ID: nt6.i
Smp Info : WL49B
Misc Info : 13-7780
Comment : 1ul Injection
Method : /chem2/nt6.i/20130419.b/SW846030613.m
Meth Date : 23-Apr-2013 14:31 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPHDR.sub
Target Version: 3.50

JZ 04/23/13

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	6.015	6.004	(0.758)	310578	12.1098	12.11
$	2	Phenol-d5	99	7.569	7.553	(0.954)	309856	10.3209	10.32
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	7.655	7.649	(0.965)	455236	17.9382	17.94
	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	7.932	7.938	(1.000)	395808	20.0000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.232	8.232	(1.038)	257781	14.4322	14.43
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	Compound Not Detected.					
	14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	17	Hexachloroethane	117	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.862	8.873	(0.889)	441221	15.4743	15.47
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.973	9.979	(1.000)	1420927	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	11.768	11.768	(0.918)	853429	16.0607	16.06
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.820	12.826	(1.000)	841821	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	14.113	14.119	(1.101)	143268	21.5230	21.52
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.182	15.193	(1.000)	1424411	20.0000	
	60 Phenanthrene	178	15.219	15.225	(1.002)	35796	0.50794	0.5079
	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	17.148	17.153	(1.129)	217478	2.93354	2.934
	65 Pyrene	202	17.500	17.506	(0.898)	210726	2.53630	2.536
$	66 Terphenyl-d14	244	17.821	17.826	(0.915)	871843	16.3266	16.33
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	19.450	19.456	(0.998)	61565	0.88763	0.8876
*	69 Chrysene-d12	240	19.482	19.482	(1.000)	1521308	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	19.514	19.525	(1.002)	137789	1.94603	1.946
	72 bis(2-Ethylhexyl)phthalate	149	19.701	19.701	(0.955)	378680	7.17028	7.170
*	134 Di-n-octylphthalate-d4	153	20.631	20.631	(1.000)	1794757	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	21.101	21.106	(0.975)	150194	2.07580	2.076
	75 Benzo(k)fluoranthene	252	21.101	21.138	(0.975)	150194	1.76264	1.763
	76 Benzo(a)pyrene	252	21.550	21.550	(0.996)	43552	0.68023	0.6802
*	77 Perylene-d12	264	21.635	21.630	(1.000)	1497945	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	23.467	23.468	(1.085)	43693	0.66308	0.6631
	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.					
	187 Total Benzofluoranthenes	252	21.101	21.138	(0.975)	148685	2.15597	2.156
	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.					

Total

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 04191307.d
Lab Smp Id: WL49B
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7780

Calibration Date: 19-APR-2013
Calibration Time: 11:29
Client Smp ID: IM-SW-01-2013041
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	395808	-13.60
27 Naphthalene-d8	1718341	859170	3436682	1420927	-17.31
42 Acenaphthene-d10	1010041	505020	2020082	841821	-16.65
59 Phenanthrene-d10	1666734	833367	3333468	1424411	-14.54
69 Chrysene-d12	1675752	837876	3351504	1521308	-9.22
134 Di-n-octylphthala	2026355	1013178	4052710	1794757	-11.43
77 Perylene-d12	1637524	818762	3275048	1497945	-8.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.94	7.44	8.44	7.93	-0.07
27 Naphthalene-d8	9.98	9.48	10.48	9.97	-0.06
42 Acenaphthene-d10	12.83	12.33	13.33	12.82	-0.04
59 Phenanthrene-d10	15.19	14.69	15.69	15.18	-0.07
69 Chrysene-d12	19.48	18.98	19.98	19.48	0.00
134 Di-n-octylphthala	20.63	20.13	21.13	20.63	0.00
77 Perylene-d12	21.63	21.13	22.13	21.64	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.

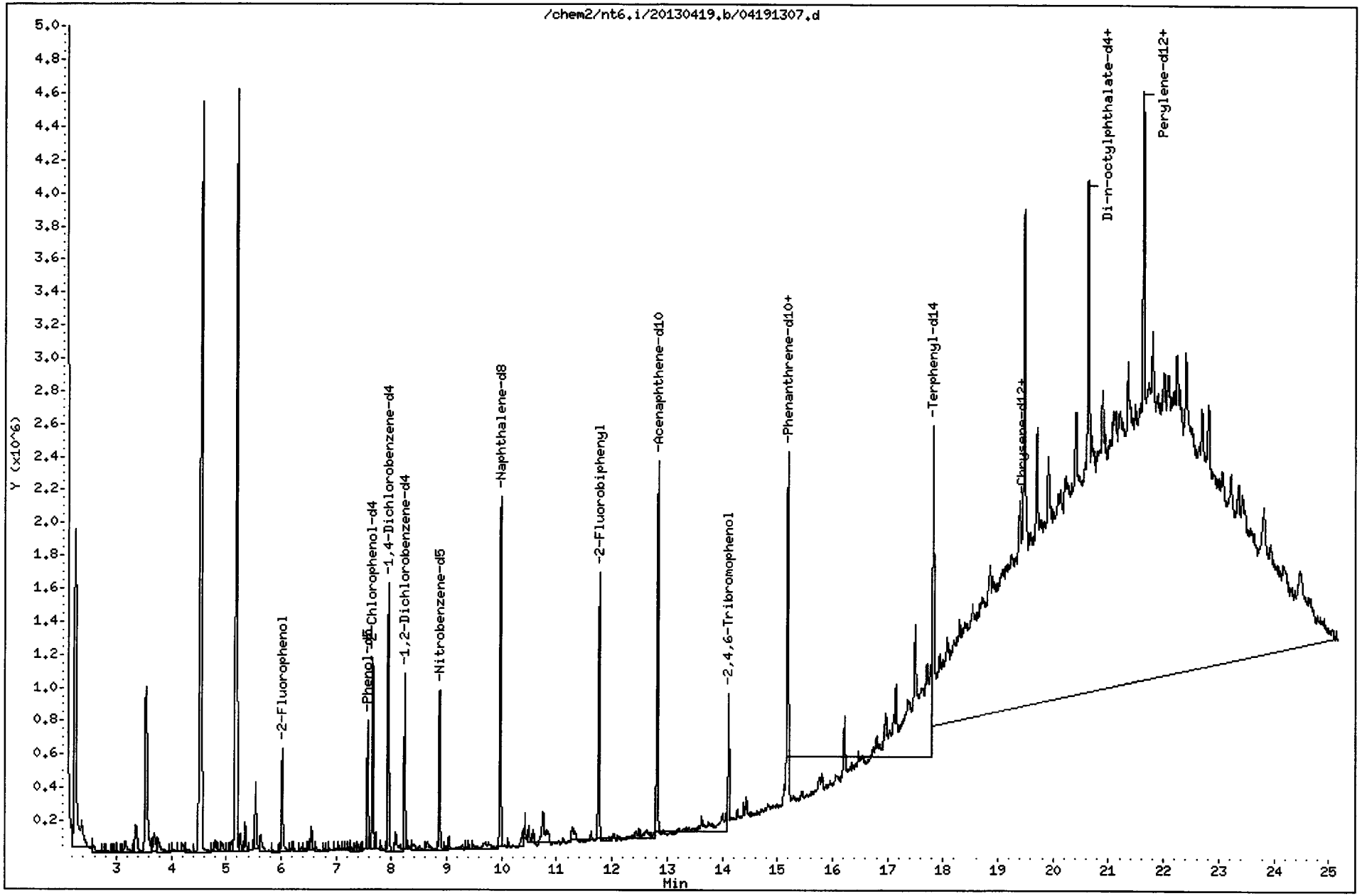
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WL49B
Client Smp ID: IM-SW-01-20130410-W
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPHDR.sub
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7780

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	12.11	32.29	23-100
$ 2 Phenol-d5	37.50	10.32	27.52	16-106
$ 5 2-Chlorophenol-d4	37.50	17.94	47.84	33-100
$ 10 1,2-Dichlorobenzen	25.00	14.43	57.73	27-100
$ 18 Nitrobenzene-d5	25.00	15.47	61.90	34-101
$ 36 2-Fluorobiphenyl	25.00	16.06	64.24	38-100
$ 55 2,4,6-Tribromophen	37.50	21.52	57.39	31-128
$ 66 Terphenyl-d14	25.00	16.33	65.31	27-122

Data File: /chem2/nt6.i/20130419.b/04191307.d
Date : 19-APR-2013 15:35
Client ID: IM-SW-01-20130410-W
Instrument: nt6.i
Sample Info: WL49B
Volume Injected (uL): 1.0
Operator: JZ
Column phase: ZB-5msi
Column diameter: 0.32



Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

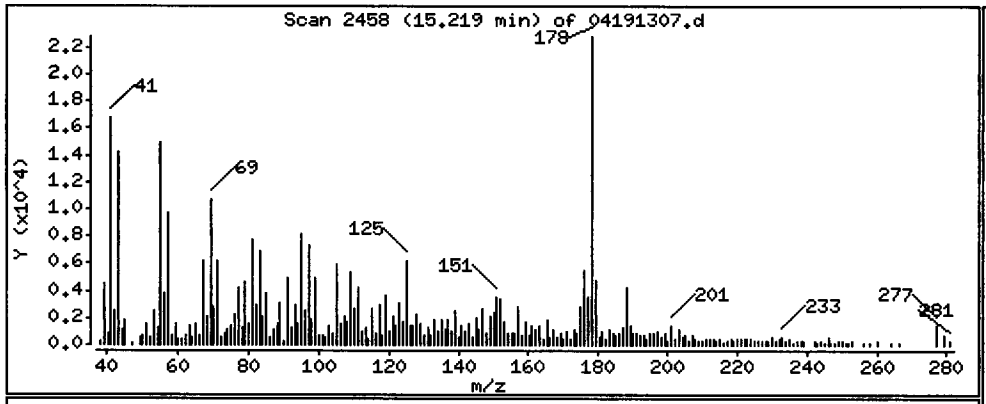
Operator: JZ

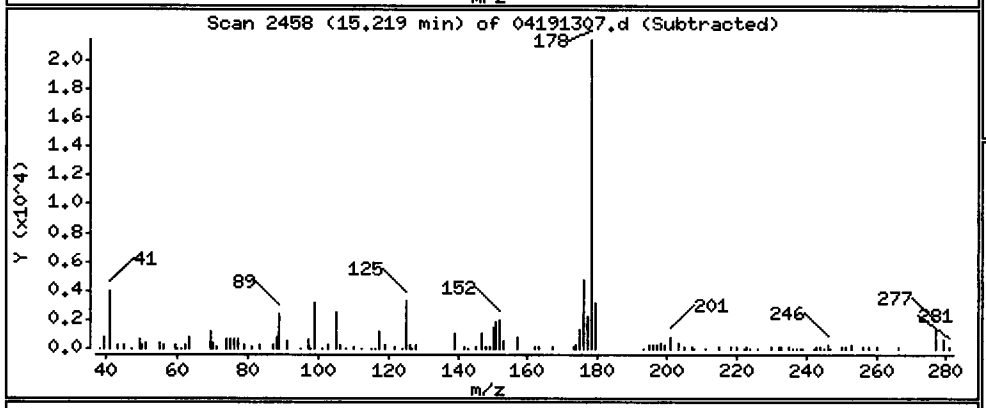
Column phase: ZB-5msi

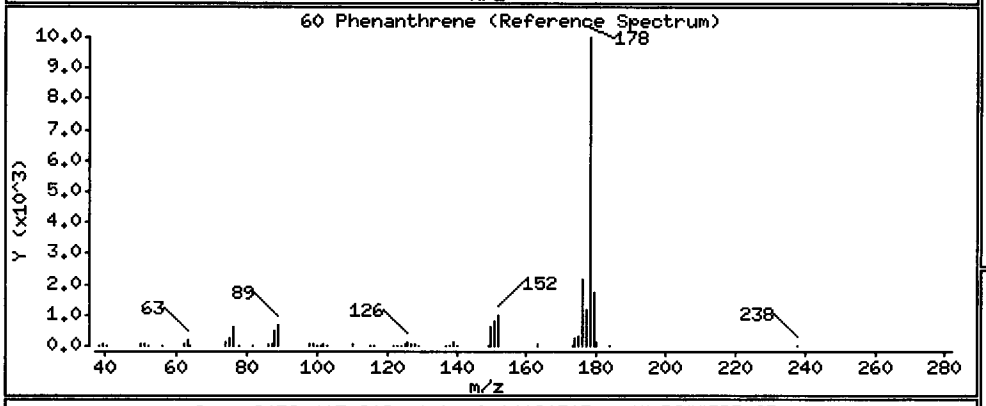
Column diameter: 0.32

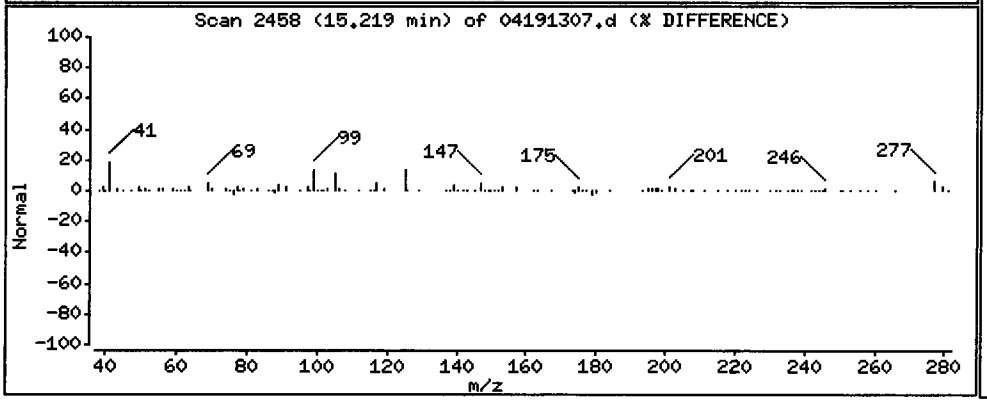
60 Phenanthrene

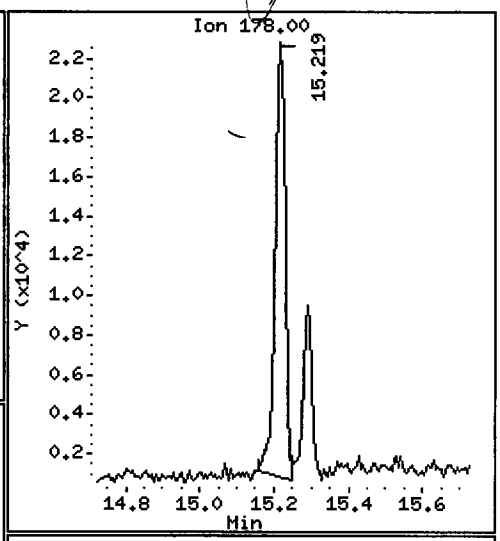
Concentration: 0.5079 ug/L

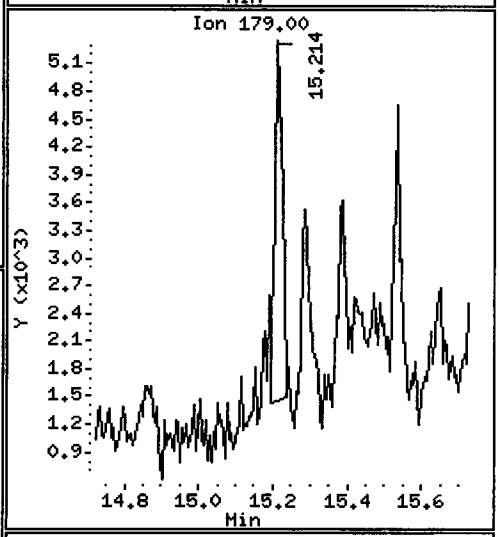


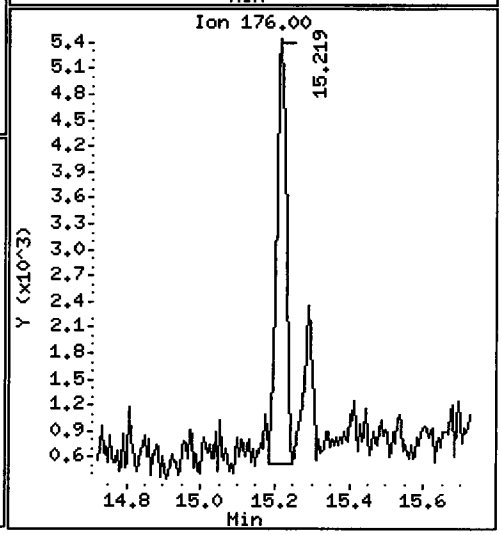












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

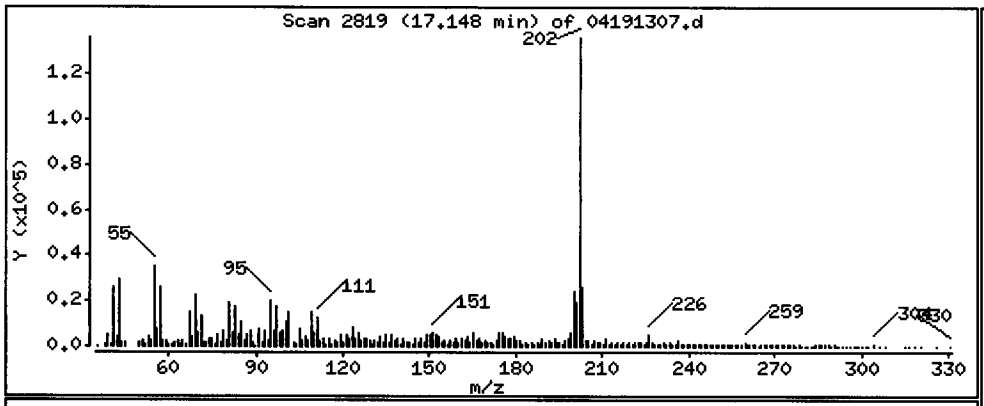
Operator: JZ

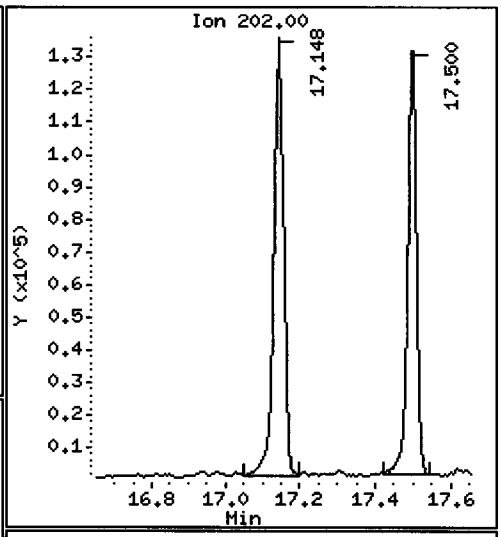
Column phase: ZB-5msi

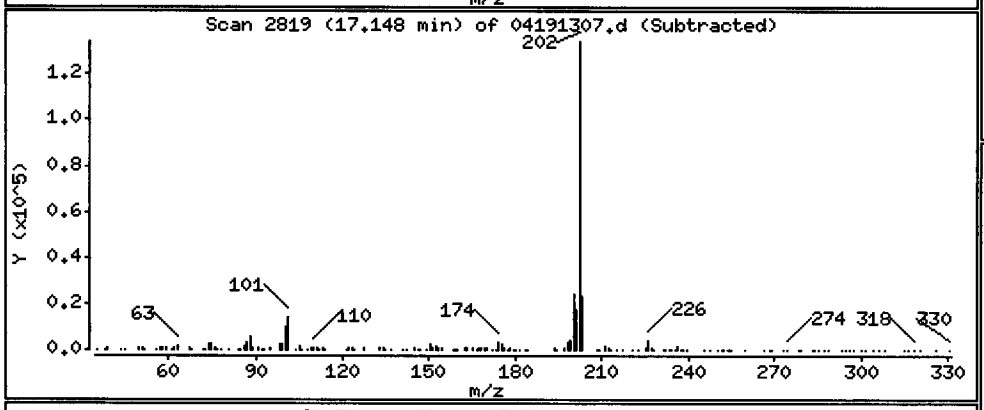
Column diameter: 0.32

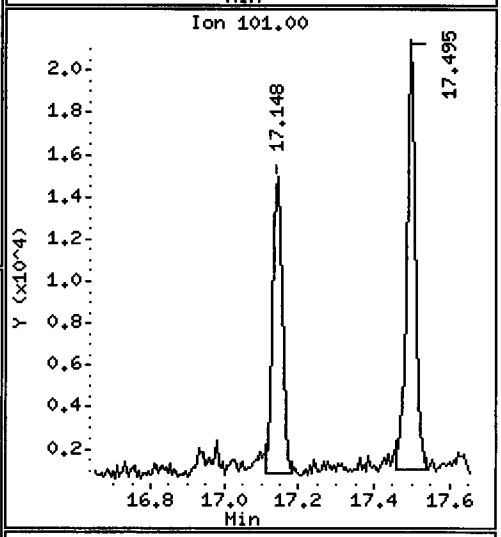
64 Fluoranthene

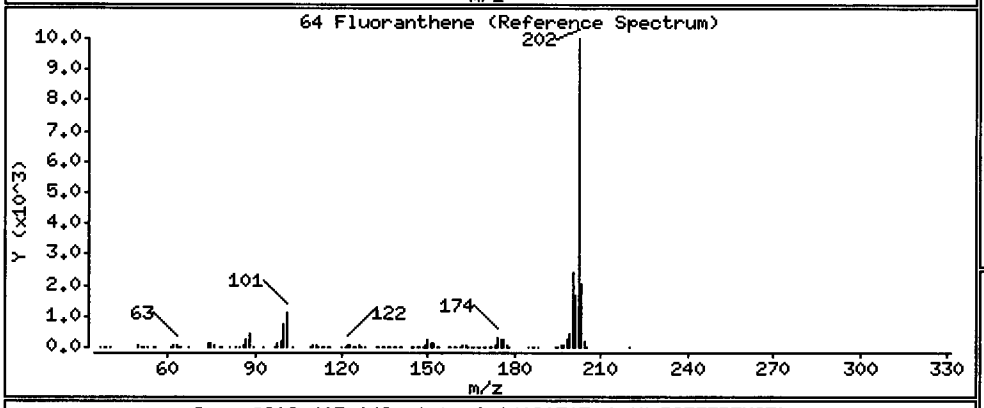
Concentration: 2.934 ug/L

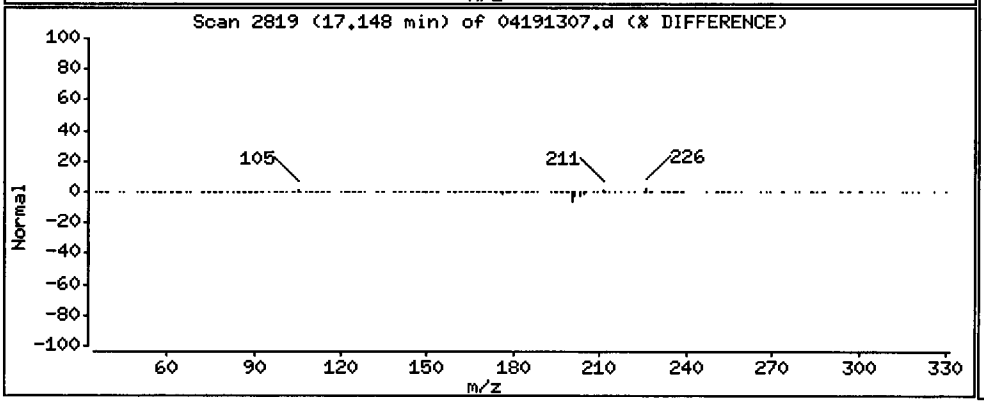


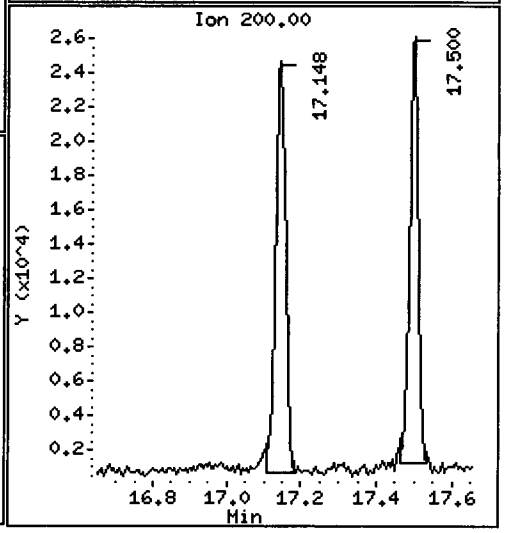












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

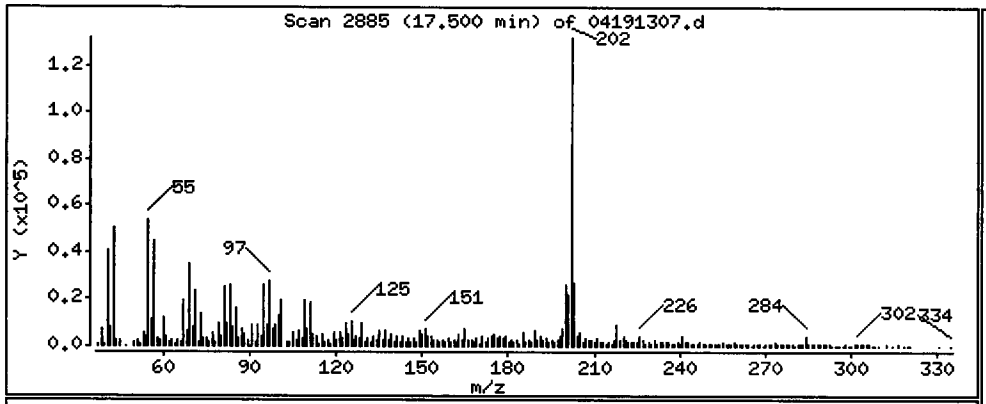
Operator: JZ

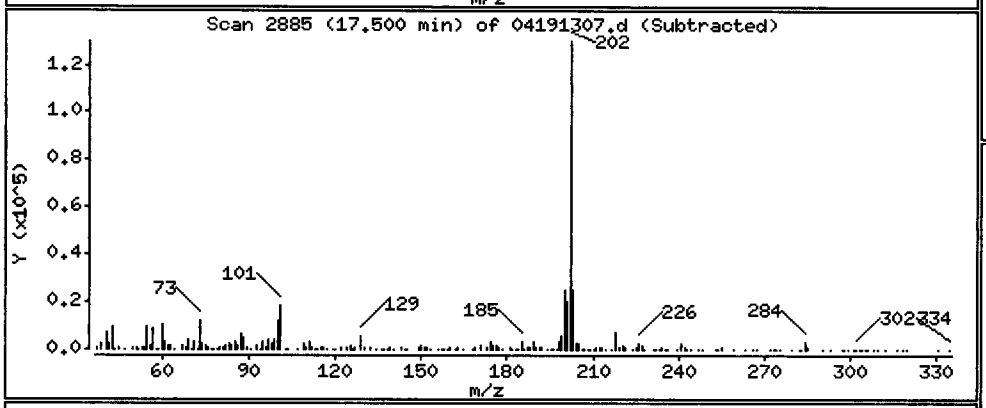
Column phase: ZB-5msi

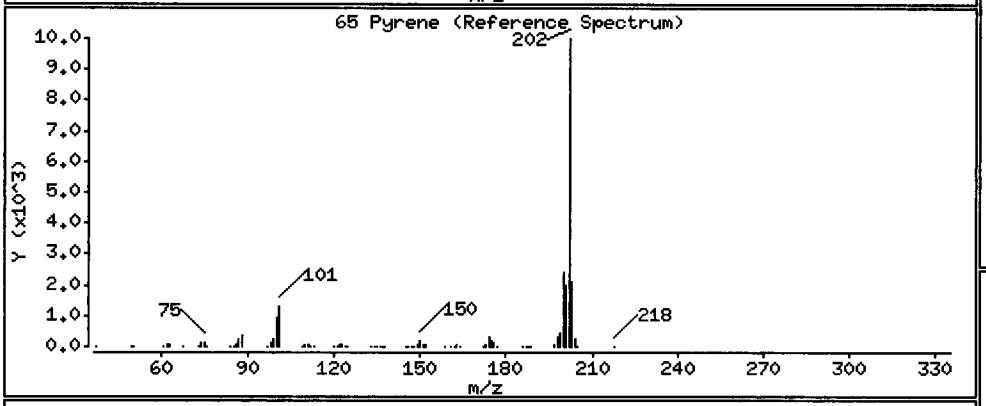
Column diameter: 0.32

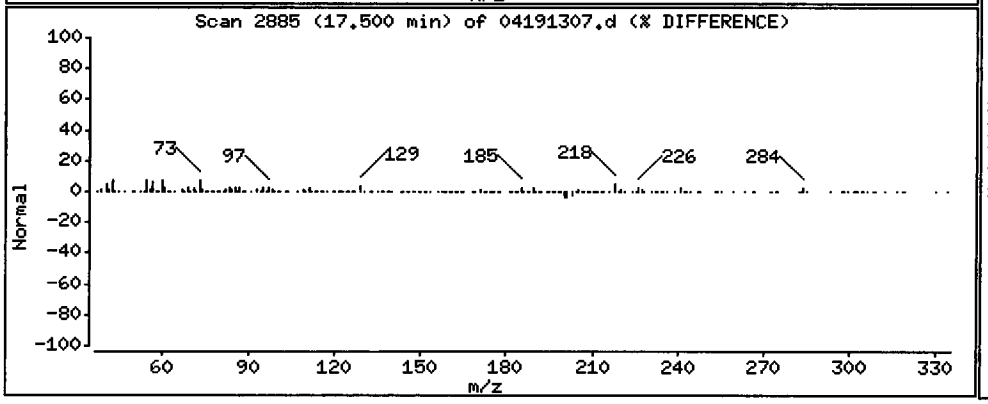
65 Pyrene

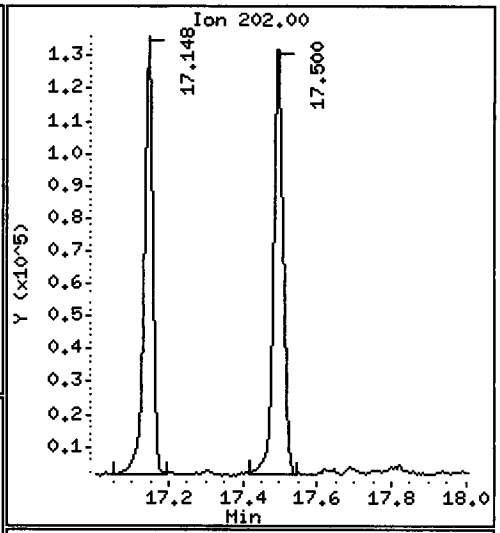
Concentration: 2.536 ug/L

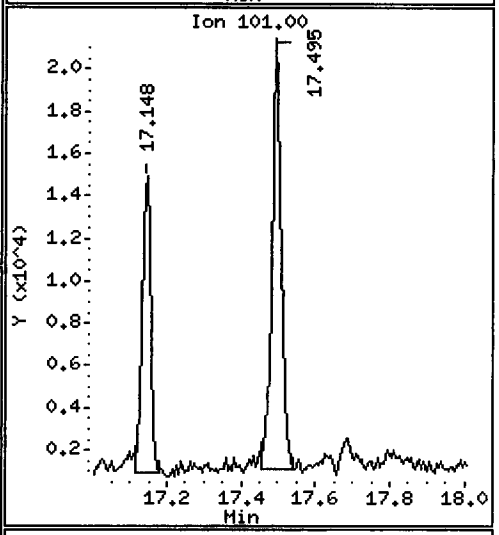


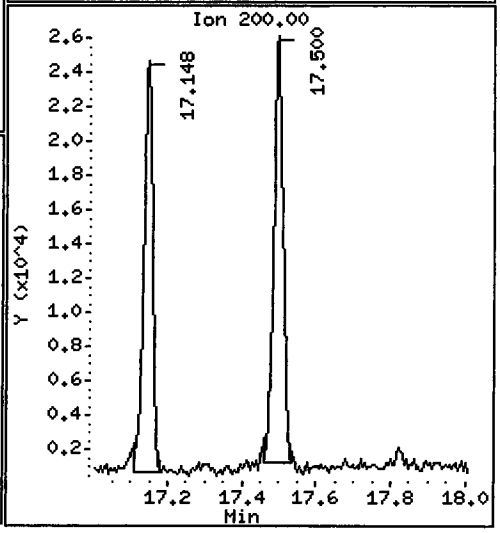












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

Operator: JZ

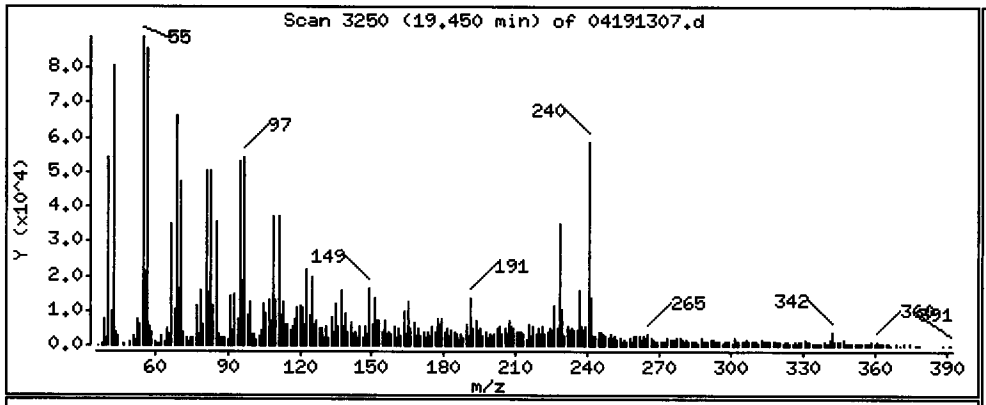
Column phase: ZB-5msi

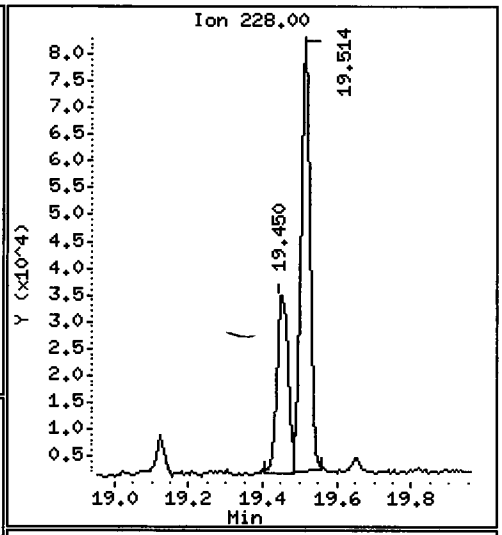
Column diameter: 0.32

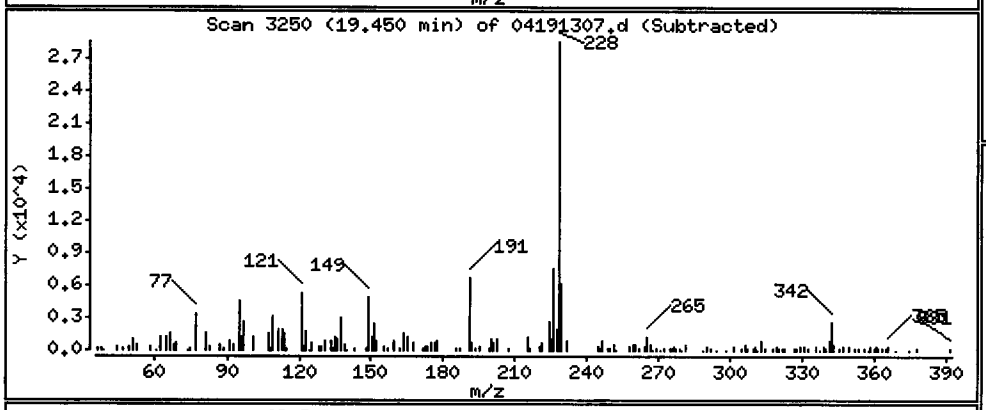
68 Benzo(a)anthracene

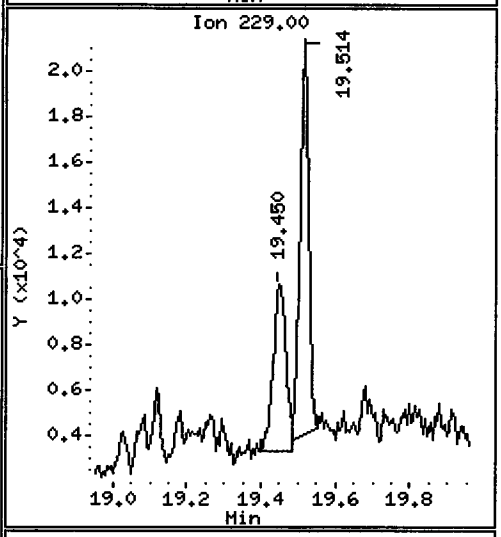
Concentration: 0.8876 ug/L

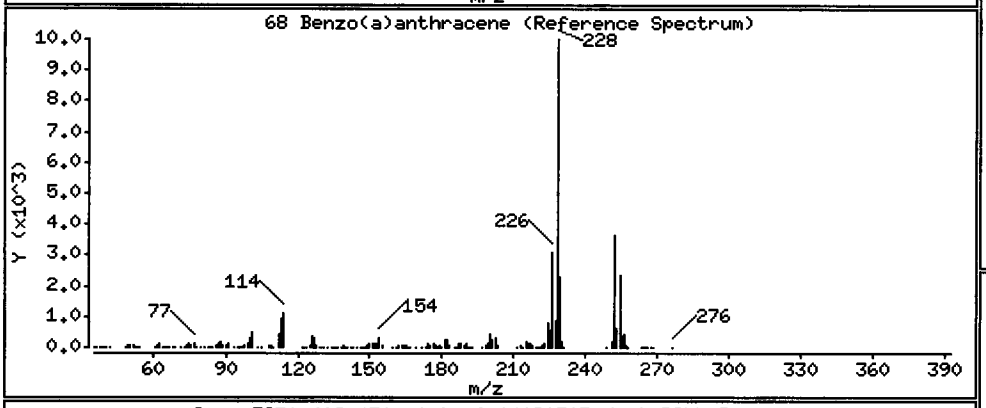
JCR

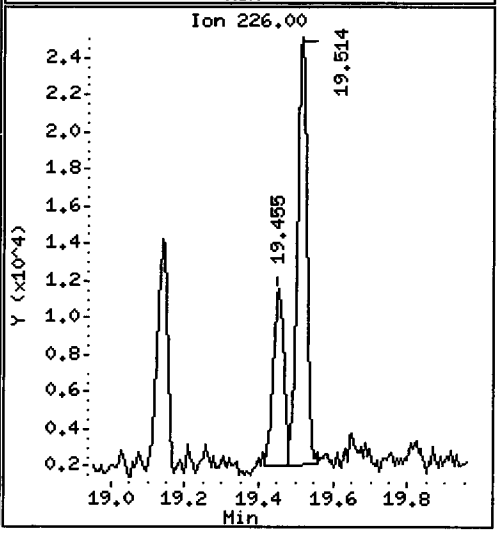


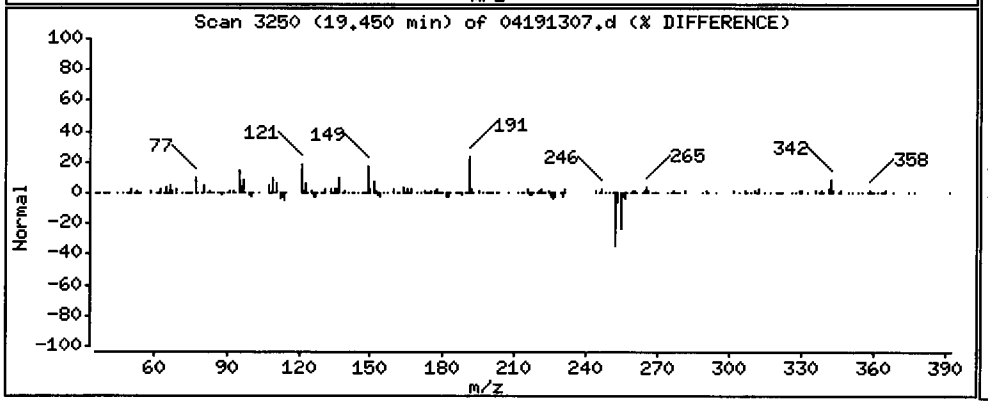












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

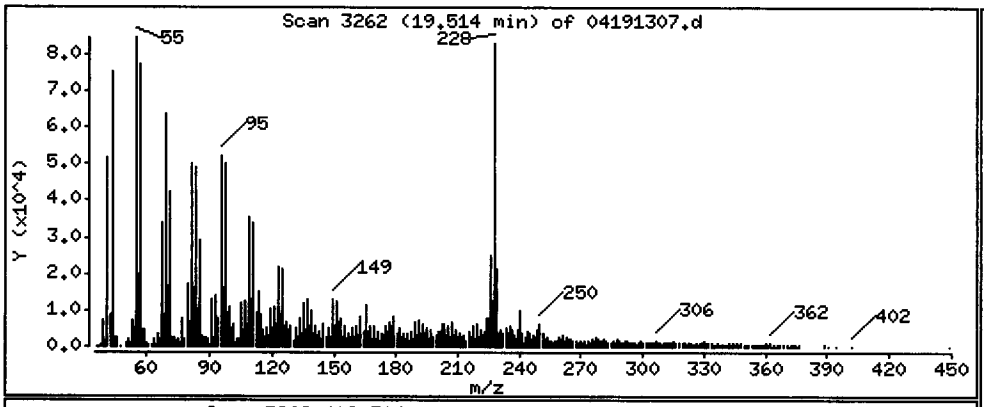
Operator: JZ

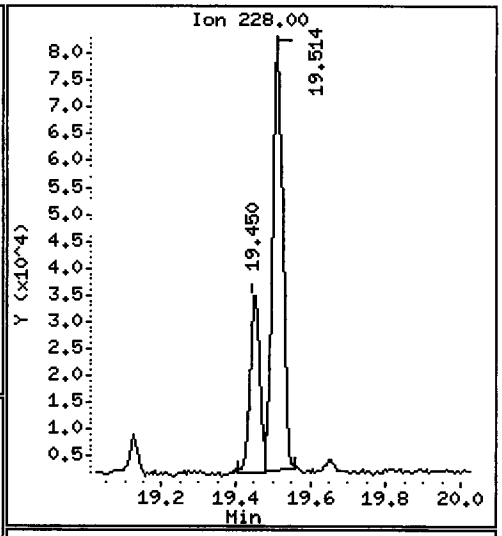
Column phase: ZB-5msi

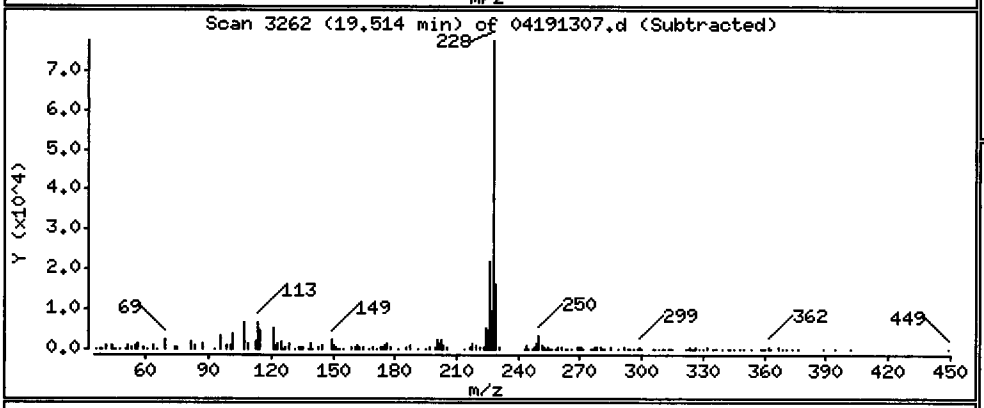
Column diameter: 0.32

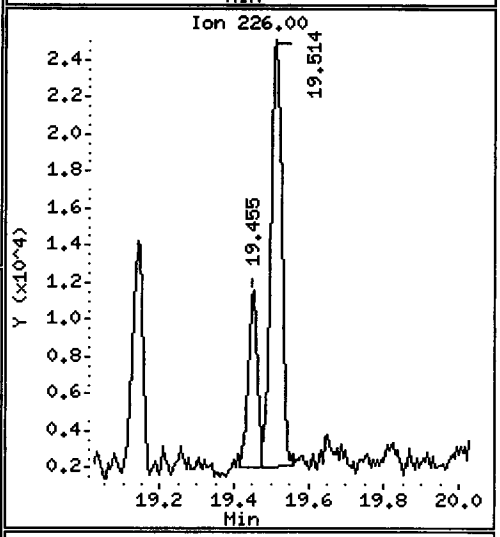
71 Chrysene

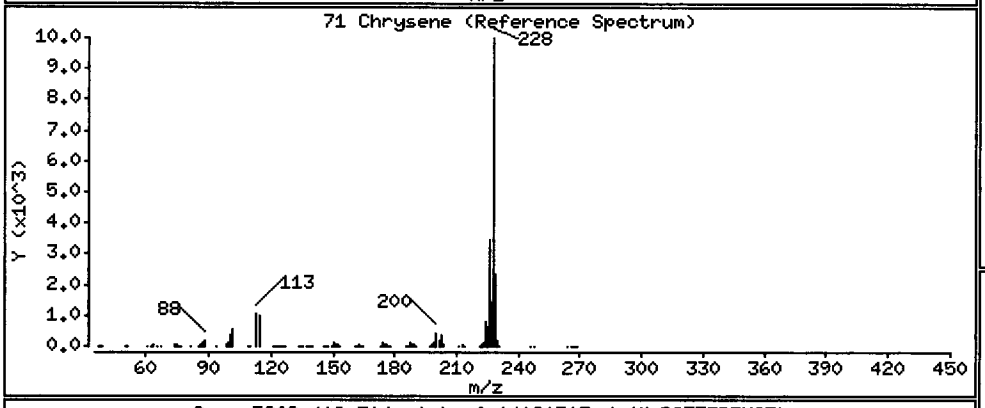
Concentration: 1.946 ug/L

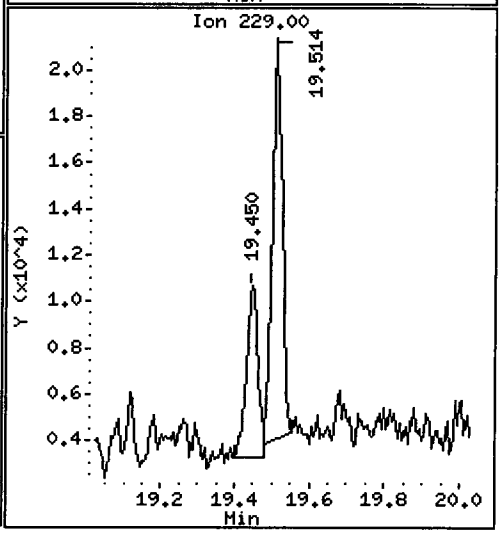


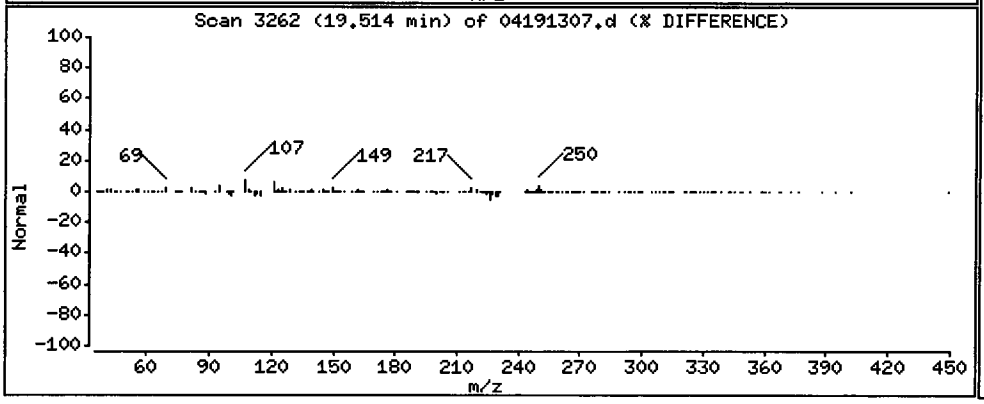












WL49-0807

Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

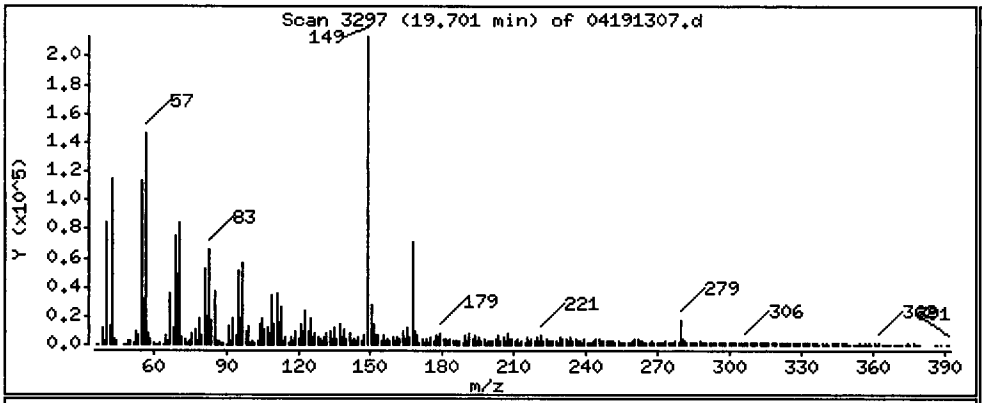
Operator: JZ

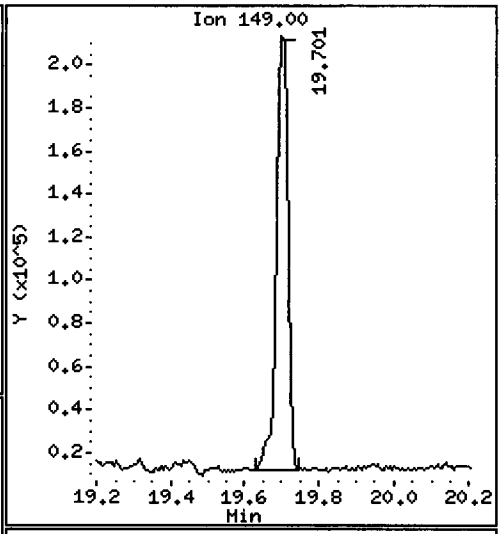
Column phase: ZB-5msi

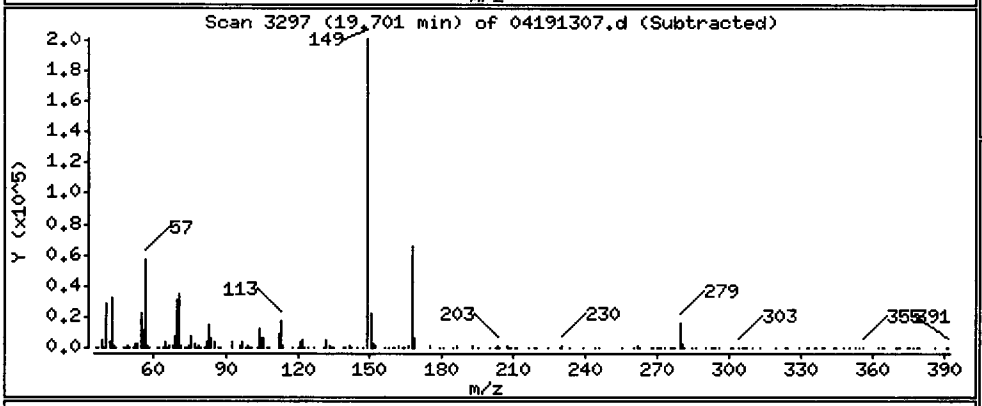
Column diameter: 0.32

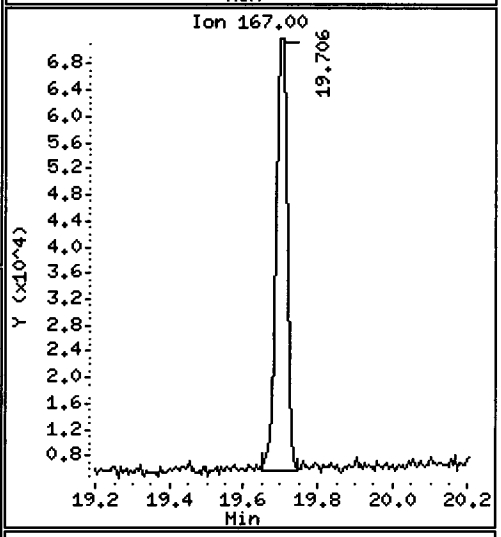
72 bis(2-Ethylhexyl)phthalate

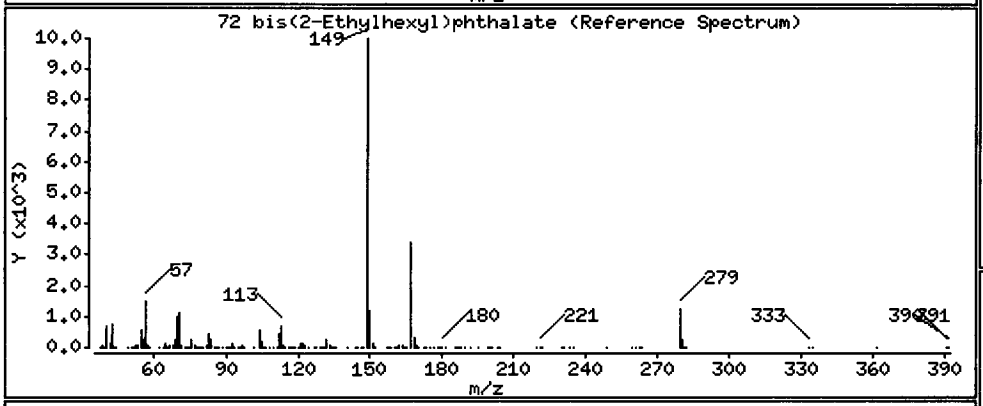
Concentration: 7.170 ug/L

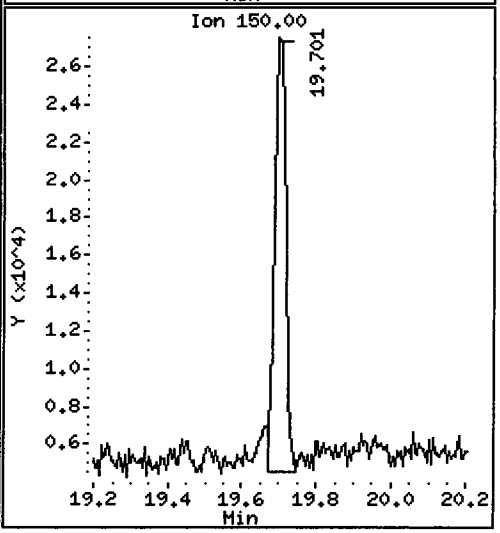


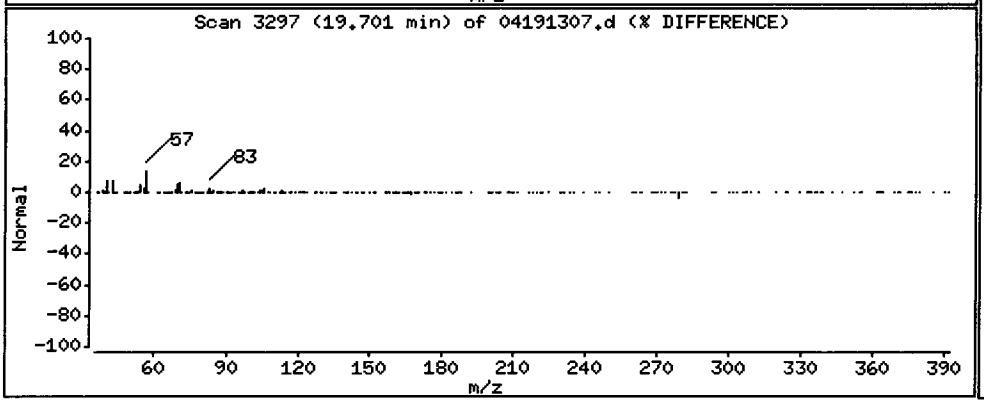












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

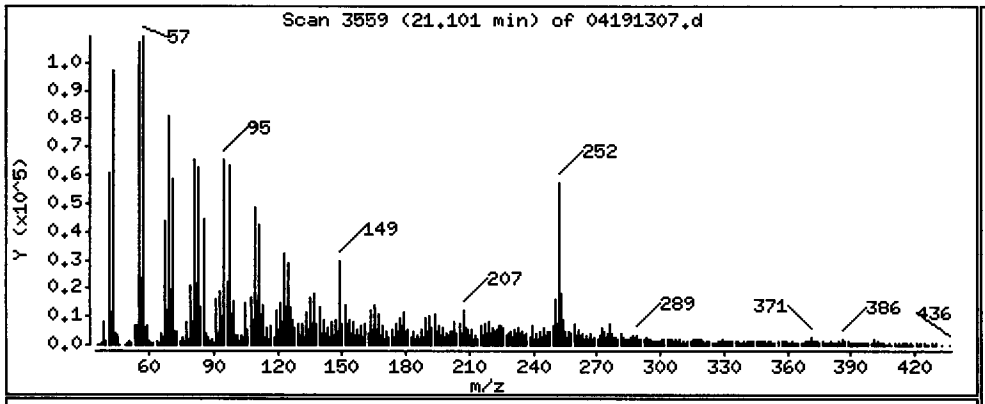
Operator: JZ

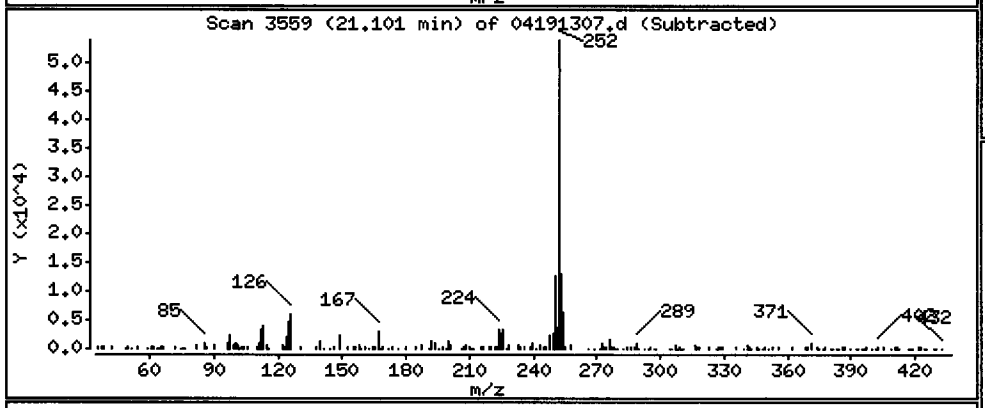
Column phase: ZB-5msi

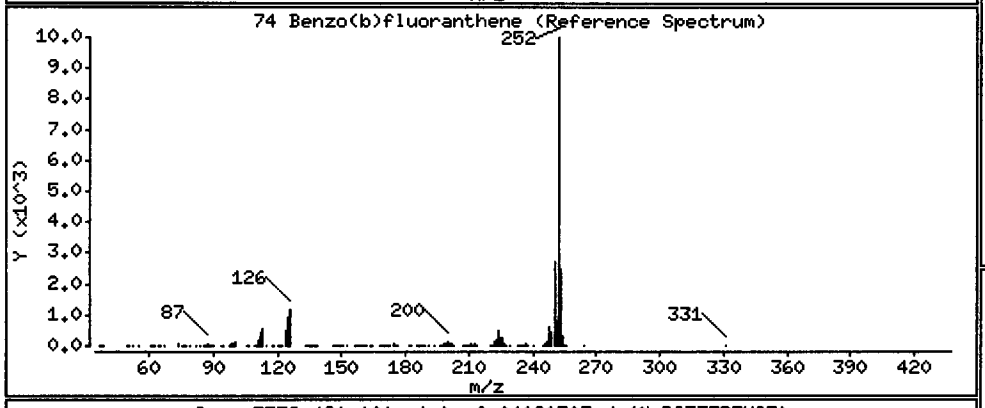
Column diameter: 0.32

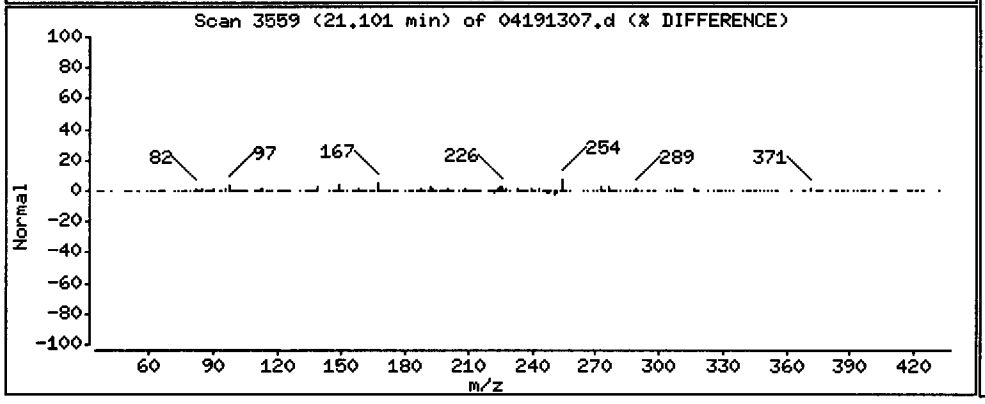
74 Benzo(b)fluoranthene

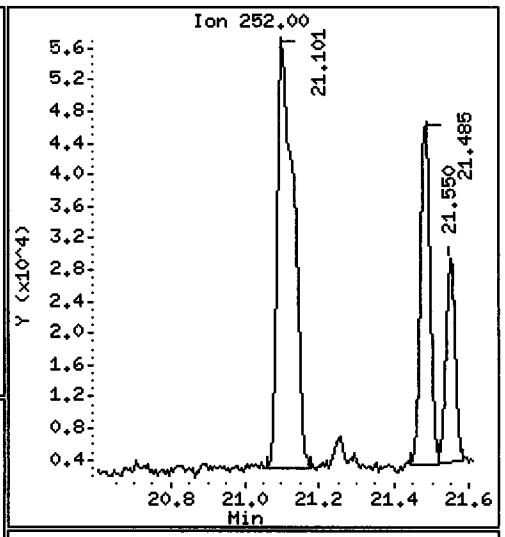
Concentration: 2.076 ug/L

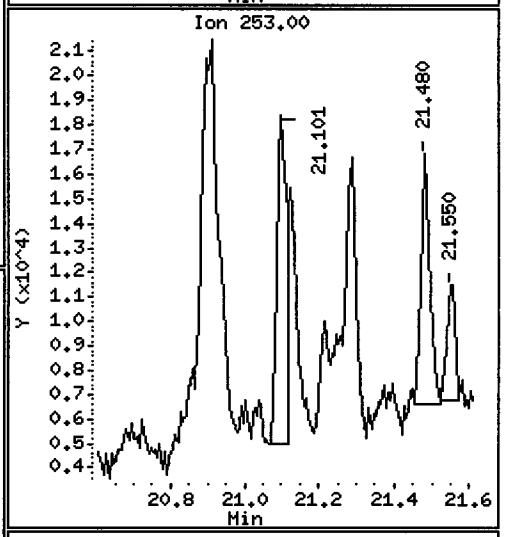


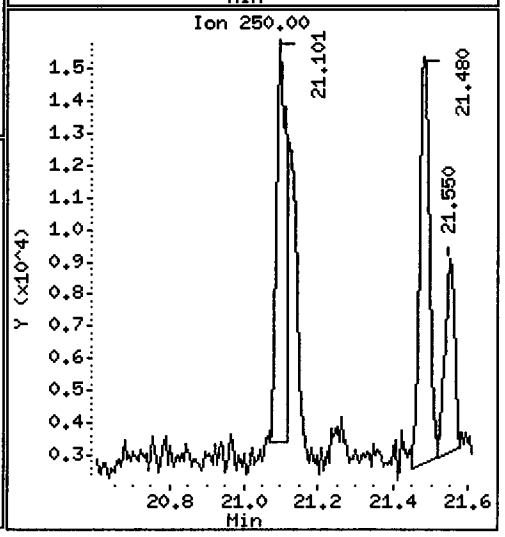












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

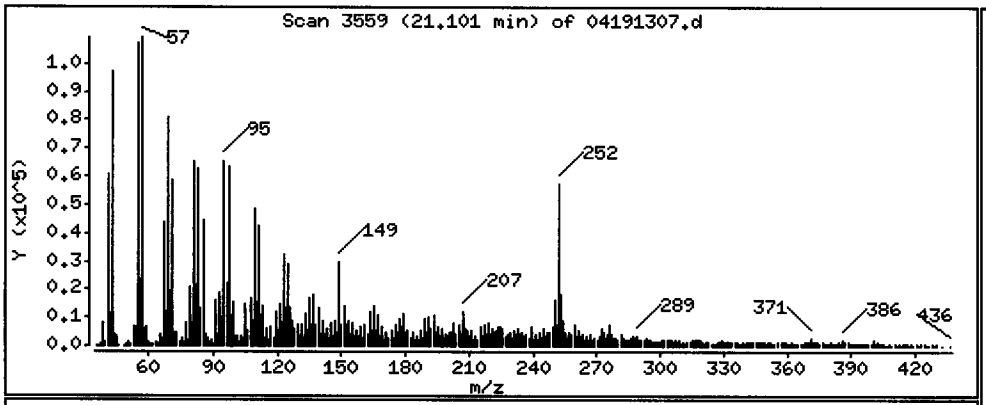
Operator: JZ

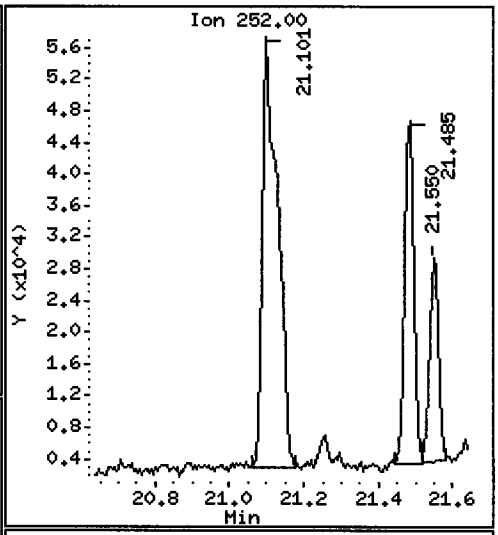
Column phase: ZB-5msi

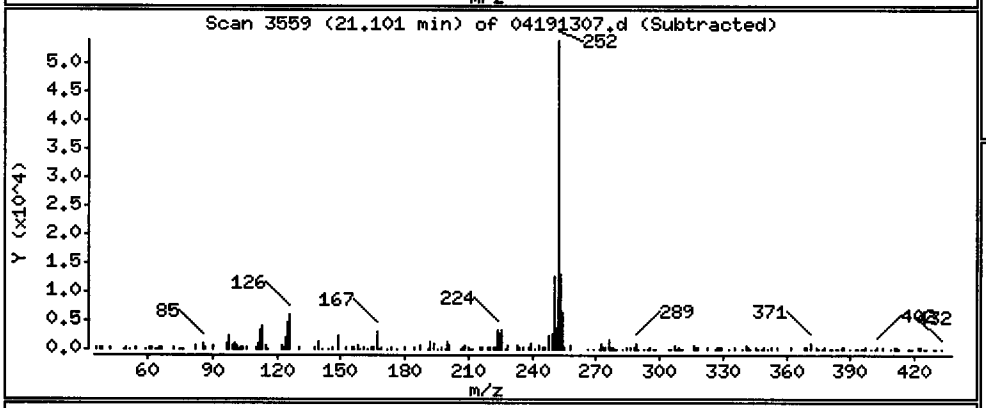
Column diameter: 0.32

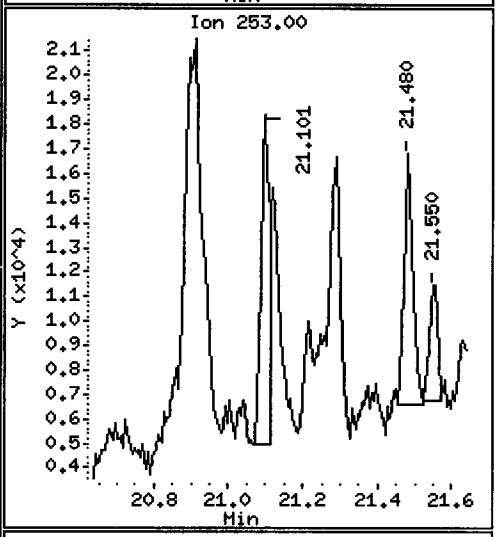
75 Benzo(k)fluoranthene

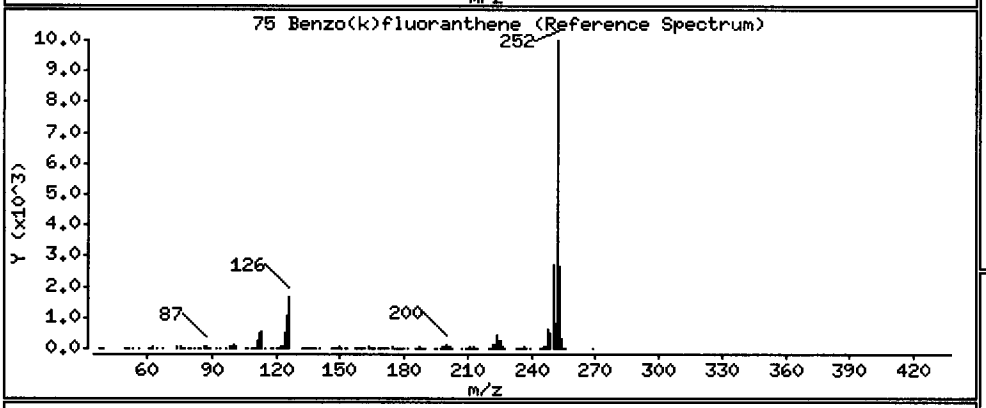
Concentration: 1.763 ug/L

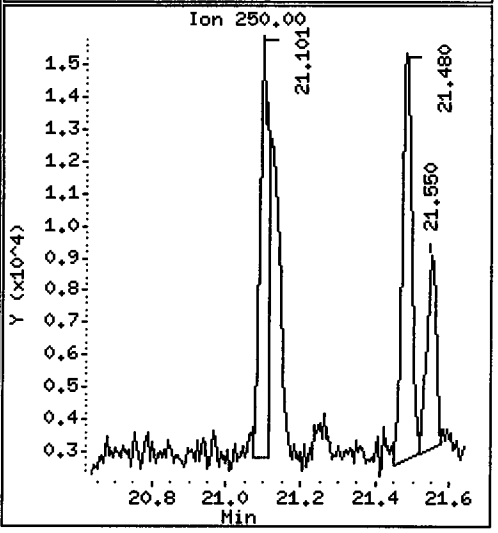


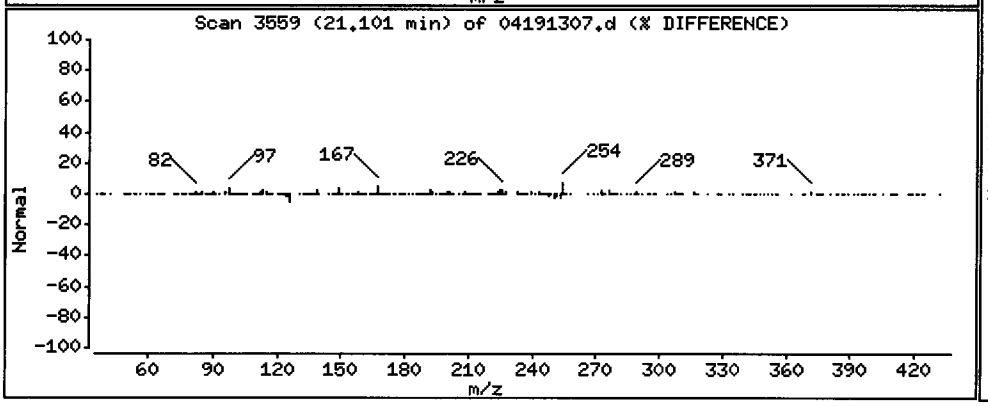












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

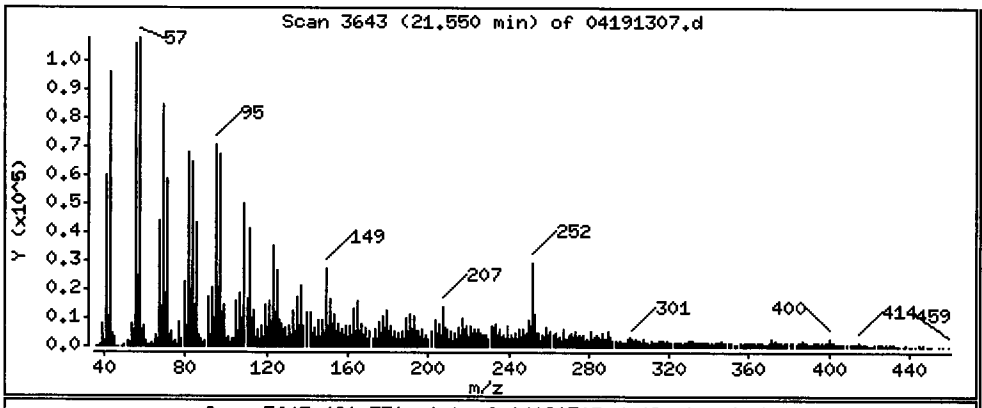
Operator: JZ

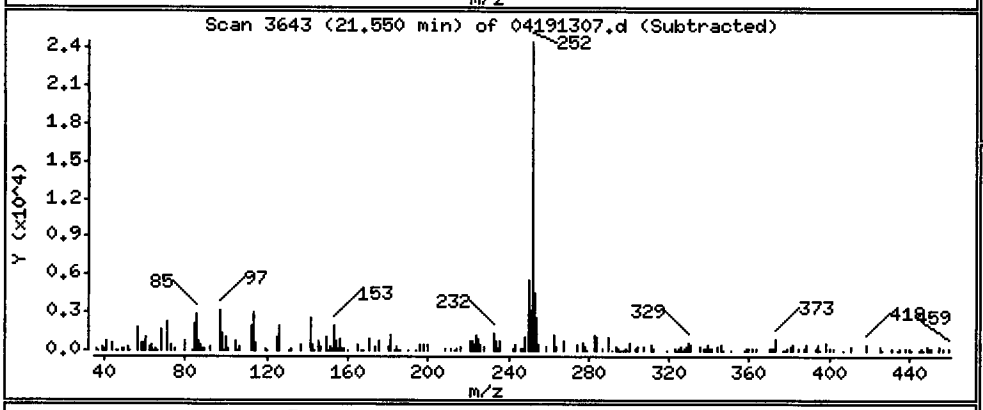
Column phase: ZB-5msi

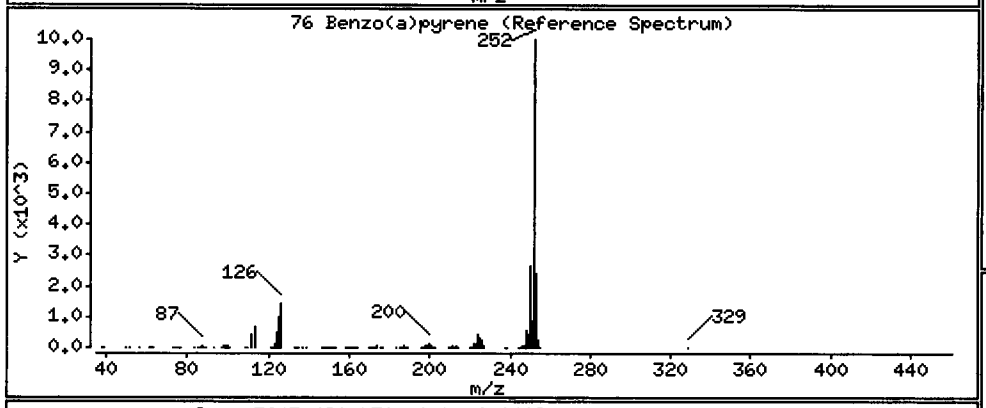
Column diameter: 0.32

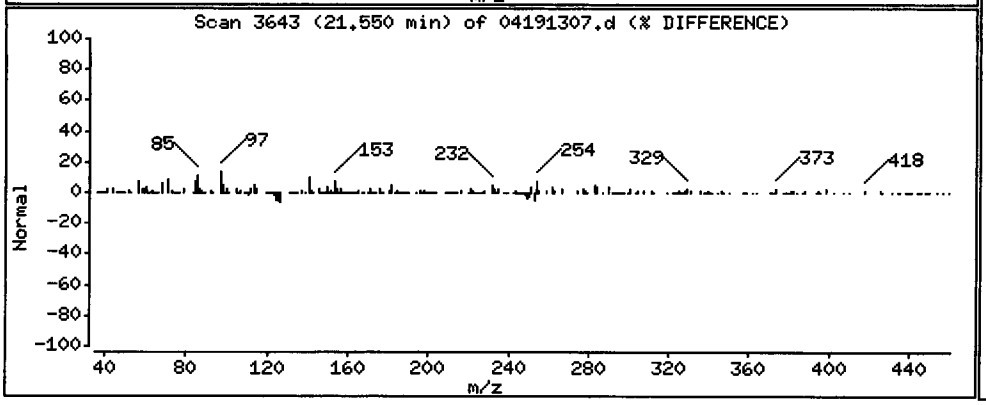
76 Benzo(a)pyrene

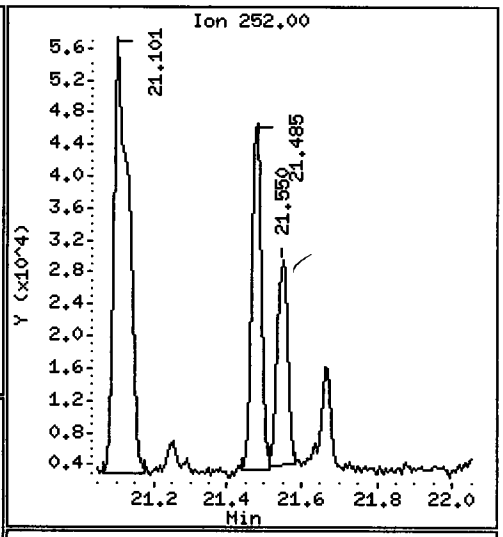
Concentration: 0.6802 ug/L

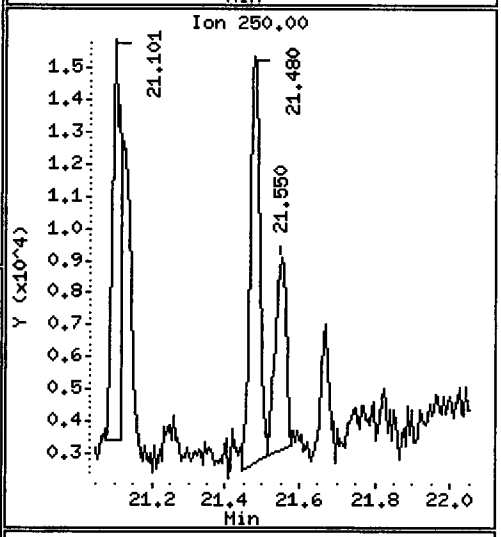


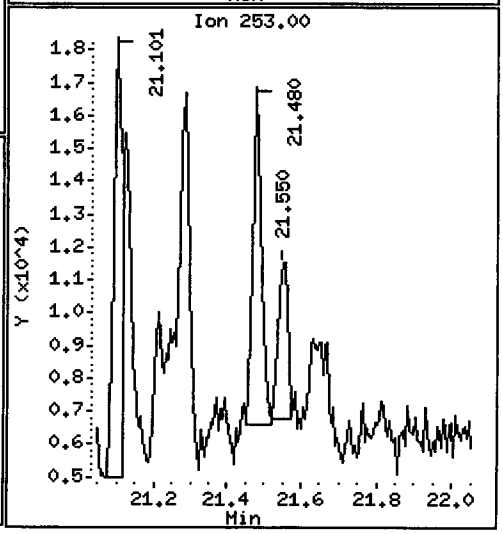












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

Operator: JZ

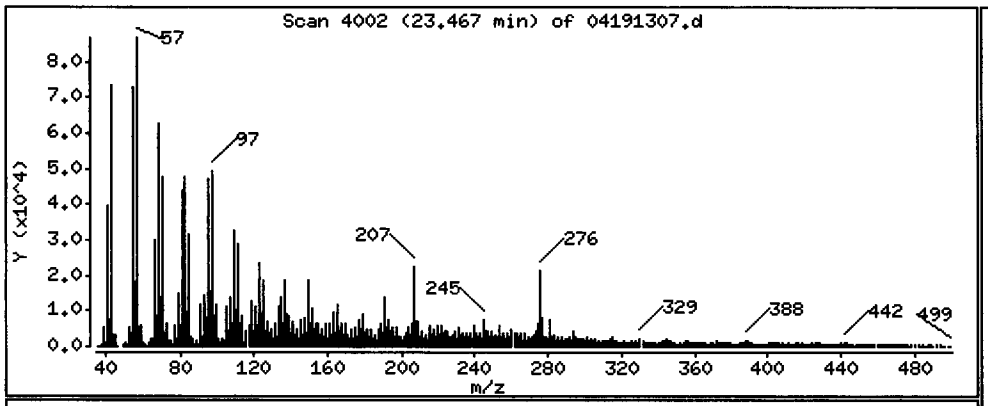
Column phase: ZB-5msi

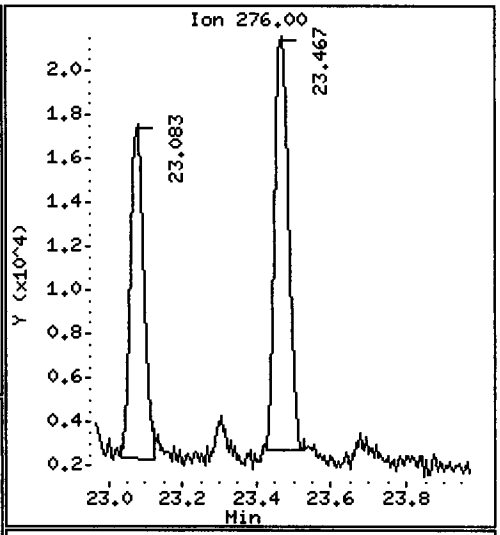
Column diameter: 0.32

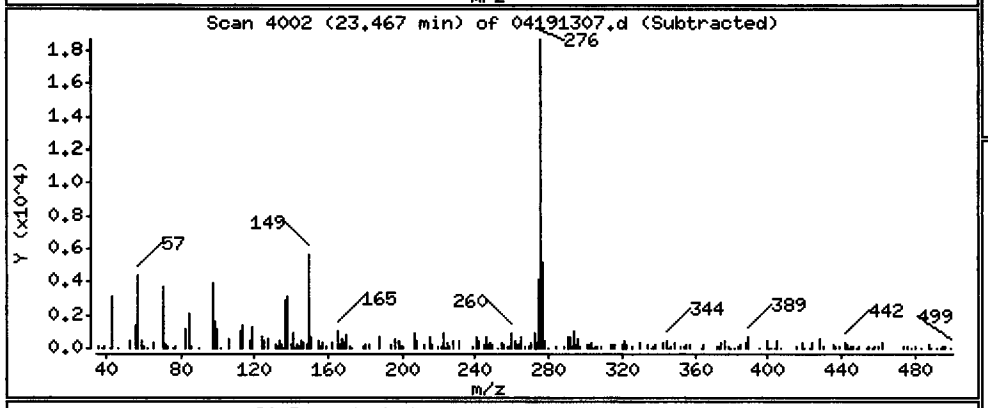
80 Benzo(g,h,i)perylene

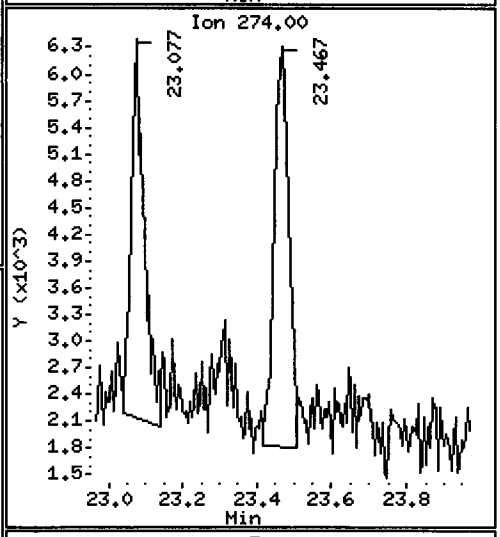
Concentration: 0.6631 ug/L

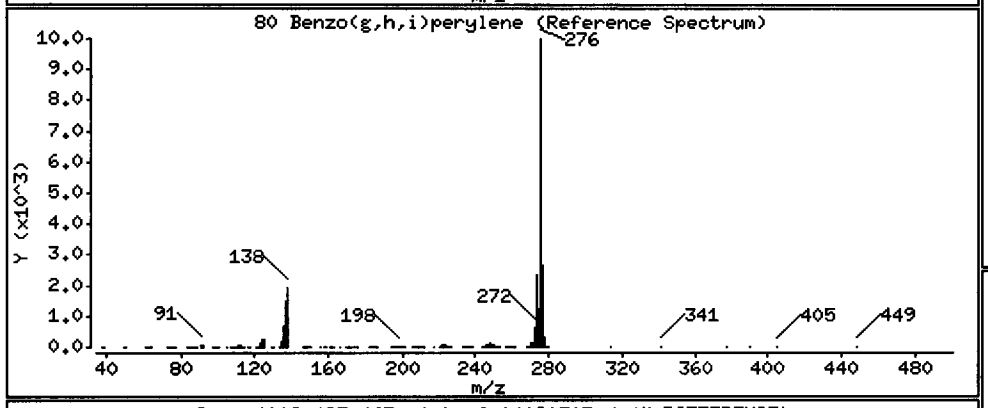
JRL

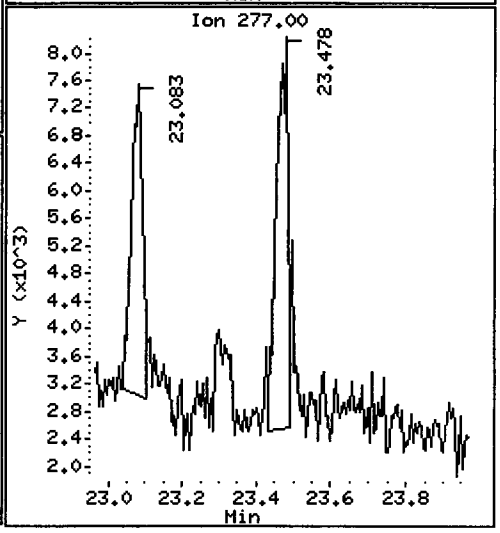


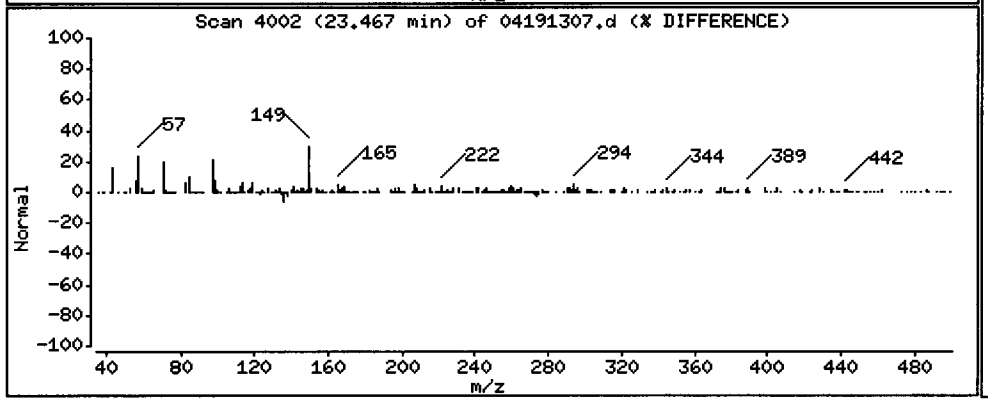












Data File: /chem2/nt6.i/20130419.b/04191307.d

Date : 19-APR-2013 15:35

Client ID: IM-SW-01-20130410-W

Instrument: nt6.i

Sample Info: WL49B

Volume Injected (uL): 1.0

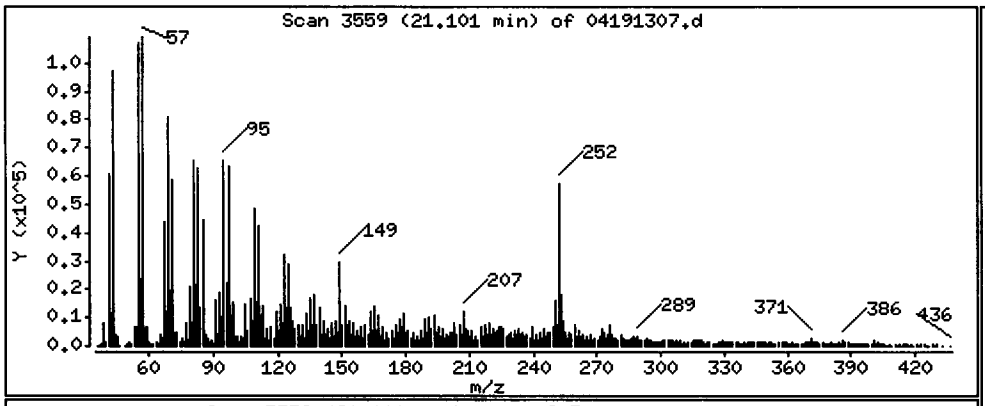
Operator: JZ

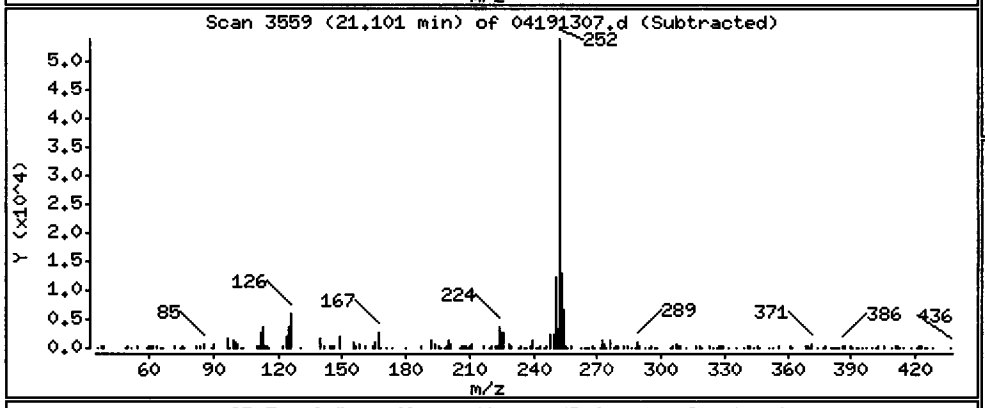
Column phase: ZB-5msi

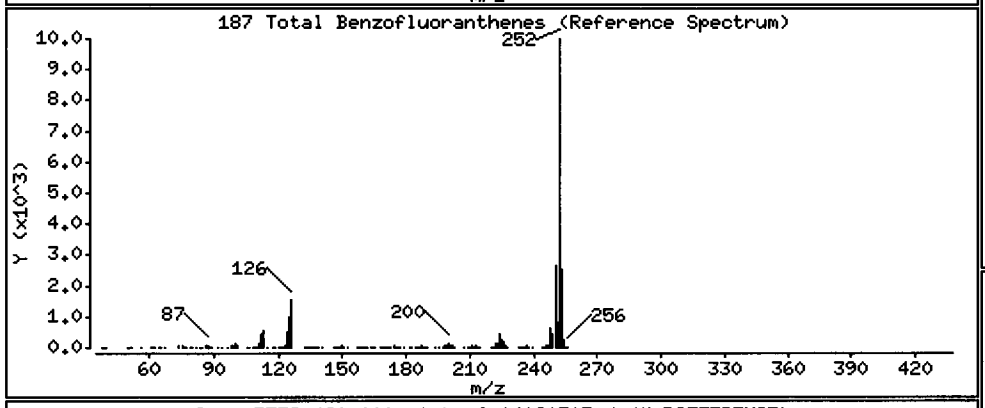
Column diameter: 0.32

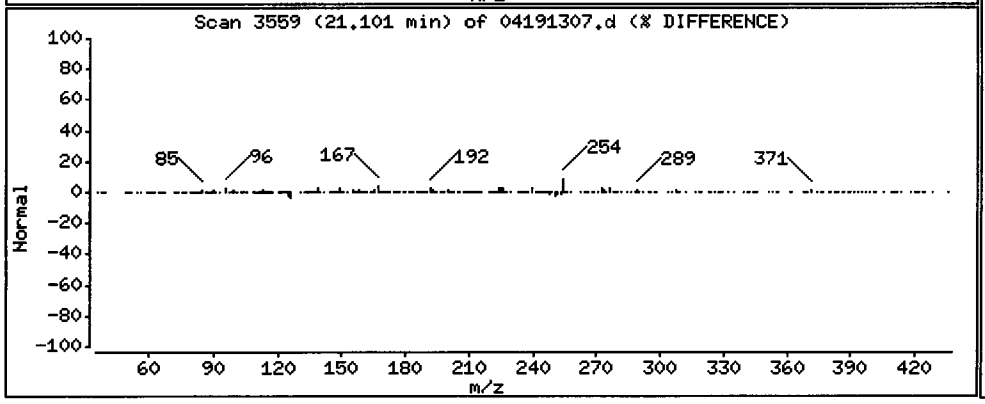
187 Total Benzofluoranthenes

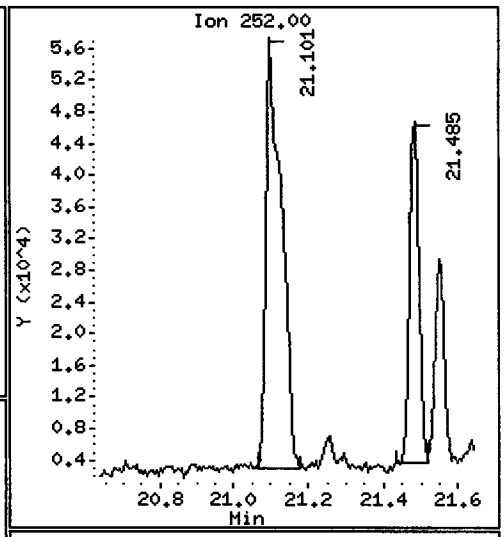
Concentration: 2.156 ug/L

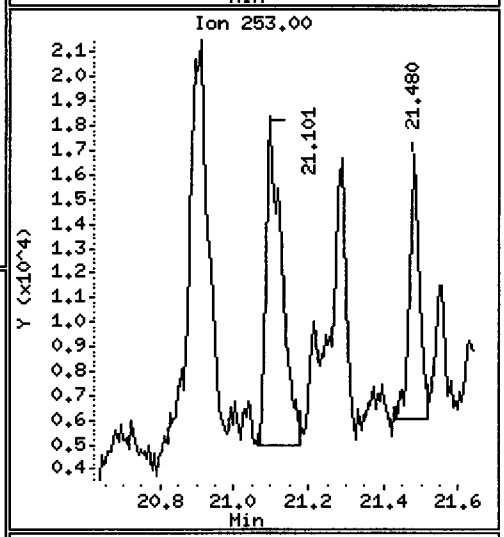


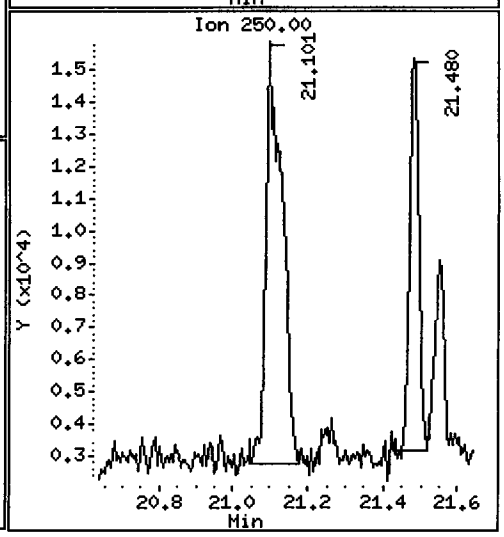












CO-ELUTION SUMMARY FOR FILE - 04191307.d

Lab ID: WL49B, Method: SW846030613.m, Instrument: nt6.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS
21.101	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Reported as Total

☆ 04/23/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130419.b/04191303.d
Lab Smp Id: WL49MBW1 Client Smp ID: WL49MBW1
Inj Date : 19-APR-2013 13:16
Operator : JZ Inst ID: nt6.i
Smp Info : WL49MBW1,
Misc Info : 13-7779
Comment : 1ul Injection
Method : /chem2/nt6.i/20130419.b/SW846030613.m
Meth Date : 23-Apr-2013 14:30 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPHDRMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 04/23/13

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	5.994	6.004	(0.756)	455152	19.5083	19.51
$	2 Phenol-d5	99	7.548	7.553	(0.952)	395191	14.4699	14.47
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.650	7.649	(0.964)	672656	29.1364	29.14
	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	7.933	7.938	(1.000)	360069	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.232	8.232	(1.038)	303238	18.6623	18.66
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.862	8.873	(0.889)	509421	19.5338	19.53
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.974	9.979	(1.000)	1299628	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	11.763	11.768	(0.917)	936026	19.8145	19.81
	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	12.821	12.826	(1.000)	748382	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	14.108	14.119	(1.100)	206320	34.8651	34.87
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.182	15.193	(1.000)	1217740	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.821	17.826	(0.915)	970166	22.5978	22.60
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.472	19.482	(1.000)	1223081	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	20.626	20.631	(1.000)	1656401	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.619	21.630	(1.000)	1177680	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.					
	187 Total Benzofluoranthenes	252	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.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 04191303.d
Lab Smp Id: WL49MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

Calibration Date: 19-APR-2013
Calibration Time: 11:29
Client Smp ID: WL49MBW1
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	360069	-21.40
27 Naphthalene-d8	1718341	859170	3436682	1299628	-24.37
42 Acenaphthene-d10	1010041	505020	2020082	748382	-25.91
59 Phenanthrene-d10	1666734	833367	3333468	1217740	-26.94
69 Chrysene-d12	1675752	837876	3351504	1223081	-27.01
134 Di-n-octylphthala	2026355	1013178	4052710	1656401	-18.26
77 Perylene-d12	1637524	818762	3275048	1177680	-28.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.94	7.44	8.44	7.93	-0.06
27 Naphthalene-d8	9.98	9.48	10.48	9.97	-0.05
42 Acenaphthene-d10	12.83	12.33	13.33	12.82	-0.04
59 Phenanthrene-d10	15.19	14.69	15.69	15.18	-0.07
69 Chrysene-d12	19.48	18.98	19.98	19.47	-0.05
134 Di-n-octylphthala	20.63	20.13	21.13	20.63	-0.02
77 Perylene-d12	21.63	21.13	22.13	21.62	-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.

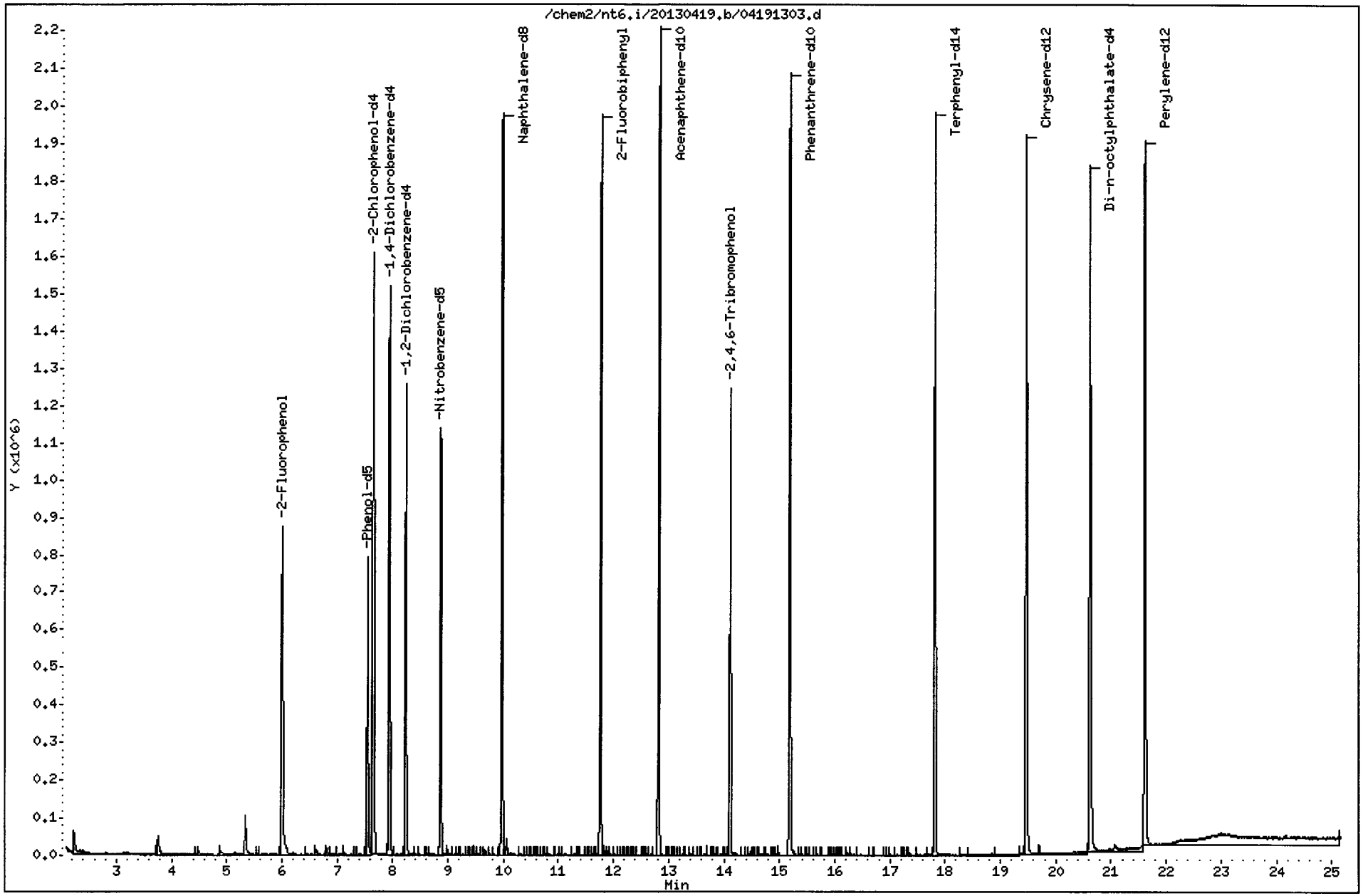
RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WL49MBW1
Client Smp ID: WL49MBW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPHDRMBLCS.sub
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	19.51	52.02	33-100
$ 2 Phenol-d5	37.50	14.47	38.59	15-121
$ 5 2-Chlorophenol-d4	37.50	29.14	77.70	46-102
$ 10 1,2-Dichlorobenzen	25.00	18.66	74.65	40-100
$ 18 Nitrobenzene-d5	25.00	19.53	78.14	50-100
$ 36 2-Fluorobiphenyl	25.00	19.81	79.26	51-100
$ 55 2,4,6-Tribromophen	37.50	34.87	92.97	46-125
$ 66 Terphenyl-d14	25.00	22.60	90.39	54-117

Data File: /chem2/nt6.i/20130419.b/04191303.d
Date : 19-APR-2013 13:16
Client ID: WL49MBW1
Sample Info: WL49MBW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 04191303.d

Lab ID: WL49MBW1, Method: SW846030613.m, Instrument: nt6.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130419.b/04191304.d
Lab Smp Id: WL49LCSW1 Client Smp ID: WL49LCSW1
Inj Date : 19-APR-2013 13:50
Operator : JZ Inst ID: nt6.i
Smp Info : WL49LCSW1,
Misc Info : 13-7779
Comment : 1ul Injection
Method : /chem2/nt6.i/20130419.b/SW846030613.m
Meth Date : 23-Apr-2013 14:30 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPHDRMBLCS.sub
Target Version: 3.50

04/23/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.998	6.004	(0.756)	484065	19.3105	19.31
$ 2	Phenol-d5	99	7.547	7.553	(0.952)	428645	14.6078	14.61
3	Phenol	94	7.569	7.575	(0.954)	284508	9.20815	9.208
$ 5	2-Chlorophenol-d4	132	7.649	7.649	(0.964)	717020	28.9069	28.91
4	Bis(2-Chloroethyl)ether	93	7.612	7.617	(0.960)	479444	17.8677	17.87
6	2-Chlorophenol	128	7.670	7.676	(0.967)	495645	20.0499	20.05
7	1,3-Dichlorobenzene	146	7.873	7.874	(0.993)	492364	17.0535	17.05
* 8	1,4-Dichlorobenzene-d4	152	7.932	7.938	(1.000)	386864	20.0000	
9	1,4-Dichlorobenzene	146	7.959	7.965	(1.003)	493532	17.5634	17.56
$ 10	1,2-Dichlorobenzene-d4	152	8.231	8.232	(1.038)	302477	17.3261	17.33
12	1,2-Dichlorobenzene	146	8.253	8.253	(1.040)	474838	17.6764	17.68
11	Benzyl alcohol	108	8.231	8.237	(1.038)	310432	18.4427	18.44
14	2,2'-oxybis(1-Chloropropane)	45	8.482	8.483	(1.069)	685047	16.0684	16.07
13	2-Methylphenol	108	8.482	8.488	(1.069)	413086	17.6317	17.63
17	Hexachloroethane	117	8.739	8.739	(1.102)	170817	15.0286	15.03
16	N-Nitroso-di-n-propylamine	70	8.701	8.707	(1.097)	364910	18.1215	18.12

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	8.728	8.723	(1.100)	811551	35.0293	35.03
$	18 Nitrobenzene-d5	82	8.867	8.873	(0.889)	565125	19.6429	19.64
	19 Nitrobenzene	77	8.894	8.900	(0.891)	550576	19.9941	19.99
	20 Isophorone	82	9.289	9.279	(0.931)	989590	20.6179	20.62
	21 2-Nitrophenol	139	9.412	9.412	(0.943)	284393	22.3201	22.32
	22 2,4-Dimethylphenol	107	9.545	9.546	(0.957)	1234558	51.2345	51.23
	23 Bis(2-Chloroethoxy)methane	93	9.679	9.674	(0.970)	594101	18.8654	18.87
	24 Benzoic acid	105	9.823	9.834	(0.984)	1015340	48.6777	48.68
	25 2,4-Dichlorophenol	162	9.807	9.808	(0.983)	1128324	60.8123	60.81
	26 1,2,4-Trichlorobenzene	180	9.919	9.920	(0.994)	425715	18.4322	18.43
*	27 Naphthalene-d8	136	9.978	9.979	(1.000)	1433725	20.0000	
	28 Naphthalene	128	10.005	10.005	(1.003)	1374260	21.3934	21.39
	29 4-Chloroaniline	127	10.165	10.166	(1.019)	1555516	134.206	134.2(R)
	30 Hexachlorobutadiene	225	10.325	10.326	(1.035)	215755	15.3508	15.35
	31 4-Chloro-3-methylphenol	107	10.993	10.994	(1.102)	1267564	64.3158	64.32
	32 2-Methylnaphthalene	141	11.121	11.127	(1.115)	768552	22.0428	22.04
	33 Hexachlorocyclopentadiene	237	11.501	11.501	(0.897)	630918	50.6133	50.61
	34 2,4,6-Trichlorophenol	196	11.650	11.651	(0.908)	892289	68.4120	68.41
	35 2,4,5-Trichlorophenol	196	11.714	11.715	(0.913)	940742	73.1148	73.11
$	36 2-Fluorobiphenyl	172	11.768	11.768	(0.918)	1096275	22.3844	22.38
	37 2-Chloronaphthalene	162	11.901	11.902	(0.928)	915326	27.7711	27.77
	38 2-Nitroaniline	65	12.152	12.148	(0.948)	902954	78.7219	78.72
	39 Dimethylphthalate	163	12.521	12.516	(0.976)	1092722	23.4004	23.40
	40 Acenaphthylene	152	12.574	12.575	(0.980)	1513941	24.7378	24.74
	41 2,6-Dinitrotoluene	165	12.612	12.607	(0.983)	723188	72.4861	72.49
*	42 Acenaphthene-d10	164	12.826	12.826	(1.000)	775873	20.0000	
	43 3-Nitroaniline	138	12.831	12.831	(1.000)	756728	188.669	188.7(R)
	44 Acenaphthene	153	12.879	12.874	(1.004)	940787	23.7432	23.74
	45 2,4-Dinitrophenol	184	12.991	12.986	(1.013)	884464	124.120	124.1
	46 Dibenzofuran	168	13.141	13.141	(1.025)	1382767	26.6827	26.68
	47 4-Nitrophenol	109	13.162	13.168	(1.026)	235042	46.3732	46.37
	48 2,4-Dinitrotoluene	165	13.237	13.232	(1.032)	992151	73.5204	73.52
	50 Diethylphthalate	149	13.670	13.665	(1.066)	1145364	26.4735	26.47
	49 Fluorene	166	13.691	13.691	(1.067)	1034952	28.4476	28.45
	51 4-Chlorophenyl-phenylether	204	13.718	13.718	(1.070)	552112	24.2713	24.27
	52 4-Nitroaniline	138	13.835	13.820	(1.079)	779111	102.382	102.4(R)
	53 4,6-Dinitro-2-methylphenol	198	13.894	13.884	(0.915)	1165022	113.028	113.0
	54 N-Nitrosodiphenylamine	169	13.931	13.932	(0.917)	819078	21.0474	21.05
$	55 2,4,6-Tribromophenol	330	14.118	14.119	(1.101)	257487	41.9698	41.97
	56 4-Bromophenyl-phenylether	248	14.492	14.493	(0.954)	334069	21.2650	21.27
	57 Hexachlorobenzene	284	14.706	14.712	(0.968)	318659	19.6748	19.67
	58 Pentachlorophenol	266	15.016	15.022	(0.989)	670740	70.1965	70.20
*	59 Phenanthrene-d10	188	15.187	15.193	(1.000)	1431401	20.0000	
	60 Phenanthrene	178	15.224	15.225	(1.002)	1563350	22.0754	22.08
	61 Anthracene	178	15.294	15.299	(1.007)	1543802	21.7717	21.77
	62 Carbazole	167	15.587	15.588	(1.026)	1418587	28.6228	28.62
	63 Di-n-butylphthalate	149	16.298	16.304	(1.073)	1913307	21.4027	21.40

Q

04/23/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
	64 Fluoranthene	202	17.147	17.153	(1.129)	1801008	24.1750	24.17	
	65 Pyrene	202	17.500	17.506	(0.898)	1835348	25.3711	25.37	
$	66 Terphenyl-d14	244	17.815	17.826	(0.915)	1154542	24.8317	24.83	
	67 Butylbenzylphthalate	149	18.702	18.708	(0.960)	859710	24.3036	24.30	
	68 Benzo(a)anthracene	228	19.450	19.456	(0.999)	1537067	25.4523	25.45	
*	69 Chrysene-d12	240	19.476	19.482	(1.000)	1324584	20.0000		
	70 3,3'-Dichlorobenzidine	252	19.471	19.472	(1.000)	1040644	62.6324	62.63	
	71 Chrysene	228	19.519	19.525	(1.002)	1509414	24.4839	24.48	
	72 bis(2-Ethylhexyl)phthalate	149	19.695	19.701	(0.955)	1187867	22.8302	22.83	
*	134 Di-n-octylphthalate-d4	153	20.625	20.631	(1.000)	1768186	20.0000		
	73 Di-n-octylphthalate	149	20.636	20.642	(1.001)	1902016	22.7821	22.78	
	74 Benzo(b)fluoranthene	252	21.095	21.106	(0.976)	1526811	23.8618	23.86	
	75 Benzo(k)fluoranthene	252	21.133	21.138	(0.978)	1687459	24.0912	24.09	Q
	76 Benzo(a)pyrene	252	21.539	21.550	(0.996)	1411754	23.3077	23.31	
*	77 Perylene-d12	264	21.619	21.630	(1.000)	1417108	20.0000		
	78 Indeno(1,2,3-cd)pyrene	276	23.066	23.078	(1.067)	1743442	23.9174	23.92	
	79 Dibenzo(a,h)anthracene	278	23.088	23.099	(1.068)	1388151	24.1853	24.19	
	80 Benzo(g,h,i)perylene	276	23.456	23.468	(1.085)	1493709	23.9613	23.96	
	90 N-Nitrosodimethylamine	74	3.236	3.226	(0.408)	584879	32.1043	32.10	Q
	91 Aniline	93	7.505	7.500	(0.946)	1891701	55.2575	55.26	
	93 Benzidine	184	Compound Not Detected.						N/C
	103 Pyridine	79	3.183	3.183	(0.401)	768214	26.5887	26.59	
	105 1-methylnaphthalene	141	11.292	11.293	(1.132)	772900	21.8212	21.82	
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.974	13.969	(1.090)	1143210	23.2553	23.26	
	187 Total Benzofluoranthenes	252	21.133	21.138	(0.978)	3027669	46.4063	46.41	
	120 2,3,4,6-Tetrachlorophenol	232	13.429	13.430	(1.047)	313332	28.2929	28.29	
	188 2,6-Dichlorophenol	162	Compound Not Detected.						
	189 N-Nitrosomethylethylamine	88	Compound Not Detected.						not added in

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

04/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 04191304.d
Lab Smp Id: WL49LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

Calibration Date: 19-APR-2013
Calibration Time: 11:29
Client Smp ID: WL49LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	386864	-15.55
27 Naphthalene-d8	1718341	859170	3436682	1433725	-16.56
42 Acenaphthene-d10	1010041	505020	2020082	775873	-23.18
59 Phenanthrene-d10	1666734	833367	3333468	1431401	-14.12
69 Chrysene-d12	1675752	837876	3351504	1324584	-20.96
134 Di-n-octylphthala	2026355	1013178	4052710	1768186	-12.74
77 Perylene-d12	1637524	818762	3275048	1417108	-13.46

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.94	7.44	8.44	7.93	-0.07
27 Naphthalene-d8	9.98	9.48	10.48	9.98	0.00
42 Acenaphthene-d10	12.83	12.33	13.33	12.83	0.00
59 Phenanthrene-d10	15.19	14.69	15.69	15.19	-0.04
69 Chrysene-d12	19.48	18.98	19.98	19.48	-0.03
134 Di-n-octylphthala	20.63	20.13	21.13	20.63	-0.03
77 Perylene-d12	21.63	21.13	22.13	21.62	-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
Client SDG: WL49
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WL49LCSW1
Client Smp ID: WL49LCSW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPHDRMBLCS.sub
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	9.208	36.83	16-100
4	Bis(2-Chloroethyl)	25.00	17.87	71.47	41-112
6	2-Chlorophenol	25.00	20.05	80.20	43-111
7	1,3-Dichlorobenzen	25.00	17.05	68.21	32-100
9	1,4-Dichlorobenzen	25.00	17.56	70.25	32-100
11	Benzyl alcohol	25.00	18.44	73.77	22-100
12	1,2-Dichlorobenzen	25.00	17.68	70.71	34-100
13	2-Methylphenol	25.00	17.63	70.53	36-110
14	2,2'-oxybis(1-Chlo	25.00	16.07	64.27	29-118
15	4-Methylphenol	50.00	35.03	70.06	38-104
16	N-Nitroso-di-n-pro	25.00	18.12	72.49	38-115
17	Hexachloroethane	25.00	15.03	60.11	24-100
19	Nitrobenzene	25.00	19.99	79.98	45-106
20	Isophorone	25.00	20.62	82.47	55-119
21	2-Nitrophenol	25.00	22.32	89.28	46-118
22	2,4-Dimethylphenol	75.00	51.23	68.31	28-105
23	Bis(2-Chloroethoxy	25.00	18.87	75.46	44-118
24	Benzoic acid	137.5	48.68	35.40	11-100
25	2,4-Dichlorophenol	75.00	60.81	81.08	43-121
26	1,2,4-Trichloroben	25.00	18.43	73.73	35-100
28	Naphthalene	25.00	21.39	85.57	36-111
29	4-Chloroaniline	75.00	134.2	178.94*	10-153
30	Hexachlorobutadien	25.00	15.35	61.40	24-100
31	4-Chloro-3-methylp	75.00	64.32	85.75	45-122
32	2-Methylnaphthalen	25.00	22.04	88.17	45-103
33	Hexachlorocyclopen	75.00	50.61	67.48	23-108
34	2,4,6-Trichlorophe	75.00	68.41	91.22	48-122
35	2,4,5-Trichlorophe	75.00	73.11	97.49	48-122
37	2-Chloronaphthalen	25.00	27.77	111.08	39-118
38	2-Nitroaniline	75.00	78.72	104.96	48-118
39	Dimethylphthalate	25.00	23.40	93.60	50-120
40	Acenaphthylene	25.00	24.74	98.95	50-119
41	2,6-Dinitrotoluene	75.00	72.49	96.65	48-133

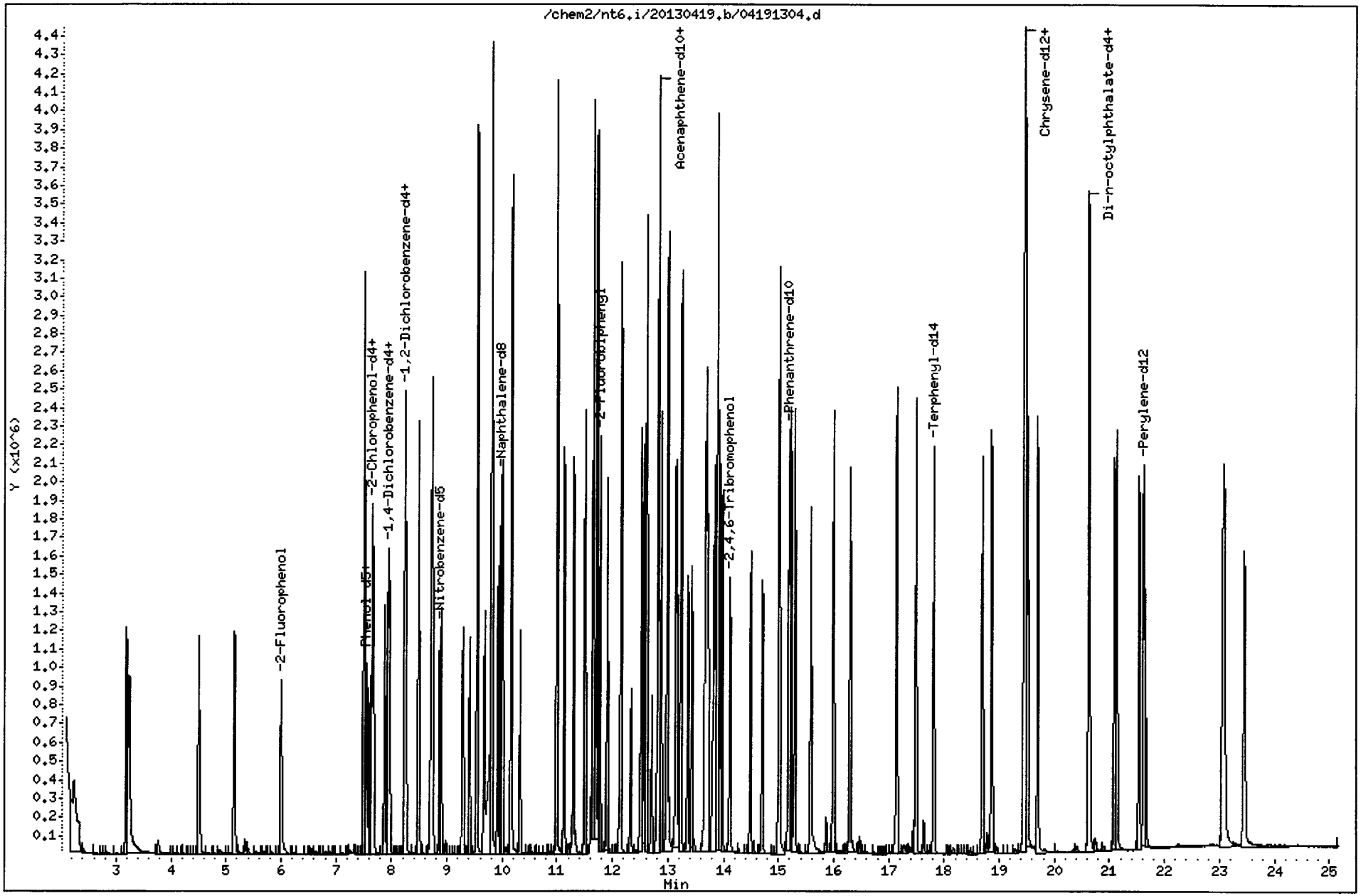
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	75.00	188.7	251.56*	10-208
44	Acenaphthene	25.00	23.74	94.97	41-120
45	2,4-Dinitrophenol	137.5	124.1	90.27	10-224
46	Dibenzofuran	25.00	26.68	106.73	51-114
47	4-Nitrophenol	75.00	46.37	61.83	10-103
48	2,4-Dinitrotoluene	75.00	73.52	98.03	51-134
49	Fluorene	25.00	28.45	113.79	50-120
50	Diethylphthalate	25.00	26.47	105.89	48-122
51	4-Chlorophenyl-phe	25.00	24.27	97.09	50-118
52	4-Nitroaniline	75.00	102.4	136.51*	42-136
53	4,6-Dinitro-2-meth	125.0	113.0	90.42	10-190
54	N-Nitrosodiphenyla	25.00	21.05	84.19	58-141
56	4-Bromophenyl-phen	25.00	21.27	85.06	50-122
57	Hexachlorobenzene	25.00	19.67	78.70	47-125
58	Pentachlorophenol	75.00	70.20	93.60	35-130
60	Phenanthrene	25.00	22.08	88.30	49-120
61	Anthracene	25.00	21.77	87.09	53-116
62	Carbazole	25.00	28.62	114.49	57-122
63	Di-n-butylphthalat	25.00	21.40	85.61	57-121
64	Fluoranthene	25.00	24.17	96.70	56-119
65	Pyrene	25.00	25.37	101.48	37-143
67	Butylbenzylphthala	25.00	24.30	97.21	34-152
68	Benzo(a)anthracene	25.00	25.45	101.81	49-129
70	3,3'-Dichlorobenzi	75.00	62.63	83.51	50-128
71	Chrysene	25.00	24.48	97.94	45-128
72	bis(2-Ethylhexyl)p	25.00	22.83	91.32	57-133
73	Di-n-octylphthalat	25.00	22.78	91.13	52-120
74	Benzo(b)fluoranthe	25.00	23.86	95.45	50-126
75	Benzo(k)fluoranthe	25.00	24.09	96.36	49-126
76	Benzo(a)pyrene	25.00	23.31	93.23	46-109
78	Indeno(1,2,3-cd)py	25.00	23.92	95.67	34-136
79	Dibenzo(a,h)anthra	25.00	24.19	96.74	41-134
80	Benzo(g,h,i)peryle	25.00	23.96	95.85	41-133
91	Aniline	75.00	55.26	73.68	28-126
111	Azobenzene (1,2-DP	25.00	23.26	93.02	55-119
105	1-methylnaphthalen	25.00	21.82	87.28	43-115
90	N-Nitrosodimethyla	50.00	32.10	64.21	31-100
103	Pyridine	50.00	26.59	53.18	25-100
120	2,3,4,6-Tetrachlor	25.00	28.29	113.17	30-160
151	1,2,4,5-Tetrachlo	25.00	0.000	not added in *	30-160
187	Total Benzofluoran	50.00	46.41	92.81	30-160

SURROGATE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	37.50	19.31	51.49	33-100

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.61	38.95	15-121
$ 5 2-Chlorophenol-d4	37.50	28.91	77.08	46-102
$ 10 1,2-Dichlorobenzen	25.00	17.33	69.30	40-100
$ 18 Nitrobenzene-d5	25.00	19.64	78.57	50-100
$ 36 2-Fluorobiphenyl	25.00	22.38	89.54	51-100
$ 55 2,4,6-Tribromophen	37.50	41.97	111.92	46-125
$ 66 Terphenyl-d14	25.00	24.83	99.33	54-117

Data File: /chem2/nt6.i/20130419.b/04191304.d
Date : 19-APR-2013 13:50
Client ID: WL49LCSW1
Sample Info: WL49LCSW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 04191304.d

Lab ID: WL49LCSW1, Method: SW846030613.m, Instrument: nt6.i, Date: 19-APR-201

RT	CO-ELUTION COMPOUNDS
8.482	2,2'-oxybis(1-Chloropropane) and 2-Methylphenol
8.231	1,2-Dichlorobenzene-d4 and Benzyl alcohol

checked OK

AZ 04/23/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130419.b/04191305.d
Lab Smp Id: WL49LCSDW1 Client Smp ID: WL49LCSDW1
Inj Date : 19-APR-2013 14:25
Operator : JZ Inst ID: nt6.i
Smp Info : WL49LCSDW1,
Misc Info : 13-7779
Comment : 1ul Injection
Method : /chem2/nt6.i/20130419.b/SW846030613.m
Meth Date : 23-Apr-2013 14:30 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPHDRMBLCS.sub
Target Version: 3.50

04/23/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.001	6.004	(0.756)	507764	19.0791	19.08
$ 2	Phenol-d5	99	7.550	7.553	(0.952)	448853	14.4077	14.41
3	Phenol	94	7.566	7.575	(0.954)	304477	9.28192	9.282
$ 5	2-Chlorophenol-d4	132	7.651	7.649	(0.964)	743869	28.2469	28.25
4	Bis(2-Chloroethyl)ether	93	7.614	7.617	(0.960)	496425	17.4257	17.43
6	2-Chlorophenol	128	7.673	7.676	(0.967)	521497	19.8700	19.87
7	1,3-Dichlorobenzene	146	7.876	7.874	(0.993)	517515	16.8832	16.88
* 8	1,4-Dichlorobenzene-d4	152	7.934	7.938	(1.000)	410727	20.0000	
9	1,4-Dichlorobenzene	146	7.961	7.965	(1.003)	520427	17.4445	17.44
$ 10	1,2-Dichlorobenzene-d4	152	8.234	8.232	(1.038)	314262	16.9553	16.96
12	1,2-Dichlorobenzene	146	8.255	8.253	(1.040)	503296	17.6473	17.65
11	Benzyl alcohol	108	8.234	8.237	(1.038)	329249	18.4241	18.42
14	2,2'-oxybis(1-Chloropropane)	45	8.485	8.483	(1.069)	714102	15.7768	15.78
13	2-Methylphenol	108	8.485	8.488	(1.069)	434457	17.4664	17.47
17	Hexachloroethane	117	8.741	8.739	(1.102)	176317	14.6112	14.61
16	N-Nitroso-di-n-propylamine	70	8.704	8.707	(1.097)	384513	17.9855	17.99

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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	8.725	8.723	(1.100)	861348	35.0186	35.02
$	18 Nitrobenzene-d5	82	8.869	8.873	(0.889)	580743	19.3682	19.37
	19 Nitrobenzene	77	8.896	8.900	(0.892)	575939	20.0680	20.07
	20 Isophorone	82	9.286	9.279	(0.931)	1046754	20.9256	20.93
	21 2-Nitrophenol	139	9.414	9.412	(0.944)	303384	22.8461	22.85
	22 2,4-Dimethylphenol	107	9.548	9.546	(0.957)	1267681	50.4782	50.48
	23 Bis(2-Chloroethoxy)methane	93	9.676	9.674	(0.970)	622148	18.9558	18.96
	24 Benzoic acid	105	9.836	9.834	(0.986)	1131209	52.0360	52.04
	25 2,4-Dichlorophenol	162	9.809	9.808	(0.983)	1185796	61.3211	61.32
	26 1,2,4-Trichlorobenzene	180	9.922	9.920	(0.995)	451767	18.7679	18.77
*	27 Naphthalene-d8	136	9.975	9.979	(1.000)	1494249	20.0000	
	28 Naphthalene	128	10.007	10.005	(1.003)	1433484	21.4167	21.42
	29 4-Chloroaniline	127	10.162	10.166	(1.019)	1655330	138.732	138.7(R)
	30 Hexachlorobutadiene	225	10.322	10.326	(1.035)	225635	15.4035	15.40
	31 4-Chloro-3-methylphenol	107	10.995	10.994	(1.102)	1327475	64.6275	64.63
	32 2-Methylnaphthalene	141	11.124	11.127	(1.115)	800791	22.0372	22.04
	33 Hexachlorocyclopentadiene	237	11.503	11.501	(0.897)	681141	52.1766	52.18
	34 2,4,6-Trichlorophenol	196	11.653	11.651	(0.908)	959578	70.2512	70.25
	35 2,4,5-Trichlorophenol	196	11.711	11.715	(0.913)	1014885	75.3179	75.32
$	36 2-Fluorobiphenyl	172	11.770	11.768	(0.918)	1144619	22.3169	22.32
	37 2-Chloronaphthalene	162	11.898	11.902	(0.928)	947720	27.4317	27.43
	38 2-Nitroaniline	65	12.155	12.148	(0.948)	971346	80.8632	80.86
	39 Dimethylphthalate	163	12.523	12.516	(0.976)	1172679	23.9794	23.98
	40 Acenaphthylene	152	12.577	12.575	(0.980)	1597580	24.9265	24.93
	41 2,6-Dinitrotoluene	165	12.614	12.607	(0.983)	773690	74.0487	74.05
*	42 Acenaphthene-d10	164	12.828	12.826	(1.000)	812538	20.0000	
	43 3-Nitroaniline	138	12.833	12.831	(1.000)	809681	195.201	195.2(R)
	44 Acenaphthene	153	12.876	12.874	(1.004)	984740	23.7311	23.73
	45 2,4-Dinitrophenol	184	12.993	12.986	(1.013)	977785	131.024	131.0
	46 Dibenzofuran	168	13.138	13.141	(1.024)	1442727	26.5835	26.58
	47 4-Nitrophenol	109	13.164	13.168	(1.026)	253216	47.7046	47.70
	48 2,4-Dinitrotoluene	165	13.239	13.232	(1.032)	1063280	75.2358	75.24
	50 Diethylphthalate	149	13.672	13.665	(1.066)	1210905	26.7254	26.73
	49 Fluorene	166	13.693	13.691	(1.067)	1083559	28.4388	28.44
	51 4-Chlorophenyl-phenylether	204	13.715	13.718	(1.069)	589049	24.7266	24.73
	52 4-Nitroaniline	138	13.837	13.820	(1.079)	836682	104.987	105.0(R)
	53 4,6-Dinitro-2-methylphenol	198	13.896	13.884	(0.915)	1276916	118.323	118.3
	54 N-Nitrosodiphenylamine	169	13.934	13.932	(0.917)	886058	21.7464	21.75
$	55 2,4,6-Tribromophenol	330	14.115	14.119	(1.100)	274182	42.6744	42.67
	56 4-Bromophenyl-phenylether	248	14.495	14.493	(0.954)	349988	21.2782	21.28
	57 Hexachlorobenzene	284	14.708	14.712	(0.968)	341628	20.1461	20.15
	58 Pentachlorophenol	266	15.018	15.022	(0.989)	711941	71.1636	71.16
*	59 Phenanthrene-d10	188	15.189	15.193	(1.000)	1498680	20.0000	
	60 Phenanthrene	178	15.226	15.225	(1.002)	1671571	22.5439	22.54
	61 Anthracene	178	15.296	15.299	(1.007)	1652679	22.2608	22.26
	62 Carbazole	167	15.584	15.588	(1.026)	1540444	29.6692	29.67
	63 Di-n-butylphthalate	149	16.300	16.304	(1.073)	2047628	21.8770	21.88

Q

AZ 04/23/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	
	64 Fluoranthene	202	17.144	17.153	(1.129)	1926290	24.6959	24.70	
	65 Pyrene	202	17.502	17.506	(0.899)	1977702	26.4576	26.46	
$	66 Terphenyl-d14	244	17.817	17.826	(0.915)	1212947	25.2469	25.25	
	67 Butylbenzylphthalate	149	18.704	18.708	(0.960)	910492	24.9095	24.91	
	68 Benzo(a)anthracene	228	19.452	19.456	(0.999)	1654048	26.5064	26.51	
*	69 Chrysene-d12	240	19.479	19.482	(1.000)	1368705	20.0000		
	70 3,3'-Dichlorobenzidine	252	19.473	19.472	(1.000)	1093862	63.7132	63.71	
	71 Chrysene	228	19.516	19.525	(1.002)	1609273	25.2622	25.26	
	72 bis(2-Ethylhexyl)phthalate	149	19.698	19.701	(0.955)	1254441	23.3345	23.33	
*	134 Di-n-octylphthalate-d4	153	20.622	20.631	(1.000)	1826924	20.0000		
	73 Di-n-octylphthalate	149	20.638	20.642	(1.001)	1998486	23.1680	23.17	
	74 Benzo(b)fluoranthene	252	21.097	21.106	(0.976)	1705145	25.9715	25.97	
	75 Benzo(k)fluoranthene	252	21.129	21.138	(0.977)	1745024	24.1439	24.14	Q
	76 Benzo(a)pyrene	252	21.541	21.550	(0.996)	1500933	24.0084	24.01	
*	77 Perylene-d12	264	21.621	21.630	(1.000)	1462650	20.0000		
	78 Indeno(1,2,3-cd)pyrene	276	23.063	23.078	(1.067)	1857246	24.6853	24.69	
	79 Dibenzo(a,h)anthracene	278	23.090	23.099	(1.068)	1475416	24.9053	24.91	
	80 Benzo(g,h,i)perylene	276	23.459	23.468	(1.085)	1588617	24.6903	24.69	
	90 N-Nitrosodimethylamine	74	3.239	3.226	(0.408)	626018	32.3660	32.37	
	91 Aniline	93	7.502	7.500	(0.945)	1956176	53.8210	53.82	
	93 Benzidine	184	Compound Not Detected.						NC
	103 Pyridine	79	3.180	3.183	(0.401)	793014	25.8524	25.85	
	105 1-methylnaphthalene	141	11.295	11.293	(1.132)	810107	21.9453	21.95	
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.976	13.969	(1.090)	1196517	23.2414	23.24	
	187 Total Benzofluoranthenes	252	21.129	21.138	(0.977)	3232184	47.9984	48.00	
	120 2,3,4,6-Tetrachlorophenol	232	13.426	13.430	(1.047)	342308	29.5146	29.51	
	188 2,6-Dichlorophenol	162	Compound Not Detected.						
	189 N-Nitrosomethylethylamine	88	Compound Not Detected.						not added in

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

04/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 04191305.d
Lab Smp Id: WL49LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

Calibration Date: 19-APR-2013
Calibration Time: 11:29
Client Smp ID: WL49LCSDW1
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	410727	-10.34
27 Naphthalene-d8	1718341	859170	3436682	1494249	-13.04
42 Acenaphthene-d10	1010041	505020	2020082	812538	-19.55
59 Phenanthrene-d10	1666734	833367	3333468	1498680	-10.08
69 Chrysene-d12	1675752	837876	3351504	1368705	-18.32
134 Di-n-octylphthala	2026355	1013178	4052710	1826924	-9.84
77 Perylene-d12	1637524	818762	3275048	1462650	-10.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.94	7.44	8.44	7.93	-0.04
27 Naphthalene-d8	9.98	9.48	10.48	9.98	-0.04
42 Acenaphthene-d10	12.83	12.33	13.33	12.83	0.01
59 Phenanthrene-d10	15.19	14.69	15.69	15.19	-0.02
69 Chrysene-d12	19.48	18.98	19.98	19.48	-0.02
134 Di-n-octylphthala	20.63	20.13	21.13	20.62	-0.04
77 Perylene-d12	21.63	21.13	22.13	21.62	-0.04

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WL49LCSDW1
Client Smp ID: WL49LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPHDRMBLCS.sub
Method File: /chem2/nt6.i/20130419.b/SW846030613.m
Misc Info: 13-7779

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	9.282	37.13	16-100
4	Bis(2-Chloroethyl)	25.00	17.43	69.70	41-112
6	2-Chlorophenol	25.00	19.87	79.48	43-111
7	1,3-Dichlorobenzen	25.00	16.88	67.53	32-100
9	1,4-Dichlorobenzen	25.00	17.44	69.78	32-100
11	Benzyl alcohol	25.00	18.42	73.70	22-100
12	1,2-Dichlorobenzen	25.00	17.65	70.59	34-100
13	2-Methylphenol	25.00	17.47	69.87	36-110
14	2,2'-oxybis(1-Chlo	25.00	15.78	63.11	29-118
15	4-Methylphenol	50.00	35.02	70.04	38-104
16	N-Nitroso-di-n-pro	25.00	17.99	71.94	38-115
17	Hexachloroethane	25.00	14.61	58.44	24-100
19	Nitrobenzene	25.00	20.07	80.27	45-106
20	Isophorone	25.00	20.93	83.70	55-119
21	2-Nitrophenol	25.00	22.85	91.38	46-118
22	2,4-Dimethylphenol	75.00	50.48	67.30	28-105
23	Bis(2-Chloroethoxy	25.00	18.96	75.82	44-118
24	Benzoic acid	137.5	52.04	37.84	11-100
25	2,4-Dichlorophenol	75.00	61.32	81.76	43-121
26	1,2,4-Trichloroben	25.00	18.77	75.07	35-100
28	Naphthalene	25.00	21.42	85.67	36-111
29	4-Chloroaniline	75.00	138.7	184.98*	10-153
30	Hexachlorobutadien	25.00	15.40	61.61	24-100
31	4-Chloro-3-methylp	75.00	64.63	86.17	45-122
32	2-Methylnaphthalen	25.00	22.04	88.15	45-103
33	Hexachlorocyclopen	75.00	52.18	69.57	23-108
34	2,4,6-Trichlorophe	75.00	70.25	93.67	48-122
35	2,4,5-Trichlorophe	75.00	75.32	100.42	48-122
37	2-Chloronaphthalen	25.00	27.43	109.73	39-118
38	2-Nitroaniline	75.00	80.86	107.82	48-118
39	Dimethylphthalate	25.00	23.98	95.92	50-120
40	Acenaphthylene	25.00	24.93	99.71	50-119
41	2,6-Dinitrotoluene	75.00	74.05	98.73	48-133

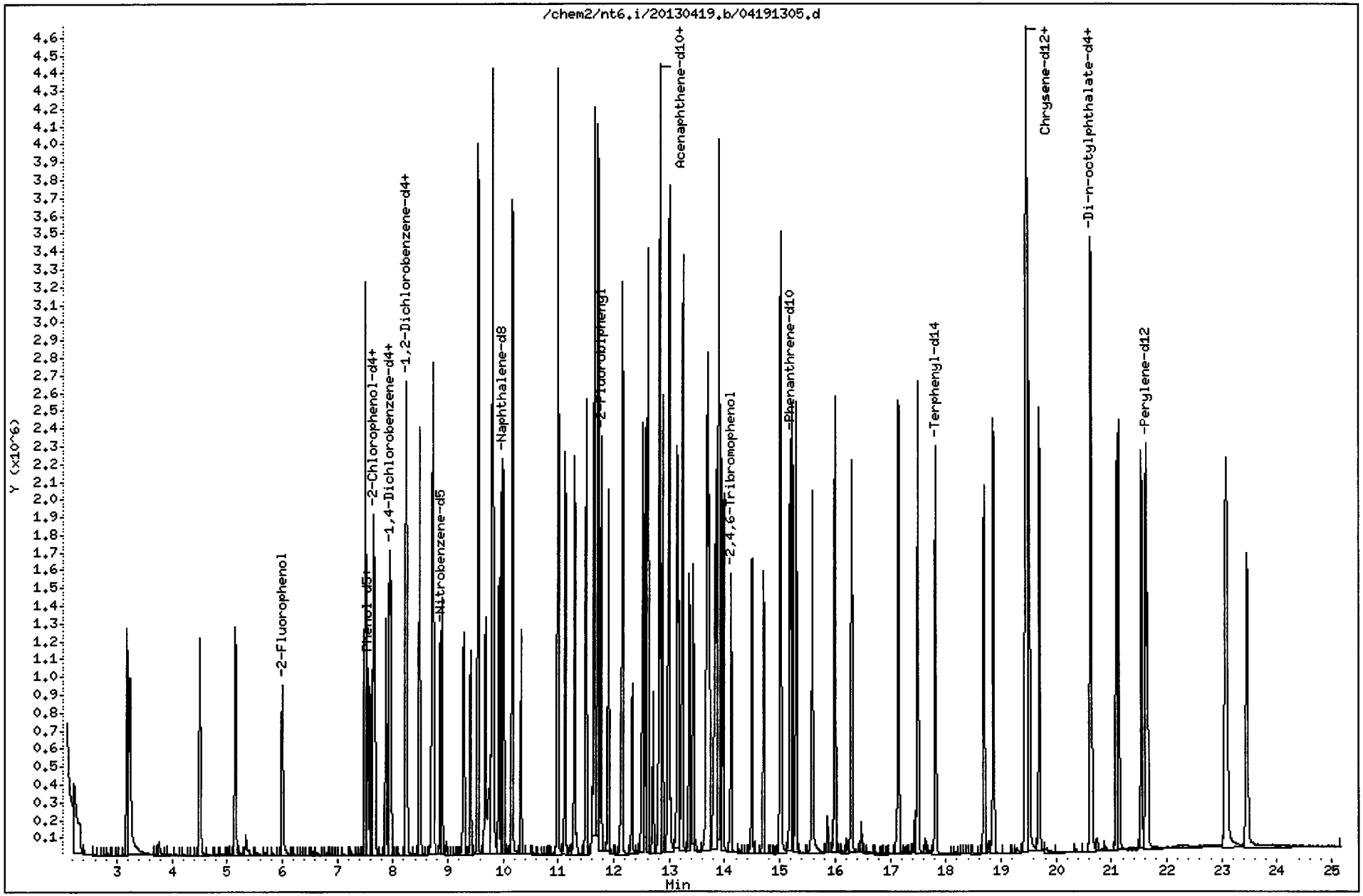
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	195.2	260.27*	10-208
44 Acenaphthene	25.00	23.73	94.92	41-120
45 2,4-Dinitrophenol	137.5	131.0	95.29	10-224
46 Dibenzofuran	25.00	26.58	106.33	51-114
47 4-Nitrophenol	75.00	47.70	63.61	10-103
48 2,4-Dinitrotoluene	75.00	75.24	100.31	51-134
49 Fluorene	25.00	28.44	113.76	50-120
50 Diethylphthalate	25.00	26.73	106.90	48-122
51 4-Chlorophenyl-phe	25.00	24.73	98.91	50-118
52 4-Nitroaniline	75.00	105.0	139.98*	42-136
53 4,6-Dinitro-2-meth	125.0	118.3	94.66	10-190
54 N-Nitrosodiphenyla	25.00	21.75	86.99	58-141
56 4-Bromophenyl-phen	25.00	21.28	85.11	50-122
57 Hexachlorobenzene	25.00	20.15	80.58	47-125
58 Pentachlorophenol	75.00	71.16	94.88	35-130
60 Phenanthrene	25.00	22.54	90.18	49-120
61 Anthracene	25.00	22.26	89.04	53-116
62 Carbazole	25.00	29.67	118.68	57-122
63 Di-n-butylphthalat	25.00	21.88	87.51	57-121
64 Fluoranthene	25.00	24.70	98.78	56-119
65 Pyrene	25.00	26.46	105.83	37-143
67 Butylbenzylphthala	25.00	24.91	99.64	34-152
68 Benzo(a)anthracene	25.00	26.51	106.03	49-129
70 3,3'-Dichlorobenzi	75.00	63.71	84.95	50-128
71 Chrysene	25.00	25.26	101.05	45-128
72 bis(2-Ethylhexyl)p	25.00	23.33	93.34	57-133
73 Di-n-octylphthalat	25.00	23.17	92.67	52-120
74 Benzo(b)fluoranthe	25.00	25.97	103.89	50-126
75 Benzo(k)fluoranthe	25.00	24.14	96.58	49-126
76 Benzo(a)pyrene	25.00	24.01	96.03	46-109
78 Indeno(1,2,3-cd)py	25.00	24.69	98.74	34-136
79 Dibenzo(a,h)anthra	25.00	24.91	99.62	41-134
80 Benzo(g,h,i)peryle	25.00	24.69	98.76	41-133
91 Aniline	75.00	53.82	71.76	28-126
111 Azobenzene (1,2-DP	25.00	23.24	92.97	55-119
105 1-methylnaphthalen	25.00	21.95	87.78	43-115
90 N-Nitrosodimethyla	50.00	32.37	64.73	31-100
103 Pyridine	50.00	25.85	51.70	25-100
120 2,3,4,6-Tetrachlor	25.00	29.51	118.06	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	not added in *	30-160
187 Total Benzofluoran	50.00	48.00	96.00	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	19.08	50.88	33-100

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.41	38.42	15-121
$ 5 2-Chlorophenol-d4	37.50	28.25	75.33	46-102
$ 10 1,2-Dichlorobenzen	25.00	16.96	67.82	40-100
$ 18 Nitrobenzene-d5	25.00	19.37	77.47	50-100
$ 36 2-Fluorobiphenyl	25.00	22.32	89.27	51-100
$ 55 2,4,6-Tribromophen	37.50	42.67	113.80	46-125
$ 66 Terphenyl-d14	25.00	25.25	100.99	54-117

Data File: /chem2/nt6.i/20130419.b/04191305.d
Date : 19-APR-2013 14:25
Client ID: WL49LCSDW1
Sample Info: WL49LCSDW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 04191305.d

Lab ID: WL49LCSDW1, Method: SW846030613.m, Instrument: nt6.i, Date: 19-APR-20

RT	CO-ELUTION COMPOUNDS
8.485	2,2'-oxybis(1-Chloropropane) and 2-Methylphenol
8.234	1,2-Dichlorobenzene-d4 and Benzyl alcohol

checked ok

04/23/19

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL49 Client ID: CAT C

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 01/25/13 Analysis Start Date: 04/24/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N / ✓	LCS / LCSD RPD ≤ 30%?	NA / ✓ LCS only
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / X
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / (3X) ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below.

- Sample E was run a 3x dilution due to dark color of the extract

(Review 1) Analyst: XZ **Date:** 4/25/13

(Review 2) Reviewer: [signature] **Date:** 4/28/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/24/13 Analysis: DBN / SIM DBN Analyst: YZ

GC Program: DBN_2 Column No: 247358 Column Type: ZB5MS1

Instrument Tune (.U or .CT.): 1302284 EM Voltage: 1625

Calibration File: DF0424 Curve Date: 04/25/13 Injection Vol.: uL

IS/SS	Ical/Ccal	LCS/ICV
1978-2	2026-2 2050-1,2	
	2060-2 1998-4	
	2088-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

	Time	Filename	LabID	ClientId	DF											
1	1730	df0424 d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1746	cc0424.d	CC0424		1	7.66	58556	10.27	212952	14.10	132668	17.34	220641	22.64	227119	24.94	205360	23.90	288338
3	1900	wl49mb.d	WL49MBS1	WL49MBS1	1	7.65	52770	10.27	203934	14.10	121815	17.34	205587	22.63	210775	24 94	182935	23.90	259915
4	1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	7.65	46529	10.27	171858	14.11	111063	17.34	183550	22.64	193070	24.94	174938	23.90	240110
5	2014	wl49f d	WL49F	IM-CB-01-201	3	7.65	47052	10 27	173120	14.11	98772	17.36	156141	22.70	192699	25.03	186003	23.96	241387
6	2051	wl49g.d	WL49G	IM-CB-02-201	1	7 66	39444	10 27	153130	14 11	90352	17 34	136238	22.65	156248	24 97	149715	23.91	205378
7	2127	wl49gms.d	WL49GMS	IM-CB-02-201	1	7 66	41745	10.26	159336	14.11	98536	17.35	150903	22 66	175942	24.97	167594	23.92	226126
8	2204	wl49gmsd.d	WL49GMSD	IM-CB-02-201	1	7.66	42104	10.26	167020	14 11	97905	17.35	153490	22.66	173061	24.98	165087	23.92	222579
9	2241	wl67a.d	WL67A	GR-CB-07-201	3	7.66	48352	10.27	187776	14.11	114903	17 35	184248	22.69	197814	25.03	189875	23.96	250530
10	2318	wl67b.d	WL67B	GR-WS-05-201	3	7.66	40596	10.27	157743	14.11	98608	17.35	150379	22 68	175439	25 01	176764	23.95	224657

YZ 4/23/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

ARI Job No.: WL49 Method: ABN.m Instrument: nt10.i Date: 24-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1900	wl49mb.d	WL49MBS1	WL49MBS1	1	NO MANUAL INTEGRATION
1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	NO MANUAL INTEGRATION
2014	wl49f.d	WL49F	IM-CB-01-2	3	Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2051	wl49g.d	WL49G	IM-CB-02-2	1	Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2127	wl49gms.d	WL49GMS	IM-CB-02-2	1	3,3'-Dichlorobenzidine, Aniline,
2204	wl49gmsd.d	WL49GMSD	IM-CB-02-2	1	3,3'-Dichlorobenzidine, Di-n-octylphthalate, Aniline,
2241	wl67a.d	WL67A	GR-CB-07-2	3	Butylbenzylphthalate, Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
2318	wl67b.d	WL67B	GR-WS-05-2	3	Di-n-butylphthalate, Butylbenzylphthalate, Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene,
1158	wl67b2.d	WL67B	GR-WS-05-2	6	Butylbenzylphthalate, Di-n-octylphthalate, Dibenzo(a,h)anthracene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

Instrument: nt10.i Date: 24-APR-2013 Method: ABN.m

INITIAL CAL: 25-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 24-APR-2013

Compound	%D
Benzyl alcohol	-31.6
Hexachlorocyclopentadiene	-22.0
3,3'-Dichlorobenzidine	-22.1
Retene	-100.0

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

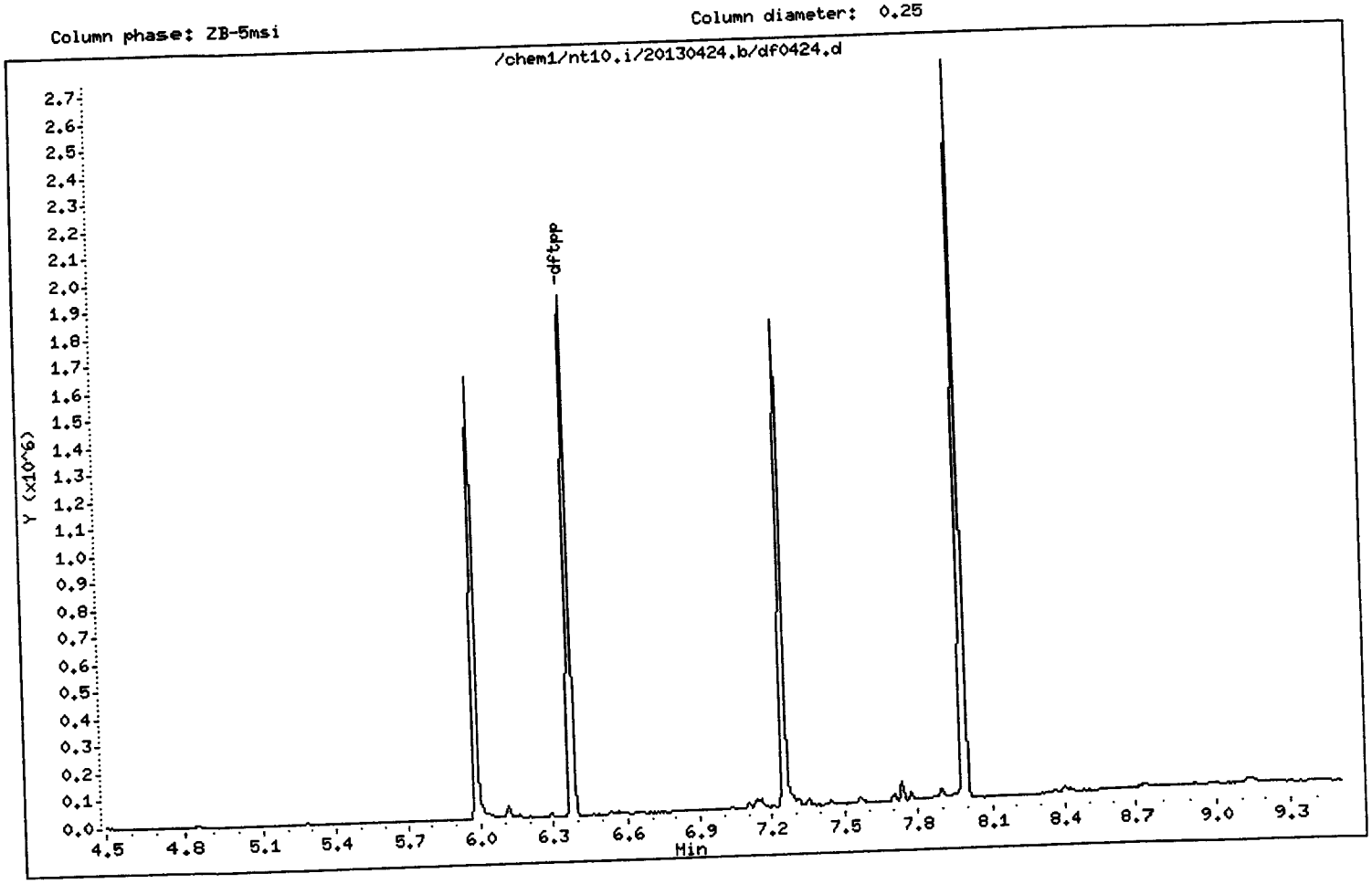
Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Sample Info: DFTPP

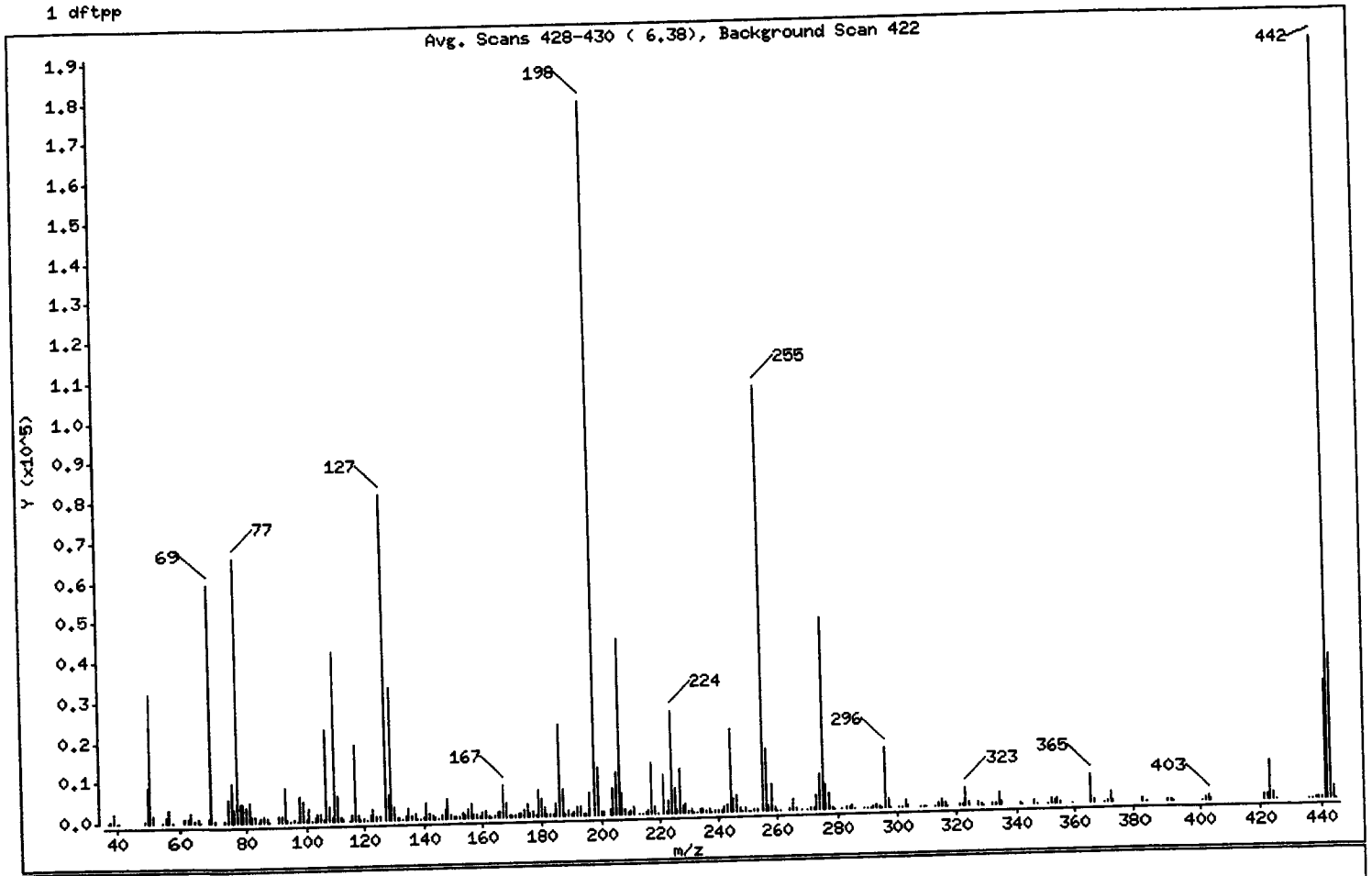
Instrument: nt10.i

Operator: YZ

Column diameter: 0.25

Column phase: ZB-5msi

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	18.02
68	Less than 2.00% of mass 69	0.56 (1.68)
69	Mass 69 relative abundance	33.29
70	Less than 2.00% of mass 69	0.14 (0.44)
127	10.00 - 80.00% of mass 198	45.50
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.59
275	10.00 - 60.00% of mass 198	26.71
365	Greater than 1.00% of mass 198	3.93
441	0.01 - 24.00% of mass 442	16.43 (15.36)
442	50.00 - 200.00% of mass 198	106.98
443	15.00 - 24.00% of mass 442	20.26 (18.94)

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d

Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422

Location of Maximum: 442.00

Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	62	129.00	32808	205.00	10718	290.00	51
38.00	420	130.00	2896	206.00	44136	291.00	54
39.00	2403	131.00	583	207.00	5430	292.00	222
40.00	124	132.00	275	208.00	1492	293.00	990
41.00	119	133.00	139	209.00	487	294.00	258
49.00	232	134.00	875	210.00	870	295.00	142
50.00	8942	135.00	2524	211.00	1733	296.00	14776
51.00	32216	136.00	990	213.00	137	297.00	2046
52.00	1767	137.00	1248	214.00	51	298.00	79
55.00	209	138.00	208	215.00	470	301.00	193
56.00	1373	139.00	131	216.00	1026	302.00	201
57.00	3288	140.00	385	217.00	12663	303.00	1630
58.00	125	141.00	4070	218.00	1617	304.00	406
61.00	732	142.00	1272	219.00	123	308.00	209
62.00	713	143.00	934	221.00	9746	309.00	118
63.00	2186	144.00	239	222.00	376	310.00	146
64.00	352	145.00	196	223.00	2876	313.00	120
65.00	1059	146.00	707	224.00	25448	314.00	746
66.00	55	147.00	2048	225.00	6292	315.00	1736
68.00	999	148.00	4742	226.00	710	316.00	874
69.00	59536	149.00	818	227.00	10853	317.00	86
70.00	259	150.00	258	228.00	1541	321.00	496
73.00	521	151.00	595	229.00	2340	322.00	312
74.00	5709	152.00	403	230.00	329	323.00	4532
75.00	9567	153.00	1361	231.00	983	324.00	924
76.00	3032	154.00	960	232.00	161	327.00	907
77.00	66016	155.00	2359	233.00	157	328.00	495
78.00	4326	156.00	3300	234.00	690	329.00	55
79.00	4544	157.00	722	235.00	824	332.00	410
80.00	3456	158.00	725	236.00	501	333.00	464
81.00	4912	159.00	585	237.00	800	334.00	2983
82.00	1250	160.00	1364	238.00	54	335.00	737
83.00	1243	161.00	1883	239.00	520	341.00	555
84.00	206	162.00	571	240.00	310	342.00	55
85.00	820	163.00	138	241.00	588	346.00	1033

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1326	164.00	270	242.00	1459	347.00	181
87.00	703	165.00	1532	243.00	1641	351.00	51
88.00	177	166.00	1277	244.00	20496	352.00	1489
91.00	1264	167.00	7974	245.00	2914	353.00	930
92.00	1216	168.00	3308	246.00	4015	354.00	1380
93.00	8379	169.00	651	247.00	869	355.00	264
94.00	617	170.00	234	248.00	153	359.00	143
95.00	125	171.00	352	249.00	707	365.00	7026
96.00	426	172.00	743	250.00	143	366.00	864
97.00	63	173.00	1004	251.00	215	370.00	61
98.00	6323	174.00	1678	252.00	244	371.00	407
99.00	4695	175.00	3145	253.00	592	372.00	2609
100.00	409	176.00	1010	255.00	106344	373.00	599
101.00	3009	177.00	1443	256.00	15303	383.00	669
102.00	160	178.00	550	257.00	1302	384.00	214
103.00	942	179.00	6588	258.00	6520	390.00	340
104.00	1960	180.00	4195	259.00	999	391.00	255
105.00	1831	181.00	2153	260.00	182	392.00	125
106.00	619	182.00	401	261.00	199	401.00	137
107.00	23016	183.00	228	264.00	283	402.00	1000
108.00	3453	184.00	507	265.00	2702	403.00	1513
109.00	678	185.00	3200	266.00	287	404.00	508
110.00	42288	186.00	22896	268.00	56	421.00	1378
111.00	6306	187.00	6675	270.00	185	422.00	1170
112.00	776	188.00	598	271.00	282	423.00	9532
113.00	262	189.00	1483	272.00	389	424.00	1837
115.00	58	190.00	274	273.00	3694	425.00	180
116.00	1306	191.00	747	274.00	8678	436.00	112
117.00	18768	192.00	2090	275.00	47760	437.00	156
118.00	1384	193.00	2239	276.00	6344	438.00	351
119.00	190	194.00	525	277.00	3970	439.00	457
120.00	264	195.00	249	278.00	627	440.00	251
121.00	65	196.00	5697	279.00	68	441.00	29376
122.00	1472	198.00	178816	281.00	58	442.00	191296
123.00	2448	199.00	11790	283.00	520	443.00	36224

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

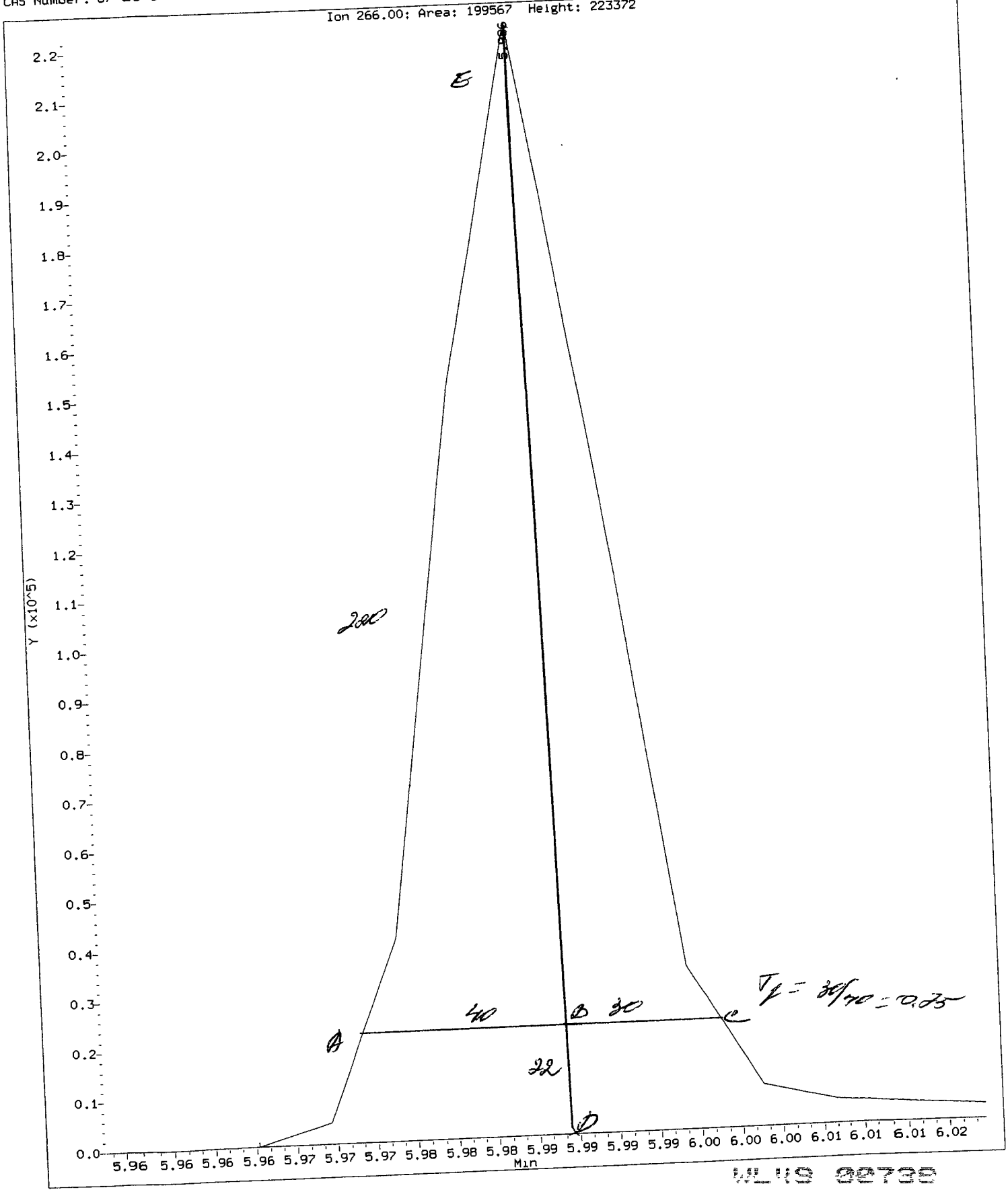
Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1020	200.00	934	284.00	341	444.00	3289
125.00	1068	201.00	969	285.00	759	445.00	129
127.00	81368	203.00	1335	286.00	60		
128.00	6094	204.00	6384	289.00	105		

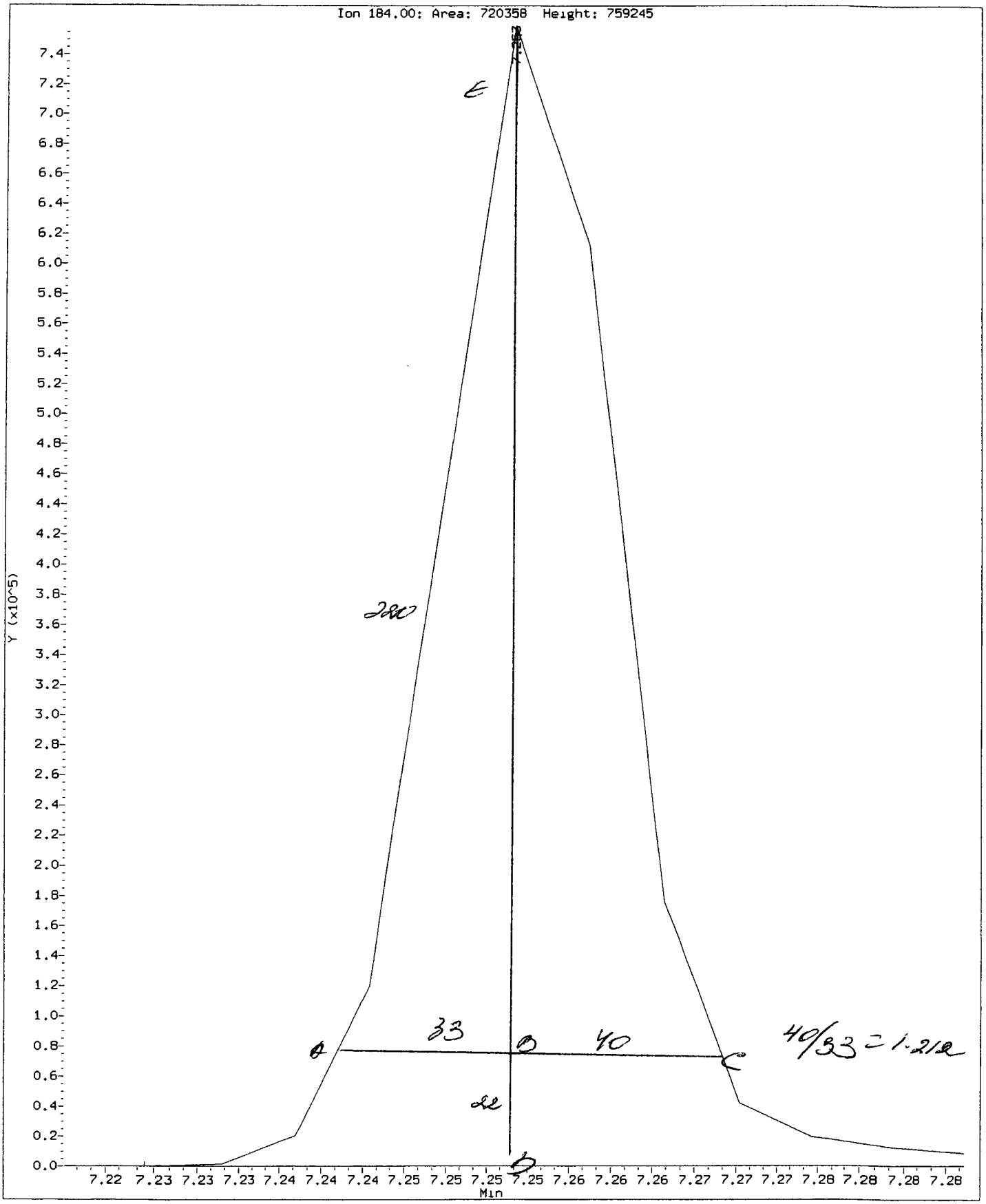
Data File: /chem1/nt10.i/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130424.b/ddt.b/df0424.d
Method: /chem1/nt10.i/20130424.b/ddt.b/sw846ddt.m
Analysis Date: 24-APR-2013 17:30

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.986	199567
Benzidine	7.253	720358
4,4'-DDE	7.446	1704
4,4'-DDD	7.735	12189
4,4'-DDT	7.991	515480

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

$$\text{DDT Percent Breakdown} = \frac{(\ 1704 + 12189) * 100}{(\ 1704 + 12189 + 515480)}$$

DDT Percent Breakdown = 2.6 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0424.d
Analysis Type:
Lab Sample ID: CC0424
Method: /chem1/nt10.i/20130424.b/ABN.m

Injection Date: 24-APR-2013 17:46
Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Init. Cal. Times: 12:59 17:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.27898	1.35504	1.35504	0.010	5.94628	20.00000	Averaged	
$ 2 Phenol-d5	1.58709	1.76626	1.76626	0.010	11.28885	20.00000	Averaged	
3 Phenol	1.67046	1.76030	1.76030	0.100	5.37816	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.37422	1.31350	1.31350	0.010	-4.41913	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.27098	1.24489	1.24489	0.700	-2.05268	20.00000	Averaged	
6 2-Chlorophenol	1.45366	1.38201	1.38201	0.800	-4.92868	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.58180	1.45311	1.45311	0.010	-8.13561	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.56627	1.42072	1.42072	0.010	-9.29290	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00989	0.96021	0.96021	0.010	-4.91987	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.50604	1.37020	1.37020	0.010	-9.01947	20.00000	Averaged	
11 Benzyl alcohol	0.79941	0.54678	0.54678	0.010	-31.60180	20.00000	Averaged	<-
14 2,2'-oxybis(1-Chloropropane	0.44716	0.41095	0.41095	0.010	-8.09880	20.00000	Averaged	
13 2-Methylphenol	1.26098	1.39134	1.39134	0.700	10.33782	20.00000	Averaged	
17 Hexachloroethane	0.61907	0.59460	0.59460	0.300	-3.95238	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.84248	0.87655	0.87655	0.500	4.04390	20.00000	Averaged	
15 4-Methylphenol	1.31137	1.40738	1.40738	0.600	7.32175	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.36919	0.39064	0.39064	0.010	5.80988	20.00000	Averaged	
19 Nitrobenzene	0.35004	0.35507	0.35507	0.200	1.43646	20.00000	Averaged	
20 Isophorone	0.61012	0.66798	0.66798	0.300	9.48355	20.00000	Averaged	
21 2-Nitrophenol	0.20568	0.21456	0.21456	0.100	4.31717	20.00000	Averaged	
22 2,4-Dimethylphenol	0.35058	0.37473	0.37473	0.200	6.88840	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.38425	0.40061	0.40061	0.050	4.25691	20.00000	Averaged	
24 Benzoic acid	18.78980	20.00000	0.28130	0.010	-6.05102	20.00000	Quadratic	
25 2,4-Dichlorophenol	0.30640	0.31428	0.31428	0.100	2.57282	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.34870	0.31970	0.31970	0.010	-8.31591	20.00000	Averaged	
28 Naphthalene	1.04083	0.96617	0.96617	0.100	-7.17372	20.00000	Averaged	
29 4-Chloroaniline	0.41889	0.41382	0.41382	0.010	-1.20980	20.00000	Averaged	
30 Hexachlorobutadiene	0.21732	0.20599	0.20599	0.010	-5.21256	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.29615	0.33631	0.33631	0.200	13.56218	20.00000	Averaged	
32 2-Methylnaphthalene	0.68720	0.68747	0.68747	0.300	0.03842	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.45113	0.35172	0.35172	0.001	-22.03638	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.40085	0.40426	0.40426	0.200	0.85015	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.42597	0.44464	0.44464	0.200	4.38189	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.37225	1.31437	1.31437	0.010	-4.21799	20.00000	Averaged	
37 2-Chloronaphthalene	1.10490	1.02065	1.02065	0.700	-7.62504	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0424.d
Analysis Type:
Lab Sample ID: CC0424
Method: /chem1/nt10.i/20130424.b/ABN.m

Injection Date: 24-APR-2013 17:46
Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Init. Cal. Times: 12:59 17:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.25914	0.30612	0.30612	0.010	18.12932	20.00000	Averaged	
39 Dimethylphthalate	1.20981	1.11953	1.11953	0.010	-7.46294	20.00000	Averaged	
40 Acenaphthylene	1.80186	1.71071	1.71071	0.900	-5.05838	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.27639	0.27248	0.27248	0.100	-1.41435	20.00000	Averaged	
43 3-Nitroaniline	0.25523	0.27023	0.27023	0.010	5.87602	20.00000	Averaged	
44 Acenaphthene	1.10485	1.04933	1.04933	0.100	-5.02523	20.00000	Averaged	
45 2,4-Dinitrophenol	18.25964	20.00000	0.22001	0.030	-8.70179	20.00000	Quadratic	
46 Dibenzofuran	1.53658	1.52782	1.52782	0.800	-0.57064	20.00000	Averaged	
47 4-Nitrophenol	9.47467	10.00000	0.16473	0.010	-5.25326	20.00000	Quadratic	
48 2,4-Dinitrotoluene	0.37372	0.37093	0.37093	0.200	-0.74640	20.00000	Averaged	
50 Diethylphthalate	1.26733	1.11738	1.11738	0.010	-11.83127	20.00000	Averaged	
49 Fluorene	1.30516	1.24209	1.24209	0.100	-4.83200	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.60824	0.55175	0.55175	0.100	-9.28731	20.00000	Averaged	
52 4-Nitroaniline	0.26944	0.29238	0.29238	0.010	8.51314	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	0.16018	0.17691	0.17691	0.001	10.44072	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.48183	0.44530	0.44530	0.010	-7.58002	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.25526	0.20917	0.20917	0.010	-18.05718	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22313	0.21962	0.21962	0.100	-1.56997	20.00000	Averaged	
57 Hexachlorobenzene	0.28001	0.25304	0.25304	0.100	-9.63184	20.00000	Averaged	
58 Pentachlorophenol	0.18673	0.15493	0.15493	0.010	-17.02634	20.00000	Averaged	
60 Phenanthrene	1.06632	1.01217	1.01217	0.700	-5.07787	20.00000	Averaged	
61 Anthracene	1.07365	1.06618	1.06618	0.700	-0.69604	20.00000	Averaged	
62 Carbazole	0.71710	0.72864	0.72864	0.010	1.60843	20.00000	Averaged	
63 Di-n-butylphthalate	1.14571	1.16185	1.16185	0.010	1.40842	20.00000	Averaged	
64 Fluoranthene	1.22799	1.22462	1.22462	0.600	-0.27485	20.00000	Averaged	
65 Pyrene	1.13938	1.20602	1.20602	0.600	5.84889	20.00000	Averaged	
$ 66 Terphenyl-d14	0.76828	0.72865	0.72865	0.010	-5.15896	20.00000	Averaged	
67 Butylbenzylphthalate	0.43214	0.45424	0.45424	0.010	5.11490	20.00000	Averaged	
68 Benzo(a)anthracene	1.11613	1.05495	1.05495	0.700	-5.48079	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.46632	0.36310	0.36310	0.010	-22.13500	20.00000	Averaged	<-
71 Chrysene	1.01092	0.89495	0.89495	0.700	-11.47162	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.52819	0.50289	0.50289	0.010	-4.79014	20.00000	Averaged	
73 Di-n-octylphthalate	0.97573	0.83461	0.83461	0.010	-14.46334	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.15936	1.23705	1.23705	0.700	6.70178	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25249	1.12045	1.12045	0.700	-10.54228	20.00000	Averaged	

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Report Date: 25-Apr-2013 15:16

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0424.d
Analysis Type:
Lab Sample ID: CC0424
Method: /chem1/nt10.i/20130424.b/ABN.m

Injection Date: 24-APR-2013 17:46
Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Init. Cal. Times: 12:59 17:16
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.00265	0.97593	0.97593	0.700	-2.66433	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.23647	1.17496	1.17496	0.500	-4.97406	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.97912	0.90035	0.90035	0.400	-8.04574	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.06086	1.01203	1.01203	0.500	-4.60264	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.76098	0.79517	0.79517	0.010	4.49205	20.00000	Averaged	
91 Aniline	3.60472	4.12635	4.12635	0.010	14.47071	20.00000	Averaged	
93 Benzidine	9.39540	10.00000	0.17438	0.010	-6.04599	20.00000	Quadratic	
103 Pyridine	0.64909	0.68021	0.68021	0.010	4.79316	20.00000	Averaged	
105 1-methylnaphthalene	0.63035	0.62732	0.62732	0.010	-0.48067	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.14954	1.12916	1.12916	0.010	-1.77212	20.00000	Averaged	
187 Total Benzofluoranthenes	1.14121	1.09301	1.09301	0.010	-4.22383	20.00000	Averaged	
99 Perylene	1.15229	1.05456	1.05456	0.010	-8.48119	20.00000	Quadratic	<-
98 Retene	++++	++++	++++	0.010	++++	20.00000	Quadratic	<-
120 2,3,4,6-Tetrachlorophenol	0.37257	0.34156	0.34156	0.010	-8.32206	20.00000	Averaged	

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Report Date: 25-Apr-2013 15:16

Analytical Resources, Inc. YZ 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/cc0424.d
Lab Smp Id: CC0424
Inj Date : 24-APR-2013 17:46 Inst ID: nt10.i
Operator : VTS/YZ
Smp Info : CC0424
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m Quant Type: ISTD
Meth Date : 25-Apr-2013 14:39 yev Cal File: ic0125h.d
Cal Date : 25-JAN-2013 17:16 Continuing Calibration Sample
Als bottle: 3
Dil Factor: 1.00000 Compound Sublist: PSDDAICAL.sub
Integrator: HP RTE
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.444	5.444	(0.710)	99182	5.00000	5.297
$	2 Phenol-d5	99	7.159	7.159	(0.934)	129281	5.00000	5.564
	3 Phenol	94	7.182	7.182	(0.937)	128845	5.00000	5.269
$	5 2-Chlorophenol-d4	132	7.306	7.306	(0.954)	96141	5.00000	4.779
	4 Bis(2-Chloroethyl)ether	93	7.260	7.260	(0.947)	91119	5.00000	4.897
	6 2-Chlorophenol	128	7.337	7.337	(0.958)	101156	5.00000	4.754
	7 1,3-Dichlorobenzene	146	7.584	7.584	(0.990)	106360	5.00000	4.593
*	8 1,4-Dichlorobenzene-d4	152	7.662	7.662	(1.000)	58556	4.00000	
	9 1,4-Dichlorobenzene	146	7.693	7.693	(1.004)	103989	5.00000	4.535
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.048)	70282	5.00000	4.754
	12 1,2-Dichlorobenzene	146	8.058	8.058	(1.052)	100292	5.00000	4.549
	11 Benzyl alcohol	108	8.019	8.019	(1.047)	40021	5.00000	3.420
	14 2,2'-oxybis(1-Chloropropane)	121	8.337	8.337	(1.088)	30079	5.00000	4.595
	13 2-Methylphenol	108	8.322	8.322	(1.086)	101839	5.00000	5.517
	17 Hexachloroethane	117	8.663	8.663	(1.131)	43522	5.00000	4.802
	16 N-Nitroso-di-n-propylamine	70	8.609	8.609	(1.124)	64159	5.00000	5.202
	15 4-Methylphenol	108	8.625	8.625	(1.126)	103013	5.00000	5.366
$	18 Nitrobenzene-d5	82	8.826	8.826	(0.860)	103983	5.00000	5.290
	19 Nitrobenzene	77	8.857	8.857	(0.863)	94515	5.00000	5.072
	20 Isophorone	82	9.354	9.354	(0.911)	177810	5.00000	5.474
	21 2-Nitrophenol	139	9.525	9.525	(0.928)	57112	5.00000	5.216
	22 2,4-Dimethylphenol	107	9.710	9.710	(0.946)	199500	10.0000	10.69
	23 Bis(2-Chloroethoxy)methane	93	9.880	9.880	(0.962)	106637	5.00000	5.213
	24 Benzoic acid	105	10.072	10.072	(0.981)	299521	20.0000	18.79
	25 2,4-Dichlorophenol	162	10.049	10.049	(0.979)	167318	10.0000	10.26
	26 1,2,4-Trichlorobenzene	180	10.196	10.196	(0.993)	85101	5.00000	4.584
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	212952	4.00000	

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Report Date: 25-Apr-2013 15:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.304	10.304	(1.004)	257185	5.00000	4.641
	29 4-Chloroaniline	127	10.520	10.520	(1.025)	220310	10.0000	9.879
	30 Hexachlorobutadiene	225	10.736	10.736	(1.046)	54832	5.00000	4.739
	31 4-Chloro-3-methylphenol	107	11.650	11.650	(1.135)	179045	10.0000	11.36
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	182997	5.00000	5.002
	33 Hexachlorocyclopentadiene	237	12.323	12.323	(0.874)	116653	10.0000	7.796
	34 2,4,6-Trichlorophenol	196	12.516	12.516	(0.888)	134080	10.0000	10.09
	35 2,4,5-Trichlorophenol	196	12.601	12.601	(0.894)	147473	10.0000	10.44
$	36 2-Fluorobiphenyl	172	12.687	12.687	(0.900)	217969	5.00000	4.789
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	169260	5.00000	4.619
	38 2-Nitroaniline	65	13.190	13.190	(0.935)	101529	10.0000	11.81
	39 Dimethylphthalate	163	13.708	13.708	(0.972)	185657	5.00000	4.627
	40 Acenaphthylene	152	13.762	13.762	(0.976)	283696	5.00000	4.747
	41 2,6-Dinitrotoluene	165	13.824	13.824	(0.980)	90373	10.0000	9.859
*	42 Acenaphthene-d10	164	14.103	14.103	(1.000)	132668	4.00000	
	43 3-Nitroaniline	138	14.111	14.111	(1.001)	89627	10.0000	10.59
	44 Acenaphthene	153	14.180	14.180	(1.005)	174016	5.00000	4.749
	45 2,4-Dinitrophenol	184	14.342	14.342	(1.017)	145938	20.0000	18.26
	46 Dibenzofuran	168	14.536	14.536	(1.031)	253365	5.00000	4.971
	47 4-Nitrophenol	109	14.605	14.605	(1.036)	54635	10.0000	9.475
	48 2,4-Dinitrotoluene	165	14.683	14.683	(1.041)	123025	10.0000	9.925
	50 Diethylphthalate	149	15.293	15.293	(1.084)	185301	5.00000	4.408
	49 Fluorene	166	15.293	15.293	(1.084)	205983	5.00000	4.758
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	91499	5.00000	4.536
	52 4-Nitroaniline	138	15.471	15.471	(1.097)	96973	10.0000	10.85
	53 4,6-Dinitro-2-methylphenol	198	15.579	15.579	(0.898)	195166	20.0000	22.09
	54 N-Nitrosodiphenylamine	169	15.633	15.633	(0.902)	122816	5.00000	4.621
$	55 2,4,6-Tribromophenol	330	15.872	15.872	(1.125)	34687	5.00000	4.097
	56 4-Bromophenyl-phenylether	248	16.412	16.412	(0.946)	60572	5.00000	4.922
	57 Hexachlorobenzene	284	16.690	16.690	(0.962)	69790	5.00000	4.518
	58 Pentachlorophenol	266	17.116	17.116	(0.987)	85462	10.0000	8.297
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	220641	4.00000	
	60 Phenanthrene	178	17.394	17.394	(1.003)	279158	5.00000	4.746
	61 Anthracene	178	17.487	17.487	(1.008)	294054	5.00000	4.965
	62 Carbazole	167	17.897	17.897	(1.032)	200960	5.00000	5.080
	63 Di-n-butylphthalate	149	18.918	18.918	(1.091)	320440	5.00000	5.070
	64 Fluoranthene	202	19.947	19.947	(1.150)	337751	5.00000	4.986
	65 Pyrene	202	20.373	20.373	(0.900)	342387	5.00000	5.292
$	66 Terphenyl-d14	244	20.775	20.775	(0.918)	206862	5.00000	4.742
	67 Butylbenzylphthalate	149	21.797	21.797	(0.963)	128959	5.00000	5.256
	68 Benzo(a)anthracene	228	22.610	22.610	(0.999)	299500	5.00000	4.726
*	69 Chrysene-d12	240	22.641	22.641	(1.000)	227119	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.633	22.633	(1.000)	206169	10.0000	7.787
	71 Chrysene	228	22.680	22.680	(1.002)	254076	5.00000	4.426
	72 bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	181253	5.00000	4.760
*	134 Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	288338	4.00000	
	73 Di-n-octylphthalate	149	23.903	23.903	(1.000)	300811	5.00000	4.277

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Report Date: 25-Apr-2013 15:16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
		====	==	======	======	========	=======	=======
74	Benzo(b)fluoranthene	252	24.383	24.383	(0.978)	317553	5.00000	5.335
75	Benzo(k)fluoranthene	252	24.422	24.422	(0.979)	287620	5.00000	4.473
76	Benzo(a)pyrene	252	24.855	24.855	(0.997)	250523	5.00000	4.867
* 77	Perylene-d12	264	24.941	24.941	(1.000)	205360	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.608	26.608	(1.067)	301614	5.00000	4.751
79	Dibenzo(a,h)anthracene	278	26.631	26.631	(1.068)	231119	5.00000	4.598
80	Benzo(g,h,i)perylene	276	27.074	27.074	(1.086)	259788	5.00000	4.770
90	N-Nitrosodimethylamine	74	3.204	3.204	(0.418)	116404	10.0000	10.45
91	Aniline	93	7.128	7.128	(0.930)	302029	5.00000	5.724
93	Benzidine	184	20.280	20.280	(0.896)	99013	10.0000	9.395
103	Pyridine	79	3.196	3.196	(0.417)	99575	10.0000	10.48
105	1-methylnaphthalene	142	12.029	12.029	(1.172)	166987	5.00000	4.976
111	Azobenzene (1,2-DP-Hydrazine)	77	15.687	15.687	(1.112)	187255	5.00000	4.911
187	Total Benzofluoranthenes	252	24.422	24.422	(0.979)	561154	10.0000	9.578
99	Perylene	252	24.979	24.979	(1.002)	270708	5.00000	4.576
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	14.945	14.945	(1.060)	56643	5.00000	4.584

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Report Date: 25-Apr-2013 15:16

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0424.d
Lab Smp Id: CC0424
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info:

Calibration Date: 24-APR-2013
Calibration Time: 16:57

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	58556	25.59
27 Naphthalene-d8	176978	88489	353956	212952	20.33
42 Acenaphthene-d10	110872	55436	221744	132668	19.66
59 Phenanthrene-d10	188290	94145	376580	220641	17.18
69 Chrysene-d12	213681	106840	427362	227119	6.29
134 Di-n-octylphthala	264159	132080	528318	288338	9.15
77 Perylene-d12	208584	104292	417168	205360	-1.55

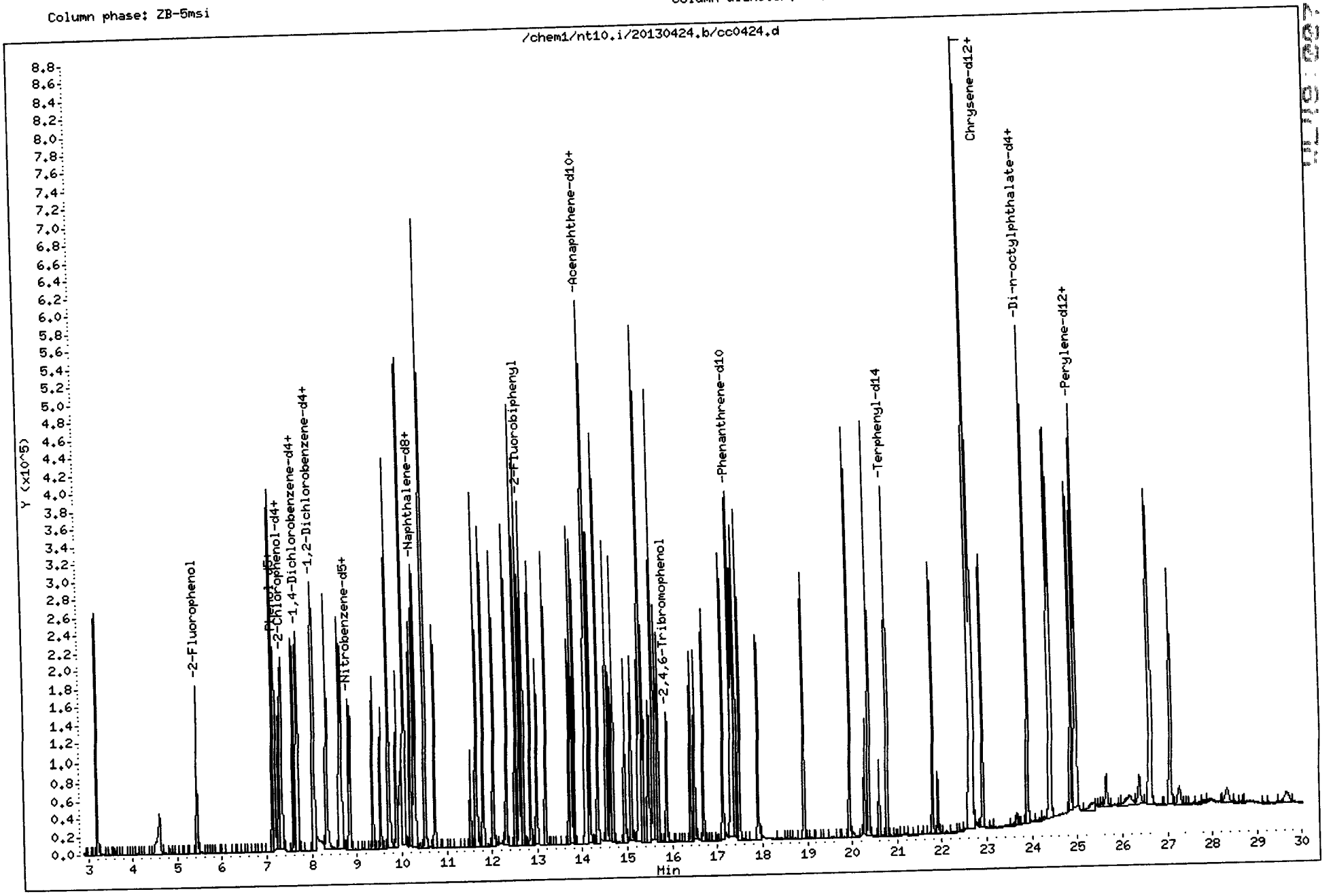
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.10	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

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

Data File: /chem1/nt10.i/20130424.b/cc0424.d
Date : 24-APR-2013 17:46
Client ID:
Sample Info: CC0424

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0424.d

Lab ID: CC0424, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/29/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49mb.d
Lab Smp Id: WL49MBS1 Client Smp ID: WL49MBS1
Inj Date : 24-APR-2013 19:00
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49MBS1
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.428	5.444	(0.709)	71356	4.22900	422.9
$	2 Phenol-d5	99	7.151	7.159	(0.934)	97765	4.66932	466.9
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.298	7.306	(0.954)	75403	4.15914	415.9
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.654	7.662	(1.000)	52770	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.049)	34393	2.58147	258.1
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	57345	3.04664	304.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	203934	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.679	12.687	(0.899)	115484	2.76342	276.3
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.103	14.103	(1.000)	121815	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	15.872	15.872	(1.125)	27484	3.53552	353.6
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	205587	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	Compound Not Detected.					
65	Pyrene	202	Compound Not Detected.					
$ 66	Terphenyl-d14	244	20.775	20.775	(0.918)	133437	3.29607	329.6
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	22.633	22.641	(1.000)	210775	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	3843	0.11197	11.20(R)
* 134	Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	259915	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	24.940	24.941	(1.000)	182935	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	Compound Not Detected.					
99	Perylene	252	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49mb.d
Lab Smp Id: WL49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: WL49MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	52770	13.18
27 Naphthalene-d8	176978	88489	353956	203934	15.23
42 Acenaphthene-d10	110872	55436	221744	121815	9.87
59 Phenanthrene-d10	188290	94145	376580	205587	9.19
69 Chrysene-d12	213681	106840	427362	210775	-1.36
134 Di-n-octylphthala	264159	132080	528318	259915	-1.61
77 Perylene-d12	208584	104292	417168	182935	-12.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.65	-0.10
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.10	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.63	-0.03
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

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

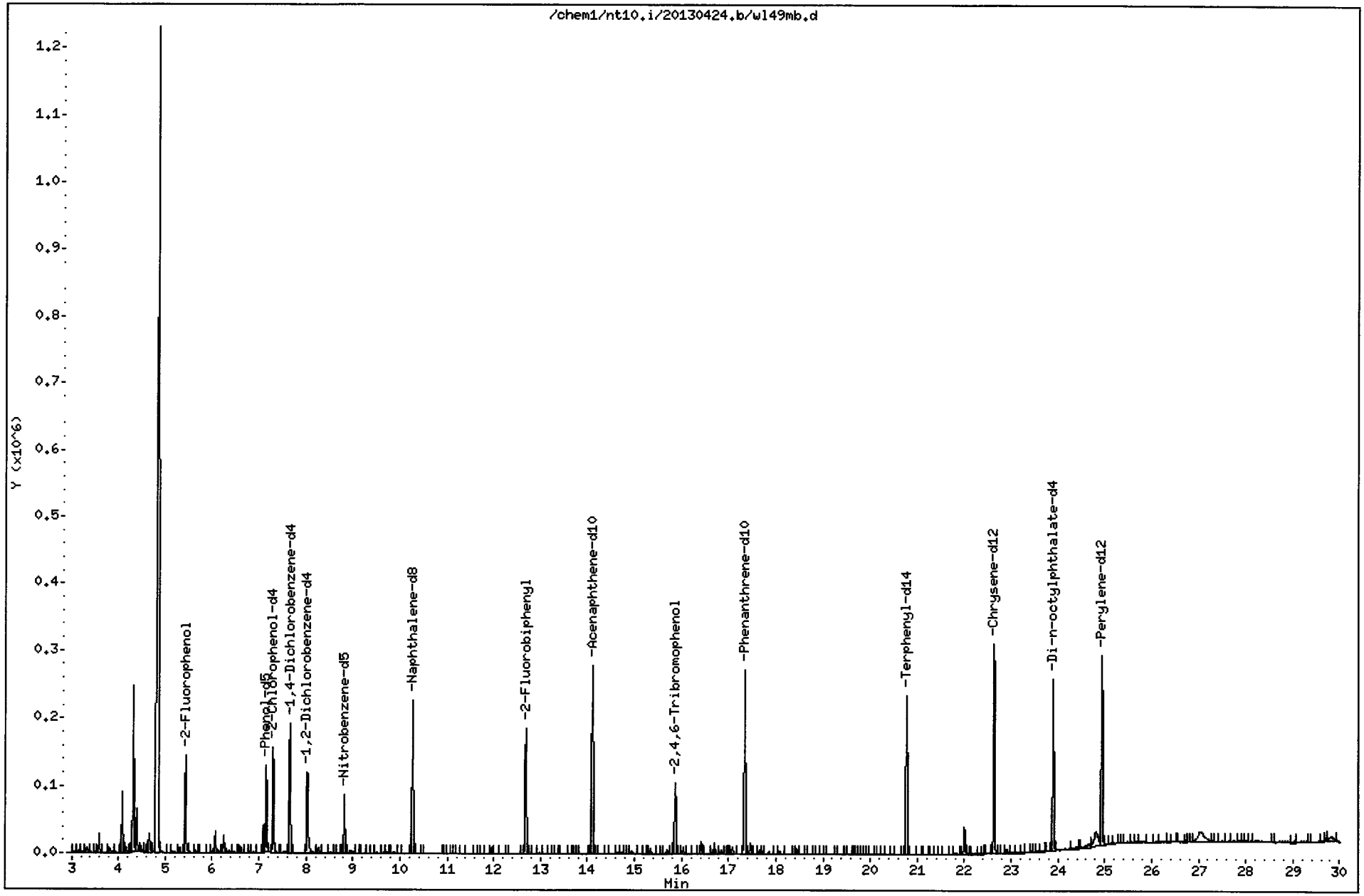
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	0.000	*	42-113
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-133
80 Benzo(g,h,i)peryl	500.0	0.000	*	38-126
105 1-methylnaphthale	500.0	0.000	*	42-100
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	422.9	56.39	30-160
$ 2 Phenol-d5	750.0	466.9	62.26	30-160
$ 5 2-Chlorophenol-d4	750.0	415.9	55.46	30-160
$ 10 1,2-Dichlorobenzen	500.0	258.1	51.63	30-160
$ 18 Nitrobenzene-d5	500.0	304.7	60.93	30-160
$ 36 2-Fluorobiphenyl	500.0	276.3	55.27	30-160
$ 55 2,4,6-Tribromophen	750.0	353.6	47.14	30-160
$ 66 Terphenyl-d14	500.0	329.6	65.92	30-160

Data File: /chem1/nt10.i/20130424.b/wl49mb.d
Date : 24-APR-2013 19:00
Client ID: WL49MBS1
Sample Info: WL49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/wl49mb.d

Date : 24-APR-2013 19:00

Client ID: WL49MBS1

Instrument: nt10.i

Sample Info: WL49MBS1

Volume Injected (uL): 1.0

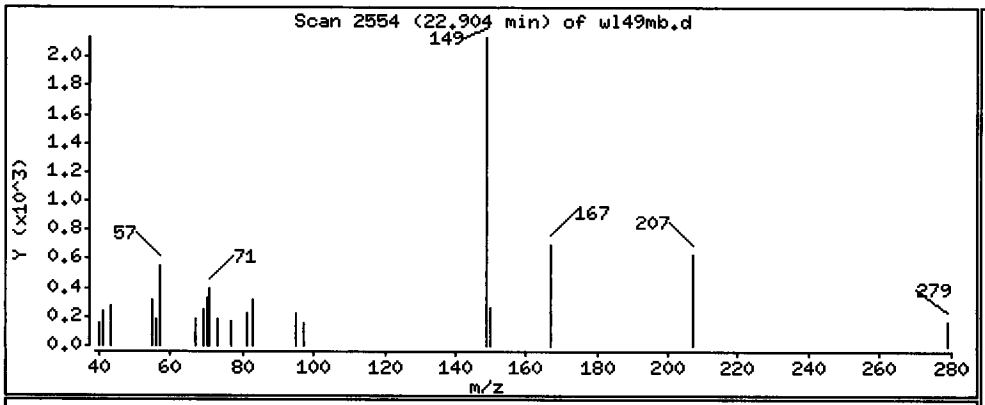
Operator: VTS/YZ

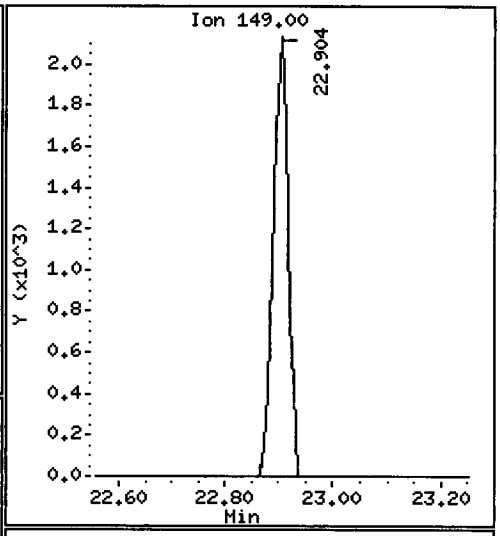
Column phase: ZB-5msi

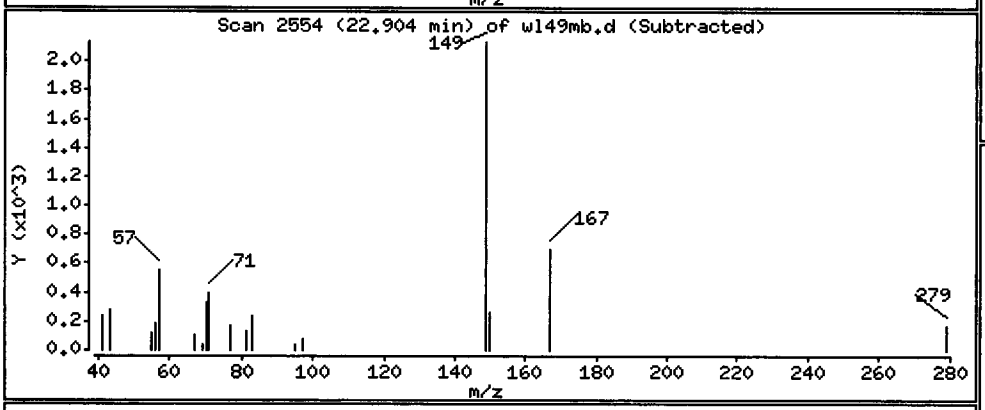
Column diameter: 0.25

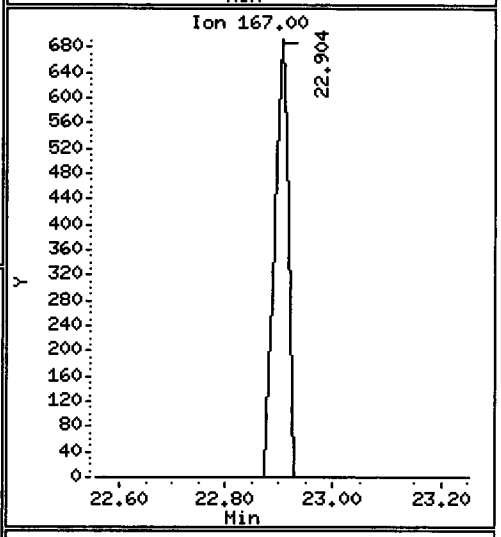
72 bis(2-Ethylhexyl)phthalate

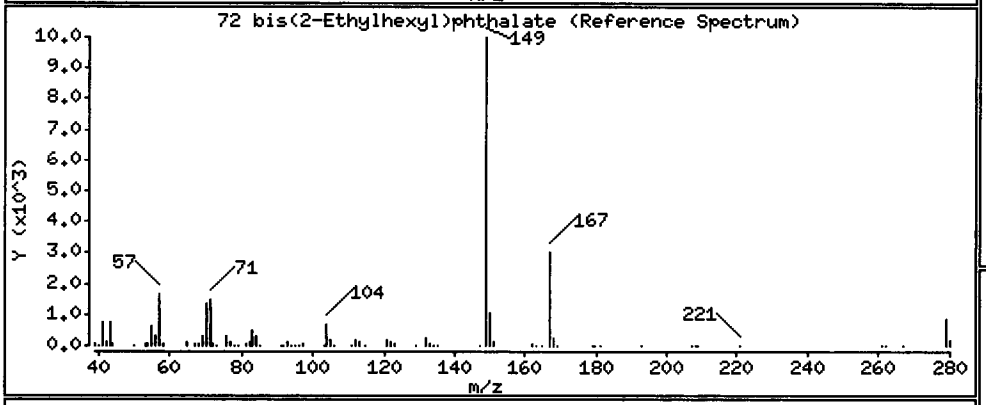
Concentration: 11.20 ug/kg

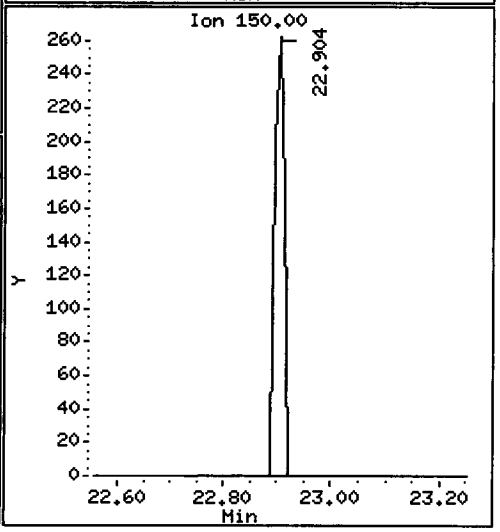


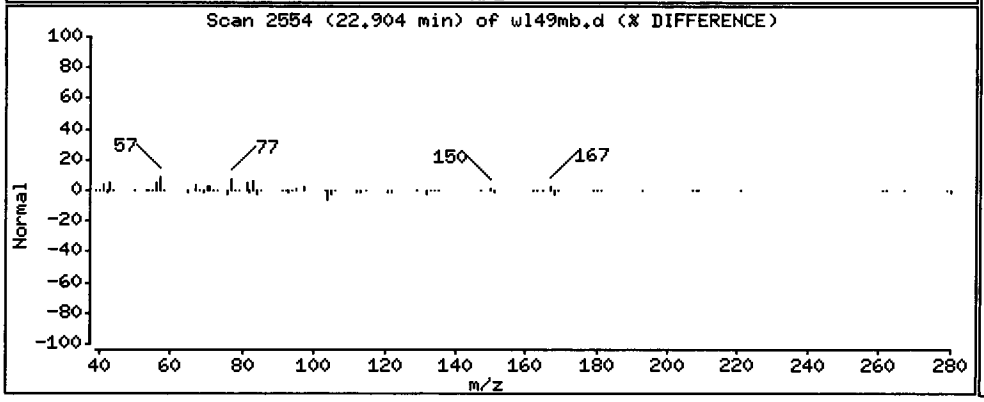












WL49 0257

CO-ELUTION SUMMARY FOR FILE - wl49mb.d

Lab ID: WL49MBS1, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 04/25/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49sb.d
Lab Smp Id: WL49LCSS1 Client Smp ID: WL49LCSS1
Inj Date : 24-APR-2013 19:37
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49LCSS1
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 09:16 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.428	5.444	(0.709)	73019	4.90802	490.8
$ 2	Phenol-d5	99	7.151	7.159	(0.934)	96965	5.25229	525.2
3	Phenol	94	7.167	7.182	(0.936)	65668	3.37950	338.0
$ 5	2-Chlorophenol-d4	132	7.298	7.306	(0.954)	71842	4.49425	449.4
4	Bis(2-Chloroethyl)ether	93	7.244	7.260	(0.946)	49289	3.33387	333.4
6	2-Chlorophenol	128	7.329	7.337	(0.958)	48452	2.86540	286.5
7	1,3-Dichlorobenzene	146	7.577	7.584	(0.990)	52100	2.83154	283.2
* 8	1,4-Dichlorobenzene-d4	152	7.654	7.662	(1.000)	46529	4.00000	
9	1,4-Dichlorobenzene	146	7.685	7.693	(1.004)	51230	2.81186	281.2
$ 10	1,2-Dichlorobenzene-d4	152	8.019	8.027	(1.048)	32159	2.73755	273.8
12	1,2-Dichlorobenzene	146	8.050	8.058	(1.052)	50389	2.87632	287.6
11	Benzyl alcohol	108	8.011	8.019	(1.047)	19836	2.13314	213.3
14	2,2'-oxybis(1-Chloropropane)	121	8.329	8.337	(1.088)	15454	2.97105	297.1
13	2-Methylphenol	108	8.314	8.322	(1.086)	41623	2.83767	283.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	8.655	8.663	(1.131)	21826	3.03089	303.1
	16 N-Nitroso-di-n-propylamine	70	8.593	8.609	(1.123)	33066	3.37410	337.4
	15 4-Methylphenol	108	8.624	8.625	(1.127)	93125	6.10489	610.5
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	51857	3.26928	326.9
	19 Nitrobenzene	77	8.849	8.857	(0.862)	50359	3.34852	334.9
	20 Isophorone	82	9.346	9.354	(0.910)	91711	3.49862	349.9
	21 2-Nitrophenol	139	9.525	9.525	(0.928)	25726	2.91125	291.1
	22 2,4-Dimethylphenol	107	9.702	9.710	(0.945)	90662	6.01903	601.9
	23 Bis(2-Chloroethoxy)methane	93	9.872	9.880	(0.962)	58526	3.54508	354.5
	24 Benzoic acid	105	10.011	10.072	(0.975)	163048	12.7294	1273
	25 2,4-Dichlorophenol	162	10.041	10.049	(0.978)	140480	10.6713	1067
	26 1,2,4-Trichlorobenzene	180	10.196	10.196	(0.993)	45439	3.03297	303.3
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	171858	4.00000	
	28 Naphthalene	128	10.304	10.304	(1.004)	124154	2.77632	277.6
	29 4-Chloroaniline	127	10.512	10.520	(1.024)	139664	7.76028	776.0
	30 Hexachlorobutadiene	225	10.736	10.736	(1.046)	27202	2.91339	291.3
	31 4-Chloro-3-methylphenol	107	11.642	11.650	(1.134)	139063	10.9294	1093
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	89556	3.03320	303.3
	33 Hexachlorocyclopentadiene	237	12.315	12.323	(0.873)	71958	5.74474	574.5
	34 2,4,6-Trichlorophenol	196	12.516	12.516	(0.887)	99190	8.91204	891.2
	35 2,4,5-Trichlorophenol	196	12.601	12.601	(0.893)	107049	9.05092	905.1
$	36 2-Fluorobiphenyl	172	12.679	12.687	(0.899)	105745	2.77534	277.5
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	91880	2.99493	299.5
	38 2-Nitroaniline	65	13.182	13.190	(0.934)	84180	11.6996	1170
	39 Dimethylphthalate	163	13.708	13.708	(0.971)	112853	3.35958	336.0
	40 Acenaphthylene	152	13.762	13.762	(0.975)	141147	2.82125	282.1
	41 2,6-Dinitrotoluene	165	13.824	13.824	(0.980)	77704	10.1254	1013
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	111063	4.00000	
	43 3-Nitroaniline	138	14.110	14.111	(1.000)	68288	9.63605	963.6
	44 Acenaphthene	153	14.172	14.180	(1.004)	88993	2.90096	290.1
	45 2,4-Dinitrophenol	184	14.335	14.342	(1.016)	83083	12.4710	1247
	46 Dibenzofuran	168	14.536	14.536	(1.030)	130461	3.05784	305.8
	47 4-Nitrophenol	109	14.605	14.605	(1.035)	45344	9.39374	939.4
	48 2,4-Dinitrotoluene	165	14.675	14.683	(1.040)	106341	10.2483	1025
	50 Diethylphthalate	149	15.285	15.293	(1.083)	111870	3.17919	317.9
	49 Fluorene	166	15.285	15.293	(1.083)	105449	2.90984	291.0
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	52445	3.10542	310.5
	52 4-Nitroaniline	138	15.463	15.471	(1.096)	76966	10.2878	1029
	53 4,6-Dinitro-2-methylphenol	198	15.571	15.579	(0.898)	132349	18.0057	1801
	54 N-Nitrosodiphenylamine	169	15.633	15.633	(0.902)	71671	3.24159	324.2
$	55 2,4,6-Tribromophenol	330	15.872	15.872	(1.125)	27315	3.85395	385.4
	56 4-Bromophenyl-phenylether	248	16.404	16.412	(0.946)	33928	3.31371	331.4
	57 Hexachlorobenzene	284	16.690	16.690	(0.962)	36028	2.80392	280.4
	58 Pentachlorophenol	266	17.115	17.116	(0.987)	64024	7.47210	747.2
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	183550	4.00000	
	60 Phenanthrene	178	17.386	17.394	(1.003)	158511	3.23950	324.0
	61 Anthracene	178	17.487	17.487	(1.008)	151845	3.08207	308.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	62 Carbazole	167	17.897	17.897	(1.032)	145181	4.41198	441.2
	63 Di-n-butylphthalate	149	18.918	18.918	(1.091)	198020	3.76651	376.7
	64 Fluoranthene	202	19.947	19.947	(1.150)	191116	3.39162	339.2
	65 Pyrene	202	20.373	20.373	(0.900)	195441	3.55381	355.4
$	66 Terphenyl-d14	244	20.775	20.775	(0.918)	125753	3.39111	339.1
	67 Butylbenzylphthalate	149	21.797	21.797	(0.963)	82665	3.96317	396.3
	68 Benzo(a)anthracene	228	22.610	22.610	(0.999)	166914	3.09831	309.8
*	69 Chrysene-d12	240	22.641	22.641	(1.000)	193070	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.633	22.633	(1.000)	113152	5.02712	502.7
	71 Chrysene	228	22.680	22.680	(1.002)	144941	2.97043	297.0
	72 bis(2-Ethylhexyl)phthalate	149	22.904	22.904	(0.959)	115224	3.63414	363.4
*	134 Di-n-octylphthalate-d4	153	23.895	23.895	(1.000)	240110	4.00000	
	73 Di-n-octylphthalate	149	23.903	23.903	(1.000)	194962	3.32867	332.9
	74 Benzo(b)fluoranthene	252	24.383	24.383	(0.978)	178476	3.51997	352.0
	75 Benzo(k)fluoranthene	252	24.422	24.422	(0.979)	161421	2.94688	294.7
	76 Benzo(a)pyrene	252	24.855	24.855	(0.997)	134573	3.06892	306.9
*	77 Perylene-d12	264	24.940	24.941	(1.000)	174938	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.600	26.608	(1.067)	170589	3.15460	315.5
	79 Dibenzo(a,h)anthracene	278	26.631	26.631	(1.068)	128791	3.00763	300.8
	80 Benzo(g,h,i)perylene	276	27.066	27.074	(1.085)	138978	2.99547	299.5
	90 N-Nitrosodimethylamine	74	3.181	3.204	(0.416)	79539	8.98550	898.6
	91 Aniline	93	7.113	7.128	(0.929)	173426	4.13598	413.6
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	3.173	3.196	(0.415)	104405	13.8277	1383
	105 1-methylnaphthalene	142	12.029	12.029	(1.172)	87655	3.23656	323.7
	111 Azobenzene (1,2-DP-Hydrazine)	77	15.687	15.687	(1.112)	107207	3.35885	335.9
	187 Total Benzofluoranthenes	252	24.422	24.422	(0.979)	314002	6.29131	629.1
	99 Perylene	252	24.971	24.979	(1.001)	70284	1.39466	139.5
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	14.938	14.945	(1.059)	27874	2.69455	269.5

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49sb.d
Lab Smp Id: WL49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: WL49LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	46529	-0.20
27 Naphthalene-d8	176978	88489	353956	171858	-2.89
42 Acenaphthene-d10	110872	55436	221744	111063	0.17
59 Phenanthrene-d10	188290	94145	376580	183550	-2.52
69 Chrysene-d12	213681	106840	427362	193070	-9.65
134 Di-n-octylphthala	264159	132080	528318	240110	-9.10
77 Perylene-d12	208584	104292	417168	174938	-16.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.65	-0.10
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
134 Di-n-octylphthala	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL49LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Client SDG: WL49
Fraction: SV
Client Smp ID: WL49LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

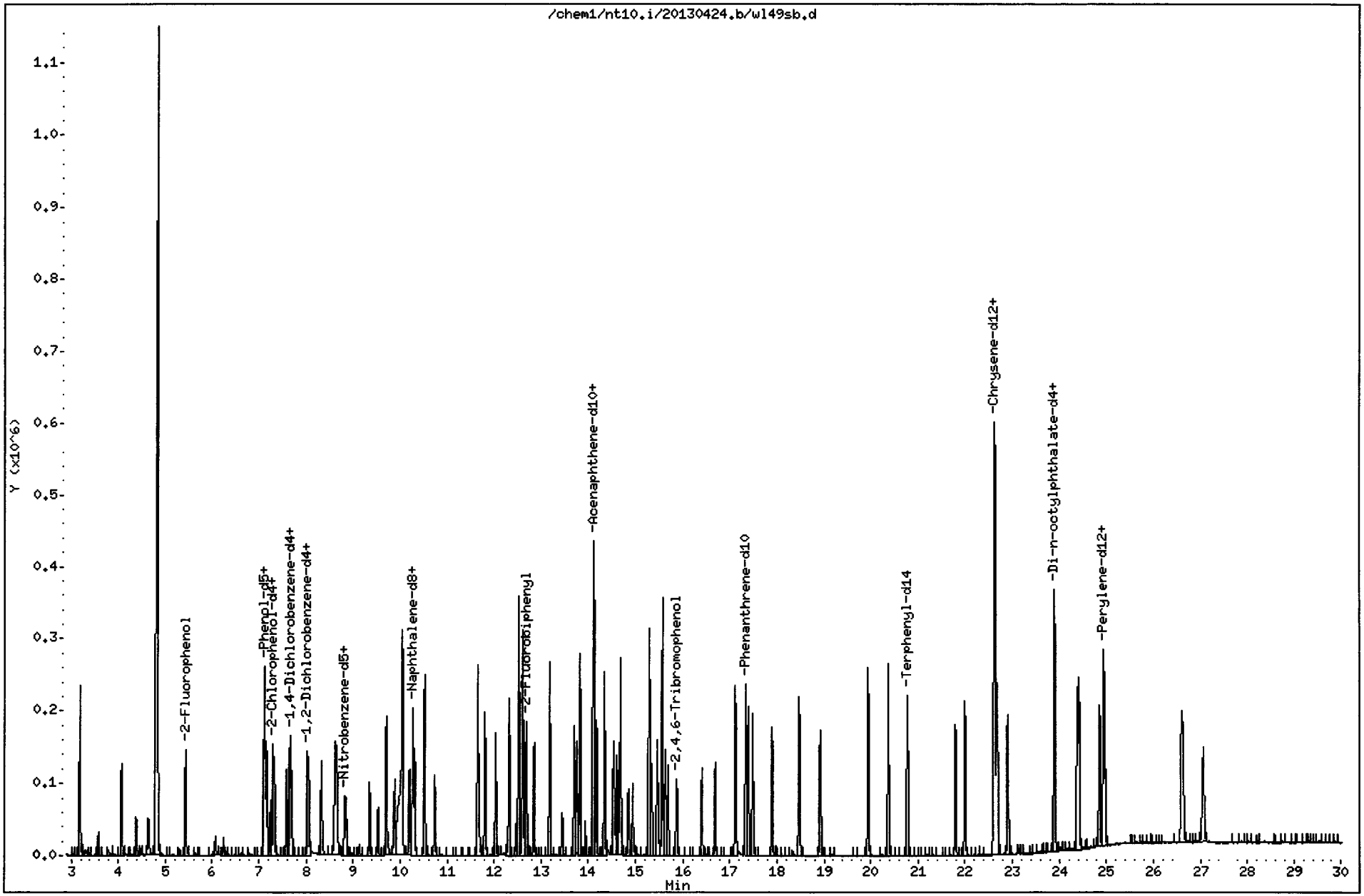
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	338.0	67.59	34-105
7	1,3-Dichlorobenzen	500.0	283.2	56.63	40-100
9	1,4-Dichlorobenzen	500.0	281.2	56.24	39-100
11	Benzyl alcohol	500.0	213.3	42.66	19-117
12	1,2-Dichlorobenzen	500.0	287.6	57.53	40-100
13	2-Methylphenol	500.0	283.8	56.75	28-100
15	4-Methylphenol	1000	610.5	61.05	29-100
17	Hexachloroethane	500.0	303.1	60.62	38-100
22	2,4-Dimethylphenol	1500	601.9	40.13	10-100
24	Benzoic acid	2750	1273	46.29	10-107
26	1,2,4-Trichloroben	500.0	303.3	60.66	35-103
28	Naphthalene	500.0	277.6	55.53	43-100
30	Hexachlorobutadien	500.0	291.3	58.27	37-100
32	2-Methylnaphthalen	500.0	303.3	60.66	43-100
39	Dimethylphthalate	500.0	336.0	67.19	43-114
40	Acenaphthylene	500.0	282.1	56.43	42-102
44	Acenaphthene	500.0	290.1	58.02	45-100
46	Dibenzofuran	500.0	305.8	61.16	43-103
49	Fluorene	500.0	291.0	58.20	45-107
50	Diethylphthalate	500.0	317.9	63.58	50-120
54	N-Nitrosodiphenyla	500.0	324.2	64.83	36-111
57	Hexachlorobenzene	500.0	280.4	56.08	33-113
58	Pentachlorophenol	1500	747.2	49.81	16-120
60	Phenanthrene	500.0	324.0	64.79	49-112
61	Anthracene	500.0	308.2	61.64	45-106
63	Di-n-butylphthalat	500.0	376.7	75.33	48-126
64	Fluoranthene	500.0	339.2	67.83	53-118
65	Pyrene	500.0	355.4	71.08	48-121
67	Butylbenzylphthala	500.0	396.3	79.26	45-132
68	Benzo(a)anthracene	500.0	309.8	61.97	49-115
71	Chrysene	500.0	297.0	59.41	47-115
72	bis(2-Ethylhexyl)p	500.0	363.4	72.68	34-130
73	Di-n-octylphthalat	500.0	332.9	66.57	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	306.9	61.38	42-113
78 Indeno(1,2,3-cd)py	500.0	315.5	63.09	42-123
79 Dibenzo(a,h)anthra	500.0	300.8	60.15	30-133
80 Benzo(g,h,i)peryle	500.0	299.5	59.91	38-126
105 1-methylnaphthalen	500.0	323.7	64.73	42-100
187 Total Benzofluoran	1000	629.1	62.91	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	490.8	65.44	30-160
$ 2 Phenol-d5	750.0	525.2	70.03	30-160
$ 5 2-Chlorophenol-d4	750.0	449.4	59.92	30-160
$ 10 1,2-Dichlorobenzen	500.0	273.8	54.75	30-160
$ 18 Nitrobenzene-d5	500.0	326.9	65.39	30-160
$ 36 2-Fluorobiphenyl	500.0	277.5	55.51	30-160
$ 55 2,4,6-Tribromophen	750.0	385.4	51.39	30-160
$ 66 Terphenyl-d14	500.0	339.1	67.82	30-160

Data File: /chem1/nt10.i/20130424.b/wl49sb.d
Date : 24-APR-2013 19:37
Client ID: WL49LCSS1
Sample Info: WL49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49sb.d

Lab ID: WL49LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
14.110	Acenaphthene-d10 and 3-Nitroaniline

Analytical Resources, Inc.

YZ 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49gms.d
Lab Smp Id: WL49GMS Client Smp ID: IM-CB-02-201304 MS
Inj Date : 24-APR-2013 21:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49GMS
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 09:16 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.10000	Weight of sample extracted (g)
M	18.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.443	5.444	(0.710)	63692	4.77172	444.8
$	2 Phenol-d5	99	7.159	7.159	(0.934)	92074	5.55891	518.1
	3 Phenol	94	7.182	7.182	(0.937)	61297	3.51607	327.7
$	5 2-Chlorophenol-d4	132	7.306	7.306	(0.954)	68332	4.76455	444.1
	4 Bis(2-Chloroethyl)ether	93	7.252	7.260	(0.946)	47052	3.54729	330.6
	6 2-Chlorophenol	128	7.336	7.337	(0.958)	45452	2.99603	279.2
	7 1,3-Dichlorobenzene	146	7.584	7.584	(0.990)	47906	2.90198	270.5
*	8 1,4-Dichlorobenzene-d4	152	7.662	7.662	(1.000)	41745	4.00000	
	9 1,4-Dichlorobenzene	146	7.693	7.693	(1.004)	48224	2.95020	275.0
$	10 1,2-Dichlorobenzene-d4	152	8.026	8.027	(1.048)	29662	2.81436	262.3
	12 1,2-Dichlorobenzene	146	8.050	8.058	(1.051)	47853	3.04459	283.8
	11 Benzyl alcohol	108	8.019	8.019	(1.047)	25236	3.02486	281.9
	14 2,2'-oxybis(1-Chloropropane)	121	8.329	8.337	(1.087)	14944	3.20225	298.5
	13 2-Methylphenol	108	8.321	8.322	(1.086)	43704	3.32100	309.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	8.663	8.663	(1.131)	20066	3.10582	289.5
	16 N-Nitroso-di-n-propylamine	70	8.601	8.609	(1.123)	32804	3.73098	347.8
	15 4-Methylphenol	108	8.632	8.625	(1.127)	91469	6.68351	622.9
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	48015	3.26496	304.3
	19 Nitrobenzene	77	8.857	8.857	(0.863)	46763	3.35377	312.6
	20 Isophorone	82	9.346	9.354	(0.910)	86452	3.55719	331.6
	21 2-Nitrophenol	139	9.524	9.525	(0.928)	24315	2.96782	276.6
	22 2,4-Dimethylphenol	107	9.710	9.710	(0.946)	93634	6.70487	624.9
	23 Bis(2-Chloroethoxy)methane	93	9.879	9.880	(0.962)	54632	3.56928	332.7
	24 Benzoic acid	105	9.926	10.072	(0.967)	30416	2.57959	240.4(R)
	25 2,4-Dichlorophenol	162	10.049	10.049	(0.979)	142839	11.7032	1091
	26 1,2,4-Trichlorobenzene	180	10.195	10.196	(0.993)	43808	3.15390	294.0
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	159336	4.00000	
	28 Naphthalene	128	10.303	10.304	(1.004)	124179	2.99511	279.2
	29 4-Chloroaniline	127	10.527	10.520	(1.026)	43258	2.59248	241.6
	30 Hexachlorobutadiene	225	10.736	10.736	(1.046)	27237	3.14639	293.3
	31 4-Chloro-3-methylphenol	107	11.649	11.650	(1.135)	138759	11.7625	1096
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	89666	3.27559	305.3
	33 Hexachlorocyclopentadiene	237	12.322	12.323	(0.873)	11525	1.03707	96.66
	34 2,4,6-Trichlorophenol	196	12.524	12.516	(0.888)	93055	9.42374	878.4
	35 2,4,5-Trichlorophenol	196	12.609	12.601	(0.894)	108704	10.3593	965.6
$	36 2-Fluorobiphenyl	172	12.686	12.687	(0.899)	109392	3.23606	301.6
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	93180	3.42345	319.1
	38 2-Nitroaniline	65	13.189	13.190	(0.935)	77036	12.0678	1125
	39 Dimethylphthalate	163	13.708	13.708	(0.971)	112810	3.78524	352.8
	40 Acenaphthylene	152	13.762	13.762	(0.975)	134774	3.03634	283.0
	41 2,6-Dinitrotoluene	165	13.824	13.824	(0.980)	74393	10.9264	1018
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	98536	4.00000	
	43 3-Nitroaniline	138	14.110	14.111	(1.000)	34664	5.51325	513.9
	44 Acenaphthene	153	14.180	14.180	(1.005)	89691	3.29541	307.2
	45 2,4-Dinitrophenol	184	14.342	14.342	(1.016)	47455	8.05485	750.8
	46 Dibenzofuran	168	14.535	14.536	(1.030)	129223	3.41388	318.2
	47 4-Nitrophenol	109	14.613	14.605	(1.036)	43908	10.2446	954.9
	48 2,4-Dinitrotoluene	165	14.682	14.683	(1.041)	93199	10.1236	943.6
	50 Diethylphthalate	149	15.293	15.293	(1.084)	106703	3.41785	318.6
	49 Fluorene	166	15.293	15.293	(1.084)	102464	3.18693	297.0
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	52291	3.48993	325.3
	52 4-Nitroaniline	138	15.471	15.471	(1.096)	51298	7.72859	720.4
	53 4,6-Dinitro-2-methylphenol	198	15.571	15.579	(0.898)	81276	13.4495	1254
	54 N-Nitrosodiphenylamine	169	15.633	15.633	(0.901)	69139	3.80359	354.5
$	55 2,4,6-Tribromophenol	330	15.879	15.872	(1.125)	23629	3.75772	350.2
	56 4-Bromophenyl-phenylether	248	16.411	16.412	(0.946)	30877	3.66816	341.9
	57 Hexachlorobenzene	284	16.697	16.690	(0.963)	34496	3.26551	304.4
	58 Pentachlorophenol	266	17.123	17.116	(0.987)	32173	4.56718	425.7
*	59 Phenanthrene-d10	188	17.347	17.340	(1.000)	150903	4.00000	
	60 Phenanthrene	178	17.394	17.394	(1.003)	155109	3.85578	359.4
	61 Anthracene	178	17.494	17.487	(1.008)	135525	3.34594	311.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	17.904	17.897	(1.032)	124045	4.58521	427.4
63	Di-n-butylphthalate	149	18.926	18.918	(1.091)	175045	4.04982	377.5
64	Fluoranthene	202	19.955	19.947	(1.150)	200559	4.32921	403.5
65	Pyrene	202	20.380	20.373	(0.900)	213534	4.26080	397.1
$ 66	Terphenyl-d14	244	20.783	20.775	(0.917)	114393	3.38508	315.5
67	Butylbenzylphthalate	149	21.812	21.797	(0.963)	101930	5.36252	499.8
68	Benzo(a)anthracene	228	22.625	22.610	(0.999)	166627	3.39409	316.3
* 69	Chrysene-d12	240	22.656	22.641	(1.000)	175942	4.00000	
70	3,3'-Dichlorobenzidine	252	22.664	22.633	(1.000)	11570	0.56407	52.58(M)
71	Chrysene	228	22.695	22.680	(1.002)	163618	3.67964	343.0
72	bis(2-Ethylhexyl)phthalate	149	22.919	22.904	(0.958)	203574	6.81774	635.5(R)
* 134	Di-n-octylphthalate-d4	153	23.918	23.895	(1.000)	226126	4.00000	
73	Di-n-octylphthalate	149	23.926	23.903	(1.000)	193253	3.50354	326.6
74	Benzo(b)fluoranthene	252	24.414	24.383	(0.978)	177451	3.65311	340.5
75	Benzo(k)fluoranthene	252	24.445	24.422	(0.979)	192259	3.66365	341.5
76	Benzo(a)pyrene	252	24.886	24.855	(0.997)	148161	3.52685	328.7
* 77	Perylene-d12	264	24.971	24.941	(1.000)	167594	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.661	26.608	(1.068)	156882	3.02825	282.3
79	Dibenzo(a,h)anthracene	278	26.685	26.631	(1.069)	120468	2.93654	273.7
80	Benzo(g,h,i)perylene	276	27.128	27.074	(1.086)	126754	2.85172	265.8
90	N-Nitrosodimethylamine	74	3.188	3.204	(0.416)	69408	8.73959	814.6
91	Aniline	93	7.136	7.128	(0.931)	42924	1.14099	106.3(M)
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.235	3.196	(0.422)	90971	13.4292	1252
105	1-methylnaphthalene	142	12.036	12.029	(1.173)	88463	3.52309	328.4
111	Azobenzene (1,2-DP-Hydrazine)	77	15.694	15.687	(1.112)	100848	3.56131	331.9
187	Total Benzofluoranthenes	252	24.445	24.422	(0.979)	340101	7.11283	663.0
99	Perylene	252	25.010	24.979	(1.002)	78318	1.62218	151.2
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	14.945	14.945	(1.059)	19276	2.10028	195.8

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49gms.d
Lab Smp Id: WL49GMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: IM-CB-02-201304
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	46623	23312	93246	41745	-10.46
27 Naphthalene-d8	176978	88489	353956	159336	-9.97
42 Acenaphthene-d10	110872	55436	221744	98536	-11.13
59 Phenanthrene-d10	188290	94145	376580	150903	-19.86
69 Chrysene-d12	213681	106840	427362	175942	-17.66
134 Di-n-octylphthala	264159	132080	528318	226126	-14.40
77 Perylene-d12	208584	104292	417168	167594	-19.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	-0.01
27 Naphthalene-d8	10.27	9.77	10.77	10.26	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.35	0.04
69 Chrysene-d12	22.64	22.14	23.14	22.66	0.07
134 Di-n-octylphthala	23.90	23.40	24.40	23.92	0.10
77 Perylene-d12	24.94	24.44	25.44	24.97	0.12

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL49GMS
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Client SDG: WL49
Fraction: SV
Client Smp ID: IM-CB-02-201304 MS
Operator: VTS/YZ
SampleType: MS
Quant Type: ISTD

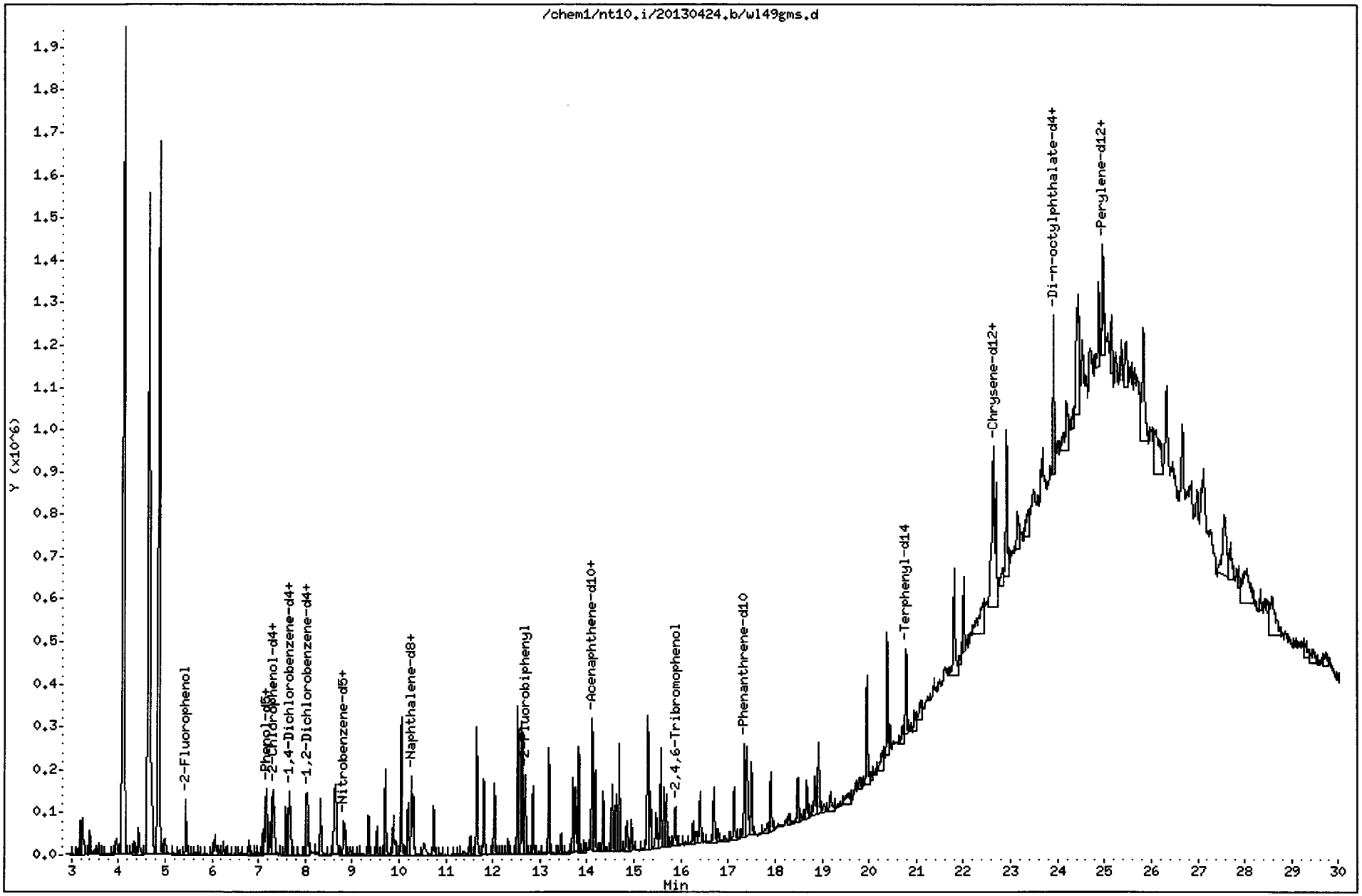
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	466.0	327.7	70.32	34-105
7	1,3-Dichlorobenzen	466.0	270.5	58.04	40-100
9	1,4-Dichlorobenzen	466.0	275.0	59.00	39-100
11	Benzyl alcohol	466.0	281.9	60.50	19-117
12	1,2-Dichlorobenzen	466.0	283.8	60.89	40-100
13	2-Methylphenol	466.0	309.5	66.42	28-100
15	4-Methylphenol	932.1	622.9	66.84	29-100
17	Hexachloroethane	466.0	289.5	62.12	38-100
22	2,4-Dimethylphenol	1398	624.9	44.70	10-100
24	Benzoic acid	2563	240.4	9.38*	10-107
26	1,2,4-Trichloroben	466.0	294.0	63.08	35-103
28	Naphthalene	466.0	279.2	59.90	43-100
30	Hexachlorobutadien	466.0	293.3	62.93	37-100
32	2-Methylnaphthalen	466.0	305.3	65.51	43-100
39	Dimethylphthalate	466.0	352.8	75.70	43-114
40	Acenaphthylene	466.0	283.0	60.73	42-102
44	Acenaphthene	466.0	307.2	65.91	45-100
46	Dibenzofuran	466.0	318.2	68.28	43-103
49	Fluorene	466.0	297.0	63.74	45-107
50	Diethylphthalate	466.0	318.6	68.36	50-120
54	N-Nitrosodiphenyla	466.0	354.5	76.07	36-111
57	Hexachlorobenzene	466.0	304.4	65.31	33-113
58	Pentachlorophenol	1398	425.7	30.45	16-120
60	Phenanthrene	466.0	359.4	77.12	49-112
61	Anthracene	466.0	311.9	66.92	45-106
63	Di-n-butylphthalat	466.0	377.5	81.00	48-126
64	Fluoranthene	466.0	403.5	86.58	53-118
65	Pyrene	466.0	397.1	85.22	48-121
67	Butylbenzylphthala	466.0	499.8	107.25	45-132
68	Benzo(a)anthracene	466.0	316.3	67.88	49-115
71	Chrysene	466.0	343.0	73.59	47-115
72	bis(2-Ethylhexyl)p	466.0	635.5	136.35*	34-130
73	Di-n-octylphthalat	466.0	326.6	70.07	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	466.0	328.7	70.54	42-113
78 Indeno(1,2,3-cd)py	466.0	282.3	60.57	42-123
79 Dibenzo(a,h)anthra	466.0	273.7	58.73	30-133
80 Benzo(g,h,i)peryle	466.0	265.8	57.03	38-126
105 1-methylnaphthalen	466.0	328.4	70.46	42-100
187 Total Benzofluoran	932.1	663.0	71.13	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	699.0	444.8	63.62	30-160
$ 2 Phenol-d5	699.0	518.1	74.12	30-160
$ 5 2-Chlorophenol-d4	699.0	444.1	63.53	30-160
$ 10 1,2-Dichlorobenzen	466.0	262.3	56.29	30-160
$ 18 Nitrobenzene-d5	466.0	304.3	65.30	30-160
$ 36 2-Fluorobiphenyl	466.0	301.6	64.72	30-160
$ 55 2,4,6-Tribromophen	699.0	350.2	50.10	30-160
$ 66 Terphenyl-d14	466.0	315.5	67.70	30-160

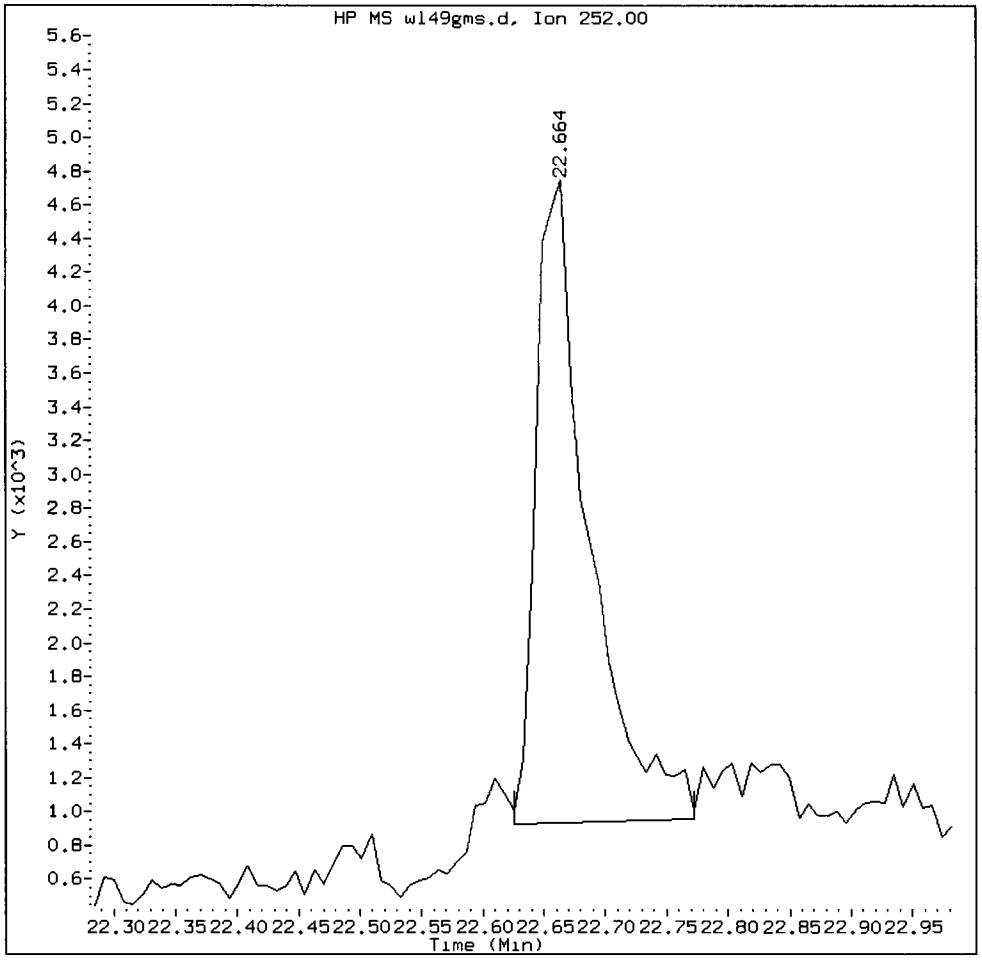
Data File: /chem1/nt10.i/20130424.b/wl49gms.d
Date : 24-APR-2013 21:27
Client ID: IM-CB-02-201304 MS
Sample Info: WL49GMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WL49GMS, /chem1/nt10.i/20130424.b/wl49gms.d

3,3'-Dichlorobenzidine Amount: 0.56 Area: 11570



MANUAL INTEGRATION for 3,3'-Dichlorobenzidine

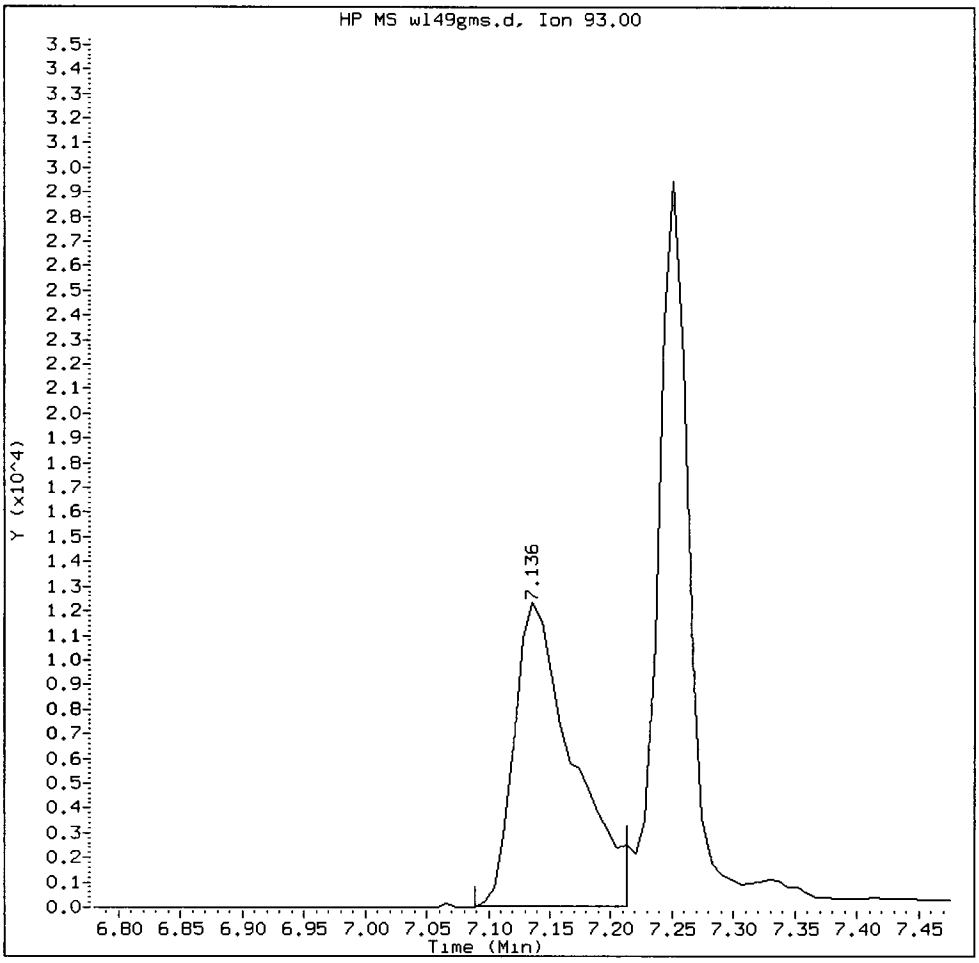
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VC Date: 4/25/13

WL49GMS, /chem1/nt10.i/20130424.b/wl49gms.d

Aniline Amount: 1.14 Area: 42924



MANUAL INTEGRATION for Aniline

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

5. Other _____

Analyst: YZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl49gms.d

Lab ID: WL49GMS, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
14.110	Acenaphthene-d10 and 3-Nitroaniline

Analytical Resources, Inc.

YZ 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49gmsd.d
Lab Smp Id: WL49GMSD Client Smp ID: IM-CB-02-201304 MSD
Inj Date : 24-APR-2013 22:04
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49GMSD
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 09:16 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	18.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	5.451	5.444	(0.711)	63527	4.71878	443.2
$ 2	Phenol-d5	99	7.159	7.159	(0.934)	93706	5.60921	526.8
3	Phenol	94	7.182	7.182	(0.937)	63837	3.63055	341.0
$ 5	2-Chlorophenol-d4	132	7.306	7.306	(0.954)	69341	4.79368	450.2
4	Bis(2-Chloroethyl)ether	93	7.252	7.260	(0.946)	52107	3.89489	365.8
6	2-Chlorophenol	128	7.337	7.337	(0.958)	47399	3.09773	290.9
7	1,3-Dichlorobenzene	146	7.584	7.584	(0.990)	49065	2.94684	276.8
* 8	1,4-Dichlorobenzene-d4	152	7.662	7.662	(1.000)	42104	4.00000	
9	1,4-Dichlorobenzene	146	7.693	7.693	(1.004)	49608	3.00899	282.6
$ 10	1,2-Dichlorobenzene-d4	152	8.026	8.027	(1.048)	30383	2.85819	268.5
12	1,2-Dichlorobenzene	146	8.050	8.058	(1.051)	48796	3.07812	289.1
11	Benzyl alcohol	108	8.019	8.019	(1.047)	26648	3.16688	297.4
14	2,2'-oxybis(1-Chloropropane)	121	8.337	8.337	(1.088)	15423	3.27671	307.8
13	2-Methylphenol	108	8.329	8.322	(1.087)	44123	3.32425	312.2

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	8.663	8.663	(1.131)	20618	3.16404	297.2
	16 N-Nitroso-di-n-propylamine	70	8.601	8.609	(1.123)	34993	3.94601	370.6
	15 4-Methylphenol	108	8.632	8.625	(1.127)	96093	6.96151	653.8
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	49975	3.24190	304.5
	19 Nitrobenzene	77	8.857	8.857	(0.863)	50138	3.43039	322.2
	20 Isophorone	82	9.354	9.354	(0.911)	94279	3.70077	347.6
	21 2-Nitrophenol	139	9.532	9.525	(0.929)	26172	3.04751	286.2
	22 2,4-Dimethylphenol	107	9.710	9.710	(0.946)	125488	8.57244	805.2
	23 Bis(2-Chloroethoxy)methane	93	9.879	9.880	(0.962)	60393	3.76414	353.5
	24 Benzoic acid	105	9.918	10.072	(0.966)	18993	1.53781	144.4(R)
	25 2,4-Dichlorophenol	162	10.049	10.049	(0.979)	152386	11.9110	1119
	26 1,2,4-Trichlorobenzene	180	10.195	10.196	(0.993)	48401	3.32426	312.2
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	167020	4.00000	
	28 Naphthalene	128	10.311	10.304	(1.004)	131848	3.03378	284.9
	29 4-Chloroaniline	127	10.535	10.520	(1.026)	53246	3.04426	285.9
	30 Hexachlorobutadiene	225	10.744	10.736	(1.047)	29364	3.23604	303.9
	31 4-Chloro-3-methylphenol	107	11.657	11.650	(1.136)	150966	12.2086	1147
	32 2-Methylnaphthalene	142	11.812	11.804	(1.151)	97985	3.41482	320.7
	33 Hexachlorocyclopentadiene	237	12.323	12.323	(0.873)	9919	0.89831	84.37
	34 2,4,6-Trichlorophenol	196	12.524	12.516	(0.888)	95755	9.75967	916.7
	35 2,4,5-Trichlorophenol	196	12.617	12.601	(0.894)	114507	10.9826	1032
$	36 2-Fluorobiphenyl	172	12.686	12.687	(0.899)	113829	3.38901	318.3
	37 2-Chloronaphthalene	162	12.849	12.849	(0.911)	97062	3.58906	337.1
	38 2-Nitroaniline	65	13.189	13.190	(0.935)	85103	13.4175	1260
	39 Dimethylphthalate	163	13.708	13.708	(0.971)	117093	3.95428	371.4
	40 Acenaphthylene	152	13.770	13.762	(0.976)	143256	3.24823	305.1
	41 2,6-Dinitrotoluene	165	13.832	13.824	(0.980)	76756	11.3461	1066
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	97905	4.00000	
	43 3-Nitroaniline	138	14.118	14.111	(1.001)	39951	6.39509	600.6
	44 Acenaphthene	153	14.180	14.180	(1.005)	92625	3.42515	321.7
	45 2,4-Dinitrophenol	184	14.342	14.342	(1.016)	43426	7.42192	697.1
	46 Dibenzofuran	168	14.535	14.536	(1.030)	134984	3.58906	337.1
	47 4-Nitrophenol	109	14.620	14.605	(1.036)	45782	10.7457	1009
	48 2,4-Dinitrotoluene	165	14.682	14.683	(1.041)	96659	10.5671	992.5
	50 Diethylphthalate	149	15.293	15.293	(1.084)	111208	3.58511	336.7
	49 Fluorene	166	15.301	15.293	(1.084)	110615	3.46262	325.2
	51 4-Chlorophenyl-phenylether	204	15.347	15.347	(1.088)	61069	4.10205	385.3
	52 4-Nitroaniline	138	15.471	15.471	(1.096)	54039	8.19402	769.6
	53 4,6-Dinitro-2-methylphenol	198	15.579	15.579	(0.898)	80169	13.0427	1225
	54 N-Nitrosodiphenylamine	169	15.640	15.633	(0.902)	74333	4.02041	377.6
$	55 2,4,6-Tribromophenol	330	15.879	15.872	(1.125)	22603	3.61773	339.8
	56 4-Bromophenyl-phenylether	248	16.419	16.412	(0.946)	33439	3.90557	366.8
	57 Hexachlorobenzene	284	16.697	16.690	(0.963)	35340	3.28902	308.9
	58 Pentachlorophenol	266	17.123	17.116	(0.987)	30500	4.25671	399.8
*	59 Phenanthrene-d10	188	17.347	17.340	(1.000)	153490	4.00000	
	60 Phenanthrene	178	17.394	17.394	(1.003)	165711	4.04991	380.4
	61 Anthracene	178	17.494	17.487	(1.008)	143655	3.48689	327.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	17.912	17.897	(1.033)	134137	4.87468	457.8
63	Di-n-butylphthalate	149	18.926	18.918	(1.091)	187980	4.27579	401.6
64	Fluoranthene	202	19.955	19.947	(1.150)	212937	4.51893	424.4
65	Pyrene	202	20.388	20.373	(0.900)	228280	4.63086	434.9
$ 66	Terphenyl-d14	244	20.790	20.775	(0.918)	114122	3.43328	322.5
67	Butylbenzylphthalate	149	21.812	21.797	(0.963)	131233	7.01908	659.3(R)
68	Benzo(a)anthracene	228	22.625	22.610	(0.999)	173584	3.59466	337.6
* 69	Chrysene-d12	240	22.656	22.641	(1.000)	173061	4.00000	
70	3,3'-Dichlorobenzidine	252	22.656	22.633	(1.000)	17091	0.84711	79.56(M)
71	Chrysene	228	22.703	22.680	(1.002)	171640	3.92431	368.6
72	bis(2-Ethylhexyl)phthalate	149	22.920	22.904	(0.958)	213962	7.27983	683.7(R)
* 134	Di-n-octylphthalate-d4	153	23.918	23.895	(1.000)	222579	4.00000	
73	Di-n-octylphthalate	149	23.926	23.903	(1.000)	202593	3.73139	350.5(M)
74	Benzo(b)fluoranthene	252	24.421	24.383	(0.978)	198683	4.15232	390.0
75	Benzo(k)fluoranthene	252	24.452	24.422	(0.979)	176391	3.41232	320.5
76	Benzo(a)pyrene	252	24.894	24.855	(0.997)	152550	3.68648	346.2
* 77	Perylene-d12	264	24.979	24.941	(1.000)	165087	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.669	26.608	(1.068)	142523	2.79286	262.3
79	Dibenzo(a,h)anthracene	278	26.693	26.631	(1.069)	113240	2.80227	263.2
80	Benzo(g,h,i)perylene	276	27.143	27.074	(1.087)	110506	2.52393	237.1
90	N-Nitrosodimethylamine	74	3.181	3.204	(0.415)	67997	8.48892	797.3
91	Aniline	93	7.136	7.128	(0.931)	52859	1.39310	130.8(M)
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.204	3.196	(0.418)	88598	12.9674	1218
105	1-methylnaphthalene	142	12.036	12.029	(1.173)	95860	3.64204	342.1
111	Azobenzene (1,2-DP-Hydrazine)	77	15.694	15.687	(1.112)	107231	3.81112	358.0
187	Total Benzofluoranthenes	252	24.452	24.422	(0.979)	345250	7.33016	688.5
99	Perylene	252	25.010	24.979	(1.001)	82855	1.74222	163.6
98	Retene	219	21.069	21.076	(0.930)	4556	0.17549	16.48
120	2,3,4,6-Tetrachlorophenol	232	14.953	14.945	(1.060)	18553	2.03453	191.1

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49gmsd.d
Lab Smp Id: WL49GMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: IM-CB-02-201304
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	46623	23312	93246	42104	-9.69
27 Naphthalene-d8	176978	88489	353956	167020	-5.63
42 Acenaphthene-d10	110872	55436	221744	97905	-11.70
59 Phenanthrene-d10	188290	94145	376580	153490	-18.48
69 Chrysene-d12	213681	106840	427362	173061	-19.01
134 Di-n-octylphthala	264159	132080	528318	222579	-15.74
77 Perylene-d12	208584	104292	417168	165087	-20.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.26	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.35	0.04
69 Chrysene-d12	22.64	22.14	23.14	22.66	0.07
134 Di-n-octylphthala	23.90	23.40	24.40	23.92	0.10
77 Perylene-d12	24.94	24.44	25.44	24.98	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

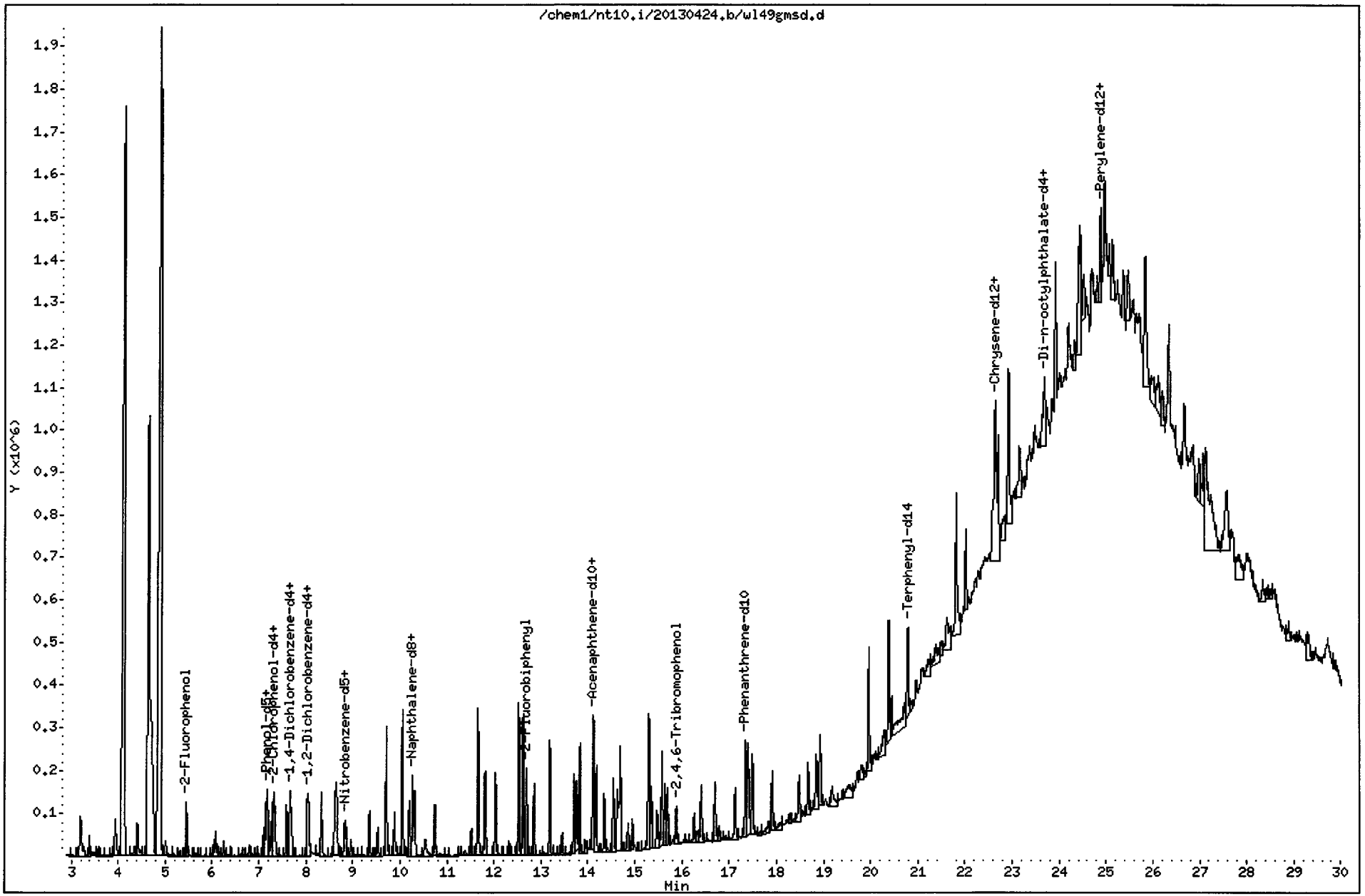
Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49GMSD
Client Smp ID: IM-CB-02-201304 MSD
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: MSD
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	469.6	341.0	72.61	34-105
7	1,3-Dichlorobenzen	469.6	276.8	58.94	40-100
9	1,4-Dichlorobenzen	469.6	282.6	60.18	39-100
11	Benzyl alcohol	469.6	297.4	63.34	19-117
12	1,2-Dichlorobenzen	469.6	289.1	61.56	40-100
13	2-Methylphenol	469.6	312.2	66.49	28-100
15	4-Methylphenol	939.2	653.8	69.62	29-100
17	Hexachloroethane	469.6	297.2	63.28	38-100
22	2,4-Dimethylphenol	1409	805.2	57.15	10-100
24	Benzoic acid	2583	144.4	5.59*	10-107
26	1,2,4-Trichloroben	469.6	312.2	66.49	35-103
28	Naphthalene	469.6	284.9	60.68	43-100
30	Hexachlorobutadien	469.6	303.9	64.72	37-100
32	2-Methylnaphthalen	469.6	320.7	68.30	43-100
39	Dimethylphthalate	469.6	371.4	79.09	43-114
40	Acenaphthylene	469.6	305.1	64.96	42-102
44	Acenaphthene	469.6	321.7	68.50	45-100
46	Dibenzofuran	469.6	337.1	71.78	43-103
49	Fluorene	469.6	325.2	69.25	45-107
50	Diethylphthalate	469.6	336.7	71.70	50-120
54	N-Nitrosodiphenyla	469.6	377.6	80.41	36-111
57	Hexachlorobenzene	469.6	308.9	65.78	33-113
58	Pentachlorophenol	1409	399.8	28.38	16-120
60	Phenanthrene	469.6	380.4	81.00	49-112
61	Anthracene	469.6	327.5	69.74	45-106
63	Di-n-butylphthalat	469.6	401.6	85.52	48-126
64	Fluoranthene	469.6	424.4	90.38	53-118
65	Pyrene	469.6	434.9	92.62	48-121
67	Butylbenzylphthala	469.6	659.3	140.38*	45-132
68	Benzo(a)anthracene	469.6	337.6	71.89	49-115
71	Chrysene	469.6	368.6	78.49	47-115
72	bis(2-Ethylhexyl)p	469.6	683.7	145.60*	34-130
73	Di-n-octylphthalat	469.6	350.5	74.63	28-124

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	469.6	346.2	73.73	42-113
78 Indeno(1,2,3-cd)py	469.6	262.3	55.86	42-123
79 Dibenzo(a,h)anthra	469.6	263.2	56.05	30-133
80 Benzo(g,h,i)peryle	469.6	237.1	50.48	38-126
105 1-methylnaphthalen	469.6	342.1	72.84	42-100
187 Total Benzofluoran	939.2	688.5	73.30	30-160

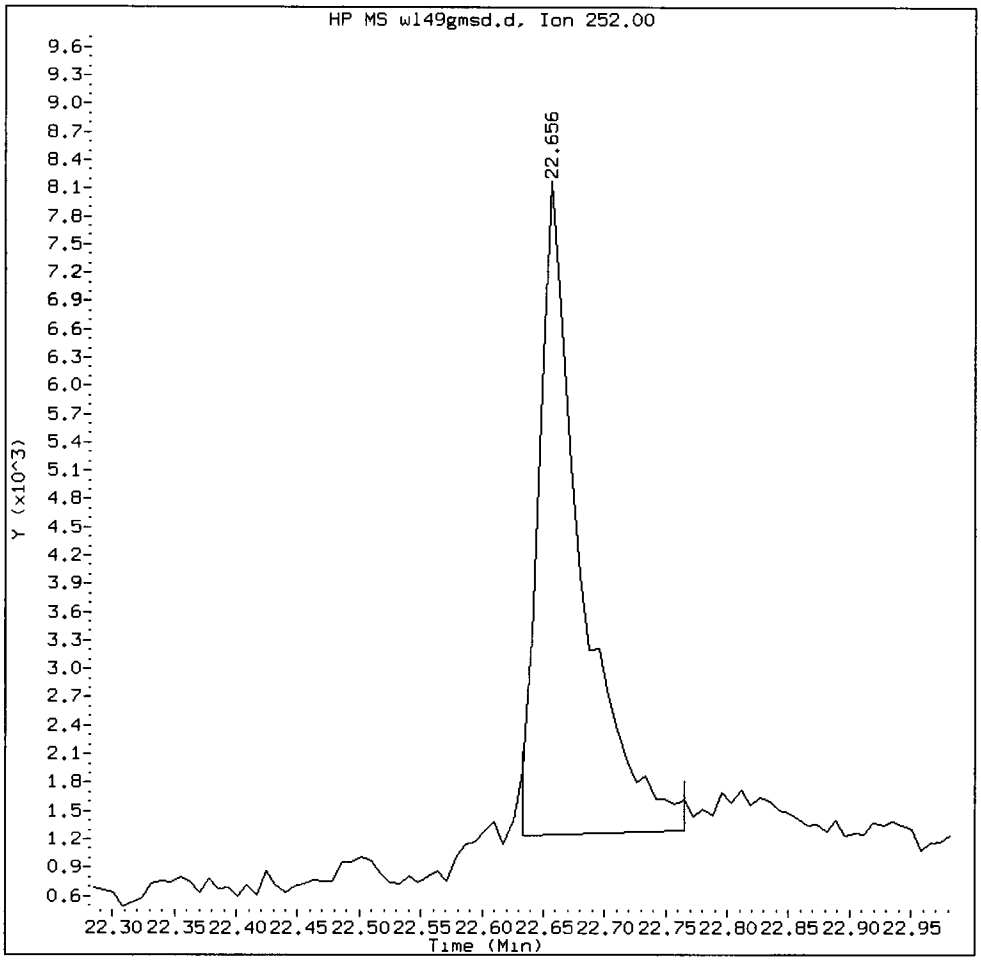
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	704.4	443.2	62.92	30-160
$ 2 Phenol-d5	704.4	526.8	74.79	30-160
$ 5 2-Chlorophenol-d4	704.4	450.2	63.92	30-160
$ 10 1,2-Dichlorobenzen	469.6	268.5	57.16	30-160
$ 18 Nitrobenzene-d5	469.6	304.5	64.84	30-160
$ 36 2-Fluorobiphenyl	469.6	318.3	67.78	30-160
$ 55 2,4,6-Tribromophen	704.4	339.8	48.24	30-160
$ 66 Terphenyl-d14	469.6	322.5	68.67	30-160

Data File: /chem1/nt10.i/20130424.b/wl49gmsd.d
Date : 24-APR-2013 22:04
Client ID: IM-CB-02-201304 MSD
Instrument: nt10.i
Sample Info: WL49GMSD
Volume Injected (uL): 1.0
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



WL49GMSD, /chem1/nt10.i/20130424.b/wl49gmsd.d

3,3'-Dichlorobenzidine Amount: 0.85 Area: 17091



MANUAL INTEGRATION for 3,3'-Dichlorobenzidine

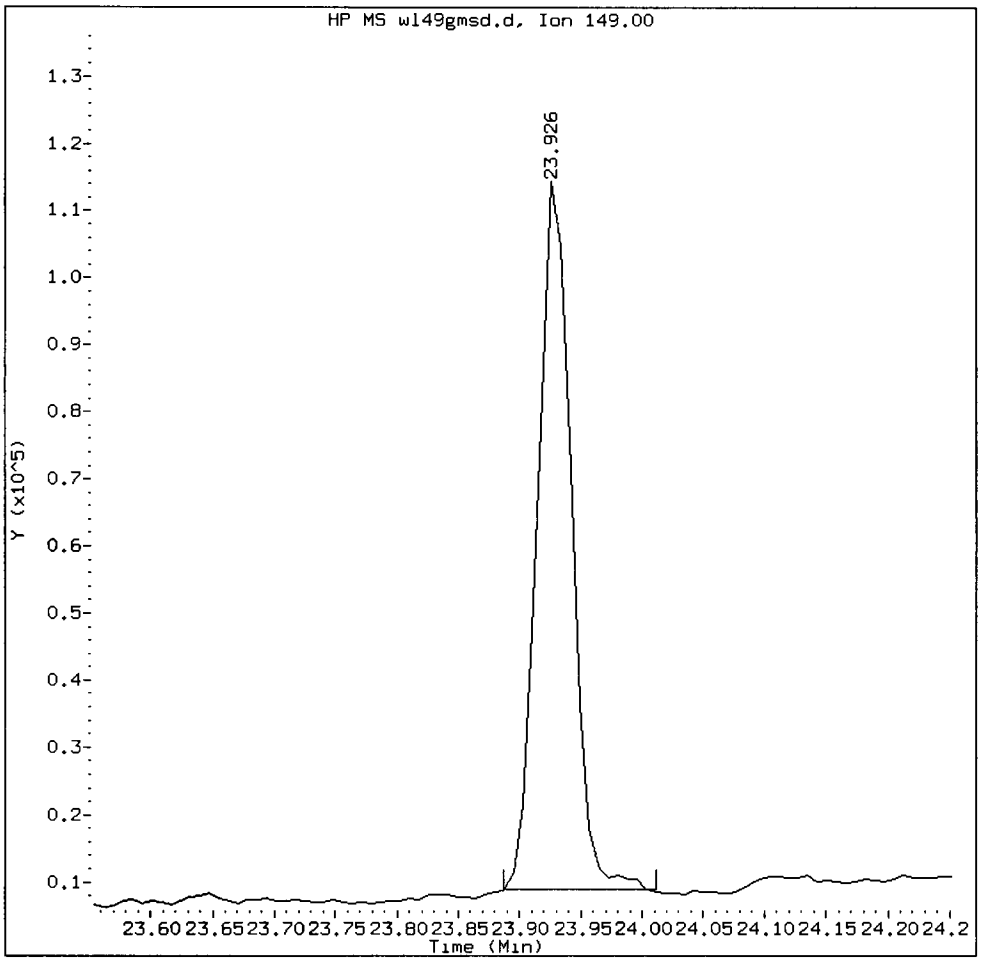
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 4/25/13

WL49GMSD, /chem1/nt10.i/20130424.b/wl49gmsd.d

Di-n-octylphthalate Amount: 3.73 Area: 202593



MANUAL INTEGRATION for Di-n-octylphthalate

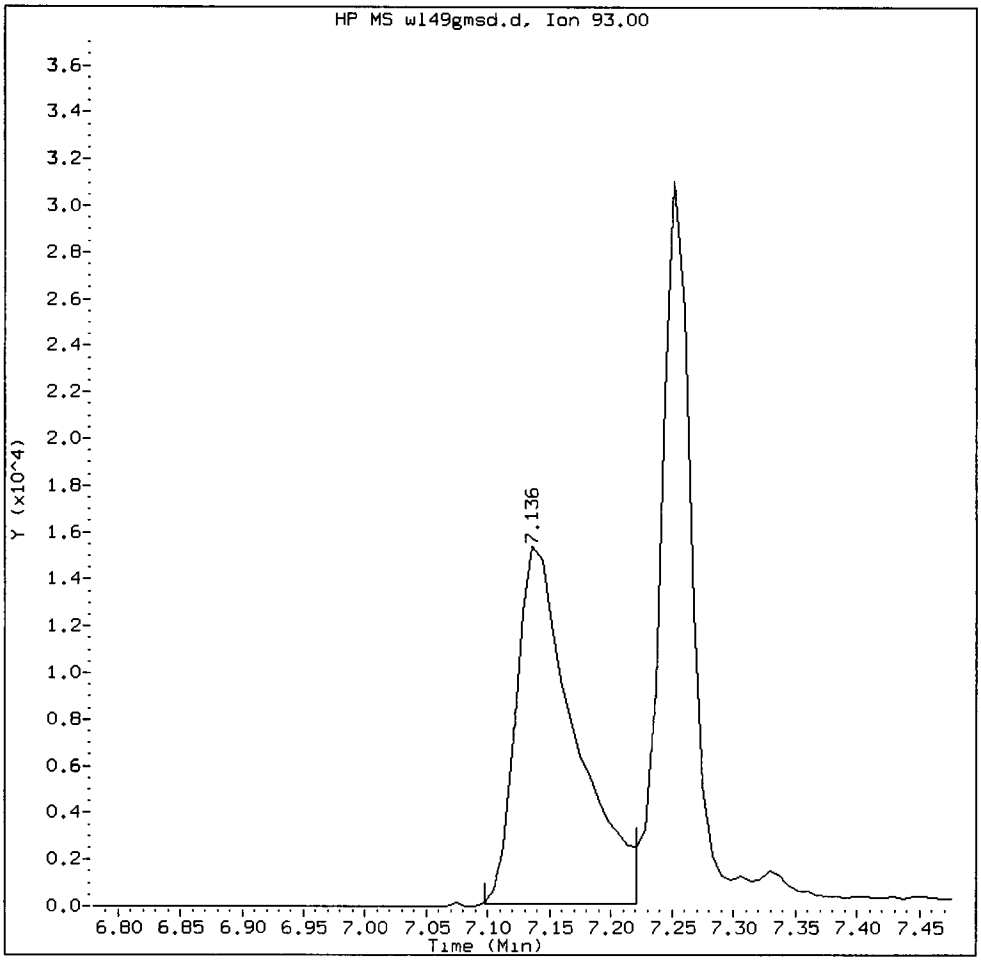
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 4/25/13

WL49GMSD, /chem1/nt10.i/20130424.b/wl49gmsd.d

Aniline Amount: 1.39 Area: 52859



MANUAL INTEGRATION for Aniline

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

5. Other _____

Analyst: VE Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl49gmsd.d

Lab ID: WL49GMSD, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 4/25/13

Data file : /chem1/nt10.i/20130424.b/wl49f.d
Lab Smp Id: WL49F Client Smp ID: IM-CB-01-20130410-S
Inj Date : 24-APR-2013 20:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49F,3
Misc Info : 13-7784
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 7
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	2.03000	Weight of sample extracted (g)
M	44.40000	% Moisture

Cpnd Variable Local Compound Variable

		QUANT SIG					CONCENTRATIONS	
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.436	5.444	(0.710)	23833	1.58415	4211
$	2 Phenol-d5	99	7.159	7.159	(0.935)	33949	1.81847	4833
	3 Phenol	94	7.182	7.182	(0.938)	22051	1.12221	2983
$	5 2-Chlorophenol-d4	132	7.306	7.306	(0.954)	25996	1.60817	4274
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.654	7.662	(1.000)	47052	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.049)	11570	0.97396	2589
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	8.640	8.625	(1.129)	8784	0.56944	1514
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	18869	1.18091	3139
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	173120	4.00000	
	28 Naphthalene	128	10.304	10.304	(1.004)	101116	2.24466	5966
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	11.804	11.804	(1.150)	137183	4.61242	12260
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.687	12.687	(0.899)	38819	1.14561	3045
	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	14.111	14.103	(1.000)	98772	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	14.180	14.180	(1.005)	7652	0.28048	745.5
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	14.543	14.536	(1.031)	21352	0.56274	1496
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	15.301	15.293	(1.084)	40071	1.24335	3305
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	15.887	15.872	(1.126)	8546	1.35582	3604
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.363	17.340	(1.000)	156141	4.00000	
	60 Phenanthrene	178	17.410	17.394	(1.003)	177324	4.26014	11320
	61 Anthracene	178	17.502	17.487	(1.008)	13514	0.32245	857.1
	62 Carbazole	167	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	63 Di-n-butylphthalate	149	18.941	18.918	(1.091)	52466	1.17313	3118
	64 Fluoranthene	202	19.978	19.947	(1.151)	156877	3.27271	8699
	65 Pyrene	202	20.404	20.373	(0.899)	163268	2.97451	7906
$	66 Terphenyl-d14	244	20.814	20.775	(0.917)	40738	1.10067	2926
	67 Butylbenzylphthalate	149	21.844	21.797	(0.962)	51582	2.47774	6586
	68 Benzo(a)anthracene	228	22.672	22.610	(0.999)	50900	0.94664	2516
*	69 Chrysene-d12	240	22.695	22.641	(1.000)	192699	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	22.742	22.680	(1.002)	66948	1.37468	3654
	72 bis(2-Ethylhexyl)phthalate	149	22.966	22.904	(0.959)	543975	17.0661	45360
*	134 Di-n-octylphthalate-d4	153	23.957	23.895	(1.000)	241387	4.00000	
	73 Di-n-octylphthalate	149	23.980	23.903	(1.001)	50068	0.85031	2260(M)
	74 Benzo(b)fluoranthene	252	24.484	24.383	(0.978)	90849	1.68517	4479
	75 Benzo(k)fluoranthene	252	24.484	24.422	(0.978)	90849	1.55986	4146
	76 Benzo(a)pyrene	252	24.941	24.855	(0.997)	38329	0.82209	2185(H)
*	77 Perylene-d12	264	25.026	24.941	(1.000)	186003	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.724	26.608	(1.068)	26191	0.45552	1211(M)
	79 Dibenzo(a,h)anthracene	278	26.747	26.631	(1.069)	11606	0.25491	677.5(M)
	80 Benzo(g,h,i)perylene	276	27.206	27.074	(1.087)	28765	0.58311	1550
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	12.036	12.029	(1.173)	77702	2.84814	7570
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	24.484	24.422	(0.978)	86693	1.63364	4342
	99 Perylene	252	25.064	24.979	(1.002)	12376	0.23097	613.9(H)
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	15.030	14.945	(1.065)	512	0.05565	147.9

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: wl49f.d
Lab Smp Id: WL49F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7784

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: IM-CB-01-2013041
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	47052	0.92
27 Naphthalene-d8	176978	88489	353956	173120	-2.18
42 Acenaphthene-d10	110872	55436	221744	98772	-10.91
59 Phenanthrene-d10	188290	94145	376580	156141	-17.07
69 Chrysene-d12	213681	106840	427362	192699	-9.82
134 Di-n-octylphthala	264159	132080	528318	241387	-8.62
77 Perylene-d12	208584	104292	417168	186003	-10.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.65	-0.10
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.36	0.13
69 Chrysene-d12	22.64	22.14	23.14	22.70	0.24
134 Di-n-octylphthala	23.90	23.40	24.40	23.96	0.26
77 Perylene-d12	24.94	24.44	25.44	25.03	0.34

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

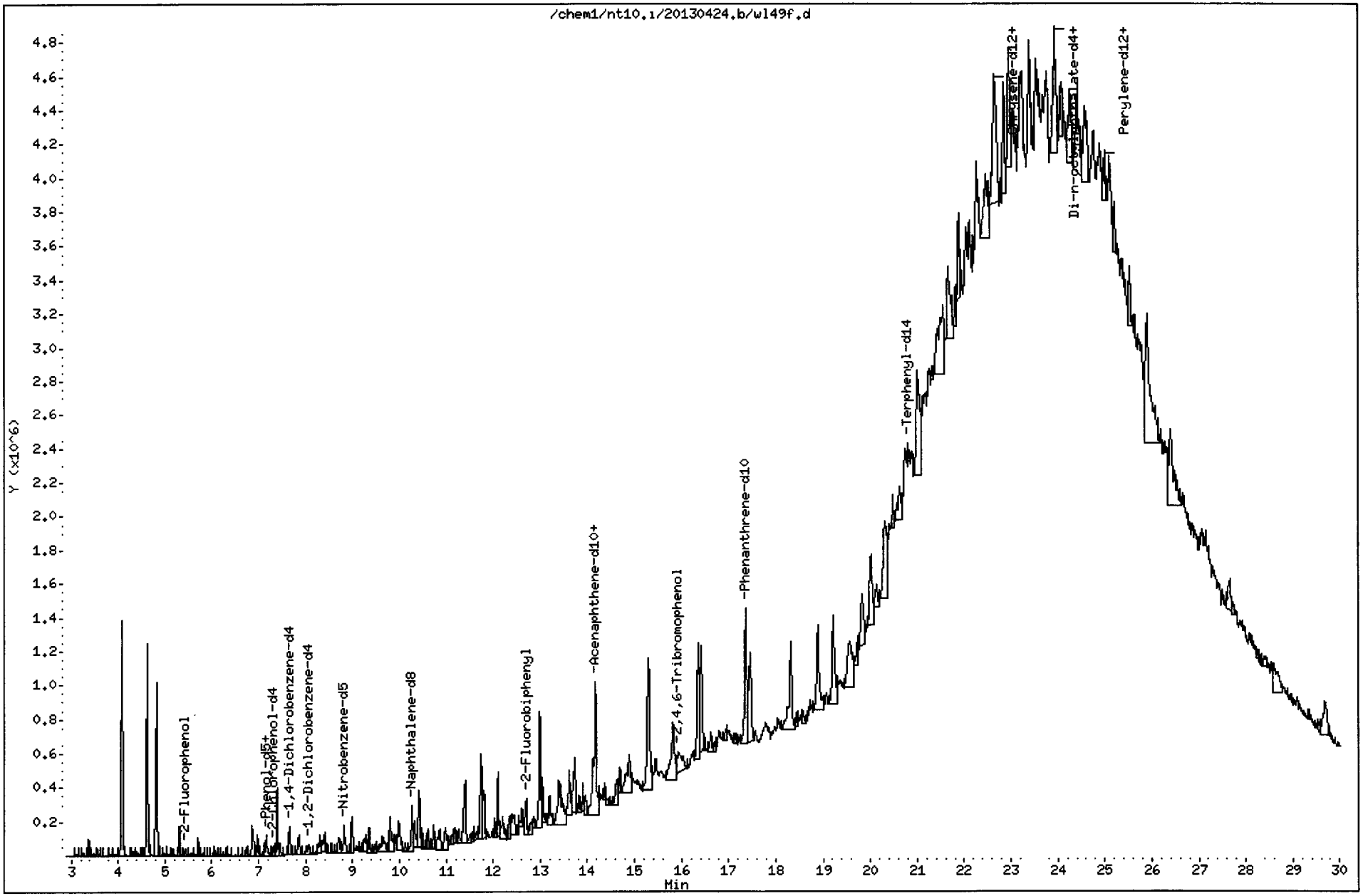
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL49F
Level: LOW
Data Type: MS DATA
SpikeList File: SHORTPSDDA.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7784

Client SDG: WL49
Fraction: SV
Client Smp ID: IM-CB-01-20130410-S
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	6645	4211	63.37	30-160
$ 2 Phenol-d5	6645	4833	72.74	30-160
$ 5 2-Chlorophenol-d4	6645	4274	64.33	30-160
$ 10 1,2-Dichlorobenzen	4430	2589	58.44	30-160
$ 18 Nitrobenzene-d5	4430	3139	70.85	30-160
$ 36 2-Fluorobiphenyl	4430	3045	68.74	30-160
$ 55 2,4,6-Tribromophen	6645	3604	54.23	30-160
$ 66 Terphenyl-d14	4430	2926	66.04	30-160

Data File: /chem1/nt10.i/20130424.b/wl49f.d
Date : 24-APR-2013 20:14
Client ID: IM-CB-01-20130410-S
Sample Info: WL49F,3
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

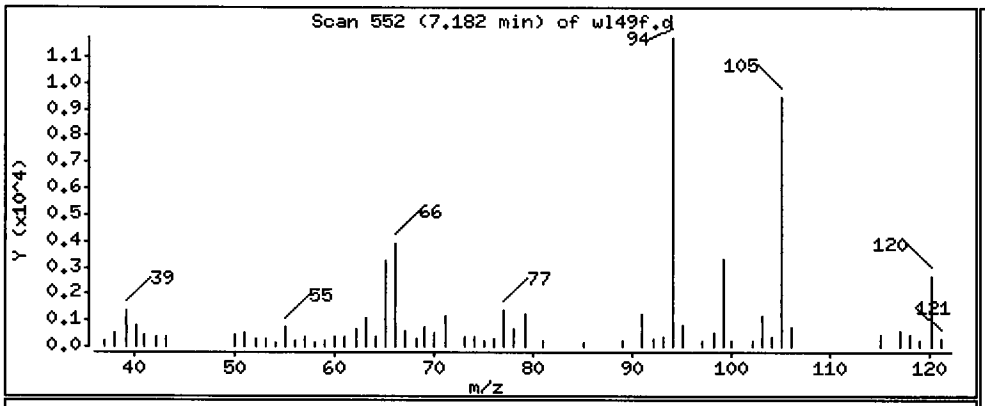
Operator: VTS/YZ

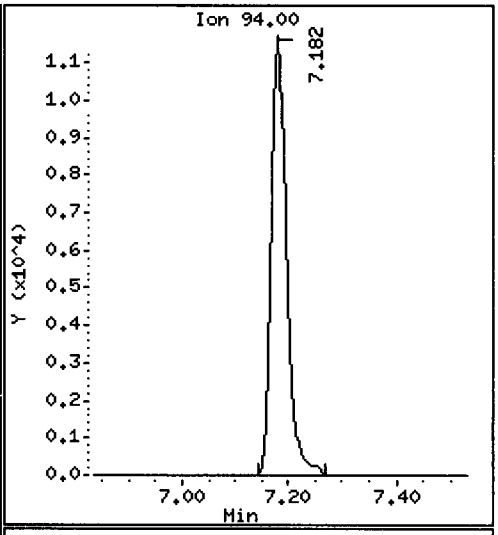
Column phase: ZB-5msi

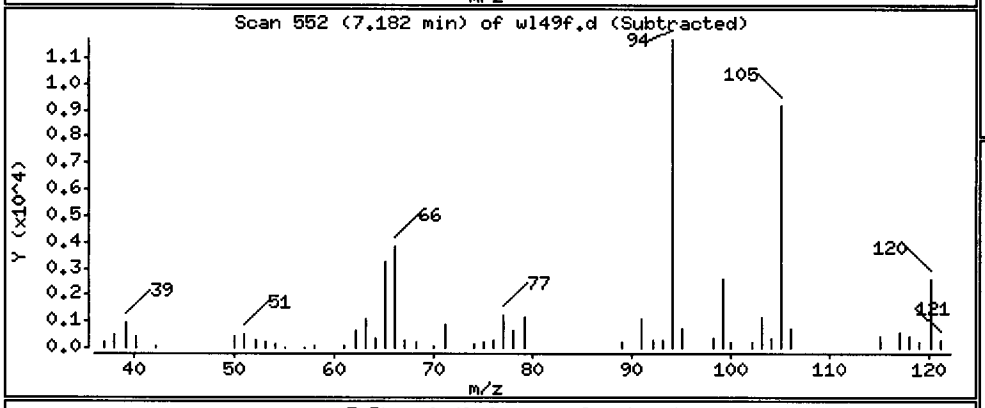
Column diameter: 0.25

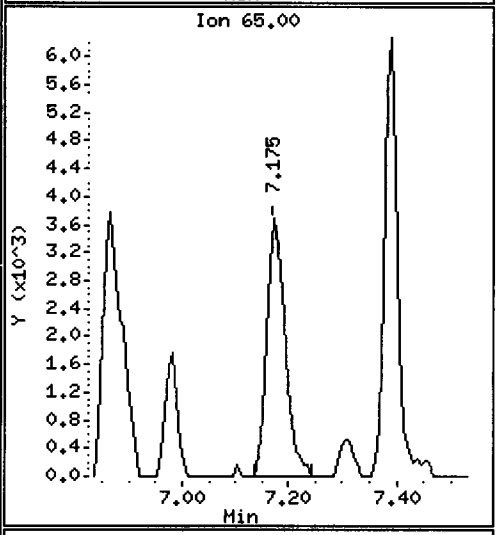
3 Phenol

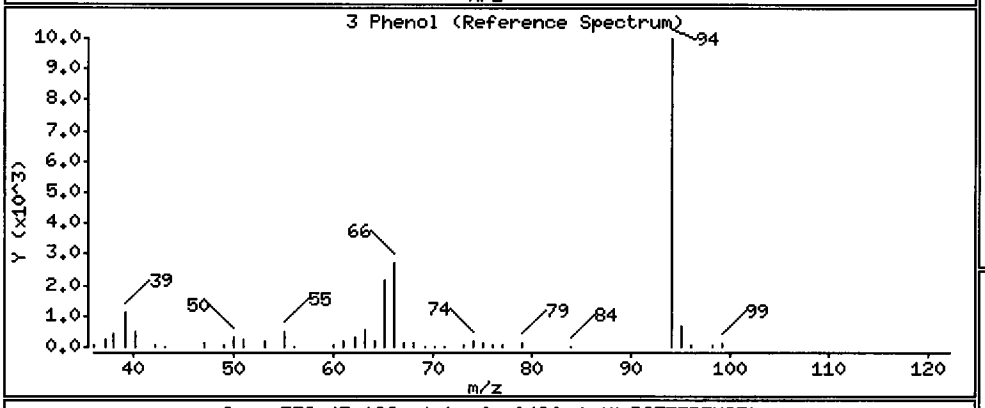
Concentration: 2983 ug/kg

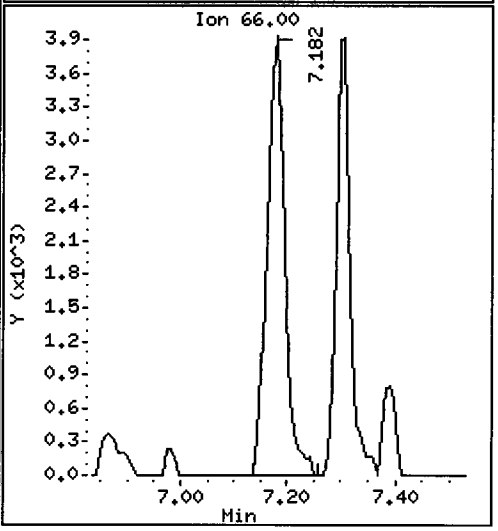


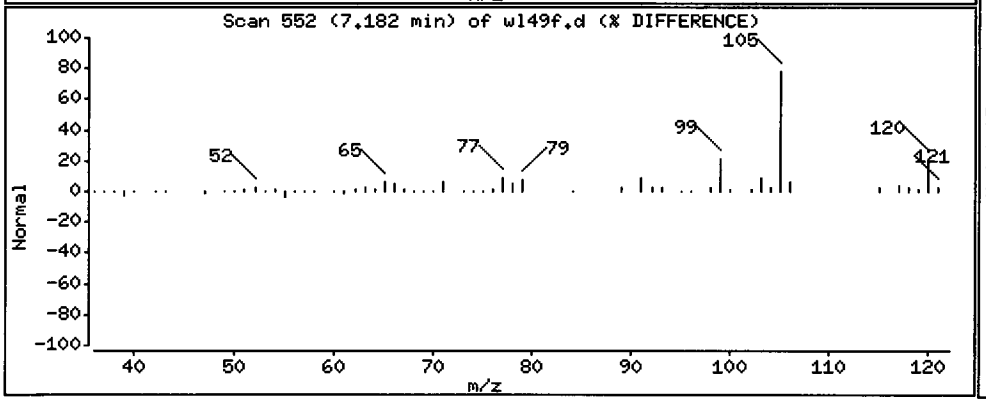












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

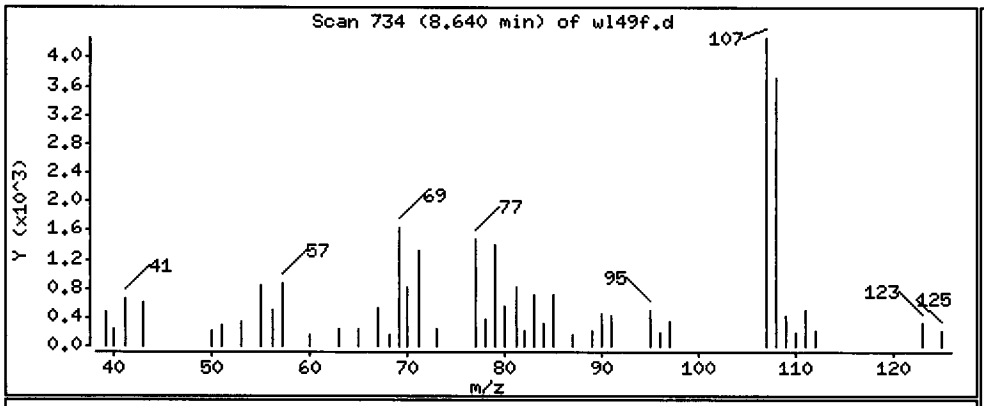
Operator: VTS/YZ

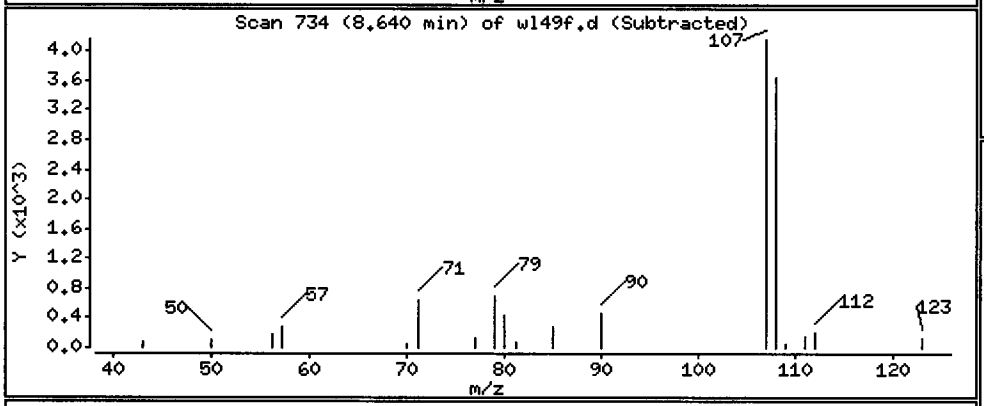
Column phase: ZB-5msi

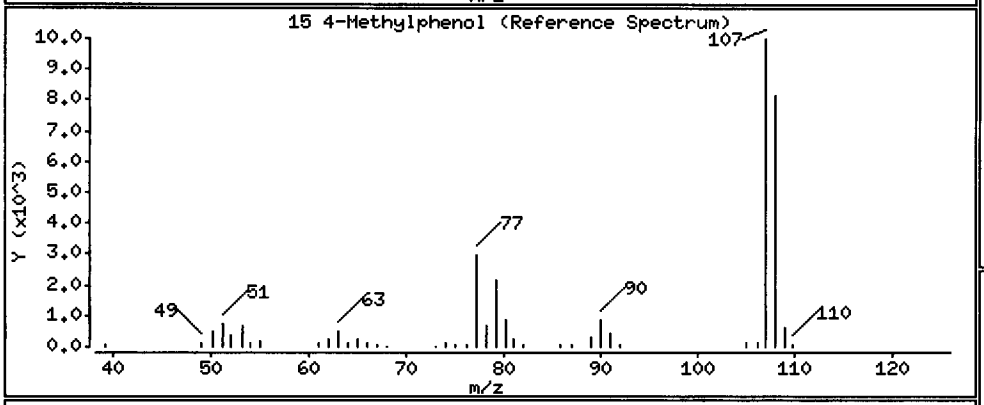
Column diameter: 0.25

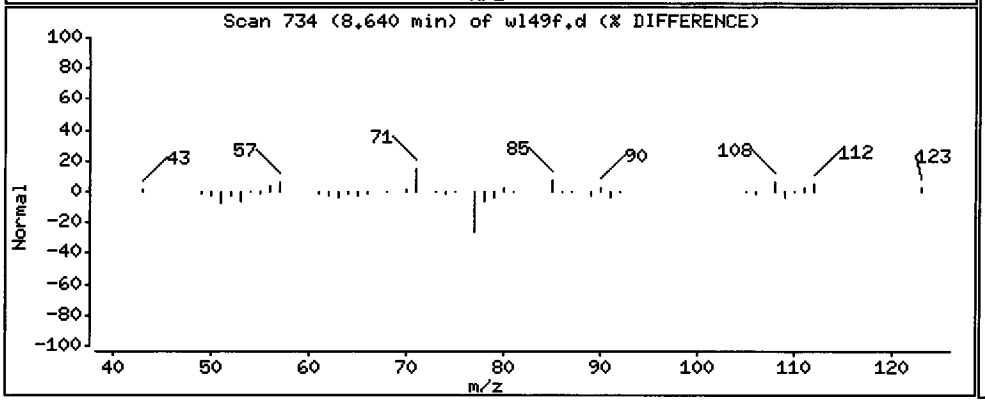
15 4-Methylphenol

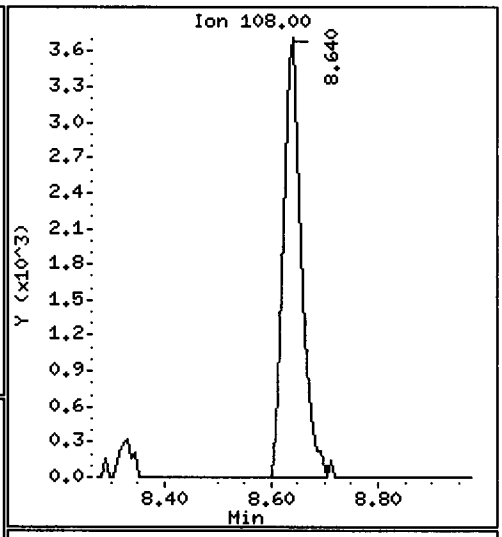
Concentration: 1514 ug/kg

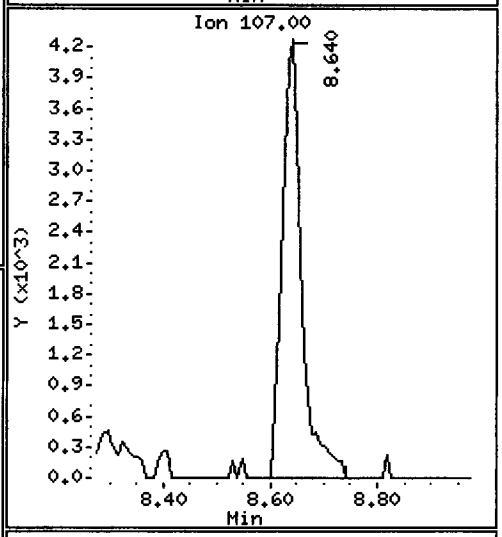


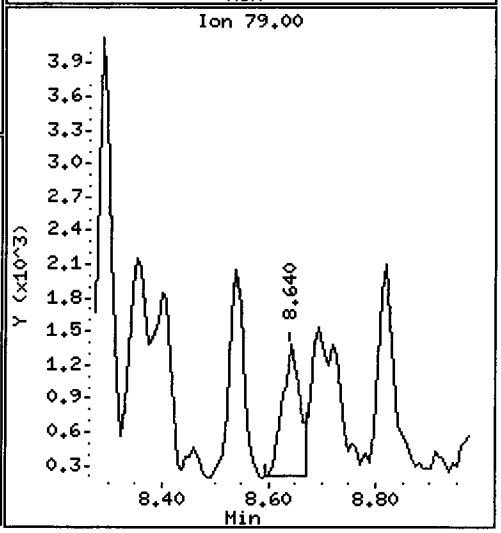












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

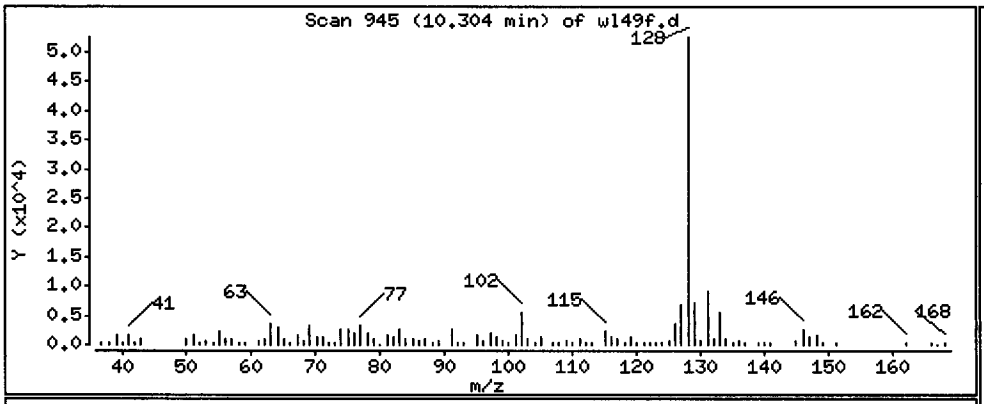
Operator: VTS/YZ

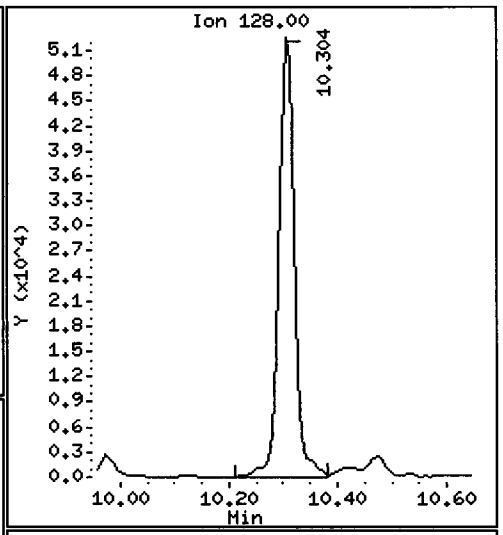
Column phase: ZB-5msi

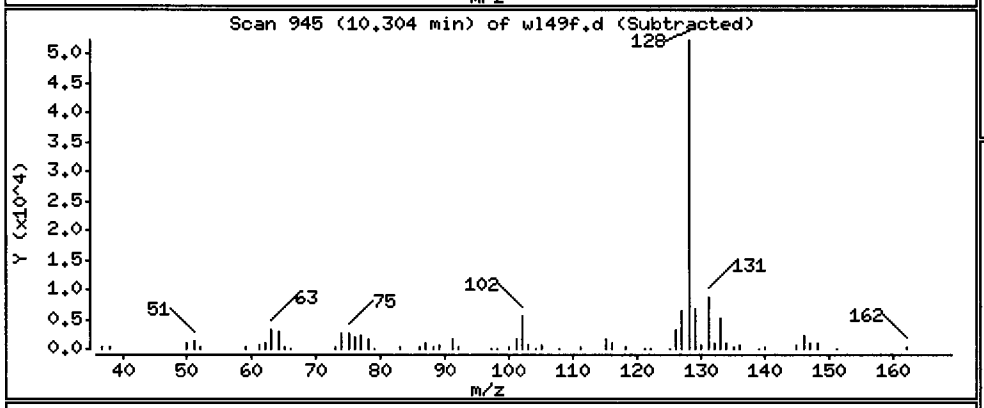
Column diameter: 0.25

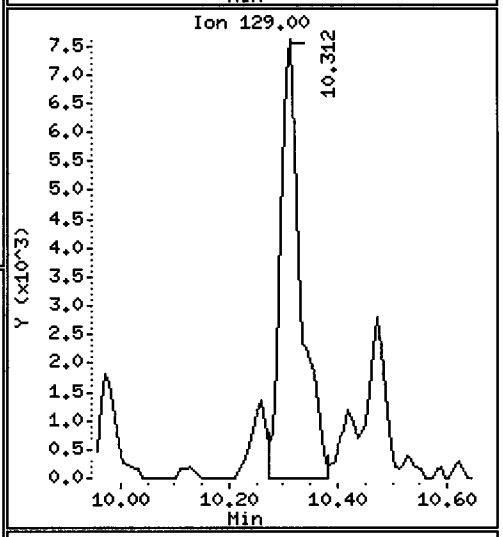
28 Naphthalene

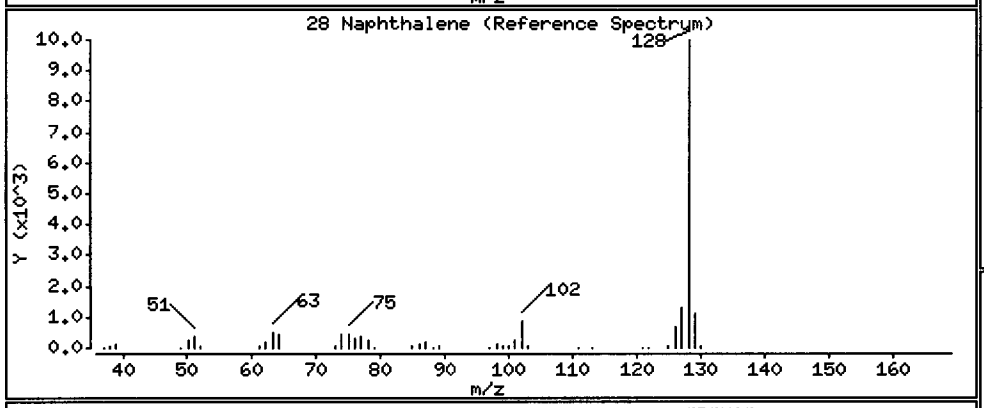
Concentration: 5966 ug/kg

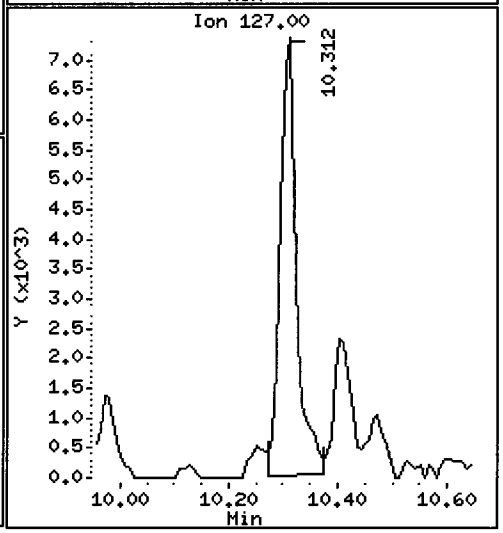


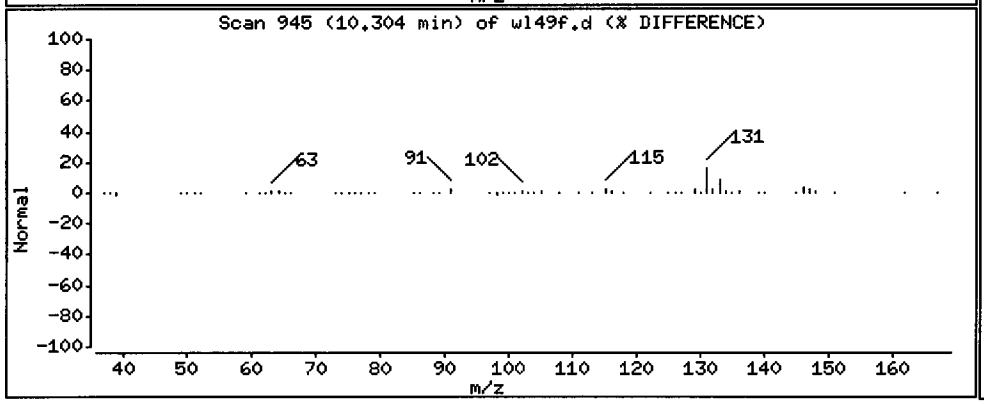












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

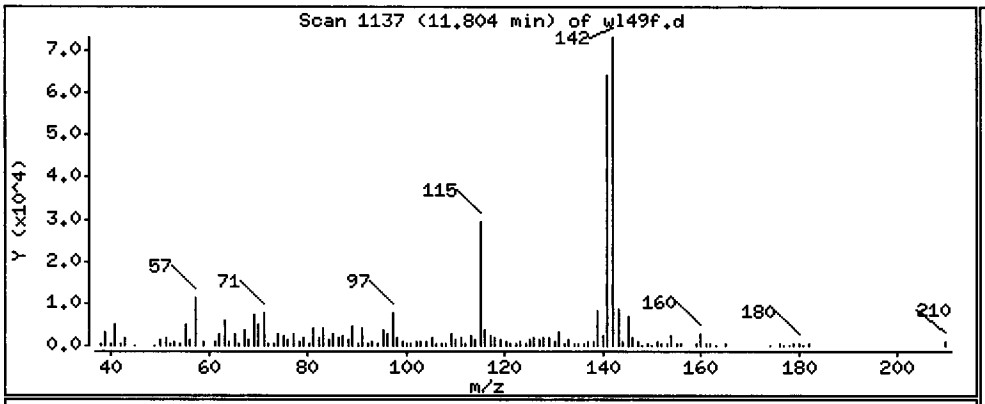
Operator: VTS/YZ

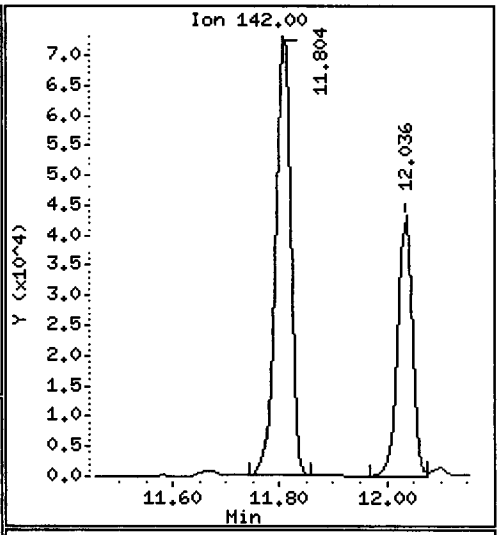
Column phase: ZB-5msi

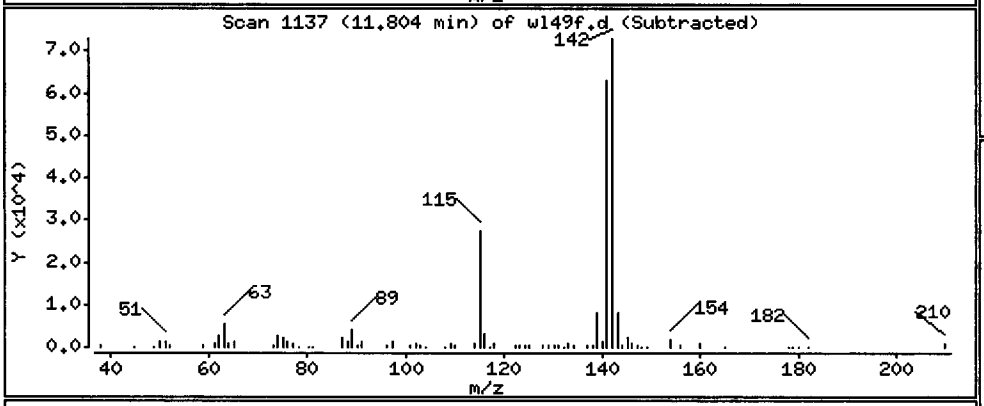
Column diameter: 0.25

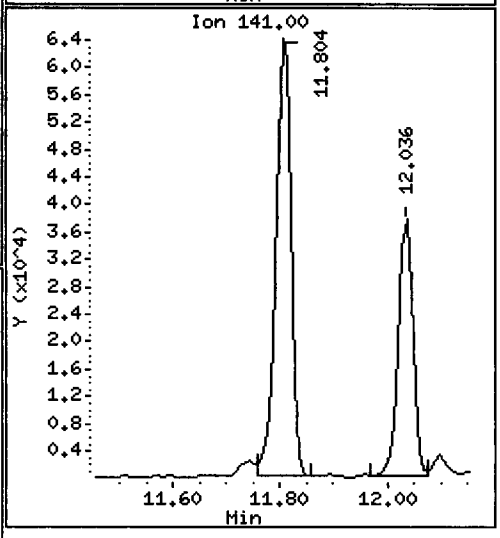
32 2-Methylnaphthalene

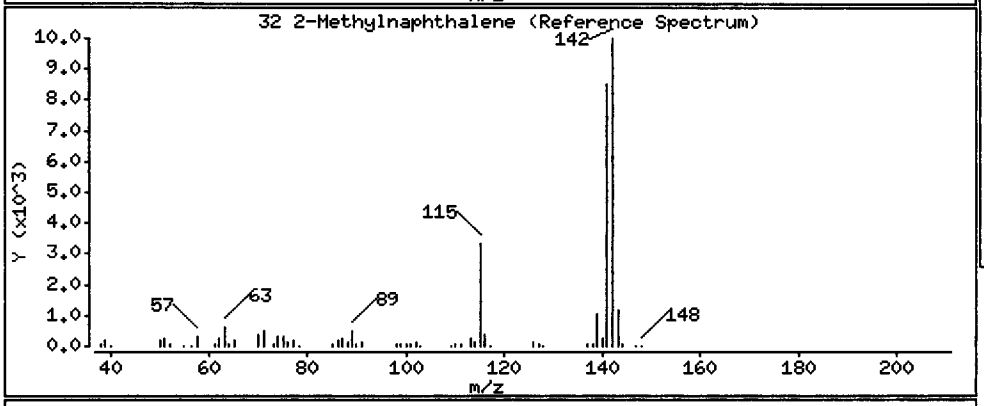
Concentration: 12260 ug/kg

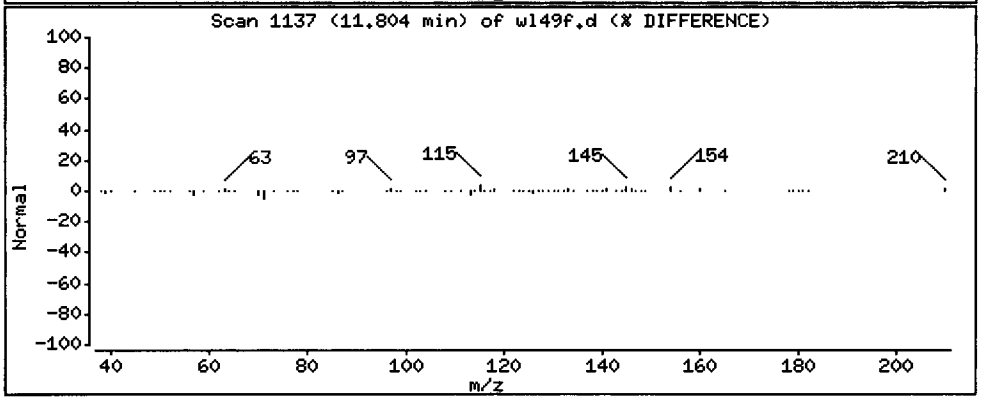












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

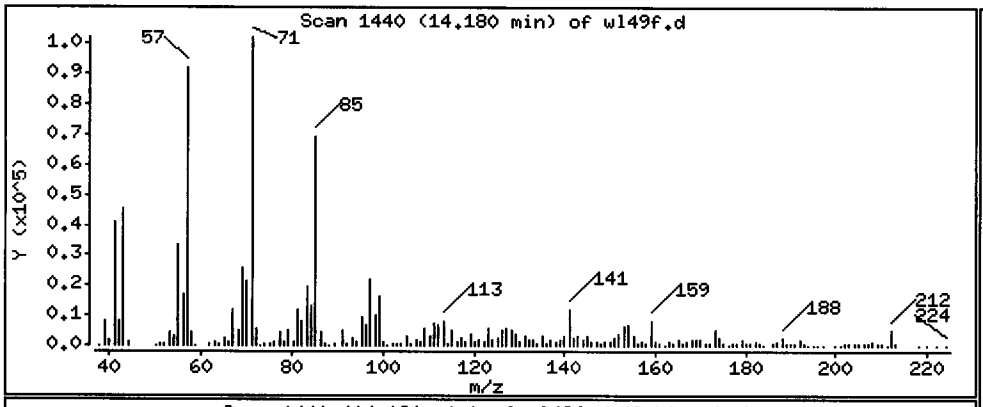
Operator: VTS/YZ

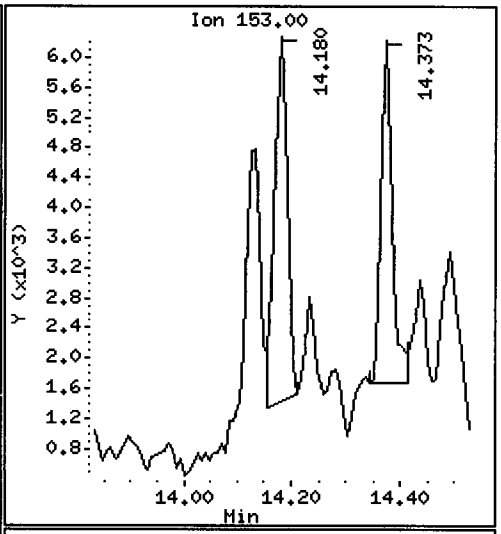
Column phase: ZB-5msi

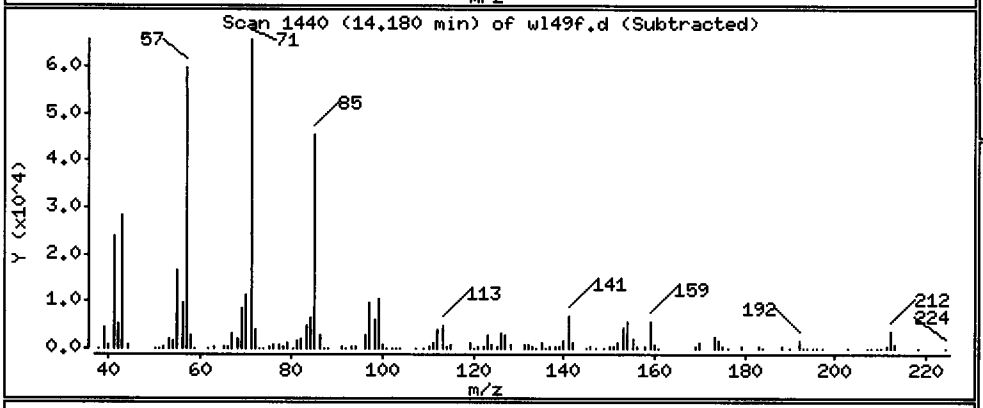
Column diameter: 0.25

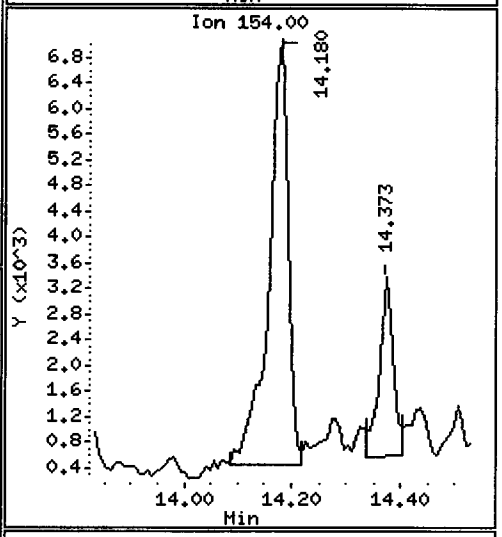
44 Acenaphthene

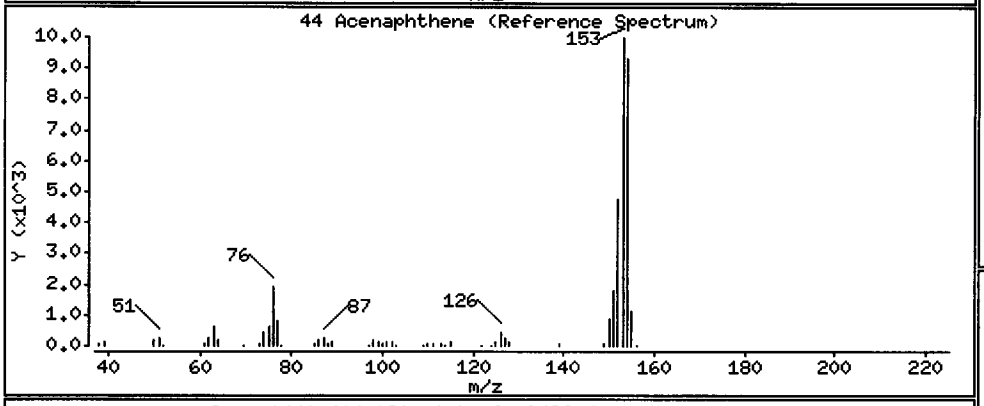
Concentration: 745.5 ug/kg

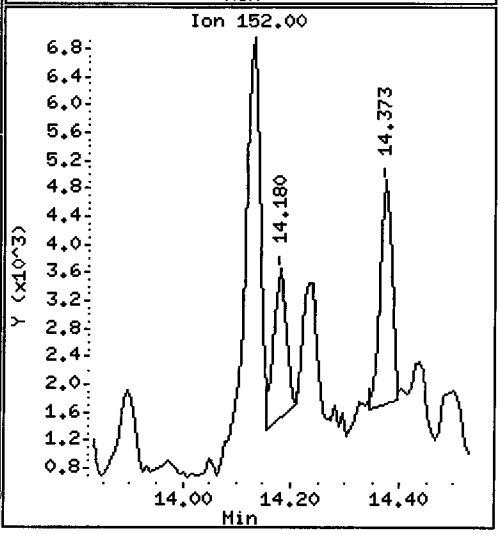


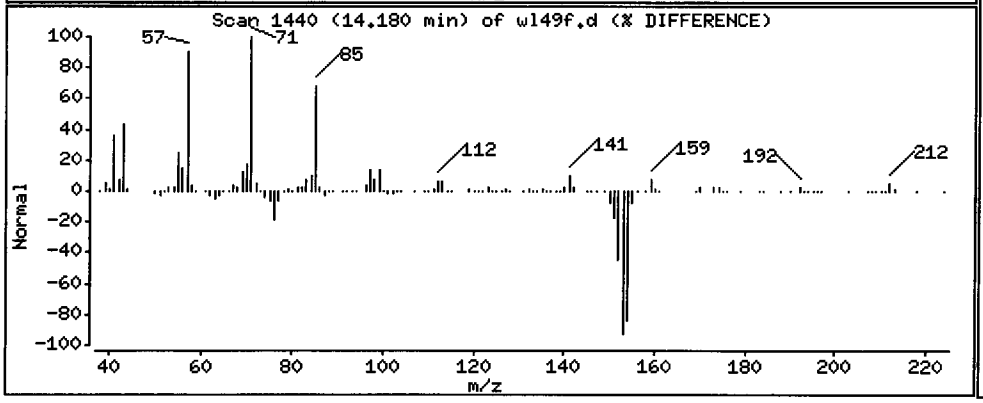












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

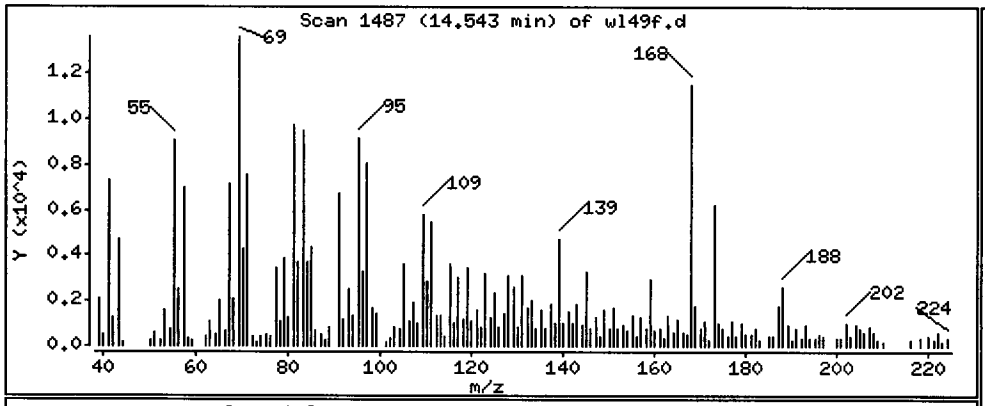
Operator: VTS/YZ

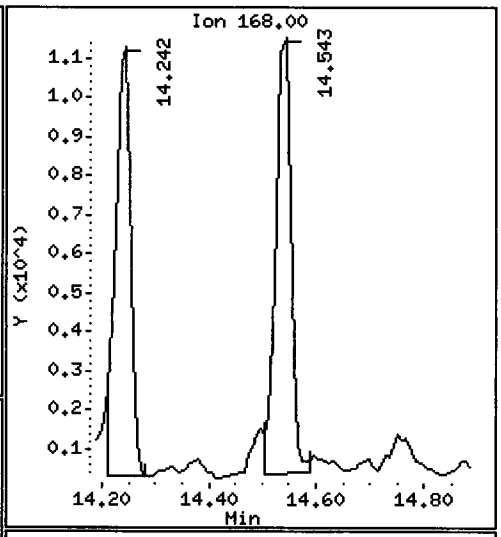
Column phase: ZB-5msi

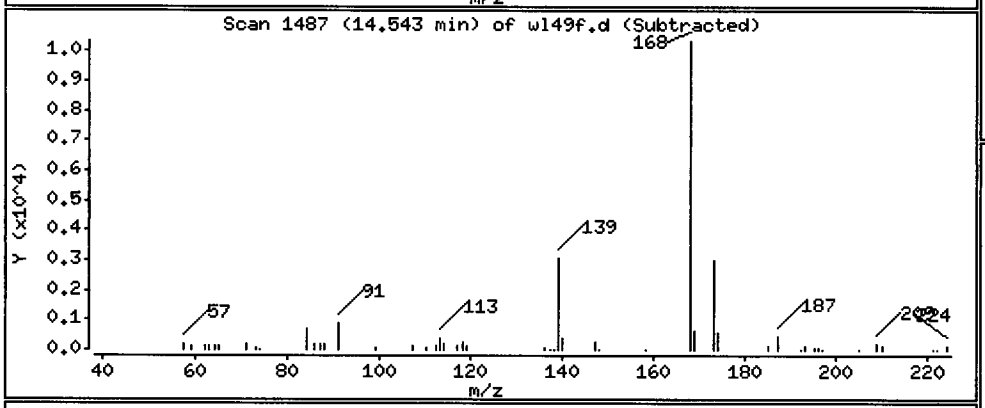
Column diameter: 0.25

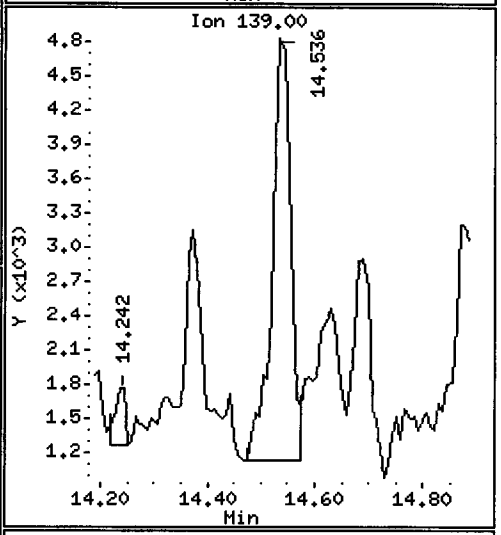
46 Dibenzofuran

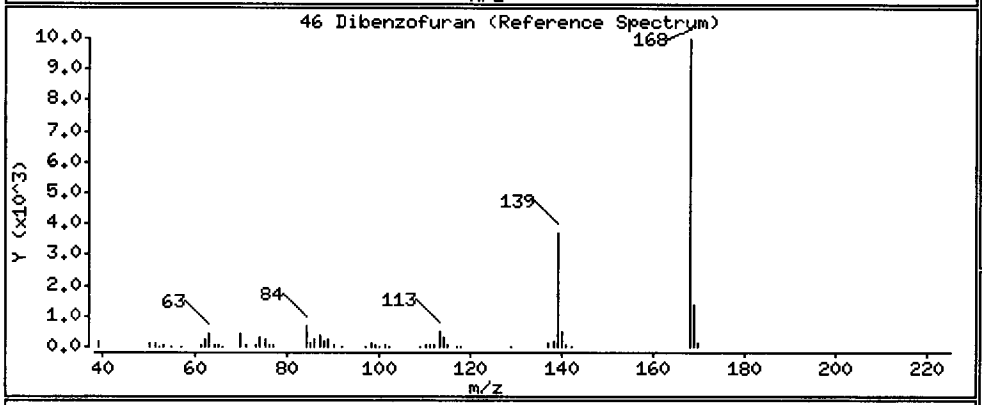
Concentration: 1496 ug/kg

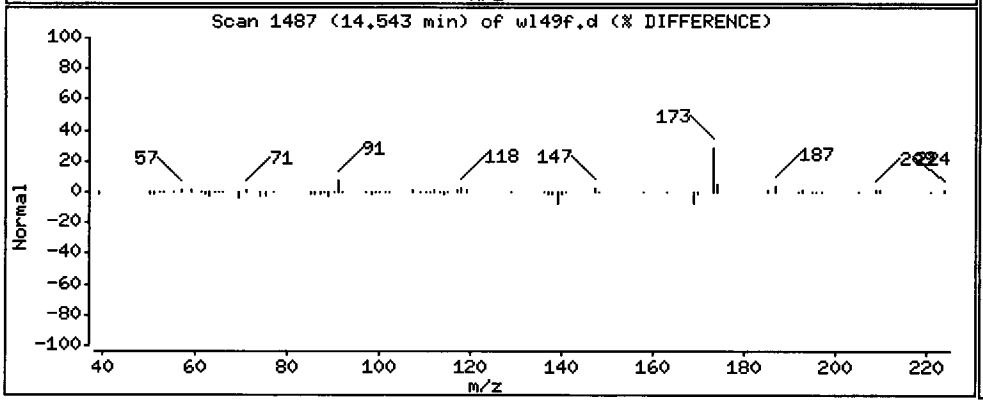


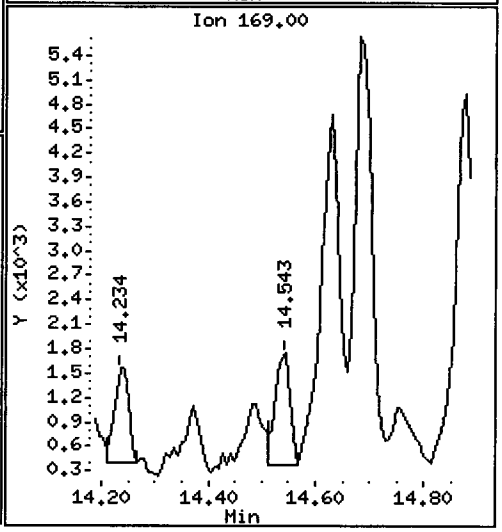












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

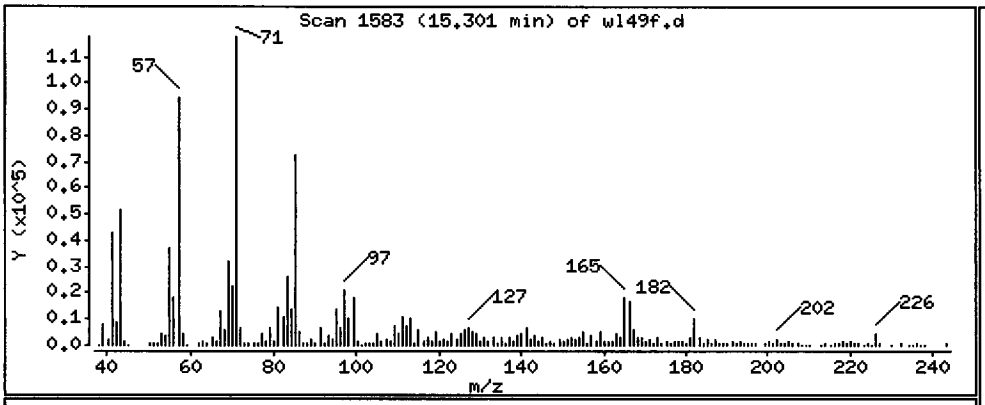
Operator: VTS/YZ

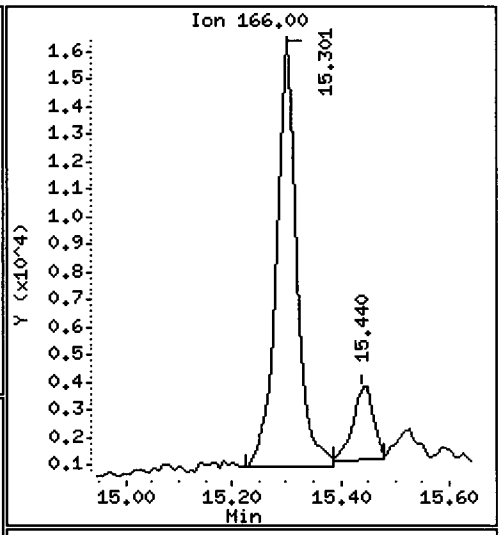
Column phase: ZB-5msi

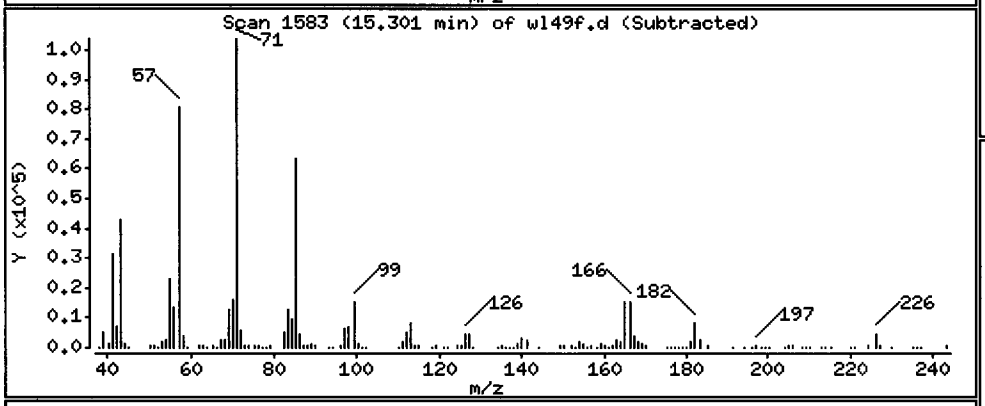
Column diameter: 0.25

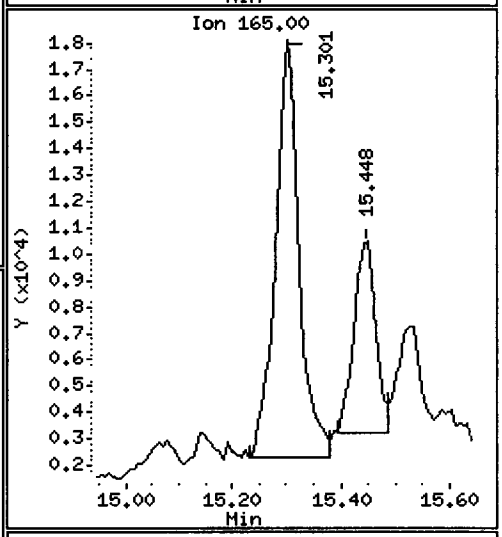
49 Fluorene

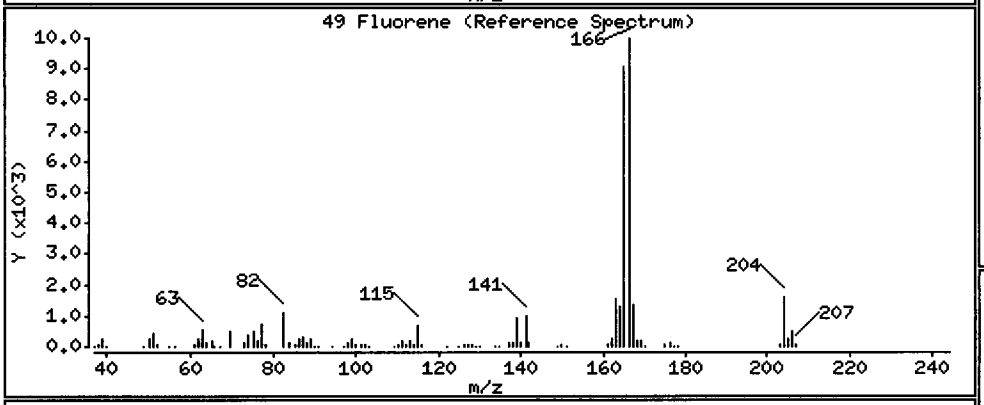
Concentration: 3305 ug/kg

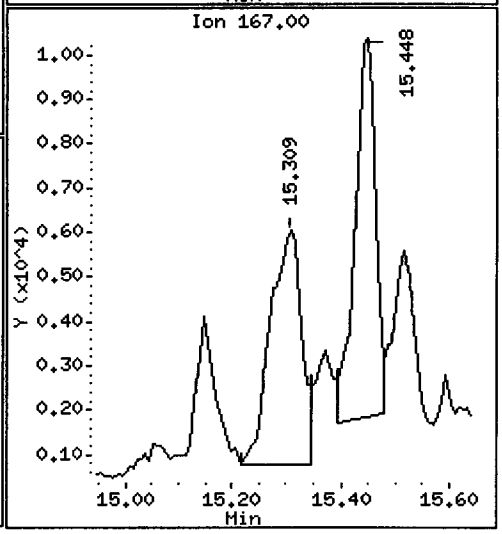


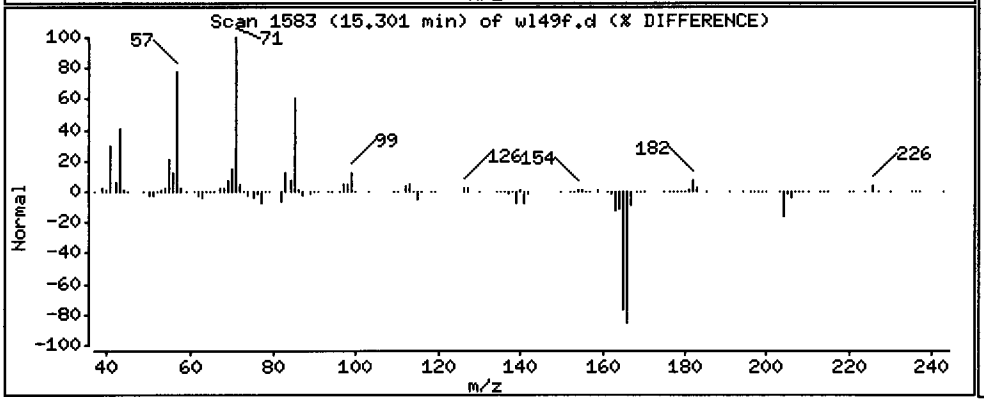












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

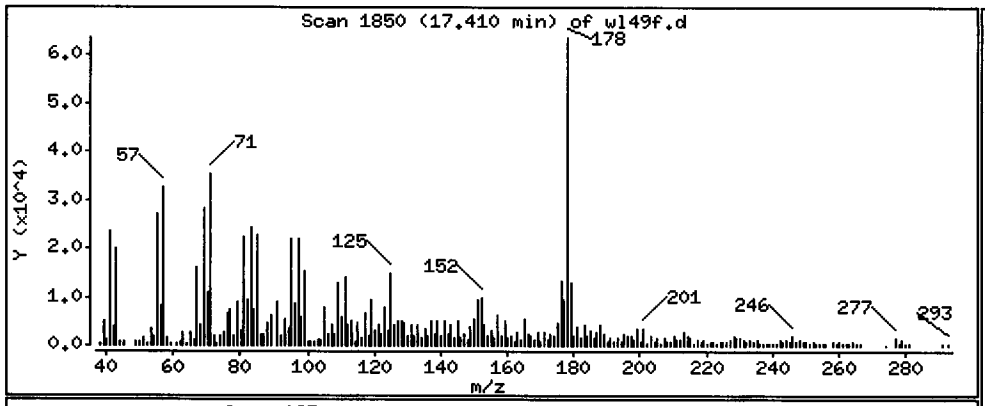
Operator: VTS/YZ

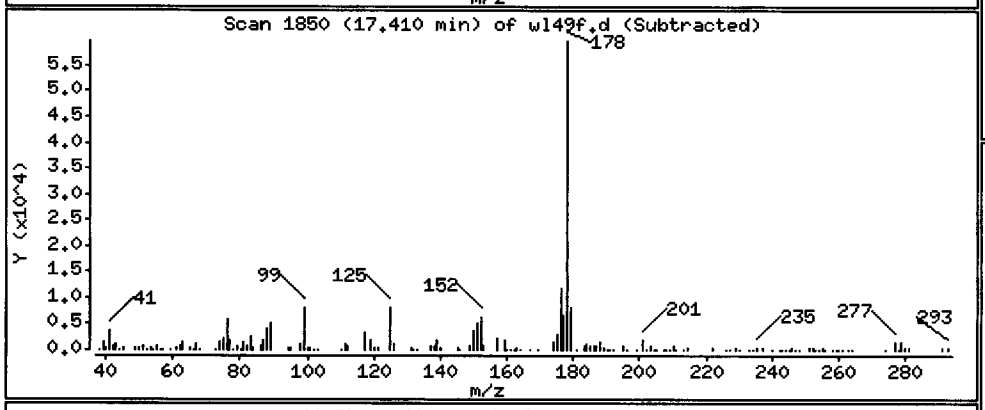
Column phase: ZB-5msi

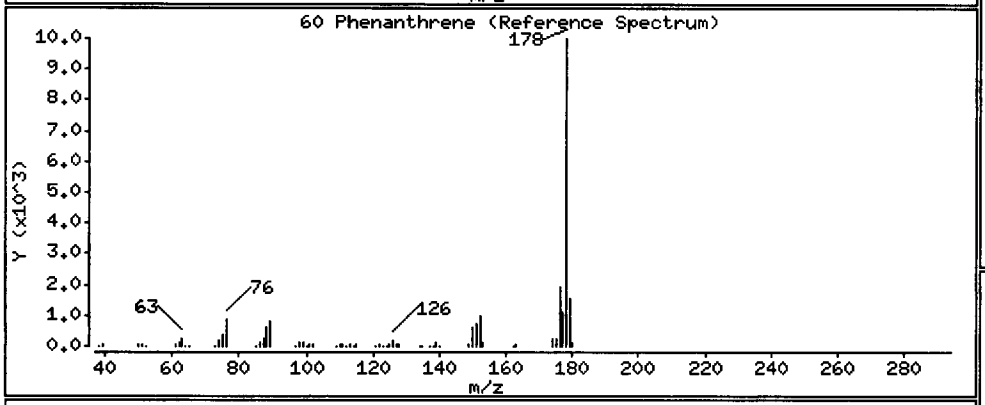
Column diameter: 0.25

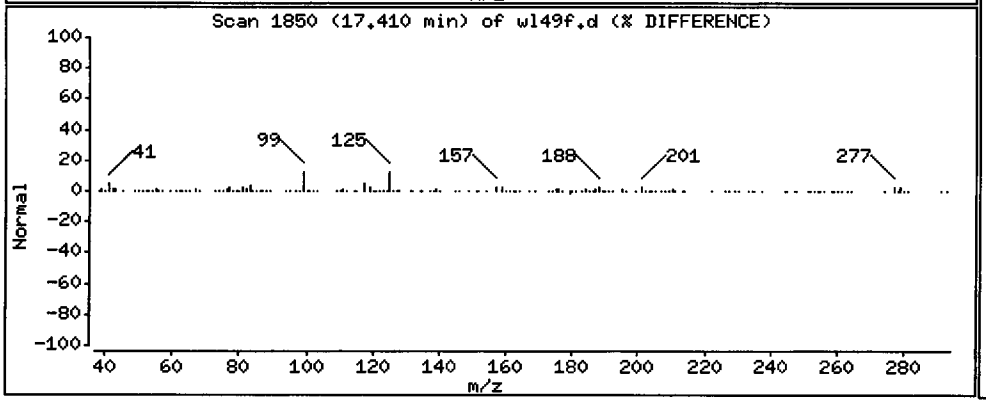
60 Phenanthrene

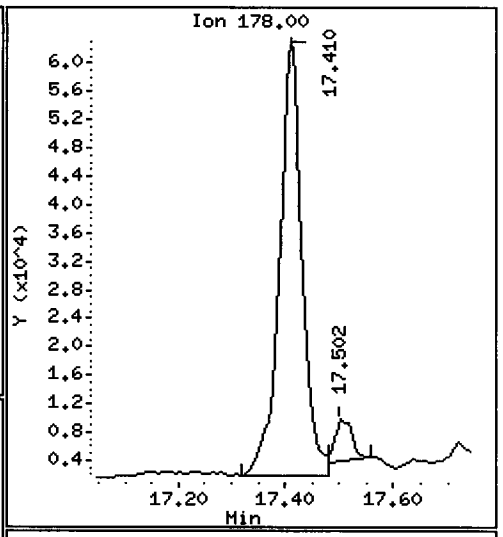
Concentration: 11320 ug/kg

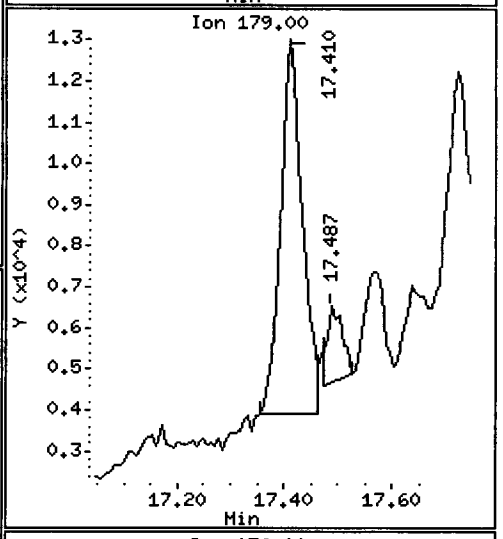


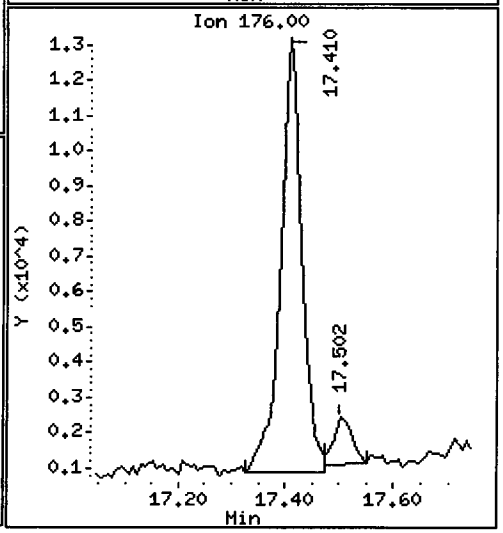












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

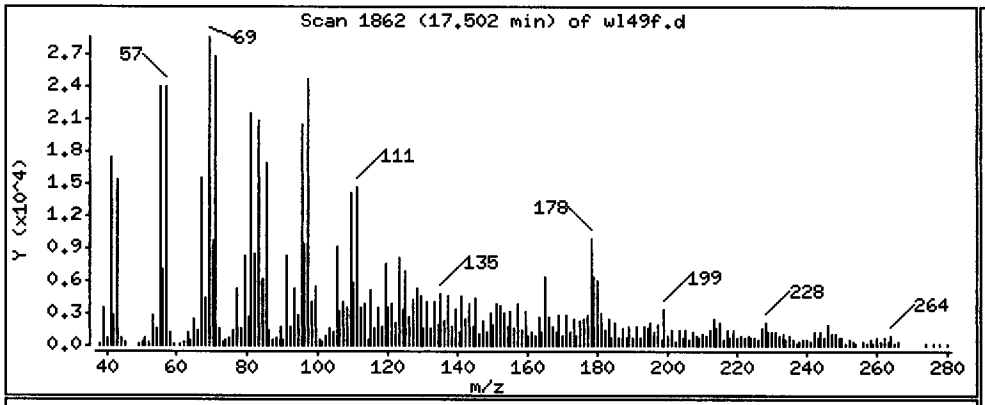
Operator: VTS/YZ

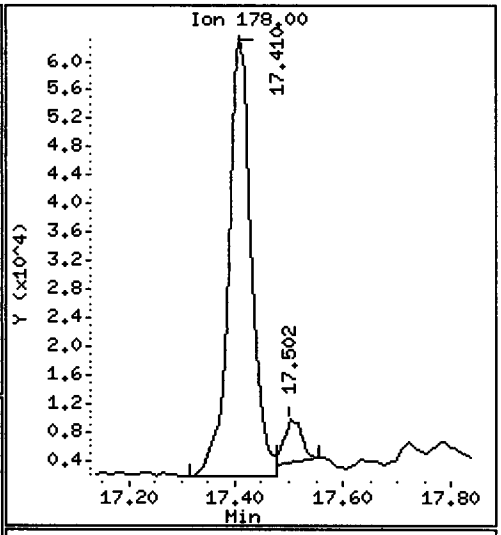
Column phase: ZB-5ms1

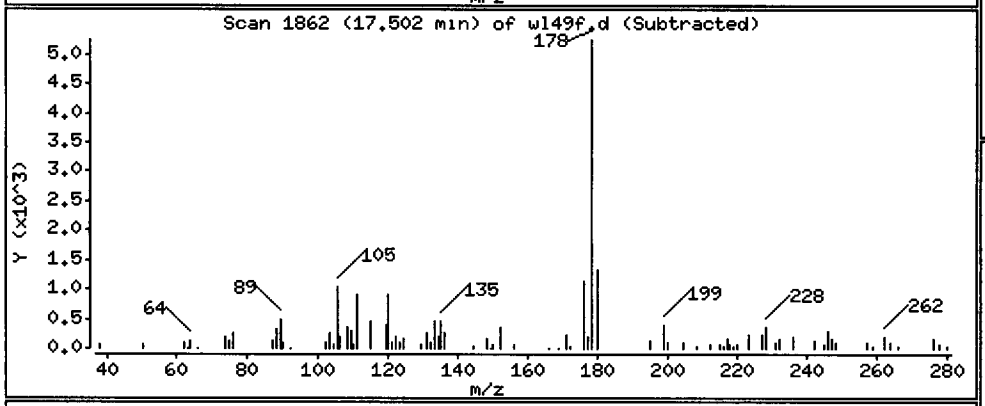
Column diameter: 0.25

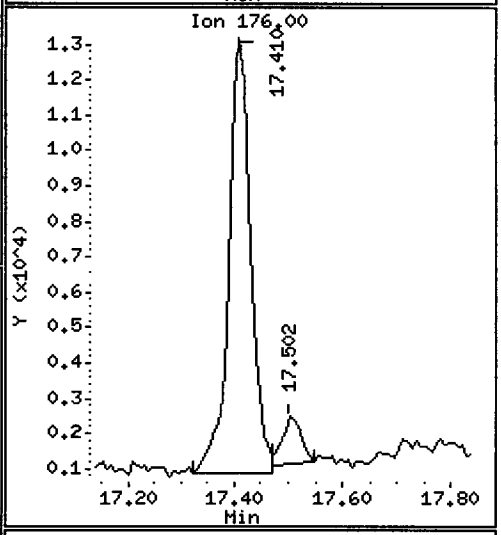
61 Anthracene

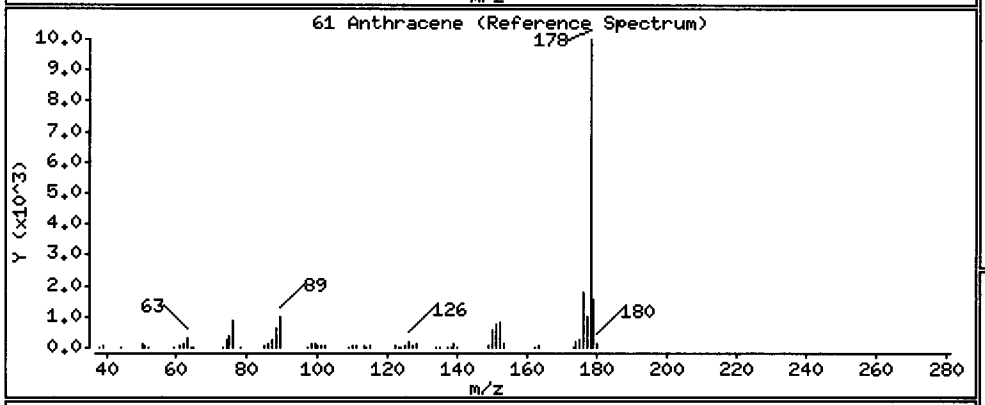
Concentration: 857.1 ug/kg

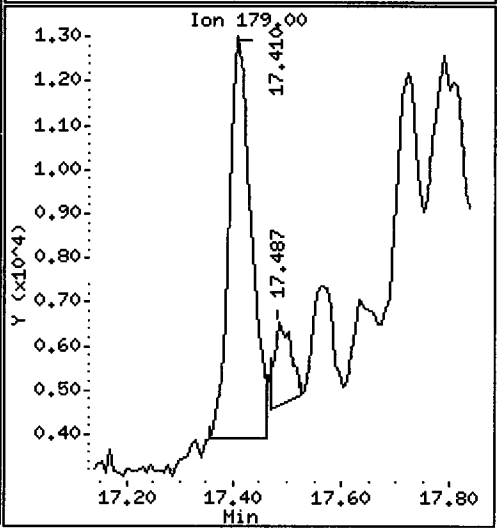


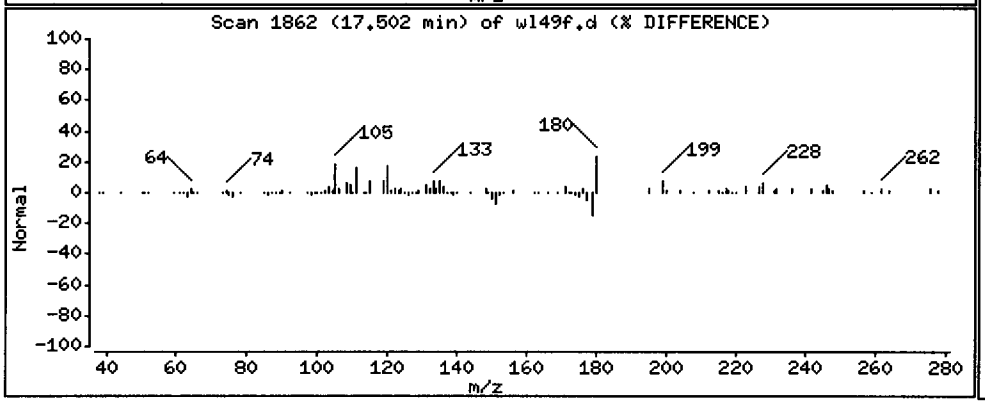












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

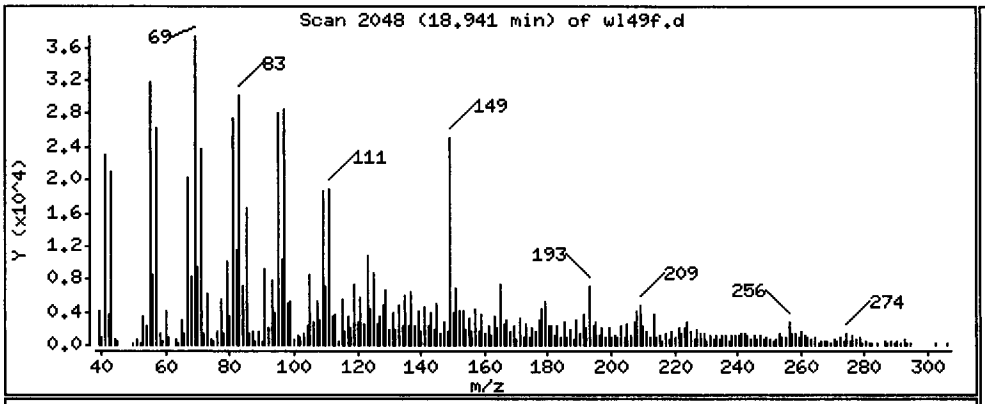
Operator: VTS/YZ

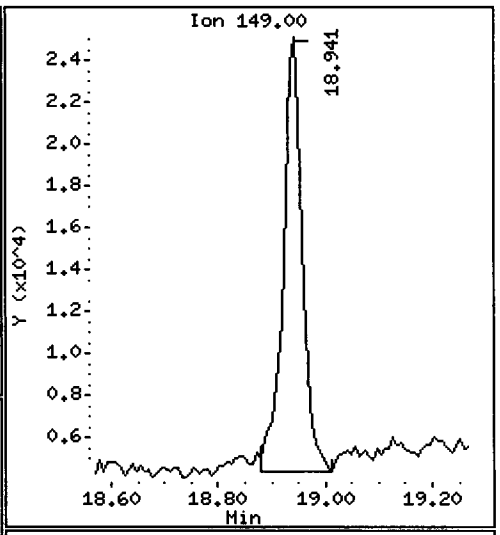
Column phase: ZB-5msi

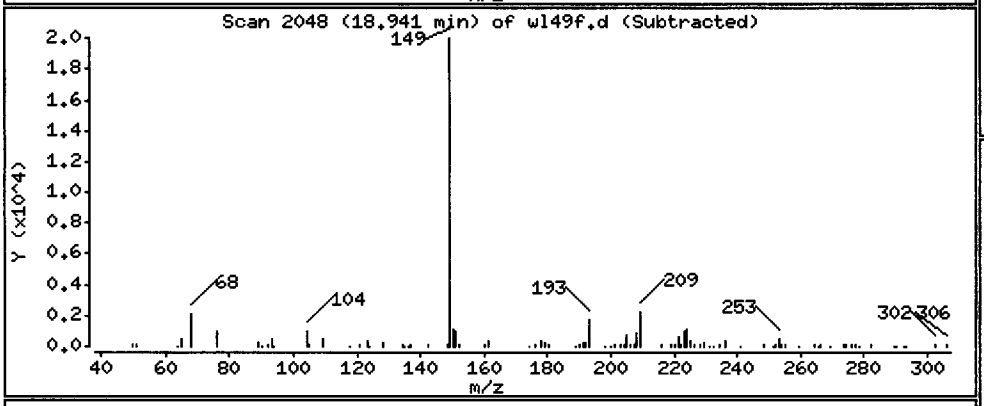
Column diameter: 0.25

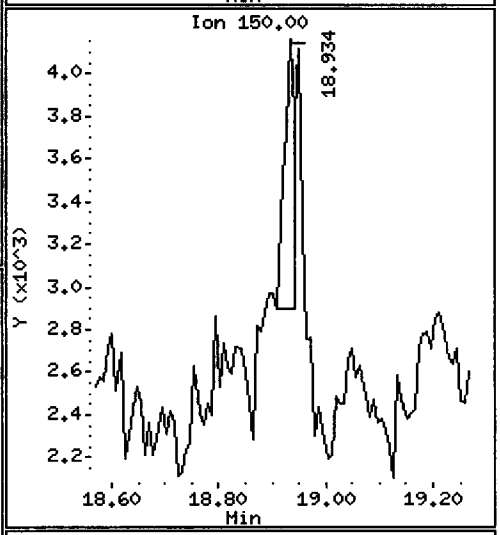
63 Di-n-butylphthalate

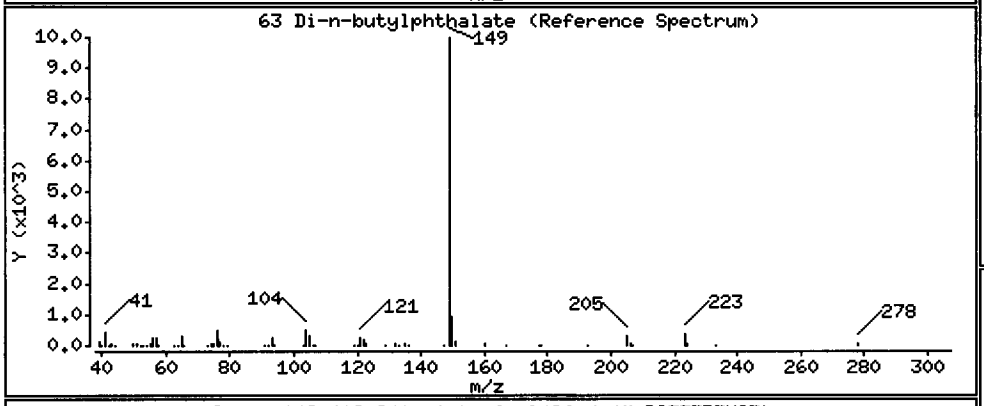
Concentration: 3118 ug/kg

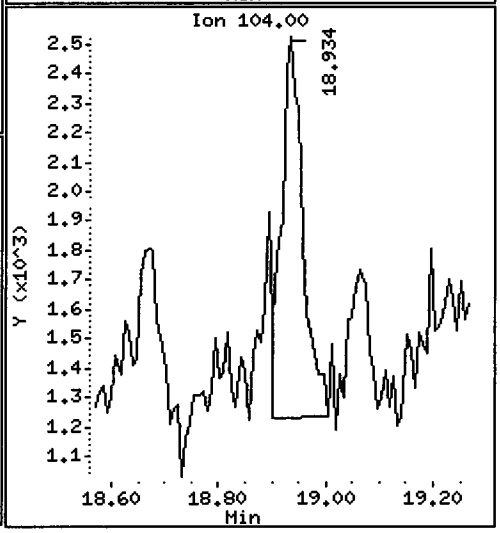


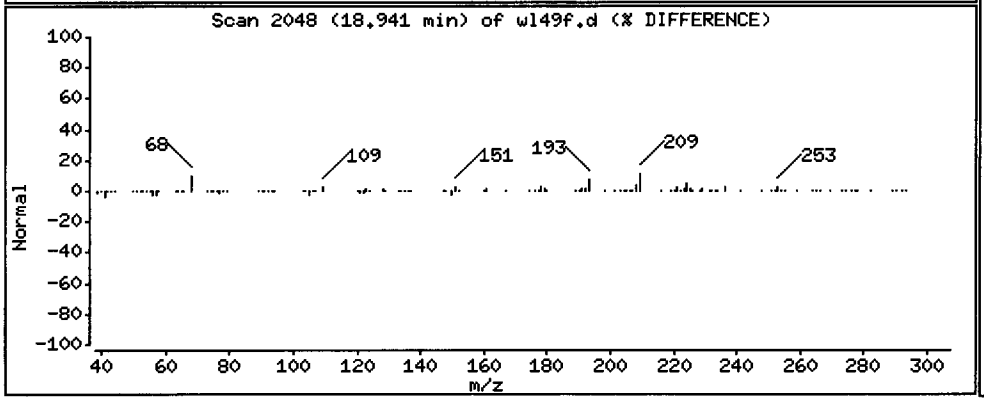












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

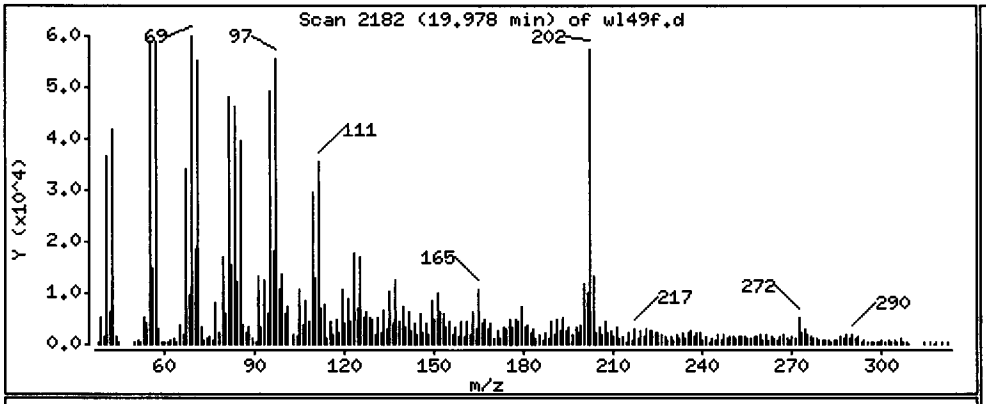
Operator: VTS/YZ

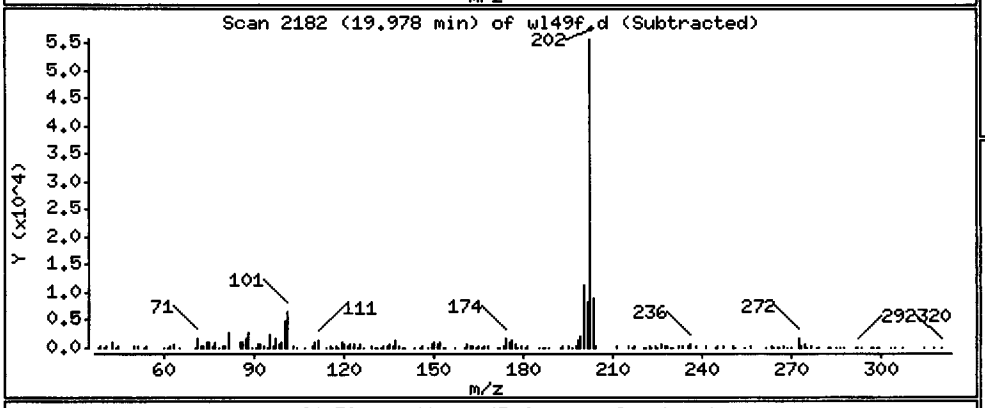
Column phase: ZB-5msi

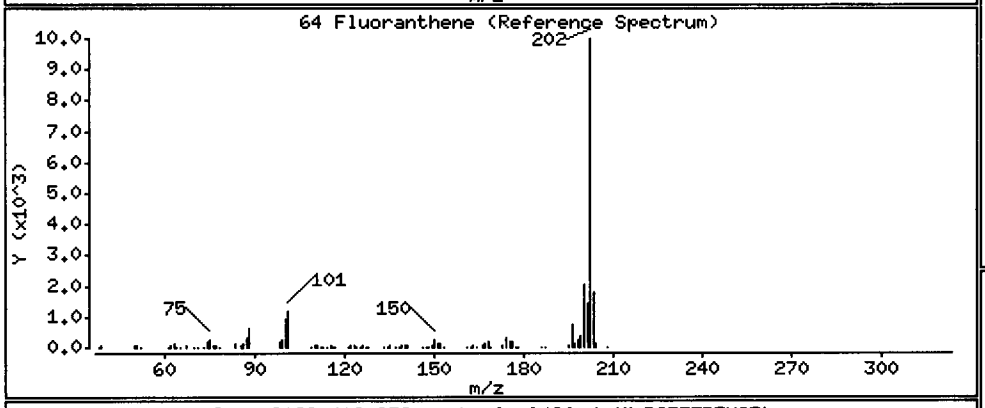
Column diameter: 0.25

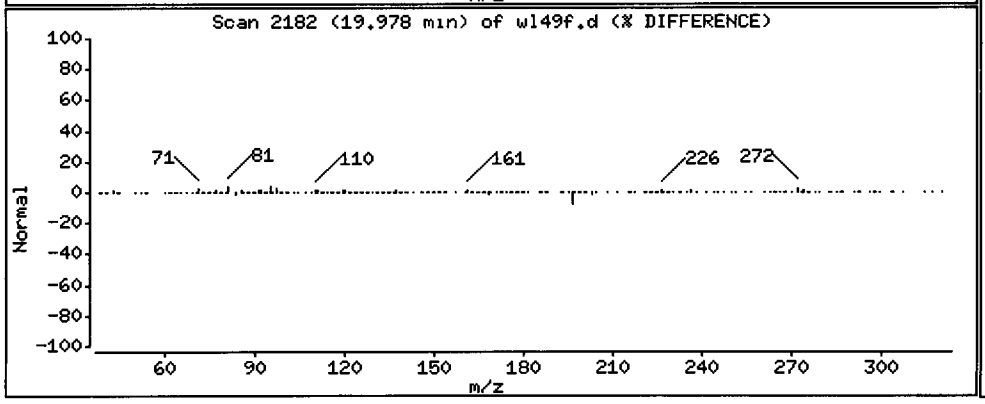
64 Fluoranthene

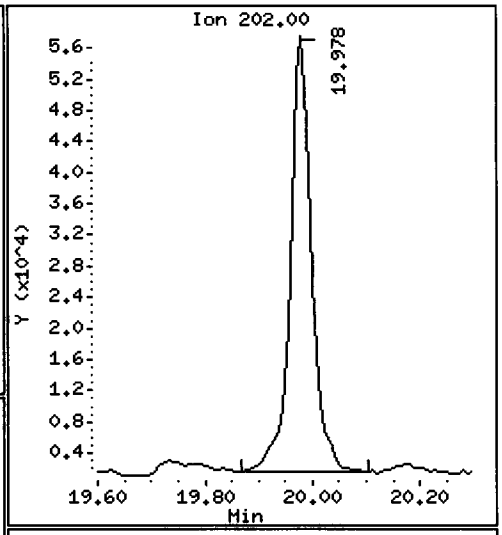
Concentration: 8699 ug/kg

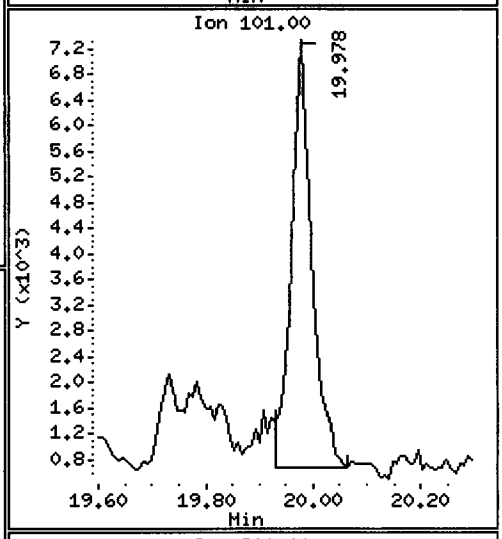


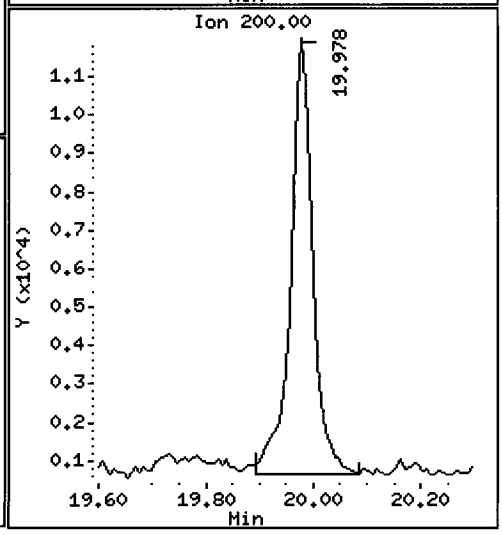












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

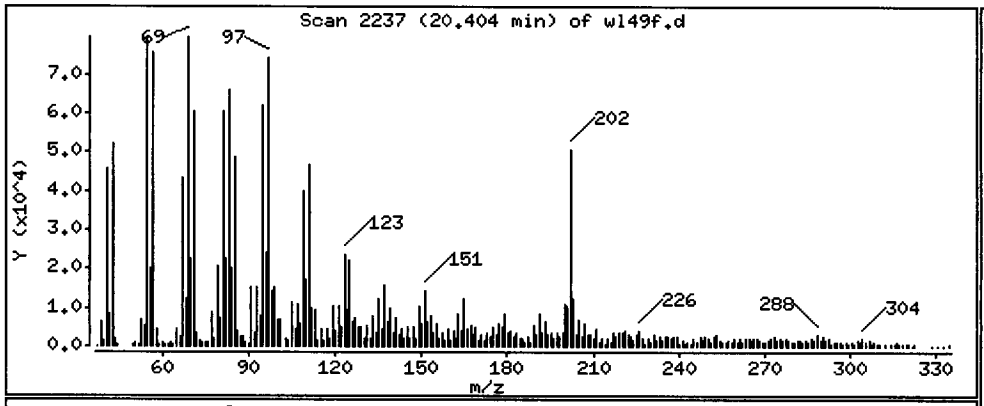
Operator: VTS/YZ

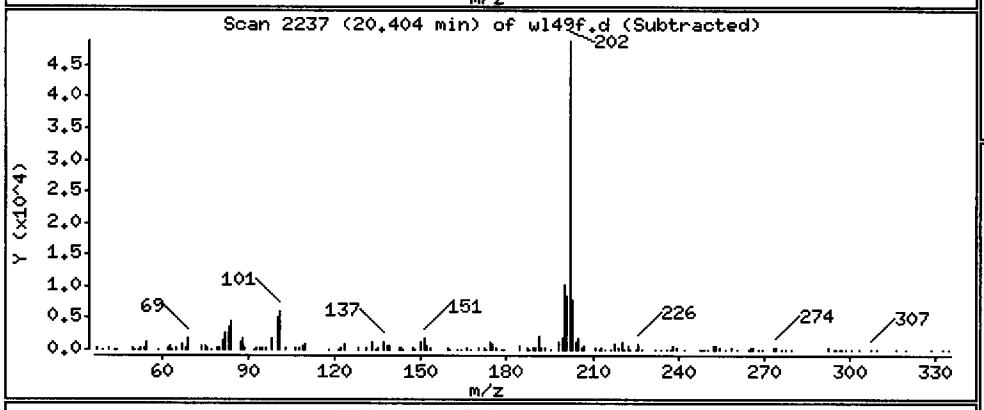
Column phase: ZB-5msi

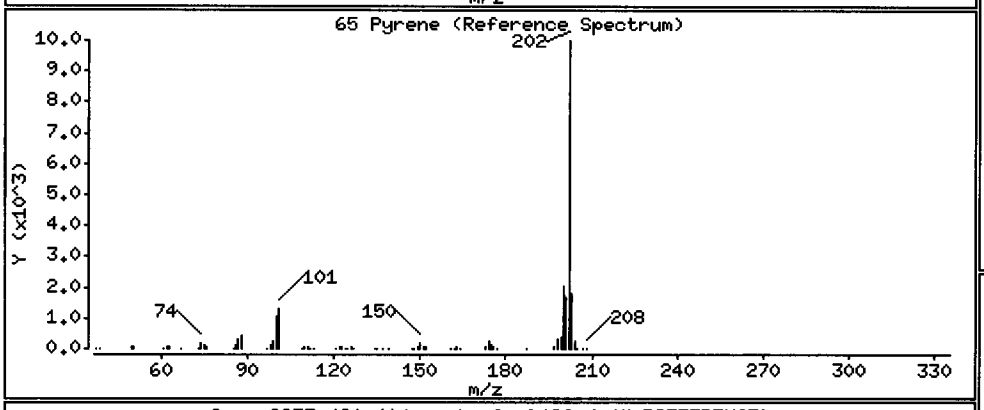
Column diameter: 0.25

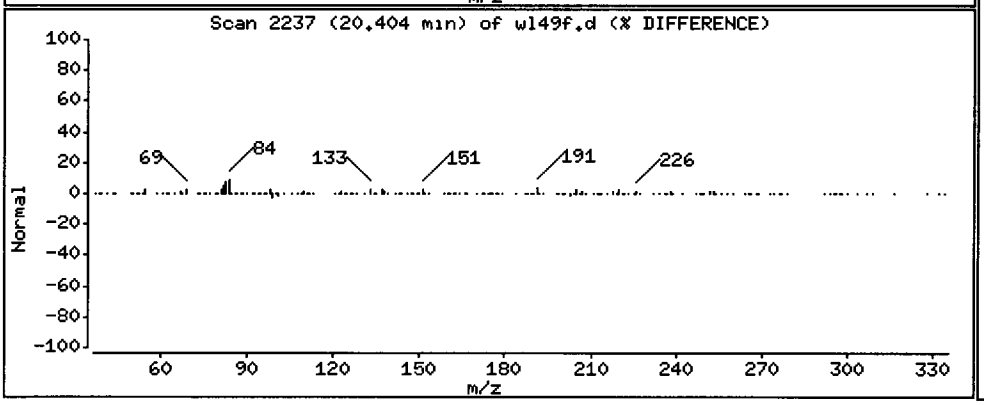
65 Pyrene

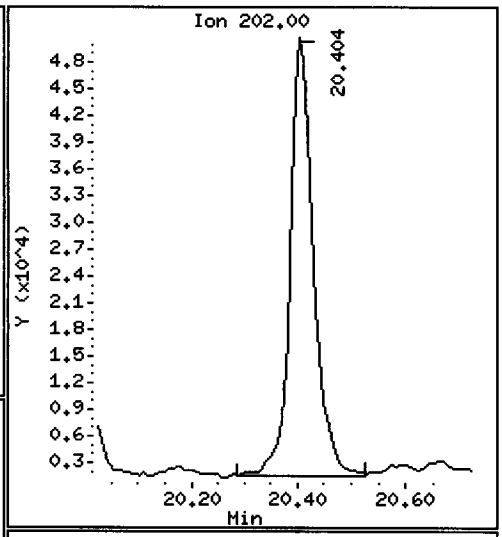
Concentration: 7906 ug/kg

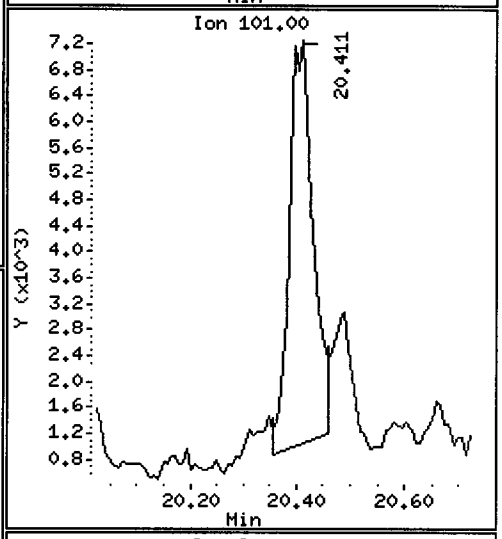


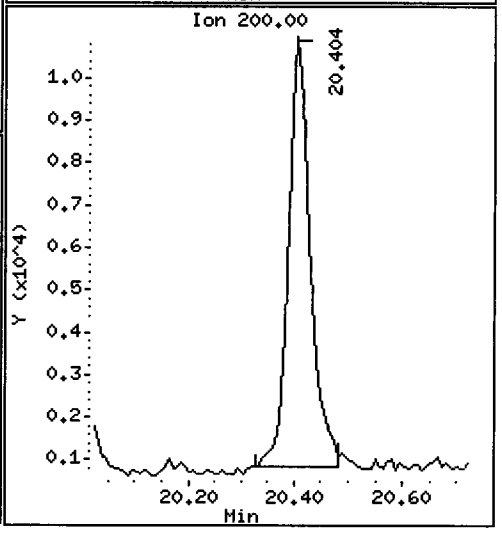












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

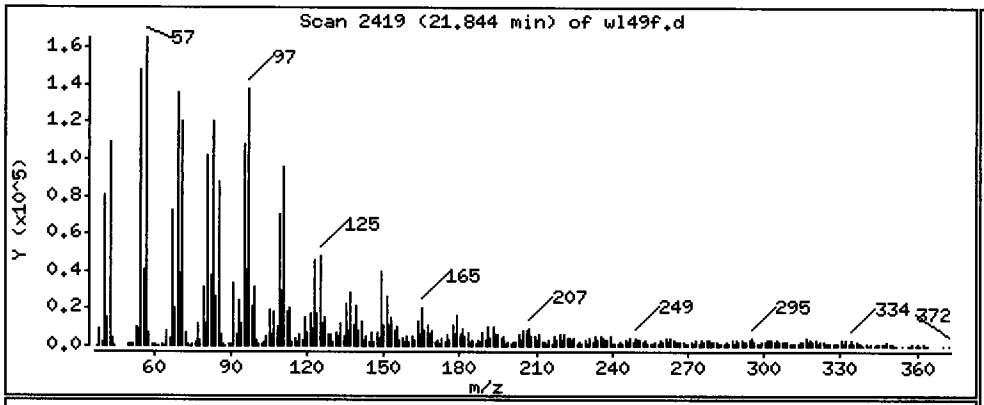
Operator: VTS/YZ

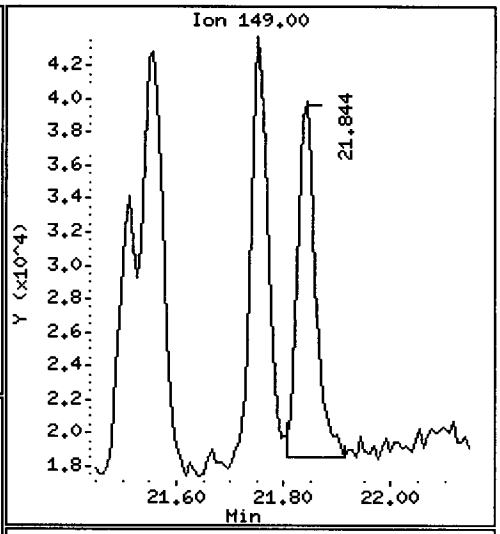
Column phase: ZB-5msi

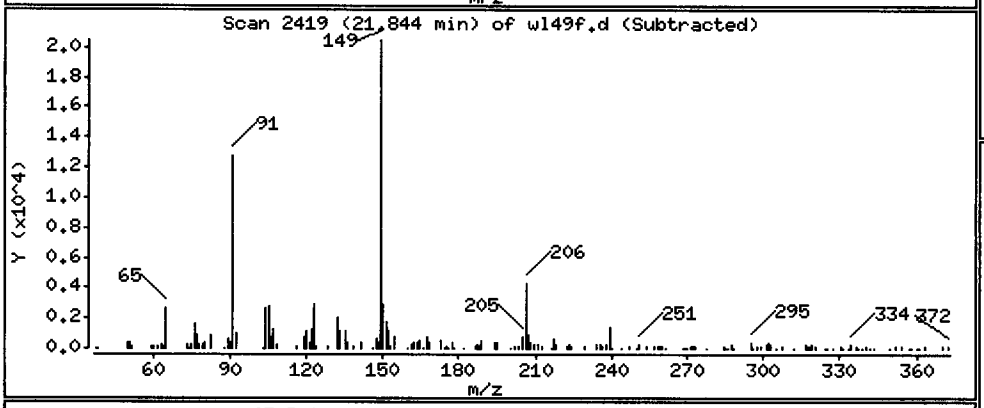
Column diameter: 0.25

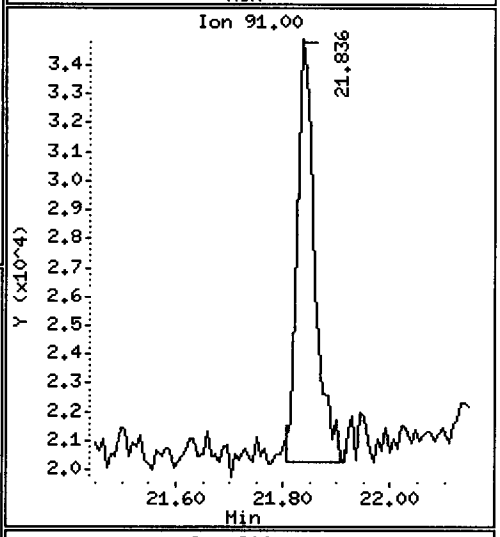
67 Butylbenzylphthalate

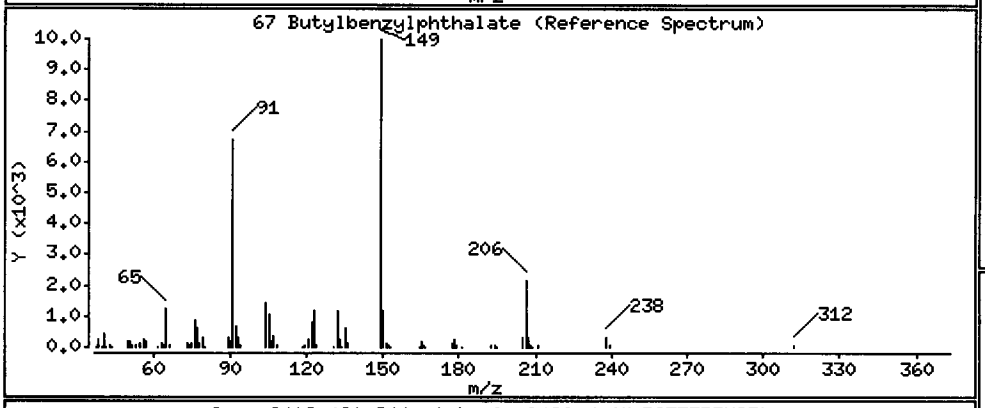
Concentration: 6586 ug/kg

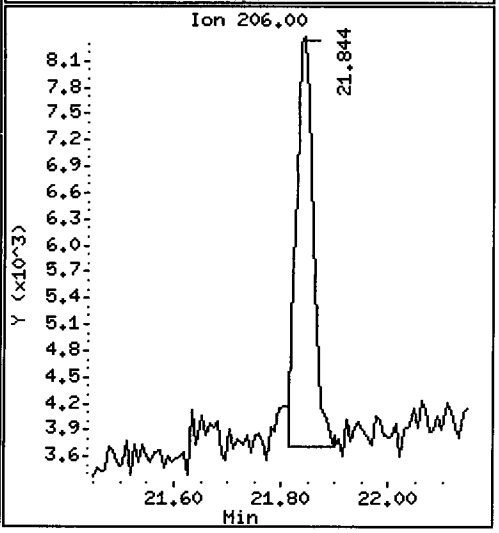


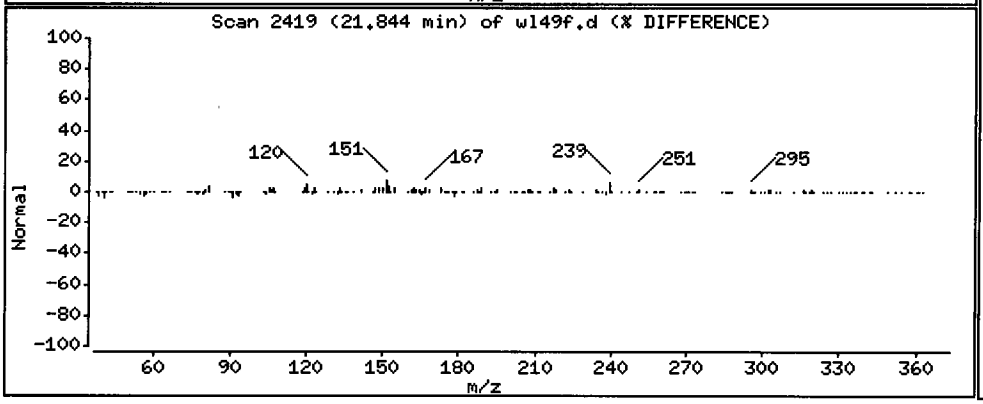












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

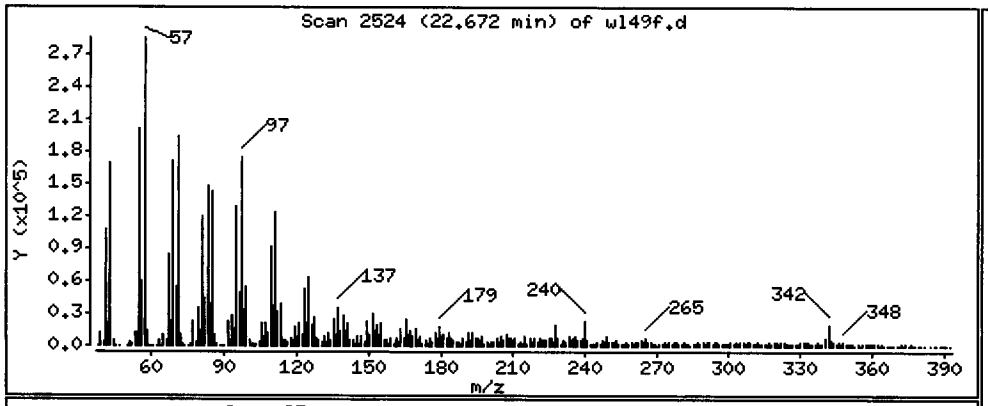
Operator: VTS/YZ

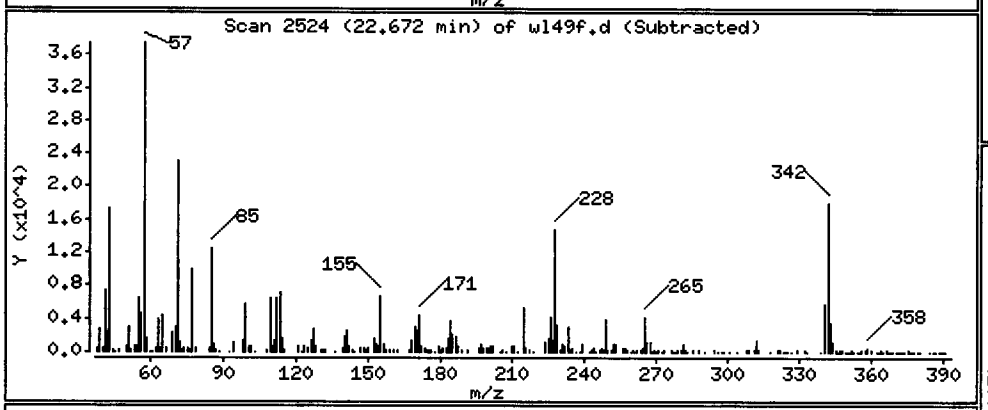
Column phase: ZB-5msi

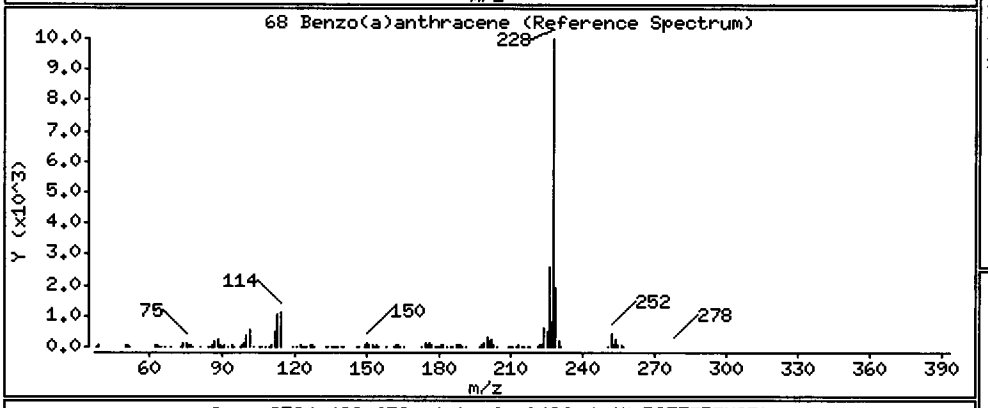
Column diameter: 0.25

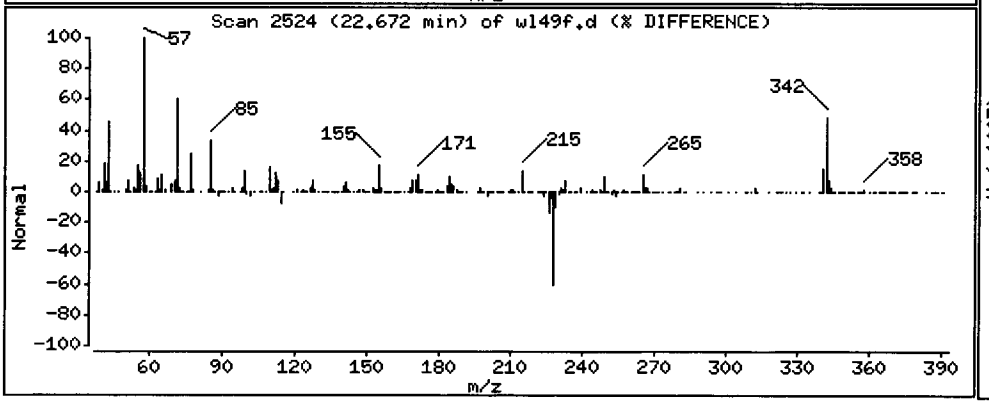
68 Benzo(a)anthracene

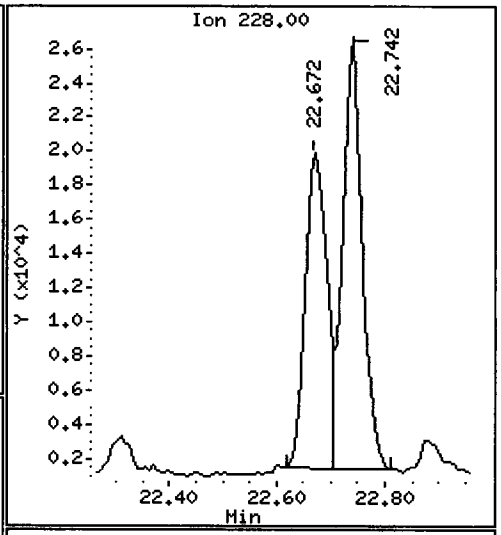
Concentration: 2516 ug/kg

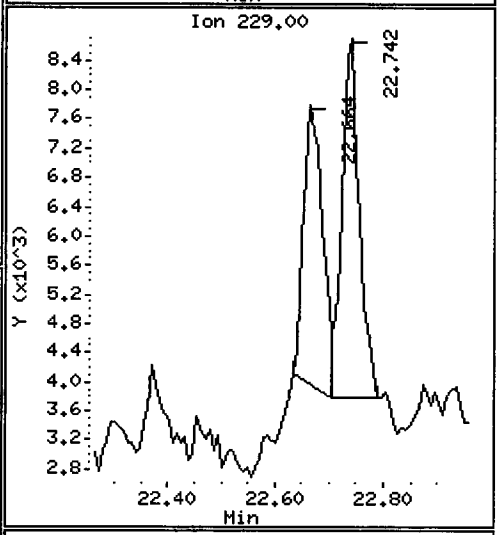


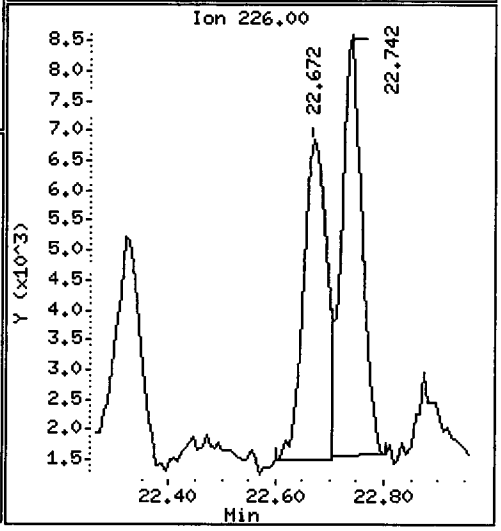












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

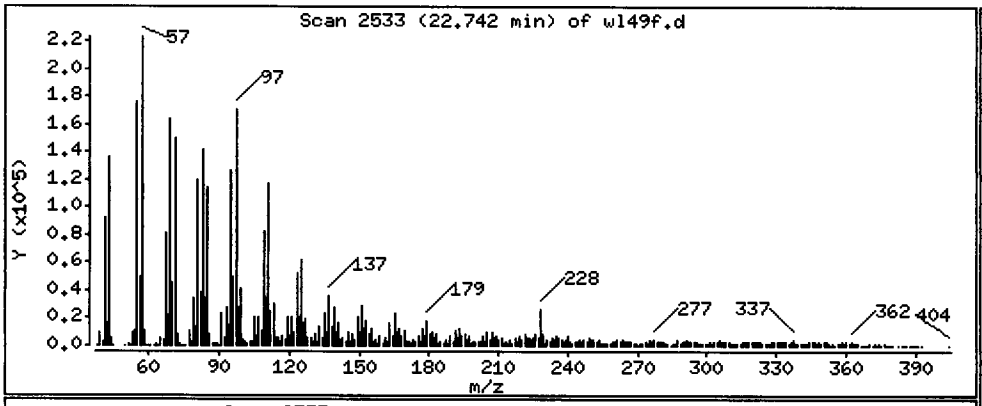
Operator: VTS/YZ

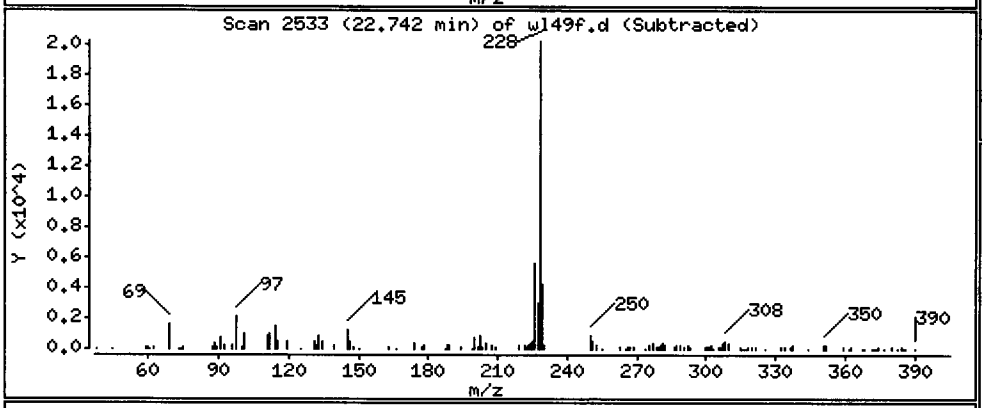
Column phase: ZB-5msi

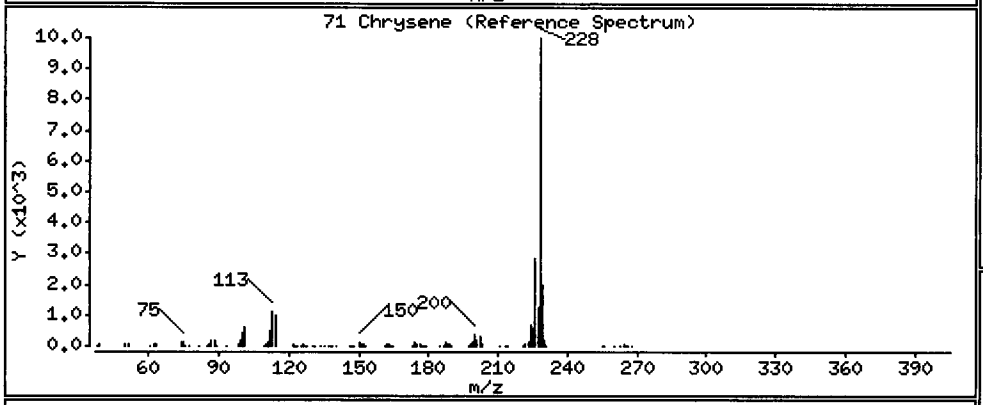
Column diameter: 0.25

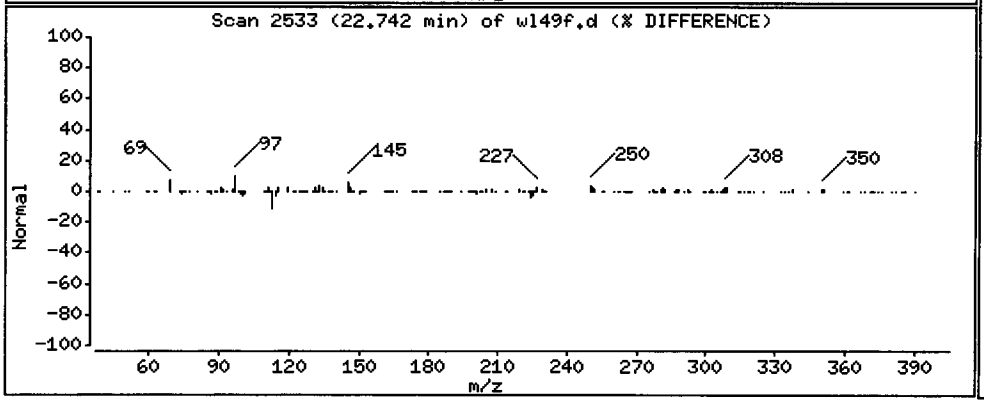
71 Chrysene

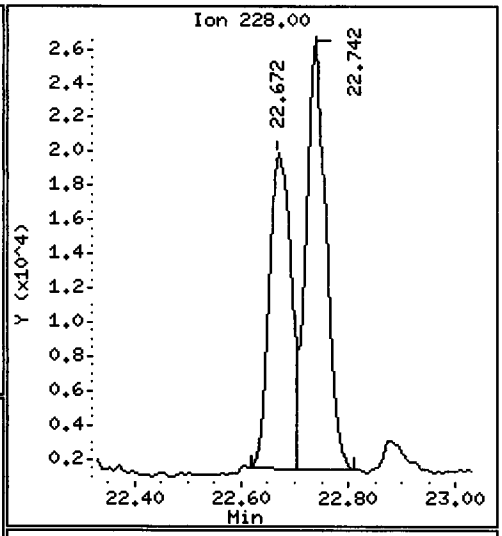
Concentration: 3654 ug/kg

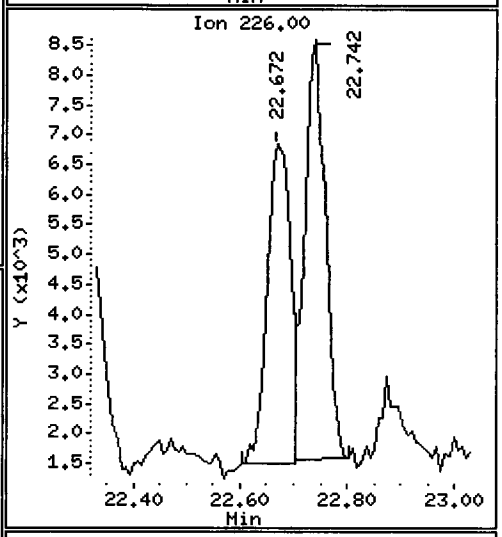


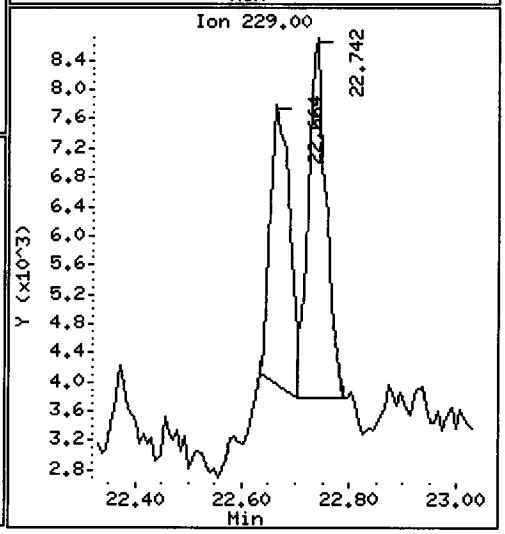












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

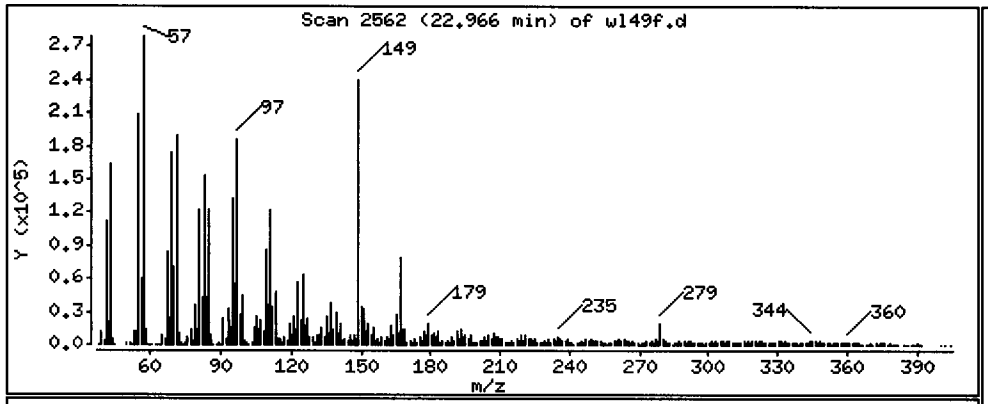
Operator: VTS/YZ

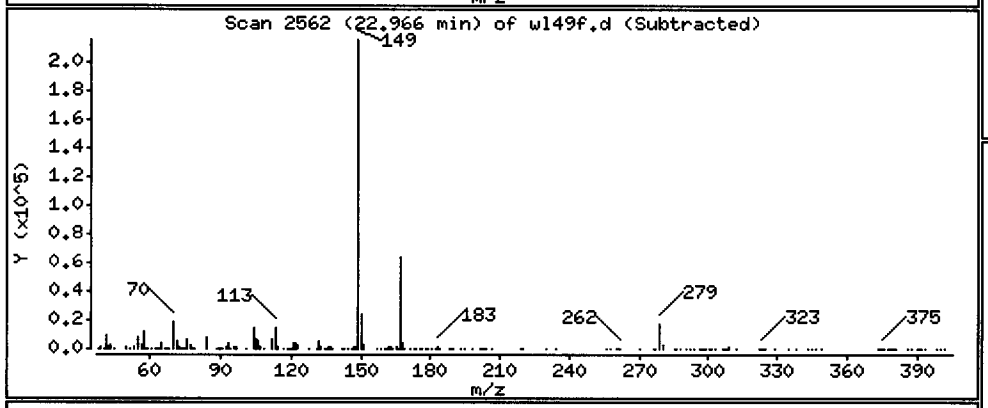
Column phase: ZB-5msi

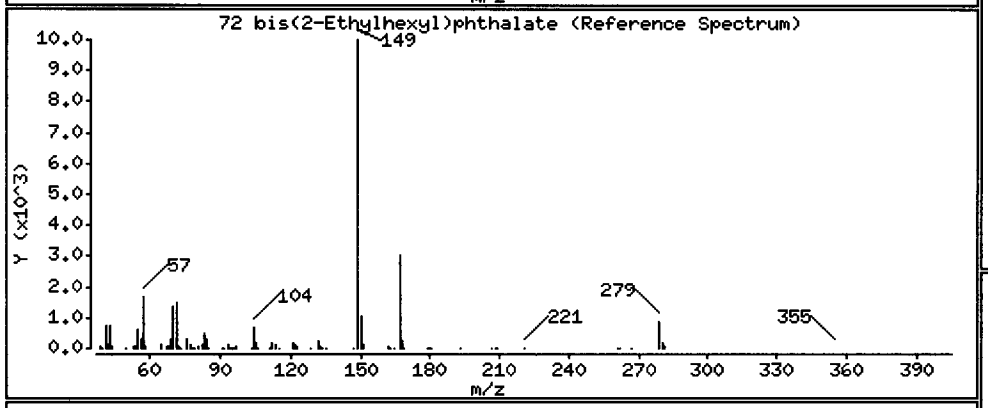
Column diameter: 0.25

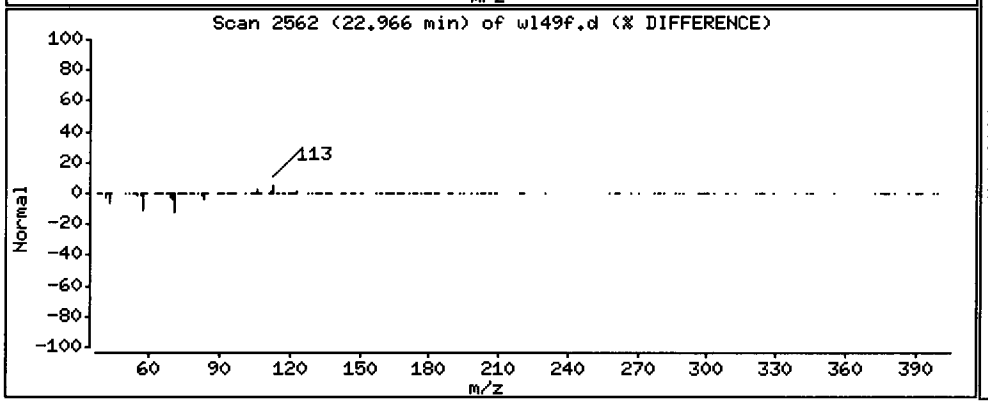
72 bis(2-Ethylhexyl)phthalate

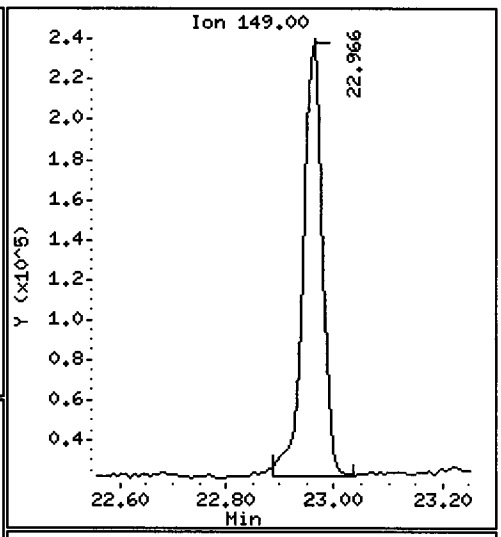
Concentration: 45360 ug/kg

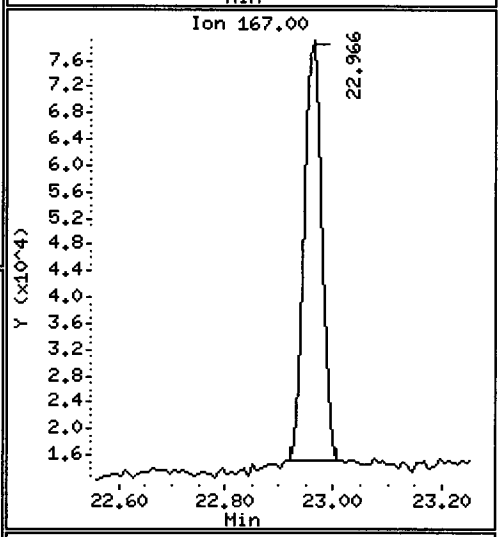


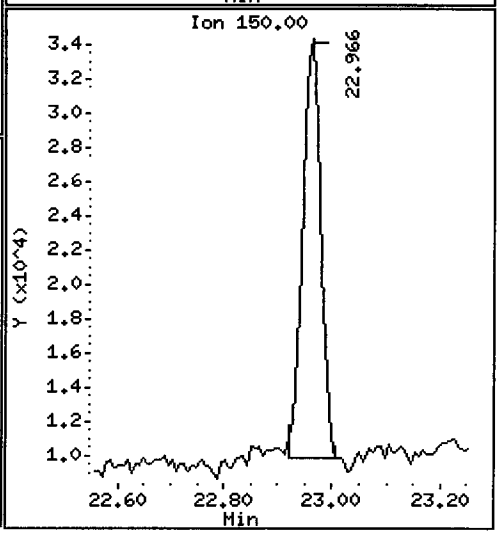












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.1

Sample Info: WL49F,3

Volume Injected (uL): 1.0

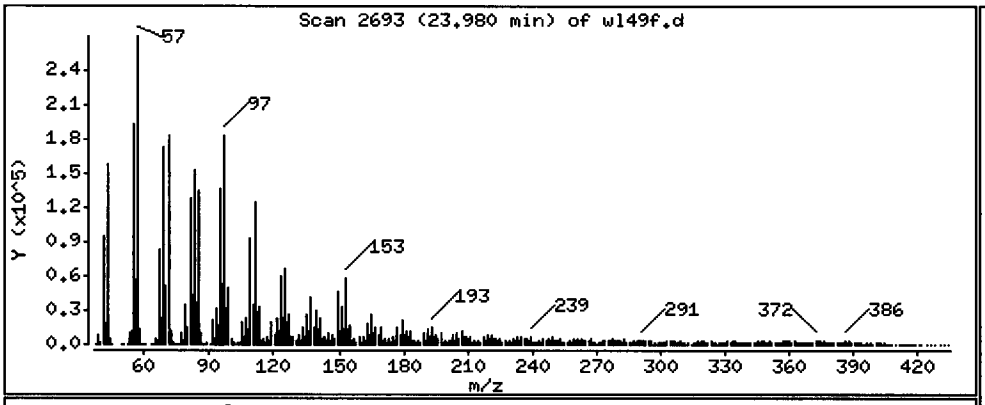
Operator: VTS/YZ

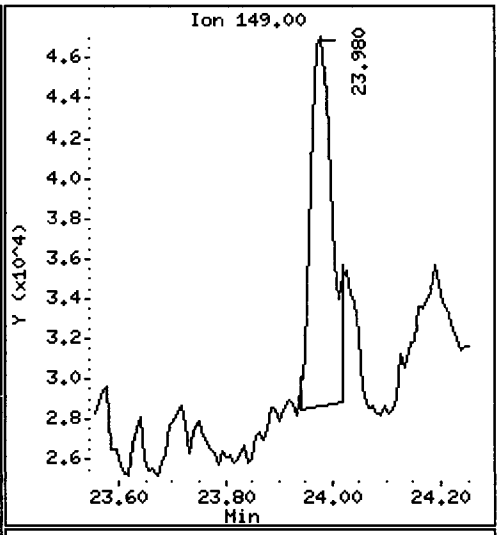
Column phase: ZB-5msi

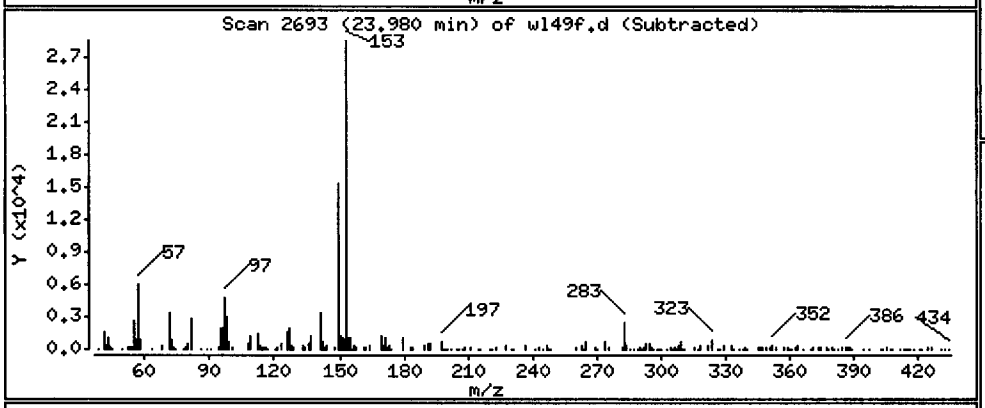
Column diameter: 0.25

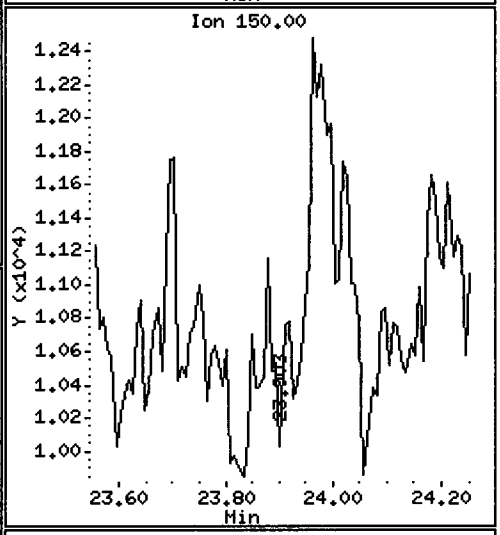
73 Di-n-octylphthalate

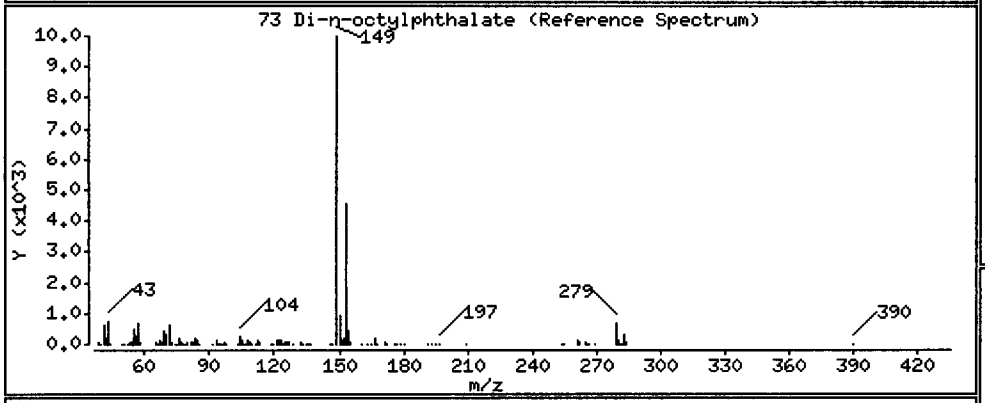
Concentration: 2260 ug/kg

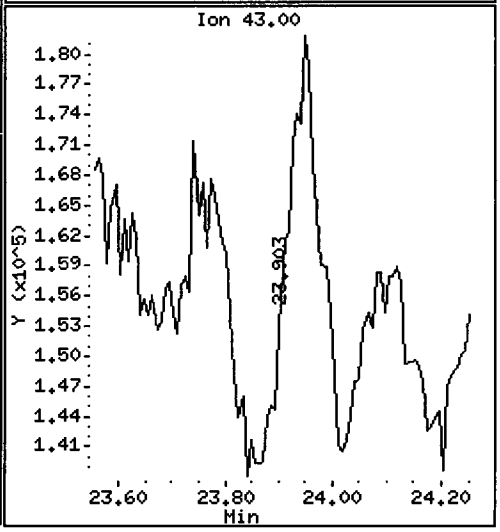


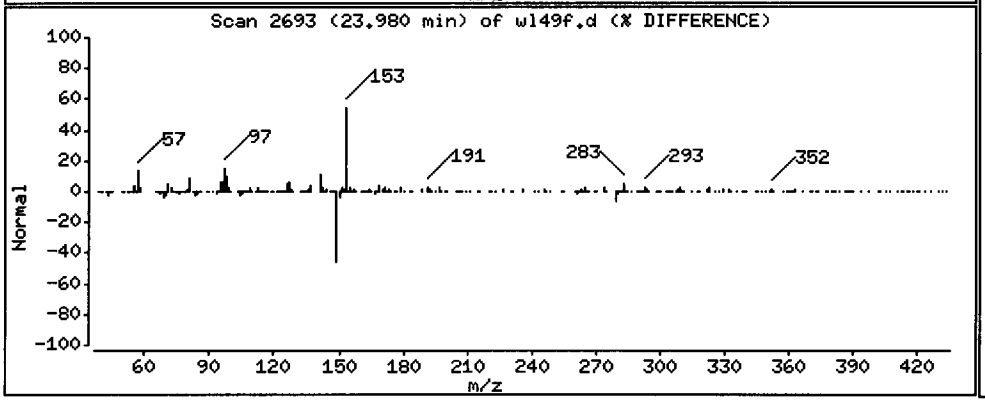












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

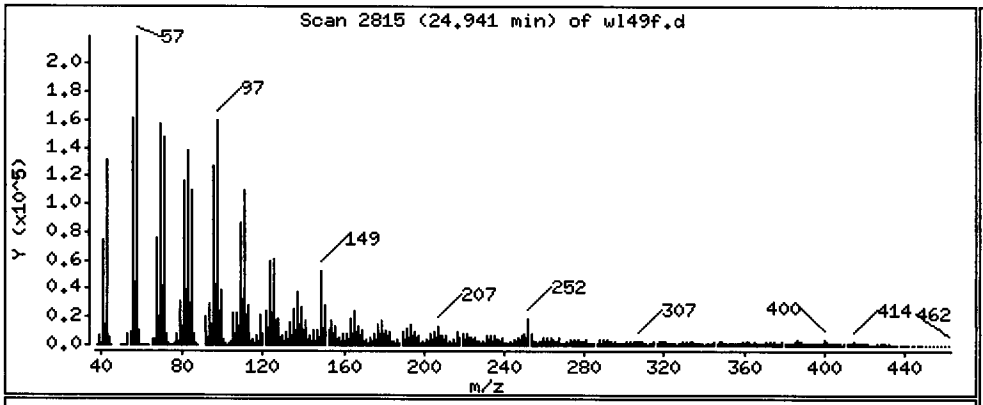
Operator: VTS/YZ

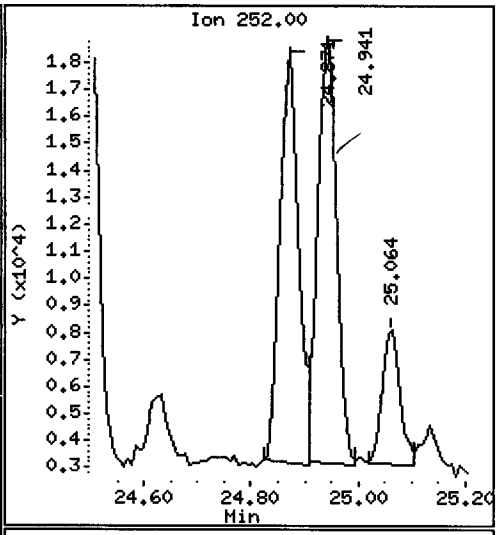
Column phase: ZB-5msi

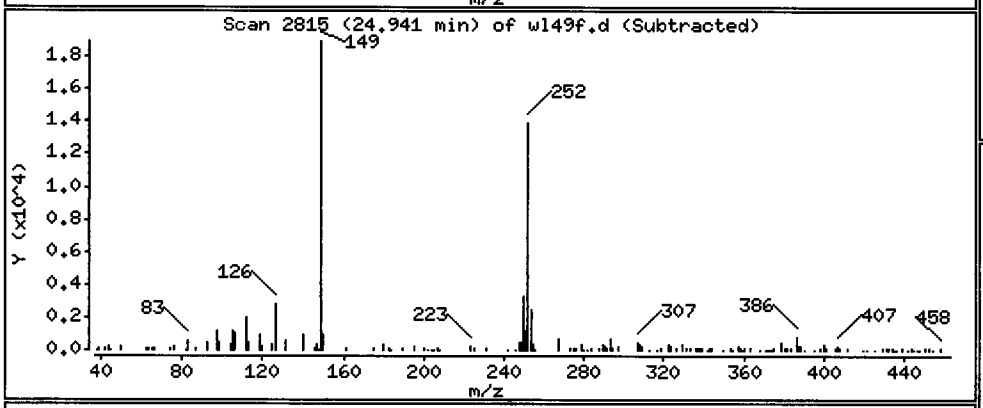
Column diameter: 0.25

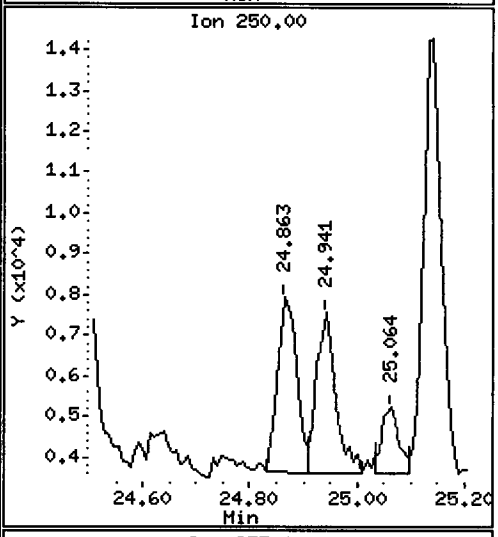
76 Benzo(a)pyrene

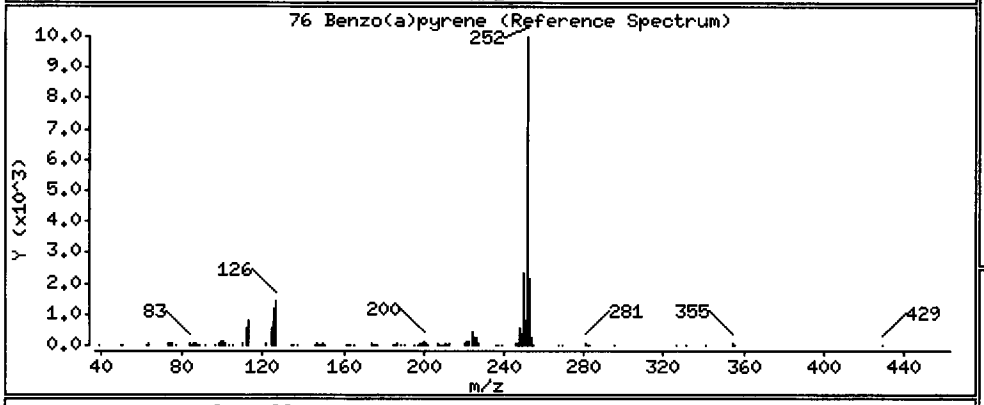
Concentration: 2185 ug/kg

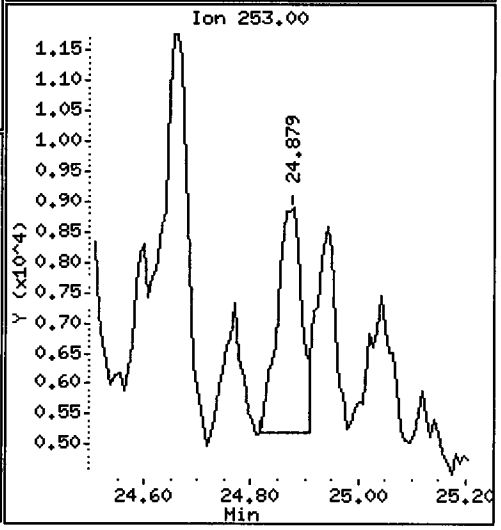


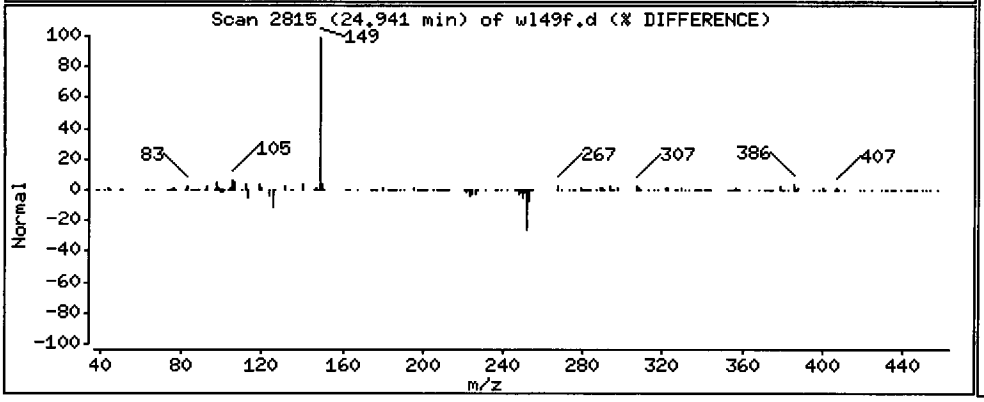












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

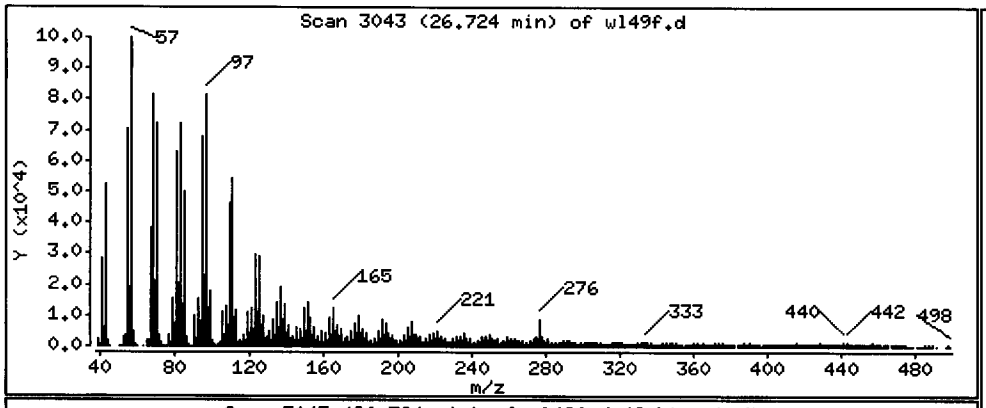
Operator: VTS/YZ

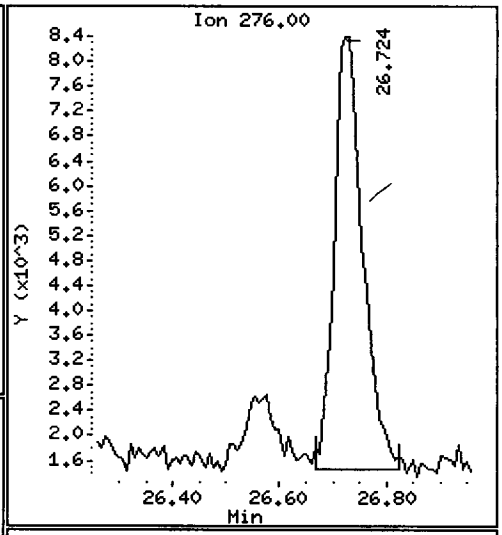
Column phase: ZB-5ms1

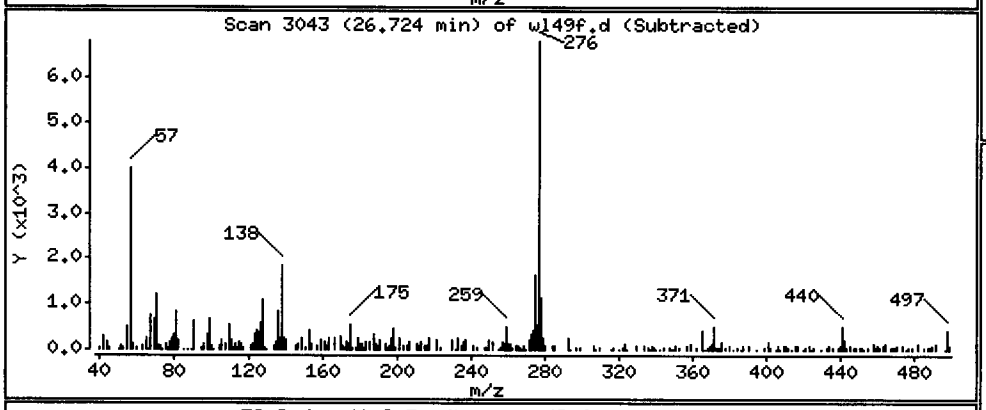
Column diameter: 0.25

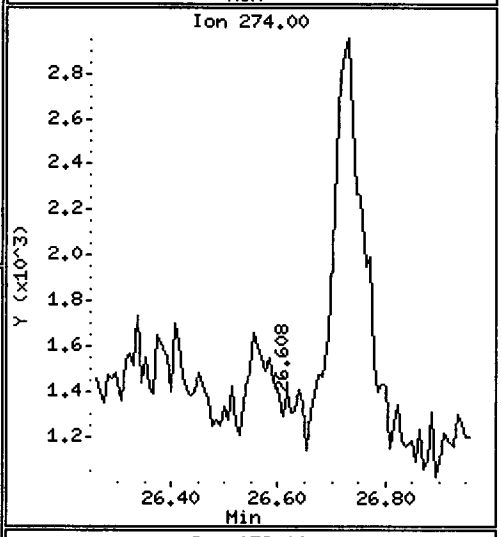
78 Indeno(1,2,3-cd)pyrene

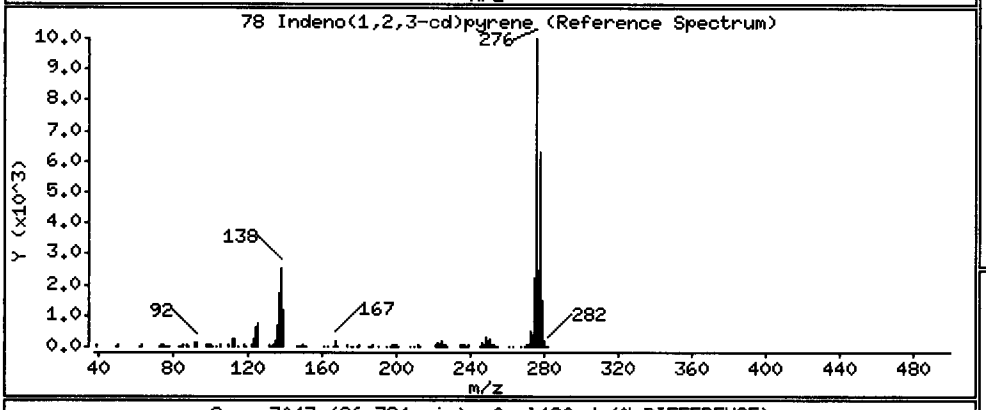
Concentration: 1211 ug/kg

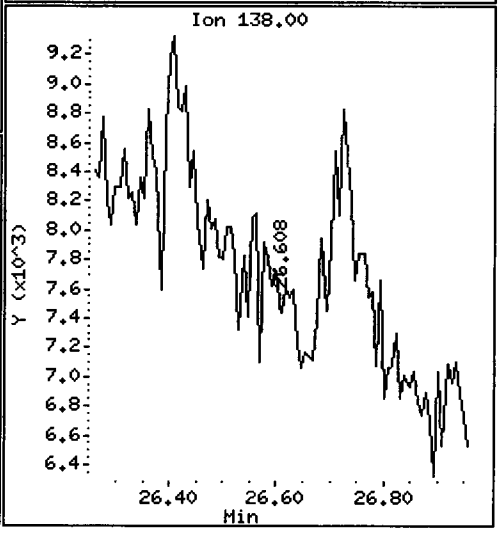


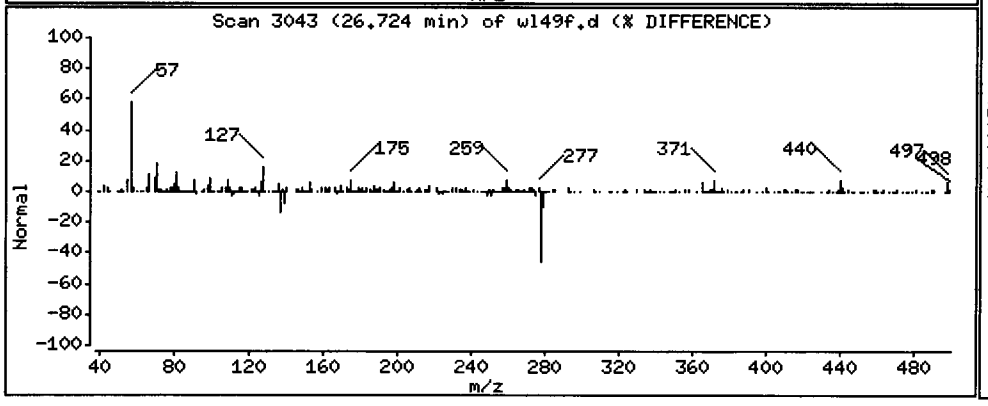












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

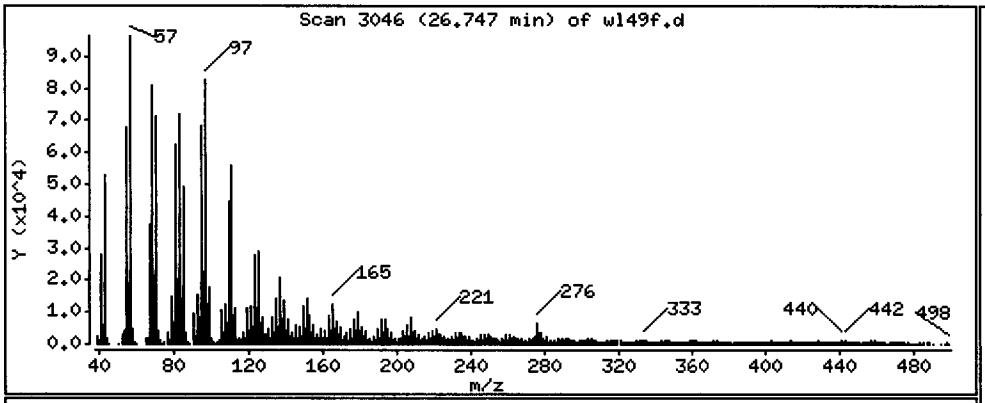
Operator: VTS/YZ

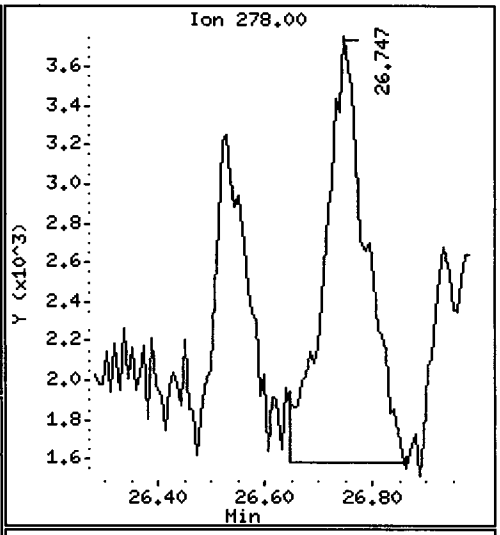
Column phase: ZB-5msi

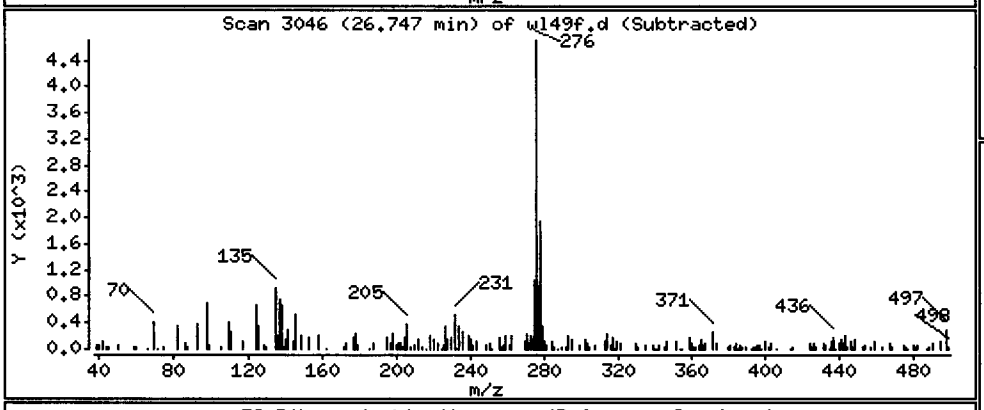
Column diameter: 0.25

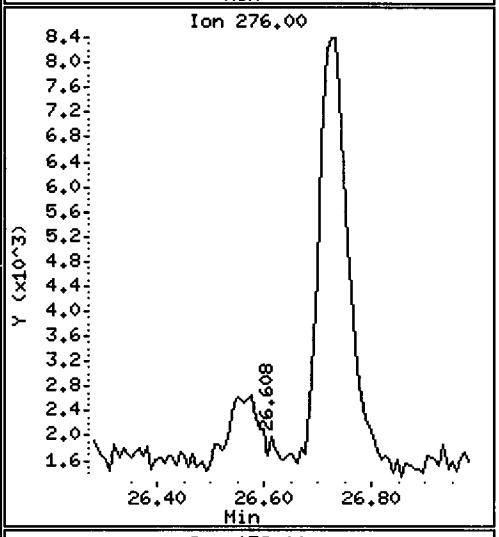
79 Dibenzo(a,h)anthracene

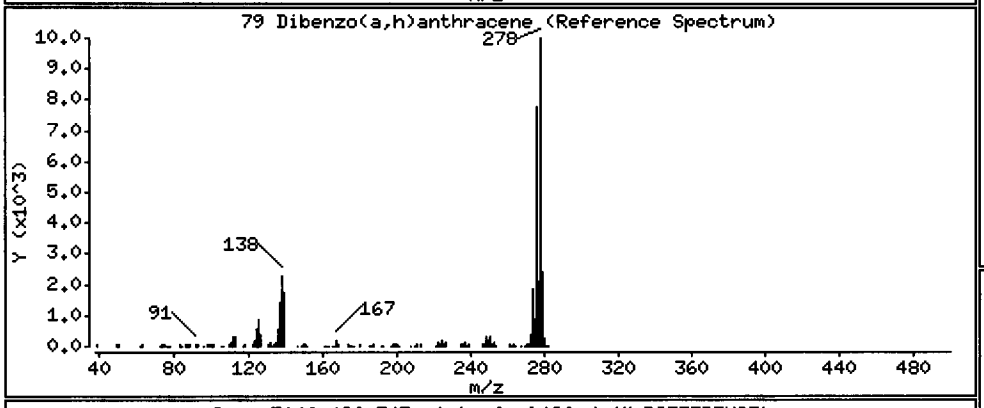
Concentration: 677.5 ug/kg

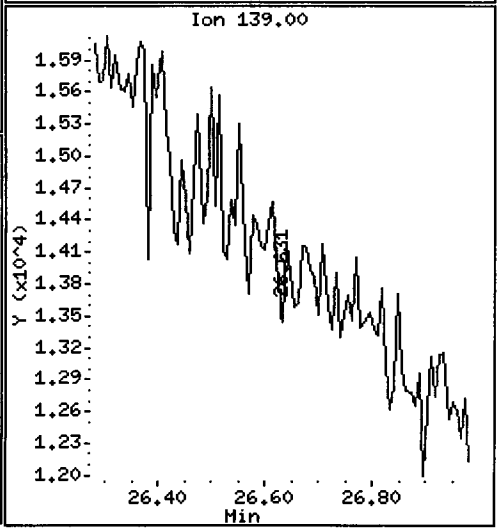


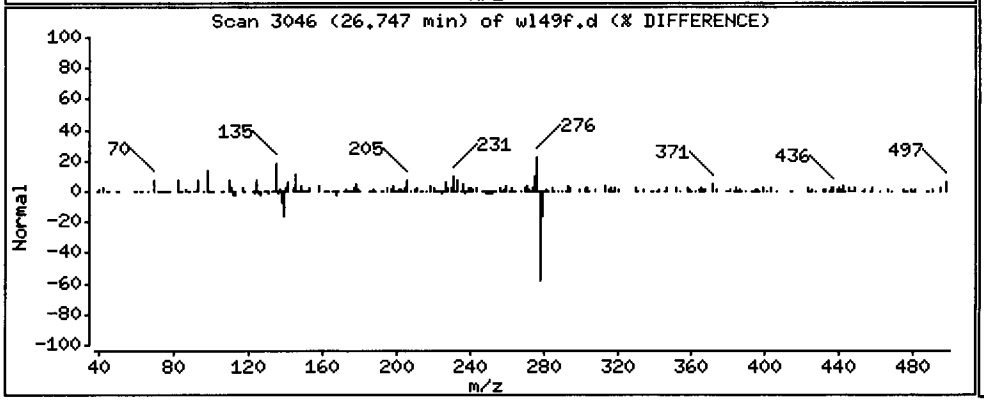












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

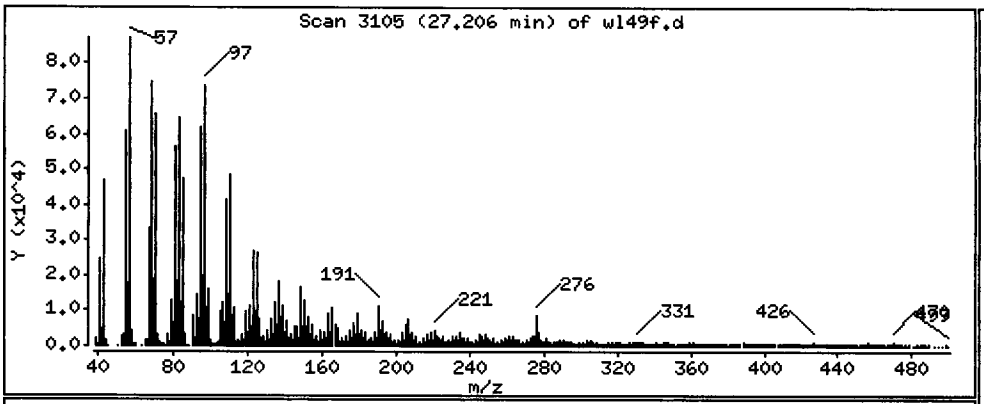
Operator: VTS/YZ

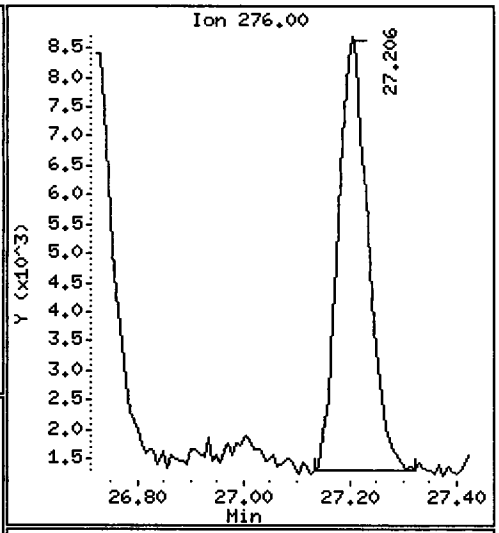
Column phase: ZB-5msi

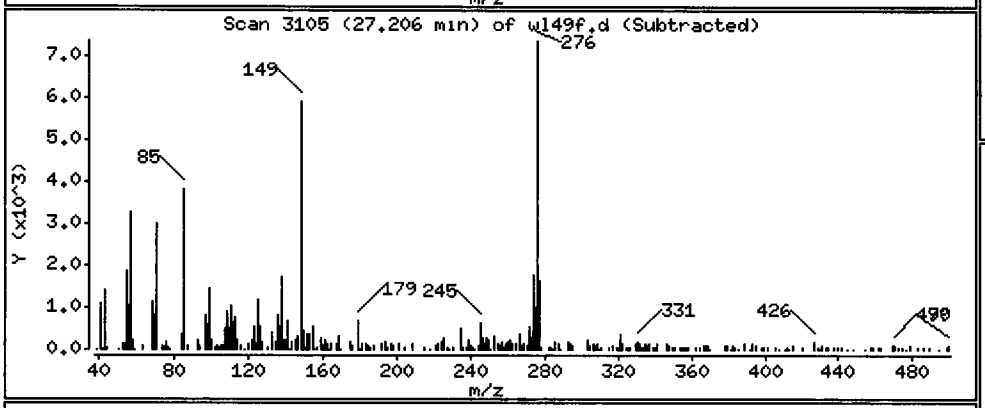
Column diameter: 0.25

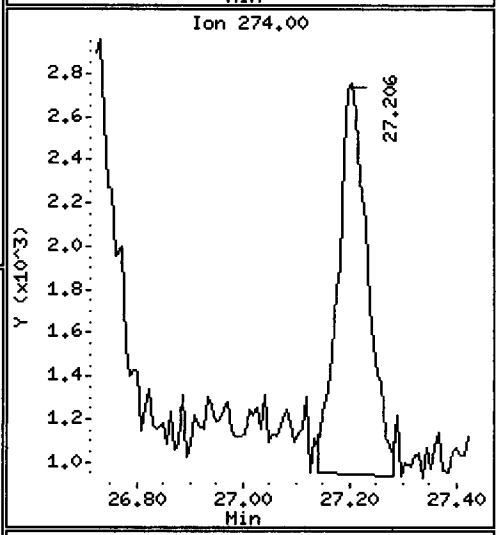
80 Benzo(g,h,i)perylene

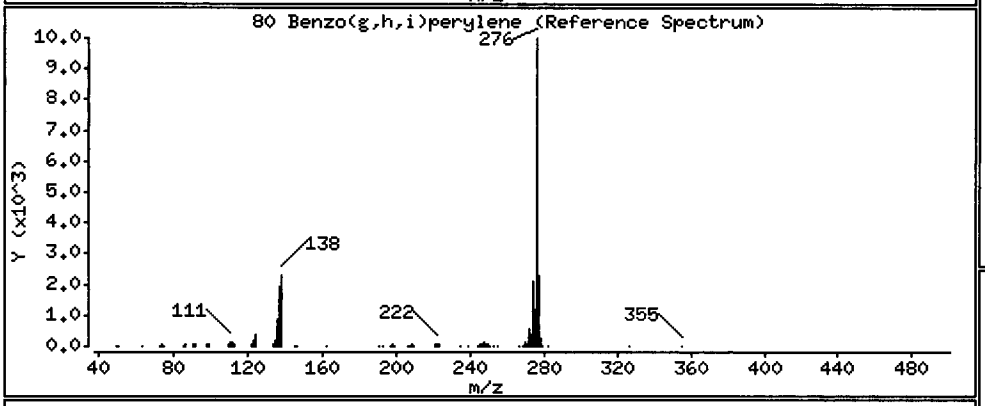
Concentration: 1550 ug/kg

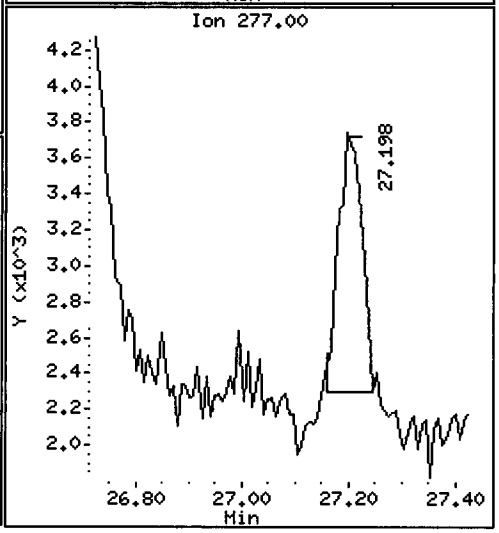


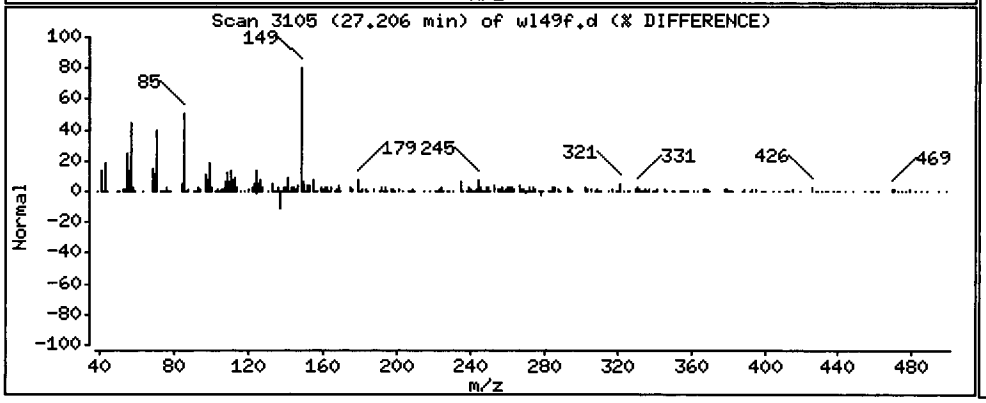












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

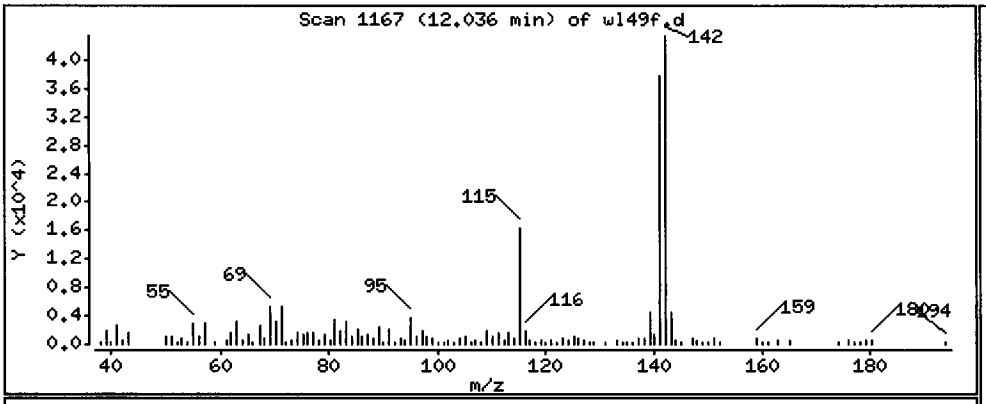
Operator: VTS/YZ

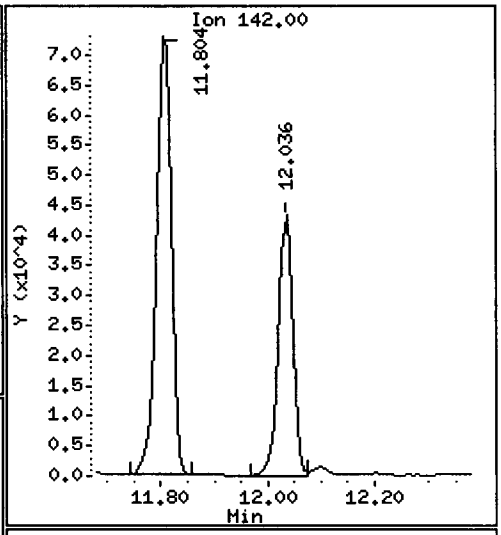
Column phase: ZB-5msi

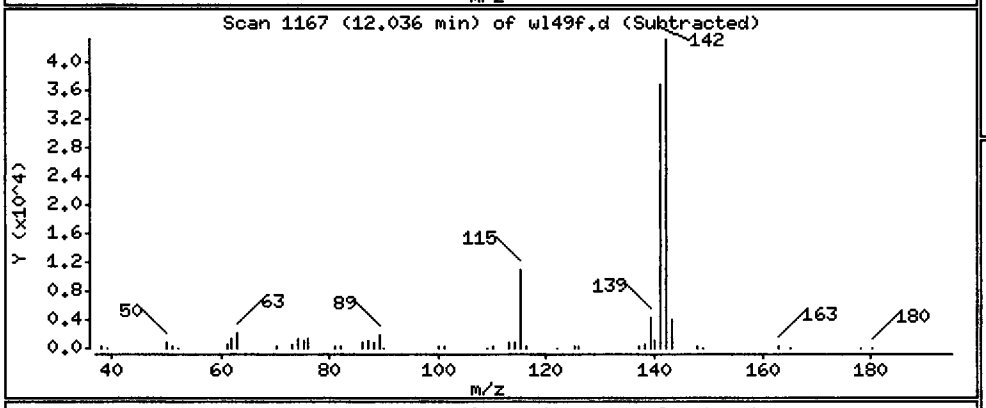
Column diameter: 0.25

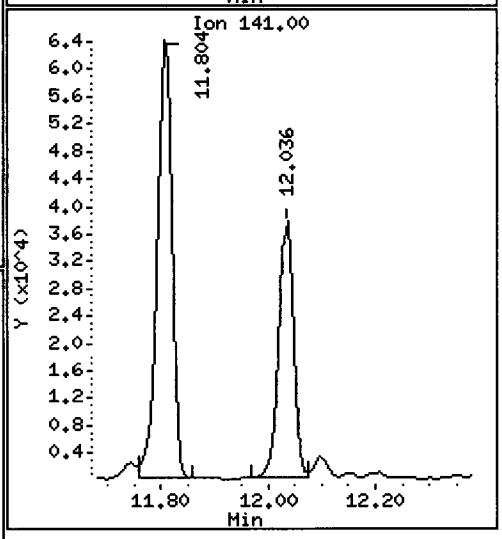
105 1-methylnaphthalene

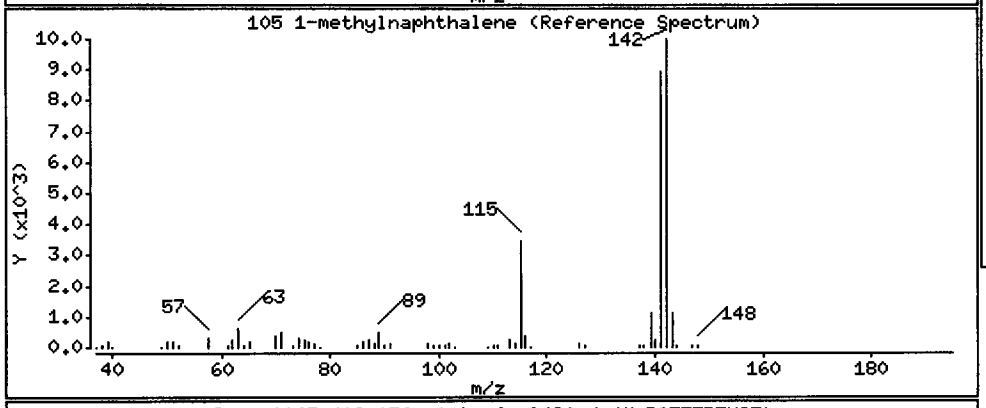
Concentration: 7570 ug/kg

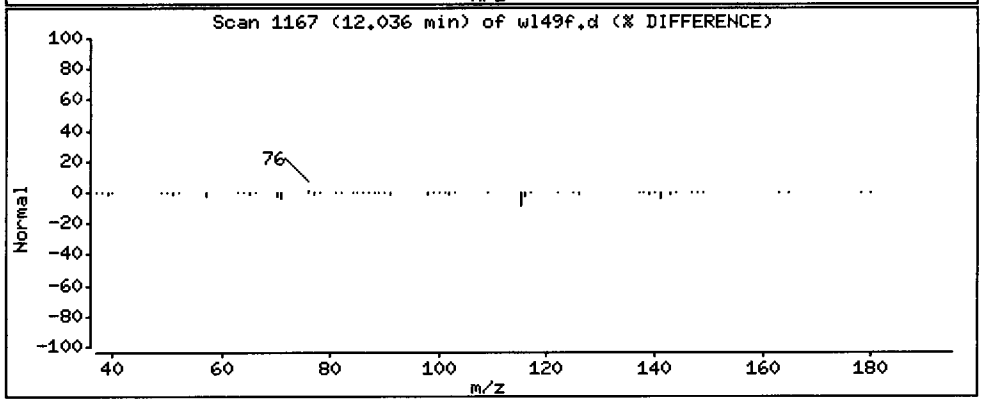












Data File: /chem1/nt10.i/20130424.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

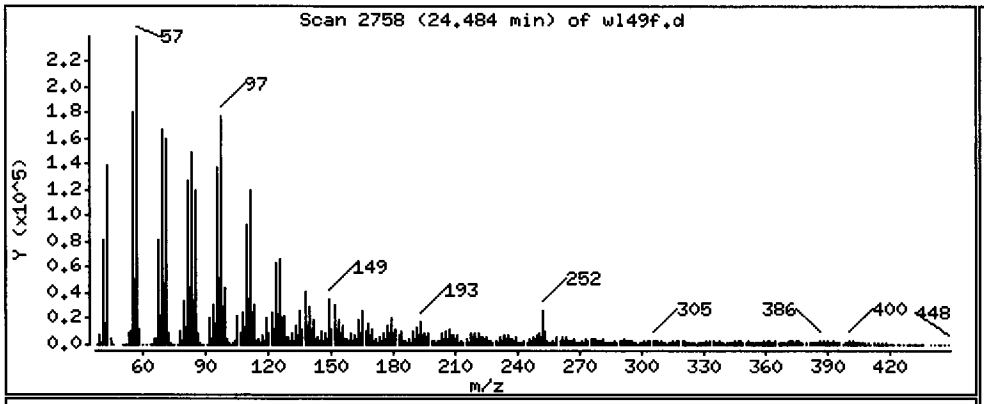
Operator: VTS/YZ

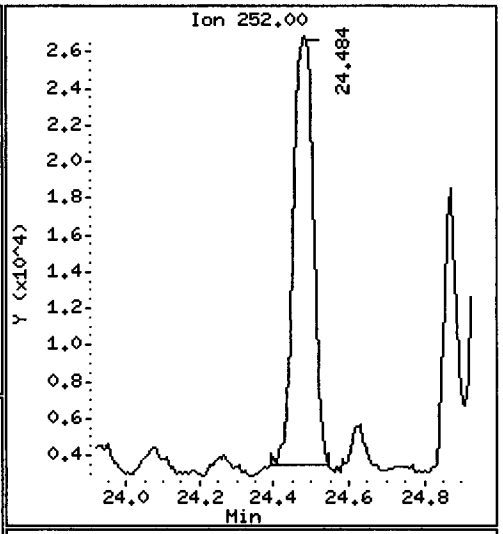
Column phase: ZB-5msi

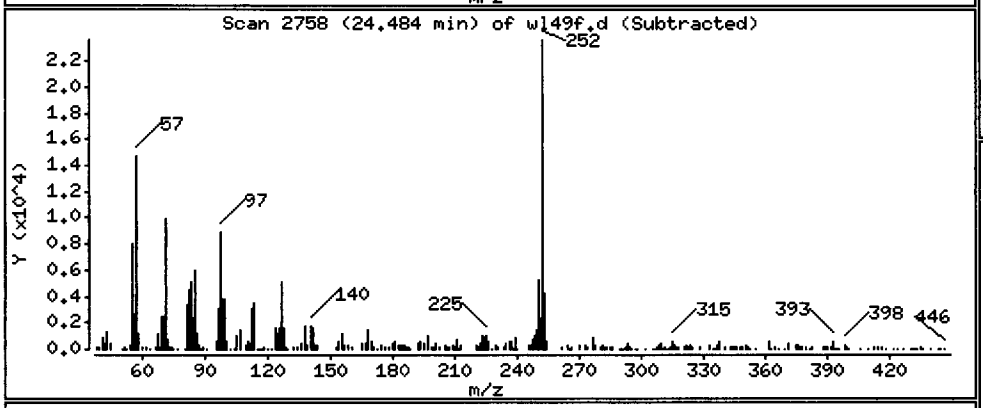
Column diameter: 0.25

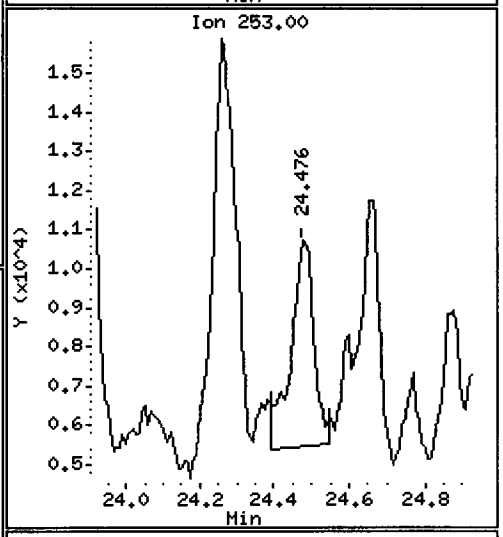
187 Total Benzofluoranthenes

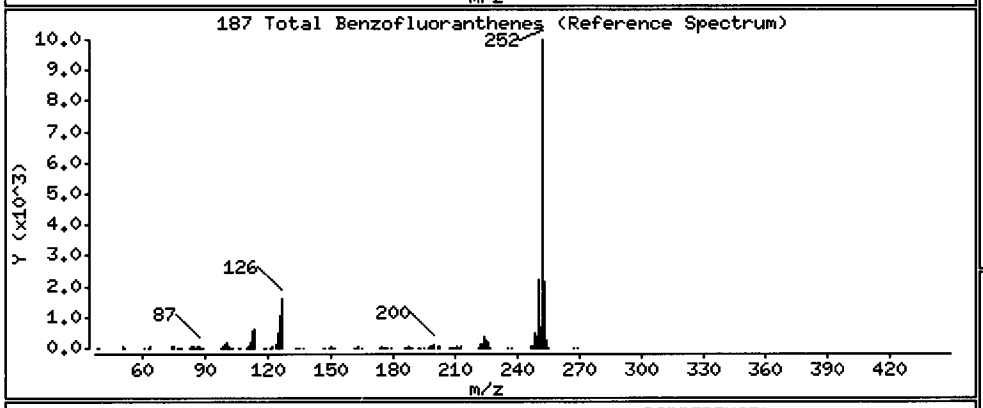
Concentration: 4342 ug/kg

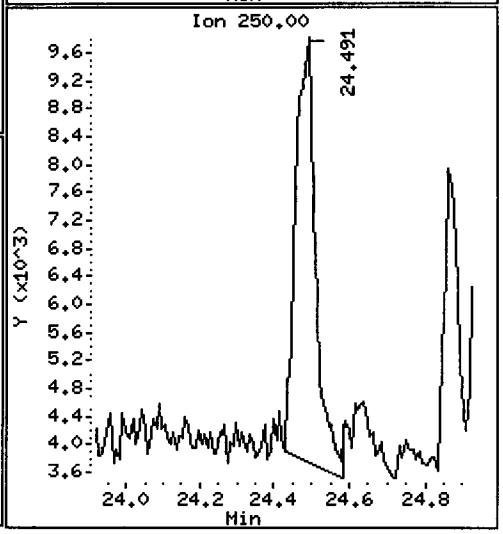


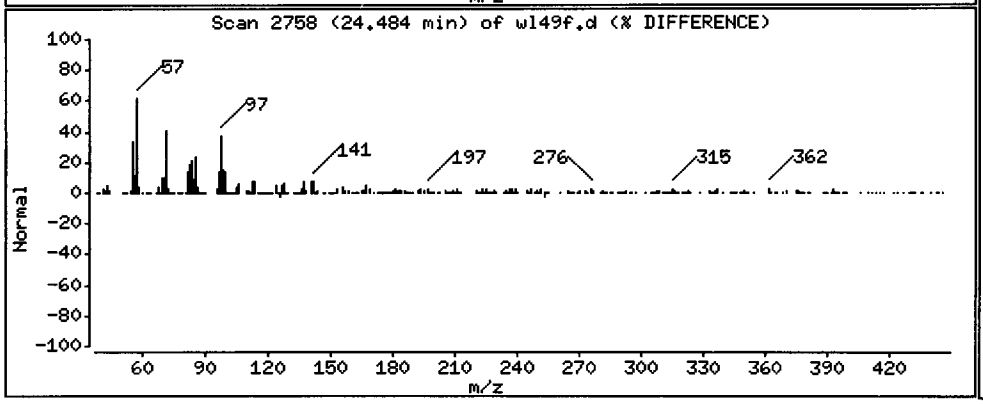






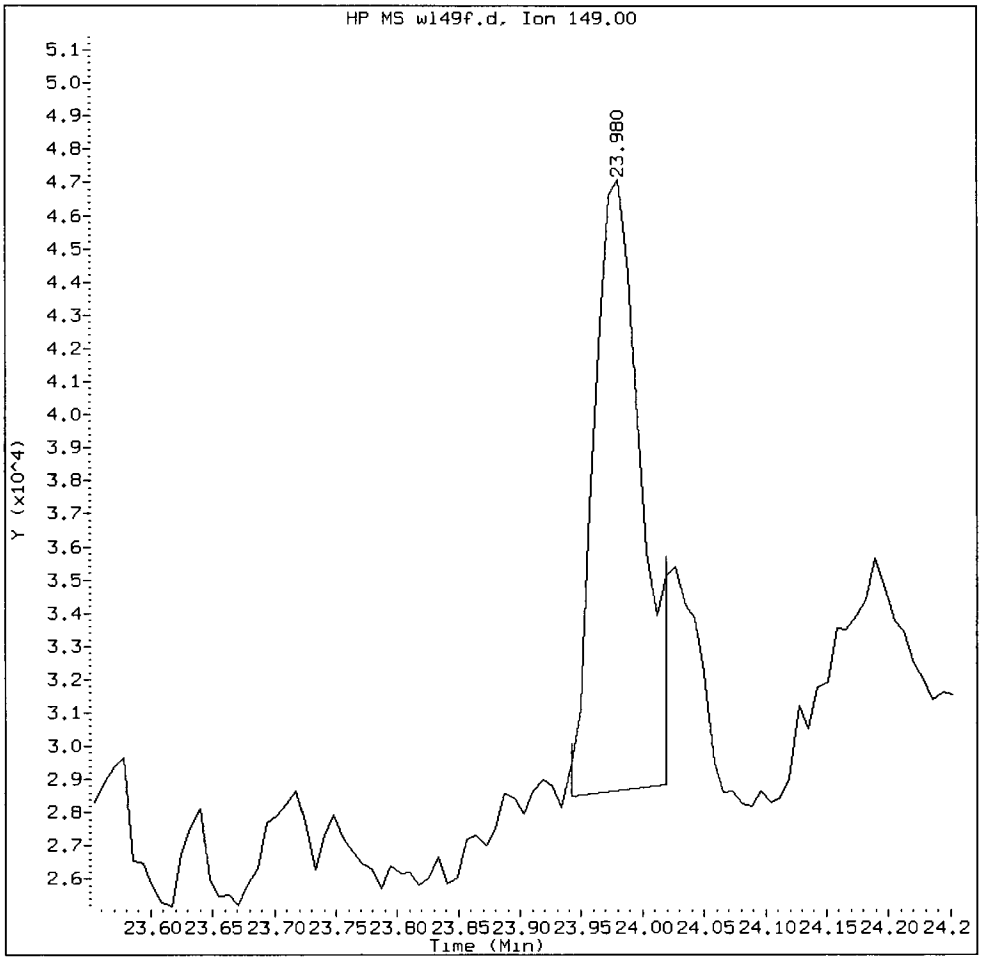






WL49F, /chem1/nt10.i/20130424.b/wl49f.d

Di-n-octylphthalate Amount: 0.85 Area: 50068



MANUAL INTEGRATION for Di-n-octylphthalate

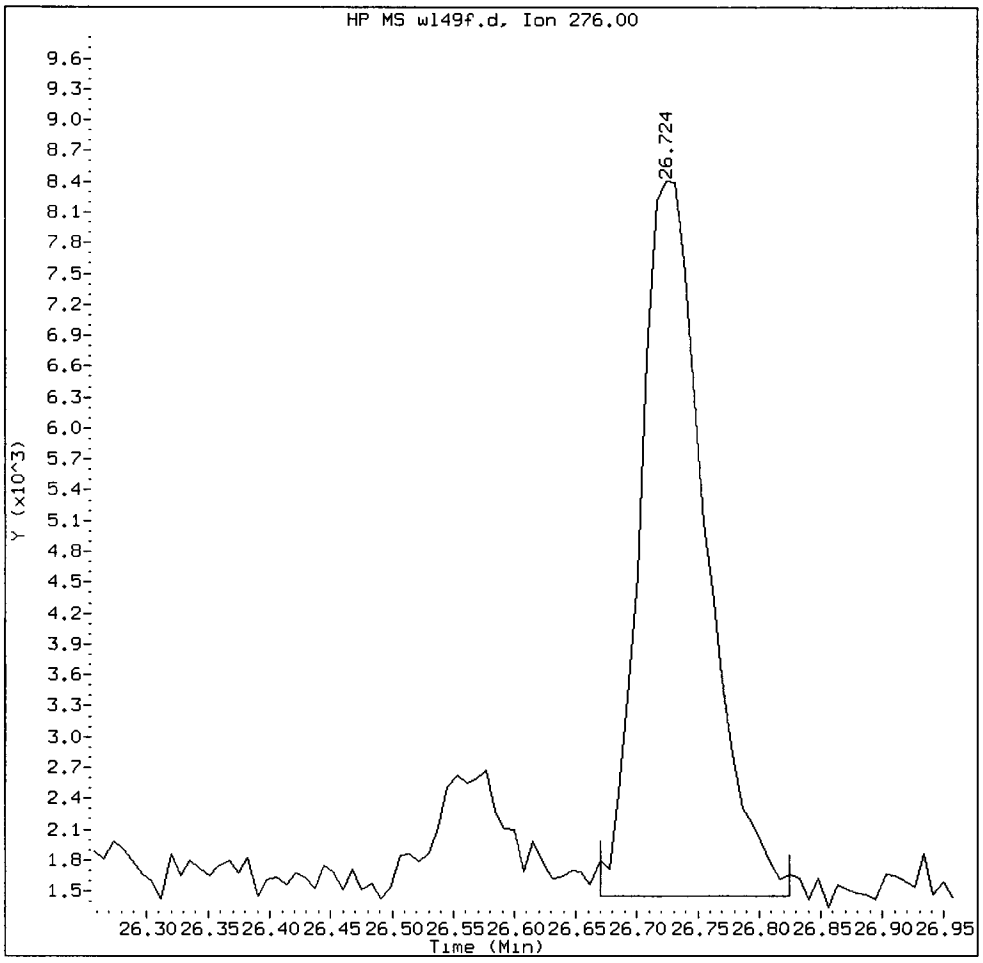
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL49F, /chem1/nt10.i/20130424.b/wl49f.d

Indeno(1,2,3-cd)pyrene Amount: 0.46 Area: 26191



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

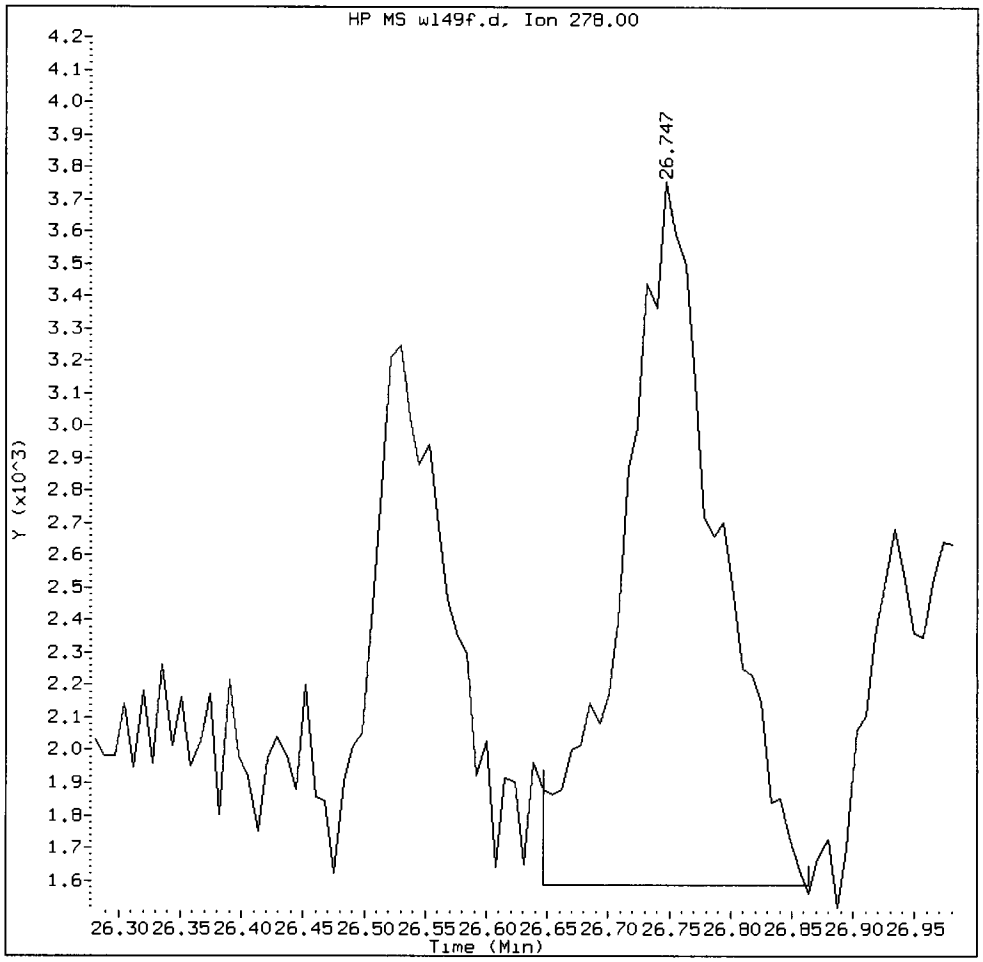
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 4/25/13

WL49F, /chem1/nt10.i/20130424.b/wl49f.d

Dibenzo(a,h)anthracene Amount: 0.25 Area: 11606



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: YB Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl49f.d

Lab ID: WL49F, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
24.484	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Analytical Resources, Inc. YZ 4/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130424.b/wl49g.d
Lab Smp Id: WL49G Client Smp ID: IM-CB-02-20130410-S
Inj Date : 24-APR-2013 20:51
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WL49G
Misc Info : 13-7785
Comment : 1ul Injection
Method : /chem1/nt10.i/20130424.b/ABN.m
Meth Date : 25-Apr-2013 14:39 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.10000	Weight of sample extracted (g)
M	18.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.443	5.444	(0.710)	54803	4.34528	405.0
$	2 Phenol-d5	99	7.159	7.159	(0.934)	81220	5.18967	483.7
	3 Phenol	94	7.182	7.182	(0.937)	2897	0.17587 J	16.39
$	5 2-Chlorophenol-d4	132	7.306	7.306	(0.954)	60528	4.46661	416.3
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.662	7.662	(1.000)	39444	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.027	8.027	(1.048)	26532	2.66424	248.3
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	8.019	8.019	(1.047)	43815	5.55817	518.1
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.818	8.826	(0.859)	43026	3.04429	283.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.265	10.265	(1.000)	153130	4.00000	
	28 Naphthalene	128	10.304	10.304	(1.004)	6790	0.17041 J	15.88
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.686	12.687	(0.899)	96412	3.11042	289.9
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	14.110	14.103	(1.000)	90352	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	15.872	15.872	(1.125)	18365	3.18513	296.9
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.340	17.340	(1.000)	136238	4.00000	
	60 Phenanthrene	178	17.386	17.394	(1.003)	37037	1.01979	95.05
	61 Anthracene	178	17.487	17.487	(1.008)	7049	0.19276	17.97

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	17.905	17.897	(1.033)	6336	0.25941	24.18
63	Di-n-butylphthalate	149	18.926	18.918	(1.091)	7163	0.18356	17.11
64	Fluoranthene	202	19.955	19.947	(1.151)	59871	1.43147	133.4
65	Pyrene	202	20.380	20.373	(0.900)	63363	1.42369	132.7
$ 66	Terphenyl-d14	244	20.783	20.775	(0.918)	96265	3.20769	299.0
67	Butylbenzylphthalate	149	21.813	21.797	(0.963)	11099	0.65752	61.28
68	Benzo(a)anthracene	228	22.618	22.610	(0.999)	21584	0.49507	46.14
* 69	Chrysene-d12	240	22.649	22.641	(1.000)	156248	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.688	22.680	(1.002)	35066	0.88800	82.77
72	bis(2-Ethylhexyl)phthalate	149	22.920	22.904	(0.959)	97819	3.60693	336.2
* 134	Di-n-octylphthalate-d4	153	23.911	23.895	(1.000)	205378	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	24.406	24.383	(0.977)	43388	0.99988	93.19
75	Benzo(k)fluoranthene	252	24.406	24.422	(0.977)	43388	0.92553	86.27
76	Benzo(a)pyrene	252	24.886	24.855	(0.997)	18482	0.49249	45.90
* 77	Perylene-d12	264	24.971	24.941	(1.000)	149715	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.654	26.608	(1.067)	12105	0.26156	24.38(M)
79	Dibenzo(a,h)anthracene	278	26.677	26.631	(1.068)	6126	0.16716	15.58(M)
80	Benzo(g,h,i)perylene	276	27.128	27.074	(1.086)	16515	0.41593	38.77
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	24.406	24.422	(0.977)	43535	1.01922	95.00
99	Perylene	252	25.002	24.979	(1.001)	9249	0.21445	19.99
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: wl49g.d
Lab Smp Id: WL49G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 17:46
Client Smp ID: IM-CB-02-2013041
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	46623	23312	93246	39444	-15.40
27 Naphthalene-d8	176978	88489	353956	153130	-13.48
42 Acenaphthene-d10	110872	55436	221744	90352	-18.51
59 Phenanthrene-d10	188290	94145	376580	136238	-27.64
69 Chrysene-d12	213681	106840	427362	156248	-26.88
134 Di-n-octylphthala	264159	132080	528318	205378	-22.25
77 Perylene-d12	208584	104292	417168	149715	-28.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.27	9.77	10.77	10.27	0.00
42 Acenaphthene-d10	14.10	13.60	14.60	14.11	0.05
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.65	0.03
134 Di-n-octylphthala	23.90	23.40	24.40	23.91	0.06
77 Perylene-d12	24.94	24.44	25.44	24.97	0.12

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

Analytical Resources, Inc.

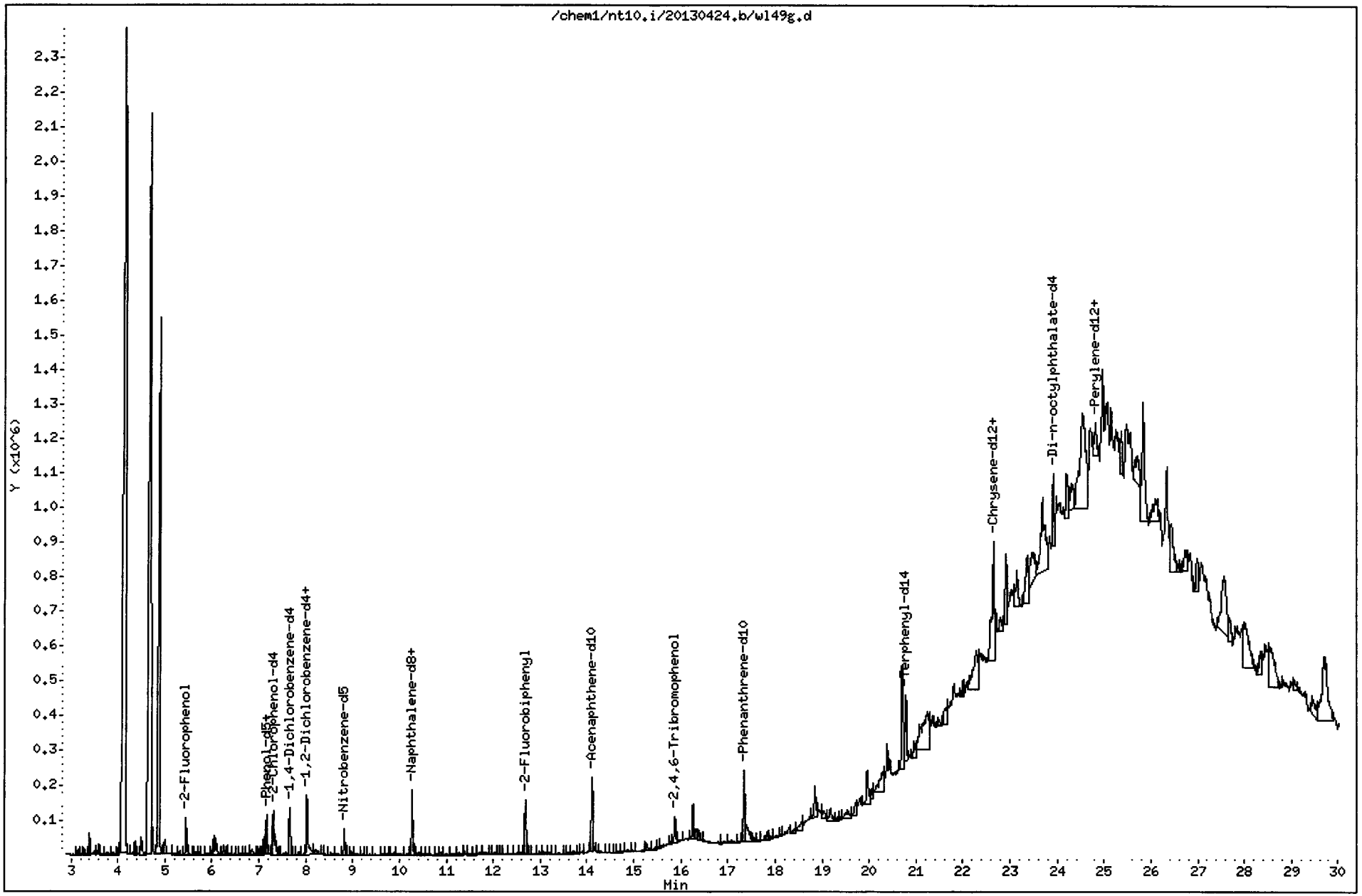
RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49G
Client Smp ID: IM-CB-02-20130410-S
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SHORTPSDDA.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130424.b/ABN.m
Misc Info: 13-7785

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	699.0	405.0	57.94	30-160
$ 2 Phenol-d5	699.0	483.7	69.20	30-160
$ 5 2-Chlorophenol-d4	699.0	416.3	59.55	30-160
$ 10 1,2-Dichlorobenzen	466.0	248.3	53.28	30-160
$ 18 Nitrobenzene-d5	466.0	283.7	60.89	30-160
$ 36 2-Fluorobiphenyl	466.0	289.9	62.21	30-160
$ 55 2,4,6-Tribromophen	699.0	296.9	42.47	30-160
$ 66 Terphenyl-d14	466.0	299.0	64.15	30-160

Data File: /chem1/nt10.i/20130424.b/wl49g.d
Date : 24-APR-2013 20:51
Client ID: IM-CB-02-20130410-S
Sample Info: WL49G
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

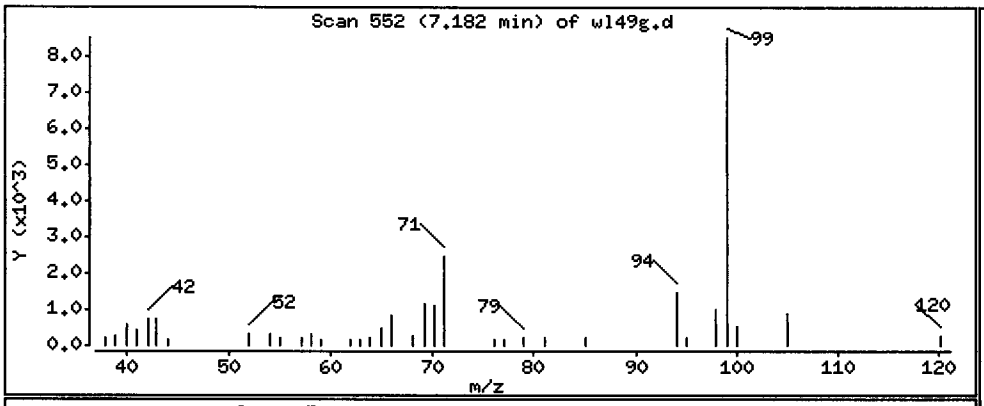
Operator: VTS/YZ

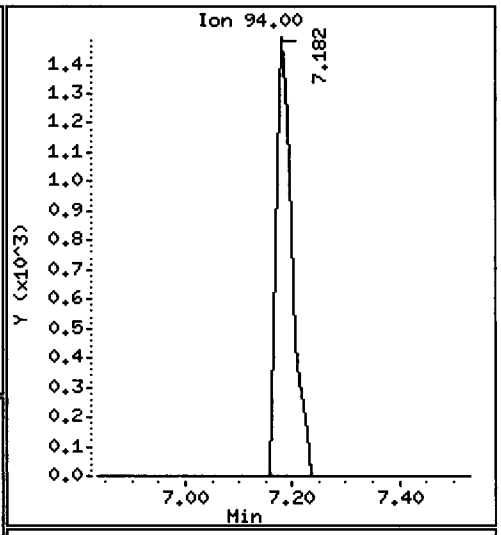
Column phase: ZB-5msi

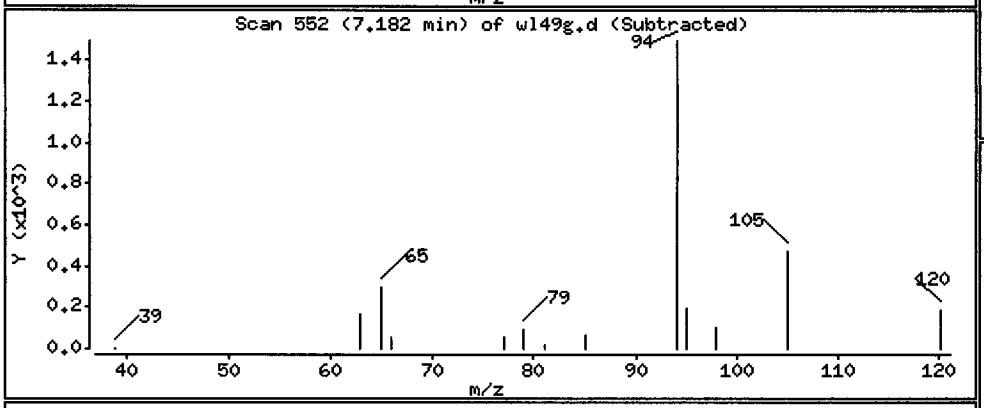
Column diameter: 0.25

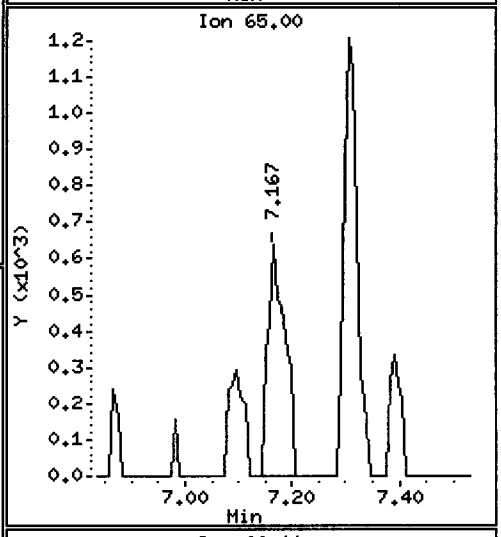
3 Phenol

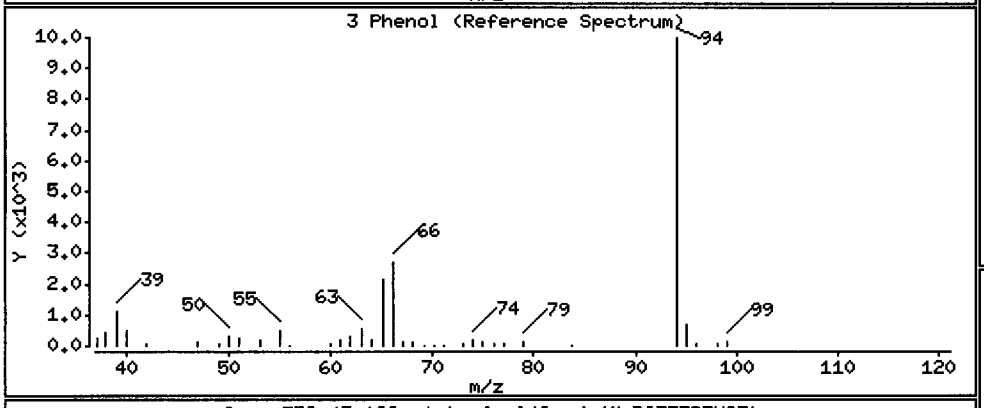
Concentration: 16.39 ug/kg

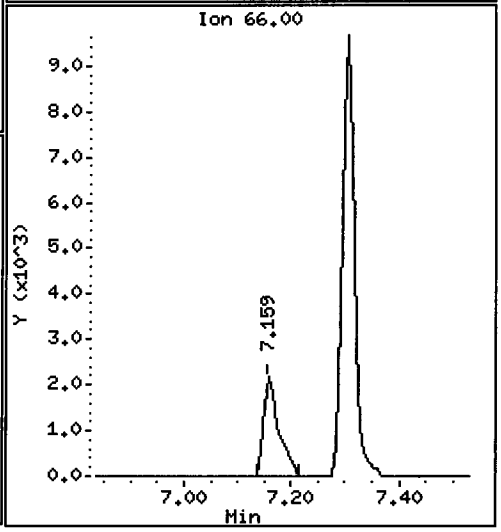


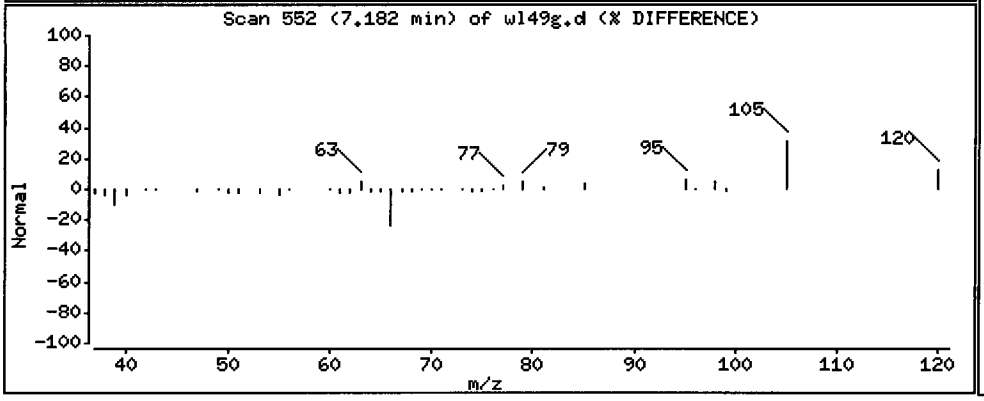












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

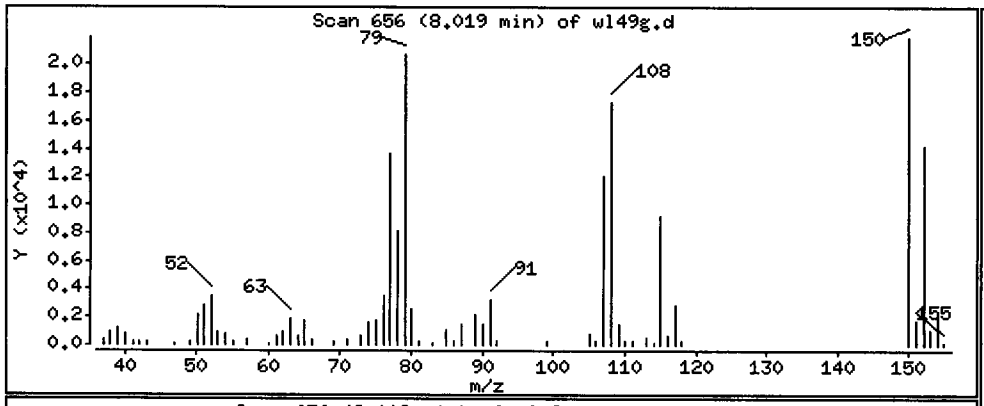
Operator: VTS/YZ

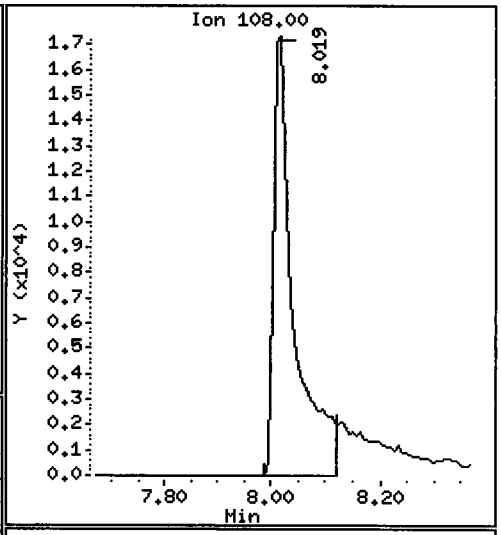
Column phase: ZB-5msi

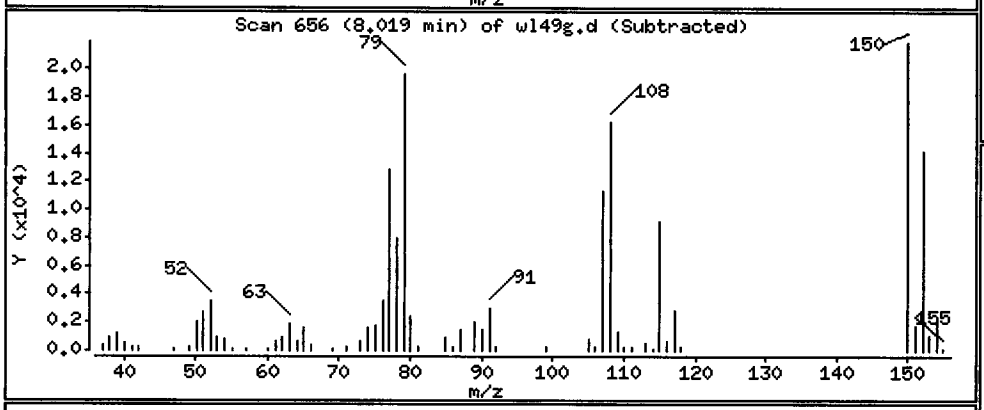
Column diameter: 0.25

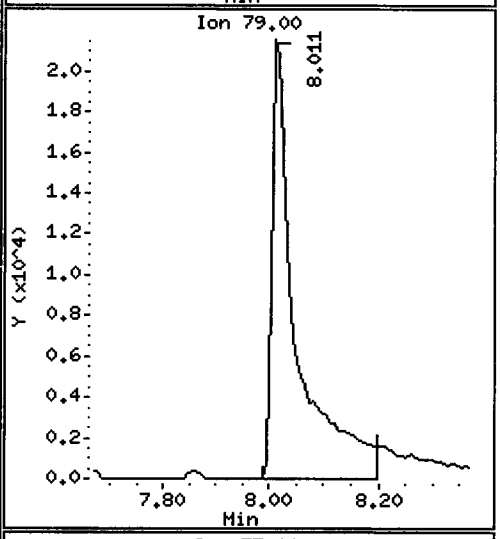
11 Benzyl alcohol

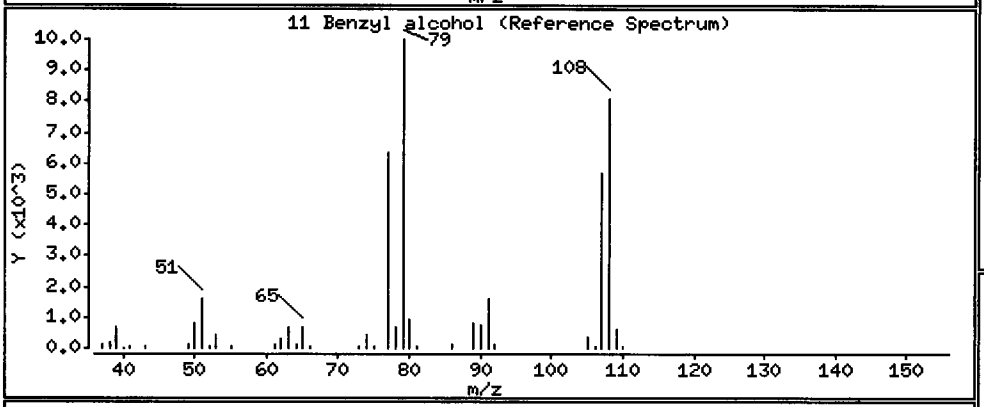
Concentration: 518.1 ug/kg

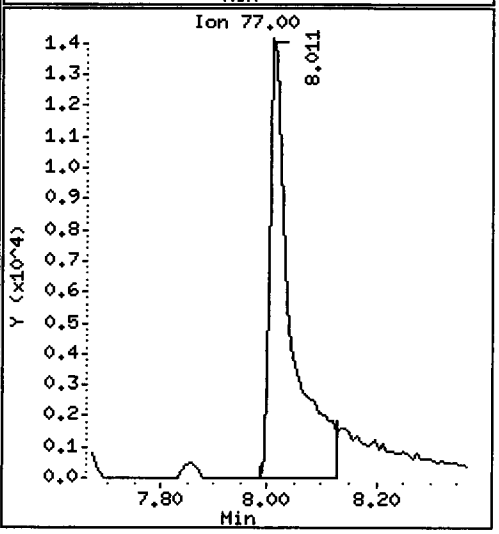


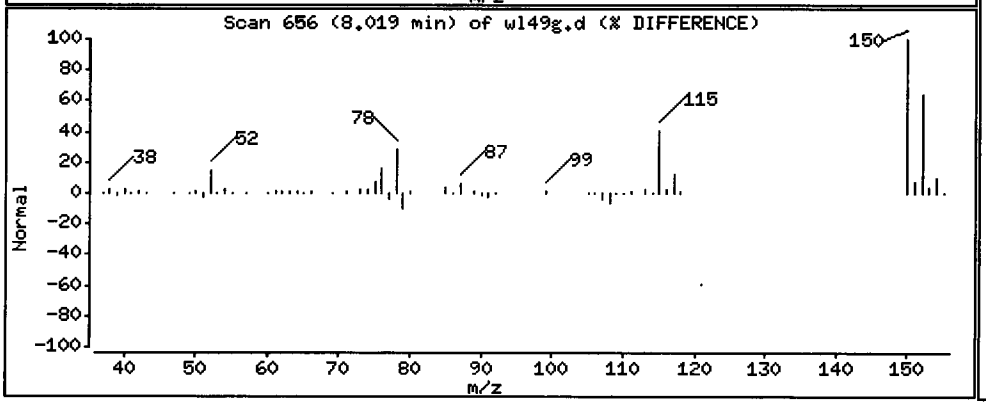












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

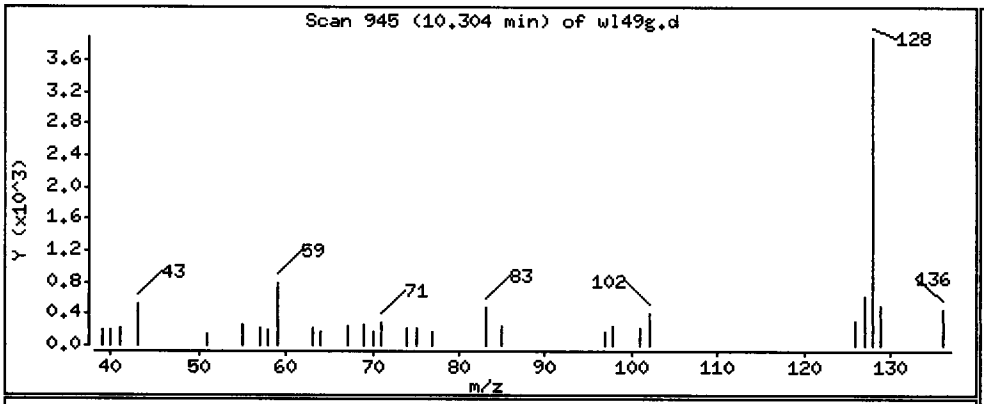
Operator: VTS/YZ

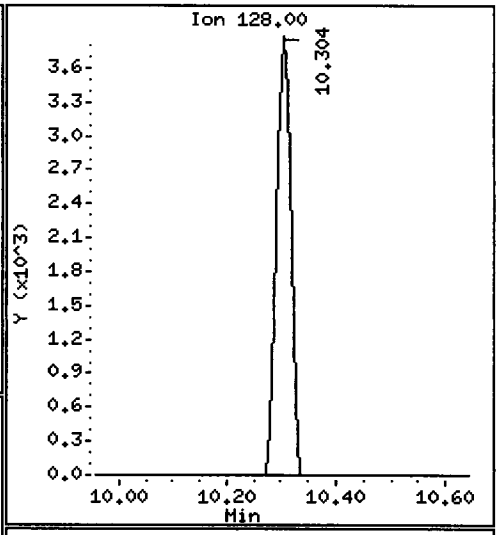
Column phase: ZB-5msi

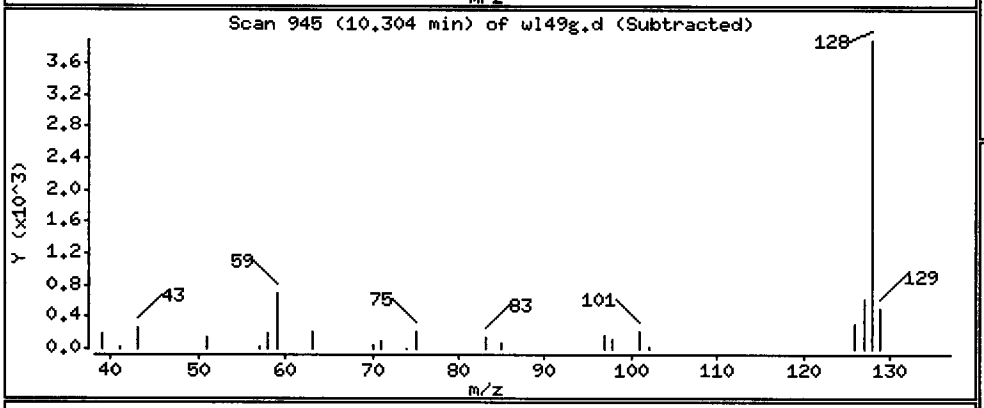
Column diameter: 0.25

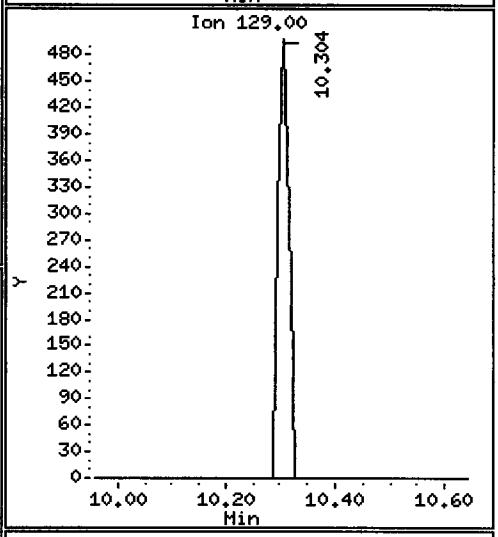
28 Naphthalene

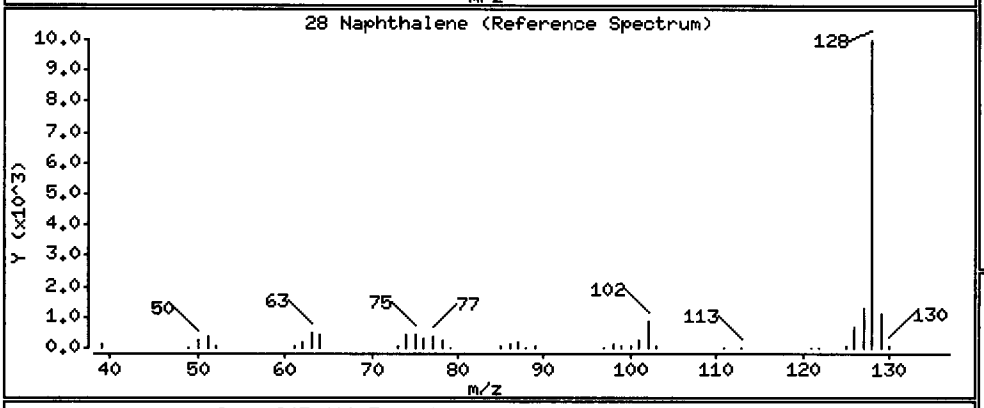
Concentration: 15.88 ug/kg

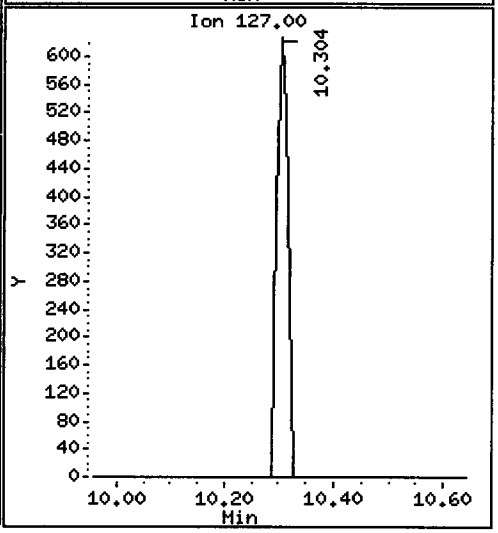


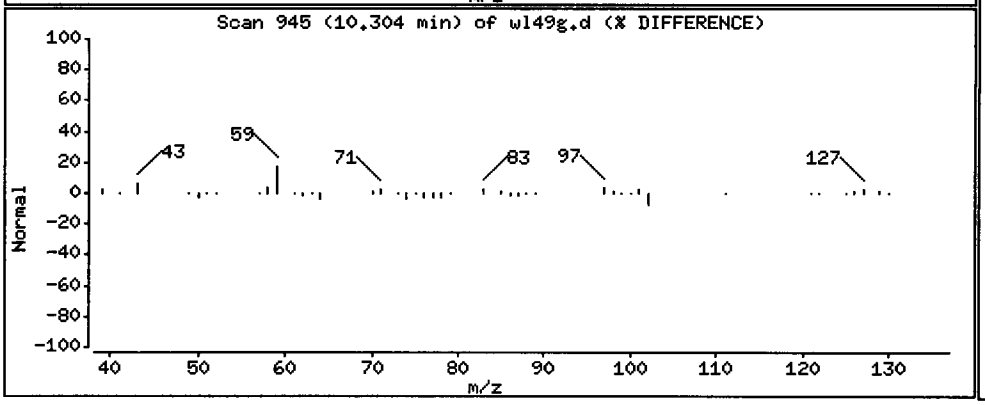












WL10 0006

Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

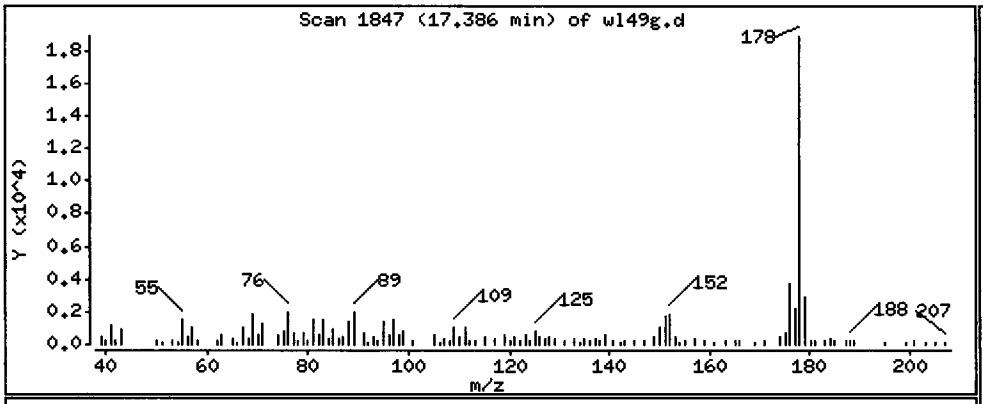
Operator: VTS/YZ

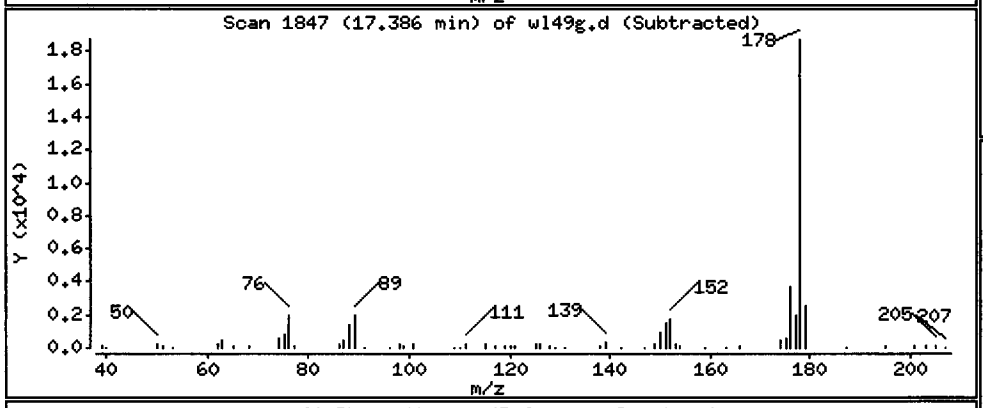
Column phase: ZB-5msi

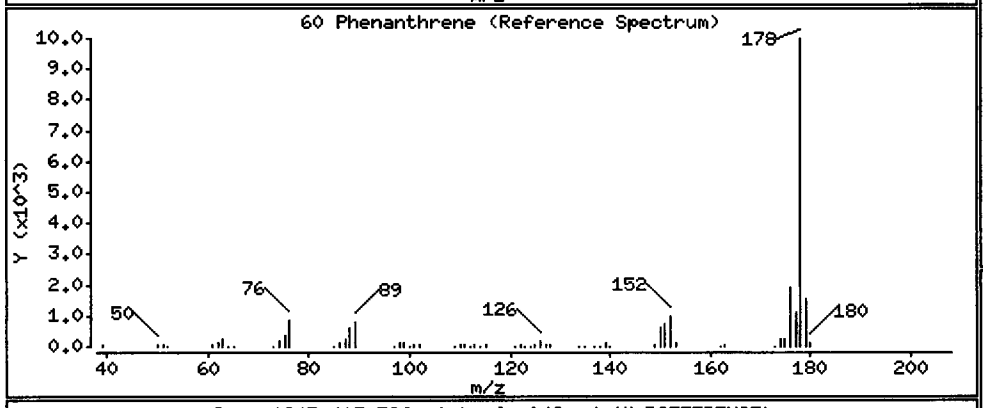
Column diameter: 0.25

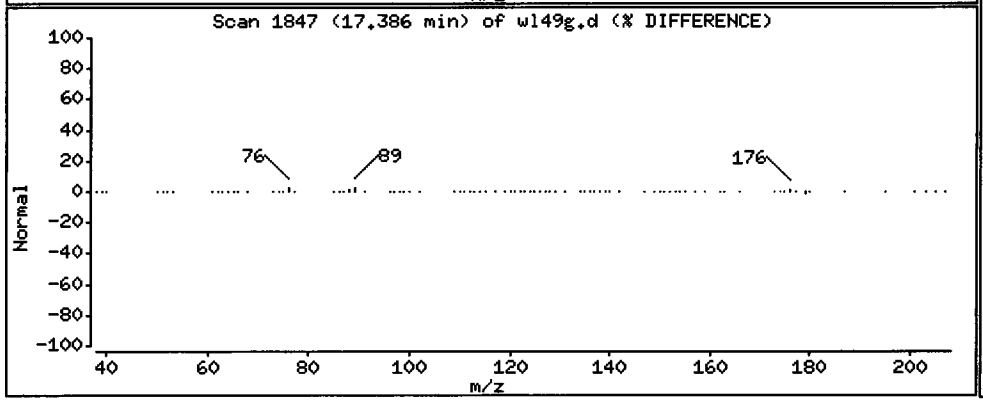
60 Phenanthrene

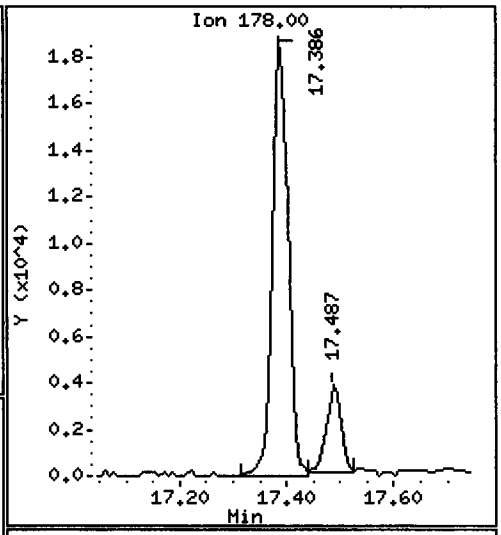
Concentration: 95.05 ug/kg

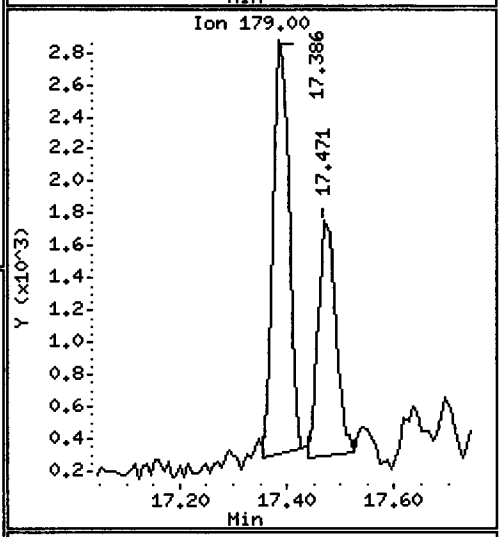


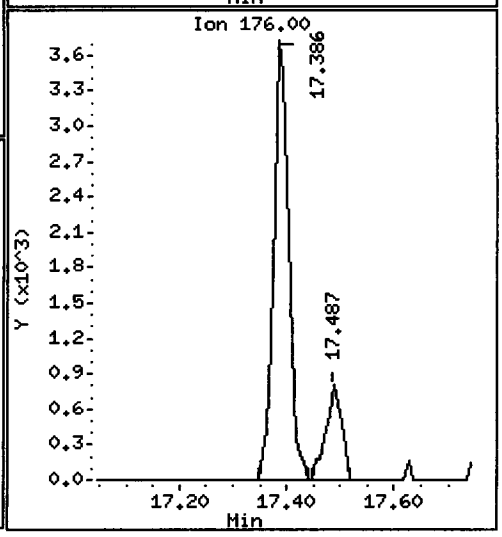












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

Operator: VTS/YZ

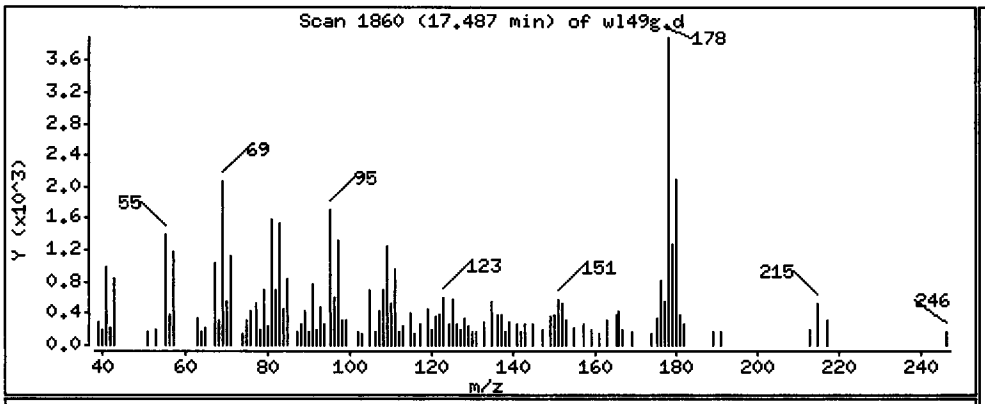
Column phase: ZB-5msi

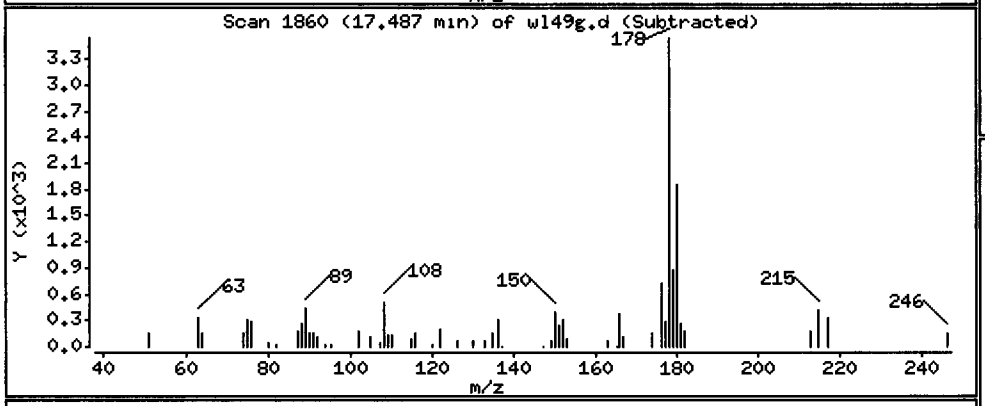
Column diameter: 0.25

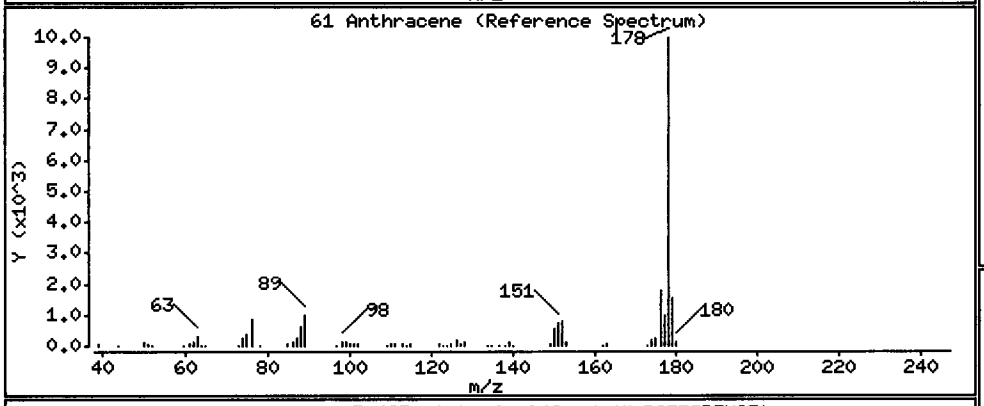
61 Anthracene

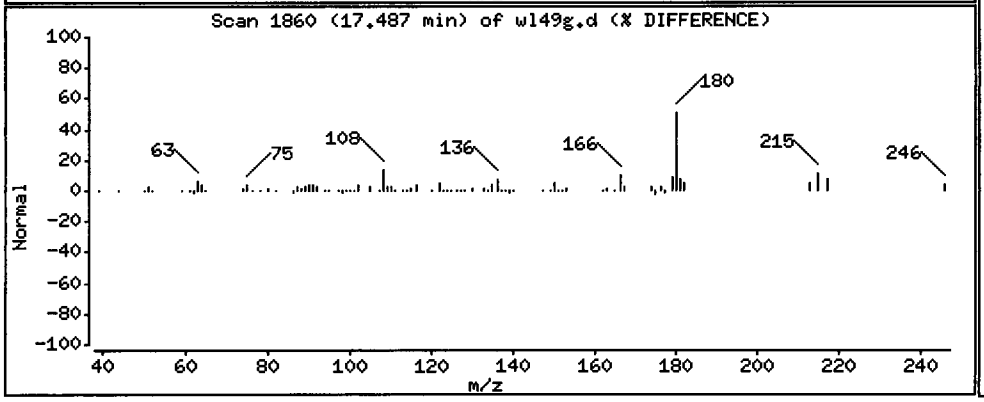
Concentration: 17.97 ug/kg

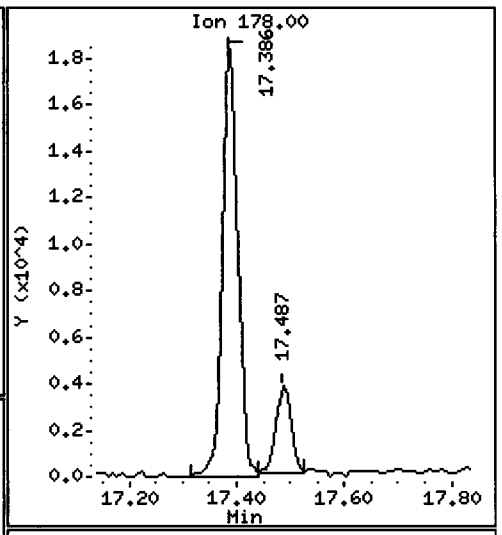
TCRL

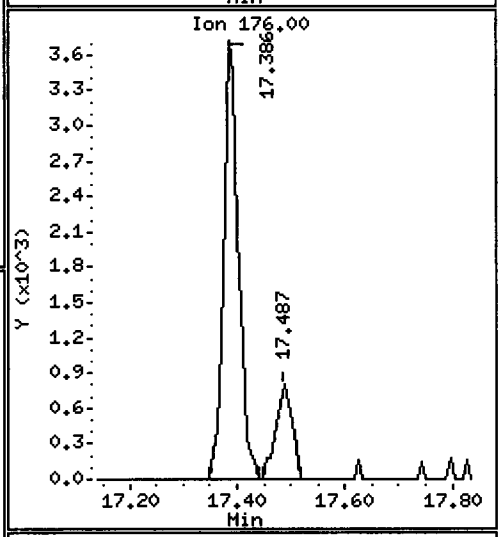


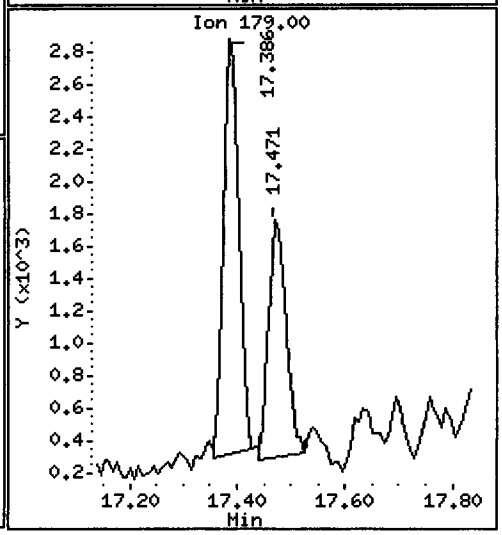












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

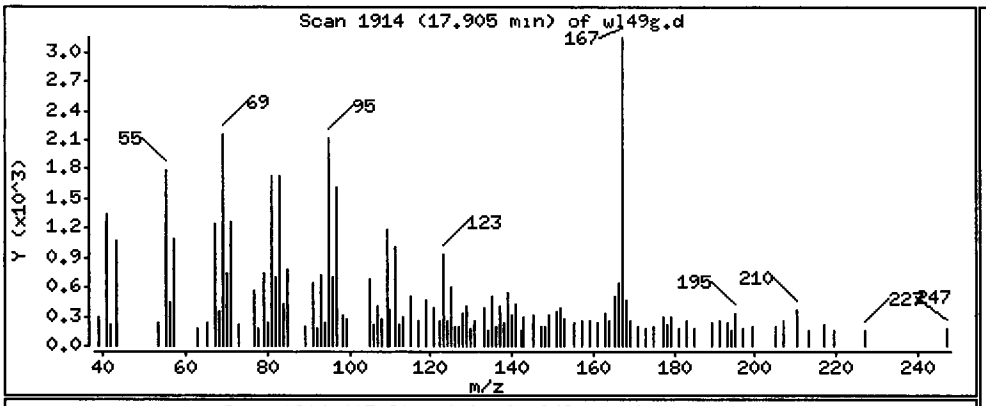
Operator: VTS/YZ

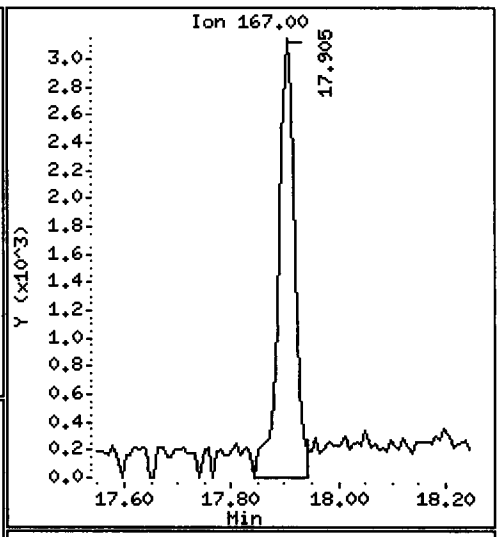
Column phase: ZB-5msi

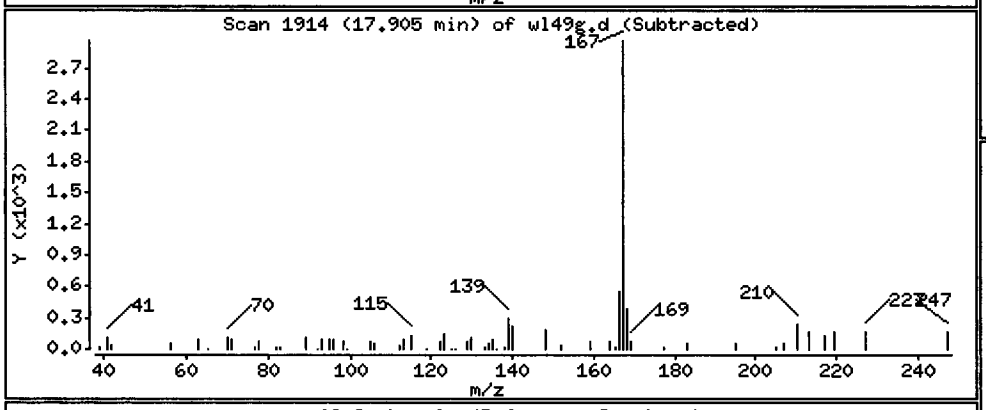
Column diameter: 0.25

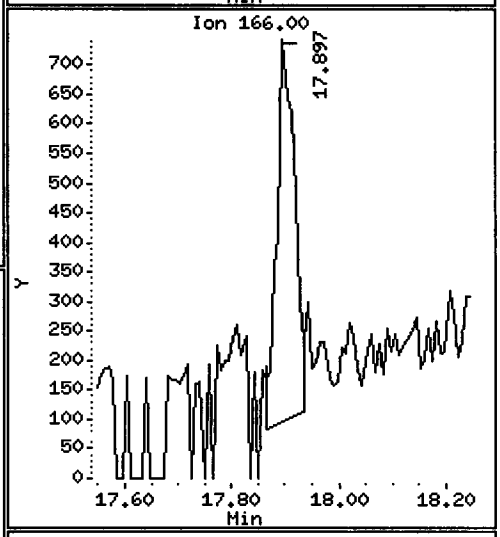
62 Carbazole

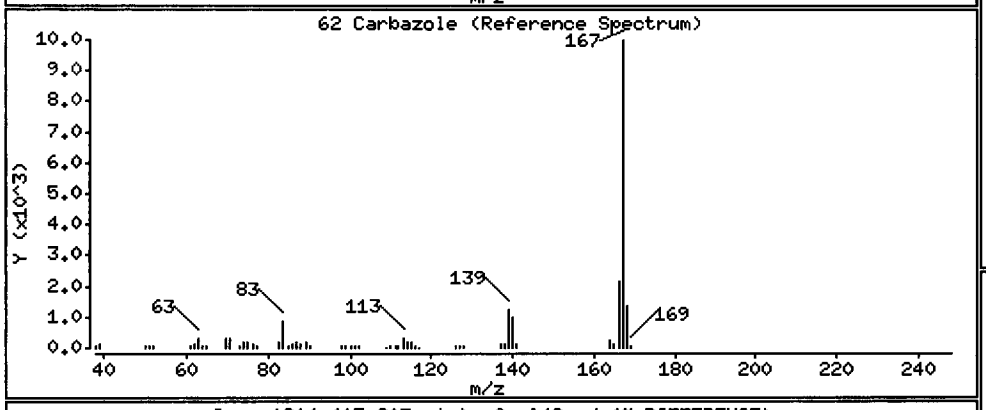
Concentration: 24.18 ug/kg

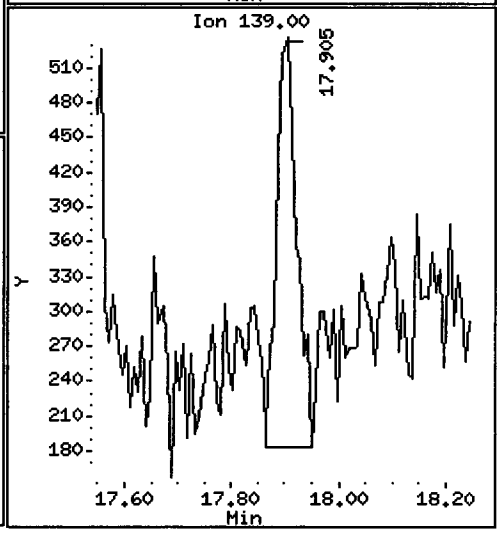


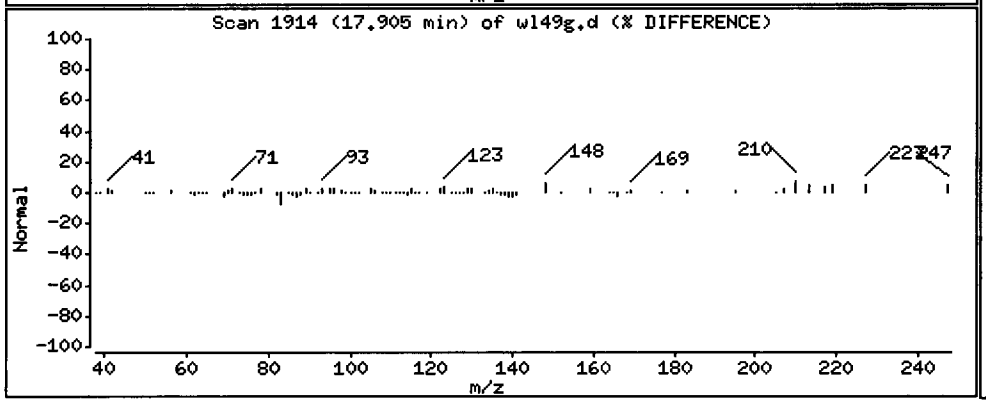












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

Operator: VTS/YZ

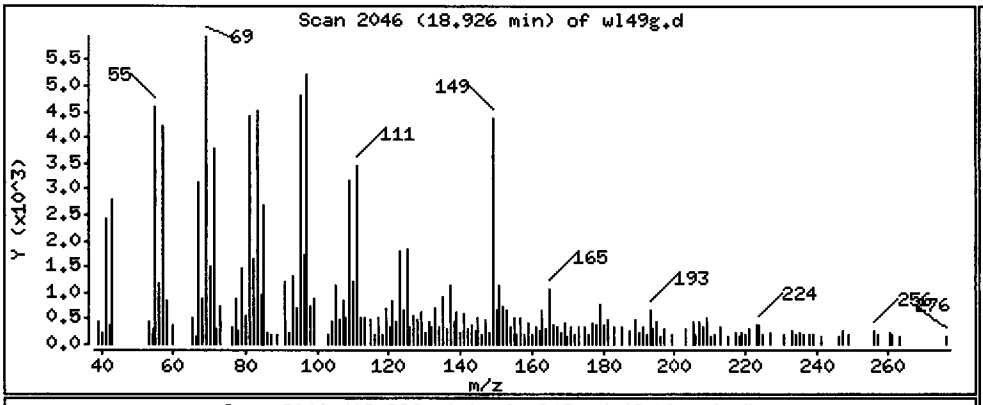
Column phase: ZB-5msi

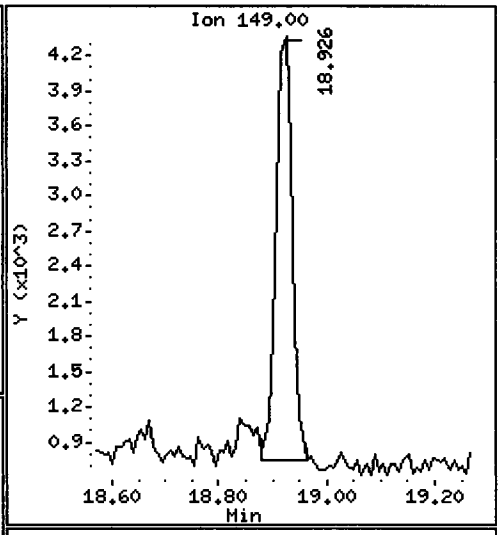
Column diameter: 0.25

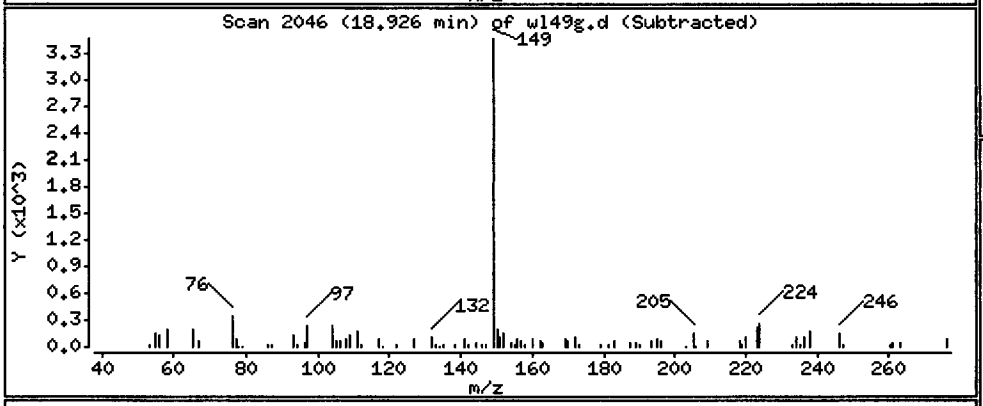
63 Di-n-butylphthalate

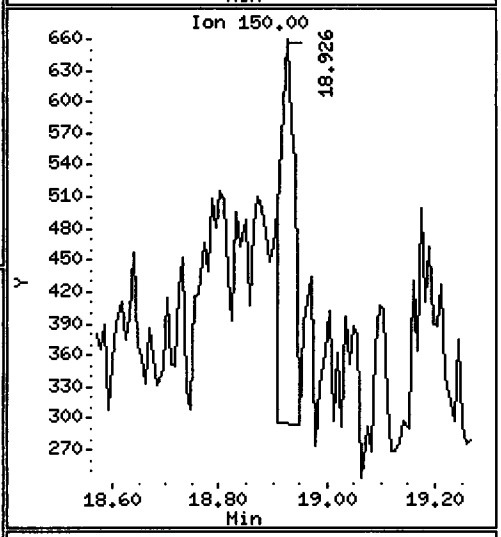
Concentration: 17.11 ug/kg

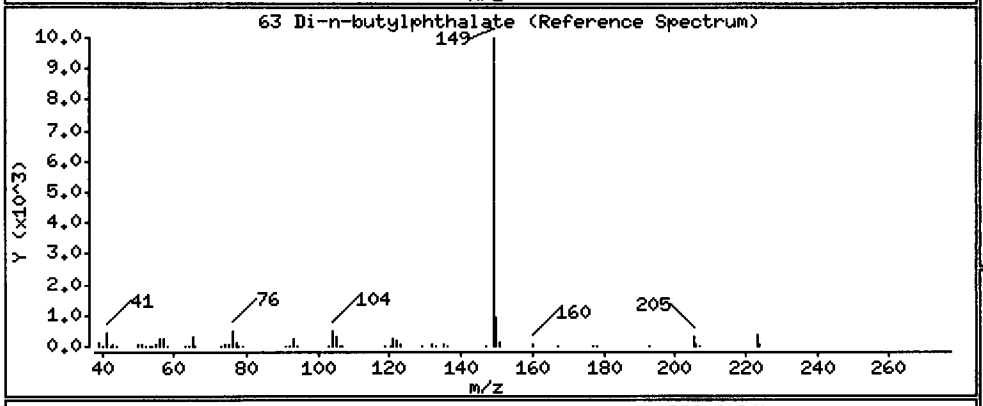
7.42L

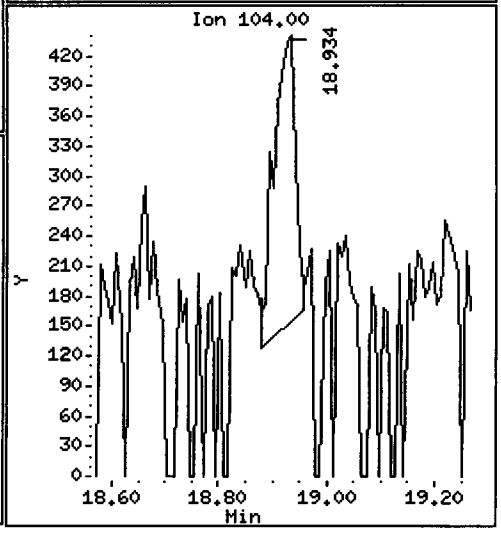


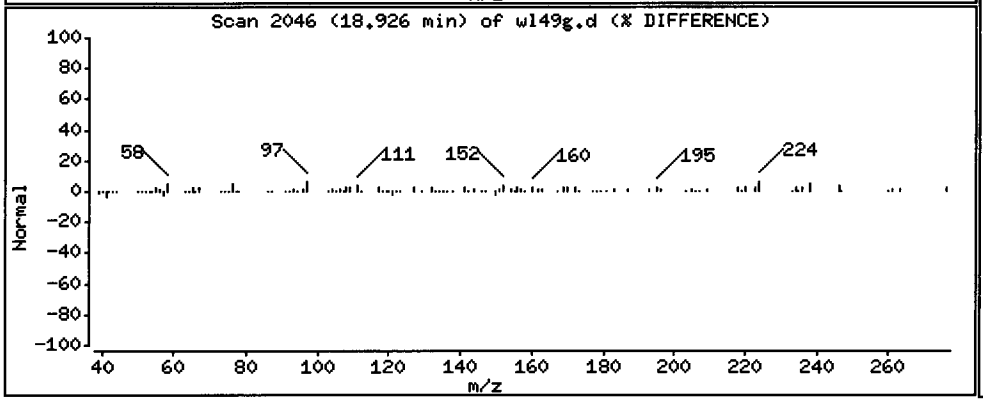












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

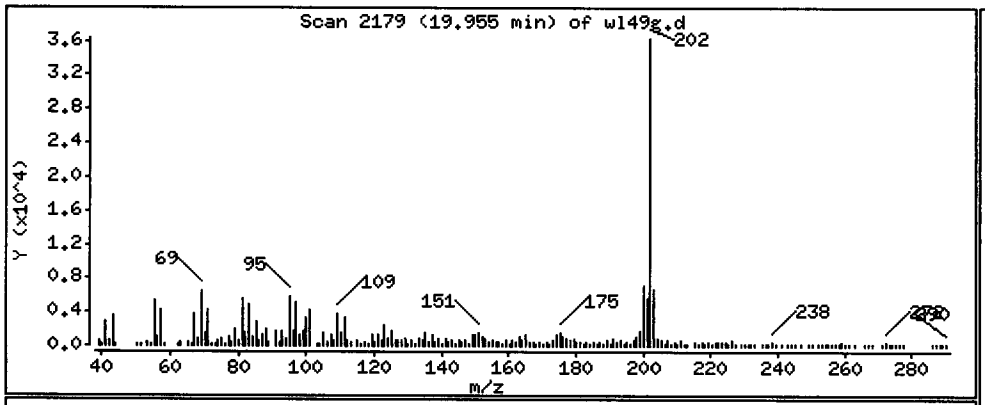
Operator: VTS/YZ

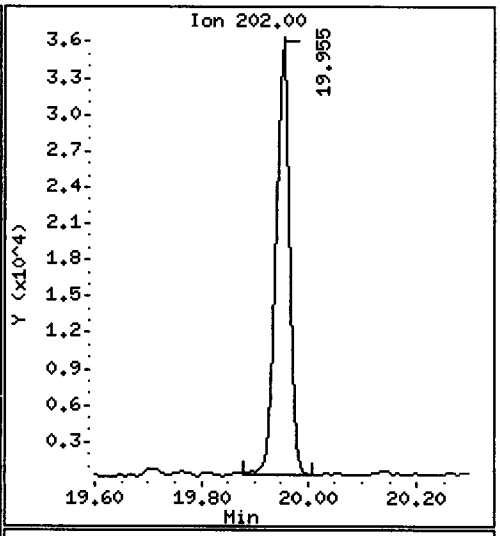
Column phase: ZB-5ms

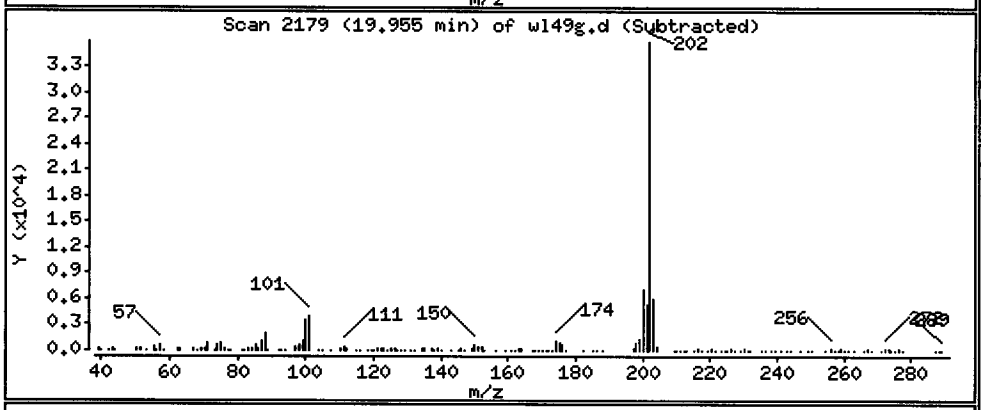
Column diameter: 0.25

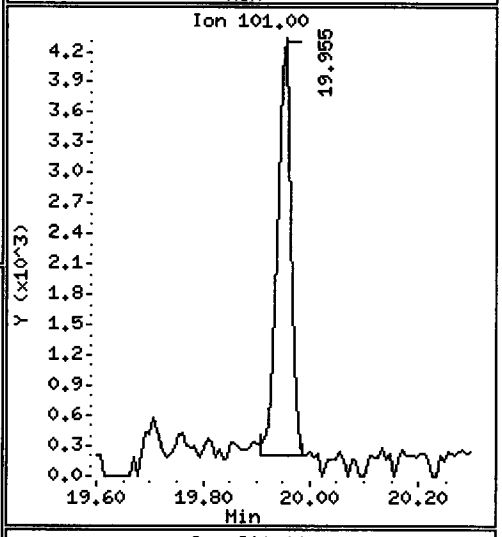
64 Fluoranthene

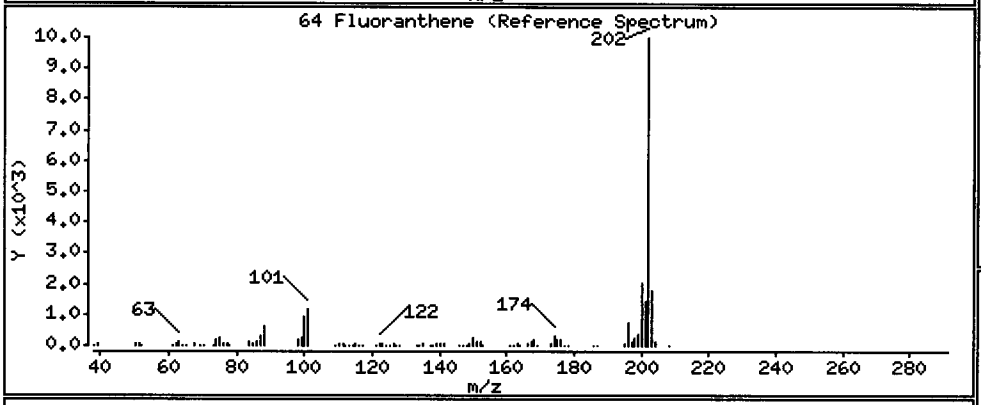
Concentration: 133.4 ug/kg

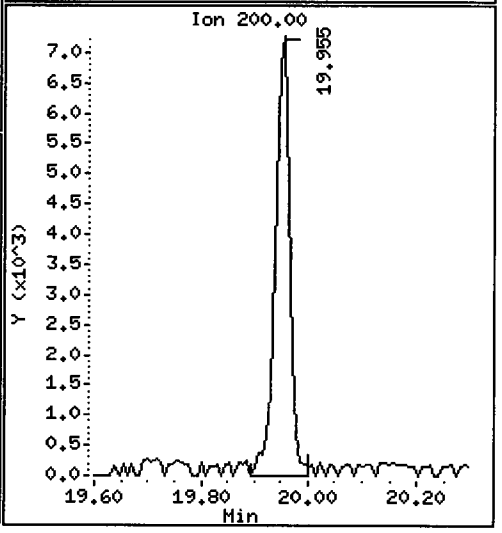


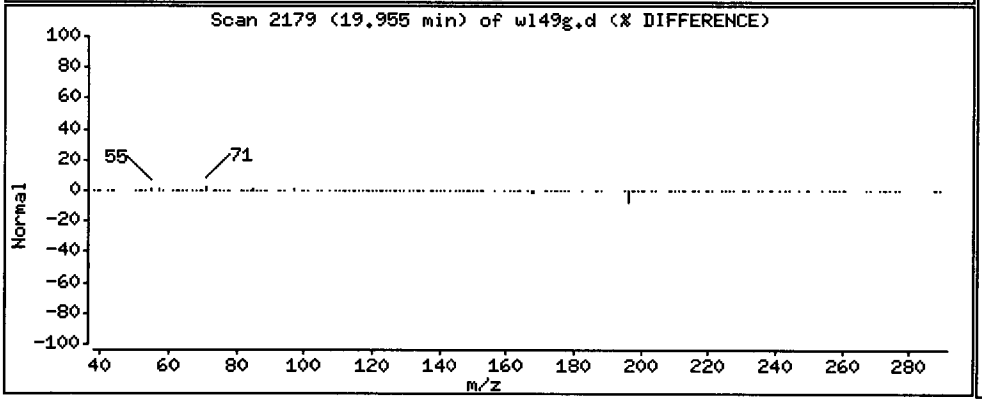












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

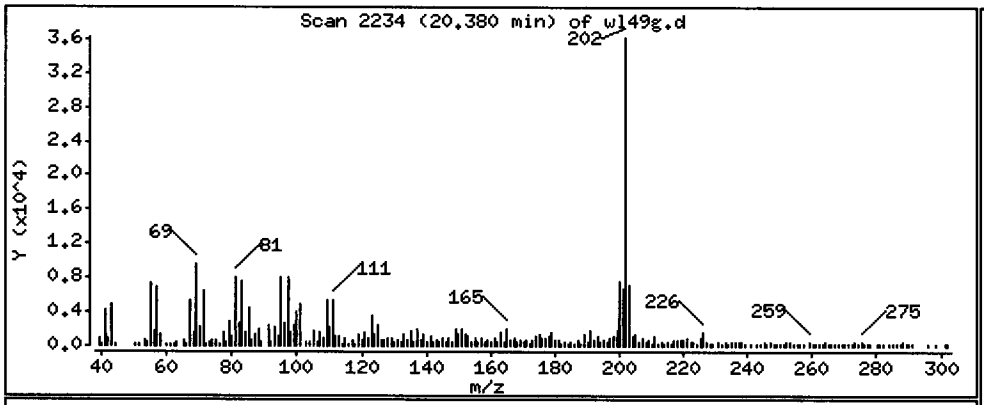
Operator: VTS/YZ

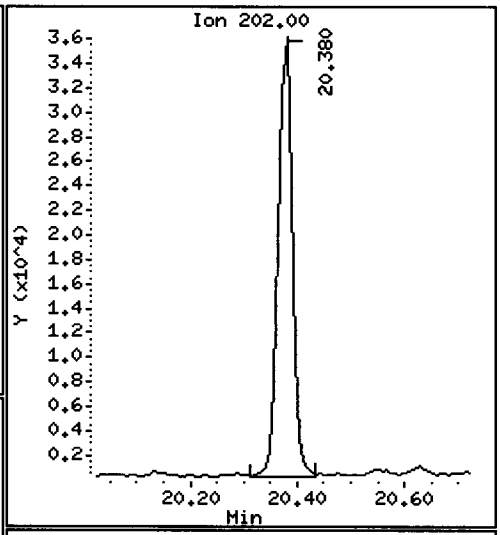
Column phase: ZB-5msi

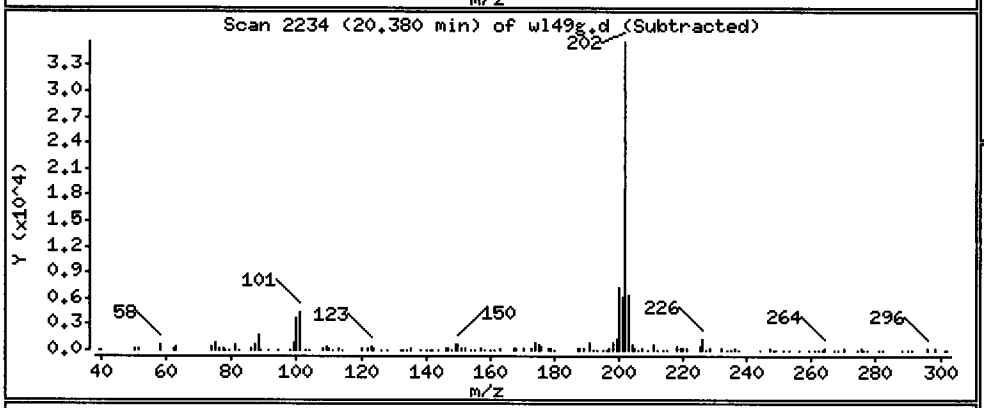
Column diameter: 0.25

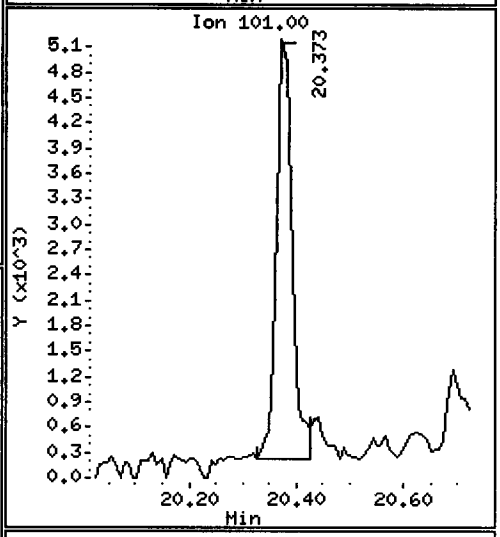
65 Pyrene

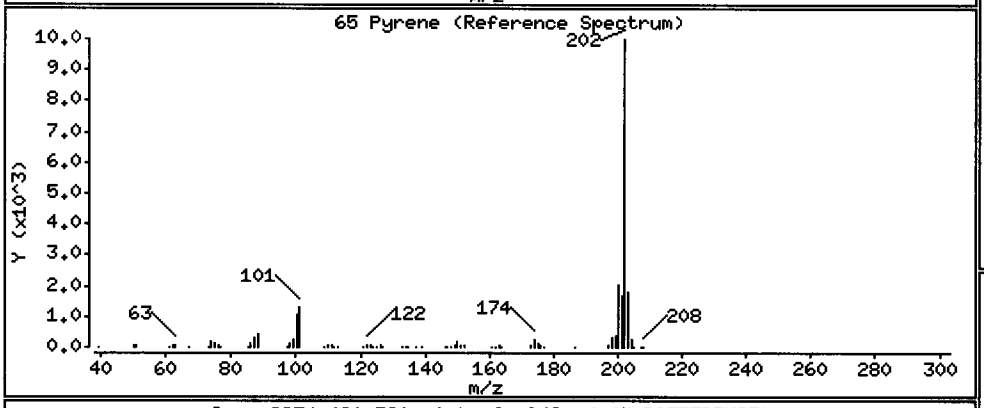
Concentration: 132.7 ug/kg

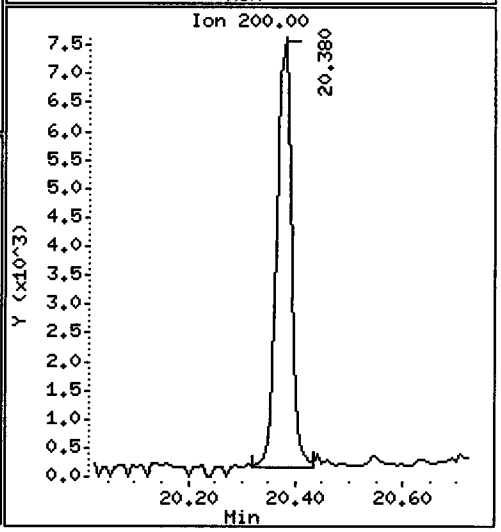


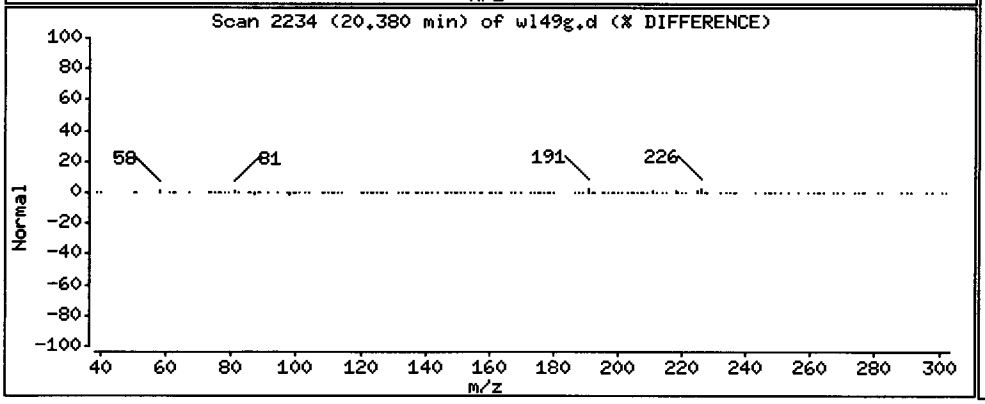












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

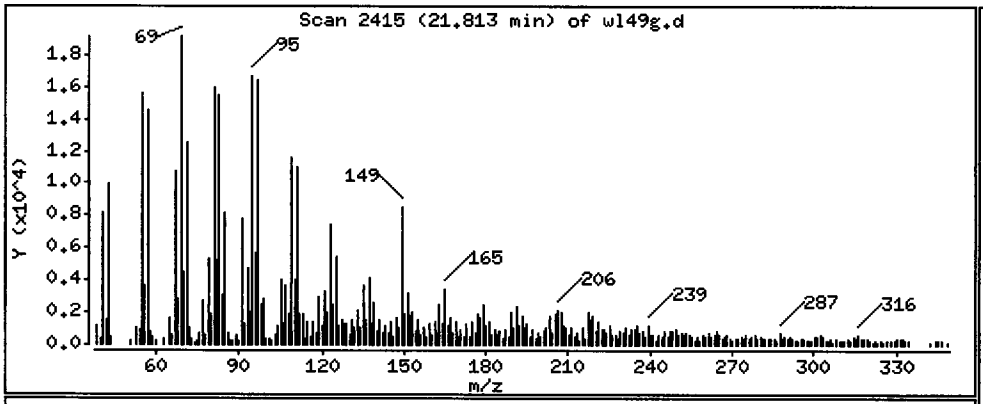
Operator: VTS/YZ

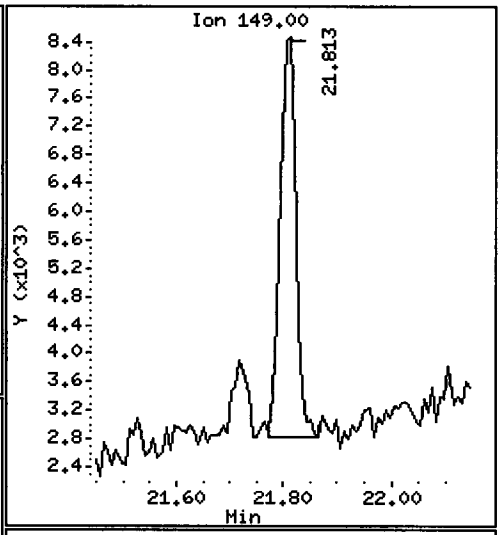
Column phase: ZB-5msi

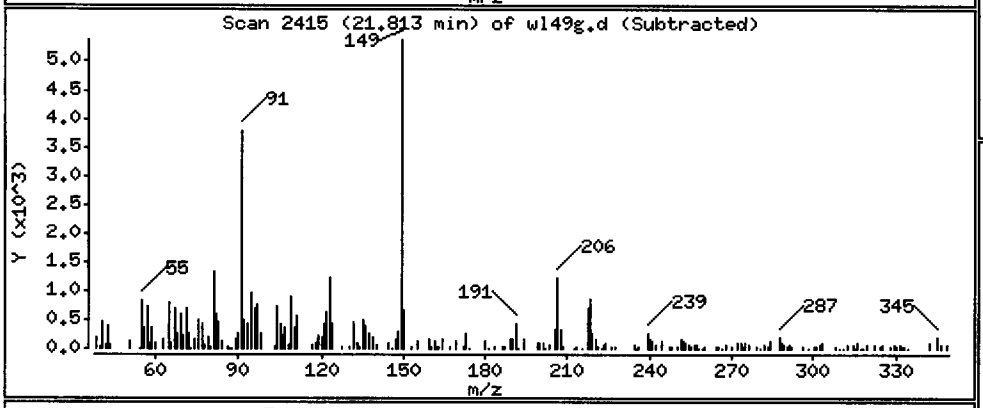
Column diameter: 0.25

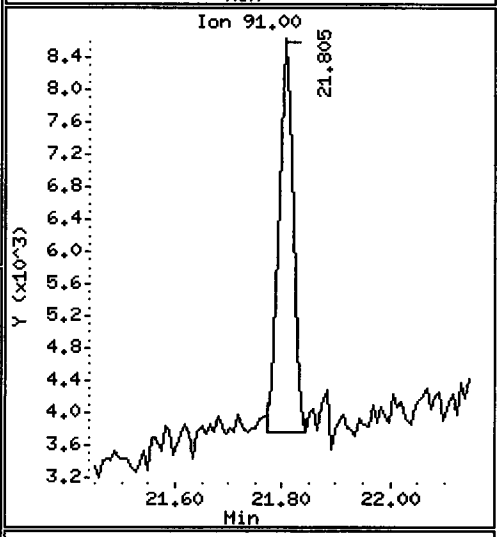
67 Butylbenzylphthalate

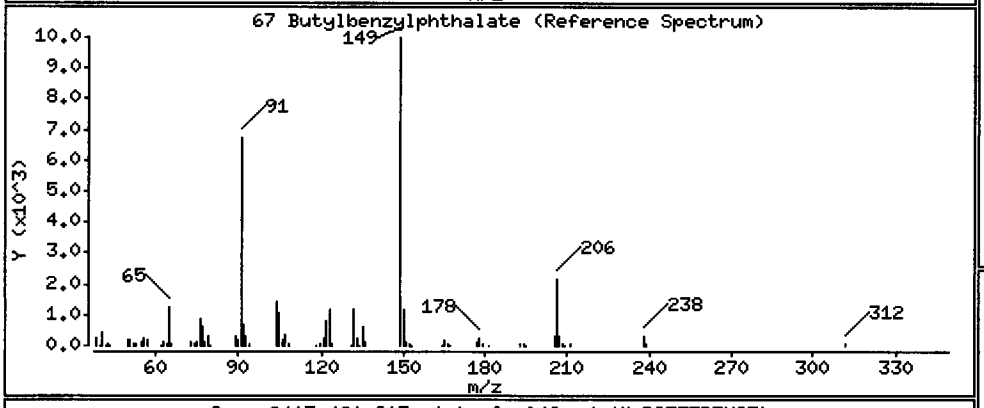
Concentration: 61.28 ug/kg

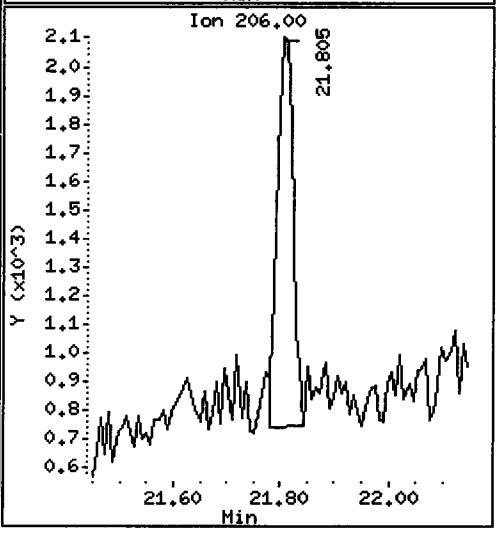


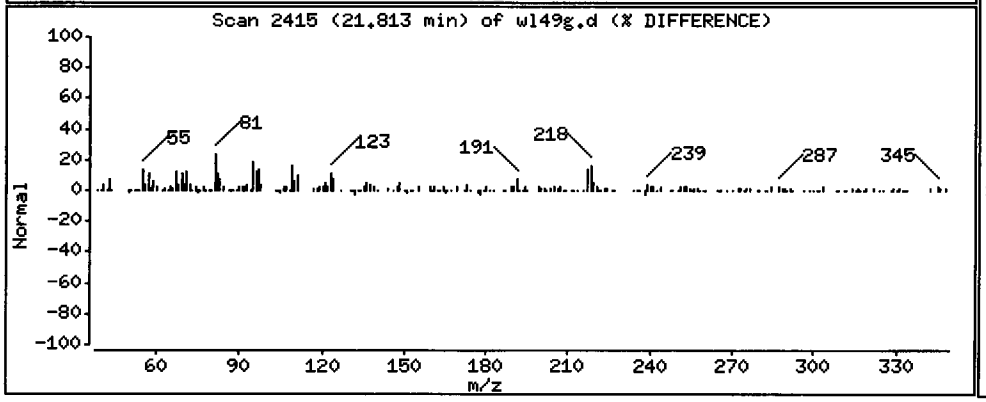












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

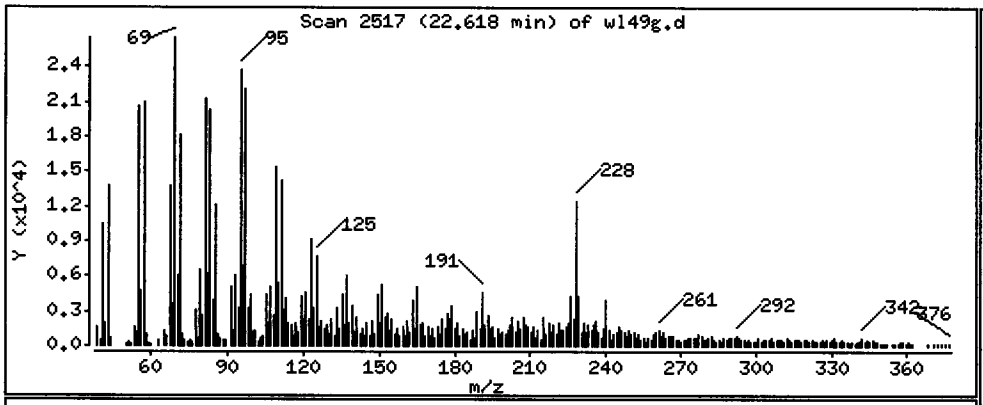
Operator: VTS/YZ

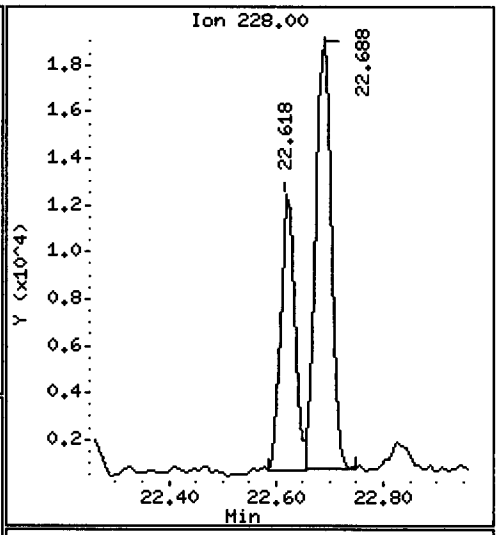
Column phase: ZB-5msi

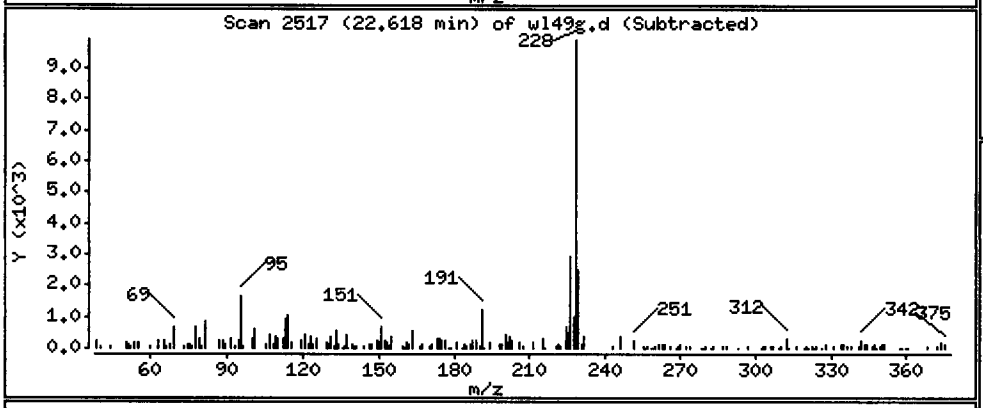
Column diameter: 0.25

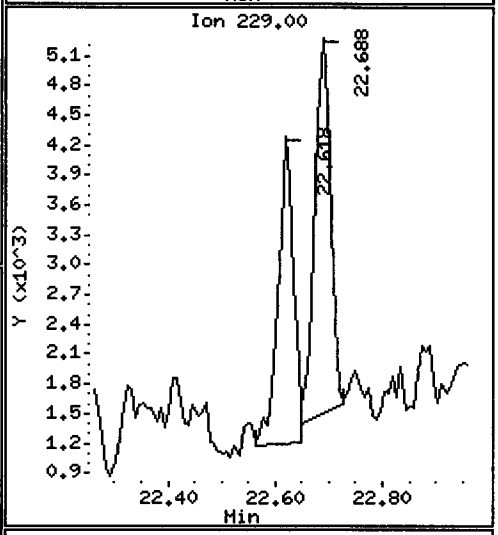
68 Benzo(a)anthracene

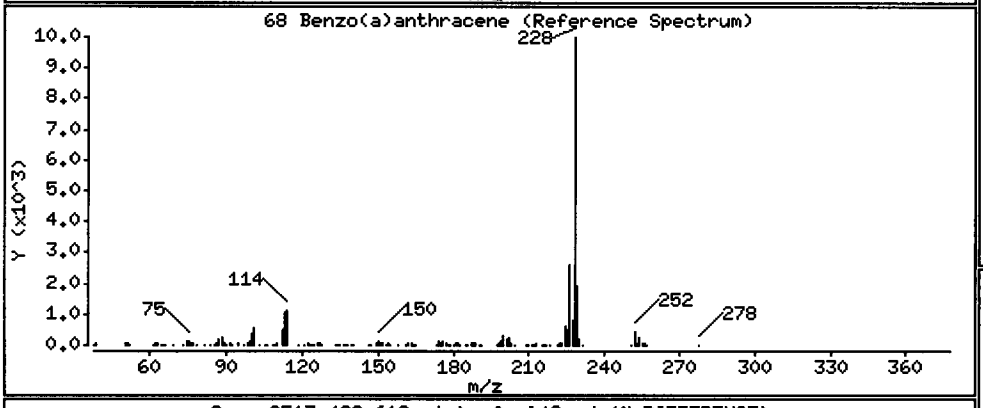
Concentration: 46.14 ug/kg

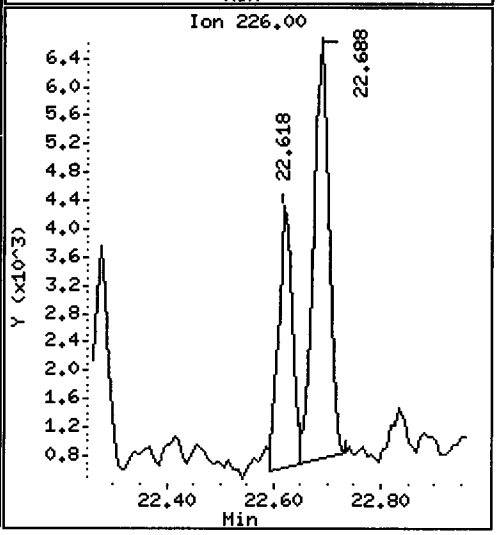


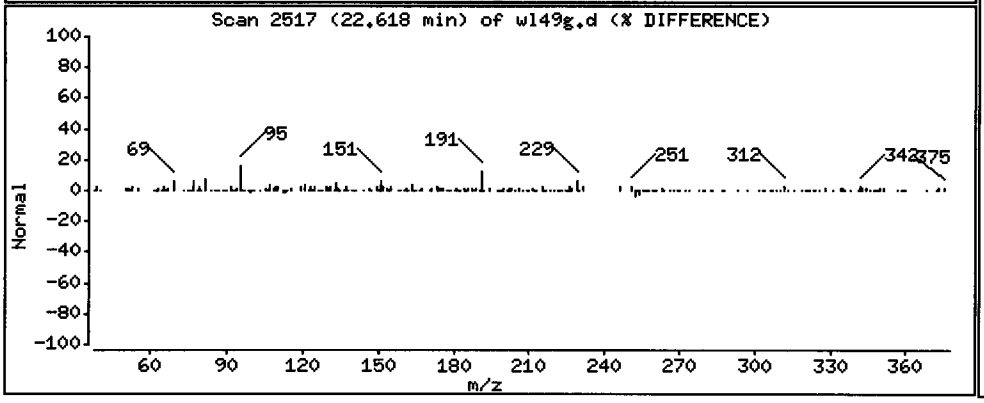












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

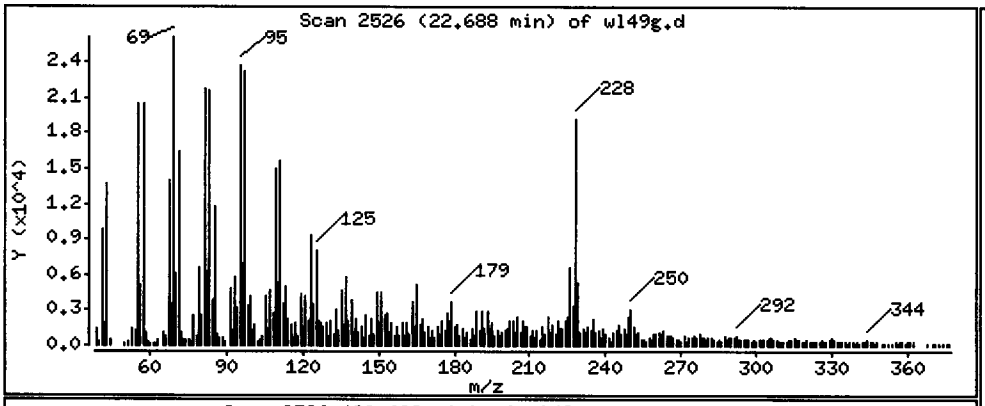
Operator: VTS/YZ

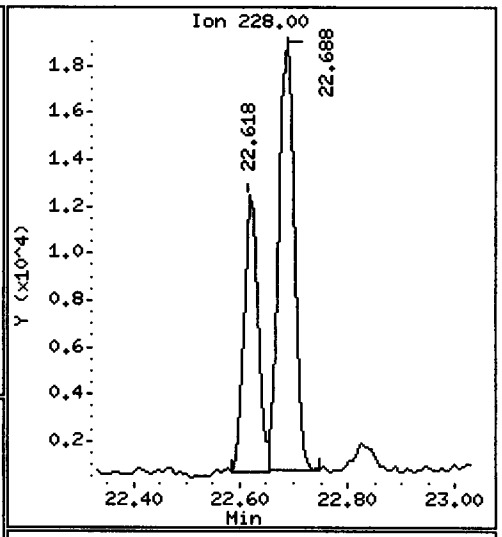
Column phase: ZB-5msi

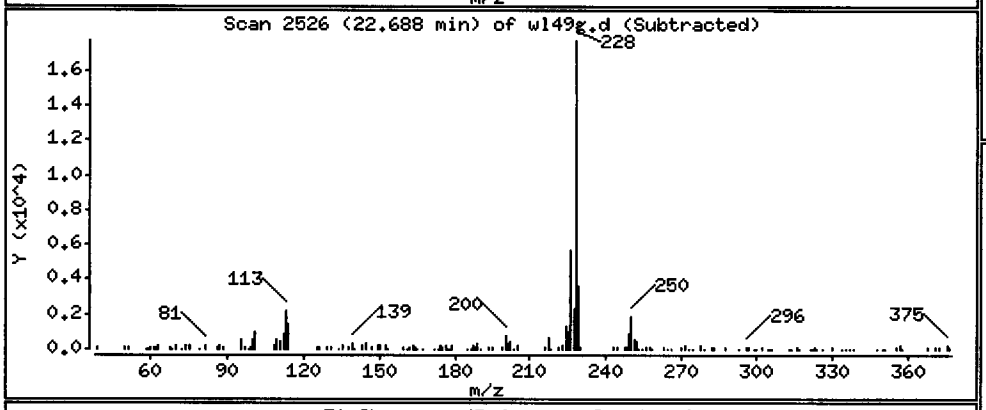
Column diameter: 0.25

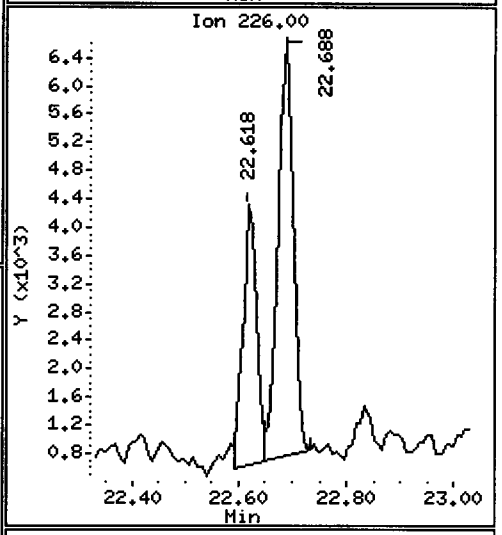
71 Chrysene

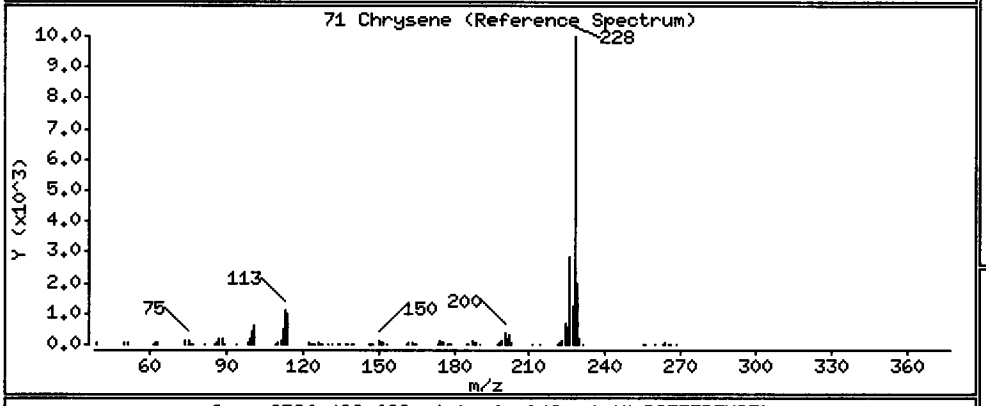
Concentration: 82.77 ug/kg

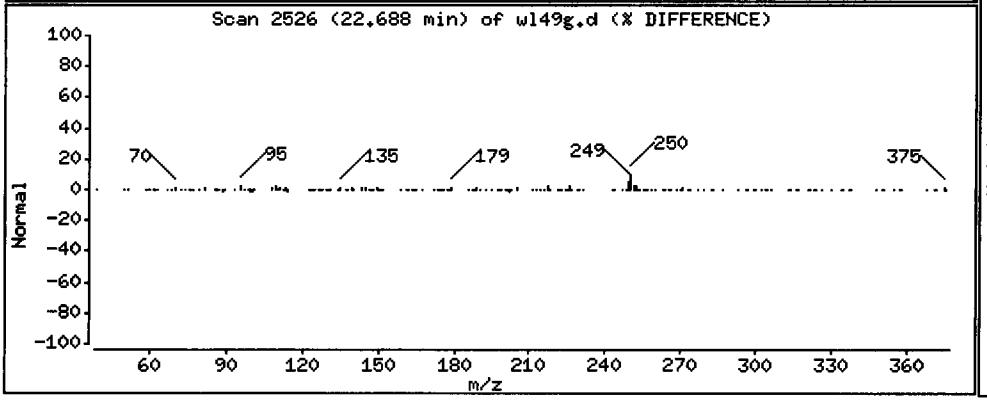


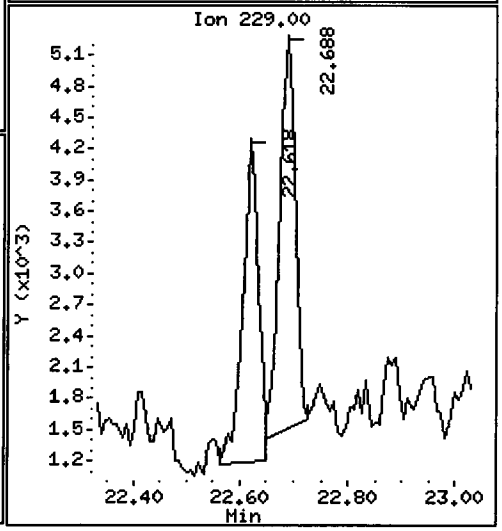












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

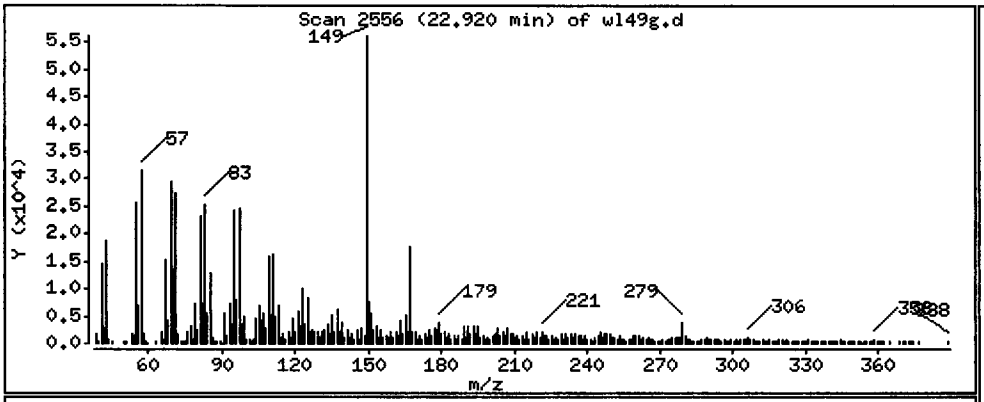
Operator: VTS/YZ

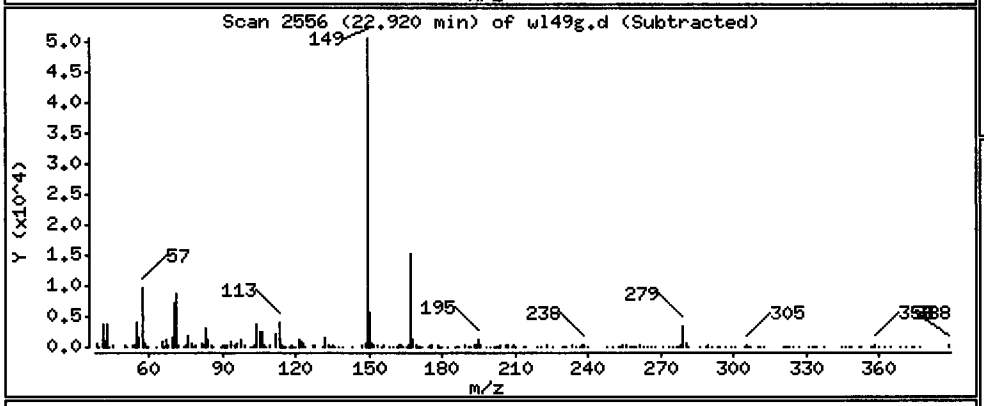
Column phase: ZB-5msi

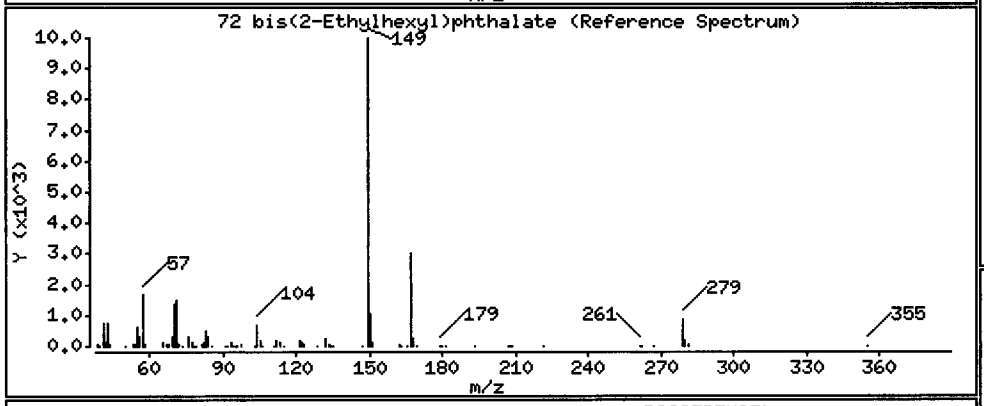
Column diameter: 0.25

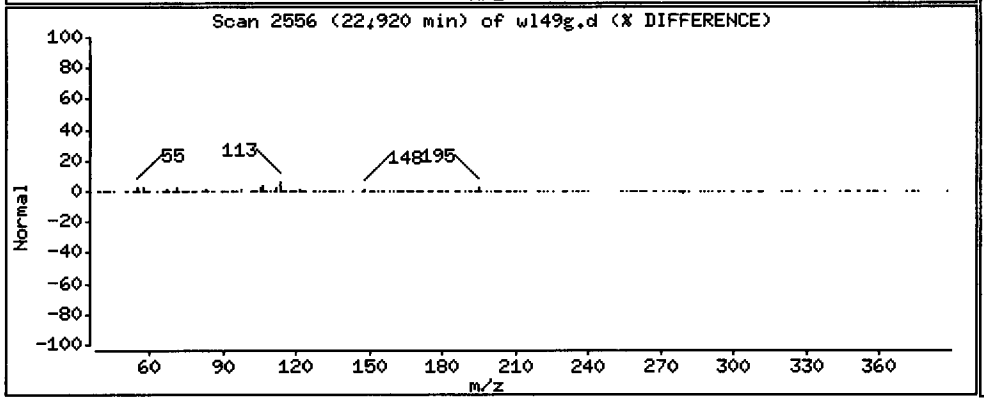
72 bis(2-Ethylhexyl)phthalate

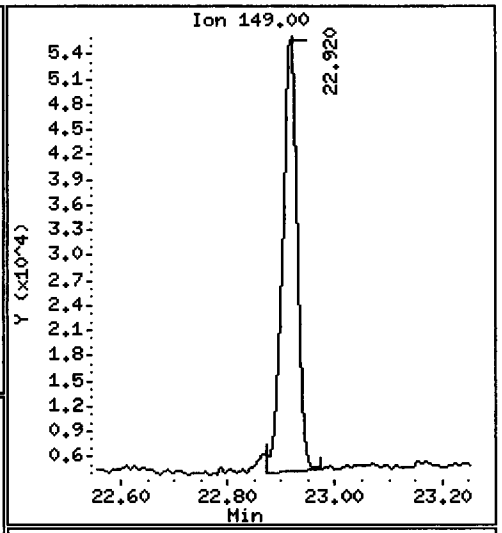
Concentration: 336.2 ug/kg

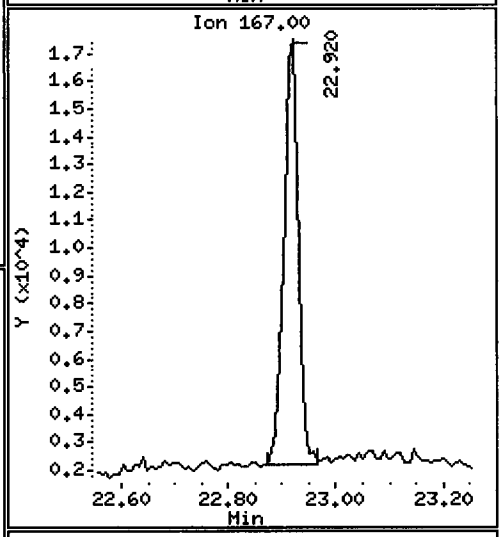


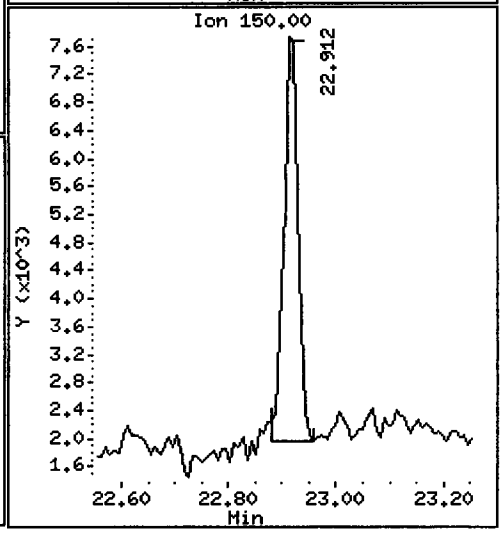












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

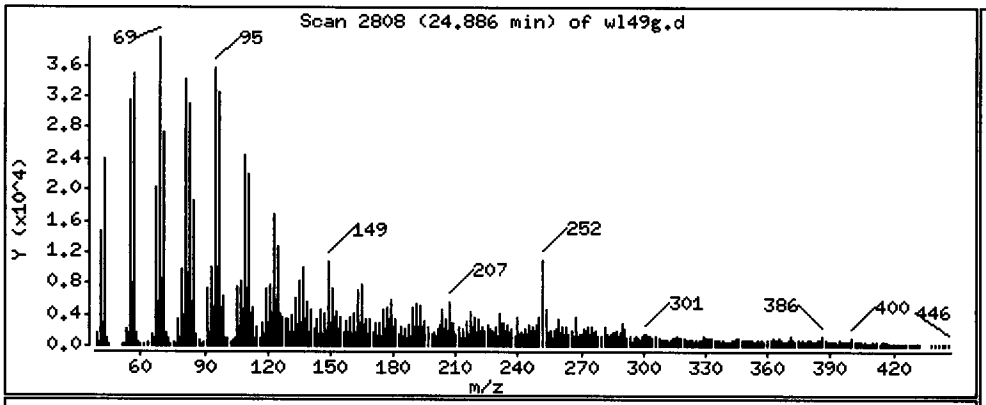
Operator: VTS/YZ

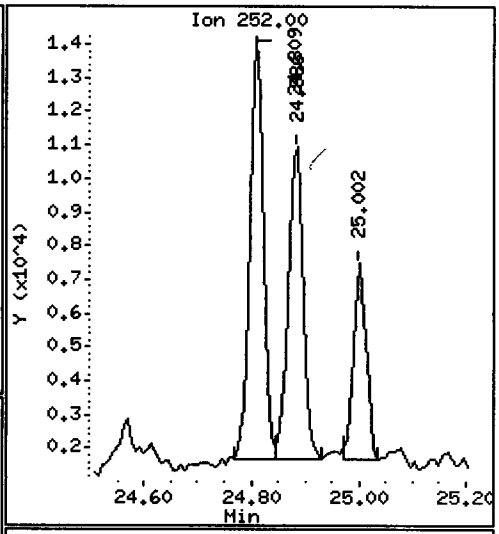
Column phase: ZB-5msi

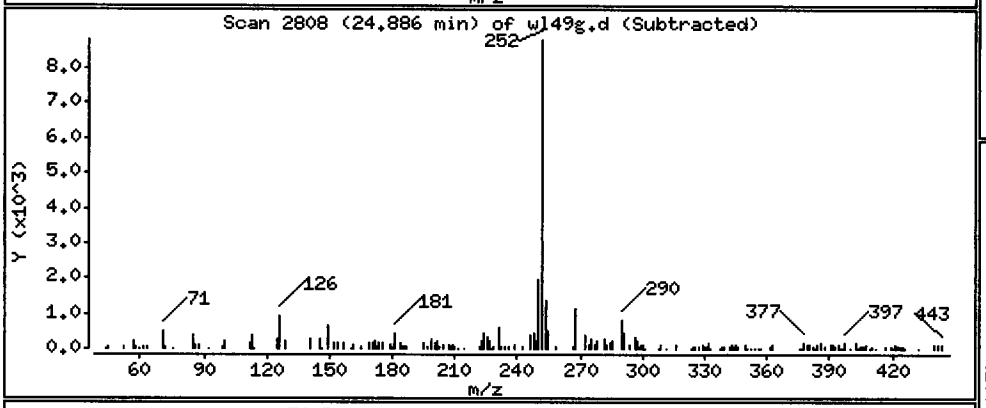
Column diameter: 0.25

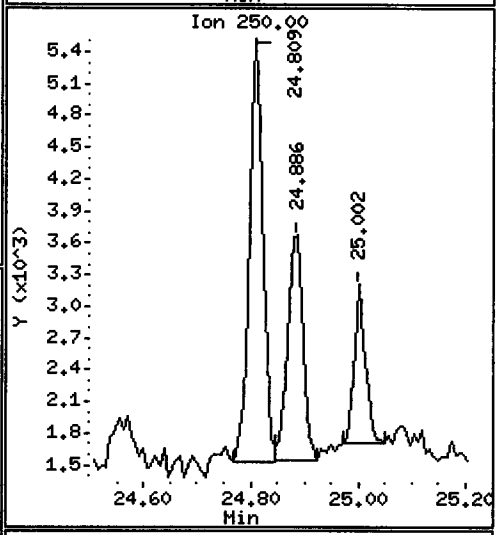
76 Benzo(a)pyrene

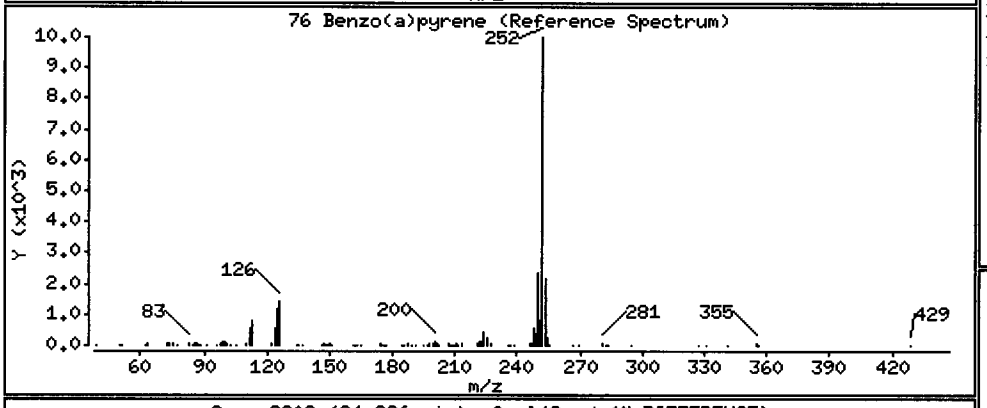
Concentration: 45.90 ug/kg

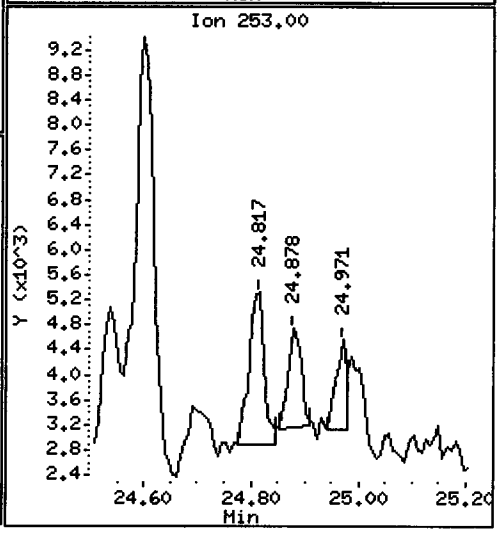


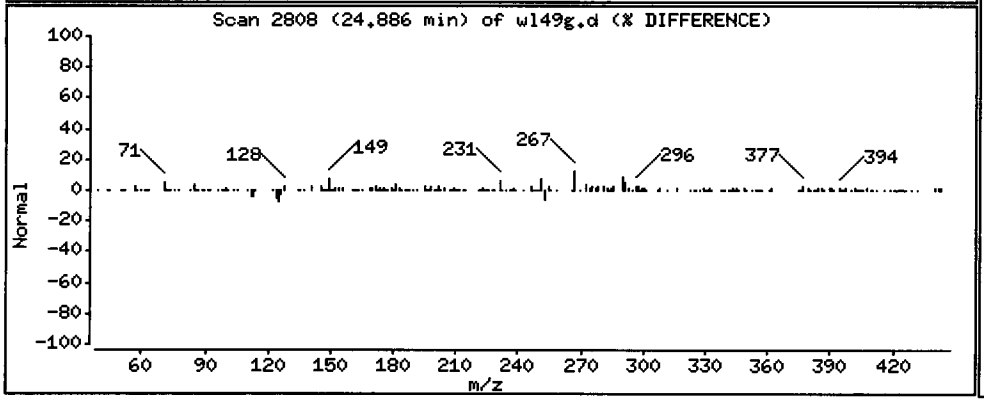












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

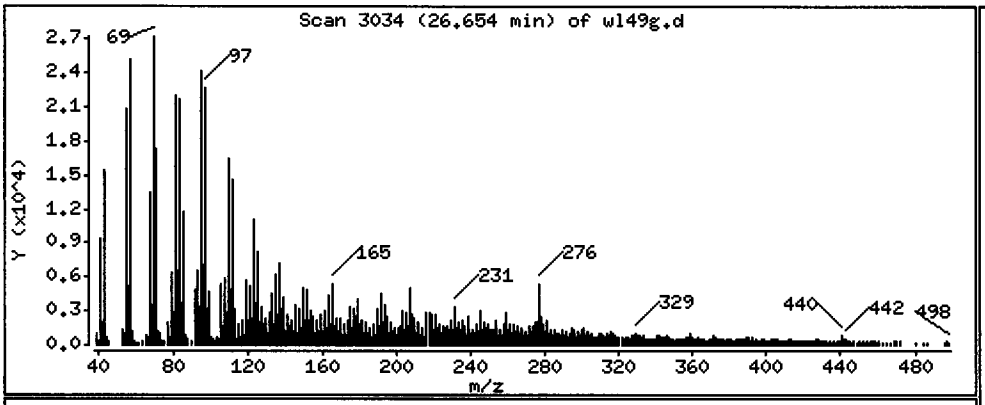
Operator: VTS/YZ

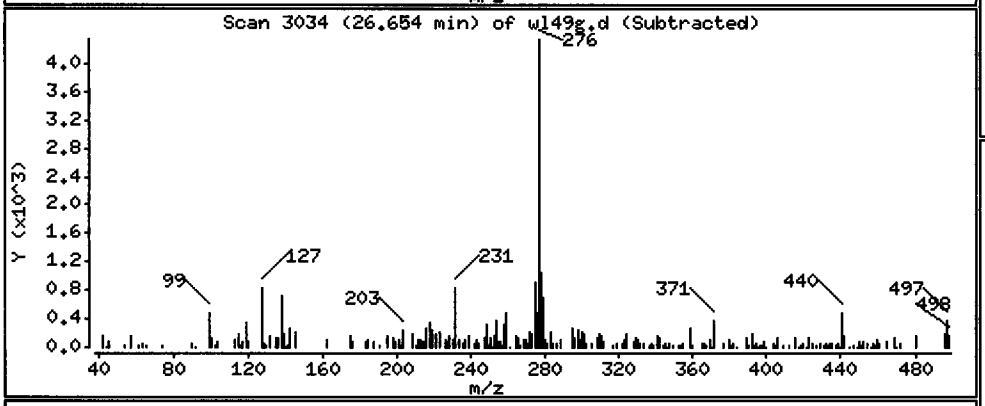
Column phase: ZB-5msi

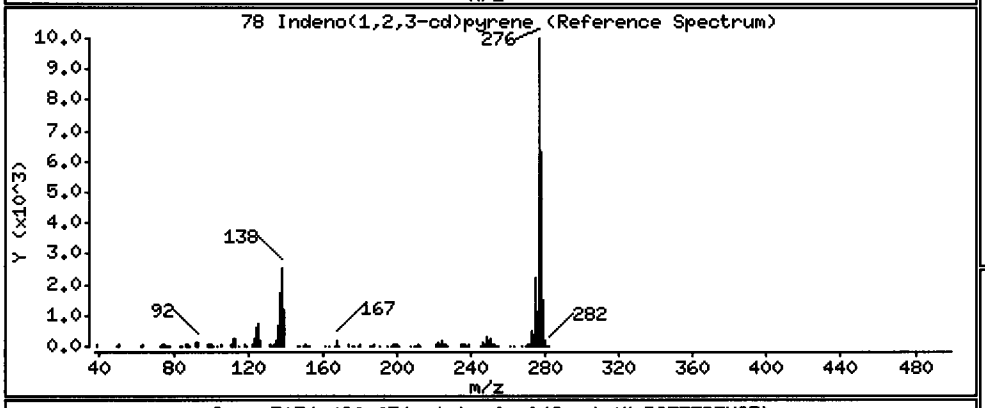
Column diameter: 0.25

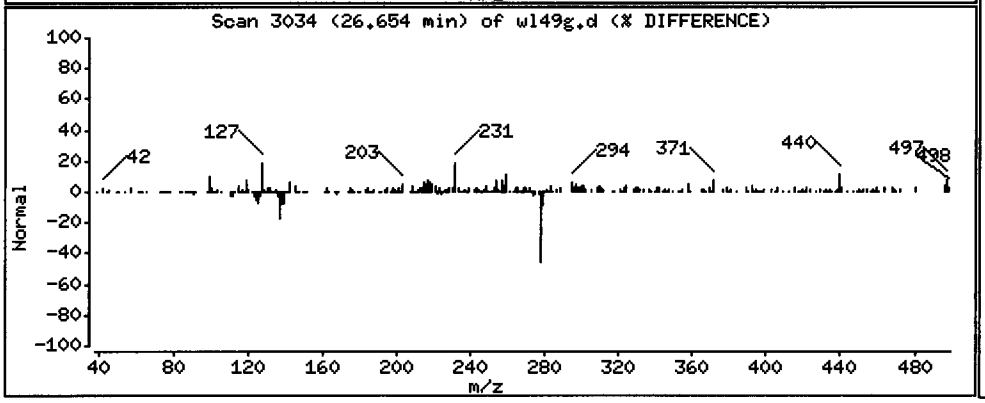
78 Indeno(1,2,3-cd)pyrene

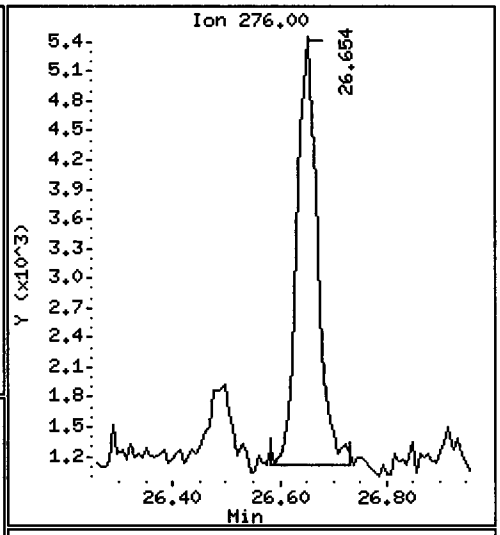
Concentration: 24.38 ug/kg

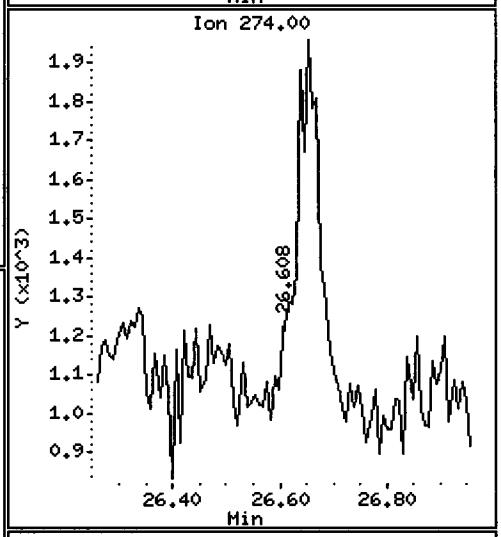


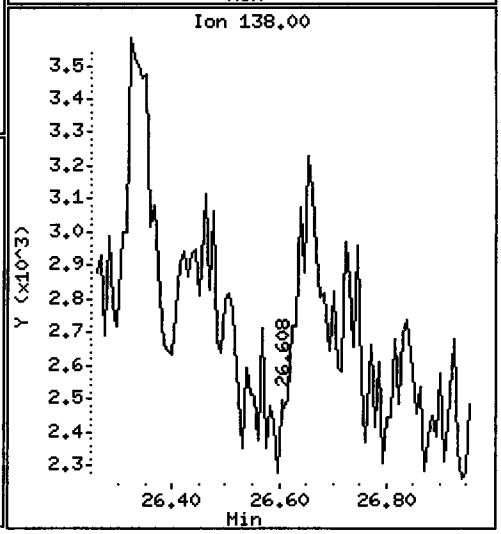












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

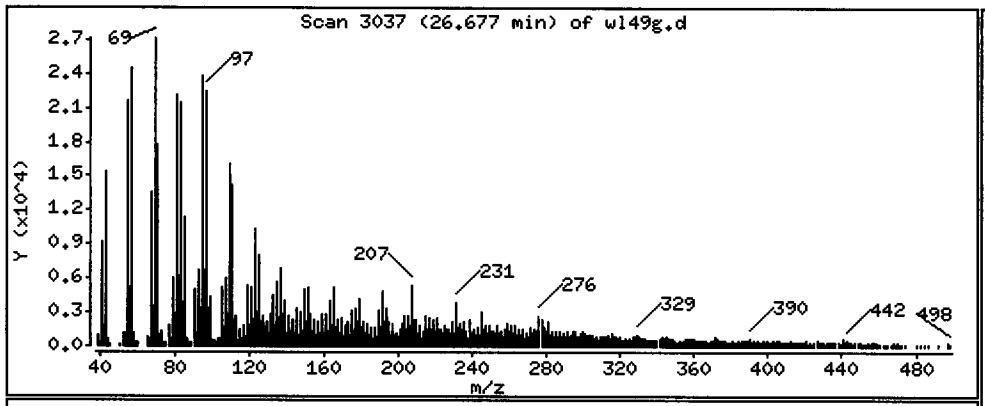
Operator: VTS/YZ

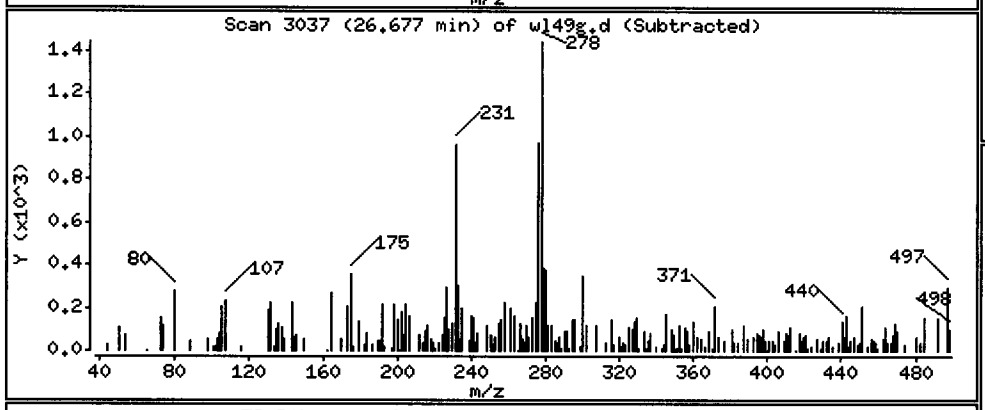
Column phase: ZB-5msi

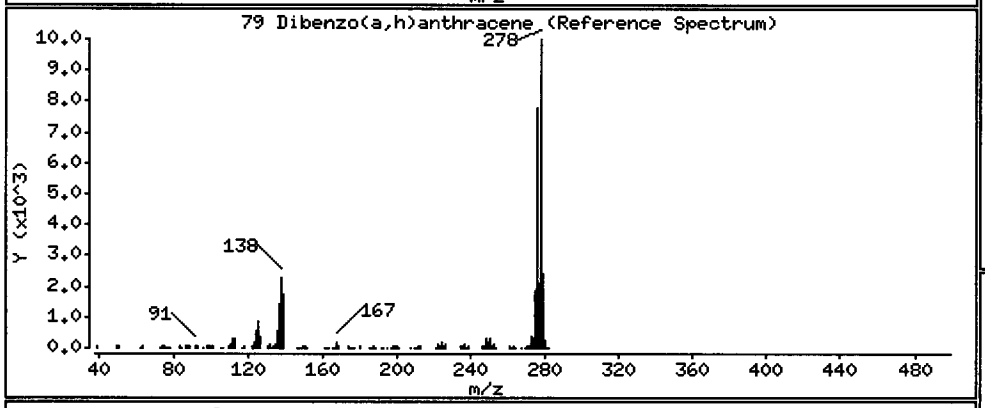
Column diameter: 0.25

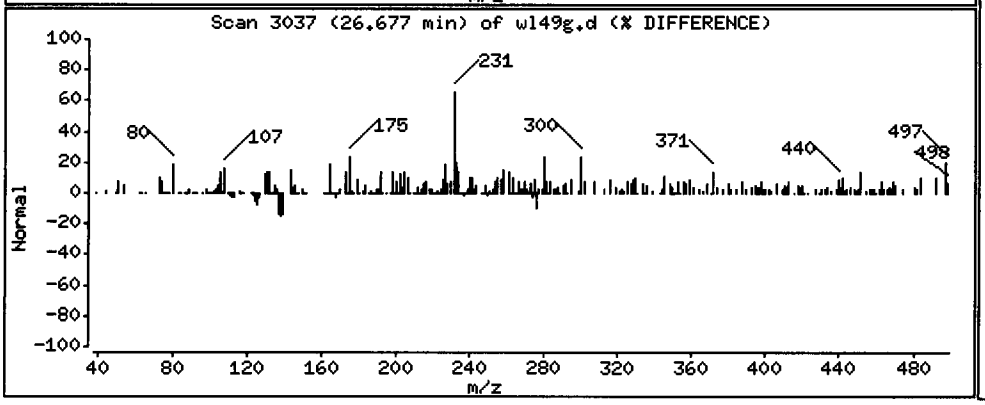
79 Dibenzo(a,h)anthracene

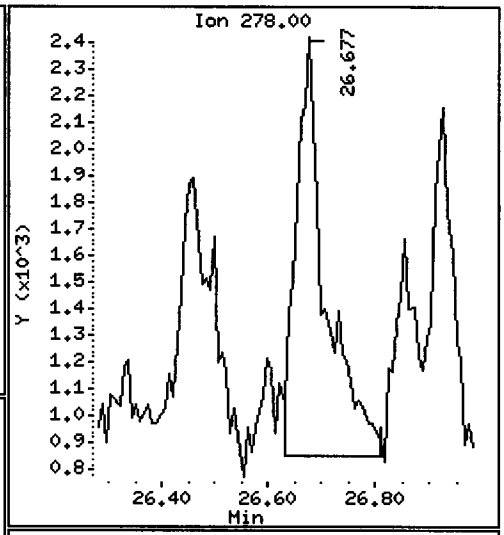
Concentration: 15.58 ug/kg

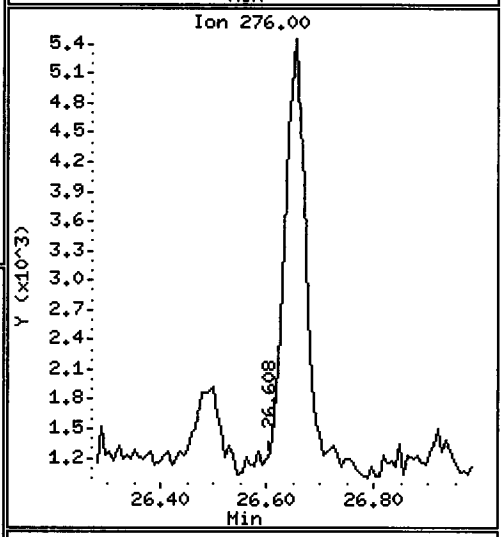


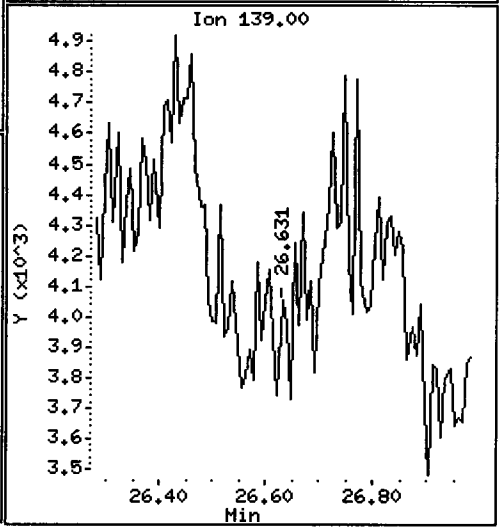












Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

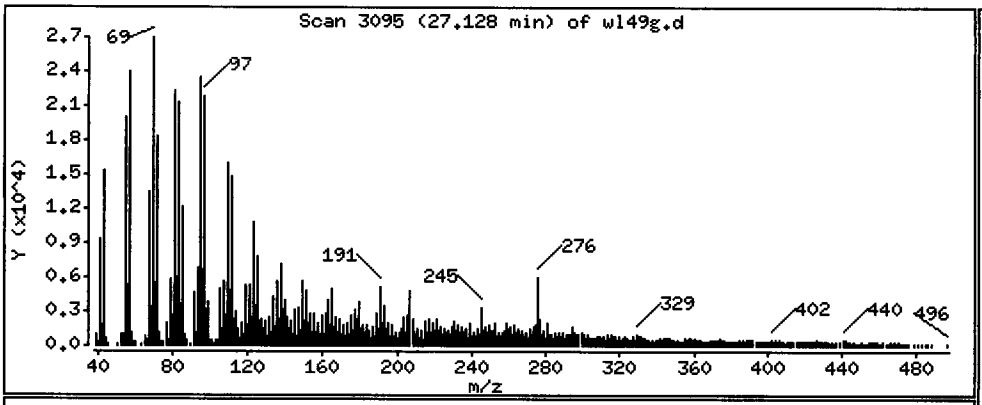
Operator: VTS/YZ

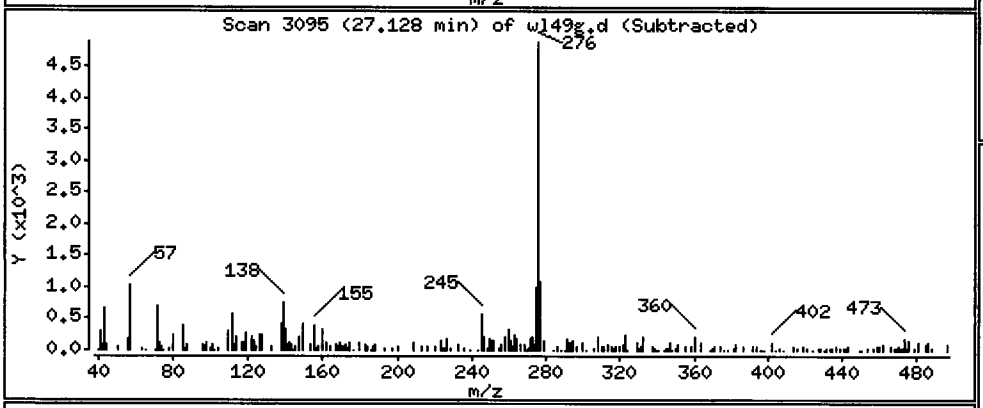
Column phase: ZB-5msi

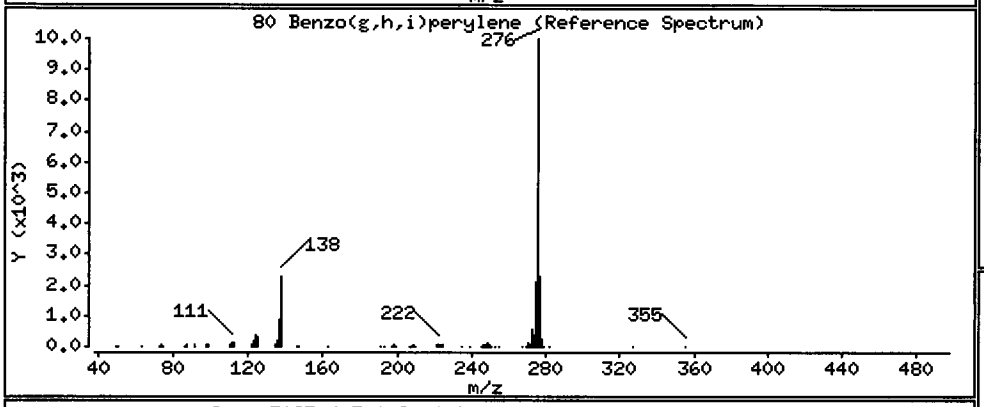
Column diameter: 0.25

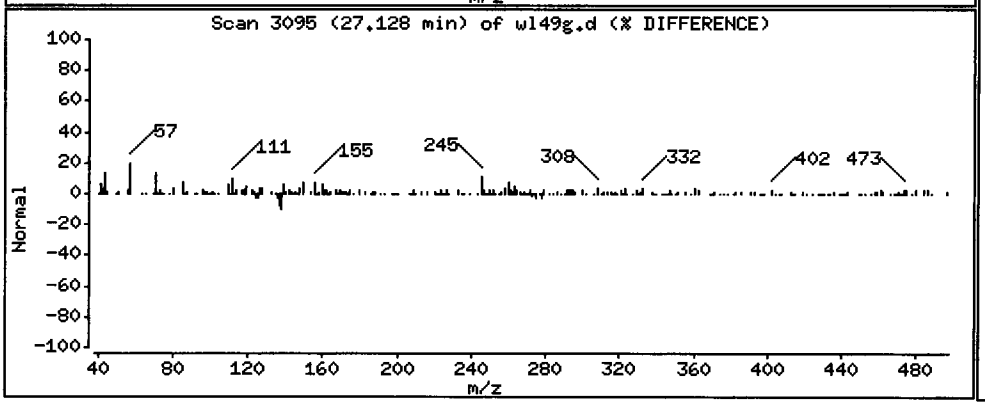
80 Benzo(g,h,i)perylene

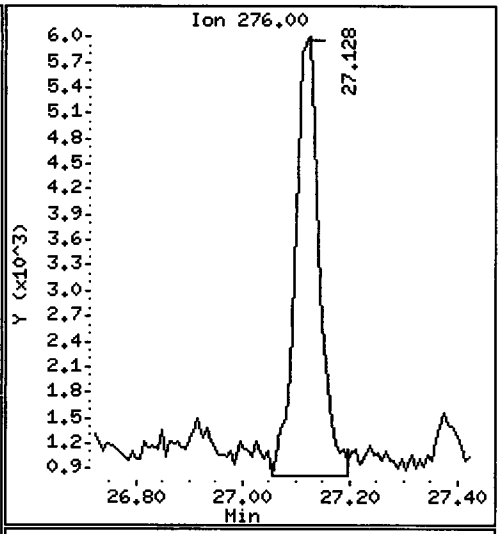
Concentration: 38.77 ug/kg

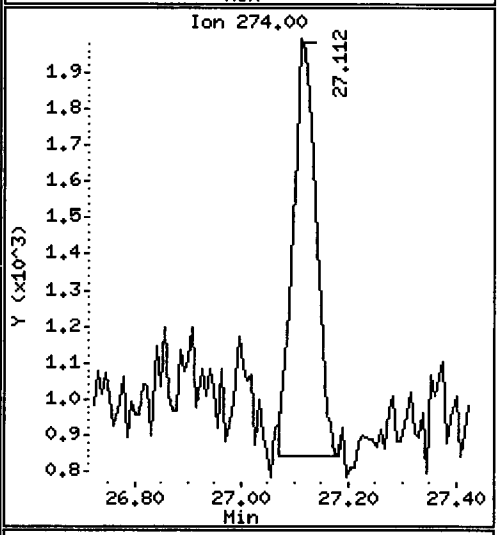


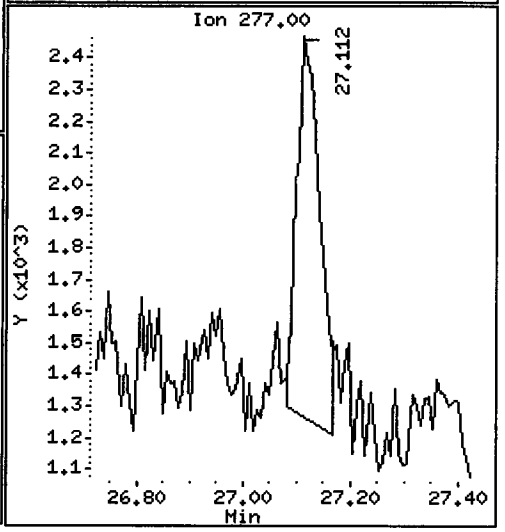












WL49:0811?

Data File: /chem1/nt10.i/20130424.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

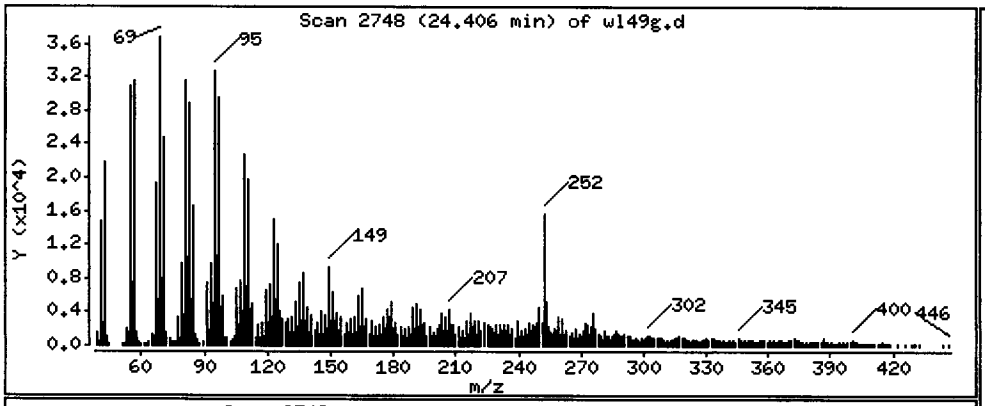
Operator: VTS/YZ

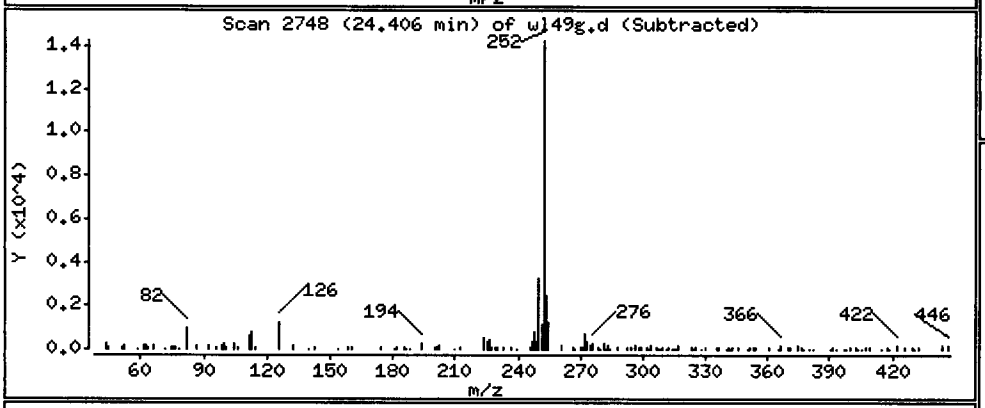
Column phase: ZB-5msi

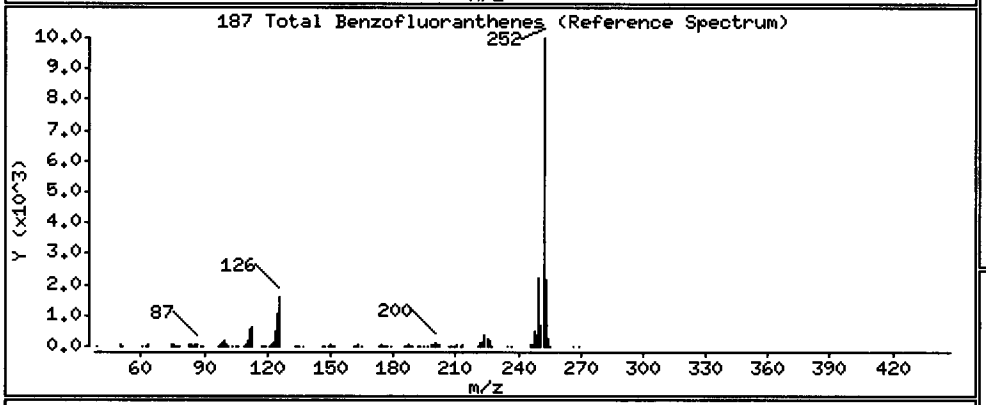
Column diameter: 0.25

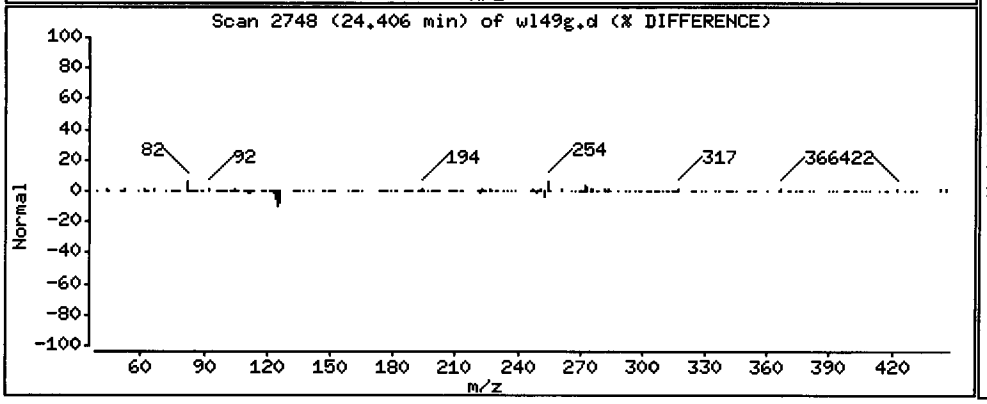
187 Total Benzofluoranthenes

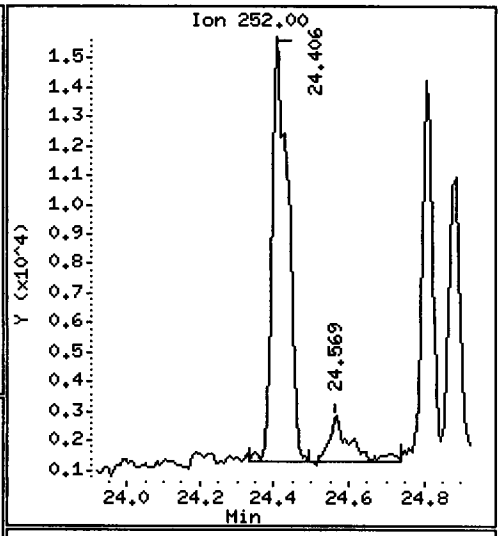
Concentration: 95.00 ug/kg

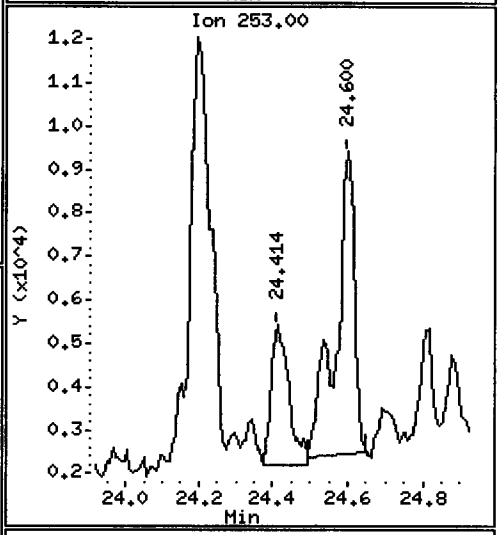


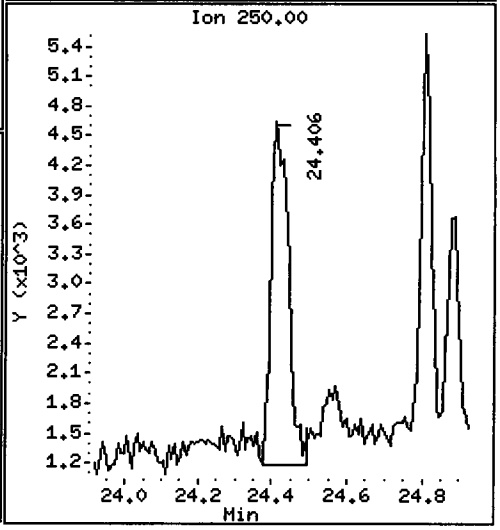






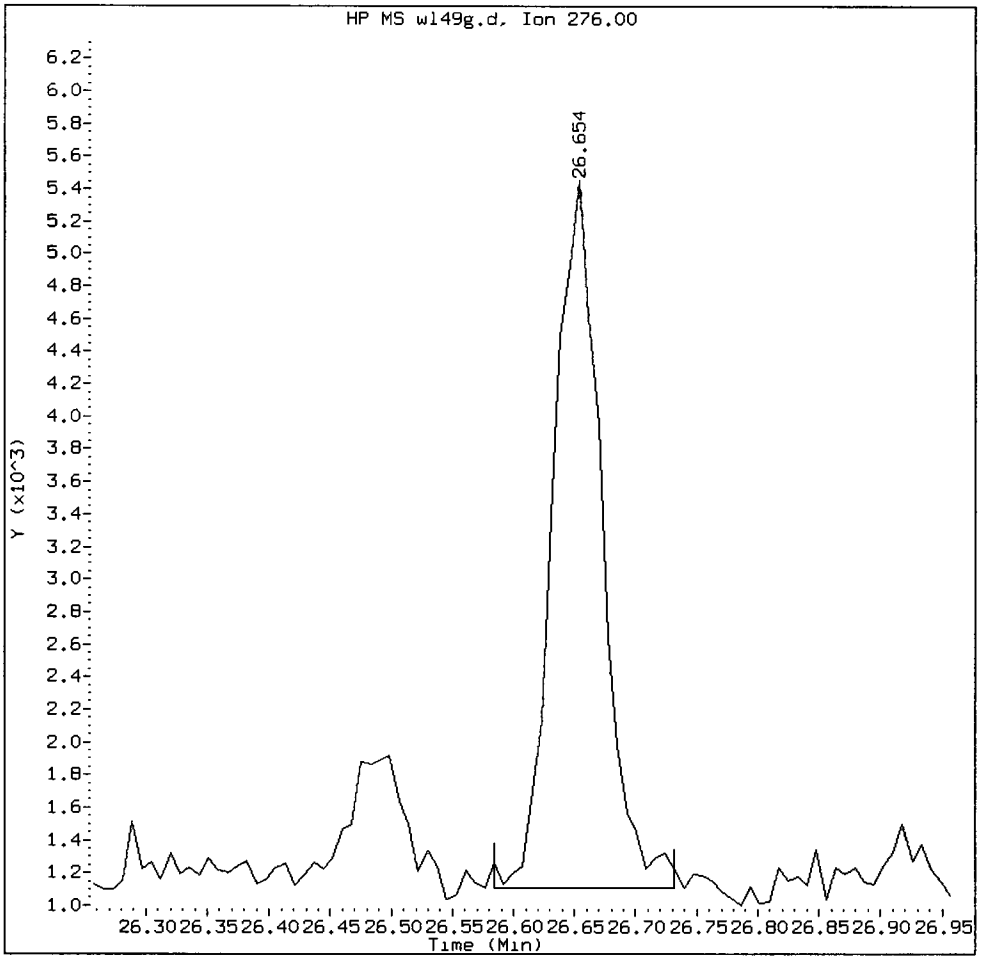






WL49G, /chem1/nt10.i/20130424.b/wl49g.d

Indeno(1,2,3-cd)pyrene Amount: 0.26 Area: 12105



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

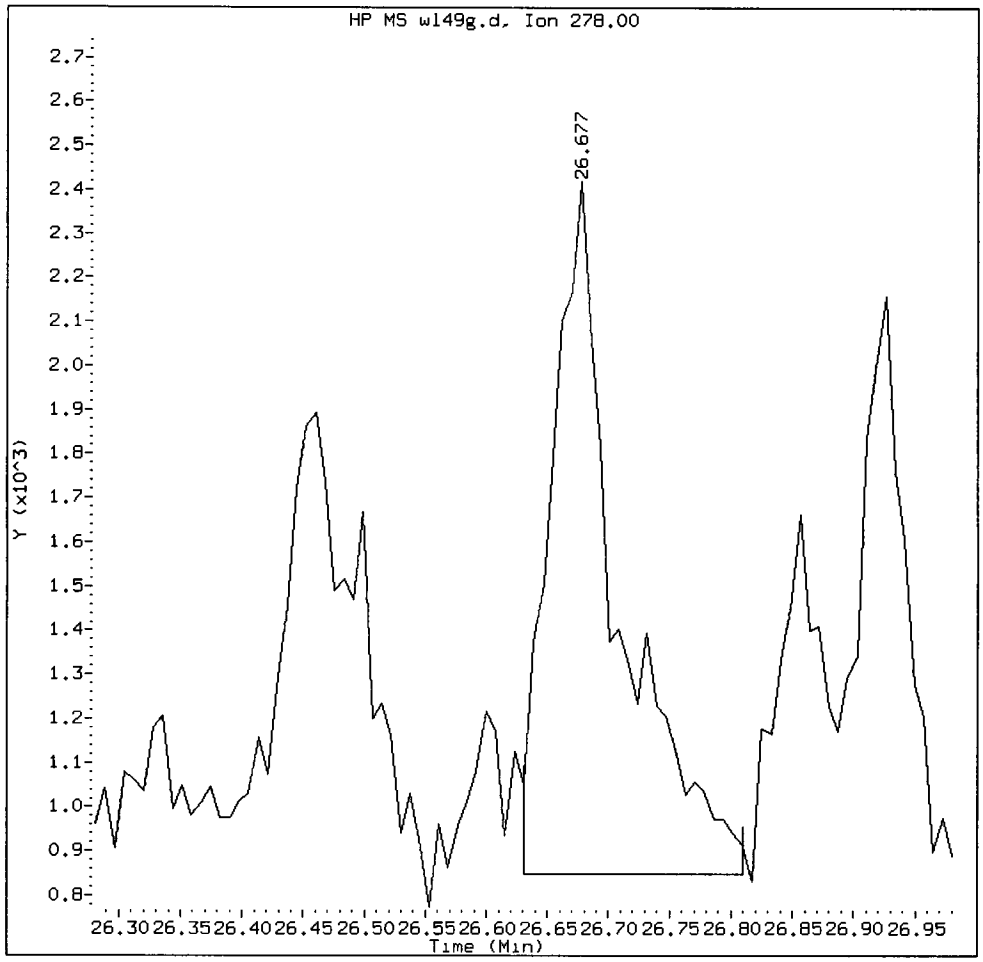
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation ✓

5. Other _____

Analyst: YZ Date: 4/25/13

WL49G, /chem1/nt10.i/20130424.b/wl49g.d

Dibenzo(a,h)anthracene Amount: 0.17 Area: 6126



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: YZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl49g.d

Lab ID: WL49G, Method: ABN.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS
24.406	Benzo(k)fluoranthene and Benzo(b)fluoranthene

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA-Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) WL49, WL67 Page 1 of 1 Batch set up by: ~~SH~~

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or (2)	Final Effective Volume	Volume to Lab	Comments	Verify Client ID CT 4/18/13 Analyst/Date
	WL49 MBS	10.00g	(1:1) (Y) N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 (2) 3 CT 4/18/13 Analyst/Date
	↓ SBS	10.00g	(1:1) (Y) N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C 1 2 3 4 5 6 Analyst/Date 4/19/13
	~~QLS~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	~~QLS (SIM)~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	TurboVap 1 (2) 3 WW 4/19/13 Analyst/Date
7	WL49 F	2.03	(1:1) (Y) N	1mL	1mL	See Analyst Notes	
3	↓ G	13.05	(1:1) (Y) N	1mL	1mL		GPC Prep Filter (1:1) WW 4/19/13 Analyst/Date
3	GMS	13.05	(1:1) (Y) N	1mL	1mL		
3	↓ GMSL	13.04	(1:1) (Y) N	1mL	1mL		
8	WL67 A	8.06	(1:1) (Y) N	1mL	1mL	See Analyst Notes	Post GPC KD 80-85°C 1 2 3 4 5 6 Analyst/Date 4/22/13
8	↓ B	6.05	(1:1) (Y) N	1mL	1mL	↓	
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3 AC 4-22-13 Analyst/Date
Analyst/Date CT 4/19/13			WW 4/19/13	AC	AC		

4-22-13 4-22-13

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2084-3)	100/150µg/mL	50µL	7/02/13	CT	TH
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	CT	TH
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	CT	TH
Acid Spike	38(2074-1)	100/150µg/mL	50µL	7/31/13	CT	TH
~~QLS Spike (14 in Freezer)~~	~~14( )~~	~~100/200µg/mL~~	~~20µL~~			
~~SIM QLS Spike (Freezer)~~	~~25( )~~	~~1µg/mL~~	~~50µL~~			

Extraction Time: 13:48 Balance ID: B1466261A

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

SIM ABN

ARI SOP: 801S(SIM-PNA) 802S(Butyl Tins) (804S(SVOA-8270D)) 805S(op-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date(s): 01/25/13 Internal Standard ID 1998-2 Expiration 07/03/13

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	2036-2	02/07/13	Ultra	see full scan curve.	
	2050-1	03/07/13			
	2050-2	8/10/13			
	2064-2	03/05/14			
	1998-4	07/03/13			

Detail problems, corrective actions and/or other pertinent information below:

- cal point dropped for PCP.

Analyst: YZ Date: 03/05/13

Reviewer: WD Date: 2.6.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 2013/01/25 Analysis: ABN/SIM ABN Analyst: YZ.

GC Program: ABN Column No: 247358 Column Type: 30M rtx-5

Instrument Tune (.U or .CT.): 12120414 EM Voltage: 1600

Calibration File: DF0125 Curve Date: 01/25/13 Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2036-2	
	2050-1	
	2050-2	
	2044-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130125.b

	Time	Filename	LabID	ClientId	DF									
1	1243	df0125.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1259	ic0125a.d	IC0125A		1	9.09	52229	11.75	195391	15.66	112411	18.94	208917	24.01	337704	26.51	236168
3	1413	ic0125c.d	IC0125C		1	9.09	49909	11.75	188389	15.66	102172	18.94	190705	24.01	214940	26.51	207018
4	1527	ic0125e.d	IC0125E		1	9.09	53853	11.75	200106	15.66	112392	18.94	210710	24.01	240805	26.51	230834
5	1603	ic0125f.d	IC0125F		1	9.09	51752	11.75	191986	15.66	110315	18.94	205875	24.01	242832	26.51	234305
6	1640	ic0125g.d	IC0125G		1	9.09	51364	11.75	189071	15.66	102169	18.94	186737	24.01	216735	26.51	211470
7	1716	ic0125h.d	IC0125H		1	9.09	50086	11.75	188224	15.66	104418	18.94	198157	24.01	227339	26.51	219691
8	1753	ic0125i.d	IC0125I		1	9.08	52436	11.75	194519	15.66	105886	18.94	194974	24.01	224854	26.51	218858

YZ 02/04/13

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/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0125a	ic0125c	ic0125e	ic0125f	ic0125g	ic0125h	ic0125i
INJ.DATE:	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013	25-JAN-2013
INJ.TIME:	12:59	14:13	15:27	16:03	16:40	17:16	17:53

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.724	6.725	6.725	6.725	6.725	6.725	6.725	6.724	6.224-7.224	6.725	0.000
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.612	7.112-8.112	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.196	29.696-30.696	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.852	23.352-24.352	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.862	27.362-28.362	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.855	19.355-20.355	+++++	+++++

Reviewer 1 YZ Date: 02/06/13

Reviewer 2 VM Date: 2.6.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.934	14.434-15.434	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
	3 Phenol	8.463	8.456	8.456	8.456	8.456	8.456	8.456	8.463	7.963-8.963	8.457	0.003
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
	7 1,3-Dichlorobenzene	9.020	9.012	9.012	9.020	9.012	9.013	9.012	9.020	8.520-9.520	9.015	0.004
*	8 1,4-Dichlorobenzene-d4	9.090	9.090	9.090	9.090	9.090	9.090	9.082	9.090	8.590-9.590	9.089	0.003
	9 1,4-Dichlorobenzene	9.121	9.121	9.121	9.121	9.121	9.121	9.113	9.121	8.621-9.621	9.120	0.003
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.392	9.392	9.392	9.392	9.392	9.393	9.392	9.392	8.892-9.892	9.392	0.000
	12 1,2-Dichlorobenzene	9.501	9.501	9.501	9.501	9.501	9.494	9.493	9.501	9.001-10.001	9.499	0.004
	13 2-Methylphenol	9.648	9.649	9.649	9.648	9.649	9.649	9.649	9.648	9.148-10.148	9.649	0.000
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.966	8.466-9.466	+++++	+++++
	15 4-Methylphenol	9.943	9.944	9.944	9.943	9.944	9.936	9.936	9.943	9.443-10.443	9.941	0.004
	16 N-Nitroso-di-n-propyla	10.005	9.998	9.998	9.998	9.998	9.998	9.998	10.005	9.505-10.505	9.999	0.003
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.274	8.774-9.774	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.618	8.118-9.118	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	11.068	11.068	11.068	11.068	11.068	11.068	11.068	11.068	10.568-11.568	11.068	0.000
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.248	9.748-10.748	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.669	11.669	11.669	11.669	11.669	11.669	11.669	11.669	11.169-12.169	11.669	0.000
*	27 Naphthalene-d8	11.754	11.754	11.754	11.754	11.754	11.754	11.754	11.754	11.254-12.254	11.754	0.000
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.480	8.980-9.980	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.209	12.210	12.210	12.209	12.210	12.210	12.210	12.209	11.709-12.709	12.210	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.301	9.801-10.801	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	15.173	15.166	15.166	15.173	15.166	15.166	15.166	15.173	14.673-15.673	15.168	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.661	15.661	15.661	15.661	15.661	15.661	15.661	15.661	15.161-16.161	15.661	0.000
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.055	12.555-13.555	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.766	16.751	16.759	16.759	16.751	16.759	16.751	16.766	16.266-17.266	16.757	0.006
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.466	12.966-13.966	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.587	13.087-14.087	+++++	+++++
	54 N-Nitrosodiphenylamine	17.152	17.145	17.153	17.152	17.153	17.145	17.153	17.152	16.652-17.652	17.150	0.004
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.286	18.279	18.279	18.286	18.279	18.279	18.279	18.286	17.786-18.786	18.281	0.004
	58 Pentachlorophenol	18.681	18.674	18.674	18.673	18.674	18.674	18.674	18.681	18.181-19.181	18.675	0.003
*	59 Phenanthrene-d10	18.944	18.937	18.937	18.936	18.937	18.937	18.937	18.944	18.444-19.444	18.938	0.003
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.008	14.508-15.508	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.286	14.786-15.786	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.761	15.261-16.261	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.132	22.132	22.132	22.132	22.132	22.132	22.132	22.132	21.632-22.632	22.132	0.000
	67 Butylbenzylphthalate	23.076	23.077	23.077	23.077	23.077	23.077	23.077	23.076	22.576-23.576	23.077	0.000
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130125.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	24.013	24.006	24.006	24.006	24.006	24.006	24.006	24.013	23.513-24.513	24.007	0.003
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.185	19.685-20.685	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.382	21.882-22.882	+++++	+++++
*	77 Perylene-d12	26.514	26.507	26.507	26.506	26.507	26.507	26.507	26.514	26.014-27.014	26.508	0.003
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.962	28.947	28.947	28.955	28.955	28.947	28.947	28.962	28.462-29.462	28.951	0.006
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.162	24.662-25.662	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.597	16.097-17.097	+++++	+++++
	90 N-Nitrosodimethylamine	4.447	4.455	4.447	4.439	4.462	4.447	4.455	4.447	3.947-4.947	4.450	0.008
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.897	7.397-8.397	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.833	21.333-22.333	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.896	14.396-15.396	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.819	14.319-15.319	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.950	26.450-27.450	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Cal Date : 06-Feb-2013 10:56 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Level 2: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Level 3: /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d
Level 4: /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Level 5: /chem1/nt10.i/20130125.b/SIM.b/ic0125e.d
Level 6: /chem1/nt10.i/20130125.b/SIM.b/ic0125f.d
Level 7: /chem1/nt10.i/20130125.b/SIM.b/ic0125a.d

Compound	0.05000 Level 1 / 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
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	1.60112	1.52637	1.74838	1.60284	1.64321	1.57901	1.61268	1.61623	4.232
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
6 2-Chlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.69924 / 1.51223	1.64308	1.78325	1.62856	1.58654	1.50818	1.62301	6.095
9 1,4-Dichlorobenzene	1.69301 / 1.50526	1.66292	1.78004	1.62057	1.57859	1.50230	1.62039	6.249
11 Benzyl alcohol	0.90024 / 1.00311	0.89553	1.03348	0.93839	0.97606	0.95672	0.95765	5.338
12 1,2-Dichlorobenzene	1.59489 / 1.42882	1.56528	1.69108	1.52681	1.50484	1.42878	1.53436	6.090
13 2-Methylphenol	1.16190 / 1.22450	1.14268	1.33403	1.20848	1.24301	1.19836	1.21614	5.135
14 2,2'-oxybis(1-Chloropropane)	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.15567 / 1.30063	1.17320	1.37170	1.26247	1.28580	1.26635	1.25940	5.911
16 N-Nitroso-di-n-propylamine	0.76162 / 0.80155	0.75518	0.86197	0.78377	0.80174	0.77595	0.79168	4.521

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
17 Hexachloroethane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.31692 / 0.35080	0.31658	0.38216	0.34344	0.35756	0.34627	0.34482	6.669
23 Bis(2-Chloroethoxy)methane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.37531 / 0.33970	0.42340	0.40002	0.37262	0.35731	0.33826	0.37237	8.375

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
28 Naphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.23652 / 0.21490	0.22579	0.24621	0.22237	0.22210	0.21458	0.22607	5.111
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	RRF	% RSD
	5.000 Level 7							
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
39 Dimethylphthalate	1.17609	1.16303	1.33970	1.21060	1.23293	1.19830		
	1.20338						1.21772	4.796
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.31938 / 1.39419	1.46232	1.57851	1.40819	1.42654	1.36955	1.42267	5.767
51 4-Chlorophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.39457 / 0.47257	0.42221	0.51525	0.47679	0.49727	0.47639	0.46501	9.075
56 4-Bromophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.31360 / 0.28438	0.30650	0.32868	0.30824	0.29576	0.28022	0.30248	5.609

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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	___ RRF	% RSD
	5.000 Level 7							
58 Pentachlorophenol	+++++	0.12822	0.16890	0.16825	0.19297	0.20079		
	0.21278						0.17865	16.990
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
67 Butylbenzylphthalate	0.32371	0.31511	0.40430	0.35715	0.40988	0.41311		
	0.45304						0.38233	13.412
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
79 Dibenzo(a,h)anthracene	0.87048	0.83963	1.02783	0.94620	1.00403	0.97443	1.01114	0.95339	7.630

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80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.75150	0.74984	0.81528	0.75422	0.74778	0.72923	0.76758	0.75935	3.573
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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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	1.24134	1.21896	1.38853	1.25752	1.27874	1.24084	1.28235	1.27261	4.382
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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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
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.49609	0.58017	0.57746	0.51719	0.52937	0.50011	0.52003	0.53149	6.455
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 02/06/13

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125a.d
Lab Smp Id: IC0125A
Inj Date : 25-JAN-2013 12:59
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 12:59 Cal File: ic0125a.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.724	6.725	(0.740)	83720	5.00000	5.038
	3	Phenol	94	8.463	8.456	(0.931)	105286	5.00000	4.989
	7	1,3-Dichlorobenzene	146	9.020	9.012	(0.992)	98728	5.00000	4.659
*	8	1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	52229	4.00000	
	9	1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	98273	5.00000	4.645
	11	Benzyl alcohol	79	9.392	9.392	(1.033)	65489	5.00000	5.237
	12	1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	93282	5.00000	4.656
	13	2-Methylphenol	108	9.648	9.649	(1.061)	79943	5.00000	5.034
	15	4-Methylphenol	108	9.943	9.936	(1.094)	84913	5.00000	5.164
	16	N-Nitroso-di-n-propylamine	70	10.005	9.998	(1.101)	52330	5.00000	5.062
	22	2,4-Dimethylphenol	107	11.068	11.068	(0.942)	171357	10.0000	10.17
	26	1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	82967	5.00000	4.561
*	27	Naphthalene-d8	136	11.754	11.754	(1.000)	195391	4.00000	
	30	Hexachlorobutadiene	225	12.209	12.210	(1.039)	52488	5.00000	4.753
	39	Dimethylphthalate	163	15.173	15.166	(0.969)	169092	5.00000	4.941
*	42	Acenaphthene-d10	162	15.661	15.661	(1.000)	112411	4.00000	
	50	Diethylphthalate	149	16.766	16.751	(1.071)	195903	5.00000	4.900
	54	N-Nitrosodiphenylamine	169	17.152	17.153	(0.905)	123410	5.00000	5.081
	57	Hexachlorobenzene	284	18.286	18.279	(0.965)	74264	5.00000	4.701
	58	Pentachlorophenol	266	18.681	18.674	(0.986)	111136	10.0000	9.992
*	59	Phenanthrene-d10	188	18.944	18.937	(1.000)	208917	4.00000	
$	66	Terphenyl-d14	244	22.132	22.132	(0.922)	154517	5.00000	4.892
	67	Butylbenzylphthalate	149	23.076	23.077	(0.961)	134613	5.00000	5.925
*	69	Chrysene-d12	240	24.013	24.006	(1.000)	237704	4.00000	
*	77	Perylene-d12	264	26.514	26.507	(1.000)	236168	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.962	28.947	(1.092)	298499	5.00000	5.303
	90	N-Nitrosodimethylamine	74	4.447	4.455	(0.489)	100225	10.0000	10.11

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125a.d
Lab Smp Id: IC0125A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

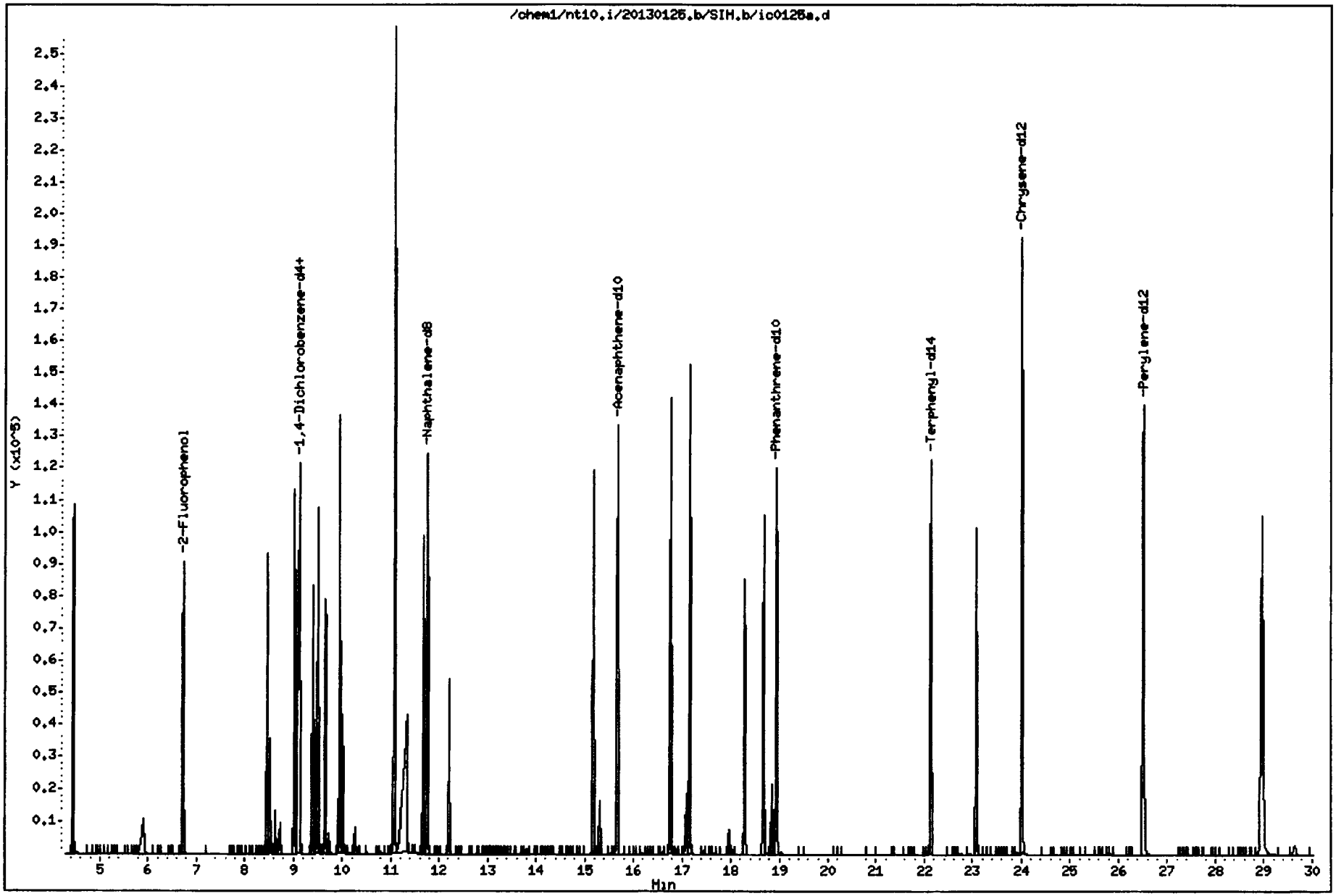
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	52229	-3.02
27 Naphthalene-d8	200104	100052	400208	195391	-2.36
42 Acenaphthene-d10	112392	56196	224784	112411	0.02
59 Phenanthrene-d10	210710	105355	421420	208917	-0.85
69 Chrysene-d12	240805	120402	481610	237704	-1.29
77 Perylene-d12	230834	115417	461668	236168	2.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.04
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.03
77 Perylene-d12	26.51	26.01	27.01	26.51	0.03

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

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125a.d
Date : 25-JAN-2013 12:59
Client ID:
Sample Info: IC0125A

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0125a.d

Lab ID: IC0125A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 2/8/13

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d
Lab Smp Id: IC0125C
Inj Date : 25-JAN-2013 14:13
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 14:13 Cal File: ic0125c.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.725	6.725	(0.740)	3465	0.20000	0.2182
	3	Phenol	94	8.456	8.456	(0.930)	4363	0.20000	0.2164
	7	1,3-Dichlorobenzene	146	9.012	9.012	(0.991)	4450	0.20000	0.2197
*	8	1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	49909	4.00000	
	9	1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	4442	0.20000	0.2197
	11	Benzyl alcohol	79	9.392	9.392	(1.033)	2579	0.20000	0.2158
	12	1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	4220	0.20000	0.2204
	13	2-Methylphenol	108	9.649	9.649	(1.061)	3329	0.20000	0.2194
	15	4-Methylphenol	108	9.944	9.936	(1.094)	3423	0.20000	0.2178
	16	N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	2151	0.20000	0.2178(M)
	22	2,4-Dimethylphenol	107	11.068	11.068	(0.942)	7081	0.40000	0.4433
	26	1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	3706	0.20000	0.2149
*	27	Naphthalene-d8	136	11.754	11.754	(1.000)	185289	4.00000	
	30	Hexachlorobutadiene	225	12.210	12.210	(1.039)	2281	0.20000	0.2178
	39	Dimethylphthalate	163	15.166	15.166	(0.968)	6844	0.20000	0.2200
*	42	Acenaphthene-d10	162	15.661	15.661	(1.000)	102172	4.00000	
	50	Diethylphthalate	149	16.751	16.751	(1.070)	8064	0.20000	0.2219
	54	N-Nitrosodiphenylamine	169	17.145	17.153	(0.905)	4913	0.20000	0.2216
	57	Hexachlorobenzene	284	18.279	18.279	(0.965)	3134	0.20000	0.2173
	58	Pentachlorophenol	266	18.674	18.674	(0.986)	3221	0.40000	0.3573
*	59	Phenanthrene-d10	188	18.937	18.937	(1.000)	190705	4.00000	
$	66	Terphenyl-d14	244	22.132	22.132	(0.922)	6206	0.20000	0.2173
	67	Butylbenzylphthalate	149	23.077	23.077	(0.961)	4345	0.20000	0.2115
*	69	Chrysene-d12	240	24.006	24.006	(1.000)	214940	4.00000	
*	77	Perylene-d12	264	26.507	26.507	(1.000)	207018	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	10639	0.20000	0.2156
	90	N-Nitrosodimethylamine	74	4.455	4.455	(0.490)	4069	0.40000	0.4295

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125c.d
Lab Smp Id: IC0125C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	49909	-7.32
27 Naphthalene-d8	200104	100052	400208	185289	-7.40
42 Acenaphthene-d10	112392	56196	224784	102172	-9.09
59 Phenanthrene-d10	210710	105355	421420	190705	-9.49
69 Chrysene-d12	240805	120402	481610	214940	-10.74
77 Perylene-d12	230834	115417	461668	207018	-10.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

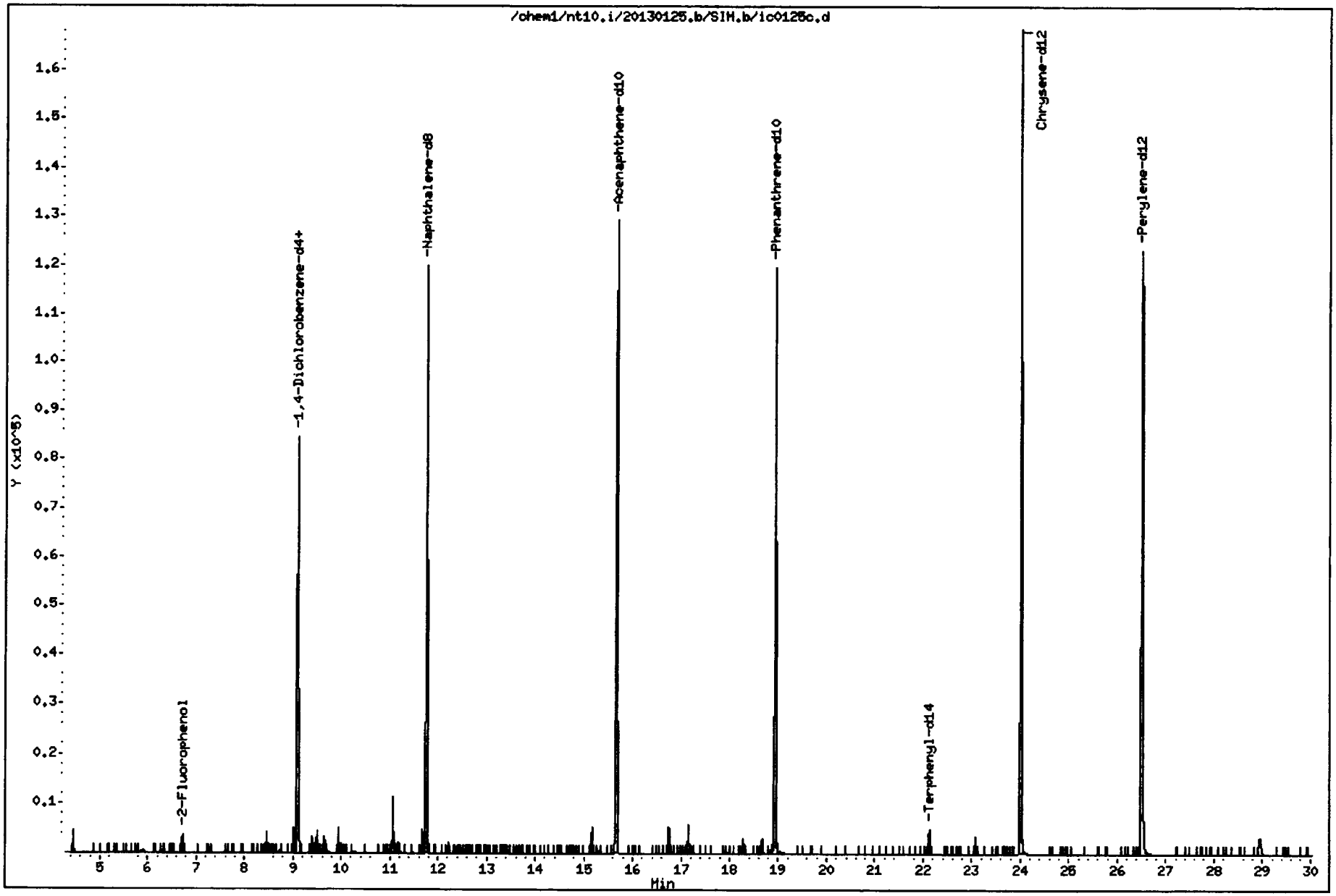
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d
Date : 25-JAN-2013 14:13
Client ID:
Sample Info: IC0125C

Instrument: nt10.i

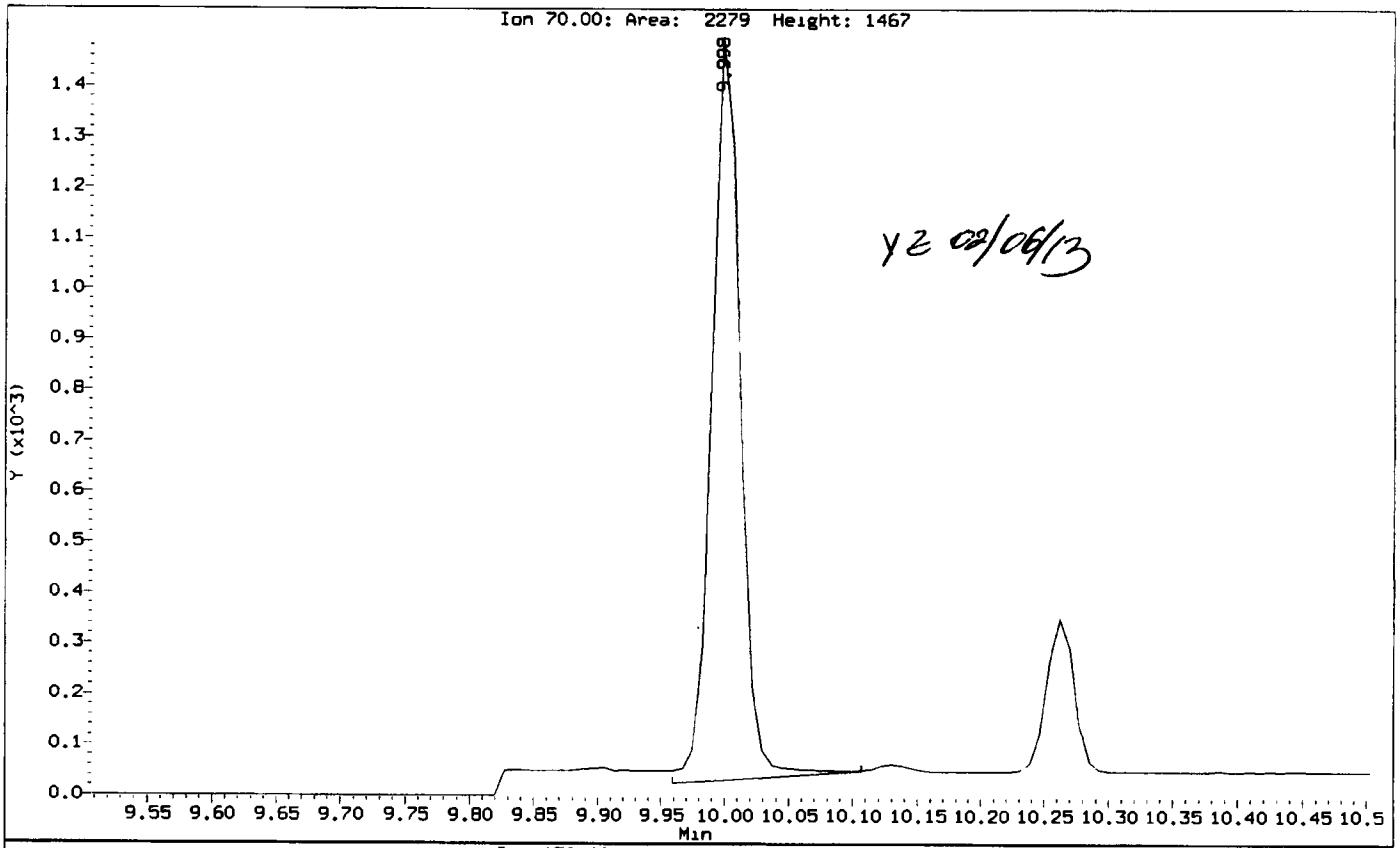
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5ms1

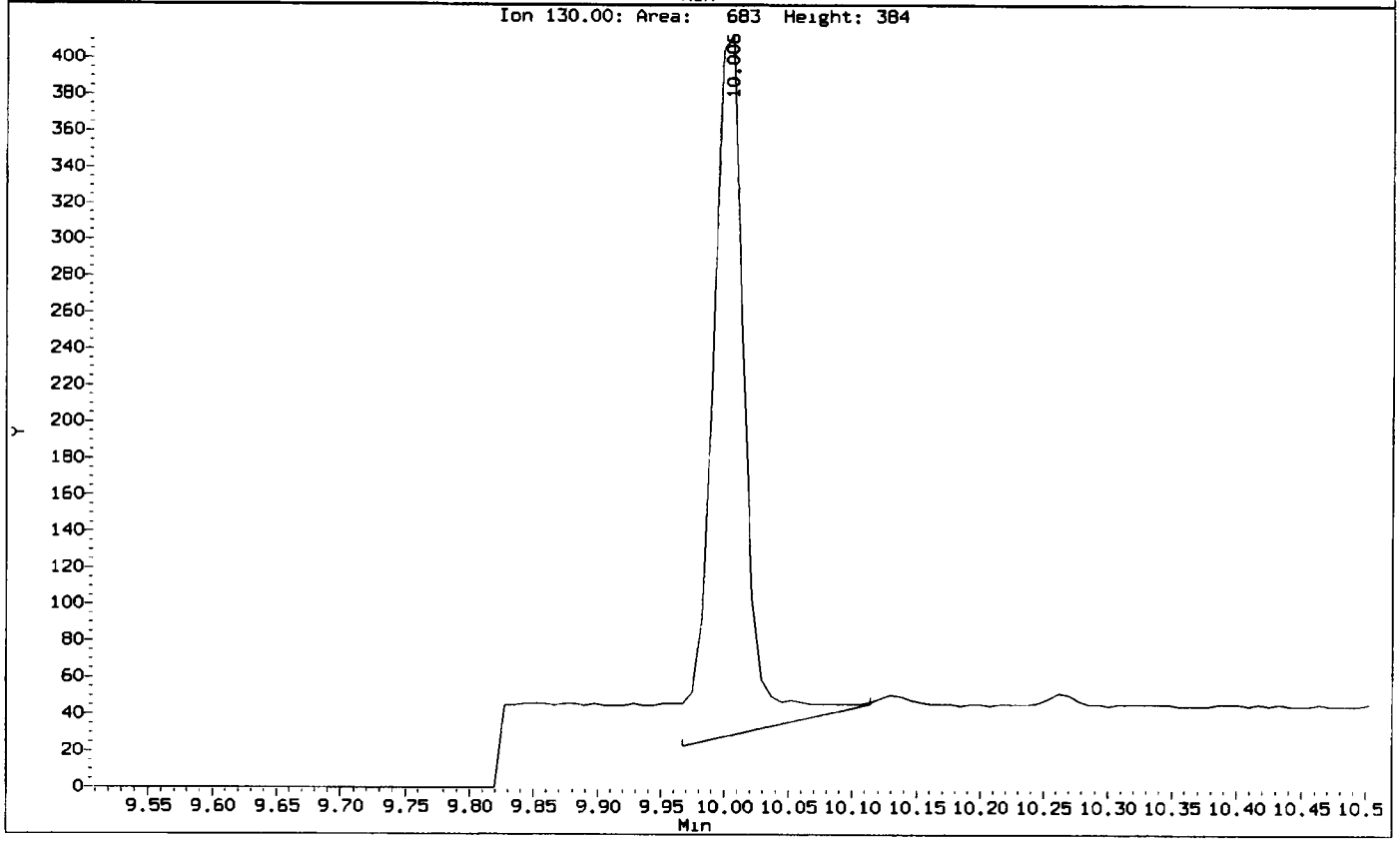


Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125c.d
Injection Date: 25-JAN-2013 14:13
Instrument: nt10.1
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7

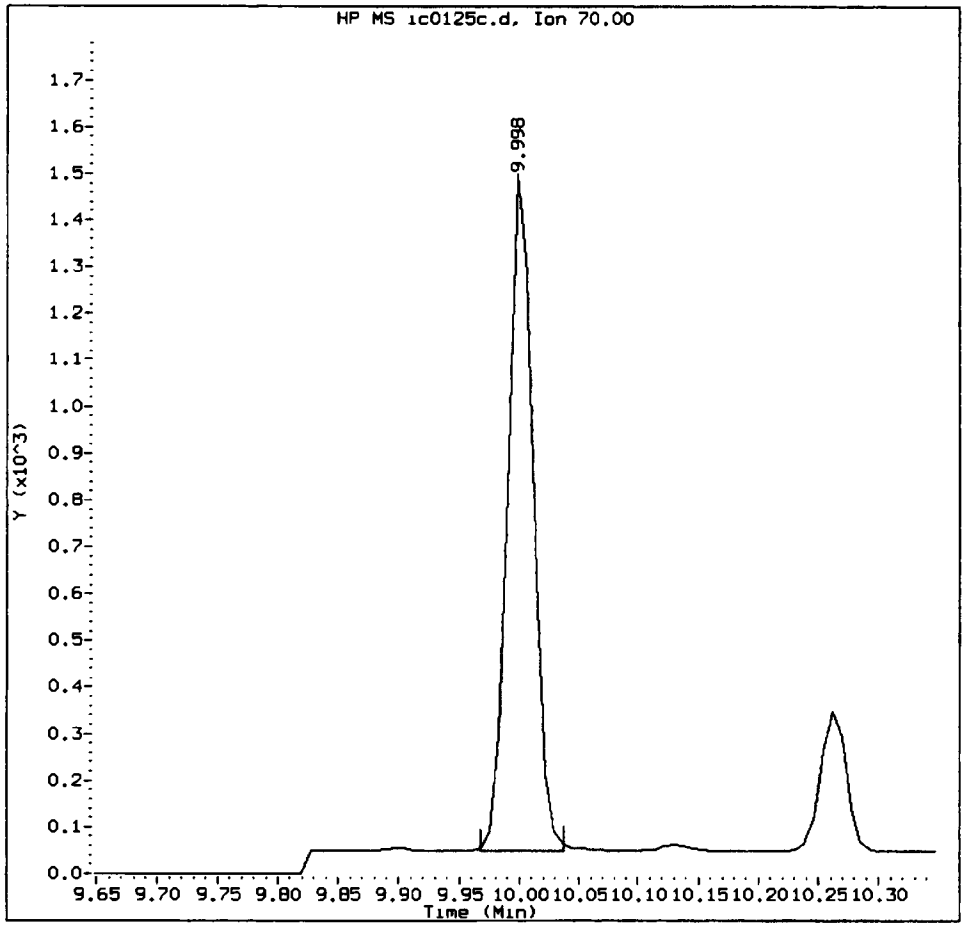


YZ 02/06/13



IC0125C, /chem1/nt10.i/20130125.b/SIM.b/ic0125c.d

N-Nitroso-di-n-propylamine Amount: 0.22 Area: 2151



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

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

5. Other _____

Analyst: VE Date: 02/06/13

CO-ELUTION SUMMARY FOR FILE - ic0125c.d

Lab ID: IC0125C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125e.d
Lab Smp Id: IC0125E
Inj Date : 25-JAN-2013 15:27
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125E
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 15:27 Cal File: ic0125e.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 02/06/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.725	6.725	(0.740)	17216	1.00000	1.005
	3 Phenol	94	8.456	8.456	(0.930)	22123	1.00000	1.017
	7 1,3-Dichlorobenzene	146	9.012	9.012	(0.991)	21360	1.00000	0.9775
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	53853	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	21253	1.00000	0.9742
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	13141	1.00000	1.019
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	20260	1.00000	0.9808
	13 2-Methylphenol	108	9.649	9.649	(1.061)	16735	1.00000	1.022
	15 4-Methylphenol	108	9.944	9.936	(1.094)	17311	1.00000	1.021
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	10794	1.00000	1.013
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	35775	2.00000	2.074
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	17875	1.00000	0.9596
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	200104	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	11111	1.00000	0.9825
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	34643	1.00000	1.012
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	112392	4.00000	
	50 Diethylphthalate	149	16.759	16.751	(1.070)	40083	1.00000	1.003
	54 N-Nitrosodiphenylamine	169	17.153	17.153	(0.906)	26195	1.00000	1.069
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	15580	1.00000	0.9778
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	20330	2.00000	2.006
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	210710	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	31869	1.00000	0.9960
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	24675	1.00000	1.072
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	240805	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	230834	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	57941	1.00000	1.053
	90 N-Nitrosodimethylamine	74	4.447	4.455	(0.489)	20135	2.00000	1.970

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125e.d
Lab Smp Id: IC0125E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	53853	0.00
27 Naphthalene-d8	200104	100052	400208	200104	0.00
42 Acenaphthene-d10	112392	56196	224784	112392	0.00
59 Phenanthrene-d10	210710	105355	421420	210710	0.00
69 Chrysene-d12	240805	120402	481610	240805	0.00
77 Perylene-d12	230834	115417	461668	230834	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

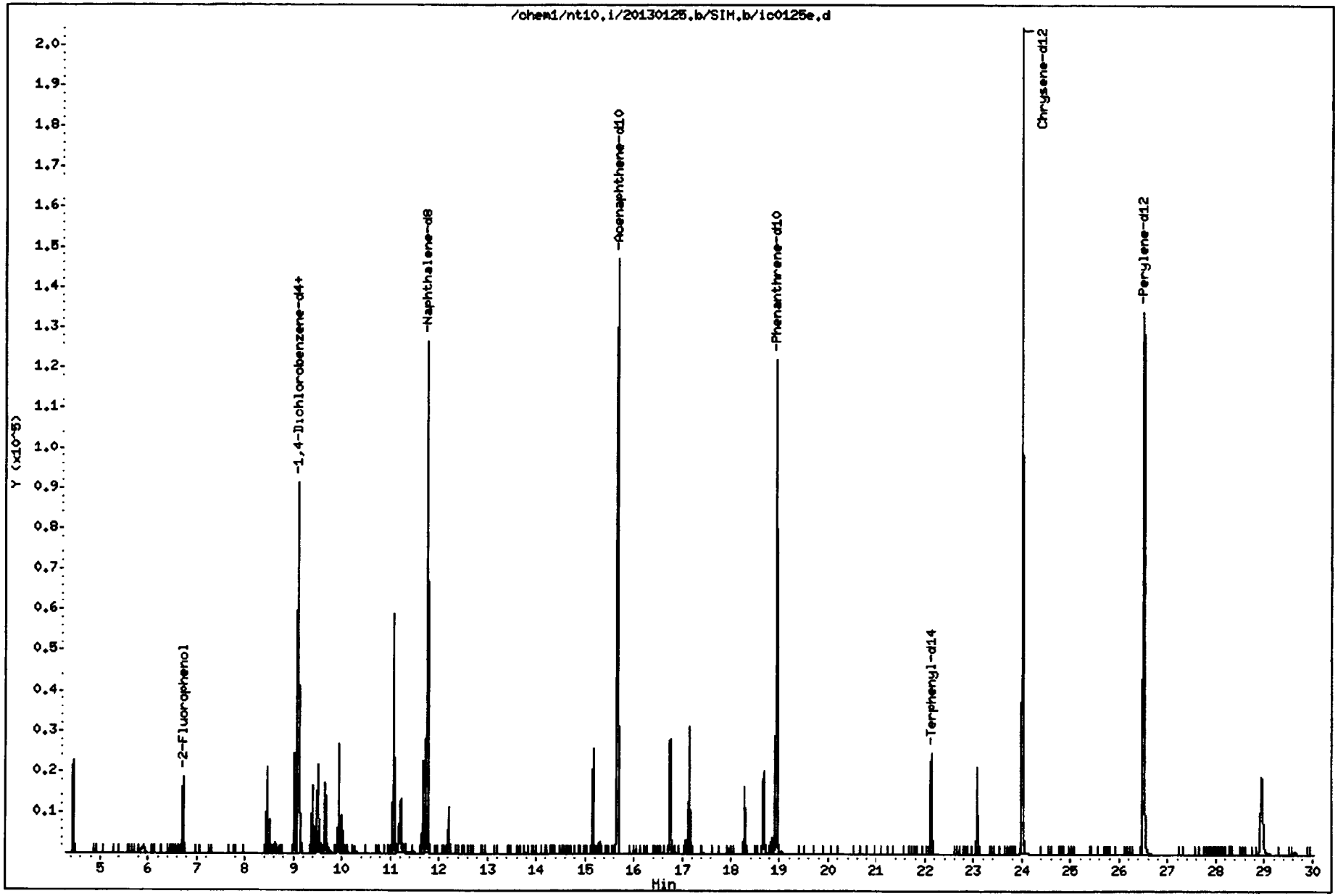
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125e.d
Date : 25-JAN-2013 15:27
Client ID:
Sample Info: IC0125E

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125e.d

Lab ID: IC0125E, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 02/06/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125f.d
Lab Smp Id: IC0125F
Inj Date : 25-JAN-2013 16:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 16:03 Cal File: ic0125f.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.725	6.725	(0.740)	40135	2.50000	2.438
	3	Phenol	94	8.456	8.456	(0.930)	51073	2.50000	2.442
	7	1,3-Dichlorobenzene	146	9.020	9.012	(0.992)	48782	2.50000	2.323
*	8	1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	51752	4.00000	
	9	1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	48592	2.50000	2.318
	11	Benzyl alcohol	79	9.392	9.392	(1.033)	30945	2.50000	2.498
	12	1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	46214	2.50000	2.328
	13	2-Methylphenol	108	9.648	9.649	(1.061)	38761	2.50000	2.463
	15	4-Methylphenol	108	9.943	9.936	(1.094)	40960	2.50000	2.514
	16	N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	25098	2.50000	2.450
	22	2,4-Dimethylphenol	107	11.068	11.068	(0.942)	83099	5.00000	5.021
	26	1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	40588	2.50000	2.271
*	27	Naphthalene-d8	136	11.754	11.754	(1.000)	191986	4.00000	
	30	Hexachlorobutadiene	225	12.209	12.210	(1.039)	25748	2.50000	2.373
	39	Dimethylphthalate	163	15.173	15.166	(0.969)	82619	2.50000	2.460
*	42	Acenaphthene-d10	162	15.661	15.661	(1.000)	110315	4.00000	
	50	Diethylphthalate	149	16.759	16.751	(1.070)	94426	2.50000	2.407
	54	N-Nitrosodiphenylamine	169	17.152	17.153	(0.906)	61298	2.50000	2.561
	57	Hexachlorobenzene	284	18.286	18.279	(0.966)	36057	2.50000	2.316
	58	Pentachlorophenol	266	18.673	18.674	(0.986)	51671	5.00000	5.039
*	59	Phenanthrene-d10	188	18.936	18.937	(1.000)	205875	4.00000	
$	66	Terphenyl-d14	244	22.132	22.132	(0.922)	75902	2.50000	2.352
	67	Butylbenzylphthalate	149	23.077	23.077	(0.961)	62698	2.50000	2.701
*	69	Chrysene-d12	240	24.006	24.006	(1.000)	242832	4.00000	
*	77	Perylene-d12	264	26.506	26.507	(1.000)	234305	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.955	28.947	(1.092)	142696	2.50000	2.555
	90	N-Nitrosodimethylamine	74	4.439	4.455	(0.488)	47174	5.00000	4.802

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125f.d
Lab Smp Id: IC0125F
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	51752	-3.90
27 Naphthalene-d8	200104	100052	400208	191986	-4.06
42 Acenaphthene-d10	112392	56196	224784	110315	-1.85
59 Phenanthrene-d10	210710	105355	421420	205875	-2.29
69 Chrysene-d12	240805	120402	481610	242832	0.84
77 Perylene-d12	230834	115417	461668	234305	1.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

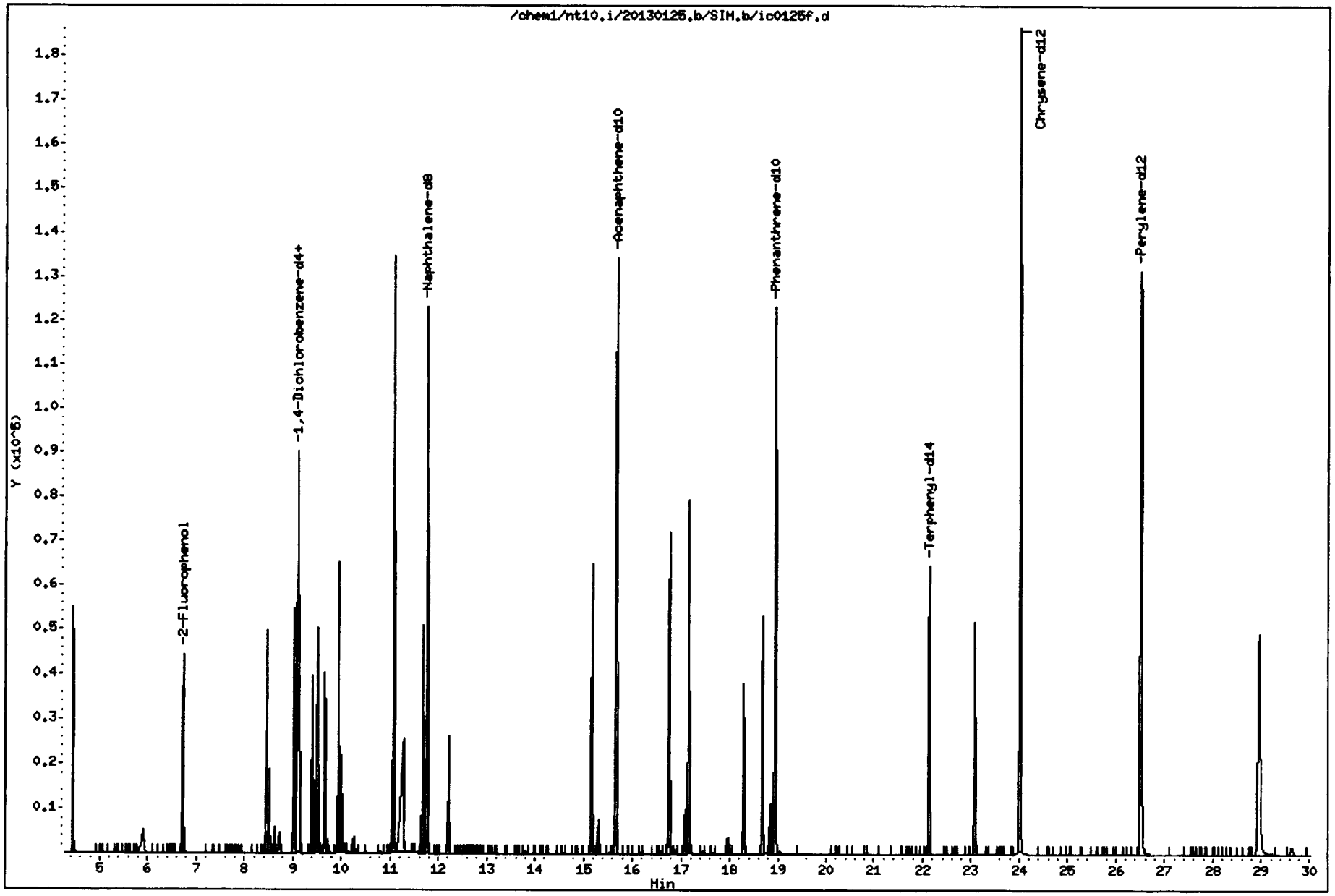
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125f.d
Date : 25-JAN-2013 16:03
Client ID:
Sample Info: IC0125F

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125f.d

Lab ID: IC0125F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Lab Smp Id: IC0125G
Inj Date : 25-JAN-2013 16:40
Operator : YZ Inst ID: nt10.i
Smp Info : IC0125G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 16:40 Cal File: ic0125g.d
Als bottle: 8 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)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.725	6.725	(0.740)	797	0.05000	0.04877(M)
	3 Phenol	94	8.456	8.456	(0.930)	1028	0.05000	0.04953
	7 1,3-Dichlorobenzene	146	9.012	9.012	(0.991)	1091	0.05000	0.05235(M)
*	8 1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	51364	4.00000	
	9 1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	1087	0.05000	0.05224(M)
	11 Benzyl alcohol	79	9.392	9.392	(1.033)	578	0.05000	0.04700(M)
	12 1,2-Dichlorobenzene	146	9.501	9.493	(1.045)	1024	0.05000	0.05197
	13 2-Methylphenol	108	9.649	9.649	(1.061)	746	0.05000	0.04777
	15 4-Methylphenol	108	9.944	9.936	(1.094)	742	0.05000	0.04588
	16 N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	489	0.05000	0.04810(M)
	22 2,4-Dimethylphenol	107	11.068	11.068	(0.942)	1498	0.10000	0.09191
	26 1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	887	0.05000	0.05039(M)
*	27 Naphthalene-d8	136	11.754	11.754	(1.000)	189071	4.00000	
	30 Hexachlorobutadiene	225	12.210	12.210	(1.039)	559	0.05000	0.05231
	39 Dimethylphthalate	163	15.166	15.166	(0.968)	1502	0.05000	0.04829
*	42 Acenaphthene-d10	162	15.661	15.661	(1.000)	102169	4.00000	
	50 Diethylphthalate	149	16.751	16.751	(1.070)	1685	0.05000	0.04637
	54 N-Nitrosodiphenylamine	169	17.153	17.153	(0.906)	921	0.05000	0.04243(M)
	57 Hexachlorobenzene	284	18.279	18.279	(0.965)	732	0.05000	0.05184
	58 Pentachlorophenol	266	18.674	18.674	(0.986)	524	0.10000	0.05954(M)
*	59 Phenanthrene-d10	188	18.937	18.937	(1.000)	186737	4.00000	
$	66 Terphenyl-d14	244	22.132	22.132	(0.922)	1344	0.05000	0.04667(M)
	67 Butylbenzylphthalate	149	23.077	23.077	(0.961)	877	0.05000	0.04233
*	69 Chrysene-d12	240	24.006	24.006	(1.000)	216735	4.00000	
*	77 Perylene-d12	264	26.507	26.507	(1.000)	211470	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.955	28.947	(1.092)	2301	0.05000	0.04565(M)
	90 N-Nitrosodimethylamine	74	4.462	4.455	(0.491)	965	0.10000	0.09897

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125g.d
Lab Smp Id: IC0125G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	51364	-4.62
27 Naphthalene-d8	200104	100052	400208	189071	-5.51
42 Acenaphthene-d10	112392	56196	224784	102169	-9.10
59 Phenanthrene-d10	210710	105355	421420	186737	-11.38
69 Chrysene-d12	240805	120402	481610	216735	-10.00
77 Perylene-d12	230834	115417	461668	211470	-8.39

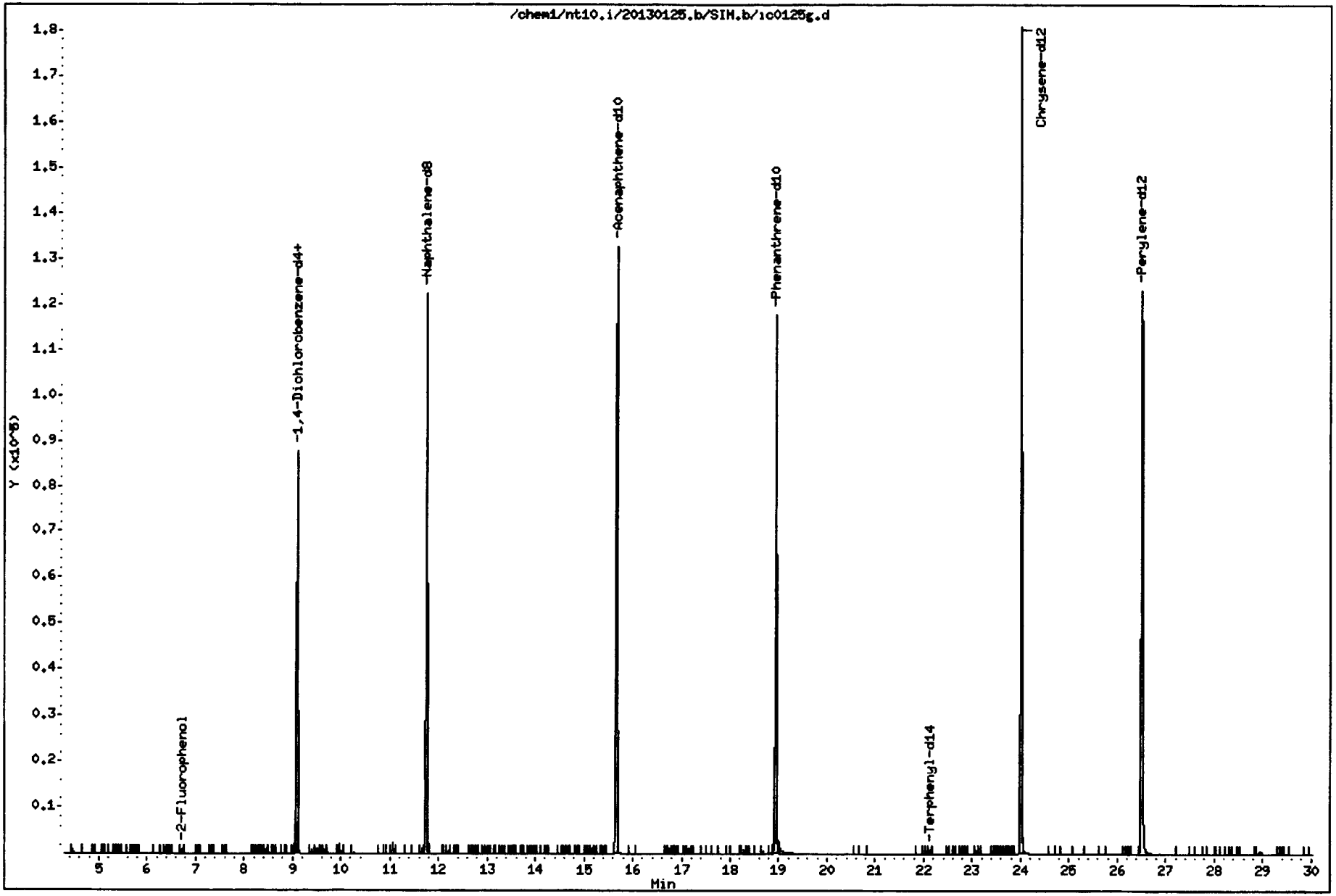
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

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

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Date : 25-JAN-2013 16:40
Client ID:
Sample Info: IC0125C

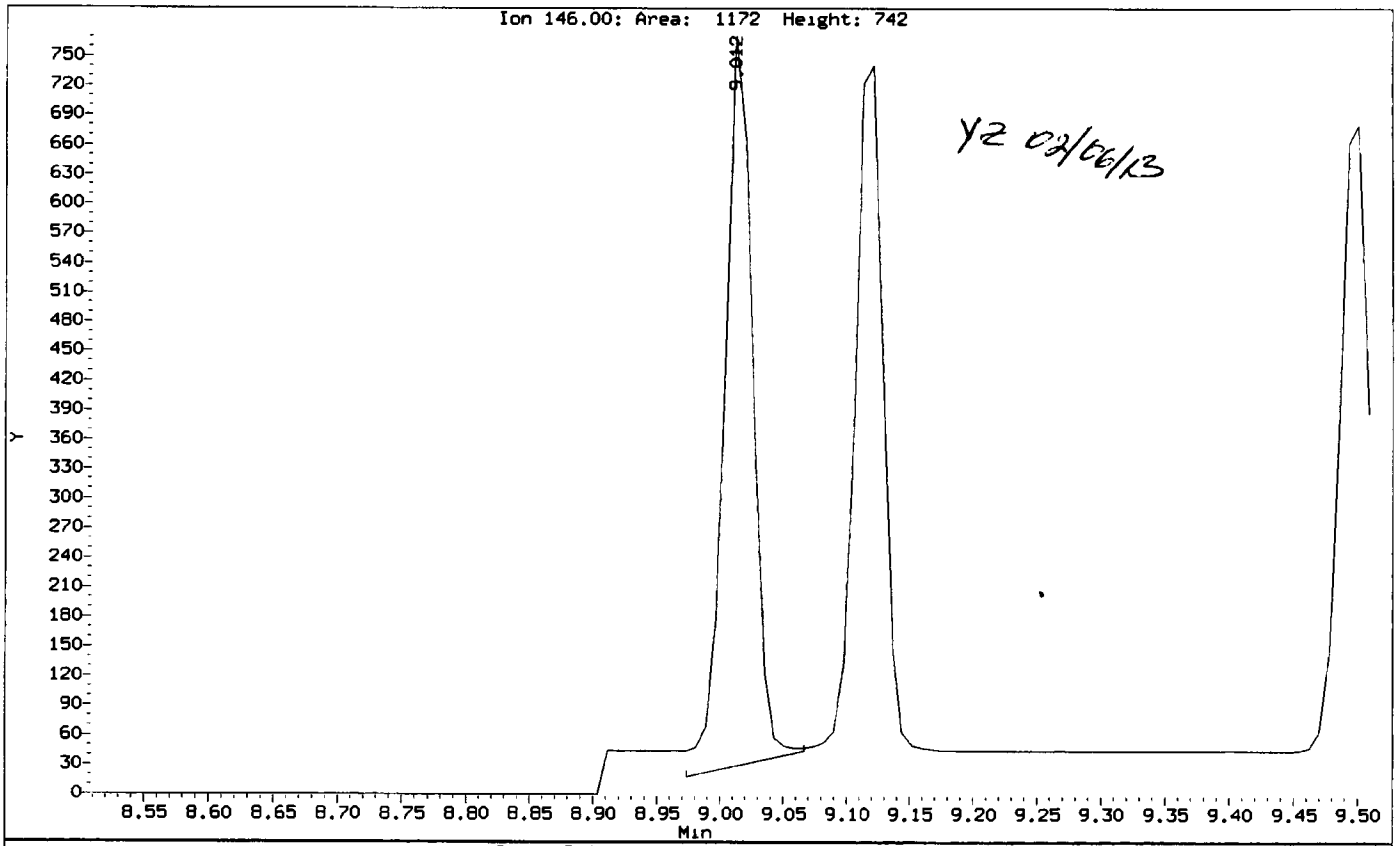
Instrument: nt10.i
Operator: YZ
Column diameter: 0.25

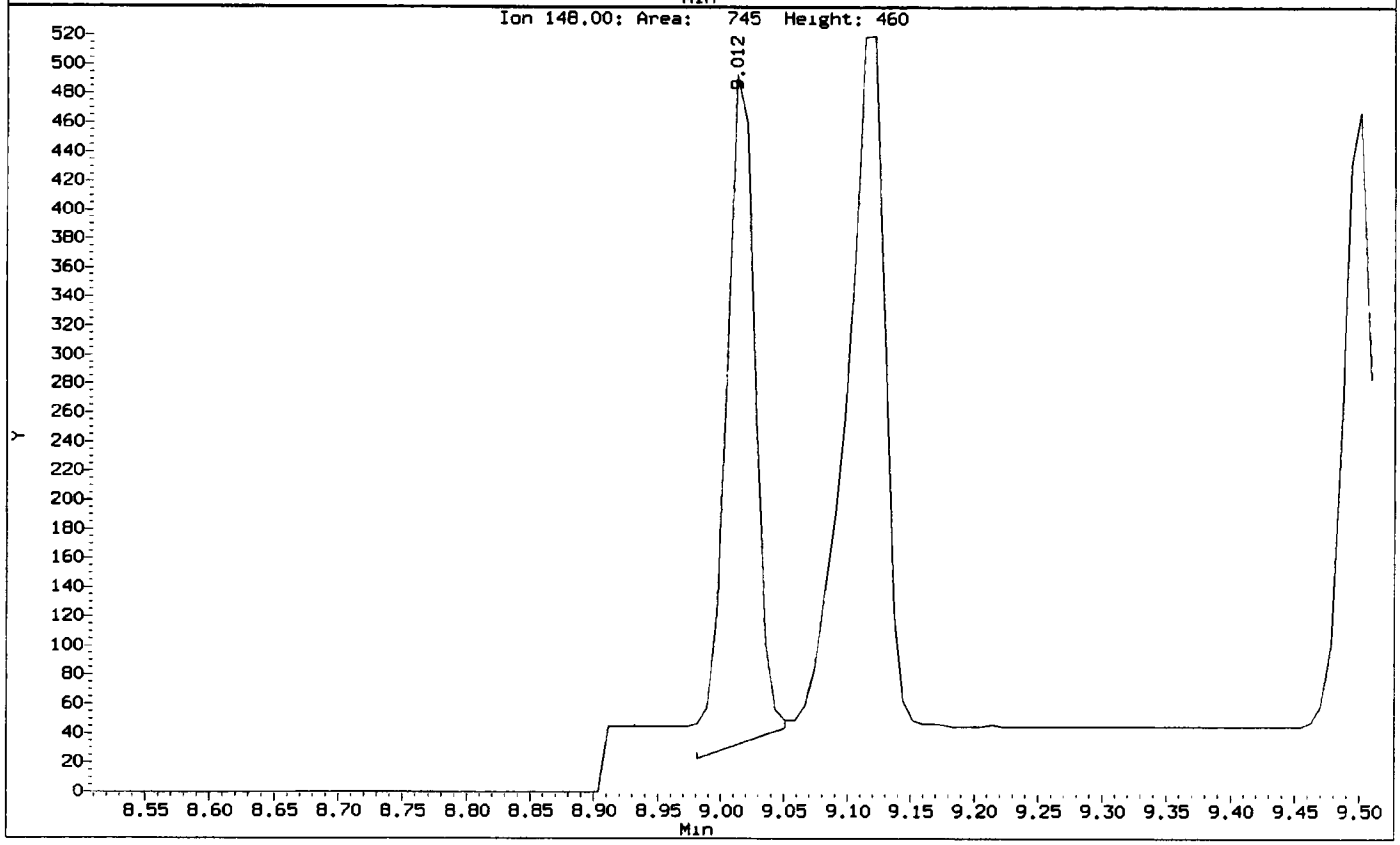
Column phase: ZB-5msi



Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

Compound: 1,3-Dichlorobenzene
CAS Number: 541-73-1

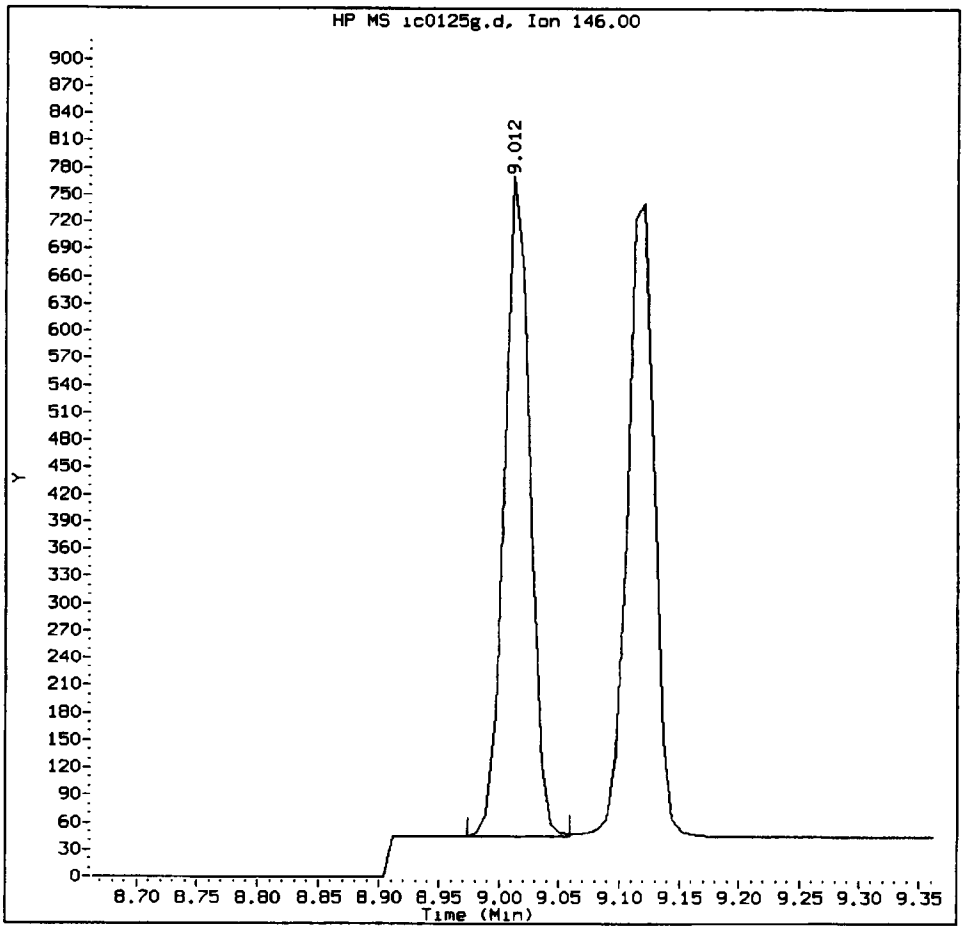




WL10:00093

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

1,3-Dichlorobenzene Amount: 0.05 Area: 1091



MANUAL INTEGRATION for 1,3-Dichlorobenzene

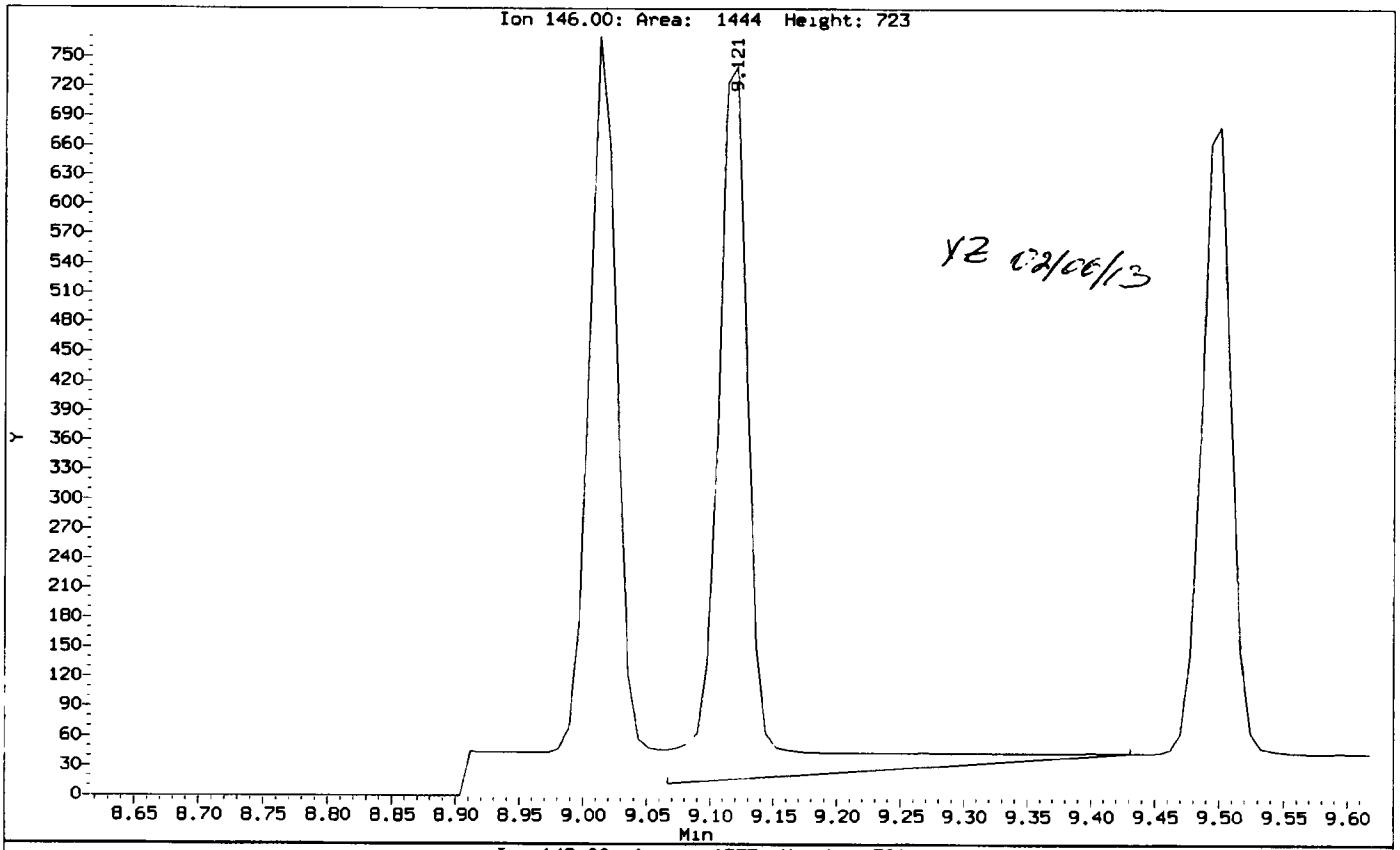
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

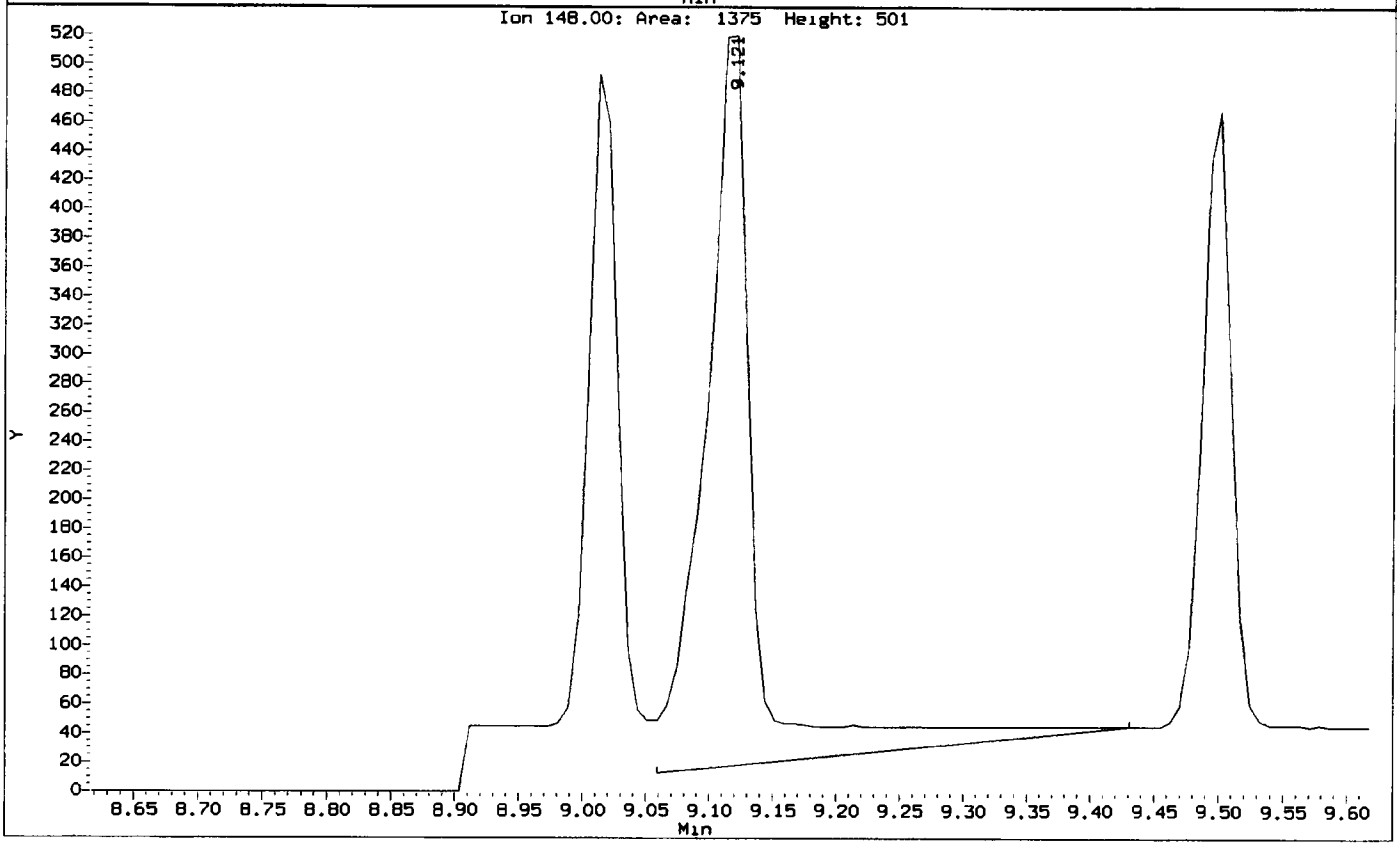
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7



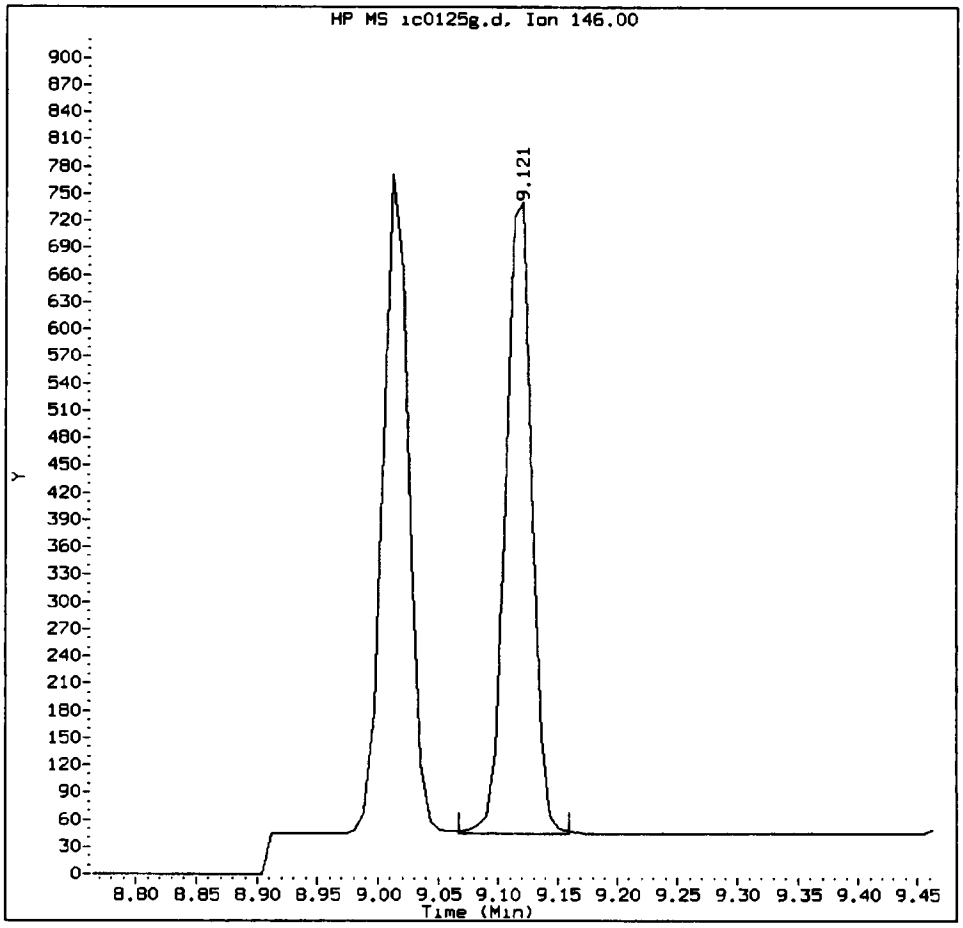
YZ 02/06/13



WL19 00995

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

1,4-Dichlorobenzene Amount: 0.05 Area: 1087



MANUAL INTEGRATION for 1,4-Dichlorobenzene

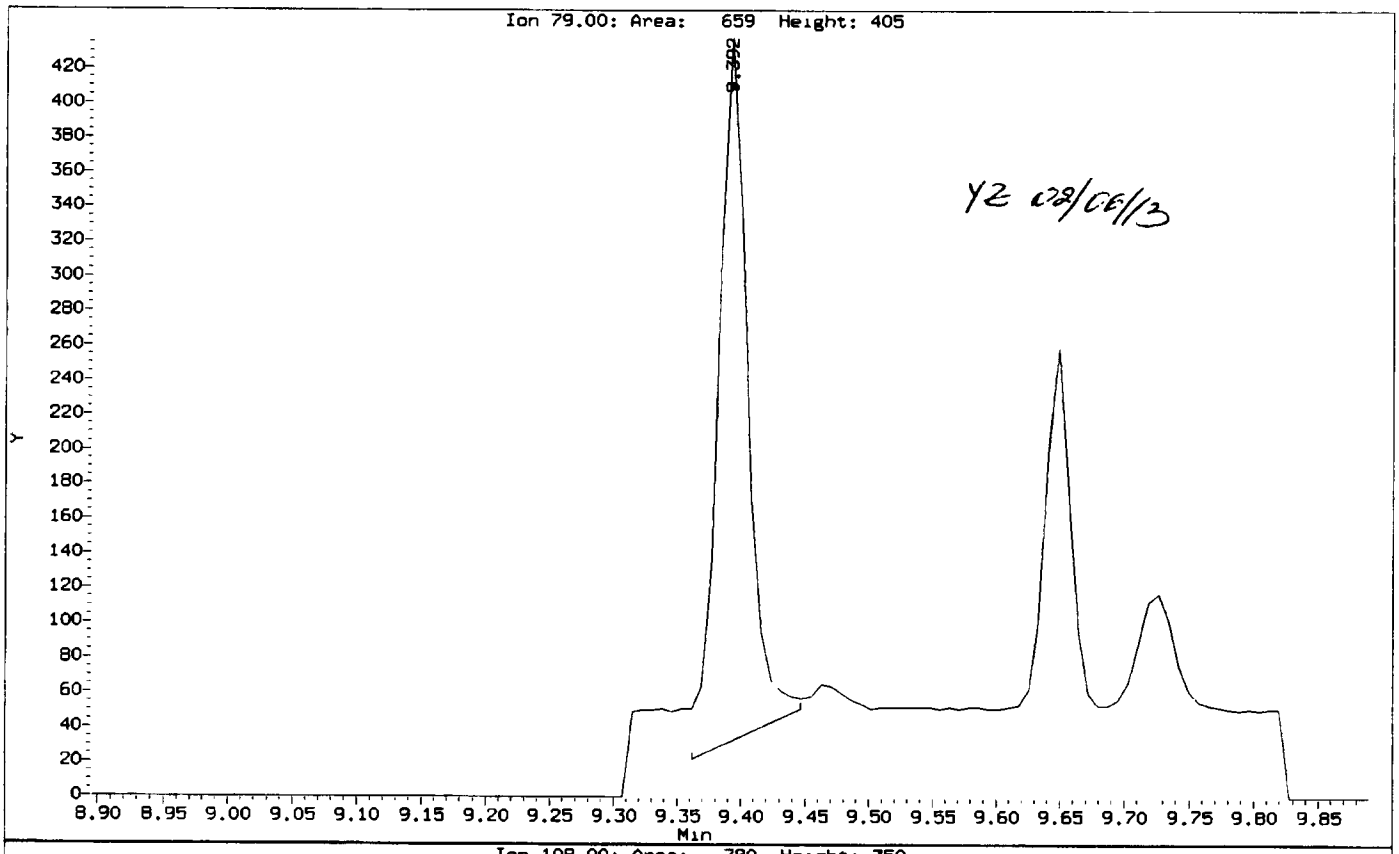
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

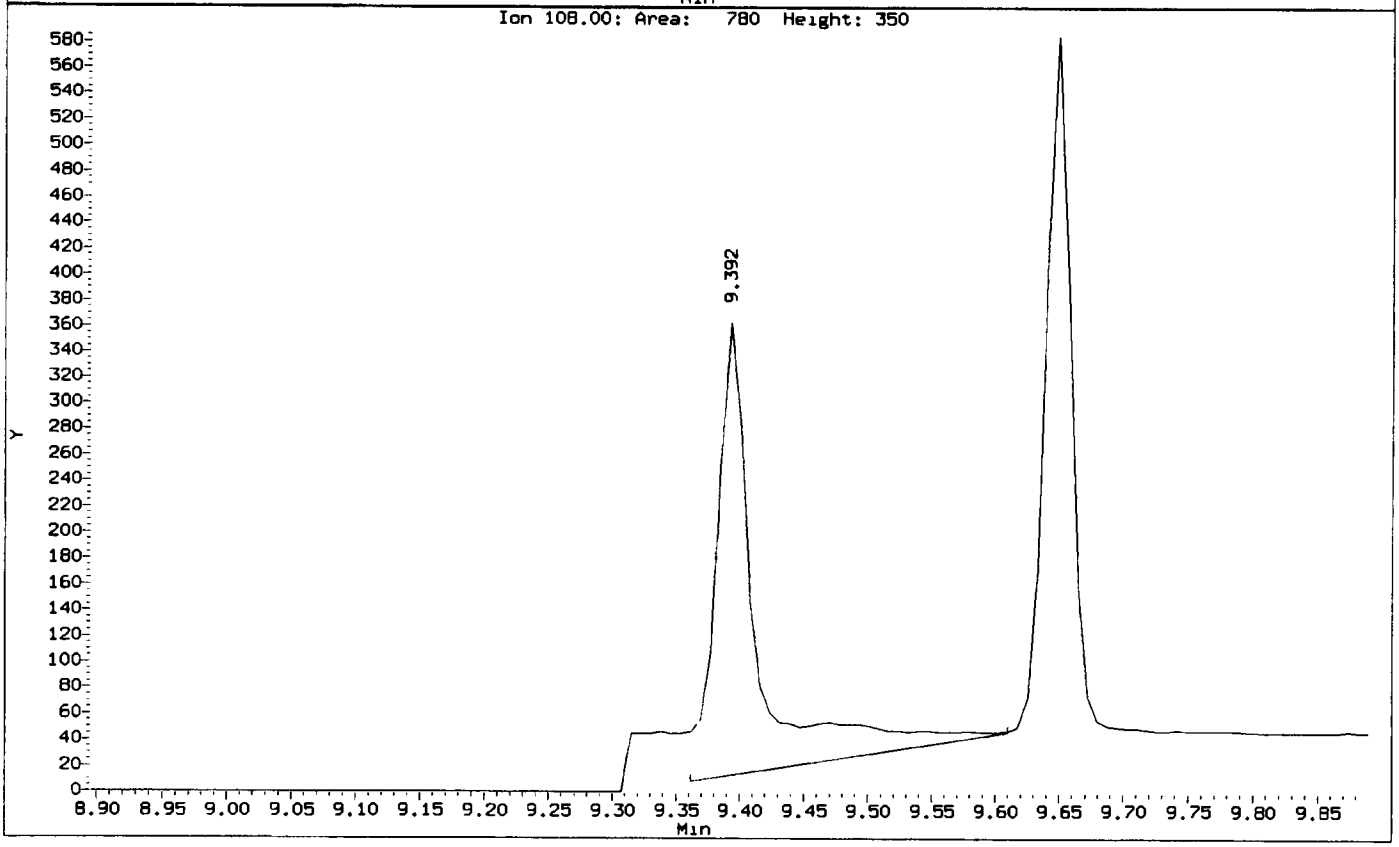
Analyst: VZ Date: 03/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

Compound: Benzyl alcohol
CAS Number: 100-51-6

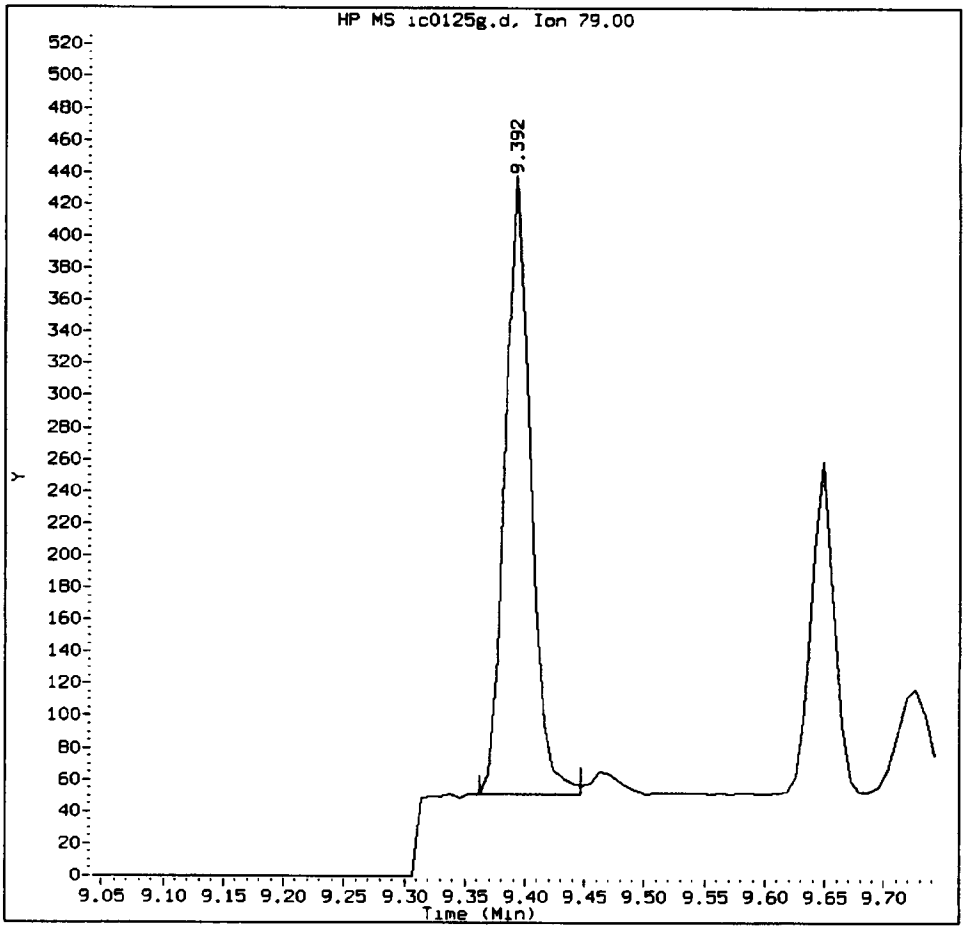


YZ 08/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Benzyl alcohol Amount: 0.05 Area: 578



MANUAL INTEGRATION for Benzyl alcohol

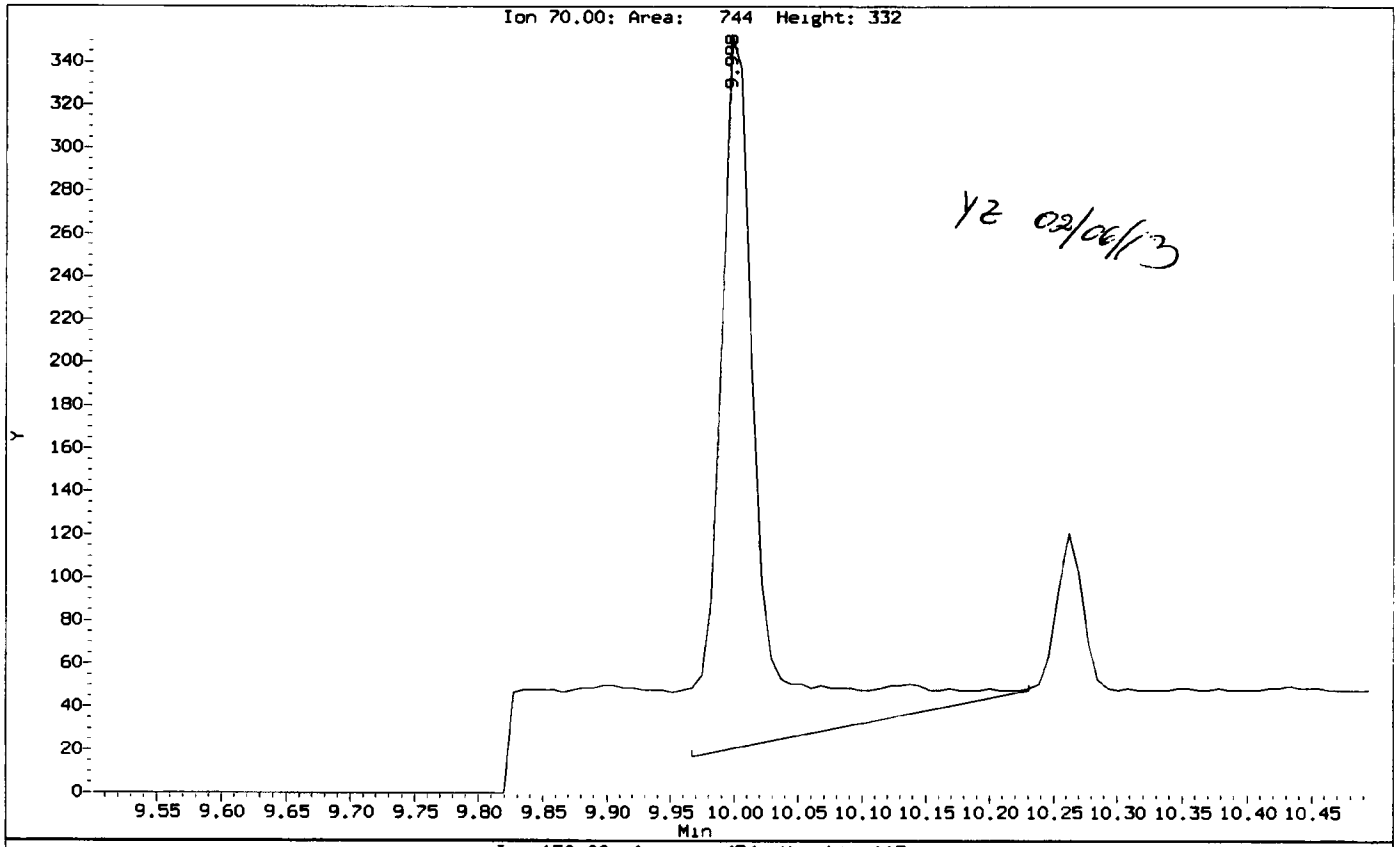
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

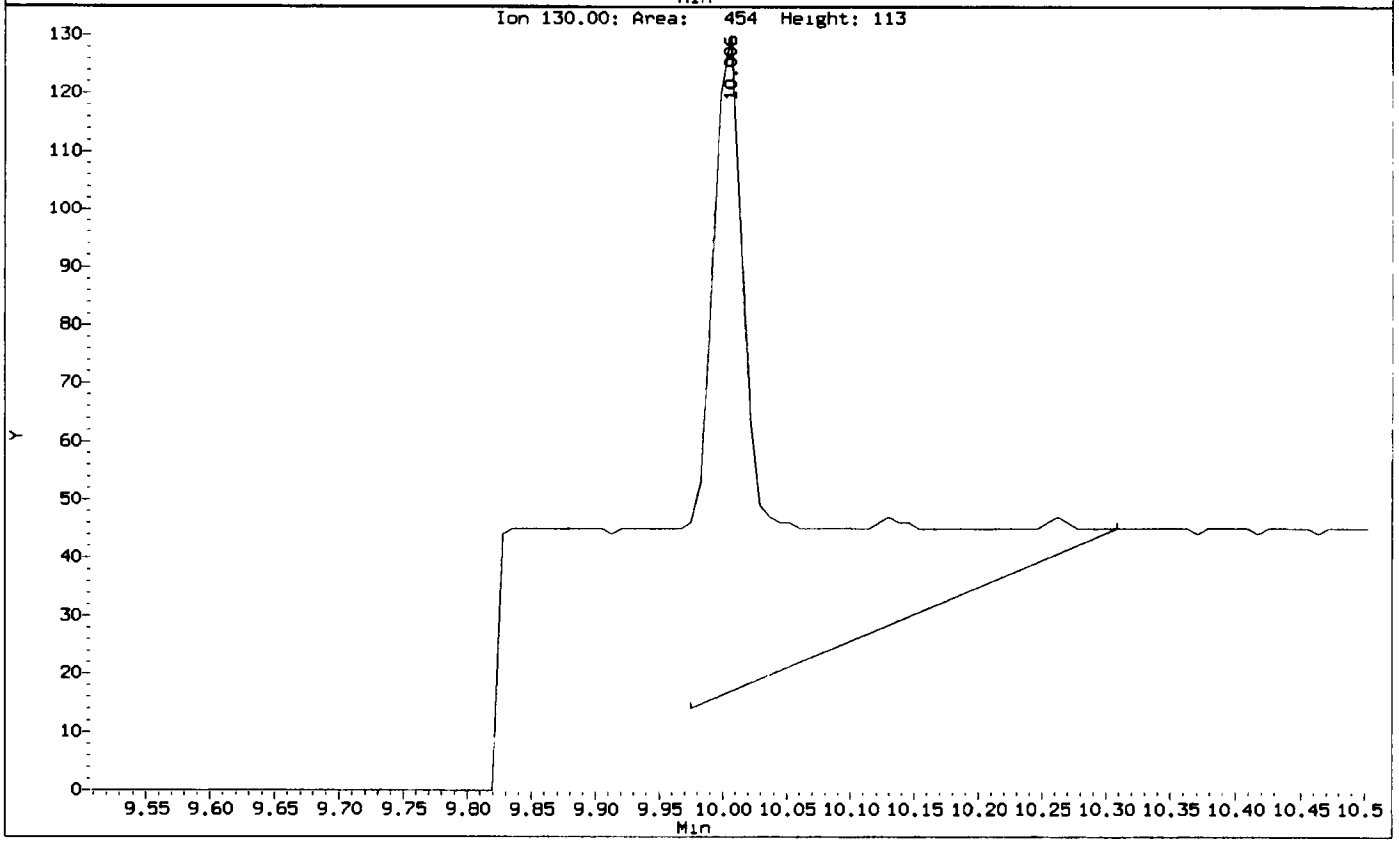
Analyst: VR Date: 02/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7



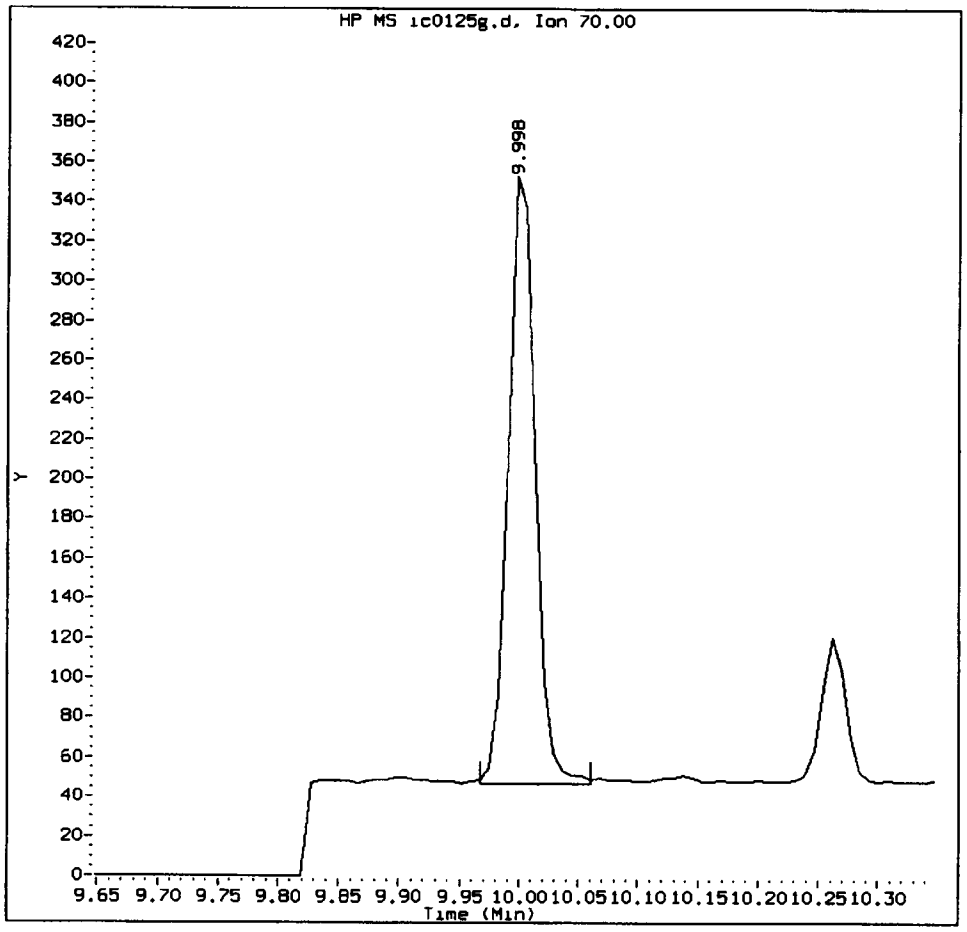
YZ 02/06/13



VL_10 : 00000

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

N-Nitroso-di-n-propylamine Amount: 0.05 Area: 489



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

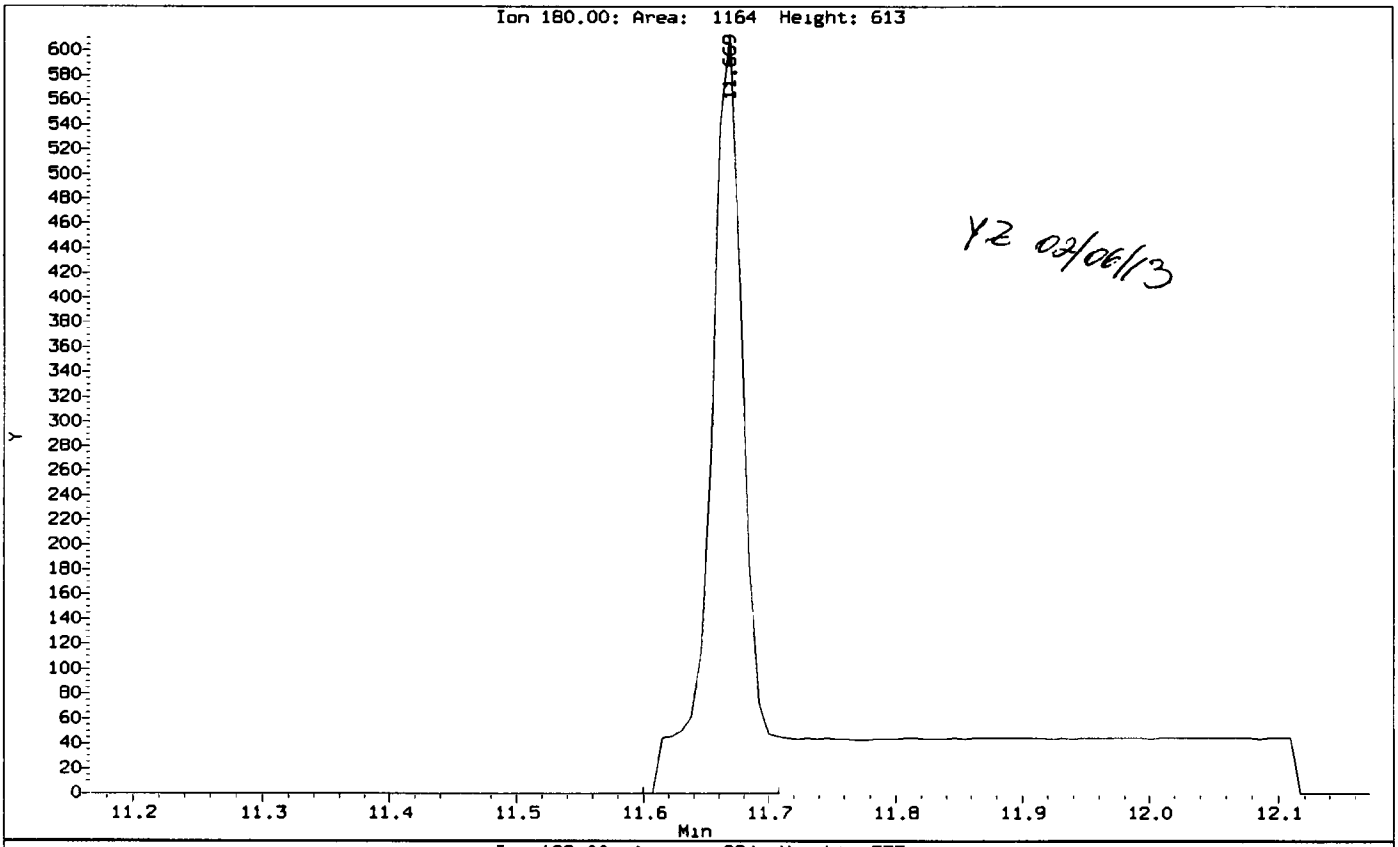
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

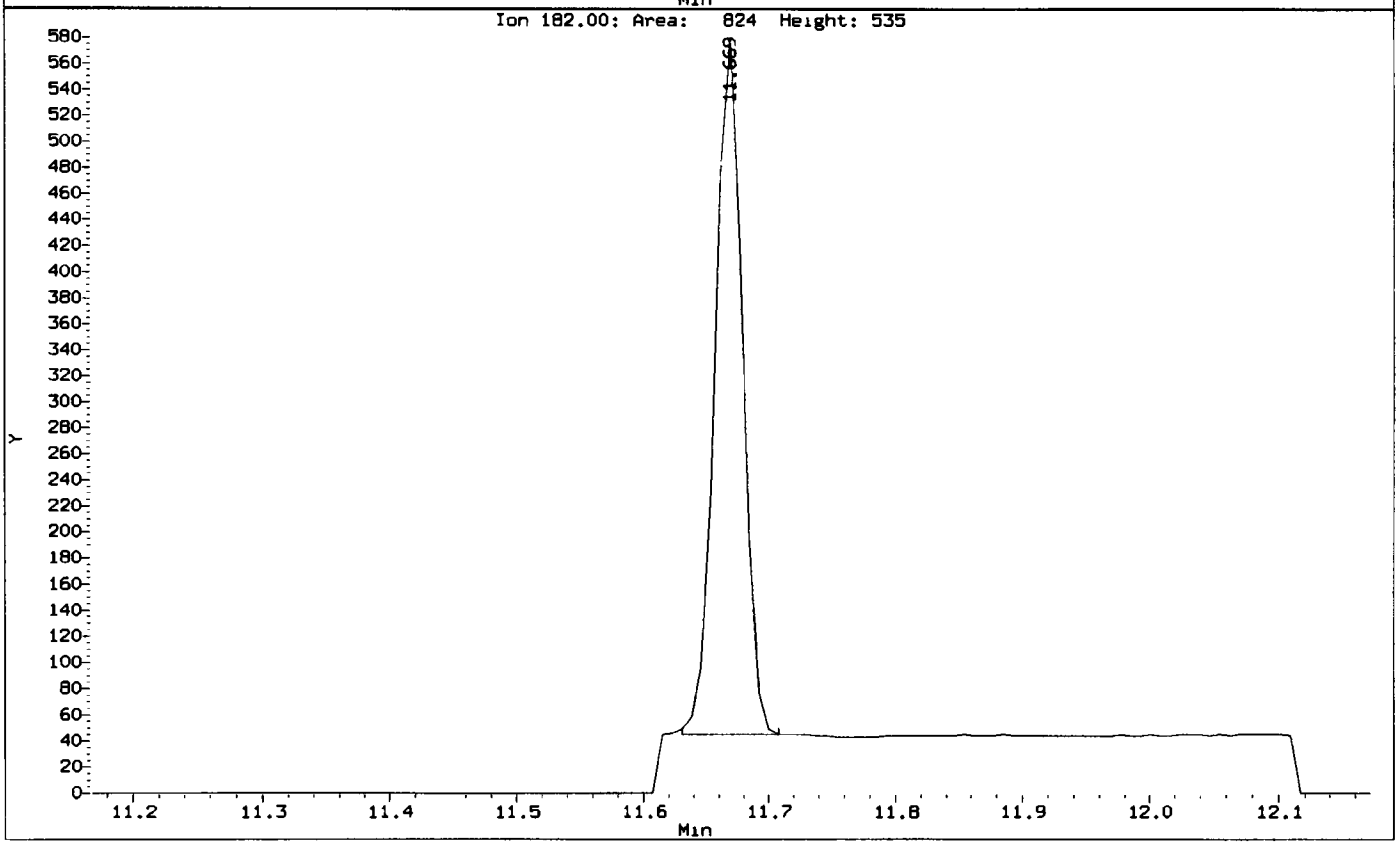
Analyst: YZ Date: 08/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

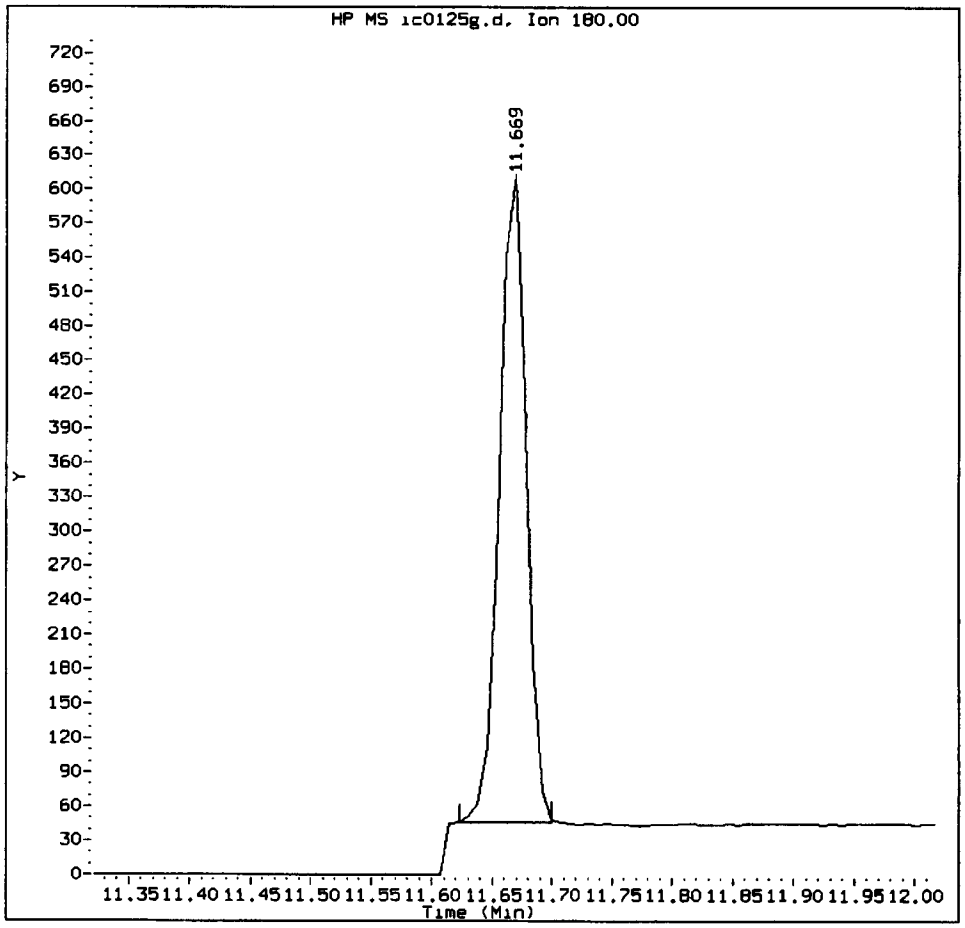


YZ 02/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

1,2,4-Trichlorobenzene Amount: 0.05 Area: 887



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

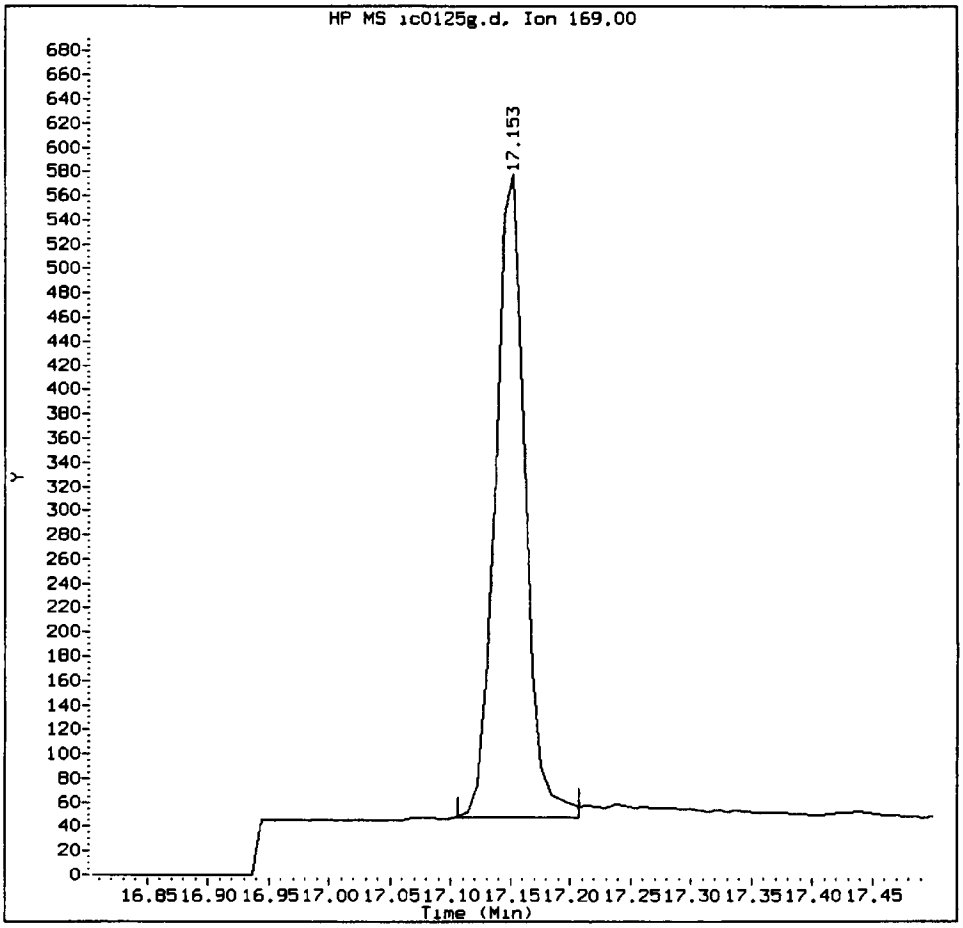
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 03/06/13

IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 921



MANUAL INTEGRATION for N-Nitrosodiphenylamine

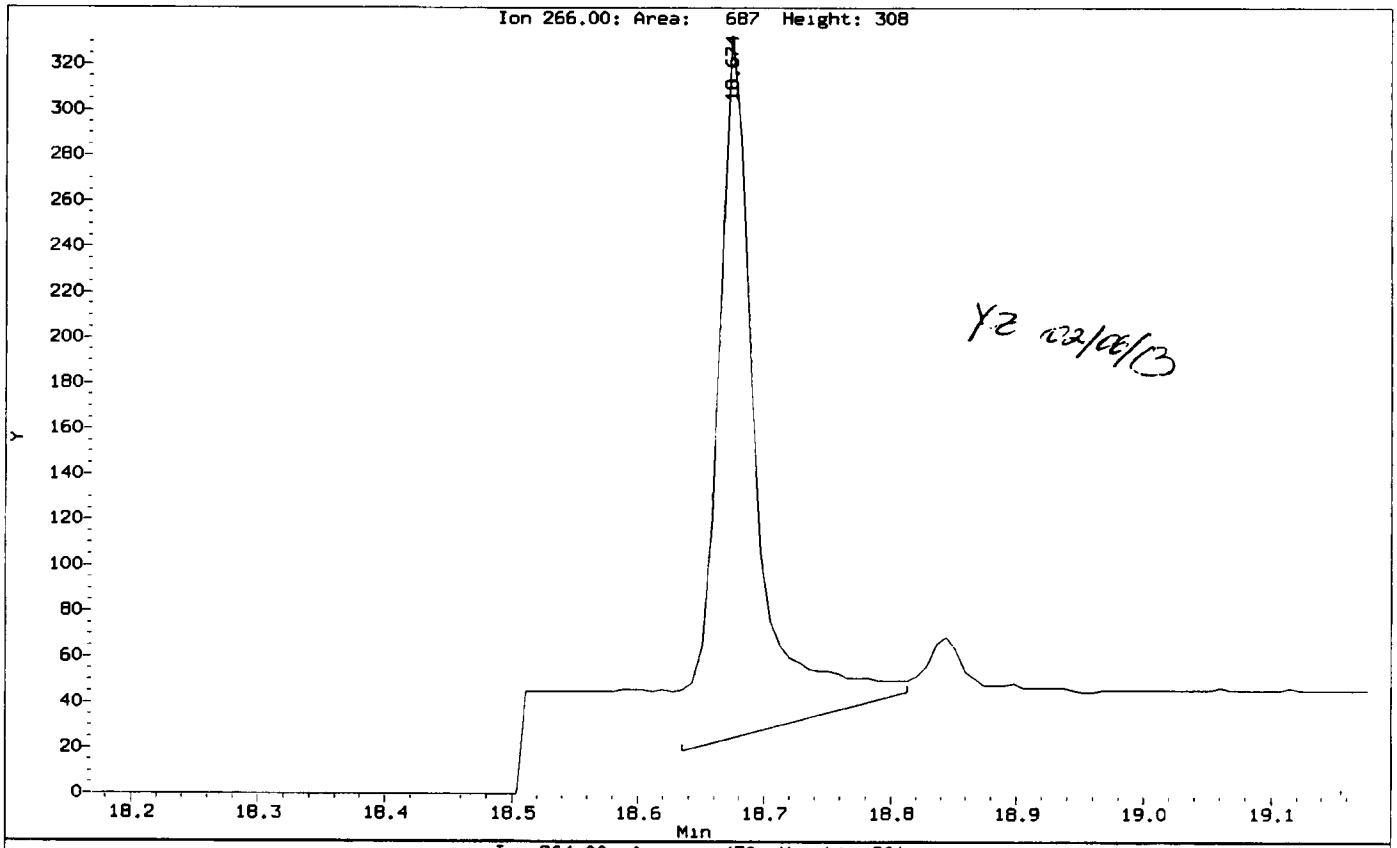
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

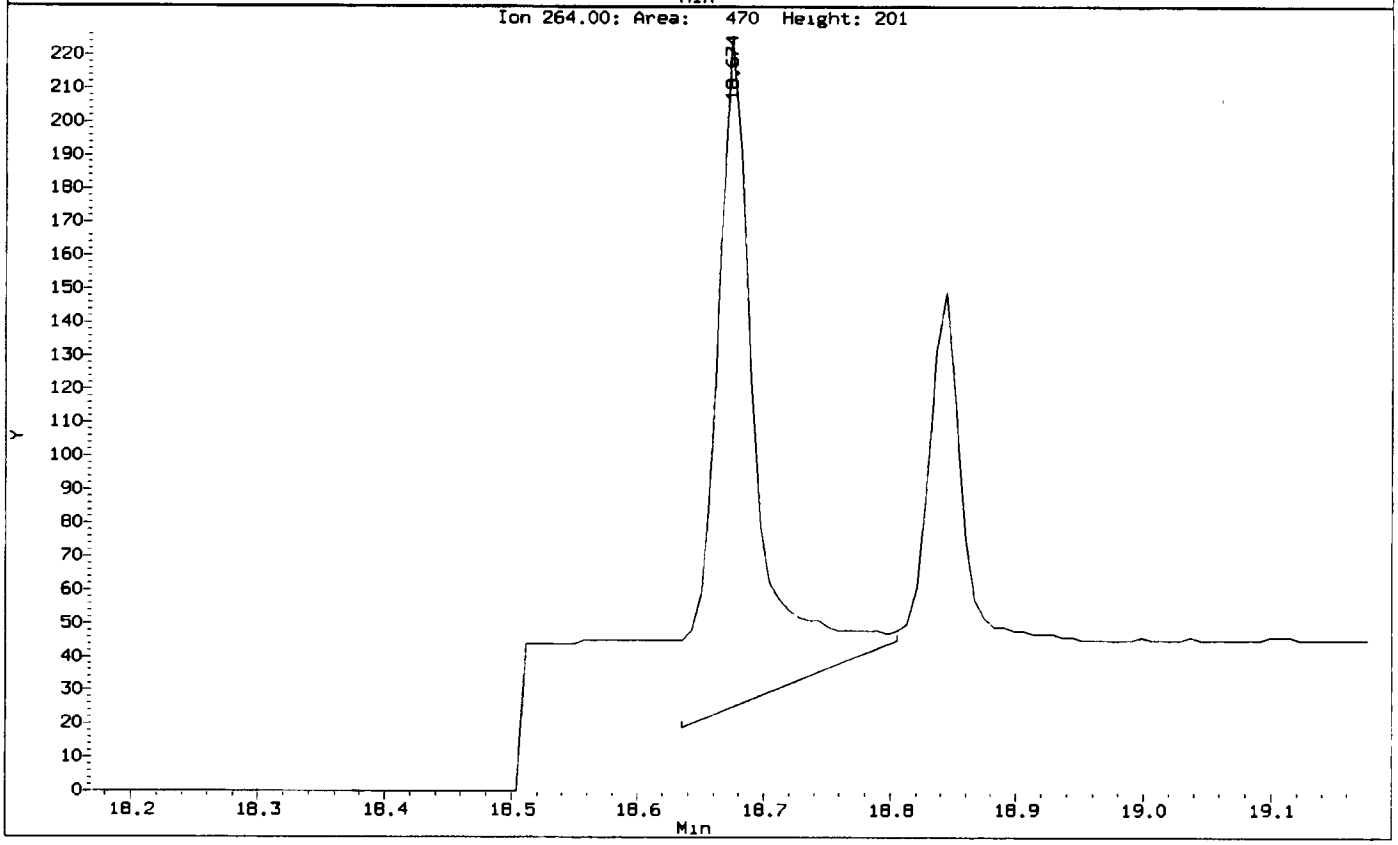
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

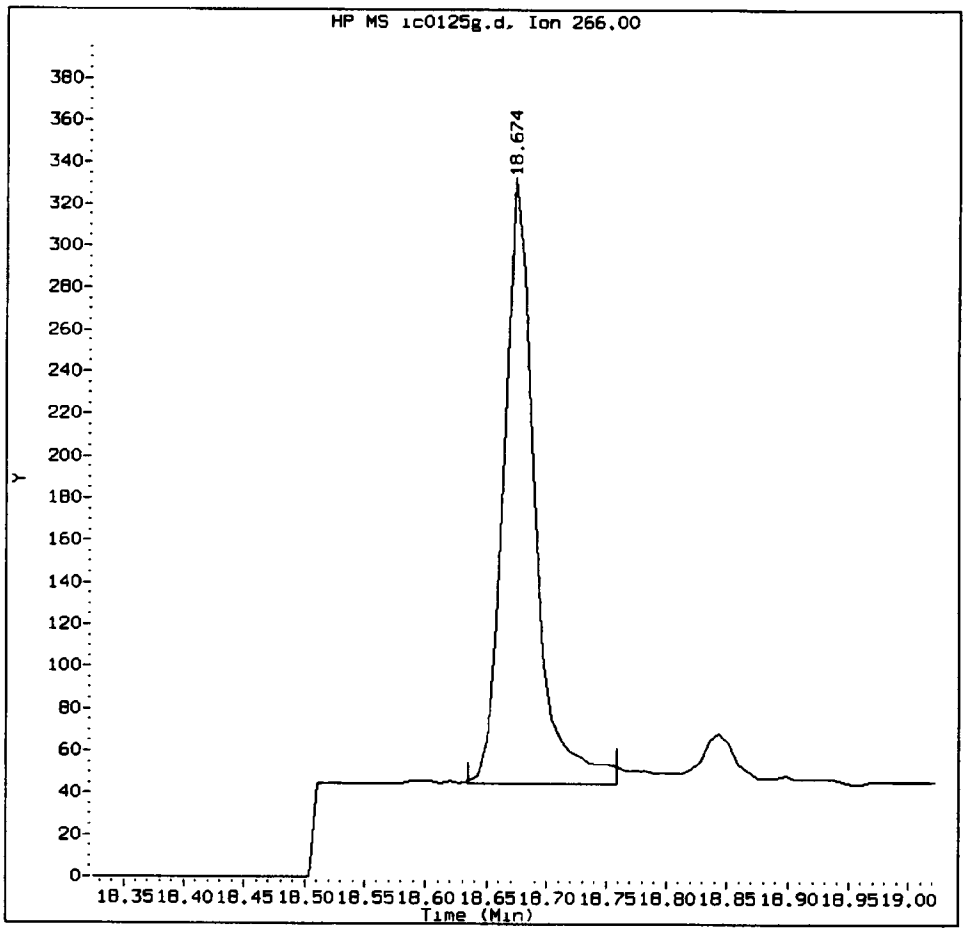


YZ 02/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Pentachlorophenol Amount: 0.06 Area: 524



MANUAL INTEGRATION for Pentachlorophenol

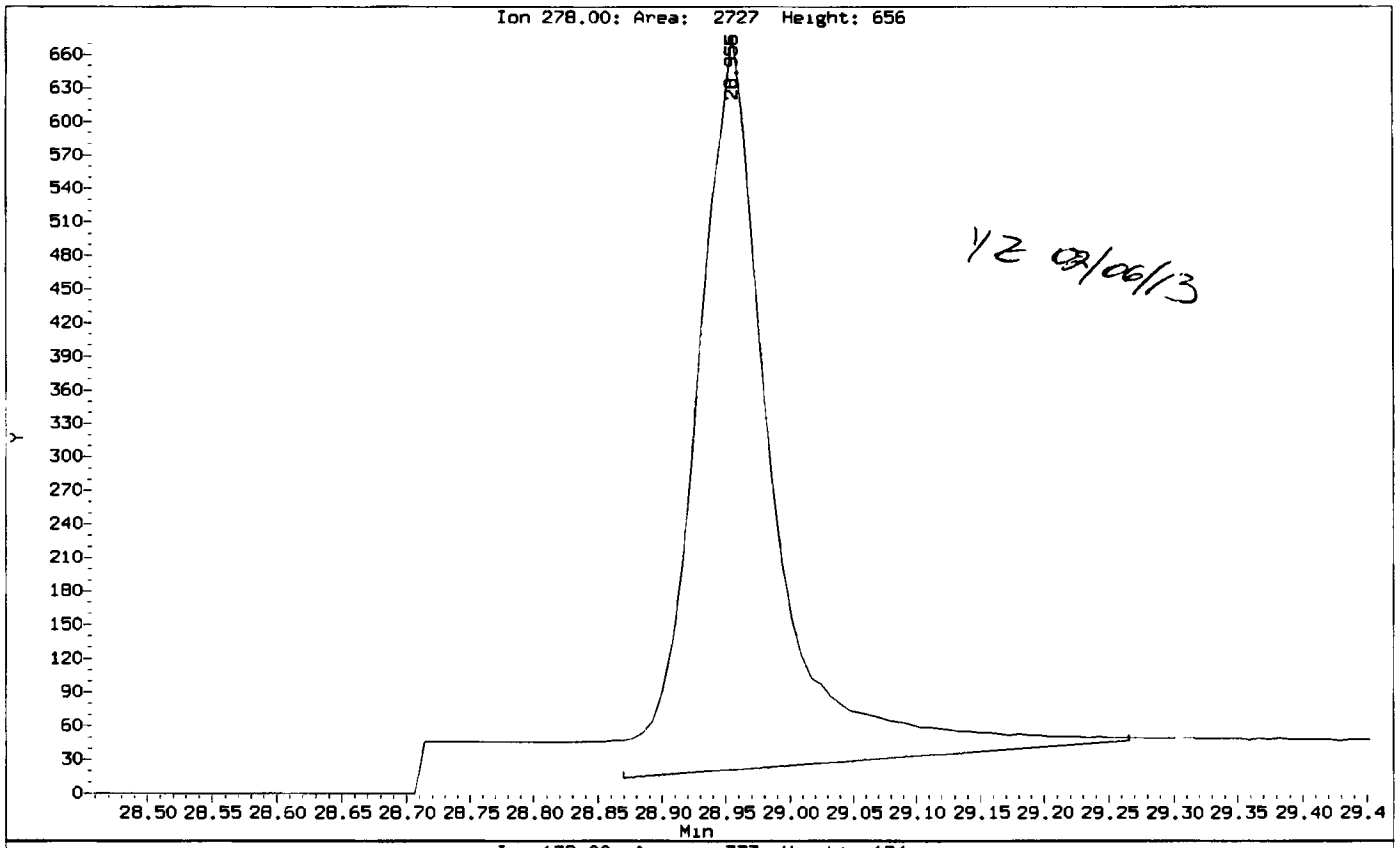
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

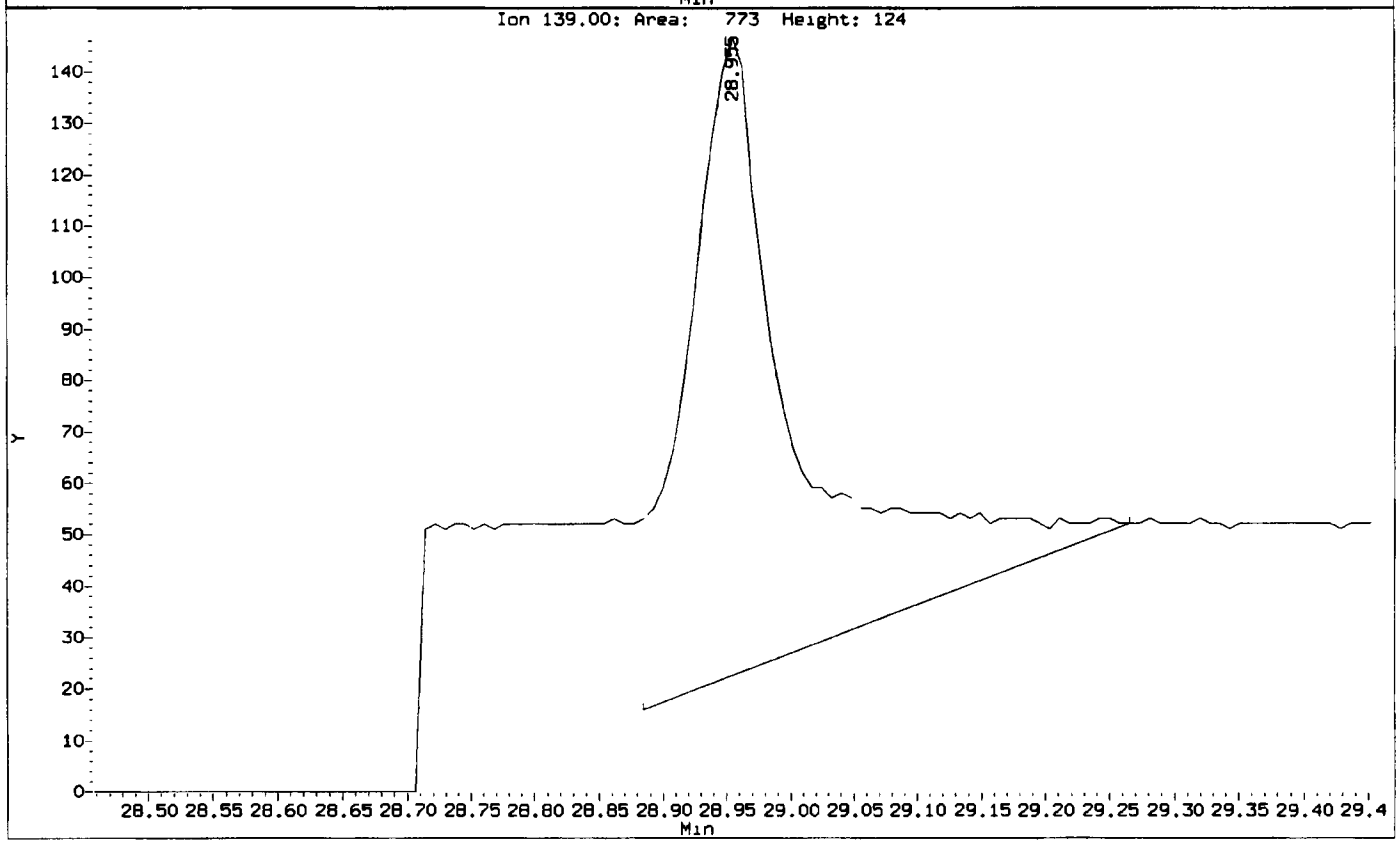
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3

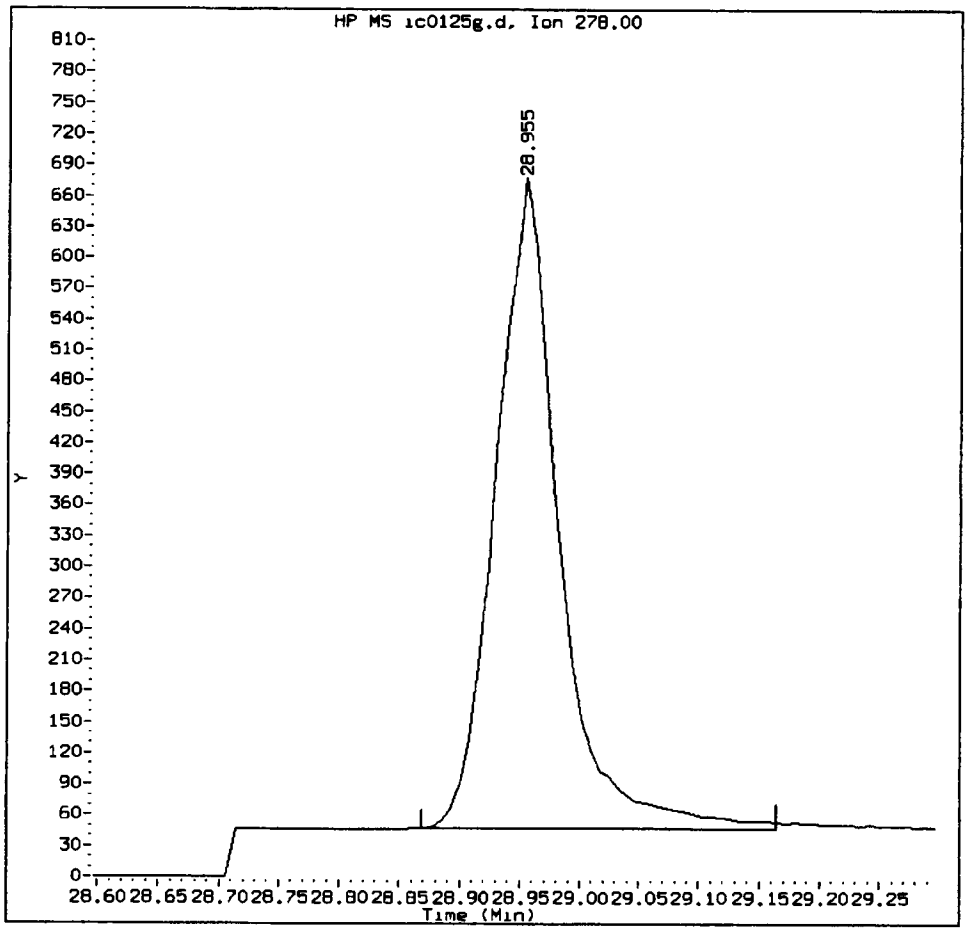


YZ 02/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Dibenzo(a,h)anthracene Amount: 0.05 Area: 2301



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

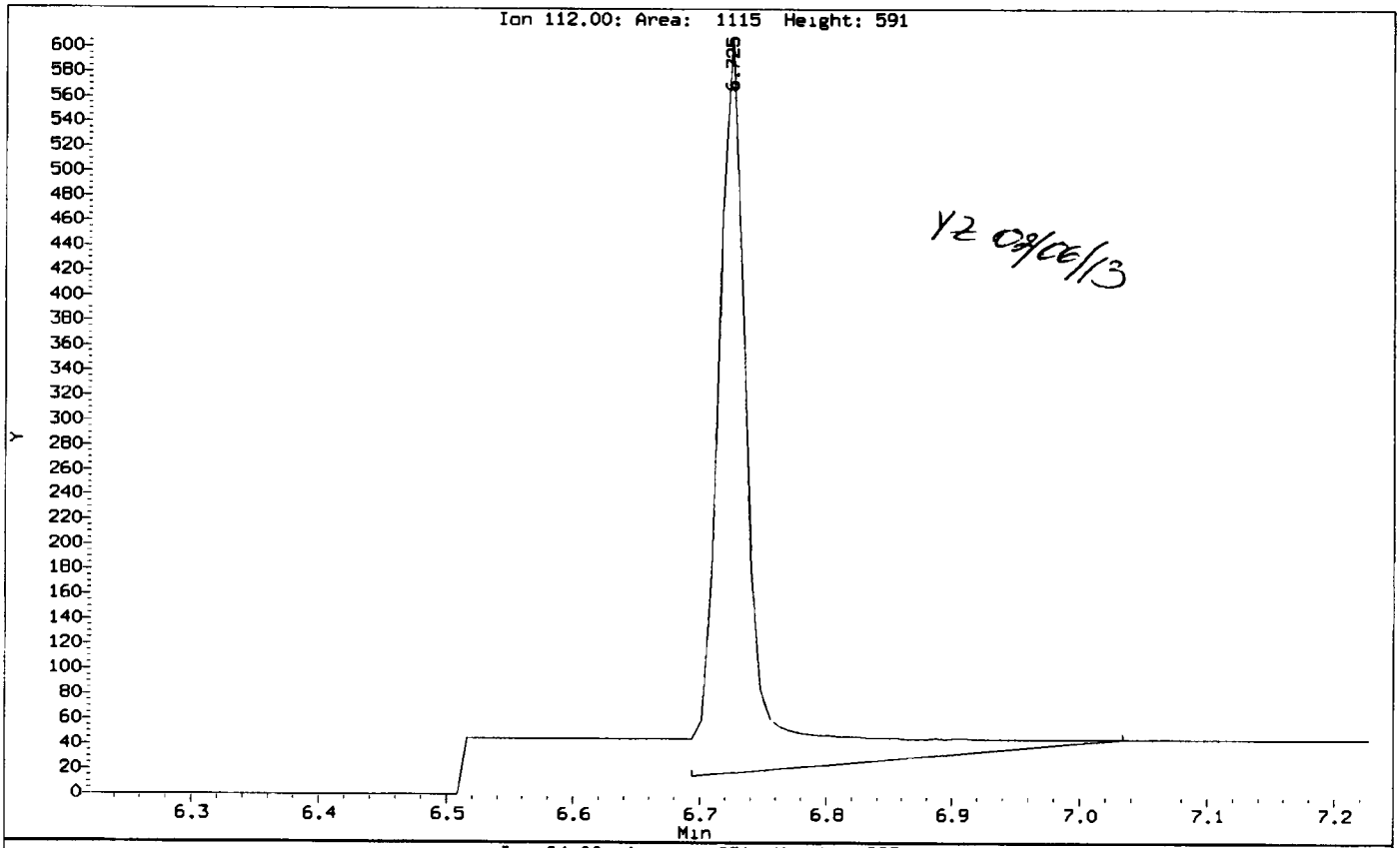
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

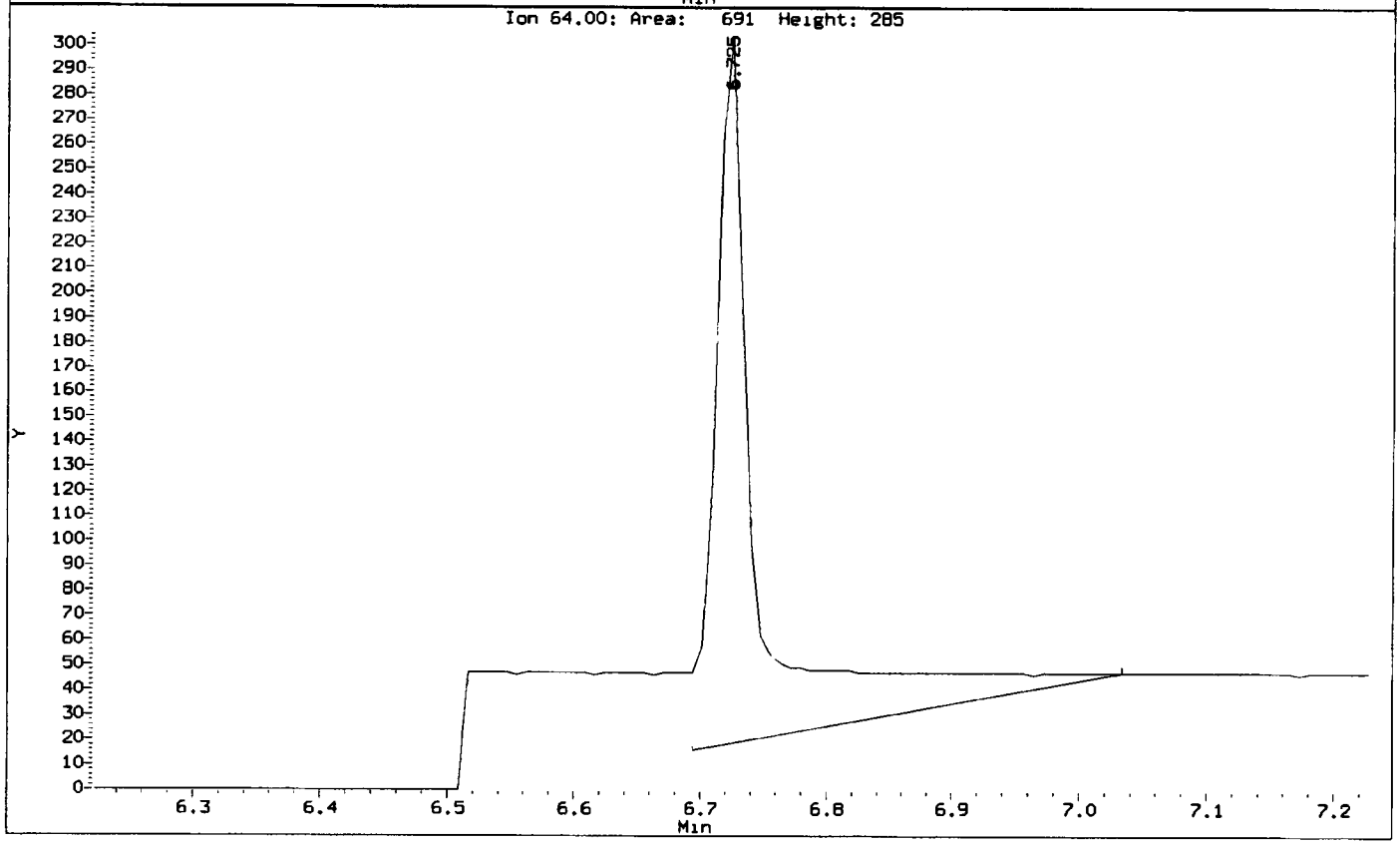
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.i
Client Sample ID:

Compound: 2-Fluorophenol
CAS Number: 367-12-4

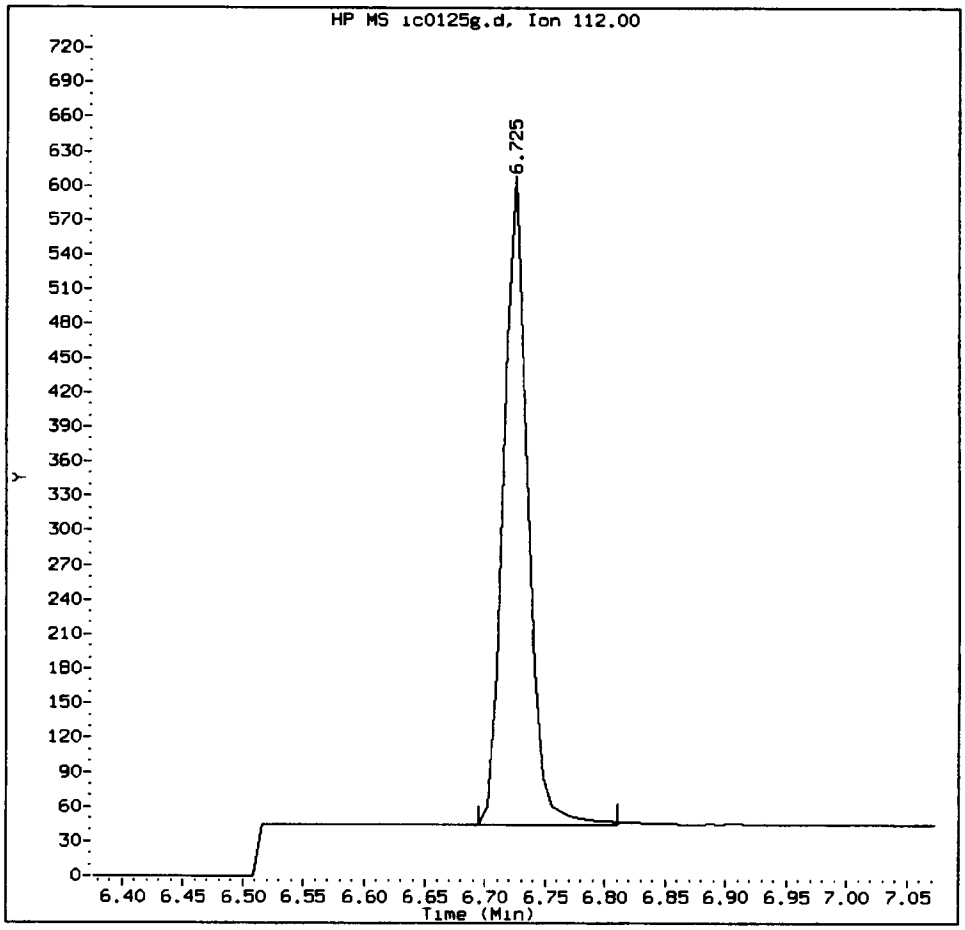


YZ 09/06/13



IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

2-Fluorophenol Amount: 0.05 Area: 797



MANUAL INTEGRATION for 2-Fluorophenol

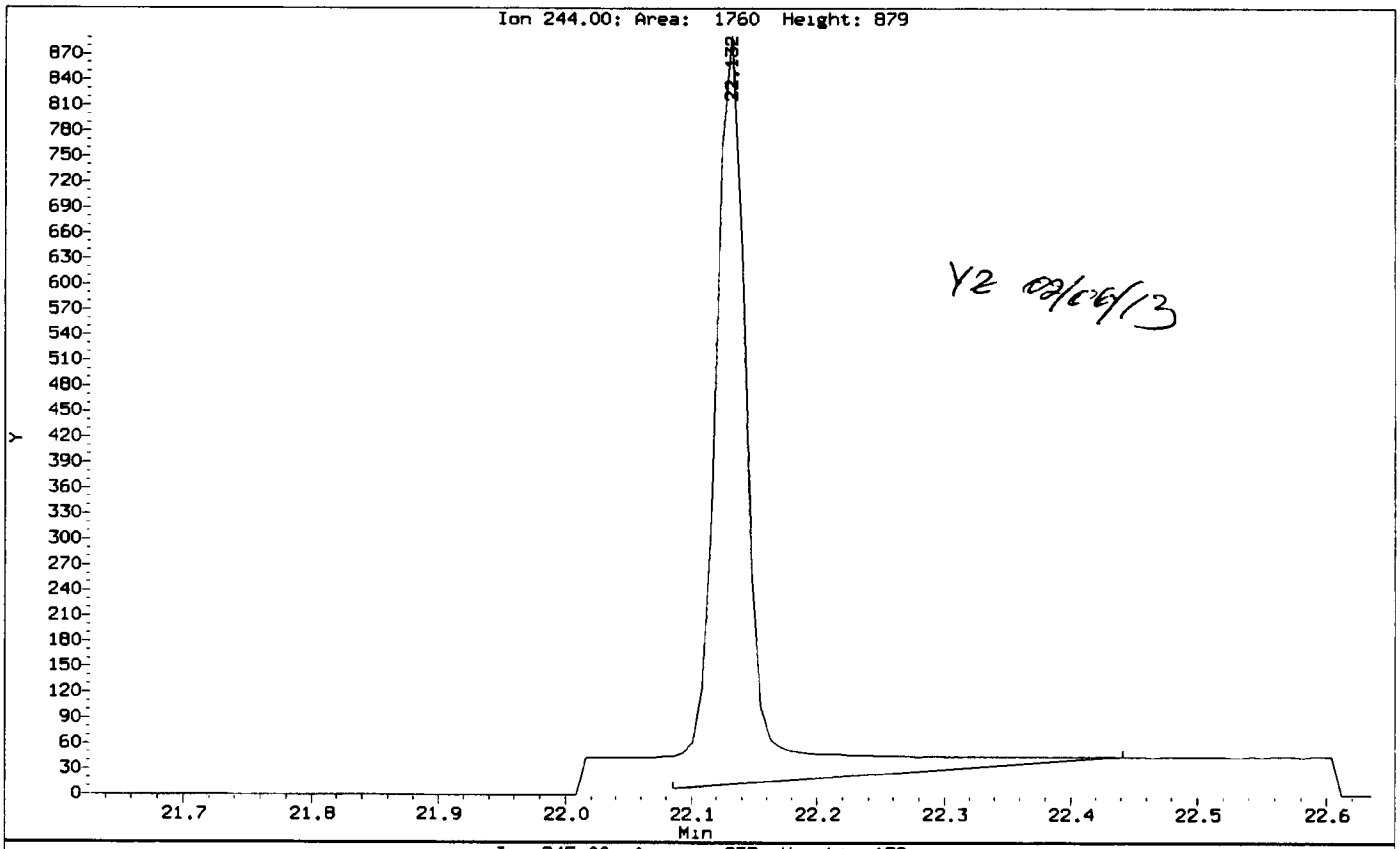
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

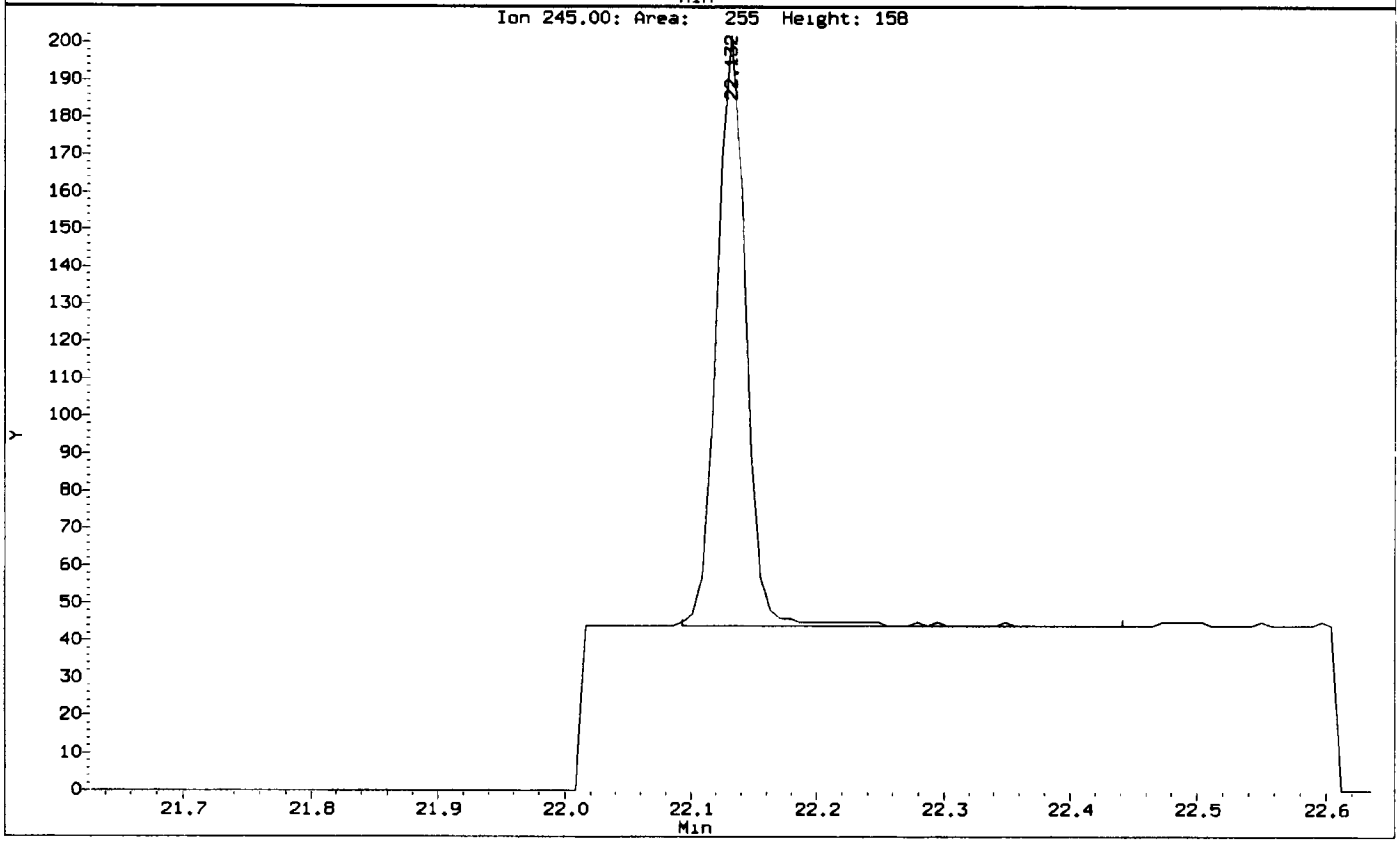
5. Other _____

Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125g.d
Injection Date: 25-JAN-2013 16:40
Instrument: nt10.1
Client Sample ID:

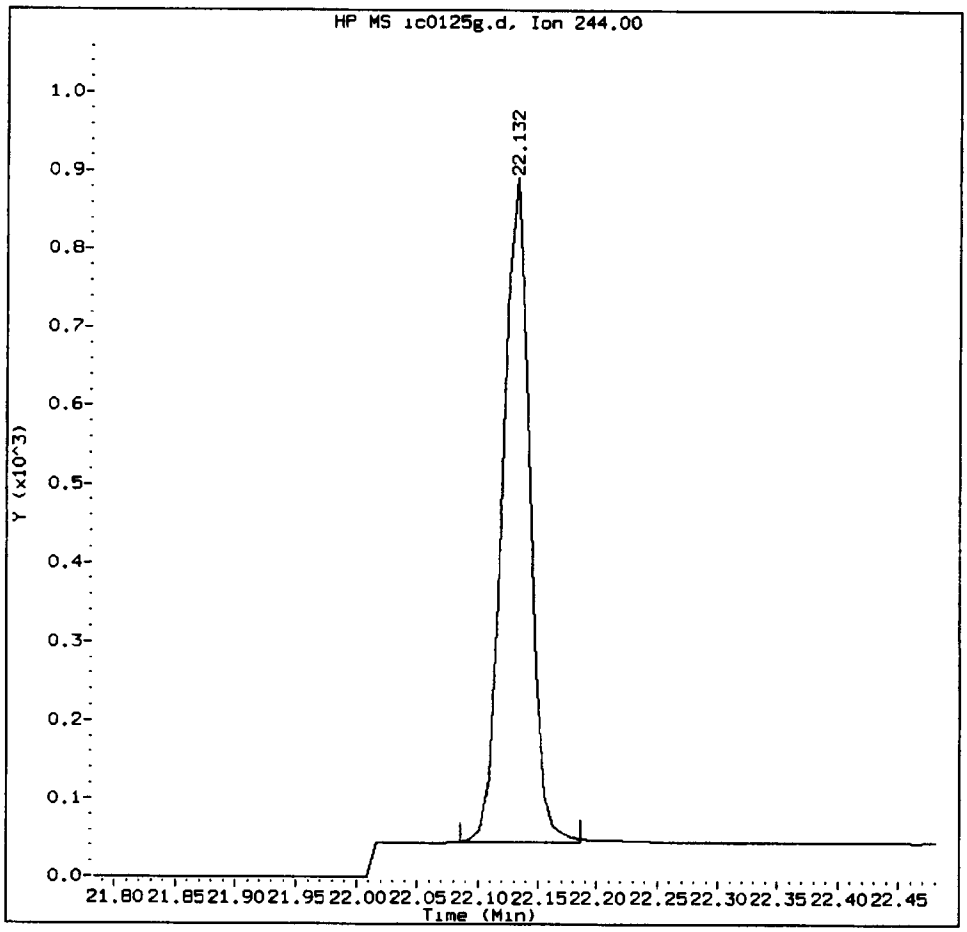
Compound: Terphenyl-d14
CAS Number:





IC0125G, /chem1/nt10.i/20130125.b/SIM.b/ic0125g.d

Terphenyl-d14 Amount: 0.05 Area: 1344



MANUAL INTEGRATION for Terphenyl-d14

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

5. Other _____

Analyst: YZ Date: 03/06/13

CO-ELUTION SUMMARY FOR FILE - ic0125g.d

Lab ID: IC0125G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 02/06/13

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Lab Smp Id: IC0125H
Inj Date : 25-JAN-2013 17:16
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0125H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:16 Cal File: ic0125h.d
Als bottle: 9 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.725	6.725	(0.740)	7873	0.50000	0.4941
	3	Phenol	94	8.456	8.456	(0.930)	10035	0.50000	0.4959
	7	1,3-Dichlorobenzene	146	9.013	9.012	(0.991)	10196	0.50000	0.5017
*	8	1,4-Dichlorobenzene-d4	152	9.090	9.082	(1.000)	50086	4.00000	
	9	1,4-Dichlorobenzene	146	9.121	9.113	(1.003)	10146	0.50000	0.5001
	11	Benzyl alcohol	79	9.393	9.392	(1.033)	5875	0.50000	0.4899
	12	1,2-Dichlorobenzene	146	9.494	9.493	(1.044)	9559	0.50000	0.4975
	13	2-Methylphenol	108	9.649	9.649	(1.061)	7566	0.50000	0.4969
	15	4-Methylphenol	108	9.936	9.936	(1.093)	7904	0.50000	0.5012
	16	N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.100)	4907	0.50000	0.4950
	22	2,4-Dimethylphenol	107	11.068	11.068	(0.942)	16161	1.00000	0.9960
	26	1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	8767	0.50000	0.5003
*	27	Naphthalene-d8	136	11.754	11.754	(1.000)	188224	4.00000	
	30	Hexachlorobutadiene	225	12.210	12.210	(1.039)	5232	0.50000	0.4918
	39	Dimethylphthalate	163	15.166	15.166	(0.968)	15801	0.50000	0.4971
*	42	Acenaphthene-d10	162	15.661	15.661	(1.000)	104418	4.00000	
	50	Diethylphthalate	149	16.759	16.751	(1.070)	18380	0.50000	0.4949
	54	N-Nitrosodiphenylamine	169	17.145	17.153	(0.905)	11810	0.50000	0.5127
	57	Hexachlorobenzene	284	18.279	18.279	(0.965)	7635	0.50000	0.5095
	58	Pentachlorophenol	266	18.674	18.674	(0.986)	8335	1.00000	0.8849
*	59	Phenanthrene-d10	188	18.937	18.937	(1.000)	198157	4.00000	
$	66	Terphenyl-d14	244	22.132	22.132	(0.922)	14697	0.50000	0.4865
	67	Butylbenzylphthalate	149	23.077	23.077	(0.961)	10149	0.50000	0.4671
*	69	Chrysene-d12	240	24.006	24.006	(1.000)	227335	4.00000	
*	77	Perylene-d12	264	26.507	26.507	(1.000)	219691	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	25984	0.50000	0.4962
	90	N-Nitrosodimethylamine	74	4.447	4.455	(0.489)	9444	1.00000	0.9933

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125h.d
Lab Smp Id: IC0125H
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	50086	-6.99
27 Naphthalene-d8	200104	100052	400208	188224	-5.94
42 Acenaphthene-d10	112392	56196	224784	104418	-7.09
59 Phenanthrene-d10	210710	105355	421420	198157	-5.96
69 Chrysene-d12	240805	120402	481610	227335	-5.59
77 Perylene-d12	230834	115417	461668	219691	-4.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.09	0.00
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

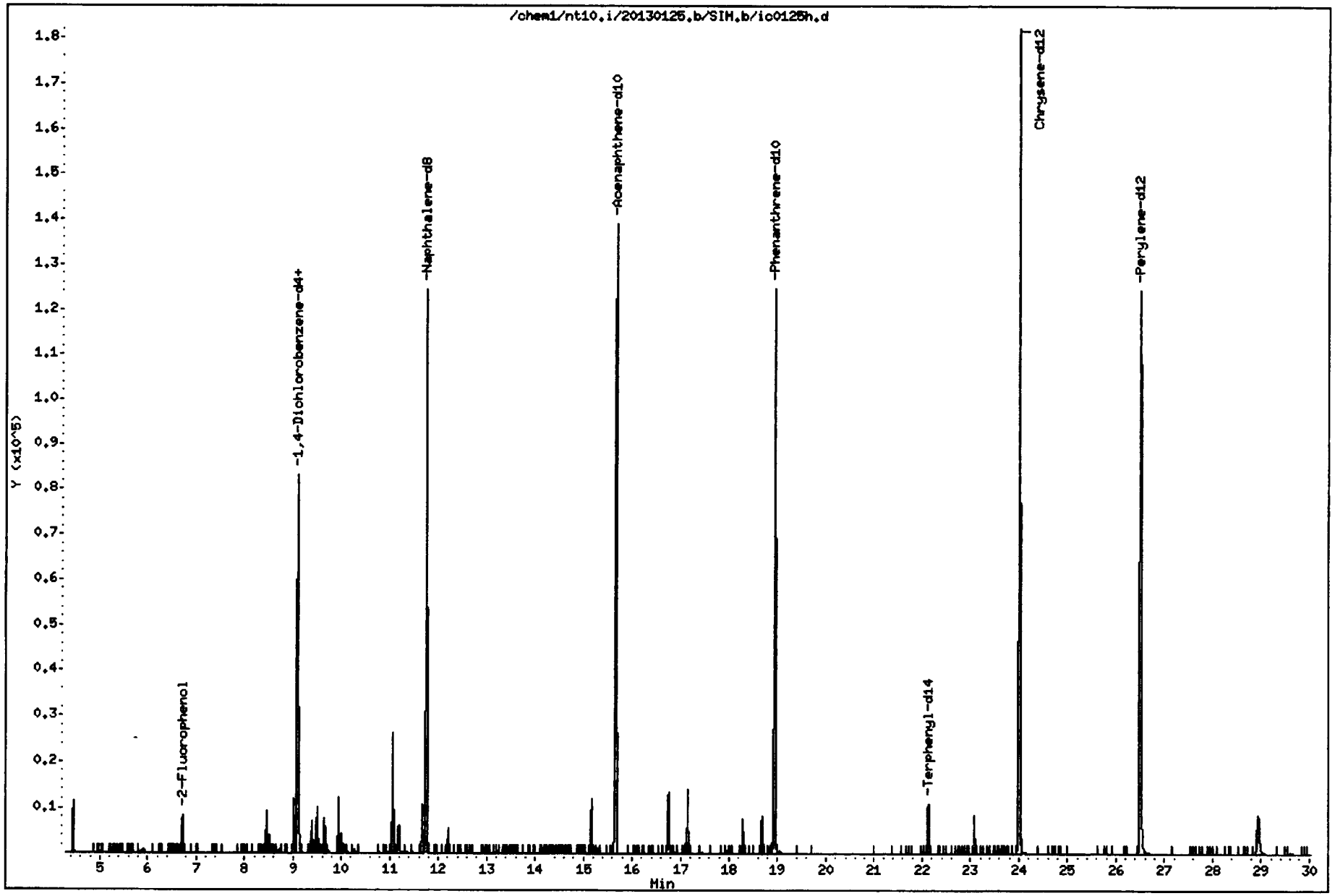
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125h.d
Date : 25-JAN-2013 17:16
Client ID:
Sample Info: IC0125H

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0125h.d

Lab ID: IC0125H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 02/04/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Lab Smp Id: IC0125I
Inj Date : 25-JAN-2013 17:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0125I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Meth Date : 06-Feb-2013 11:08 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.725	6.725	(0.740)	1598	0.10000	0.09578
	3	Phenol	94	8.456	8.456	(0.931)	2001	0.10000	0.09444
	7	1,3-Dichlorobenzene	146	9.012	9.012	(0.992)	2154	0.10000	0.1012
*	8	1,4-Dichlorobenzene-d4	152	9.082	9.082	(1.000)	52438	4.00000	
	9	1,4-Dichlorobenzene	146	9.113	9.113	(1.003)	2180	0.10000	0.1026
	11	Benzyl alcohol	79	9.392	9.392	(1.034)	1174	0.10000	0.09351(M)
	12	1,2-Dichlorobenzene	146	9.493	9.493	(1.045)	2052	0.10000	0.1020
	13	2-Methylphenol	108	9.649	9.649	(1.062)	1498	0.10000	0.09396
	15	4-Methylphenol	108	9.936	9.936	(1.094)	1538	0.10000	0.09316
	16	N-Nitroso-di-n-propylamine	70	9.998	9.998	(1.101)	990	0.10000	0.09539(M)
	22	2,4-Dimethylphenol	107	11.068	11.068	(0.942)	3079	0.20000	0.1836
	26	1,2,4-Trichlorobenzene	180	11.669	11.669	(0.993)	2059	0.10000	0.1137
*	27	Naphthalene-d8	136	11.754	11.754	(1.000)	194519	4.00000	
	30	Hexachlorobutadiene	225	12.210	12.210	(1.039)	1098	0.10000	0.09988
	39	Dimethylphthalate	163	15.166	15.166	(0.968)	3070	0.10000	0.09551(M)
*	42	Acenaphthene-d10	162	15.661	15.661	(1.000)	105586	4.00000	
	50	Diethylphthalate	149	16.751	16.751	(1.070)	3860	0.10000	0.1028
	54	N-Nitrosodiphenylamine	169	17.153	17.153	(0.906)	2058	0.10000	0.09080
	57	Hexachlorobenzene	284	18.279	18.279	(0.965)	1494	0.10000	0.1013(M)
	58	Pentachlorophenol	266	18.674	18.674	(0.986)	1250	0.20000	0.1359
*	59	Phenanthrene-d10	188	18.937	18.937	(1.000)	194974	4.00000	
$	66	Terphenyl-d14	244	22.132	22.132	(0.922)	3257	0.10000	0.1092
	67	Butylbenzylphthalate	149	23.077	23.077	(0.961)	1769	0.10000	0.08242
*	69	Chrysene-d12	240	24.006	24.006	(1.000)	224554	4.00000	
*	77	Perylene-d12	264	26.507	26.507	(1.000)	218858	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.947	28.947	(1.092)	4594	0.10000	0.08807(M)
	90	N-Nitrosodimethylamine	74	4.455	4.455	(0.490)	1966	0.20000	0.1975

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0125i.d
Lab Smp Id: IC0125I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130125.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 25-JAN-2013
Calibration Time: 15:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	52438	-2.63
27 Naphthalene-d8	200104	100052	400208	194519	-2.79
42 Acenaphthene-d10	112392	56196	224784	105586	-6.06
59 Phenanthrene-d10	210710	105355	421420	194974	-7.47
69 Chrysene-d12	240805	120402	481610	224554	-6.75
77 Perylene-d12	230834	115417	461668	218858	-5.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.09	8.59	9.59	9.08	-0.09
27 Naphthalene-d8	11.75	11.25	12.25	11.75	0.00
42 Acenaphthene-d10	15.66	15.16	16.16	15.66	0.00
59 Phenanthrene-d10	18.94	18.44	19.44	18.94	0.00
69 Chrysene-d12	24.01	23.51	24.51	24.01	0.00
77 Perylene-d12	26.51	26.01	27.01	26.51	0.00

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

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Page 4

Date : 25-JAN-2013 17:53

Client ID:

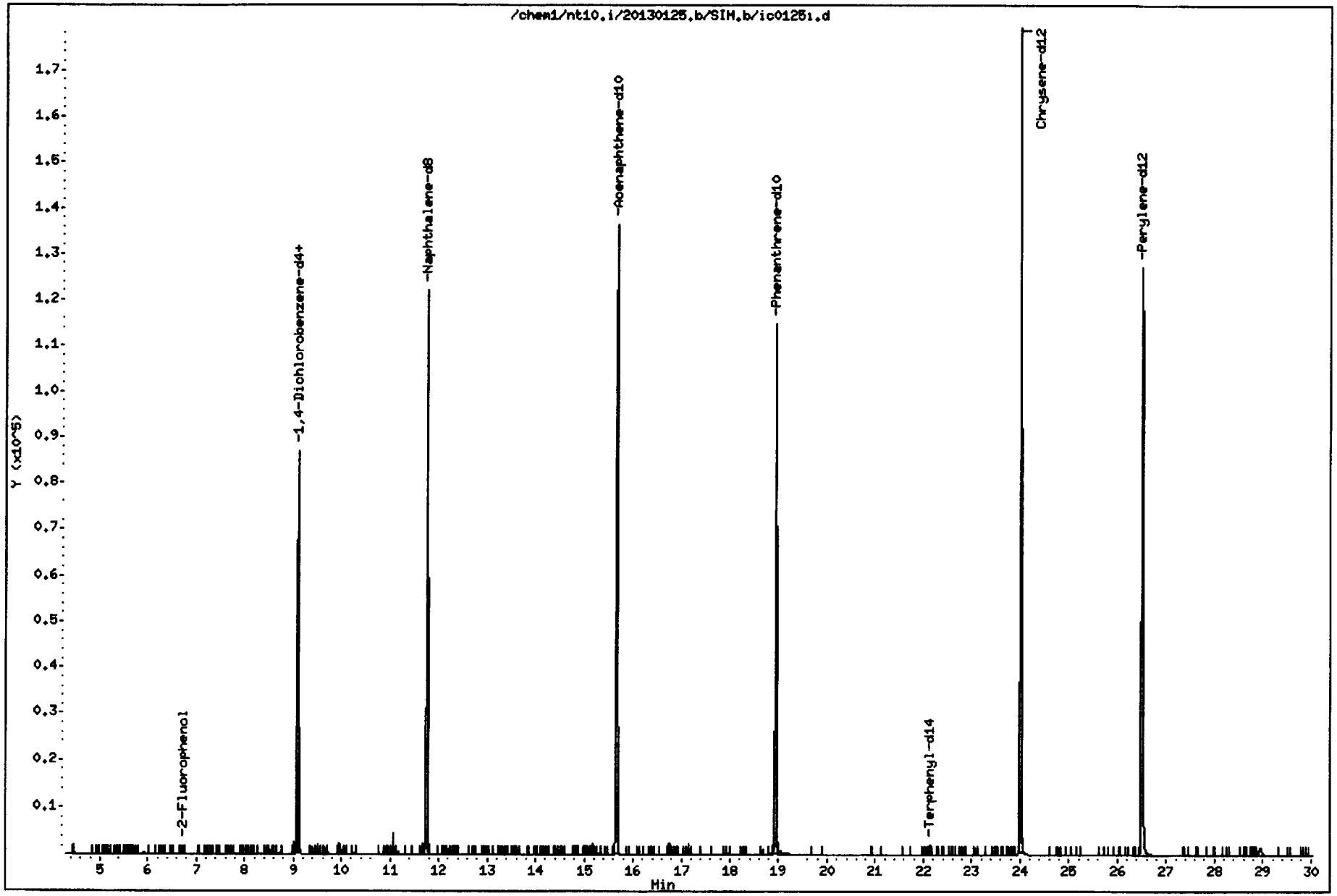
Instrument: nt10.i

Sample Info: IC0125I

Operator: YZ

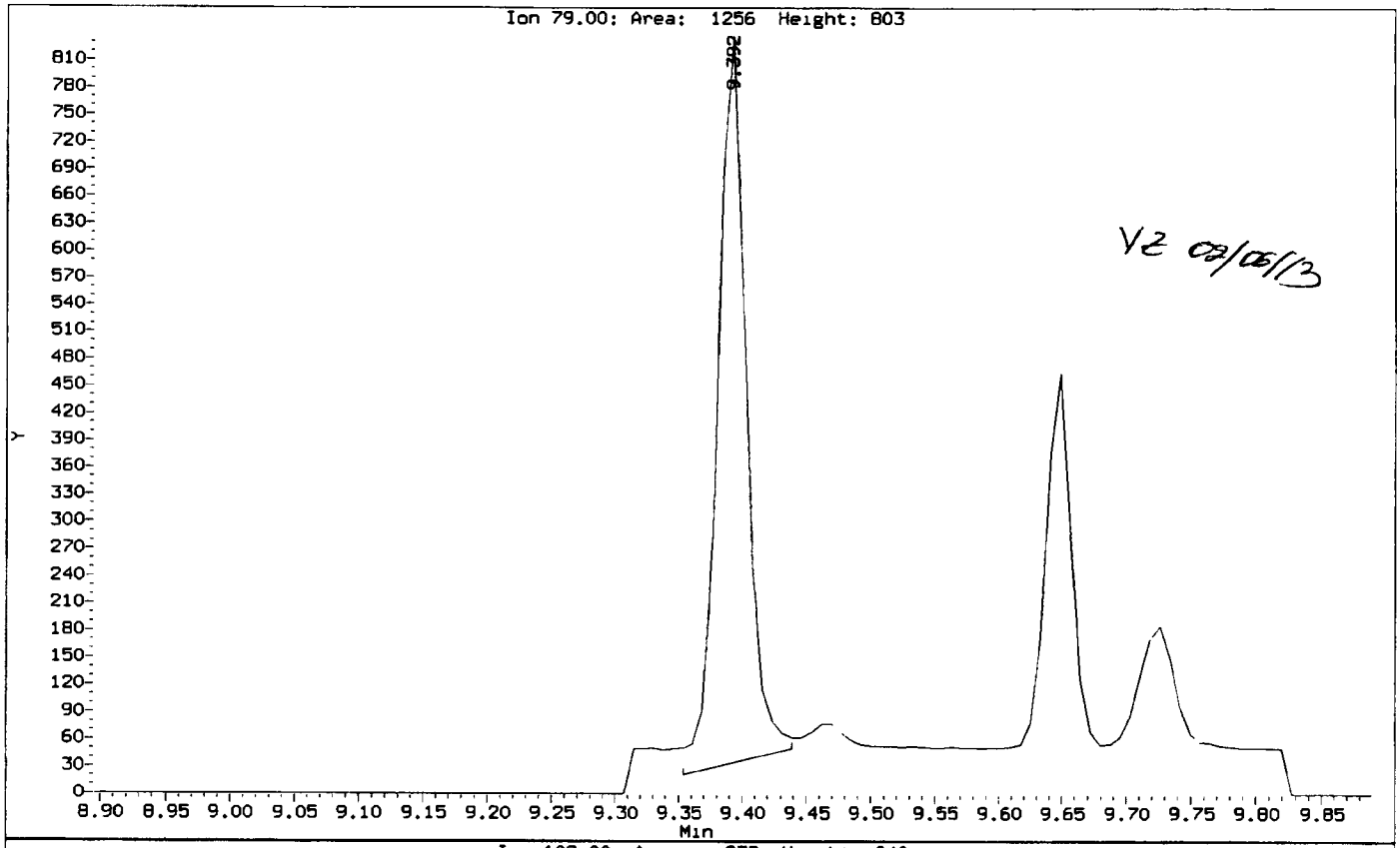
Column phase: ZB-5msi

Column diameter: 0.25

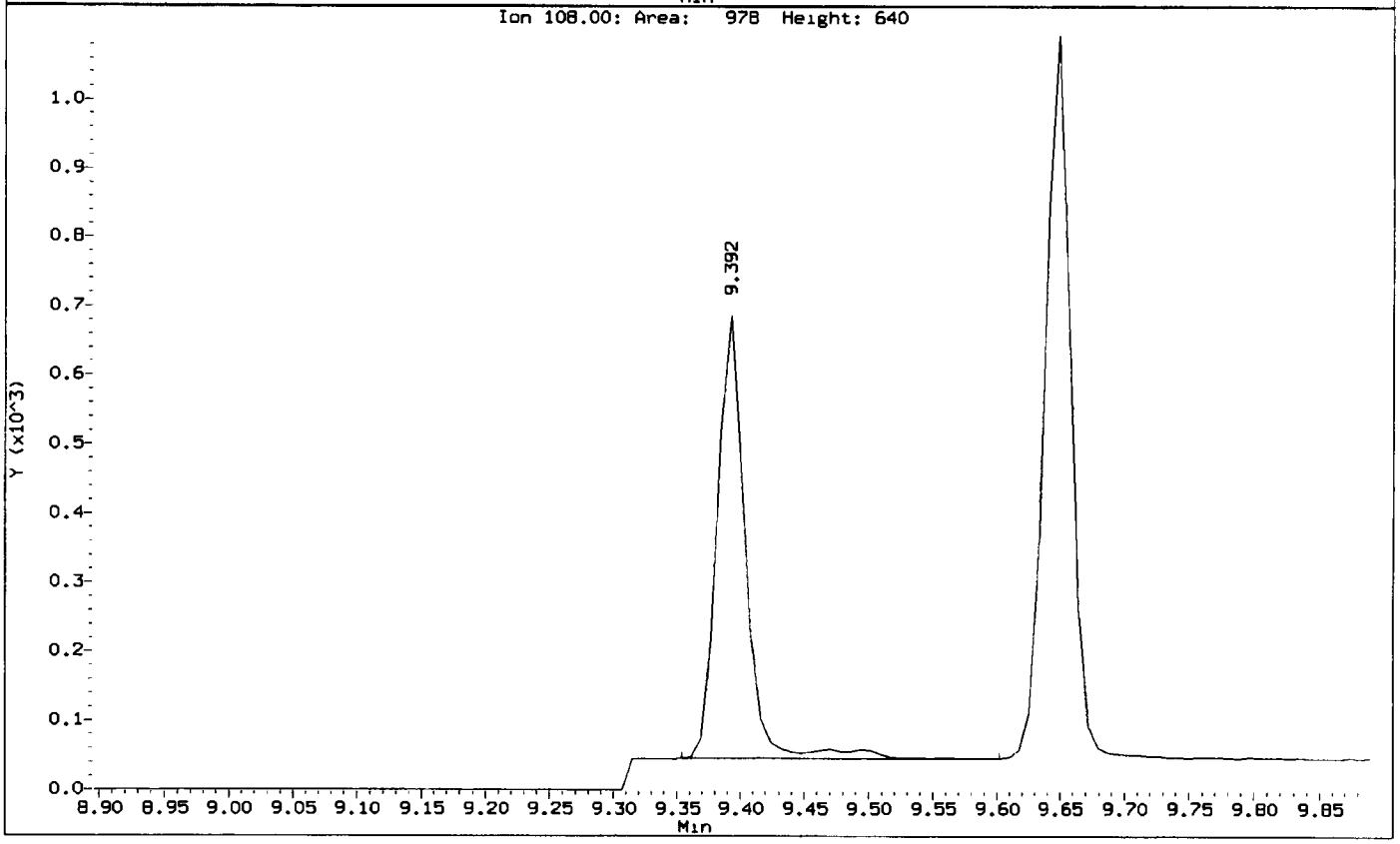


Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125i.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: Benzyl alcohol
CAS Number: 100-51-6



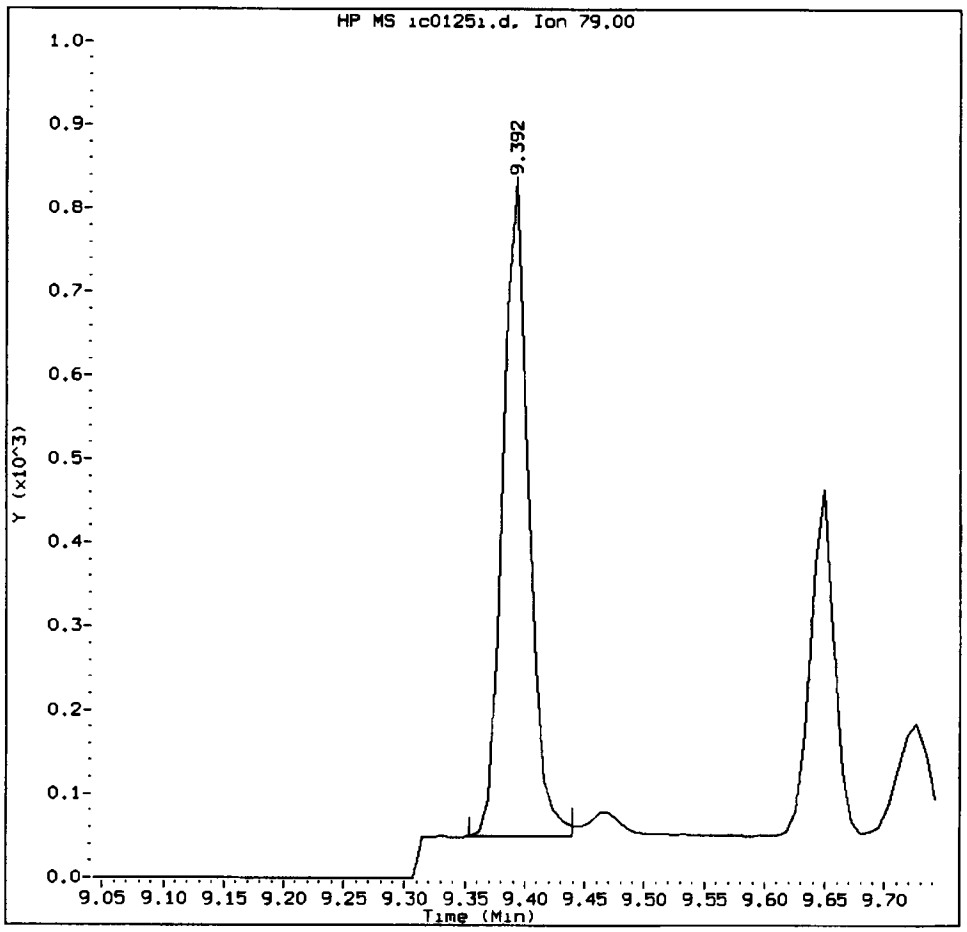
VL 08/06/13



WJ 10 08824

IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Benzyl alcohol Amount: 0.09 Area: 1174



MANUAL INTEGRATION for Benzyl alcohol

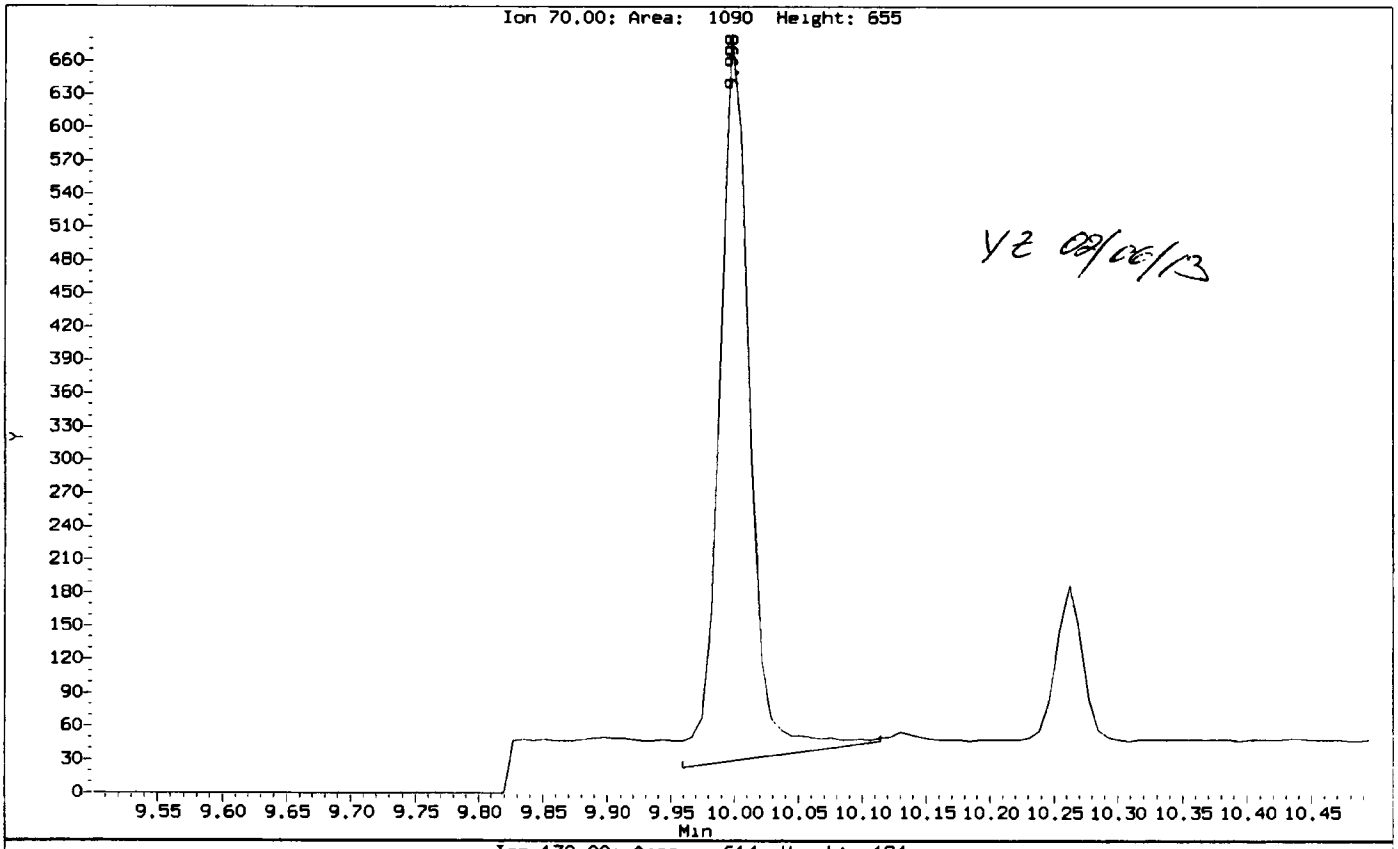
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

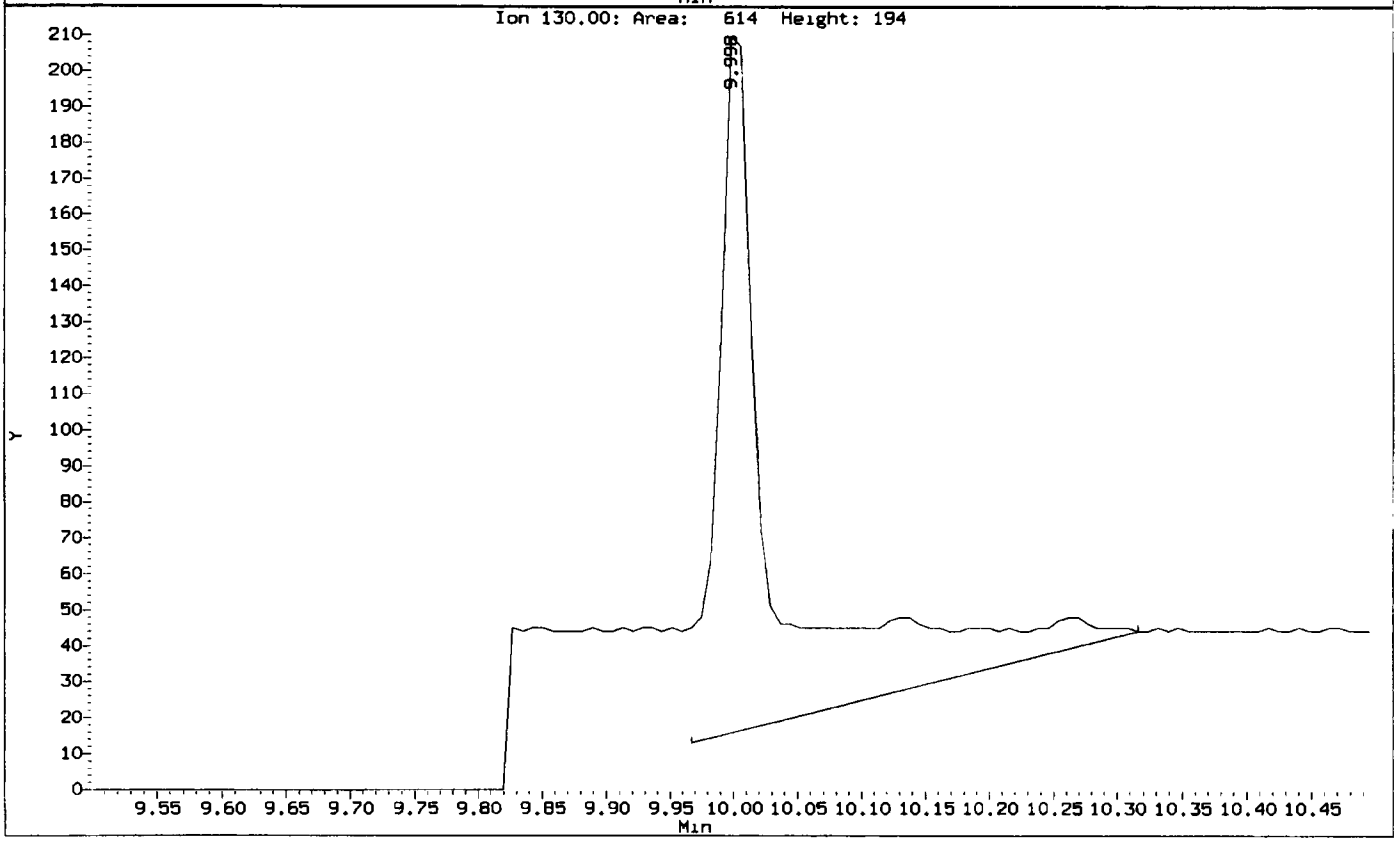
Analyst: VZ Date: 08/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.i
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7

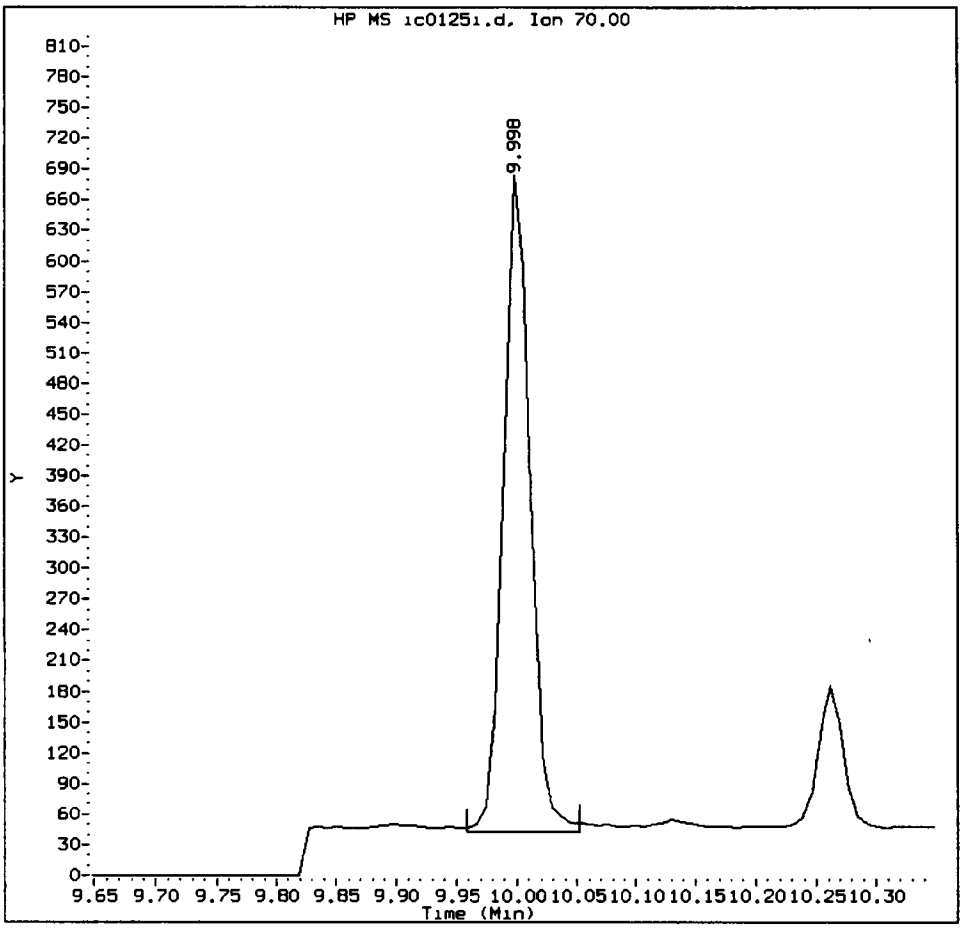


YZ 08/06/13



IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

N-Nitroso-di-n-propylamine Amount: 0.10 Area: 990



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

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

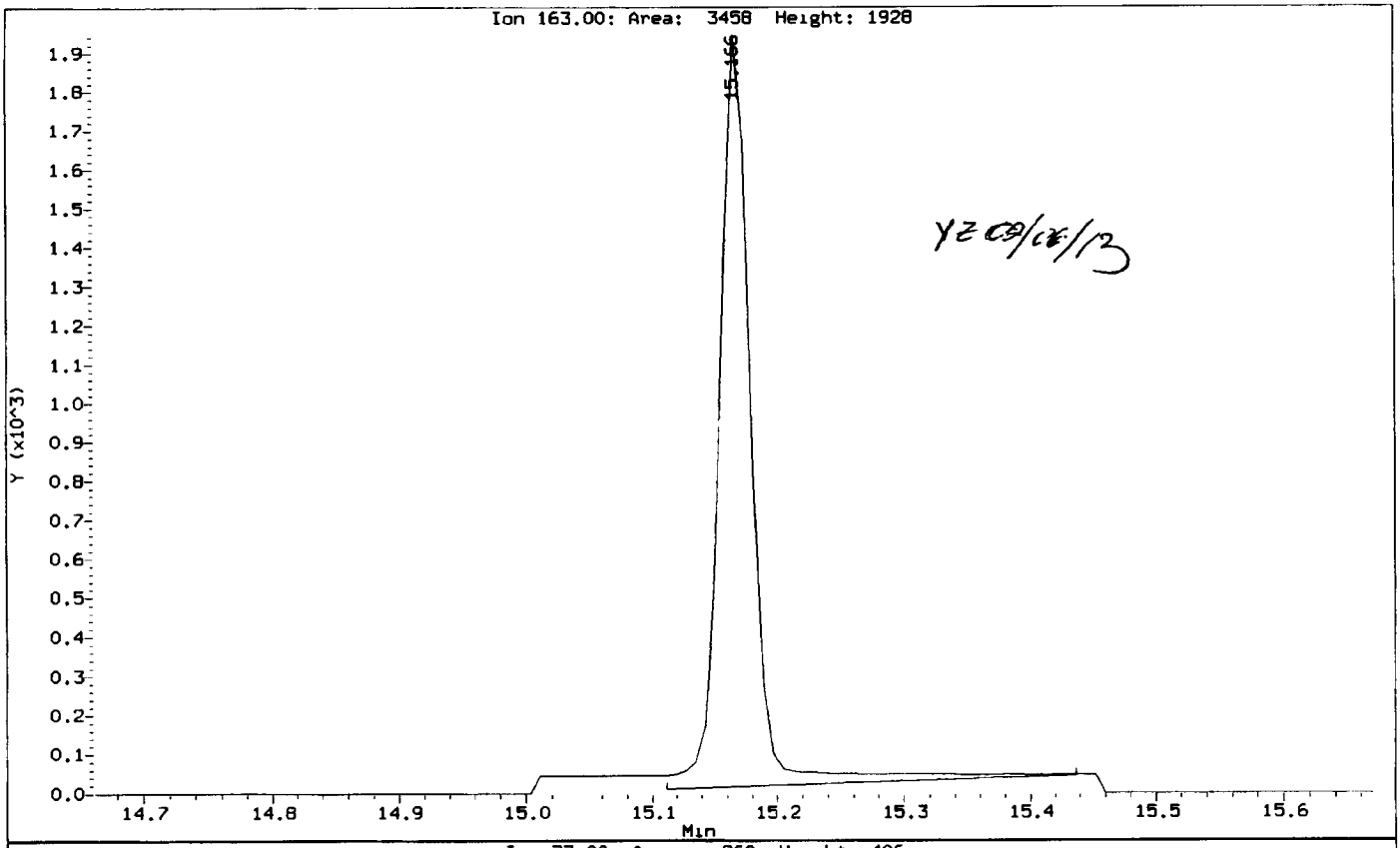
5. Other _____

Analyst: YZ Date: 08/06/13

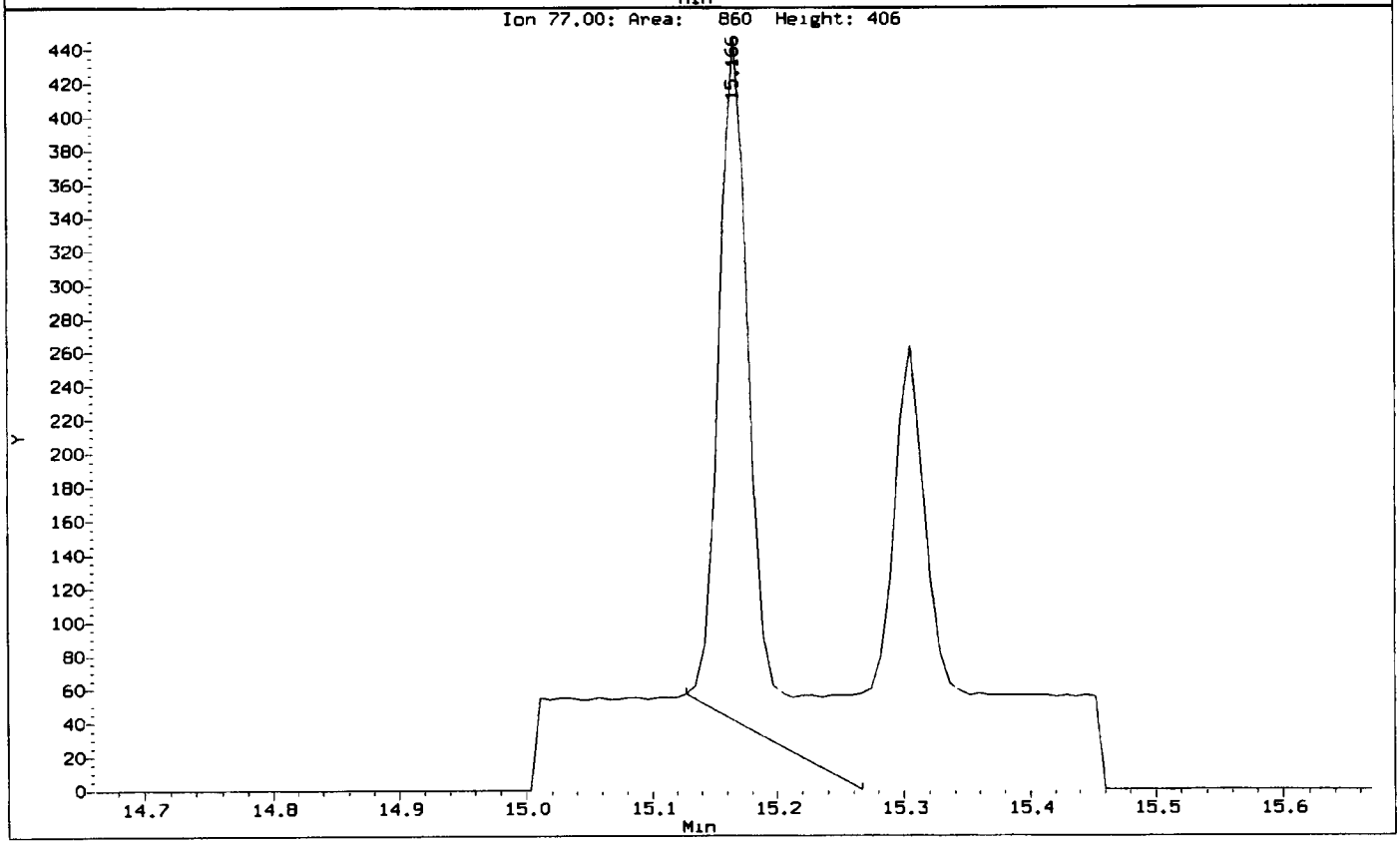
JUL 19 2002

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.i
Client Sample ID:

Compound: Dimethylphthalate
CAS Number: 131-11-3



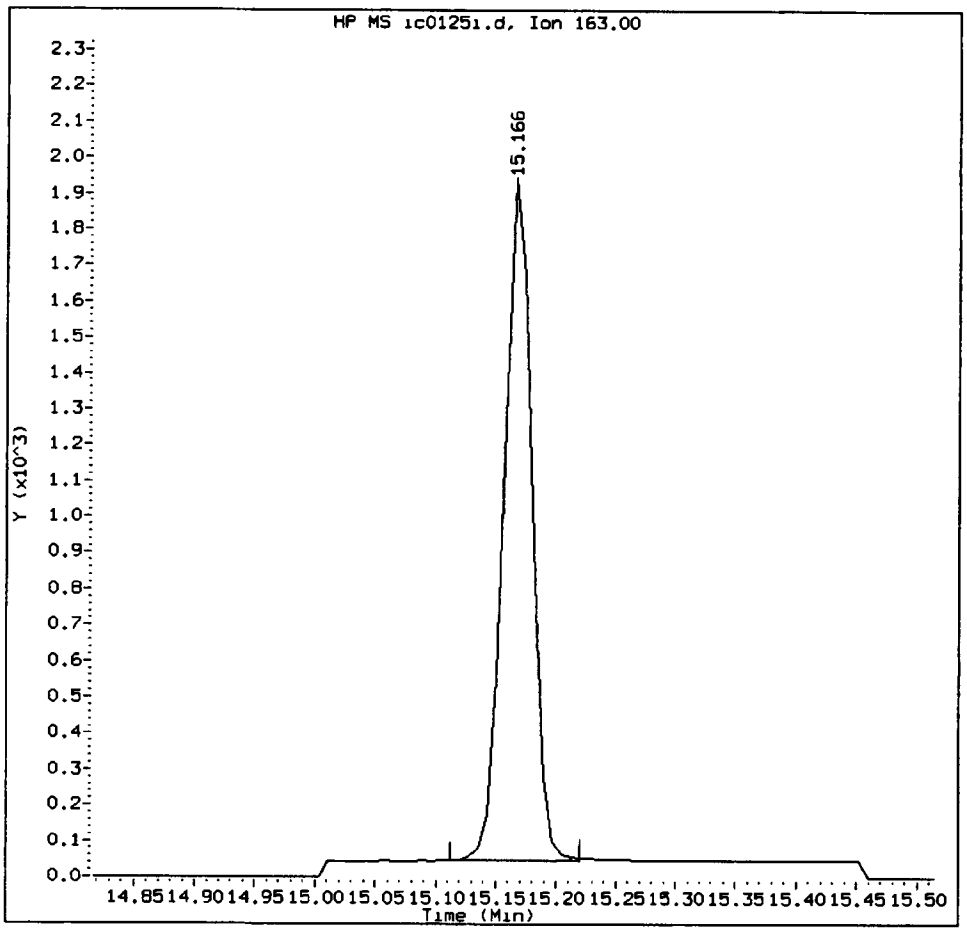
YZ 09/06/13



WL_18 : 00025

IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Dimethylphthalate Amount: 0.10 Area: 3070



MANUAL INTEGRATION for Dimethylphthalate

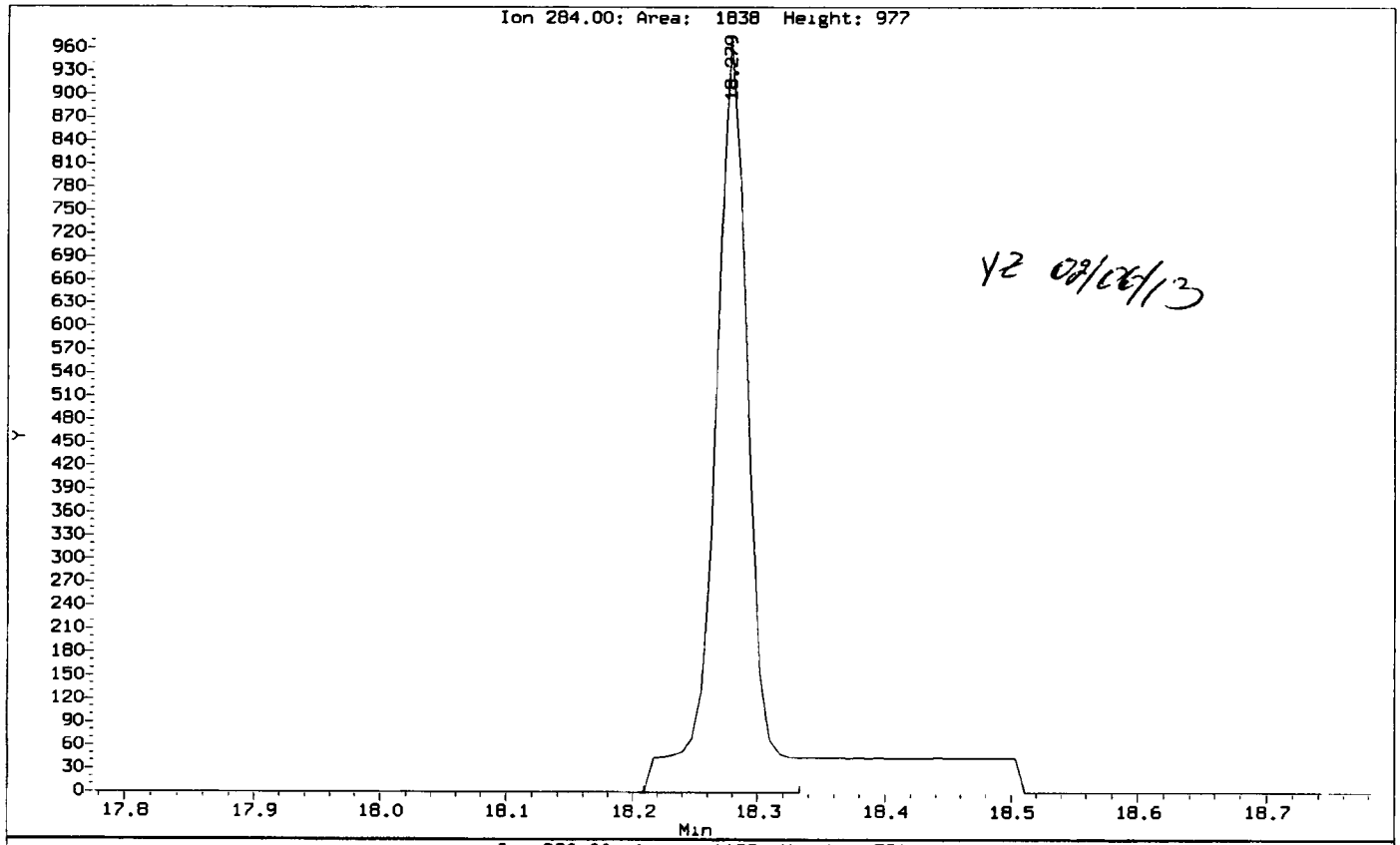
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

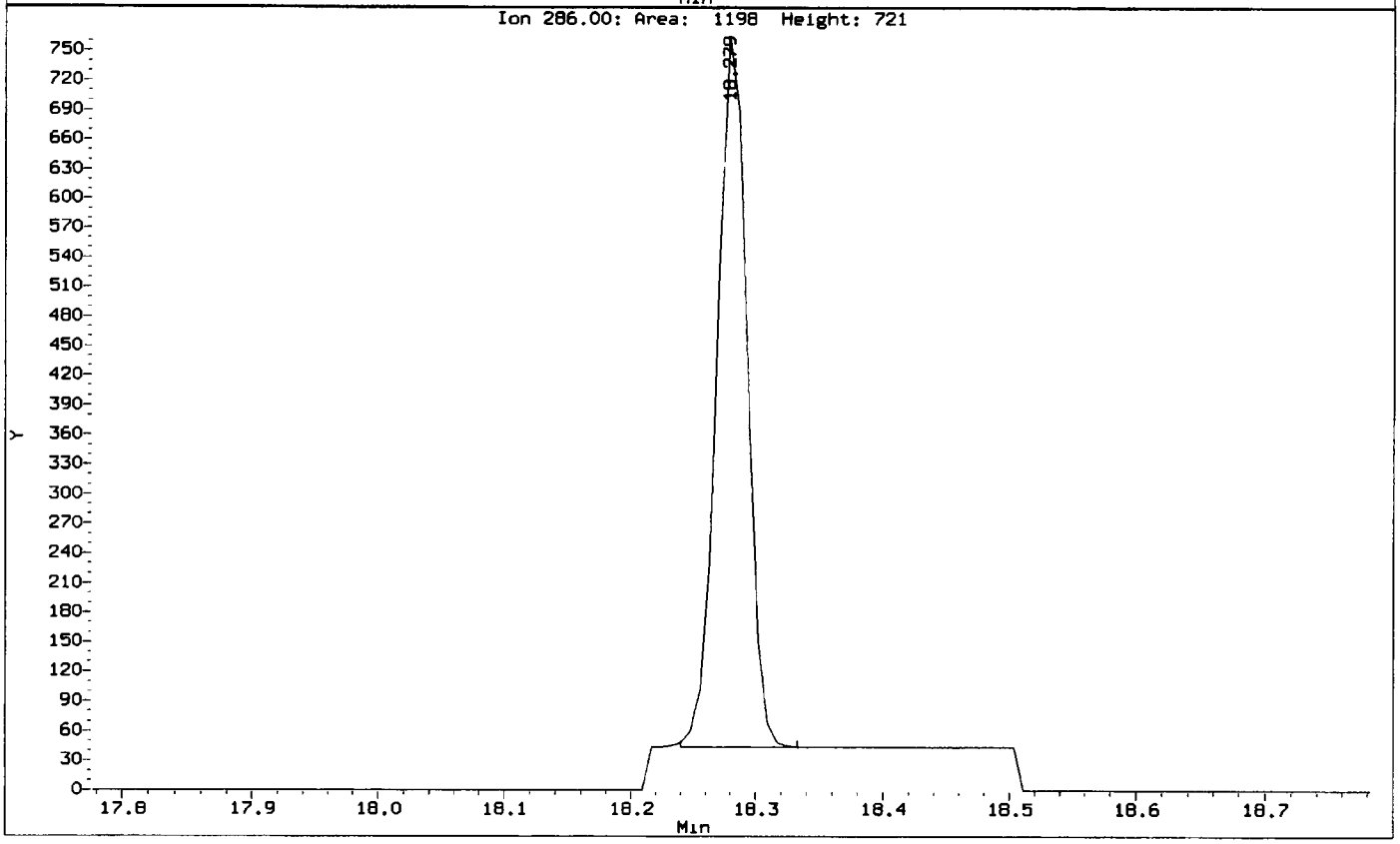
Analyst: YZ Date: 08/06/13

Data File: /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.i
Client Sample ID:

Compound: Hexachlorobenzene
CAS Number: 118-74-1



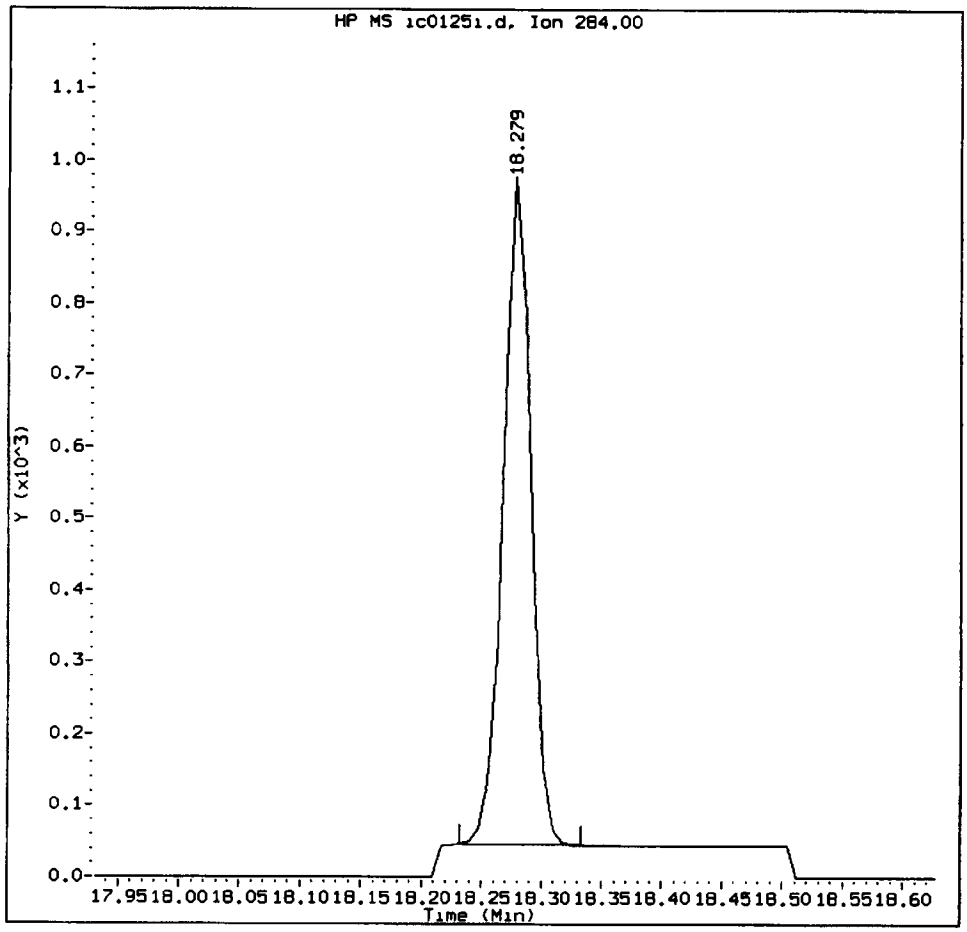
YZ 02/06/13



WL/8 0997

IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Hexachlorobenzene Amount: 0.10 Area: 1494



MANUAL INTEGRATION for Hexachlorobenzene

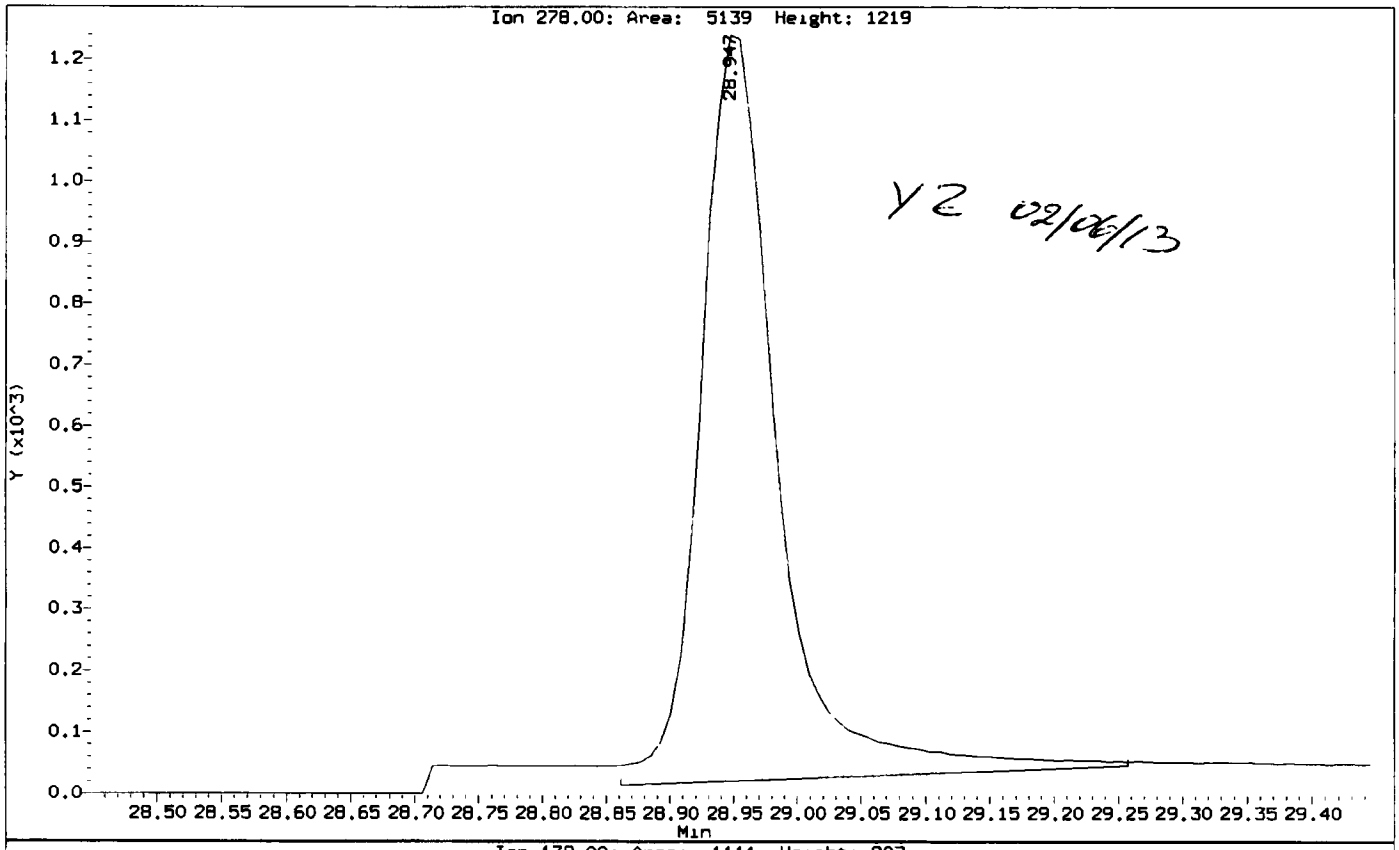
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

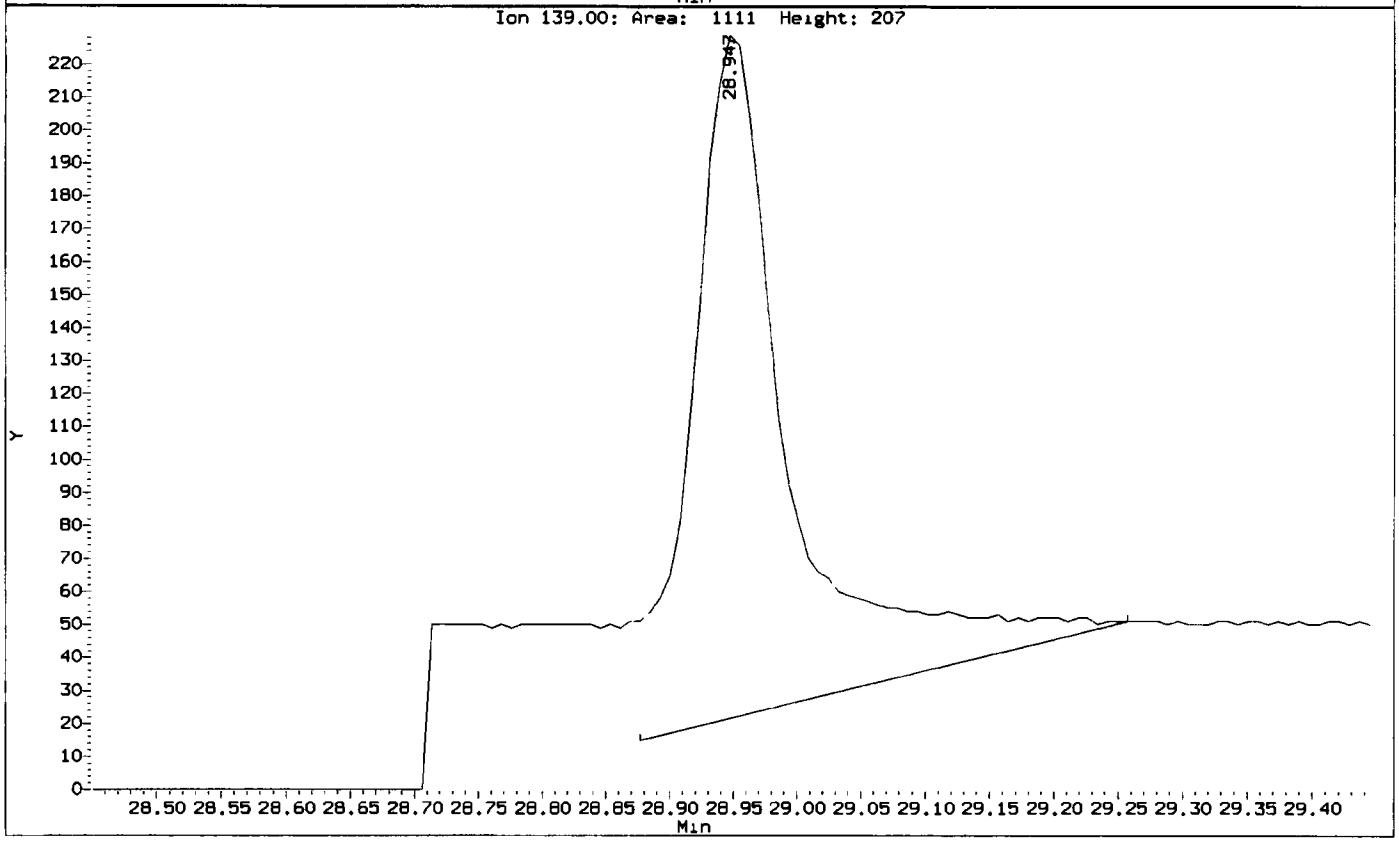
Analyst: YZ Date: 02/06/13

Data File: /chem1/nt10.1/20130125.b/SIM.b/1c0125.1.d
Injection Date: 25-JAN-2013 17:53
Instrument: nt10.1
Client Sample ID:

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3

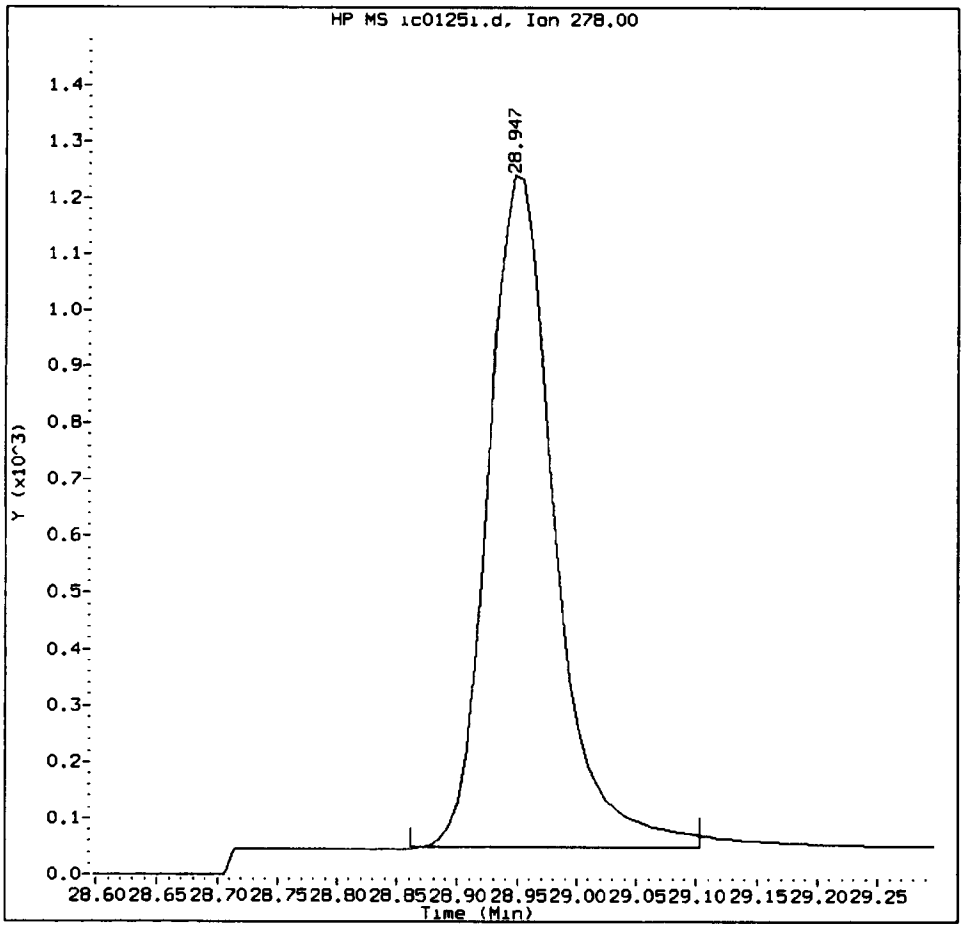


YZ 02/06/13



IC0125I, /chem1/nt10.i/20130125.b/SIM.b/ic0125i.d

Dibenzo(a,h)anthracene Amount: 0.09 Area: 4594



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: YZ Date: 03/06/13

CO-ELUTION SUMMARY FOR FILE - ic0125i.d

Lab ID: IC0125I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 25-JAN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

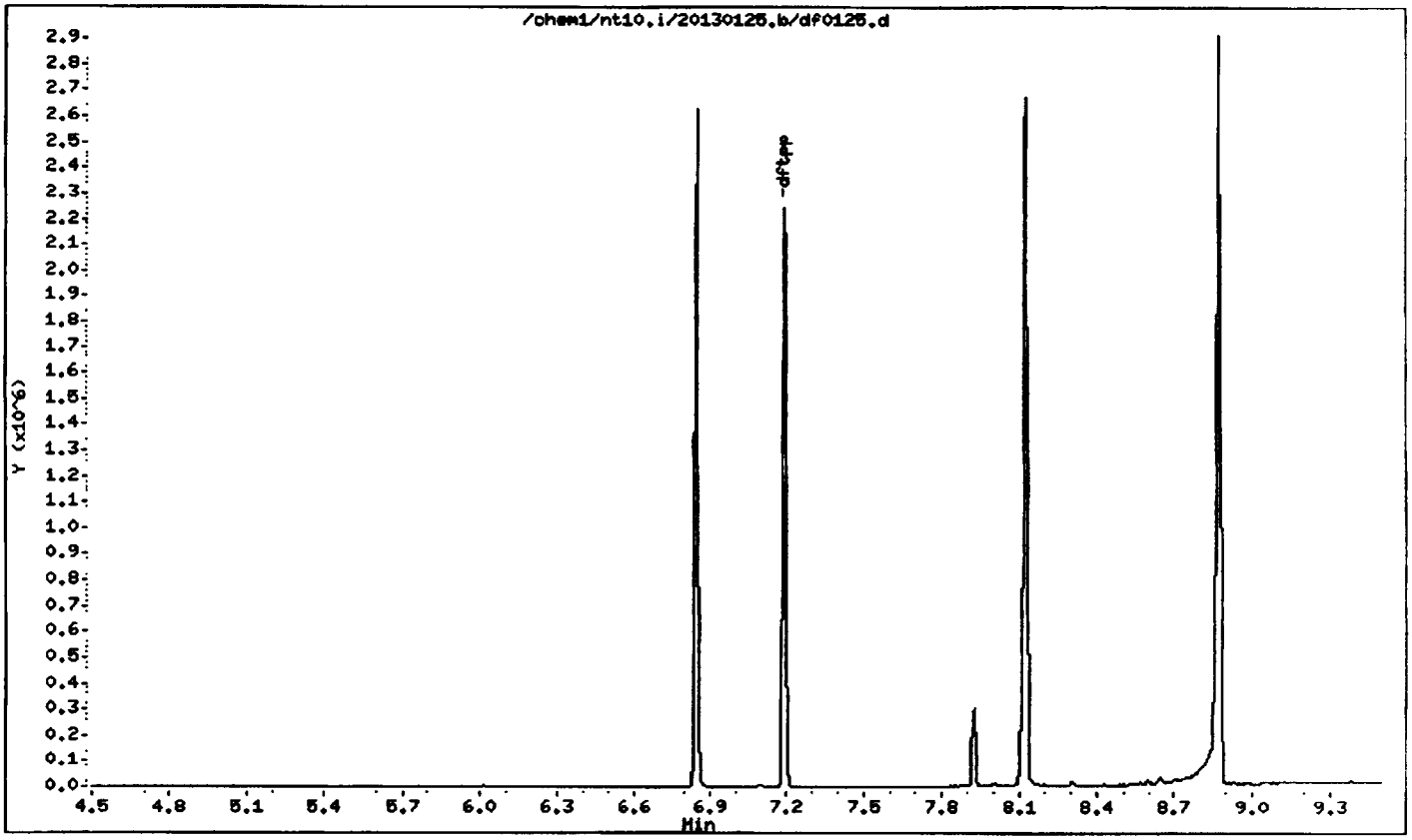
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

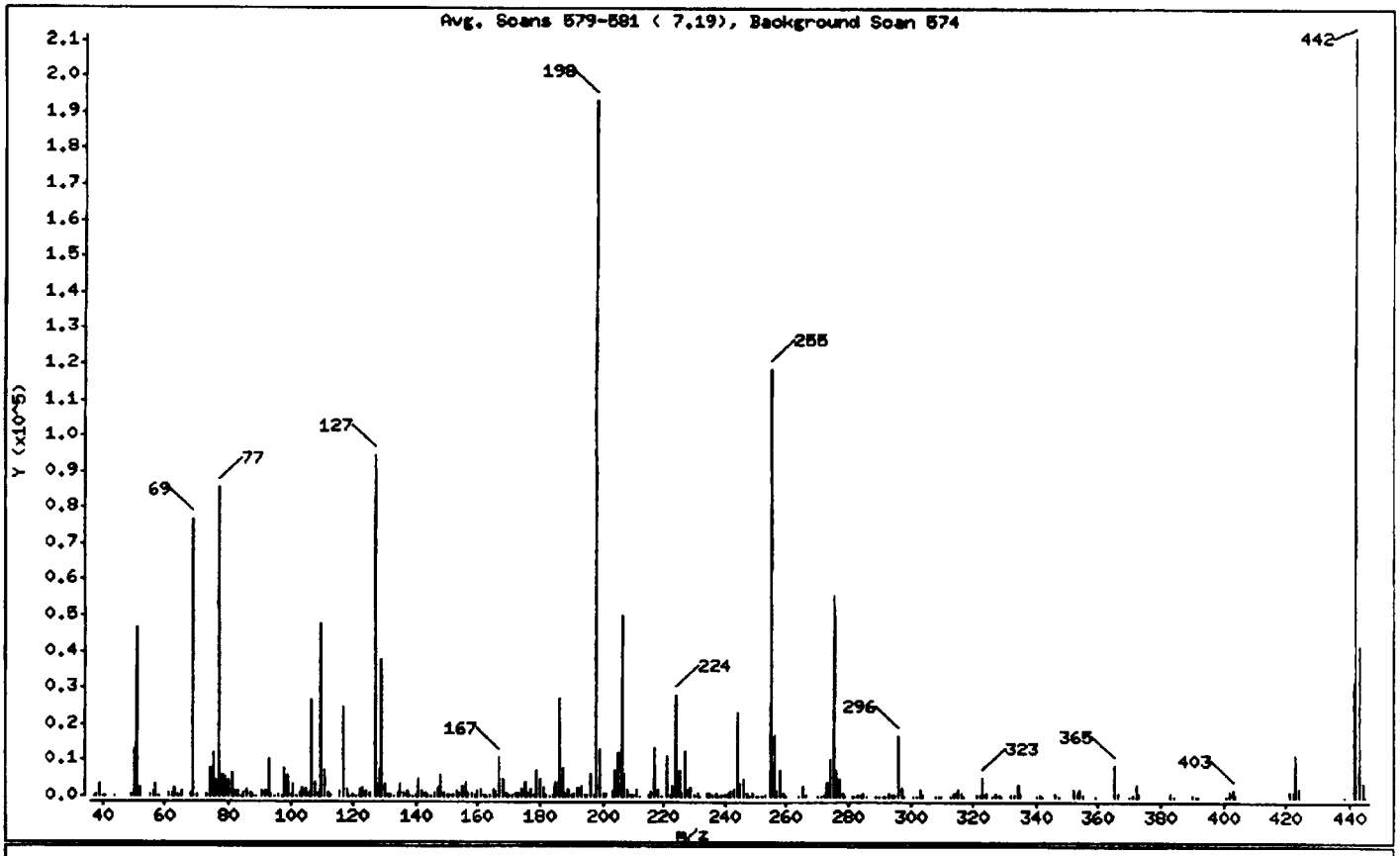
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	24.19
68	Less than 2.00% of mass 69	0.61 (1.54)
69	Mass 69 relative abundance	39.80
70	Less than 2.00% of mass 69	0.19 (0.49)
127	10.00 - 80.00% of mass 198	48.91
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	28.93
365	Greater than 1.00% of mass 198	4.43
441	0.01 - 24.00% of mass 442	16.45 (15.06)
442	50.00 - 200.00% of mass 198	109.23
443	15.00 - 24.00% of mass 442	21.82 (19.98)

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d
Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574
Location of Maximum: 442.00
Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	197	129.00	37936	204.00	7247	290.00	134
38.00	705	130.00	3252	205.00	12071	291.00	73
39.00	3533	131.00	616	206.00	50152	292.00	193
40.00	113	132.00	309	207.00	6355	293.00	1040
41.00	57	133.00	201	208.00	1855	294.00	300
44.00	41	134.00	1063	209.00	685	295.00	432
49.00	407	135.00	3189	210.00	390	296.00	17168
50.00	12941	136.00	1177	211.00	2076	297.00	2409
51.00	46792	137.00	1570	212.00	126	298.00	117
52.00	2479	138.00	318	215.00	691	301.00	186
55.00	299	139.00	141	216.00	1249	302.00	228
56.00	1601	140.00	439	217.00	13670	303.00	1845
57.00	3595	141.00	5058	218.00	1710	304.00	531
58.00	186	142.00	1565	219.00	126	308.00	197
61.00	736	143.00	1108	221.00	10937	309.00	121
62.00	914	144.00	315	222.00	480	310.00	187
63.00	2618	145.00	214	223.00	3072	313.00	153
64.00	316	146.00	882	224.00	28320	314.00	792
65.00	1300	147.00	2615	225.00	7216	315.00	2023
68.00	1189	148.00	6026	226.00	852	316.00	1067
69.00	76976	149.00	1129	227.00	12743	317.00	159
70.00	375	150.00	301	228.00	1719	321.00	538
73.00	705	151.00	726	229.00	2389	322.00	299
74.00	7863	152.00	293	230.00	329	323.00	5388
75.00	12207	153.00	1577	231.00	1021	324.00	1013
76.00	4289	154.00	1181	232.00	167	326.00	50
77.00	85576	155.00	2757	233.00	188	327.00	1029
78.00	5655	156.00	4011	234.00	771	328.00	558
79.00	5556	157.00	812	235.00	861	329.00	60
80.00	4389	158.00	873	236.00	627	332.00	351
81.00	6233	159.00	710	237.00	1022	333.00	548
82.00	1534	160.00	1489	238.00	110	334.00	3620
83.00	1401	161.00	2161	239.00	541	335.00	964
84.00	112	162.00	649	240.00	417	340.00	51
85.00	1085	163.00	146	241.00	730	341.00	679

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d

Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574

Location of Maximum: 442.00

Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1703	164.00	290	242.00	1687	342.00	153
87.00	795	165.00	1882	243.00	1735	346.00	1164
88.00	279	166.00	1494	244.00	23312	347.00	162
89.00	81	167.00	10689	245.00	3158	352.00	1760
91.00	1338	168.00	4694	246.00	4620	353.00	1209
92.00	1519	169.00	848	247.00	978	354.00	1709
93.00	9994	170.00	329	248.00	181	355.00	309
94.00	645	171.00	378	249.00	862	359.00	64
95.00	134	172.00	865	250.00	149	365.00	8559
96.00	471	173.00	1141	251.00	169	366.00	1203
97.00	212	174.00	2025	252.00	221	370.00	156
98.00	7840	175.00	3911	253.00	585	371.00	436
99.00	5867	176.00	1174	255.00	118624	372.00	3166
100.00	531	177.00	1772	256.00	17216	373.00	730
101.00	3503	178.00	646	257.00	1329	383.00	830
102.00	180	179.00	7329	258.00	7275	384.00	228
103.00	1140	180.00	4831	259.00	1188	390.00	433
104.00	2300	181.00	2296	260.00	200	391.00	237
105.00	2067	182.00	354	261.00	142	392.00	163
106.00	732	183.00	241	264.00	186	401.00	177
107.00	26848	184.00	572	265.00	2938	402.00	1244
108.00	4043	185.00	3662	266.00	493	403.00	1787
109.00	744	186.00	27072	270.00	126	404.00	646
110.00	47768	187.00	7673	271.00	234	421.00	1637
111.00	7142	188.00	763	272.00	384	422.00	1574
112.00	909	189.00	1730	273.00	3889	423.00	11637
113.00	338	190.00	326	274.00	10079	424.00	2496
116.00	1403	191.00	859	275.00	55952	425.00	200
117.00	24664	192.00	2439	276.00	7415	437.00	50
118.00	1723	193.00	2782	277.00	4869	438.00	71
119.00	207	194.00	548	278.00	775	441.00	31824
120.00	344	195.00	439	279.00	140	442.00	211264
121.00	108	196.00	6210	281.00	108	443.00	42208
122.00	1841	197.00	402	282.00	139	444.00	4074
123.00	2656	198.00	193408	283.00	558	445.00	209

Data File: /chem1/nt10.i/20130125.b/df0125.d

Date : 25-JAN-2013 12:43

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0125.d

Spectrum: Avg. Scans 579-581 (7.19), Background Scan 574

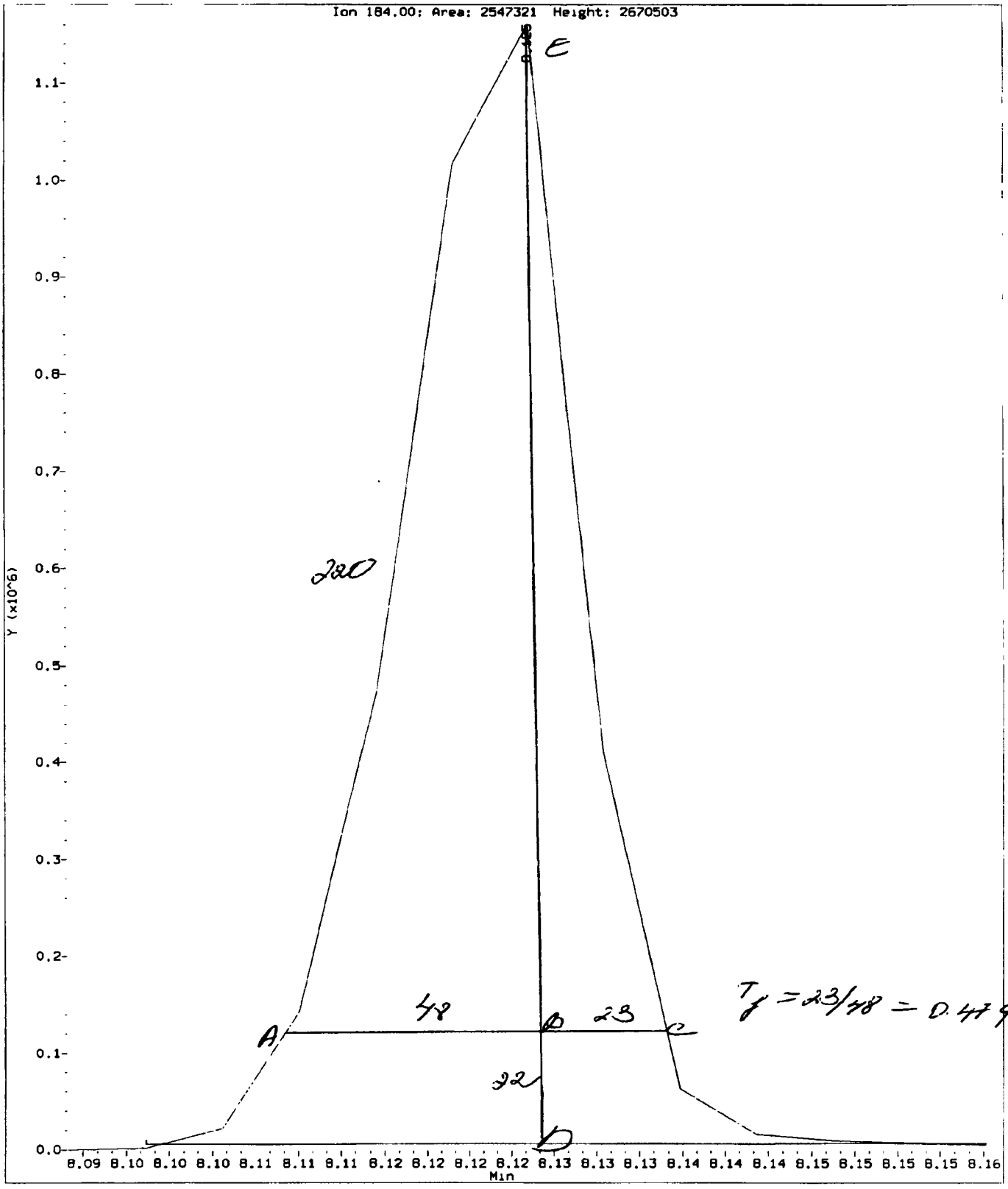
Location of Maximum: 442.00

Number of points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1219	199.00	12893	284.00	387		
125.00	1090	200.00	1075	285.00	813		
127.00	94600	201.00	925	286.00	126		
128.00	7116	203.00	1424	289.00	147		

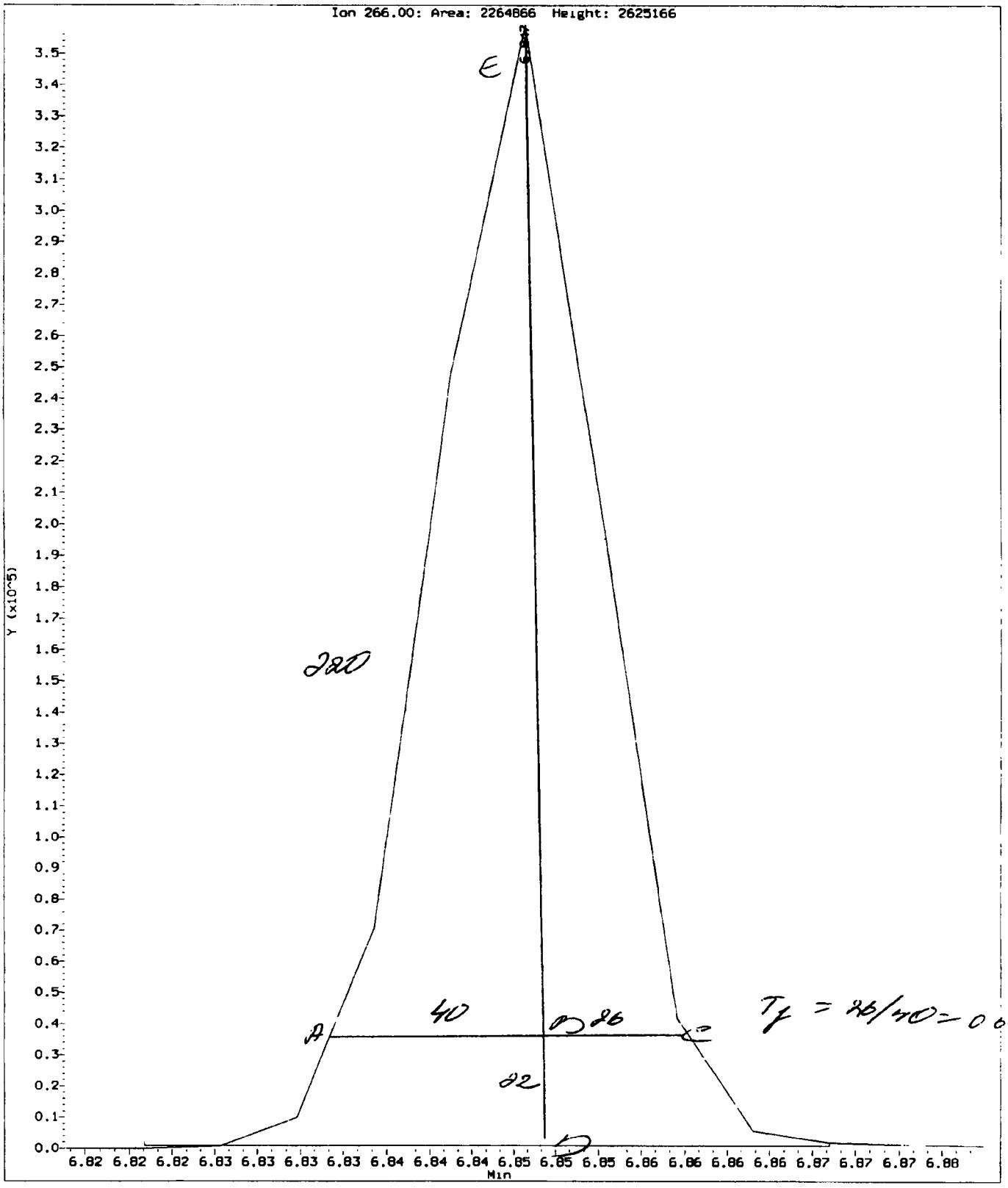
Data File: /chem1/nt10.1/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130125.b/ddt.b/df0125.d
Injection Date: 25-JAN-2013 12:43
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130125.b/ddt.b/df0125.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130125.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 25-JAN-2013 12:43 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.847	2264865
Benzidine	8.125	2547321
4,4'-DDE	8.307	1813
4,4'-DDD	8.644	5130
4,4'-DDT	8.874	537797

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

$$\text{DDT Percent Breakdown} = \frac{(1813 + 5130) * 100}{(1813 + 5130 + 537797)}$$

DDT Percent Breakdown = 1.3 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL49, WL65

Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL49 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date: 04/25/13 Analysis Start Date: 04/24/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ✓	Internal Standard within 50-200%?	(Y) / N / ✓
DDT Breakdown <20%?	(Y) / N / ✓	Retention Times within Windows?	(Y) / N / ✓
Peak Tailing Factor ≤2?	(Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
CCAL Meets %D?	(Y) / N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓ LCS only
ICAL Q Flag applied?	Y / (N) / ✓	LCS / LCSD RPD ≤ 30%?	(NA) / LCS only
CCAL Q flag applied?	(Y) / N / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Surrogate Recovery met?	(Y) / N / ✓	MS / MSD RPD ≤ 30%?	NA / ✓ < 30%
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.

- Sample 6 was run @ 3X dilution due to dark color of the extract.

(Review 1) Analyst: YZ **Date:** 4/25/13

(Review 2) Reviewer: [signature] **Date:** 4/28/13

WL49 00011

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/24/13 Analysis: 8260/5/MBTEX Analyst: YE

GC Program: 8260_2 Column No: 247358 Column Type: ZB5 MS1

Instrument Tune (.U or .CT.): 130228.U EM Voltage: 1625

Calibration File: DF0424 Curve Date: 04/25/13 Injection Vol.: 1 mL

IS/SS	Ical/Ccal	LCS/ICV
1978-2	2036-2 2030-2	
	2064-2 1998-4	
	2068-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b

	Time	Filename	LabID	ClientId	DF									
1	1730	df0424.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1823	cc0424a.d	CC0424A		1	7.66	64368	10.26	235264	14.11	134084	17.34	242738	22.64	250279	24.94	226945
3	1900	wl49mb.d	WL49MBS1	WL49MBS1	1	7.66	62056	10.26	235471	14.11	133819	17.34	241354	22.64	250567	24.94	221480
4	1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	7.66	53955	10.26	202366	14.11	120107	17.34	213856	22.64	229947	24.95	210603
5	2014	wl49f.d	WL49F	IM-CB-01-201	3	7.66	55621	10.27	199995	14.12	105965	17.36	184592	22.70	226727	25.02	224029
6	2051	wl49g.d	WL49G	IM-CB-02-201	1	7.66	45698	10.27	175549	14.11	98060	17.34	158125	22.65	188920	24.97	193290
7	2127	wl49gms.d	WL49GMS	IM-CB-02-201	1	7.66	48830	10.27	186600	14.11	105738	17.34	177609	22.65	210924	24.98	216411
8	2204	wl49gmsd.d	WL49GMSD	IM-CB-02-201	1	7.66	49791	10.27	192622	14.12	107090	17.34	175504	22.65	207051	24.98	197195
9	2241	wl67a.d	WL67A	GR-CB-07-201	3	7.67	57007	10.27	219195	14.12	123616	17.35	216207	22.69	239042	25.04	229899
10	2318	wl67b.d	WL67B	GR-WS-05-201	3	7.67	47798	10.27	181756	14.12	104571	17.35	173569	22.68	213736	25.02	206547

YE 4/24/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b/SIM.b

ARI Job No.: WL49 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 24-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1900	wl49mb.d	WL49MBS1	WL49MBS1	1	NO MANUAL INTEGRATION
1937	wl49sb.d	WL49LCSS1	WL49LCSS1	1	NO MANUAL INTEGRATION
2051	wl49g.d	WL49G	IM-CB-02-2	1	4-Methylphenol, Dimethylphthalate, Diethylphthalate, Butylbenzylphthalate, Dibenzo(a,h)anthracene,
2127	wl49gms.d	WL49GMS	IM-CB-02-2	1	NO MANUAL INTEGRATION
2204	wl49gmsd.d	WL49GMSD	IM-CB-02-2	1	NO MANUAL INTEGRATION
2241	wl67a.d	WL67A	GR-CB-07-2	3	Benzyl alcohol, Diethylphthalate,
2318	wl67b.d	WL67B	GR-WS-05-2	3	Dimethylphthalate, N-Nitrosodiphenylamine,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130424.b/SIM.b

Instrument: nt10.i Date: 24-APR-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 25-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 24-APR-2013

Compound	%D
Benzyl alcohol	-25.1
Pentachlorophenol	-34.6
Butylbenzylphthalate	23.7

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

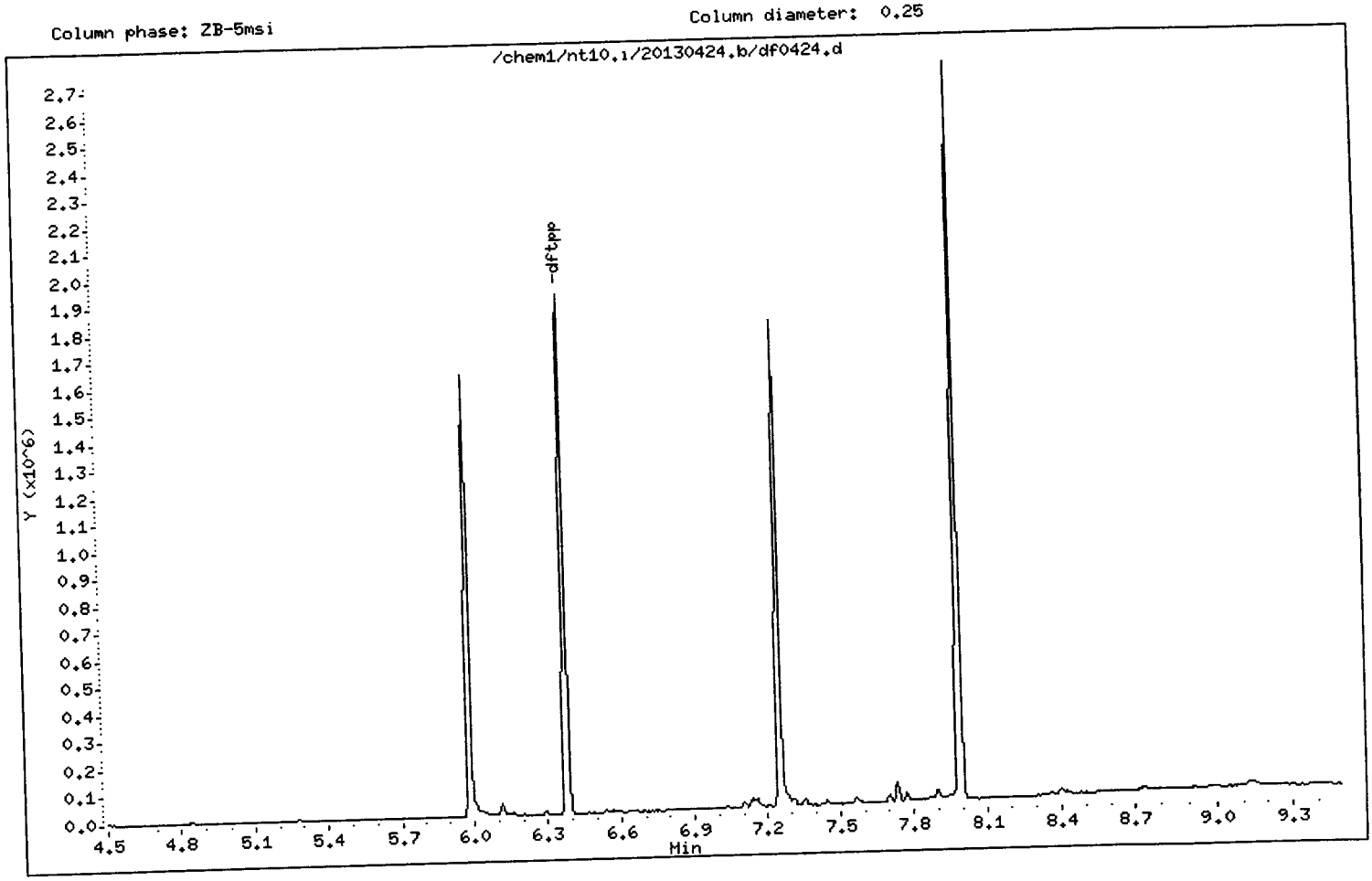
Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

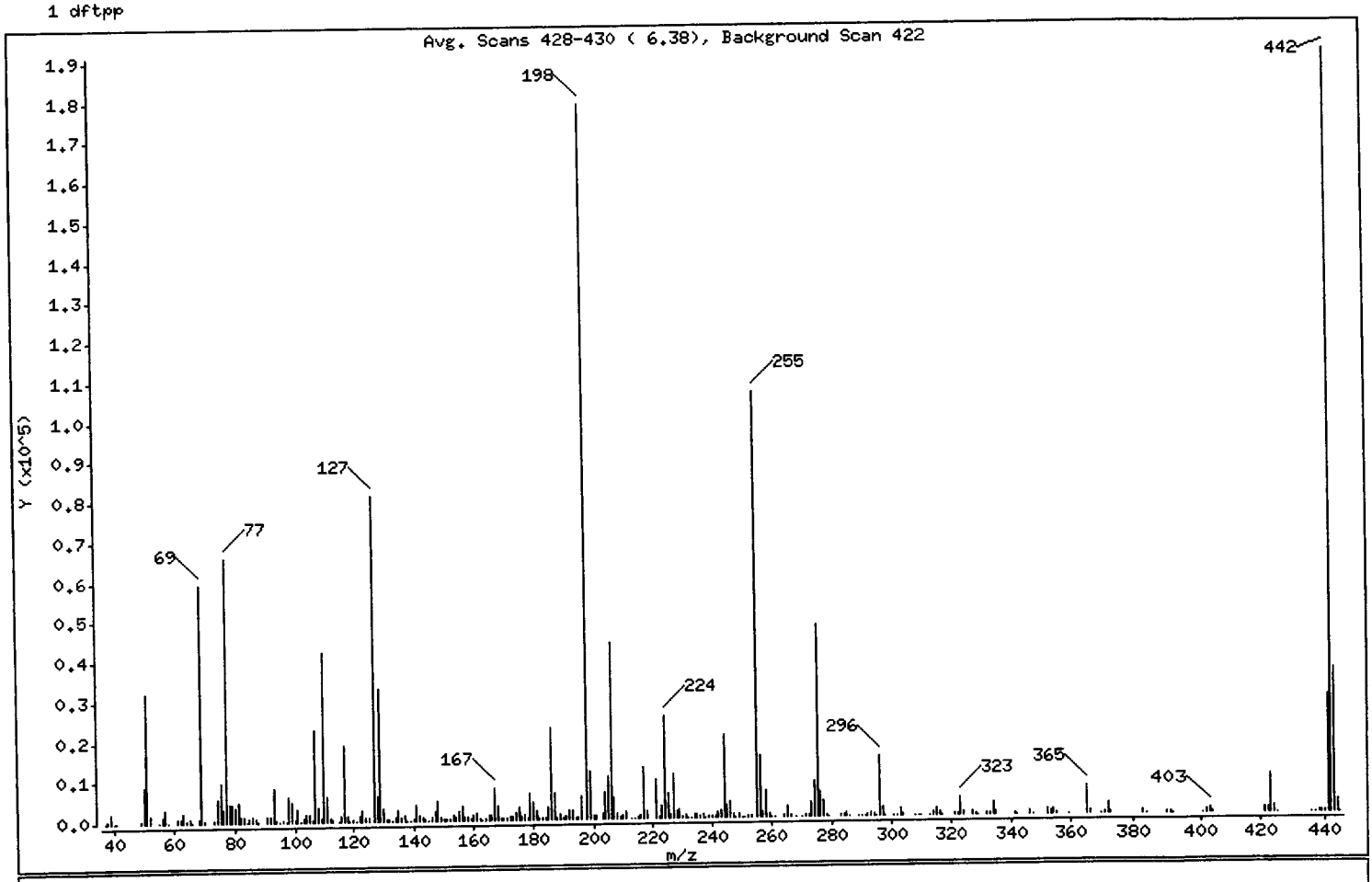
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	18.02
68	Less than 2.00% of mass 69	0.56 (1.68)
69	Mass 69 relative abundance	33.29
70	Less than 2.00% of mass 69	0.14 (0.44)
127	10.00 - 80.00% of mass 198	45.50
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.59
275	10.00 - 60.00% of mass 198	26.71
365	Greater than 1.00% of mass 198	3.93
441	0.01 - 24.00% of mass 442	16.43 (15.36)
442	50.00 - 200.00% of mass 198	106.98
443	15.00 - 24.00% of mass 442	20.26 (18.94)

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0424.d

Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422

Location of Maximum: 442.00

Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	62	129.00	32808	205.00	10718	290.00	51
38.00	420	130.00	2896	206.00	44136	291.00	54
39.00	2403	131.00	583	207.00	5430	292.00	222
40.00	124	132.00	275	208.00	1492	293.00	990
41.00	119	133.00	139	209.00	487	294.00	258
49.00	232	134.00	875	210.00	870	295.00	142
50.00	8942	135.00	2524	211.00	1733	296.00	14776
51.00	32216	136.00	990	213.00	137	297.00	2046
52.00	1767	137.00	1248	214.00	51	298.00	79
55.00	209	138.00	208	215.00	470	301.00	193
56.00	1373	139.00	131	216.00	1026	302.00	201
57.00	3288	140.00	385	217.00	12663	303.00	1630
58.00	125	141.00	4070	218.00	1617	304.00	406
61.00	732	142.00	1272	219.00	123	308.00	209
62.00	713	143.00	934	221.00	9746	309.00	118
63.00	2186	144.00	239	222.00	376	310.00	146
64.00	352	145.00	196	223.00	2876	313.00	120
65.00	1059	146.00	707	224.00	25448	314.00	746
66.00	55	147.00	2048	225.00	6292	315.00	1736
68.00	999	148.00	4742	226.00	710	316.00	874
69.00	59536	149.00	818	227.00	10853	317.00	86
70.00	259	150.00	258	228.00	1541	321.00	496
73.00	521	151.00	595	229.00	2340	322.00	312
74.00	5709	152.00	403	230.00	329	323.00	4532
75.00	9567	153.00	1361	231.00	983	324.00	924
76.00	3032	154.00	960	232.00	161	327.00	907
77.00	66016	155.00	2359	233.00	157	328.00	495
78.00	4326	156.00	3300	234.00	690	329.00	55
79.00	4544	157.00	722	235.00	824	332.00	410
80.00	3456	158.00	725	236.00	501	333.00	464
81.00	4912	159.00	585	237.00	800	334.00	2983
82.00	1250	160.00	1364	238.00	54	335.00	737
83.00	1243	161.00	1883	239.00	520	341.00	555
84.00	206	162.00	571	240.00	310	342.00	55
85.00	820	163.00	138	241.00	588	346.00	1033

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	1326	164.00	270	242.00	1459	347.00	181
87.00	703	165.00	1532	243.00	1641	351.00	51
88.00	177	166.00	1277	244.00	20496	352.00	1489
91.00	1264	167.00	7974	245.00	2914	353.00	930
92.00	1216	168.00	3308	246.00	4015	354.00	1380
93.00	8379	169.00	651	247.00	869	355.00	264
94.00	617	170.00	234	248.00	153	359.00	143
95.00	125	171.00	352	249.00	707	365.00	7026
96.00	426	172.00	743	250.00	143	366.00	864
97.00	63	173.00	1004	251.00	215	370.00	61
98.00	6323	174.00	1678	252.00	244	371.00	407
99.00	4695	175.00	3145	253.00	592	372.00	2609
100.00	409	176.00	1010	255.00	106344	373.00	599
101.00	3009	177.00	1443	256.00	15303	383.00	669
102.00	160	178.00	550	257.00	1302	384.00	214
103.00	942	179.00	6588	258.00	6520	390.00	340
104.00	1960	180.00	4195	259.00	999	391.00	255
105.00	1831	181.00	2153	260.00	182	392.00	125
106.00	619	182.00	401	261.00	199	401.00	137
107.00	23016	183.00	228	264.00	283	402.00	1000
108.00	3453	184.00	507	265.00	2702	403.00	1513
109.00	678	185.00	3200	266.00	287	404.00	508
110.00	42288	186.00	22896	268.00	56	421.00	1378
111.00	6306	187.00	6675	270.00	185	422.00	1170
112.00	776	188.00	598	271.00	282	423.00	9532
113.00	262	189.00	1483	272.00	389	424.00	1837
115.00	58	190.00	274	273.00	3694	425.00	180
116.00	1306	191.00	747	274.00	8678	436.00	112
117.00	18768	192.00	2090	275.00	47760	437.00	156
118.00	1384	193.00	2239	276.00	6344	438.00	351
119.00	190	194.00	525	277.00	3970	439.00	457
120.00	264	195.00	249	278.00	627	440.00	251
121.00	65	196.00	5697	279.00	68	441.00	29376
122.00	1472	198.00	178816	281.00	58	442.00	191296
123.00	2448	199.00	11790	283.00	520	443.00	36224

Data File: /chem1/nt10.i/20130424.b/df0424.d

Date : 24-APR-2013 17:30

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

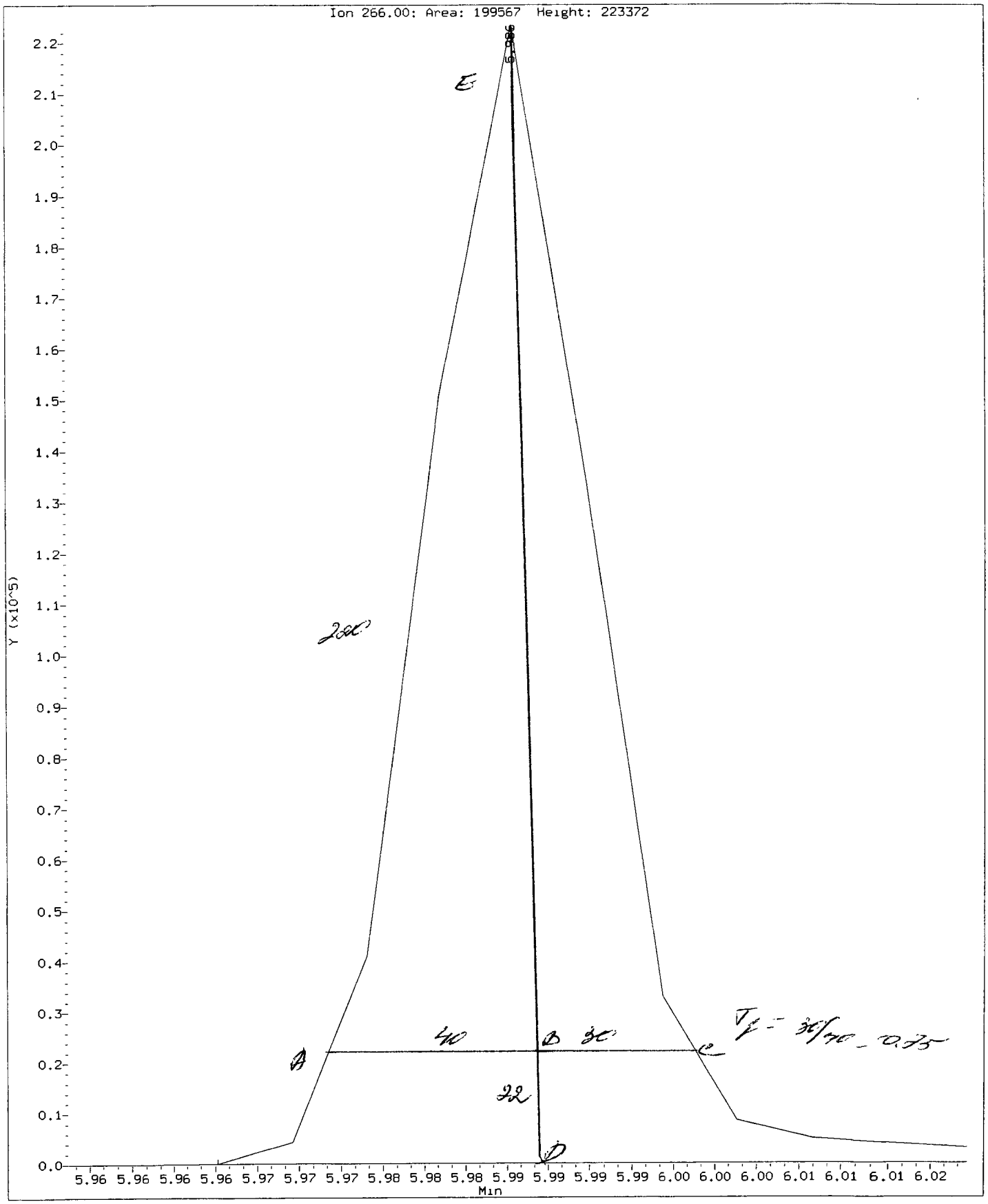
Column diameter: 0.25

Data File: df0424.d
Spectrum: Avg. Scans 428-430 (6.38), Background Scan 422
Location of Maximum: 442.00
Number of points: 294

m/z	Y	m/z	Y	m/z	Y	m/z	Y
124.00	1020	200.00	934	284.00	341	444.00	3289
125.00	1068	201.00	969	285.00	759	445.00	129
127.00	81368	203.00	1335	286.00	60		
128.00	6094	204.00	6384	289.00	105		

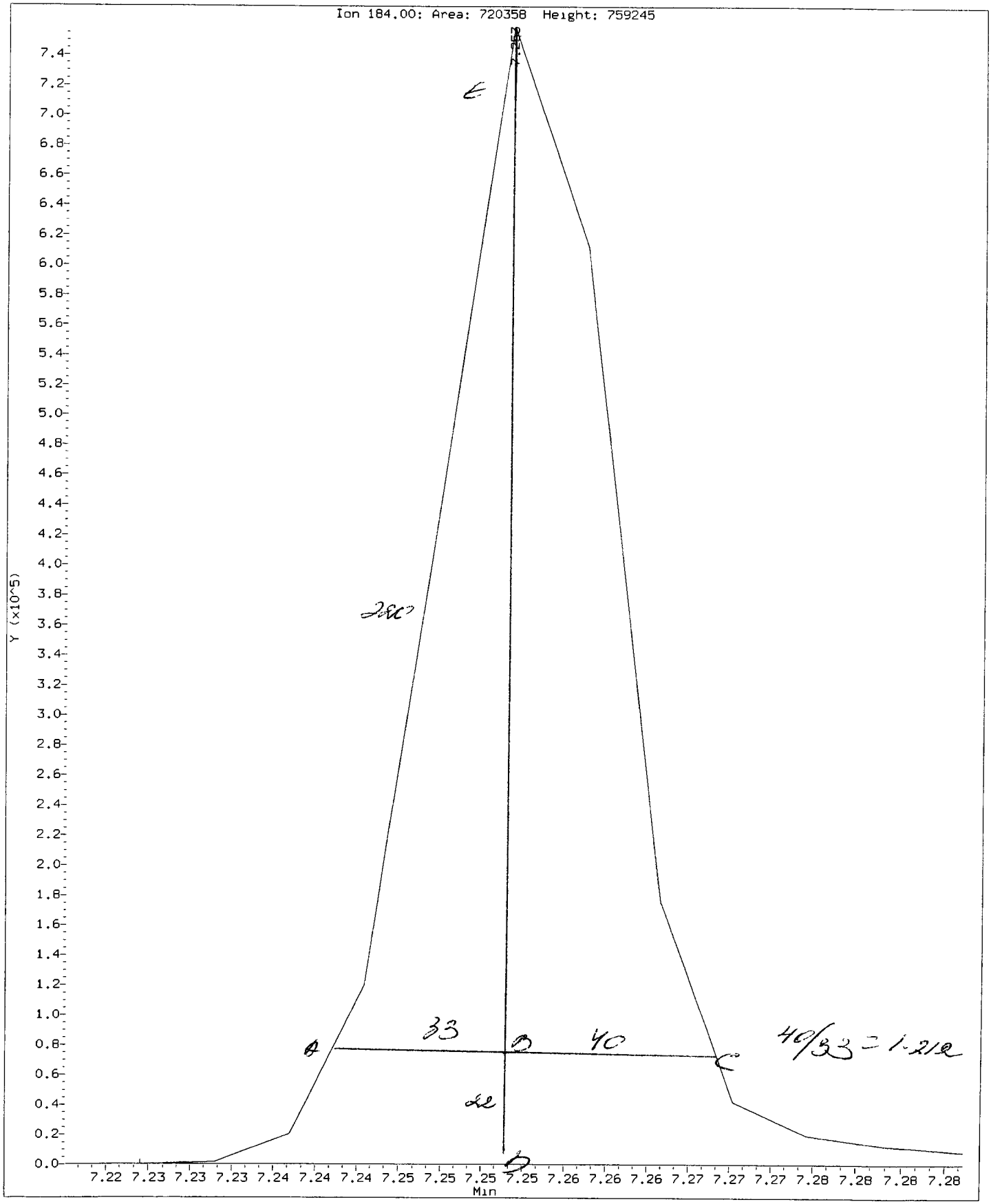
Data File: /chem1/nt10.i/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130424.b/ddt.b/df0424.d
Injection Date: 24-APR-2013 17:30
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130424.b/ddt.b/df0424.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130424.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 24-APR-2013 17:30 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.986	199567
Benzidine	7.253	720358
4,4'-DDE	7.446	1704
4,4'-DDD	7.735	12189
4,4'-DDT	7.991	515480

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

$$\text{DDT Percent Breakdown} = \frac{(1704 + 12189) * 100}{(1704 + 12189 + 515480)}$$

DDT Percent Breakdown = 2.6 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0424a.d
Analysis Type:
Lab Sample ID: CC0424A
Method: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m

Injection Date: 24-APR-2013 18:23
Init. Cal. Date(s): 25-JAN-2013 25-JAN-2013
Init. Cal. Times: 12:59 17:53
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.27261	1.39610	0.010	9.70338	20.00000	Averaged	
3 Phenol	1.61623	1.88448	0.010	16.59691	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.62301	1.59104	0.010	-1.96997	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.62039	1.58775	0.010	-2.01438	20.00000	Averaged	
11 Benzyl alcohol	0.95765	0.71769	0.010	-25.05737	20.00000	Averaged	<-
12 1,2-Dichlorobenzene	1.53436	1.53449	0.010	0.00864	20.00000	Averaged	
13 2-Methylphenol	1.21614	1.28219	0.010	5.43123	20.00000	Averaged	
15 4-Methylphenol	1.25940	1.48179	0.010	17.65854	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.79168	0.84272	0.050	6.44640	20.00000	Averaged	
22 2,4-Dimethylphenol	0.34482	0.35853	0.010	3.97746	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.37237	0.37038	0.010	-0.53695	20.00000	Averaged	
30 Hexachlorobutadiene	0.22607	0.22740	0.010	0.59031	20.00000	Averaged	
39 Dimethylphthalate	1.21772	1.18672	0.010	-2.54583	20.00000	Averaged	
50 Diethylphthalate	1.42267	1.36309	0.010	-4.18809	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.46501	0.49746	0.010	6.97870	20.00000	Averaged	
57 Hexachlorobenzene	0.30248	0.28755	0.010	-4.93571	20.00000	Averaged	
58 Pentachlorophenol	0.17865	0.11686	0.005	-34.58862	20.00000	Averaged	<-
$ 66 Terphenyl-d14	0.53149	0.49898	0.010	-6.11708	20.00000	Averaged	
67 Butylbenzylphthalate	0.38233	0.47298	0.010	23.70916	20.00000	Averaged	<-
79 Dibenzo(a,h)anthracene	0.95339	0.93184	0.010	-2.26075	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.75935	0.75323	0.010	-0.80545	20.00000	Averaged	

YZ 4/25/13

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d
Lab Smp Id: CC0424A
Inj Date : 24-APR-2013 18:23
Operator : YZ Inst ID: nt10.i
Smp Info : CC0424A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.433	5.433	(0.709)	22466	1.00000	1.097
	3 Phenol	94	7.172	7.172	(0.936)	30325	1.00000	1.166 (H)
	7 1,3-Dichlorobenzene	146	7.581	7.581	(0.990)	25603	1.00000	0.9803 (H)
*	8 1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	64368	4.00000	
	9 1,4-Dichlorobenzene	146	7.690	7.690	(1.004)	25550	1.00000	0.9799
	11 Benzyl alcohol	79	8.101	8.101	(1.058)	11549	1.00000	0.7494
	12 1,2-Dichlorobenzene	146	8.055	8.055	(1.052)	24693	1.00000	1.000
	13 2-Methylphenol	108	8.319	8.319	(1.086)	20633	1.00000	1.054 (M)
	15 4-Methylphenol	108	8.621	8.621	(1.126)	23845	1.00000	1.177
	16 N-Nitroso-di-n-propylamine	70	8.598	8.598	(1.123)	13561	1.00000	1.064 (H)
	22 2,4-Dimethylphenol	107	9.707	9.707	(0.946)	42175	2.00000	2.080
	26 1,2,4-Trichlorobenzene	180	10.193	10.193	(0.993)	21784	1.00000	0.9946
*	27 Naphthalene-d8	136	10.262	10.262	(1.000)	235264	4.00000	
	30 Hexachlorobutadiene	225	10.741	10.741	(1.047)	13375	1.00000	1.006
	39 Dimethylphthalate	163	13.705	13.705	(0.971)	39780	1.00000	0.9745
*	42 Acenaphthene-d10	162	14.108	14.108	(1.000)	134084	4.00000	
	50 Diethylphthalate	149	15.283	15.283	(1.083)	45692	1.00000	0.9581
	54 N-Nitrosodiphenylamine	169	15.630	15.630	(0.902)	30188	1.00000	1.070
	57 Hexachlorobenzene	284	16.687	16.687	(0.962)	17450	1.00000	0.9506
	58 Pentachlorophenol	266	17.120	17.120	(0.988)	14183	2.00000	1.308
*	59 Phenanthrene-d10	188	17.337	17.337	(1.000)	242738	4.00000	
$	66 Terphenyl-d14	244	20.780	20.780	(0.918)	31221	1.00000	0.9388
	67 Butylbenzylphthalate	149	21.802	21.802	(0.963)	29594	1.00000	1.237
*	69 Chrysene-d12	240	22.638	22.638	(1.000)	250279	4.00000	
*	77 Perylene-d12	264	24.938	24.938	(1.000)	226945	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.628	26.628	(1.068)	52869	1.00000	0.9774
	90 N-Nitrosodimethylamine	74	3.178	3.178	(0.415)	24242	2.00000	1.984

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d
Report Date: 25-Apr-2013 12:15

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0424a.d
Lab Smp Id: CC0424A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 24-APR-2013
Calibration Time: 18:23

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	64368	19.53
27 Naphthalene-d8	200104	100052	400208	235264	17.57
42 Acenaphthene-d10	112392	56196	224784	134084	19.30
59 Phenanthrene-d10	210710	105355	421420	242738	15.20
69 Chrysene-d12	240805	120402	481610	250279	3.93
77 Perylene-d12	230834	115417	461668	226945	-1.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

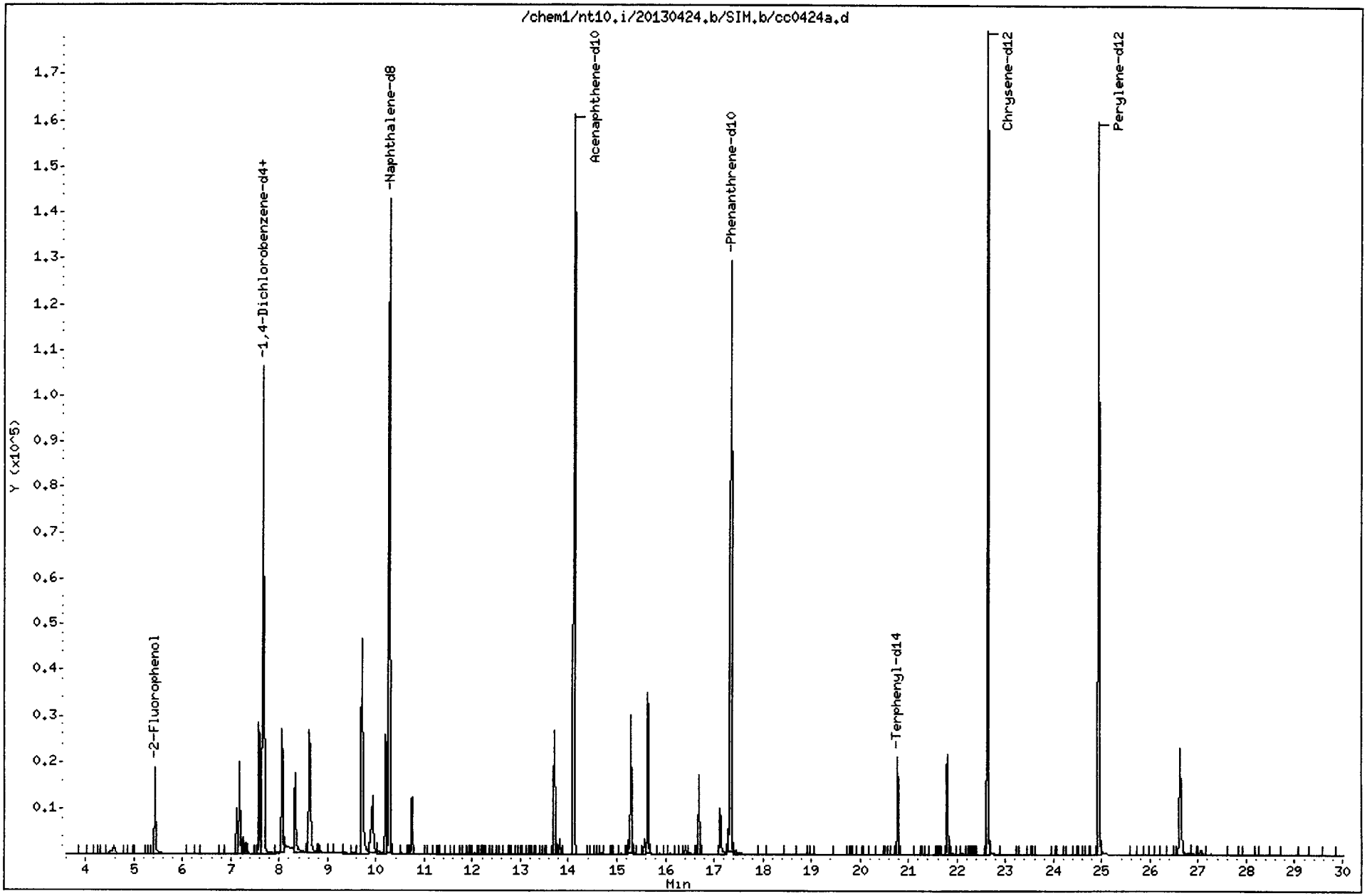
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d
Date : 24-APR-2013 18:23
Client ID:
Sample Info: CC0424A

Instrument: nt10.i

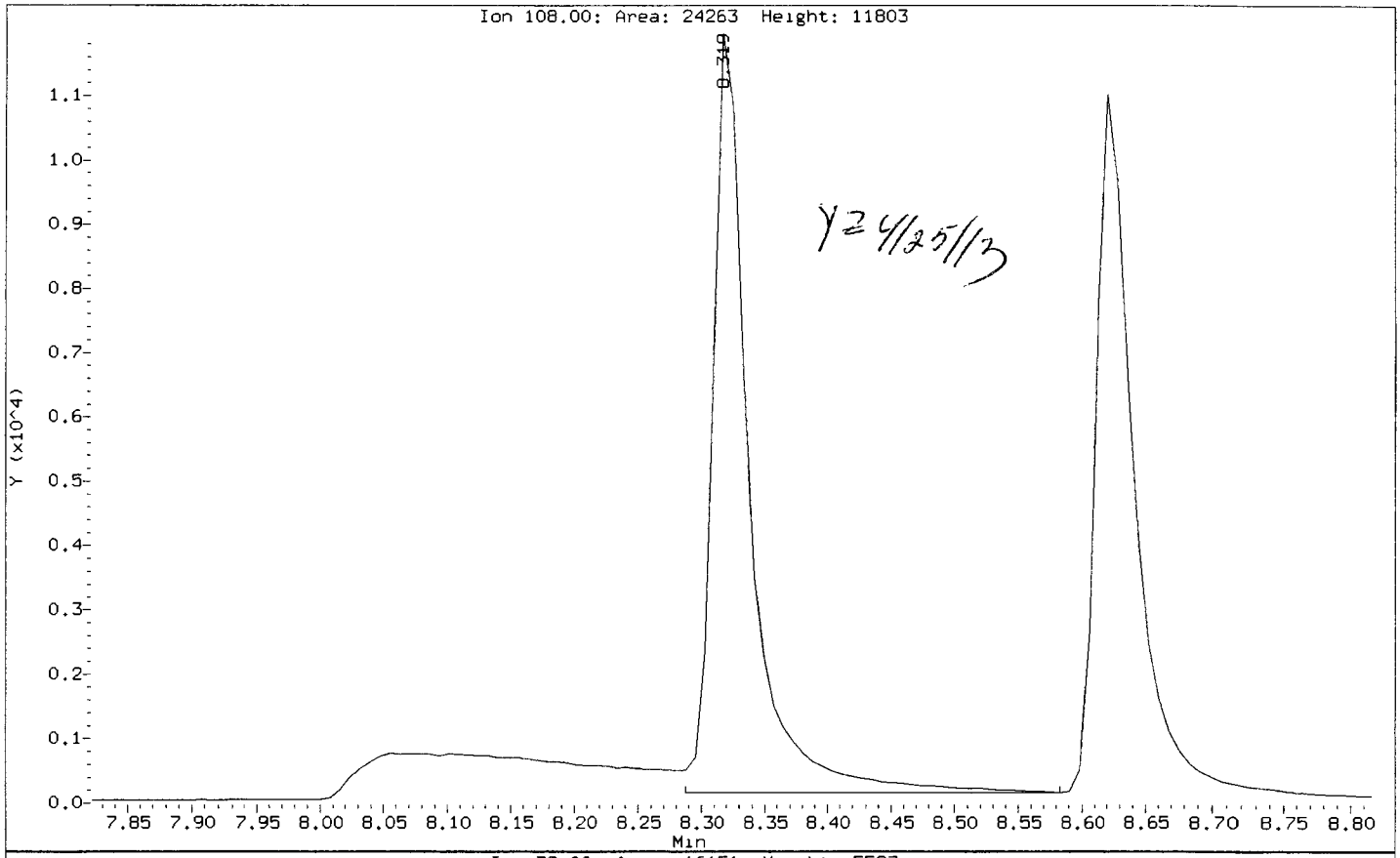
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5ms1

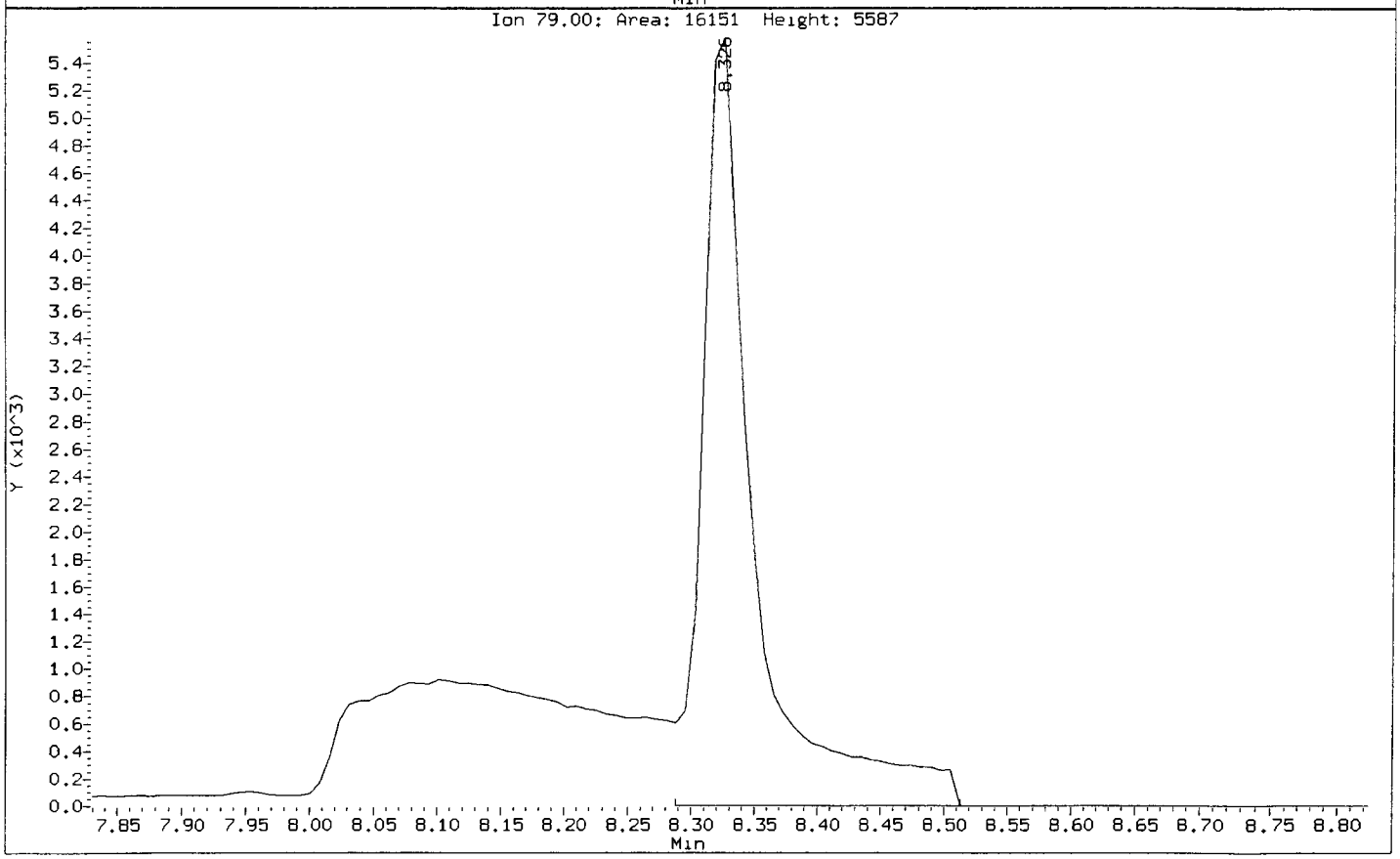


Data File: /chem1/nt10.1/20130424.b/SIM.b/cc0424a.d
Injection Date: 24-APR-2013 18:23
Instrument: nt10.1
Client Sample ID:

Compound: 2-Methylphenol
CAS Number: 95-48-7

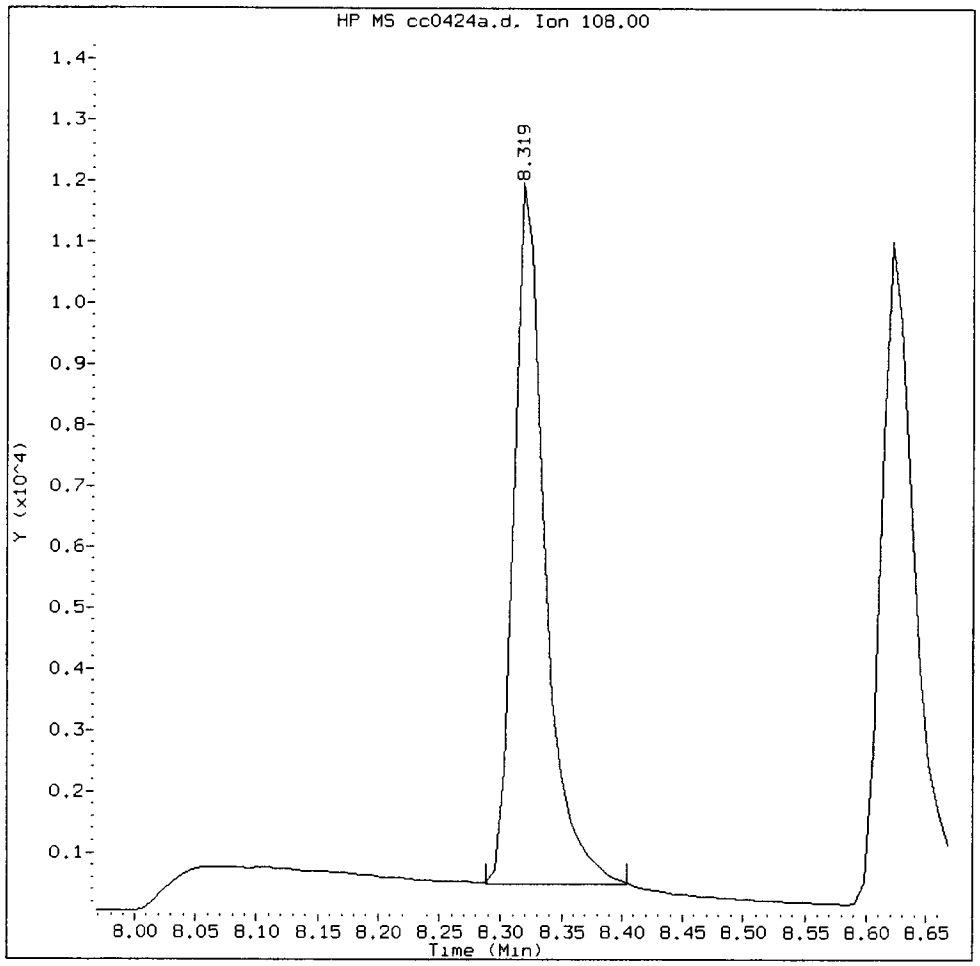


Y 4/25/13



CC0424A, /chem1/nt10.i/20130424.b/SIM.b/cc0424a.d

2-Methylphenol Amount: 1.05 Area: 20633



MANUAL INTEGRATION for 2-Methylphenol

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

5. Other _____

Analyst: YZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - cc0424a.d

Lab ID: CC0424A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/29/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49mb.d
Lab Smp Id: WL49MBS1 Client Smp ID: WL49MBS1
Inj Date : 24-APR-2013 19:00
Operator : YZ Inst ID: nt10.i
Smp Info : WL49MBS1
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.433	5.433	(0.709)	82137	4.16025	416.0
	3 Phenol	94	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	62056	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.262	10.262	(1.000)	235471	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	14.108	14.108	(1.000)	133819	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.337	17.337	(1.000)	241354	4.00000	
$	66 Terphenyl-d14	244	20.780	20.780	(0.918)	99166	2.97854	297.9
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.638	22.638	(1.000)	250567	4.00000	
*	77 Perylene-d12	264	24.938	24.938	(1.000)	221480	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49mb.d
Lab Smp Id: WL49MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: WL49MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	62056	15.23
27 Naphthalene-d8	200104	100052	400208	235471	17.67
42 Acenaphthene-d10	112392	56196	224784	133819	19.06
59 Phenanthrene-d10	210710	105355	421420	241354	14.54
69 Chrysene-d12	240805	120402	481610	250567	4.05
77 Perylene-d12	230834	115417	461668	221480	-4.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
77 Perylene-d12	24.94	24.44	25.44	24.94	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

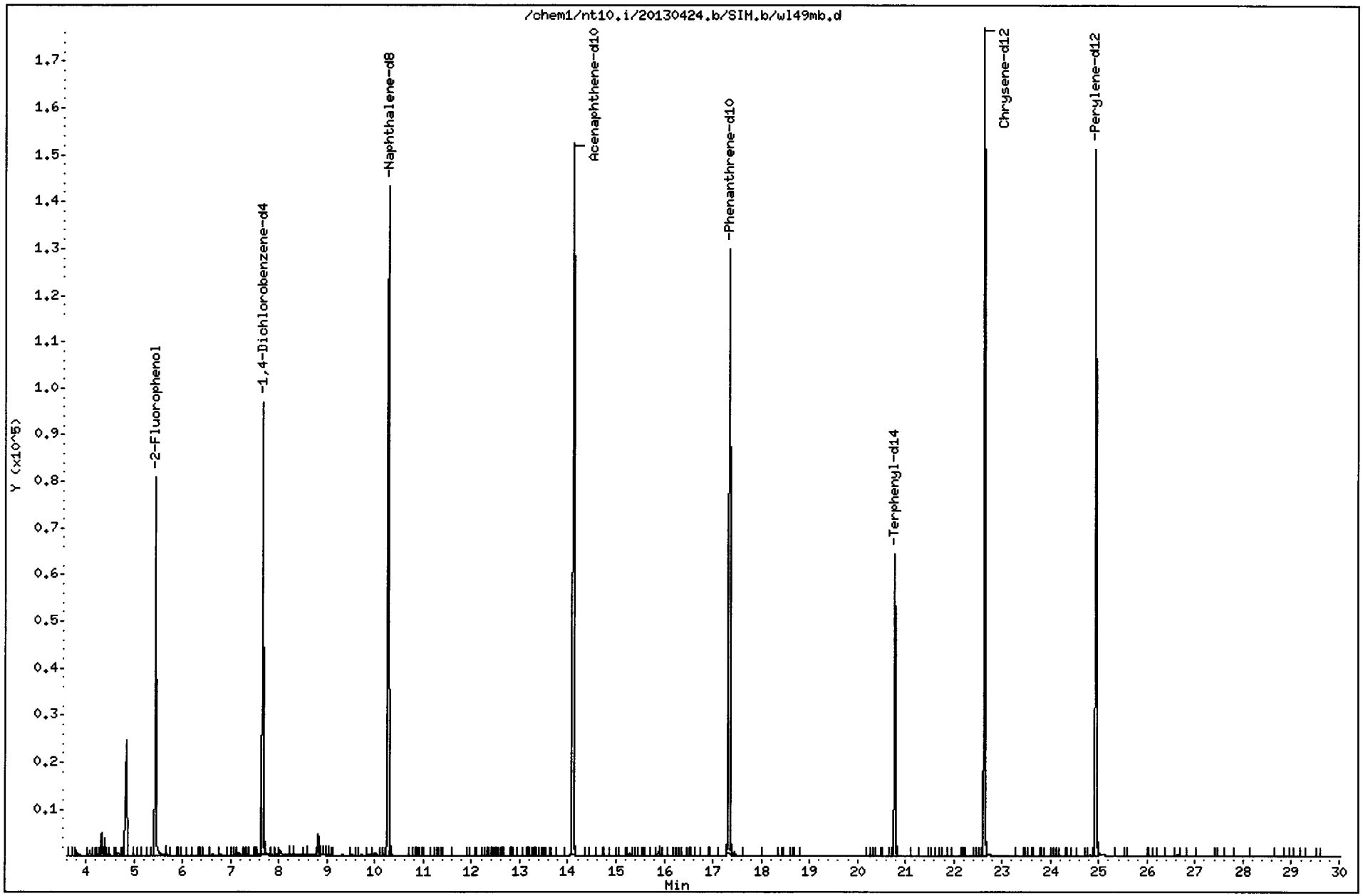
Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49MBS1
Client Smp ID: WL49MBS1
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	0.000	*	30-160
7 1,3-Dichlorobenze	500.0	0.000	*	30-160
9 1,4-Dichlorobenze	500.0	0.000	*	30-160
11 Benzyl alcohol	500.0	0.000	*	30-160
12 1,2-Dichlorobenze	500.0	0.000	*	30-160
13 2-Methylphenol	500.0	0.000	*	30-160
15 4-Methylphenol	1000	0.000	*	30-160
16 N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22 2,4-Dimethylphenol	1000	0.000	*	30-160
26 1,2,4-Trichlorobe	500.0	0.000	*	30-160
30 Hexachlorobutadie	500.0	0.000	*	30-160
39 Dimethylphthalate	500.0	0.000	*	30-160
50 Diethylphthalate	500.0	0.000	*	30-160
54 N-Nitrosodiphenyl	500.0	0.000	*	30-160
57 Hexachlorobenzene	500.0	0.000	*	30-160
58 Pentachlorophenol	1000	0.000	*	30-160
67 Butylbenzylphthal	500.0	0.000	*	30-160
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90 N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	416.0	55.47	30-160
$ 66 Terphenyl-d14	500.0	297.9	59.57	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49mb.d
Date : 24-APR-2013 19:00
Client ID: WL49MBS1
Sample Info: WL49MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49mb.d

Lab ID: WL49MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/26/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49sb.d
Lab Smp Id: WL49LCSS1 Client Smp ID: WL49LCSS1
Inj Date : 24-APR-2013 19:37
Operator : YZ Inst ID: nt10.i
Smp Info : WL49LCSS1
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 09:22 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.433	5.433	(0.709)	82789	4.82287	482.3
	3 Phenol	94	7.172	7.172	(0.936)	75824	3.47801	347.8
	7 1,3-Dichlorobenzene	146	7.582	7.581	(0.990)	60136	2.74689	274.7
*	8 1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	53955	4.00000	
	9 1,4-Dichlorobenzene	146	7.682	7.690	(1.003)	61136	2.79709	279.7
	11 Benzyl alcohol	79	8.016	8.101	(1.047)	34737	2.68915	268.9
	12 1,2-Dichlorobenzene	146	8.047	8.055	(1.051)	59672	2.88319	288.3
	13 2-Methylphenol	108	8.319	8.319	(1.086)	50753	3.09390	309.4
	15 4-Methylphenol	108	8.629	8.621	(1.127)	104732	6.16515	616.5
	16 N-Nitroso-di-n-propylamine	70	8.598	8.598	(1.123)	34007	3.18453	318.5
	22 2,4-Dimethylphenol	107	9.700	9.707	(0.945)	100990	5.78909	578.9
	26 1,2,4-Trichlorobenzene	180	10.193	10.193	(0.993)	53832	2.85748	285.7
*	27 Naphthalene-d8	136	10.262	10.262	(1.000)	202366	4.00000	
	30 Hexachlorobutadiene	225	10.734	10.741	(1.046)	32570	2.84772	284.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	13.705	13.705	(0.971)	115667	3.16340	316.3
*	42 Acenaphthene-d10	162	14.108	14.108	(1.000)	120107	4.00000	
	50 Diethylphthalate	149	15.291	15.283	(1.084)	131776	3.08478	308.5
	54 N-Nitrosodiphenylamine	169	15.638	15.630	(0.902)	83246	3.34844	334.8
	57 Hexachlorobenzene	284	16.695	16.687	(0.963)	44368	2.74352	274.4
	58 Pentachlorophenol	266	17.121	17.120	(0.988)	80317	8.40890	840.9
*	59 Phenanthrene-d10	188	17.337	17.337	(1.000)	213856	4.00000	
$	66 Terphenyl-d14	244	20.780	20.780	(0.918)	92418	3.02477	302.5
	67 Butylbenzylphthalate	149	21.802	21.802	(0.963)	95917	4.36406	436.4
*	69 Chrysene-d12	240	22.638	22.638	(1.000)	229947	4.00000	
*	77 Perylene-d12	264	24.946	24.938	(1.000)	210603	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.628	26.628	(1.067)	155071	3.08926	308.9
	90 N-Nitrosodimethylamine	74	3.186	3.178	(0.416)	87859	8.57776	857.8

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49sb.d
Lab Smp Id: WL49LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: WL49LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	53955	0.19
27 Naphthalene-d8	200104	100052	400208	202366	1.13
42 Acenaphthene-d10	112392	56196	224784	120107	6.86
59 Phenanthrene-d10	210710	105355	421420	213856	1.49
69 Chrysene-d12	240805	120402	481610	229947	-4.51
77 Perylene-d12	230834	115417	461668	210603	-8.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.00
69 Chrysene-d12	22.64	22.14	23.14	22.64	0.00
77 Perylene-d12	24.94	24.44	25.44	24.95	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL49LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

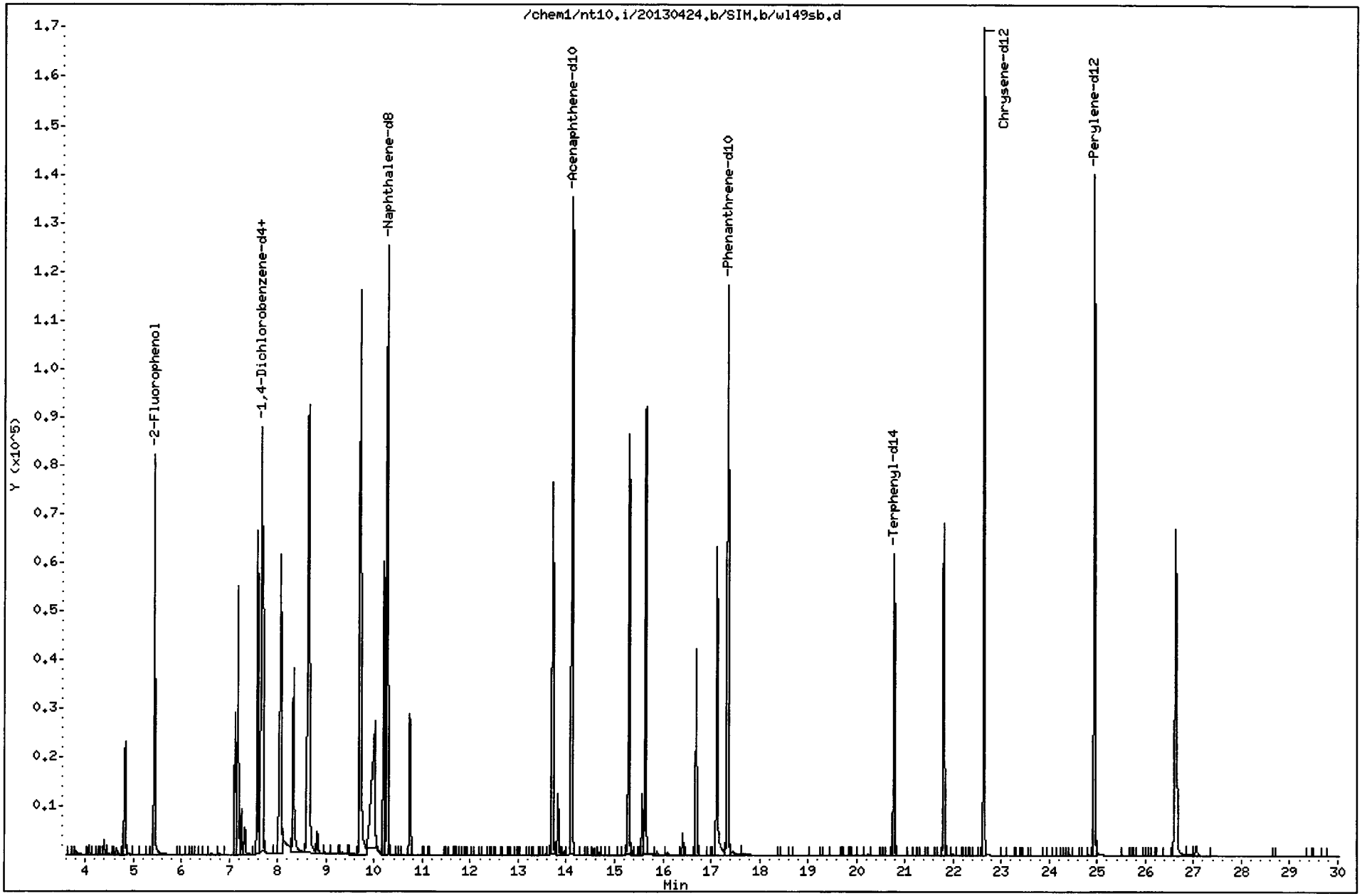
Client SDG: WL49
Fraction: SV
Client Smp ID: WL49LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	347.8	69.56	30-160
7	1,3-Dichlorobenzen	500.0	274.7	54.94	30-160
9	1,4-Dichlorobenzen	500.0	279.7	55.94	30-160
11	Benzyl alcohol	500.0	268.9	53.78	30-160
12	1,2-Dichlorobenzen	500.0	288.3	57.66	30-160
13	2-Methylphenol	500.0	309.4	61.88	30-160
15	4-Methylphenol	1000	616.5	61.65	30-160
16	N-Nitroso-di-n-pro	500.0	318.5	63.69	30-160
22	2,4-Dimethylphenol	1000	578.9	57.89	30-160
26	1,2,4-Trichloroben	500.0	285.7	57.15	30-160
30	Hexachlorobutadien	500.0	284.8	56.95	30-160
39	Dimethylphthalate	500.0	316.3	63.27	30-160
50	Diethylphthalate	500.0	308.5	61.70	30-160
54	N-Nitrosodiphenyla	500.0	334.8	66.97	30-160
57	Hexachlorobenzene	500.0	274.4	54.87	30-160
58	Pentachlorophenol	1000	840.9	84.09	30-160
67	Butylbenzylphthala	500.0	436.4	87.28	30-160
79	Dibenzo(a,h)anthra	500.0	308.9	61.79	30-160
90	N-Nitrosodimethyla	1000	857.8	85.78	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	482.3	64.30	30-160
$ 66	Terphenyl-d14	500.0	302.5	60.50	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49sb.d
Date : 24-APR-2013 19:37
Client ID: WL49LCSS1
Sample Info: WL49LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49sb.d

Lab ID: WL49LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49gms.d
Lab Smp Id: WL49GMS Client Smp ID: IM-CB-02-201304 MS
Inj Date : 24-APR-2013 21:27
Operator : YZ Inst ID: nt10.i
Smp Info : WL49GMS
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 09:22 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.05000	Weight of sample extracted (g)
M	18.10000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.448	5.433	(0.711)	74582	4.80078	449.2
	3	Phenol	94	7.187	7.172	(0.938)	68156	3.45441	323.2
	7	1,3-Dichlorobenzene	146	7.581	7.581	(0.990)	55525	2.80246	262.2
*	8	1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	48830	4.00000	
	9	1,4-Dichlorobenzene	146	7.690	7.690	(1.004)	56261	2.84421	266.1
	11	Benzyl alcohol	79	8.016	8.101	(1.047)	41388	3.54032	331.2
	12	1,2-Dichlorobenzene	146	8.055	8.055	(1.052)	54554	2.91255	272.5
	13	2-Methylphenol	108	8.326	8.319	(1.087)	48482	3.26566	305.5
	15	4-Methylphenol	108	8.637	8.621	(1.128)	100102	6.51107	609.2
	16	N-Nitroso-di-n-propylamine	70	8.606	8.598	(1.124)	33334	3.44913	322.7
	22	2,4-Dimethylphenol	107	9.707	9.707	(0.945)	103005	6.40348	599.1
	26	1,2,4-Trichlorobenzene	180	10.200	10.193	(0.993)	52417	3.01745	282.3
*	27	Naphthalene-d8	136	10.270	10.262	(1.000)	186600	4.00000	
	30	Hexachlorobutadiene	225	10.741	10.741	(1.046)	32243	3.05733	286.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	13.713	13.705	(0.972)	114915	3.56992	334.0
*	42 Acenaphthene-d10	162	14.107	14.108	(1.000)	105738	4.00000	
	50 Diethylphthalate	149	15.290	15.283	(1.084)	123739	3.29027	307.8
	54 N-Nitrosodiphenylamine	169	15.638	15.630	(0.902)	82140	3.97824	372.2
	57 Hexachlorobenzene	284	16.694	16.687	(0.962)	41885	3.11855	291.8
	58 Pentachlorophenol	266	17.128	17.120	(0.988)	41358	5.21372	487.8
*	59 Phenanthrene-d10	188	17.345	17.337	(1.000)	177609	4.00000	
$	66 Terphenyl-d14	244	20.788	20.780	(0.918)	84425	3.01238	281.8
	67 Butylbenzylphthalate	149	21.810	21.802	(0.963)	115133	5.71079	534.3
*	69 Chrysene-d12	240	22.654	22.638	(1.000)	210924	4.00000	
*	77 Perylene-d12	264	24.976	24.938	(1.000)	216411	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.690	26.628	(1.069)	147756	2.86454	268.0
	90 N-Nitrosodimethylamine	74	3.193	3.178	(0.417)	76452	8.24748	771.7

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49gms.d
Lab Smp Id: WL49GMS
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: IM-CB-02-201304
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	53853	26926	107706	48830	-9.33
27 Naphthalene-d8	200104	100052	400208	186600	-6.75
42 Acenaphthene-d10	112392	56196	224784	105738	-5.92
59 Phenanthrene-d10	210710	105355	421420	177609	-15.71
69 Chrysene-d12	240805	120402	481610	210924	-12.41
77 Perylene-d12	230834	115417	461668	216411	-6.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.27	0.07
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.04
69 Chrysene-d12	22.64	22.14	23.14	22.65	0.07
77 Perylene-d12	24.94	24.44	25.44	24.98	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

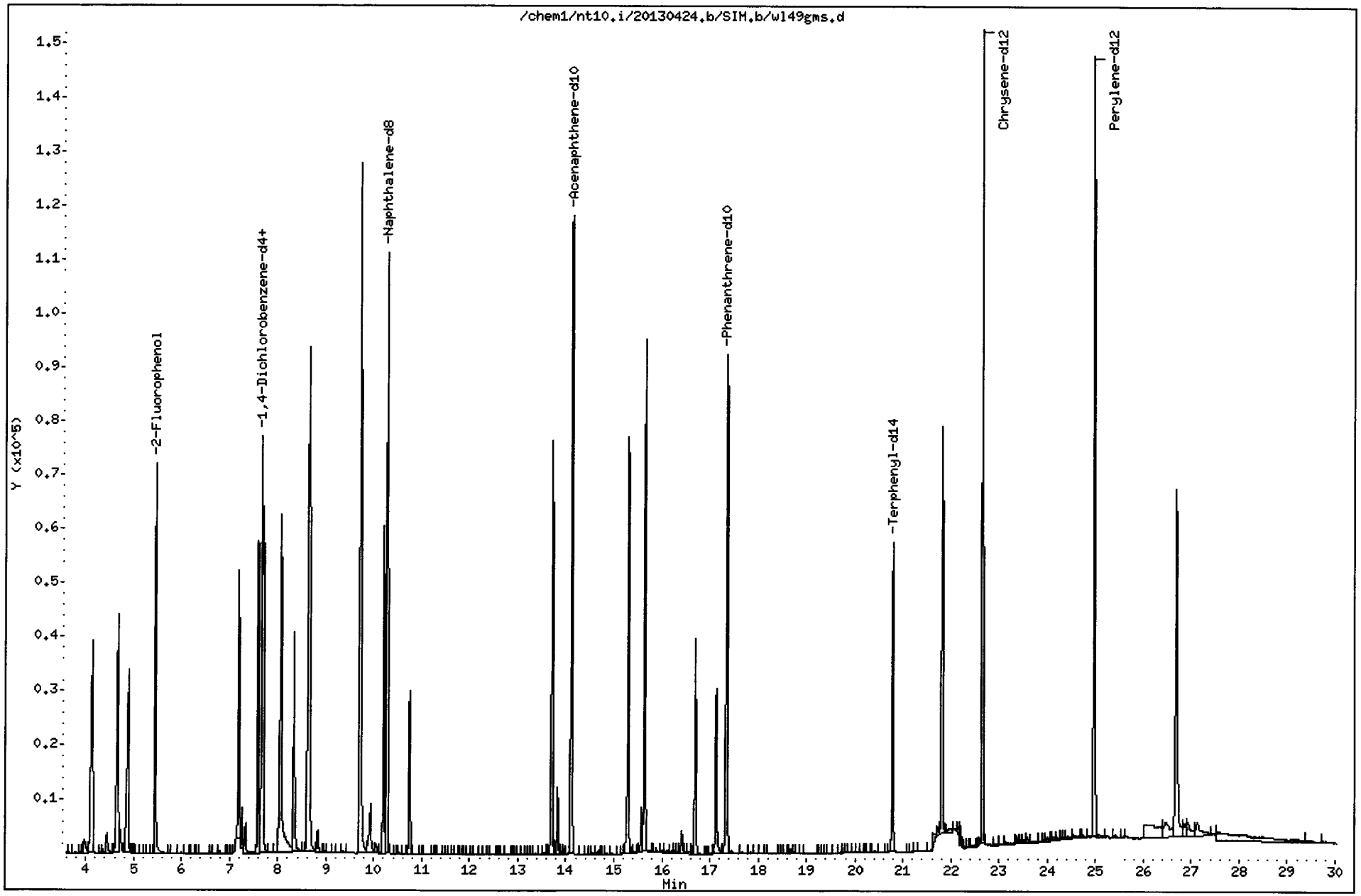
Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49GMS
Client Smp ID: IM-CB-02-201304 MS
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	467.8	323.2	69.09	30-160
7 1,3-Dichlorobenzen	467.8	262.2	56.05	30-160
9 1,4-Dichlorobenzen	467.8	266.1	56.88	30-160
11 Benzyl alcohol	467.8	331.2	70.81	30-160
12 1,2-Dichlorobenzen	467.8	272.5	58.25	30-160
13 2-Methylphenol	467.8	305.5	65.31	30-160
15 4-Methylphenol	935.6	609.2	65.11	30-160
16 N-Nitroso-di-n-pro	467.8	322.7	68.98	30-160
22 2,4-Dimethylphenol	935.6	599.1	64.03	30-160
26 1,2,4-Trichloroben	467.8	282.3	60.35	30-160
30 Hexachlorobutadien	467.8	286.1	61.15	30-160
39 Dimethylphthalate	467.8	334.0	71.40	30-160
50 Diethylphthalate	467.8	307.8	65.81	30-160
54 N-Nitrosodiphenyla	467.8	372.2	79.56	30-160
57 Hexachlorobenzene	467.8	291.8	62.37	30-160
58 Pentachlorophenol	935.6	487.8	52.14	30-160
67 Butylbenzylphthala	467.8	534.3	114.22	30-160
79 Dibenzo(a,h)anthra	467.8	268.0	57.29	30-160
90 N-Nitrosodimethyla	935.6	771.7	82.47	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	701.7	449.2	64.01	30-160
$ 66 Terphenyl-d14	467.8	281.8	60.25	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49gms.d
Date : 24-APR-2013 21:27
Client ID: IM-CB-02-201304 MS
Sample Info: WL49GMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49gms.d

Lab ID: WL49GMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 4/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49gmsd.d
Lab Smp Id: WL49GMSD Client Smp ID: IM-CB-02-201304 MSD
Inj Date : 24-APR-2013 22:04
Operator : YZ Inst ID: nt10.i
Smp Info : WL49GMSD
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 09:22 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 10 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.04000	Weight of sample extracted (g)
M	18.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.456	5.433	(0.712)	72845	4.59847	430.6
	3 Phenol	94	7.187	7.172	(0.938)	74007	3.67856	344.4
	7 1,3-Dichlorobenzene	146	7.589	7.581	(0.991)	57043	2.82351	264.4
*	8 1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	49791	4.00000	
	9 1,4-Dichlorobenzene	146	7.690	7.690	(1.004)	58226	2.88674	270.3
	11 Benzyl alcohol	79	8.024	8.101	(1.048)	40396	3.38877	317.3
	12 1,2-Dichlorobenzene	146	8.055	8.055	(1.052)	56398	2.95289	276.5
	13 2-Methylphenol	108	8.327	8.319	(1.087)	51730	3.41719	320.0
	15 4-Methylphenol	108	8.637	8.621	(1.128)	106560	6.79735	636.5
	16 N-Nitroso-di-n-propylamine	70	8.606	8.598	(1.124)	35418	3.59404	336.5
	22 2,4-Dimethylphenol	107	9.715	9.707	(0.946)	139055	8.37433	784.1
	26 1,2,4-Trichlorobenzene	180	10.201	10.193	(0.993)	55986	3.12215	292.3
*	27 Naphthalene-d8	136	10.270	10.262	(1.000)	192622	4.00000	
	30 Hexachlorobutadiene	225	10.741	10.741	(1.046)	34603	3.17853	297.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	13.713	13.705	(0.971)	119939	3.67895	344.5
*	42 Acenaphthene-d10	162	14.115	14.108	(1.000)	107090	4.00000	
	50 Diethylphthalate	149	15.290	15.283	(1.083)	128654	3.37777	316.3
	54 N-Nitrosodiphenylamine	169	15.645	15.630	(0.902)	84537	4.14344	388.0
	57 Hexachlorobenzene	284	16.702	16.687	(0.963)	43133	3.24999	304.3
	58 Pentachlorophenol	266	17.128	17.120	(0.988)	37931	4.83905	453.1
*	59 Phenanthrene-d10	188	17.345	17.337	(1.000)	175504	4.00000	
$	66 Terphenyl-d14	244	20.788	20.780	(0.918)	87383	3.17624	297.4
	67 Butylbenzylphthalate	149	21.817	21.802	(0.963)	151905	7.67569	718.7
*	69 Chrysene-d12	240	22.654	22.638	(1.000)	207051	4.00000	
*	77 Perylene-d12	264	24.976	24.938	(1.000)	197195	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.698	26.628	(1.069)	132792	2.82530	264.5
	90 N-Nitrosodimethylamine	74	3.186	3.178	(0.416)	74406	7.87184	737.1

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49gmsd.d
Lab Smp Id: WL49GMSD
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: IM-CB-02-201304
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	53853	26926	107706	49791	-7.54
27 Naphthalene-d8	200104	100052	400208	192622	-3.74
42 Acenaphthene-d10	112392	56196	224784	107090	-4.72
59 Phenanthrene-d10	210710	105355	421420	175504	-16.71
69 Chrysene-d12	240805	120402	481610	207051	-14.02
77 Perylene-d12	230834	115417	461668	197195	-14.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.27	0.08
42 Acenaphthene-d10	14.11	13.61	14.61	14.12	0.06
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.04
69 Chrysene-d12	22.64	22.14	23.14	22.65	0.07
77 Perylene-d12	24.94	24.44	25.44	24.98	0.16

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

Analytical Resources, Inc.

RECOVERY REPORT

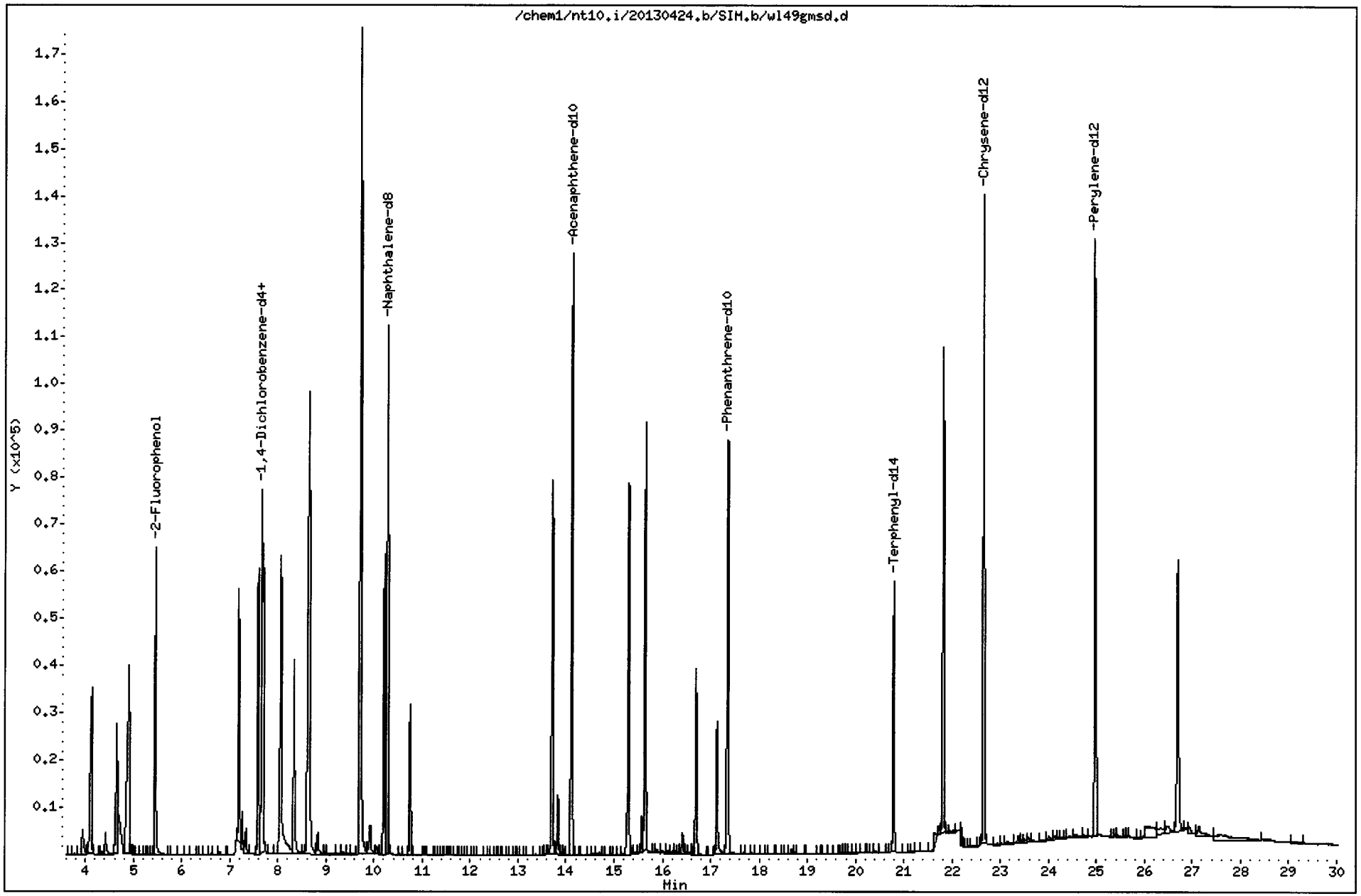
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL49GMSD
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Client SDG: WL49
Fraction: SV
Client Smp ID: IM-CB-02-201304 MSD
Operator: YZ
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	468.2	344.4	73.57	30-160
7	1,3-Dichlorobenzen	468.2	264.4	56.47	30-160
9	1,4-Dichlorobenzen	468.2	270.3	57.73	30-160
11	Benzyl alcohol	468.2	317.3	67.78	30-160
12	1,2-Dichlorobenzen	468.2	276.5	59.06	30-160
13	2-Methylphenol	468.2	320.0	68.34	30-160
15	4-Methylphenol	936.4	636.5	67.97	30-160
16	N-Nitroso-di-n-pro	468.2	336.5	71.88	30-160
22	2,4-Dimethylphenol	936.4	784.1	83.74	30-160
26	1,2,4-Trichloroben	468.2	292.3	62.44	30-160
30	Hexachlorobutadien	468.2	297.6	63.57	30-160
39	Dimethylphthalate	468.2	344.5	73.58	30-160
50	Diethylphthalate	468.2	316.3	67.56	30-160
54	N-Nitrosodiphenyla	468.2	388.0	82.87	30-160
57	Hexachlorobenzene	468.2	304.3	65.00	30-160
58	Pentachlorophenol	936.4	453.1	48.39	30-160
67	Butylbenzylphthala	468.2	718.7	153.51	30-160
79	Dibenzo(a,h)anthra	468.2	264.5	56.51	30-160
90	N-Nitrosodimethyla	936.4	737.1	78.72	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	702.3	430.6	61.31	30-160
$ 66	Terphenyl-d14	468.2	297.4	63.52	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49gmsd.d
Date : 24-APR-2013 22:04
Client ID: IM-CB-02-201304 MSD
Instrument: nt10.i
Sample Info: WL49GMSD
Volume Injected (uL): 1.0
Operator: YZ
Column phase: ZB-5msi
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl49gmsd.d

Lab ID: WL49GMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 4/25/13

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49f.d
Lab Smp Id: WL49F Client Smp ID: IM-CB-01-20130410-S
Inj Date : 24-APR-2013 20:14
Operator : YZ Inst ID: nt10.i
Smp Info : WL49F,3
Misc Info : 13-7784
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 7
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	2.03000	Weight of sample extracted (g)
M	44.40000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.433	5.433	(0.709)	28696	1.62161	4310
	3	Phenol	94	7.187	7.172	(0.938)	24411	1.08618	2887
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	55621	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	8.327	8.319	(1.087)	560	0.03312 J	88.02(M)
	15	4-Methylphenol	108	8.637	8.621	(1.128)	9950	0.56817	1510
	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	10.270	10.262	(1.000)	199995	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	13.705	13.705	(0.971)	3505	0.10865	288.8(M)
*	42 Acenaphthene-d10	162	14.116	14.108	(1.000)	105965	4.00000	
	50 Diethylphthalate	149	15.291	15.283	(1.083)	1756	0.04659	123.8(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.360	17.337	(1.000)	184592	4.00000	
$	66 Terphenyl-d14	244	20.811	20.780	(0.917)	34913	1.15891	3080
	67 Butylbenzylphthalate	149	21.841	21.802	(0.962)	58540	2.70130	7180
*	69 Chrysene-d12	240	22.700	22.638	(1.000)	226727	4.00000	
*	77 Perylene-d12	264	25.023	24.938	(1.000)	224029	4.00000	(H)
	79 Dibenzo(a,h)anthracene	278	26.745	26.628	(1.072)	11989	0.22453	596.8(H)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49f.d
Lab Smp Id: WL49F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7784

Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: IM-CB-01-2013041
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	55621	3.28
27 Naphthalene-d8	200104	100052	400208	199995	-0.05
42 Acenaphthene-d10	112392	56196	224784	105965	-5.72
59 Phenanthrene-d10	210710	105355	421420	184592	-12.40
69 Chrysene-d12	240805	120402	481610	226727	-5.85
77 Perylene-d12	230834	115417	461668	224029	-2.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.27	0.08
42 Acenaphthene-d10	14.11	13.61	14.61	14.12	0.06
59 Phenanthrene-d10	17.34	16.84	17.84	17.36	0.14
69 Chrysene-d12	22.64	22.14	23.14	22.70	0.27
77 Perylene-d12	24.94	24.44	25.44	25.02	0.34

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

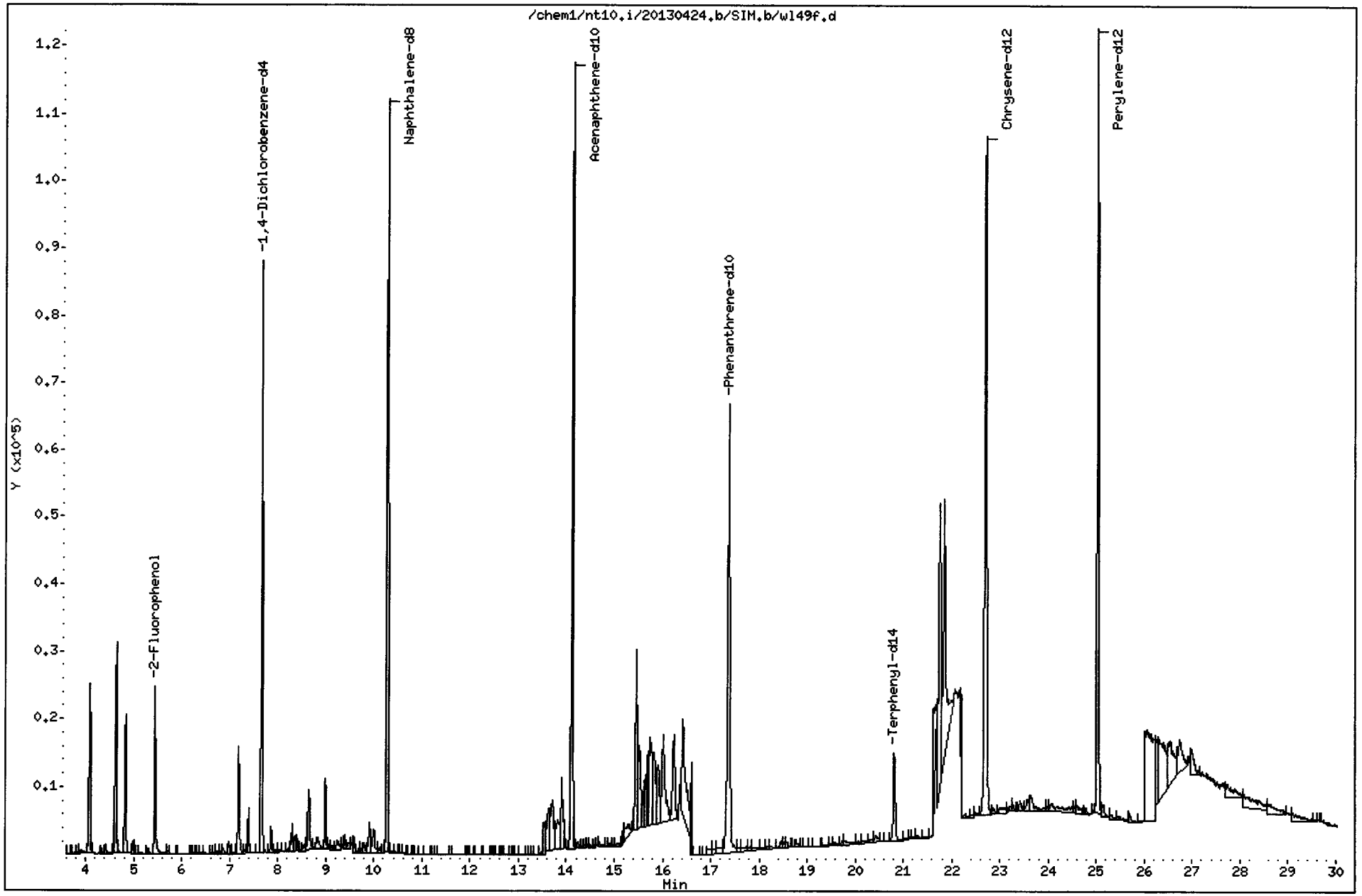
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WL49F
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7784

Client SDG: WL49
Fraction: SV
Client Smp ID: IM-CB-01-20130410-S
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	6645	4310	64.86	30-160
$ 66 Terphenyl-d14	4430	3080	69.53	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49f.d
Date : 24-APR-2013 20:14
Client ID: IM-CB-01-20130410-S
Sample Info: WL49F,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

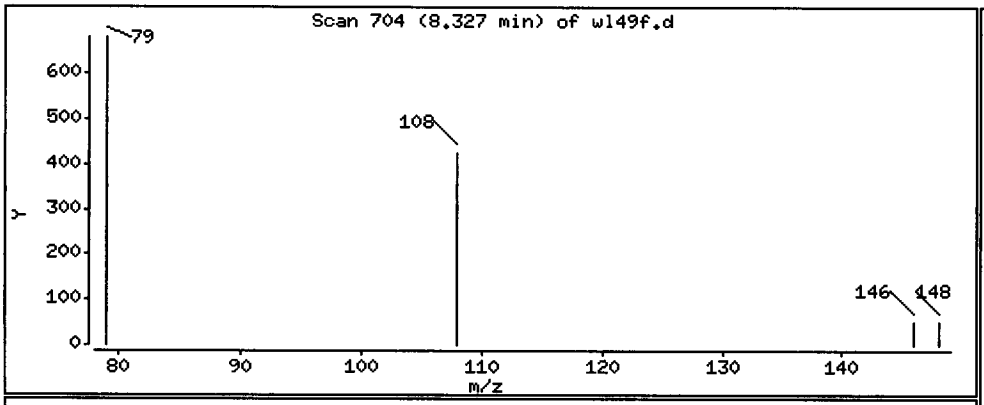
Operator: YZ

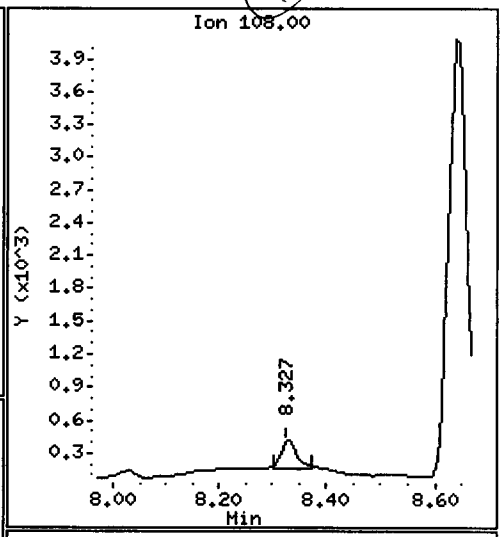
Column phase: ZB-5msi

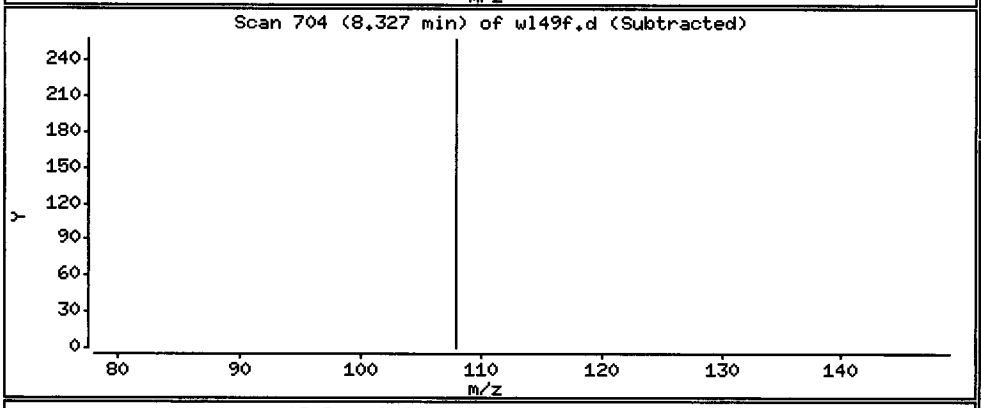
Column diameter: 0.25

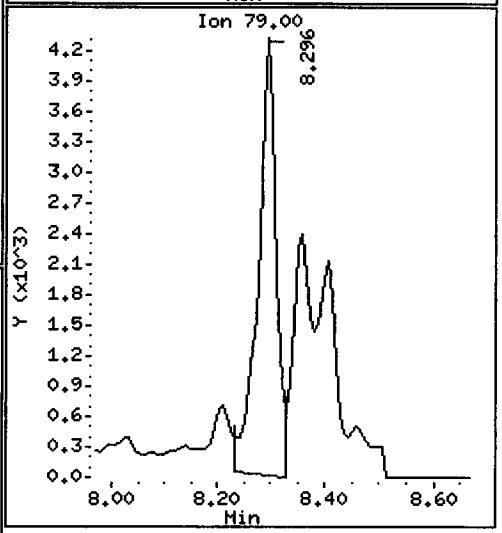
13 2-Methylphenol

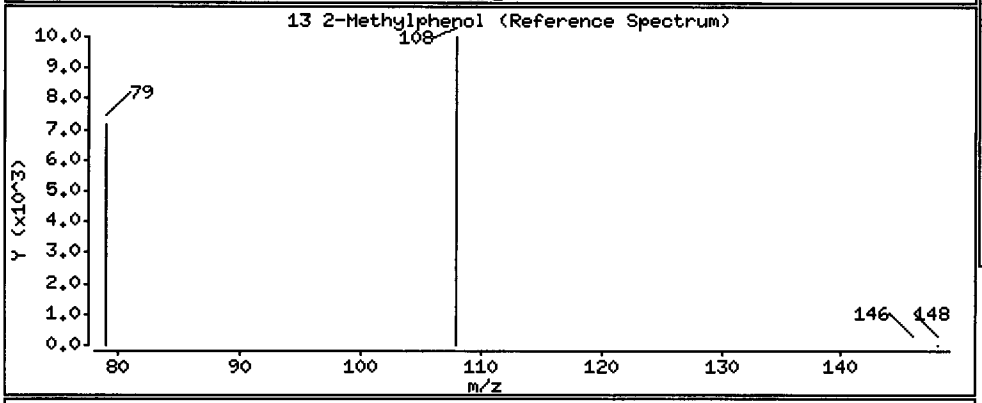
Concentration: 88.02 ug/kg

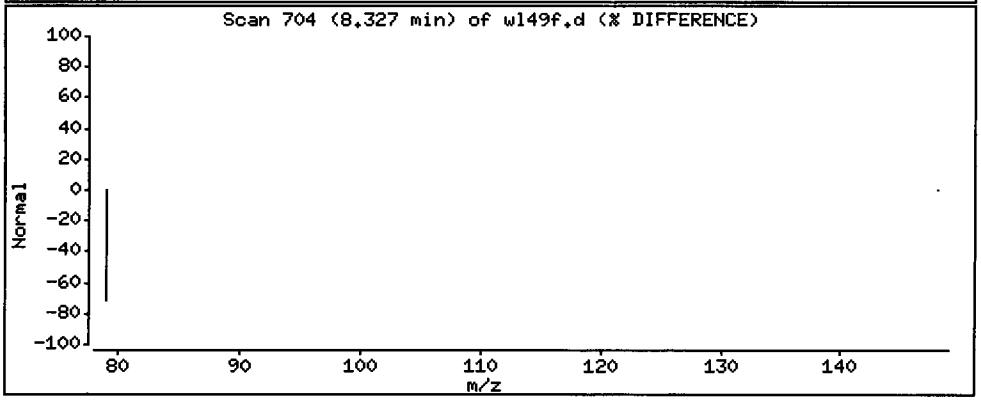












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

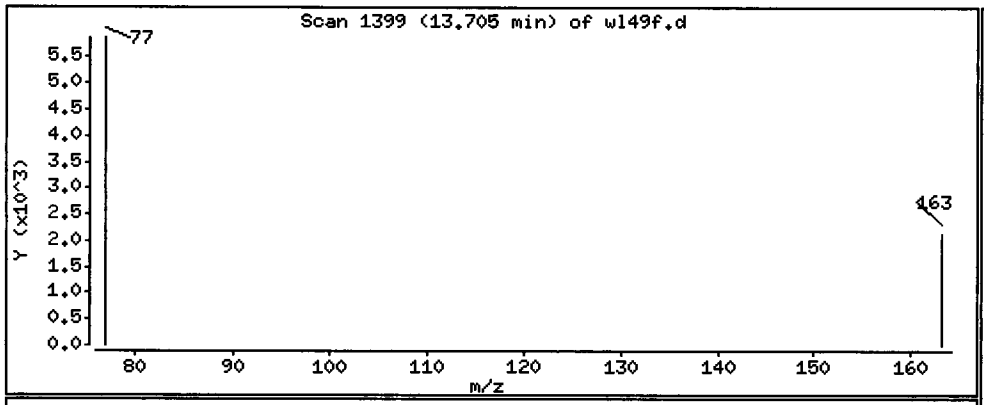
Operator: YZ

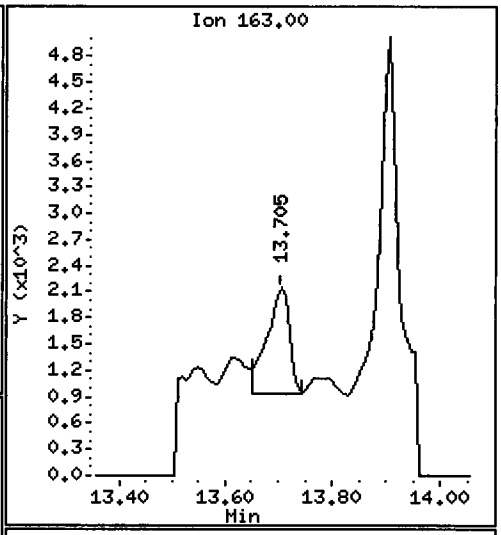
Column phase: ZB-5msi

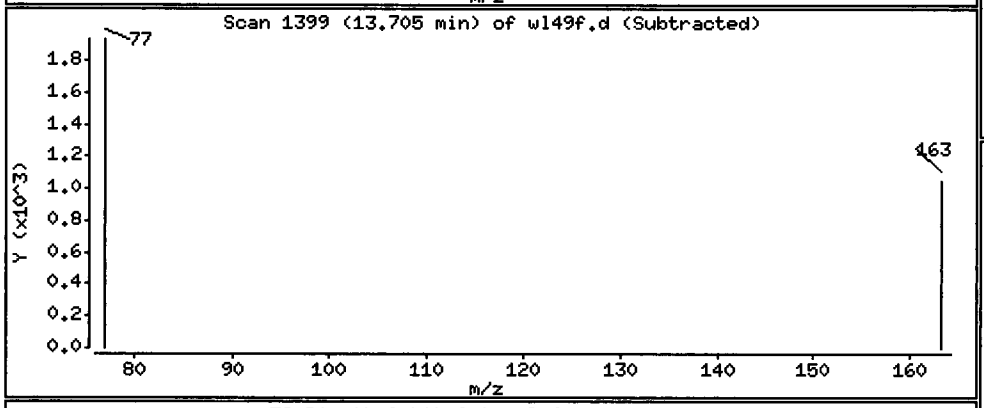
Column diameter: 0.25

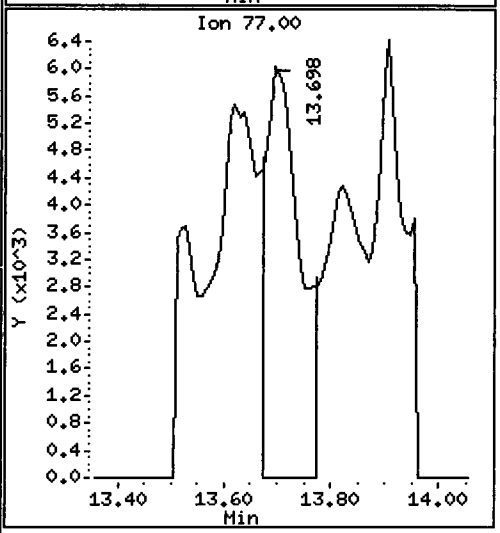
39 Dimethylphthalate

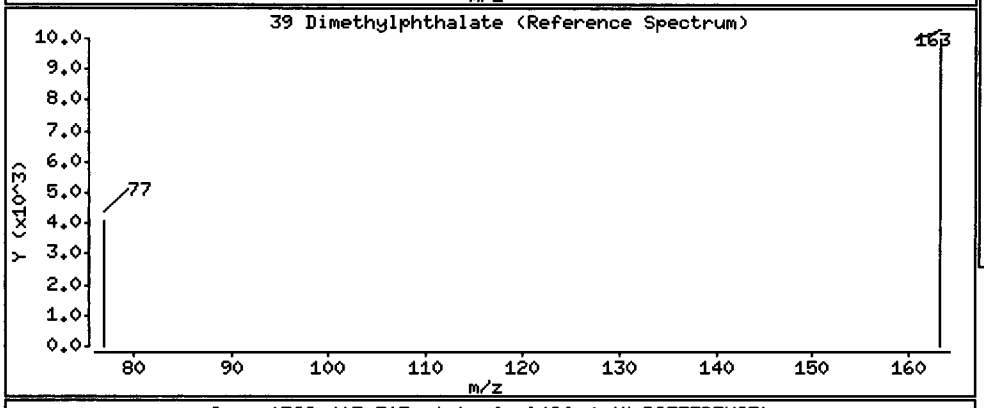
Concentration: 288.8 ug/kg

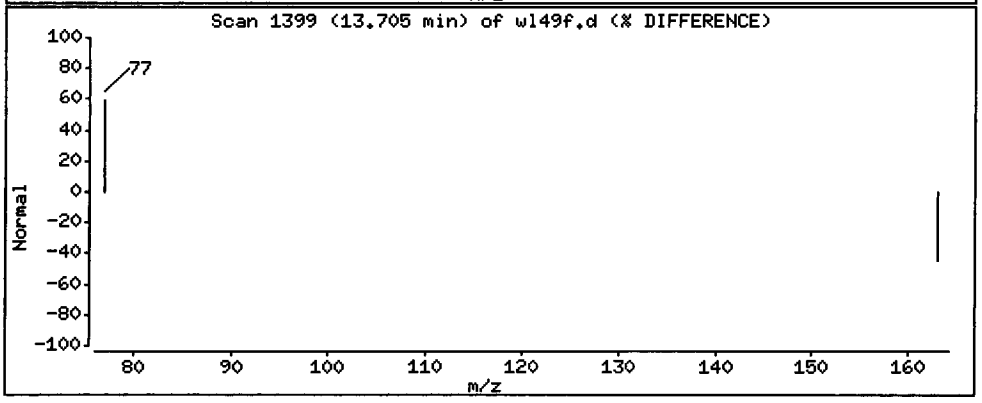












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

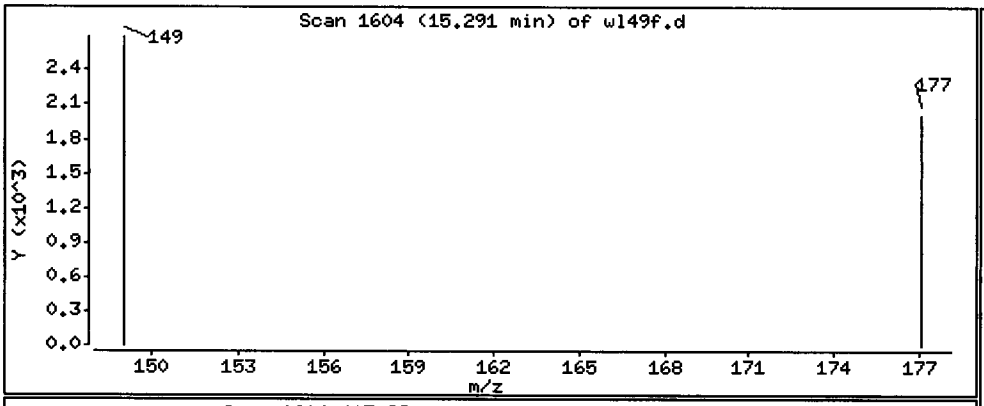
Operator: YZ

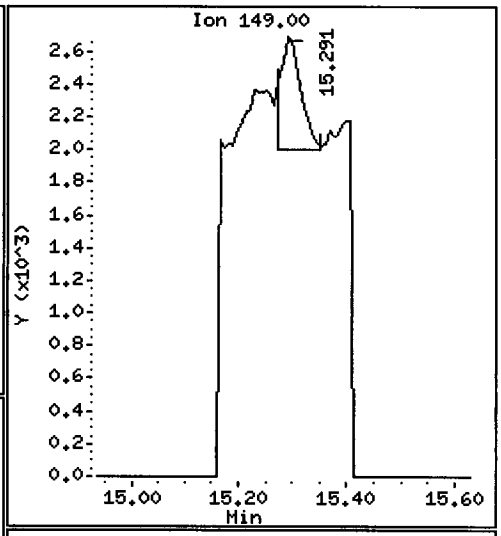
Column phase: ZB-5msi

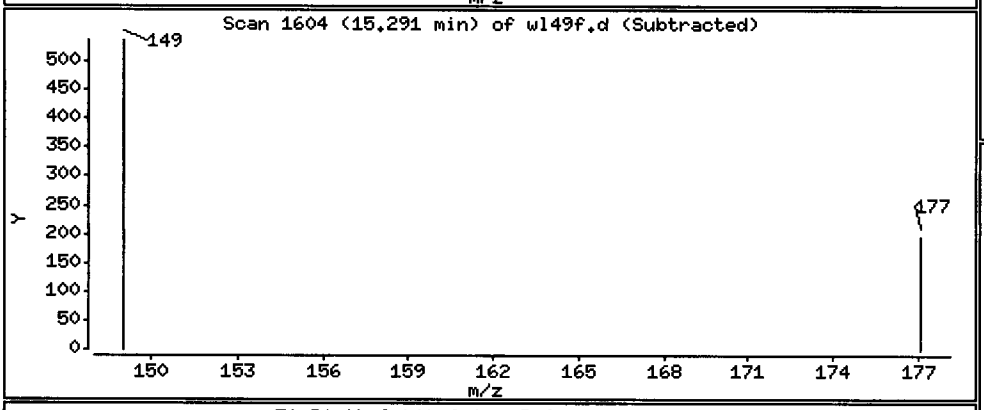
Column diameter: 0.25

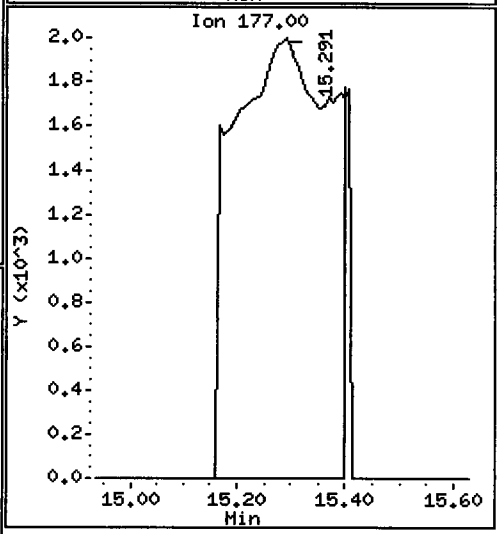
50 Diethylphthalate

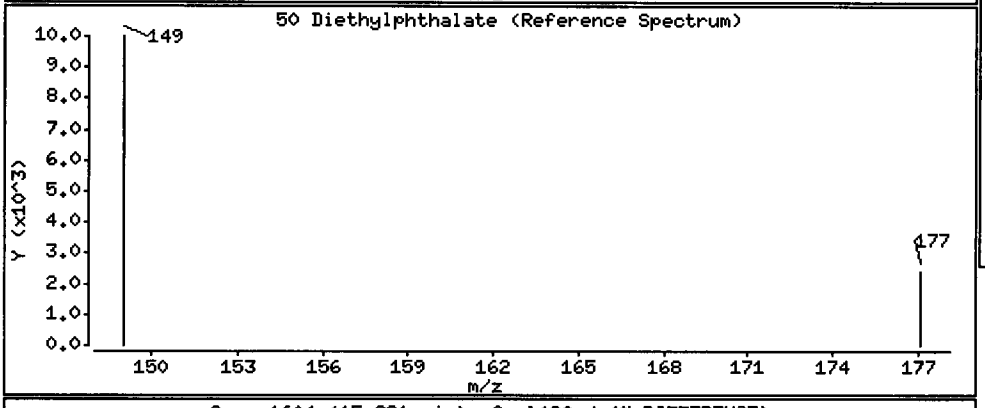
Concentration: 123.8 ug/kg

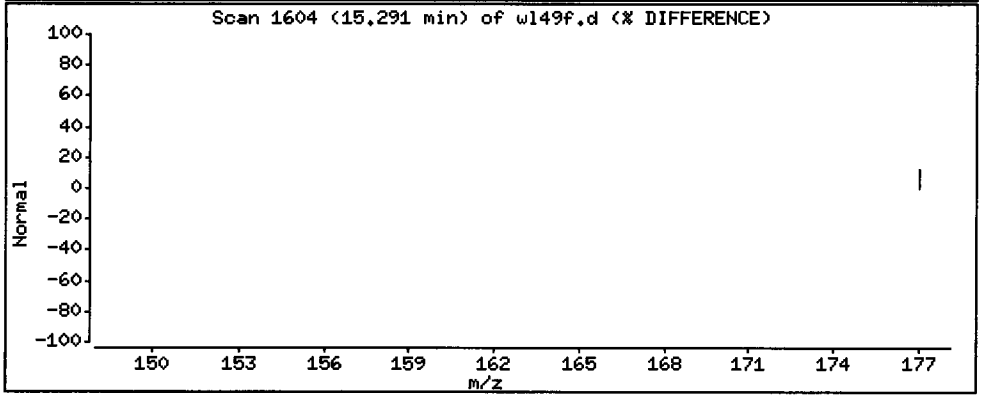












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

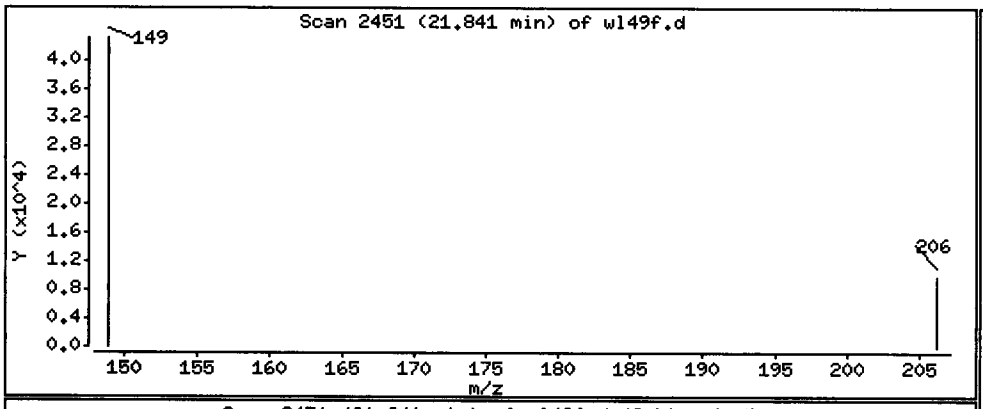
Operator: YZ

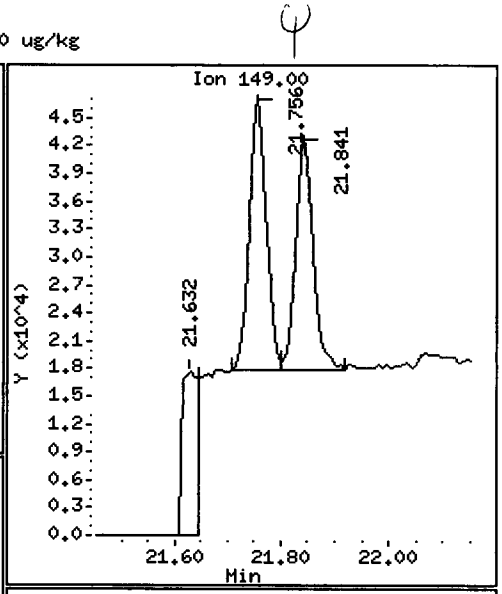
Column phase: ZB-5msi

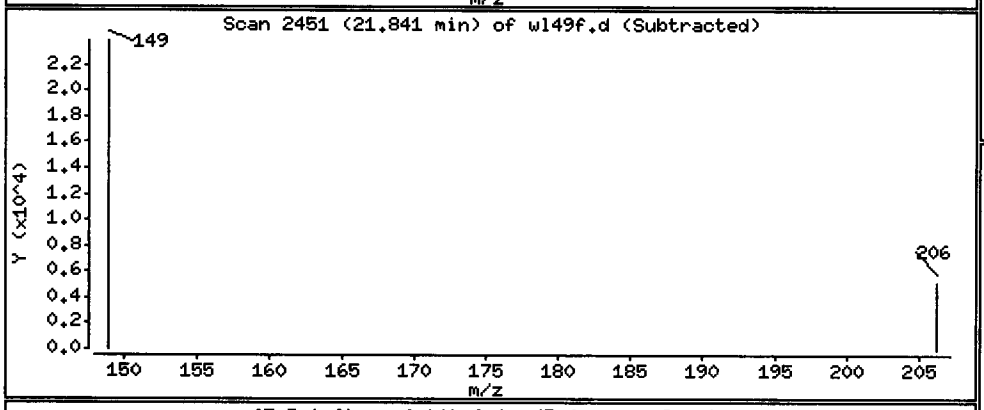
Column diameter: 0.25

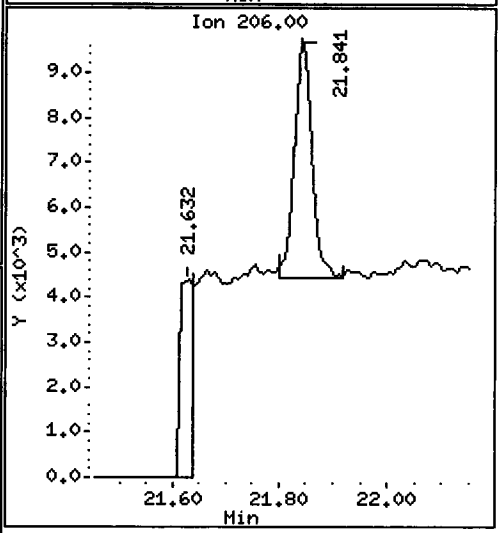
67 Butylbenzylphthalate

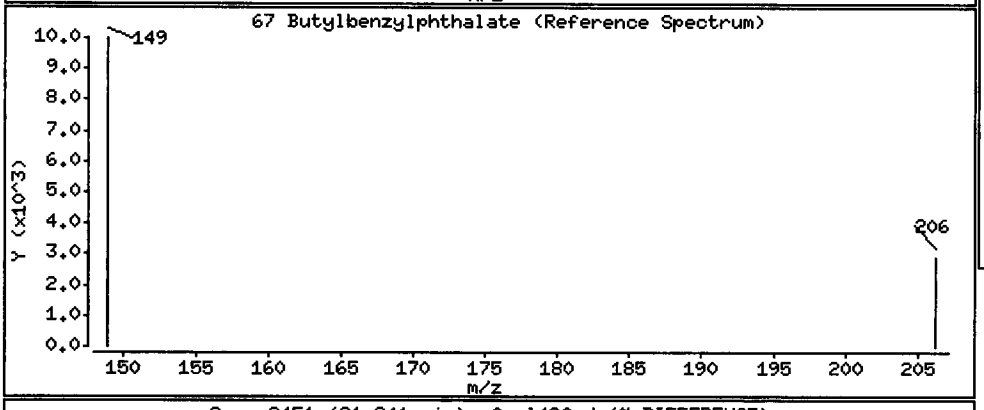
Concentration: 7180 ug/kg

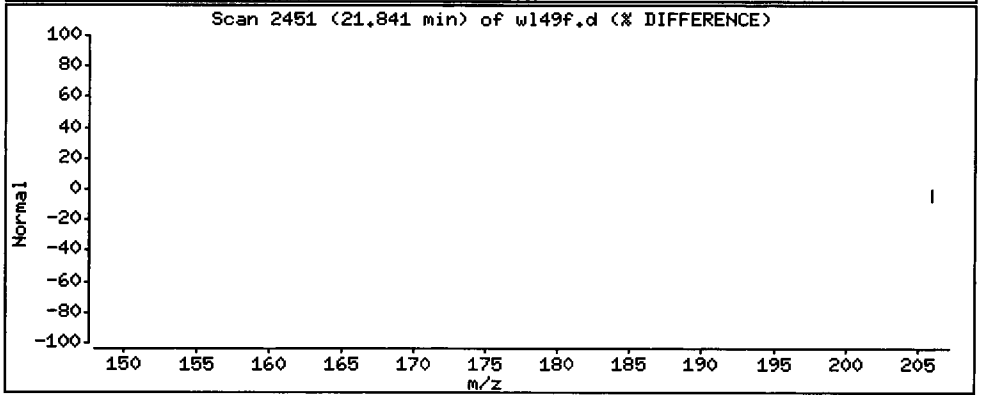












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Date : 24-APR-2013 20:14

Client ID: IM-CB-01-20130410-S

Instrument: nt10.i

Sample Info: WL49F,3

Volume Injected (uL): 1.0

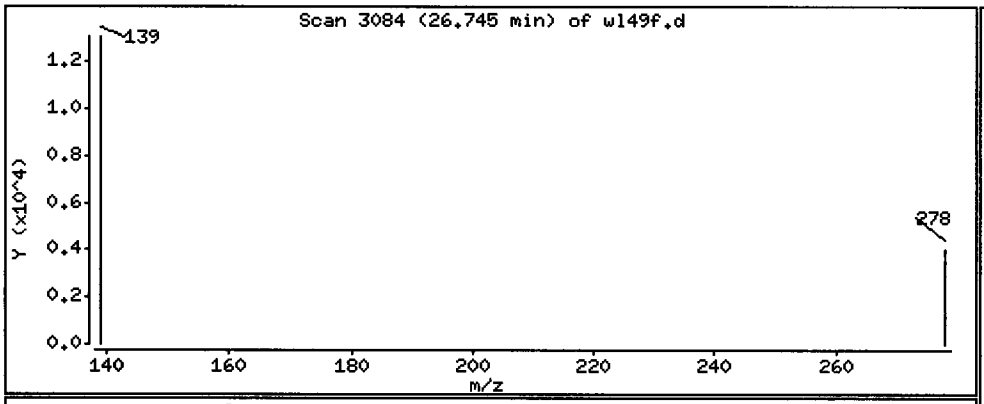
Operator: YZ

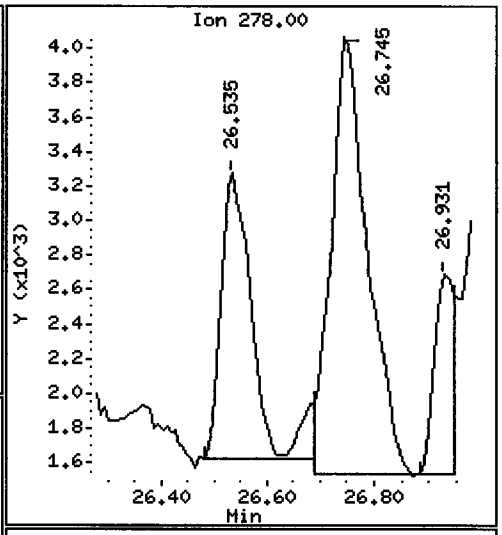
Column phase: ZB-5msi

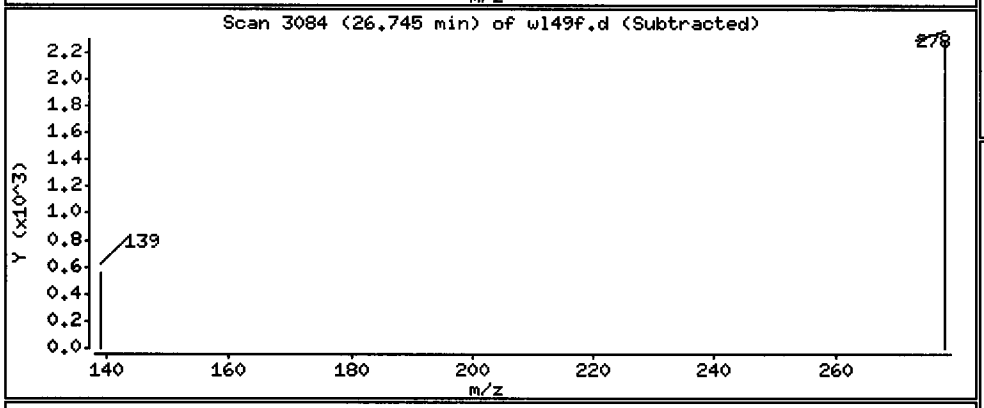
Column diameter: 0.25

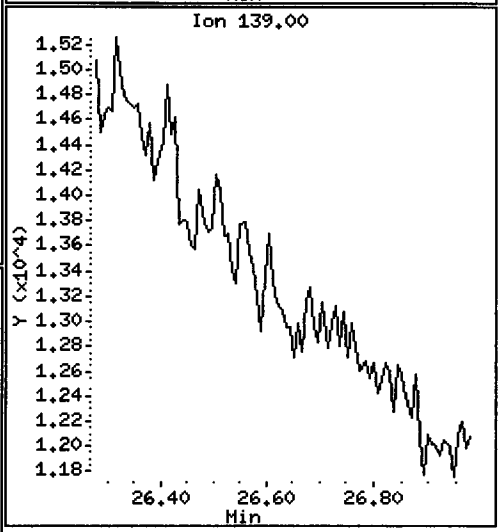
79 Dibenzo(a,h)anthracene

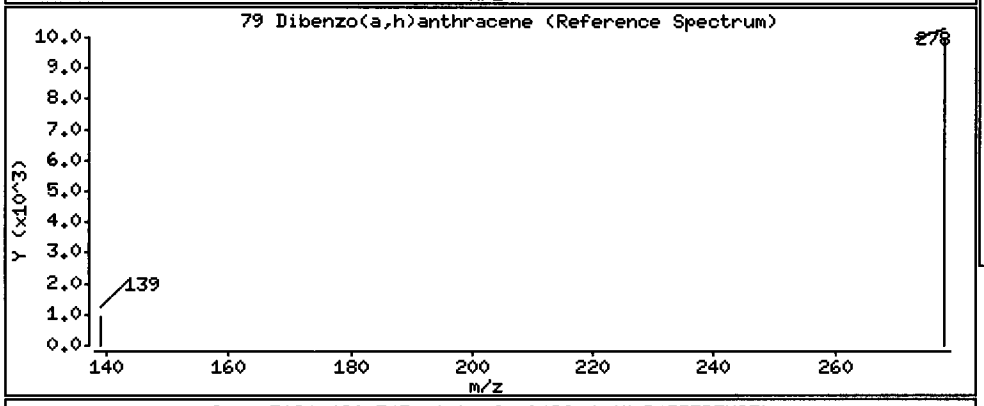
Concentration: 596.8 ug/kg

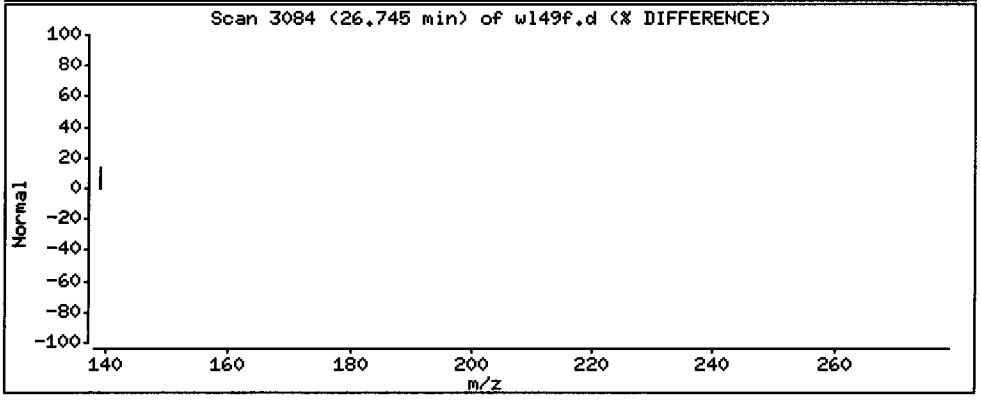






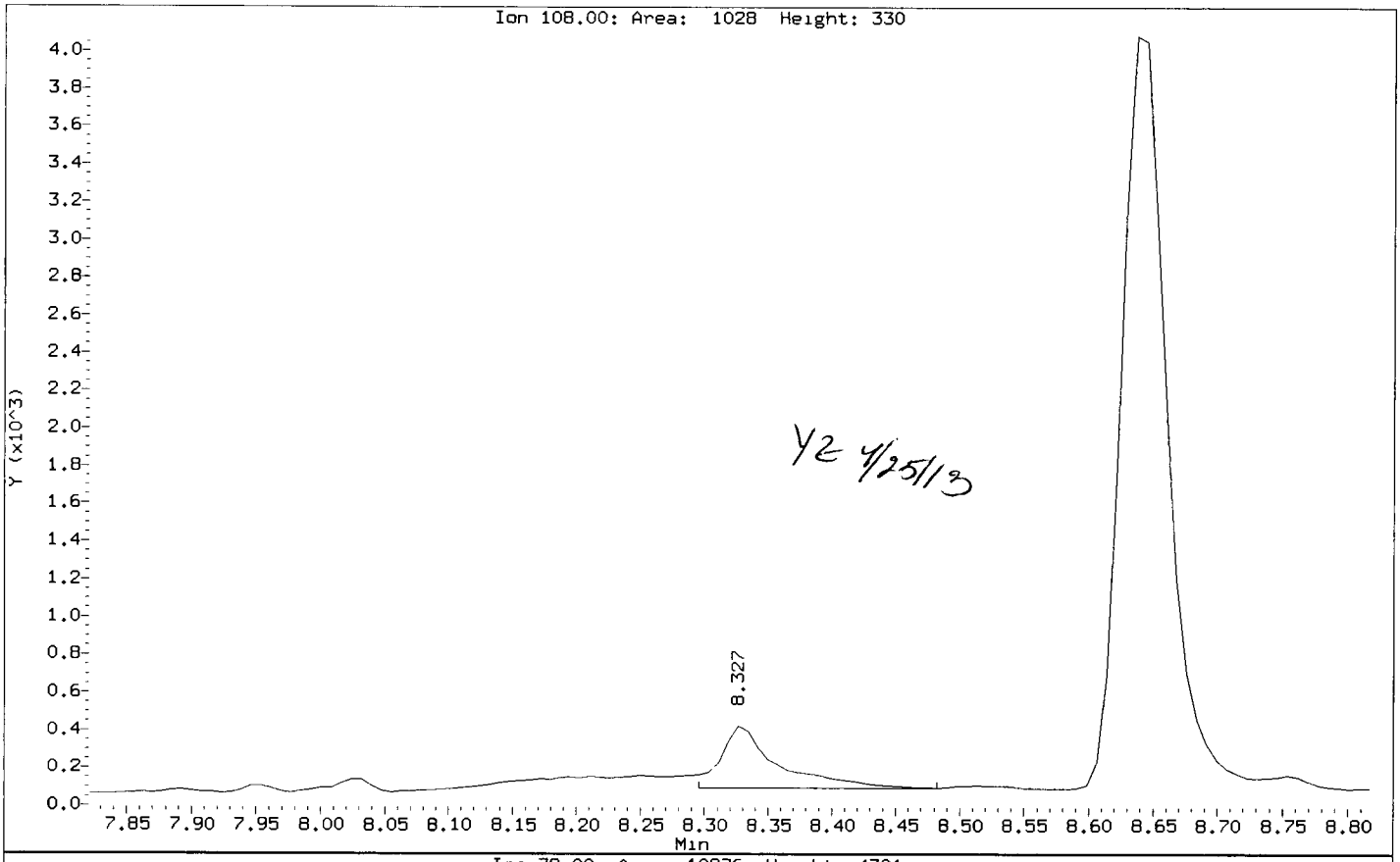




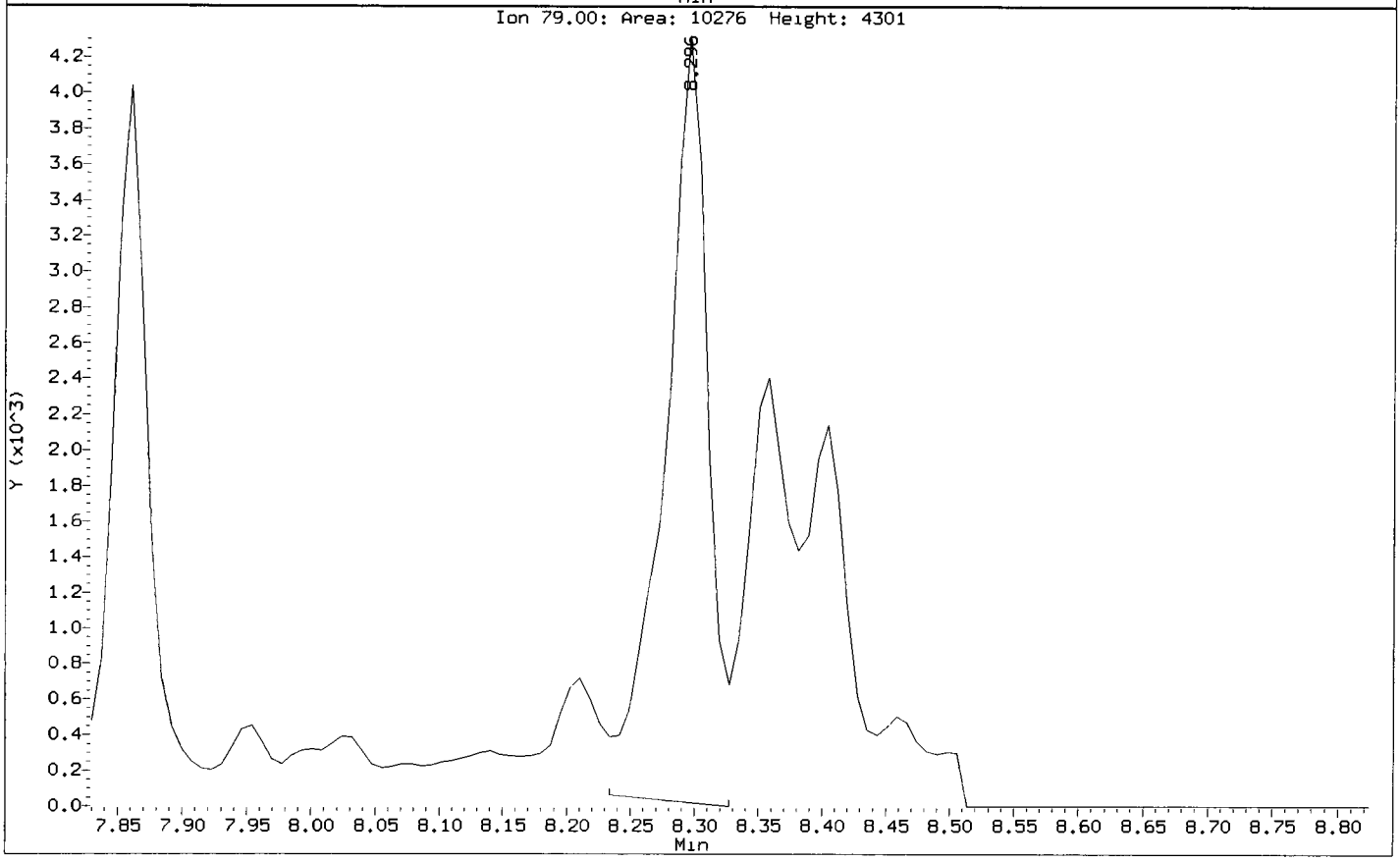


Data File: /chem1/nt10.1/20130424.b/SIM.b/w149f.d
Injection Date: 24-APR-2013 20:14
Instrument: nt10.1
Client Sample ID: IM-CB-01-20130410-S

Compound: 2-Methylphenol
CAS Number: 95-48-7

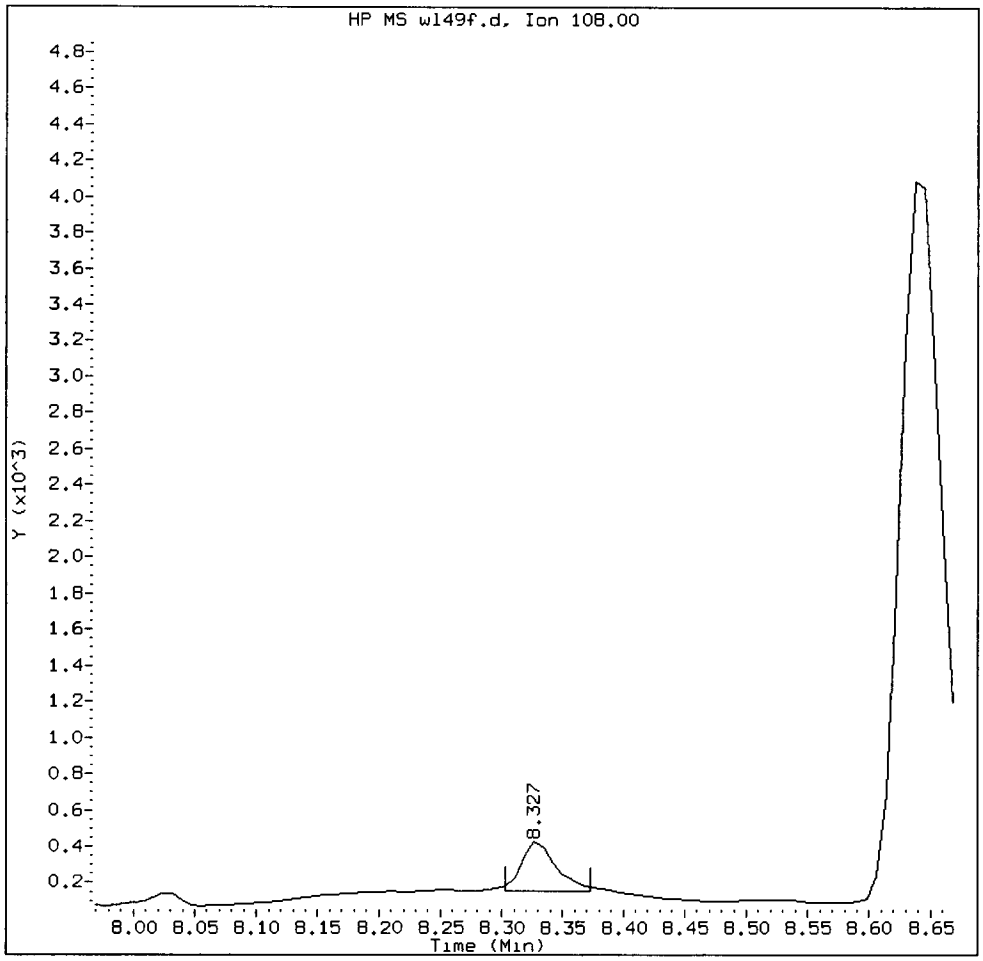


YE 4/25/13



WL49F, /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

2-Methylphenol Amount: 0.03 Area: 560



MANUAL INTEGRATION for 2-Methylphenol

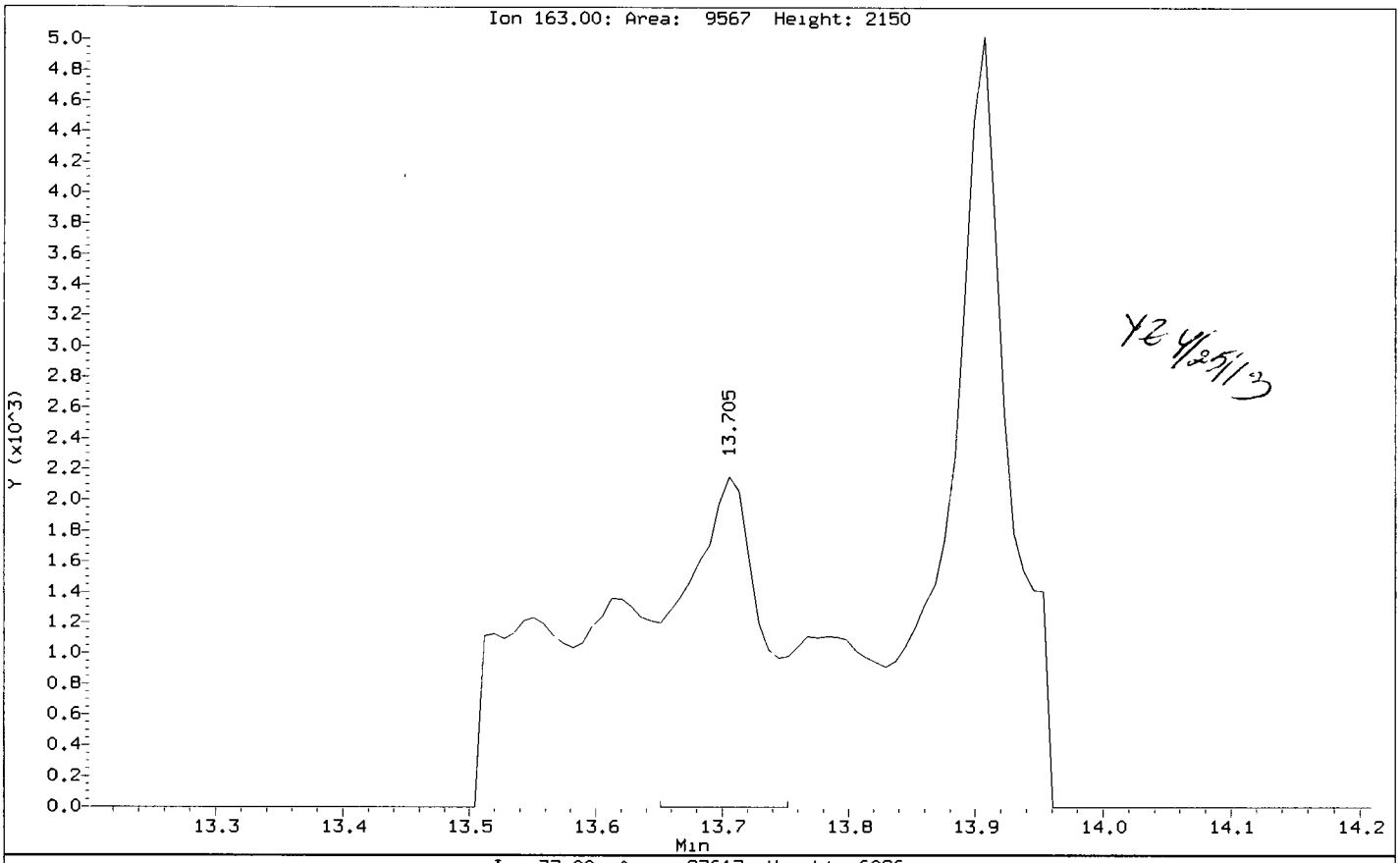
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

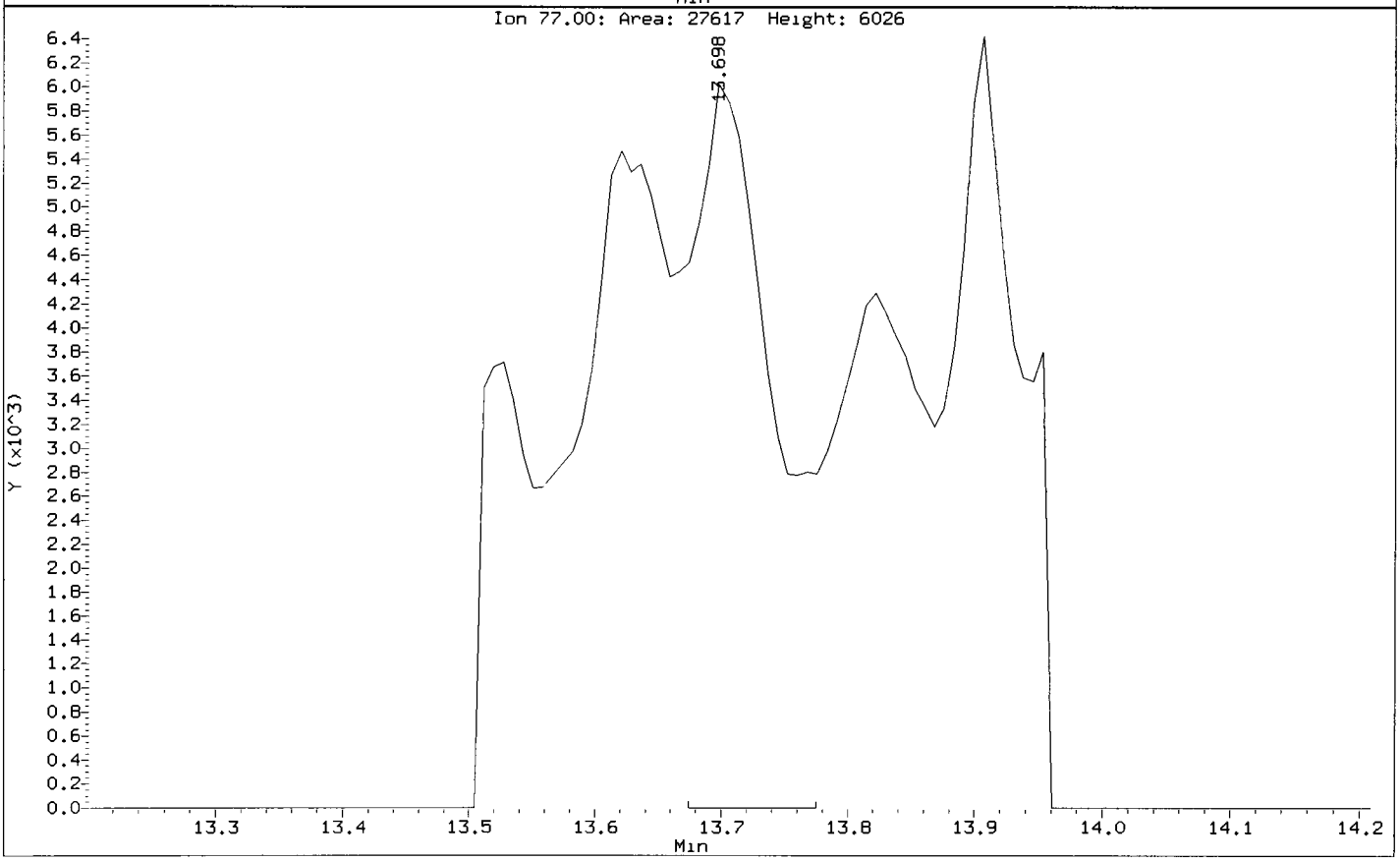
Analyst: YZ Date: 4/25/13

Data File: /chem1/nt10.1/20130424.b/SIM.b/w149f.d
Injection Date: 24-APR-2013 20:14
Instrument: nt10.1
Client Sample ID: IM-CB-01-20130410-S

Compound: Dimethylphthalate
CAS Number: 131-11-3

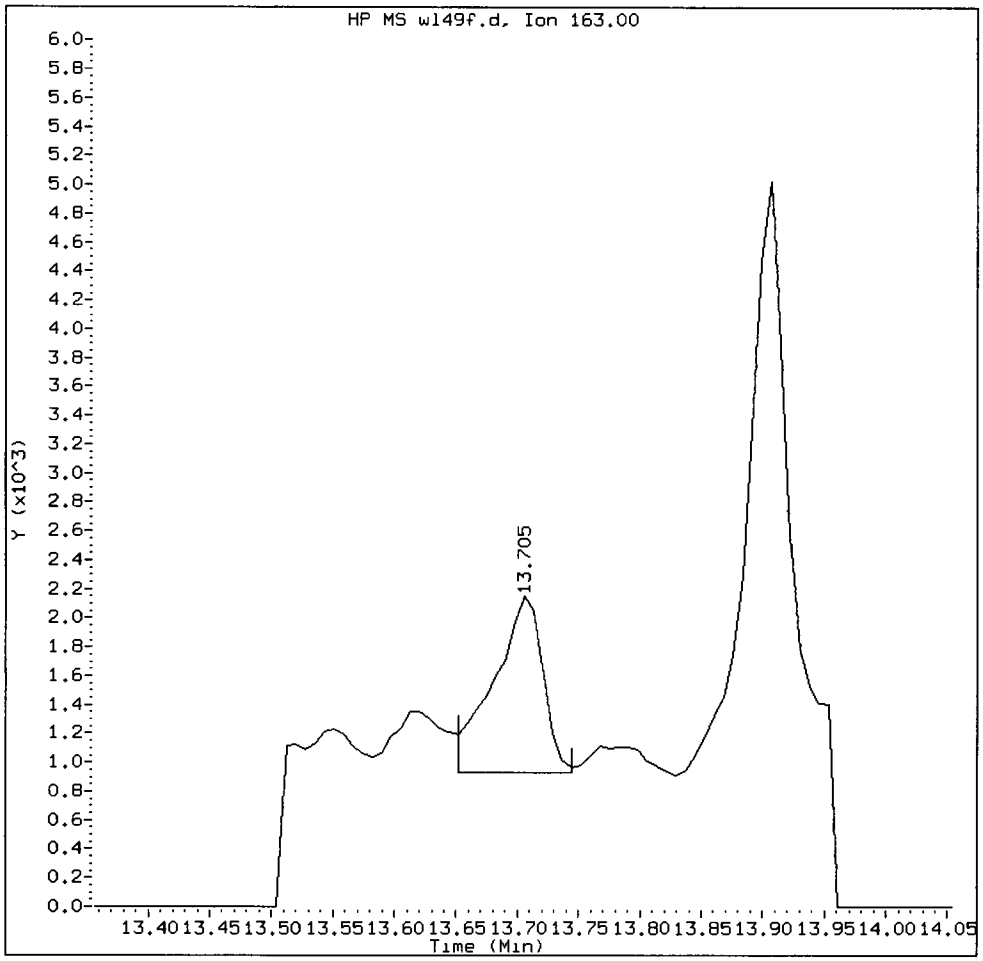


YE 4/25/13



WL49F, /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Dimethylphthalate Amount: 0.11 Area: 3505



MANUAL INTEGRATION for Dimethylphthalate

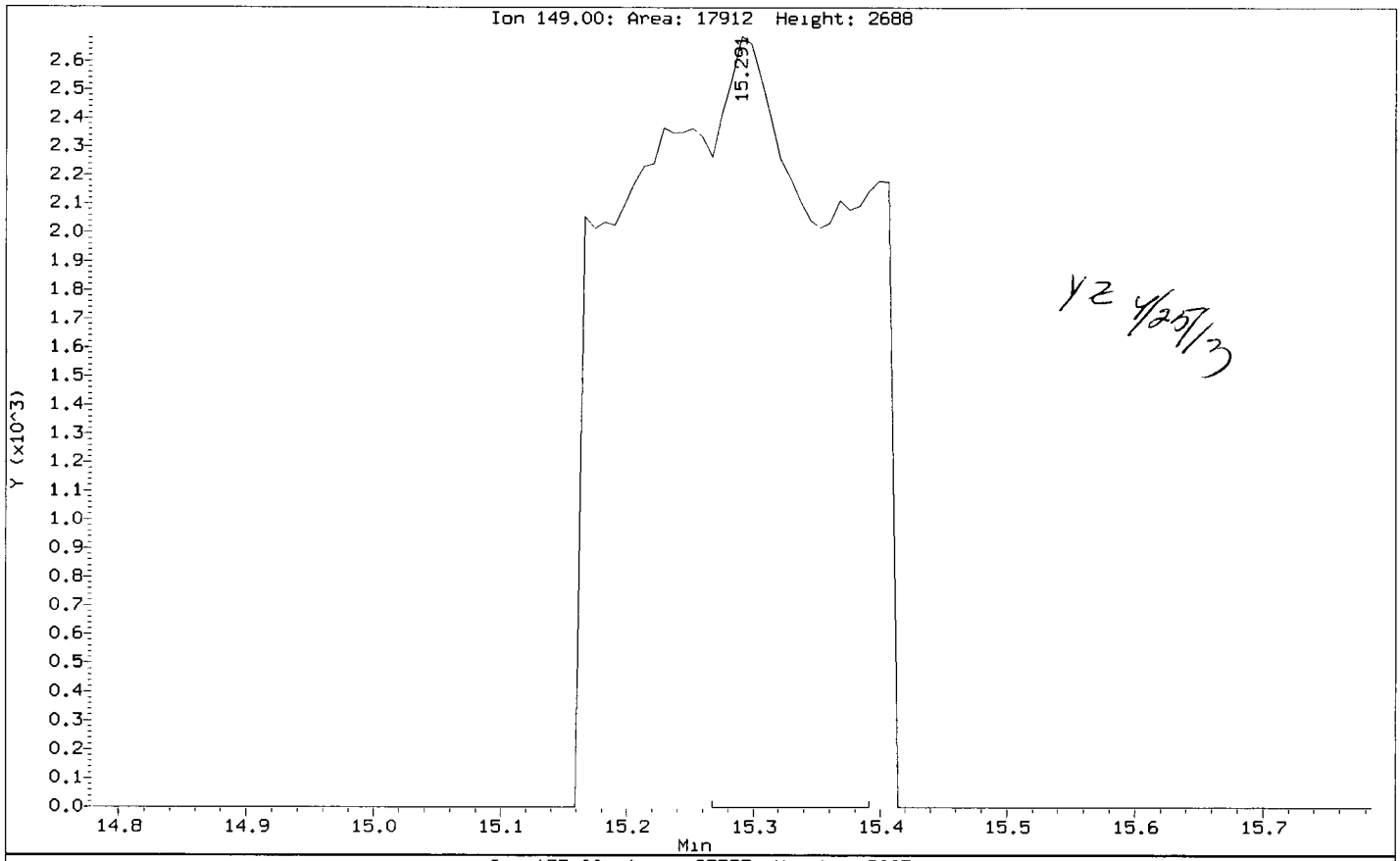
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

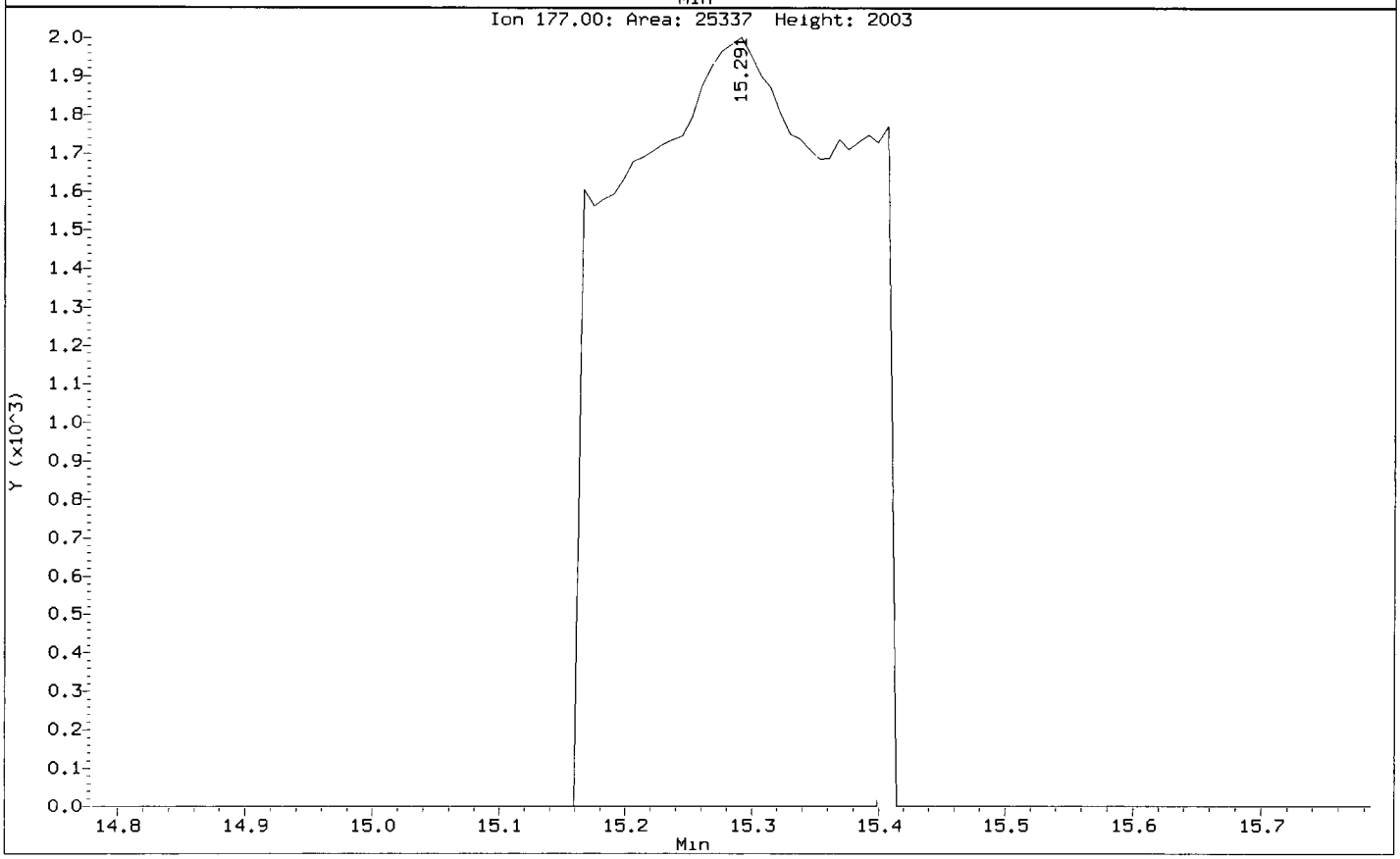
Analyst: YZ Date: 4/25/13

Data File: /chem1/nt10.1/20130424.b/SIM.b/w149f.d
Injection Date: 24-APR-2013 20:14
Instrument: nt10.1
Client Sample ID: IM-CB-01-20130410-S

Compound: Diethylphthalate
CAS Number: 84-66-2

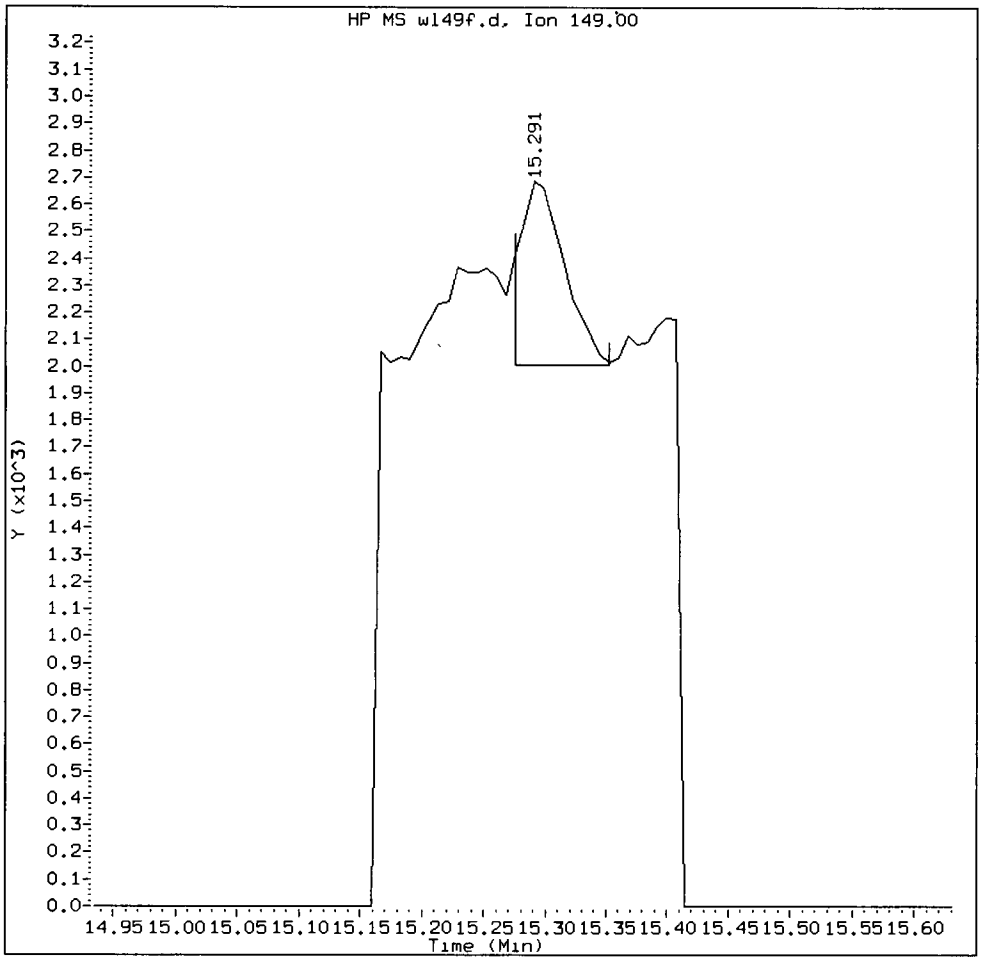


YZ 4/25/13



WL49F, /chem1/nt10.i/20130424.b/SIM.b/wl49f.d

Diethylphthalate Amount: 0.05 Area: 1756



MANUAL INTEGRATION for Diethylphthalate

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

5. Other _____

Analyst: YZ Date: 4/25/13

CO-ELUTION SUMMARY FOR FILE - wl49f.d

Lab ID: WL49F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc. YZ 4/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130424.b/SIM.b/wl49g.d
Lab Smp Id: WL49G Client Smp ID: IM-CB-02-20130410-S
Inj Date : 24-APR-2013 20:51
Operator : YZ Inst ID: nt10.i
Smp Info : WL49G
Misc Info : 13-7785
Comment :
Method : /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Meth Date : 25-Apr-2013 11:46 yev Quant Type: ISTD
Cal Date : 25-JAN-2013 17:53 Cal File: ic0125i.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.05000	Weight of sample extracted (g)
M	18.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	5.449	5.433	(0.711)	63708	4.38189	410.0
	3 Phenol	94	7.187	7.172	(0.938)	3293	0.17834	16.69
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.659	7.659	(1.000)	45698	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	8.016	8.101	(1.047)	80197	7.33019	685.8(H)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	8.645	8.621	(1.129)	469	0.03260	3.050(M)
	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	10.270	10.262	(1.000)	175549	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	13.705	13.705	(0.971)	1718	0.05755	5.385 (M)
*	42 Acenaphthene-d10	162	14.108	14.108	(1.000)	98060	4.00000	
	50 Diethylphthalate	149	15.283	15.283	(1.083)	1108	0.03177 J	2.972 (M)
	54 N-Nitrosodiphenylamine	169	15.630	15.630	(0.901)	1138	0.06191	5.792
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.345	17.337	(1.000)	158125	4.00000	
$	66 Terphenyl-d14	244	20.788	20.780	(0.918)	72146	2.87408	268.9
	67 Butylbenzylphthalate	149	21.810	21.802	(0.963)	14441	0.79973	74.83 (M)
*	69 Chrysene-d12	240	22.654	22.638	(1.000)	188920	4.00000	
*	77 Perylene-d12	264	24.969	24.938	(1.000)	193290	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.675	26.628	(1.068)	6614	0.14356	13.43 (M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wl49g.d
Lab Smp Id: WL49G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Calibration Date: 24-APR-2013
Calibration Time: 18:23
Client Smp ID: IM-CB-02-2013041
Level: LOW
Sample Type: Sediment
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	53853	26926	107706	45698	-15.14
27 Naphthalene-d8	200104	100052	400208	175549	-12.27
42 Acenaphthene-d10	112392	56196	224784	98060	-12.75
59 Phenanthrene-d10	210710	105355	421420	158125	-24.96
69 Chrysene-d12	240805	120402	481610	188920	-21.55
77 Perylene-d12	230834	115417	461668	193290	-16.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.66	7.16	8.16	7.66	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.27	0.08
42 Acenaphthene-d10	14.11	13.61	14.61	14.11	0.00
59 Phenanthrene-d10	17.34	16.84	17.84	17.34	0.05
69 Chrysene-d12	22.64	22.14	23.14	22.65	0.07
77 Perylene-d12	24.94	24.44	25.44	24.97	0.12

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

Analytical Resources, Inc.

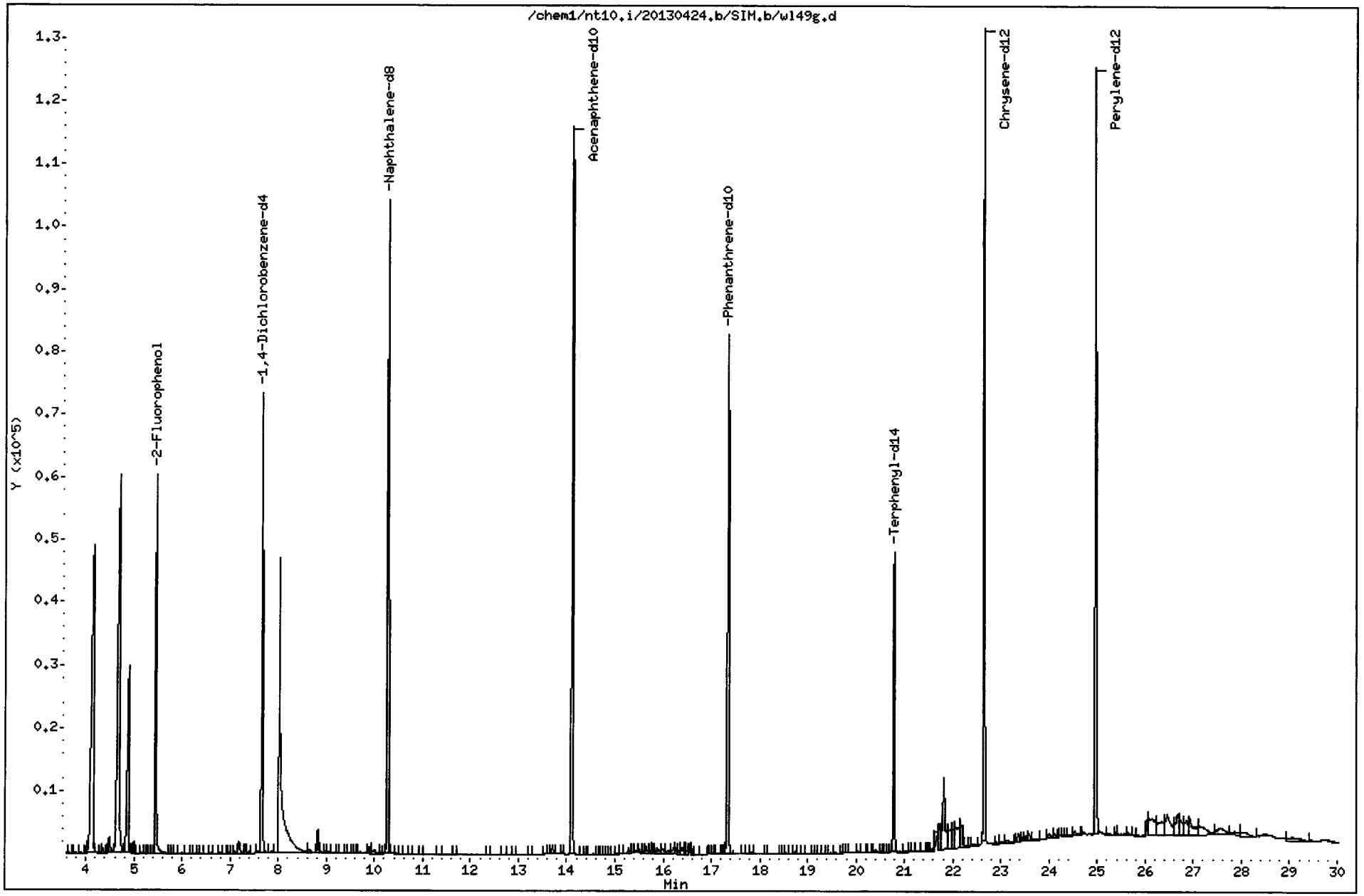
RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WL49G
Client Smp ID: IM-CB-02-20130410-S
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130424.b/SIM.b/SIMABN2.m
Misc Info: 13-7785

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	701.7	410.0	58.43	30-160
$ 66 Terphenyl-d14	467.8	268.9	57.48	30-160

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d
Date : 24-APR-2013 20:51
Client ID: IM-CB-02-20130410-S
Sample Info: WL49G
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

Operator: YZ

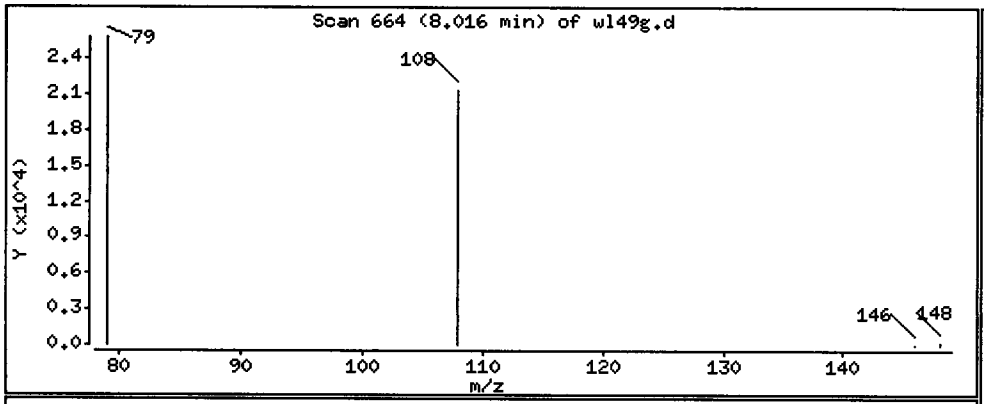
Column phase: ZB-5msi

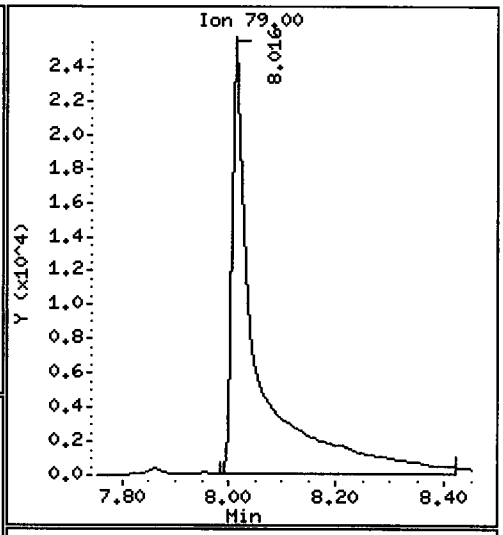
Column diameter: 0.25

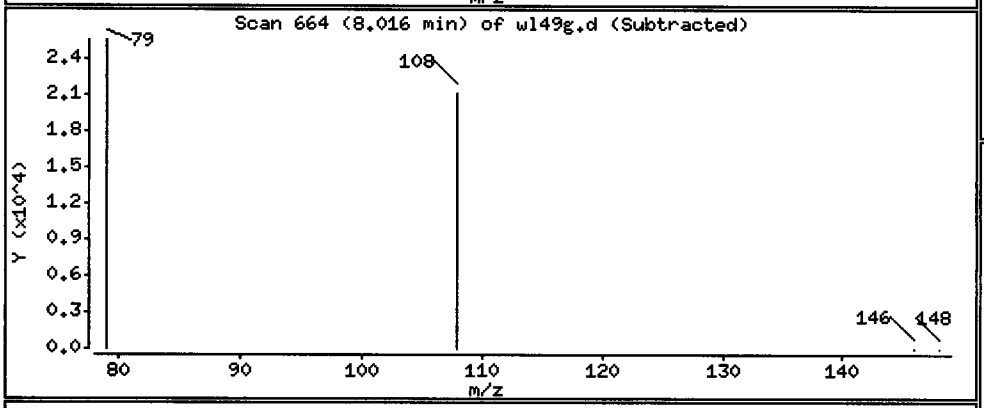
11 Benzyl alcohol

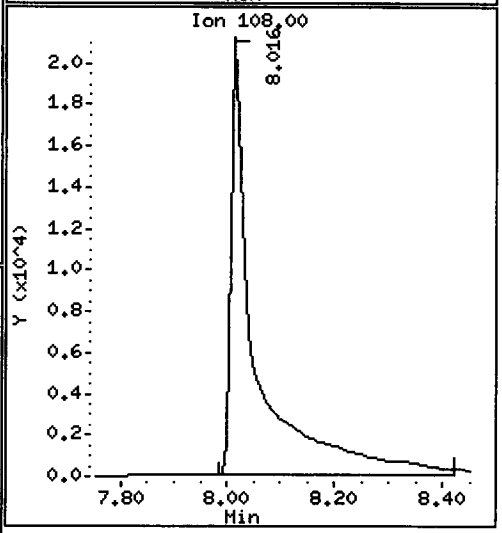
Concentration: 685.8 ug/kg

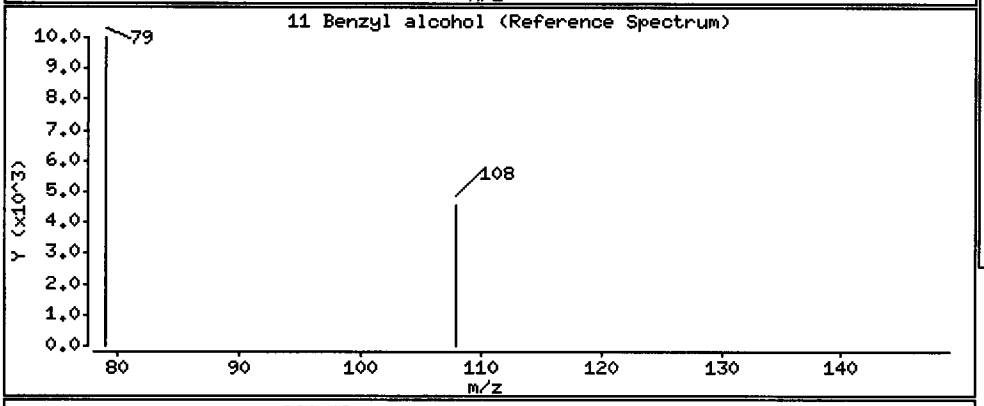
EY

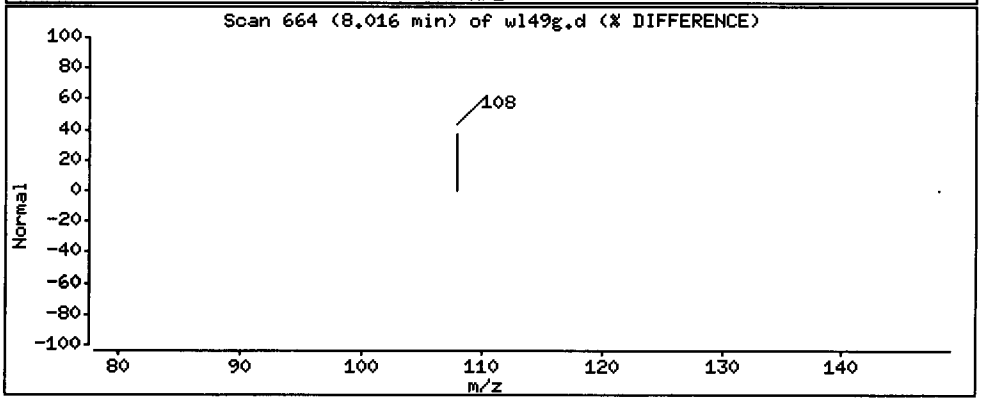












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

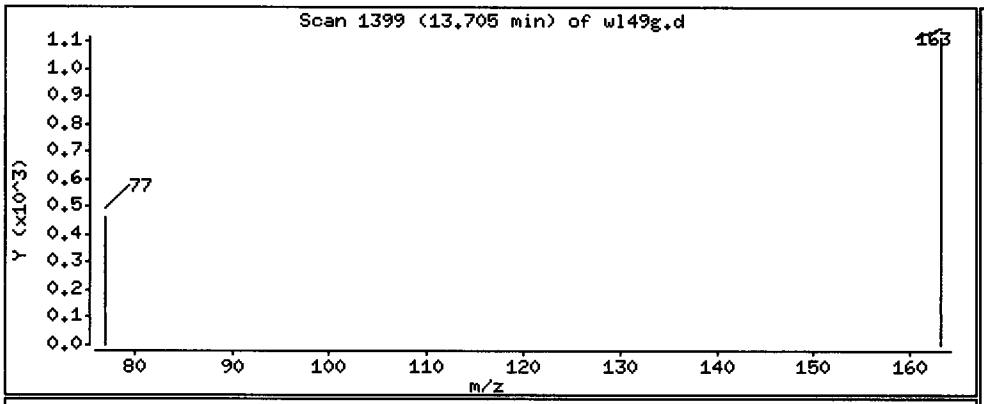
Operator: YZ

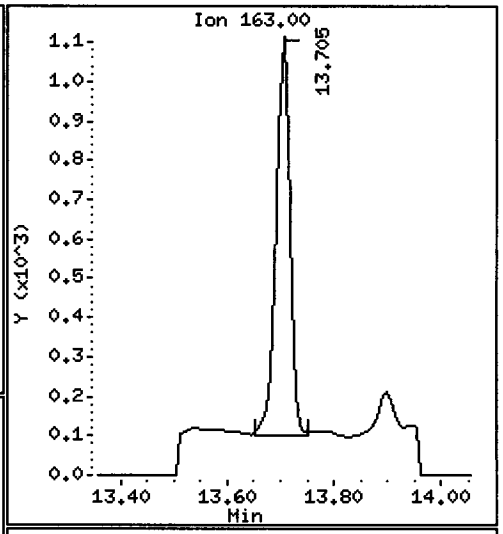
Column phase: ZB-5msi

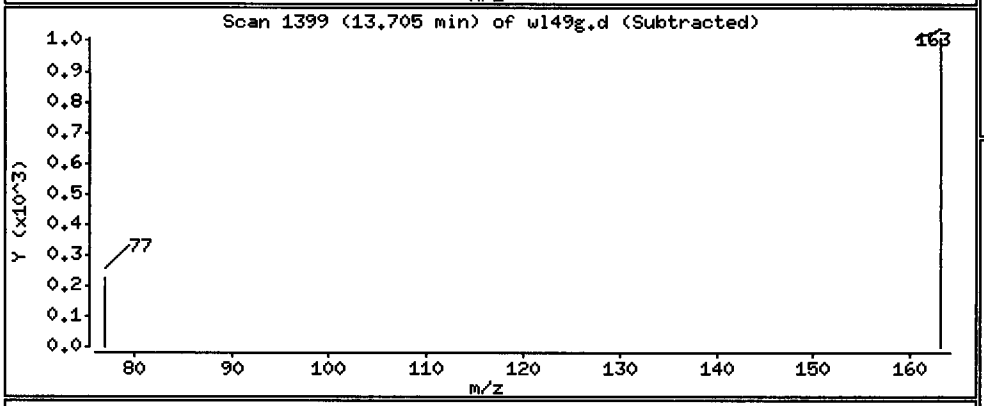
Column diameter: 0.25

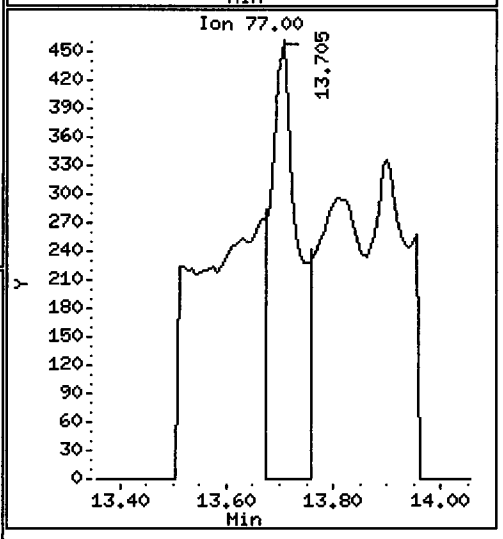
39 Dimethylphthalate

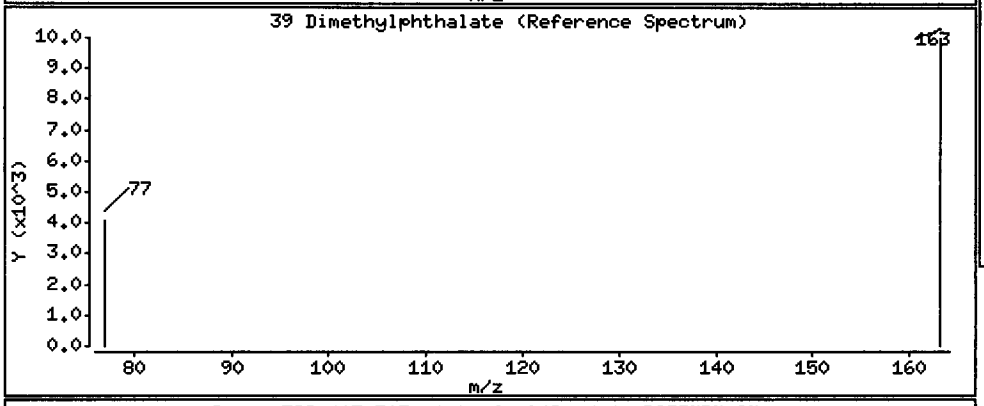
Concentration: 5.385 ug/kg

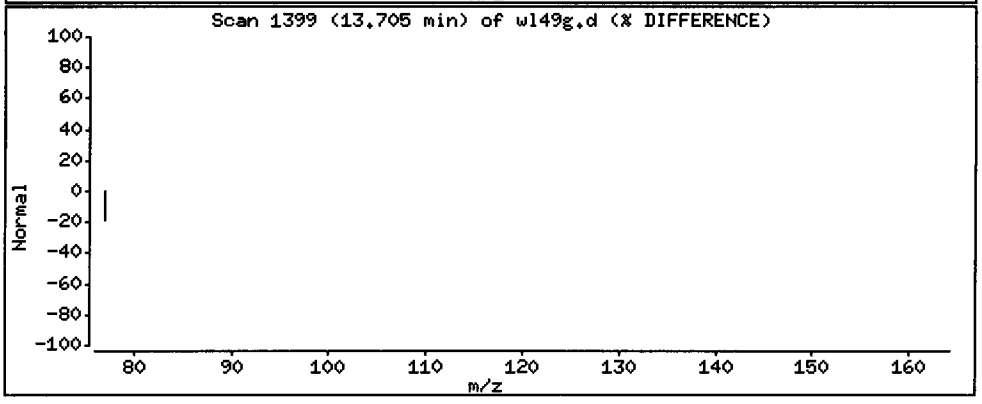












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

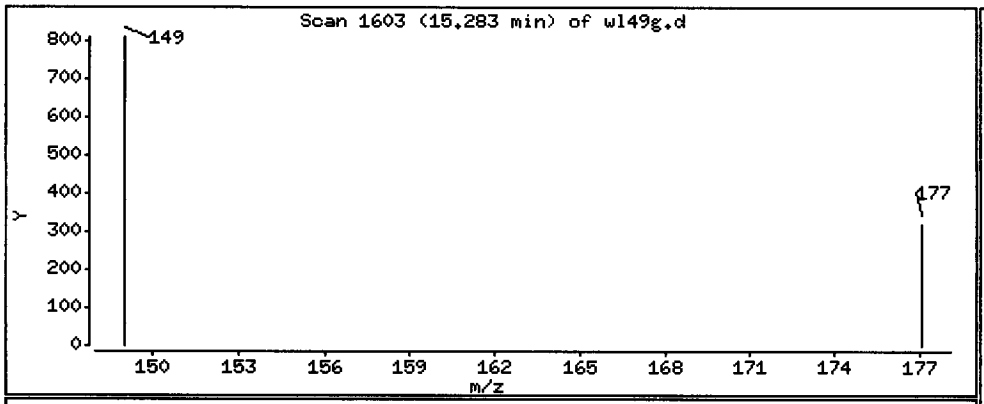
Operator: YZ

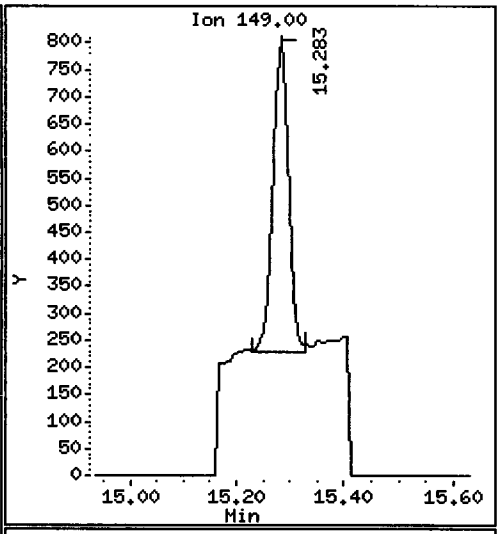
Column phase: ZB-5msi

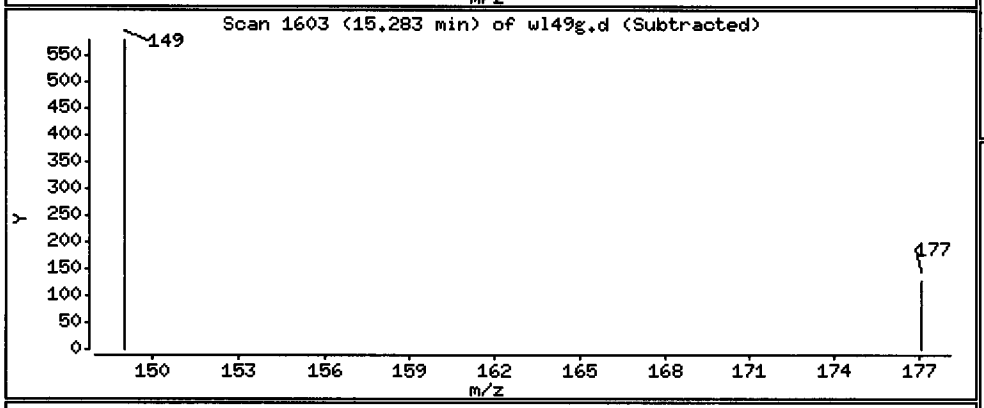
Column diameter: 0.25

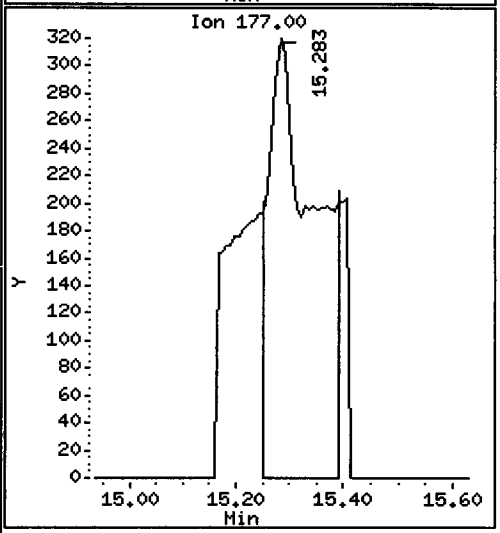
50 Diethylphthalate

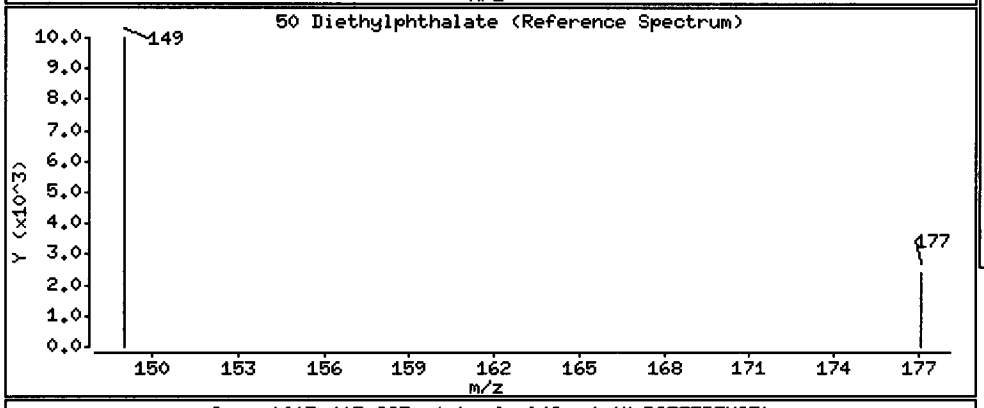
Concentration: 2.972 ug/kg

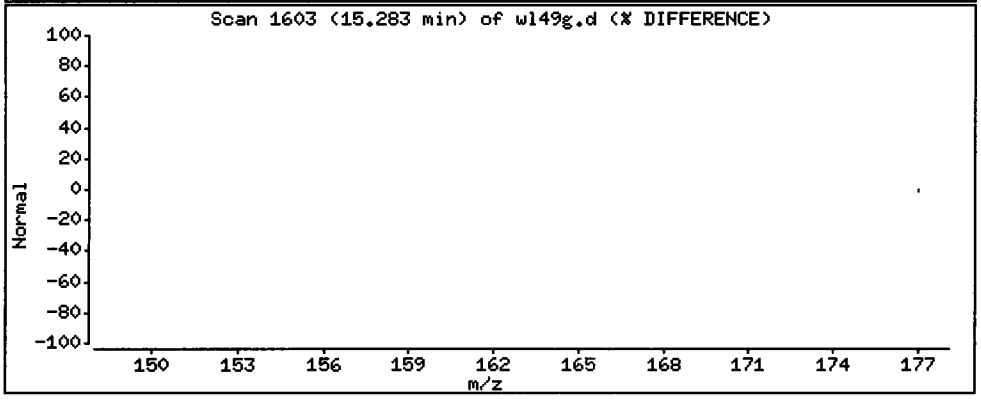












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

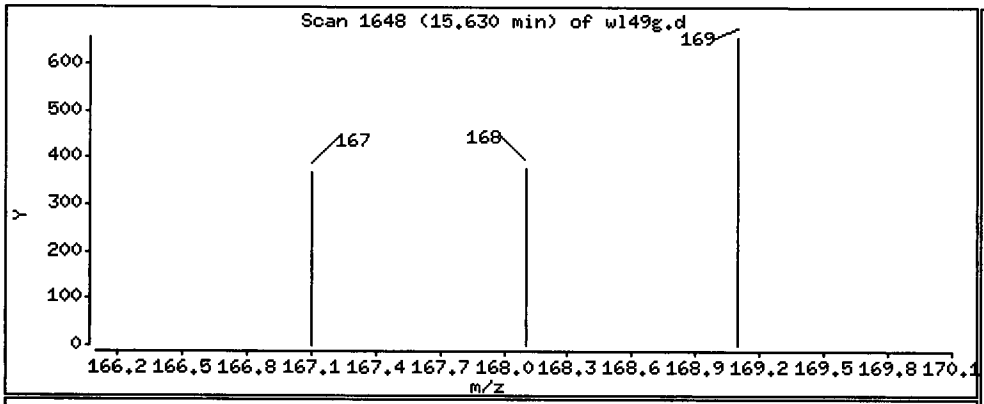
Operator: YZ

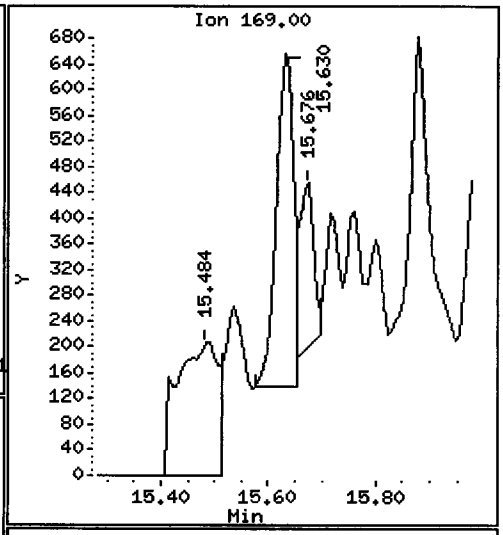
Column phase: ZB-5msi

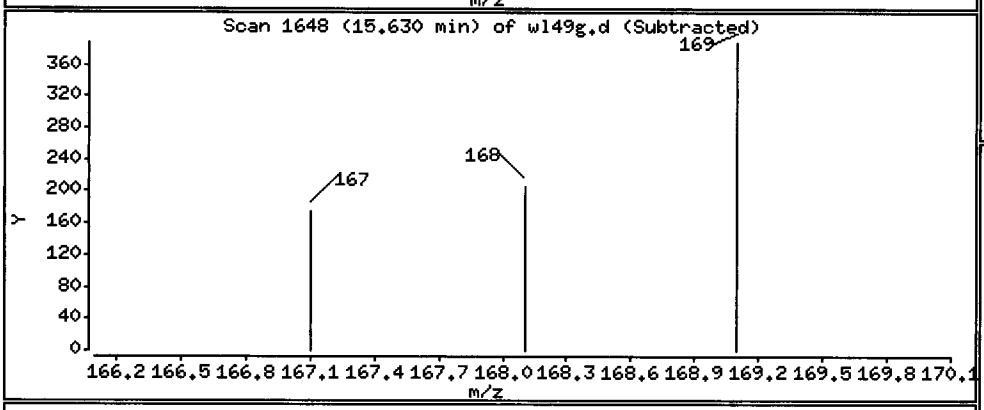
Column diameter: 0.25

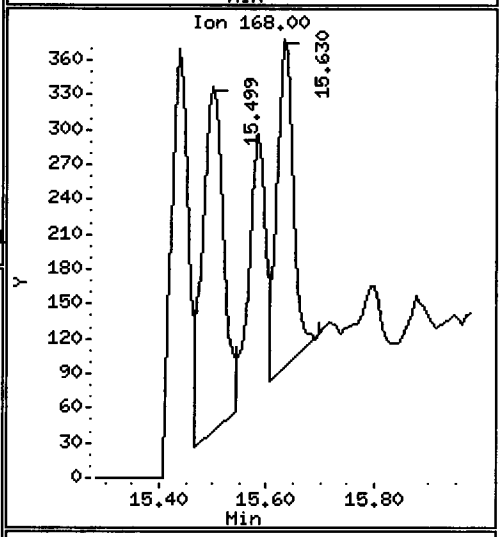
54 N-Nitrosodiphenylamine

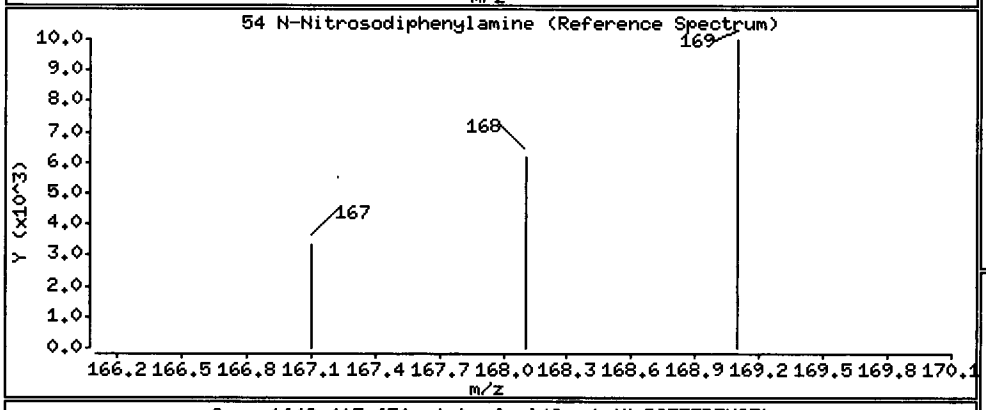
Concentration: 5.792 ug/kg

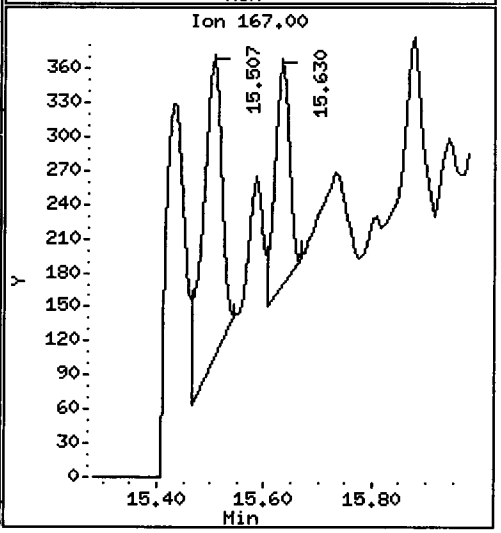


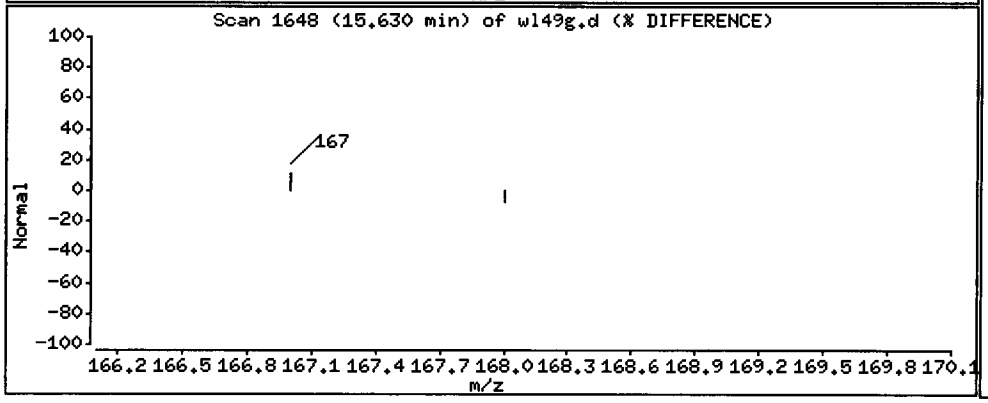












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

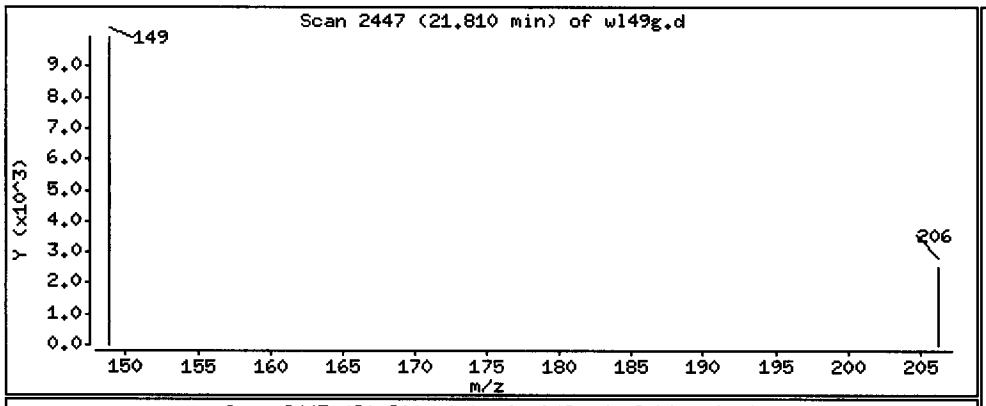
Operator: YZ

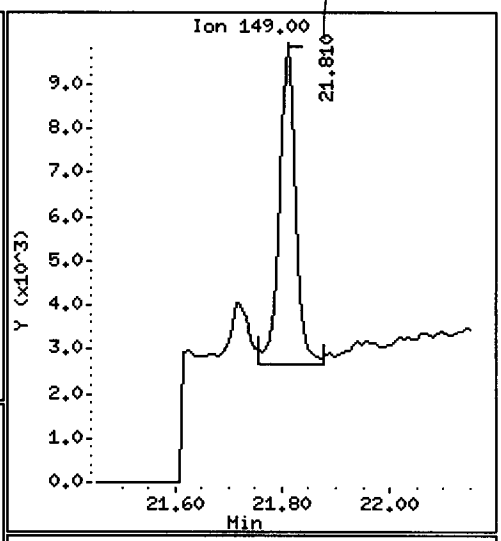
Column phase: ZB-5msi

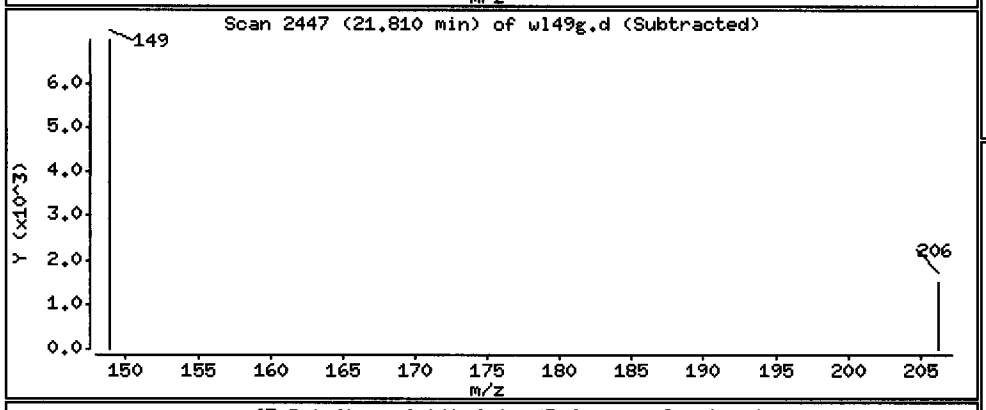
Column diameter: 0.25

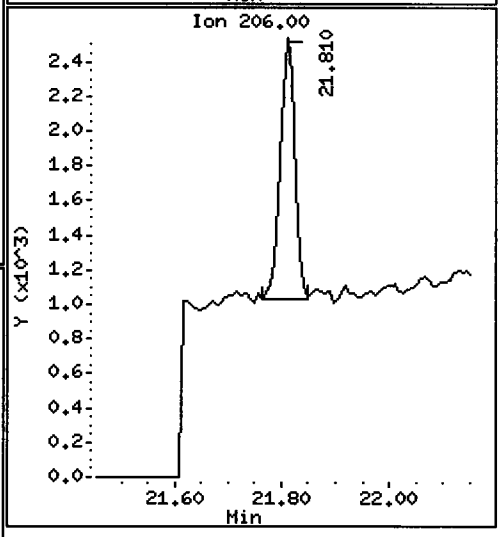
67 Butylbenzylphthalate

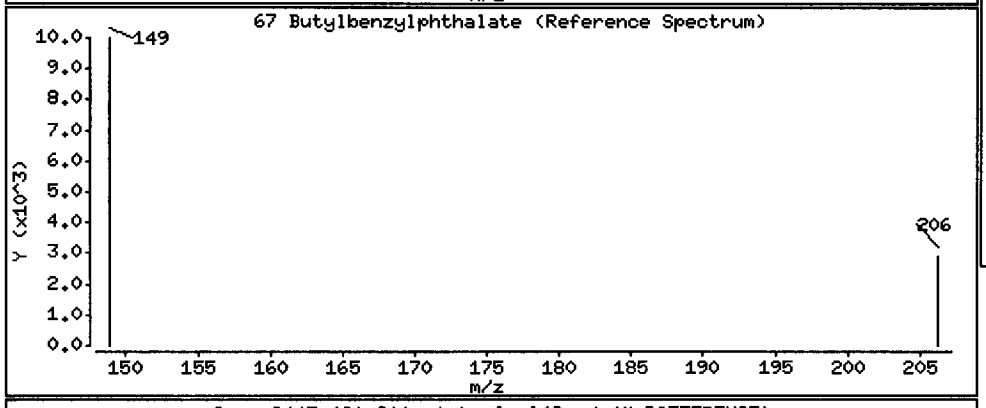
Concentration: 74.83 ug/kg

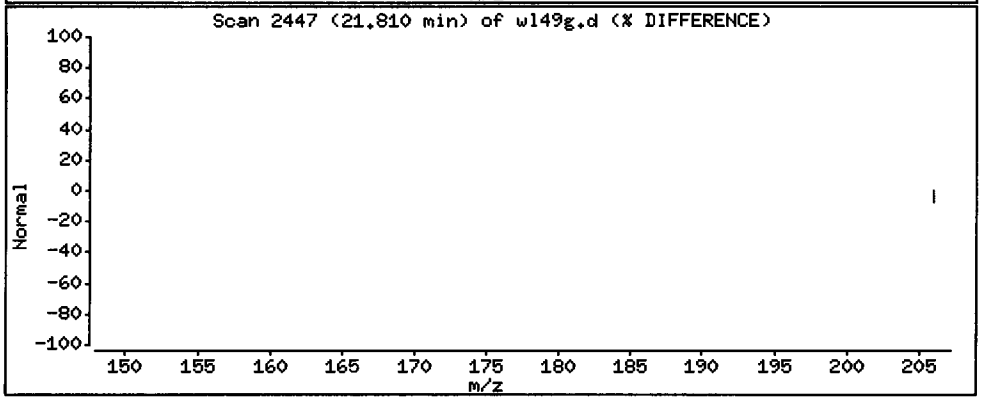












Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Date : 24-APR-2013 20:51

Client ID: IM-CB-02-20130410-S

Instrument: nt10.i

Sample Info: WL49G

Volume Injected (uL): 1.0

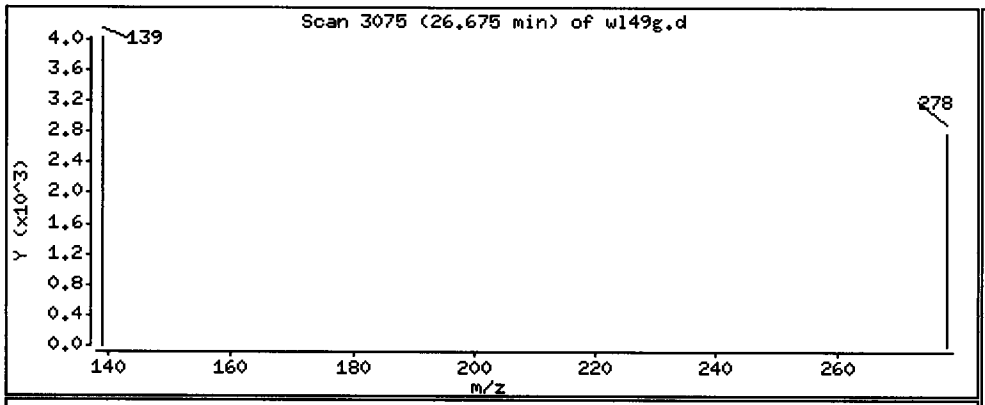
Operator: YZ

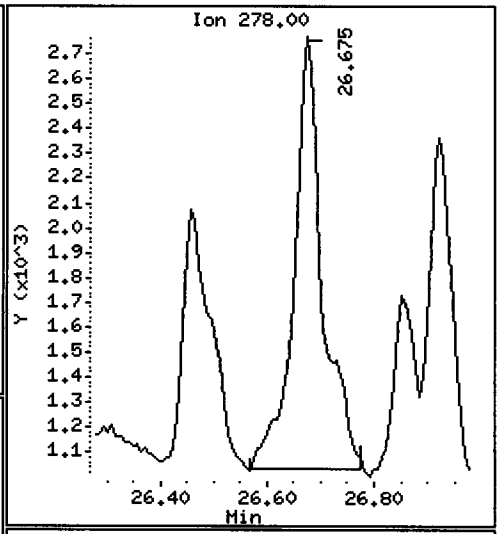
Column phase: ZB-5msi

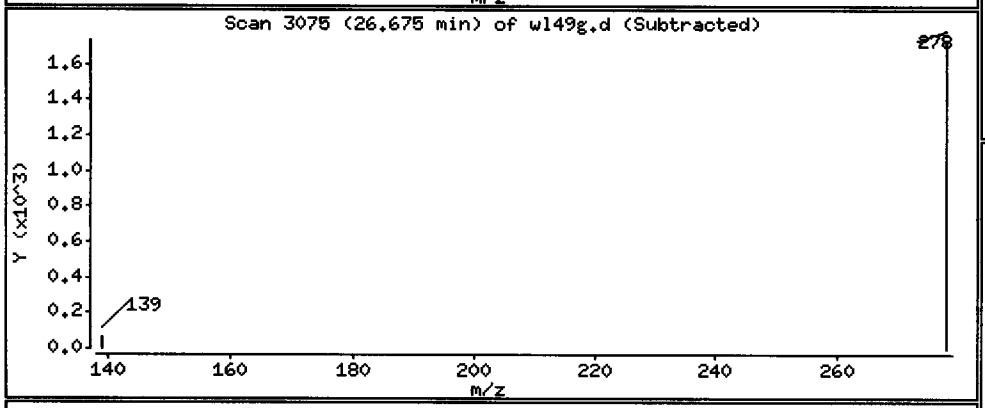
Column diameter: 0.25

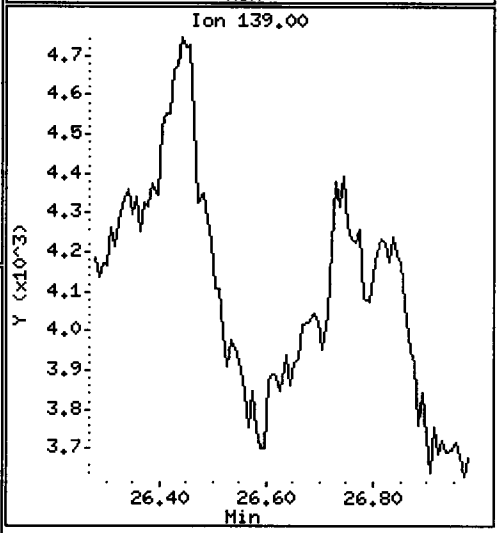
79 Dibenzo(a,h)anthracene

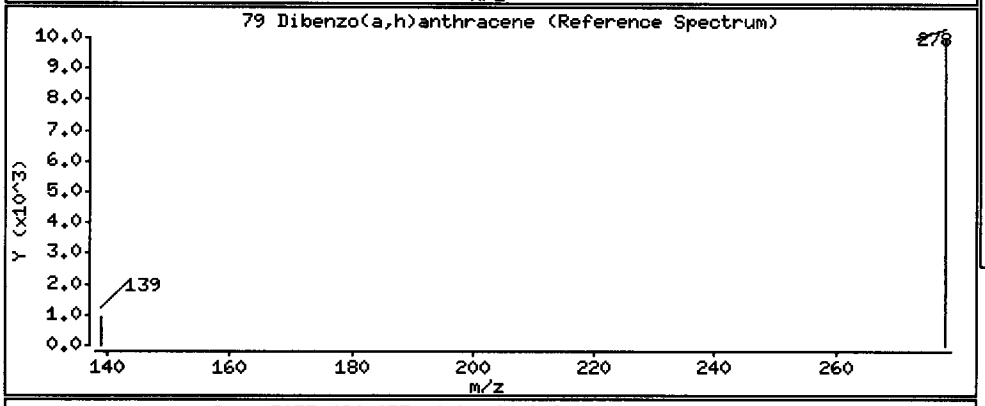
Concentration: 13.43 ug/kg

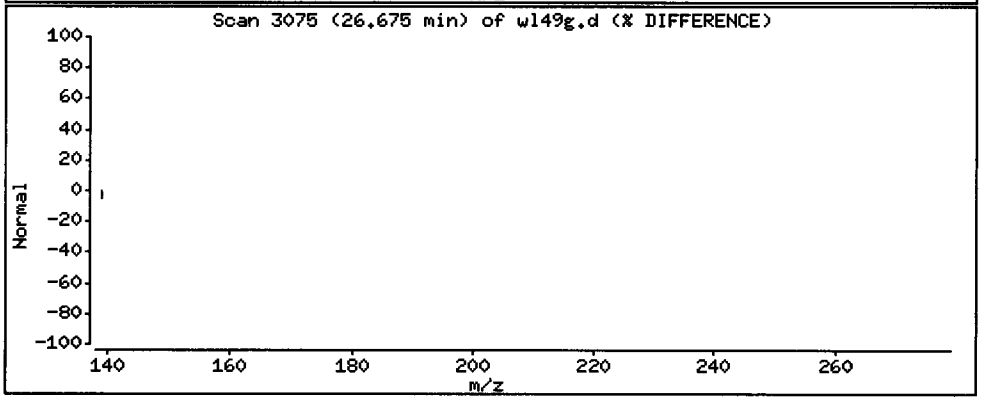






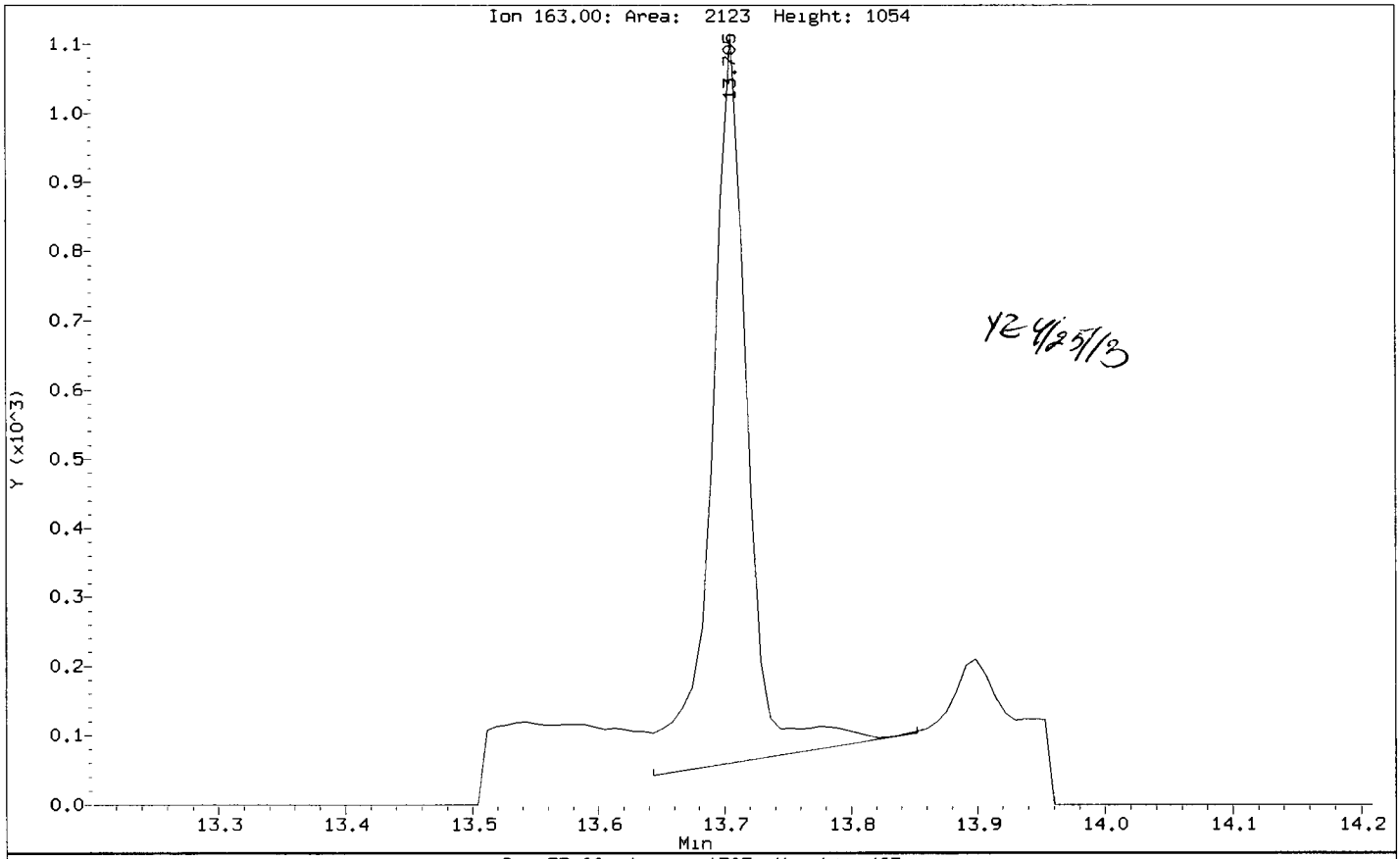




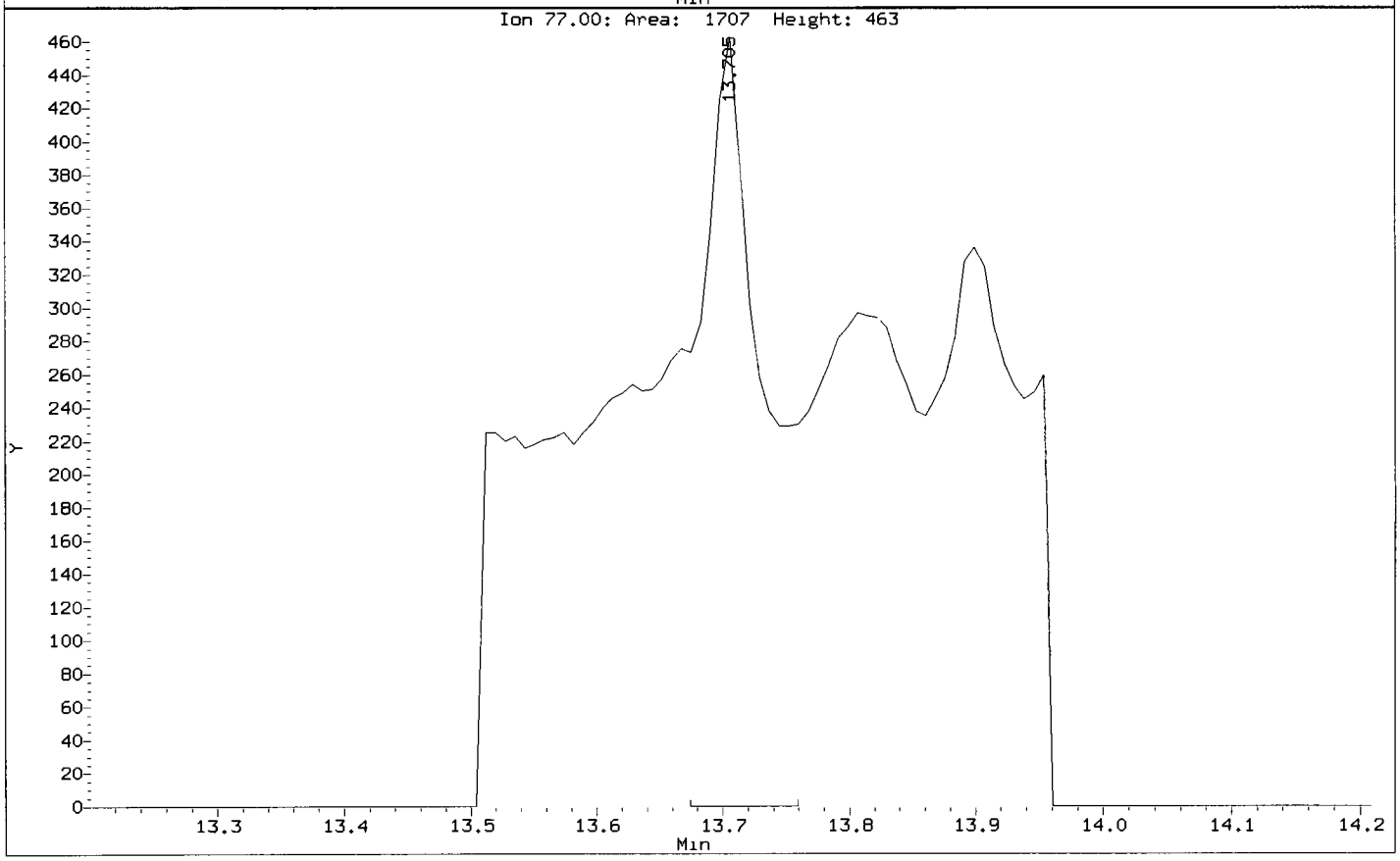


Data File: /chem1/nt10.i/20130424.b/SIM.b/w149g.d
Injection Date: 24-APR-2013 20:51
Instrument: nt10.i
Client Sample ID: IM-CB-02-20130410-S

Compound: Dimethylphthalate
CAS Number: 131-11-3



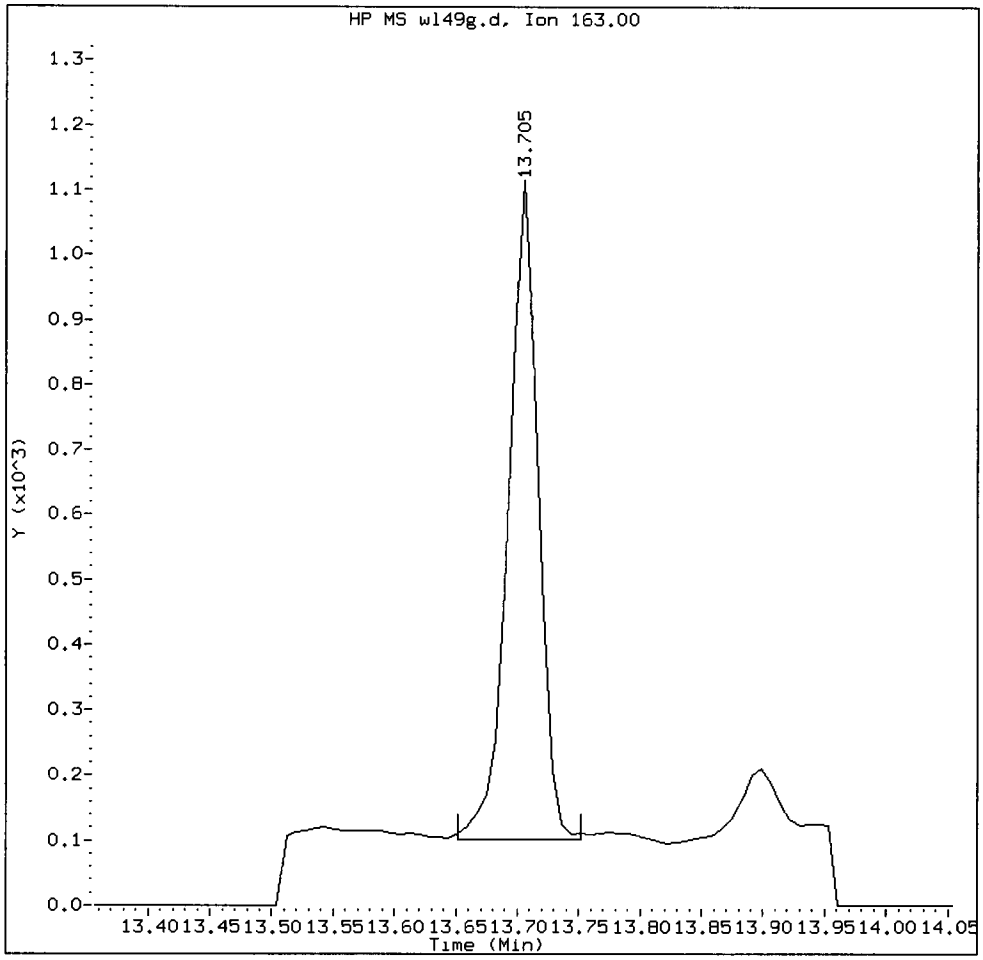
YE 4/25/13



WLNS 01012

WL49G, /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Dimethylphthalate Amount: 0.06 Area: 1718



MANUAL INTEGRATION for Dimethylphthalate

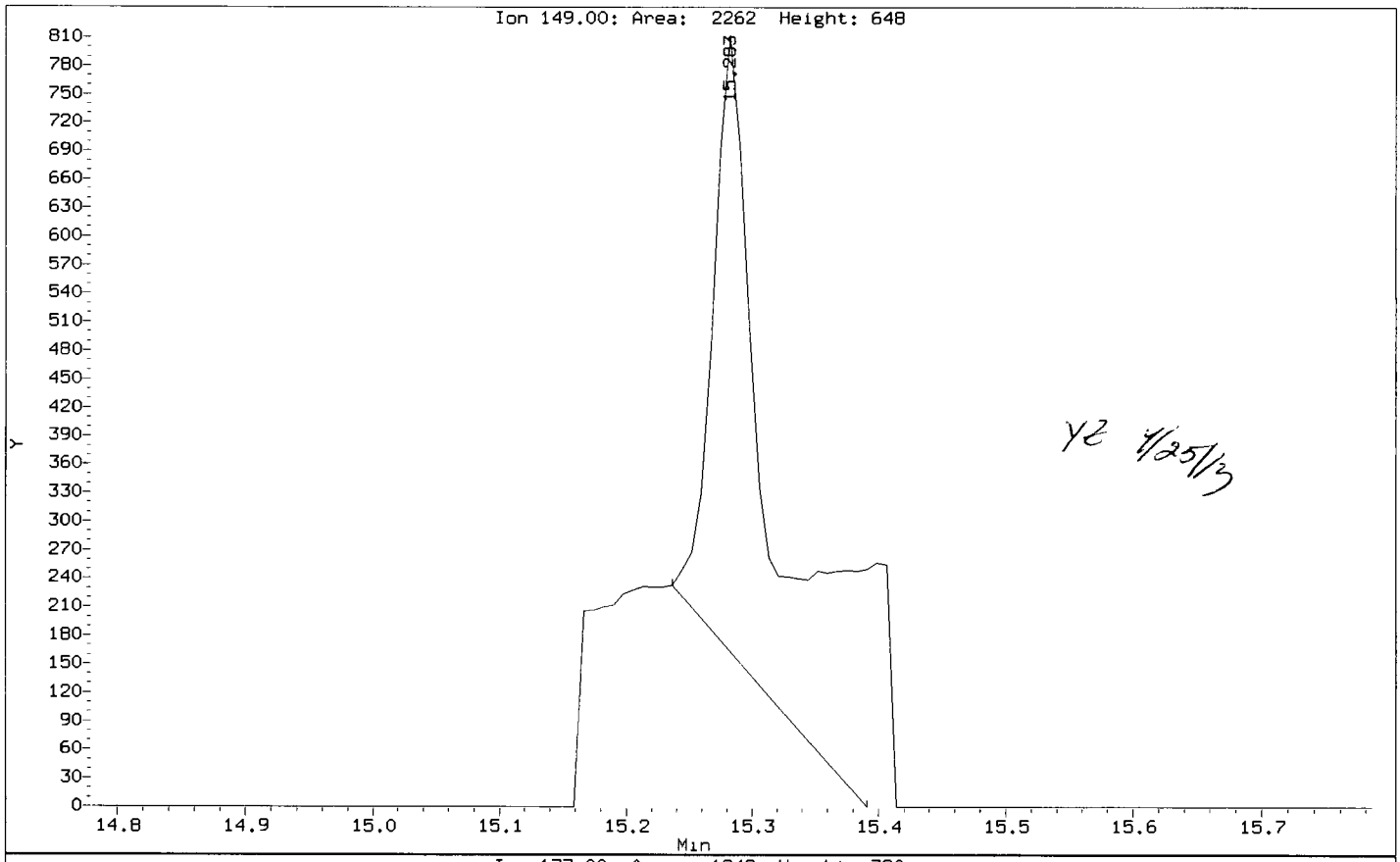
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

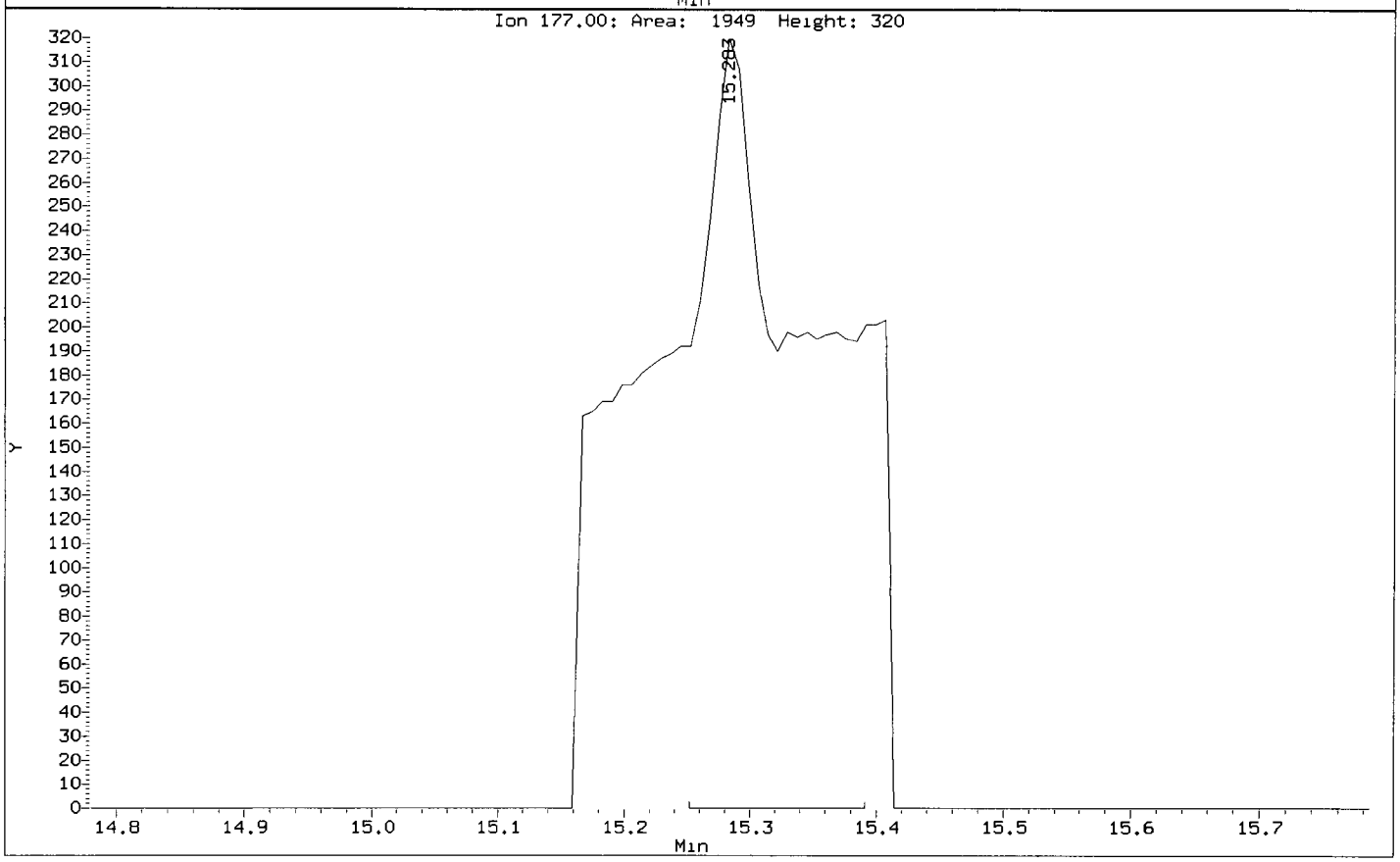
Analyst: YZ Date: 4/25/13

Data File: /chem1/nt10.1/20130424.b/SIM.b/w149g.d
Injection Date: 24-APR-2013 20:51
Instrument: nt10.1
Client Sample ID: IM-CB-02-20130410-S

Compound: Diethylphthalate
CAS Number: 84-66-2



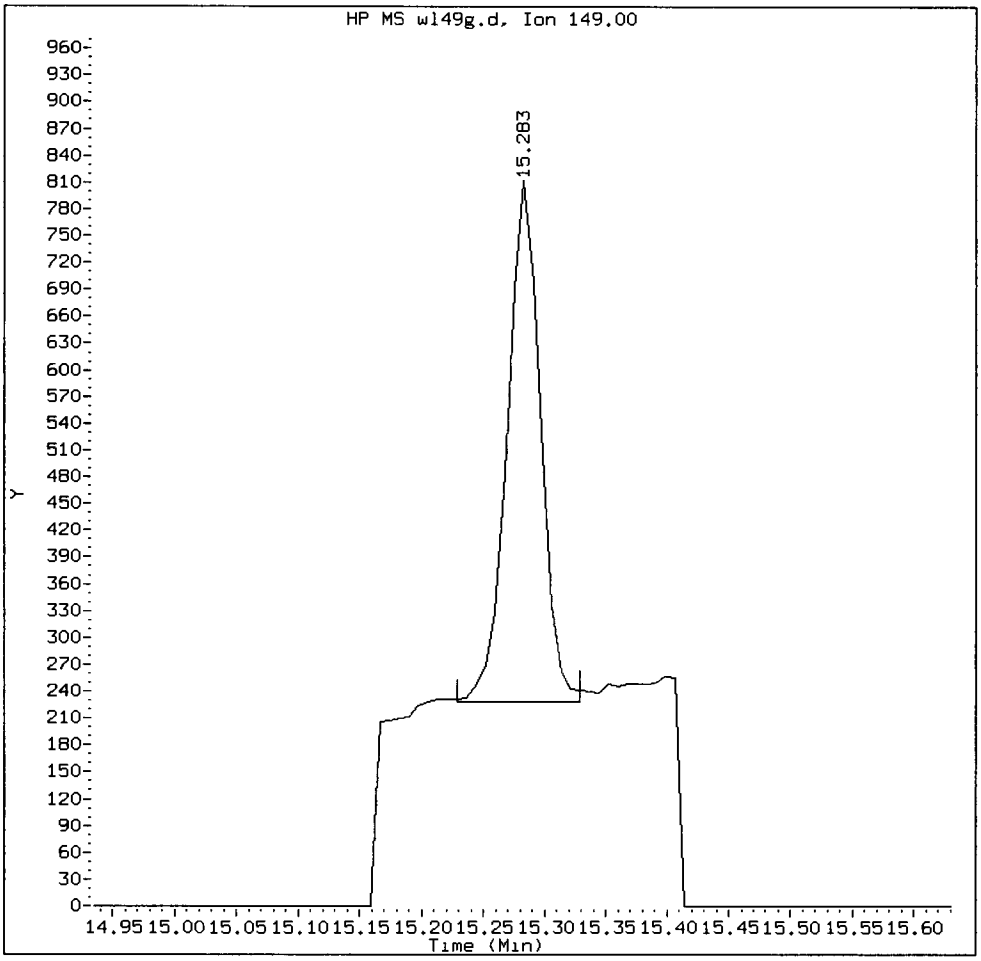
YE 4/25/13



WL 10 - 81815

WL49G, /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Diethylphthalate Amount: 0.03 Area: 1108



MANUAL INTEGRATION for Diethylphthalate

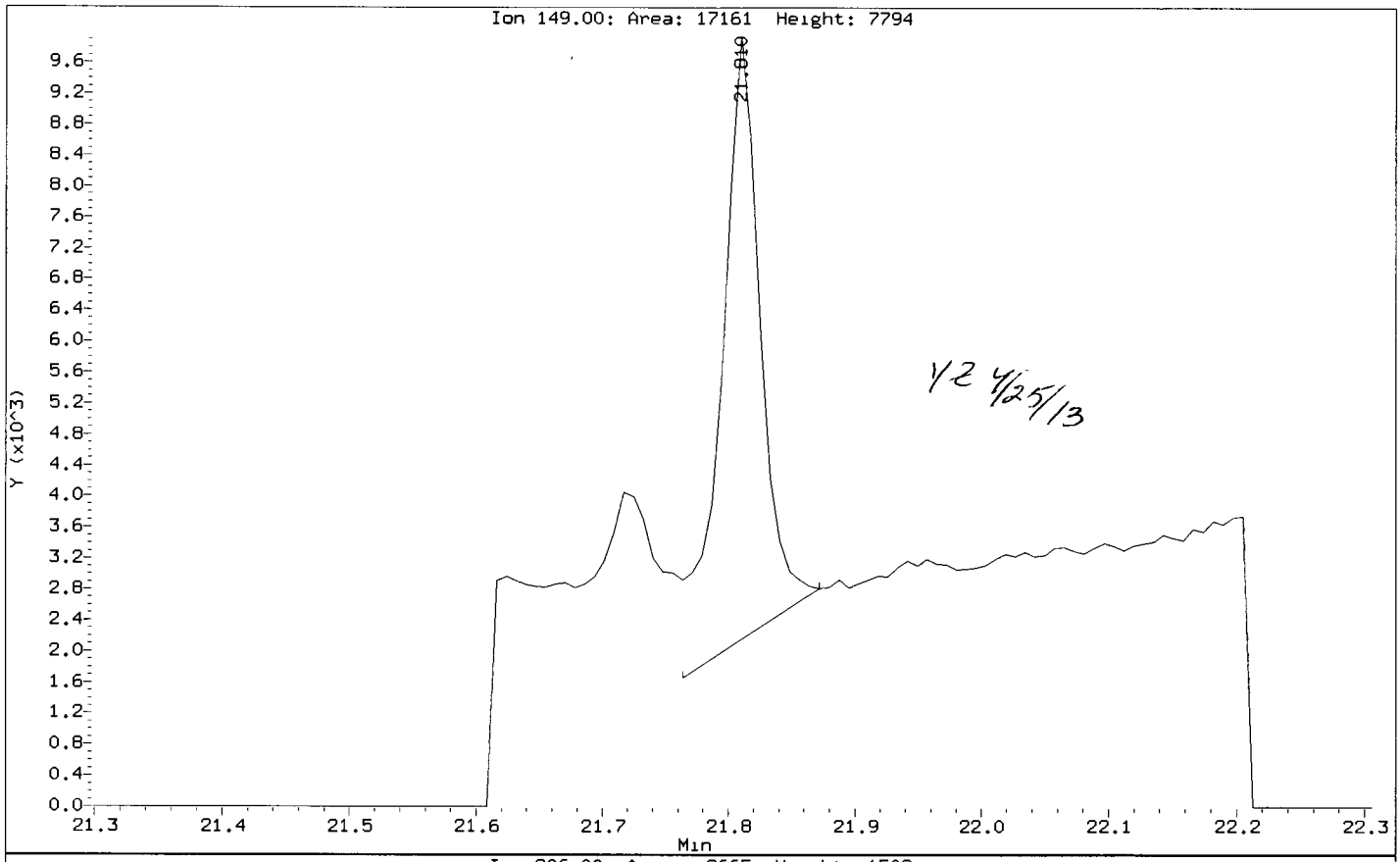
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

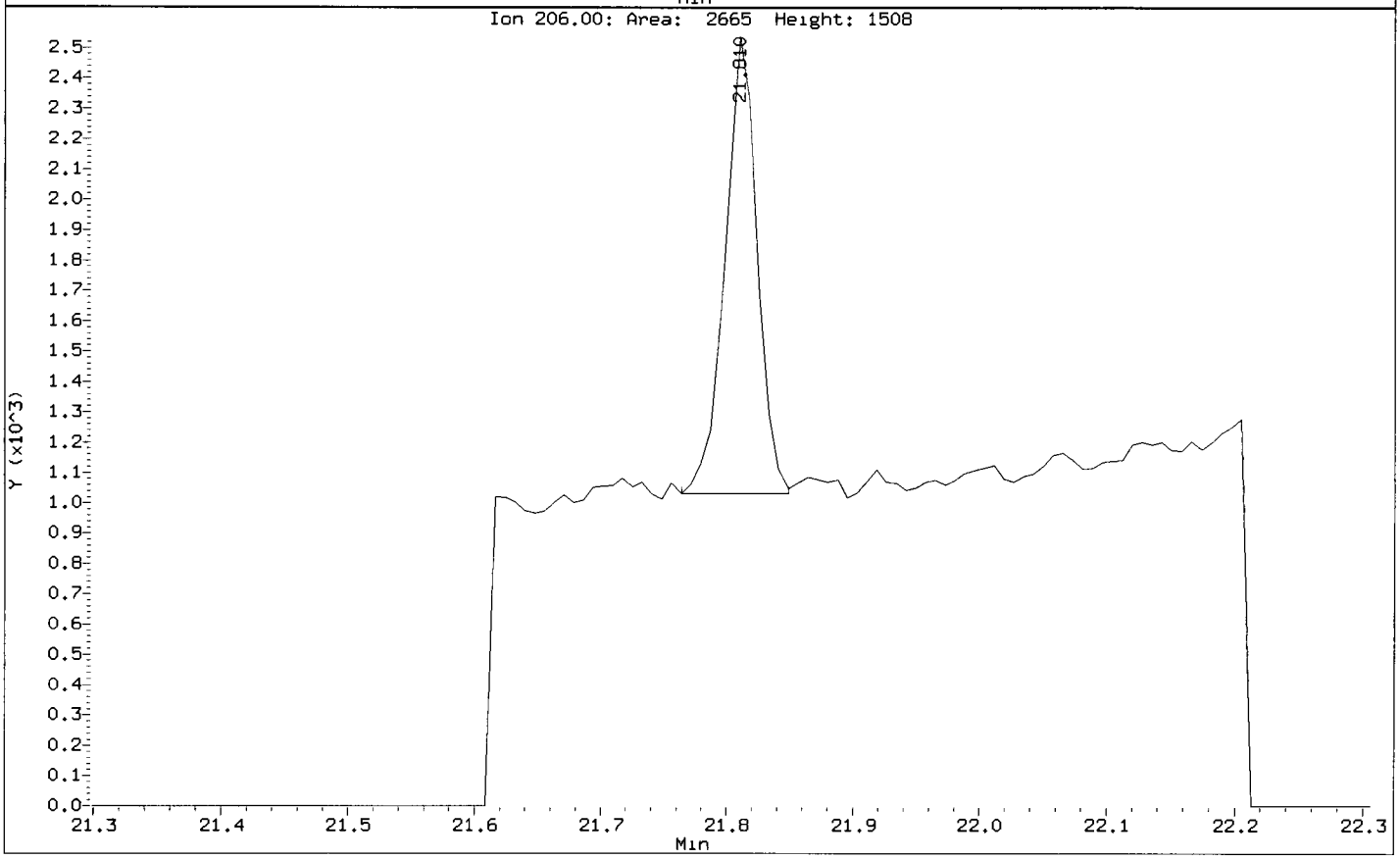
5. Other _____

Analyst: YZ Date: 4/25/13

Data File: /chem1/nt10.i/20130424.b/SIM.b/wl49g.d
Injection Date: 24-APR-2013 20:51
Instrument: nt10.i
Client Sample ID: IM-CB-02-20130410-S

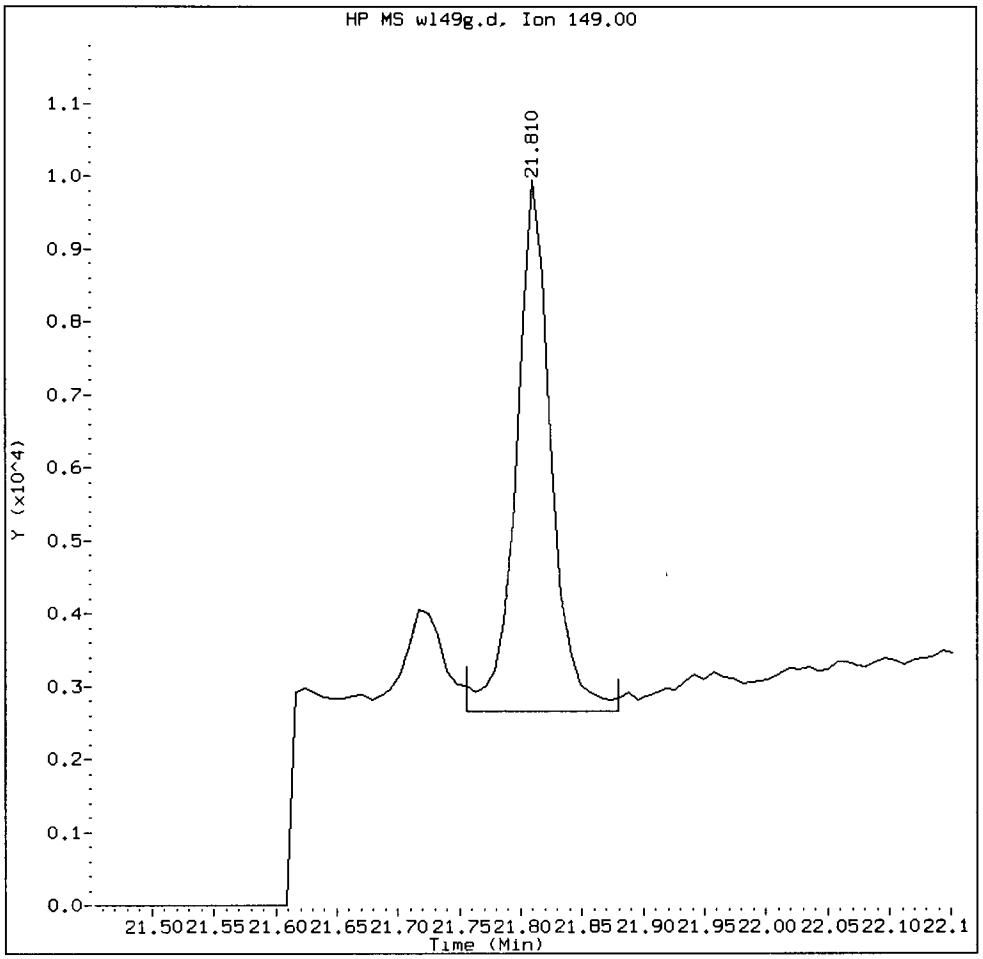
Compound: Butylbenzylphthalate
CAS Number: 85-68-7





WL49G, /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Butylbenzylphthalate Amount: 0.80 Area: 14441



MANUAL INTEGRATION for Butylbenzylphthalate

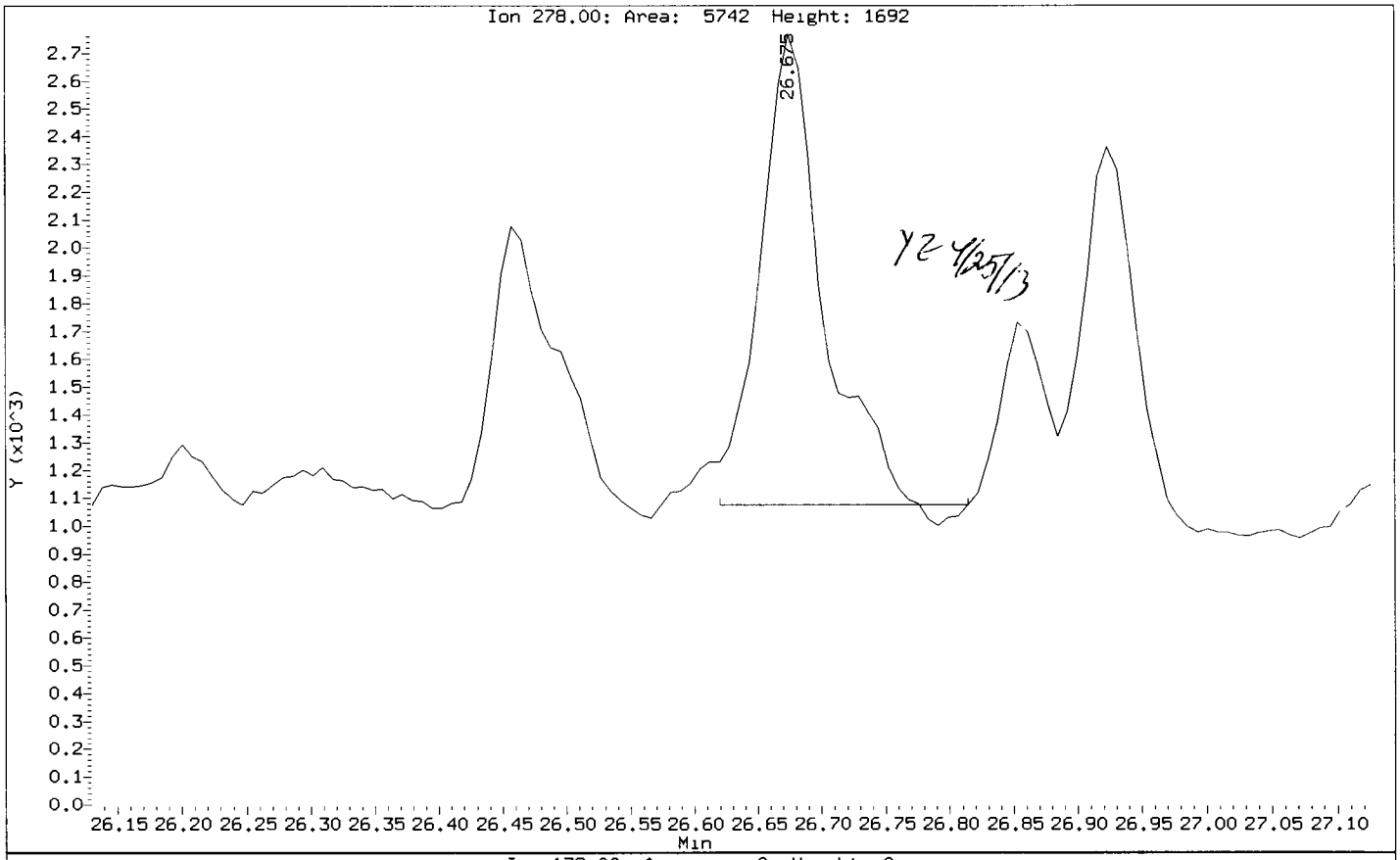
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YB Date: 4/25/17

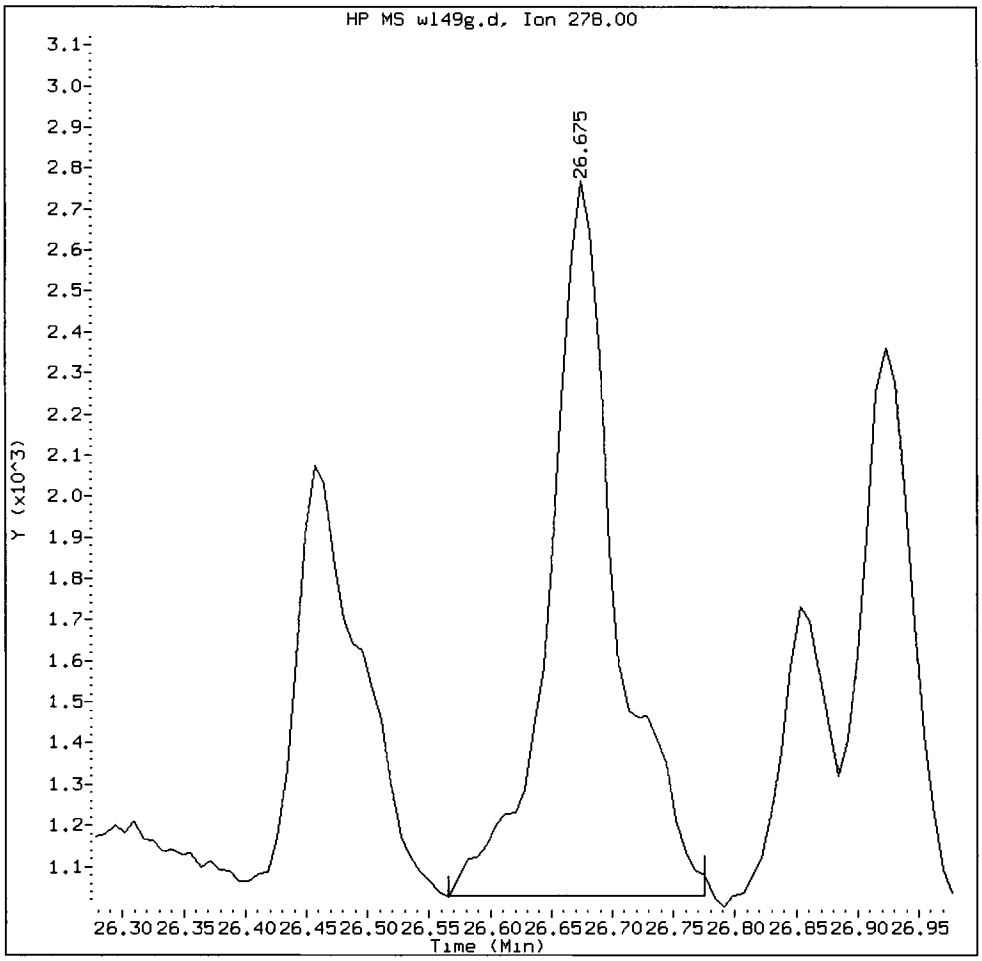
Data File: /chem1/nt10.i/20130424.b/SIM.b/w149g.d
Injection Date: 24-APR-2013 20:51
Instrument: nt10.i
Client Sample ID: IM-CB-02-20130410-S

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3



WL49G, /chem1/nt10.i/20130424.b/SIM.b/wl49g.d

Dibenzo(a,h)anthracene Amount: 0.14 Area: 6614



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other _____

Analyst: YZ Date: 4/25/17

CO-ELUTION SUMMARY FOR FILE - wl49g.d

Lab ID: WL49G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

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) WL62, WL49 Page 1 of 1 Batch set up by: ~~SH~~

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments
	WL62 MBW	500mL	0.5mL	0.5mL	
	SBW	500mL	0.5mL	0.5mL	
	SBW Dup.	500mL	0.5mL	0.5mL	
	~~QLS~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~	
3	WL62 B	500mL	0.5mL	0.5mL	
3	C	500mL	0.5mL	0.5mL	
3	D	500mL	0.5mL	0.5mL	
3	F	500mL	0.5mL	0.5mL	
4	WL49 A	500mL	0.5mL	0.5mL	
3	B	500mL	~~0.5mL~~ 1mL	~~0.5mL~~ 1mL	See notes
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
		500mL	0.5mL	0.5mL	
Analyst/Date	AR 04/15/13 →		SP 4/16/13	SP 4/16/13	SP 4/16/13

Verify Client ID: AR 04/15/13 — Analyst/Date

KD: 1 80°C 1 2 3 4 5 6 — 4/16/13 — Analyst/Date

TurboVap: 1 2 3 — Pre-Silica Gel Shakeout — SP 4/16/13 — Analyst/Date

(REQ) Silica Gel Clean Shakeout (1:1) — SP 4/16/13 — Analyst/Date

TurboVap: 1 2 3 — Post Silica Gel Shakeout — SP 4/16/13 — Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	1 (2077-4)	1.5/7.5µg/mL	100µL	2/21/14	AR	~~SH~~ SP
Spike	18 (2077-2)	1.5/7.5µg/mL	100µL	10/13/13	AR	~~SH~~ SP
~~QLS Spike~~	~~2 ( )~~	~~0.1µg/mL~~	~~50µL~~			

Extraction Time: 15:25

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.

Archive Y N
WL62 only

13-7771
7779

WL 49 01823

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: VLLF9 Client ID: SADC
Analyst: VD Date: 4/11/12

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
B	10	Dcm	490	50X				
B	100	Dcm	900	10X	4/20/12	VD		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 Client ID: SAIC

Parameter: SIM PNA low level Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= WL49 samples A, light grey, turbid B light tan, turbid	AR 04/15/13
☑ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) WL49 sample B 3% particulates	AR 04/15/13
☑ Emulsions (%)= WL49 sample B 100% emulsion, used Centrifuge dry Sample with Sulfate	AR 04/15/13
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). (Centrifuge#1 used for all Centrifugations) WL49 B - very dark extract both before and after silica cleanup. Vialed at 1mL.	SP 4/16/13

3056F

Revision 009
08/14/12

WL49 01025

SIM PAH Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

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:** 2/27/13

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 pnA Analyst: VD

GC Program: low sim Column No: 14123 Column Type: Rxi-175ms

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	261768	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

Report Date : 26-Feb-2013 09:15

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:

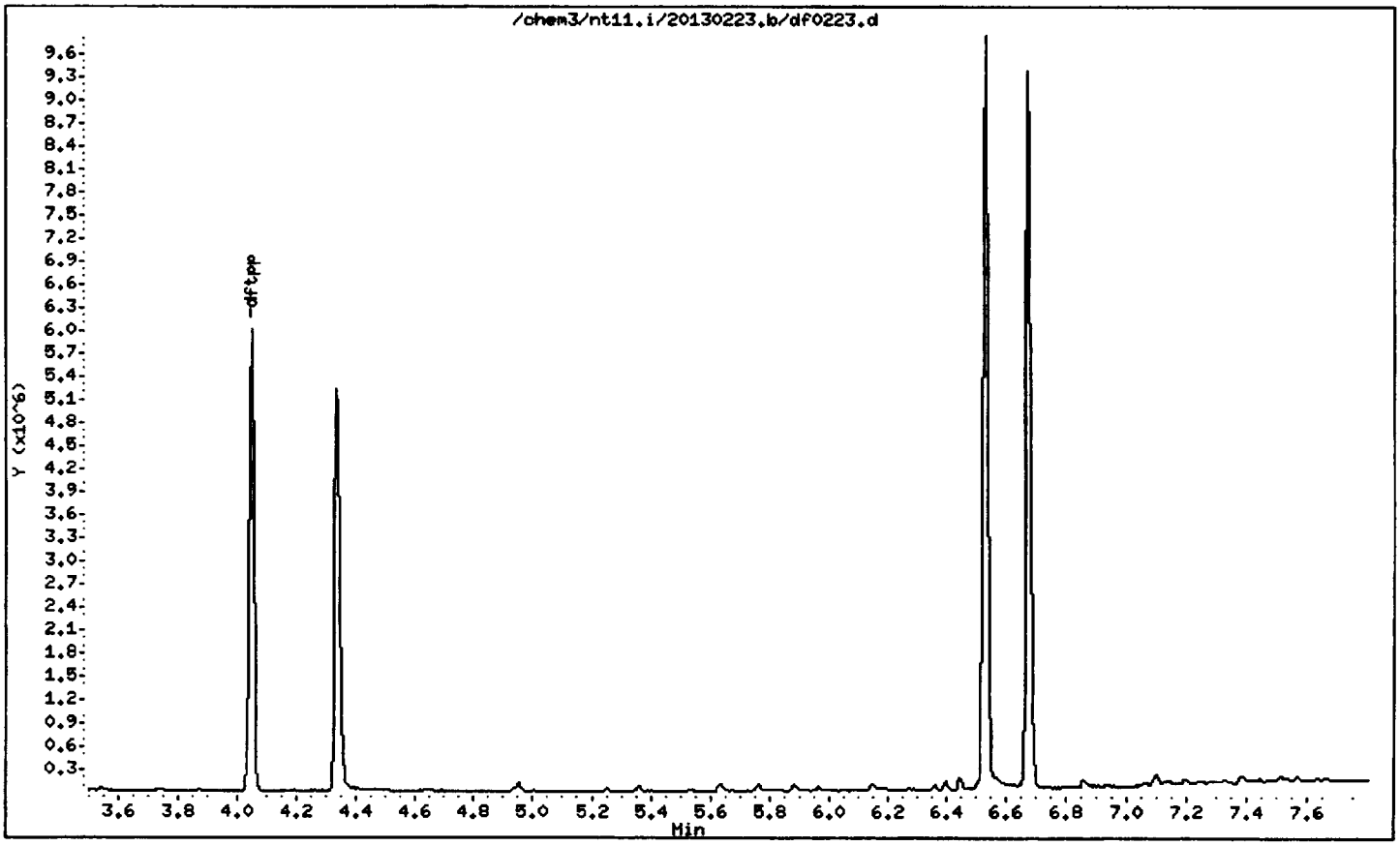
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-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

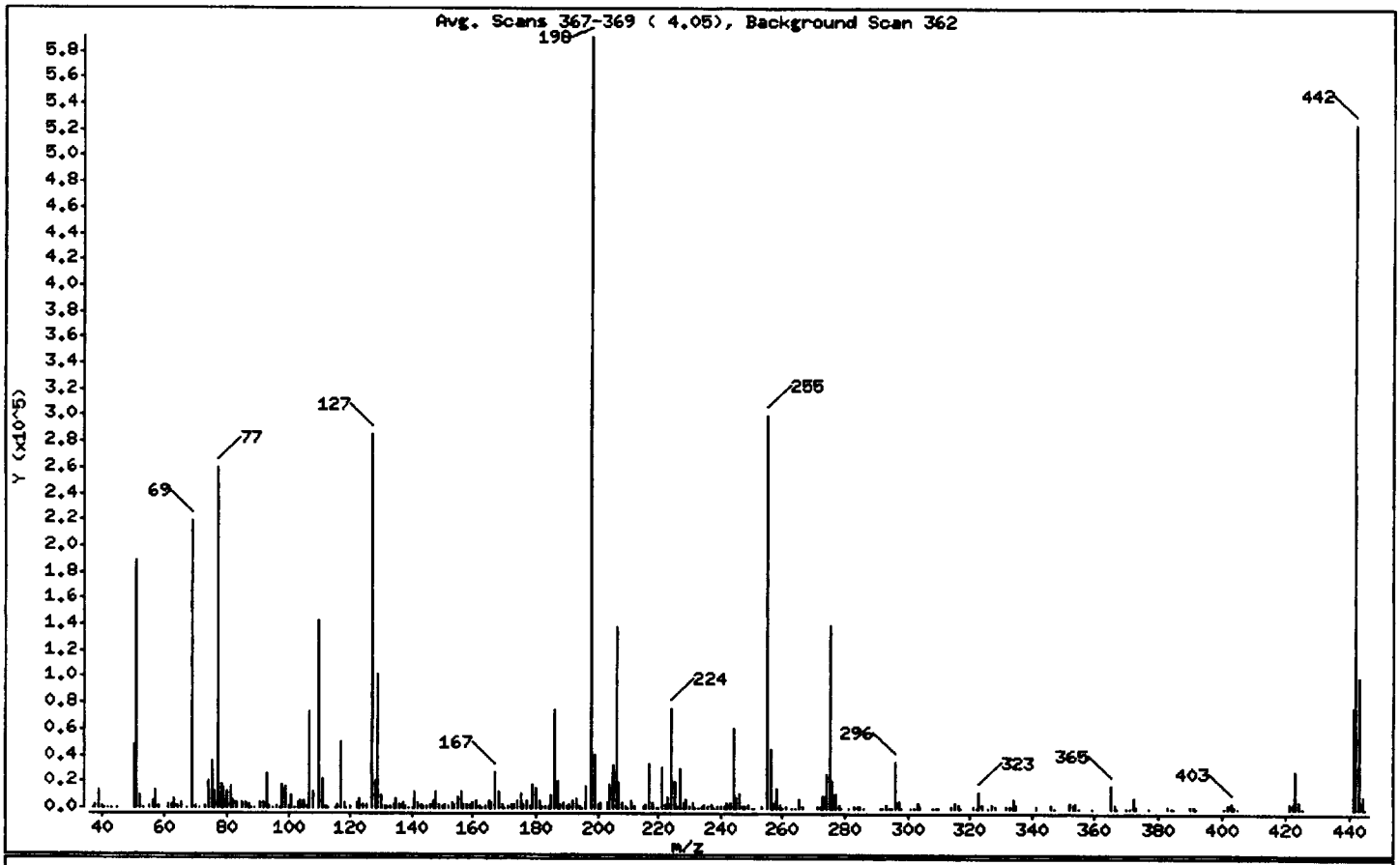
Sample Info: DFTPP 10

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: /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

Data File: df0223.d

Spectrum: Avg. Scans 367-369 (4.06), 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	2265
65.00	4494	147.00	5579	224.00	76032	317.00	381
67.00	663	148.00	12583	225.00	20592	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

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
83.00	3674	162.00	1873	239.00	1453	382.00	4182
85.00	4045	163.00	588	240.00	1096	383.00	2655
86.00	3583	164.00	736	241.00	1902	384.00	4443
87.00	2329	165.00	4817	242.00	4204	385.00	554
88.00	556	166.00	4083	243.00	3830	389.00	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	425.00	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		

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-17sil ms

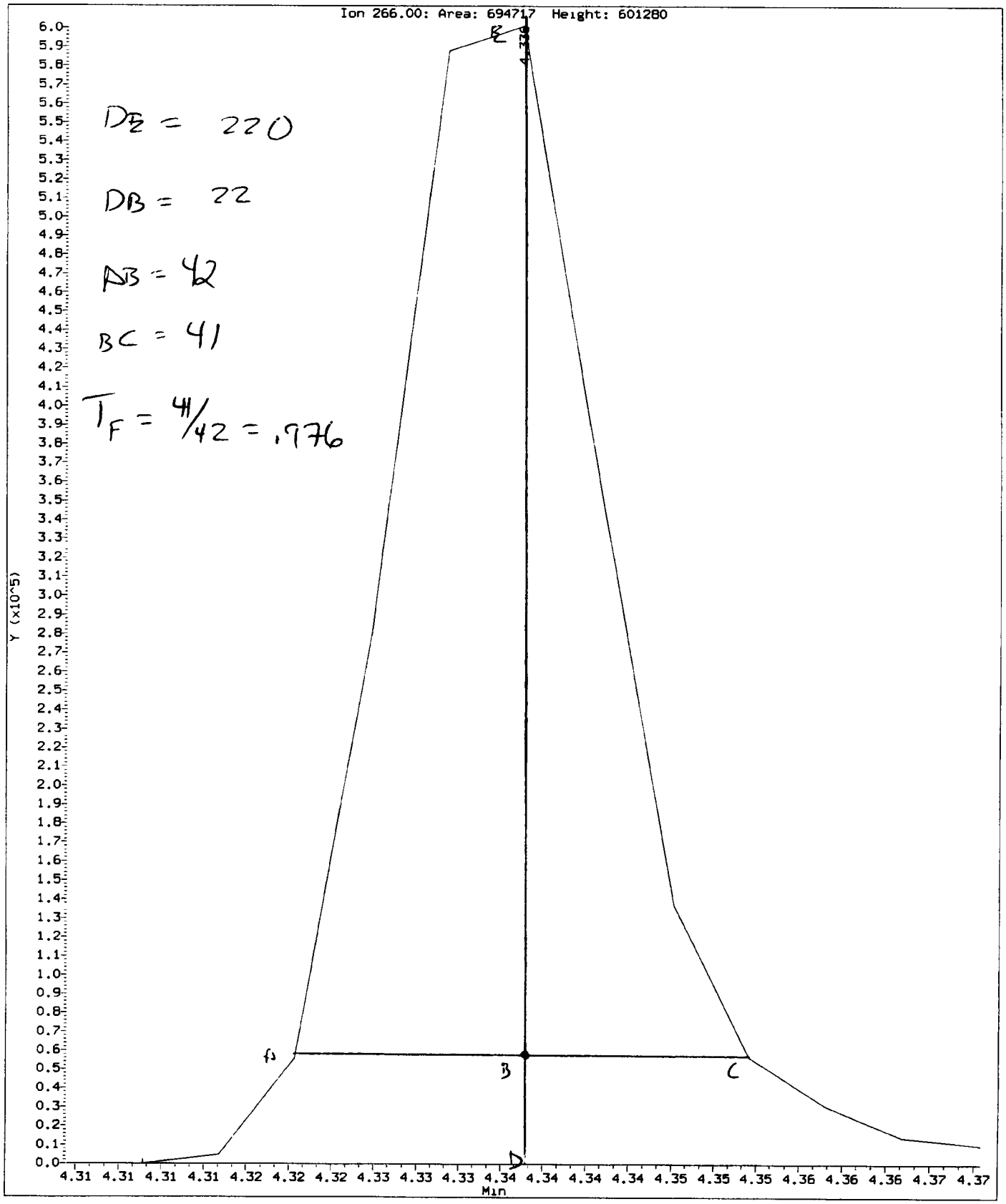
Column diameter: 0.25

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		

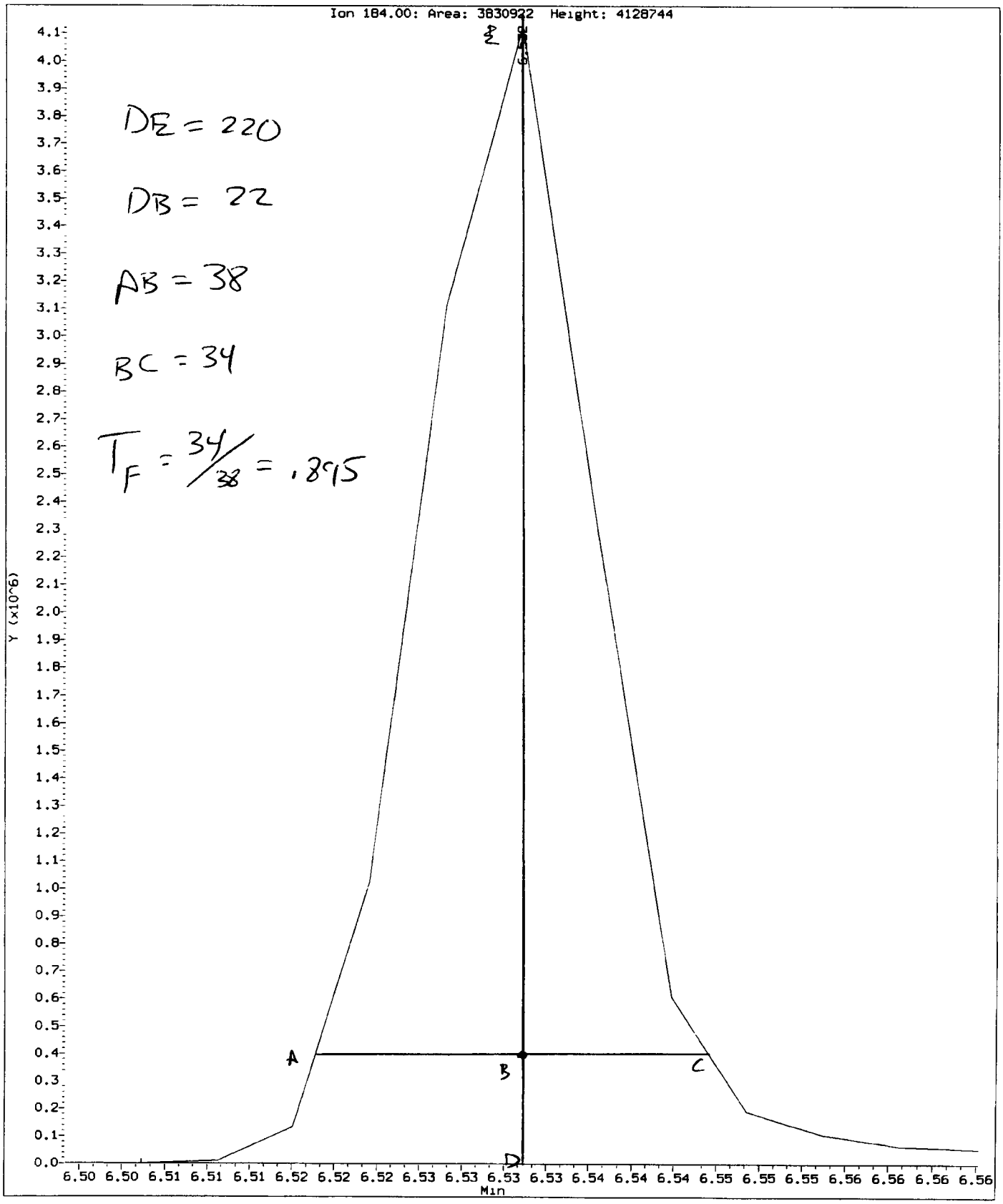
Data File: /chem3/nt11.i/20130223.b/DDT.b/df0223.d
Injection Date: 23-FEB-2013 09:36
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130223.b/DDT.b/df0223.d
Injection Date: 23-FEB-2013 09:36
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/20130223.b/DDT.b/df0223.d
Method: /chem3/nt11.i/20130223.b/DDT.b/sw846ddt.m
Analysis Date: 23-FEB-2013 09:36

ARI ID: DFTPP 10
Misc:
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.

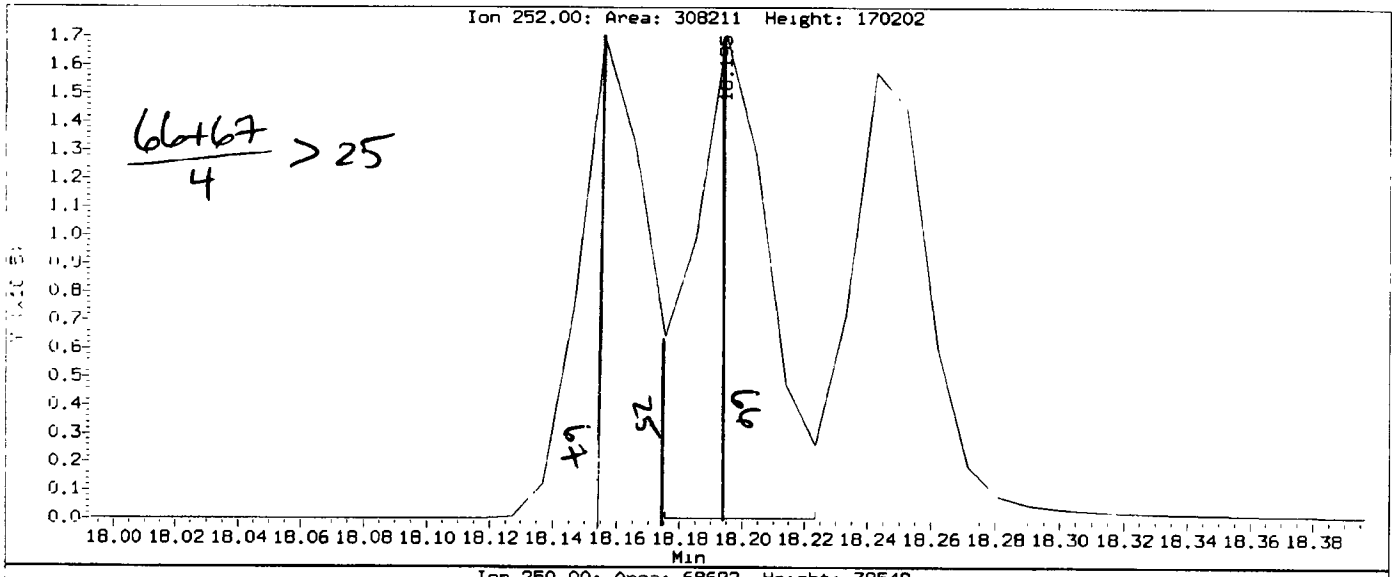
INITIAL CALIBRATION DATA

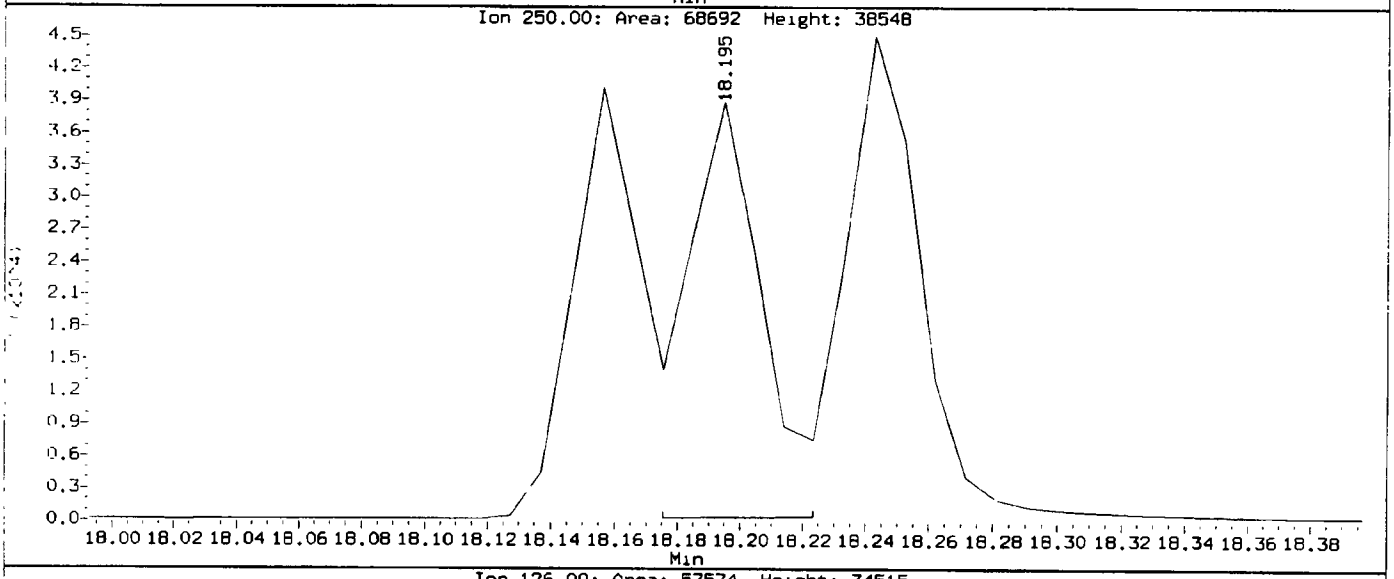
Start Cal Date : 23-FEB-2013 09:51
End Cal Date : 23-FEB-2013 12:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130223.b/lowsim.m
Cal Date : 23-Feb-2013 12:48 van
Curve Type : Average

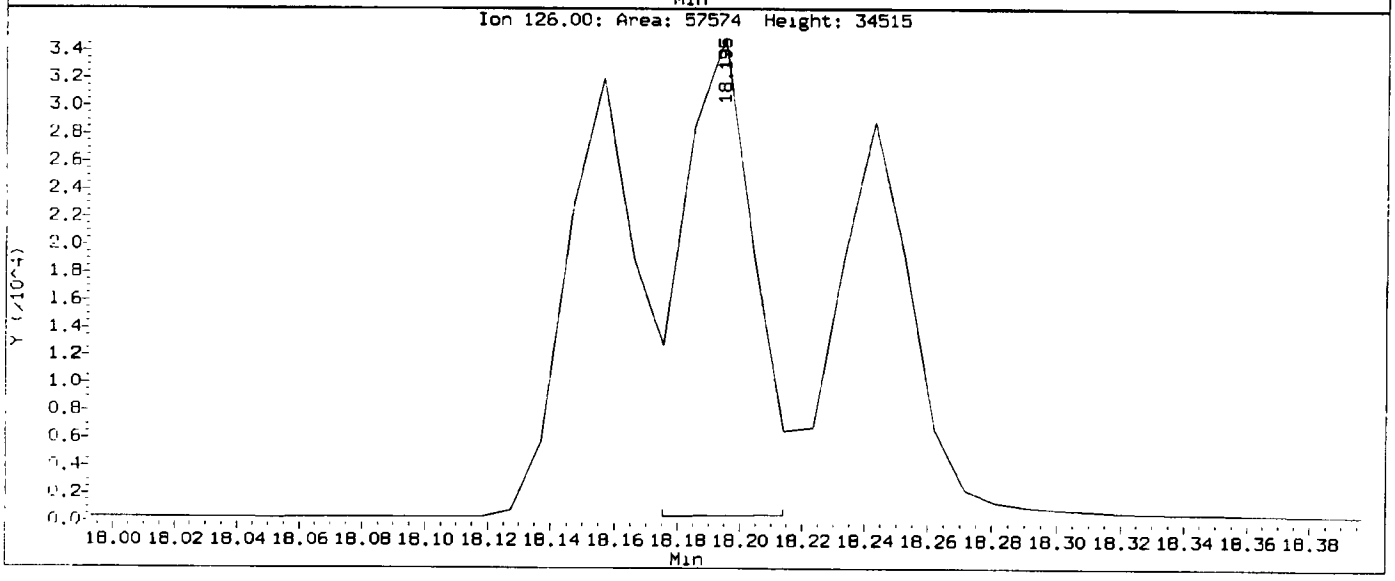
Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
39 Benzo(g,h,i)perylene	1.63740	1.39502	1.50380	1.42776	1.44835	1.42748	1.47330	5.978
47 Perylene	1.60629	1.44987	1.57488	1.50213	1.50270	1.50783	1.52395	3.718
$ 6 2-Methylnaphthalene-d10	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

		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)	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

2.23.13

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

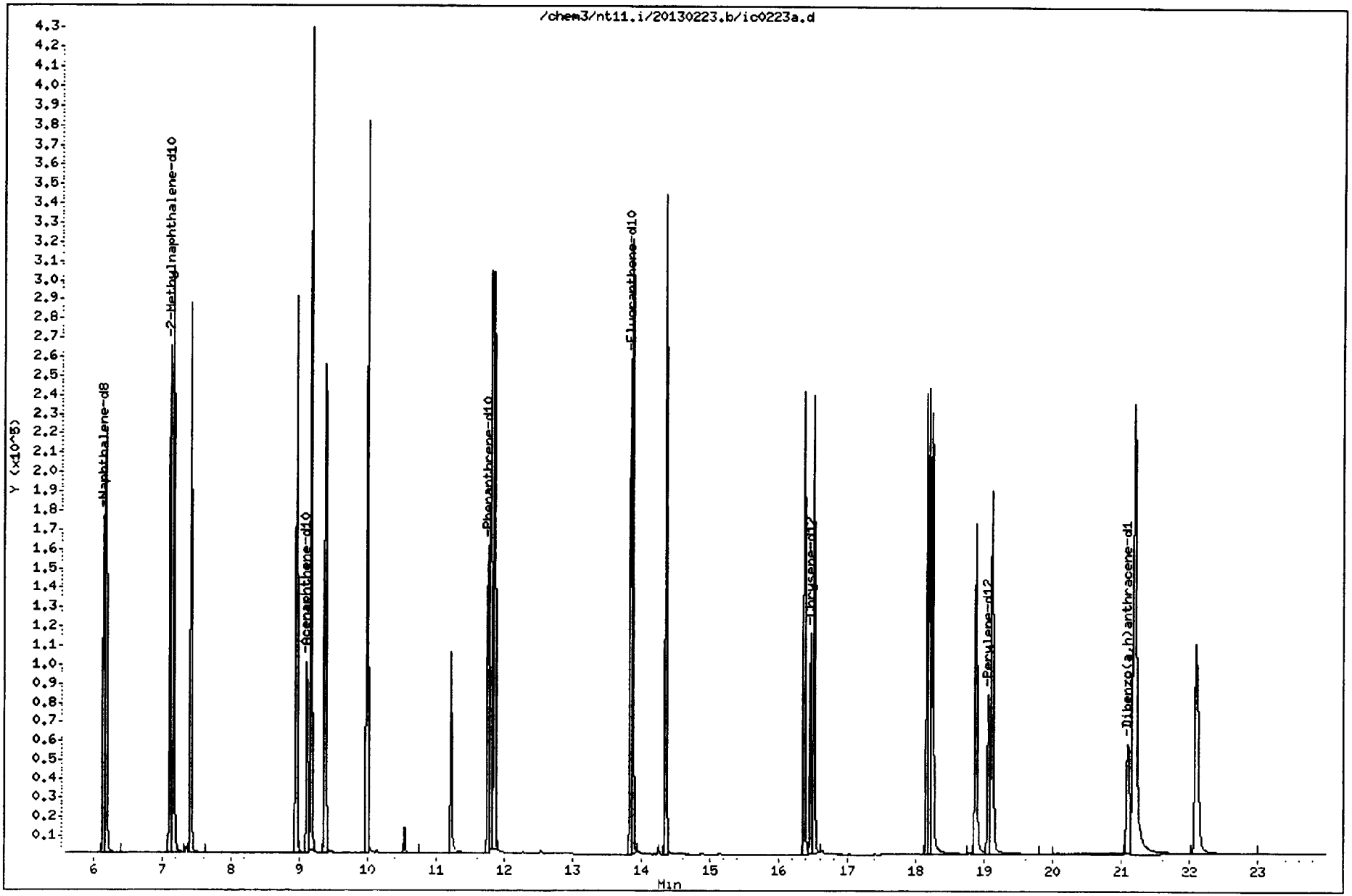
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223a.d
Date : 23-FEB-2013 09:51
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



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

		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)	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

2.23.13 VD

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

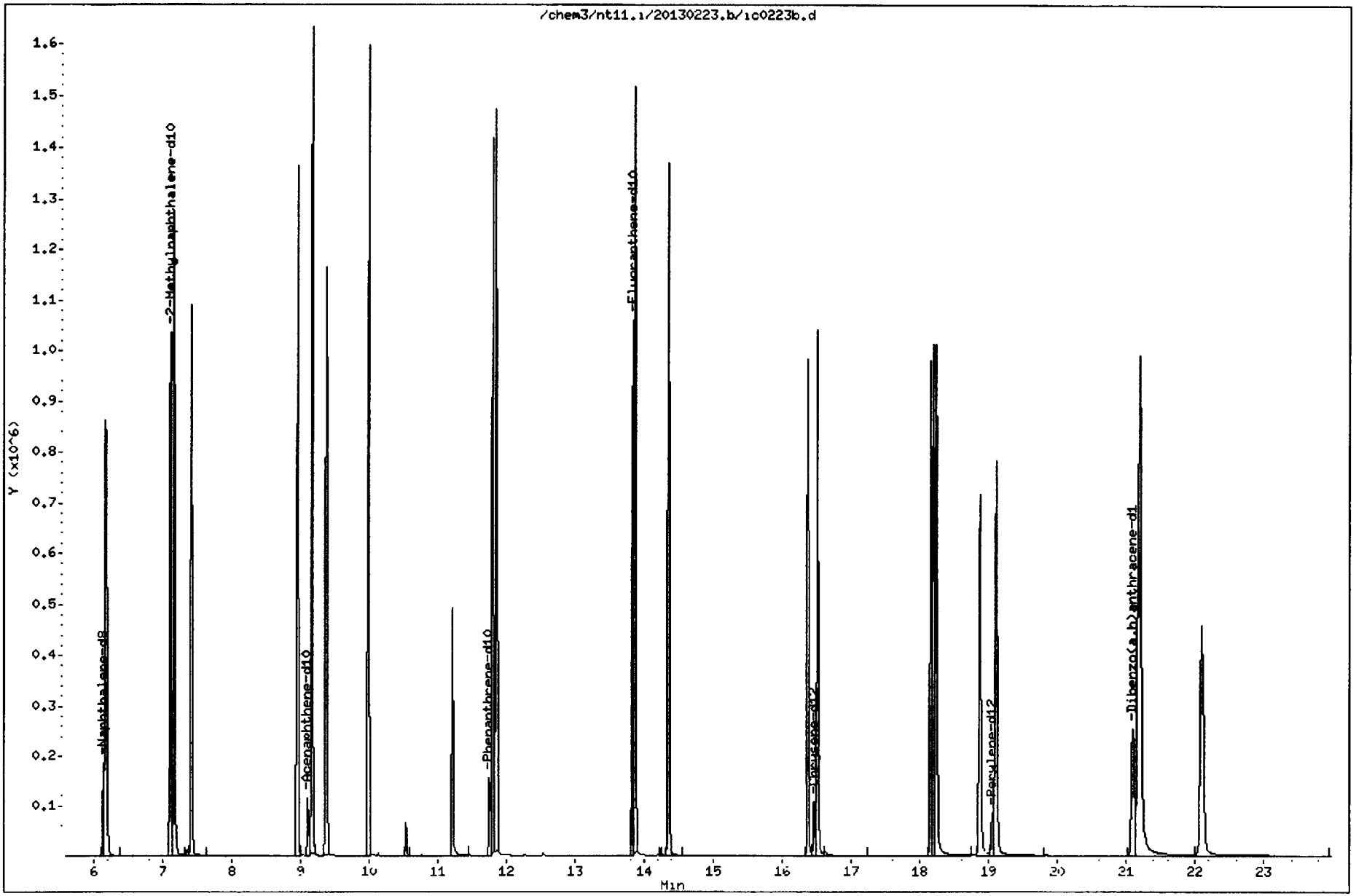
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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 diameter: 0.25

Column phase: Rxi-17Sil MS



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)	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)	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

SD 2.25.13

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

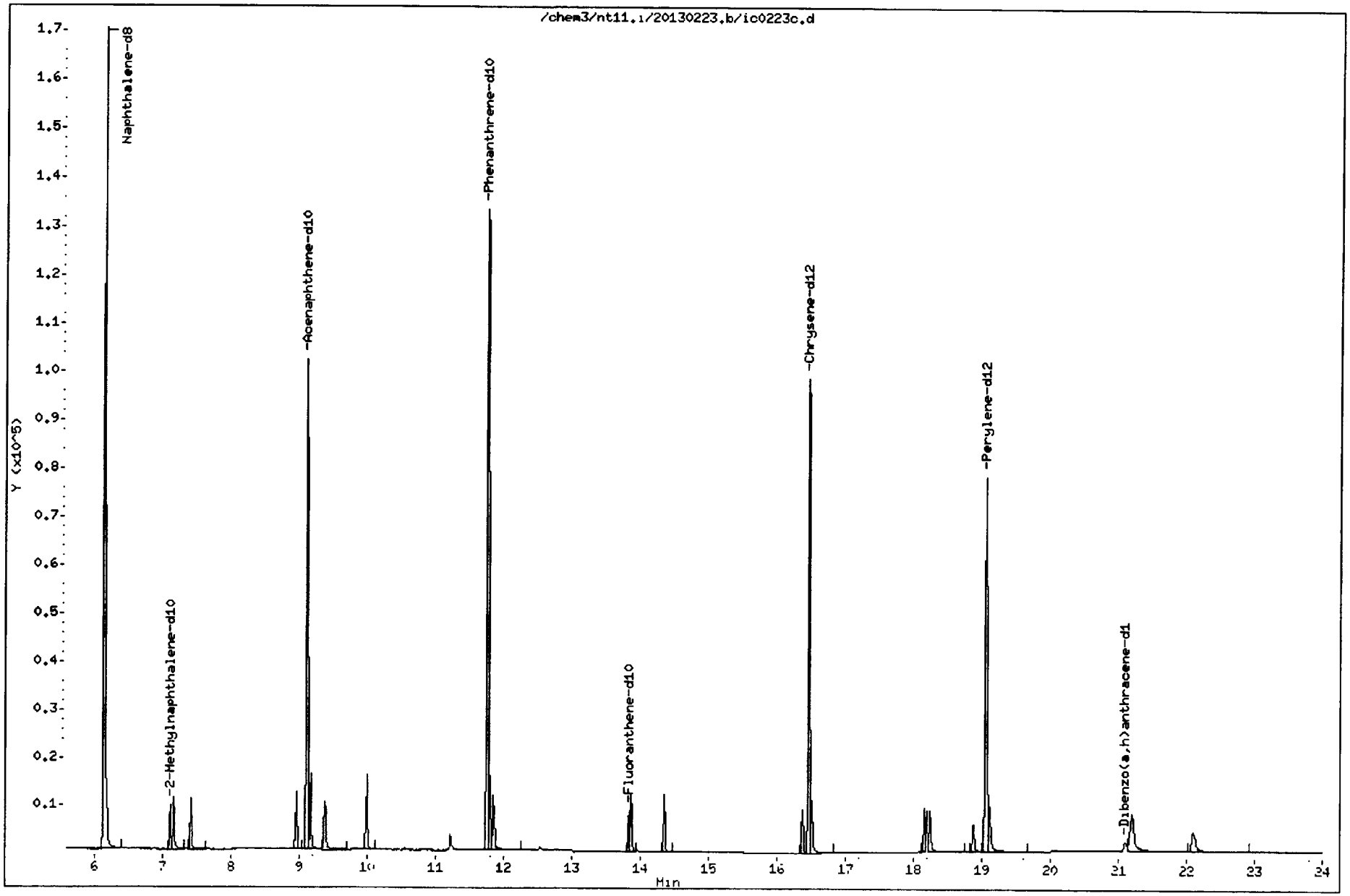
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.1/20130223.b/ic0223c.d
Date : 23-FEB-2013 10:50
Client ID:
Sample Info: SIM 10

Instrument: nt11.1

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



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

			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)	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

VD 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

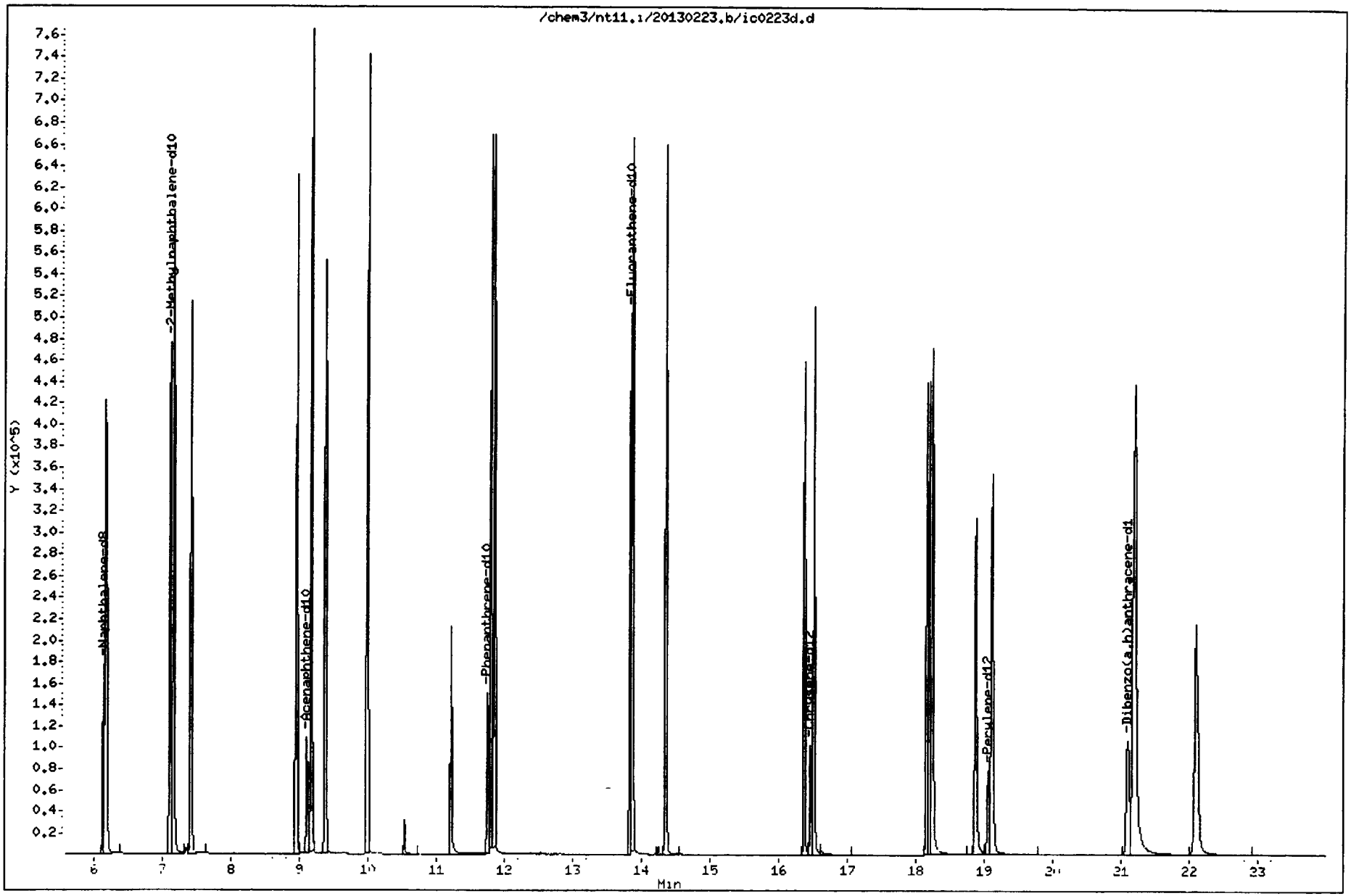
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/ic0223d.d
Date : 23-FEB-2013 11:19
Client ID:
Sample Info: SIM 500

Column phase: Rx1-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



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

			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)	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

SD 2.25.13

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

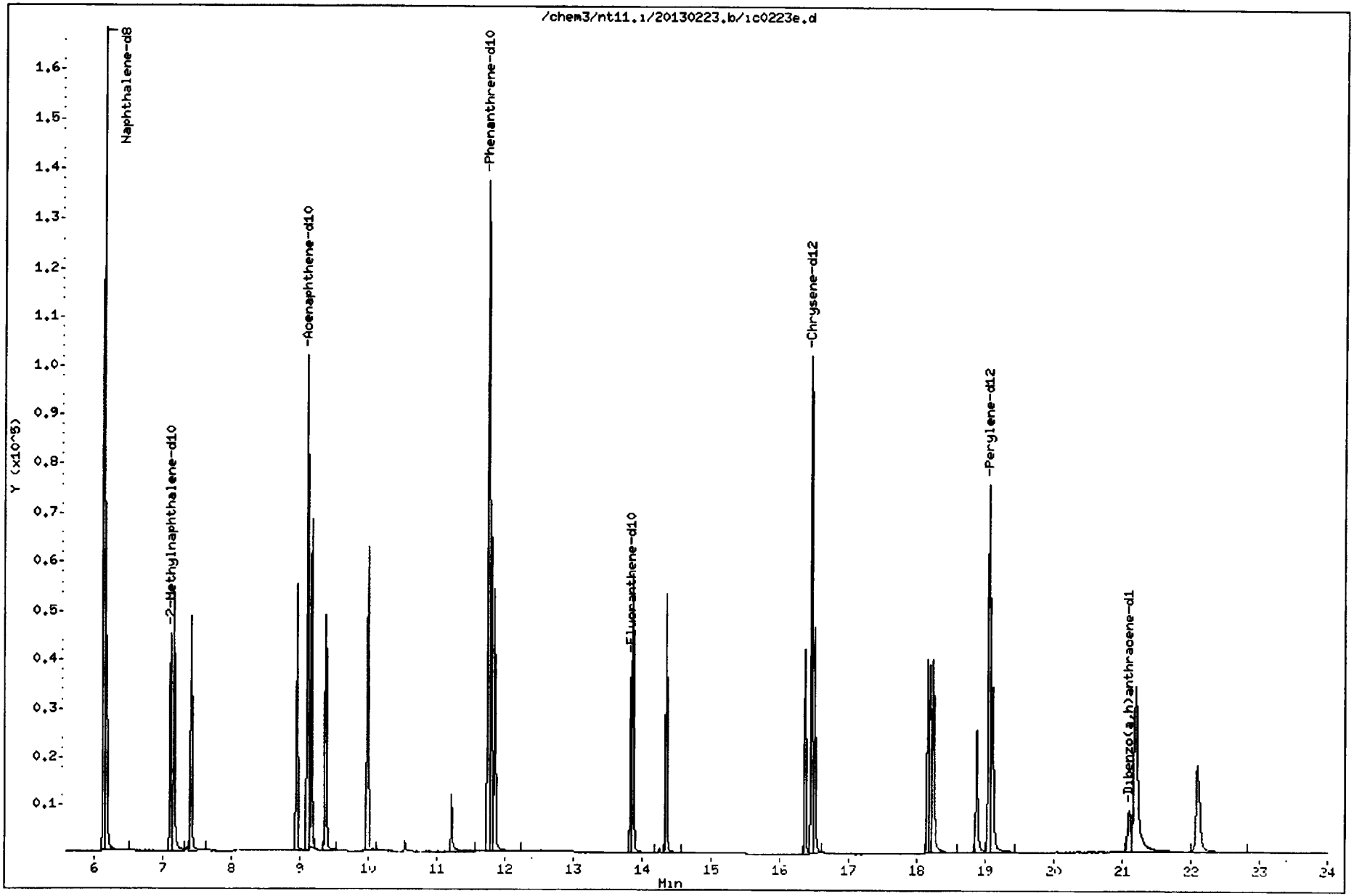
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130223.b/1c0223e.d
Date : 23-FEB-2013 11:48
Client ID:
Sample Info: SIM 50

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rx1-17Sil MS



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

			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)	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)	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

2-23-13

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

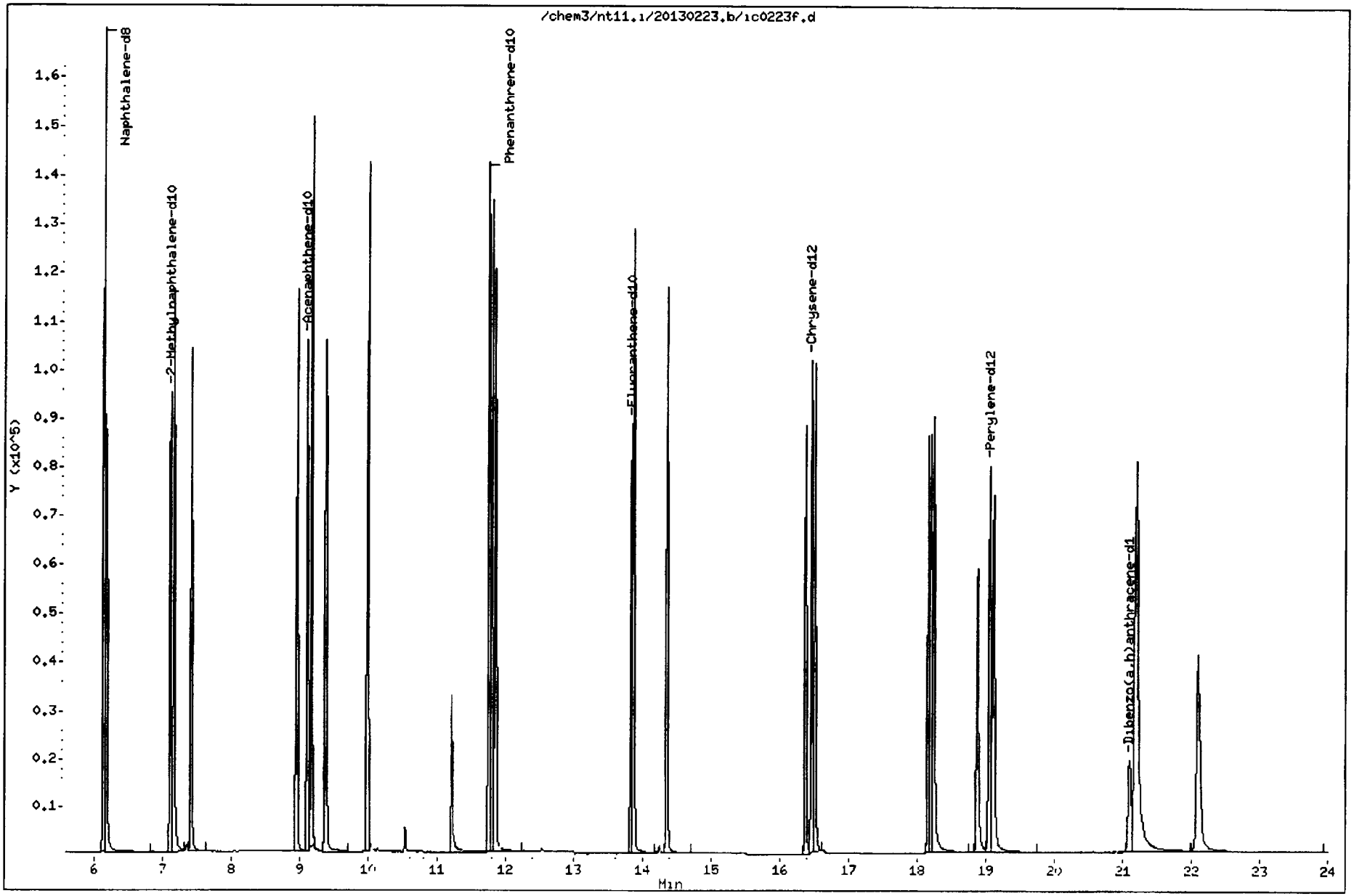
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.1/20130223.b/1c0223f.d
Date : 23-FEB-2013 12:17
Client ID:
Sample Info: SIM 100

Instrument: nt11.1

Operator: VTS
Column diameter: 0.25

Column phase: Rx1-17Sil MS



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

2·27·13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Data File: /chem3/nt11.i/20130226.b/df0226.d

Date : 26-FEB-2013 15:03

Client ID:

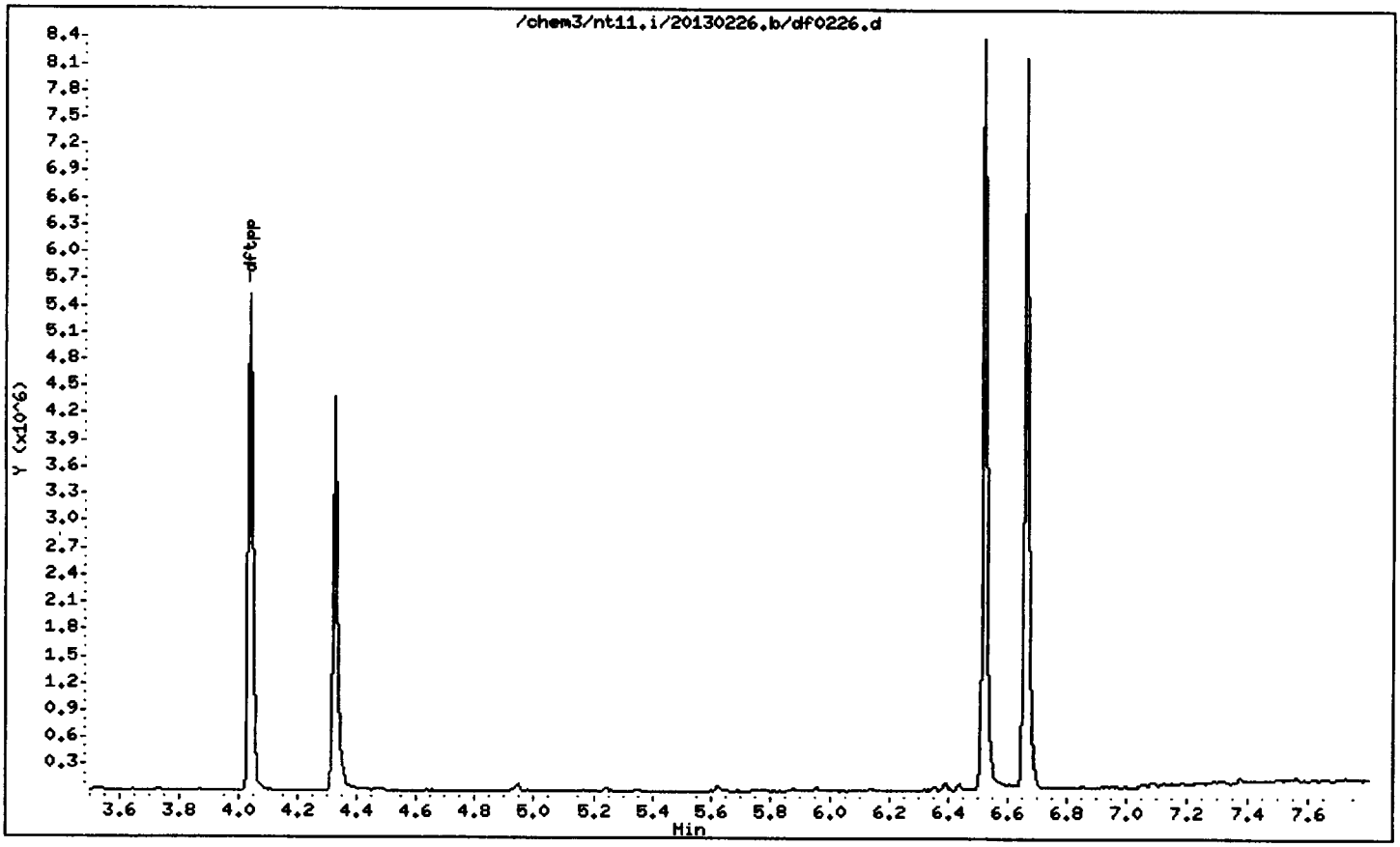
Instrument: nt11.i

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

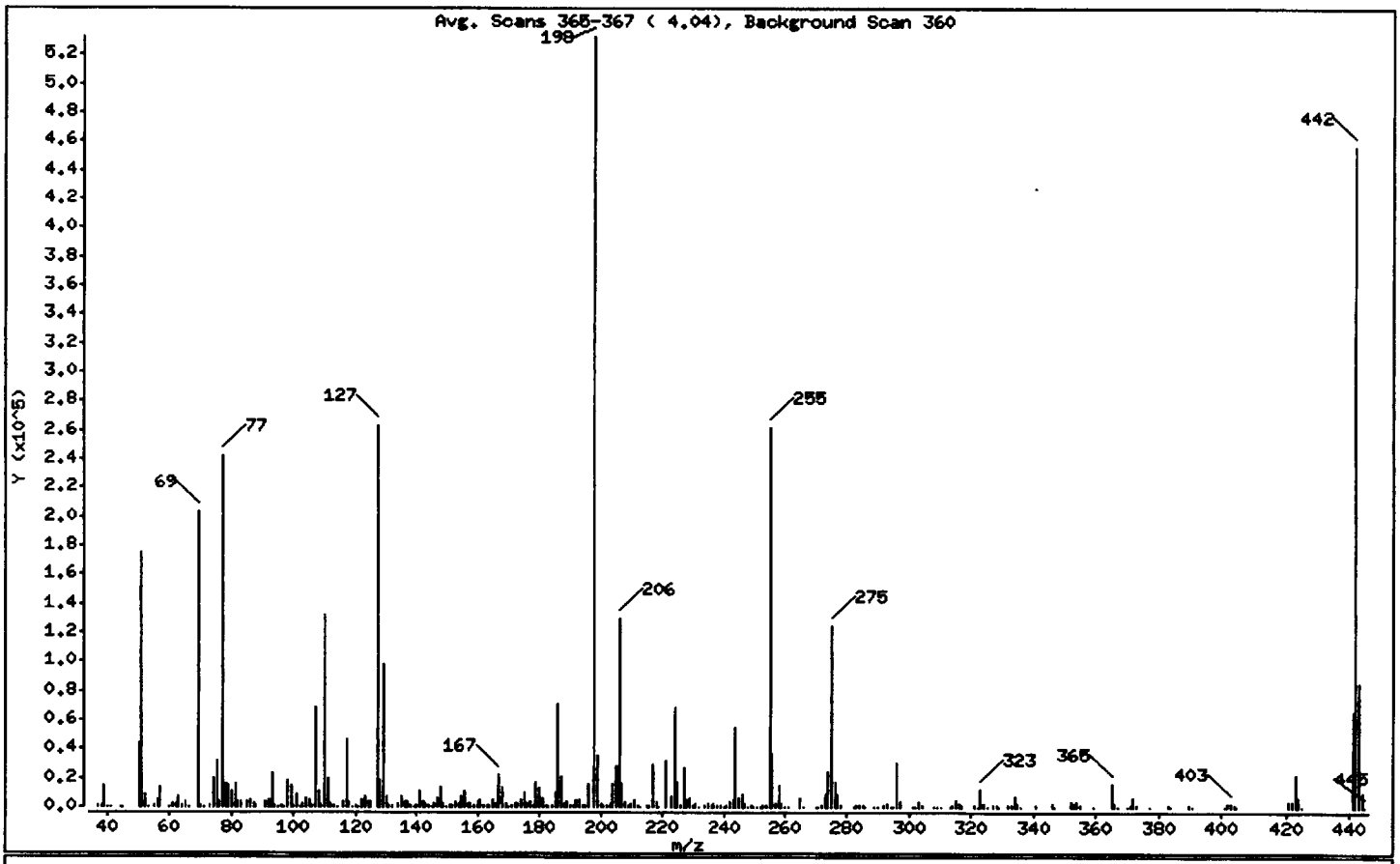
Sample Info: DFTPP 10

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	2595	218.00	3979	314.00	1464
62.00	2344	144.00	968	219.00	327	315.00	4961
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	3856	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	2517	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

Data File: /ohem3/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

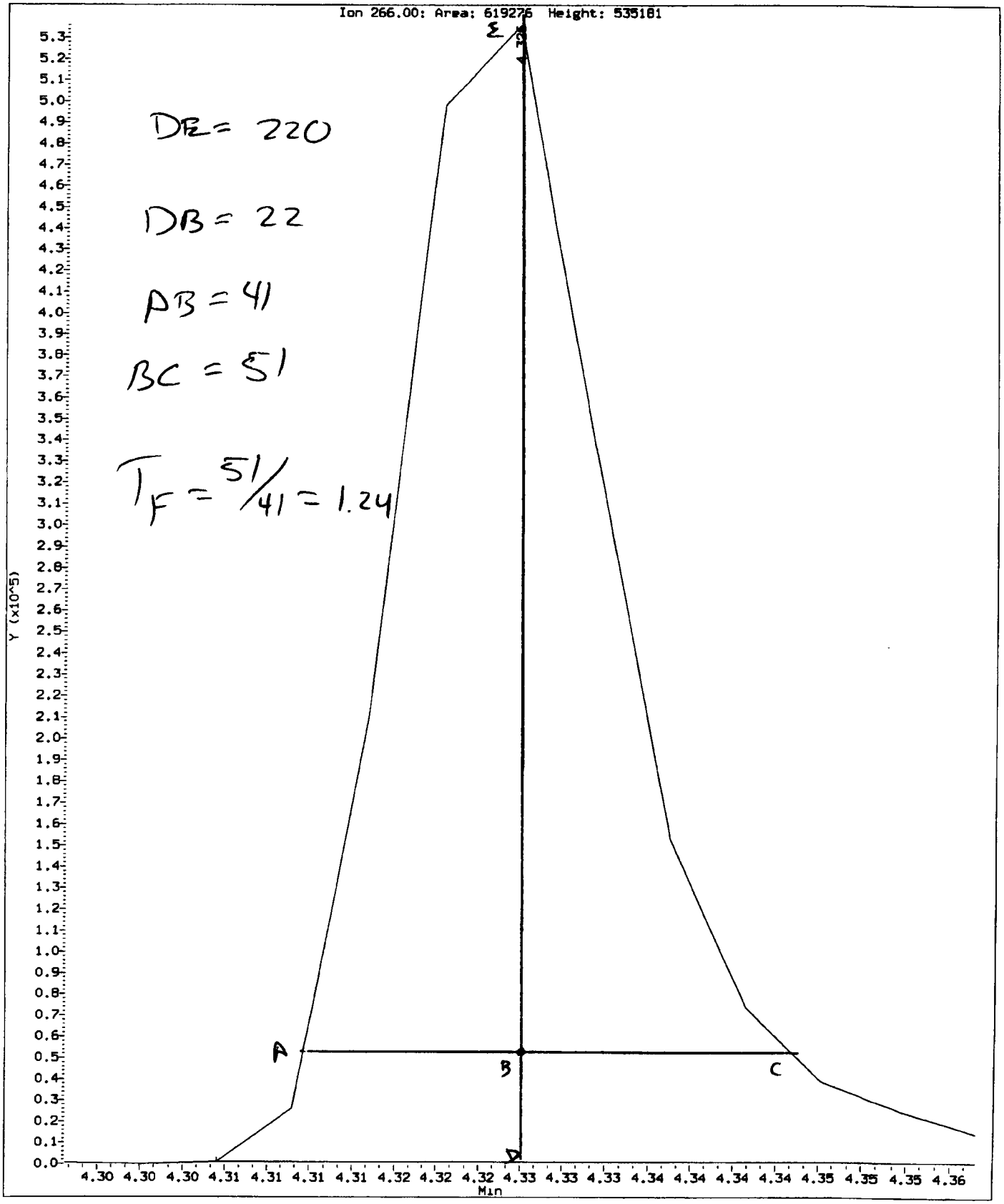
Location of Maximum: 198.00

Number of points: 289

m/z	Y	m/z	Y	m/z	Y	m/z	Y
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		

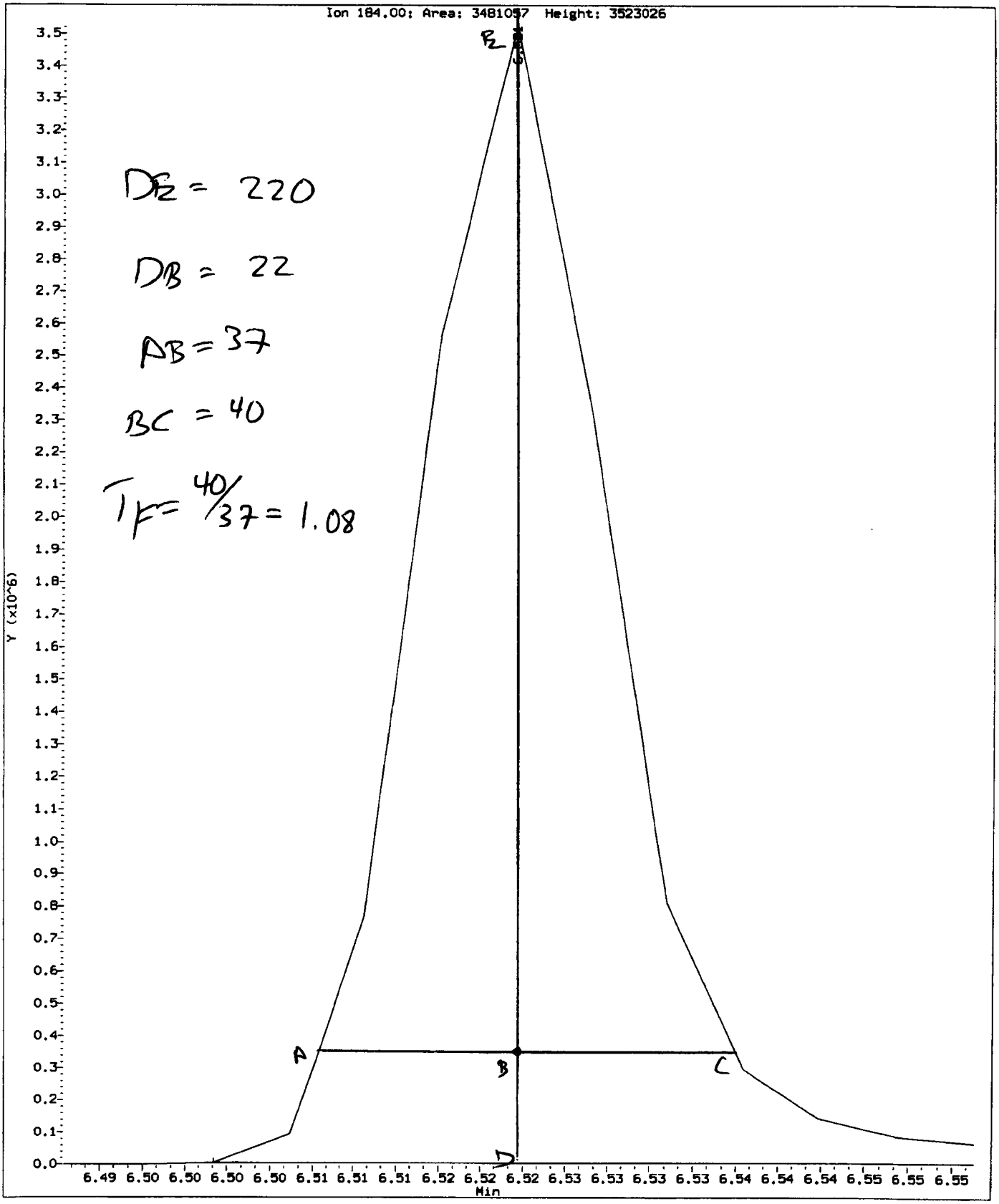
Data File: /chem3/nt11.i/20130226.b/DDT.b/df0226.d
Injection Date: 26-FEB-2013 15:03
Instrument: nt11.i
Client Sample ID:

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)	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:

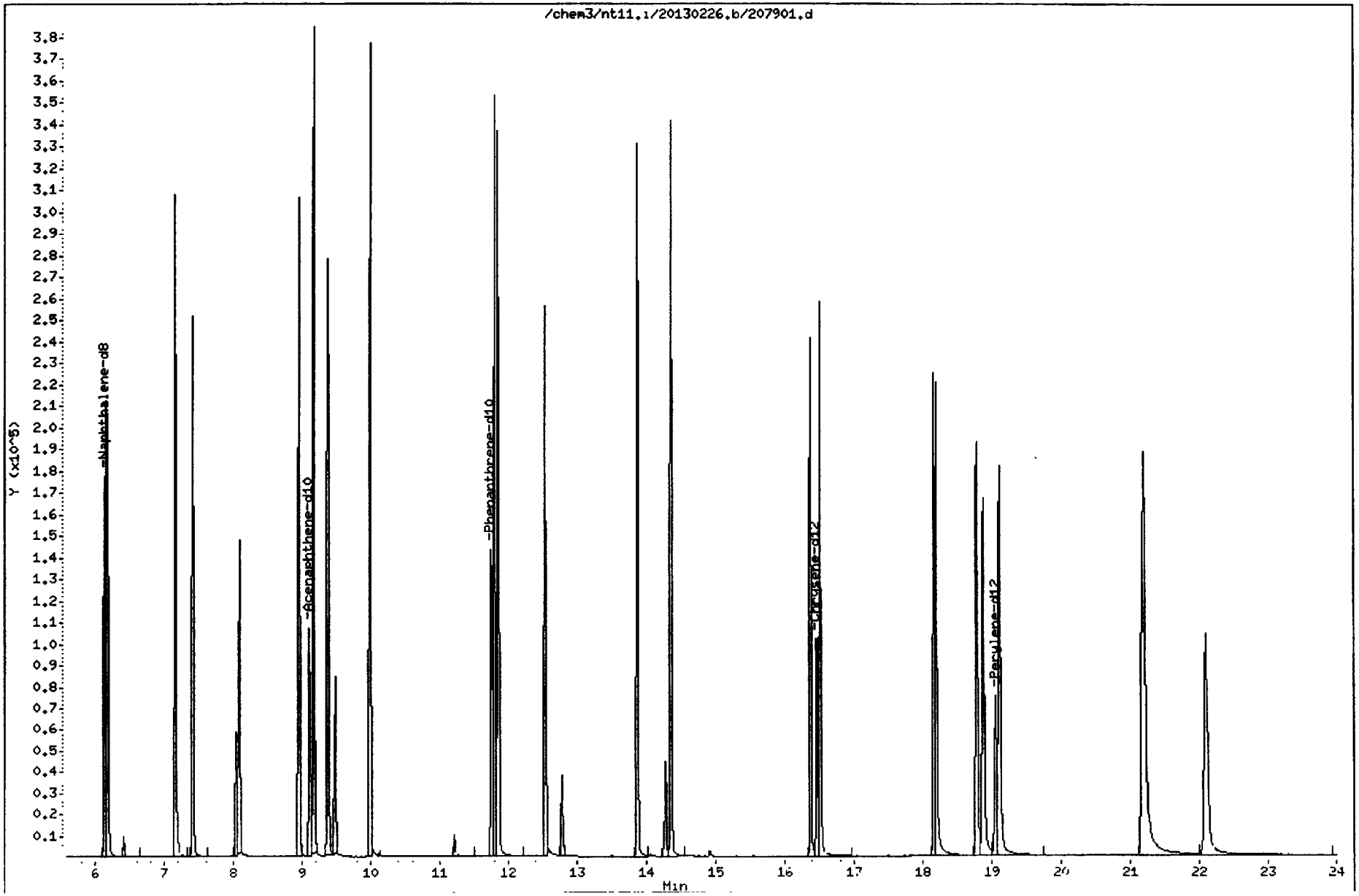
2/27/12
70-130

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: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WLY9 Client ID: SPRC

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: 4.19.13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N	LCS / LCSD RPD ≤ 30%?	NA /
CCAL Q flag applied?	Y / N	~~MS / MSD Recovery in Control?~~	~~Y / N /~~
Surrogate Recovery met?	Y / N / ✓	~~MS / MSD RPD ≤ 30%?~~	~~NA /~~
Manual Integrations?	Y / N	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below.

- Samples B was very dark after cleanup. 1251 PAH @ SOX was too weak. Use Alt- run @ 10X
- Final IV package.

(Review 1) Analyst: VD **Date:** 4.23.13

(Review 2) Reviewer: MW **Date:** 4/23

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 4.19.13 Analysis: low Sim PNP Analyst: VTS

GC Program: lowsim Column No: 14123 Column Type: Rxi-17Sil ms

Instrument Tune (.U or .CT.): 121208.U EM Voltage: 2424

Calibration File: df0419 Curve Date: 2.23.13 Injection Vol.: 2 uL

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130419.b

	Time	Filename	LabID	ClientId	DF									
1	1510	df0419.d	DFTPP 10		1	NO ISTDS FOUND								
2	1526	cc0419.d	SIM 250		1	6.19	221636	9.16	126615	11.81	207851	16.52	163937	19.13	143004
3	1625	wl62mb.d	WL62MBW1	WL62MBW1	1	6.19	216319	9.16	122810	11.82	203960	16.52	162533	19.14	140454
4	1655	wl62sb.d	WL62LCSW1	WL62LCSW1	1	6.19	217333	9.16	127416	11.81	209207	16.52	164185	19.13	143352
5	1724	wl62sbd.d	WL62LCSDW1	WL62LCSDW1	1	6.19	217401	9.16	126884	11.81	209496	16.52	159374	19.13	136632
6	1753	wl62b.d	WL62B	MW-06-130410	1	6.19	218861	9.16	128256	11.81	213884	16.52	157086	19.13	135145
7	1822	wl62c.d	WL62C	MW-07-130410	1	6.19	218650	9.16	125036	11.81	204538	16.52	156486	19.13	136312
8	1851	wl62d.d	WL62D	MW-08-130410	1	6.19	222717	9.16	130476	11.81	213752	16.52	164096	19.13	142137
9	1920	wl62f.d	WL62F	MW-06-130410	1	6.19	220894	9.16	129335	11.81	216936	16.52	160632	19.13	139815
10	1949	wl49a.d	WL49A	IM-MH-01-201	1	6.19	218986	9.16	131492	11.81	207304	16.52	160343	19.13	183617
11	2018	wl49b.d	WL49B	IM-SW-01-201	50	6.19	211949	9.16	122479	11.81	200990	16.52	157136	19.13	141822

4.23.13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130419.b

ARI Job No.: SIM Method: lowsim.m Instrument: nt11.i Date: 19-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1526	cc0419.d	SIM 250		1	NO MANUAL INTEGRATION
1510	df0419.d	DFTPP 10		1	NO MANUAL INTEGRATION
1949	wl49a.d	WL49A	IM-MH-01-2	1	NO MANUAL INTEGRATION
2018	wl49b.d	WL49B	IM-SW-01-2	50	NO MANUAL INTEGRATION
1753	wl62b.d	WL62B	MW-06-1304	1	NO MANUAL INTEGRATION
1822	wl62c.d	WL62C	MW-07-1304	1	NO MANUAL INTEGRATION
1851	wl62d.d	WL62D	MW-08-1304	1	NO MANUAL INTEGRATION
1920	wl62f.d	WL62F	MW-06-1304	1	NO MANUAL INTEGRATION
1626	wl62mb.d	WL62MBW1	WL62MBW1	1	NO MANUAL INTEGRATION
1655	wl62sb.d	WL62LCSW1	WL62LCSW1	1	NO MANUAL INTEGRATION
1724	wl62sbd.d	WL62LCSDW1	WL62LCSDW1	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130419.b

Instrument: nt11.i Date: 19-APR-2013 Method: lowsim.m

INITIAL CAL: 23-FEB-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 19-APR-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130419.b/df0419.d

Date : 19-APR-2013 15:10

Client ID:

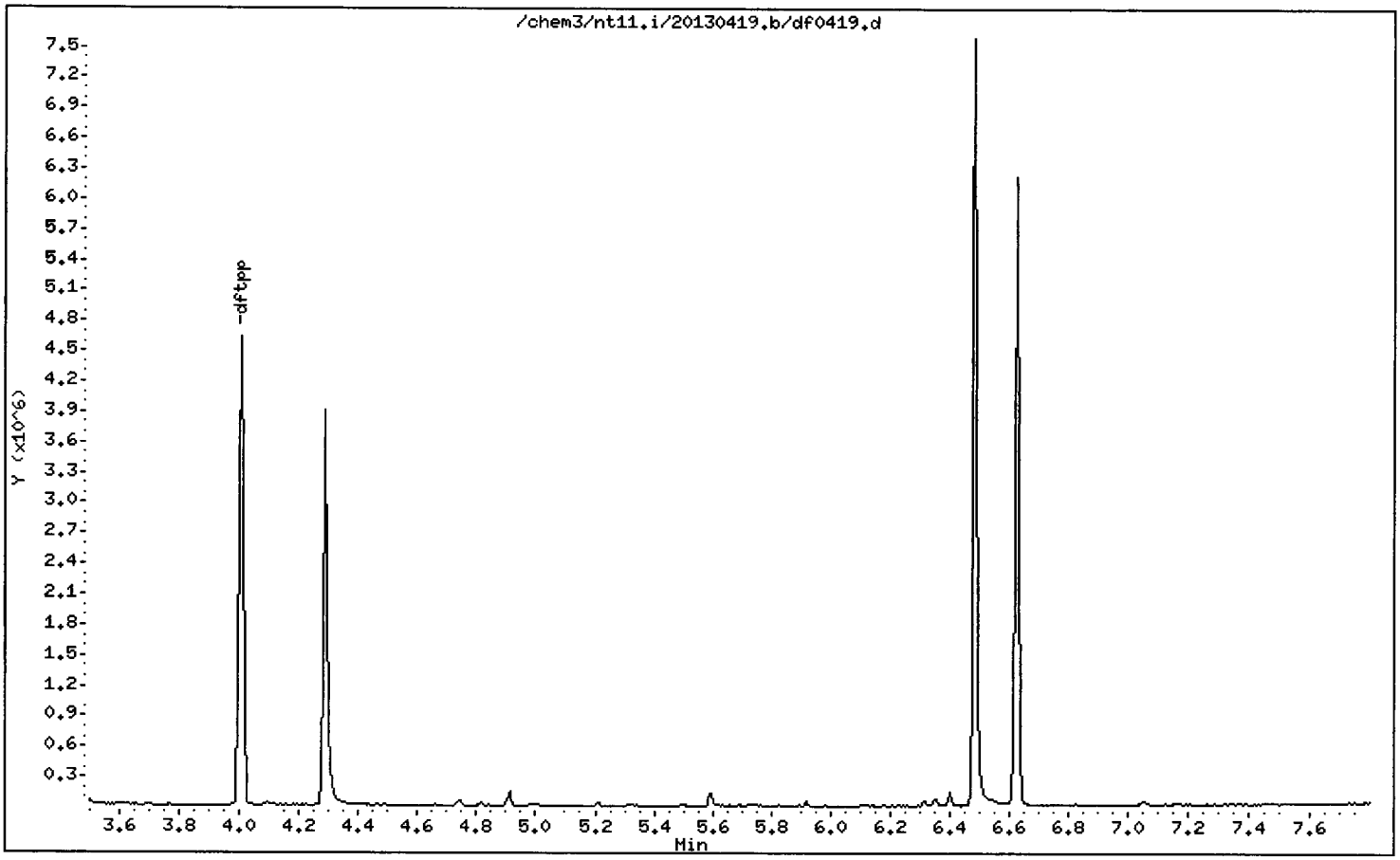
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130419.b/df0419.d

Date : 19-APR-2013 15:10

Client ID:

Instrument: nt11.i

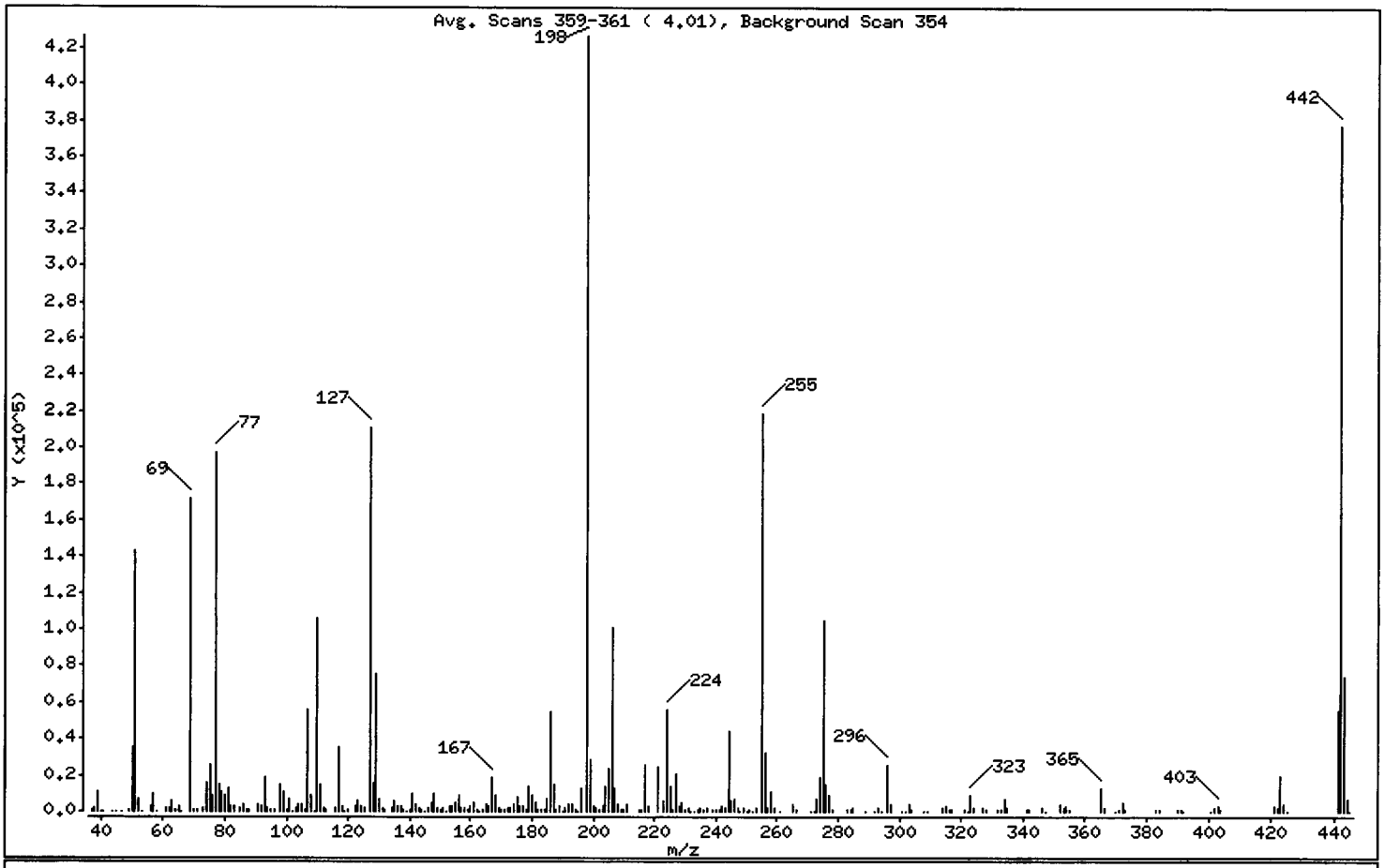
Sample Info: DFTPP 10

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	33.64
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	40.27
70	Less than 2.00% of mass 69	0.28 (0.70)
127	10.00 - 80.00% of mass 198	49.52
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.61
275	10.00 - 60.00% of mass 198	24.62
365	Greater than 1.00% of mass 198	3.01
441	0.01 - 24.00% of mass 442	13.03 (14.73)
442	50.00 - 200.00% of mass 198	88.43
443	15.00 - 24.00% of mass 442	17.39 (19.67)

Date : 19-APR-2013 15:10

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0419.d
Spectrum: Avg. Scans 359-361 (4.01), Background Scan 354
Location of Maximum: 198.00
Number of points: 267

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	685	122.00	2893	191.00	1513	275.00	105040
38.00	2057	123.00	6060	192.00	4115	276.00	14413
39.00	11129	124.00	2766	193.00	4274	277.00	8652
40.00	99	125.00	2374	194.00	1299	278.00	1134
41.00	279	127.00	211264	195.00	444	283.00	1056
44.00	228	128.00	15342	196.00	12643	284.00	782
45.00	187	129.00	75544	198.00	426624	285.00	1616
47.00	106	130.00	7019	199.00	28200	289.00	219
49.00	1080	131.00	1733	200.00	2495	292.00	234
50.00	35528	132.00	1106	201.00	1820	293.00	1540
51.00	143488	134.00	1592	202.00	612	294.00	356
52.00	7235	135.00	6092	203.00	2958	296.00	25824
53.00	402	136.00	2591	204.00	13887	297.00	4060
56.00	3317	137.00	2507	205.00	23232	301.00	172
57.00	9896	138.00	853	206.00	101376	302.00	446
58.00	319	139.00	395	207.00	12284	303.00	3499
61.00	1798	140.00	695	208.00	3865	304.00	975
62.00	1987	141.00	9466	209.00	970	308.00	252
63.00	6044	142.00	3858	210.00	931	309.00	216
64.00	916	143.00	2288	211.00	4060	314.00	1580
65.00	3114	144.00	560	215.00	831	315.00	3274
66.00	176	145.00	224	216.00	762	316.00	1416
69.00	171776	146.00	1561	217.00	25096	317.00	526
70.00	1200	147.00	4572	218.00	3044	321.00	1161
71.00	572	148.00	9894	221.00	24984	322.00	187
73.00	1661	149.00	2191	223.00	6151	323.00	9262
74.00	15261	150.00	978	224.00	56008	324.00	1912
75.00	25408	151.00	1714	225.00	14208	327.00	1991
76.00	8941	152.00	346	226.00	1466	328.00	1227
77.00	197376	153.00	3141	227.00	20248	332.00	542
78.00	14478	154.00	2631	228.00	3272	333.00	997
79.00	11277	155.00	5294	229.00	5250	334.00	6741
80.00	8404	156.00	8441	230.00	708	335.00	2060
81.00	12440	157.00	2039	231.00	2300	341.00	1291
82.00	3374	158.00	1968	232.00	354	342.00	676

Data File: /chem3/nt11.i/20130419.b/df0419.d

Date : 19-APR-2013 15:10

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

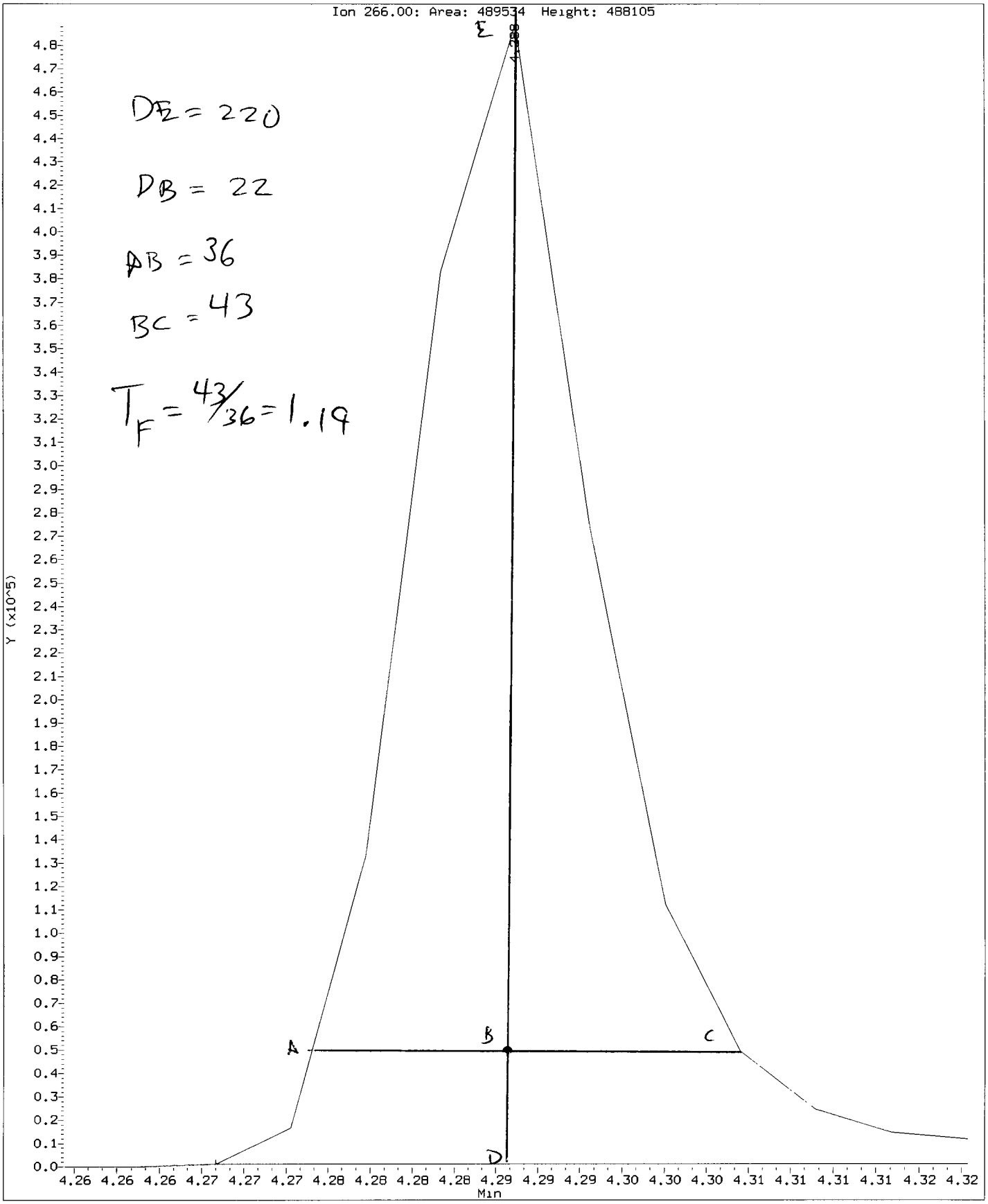
Column diameter: 0.25

Data File: df0419.d
Spectrum: Avg. Scans 359-361 (4.01), Background Scan 354
Location of Maximum: 198.00
Number of points: 267

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	3071	159.00	1340	233.00	314	346.00	1832
85.00	2007	160.00	2703	234.00	1320	347.00	469
86.00	3876	161.00	4790	235.00	1652	352.00	3547
87.00	1088	162.00	1222	236.00	887	353.00	2258
88.00	963	163.00	347	237.00	1866	354.00	2560
91.00	3539	164.00	815	239.00	612	355.00	616
92.00	3113	165.00	3511	240.00	687	365.00	12851
93.00	18616	166.00	2758	241.00	941	366.00	2096
94.00	1694	167.00	18616	242.00	3301	370.00	174
95.00	550	168.00	9301	243.00	1627	371.00	611
96.00	945	169.00	1610	244.00	44272	372.00	5304
98.00	14273	170.00	735	245.00	5637	373.00	1303
99.00	11101	171.00	826	246.00	6757	383.00	1352
100.00	1008	172.00	2018	247.00	1660	384.00	505
101.00	7111	173.00	1974	248.00	171	390.00	1260
102.00	330	174.00	4173	249.00	1661	391.00	812
103.00	2164	175.00	7469	250.00	369	392.00	404
104.00	4257	176.00	2954	251.00	576	401.00	227
105.00	3991	177.00	3396	252.00	190	402.00	2090
106.00	1243	178.00	1215	253.00	1765	403.00	3068
107.00	55792	179.00	13325	255.00	218816	404.00	1299
108.00	9132	180.00	8959	256.00	32640	421.00	2703
109.00	374	181.00	4645	257.00	1941	422.00	2138
110.00	105528	182.00	980	258.00	10331	423.00	19368
111.00	14397	183.00	858	259.00	1940	424.00	3534
112.00	1901	184.00	1093	261.00	238	425.00	252
113.00	805	185.00	6555	265.00	4055	441.00	55584
116.00	2281	186.00	54752	266.00	992	442.00	377280
117.00	35696	187.00	15165	271.00	172	443.00	74200
118.00	3203	188.00	1429	272.00	481	444.00	6582
119.00	250	189.00	3295	273.00	6836	445.00	201
120.00	869	190.00	197	274.00	18464		

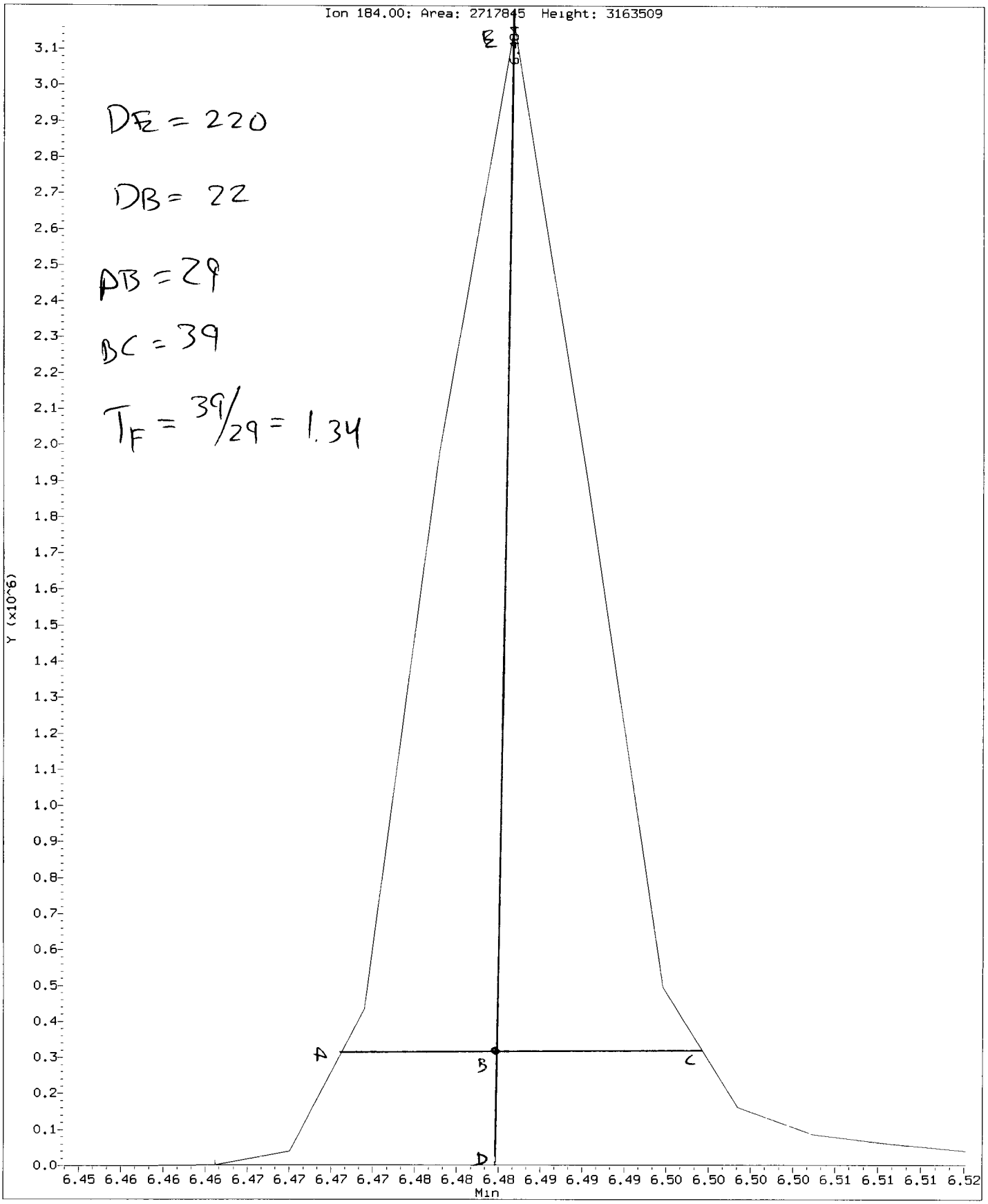
Data File: /chem3/nt11.i/20130419.b/DDT.b/df0419.d
Injection Date: 19-APR-2013 15:10
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20130419.b/DDT.b/df0419.d
Injection Date: 19-APR-2013 15:10
Instrument: nt11.1
Client Sample ID:

Compound: Benzidine
CAS Number:



WLIO-02181

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130419.b/DDT.b/df0419.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130419.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 19-APR-2013 15:10 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.288	489534
Benzidine	6.484	2717845
4,4'-DDE	5.918	4401
4,4'-DDD	6.404	24359
4,4'-DDT	6.628	1217221

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

$$\text{DDT Percent Breakdown} = \frac{(\ 4401 + 24359) * 100}{(\ 4401 + 24359 + 1217221)}$$

DDT Percent Breakdown = 2.3 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130419.b/cc0419.d
Lab Smp Id: SIM 250
Inj Date : 19-APR-2013 15:26
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130419.b/lowsim.m
Meth Date : 19-Apr-2013 16:01 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)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.186	6.186	(1.000)	221636	200.000	
	5 Naphthalene	128	6.218	6.218	(1.005)	285414	250.000	235
$	6 2-Methylnaphthalene-d10	152	7.153	7.153	(1.156)	165166	250.000	235
	7 2-Methylnaphthalene	142	7.216	7.216	(1.166)	178298	250.000	235
	8 1-methylnaphthalene	142	7.458	7.458	(1.205)	176848	250.000	232
	10 Acenaphthylene	152	9.006	9.006	(0.983)	270802	250.000	240
*	11 Acenaphthene-d10	164	9.161	9.161	(1.000)	126615	200.000	
	12 Acenaphthene	153	9.216	9.216	(1.006)	173004	250.000	232
	14 Dibenzofuran	168	9.427	9.427	(1.029)	245072	250.000	225
	15 Fluorene	166	10.046	10.046	(1.097)	194203	250.000	239
*	18 Phenanthrene-d10	188	11.807	11.807	(1.000)	207851	200.000	
	19 Phenanthrene	178	11.851	11.851	(1.004)	290067	250.000	226
	20 Anthracene	178	11.906	11.906	(1.008)	283443	250.000	235
$	23 Fluoranthene-d10	212	13.898	13.898	(1.177)	263211	250.000	244
	24 Fluoranthene	202	13.926	13.926	(1.180)	310054	250.000	244
	25 Pyrene	202	14.416	14.416	(0.873)	307352	250.000	224
	28 Benzo(a)anthracene	228	16.425	16.425	(0.994)	262443	250.000	231
*	29 Chrysene-d12	240	16.516	16.516	(1.000)	163937	200.000	
	30 Chrysene	228	16.566	16.566	(1.003)	262790	250.000	224
	44 Benzo(b)fluoranthene	252	18.214	18.214	(0.952)	240722	250.000	212
	45 Benzo(k)fluoranthene	252	18.253	18.253	(0.954)	279670	250.000	227
	46 Benzo(j)fluoranthene	252	18.301	18.301	(0.957)	276296	250.000	221
	34 Benzo(a)pyrene	252	18.944	18.944	(0.990)	216310	250.000	226
*	35 Perylene-d12	264	19.127	19.127	(1.000)	143004	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.307	21.307	(1.114)	274250	250.000	233
$	36 Dibenzo(a,h)anthracene-d14	292	21.207	21.207	(1.109)	189050	250.000	231

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	21.296	21.296	(1.113)	217488	250.000	230
39 Benzo(g,h,i)perylene	276	22.226	22.226	(1.162)	235382	250.000	223
47 Perylene	252	19.185	19.185	(1.003)	238959	250.000	219

LD
4.19.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0419.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info:

Calibration Date: 19-APR-2013
Calibration Time: 14:23

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	221636	-13.18
11 Acenaphthene-d10	142891	71446	285782	126615	-11.39
18 Phenanthrene-d10	220853	110426	441706	207851	-5.89
29 Chrysene-d12	162525	81262	325050	163937	0.87
35 Perylene-d12	139028	69514	278056	143004	2.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.81	0.00
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.00
35 Perylene-d12	19.13	18.63	19.63	19.13	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 19-APR-2013 15:26
Lab File ID: cc0419.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/20130419.b/lowsim.m

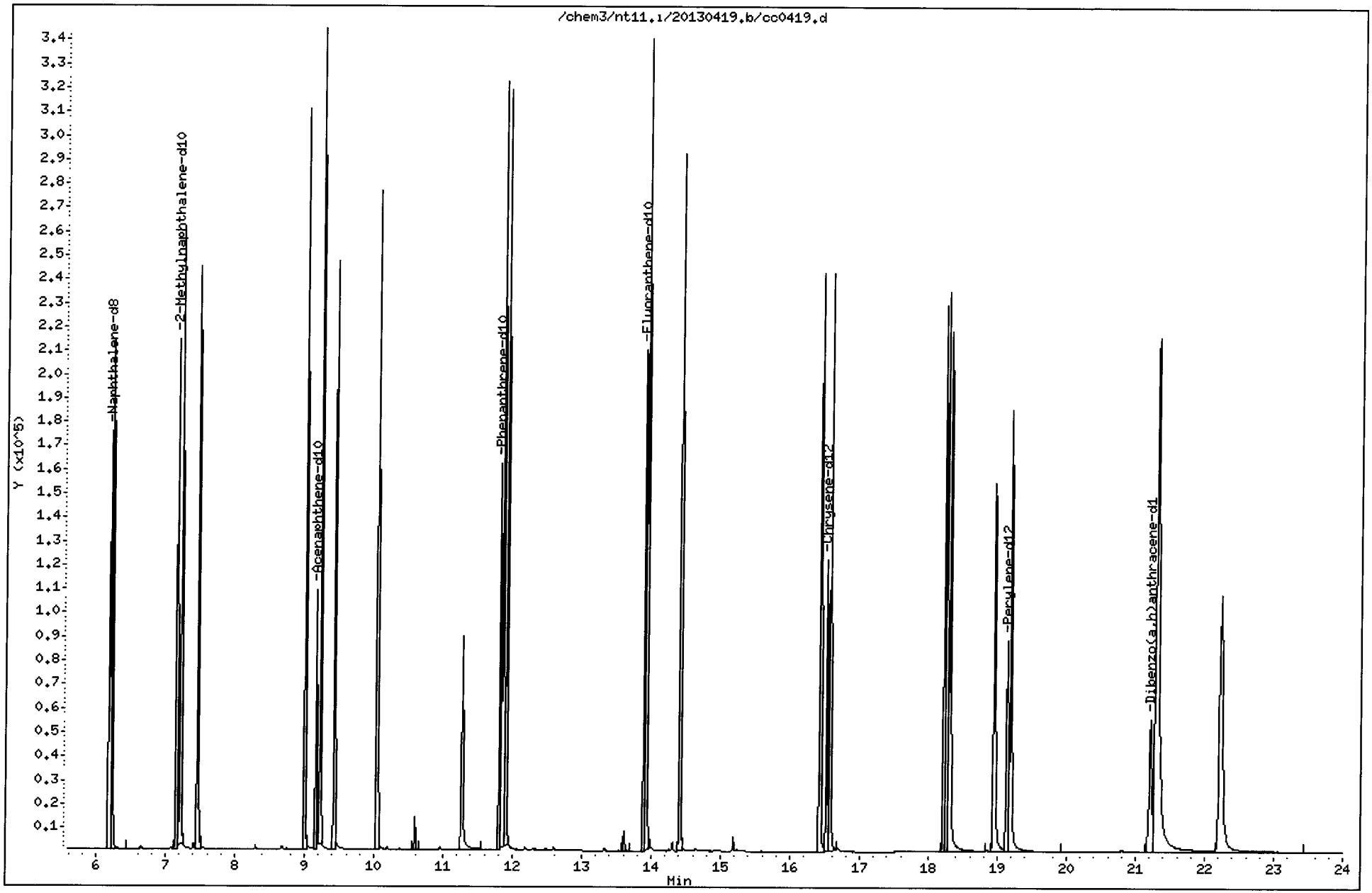
COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.09508	1.03021	0.010	-5.92377	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.63288	0.59617	0.010	-5.80102	20.00000	Averaged
7 2-Methylnaphthalene	0.68537	0.64357	0.010	-6.09951	20.00000	Averaged
8 1-Methylnaphthalene	0.68897	0.63833	0.010	-7.34979	20.00000	Averaged
10 Acenaphthylene	1.78573	1.71101	0.010	-4.18423	20.00000	Averaged
12 Acenaphthene	1.17874	1.09310	0.010	-7.26564	20.00000	Averaged
14 Dibenzofuran	1.71710	1.54845	0.010	-9.82224	20.00000	Averaged
15 Fluorene	1.28190	1.22704	0.010	-4.27924	20.00000	Averaged
19 Phenanthrene	1.23537	1.11644	0.010	-9.62749	20.00000	Averaged
20 Anthracene	1.15865	1.09094	0.010	-5.84341	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03665	1.01307	0.200	-2.27475	20.00000	Averaged
24 Fluoranthene	1.22132	1.19337	0.010	-2.28874	20.00000	Averaged
25 Pyrene	1.67487	1.49985	0.010	-10.44951	20.00000	Averaged
28 Benzo(a)anthracene	1.38400	1.28071	0.010	-7.46368	20.00000	Averaged
30 Chrysene	1.43023	1.28239	0.010	-10.33644	20.00000	Averaged
44 Benzo(b)fluoranthene	1.58507	1.34666	0.200	-15.04100	20.00000	Averaged
45 Benzo(k)fluoranthene	1.72364	1.56454	0.200	-9.23031	20.00000	Averaged
46 Benzo(j)fluoranthene	1.74944	1.54567	0.200	-11.64774	20.00000	Averaged
34 Benzo(a)pyrene	1.33777	1.21009	0.010	-9.54427	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.64660	1.53422	0.010	-6.82462	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.14296	1.05760	0.010	-7.46889	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.32390	1.21668	0.010	-8.09892	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.47330	1.31679	0.010	-10.62340	20.00000	Averaged
47 Perylene	1.52395	1.33680	0.200	-12.28076	20.00000	Averaged

Data File: /chem3/nt11.i/20130419.b/cc0419.d
Date : 19-APR-2013 15:26
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - cc0419.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130419.b/wl62mb.d
Lab Smp Id: WL62MBW1 Client Smp ID: WL62MBW1
Inj Date : 19-APR-2013 16:26
Operator : VTS Inst ID: nt11.i
Smp Info : WL62MBW1
Misc Info : 13-7771
Comment :
Method : /chem3/nt11.i/20130419.b/lowsim.m
Meth Date : 19-Apr-2013 16:01 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	6.186	6.186	(1.000)	216319	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.163	7.153	(1.158)	146596	214.158	214
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.161	9.161	(1.000)	122810	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.818	11.807	(1.000)	203960	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.897	13.898	(1.176)	262614	248.410	248
	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	16.525	16.516	(1.000)	162533	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	19.136	19.127	(1.000)	140454	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	21.207	21.207	(1.108)	178372	222.224	222
	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.					

4/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wl62mb.d
Lab Smp Id: WL62MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7771

Calibration Date: 19-APR-2013
Calibration Time: 15:26
Client Smp ID: WL62MBW1
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	216319	-15.26
11 Acenaphthene-d10	142891	71446	285782	122810	-14.05
18 Phenanthrene-d10	220853	110426	441706	203960	-7.65
29 Chrysene-d12	162525	81262	325050	162533	0.00
35 Perylene-d12	139028	69514	278056	140454	1.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.82	0.09
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.05
35 Perylene-d12	19.13	18.63	19.63	19.14	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

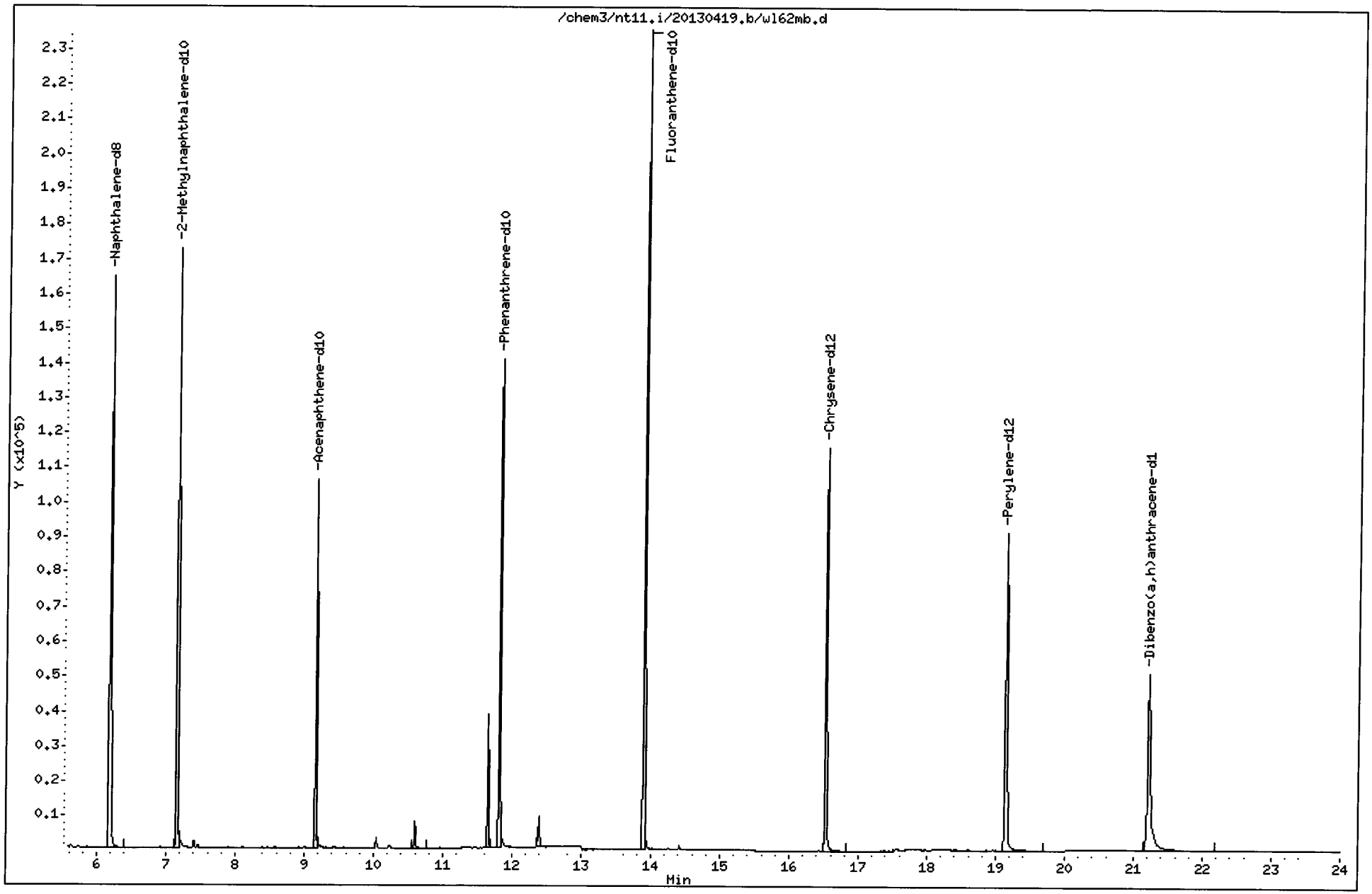
Client Name: Geoengineers
Sample Matrix: LIQUID
Lab Smp Id: WL62MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7771

Client SDG: WL62
Fraction: SV
Client Smp ID: WL62MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	214	71.39	35-94
$ 23 Fluoranthene-d10	300	248	82.80	30-160
$ 36 Dibenzo(a,h)anthra	300	222	74.07	26-115

Data File: /chem3/nt11.i/20130419.b/wl62mb.d
Date : 19-APR-2013 16:26
Client ID: WL62MBW1
Sample Info: WL62MBW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl62mb.d

Lab ID: WL62MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130419.b/wl62sb.d
Lab Smp Id: WL62LCSW1 Client Smp ID: WL62LCSW1
Inj Date : 19-APR-2013 16:55
Operator : VTS Inst ID: nt11.i
Smp Info : WL62LCSW1
Misc Info : 13-7771
Comment :
Method : /chem3/nt11.i/20130419.b/lowsim.m
Meth Date : 19-Apr-2013 16:01 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 5 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)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.186	6.186	(1.000)	217333	200.000	
	5 Naphthalene	128	6.218	6.218	(1.005)	241236	202.723	203
$	6 2-Methylnaphthalene-d10	152	7.153	7.153	(1.156)	146359	212.814	213
	7 2-Methylnaphthalene	142	7.216	7.216	(1.166)	150488	202.059	202
	8 1-methylnaphthalene	142	7.457	7.458	(1.205)	151032	201.730	202
	10 Acenaphthylene	152	9.006	9.006	(0.983)	227121	199.640	200
*	11 Acenaphthene-d10	164	9.161	9.161	(1.000)	127416	200.000	
	12 Acenaphthene	153	9.216	9.216	(1.006)	150781	200.786	201
	14 Dibenzofuran	168	9.426	9.427	(1.029)	217255	198.600	199
	15 Fluorene	166	10.035	10.046	(1.095)	171860	210.440	210
*	18 Phenanthrene-d10	188	11.807	11.807	(1.000)	209207	200.000	
	19 Phenanthrene	178	11.851	11.851	(1.004)	258133	199.756	200
	20 Anthracene	178	11.906	11.906	(1.008)	221098	182.426	182
$	23 Fluoranthene-d10	212	13.888	13.898	(1.176)	256674	236.702	237
	24 Fluoranthene	202	13.926	13.926	(1.180)	278088	217.674	218

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.407	14.416	(0.872)	282090	205.165	205
	28 Benzo(a)anthracene	228	16.425	16.425	(0.994)	240395	211.585	212
*	29 Chrysene-d12	240	16.516	16.516	(1.000)	164185	200.000	
	30 Chrysene	228	16.566	16.566	(1.003)	244613	208.339	208
	44 Benzo(b)fluoranthene	252	18.214	18.214	(0.952)	228072	200.748	201
	45 Benzo(k)fluoranthene	252	18.252	18.253	(0.954)	252314	204.231	204
	46 Benzo(j)fluoranthene	252	18.300	18.301	(0.957)	256261	204.366	204
	34 Benzo(a)pyrene	252	18.944	18.944	(0.990)	163492	170.506	171
*	35 Perylene-d12	264	19.127	19.127	(1.000)	143352	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.307	21.307	(1.114)	246567	208.917	209
$	36 Dibenzo(a,h)anthracene-d14	292	21.196	21.207	(1.108)	179274	218.832	219
	38 Dibenzo(a,h)anthracene	278	21.296	21.296	(1.113)	194862	205.351	205
	39 Benzo(g,h,i)perylene	276	22.226	22.226	(1.162)	210399	199.241	199
	47 Perylene	252	19.184	19.185	(1.003)	174349	159.616	160

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wl62sb.d
Lab Smp Id: WL62LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7771

Calibration Date: 19-APR-2013
Calibration Time: 15:26
Client Smp ID: WL62LCSW1
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	217333	-14.87
11 Acenaphthene-d10	142891	71446	285782	127416	-10.83
18 Phenanthrene-d10	220853	110426	441706	209207	-5.27
29 Chrysene-d12	162525	81262	325050	164185	1.02
35 Perylene-d12	139028	69514	278056	143352	3.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.81	0.00
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.00
35 Perylene-d12	19.13	18.63	19.63	19.13	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Geoengineers
Sample Matrix: LIQUID
Lab Smp Id: WL62LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7771

Client SDG: WL62
Fraction: SV
Client Smp ID: WL62LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

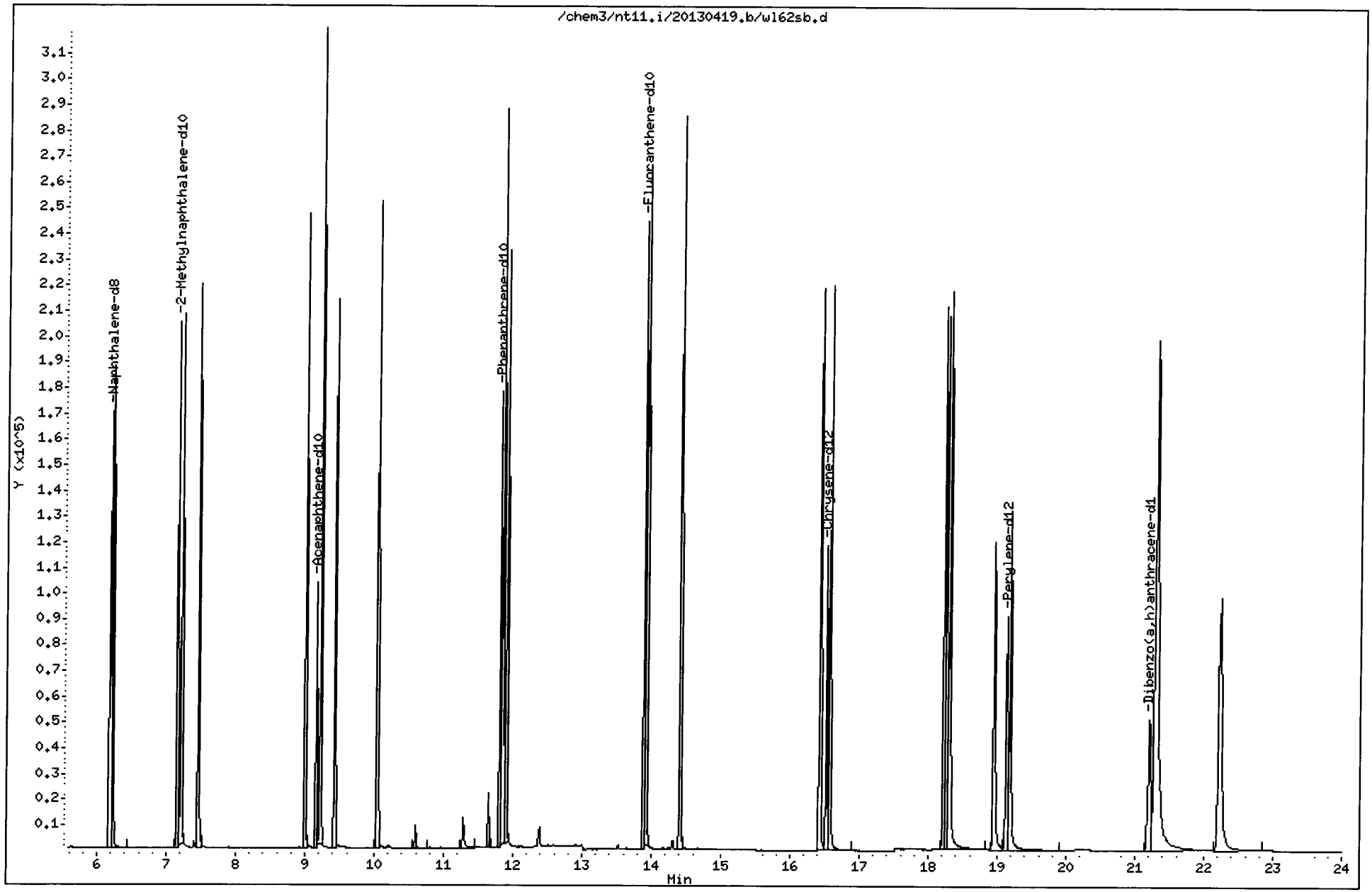
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	203	67.57	37-90
7 2-Methylnaphthalen	300	202	67.35	39-90
8 1-methylnaphthalen	300	202	67.24	38-95
10 Acenaphthylene	300	200	66.55	35-95
12 Acenaphthene	300	201	66.93	38-94
14 Dibenzofuran	300	199	66.20	36-94
15 Fluorene	300	210	70.15	41-102
19 Phenanthrene	300	200	66.59	41-101
20 Anthracene	300	182	60.81	28-101
24 Fluoranthene	300	218	72.56	49-114
25 Pyrene	300	205	68.39	42-114
28 Benzo(a)anthracene	300	212	70.53	42-111
30 Chrysene	300	208	69.45	46-106
44 Benzo(b)fluoranthe	300	201	66.92	30-160
45 Benzo(k)fluoranthe	300	204	68.08	30-160
46 Benzo(j)fluoranthe	300	204	68.12	30-160
34 Benzo(a)pyrene	300	171	56.84	20-99
37 Indeno(1,2,3-cd)py	300	209	69.64	32-113
38 Dibenzo(a,h)anthra	300	205	68.45	30-113
39 Benzo(g,h,i)peryle	300	199	66.41	27-113
47 Perylene	300	160	53.21	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	213	70.94	35-94
$ 23 Fluoranthene-d10	300	237	78.90	30-160
$ 36 Dibenzo(a,h)anthra	300	219	72.94	26-115

Data File: /chem3/nt11.i/20130419.b/wl62sb.d
Date : 19-APR-2013 16:55
Client ID: WL62LCSW1
Sample Info: WL62LCSW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl62sb.d

Lab ID: WL62LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130419.b/wl62sbd.d
Lab Smp Id: WL62LCSDW1 Client Smp ID: WL62LCSDW1
Inj Date : 19-APR-2013 17:24
Operator : VTS Inst ID: nt11.i
Smp Info : WL62LCSDW1
Misc Info : 13-7771
Comment :
Method : /chem3/nt11.i/20130419.b/lowsim.m
Meth Date : 19-Apr-2013 16:01 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	6.186	6.186	(1.000)	217401	200.000	
	5 Naphthalene	128	6.218	6.218	(1.005)	237730	199.714	200
$	6 2-Methylnaphthalene-d10	152	7.153	7.153	(1.156)	140797	204.663	205
	7 2-Methylnaphthalene	142	7.216	7.216	(1.166)	149490	200.656	201
	8 1-methylnaphthalene	142	7.458	7.458	(1.205)	150309	200.702	201
	10 Acenaphthylene	152	9.006	9.006	(0.983)	228584	201.768	202
*	11 Acenaphthene-d10	164	9.161	9.161	(1.000)	126884	200.000	
	12 Acenaphthene	153	9.216	9.216	(1.006)	151176	202.156	202
	14 Dibenzofuran	168	9.426	9.427	(1.029)	217601	199.750	200
	15 Fluorene	166	10.035	10.046	(1.095)	171382	210.734	211
*	18 Phenanthrene-d10	188	11.807	11.807	(1.000)	209496	200.000	
	19 Phenanthrene	178	11.851	11.851	(1.004)	258581	199.826	200
	20 Anthracene	178	11.906	11.906	(1.008)	219941	181.221	181
$	23 Fluoranthene-d10	212	13.888	13.898	(1.176)	251183	231.319	231
	24 Fluoranthene	202	13.926	13.926	(1.180)	281438	219.993	220

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.407	14.416	(0.872)	280979	210.526	211
	28 Benzo(a)anthracene	228	16.425	16.425	(0.994)	237531	215.375	215
*	29 Chrysene-d12	240	16.516	16.516	(1.000)	159374	200.000	
	30 Chrysene	228	16.566	16.566	(1.003)	246626	216.394	216
	44 Benzo(b)fluoranthene	252	18.214	18.214	(0.952)	232147	214.384	214
	45 Benzo(k)fluoranthene	252	18.252	18.253	(0.954)	251098	213.243	213
	46 Benzo(j)fluoranthene	252	18.300	18.301	(0.957)	251331	210.293	210
	34 Benzo(a)pyrene	252	18.944	18.944	(0.990)	157457	172.289	172
*	35 Perylene-d12	264	19.127	19.127	(1.000)	136632	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.307	21.307	(1.114)	246686	219.298	219
$	36 Dibenzo(a,h)anthracene-d14	292	21.196	21.207	(1.108)	174532	223.522	224
	38 Dibenzo(a,h)anthracene	278	21.296	21.296	(1.113)	194772	215.352	215
	39 Benzo(g,h,i)perylene	276	22.226	22.226	(1.162)	210810	209.448	209
	47 Perylene	252	19.184	19.185	(1.003)	164966	158.453	158

4/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wl62sbd.d
Lab Smp Id: WL62LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7771

Calibration Date: 19-APR-2013
Calibration Time: 15:26
Client Smp ID: WL62LCSDW1
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	217401	-14.84
11 Acenaphthene-d10	142891	71446	285782	126884	-11.20
18 Phenanthrene-d10	220853	110426	441706	209496	-5.14
29 Chrysene-d12	162525	81262	325050	159374	-1.94
35 Perylene-d12	139028	69514	278056	136632	-1.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.81	0.00
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.00
35 Perylene-d12	19.13	18.63	19.63	19.13	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Geoengineers
Sample Matrix: LIQUID
Lab Smp Id: WL62LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7771

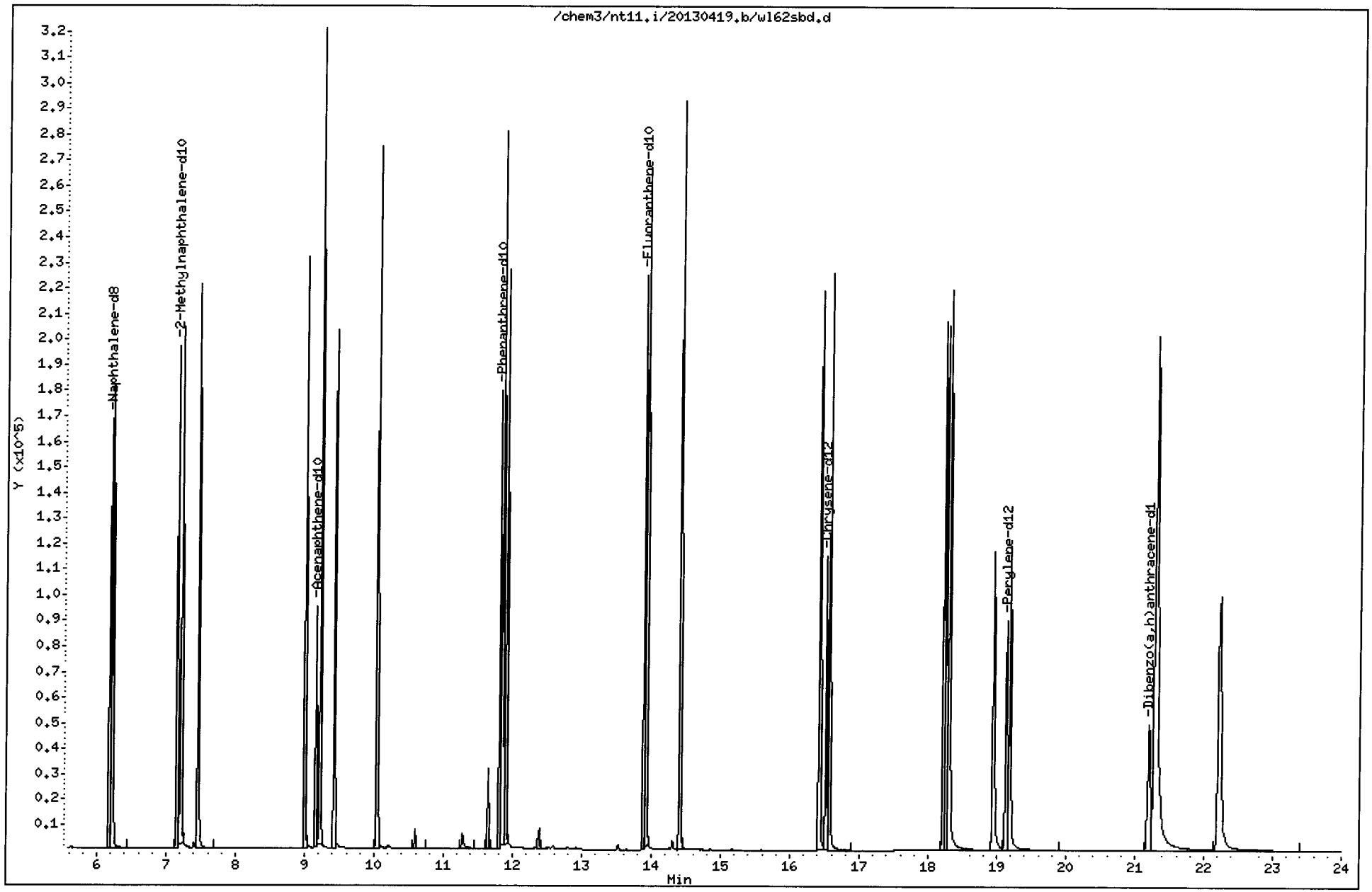
Client SDG: WL62
Fraction: SV
Client Smp ID: WL62LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	200	66.57	37-90
7 2-Methylnaphthalen	300	201	66.89	39-90
8 1-methylnaphthalen	300	201	66.90	38-95
10 Acenaphthylene	300	202	67.26	35-95
12 Acenaphthene	300	202	67.39	38-94
14 Dibenzofuran	300	200	66.58	36-94
15 Fluorene	300	211	70.24	41-102
19 Phenanthrene	300	200	66.61	41-101
20 Anthracene	300	181	60.41	28-101
24 Fluoranthene	300	220	73.33	49-114
25 Pyrene	300	211	70.18	42-114
28 Benzo(a)anthracene	300	215	71.79	42-111
30 Chrysene	300	216	72.13	46-106
44 Benzo(b)fluoranthe	300	214	71.46	30-160
45 Benzo(k)fluoranthe	300	213	71.08	30-160
46 Benzo(j)fluoranthe	300	210	70.10	30-160
34 Benzo(a)pyrene	300	172	57.43	20-99
37 Indeno(1,2,3-cd)py	300	219	73.10	32-113
38 Dibenzo(a,h)anthra	300	215	71.78	30-113
39 Benzo(g,h,i)peryle	300	209	69.82	27-113
47 Perylene	300	158	52.82	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	205	68.22	35-94
$ 23 Fluoranthene-d10	300	231	77.11	30-160
$ 36 Dibenzo(a,h)anthra	300	224	74.51	26-115

Data File: /chem3/nt11.i/20130419.b/wl62sbd.d
Date : 19-APR-2013 17:24
Client ID: WL62LCSDW1
Sample Info: WL62LCSDW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wl62sbd.d

Lab ID: WL62LCSDW1, Method: lowsim.m, Instrument: nt11.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130419.b/wl49a.d
Lab Smp Id: WL49A Client Smp ID: IM-MH-01-20130410-W
Inj Date : 19-APR-2013 19:49
Operator : VTS Inst ID: nt11.i
Smp Info : WL49A
Misc Info : 13-7779
Comment :
Method : /chem3/nt11.i/20130419.b/lowsim.m
Meth Date : 19-Apr-2013 16:01 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 11
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	6.186	6.186	(1.000)	218986	200.000		
	5 Naphthalene	128	6.218	6.218	(1.005)	43791	36.5220	36.5	
$	6 2-Methylnaphthalene-d10	152	7.163	7.153	(1.158)	142610	205.798	206	
	7 2-Methylnaphthalene	142	Compound Not Detected.						
	8 1-methylnaphthalene	142	7.510	7.458	(1.214)	4918	6.51929	6.52	J
	10 Acenaphthylene	152	Compound Not Detected.						
*	11 Acenaphthene-d10	164	9.161	9.161	(1.000)	131492	200.000		
	12 Acenaphthene	153	Compound Not Detected.						
	14 Dibenzofuran	168	Compound Not Detected.						
	15 Fluorene	166	Compound Not Detected.						
*	18 Phenanthrene-d10	188	11.807	11.807	(1.000)	207304	200.000		
	19 Phenanthrene	178	Compound Not Detected.						
	20 Anthracene	178	Compound Not Detected.						
$	23 Fluoranthene-d10	212	13.898	13.898	(1.177)	220311	205.034	205	
	24 Fluoranthene	202	13.936	13.926	(1.180)	22523	17.7918	17.8	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.436	14.416	(0.874)	31230	23.2579	23.3
	28 Benzo(a)anthracene	228	16.417	16.425	(0.994)	19245	17.3445	17.3
*	29 Chrysene-d12	240	16.516	16.516	(1.000)	160343	200.000	
	30 Chrysene	228	16.566	16.566	(1.003)	9864	8.60255	8.60 J
	44 Benzo(b)fluoranthene	252	18.214	18.214	(0.952)	10683	7.34113	7.34 J
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	18.944	18.944	(0.990)	10051	8.18360	8.18 J
*	35 Perylene-d12	264	19.127	19.127	(1.000)	183617	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	21.196	21.207	(1.108)	166237	158.421	158
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	22.226	22.226	(1.162)	7529	5.56625	5.57 J
	47 Perylene	252	Compound Not Detected.					

VD
4-20-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wl49a.d
Lab Smp Id: WL49A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7779

Calibration Date: 19-APR-2013
Calibration Time: 15:26
Client Smp ID: IM-MH-01-20130410-W
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	218986	-14.22
11 Acenaphthene-d10	142891	71446	285782	131492	-7.98
18 Phenanthrene-d10	220853	110426	441706	207304	-6.13
29 Chrysene-d12	162525	81262	325050	160343	-1.34
35 Perylene-d12	139028	69514	278056	183617	32.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.81	0.00
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.00
35 Perylene-d12	19.13	18.63	19.63	19.13	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

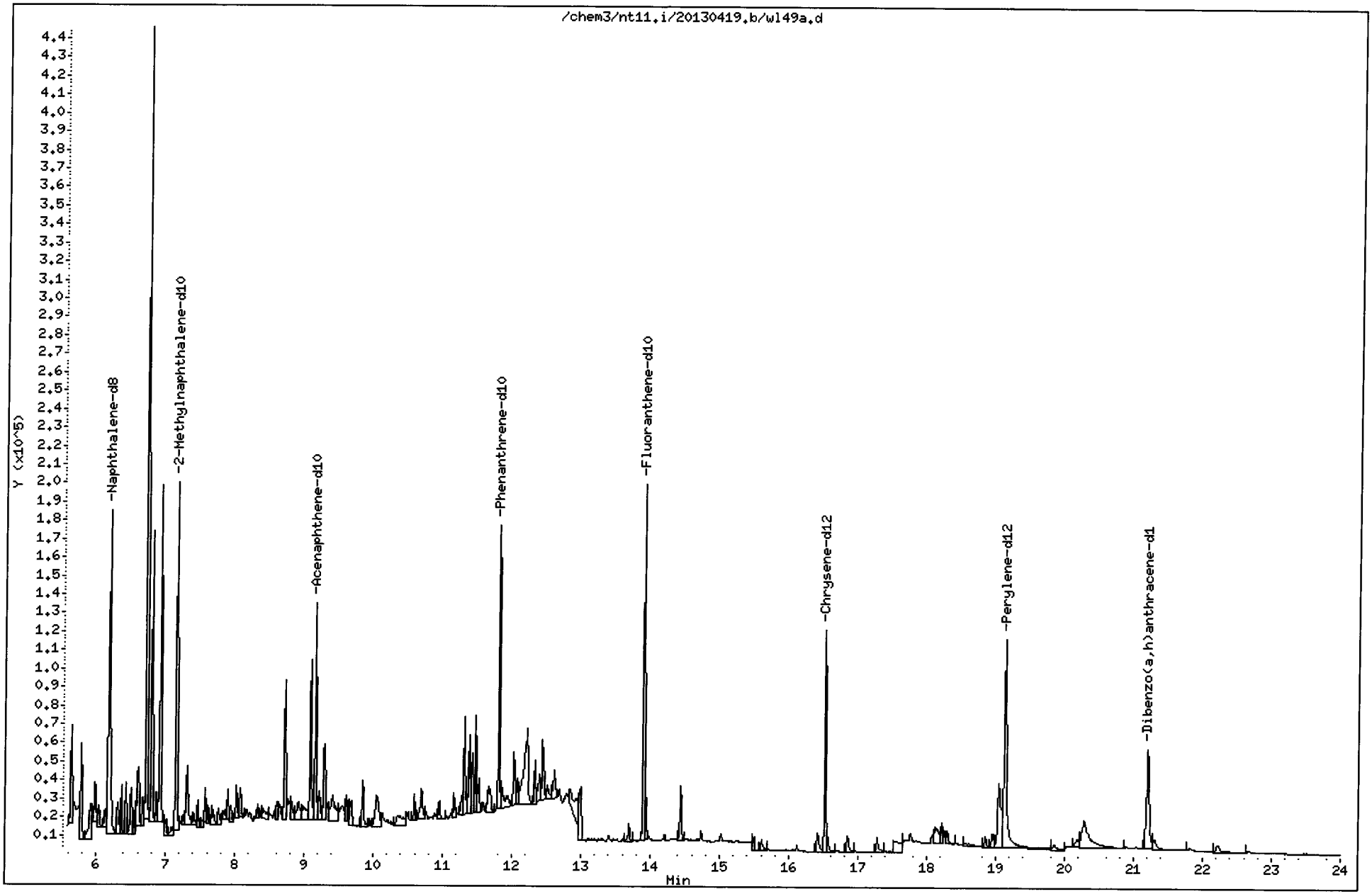
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WL49A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130419.b/lowsim.m
Misc Info: 13-7779

Client SDG: WL49
Fraction: SV
Client Smp ID: IM-MH-01-20130410-W
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	206	68.60	35-94
$ 23 Fluoranthene-d10	300	205	68.34	30-160
$ 36 Dibenzo(a,h)anthra	300	158	52.81	26-115

Data File: /chem3/nt11.i/20130419.b/wl49a.d
Date : 19-APR-2013 19:49
Client ID: IM-MH-01-20130410-W
Sample Info: WL49A
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

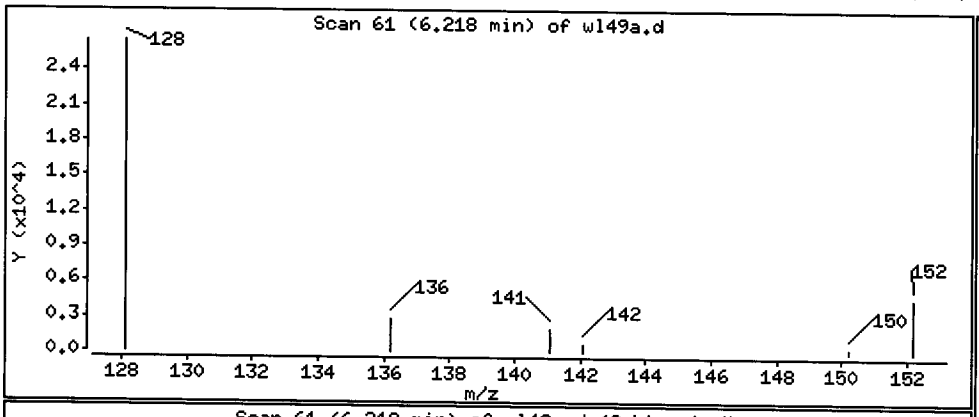
Operator: VTS

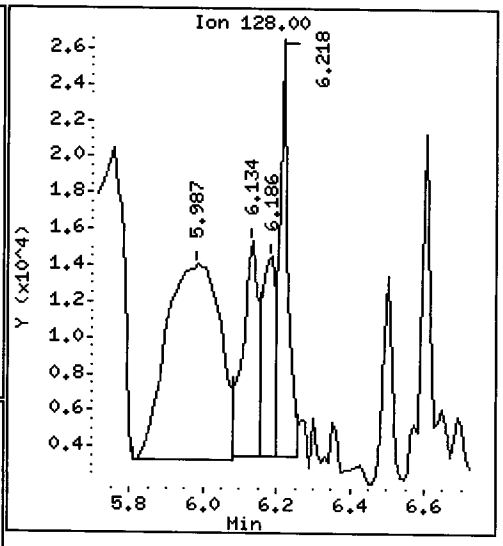
Column phase: Rxi-17Sil MS

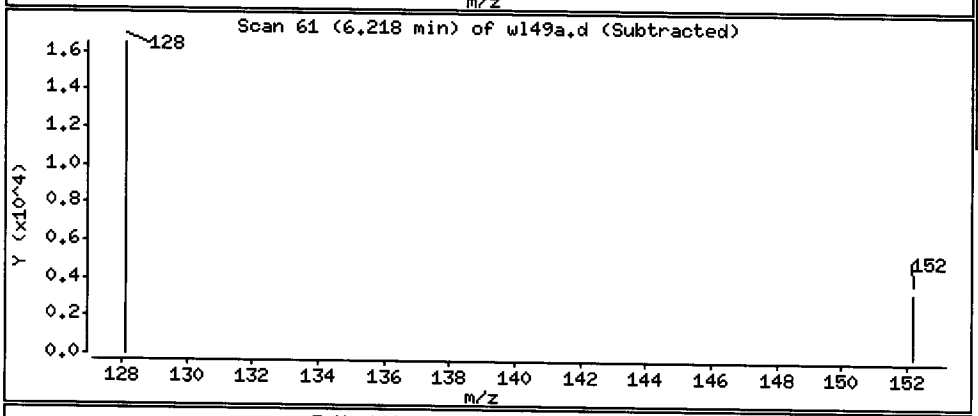
Column diameter: 0.25

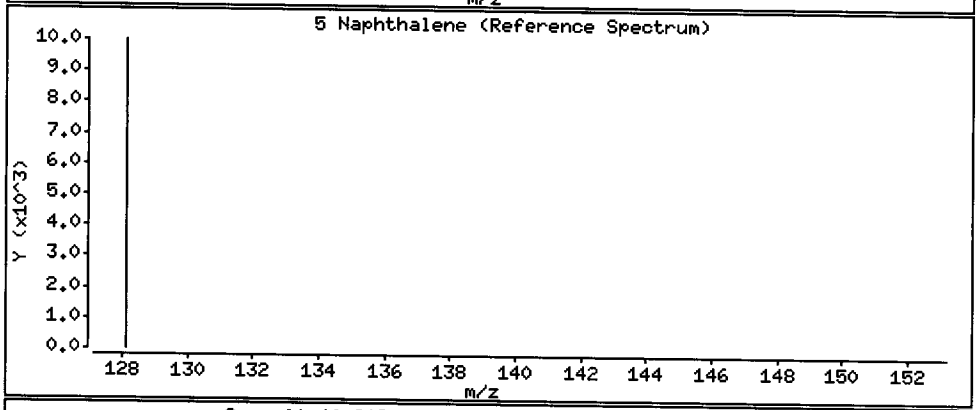
5 Naphthalene

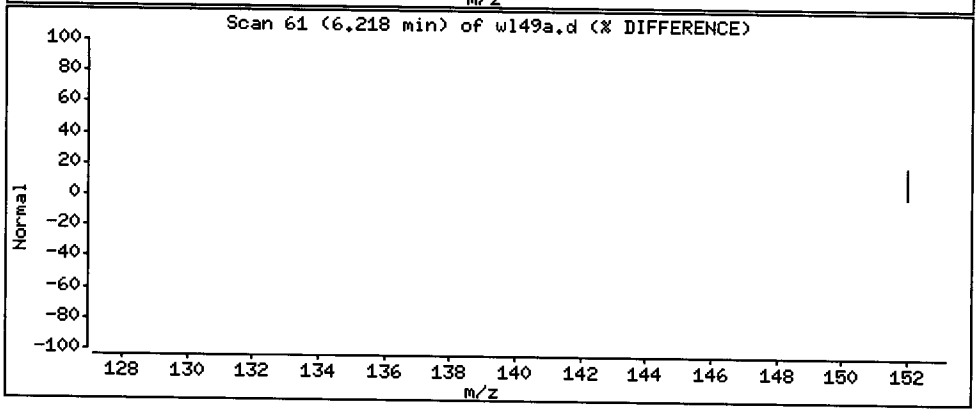
Concentration: 36.5 ug/L











Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

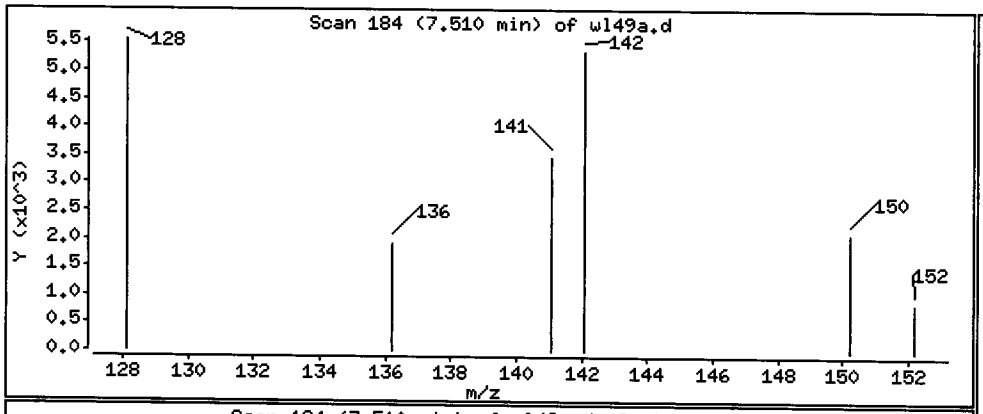
Operator: VTS

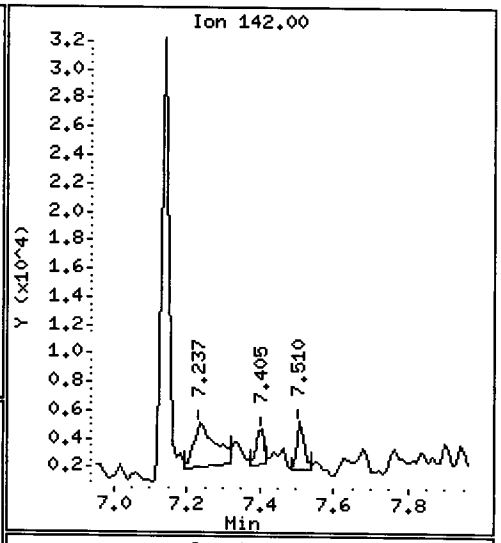
Column phase: Rxi-17Sil MS

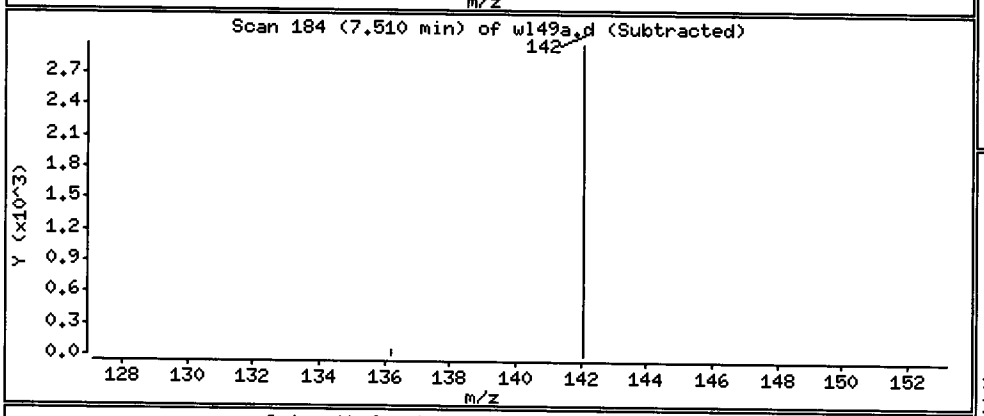
Column diameter: 0.25

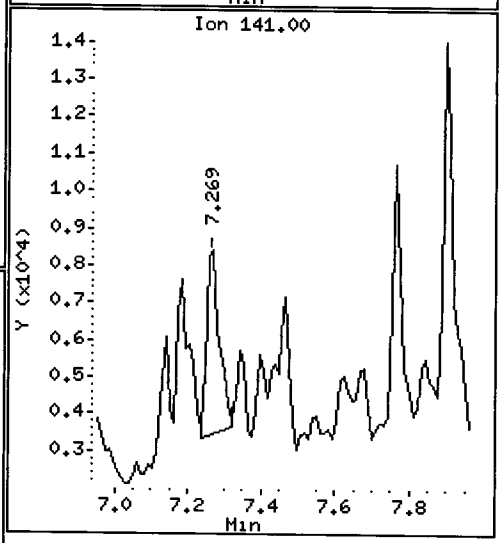
8 1-methylnaphthalene

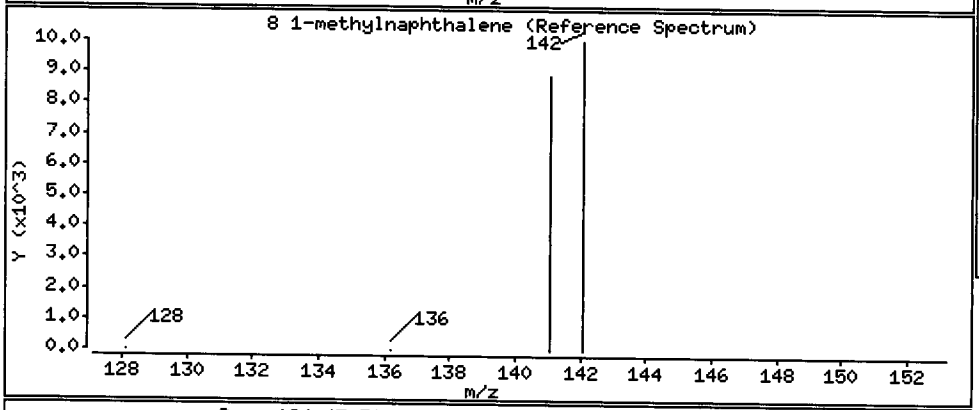
Concentration: 6.52 ug/L

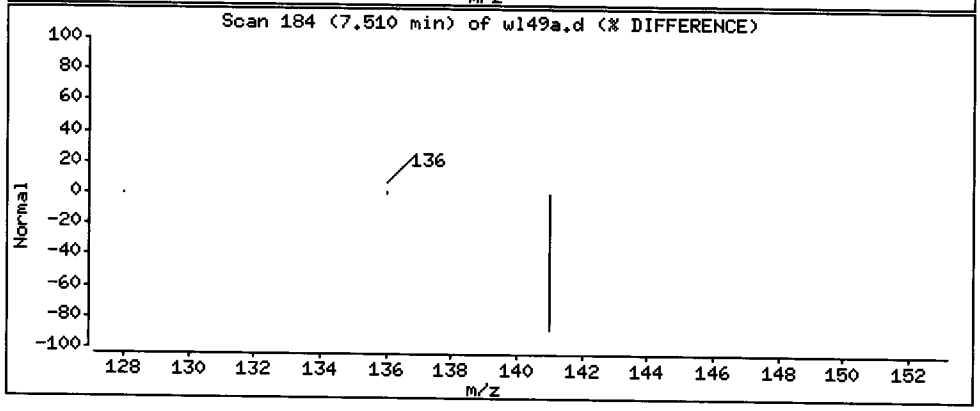












Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

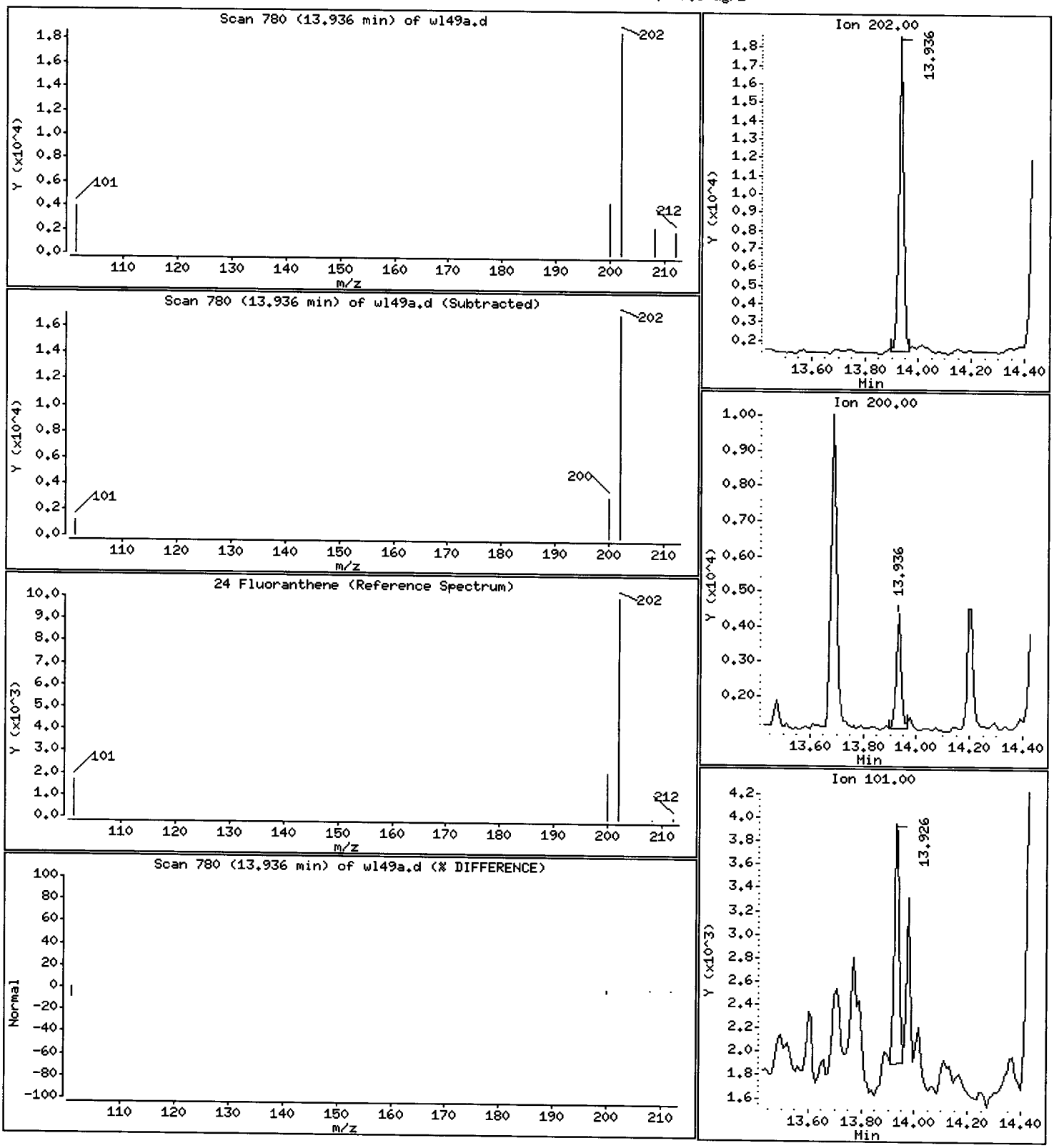
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 Fluoranthene

Concentration: 17.8 ug/L



Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

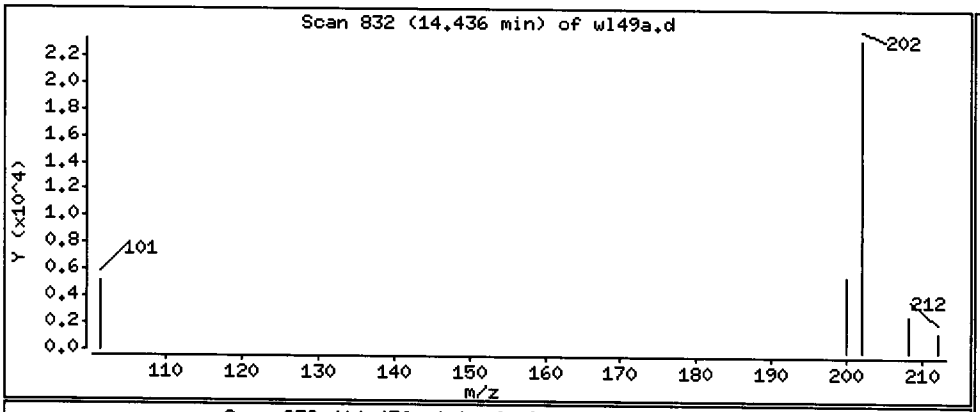
Operator: VTS

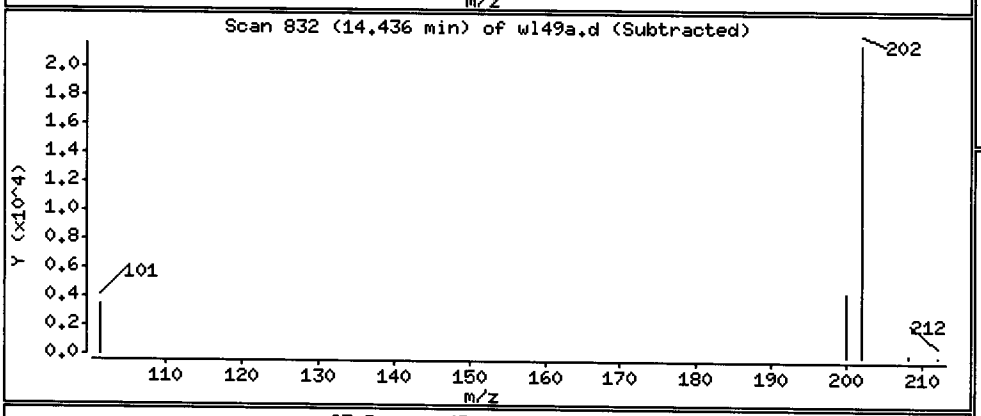
Column phase: Rxi-17Sil MS

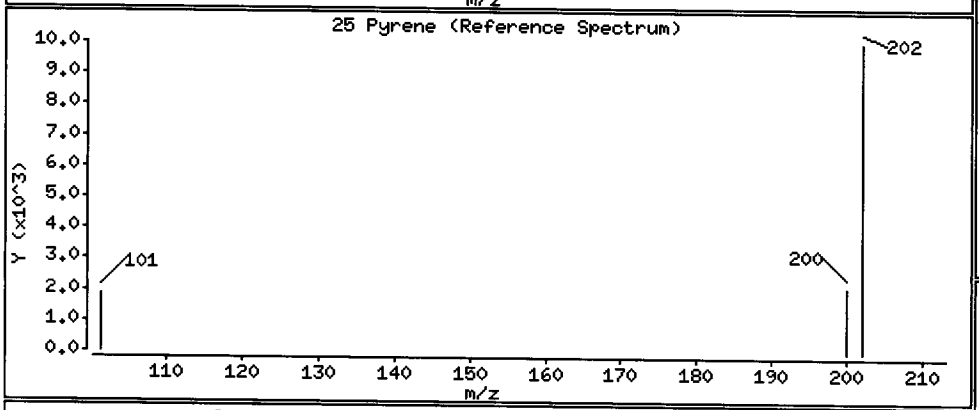
Column diameter: 0.25

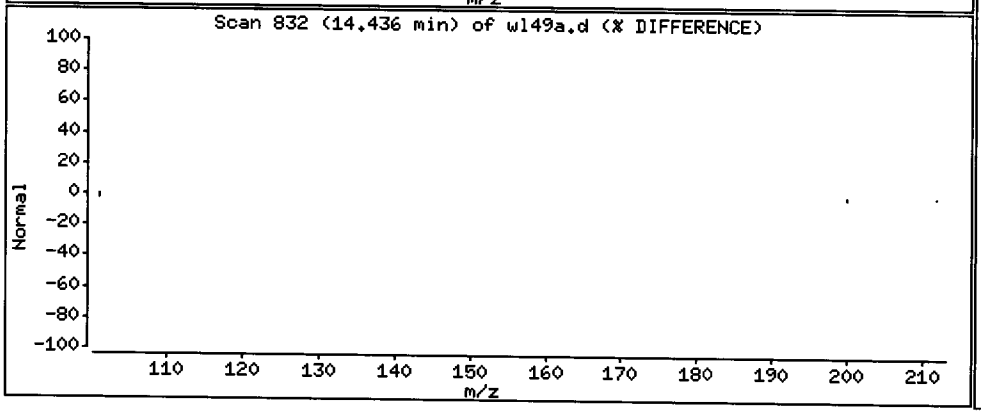
25 Pyrene

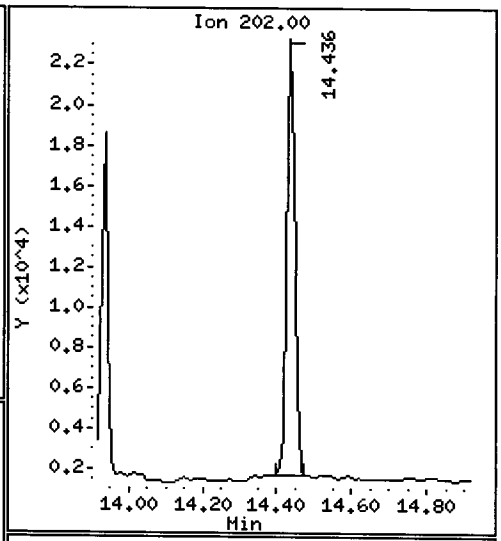
Concentration: 23.3 ug/L

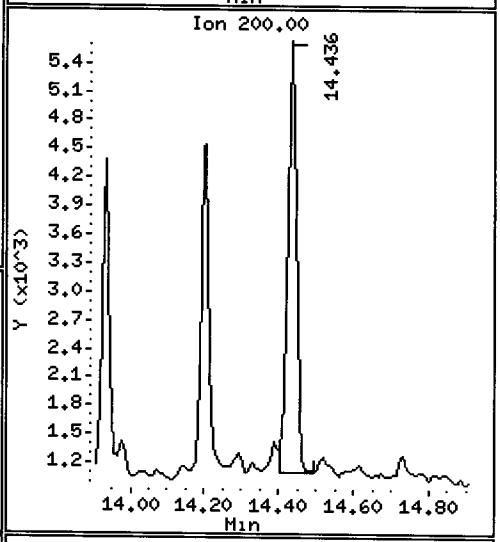


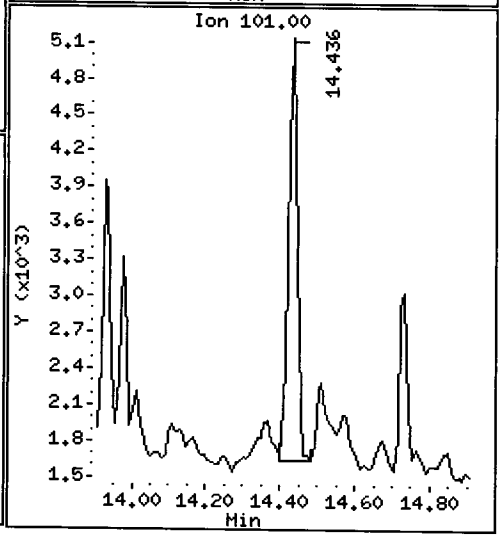












Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

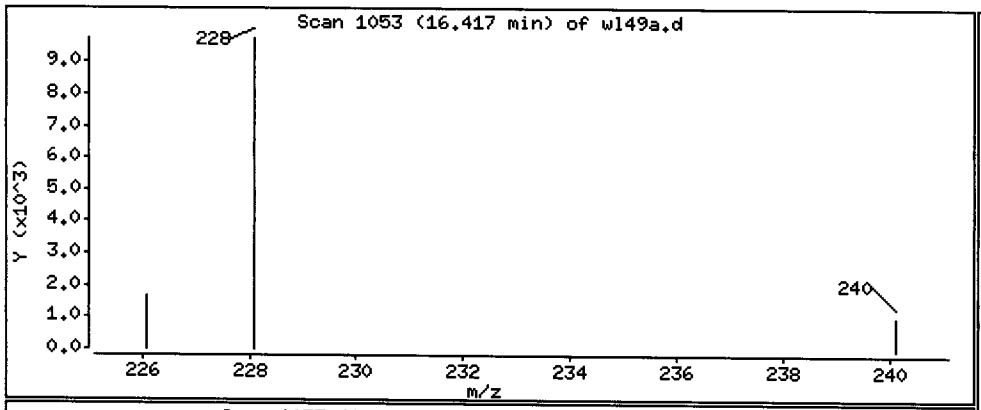
Operator: VTS

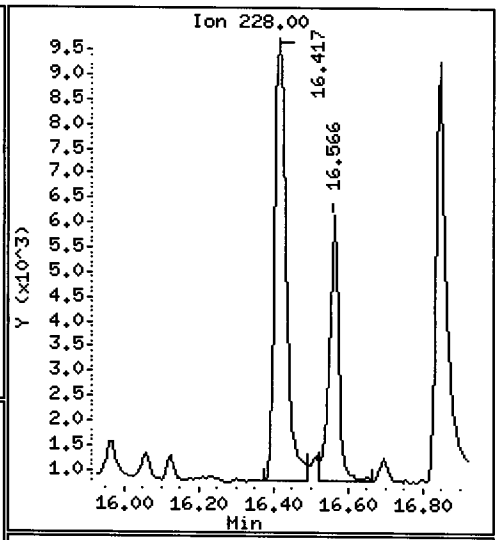
Column phase: Rxi-17Sil MS

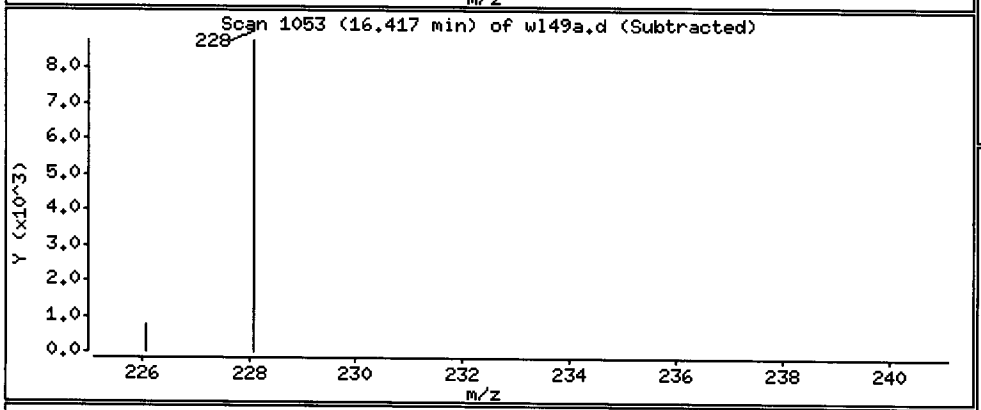
Column diameter: 0.25

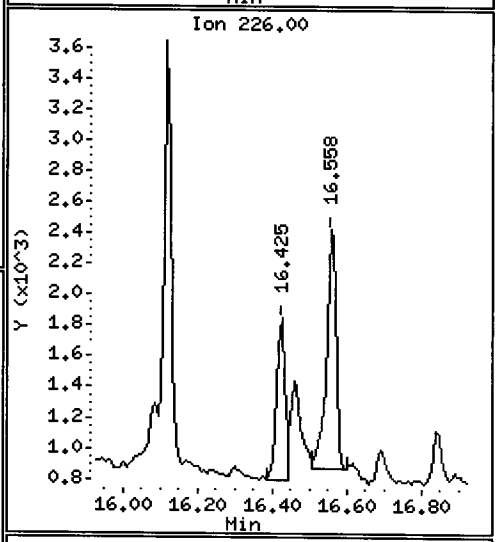
28 Benzo(a)anthracene

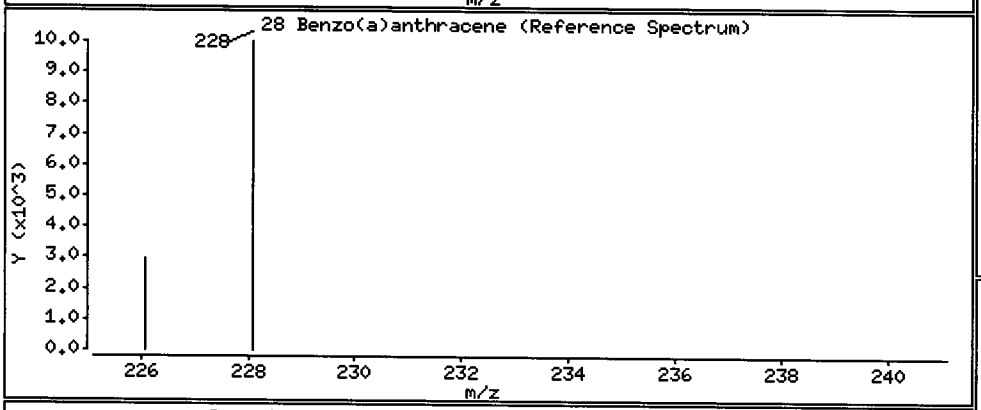
Concentration: 17.3 ug/L

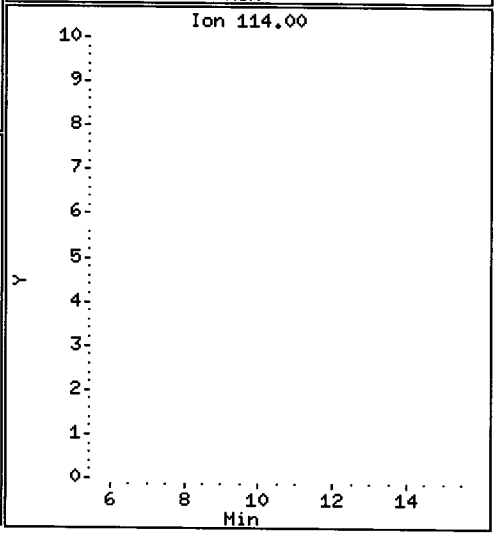


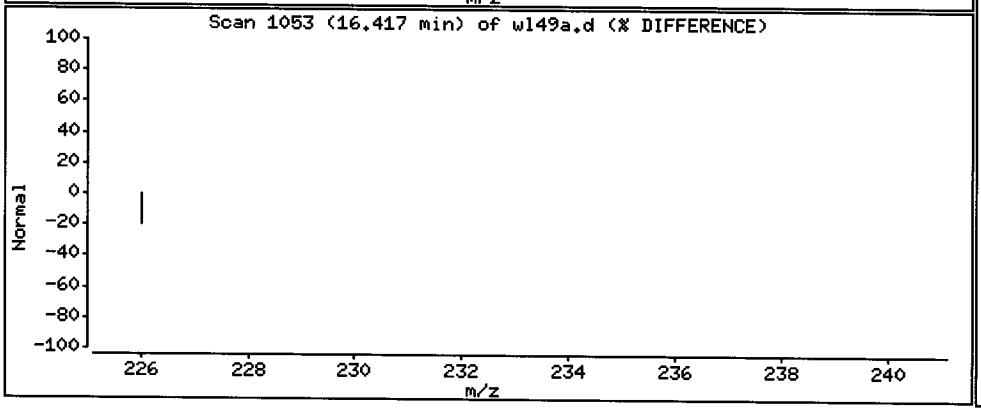












Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

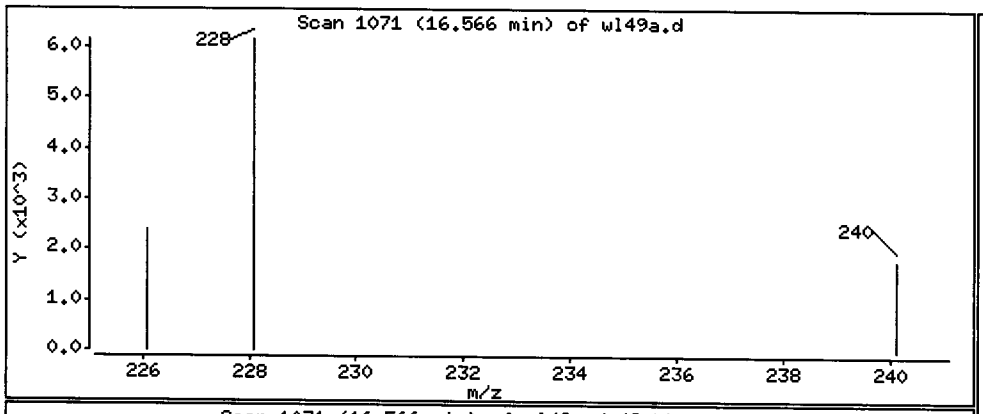
Operator: VTS

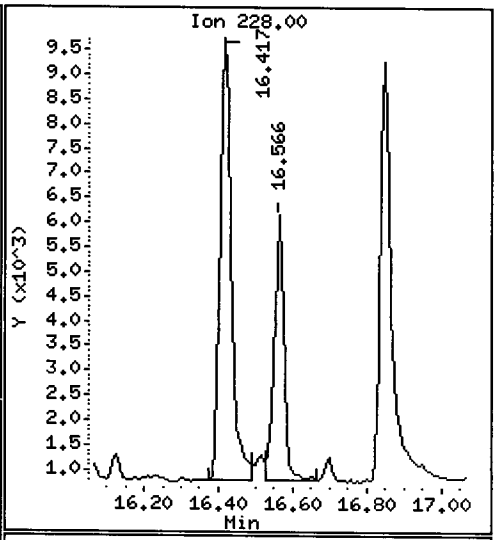
Column phase: Rxi-17Sil MS

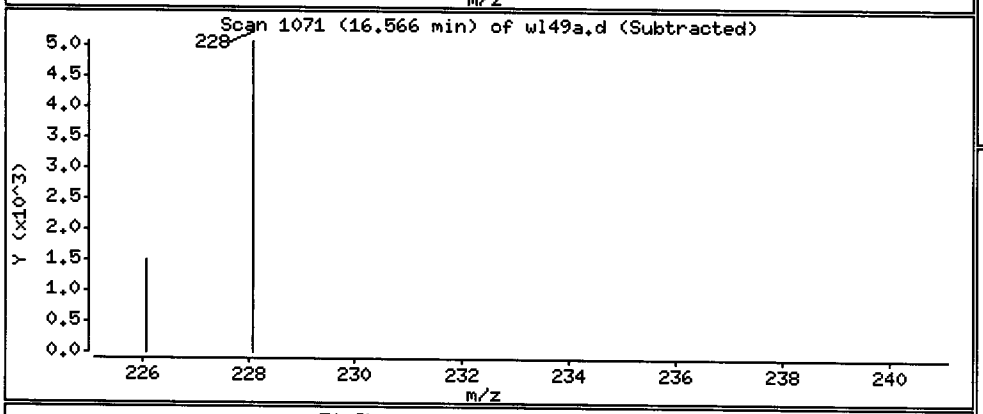
Column diameter: 0.25

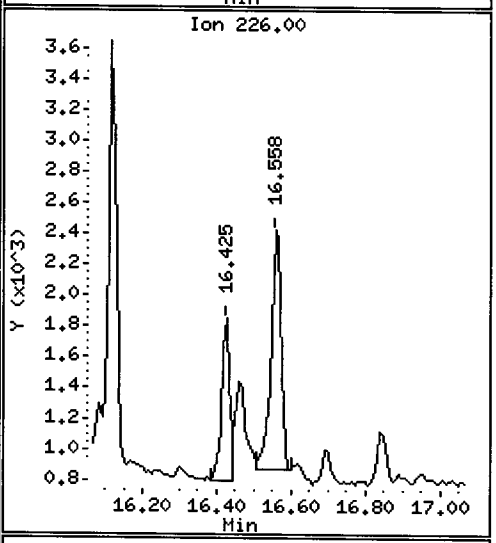
30 Chrysene

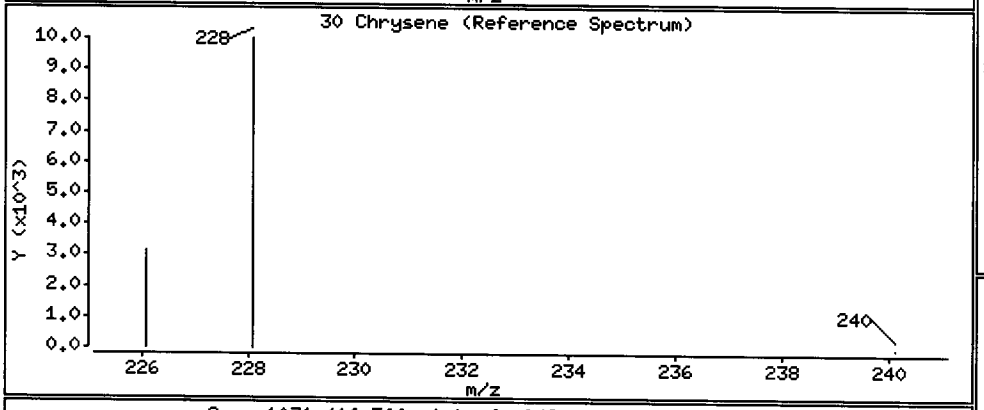
Concentration: 8.60 ug/L

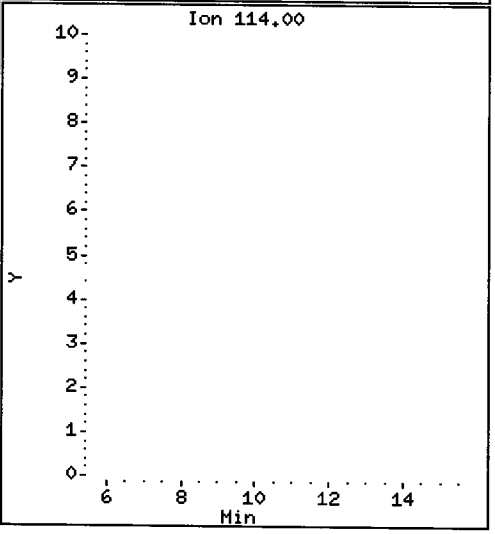


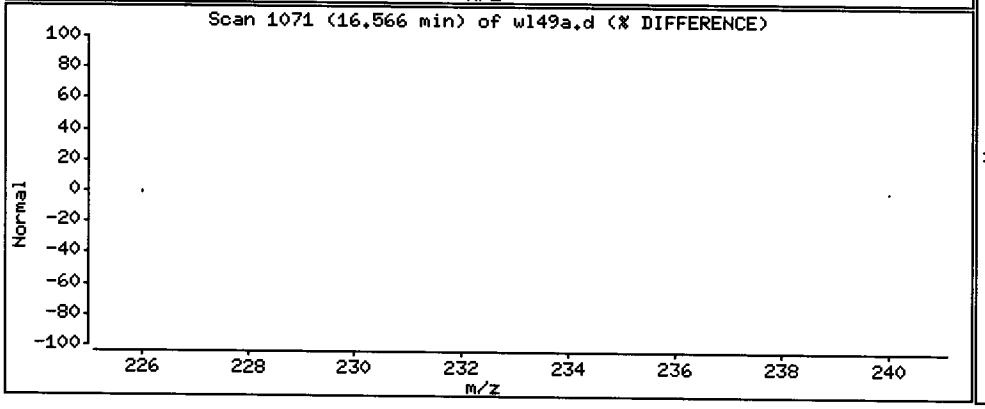












Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

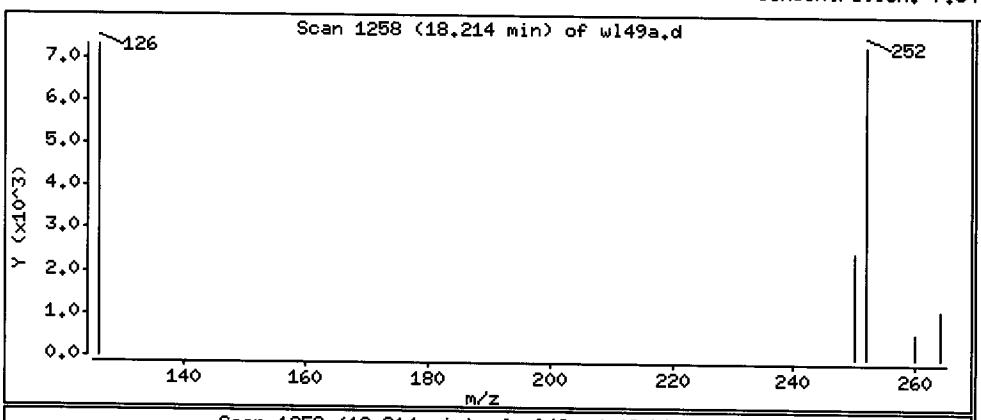
Operator: VTS

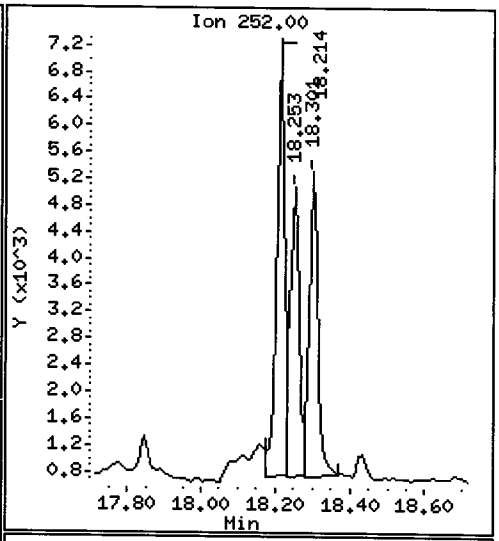
Column phase: Rxi-17Sil MS

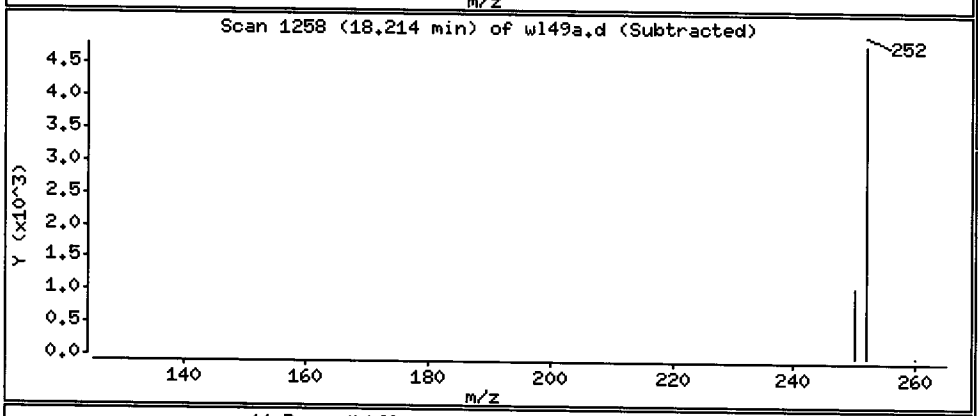
Column diameter: 0.25

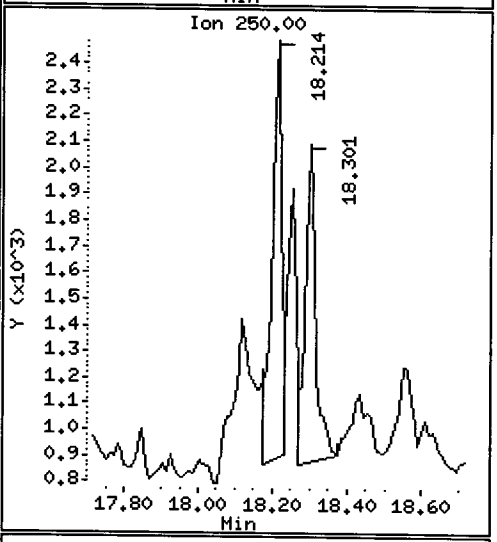
44 Benzo(b)fluoranthene

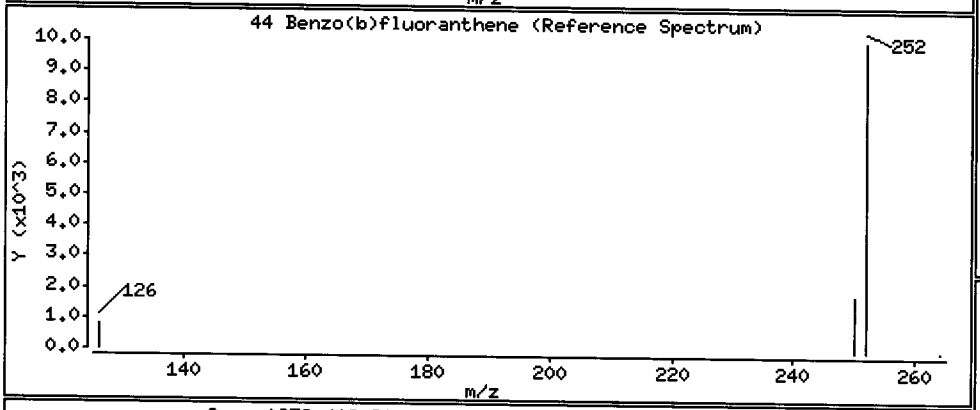
Concentration: 7.34 ug/L

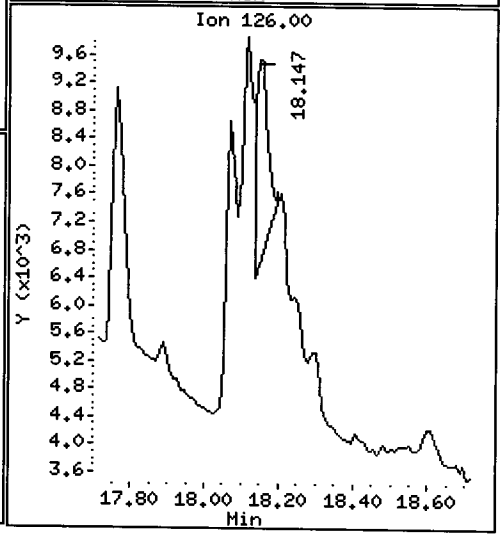


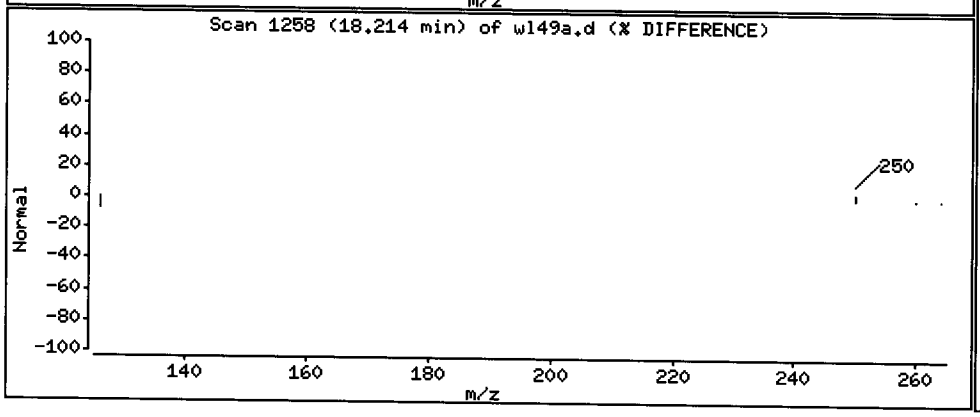












Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

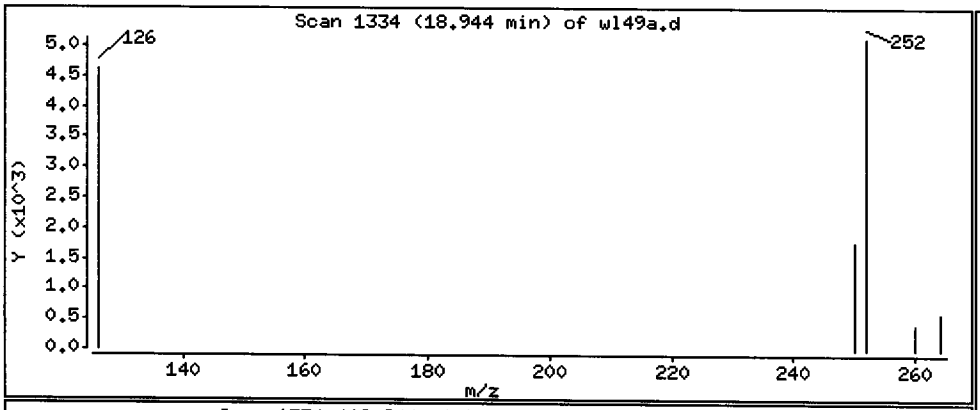
Operator: VTS

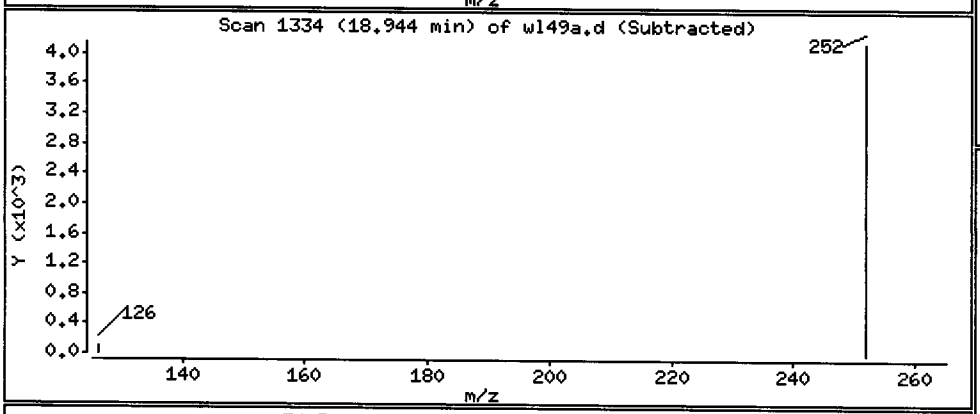
Column phase: Rxi-17Sil MS

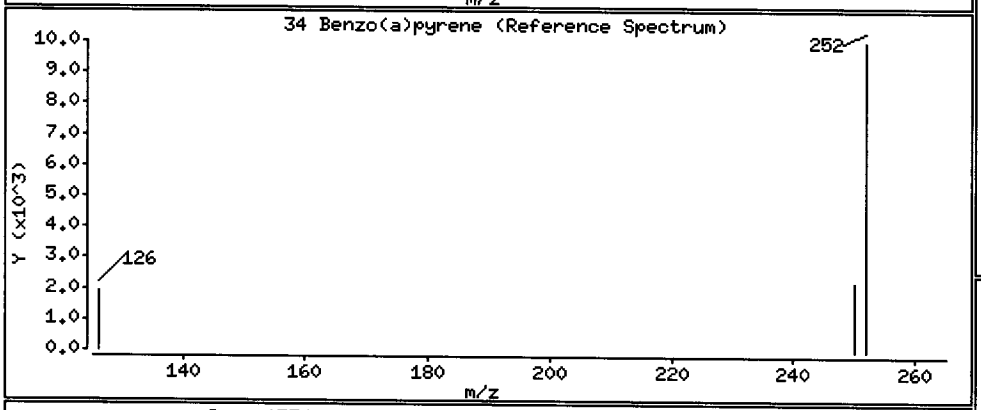
Column diameter: 0.25

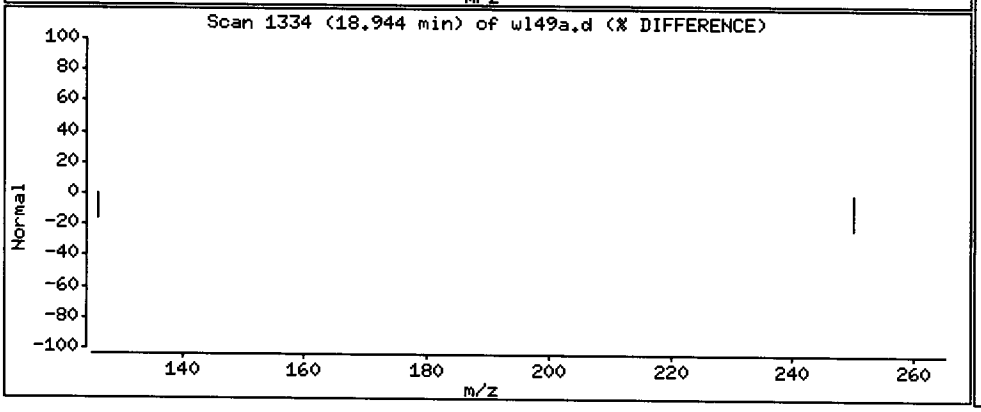
34 Benzo(a)pyrene

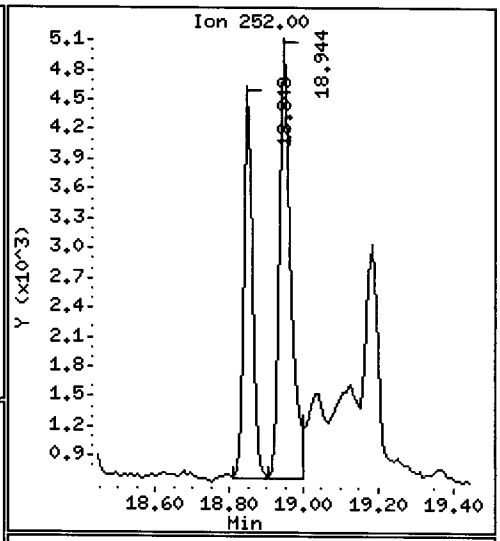
Concentration: 8.18 ug/L

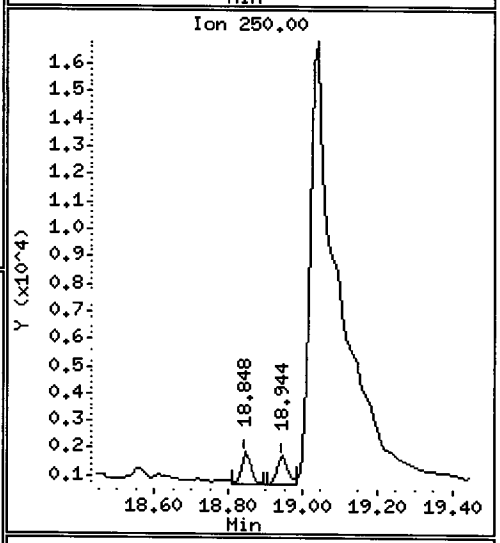


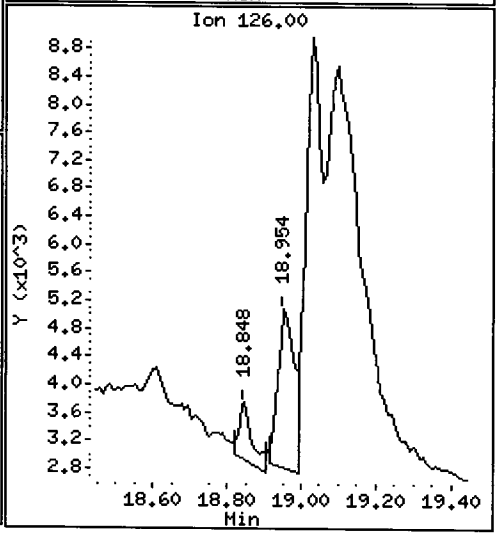












Data File: /chem3/nt11.i/20130419.b/wl49a.d

Date : 19-APR-2013 19:49

Client ID: IM-MH-01-20130410-W

Instrument: nt11.i

Sample Info: WL49A

Volume Injected (uL): 2.0

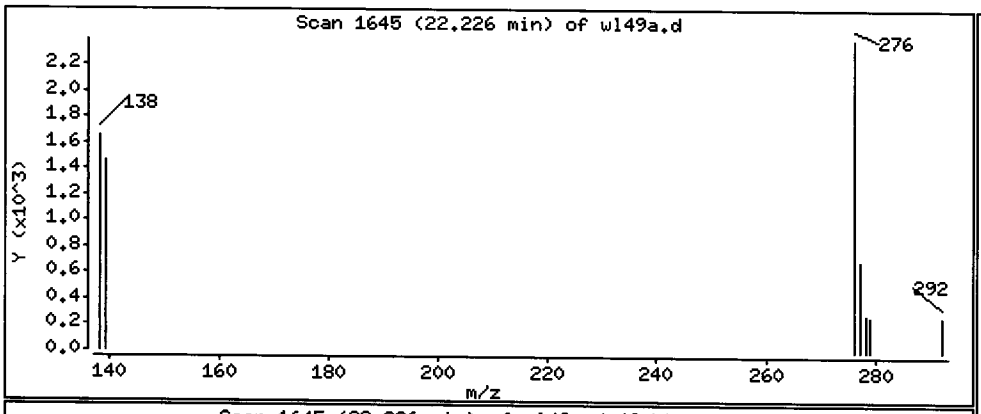
Operator: VTS

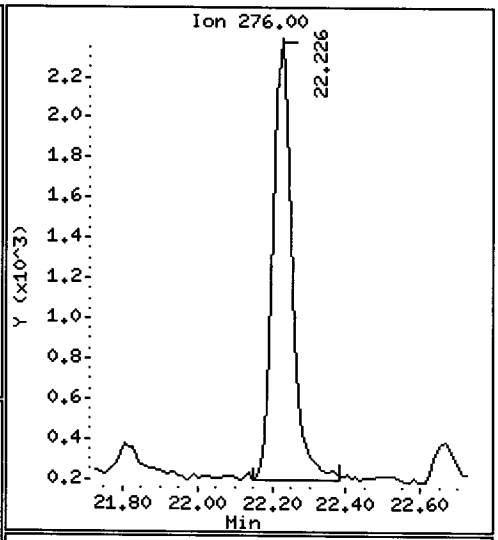
Column phase: Rxi-17Sil MS

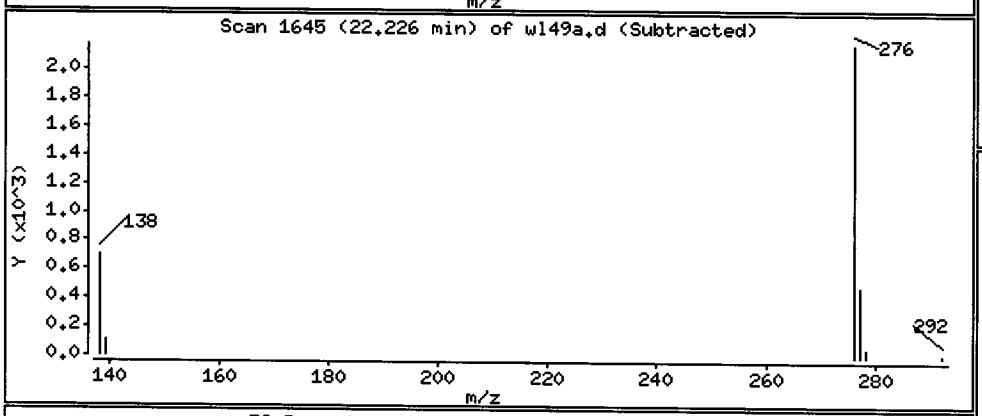
Column diameter: 0.25

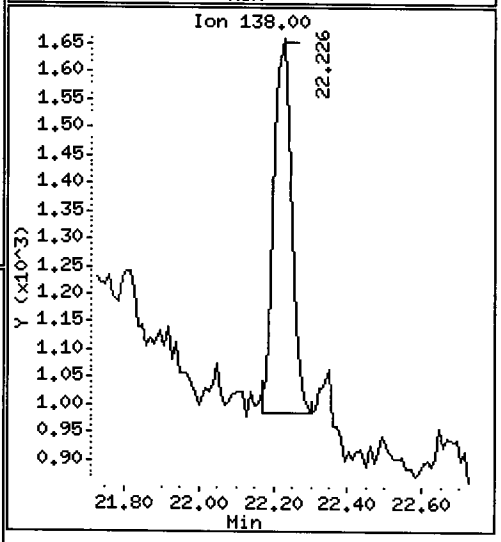
39 Benzo(g,h,i)perylene

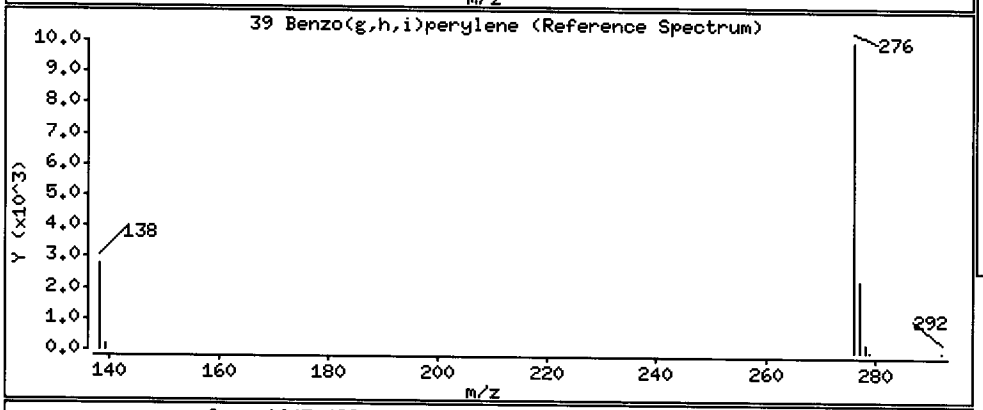
Concentration: 5.57 ug/L

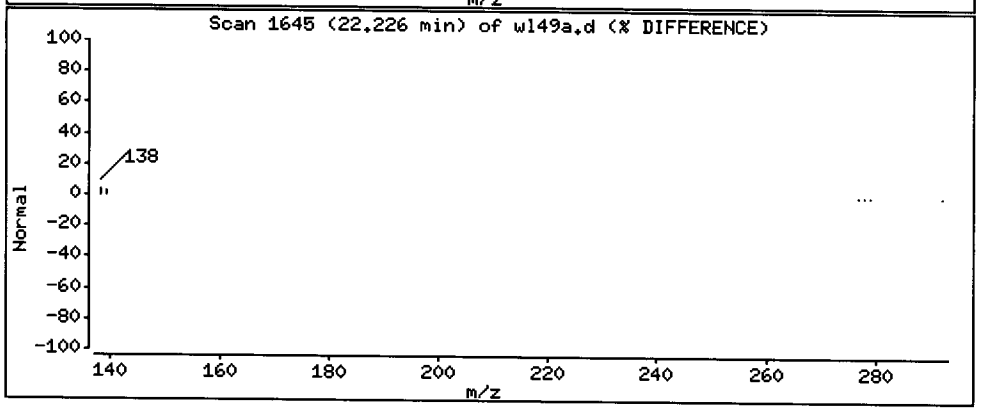












CO-ELUTION SUMMARY FOR FILE - wl49a.d

Lab ID: WL49A, Method: lowsim.m, Instrument: nt11.i, Date: 19-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 4·20·13 Analysis: lowSim PNA Analyst: VD

GC Program: lowsim Column No: 14123 Column Type: Rxi-17Sil MS

Instrument Tune (.U or .CT.): 121208.U EM Voltage: 2424

Calibration File: df0420 Curve Date: 2·23·13 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV
2005-1	2077-1	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130420.b

	Time	Filename	LabID	ClientId	DF								
1	1523	df0420.d	DFTPP 10		1	NO ISTDS FOUND							
2	1539	cc0420.d	SIM 250		1	6.19	224629	9.16	128517	11.81	214796	16.52	168013	19.13	146468
3	1621	wl49b.d	WL49B	IM-SW-01-201	10	6.19	212414	9.16	125643	11.81	206607	16.52	160010	19.14	146631

4.23.13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130420.b

ARI Job No.: SIM Method: lowsim.m Instrument: nt11.i Date: 20-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1539	cc0420.d	SIM 250		1	NO MANUAL INTEGRATION
1523	df0420.d	DFTPP 10		1	NO MANUAL INTEGRATION
1621	wl49b.d	WL49B	IM-SW-01-2	10	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130420.b

Instrument: nt11.i Date: 20-APR-2013 Method: lowsim.m

INITIAL CAL: 23-FEB-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 20-APR-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130420.b/df0420.d

Date : 20-APR-2013 15:23

Client ID:

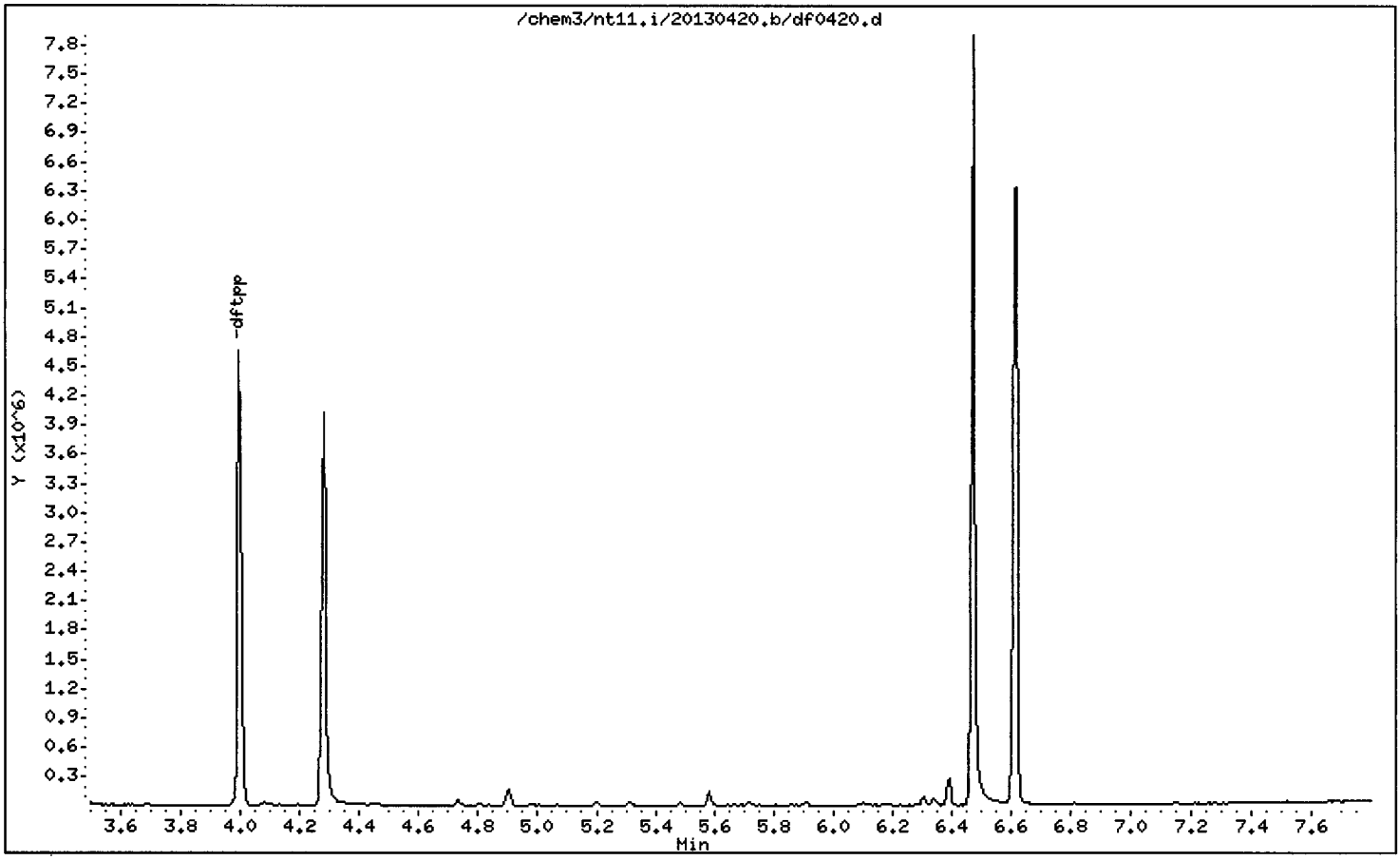
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rx1-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130420.b/df0420.d

Date : 20-APR-2013 15:23

Client ID:

Instrument: nt11.i

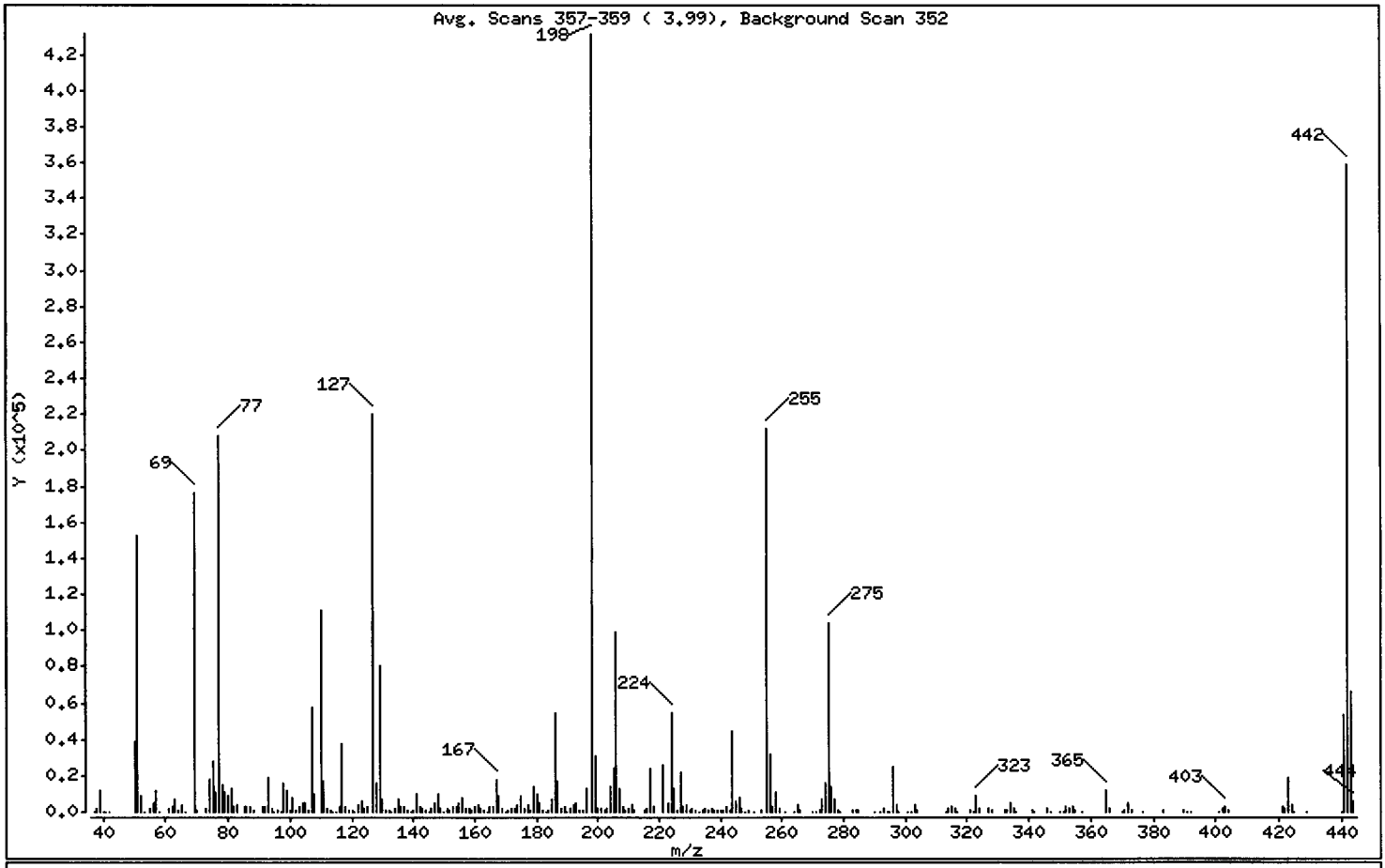
Sample Info: DFTPP 10

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	35.48
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	40.94
70	Less than 2.00% of mass 69	0.26 (0.63)
127	10.00 - 80.00% of mass 198	51.15
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.01
275	10.00 - 60.00% of mass 198	24.05
365	Greater than 1.00% of mass 198	2.75
441	0.01 - 24.00% of mass 442	12.39 (14.90)
442	50.00 - 200.00% of mass 198	83.17
443	15.00 - 24.00% of mass 442	15.39 (18.51)

Date : 20-APR-2013 15:23

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0420.d
Spectrum: Avg. Scans 357-359 (3.99), Background Scan 352
Location of Maximum: 198.00
Number of points: 278

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	401	124.00	2330	195.00	840	283.00	864
38.00	1716	125.00	2564	196.00	13334	284.00	921
39.00	11599	127.00	220672	198.00	431488	285.00	1449
40.00	382	128.00	15405	199.00	30256	290.00	485
41.00	301	129.00	80624	200.00	2330	292.00	475
42.00	215	130.00	6808	201.00	2214	293.00	1864
49.00	20	131.00	1323	202.00	770	294.00	316
50.00	38408	132.00	879	203.00	2395	295.00	174
51.00	153024	133.00	180	204.00	14324	296.00	24808
52.00	8755	134.00	2435	205.00	23752	297.00	3831
53.00	180	135.00	6505	206.00	99352	298.00	206
55.00	1547	136.00	2699	207.00	12772	301.00	176
56.00	4643	137.00	3150	208.00	3051	302.00	180
57.00	11797	138.00	1087	209.00	1064	303.00	3534
58.00	394	139.00	332	210.00	1733	304.00	768
61.00	1776	140.00	883	211.00	3696	313.00	183
62.00	2623	141.00	9550	212.00	663	314.00	1662
63.00	7077	142.00	3379	215.00	945	315.00	3128
64.00	920	143.00	1706	216.00	1580	316.00	1493
65.00	3751	144.00	607	217.00	23528	317.00	281
66.00	253	145.00	428	218.00	3168	321.00	815
69.00	176640	146.00	1539	221.00	25976	322.00	461
70.00	1105	147.00	5190	223.00	5251	323.00	8666
73.00	1903	148.00	9576	224.00	54320	324.00	1808
74.00	17576	149.00	1951	225.00	13171	327.00	1504
75.00	27744	150.00	479	226.00	752	328.00	692
76.00	10609	151.00	1897	227.00	21480	332.00	760
77.00	208064	152.00	810	228.00	2866	333.00	985
78.00	14393	153.00	2762	229.00	4459	334.00	4799
79.00	10909	154.00	2819	230.00	824	335.00	1789
80.00	9359	155.00	4922	231.00	1578	336.00	201
81.00	12998	156.00	7784	232.00	568	341.00	1091
82.00	3060	157.00	1940	233.00	214	342.00	210
83.00	4267	158.00	1856	234.00	1454	346.00	1993
85.00	2589	159.00	1363	235.00	1790	347.00	458

Date : 20-APR-2013 15:23

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0420.d
Spectrum: Avg. Scans 357-359 (3.99), Background Scan 352
Location of Maximum: 198.00
Number of points: 278

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	3197	160.00	2824	236.00	1167	350.00	189
87.00	2485	161.00	3961	237.00	1904	351.00	311
88.00	1089	162.00	1547	238.00	653	352.00	2555
91.00	3008	163.00	505	239.00	1107	353.00	2067
92.00	3326	164.00	354	240.00	508	354.00	2962
93.00	18984	165.00	3326	241.00	788	355.00	520
94.00	1620	166.00	2501	242.00	2529	357.00	178
95.00	489	167.00	18120	243.00	673	365.00	11865
96.00	1041	168.00	8920	244.00	44568	366.00	1697
97.00	292	169.00	1505	245.00	6113	370.00	200
98.00	15871	170.00	456	246.00	7643	371.00	727
99.00	11667	171.00	913	247.00	1772	372.00	4795
100.00	1099	172.00	1708	248.00	439	373.00	1275
101.00	7517	173.00	2165	249.00	1204	377.00	220
102.00	607	174.00	3759	251.00	445	383.00	1278
103.00	2624	175.00	8532	253.00	1032	390.00	981
104.00	5370	176.00	2357	255.00	212672	391.00	483
105.00	4806	177.00	3744	256.00	32104	392.00	473
106.00	712	178.00	877	257.00	2555	401.00	291
107.00	58008	179.00	13977	258.00	10765	402.00	1837
108.00	9606	180.00	9519	259.00	1850	403.00	2846
110.00	111104	181.00	5050	261.00	277	404.00	810
111.00	16680	182.00	781	264.00	457	421.00	2889
112.00	2211	183.00	191	265.00	3939	422.00	1567
113.00	930	184.00	1012	266.00	589	423.00	19208
114.00	213	185.00	7193	270.00	257	424.00	3722
115.00	171	186.00	54672	271.00	233	425.00	456
116.00	2603	187.00	16369	272.00	502	429.00	167
117.00	37536	188.00	1560	273.00	6629	440.00	170
118.00	3330	189.00	2480	274.00	16129	441.00	53464
119.00	794	190.00	433	275.00	103752	442.00	358848
120.00	941	191.00	1605	276.00	13500	443.00	66408
121.00	193	192.00	3922	277.00	7173	444.00	6391
122.00	4385	193.00	4978	278.00	1440		
123.00	5499	194.00	1080	279.00	418		

Data File: /chem3/nt11.i/20130420.b/df0420.d

Date : 20-APR-2013 15:23

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

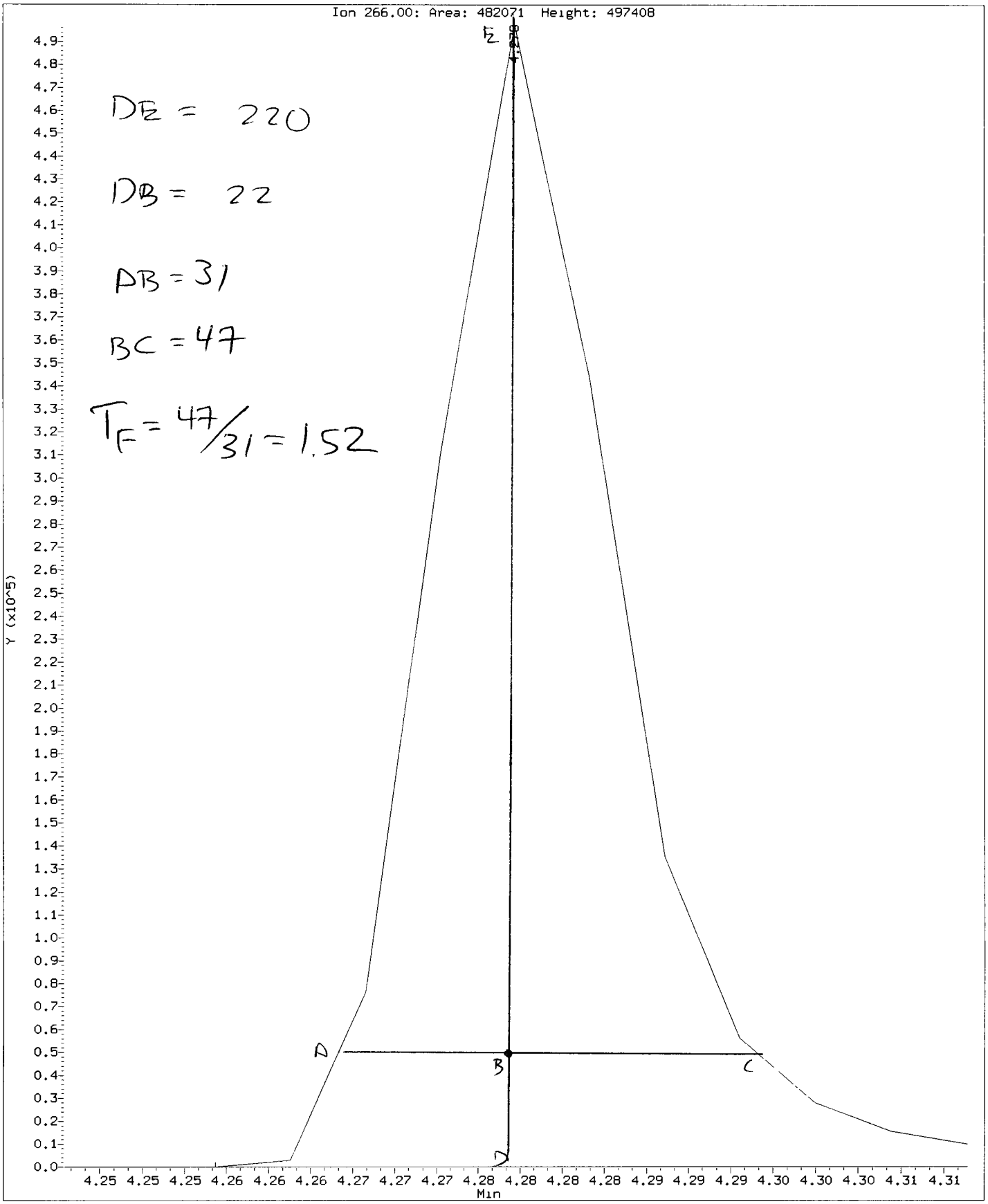
Column diameter: 0.25

Data File: df0420.d
Spectrum: Avg. Scans 357-359 (3.99), Background Scan 352
Location of Maximum: 198.00
Number of points: 278

m/z	Y	m/z	Y	m/z	Y	m/z	Y

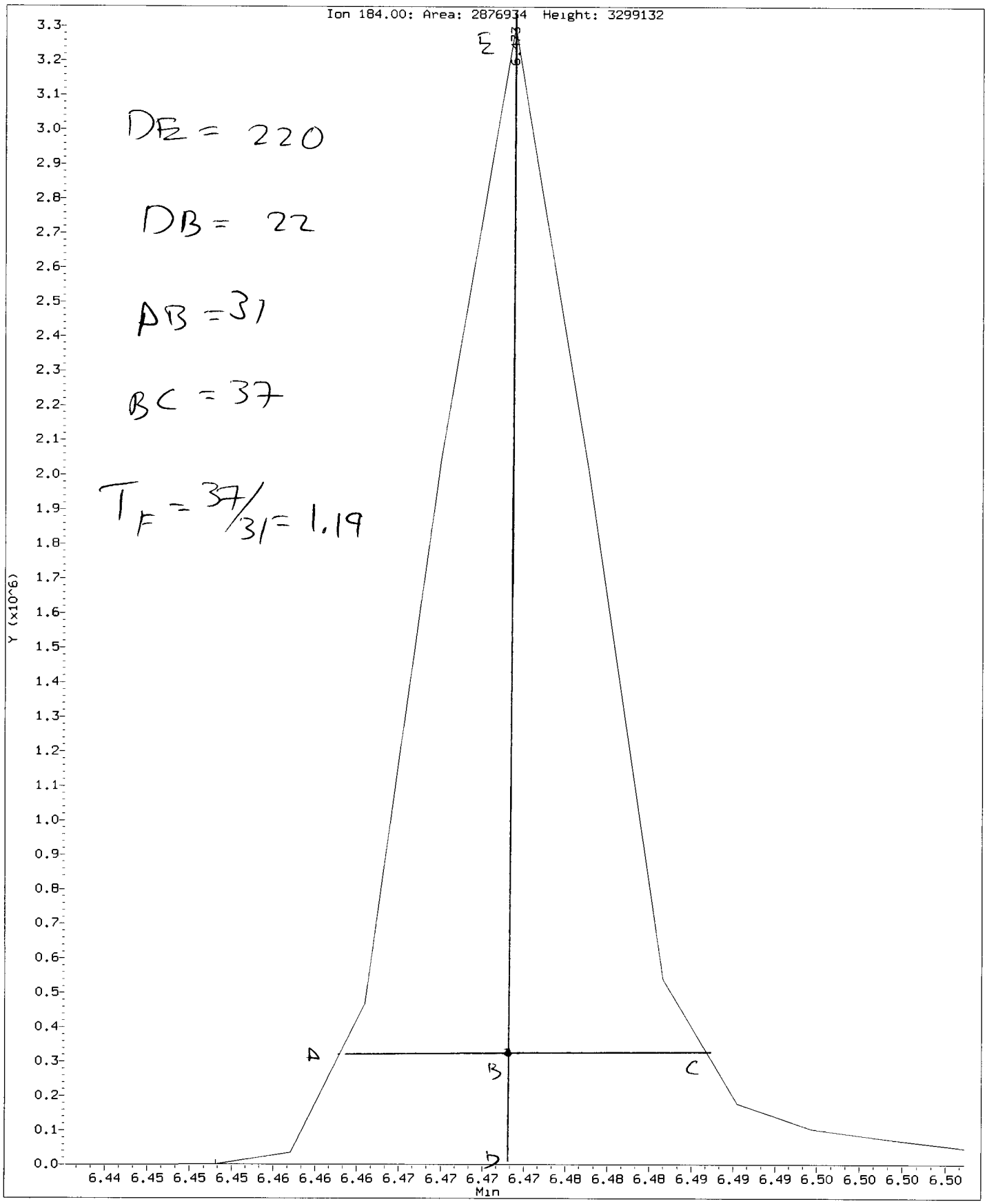
Data File: /chem3/nt11.1/20130420.b/DDT.b/df0420.d
Injection Date: 20-APR-2013 15:23
Instrument: nt11.1
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130420.b/DDT.b/df0420.d
Injection Date: 20-APR-2013 15:23
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/20130420.b/DDT.b/df0420.d
Method: /chem3/nt11.i/20130420.b/DDT.b/sw846ddt.m
Analysis Date: 20-APR-2013 15:23

ARI ID: DFTPP 10
Misc:
Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.278	482071
Benzidine	6.473	2876934
4,4'-DDE	5.907	3670
4,4'-DDD	6.393	50201
4,4'-DDT	6.617	1195965

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

$$\text{DDT Percent Breakdown} = \frac{(3670 + 50201) * 100}{(3670 + 50201 + 1195965)}$$

DDT Percent Breakdown = 4.3 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130420.b/cc0420.d
Lab Smp Id: SIM 250
Inj Date : 20-APR-2013 15:39
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130420.b/lowsim.m
Meth Date : 20-Apr-2013 16:11 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	6.186	6.186	(1.000)	224629	200.000	
	5 Naphthalene	128	6.218	6.218	(1.005)	286032	250.000	233
$	6 2-Methylnaphthalene-d10	152	7.153	7.153	(1.156)	165946	250.000	233
	7 2-Methylnaphthalene	142	7.216	7.216	(1.166)	179293	250.000	233
	8 1-methylnaphthalene	142	7.457	7.457	(1.205)	177144	250.000	229
	10 Acenaphthylene	152	9.006	9.006	(0.983)	275671	250.000	240
*	11 Acenaphthene-d10	164	9.161	9.161	(1.000)	128517	200.000	
	12 Acenaphthene	153	9.216	9.216	(1.006)	176073	250.000	232
	14 Dibenzofuran	168	9.426	9.426	(1.029)	250360	250.000	227
	15 Fluorene	166	10.035	10.035	(1.095)	196186	250.000	238
*	18 Phenanthrene-d10	188	11.807	11.807	(1.000)	214796	200.000	
	19 Phenanthrene	178	11.851	11.851	(1.004)	292879	250.000	221
	20 Anthracene	178	11.906	11.906	(1.008)	300720	250.000	242
$	23 Fluoranthene-d10	212	13.888	13.888	(1.176)	273763	250.000	246
	24 Fluoranthene	202	13.926	13.926	(1.180)	316118	250.000	241
	25 Pyrene	202	14.407	14.407	(0.872)	316652	250.000	225
	28 Benzo(a)anthracene	228	16.425	16.425	(0.994)	270640	250.000	233
*	29 Chrysene-d12	240	16.516	16.516	(1.000)	168013	200.000	
	30 Chrysene	228	16.566	16.566	(1.003)	269016	250.000	224
	44 Benzo(b)fluoranthene	252	18.214	18.214	(0.952)	253418	250.000	218
	45 Benzo(k)fluoranthene	252	18.252	18.252	(0.954)	281797	250.000	223
	46 Benzo(j)fluoranthene	252	18.300	18.300	(0.957)	279697	250.000	218
	34 Benzo(a)pyrene	252	18.944	18.944	(0.990)	222531	250.000	227
*	35 Perylene-d12	264	19.127	19.127	(1.000)	146468	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.307	21.307	(1.114)	274979	250.000	228
$	36 Dibenzo(a,h)anthracene-d14	292	21.196	21.196	(1.108)	190652	250.000	228

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	21.296	21.296	(1.113)	218188	250.000	225
39 Benzo(g,h,i)perylene	276	22.226	22.226	(1.162)	236890	250.000	220
47 Perylene	252	19.184	19.184	(1.003)	241865	250.000	217

VD
4-23-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0420.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130420.b/lowsim.m
Misc Info:

Calibration Date: 20-APR-2013
Calibration Time: 15:39

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	224629	-12.01
11 Acenaphthene-d10	142891	71446	285782	128517	-10.06
18 Phenanthrene-d10	220853	110426	441706	214796	-2.74
29 Chrysene-d12	162525	81262	325050	168013	3.38
35 Perylene-d12	139028	69514	278056	146468	5.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.81	0.00
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.00
35 Perylene-d12	19.13	18.63	19.63	19.13	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

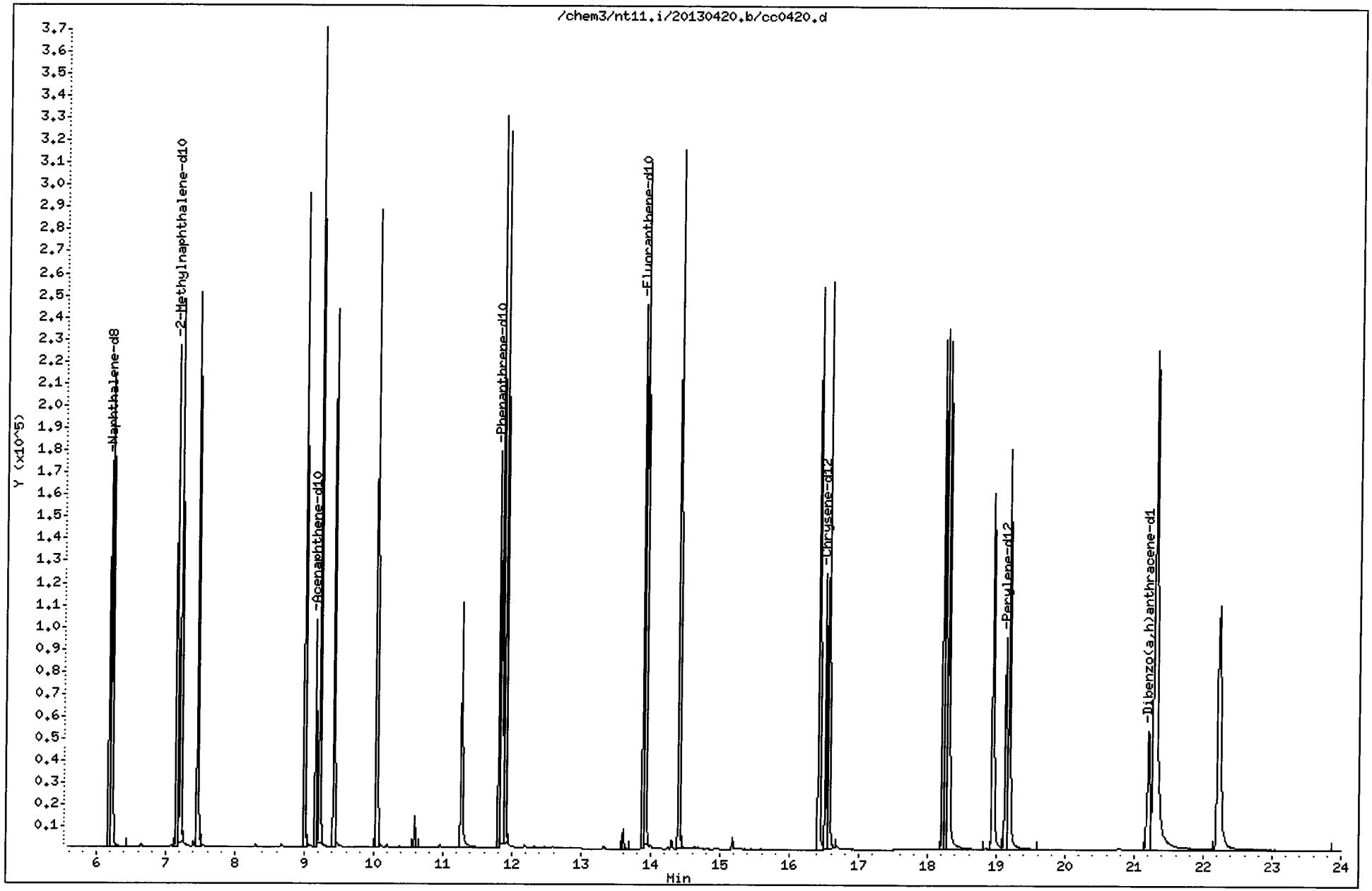
Instrument ID: nt11.i Injection Date: 20-APR-2013 15:39
Lab File ID: cc0420.d Init. Cal. Date(s): 23-FEB-2013 23-FEB-2013
Analysis Type: Init. Cal. Times: 09:51 12:17
Lab Sample ID: SIM 250 Quant Type: ISTD
Method: /chem3/nt11.i/20130420.b/lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.09508	1.01868	0.010	-6.97592	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.63288	0.59101	0.010	-6.61683	20.00000	Averaged
7 2-Methylnaphthalene	0.68537	0.63854	0.010	-6.83357	20.00000	Averaged
8 1-Methylnaphthalene	0.68897	0.63089	0.010	-8.43060	20.00000	Averaged
10 Acenaphthylene	1.78573	1.71600	0.010	-3.90501	20.00000	Averaged
12 Acenaphthene	1.17874	1.09603	0.010	-7.01729	20.00000	Averaged
14 Dibenzofuran	1.71710	1.55845	0.010	-9.23979	20.00000	Averaged
15 Fluorene	1.28190	1.22123	0.010	-4.73295	20.00000	Averaged
19 Phenanthrene	1.23537	1.09082	0.010	-11.70156	20.00000	Averaged
20 Anthracene	1.15865	1.12002	0.010	-3.33394	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03665	1.01962	0.200	-1.64325	20.00000	Averaged
24 Fluoranthene	1.22132	1.17737	0.010	-3.59887	20.00000	Averaged
25 Pyrene	1.67487	1.50775	0.010	-9.97803	20.00000	Averaged
28 Benzo(a)anthracene	1.38400	1.28866	0.010	-6.88896	20.00000	Averaged
30 Chrysene	1.43023	1.28093	0.010	-10.43911	20.00000	Averaged
44 Benzo(b)fluoranthene	1.58507	1.38416	0.200	-12.67518	20.00000	Averaged
45 Benzo(k)fluoranthene	1.72364	1.53916	0.200	-10.70284	20.00000	Averaged
46 Benzo(j)fluoranthene	1.74944	1.52769	0.200	-12.67548	20.00000	Averaged
34 Benzo(a)pyrene	1.33777	1.21546	0.010	-9.14324	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.64660	1.50192	0.010	-8.78645	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.14296	1.04133	0.010	-8.89180	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.32390	1.19173	0.010	-9.98326	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.47330	1.29388	0.010	-12.17806	20.00000	Averaged
47 Perylene	1.52395	1.32105	0.200	-13.31384	20.00000	Averaged

Data File: /chem3/nt11.i/20130420.b/cc0420.d
Date : 20-APR-2013 15:39
Client ID:
Sample Info: SIM 250

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - cc0420.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 20-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130420.b/wl49b.d
Lab Smp Id: WL49B Client Smp ID: IM-SW-01-20130410-W
Inj Date : 20-APR-2013 16:21
Operator : vts Inst ID: nt11.i
Smp Info : WL49B,10
Misc Info : 13-7780
Comment :
Method : /chem3/nt11.i/20130420.b/lowsim.m
Meth Date : 20-Apr-2013 16:11 van Quant Type: ISTD
Cal Date : 23-FEB-2013 12:17 Cal File: ic0223f.d
Als bottle: 4
Dil Factor: 10.00000
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	10.00000	Dilution Factor
Vt	1000.00000	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	6.186	6.186	(1.000)	212414	200.000	
	5	Naphthalene	128	Compound Not Detected.					
$	6	2-Methylnaphthalene-d10	152	7.163	7.153	(1.158)	6077	9.04092	181
	7	2-Methylnaphthalene	142	7.216	7.216	(1.166)	4215	5.79050	116
	8	1-methylnaphthalene	142	Compound Not Detected.					
	10	Acenaphthylene	152	Compound Not Detected.					
*	11	Acenaphthene-d10	164	9.161	9.161	(1.000)	125643	200.000	
	12	Acenaphthene	153	9.216	9.216	(1.006)	4555	6.15122	123
	14	Dibenzofuran	168	9.426	9.426	(1.029)	6655	6.16940	123
	15	Fluorene	166	10.046	10.035	(1.097)	9360	11.6229	232
*	18	Phenanthrene-d10	188	11.807	11.807	(1.000)	206607	200.000	
	19	Phenanthrene	178	11.851	11.851	(1.004)	117990	92.4553	1850
	20	Anthracene	178	11.906	11.906	(1.008)	48731	40.7136	814
$	23	Fluoranthene-d10	212	13.897	13.888	(1.177)	13783	12.8705	257
	24	Fluoranthene	202	13.926	13.926	(1.180)	456318	361.679	7230

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.416	14.407	(0.872)	442363	330.127	6600
	28 Benzo(a)anthracene	228	16.433	16.425	(0.994)	120009	108.383	2170
*	29 Chrysene-d12	240	16.524	16.516	(1.000)	160010	200.000	
	30 Chrysene	228	16.566	16.566	(1.002)	268145	234.340	4690
	44 Benzo(b)fluoranthene	252	18.223	18.214	(0.952)	143902	123.829	2480
	45 Benzo(k)fluoranthene	252	18.262	18.252	(0.954)	76736	60.7235	1210
	46 Benzo(j)fluoranthene	252	18.310	18.300	(0.957)	63031	49.1427	983
	34 Benzo(a)pyrene	252	18.954	18.944	(0.990)	94326	96.1731	1920
*	35 Perylene-d12	264	19.136	19.127	(1.000)	146631	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	21.318	21.307	(1.114)	72395	59.9687	1200
$	36 Dibenzo(a,h)anthracene-d14	292	21.218	21.196	(1.109)	6250	7.45852	149
	38 Dibenzo(a,h)anthracene	278	21.307	21.296	(1.113)	15566	16.0371	321
	39 Benzo(g,h,i)perylene	276	22.237	22.226	(1.162)	96595	89.4267	1790
	47 Perylene	252	19.194	19.184	(1.003)	34443	30.8272	617

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WL49
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WL49B
Client Smp ID: IM-SW-01-20130410-W
Level: LOW
Operator: vts
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130420.b/lowsim.m
Misc Info: 13-7780

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	181	60.27	35-94
$ 23 Fluoranthene-d10	300	257	85.80	30-160
$ 36 Dibenzo(a,h)anthra	300	149	49.72	26-115

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wl49b.d
Lab Smp Id: WL49B
Analysis Type: SV
Quant Type: ISTD
Operator: vts
Method File: /chem3/nt11.i/20130420.b/lowsim.m
Misc Info: 13-7780

Calibration Date: 20-APR-2013
Calibration Time: 15:39
Client Smp ID: IM-SW-01-20130410-W
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	255285	127642	510570	212414	-16.79
11 Acenaphthene-d10	142891	71446	285782	125643	-12.07
18 Phenanthrene-d10	220853	110426	441706	206607	-6.45
29 Chrysene-d12	162525	81262	325050	160010	-1.55
35 Perylene-d12	139028	69514	278056	146631	5.47

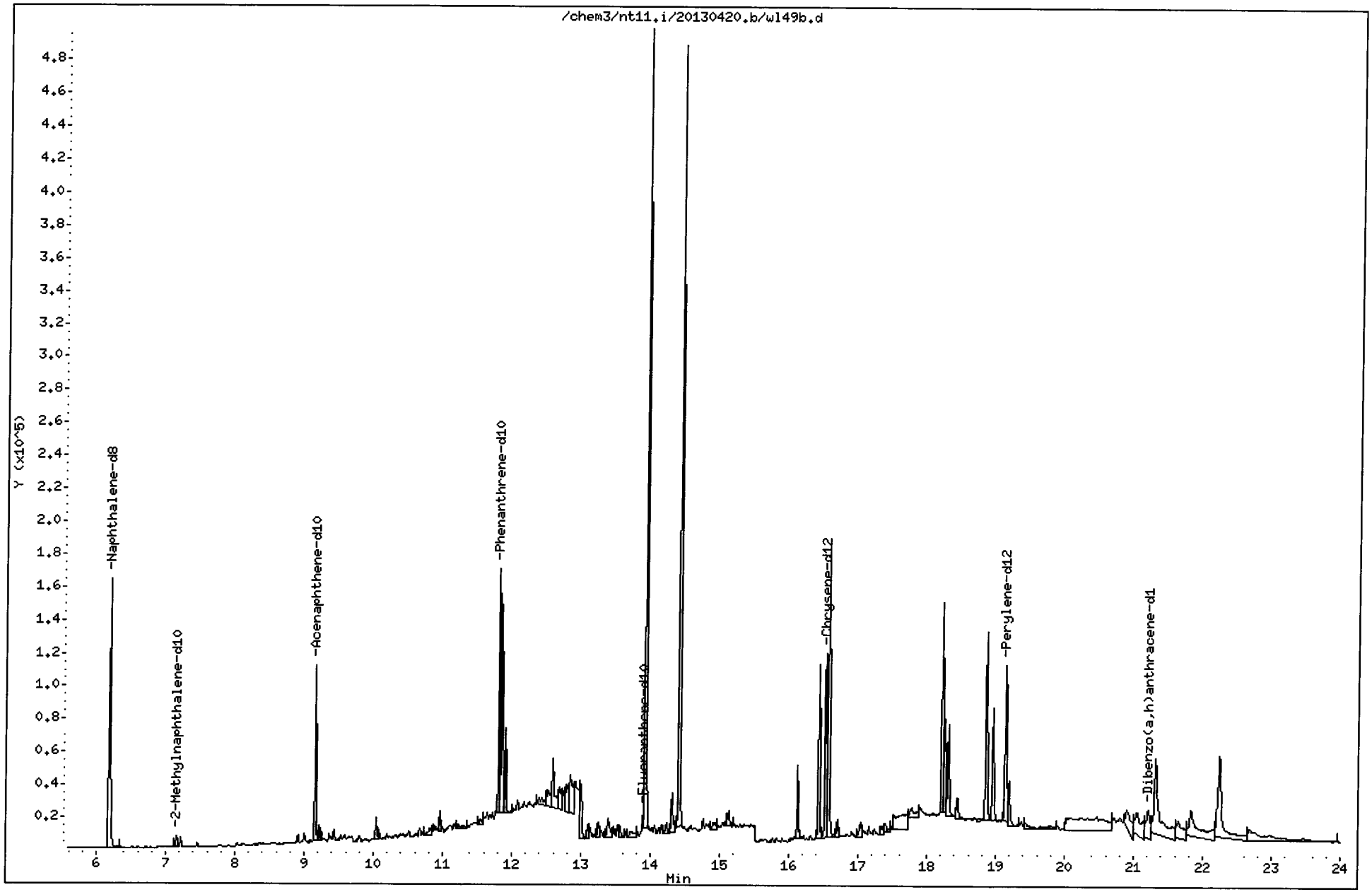
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.19	5.69	6.69	6.19	0.00
11 Acenaphthene-d10	9.16	8.66	9.66	9.16	0.00
18 Phenanthrene-d10	11.81	11.31	12.31	11.81	0.00
29 Chrysene-d12	16.52	16.02	17.02	16.52	0.05
35 Perylene-d12	19.13	18.63	19.63	19.14	0.05

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/20130420.b/wl49b.d
Date : 20-APR-2013 16:21
Client ID: IM-SW-01-20130410-W
Sample Info: WL49B,10
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: vts
Column diameter: 0.25



WL49-04159

Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

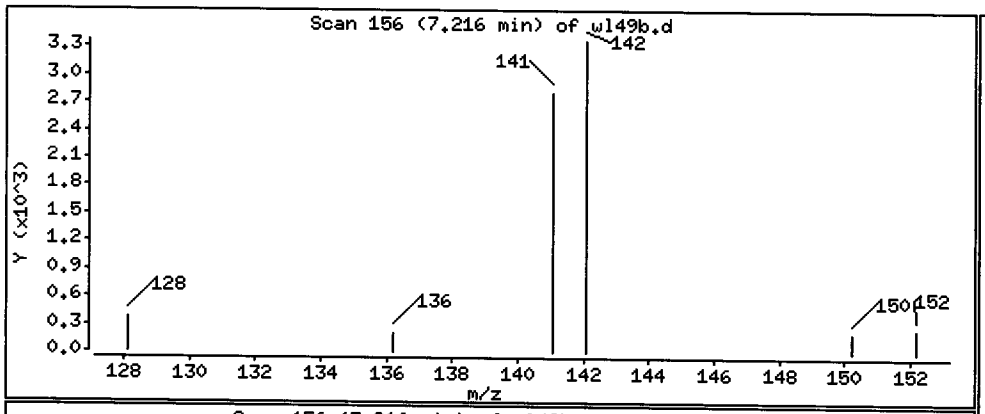
Operator: vts

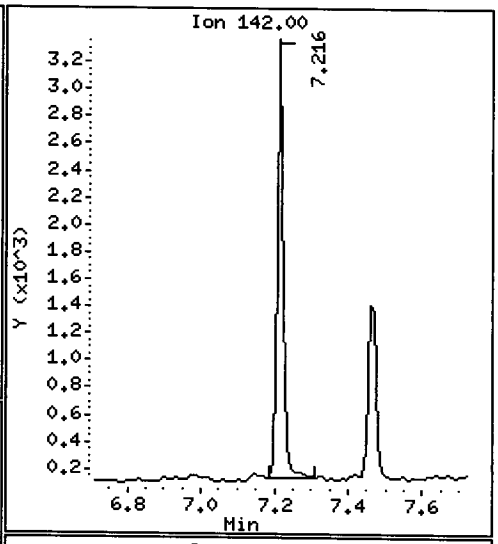
Column phase: Rxi-17Sil MS

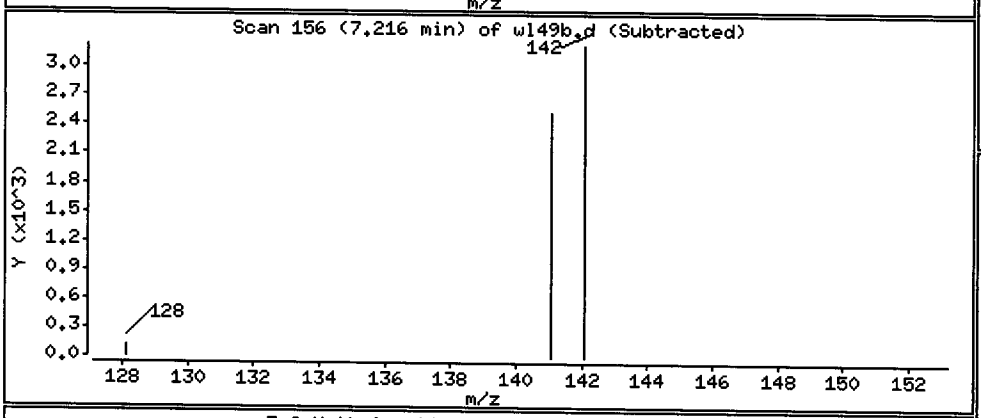
Column diameter: 0.25

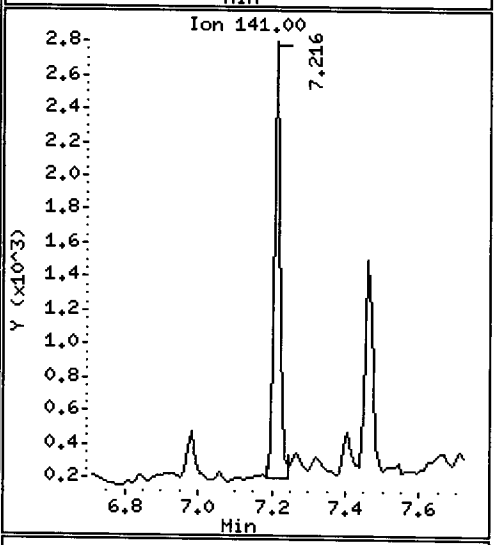
7 2-Methylnaphthalene

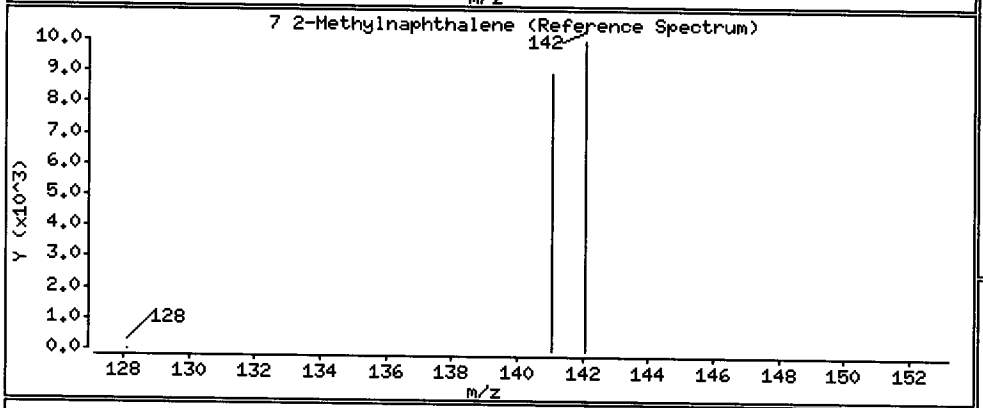
Concentration: 116 ug/L

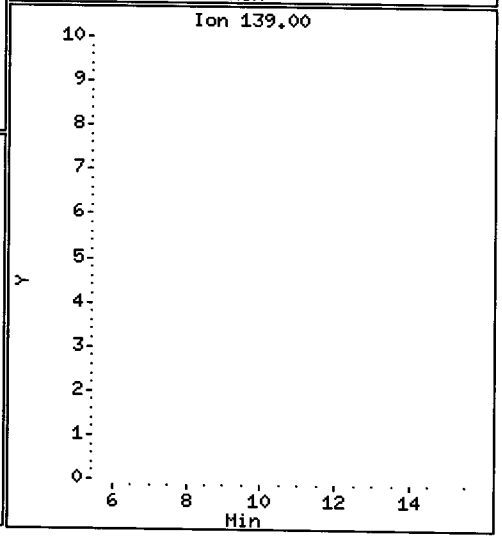


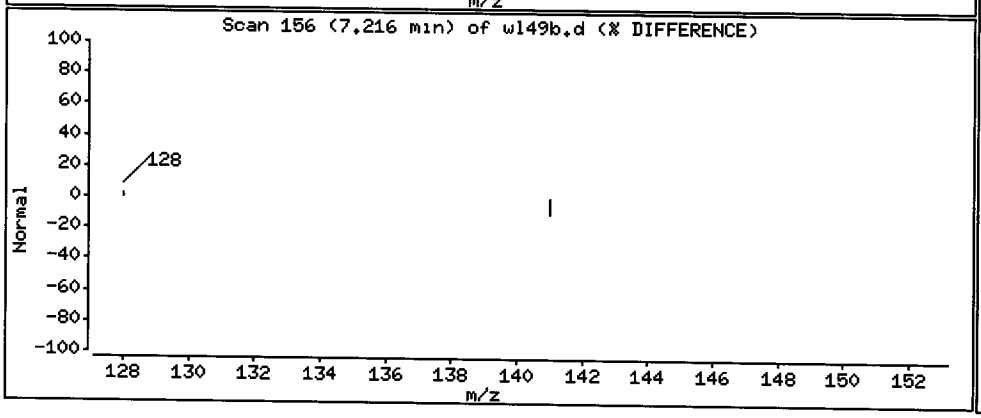












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

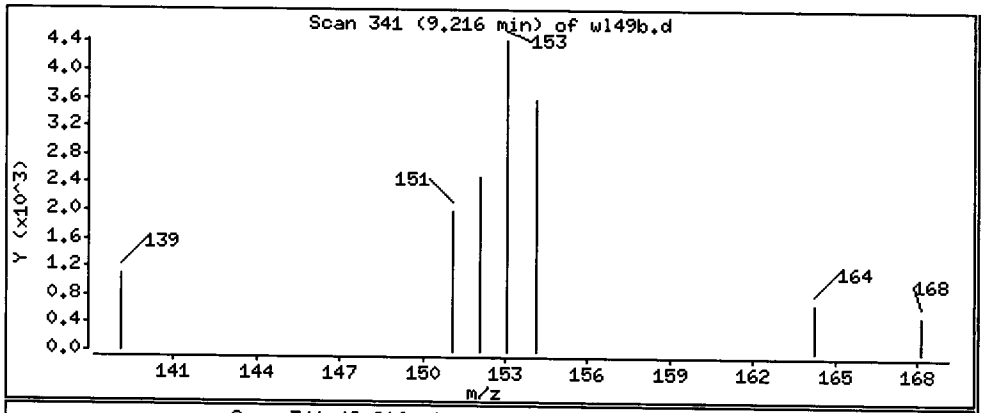
Operator: vts

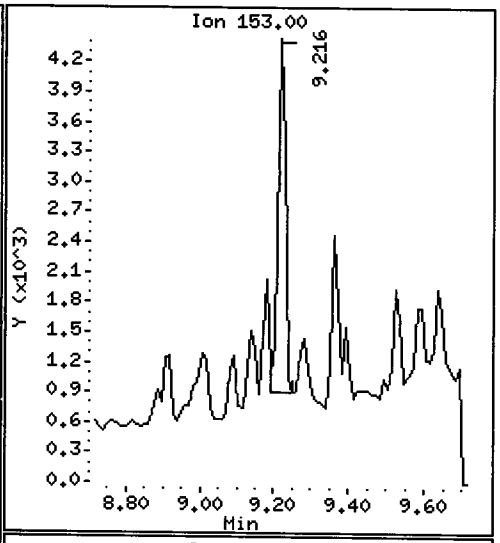
Column phase: Rxi-17Sil MS

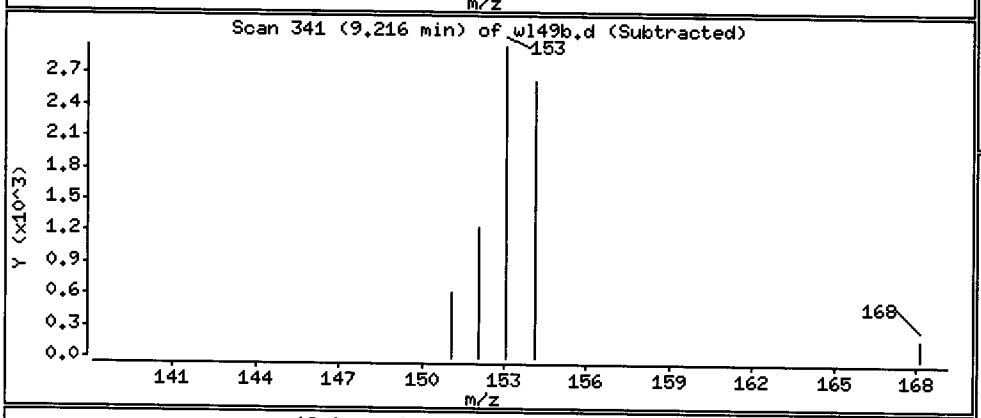
Column diameter: 0.25

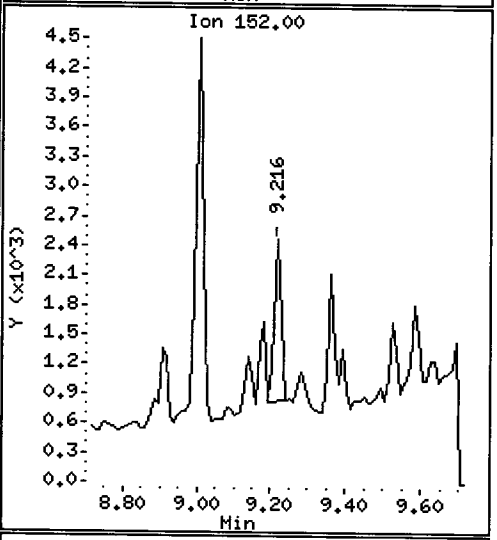
12 Acenaphthene

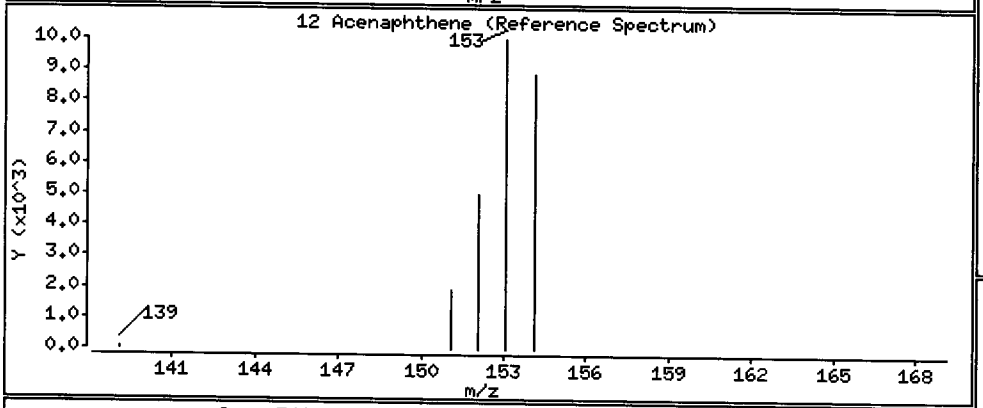
Concentration: 123 ug/L

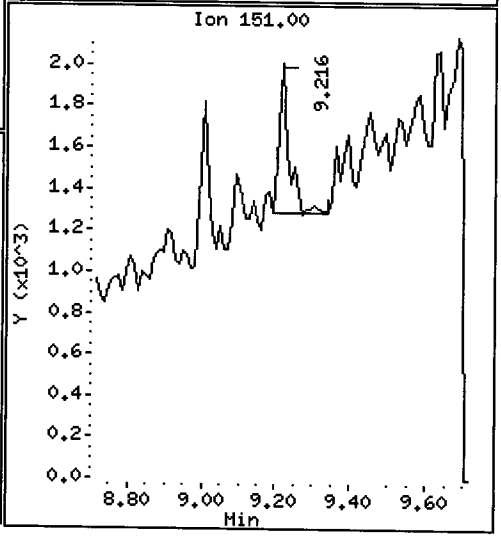


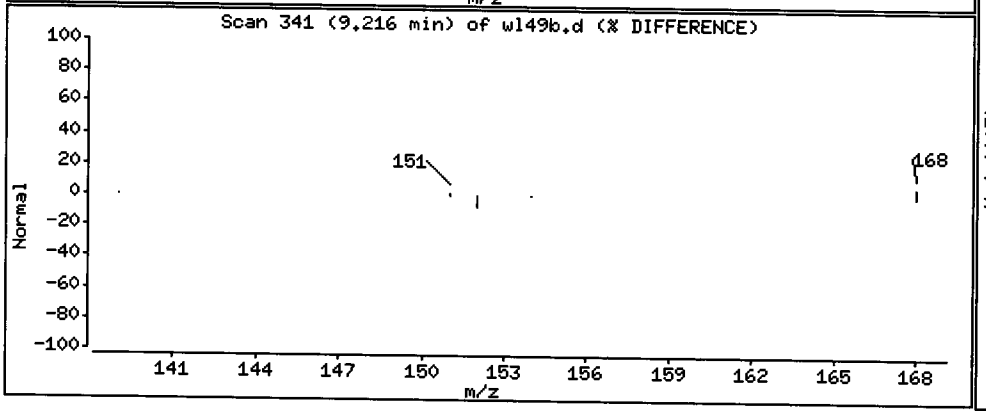












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

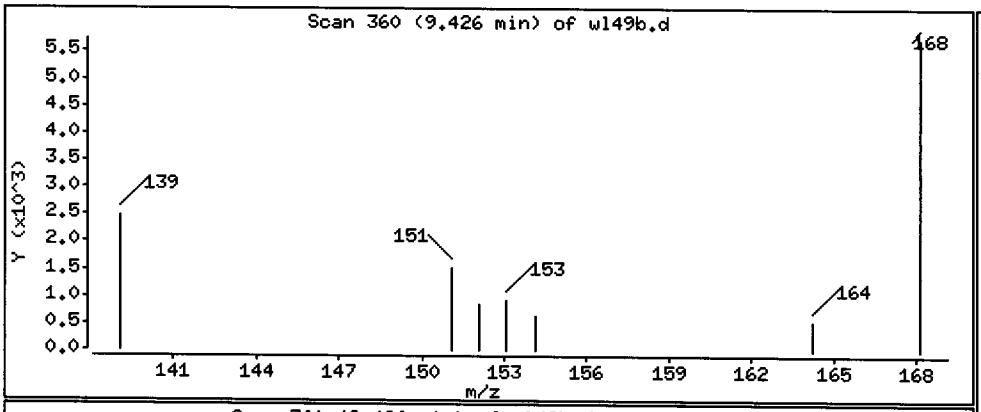
Operator: vts

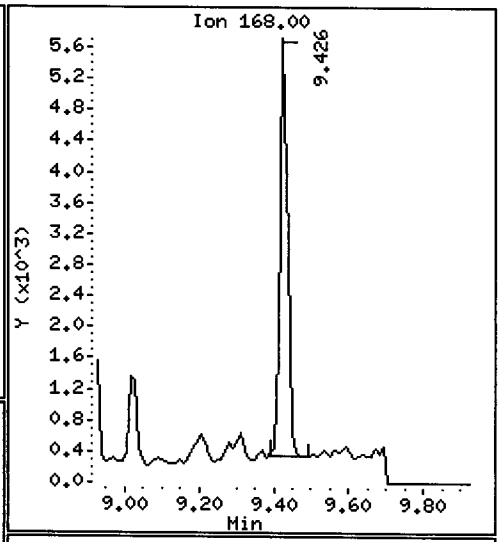
Column phase: Rxi-17Sil MS

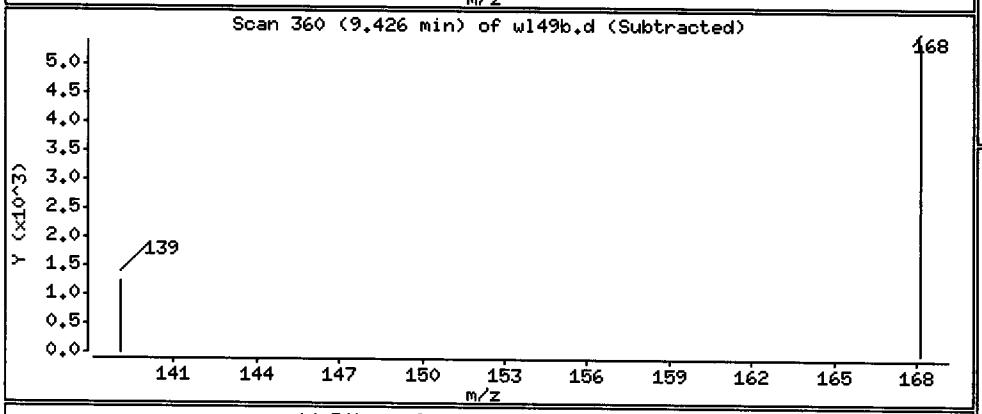
Column diameter: 0.25

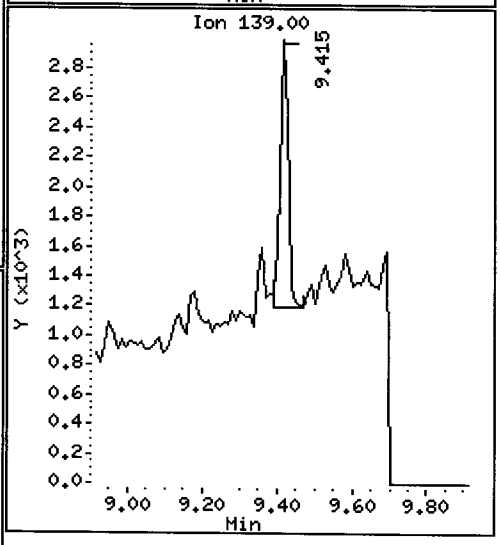
14 Dibenzofuran

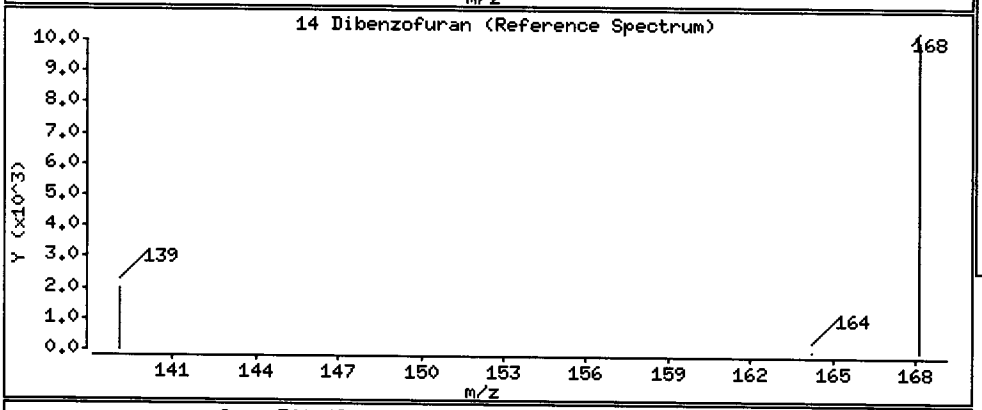
Concentration: 123 ug/L

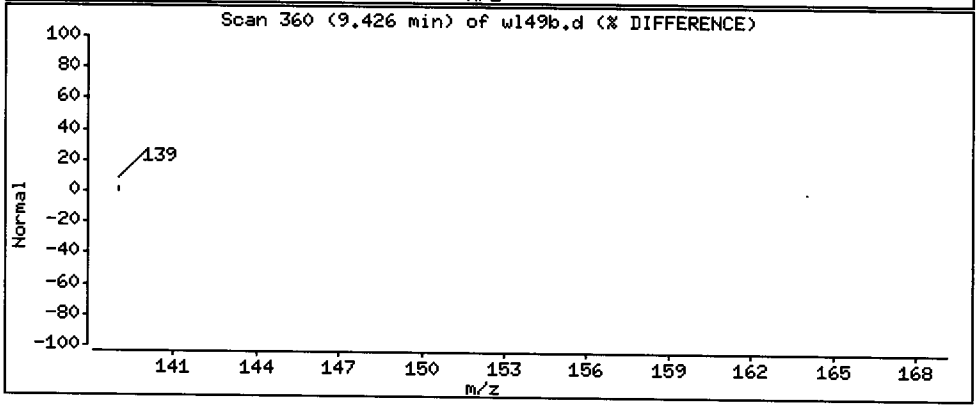












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

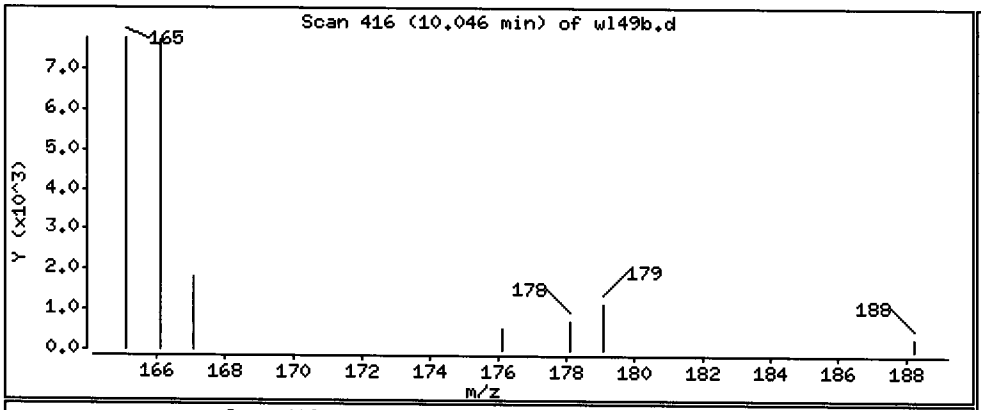
Operator: vts

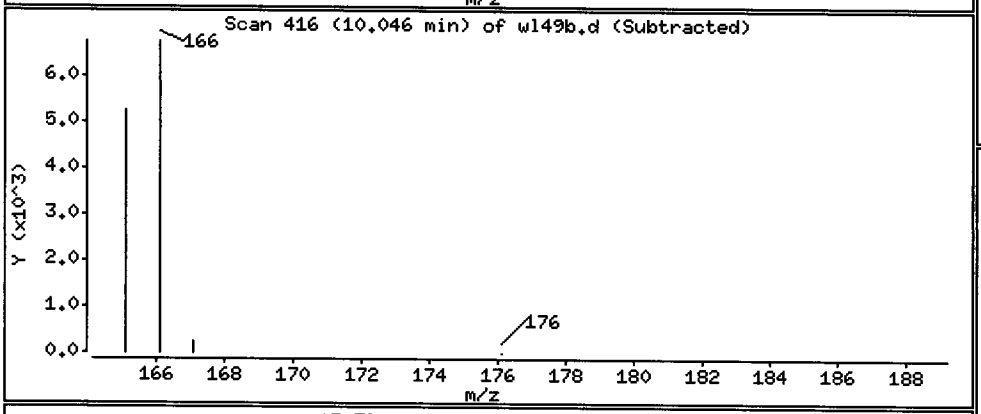
Column phase: Rxi-17Sil MS

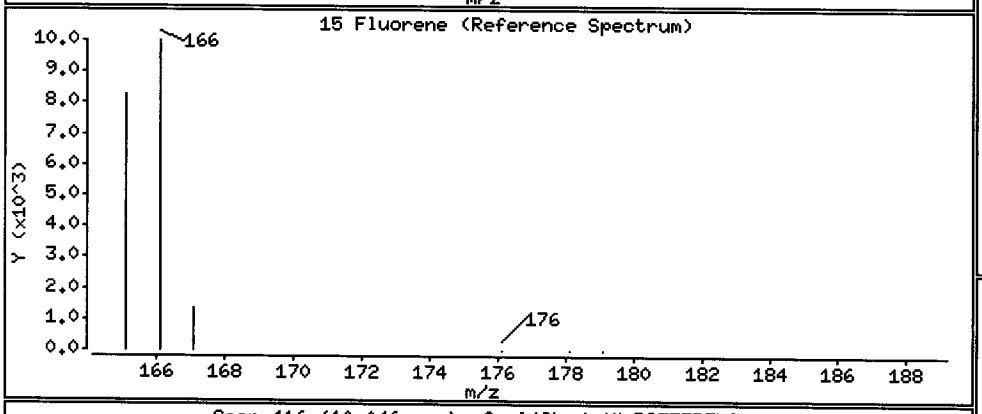
Column diameter: 0.25

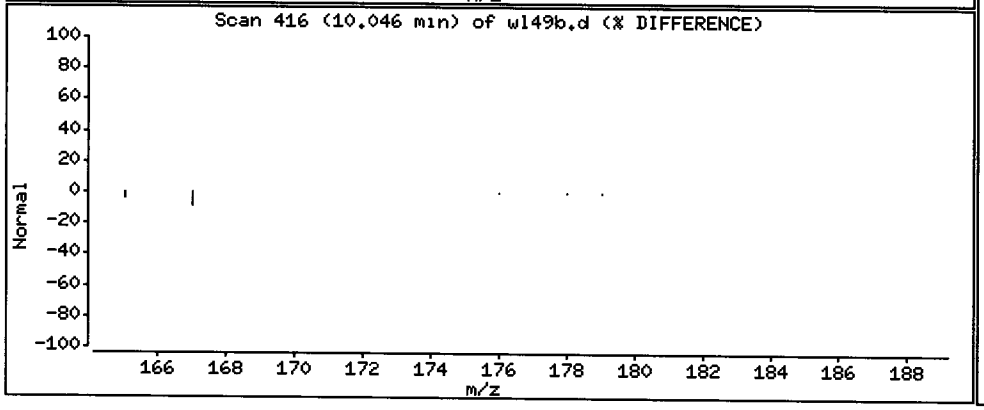
15 Fluorene

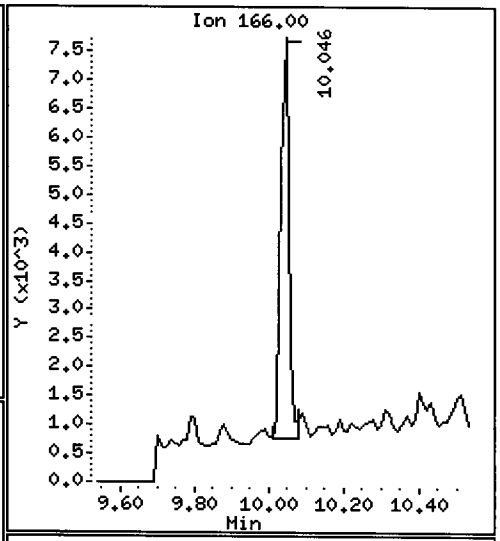
Concentration: 232 ug/L

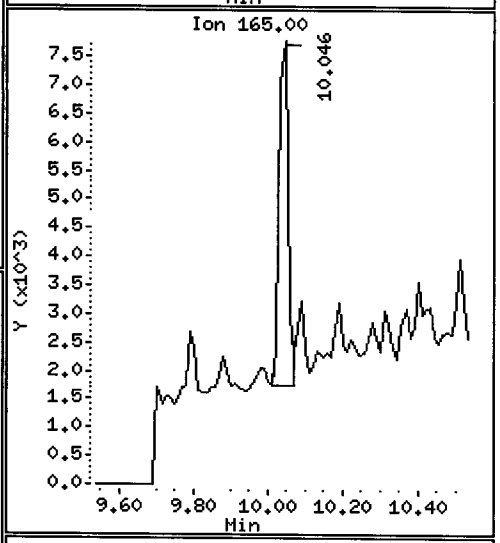


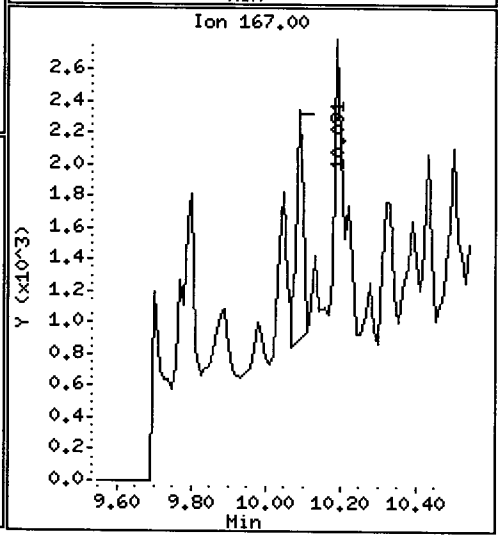












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

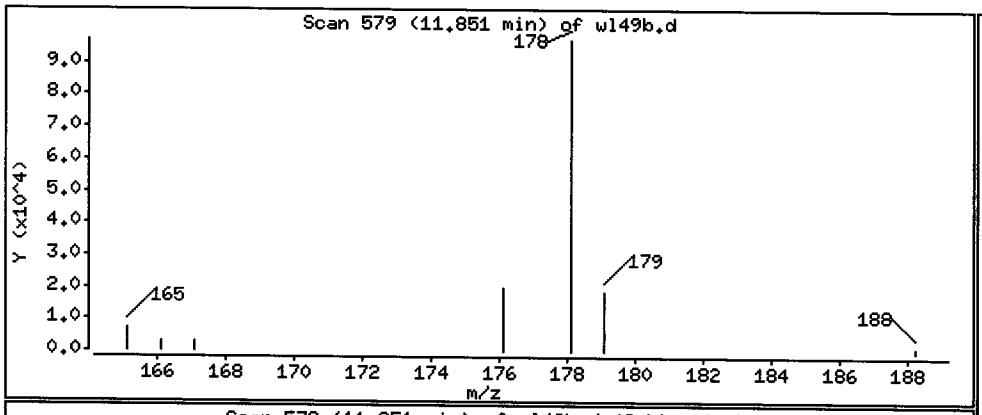
Operator: vts

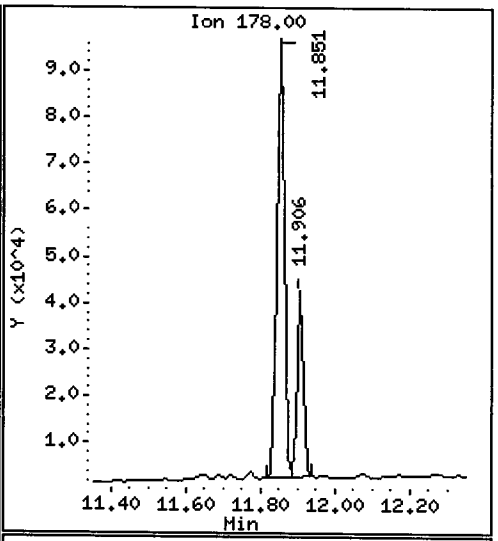
Column phase: Rxi-17Sil MS

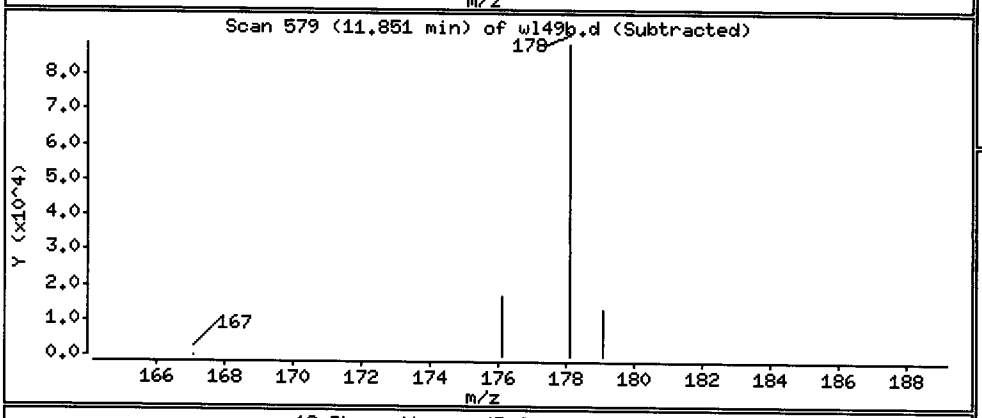
Column diameter: 0.25

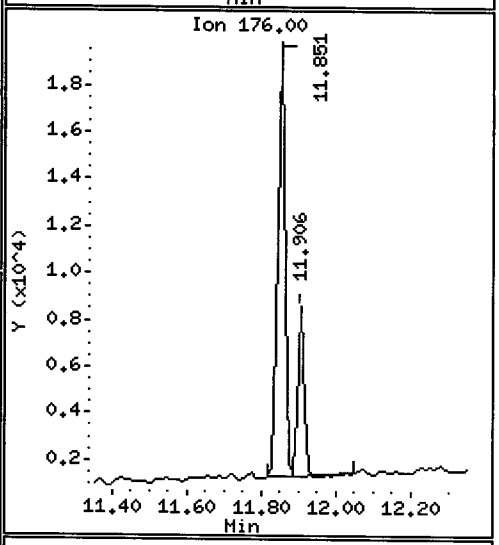
19 Phenanthrene

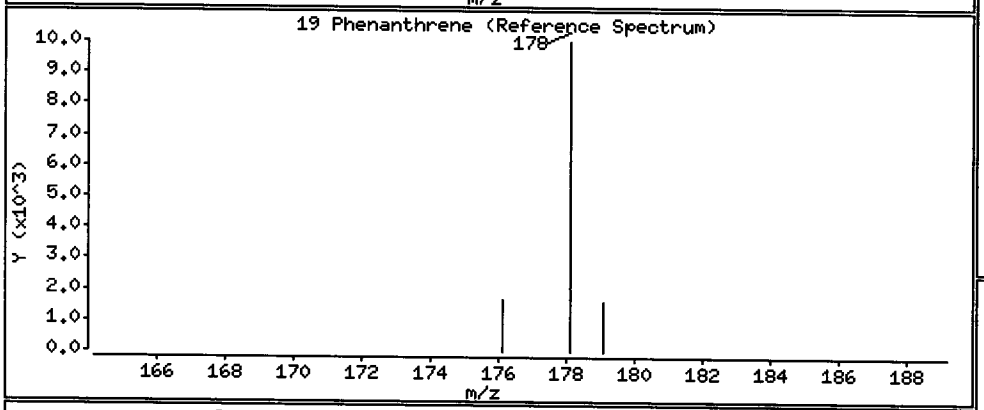
Concentration: 1850 ug/L

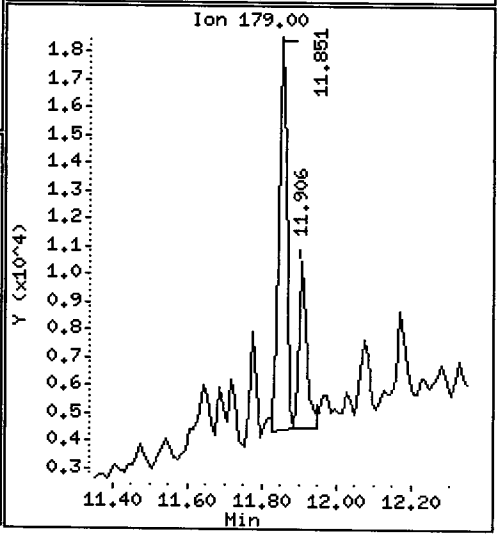


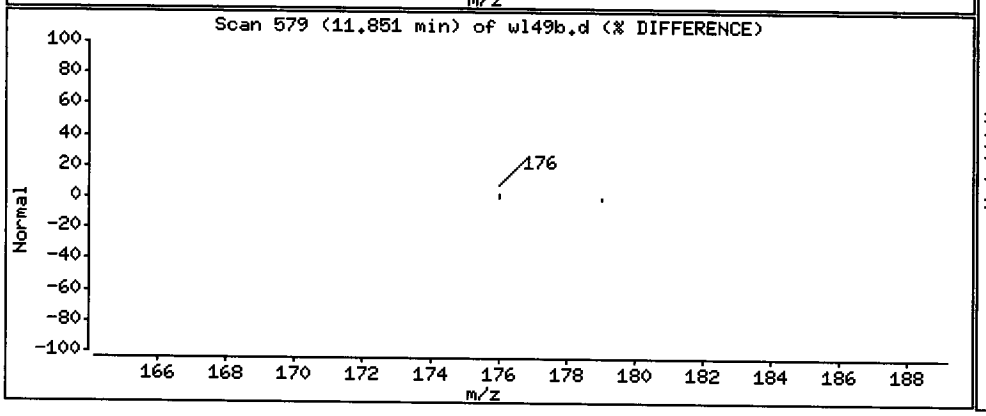












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

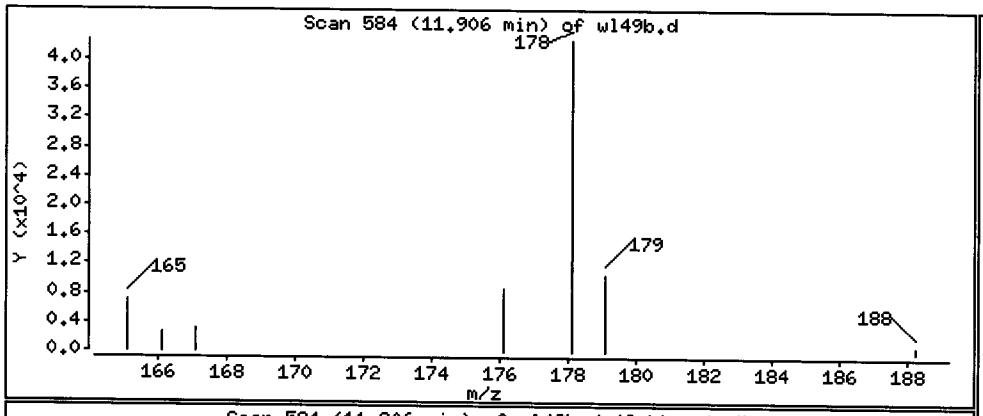
Operator: vts

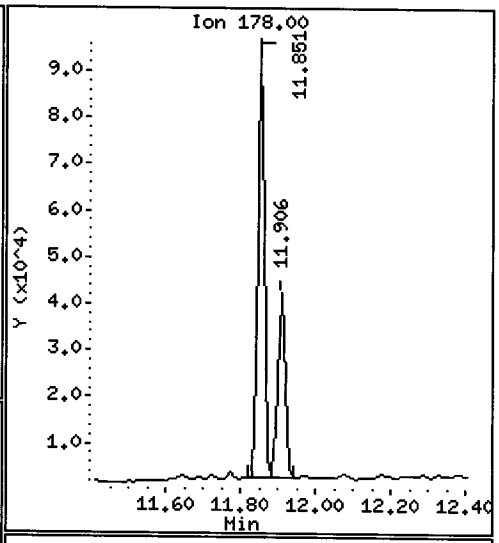
Column phase: Rx1-17Sil MS

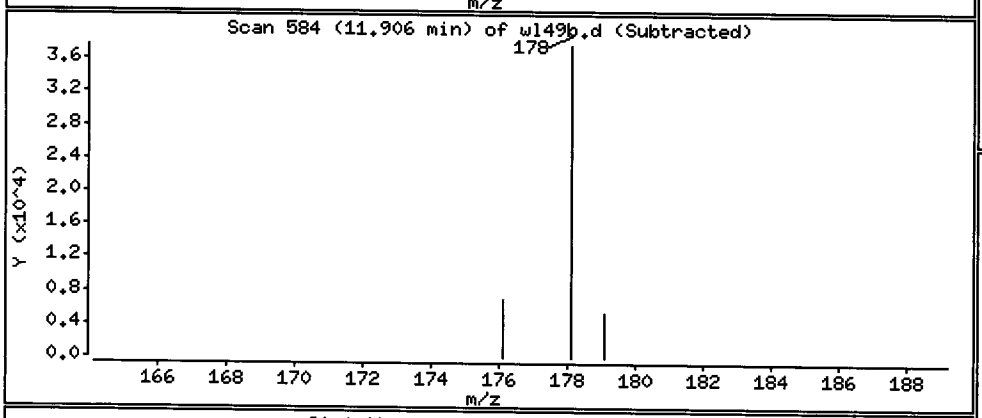
Column diameter: 0.25

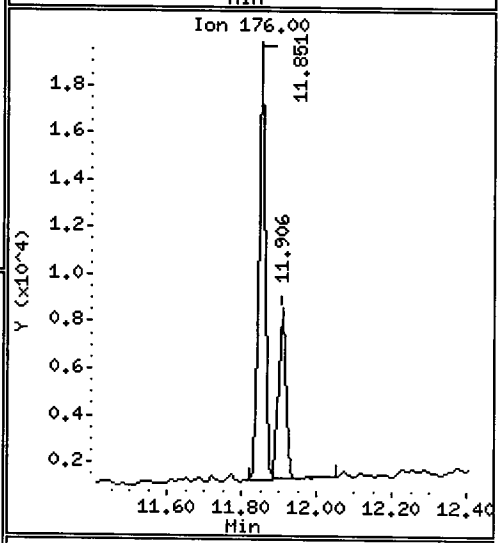
20 Anthracene

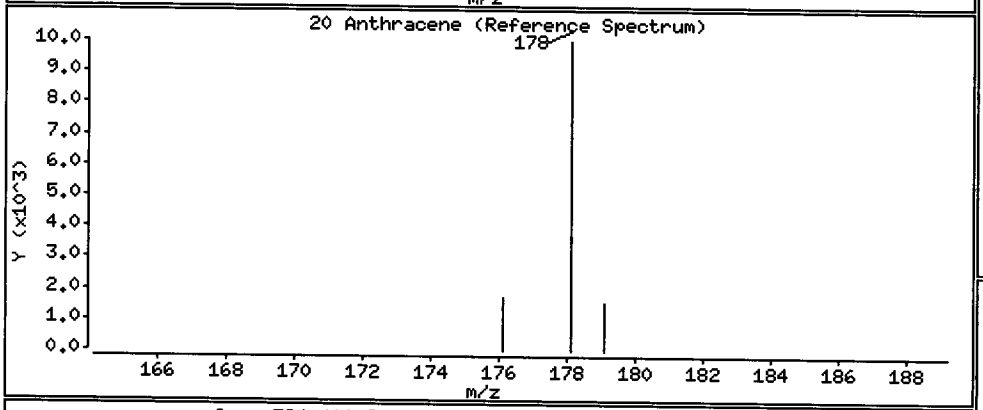
Concentration: 814 ug/L

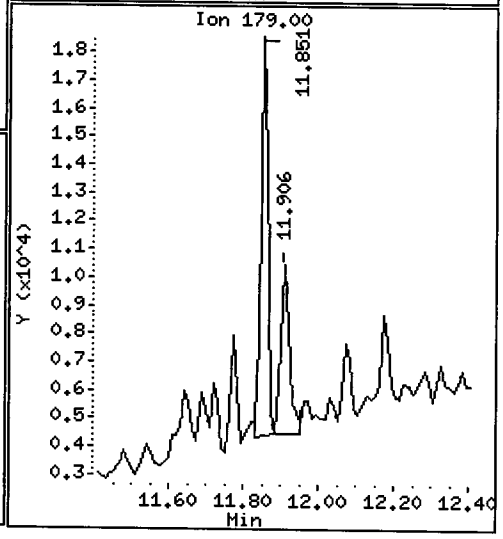


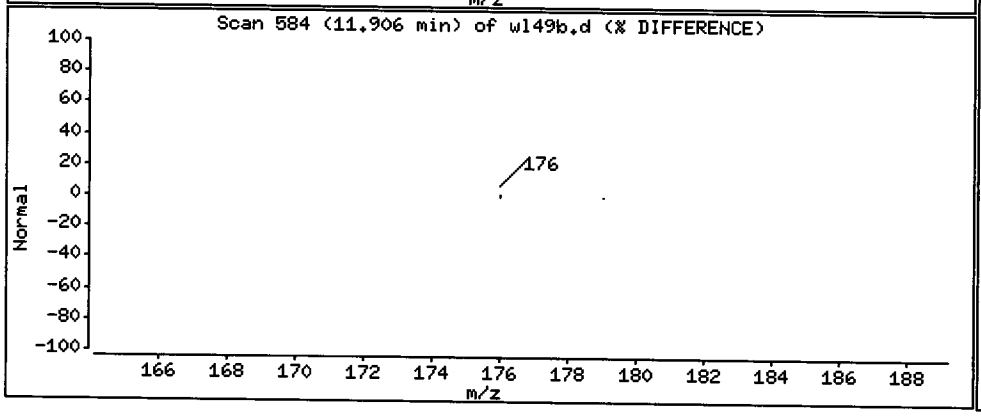












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

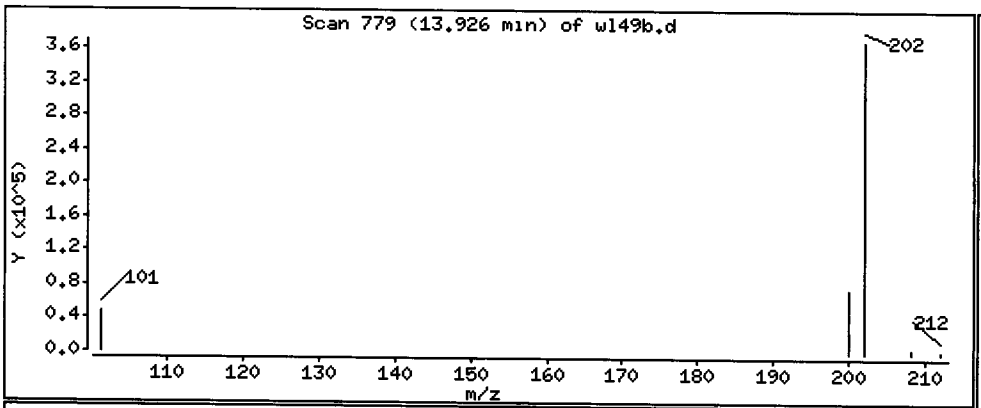
Operator: vts

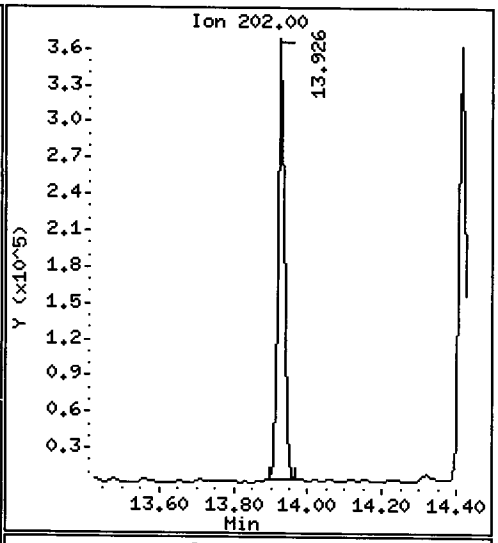
Column phase: Rxi-17Sil MS

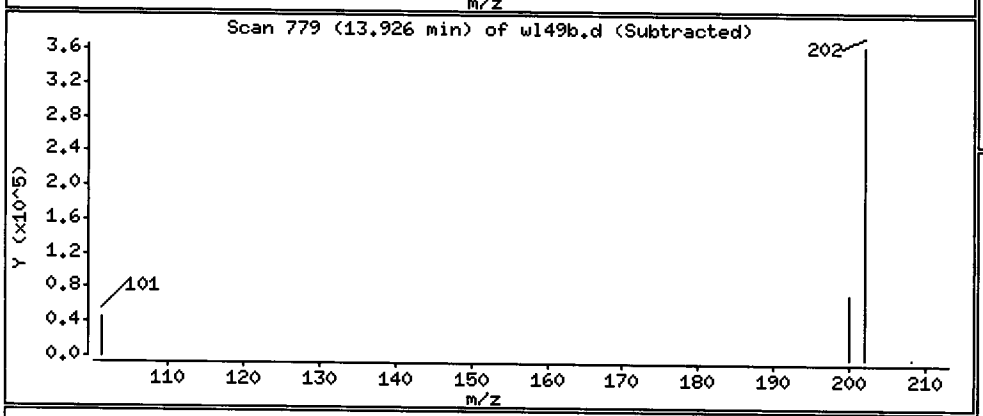
Column diameter: 0.25

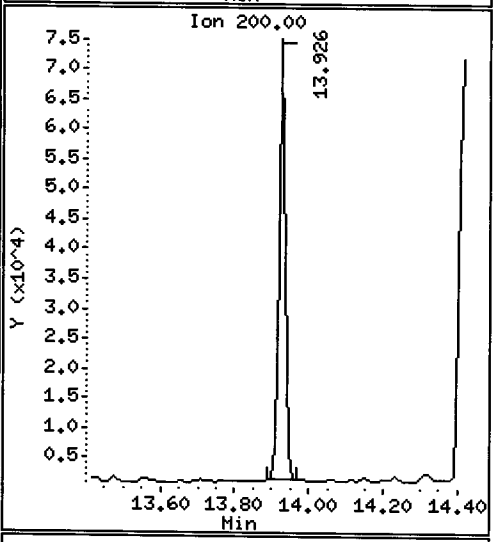
24 Fluoranthene

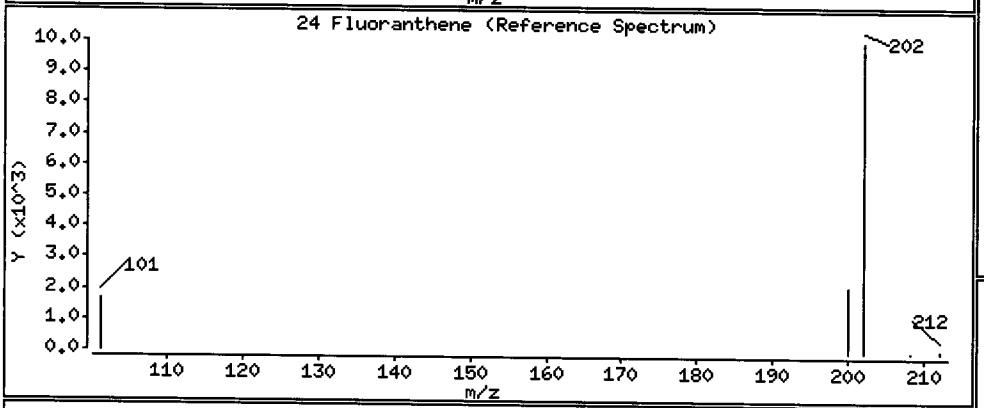
Concentration: 7230 ug/L

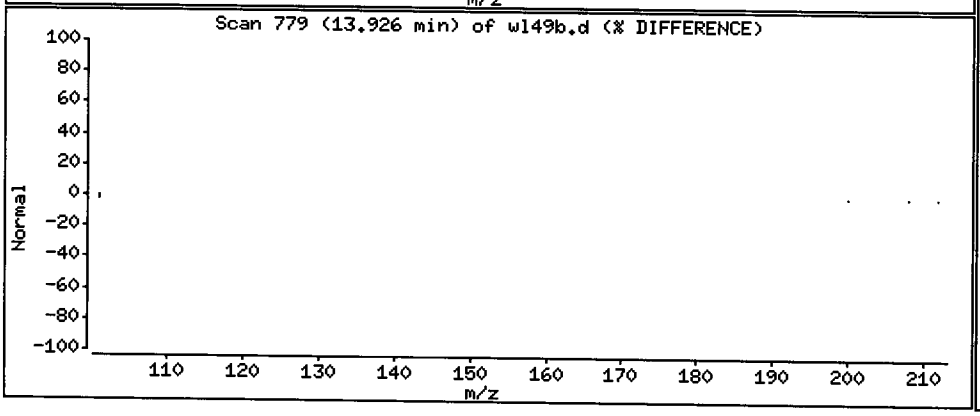


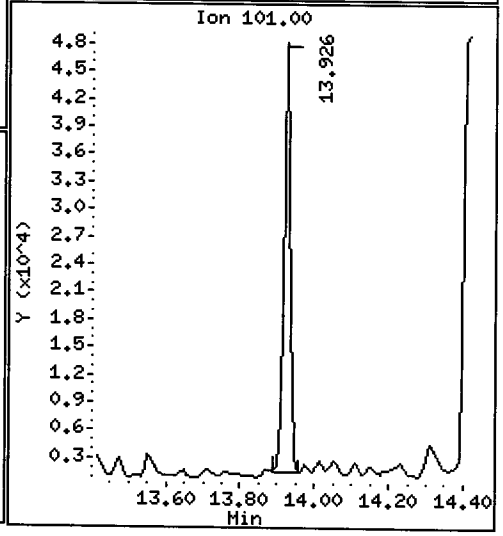












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

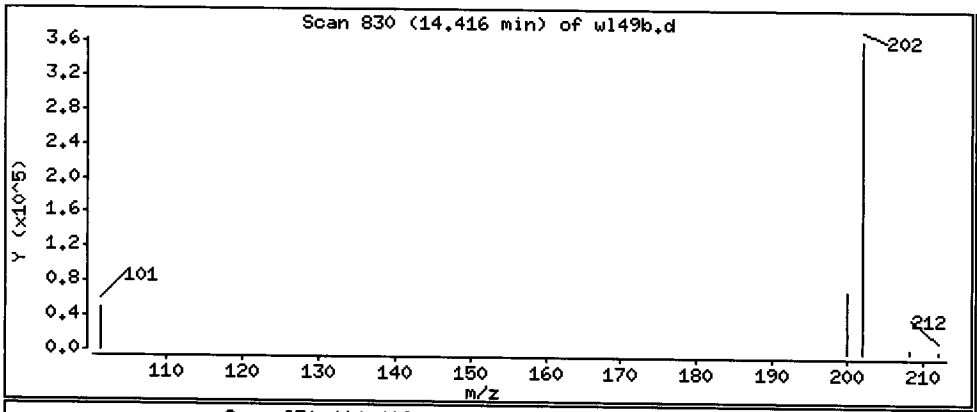
Operator: vts

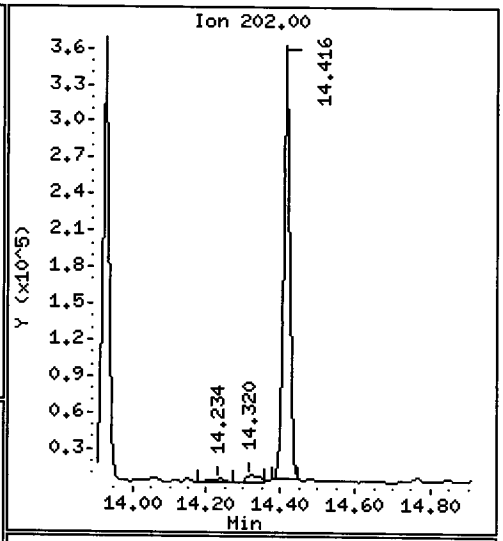
Column phase: Rxi-17Sil MS

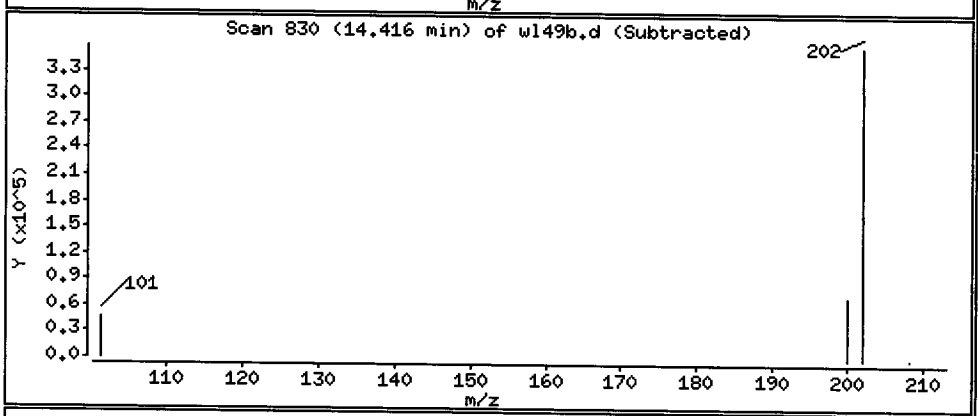
Column diameter: 0.25

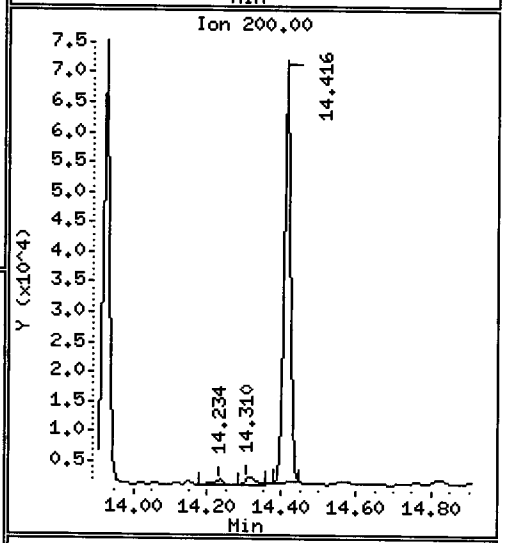
25 Pyrene

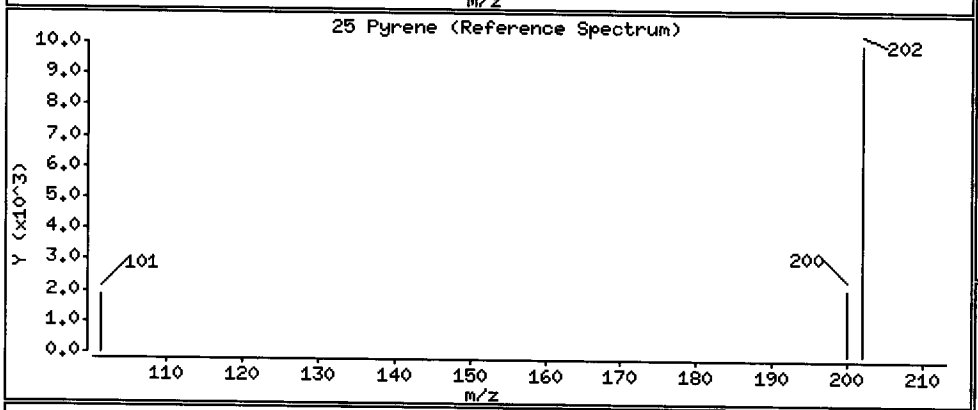
Concentration: 6600 ug/L

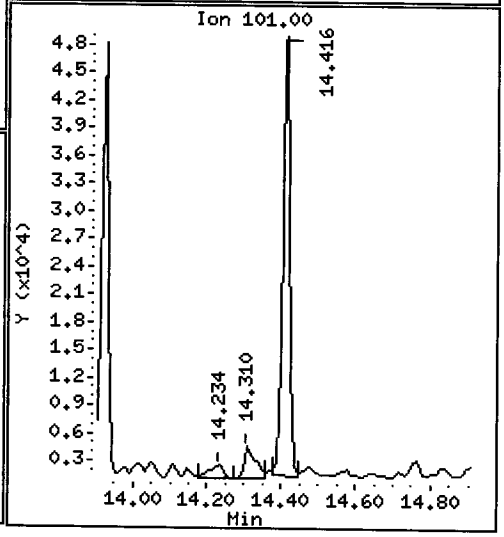


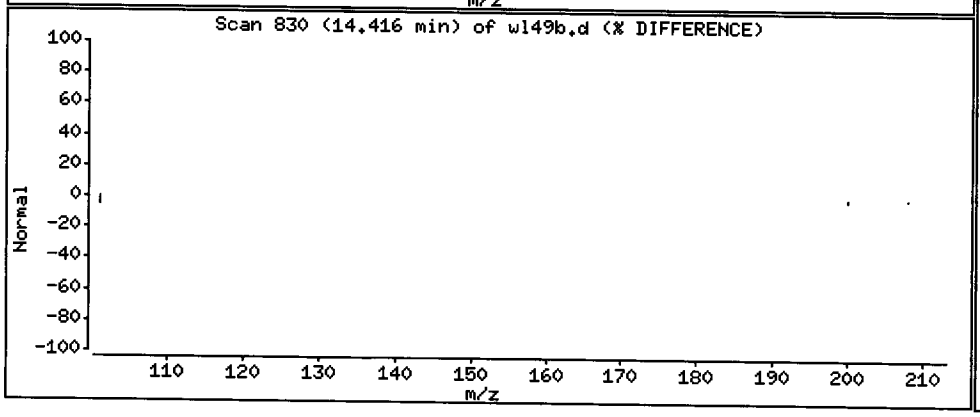












WL49B-0172

Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

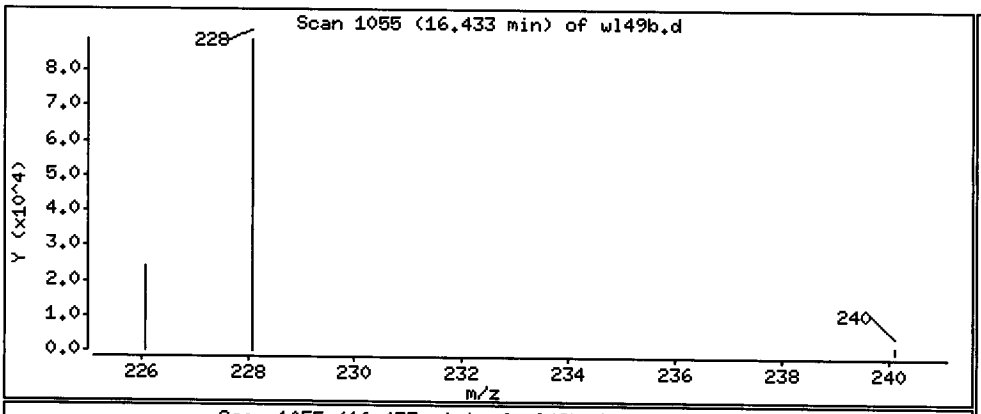
Operator: vts

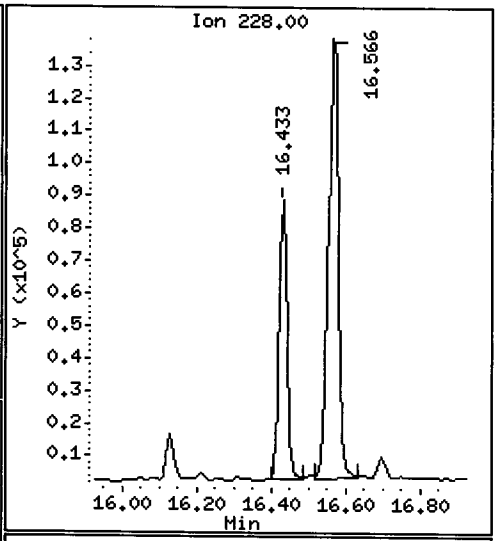
Column phase: Rxi-17Sil MS

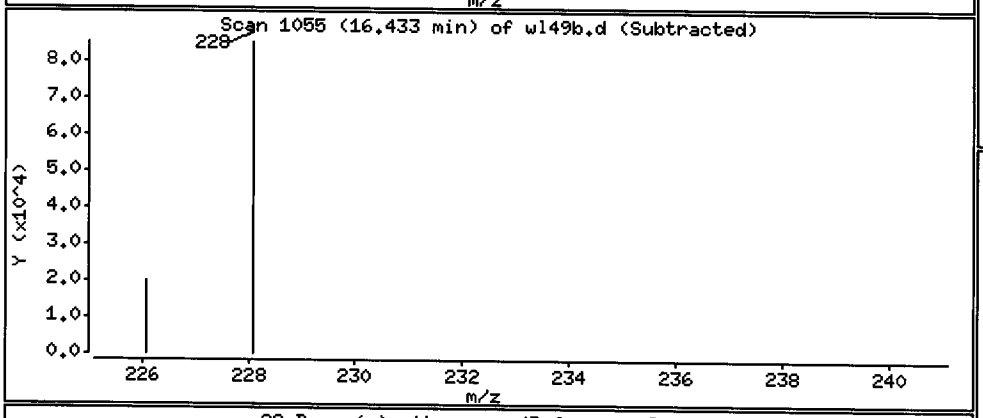
Column diameter: 0.25

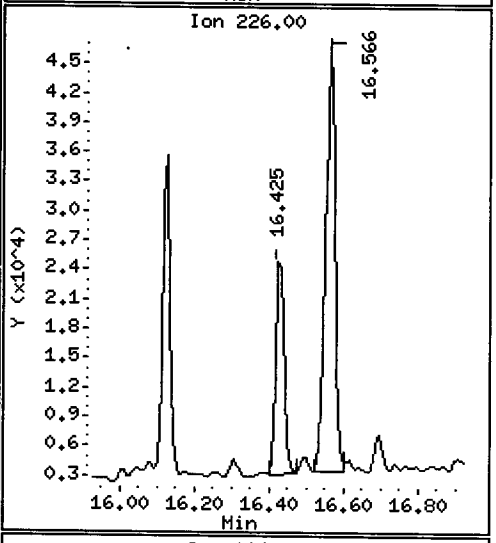
28 Benzo(a)anthracene

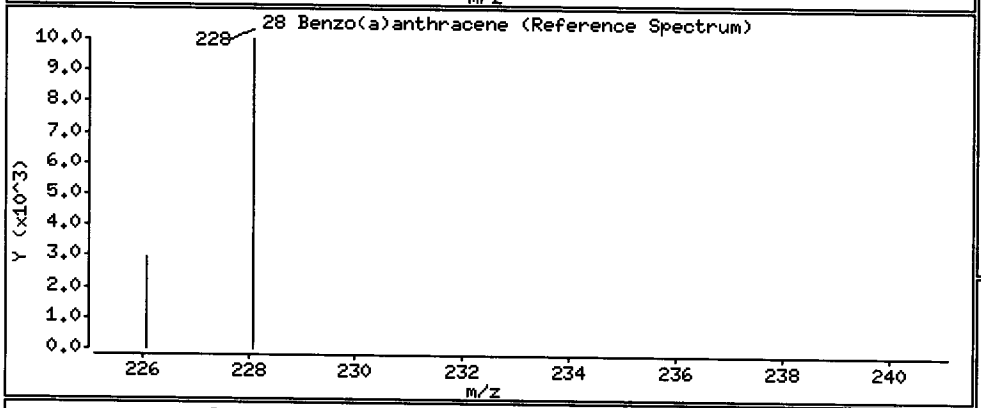
Concentration: 2170 ug/L

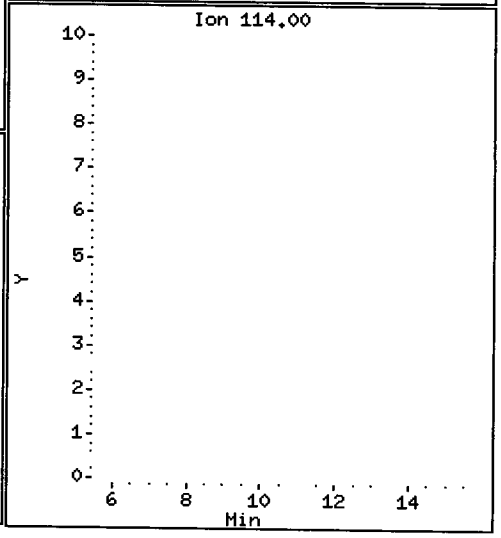


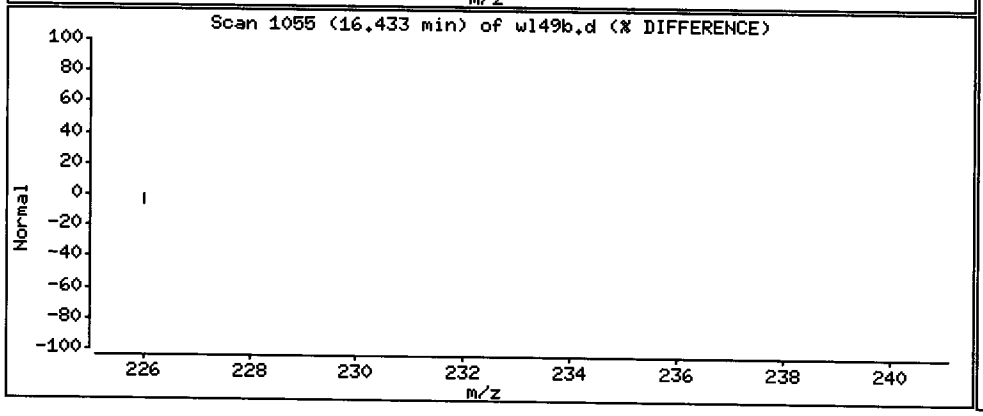












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

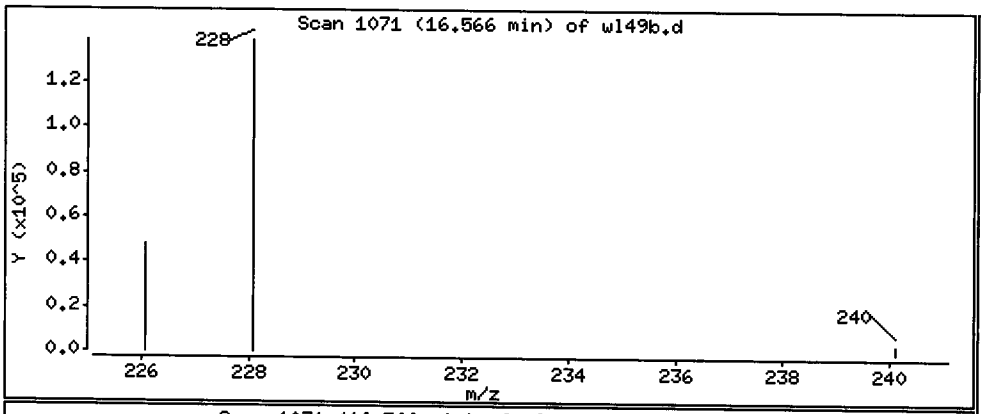
Operator: vts

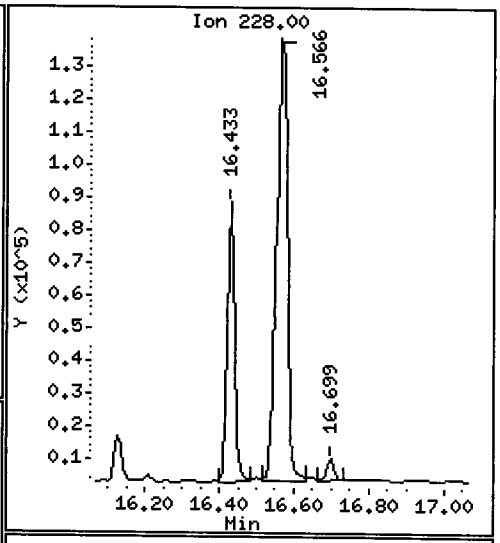
Column phase: Rxi-17Sil MS

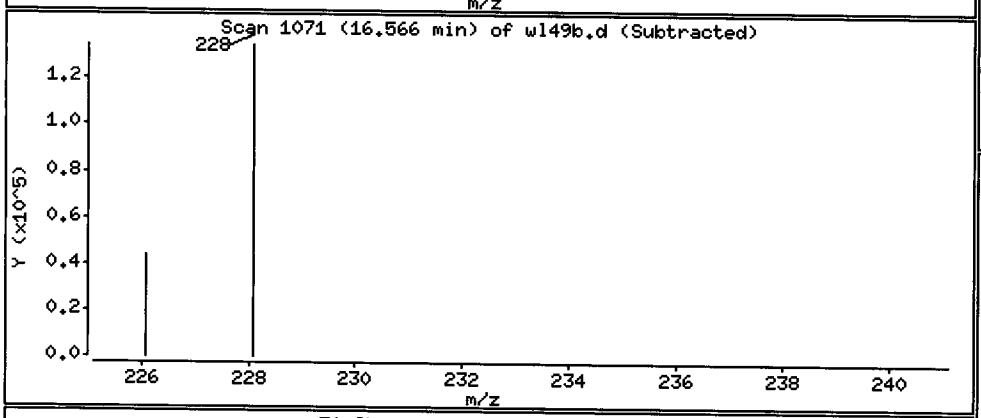
Column diameter: 0.25

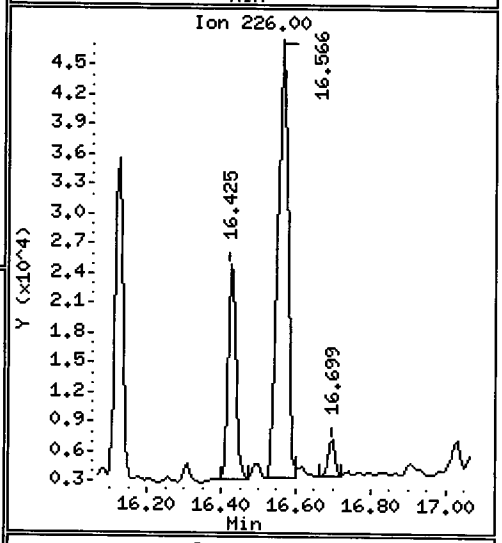
30 Chrysene

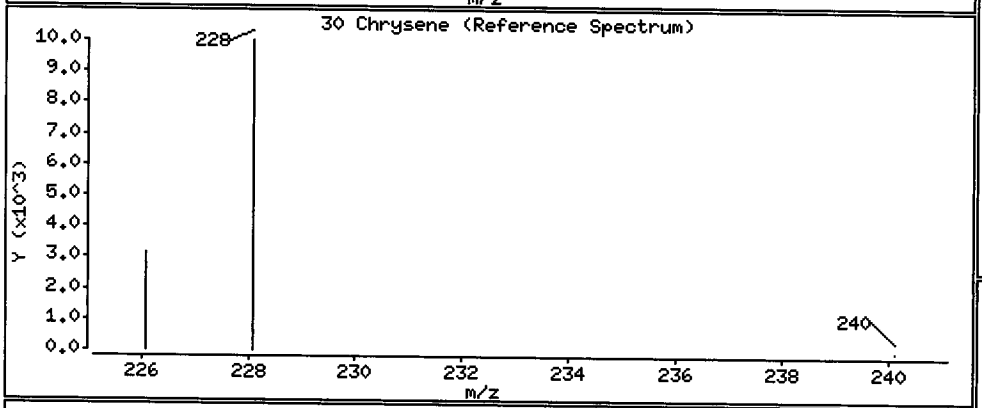
Concentration: 4690 ug/L

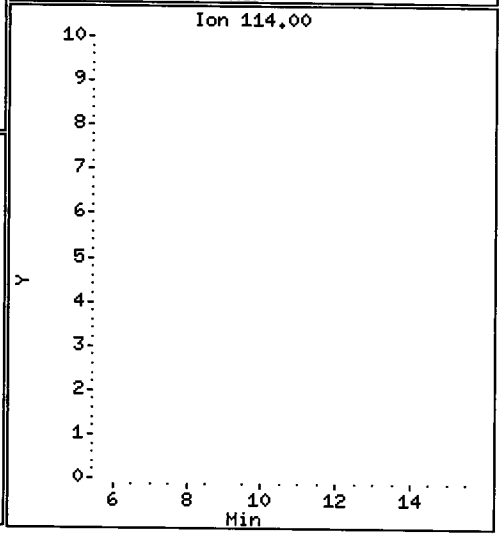


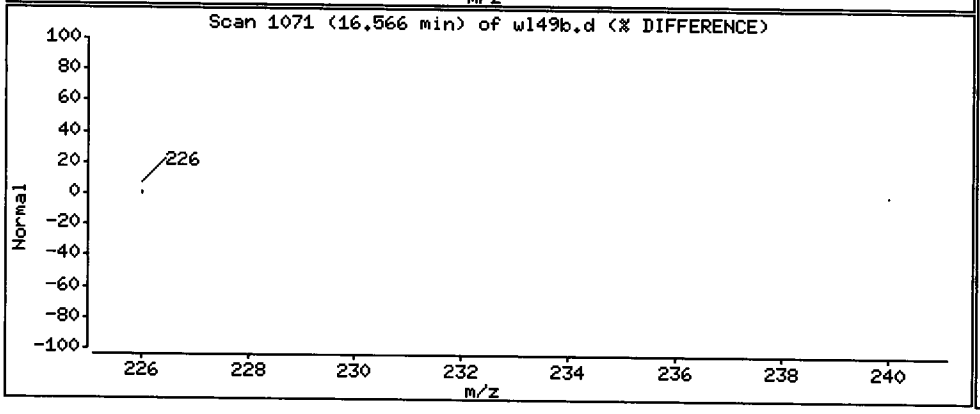












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

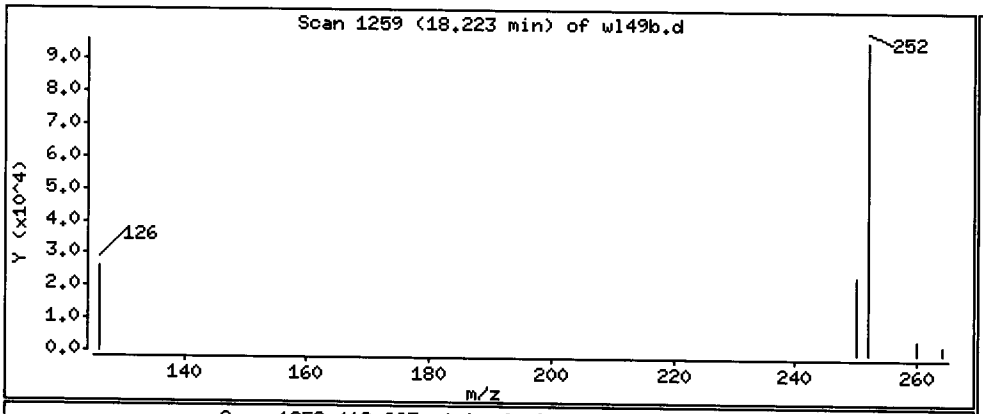
Operator: vts

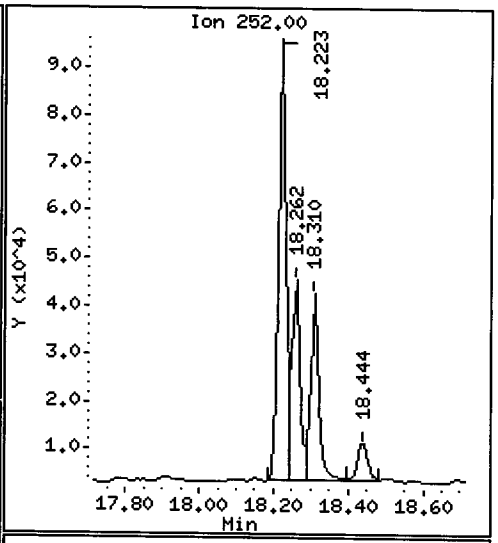
Column phase: Rxi-17Sil MS

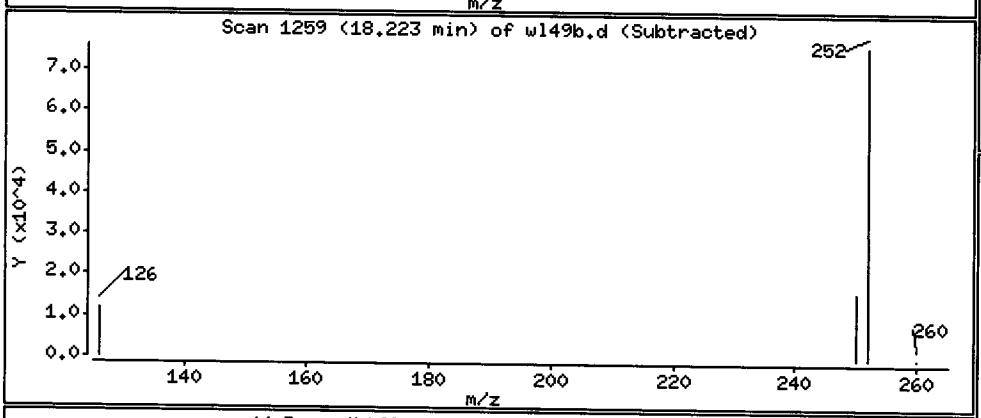
Column diameter: 0.25

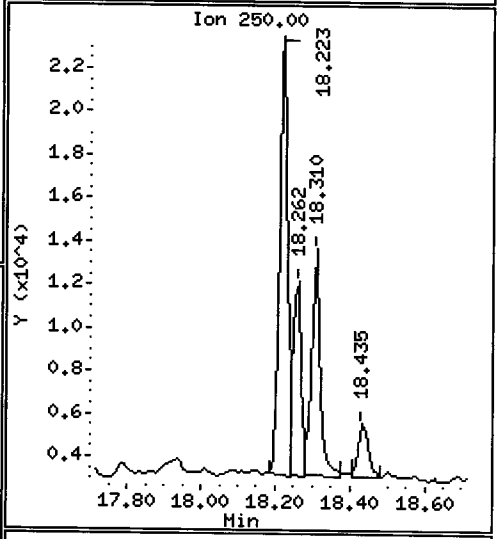
44 Benzo(b)fluoranthene

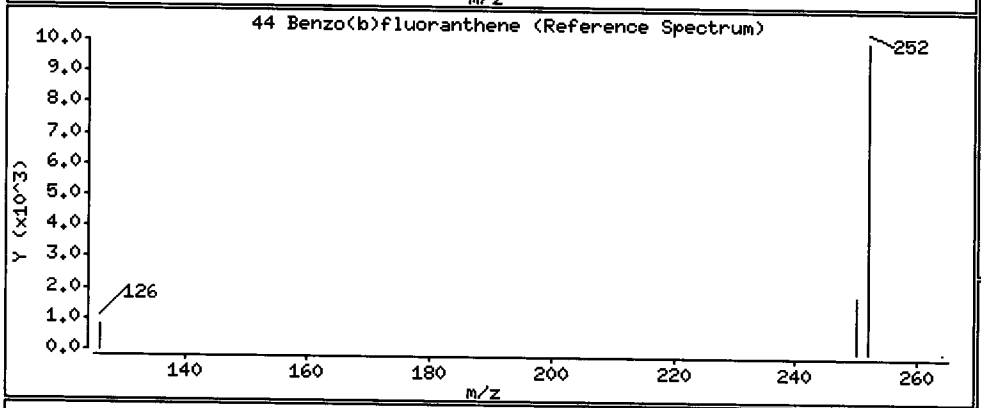
Concentration: 2480 ug/L

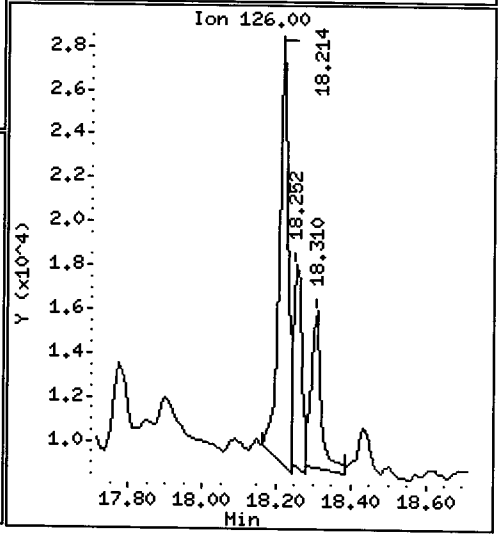


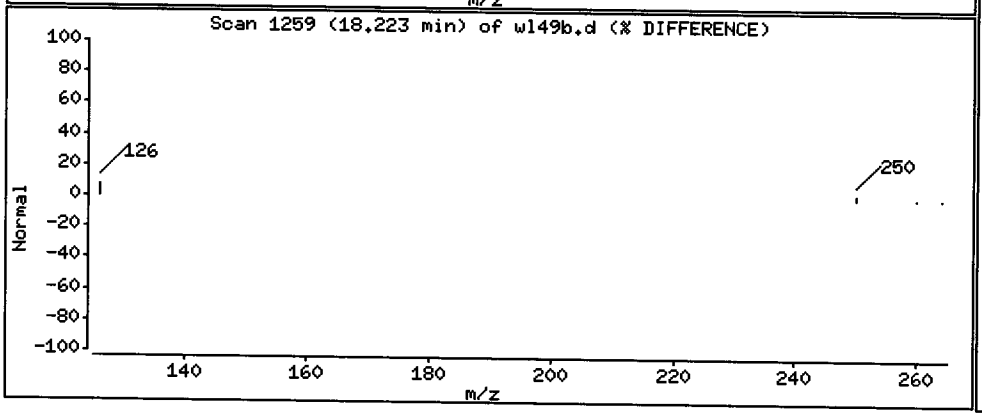












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

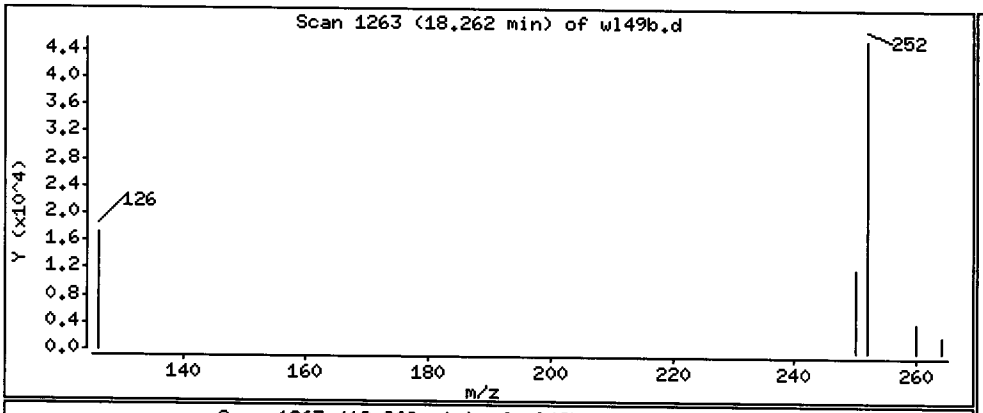
Operator: vts

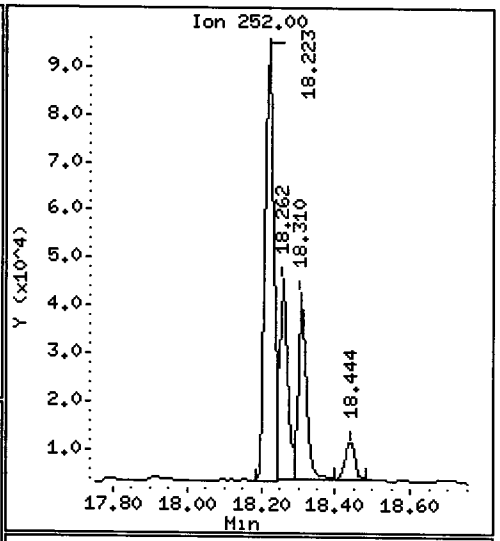
Column phase: Rxi-17Sil MS

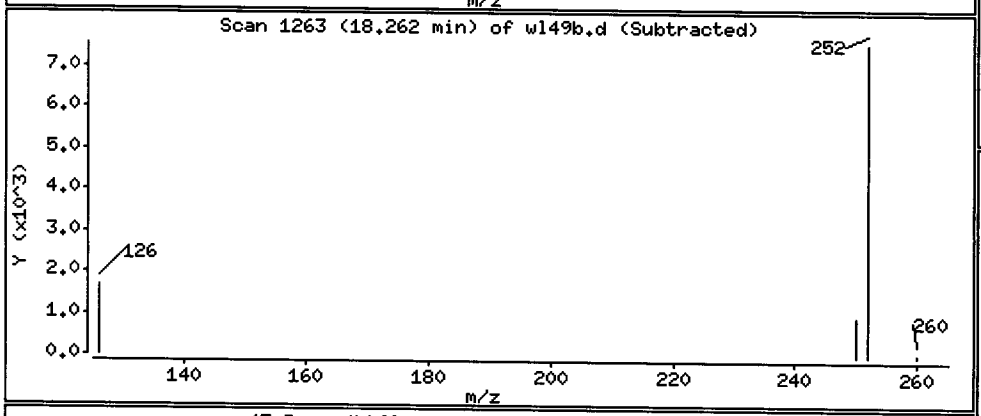
Column diameter: 0.25

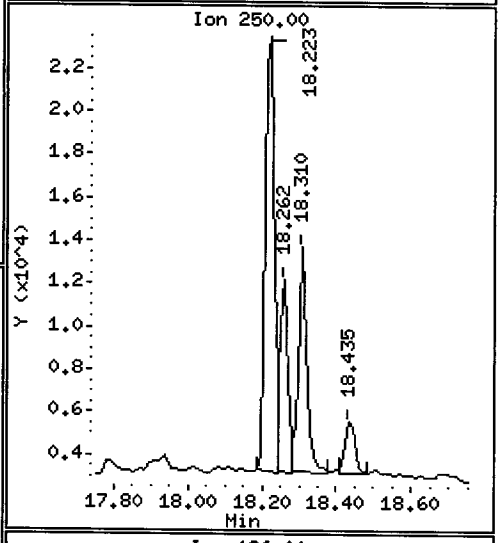
45 Benzo(k)fluoranthene

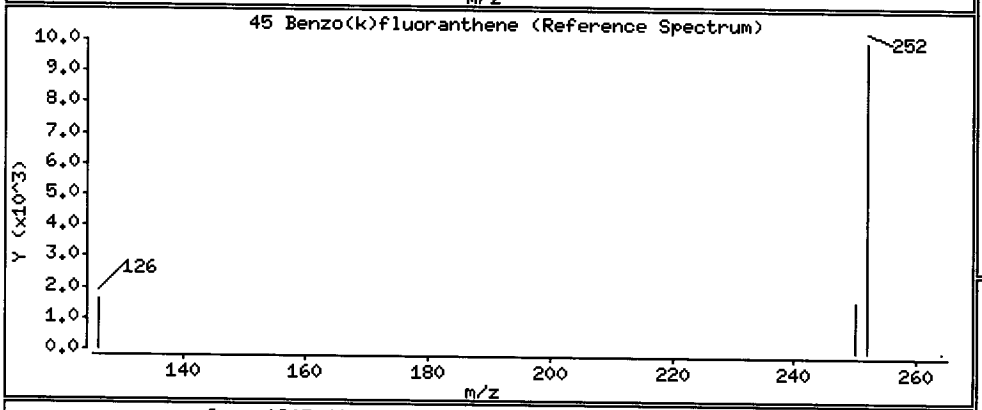
Concentration: 1210 ug/L

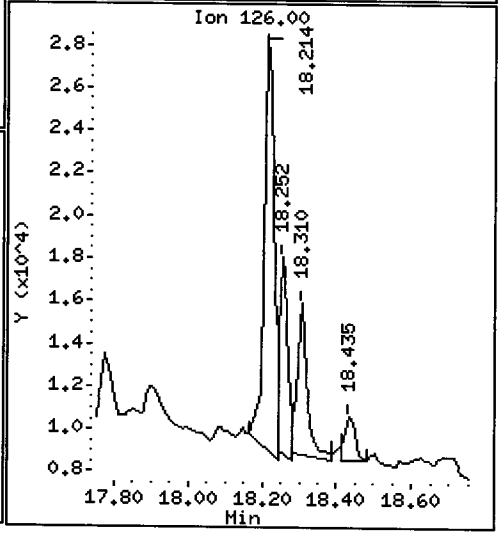


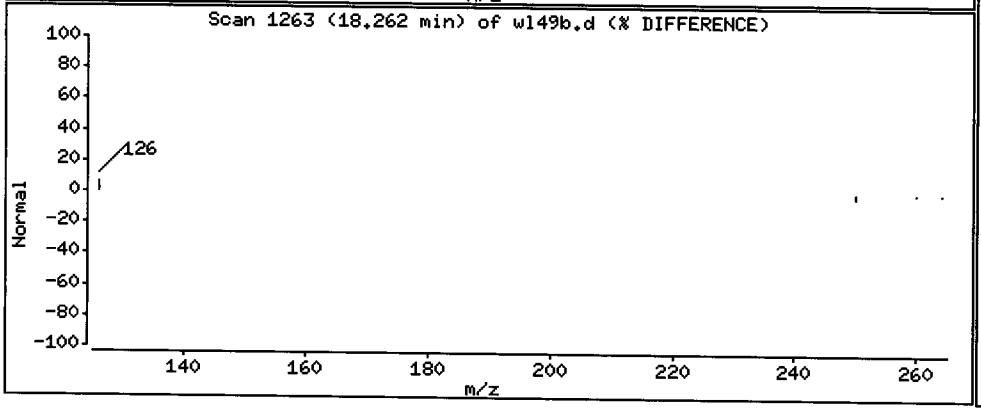












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

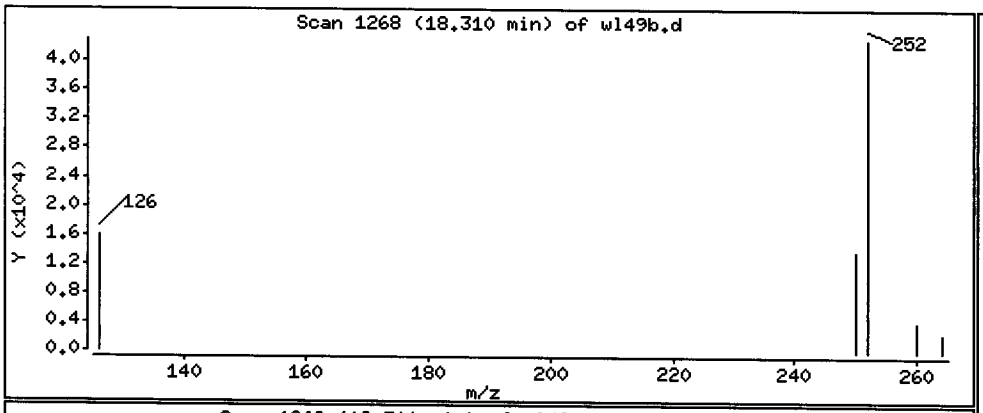
Operator: vts

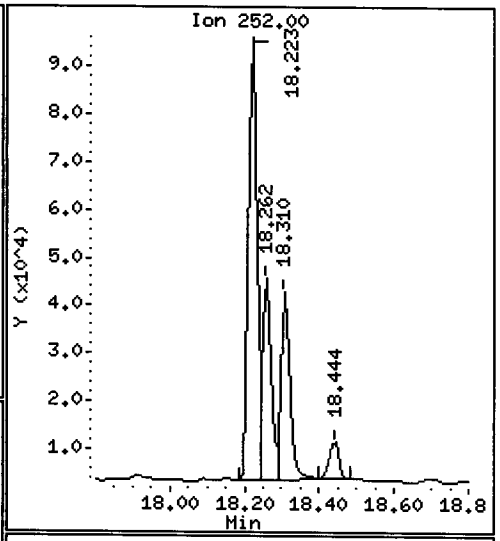
Column phase: Rxi-17Sil MS

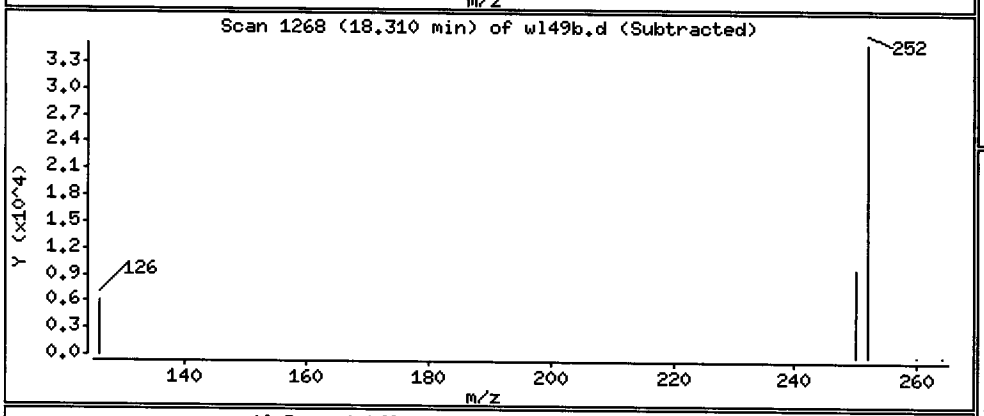
Column diameter: 0.25

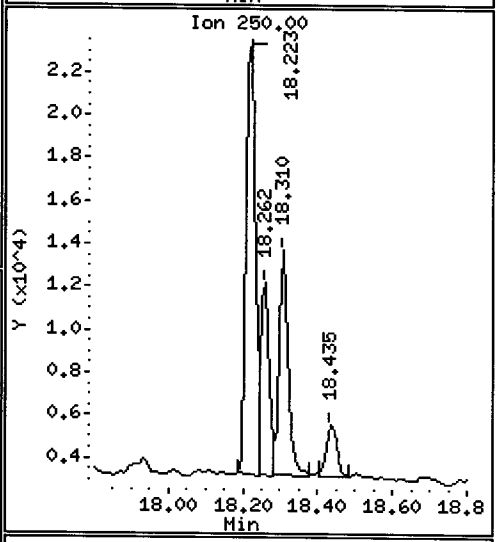
46 Benzo(j)fluoranthene

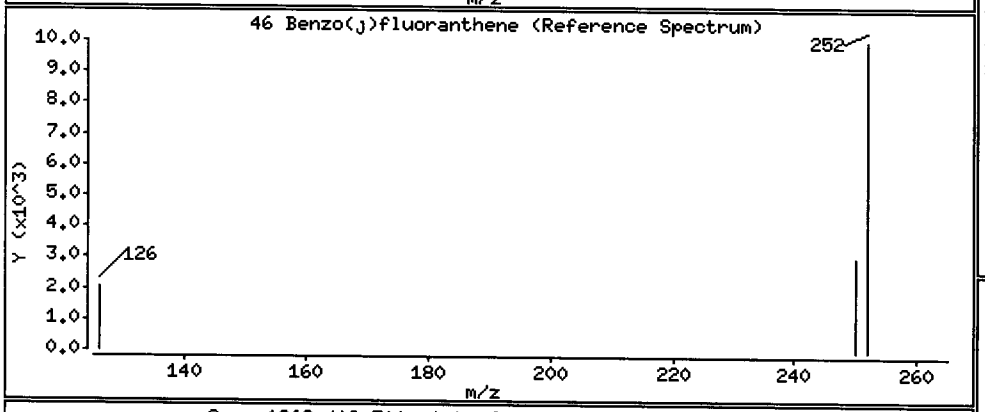
Concentration: 983 ug/L

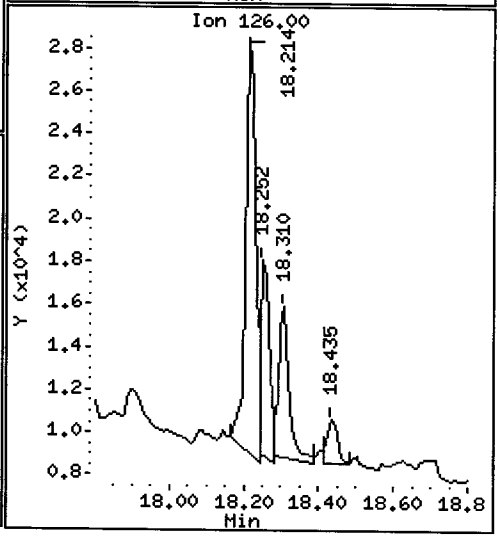


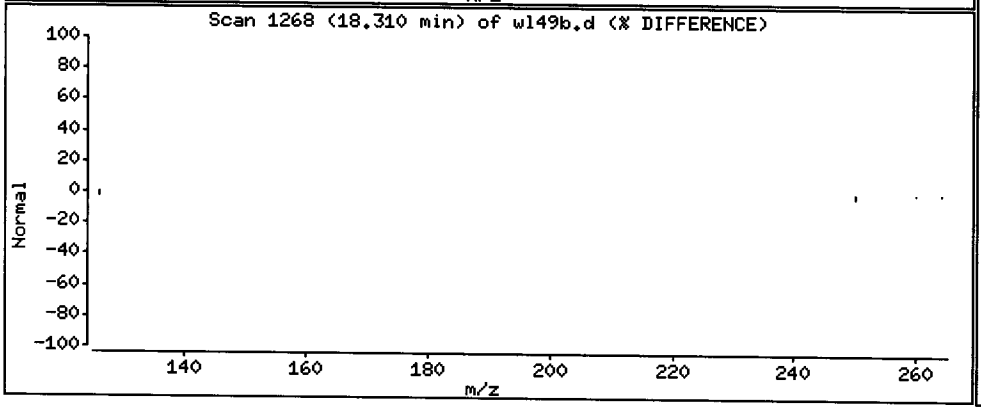












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

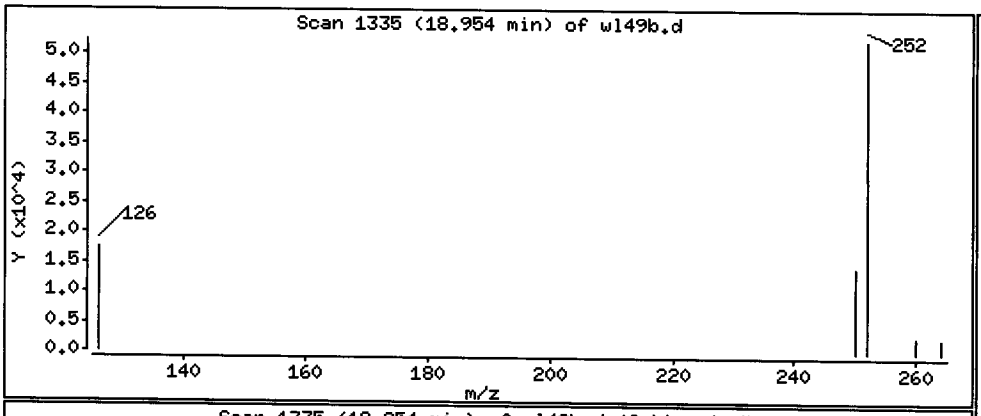
Operator: vts

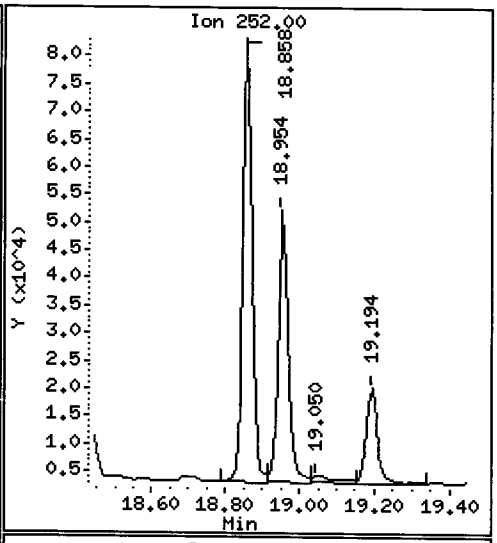
Column phase: Rxi-17Sil MS

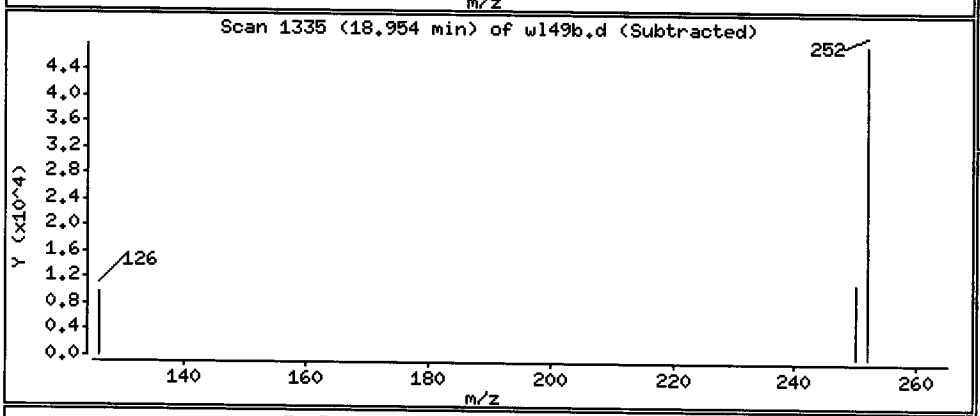
Column diameter: 0.25

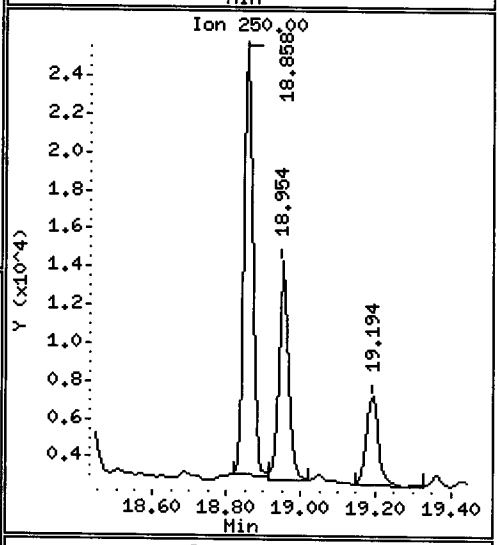
34 Benzo(a)pyrene

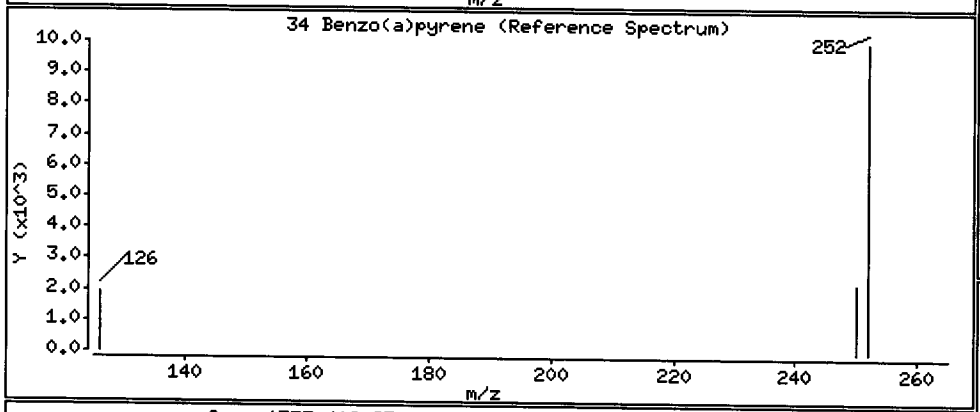
Concentration: 1920 ug/L

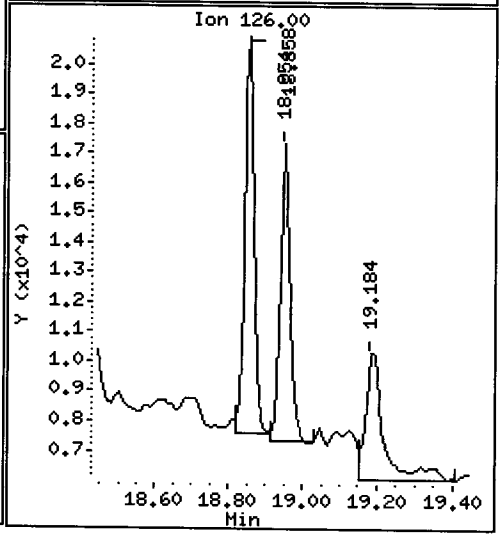


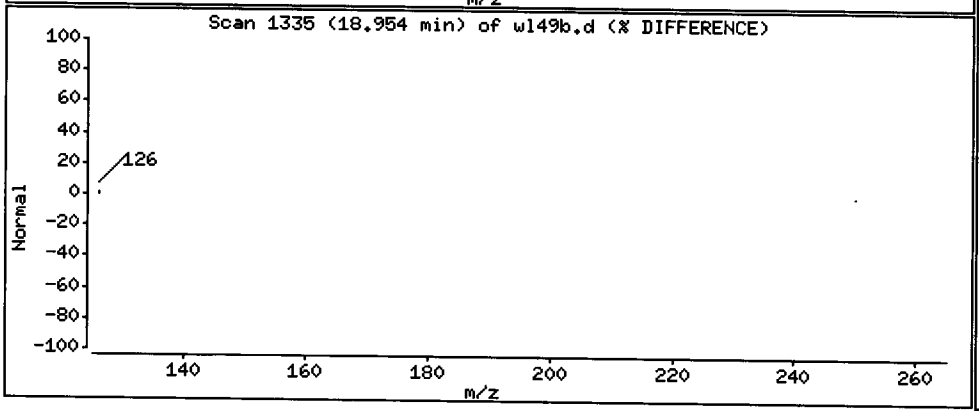












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

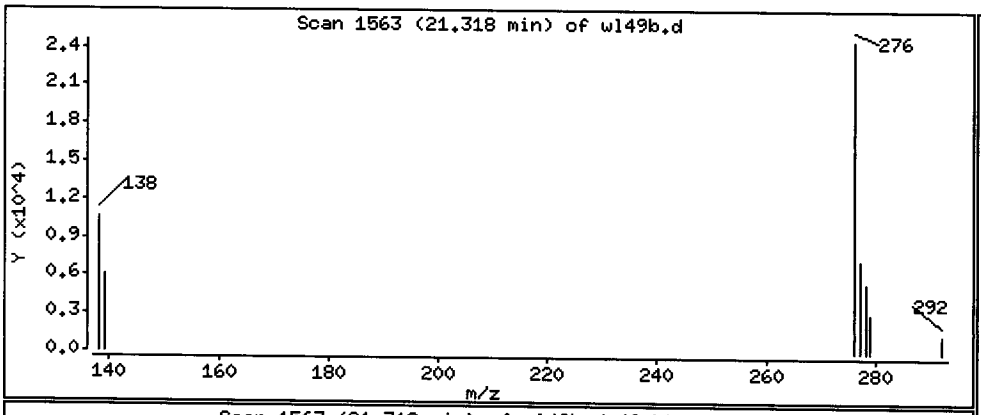
Operator: vts

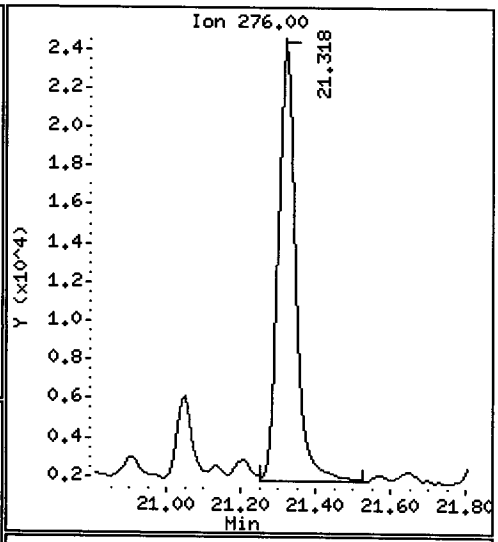
Column phase: Rxi-17Sil MS

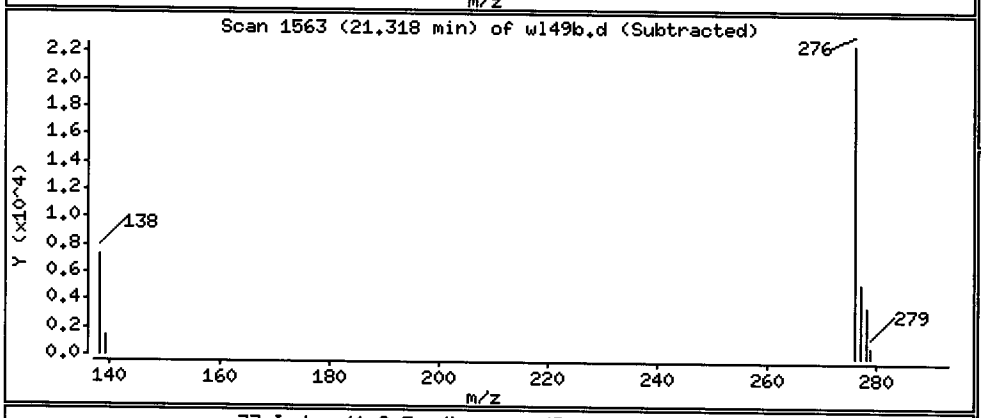
Column diameter: 0.25

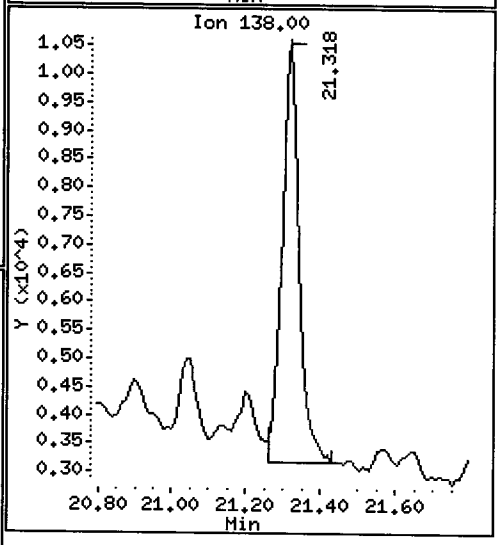
37 Indeno(1,2,3-cd)pyrene

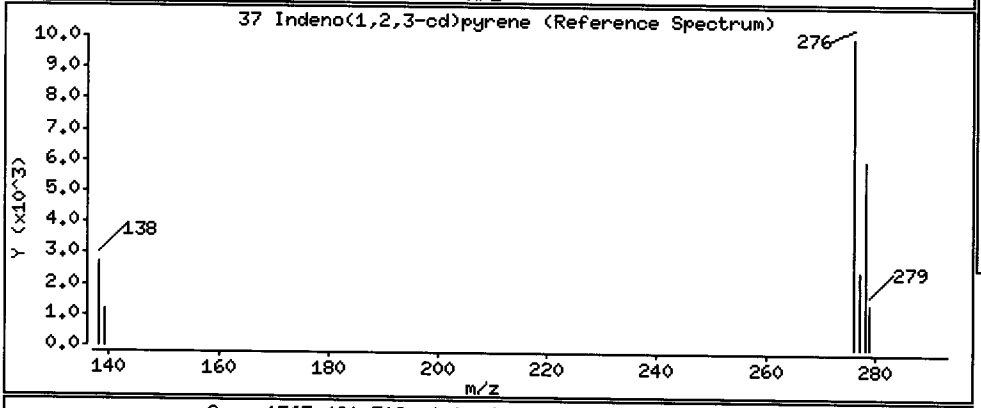
Concentration: 1200 ug/L

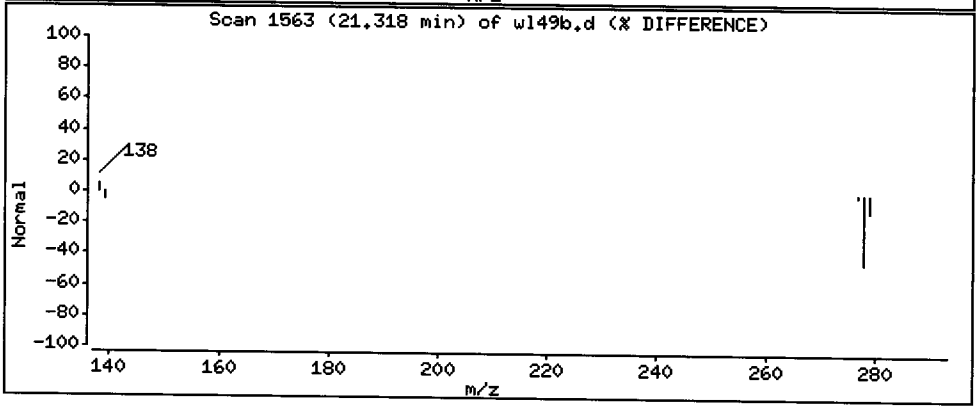












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

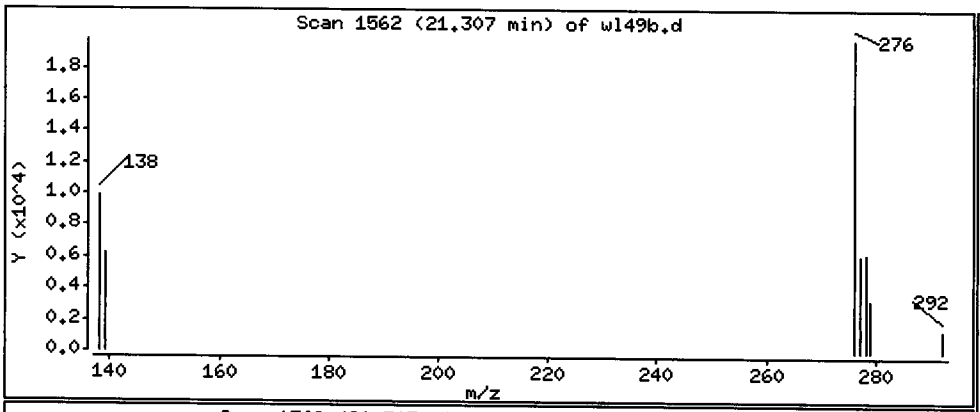
Operator: vts

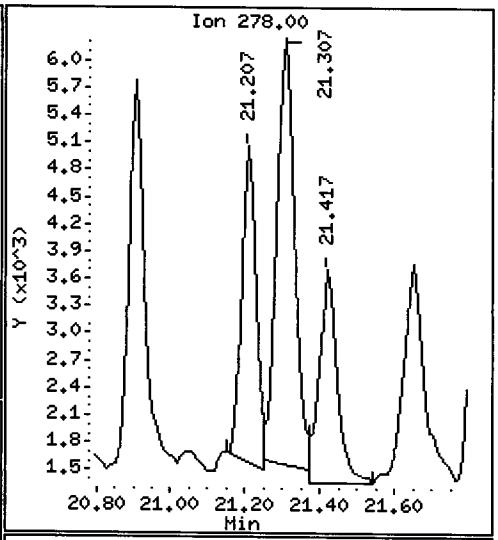
Column phase: Rxi-17Sil MS

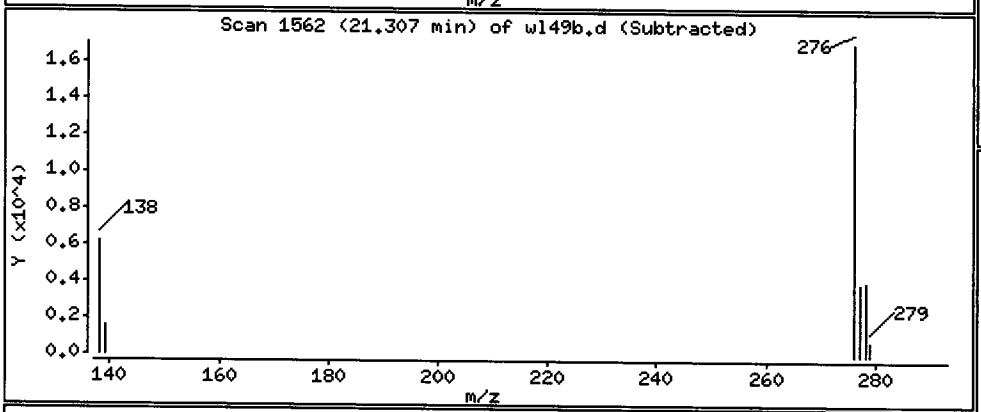
Column diameter: 0.25

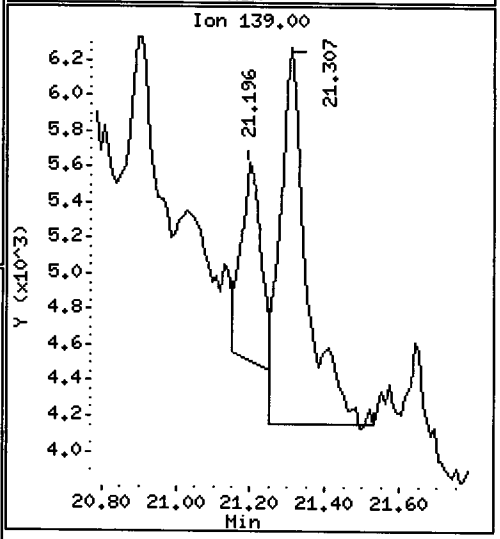
38 Dibenzo(a,h)anthracene

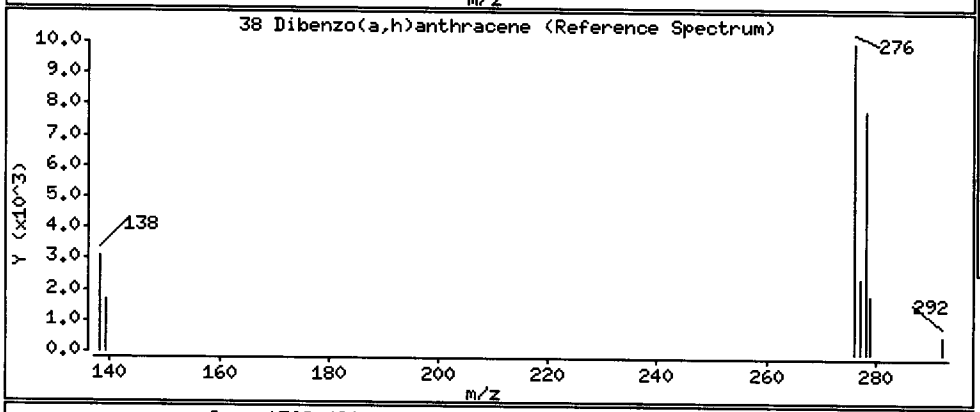
Concentration: 321 ug/L

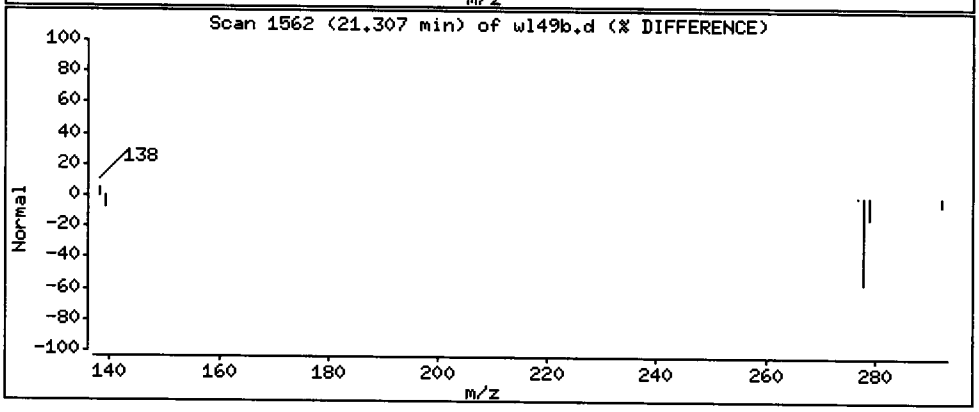












Data File: /chem3/nt11.i/20130420.b/wl49b.d

Date : 20-APR-2013 16:21

Client ID: IM-SW-01-20130410-W

Instrument: nt11.i

Sample Info: WL49B,10

Volume Injected (uL): 2.0

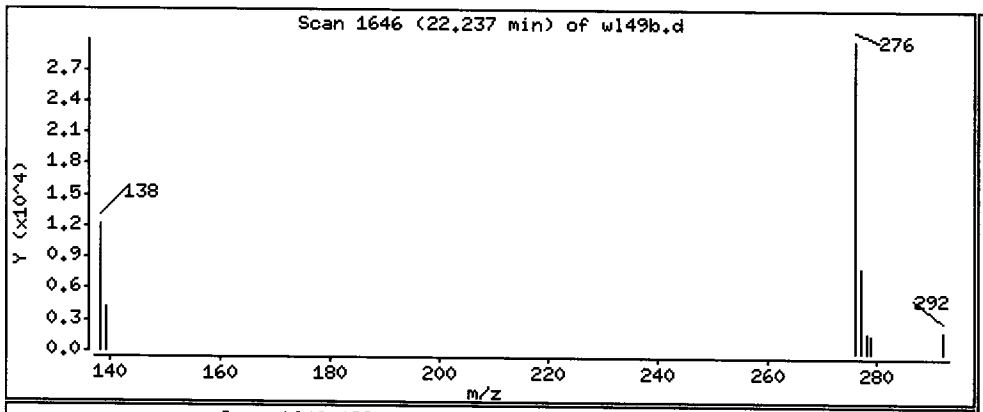
Operator: vts

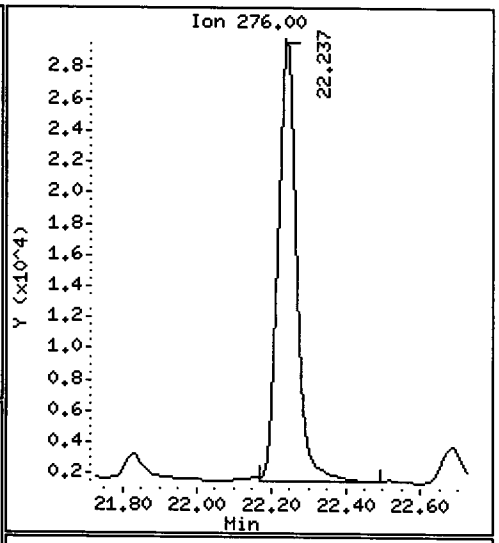
Column phase: Rxi-17Sil MS

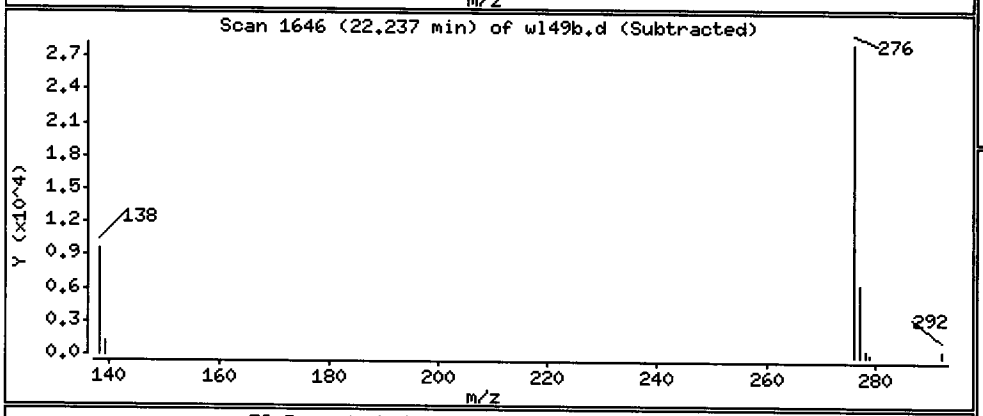
Column diameter: 0.25

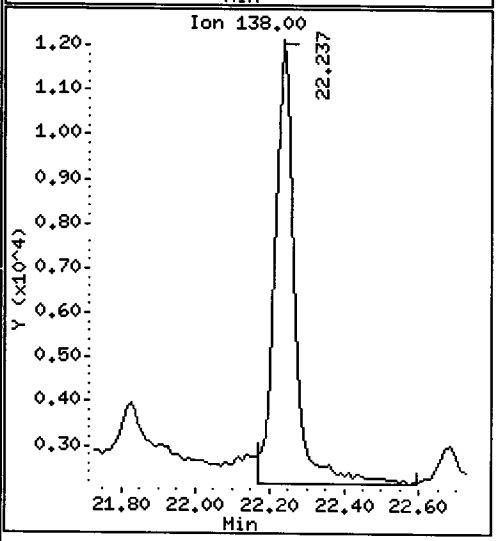
39 Benzo(g,h,i)perylene

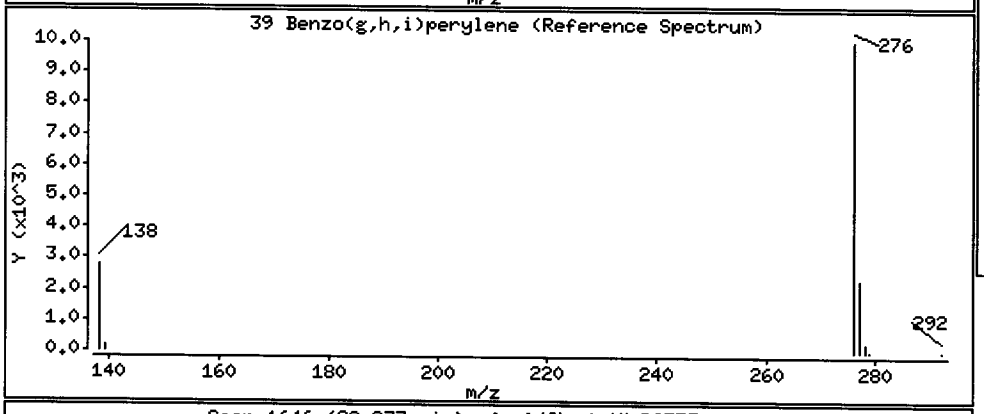
Concentration: 1790 ug/L

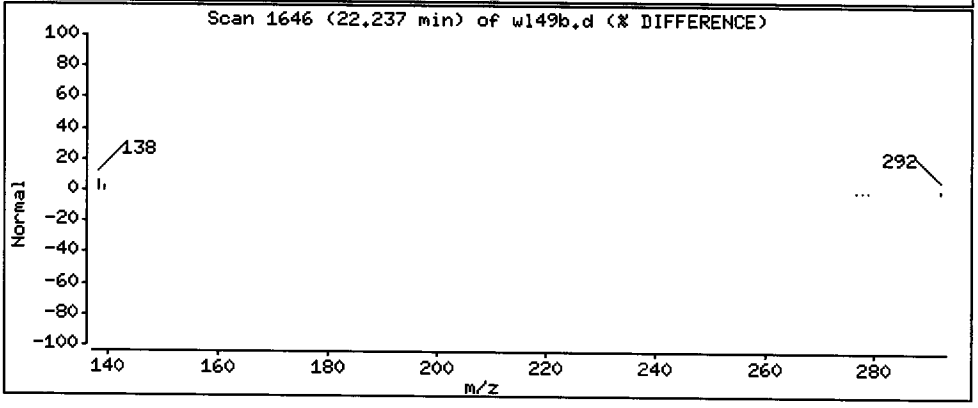












CO-ELUTION SUMMARY FOR FILE - wl49b.d

Lab ID: WL49B, Method: lowsim.m, Instrument: nt11.i, Date: 20-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WK49, WL49

Matrix (circle one)	Soil (Sediment) Oil Tissue	
Extraction Method	Start Time/Date:	End Time/Date:
Soxhlet	10:00 4/15/13	05:13 4/16/13

Reagent / Standard	**NA**	**ID / Lot Number**	**Initials**	**Date**
Analytical Balance		SN 24650344	PD	4/15/13
Purified Sand		I8085	PD	4/15/13
Toluene		I8141	PD	4/15/13
Hexane		I8166	PD	4/16/13
CH_2Cl_2		I8089	PD	4/16/13
H_2SO_4		I8012	PD	4/16/13
Na_2SO_4		I5068	PD	4/16/13
Glasswool		5/18/12	PD	4/16/13
10 % $AgNO_3$	/			
Basic Silica		H104	PD	4/16/13
Acid Silica		H143	PD	4/16/13
0% Silica		I8035	PD	4/16/13
Activated Florisil		H013	PD	4/16/13
Dual Carbon Column	/			
Other ( )	/			
Nonane		I5167	PD	4/16/13

Bottle ID	**ARI Sample ID**	**Sample Weight (eq to dry wt)**	**Roto Vap 45 °C**	**Final Vol.**	**H20 Trap Vol (mL)**	**Comments**
1-15-13	WK49 MB	10.00g	(1) 2	10uL	0.2	
↓	↓ OPR	10.00g	1 (2)	10uL	0.1	
	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
9	WK49E	27.42	(1) 2	10uL	18.00	
9	WL49F	18.01	1 (2)	10uL	5.8	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		PD 4/15/13	PD 4/16/13	PD 4/16/13	PD 4/16/13	

Reagent / Standard	**Vol**	**ID / Lot Number**	**Solution Conc.**	**Expiration Date**	**Initials**	**Date**	**Witness**
Recovery Standard	1.0 mL	~~2082-3~~ 2062-3	2/4ng/mL	~~3/15/14~~ 1/15/14	PDx2	4/15/13	PD
Ongoing Precision /Recovery	20 µL	2069-3	10/50/100ng/mL	2/6/14	PDx2	4/15/13	PD
~~QLS Standard~~	~~10 µL~~	21/	~~0.5/2.5/5ng/mL~~				
Clean-up Standard	1.0 mL	7082-4	0.8ng/mL	3/15/14	PDx2	4/16/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: [signature] 4/16/13 Bench Sheet No.: 00032

Verify Client ID	
Analyst/Date	PD 4/15/13
Acid Clean	(Y) N
Analyst/Date	PD 4/16/13
Silica-Florisil	(Y) N
Analyst/Date	PD 4/16/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 Client ID: SAIC

Parameter: Client Project:

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= 9/+	AC 4-12-13
☐ Standing Water Homogenized (Shared samples)=	↓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? 30% small-med. = g	
☐ Organics (Leaves/sticks/grass)= 10% sticks = g+ AC 4-12-13	
☐ Oily, obvious fuel/sulfur odors=	
☑ Other (Details)= Split F in two vials for Acid wash due to black extract	PD 4/16/13
Double Acid silica used due to yellow and turbid extract	PD 4/16/13
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)	

WL49 0119H

Dioxin Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

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: 77819 Column Type: RTX Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): dio13032_1-5 Detector Voltage: 350

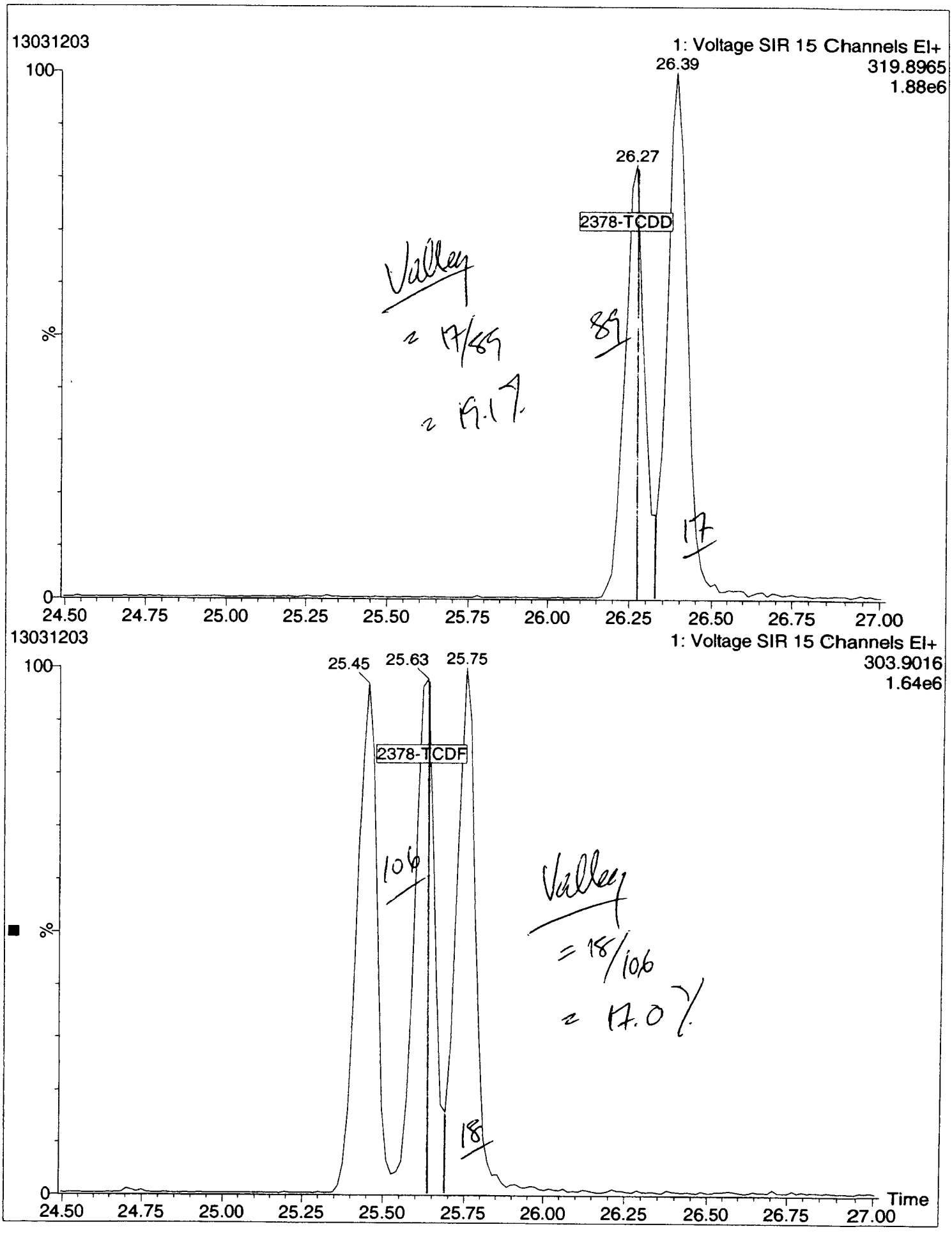
Resolution Check Files: 12:15, 22:03 Curve Date: 3/12/13

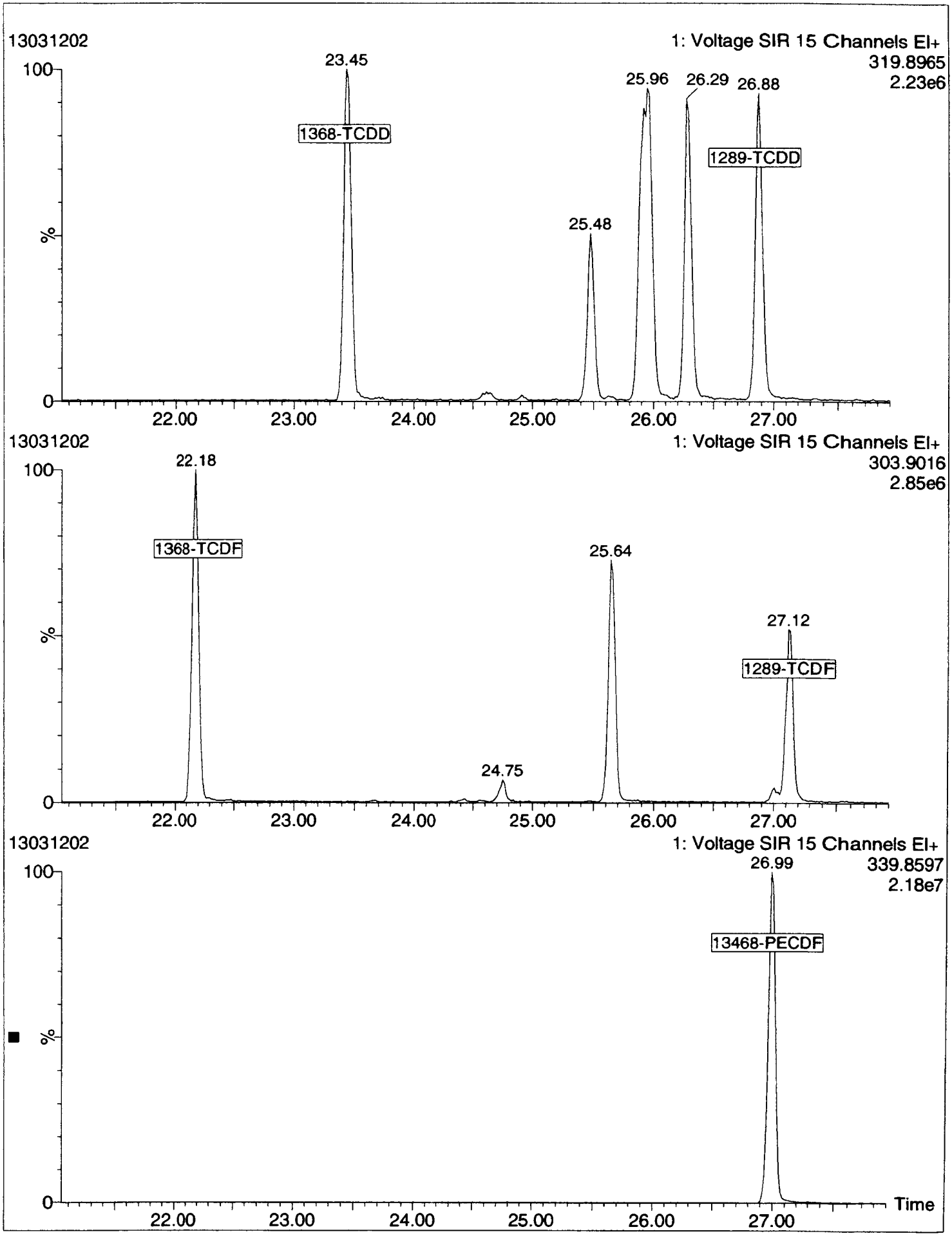
IS/SS	Ical/Ccal	LCS/ICV
I7908	I7908 C9972	

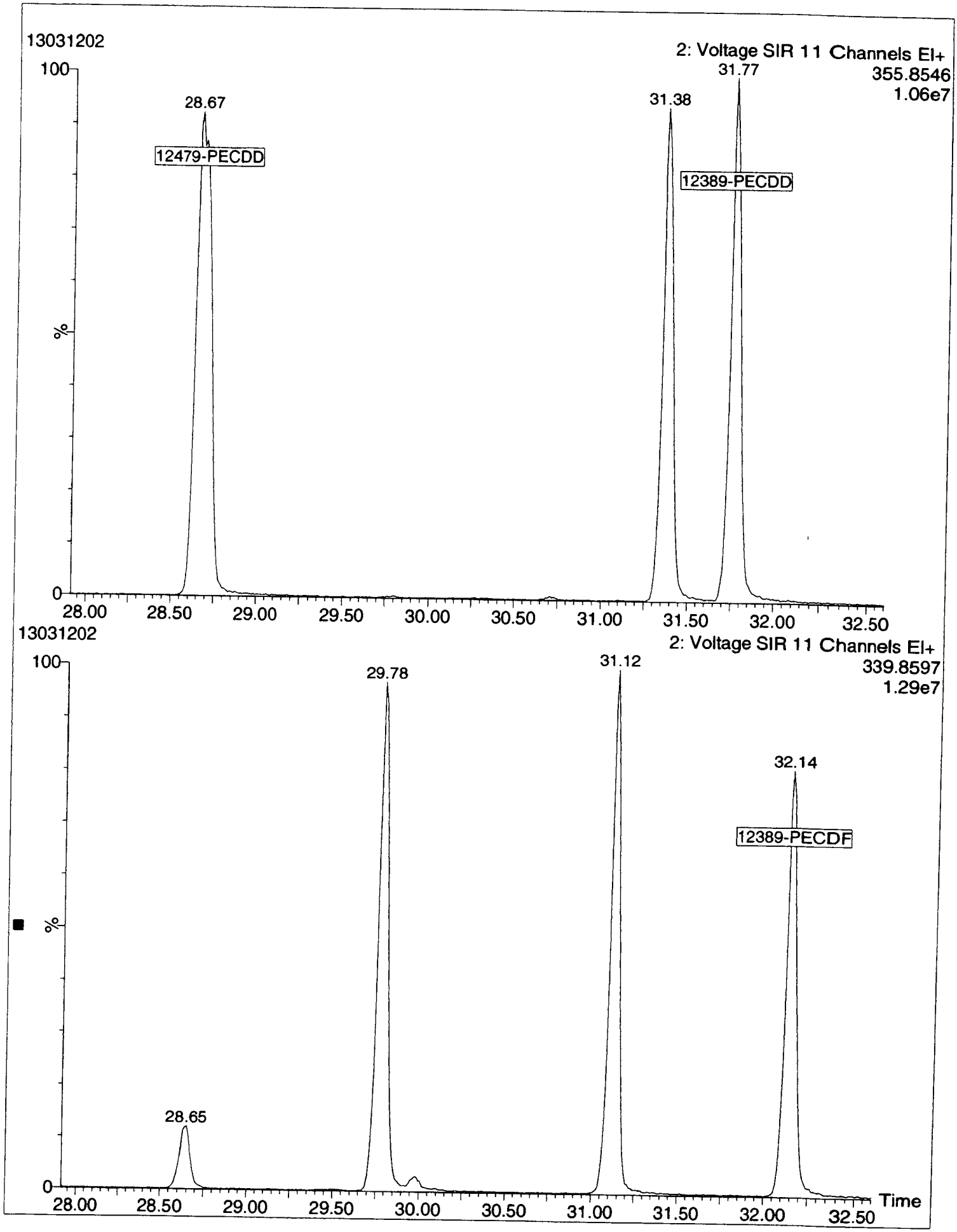
1	12-Mar-13	12:17:53	13031202	CS3
2	12-Mar-13	13:07:13	13031203	ISC01
3	12-Mar-13	15:01:10	13031204	CSL
4	12-Mar-13	15:57:32	13031205	CS1
5	12-Mar-13	16:46:52	13031206	CS2
6	12-Mar-13	17:38:09	13031207	CS3
7	12-Mar-13	18:29:32	13031208	CS4
8	12-Mar-13	19:20:50	13031209	CS5
9	12-Mar-13	20:12:13	13031210	ICV
10	12-Mar-13	21:03:32	13031211	CS3
11	12-Mar-13	22:03:05	13031212	ISC02

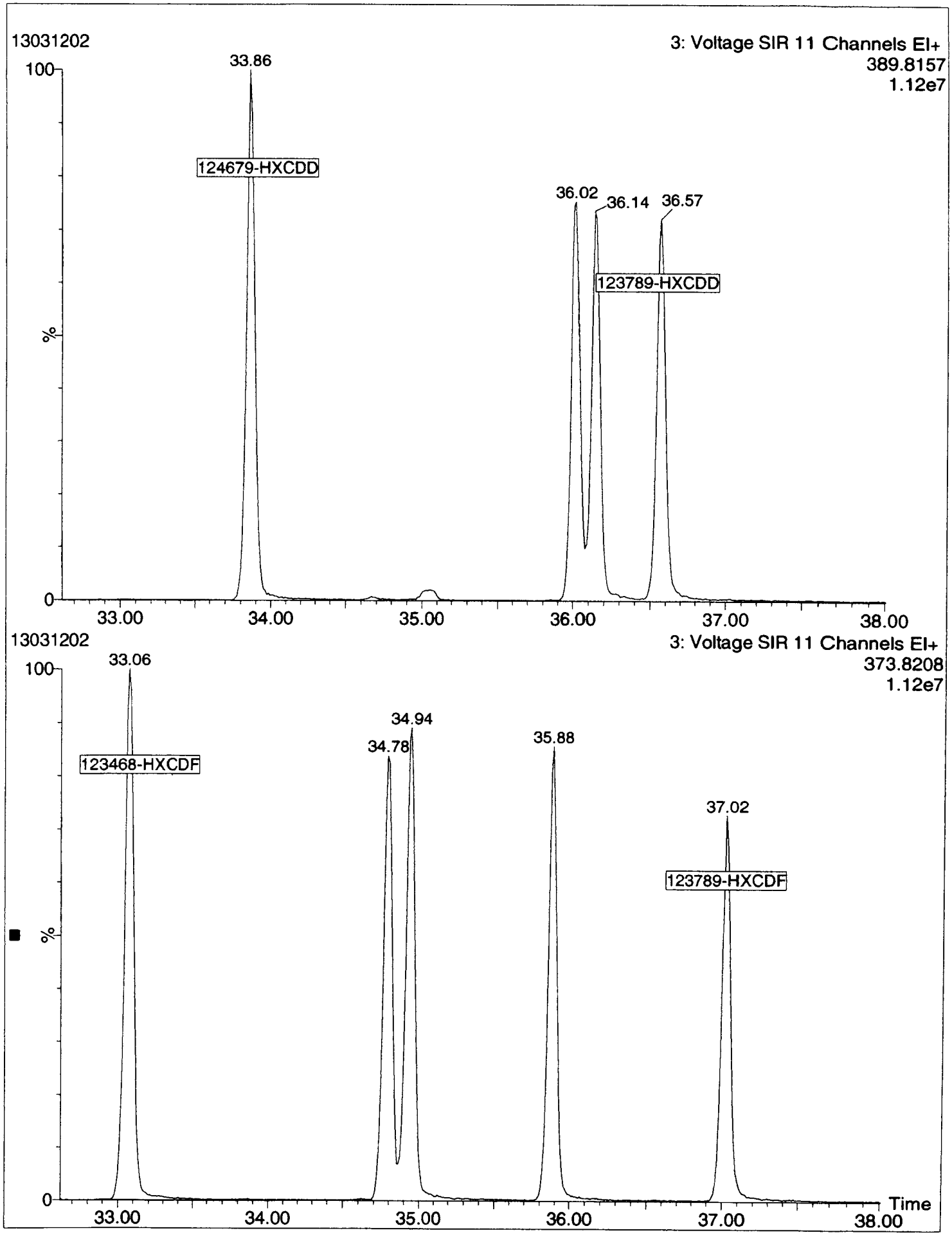
JH 3/13/13

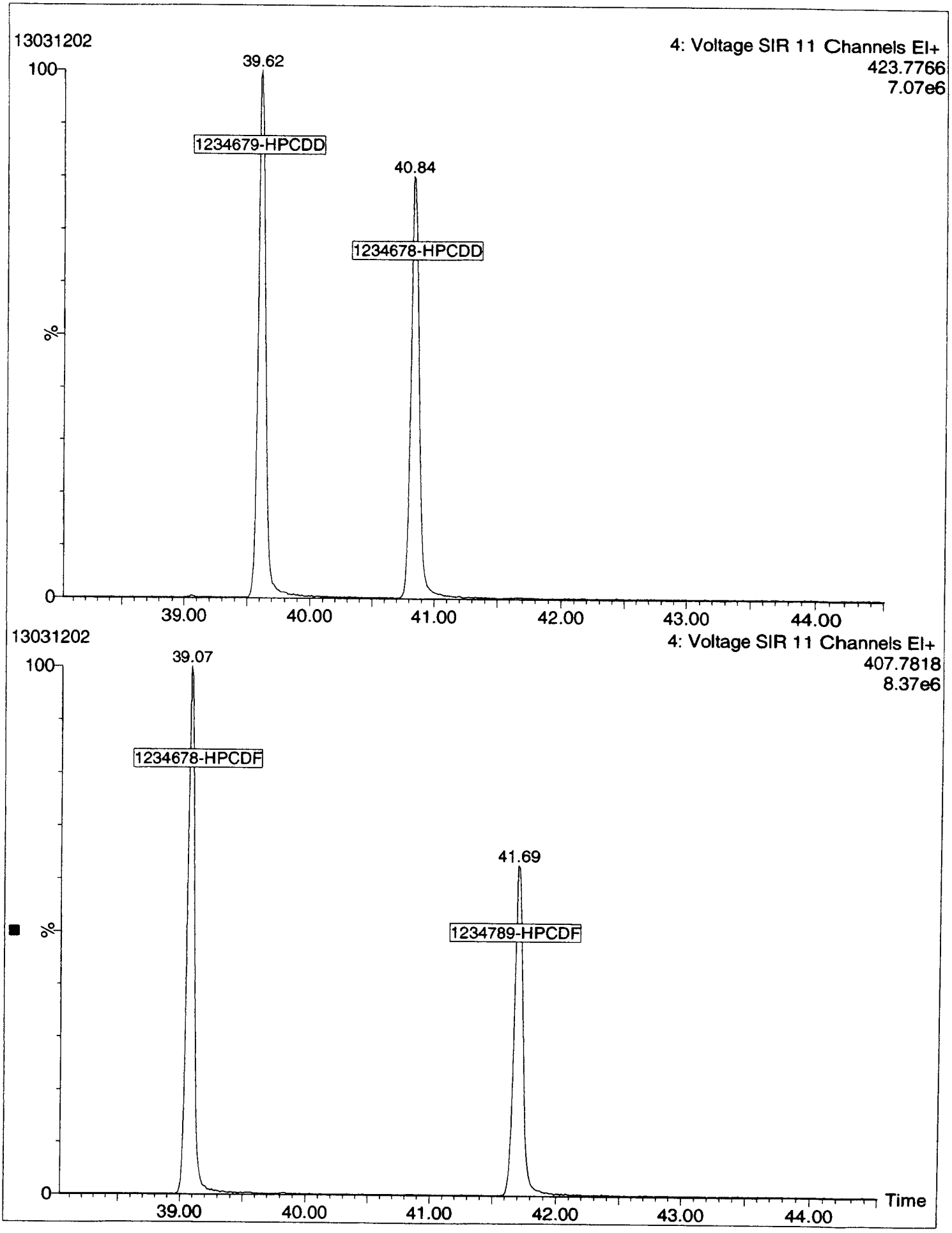
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS


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
29.78
31.12
32.14
12389-PECDF
28.65
28.00
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
Time


13031202
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
100
39.62
1234679-HPCDD
40.84
1234678-HPCDD
%
0
39.00
40.00
41.00
42.00
43.00
44.00
13031202
4: Voltage SIR 11 Channels EI+
407.7818
8.37e6
100
39.07
1234678-HPCDF
41.69
1234789-HPCDF
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00

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st Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
inted: 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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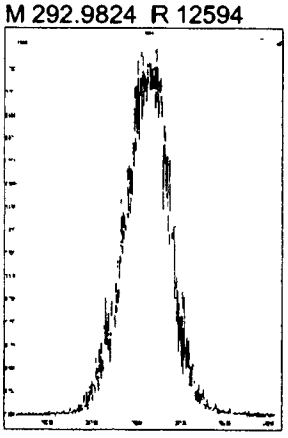
Calibration Saved	Saved to 'P:\DIOXIN8290.PRO\CurveDB\130312ICAL.cdb'	
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130312IC.qld'	

Baseline put back as original

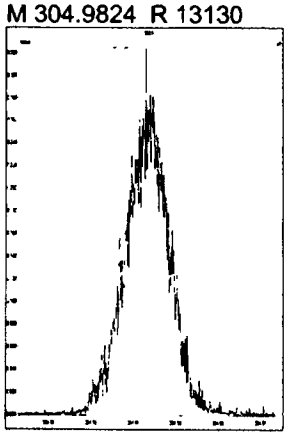
WL#9:01193

Printed: Tuesday, March 12, 2013 12:15:33 Pacific Daylight Time

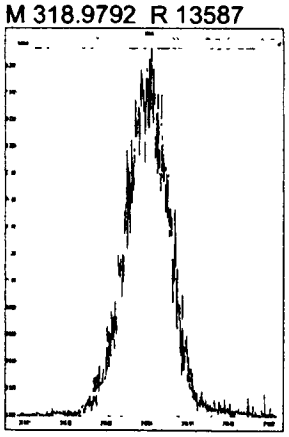
M 292.9824 R 12594



M 304.9824 R 13130



M 318.9792 R 13587



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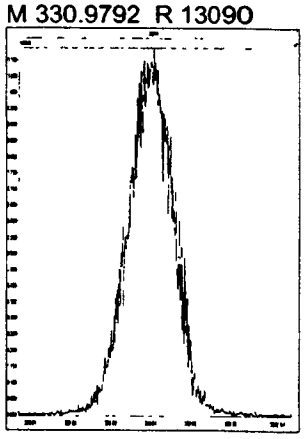

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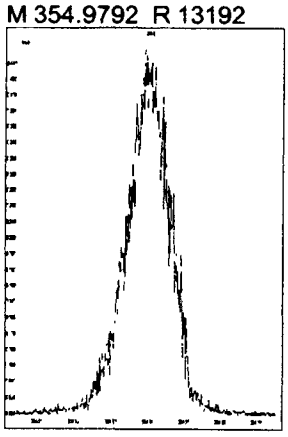

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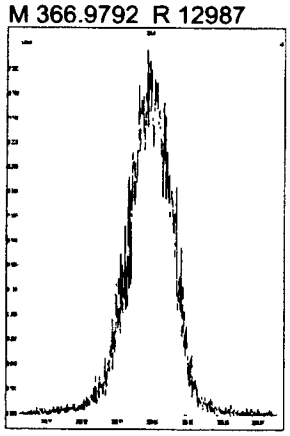
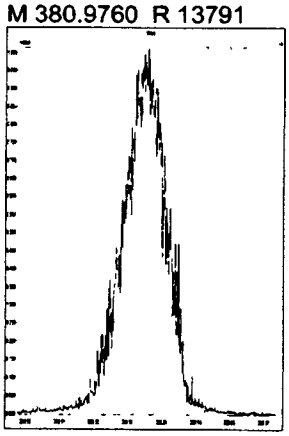


M 380.9760 R 13791



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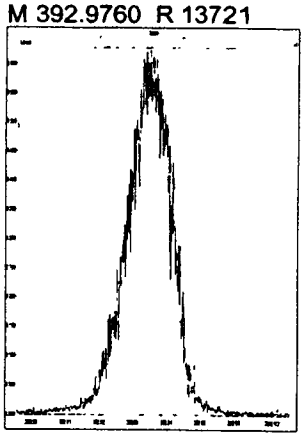
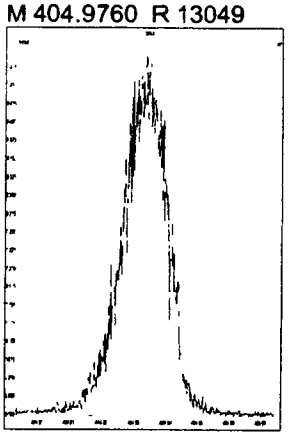


M 404.9760 R 13049



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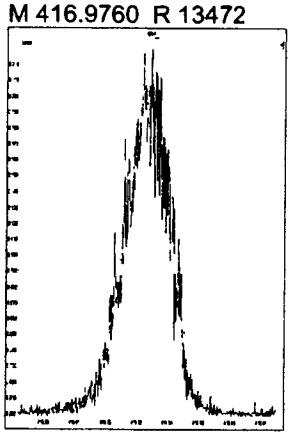
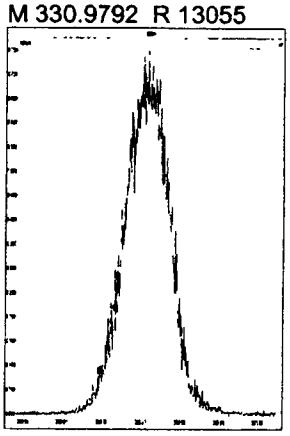


M 330.9792 R 13055



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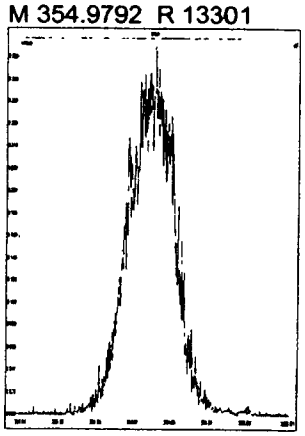

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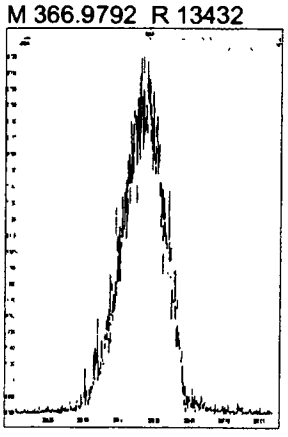
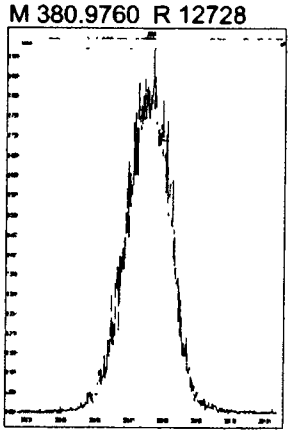
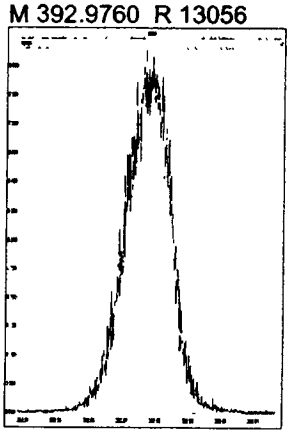


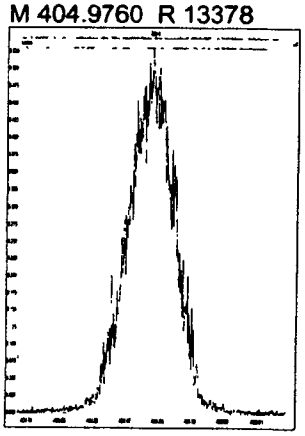
M 380.9760 R 12728



M 392.9760 R 13056



M 404.9760 R 13378



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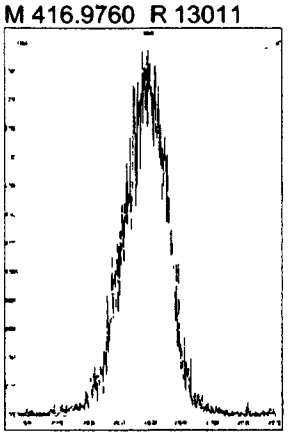
M 416.9760 R 13011



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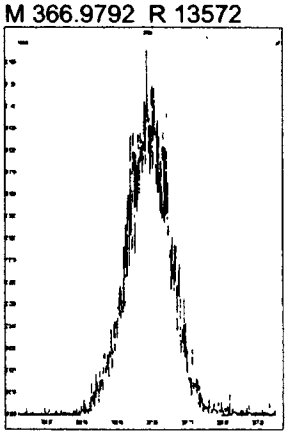

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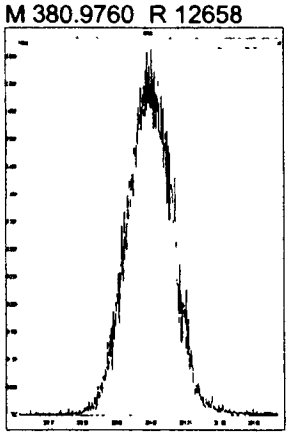
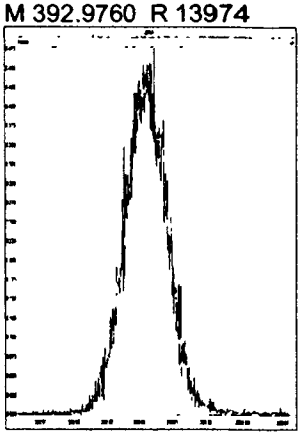


M 392.9760 R 13974



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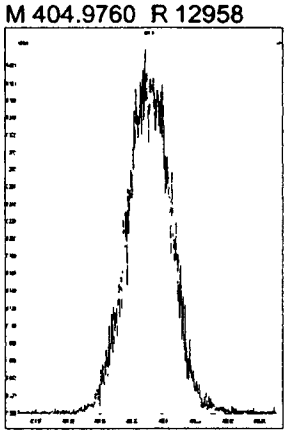
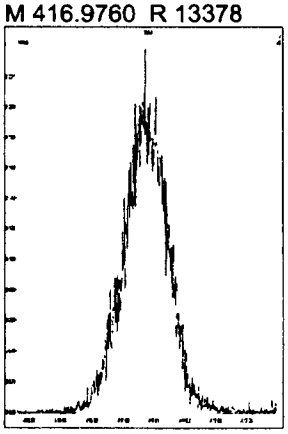
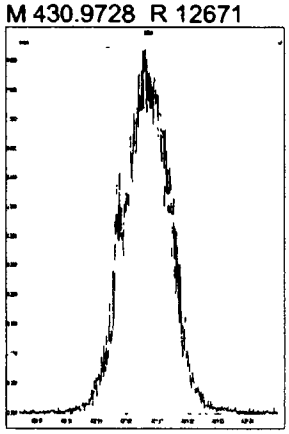


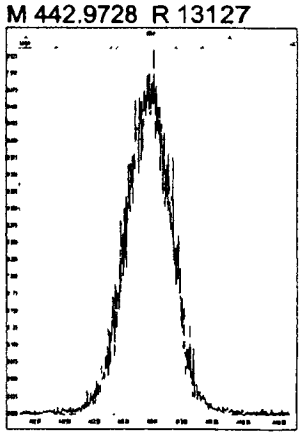
M 416.9760 R 13378



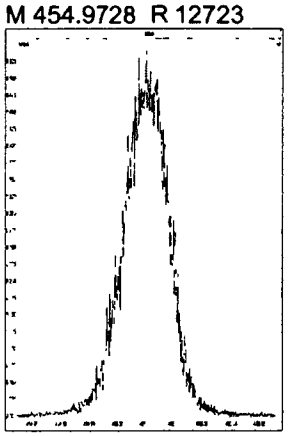
M 430.9728 R 12671



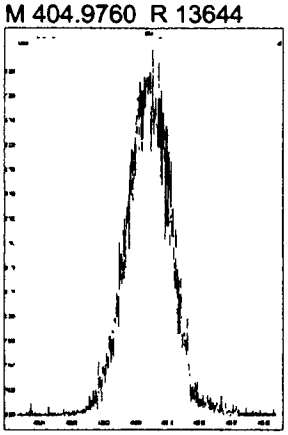
M 442.9728 R 13127



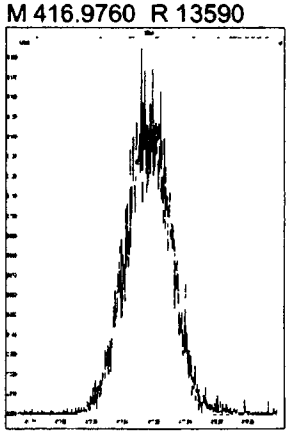
M 454.9728 R 12723



M 404.9760 R 13644



M 416.9760 R 13590



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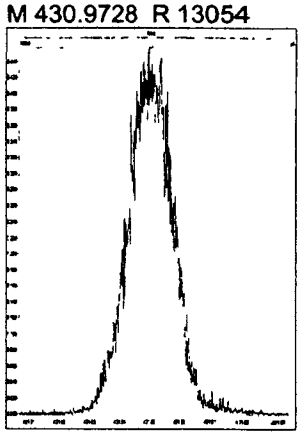
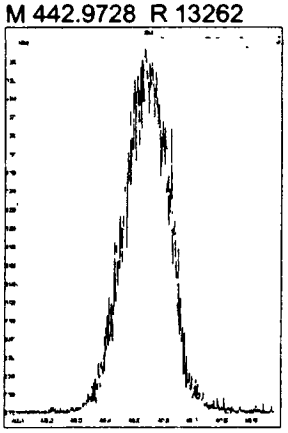
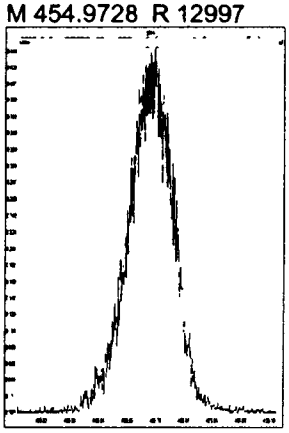


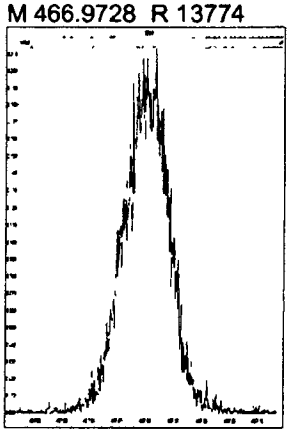
M 442.9728 R 13262



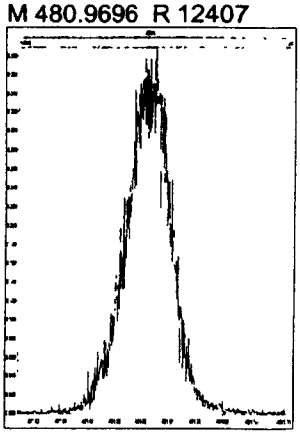
M 454.9728 R 12997



M 466.9728 R 13774



M 480.9696 R 12407



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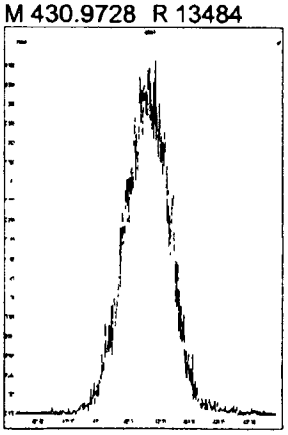
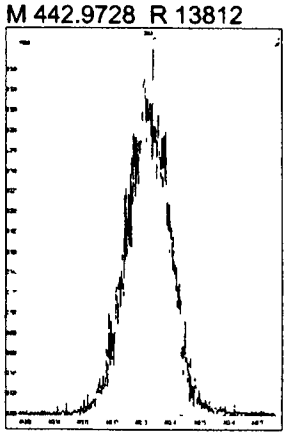
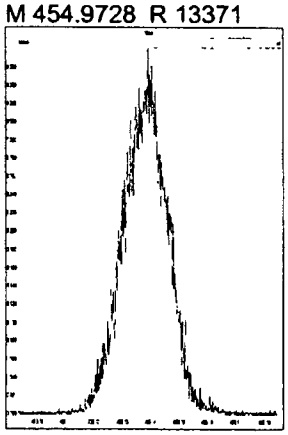


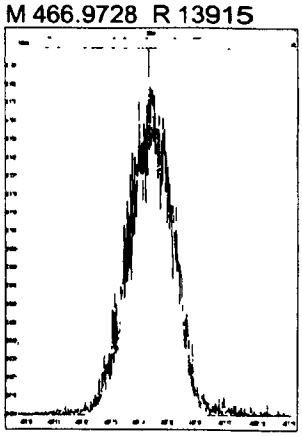
M 442.9728 R 13812



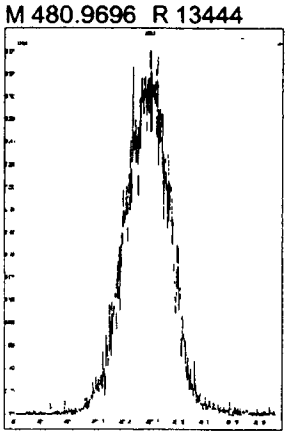
M 454.9728 R 13371



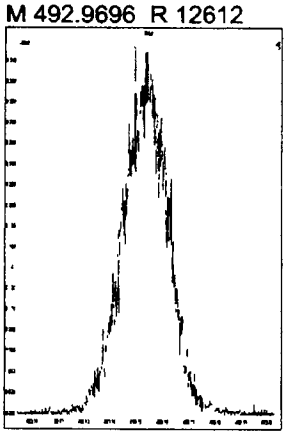
M 466.9728 R 13915



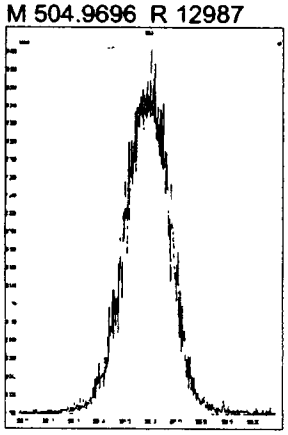
M 480.9696 R 13444



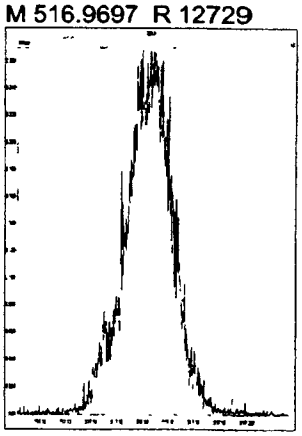
M 492.9696 R 12612



M 504.9696 R 12987

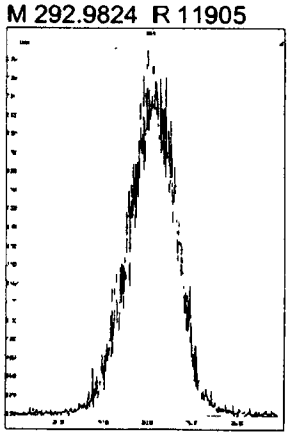


M 516.9697 R 12729

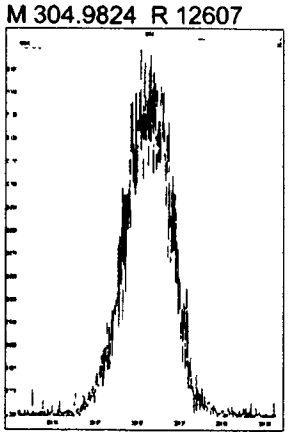


Printed: Tuesday, March 12, 2013 22:03:03 Pacific Daylight Time

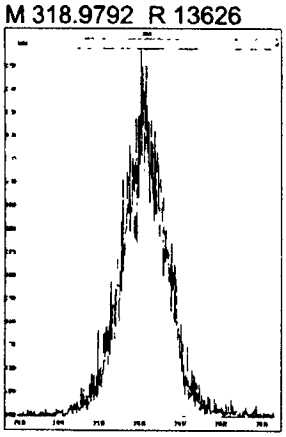
M 292.9824 R 11905



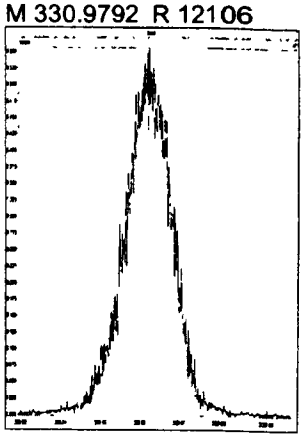
M 304.9824 R 12607



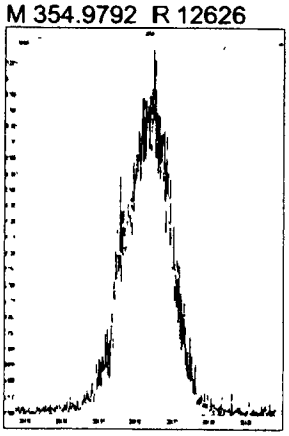
M 318.9792 R 13626



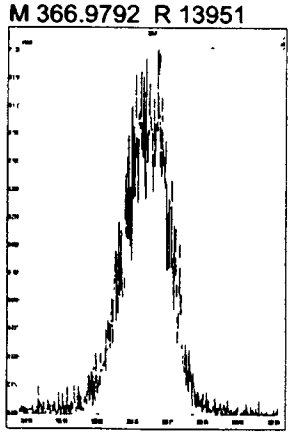
M 330.9792 R 12106



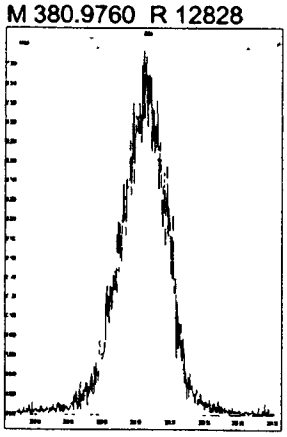
M 354.9792 R 12626



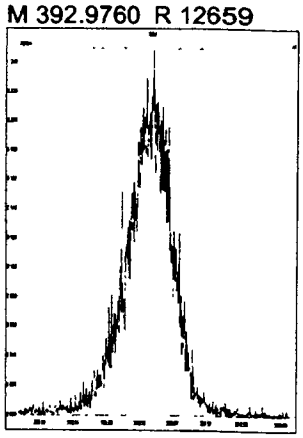
M 366.9792 R 13951



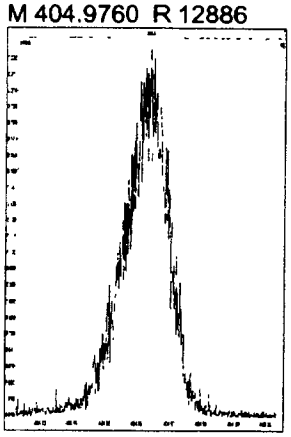
M 380.9760 R 12828



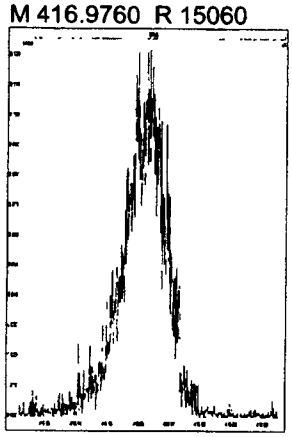
M 392.9760 R 12659



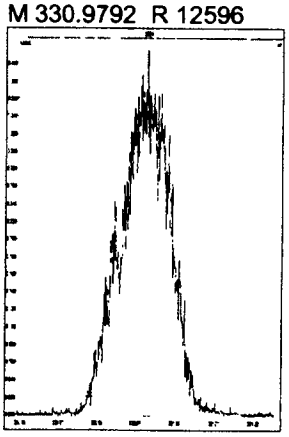
M 404.9760 R 12886



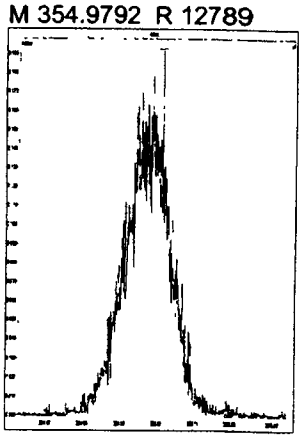
M 416.9760 R 15060



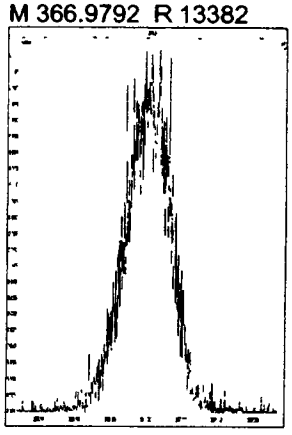
M 330.9792 R 12596



M 354.9792 R 12789



M 366.9792 R 13382



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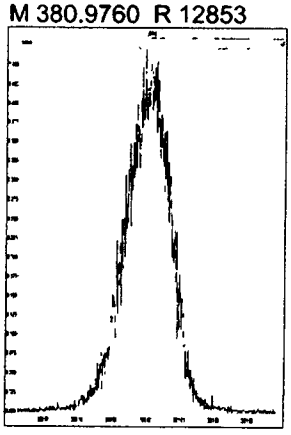

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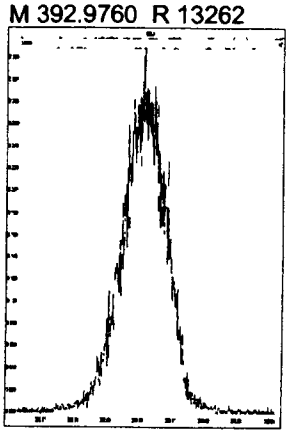
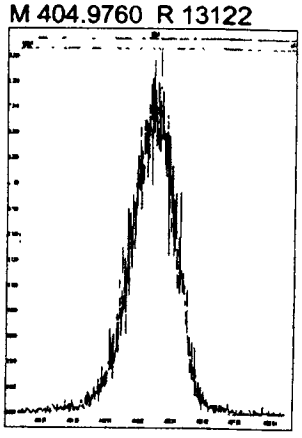


M 404.9760 R 13122



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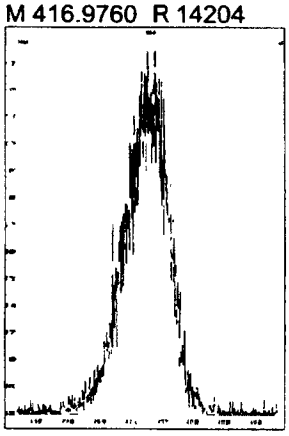
M 416.9760 R 14204



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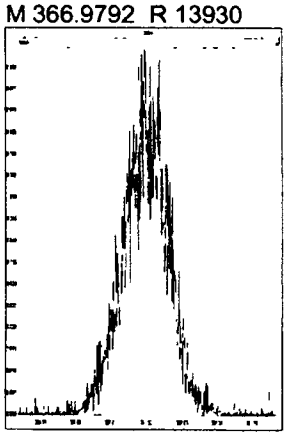

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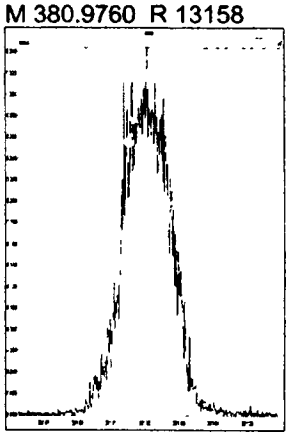

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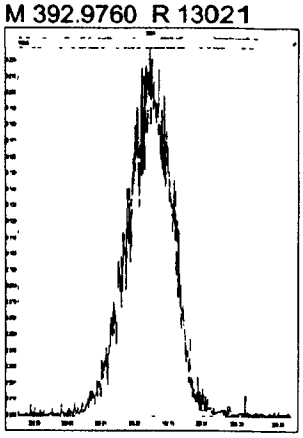

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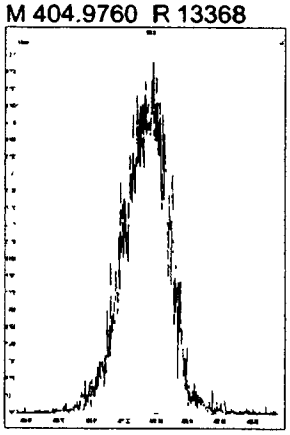

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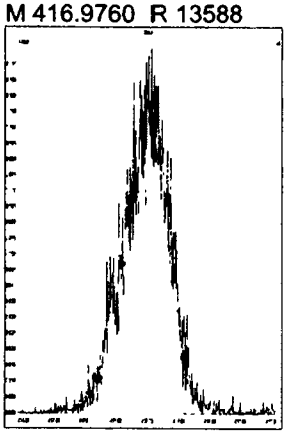

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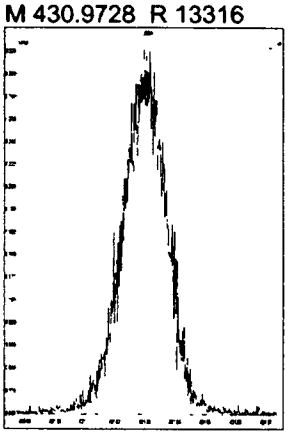
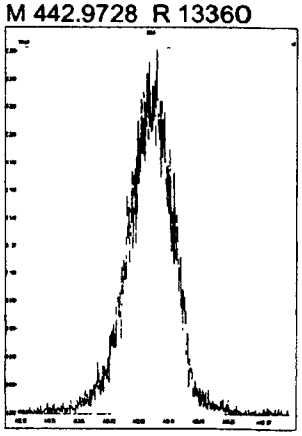


M 442.9728 R 13360



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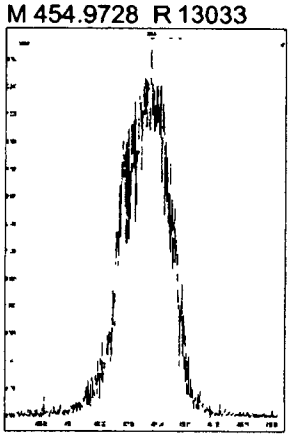

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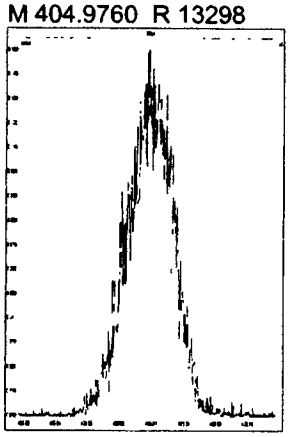

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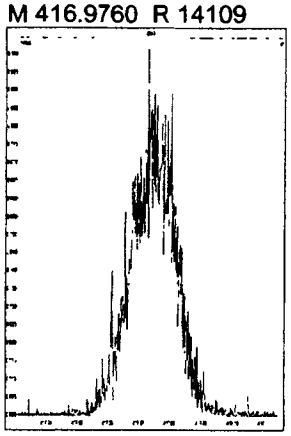

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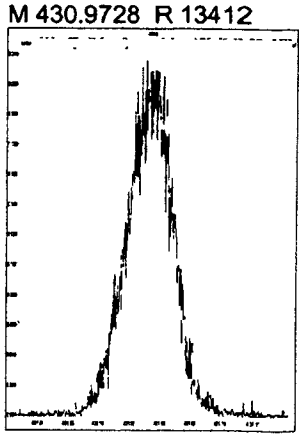

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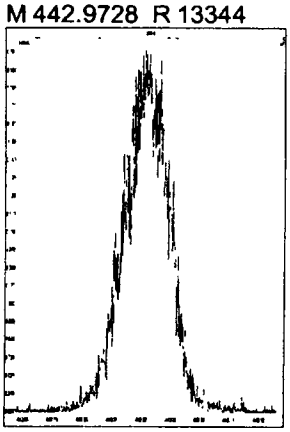

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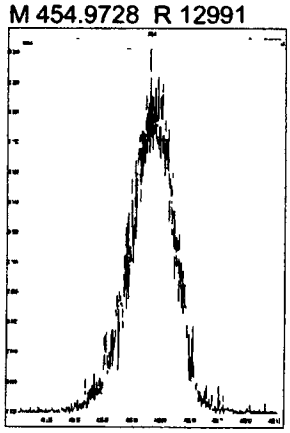
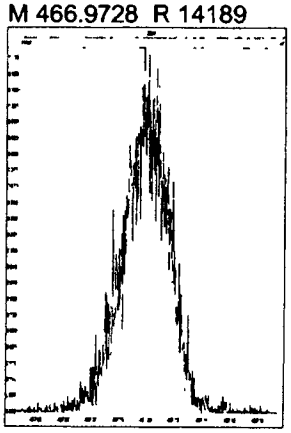


M 466.9728 R 14189



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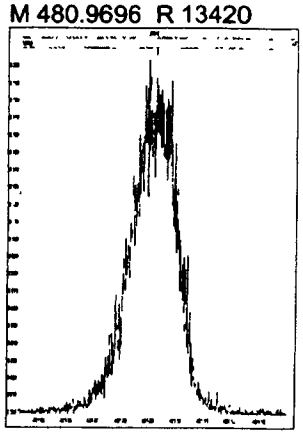

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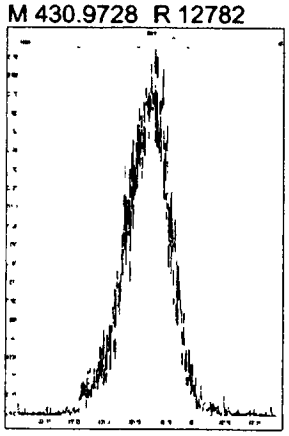

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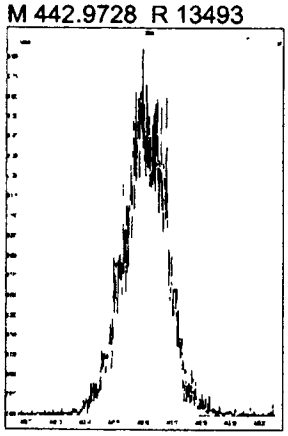

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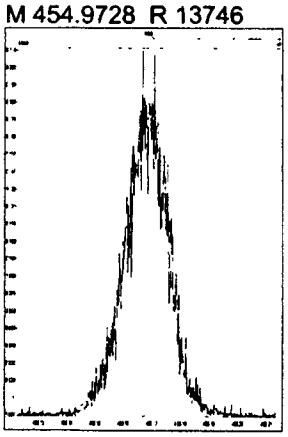

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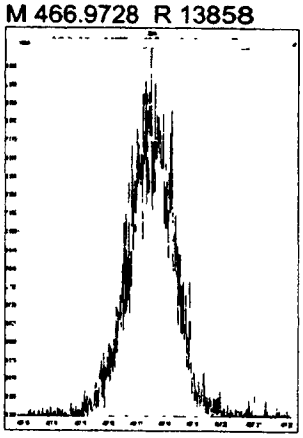
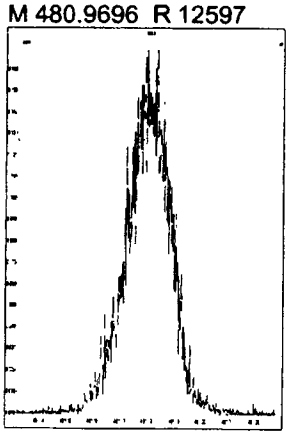


M 480.9696 R 12597



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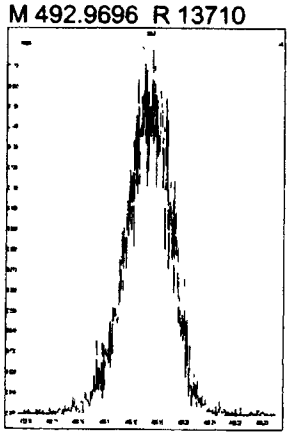

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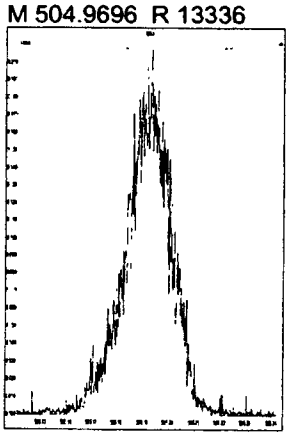
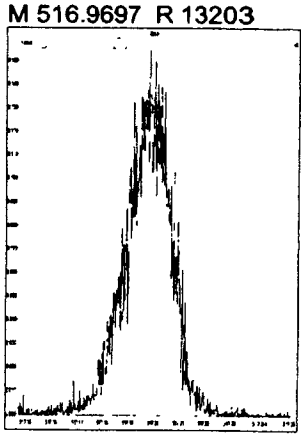


M 516.9697 R 13203



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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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	12378-PeCDF	29.763	1.000	5.90e3	3.72e3	0.836	1.587	1.550	102.3	NO	0.502	0.502
	23478-PeCDF	31.111	1.001	5.06e3	3.50e3	0.851	1.445	1.550	90.5	NO	0.477	0.477
	123478-HxCDF	34.771	1.000	3.94e3	3.73e3	1.017	1.055	1.240	71.4	NO	0.493	0.493
	234678-HxCDF	35.868	1.000	4.42e3	3.54e3	1.027	1.249	1.240	76.0	NO	0.515	0.515
	123678-HxCDF	34.925	1.001	4.68e3	3.80e3	1.013	1.232	1.240	91.8	NO	0.494	0.494
	123789-HxCDF	37.007	1.000	2.94e3	2.66e3	0.929	1.104	1.240	48.7	NO	0.456	0.456
	1234678-HpCDF	39.057	1.000	3.47e3	3.21e3	1.151	1.081	1.050	73.7	NO	0.474	0.474
	1234789-HpCDF	41.698	1.001	2.56e3	2.71e3	1.149	0.941	1.050	49.0	NO	0.508	0.508
	OCDF	46.818	1.006	4.00e3	4.64e3	0.963	0.863	0.890	59.1	NO	0.903	0.903
	2378-TCDD	26.287	1.001	1.02e3	1.38e3	0.980	0.739	0.770	17.2	NO	0.111	0.111
	12378-PeCDD	31.374	1.001	4.47e3	3.11e3	0.948	1.437	1.550	51.8	NO	0.508	0.508
	123478-HxCDD	36.010	1.001	3.51e3	2.99e3	0.941	1.175	1.240	42.1	NO	0.499	0.499
	123678-HxCDD	36.141	1.001	3.82e3	3.15e3	0.884	1.214	1.240	57.2	NO	0.513	0.513
	123789-HxCDD	36.547	1.012	3.76e3	2.79e3	0.870	1.350	1.240	37.9	NO	0.515	0.515
	1234678-HpCDD	40.832	1.001	2.78e3	2.93e3	0.948	0.947	1.050	59.5	NO	0.550	0.550
	OCDD	46.558	1.001	4.84e3	5.95e3	0.969	0.813	0.890	128.9	NO	1.122	1.122
	13C-2378-TCDF	25.615	1.006	1.33e6	1.71e6	1.318	0.779	0.770	4105.0	NO		99.206
	13C-12378-PeCDF	29.752	1.169	1.39e6	9.01e5	1.026	1.542	1.550	2825.7	NO		95.850
	13C-23478-PeCDF	31.089	1.222	1.28e6	8.28e5	0.966	1.546	1.550	2678.9	NO		93.717
	13C-123478-HxCDF	34.761	0.951	5.14e5	1.01e6	1.123	0.507	0.510	1594.9	NO		99.085
	13C-123678-HxCDF	34.903	0.955	5.67e5	1.13e6	1.216	0.502	0.510	1701.6	NO		101.676
	13C-234678-HxCDF	35.856	0.981	5.20e5	9.84e5	1.106	0.528	0.510	1555.2	NO		98.971
	13C-123789-HxCDF	36.996	1.012	4.52e5	8.71e5	0.995	0.520	0.510	1337.1	NO		96.830
	13C-1234678-HpCDF	39.046	1.068	3.69e5	8.57e5	0.896	0.431	0.440	2170.0	NO		99.623
	13C-1234789-HpCDF	41.665	1.140	2.79e5	6.24e5	0.693	0.447	0.440	1405.3	NO		94.831
	13C-1234-TCDD	25.450	0.000	1.02e6	1.31e6	1.000	0.777	0.770	2964.7	NO		100.000
	13C-2378-TCDD	26.257	1.032	9.57e5	1.25e6	0.961	0.766	0.770	2652.8	NO		98.560
	13C-12378-PeCDD	31.352	1.232	9.64e5	6.10e5	0.703	1.581	1.550	2926.5	NO		96.057
	13C-123478-HxCDD	35.988	0.985	7.78e5	6.07e5	1.016	1.281	1.240	3534.8	NO		99.261
	13C-123678-HxCDD	36.119	0.988	8.53e5	6.85e5	1.098	1.245	1.240	3678.5	NO		101.955
	13C-1234678-HpCDD	40.810	1.117	5.44e5	5.51e5	0.828	0.986	1.050	1858.0	NO		96.231
	13C-OCDD	46.531	1.273	9.36e5	1.05e6	0.770	0.892	0.890	2244.5	NO		187.792

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	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							
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	FUNCTION3 PFK			0.00e0							
	FUNCTION4 PFK			1.47e6							
	FUNCTION5 PFK			2.01e5							
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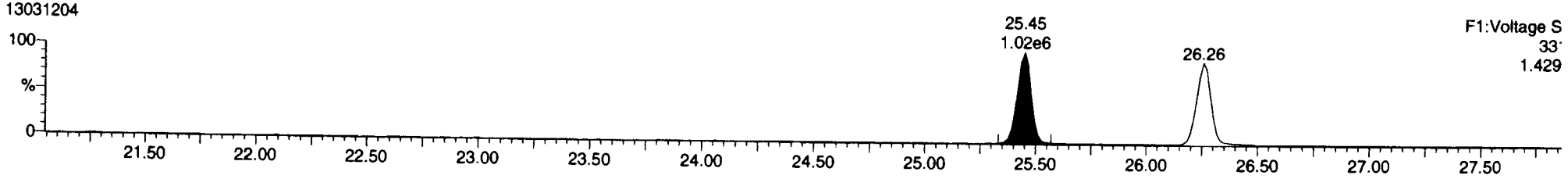
	FUNCTION1 HPCDPE			6.65e2							0.000
	FUNCTION2 HPCDPE			3.68e2							0.000
	FUNCTION3 OCDPE			0.00e0							
	FUNCTION4 NCDPE			1.75e2							0.000
	FUNCTION5 DCDPE			1.00e2							0.000

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

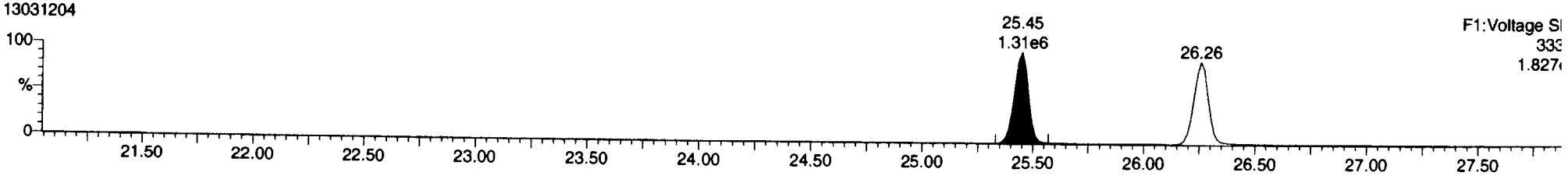
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

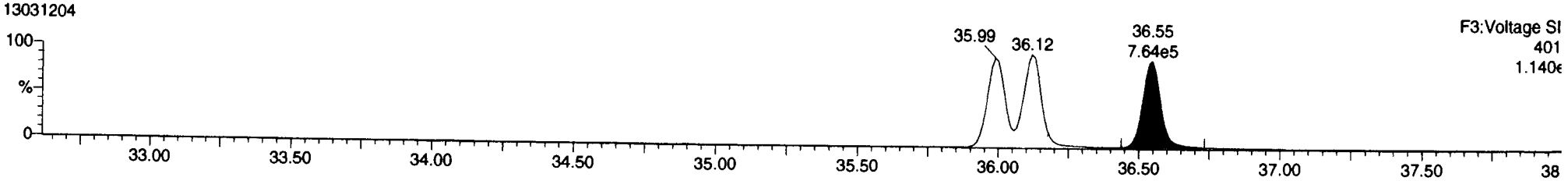
13C-1234-TCDD
13031204



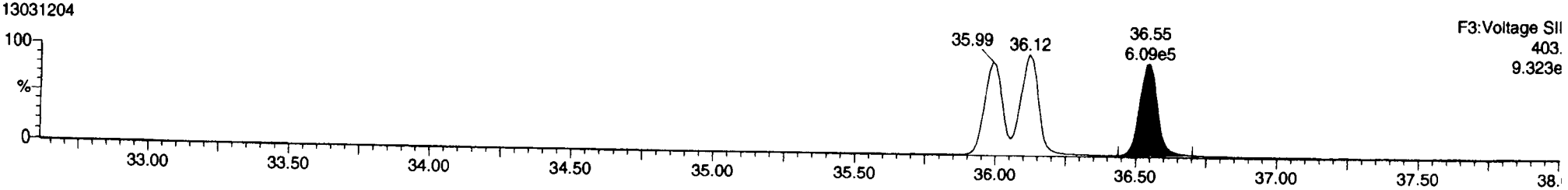
13C-1234-TCDD
13031204



13C-123789-HxCDD
13031204



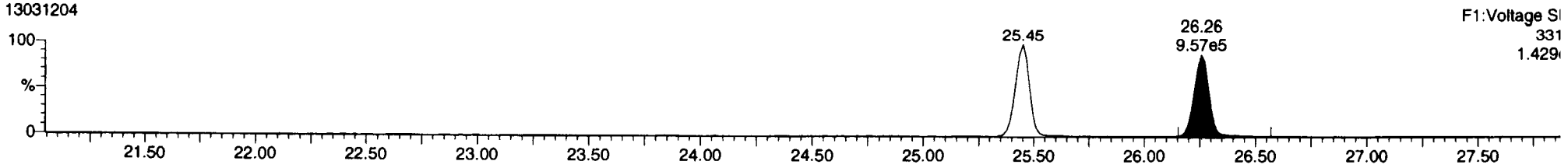
13C-123789-HxCDD
13031204



ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD

13031204



13C-2378-TCDD

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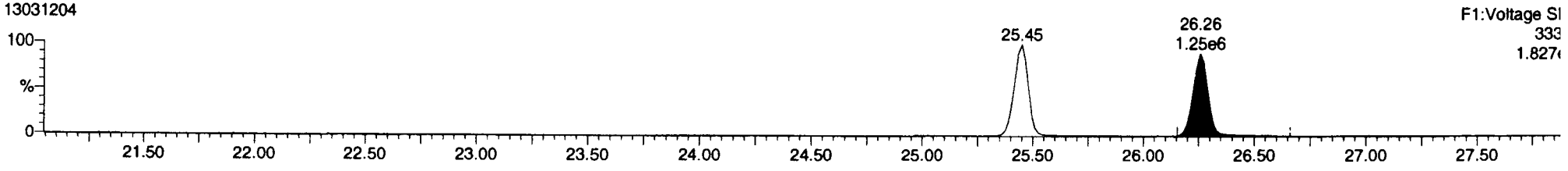

Total-tetradioxins

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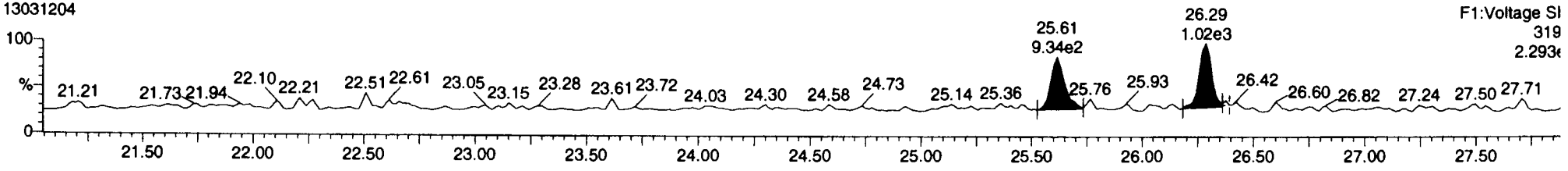
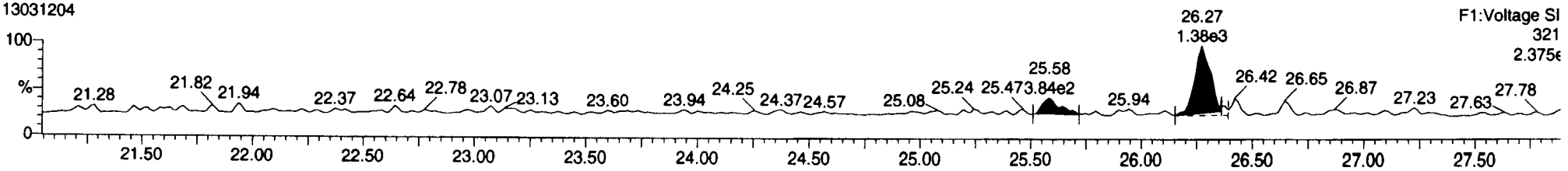


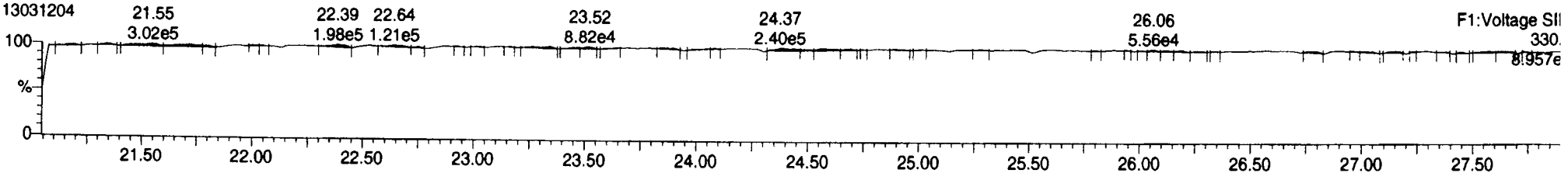
Total-tetradioxins

13031204



FUNCTION1 PFK

13031204



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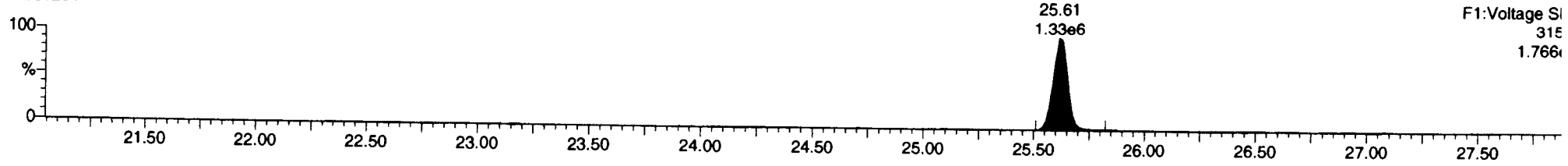
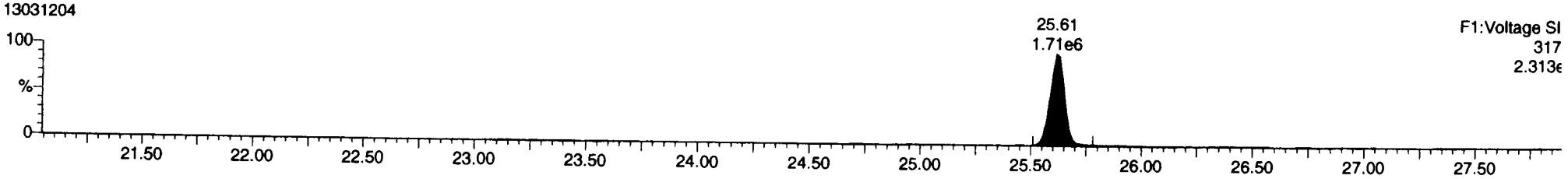
13C-2378-TCDF

13031204



13C-2378-TCDF

13031204



Total-tetrafurans

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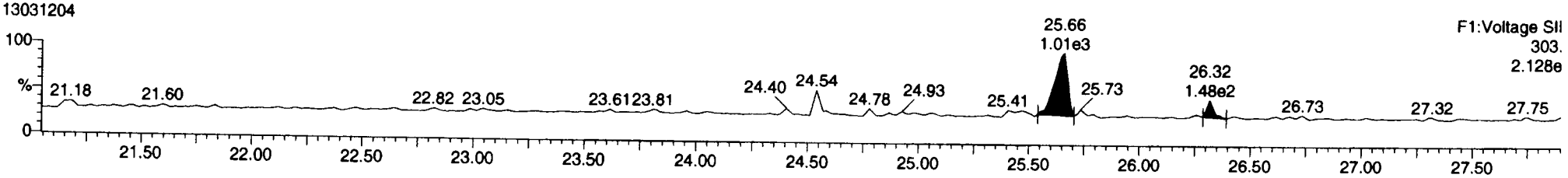

Total-tetrafurans

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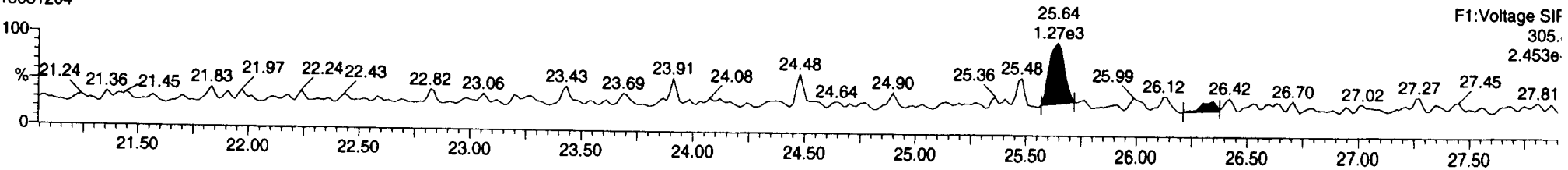
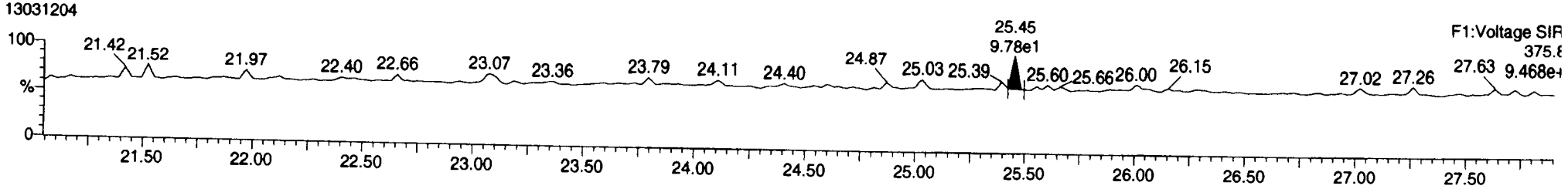


FUNCTION1 HXCDPE

13031204



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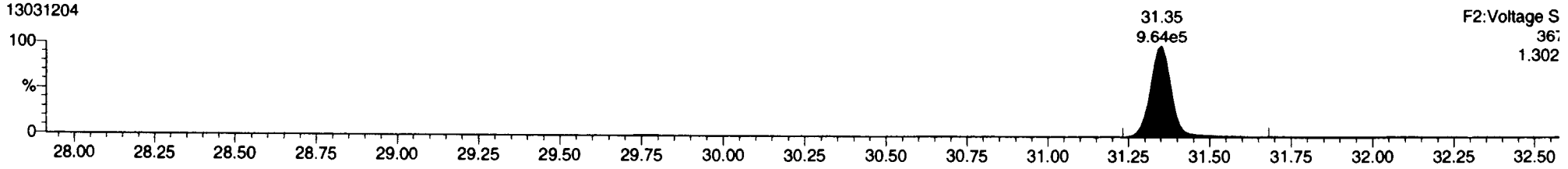
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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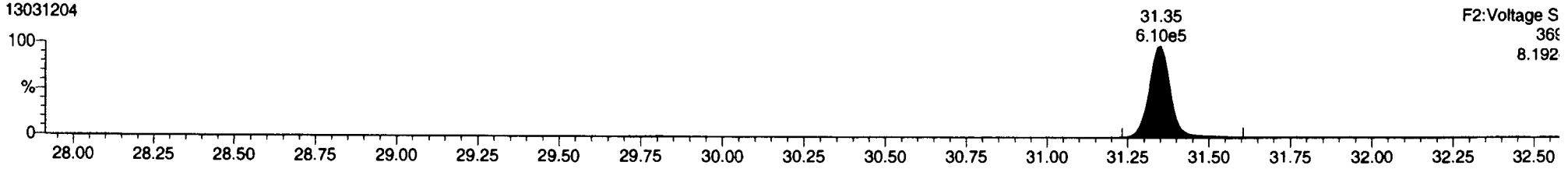
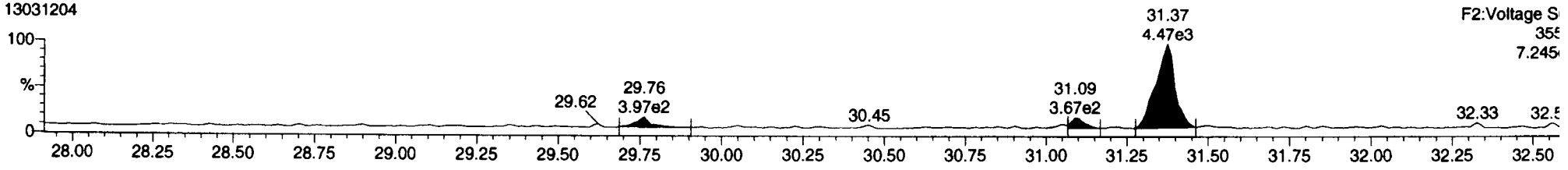
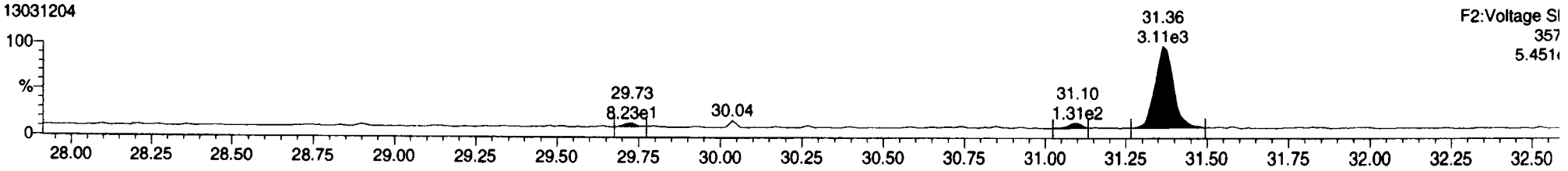


Total-pentadioxins



Total-pentadioxins



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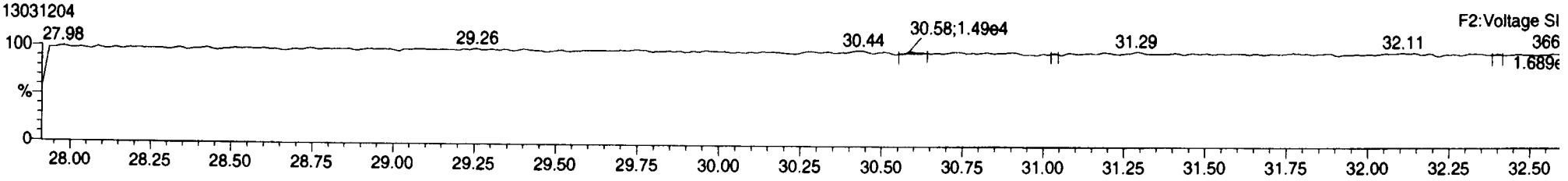

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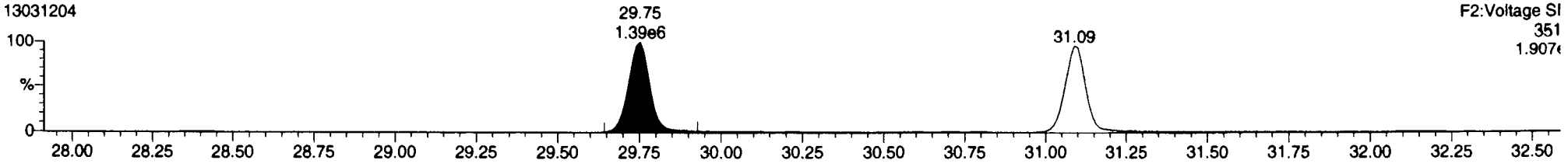
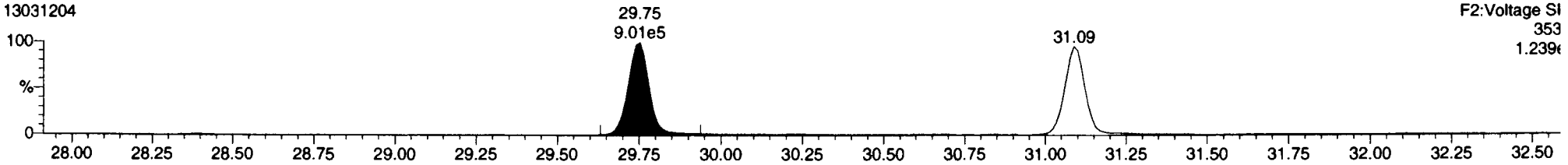
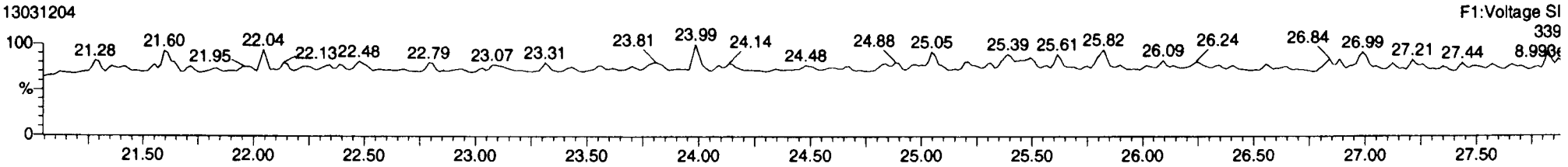
13C-12378-PeCDF



13C-12378-PeCDF



Total-penta1



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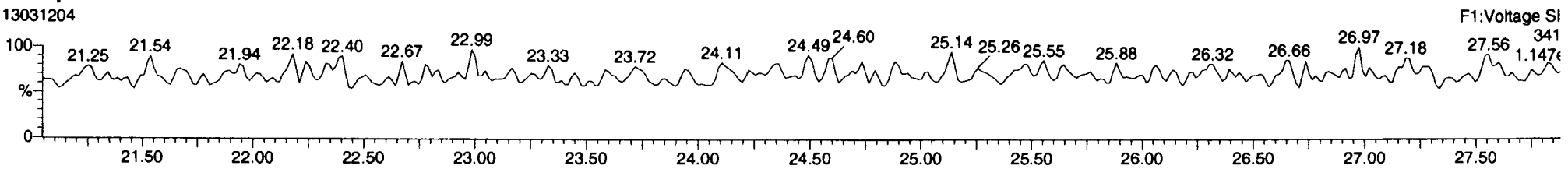

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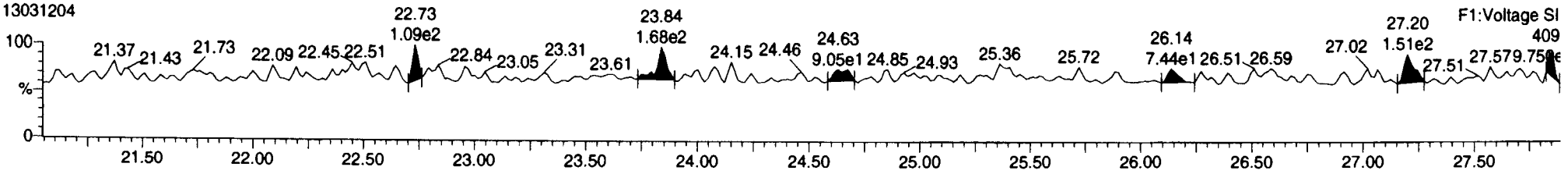

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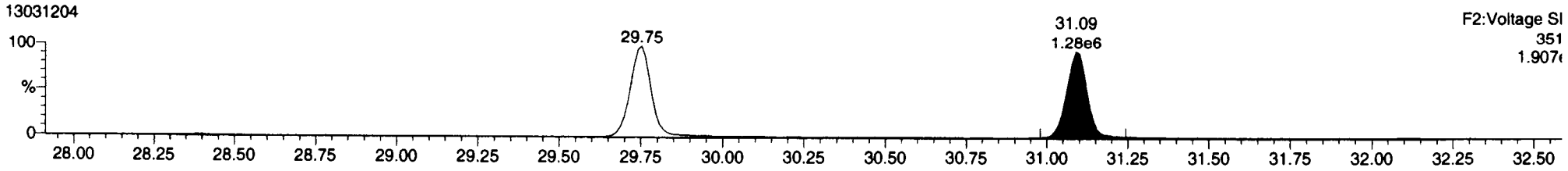
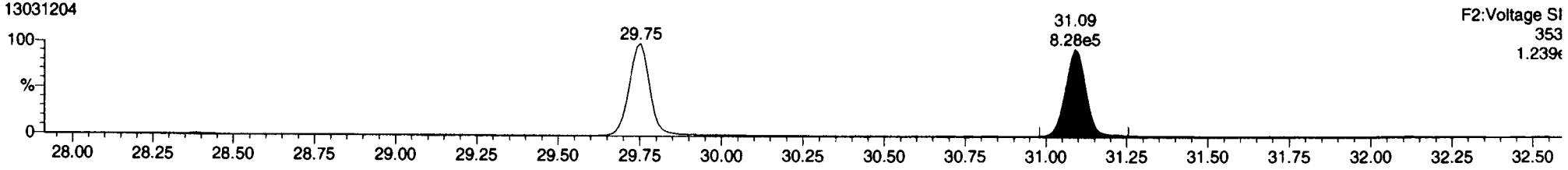
ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

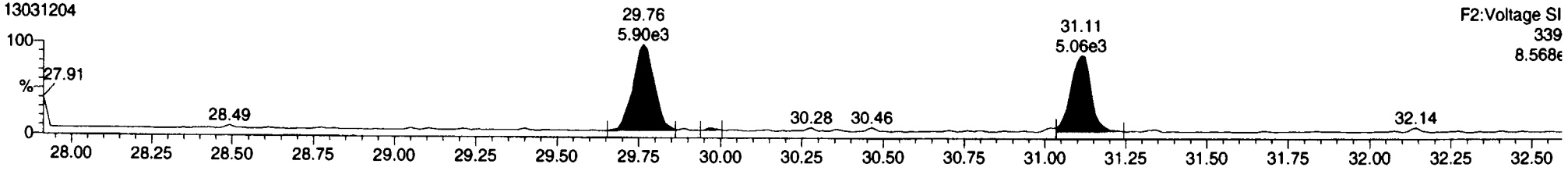
13C-23478-PeCDF



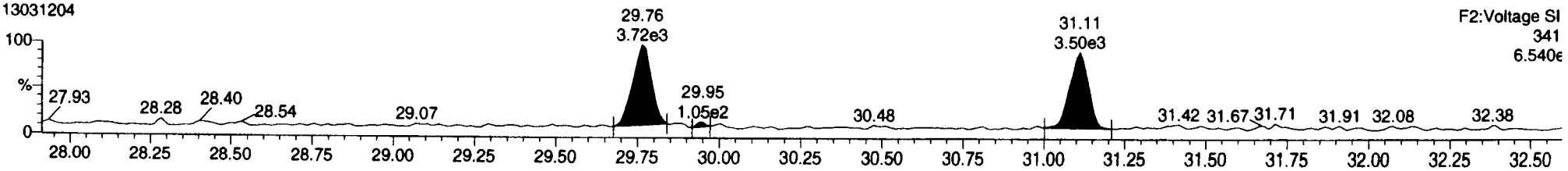
13C-23478-PeCDF



Total-pentafurans



Total-pentafurans



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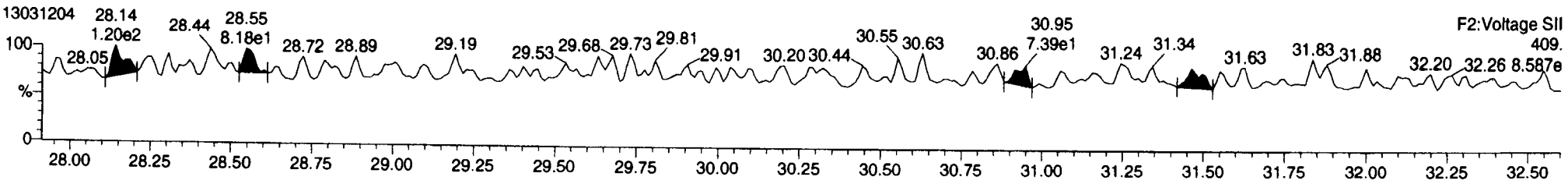

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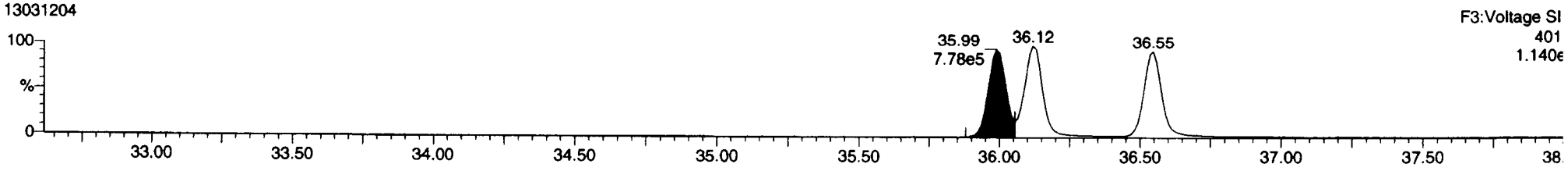
13C-123478-HxCDD

13031204



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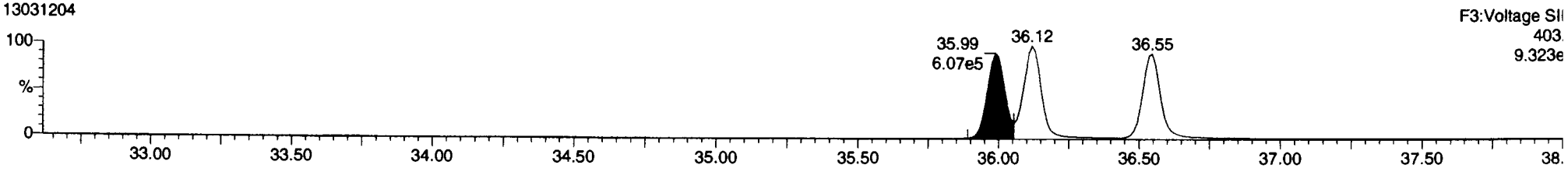
13031204



Total-hexadioxins

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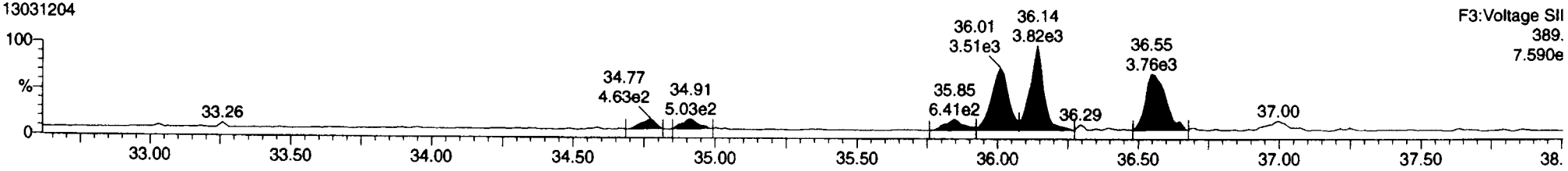

Total-hexadioxins

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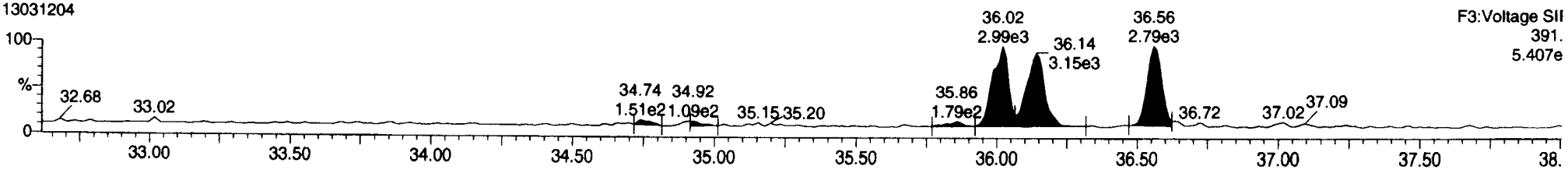

FUNCTION3 PFK

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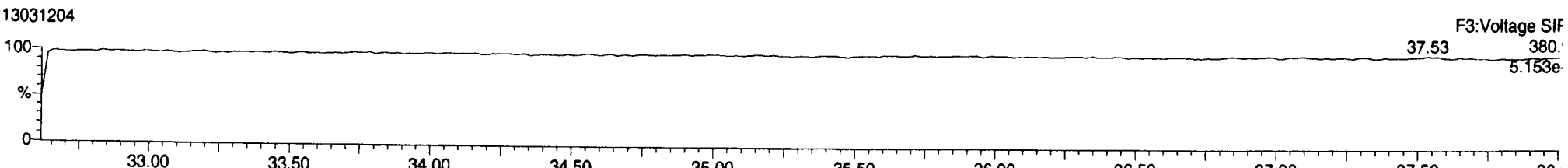

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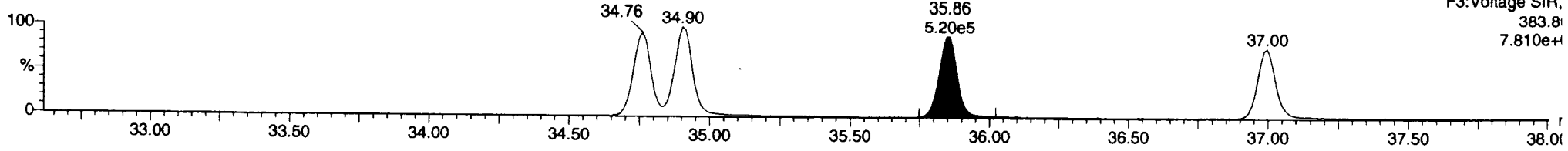
13C-234678-HxCDF

13031204



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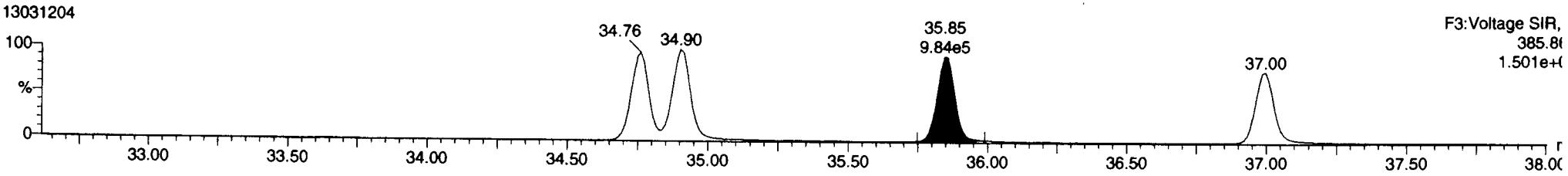

Total-hexafurans

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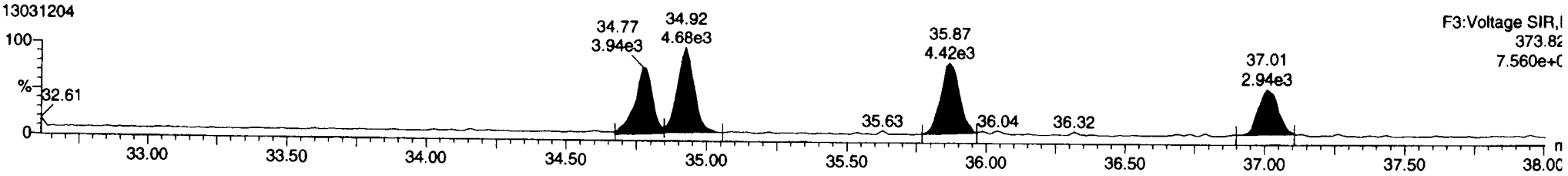

Total-hexafurans

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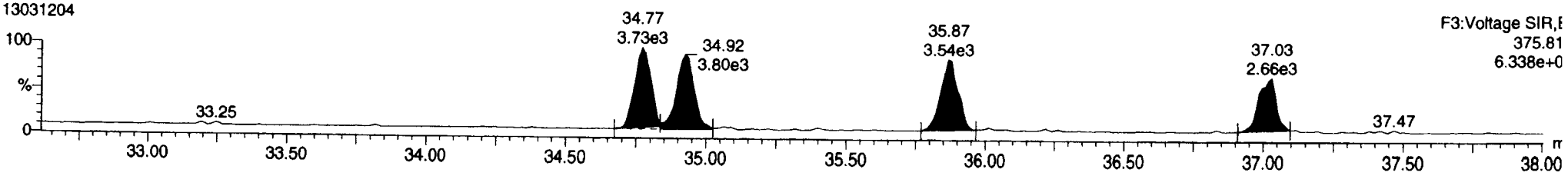
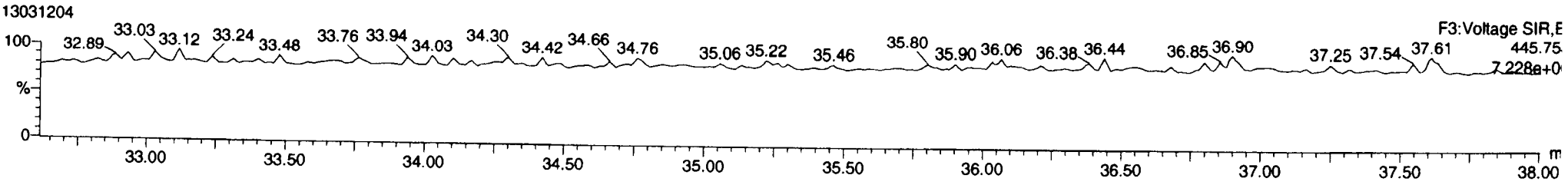


FUNCTION3 OCDPE

13031204



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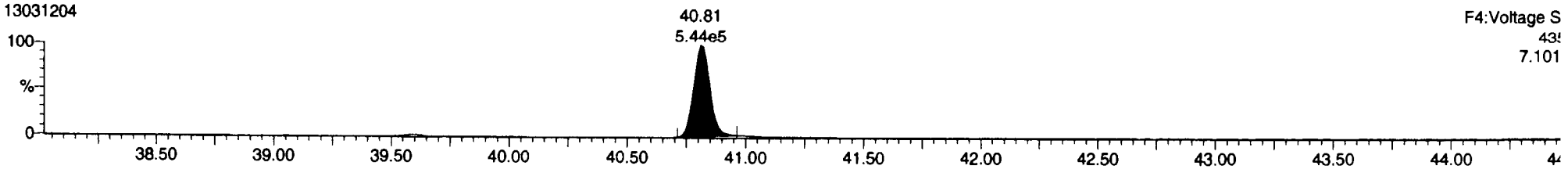
13C-1234678-HpCDD



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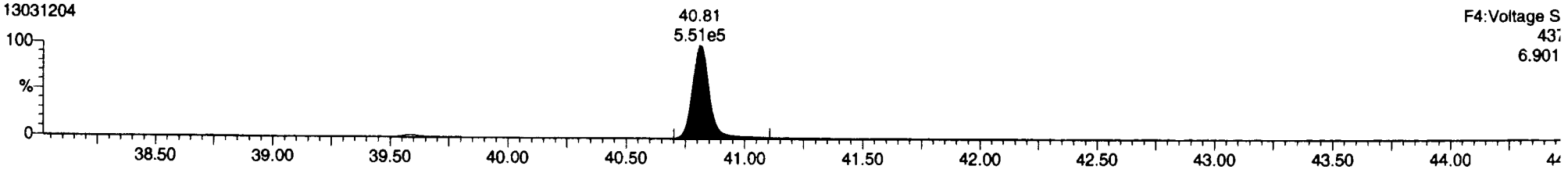
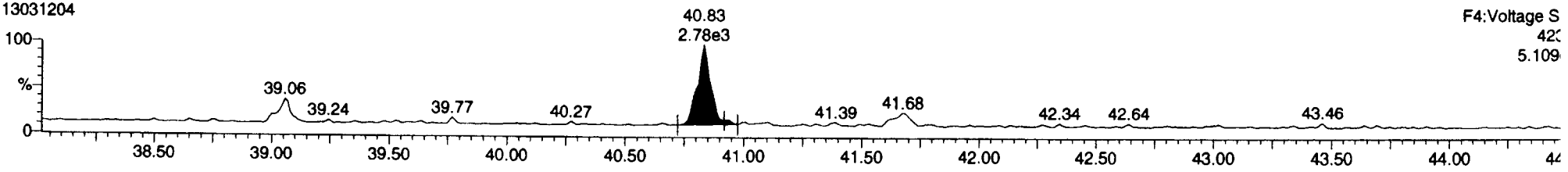
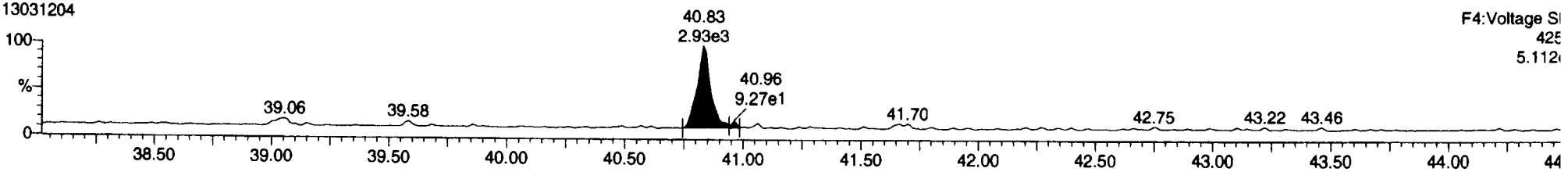


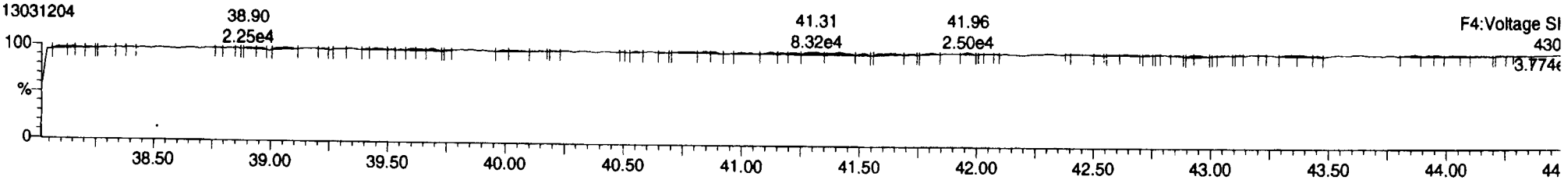
Total-heptadioxins



Total-heptadioxins

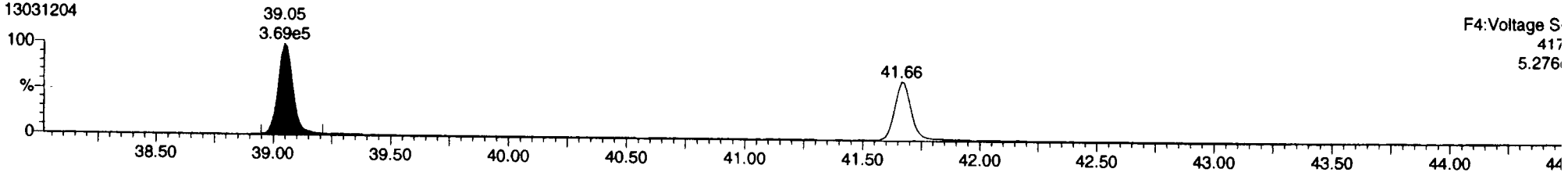


FUNCTION4 PFK



ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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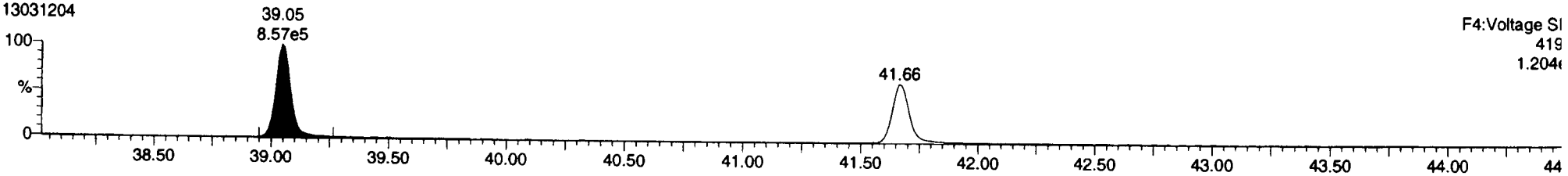
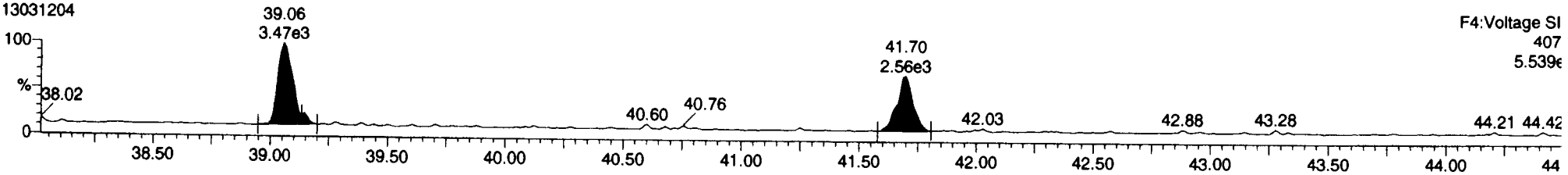
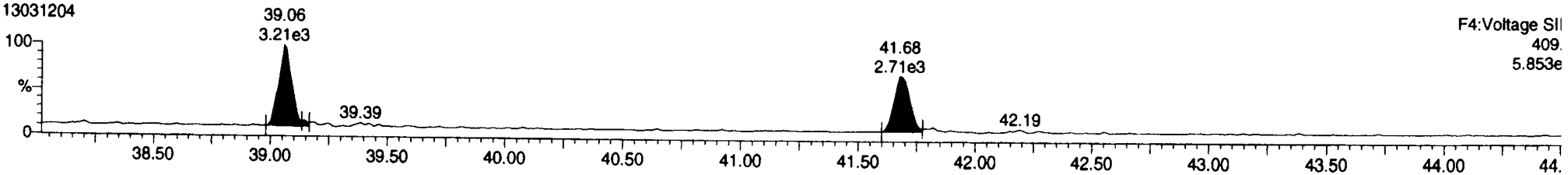


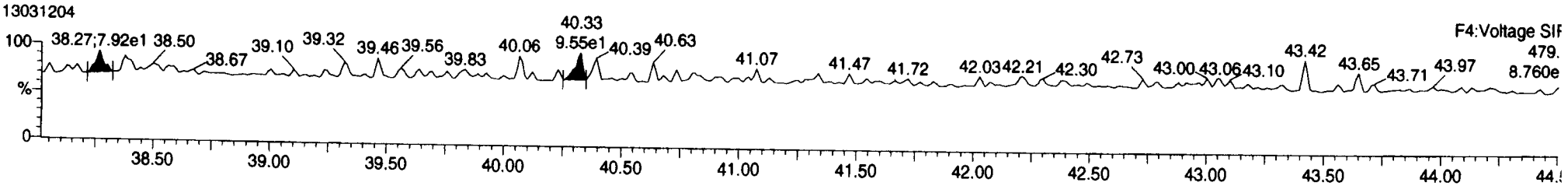
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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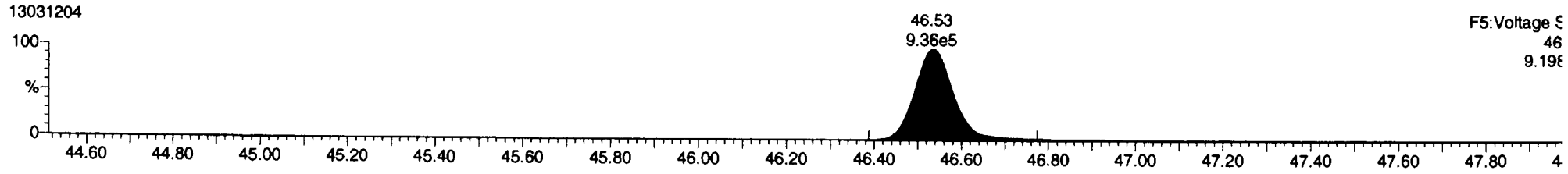
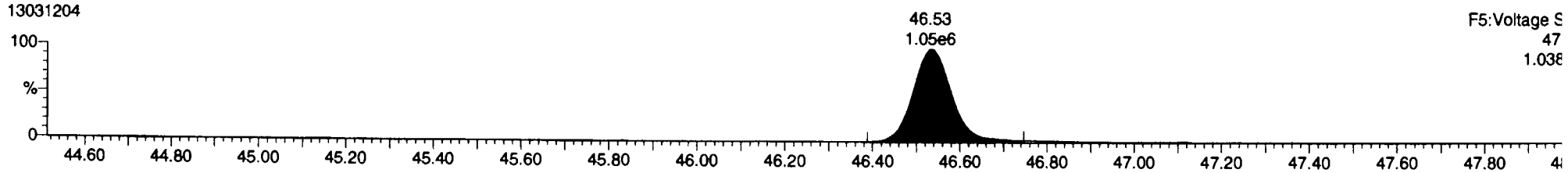
Printed: Wednesday, March 13, 2013 10:42:20 Pacific Daylight Time

ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

13C-OCDD



13C-OCDD



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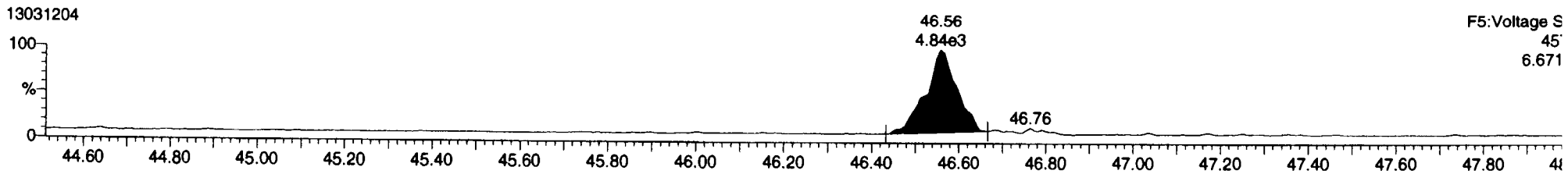

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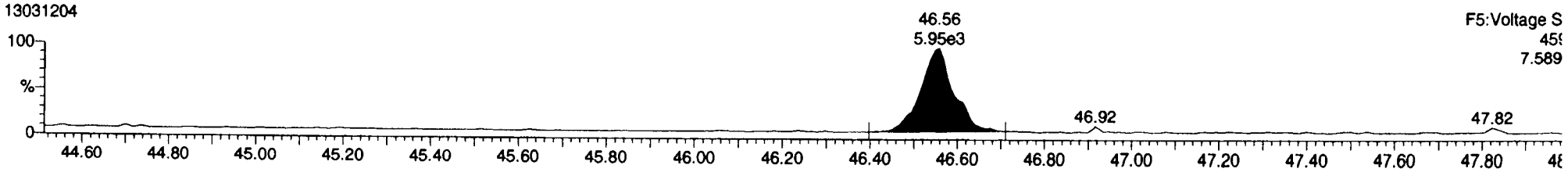

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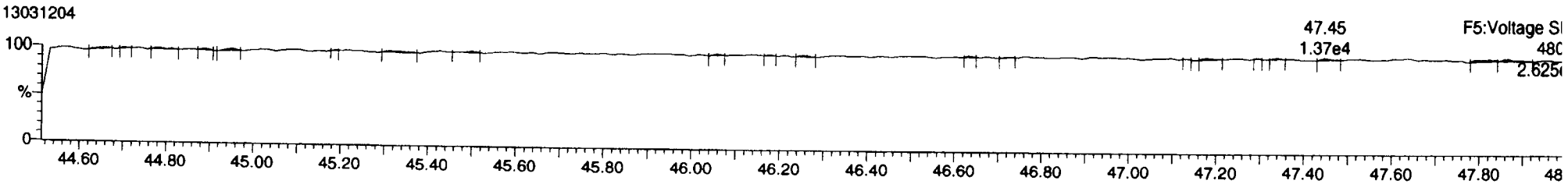

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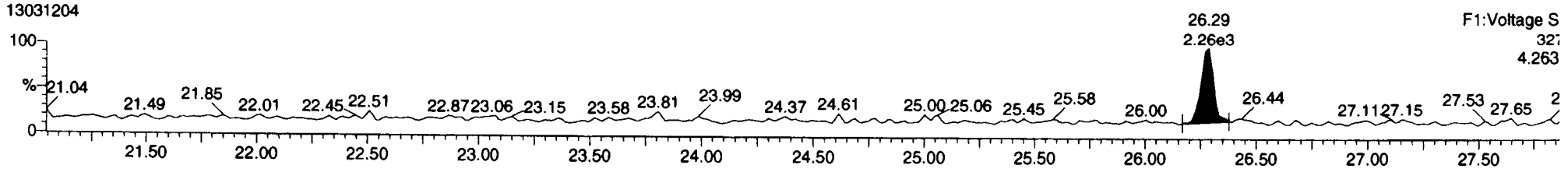
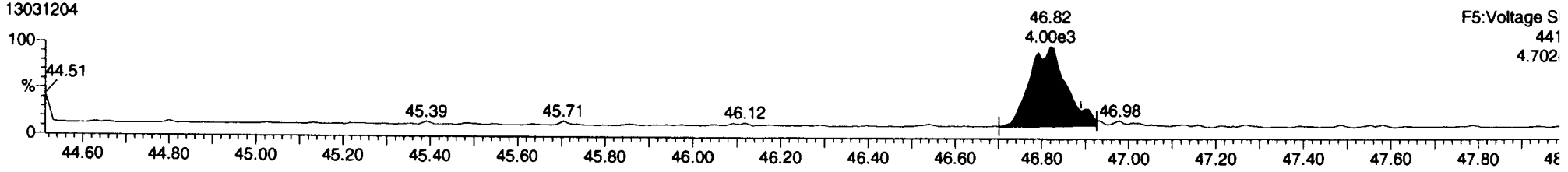
ID: CSL, Name: 13031204, Date: 12-Mar-2013, Time: 15:01:10, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



OCDF



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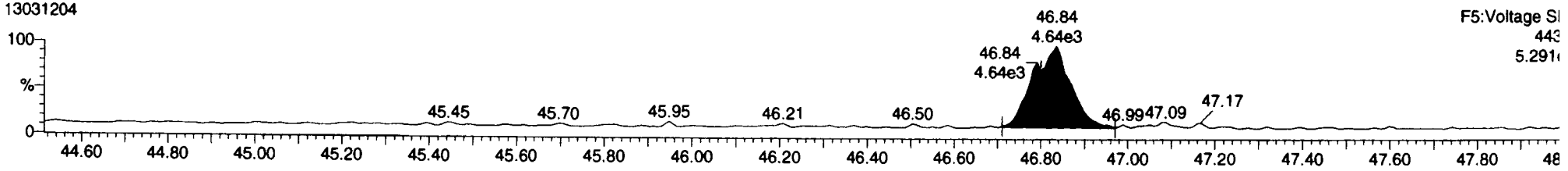
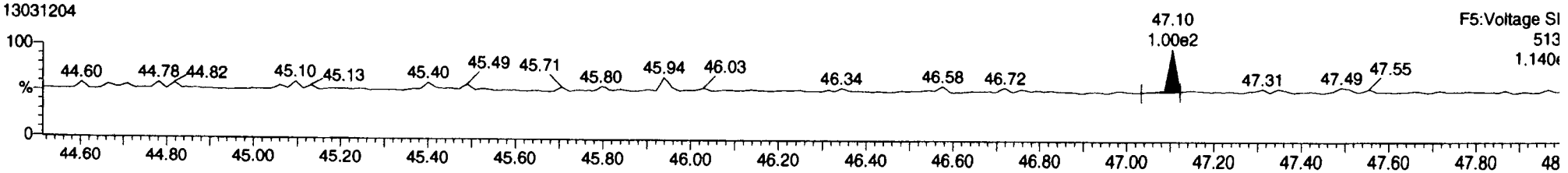


FUNCTION5 DCDPE



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Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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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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	12378-PeCDF	29.764	1.001	4.54e4	3.11e4	0.836	1.459	1.550	335.7	NO	2.480	2.480
	23478-PeCDF	31.101	1.000	4.32e4	2.98e4	0.851	1.446	1.550	328.8	NO	2.482	2.482
	123478-HxCDF	34.763	1.000	3.19e4	2.89e4	1.017	1.101	1.240	277.0	NO	2.460	2.460
	234678-HxCDF	35.870	1.001	3.21e4	2.87e4	1.027	1.117	1.240	265.4	NO	2.420	2.420
	123678-HxCDF	34.927	1.001	3.58e4	3.18e4	1.013	1.123	1.240	289.8	NO	2.557	2.557
	123789-HxCDF	37.010	1.001	2.74e4	2.44e4	0.929	1.123	1.240	216.3	NO	2.501	2.501
	1234678-HpCDF	39.059	1.000	2.72e4	2.79e4	1.151	0.974	1.050	256.9	NO	2.388	2.388
	1234789-HpCDF	41.690	1.001	2.15e4	2.15e4	1.149	1.000	1.050	172.1	NO	2.372	2.372
	OCDF	46.813	1.006	3.90e4	4.32e4	0.963	0.902	0.890	284.8	NO	4.910	4.910
	2378-TCDD	26.272	1.001	6.90e3	9.52e3	0.980	0.725	0.770	82.3	NO	0.475	0.475
	12378-PeCDD	31.365	1.001	3.39e4	2.19e4	0.948	1.546	1.550	449.8	NO	2.386	2.386
	123478-HxCDD	36.001	1.000	2.87e4	2.43e4	0.941	1.180	1.240	232.6	NO	2.563	2.563
	123678-HxCDD	36.133	1.001	2.89e4	2.35e4	0.884	1.228	1.240	238.5	NO	2.449	2.449
	123789-HxCDD	36.560	1.012	2.77e4	2.22e4	0.870	1.247	1.240	221.5	NO	2.483	2.483
	1234678-HpCDD	40.824	1.000	2.18e4	2.12e4	0.948	1.028	1.050	317.6	NO	2.439	2.439
	OCDD	46.553	1.000	3.90e4	4.44e4	0.969	0.879	0.890	277.8	NO	4.951	4.951
	13C-2378-TCDF	25.615	1.006	2.17e6	2.84e6	1.318	0.763	0.770	6656.9	NO		104.063
	13C-12378-PeCDF	29.742	1.169	2.26e6	1.43e6	1.026	1.580	1.550	3603.9	NO		98.633
	13C-23478-PeCDF	31.090	1.222	2.07e6	1.39e6	0.966	1.494	1.550	3442.4	NO		98.070
	13C-123478-HxCDF	34.752	0.951	8.17e5	1.61e6	1.123	0.507	0.510	2075.2	NO		95.896
	13C-123678-HxCDF	34.905	0.955	8.90e5	1.72e6	1.216	0.517	0.510	2131.8	NO		95.114
	13C-234678-HxCDF	35.848	0.981	8.27e5	1.62e6	1.106	0.510	0.510	2082.4	NO		98.095
	13C-123789-HxCDF	36.988	1.012	7.59e5	1.47e6	0.995	0.517	0.510	1862.0	NO		99.193
	13C-1234678-HpCDF	39.048	1.069	6.11e5	1.39e6	0.896	0.438	0.440	2376.0	NO		99.142
	13C-1234789-HpCDF	41.668	1.140	4.81e5	1.10e6	0.693	0.438	0.440	1640.5	NO		100.914
	13C-1234-TCDD	25.451	0.000	1.60e6	2.05e6	1.000	0.781	0.770	3531.5	NO		100.000
	13C-2378-TCDD	26.257	1.032	1.53e6	1.99e6	0.961	0.770	0.770	3320.7	NO		100.469
	13C-12378-PeCDD	31.343	1.232	1.52e6	9.53e5	0.703	1.591	1.550	5204.2	NO		96.261
	13C-123478-HxCDD	35.990	0.985	1.22e6	9.76e5	1.016	1.253	1.240	3885.0	NO		95.958
	13C-123678-HxCDD	36.111	0.988	1.34e6	1.08e6	1.098	1.233	1.240	3932.0	NO		97.632
	13C-1234678-HpCDD	40.813	1.117	9.43e5	9.21e5	0.828	1.024	1.050	3621.1	NO		99.684
	13C-OCDD	46.535	1.274	1.63e6	1.85e6	0.770	0.883	0.890	4017.1	NO		200.126

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

	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
	FUNCTION3 OCDPE			0.00e0							
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	FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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Printed: Wednesday, March 13, 2013 10:42:30 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

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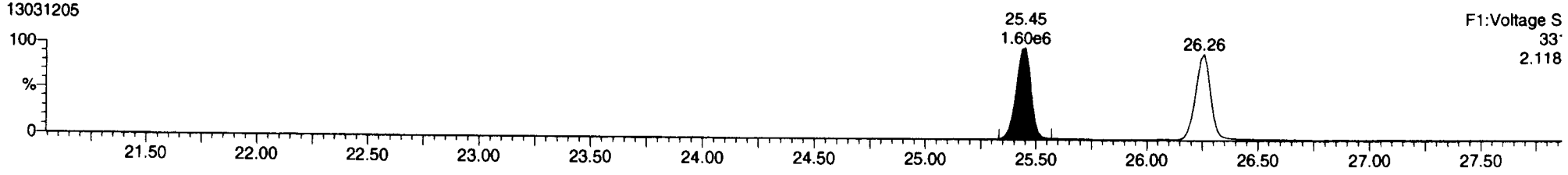
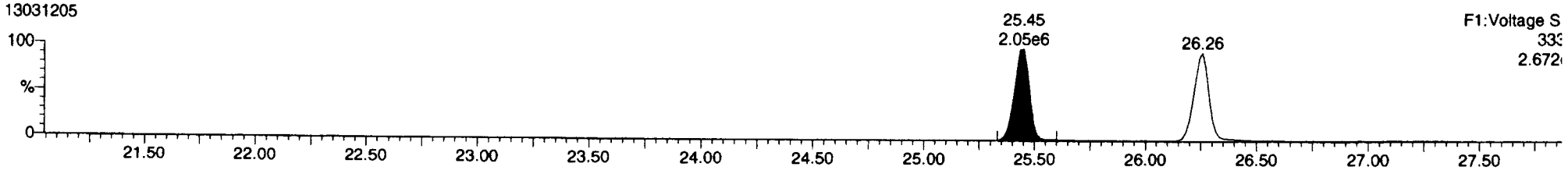
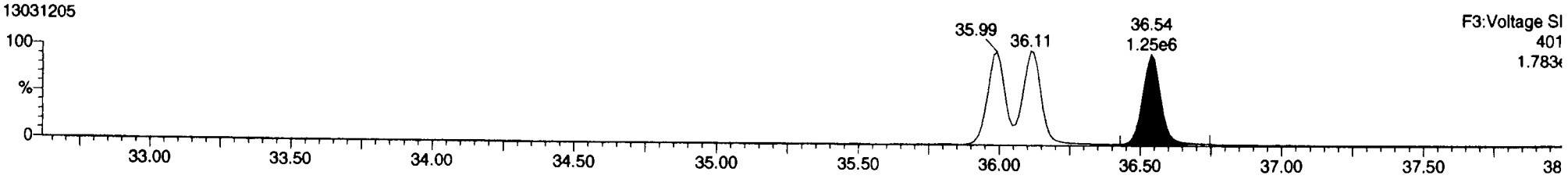
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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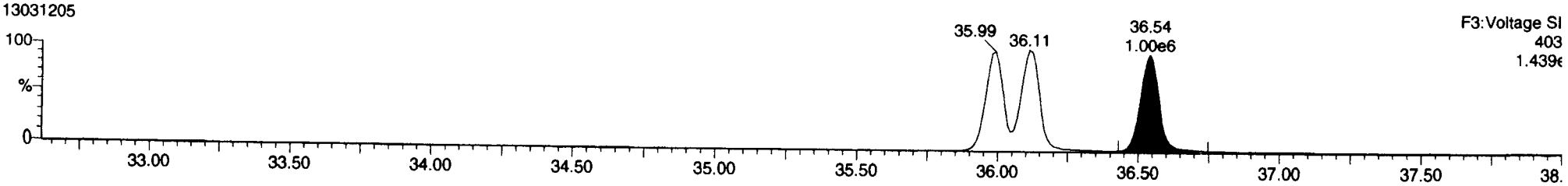

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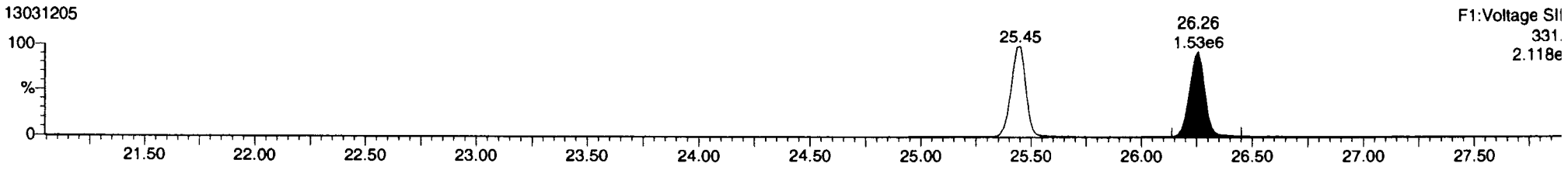
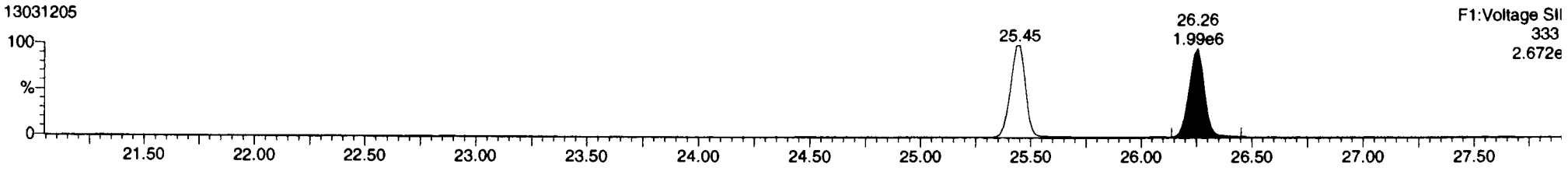
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

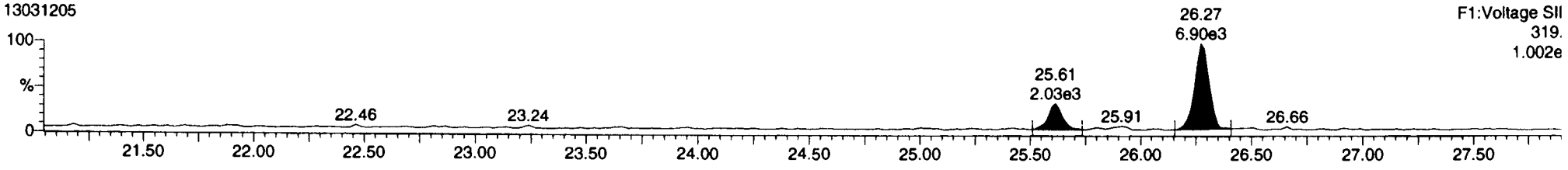
13C-2378-TCDD



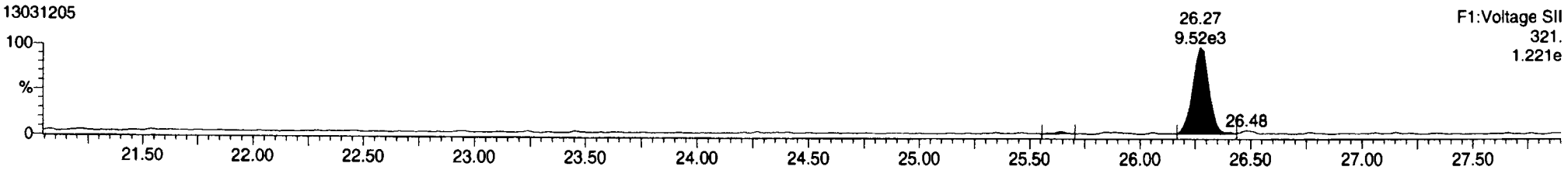
13C-2378-TCDD



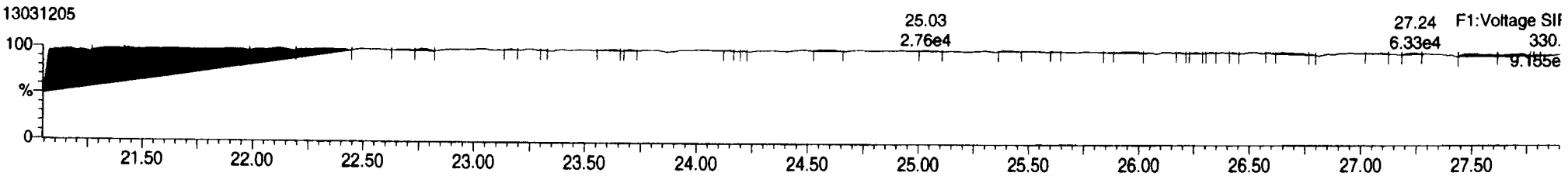
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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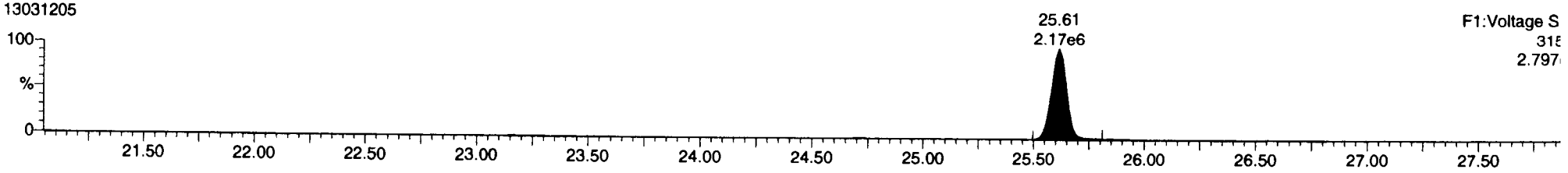
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

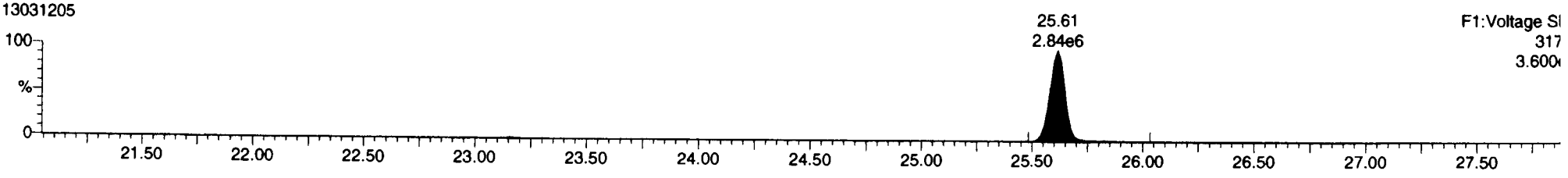
13C-2378-TCDF

13031205



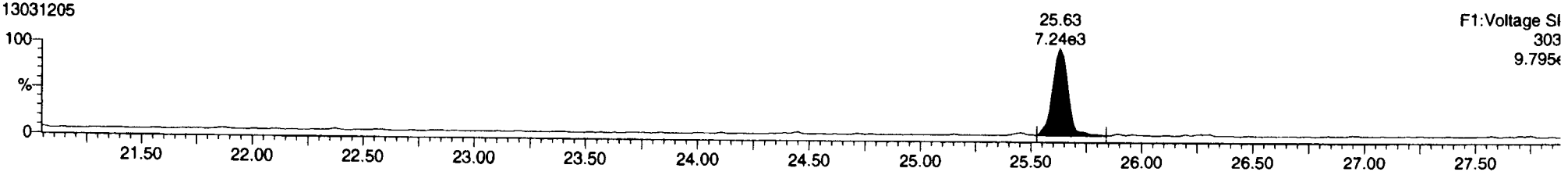
13C-2378-TCDF

13031205



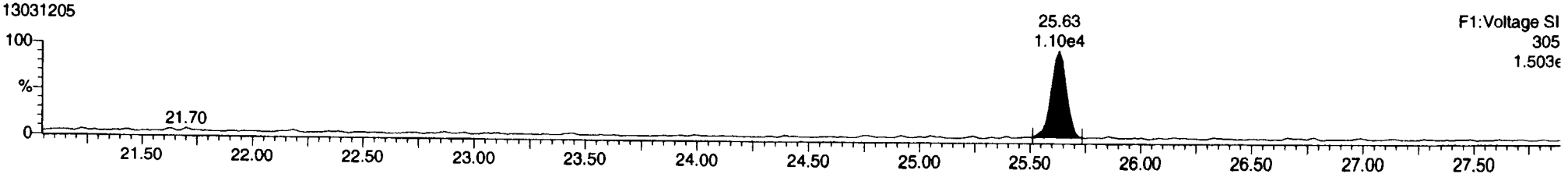
Total-tetrafurans

13031205



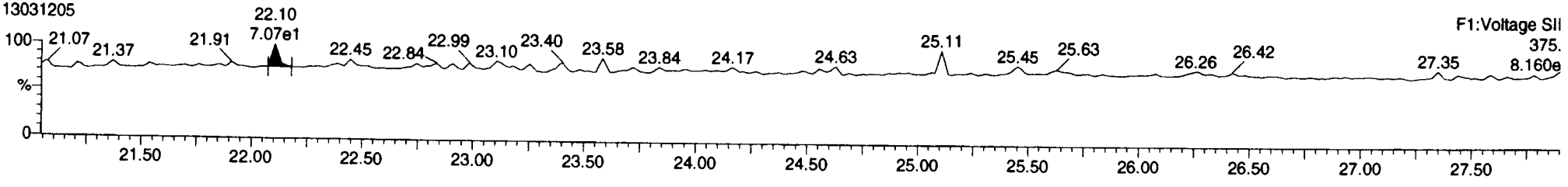
Total-tetrafurans

13031205



FUNCTION1 HXCDPE

13031205



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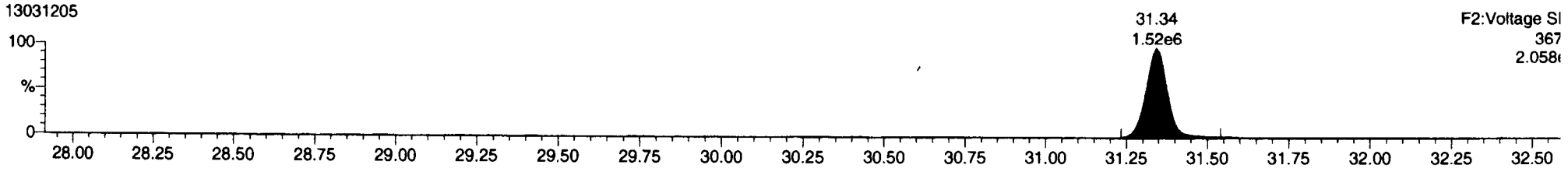
13C-12378-PeCDD



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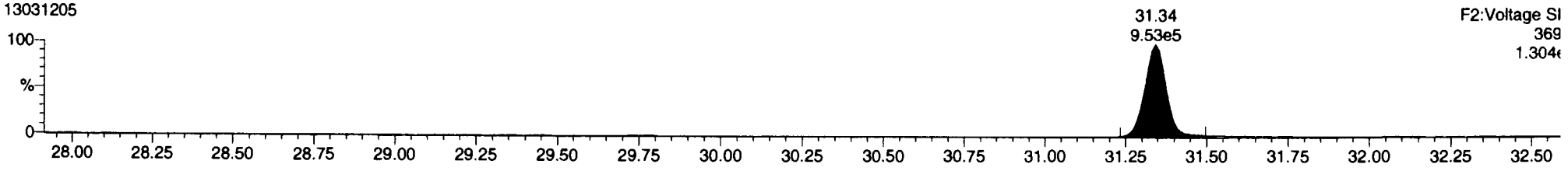
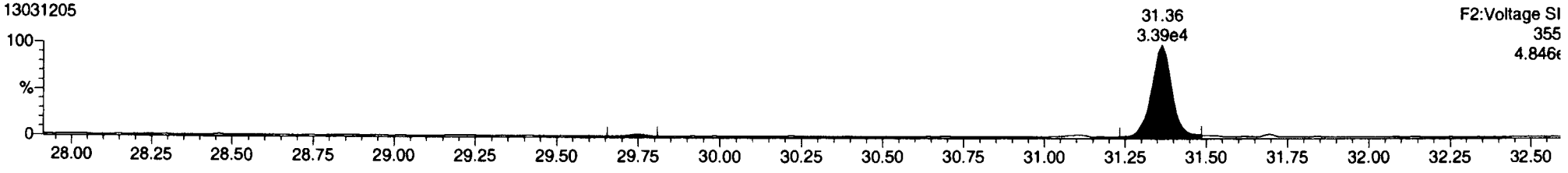
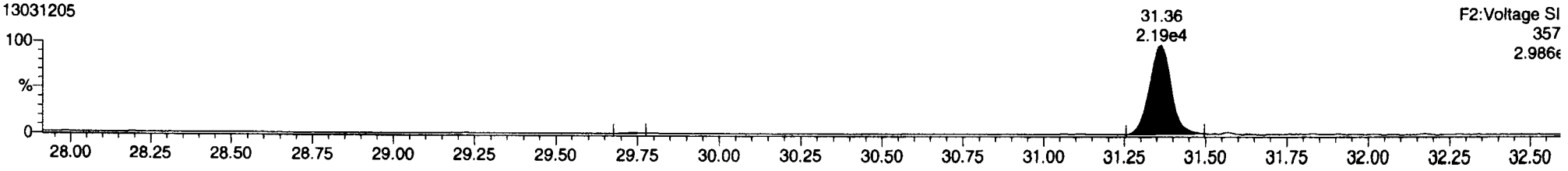


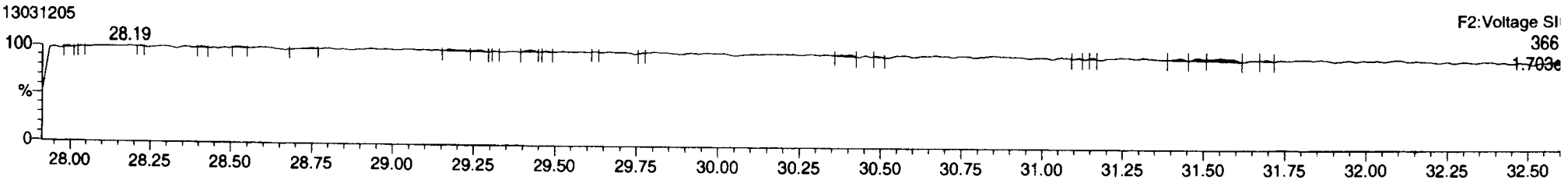
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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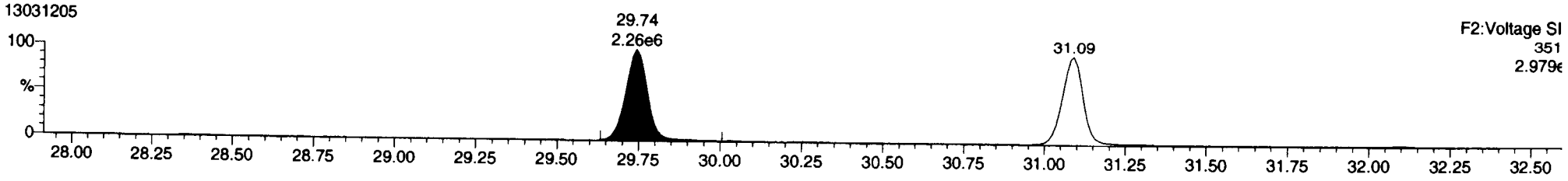

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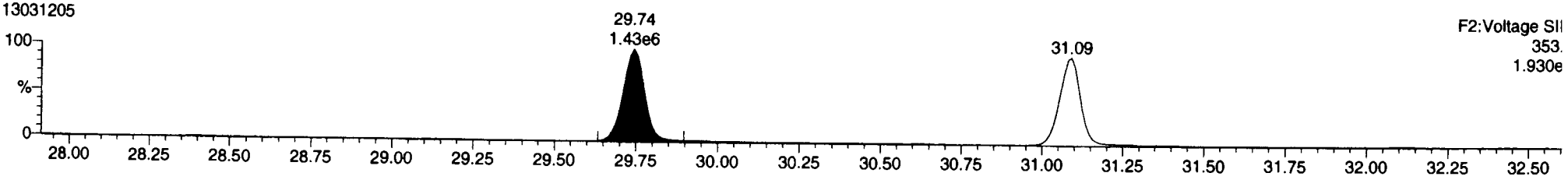

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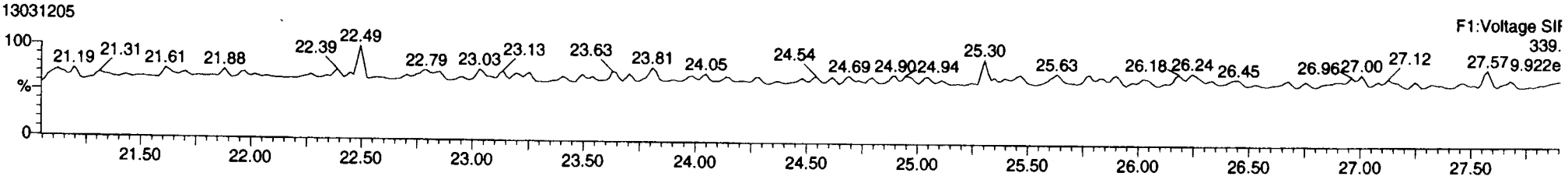
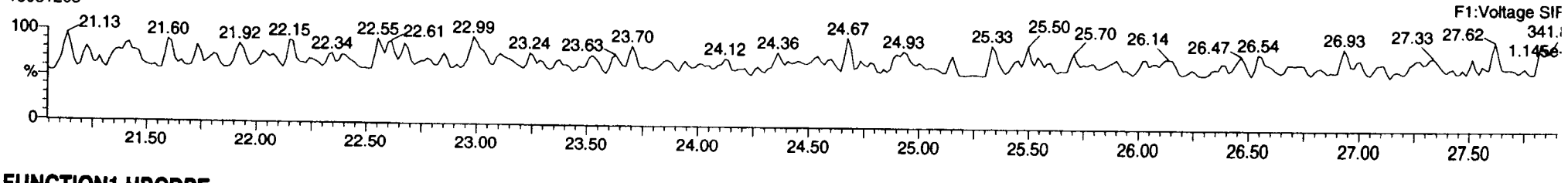


Total-penta1



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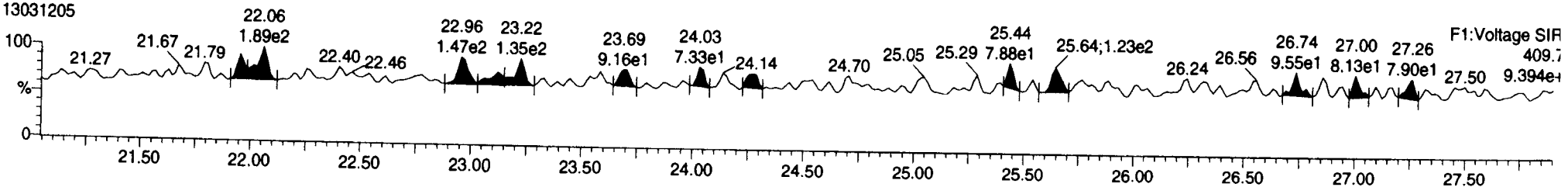

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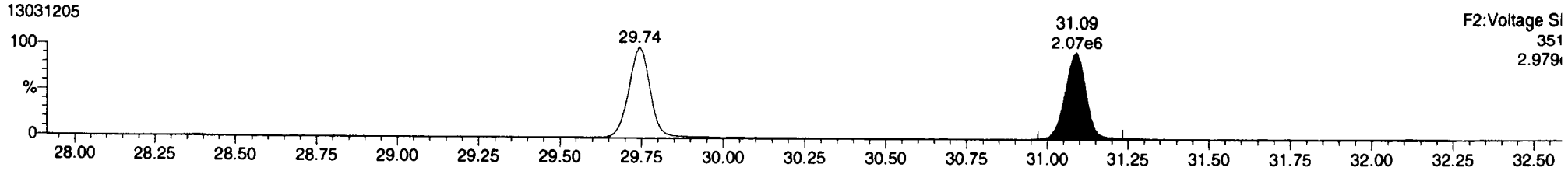
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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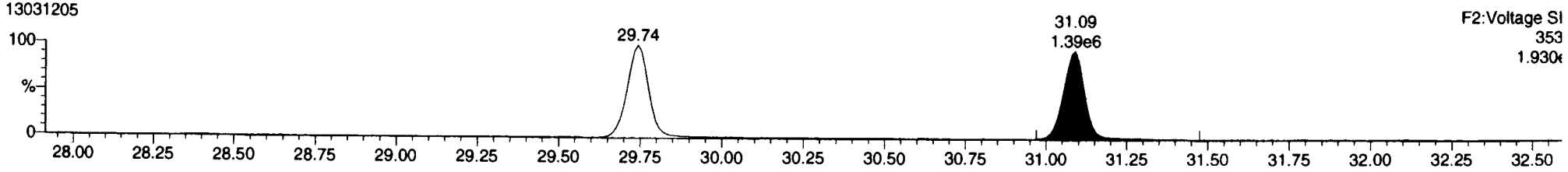
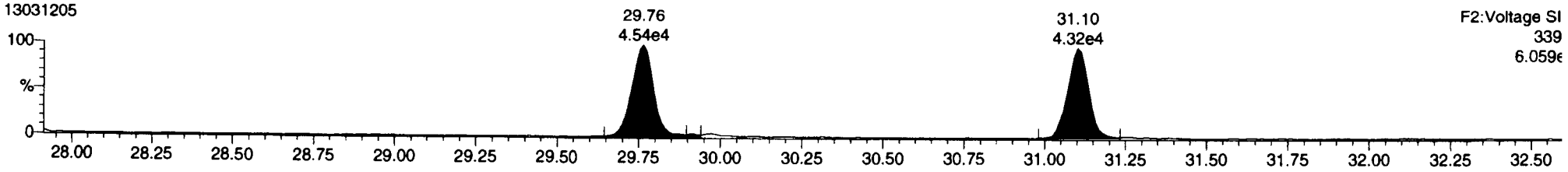
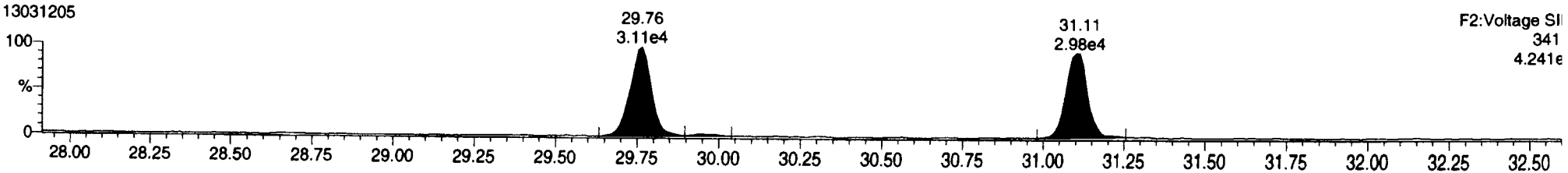


Total-pentafurans



Total-pentafurans



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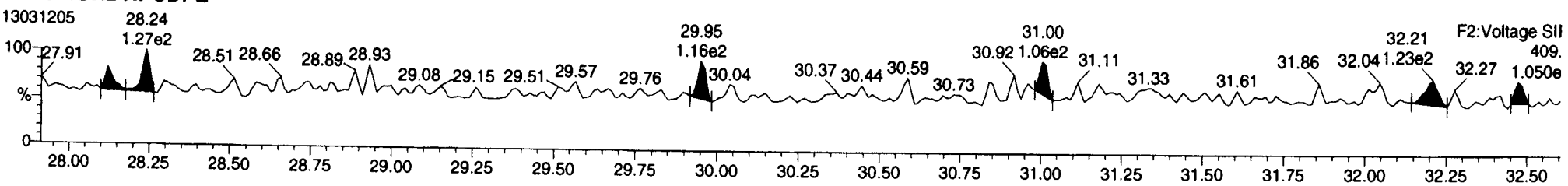

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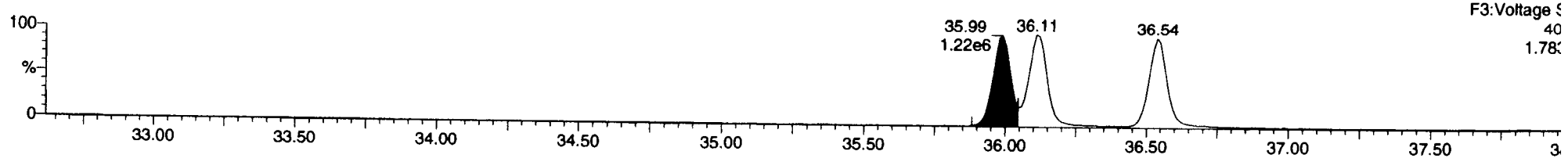
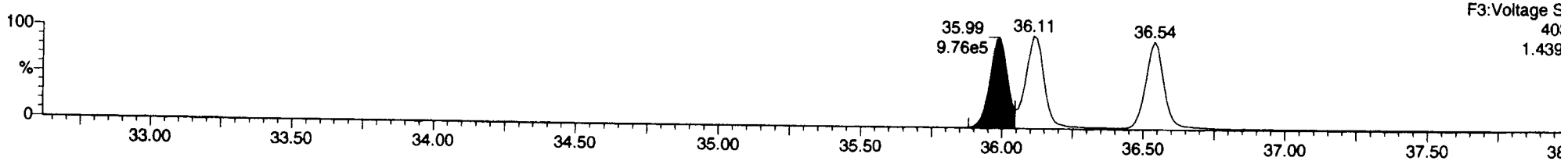
13C-123478-HxCDD

13031205



13C-123478-HxCDD

13031205



Total-hexadioxins

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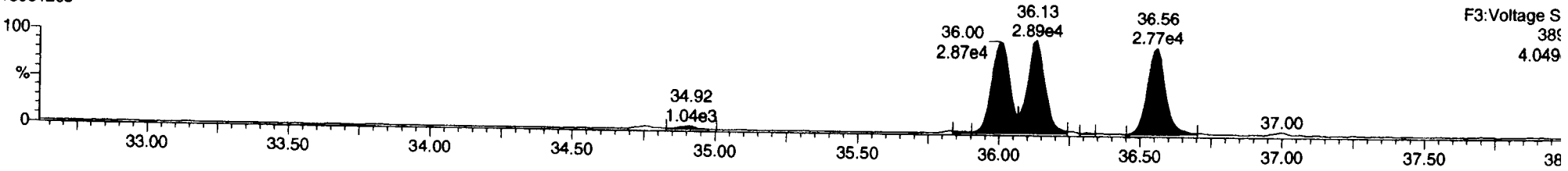

Total-hexadioxins

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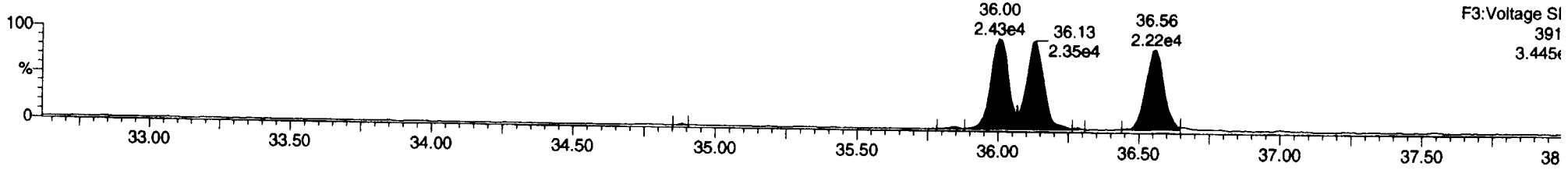
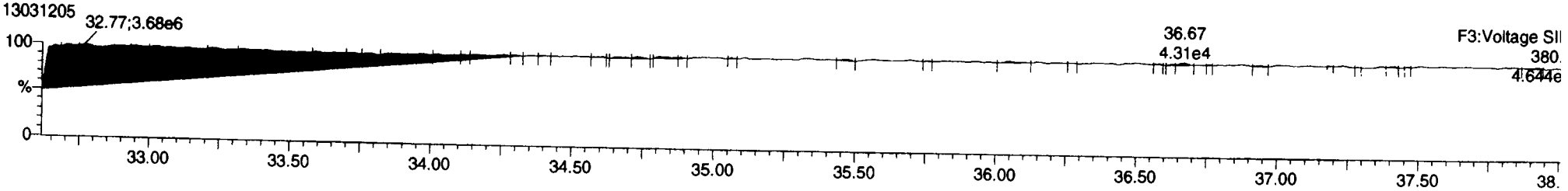


FUNCTION3 PFK

13031205



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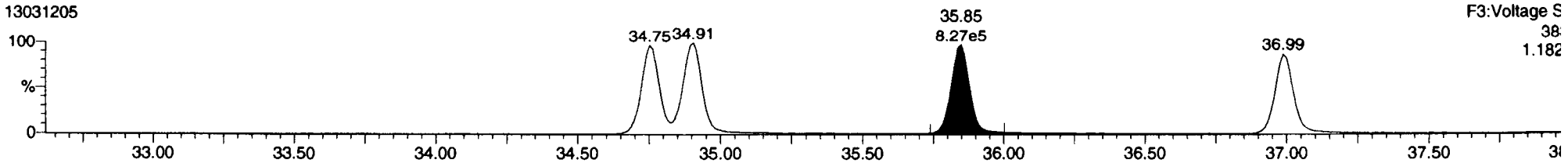
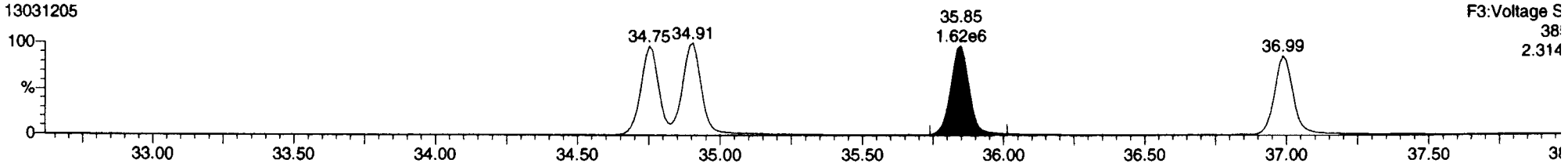
ID: CS1, Name: 13031205, Date: 12-Mar-2013, Time: 15:57:32, Conditions: AUTOSPEC01, User: pk

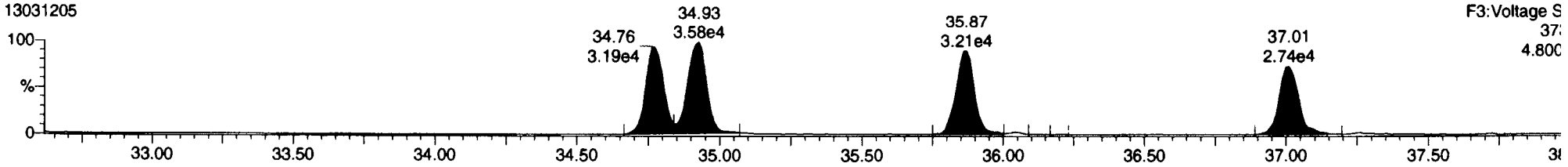
13C-234678-HxCDF



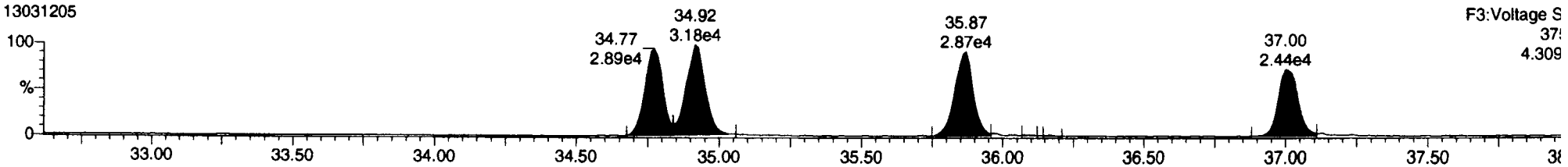
13C-234678-HxCDF



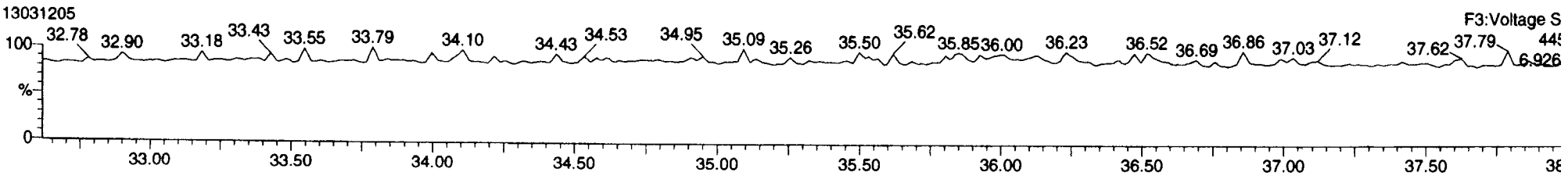
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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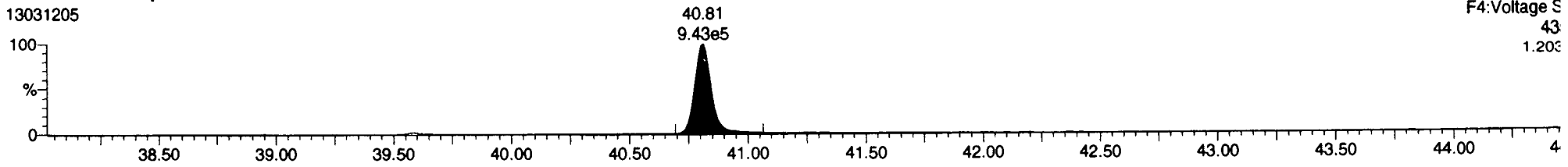
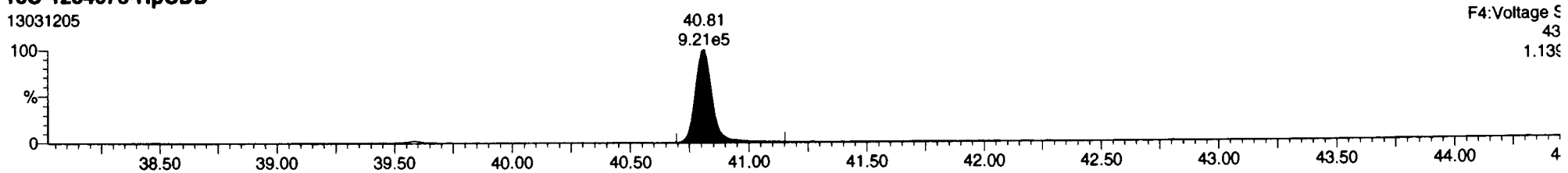
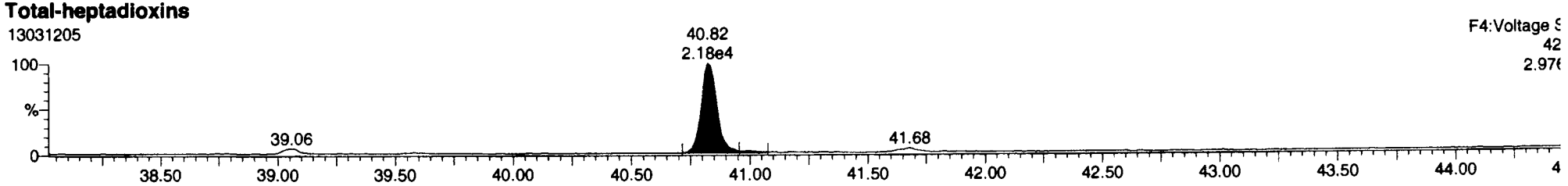
13C-1234678-HpCDD



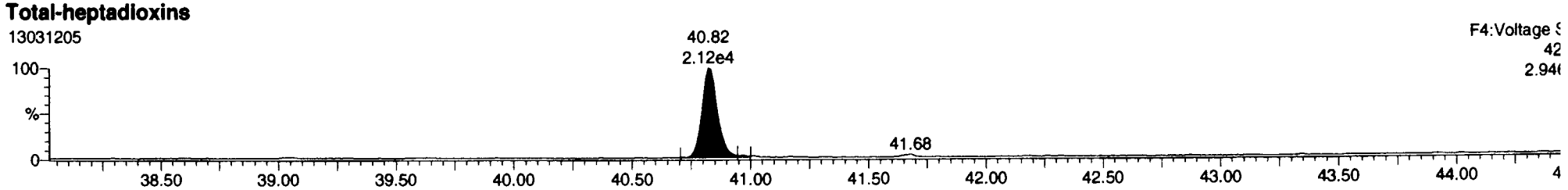
13C-1234678-HpCDD



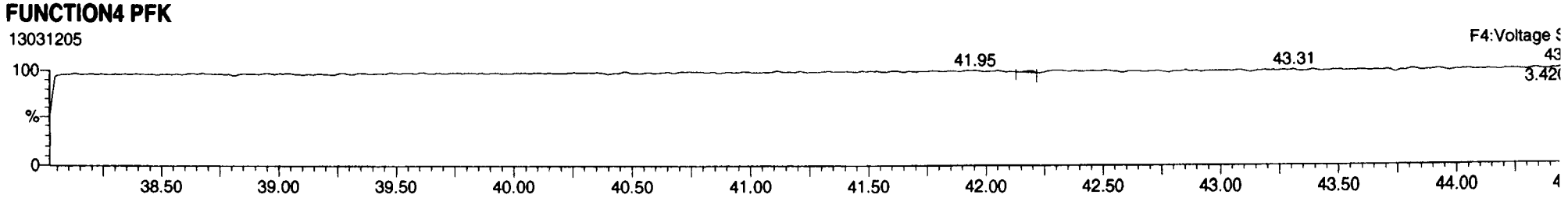
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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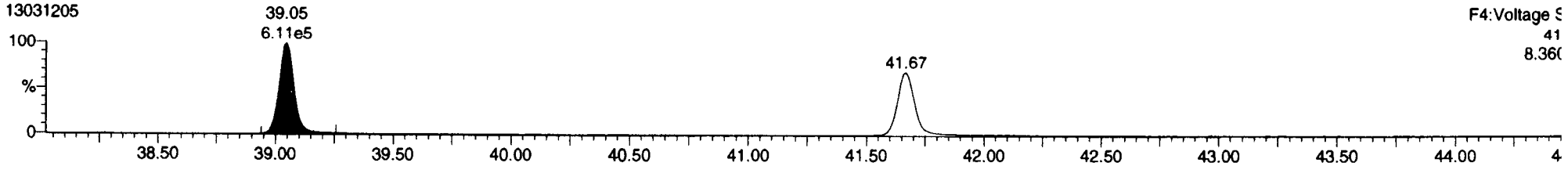
13C-1234678-HpCDF



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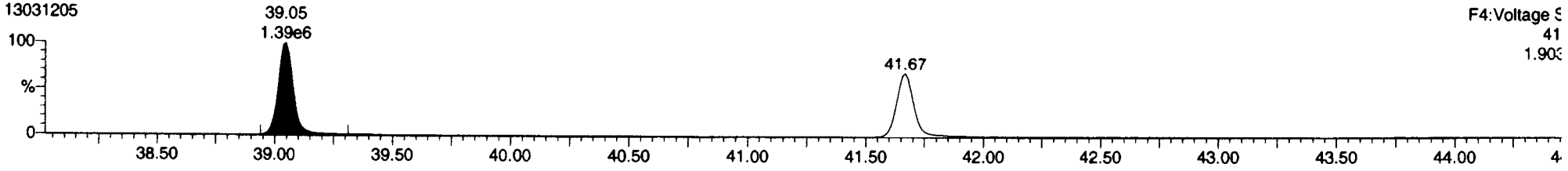
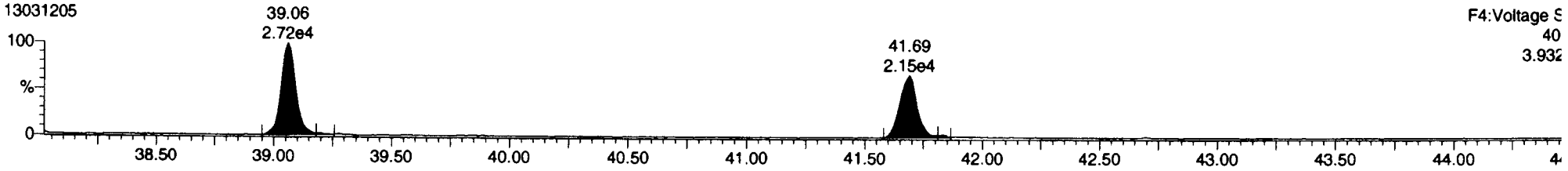
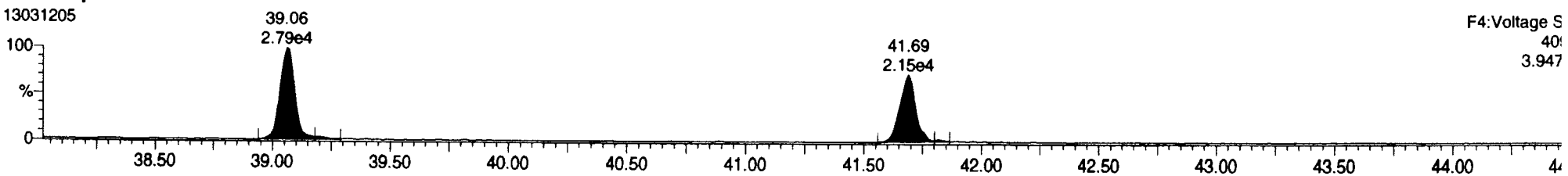


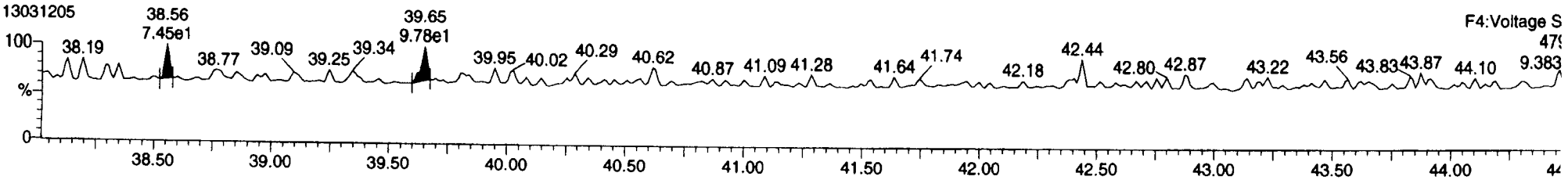
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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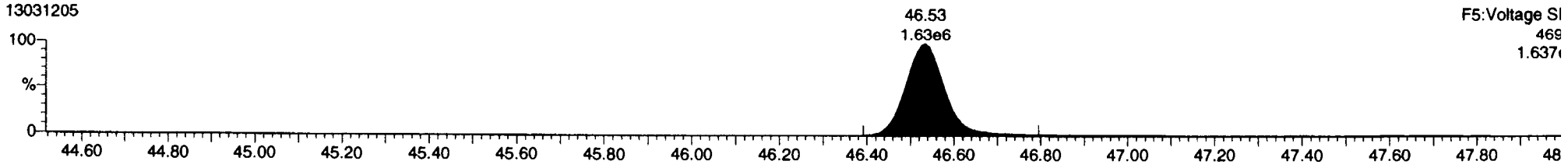
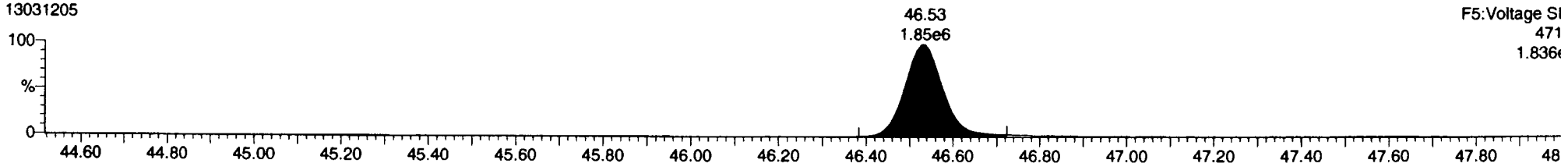
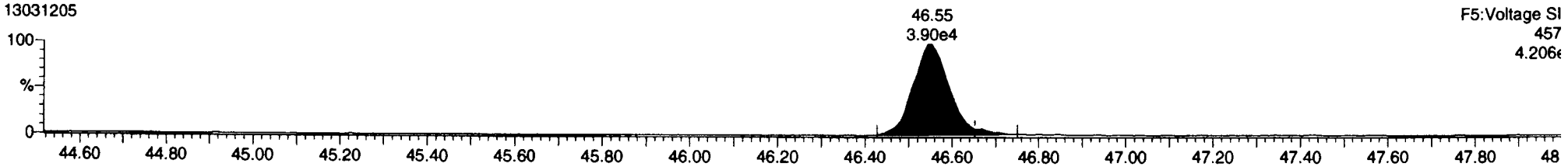
13C-OCDD



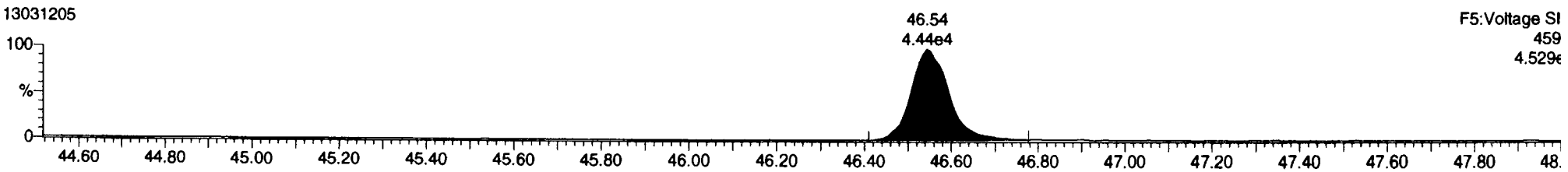
13C-OCDD



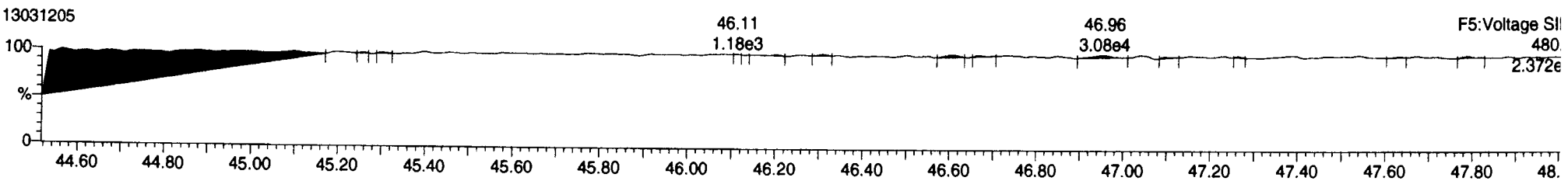
OCDD



OCDD



FUNCTION5 PFK



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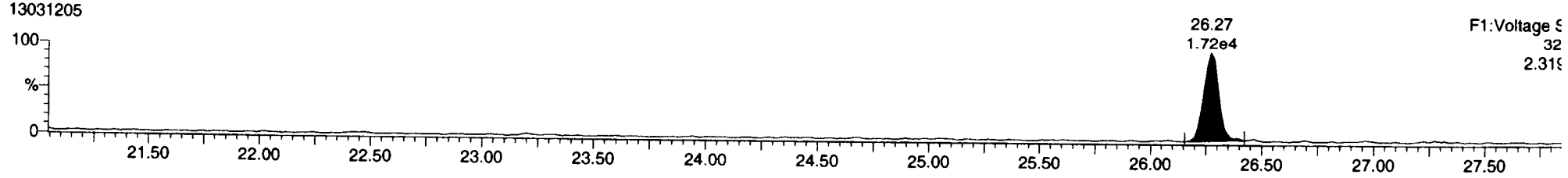
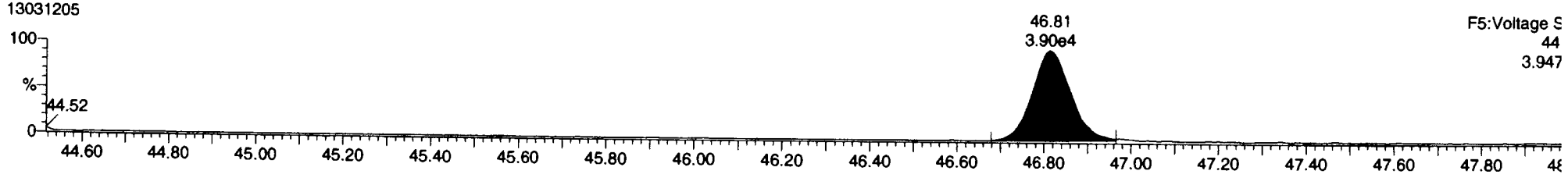
37CL-2378-TCDD

13031205



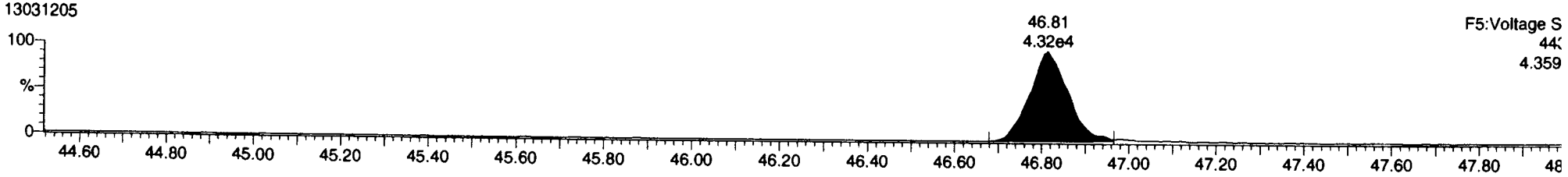
OCDF

13031205



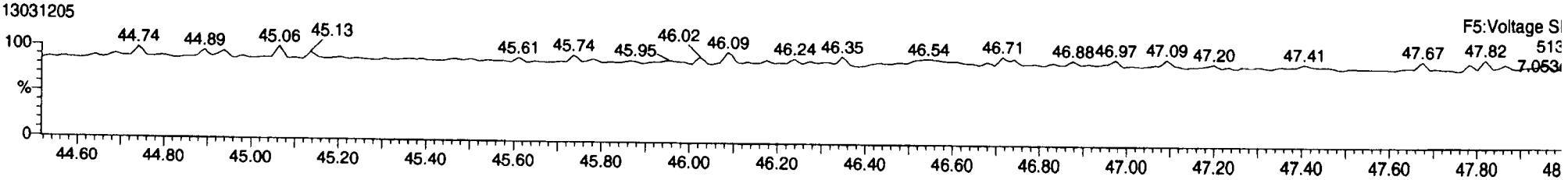
OCDF

13031205



FUNCTION5 DCDPE

13031205



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

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[redacted]	12378-PeCDF	29.764	1.001	1.36e5	9.17e4	0.836	1.484	1.550	783.7	NO	9.780	9.780
[redacted]	23478-PeCDF	31.101	1.000	1.34e5	9.12e4	0.851	1.468	1.550	781.9	NO	9.946	9.946
[redacted]	123478-HxCDF	34.773	1.001	1.06e5	8.92e4	1.017	1.191	1.240	656.0	NO	9.913	9.913
[redacted]	234678-HxCDF	35.869	1.001	1.04e5	8.92e4	1.027	1.170	1.240	643.1	NO	9.646	9.646
[redacted]	123678-HxCDF	34.916	1.000	1.15e5	9.79e4	1.013	1.170	1.240	689.9	NO	10.163	10.163
[redacted]	123789-HxCDF	37.009	1.001	8.77e4	7.42e4	0.929	1.183	1.240	529.5	NO	9.874	9.874
[redacted]	1234678-HpCDF	39.059	1.000	9.28e4	8.82e4	1.151	1.052	1.050	539.9	NO	9.990	9.990
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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 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

[redacted]											
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[redacted]	FUNCTION1 PFK			1.75e6							
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[redacted]	FUNCTION4 PFK			0.00e0							
[redacted]	FUNCTION5 PFK			7.95e6							
[redacted]	FUNCTION1 HXCDPE			0.00e0							
[redacted]	FUNCTION1 HPCDPE			1.20e3							0.000
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[redacted]	FUNCTION4 NCDPE			0.00e0							
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Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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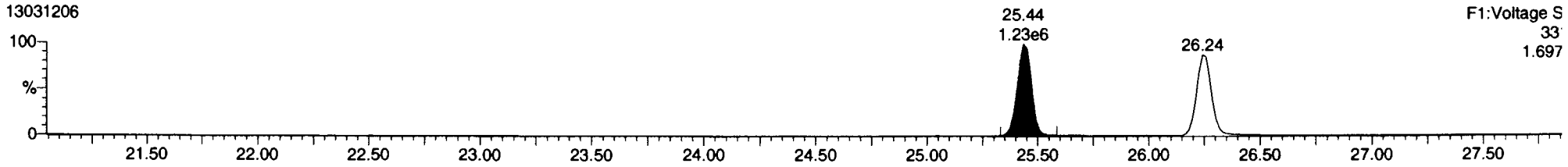
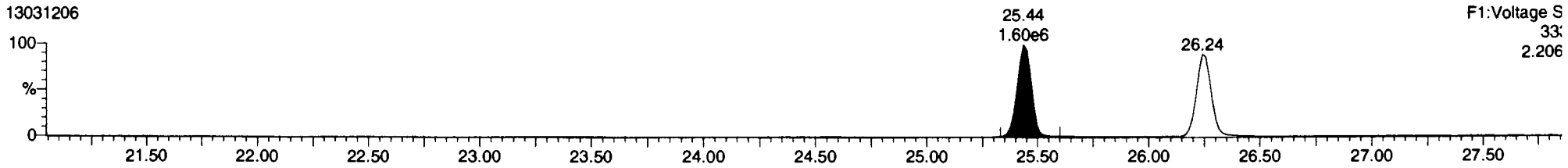
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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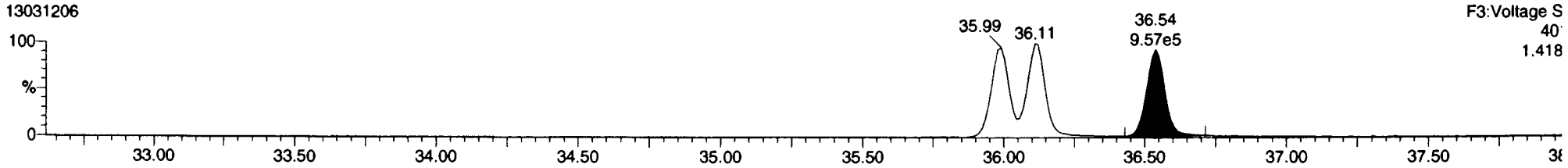

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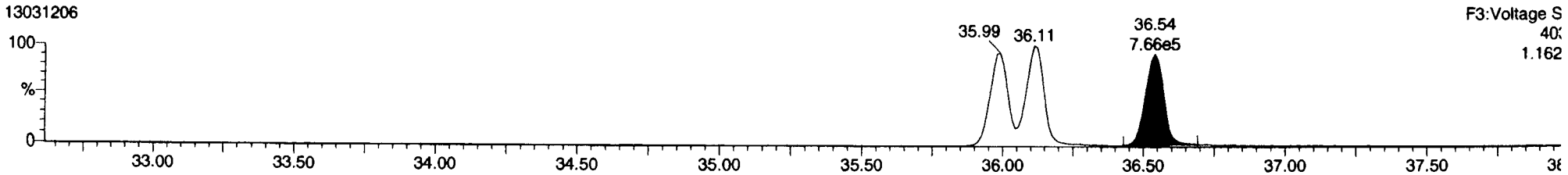

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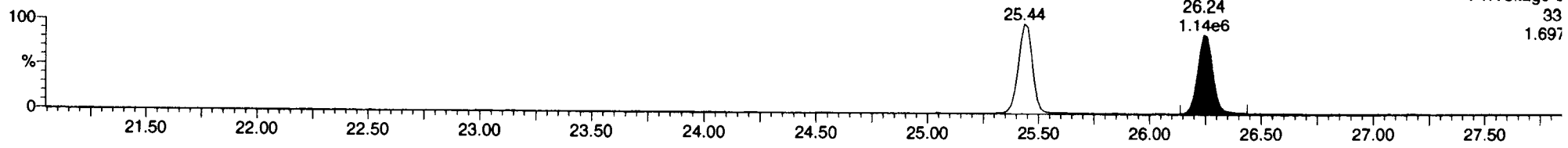
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD

13031206



13C-2378-TCDD

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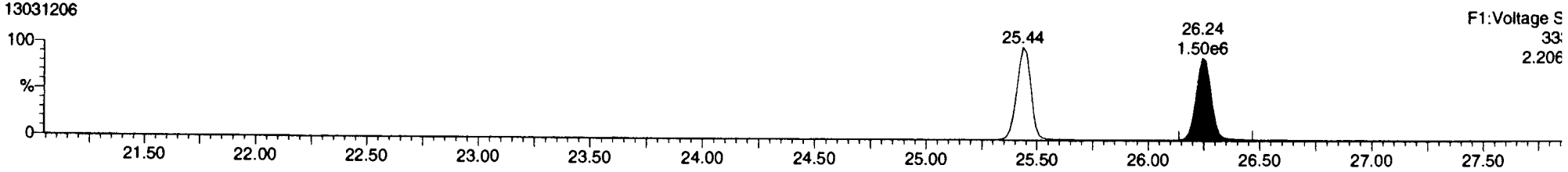
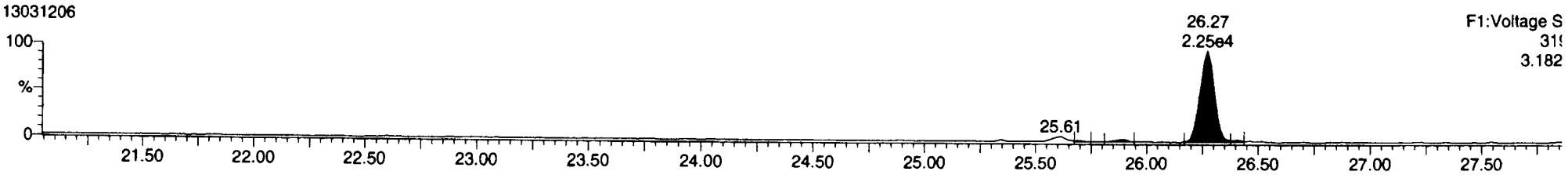


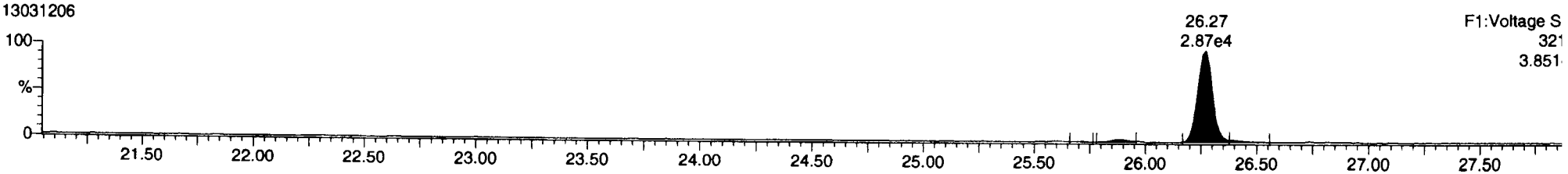
Total-tetradioxins

13031206



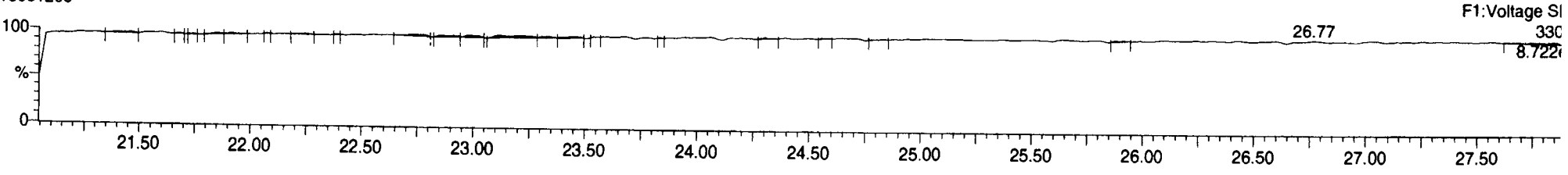
Total-tetradioxins

13031206



FUNCTION1 PFK

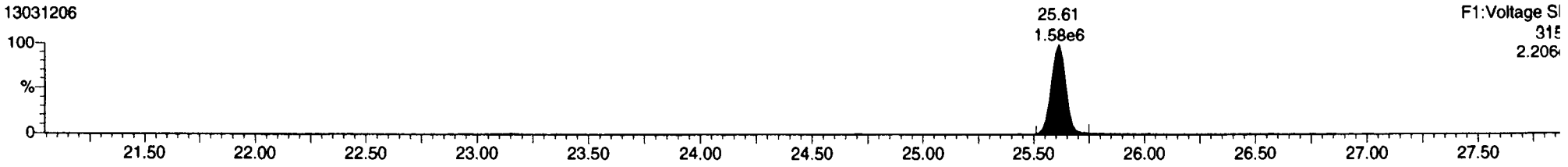
13031206



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-TCDF



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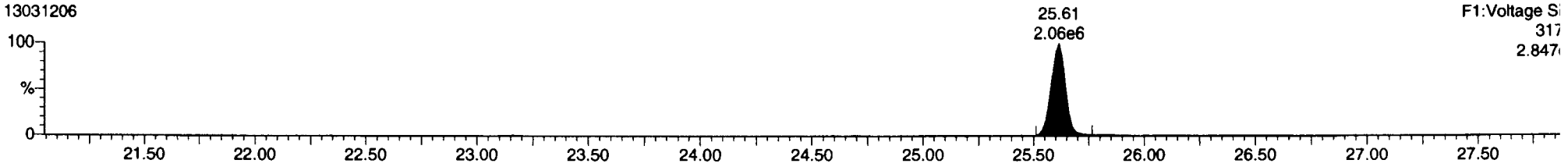
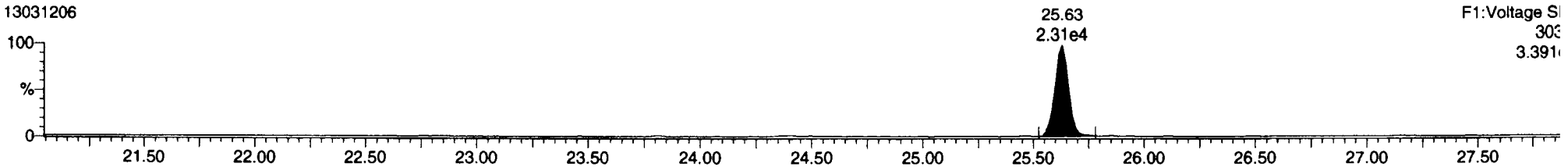
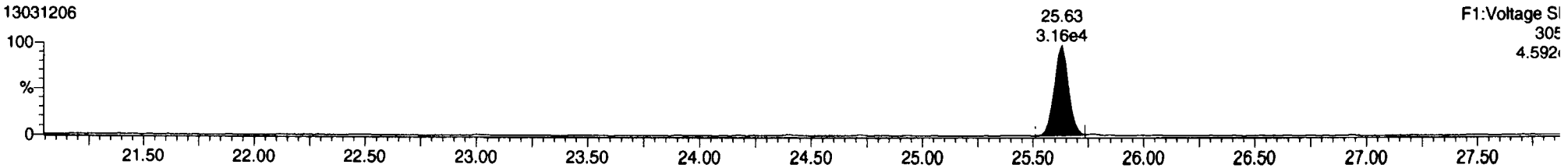


Total-tetrafurans



Total-tetrafurans



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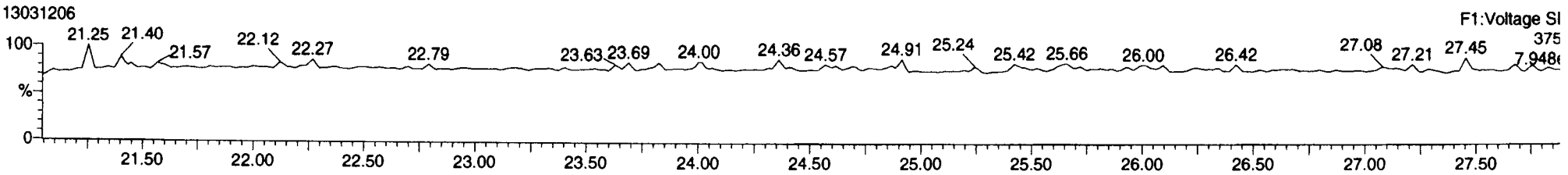

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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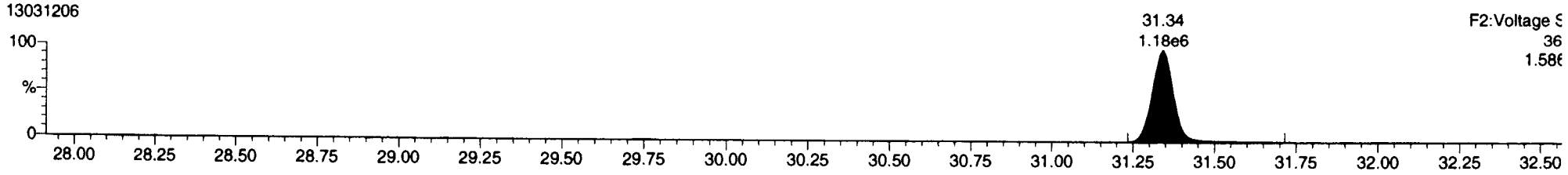
13C-12378-PeCDD



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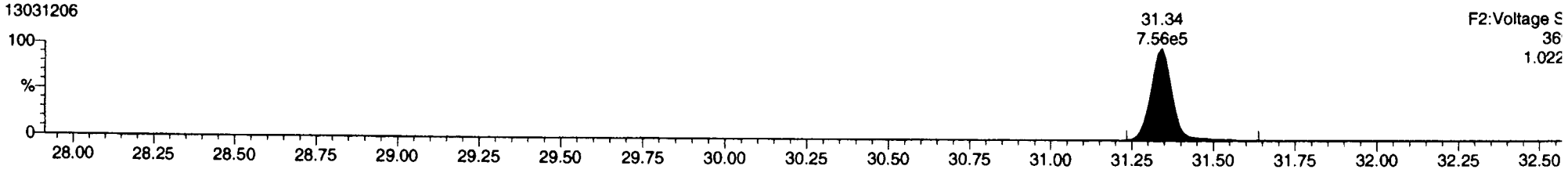
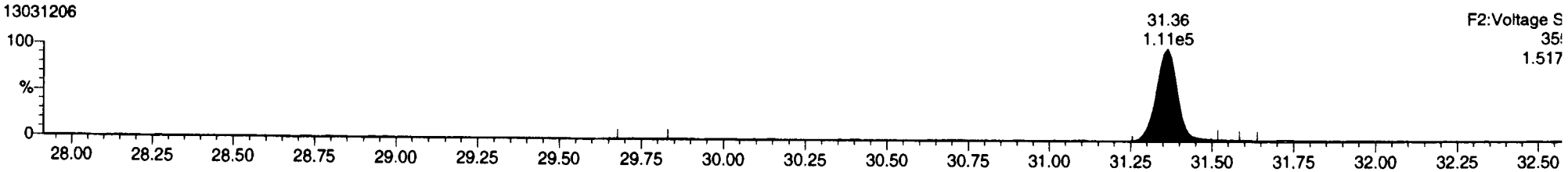
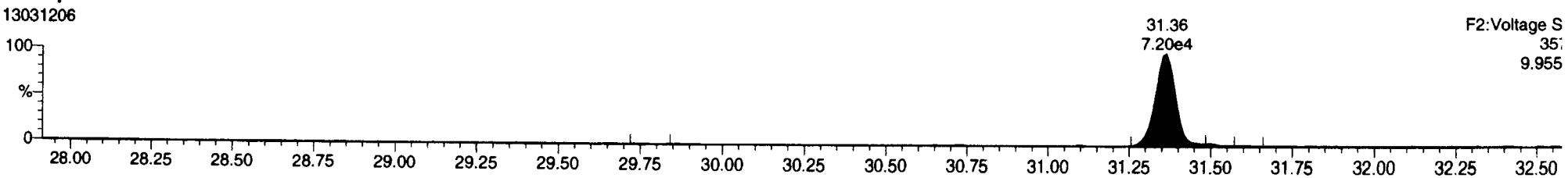


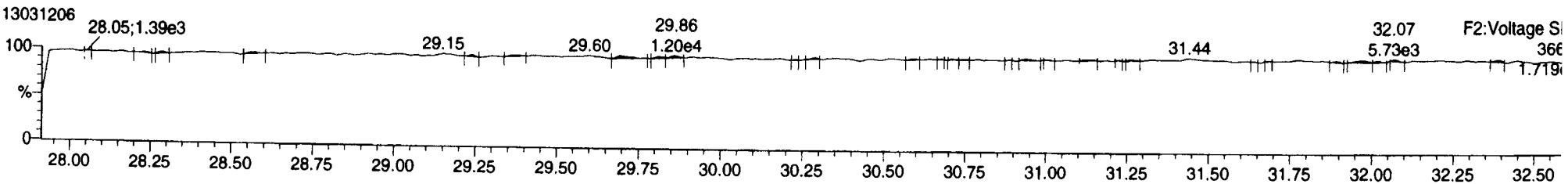
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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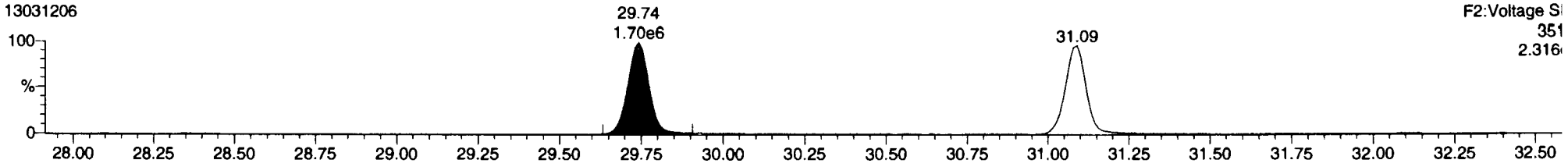
13C-12378-PeCDF



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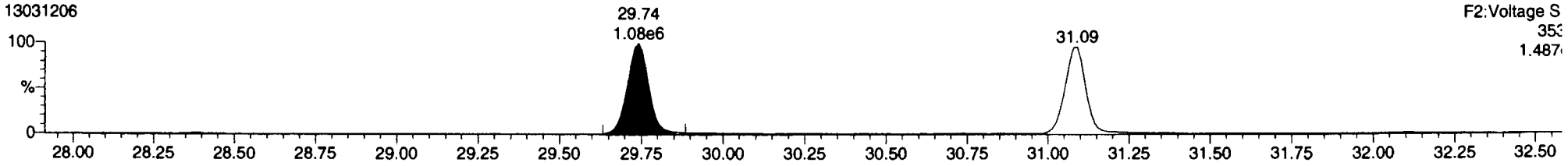
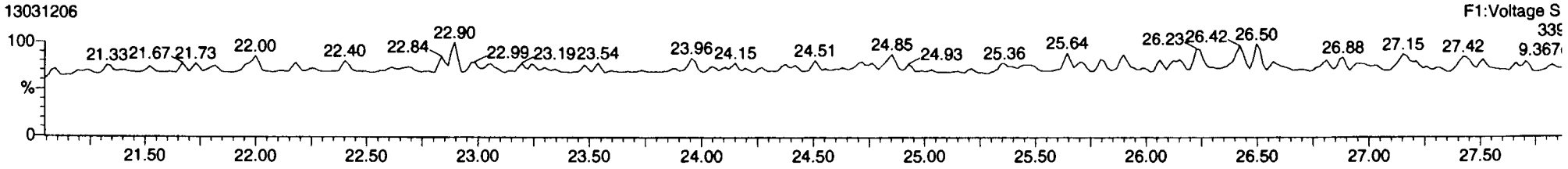
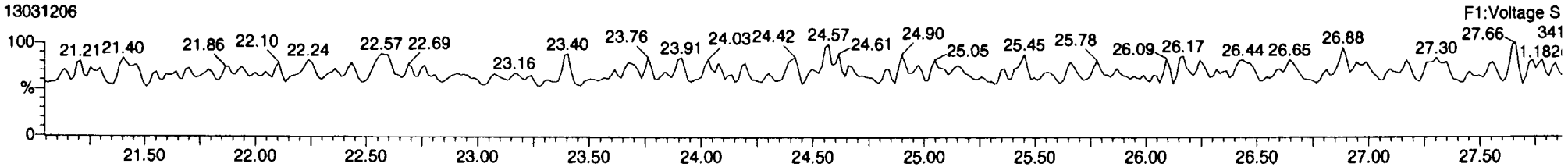


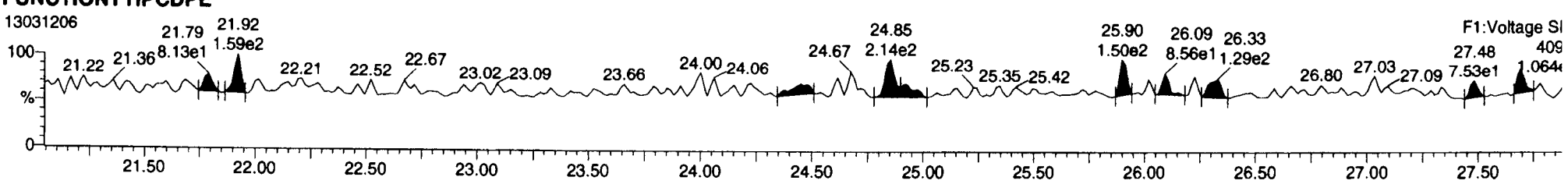
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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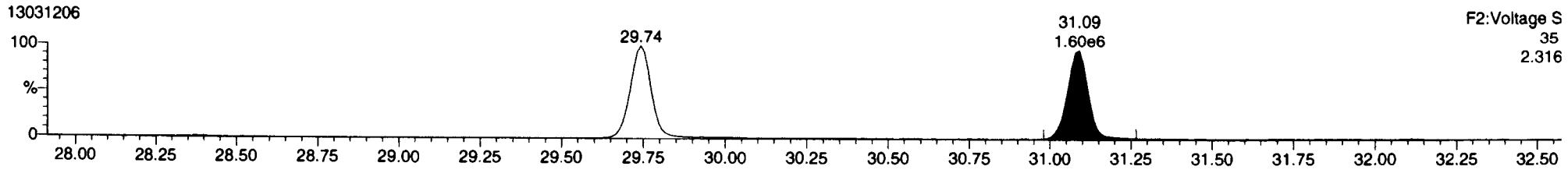
13C-23478-PeCDF



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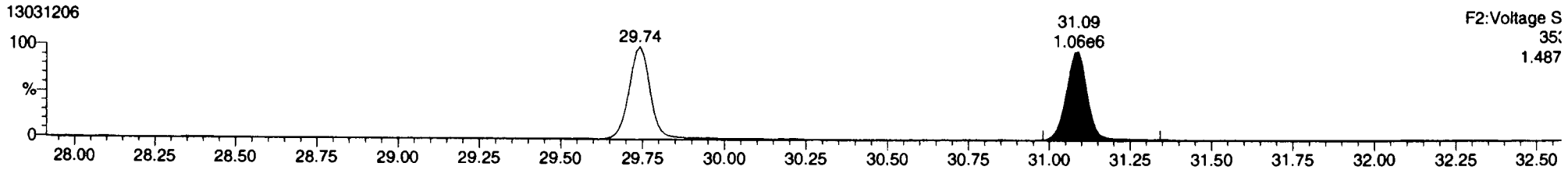
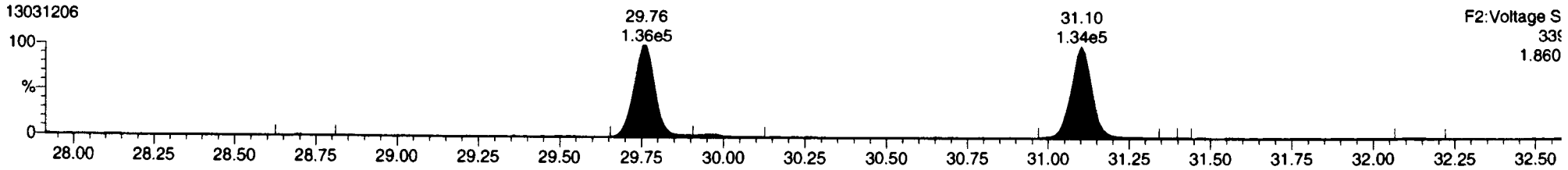
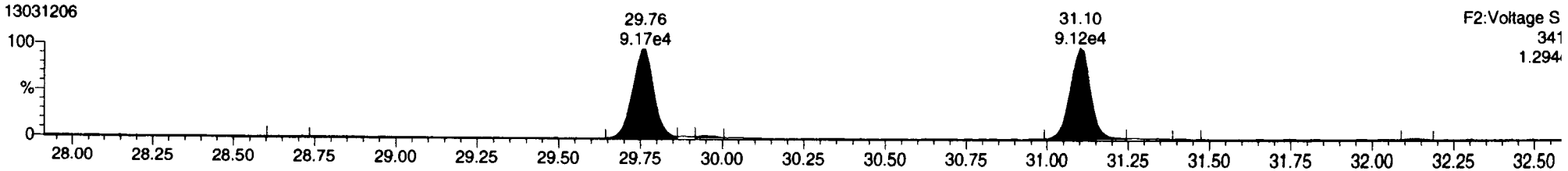


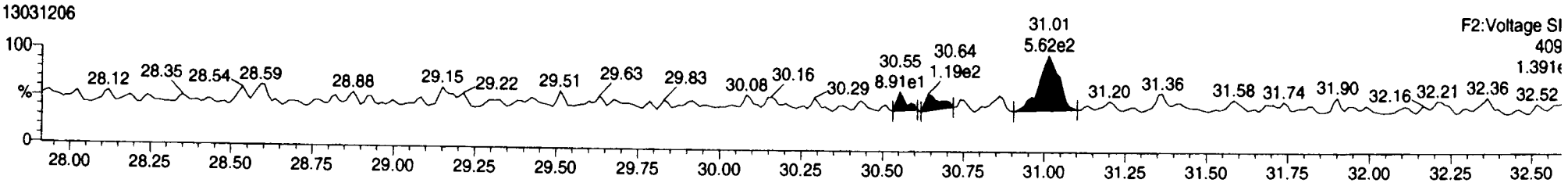
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

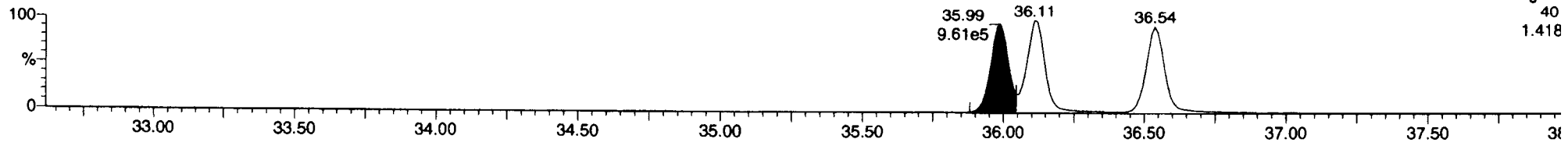


Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

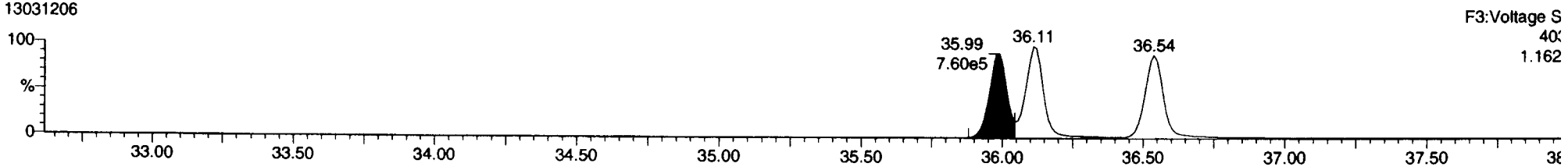
13C-123478-HxCDD

13031206



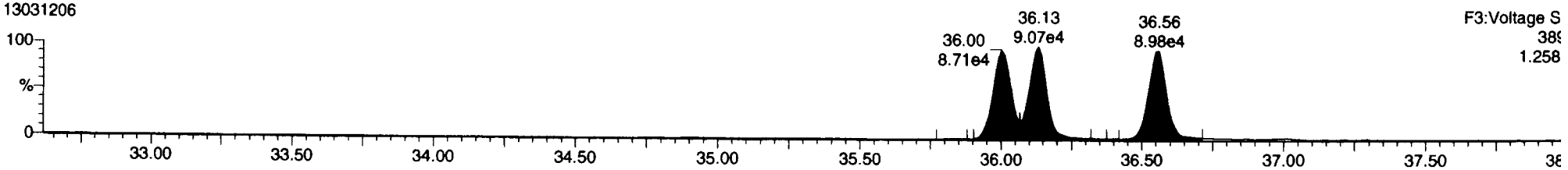
13C-123478-HxCDD

13031206



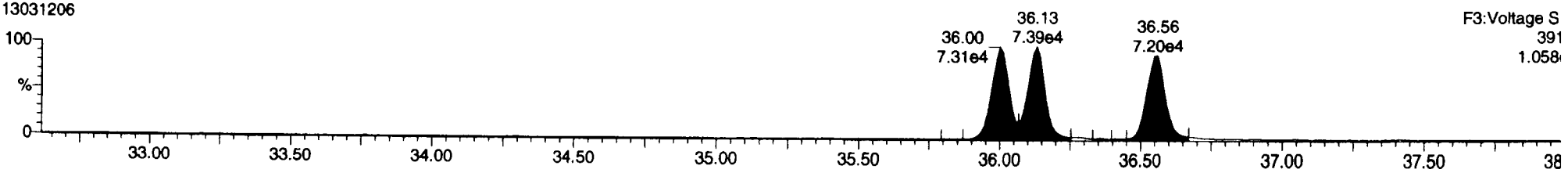
Total-hexadioxins

13031206



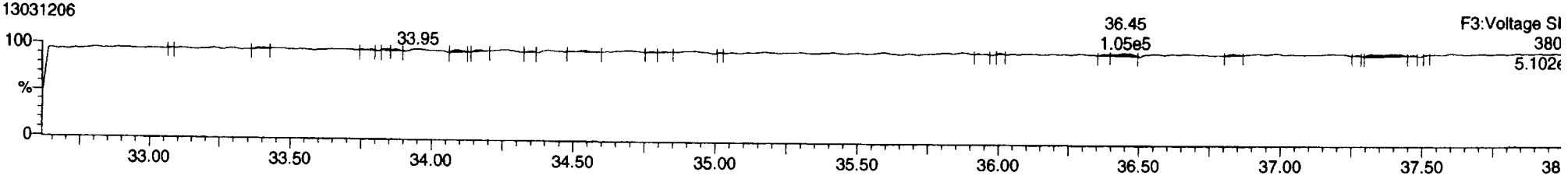
Total-hexadioxins

13031206



FUNCTION3 PFK

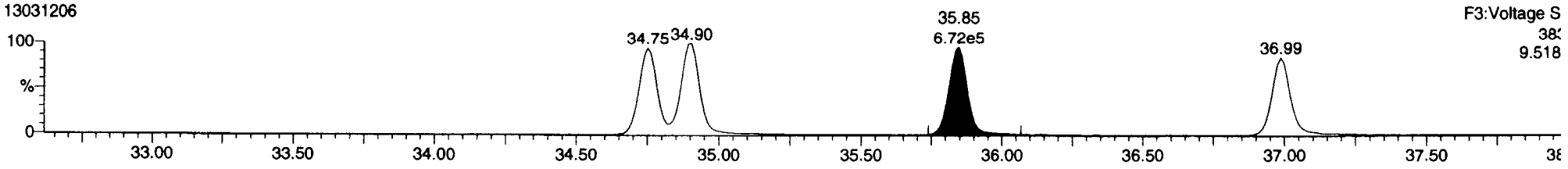
13031206



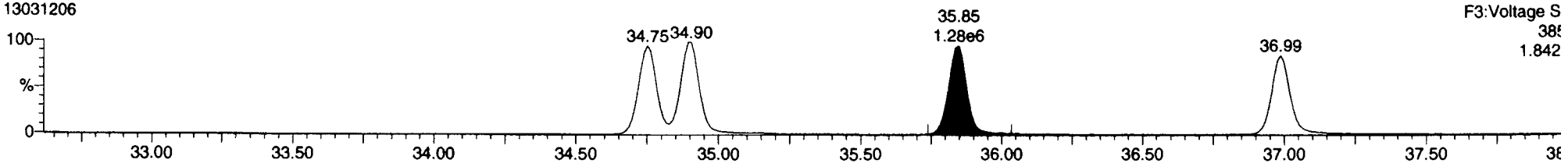
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

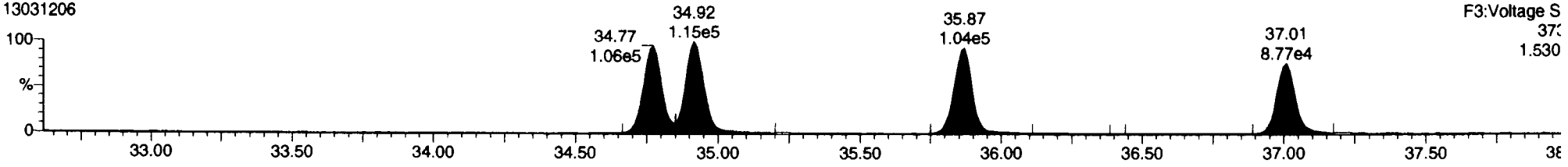
13C-234678-HxCDF



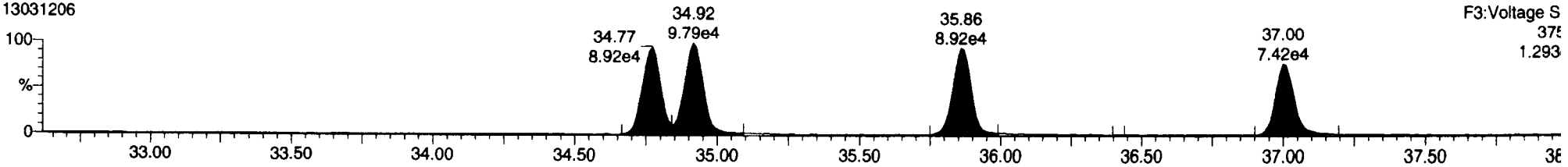
13C-234678-HxCDF



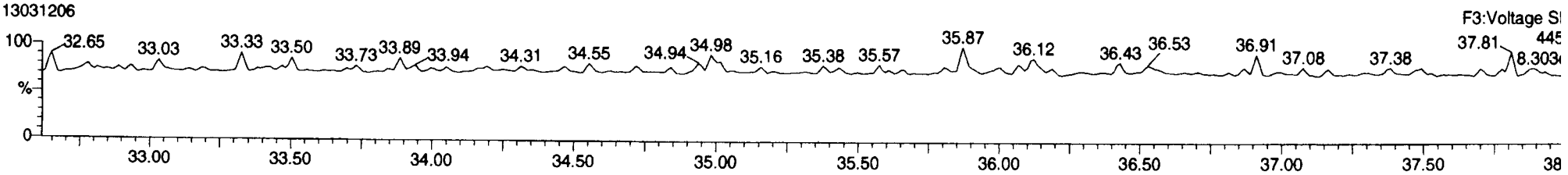
Total-hexafurans



Total-hexafurans



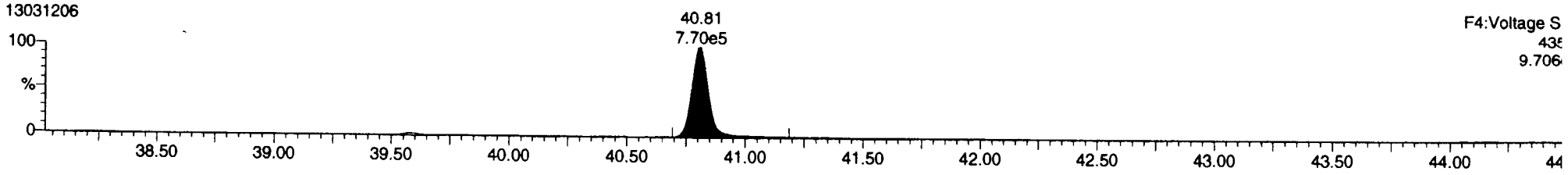
FUNCTION3 OCDPE



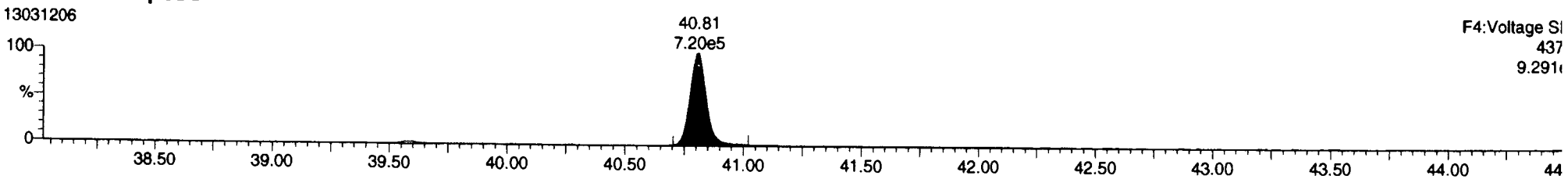
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

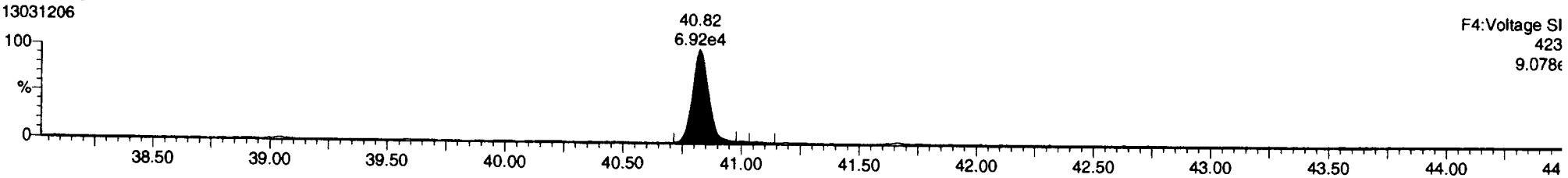
13C-1234678-HpCDD



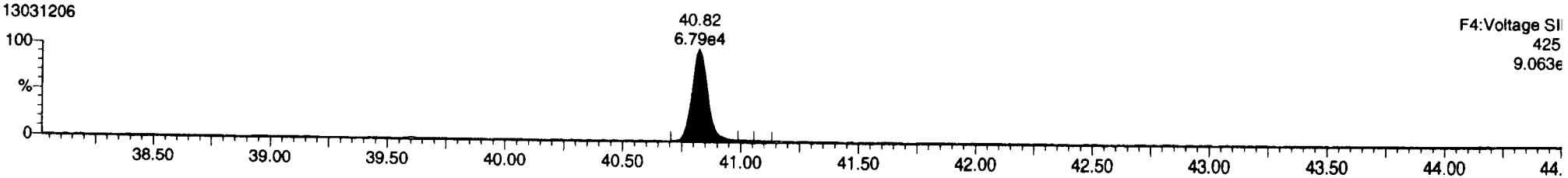
13C-1234678-HpCDD



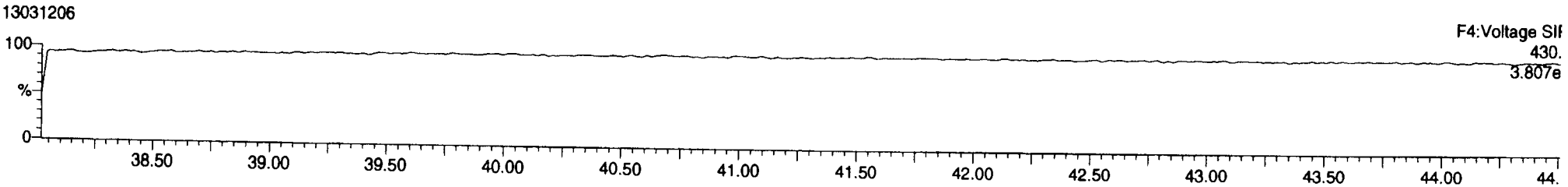
Total-heptadioxins



Total-heptadioxins



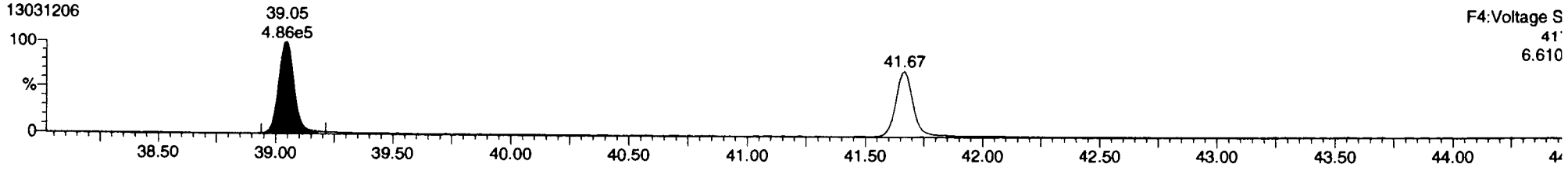
FUNCTION4 PFK



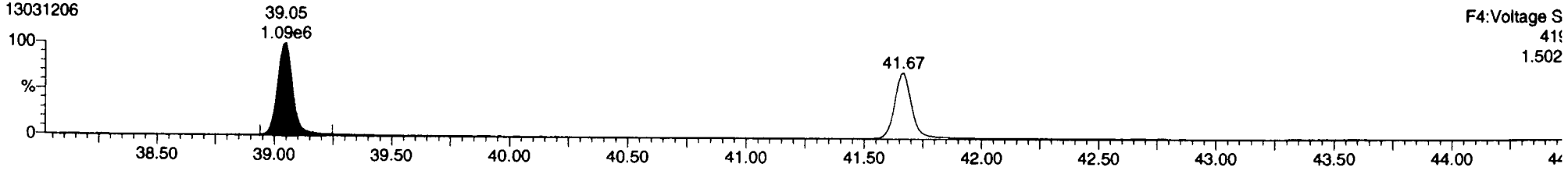
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

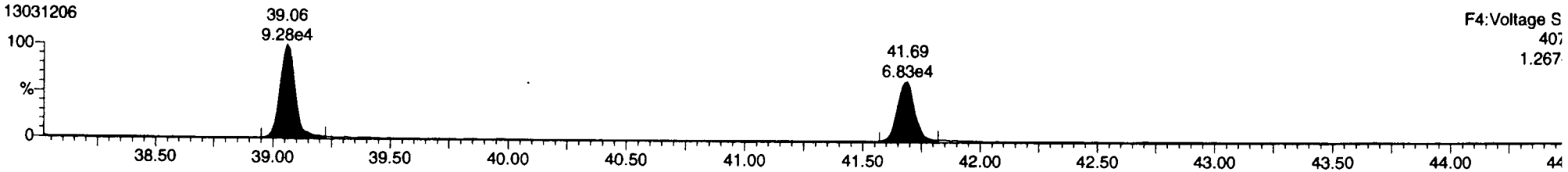
13C-1234678-HpCDF



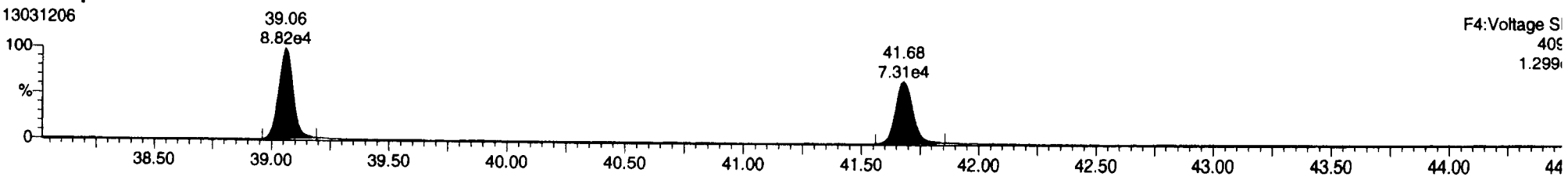
13C-1234678-HpCDF



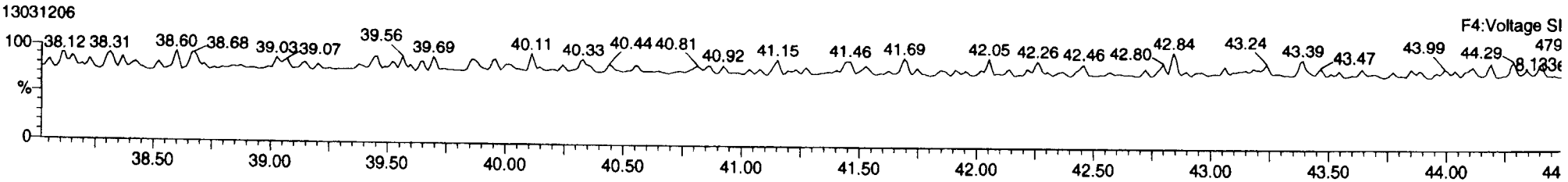
Total-heptafurans



Total-heptafurans



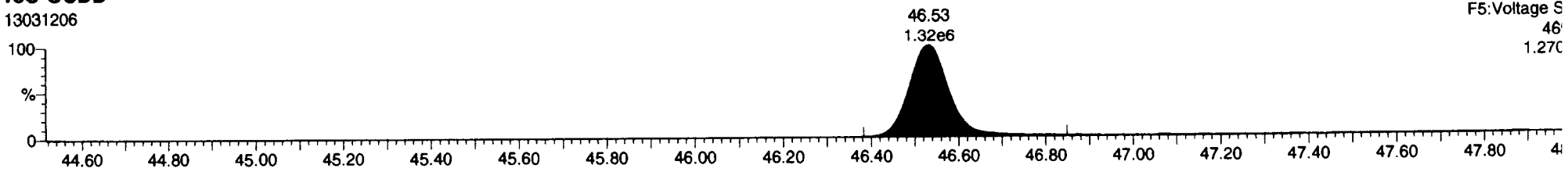
FUNCTION4 NCDPE



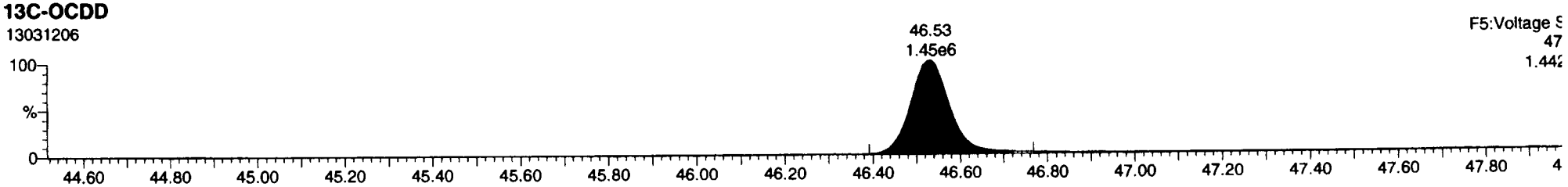
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:42:40 Pacific Daylight Time

ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

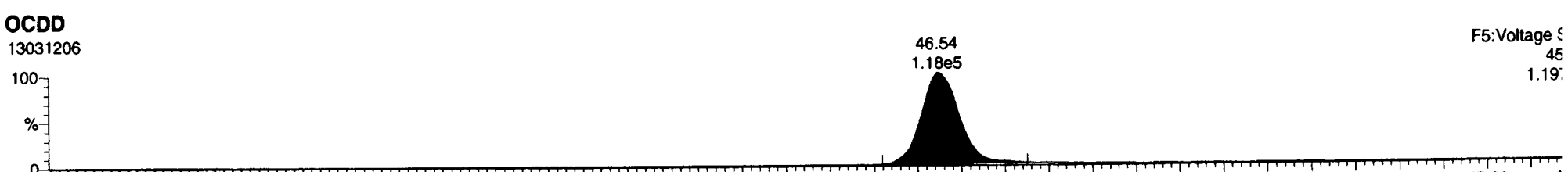
13C-OCDD



13C-OCDD

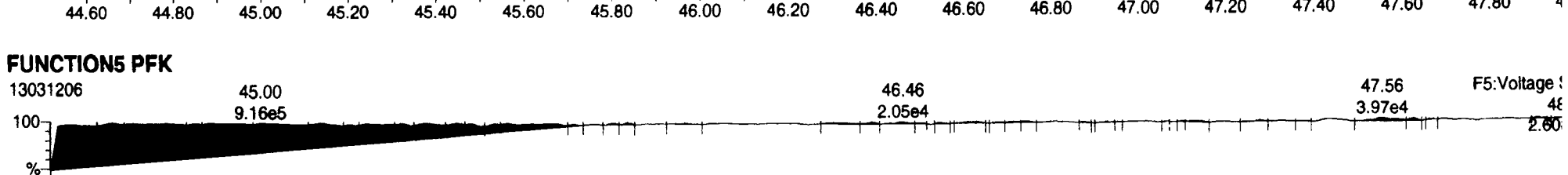


OCDD



OCDD

FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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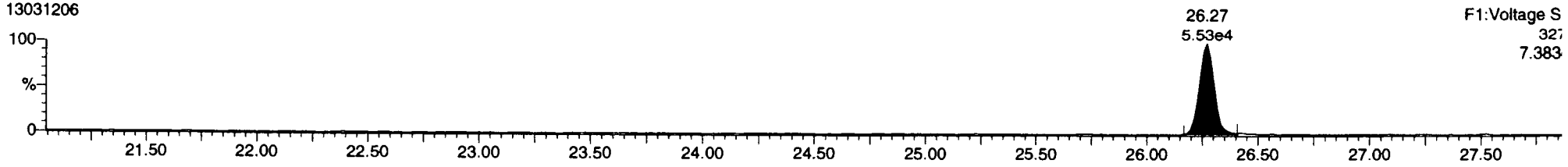
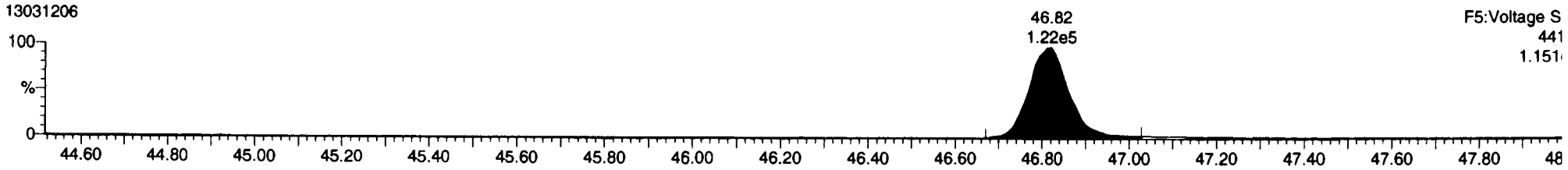
ID: CS2, Name: 13031206, Date: 12-Mar-2013, Time: 16:46:52, Conditions: AUTOSPEC01, User: pk

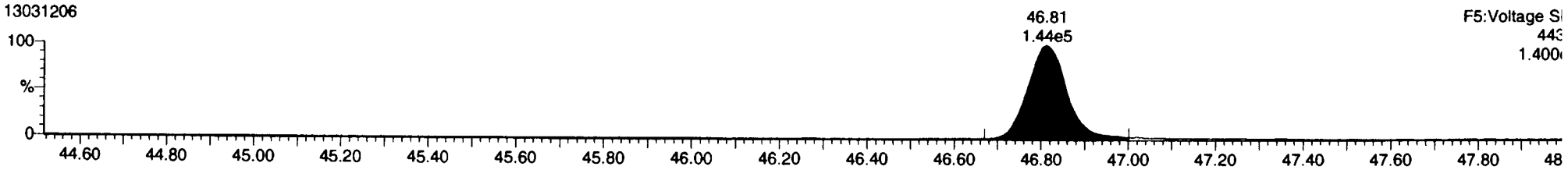
37CL-2378-TCDD



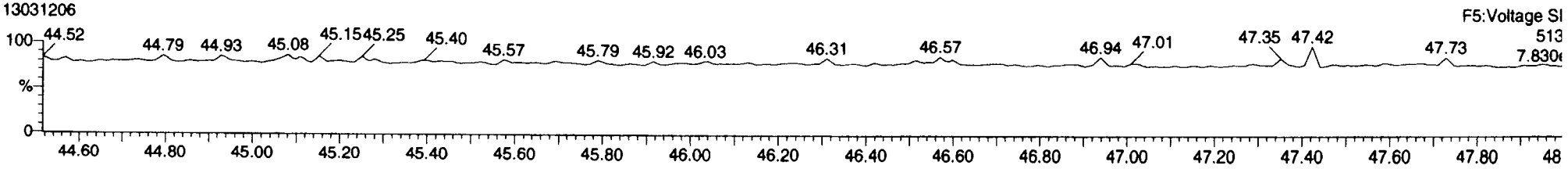
OCDF



OCDF



FUNCTION5 DCDPE



Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

	2378-TCDF	25.630	1.001	9.28e4	1.34e5	0.763	0.695	0.770	641.8	NO	10.378	10.378
	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

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

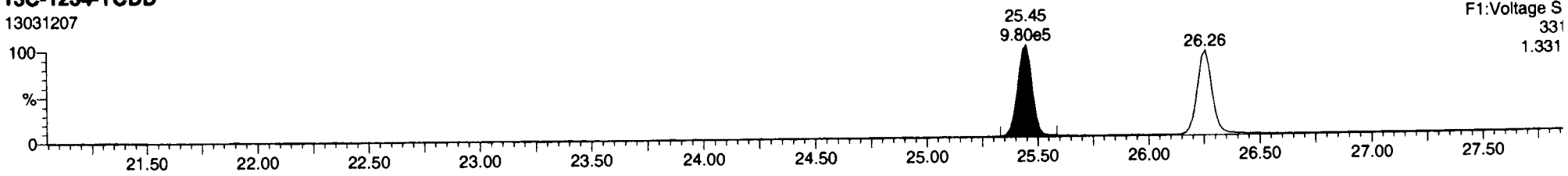
	13C-123789-HxCDD	36.539	0.000	7.12e5	5.82e5	1.000	1.224	1.240	2295.3	NO	100.000
	Total-tetrafurans			2.86e5		0.763					32.266
	Total-penta1			9.92e5							80.281
	Total-pentafurans			1.69e6		0.844					150.069
	Total-hexafurans			2.11e6		0.997					267.363
	Total-heptafurans			5.81e5		1.150					100.681
	Total-Furans			6.08e6		0.970					729.404
	Total-tetradioxins			5.06e5		0.980					54.794
	Total-pentadioxins			1.58e6		0.948					174.842
	Total-hexadioxins			1.52e6		0.898					214.676
	Total-heptadioxins			5.54e5		0.948					105.468
	Total-Dioxins			4.56e6		0.934					643.868
	Total-TEQ			1.06e7							1373.272
	37CL-2378-TCDD	26.272	1.032	2.26e5		0.999			1299.4		9.964
	FUNCTION1 PFK			2.77e6							
	FUNCTION2 PFK			5.48e5							0.000
	FUNCTION3 PFK			0.00e0							
	FUNCTION4 PFK			7.29e4							
	FUNCTION5 PFK			5.05e5							
	FUNCTION1 HXCDPE			2.76e2							0.000
	FUNCTION1 HPCDPE			1.49e3							0.000
	FUNCTION2 HPCDPE			1.26e3							0.000
	FUNCTION3 OCDPE			0.00e0							
	FUNCTION4 NCDPE			7.42e1							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 10:42:50 Pacific Daylight Time

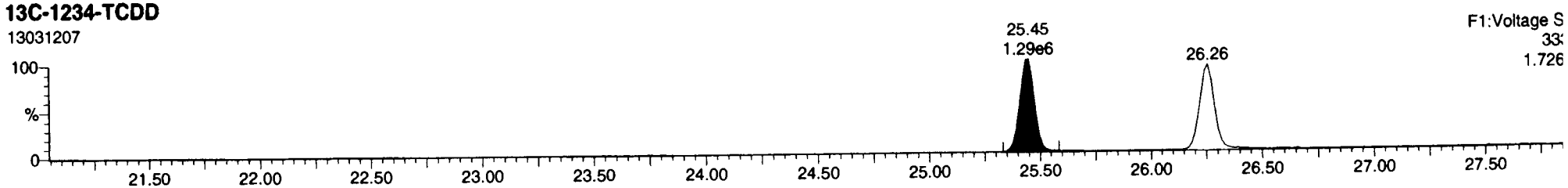
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

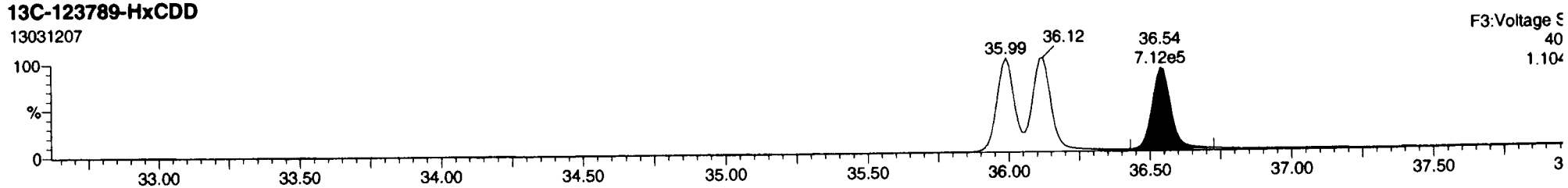
13C-1234-TCDD
13031207



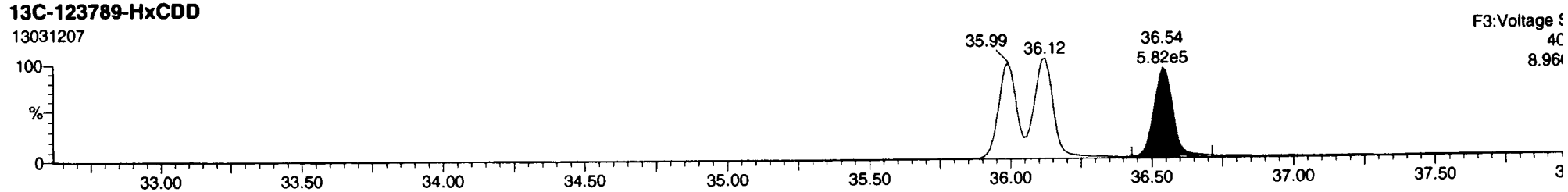
13C-1234-TCDD
13031207



13C-123789-HxCDD
13031207



13C-123789-HxCDD
13031207



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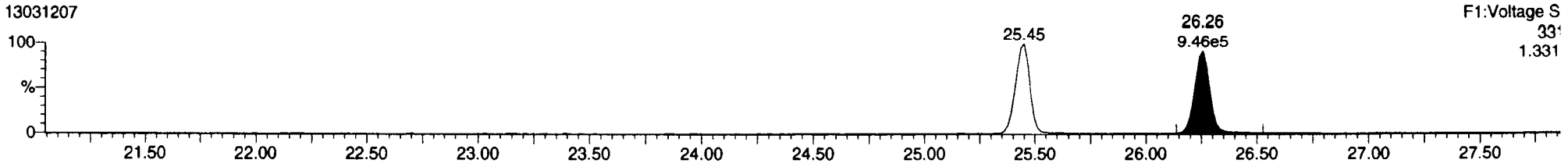
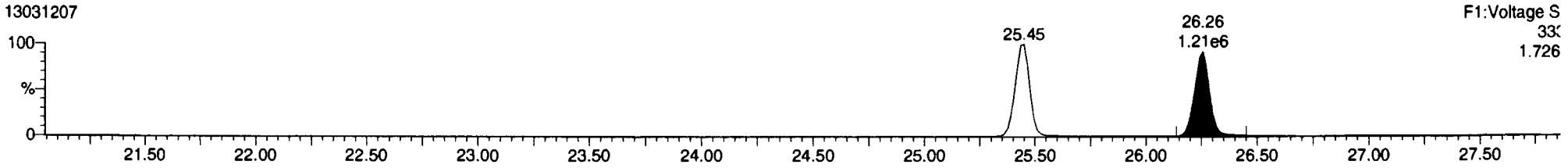
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

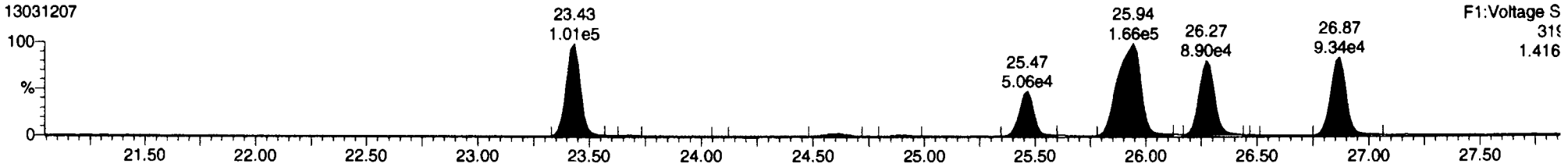
13C-2378-TCDD



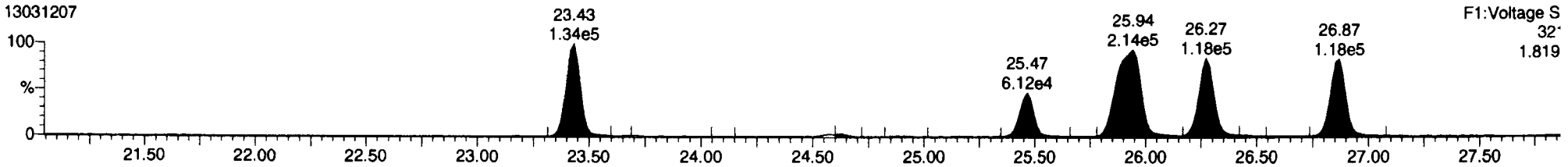
13C-2378-TCDD



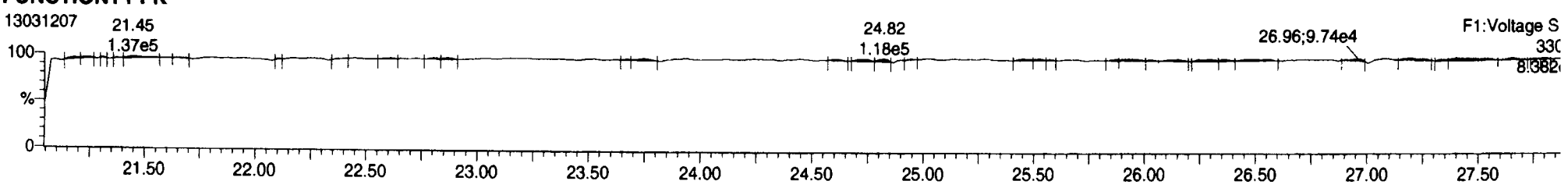
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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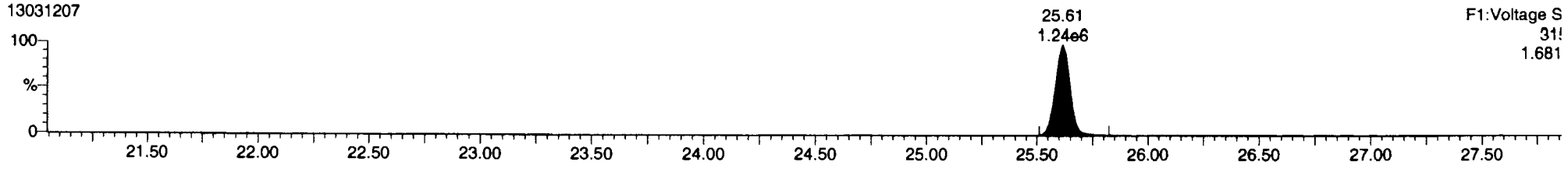
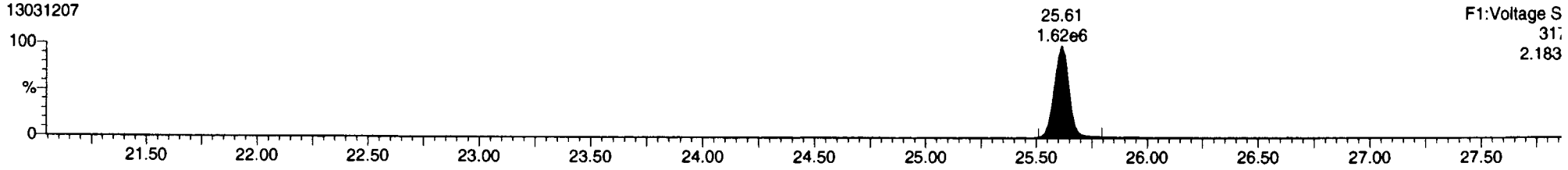
ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

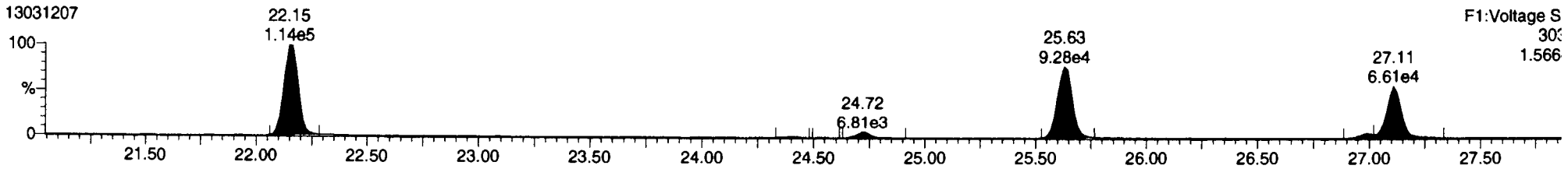
13C-2378-TCDF



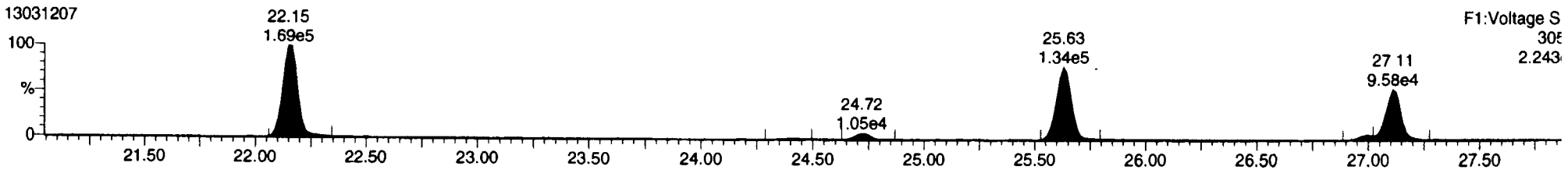
13C-2378-TCDF



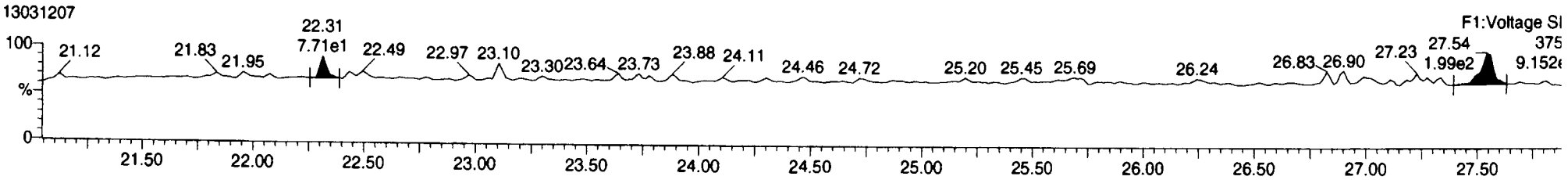
Total-tetrafurans



Total-tetrafurans

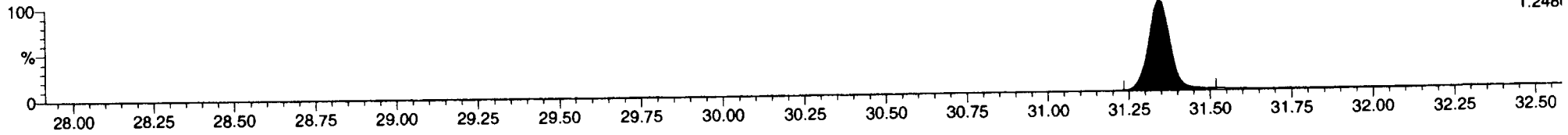


FUNCTION1 HXCDPE

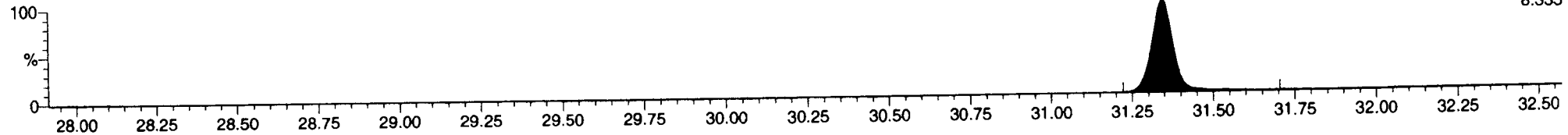


ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

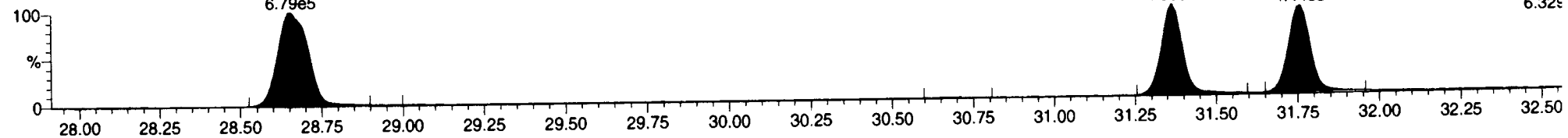
13C-12378-PeCDD
13031207
31.34
9.43e5
F2:Voltage SI
367
1.248



13C-12378-PeCDD
13031207
31.34
6.21e5
F2:Voltage S
369
8.335



Total-pentadioxins
13031207
28.66
6.79e5
31.36
4.50e5
31.76
4.44e5
F2:Voltage S
35
6.329



Total-pentadioxins
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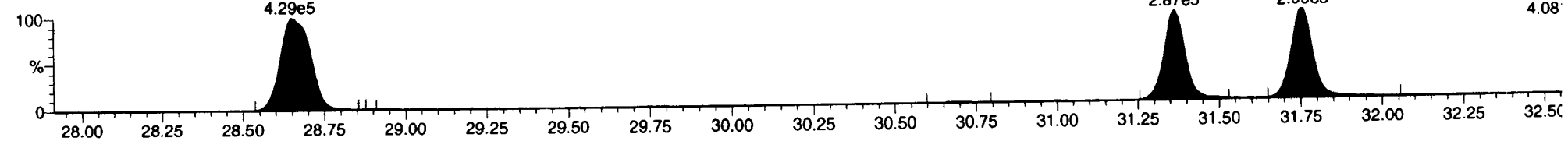
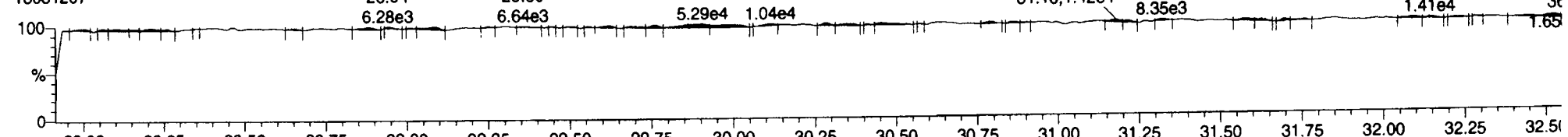
4.29e5
31.36
2.87e5
31.76
2.99e5
F2:Voltage S
35
4.08



FUNCTION2 PFK
13031207
28.94
6.28e3
29.36
6.64e3
29.91
5.29e4
30.11
1.04e4
31.18;1.42e4
31.32
8.35e3
32.14
1.41e4
F2:Voltage S
36
1.65



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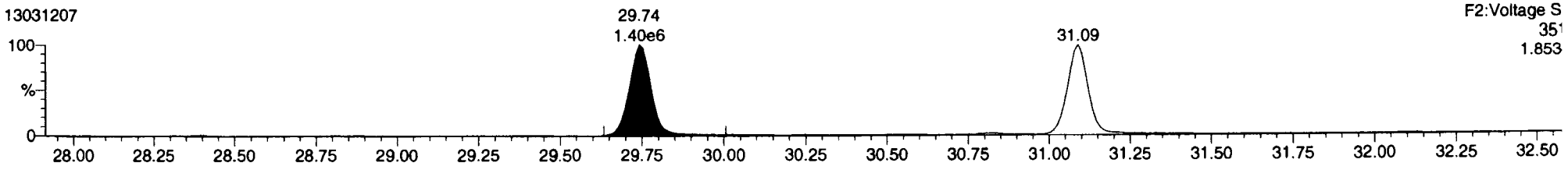
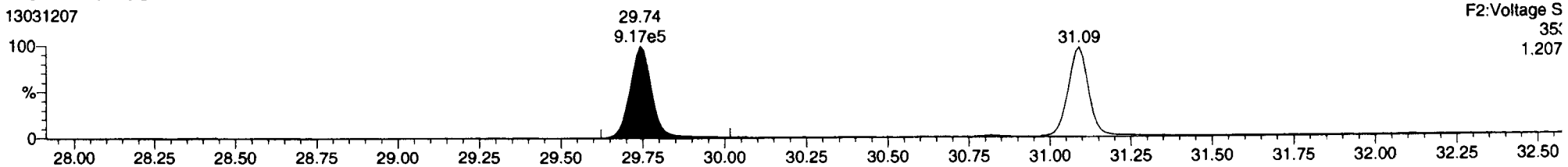
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

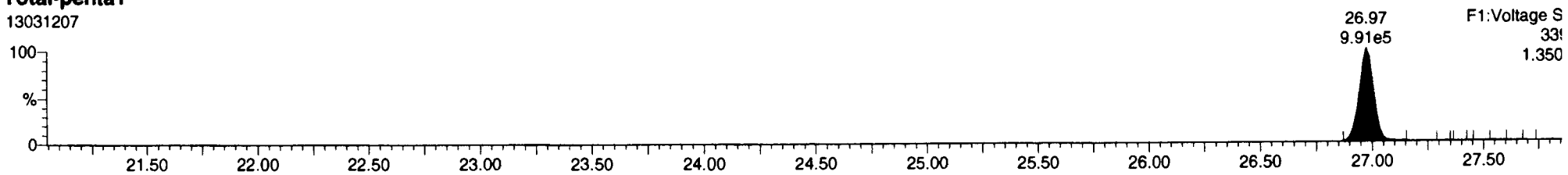
13C-12378-PeCDF



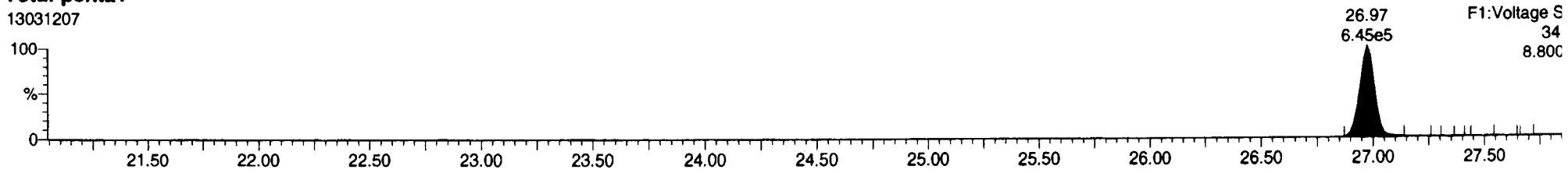
13C-12378-PeCDF



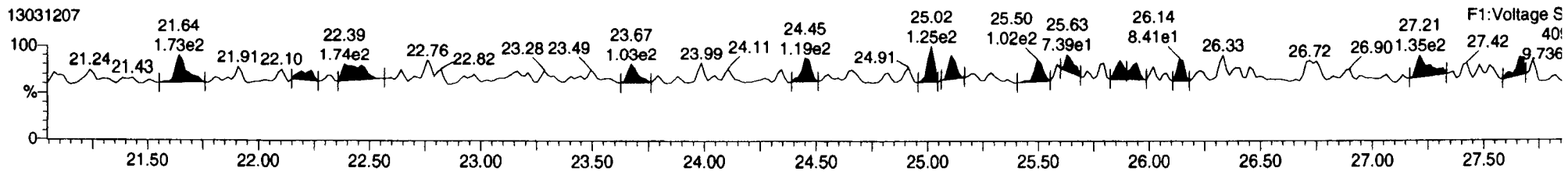
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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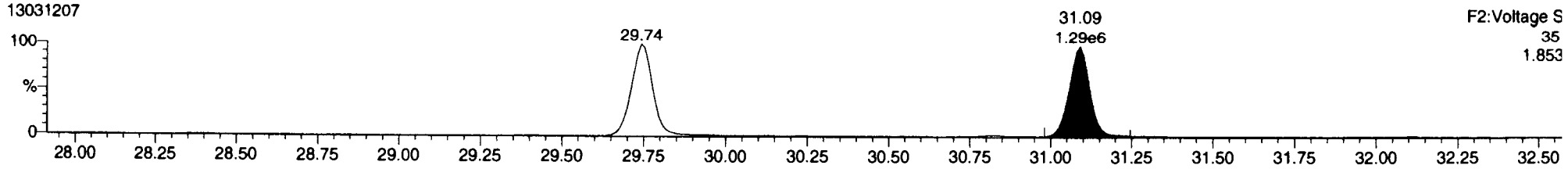
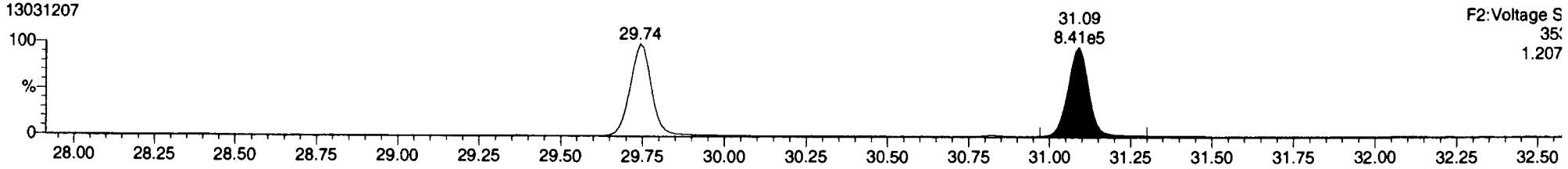
13C-23478-PeCDF



13C-23478-PeCDF



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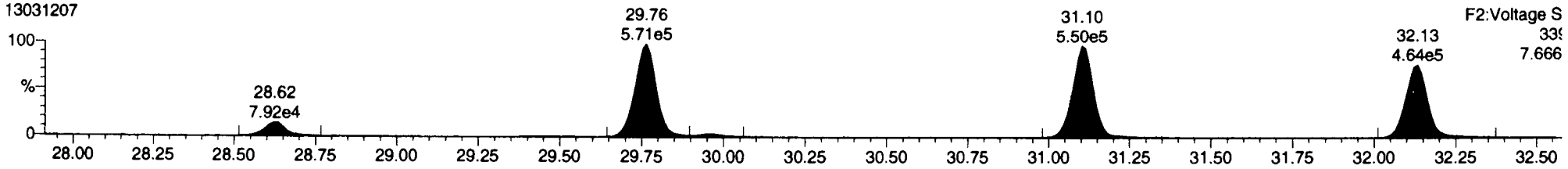
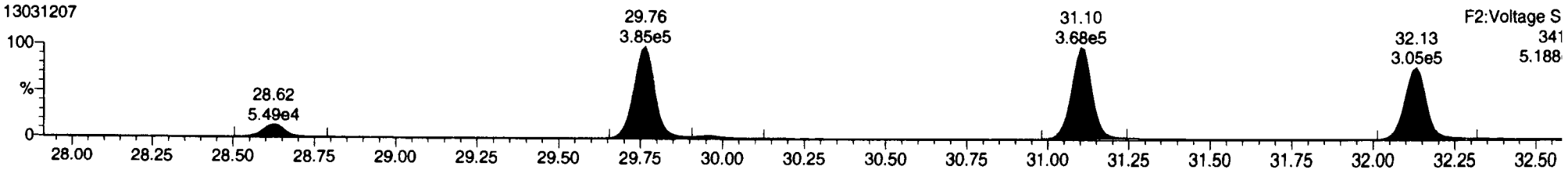


Total-pentafurans



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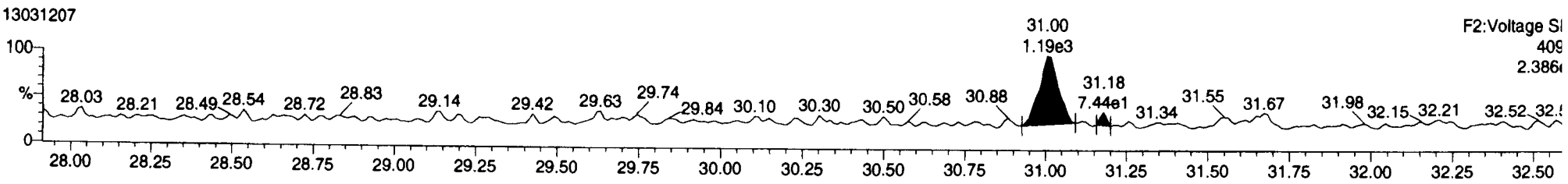

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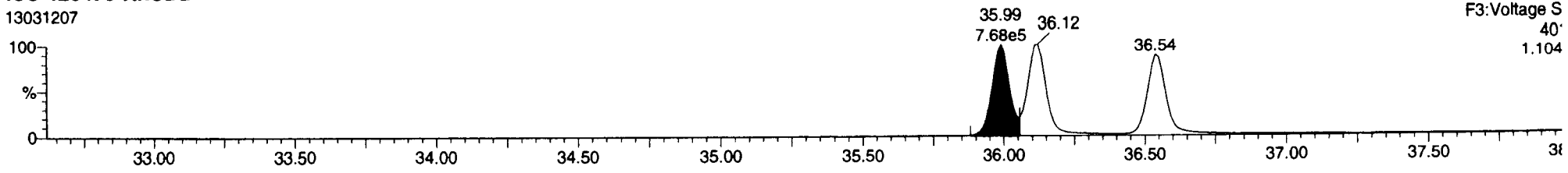
13C-123478-HxCDD



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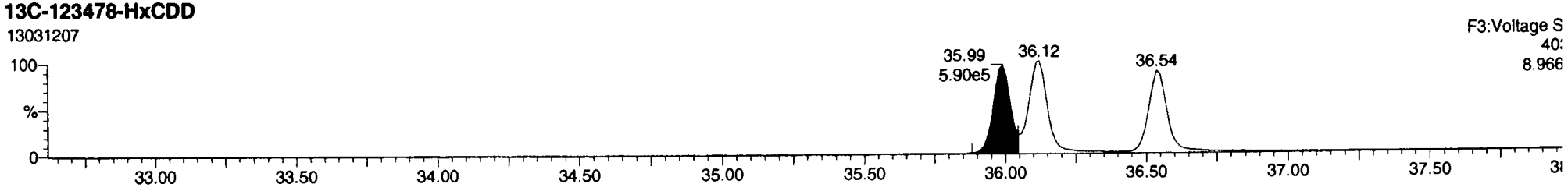

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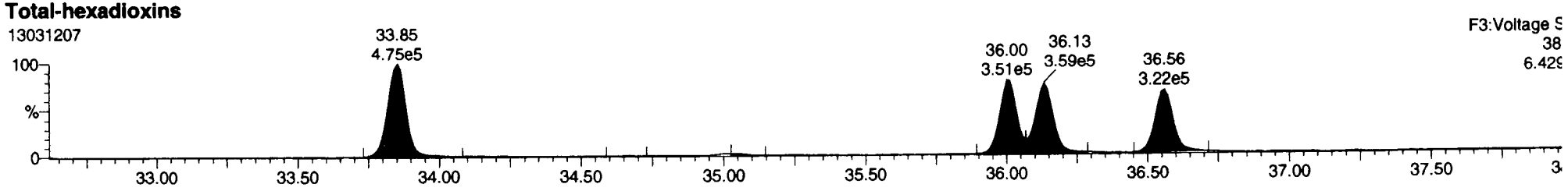
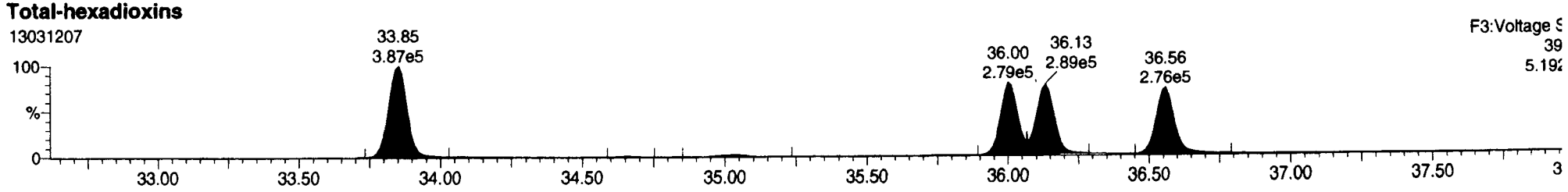


Total-hexadioxins



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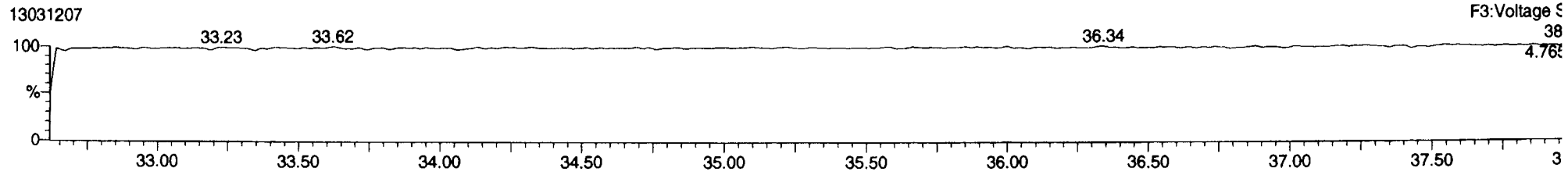

Dataset: P:\DIOXIN8290.PRO\130312IC.qld
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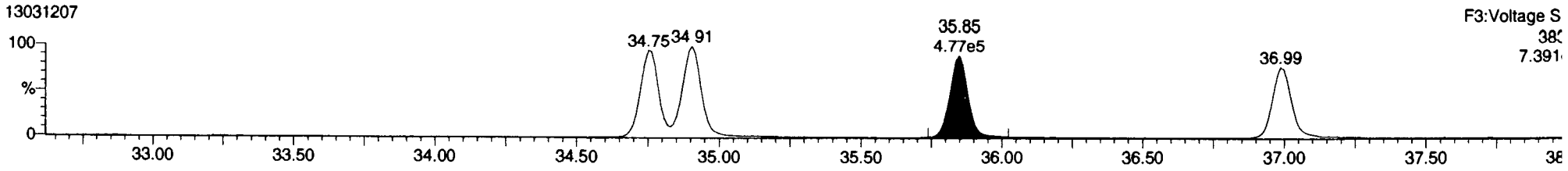
13C-234678-HxCDF



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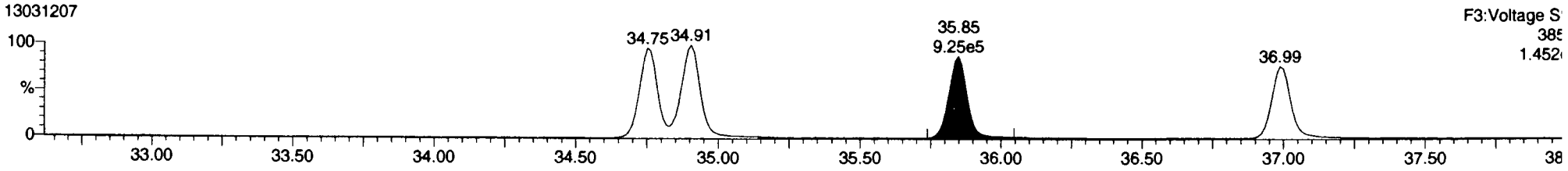
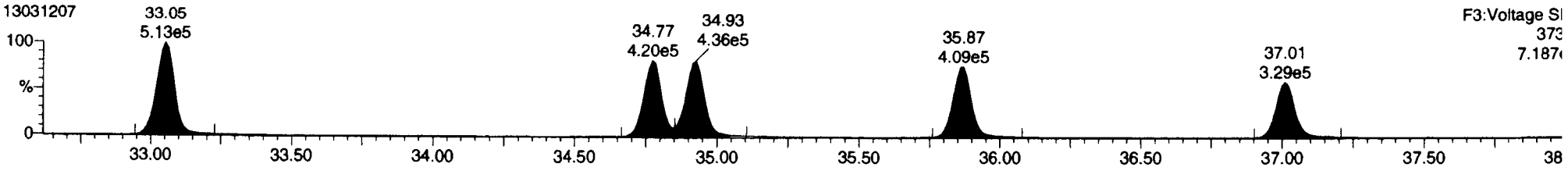
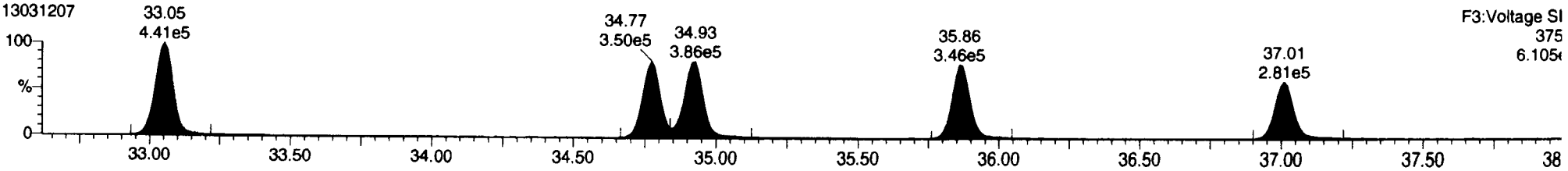


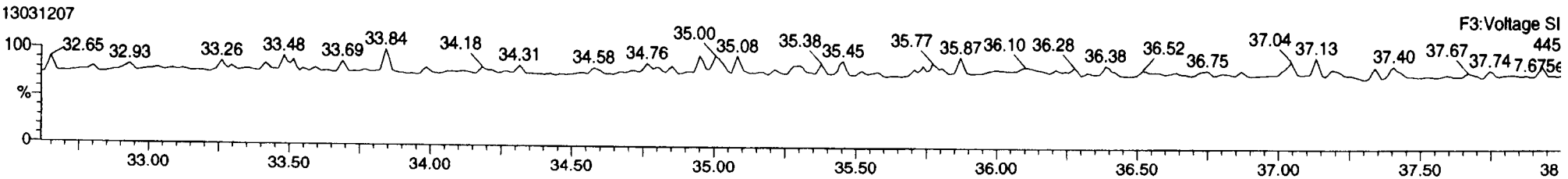
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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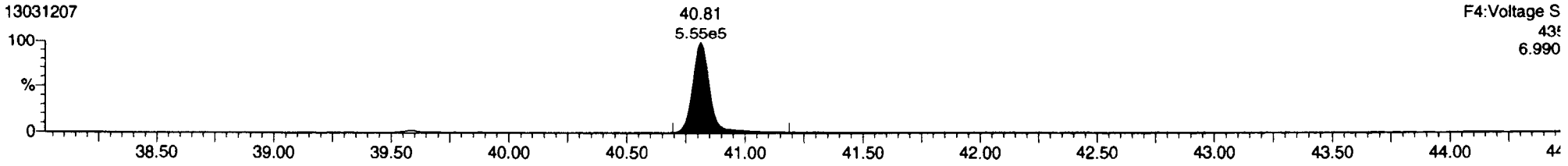
ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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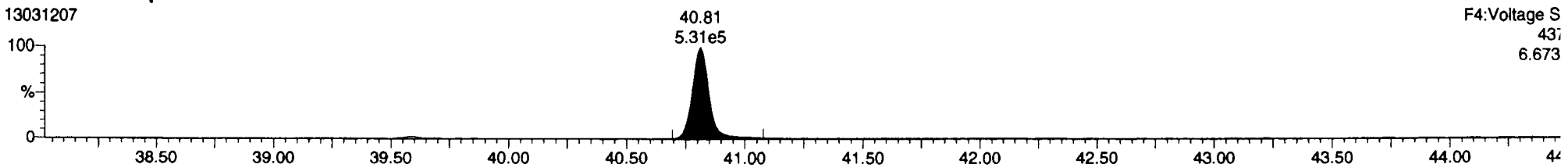

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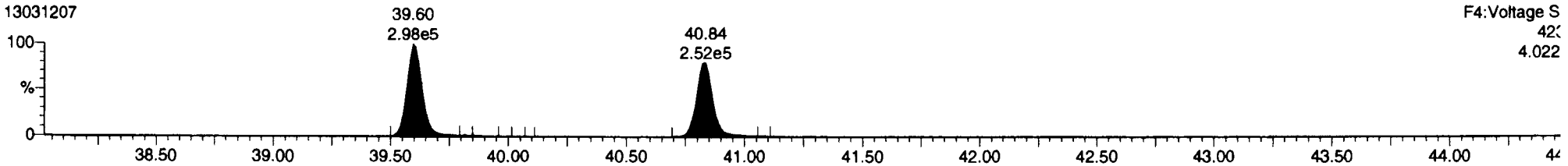

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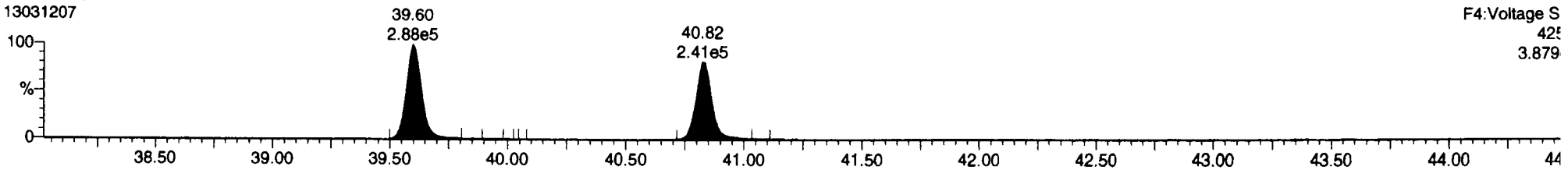
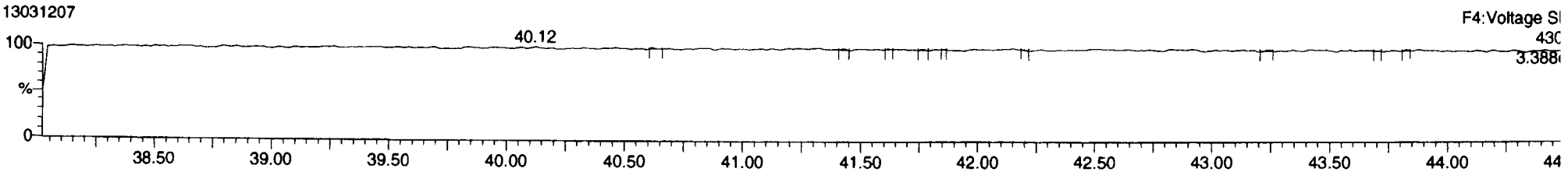


FUNCTION4 PFK



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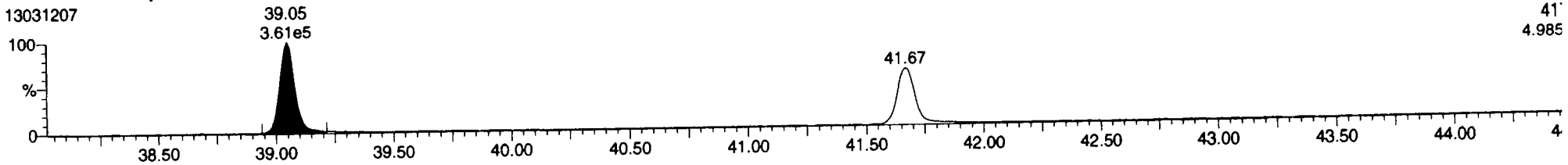
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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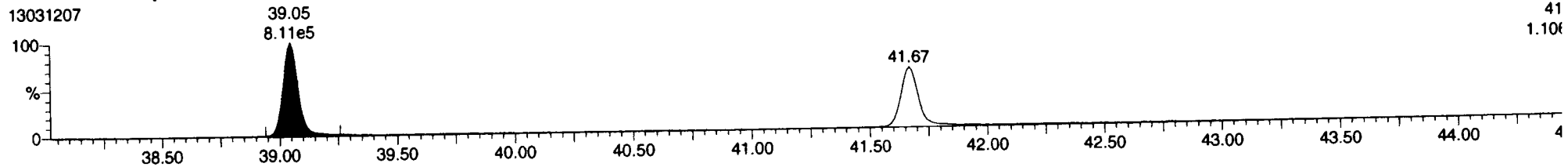

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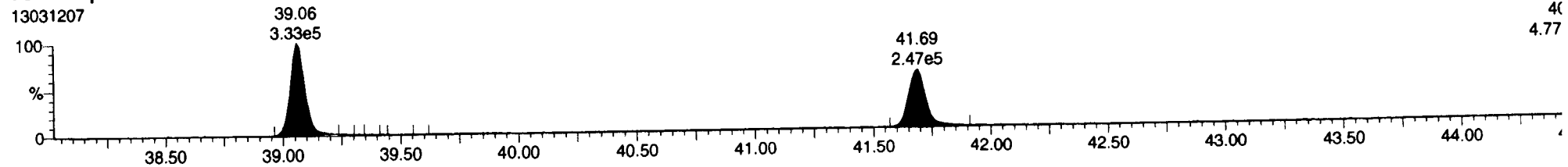

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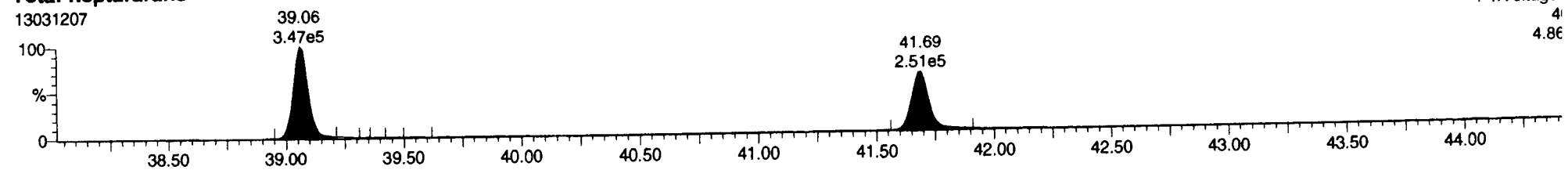
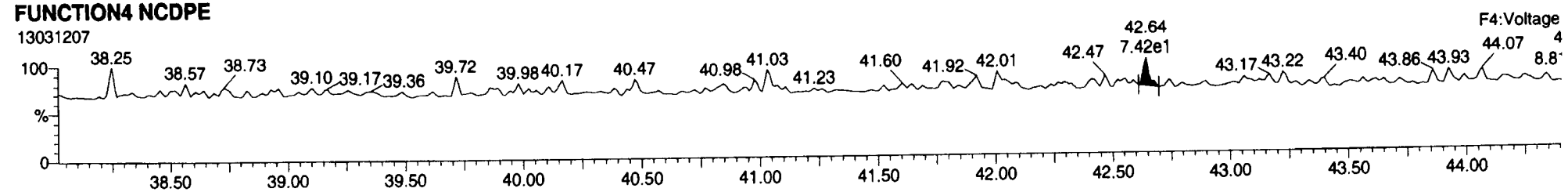


FUNCTION4 NCDPE



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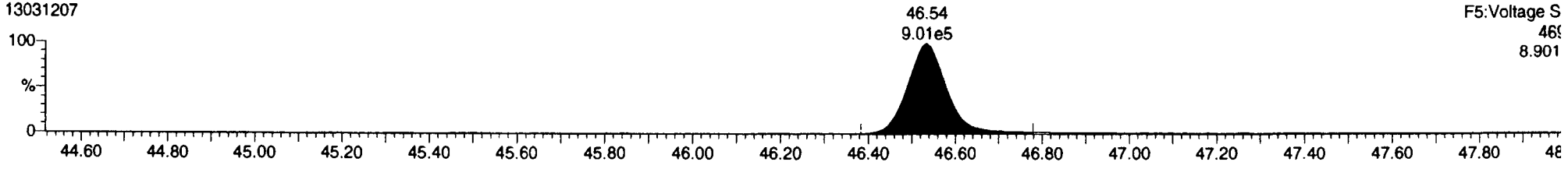
Printed: Wednesday, March 13, 2013 10:42:50 Pacific Daylight Time

ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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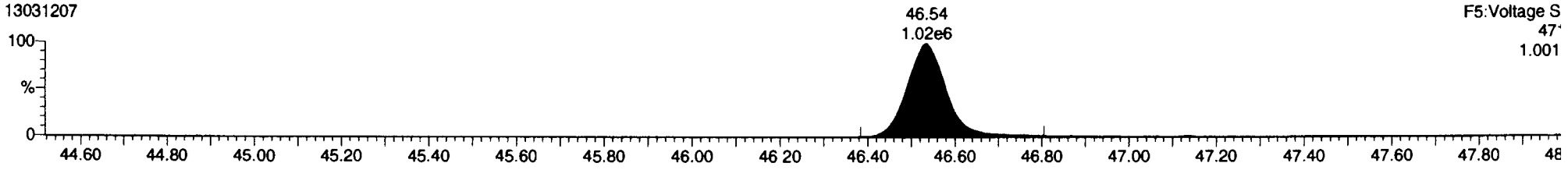

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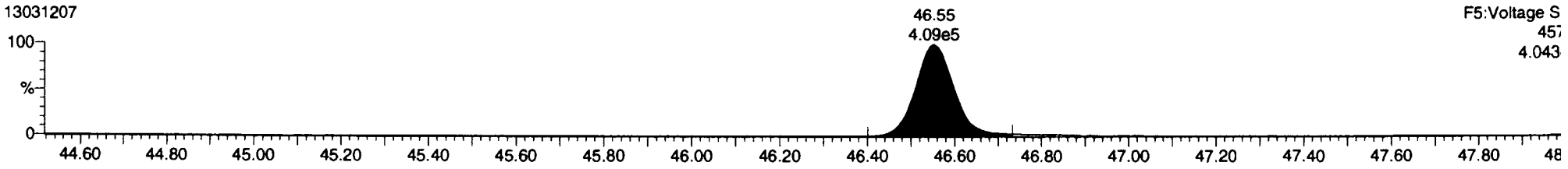

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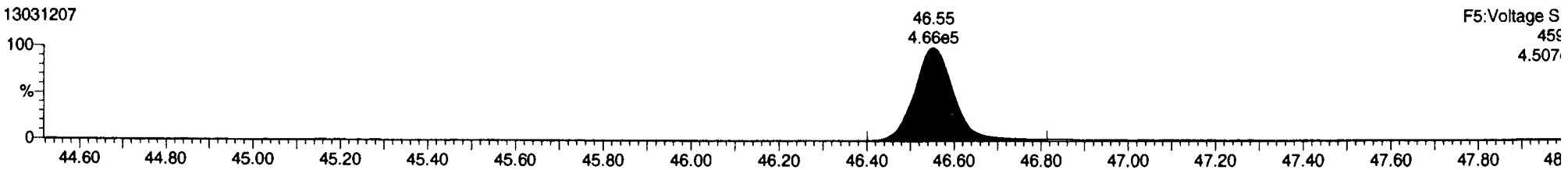

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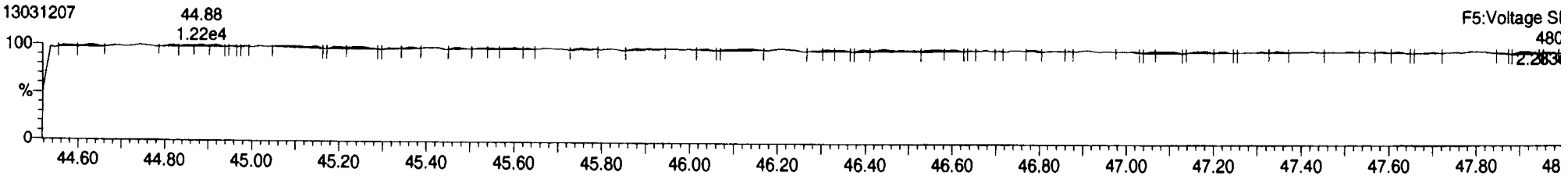

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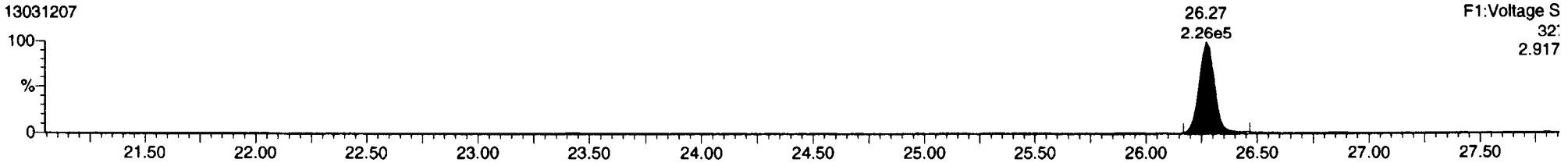
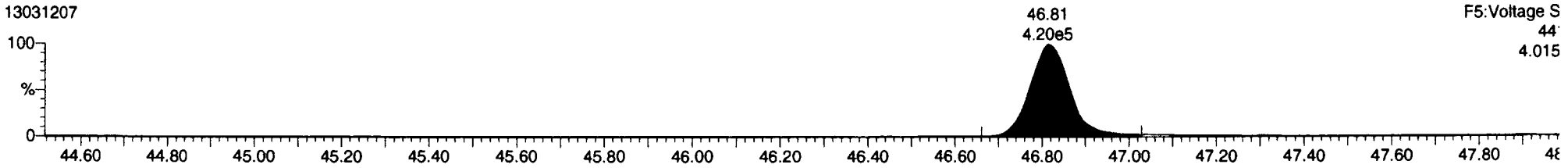
ID: CS3, Name: 13031207, Date: 12-Mar-2013, Time: 17:38:09, Conditions: AUTOSPEC01, User: pk

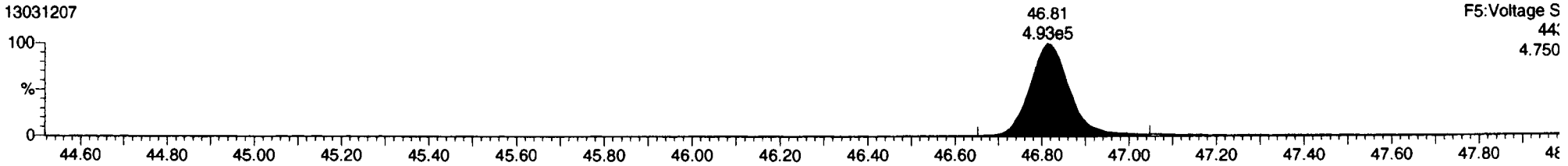
37CL-2378-TCDD



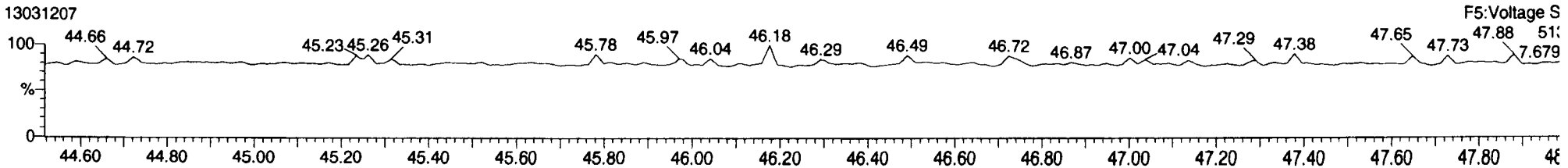
OCDF



OCDF



FUNCTION5 DCDPE



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Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
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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

	2378-TCDF	25.630	1.001	6.78e5	9.47e5	0.763	0.716	0.770	3877.7	NO	40.528	40.528
	12378-PeCDF	29.753	1.000	4.08e6	2.77e6	0.836	1.471	1.550	5541.2	NO	203.619	203.619
	23478-PeCDF	31.102	1.001	4.00e6	2.74e6	0.851	1.460	1.550	5501.8	NO	203.746	203.746
	123478-HxCDF	34.763	1.000	3.27e6	2.79e6	1.017	1.169	1.240	3912.9	NO	203.402	203.402
	234678-HxCDF	35.859	1.001	3.25e6	2.72e6	1.027	1.195	1.240	3863.8	NO	199.956	199.956
	123678-HxCDF	34.916	1.001	3.45e6	3.00e6	1.013	1.152	1.240	4073.3	NO	196.407	196.407
	123789-HxCDF	36.999	1.000	2.66e6	2.32e6	0.929	1.149	1.240	3081.8	NO	210.254	210.254
	1234678-HpCDF	39.059	1.001	2.76e6	2.76e6	1.151	1.001	1.050	6713.9	NO	208.359	208.359
	1234789-HpCDF	41.679	1.001	2.02e6	2.14e6	1.149	0.945	1.050	4254.5	NO	204.030	204.030
	OCDF	46.813	1.006	3.61e6	4.31e6	0.963	0.836	0.890	5120.8	NO	424.269	424.269
	2378-TCDD	26.272	1.001	6.35e5	8.23e5	0.980	0.772	0.770	3230.8	NO	39.299	39.299
	12378-PeCDD	31.354	1.001	3.24e6	2.18e6	0.948	1.485	1.550	11017.3	NO	204.699	204.699
	123478-HxCDD	36.001	1.001	2.74e6	2.23e6	0.941	1.231	1.240	6523.4	NO	196.685	196.685
	123678-HxCDD	36.133	1.001	2.83e6	2.29e6	0.884	1.238	1.240	6106.2	NO	206.692	206.692
	123789-HxCDD	36.549	1.012	2.60e6	2.08e6	0.870	1.249	1.240	6016.6	NO	196.103	196.103
	1234678-HpCDD	40.824	1.001	2.01e6	1.95e6	0.948	1.032	1.050	3860.4	NO	196.416	196.416
	OCDD	46.553	1.001	3.44e6	3.99e6	0.969	0.862	0.890	6725.0	NO	395.487	395.487
	13C-2378-TCDF	25.615	1.007	2.31e6	2.95e6	1.318	0.783	0.770	7935.3	NO		100.421
	13C-12378-PeCDF	29.743	1.169	2.44e6	1.58e6	1.026	1.544	1.550	4254.3	NO		98.827
	13C-23478-PeCDF	31.080	1.222	2.36e6	1.53e6	0.966	1.547	1.550	4247.4	NO		101.383
	13C-123478-HxCDF	34.752	0.951	9.91e5	1.94e6	1.123	0.511	0.510	2407.3	NO		100.804
	13C-123678-HxCDF	34.894	0.955	1.08e6	2.16e6	1.216	0.499	0.510	2643.8	NO		103.089
	13C-234678-HxCDF	35.837	0.981	9.89e5	1.92e6	1.106	0.515	0.510	2480.1	NO		101.702
	13C-123789-HxCDF	36.988	1.012	8.67e5	1.68e6	0.995	0.516	0.510	2060.7	NO		99.036
	13C-1234678-HpCDF	39.037	1.068	7.04e5	1.60e6	0.896	0.441	0.440	2673.2	NO		99.331
	13C-1234789-HpCDF	41.657	1.140	5.43e5	1.23e6	0.693	0.441	0.440	1788.1	NO		98.882
	13C-1234-TCDD	25.436	0.000	1.73e6	2.24e6	1.000	0.773	0.770	3728.2	NO		100.000
	13C-2378-TCDD	26.243	1.032	1.64e6	2.15e6	0.961	0.764	0.770	3357.2	NO		99.171
	13C-12378-PeCDD	31.332	1.232	1.69e6	1.10e6	0.703	1.532	1.550	7274.1	NO		100.000
	13C-123478-HxCDD	35.979	0.985	1.50e6	1.19e6	1.016	1.265	1.240	5153.3	NO		102.117
	13C-123678-HxCDD	36.111	0.988	1.54e6	1.26e6	1.098	1.218	1.240	5175.5	NO		98.523
	13C-1234678-HpCDD	40.802	1.117	1.07e6	1.05e6	0.828	1.014	1.050	3747.3	NO		99.076
	13C-OCDD	46.526	1.273	1.84e6	2.03e6	0.770	0.907	0.890	6488.8	NO		194.599

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

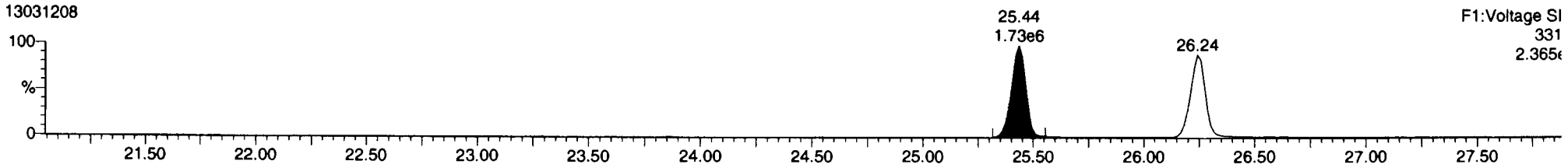
	13C-123789-HxCDD	36.538	0.000	1.43e6	1.15e6	1.000	1.242	1.240	4823.6	NO	100.000
	Total-tetrafurans			6.91e5		0.763					41.295
	Total-penta1			0.00e0							
	Total-pentafurans			8.31e6		0.844					418.095
	Total-hexafurans			1.27e7		0.997					811.647
	Total-heptafurans			4.79e6		1.150					413.439
	Total-Furans			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

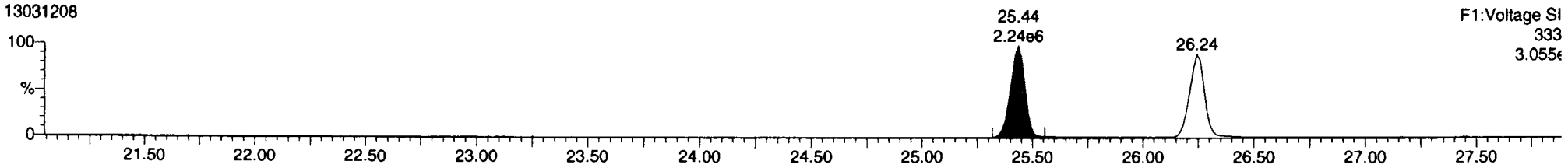
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
Calibration: 13 Mar 2013 10:38:15

ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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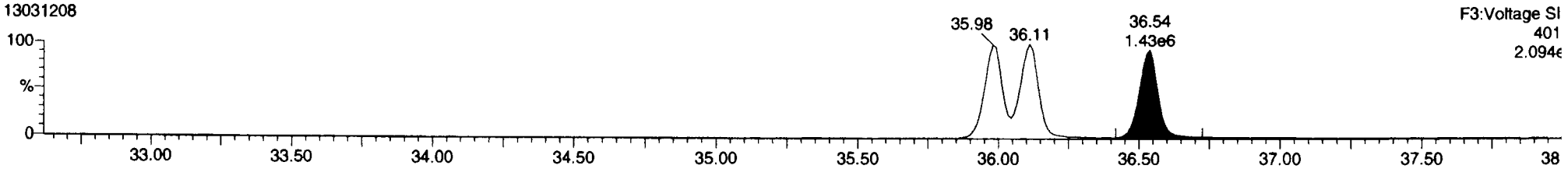

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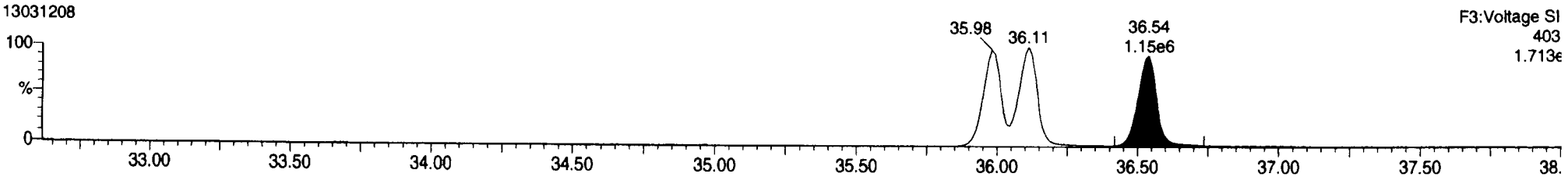

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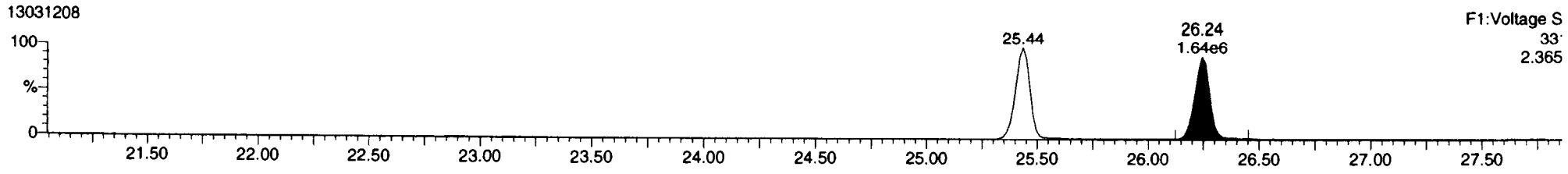
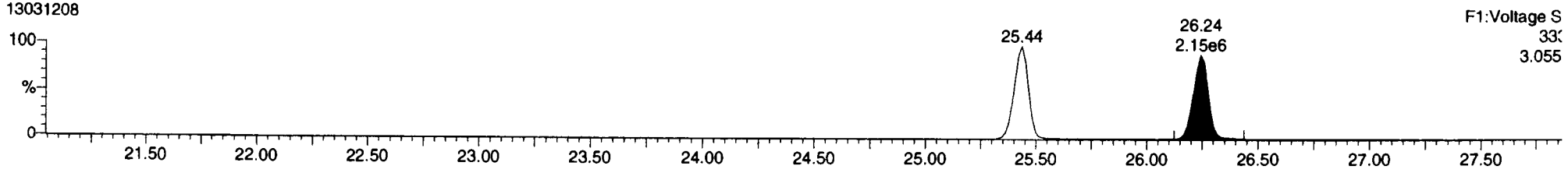
ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

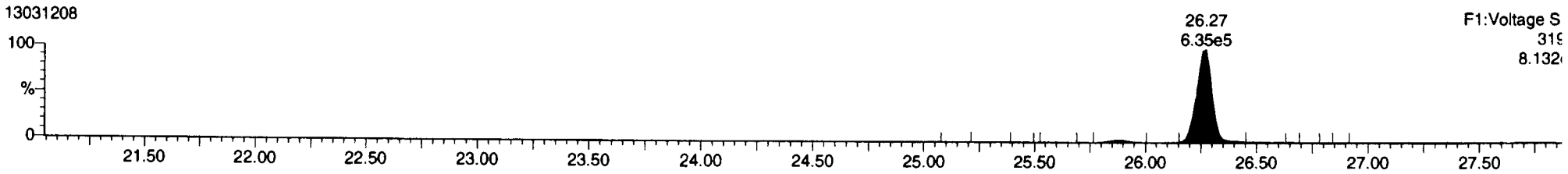
13C-2378-TCDD



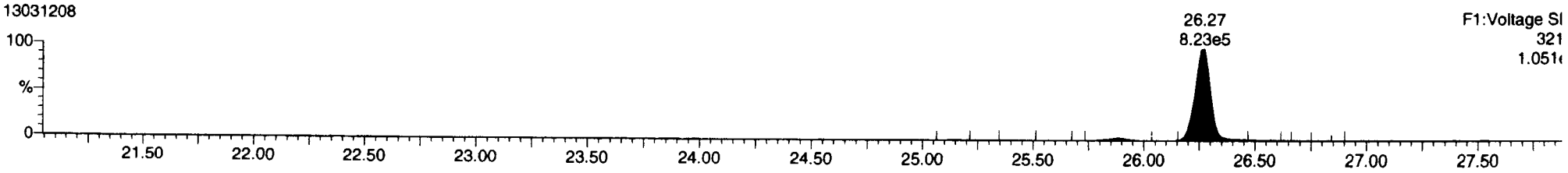
13C-2378-TCDD



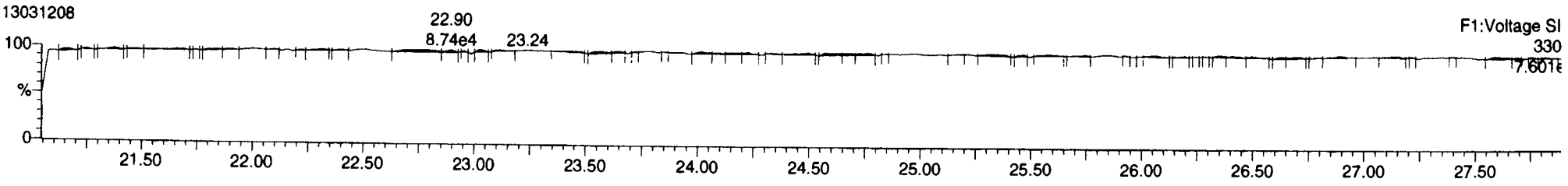
Total-tetradioxins



Total-tetradioxins

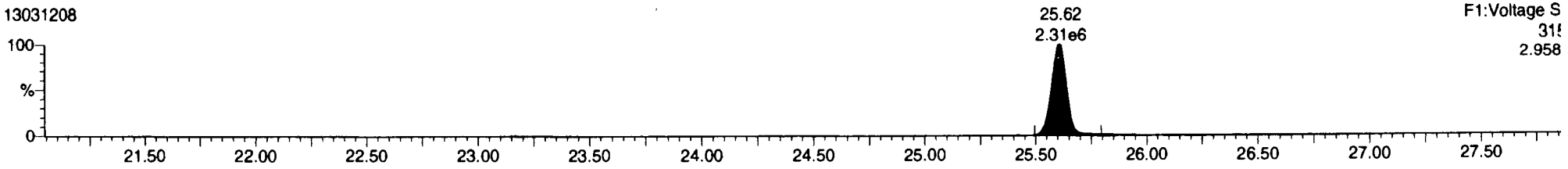


FUNCTION1 PFK

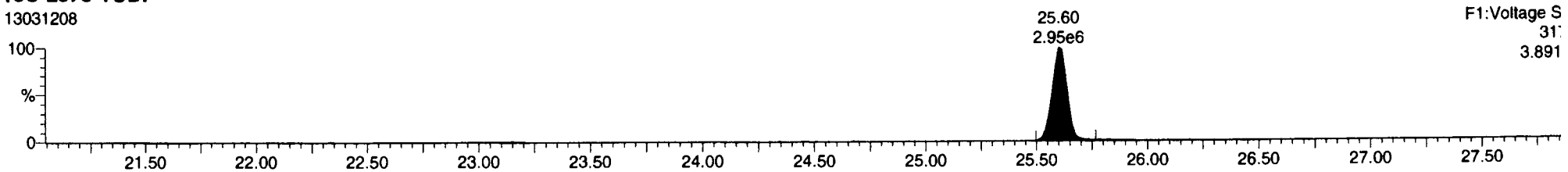


ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

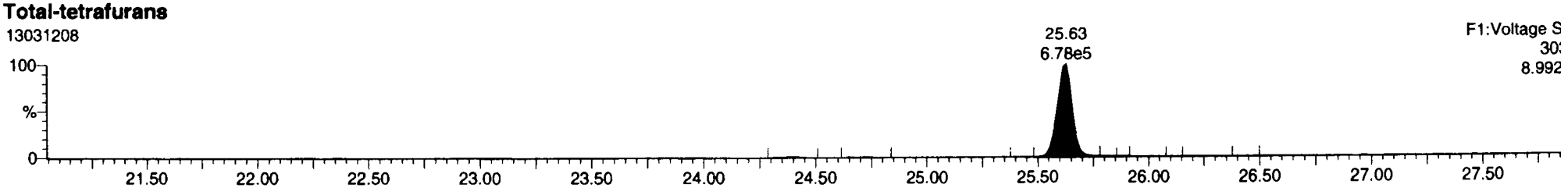
13C-2378-TCDF



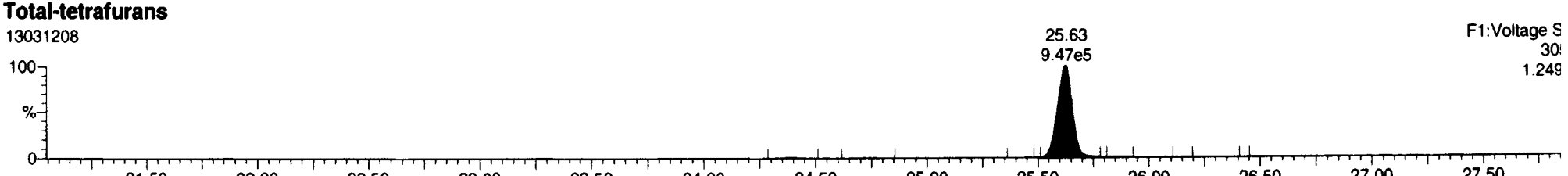
13C-2378-TCDF



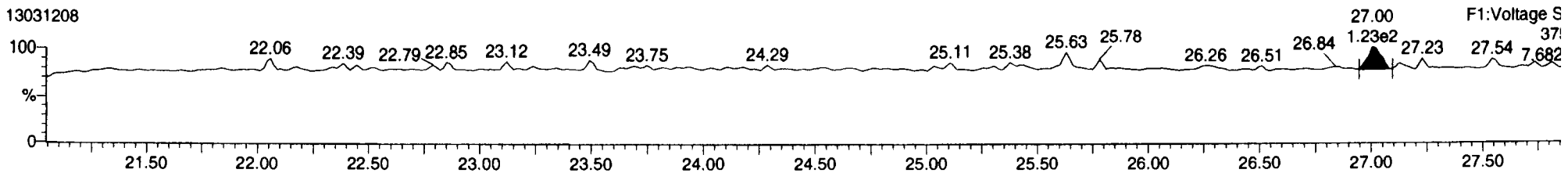
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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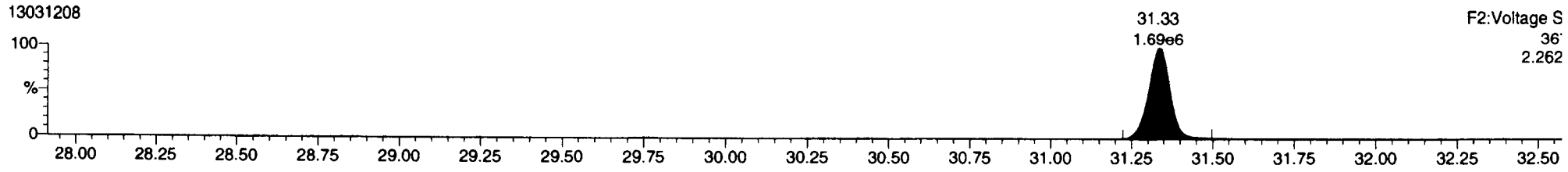
Printed: Wednesday, March 13, 2013 10:43:00 Pacific Daylight Time

ID: CS4, Name: 13031208, Date: 12-Mar-2013, Time: 18:29:32, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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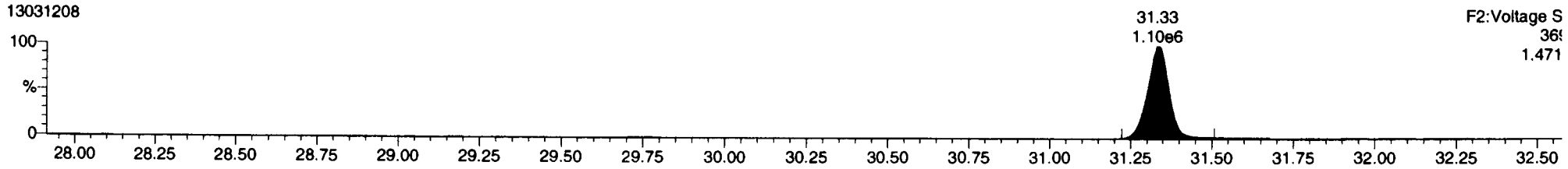
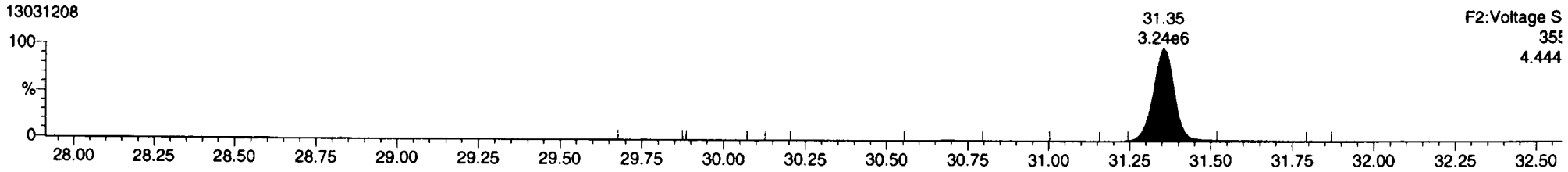
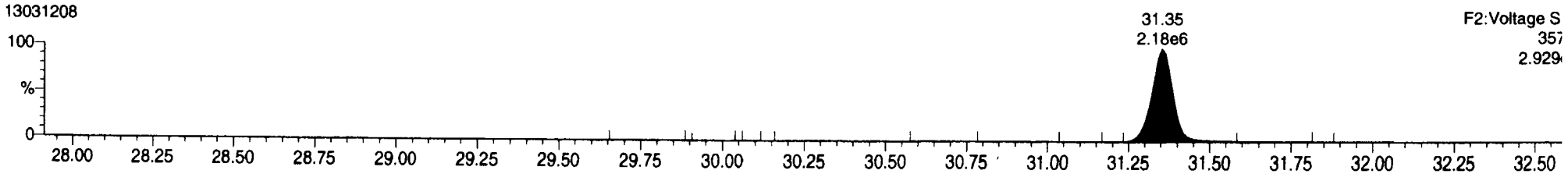


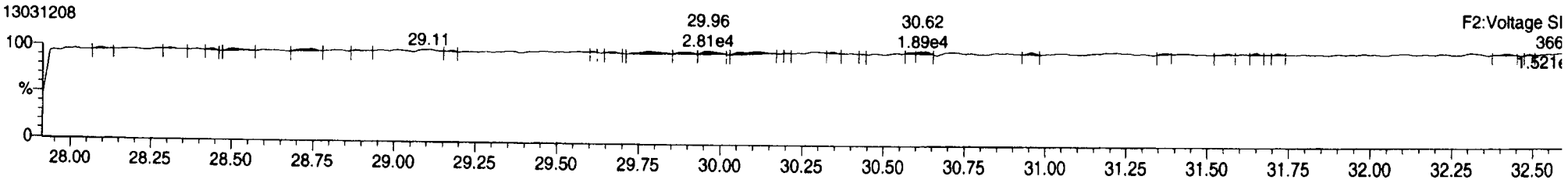
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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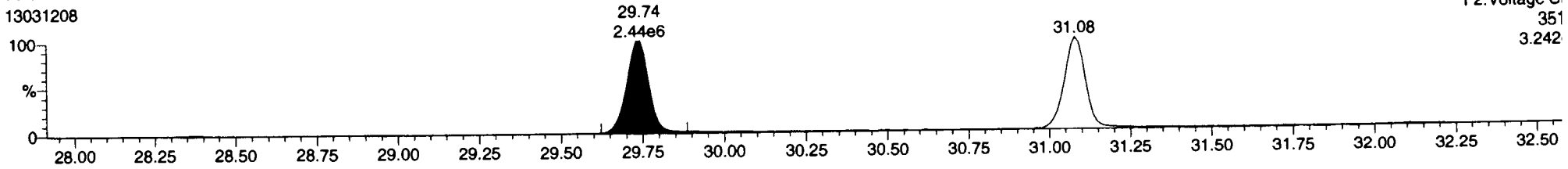
13C-12378-PeCDF



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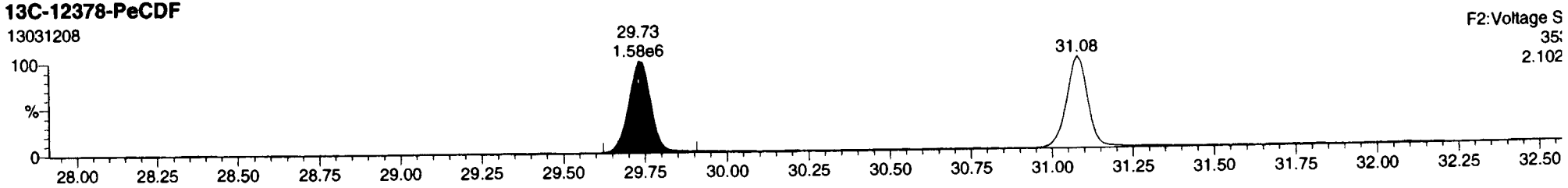
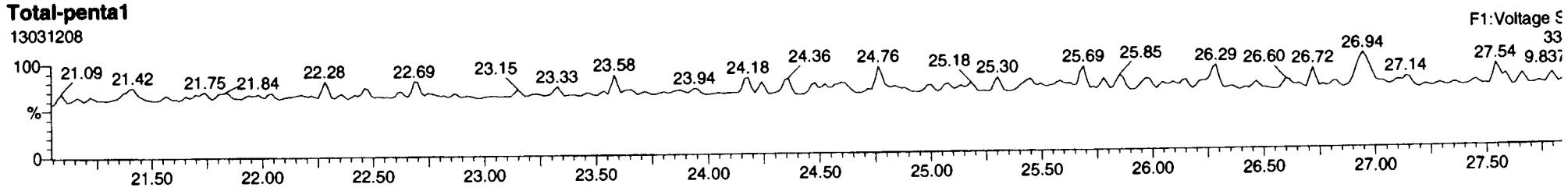


Total-penta1



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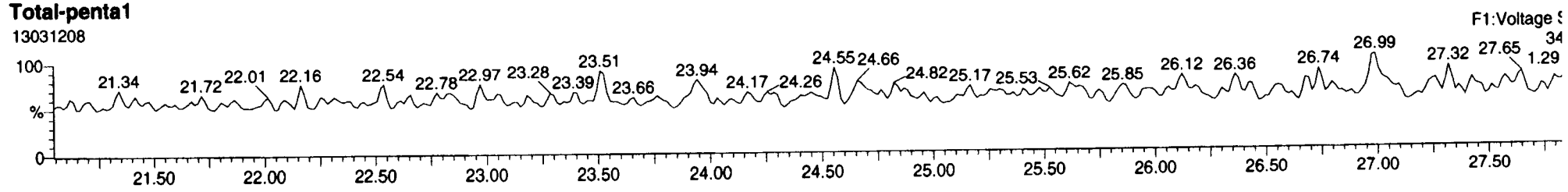
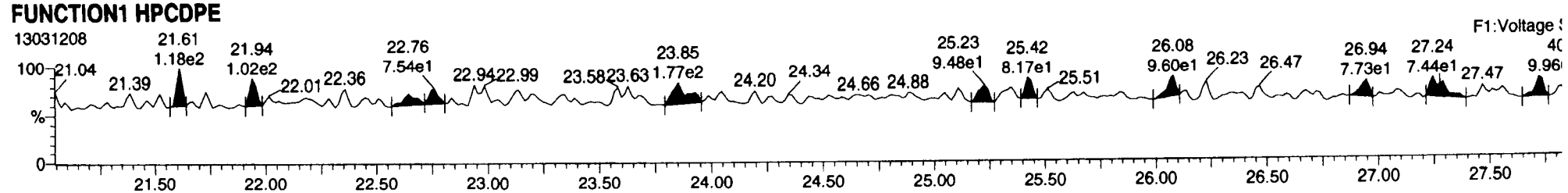


FUNCTION1 HPCDPE



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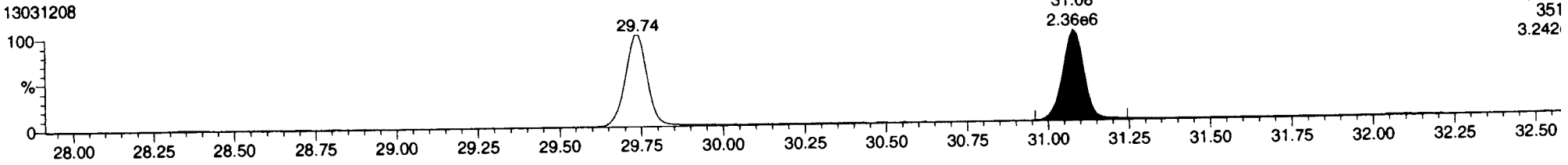
13C-23478-PeCDF



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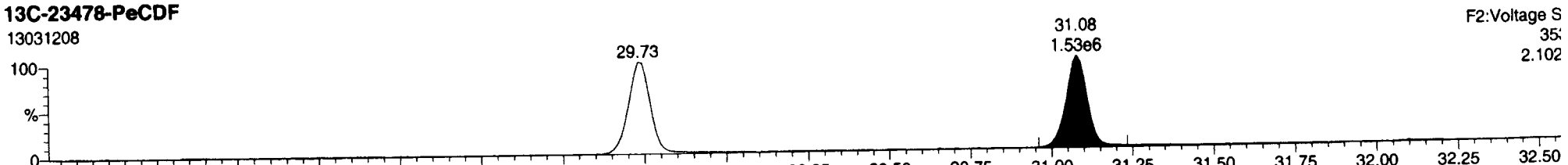
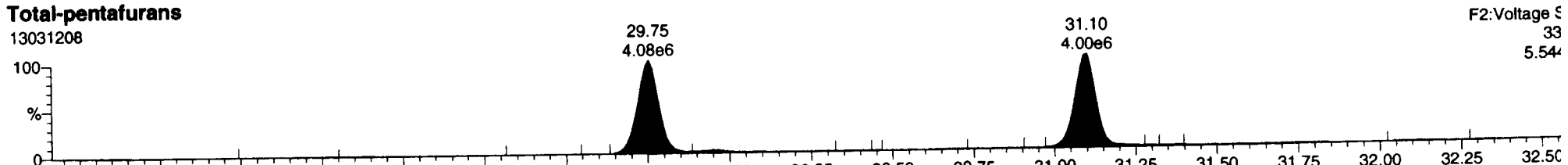
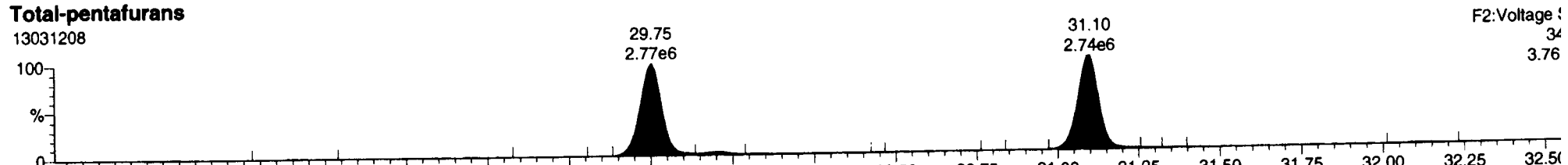


Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

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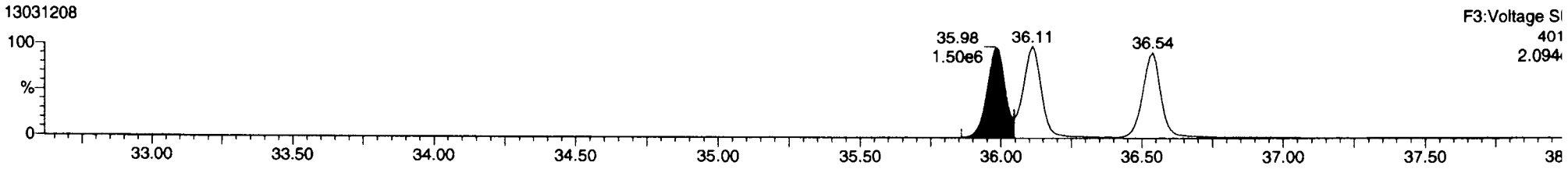
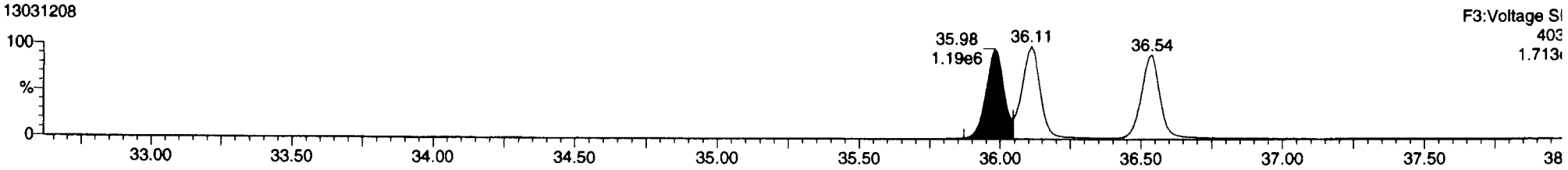
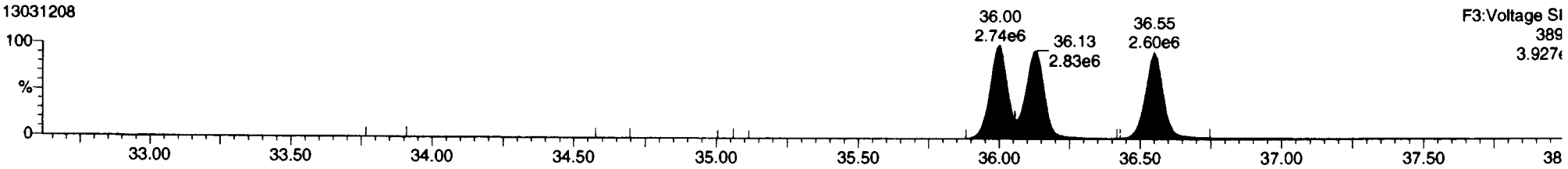
13C-123478-HxCDD



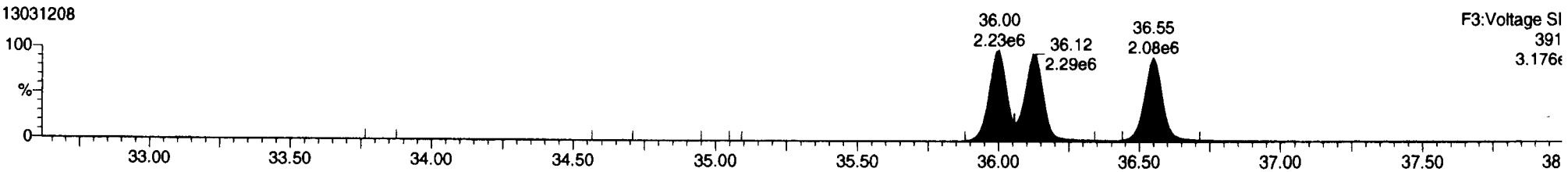
13C-123478-HxCDD



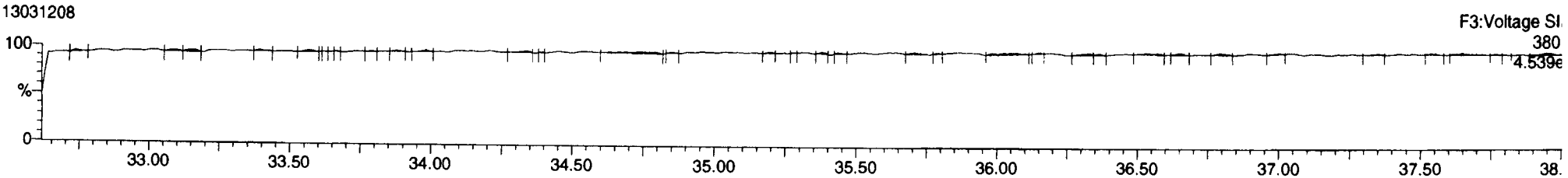
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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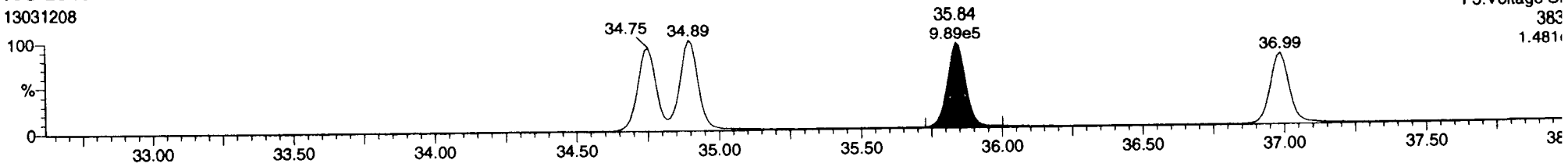
13C-234678-HxCDF



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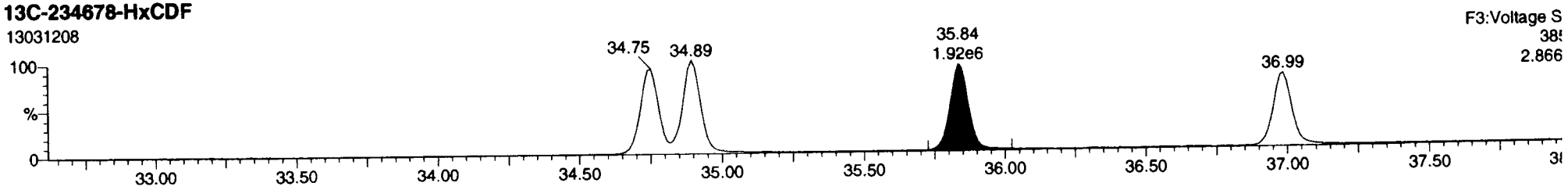
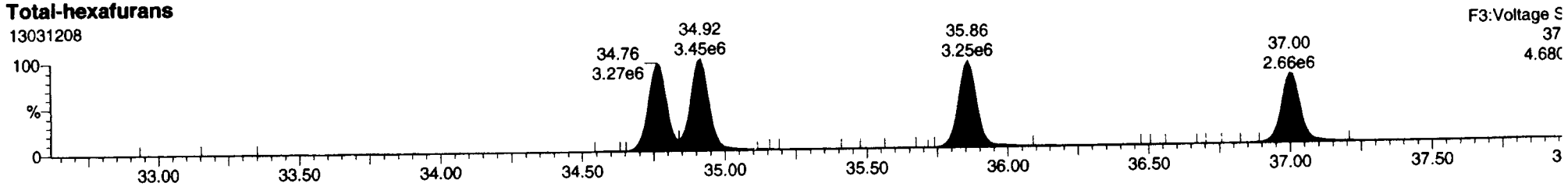
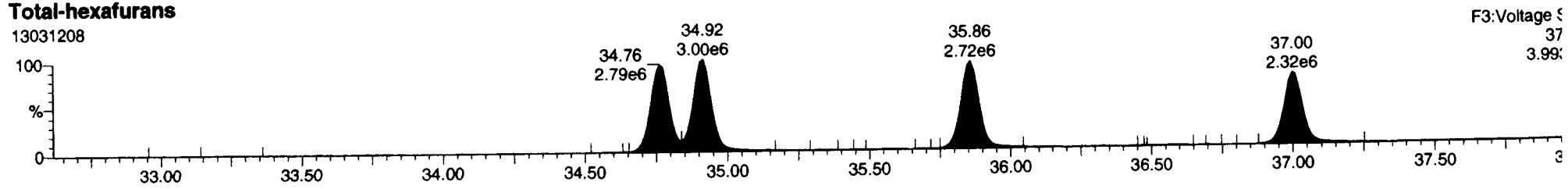


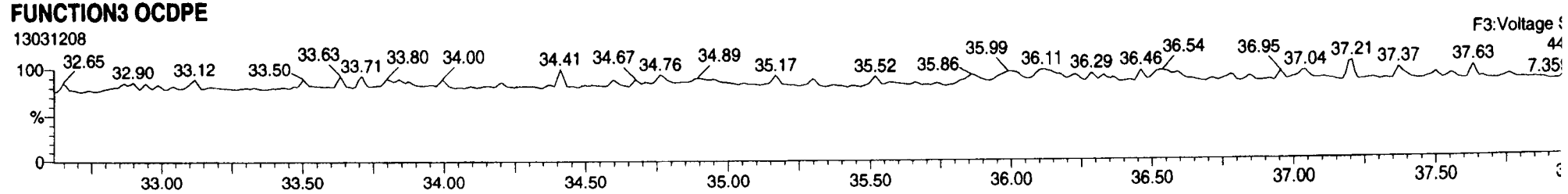
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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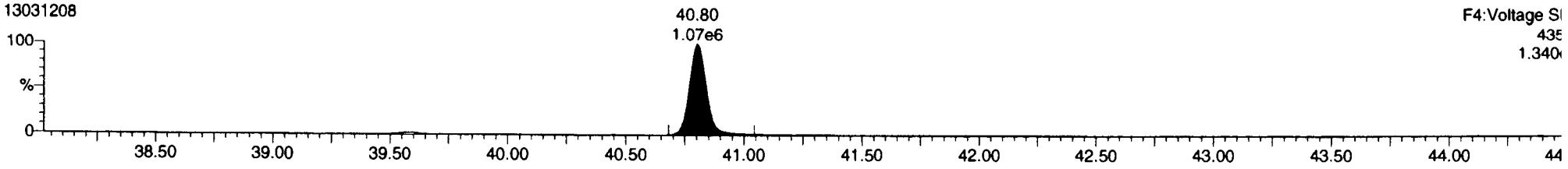
13C-1234678-HpCDD



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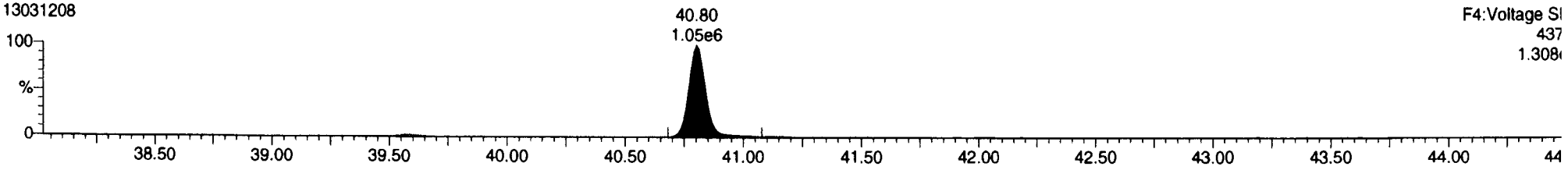
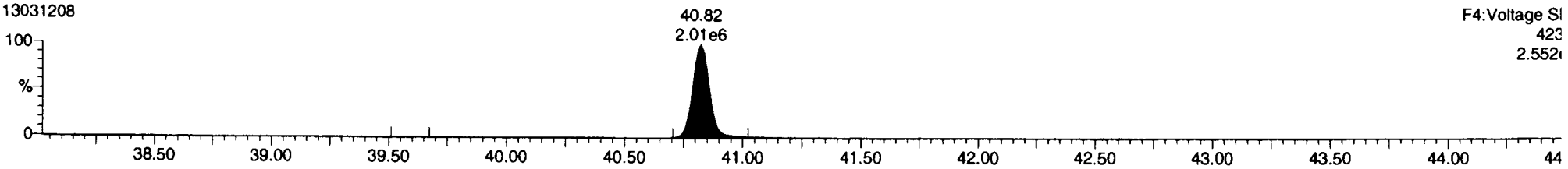
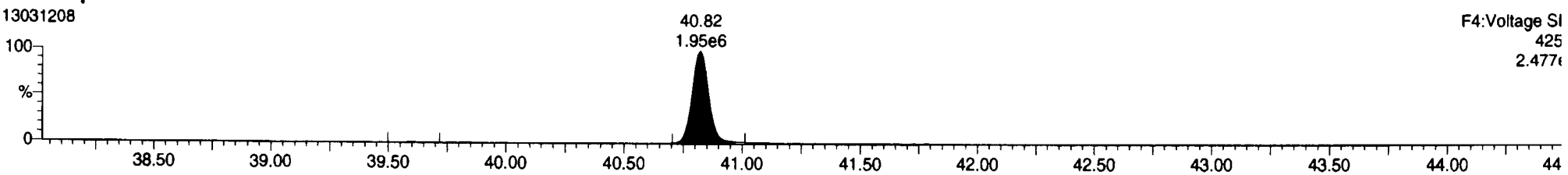


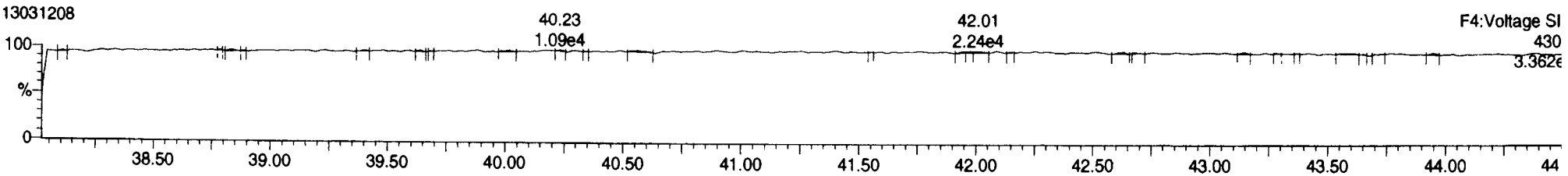
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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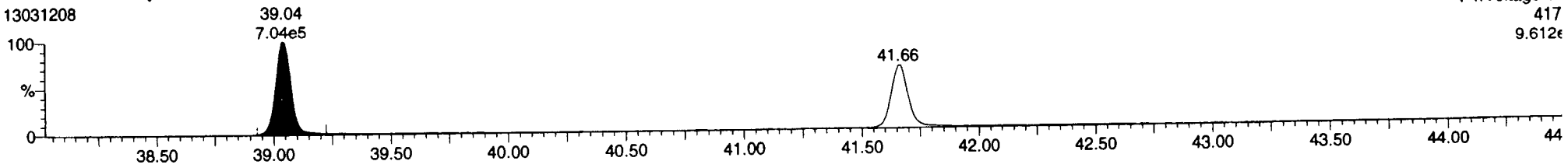
13C-1234678-HpCDF



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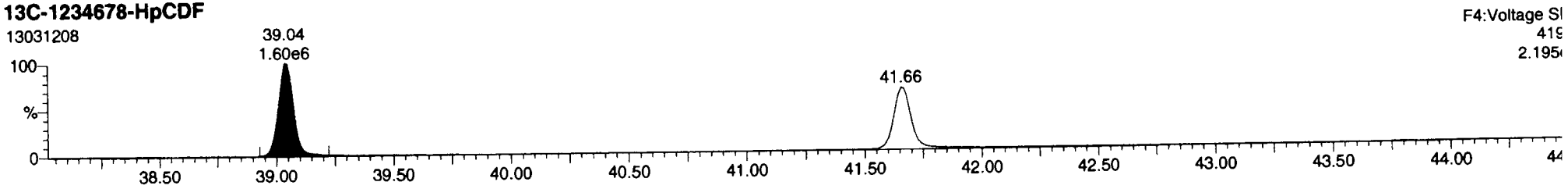
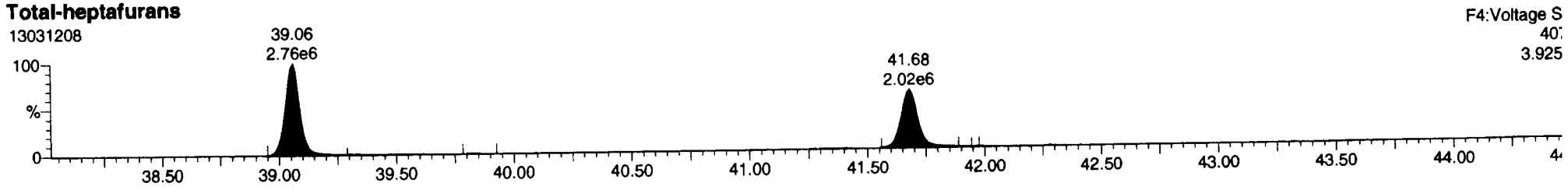
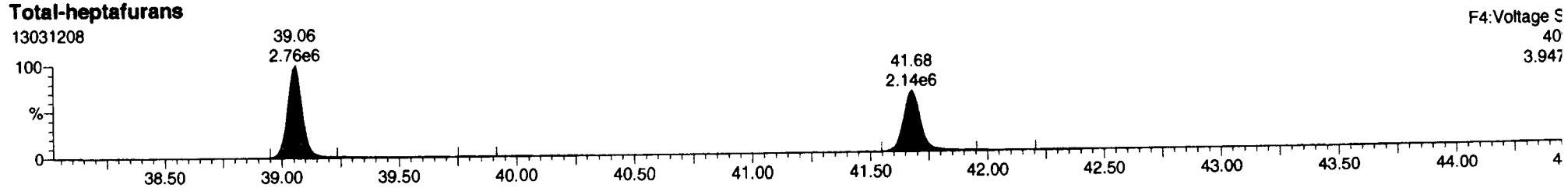


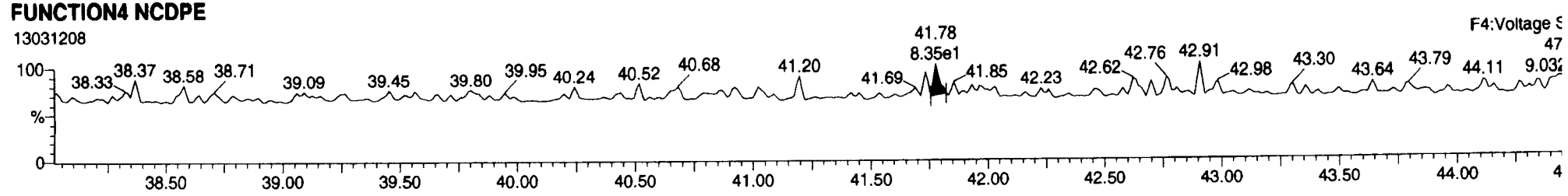
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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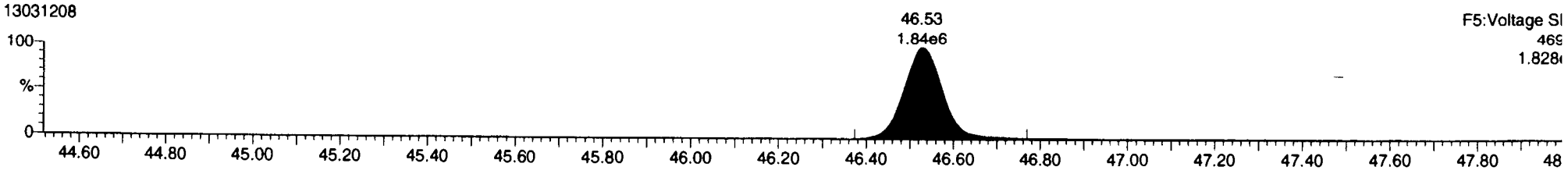
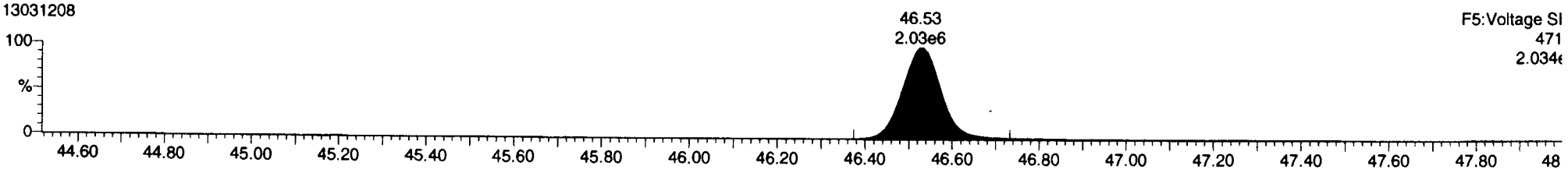
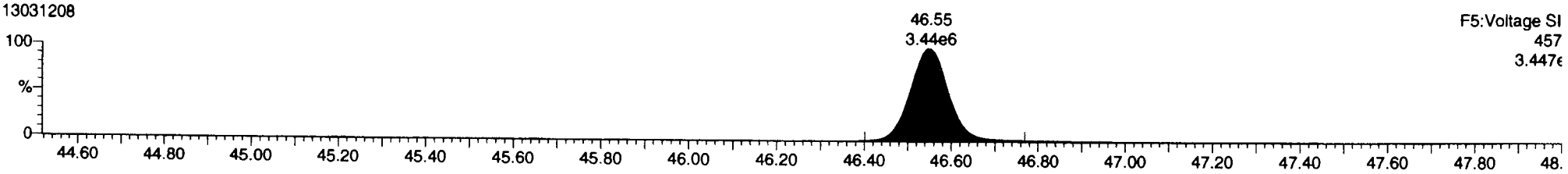
13C-OCDD



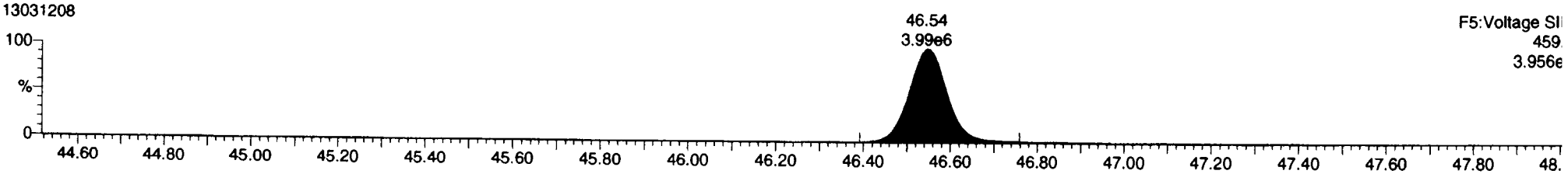
13C-OCDD



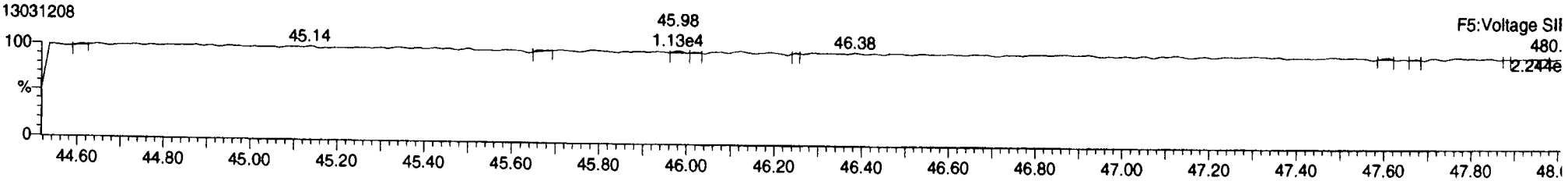
OCDD



OCDD



FUNCTION5 PFK



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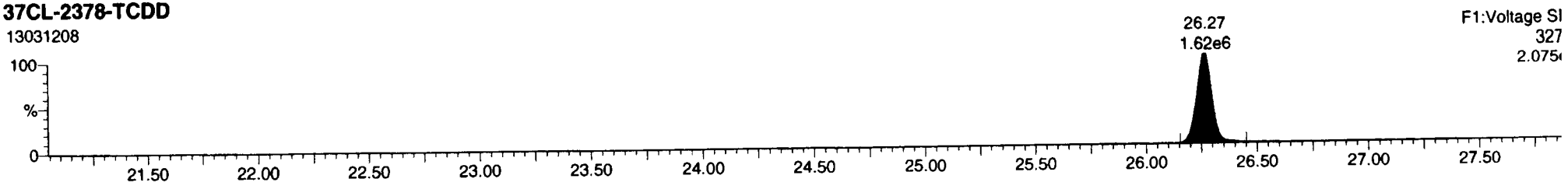
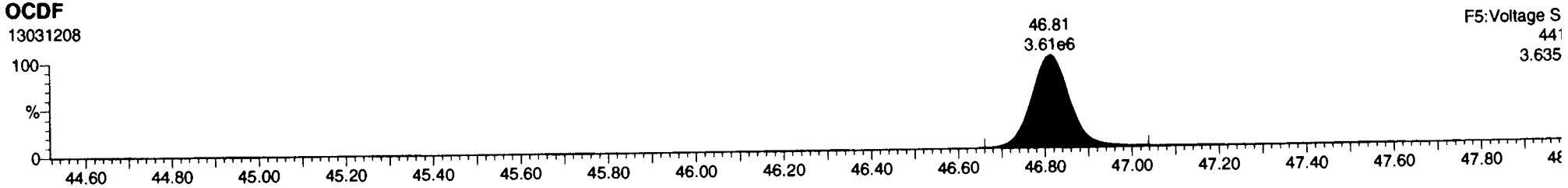
37CL-2378-TCDD



OCDF



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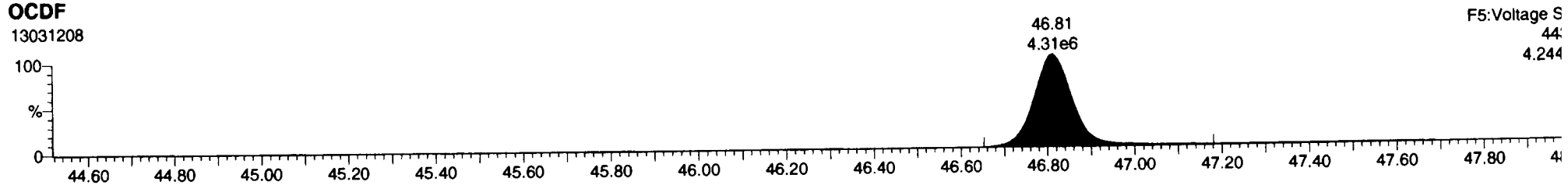
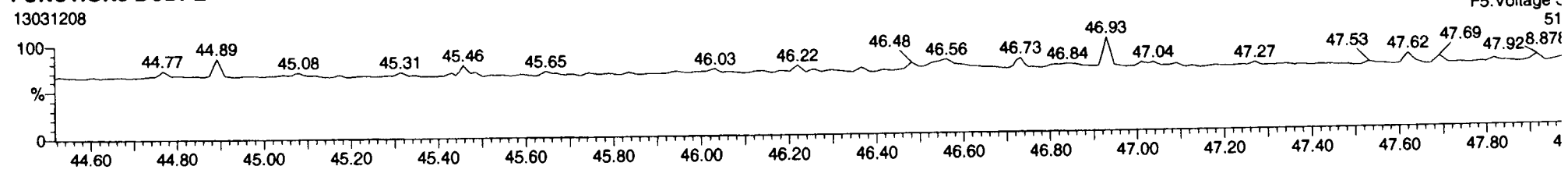


FUNCTION5 DCDPE



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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

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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
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	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

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

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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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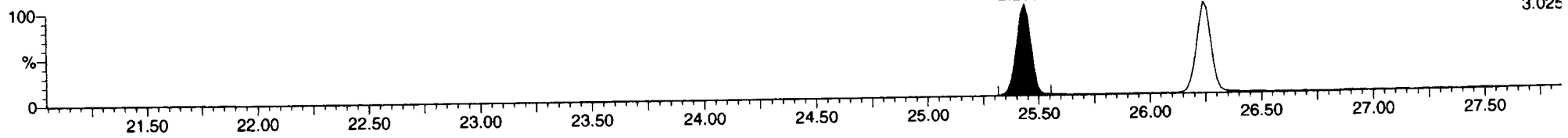
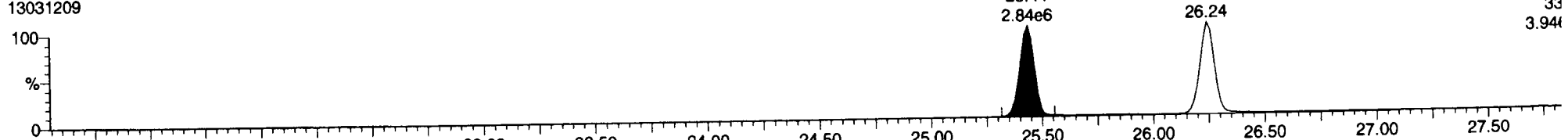
13031209



13C-1234-TCDD
13031209



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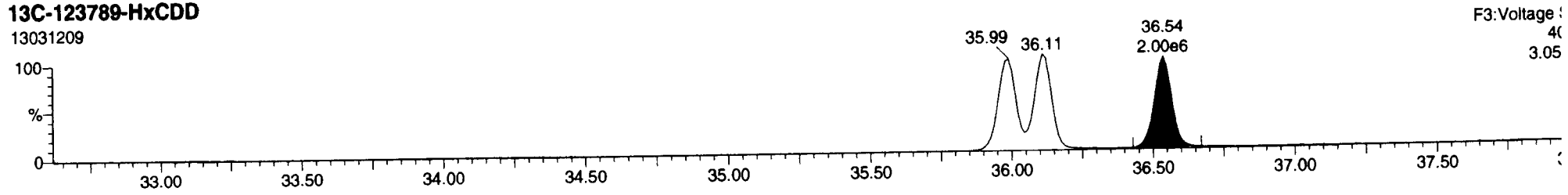
13031209



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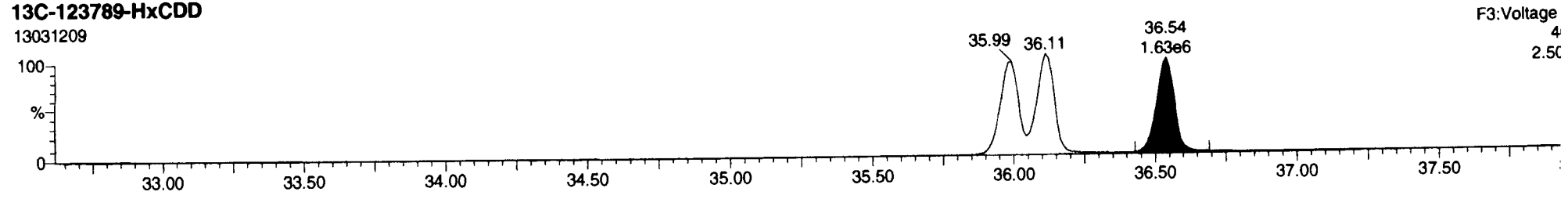

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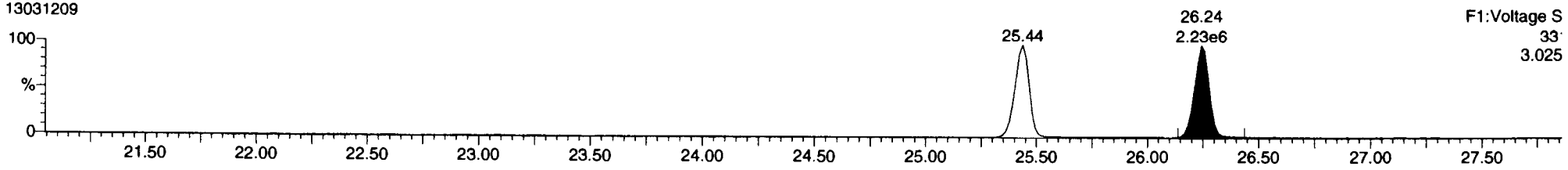
ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

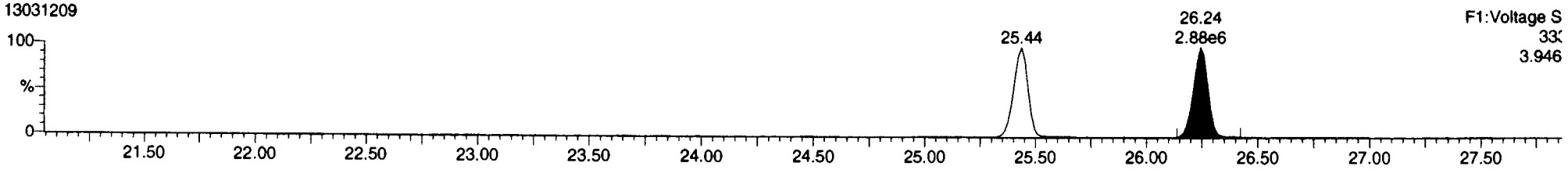
13C-2378-TCDD

13031209



13C-2378-TCDD

13031209



Total-tetradioxins

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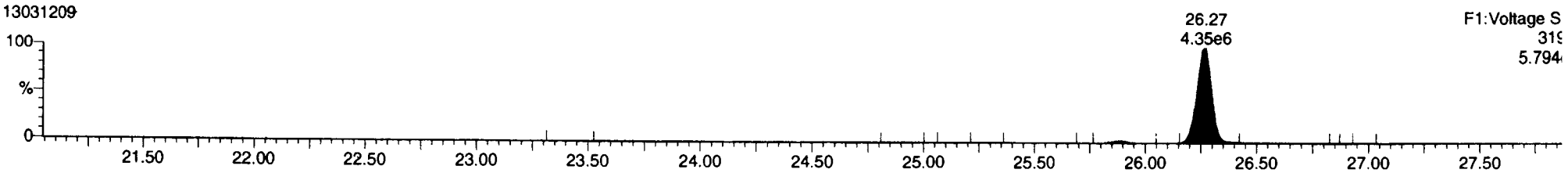

Total-tetradioxins

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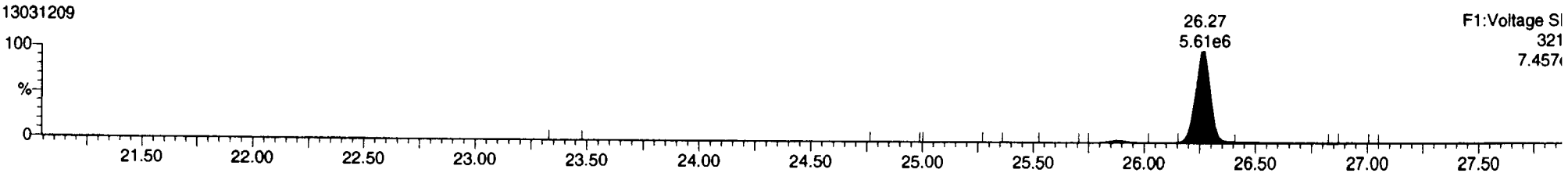
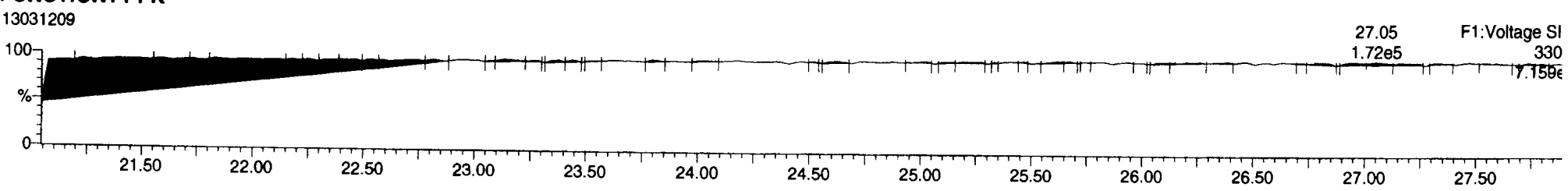


FUNCTION1 PFK

13031209



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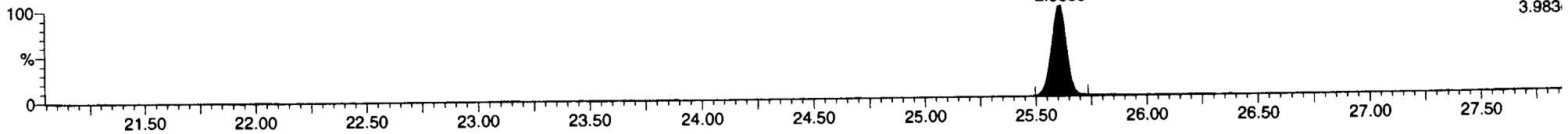
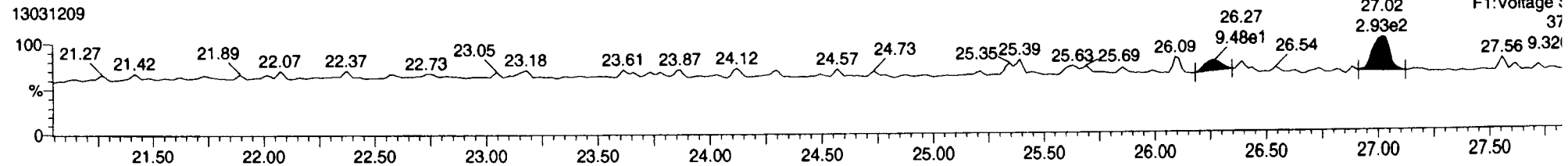
13C-2378-TCDF
13031209


13C-2378-TCDF
13031209


Total-tetrafurans
13031209


Total-tetrafurans
13031209


FUNCTION1 HXCDPE
13031209


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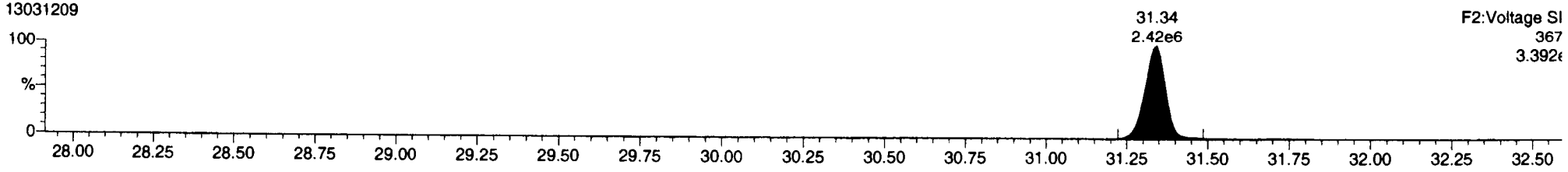
13C-12378-PeCDD



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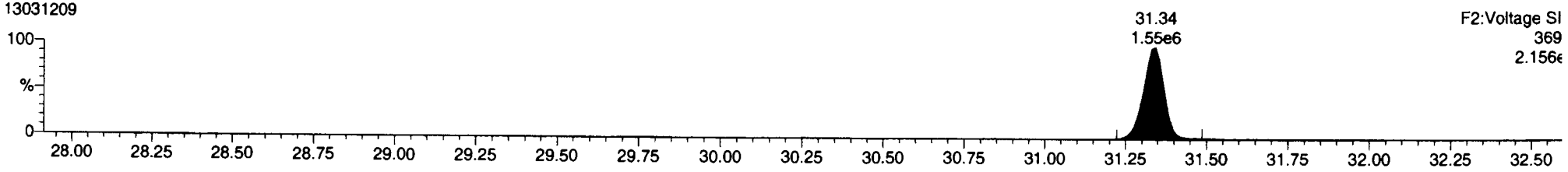
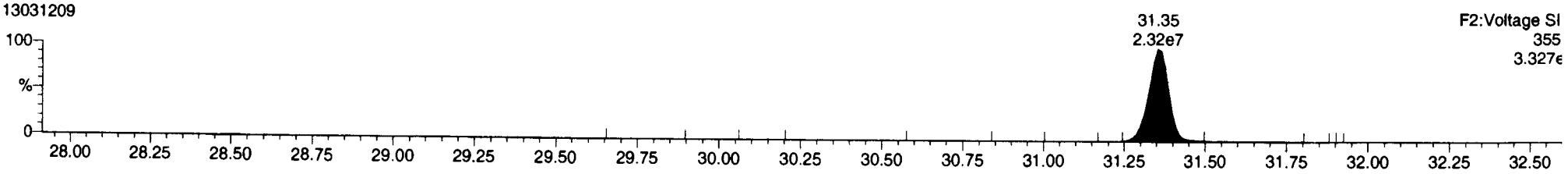
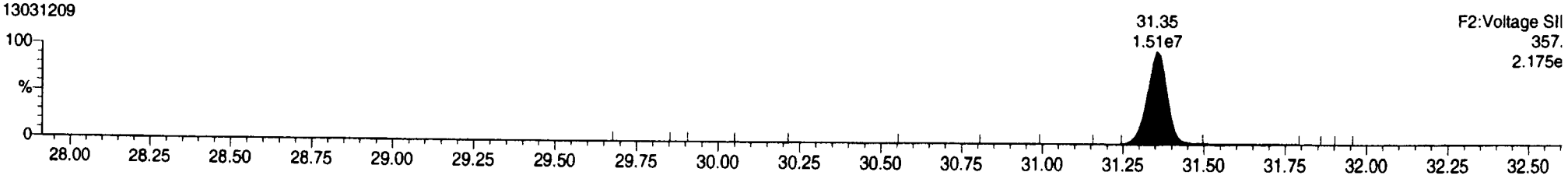


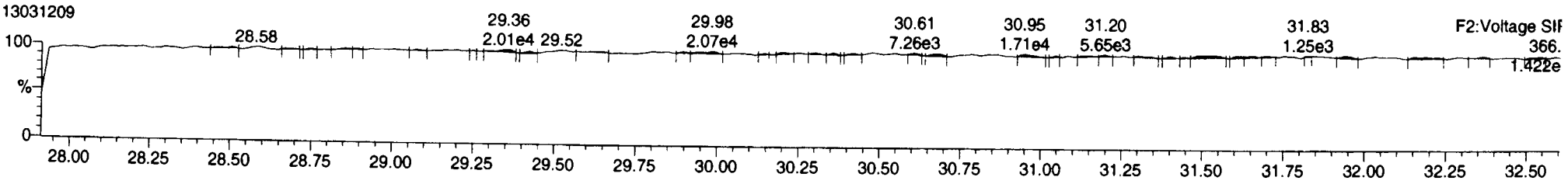
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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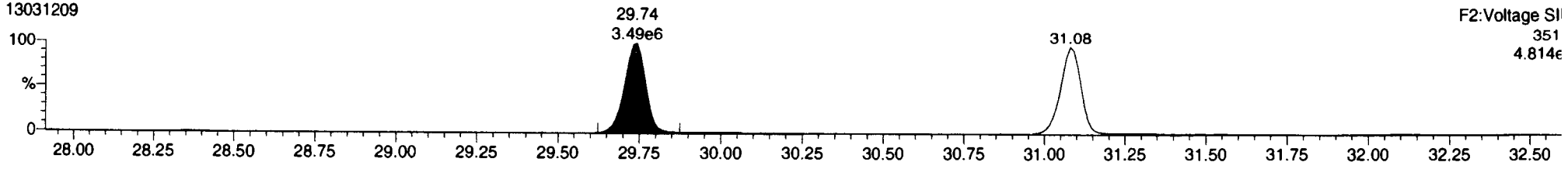
13C-12378-PeCDF



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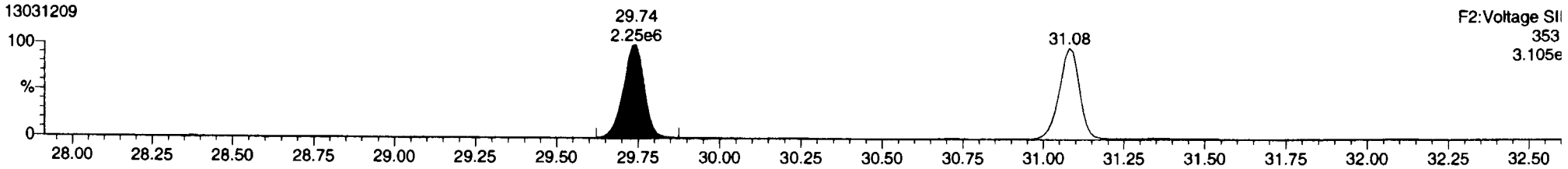
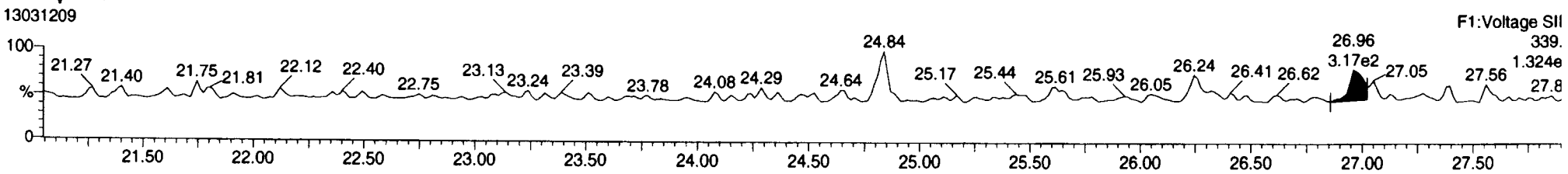


Total-penta1



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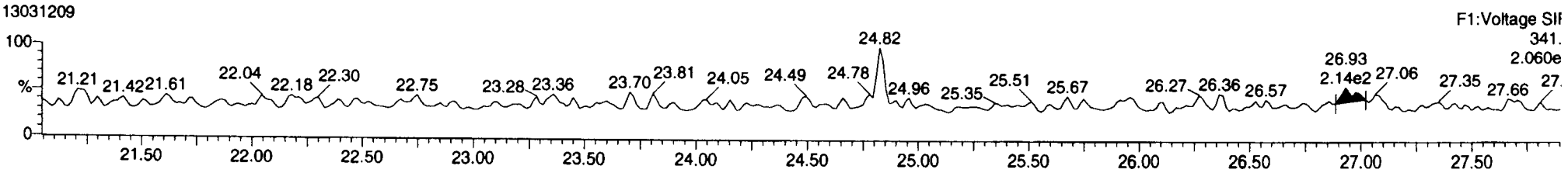
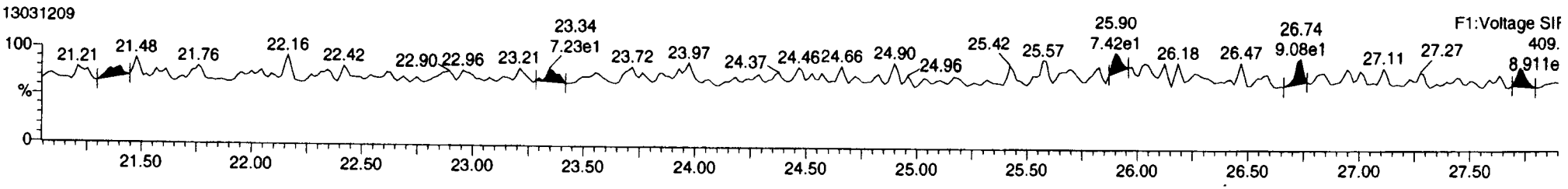


FUNCTION1 HPCDPE



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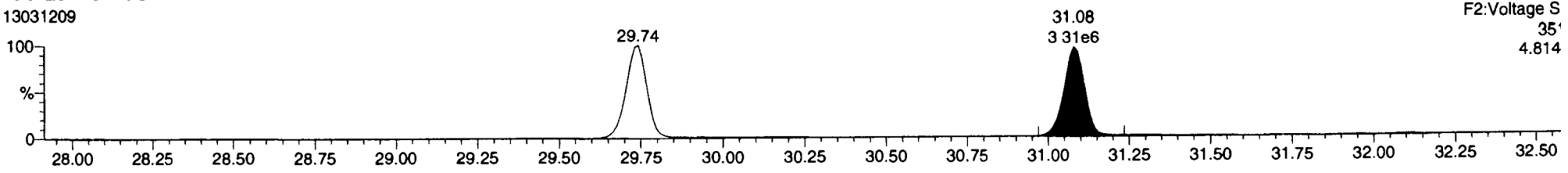
13C-23478-PeCDF



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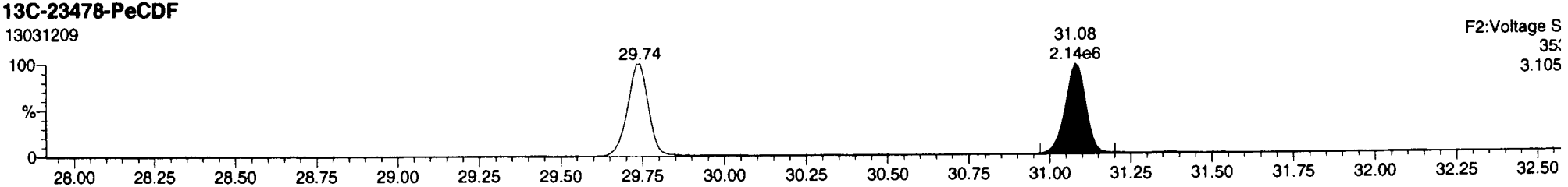
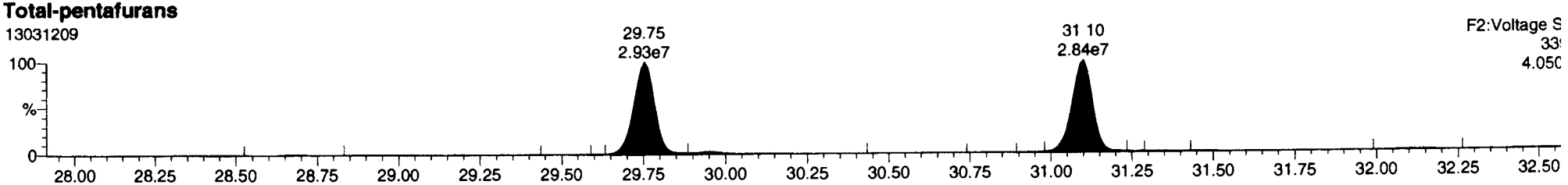
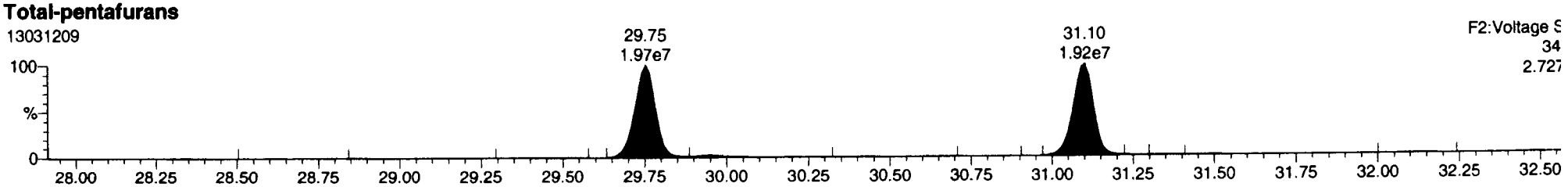


Total-pentafurans



Total-pentafurans

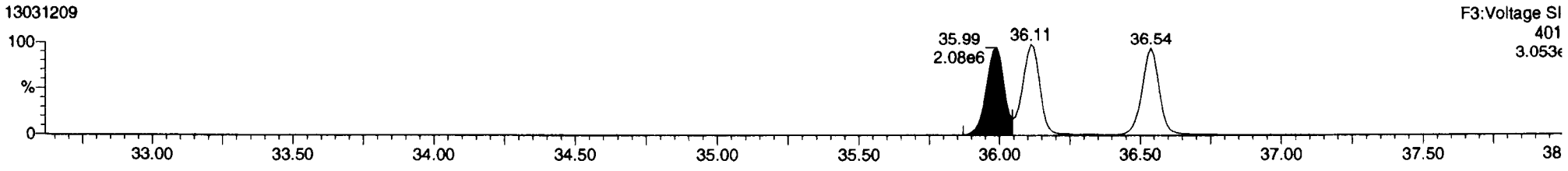


FUNCTION2 HPCDPE

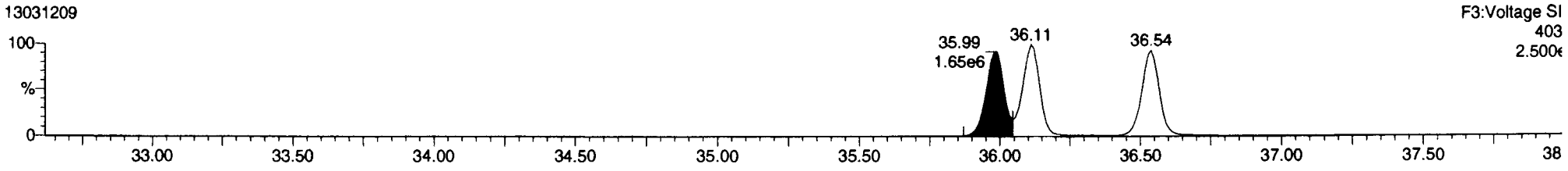
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

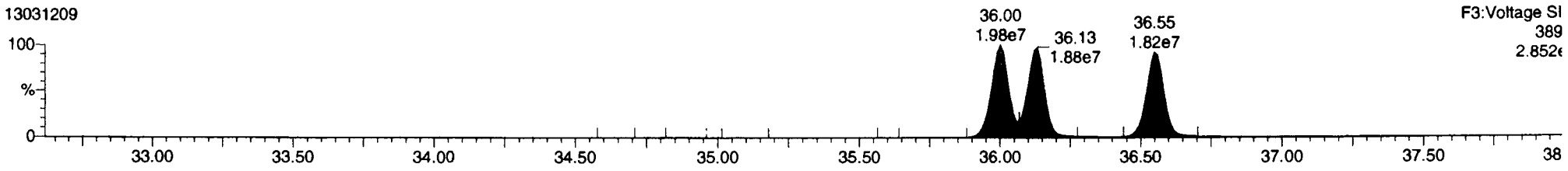
13C-123478-HxCDD



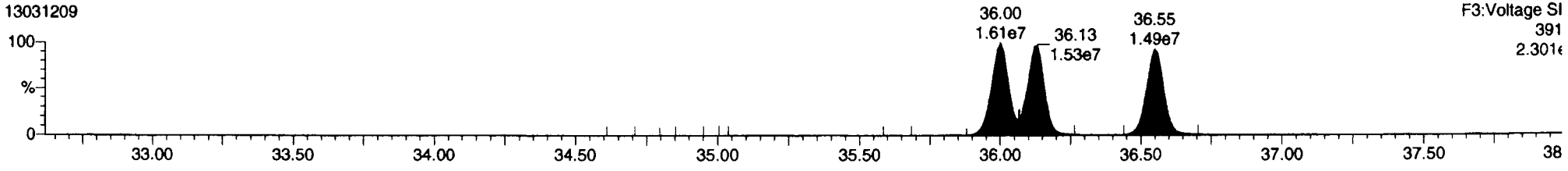
13C-123478-HxCDD



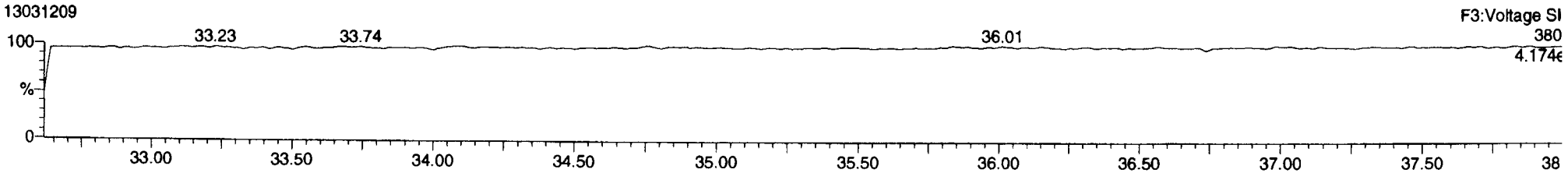
Total-hexadioxins



Total-hexadioxins



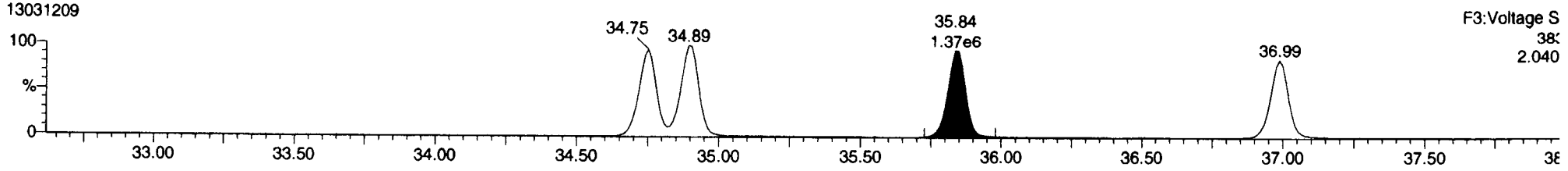
FUNCTION3 PFK



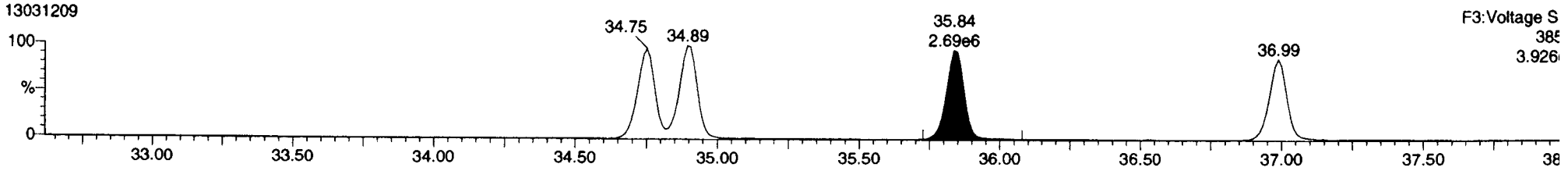
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

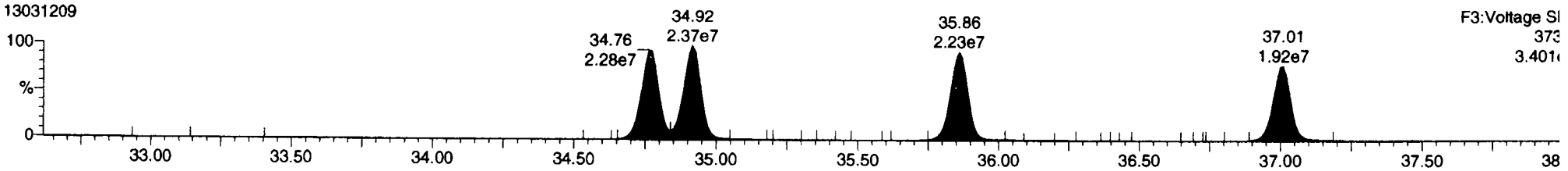
13C-234678-HxCDF



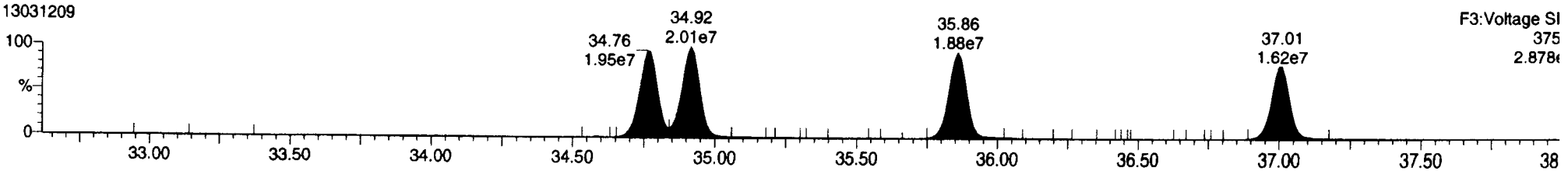
13C-234678-HxCDF



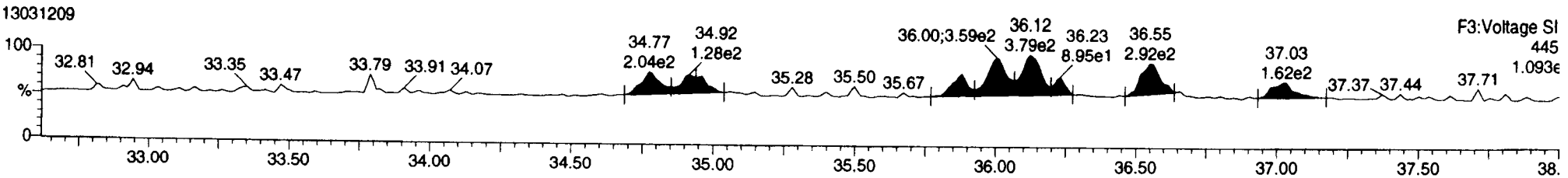
Total-hexafurans



Total-hexafurans



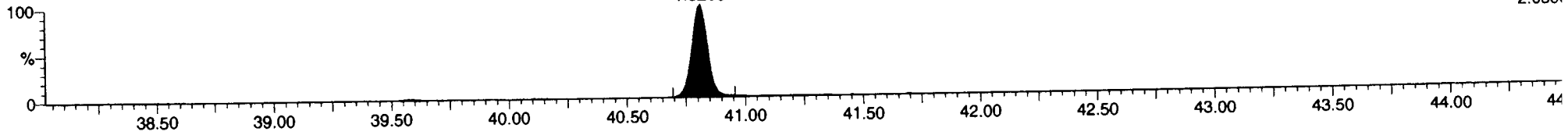
FUNCTION3 OCDPE



Dataset: P:\DIOXIN5290.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-1234678-HpCDD
13031209
40.81
1.52e6
F4:Voltage SI
435
2.059



13C-1234678-HpCDD
13031209
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1.47e6
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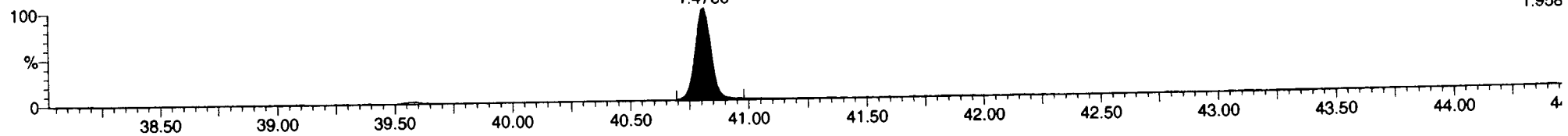
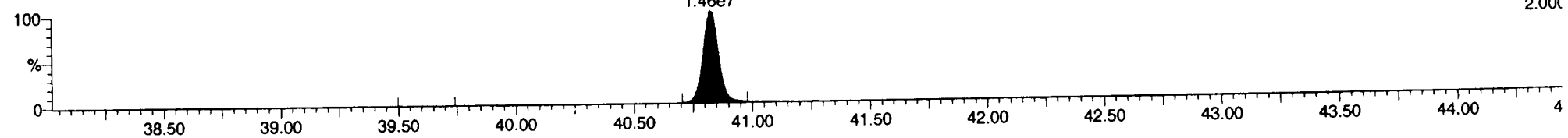
1.958



Total-heptadioxins
13031209
40.82
1.46e7
F4:Voltage S
2.000



Total-heptadioxins
13031209
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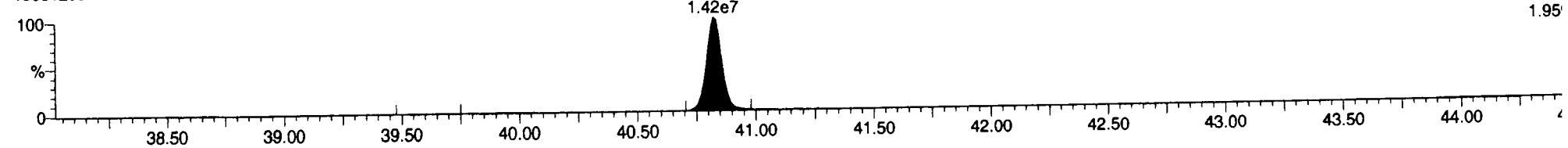
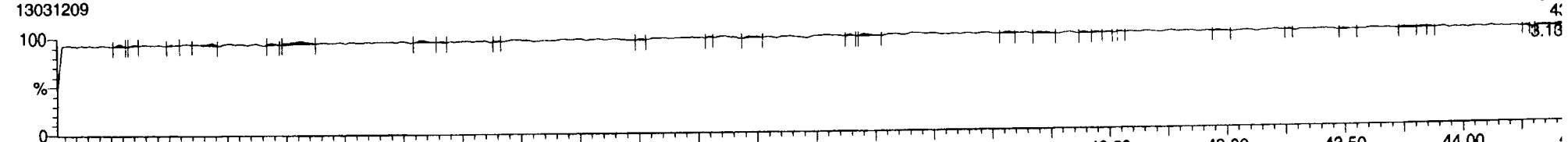


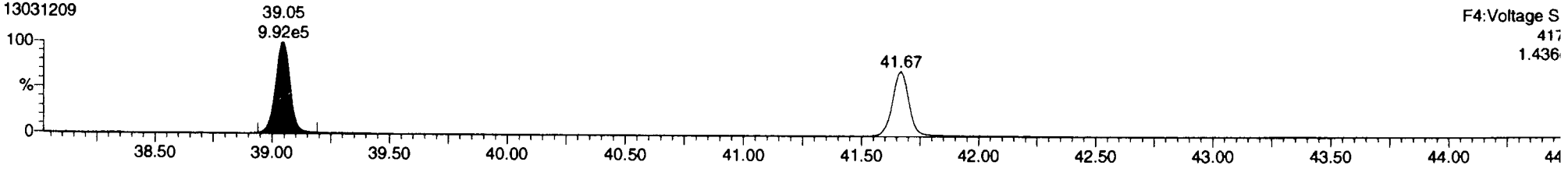
FUNCTION4 PFK
13031209
F4:Voltage



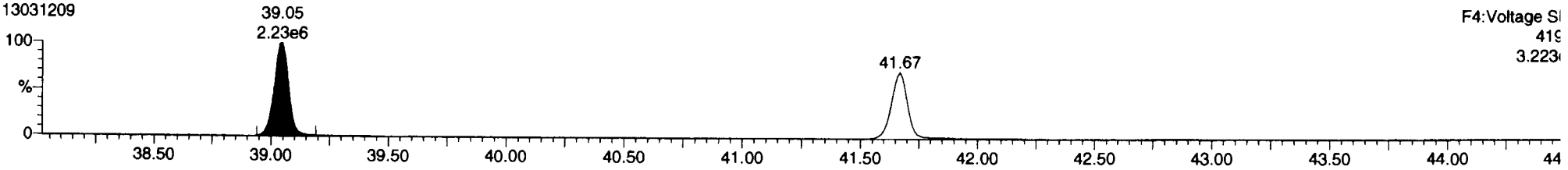
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

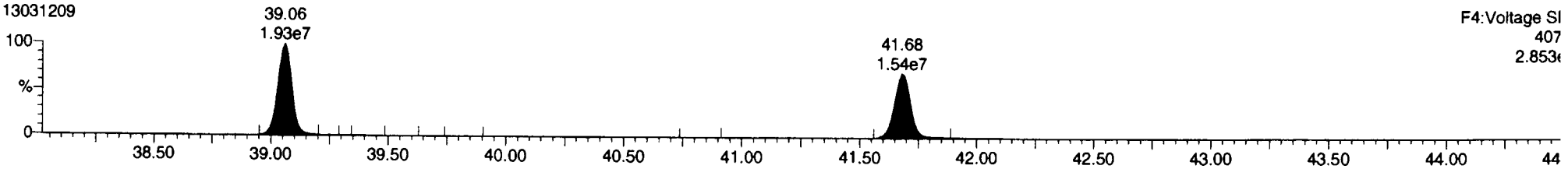
13C-1234678-HpCDF



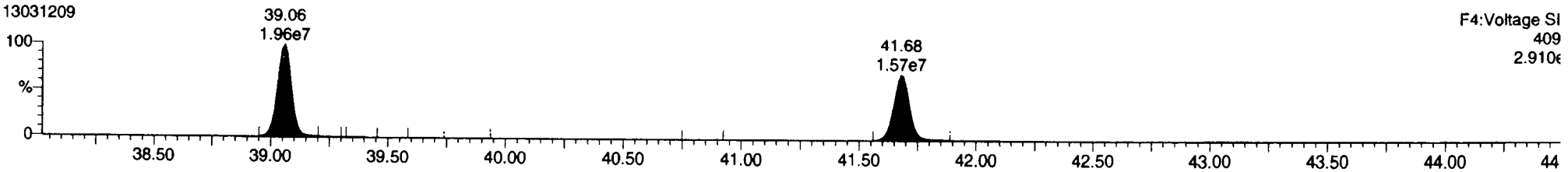
13C-1234678-HpCDF



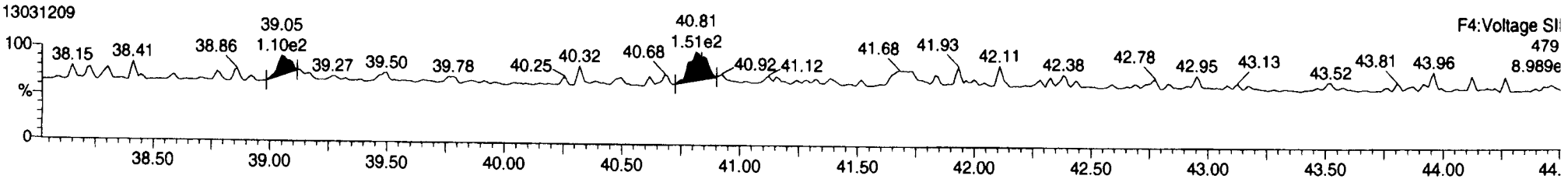
Total-heptafurans



Total-heptafurans

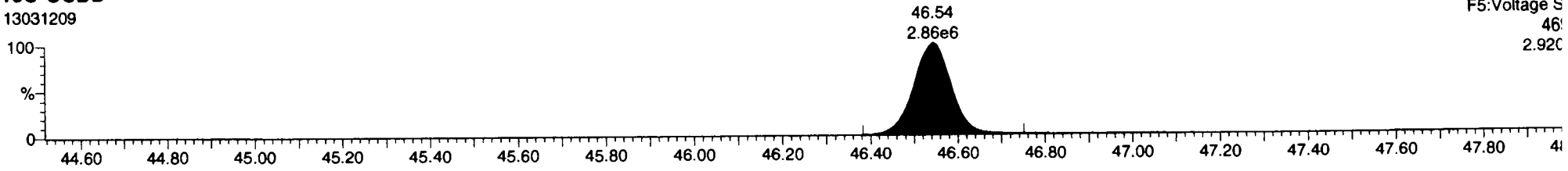


FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

13C-OCDD
13031209


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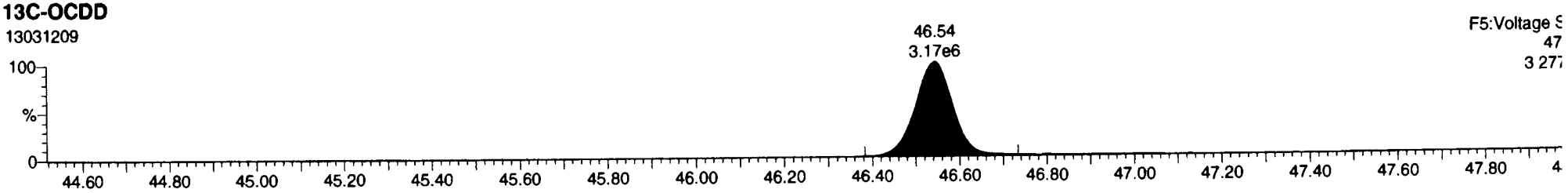
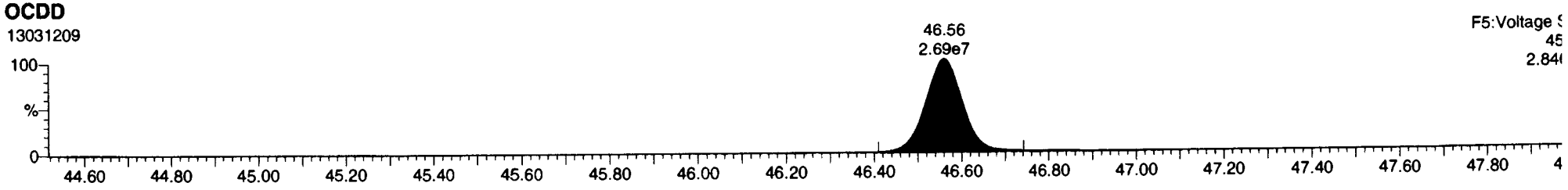
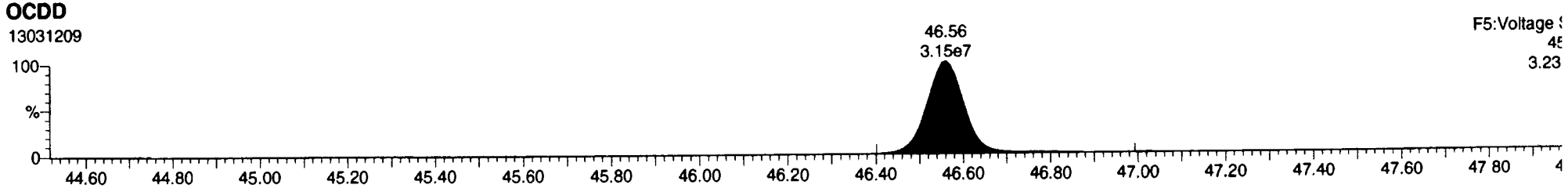
13031209


OCDD
13031209


OCDD
13031209


FUNCTION5 PFK
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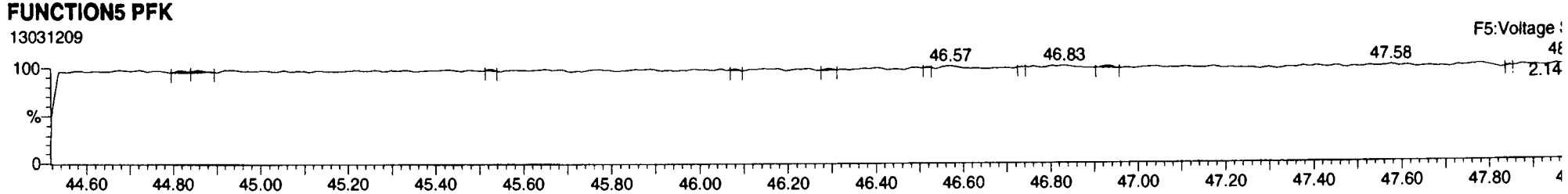
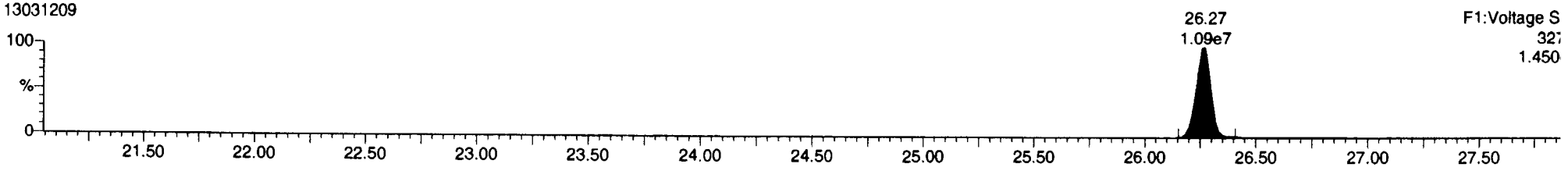


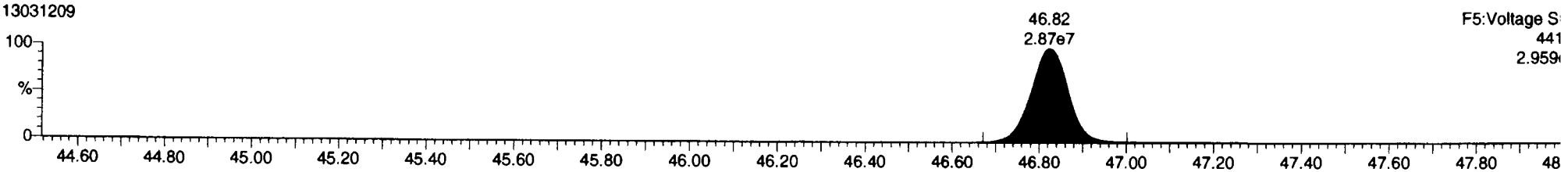
Dataset: P:\DIOXIN8290.PRO\130312IC.qld
Last Altered: Wednesday, March 13, 2013 10:38:15 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 10:43:10 Pacific Daylight Time

ID: CS5, Name: 13031209, Date: 12-Mar-2013, Time: 19:20:50, Conditions: AUTOSPEC01, User: pk

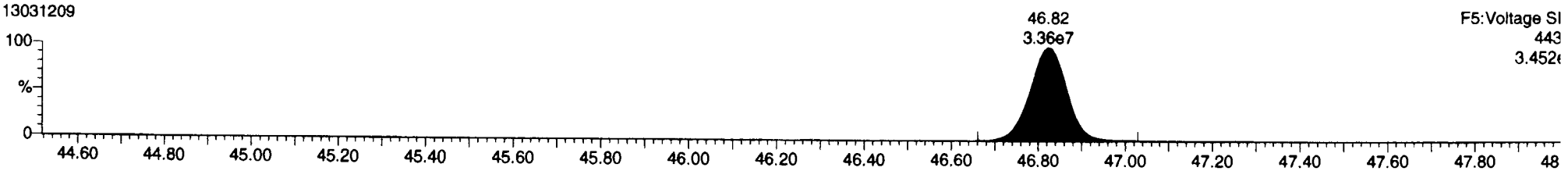
37CL-2378-TCDD



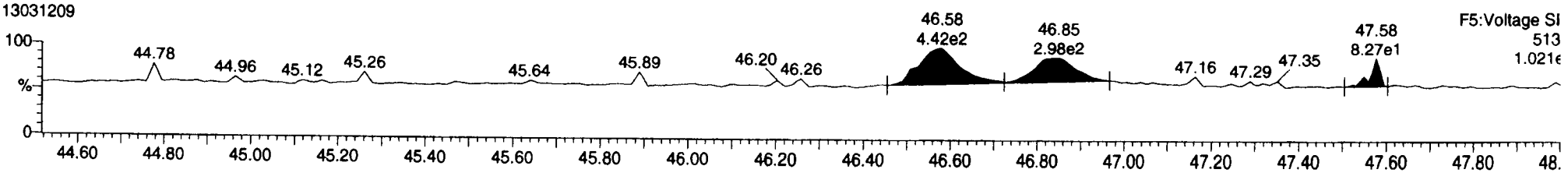
OCDF



OCDF



FUNCTION5 DCDPE



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

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130312.mdb 13 Mar 2013 10:32:39
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

	2378-TCDF	25.630	1.001	1.71e5	2.36e5	0.763	0.723	0.770	1573.2	NO	10.747	10.747
	12378-PeCDF	29.754	1.000	1.06e6	7.17e5	0.836	1.484	1.550	2493.5	NO	55.364	55.364
	23478-PeCDF	31.102	1.000	9.61e5	6.40e5	0.851	1.501	1.550	2394.0	NO	50.626	50.626
	123478-HxCDF	34.774	1.001	8.02e5	6.86e5	1.017	1.168	1.240	1223.4	NO	54.833	54.833
	234678-HxCDF	35.859	1.000	7.62e5	6.46e5	1.027	1.180	1.240	1152.1	NO	51.048	51.048
	123678-HxCDF	34.917	1.000	8.50e5	7.20e5	1.013	1.181	1.240	1300.6	NO	50.908	50.908
	123789-HxCDF	37.010	1.001	6.79e5	5.86e5	0.929	1.160	1.240	1006.9	NO	59.547	59.547
	1234678-HpCDF	39.060	1.000	6.28e5	6.36e5	1.151	0.988	1.050	2407.5	NO	54.179	54.179
	1234789-HpCDF	41.680	1.000	4.93e5	5.00e5	1.149	0.987	1.050	1567.1	NO	51.814	51.814
	OCDF	46.823	1.006	8.40e5	9.70e5	0.963	0.866	0.890	2569.5	NO	111.981	111.981
	2378-TCDD	26.272	1.001	1.68e5	2.19e5	0.980	0.768	0.770	1546.5	NO	9.894	9.894
	12378-PeCDD	31.365	1.001	8.19e5	5.32e5	0.948	1.541	1.550	4109.6	NO	47.573	47.573
	123478-HxCDD	36.001	1.000	6.52e5	5.33e5	0.941	1.224	1.240	2684.5	NO	51.793	51.793
	123678-HxCDD	36.133	1.001	6.50e5	5.40e5	0.884	1.205	1.240	2622.9	NO	55.825	55.825
	123789-HxCDD	36.561	1.012	6.65e5	5.45e5	0.870	1.220	1.240	2589.3	NO	57.452	57.452
	1234678-HpCDD	40.825	1.000	5.01e5	4.79e5	0.948	1.045	1.050	2020.5	NO	49.665	49.665
	OCDD	46.554	1.000	8.12e5	9.38e5	0.969	0.865	0.890	1491.9	NO	107.590	107.590
	13C-2378-TCDF	25.615	1.007	2.17e6	2.79e6	1.318	0.776	0.770	6012.4	NO		88.881
	13C-12378-PeCDF	29.743	1.169	2.34e6	1.51e6	1.026	1.544	1.550	4578.2	NO		88.695
	13C-23478-PeCDF	31.091	1.222	2.25e6	1.46e6	0.966	1.544	1.550	4557.1	NO		90.875
	13C-123478-HxCDF	34.752	0.951	9.15e5	1.75e6	1.123	0.522	0.510	1438.1	NO		93.749
	13C-123678-HxCDF	34.905	0.955	1.03e6	2.02e6	1.216	0.509	0.510	1593.1	NO		98.793
	13C-234678-HxCDF	35.848	0.981	9.28e5	1.76e6	1.106	0.528	0.510	1451.3	NO		95.770
	13C-123789-HxCDF	36.988	1.012	7.79e5	1.51e6	0.995	0.517	0.510	1203.4	NO		90.630
	13C-1234678-HpCDF	39.049	1.069	6.27e5	1.40e6	0.896	0.449	0.440	2687.8	NO		89.250
	13C-1234789-HpCDF	41.669	1.140	5.10e5	1.16e6	0.693	0.441	0.440	1865.4	NO		94.914
	13C-1234-TCDD	25.436	0.000	1.86e6	2.38e6	1.000	0.781	0.770	4722.2	NO		100.000
	13C-2378-TCDD	26.243	1.032	1.75e6	2.25e6	0.961	0.777	0.770	4265.7	NO		98.110
	13C-12378-PeCDD	31.343	1.232	1.82e6	1.17e6	0.703	1.549	1.550	4466.5	NO		100.618
	13C-123478-HxCDD	35.991	0.985	1.35e6	1.08e6	1.016	1.241	1.240	3180.6	NO		94.421
	13C-123678-HxCDD	36.111	0.988	1.34e6	1.07e6	1.098	1.257	1.240	3042.0	NO		86.586
	13C-1234678-HpCDD	40.814	1.117	1.06e6	1.02e6	0.828	1.048	1.050	4009.8	NO		99.117
	13C-OCDD	46.535	1.274	1.58e6	1.78e6	0.770	0.889	0.890	2407.1	NO		171.966

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

[redacted]	13C-123789-HxCDD	36.539	0.000	1.41e6	1.12e6	1.000	1.260	1.240	3175.3	NO		100.000
[redacted]	Total-tetrafurans			1.72e5		0.763						10.847
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[redacted]	FUNCTION5 PFK			3.13e6								
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[redacted]	FUNCTION4 NCDPE			0.00e0								
[redacted]	FUNCTION5 DCDPE			0.00e0								

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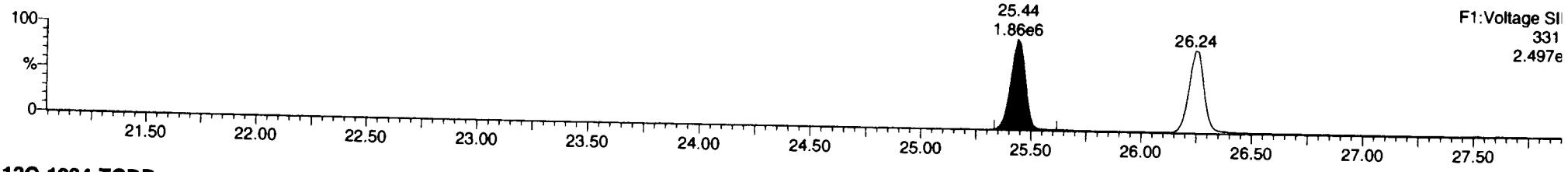
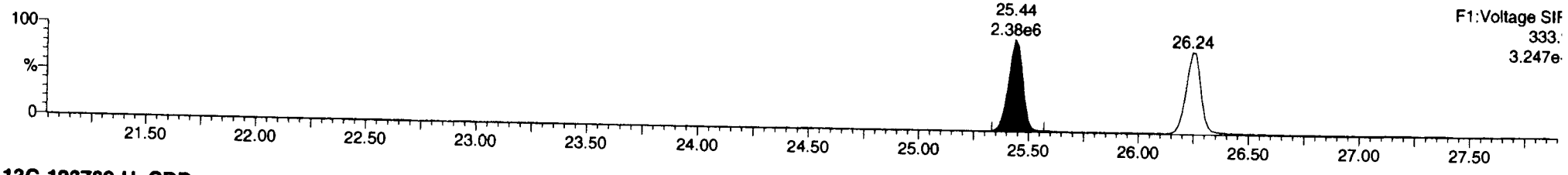
Calibration: P:\DIOXIN8290.PRO\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

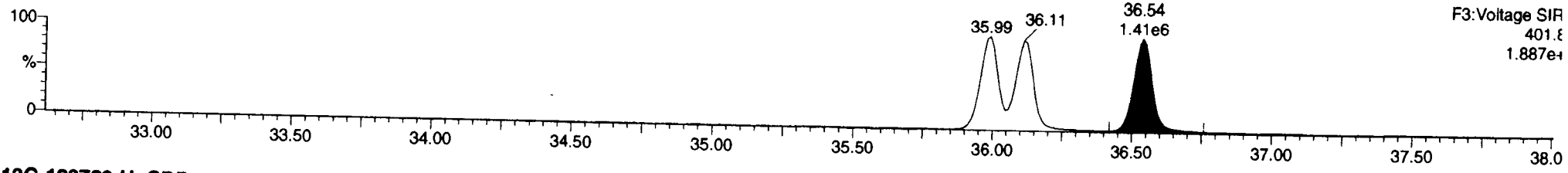
13C-1234-TCDD
13031210



13C-1234-TCDD
13031210



13C-123789-HxCDD
13031210



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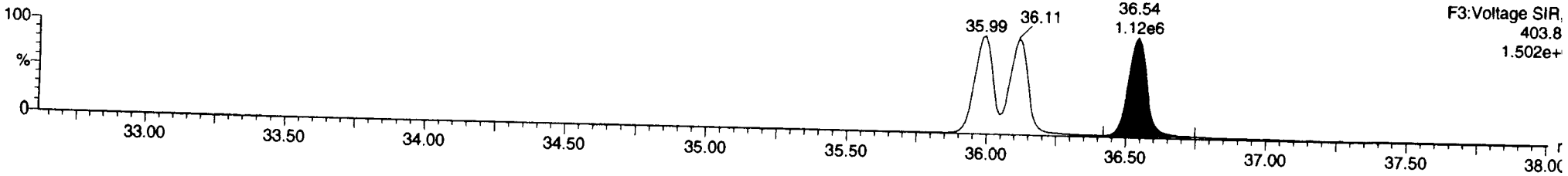
13031210



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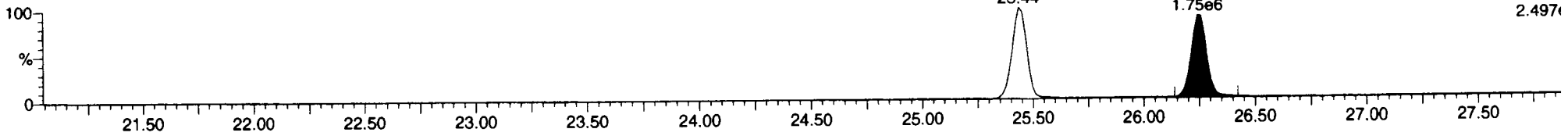
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
13031210

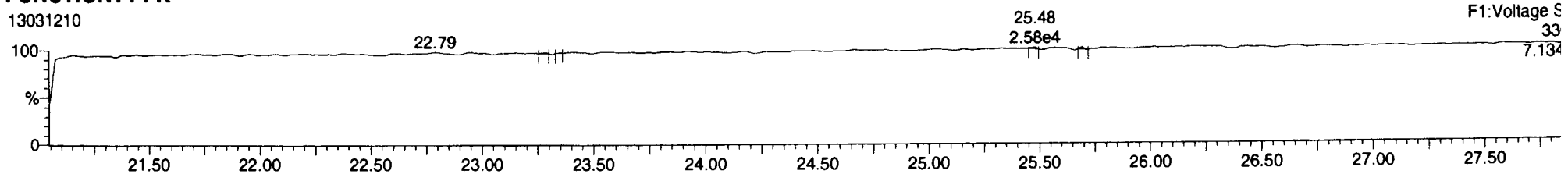


13C-2378-TCDD
13031210

Total-tetradioxins
13031210

Total-tetradioxins
13031210

FUNCTION1 PFK
13031210



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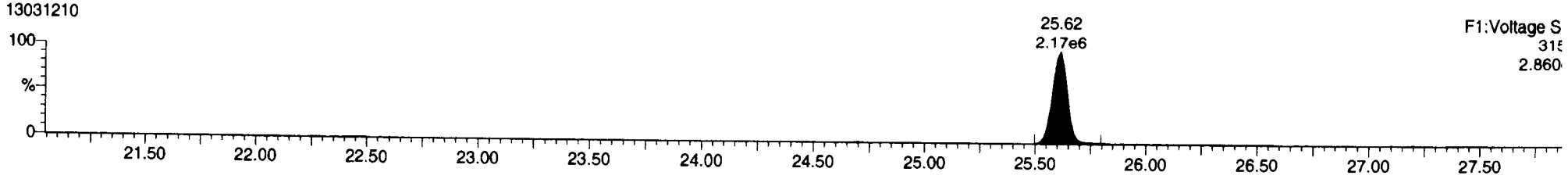
ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

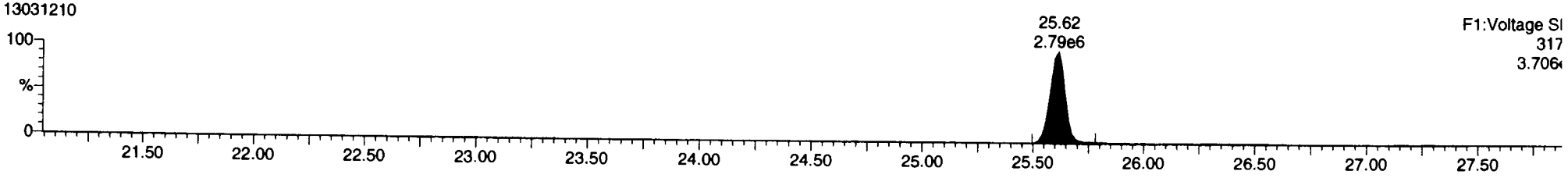
13C-2378-TCDF

13031210



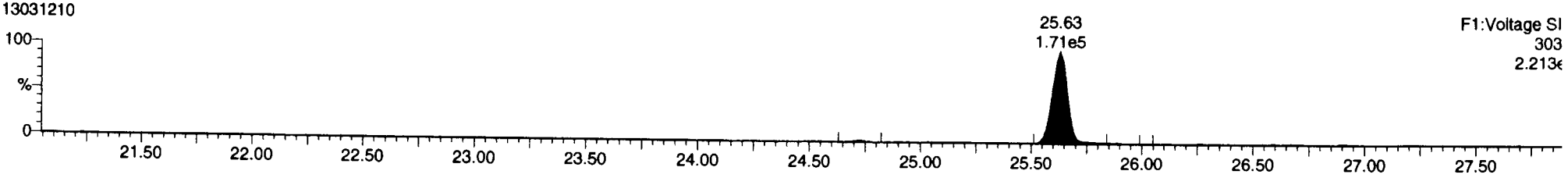
13C-2378-TCDF

13031210



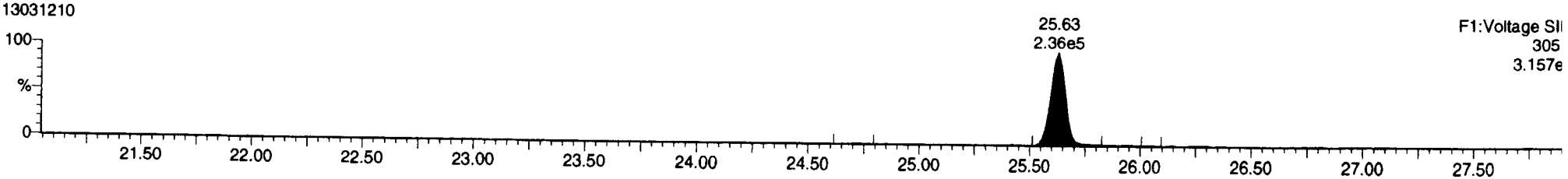
Total-tetrafurans

13031210



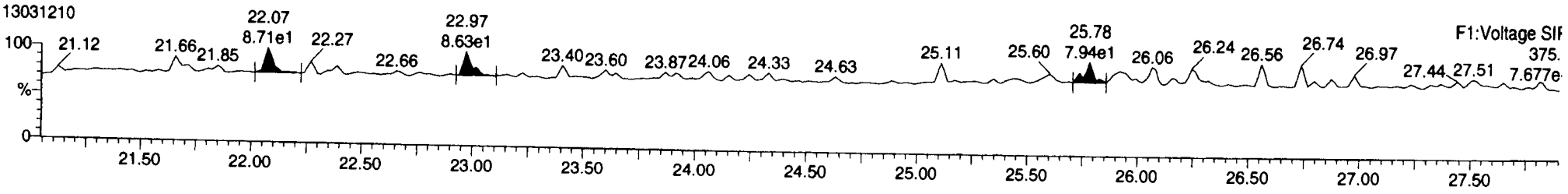
Total-tetrafurans

13031210



FUNCTION1 HXCDPE

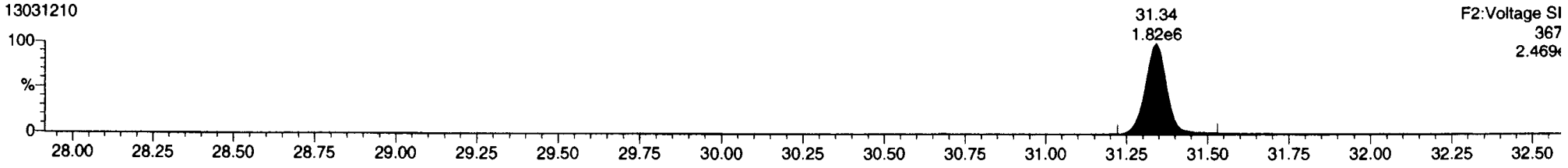
13031210



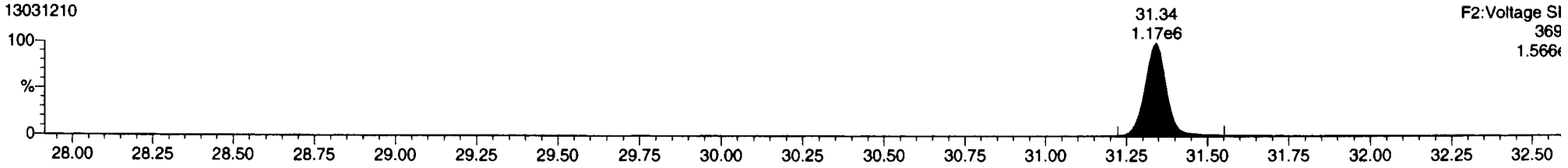
Dataset: P:\DIOXIN8290.PRO\130312ICV.qld
Last Altered: Wednesday, March 13, 2013 11:12:18 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

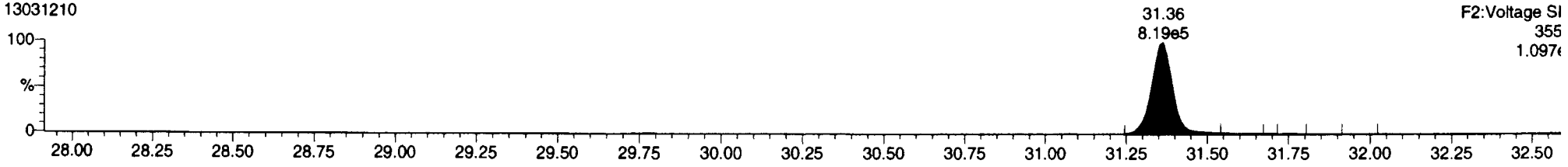
13C-12378-PeCDD



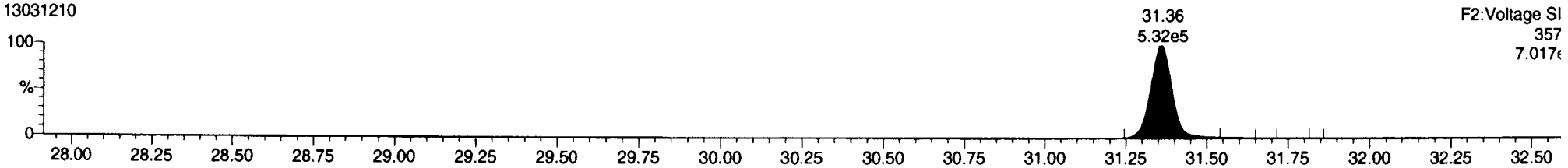
13C-12378-PeCDD



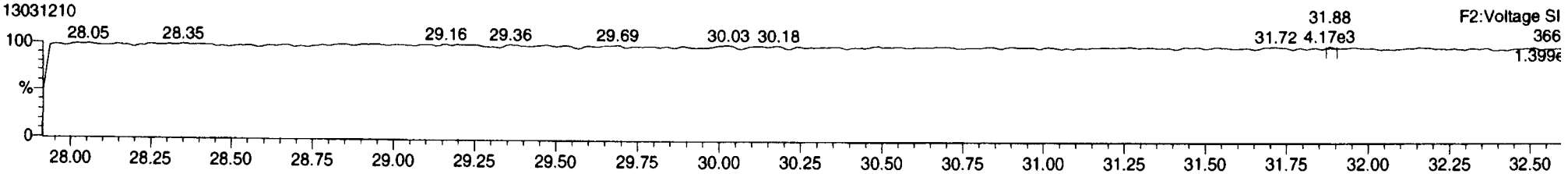
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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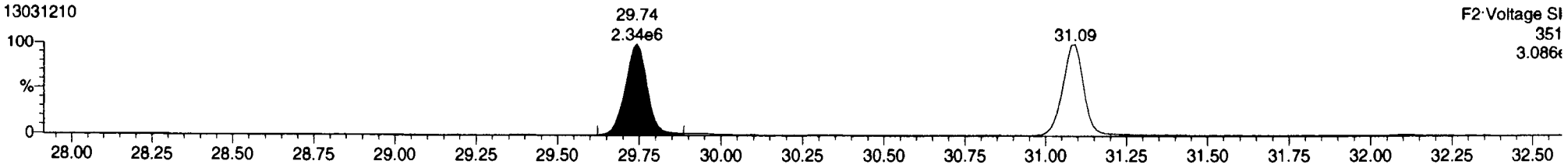
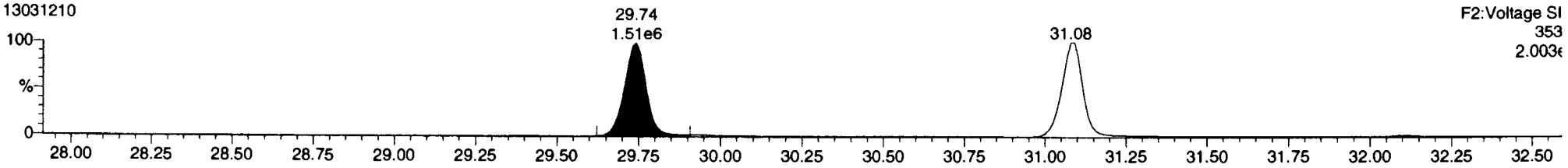
Last Altered: Wednesday, March 13, 2013 11:12:18 Pacific Daylight Time
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

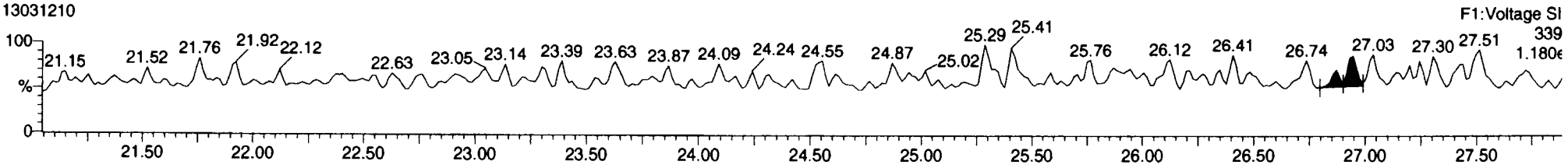
13C-12378-PeCDF



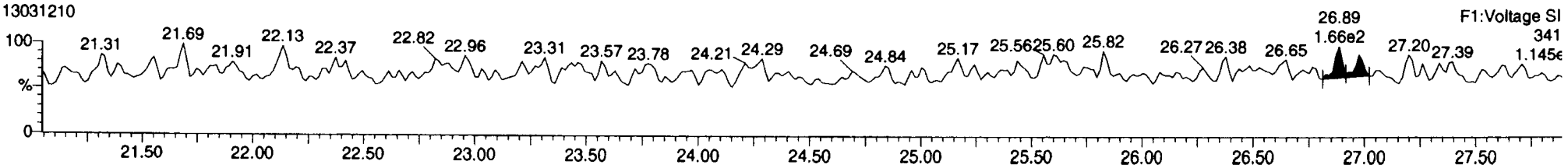
13C-12378-PeCDF



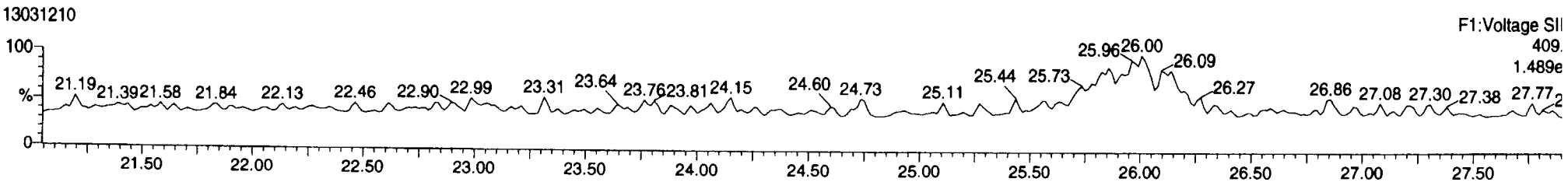
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130312ICV.qld
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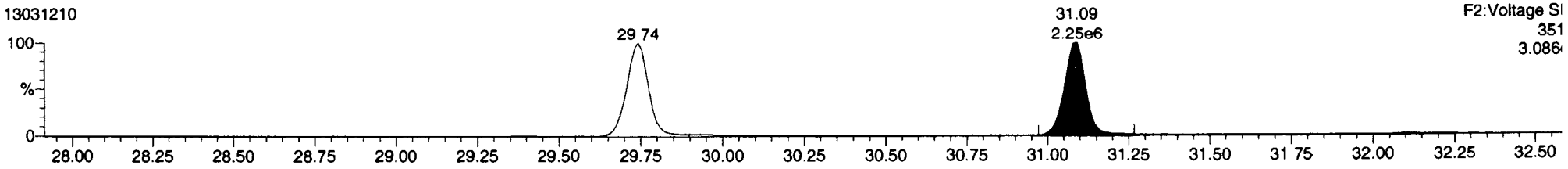
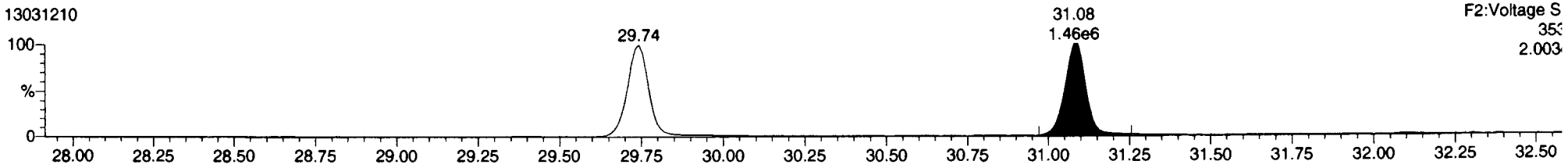
ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

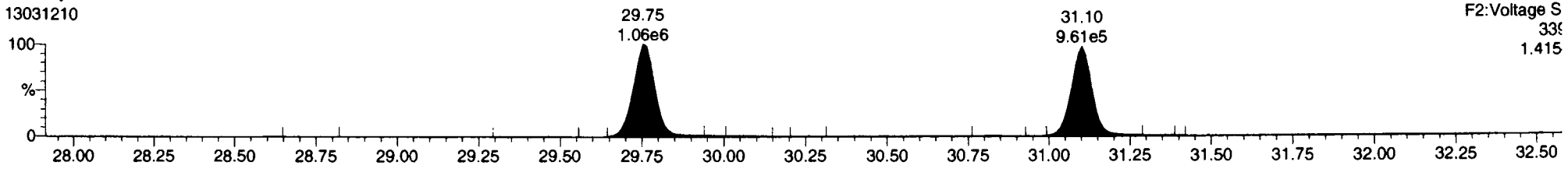
13C-23478-PeCDF



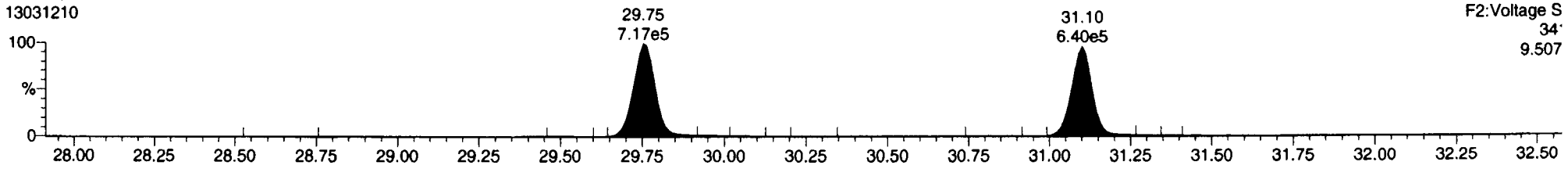
13C-23478-PeCDF



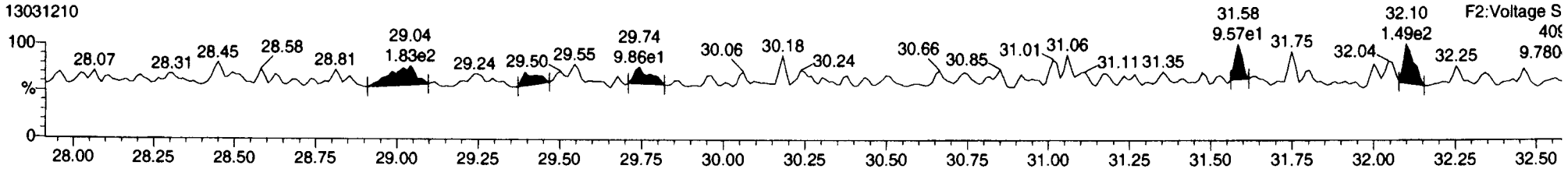
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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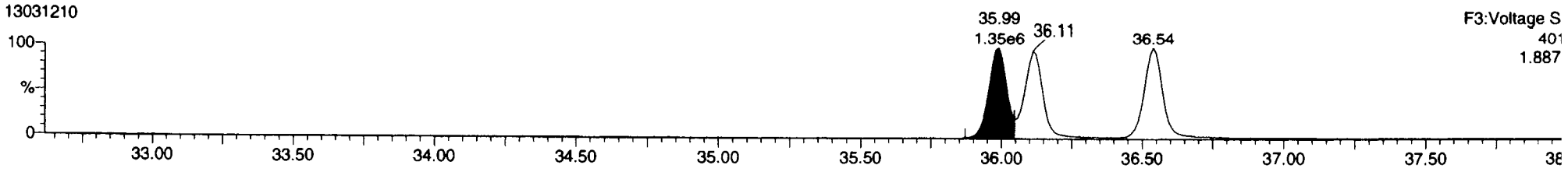
13C-123478-HxCDD



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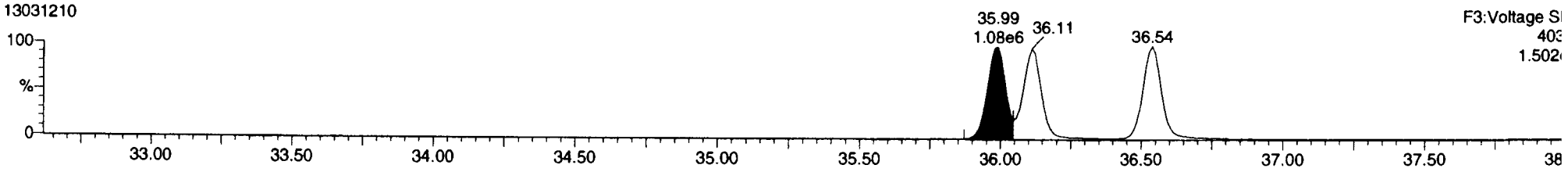
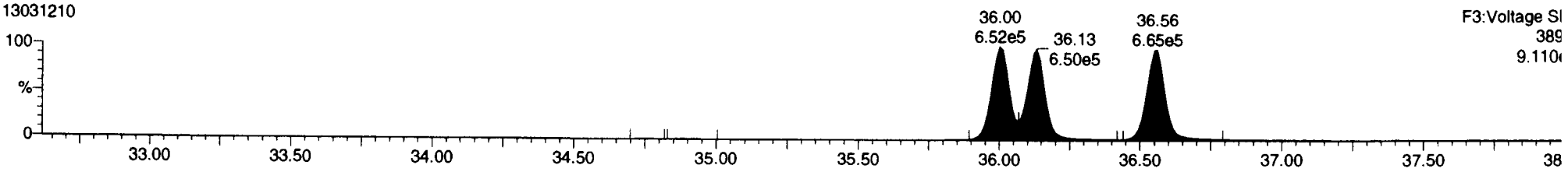
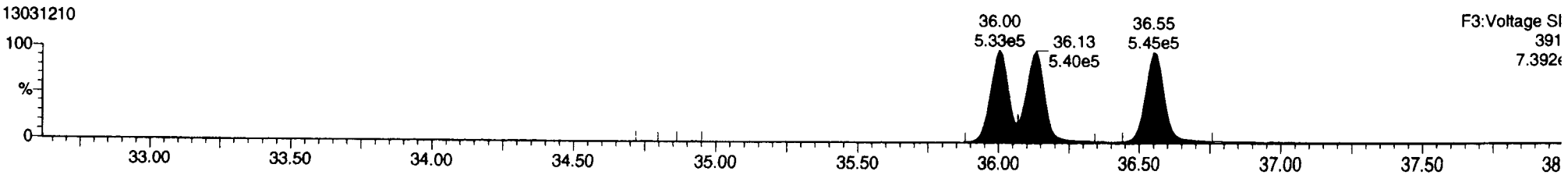


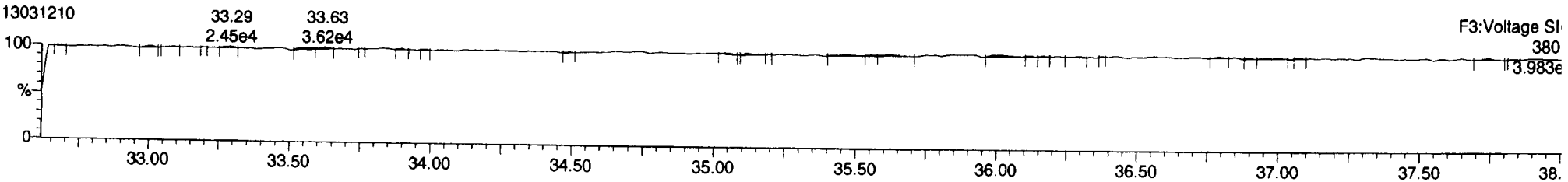
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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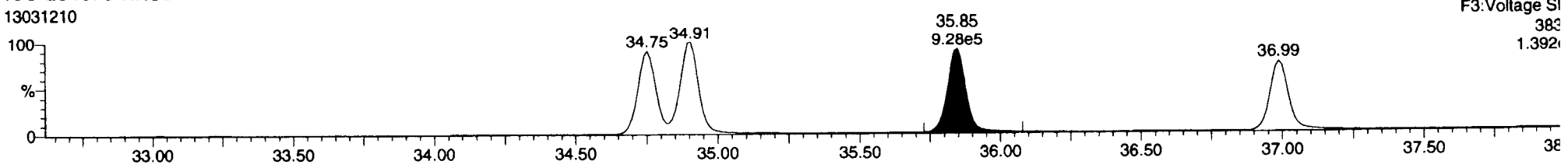
13C-234678-HxCDF



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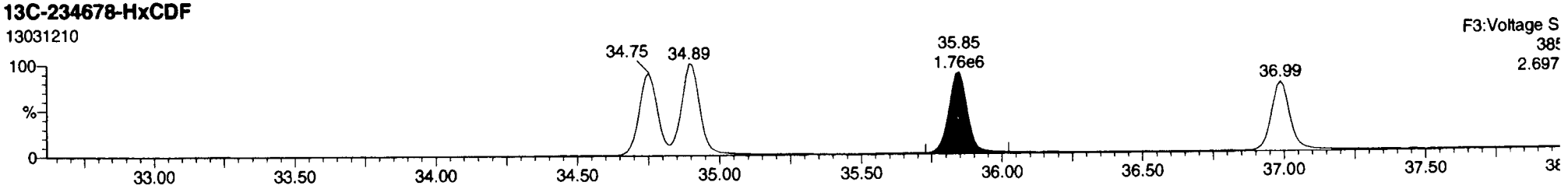
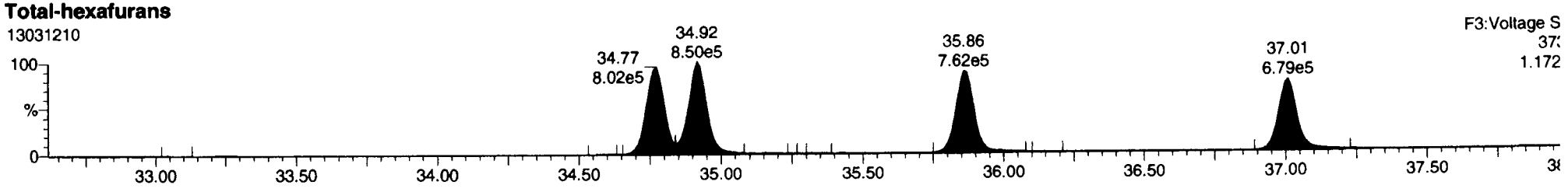
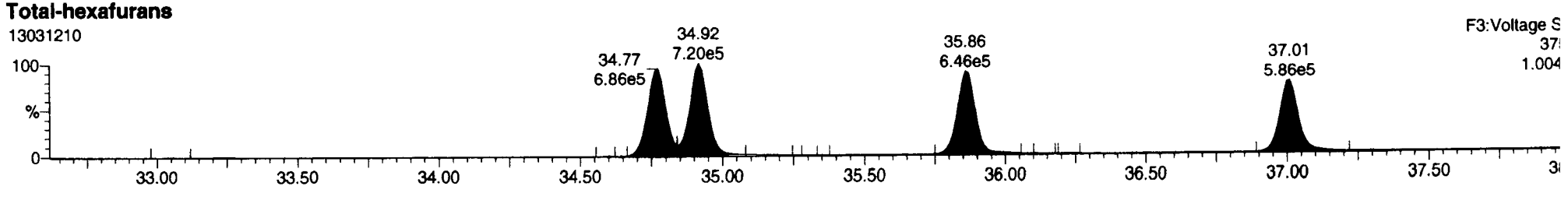


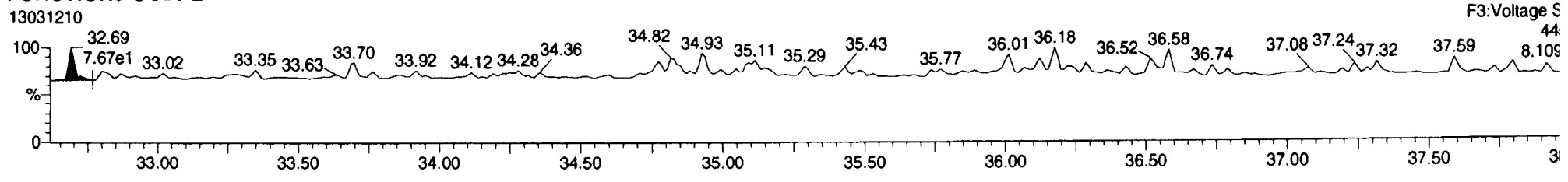
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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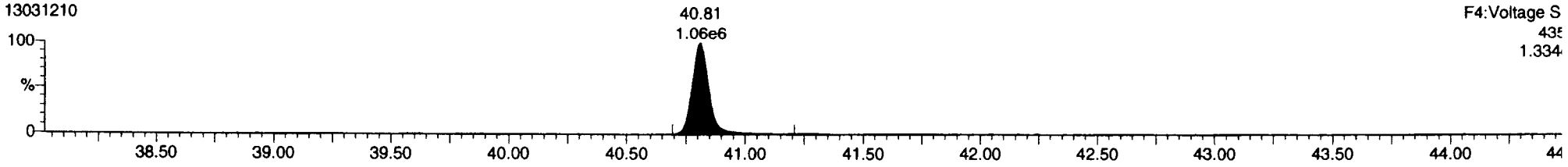
13C-1234678-HpCDD



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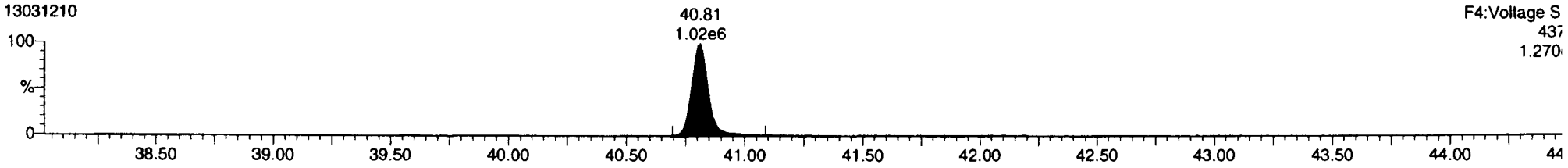
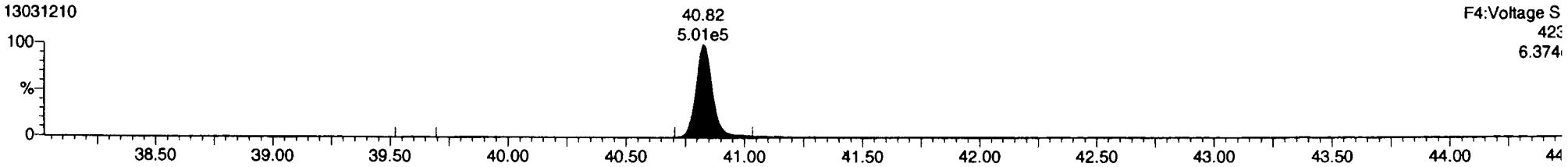
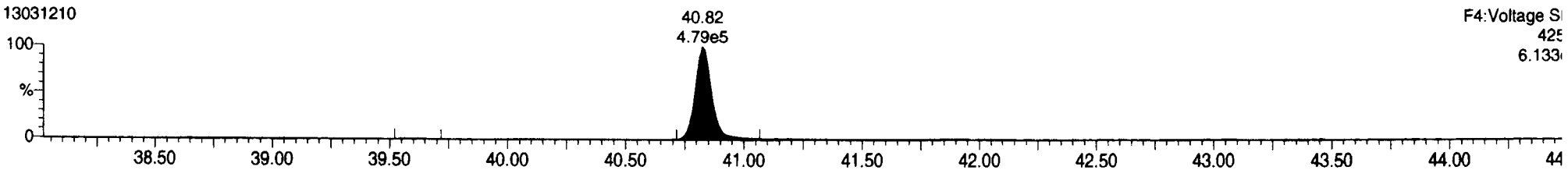


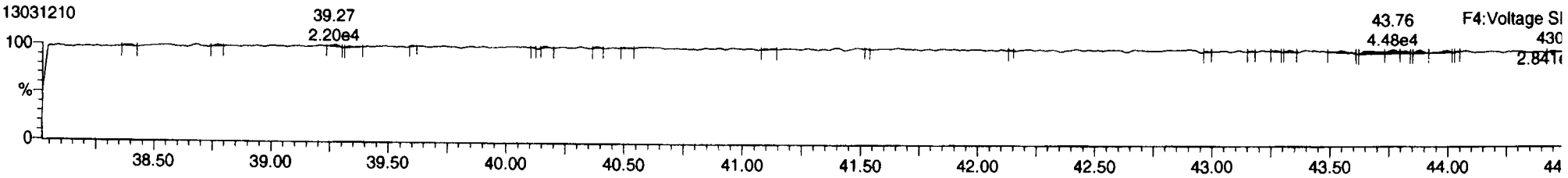
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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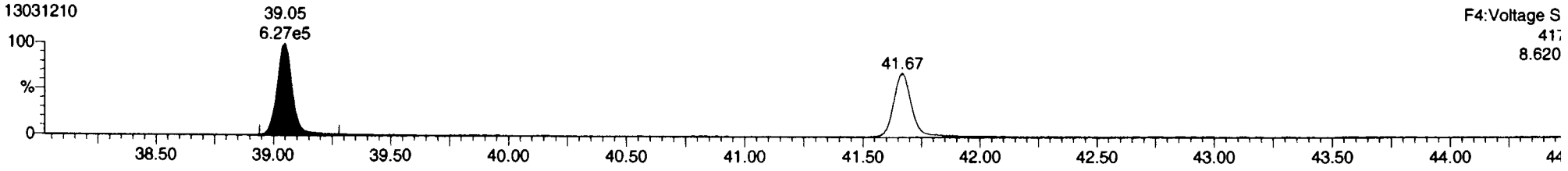
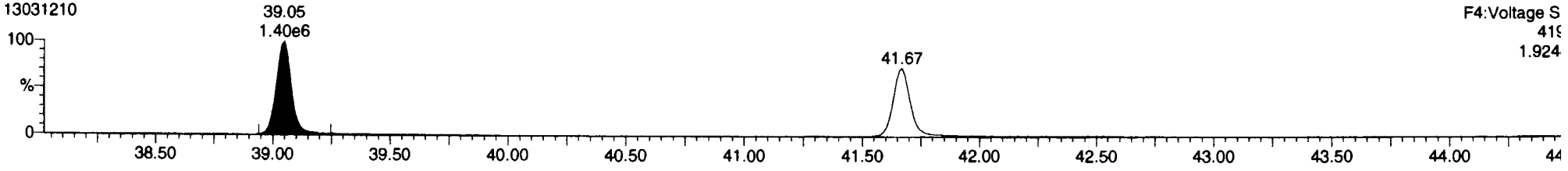
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

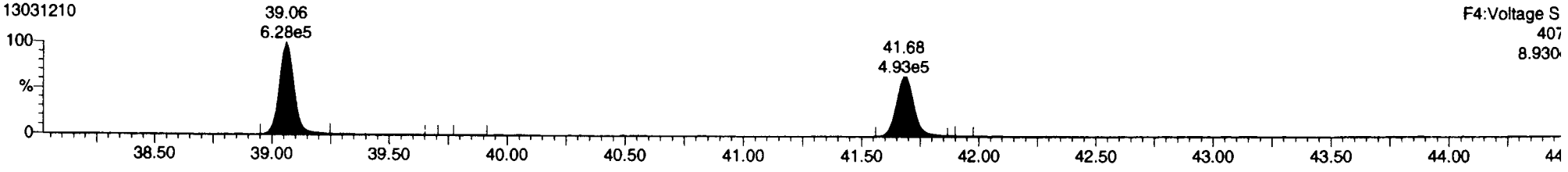
13C-1234678-HpCDF



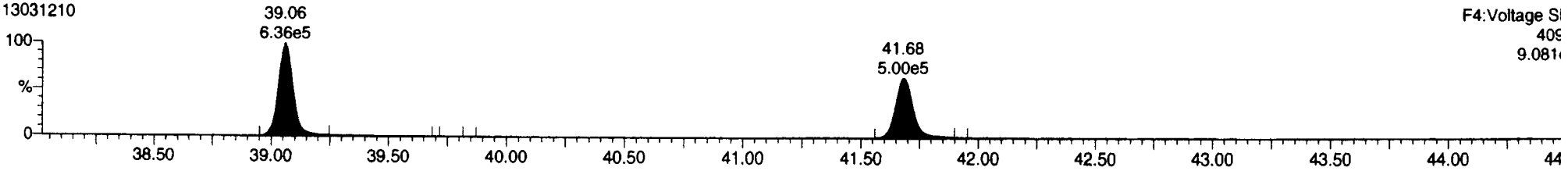
13C-1234678-HpCDF



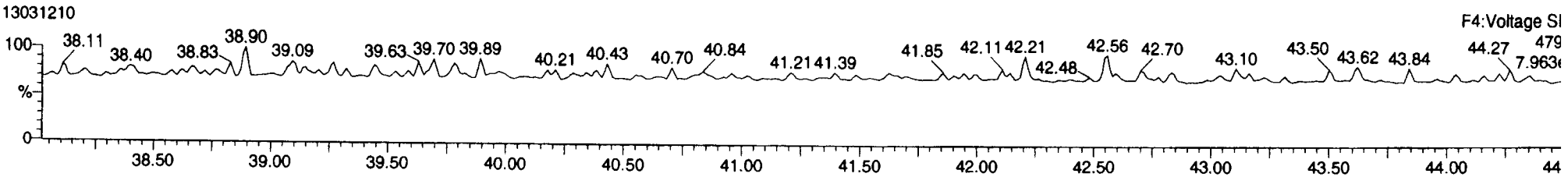
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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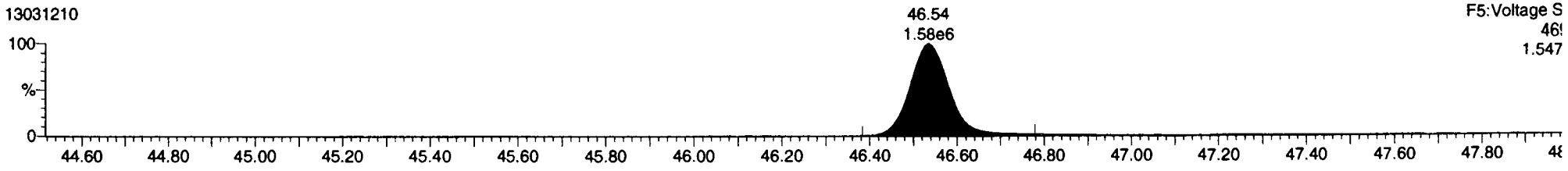
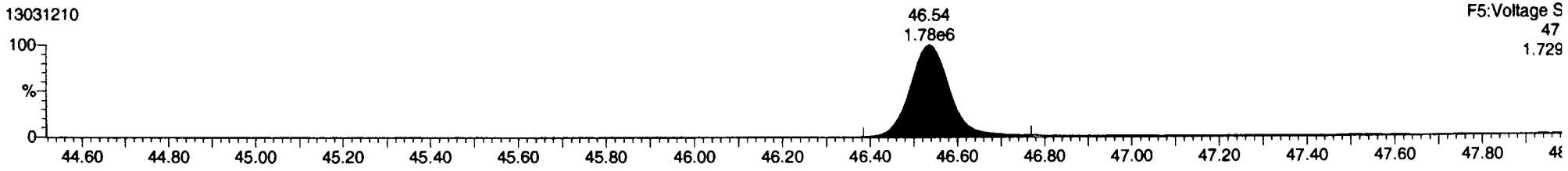
Printed: Wednesday, March 13, 2013 11:17:54 Pacific Daylight Time

ID: ICV, Name: 13031210, Date: 12-Mar-2013, Time: 20:12:13, Conditions: AUTOSPEC01, User: pk

13C-OCDD



13C-OCDD



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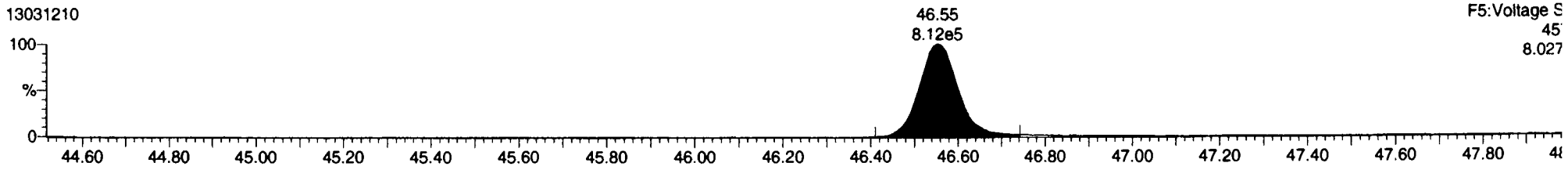

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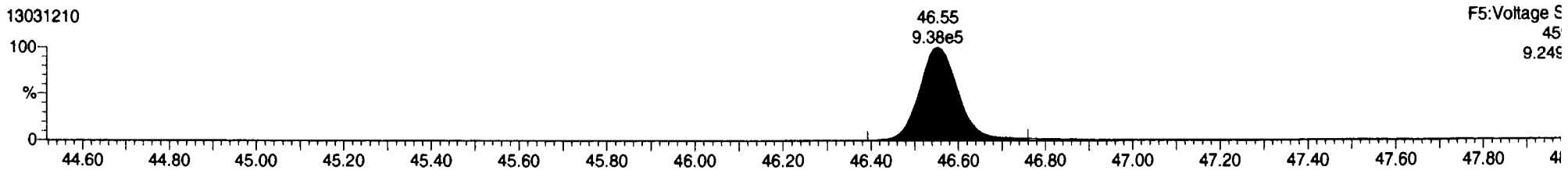
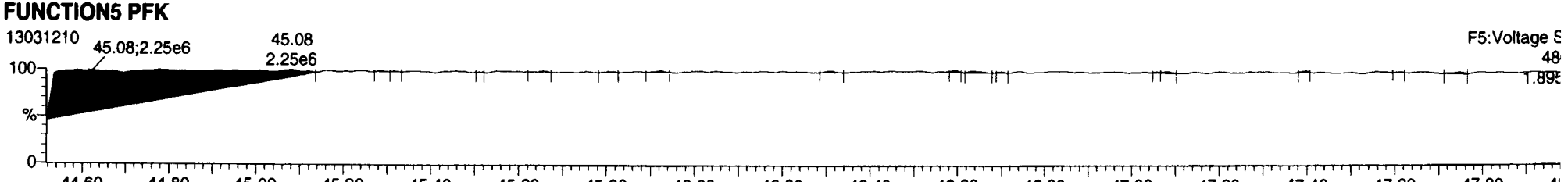


FUNCTION5 PFK



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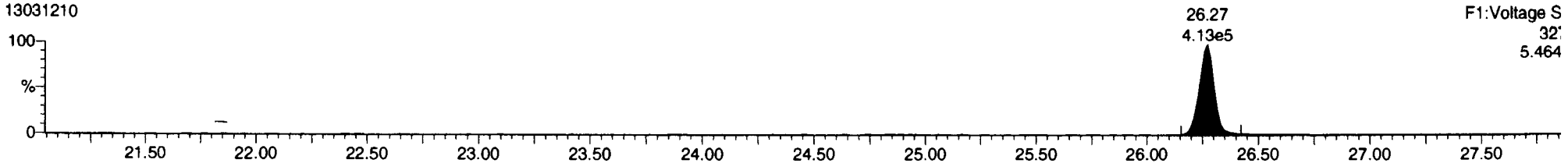
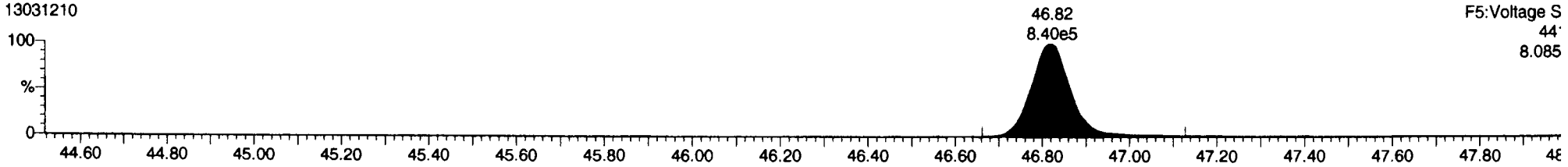
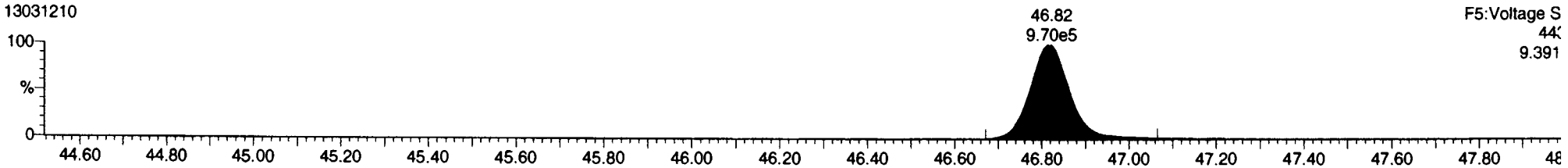
37CL-2378-TCDD



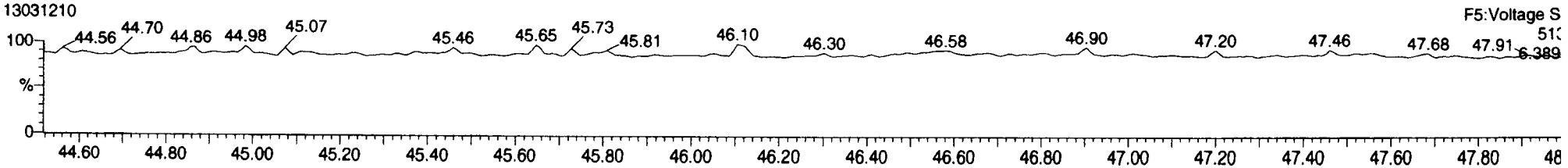
OCDF



OCDF



FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WLH9, WLH9 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 3/12/13 Analysis Start Date: 4/16/13

	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 / * OK	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:

* Pef 1% high in dilution ccal - Not used for quant since Pef not reported in dilution.

(Review 1)Analyst: Pete **Date:** 4/17

(Review 2)Reviewer: MMS **Date:** 4/17

WLH9:81298

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 4/18/13 Analysis: Dioxins Analyst: MK

GC Program: 8290C Column No: F7819 Column Type: RTXDioxin2

Inj Vol: 1ul Instrument Tune (IPR): diox130312_1-5 Detector Voltage: 350

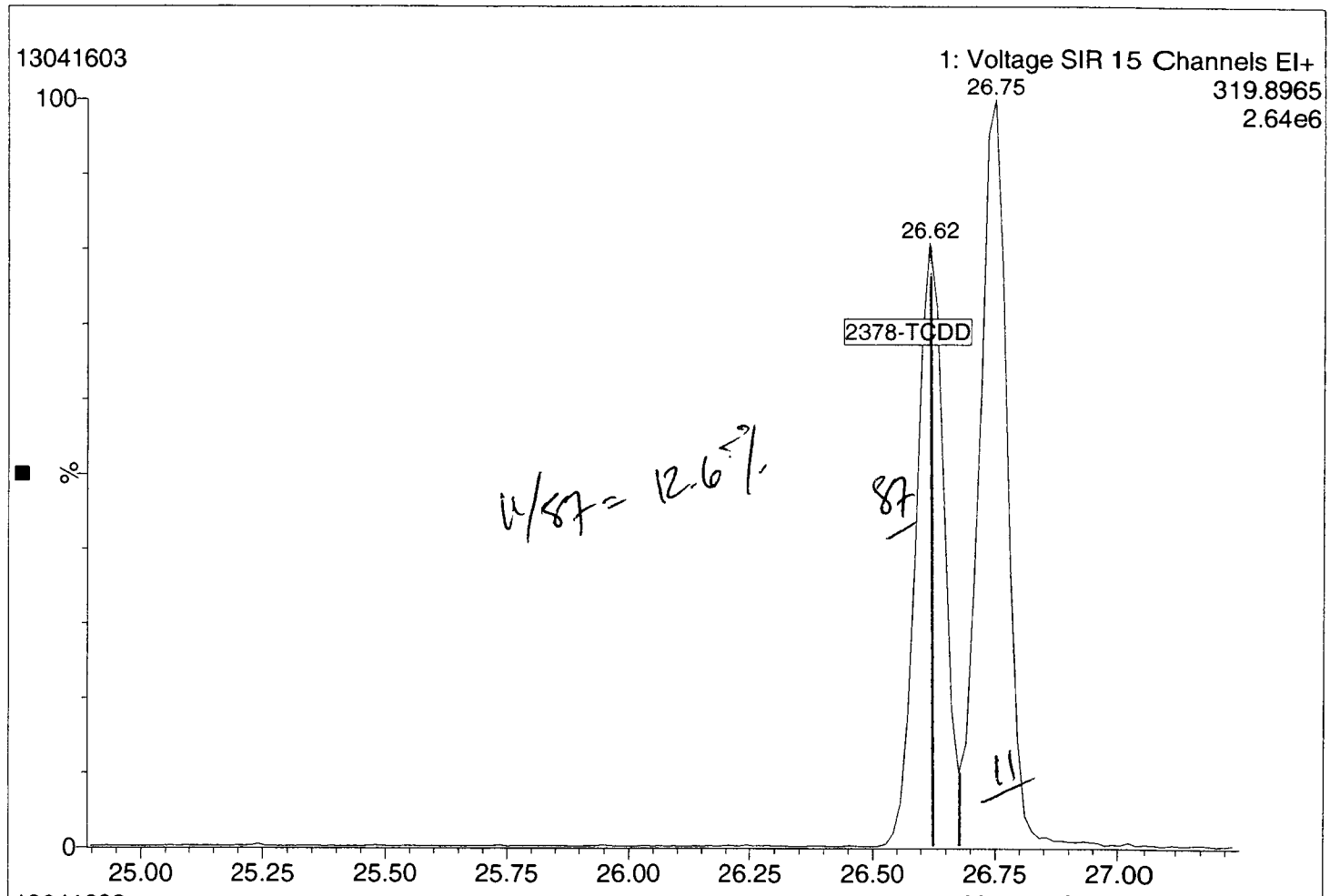
Resolution Check Files: 11:02, 17:30 Curve Date: 3/12/13

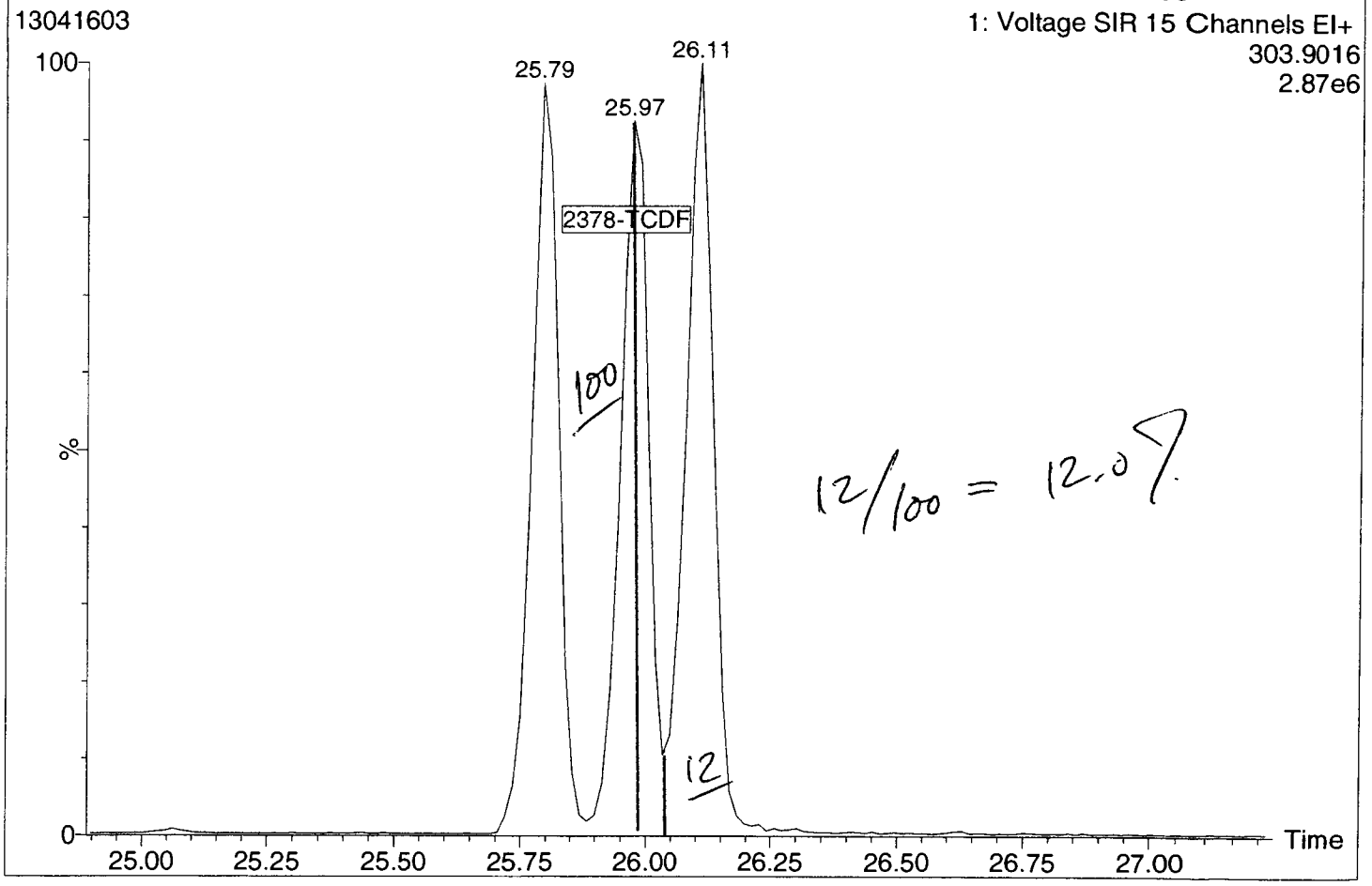
IS/SS	Ical/Ccal	LCS/ICV
F8144	I7708 1997-2	

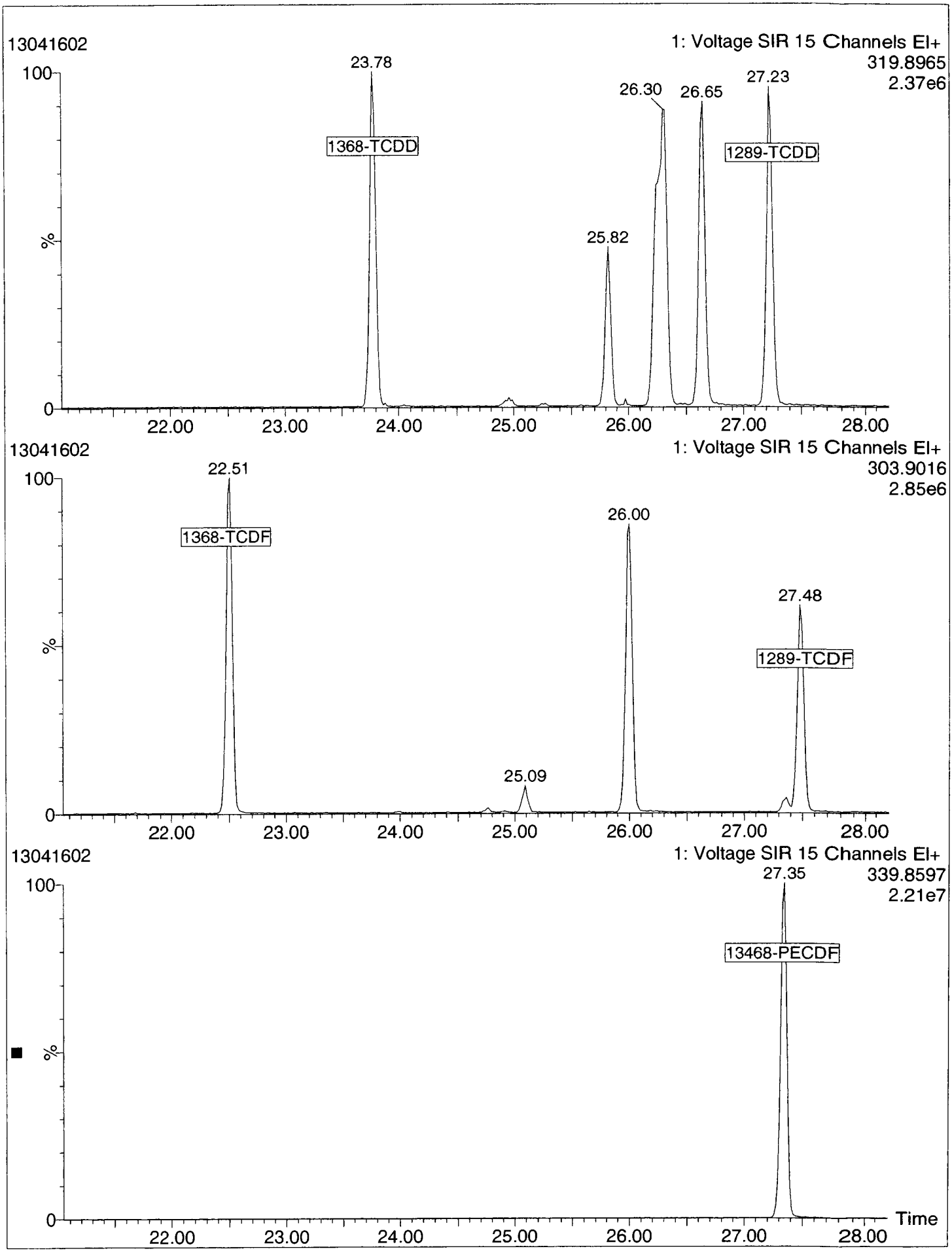
1	16-Apr-13	11:11:46	13041602	CS3
2	16-Apr-13	12:02:21	13041603	ISC01
3	16-Apr-13	13:02:53	13041604	WK49MBS
4	16-Apr-13	13:53:11	13041605	WK49OPR
5	16-Apr-13	14:45:26	13041606	WK49E
6	16-Apr-13	15:37:52	13041607	WL49F
7	16-Apr-13	16:30:07	13041608	CS3

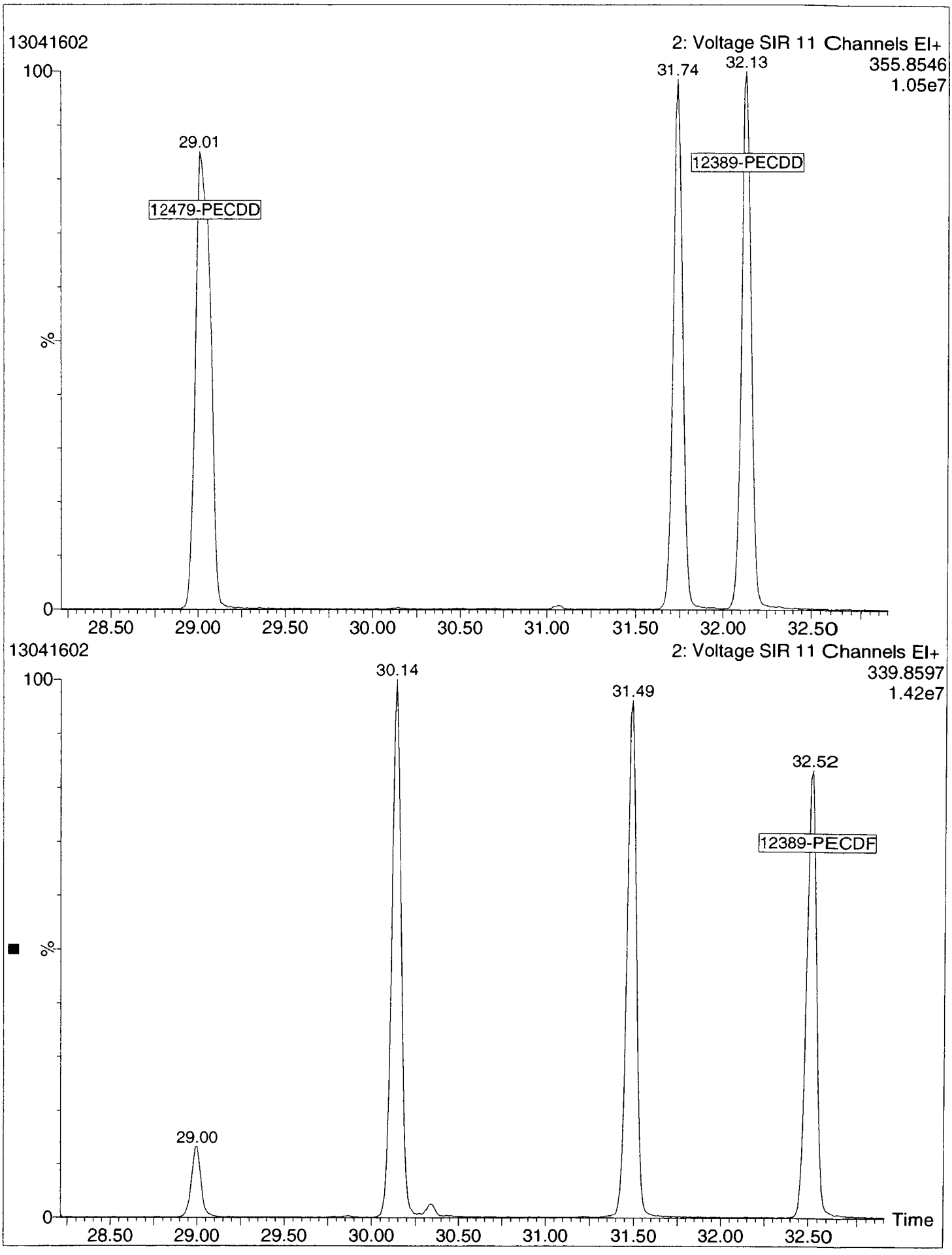
MK 4/18/13

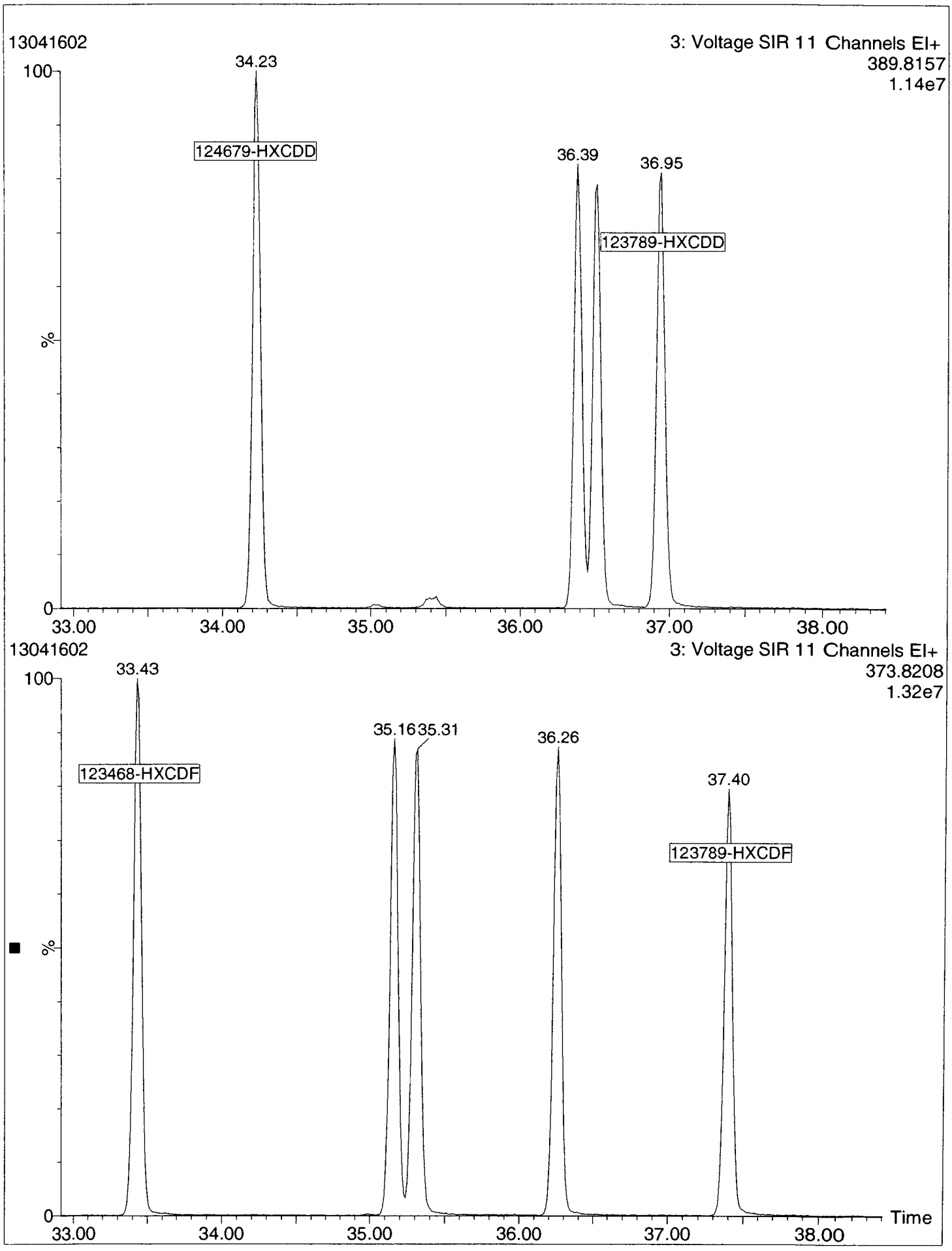
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

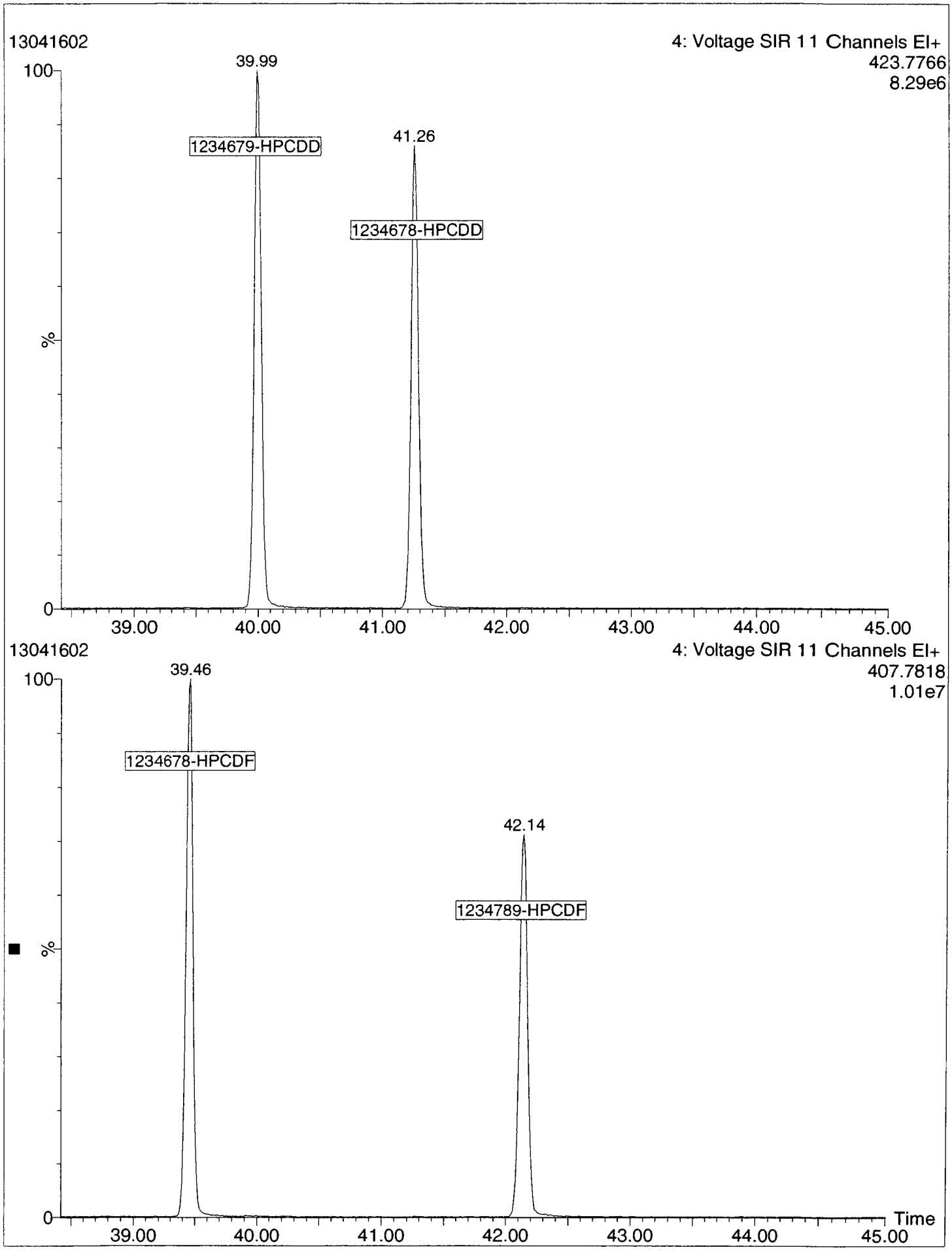

13041603
1: Voltage SIR 15 Channels EI+
319.8965
2.64e6
26.75
26.62
2378-TCDD
100
%
0
87
11
11/87 = 12.6%
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00


13041603
1: Voltage SIR 15 Channels EI+
303.9016
2.87e6
25.79
26.11
25.97
2378-TCDF
100
%
0
100
12
12/100 = 12.0%
Time
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00


13041602
1: Voltage SIR 15 Channels EI+
319.8965
2.37e6
100
%
0
23.78
1368-TCDD
25.82
26.30
26.65
27.23
1289-TCDD
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13041602
1: Voltage SIR 15 Channels EI+
303.9016
2.85e6
100
%
0
22.51
1368-TCDF
25.09
26.00
27.48
1289-TCDF
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13041602
1: Voltage SIR 15 Channels EI+
339.8597
2.21e7
100
%
0
27.35
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00

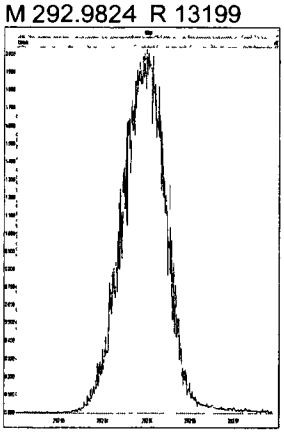

13041602
2: Voltage SIR 11 Channels EI+
355.8546
1.05e7
100
%
0
29.01
12479-PECDD
31.74
32.13
12389-PECDD
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
13041602
2: Voltage SIR 11 Channels EI+
339.8597
1.42e7
100
%
0
30.14
31.49
32.52
12389-PECDF
29.00
Time
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50


13041602
3: Voltage SIR 11 Channels EI+
389.8157
1.14e7
100
%
0
34.23
124679-HXCDD
36.39
36.95
123789-HXCDD
33.00
34.00
35.00
36.00
37.00
38.00
13041602
3: Voltage SIR 11 Channels EI+
373.8208
1.32e7
100
%
0
33.43
123468-HXCDF
35.16
35.31
36.26
37.40
123789-HXCDF
Time
33.00
34.00
35.00
36.00
37.00
38.00

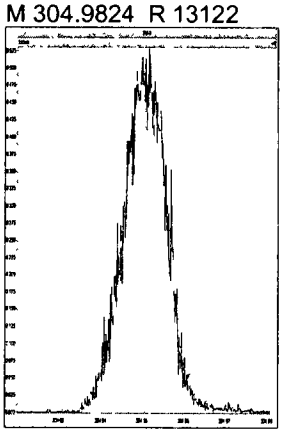

13041602
4: Voltage SIR 11 Channels EI+
423.7766
8.29e6
39.99
1234679-HPCDD
41.26
1234678-HPCDD
100
%
0
39.00
40.00
41.00
42.00
43.00
44.00
45.00
13041602
4: Voltage SIR 11 Channels EI+
407.7818
1.01e7
39.46
1234678-HPCDF
42.14
1234789-HPCDF
100
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Printed: Tuesday, April 16, 2013 11:03:29 Pacific Daylight Time

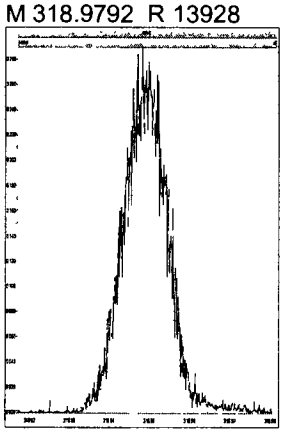
M 292.9824 R 13199



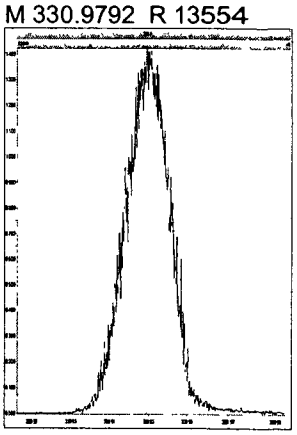
M 304.9824 R 13122



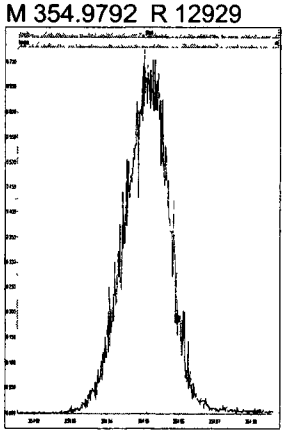
M 318.9792 R 13928



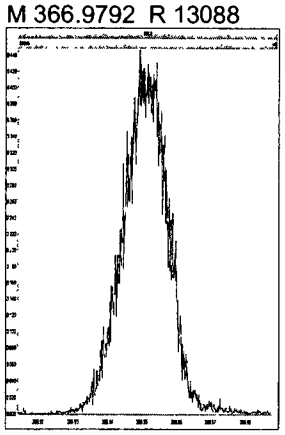
M 330.9792 R 13554



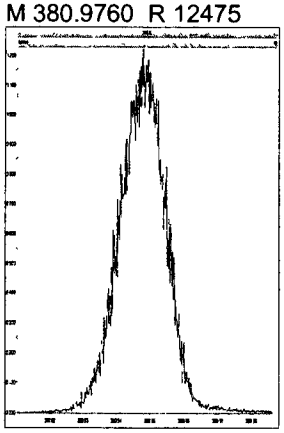
M 354.9792 R 12929



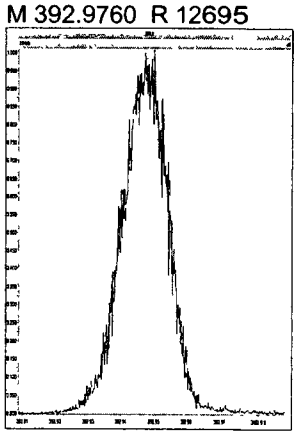
M 366.9792 R 13088



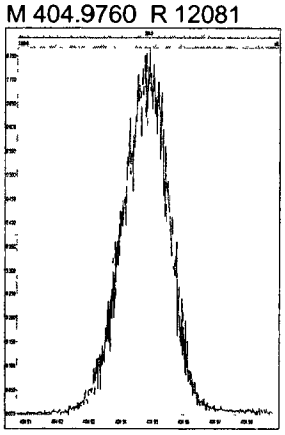
M 380.9760 R 12475



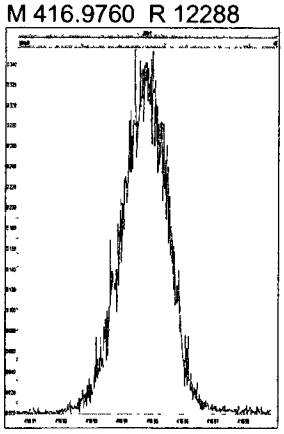
M 392.9760 R 12695



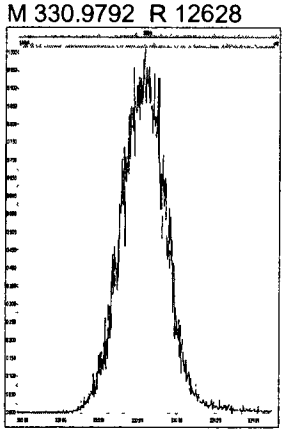
M 404.9760 R 12081



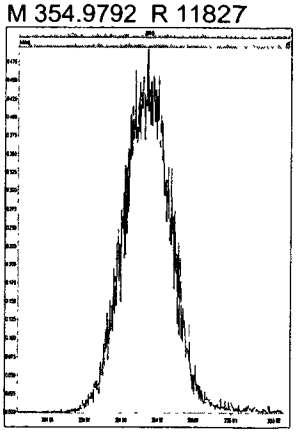
M 416.9760 R 12288



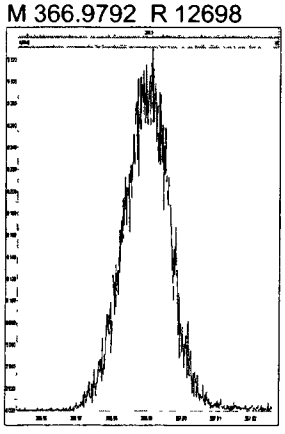
M 330.9792 R 12628



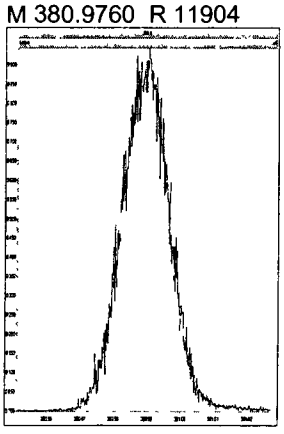
M 354.9792 R 11827



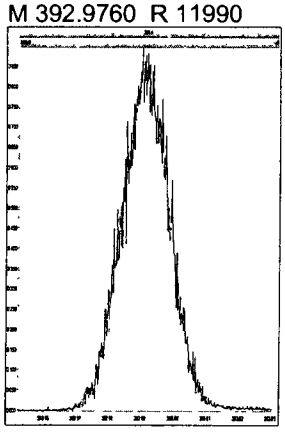
M 366.9792 R 12698



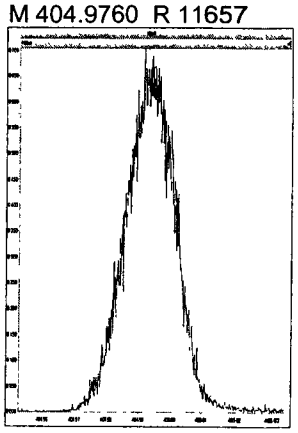
M 380.9760 R 11904



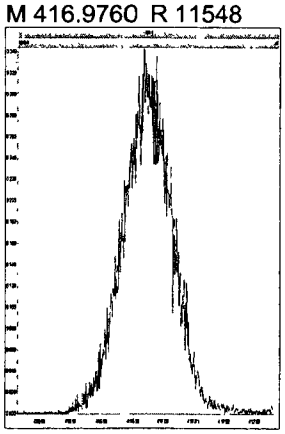
M 392.9760 R 11990



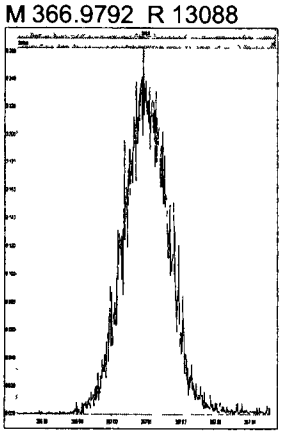
M 404.9760 R 11657



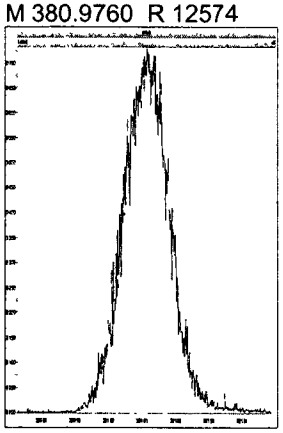
M 416.9760 R 11548



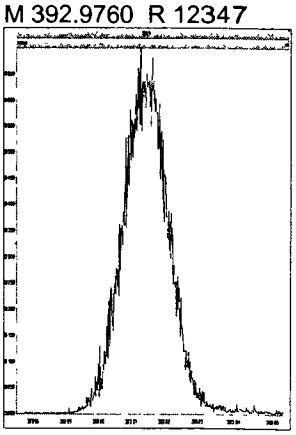
M 366.9792 R 13088



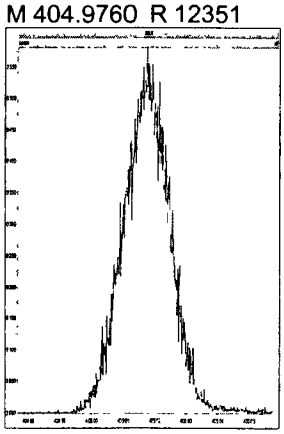
M 380.9760 R 12574



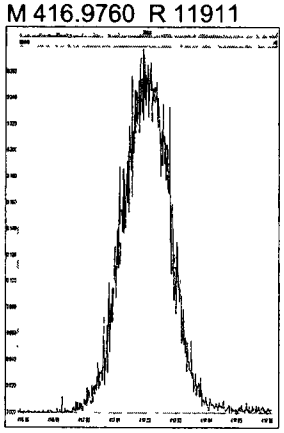
M 392.9760 R 12347



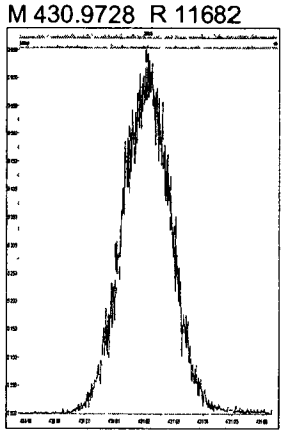
M 404.9760 R 12351



M 416.9760 R 11911



M 430.9728 R 11682



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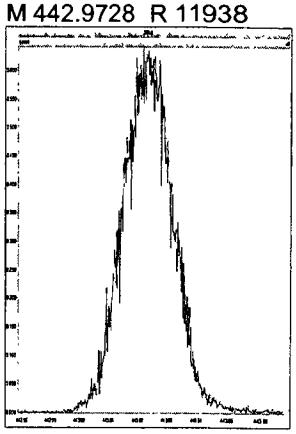
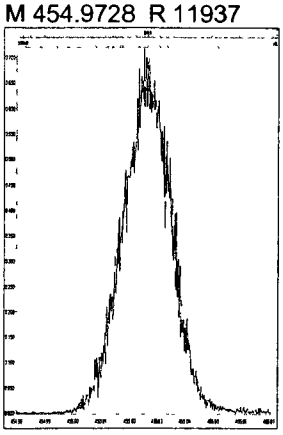
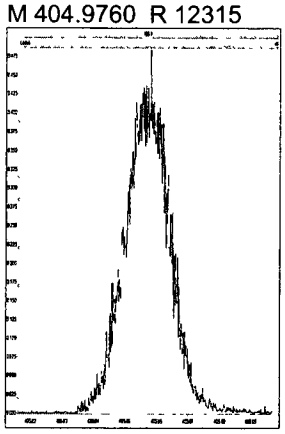


M 454.9728 R 11937



M 404.9760 R 12315



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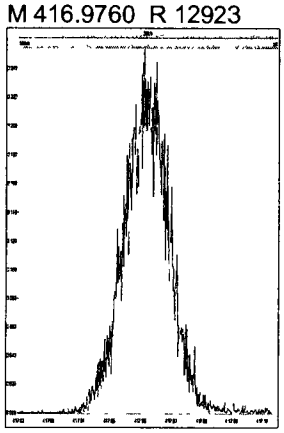

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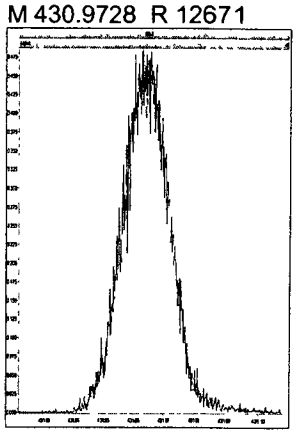

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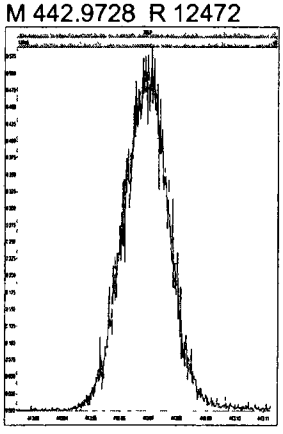
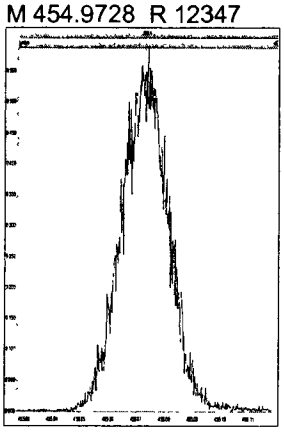


M 454.9728 R 12347



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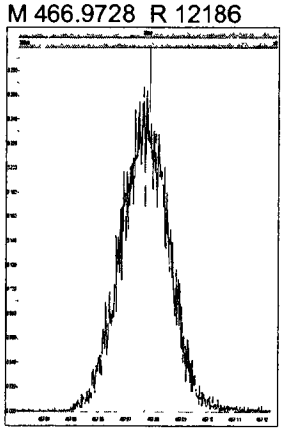
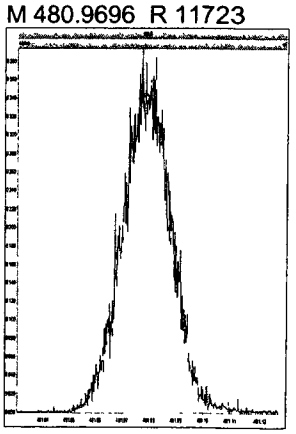


M 480.9696 R 11723



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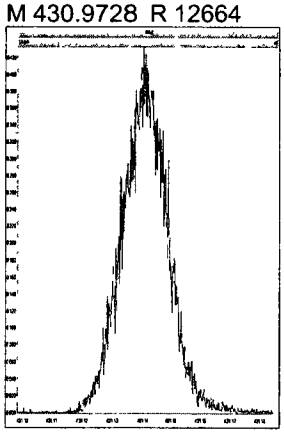
M 430.9728 R 12664



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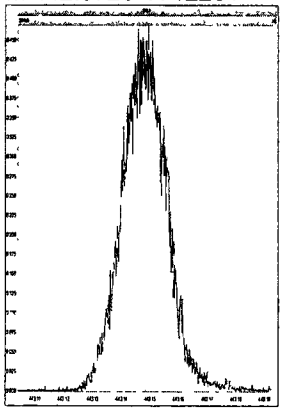

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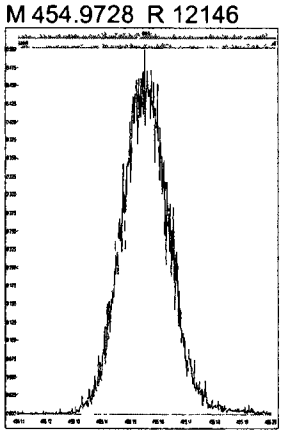

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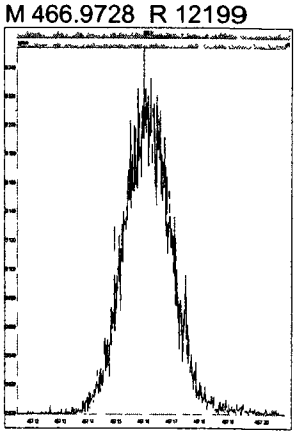
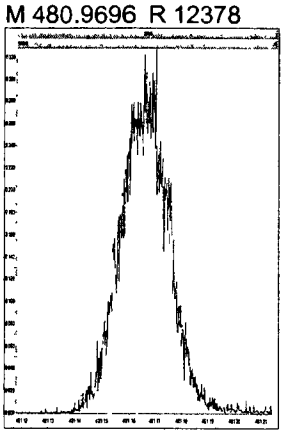
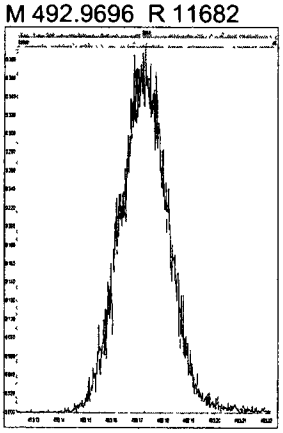


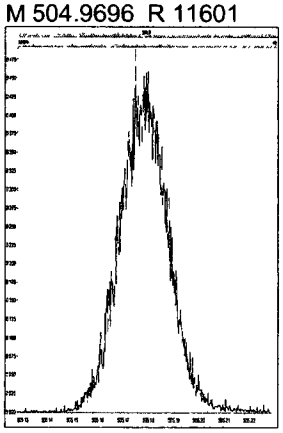
M 480.9696 R 12378



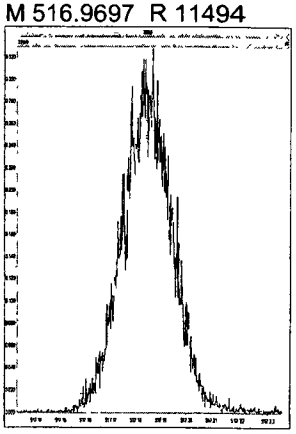
M 492.9696 R 11682



M 504.9696 R 11601



M 516.9697 R 11494



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Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

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Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

	2378-TCDF	26.003	1.001	1.57e5	2.12e5	0.763	0.739	0.770	1336.3	NO	11.148	11.148
	12378-PeCDF	30.140	1.001	8.70e5	5.85e5	0.836	1.486	1.550	3760.5	NO	53.735	53.735
	23478-PeCDF	31.488	1.001	8.33e5	5.62e5	0.851	1.481	1.550	3643.6	NO	52.273	52.273
	123478-HxCDF	35.160	1.001	7.25e5	6.13e5	1.017	1.182	1.240	2298.4	NO	52.859	52.859
	234678-HxCDF	36.257	1.001	7.26e5	6.06e5	1.027	1.199	1 240	2249.5	NO	54.357	54.357
	123678-HxCDF	35.303	1.000	7.31e5	6.27e5	1.013	1.165	1.240	2222.7	NO	51.433	51.433
	123789-HxCDF	37.396	1.000	6.34e5	5.35e5	0.929	1.185	1.240	2033.3	NO	52.356	52 356
	1234678-HpCDF	39.446	1.000	6.48e5	6.56e5	1.151	0.988	1.050	2344.0	NO	53.201	53.201
	1234789-HpCDF	42.143	1.000	5.48e5	5.48e5	1.149	1.001	1.050	1715.4	NO	53.263	53.263
	OCDF	47.418	1.006	9 02e5	1.04e6	0.963	0.864	0.890	2814.5	NO	108.405	108.405
	2378-TCDD	26.646	1.001	1.33e5	1.68e5	0.980	0.792	0.770	1398.0	NO	10.154	10.154
	12378-PeCDD	31.740	1.001	6.26e5	4.09e5	0.948	1.528	1.550	2627.1	NO	51.073	51.073
	123478-HxCDD	36.388	1.001	5.75e5	4.63e5	0.941	1.242	1.240	2363.4	NO	50.410	50.410
	123678-HxCDD	36.520	1.001	5.63e5	4.52e5	0.884	1.245	1.240	2292.4	NO	49.231	49.231
	123789-HxCDD	36.947	1.012	5 72e5	4.62e5	0.870	1.237	1.240	2316.8	NO	52.632	52.632
	1234678-HpCDD	41.255	1.000	4.87e5	4.66e5	0 948	1.045	1.050	1868.2	NO	50.379	50 379
	OCDD	47.148	1.001	8.10e5	9.17e5	0.969	0.884	0.890	2525.3	NO	95 648	95.648
	13C-2378-TCDF	25.988	1.007	1.89e6	2.44e6	1.318	0.773	0.770	7617.0	NO		108.508
	13C-12378-PeCDF	30.118	1.167	1.97e6	1.27e6	1.026	1.548	1.550	6557.7	NO		104.229
	13C-23478-PeCDF	31.466	1.219	1.91e6	1.23e6	0.966	1 558	1.550	6454 8	NO		107.168
	13C-123478-HxCDF	35.138	0.952	8.44e5	1.64e6	1.123	0.513	0.510	3253.7	NO		99.355
	13C-123678-HxCDF	35.292	0.956	8.95e5	1.71e6	1.216	0.523	0.510	3438.4	NO		96.131
	13C-234678-HxCDF	36.235	0.981	8.24e5	1.56e6	1.106	0.527	0.510	3154.5	NO		96.734
	13C-123789-HxCDF	37.386	1.013	8.19e5	1.58e6	0.995	0.517	0.510	3160.9	NO		108.225
	13C-1234678-HpCDF	39.436	1.068	6.64e5	1.47e6	0.896	0.453	0.440	3680.2	NO		106.556
	13C-1234789-HpCDF	42.121	1.141	5.57e5	1.23e6	0.693	0.451	0.440	2642.5	NO		115.751
	13C-1234-TCDD	25.809	0.000	1.33e6	1.70e6	1.000	0.782	0.770	4385.9	NO		100.000
	13C-2378-TCDD	26.616	1.031	1.33e6	1.71e6	0.961	0.776	0.770	4305.2	NO		104.135
	13C-12378-PeCDD	31.718	1.229	1.30e6	8.32e5	0.703	1.567	1.550	7560.6	NO		100.267
	13C-123478-HxCDD	36.366	0.985	1.22e6	9.66e5	1.016	1.264	1.240	6184.0	NO		96.458
	13C-123678-HxCDD	36.498	0.988	1.30e6	1.03e6	1.098	1.251	1.240	6639.2	NO		95.097
	13C-1234678-HpCDD	41.233	1.117	1.02e6	9.75e5	0.828	1.048	1.050	4777.5	NO		108.027
	13C-OCDD	47.121	1.276	1.77e6	1.96e6	0.770	0.901	0.890	7854.6	NO		216.970

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416OPEN.qld
Last Altered: Tuesday, April 16, 2013 12:05:28 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

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	Total-tetrafurans			4.64e5		0.763					33.576
	Total-penta1			1.37e6							77.321
	Total-pentafurans			2.59e6		0.844					160.947
	Total-hexafurans			3.62e6		0.997					271.226
	Total-heptafurans			1.20e6		1.150					106.505
	Total-Furans			1.01e7		0.970					757.980
	Total-tetradioxins			7.12e5		0 980					54.589
	Total-pentadioxins			2.15e6		0.948					175.867
	Total-hexadioxins			2.42e6		0.898					216.039
	Total-heptadioxins			1.03e6		0.948					106.882
	Total-Dioxins			7.12e6		0.934					649.026
	Total-TEQ			1.73e7							1407 006
	37CL-2378-TCDD	26.631	1.032	3.22e5		0.999			2854.3		10.631
	FUNCTION1 PFK			3.61e5							
	FUNCTION2 PFK			4.04e5							0.000
	FUNCTION3 PFK			7.69e5							0.000
	FUNCTION4 PFK			6.27e5							
	FUNCTION5 PFK			2.49e5							
	FUNCTION1 HXCDPE			7.63e2							0.000
	FUNCTION1 HPCDPE			3.25e3							0.000
	FUNCTION2 HPCDPE			1.39e3							0.000
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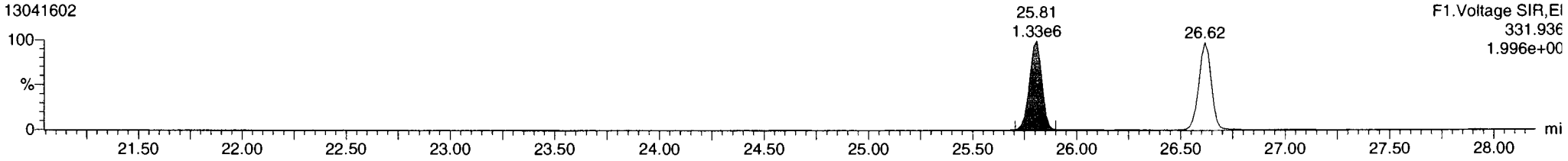
ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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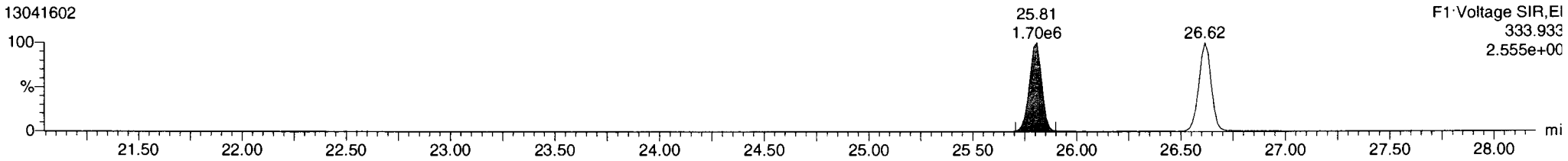

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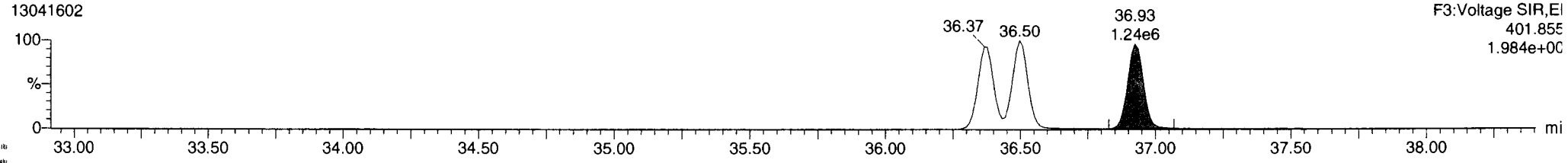
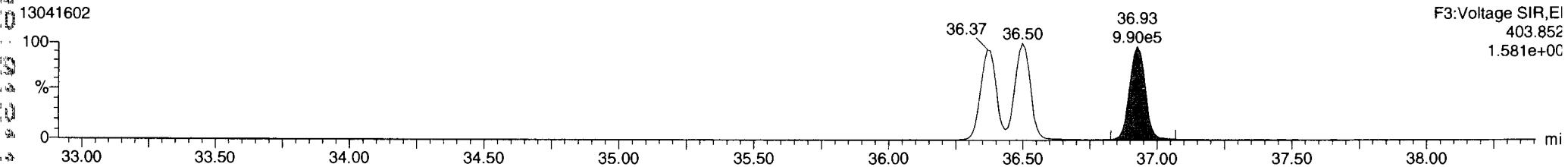


13C-123789-HxCDD



Quantify Sample Report **MassLynx 4.1 SCN 714**
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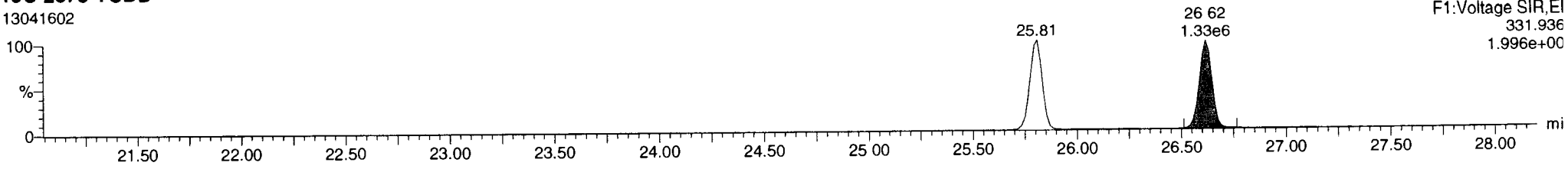
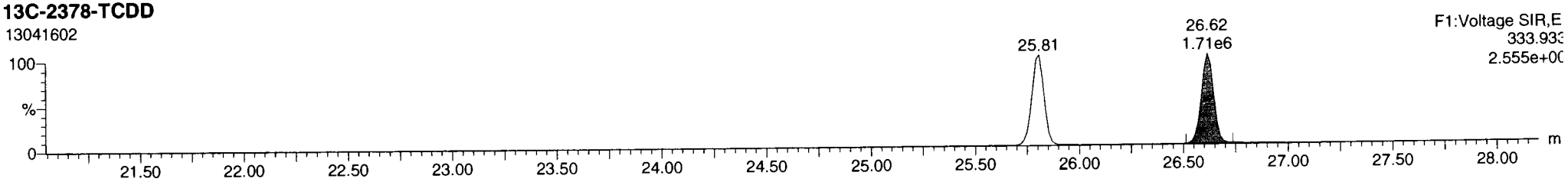
Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

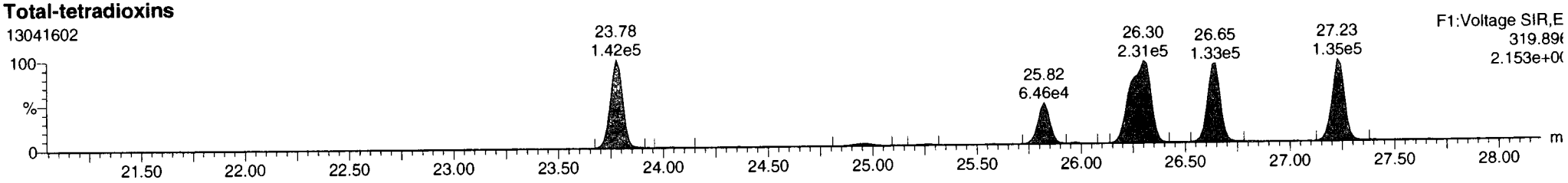
13C-2378-TCDD
13041602



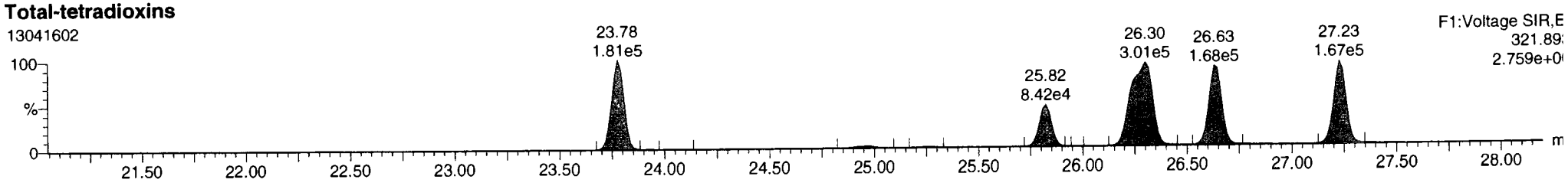
13C-2378-TCDD
13041602



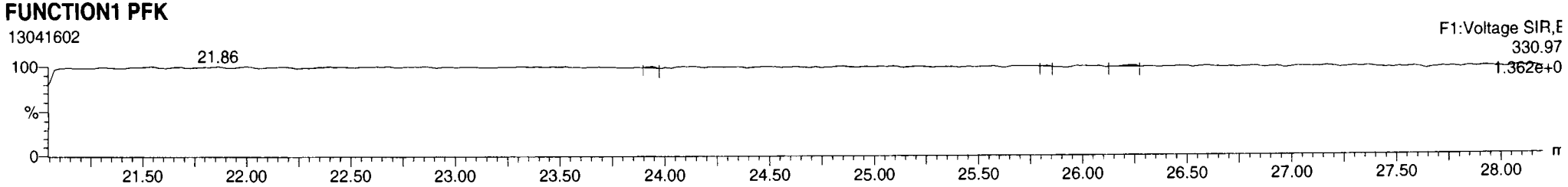
Total-tetradioxins
13041602



Total-tetradioxins
13041602



FUNCTION1 PFK
13041602



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Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

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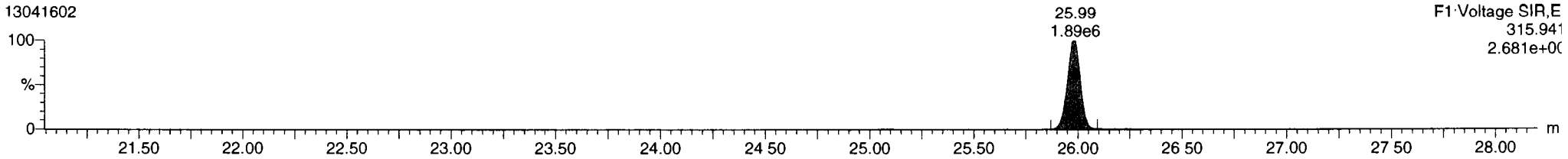
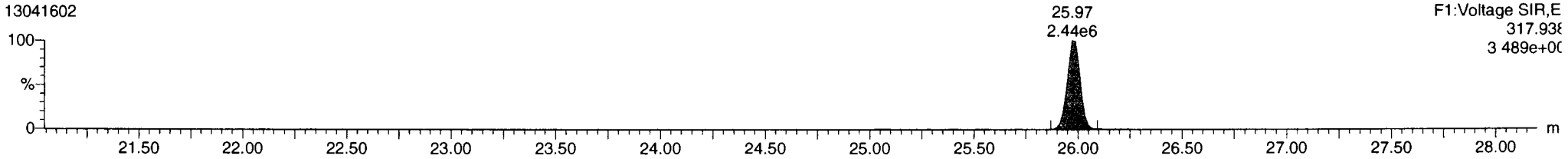
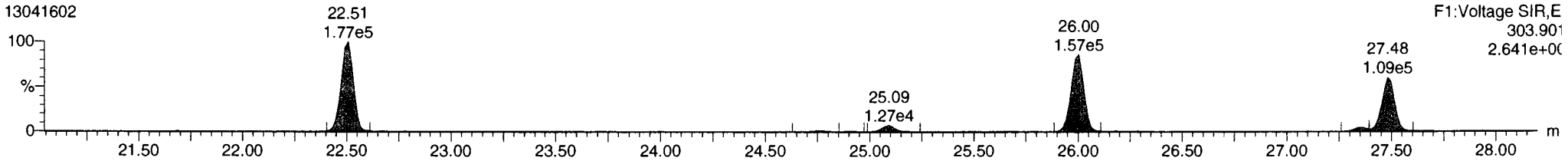
13C-2378-TCDF



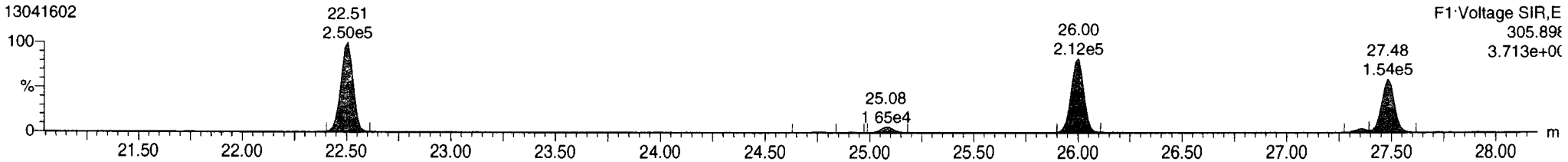
13C-2378-TCDF



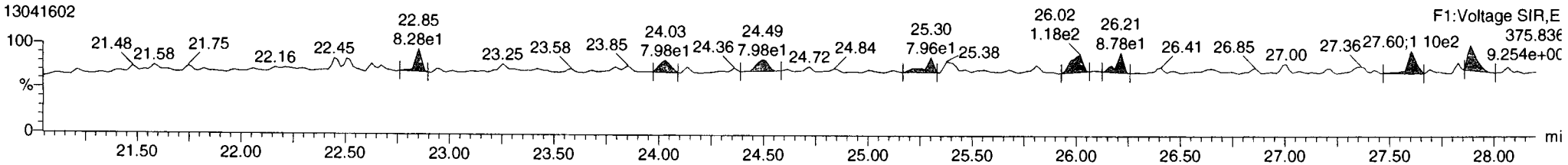
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

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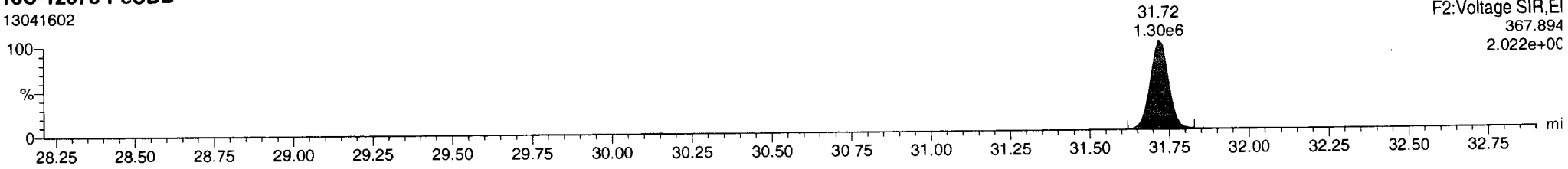
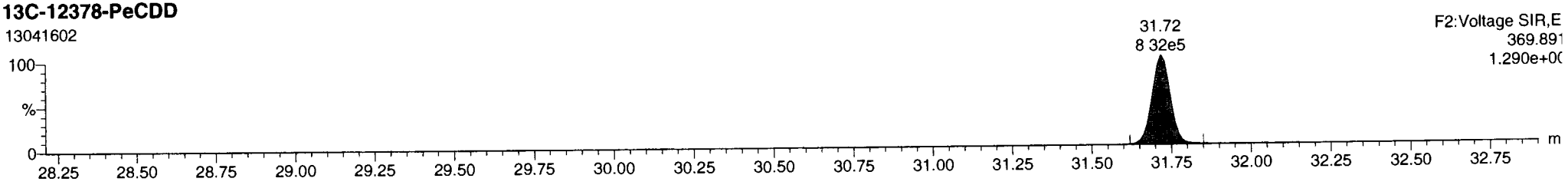
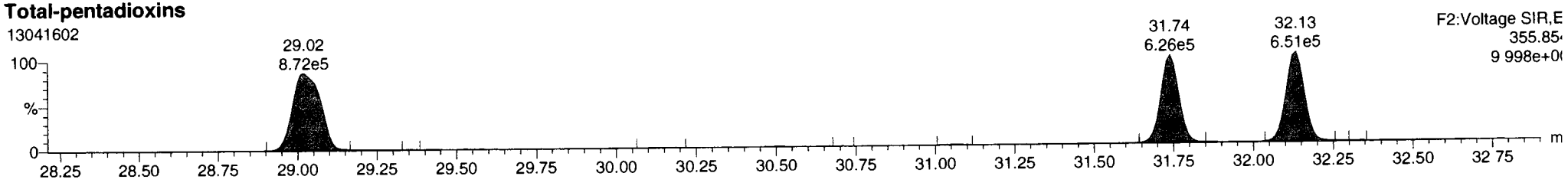
13C-12378-PeCDD
13041602



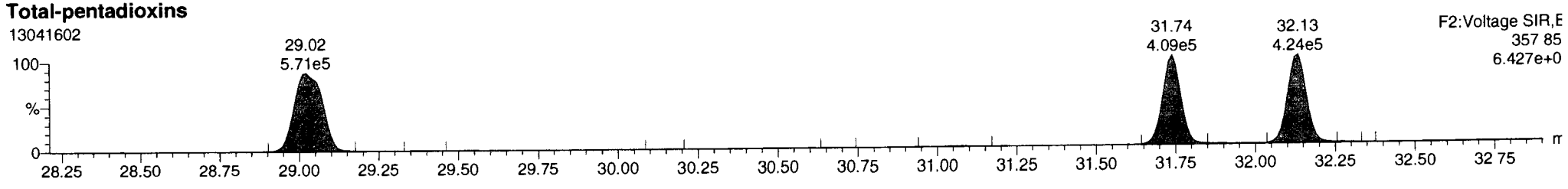
13C-12378-PeCDD
13041602



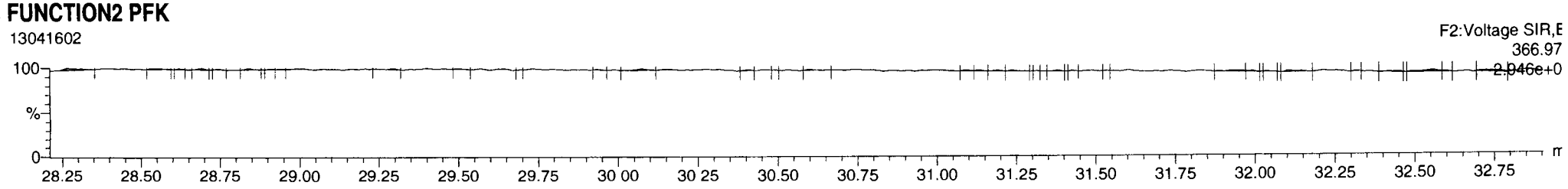
Total-pentadioxins
13041602



Total-pentadioxins
13041602



FUNCTION2 PFK
13041602



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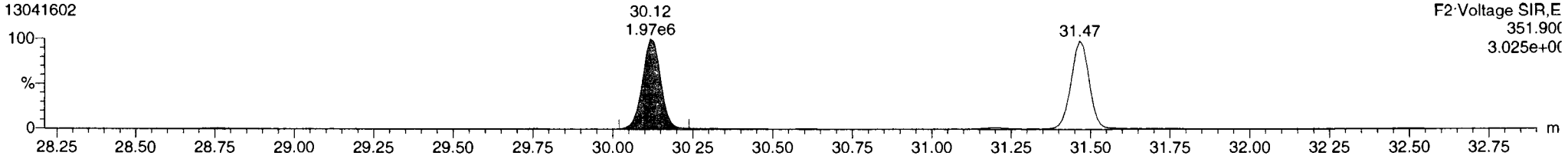
ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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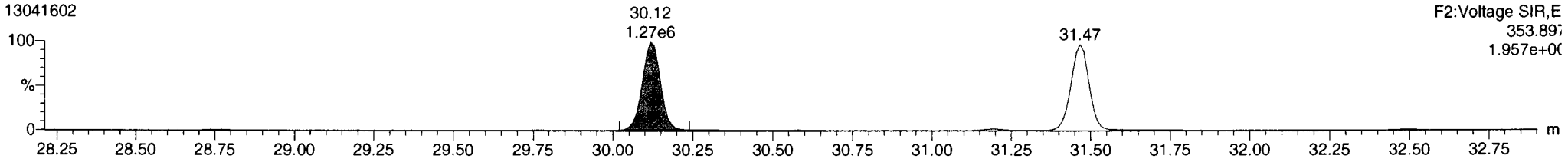
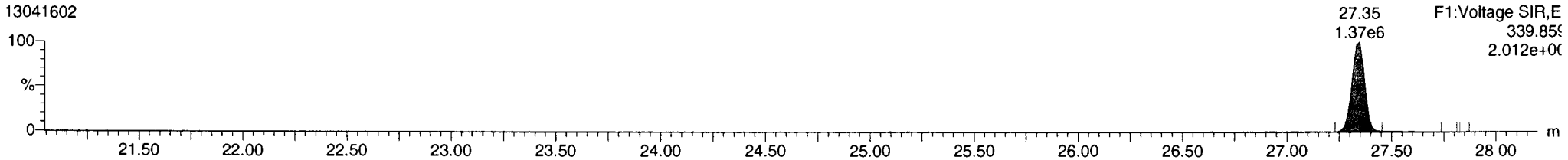
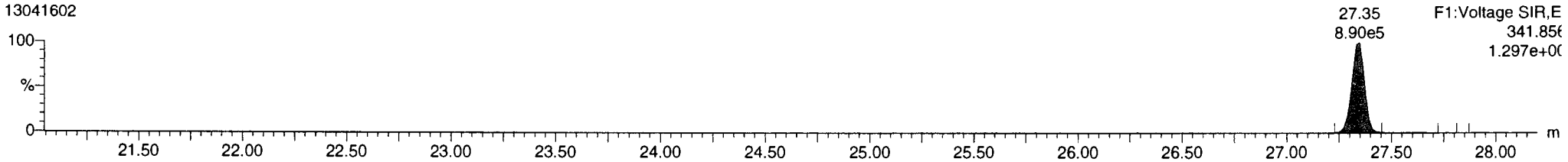


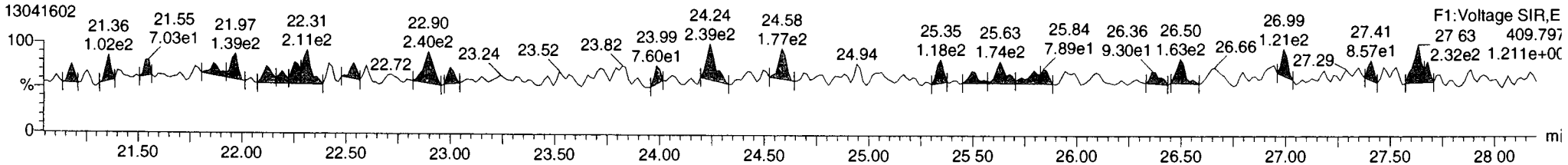
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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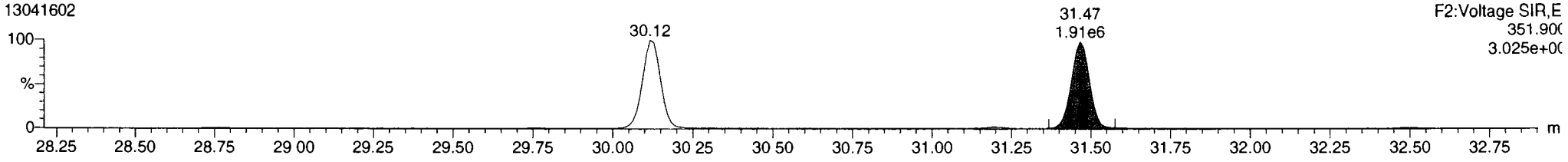
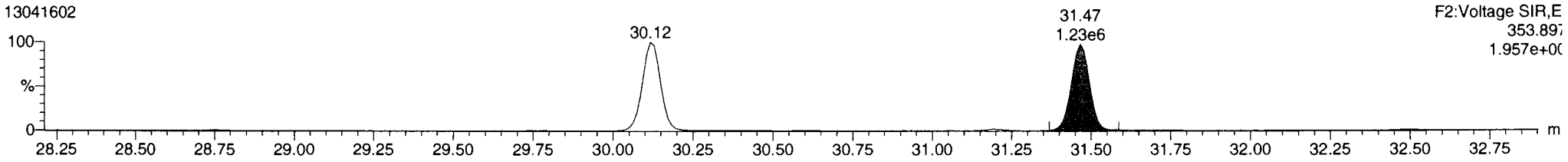
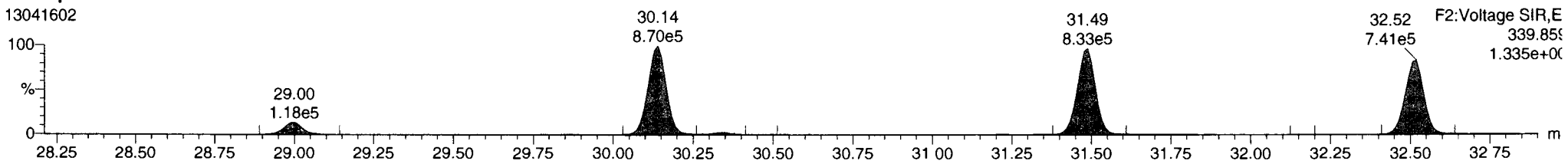
13C-23478-PeCDF



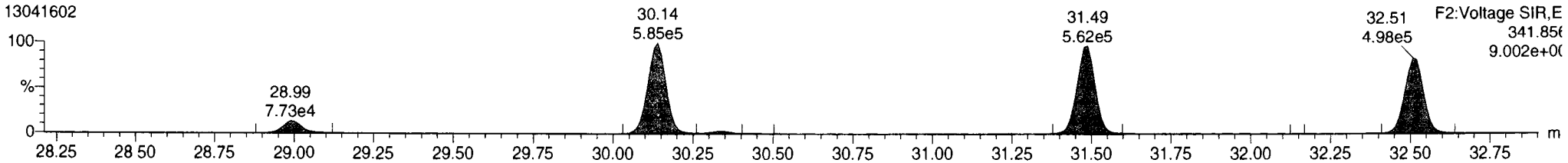
13C-23478-PeCDF



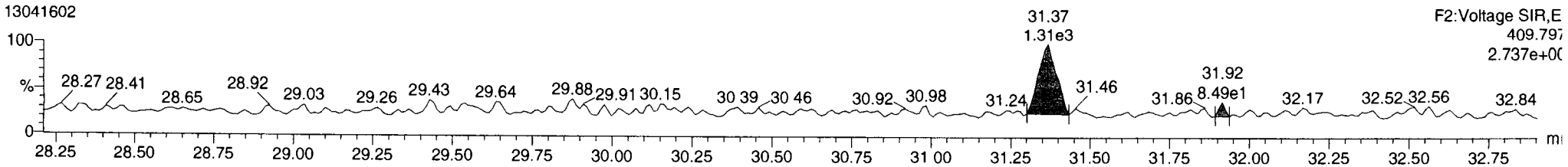
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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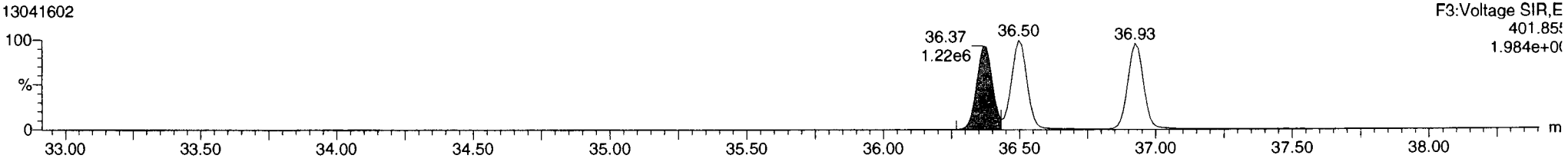
13C-123478-HxCDD



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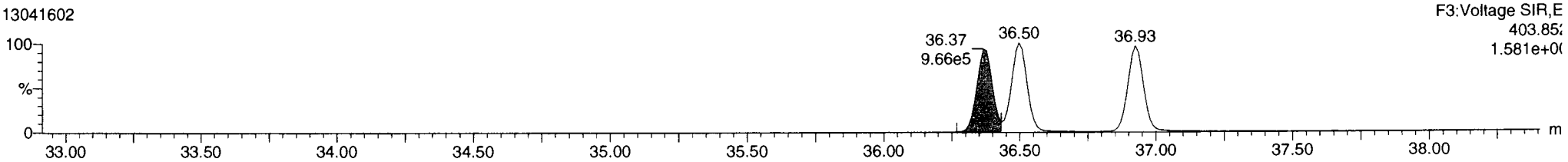
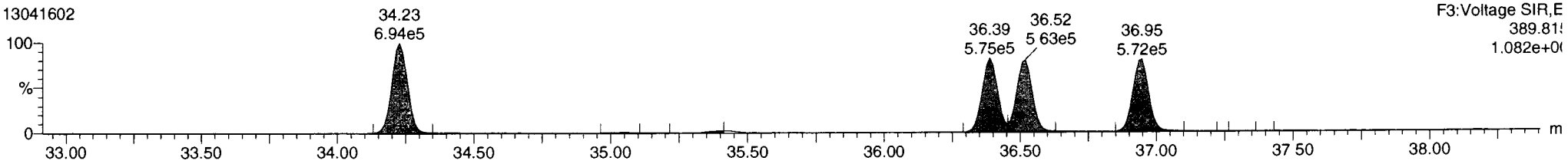
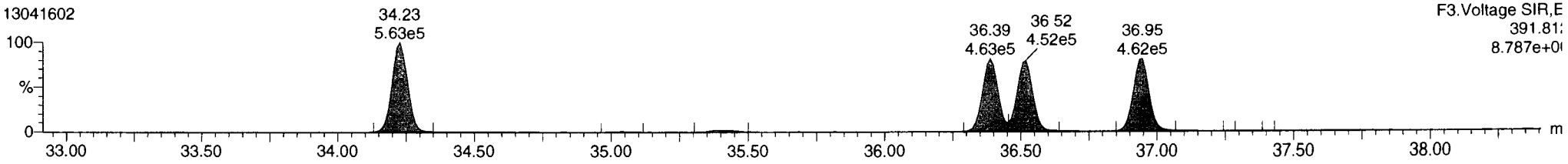


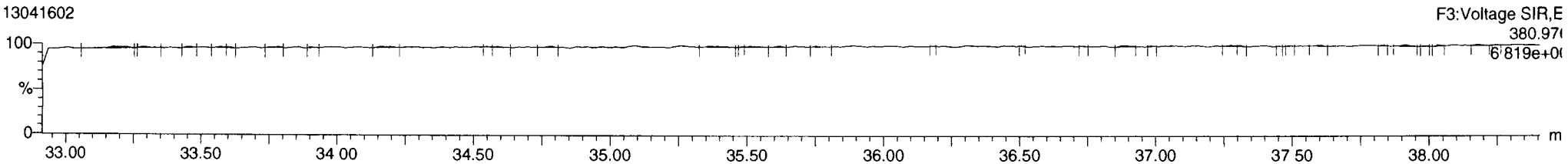
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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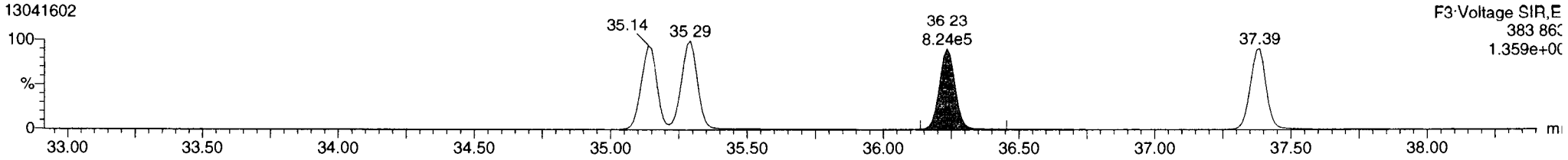
13C-234678-HxCDF



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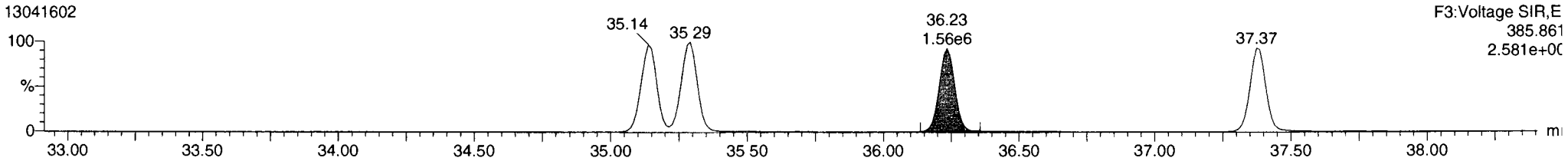
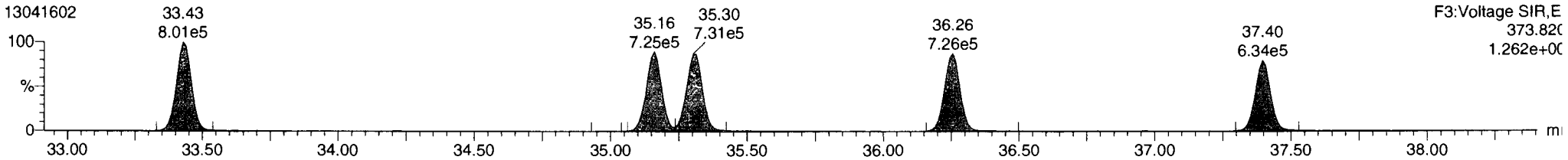
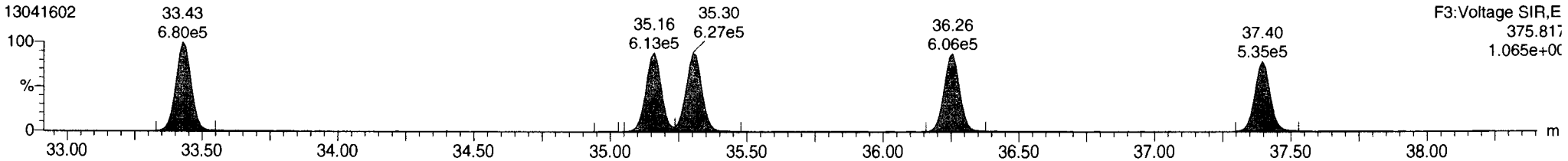


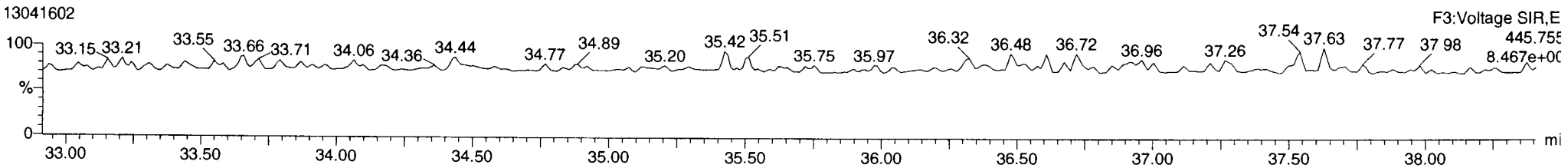
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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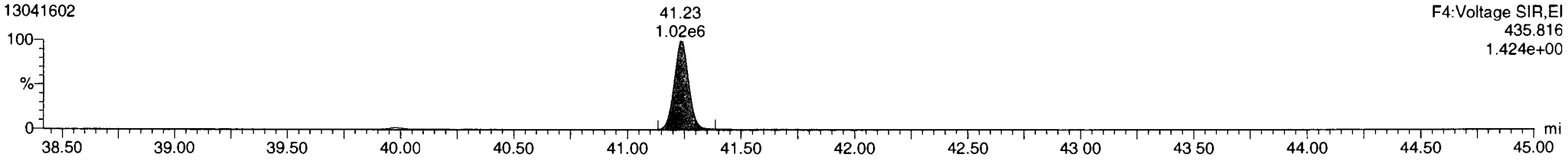
13C-1234678-HpCDD



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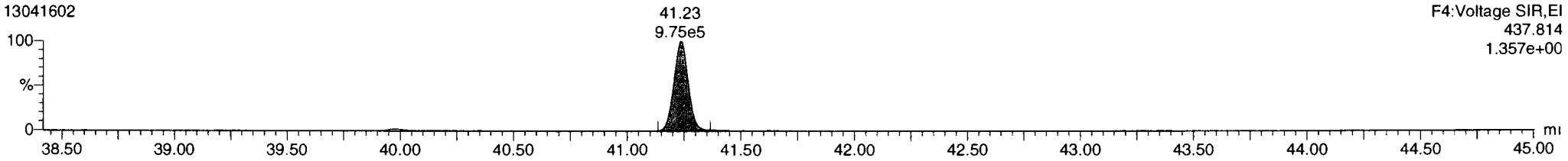
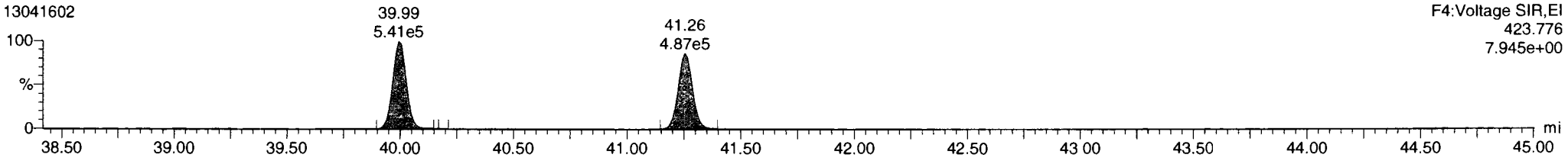
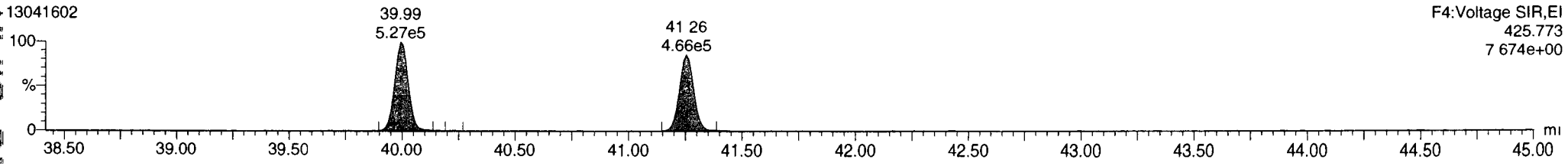


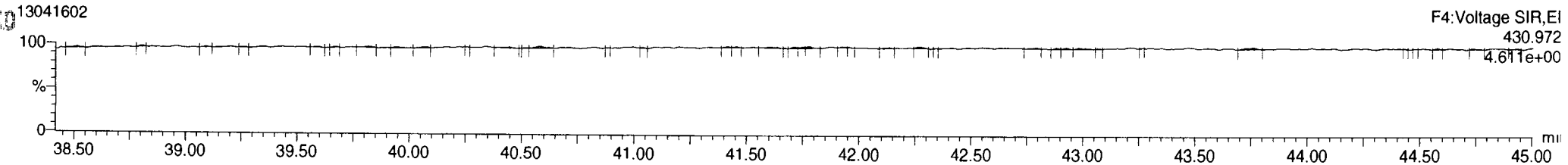
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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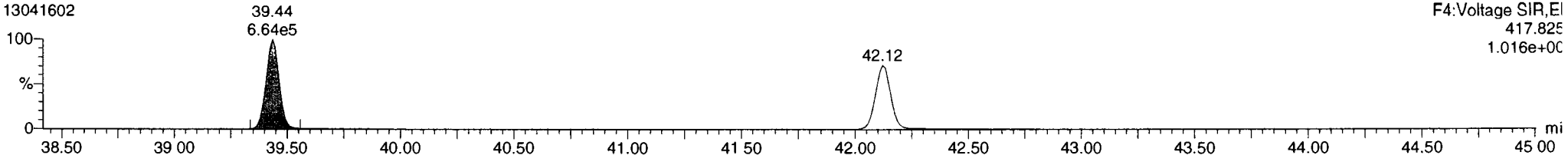
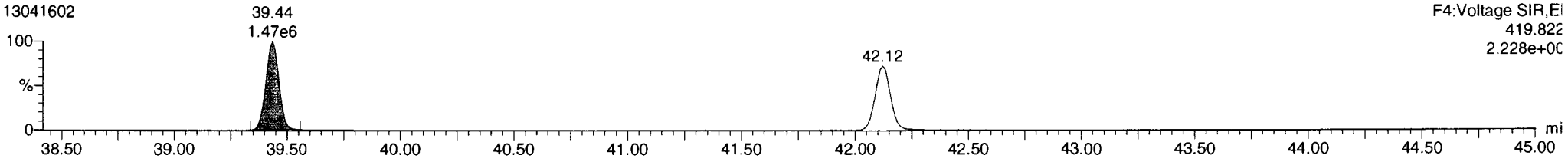
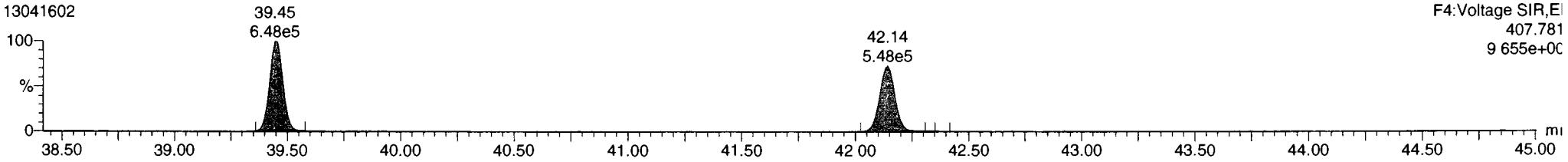
13C-1234678-HpCDF



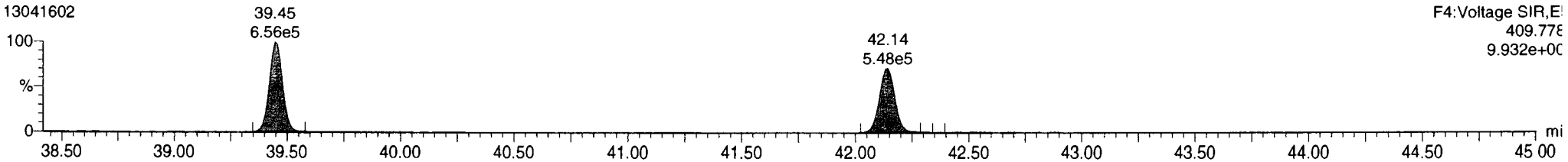
13C-1234678-HpCDF



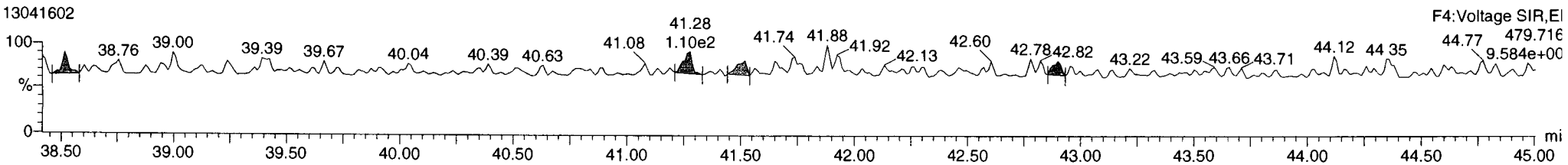
Total-heptafurans



Total-heptafurans



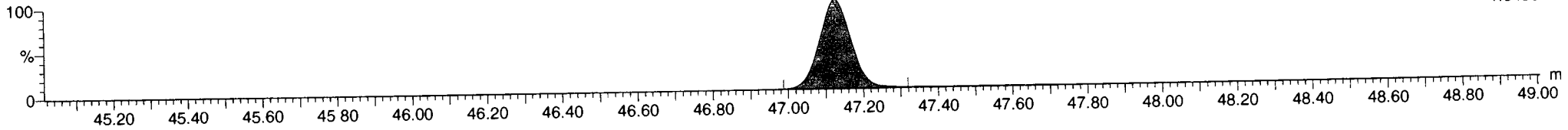
FUNCTION4 NCDPE



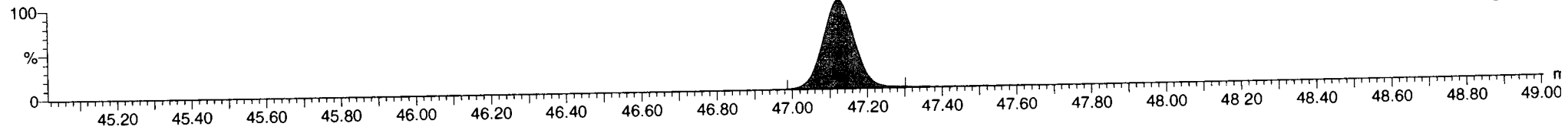
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416OPEN.qld
Last Altered: Tuesday, April 16, 2013 12:05:28 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

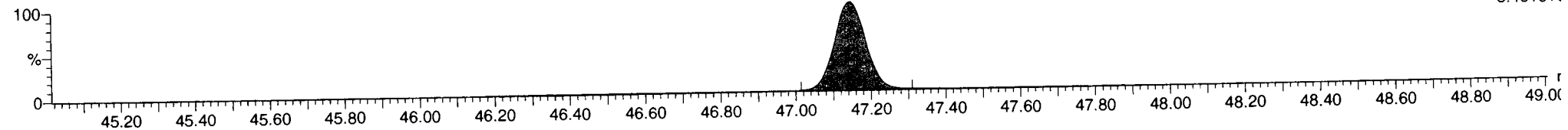
13C-OCDD
13041602
47.12
1.77e6
F5:Voltage SIR,E
469 77
1.845e+0



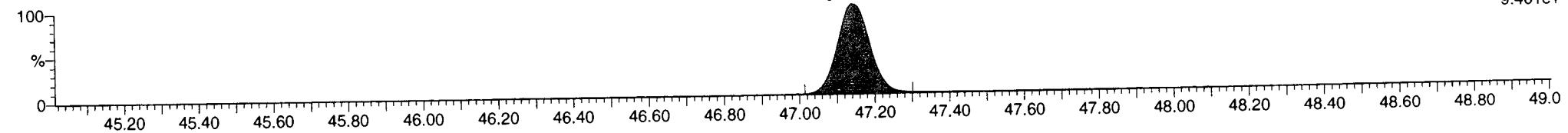
13C-OCDD
13041602
47.12
1.96e6
F5:Voltage SIR,E
471.77
2.046e+0



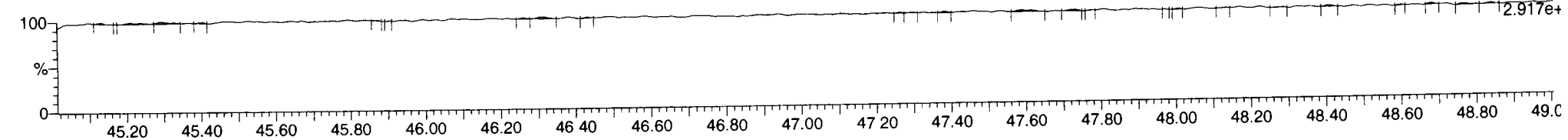
OCDD
13041602
47.15
8.10e5
F5:Voltage SIR,
457.7
8.481e+



OCDD
13041602
47 14
9.17e5
F5:Voltage SIR,
459.7
9.461e+



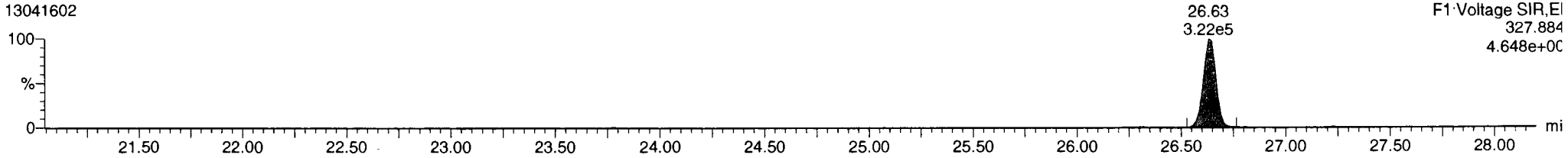
FUNCTION5 PFK
13041602
F5:Voltage SIR
480.9
2.917e+



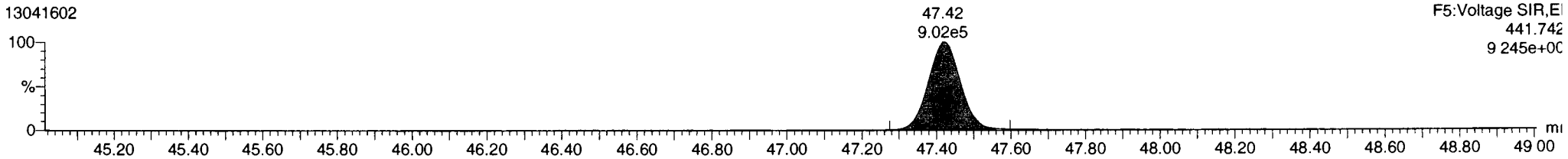
Dataset: P:\DIOXIN8290.PRO\130416OPEN.qld
Last Altered: Tuesday, April 16, 2013 12:05:28 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 14:01:53 Pacific Daylight Time

ID: CS3, Name: 13041602, Date: 16-Apr-2013, Time: 11:11:46, Conditions: AUTOSPEC01, User: pk

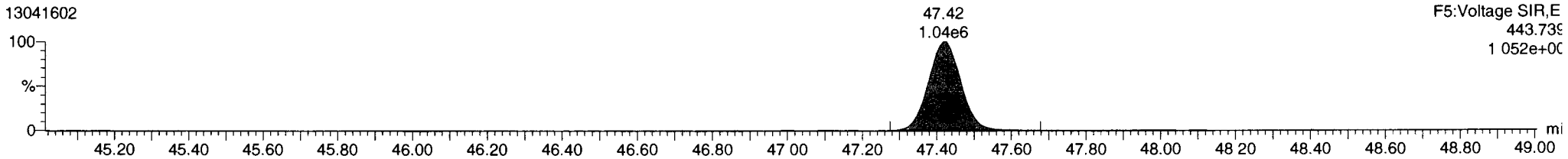
37CL-2378-TCDD



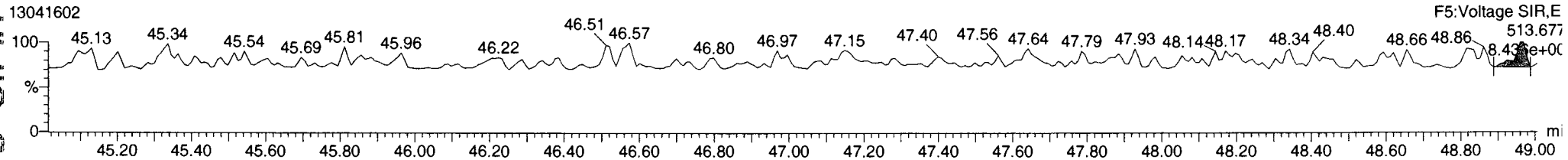
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WK49MBS
Lab.File ID: 13041604
Date Analysed: 16-Apr-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	26.63	0.0600	0.00900	
12378-PeCDD	356/358	0.00			0.019
123478-HxCDD	390/392	0.00			0.024
123678-HxCDD	390/392	36.52	0.0275	0.0200	
123789-HxCDD	390/392	0.00			0.026
1234678-HpCDD	424/426	41.25	0.822		
OCDD	458/460	47.15	6.47		
2378-TCDF	304/306	26.00	0.0103	0.00900	
12378-PeCDF	340/342	30.14	0.0134	0.0120	
23478-PeCDF	340/342	0.00			0.017
123478-HxCDF	374/376	0.00			0.015
234678-HxCDF	374/376	0.00			0.015
123678-HxCDF	374/376	0.00			0.013
123789-HxCDF	374/376	0.00			0.018
1234678-HpCDF	408/410	39.45	0.575		
1234789-HpCDF	408/410	0.00			0.034
OCDF	442/444	47.43	2.30		

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

MK 4/17/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

	2378-TCDF	26.003	1.001	1.27e2	2.02e2	0.763	0.628	0.770	3.6	1087	1526	3.88e3	4.63e3	YES	0.009	0.010
	12378-PeCDF	30.140	1.001	2.09e2	1.82e2	0.836	1.147	1.550	4.6	968	1613	4.43e3	5.69e3	YES	0.012	0.013
	23478-PeCDF					0.851		1.550		968	1613					
	123478-HxCDF					1.017		1.240		1017	1092					
	234678-HxCDF					1.027		1.240		1017	1092					
	123678-HxCDF					1.013		1.240		1017	1092					
	123789-HxCDF					0.929		1.240		1017	1092					
	1234678-HpCDF	39.446	1.000	5.58e3	5.57e3	1 151	1.002	1.050	61.0	1369	1495	8.35e4	7.55e4	NO	0.575	0.575
	1234789-HpCDF					1.149		1.050		1369	1495					
	OCDF	47.426	1.006	1.41e4	1.63e4	0.963	0.863	0.890	149.8	1023	1257	1.53e5	1.71e5	NO	2.304	2.304
	2378-TCDD	26.631	1.001	1.15e2	1.56e3	0.980	0.074	0.770	2.6	940	1251	2.41e3	2.43e4	YES	0.009	0.060
	12378-PeCDD					0.948		1.550		1498	877					
	123478-HxCDD					0.941		1.240		1553	1422					
	123678-HxCDD	36.520	1.001	2.15e2	3.17e2	0.884	0.678	1.240	3.7	1553	1422	5.76e3	7.60e3	YES	0.020	0.028
	123789-HxCDD					0.870		1.240		1553	1422					
	1234678-HpCDD	41.255	1.001	6.71e3	6.90e3	0.948	0.972	1.050	47.1	1971	1420	9.29e4	9.50e4	NO	0.822	0.822
	OCDD	47.148	1.001	4.09e4	4.50e4	0.969	0.910	0.890	409.8	996	970	4.08e5	4.76e5	NO	6.469	6.469
	13C-2378-TCDF	25.973	1.007	1.83e6	2.37e6	1.318	0.772	0.770	8074.4	3362	2228	2.71e7	3.53e7	NO		112.050
	13C-12378-PeCDF	30.118	1.168	2.13e6	1.38e6	1.026	1.544	1.550	10009.9	3226	5029	3.23e7	2.09e7	NO		120.363
	13C-23478-PeCDF	31.466	1.220	1.84e6	1.19e6	0.966	1.545	1.550	8551.7	3226	5029	2.76e7	1.80e7	NO		110.628
	13C-123478-HxCDF	35.138	0.952	7.62e5	1.48e6	1.123	0.515	0.510	3067.0	3781	4017	1.16e7	2.26e7	NO		105.083
	13C-123678-HxCDF	35.281	0.955	8.75e5	1.69e6	1.216	0.518	0.510	3506.6	3781	4017	1.33e7	2.56e7	NO		111.166
	13C-234678-HxCDF	36.234	0.981	7.35e5	1.42e6	1.106	0.519	0.510	2999.3	3781	4017	1.13e7	2.16e7	NO		102.467
	13C-123789-HxCDF	37.375	1.012	6.96e5	1.32e6	0 995	0.528	0.510	2808.6	3781	4017	1.06e7	2.05e7	NO		106.685
	13C-1234678-HpCDF	39.435	1.068	5.22e5	1.16e6	0.896	0.449	0.440	3801.7	2086	2732	7.93e6	1.75e7	NO		99.115
	13C-1234789-HpCDF	42.121	1.141	4.35e5	9.68e5	0.693	0.449	0.440	2754.5	2086	2732	5.75e6	1.27e7	NO		106.615
	13C-1234-TCDD	25.794	0.000	1.23e6	1.61e6	1.000	0.767	0.770	3814.7	4828	2269	1.84e7	2.41e7	NO		100.000
	13C-2378-TCDD	26.616	1.032	1.23e6	1.61e6	0.961	0.768	0.770	3765.5	4828	2269	1.82e7	2.34e7	NO		104.149
	13C-12378-PeCDD	31.718	1.230	1.34e6	8.55e5	0.703	1.570	1.550	7819.9	2643	2413	2.07e7	1.30e7	NO		110.063
	13C-123478-HxCDD	36.366	0.985	1.18e6	9.33e5	1.016	1.264	1.240	6475.6	2825	1900	1.83e7	1.44e7	NO		109.594
	13C-123678-HxCDD	36.498	0.988	1.21e6	9.77e5	1 098	1 240	1.240	6652.1	2825	1900	1.88e7	1.51e7	NO		104.968
	13C-1234678-HpCDD	41.233	1 117	8.90e5	8.56e5	0.828	1.040	1.050	4108.1	2971	2455	1.22e7	1.17e7	NO		111.090
	13C-OCDD	47.121	1.276	1.29e6	1.45e6	0.770	0.892	0.890	4981.8	2653	1621	1.32e7	1.50e7	NO		187.642

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

[redacted]															
[redacted]	13C-123789-HxCDD	36.925	0.000	1.05e6	8.51e5	1.000	1.230	1.240	5667.1	2825	1900	1.60e7	1.28e7	NO	100.000
[redacted]	Total-tetrafurans			3.88e2		0 763				1087		7.38e3			0.023
[redacted]	Total-penta1			0.00e0						896		0.00e0			
[redacted]	Total-pentafurans			2.09e2		0.844				968		4.43e3			0.013
[redacted]	Total-hexafurans			4.71e3		0.997				1017		7.66e4			0.372
[redacted]	Total-heptafurans			1 93e4		1.150				1369		2.77e5			2.156
[redacted]	Total-Furans			3.87e4		0.970				1087		5.19e5			4.869
[redacted]	Total-tetradioxins			2.40e2		0 980				940		4.97e3			0.075
[redacted]	Total-pentadioxins			9.44e2		0.948				1498		1.89e4			0.064
[redacted]	Total-hexadioxins			2.04e3		0.898				1553		4.38e4			0.186
[redacted]	Total-heptadioxins			2.03e4		0.948				1971		2.99e5			2.420
[redacted]	Total-Dioxins			6.45e4		0.934				940		7.75e5			9.214
[redacted]	Total-TEQ			1.03e5						940		1.29e6			14.083
[redacted]	37CL-2378-TCDD	26.631	1.032	1.21e6		0.999			12044.5	1503		1 81e7			42.624
[redacted]	FUNCTION1 PFK			1.21e7						1267917		1.27e8			
[redacted]	FUNCTION2 PFK			5.86e5						311663		1 49e7			0.000
[redacted]	FUNCTION3 PFK			2.02e6						447660		4.10e7			0.000
[redacted]	FUNCTION4 PFK			4.92e5						317380		1.53e7			
[redacted]	FUNCTION5 PFK			2.25e5						308411		9.15e6			
[redacted]	FUNCTION1 HXCDPE			8.01e1						302		1.58e3			0.000
[redacted]	FUNCTION1 HPCDPE			1.83e3						1233		3.67e4			0.000
[redacted]	FUNCTION2 HPCDPE			4.62e2						1214		1.59e4			0.000
[redacted]	FUNCTION3 OCDPE			0.00e0						565		0.00e0			
[redacted]	FUNCTION4 NCDPE			3.37e2						884		7 37e3			0 000
[redacted]	FUNCTION5 DCDPE			0.00e0						690		0.00e0			

[redacted]

)uantify Totals Report MassLynx 4.1 SCN 714
)ataset: P:\DIOXIN8290.PRO\130416DATA.qld
.ast Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
'rinted: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

D: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

TF

	1	2378-TCDF	303.9016	26.00	329.192	0.763	0.010	0.009	0.63	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.78	408.569	0.763	0.013		1.77	0.77	YES	3.2

PP

PF

	2	12378-PeCDF	339.8597	30.14	391.377	0.836	0.013	0.012	1.15	1.55	YES	4.6

HF

	38	Total-hexafurans	373.8208	34.50	5348.841	0.997	0.239		1.26	1.24	NO	51.3
	38	Total-hexafurans	373.8208	33.64	2167.052	0.997	0.097		1.53	1.24	YES	15.0
	38	Total-hexafurans	373.8208	33.44	801.103	0.997	0.036		1.10	1.24	NO	9.0

HPF

	39	Total-heptafurans	407.7818	40.24	28086.442	1.150	1.582		0.96	1.05	NO	141.6
	8	1234678-HpCDF	407.7818	39.45	11143.273	1.151	0.575	0.575	1.00	1.05	NO	61.0

Furans,TF,PP,PF,HF,HPF,OF

	1	2378-TCDF	303.9016	26.00	329.192	0.763	0.010	0.009	0.63	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.78	408.569	0.763	0.013		1.77	0.77	YES	3.2
	2	12378-PeCDF	339.8597	30.14	391.377	0.836	0.013	0.012	1.15	1.55	YES	4.6
	38	Total-hexafurans	373.8208	34.50	5348.841	0.997	0.239		1.26	1.24	NO	51.3
	38	Total-hexafurans	373.8208	33.64	2167.052	0.997	0.097		1.53	1.24	YES	15.0
	38	Total-hexafurans	373.8208	33.44	801.103	0.997	0.036		1.10	1.24	NO	9.0
	39	Total-heptafurans	407.7818	40.24	28086.442	1.150	1.582		0.96	1.05	NO	141.6
	8	1234678-HpCDF	407.7818	39.45	11143.273	1.151	0.575	0.575	1.00	1.05	NO	61.0
	10	OCDF	441.7428	47.43	30413.109	0.963	2.304	2.304	0.86	0.89	NO	149.8

TD

	41	Total-tetradioxins	319.8965	24.78	411.860	0.980	0.015		0.44	0.77	YES	2.7
	11	2378-TCDD	319.8965	26.63	1670.798	0.980	0.060	0.009	0.07	0.77	YES	2.6

uantity Totals Report MassLynx 4.1 SCN 714
)ataset: P:\DIOXIN8290.PRO\130416DATA.qld
ast Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
'rinted: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

): WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

'D

	42	Total-pentadioxins	355.8546	32.13	407.192	0.948	0.020		1.17	1.55	YES	3.3
	42	Total-pentadioxins	355.8546	30.67	352.659	0.948	0.017		2.43	1.55	YES	2.6
	42	Total-pentadioxins	355.8546	30.13	571.484	0.948	0.027		4.92	1.55	YES	6.8

ID

	43	Total-hexadioxins	389.8157	34.22	1485.405	0.898	0.077		1.22	1.24	NO	8.3
	14	123678-HxCDD	389.8157	36.52	532.261	0.884	0.028	0.020	0.68	1.24	YES	3.7
	43	Total-hexadioxins	389.8157	35.43	801.779	0.898	0.042		1.98	1.24	YES	10.2
	43	Total-hexadioxins	389.8157	35.38	767.632	0 898	0 040		1.65	1.24	YES	6.0

IPD

	16	1234678-HpCDD	423.7766	41.25	13607.798	0.948	0.822	0.822	0.97	1.05	NO	47.1
	44	Total-heptadioxins	423.7766	39.99	26456.885	0.948	1.598		1.06	1.05	NO	104.8

)ioxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	24.78	411.860	0.980	0.015		0.44	0.77	YES	2.7
	11	2378-TCDD	319.8965	26.63	1670.798	0.980	0.060	0.009	0 07	0.77	YES	2.6
	42	Total-pentadioxins	355.8546	32.13	407.192	0.948	0.020		1.17	1.55	YES	3.3
	42	Total-pentadioxins	355.8546	30.67	352.659	0.948	0.017		2.43	1.55	YES	2.6
	42	Total-pentadioxins	355.8546	30.13	571.484	0.948	0.027		4.92	1.55	YES	6.8
	43	Total-hexadioxins	389.8157	34.22	1485.405	0.898	0.077		1.22	1.24	NO	8.3
	14	123678-HxCDD	389.8157	36.52	532.261	0.884	0.028	0.020	0.68	1.24	YES	3.7
	43	Total-hexadioxins	389.8157	35.43	801.779	0.898	0.042		1.98	1.24	YES	10.2
	43	Total-hexadioxins	389 8157	35.38	767.632	0.898	0.040		1.65	1.24	YES	6.0
	16	1234678-HpCDD	423.7766	41.25	13607.798	0.948	0.822	0.822	0.97	1.05	NO	47.1
	44	Total-heptadioxins	423.7766	39.99	26456.885	0.948	1.598		1.06	1.05	NO	104.8
	17	OCDD	457.7377	47.15	85941.488	0.969	6.469	6.469	0.91	0.89	NO	409.8

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

D: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

1	2378-TCDF	303.9016	26.00	329.192	0 763	0.010	0.009	0.63	0.77	YES	3.6
35	Total-tetrafurans	303.9016	25.78	408.569	0 763	0.013		1.77	0.77	YES	3 2
2	12378-PeCDF	339.8597	30.14	391.377	0 836	0.013	0.012	1.15	1.55	YES	4.6
38	Total-hexafurans	373.8208	34.50	5348.841	0.997	0.239		1.26	1.24	NO	51.3
38	Total-hexafurans	373.8208	33.64	2167.052	0.997	0.097		1.53	1.24	YES	15.0
38	Total-hexafurans	373.8208	33.44	801.103	0.997	0.036		1.10	1.24	NO	9.0
39	Total-heptafurans	407.7818	40.24	28086.442	1.150	1.582		0.96	1.05	NO	141.6
8	1234678-HpCDF	407.7818	39.45	11143 273	1.151	0.575	0.575	1.00	1.05	NO	61.0
10	OCDF	441.7428	47.43	30413.109	0.963	2.304	2.304	0.86	0 89	NO	149.8
41	Total-tetradioxins	319.8965	24.78	411.860	0.980	0.015		0.44	0.77	YES	2.7
11	2378-TCDD	319.8965	26.63	1670.798	0.980	0.060	0.009	0.07	0.77	YES	2.6
42	Total-pentadioxins	355.8546	32.13	407.192	0.948	0.020		1.17	1.55	YES	3.3
42	Total-pentadioxins	355.8546	30.67	352.659	0.948	0.017		2.43	1.55	YES	2.6
42	Total-pentadioxins	355.8546	30.13	571.484	0.948	0.027		4.92	1.55	YES	6.8
43	Total-hexadioxins	389.8157	34.22	1485.405	0.898	0.077		1.22	1.24	NO	8.3
14	123678-HxCDD	389.8157	36.52	532.261	0.884	0.028	0.020	0.68	1.24	YES	3.7
43	Total-hexadioxins	389.8157	35 43	801.779	0.898	0.042		1.98	1.24	YES	10.2
43	Total-hexadioxins	389.8157	35.38	767.632	0.898	0.040		1.65	1.24	YES	6.0
16	1234678-HpCDD	423.7766	41.25	13607.798	0.948	0.822	0.822	0.97	1.05	NO	47.1
44	Total-heptadioxins	423.7766	39.99	26456.885	0.948	1.598		1.06	1.05	NO	104.8
17	OCDD	457.7377	47.15	85941.488	0.969	6.469	6.469	0.91	0.89	NO	409.8

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

D: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

PFK1

	48	FUNCTION1	PFK	330.9792	22.09	0.000					3.5
	48	FUNCTION1	PFK	330.9792	21.98	0.000					4.4
	48	FUNCTION1	PFK	330.9792	21.79	0.000					7.3
	48	FUNCTION1	PFK	330.9792	21.64	0.000					10.1
	48	FUNCTION1	PFK	330.9792	21.54	0.000					11.8
	48	FUNCTION1	PFK	330.9792	21.36	0.000					10.2
	48	FUNCTION1	PFK	330.9792	21.10	0.000					1 3
	48	FUNCTION1	PFK	330.9792	27.50	0.000					4.5
	48	FUNCTION1	PFK	330.9792	27.14	0.000					2.1
	48	FUNCTION1	PFK	330.9792	27.02	0.000					3.8
	48	FUNCTION1	PFK	330.9792	26.57	0.000					0.6
	48	FUNCTION1	PFK	330.9792	26.50	0.000					0.6
	48	FUNCTION1	PFK	330.9792	25.96	0.000					4 7
	48	FUNCTION1	PFK	330.9792	25.91	0.000					4.0
	48	FUNCTION1	PFK	330.9792	25.70	0.000					3.5
	48	FUNCTION1	PFK	330.9792	25.56	0.000					0.3
	48	FUNCTION1	PFK	330.9792	25.47	0.000					4 1
	48	FUNCTION1	PFK	330.9792	25.12	0 000					2.7
	48	FUNCTION1	PFK	330.9792	24.40	0.000					1 6
	48	FUNCTION1	PFK	330.9792	24.24	0.000					5.3
	48	FUNCTION1	PFK	330.9792	23.40	0.000					2.6
	48	FUNCTION1	PFK	330.9792	23.08	0.000					1.6
	48	FUNCTION1	PFK	330.9792	22.96	0.000					0.8
	48	FUNCTION1	PFK	330.9792	27.84	0.000					4.7
	48	FUNCTION1	PFK	330.9792	27.68	0.000					4.1

ataset: P:\DIOXIN8290.PRO\130416DATA.qld
ast Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
rinted: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

): WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

FK2

	49	FUNCTION2 PFK	366.9792	29.27	0.000	0.000				0.5
	49	FUNCTION2 PFK	366.9792	29.21	0 000	0.000				0.5
	49	FUNCTION2 PFK	366.9792	29 12	0.000	0.000				1.1
	49	FUNCTION2 PFK	366.9792	28.97	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	28.92	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	28.87	0.000	0.000				1.7
	49	FUNCTION2 PFK	366.9792	28.75	0.000	0.000				1.1
	49	FUNCTION2 PFK	366 9792	28.72	0.000	0.000				1.1
	49	FUNCTION2 PFK	366.9792	28.65	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	28.59	0.000	0.000				0.8
	49	FUNCTION2 PFK	366.9792	28.43	0.000	0.000				2.5
	49	FUNCTION2 PFK	366 9792	28.36	0.000	0.000				2.6
	49	FUNCTION2 PFK	366.9792	28.31	0.000	0.000				0.6
	49	FUNCTION2 PFK	366.9792	31.09	0.000	0.000				1.1
	49	FUNCTION2 PFK	366.9792	30.98	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	30.89	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	30.82	0.000	0.000				1.8
	49	FUNCTION2 PFK	366.9792	30.70	0.000	0.000				1.3
	49	FUNCTION2 PFK	366.9792	30.66	0.000	0.000				1.4
	49	FUNCTION2 PFK	366.9792	30.58	0.000	0.000				0.9
	49	FUNCTION2 PFK	366.9792	30.51	0.000	0.000				0.7
	49	FUNCTION2 PFK	366.9792	30.42	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	30.01	0.000	0.000				1.0
	49	FUNCTION2 PFK	366.9792	29.94	0.000	0.000				2.5
	49	FUNCTION2 PFK	366.9792	29.82	0.000	0.000				1.8
	49	FUNCTION2 PFK	366.9792	29.70	0.000	0.000				0.7
	49	FUNCTION2 PFK	366.9792	29.67	0.000	0.000				0.9
	49	FUNCTION2 PFK	366.9792	29.58	0.000	0.000				1.6
	49	FUNCTION2 PFK	366.9792	29.39	0 000	0.000				1.3
	49	FUNCTION2 PFK	366.9792	32.79	0.000	0.000				1.2
	49	FUNCTION2 PFK	366.9792	32.64	0.000	0.000				1.3
	49	FUNCTION2 PFK	366.9792	32.56	0.000	0.000				0.5
	49	FUNCTION2 PFK	366.9792	32.46	0.000	0.000				0.4
	49	FUNCTION2 PFK	366.9792	32.34	0 000	0.000				1.1
	49	FUNCTION2 PFK	366.9792	32.27	0.000	0.000				1.1
	49	FUNCTION2 PFK	366.9792	32.06	0.000	0.000				0.5
	49	FUNCTION2 PFK	366.9792	32.03	0.000	0.000				0.3
	49	FUNCTION2 PFK	366.9792	31.82	0.000	0.000				1.3
	49	FUNCTION2 PFK	366.9792	31.78	0.000	0.000				1.2
	49	FUNCTION2 PFK	366.9792	31.73	0.000	0.000				1.5
	49	FUNCTION2 PFK	366.9792	31.52	0.000	0.000				1.2
	49	FUNCTION2 PFK	366.9792	31.19	0.000	0.000				0.4

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

D: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	50 FUNCTION3 PFK	380.9760	33.07	0 000	0.000					4.6
[redacted]	50 FUNCTION3 PFK	380.9760	32.98	0.000	0.000					5.2
[redacted]	50 FUNCTION3 PFK	380.9760	34.80	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	34.69	0 000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	34.59	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	34.50	0.000	0.000					0.3
[redacted]	50 FUNCTION3 PFK	380.9760	34.34	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	34.05	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	33.94	0.000	0.000					1.8
[redacted]	50 FUNCTION3 PFK	380.9760	33.88	0.000	0.000					1.9
[redacted]	50 FUNCTION3 PFK	380.9760	33.82	0 000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.75	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	33.53	0.000	0.000					1.5
[redacted]	50 FUNCTION3 PFK	380.9760	33.43	0.000	0.000					2.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.36	0.000	0.000					2.8
[redacted]	50 FUNCTION3 PFK	380.9760	33.32	0.000	0.000					3.1
[redacted]	50 FUNCTION3 PFK	380.9760	33.27	0.000	0.000					4.4
[redacted]	50 FUNCTION3 PFK	380.9760	33.12	0.000	0.000					4.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.17	0.000	0.000					1.0
[redacted]	50 FUNCTION3 PFK	380.9760	36.10	0.000	0.000					1.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.04	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.92	0.000	0.000					1.7
[redacted]	50 FUNCTION3 PFK	380.9760	35.77	0.000	0.000					1.6
[redacted]	50 FUNCTION3 PFK	380.9760	35.72	0.000	0.000					0.8
[redacted]	50 FUNCTION3 PFK	380.9760	35.69	0.000	0.000					1 3
[redacted]	50 FUNCTION3 PFK	380.9760	35.62	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.52	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	35.36	0.000	0.000					2.4
[redacted]	50 FUNCTION3 PFK	380.9760	35.25	0.000	0.000					2 6
[redacted]	50 FUNCTION3 PFK	380.9760	35.14	0.000	0.000					1.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.08	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	35.02	0.000	0.000					0.7
[redacted]	50 FUNCTION3 PFK	380.9760	34.91	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.88	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	37.53	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.44	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	37.32	0.000	0.000					2.4
[redacted]	50 FUNCTION3 PFK	380.9760	37.24	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	37.20	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	37.12	0.000	0.000					2.0
[redacted]	50 FUNCTION3 PFK	380.9760	37.02	0.000	0.000					0.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.97	0.000	0.000					0.5
[redacted]	50 FUNCTION3 PFK	380.9760	36.89	0.000	0.000					0.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.82	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	36.64	0.000	0.000					1.2
[redacted]	50 FUNCTION3 PFK	380.9760	36.50	0.000	0.000					1.4
[redacted]	50 FUNCTION3 PFK	380.9760	36.37	0.000	0.000					1.1
[redacted]	50 FUNCTION3 PFK	380.9760	36.32	0.000	0.000					1.3
[redacted]	50 FUNCTION3 PFK	380.9760	36.27	0.000	0.000					1.5

ataset: P:\DIOXIN8290.PRO\130416DATA.qld
ast Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
rinted: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

): WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

FK3

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
[redacted]	50	FUNCTION3 PFK	380.9760	36.20	0.000		0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.28	0.000		0.000					1.3
[redacted]	50	FUNCTION3 PFK	380.9760	38.24	0.000		0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	38.17	0.000		0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	38.05	0.000		0 000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	37.96	0.000		0.000					0.9
[redacted]	50	FUNCTION3 PFK	380.9760	37.92	0.000		0.000					1.3
[redacted]	50	FUNCTION3 PFK	380.9760	37.89	0.000		0.000					1.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.81	0 000		0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	37 63	0.000		0.000					1.8

FK4

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
[redacted]	51	FUNCTION4 PFK	430.9728	39.45	0.000							0 8
[redacted]	51	FUNCTION4 PFK	430.9728	39.29	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430 9728	39.03	0 000							1.7
[redacted]	51	FUNCTION4 PFK	430.9728	38.79	0 000							1.1
[redacted]	51	FUNCTION4 PFK	430.9728	38.72	0.000							1.7
[redacted]	51	FUNCTION4 PFK	430.9728	38.67	0.000							1 7
[redacted]	51	FUNCTION4 PFK	430.9728	43.21	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.11	0.000							1.9
[redacted]	51	FUNCTION4 PFK	430.9728	43.03	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	42.87	0 000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	42.81	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	42.73	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	42.37	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	42.19	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	41.77	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	41.59	0.000							2.4
[redacted]	51	FUNCTION4 PFK	430.9728	41.20	0.000							1.9
[redacted]	51	FUNCTION4 PFK	430.9728	40 64	0.000							2.1
[redacted]	51	FUNCTION4 PFK	430.9728	40 61	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	39.75	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	39.70	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	39.57	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	44.94	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	44.70	0.000							2.2
[redacted]	51	FUNCTION4 PFK	430.9728	44.64	0.000							2.8
[redacted]	51	FUNCTION4 PFK	430.9728	44.33	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	44.12	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	44.01	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	43.96	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	43.89	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.68	0.000							1.9
[redacted]	51	FUNCTION4 PFK	430.9728	43.61	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	43.57	0.000							2.2
[redacted]	51	FUNCTION4 PFK	430.9728	43.34	0.000							1.3

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

D: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

PFK5

	52	FUNCTION5 PFK	480.9696	45.44	0.000						1.4
	52	FUNCTION5 PFK	480.9696	45.09	0.000						2.9
	52	FUNCTION5 PFK	480.9696	45.05	0.000						2.5
	52	FUNCTION5 PFK	480.9696	47.67	0.000						0.8
	52	FUNCTION5 PFK	480.9696	47.59	0.000						0.5
	52	FUNCTION5 PFK	480.9696	47.47	0.000						1.1
	52	FUNCTION5 PFK	480.9696	47 43	0.000						0.9
	52	FUNCTION5 PFK	480.9696	47.26	0.000						0.7
	52	FUNCTION5 PFK	480.9696	47.19	0.000						1.0
	52	FUNCTION5 PFK	480.9696	46.82	0.000						0.8
	52	FUNCTION5 PFK	480.9696	46.56	0.000						0.6
	52	FUNCTION5 PFK	480.9696	46.28	0.000						1.5
	52	FUNCTION5 PFK	480.9696	46.08	0.000						0.4
	52	FUNCTION5 PFK	480.9696	45.91	0.000						0.5
	52	FUNCTION5 PFK	480.9696	45.68	0.000						0.6
	52	FUNCTION5 PFK	480.9696	45.60	0.000						0.5
	52	FUNCTION5 PFK	480.9696	45.57	0.000						0.9
	52	FUNCTION5 PFK	480.9696	45.52	0 000						0.6
	52	FUNCTION5 PFK	480.9696	45.48	0.000						1.3
	52	FUNCTION5 PFK	480.9696	48.93	0.000						0.8
	52	FUNCTION5 PFK	480.9696	48.87	0.000						1.1
	52	FUNCTION5 PFK	480.9696	48.75	0.000						0.9
	52	FUNCTION5 PFK	480.9696	48.69	0.000						0.7
	52	FUNCTION5 PFK	480.9696	48.35	0.000						1.7
	52	FUNCTION5 PFK	480.9696	48 29	0.000						1.7
	52	FUNCTION5 PFK	480.9696	48.18	0.000						0.7
	52	FUNCTION5 PFK	480.9696	48.05	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.94	0.000						0.9
	52	FUNCTION5 PFK	480.9696	47.87	0.000						1.1

ETHERS1

	53	FUNCTION1 HXCD...	375.8364	23.05	0 000	0.000					5.2

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
	54	FUNCTION1 HPCD..	409.7974	21.95	0.000		0.000					2.9
	54	FUNCTION1 HPCD...	409.7974	21.75	0.000		0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	21.18	0.000		0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	27.57	0.000		0.000					1.6
	54	FUNCTION1 HPCD...	409.7974	27.35	0.000		0.000					2.0
	54	FUNCTION1 HPCD...	409.7974	27.08	0 000		0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	27.02	0.000		0.000					1.4
	54	FUNCTION1 HPCD...	409.7974	26.32	0.000		0.000					1.3
	54	FUNCTION1 HPCD...	409.7974	26.17	0.000		0.000					1.3
	54	FUNCTION1 HPCD...	409.7974	25.18	0.000		0 000					1.5
	54	FUNCTION1 HPCD...	409.7974	25.02	0.000		0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	24.69	0.000		0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	23 84	0.000		0.000					1.2
	54	FUNCTION1 HPCD..	409.7974	23.67	0.000		0.000					2.4
	54	FUNCTION1 HPCD...	409.7974	23.43	0.000		0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	22.15	0.000		0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	22.01	0.000		0.000					1.9

ETHERS3

	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	29.72	0.000		0.000					3.3
	55	FUNCTION2 HPCD...	409.7974	32 45	0.000		0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	32.26	0.000		0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	31.18	0.000		0.000					2.7
	55	FUNCTION2 HPCD...	409.7974	30.55	0.000		0.000					2.3

ETHERS4

	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N

ETHERS5

	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
	57	FUNCTION4 NCDPE	479.7165	44.67	0.000		0.000					3.1
	57	FUNCTION4 NCDPE	479.7165	43.60	0.000		0.000					3.3
	57	FUNCTION4 NCDPE	479.7165	43.41	0.000		0.000					2.0

ETHERS6

	#	Name	Trace	RT	Abs Resp	REF M...	pg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

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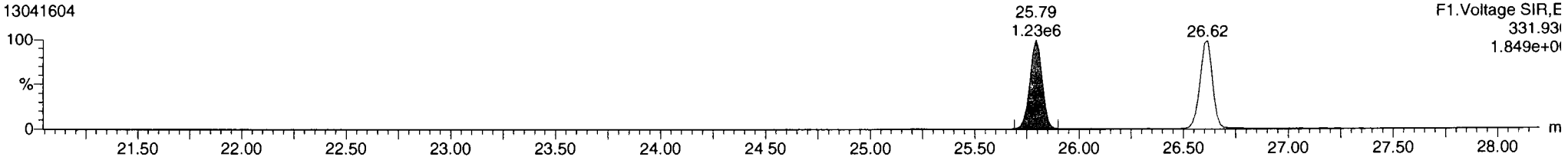
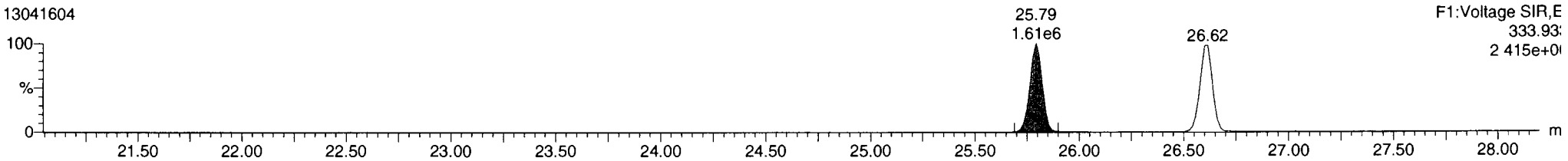
ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

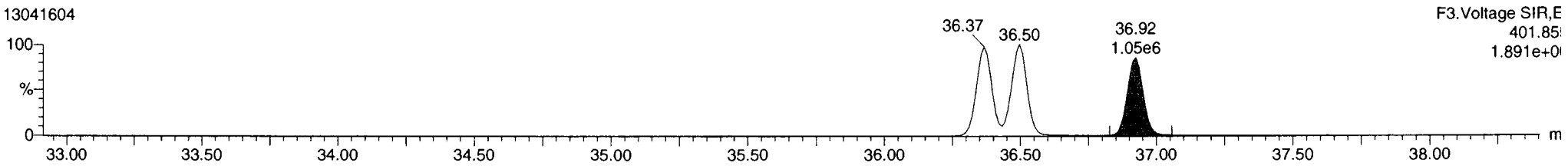
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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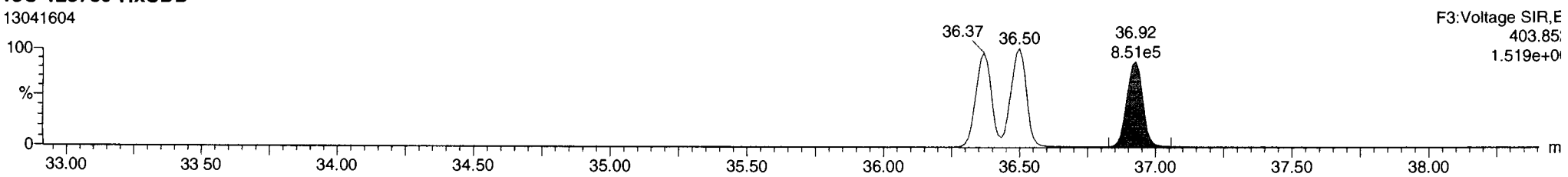

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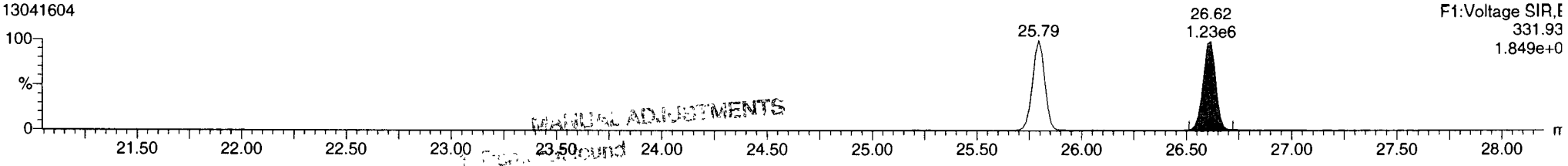
ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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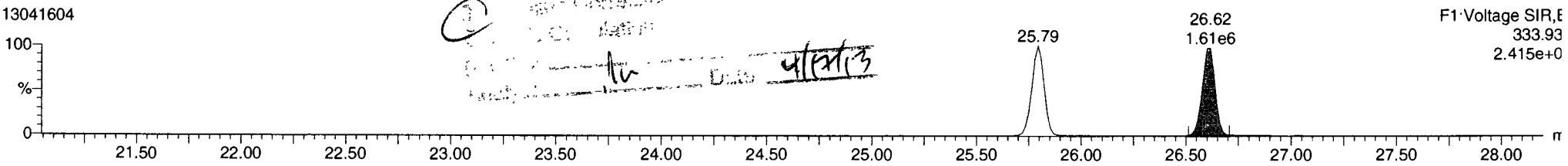
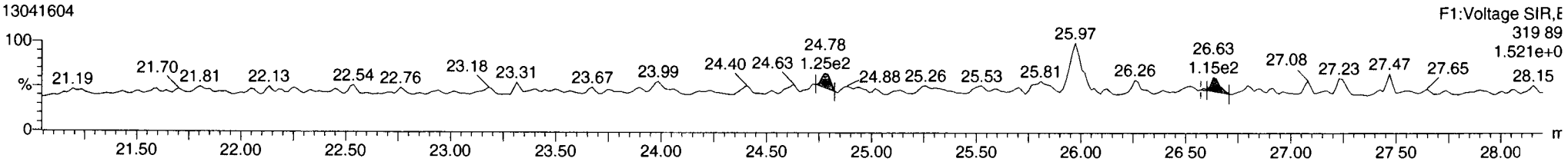
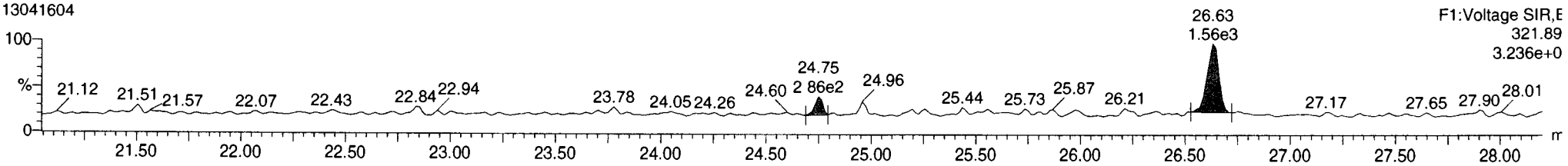


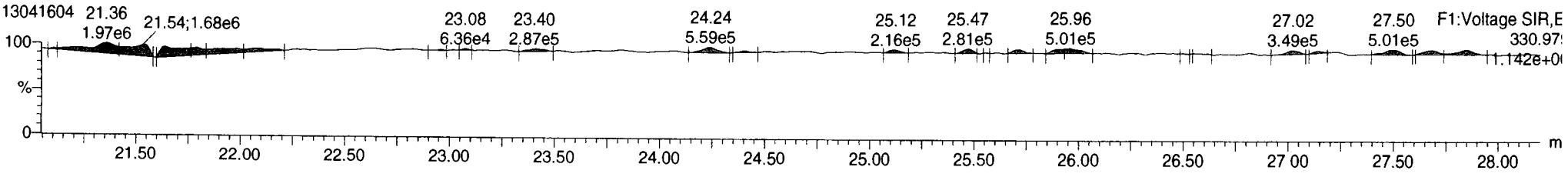
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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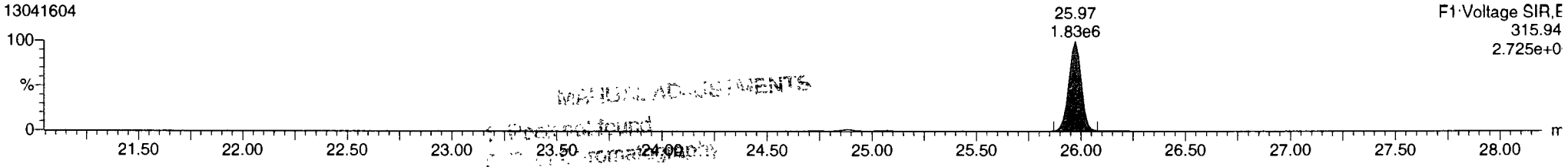
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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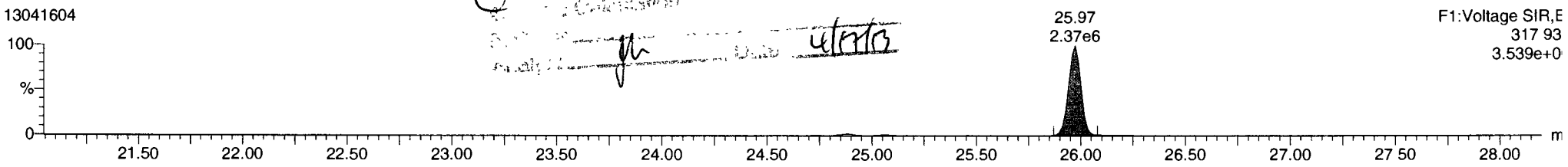
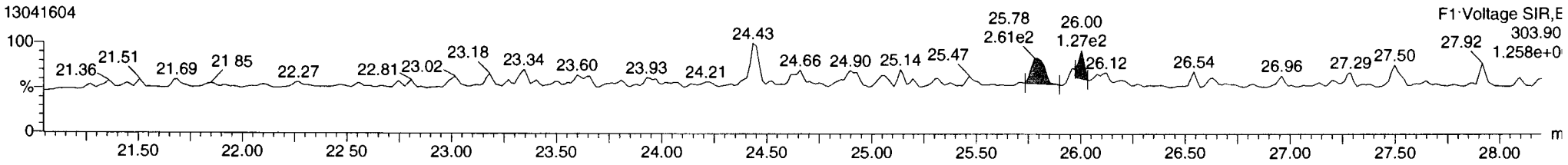
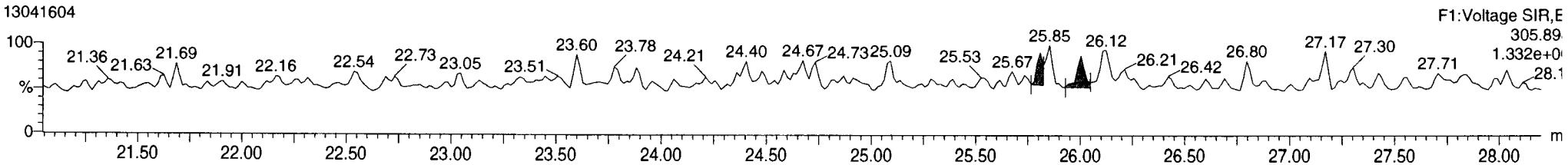


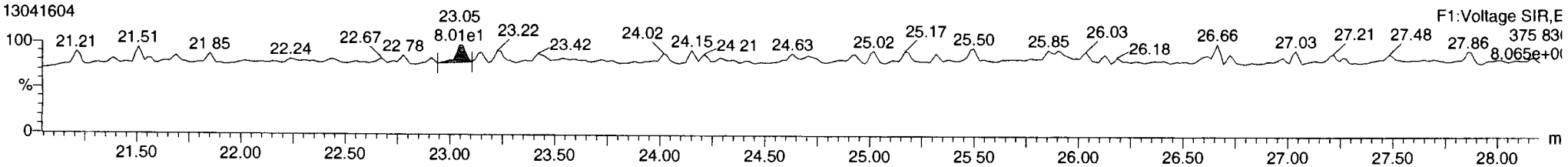
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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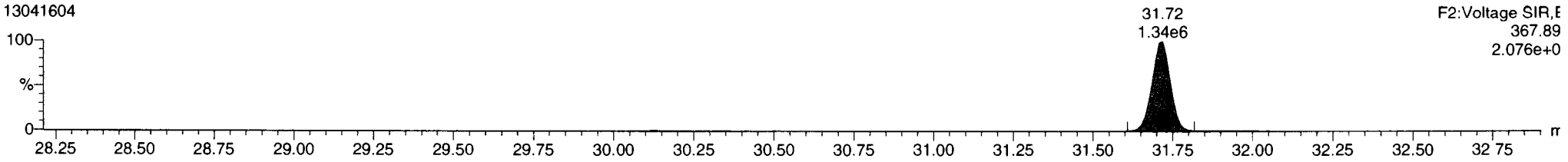
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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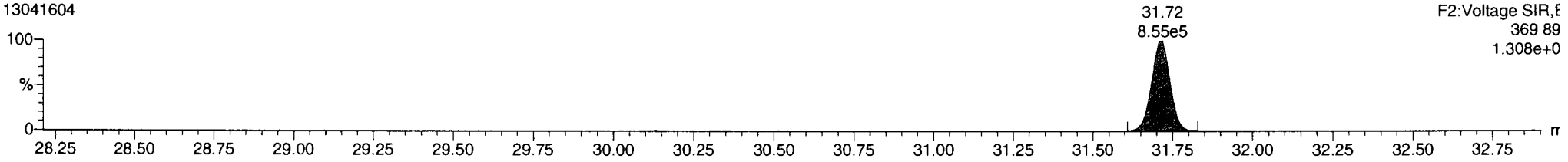
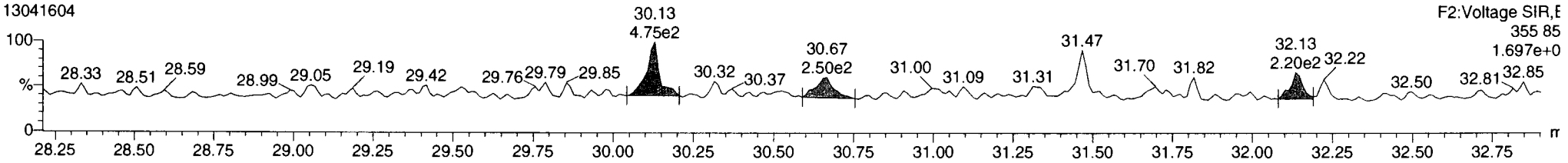
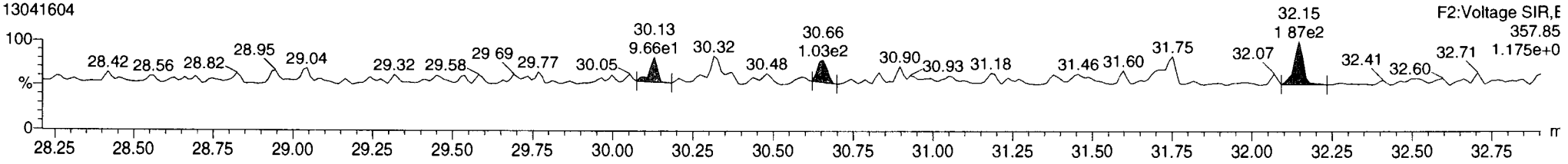


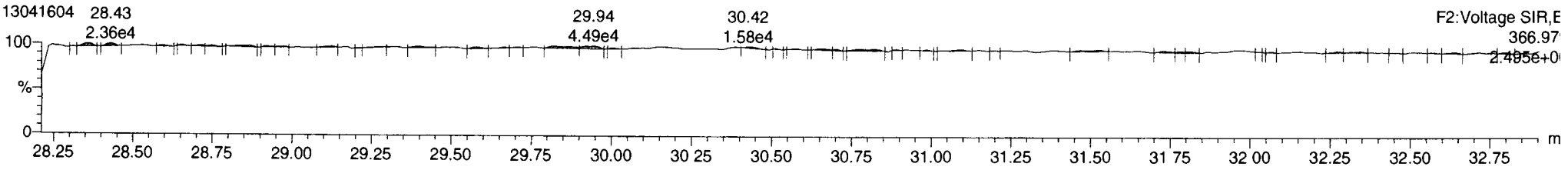
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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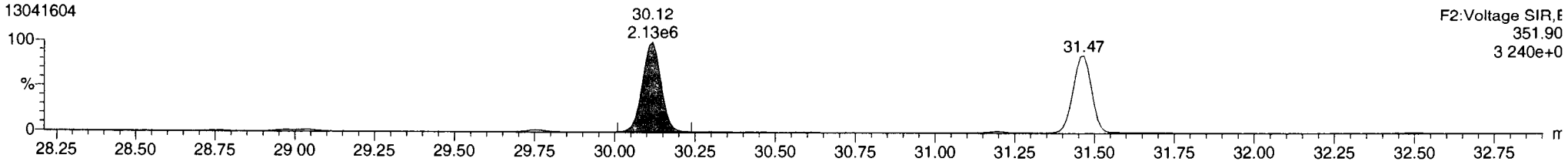
13C-12378-PeCDF



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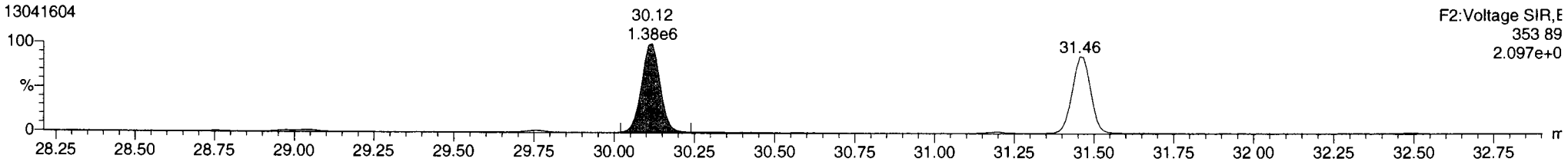
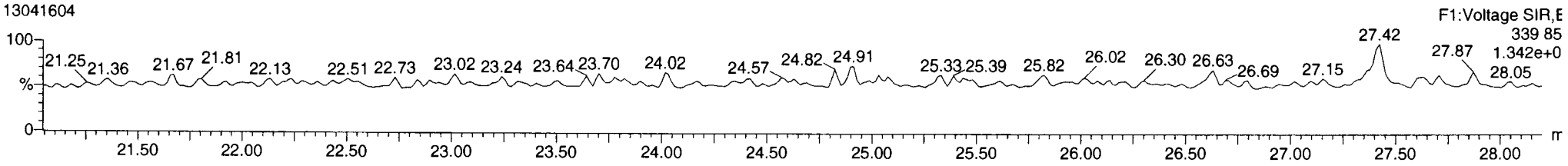
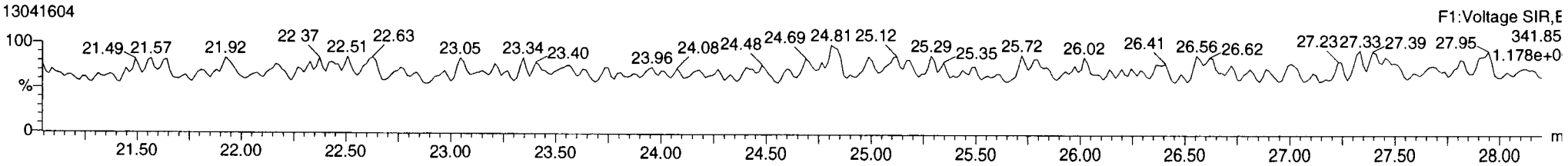


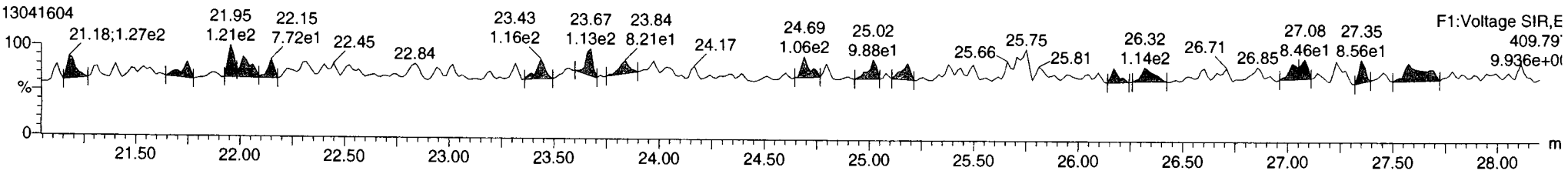
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

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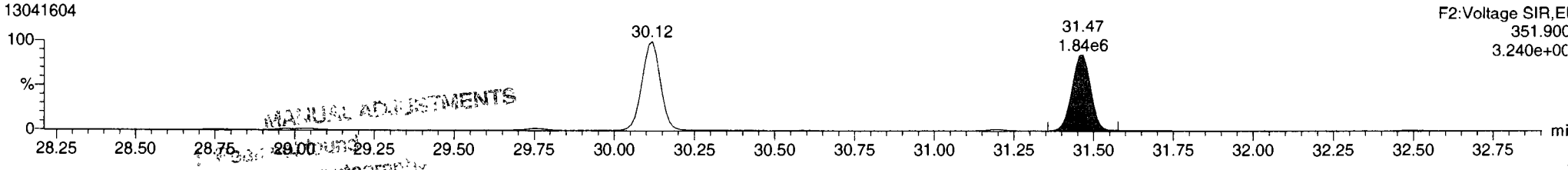
13C-23478-PeCDF



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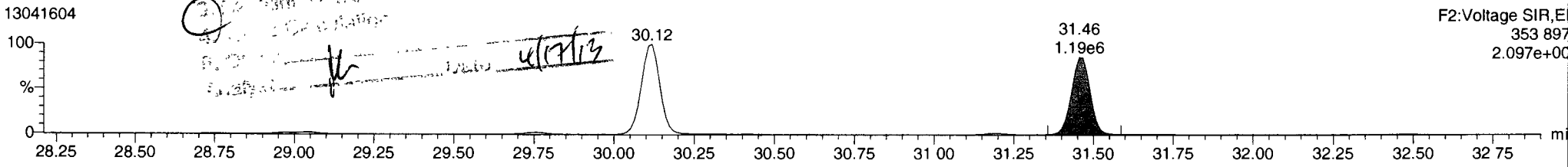
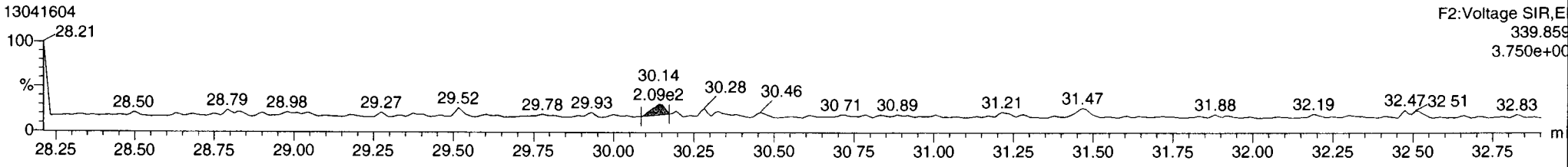
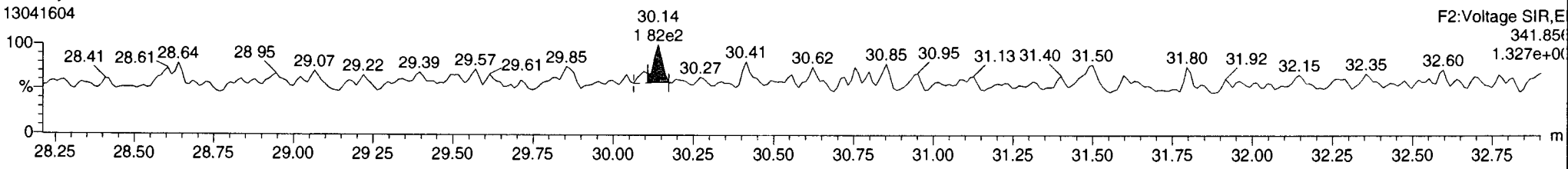


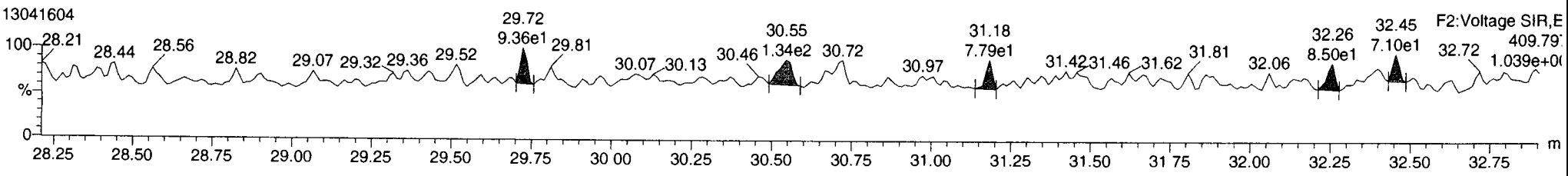
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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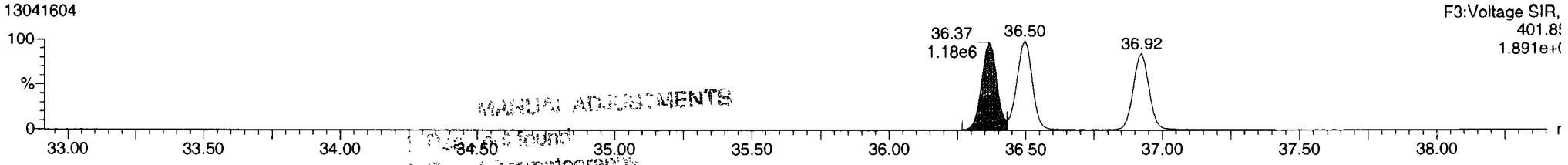
13C-123478-HxCDD



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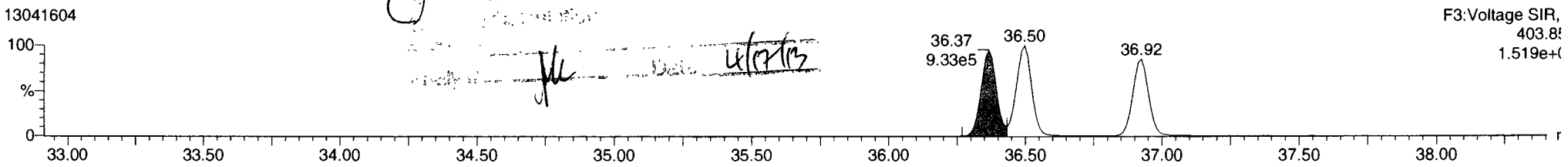
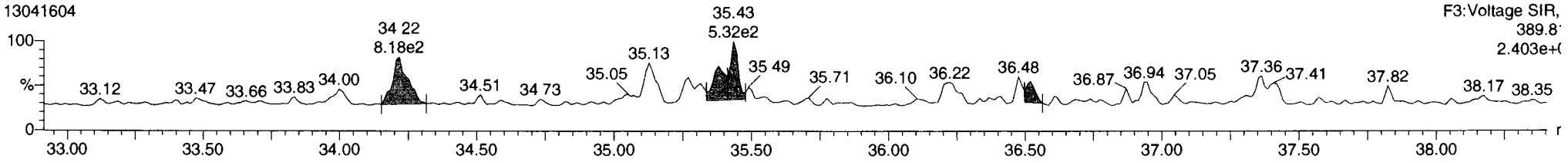
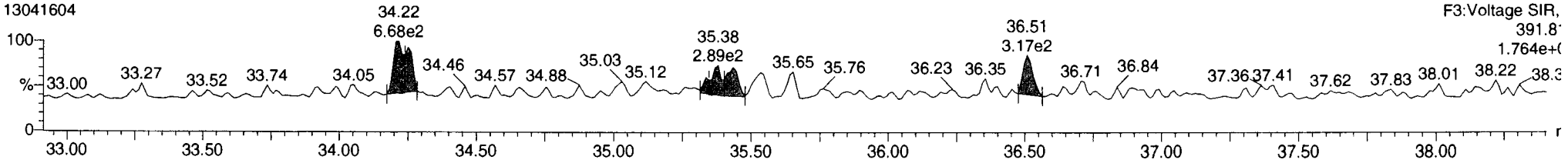


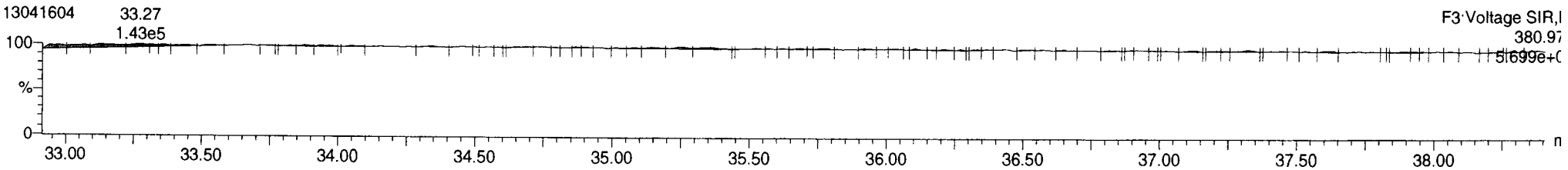
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

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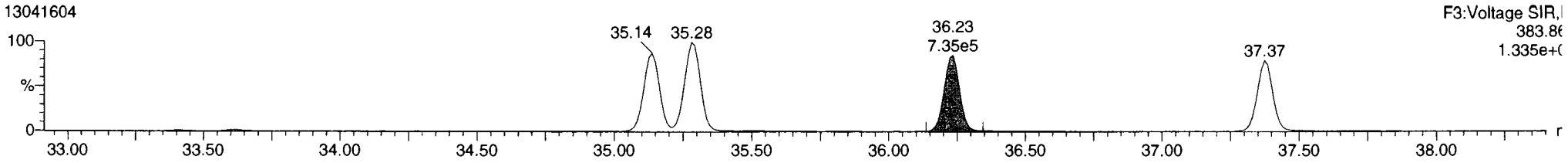
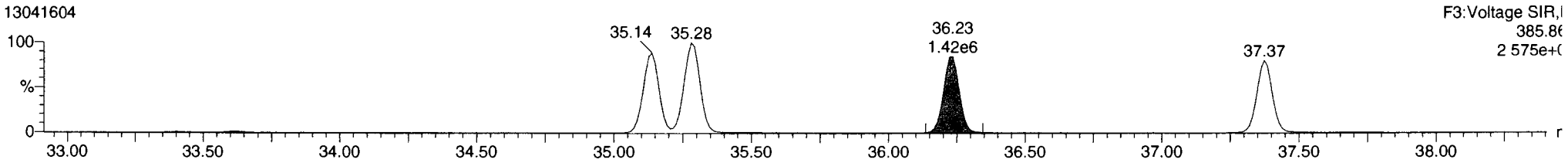
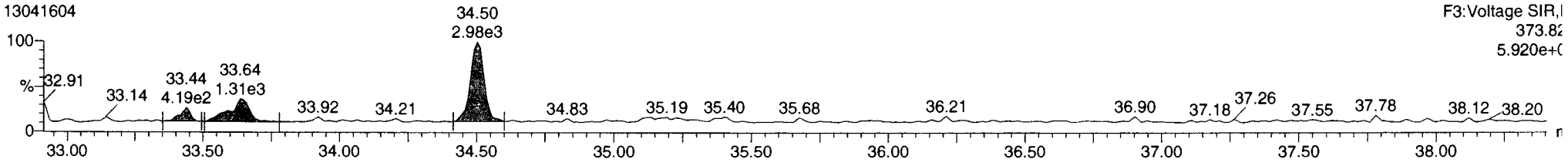
13C-234678-HxCDF



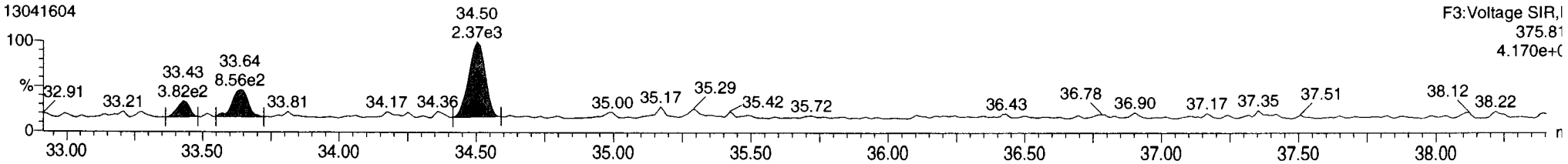
13C-234678-HxCDF



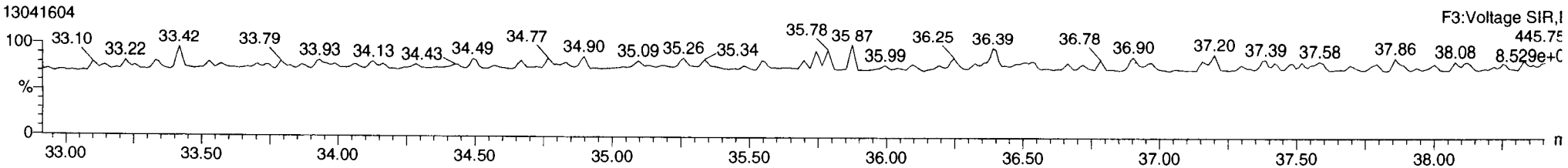
Total-hexafurans



Total-hexafurans



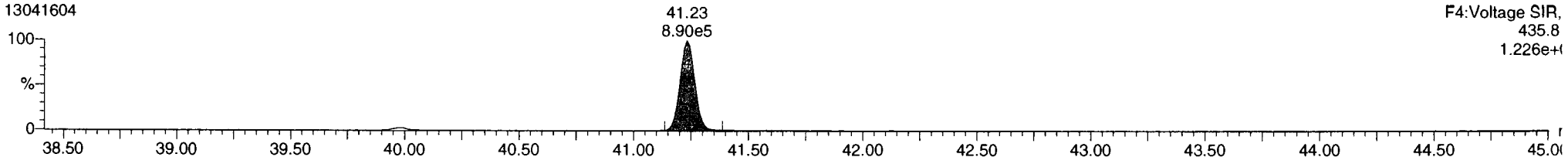
FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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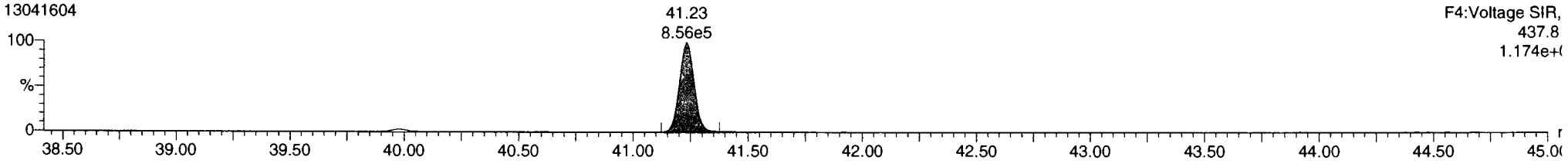
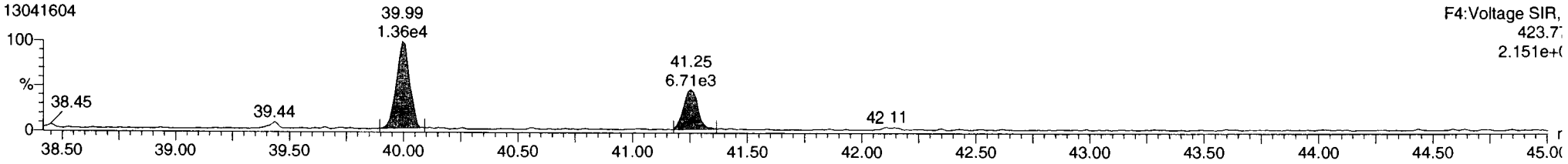
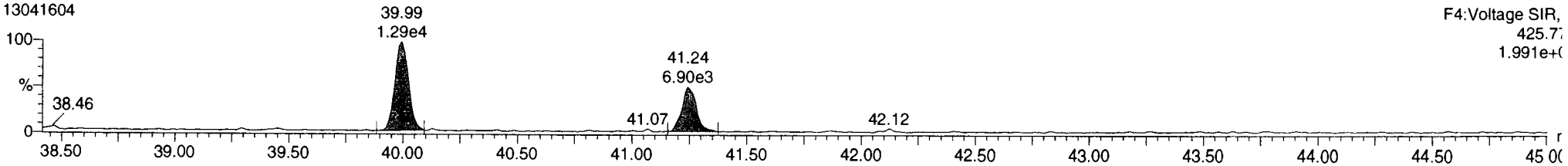


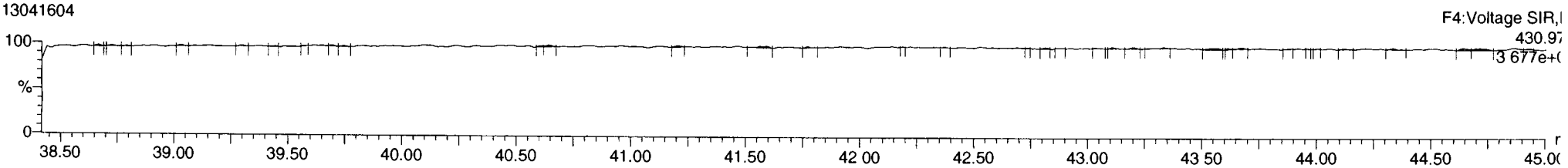
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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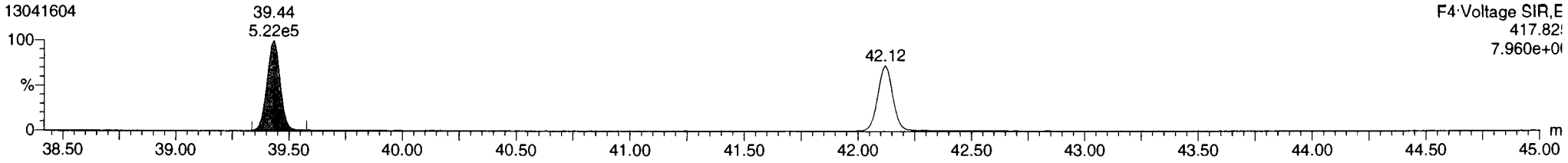
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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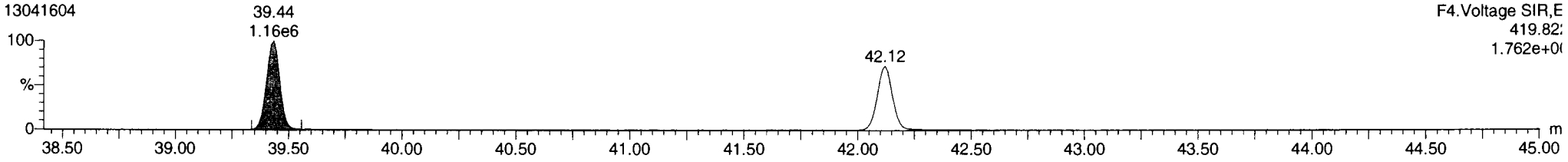
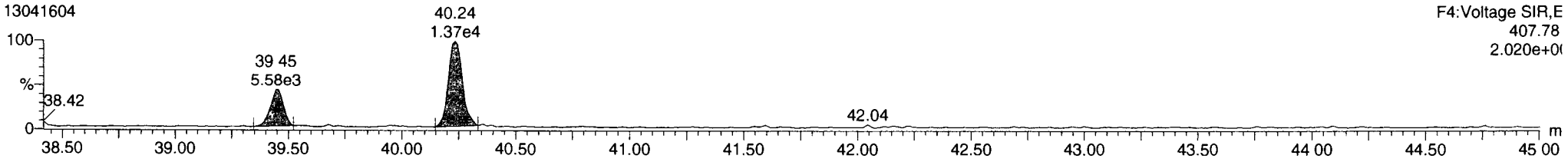
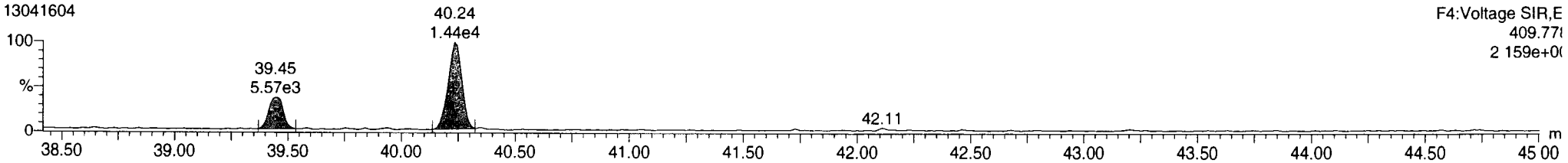


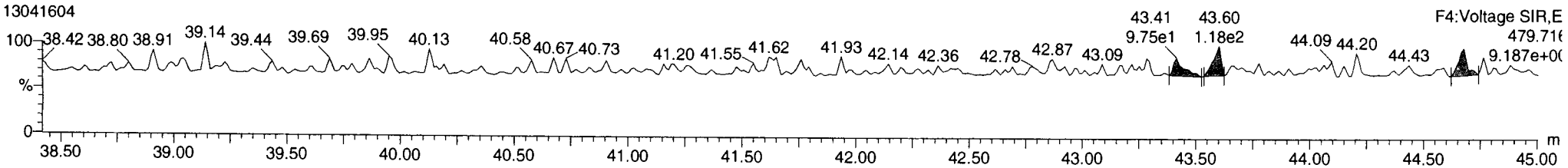
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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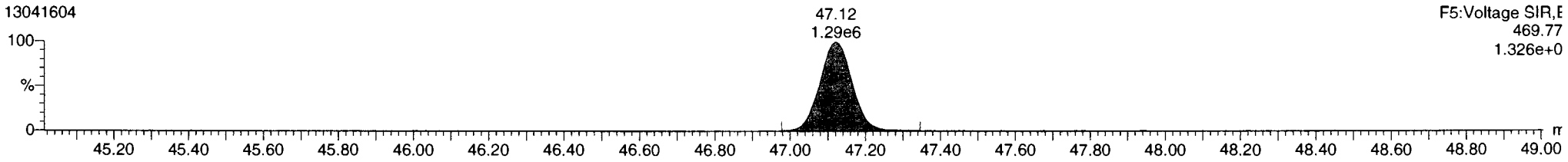
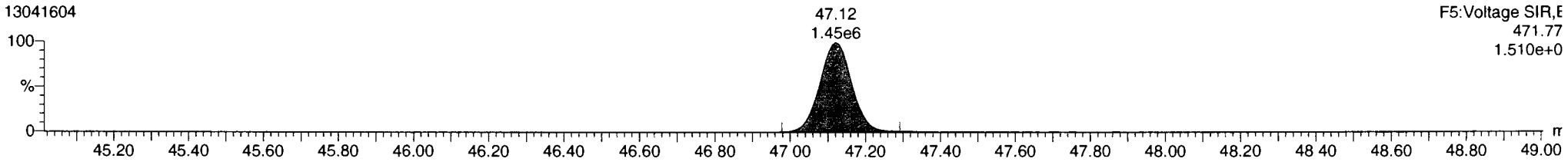
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:29 Pacific Daylight Time

ID: WK49MBS, Name: 13041604, Date: 16-Apr-2013, Time: 13:02:53, Conditions: AUTOSPEC01, User: pk

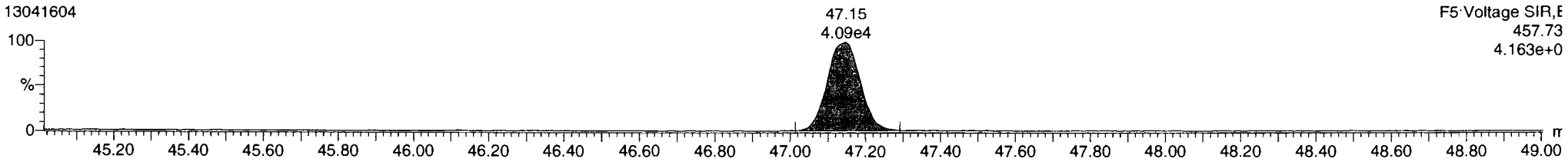
13C-OCDD



13C-OCDD



OCDD



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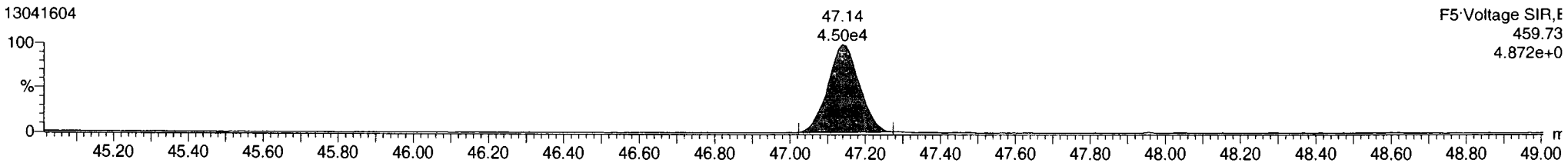
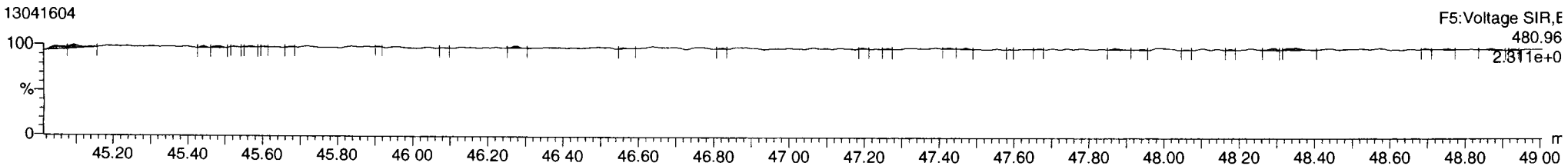


FUNCTION5 PFK



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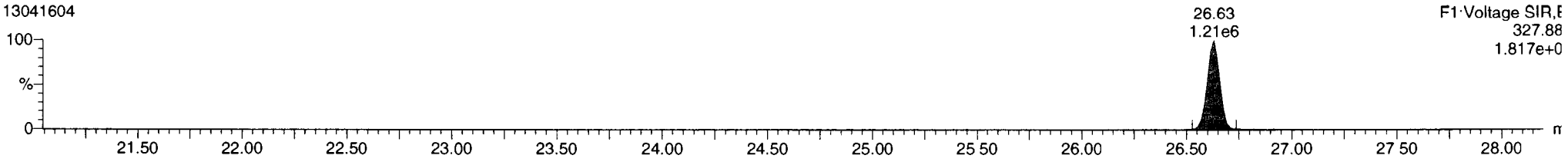
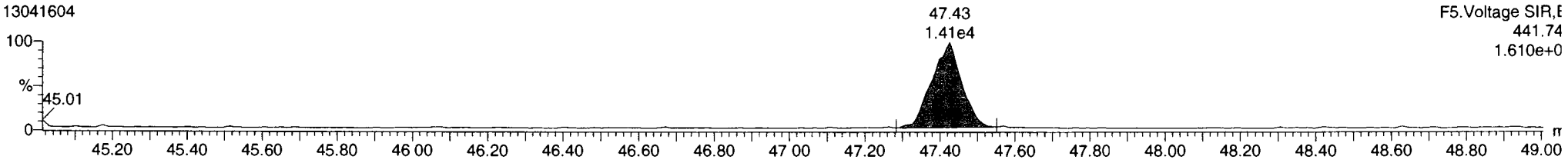
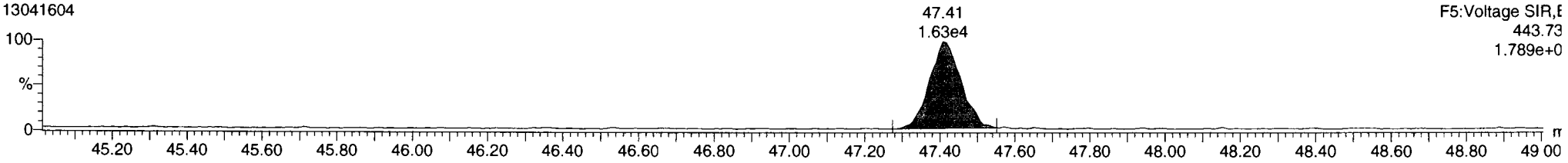
37CL-2378-TCDD



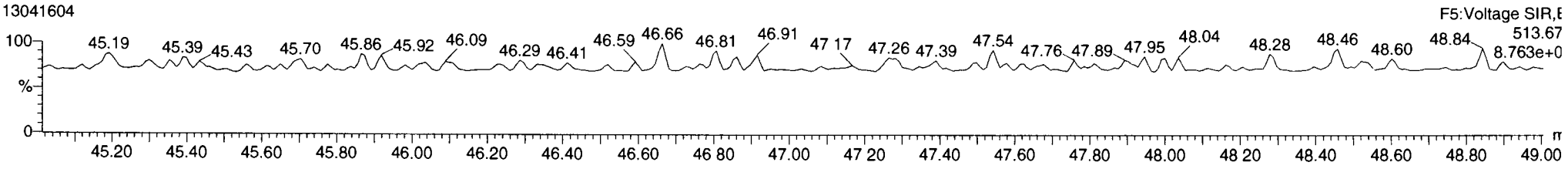
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

MH 4/17/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

[redacted]	2378-TCDF	25.959	1.001	1.36e5	1.87e5	0.763	0.728	0.770	1445.3	1314	2186	1.90e6	2.62e6	NO	10.914	10.914
[redacted]	12378-PeCDF	30.107	1.000	7.59e5	5.07e5	0.836	1.497	1.550	4278.0	2651	2205	1.13e7	7.53e6	NO	49.743	49 743
[redacted]	23478-PeCDF	31.455	1.001	7.14e5	4.85e5	0.851	1.470	1.550	4019.3	2651	2205	1.07e7	7.18e6	NO	50.290	50.290
[redacted]	123478-HxCDF	35.139	1.001	6.00e5	5.02e5	1.017	1.195	1.240	2984.6	3019	3699	9.01e6	7.41e6	NO	48.918	48.918
[redacted]	234678-HxCDF	36.235	1.001	6.07e5	5.04e5	1.027	1.204	1.240	2965.9	3019	3699	8.95e6	7.58e6	NO	51.391	51.391
[redacted]	123678-HxCDF	35.281	1.000	6.61e5	5.59e5	1.013	1.182	1.240	3301.8	3019	3699	9.97e6	8.37e6	NO	48.824	48.824
[redacted]	123789-HxCDF	37.375	1.000	4.91e5	4.10e5	0.929	1.197	1.240	2475.1	3019	3699	7.47e6	6.13e6	NO	49.265	49.265
[redacted]	1234678-HpCDF	39.435	1.001	5.53e5	5.56e5	1.151	0.995	1.050	3248.9	2539	3139	8.25e6	8.28e6	NO	59.404	59.404
[redacted]	1234789-HpCDF	42.121	1.000	3.86e5	3.87e5	1.149	0.997	1.050	1996.0	2539	3139	5.07e6	4.99e6	NO	50.451	50.451
[redacted]	OCDF	47.399	1.006	5.89e5	6.76e5	0.963	0.872	0.890	2936 8	2026	2069	5.95e6	6.84e6	NO	99.688	99.688
[redacted]	2378-TCDD	26.601	1.001	1.11e5	1.45e5	0.980	0.762	0.770	1279.0	1263	1585	1.62e6	2.09e6	NO	9.582	9.582
[redacted]	12378-PeCDD	31.708	1.000	5.63e5	3.64e5	0.948	1.548	1.550	3416 3	2471	1446	8.44e6	5.47e6	NO	48.260	48.260
[redacted]	123478-HxCDD	36.366	1.000	5.04e5	4.11e5	0.941	1.226	1.240	2946.1	2621	2030	7 72e6	6.23e6	NO	48.297	48.297
[redacted]	123678-HxCDD	36.498	1.001	4.77e5	3.90e5	0.884	1.223	1.240	2805.5	2621	2030	7.35e6	5.98e6	NO	46.317	46.317
[redacted]	123789-HxCDD	36.925	1.012	4.87e5	3.97e5	0.870	1.229	1.240	2744 2	2621	2030	7.19e6	5.81e6	NO	49.203	49.203
[redacted]	1234678-HpCDD	41.233	1.000	3.92e5	3.78e5	0.948	1.038	1.050	1997.0	2644	2229	5.28e6	5.16e6	NO	49.330	49 330
[redacted]	OCDD	47.121	1.000	5.95e5	6.78e5	0.969	0.878	0.890	4008.7	1550	1763	6.21e6	6.97e6	NO	99.603	99.603
[redacted]	13C-2378-TCDF	25.944	1.007	1.68e6	2.21e6	1.318	0.758	0.770	6935.4	3411	1724	2.37e7	3.15e7	NO		96.996
[redacted]	13C-12378-PeCDF	30.096	1.168	1.85e6	1.19e6	1.026	1.555	1.550	8548.2	3207	3245	2.74e7	1.76e7	NO		97.564
[redacted]	13C-23478-PeCDF	31.434	1.220	1.70e6	1.10e6	0.966	1.543	1.550	7778.5	3207	3245	2.49e7	1.60e7	NO		95.308
[redacted]	13C-123478-HxCDF	35.117	0.952	7.55e5	1.46e6	1.123	0.517	0.510	3627.7	3172	4325	1.15e7	2.20e7	NO		91.727
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[redacted]	13C-123789-HxCDF	37.364	1.012	6.69e5	1.30e6	0.995	0.516	0.510	3132.8	3172	4325	9.94e6	1.94e7	NO		91.945
[redacted]	13C-1234678-HpCDF	39.414	1.068	5.03e5	1.12e6	0.896	0.449	0.440	3072.7	2407	2898	7.40e6	1.66e7	NO		84.245
[redacted]	13C-1234789-HpCDF	42.110	1.141	4.11e5	9.24e5	0.693	0.444	0.440	2170.5	2407	2898	5.22e6	1.18e7	NO		89.497
[redacted]	13C-1234-TCDD	25.764	0.000	1.33e6	1.72e6	1.000	0.772	0.770	4950.6	3773	2364	1.87e7	2.44e7	NO		100.000
[redacted]	13C-2378-TCDD	26.586	1.032	1.18e6	1.54e6	0.961	0.767	0.770	4557.2	3773	2364	1.72e7	2.23e7	NO		93.009
[redacted]	13C-12378-PeCDD	31.697	1.230	1.24e6	7.87e5	0.703	1.573	1.550	10865.5	1706	3425	1.85e7	1.18e7	NO		94.635
[redacted]	13C-123478-HxCDD	36.355	0.985	1 12e6	8.90e5	1.016	1.264	1.240	5725 4	2945	2695	1.69e7	1.35e7	NO		92.211
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[redacted]	13C-1234678-HpCDD	41.222	1.117	8.43e5	8.02e5	0.828	1.051	1.050	3370.6	3388	3043	1.14e7	1.08e7	NO		92.366
[redacted]	13C-OCDD	47.103	1.276	1.24e6	1.40e6	0.770	0.887	0.890	4412.0	2890	2788	1.27e7	1.44e7	NO		159.229

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

ID: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

[redacted]	13C-123789-HxCDD	36.903	0.000	1.19e6	9.62e5	1.000	1.234	1.240	5993.9	2945	2695	1.76e7	1 43e7	NO	100 000
[redacted]	Total-tetrafurans			1.56e5		0.763				1314		2.19e6			12.523
[redacted]	Total-penta1			4.14e2						996		1.04e4			0.039
[redacted]	Total-pentafurans			1.55e6		0.844				2651		2.31e7			105.021
[redacted]	Total-hexafurans			2.38e6		0.997				3019		3.57e7			200.058
[redacted]	Total-heptafurans			9.60e5		1.150				2539		1.36e7			112.196
[redacted]	Total-Furans			5.63e6		0.970				1314		8 06e7			529.525
[redacted]	Total-tetradioxins			1.15e5		0.980				1263		1.67e6			9.912
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[redacted]	Total-hexadioxins			1.47e6		0.898				2621		2.23e7			144.120
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[redacted]	Total-Dioxins			3 16e6		0.934				1263		4.43e7			354.417
[redacted]	Total-TEQ			8.80e6						1263		1.25e8			883.942
[redacted]	37CL-2378-TCDD	26.601	1.032	1.18e6		0.999			12652.5	1349		1.71e7			38.903
[redacted]	FUNCTION1 PFK			3.97e7						1144943		2.01e8			
[redacted]	FUNCTION2 PFK			1.91e5						282990		6.95e6			0 000
[redacted]	FUNCTION3 PFK			4.57e5						437334		1.41e7			0.000
[redacted]	FUNCTION4 PFK			8 39e5						381074		1.48e7			
[redacted]	FUNCTION5 PFK			7.94e4						303222		3.68e6			
[redacted]	FUNCTION1 HXCDPE			1.04e2						414		2.13e3			0.000
[redacted]	FUNCTION1 HPCDPE			1.79e3						1364		3.92e4			0.000
[redacted]	FUNCTION2 HPCDPE			6.98e2						1223		2.23e4			0.000
[redacted]	FUNCTION3 OCDPE			3.21e2						448		9.59e3			0.000
[redacted]	FUNCTION4 NCDPE			1.25e2						518		4.96e3			0 000
[redacted]	FUNCTION5 DCDPE			0.00e0						482		0.00e0			

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

TF

	35	Total-tetrafurans	303.9016	26.20	664.728	0.763	0.022		0.53	0.77	YES	3.8
	1	2378-TCDF	303.9016	25.96	323838.813	0.763	10.914	10.914	0.73	0 77	NO	1445.3
	35	Total-tetrafurans	303.9016	25.78	1663.489	0.763	0.056		0.59	0.77	YES	6.3
	35	Total-tetrafurans	303.9016	25.06	7676.513	0.763	0.259		0.64	0.77	YES	32.6
	35	Total-tetrafurans	303.9016	24.87	32407.583	0.763	1.092		0.73	0.77	NO	148.4
	35	Total-tetrafurans	303.9016	24.73	3764.137	0.763	0.127		1.02	0.77	YES	22.0
	35	Total-tetrafurans	303.9016	23.49	1564.809	0.763	0.053		0.58	0.77	YES	6.7

PP

	36	Total-penta1	339.8597	27.42	678.048		0.025		0.67	1.55	YES	6 7
	36	Total-penta1	339.8597	27.36	361.951		0.014		0.66	1.55	YES	3.7

PF

	3	23478-PeCDF	339.8597	31.46	1199059 188	0.851	50.290	50.290	1.47	1.55	NO	4019.3
	37	Total-pentafurans	339.8597	31.19	1995.032	0.844	0.081		1.83	1.55	YES	6.3
	37	Total-pentafurans	339.8597	30.42	2488.737	0.844	0.101		5.30	1.55	YES	13.0
	37	Total-pentafurans	339.8597	30.30	32042 188	0.844	1.299		1.94	1.55	YES	106.7
	2	12378-PeCDF	339.8597	30.11	1266486.469	0.836	49.743	49.743	1 50	1.55	NO	4278.0
	37	Total-pentafurans	339.8597	29.75	29148.207	0.844	1.182		1.42	1.55	NO	90.2
	37	Total-pentafurans	339.8597	29.03	29330.321	0.844	1.189		1.41	1.55	NO	87.1
	37	Total-pentafurans	339.8597	28.97	18541.057	0.844	0.752		1.53	1.55	NO	76.7
	37	Total-pentafurans	339.8597	32.50	9475.104	0.844	0.384		1.59	1.55	NO	34.3

HF

	7	123789-HxCDF	373.8208	37.37	900549.407	0.929	49.265	49.265	1.20	1.24	NO	2475.1
	5	234678-HxCDF	373.8208	36.23	1110542.750	1.027	51.391	51.391	1.20	1.24	NO	2965.9
	6	123678-HxCDF	373.8208	35.28	1220664.750	1.013	48.824	48.824	1.18	1.24	NO	3301.8
	4	123478-HxCDF	373.8208	35.14	1102053.813	1.017	48.918	48.918	1.20	1.24	NO	2984.6
	38	Total-hexafurans	373.8208	34.49	7059.149	0.997	0.324		1.11	1.24	NO	18.9
	38	Total-hexafurans	373.8208	33.61	20813.654	0.997	0.954		1.22	1.24	NO	55.7
	38	Total-hexafurans	373.8208	33.41	8329.363	0.997	0.382		1.31	1.24	NO	25.4

HPF

	9	1234789-HpCDF	407.7818	42.12	773625.500	1.149	50.451	50.451	1.00	1.05	NO	1996.0
	39	Total-heptafurans	407.7818	40.22	36613.750	1.150	2.153		1.02	1.05	NO	102.8
	39	Total-heptafurans	407.7818	39.94	3199.309	1.150	0.188		1.19	1.05	NO	9.3
	8	1234678-HpCDF	407.7818	39.44	1109779.500	1.151	59.404	59.404	0.99	1.05	NO	3248.9

WL/18-61315

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Area Ratio	RRF Ac	Conc	EMPC	1° Ratio	2° Ratio	Pass?	S/N
	35	Total-tetrafurans	303.9016	26.20	664.728	0.763	0.022		0.53	0.77	YES	3.8
	1	2378-TCDF	303.9016	25.96	323838.813	0.763	10.914	10.914	0.73	0.77	NO	1445.3
	35	Total-tetrafurans	303.9016	25.78	1663.489	0.763	0.056		0.59	0.77	YES	6.3
	35	Total-tetrafurans	303.9016	25.06	7676.513	0.763	0.259		0.64	0.77	YES	32.6
5	35	Total-tetrafurans	303.9016	24.87	32407.583	0.763	1.092		0.73	0.77	NO	148.4
6	35	Total-tetrafurans	303.9016	24.73	3764.137	0.763	0.127		1.02	0.77	YES	22.0
	35	Total-tetrafurans	303.9016	23.49	1564.809	0.763	0.053		0.58	0.77	YES	6.7
	3	23478-PeCDF	339.8597	31.46	1199059 188	0 851	50.290	50.290	1.47	1.55	NO	4019.3
	37	Total-pentafurans	339.8597	31.19	1995.032	0.844	0.081		1.83	1.55	YES	6.3
10	37	Total-pentafurans	339.8597	30.42	2488.737	0.844	0.101		5.30	1.55	YES	13.0
11	37	Total-pentafurans	339.8597	30.30	32042.188	0.844	1.299		1.94	1.55	YES	106.7
12	2	12378-PeCDF	339 8597	30 11	1266486.469	0.836	49.743	49.743	1.50	1.55	NO	4278.0
13	37	Total-pentafurans	339 8597	29.75	29148.207	0.844	1.182		1.42	1.55	NO	90.2
14	37	Total-pentafurans	339.8597	29.03	29330.321	0.844	1 189		1.41	1.55	NO	87.1
15	37	Total-pentafurans	339.8597	28.97	18541.057	0.844	0.752		1.53	1.55	NO	76.7
16	37	Total-pentafurans	339.8597	32.50	9475 104	0.844	0.384		1.59	1.55	NO	34.3
17	7	123789-HxCDF	373.8208	37.37	900549.407	0.929	49.265	49.265	1.20	1.24	NO	2475.1
18	5	234678-HxCDF	373.8208	36.23	1110542.750	1.027	51.391	51.391	1.20	1.24	NO	2965.9
19	6	123678-HxCDF	373 8208	35.28	1220664.750	1.013	48.824	48.824	1.18	1.24	NO	3301.8
20	4	123478-HxCDF	373.8208	35.14	1102053.813	1.017	48.918	48.918	1.20	1.24	NO	2984.6
21	38	Total-hexafurans	373.8208	34.49	7059.149	0.997	0.324		1.11	1.24	NO	18.9
22	38	Total-hexafurans	373.8208	33.61	20813.654	0.997	0.954		1.22	1.24	NO	55.7
23	38	Total-hexafurans	373.8208	33.41	8329.363	0.997	0.382		1.31	1.24	NO	25.4
24	9	1234789-HpCDF	407.7818	42.12	773625.500	1.149	50.451	50.451	1.00	1.05	NO	1996.0
25	39	Total-heptafurans	407 7818	40.22	36613.750	1.150	2.153		1.02	1.05	NO	102.8
26	39	Total-heptafurans	407.7818	39.94	3199.309	1.150	0.188		1 19	1.05	NO	9.3
27	8	1234678-HpCDF	407.7818	39.44	1109779.500	1.151	59.404	59.404	0.99	1.05	NO	3248.9
28	10	OCDF	441.7428	47.40	1265611.625	0.963	99.688	99.688	0.87	0.89	NO	2936.8
29	36	Total-penta1	339.8597	27.42	678.048		0.025		0.67	1.55	YES	6.7
30	36	Total-penta1	339.8597	27.36	361.951		0.014		0.66	1.55	YES	3 7

TD

	#	Name	Trace	RT	Area Ratio	RRF Ac	Conc	EMPC	1° Ratio	2° Ratio	Pass?	S/N
1	41	Total-tetradioxins	319.8965	25.24	1477.807	0.980	0.055		0.93	0.77	YES	10.0
2	11	2378-TCDD	319.8965	26.60	255501 422	0.980	9.582	9.582	0.76	0.77	NO	1279.0
3	41	Total-tetradioxins	319.8965	26.23	7333 195	0.980	0.275		0.97	0.77	YES	31 9

PD

	#	Name	Trace	RT	Area Ratio	RRF Ac	Conc	EMPC	1° Ratio	2° Ratio	Pass?	S/N
	12	12378-PeCDD	355.8546	31.71	927026.750	0.948	48.260	48.260	1.55	1.55	NO	3416.3
2	42	Total-pentadioxins	355.8546	31.03	2189.884	0.948	0.114		1.34	1.55	NO	8.7
3	42	Total-pentadioxins	355.8546	30.47	2359.708	0.948	0 123		1.49	1.55	NO	9.4
4	42	Total-pentadioxins	355.8546	30.33	2604.287	0.948	0.136		1.48	1.55	NO	9.4
5	42	Total-pentadioxins	355.8546	30.12	2396.344	0.948	0.125		1.51	1.55	NO	8.2

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

HD

	43 Total-hexadioxins	389.8157	35.40	2127.152	0.898	0.115		1.36	1.24	NO	9.2
	43 Total-hexadioxins	389.8157	35.36	1626 855	0.898	0.088		1.80	1.24	YES	9.2
	43 Total-hexadioxins	389.8157	34.21	1872.522	0.898	0.101		0.85	1.24	YES	5.3
	15 123789-HxCDD	389.8157	36.93	884058.282	0.870	49.203	49.203	1.23	1.24	NO	2744.2
	14 123678-HxCDD	389.8157	36.50	866821.219	0.884	46.317	46.317	1.22	1.24	NO	2805.5
	13 123478-HxCDD	389.8157	36.37	915594.031	0.941	48.297	48.297	1.23	1.24	NO	2946.1

HPD

	16 1234678-HpCDD	423.7766	41.23	769467.531	0.948	49.330	49.330	1.04	1.05	NO	1997.0
	44 Total-heptadioxins	423.7766	39.98	42038.348	0.948	2.695		1.16	1.05	NO	119.7

Dioxins,TD,PD,HD,HPD,OD

	41 Total-tetradioxins	319.8965	25.24	1477.807	0.980	0.055		0.93	0.77	YES	10.0
	11 2378-TCDD	319.8965	26.60	255501.422	0.980	9.582	9.582	0.76	0 77	NO	1279.0
	41 Total-tetradioxins	319.8965	26.23	7333.195	0.980	0.275		0.97	0 77	YES	31.9
	12 12378-PeCDD	355.8546	31.71	927026.750	0.948	48.260	48.260	1.55	1.55	NO	3416.3
	42 Total-pentadioxins	355.8546	31.03	2189.884	0.948	0.114		1.34	1.55	NO	8.7
	42 Total-pentadioxins	355.8546	30.47	2359.708	0.948	0.123		1.49	1.55	NO	9.4
	42 Total-pentadioxins	355.8546	30.33	2604.287	0.948	0.136		1.48	1.55	NO	9.4
	42 Total-pentadioxins	355.8546	30.12	2396.344	0.948	0.125		1.51	1.55	NO	8.2
	43 Total-hexadioxins	389.8157	35.40	2127.152	0.898	0.115		1.36	1.24	NO	9 2
	43 Total-hexadioxins	389.8157	35.36	1626.855	0.898	0.088		1.80	1.24	YES	9.2
	43 Total-hexadioxins	389.8157	34 21	1872.522	0.898	0.101		0.85	1.24	YES	5.3
	15 123789-HxCDD	389.8157	36.93	884058.282	0.870	49.203	49.203	1.23	1.24	NO	2744.2
	14 123678-HxCDD	389.8157	36.50	866821.219	0.884	46.317	46.317	1.22	1.24	NO	2805.5
	13 123478-HxCDD	389.8157	36.37	915594.031	0.941	48.297	48.297	1.23	1.24	NO	2946.1
	16 1234678-HpCDD	423.7766	41.23	769467.531	0.948	49.330	49.330	1.04	1.05	NO	1997.0
	44 Total-heptadioxins	423.7766	39.98	42038.348	0.948	2.695		1.16	1.05	NO	119.7
	17 OCDD	457.7377	47.12	1272484.063	0.969	99.603	99.603	0.88	0.89	NO	4008.7

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	35	Total-tetrafurans	303.9016	26.20	664.728	0.763	0.022		0.53	0.77	YES	3.8
	1	2378-TCDF	303.9016	25.96	323838.813	0.763	10.914	10.914	0.73	0.77	NO	1445.3
	35	Total-tetrafurans	303.9016	25.78	1663.489	0.763	0.056		0.59	0.77	YES	6.3
	35	Total-tetrafurans	303.9016	25.06	7676.513	0.763	0.259		0 64	0.77	YES	32.6
	35	Total-tetrafurans	303.9016	24.87	32407.583	0.763	1.092		0.73	0.77	NO	148.4
	35	Total-tetrafurans	303.9016	24.73	3764.137	0.763	0.127		1.02	0.77	YES	22.0
	35	Total-tetrafurans	303.9016	23.49	1564.809	0.763	0.053		0.58	0 77	YES	6.7
	3	23478-PeCDF	339.8597	31.46	1199059.188	0.851	50.290	50.290	1.47	1.55	NO	4019.3
	37	Total-pentafurans	339.8597	31.19	1995.032	0.844	0.081		1.83	1.55	YES	6.3
	37	Total-pentafurans	339.8597	30.42	2488.737	0.844	0.101		5.30	1.55	YES	13.0
	37	Total-pentafurans	339.8597	30.30	32042.188	0.844	1.299		1.94	1.55	YES	106.7
	2	12378-PeCDF	339.8597	30.11	1266486.469	0.836	49.743	49.743	1.50	1.55	NO	4278.0
	37	Total-pentafurans	339.8597	29.75	29148.207	0.844	1.182		1.42	1.55	NO	90.2
	37	Total-pentafurans	339.8597	29.03	29330.321	0.844	1.189		1.41	1.55	NO	87.1
	37	Total-pentafurans	339.8597	28.97	18541.057	0 844	0.752		1.53	1.55	NO	76.7
	37	Total-pentafurans	339.8597	32.50	9475.104	0.844	0.384		1.59	1.55	NO	34.3
	7	123789-HxCDF	373.8208	37.37	900549.407	0 929	49.265	49 265	1.20	1.24	NO	2475.1
	5	234678-HxCDF	373.8208	36.23	1110542.750	1.027	51.391	51.391	1.20	1.24	NO	2965.9
	6	123678-HxCDF	373.8208	35.28	1220664.750	1.013	48.824	48.824	1.18	1.24	NO	3301.8
	4	123478-HxCDF	373.8208	35.14	1102053.813	1.017	48.918	48.918	1.20	1.24	NO	2984.6
	38	Total-hexafurans	373.8208	34.49	7059.149	0.997	0.324		1.11	1.24	NO	18.9
	38	Total-hexafurans	373.8208	33.61	20813.654	0.997	0.954		1.22	1.24	NO	55.7
	38	Total-hexafurans	373.8208	33.41	8329.363	0.997	0.382		1.31	1.24	NO	25.4
	9	1234789-HpCDF	407.7818	42.12	773625.500	1.149	50.451	50 451	1.00	1 05	NO	1996.0
	39	Total-heptafurans	407.7818	40.22	36613.750	1.150	2.153		1.02	1.05	NO	102.8
	39	Total-heptafurans	407.7818	39.94	3199.309	1 150	0.188		1.19	1.05	NO	9.3
	8	1234678-HpCDF	407.7818	39.44	1109779.500	1.151	59.404	59.404	0.99	1.05	NO	3248 9
	10	OCDF	441.7428	47.40	1265611.625	0.963	99.688	99.688	0.87	0.89	NO	2936.8
	36	Total-penta1	339.8597	27.42	678.048		0.025		0.67	1.55	YES	6.7
	36	Total-penta1	339.8597	27.36	361.951		0.014		0.66	1.55	YES	3.7
	41	Total-tetradioxins	319.8965	25.24	1477.807	0.980	0.055		0.93	0.77	YES	10.0
	11	2378-TCDD	319.8965	26.60	255501.422	0.980	9.582	9.582	0.76	0.77	NO	1279.0
	41	Total-tetradioxins	319.8965	26.23	7333.195	0.980	0.275		0.97	0.77	YES	31.9
	12	12378-PeCDD	355.8546	31.71	927026.750	0.948	48.260	48.260	1.55	1 55	NO	3416.3
	42	Total-pentadioxins	355.8546	31.03	2189.884	0.948	0.114		1.34	1.55	NO	8.7
	42	Total-pentadioxins	355.8546	30.47	2359.708	0.948	0.123		1.49	1.55	NO	9.4
	42	Total-pentadioxins	355.8546	30.33	2604.287	0.948	0.136		1.48	1.55	NO	9.4
	42	Total-pentadioxins	355.8546	30.12	2396.344	0.948	0 125		1.51	1.55	NO	8.2
	43	Total-hexadioxins	389.8157	35.40	2127.152	0.898	0.115		1.36	1.24	NO	9.2
	43	Total-hexadioxins	389.8157	35.36	1626.855	0.898	0.088		1.80	1.24	YES	9.2
	43	Total-hexadioxins	389.8157	34.21	1872.522	0.898	0.101		0.85	1.24	YES	5.3
	15	123789-HxCDD	389.8157	36.93	884058.282	0.870	49.203	49.203	1.23	1.24	NO	2744.2
	14	123678-HxCDD	389.8157	36.50	866821.219	0.884	46.317	46.317	1.22	1.24	NO	2805.5
	13	123478-HxCDD	389.8157	36.37	915594.031	0.941	48.297	48.297	1.23	1.24	NO	2946.1
	16	1234678-HpCDD	423.7766	41.23	769467.531	0.948	49.330	49.330	1.04	1.05	NO	1997.0
	44	Total-heptadioxins	423.7766	39.98	42038.348	0.948	2.695		1.16	1.05	NO	119.7
	17	OCDD	457.7377	47.12	1272484.063	0.969	99.603	99.603	0.88	0.89	NO	4008.7

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

PFK1

[redacted]	48	FUNCTION1 PFK	330.9792	23.37	0.000					2.0
[redacted]	48	FUNCTION1 PFK	330.9792	23.31	0.000					1.3
[redacted]	48	FUNCTION1 PFK	330.9792	23.24	0.000					1.4
[redacted]	48	FUNCTION1 PFK	330.9792	23.05	0.000					2.9
[redacted]	48	FUNCTION1 PFK	330.9792	22.64	0.000					6.6
[redacted]	48	FUNCTION1 PFK	330.9792	22.03	0.000					24.3
[redacted]	48	FUNCTION1 PFK	330.9792	21.73	0.000					33.5
[redacted]	48	FUNCTION1 PFK	330.9792	21.49	0.000					34.0
[redacted]	48	FUNCTION1 PFK	330.9792	21 33	0.000					23.0
[redacted]	48	FUNCTION1 PFK	330.9792	27.33	0.000					0.7
[redacted]	48	FUNCTION1 PFK	330.9792	27.20	0.000					2.6
[redacted]	48	FUNCTION1 PFK	330.9792	27.12	0.000					2.4
[redacted]	48	FUNCTION1 PFK	330.9792	27.00	0.000					2.3
[redacted]	48	FUNCTION1 PFK	330.9792	26.47	0.000					1.9
[redacted]	48	FUNCTION1 PFK	330.9792	26.24	0.000					1.5
[redacted]	48	FUNCTION1 PFK	330.9792	26.14	0.000					0.9
[redacted]	48	FUNCTION1 PFK	330.9792	25.99	0.000					4.4
[redacted]	48	FUNCTION1 PFK	330 9792	25.93	0.000					4.0
[redacted]	48	FUNCTION1 PFK	330.9792	25.69	0.000					2.9
[redacted]	48	FUNCTION1 PFK	330.9792	25.45	0.000					1.8
[redacted]	48	FUNCTION1 PFK	330.9792	25.35	0.000					0.7
[redacted]	48	FUNCTION1 PFK	330.9792	25.11	0.000					3.0
[redacted]	48	FUNCTION1 PFK	330.9792	24.61	0.000					1.0
[redacted]	48	FUNCTION1 PFK	330.9792	24.21	0.000					5.6
[redacted]	48	FUNCTION1 PFK	330.9792	23.85	0.000					0.7
[redacted]	48	FUNCTION1 PFK	330.9792	27.81	0.000					2.8
[redacted]	48	FUNCTION1 PFK	330.9792	27.66	0.000					2.7
[redacted]	48	FUNCTION1 PFK	330.9792	27.54	0.000					1.3
[redacted]	48	FUNCTION1 PFK	330.9792	27 48	0.000					3.5

)ataset: P:\DIOXIN8290.PRO\130416DATA.qld
ast Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
'rinted: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

): WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

'FK2

[redacted]	49 FUNCTION2 PFK	366.9792	29.71	0.000	0.000	0.5
[redacted]	49 FUNCTION2 PFK	366.9792	29.67	0.000	0.000	1.1
[redacted]	49 FUNCTION2 PFK	366.9792	29.64	0.000	0.000	0.4
[redacted]	49 FUNCTION2 PFK	366.9792	29.53	0.000	0.000	0.9
[redacted]	49 FUNCTION2 PFK	366.9792	29.45	0.000	0.000	1.2
[redacted]	49 FUNCTION2 PFK	366.9792	29.36	0.000	0.000	1.5
[redacted]	49 FUNCTION2 PFK	366.9792	29.25	0.000	0.000	0.4
[redacted]	49 FUNCTION2 PFK	366.9792	29.00	0.000	0.000	0.6
[redacted]	49 FUNCTION2 PFK	366.9792	28.89	0.000	0.000	1.1
[redacted]	49 FUNCTION2 PFK	366.9792	28.57	0.000	0.000	2.2
[redacted]	49 FUNCTION2 PFK	366.9792	28.50	0.000	0.000	1.5
[redacted]	49 FUNCTION2 PFK	366.9792	32.21	0.000	0.000	0.7
[redacted]	49 FUNCTION2 PFK	366.9792	32.05	0.000	0.000	1.3
[redacted]	49 FUNCTION2 PFK	366.9792	31.99	0.000	0.000	1.9
[redacted]	49 FUNCTION2 PFK	366.9792	31.94	0.000	0.000	1.4
[redacted]	49 FUNCTION2 PFK	366.9792	31.89	0.000	0.000	0.5
[redacted]	49 FUNCTION2 PFK	366.9792	31.73	0.000	0.000	1.9
[redacted]	49 FUNCTION2 PFK	366.9792	31.07	0.000	0.000	0.4
[redacted]	49 FUNCTION2 PFK	366.9792	30 97	0.000	0.000	0.6
[redacted]	49 FUNCTION2 PFK	366.9792	30.93	0.000	0.000	1.1
[redacted]	49 FUNCTION2 PFK	366.9792	30.82	0.000	0.000	0.9
[redacted]	49 FUNCTION2 PFK	366.9792	30.75	0.000	0.000	1 1
[redacted]	49 FUNCTION2 PFK	366.9792	29.83	0.000	0.000	0.6
[redacted]	49 FUNCTION2 PFK	366.9792	29 75	0.000	0.000	0.7

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	Le	Name	Mass	RT	Area Resp	Area EM	[redacted]	EM/R	R Ratio	R Ratio	R	S/N
[redacted]	50	FUNCTION3 PFK	380.9760	33.43	0.000	0.000						1.8
[redacted]	50	FUNCTION3 PFK	380.9760	33.20	0.000	0.000						0.8
[redacted]	50	FUNCTION3 PFK	380.9760	37 48	0.000	0.000						1.5
[redacted]	50	FUNCTION3 PFK	380.9760	37 11	0.000	0.000						0.8
[redacted]	50	FUNCTION3 PFK	380.9760	36.46	0.000	0.000						1.1
[redacted]	50	FUNCTION3 PFK	380.9760	36 31	0.000	0.000						0.8
[redacted]	50	FUNCTION3 PFK	380.9760	35.94	0.000	0.000						2.7
[redacted]	50	FUNCTION3 PFK	380.9760	35.77	0.000	0.000						0.8
[redacted]	50	FUNCTION3 PFK	380.9760	35 26	0.000	0.000						2.8
[redacted]	50	FUNCTION3 PFK	380.9760	35 12	0.000	0.000						1.9
[redacted]	50	FUNCTION3 PFK	380.9760	34.50	0.000	0.000						1.5
[redacted]	50	FUNCTION3 PFK	380.9760	34.35	0.000	0.000						1.3
[redacted]	50	FUNCTION3 PFK	380.9760	34.21	0.000	0.000						1.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.98	0.000	0.000						1.1
[redacted]	50	FUNCTION3 PFK	380.9760	33.87	0.000	0.000						1.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.55	0.000	0.000						0.5
[redacted]	50	FUNCTION3 PFK	380 9760	33.51	0.000	0.000						0.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.46	0.000	0.000						2.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.98	0.000	0.000						1.8
[redacted]	50	FUNCTION3 PFK	380.9760	37.83	0.000	0.000						2.0
[redacted]	50	FUNCTION3 PFK	380.9760	37 76	0.000	0.000						1.4
[redacted]	50	FUNCTION3 PFK	380.9760	37.62	0.000	0.000						0.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.54	0.000	0.000						1.0

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs Resp	PRF M	pg	EMPC	1° Ratl	1° Ratl	1° R	S/N
	51	FUNCTION4 PFK	430.9728	40.22	0.000							1.0
	51	FUNCTION4 PFK	430.9728	40.15	0.000							2.3
	51	FUNCTION4 PFK	430.9728	40.04	0.000							1.0
	51	FUNCTION4 PFK	430.9728	40.01	0.000							1.8
	51	FUNCTION4 PFK	430.9728	39.93	0.000							1.7
	51	FUNCTION4 PFK	430.9728	39.65	0.000							0.9
	51	FUNCTION4 PFK	430.9728	39.21	0.000							0.6
	51	FUNCTION4 PFK	430.9728	38.79	0.000							1.5
	51	FUNCTION4 PFK	430.9728	38.62	0.000							1.8
	51	FUNCTION4 PFK	430 9728	38.53	0.000							6.9
	51	FUNCTION4 PFK	430.9728	44.43	0.000							1.5
	51	FUNCTION4 PFK	430 9728	44.08	0.000							1.1
	51	FUNCTION4 PFK	430.9728	43.77	0.000							1.0
	51	FUNCTION4 PFK	430.9728	43.24	0.000							1.2
	51	FUNCTION4 PFK	430.9728	42.97	0.000							1.3
	51	FUNCTION4 PFK	430.9728	42.52	0.000							0.8
	51	FUNCTION4 PFK	430.9728	42.37	0.000							0.7
	51	FUNCTION4 PFK	430.9728	42.02	0.000							1.3
	51	FUNCTION4 PFK	430.9728	41.45	0.000							0.5
	51	FUNCTION4 PFK	430.9728	41.27	0.000							1.1
	51	FUNCTION4 PFK	430.9728	41.19	0.000							0.9
	51	FUNCTION4 PFK	430.9728	41.05	0.000							1.4
	51	FUNCTION4 PFK	430.9728	40.76	0.000							1.1
	51	FUNCTION4 PFK	430.9728	40.65	0.000							1.9
	51	FUNCTION4 PFK	430.9728	40.41	0.000							1.9
	51	FUNCTION4 PFK	430.9728	40.29	0.000							0.7
	51	FUNCTION4 PFK	430.9728	44.60	0.000							0.8

PFK5

	#	Name	Trace	RT	Abs Resp	PRF M	pg	EMPC	1° Ratl	1° Ratl	1° R	S/N
	52	FUNCTION5 PFK	480.9696	48.57	0.000							1.1
	52	FUNCTION5 PFK	480.9696	48.21	0.000							1.2
	52	FUNCTION5 PFK	480.9696	48.04	0.000							0.6
	52	FUNCTION5 PFK	480.9696	47.29	0.000							1.2
	52	FUNCTION5 PFK	480.9696	47.22	0.000							1.1
	52	FUNCTION5 PFK	480.9696	46.99	0.000							0.6
	52	FUNCTION5 PFK	480.9696	46.91	0.000							0.7
	52	FUNCTION5 PFK	480.9696	46.35	0.000							1.8
	52	FUNCTION5 PFK	480.9696	45.90	0.000							1.5
	52	FUNCTION5 PFK	480.9696	45.32	0.000							1.1
	52	FUNCTION5 PFK	480.9696	45.17	0.000							1.4

ETHERS1

	#	Name	Trace	RT	Abs Resp	PRF M	pg	EMPC	1° Ratl	1° Ratl	1° R	S/N
	53	FUNCTION1 HXCD...	375.8364	25.94	0.000	0.000						5.1

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

D: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	54	FUNCTION1 HPCD...	409.7974	27.78	0.000	0.000						1.5
	54	FUNCTION1 HPCD...	409.7974	27.59	0.000	0.000						1.3
	54	FUNCTION1 HPCD...	409.7974	26.62	0.000	0.000						1.7
	54	FUNCTION1 HPCD...	409.7974	26.39	0.000	0.000						1.6
	54	FUNCTION1 HPCD...	409.7974	26.00	0.000	0.000						1.3
	54	FUNCTION1 HPCD...	409.7974	25.91	0.000	0.000						1.9
	54	FUNCTION1 HPCD...	409.7974	25.12	0.000	0.000						2.0
	54	FUNCTION1 HPCD...	409.7974	24.55	0.000	0.000						1.0
	54	FUNCTION1 HPCD...	409.7974	23.91	0.000	0.000						3.2
	54	FUNCTION1 HPCD...	409.7974	23.73	0.000	0.000						1.5
	54	FUNCTION1 HPCD...	409.7974	23.45	0.000	0.000						2.4
	54	FUNCTION1 HPCD...	409.7974	23.39	0.000	0.000						1.5
	54	FUNCTION1 HPCD...	409.7974	21.98	0.000	0.000						2.5
	54	FUNCTION1 HPCD...	409.7974	21.73	0.000	0.000						1.6
	54	FUNCTION1 HPCD...	409.7974	21.67	0.000	0.000						1.7
	54	FUNCTION1 HPCD...	409.7974	21.27	0.000	0.000						0.9
	54	FUNCTION1 HPCD...	409.7974	28.08	0.000	0.000						0.9

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	55	FUNCTION2 HPCD...	409.7974	32.03	0.000	0.000						1.8
	55	FUNCTION2 HPCD...	409.7974	31.78	0.000	0.000						4.5
	55	FUNCTION2 HPCD...	409.7974	30.10	0.000	0.000						4.0
	55	FUNCTION2 HPCD...	409.7974	30.06	0.000	0.000						3.4
	55	FUNCTION2 HPCD...	409.7974	28.58	0.000	0.000						2.5
	55	FUNCTION2 HPCD...	409.7974	28.43	0 000	0.000						2.1

ETHERS4

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	56	FUNCTION3 OCDPE	445.7555	36.99	0.000	0.000						6.0
	56	FUNCTION3 OCDPE	445.7555	36.91	0.000	0.000						3.3
	56	FUNCTION3 OCDPE	445.7555	35.94	0.000	0.000						6.7
	56	FUNCTION3 OCDPE	445.7555	34.24	0.000	0.000						5.5

ETHERS5

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	57	FUNCTION4 NCDPE	479.7165	41.70	0.000	0.000						9.6

ETHERS6

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

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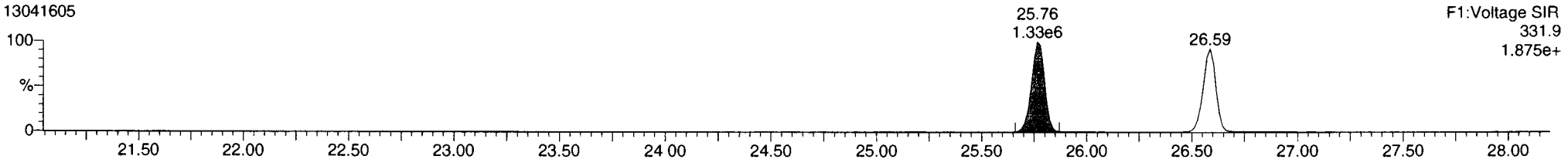
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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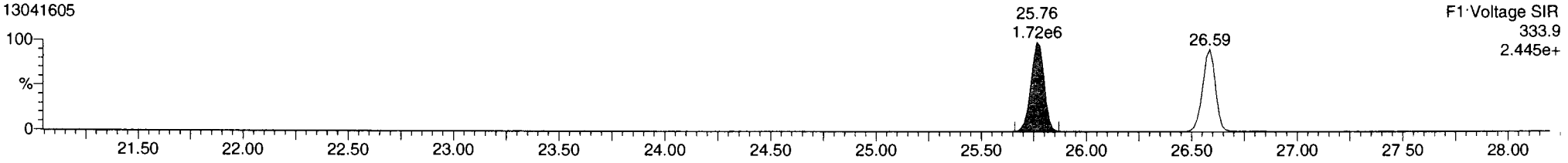

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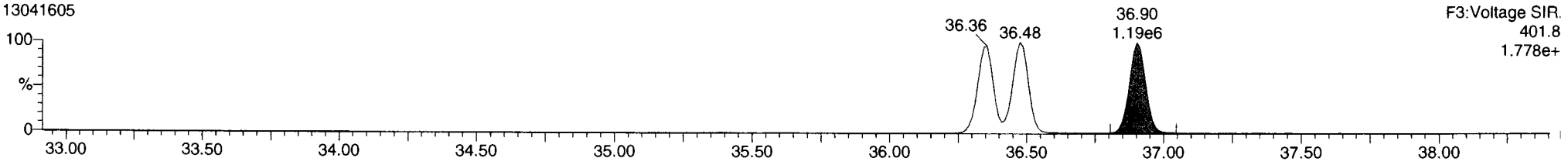

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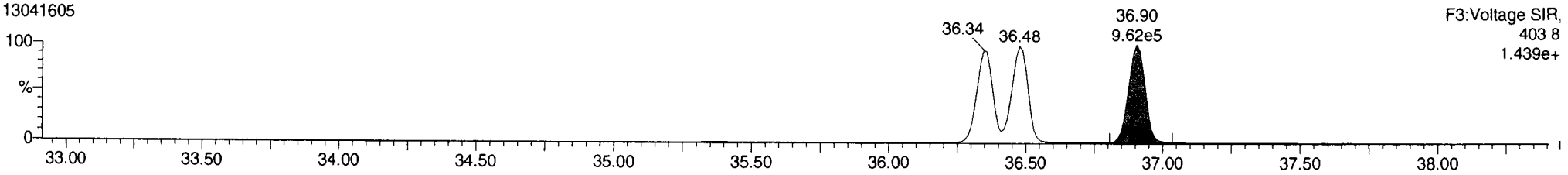

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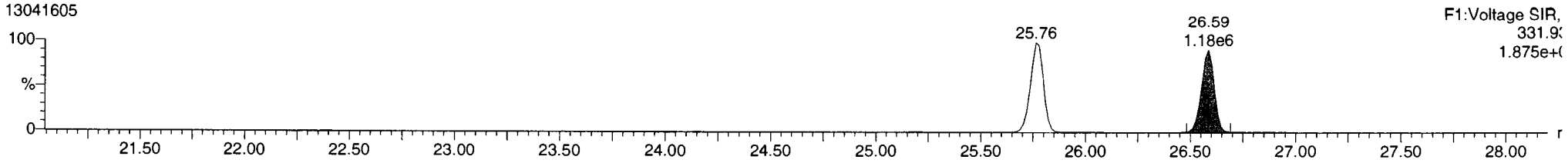
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

ID: WK49OPR, Name: 13041605, Date: 16-Apr-2013, Time: 13:53:11, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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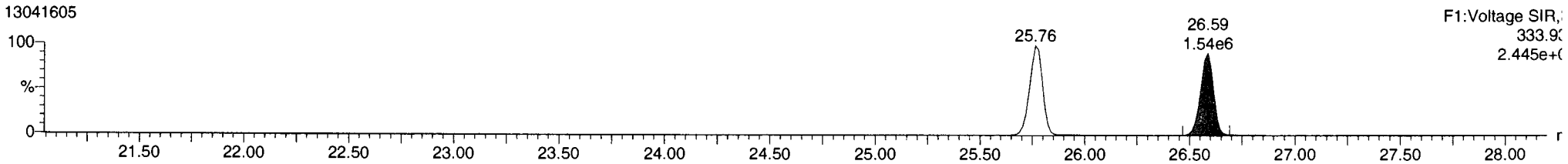

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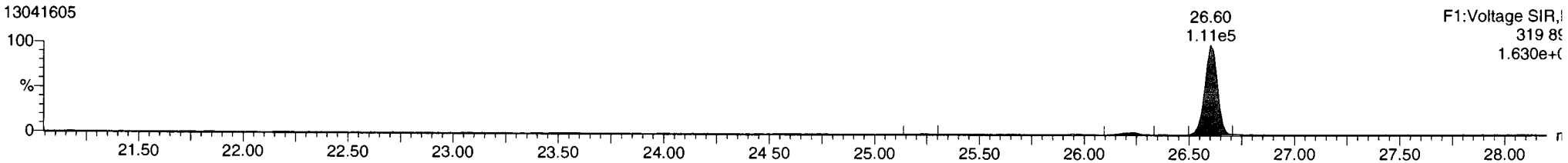

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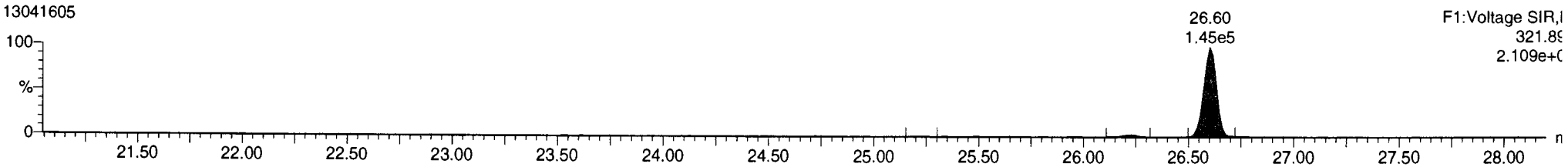

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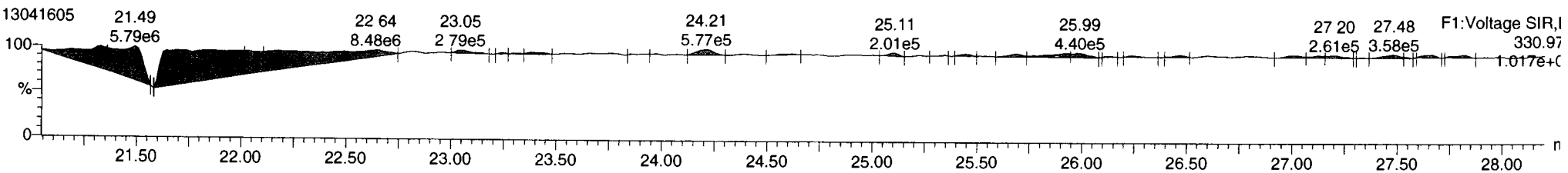

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:50 Pacific Daylight Time

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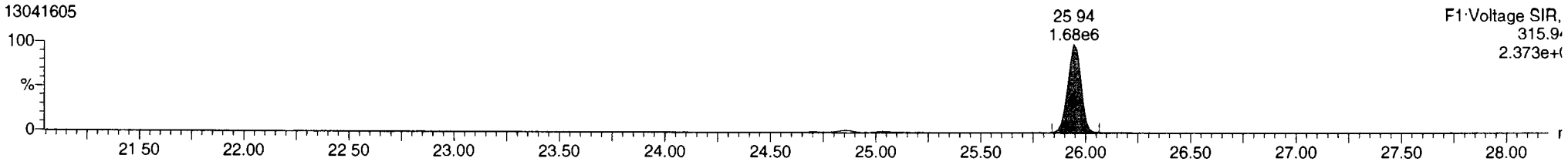
13C-2378-TCDF



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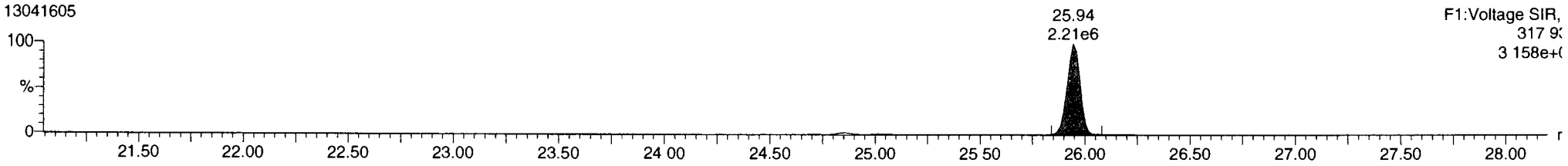
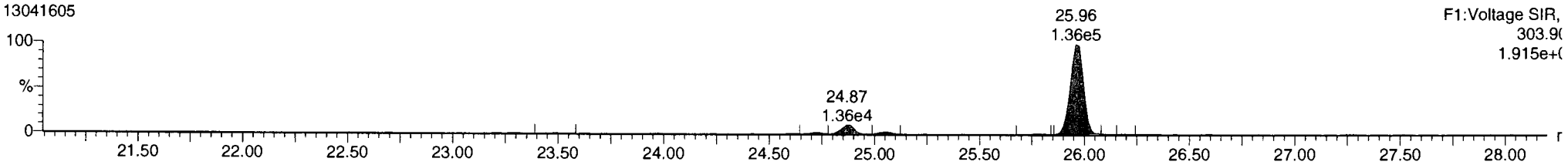


Total-tetrafurans



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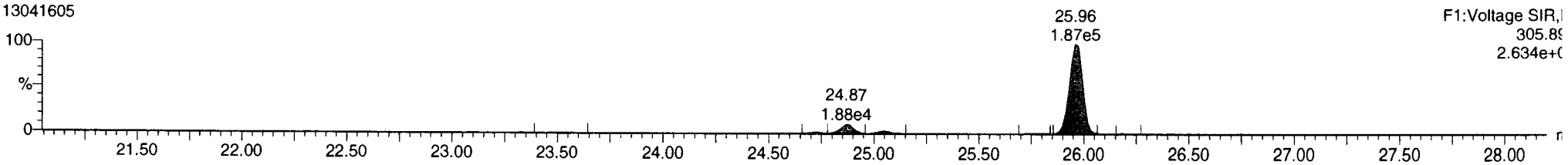
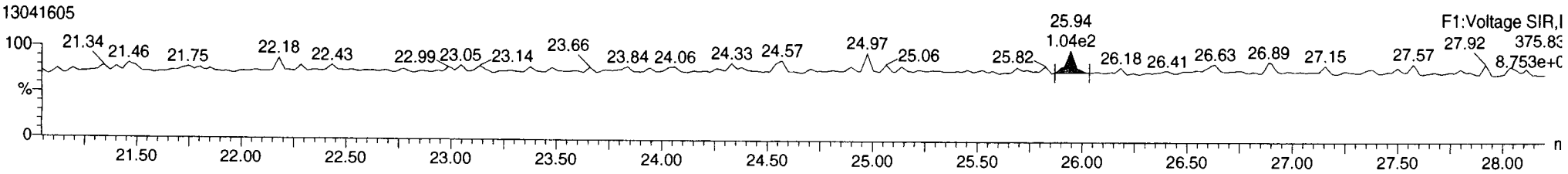


FUNCTION1 HXCDPE



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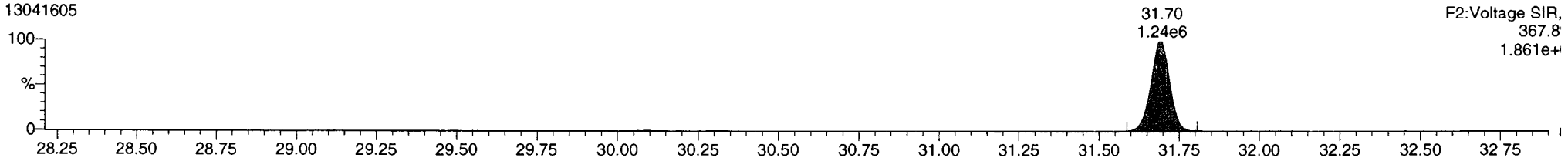
13C-12378-PeCDD



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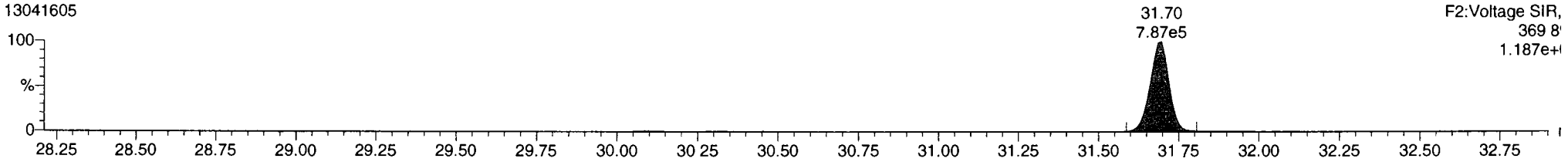
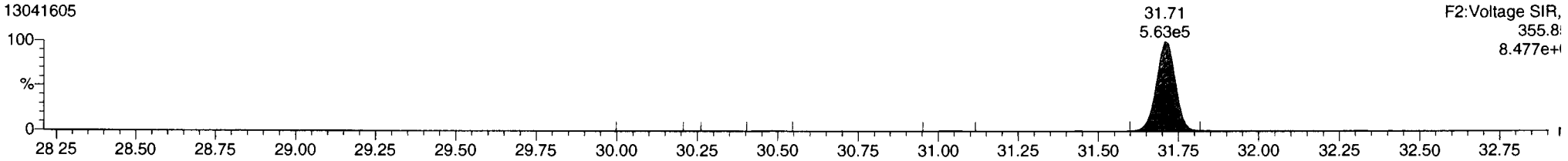
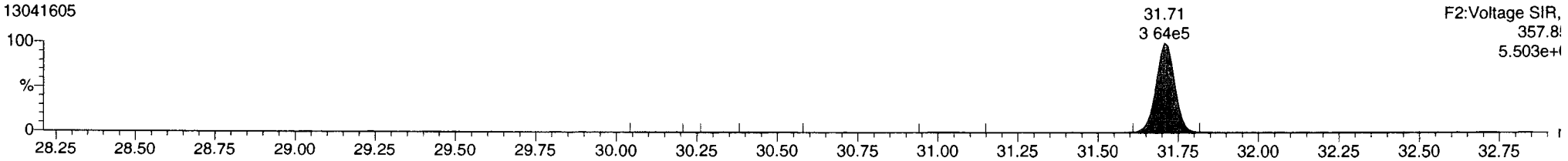


Total-pentadioxins



Total-pentadioxins



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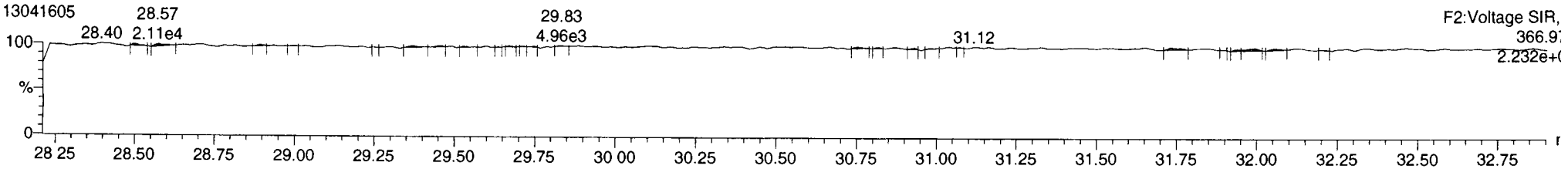

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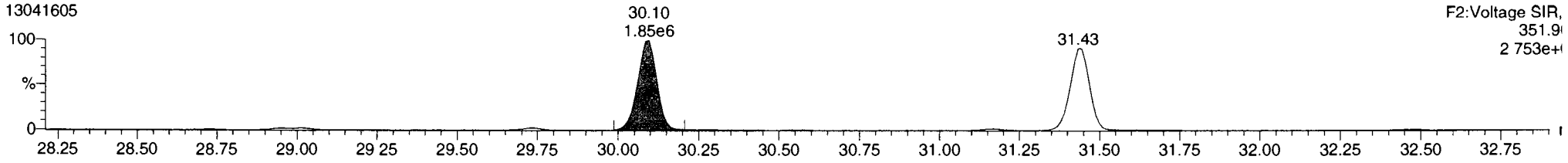
13C-12378-PeCDF



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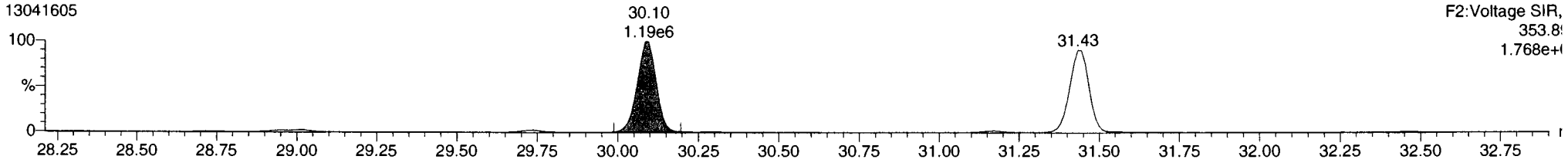

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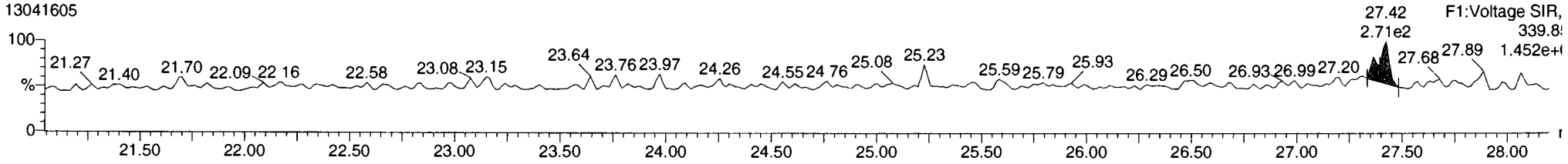

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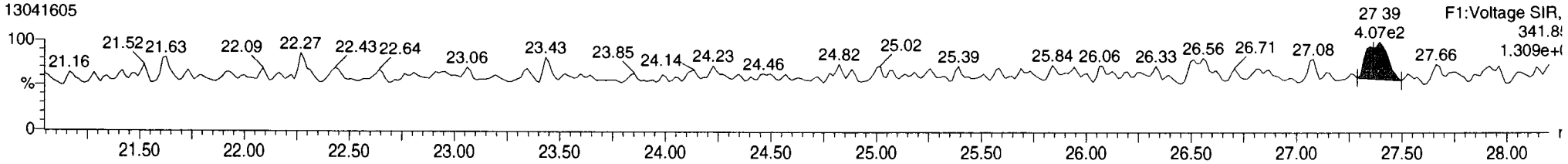

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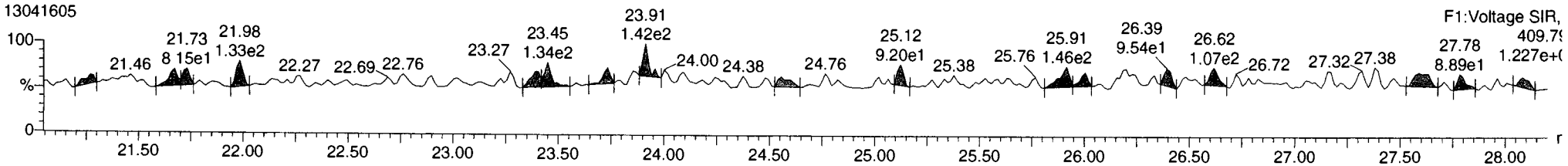

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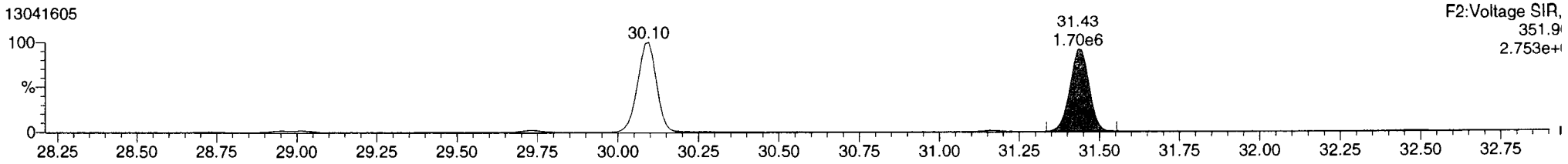

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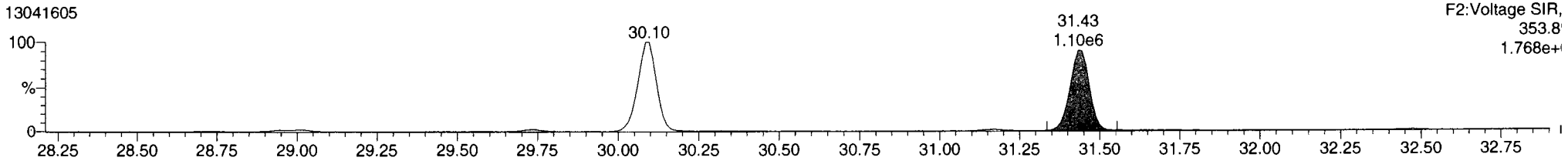

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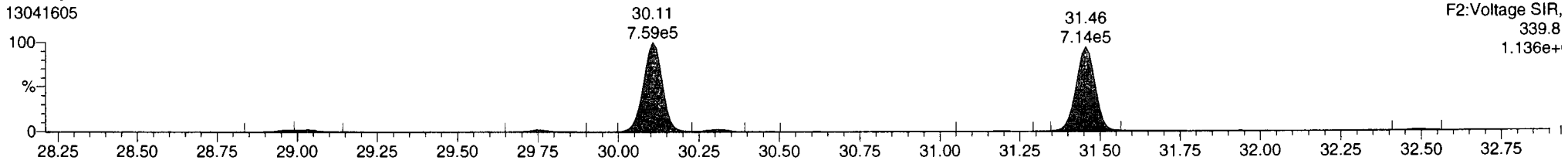

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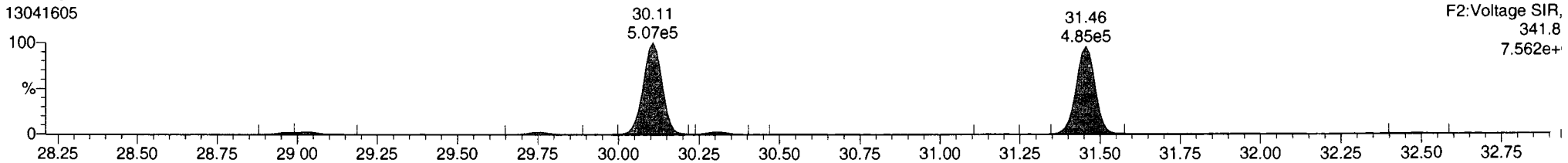

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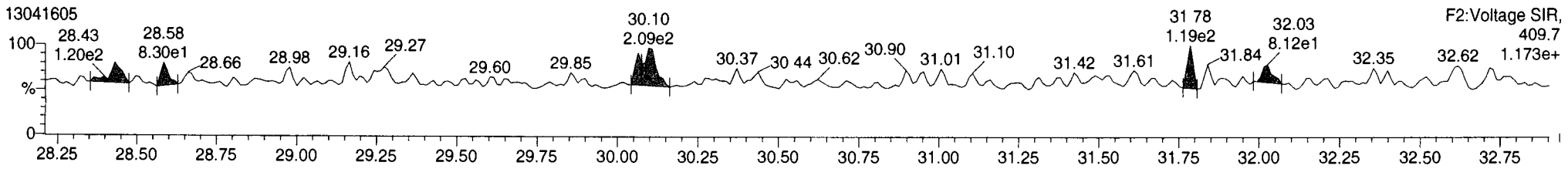

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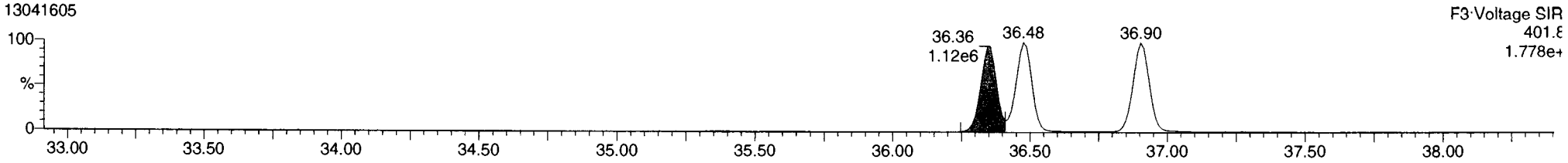
13C-123478-HxCDD



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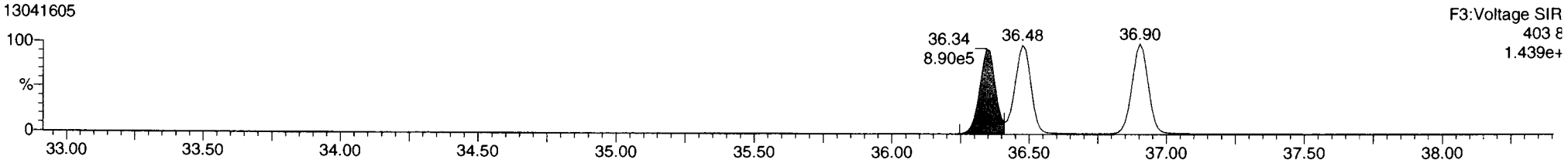

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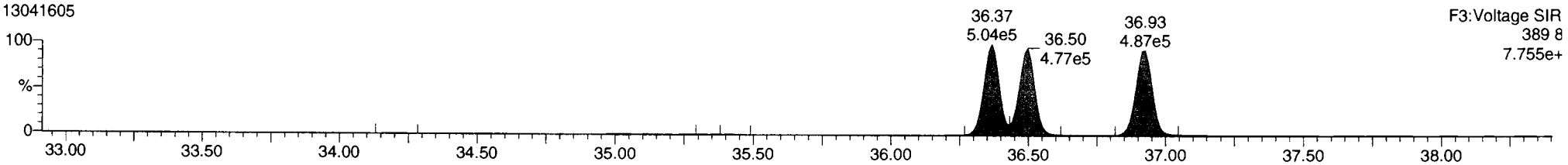

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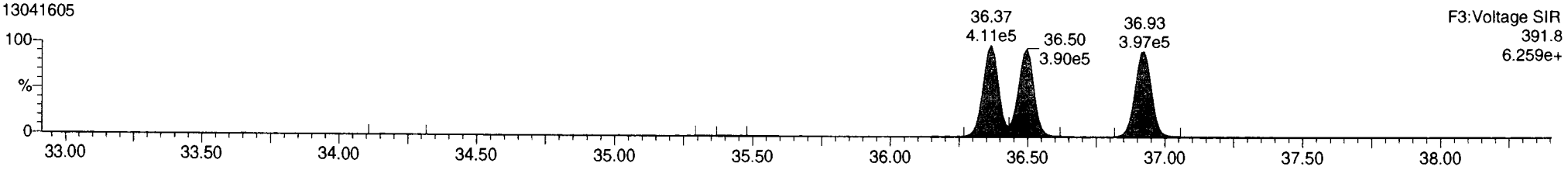

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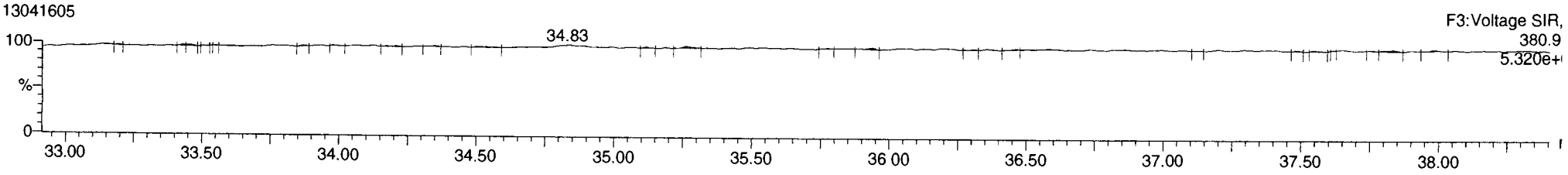

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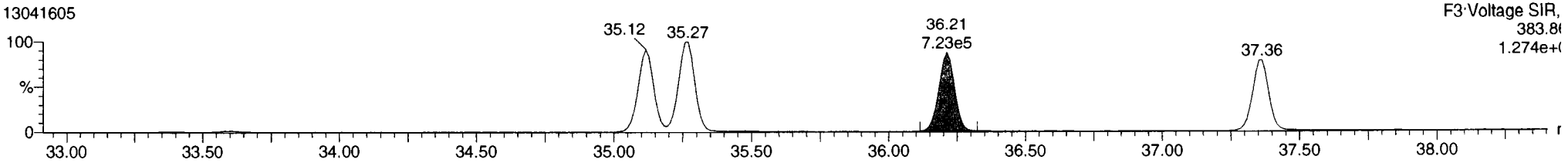

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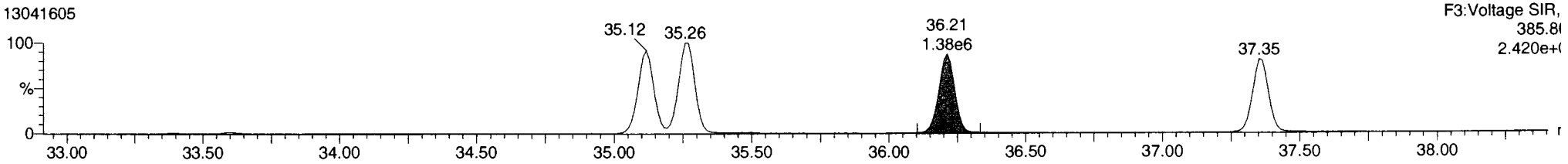

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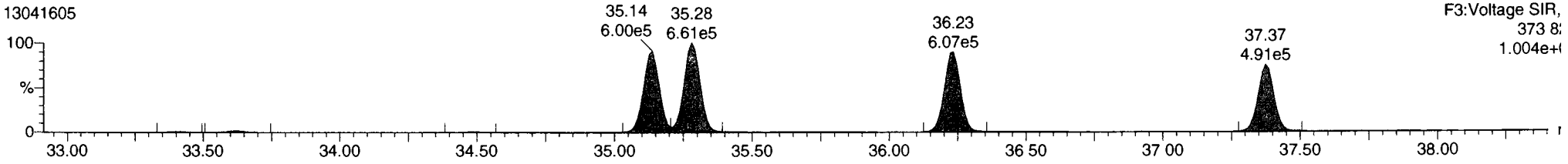

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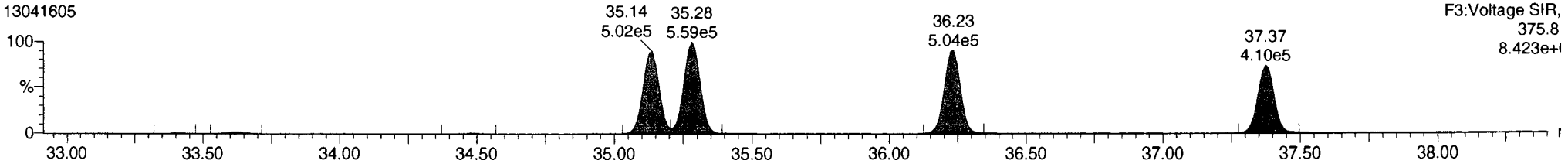

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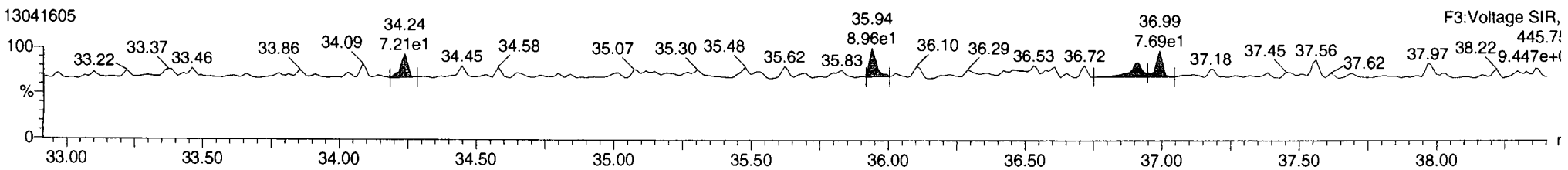

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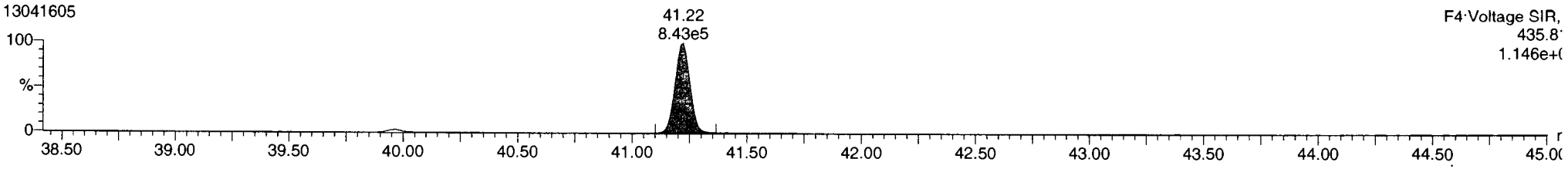

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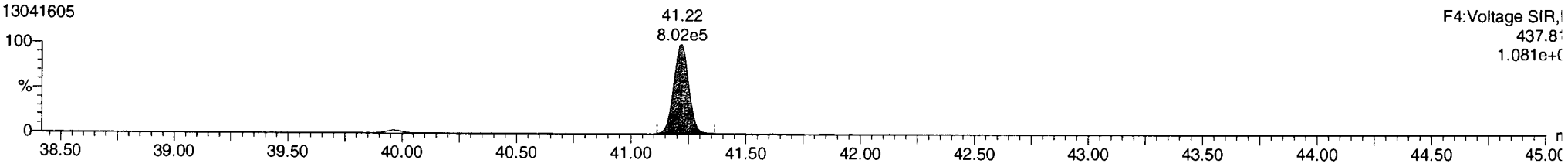
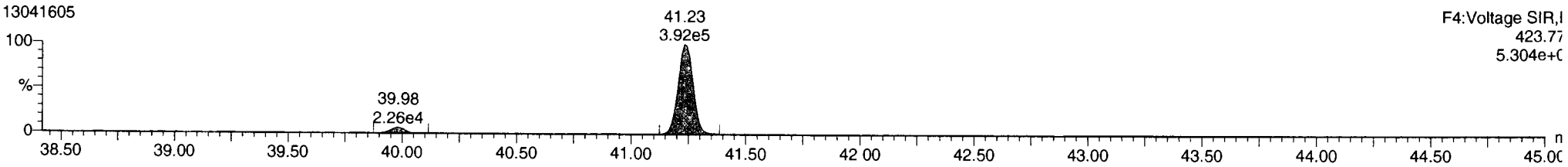


Total-heptadioxins



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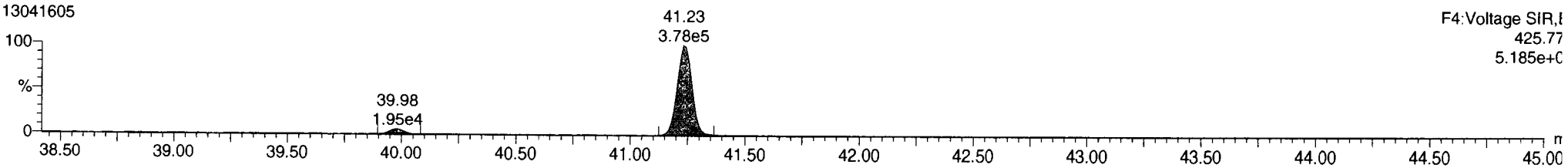
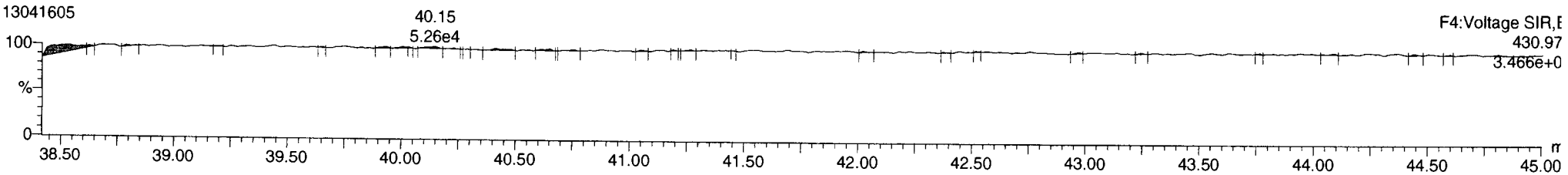


FUNCTION4 PFK



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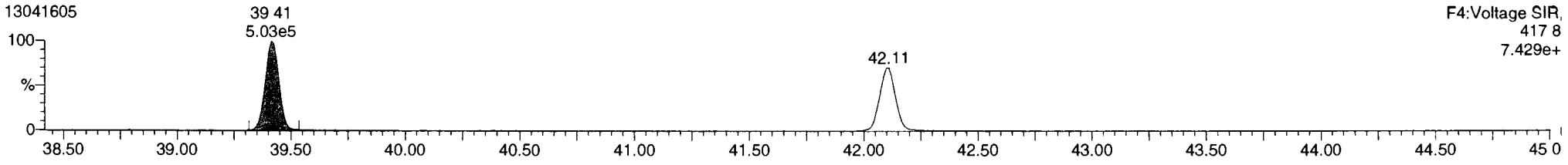
13C-1234678-HpCDF



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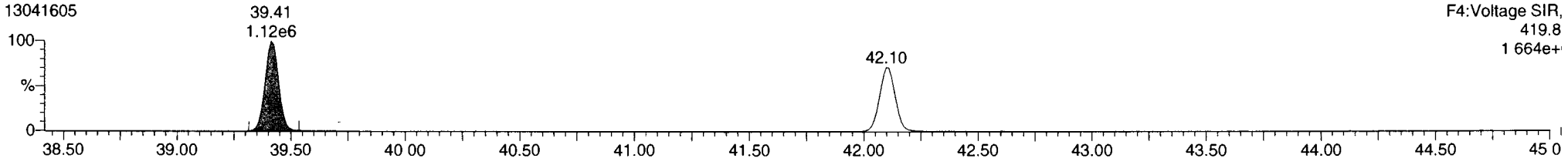

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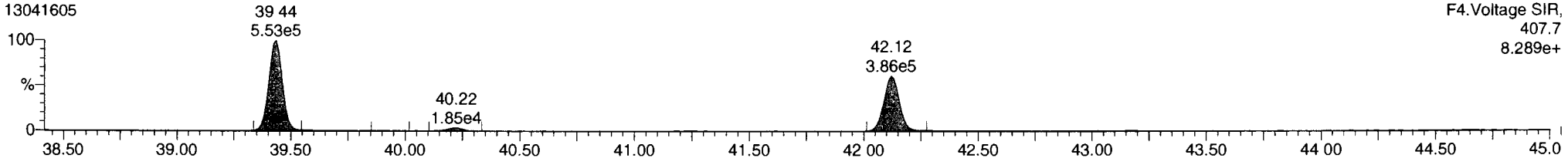

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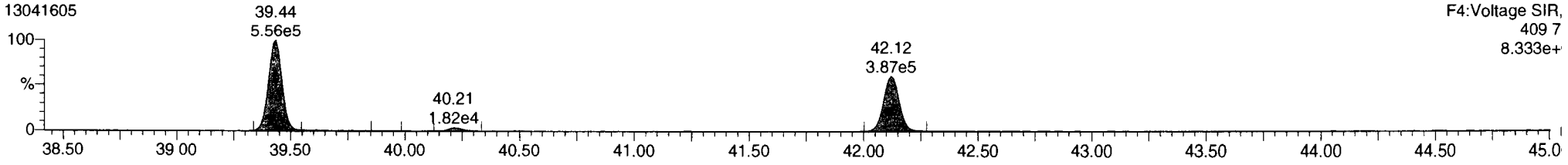

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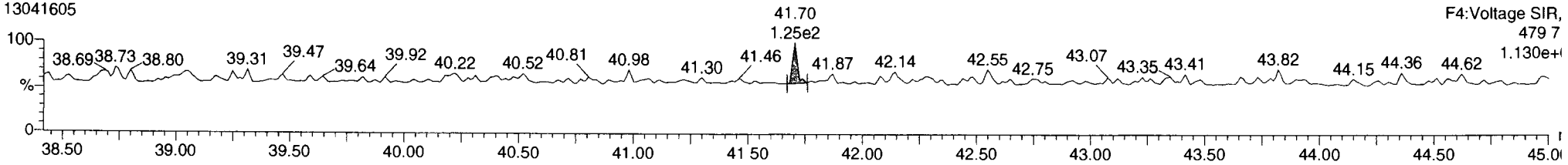

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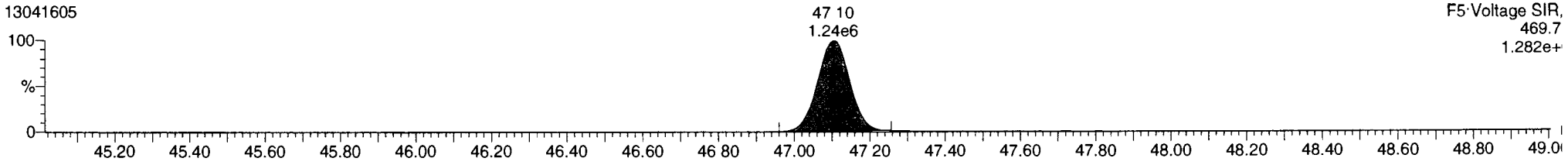
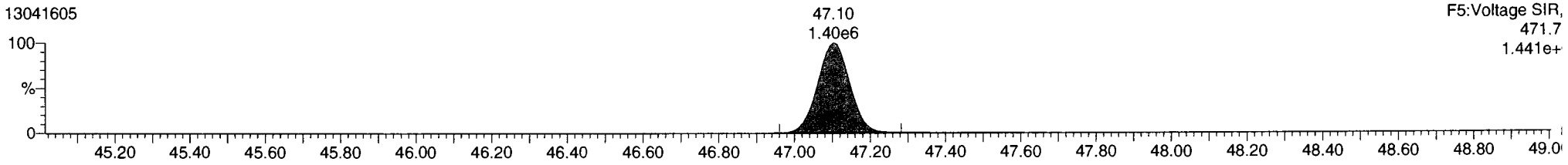
13C-OCDD



13C-OCDD



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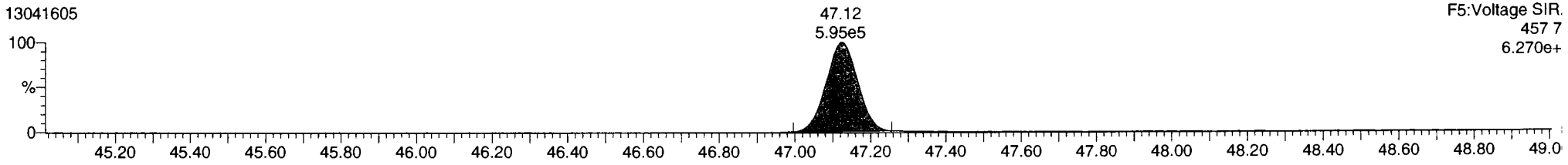

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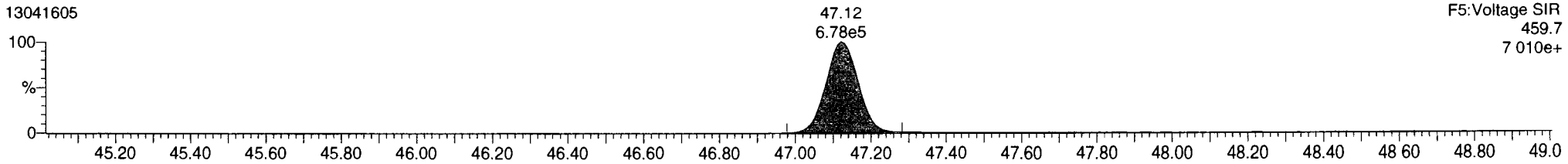
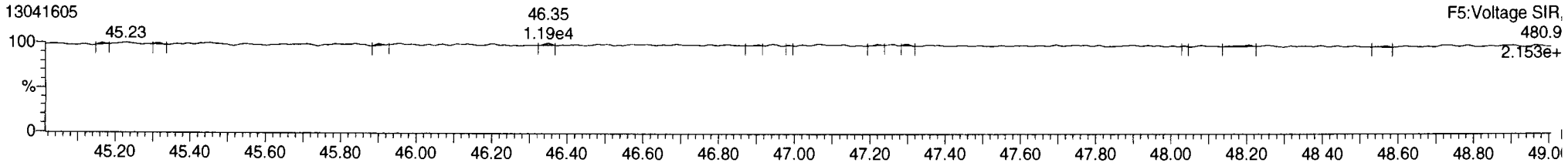


FUNCTION5 PFK



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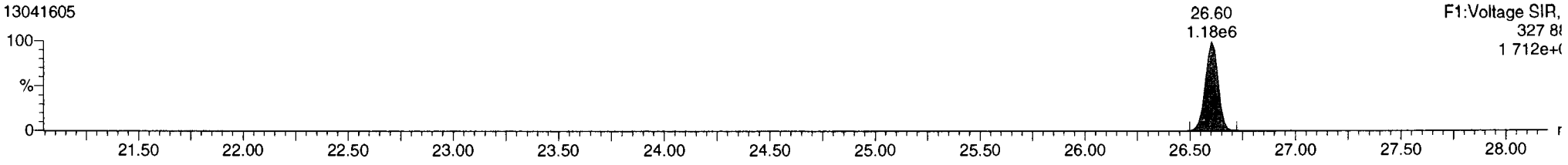
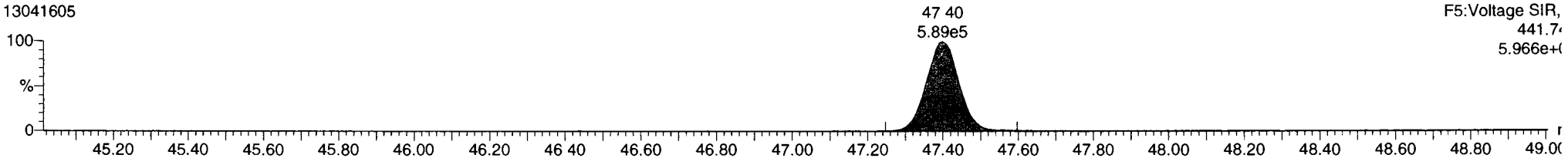
37CL-2378-TCDD



OCDF



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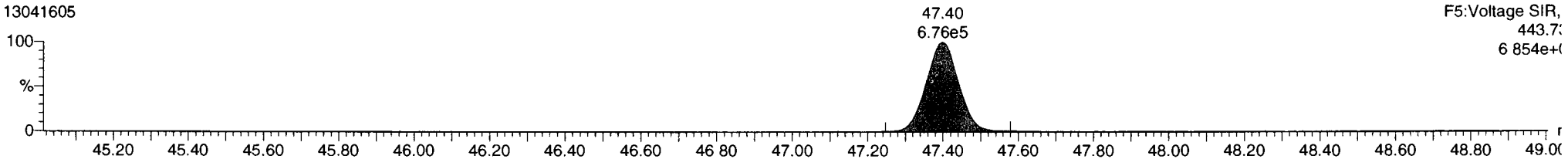
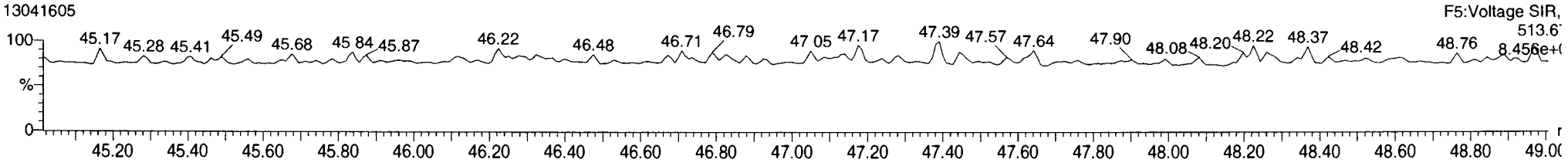


FUNCTION5 DCDPE



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Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

4/17/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
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ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

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1	2378-TCDF	26.033	1.001	8.22e4	1.12e5	0.763	0.737	0.770	414.1	3076	4103	1.27e6	1.66e6	NO	16.590	16.590
2	12378-PeCDF	30.198	1.001	1.03e5	6.75e4	0.836	1.530	1.550	167.9	9265	3737	1.56e6	1.01e6	NO	9.685	9.685
3	23478-PeCDF	31.535	1.001	2.11e5	1.42e5	0.851	1.489	1.550	330.8	9265	3737	3.07e6	2.04e6	NO	20.653	20.653
4	123478-HxCDF	35.218	1.000	1.96e5	1.66e5	1.017	1.180	1.240	632.5	4442	4105	2.81e6	2.46e6	NO	23.386	23.386
5	234678-HxCDF	36.315	1.000	1.66e5	1.42e5	1.027	1.174	1.240	422.7	4442	4105	1.88e6	1.65e6	NO	20.551	20.551
6	123678-HxCDF	35.372	1.001	1.29e5	1.10e5	1.013	1.171	1.240	429.1	4442	4105	1.91e6	1.67e6	NO	14.820	14.820
7	123789-HxCDF	37.422	1.000	4.05e4	3.41e4	0.929	1.188	1.240	129.3	4442	4105	5.74e5	4.93e5	NO	5.921	5.921
8	1234678-HpCDF	39.526	1.000	6.29e5	6.23e5	1.151	1.009	1.050	2068.8	4554	4033	9.42e6	9.35e6	NO	123.017	123.017
9	1234789-HpCDF	42.223	1.001	4.79e4	5.10e4	1.149	0.940	1.050	132.8	4554	4033	6.05e5	6.28e5	NO	12.379	12.379
10	OCDF	47.519	1.006	6.13e5	7.13e5	0.963	0.859	0.890	1777.3	3365	2238	5.98e6	6.94e6	NO	307.154	307.154
11	2378-TCDD	26.676	1.001	7.65e3	1.16e4	0.980	0.662	0.770	23.3	4919	3874	1.14e5	1.63e5	NO	1.228	1.228
12	12378-PeCDD	31.788	1.000	5.74e4	3.69e4	0.948	1.558	1.550	181.1	4199	2674	7.61e5	5.02e5	NO	5.946	5.946
13	123478-HxCDD	36.457	1.001	4.14e4	3.40e4	0.941	1.218	1.240	205.3	3131	3936	6.43e5	5.18e5	NO	5.718	5.718
14	123678-HxCDD	36.589	1.001	1.69e5	1.36e5	0.884	1.239	1.240	802.3	3131	3936	2.51e6	2.08e6	NO	23.404	23.404
15	123789-HxCDD	37.005	1.012	8.19e4	6.77e4	0.870	1.210	1.240	406.9	3131	3936	1.27e6	1.01e6	NO	11.971	11.971
16	1234678-HpCDD	41.335	1.001	2.22e6	2.16e6	0.948	1.027	1.050	3730.2	8174	6003	3.05e7	2.97e7	NO	542.350	542.350
17	OCDD	47.250	1.000	1.12e7	1.26e7	0.969	0.885	0.890	22695.6	4898	6092	1.11e8	1.25e8	NO	5469.475	5469.475
18	13C-2378-TCDF	26.018	1.007	6.64e5	8.68e5	1.318	0.765	0.770	1468.9	6799	4800	9.99e6	1.29e7	NO		32.993
19	13C-12378-PeCDF	30.176	1.168	1.28e6	8.26e5	1.026	1.554	1.550	3436.7	5482	3353	1.88e7	1.21e7	NO		58.362
20	13C-23478-PeCDF	31.514	1.220	1.22e6	7.87e5	0.966	1.552	1.550	3397.2	5482	3353	1.86e7	1.21e7	NO		59.032
21	13C-123478-HxCDF	35.208	0.952	5.20e5	1.00e6	1.123	0.518	0.510	1552.0	4931	4375	7.65e6	1.47e7	NO		73.268
22	13C-123678-HxCDF	35.350	0.956	5.51e5	1.05e6	1.216	0.527	0.510	1612.4	4931	4375	7.95e6	1.52e7	NO		70.889
23	13C-234678-HxCDF	36.304	0.981	4.97e5	9.62e5	1.106	0.517	0.510	1511.5	4931	4375	7.45e6	1.43e7	NO		71.260
24	13C-123789-HxCDF	37.433	1.012	4.65e5	8.91e5	0.995	0.522	0.510	1436.2	4931	4375	7.08e6	1.37e7	NO		73.601
25	13C-1234678-HpCDF	39.515	1.068	2.73e5	6.11e5	0.896	0.447	0.440	941.8	4285	3079	4.04e6	8.98e6	NO		53.291
26	13C-1234789-HpCDF	42.201	1.141	2.17e5	4.79e5	0.693	0.453	0.440	650.0	4285	3079	2.79e6	6.20e6	NO		54.182
27	13C-1234-TCDD	25.839	0.000	1.53e6	1.99e6	1.000	0.771	0.770	4621.3	5034	4679	2.33e7	2.98e7	NO		100.000
28	13C-2378-TCDD	26.661	1.032	6.96e5	9.00e5	0.961	0.773	0.770	1999.7	5034	4679	1.01e7	1.30e7	NO		47.128
29	13C-12378-PeCDD	31.777	1.230	1.02e6	6.50e5	0.703	1.571	1.550	4700.3	3326	3351	1.56e7	9.92e6	NO		67.464
30	13C-123478-HxCDD	36.435	0.985	7.80e5	6.20e5	1.016	1.258	1.240	3226.3	3601	3991	1.16e7	9.18e6	NO		74.482
31	13C-123678-HxCDD	36.567	0.988	8.10e5	6.64e5	1.098	1.220	1.240	3391.2	3601	3991	1.22e7	1.01e7	NO		72.456
32	13C-1234678-HpCDD	41.313	1.117	4.29e5	4.22e5	0.828	1.018	1.050	2404.3	2472	2645	5.94e6	5.75e6	NO		55.482
33	13C-OCDD	47.232	1.277	4.23e5	4.73e5	0.770	0.896	0.890	2290.6	1801	2385	4.13e6	4.68e6	NO		62.884

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

34	13C-123789-HxCDD	36.994	0.000	1.03e6	8.26e5	1.000	1.242	1.240	4406.6	3601	3991	1.59e7	1.27e7	NO	100.000
35	Total-tetrafurans			9.75e5		0.763				3076		1.32e7			193.169
36	Total-penta1			5.60e5						2307		6.43e6			49.339
37	Total-pentafurans			1.68e6		0.844				9265		2.27e7			162.437
38	Total-hexafurans			1.94e6		0.997				4442		2.70e7			240.490
39	Total-heptafurans			1.57e6		1.150				4554		2.28e7			331.872
40	Total-Furans			7.34e6		0.970				3076		9.80e7			1284.461
41	Total-tetradioxins			1.51e5		0.980				4919		2.05e6			22.179
42	Total-pentadioxins			3.97e5		0.948				4199		5.19e6			41.486
43	Total-hexadioxins			1.14e6		0.898				3131		1.53e7			160.293
44	Total-heptadioxins			4.19e6		0.948				8174		5.90e7			1022.849
45	Total-Dioxins			1.70e7		0.934				4919		1.93e8			6716.350
46	Total-TEQ			2.44e7						4919		2.91e8			8000.811
47	37CL-2378-TCDD	26.676	1.032	7.68e5		0.999			3483.4	3311		1.15e7			21.815
48	FUNCTION1 PFK			1.03e6						377382		1.31e7			
49	FUNCTION2 PFK			1.37e6						151710		1.57e7			0.000
50	FUNCTION3 PFK			3.34e5						353718		2.00e6			0.000
51	FUNCTION4 PFK			5.75e5						292904		1.25e7			
52	FUNCTION5 PFK			7.28e4						204324		2.98e6			
53	FUNCTION1 HXCDPE			1.78e4						2050		2.69e5			0.000
54	FUNCTION1 HPCDPE			1.39e4						2106		2.25e5			0.000
55	FUNCTION2 HPCDPE			1.09e4						2595		1.76e5			0.000
56	FUNCTION3 OCDPE			1.11e4						2507		2.05e5			0.000
57	FUNCTION4 NCDPE			1.62e4						2132		2.51e5			0.000
58	FUNCTION5 DCDPE			5.07e3						3378		7.92e4			0.000

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	Conc.	EMPC	1° Rat...	I.S. Rat...	Mask	S/N
	35	Total-tetrafurans	303.9016	24.94	136550.203	0.763	11.685		0.71	0.77	NO	262.1
	35	Total-tetrafurans	303.9016	24.79	48313.154	0.763	4.134		0.70	0.77	NO	106.3
	35	Total-tetrafurans	303.9016	24.70	215657.032	0.763	18.454		0.72	0.77	NO	353.6
	35	Total-tetrafurans	303.9016	24.27	54259.695	0.763	4.643		0.74	0.77	NO	111.1
	35	Total-tetrafurans	303.9016	24.14	63777.754	0.763	5.458		0.72	0.77	NO	120.9
	35	Total-tetrafurans	303.9016	24.03	46212.134	0.763	3.955		0.75	0.77	NO	90.3
	35	Total-tetrafurans	303.9016	23.87	40267.414	0.763	3.446		0.81	0.77	NO	86.8
	35	Total-tetrafurans	303.9016	23.78	36368.972	0.763	3.112		0.73	0.77	NO	74.1
	35	Total-tetrafurans	303.9016	23.67	62898.068	0.763	5.382		0.76	0.77	NO	117.6
	35	Total-tetrafurans	303.9016	23.55	123863.180	0.763	10.599		0.71	0.77	NO	150.5
	35	Total-tetrafurans	303.9016	23.37	139151.754	0.763	11.908		0.75	0.77	NO	225.8
	35	Total-tetrafurans	303.9016	22.79	53718.666	0.763	4.597		0.74	0.77	NO	111.0
	35	Total-tetrafurans	303.9016	22.52	40056.246	0.763	3.428		0.80	0.77	NO	85.2
	35	Total-tetrafurans	303.9016	27.51	22014.784	0.763	1.884		0.71	0.77	NO	54.0
	35	Total-tetrafurans	303.9016	27.44	76098.668	0.763	6.512		1.99	0.77	YES	229.7
	35	Total-tetrafurans	303.9016	26.54	5838.073	0.763	0.500		0.55	0.77	YES	8.9
	35	Total-tetrafurans	303.9016	26.42	3033.358	0.763	0.260		0.86	0.77	NO	8.3
	35	Total-tetrafurans	303.9016	26.26	231726.531	0.763	19.829		0.75	0.77	NO	483.5
	35	Total-tetrafurans	303.9016	26.17	166793.992	0.763	14.273		0.73	0.77	NO	319.8
	1	2378-TCDF	303.9016	26.03	193875.657	0.763	16.590	16.590	0.74	0.77	NO	414.1
	35	Total-tetrafurans	303.9016	25.79	175050.211	0.763	14.980		0.75	0.77	NO	232.3
	35	Total-tetrafurans	303.9016	25.66	8041.163	0.763	0.688		0.62	0.77	YES	16.1
	35	Total-tetrafurans	303.9016	25.54	113165.821	0.763	9.684		0.75	0.77	NO	226.5
	35	Total-tetrafurans	303.9016	25.35	46308.994	0.763	3.963		0.76	0.77	NO	102.0
	35	Total-tetrafurans	303.9016	25.12	154323.571	0.763	13.206		0.71	0.77	NO	296.7

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	Conc.	EMPC	1° Rat...	I.S. Rat...	Mask	S/N
	36	Total-penta1	339.8597	27.47	931598.032		49.339		1.50	1.55	NO	2787.5

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

PF

		Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	37 Rati...	35 Ratio	37 R...	S/N
	37	Total-pentafurans	339.8597	29.41	16475.770	0.844	0.948		1.36	1.55	NO	16.8
	37	Total-pentafurans	339.8597	29.24	15891.749	0.844	0.915		1.18	1.55	YES	13.9
	37	Total-pentafurans	339.8597	29.11	363529.297	0.844	20.927		1.50	1.55	NO	359.3
	37	Total-pentafurans	339.8597	29.05	389352.969	0.844	22.414		1.47	1.55	NO	389.3
	37	Total-pentafurans	339.8597	28.92	374593.828	0.844	21.564		1.48	1.55	NO	212.1
	37	Total-pentafurans	339.8597	32.57	40022.267	0.844	2.304		1.84	1.55	YES	25.2
	3	23478-PeCDF	339.8597	31.54	353148.266	0.851	20.653	20.653	1.49	1.55	NO	330.8
	37	Total-pentafurans	339.8597	31.38	106225.692	0.844	6.115		1.43	1.55	NO	104.5
	37	Total-pentafurans	339.8597	31.26	243711.609	0.844	14.030		1.45	1.55	NO	230.0
	37	Total-pentafurans	339.8597	31.02	19396.265	0.844	1.117		1.55	1.55	NO	18.6
	37	Total-pentafurans	339.8597	30.68	12078.537	0.844	0.695		1.51	1.55	NO	13.2
	37	Total-pentafurans	339.8597	30.51	76867.528	0.844	4.425		1.42	1.55	NO	78.6
	37	Total-pentafurans	339.8597	30.40	180067.375	0.844	10.366		1.50	1.55	NO	165.8
	2	12378-PeCDF	339.8597	30.20	170794.235	0.836	9.685	9.685	1.53	1.55	NO	167.9
	37	Total-pentafurans	339.8597	29.84	354054.266	0.844	20.382		1.51	1.55	NO	232.2
	37	Total-pentafurans	339.8597	29.73	27548.203	0.844	1.586		1.40	1.55	NO	31.5
	37	Total-pentafurans	339.8597	29.62	74904.632	0.844	4.312		1.31	1.55	YES	62.3

HF

		Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	37 Rati...	35 Ratio	37 R...	S/N
	5	234678-HxCDF	373.8208	36.31	307952.813	1.027	20.551	20.551	1.17	1.24	NO	422.7
	38	Total-hexafurans	373.8208	35.94	27040.124	0.997	1.829		1.13	1.24	NO	43.5
	38	Total-hexafurans	373.8208	35.72	34916.824	0.997	2.362		1.21	1.24	NO	62.6
	38	Total-hexafurans	373.8208	35.59	20499.905	0.997	1.387		1.35	1.24	NO	35.3
	6	123678-HxCDF	373.8208	35.37	239544.632	1.013	14.820	14.820	1.17	1.24	NO	429.1
	4	123478-HxCDF	373.8208	35.22	362322.578	1.017	23.386	23.386	1.18	1.24	NO	632.5
	38	Total-hexafurans	373.8208	35.05	201762.828	0.997	13.648		1.24	1.24	NO	378.1
	38	Total-hexafurans	373.8208	34.57	770264.969	0.997	52.102		1.19	1.24	NO	1415.4
	38	Total-hexafurans	373.8208	34.25	56787.168	0.997	3.841		1.24	1.24	NO	103.5
	38	Total-hexafurans	373.8208	33.98	25632.091	0.997	1.734		1.25	1.24	NO	42.1
	38	Total-hexafurans	373.8208	33.71	1152366.125	0.997	77.949		1.17	1.24	NO	1803.9
	38	Total-hexafurans	373.8208	33.50	309891.500	0.997	20.962		1.18	1.24	NO	571.1
	7	123789-HxCDF	373.8208	37.42	74590.262	0.929	5.921	5.921	1.19	1.24	NO	129.3

HPF

		Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	37 Rati...	35 Ratio	37 R...	S/N
	9	1234789-HpCDF	407.7818	42.22	98941.887	1.149	12.379	12.379	0.94	1.05	NO	132.8
	39	Total-heptafurans	407.7818	40.32	1698454.876	1.150	186.999		1.00	1.05	NO	2666.2
	39	Total-heptafurans	407.7818	40.02	86067.477	1.150	9.476		1.05	1.05	NO	128.6
	8	1234678-HpCDF	407.7818	39.53	1251662.563	1.151	123.017	123....	1.01	1.05	NO	2068.8

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

		Name		RT	Abs Area	RRF M		Conc	T Ratio	LT Ratio	T Res	S/N
	35	Total-tetrafurans	303.9016	24.94	136550.203	0.763	11.685		0.71	0.77	NO	262.1
	35	Total-tetrafurans	303.9016	24.79	48313.154	0.763	4.134		0.70	0.77	NO	106.3
	35	Total-tetrafurans	303.9016	24.70	215657.032	0.763	18.454		0.72	0.77	NO	353.6
	35	Total-tetrafurans	303.9016	24.27	54259.695	0.763	4.643		0.74	0.77	NO	111.1
	35	Total-tetrafurans	303.9016	24.14	63777.754	0.763	5.458		0.72	0.77	NO	120.9
	35	Total-tetrafurans	303.9016	24.03	46212.134	0.763	3.955		0.75	0.77	NO	90.3
	35	Total-tetrafurans	303.9016	23.87	40267.414	0.763	3.446		0.81	0.77	NO	86.8
	35	Total-tetrafurans	303.9016	23.78	36368.972	0.763	3.112		0.73	0.77	NO	74.1
	35	Total-tetrafurans	303.9016	23.67	62898.068	0.763	5.382		0.76	0.77	NO	117.6
	35	Total-tetrafurans	303.9016	23.55	123863.180	0.763	10.599		0.71	0.77	NO	150.5
	35	Total-tetrafurans	303.9016	23.37	139151.754	0.763	11.908		0.75	0.77	NO	225.8
	35	Total-tetrafurans	303.9016	22.79	53718.666	0.763	4.597		0.74	0.77	NO	111.0
	35	Total-tetrafurans	303.9016	22.52	40056.246	0.763	3.428		0.80	0.77	NO	85.2
	35	Total-tetrafurans	303.9016	27.51	22014.784	0.763	1.884		0.71	0.77	NO	54.0
	35	Total-tetrafurans	303.9016	27.44	76098.668	0.763	6.512		1.99	0.77	YES	229.7
	35	Total-tetrafurans	303.9016	26.54	5838.073	0.763	0.500		0.55	0.77	YES	8.9
	35	Total-tetrafurans	303.9016	26.42	3033.358	0.763	0.260		0.86	0.77	NO	8.3
	35	Total-tetrafurans	303.9016	26.26	231726.531	0.763	19.829		0.75	0.77	NO	483.5
	35	Total-tetrafurans	303.9016	26.17	166793.992	0.763	14.273		0.73	0.77	NO	319.8
	1	2378-TCDF	303.9016	26.03	193875.657	0.763	16.590	16.590	0.74	0.77	NO	414.1
	35	Total-tetrafurans	303.9016	25.79	175050.211	0.763	14.980		0.75	0.77	NO	232.3
	35	Total-tetrafurans	303.9016	25.66	8041.163	0.763	0.688		0.62	0.77	YES	16.1
	35	Total-tetrafurans	303.9016	25.54	113165.821	0.763	9.684		0.75	0.77	NO	226.5
	35	Total-tetrafurans	303.9016	25.35	46308.994	0.763	3.963		0.76	0.77	NO	102.0
	35	Total-tetrafurans	303.9016	25.12	154323.571	0.763	13.206		0.71	0.77	NO	296.7
	37	Total-pentafurans	339.8597	29.41	16475.770	0.844	0.948		1.36	1.55	NO	16.8
	37	Total-pentafurans	339.8597	29.24	15891.749	0.844	0.915		1.18	1.55	YES	13.9
	37	Total-pentafurans	339.8597	29.11	363529.297	0.844	20.927		1.50	1.55	NO	359.3
	37	Total-pentafurans	339.8597	29.05	389352.969	0.844	22.414		1.47	1.55	NO	389.3
	37	Total-pentafurans	339.8597	28.92	374593.828	0.844	21.564		1.48	1.55	NO	212.1
	37	Total-pentafurans	339.8597	32.57	40022.267	0.844	2.304		1.84	1.55	YES	25.2
	3	23478-PeCDF	339.8597	31.54	353148.266	0.851	20.653	20.653	1.49	1.55	NO	330.8
	37	Total-pentafurans	339.8597	31.38	106225.692	0.844	6.115		1.43	1.55	NO	104.5
	37	Total-pentafurans	339.8597	31.26	243711.609	0.844	14.030		1.45	1.55	NO	230.0
	37	Total-pentafurans	339.8597	31.02	19396.265	0.844	1.117		1.55	1.55	NO	18.6
	37	Total-pentafurans	339.8597	30.68	12078.537	0.844	0.695		1.51	1.55	NO	13.2
	37	Total-pentafurans	339.8597	30.51	76867.528	0.844	4.425		1.42	1.55	NO	78.6
	37	Total-pentafurans	339.8597	30.40	180067.375	0.844	10.366		1.50	1.55	NO	165.8
	2	12378-PeCDF	339.8597	30.20	170794.235	0.836	9.685	9.685	1.53	1.55	NO	167.9
	37	Total-pentafurans	339.8597	29.84	354054.266	0.844	20.382		1.51	1.55	NO	232.2
	37	Total-pentafurans	339.8597	29.73	27548.203	0.844	1.586		1.40	1.55	NO	31.5
	37	Total-pentafurans	339.8597	29.62	74904.632	0.844	4.312		1.31	1.55	YES	62.3
	5	234678-HxCDF	373.8208	36.31	307952.813	1.027	20.551	20.551	1.17	1.24	NO	422.7
	38	Total-hexafurans	373.8208	35.94	27040.124	0.997	1.829		1.13	1.24	NO	43.5
	38	Total-hexafurans	373.8208	35.72	34916.824	0.997	2.362		1.21	1.24	NO	62.6
	38	Total-hexafurans	373.8208	35.59	20499.905	0.997	1.387		1.35	1.24	NO	35.3
	6	123678-HxCDF	373.8208	35.37	239544.632	1.013	14.820	14.820	1.17	1.24	NO	429.1
	4	123478-HxCDF	373.8208	35.22	362322.578	1.017	23.386	23.386	1.18	1.24	NO	632.5
	38	Total-hexafurans	373.8208	35.05	201762.828	0.997	13.648		1.24	1.24	NO	378.1

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

D: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	38	Total-hexafurans	373.8208	34.57	770264.969	0.997	52.102		1.19	1.24	NO	1415.4
	38	Total-hexafurans	373.8208	34.25	56787.168	0.997	3.841		1.24	1.24	NO	103.5
	38	Total-hexafurans	373.8208	33.98	25632.091	0.997	1.734		1.25	1.24	NO	42.1
	38	Total-hexafurans	373.8208	33.71	1152366.125	0.997	77.949		1.17	1.24	NO	1803.9
	38	Total-hexafurans	373.8208	33.50	309891.500	0.997	20.962		1.18	1.24	NO	571.1
	7	123789-HxCDF	373.8208	37.42	74590.262	0.929	5.921	5.921	1.19	1.24	NO	129.3
	9	1234789-HpCDF	407.7818	42.22	98941.887	1.149	12.379	12.379	0.94	1.05	NO	132.8
	39	Total-heptafurans	407.7818	40.32	1698454.876	1.150	186.999		1.00	1.05	NO	2666.2
	39	Total-heptafurans	407.7818	40.02	86067.477	1.150	9.476		1.05	1.05	NO	128.6
	8	1234678-HpCDF	407.7818	39.53	1251662.563	1.151	123.017	123....	1.01	1.05	NO	2068.8
	10	OCDF	441.7428	47.52	1325922.813	0.963	307.154	307....	0.86	0.89	NO	1777.3
	36	Total-penta1	339.8597	27.47	931598.032		49.339		1.50	1.55	NO	2787.5

TD

	11	2378-TCDD	319.8965	26.68	19210.755	0.980	1.228	1.228	0.66	0.77	NO	23.3
	41	Total-tetradioxins	319.8965	26.30	45078.729	0.980	2.881		0.80	0.77	NO	42.6
	41	Total-tetradioxins	319.8965	26.00	5035.170	0.980	0.322		0.86	0.77	NO	6.1
	41	Total-tetradioxins	319.8965	25.85	10453.465	0.980	0.668		0.71	0.77	NO	12.5
	41	Total-tetradioxins	319.8965	25.64	20997.008	0.980	1.342		0.79	0.77	NO	25.3
	41	Total-tetradioxins	319.8965	25.56	2095.440	0.980	0.134		1.16	0.77	YES	4.3
	41	Total-tetradioxins	319.8965	25.29	44132.760	0.980	2.821		0.83	0.77	NO	57.2
	41	Total-tetradioxins	319.8965	25.02	26289.060	0.980	1.680		0.71	0.77	NO	26.8
	41	Total-tetradioxins	319.8965	24.79	2453.144	0.980	0.157		0.79	0.77	NO	3.2
	41	Total-tetradioxins	319.8965	24.29	7018.070	0.980	0.449		0.77	0.77	NO	9.1
	41	Total-tetradioxins	319.8965	24.08	57502.509	0.980	3.676		0.73	0.77	NO	72.9
	41	Total-tetradioxins	319.8965	23.82	62065.250	0.980	3.967		0.80	0.77	NO	83.1
	41	Total-tetradioxins	319.8965	27.24	20901.400	0.980	1.336		0.81	0.77	NO	20.5
	41	Total-tetradioxins	319.8965	26.80	23744.991	0.980	1.518		0.78	0.77	NO	29.2

PD

	42	Total-pentadioxins	355.8546	32.18	28408.867	0.948	1.792		1.57	1.55	NO	61.1
	12	12378-PeCDD	355.8546	31.79	94282.817	0.948	5.946	5.946	1.56	1.55	NO	181.1
	42	Total-pentadioxins	355.8546	31.12	48879.352	0.948	3.083		1.40	1.55	NO	85.2
	42	Total-pentadioxins	355.8546	30.72	61318.486	0.948	3.867		1.56	1.55	NO	95.5
	42	Total-pentadioxins	355.8546	30.56	78960.048	0.948	4.980		1.52	1.55	NO	172.4
	42	Total-pentadioxins	355.8546	30.42	58012.777	0.948	3.659		1.54	1.55	NO	133.5
	42	Total-pentadioxins	355.8546	30.21	95093.825	0.948	5.997		1.54	1.55	NO	216.3
	42	Total-pentadioxins	355.8546	29.57	25662.404	0.948	1.618		1.51	1.55	NO	56.6
	42	Total-pentadioxins	355.8546	29.10	167171.875	0.948	10.543		1.51	1.55	NO	235.1

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

HD

	#	Name	Trace	RT	Abs Area	RRF M...	ng	EMPC	% Rati...	% Rati...	IS R...	S/N
	14	123678-HxCDD	389.8157	36.59	304907.984	0.884	23.404	23.404	1.24	1.24	NO	802.3
	13	123478-HxCDD	389.8157	36.46	75385.496	0.941	5.718	5.718	1.22	1.24	NO	205.3
	43	Total-hexadioxins	389.8157	35.60	50591.178	0.898	3.918		1.27	1.24	NO	148.1
	43	Total-hexadioxins	389.8157	35.49	771216.219	0.898	59.731		1.22	1.24	NO	1424.8
	43	Total-hexadioxins	389.8157	35.11	238582.774	0.898	18.478		1.27	1.24	NO	630.5
	43	Total-hexadioxins	389.8157	34.30	403587.797	0.898	31.258		1.23	1.24	NO	1051.9
	43	Total-hexadioxins	389.8157	34.05	22827.949	0.898	1.768		1.33	1.24	NO	64.4
	15	123789-HxCDD	389.8157	37.01	149651.141	0.870	11.971	11.971	1.21	1.24	NO	406.9
	43	Total-hexadioxins	389.8157	36.76	52241.185	0.898	4.046		1.24	1.24	NO	138.3

HPD

	#	Name	Trace	RT	Abs Area	RRF M...	ng	EMPC	% Rati...	% Rati...	IS R...	S/N
	16	1234678-HpCDD	423.7766	41.33	4375070.500	0.948	542.350	542....	1.03	1.05	NO	3730.2
	44	Total-heptadioxins	423.7766	40.07	3876131.250	0.948	480.499		1.04	1.05	NO	3483.3

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
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Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

D: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	Name	Trace	RT	Area	RRF-MC	%D	EMPC	T.Rat...	T.Rat...	ID P...	S/N
11	2378-TCDD	319.8965	26.68	19210.755	0.980	1.228	1.228	0.66	0.77	NO	23.3
41	Total-tetradioxins	319.8965	26.30	45078.729	0.980	2.881		0.80	0.77	NO	42.6
41	Total-tetradioxins	319.8965	26.00	5035.170	0.980	0.322		0.86	0.77	NO	6.1
41	Total-tetradioxins	319.8965	25.85	10453.465	0.980	0.668		0.71	0.77	NO	12.5
41	Total-tetradioxins	319.8965	25.64	20997.008	0.980	1.342		0.79	0.77	NO	25.3
41	Total-tetradioxins	319.8965	25.56	2095.440	0.980	0.134		1.16	0.77	YES	4.3
41	Total-tetradioxins	319.8965	25.29	44132.760	0.980	2.821		0.83	0.77	NO	57.2
41	Total-tetradioxins	319.8965	25.02	26289.060	0.980	1.680		0.71	0.77	NO	26.8
41	Total-tetradioxins	319.8965	24.79	2453.144	0.980	0.157		0.79	0.77	NO	3.2
41	Total-tetradioxins	319.8965	24.29	7018.070	0.980	0.449		0.77	0.77	NO	9.1
41	Total-tetradioxins	319.8965	24.08	57502.509	0.980	3.676		0.73	0.77	NO	72.9
41	Total-tetradioxins	319.8965	23.82	62065.250	0.980	3.967		0.80	0.77	NO	83.1
45	Total-Dioxins	319.8965	27.65	1004.141	0.934	0.067		1.86	0.77	YES	2.5
41	Total-tetradioxins	319.8965	27.24	20901.400	0.980	1.336		0.81	0.77	NO	20.5
41	Total-tetradioxins	319.8965	26.80	23744.991	0.980	1.518		0.78	0.77	NO	29.2
42	Total-pentadioxins	355.8546	32.18	28408.867	0.948	1.792		1.57	1.55	NO	61.1
12	12378-PeCDD	355.8546	31.79	94282.817	0.948	5.946	5.946	1.56	1.55	NO	181.1
42	Total-pentadioxins	355.8546	31.12	48879.352	0.948	3.083		1.40	1.55	NO	85.2
42	Total-pentadioxins	355.8546	30.72	61318.486	0.948	3.867		1.56	1.55	NO	95.5
42	Total-pentadioxins	355.8546	30.56	78960.048	0.948	4.980		1.52	1.55	NO	172.4
42	Total-pentadioxins	355.8546	30.42	58012.777	0.948	3.659		1.54	1.55	NO	133.5
42	Total-pentadioxins	355.8546	30.21	95093.825	0.948	5.997		1.54	1.55	NO	216.3
42	Total-pentadioxins	355.8546	29.57	25662.404	0.948	1.618		1.51	1.55	NO	56.6
42	Total-pentadioxins	355.8546	29.10	167171.875	0.948	10.543		1.51	1.55	NO	235.1
14	123678-HxCDD	389.8157	36.59	304907.984	0.884	23.404	23.404	1.24	1.24	NO	802.3
13	123478-HxCDD	389.8157	36.46	75385.496	0.941	5.718	5.718	1.22	1.24	NO	205.3
43	Total-hexadioxins	389.8157	35.60	50591.178	0.898	3.918		1.27	1.24	NO	148.1
43	Total-hexadioxins	389.8157	35.49	771216.219	0.898	59.731		1.22	1.24	NO	1424.8
43	Total-hexadioxins	389.8157	35.11	238582.774	0.898	18.478		1.27	1.24	NO	630.5
43	Total-hexadioxins	389.8157	34.30	403587.797	0.898	31.258		1.23	1.24	NO	1051.9
43	Total-hexadioxins	389.8157	34.05	22827.949	0.898	1.768		1.33	1.24	NO	64.4
15	123789-HxCDD	389.8157	37.01	149651.141	0.870	11.971	11.971	1.21	1.24	NO	406.9
43	Total-hexadioxins	389.8157	36.76	52241.185	0.898	4.046		1.24	1.24	NO	138.3
16	1234678-HpCDD	423.7766	41.33	4375070.500	0.948	542.350	542....	1.03	1.05	NO	3730.2
44	Total-heptadioxins	423.7766	40.07	3876131.250	0.948	480.499		1.04	1.05	NO	3483.3
17	OCDD	457.7377	47.25	23759114....	0.969	5469.4...	5469...	0.89	0.89	NO	22695.6

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rat	1° Rat	1 Pk	S/N
[redacted]	35	Total-tetrafurans	303.9016	24.94	136550.203	0.763	11.685		0.71	0.77	NO	262.1
[redacted]	35	Total-tetrafurans	303.9016	24.79	48313.154	0.763	4.134		0.70	0.77	NO	106.3
[redacted]	35	Total-tetrafurans	303.9016	24.70	215657.032	0.763	18.454		0.72	0.77	NO	353.6
[redacted]	35	Total-tetrafurans	303.9016	24.27	54259.695	0.763	4.643		0.74	0.77	NO	111.1
[redacted]	35	Total-tetrafurans	303.9016	24.14	63777.754	0.763	5.458		0.72	0.77	NO	120.9
[redacted]	35	Total-tetrafurans	303.9016	24.03	46212.134	0.763	3.955		0.75	0.77	NO	90.3
[redacted]	35	Total-tetrafurans	303.9016	23.87	40267.414	0.763	3.446		0.81	0.77	NO	86.8
[redacted]	35	Total-tetrafurans	303.9016	23.78	36368.972	0.763	3.112		0.73	0.77	NO	74.1
[redacted]	35	Total-tetrafurans	303.9016	23.67	62898.068	0.763	5.382		0.76	0.77	NO	117.6
[redacted]	35	Total-tetrafurans	303.9016	23.55	123863.180	0.763	10.599		0.71	0.77	NO	150.5
[redacted]	35	Total-tetrafurans	303.9016	23.37	139151.754	0.763	11.908		0.75	0.77	NO	225.8
[redacted]	35	Total-tetrafurans	303.9016	22.79	53718.666	0.763	4.597		0.74	0.77	NO	111.0
[redacted]	35	Total-tetrafurans	303.9016	22.52	40056.246	0.763	3.428		0.80	0.77	NO	85.2
[redacted]	35	Total-tetrafurans	303.9016	27.51	22014.784	0.763	1.884		0.71	0.77	NO	54.0
[redacted]	35	Total-tetrafurans	303.9016	27.44	76098.668	0.763	6.512		1.99	0.77	YES	229.7
[redacted]	35	Total-tetrafurans	303.9016	26.54	5838.073	0.763	0.500		0.55	0.77	YES	8.9
[redacted]	35	Total-tetrafurans	303.9016	26.42	3033.358	0.763	0.260		0.86	0.77	NO	8.3
[redacted]	35	Total-tetrafurans	303.9016	26.26	231726.531	0.763	19.829		0.75	0.77	NO	483.5
[redacted]	35	Total-tetrafurans	303.9016	26.17	166793.992	0.763	14.273		0.73	0.77	NO	319.8
[redacted]	1	2378-TCDF	303.9016	26.03	193875.657	0.763	16.590	16.590	0.74	0.77	NO	414.1
[redacted]	35	Total-tetrafurans	303.9016	25.79	175050.211	0.763	14.980		0.75	0.77	NO	232.3
[redacted]	35	Total-tetrafurans	303.9016	25.66	8041.163	0.763	0.688		0.62	0.77	YES	16.1
[redacted]	35	Total-tetrafurans	303.9016	25.54	113165.821	0.763	9.684		0.75	0.77	NO	226.5
[redacted]	35	Total-tetrafurans	303.9016	25.35	46308.994	0.763	3.963		0.76	0.77	NO	102.0
[redacted]	35	Total-tetrafurans	303.9016	25.12	154323.571	0.763	13.206		0.71	0.77	NO	296.7
[redacted]	37	Total-pentafurans	339.8597	29.41	16475.770	0.844	0.948		1.36	1.55	NO	16.8
[redacted]	37	Total-pentafurans	339.8597	29.24	15891.749	0.844	0.915		1.18	1.55	YES	13.9
[redacted]	37	Total-pentafurans	339.8597	29.11	363529.297	0.844	20.927		1.50	1.55	NO	359.3
[redacted]	37	Total-pentafurans	339.8597	29.05	389352.969	0.844	22.414		1.47	1.55	NO	389.3
[redacted]	37	Total-pentafurans	339.8597	28.92	374593.828	0.844	21.564		1.48	1.55	NO	212.1
[redacted]	37	Total-pentafurans	339.8597	32.57	40022.267	0.844	2.304		1.84	1.55	YES	25.2
[redacted]	3	23478-PeCDF	339.8597	31.54	353148.266	0.851	20.653	20.653	1.49	1.55	NO	330.8
[redacted]	37	Total-pentafurans	339.8597	31.38	106225.692	0.844	6.115		1.43	1.55	NO	104.5
[redacted]	37	Total-pentafurans	339.8597	31.26	243711.609	0.844	14.030		1.45	1.55	NO	230.0
[redacted]	37	Total-pentafurans	339.8597	31.02	19396.265	0.844	1.117		1.55	1.55	NO	18.6
[redacted]	37	Total-pentafurans	339.8597	30.68	12078.537	0.844	0.695		1.51	1.55	NO	13.2
[redacted]	37	Total-pentafurans	339.8597	30.51	76867.528	0.844	4.425		1.42	1.55	NO	78.6
[redacted]	37	Total-pentafurans	339.8597	30.40	180067.375	0.844	10.366		1.50	1.55	NO	165.8
[redacted]	2	12378-PeCDF	339.8597	30.20	170794.235	0.836	9.685	9.685	1.53	1.55	NO	167.9
[redacted]	37	Total-pentafurans	339.8597	29.84	354054.266	0.844	20.382		1.51	1.55	NO	232.2
[redacted]	37	Total-pentafurans	339.8597	29.73	27548.203	0.844	1.586		1.40	1.55	NO	31.5
[redacted]	37	Total-pentafurans	339.8597	29.62	74904.632	0.844	4.312		1.31	1.55	YES	62.3
[redacted]	5	234678-HxCDF	373.8208	36.31	307952.813	1.027	20.551	20.551	1.17	1.24	NO	422.7
[redacted]	38	Total-hexafurans	373.8208	35.94	27040.124	0.997	1.829		1.13	1.24	NO	43.5
[redacted]	38	Total-hexafurans	373.8208	35.72	34916.824	0.997	2.362		1.21	1.24	NO	62.6
[redacted]	38	Total-hexafurans	373.8208	35.59	20499.905	0.997	1.387		1.35	1.24	NO	35.3
[redacted]	6	123678-HxCDF	373.8208	35.37	239544.632	1.013	14.820	14.820	1.17	1.24	NO	429.1
[redacted]	4	123478-HxCDF	373.8208	35.22	362322.578	1.017	23.386	23.386	1.18	1.24	NO	632.5
[redacted]	38	Total-hexafurans	373.8208	35.05	201762.828	0.997	13.648		1.24	1.24	NO	378.1

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R...	S/N
38	Total-hexafurans	373.8208	34.57	770264.969	0.997	52.102		1.19	1.24	NO	1415.4
38	Total-hexafurans	373.8208	34.25	56787.168	0.997	3.841		1.24	1.24	NO	103.5
38	Total-hexafurans	373.8208	33.98	25632.091	0.997	1.734		1.25	1.24	NO	42.1
38	Total-hexafurans	373.8208	33.71	1152366.125	0.997	77.949		1.17	1.24	NO	1803.9
38	Total-hexafurans	373.8208	33.50	309891.500	0.997	20.962		1.18	1.24	NO	571.1
7	123789-HxCDF	373.8208	37.42	74590.262	0.929	5.921	5.921	1.19	1.24	NO	129.3
9	1234789-HpCDF	407.7818	42.22	98941.887	1.149	12.379	12.379	0.94	1.05	NO	132.8
39	Total-heptafurans	407.7818	40.32	1698454.876	1.150	186.999		1.00	1.05	NO	2666.2
39	Total-heptafurans	407.7818	40.02	86067.477	1.150	9.476		1.05	1.05	NO	128.6
8	1234678-HpCDF	407.7818	39.53	1251662.563	1.151	123.017	123....	1.01	1.05	NO	2068.8
10	OCDF	441.7428	47.52	1325922.813	0.963	307.154	307....	0.86	0.89	NO	1777.3
36	Total-penta1	339.8597	27.47	931598.032		49.339		1.50	1.55	NO	2787.5
11	2378-TCDD	319.8965	26.68	19210.755	0.980	1.228	1.228	0.66	0.77	NO	23.3
41	Total-tetradioxins	319.8965	26.30	45078.729	0.980	2.881		0.80	0.77	NO	42.6
41	Total-tetradioxins	319.8965	26.00	5035.170	0.980	0.322		0.86	0.77	NO	6.1
41	Total-tetradioxins	319.8965	25.85	10453.465	0.980	0.668		0.71	0.77	NO	12.5
41	Total-tetradioxins	319.8965	25.64	20997.008	0.980	1.342		0.79	0.77	NO	25.3
41	Total-tetradioxins	319.8965	25.56	2095.440	0.980	0.134		1.16	0.77	YES	4.3
41	Total-tetradioxins	319.8965	25.29	44132.760	0.980	2.821		0.83	0.77	NO	57.2
41	Total-tetradioxins	319.8965	25.02	26289.060	0.980	1.680		0.71	0.77	NO	26.8
41	Total-tetradioxins	319.8965	24.79	2453.144	0.980	0.157		0.79	0.77	NO	3.2
41	Total-tetradioxins	319.8965	24.29	7018.070	0.980	0.449		0.77	0.77	NO	9.1
41	Total-tetradioxins	319.8965	24.08	57502.509	0.980	3.676		0.73	0.77	NO	72.9
41	Total-tetradioxins	319.8965	23.82	62065.250	0.980	3.967		0.80	0.77	NO	83.1
45	Total-Dioxins	319.8965	27.65	1004.141	0.934	0.067		1.86	0.77	YES	2.5
41	Total-tetradioxins	319.8965	27.24	20901.400	0.980	1.336		0.81	0.77	NO	20.5
41	Total-tetradioxins	319.8965	26.80	23744.991	0.980	1.518		0.78	0.77	NO	29.2
42	Total-pentadioxins	355.8546	32.18	28408.867	0.948	1.792		1.57	1.55	NO	61.1
12	12378-PeCDD	355.8546	31.79	94282.817	0.948	5.946	5.946	1.56	1.55	NO	181.1
42	Total-pentadioxins	355.8546	31.12	48879.352	0.948	3.083		1.40	1.55	NO	85.2
42	Total-pentadioxins	355.8546	30.72	61318.486	0.948	3.867		1.56	1.55	NO	95.5
42	Total-pentadioxins	355.8546	30.56	78960.048	0.948	4.980		1.52	1.55	NO	172.4
42	Total-pentadioxins	355.8546	30.42	58012.777	0.948	3.659		1.54	1.55	NO	133.5
42	Total-pentadioxins	355.8546	30.21	95093.825	0.948	5.997		1.54	1.55	NO	216.3
42	Total-pentadioxins	355.8546	29.57	25662.404	0.948	1.618		1.51	1.55	NO	56.6
42	Total-pentadioxins	355.8546	29.10	167171.875	0.948	10.543		1.51	1.55	NO	235.1
14	123678-HxCDD	389.8157	36.59	304907.984	0.884	23.404	23.404	1.24	1.24	NO	802.3
13	123478-HxCDD	389.8157	36.46	75385.496	0.941	5.718	5.718	1.22	1.24	NO	205.3
43	Total-hexadioxins	389.8157	35.60	50591.178	0.898	3.918		1.27	1.24	NO	148.1
43	Total-hexadioxins	389.8157	35.49	771216.219	0.898	59.731		1.22	1.24	NO	1424.8
43	Total-hexadioxins	389.8157	35.11	238582.774	0.898	18.478		1.27	1.24	NO	630.5
43	Total-hexadioxins	389.8157	34.30	403587.797	0.898	31.258		1.23	1.24	NO	1051.9
43	Total-hexadioxins	389.8157	34.05	22827.949	0.898	1.768		1.33	1.24	NO	64.4
15	123789-HxCDD	389.8157	37.01	149651.141	0.870	11.971	11.971	1.21	1.24	NO	406.9
43	Total-hexadioxins	389.8157	36.76	52241.185	0.898	4.046		1.24	1.24	NO	138.3
16	1234678-HpCDD	423.7766	41.33	4375070.500	0.948	542.350	542....	1.03	1.05	NO	3730.2
44	Total-heptadioxins	423.7766	40.07	3876131.250	0.948	480.499		1.04	1.05	NO	3483.3
17	OCDD	457.7377	47.25	23759114....	0.969	5469.4...	5469...	0.89	0.89	NO	22695.6

D: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Trace	RT	Abs Resp	RRF M...	co	EMPC	1* Ratio	2* Ratio	1* R...	S/N
	48	FUNCTION1 PFK	330.9792	24.06	0.000							8.0
	48	FUNCTION1 PFK	330.9792	22.27	0.000							8.7
	48	FUNCTION1 PFK	330.9792	21.43	0.000							7.4
	48	FUNCTION1 PFK	330.9792	21.30	0.000							10.6

PFK2

	#	Name	Trace	RT	Abs Resp	RRF M...	co	EMPC	1* Ratio	2* Ratio	1* R...	S/N
	49	FUNCTION2 PFK	366.9792	30.21	0.000	0.000						13.0
	49	FUNCTION2 PFK	366.9792	30.19	0.000	0.000						12.9
	49	FUNCTION2 PFK	366.9792	29.92	0.000	0.000						9.7
	49	FUNCTION2 PFK	366.9792	29.40	0.000	0.000						5.2
	49	FUNCTION2 PFK	366.9792	29.33	0.000	0.000						4.6
	49	FUNCTION2 PFK	366.9792	29.18	0.000	0.000						2.0
	49	FUNCTION2 PFK	366.9792	28.98	0.000	0.000						3.0
	49	FUNCTION2 PFK	366.9792	28.63	0.000	0.000						5.6
	49	FUNCTION2 PFK	366.9792	28.58	0.000	0.000						7.9
	49	FUNCTION2 PFK	366.9792	28.30	0.000	0.000						2.1
	49	FUNCTION2 PFK	366.9792	32.40	0.000	0.000						5.2
	49	FUNCTION2 PFK	366.9792	32.27	0.000	0.000						4.8
	49	FUNCTION2 PFK	366.9792	32.08	0.000	0.000						4.4
	49	FUNCTION2 PFK	366.9792	31.95	0.000	0.000						1.9
	49	FUNCTION2 PFK	366.9792	31.37	0.000	0.000						6.7
	49	FUNCTION2 PFK	366.9792	31.16	0.000	0.000						4.7
	49	FUNCTION2 PFK	366.9792	31.00	0.000	0.000						1.4
	49	FUNCTION2 PFK	366.9792	30.83	0.000	0.000						2.0
	49	FUNCTION2 PFK	366.9792	30.37	0.000	0.000						6.4

PFK3

	#	Name	Trace	RT	Abs Resp	RRF M...	co	EMPC	1* Ratio	2* Ratio	1* R...	S/N
	50	FUNCTION3 PFK	380.9760	37.49	0.000	0.000						5.7

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Area Ratio	RRF M...	...	...	EMPC	1° Ratio	2° Ratio	...	S/N
	51	FUNCTION4 PFK	430.9728	38.79	0.000								1.6
	51	FUNCTION4 PFK	430.9728	38.75	0.000								2.4
	51	FUNCTION4 PFK	430.9728	38.66	0.000								0.6
	51	FUNCTION4 PFK	430.9728	38.53	0.000								1.7
	51	FUNCTION4 PFK	430.9728	42.50	0.000								0.9
	51	FUNCTION4 PFK	430.9728	42.18	0.000								0.6
	51	FUNCTION4 PFK	430.9728	41.99	0.000								0.6
	51	FUNCTION4 PFK	430.9728	41.73	0.000								1.1
	51	FUNCTION4 PFK	430.9728	41.20	0.000								2.8
	51	FUNCTION4 PFK	430.9728	40.84	0.000								2.1
	51	FUNCTION4 PFK	430.9728	40.48	0.000								1.3
	51	FUNCTION4 PFK	430.9728	40.23	0.000								1.5
	51	FUNCTION4 PFK	430.9728	39.98	0.000								1.7
	51	FUNCTION4 PFK	430.9728	39.79	0.000								1.9
	51	FUNCTION4 PFK	430.9728	39.54	0.000								0.7
	51	FUNCTION4 PFK	430.9728	39.30	0.000								1.2
	51	FUNCTION4 PFK	430.9728	39.24	0.000								1.8
	51	FUNCTION4 PFK	430.9728	38.99	0.000								3.4
	51	FUNCTION4 PFK	430.9728	38.95	0.000								1.9
	51	FUNCTION4 PFK	430.9728	38.90	0.000								0.4
	51	FUNCTION4 PFK	430.9728	44.77	0.000								0.9
	51	FUNCTION4 PFK	430.9728	44.46	0.000								1.2
	51	FUNCTION4 PFK	430.9728	44.02	0.000								1.0
	51	FUNCTION4 PFK	430.9728	43.99	0.000								0.8
	51	FUNCTION4 PFK	430.9728	43.64	0.000								1.3
	51	FUNCTION4 PFK	430.9728	43.55	0.000								1.9
	51	FUNCTION4 PFK	430.9728	42.86	0.000								1.9
	51	FUNCTION4 PFK	430.9728	42.77	0.000								1.6
	51	FUNCTION4 PFK	430.9728	42.60	0.000								2.1

PFK5

	#	Name	Trace	RT	Area Ratio	RRF M...	...	...	EMPC	1° Ratio	2° Ratio	...	S/N
	52	FUNCTION5 PFK	480.9696	47.37	0.000								1.3
	52	FUNCTION5 PFK	480.9696	47.32	0.000								1.0
	52	FUNCTION5 PFK	480.9696	47.02	0.000								1.2
	52	FUNCTION5 PFK	480.9696	46.57	0.000								1.4
	52	FUNCTION5 PFK	480.9696	46.16	0.000								1.3
	52	FUNCTION5 PFK	480.9696	45.05	0.000								1.2
	52	FUNCTION5 PFK	480.9696	48.77	0.000								0.7
	52	FUNCTION5 PFK	480.9696	48.57	0.000								1.3
	52	FUNCTION5 PFK	480.9696	48.34	0.000								1.0
	52	FUNCTION5 PFK	480.9696	47.93	0.000								1.0
	52	FUNCTION5 PFK	480.9696	47.64	0.000								2.2
	52	FUNCTION5 PFK	480.9696	47.49	0.000								1.1

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

D: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

ETHERS1

	53 FUNCTION1 HXCD...	375.8364	27.06	0.000	0.000					12.7
	53 FUNCTION1 HXCD...	375.8364	26.75	0.000	0.000					5.2
	53 FUNCTION1 HXCD...	375.8364	26.41	0.000	0.000					14.7
	53 FUNCTION1 HXCD...	375.8364	26.05	0.000	0.000					10.2
	53 FUNCTION1 HXCD...	375.8364	24.06	0.000	0.000					16.6
	53 FUNCTION1 HXCD...	375.8364	23.87	0.000	0.000					40.1
	53 FUNCTION1 HXCD...	375.8364	23.03	0.000	0.000					5.0
	53 FUNCTION1 HXCD...	375.8364	22.57	0.000	0.000					1.8
	53 FUNCTION1 HXCD...	375.8364	21.72	0.000	0.000					5.6
	53 FUNCTION1 HXCD...	375.8364	27.75	0.000	0.000					1.9
	53 FUNCTION1 HXCD...	375.8364	27.69	0.000	0.000					2.6
	53 FUNCTION1 HXCD...	375.8364	27.39	0.000	0.000					4.7
	53 FUNCTION1 HXCD...	375.8364	27.30	0.000	0.000					5.4
	53 FUNCTION1 HXCD...	375.8364	27.14	0.000	0.000					5.0

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

D: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

ETHERS2

[redacted]	54	FUNCTION1 HPCD...	409.7974	23.85	0.000	0.000					2.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.57	0.000	0.000					23.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.33	0.000	0.000					3.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.99	0.000	0.000					0.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.69	0.000	0.000					2.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.49	0.000	0.000					2.5
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.45	0.000	0.000					1.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.31	0.000	0.000					8.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.72	0.000	0.000					1.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.18	0.000	0.000					1.2
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.96	0.000	0.000					13.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.85	0.000	0.000					1.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.44	0.000	0.000					1.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.33	0.000	0.000					1.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	26.02	0.000	0.000					1.9
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.61	0.000	0.000					2.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.51	0.000	0.000					2.5
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.45	0.000	0.000					2.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.39	0.000	0.000					3.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.32	0.000	0.000					4.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.17	0.000	0.000					1.3
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.11	0.000	0.000					1.9
[redacted]	54	FUNCTION1 HPCD...	409.7974	25.02	0.000	0.000					3.6
[redacted]	54	FUNCTION1 HPCD...	409.7974	24.61	0.000	0.000					2.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	24.34	0.000	0.000					1 7
[redacted]	54	FUNCTION1 HPCD...	409.7974	24.05	0.000	0.000					0.8
[redacted]	54	FUNCTION1 HPCD...	409.7974	28.09	0.000	0.000					3.3
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.69	0.000	0.000					0.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.53	0.000	0.000					1.5
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.44	0.000	0.000					5.0
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.21	0.000	0.000					2.3
[redacted]	54	FUNCTION1 HPCD...	409.7974	27.08	0.000	0.000					1.5

ETHERS3

[redacted]	55	FUNCTION2 HPCD...	409.7974	30.89	0.000	0.000					5.5
[redacted]	55	FUNCTION2 HPCD...	409.7974	30.15	0.000	0.000					24.8
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.88	0.000	0.000					6.0
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.83	0.000	0.000					5.5
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.42	0.000	0.000					3.4
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.23	0.000	0.000					10.7
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.16	0.000	0.000					4.0
[redacted]	55	FUNCTION2 HPCD...	409.7974	28.72	0.000	0.000					8.1

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

ETHERS4

	Name	Trans	RT	Abs Resp	RRF M...	...ppb	EMPC	1° Ratl...	2° Ratl...	T.R...	S/N
	56 FUNCTION3 OCDPE	445.7555	36.68	0.000	0.000						3.8
	56 FUNCTION3 OCDPE	445.7555	36.34	0.000	0.000						2.9
	56 FUNCTION3 OCDPE	445.7555	36.25	0.000	0.000						3.8
	56 FUNCTION3 OCDPE	445.7555	35.40	0.000	0.000						1.9
	56 FUNCTION3 OCDPE	445.7555	35.28	0.000	0.000						2.5
	56 FUNCTION3 OCDPE	445.7555	35.19	0.000	0.000						8.7
	56 FUNCTION3 OCDPE	445.7555	35.14	0.000	0.000						14.3
	56 FUNCTION3 OCDPE	445.7555	34.99	0.000	0.000						4.7
	56 FUNCTION3 OCDPE	445.7555	34.89	0.000	0.000						6.1
	56 FUNCTION3 OCDPE	445.7555	34.53	0.000	0.000						2.2
	56 FUNCTION3 OCDPE	445.7555	34.18	0.000	0.000						1.1
	56 FUNCTION3 OCDPE	445.7555	33.85	0.000	0.000						1.0
	56 FUNCTION3 OCDPE	445.7555	33.64	0.000	0.000						1.7
	56 FUNCTION3 OCDPE	445.7555	33.49	0.000	0.000						1.4
	56 FUNCTION3 OCDPE	445.7555	33.39	0.000	0.000						3.5
	56 FUNCTION3 OCDPE	445.7555	32.96	0.000	0.000						2.9
	56 FUNCTION3 OCDPE	445.7555	37.84	0.000	0.000						1.8
	56 FUNCTION3 OCDPE	445.7555	37.75	0.000	0.000						1.8
	56 FUNCTION3 OCDPE	445.7555	37.60	0.000	0.000						3.2
	56 FUNCTION3 OCDPE	445.7555	37.16	0.000	0.000						1.6
	56 FUNCTION3 OCDPE	445.7555	37.05	0.000	0.000						3.4
	56 FUNCTION3 OCDPE	445.7555	36.95	0.000	0.000						2.3
	56 FUNCTION3 OCDPE	445.7555	36.76	0.000	0.000						2.8
	56 FUNCTION3 OCDPE	445.7555	36.73	0.000	0.000						2.4

ETHERS5

	Name	Trans	RT	Abs Resp	RRF M...	...ppb	EMPC	1° Ratl...	2° Ratl...	T.R...	S/N
	57 FUNCTION4 NCDPE	479.7165	40.87	0.000	0.000						7.4
	57 FUNCTION4 NCDPE	479.7165	40.07	0.000	0.000						7.3
	57 FUNCTION4 NCDPE	479.7165	40.02	0.000	0.000						4.4
	57 FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000						3.6
	57 FUNCTION4 NCDPE	479.7165	39.08	0.000	0.000						4.8
	57 FUNCTION4 NCDPE	479.7165	38.66	0.000	0.000						3.2
	57 FUNCTION4 NCDPE	479.7165	38.47	0.000	0.000						21.8
	57 FUNCTION4 NCDPE	479.7165	44.51	0.000	0.000						2.6
	57 FUNCTION4 NCDPE	479.7165	44.26	0.000	0.000						1.8
	57 FUNCTION4 NCDPE	479.7165	43.35	0.000	0.000						2.0
	57 FUNCTION4 NCDPE	479.7165	43.26	0.000	0.000						2.0
	57 FUNCTION4 NCDPE	479.7165	42.73	0.000	0.000						10.2
	57 FUNCTION4 NCDPE	479.7165	42.64	0.000	0.000						6.9
	57 FUNCTION4 NCDPE	479.7165	41.71	0.000	0.000						4.4
	57 FUNCTION4 NCDPE	479.7165	41.28	0.000	0.000						11.8
	57 FUNCTION4 NCDPE	479.7165	41.13	0.000	0.000						10.1
	57 FUNCTION4 NCDPE	479.7165	40.93	0.000	0.000						13.3

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:09:36 Pacific Daylight Time

D: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

ETHERS6

[redacted]	#	Name	Time	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	58	FUNCTION5 DCDPE	513.6775	48.49	0.000	0.000				2.3
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[redacted]	58	FUNCTION5 DCDPE	513.6775	47.06	0.000	0.000				15.9

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
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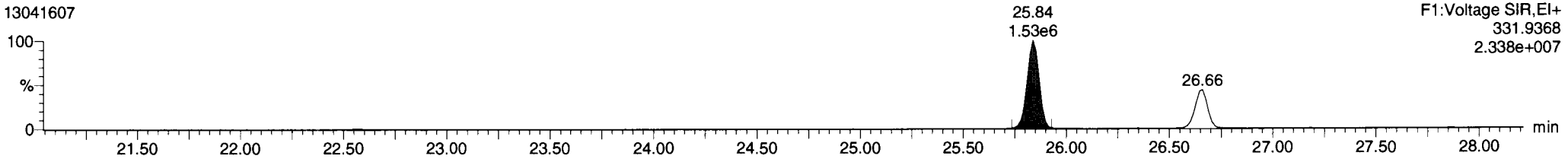
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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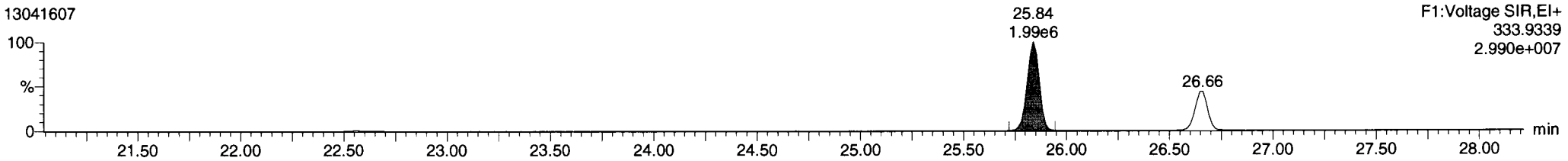

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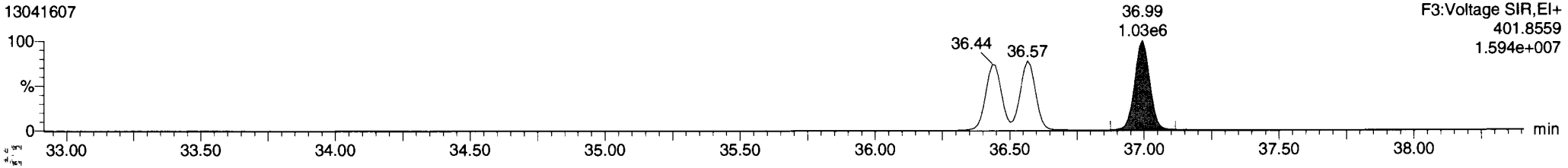

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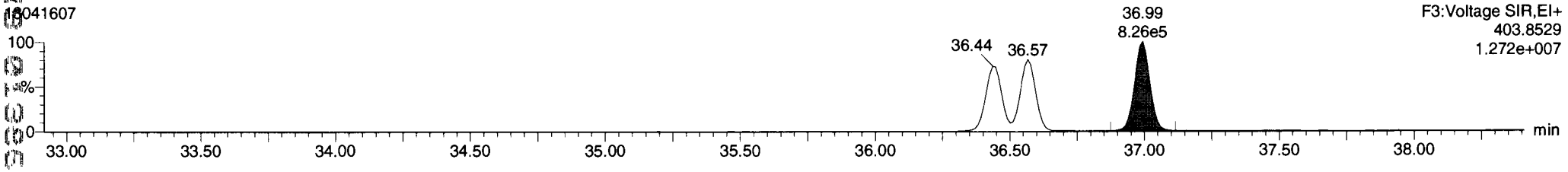

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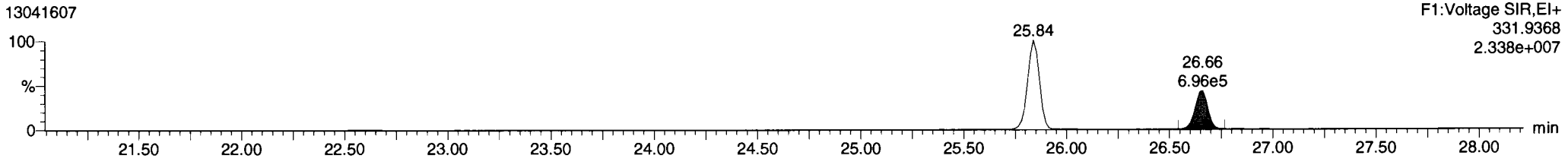
ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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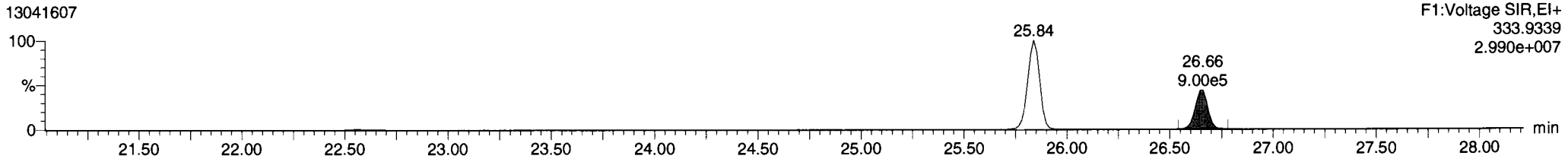
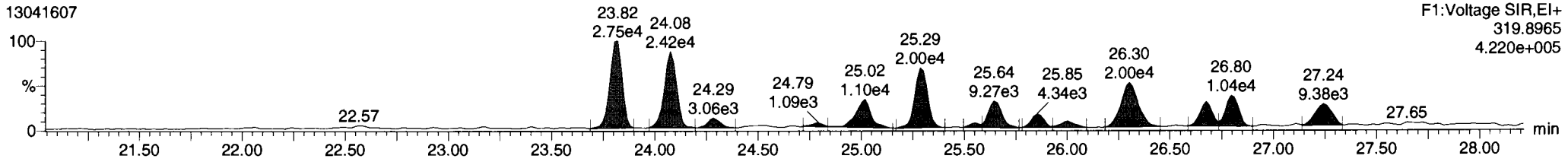
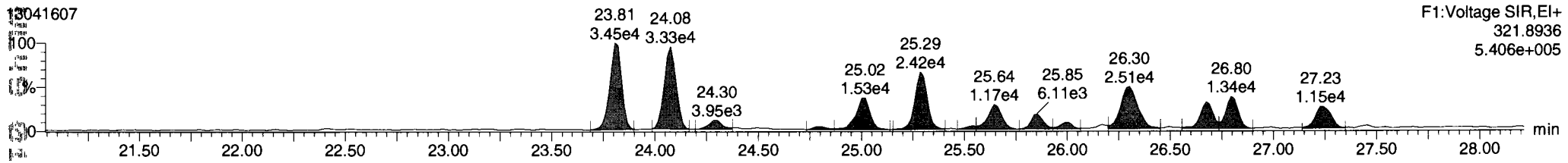


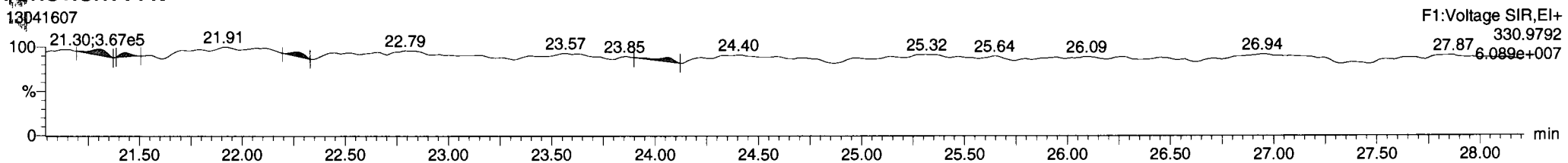
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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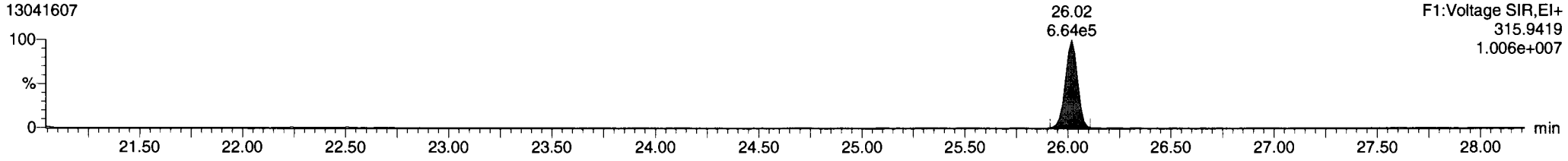
ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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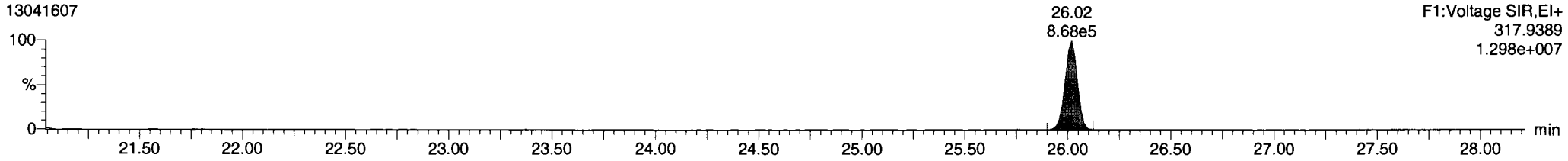
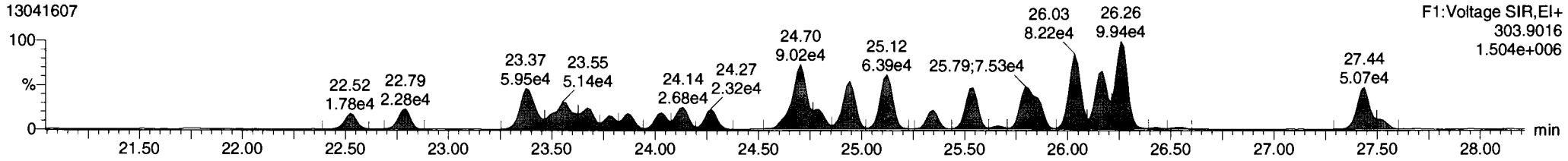
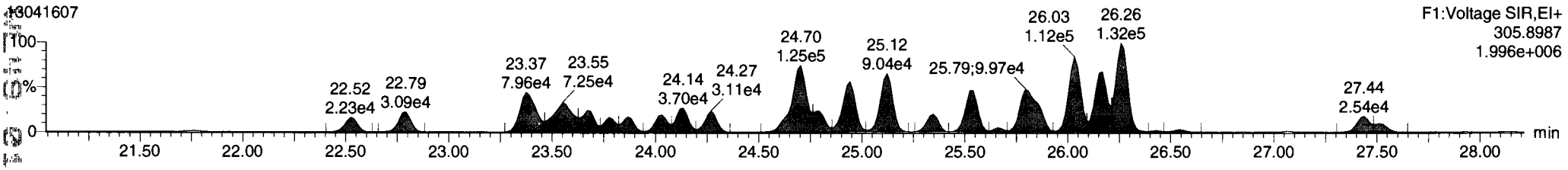


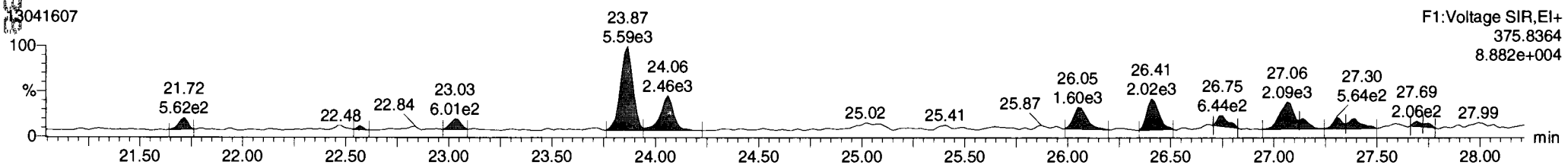
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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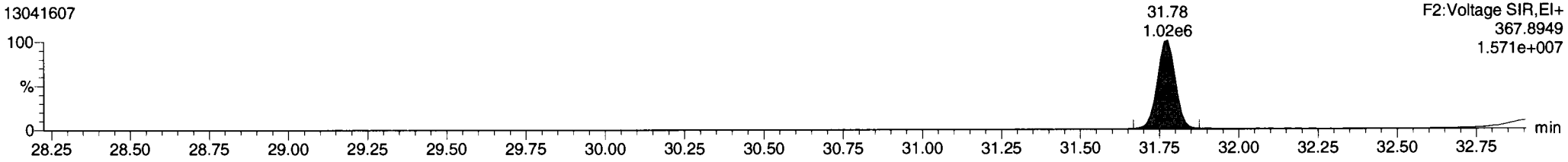
ID: WL49F, Name: 13041607, Date: 16-Apr-2013, Time: 15:37:52, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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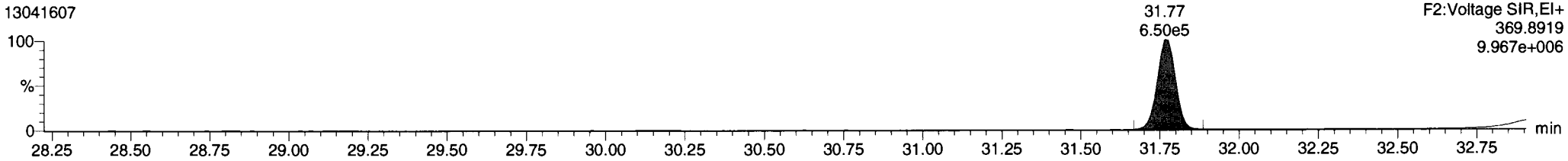
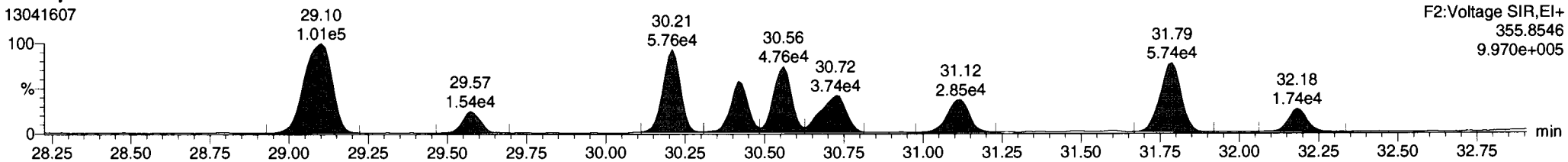
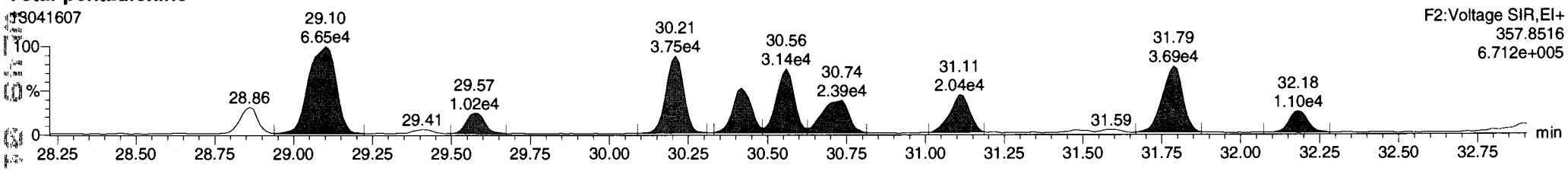


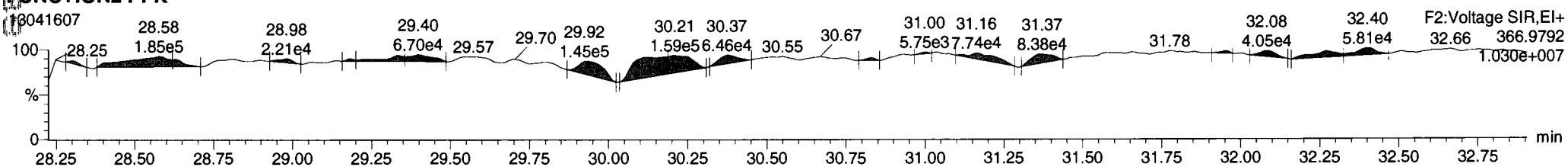
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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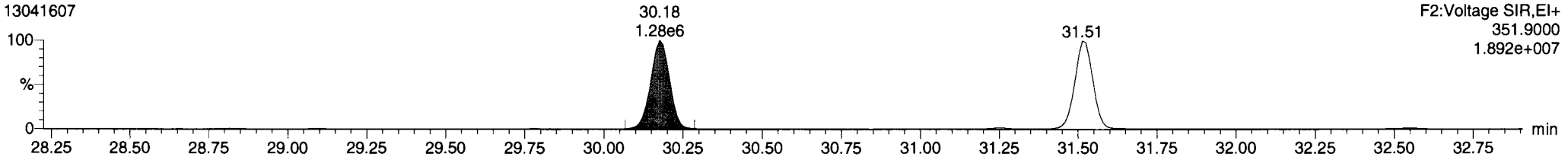
13C-12378-PeCDF



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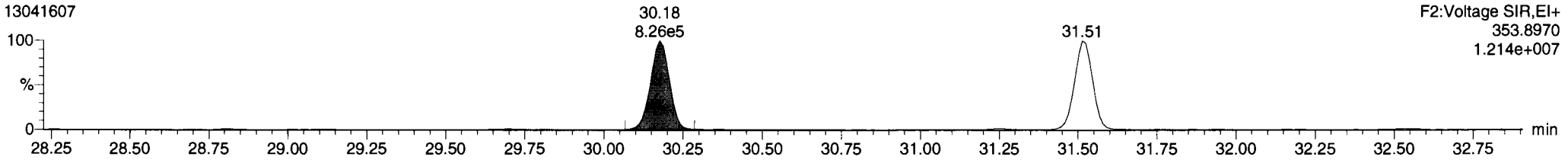

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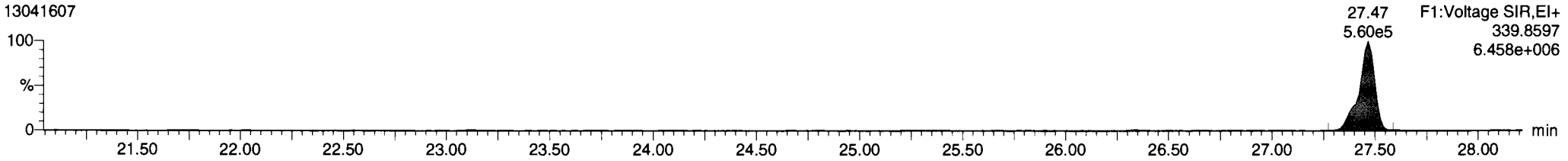
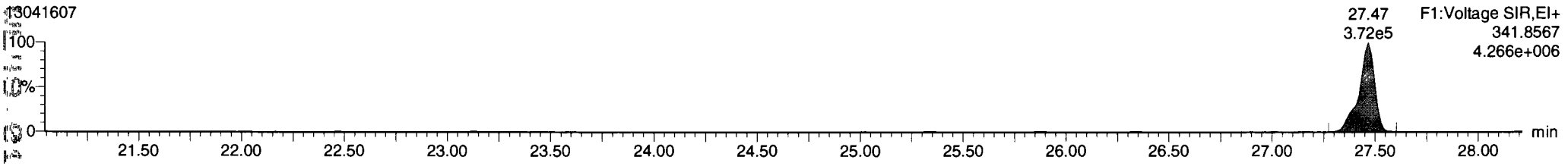


Total-penta1



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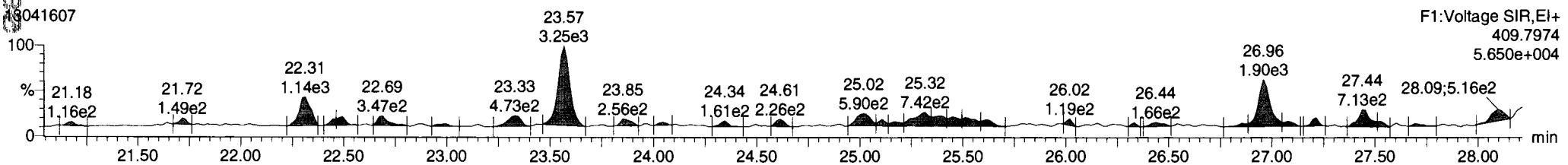

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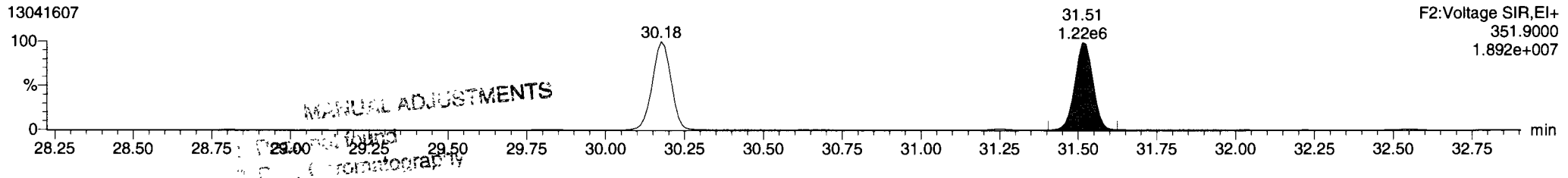
13C-23478-PeCDF



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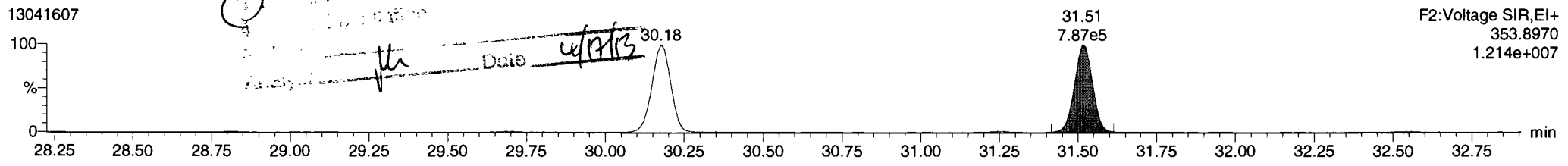
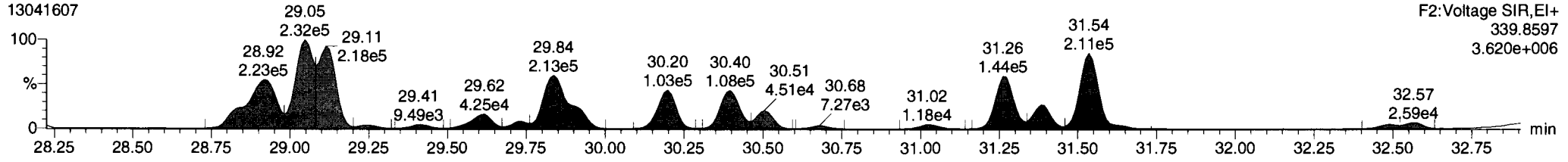
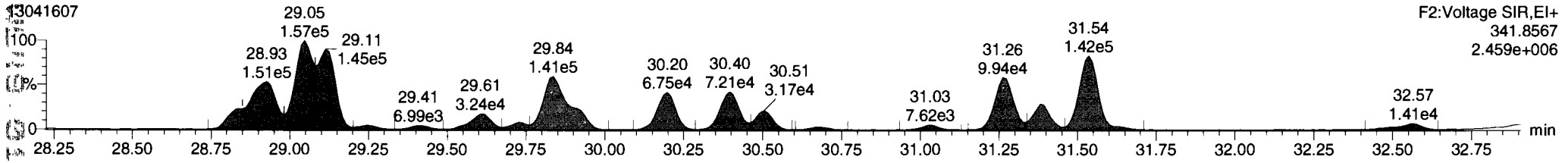


Total-pentafurans



Total-pentafurans



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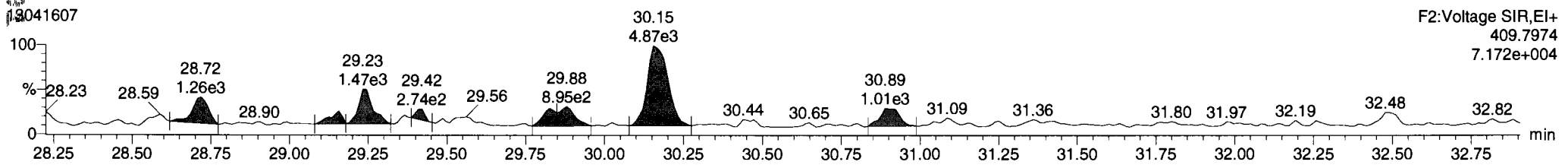

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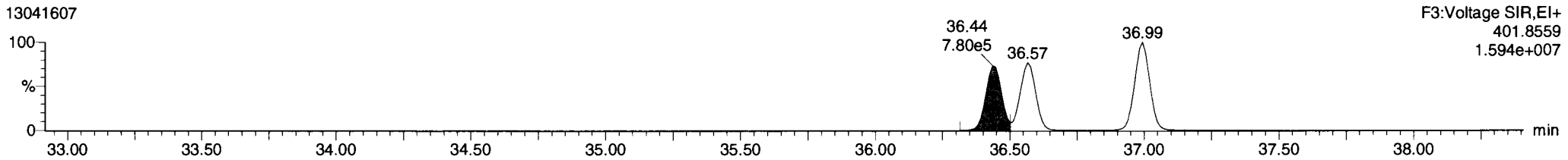
13C-123478-HxCDD



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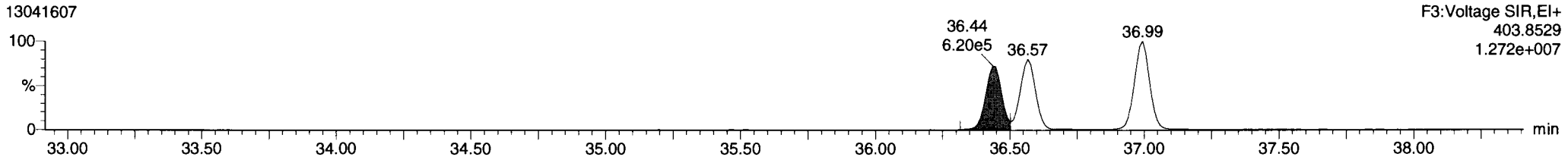
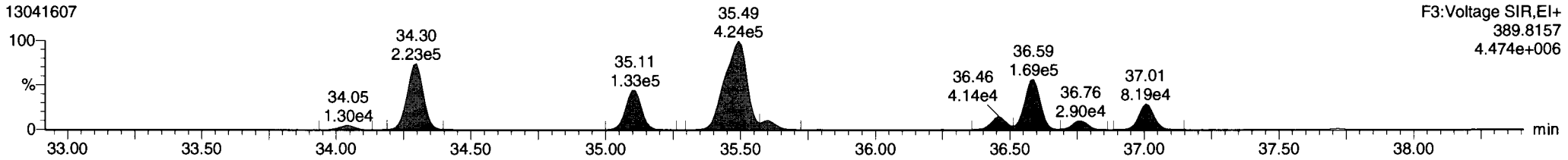
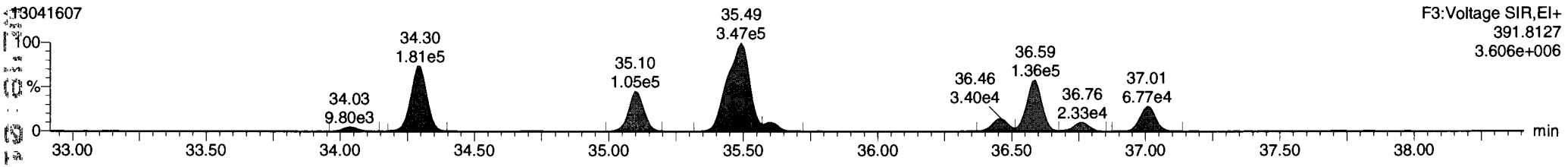


Total-hexadioxins



Total-hexadioxins



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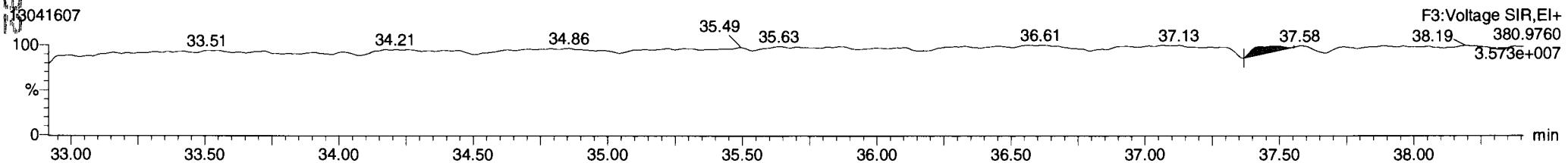

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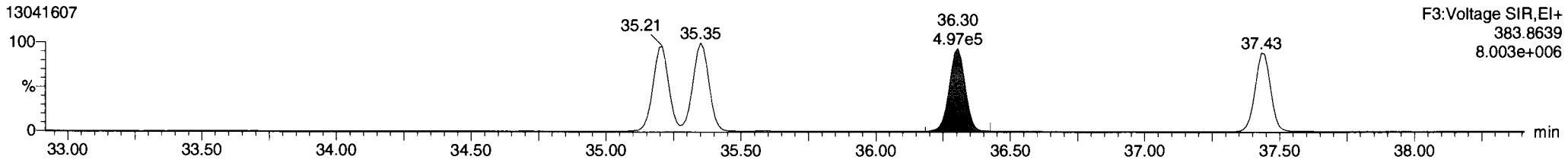
13C-234678-HxCDF



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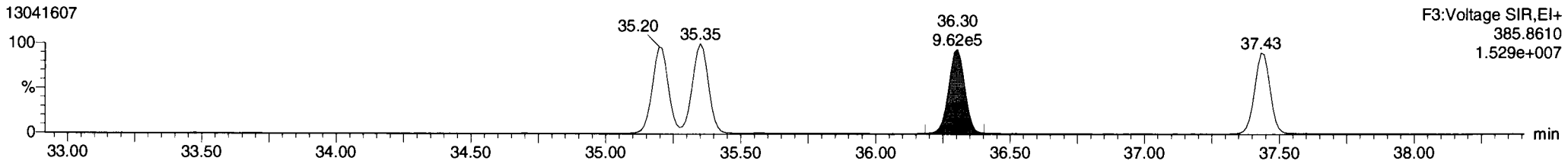
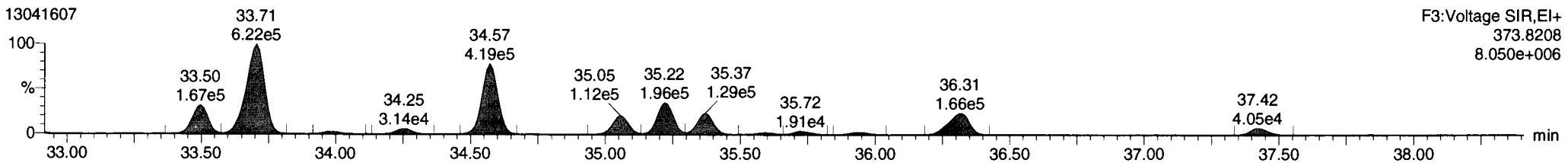
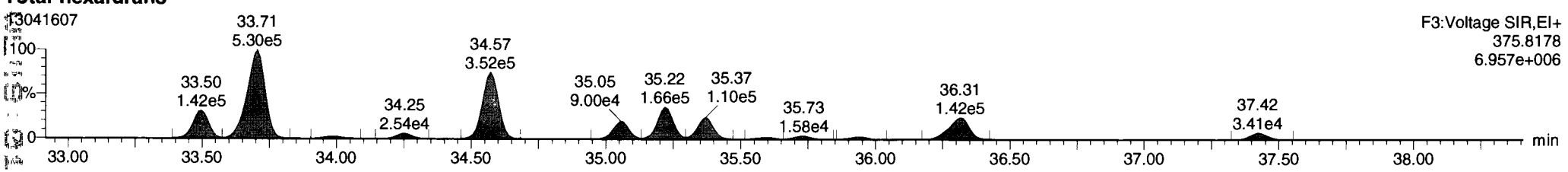


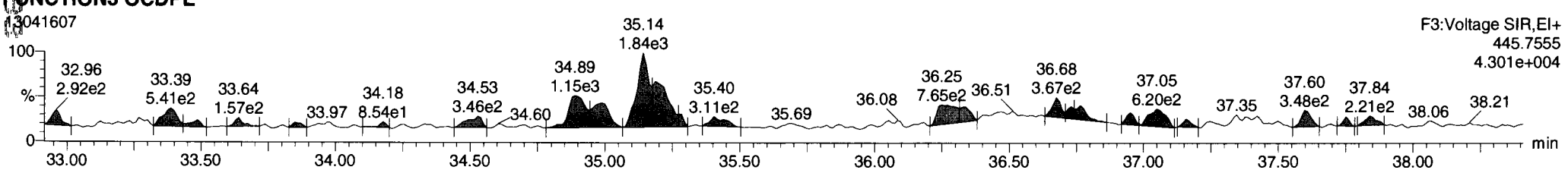
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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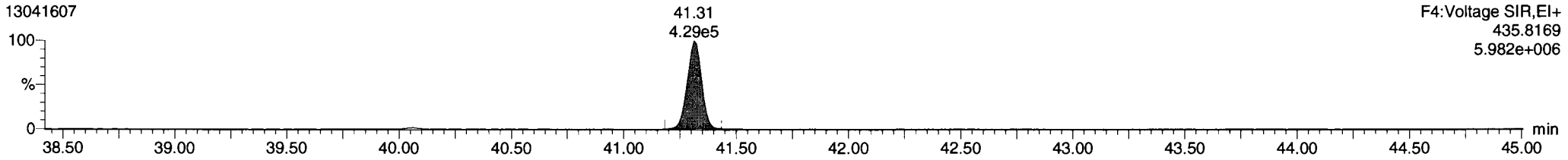
13C-1234678-HpCDD



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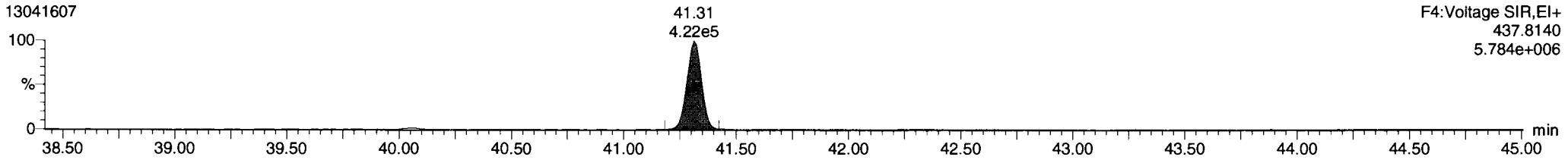

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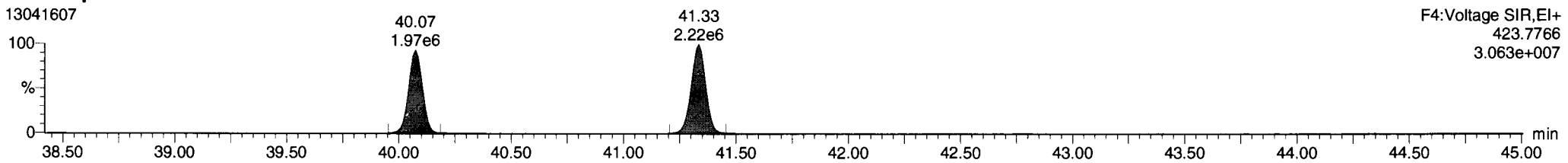

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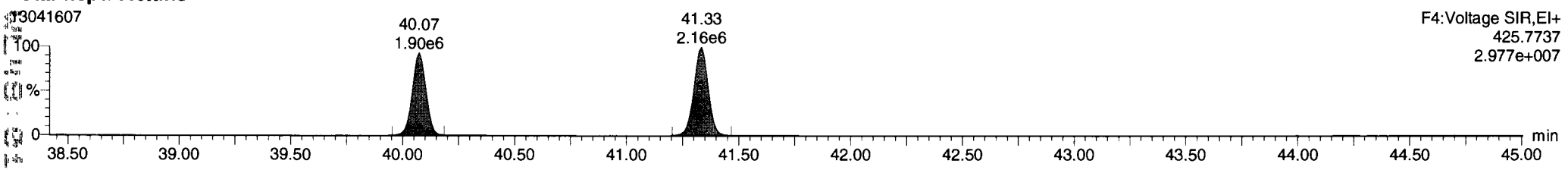
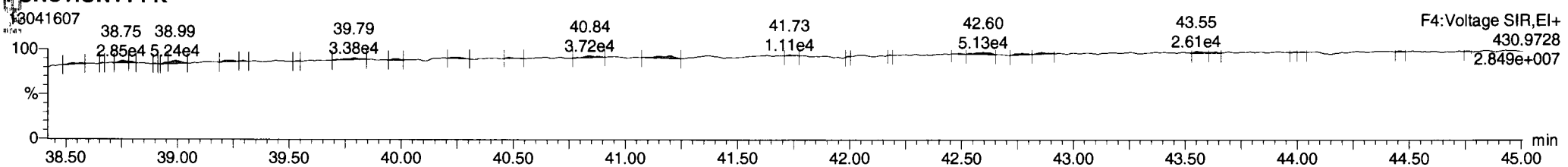


FUNCTION4 PFK



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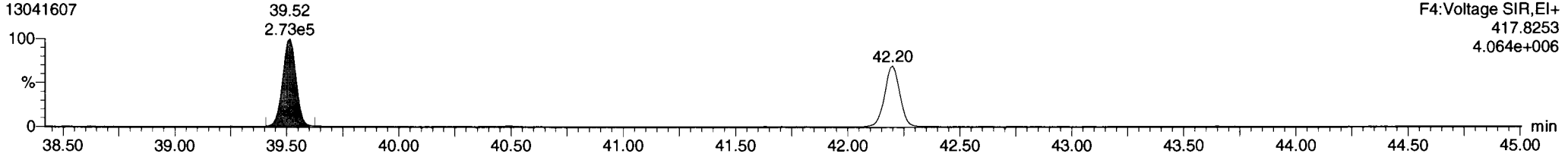
13C-1234678-HpCDF



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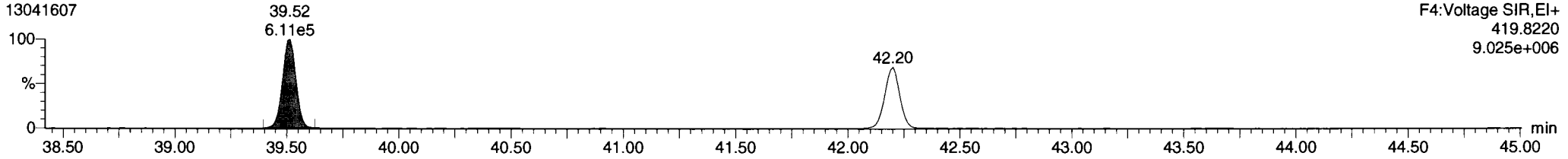

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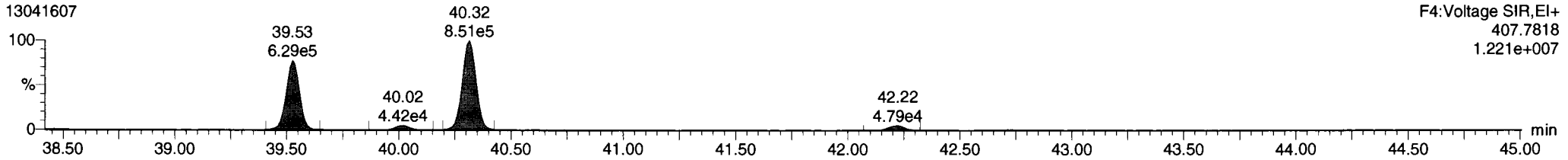

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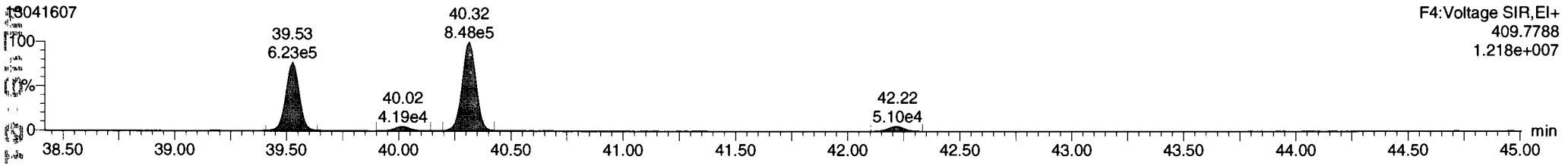

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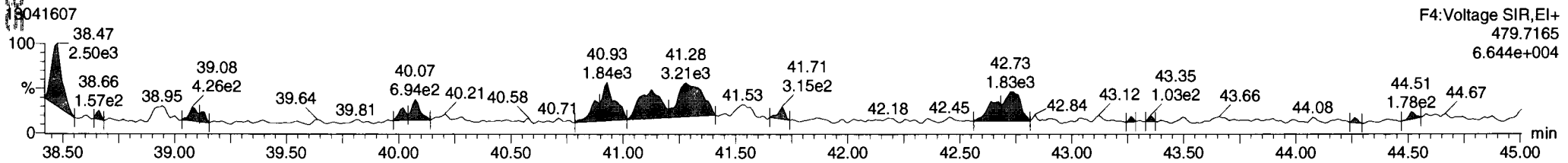

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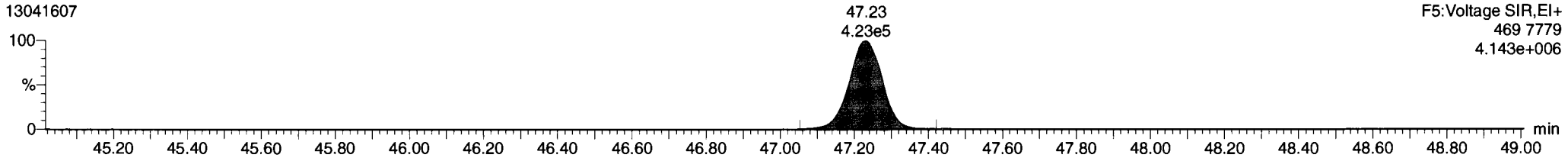
13C-OCDD



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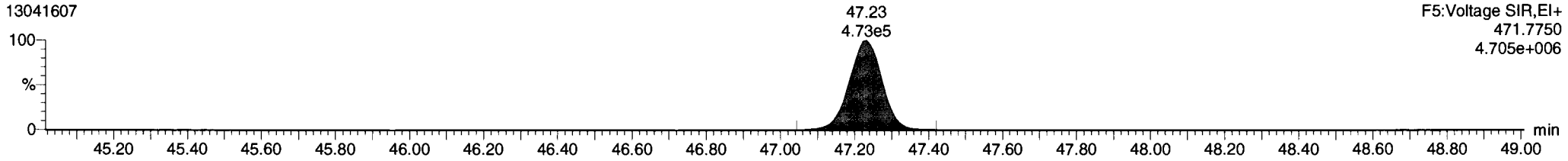

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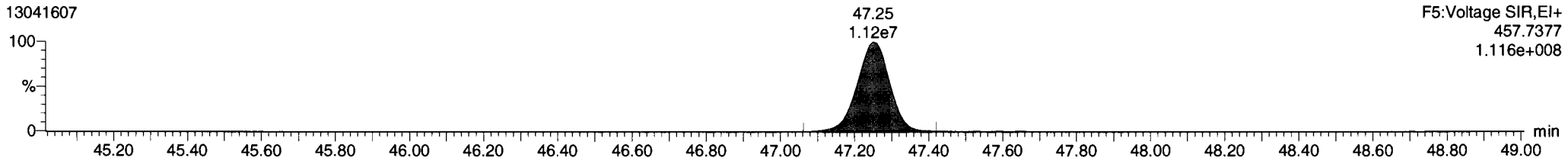

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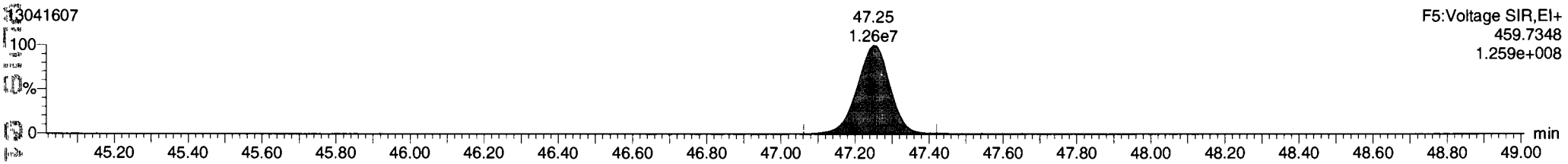
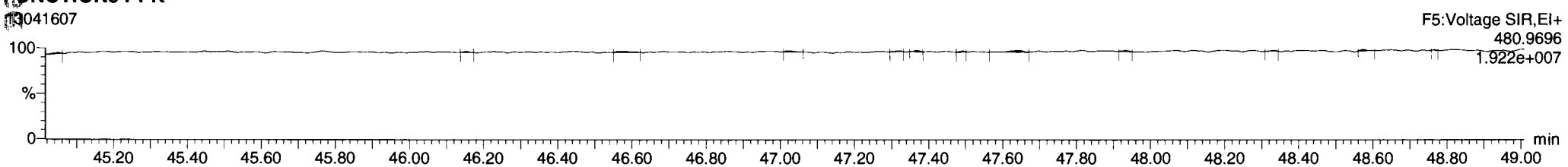


FUNCTION5 PFK



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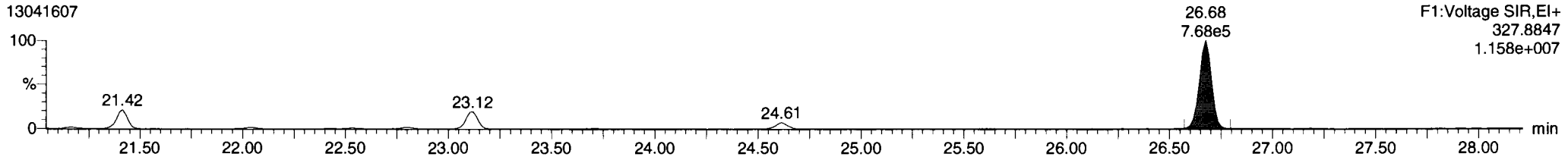
37CL-2378-TCDD



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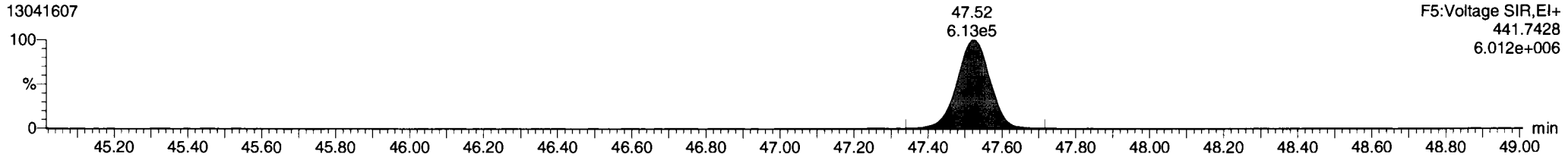

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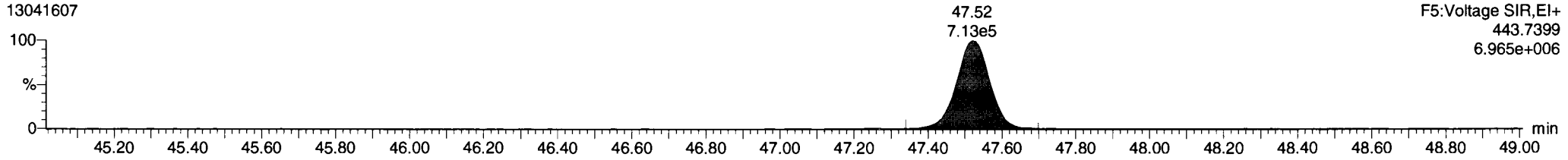
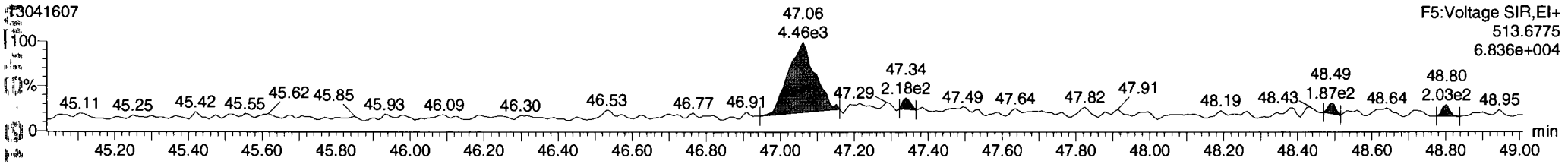


FUNCTION5 DCDPE



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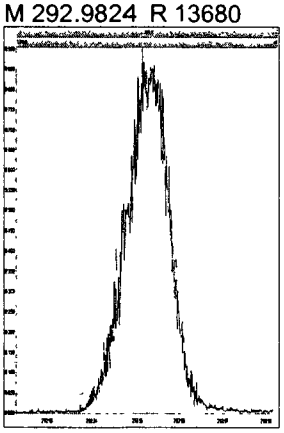
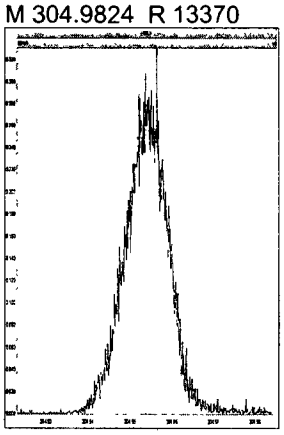
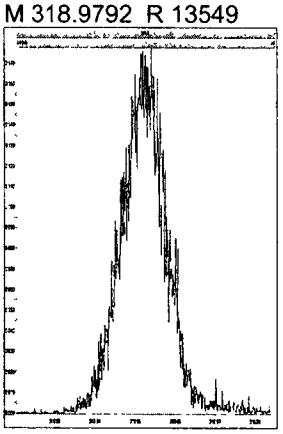


M 304.9824 R 13370



M 318.9792 R 13549



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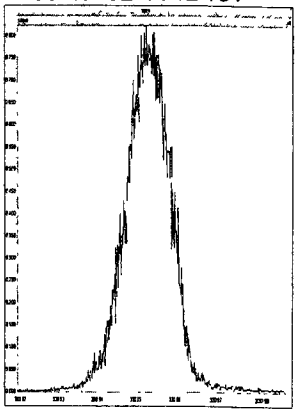
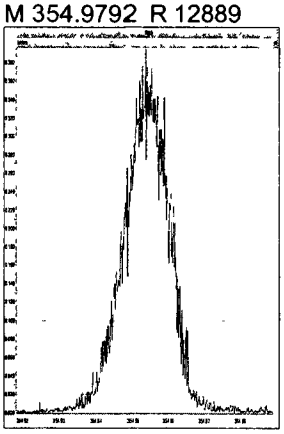


M 354.9792 R 12889



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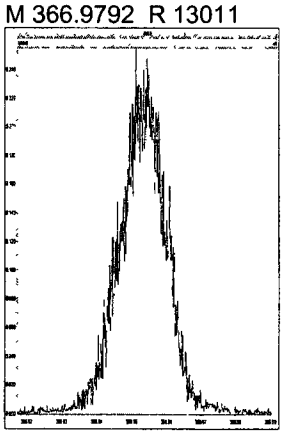

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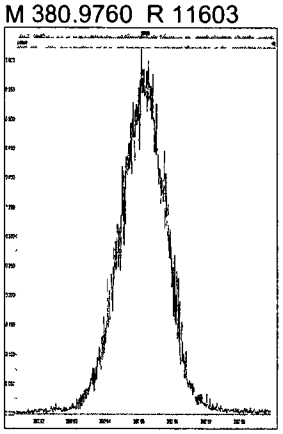

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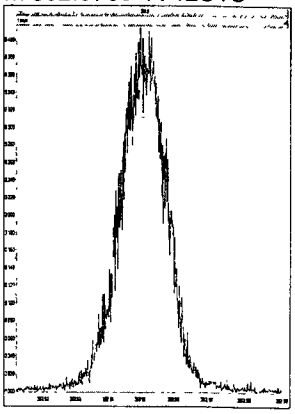

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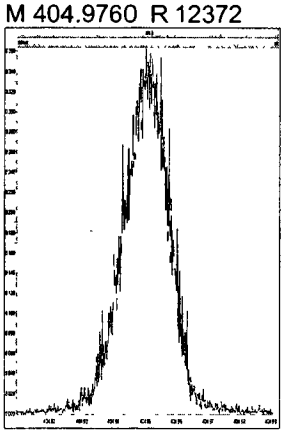

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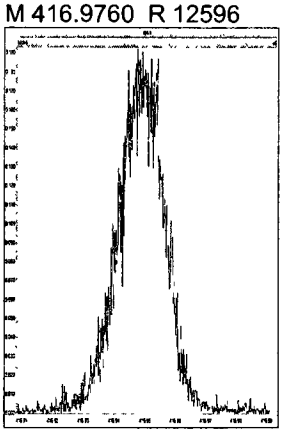

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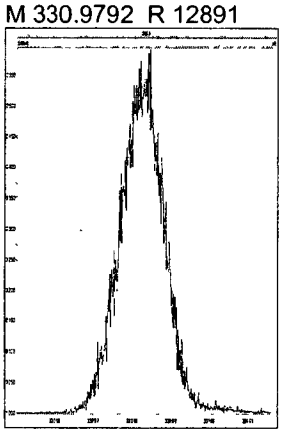

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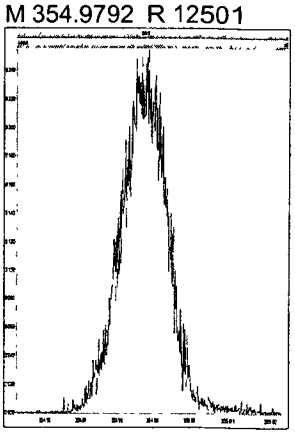

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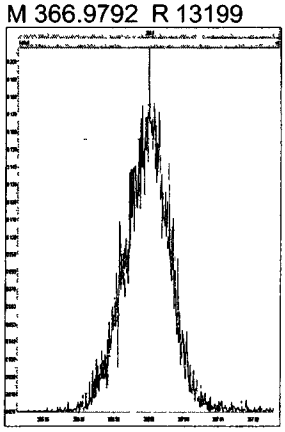
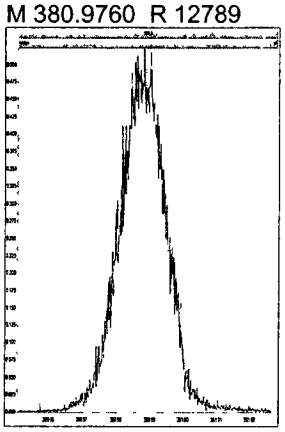
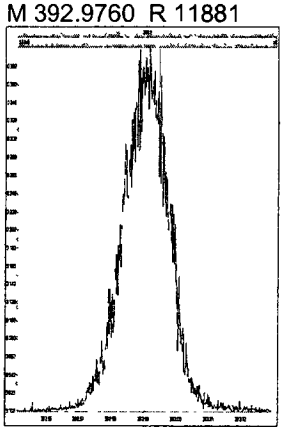


M 380.9760 R 12789



M 392.9760 R 11881



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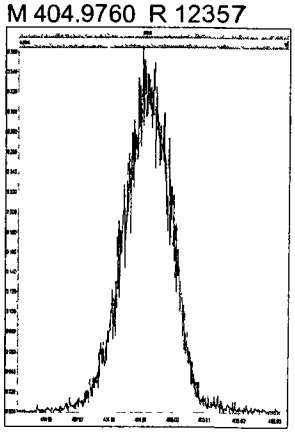

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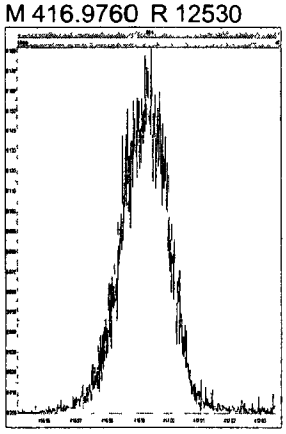

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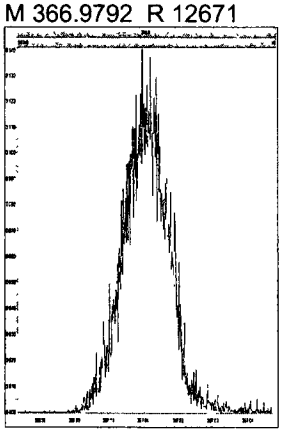

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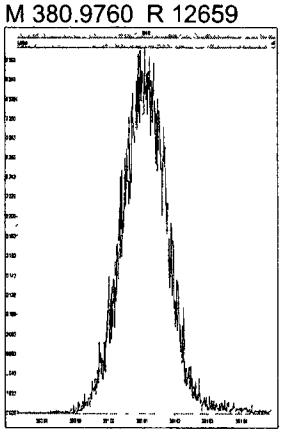

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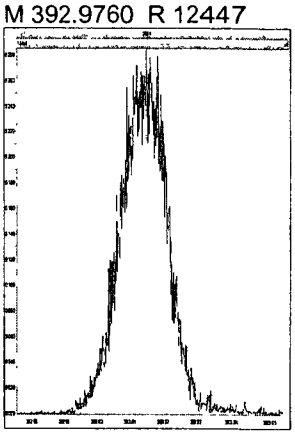

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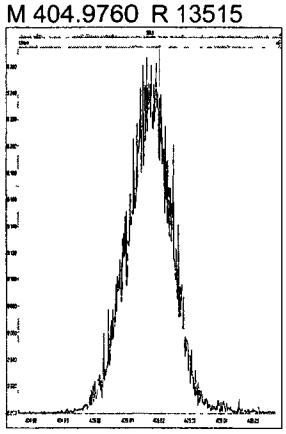

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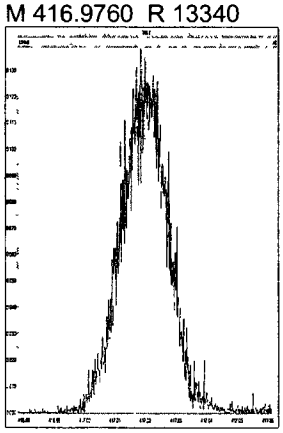

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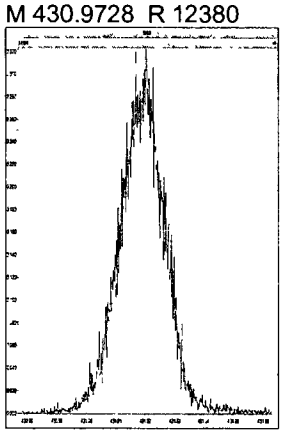

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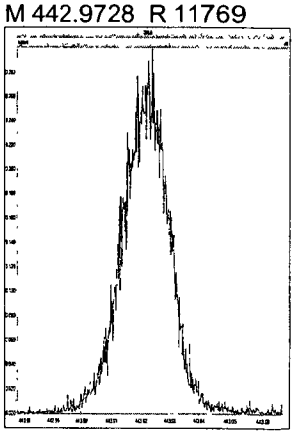

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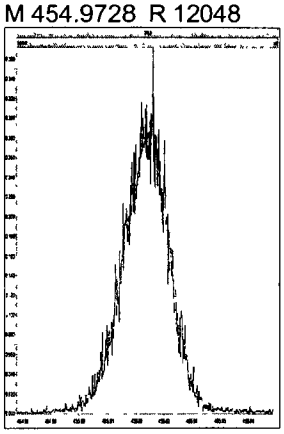

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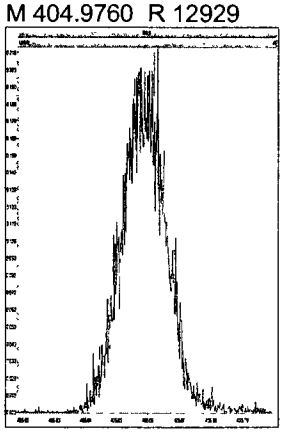
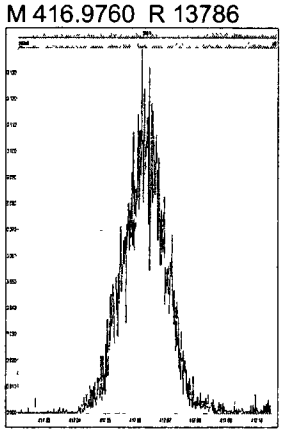
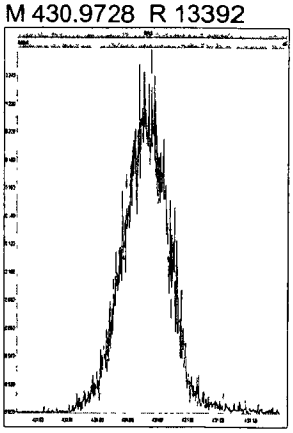


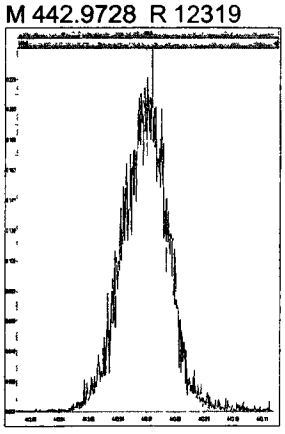
M 416.9760 R 13786



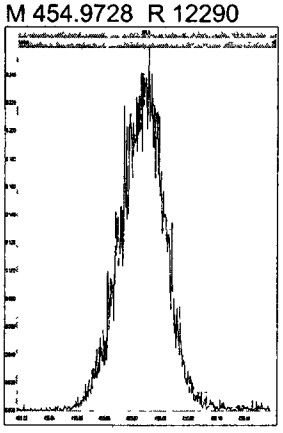
M 430.9728 R 13392



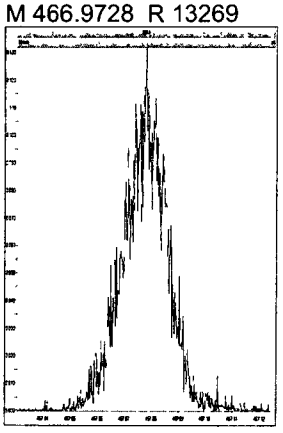
M 442.9728 R 12319



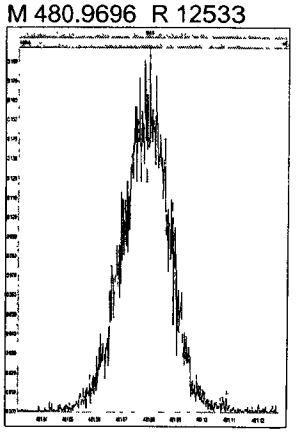
M 454.9728 R 12290



M 466.9728 R 13269

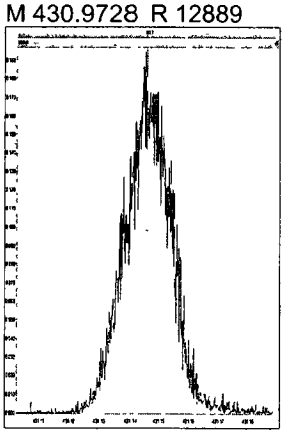


M 480.9696 R 12533

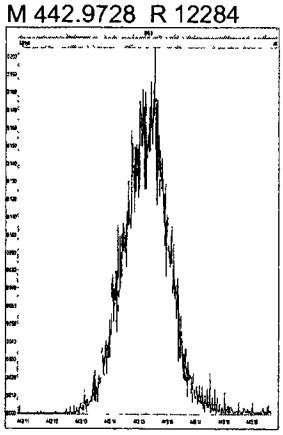


Printed: Tuesday, April 16, 2013 17:30:35 Pacific Daylight Time

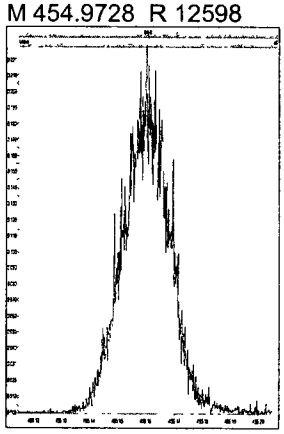
M 430.9728 R 12889



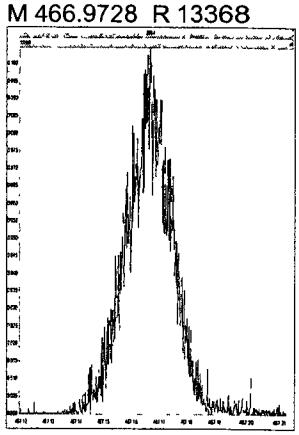
M 442.9728 R 12284



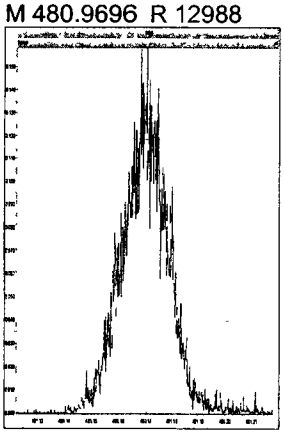
M 454.9728 R 12598



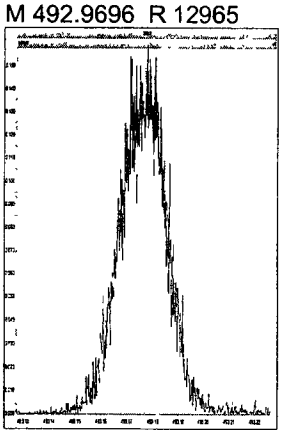
M 466.9728 R 13368



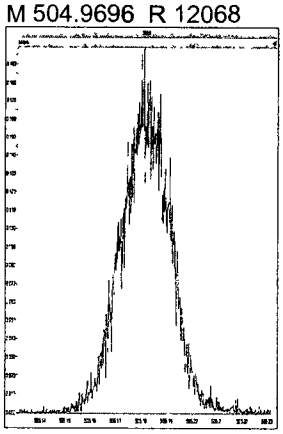
M 480.9696 R 12988



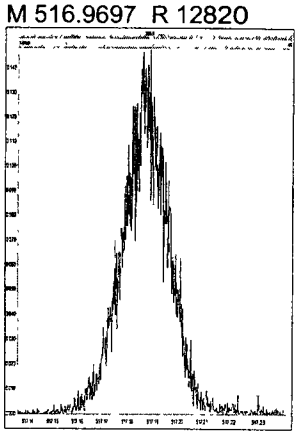
M 492.9696 R 12965



M 504.9696 R 12068



M 516.9697 R 12820



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

	2378-TCDF	25.973	1.001	2.01e5	2.74e5	0.763	0.733	0.770	1050.7	NO	11.080	11.080
	12378-PeCDF	30.122	1.000	1.17e6	7.76e5	0.836	1.514	1.550	3992.3	NO	53.295	53.295
	23478-PeCDF	31.470	1.000	1.18e6	7.77e5	0.851	1.523	1.550	4048.5	NO	53.028	53.028
	123478-HxCDF	35.153	1.001	9.04e5	7.62e5	1.017	1.186	1.240	3739.0	NO	51.113	51.113
	234678-HxCDF	36.249	1.001	9.07e5	7.67e5	1.027	1.181	1.240	3929.7	NO	53.870	53.870
	123678-HxCDF	35.296	1.000	9.22e5	7.87e5	1.013	1.172	1.240	3868.3	NO	50.730	50.730
	123789-HxCDF	37.389	1.000	8.01e5	6.74e5	0.929	1.190	1.240	3457.9	NO	52.742	52.742
	1234678-HpCDF	39.450	1.000	6.99e5	7.05e5	1.151	0.992	1.050	3622.8	NO	52.717	52.717
	1234789-HpCDF	42.136	1.000	5.39e5	5.46e5	1.149	0.988	1.050	2296.5	NO	52.826	52.826
	OCDF	47.421	1.006	6.93e5	7.92e5	0.963	0.875	0.890	4174.9	NO	108.238	108.238
	2378-TCDD	26.616	1.001	1.72e5	2.29e5	0.980	0.751	0.770	1211.1	NO	10.154	10.154
	12378-PeCDD	31.722	1.000	8.86e5	5.73e5	0.948	1.546	1.550	3799.9	NO	50.079	50.079
	123478-HxCDD	36.381	1.001	7.34e5	5.94e5	0.941	1.235	1.240	2468.6	NO	50.314	50.314
	123678-HxCDD	36.512	1.001	7.04e5	5.70e5	0.884	1.236	1.240	2378.2	NO	48.977	48.977
	123789-HxCDD	36.940	1.012	7.23e5	5.97e5	0.870	1 212	1.240	2363.8	NO	52.822	52.822
	1234678-HpCDD	41.248	1.000	5.04e5	4.83e5	0.948	1.043	1.050	2362.2	NO	50.256	50.256
	OCDD	47.152	1.001	6.25e5	7.11e5	0.969	0.879	0.890	3068.7	NO	96.781	96.781
	13C-2378-TCDF	25.958	1.007	2.45e6	3.17e6	1.318	0.774	0.770	9886.7	NO		105.948
	13C-12378-PeCDF	30.111	1.168	2.67e6	1.71e6	1.026	1.560	1.550	10597 0	NO		105.885
	13C-23478-PeCDF	31.459	1.220	2.64e6	1.70e6	0.966	1.554	1.550	10547.1	NO		111.576
	13C-123478-HxCDF	35.131	0.952	1.09e6	2.12e6	1.123	0.516	0.510	6076.6	NO		99.835
	13C-123678-HxCDF	35.285	0.956	1.14e6	2.19e6	1.216	0.519	0.510	6350.6	NO		95.665
	13C-234678-HxCDF	36.227	0.981	1.03e6	1.99e6	1.106	0.520	0.510	5877.6	NO		95.666
	13C-123789-HxCDF	37.378	1.012	1.02e6	1.98e6	0.995	0.516	0.510	5728.5	NO		105.756
	13C-1234678-HpCDF	39.439	1.068	7.20e5	1.59e6	0.896	0.452	0.440	4835.3	NO		90.318
	13C-1234789-HpCDF	42.125	1.141	5.47e5	1.24e6	0.693	0.441	0.440	3145.4	NO		90.137
	13C-1234-TCDD	25.779	0.000	1.76e6	2.27e6	1.000	0.773	0.770	8480.0	NO		100.000
	13C-2378-TCDD	26.601	1.032	1.76e6	2.27e6	0.961	0.773	0.770	8556.8	NO		103.999
	13C-12378-PeCDD	31.711	1.230	1.87e6	1.20e6	0.703	1.554	1.550	8772.5	NO		108.438
	13C-123478-HxCDD	36.359	0.985	1.56e6	1.24e6	1.016	1.257	1.240	9191.7	NO		96 514
	13C-123678-HxCDD	36.490	0.988	1.63e6	1.32e6	1.098	1.237	1.240	9273.7	NO		93.695
	13C-1234678-HpCDD	41.237	1.117	1.06e6	1.02e6	0.828	1.040	1.050	5320.7	NO		87.527
	13C-OCDD	47.125	1.276	1.34e6	1.51e6	0.770	0.890	0.890	4332.0	NO		129.343

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

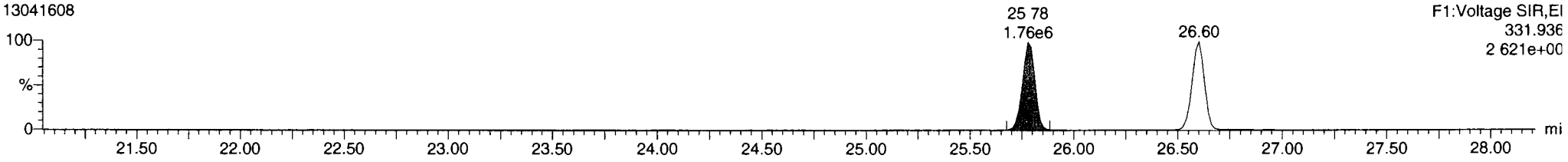
13C-123789-HxCDD	36.918	0.000	1 58e6	1.28e6	1.000	1.226	1.240	9016.5	NO	100.000
Total-tetrafurans			6.04e5		0.763					33.008
Total-penta1			1.69e6							70.178
Total-pentafurans			3.61e6		0.844					162.856
Total-hexafurans			4.60e6		0.997					270.648
Total-heptafurans			1.24e6		1.150					105 716
Total-Furans			1.24e7		0.970					750.656
Total-tetradioxins			9.41e5		0.980					54.531
Total-pentadioxins			3.01e6		0.948					170.254
Total-hexadioxins			3.10e6		0.898					217.978
Total-heptadioxins			1.08e6		0 948					107.903
Total-Dioxins			8.76e6		0.934					647.446
Total-TEQ			2.12e7							1398.103
37CL-2378-TCDD	26.616	1.032	4.28e5		0.999			3417.4		10.635
FUNCTION1 PFK			5.88e5							
FUNCTION2 PFK			1.32e5							0.000
FUNCTION3 PFK			2.24e6							0.000
FUNCTION4 PFK			1.59e5							
FUNCTION5 PFK			3.91e4							
FUNCTION1 HXCDPE			2.17e3							0.000
FUNCTION1 HPCDPE			9.65e2							0.000
FUNCTION2 HPCDPE			2.53e3							0.000
FUNCTION3 OCDPE			8.04e2							0.000
FUNCTION4 NCDPE			7.67e2							0.000
FUNCTION5 DCDPE			2.02e3							0.000

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130410.mdb 12 Apr 2013 12:10:56
Calibration: P:\DIOXIN8290.pro\CurveDB\130312ICAL.cdb 13 Mar 2013 10:38:15

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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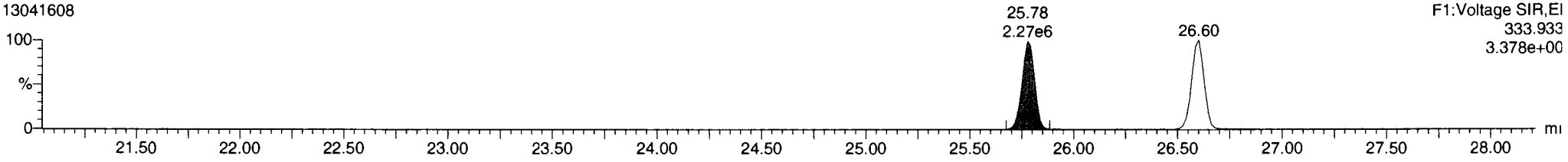

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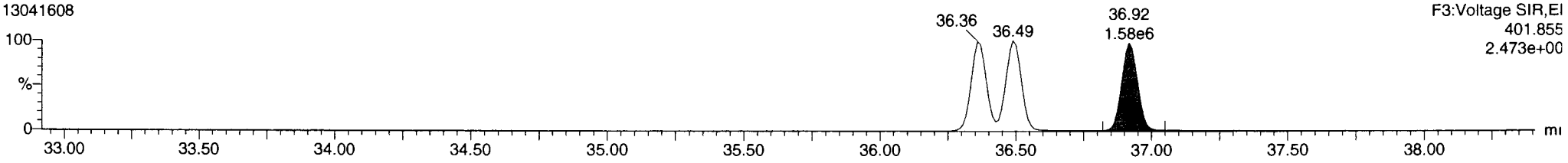

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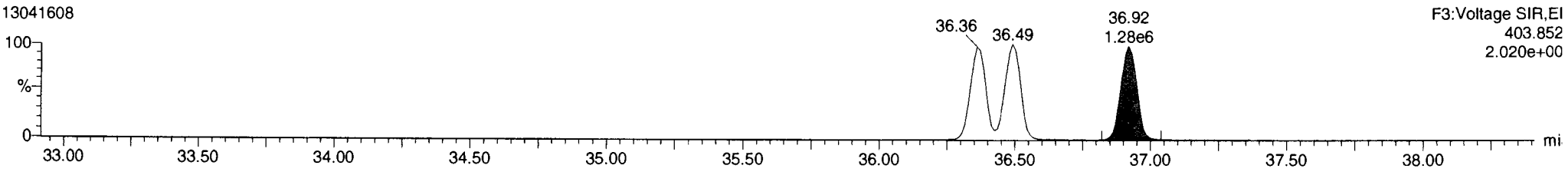

Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
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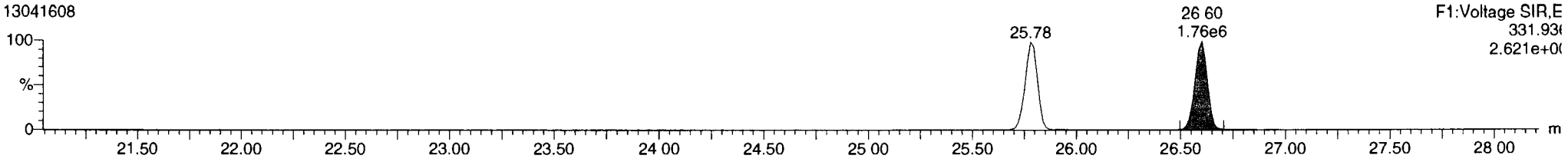
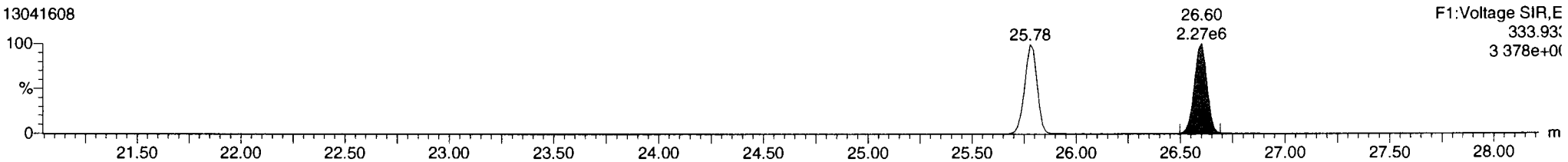
ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

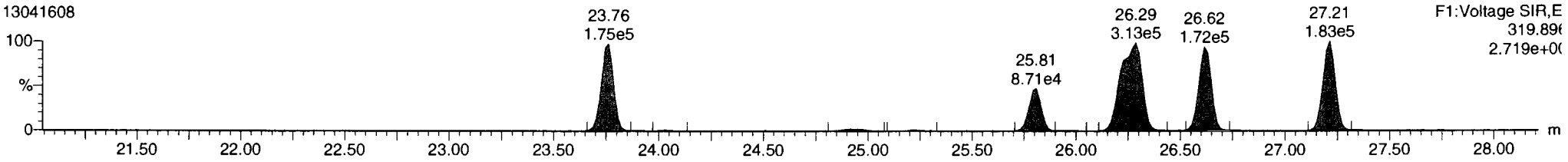
13C-2378-TCDD



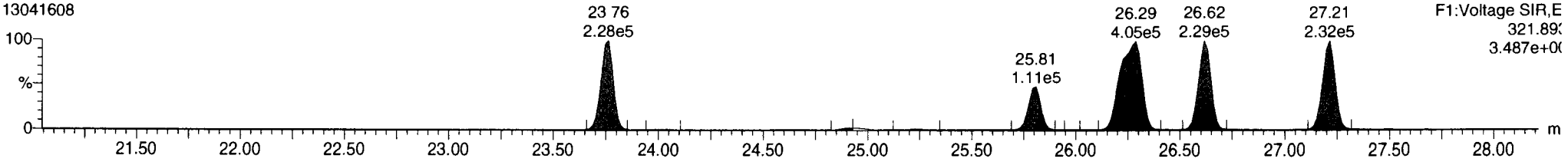
13C-2378-TCDD



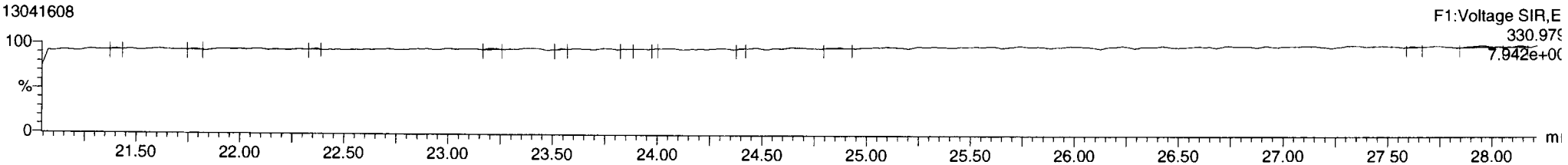
Total-tetradioxins



Total-tetradioxins



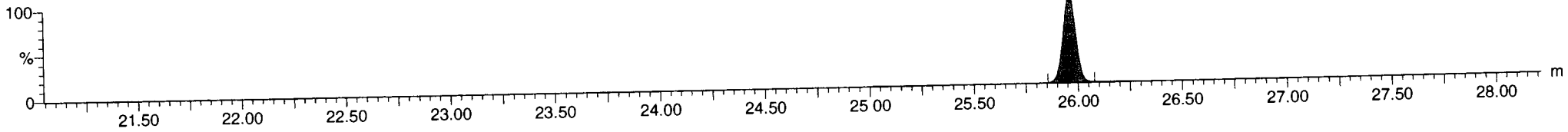
FUNCTION1 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

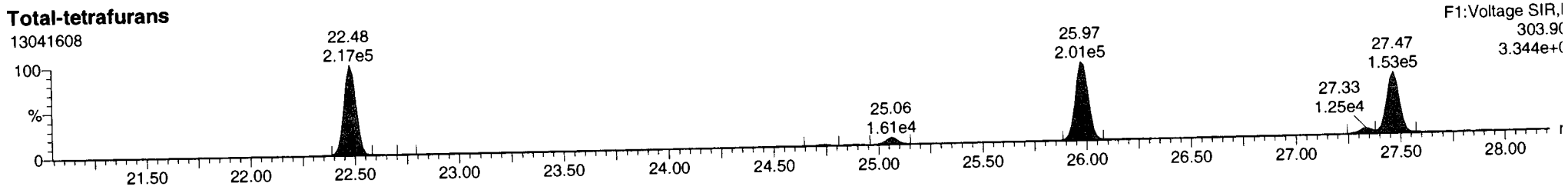
ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
13041608
F1:Voltage SIR,E
315.94
3.639e+0

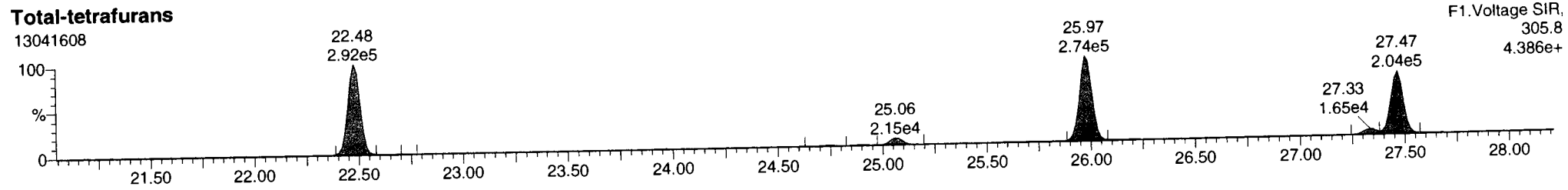


13C-2378-TCDF
13041608
F1:Voltage SIR,E
317.93
4.724e+0

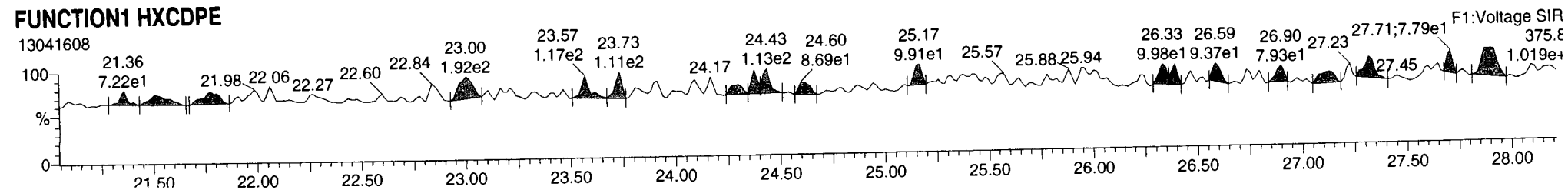
Total-tetrafurans
13041608
F1:Voltage SIR,
303.9
3.344e+



Total-tetrafurans
13041608
F1.Voltage SIR,
305.8
4.386e+



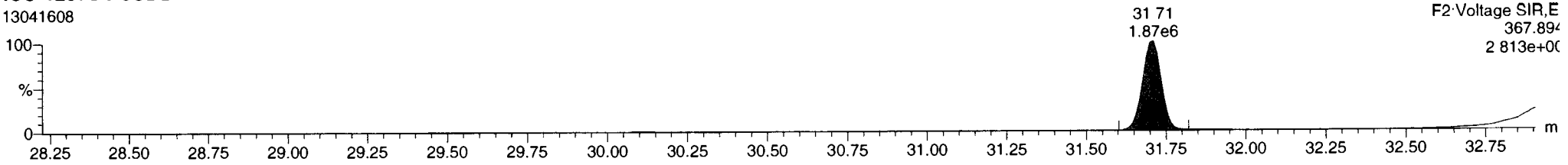
FUNCTION1 HXCDPE
13041608
F1:Voltage SIR
375.8
1.019e+



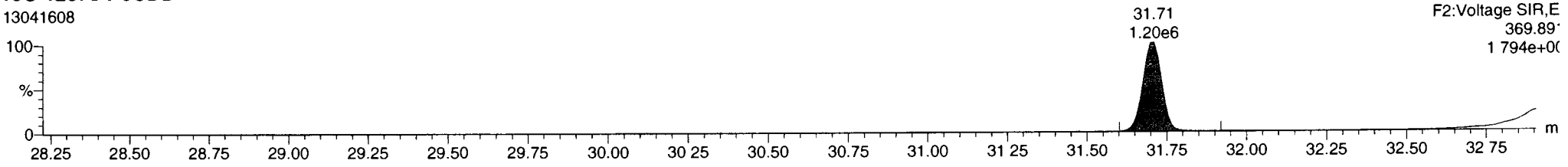
Quantify Sample Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

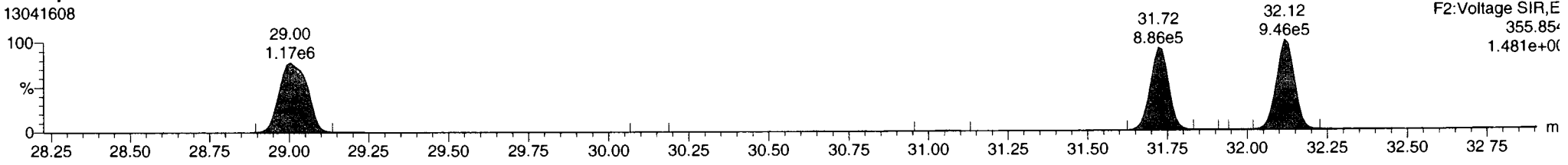
13C-12378-PeCDD



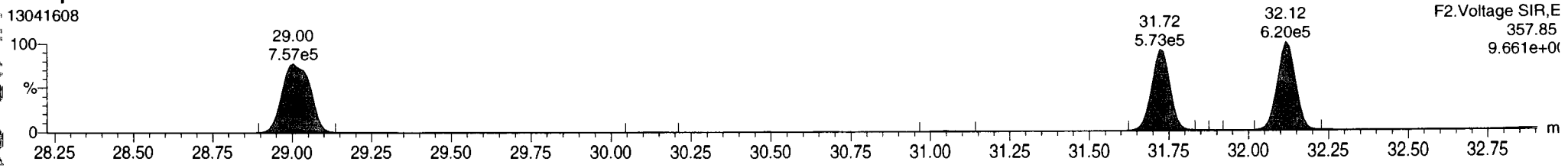
13C-12378-PeCDD



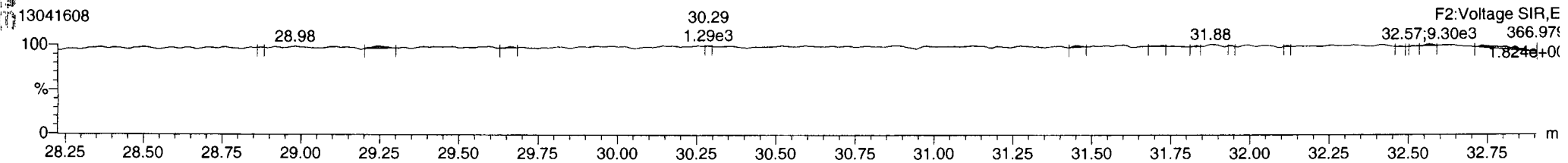
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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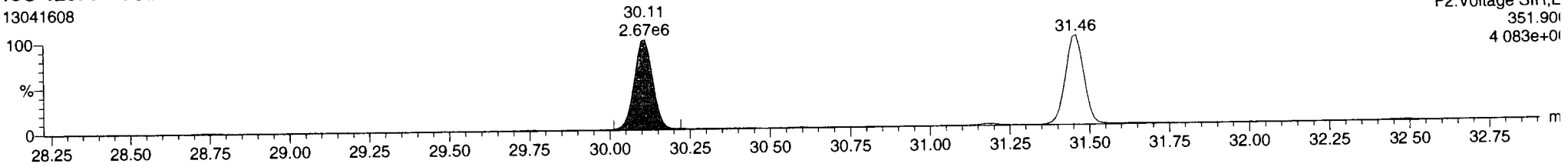
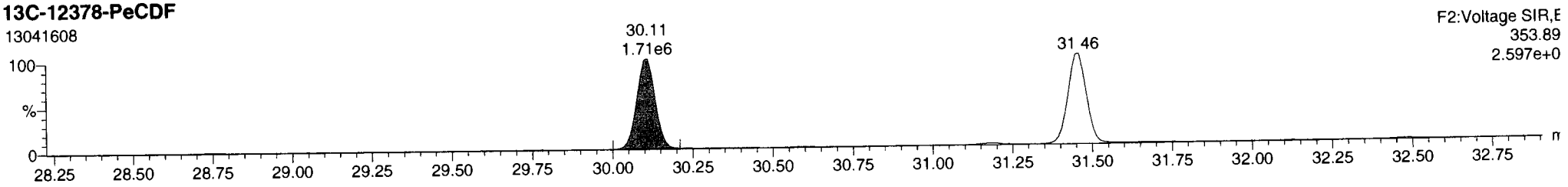
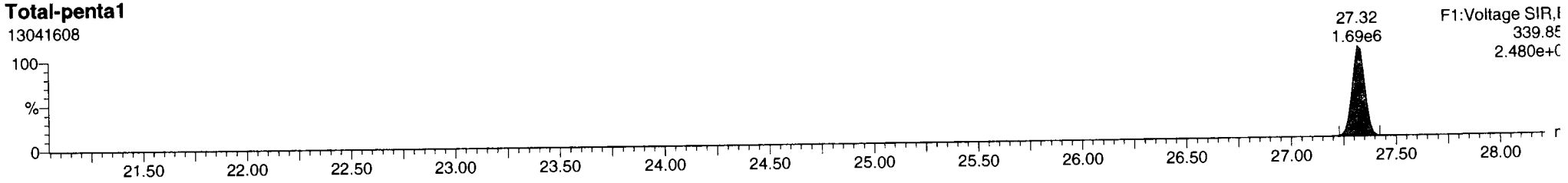
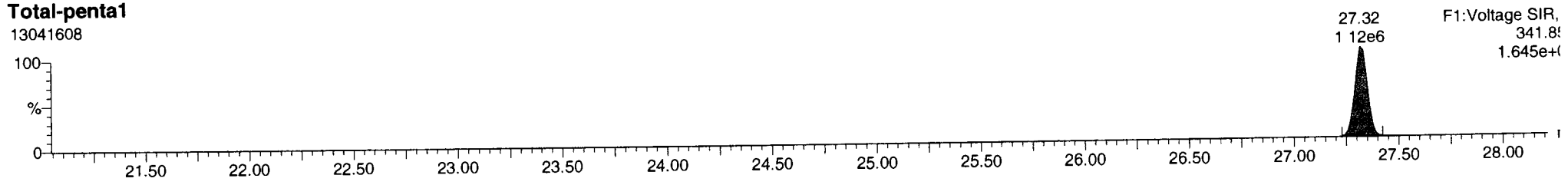
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

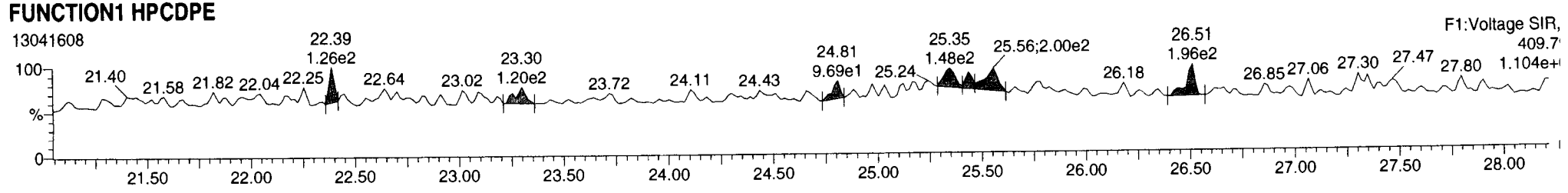
ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF
13041608


13C-12378-PeCDF
13041608


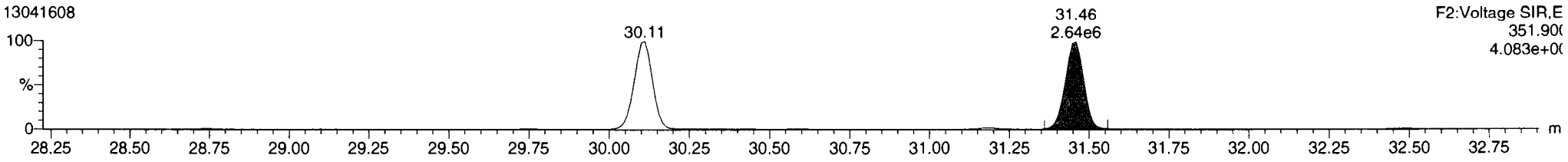
Total-penta1
13041608


Total-penta1
13041608


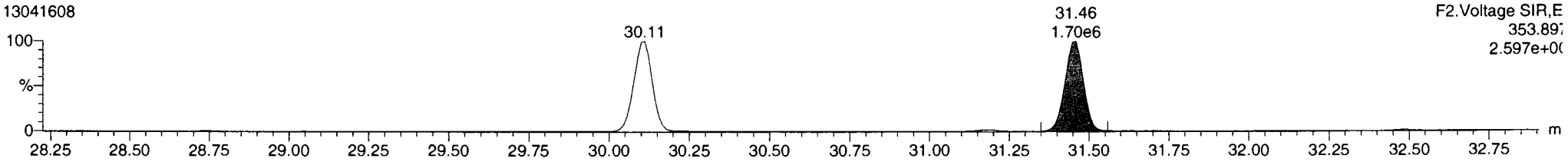
FUNCTION1 HPCDPE
13041608


ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

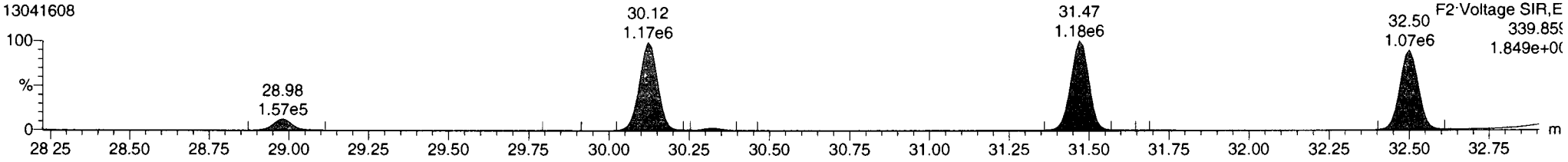
13C-23478-PeCDF



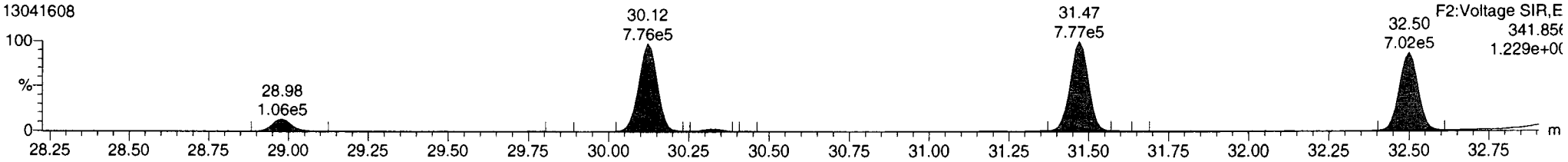
13C-23478-PeCDF



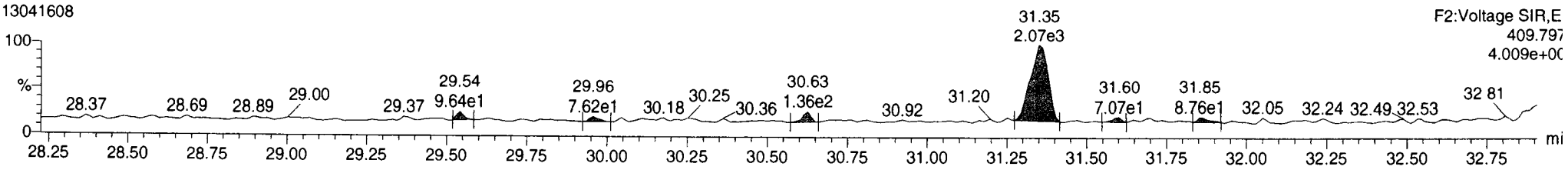
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx 4.1 SCN 714**
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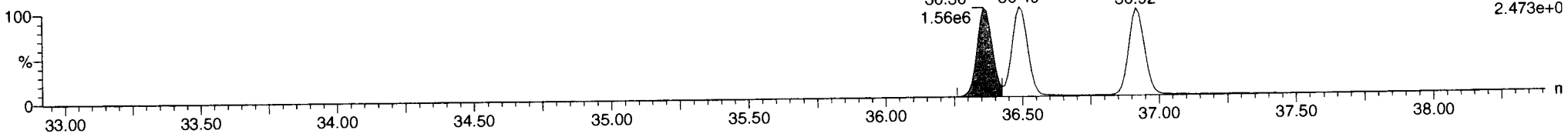
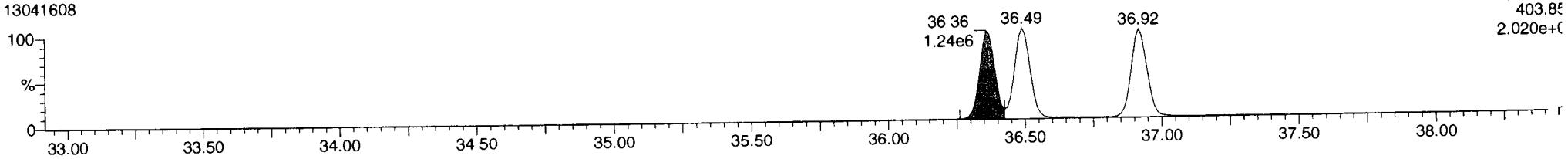
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

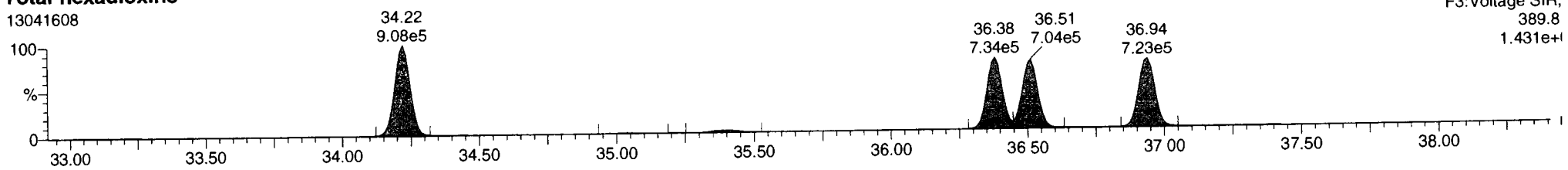
13C-123478-HxCDD
13041608
F3:Voltage SIR,E
401.85
2.473e+0



13C-123478-HxCDD
13041608
F3:Voltage SIR,I
403.85
2.020e+0



Total-hexadioxins
13041608
F3:Voltage SIR,
389.8
1.431e+



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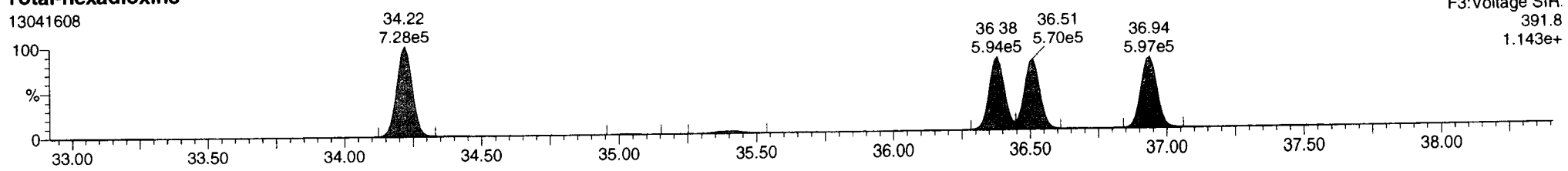
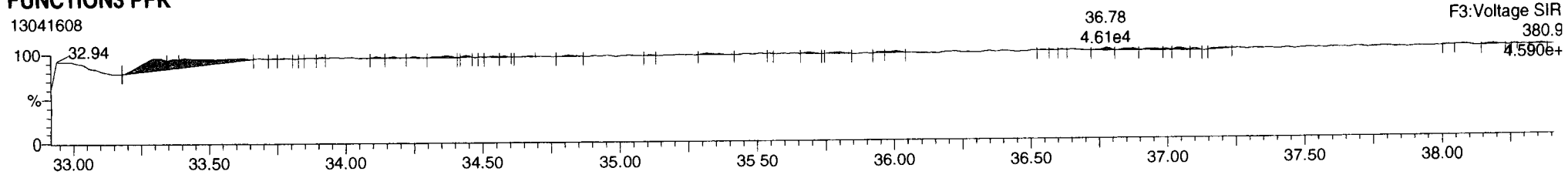
13041608
F3:Voltage SIR
391.8
1.143e+

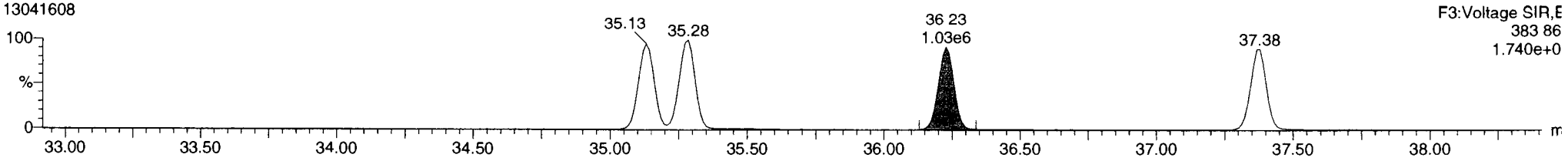


FUNCTION3 PFK
13041608
F3:Voltage SIR
380.9
4.590e+

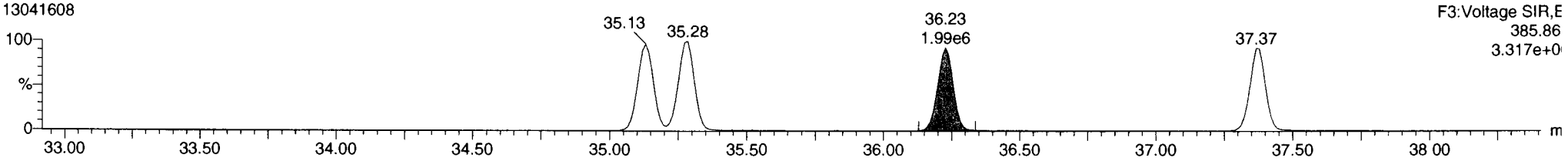


ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

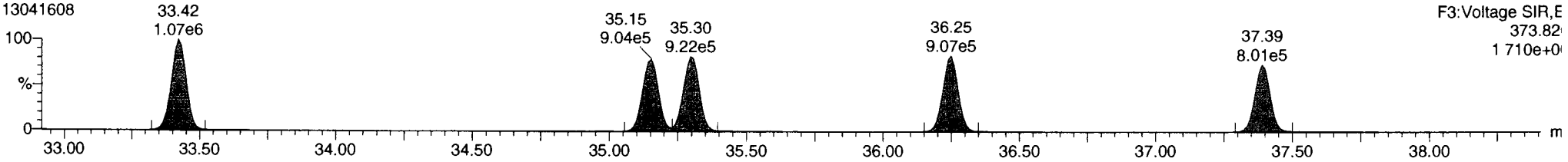
13C-234678-HxCDF



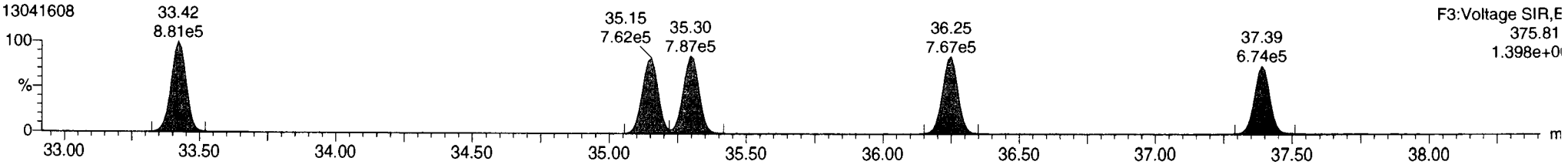
13C-234678-HxCDF



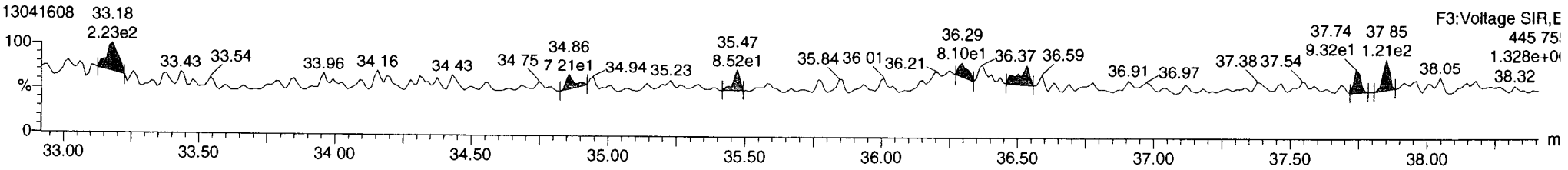
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
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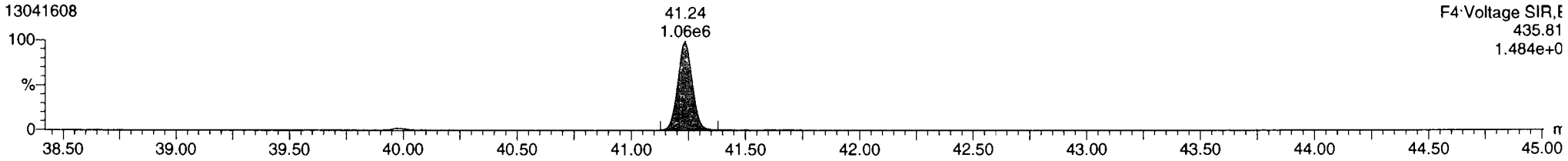
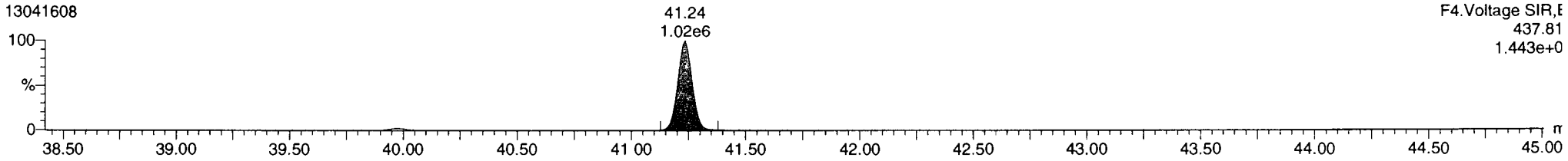
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

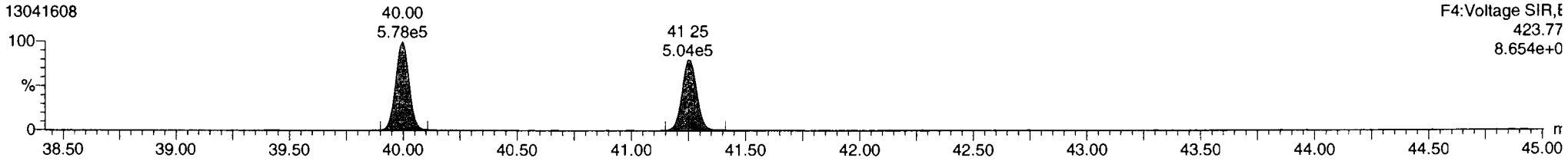
13C-1234678-HpCDD



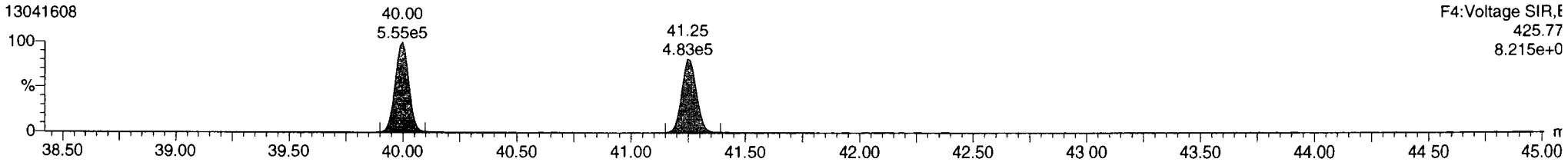
13C-1234678-HpCDD



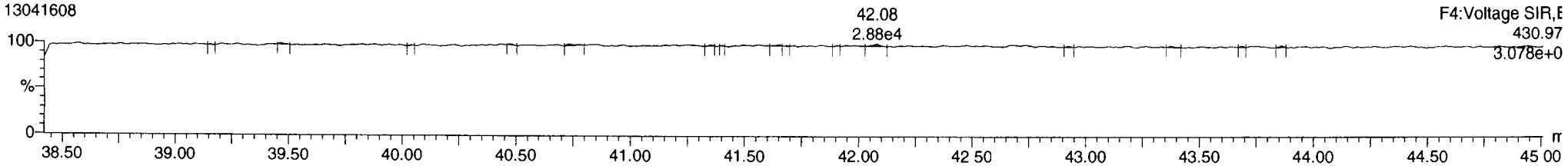
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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Last Altered: Wednesday, April 17, 2013 12:06:59 Pacific Daylight Time
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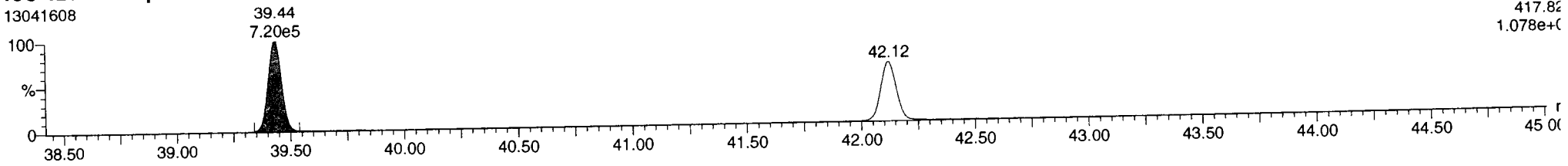
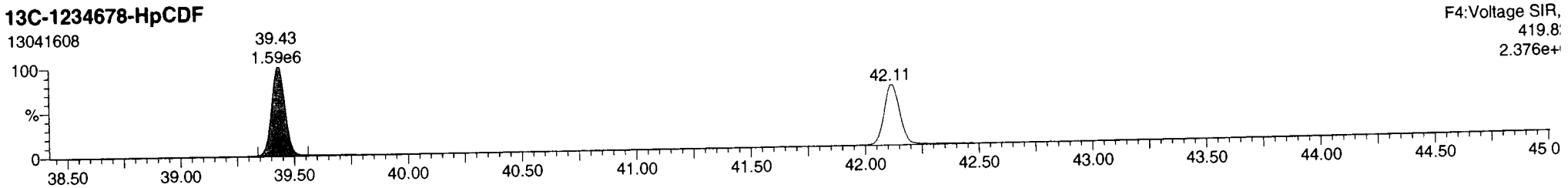
ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

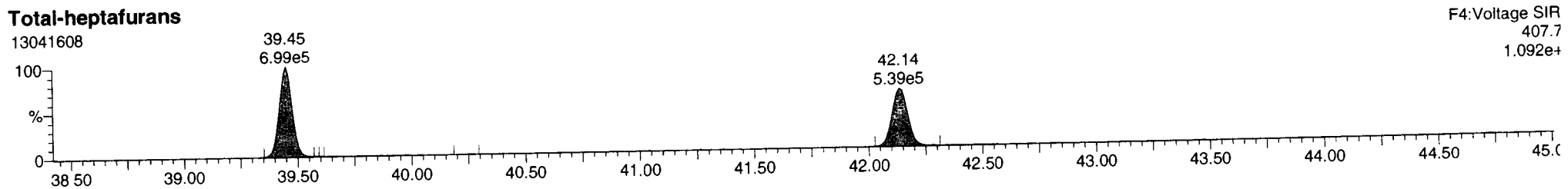
13C-1234678-HpCDF



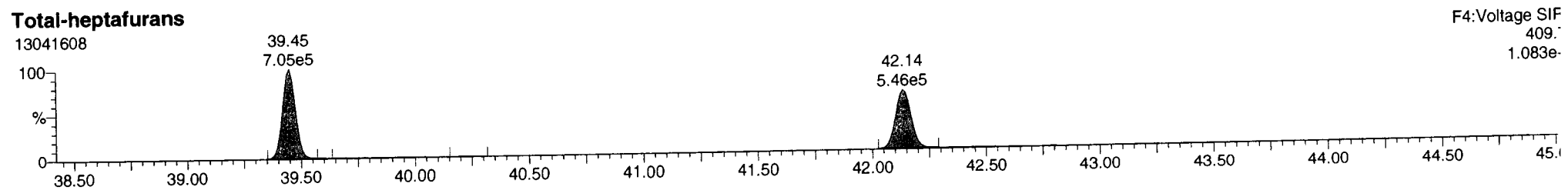
13C-1234678-HpCDF



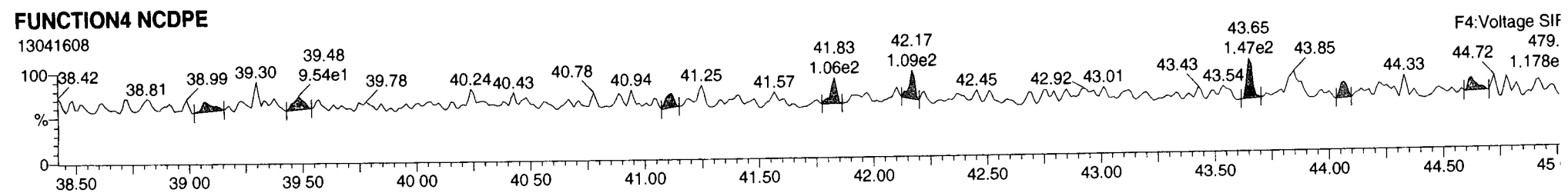
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130416DATA.qld
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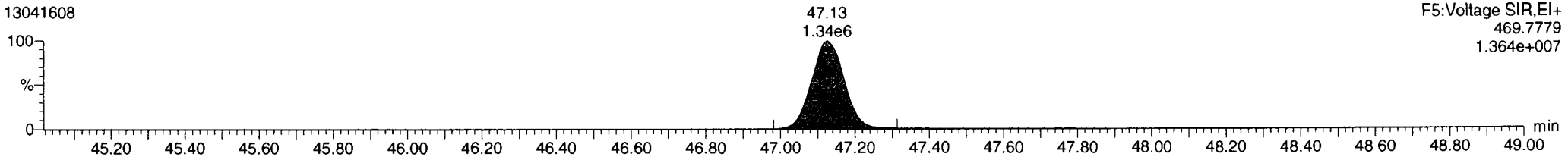
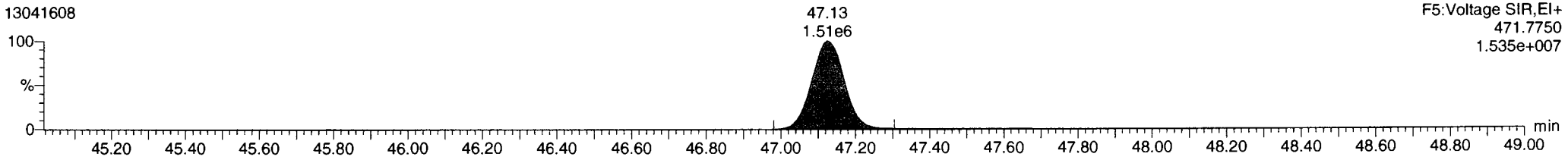
ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

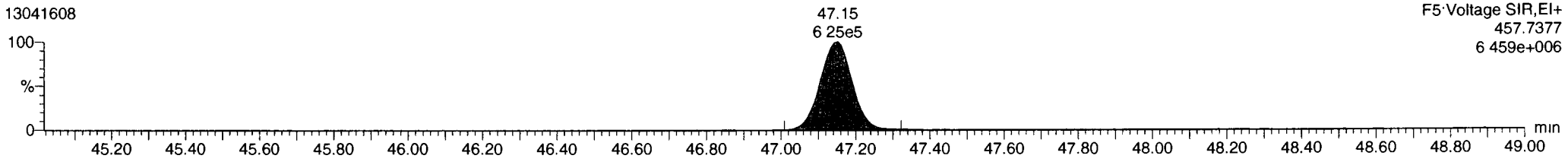
13C-OCDD



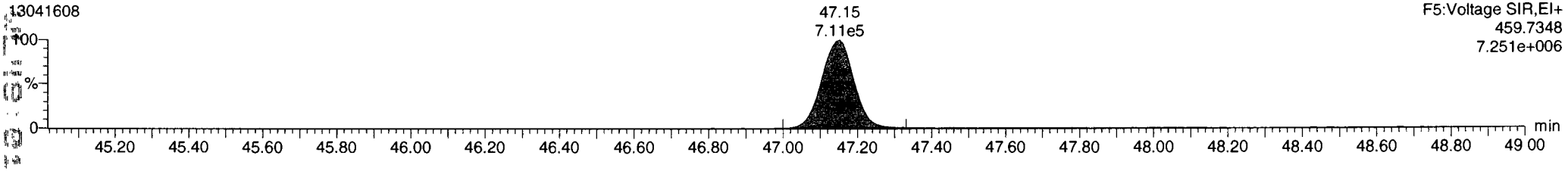
13C-OCDD



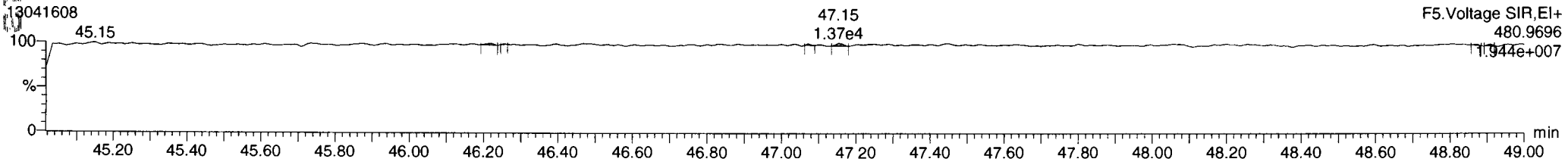
OCDD



OCDD



FUNCTION5 PFK



Quantify Sample Report **MassLynx 4.1 SCN 714**
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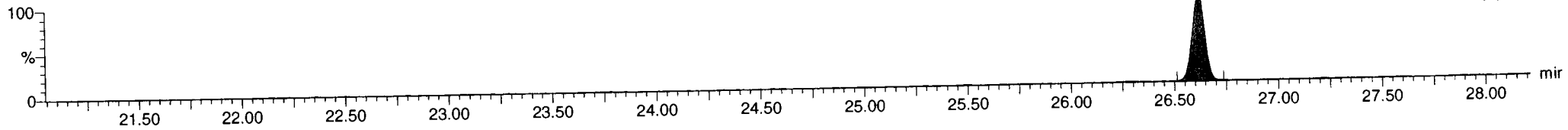
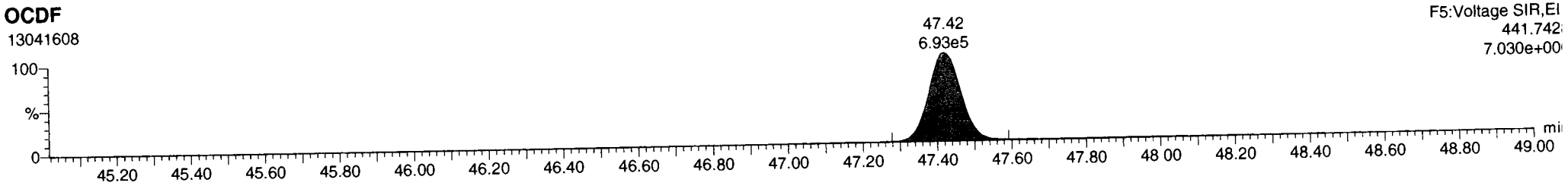
Printed: Wednesday, April 17, 2013 12:08:00 Pacific Daylight Time

ID: CS3, Name: 13041608, Date: 16-Apr-2013, Time: 16:30:07, Conditions: AUTOSPEC01, User: pk

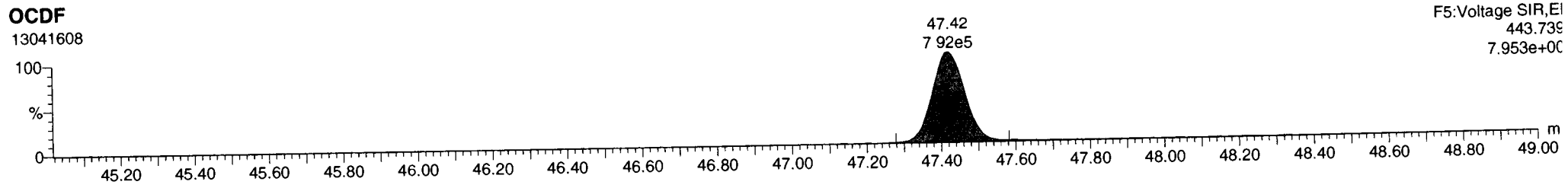
37CL-2378-TCDD
13041608
F1:Voltage SIR,EI+
327.8847
6.348e+006



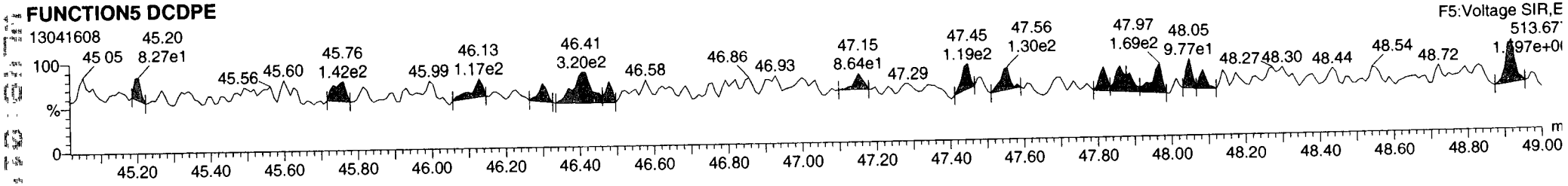
OCDF
13041608
F5:Voltage SIR,EI
441.742
7.030e+00



OCDF
13041608
F5:Voltage SIR,EI
443.739
7.953e+00



FUNCTION5 DCDPE
13041608
F5:Voltage SIR,E
513.67
1.497e+00



Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

Incorporated
Analytical Chemists and Consultants

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)
In-House (0.05-0.1ppb)

Preparation Test Pest # 1(PESWSI)
ARI Job No(s) WL74, WL49 Page 1 of 1 Batch set up by: SH

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate ①2 3	(Opt) Silica Gel Clean (1:5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WL74 MBW	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		AR 04/16/13 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 04/16/13 Analyst/Date
	~~QLS~~	~~500mL~~	(5mL) Y / N	(1:5) Y / N	~~5mL~~	~~1mL~~		
5	WL74 A	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		KD 80-85°C
8	WL49 A	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Hexane Exchange (2 X 20mL) 100°C
6	↓ B	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		①2③④5 6
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		YL / CT 04/17/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1②8 Pre-Cleanups (4mL=10mL Hexane Exchange)
		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		CJZ 4/19/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL	CJZ 4/19/13	
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2⑤ Post Cleanups
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
Analyst/Date			CJZ 4/19/13	CJZ 4/19/13	CJZ 4/19/13	CJZ 4/19/13		CJZ 4/19/13 Analyst/Date

AR 04/16/13 → AC 4-16-13

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (2035-2)	2µg/mL	100µL	5/16/13	AR	SH
Spike	3 (2079-2)	0.5/1/5µg/mL	200µL	12/14/13	AR	SH
~~QLS Spike~~	~~10 ( )~~	~~0.25-2.5µg/mL~~	~~50µL~~			
Extraction Time: 1305						

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)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 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=WL49 samples A, light grey, turbid B, light tan, turbid	AR 04/16/13
☑ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) WL49 sample B 3% particulates	AR 04/16/13
☑ Emulsions (%)=WL49 sample B, 100% emulsion, used centrifuge dry sample with sulfate	AR 04/16/13
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

3056F

Revision 009
08/14/12

WL49:04117

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest PSDDA – Soil (Sed)
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 (PESSDMP) PSDDA (1-2ppb)

ARI Job No(s) WL49, WL67 Page 1 of 1 Batch set up by: ~~SH~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 (3) very high sulfur	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID / Analyst/Date
	WL49 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave (1) 2 3
	↓ SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	YL 04/19/13 Analyst/Date
	~~SBS Dup.~~	~~12.5g~~	~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	WL49 QLS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6
7	F	12.55	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst Notes	
3	G	16.61	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
3	Gms	16.11	2.5mL	(1:2.5) 1mL	2.5mL	1mL		Analyst/Date 04/22/13
3	↓ Gmsd	16.47	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups
8	WL67 A	31.12	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	↓ B	7.52	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst Notes	
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		CSZ 4/23/13 Analyst/Date
			~~2.5mL~~	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 2 (3) Post Cleanups
			2.5mL	(1:2.5) 1mL	~~2.5mL~~	1mL	CSZ 4/23/13	
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
Analyst/Date TH 4/19/13			CSZ 4/23/13	CSZ 4/23/13	CSZ 4/23/13	CSZ 4/23/13		CSZ 4/23/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (2035-2)	2µg/mL	50µL	5/16/13	YL	TH
Spike	3 (2079-2)	0.5/1/5µg/mL	100µL	12/18/13	YL	TH
QLS Spike	10 (2046-2)	0.25-2.5µg/mL	25µL	12/18/13	YL	TH
Extraction Time: 12:40			Balance ID: B139298002			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Small~~ Large drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL). 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/Sed
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WL49, WL67

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8090 + jar date 4/11/13)	YL
Neutral Glasswool: (I# 7998 + jar date 4/5/13)	4/19/13
1:1 Hexane/Acetone: (H# 158)	
80:20 Hexane/Acetone: (H# 162)	
Hexane: (I# 8175)	
KD Station:	KD
Hexane: (I# 8175)	RZ 4/22/13
Anhydrous Sodium Sulfate: (I# 8060 + jar date 4/8/13)	
Neutral Glasswool: (I# 7998 + jar date 4/8/13)	
Vialing Station:	Vialing
Hexane: (I# 8175)	
Ethyl Acetate: (I# 6079)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 148)	CJ2 4/23/13
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# 7914)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 Client ID: SAIC

Parameter: Pest PSDDA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)= 9,t	AC 4-12-13
☐ Standing Water Homogenized (Shared samples)=	↓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? 30% small-med. = g	
☐ Organics (Leaves/sticks/grass)= 10% = sticks = g t AC 4-12-13	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☑ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst,	
(Centrifuge#1 used for all Centrifugations) reduced extraction weight for	
Sample 'F', based on sample pre-screen.	JH 4/17/13

WL10 01120

Pesticide Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

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 Hexabromobiphenyl	10.368	10.366	10.367	10.367	10.368	10.368	10.367	10.368	10.318-10.418	10.367	0.001
$ 2 Tetrachloro-m-xylene	4.166	4.165	4.165	4.166	4.166	4.167	4.169	4.166	4.116-4.216	4.166	0.001
3 Hexachlorobenzene	4.629	4.628	4.628	4.628	4.629	4.630	4.629	4.629	4.579-4.679	4.629	0.001
4 alpha-BHC	4.756	4.754	4.755	4.755	4.755	4.756	4.756	4.756	4.706-4.806	4.755	0.001
5 gamma-BHC (Lindane)	5.116	5.114	5.114	5.115	5.115	5.116	5.116	5.116	5.066-5.166	5.115	0.001
6 beta-BHC	5.186	5.184	5.184	5.185	5.185	5.186	5.185	5.186	5.136-5.236	5.185	0.001
7 delta-BHC	5.499	5.497	5.498	5.498	5.498	5.499	5.499	5.499	5.449-5.549	5.498	0.001
8 Heptachlor	5.582	5.580	5.581	5.581	5.581	5.582	5.582	5.582	5.532-5.632	5.581	0.001
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.921	5.919	5.919	5.920	5.920	5.921	5.921	5.921	5.871-5.971	5.920	0.001
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.476	6.474	6.474	6.475	6.475	6.476	6.476	6.476	6.426-6.526	6.475	0.001
12 gamma-Chlordane	6.658	6.656	6.656	6.657	6.657	6.658	6.657	6.658	6.608-6.708	6.657	0.001
13 alpha-Chlordane	6.796	6.794	6.795	6.795	6.795	6.796	6.795	6.796	6.746-6.846	6.795	0.001
14 Endosulfan I	6.863	6.861	6.862	6.862	6.862	6.863	6.863	6.863	6.813-6.913	6.862	0.001

Reviewer 1 YZ Date: 4/8/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Batch File: /chem2/ecd6.i/20130405PEST.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.921	6.918	6.919	6.919	6.920	6.921	6.920	6.921	6.871-6.971	6.920	0.001
	16 Dieldrin	7.121	7.119	7.120	7.120	7.120	7.121	7.121	7.121	7.071-7.171	7.120	0.001
	17 Endrin	7.411	7.409	7.409	7.410	7.409	7.411	7.410	7.411	7.361-7.461	7.410	0.001
	18 4,4'-DDD	7.458	7.456	7.456	7.457	7.457	7.458	7.458	7.458	7.408-7.508	7.457	0.001
	19 Endosulfan II	7.599	7.597	7.597	7.597	7.598	7.598	7.599	7.599	7.549-7.649	7.598	0.001
	20 4,4'-DDT	7.746	7.744	7.745	7.745	7.745	7.746	7.745	7.746	7.696-7.796	7.745	0.001
	21 Endrin aldehyde	7.896	7.895	7.895	7.896	7.895	7.896	7.895	7.896	7.846-7.946	7.895	0.001
	22 Endosulfan sulfate	8.141	8.139	8.140	8.140	8.140	8.141	8.140	8.141	8.091-8.191	8.140	0.001
	23 Methoxychlor	8.328	8.327	8.327	8.327	8.327	8.328	8.330	8.328	8.278-8.378	8.328	0.001
	24 Endrin ketone	8.633	8.632	8.632	8.632	8.632	8.633	8.633	8.633	8.583-8.683	8.632	0.001
$	25 Decachlorobiphenyl	9.796	9.794	9.795	9.795	9.794	9.795	9.795	9.796	9.746-9.846	9.795	0.001
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.131	7.081-7.181	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.432	6.382-6.482	+++++	+++++

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 YZ 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					0.05148	0.000
(2)	+++++	+++++	+++++	+++++	0.03504	+++++		
	+++++	+++++					0.03504	0.000
(3)	+++++	+++++	+++++	+++++	0.05882	+++++		
	+++++	+++++					0.05882	0.000
(4)	+++++	+++++	+++++	+++++	0.05933	+++++		
	+++++	+++++					0.05933	0.000
(5)	+++++	+++++	+++++	+++++	0.03915	+++++		
	+++++	+++++					0.03915	0.000
(6)	+++++	+++++	+++++	+++++	0.03361	+++++		
	+++++	+++++					0.03361	0.000
39 2,4-DDE	0.97037	0.94494	0.94800	0.97255	0.90349	1.01619		
	0.84262	+++++					0.94259	5.914
40 2,4-DDD	0.86428	0.82066	0.81941	0.83423	0.77745	0.89463		
	0.76053	+++++					0.82446	5.633
41 2,4-DDT	0.97762	0.93181	0.93450	0.95197	0.89630	1.03633		
	0.87037	+++++					0.94270	5.752

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.29181	1.24713	1.25548	1.27408	1.19753	1.36047		
	1.13536	+++++					1.25169	5.691
44 trans-Nonachlor	1.52831	1.46845	1.47524	1.51266	1.42527	1.63694		
	1.39053	+++++					1.49105	5.361
45 cis-Nonachlor	1.60364	1.52966	1.54573	1.59353	1.51117	1.75011		
	1.49805	+++++					1.57598	5.479
46 Mirex	1.06476	0.97851	0.94279	0.93019	0.85718	0.98037		
	0.83485	+++++					0.94124	8.308
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Cal Date : 08-Apr-2013 11:23 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.22093	1.17519	1.17086	1.12023	1.33214	1.27457		
	1.13000	+++++					1.20342	6.446
$ 25 Decachlorobiphenyl	1.22712	1.39221	1.18347	1.03855	1.18904	1.14719		
	0.99666	+++++					1.16775	11.110

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a015.d
Level 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a016.d
Level 3: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a017.d
Level 4: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a018.d
Level 5: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a014.d
Level 6: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a019.d
Level 7: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a020.d
Level 8: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a013.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.68966	1.54770	1.52497	1.44719	1.51551	1.56884		
	1.43229	+++++					1.53231	5.583
3 Hexachlorobenzene	1.85432	1.77150	1.76373	1.68524	1.96131	1.87809		
	1.63888	+++++					1.79330	6.276
4 alpha-BHC	1.70138	1.75567	1.85342	1.87497	2.23583	2.20600		
	2.00018	+++++					1.94678	10.779
5 gamma-BHC (Lindane)	1.54386	1.55958	1.62894	1.63777	1.95411	1.92482		
	1.74555	+++++					1.71352	9.792
6 beta-BHC	0.75150	0.73780	0.73159	0.71129	0.83666	0.82054		
	0.72405	+++++					0.75906	6.493
7 delta-BHC	1.48508	1.50559	1.58354	1.59180	1.87744	1.86008		
	1.68038	+++++					1.65484	9.633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.53588	1.52969	1.56029	1.54097	1.79481	1.70711		
	1.45373	+++++					1.58893	7.450
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.37926	1.37037	1.39862	1.38737	1.64212	1.58534		
	1.37709	+++++					1.44860	7.893
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.27602	1.21672	1.22365	1.19040	1.39603	1.33591		
	1.14610	+++++					1.25497	6.928
12 gamma-Chlordane	1.23139	1.20522	1.21707	1.19590	1.40625	1.37528		
	1.20954	+++++					1.26295	7.003
13 alpha-Chlordane	1.15386	1.12660	1.12460	1.10005	1.29194	1.25884		
	1.10159	+++++					1.16535	6.683
14 Endosulfan I	1.07598	1.05971	1.06310	1.03937	1.21798	1.18434		
	1.01792	+++++					1.09406	6.957
15 4,4'-DDE	1.07231	1.07330	1.09778	1.07854	1.24866	1.20322		
	1.05591	+++++					1.11853	6.753

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.06871	1.06342	1.07850	1.05724	1.22625	1.17015		
	1.02268	+++++					1.09813	6.590
17 Endrin	2.17870	2.04807	2.09589	2.02185	2.57180	2.33640		
	1.95604	+++++					2.17268	9.894
18 4,4'-DDD	2.26082	2.14565	2.20459	2.13439	2.69106	2.51434		
	2.14488	+++++					2.29939	9.475
19 Endosulfan II	2.43748	2.28049	2.30366	2.19551	2.75928	2.56341		
	2.16454	+++++					2.38634	8.999
20 4,4'-DDT	2.05904	1.93083	1.97799	1.92012	2.39796	2.30287		
	2.02246	+++++					2.08733	9.013
21 Endrin aldehyde	1.93356	1.79284	1.80285	1.72269	2.16235	2.03164		
	1.72866	+++++					1.88208	8.858
22 Endosulfan sulfate	1.98303	1.84581	1.87837	1.81411	2.30559	2.17756		
	1.86710	+++++					1.98165	9.522
23 Methoxychlor	0.94203	0.85843	0.85236	0.79685	0.99291	0.93147		
	0.68248	+++++					0.86522	12.018
24 Endrin ketone	2.08253	1.92427	1.93089	1.84154	2.31127	2.19456		
	1.90367	+++++					2.02696	8.577

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.07348	+++++		
	+++++	+++++					0.07348	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.10995	+++++		
	+++++	+++++					0.10995	0.000
(3)	+++++	+++++	+++++	+++++	0.11751	+++++		
	+++++	+++++					0.11751	0.000
(4)	+++++	+++++	+++++	+++++	0.08491	+++++		
	+++++	+++++					0.08491	0.000
(5)	+++++	+++++	+++++	+++++	0.10752	+++++		
	+++++	+++++					0.10752	0.000
38 2,4-DDE	0.81007	0.79245	0.77739	0.77920	0.72189	0.78749		
	0.64847	+++++					0.75957	7.385
39 2,4-DDD	1.72533	1.60231	1.59340	1.62587	1.55489	1.72186		
	1.43911	+++++					1.60897	6.144
40 2,4-DDT	1.78286	1.67947	1.68200	1.72632	1.65914	1.86011		
	1.56080	+++++					1.70724	5.589
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05125	1.04120	1.03502	1.04960	0.98900	1.10930		
	0.95840	+++++					1.03340	4.674

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	3.19206	3.05137	3.06372	3.12225	2.97977	3.28562		
	2.78344	+++++					3.06832	5.234
44 cis-Nonachlor	2.98886	2.83553	2.88674	2.93078	2.81218	3.13506		
	2.69727	+++++					2.89806	4.823
45 Mirex	1.50918	1.37059	1.31068	1.29630	1.22446	1.36347		
	1.17545	+++++					1.32145	8.226
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-APR-2013 12:47
End Cal Date : 05-APR-2013 17:33
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130405PEST.b/PEST0405B.m
Cal Date : 08-Apr-2013 10:50 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.45811	1.42532	1.42159	1.36019	1.57240	1.47902		
	1.18841	+++++					1.41501	8.423
$ 25 Decachlorobiphenyl	2.07956	1.87920	1.82822	1.70015	2.10612	1.97368		
	1.71032	+++++					1.89675	8.652

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a004.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a004.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
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

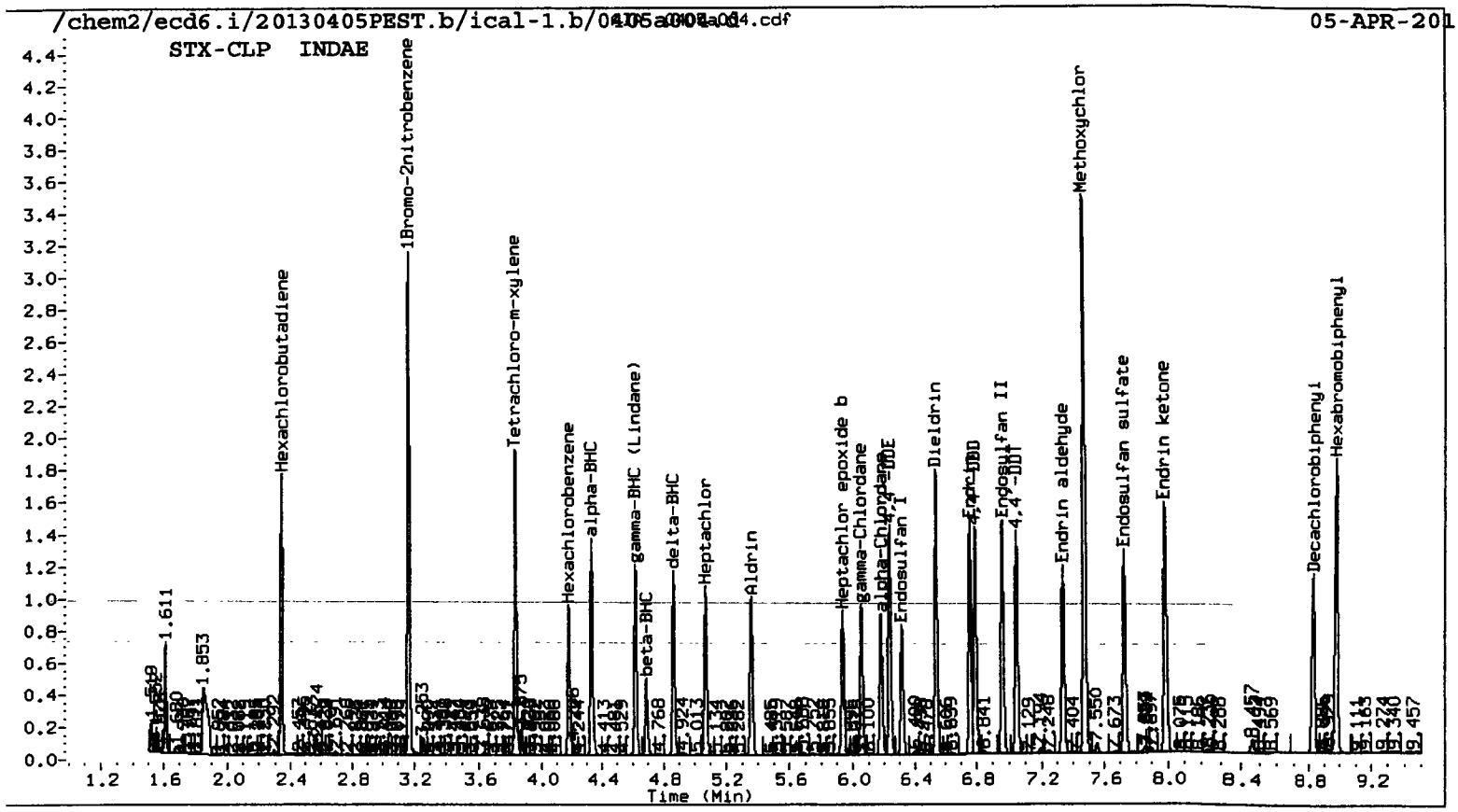
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5448520	0.0
Hexabromobiphenyl	4807902	4807902	0.0

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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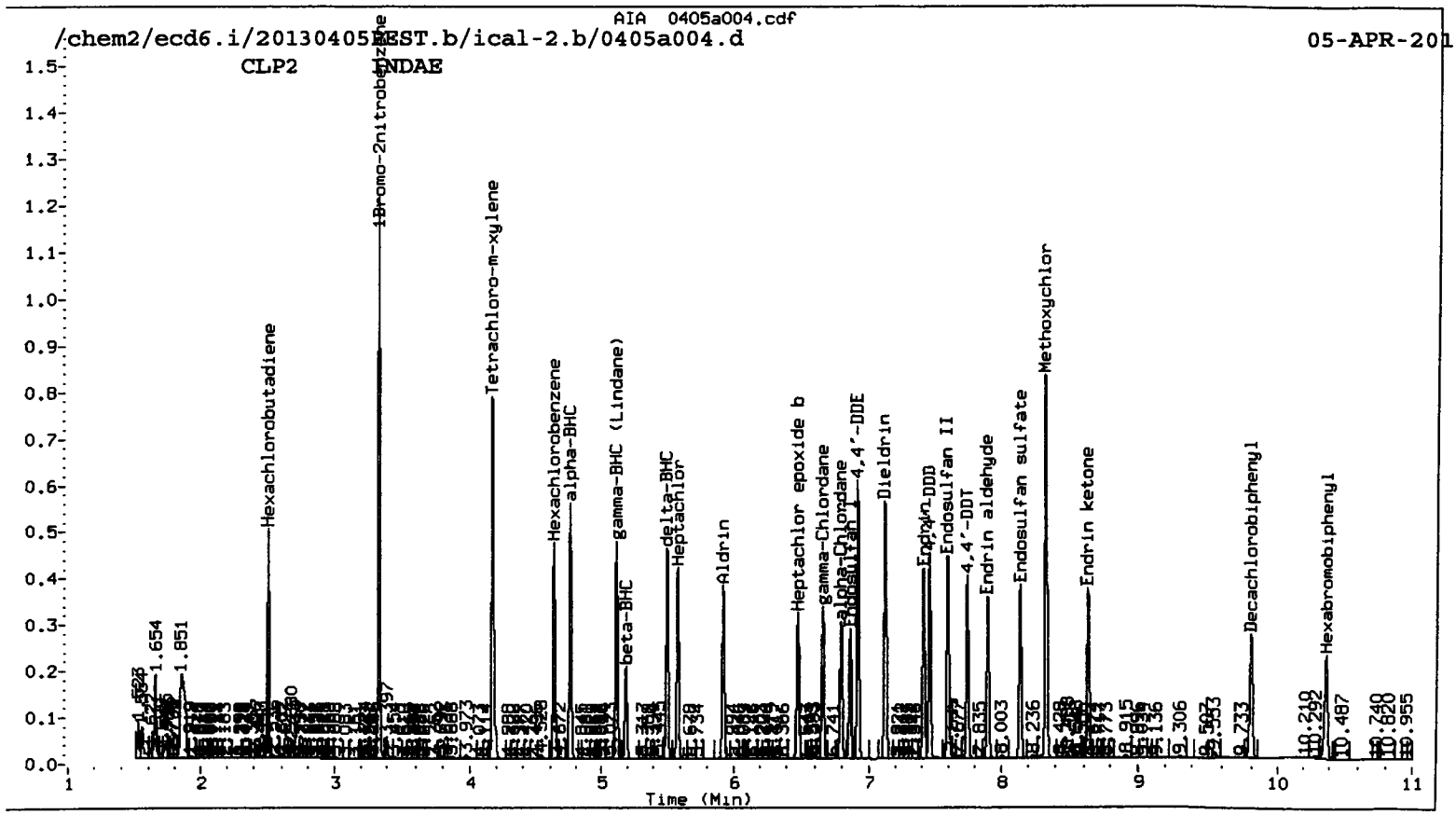
05-APR-201
STX-CLP INDAE
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.611
1.853
Time (Min)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05-APR-201
CLP2 INDAE
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.654
1.851
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

XZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a005.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a005.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 05-APR-2013 13:05
Compound Sublist: INDA
Report Date: 04/08/2013 11:23
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	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

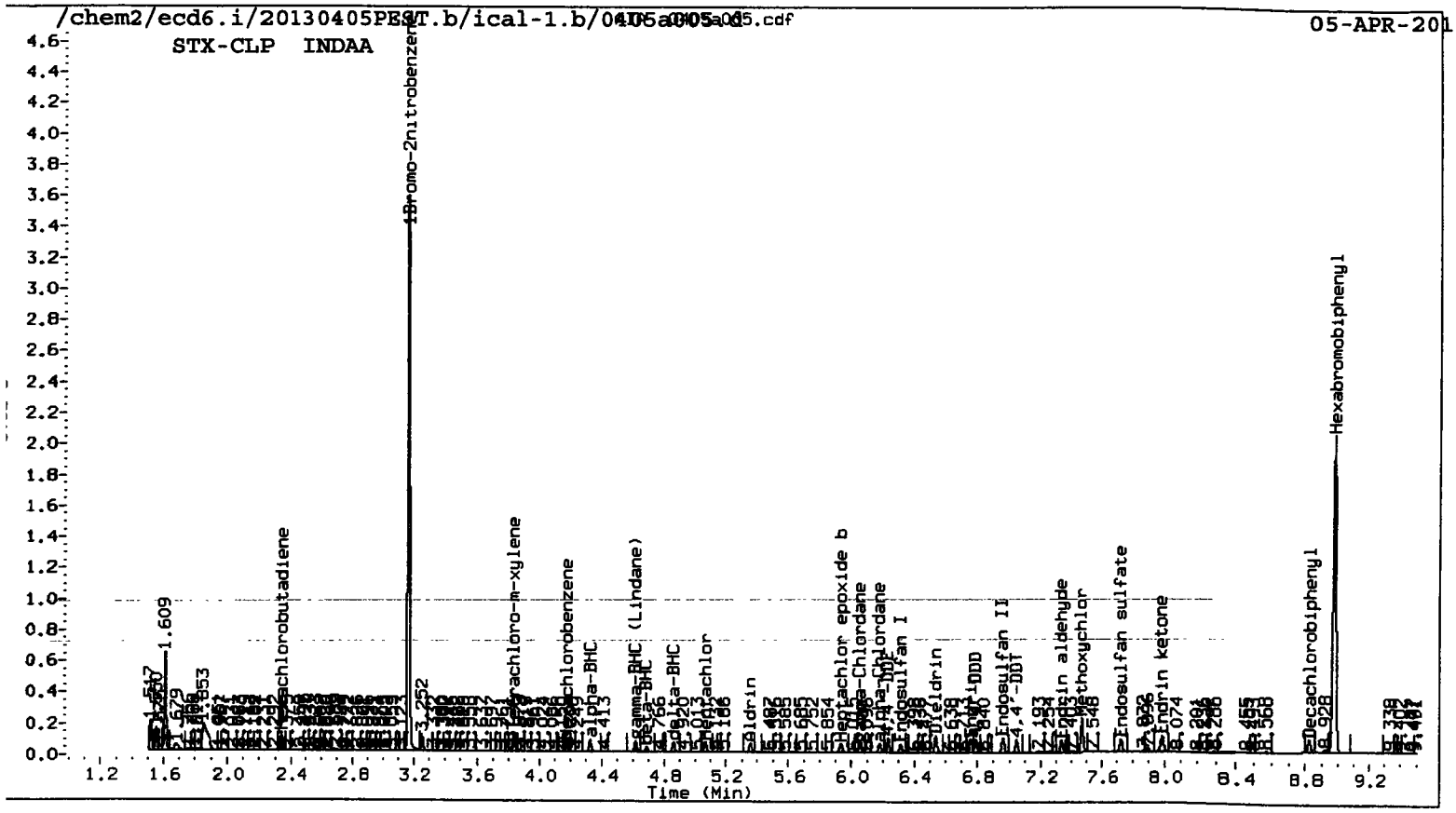
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6225835	14.3
Hexabromobiphenyl	4807902	5241456	9.0

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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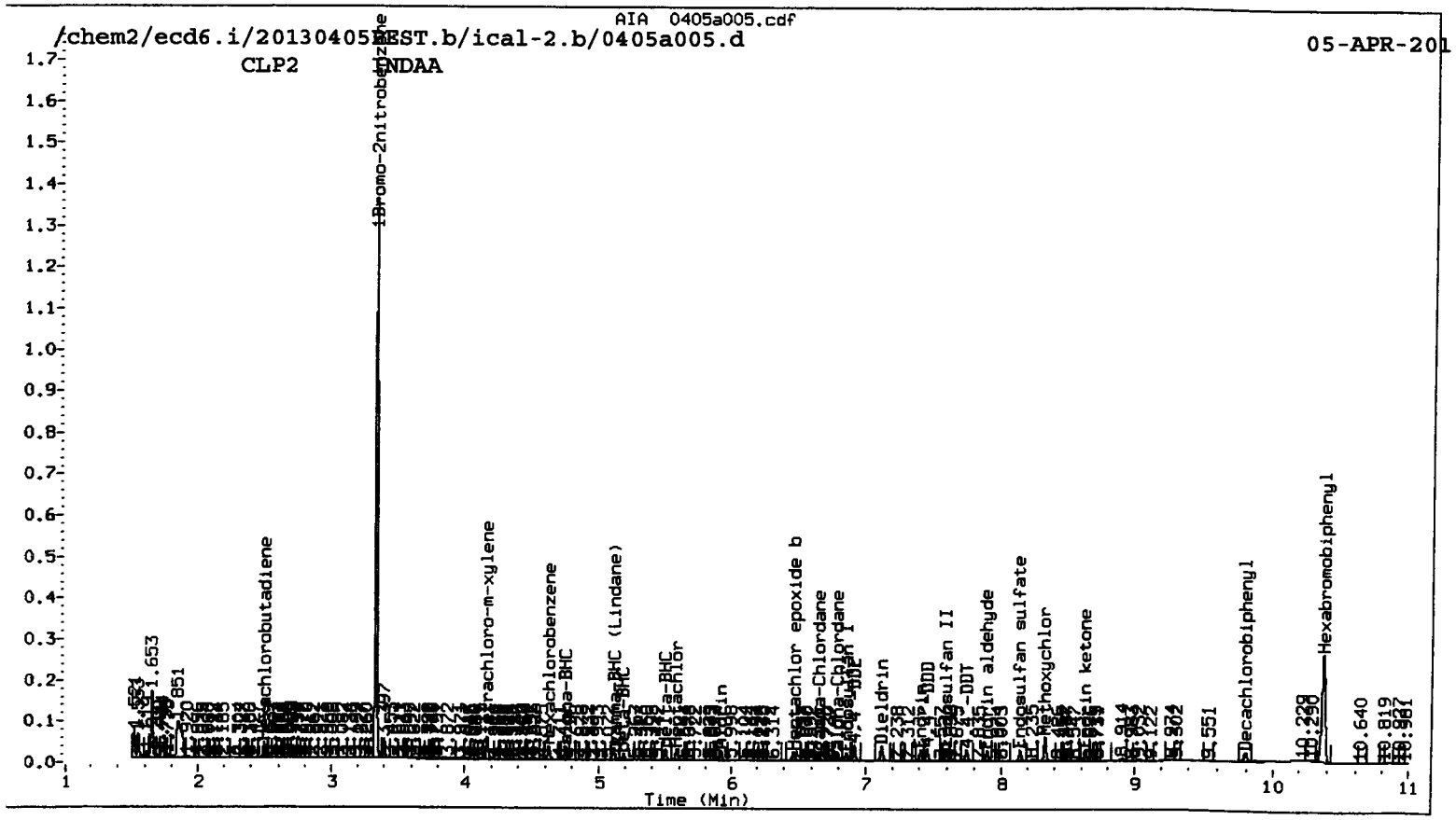
05-APR-201
STX-CLP INDAA
1.609
3.252
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 INDAA
Hexabromobiphenyl
Time (Min)

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

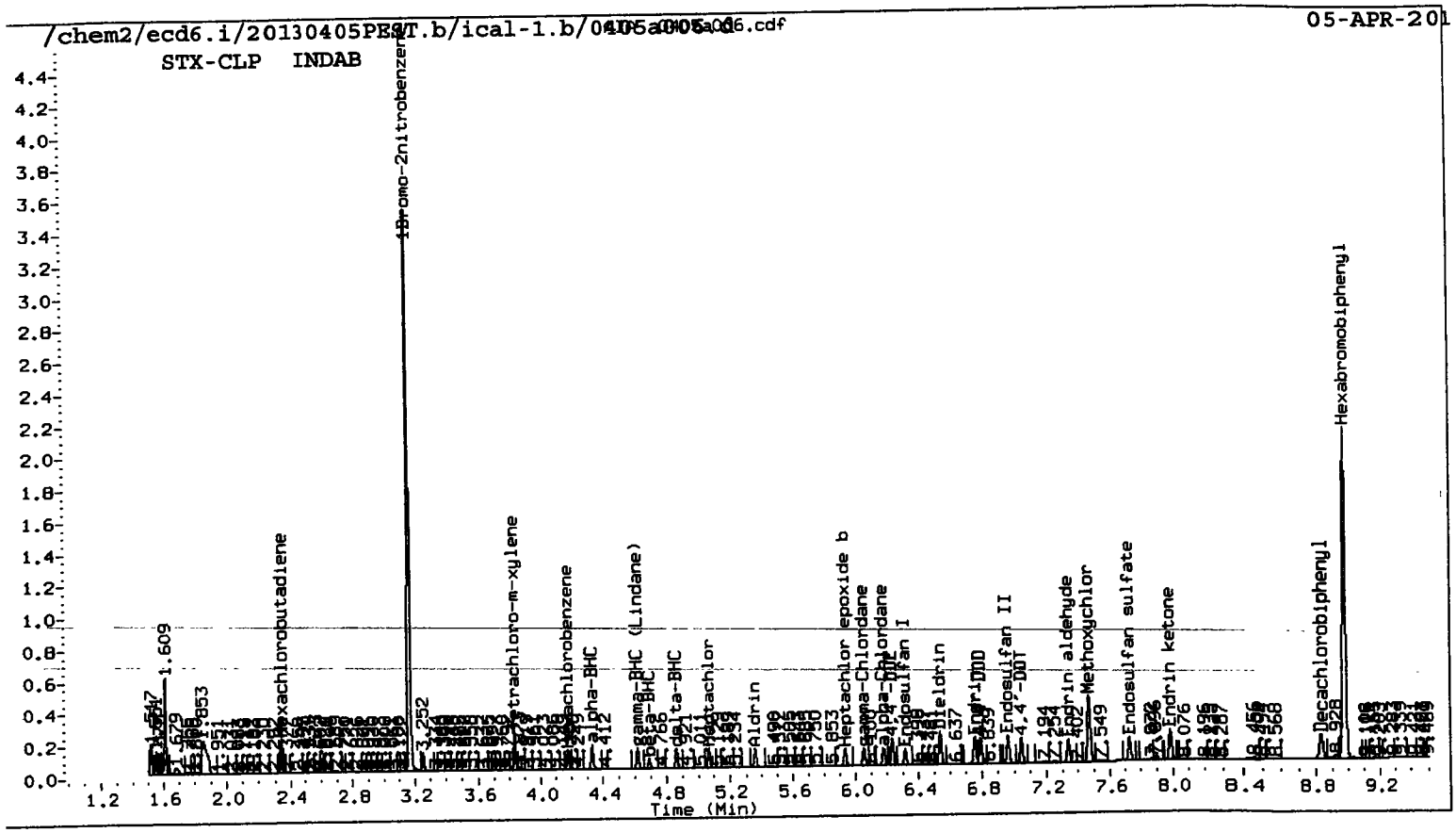
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6111022	12.2
Hexabromobiphenyl	4807902	5357211	11.4

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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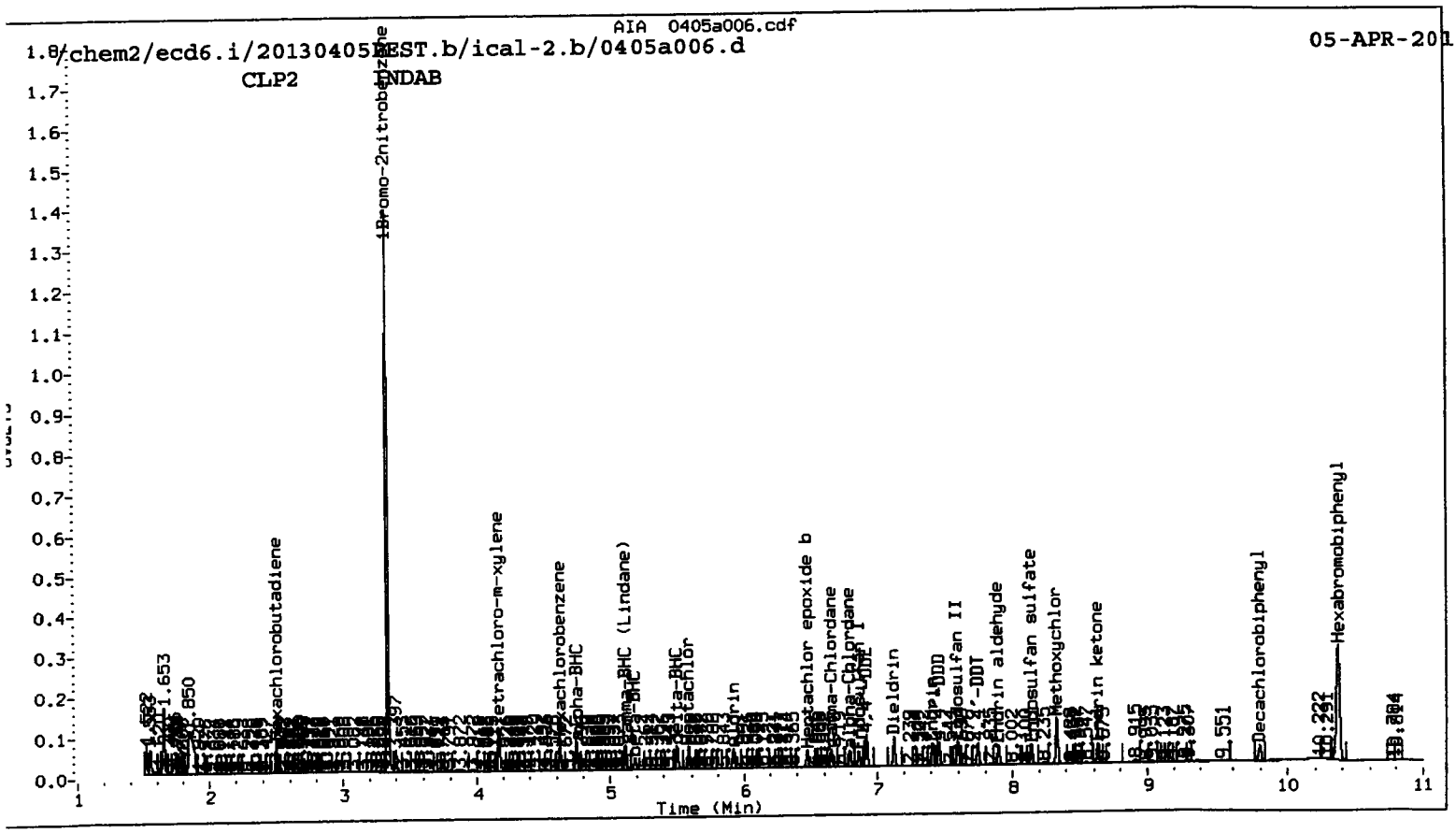
Hexachlorobutadiene
1,3,5-Trichloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Pentachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAB
1-Bromo-2nitrobenzene
Hexachlorobutadiene
1,3,5-Trichloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a007.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a007.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
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

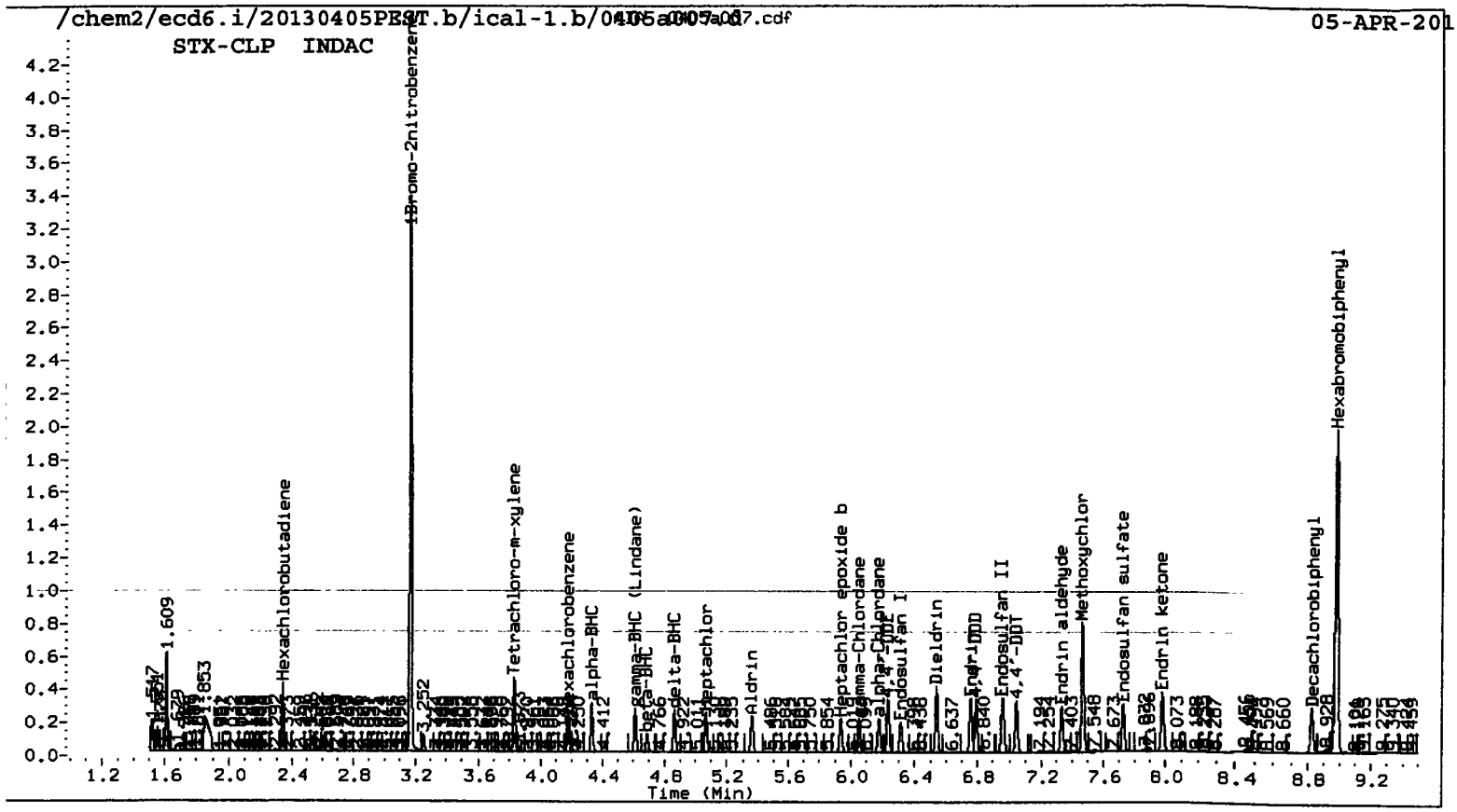
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5854383	7.4
Hexabromobiphenyl	4807902	5133358	6.8

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%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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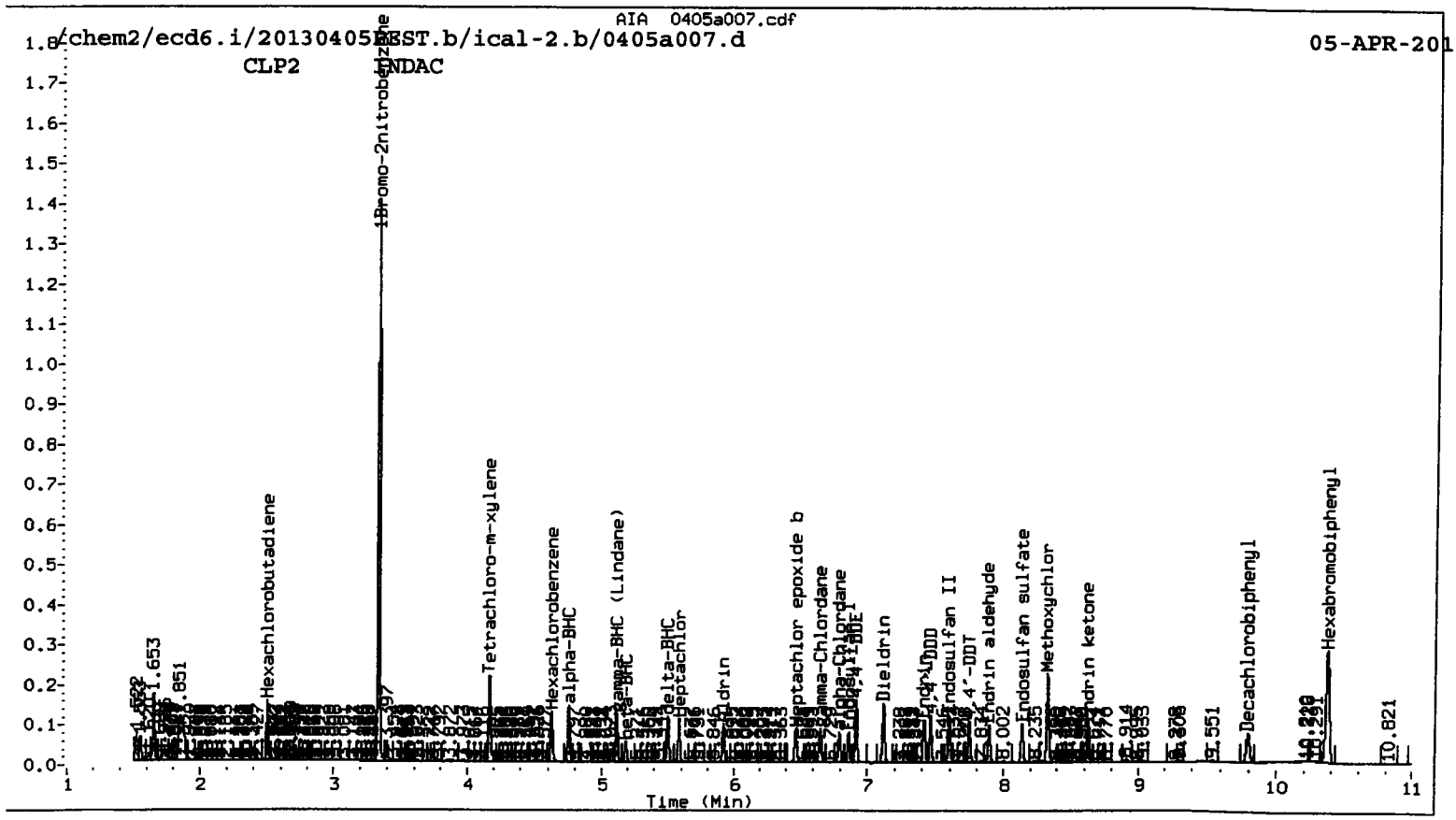
STX-CLP INDAC
1.609
1Bromo-2nitrobenzene
3.252
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDAC
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
10.821
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a008.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a008.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 05-APR-2013 13:58
Compound Sublist: INDA
Report Date: 04/08/2013 11:24
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.165	0.000	5880001	3.334	0.001	26036651	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.330	0.000	1203007	4.755	-0.001	6102248	9.3019	9.6311	3.5	alpha-BHC
4.687	0.000	472803	5.185	0.000	2314958	9.1250	9.3707	2.7	beta-BHC
4.858	0.000	1073436	5.498	-0.001	5180632	9.3252	9.6190	3.1	delta-BHC
4.615	0.000	1086941	5.115	-0.001	5330243	9.3120	9.5579	2.6	gamma-BHC (Lindane)
5.065	0.000	1045376	5.581	-0.001	5015211	9.3443	9.6982	3.7	Heptachlor
5.360	0.000	1023118	5.920	-0.001	4515314	9.3217	9.5756	2.7	Aldrin
5.937	0.000	924040	6.475	-0.001	3874240	9.2110	9.4673	2.7	Heptachlor epoxide b
6.314	-0.001	846542	6.862	0.000	3382705	9.1959	9.4753	3.0	Endosulfan I
6.537	-0.001	1807376	7.120	-0.001	6881739	18.6167	19.2231	3.2	Dieldrin
6.233	-0.002	1444344	6.920	-0.001	7020418	18.1580	19.2384	5.8	4,4'-DDE
6.755	-0.001	1484141	7.409	-0.001	5044378	18.2999	18.5844	1.5	Endrin
6.960	0.000	1510564	7.598	-0.001	5477668	18.1784	18.3738	1.1	Endosulfan II
6.790	-0.001	1411271	7.457	-0.001	5325162	18.2510	18.5370	1.6	4,4'-DDD
7.729	0.000	1319711	8.140	0.000	4526096	18.0140	18.2815	1.5	Endosulfan sulfate
7.049	0.000	1397194	7.745	-0.001	4790586	18.0293	18.3697	1.9	4,4'-DDT
7.472	-0.001	3458050	8.327	-0.003	9940461	88.9648	91.9723	3.3	Methoxychlor
7.985	0.000	1641030	8.632	0.000	4594528	17.8398	18.1433	1.7	Endrin ketone
7.339	0.000	1232075	7.895	0.000	4297995	18.0539	18.2792	1.2	Endrin aldehyde
6.055	0.000	942719	6.657	0.000	3892155	9.1938	9.4433	2.7	gamma-Chlordane
6.179	0.000	904304	6.795	0.000	3580213	9.1690	9.4137	2.6	alpha-Chlordane
2.340	-0.001	1257691	2.496	-0.001	4709994	9.2406	9.4445	2.2	Hexachlorobutadiene
4.179	0.000	864759	4.629	-0.001	5484749	9.1763	9.3974	2.4	Hexachlorobenzene
8.979	-0.001	5227384	10.368	0.001	9979752	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	1646740	4.166	-0.003	8853730	18.6175	19.2253	3.2	Tetrachloro-m-xylene
8.830	-0.001	1357228	9.794	-0.001	4241762	17.7872	17.9012	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.5	48.1	46.5~	115- 0
Decachlorobiphenyl	44.5	44.8	44.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

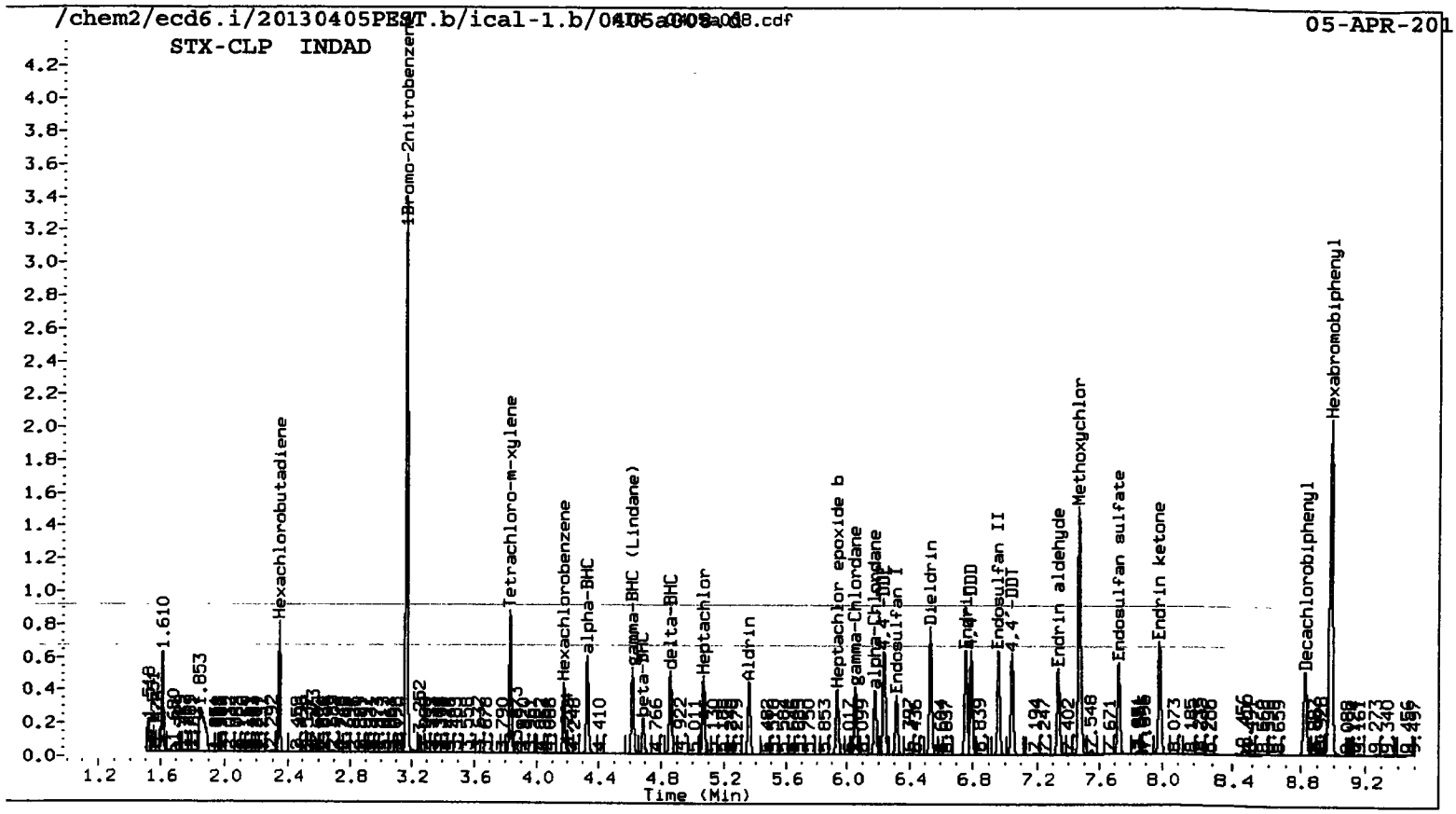
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5880001	7.9
Hexabromobiphenyl	4807902	5227384	8.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26036651	20.0
Hexabromobiphenyl	7681727	9979752	29.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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STX-CLP INDAD
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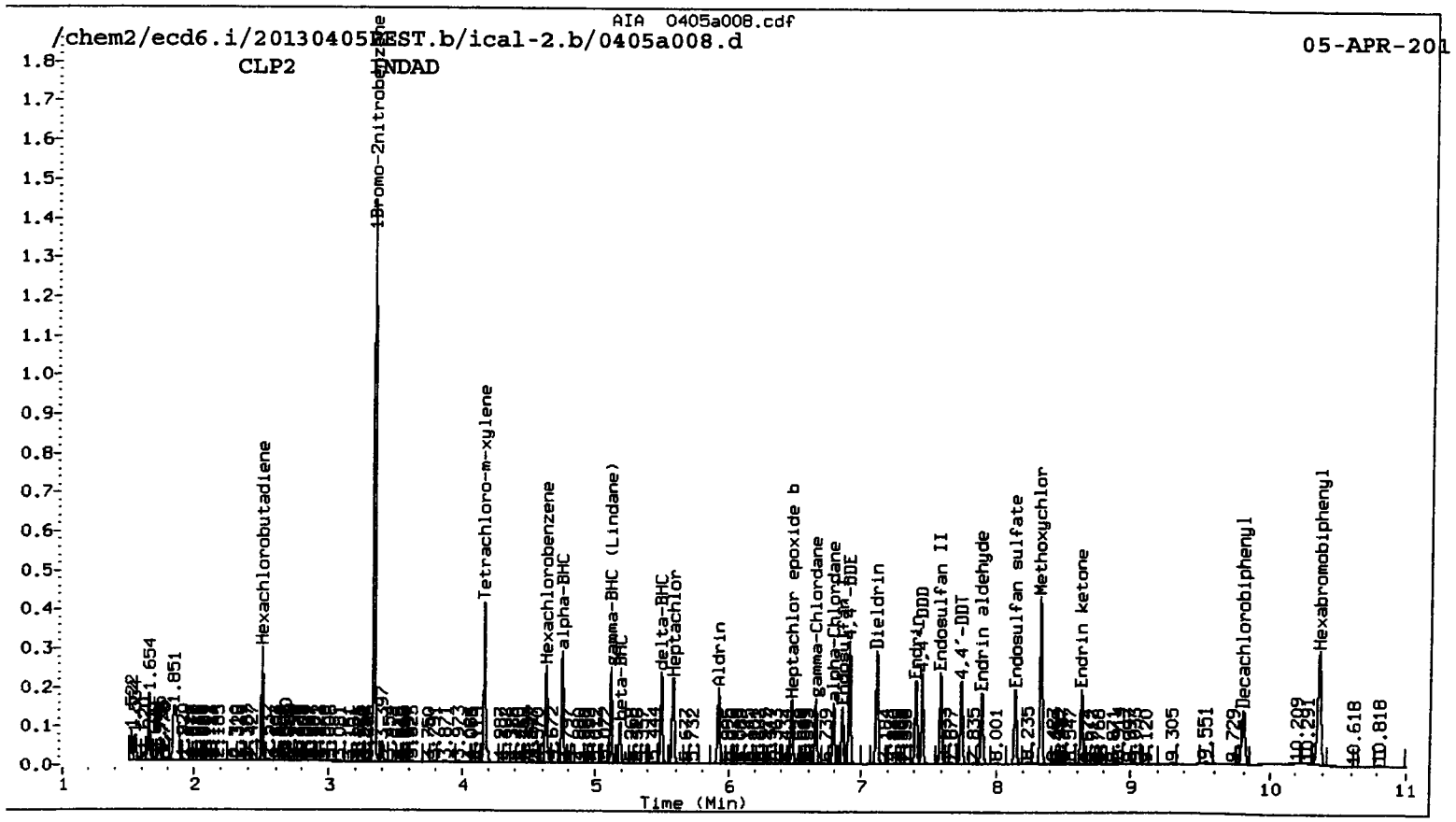
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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4-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a009.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a009.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 05-APR-2013 14:17
Report Date: 04/08/2013 11:24
Matrix: NONE
Dilution Factor: 1.000

YZ 4/8/13

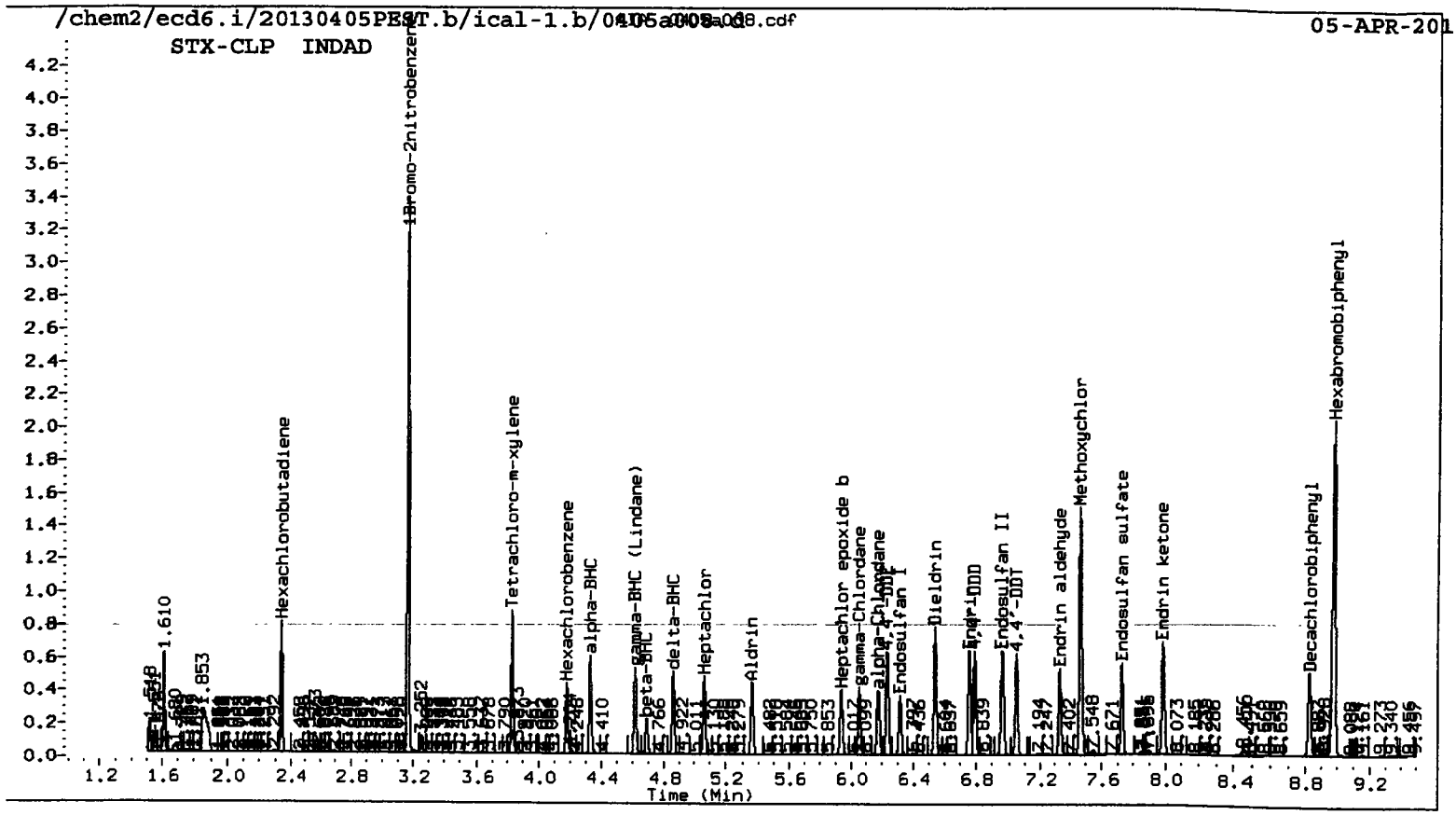
STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.165	0.001	4847986	3.333	0.001	21952139	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	4882270	4.756	-0.000	24213251	45.7868	45.3262	1.0	alpha-BHC
4.688	0.001	1788098	5.186	0.001	9006341	41.8560	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

WL 19 01162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STX-CLP INDAD
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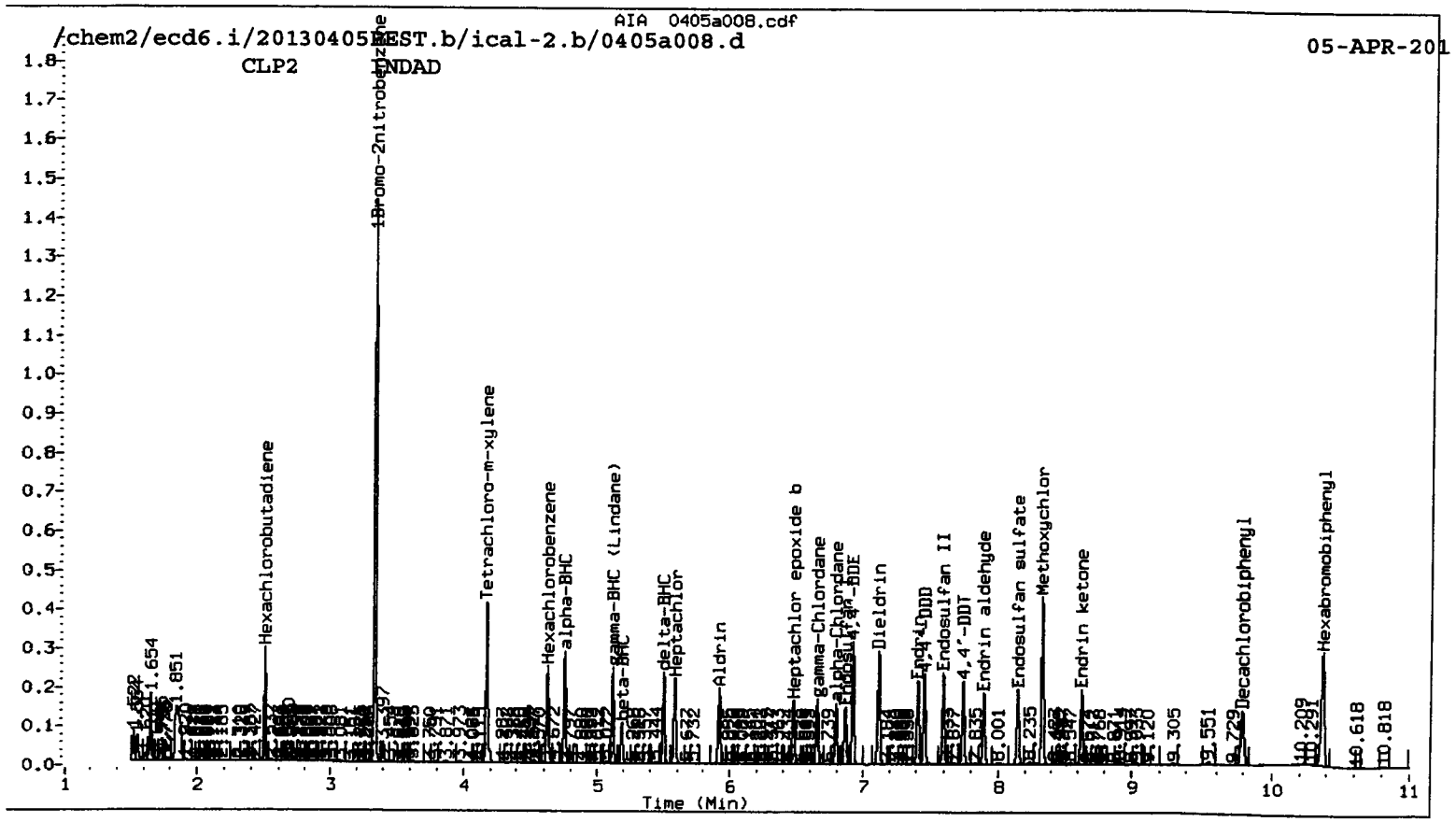
1.853
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
beta-BHC
Gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
beta-BHC
Gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

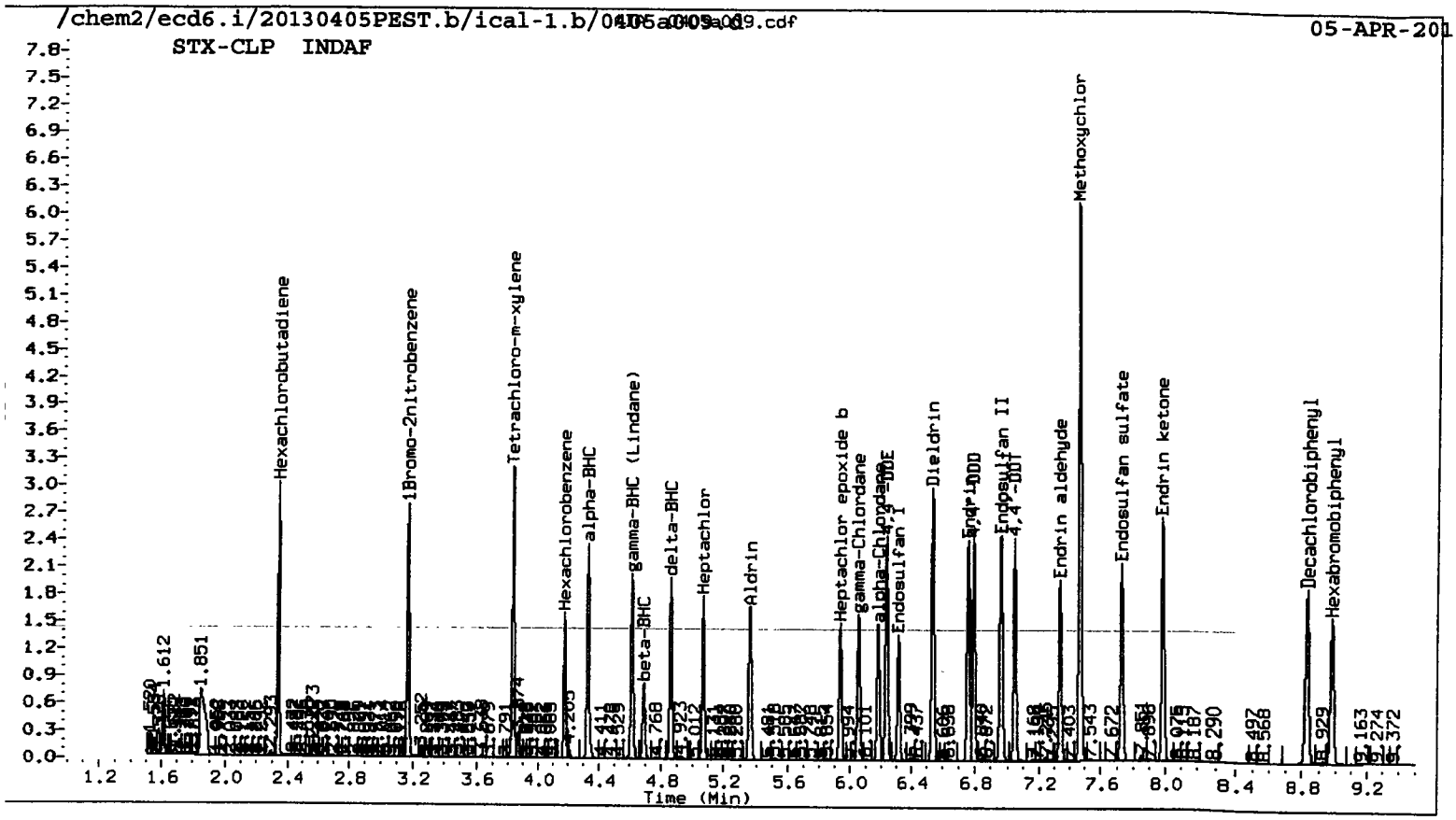
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4847986	-11.0
Hexabromobiphenyl	4807902	4193877	-12.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21952139	1.2
Hexabromobiphenyl	7681727	8109922	5.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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STX-CLP INDAF
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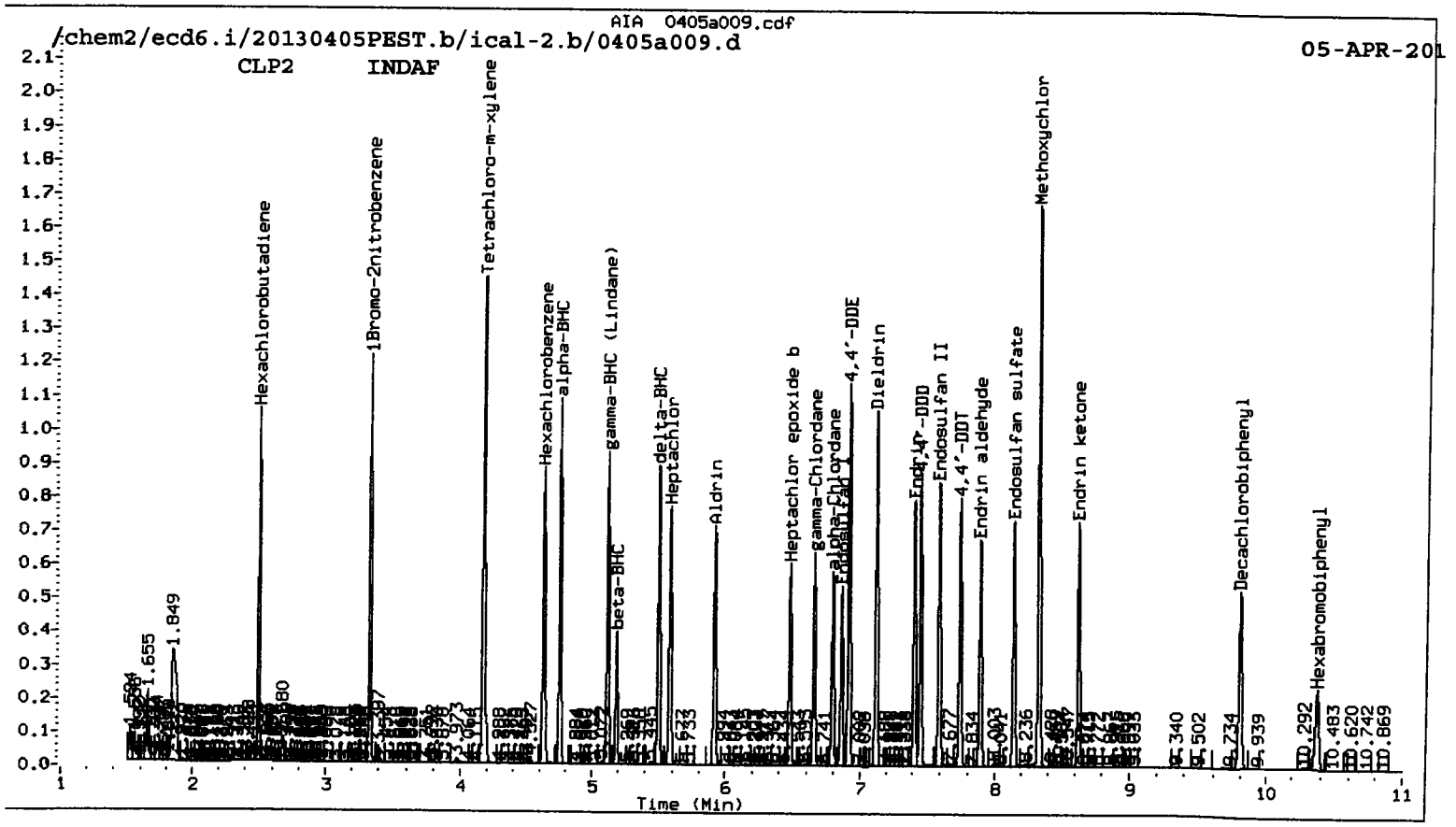
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 INDAF
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1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a010.d ARI ID: INDAG YE 4/8/13
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			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	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

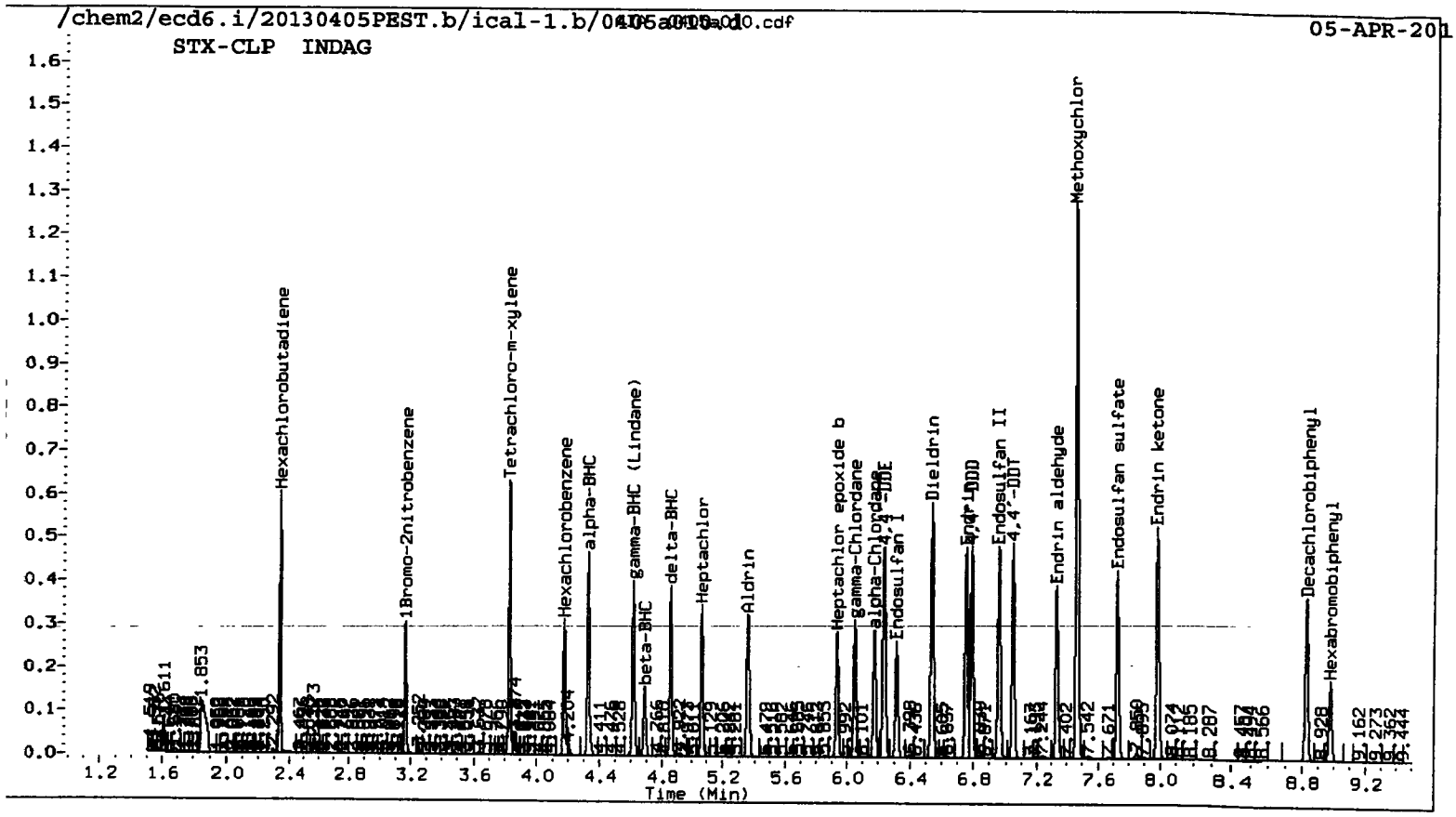
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5342959	-1.9
Hexabromobiphenyl	4807902	4760154	-1.0

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%)

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 INDAG
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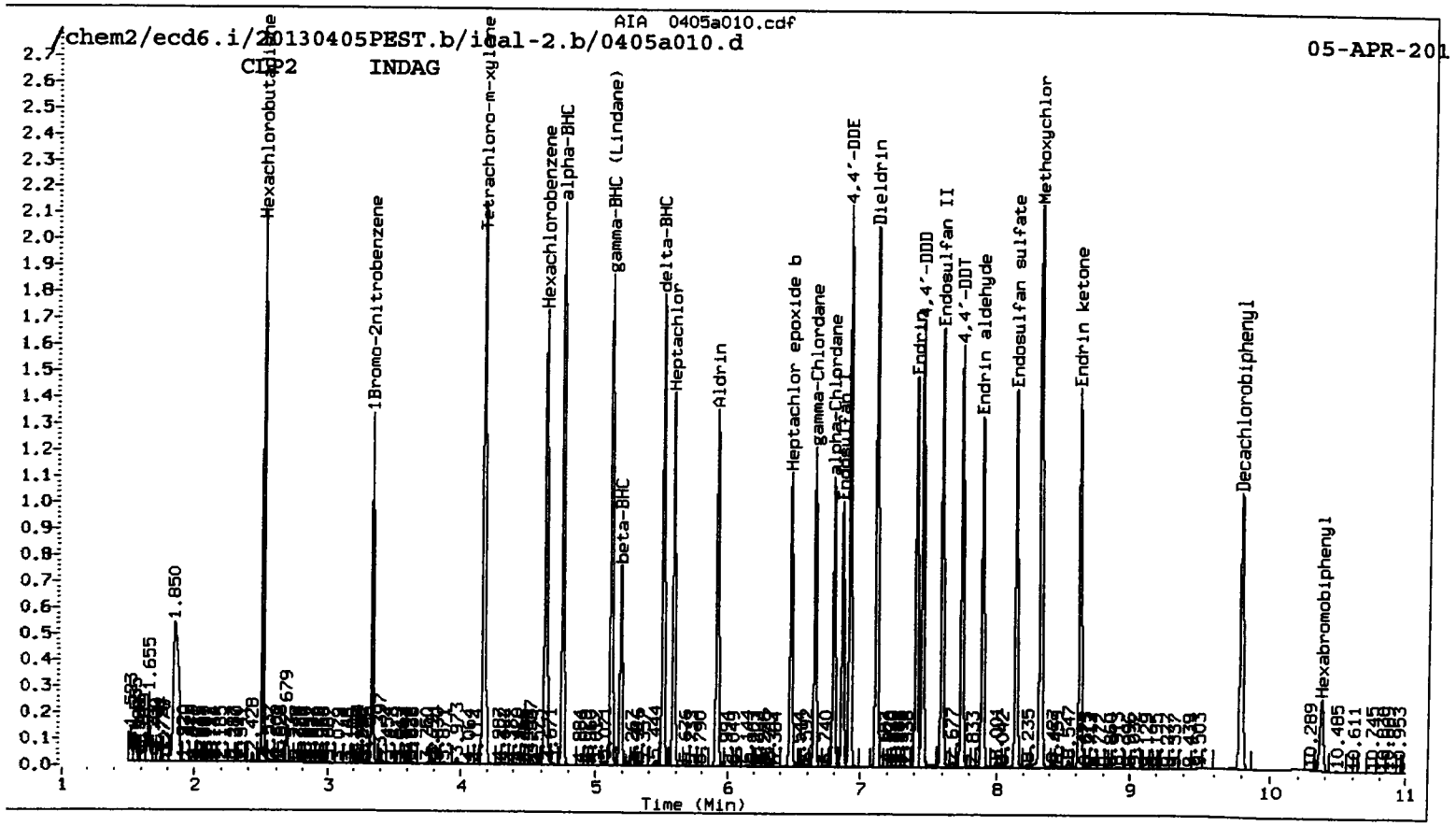
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Methoxychlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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05-APR-201
CLP2 INDAG
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
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

Column 1

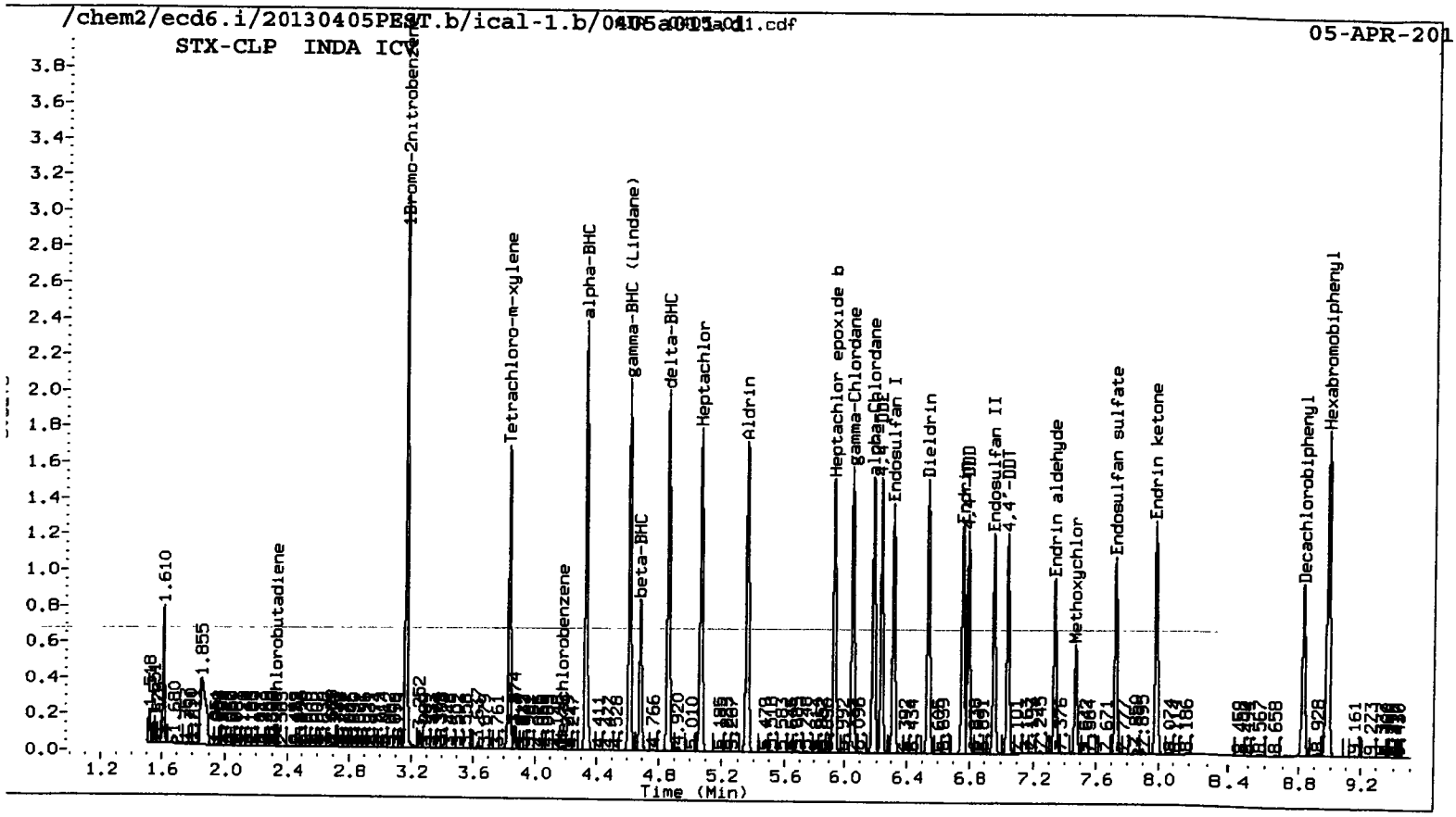
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5329694	-2.2
Hexabromobiphenyl	4807902	4682567	-2.6

Column 2

Standard Cpnd	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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STX-CLP INDA ICV
05-APR-201
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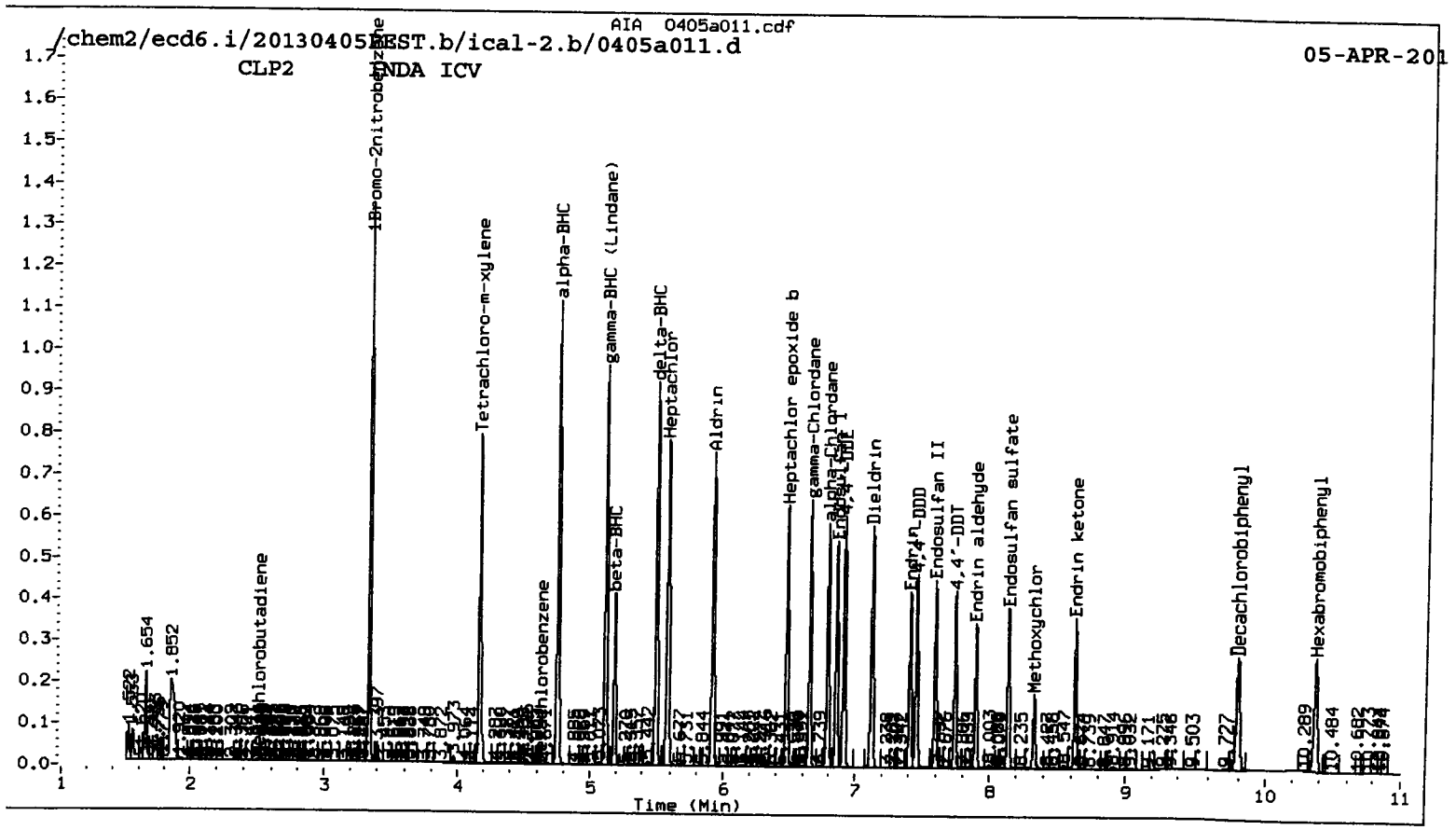
1.855
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin_DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 INDA ICV
05-APR-201
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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
Endrin_DDD
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/ical-1.b/0405a013.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130405PEST.b/ical-2.b/0405a013.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 05-APR-2013 15:28
Report Date: 04/08/2013 11:10
Matrix: NONE
Dilution Factor: 1.000

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

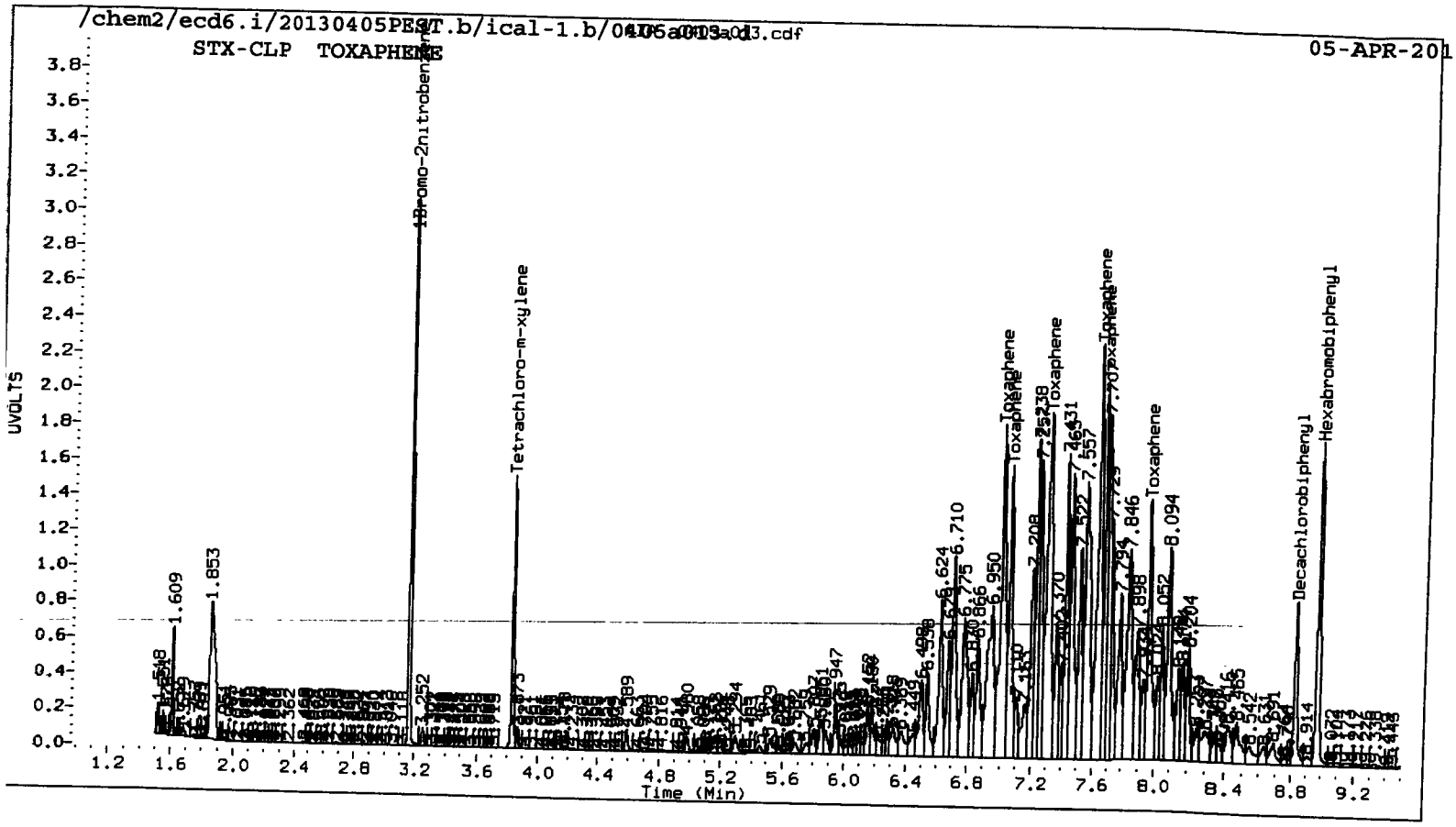
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5312805	-2.5
Hexabromobiphenyl	4807902	4975008	3.5

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	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.012	0.000	8003846	2500.0	1	7.344	0.000	22151327	2500.0
Toxaphene	2	7.063	0.000	5446974	2500.0	2	7.668	0.000	33145977	2500.0
Toxaphene	3	7.320	0.000	9145159	2500.0	3	7.898	0.000	35423964	2500.0
Toxaphene	4	7.645	0.000	9223987	2500.0	4	8.366	0.000	25596960	2500.0
Toxaphene	5	7.684	0.000	6087258	2500.0	5	8.406	0.000	32412475	2500.0
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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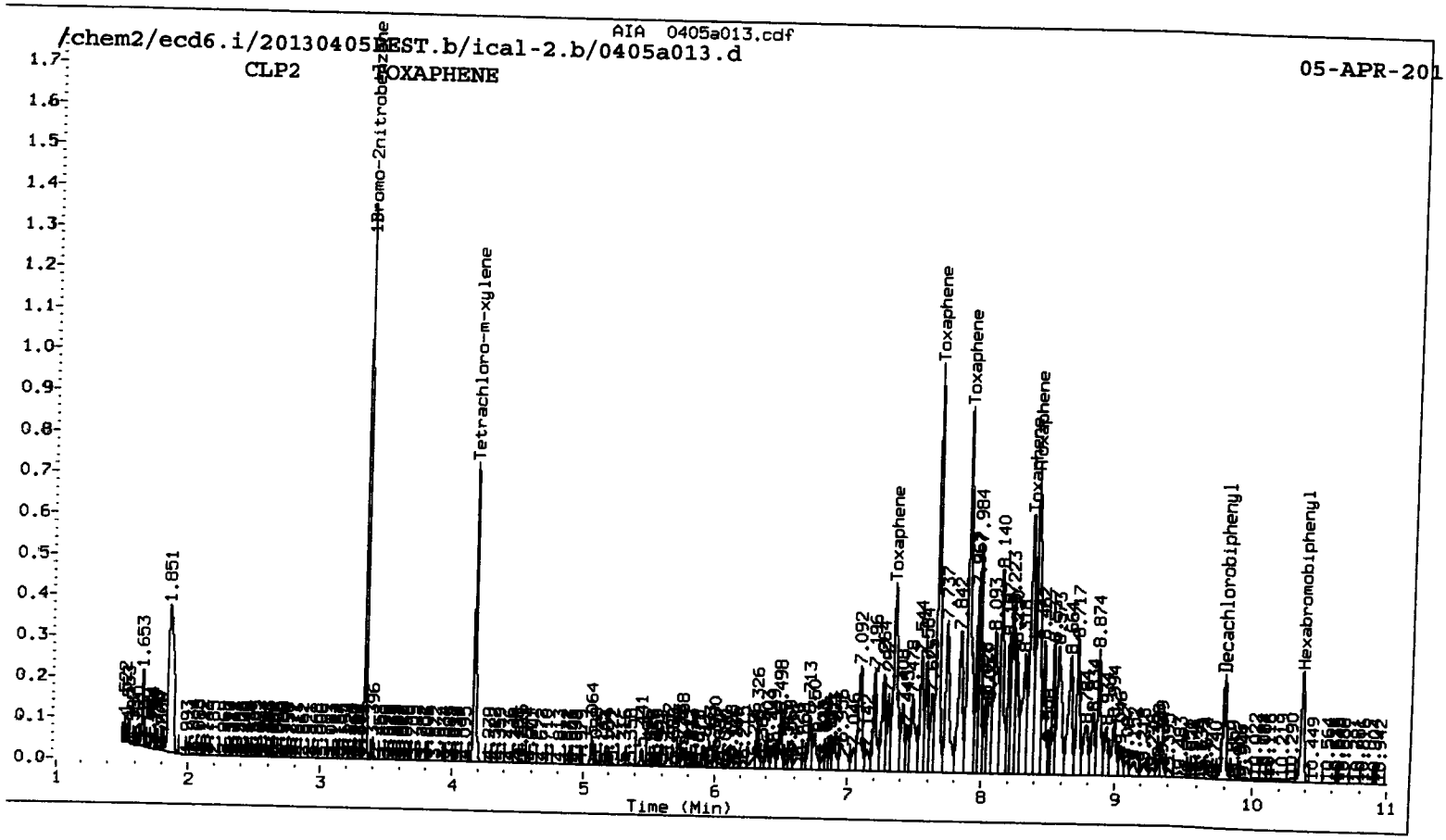
STX-CLP TOXAPHENE
05-APR-201
UVOLTS
Time (Min)
1.609
1.853
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 TOXAPHENE
05-APR-201
Time (Min)
1.851
1.653
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YB 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a014.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a014.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 15:46
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.736	-0.018	283	1.731	-0.001	943789	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5486756	3.334	0.001	25352954	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	2855555	6.385	0.000	12537032	38.2690	38.2815	0.0	Oxychlordane MN
5.911	0.001	2154414	6.631	0.000	9150967	38.3407	38.0157	0.9	2,4-DDE MN
6.162	0.000	3398608	6.741	0.000	14261784	38.2352	38.8457	1.6	trans-Nonachlor MN
6.398	0.000	1853860	7.115	0.000	7441995	37.7193	38.6555	2.5	2,4-DDD MN
6.637	0.001	2137262	7.403	0.000	7940976	38.0311	38.8730	2.2	2,4-DDT MN
6.778	0.000	3603446	7.465	0.000	13459648	38.3550	38.8147	1.2	cis-Nonachlor MN
7.653	0.001	2043980	8.619	0.000	5860500	36.4278	37.0642	1.7	Mirex MN
8.979	0.000	4769081	10.366	0.000	9572394	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	3067703	4.166	-0.002	16849872	37.1597	37.5751	1.1	Tetrachloro-m-xylen
8.831	-0.001	2388328	9.794	-0.001	8191515	34.6253	36.0931	4.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	92.9	93.9	92.9~	150- 0
Decachlorobiphenyl	86.6	90.2	86.6~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5486756	0.7
Hexabromobiphenyl	4807902	4769081	-0.8

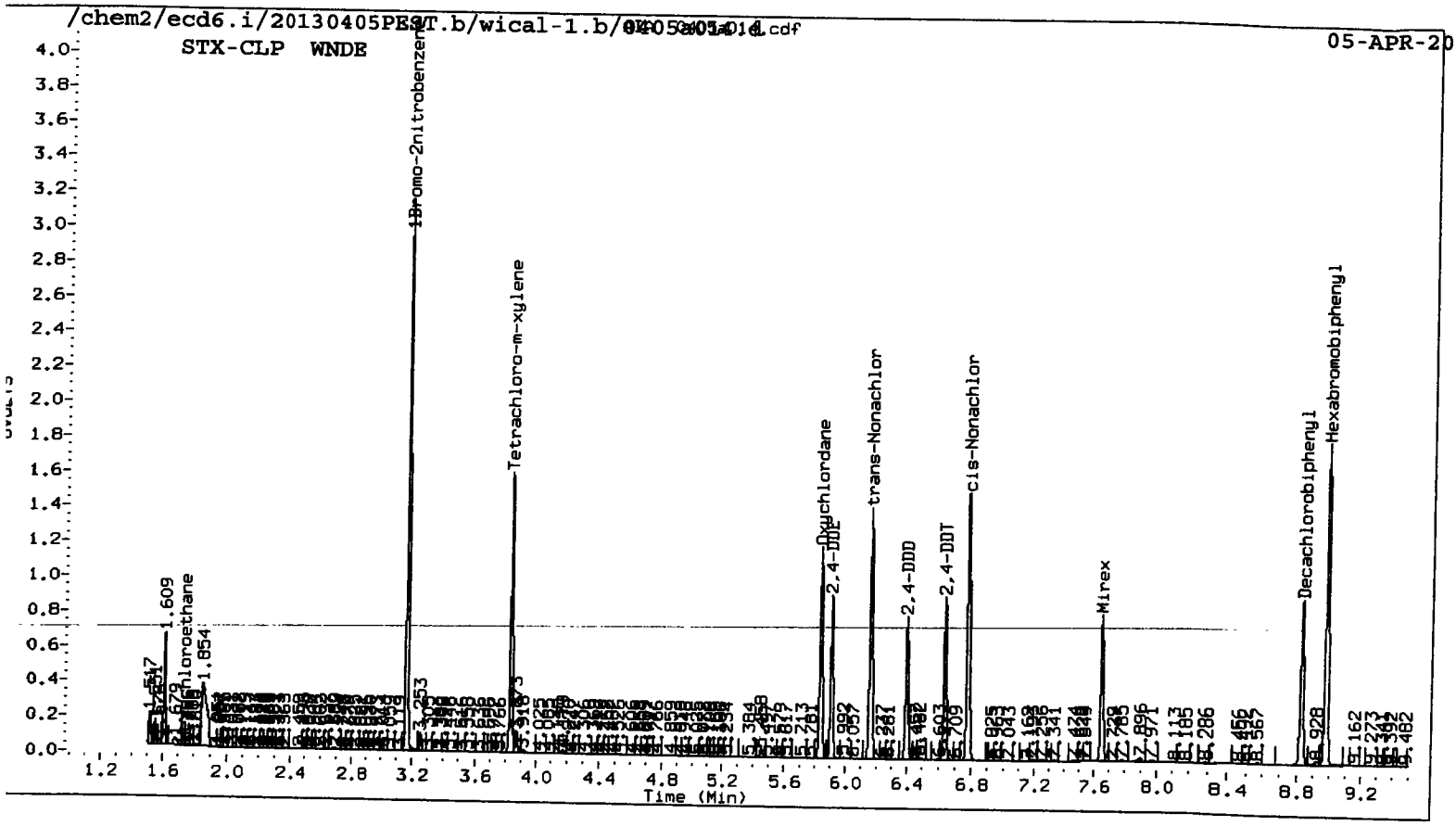
WLI0_01175

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25352954	16.8
Hexabromobiphenyl	7681727	9572394	24.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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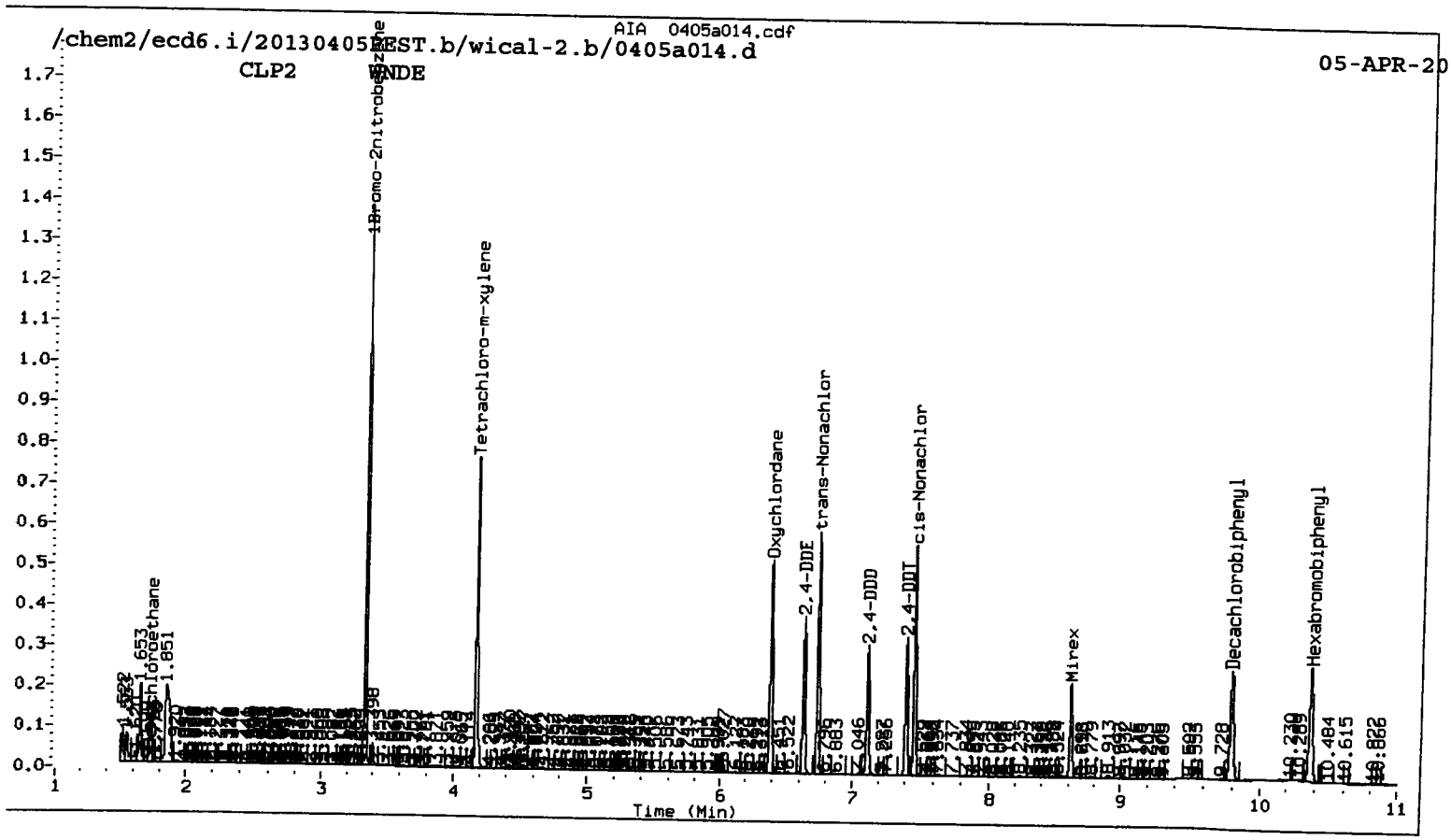
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
1.609
1.854
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDE
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
1.653
1.851
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/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

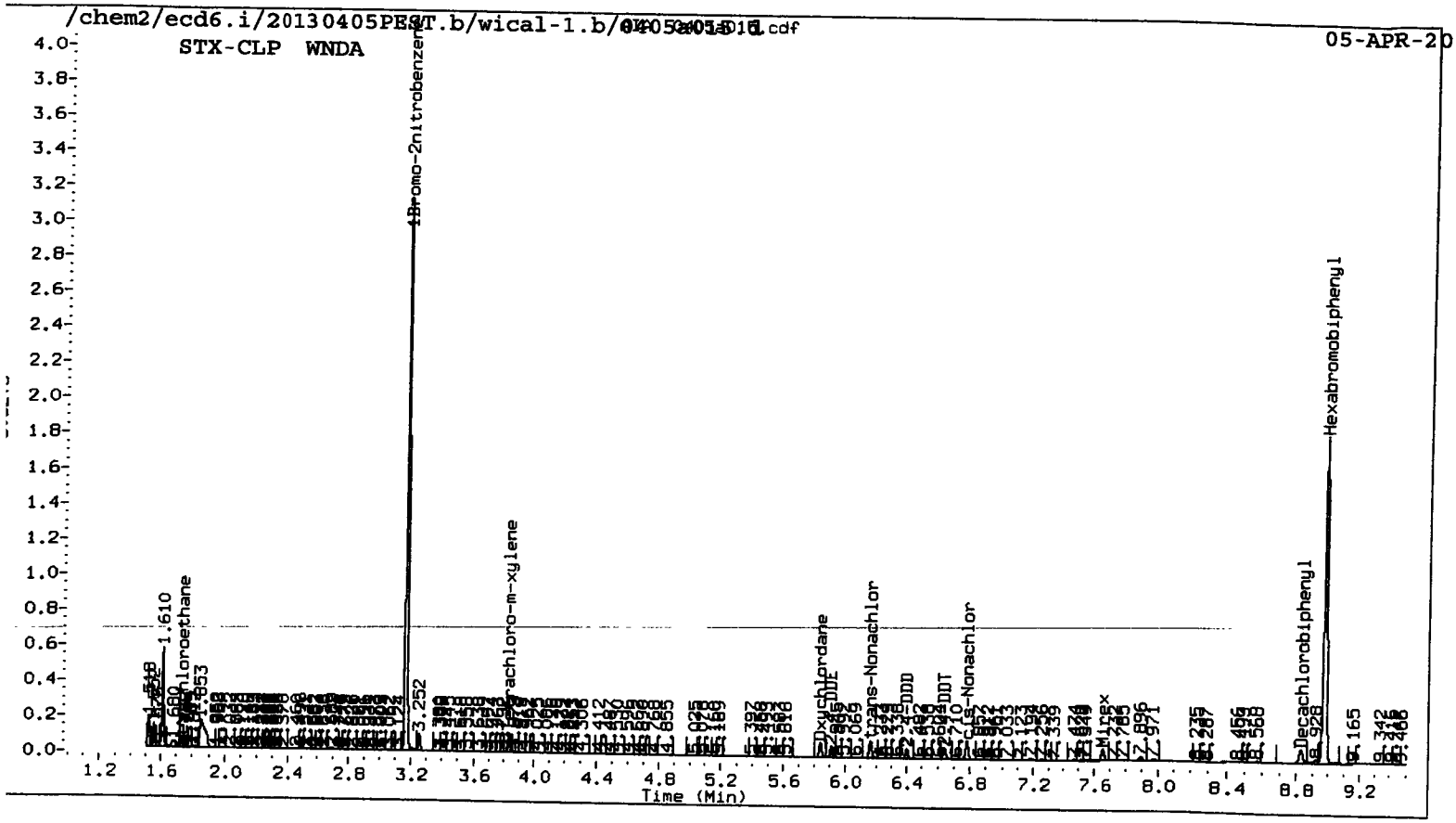
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5428471	-0.4
Hexabromobiphenyl	4807902	4784071	-0.5

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25320828	16.7
Hexabromobiphenyl	7681727	9686694	26.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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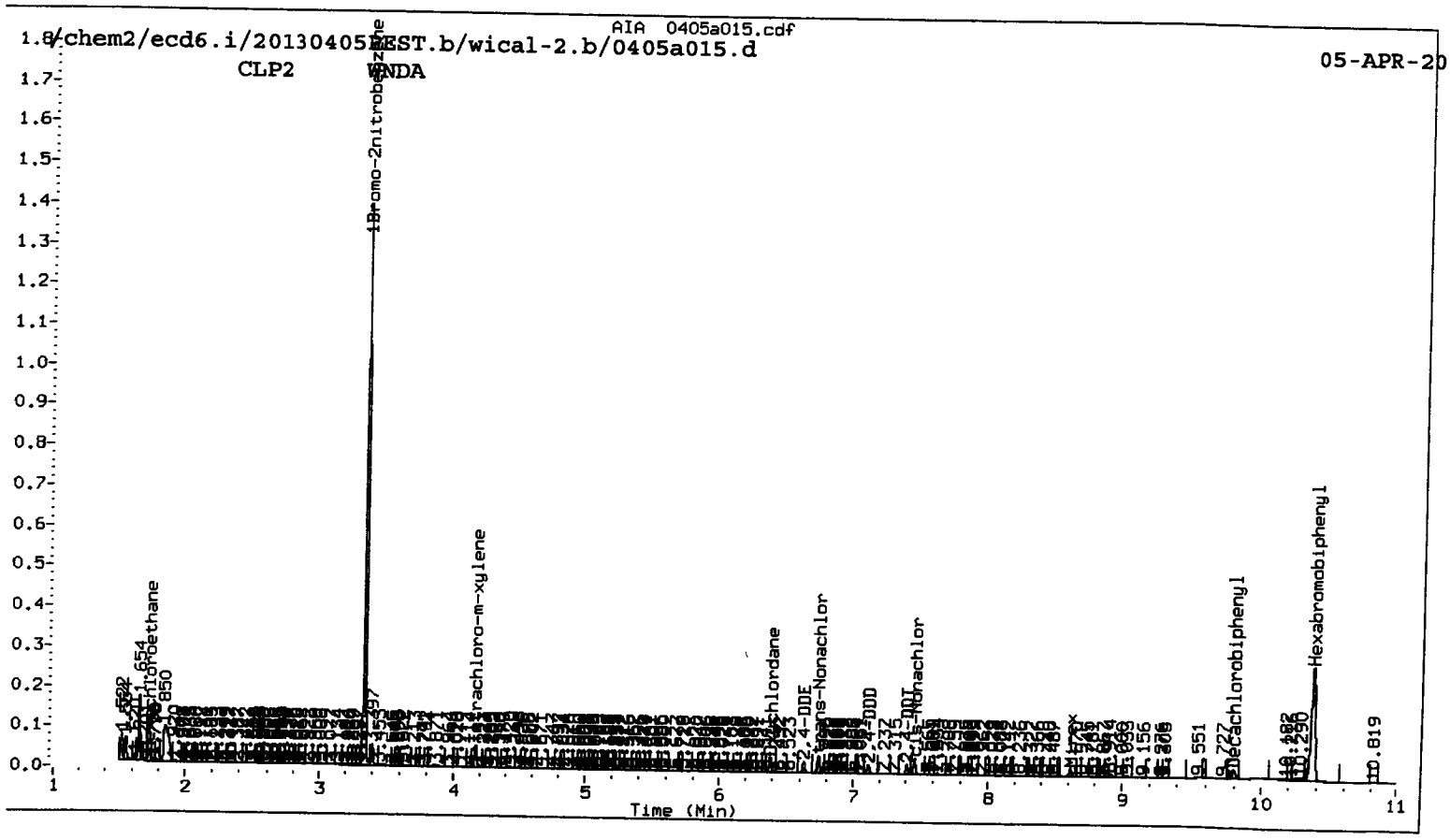
STX-CLP WNDA
05-APR-20
1,4-Dibromo-2-nitrobenzene
1,2,4,5-Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl
Time (Min)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CLP2 WNDA
05-APR-20
1,4-Dibromo-2-nitrobenzene
1,2,4,5-Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a016.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a016.d Client ID: YE 4/8/13
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 16:22
Compound Sublist: WND Report Date: 04/08/2013 11:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.726	-0.028	394	1.734	0.003	613547	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	5559811	3.333	0.001	25893655	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	385940	6.384	-0.001	1685022	4.9818	5.0377	1.1	Oxychlordane
5.911	0.001	292424	6.631	0.000	1282471	5.0125	5.2165	4.0	2,4-DDE
6.162	0.001	454428	6.741	0.000	1945403	4.9242	4.9724	1.0	trans-Nonachlor
6.398	0.001	253964	7.115	0.000	1021556	4.9770	4.9793	0.0	2,4-DDD
6.638	0.001	288360	7.403	0.000	1070745	4.9422	4.9187	0.5	2,4-DDT
6.778	0.000	473373	7.465	0.000	1807794	4.8530	4.8921	0.8	cis-Nonachlor
7.653	0.000	302811	8.619	0.001	873819	5.1980	5.1859	0.2	Mirex
8.979	0.000	4951391	10.368	0.002	10200809	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	415118	4.166	-0.003	2338146	4.9623	5.1052	2.8	Tetrachloro-m-xylene
8.830	-0.001	375057	9.796	0.000	1181360	5.2373	4.8846	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	12.4	12.8	12.4~	150- 0
Decachlorobiphenyl	13.1	12.2	12.2~	150- 0

~ Indicates recovery outside QC Limits

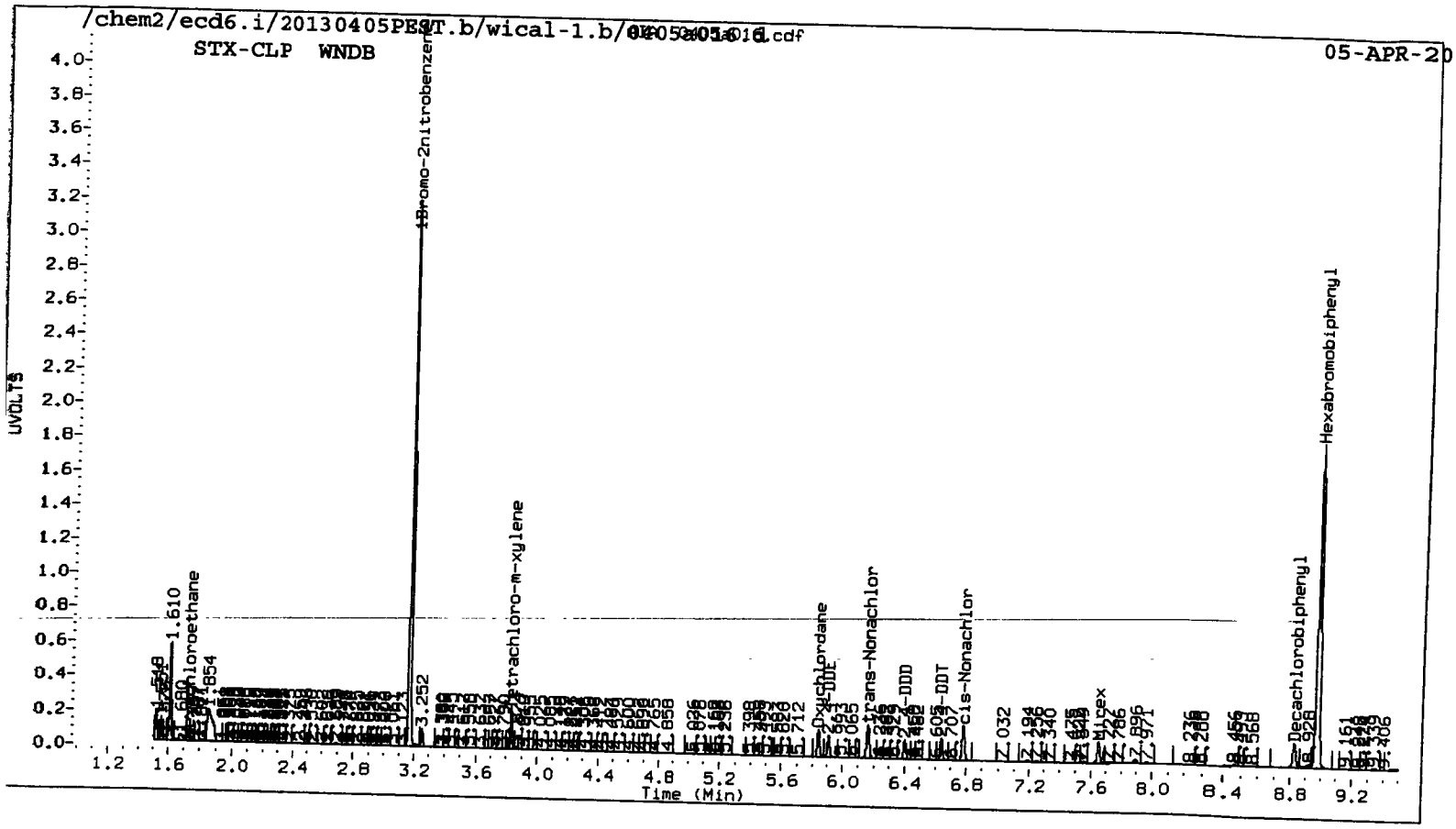
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5559811	2.0
Hexabromobiphenyl	4807902	4951391	3.0

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25893655	19.3
Hexabromobiphenyl	7681727	10200809	32.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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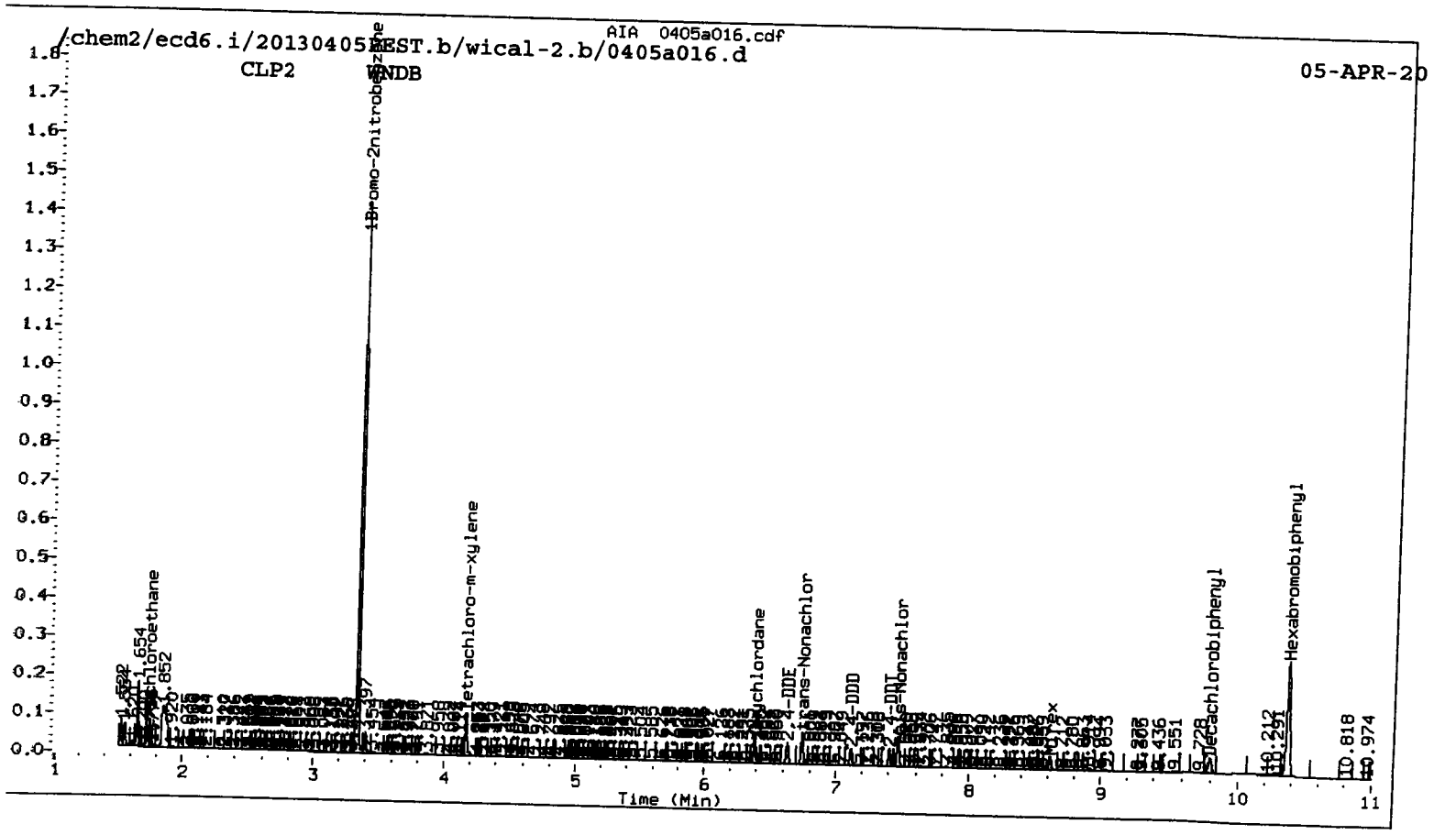
STX-CLP WNDB
05-APR-20
UVOLTS
Time (Min)
1.610
Tetrachloroethane
3.252
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a016.cdf
CLP2 WNDB
05-APR-20
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
trans-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

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
1.757	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

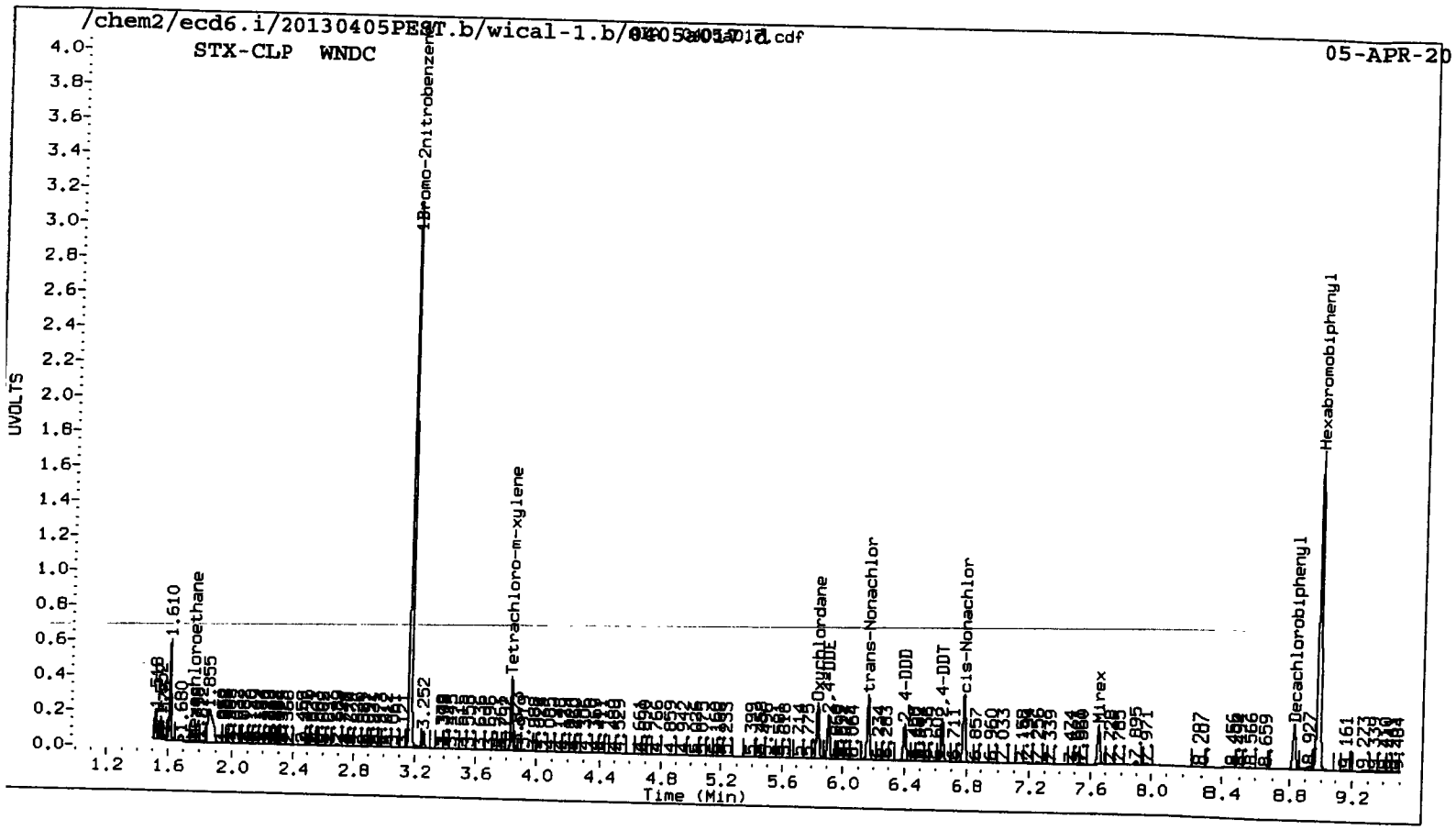
INTERNAL STANDARD SUMMARY

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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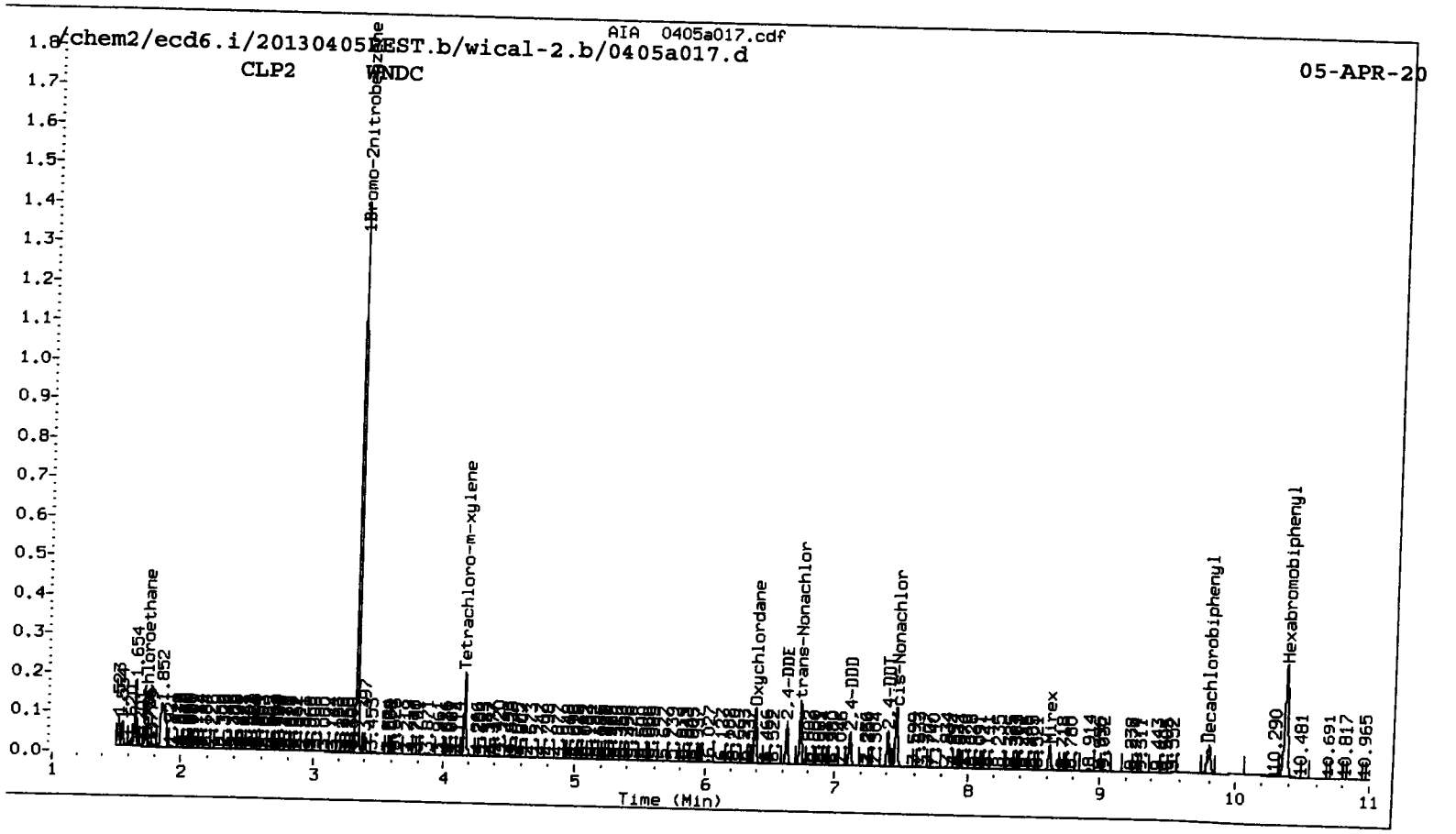
STX-CLP WNDC
05-APR-20
UVOLTS
Time (Min)
1,2,4,5-Tetrachlorobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDC
05-APR-20
Time (Min)
1,2,4,5-Tetrachlorobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

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

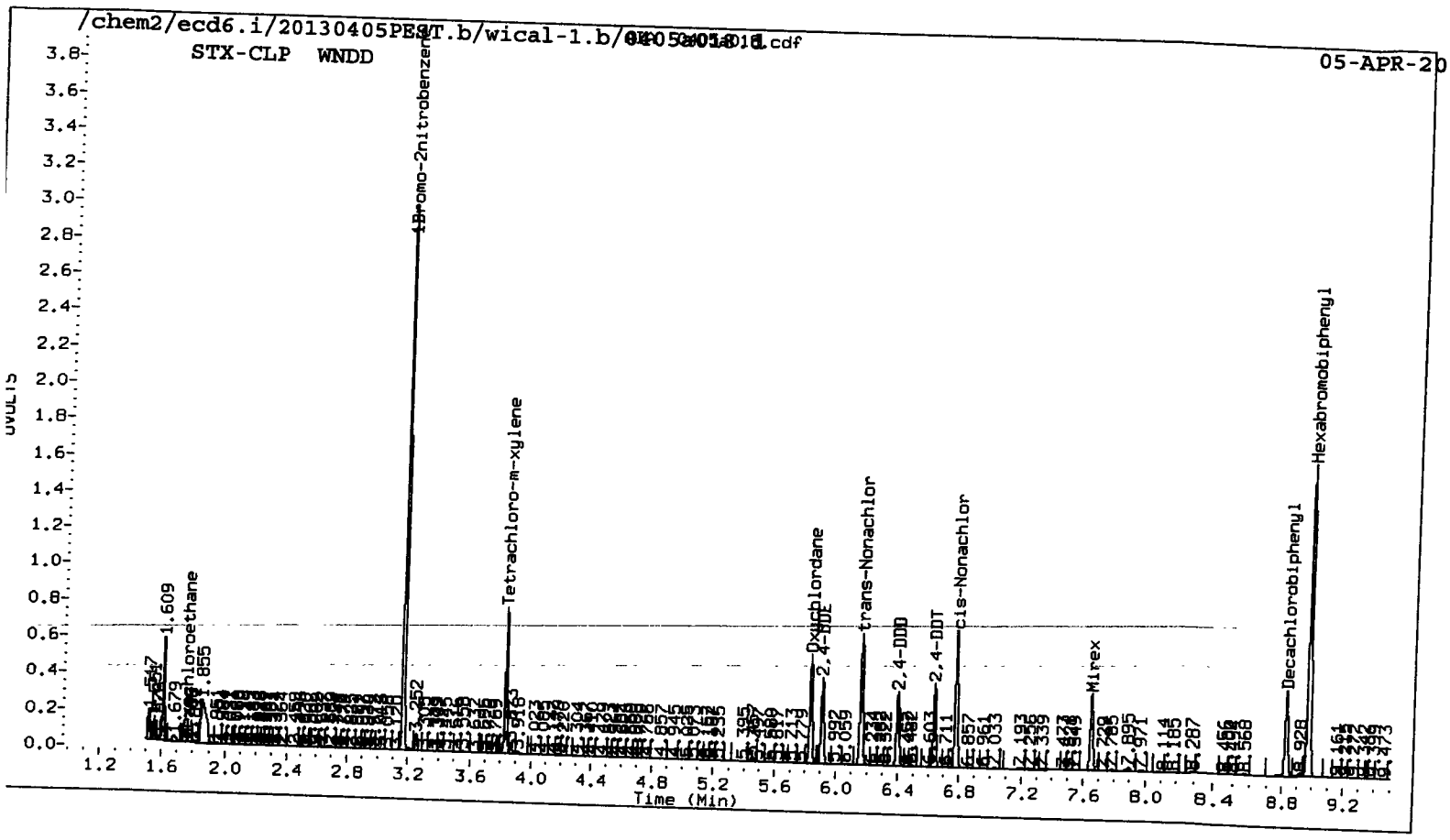
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5198393	-4.6
Hexabromobiphenyl	4807902	4473234	-7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24486263	12.8
Hexabromobiphenyl	7681727	9416112	22.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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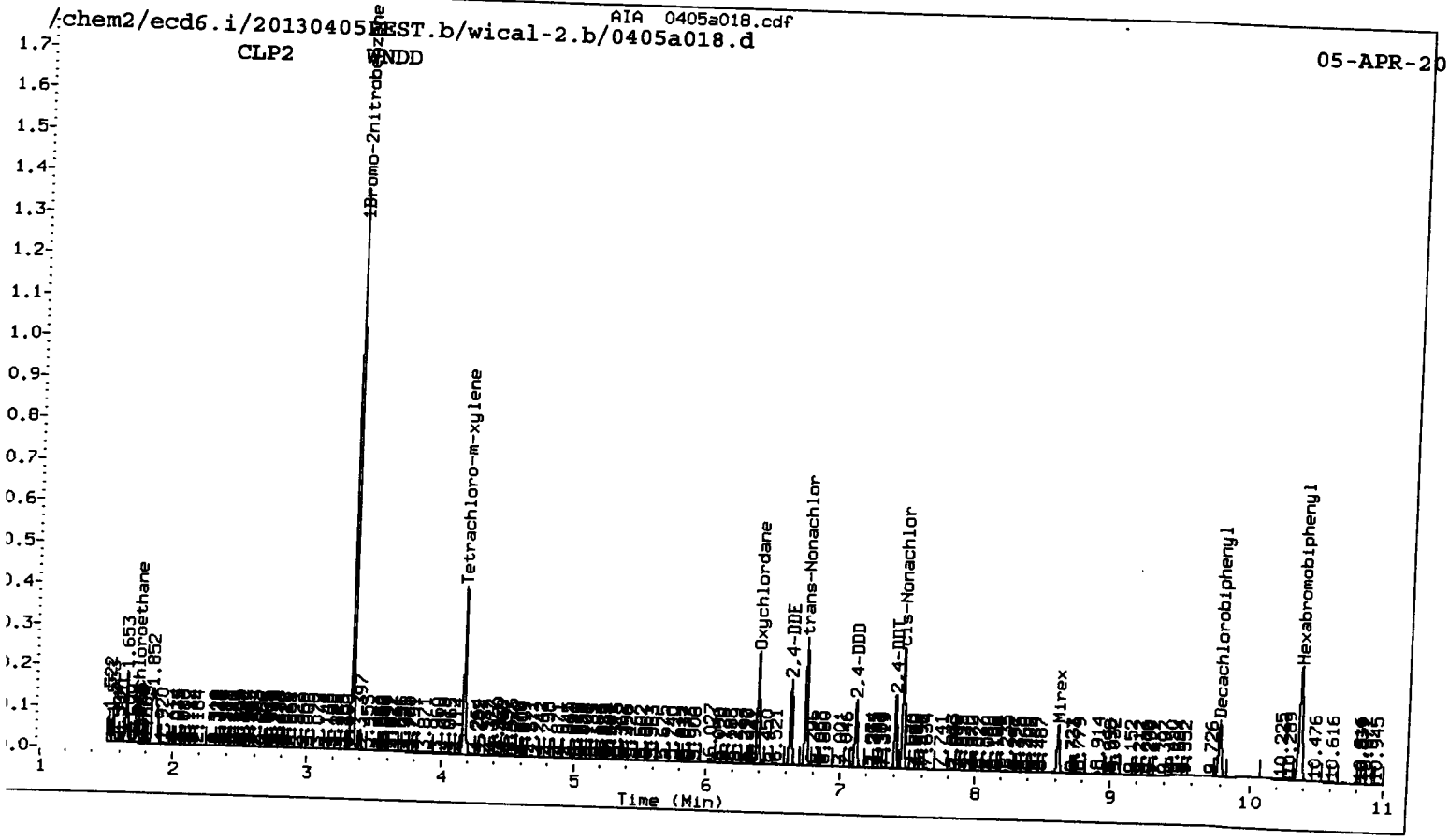
STX-CLP WNDD
05-APR-20
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1,1,1-Trichloroethane
Time (Min)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AIA 0405a018.cdf
CLP2 WNDD
05-APR-20
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1,1,1-Trichloroethane
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

YZ 4/9/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.756	0.002	2124	1.732	0.000	1217269	0.0000	0.0000	---	Hexachloroethane
3.165	0.000	4612962	3.333	0.001	21937785	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	5434497	6.385	0.000	24335569	86.9522	85.8760	1.2	Oxychlordane
5.911	0.000	4059251	6.631	0.001	17275878	86.2463	82.9415	3.9	2,4-DDE
6.162	0.000	6538878	6.741	0.000	27536270	87.8272	85.6658	2.5	trans-Nonachlor
6.398	0.000	3573667	7.115	0.000	14430584	86.8091	85.6129	1.4	2,4-DDD
6.637	0.000	4139705	7.404	0.000	15589258	87.9458	87.1632	0.9	2,4-DDT
6.778	0.000	6990950	7.465	0.001	26274409	88.8391	86.5423	2.6	cis-Nonachlor
7.653	0.000	3916159	8.619	0.000	11427001	83.3261	82.5440	0.9	Mirex
8.979	0.000	3994575	10.366	0.000	8380834	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	0.000	5839913	4.166	-0.003	31976175	84.1398	82.4072	2.1	Tetrachloro-m-xylen
8.830	-0.001	4540430	9.794	-0.001	16079323	78.5888	80.9209	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	210.3	206.0	206.0~	150- 0
Decachlorobiphenyl	196.5	202.3	196.5~	150- 0

~ Indicates recovery outside QC Limits

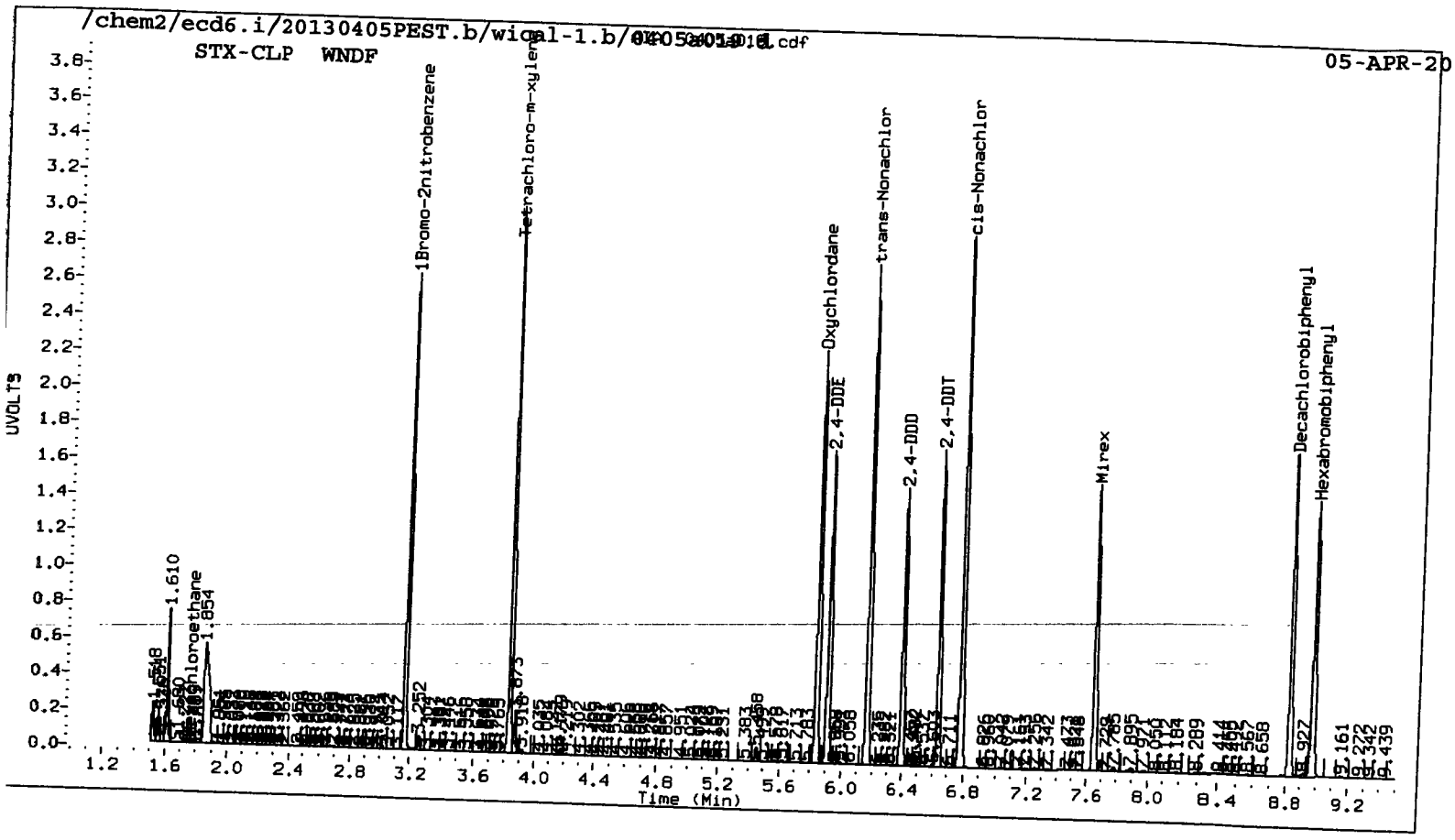
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4612962	-15.3
Hexabromobiphenyl	4807902	3994575	-16.9

Standard Cpnd	Column 2 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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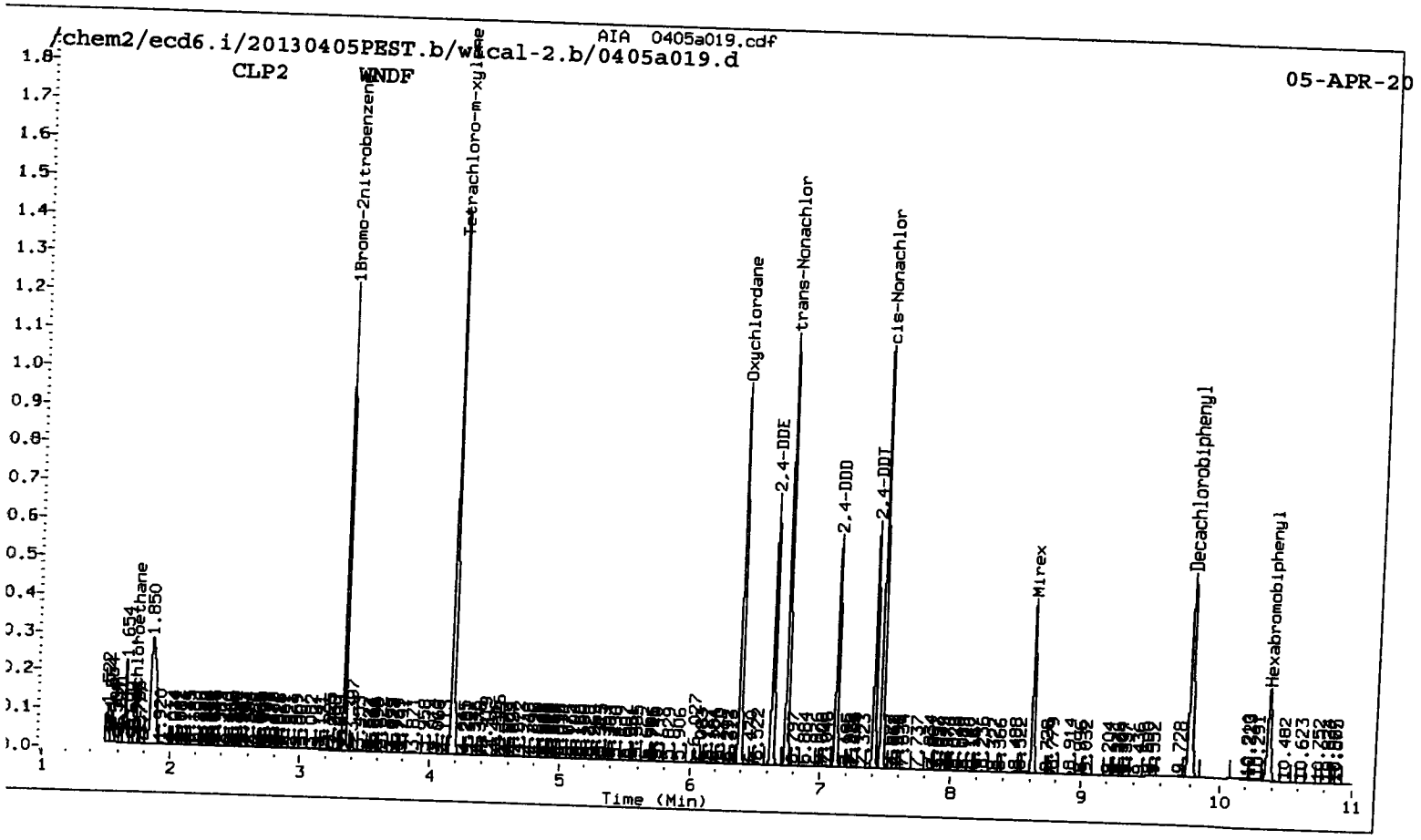
STX-CLP WNDF
05-APR-20
UVOLTS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.610
1.854
Time (Min)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AIA 0405a019.cdf
CLP2 WNDF
05-APR-20
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.850
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/8/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/wical-1.b/0405a020.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130405PEST.b/wical-2.b/0405a020.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 05-APR-2013 17:33
Compound Sublist: WND Report Date: 04/08/2013 11:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.754	0.000	3460	1.732	0.000	2685728	0.0000	0.0000	---	Hexachloroethane
3.164	-0.001	5195250	3.332	0.000	24391118	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.840	0.000	10298992	6.385	0.000	46753129	145.1289	148.3892	2.2	Oxychlordane
5.911	0.000	7643527	6.631	0.000	31633724	143.0297	136.5977	4.6	2,4-DDE
6.162	0.000	12613712	6.741	0.000	52659310	149.2130	145.1446	2.8	trans-Nonachlor
6.397	0.000	6898918	7.115	0.000	27226192	147.5945	143.1087	3.1	2,4-DDD
6.636	0.000	7895245	7.404	0.000	29528420	147.7234	146.2755	1.0	2,4-DDT
6.778	0.000	13589021	7.465	0.000	51029091	152.0877	148.9144	2.1	cis-Nonachlor
7.653	0.000	7573057	8.619	0.000	22238197	141.9155	142.3234	0.3	Mirex
8.978	-0.001	4535578	10.366	0.000	9459401	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	11025035	4.167	-0.002	56455397	141.0420	130.8595	7.5	Tetrachloro-m-xyl
8.830	-0.001	8738751	9.795	-0.001	31424440	133.2144	140.1148	5.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	352.6	327.1	327.1~	150- 0
Decachlorobiphenyl	333.0	350.3	333.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

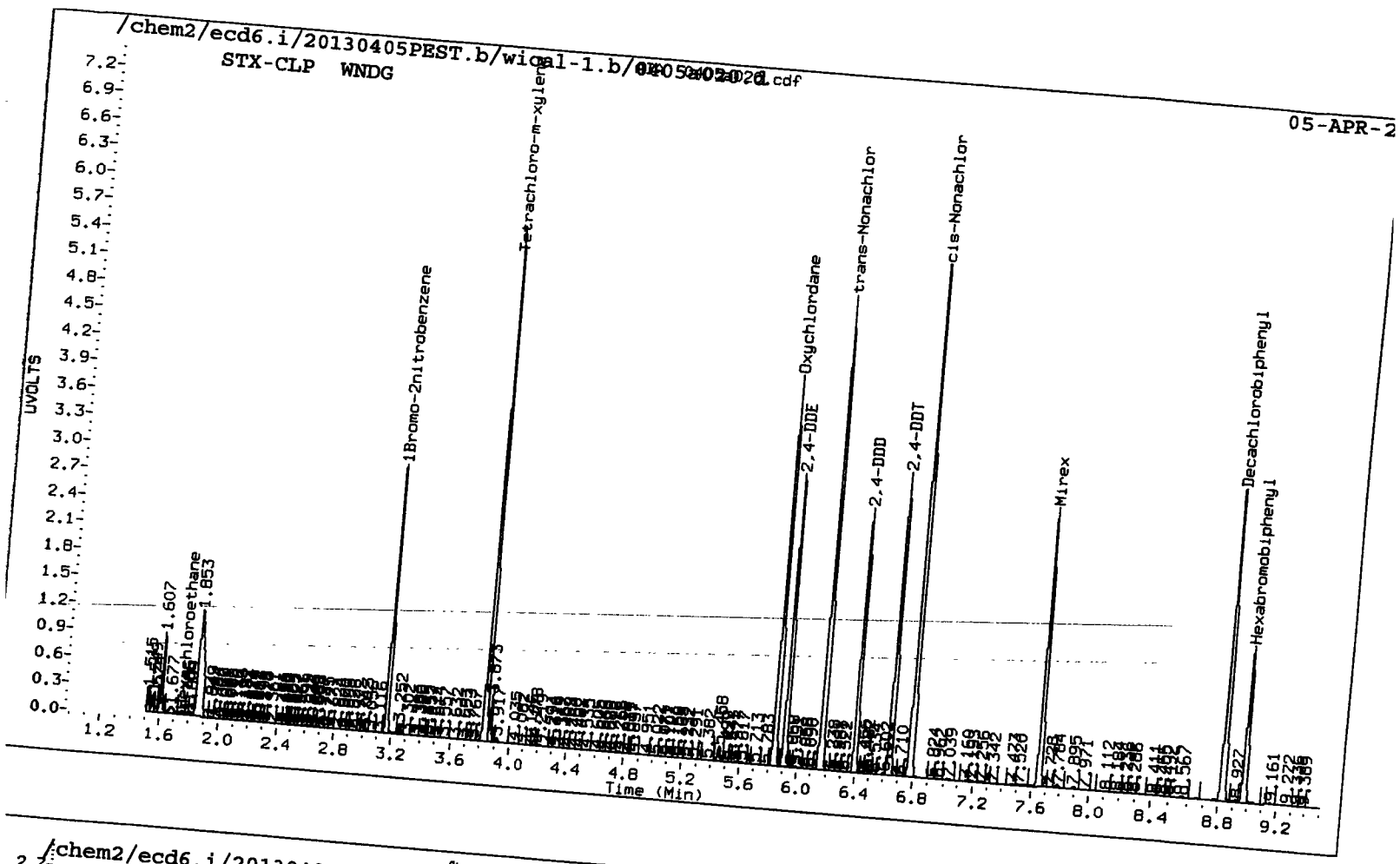
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5195250	-4.6
Hexabromobiphenyl	4807902	4535578	-5.7

WLI9 04198

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	24391118	12.4
Hexabromobiphenyl	7681727	9459401	23.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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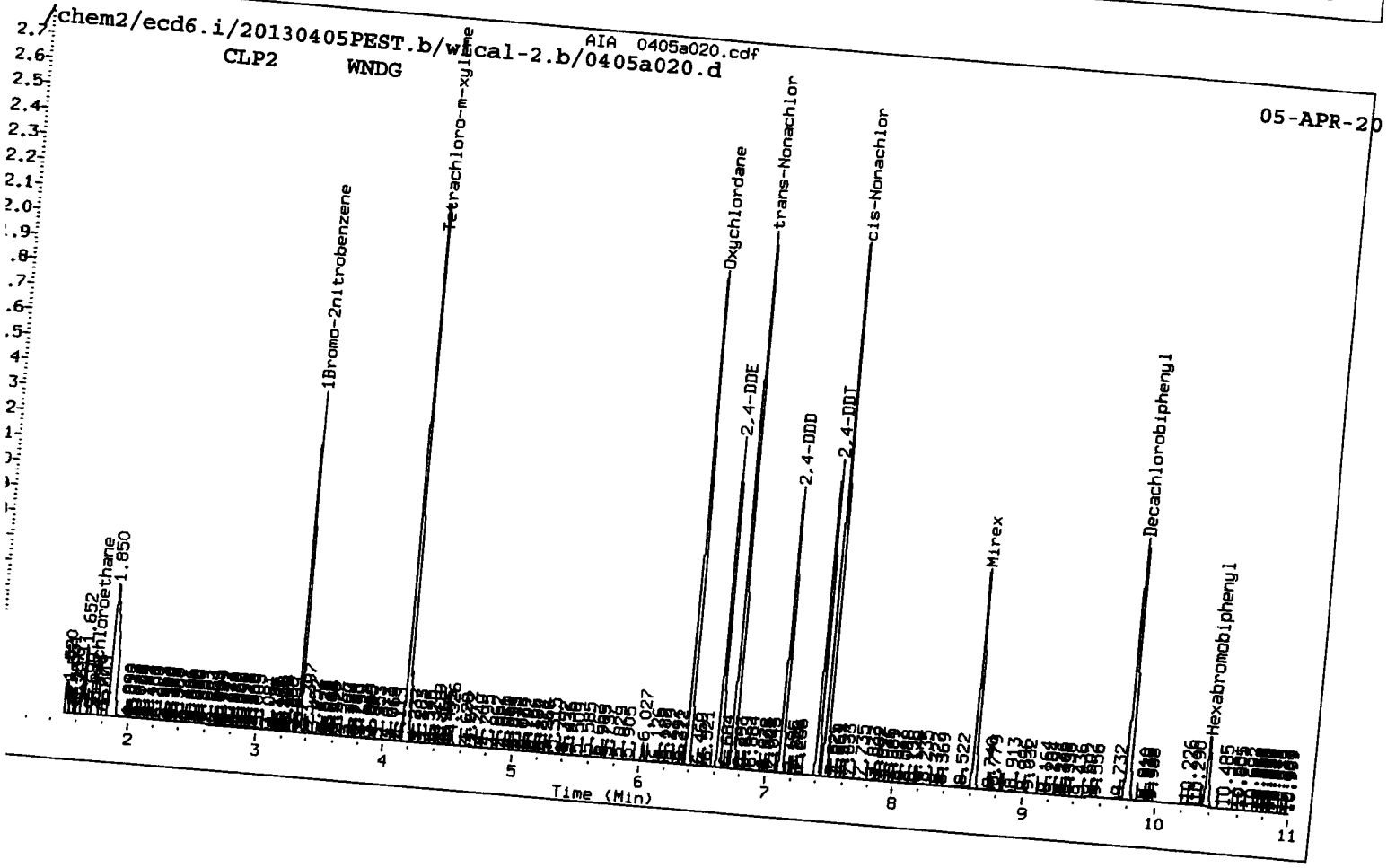
STX-CLP WNDG
AIA 0405a020.cdf
05-APR-2
UVOLTS
Time (Min)
1,2-Dichloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDG
AIA 0405a020.cdf
05-APR-20
Time (Min)
1,2-Dichloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/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

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
1.757	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

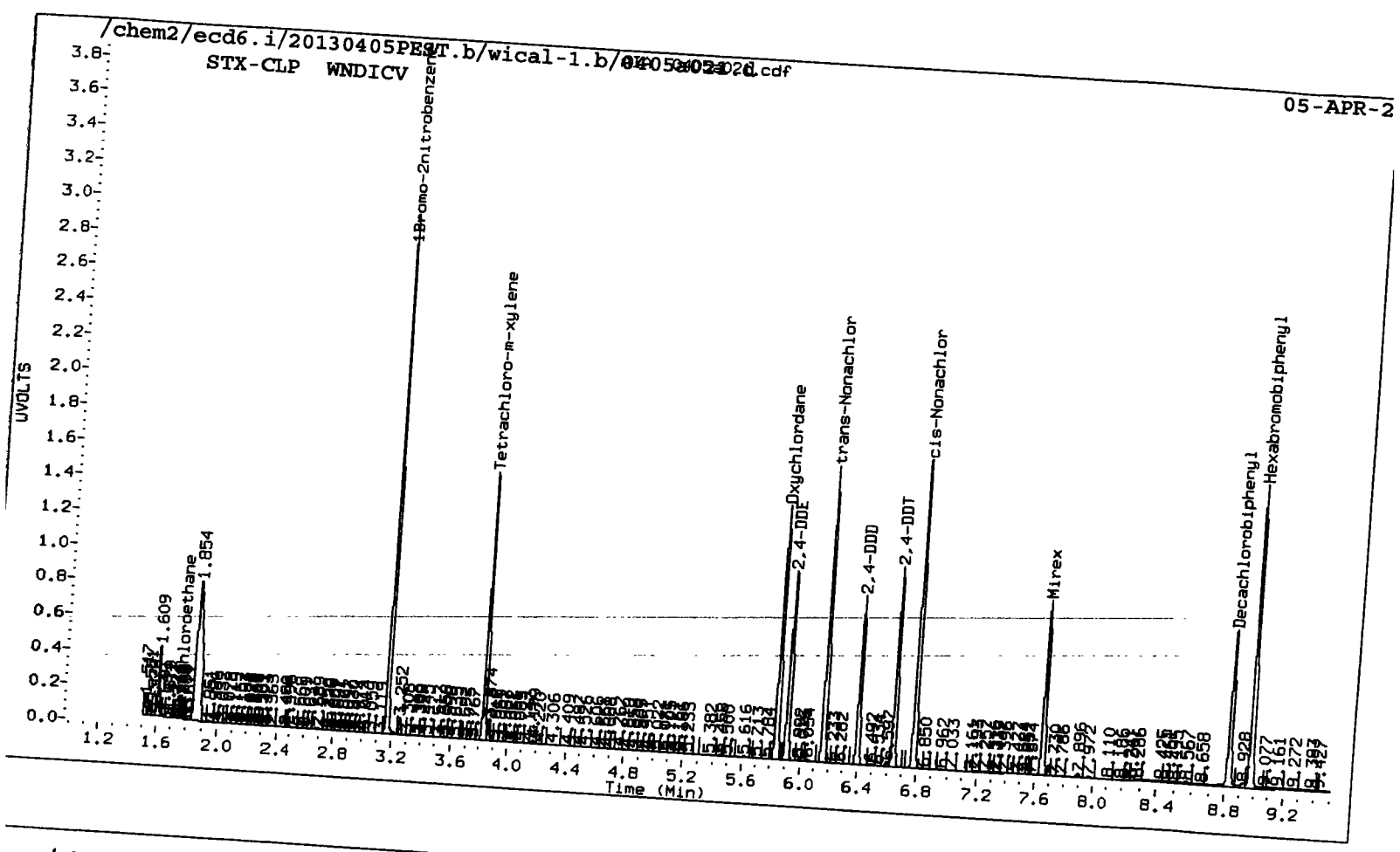
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5135851	-5.7
Hexabromobiphenyl	4807902	4564895	-5.1

WLI9 81485

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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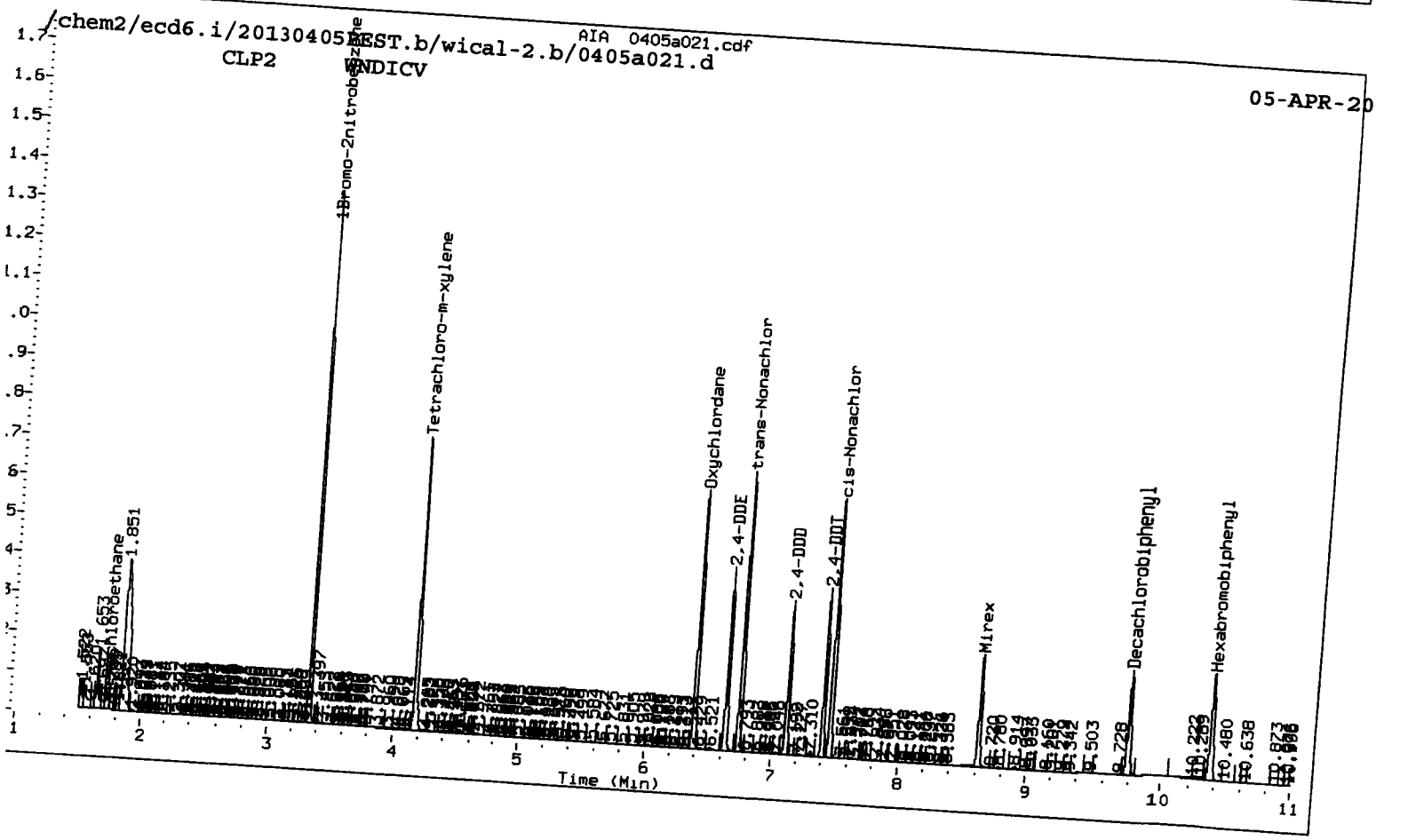
STX-CLP WNDICV
05-APR-2
UVOLTS
Time (Min)
1.609
1.854
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0405a021.cdf
CLP2 WNDICV
05-APR-20
Time (Min)
1.851
Tetrachloro-m-xylene
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: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL49 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 04/05/13 Analysis Start Date: 04/22/13

	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%?	(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

- CCALs: DDT, Methoxychlor, Endrin Aldehyde, Toxaphene failed on CC#2 column, okay on CC#1.
- pic hits -

(Review 1) Analyst: YE **Date:** 4/29/13

(Review 2) Reviewer: [illegible] **Date:** 5/1/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 04/22/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1023684 Column Type: STX-CL

Column 2 Serial No.: 1094709 Column Type: STX-CL2

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2	

	Inject Date/Time	Filename	DF	LabID	ClientID	
1	22-APR-2013 12:58	0422a005.d	1	DS		
2	22-APR-2013 13:18	0422a006.d	1	INDAE		
3	22-APR-2013 13:38	0422a007.d	1	TOXAPH		
4	22-APR-2013 13:56	0422a008.d	1	WL74MBS1	WL74MBS1	
5	22-APR-2013 14:16	0422a009.d	1	WL74LCSS1	WL74LCSS1	
6	22-APR-2013 14:36	0422a010.d	1	WL74LCSDS1	WL74LCSDS1	
7	22-APR-2013 14:56	0422a011.d	1	WL74B	DMMU-P4-C1	
8	22-APR-2013 15:16	0422a012.d	1	WL74C	DMMU-P4-C2	
9	22-APR-2013 15:34	0422a013.d	1	WL74D	DMMU-P4-C3	
10	22-APR-2013 15:54	0422a014.d	1	WL74E	DMMU-P4-D1	
11	22-APR-2013 16:14	0422a015.d	1	WL74F	DMMU-P4-D2	
12	22-APR-2013 16:32	0422a016.d	1	WL74G	DMMU-P4-D3	
13	22-APR-2013 16:49	0422a017.d	1	WL74H	DMMU-P4-N1	
14	22-APR-2013 17:07	0422a018.d	1	WL74I	DMMU-P4-X3	
15	22-APR-2013 17:25	0422a019.d	1	WL74J	DMMU-P4-N2	
16	22-APR-2013 17:43	0422a020.d	1	WL74JMS	DMMU-P4-N2	MS
17	22-APR-2013 18:01	0422a021.d	1	WL74JMSD	DMMU-P4-N2	MSD
18	22-APR-2013 18:18	0422a022.d	1	WL74MBS1	WL74MBS1	
19	22-APR-2013 18:36	0422a023.d	1	WL74LCSS1	WL74LCSS1	
20	22-APR-2013 18:54	0422a024.d	1	WL74LCSDS1	WL74LCSDS1	
21	22-APR-2013 19:12	0422a025.d	1	DS		
22	22-APR-2013 19:30	0422a026.d	1	INDAE		
23	22-APR-2013 19:47	0422a027.d	1	TOXAPH		
24	22-APR-2013 20:05	0422a028.d	1	WL74MBW1		
25	22-APR-2013 20:23	0422a029.d	1	WL74LCSW1		
26	22-APR-2013 20:43	0422a030.d	1	WL74LCSDW1		
27	22-APR-2013 21:01	0422a031.d	1	WL74A		
28	22-APR-2013 21:18	0422a032.d	1	WL49A		
29	22-APR-2013 21:37	0422a033.d	1	WL49B		
30	22-APR-2013 21:55	0422a034.d	1	WK63MBS1		
31	22-APR-2013 22:13	0422a035.d	1	WK65A		
32	22-APR-2013 22:30	0422a036.d	1	WL68MBS1		
33	22-APR-2013 22:48	0422a037.d	1	WL68LCSS1		
34	22-APR-2013 23:06	0422a038.d	1	WL68LCSDS1		
35	22-APR-2013 23:24	0422a039.d	1	WL68QLS		
36	22-APR-2013 23:42	0422a040.d	1	DS		
37	22-APR-2013 23:59	0422a041.d	1	INDAE		
38	23-APR-2013 00:17	0422a042.d	1	TOXAPH		
39	23-APR-2013 00:35	0422a043.d	1	WL68A	10	
40	23-APR-2013 00:53	0422a044.d	1	WL68AMS	10	
41	23-APR-2013 01:11	0422a045.d	1	WL68AMSD	10	
42	23-APR-2013 01:28	0422a046.d	1	WL68B	10	
43	23-APR-2013 01:46	0422a047.d	1	WL68MBS1		
44	23-APR-2013 02:04	0422a048.d	1	WL68LCSS1		
45	23-APR-2013 02:22	0422a049.d	1	WL68LCSDS1		
46	23-APR-2013 02:40	0422a050.d	1	WL68QLS		
47	23-APR-2013 02:57	0422a051.d	1	DS		
48	23-APR-2013 03:15	0422a052.d	1	INDAE		
49	23-APR-2013 03:33	0422a053.d	1	TOXAPH		

YZ 4/23/13

WL10: 81581

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 04/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a026.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a026.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Injection Date: 22-APR-2013 19:30
Compound Sublist: INDA
Report Date: 04/29/2013 10:58
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
3.163	-0.001	4818676	3.333	0.001	25714748	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.328	-0.002	2285372	4.755	-0.001	13277877	21.5630	21.2187	1.6	alpha-BHC
4.686	-0.001	838207	5.185	0.000	4854305	19.7402	19.8956	0.8	beta-BHC
4.857	-0.001	1953470	5.497	-0.002	10882806	20.7080	20.4593	1.2	delta-BHC
4.613	-0.002	2041411	5.114	-0.002	11554424	21.3411	20.9782	1.7	gamma-BHC (Lindane)
5.062	-0.003	1863818	5.580	-0.002	10067678	20.3295	19.7121	3.1	Heptachlor
5.357	-0.003	1885724	5.918	-0.003	9533886	20.9652	20.4753	2.4	Aldrin
5.932	-0.004	1693628	6.472	-0.003	8225894	20.6008	20.3918	1.0	Heptachlor epoxide b
6.309	-0.005	1550875	6.861	-0.002	7210849	20.5576	20.5047	0.3	Endosulfan I
6.532	-0.005	3371505	7.118	-0.003	14332658	42.3768	40.6050	4.3	Dieldrin
6.230	-0.005	2654833	6.918	-0.002	14348529	40.7272	39.9086	2.0	4,4'-DDE
6.751	-0.006	2827245	7.407	-0.003	10751626	41.3674	34.8348	17.1	Endrin
6.956	-0.005	2758404	7.595	-0.003	11557028	39.3908	34.0917	14.4	Endosulfan II
6.787	-0.004	2860007	7.455	-0.003	11914963	43.8898	36.4766	18.4	4,4'-DDD
7.724	-0.005	2430824	8.138	-0.002	9641258	39.3737	34.2484	13.9	Endosulfan sulfate
7.045	-0.004	2329275	7.743	-0.002	8851753	35.6667	29.8520 ✓	17.7	4,4'-DDT
7.469	-0.005	5646277	8.325	-0.005	18184269	172.3731	147.9468 ✓	15.3	Methoxychlor
7.980	-0.005	3045580	8.630	-0.002	9731424 OK	39.2885	33.7960	15.0	Endrin ketone
7.334	-0.005	2075573	7.893	-0.002	8388300	36.0905	31.3740	14.0	Endrin aldehyde
6.051	-0.004	1746706	6.655	-0.002	8302990	20.7866	20.4530	1.6	gamma-Chlordane
6.176	-0.004	1664323	6.793	-0.002	7604237	20.5917	20.3004	1.4	alpha-Chlordane
2.340	-0.001	2312139	2.497	0.000	8529750	20.7297	17.3180	17.9	Hexachlorobutadiene
4.178	-0.001	1628128	4.629	-0.001	12291132	21.0820	21.3230	1.1	Hexachlorobenzene
8.977	-0.002	4405181	10.365	-0.001	11364629	80.0000	80.0000	0.0	Hexabromobiphenyl
3.836	-0.001	3012651	4.166	-0.002	17782069	41.5619	39.0959	6.1	Tetrachloro-m-xylen
8.827	-0.004	2365515	9.793	-0.002	9275369	36.7877	34.4236	6.6	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	103.9	97.7	97.7~	115- 0
Decachlorobiphenyl	92.0	86.1	86.1~	115- 0

WLIO-21502

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

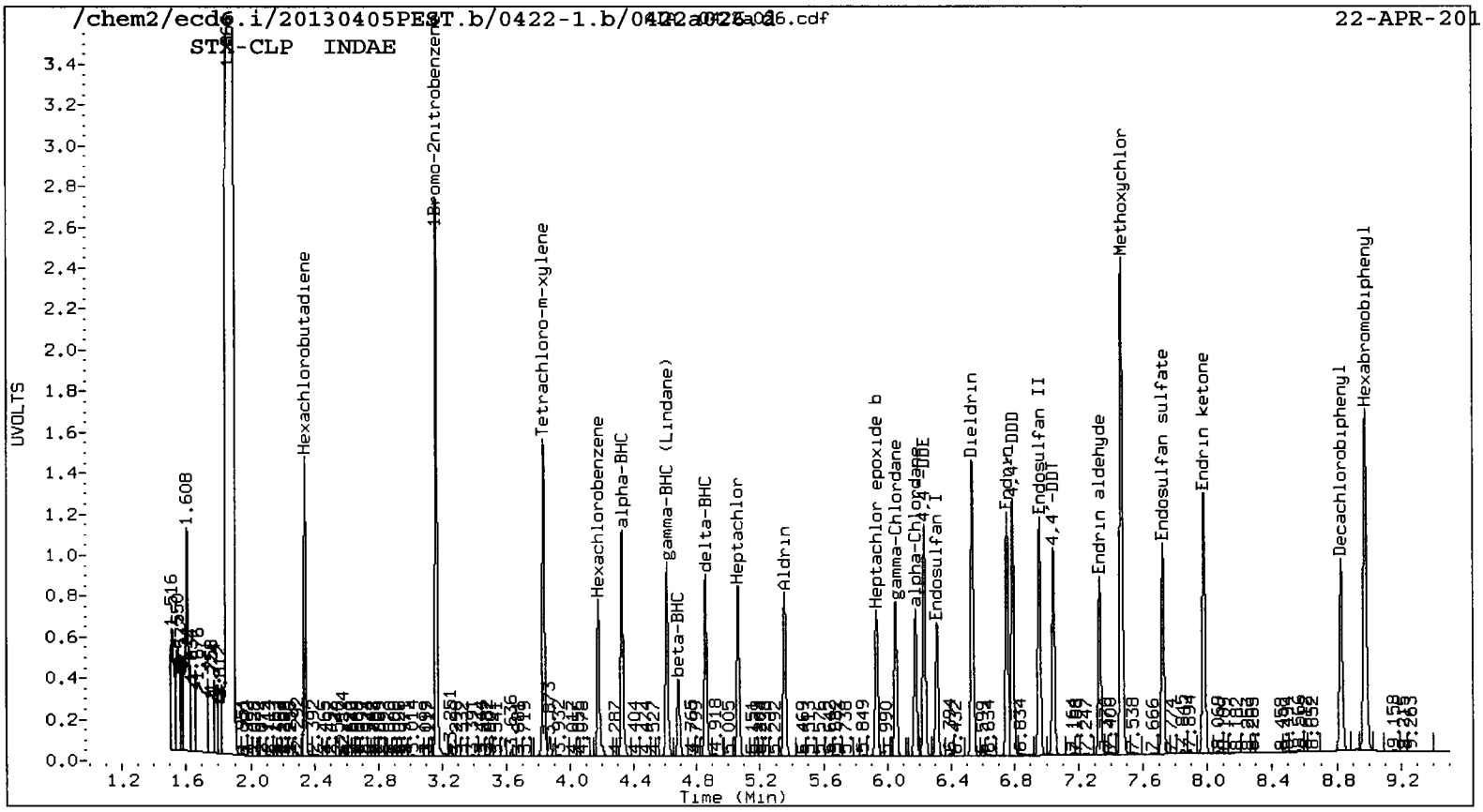
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4818676	-11.6
Hexabromobiphenyl	4807902	4405181	-8.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25714748	18.5
Hexabromobiphenyl	7681727	11364629	47.9

* 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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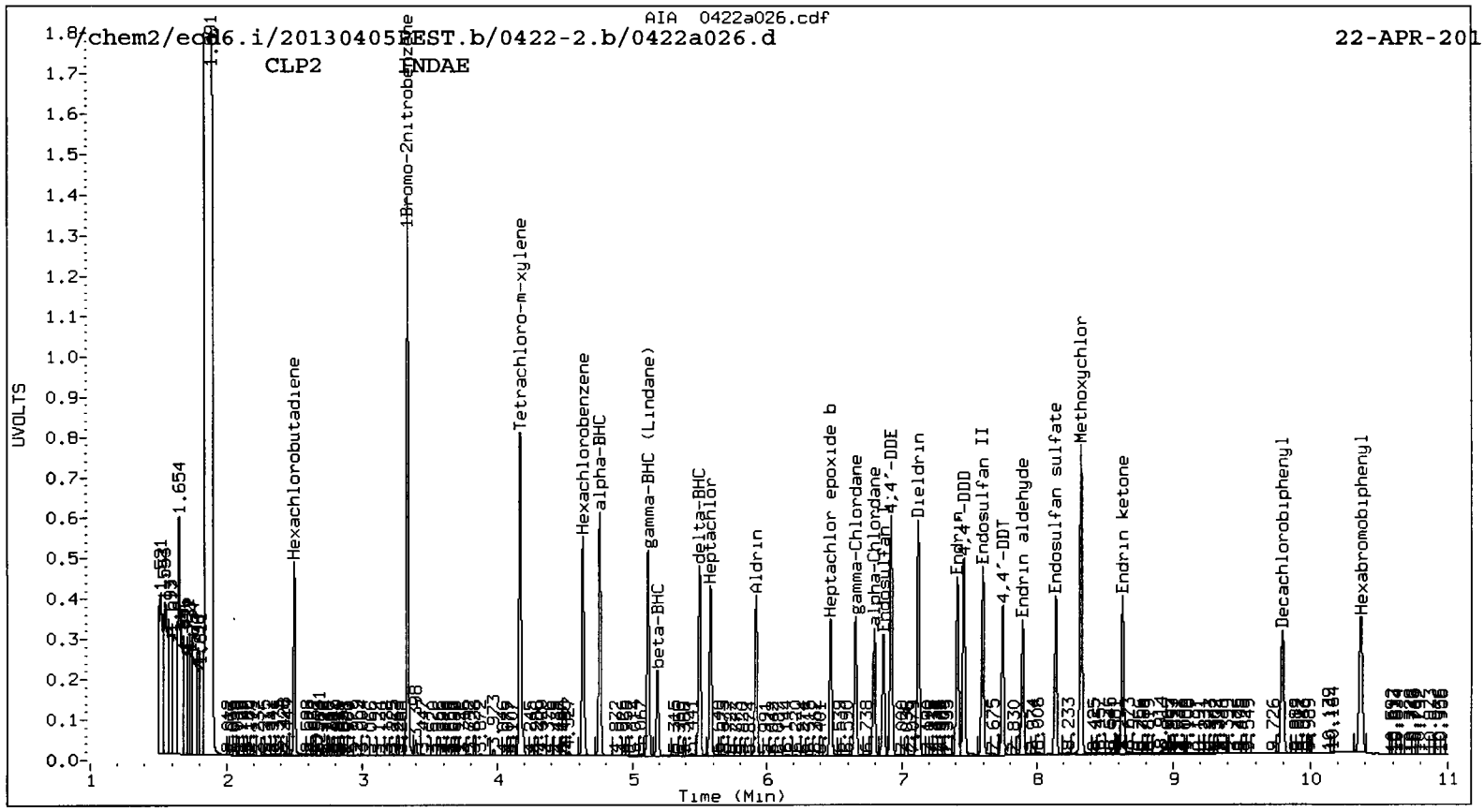
22-APR-201
ST5-CLP INDAE
UVOLTS
Time (Min)
1.608
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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22-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1.654
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a027.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a027.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 19:47
Compound Sublist: TOXAPH Report Date: 04/29/2013 10:58
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

Y2 04/29/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.163	-0.001	5000157	3.333	0.001	26731310	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.978	-0.002	4618745	10.366	0.000	11950392	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2557535	4.166	-0.002	15466355	34.0026	32.7114	3.9	Tetrachloro-m-xylen
8.828	-0.003	2134102	9.793	-0.002	8401098	31.6542	29.6506	6.5	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	85.0	81.8	81.8~	150- 0
Decachlorobiphenyl	79.1	74.1	74.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

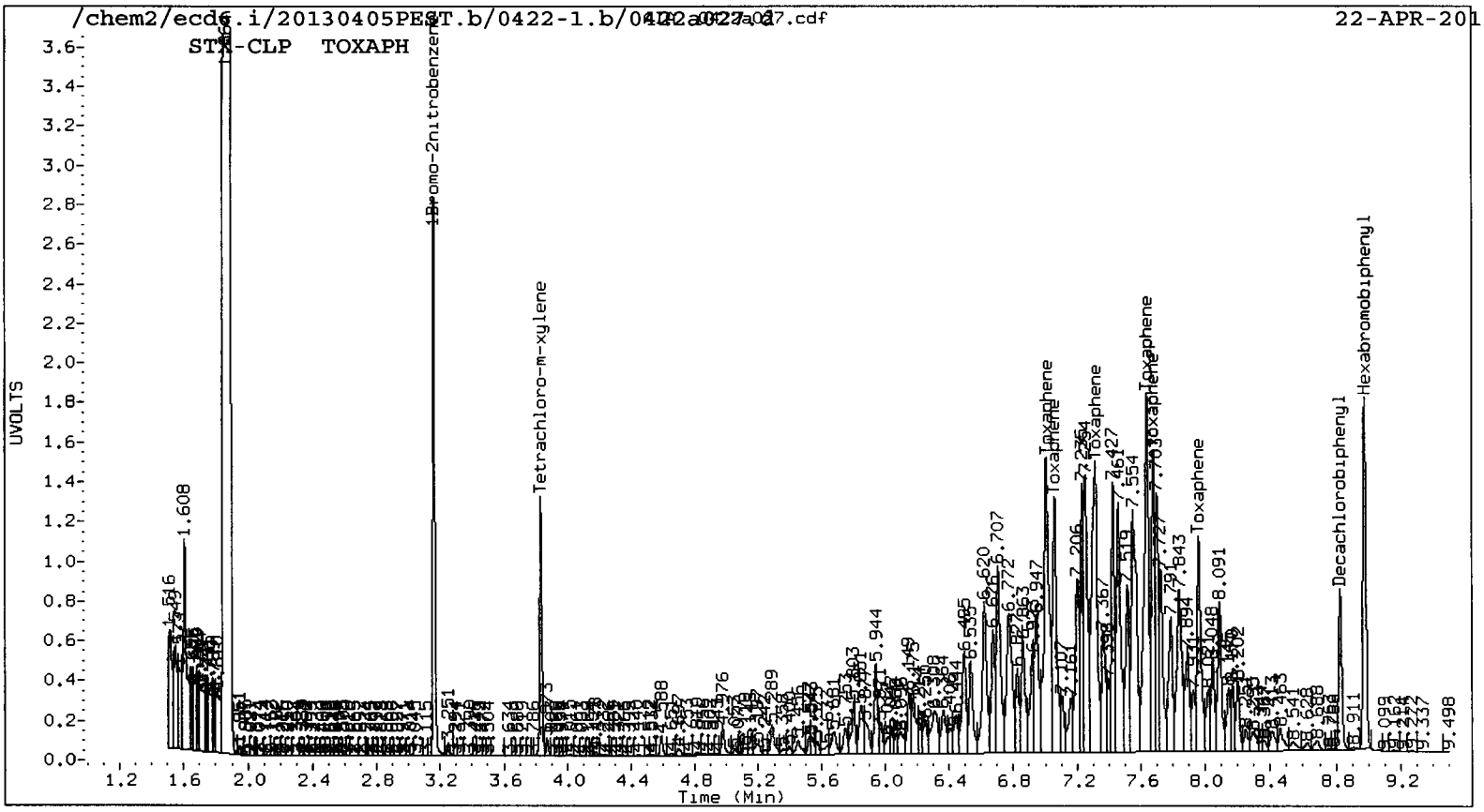
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5000157	-8.2
Hexabromobiphenyl	4807902	4618745	-3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26731310	23.2
Hexabromobiphenyl	7681727	11950392	55.6

* 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	7.008	-0.004	6514926	2191.9	1	7.343	-0.001	21306274	1941.0
Toxaphene	2	7.060	-0.004	4463048	2206.4	2	7.667	-0.001	30321885	1846.1
Toxaphene	3	7.317	-0.003	7078744	2084.4	3	7.897	-0.001	32038235	1825.1
Toxaphene	4	7.642	-0.002	7089230	2069.6	4	8.365	-0.001	21406259	1687.6
Toxaphene	5	7.681	-0.004	4381033	1938.0	5	8.405	0.000	25164345	1566.8
Toxaphene	6	7.963	-0.003	3730725	1922.4	NS	---			----
Total STX-CLPAve (6 peaks): 2068.799						Total CLP2Ave (5 peaks): 1773.334				RPD = 15
Corrected Ave (6 peaks): 2068.799						Corrected Ave (5 peaks): 1773.334				RPD = 15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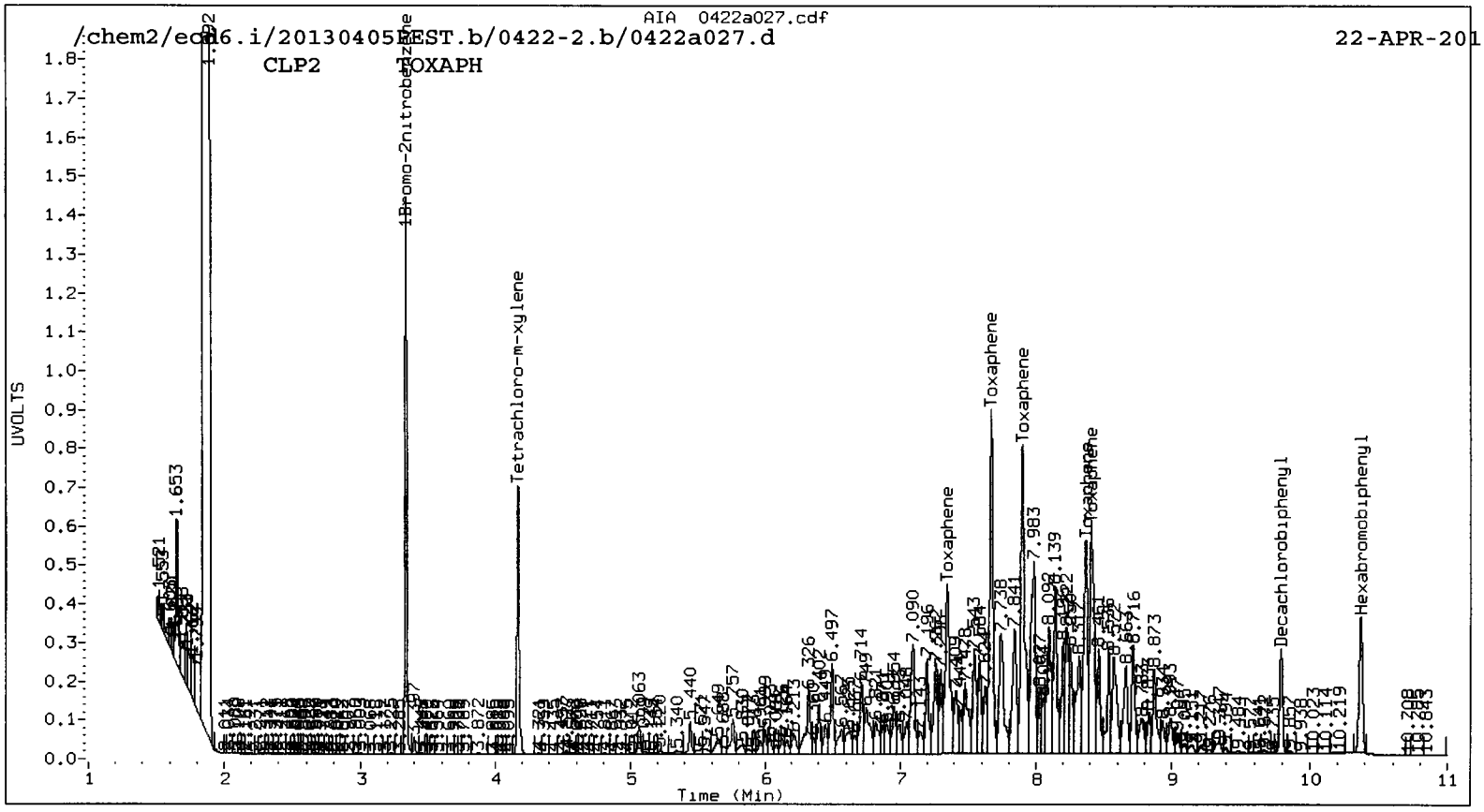
22-APR-201
STX-CLP TOXAPH
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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22-APR-201
CLP2 TOXAPH
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 04/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a028.d ARI ID: WL74MBW1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a028.d Client ID: WL74MBW1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 20:05
Compound Sublist: wpest Report Date: 04/29/2013 10:57
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.002	5168032	3.333	0.001	27791553	80.0000	80.0000	IS 0.0	1Bromo-2nitrobenzen
4.300	-0.030	5698	4.755	-0.001	83681	~~0.0501~~	~~0.1237~~	84.7*	alpha-BHC
4.713	0.026	5306	----			0.1165	0.0000	---	beta-BHC
4.852	-0.006	2831	5.509	0.010	80649	0.0280	0.1403	133.5*	delta-BHC
4.611	-0.004	1857	5.092	-0.024	87542	0.0181	0.1471	156.2*	gamma-BHC (Lindane)
5.063	-0.002	6189	5.578	-0.003	19118	0.0629	0.0346	58.0*	Heptachlor
5.358	-0.003	3269	5.898	-0.022	316131	0.0339	0.6282	179.5*	Aldrin
5.935	-0.002	1438	6.473	-0.003	71648	0.0163	0.1643	163.9*	Heptachlor epoxide b
6.303	-0.012	3722	6.857	-0.006	35375	0.0460	0.0931	67.7*	Endosulfan I
6.529	-0.008	1692	----			0.0198	0.0000	---	Dieldrin
6.229	-0.006	4811	6.917	-0.004	81760	0.0688	0.2104	101.4*	4,4'-DDE
6.759	0.003	2640	7.418	0.008	79038	0.0348	0.2251	146.5*	Endrin
6.959	-0.001	5014	7.633	0.034	146979	0.0645	0.3811	142.1*	Endosulfan II
6.802	0.011	10687	7.452	-0.006	86138	0.1477	0.2318	44.3*	4,4'-DDD
----			8.141	0.001	114348	0.0000	0.3570	---	Endosulfan sulfate
7.025	-0.024	7150	7.757	0.012	153917	0.0986	0.4562	128.9*	4,4'-DDT
7.471	-0.002	29055	8.322	-0.008	297564	0.7989	2.1279	90.8*	Methoxychlor
7.970	-0.015	20846	----			0.2422	0.0000	---	Endrin ketone
7.332	-0.006	10724	7.901	0.006	120914	0.1679	0.3975	81.2*	Endrin aldehyde
6.058	0.002	6943	6.675	0.017	132826	0.0770	0.3027	118.9*	gamma-Chlordane
----			6.795	0.000	36658	0.0000	0.0905	---	alpha-Chlordane
2.338	-0.003	19722	2.497	0.000	155128	0.1649	0.2914	55.5*	Hexachlorobutadiene
4.178	-0.001	39984	4.625	-0.005	135565	0.4827	0.2176	75.7*	Hexachlorobenzene
5.832	-0.008	2350	6.430	0.045	175931	0.0307	0.4901	176.4*	Oxychlordane
----			----			0.0000	0.0000	---	2,4-DDE
6.168	0.006	7323	6.712	-0.029	110803	0.0803	0.2234	94.2*	trans-Nonachlor
6.384	-0.014	1735	7.108	-0.006	169900	0.0344	0.6533	180.0*	2,4-DDD
6.664	0.028	5656	7.379	-0.024	158203	0.0981	0.5733	141.5*	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.649	-0.004	21946	8.612	-0.007	565258	~~0.3814~~	~~2.6466~~	149.6*	Mirex
8.977	-0.003	4891195	10.366	-0.001	12930004	80.0000	80.0000	+S 0.0	Hexabromobiphenyl
1.754	0.000	31789	1.719	-0.013	12742089	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.598	0.017	2640	7.296	-0.040	58302	~~0.0000~~	~~0.0000~~	---	Kepone
3.835	-0.001	1928905	4.166	-0.003	11215588	24.8119	22.8161	8.4	Tetrachloro-m-xylen
8.827	-0.004	1489443	9.792	-0.003	5955135	20.8617	19.4255	7.1	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	62.0	57.0	57.0	52-100
Decachlorobiphenyl	52.2	48.6	48.6~	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

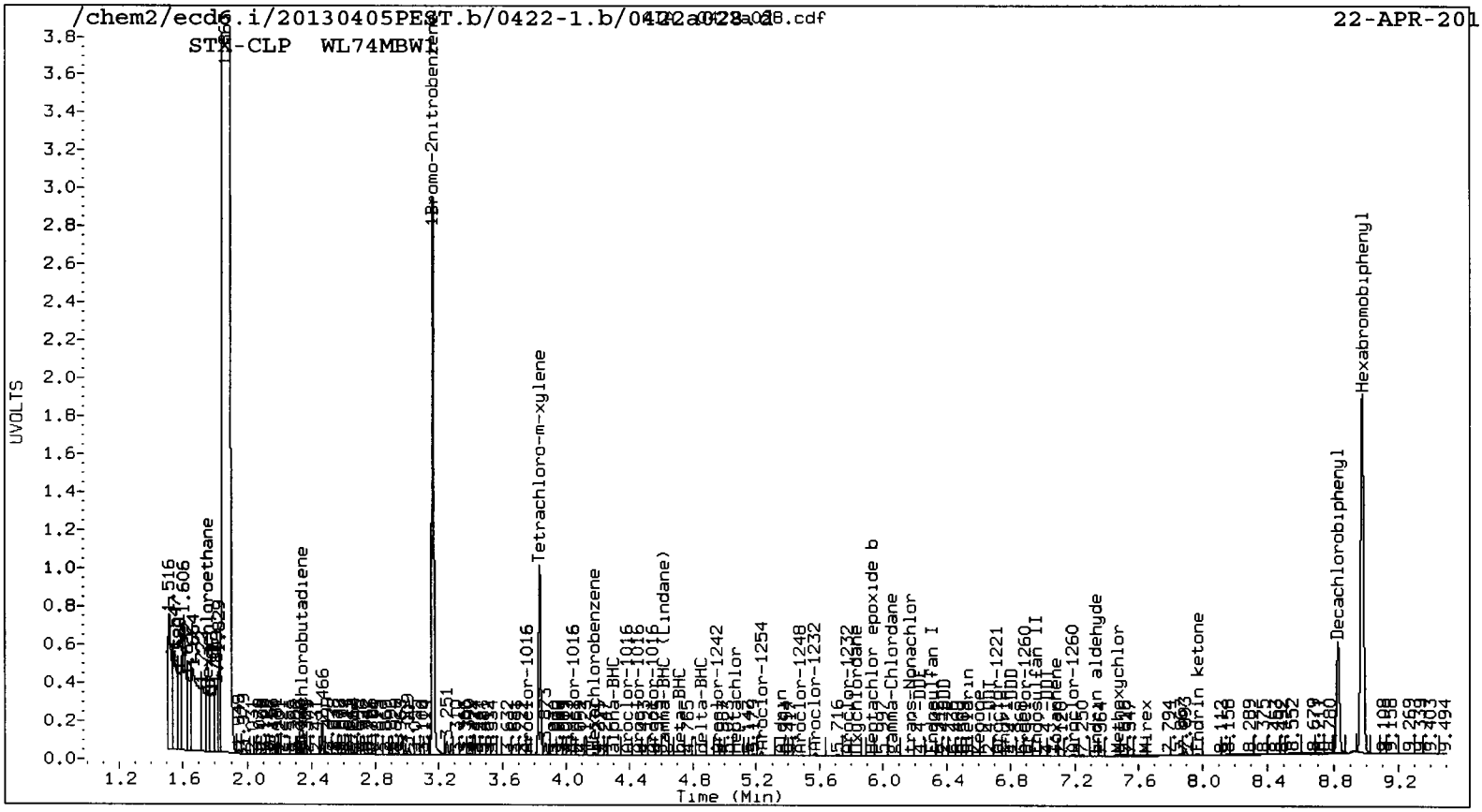
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5168032	-5.1
Hexabromobiphenyl	4807902	4891195	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27791553	28.1
Hexabromobiphenyl	7681727	12930004	68.3

* 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	7.025	0.013	7150	2.3	1	7.379	0.035	158203	13.3
Toxaphene	2	7.078	0.015	10460	4.9	2	7.677	0.009	94142	5.3
Toxaphene	3	7.332	0.012	10724	3.0	3	7.901	0.003	120914	6.4
Toxaphene	4	7.649	0.004	21946	6.1	4	8.322	-0.044	297564	21.7
Toxaphene	5	---			0.000	5	8.411	0.005	159494	9.2
Toxaphene	6	7.970	0.003	20846	10.1	NS	---			----
Total STX-CLPAve (5 peaks): 5.266						Total CLP2Ave (5 peaks): 11.169				RPD = 72*
Corrected Ave (4 peaks): 4.047						Corrected Ave (4 peaks): 8.541				RPD = 71*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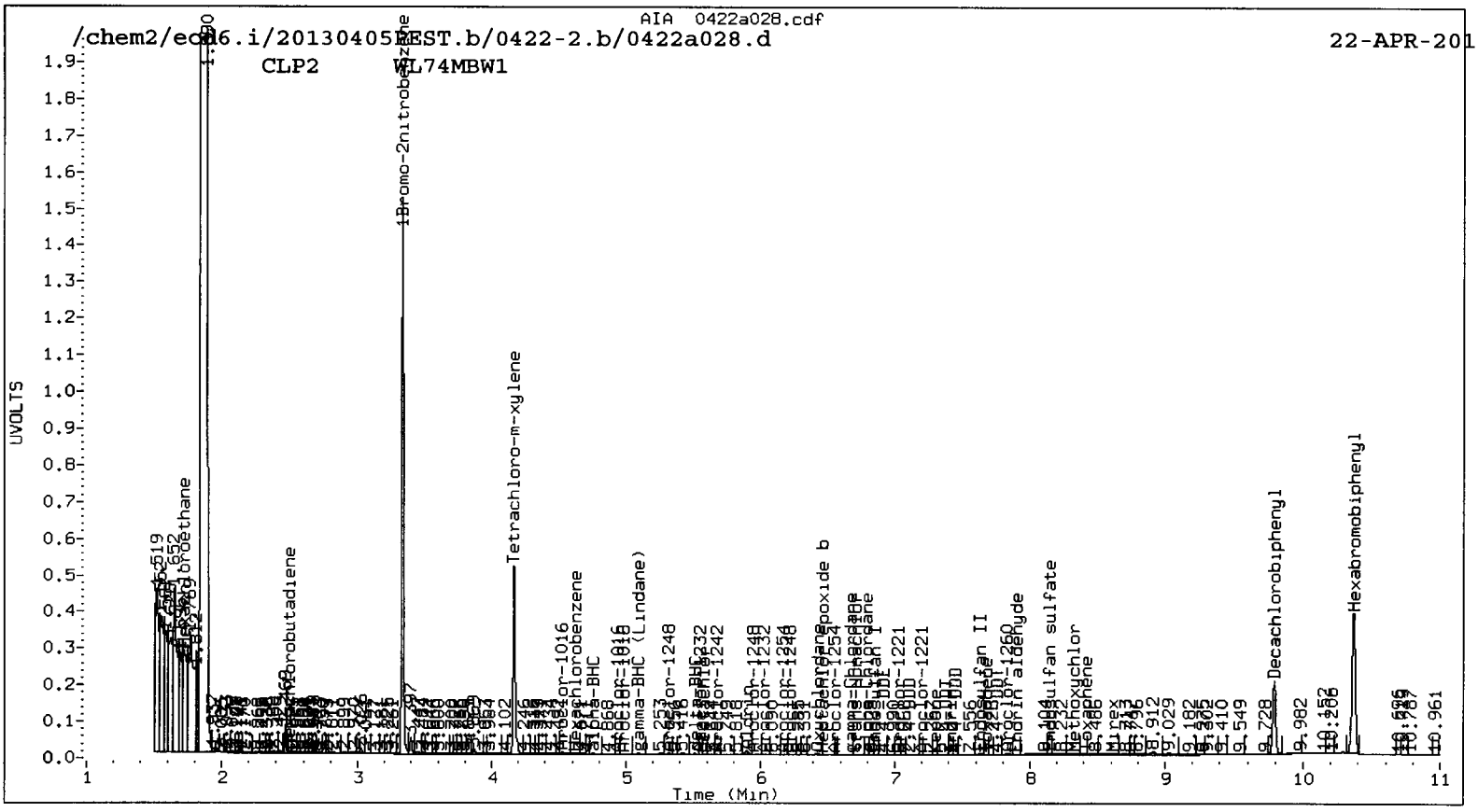
AIA 0422a028.cdf
22-APR-201
STX-CLP WL74MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl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AIA 0422a028.cdf
22-APR-201
CLP2 WL74MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 04/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a029.d ARI ID: WL74LCSW1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a029.d Client ID: WL74LCSW1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 20:23
Compound Sublist: wpest Report Date: 04/29/2013 10:57
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.002	5405363	3.333	0.000	28925697	80.0000	80.0000 LS	0.0	1Bromo-2nitrobenzen
4.327	-0.003	1770436	4.755	-0.002	9892306	14.8914	14.0536	5.8	alpha-BHC
4.686	-0.001	692154	5.185	0.000	3750654	14.5313	13.6658	6.1	beta-BHC
4.857	-0.002	1654409	5.497	-0.002	8962644	15.6342	14.9791	4.3	delta-BHC
4.613	-0.002	1655367	5.114	-0.002	8665430	15.4271	13.9865	9.8	gamma-BHC (Lindane)
5.062	-0.003	1330342	5.579	-0.003	7036512	12.9357	12.2478	5.5	Heptachlor
5.357	-0.003	1302159	5.918	-0.003	6674383	12.9059	12.7429	1.3	Aldrin
5.932	-0.004	1467619	6.472	-0.003	6975315	15.9141	15.3722	3.5	Heptachlor epoxide b
6.310	-0.005	1363990	6.860	-0.003	6175245	16.1179	15.6106	3.2	Endosulfan I
6.532	-0.005	2904096	7.118	-0.003	12750632	32.5400	32.1131	1.3	Dieldrin N
6.231	-0.004	2719482	6.918	-0.002	12374124	37.1909	30.5965	19.5	4,4'-DDE
6.751	-0.006	2447741	7.407	-0.003	9500832	31.1344	25.9794	18.1	Endrin
6.956	-0.005	2491434	7.596	-0.003	6264048	30.9290	15.5950	65.9*	Endosulfan II
6.787	-0.004	2518828	7.456	-0.002	10599902	33.6028	27.3875	20.4	4,4'-DDD
7.724	-0.005	2169752	8.138	-0.002	8782144	30.5523	26.3291	14.8	Endosulfan sulfate
7.045	-0.004	2014460	7.744	-0.002	7577202	26.8152	21.5666	21.7	4,4'-DDT
7.469	-0.005	4881454	8.326	-0.005	16197615	129.5499	111.2215	15.2	Methoxychlor
7.980	-0.005	2731949	8.630	-0.002	8970986	30.6371	26.2940	15.3	Endrin ketone
7.334	-0.005	1370308	7.893	-0.002	5584313	20.7135	17.6276	16.1	Endrin aldehyde
6.051	-0.004	1489731	6.655	-0.002	6935703	15.8043	15.1883	4.0	gamma-Chlordane
6.176	-0.004	1421274	6.793	-0.002	5970300	15.6760	14.1692	10.1	alpha-Chlordane
2.339	-0.002	1015714	2.496	-0.001	4759737	8.1181	8.5910	5.7	Hexachlorobutadiene
4.178	-0.001	1073190	4.628	-0.001	7966699	12.3880	12.2866	0.8	Hexachlorobenzene
5.849	0.009	14960	6.363	-0.021	24667	0.1887	0.0660	96.3*	Oxychlordane
----			6.590	-0.041	86154	0.0000	0.3137	---	2,4-DDE
----			6.735	-0.005	46756	0.0000	0.0905	---	trans-Nonachlor
6.394	-0.003	32378	7.118	0.003	12750632	0.6200	47.0811	194.8*	2,4-DDD
6.634	-0.002	28463	----			0.4767	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.666	0.013	71880	----			1.2056	0.0000	---	Mirex
8.977	-0.002	5067377	10.366	0.000	13465655	80.0000	80.0000 LS	0.0	Hexabromobiphenyl
1.753	-0.001	69300	1.737	0.005	14845554	0.0000	0.0000	---	Hexachloroethane
6.598	0.017	8380	7.336	0.000	102397	0.0000	0.0000	---	Kepone
3.835	-0.001	1965833	4.166	-0.003	11458536	24.1766	22.3963	7.6	Tetrachloro-m-xylen
8.828	-0.003	1683158	9.793	-0.003	6824202	22.7553	21.3749	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	60.4	56.0	56.0	52-100
Decachlorobiphenyl	56.9	53.4	53.4~	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	778360.6	649484.5	649484.5~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	670380.1	539164.4	539164.4~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

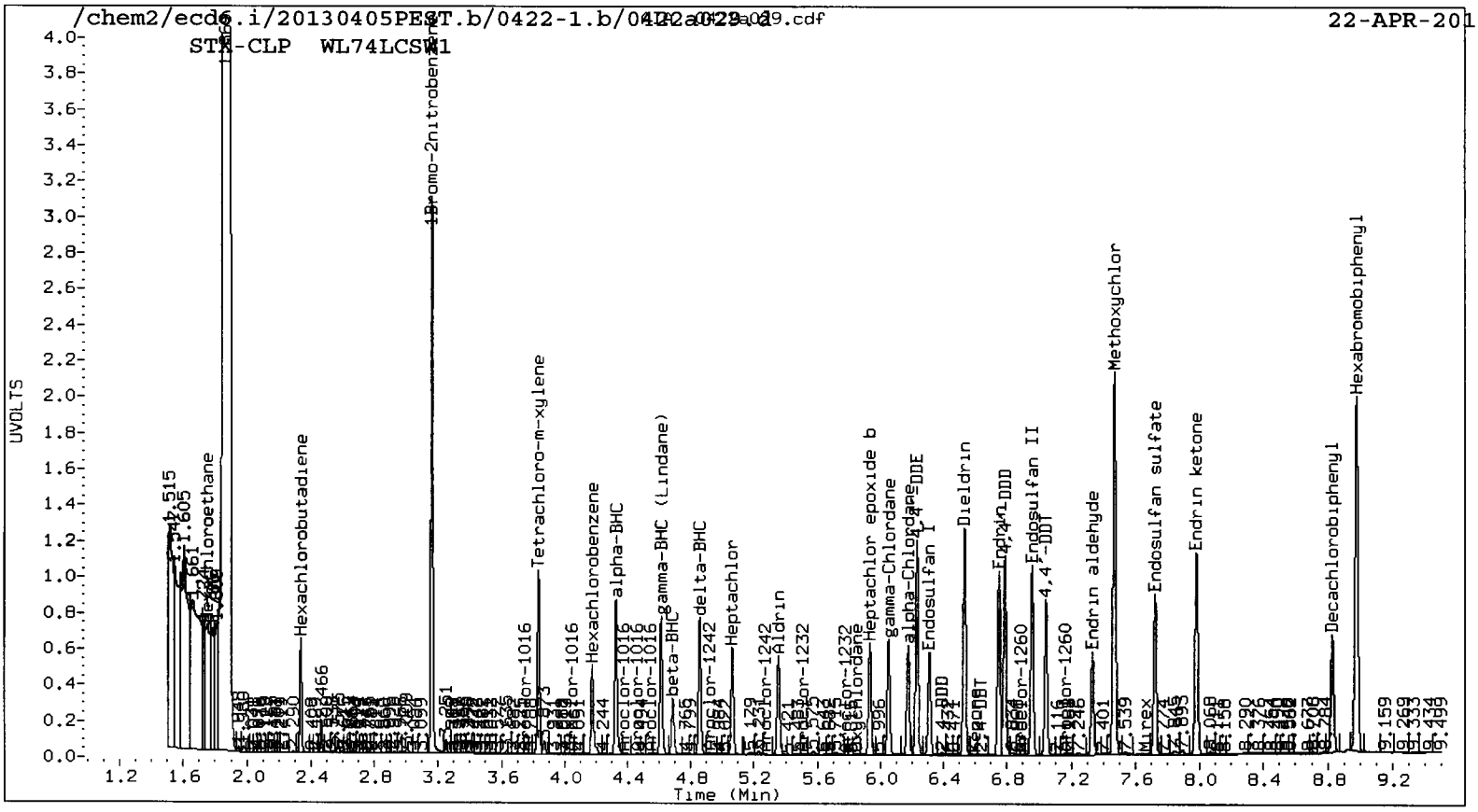
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5405363	-0.8
Hexabromobiphenyl	4807902	5067377	5.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28925697	33.3
Hexabromobiphenyl	7681727	13465655	75.3

* 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	7.045	0.033	2014460	617.7	1	7.336	-0.008	102397	8.3
Toxaphene	2	---			0.000	2	7.676	0.008	175869	9.5
Toxaphene	3	7.334	0.014	1370308	367.8	3	7.893	-0.005	5584313	282.3
Toxaphene	4	7.666	0.021	71880	19.1	4	8.326	-0.041	16197615	1133.3
Toxaphene	5	---			0.000	5	8.426	0.020	248205	13.7
Toxaphene	6	7.980	0.013	2731949	1283.1	NS	---			----
Total STX-CLPAve (4 peaks): 571.947						Total CLP2Ave (5 peaks): 289.425				RPD = 66*
Corrected Ave (3 peaks): 334.882						Corrected Ave (4 peaks): 78.456				RPD = 124*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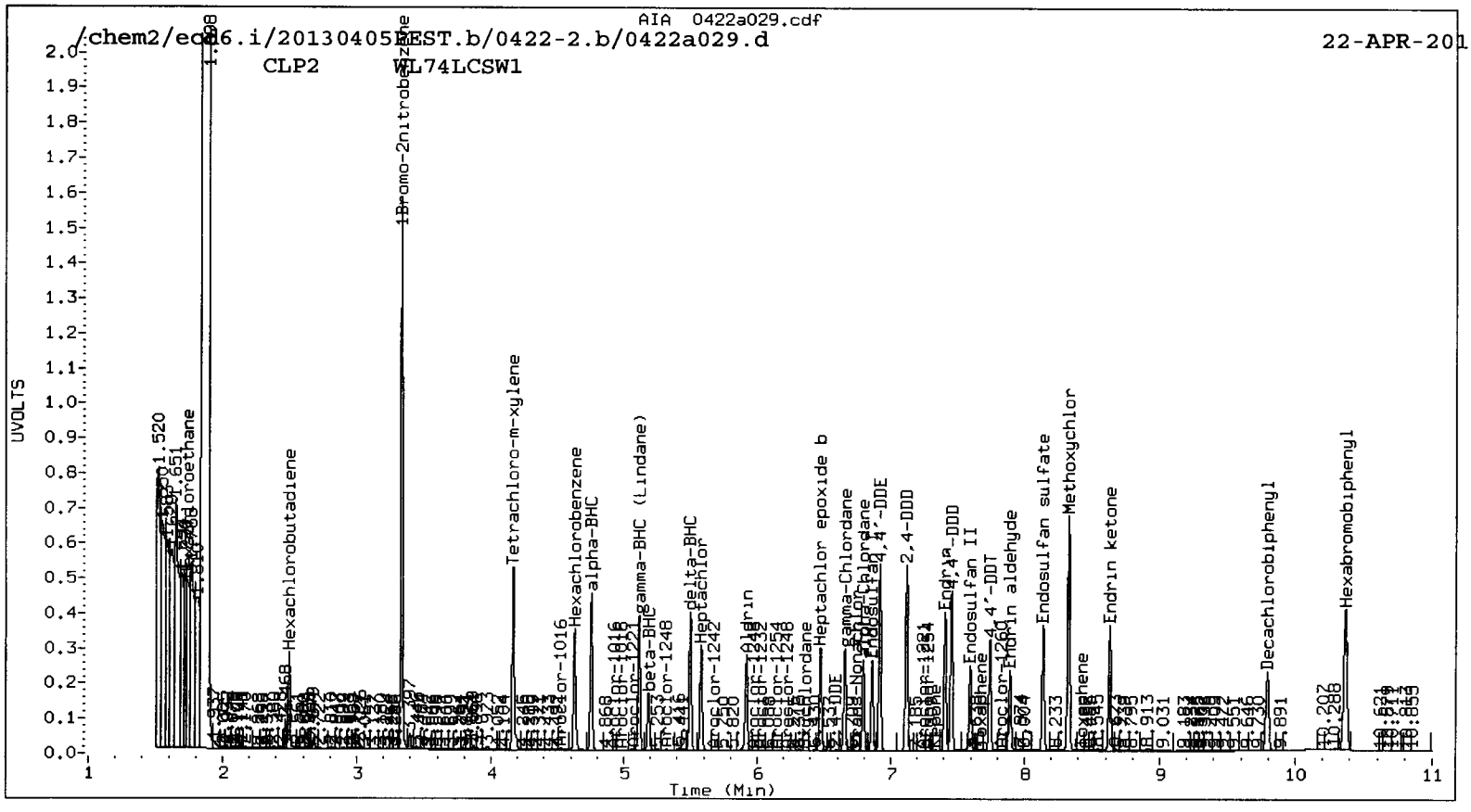
AIA 0422a029.cdf
22-APR-201
STX-CLP WL74LCSW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0422a029.cdf
22-APR-201
CLP2 WL74LCSW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
2,4-DDD
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 04/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a030.d ARI ID: WL74LCSDW1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a030.d Client ID: WL74LCSDW1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 20:43
Compound Sublist: wpest Report Date: 04/29/2013 10:57
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.001	5321844	3.333	0.000	28755903	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.330	0.000	1711469	4.756	0.000	9716122	14.6213	13.8848	5.2	alpha-BHC
4.689	0.001	653586	5.186	0.001	3592867	13.9370	13.1682	5.7	beta-BHC
4.860	0.001	1553677	5.499	0.000	8587651	14.9127	14.4371	3.2	delta-BHC
4.615	0.000	1608930	5.115	-0.001	8820437	15.2296	14.3207	6.2	gamma-BHC (Lindane)
5.065	0.000	1301985	5.581	-0.001	6965931	12.8586	12.1966	5.3	Heptachlor
5.360	0.000	1294943	5.920	-0.001	6778170	13.0358	13.0175	0.1	Aldrin
5.935	-0.001	1440077	6.474	-0.001	6921509	15.8605	15.3437	3.3	Heptachlor epoxide b
6.313	-0.002	1339444	6.862	-0.001	6156980	16.0763	15.6564	2.6	Endosulfan I
6.535	-0.002	2859573	7.119	-0.002	12692430	32.5440	32.1553	1.2	Dieldrin
6.234	-0.001	2645206	6.919	-0.001	12230879	36.7428	30.4209	18.8	4,4'-DDE
6.754	-0.002	2393130	7.408	-0.001	9368516	30.7717	25.7515	17.8	Endrin
6.959	-0.002	2418560	7.597	-0.002	6389782	30.3517	15.9912	62.0*	Endosulfan II
6.790	-0.001	2464313	7.457	-0.001	10498902	33.2339	27.2683	19.7	4,4'-DDD
7.727	-0.002	2017368	8.139	-0.001	8256314	28.7162	24.8820	14.3	Endosulfan sulfate
7.048	-0.001	1955689	7.745	-0.001	7399557	26.3167	21.1711	21.7	4,4'-DDT
7.472	-0.002	4743528	8.326	-0.004	15889622	127.2620	109.6772	14.8	Methoxychlor
7.983	-0.002	2622138	8.632	-0.001	8686459	29.7263	25.5932	14.9	Endrin ketone
7.336	-0.002	1420764	7.894	-0.001	5762644	21.7104	18.2857	17.1	Endrin aldehyde
6.054	-0.001	1463193	6.656	-0.001	6877303	15.7664	15.1494	4.0	gamma-Chlordane
6.179	-0.001	1394429	6.794	-0.001	6041040	15.6213	14.4217	8.0	alpha-Chlordane
2.339	-0.002	1013857	2.495	-0.002	4807581	8.2304	8.7286	5.9	Hexachlorobutadiene
4.180	0.001	976607	4.630	0.000	7913616	11.4501	12.2768	7.0	Hexachlorobenzene
5.851	0.011	16198	6.366	-0.019	25457	0.2065	0.0685	100.3*	Oxychlordane
----			6.592	-0.039	76069	0.0000	0.2786	---	2,4-DDE
----			6.737	-0.004	34373	0.0000	0.0669	---	trans-Nonachlor
6.397	0.000	32713	----			0.6332	0.0000	---	2,4-DDD
6.637	0.001	27645	----			0.4680	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.668	0.016	64061	----			1.0862	0.0000	---	Mirex
8.979	0.000	5012726	10.367	0.001	13395607	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.754	0.000	75912	1.739	0.007	15384891	0.0000	0.0000	---	Hexachloroethane
6.602	0.021	8875	7.336	0.000	83413	0.0000	0.0000	---	Kepone
3.837	0.001	1880140	4.167	-0.002	11180281	23.4856	21.9815	6.6	Tetrachloro-m-xylen
8.830	-0.001	1586553	9.795	-0.001	6334257	21.6831	19.9441	8.4	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	58.7	55.0	55.0	52-100
Decachlorobiphenyl	54.2	49.9	49.9~	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	769291.4	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	657917.6	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	5321844	-2.3
Hexabromobiphenyl	4807902	5012726	4.3

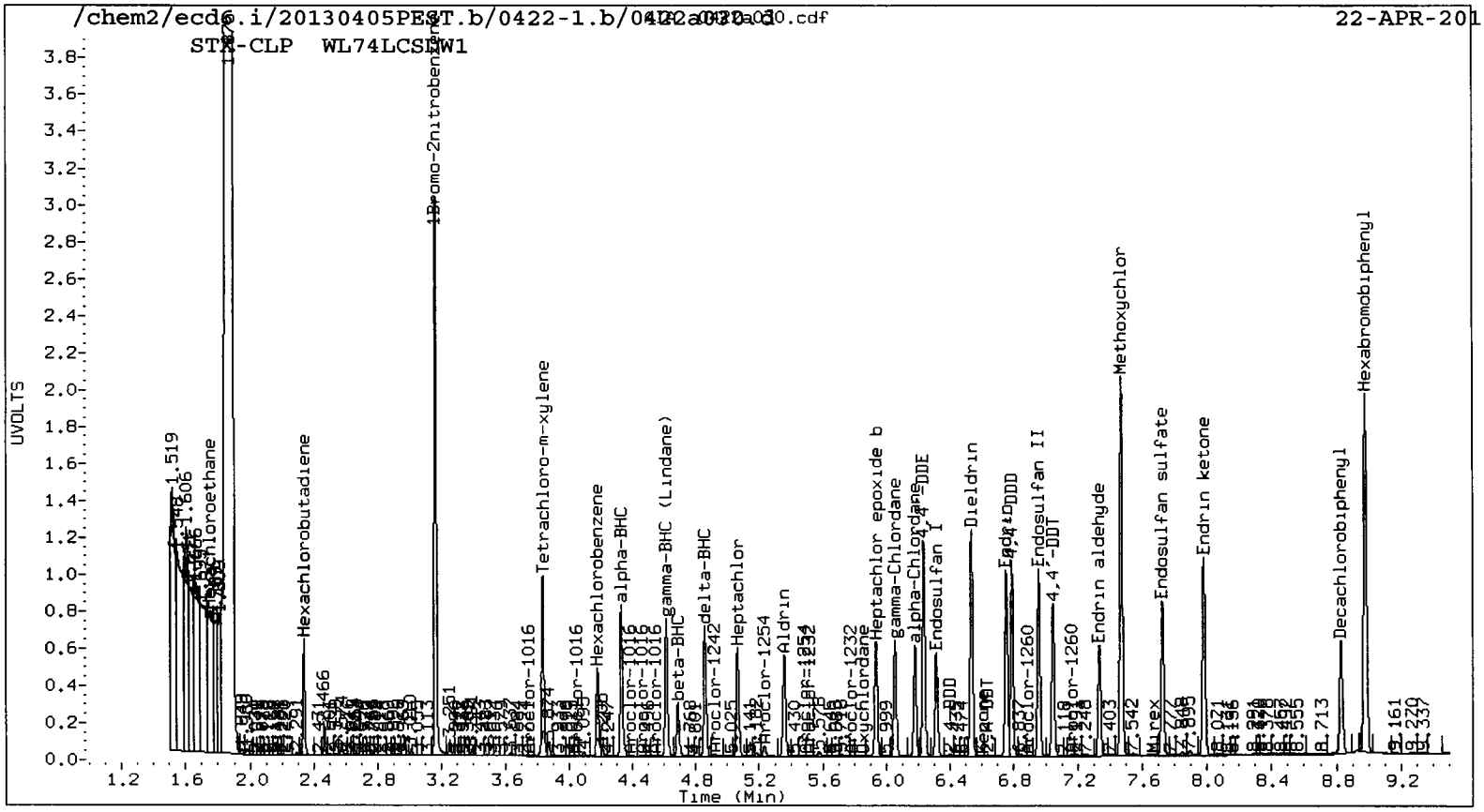
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28755903	32.5
Hexabromobiphenyl	7681727	13395607	74.4

* 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	7.048	0.036	1955689	606.3	1	7.336	-0.008	83413	6.8	
Toxaphene	2	---			0.000	2	7.677	0.009	162514	8.8	
Toxaphene	3	7.336	0.016	1420764	385.5	3	7.894	-0.004	5762644	292.9	
Toxaphene	4	7.668	0.024	64061	17.2	4	8.326	-0.040	15889622	1117.6	
Toxaphene	5	---			0.000	5	8.427	0.021	200499	11.1	
Toxaphene	6	7.983	0.016	2622138	1245.0	NS	---			----	

Total STX-CLPAve (4 peaks): 563.489 Total CLP2Ave (5 peaks): 287.435 RPD = 65*
Corrected Ave (3 peaks): 336.322 Corrected Ave (4 peaks): 79.903 RPD = 123*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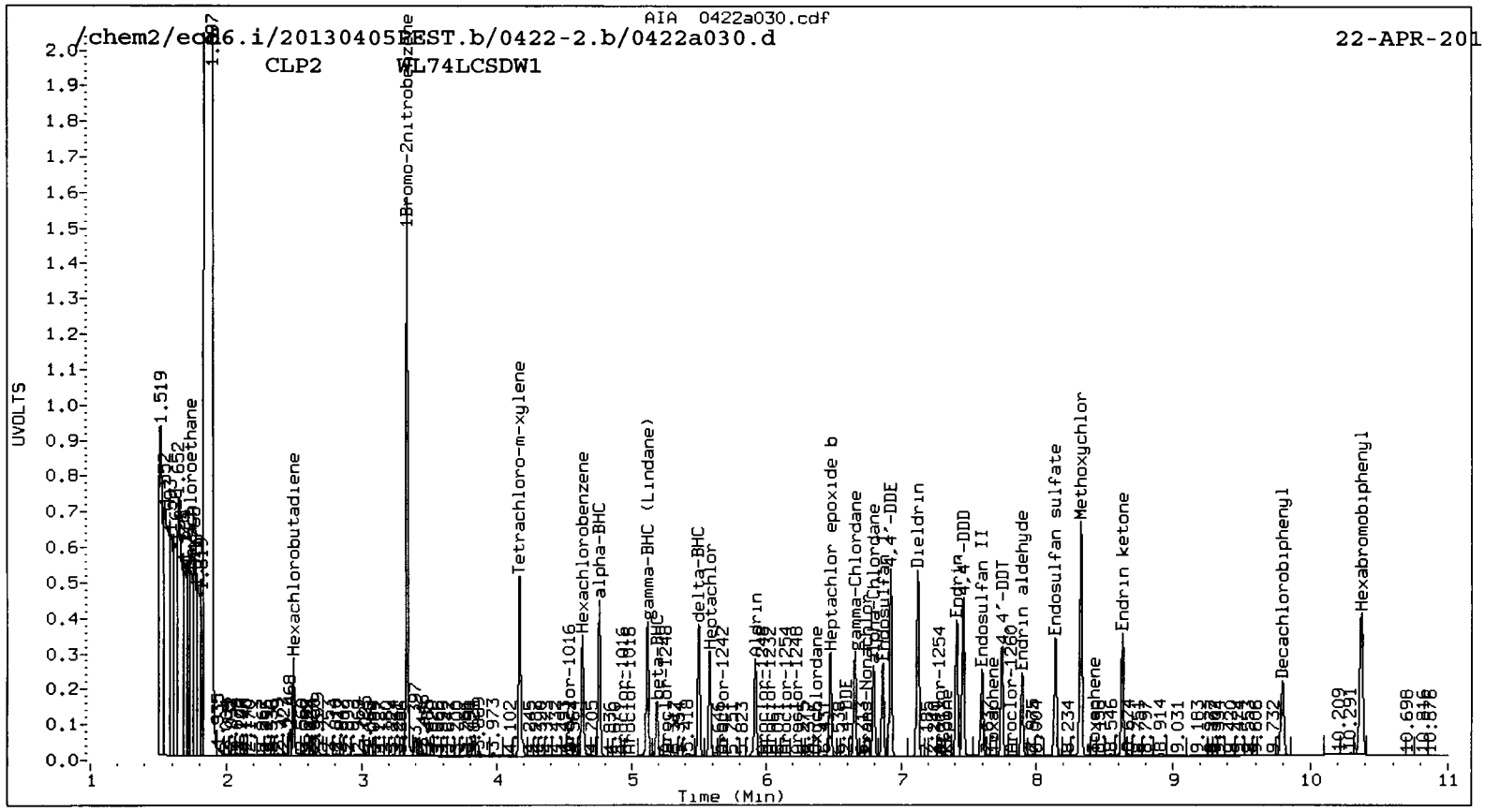
22-APR-201
STX-CLP WL74LCSDW1
UVOLTS
Time (Min)
1,519
1,606
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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22-APR-201
CLP2 WL74LCSDW1
UVOLTS
Time (Min)
1,519
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
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

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a032.d ARI ID: WL49A
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a032.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 21:18
Compound Sublist: wpest Report Date: 04/29/2013 10:57
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.002	5135385	3.333	0.001	26949577	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.312	-0.018	24438	4.766	0.009	248249	0.2164	0.3785	54.5*	alpha-BHC
4.686	-0.001	22618	5.186	0.001	109230	0.4998	0.4272	15.7	beta-BHC
4.865	0.006	16686	5.533	0.034	643178	0.1660	1.1538	149.7*	delta-BHC
4.611	-0.004	5303	5.093	-0.023	1469604	0.0520	2.5460	192.0*	gamma-BHC (Lindane)
5.024	-0.041	57767	----			0.5912	0.0000	---	Heptachlor
5.371	0.011	14650	5.896	-0.025	1003943	0.1528	2.0573	172.3*	Aldrin
5.944	0.008	19971	6.434	-0.042	980531	0.2279	2.3193	164.2*	Heptachlor epoxide b
6.308	-0.007	7526	6.869	0.006	100721	0.0936	0.2733	97.9*	Endosulfan I
6.538	0.001	23888	7.160	0.039	137558	0.2817	0.3719	27.6	Dieldrin
6.227	-0.008	25012	6.915	-0.006	120144	0.3600	0.3189	12.1	4,4'-DDE
6.758	0.002	20869	7.416	0.006	155305	0.2691	0.4175	43.2*	Endrin
6.972	0.012	305503	7.568	-0.031	173545	3.8452	0.4248	160.2*	Endosulfan II
6.785	-0.006	10147	7.450	-0.008	139732	0.1372	0.3549	88.5*	4,4'-DDD
7.740	0.011	30955	8.165	0.025	118218	0.4419	0.3484	23.7	Endosulfan sulfate
7.051	0.002	22814	7.752	0.007	201398	0.3079	0.5636	58.7*	4,4'-DDT
7.456	-0.017	21885	8.331	0.000	221839	0.5889	1.4975	87.1*	Methoxychlor
7.971	-0.014	74981	----			0.8525	0.0000	---	Endrin ketone
7.350	0.011	29520	7.906	0.010	167562	0.4524	0.5200	13.9	Endrin aldehyde
6.076	0.021	28387	6.678	0.020	305176	0.3170	0.7173	77.4*	gamma-Chlordane
6.186	0.006	17088	6.823	0.028	153715	0.1984	0.3916	65.5*	alpha-Chlordane
2.337	-0.003	13828	2.497	0.000	98919	0.1163	0.1916	48.9*	Hexachlorobutadiene
4.174	-0.005	277243	4.612	-0.017	260346	3.3685	0.4310	154.6*	Hexachlorobenzene
5.841	0.001	32949	6.366	-0.019	113722	0.4214	0.3267	25.3	Oxychlordane
5.906	-0.005	34607	6.629	-0.002	162740	0.5877	0.6360	7.9	2,4-DDE
6.121	-0.041	12486	6.740	0.000	163828	0.1340	0.3119	79.8*	trans-Nonachlor
6.430	0.032	80368	7.109	-0.006	142386	1.5603	0.5169	100.5*	2,4-DDD
6.668	0.031	18249	----			0.3099	0.0000	---	2,4-DDT
6.807	0.029	17682	----			0.1796	0.0000	---	cis-Nonachlor
7.640	-0.012	30525	8.618	-0.001	740172	0.5191	3.2715	145.2*	Mirex
8.977	-0.003	4998028	10.366	0.000	13696900	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.001	63823	1.741	0.009	13905285	0.0000	0.0000	---	Hexachloroethane
6.598	0.017	12521	7.364	0.027	1170406	0.0000	0.0000	---	Kepone
3.835	-0.001	1868283	4.166	-0.003	10276873	24.1849	21.5596	11.5	Tetrachloro-m-xylen
8.827	-0.004	1769649	9.794	-0.002	7586882	24.2565	23.3626	3.8	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	60.5	53.9	53.9	52-100
Decachlorobiphenyl	60.6	58.4	58.4	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

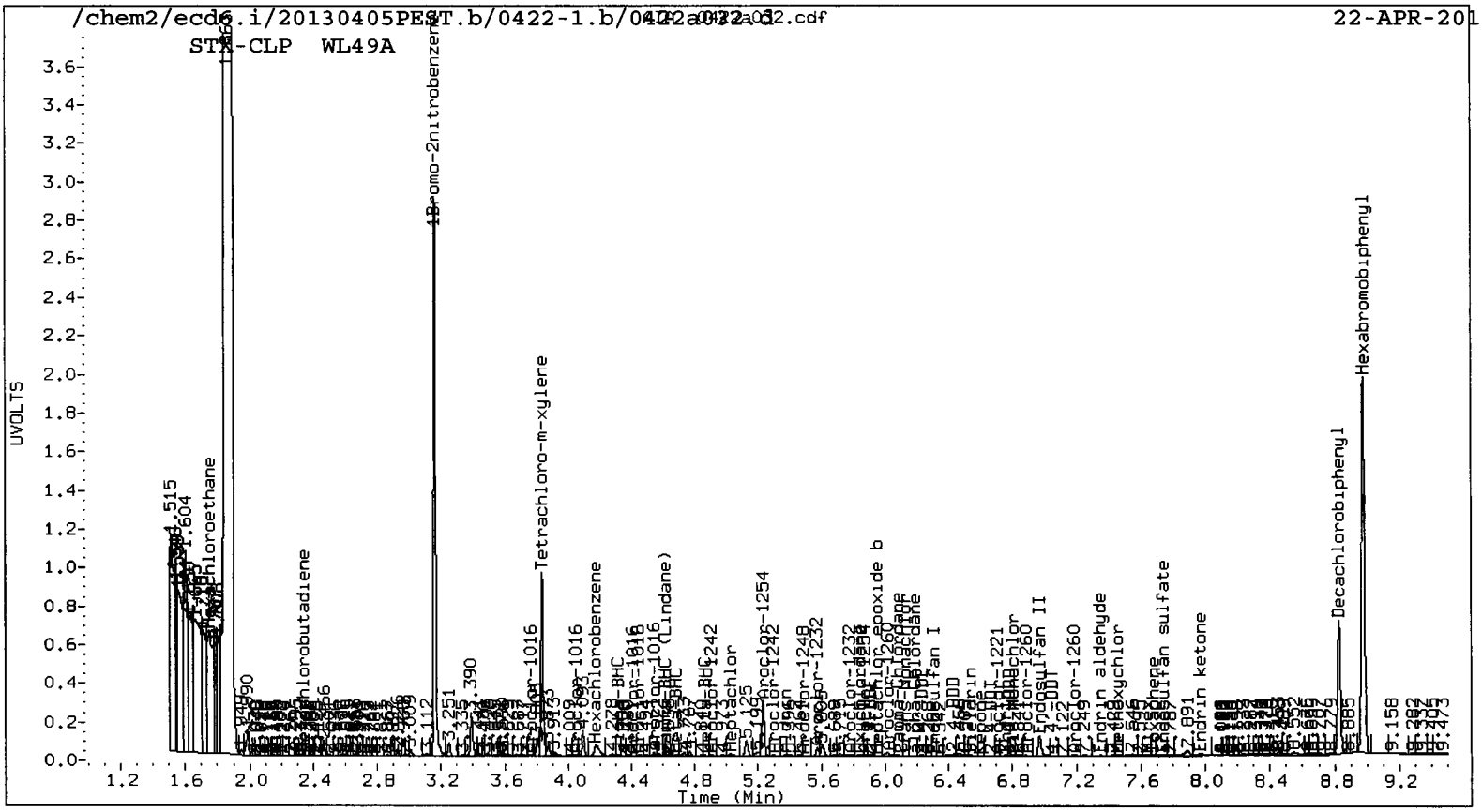
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5135385	-5.7
Hexabromobiphenyl	4807902	4998028	4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26949577	24.2
Hexabromobiphenyl	7681727	13696900	78.3

* 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	7.051	0.039	22814	7.1	1	7.364	0.019	1170406	93.0
Toxaphene	2	---			0.000	2	7.637	-0.030	150103	8.0
Toxaphene	3	7.350	0.030	29520	8.0	3	7.906	0.007	167562	8.3
Toxaphene	4	7.640	-0.004	30525	8.2	4	8.331	-0.036	221839	15.3
Toxaphene	5	7.678	-0.007	15141	6.2	5	8.408	0.002	200309	10.9
Toxaphene	6	7.971	0.004	74981	35.7	NS	---			----
Total STX-CLPAve (5 peaks): 13.051						Total CLP2Ave (5 peaks): 27.095				RPD = 70*
Corrected Ave (4 peaks): 7.388						Corrected Ave (4 peaks): 10.611				RPD = 36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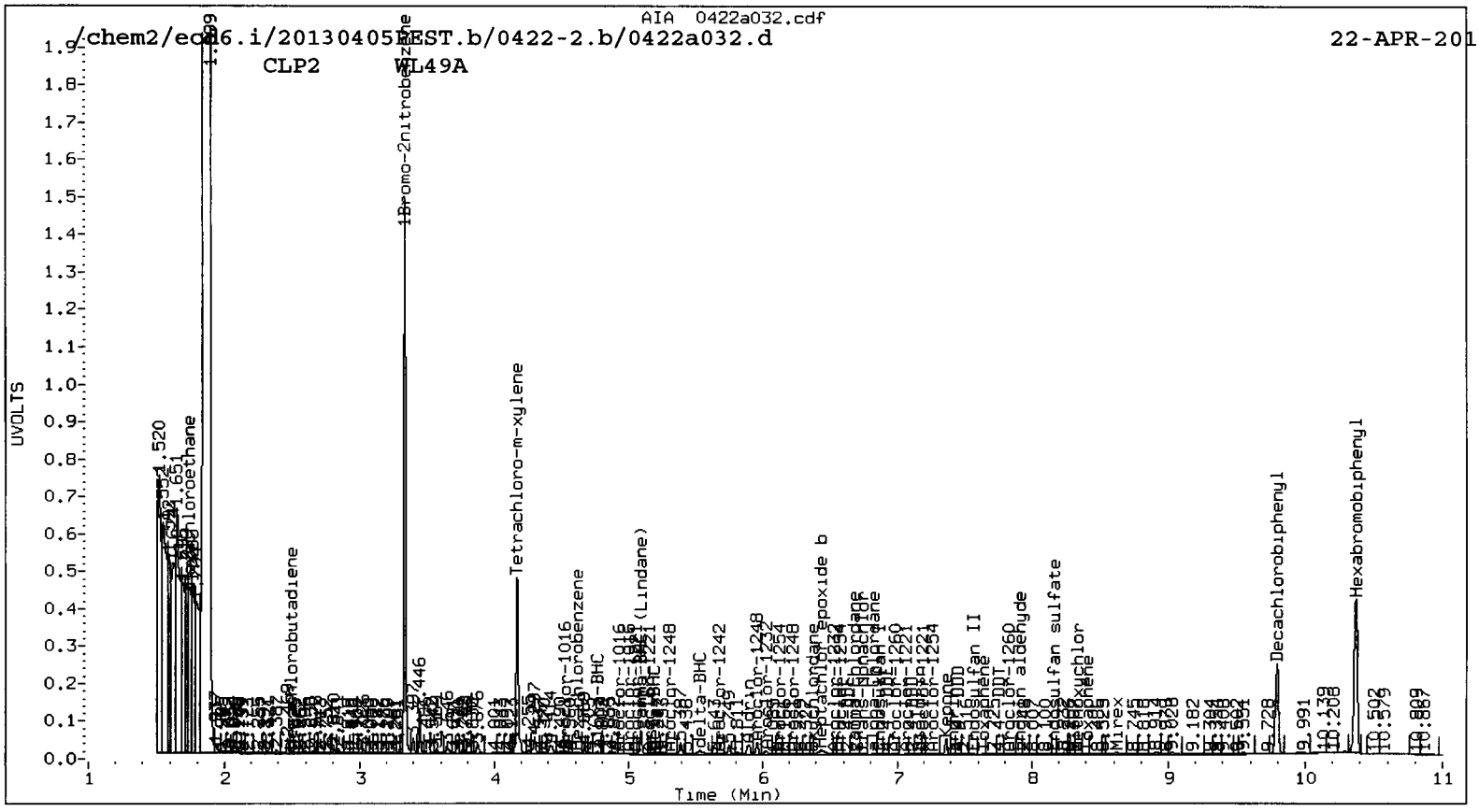
STX-CLP WL49A
22-APR-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Hexachlorobutadiene
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WL49A
22-APR-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Hexachlorobutadiene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 04/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a033.d ARI ID: WL49B
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a033.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 21:37
Compound Sublist: wpest Report Date: 04/29/2013 10:57
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.002	5041193	3.332	0.000	26361349	80.0000	80.0000 LS	0.0	1Bromo-2nitrobenzen
4.313	-0.017	76842	4.741	-0.015	122089	0.6930	0.1903	113.8*	alpha-BHC
4.685	-0.002	25179	5.193	0.008	75109	0.5668	0.3003	61.5*	beta-BHC
4.847	-0.011	75696	5.507	0.008	466372	0.7670	0.8553	10.9	delta-BHC
4.613	-0.002	35787	5.093	-0.023	508612	0.3576	0.9008	86.3*	gamma-BHC (Lindane)
5.049	-0.016	88171	5.588	0.006	365976	0.9193	0.6990	27.2	Heptachlor
5.370	0.009	86738	5.946	0.025	50803	0.9218	0.1064	158.6*	Aldrin
5.966	0.030	168860	6.450	-0.025	724927	1.9633	1.7530	11.3	Heptachlor epoxide b
6.311	-0.004	5585	6.858	-0.004	14274	0.0708	0.0396	56.5*	Endosulfan I
6.511	-0.026	117545	7.096	-0.025	162758	1.4122	0.4498	103.4*	Dieldrin
6.231	-0.004	182290	6.918	-0.002	495410	2.6730	1.3441	66.2*	4,4'-DDE
6.763	0.006	132162	7.421	0.011	390207	1.8265	1.4673	21.8	Endrin
6.960	-0.001	8438	7.577	-0.022	709773	0.1138	2.4300	182.1*	Endosulfan II
6.809	0.019	31818	7.456	-0.001	206125	0.4612	0.7324	45.4*	4,4'-DDD
7.728	-0.001	8108	8.164	0.023	212586	0.1241	0.8764	150.4*	Endosulfan sulfate
7.048	0.000	264315	7.746	0.000	924922	3.8228	3.6201	5.4	4,4'-DDT
7.512	0.039	54358	8.331	0.001	268637	1.5674	2.5366	47.2*	Methoxychlor
7.962	-0.023	146002	8.637	0.004	982876	1.7790	3.9615	76.0*	Endrin ketone
7.352	0.013	69737	7.882	-0.014	108362	1.1453	0.4704	83.5*	Endrin aldehyde
6.052	-0.003	43544	6.657	0.000	951872	0.4953	2.2873	128.8*	gamma-Chlordane
6.181	0.001	92101	6.793	-0.002	94033	1.0892	0.2449	126.6*	alpha-Chlordane
2.337	-0.004	14344	2.496	-0.001	121434	0.1229	0.2405	64.7*	Hexachlorobutadiene
4.178	-0.001	137337	4.628	-0.002	852205	1.6998	1.4422	16.4	Hexachlorobenzene
5.870	0.030	23949	6.365	-0.020	607957	0.3282	1.7854	137.9*	Oxychlordane
5.917	0.007	20008	6.620	-0.011	279247	0.3641	1.1157	101.6*	2,4-DDE
6.121	-0.040	338034	6.733	-0.007	1260748	3.8887	3.3569	14.7	trans-Nonachlor
6.385	-0.012	42555	7.114	-0.001	116967	0.8854	0.5939	39.4	2,4-DDD
6.637	0.000	33520	7.366	-0.038	159347	0.6099	0.7625	22.2	2,4-DDT
6.783	0.005	112905	7.487	0.023	37907	1.2289	0.1069	168.0*	cis-Nonachlor
7.664	0.011	167252	8.591	-0.028	468064	3.0480	2.8938	5.2	Mirex
8.983	0.003	4663889	10.370	0.004	9792172	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.749	-0.005	61601	1.735	0.003	16057071	0.0000	0.0000	---	Hexachloroethane
6.599	0.018	82312	7.334	-0.002	102067	0.0000	0.0000	---	Kepone
3.835	-0.001	1584005	4.166	-0.003	7674361	20.8880	16.4591	23.7	Tetrachloro-m-xylene
8.831	0.000	1680076	9.797	0.001	4530861	24.6786	19.5156	23.4	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	52.2	41.1	41.1~	52-100
Decachlorobiphenyl	61.7	48.8	48.8~	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

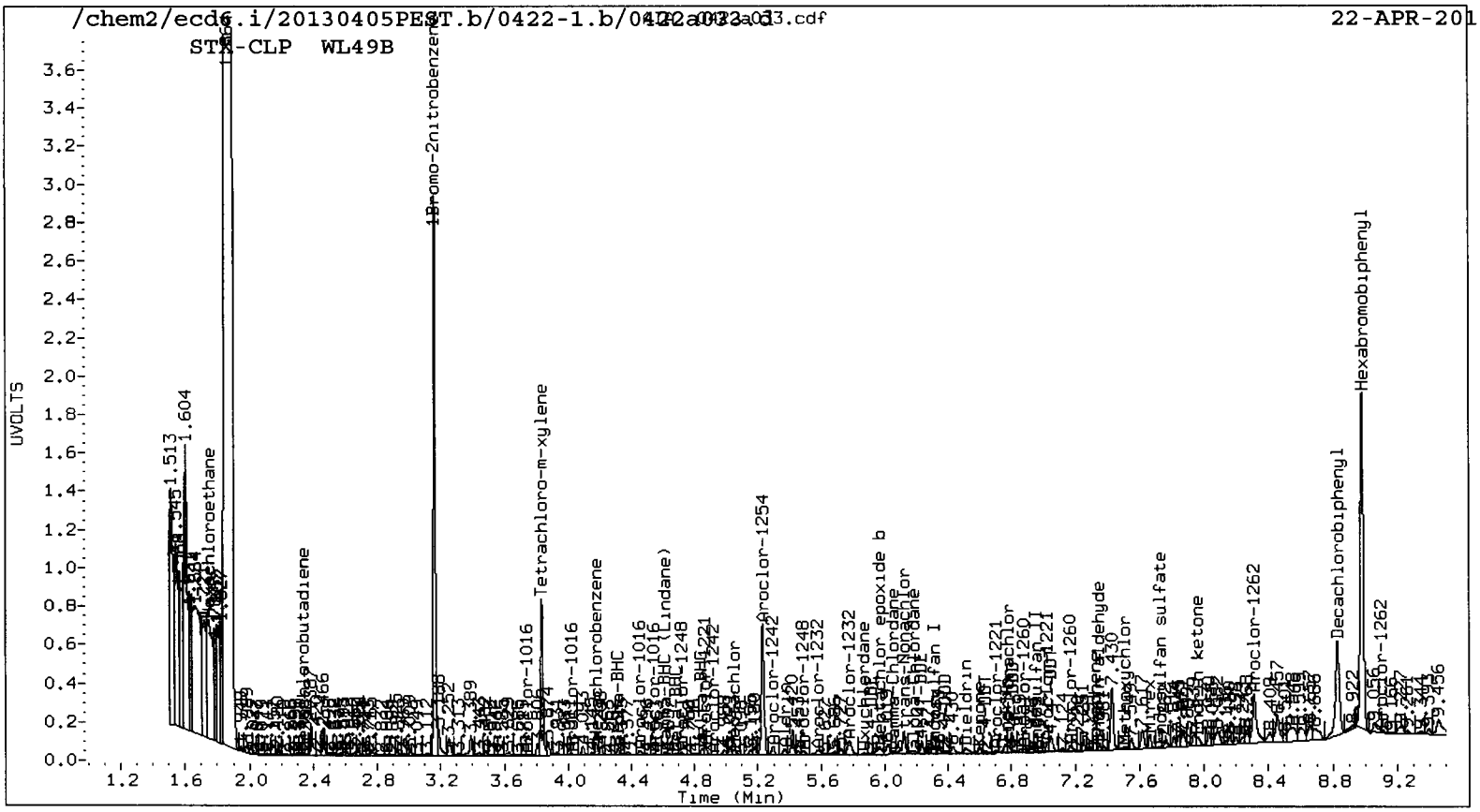
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5041193	-7.5
Hexabromobiphenyl	4807902	4663889	-3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26361349	21.5
Hexabromobiphenyl	7681727	9792172	27.5

* 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	7.026	0.014	121579	40.5	1	7.334	-0.010	102067	11.3
Toxaphene	2	7.048	-0.015	264315	129.4	2	7.671	0.003	107306	8.0
Toxaphene	3	7.324	0.004	4314	1.3	3	7.882	-0.016	108362	7.5
Toxaphene	4	7.664	0.019	167252	48.4	4	8.375	0.009	1150174	110.7
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.962	-0.004	146002	74.5	NS	---			----
Total STX-CLPAve (5 peaks): 58.807						Total CLP2Ave (4 peaks): 34.380				RPD = 52*
Corrected Ave (4 peaks): 41.157						Corrected Ave (3 peaks): 8.952				RPD = 129*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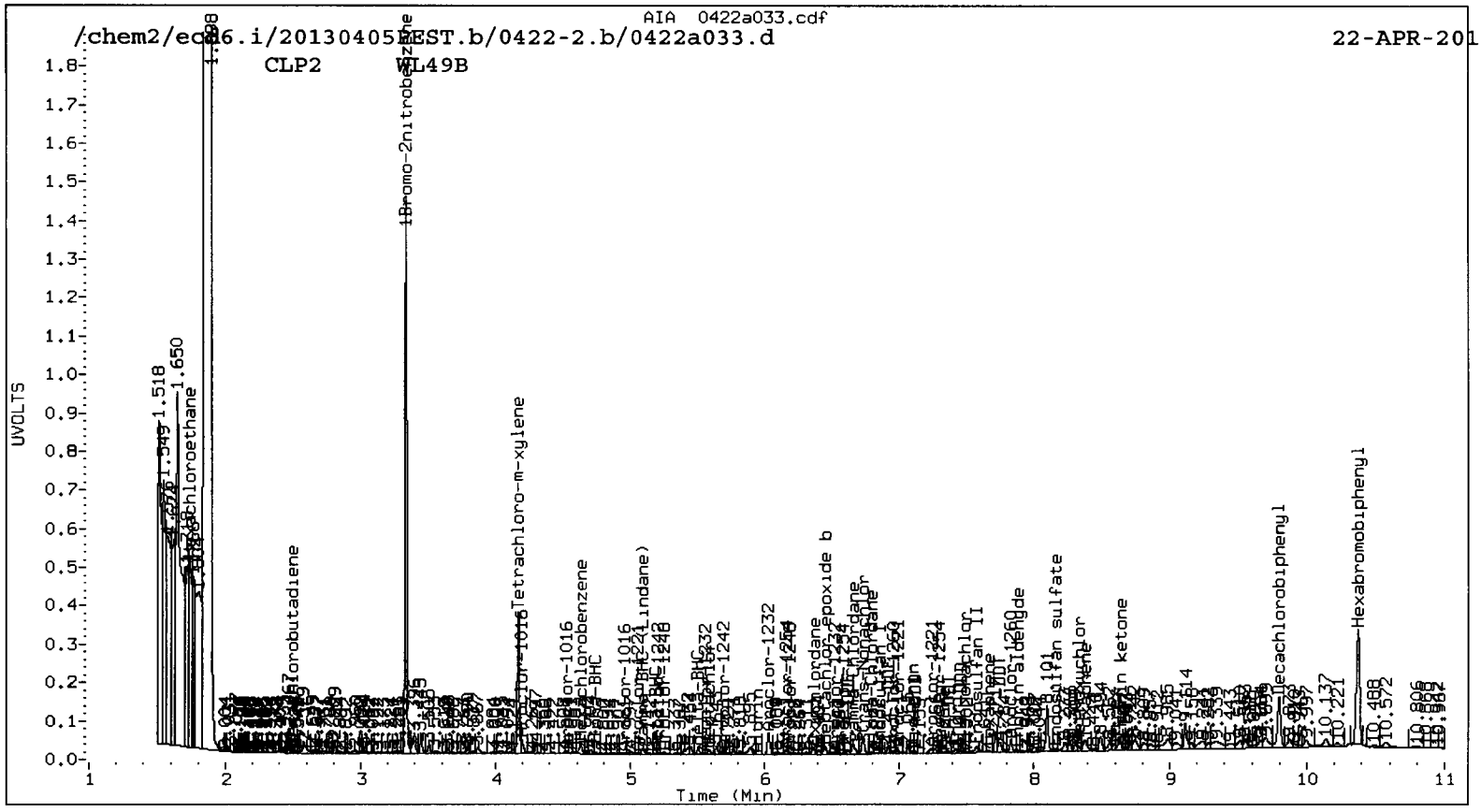
22-APR-201
STX-CLP WL49B
UVOLTS
Time (Min)
1.513
1.604
1.345
Tetrachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl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22-APR-201
CLP2 WL49B
UVOLTS
Time (Min)
1.518
1.650
Tetrachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a041.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 22-APR-2013 23:59
Compound Sublist: INDA Report Date: 04/29/2013 10:58
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 04/29/13

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	4764753	3.333	0.001	27081590	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.328	-0.002	2275152	4.755	-0.002	14283828	21.7095	21.6742	0.2	alpha-BHC
4.686	-0.001	830177	5.185	0.000	5274701	19.7723	20.5275	3.7	beta-BHC
4.857	-0.001	1909840	5.498	-0.001	11582364	20.4746	20.6755	1.0	delta-BHC
4.613	-0.002	2027637	5.114	-0.002	12434964	21.4370	21.4374	0.0	gamma-BHC (Lindane)
5.063	-0.002	1820940	5.580	-0.002	10796203	20.0866	20.0717	0.1	Heptachlor
5.357	-0.003	1879520	5.919	-0.002	10462853	21.1327	21.3363	1.0	Aldrin
5.933	-0.004	1691572	6.473	-0.002	9008023	20.8087	21.2036	1.9	Heptachlor epoxide b
6.310	-0.004	1548739	6.861	-0.002	7932877	20.7616	21.4194	3.1	Endosulfan I
6.533	-0.004	3362119	7.118	-0.003	15900752	42.7370	42.7738	0.1	Dieldrin
6.231	-0.004	2626156	6.919	-0.002	15887264	40.7432	41.9582	2.9	4,4'-DDE
6.752	-0.005	2767949	7.408	-0.002	11730770	39.7562	34.2723	14.8	Endrin
6.957	-0.004	2744842	7.597	-0.002	12829382	38.4774	34.1260	12.0	Endosulfan II
6.788	-0.003	2896209	7.456	-0.002	13501490	43.6293	37.2719	15.7	4,4'-DDD
7.725	-0.004	2426778	8.139	-0.001	10432837	38.5865	33.4185	14.4	Endosulfan sulfate
7.046	-0.003	2229062	7.744	-0.001	9258631	33.5055	28.1559	17.4	4,4'-DDT
7.470	-0.003	5445142	8.326	-0.004	18932655	163.1807	138.8989	16.1	Methoxychlor
7.981	-0.004	3072827	8.631	-0.001	10755403	38.9122	33.6817	14.4	Endrin ketone
7.334	-0.004	2076393	7.894	-0.001	9229379	35.4419	31.1276	13.0	Endrin aldehyde
6.052	-0.003	1746992	6.656	-0.002	9091098	21.0253	21.2640	1.1	gamma-Chlordane
6.176	-0.004	1665625	6.793	-0.002	8399895	20.8410	21.2927	2.1	alpha-Chlordane
2.340	-0.001	2327211	2.497	0.000	8716497	21.1009	16.8040	22.7	Hexachlorobutadiene
4.179	-0.001	1621626	4.628	-0.001	13236548	21.2354	21.8041	2.6	Hexachlorobenzene
8.978	-0.001	4487572	10.367	0.001	12603113	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2957746	4.166	-0.003	19055960	41.2662	39.7822	3.7	Tetrachloro-m-xylen
8.828	-0.003	2411521	9.794	-0.002	10333875	36.8146	34.5832	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	103.2	99.5	99.5~	115- 0
Decachlorobiphenyl	92.0	86.5	86.5~	115- 0

~ Indicates recovery outside QC Limits

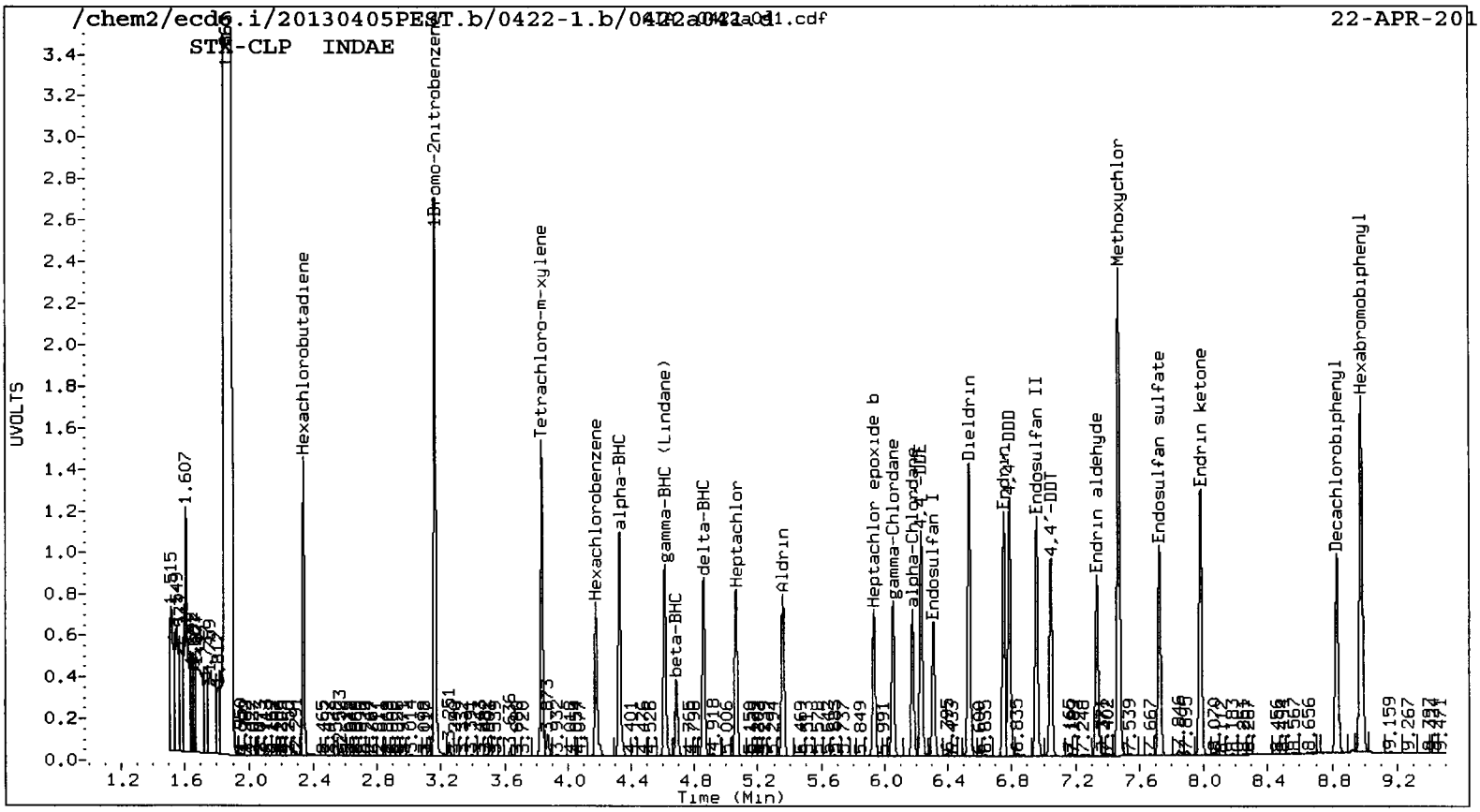
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5448520	4764753	-12.5
Hexabromobiphenyl	4807902	4487572	-6.7

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	21702340	27081590	24.8
Hexabromobiphenyl	7681727	12603113	64.1

* 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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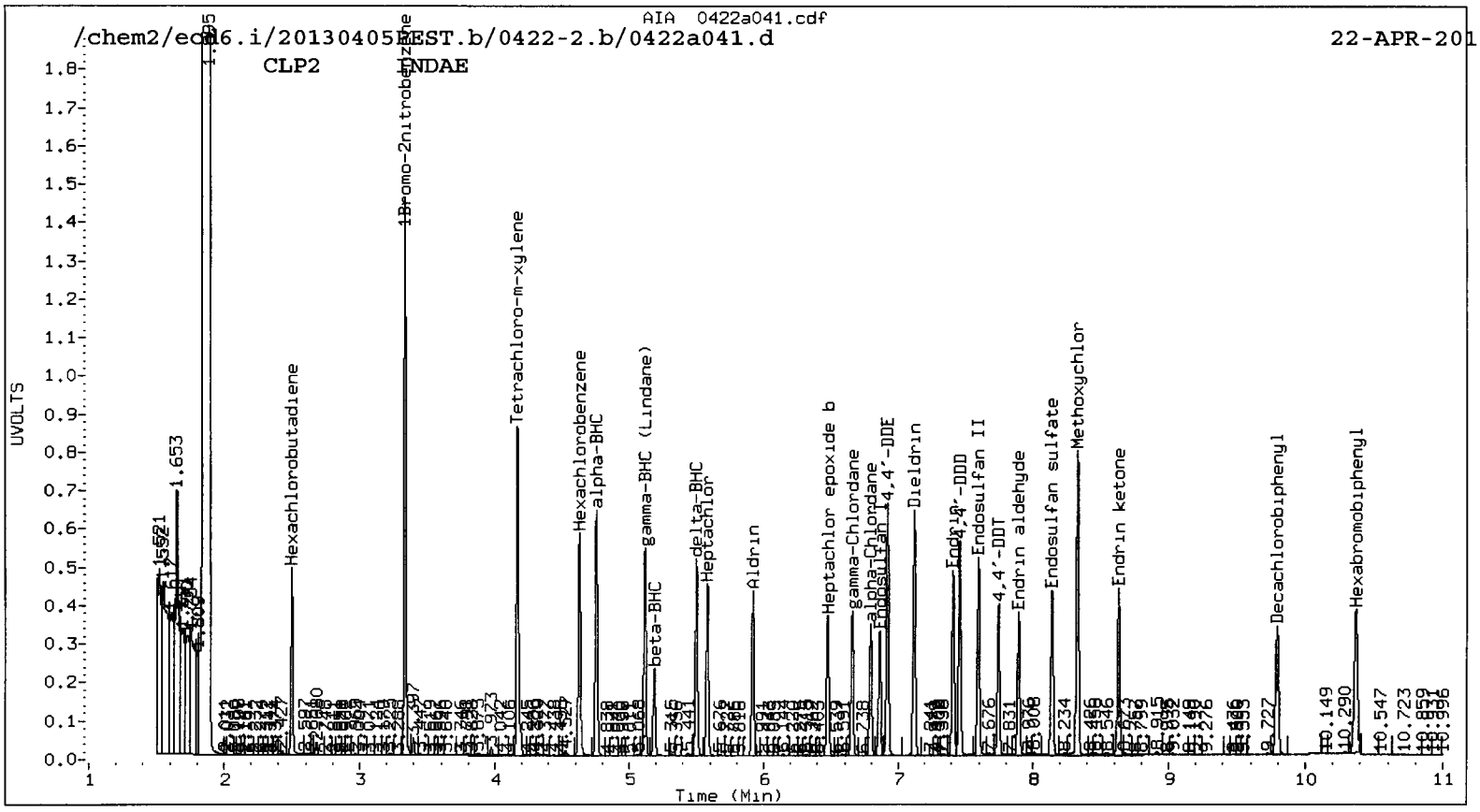
22-APR-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.607
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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22-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1.653
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0422-1.b/0422a042.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0422-2.b/0422a042.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 23-APR-2013 00:17
Compound Sublist: TOXAPH Report Date: 04/29/2013 10:58
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
3.163	-0.001	4939736	3.333	0.001	28148455	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.978	-0.001	4686270	10.366	0.000	13112891	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	-0.001	2519086	4.166	-0.002	16573754	33.9011	33.2888	1.8	Tetrachloro-m-xylen
8.828	-0.003	2150421	9.794	-0.002	9173895	31.4367	29.5077	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	84.8	83.2	83.2~	150- 0
Decachlorobiphenyl	78.6	73.8	73.8~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4939736	-9.3
Hexabromobiphenyl	4807902	4686270	-2.5

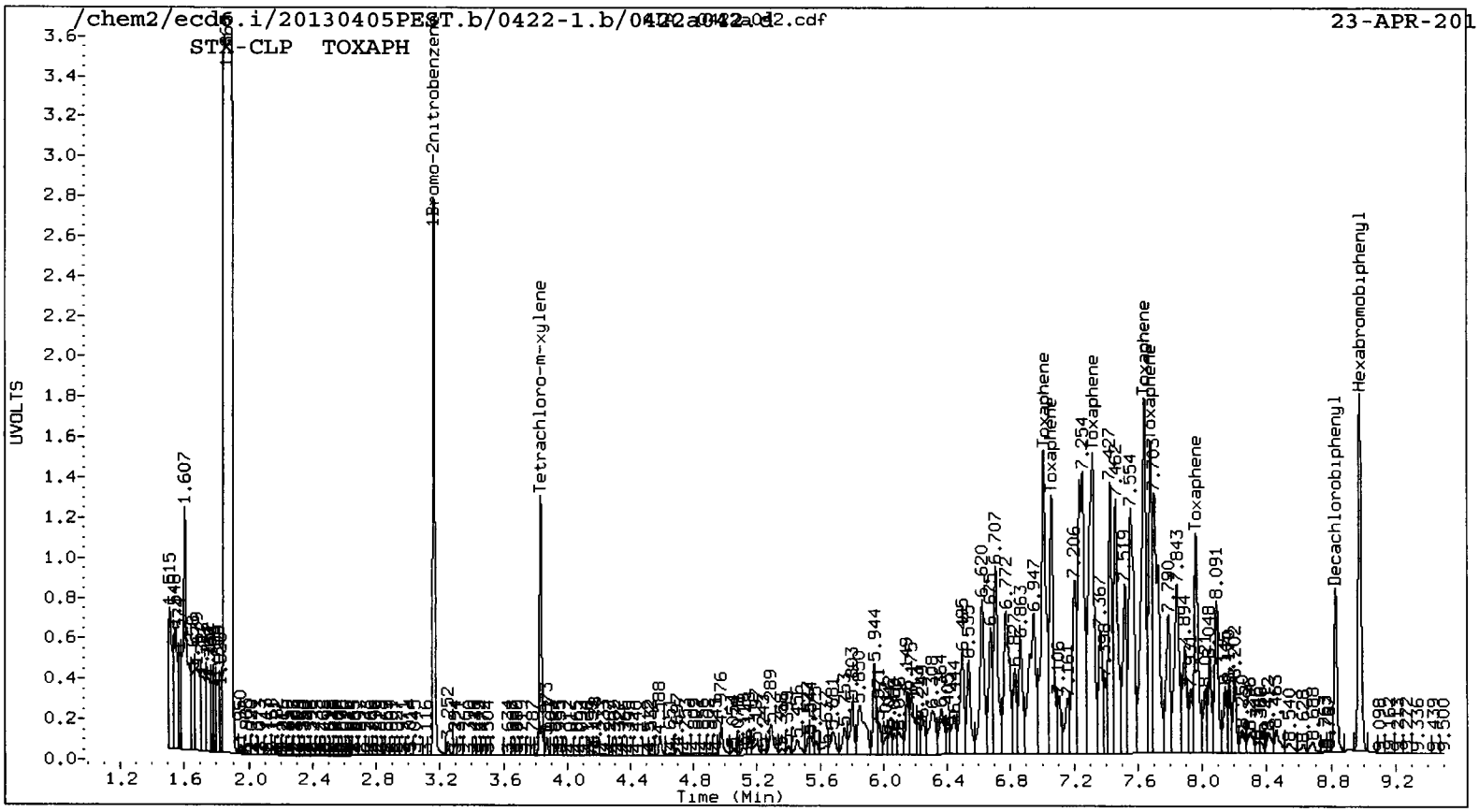
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28148455	29.7
Hexabromobiphenyl	7681727	13112891	70.7

WL 10: 01526

* 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	7.008	-0.003	6474646	2147.0	1	7.343	-0.001	23824787	1978.1
Toxaphene	2	7.060	-0.004	4527415	2206.0	2	7.667	-0.001	33513730	1859.5
Toxaphene	3	7.317	-0.003	7155151	2076.5	3	7.897	-0.001	35214592	1828.3
Toxaphene	4	7.642	-0.002	7156989	2059.3	4	8.366	0.000	23870867	1715.1
Toxaphene	5	7.681	-0.003	4472212	1949.9	5	8.405	-0.001	27860480	1580.8
Toxaphene	6	7.963	-0.003	3748248	1903.6	NS	---			----
Total STX-CLPAve (6 peaks): 2057.044						Total CLP2Ave (5 peaks): 1792.357				RPD = 14
Corrected Ave (6 peaks): 2057.044						Corrected Ave (5 peaks): 1792.357				RPD = 14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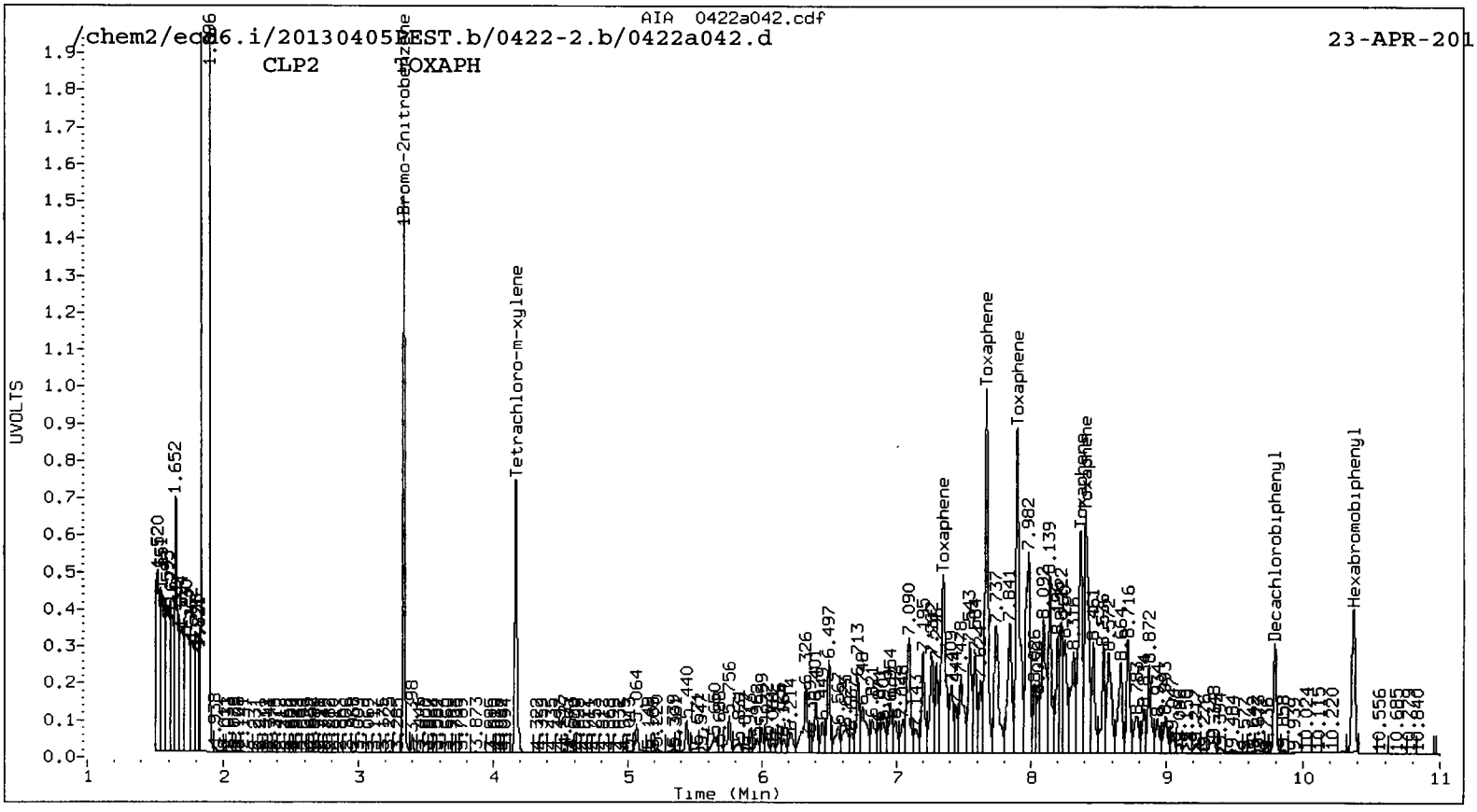
AIA 0422a042.cdf
23-APR-201
STX-CLP TOXAPH
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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AIA 0422a042.cdf
23-APR-201
CLP2 TOXAPH
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL49/WL64 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 04/05/13 Analysis Start Date: 04/24/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / (N) / 59%	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	Y / (N) / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	Y / (N) / ✓	LCS / LCSD RPD ≤30%?	(NA) / ✓
Surrogate Recovery in Control?	(Y) / N / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Internal STD. within 50-200%?	NA / (Y) / N / ✓	MS / MSD RPD ≤30%?	NA / (Y)
Manual Integrations?	Y / (N) / ✓	Samples Diluted?	(Y) / N / (10x, 500x)
Integration Summary?	Y / (N) / ✓	Special Analysis Request?	(Y) / N / ✓

Detail problems, corrective actions and/or other pertinent information below

- Samples were run @ 10x dilution, due to bad matrix, very dark color of the extracts.
- closing ccal e failed, DDT break down 59%
- Samples were re-run @ 500x dilution on 04/25/13 ~~but~~ closing ccal e - okay. Both runs reported.
- some pesticides reported with 'Y' flag due to PCBs + matrix interference.

(Review 1) Analyst: YZ **Date:** 4/29/13

(Review 2) Reviewer: [illegible] **Date:** 4/29/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 04/23-4/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1035684 Column Type: STX CLP1

Column 2 Serial No.: 1094709 Column Type: STX CLP2

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0424-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-APR-2013 13:40	0424a005.d	1	DS	
2	24-APR-2013 13:58	0424a006.d	1	INDAE	
3	24-APR-2013 14:16	0424a007.d	1	TOXAPH	
4	24-APR-2013 14:34	0424a008.d	1	WL49MBS1	WL49MBS1
5	24-APR-2013 14:54	0424a009.d	1	WL49LCSS1	WL49LCSS1
6	24-APR-2013 15:14	0424a010.d	1	WL49QLS	
7	24-APR-2013 15:33	0424a011.d	10	WL49F	IM-CB-01-20130410-S
8	24-APR-2013 15:53	0424a012.d	10	WL49G	IM-CB-02-20130410-S
9	24-APR-2013 16:13	0424a013.d	10	WL49GMS	IM-CB-02-201304 MS
10	24-APR-2013 16:33	0424a014.d	10	WL49GMSD	IM-CB-02-201304 MSD
11	24-APR-2013 16:53	0424a015.d	10	WL67A	GR-CB-07-20130411-S
12	24-APR-2013 17:13	0424a016.d	10	WL67B	GR-WS-05-20130411-S
13	24-APR-2013 17:31	0424a017.d	1	DS	
14	24-APR-2013 17:49	0424a018.d	1	INDAE	
15	24-APR-2013 18:07	0424a019.d	1	TOXAPH	

YZ 4/29/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 04/25/13 Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085841 Column Type: ST X CLP

Column 2 Serial No.: 1094709 Column Type: ST X CLP

GC Method: Pest ICal Date: 04/05/13

IS	Ical/Ccal	ICV
2006-1	2048-1,2	
	2067-1,2	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130405PEST.b/0425-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-APR-2013 11:59	0425a005.d	1	DS	
2	25-APR-2013 12:17	0425a006.d	1	INDAE	
3	25-APR-2013 12:37	0425a007.d	1	TOXAPH	
4	25-APR-2013 12:56	0425a008.d	500	WL49F	IM-CB-01-20130410-S
5	25-APR-2013 13:14	0425a009.d	500	WL49G	IM-CB-02-20130410-S
6	25-APR-2013 13:31	0425a010.d	500	WL67A	GR-CB-07-20130411-S
7	25-APR-2013 13:49	0425a011.d	500	WL67B	GR-WS-05-20130411-S
8	25-APR-2013 14:08	0425a012.d	1	DS	
9	25-APR-2013 14:25	0425a013.d	1	INDAE	
10	25-APR-2013 14:43	0425a014.d	1	TOXAPH	

YZ 04/29/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 13:58
Compound Sublist: INDA Report Date: 04/26/2013 15:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	-0.003	5283698	3.332	-0.001	27378463	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2489862	4.752	-0.004	14372483	21.4248	21.5723	0.7	alpha-BHC
4.685	-0.002	901935	5.183	-0.002	5224919	19.3716	20.1133	3.8	beta-BHC
4.855	-0.003	2112064	5.496	-0.003	11854182	20.4187	20.9313	2.5	delta-BHC
4.610	-0.005	2228240	5.111	-0.005	12568422	21.2441	21.4325	0.9	gamma-BHC (Lindane)
5.060	-0.005	2121424	5.577	-0.005	11610218	21.1028	21.3510	1.2	Heptachlor
5.354	-0.006	2036489	5.916	-0.005	10616675	20.6487	21.4152	3.6	Aldrin
5.929	-0.007	1815774	6.470	-0.005	9261274	20.1427	21.5634	6.8	Heptachlor epoxide b
6.307	-0.008	1660770	6.858	-0.005	8215632	20.0768	21.9423	8.9	Endosulfan I
6.529	-0.008	3638918	7.115	-0.006	16196325	41.7125	43.0965	3.3	Dieldrin
6.228	-0.007	2852167	6.916	-0.005	16396835	39.9036	42.8344	7.1	4,4'-DDE
6.748	-0.008	3200312	7.405	-0.005	12994983	45.5755	40.1767	12.6	Endrin
6.953	-0.007	3013535	7.593	-0.006	12985224	41.8849	36.5521	13.6	Endosulfan II
6.785	-0.006	2972096	7.453	-0.005	12986311	44.3919	37.9374	15.7	4,4'-DDD
7.722	-0.008	2664046	8.135	-0.005	10352060	41.9990	35.0908	17.9	Endosulfan sulfate
7.043	-0.006	2963571	7.742	-0.004	10674401	44.1674	34.3517	25.0	4,4'-DDT
7.467	-0.007	6900698	8.323	-0.008	21500312	205.0430	166.9222	20.5	Methoxychlor
7.977	-0.008	3228697	8.627	-0.005	10053051	40.5384	33.3155	19.6	Endrin ketone
7.331	-0.008	2373247	7.890	-0.005	9603709	40.1645	34.2764	15.8	Endrin aldehyde
6.049	-0.006	1899763	6.652	-0.005	9333396	20.6183	21.5941	4.6	gamma-Chlordane
6.173	-0.007	1801962	6.790	-0.005	8662219	20.3325	21.7196	6.6	alpha-Chlordane
2.339	-0.001	2542420	2.497	-0.001	8103954	20.7881	15.4537	29.4	Hexachlorobutadiene
4.177	-0.003	1763131	4.626	-0.003	13454320	20.8208	21.9225	5.2	Hexachlorobenzene
8.975	-0.005	4526048	10.362	-0.004	11909558	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.003	3311247	4.165	-0.004	19095705	41.6608	39.4329	5.5	Tetrachloro-m-xylen
8.824	-0.007	2485908	9.789	-0.007	9672675	37.6276	34.2556	9.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	104.2	98.6	98.6~	115- 0
Decachlorobiphenyl	94.1	85.6	85.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

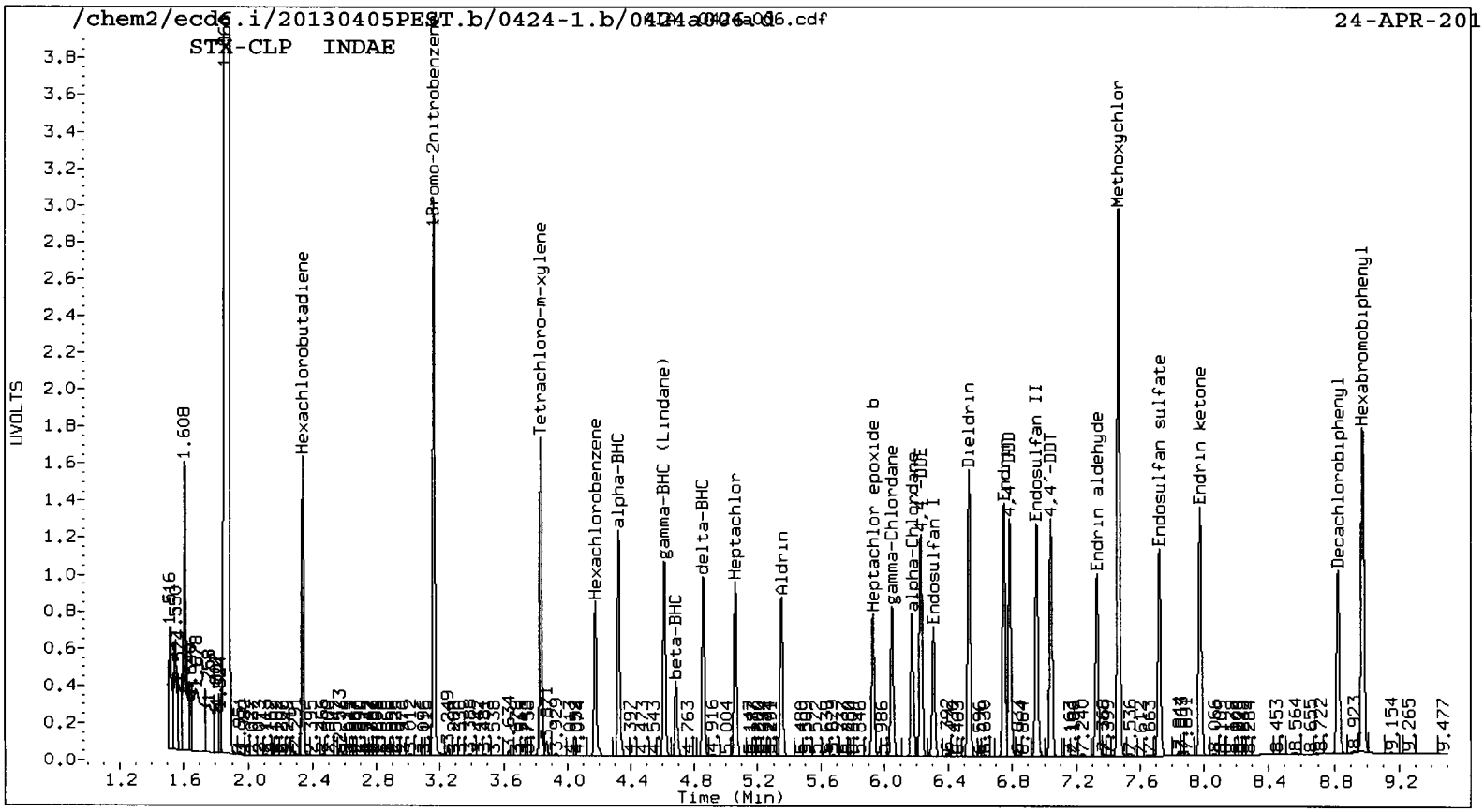
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5283698	-3.0
Hexabromobiphenyl	4807902	4526048	-5.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27378463	26.2
Hexabromobiphenyl	7681727	11909558	55.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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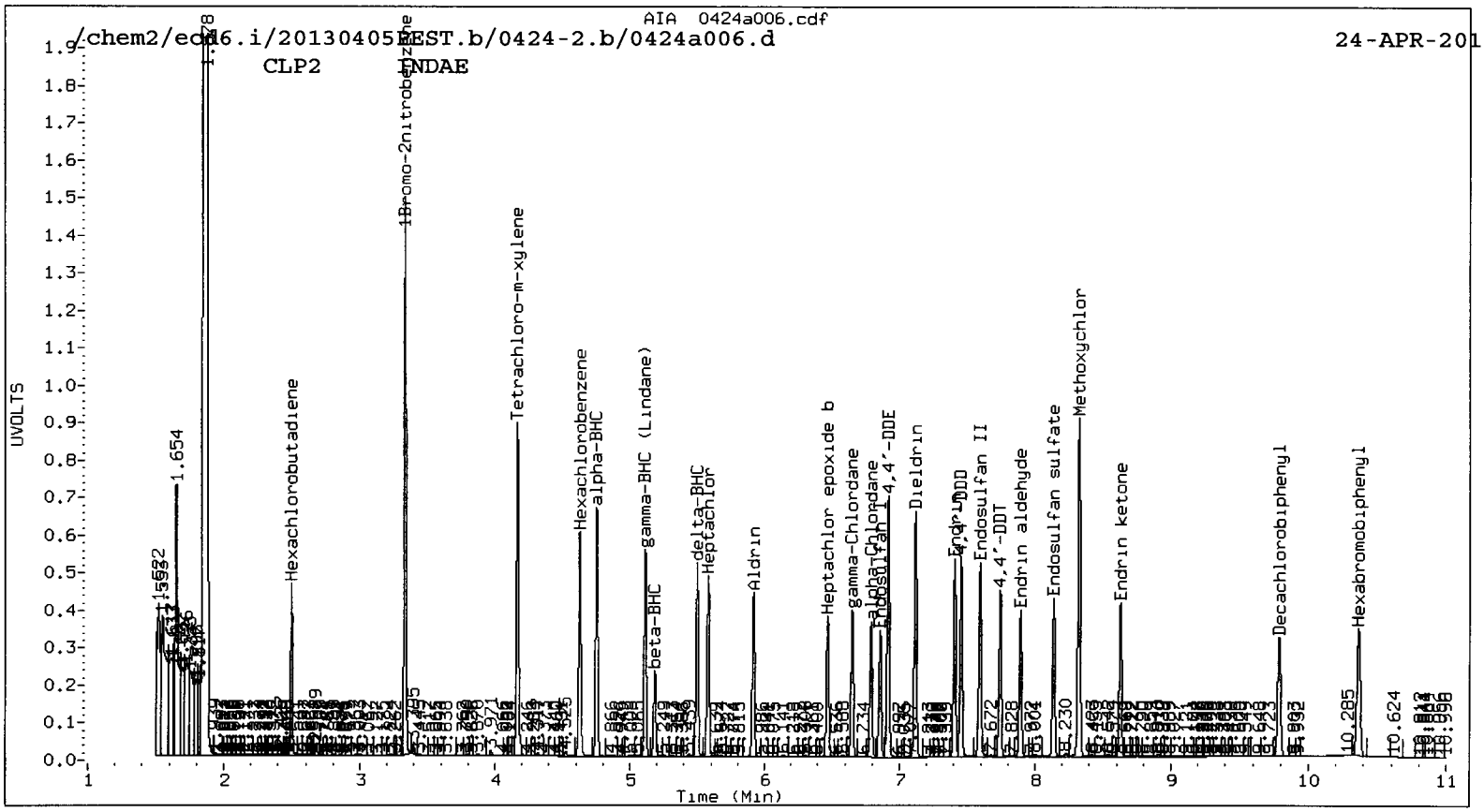
24-APR-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.608
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0424a006.cdf
24-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1.654
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a007.d Client ID:
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Compound Sublist: TOXAPH Report Date: 04/26/2013 15:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YE 4/29/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	-0.003	5712922	3.332	-0.001	30001246	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.975	-0.005	4986693	10.362	-0.004	12823922	80.0000	80.0000	0.0	Hexabromobiphenyl
3.833	-0.003	2949228	4.164	-0.004	17297592	34.3182	32.5970	5.1	Tetrachloro-m-xylen
8.824	-0.007	2362552	9.789	-0.006	9125460	32.4570	30.0133	7.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	85.8	81.5	81.5~	150- 0
Decachlorobiphenyl	81.1	75.0	75.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

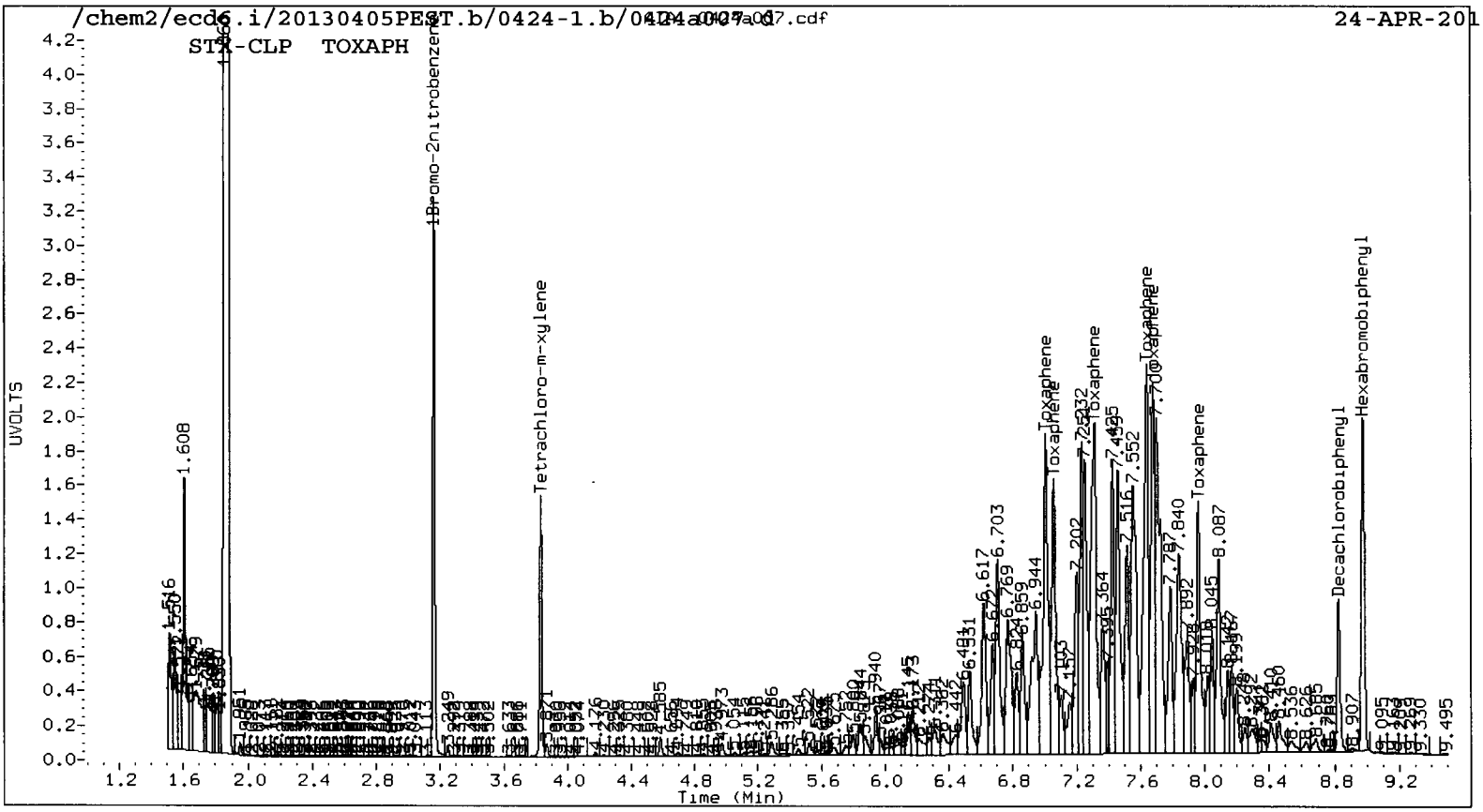
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5712922	4.9
Hexabromobiphenyl	4807902	4986693	3.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	30001246	38.2
Hexabromobiphenyl	7681727	12823922	66.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.005	-0.007	8119204	2530.1	1	7.340	-0.004	26271553	2230.4
Toxaphene	2	7.056	-0.007	5484063	2511.1	2	7.664	-0.004	37551197	2130.5
Toxaphene	3	7.313	-0.007	9140862	2493.0	3	7.894	-0.004	40138578	2130.9
Toxaphene	4	7.639	-0.006	9257765	2503.3	4	8.363	-0.004	27565762	2025.2
Toxaphene	5	7.678	-0.006	6189027	2535.8	5	8.402	-0.004	35213172	2043.1
Toxaphene	6	7.960	-0.006	5119901	2443.6	NS	---			----
Total STX-CLPAve (6 peaks): 2502.821						Total CLP2Ave (5 peaks): 2111.995				RPD = 17
Corrected Ave (6 peaks): 2502.821						Corrected Ave (5 peaks): 2111.995				RPD = 17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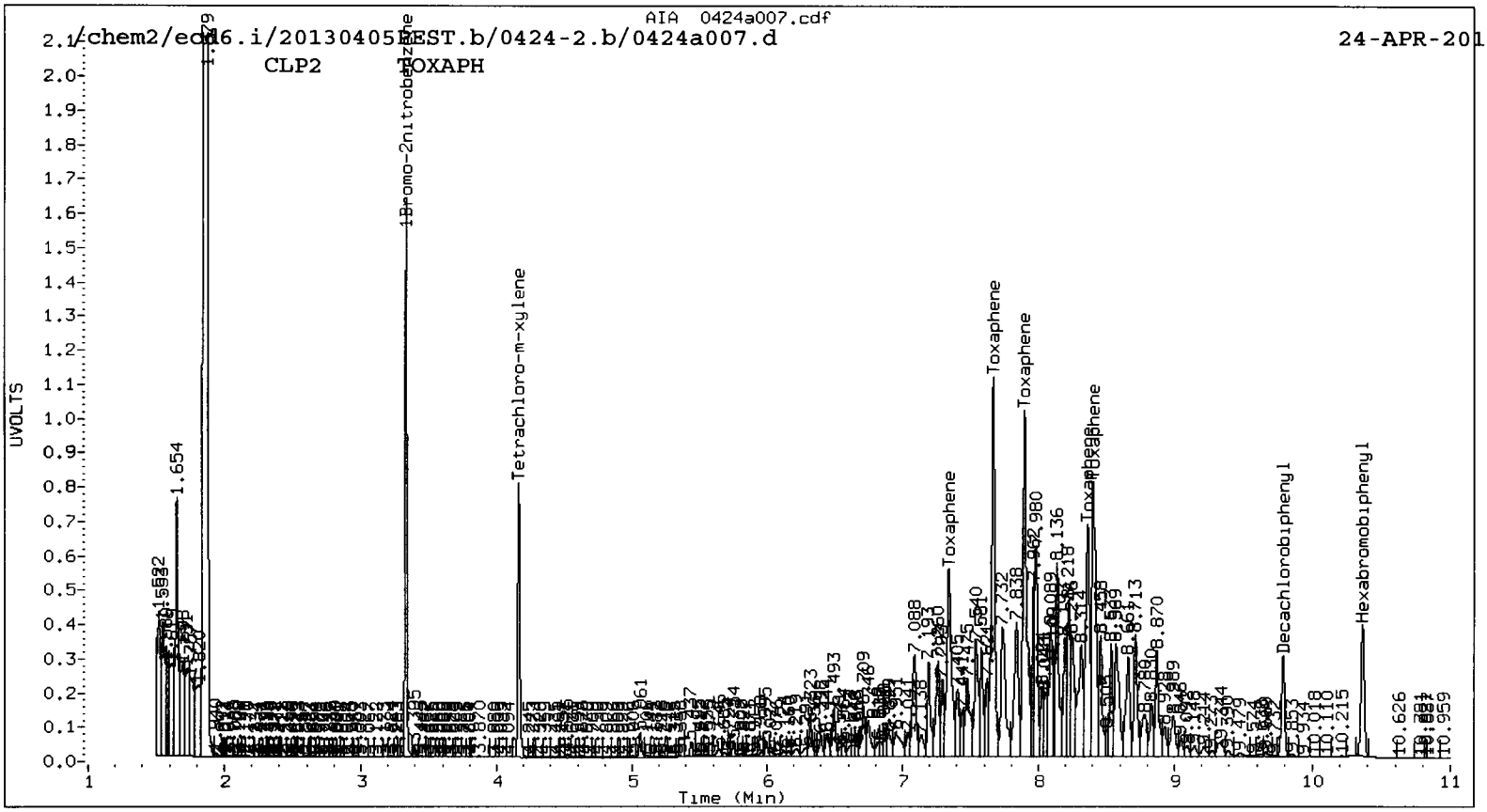
24-APR-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.608
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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24-APR-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.654
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

yz 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a008.d ARI ID: WL49MBS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a008.d Client ID: WL49MBS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 14:34
Compound Sublist: wpest Report Date: 04/26/2013 15:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	5625864	3.332	-0.001	28518898	80.0000	80.0000 FS	0.0	1Bromo-2nitrobenzen
4.324	-0.006	3769	4.750	-0.006	103584	0.0305	0.1493	132.2*	alpha-BHC
4.683	-0.004	1959	5.168	-0.017	21091	0.0395	0.0779	65.4*	beta-BHC
4.865	0.006	5465	5.506	0.007	139645	0.0496	0.2367	130.7*	delta-BHC
4.609	-0.006	3512	5.131	0.015	16574	0.0314	0.0271	14.7	gamma-BHC (Lindane)
5.057	-0.008	8715	5.580	-0.002	49022	0.0814	0.0865	6.1	Heptachlor
5.367	0.006	10336	5.944	0.023	74575	0.0984	0.1444	37.9	Aldrin
5.931	-0.005	4404	6.481	0.006	58106	0.0459	0.1299	95.6*	Heptachlor epoxide b
6.299	-0.015	2560	6.849	-0.014	50079	0.0291	0.1284	126.2*	Endosulfan I
6.505	-0.032	3345	7.169	0.048	72893	0.0360	0.1862	135.2*	Dieldrin
6.228	-0.007	4980	6.914	-0.007	61405	0.0654	0.1540	80.7*	4,4'-DDE
6.757	0.000	4989	7.419	0.009	69918	0.0663	0.1993	100.1*	Endrin
6.972	0.011	5244	7.569	-0.030	132223	0.0680	0.3432	133.8*	Endosulfan II
6.798	0.007	10613	7.452	-0.006	54261	0.1480	0.1461	1.2	4,4'-DDD
7.725	-0.004	5428	8.136	-0.004	112155	0.0799	0.3505	125.8*	Endosulfan sulfate
7.019	-0.030	10593	7.754	0.009	135680	0.1474	0.4026	92.8*	4,4'-DDT
7.454	-0.019	5804	8.309	-0.021	250688	0.1610	1.7944	167.1*	Methoxychlor
7.968	-0.017	33241	8.632	-0.001	120890	0.3896	0.3694	5.3	Endrin ketone
7.324	-0.014	3504	7.883	-0.012	124243	0.0554	0.4088	152.3*	Endrin aldehyde
6.047	-0.008	7536	6.672	0.014	49436	0.0768	0.1098	35.4	gamma-Chlordane
6.174	-0.006	2992	6.791	-0.004	28761	0.0317	0.0692	74.4*	alpha-Chlordane
2.344	0.003	19805	2.502	0.005	115852	0.1521	0.2121	33.0	Hexachlorobutadiene
4.176	-0.003	47270	4.624	-0.006	140336	0.5243	0.2195	81.9*	Hexachlorobenzene
5.828	-0.012	5884	6.396	0.011	41676	0.0776	0.1131	37.3	Oxychlordane
----			6.635	0.004	31875	0.0000	0.1177	---	2,4-DDE
6.143	-0.019	2713	6.746	0.005	31799	0.0300	0.0642	72.5*	trans-Nonachlor
6.376	-0.021	1481	7.106	-0.009	105788	0.0296	0.4072	172.9*	2,4-DDD
6.659	0.022	3087	7.377	-0.027	86993	0.0540	0.3156	141.5*	2,4-DDT
----			7.499	0.034	70440	0.0000	0.1505	---	cis-Nonachlor
7.644	-0.009	2461	8.613	-0.005	135665	0.0431	0.6358	174.6*	Mirex
8.975	-0.005	4848327	10.362	-0.004	12917484	80.0000	80.0000 S	0.0	Hexabromobiphenyl
1.754	0.000	67836	1.721	-0.011	8817357	0.0000	0.0000	---	Hexachloroethane
6.596	0.015	3302	7.327	-0.009	17625	0.0000	0.0000	---	Kepone
3.834	-0.003	2374784	4.164	-0.004	13157966	28.0614	26.0848	7.3	Tetrachloro-m-xylen
8.825	-0.006	2324457	9.790	-0.005	9183423	32.8450	29.9852	9.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	70.2	65.2	65.2	42-112
Decachlorobiphenyl	82.1	75.0	75.0	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

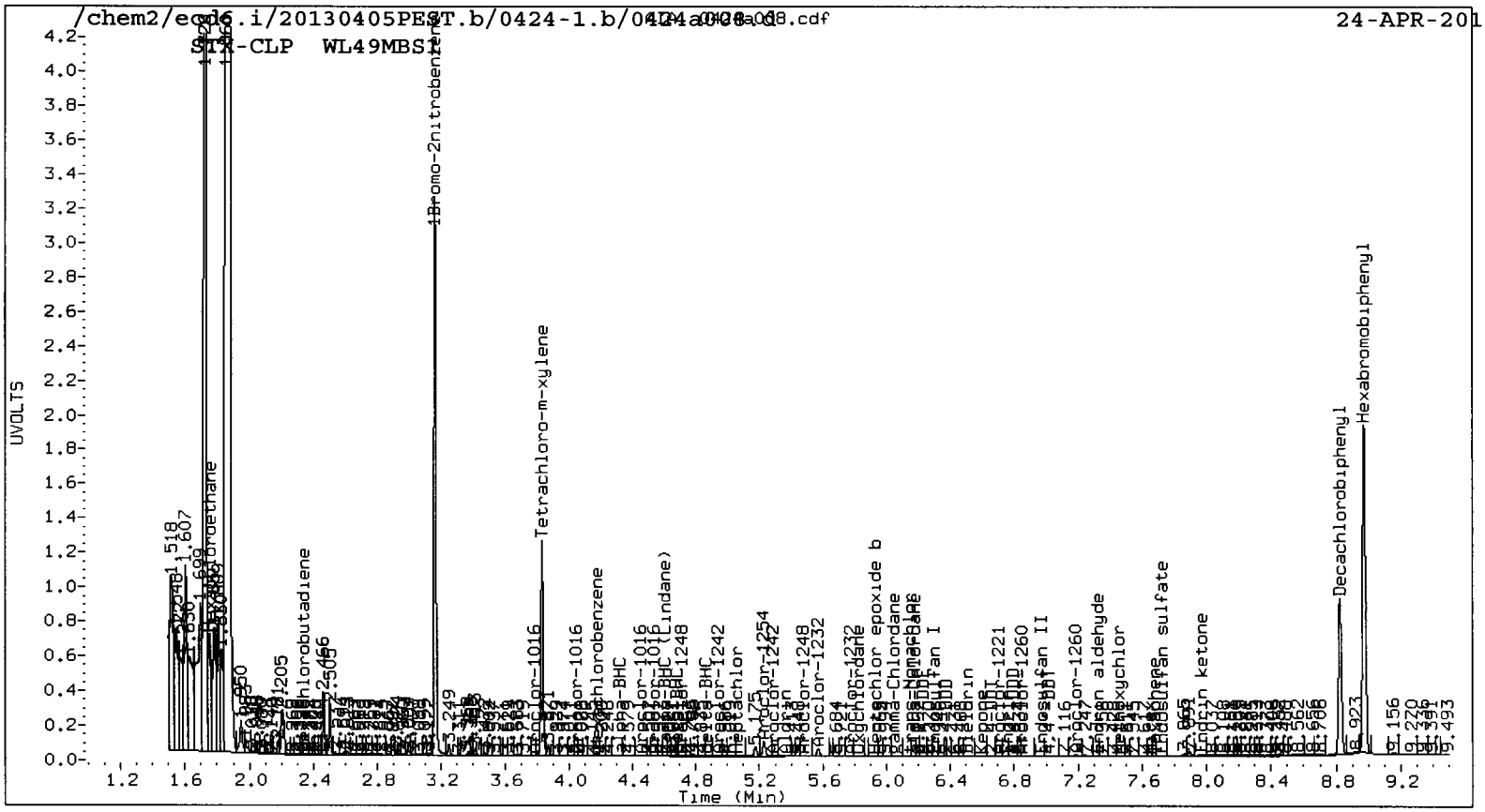
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5625864	3.3
Hexabromobiphenyl	4807902	4848327	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	28518898	31.4
Hexabromobiphenyl	7681727	12917484	68.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.019	0.007	10593	3.4	1	7.327	-0.017	17625	1.5
Toxaphene	2	---			0.000	2	7.672	0.004	82986	4.7
Toxaphene	3	7.324	0.004	3504	1.0	3	7.883	-0.015	124243	6.5
Toxaphene	4	7.644	-0.001	2461	0.7	4	8.376	0.010	72085	5.3
Toxaphene	5	7.675	-0.009	2041	0.9	5	---			0.0
Toxaphene	6	7.968	0.002	33241	16.3	NS	---			----
Total STX-CLPAve (5 peaks): 4.448						Total CLP2Ave (4 peaks): 4.491			RPD = 1	
Corrected Ave (4 peaks): 1.481						Corrected Ave (4 peaks): 4.491			RPD = 101*	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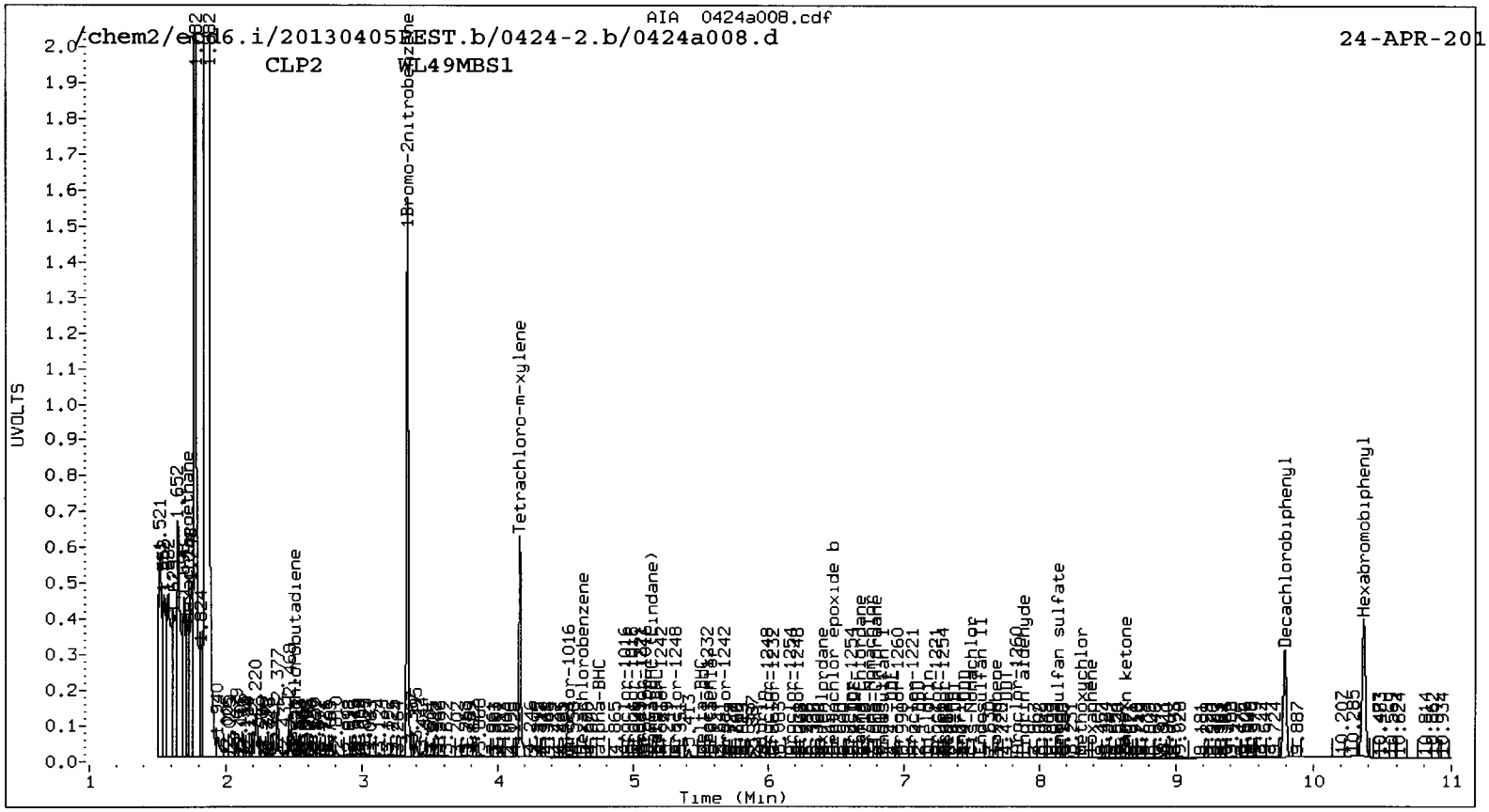
AIA 0424a008.cdf
24-APR-201
S1X-CLP WL49MBS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0424a008.cdf
24-APR-201
CLP2 WL49MBS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a009.d ARI ID: WL49LCSS1
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a009.d Client ID: WL49LCSS1
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 14:54
Compound Sublist: wpest Report Date: 04/29/2013 10:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.164	-0.001	5855175	3.334	0.001	29363941	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.001	1945074	4.757	0.000	10754747	15.1034	15.0508	0.3	alpha-BHC
4.691	0.004	776043	5.187	0.002	4172840	15.0409	14.9772	0.4	beta-BHC
4.862	0.003	1889396	5.500	0.001	10029885	16.4832	16.5126	0.2	delta-BHC
4.616	0.001	1840301	5.115	-0.001	9264167	15.8330	14.7297	7.2	gamma-BHC (Lindane)
5.066	0.000	1717474	5.581	-0.001	8865300	15.4171	15.2008	1.4	Heptachlor
5.360	0.000	1562640	5.919	-0.002	8176587	14.2978	15.3780	7.3	Aldrin
5.935	-0.002	1601136	6.474	-0.002	7839519	16.0281	17.0188	6.0	Heptachlor epoxide b
6.312	-0.003	1498194	6.860	-0.002	6923073	16.3437	17.2399	5.3	Endosulfan I
6.534	-0.003	3250057	7.118	-0.003	14234310	33.6189	35.3148	4.9	Dieldrin N
6.233	-0.002	3023038	6.919	-0.002	13755330	38.1662	33.5041	13.0	4,4'-DDE
6.753	-0.003	2837056	7.407	-0.003	11402988	36.4588	31.7745	13.7	Endrin
6.958	-0.003	2786393	7.596	-0.003	10661954	34.9477	27.0496	25.5	Endosulfan II
6.790	-0.001	2672511	7.456	-0.002	11298626	36.0210	29.7487	19.1	4,4'-DDD
7.725	-0.004	2491380	8.138	-0.002	9632454	35.4432	29.4283	18.5	Endosulfan sulfate
7.047	-0.002	2655104	7.744	-0.002	10006619	35.7078	29.0237	20.7	4,4'-DDT
7.470	-0.003	6280472	8.325	-0.006	19761627	168.3990	138.2779	19.6	Methoxychlor
7.980	-0.005	3020491	8.629	-0.003	9197954	34.2225	27.4727	21.9	Endrin ketone
7.335	-0.004	1294809	7.893	-0.003	5181428	19.7743	16.6673	17.1	Endrin aldehyde
6.054	-0.001	1661136	6.655	-0.002	7897545	16.2689	17.0365	4.6	gamma-Chlordane
6.178	-0.002	1585426	6.793	-0.002	7188733	16.1432	16.8062	4.0	alpha-Chlordane
2.339	-0.002	1737859	2.496	-0.001	6876887	12.8227	12.2270	4.8	Hexachlorobutadiene
4.181	0.002	1432102	4.631	0.001	10119554	15.2610	15.3739	0.7	Hexachlorobenzene
5.851	0.011	12506	6.395	0.010	29172	0.1594	0.0769	69.8*	Oxychlordane
----			6.592	-0.039	63798	0.0000	0.2288	---	2,4-DDE
----			6.737	-0.003	41546	0.0000	0.0820	---	trans-Nonachlor
6.397	-0.001	28942	7.118	0.003	14234310	0.5599	53.5605	195.9*	2,4-DDD
6.635	-0.001	14983	----			0.2535	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.667	0.014	13361	8.580	-0.039	94971	0.2264	0.4351	63.1*	Mirex
8.977	-0.002	5015612	10.364	-0.002	13214015	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.002	36594	1.724	-0.007	22484613	0.0000	0.0000	---	Hexachloroethane
6.598	0.017	1642	7.338	0.002	57093	0.0000	0.0000	---	Kepone
3.838	0.001	2550024	4.168	-0.001	13918956	28.9520	26.7993	7.7	Tetrachloro-m-xylen
8.827	-0.004	2439974	9.791	-0.004	9593386	33.3274	30.6209	8.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	72.4	67.0	67.0	42-112
Decachlorobiphenyl	83.3	76.6	76.6	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1458352.6	1271.0	1271.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1428312.5	1160.9	1160.9~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

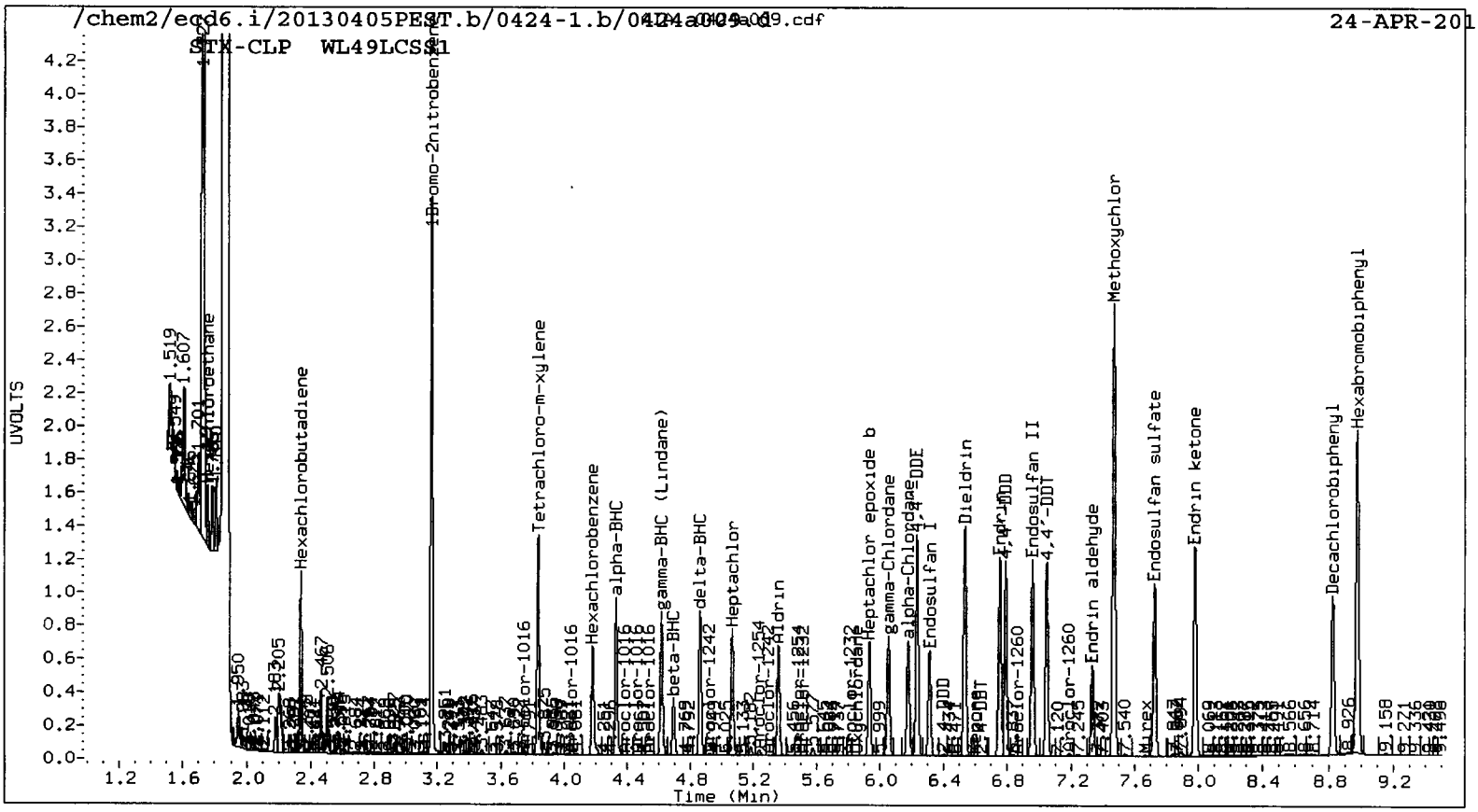
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5855175	7.5
Hexabromobiphenyl	4807902	5015612	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	29363941	35.3
Hexabromobiphenyl	7681727	13214015	72.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.047	0.035	2655104	822.6	1	7.338	-0.006	57093	4.7
Toxaphene	2	---			0.000	2	7.674	0.007	191229	10.5
Toxaphene	3	7.335	0.014	1294809	351.1	3	7.893	-0.006	5181428	266.9
Toxaphene	4	7.667	0.022	13361	3.6	4	8.325	-0.041	19761627	1409.0
Toxaphene	5	---			0.000	5	8.425	0.019	218702	12.3
Toxaphene	6	7.980	0.014	3020491	1433.3	NS	---			----
Total STX-CLPAve (4 peaks): 652.650						Total CLP2Ave (5 peaks): 340.698				RPD = 63*
Corrected Ave (3 peaks): 392.431						Corrected Ave (4 peaks): 73.624				RPD = 137*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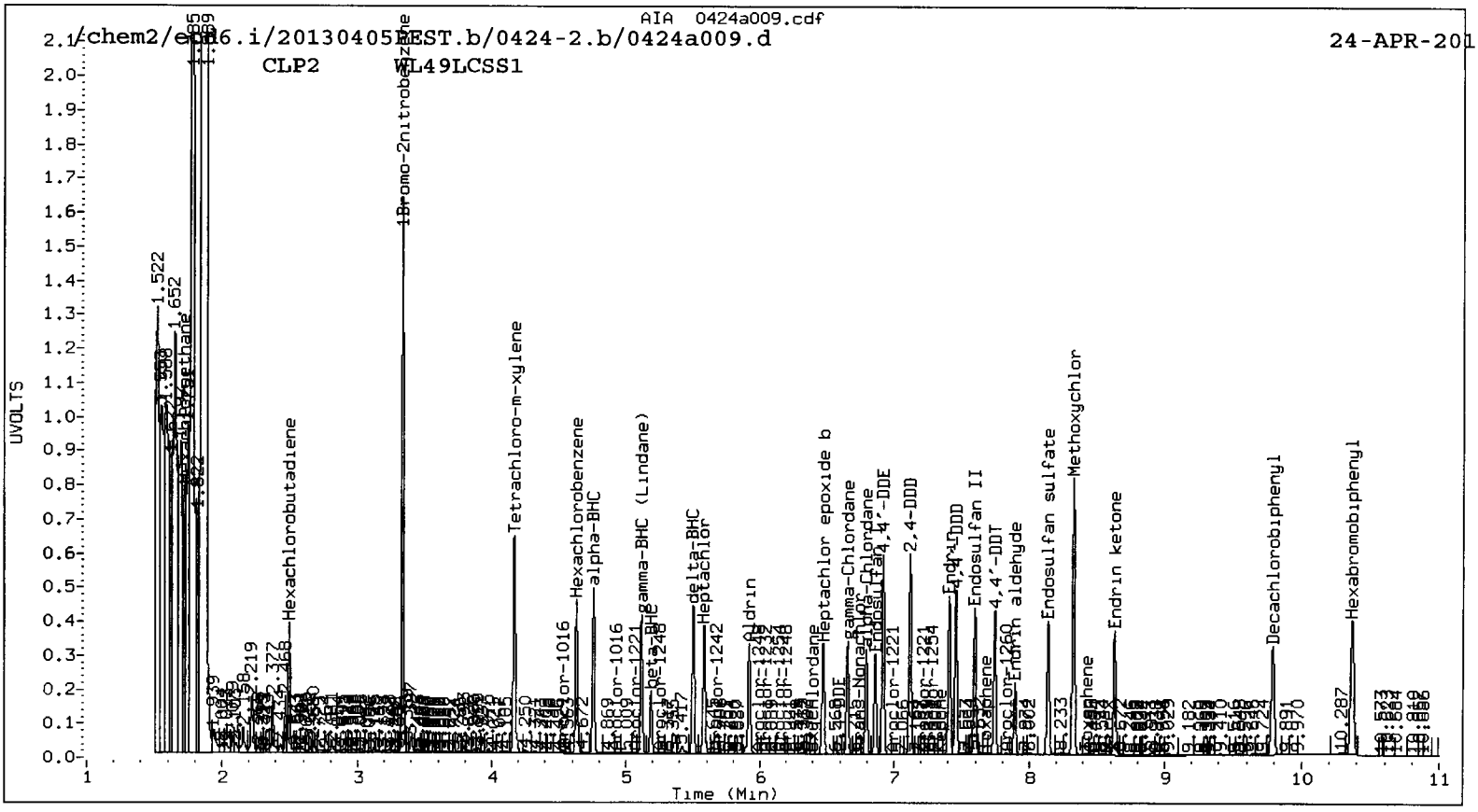
24-APR-201
STX-CLP WL49LCSS1
UVOLTS
Time (Min)
1,2,4,5-Tetrachlorobenzene
1,3-Dichloropropene
Hexachlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0424a009.cdf
24-APR-201
CLP2 WL49LCSS1
UVOLTS
Time (Min)
1,2,4,5-Tetrachlorobenzene
1,3-Dichloropropene
Hexachlorobutadiene
1-Bromo-2-nitrobenzene
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
2,4-DDD
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/0424-1.b/0424a011.d ARI ID: WL49F
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a011.d Client ID: IM-CB-01-20130410-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 15:33
Compound Sublist: wpest Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.164	-0.001	6507252	3.333	0.000	20558444	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.321	-0.009	635768	4.754	-0.002	197823	4.4420	0.3954	167.3*	alpha-BHC
4.699	0.012	447440	5.163	-0.022	282968	7.8031	1.4506	137.3*	beta-BHC
4.859	0.001	2005257	5.504	0.005	1870432	15.7409	4.3983	112.6*	delta-BHC
4.642	0.027	1812890	5.108	-0.008	1517990	14.0342	3.4473	121.1*	gamma-BHC (Lindane)
5.062	-0.004	1552316	5.596	0.014	6182409	12.5382	15.1410	18.8	Heptachlor
5.383	0.023	1893430	5.923	0.002	546733	15.5884	1.4687	165.6*	Aldrin
----			6.465	-0.011	7781416	0.0000	24.1281	---	Heptachlor epoxide b
6.296	-0.019	871119	6.866	0.003	478851	8.5507	1.7032	133.6*	Endosulfan I
6.538	0.001	1059793	7.126	0.005	2936819	9.8640	10.4069	5.4	Dieldrin matrix
6.255	0.020	2201633	6.933	0.013	4953957	25.0105	17.2347	36.8	4,4'-DDE overcall matrix
----			----			0.0000	0.0000	---	Endrin
6.963	0.002	114386	7.597	-0.001	5714051	1.1280	18.9751	177.6*	Endosulfan II
6.812	0.021	6197884	7.444	-0.014	5039544	65.6804	17.3681	116.3*	4,4'-DDD
7.700	-0.029	984152	8.118	-0.022	14510306	11.0081	58.0259	136.2*	Endosulfan sulfate
7.077	0.028	6711632	7.765	0.020	9216486	70.9686	34.9903	67.9*	4,4'-DDT
7.457	-0.016	2738900	8.337	0.006	9586860	57.7404	87.8060	41.3*	Methoxychlor
7.995	0.010	5596585	8.651	0.018	11242721	49.8557	43.9541	12.6	Endrin ketone
7.328	-0.011	1685883	7.912	0.016	5857076	20.2432	24.6613	19.7	Endrin aldehyde
6.069	0.014	540330	6.691	0.034	5716048	4.7616	17.6120	114.9*	gamma-Chlordane
6.210	0.030	498414	6.778	-0.017	2788836	4.5664	9.3125	68.4*	alpha-Chlordane
2.322	-0.019	123933	2.508	0.011	198688	0.8228	0.5046	47.9*	Hexachlorobutadiene
4.187	0.008	561188	4.618	-0.012	4564528	5.3810	9.9047	59.2*	Hexachlorobenzene
5.881	0.041	86285	6.364	-0.021	11910313	0.8645	44.8494	192.4*	Oxychlordane
5.912	0.001	528865	6.637	0.006	3592575	7.0363	18.4052	89.4*	2,4-DDE
6.137	-0.024	1096924	6.743	0.002	4041305	9.2258	10.4374	12.3	trans-Nonachlor
6.415	0.018	1422683	7.080	-0.034	8669456	21.6403	42.6990	65.5*	2,4-DDD
6.631	-0.005	1124756	7.386	-0.018	1523019	14.9626	7.0694	71.7*	2,4-DDT
----			7.473	0.008	12447041	0.0000	34.0355	---	cis-Nonachlor
7.668	0.015	3898974	8.585	-0.034	1643078	51.9487	9.8533	136.2*	Mirex
9.052	0.073	6379216	10.413	0.047	10095252	80.0000	80.0000	0.0	Hexabromobiphenyl
1.755	0.001	48995	1.719	-0.013	2512275	0.0000	0.0000	---	Hexachloroethane
6.585	0.004	26974	7.351	0.015	752146	0.0000	0.0000	---	Kepone
3.843	0.007	249585	4.170	0.002	1499240	2.5497	4.1230	47.2*	Tetrachloro-m-xylene
8.857	0.026	1027656	9.837	0.042	912302	11.0362	3.8116	97.3*	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	6.4	10.3	6.4~	42-112
Decachlorobiphenyl	27.6	9.5	9.5~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

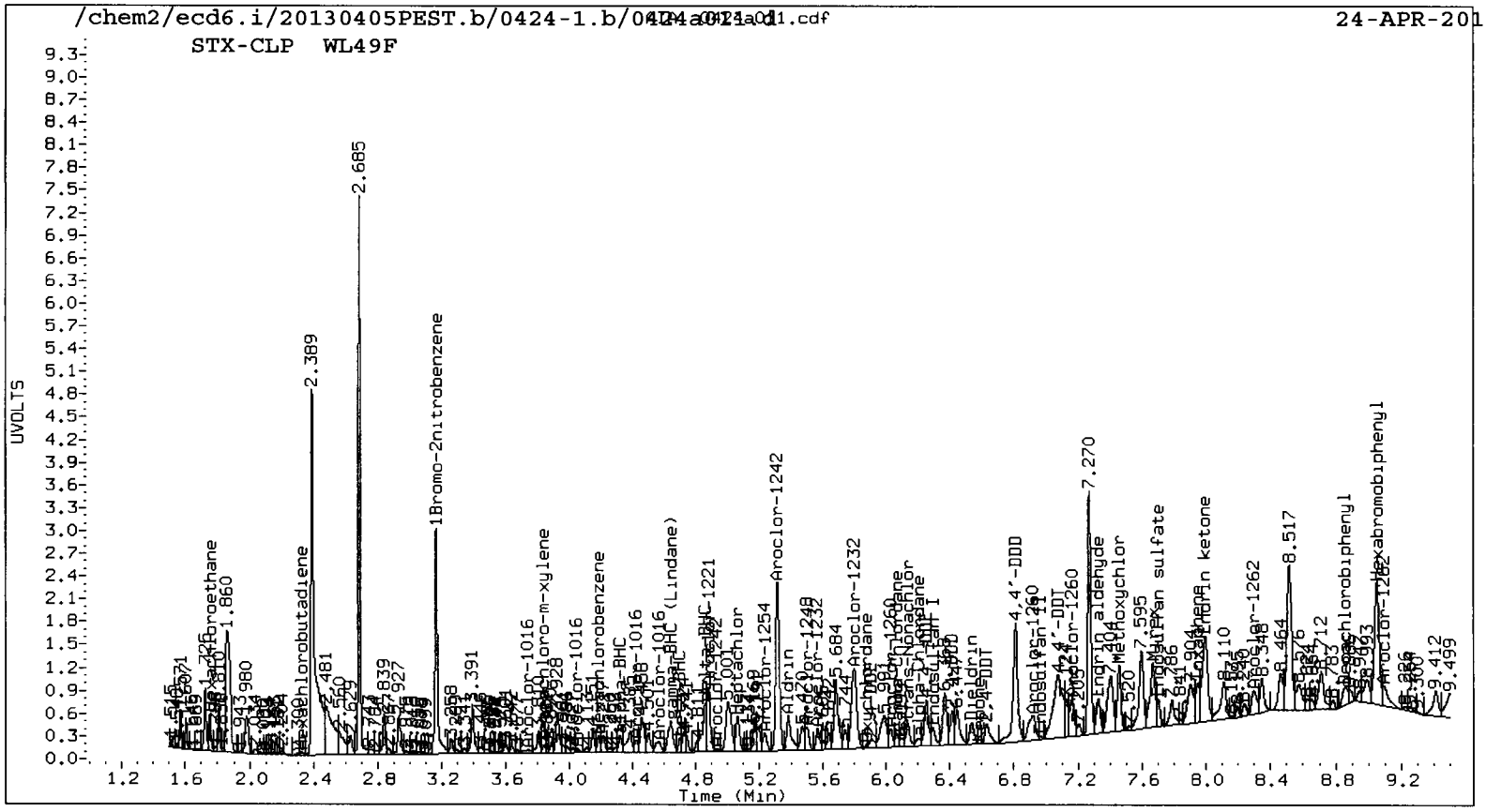
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	6507252	19.4
Hexabromobiphenyl	4807902	6379216	32.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	20558444	-5.3
Hexabromobiphenyl	7681727	10095252	31.4

* 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	6.963	-0.049	114386	27.9	1	7.351	0.007	752146	81.1
Toxaphene	2	7.077	0.014	6711632	2402.4	2	7.683	0.015	1312620	94.6
Toxaphene	3	7.328	0.008	1685883	359.4	3	7.912	0.014	5857076	395.0
Toxaphene	4	7.668	0.023	3898974	824.1	4	8.337	-0.029	9586860	894.7
Toxaphene	5	7.700	0.016	984152	315.2	5	8.403	-0.003	4441037	327.3
Toxaphene	6	7.948	-0.019	1837275	685.5	NS	---			----
Total STX-CLPAve (6 peaks): 769.079						Total CLP2Ave (5 peaks): 358.543				RPD = 73*
Corrected Ave (5 peaks): 442.422						Corrected Ave (4 peaks): 224.503				RPD = 65*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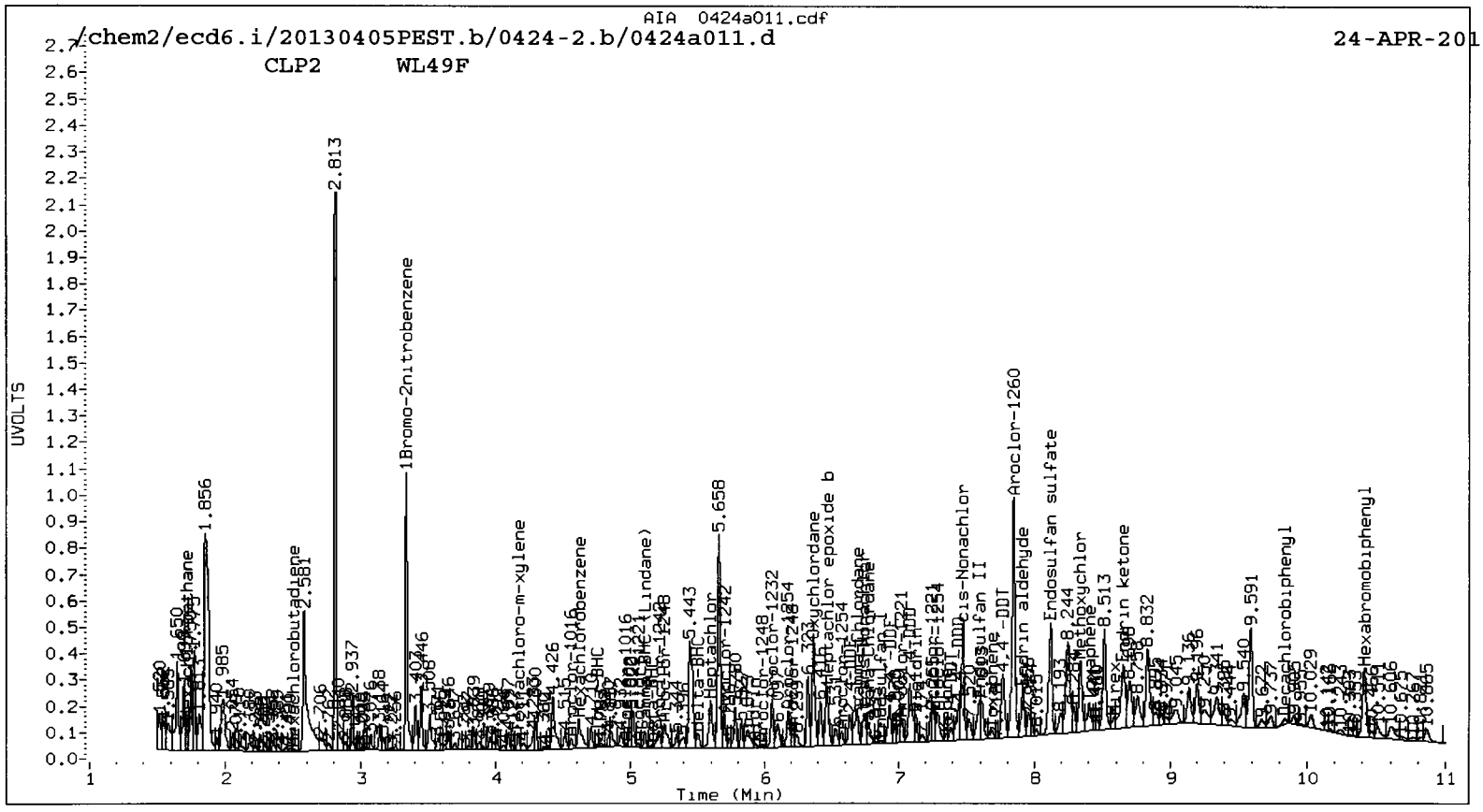
AIA 0424a011.cdf
24-APR-201
STX-CLP WL49F
UVOLTS
Time (Min)
2.685
2.389
1.860
1Bromo-2nitrobenzene
Aroclor-1242
7.270
8.517
7.595
Endrin ketone
Methoxychlor
4,4'-DDD
4,4'-DDT
Endosulfan sulfate
Hexachlorobiphenyl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24-APR-201
CLP2 WL49F
UVOLTS
Time (Min)
2.813
1.856
1Bromo-2nitrobenzene
5.658
Aroclor-1260
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
8.513
Endrin ketone
9.591
Hexachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a012.d ARI ID: WL49G
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a012.d Client ID: IM-CB-02-20130410-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 15:53
Compound Sublist: wpest Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 10.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.165	0.000	5458670	3.334	0.002	19305502	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.317	-0.013	46767	4.746	-0.011	11291	0.3895	0.0240	176.8*	alpha-BHC
4.687	0.000	27256	5.195	0.010	87795	0.5666	0.4793	16.7	beta-BHC
4.851	-0.007	29987	5.457	-0.042	150826	0.2806	0.3777	29.5	delta-BHC
4.618	0.003	28394	5.098	-0.018	82614	0.2620	0.1998	27.0	gamma-BHC (Lindane)
5.054	-0.012	30557	5.591	0.009	127491	0.2942	0.3325	12.2	Heptachlor
5.374	0.013	52286	5.892	-0.029	153676	0.5132	0.4396	15.4	Aldrin
5.947	0.011	35546	6.454	-0.022	175288	0.3817	0.5788	41.0*	Heptachlor epoxide b
6.349	0.034	908006	6.846	-0.017	177643	10.6249	0.6728	176.2*	Endosulfan I
6.530	-0.007	108331	7.160	0.039	188487	1.2020	0.7113	51.3*	Dieldrin
6.235	0.000	65725	6.919	-0.002	394059	0.8901	1.4599	48.5*	4,4'-DDE
6.764	0.008	35754	7.420	0.010	162566	0.4567	0.6311	32.1	Endrin
6.990	0.029	145125	7.580	-0.019	301697	1.8092	1.0663	51.7*	Endosulfan II
6.790	-0.001	68048	7.453	-0.005	148797	0.9116	0.5458	50.2*	4,4'-DDD
7.714	-0.015	15104	8.154	0.013	167180	0.2136	0.7115	107.7*	Endosulfan sulfate
7.052	0.003	113122	----			1.5122	0.0000	---	4,4'-DDT
7.486	0.012	19367	8.309	-0.021	335295	0.5162	3.2685	145.4*	Methoxychlor
7.997	0.012	14925	8.636	0.004	933611	0.1681	3.8848	183.4*	Endrin ketone
7.355	0.016	14881	7.944	0.049	204085	0.2259	0.9146	120.8*	Endrin aldehyde
6.053	-0.002	16051	6.659	0.002	195669	0.1686	0.6420	116.8*	gamma-Chlordane
6.192	0.012	41998	----			0.4587	0.0000	---	alpha-Chlordane
2.341	0.000	2211	2.500	0.003	27928	0.0175	0.0755	124.8*	Hexachlorobutadiene
4.182	0.003	56073	4.632	0.002	178019	0.6409	0.4114	43.6*	Hexachlorobenzene
5.845	0.005	2436	6.406	0.021	71138	0.0309	0.2853	161.0*	Oxychlordane
5.870	-0.041	5527	6.621	-0.010	416651	0.0930	2.2731	184.3*	2,4-DDE
6.124	-0.037	38828	6.736	-0.005	1285041	0.4128	3.5323	158.1*	trans-Nonachlor
6.427	0.030	58762	----			1.1300	0.0000	---	2,4-DDD
6.638	0.002	9747	7.401	-0.003	147387	0.1639	0.7281	126.5*	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.665	0.012	75865	8.590	-0.029	445130	1.2778	2.8411	75.9*	Mirex
8.981	0.001	5046076	10.368	0.002	9485174	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.758	0.004	8092	1.727	-0.005	2070547	0.0000	0.0000	---	Hexachloroethane
6.600	0.019	68949	7.335	-0.001	203759	0.0000	0.0000	---	Kepone
3.839	0.002	249179	4.169	0.000	1113105	3.0346	3.2598	7.2	Tetrachloro-m-xylene
8.829	-0.002	973435	9.794	-0.001	975025	13.2158	4.3356	101.2*	Decachlorobiphenyl

NR

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

WL49 0517

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	7.6	8.1	7.6~	42-112
Decachlorobiphenyl	33.0	10.8	10.8~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5458670	0.2
Hexabromobiphenyl	4807902	5046076	5.0

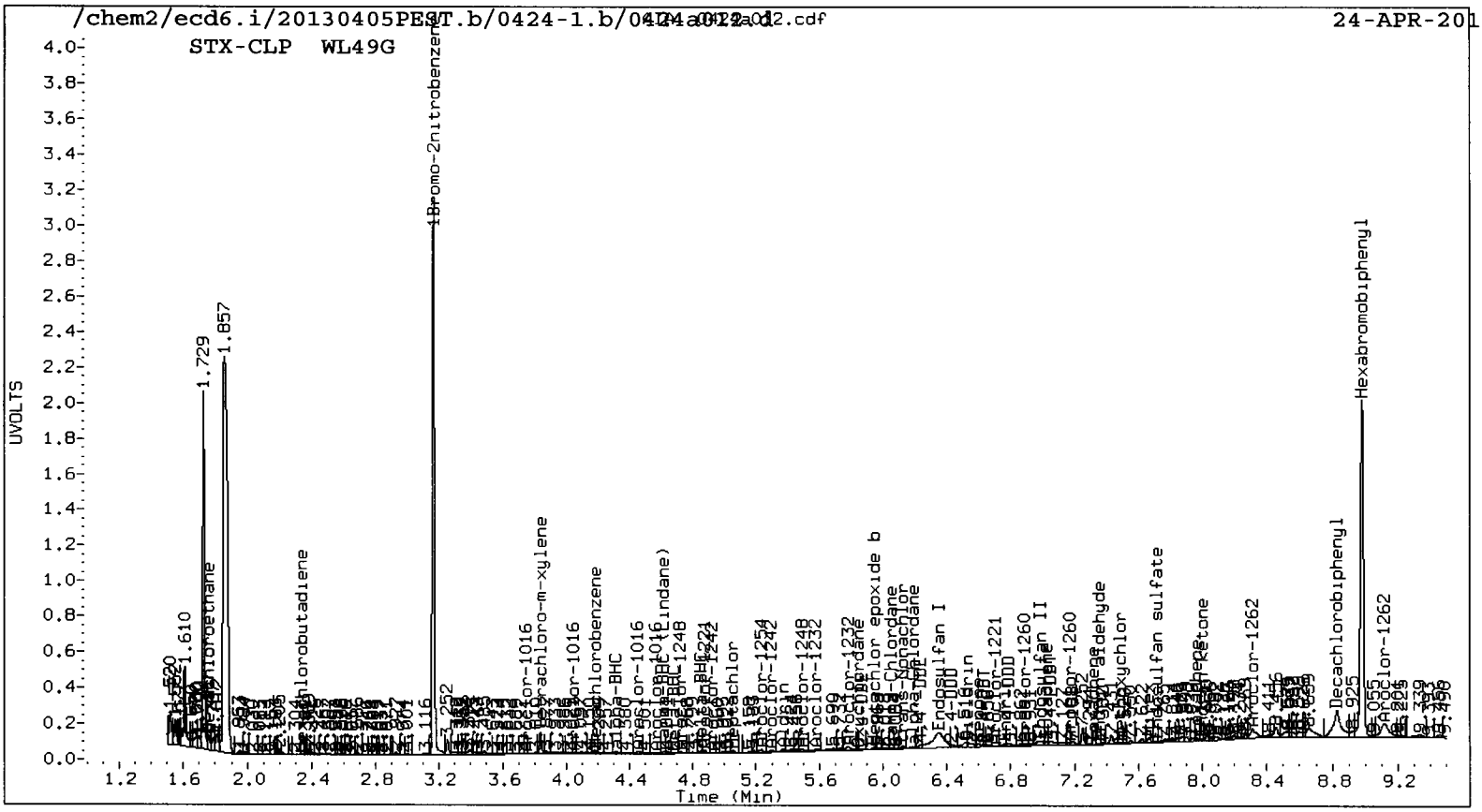
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	19305502	-11.0
Hexabromobiphenyl	7681727	9485174	23.5

* 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	7.026	0.014	65487	20.2	1	7.335	-0.009	203759	23.4	
Toxaphene	2	7.052	-0.012	113122	51.2	2	7.670	0.002	37031	2.8	
Toxaphene	3	7.320	0.000	2361	0.6	3	7.944	0.046	204085	14.6	
Toxaphene	4	7.665	0.021	75865	20.3	4	8.372	0.005	1875139	186.3	
Toxaphene	5	---			0.000	5	---			0.000	
Toxaphene	6	7.964	-0.003	34666	16.4	NS	---			----	
Total STX-CLPAve (5 peaks): 21.723						Total CLP2Ave (4 peaks): 56.783				RPD = 89*	
Corrected Ave (4 peaks): 14.357						Corrected Ave (3 peaks): 13.625				RPD = 5	

WL#8 615#8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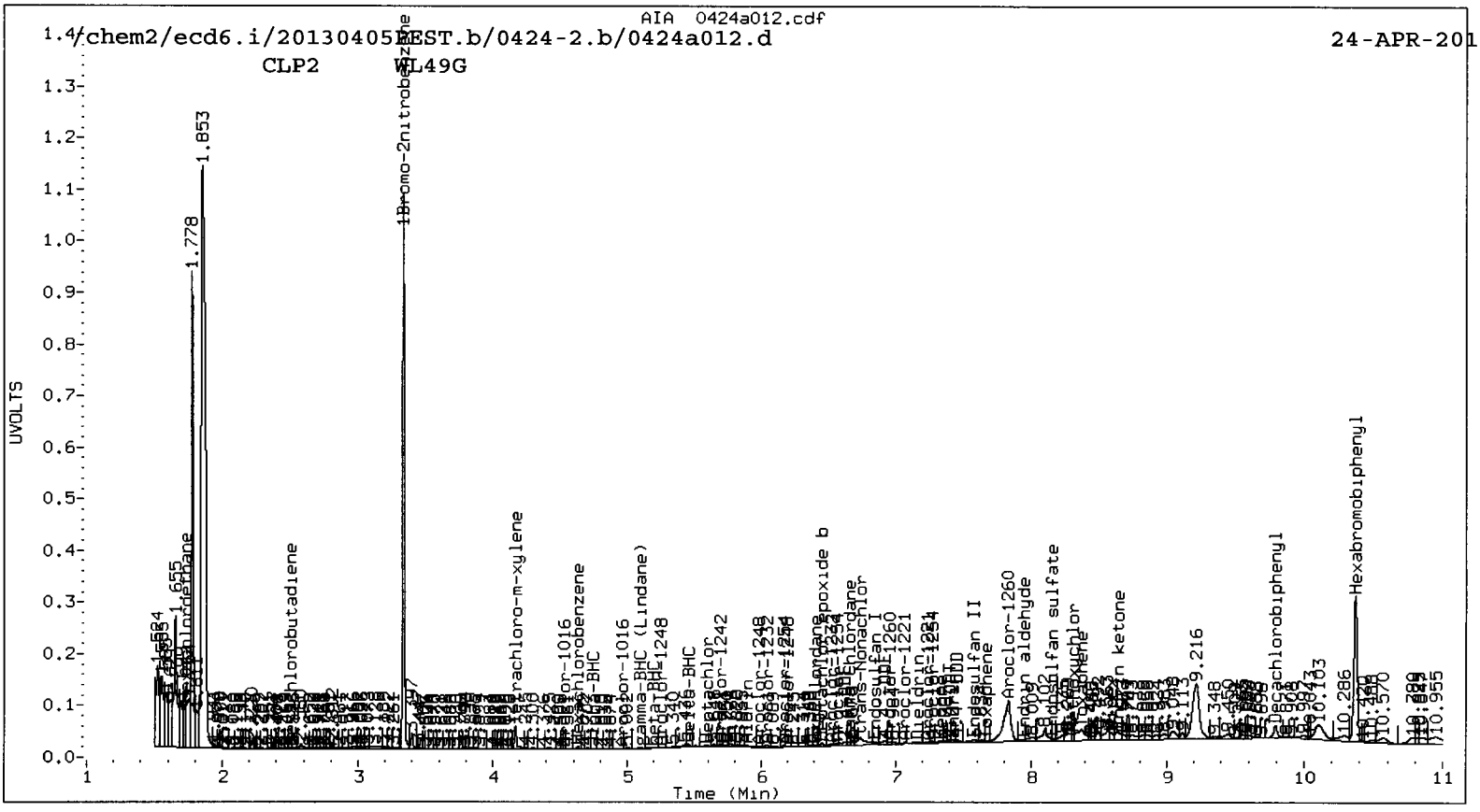
24-APR-201
STX-CLP WL49G
UVOLTS
Time (Min)
1.729
1.857
1.610
1Bromo-2nitrobenzene
Hexabromobiphenyl
Decachlorobiphenyl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24-APR-201
CLP2 WL49G
UVOLTS
Time (Min)
1.853
1.778
1Bromo-2nitrobenzene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a013.d ARI ID: WL49GMS
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a013.d Client ID: IM-CB-02-201304 MS
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 16:13
Compound Sublist: wpest Report Date: 04/29/2013 10:10
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
3.164	-0.001	5387879	3.333	0.000	25948196	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.329	-0.001	155236	4.755	-0.001	472321	1.3099	0.7480	54.6*	alpha-BHC
4.689	0.002	72788	5.187	0.002	329631	1.5331	1.3389	13.5	beta-BHC
4.861	0.003	93478	5.500	0.001	260914	0.8862	0.4861	58.3*	delta-BHC
4.614	-0.001	123416	5.113	-0.003	524946	1.1539	0.9445	20.0	gamma-BHC (Lindane)
5.063	-0.002	140084	5.581	-0.001	535860	1.3665	1.0398	27.2	Heptachlor
5.360	-0.001	149171	5.918	-0.002	489644	1.4833	1.0421	34.9	Aldrin
5.935	-0.002	147522	6.472	-0.003	569411	1.6048	1.3989	13.7	Heptachlor epoxide b
6.311	-0.004	93645	6.860	-0.003	243515	1.1102	0.6862	47.2*	Endosulfan I
6.534	-0.003	219692	7.118	-0.003	683160	2.4696	1.9180	25.1	Dieldrin N
6.233	-0.002	246366	6.919	-0.002	672223	3.3802	1.8529	58.4*	4,4'-DDE
6.753	-0.004	203711	7.367	-0.043	42144	2.7255	0.1573	178.2*	Endrin
6.958	-0.003	166344	7.596	-0.003	543835	2.1721	1.8478	16.1	Endosulfan II
6.789	-0.001	226712	7.456	-0.002	621028	3.1813	2.1899	36.9	4,4'-DDD
7.725	-0.004	136119	8.138	-0.002	240087	2.0161	0.9823	69.0*	Endosulfan sulfate
7.047	-0.002	172678	7.744	-0.002	616639	2.4178	2.3953	0.9	4,4'-DDT
7.471	-0.002	337415	8.326	-0.005	1011311	9.4190	9.4772	0.6	Methoxychlor
7.981	-0.004	207354	8.631	-0.002	968186	2.4459	3.8729	45.2*	Endrin ketone
7.336	-0.003	88616	7.893	-0.003	309514	1.4090	1.3334	5.5	Endrin aldehyde
6.053	-0.002	152775	6.655	-0.002	531469	1.6260	1.2974	22.5	gamma-Chlordane
6.178	-0.002	133956	6.793	-0.002	364366	1.4823	0.9640	42.4*	alpha-Chlordane
2.340	-0.001	161496	2.496	-0.001	803454	1.2949	1.6166	22.1	Hexachlorobutadiene
4.180	0.001	173581	4.630	0.000	955741	2.0102	1.6431	20.1	Hexachlorobenzene
5.872	0.032	9684	6.404	0.020	97914	0.1285	0.2921	77.8*	Oxychlordane
----			6.620	-0.011	96971	0.0000	0.3936	---	2,4-DDE
6.122	-0.039	50150	6.734	-0.007	212925	0.5585	0.5627	0.7	trans-Nonachlor
6.384	-0.013	25314	7.118	0.003	683160	0.5099	3.4427	148.4*	2,4-DDD
6.641	0.005	9425	7.407	0.004	563507	0.1660	2.6762	176.6*	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.664	0.011	61814	8.591	-0.027	351068	1.0906	2.1541	65.6*	Mirex
8.981	0.001	4817583	10.367	0.001	9866622	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.757	0.003	11281	1.741	0.009	4092681	0.0000	0.0000	---	Hexachloroethane
6.600	0.019	19486	7.336	0.000	37359	0.0000	0.0000	---	Kepone
3.837	0.000	256208	4.167	-0.002	1170266	3.1612	2.5498	21.4	Tetrachloro-m-xylene
8.830	-0.001	322681	9.795	0.000	641166	4.5886	2.7408	50.4*	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	7.9	6.4	6.4~	42-112
Decachlorobiphenyl	11.5	6.9	6.9~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1090194.1	6.3	6.3~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	967104.6	95.8	95.8~	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

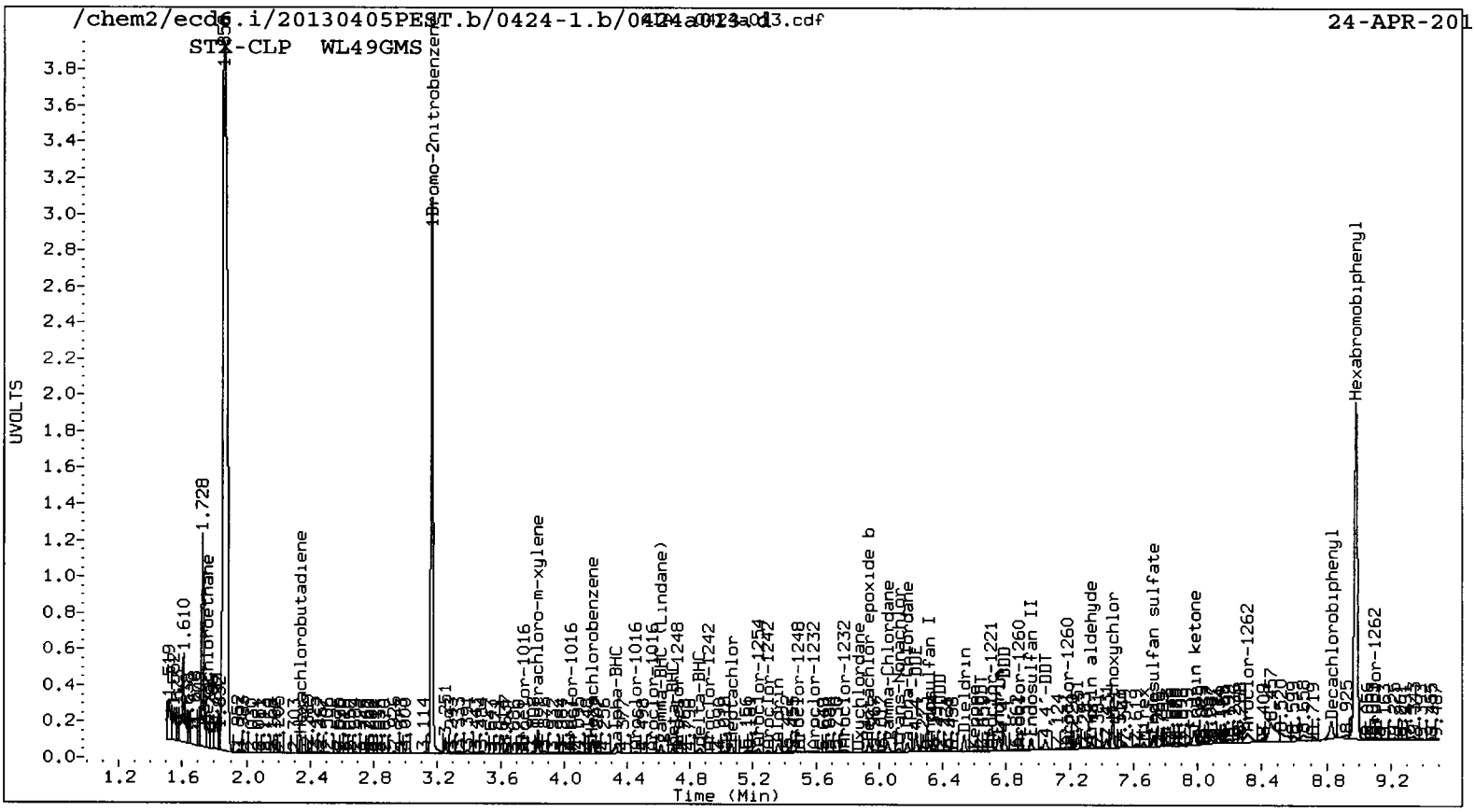
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5387879	-1.1
Hexabromobiphenyl	4807902	4817583	0.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25948196	19.6
Hexabromobiphenyl	7681727	9866622	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	7.047	0.035	172678	55.7	1	7.336	-0.008	37359	4.1
Toxaphene	2	---			0.000	2	7.671	0.003	15750	1.2
Toxaphene	3	7.336	0.015	88616	25.0	3	7.893	-0.005	309514	21.4
Toxaphene	4	7.664	0.019	61814	17.3	4	8.373	0.007	338178	32.3
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.981	0.015	207354	102.4	NS	---			----
Total STX-CLPAve (4 peaks): 50.114						Total CLP2Ave (4 peaks): 14.733				RPD = 109*
Corrected Ave (3 peaks): 32.672						Corrected Ave (3 peaks): 8.880				RPD = 115*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24-APR-201
ST1-CLP WL49GMS
UVOLTS
Time (Min)
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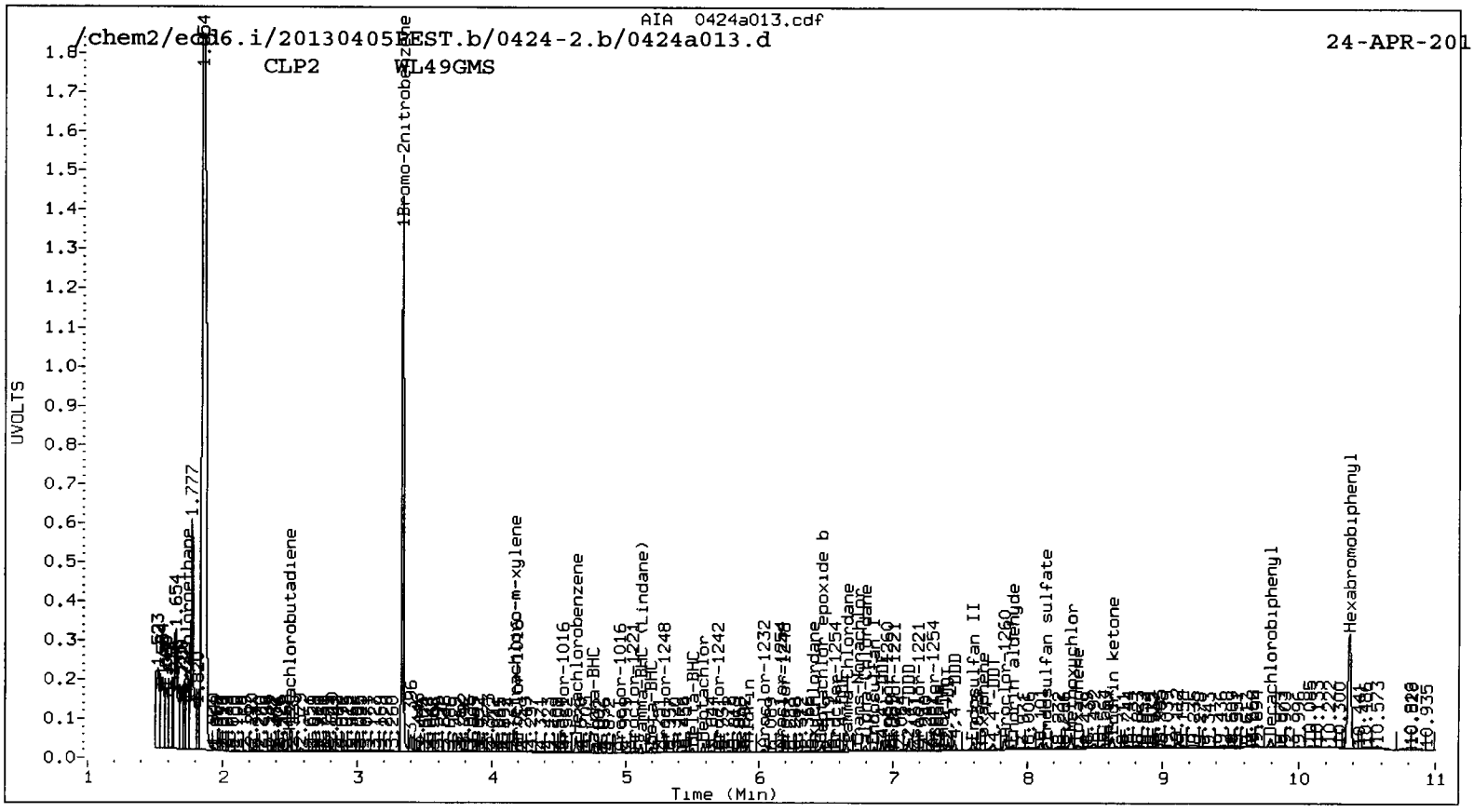
1.610
3.114
1-Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichlorobenzene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0424a013.cdf
24-APR-201
CLP2 WL49GMS
UVOLTS
Time (Min)
1.777
1.654
1-Bromo-2nitrobenzene
Hexachlorobutadiene
1,2,4-Trichlorobenzene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a014.d ARI ID: WL49GMSD
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a014.d Client ID: IM-CB-02-201304 MSD
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 16:33
Compound Sublist: wpest Report Date: 04/29/2013 10:10
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
3.164	-0.001	5180949	3.333	0.001	25143824	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.330	0.000	174465	4.756	0.000	647795	1.5310	1.0587	36.5	alpha-BHC
4.690	0.003	78799	5.191	0.006	1033194	1.7260	4.3308	86.0*	beta-BHC
4.861	0.003	161466	5.500	0.001	516267	1.5920	0.9926	46.4*	delta-BHC
4.615	0.000	163573	5.115	-0.001	615871	1.5904	1.1436	32.7	gamma-BHC (Lindane)
5.057	-0.008	317519	5.581	-0.001	533668	3.2212	1.0686	100.4*	Heptachlor
5.361	0.000	147543	5.919	-0.002	599505	1.5257	1.3168	14.7	Aldrin
5.935	-0.001	148155	6.473	-0.003	580743	1.6761	1.4723	12.9	Heptachlor epoxide b
6.312	-0.003	115031	6.860	-0.002	316588	1.4182	0.9207	42.5*	Endosulfan I
6.534	-0.003	219299	7.118	-0.003	677608	2.5637	1.9633	26.5	Dieldrin N
6.233	-0.002	248209	6.919	-0.002	687816	3.5415	1.9565	57.7*	4,4'-DDE
6.753	-0.003	193597	7.364	-0.046	38136	2.6594	0.1466	179.1*	Endrin
6.958	-0.002	206315	7.596	-0.003	670088	2.7661	2.3454	16.5	Endosulfan II
6.790	-0.001	232258	7.456	-0.002	625154	3.3463	2.2709	38.3	4,4'-DDD
7.726	-0.003	163435	8.138	-0.003	538605	2.4854	2.2702	9.0	Endosulfan sulfate
7.047	-0.002	181039	7.744	-0.002	861093	2.6026	3.4457	27.9	4,4'-DDT
7.471	-0.002	356091	8.326	-0.005	1023476	10.2062	9.8804	3.2	Methoxychlor
7.981	-0.004	203076	8.630	-0.002	762911	2.4595	3.1438	24.4	Endrin ketone
7.336	-0.002	116972	7.893	-0.003	272574	1.9096	1.2097	44.9*	Endrin aldehyde
6.054	-0.001	165207	6.656	-0.002	525499	1.8286	1.3239	32.0	gamma-Chlordane
6.179	-0.001	145049	6.793	-0.002	369992	1.6691	1.0102	49.2*	alpha-Chlordane
2.340	-0.001	154463	2.496	-0.001	778028	1.2880	1.6155	22.6	Hexachlorobutadiene
4.181	0.002	161220	4.630	0.001	994817	1.9416	1.7650	9.5	Hexachlorobenzene
5.872	0.032	7682	6.405	0.020	106645	0.1046	0.3283	103.3*	Oxychlordane
----			6.621	-0.010	106617	0.0000	0.4466	---	2,4-DDE
6.123	-0.038	52808	6.734	-0.006	206829	0.6038	0.5630	7.0	trans-Nonachlor
6.387	-0.010	27530	7.118	0.003	677608	0.5693	3.5177	144.3*	2,4-DDD
6.638	0.001	7207	7.407	0.004	574796	0.1303	2.8122	182.3*	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.665	0.012	56597	8.590	-0.029	363588	1.0252	2.2982	76.6*	Mirex
8.981	0.002	4692113	10.367	0.001	9577863	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.758	0.004	10827	1.724	-0.008	1135553	0.0000	0.0000	---	Hexachloroethane
6.601	0.020	16469	7.334	-0.002	53700	0.0000	0.0000	---	Kepone
3.837	0.001	243849	4.167	-0.001	1394519	3.1289	3.1356	0.2	Tetrachloro-m-xylene
8.830	-0.002	440312	9.794	-0.001	619295	6.4288	2.7272	80.9*	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	7.8	7.8	7.8~	42-112
Decachlorobiphenyl	16.1	6.8	6.8~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1063772.4	5.9	5.9~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1041044.6	137.8	137.8~	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

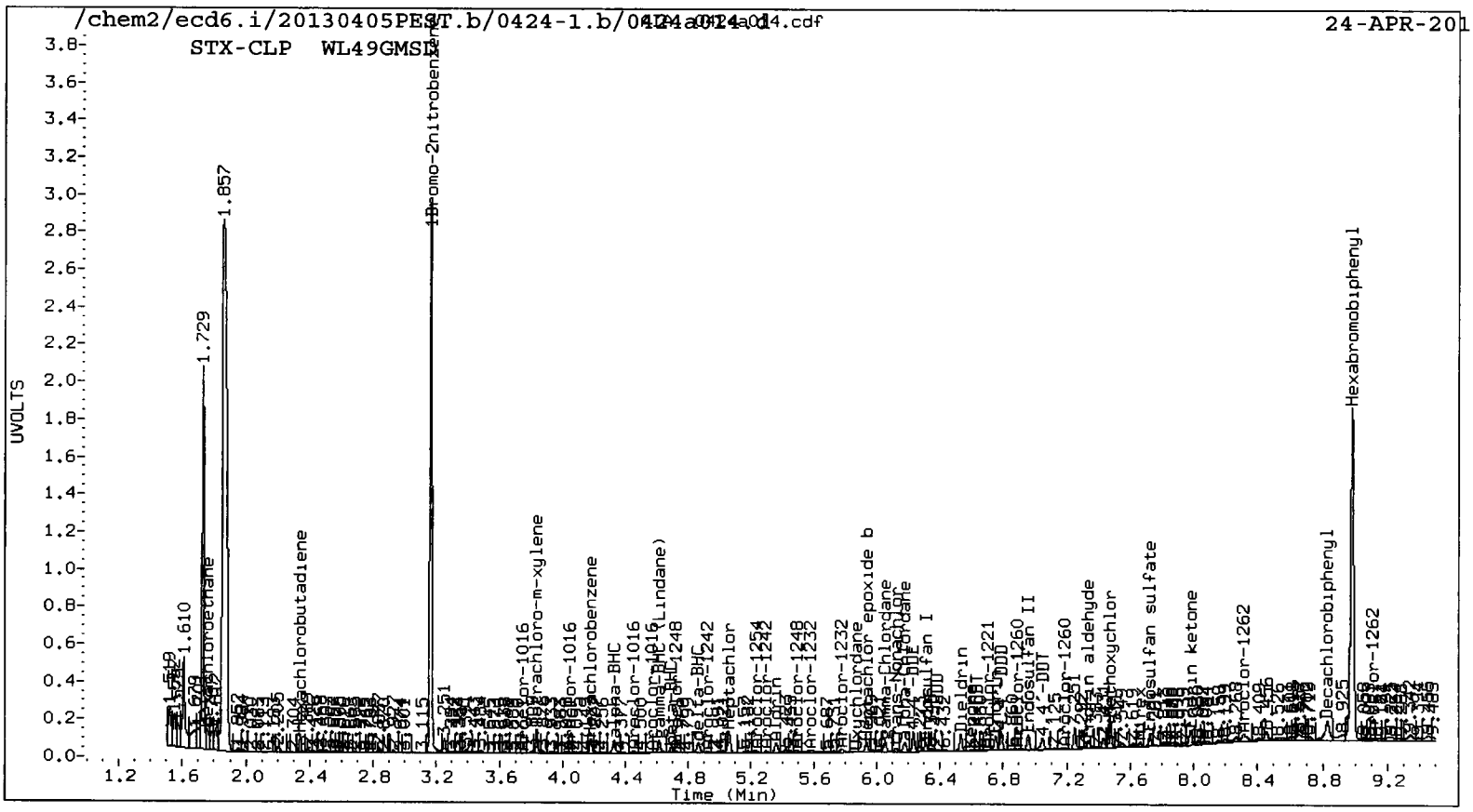
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5180949	-4.9
Hexabromobiphenyl	4807902	4692113	-2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25143824	15.9
Hexabromobiphenyl	7681727	9577863	24.7

* 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	7.047	0.036	181039	60.0	1	7.334	-0.010	53700	6.1	
Toxaphene	2	---			0.000	2	7.669	0.001	58664	4.5	
Toxaphene	3	7.336	0.016	116972	33.9	3	7.893	-0.005	272574	19.4	
Toxaphene	4	7.665	0.020	56597	16.3	4	8.373	0.007	297184	29.2	
Toxaphene	5	---			0.000	5	---			0.000	
Toxaphene	6	7.981	0.015	203076	103.0	NS	---			----	
Total STX-CLPAve (4 peaks): 53.284						Total CLP2Ave (4 peaks): 14.792				RPD = 113*	
Corrected Ave (3 peaks): 36.709						Corrected Ave (3 peaks): 9.978				RPD = 115*	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24-APR-201
STX-CLP WL49GMSD
UVOLTS
Time (Min)
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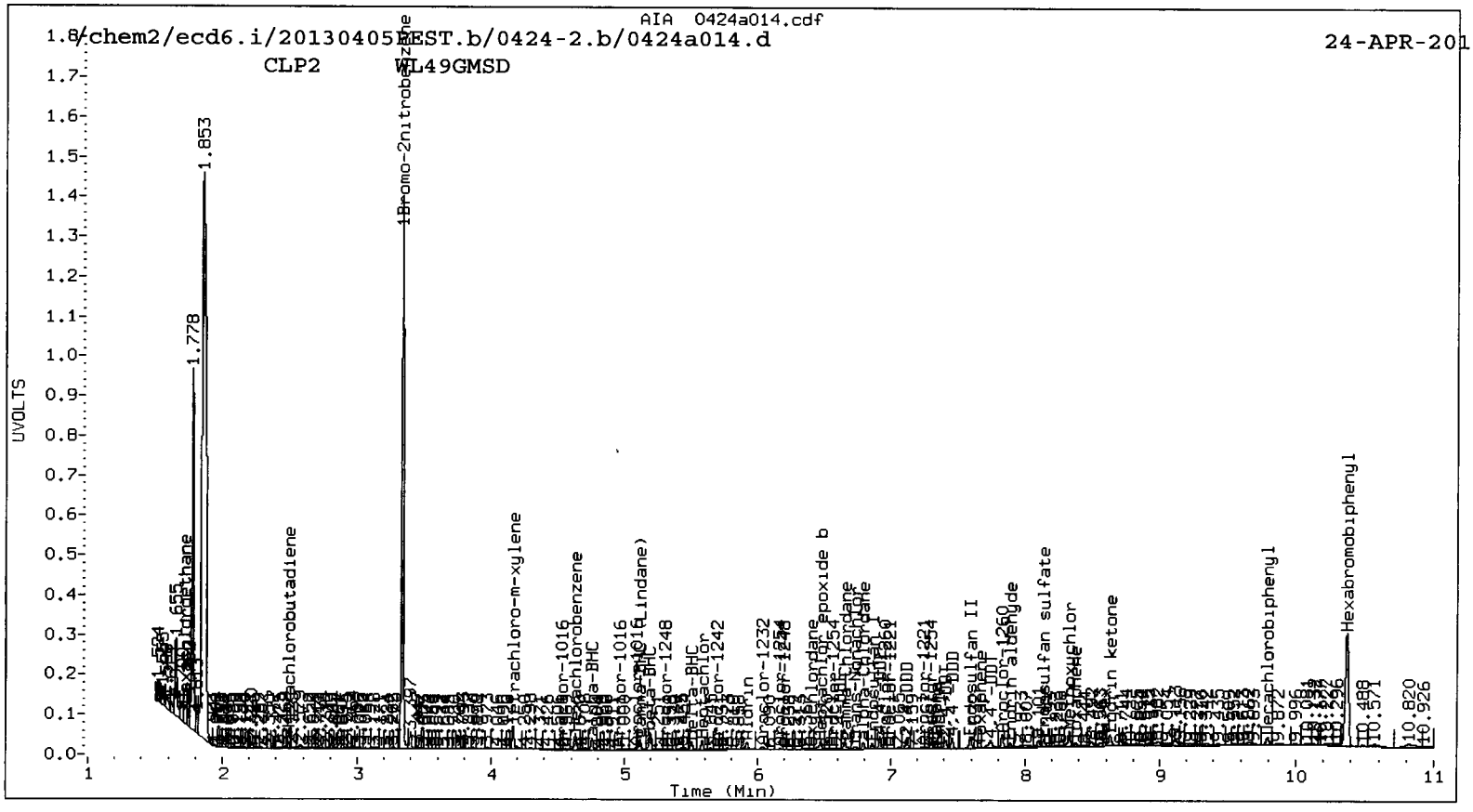
1.610
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachlorobenzene
Hexabromobiphenyl
Decachlorobiphenyl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24-APR-201
CLP2 WL49GMSD
UVOLTS
Time (Min)
1.853
1.778
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachlorobenzene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a018.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0424-2.b/0424a018.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 17:49
Compound Sublist: INDA Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	4870788	3.332	-0.001	25415091	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.326	-0.004	2194134	4.752	-0.004	10598585	20.4807	17.1368	17.8	alpha-BHC
4.686	-0.001	746187	5.184	-0.001	3559653	17.3851	14.7615	16.3	beta-BHC
4.857	-0.002	1782660	5.497	-0.002	8115137	18.6951	15.4361	19.1	delta-BHC
4.610	-0.005	1822407	5.112	-0.005	8510351	18.8478	15.6335	18.6	gamma-BHC (Lindane)
5.060	-0.005	1240751	5.577	-0.004	5588886	13.3887	11.0718	18.9	Heptachlor
5.355	-0.006	1685320	5.916	-0.005	6722702	18.5367	14.6081	23.7	Aldrin
5.930	-0.007	1455345	6.471	-0.005	5278858	17.5130	13.2405	27.8	Heptachlor epoxide b
6.307	-0.007	1364728	6.858	-0.005	4178195	17.8966	12.0212	39.3	Endosulfan I
6.530	-0.007	2865501	7.116	-0.005	9145829	35.6314	26.2160	30.4	Dieldrin
6.229	-0.006	2528382	6.916	-0.004	8662184	38.3724	24.3768	44.6*	4,4'-DDE
6.749	-0.007	2118418	7.405	-0.004	5563946	34.3955	23.7261	36.7	Endrin
6.955	-0.006	2341981	7.595	-0.004	8092773	37.1121	31.4198	16.6	Endosulfan II
6.786	-0.005	3088492	7.454	-0.004	8629808	52.5943	34.7717	40.8*	4,4'-DDD
7.723	-0.007	1986662	8.136	-0.004	5801635	35.7086	27.1244	27.3	Endosulfan sulfate
7.041	-0.008	901436	7.741	-0.004	1965921	15.3170	8.7260	54.8*	4,4'-DDT
7.468	-0.006	1746684	8.323	-0.007	4509302	59.1722	48.2861	20.3	Methoxychlor
7.978	-0.007	2164453	8.628	-0.005	5876137	30.9841	26.8587	14.3	Endrin ketone
7.332	-0.007	1746019	7.891	-0.005	4985947	33.6899	24.5441	31.4	Endrin aldehyde
6.049	-0.006	1506620	6.653	-0.004	4883927	17.7377	12.1725	37.2	gamma-Chlordane
6.173	-0.007	1429308	6.791	-0.004	4273169	17.4948	11.5422	41.0*	alpha-Chlordane
2.340	-0.001	2373897	2.497	0.000	7967544	21.0556	16.3673	25.1	Hexachlorobutadiene
4.177	-0.002	1589424	4.628	-0.002	10167565	20.3606	17.8469	13.2	Hexachlorobenzene
8.977	-0.003	3969794	10.364	-0.002	8634792	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2956345	4.165	-0.004	15943292	40.3487	35.4665	12.9	Tetrachloro-m-xylen
8.826	-0.005	2142605	9.791	-0.005	6495649	36.9755	31.7286	15.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	100.9	88.7	88.7~	115- 0
Decachlorobiphenyl	92.4	79.3	79.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

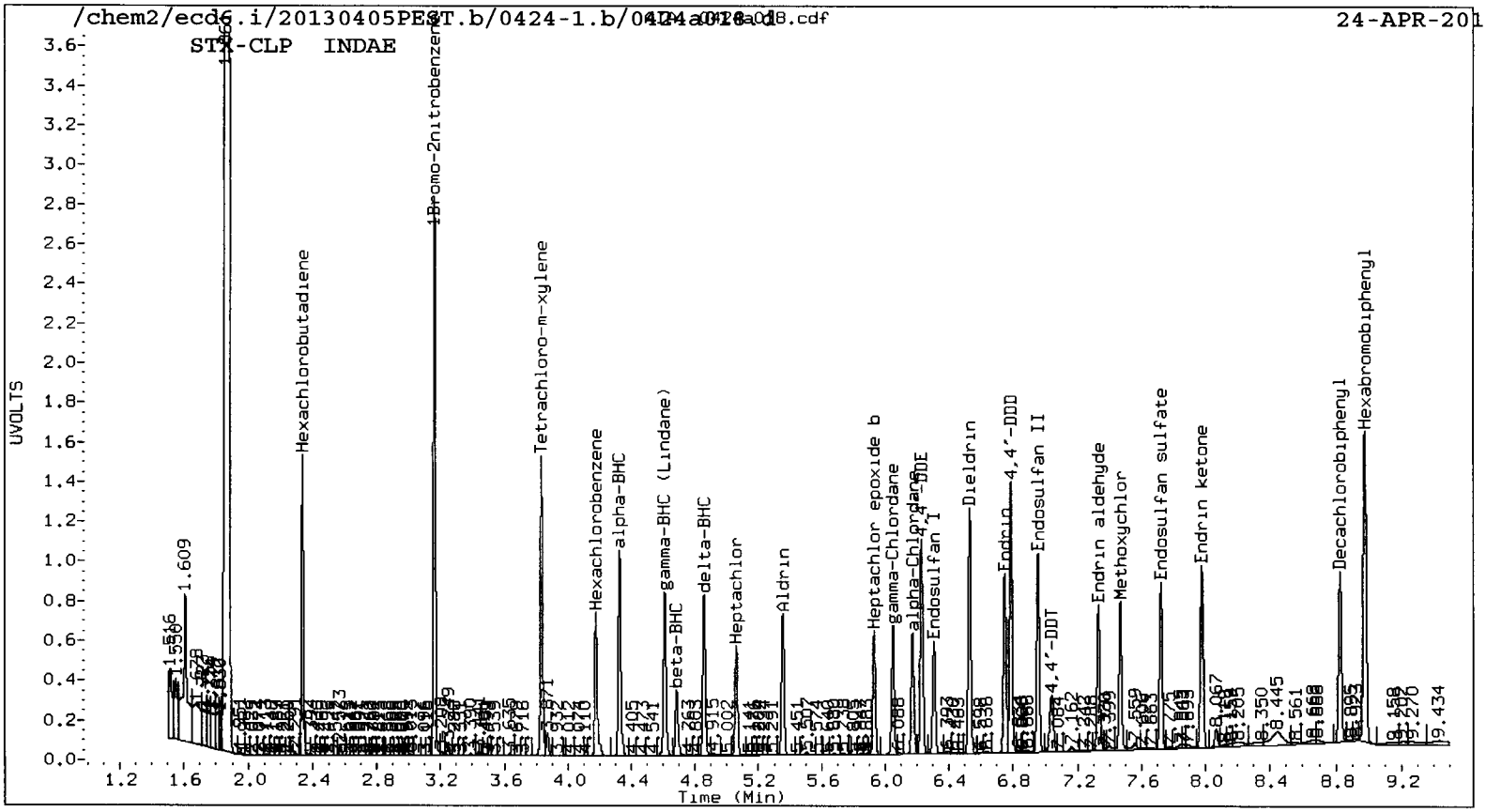
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4870788	-10.6
Hexabromobiphenyl	4807902	3969794	-17.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	25415091	17.1
Hexabromobiphenyl	7681727	8634792	12.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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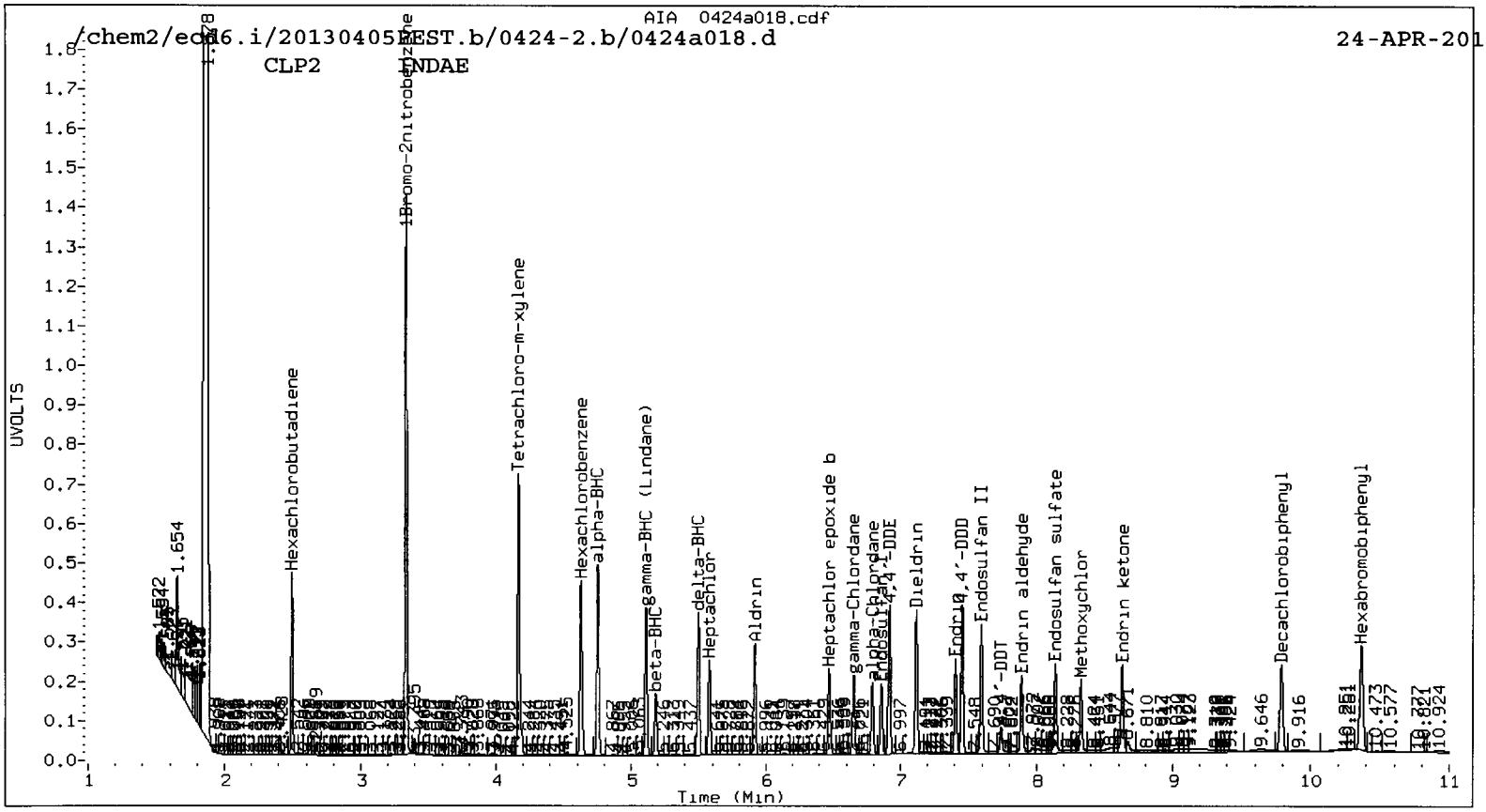
AIA 0424a018.cdf
24-APR-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.609
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0424a018.cdf
24-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1.654
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

VZ 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0424-1.b/0424a019.d ARI ID: TOXAPH
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Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 24-APR-2013 18:07
Compound Sublist: TOXAPH Report Date: 04/26/2013 15:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	5355166	3.332	-0.001	27561322	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.977	-0.003	4498838	10.364	-0.002	9831517	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2688622	4.165	-0.004	16658069	33.3757	34.1709	2.4	Tetrachloro-m-xylen
8.826	-0.005	1996242	9.791	-0.004	6231173	30.3986	26.7319	12.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	83.4	85.4	83.4~	150- 0
Decachlorobiphenyl	76.0	66.8	66.8~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5355166	-1.7
Hexabromobiphenyl	4807902	4498838	-6.4

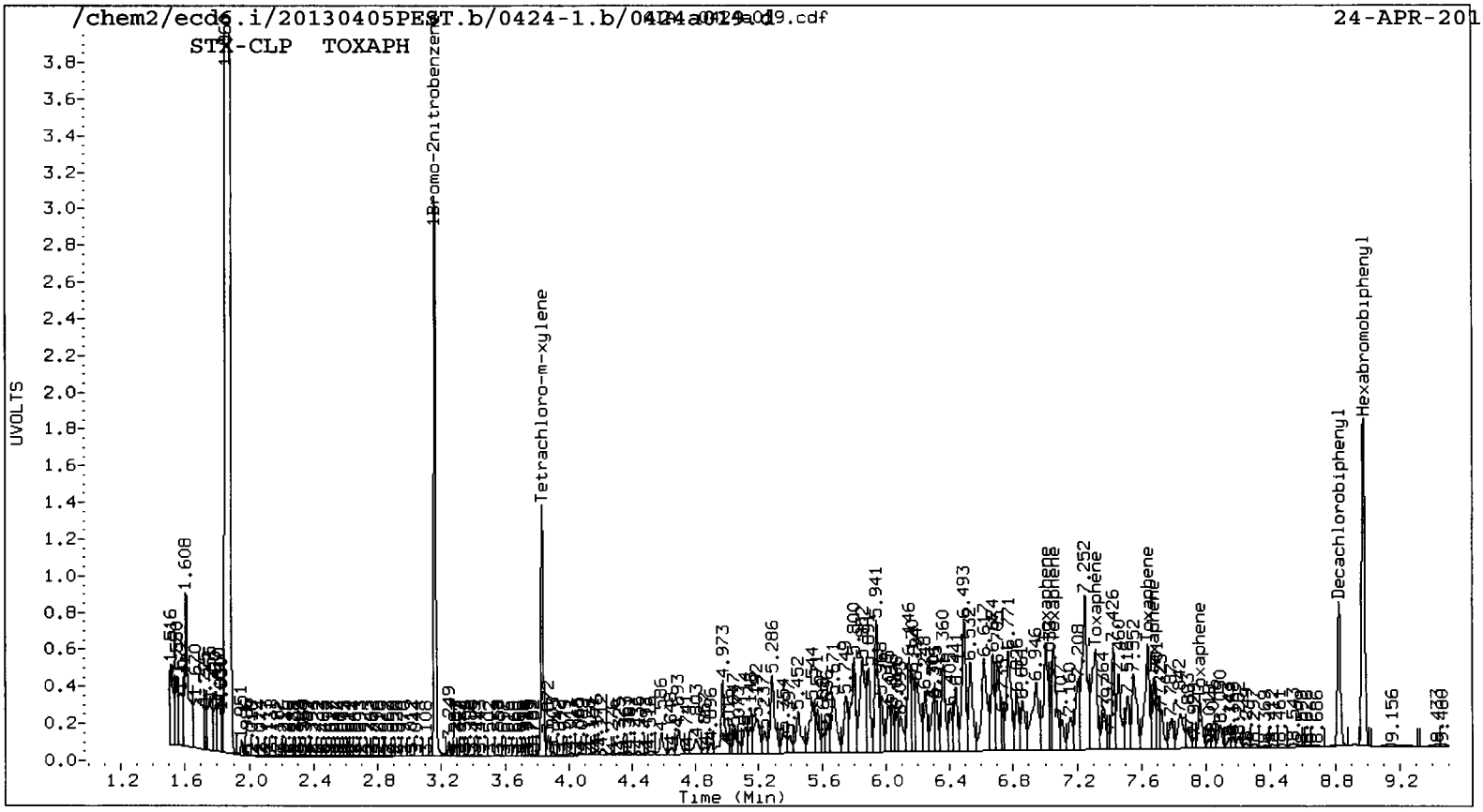
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	27561322	27.0
Hexabromobiphenyl	7681727	9831517	28.0

WI_19:01559

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.006	-0.006	2093543	723.1	1	7.340	-0.004	10300555	1140.6
Toxaphene	2	7.057	-0.007	2090125	1060.8	2	7.666	-0.002	12046664	891.5
Toxaphene	3	7.317	-0.004	2586528	781.9	3	7.894	-0.004	9297163	643.8
Toxaphene	4	7.642	-0.003	2257383	676.6	4	8.364	-0.002	4753382	455.5
Toxaphene	5	7.680	-0.005	1094916	497.3	5	8.403	-0.003	5118857	387.4
Toxaphene	6	7.962	-0.004	894251	473.1	NS	---			----
Total STX-CLPAve (6 peaks): 702.138						Total CLP2Ave (5 peaks): 703.768				RPD = 0
Corrected Ave (6 peaks): 702.138						Corrected Ave (5 peaks): 703.768				RPD = 0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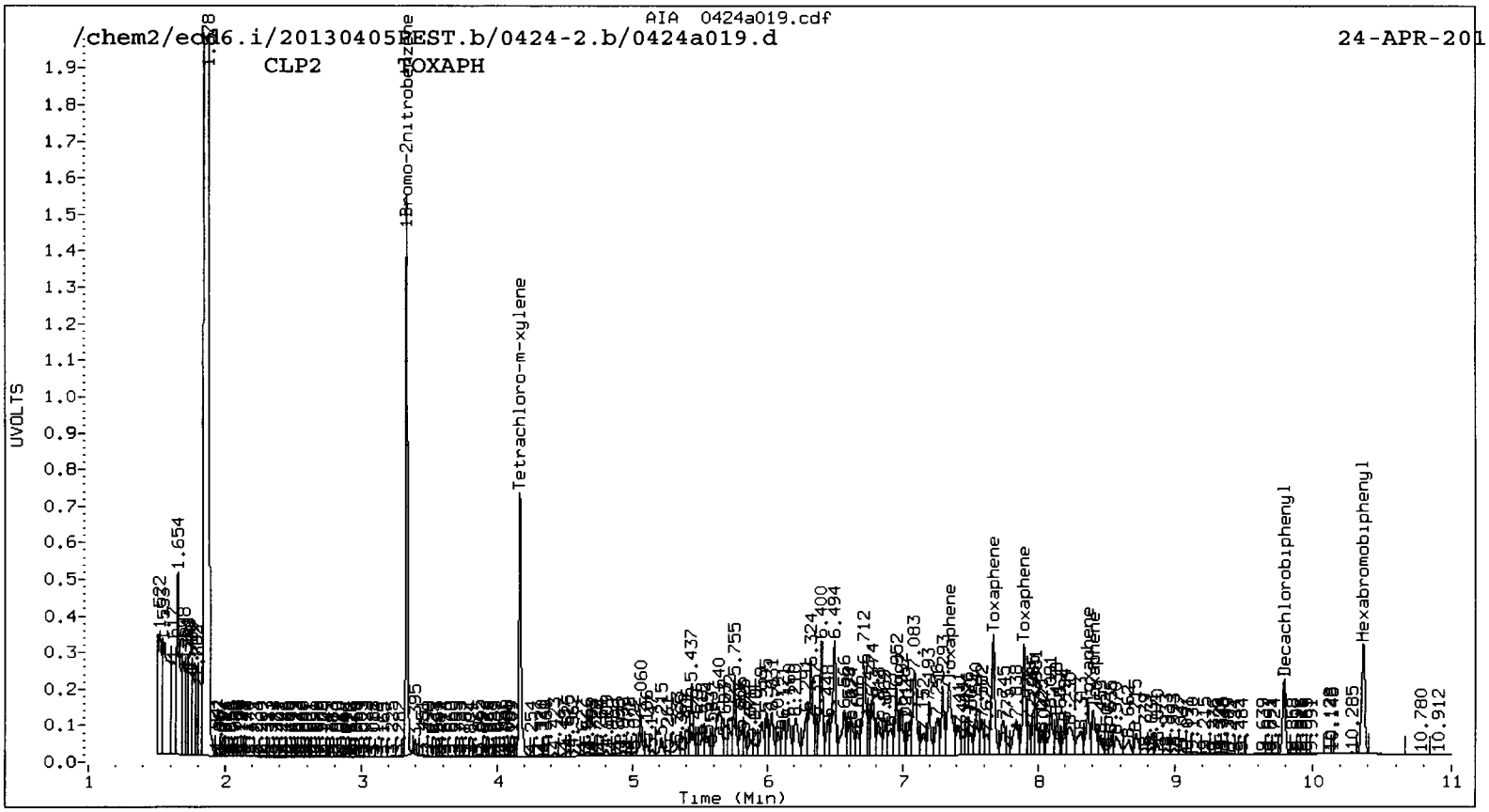
AIA 0424a019.cdf
24-APR-201
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Toxaphene
UVOLTS
Time (Min)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AIA 0424a019.cdf
24-APR-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
Toxaphene
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a006.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 25-APR-2013 12:17
Report Date: 04/26/2013 15:16
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	4277863	3.332	-0.001	22469005	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.004	2012609	4.752	-0.004	11703874	21.3901	21.4052	0.1	alpha-BHC
4.686	-0.002	739711	5.183	-0.002	4269848	19.6229	20.0282	2.0	beta-BHC
4.856	-0.002	1753437	5.496	-0.003	9872399	20.9373	21.2408	1.4	delta-BHC
4.610	-0.005	1806613	5.111	-0.005	10254688	21.2742	21.3079	0.2	gamma-BHC (Lindane)
5.060	-0.006	1725385	5.577	-0.005	9560856	21.1988	21.4239	1.1	Heptachlor
5.354	-0.006	1672417	5.915	-0.005	8783040	20.9443	21.5875	3.0	Aldrin
5.929	-0.007	1493427	6.469	-0.006	7654708	20.4622	21.7170	6.0	Heptachlor epoxide b
6.307	-0.008	1381493	6.857	-0.006	6866743	20.6274	22.3469	8.0	Endosulfan I
6.529	-0.008	2985500	7.115	-0.006	13724272	42.2690	44.4980	5.1	Dieldrin
6.228	-0.007	2384191	6.915	-0.005	14020403	41.1992	44.6291	8.0	4,4'-DDE
6.748	-0.008	2500536	7.405	-0.005	9803187	43.8845	38.1470	14.0	Endrin
6.954	-0.007	2500832	7.593	-0.005	10431954	42.8355	36.9592	14.7	Endosulfan II
6.786	-0.005	2473583	7.453	-0.005	10428107	45.5309	38.3426	17.1	4,4'-DDD
7.722	-0.007	2149822	8.136	-0.005	8231199	41.7675	35.1175	17.3	Endosulfan sulfate
7.043	-0.006	2435499	7.742	-0.004	8509103	44.7315	34.4653	25.9	4,4'-DDT
7.468	-0.006	5613389	8.323	-0.007	17248193	205.5491	168.5415	19.8	Methoxychlor
7.978	-0.007	2626422	8.628	-0.005	7976022	40.6390	33.2682	19.9	Endrin ketone
7.331	-0.007	1997496	7.891	-0.005	7795370	41.6605	35.0176	17.3	Endrin aldehyde
6.049	-0.006	1549261	6.652	-0.005	7811058	20.7678	22.0206	5.9	gamma-Chlordane
6.173	-0.007	1487752	6.790	-0.005	7181157	20.7342	21.9403	5.7	alpha-Chlordane
2.340	-0.001	2089583	2.497	0.000	7030067	21.1027	16.3350	25.5	Hexachlorobutadiene
4.177	-0.002	1464770	4.627	-0.002	11225655	21.3645	22.2877	4.2	Hexachlorobenzene
8.976	-0.003	3672659	10.363	-0.003	9462408	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2745599	4.165	-0.004	16056568	42.6662	40.4018	5.5	Tetrachloro-m-xylen
8.825	-0.006	2024887	9.790	-0.006	7526237	37.7712	33.5472	11.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	106.7	101.0	101.0~	115- 0
Decachlorobiphenyl	94.4	83.9	83.9~	115- 0

~ Indicates recovery outside QC Limits

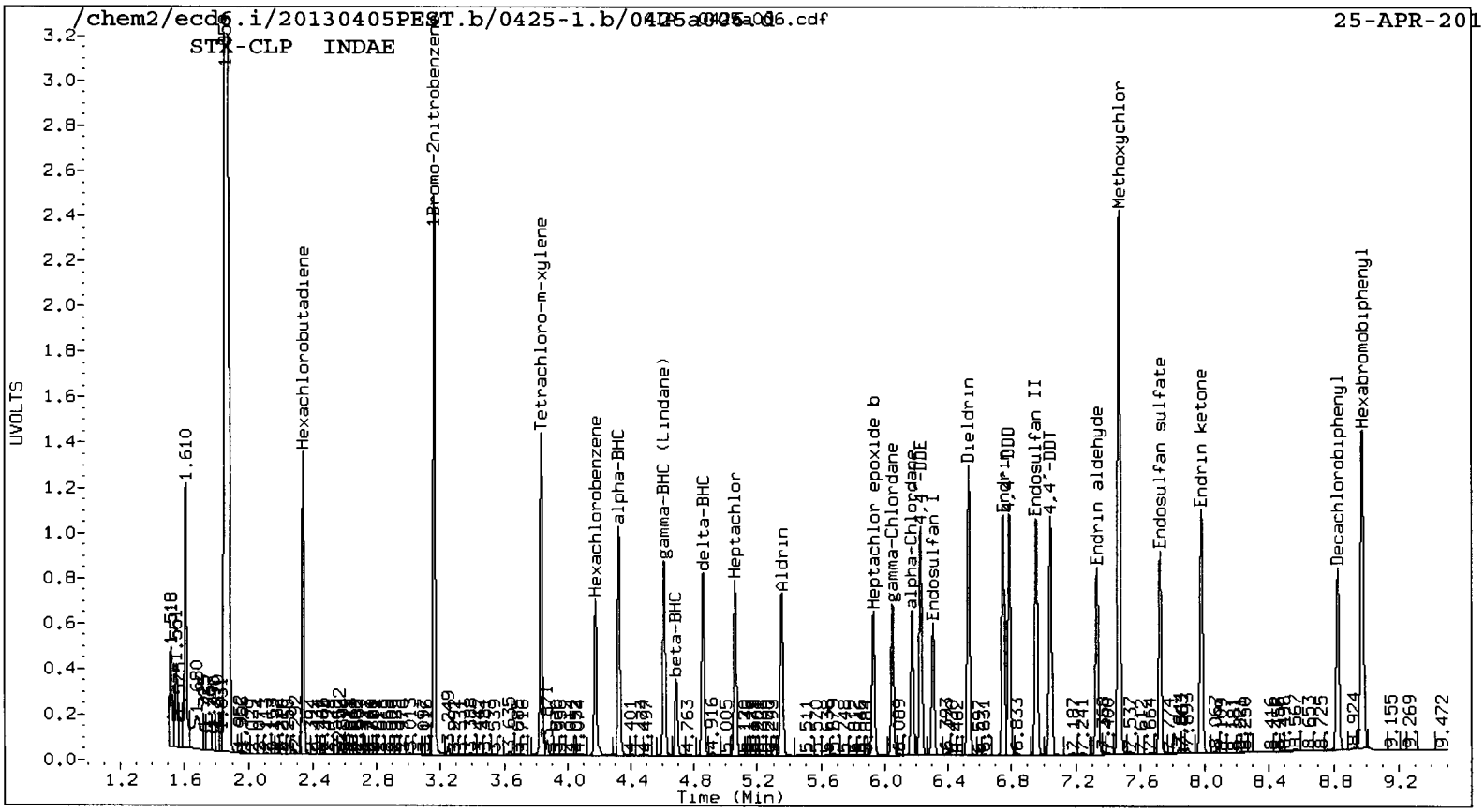
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5448520	4277863	-21.5
Hexabromobiphenyl	4807902	3672659	-23.6

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	21702340	22469005	3.5
Hexabromobiphenyl	7681727	9462408	23.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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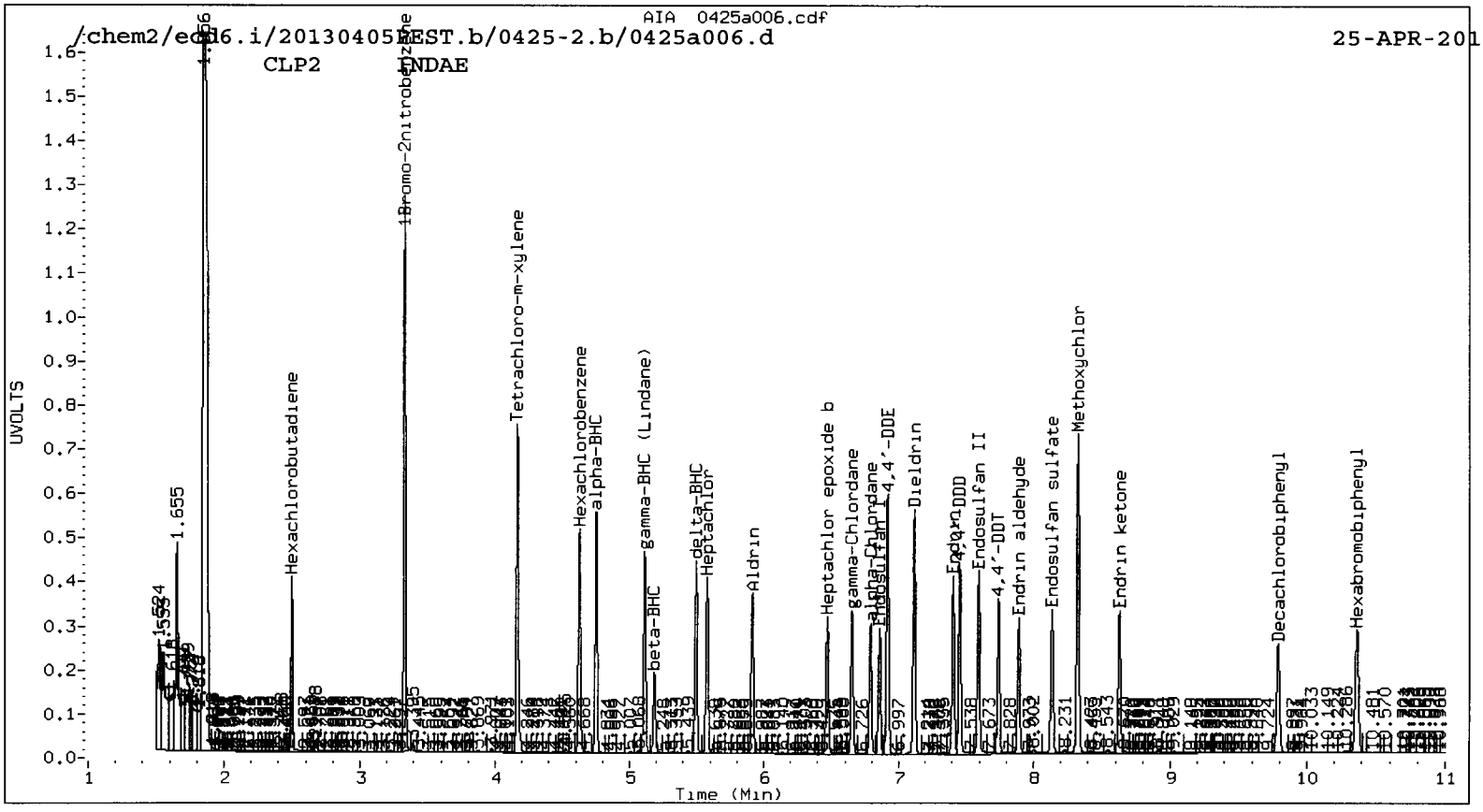
25-APR-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1.610
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0425a006.cdf
25-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1.655
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Y2 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a007.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 12:37
Compound Sublist: TOXAPH Report Date: 04/26/2013 15:16
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.164	-0.001	4072392	3.333	0.001	21400279	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.980	0.000	3476416	10.365	-0.002	8850635	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.001	2145560	4.167	-0.001	12647127	35.0240	33.4121	4.7	Tetrachloro-m-xylen
8.829	-0.002	1662525	9.792	-0.003	6172059	32.7625	29.4128	10.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	87.6	83.5	83.5~	150- 0
Decachlorobiphenyl	81.9	73.5	73.5~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

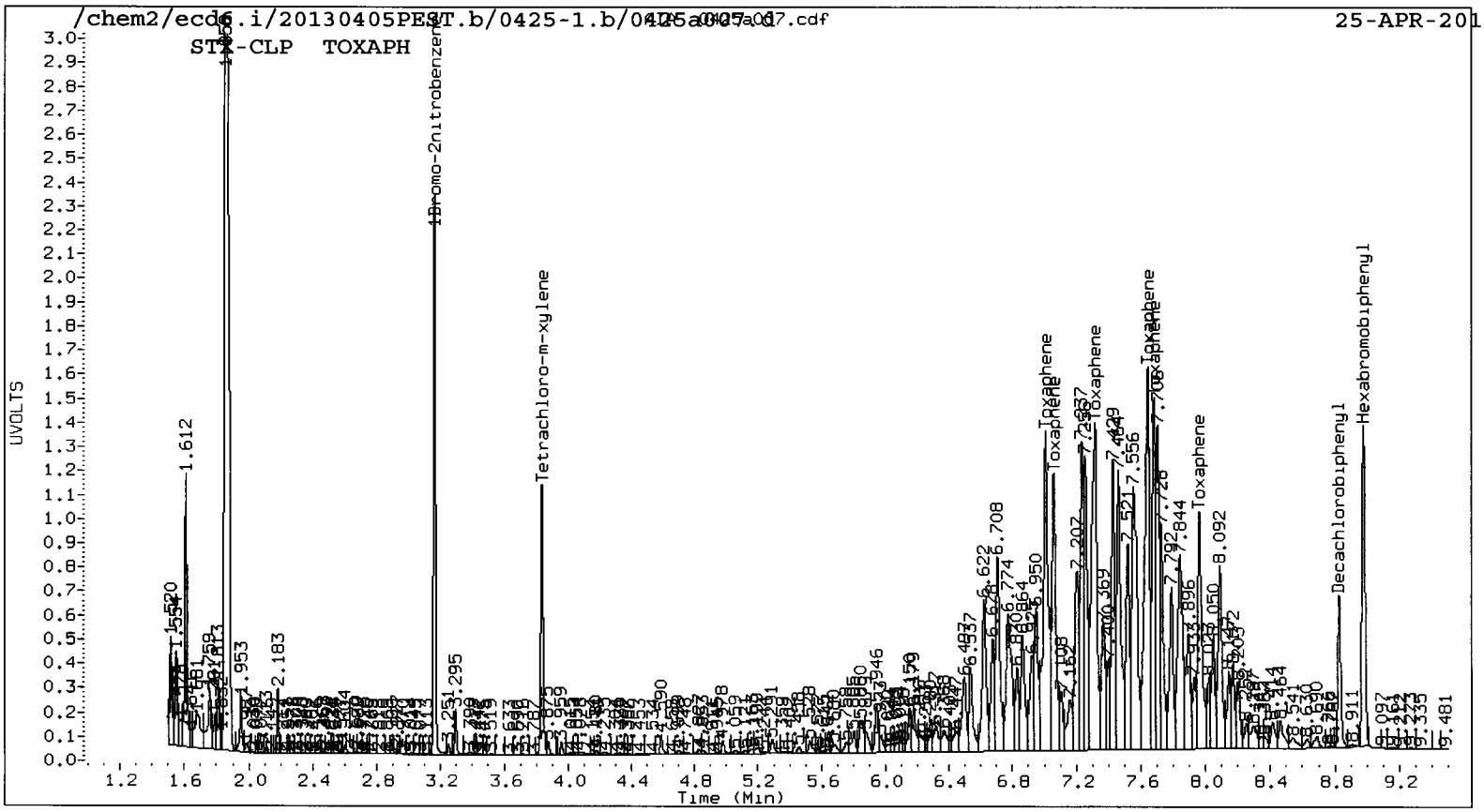
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4072392	-25.3
Hexabromobiphenyl	4807902	3476416	-27.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	21400279	-1.4
Hexabromobiphenyl	7681727	8850635	15.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.010	-0.002	5763400	2576.2	1	7.343	-0.001	18406970	2264.2
Toxaphene	2	7.062	-0.001	3936732	2585.7	2	7.667	-0.001	25748615	2116.7
Toxaphene	3	7.319	-0.001	6509661	2546.6	3	7.897	-0.001	27323859	2101.7
Toxaphene	4	7.644	-0.001	6406854	2485.0	4	8.365	-0.001	18393845	1958.0
Toxaphene	5	7.683	-0.002	4248151	2496.8	5	8.404	-0.001	23553165	1980.0
Toxaphene	6	7.964	-0.002	3464424	2371.8	NS	---			----
Total STX-CLPAve (6 peaks): 2510.370						Total CLP2Ave (5 peaks): 2084.141				RPD = 19
Corrected Ave (6 peaks): 2510.370						Corrected Ave (5 peaks): 2084.141				RPD = 19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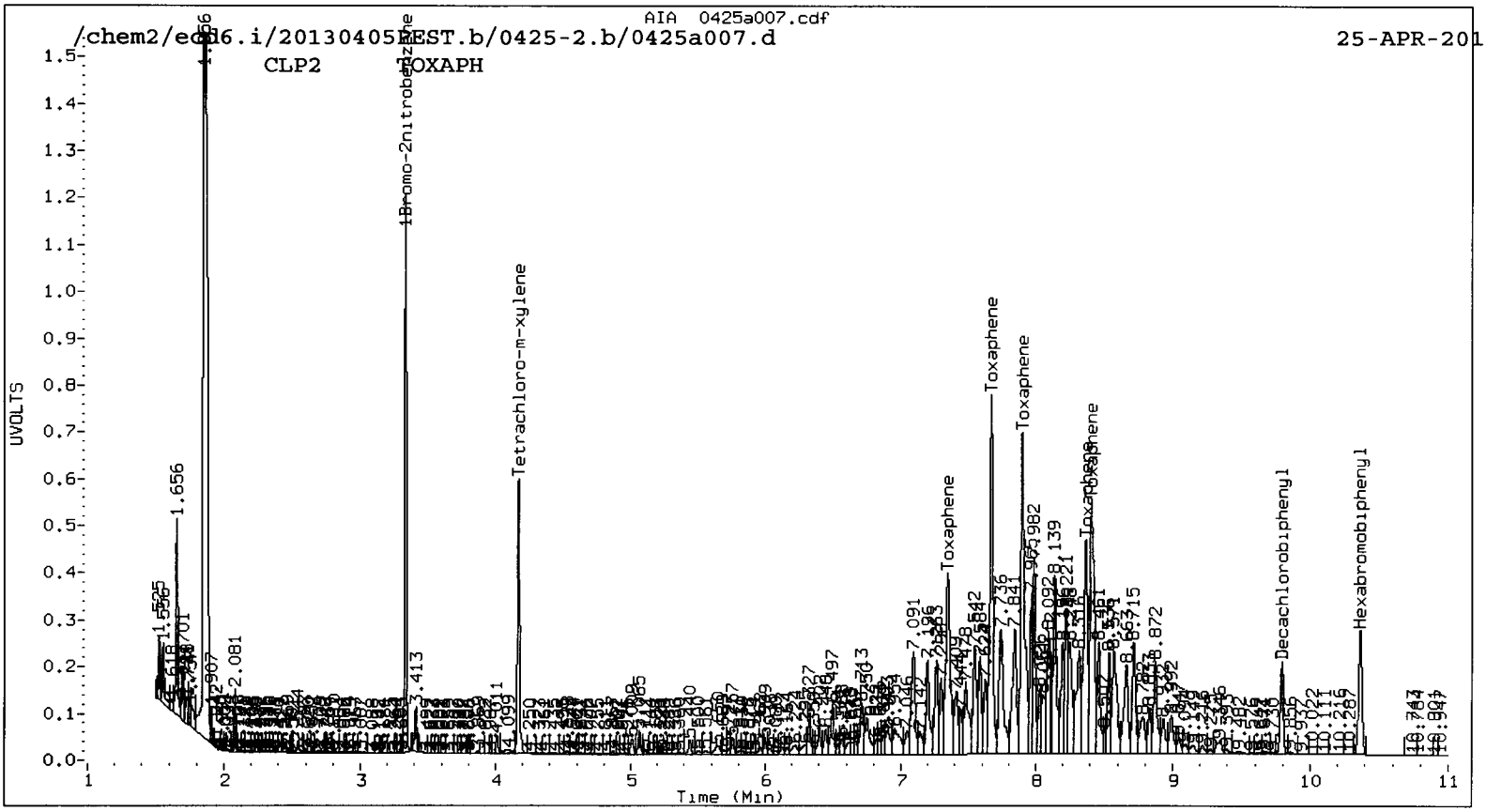
25-APR-201
ST-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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25-APR-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a008.d ARI ID: WL49F
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a008.d Client ID: IM-CB-01-20130410-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 12:56
Compound Sublist: wpest Report Date: 04/26/2013 15:16
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 500.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.163	-0.002	4800725	3.332	0.000	22385485	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.337	0.007	5708	4.753	-0.003	16002	0.0541	0.0294	59.2*	alpha-BHC
4.689	0.001	15953	5.184	-0.001	22149	0.3771	0.1043	113.3*	beta-BHC
4.847	-0.012	48483	5.505	0.006	45593	0.5159	0.0985	135.9*	delta-BHC
4.633	0.018	55293	5.104	-0.012	82754	0.5802	0.1726	108.3*	gamma-BHC (Lindane)
5.048	-0.018	43622	5.588	0.006	293294	0.4776	0.6597	32.0	Heptachlor
5.369	0.008	42481	5.889	-0.032	158085	0.4741	0.3900	19.5	Aldrin
5.965	0.029	63401	6.450	-0.026	280203	0.7741	0.7979	3.0	Heptachlor epoxide b
6.342	0.027	69526	6.843	-0.020	6844	0.9250	0.0224	190.6*	Endosulfan I
6.510	-0.027	33864	7.092	-0.029	45440	0.4272	0.1479	97.1*	Dieldrin
6.229	-0.006	45577	6.915	-0.005	130861	0.7018	0.4181	50.7*	4,4'-DDE
6.760	0.004	39728	7.418	0.008	202601	0.5932	0.7221	19.6	Endrin
6.988	0.028	33733	7.595	-0.004	122268	0.4916	0.3968	21.4	Endosulfan II
6.786	-0.004	100782	7.454	-0.004	277757	1.5783	0.9354	51.2*	4,4'-DDD
7.762	0.032	32521	8.163	0.022	114894	0.5376	0.4490	18.0	Endosulfan sulfate
7.051	0.002	90674	7.738	-0.007	380786	1.4169	1.4126	0.3	4,4'-DDT
7.483	0.009	3379	8.305	-0.025	403153	0.1053	3.6082	188.7*	Methoxychlor
7.999	0.014	4684	8.664	0.031	298607	0.0617	1.1408	179.5*	Endrin ketone
7.356	0.018	81698	7.882	-0.013	255168	1.4497	1.0499	32.0	Endrin aldehyde
6.046	-0.009	17863	6.676	0.019	184548	0.2134	0.5222	84.0*	gamma-Chlordane
6.187	0.007	19667	6.792	-0.003	31787	0.2442	0.0975	85.9*	alpha-Chlordane
2.338	-0.003	2064	2.520	0.023	119058	0.0186	0.2777	174.9*	Hexachlorobutadiene
4.181	0.002	17257	4.613	-0.017	174749	0.2243	0.3482	43.3*	Hexachlorobenzene
5.883	0.043	15162	6.402	0.017	143326	0.2245	0.4957	75.3*	Oxychlordane
5.916	0.005	8270	6.618	-0.013	149492	0.1626	0.7034	124.9*	2,4-DDE
6.121	-0.041	21571	6.751	0.010	82231	0.2681	0.2075	25.5	trans-Nonachlor
6.391	-0.007	34554	7.111	-0.004	73904	0.7767	0.3557	74.4*	2,4-DDD
6.635	-0.002	6429	7.363	-0.041	66733	0.1264	0.3027	82.2*	2,4-DDT
----			7.496	0.031	45833	0.0000	0.1225	---	cis-Nonachlor
7.672	0.020	31391	8.620	0.001	380230	0.6181	2.2281	113.1*	Mirex
8.979	-0.001	4316695	10.365	-0.001	10331150	80.0000	80.0000	0.0	Hexabromobiphenyl
1.756	0.002	3062	1.736	0.004	1034002	0.0000	0.0000	---	Hexachloroethane
6.598	0.017	27943	7.334	-0.002	28838	0.0000	0.0000	---	Kepone
3.835	-0.001	8472	4.164	-0.005	57797	0.1173	0.1460	21.8	Tetrachloro-m-xylene
8.818	-0.013	52337	9.794	-0.002	95898	0.8306	0.3915	71.9*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	0.3	0.4	0.3~	42-112
Decachlorobiphenyl	2.1	1.0	1.0~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

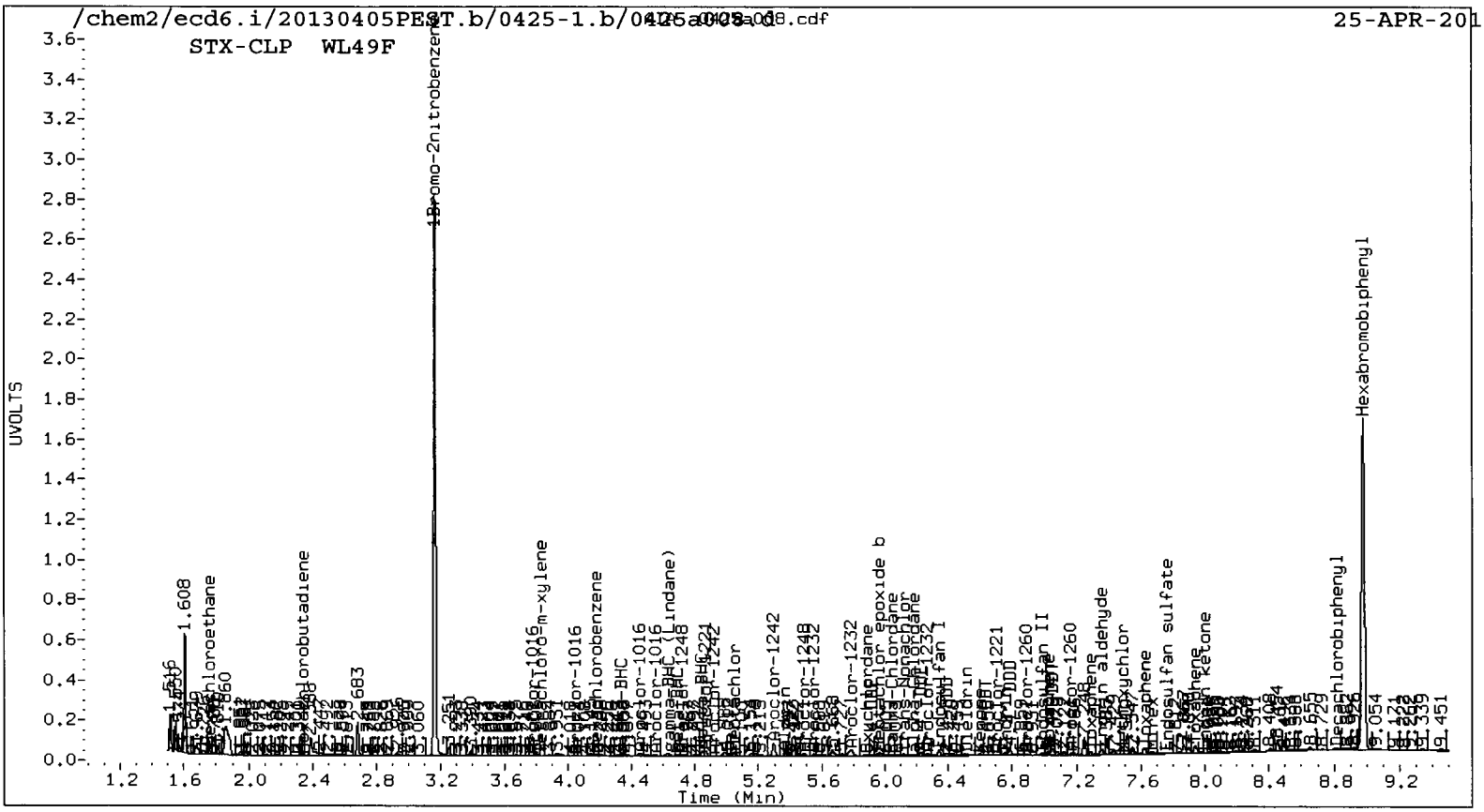
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4800725	-11.9
Hexabromobiphenyl	4807902	4316695	-10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	22385485	3.1
Hexabromobiphenyl	7681727	10331150	34.5

* 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	7.024	0.012	39247	14.1	1	7.334	-0.010	28838	3.0
Toxaphene	2	7.051	-0.013	90674	48.0	2	7.697	0.029	25565	1.8
Toxaphene	3	7.285	-0.035	40701	12.8	3	7.882	-0.016	255168	16.8
Toxaphene	4	7.620	-0.024	93207	29.1	4	8.385	0.019	163081	14.9
Toxaphene	5	7.672	-0.012	31391	14.9	5	8.404	-0.002	74069	5.3
Toxaphene	6	7.941	-0.026	123697	68.2	NS	---			----
Total STX-CLPAve (6 peaks): 31.182						Total CLP2Ave (5 peaks): 8.372				RPD = 115*
Corrected Ave (5 peaks): 23.778						Corrected Ave (3 peaks): 3.391				RPD = 150*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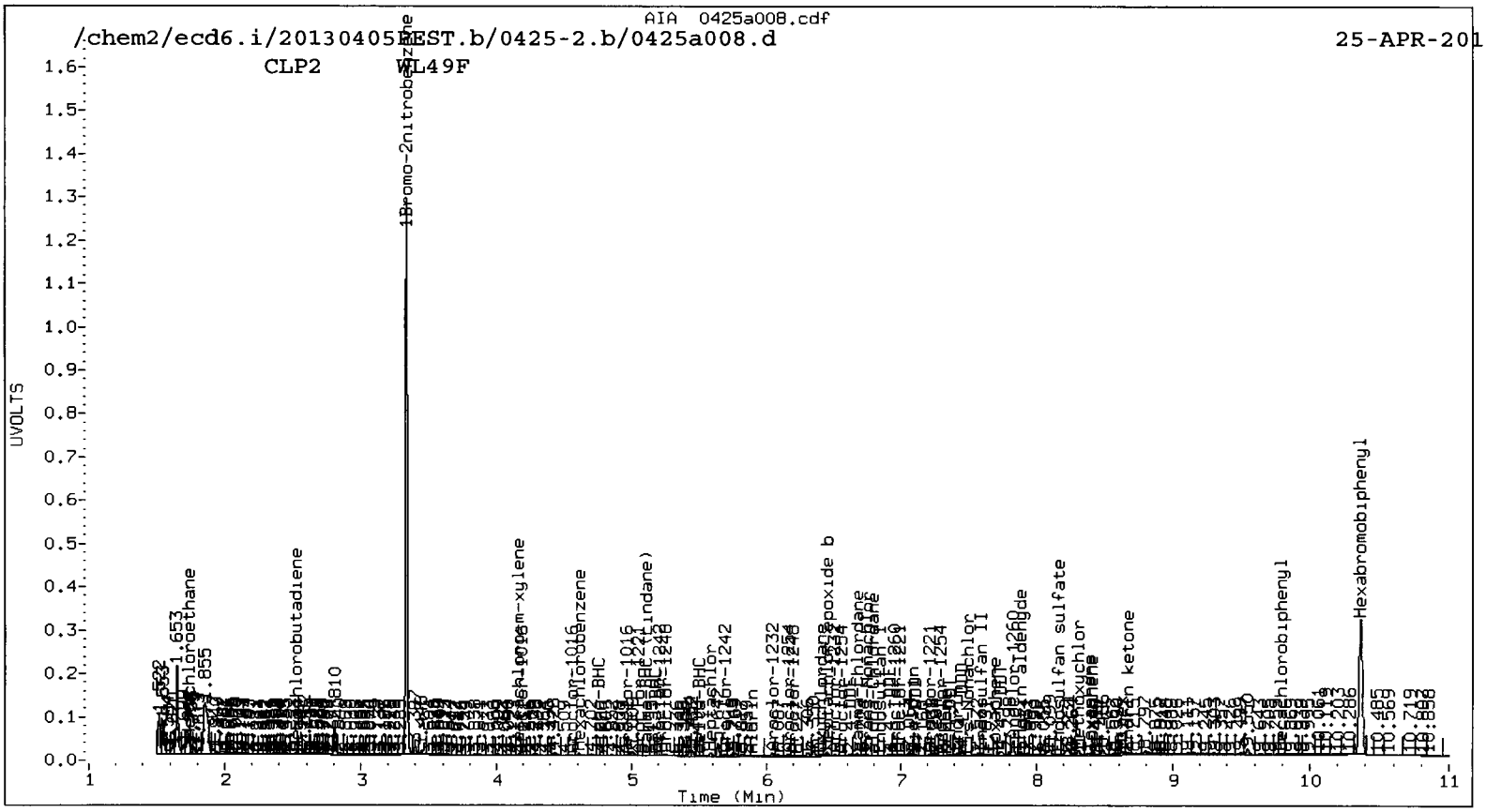
25-APR-201
STX-CLP WL49F
UVOLTS
Time (Min)
1.608
1-Bromo-2-nitrobenzene
Hexabromobiphenyl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25-APR-201
CLP2 WL49F
UVOLTS
Time (Min)
1.653
1-Bromo-2-nitrobenzene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 4/29/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a009.d ARI ID: WL49G
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a009.d Client ID: IM-CB-02-20130410-S
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 13:14
Compound Sublist: wpest Report Date: 04/26/2013 15:16
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 500.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	-0.003	5131616	3.332	0.000	26933980	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.311	-0.019	1235	4.751	-0.006	5396	0.0109	0.0082	28.2	alpha-BHC
4.720	0.033	1157	5.178	-0.007	11632	0.0256	0.0455	56.1*	beta-BHC
4.846	-0.013	3337	5.506	0.007	10687	0.0332	0.0192	53.6*	delta-BHC
----			5.100	-0.016	16214	0.0000	0.0281	---	gamma-BHC (Lindane)
5.047	-0.018	1982	5.583	0.001	7513	0.0203	0.0140	36.4	Heptachlor
5.369	0.008	1664	5.899	-0.022	19914	0.0174	0.0408	80.6*	Aldrin
5.941	0.005	9871	6.496	0.020	6900	0.1127	0.0163	149.4*	Heptachlor epoxide b
6.343	0.028	4588	6.894	0.031	3210	0.0571	0.0087	147.0*	Endosulfan I
6.508	-0.029	3010	7.159	0.038	1787	0.0355	0.0048	152.1*	Dieldrin
6.230	-0.005	11418	6.916	-0.005	3086	0.1645	0.0082	181.0*	4,4'-DDE
6.759	0.002	2312	7.414	0.004	22847	0.0343	0.0765	76.2*	Endrin
6.913	-0.047	1040	7.572	-0.027	37568	0.0150	0.1145	153.5*	Endosulfan II
6.784	-0.006	3153	7.454	-0.004	14695	0.0490	0.0465	5.3	4,4'-DDD
----			8.141	0.000	13648	0.0000	0.0501	---	Endosulfan sulfate
7.042	-0.007	7793	7.715	-0.030	375965	0.1209	1.3096	166.2*	4,4'-DDT
7.431	-0.043	3599	8.308	-0.022	75687	0.1113	0.6361	140.4*	Methoxychlor
7.969	-0.016	19674	8.632	-0.001	39309	0.2571	0.1410	58.3*	Endrin ketone
7.324	-0.015	2221	----			0.0391	0.0000	---	Endrin aldehyde
6.031	-0.024	24289	6.672	0.015	28695	0.2714	0.0675	120.3*	gamma-Chlordane
6.168	-0.012	7160	6.800	0.005	38014	0.0832	0.0969	15.2	alpha-Chlordane
2.342	0.001	2133	2.501	0.004	15086	0.0180	0.0292	47.8*	Hexachlorobutadiene
4.180	0.000	3436	4.626	-0.003	16313	0.0418	0.0270	42.9*	Hexachlorobenzene
----			6.366	-0.019	13844	0.0000	0.0398	---	Oxychlordane
----			6.619	-0.012	15171	0.0000	0.0593	---	2,4-DDE
6.124	-0.038	4882	6.732	-0.008	29118	0.0602	0.0690	13.6	trans-Nonachlor
6.382	-0.016	3506	7.098	-0.016	3188	0.0782	0.0144	137.8*	2,4-DDD
----			7.361	-0.042	13195	0.0000	0.0562	---	2,4-DDT
----			7.511	0.046	18667	0.0000	0.0468	---	cis-Nonachlor
7.663	0.010	8670	8.597	-0.022	122970	0.1695	0.6766	119.9*	Mirex
8.975	-0.005	4347872	10.361	-0.005	11002628	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	0.003	2098	1.737	0.005	721092	0.0000	0.0000	---	Hexachloroethane
6.599	0.018	1165	7.334	-0.002	17908	0.0000	0.0000	---	Kepone
3.835	-0.002	6889	4.165	-0.004	46205	0.0892	0.0970	8.3	Tetrachloro-m-xylene
8.825	-0.006	18083	9.791	-0.004	26035	0.2849	0.0998	96.2*	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	0.2	0.2	0.2~	42-112
Decachlorobiphenyl	0.7	0.2	0.2~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

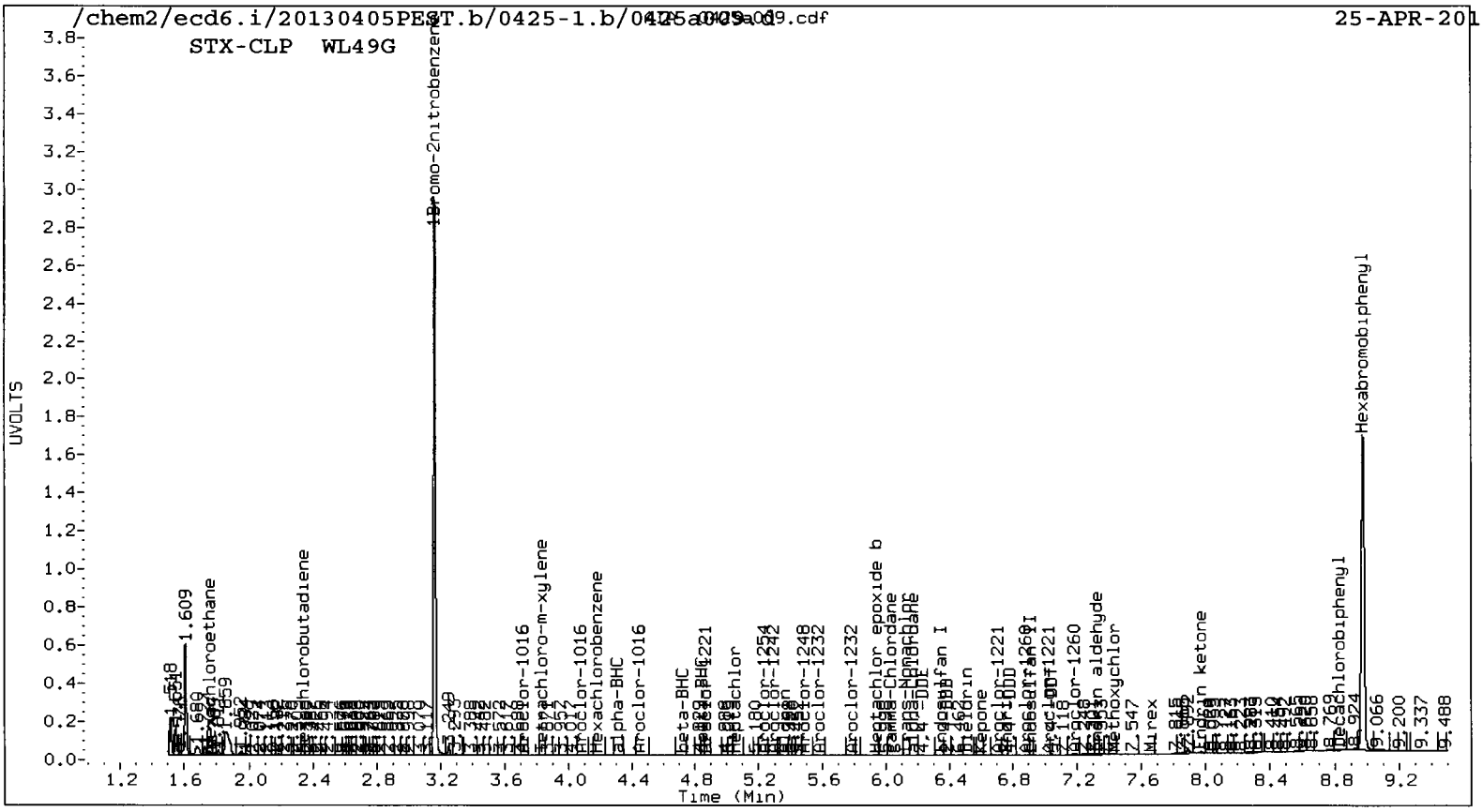
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	5131616	-5.8
Hexabromobiphenyl	4807902	4347872	-9.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	26933980	24.1
Hexabromobiphenyl	7681727	11002628	43.2

* 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	7.025	0.014	9577	3.4	1	7.334	-0.010	17908	1.8
Toxaphene	2	7.042	-0.021	7793	4.1	2	7.630	-0.037	84322	5.6
Toxaphene	3	7.324	0.004	2221	0.7	3	---			0.0
Toxaphene	4	7.663	0.018	8670	2.7	4	8.368	0.002	51481	4.4
Toxaphene	5	---			0.000	5	8.416	0.010	26475	1.8
Toxaphene	6	7.969	0.003	19674	10.8	NS	---			----
Total STX-CLPAve (5 peaks): 4.334						Total CLP2Ave (4 peaks): 3.387				RPD = 25
Corrected Ave (4 peaks): 2.725						Corrected Ave (4 peaks): 3.387				RPD = 22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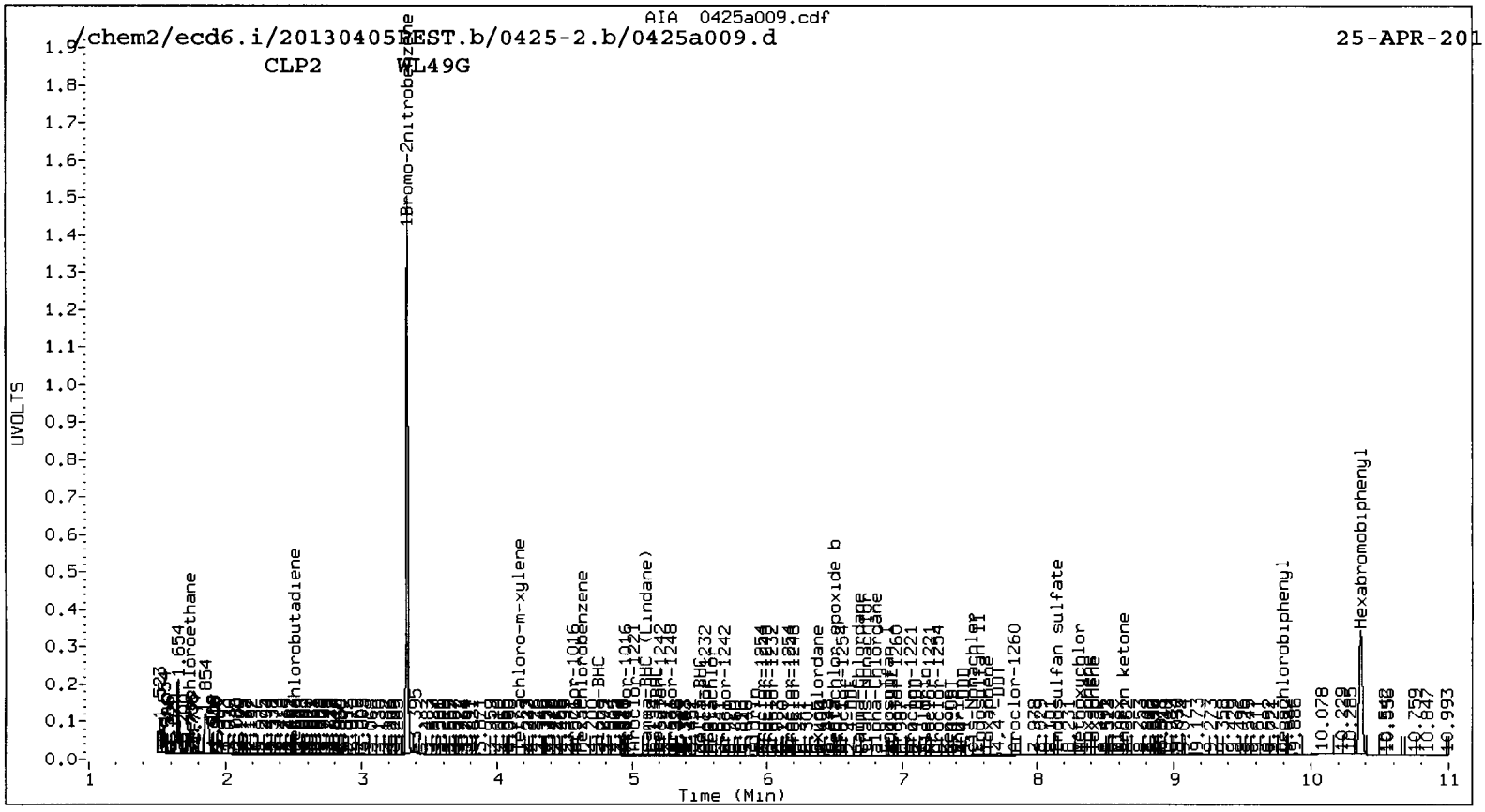
25-APR-201
STX-CLP WL49G
UVOLTS
Time (Min)
1.609
Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Hexachlorobenzene
Hexabromobiphenyl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25-APR-201
CLP2 WL49G
UVOLTS
Time (Min)
Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Hexachlorobenzene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a013.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a013.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 14:25
Compound Sublist: INDA Report Date: 04/26/2013 15:17
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YE 4/29/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	-0.003	4243504	3.332	-0.001	22903981	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.325	-0.005	2002448	4.752	-0.004	11810304	21.4544	21.1896	1.2	alpha-BHC
4.686	-0.001	732658	5.184	-0.001	4298744	19.5932	19.7808	1.0	beta-BHC
4.857	-0.002	1723535	5.496	-0.003	9842731	20.7469	20.7748	0.1	delta-BHC
4.610	-0.005	1791251	5.111	-0.005	10325828	21.2641	21.0482	1.0	gamma-BHC (Lindane)
5.059	-0.006	1701971	5.577	-0.005	9534891	21.0804	20.9600	0.6	Heptachlor
5.354	-0.006	1651285	5.915	-0.005	8781709	20.8471	21.1744	1.6	Aldrin
5.929	-0.007	1469419	6.470	-0.006	7469868	20.2962	20.7901	2.4	Heptachlor epoxide b
6.307	-0.008	1354626	6.857	-0.006	6593060	20.3900	21.0487	3.2	Endosulfan I
6.530	-0.008	2903709	7.115	-0.006	13299335	41.4439	42.3013	2.0	Dieldrin
6.228	-0.007	2348340	6.915	-0.005	13436068	40.9083	41.9568	2.5	4,4'-DDE
6.748	-0.008	2465438	7.404	-0.006	9637874	44.6587	38.1179	15.8	Endrin
6.954	-0.007	2424950	7.593	-0.006	10511153	42.8703	37.8496	12.4	Endosulfan II
6.786	-0.005	2412960	7.454	-0.004	10231031	45.8420	38.2340	18.1	4,4'-DDD
7.722	-0.007	2096178	8.136	-0.005	7920171	42.0337	34.3439	20.1	Endosulfan sulfate
7.044	-0.005	2309259	7.742	-0.004	8321593	43.7756	34.2578	24.4	4,4'-DDT
7.468	-0.006	5410625	8.323	-0.008	16722167	204.4900	166.0773	20.7	Methoxychlor
7.977	-0.008	2568385	8.628	-0.005	7800127	41.0178	33.0673	21.5	Endrin ketone
7.332	-0.007	1889228	7.891	-0.005	7411565	40.6684	33.8387	18.3	Endrin aldehyde
6.049	-0.006	1519927	6.652	-0.005	7541600	20.5395	20.8572	1.5	gamma-Chlordane
6.173	-0.007	1458580	6.790	-0.005	6884448	20.4922	20.6343	0.7	alpha-Chlordane
2.339	-0.001	2080504	2.497	0.000	7081176	21.1812	16.1413	27.0	Hexachlorobutadiene
4.177	-0.002	1456060	4.627	-0.002	11414763	21.4094	22.2328	3.8	Hexachlorobenzene
8.976	-0.003	3558332	10.362	-0.004	9309949	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.003	2714528	4.165	-0.004	16303227	42.5250	40.2434	5.5	Tetrachloro-m-xylen
8.825	-0.006	1993928	9.789	-0.006	7464877	38.3887	33.8186	12.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	106.3	100.6	100.6~	115- 0
Decachlorobiphenyl	96.0	84.5	84.5~	115- 0

WL 19 0157

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

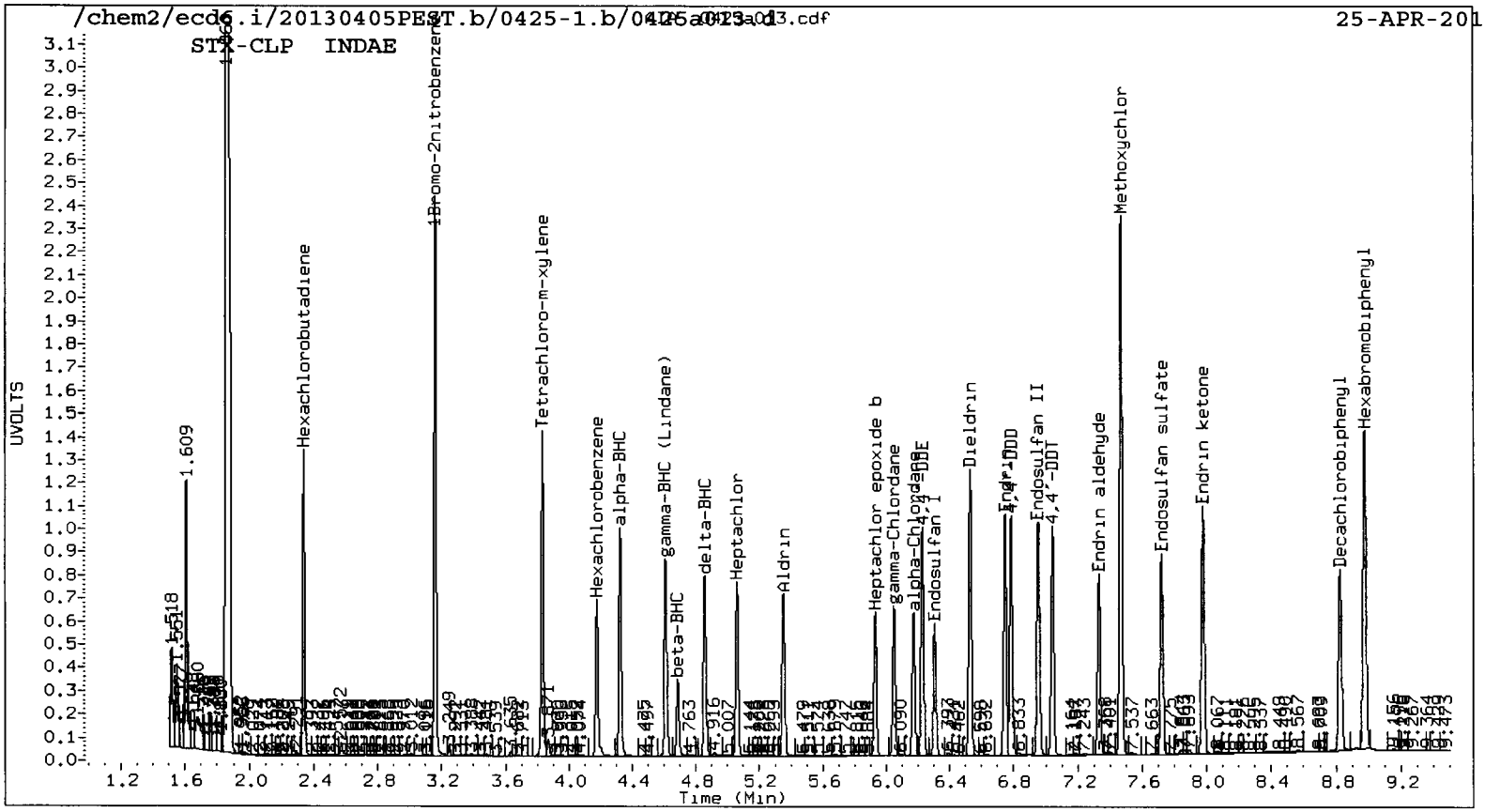
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4243504	-22.1
Hexabromobiphenyl	4807902	3558332	-26.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	22903981	5.5
Hexabromobiphenyl	7681727	9309949	21.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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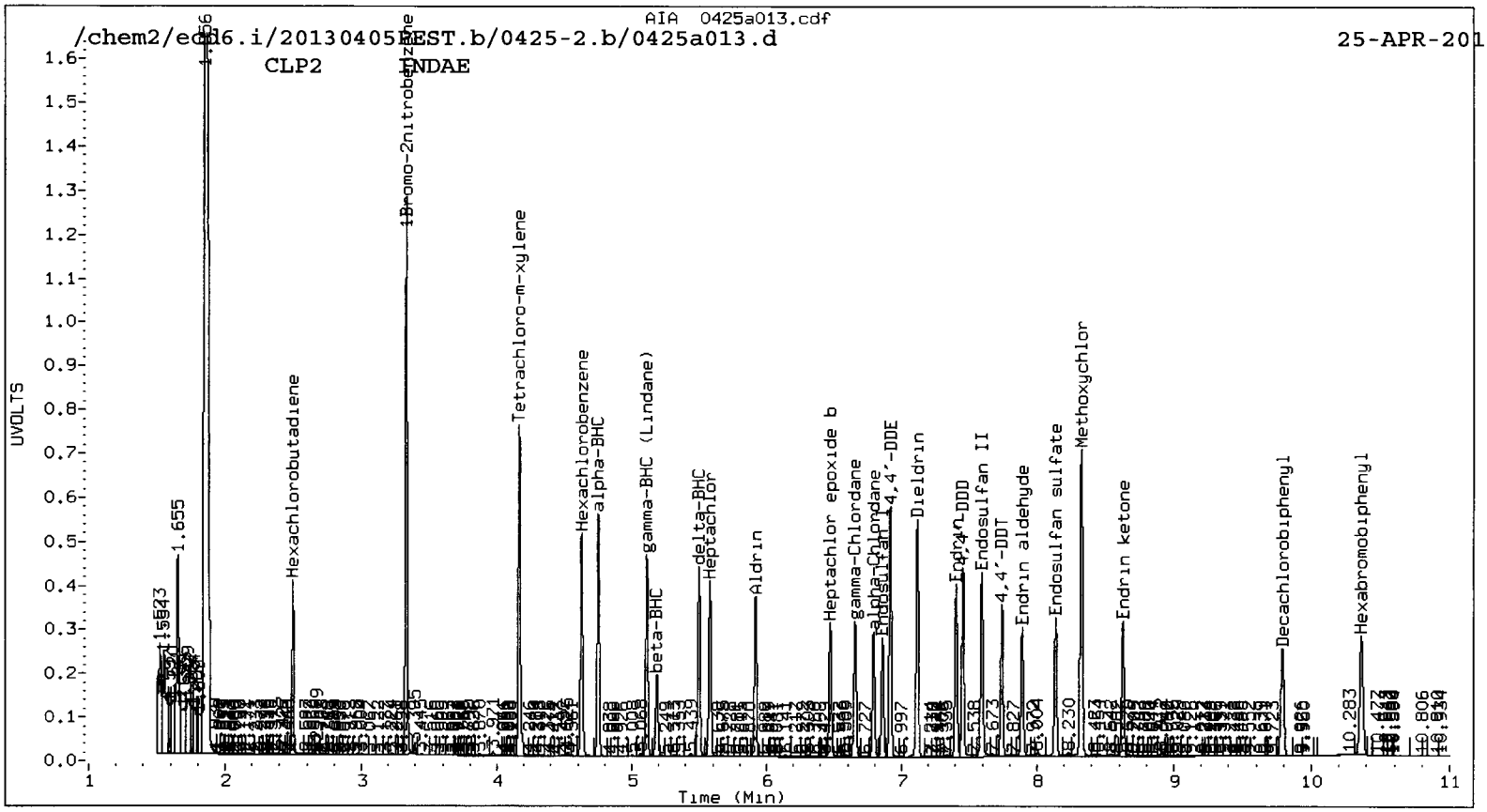
25-APR-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.609
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0425a013.cdf
25-APR-201
CLP2 INDAE
UVOLTS
Time (Min)
1.655
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

4/26/13

Data file 1: /chem2/ecd6.i/20130405PEST.b/0425-1.b/0425a014.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130405PEST.b/0425-2.b/0425a014.d Client ID:
Method: /chem2/ecd6.i/20130405PEST.b/PEST0405.m Injection Date: 25-APR-2013 14:43
Compound Sublist: TOXAPH Report Date: 04/26/2013 15:17
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	-0.002	4091075	3.332	0.000	22111997	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.976	-0.003	3470518	10.362	-0.004	9045595	80.0000	80.0000	0.0	Hexabromobiphenyl
3.834	-0.002	2156920	4.165	-0.004	12867366	35.0486	32.8998	6.3	Tetrachloro-m-xylen
8.824	-0.007	1671354	9.789	-0.006	6293260	32.9924	29.3440	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	87.6	82.2	82.2~	150- 0
Decachlorobiphenyl	82.5	73.4	73.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5448520	4091075	-24.9
Hexabromobiphenyl	4807902	3470518	-27.8

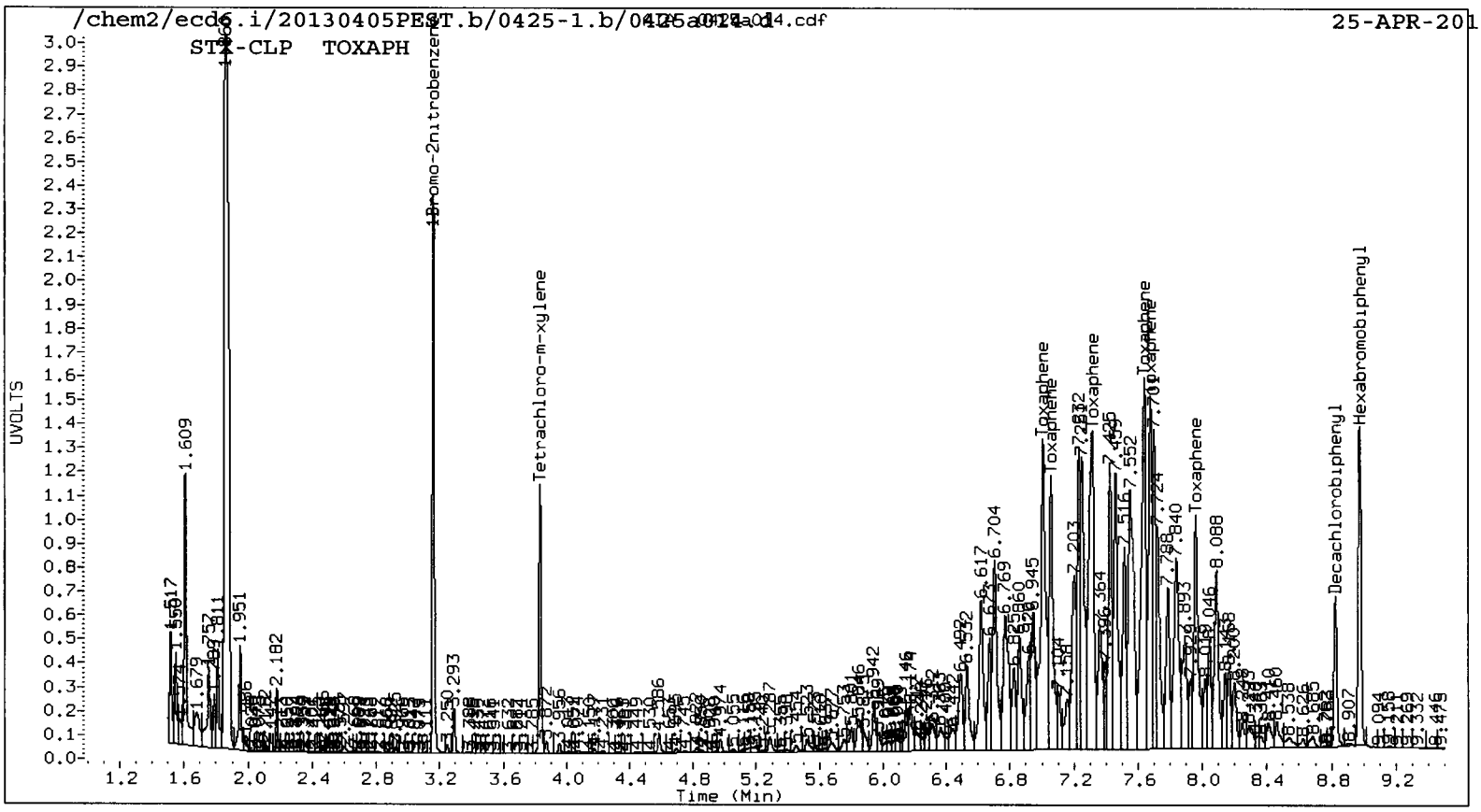
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21702340	22111997	1.9
Hexabromobiphenyl	7681727	9045595	17.8

WL19:01577

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	7.006	-0.006	5738101	2569.3	1	7.340	-0.004	18746291	2256.3
Toxaphene	2	7.057	-0.006	3917993	2577.8	2	7.664	-0.004	26724828	2149.6
Toxaphene	3	7.315	-0.006	6400501	2508.2	3	7.895	-0.004	27806648	2092.8
Toxaphene	4	7.640	-0.005	6365770	2473.3	4	8.363	-0.003	18430575	1919.7
Toxaphene	5	7.678	-0.006	4231306	2491.1	5	8.402	-0.004	23836703	1960.7
Toxaphene	6	7.960	-0.006	3444075	2361.9	NS	---			----
Total STX-CLPAve (6 peaks): 2496.924						Total CLP2Ave (5 peaks): 2075.790				RPD = 18
Corrected Ave (6 peaks): 2496.924						Corrected Ave (5 peaks): 2075.790				RPD = 18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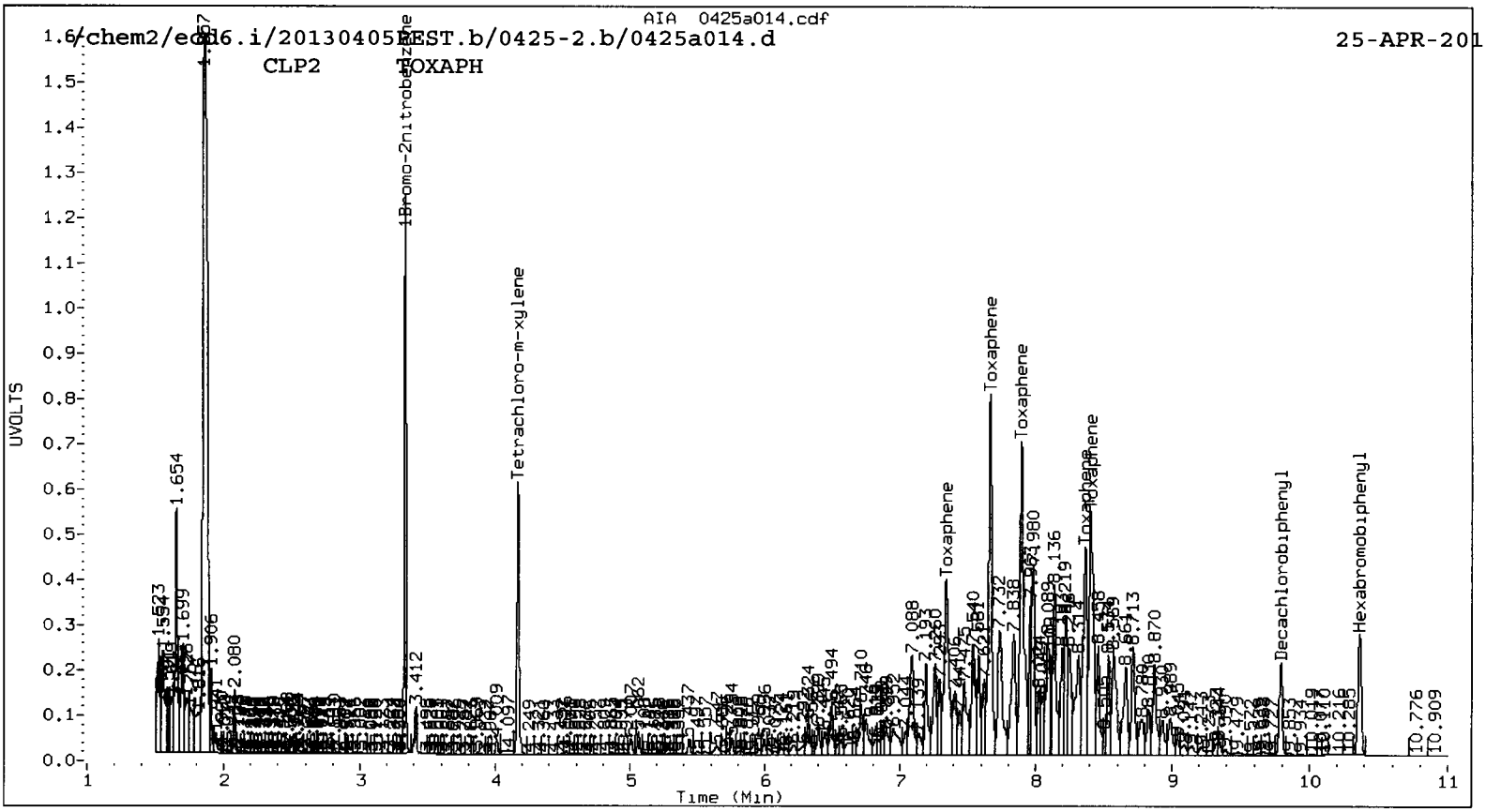
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

Incorporated
Analytical Chemists and Consultants

(8082A) PCB – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test PCB Low Level # 3 (PCBWSL) Low Level (0.01ppb)
ARI Job No(s) WL49 Page 1 of 1 Batch set up by: JH

Bottle #	ARI Sample I.D.	Volume Extracted	(REQ) Acid Clean (1:1)	(REQ) Sulfur Clean (1:1) Transfer Rinse (1) 2 3	(REQ) Silica Gel Clean (1:1) Transfer Rinse	Final Effective Volume	Volume to Lab	Comments	Verify Client ID AR 04/16/13 Analyst/Date
	WL49 MBW	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		Verifty pH is 5-9 AR 04/16/13 Analyst/Date
	SBW	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
	SBW Dup.	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
	~~QLS~~	~~1000mL~~	~~4mL~~	~~4mL~~	~~1mL~~	~~0.5mL~~	~~0.5mL~~		
6,9	WL49 A	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
8,7	B	1000mL	4mL	4mL	1mL	0.5mL	0.5mL	See Notes	KD 100°C 1 2 3 4 5 6 4/18/13 Analyst/Date
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		TurboVap 1 2 3 Pre-Cleanups 4/19/13 Analyst/Date
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL	SP 4/22/13	TurboVap (1) 2 3 Post Cleanups SP 4/22/13 Analyst/Date
Analyst/Date		AR 04/16/13 →	MW 4/19/13	MW 4/19/13	SP 4/22/13	SP 4/22/13	SP 4/22/13		

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	D (2065-4)	0.2µg/mL	100µL	5/16/13	AR	SP
Spike	13 (2031-2)	2µg/mL	25µL	8/28/13	AR	SP
~~QLS Spike~~	~~23 ( )~~	~~0.2µg/mL~~	~~50µL~~			
Extraction Time:	1540					

SPECIAL INSTRUCTIONS: 1. Rinse all Non-scratched glassware with Hexane. 2. Verify pH is 5-9.

3. Adjust pH (if necessary=Analyst Notes). 4. Add Surr/Spike. 5. Extract 3X with 60mL Hexane.

6. Non-scratched KD (NO Drying Column) at 100°. RINSE SNYDER COLUMNS WITH HEXANE 7. TurboVap.

8. Clean-ups=Transfer Rinse. 9. TurboVap. 10. Vial with Hexane.
A. Archive Y N

Reagent and Solutions Identification

(8082A) PCB – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WL49

(8082A) Low Level PCB Aqueous:	Analyst/Date
Separatory Funnel Station: Hexane: (I# 8175) Anhydrous Sodium Sulfate: (I# 8090 jar date 4/11/13)	Sep. Funnel AR 4/16/13
KD Station: Hexane: (I# 8175)	KD YL 4/18/13
Vialing Station: Hexane: (I# 8175) Concentrated Sulfuric Acid: (I# 8412) Tetrabutylammonium hydrogensulfate (TBAS): (H# 148) Sodium Sulfite: (I# 7704) Silica Gel (SPE) Darts: (I# 7750)	Vialing SC 4/22/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49

Client ID: SAIC

Parameter: PCB Low level

Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= WL49 samples A, light grey light turbidity B tan, turbid	AR 04/16/13
☑ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) WL49 sample B 3% particulates	AR 04/16/13
☑ Emulsions (%)= WL49 Sample B 100% emulsion, used centrifuge dry sample with sulfate	AR 04/16/13
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	
extract B is viscus and amber in color pre-cleanup	MW 4/19/13

3056F

Revision 009
08/14/12

WL49 : 01592

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) WL49, WL67 Page 1 of 1 PSDDA (4ppb)
Batch set up by: ~~JH~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) Very high 1 2 (3) sulfur	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS WL49	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	TH 4/19/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave (1) 2 3 YL 04/19/13 Analyst/Date
	~~SBSDup~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	WL49 QLS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6 RR 04/22/13 Analyst/Date
7	F	12.57	2.5mL	2.5mL	1mL	2.5mL	1mL	See Analyst Notes	
3	G	16.49	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	GMS	16.05	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	GMSd	16.39	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	WL67A	31.55	2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 (2) 8 Pre-Cleanups CJZ 4/23/13 Analyst/Date
8	B	7.58	2.5mL	2.5mL	1mL	2.5mL	1mL	See Analyst Notes	
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL	CJZ 4/23/13	TurboVap 1 2 (6) Post Cleanups
			2.5mL	2.5mL	1mL	2.5mL	1mL		
Analyst/Date	TH 4/19/13		CJZ 4/23/13	CJZ 4/23/13	CJZ 4/23/13	CJZ 4/23/13	CJZ 4/23/13		CJZ 4/23/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(2ϕ35-2)	2µg/mL	50µL	5/16/13	YL	TH
Spike	1 (2ϕ74-4)	20µg/mL	63µL	10/31/13	YL	TH
QLS Spike	5 (2ϕ88-3)	2µg/mL	25µL	10/31/13	YL	TH

Extraction Time: 12:40 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate.
2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels).
3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike.
5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Smaller~~ Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate).
12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

A. Need Total Solids Y /(N) B. ~~Archive~~/Freeze Y/ N
Both Jobs

WL49 - 67 SDG

Reagent and Solutions Identification

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WL49, WL67

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8040 + jar date 4/11/13)	YL 04/19/13
Neutral Glasswool: (I# 7998 + jar date 4/5/13)	
1:1 Hexane/Acetone: (H# 158)	
80:20 Hexane/Acetone: (H# 162)	
Hexane: (I# 8175)	
KD Station:	KD
Hexane: (I# 8175)	RR 04/22/13
Anhydrous Sodium Sulfate: (I# 8068 + jar date 04/04/13	
Neutral Glasswool: (I# 7998 + jar date 04/05/13)	
Vialing Station:	Vialing
Hexane: (I# 8175)	
Concentrated Sulfuric Acid: (I# 8012)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 148)	CSZ 4/23/13
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# 7914)	

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Extract Dilution Bench Sheet

ARI Job#: _____ Client ID: _____
Analyst: JK Date: 04/23/13

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
WL49F	50	Hexane	950	20				
WL67A	↓	↓	↓	↓				
WL67B	↓	↓	↓	↓				

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Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 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)= 9,t	AC 4-12-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? 30% small-med. = g	
☐ Organics (Leaves/sticks/grass)= 10% = sticks = g t AC 4-12-13	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☑ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst, (Centrifuge#1 used for all Centrifugations) reduced extraction weight for Sample 'F', based on Sample pre-screen.	JT 4/12/13

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Revision 009
08/14/12

PCB Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

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GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/16/13 Internal Standard ID ~~2006-1~~ Expiration 7/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
1660	1980-1	5/16/13	1660	2009-2	5/16/13
1242	1980-4	5/16/13	1242	2009-5	
1248	1980-5	5/16/13	1248	2009-6	
1254	1980-6	5/16/13	1254	2009-7	
2462	1980-2	5/16/13	2462	2009-3	
3268	1980-3	5/16/13	3268	2009-4	
DDTS	FF1-2	4/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Man Int in 1660 low point on 2435 cal.

Analyst: [signature] **Date:** 4/17/13

Reviewer: [signature] **Date:** 4/23/13

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 4/16/13 Analysis: PCB Analyst: JK

Column 1 Serial No.: 213234 Column Type: 1701

Column 2 Serial No.: 176568 Column Type: 1701

GC Method: PCB ICal Date: 4/16/13 Injection Volume: 2 uL

IS	Ical/Ccal	ICV
2006-1	1PB0-1,2,3,4,5,6	2009-2,3,4,5,6,7

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130416.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	16-APR-2013 15:46	0416a001.d	1	IB	
2	16-APR-2013 16:06	0416a002.d	1	AR1660 .25	
3	16-APR-2013 16:27	0416a003.d	1	AR1660 .02	
4	16-APR-2013 16:47	0416a004.d	1	AR1660 .05	
5	16-APR-2013 17:08	0416a005.d	1	AR1660 1	
6	16-APR-2013 17:29	0416a006.d	1	AR1660 0.1	
7	16-APR-2013 17:49	0416a007.d	1	AR1660 0.5	
8	16-APR-2013 18:10	0416a008.d	1	AR1242	
9	16-APR-2013 18:30	0416a009.d	1	AR1248	
10	16-APR-2013 18:51	0416a010.d	1	AR1254	
11	16-APR-2013 19:11	0416a011.d	1	AR2162	
12	16-APR-2013 19:32	0416a012.d	1	AR3268	
13	16-APR-2013 19:53	0416a013.d	1	AR1660 ICV	
14	16-APR-2013 20:13	0416a014.d	1	AR1242 ICV	
15	16-APR-2013 20:34	0416a015.d	1	AR1248 ICV	
16	16-APR-2013 20:54	0416a016.d	1	AR1254 ICV	
17	16-APR-2013 21:15	0416a017.d	1	AR2162 ICV	
18	16-APR-2013 21:35	0416a018.d	1	AR3268 ICV	
19	16-APR-2013 21:56	0416a019.d	1	DDTS 0.1	
20	16-APR-2013 22:16	0416a020.d	1	DDT BD	

JK 4/18/13

Now 1701 column

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130416.b/ical-1.b/0416a003.d
Level 2: /chem2/ecd7.i/20130416.b/ical-1.b/0416a004.d
Level 3: /chem2/ecd7.i/20130416.b/ical-1.b/0416a006.d
Level 4: /chem2/ecd7.i/20130416.b/ical-1.b/0416a002.d
Level 5: /chem2/ecd7.i/20130416.b/ical-1.b/0416a007.d
Level 6: /chem2/ecd7.i/20130416.b/ical-1.b/0416a005.d
Level 7: /chem2/ecd7.i/20130416.b/ical-1.b/0416a012.d
Level 8: /chem2/ecd7.i/20130416.b/ical-1.b/0416a019.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00974	+++++	0.00974	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00736	+++++	0.00736	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02468	+++++	0.02468	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01845	+++++	0.01845	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06225	+++++	0.06225	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02456	+++++	0.02456	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02301	+++++					0.02301	0.000
4 Aroclor-1232 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01635	+++++					0.01635	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00952	+++++					0.00952	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03181	+++++					0.03181	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01279	+++++					0.01279	0.000
7 Aroclor-1016 (1)	0.02827	0.02492	0.02432	0.02292	0.02266	0.02188		
	+++++	+++++					0.02416	9.520
(2)	0.09210	0.08255	0.08218	0.07756	0.07757	0.07456		
	+++++	+++++					0.08109	7.644
(3)	0.03679	0.03319	0.03248	0.03037	0.03007	0.02889		
	+++++	+++++					0.03197	8.917
(4)	0.02131	0.01905	0.01872	0.01731	0.01709	0.01633		
	+++++	+++++					0.01830	9.820

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04360	+++++					0.04360	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02774	+++++					0.02774	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03854	+++++					0.03854	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05133	+++++					0.05133	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04767	+++++					0.04767	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02881	+++++					0.02881	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05688	+++++					0.05688	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06046	+++++					0.06046	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05707	+++++					0.05707	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.05707	0.05119	0.04980	0.04729	0.04587	0.04394		
	+++++	+++++					0.04919	9.481
(2)	0.05705	0.05077	0.04968	0.04737	0.04631	0.04451		
	+++++	+++++					0.04928	8.982
(3)	0.13322	0.11983	0.11956	0.11604	0.11398	0.11054		
	+++++	+++++					0.11886	6.609
(4)	0.06385	0.06229	0.06267	0.06097	0.06047	0.05885		
	+++++	+++++					0.06152	2.894
(5)	0.03348	0.02994	0.02954	0.02841	0.02795	0.02706		
	+++++	+++++					0.02940	7.682
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05813	+++++					0.05813	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.15569	+++++					0.15569	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05024	+++++					0.05024	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05855	+++++					0.05855	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05133	+++++					0.05133	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16806	+++++					0.16806	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.15680	+++++					0.15680	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13284	+++++					0.13284	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.40564	+++++					0.40564	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	705					705	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	647					647	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	831					831	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1123					1123	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB1.m
Cal Date : 17-Apr-2013 11:01 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	904	904	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1052	1052	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.01155	0.96030	0.98858	0.98603	1.01674	1.00501	+++++	+++++	0.99470	2.095
$ 13 Decachlorobiphenyl	1.48082	1.27393	1.23901	1.14662	1.10897	1.06603	+++++	+++++	1.21923	12.314

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130416.b/ical-2.b/0416a003.d
Level 2: /chem2/ecd7.i/20130416.b/ical-2.b/0416a004.d
Level 3: /chem2/ecd7.i/20130416.b/ical-2.b/0416a006.d
Level 4: /chem2/ecd7.i/20130416.b/ical-2.b/0416a002.d
Level 5: /chem2/ecd7.i/20130416.b/ical-2.b/0416a007.d
Level 6: /chem2/ecd7.i/20130416.b/ical-2.b/0416a005.d
Level 7: /chem2/ecd7.i/20130416.b/ical-2.b/0416a012.d
Level 8: /chem2/ecd7.i/20130416.b/ical-2.b/0416a019.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01234	+++++	0.01234	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00787	+++++	0.00787	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02274	+++++	0.02274	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.00781	+++++	0.00781	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01589	+++++	0.01589	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01754	+++++	0.01754	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03158	+++++	0.03158	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01028	+++++	0.01028	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01486	+++++	0.01486	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.02966	+++++	0.02966	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05866	+++++	0.05866	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02035	+++++	0.02035	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01635	+++++	0.01635	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04205	+++++	0.04205	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02999	+++++	0.02999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04073	+++++					0.04073	0.000
7 Aroclor-1016(1)	0.02361	0.02119	0.01966	0.01701	0.01577	0.01461		
	+++++	+++++					0.01864	18.490
(2)	0.05401	0.04566	0.04191	0.03673	0.03468	0.03247		
	+++++	+++++					0.04091	19.640
(3)	0.10057	0.08654	0.08102	0.07251	0.07006	0.06783		
	+++++	+++++					0.07975	15.553
(4)	0.03180	0.02741	0.02574	0.02278	0.02193	0.02090		
	+++++	+++++					0.02509	16.298
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02578	+++++					0.02578	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03193	+++++					0.03193	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05208	+++++					0.05208	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05172	+++++					0.05172	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03841	+++++					0.03841	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06071	+++++					0.06071	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13995	+++++					0.13995	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05344	+++++					0.05344	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08764	+++++					0.08764	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04822	+++++					0.04822	0.000
9 Aroclor-1260(1)	0.08315	0.07181	0.06790	0.06246	0.05848	0.05676		
	+++++	+++++					0.06676	14.715
(2)	0.06254	0.05576	0.05356	0.04997	0.04679	0.04537		
	+++++	+++++					0.05233	12.154
(3)	0.12849	0.11287	0.10950	0.10275	0.09866	0.09801		
	+++++	+++++					0.10838	10.596

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(4)	0.08269	0.07553	0.07330	0.06918	0.06544	0.06400	+++++	+++++	0.07169	9.722
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.14002	+++++	0.14002	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.13287	+++++	0.13287	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10716	+++++	0.10716	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.35159	+++++	0.35159	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	615	615	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	975	975	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	545	545	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	433	433	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-APR-2013 16:06
End Cal Date : 16-APR-2013 21:56
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130416.b/PCB2.m
Cal Date : 17-Apr-2013 10:20 peter
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	891	891	0.000
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene	1.28715	1.10735	1.06877	1.00266	0.99916	0.97665	+++++	+++++	1.07362	10.761
$ 13 Decachlorobiphenyl	0.90251	0.92126	0.94367	0.92656	0.90134	0.90784	+++++	+++++	0.91720	1.798

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a001.d
Data file 2: 20130416.b/ical-2.b/0416a001.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 16-APR-2013 15:46
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.722	0.006	2822703	5.391	-0.009	4342996	0.0	16071.4	----	Tetrachloro-m-xylene
14.595	0.003	2458500	14.650	0.001	2874864	0.0	0.0	----	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	0.0	40178.4
Decachlorobiphenyl	0.0	0.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	0	-100.0 <-
Hexabromobiphenyl	4375297	0	-100.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	20136	-99.8 <-
Hexabromobiphenyl	6077527	0	-100.0 <-

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	6.637	-0.024	11246	2396.6
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	9.481	0.063	13286	2103.7
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	6.221	-0.006	61850	19907.1
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	6.637	-0.024	11246	1965.0
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	6.637	-0.024	11246	3006.2
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	9.481	0.062	13286	2593.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a002.d
Data file 2: 20130416.b/ical-2.b/0416a002.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 .25
Client ID:
Injection Date: 16-APR-2013 16:06
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	1378308	5.399	-0.001	2137002	19.8	18.7	6.0	Tetrachloro-m-xylene
14.591	0.000	1254197	14.649	0.000	1407805	18.8	20.2	7.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	49.6	46.7
Decachlorobiphenyl	47.0	50.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5591339	0.0
Hexabromobiphenyl	4375297	4375297	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8525322	0.0
Hexabromobiphenyl	6077527	6077527	0.0

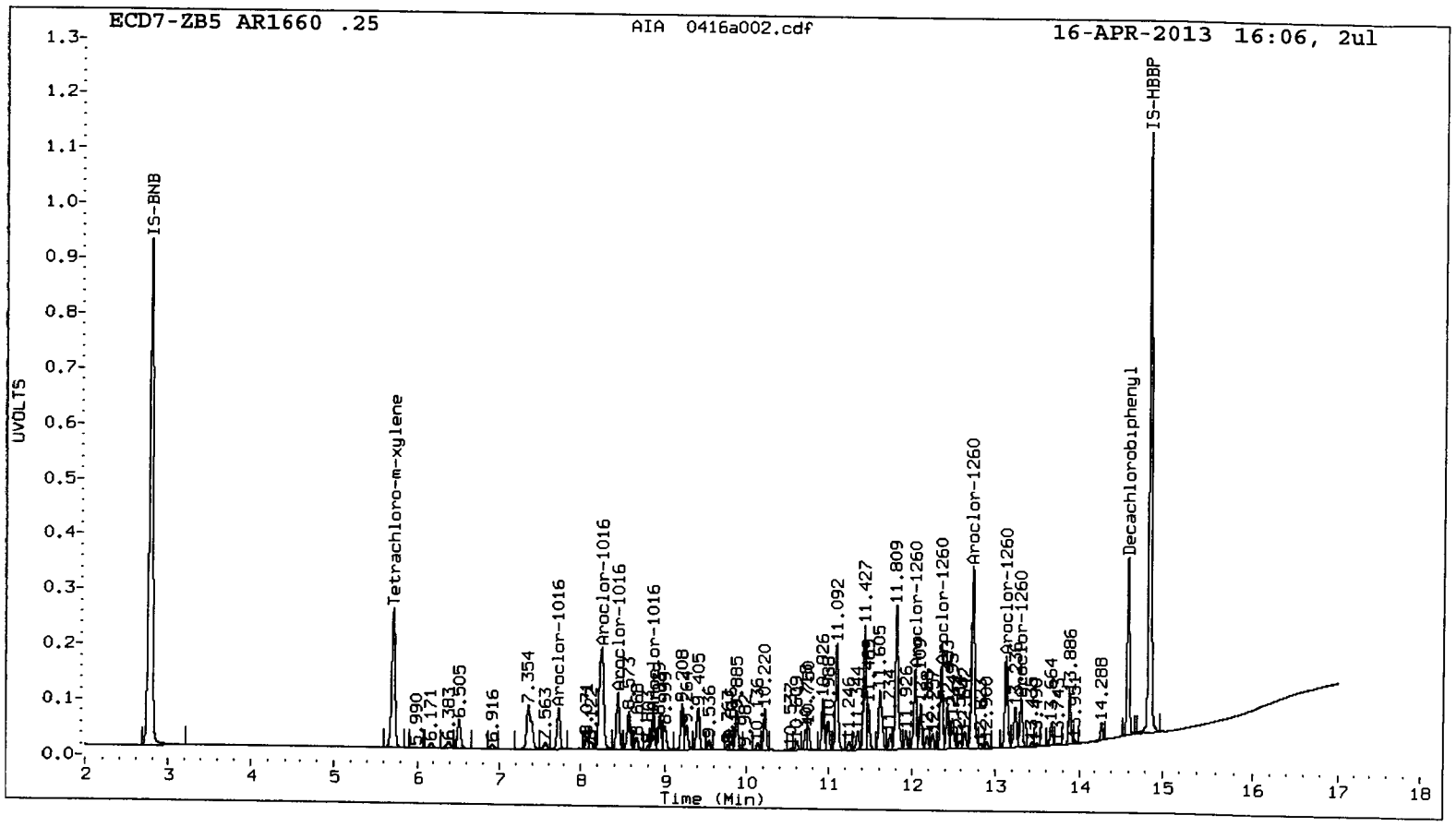
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	400549	237.2	1	6.661	0.000	453267	228.1
Aroclor-1016	2	8.252	0.000	1355141	239.1	2	7.542	0.001	978658	224.5
Aroclor-1016	3	8.438	0.000	530676	237.5	3	8.353	-0.001	1931731	227.3
Aroclor-1016	4	8.864	0.000	302372	236.4	4	9.419	0.001	606923	227.0
	Total Col1Ave (4 peaks):			237.6		Total Col2Ave (4 peaks):			226.7	RPD = 5
	Corrected Ave (3 peaks):			237.0		Corrected Ave (3 peaks):			226.2	RPD = 5
Aroclor-1260	1	12.040	0.000	646531	240.3	1	11.972	0.002	1186342	233.9
Aroclor-1260	2	12.358	0.000	647731	240.3	2	12.517	0.001	949040	238.7
Aroclor-1260	3	12.729	0.000	1586585	244.1	3	12.788	0.002	1951511	237.0
Aroclor-1260	4	13.127	0.000	833563	247.8	4	13.349	0.002	1313829	241.2
Aroclor-1260	5	13.305	0.000	388379	241.6	NS	---			----
	Total Col1Ave (5 peaks):			242.8		Total Col2Ave (4 peaks):			237.7	RPD = 2
	Corrected Ave (4 peaks):			241.6		Corrected Ave (3 peaks):			236.5	RPD = 2

Total PCB Area Col1 (5.816 - 14.491) = 19196403 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 25726136 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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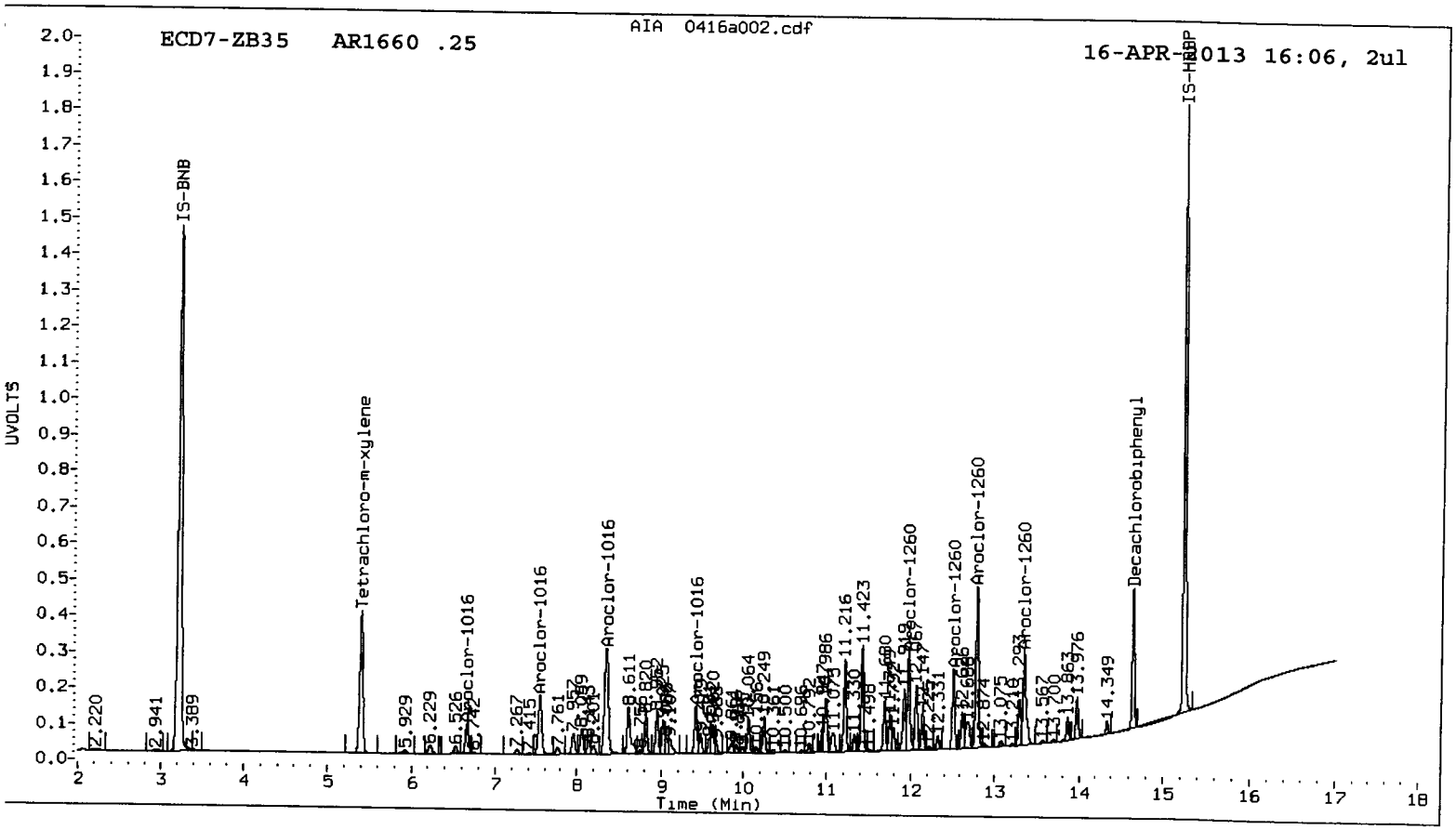
AIA 0416a002.cdf
16-APR-2013 16:06, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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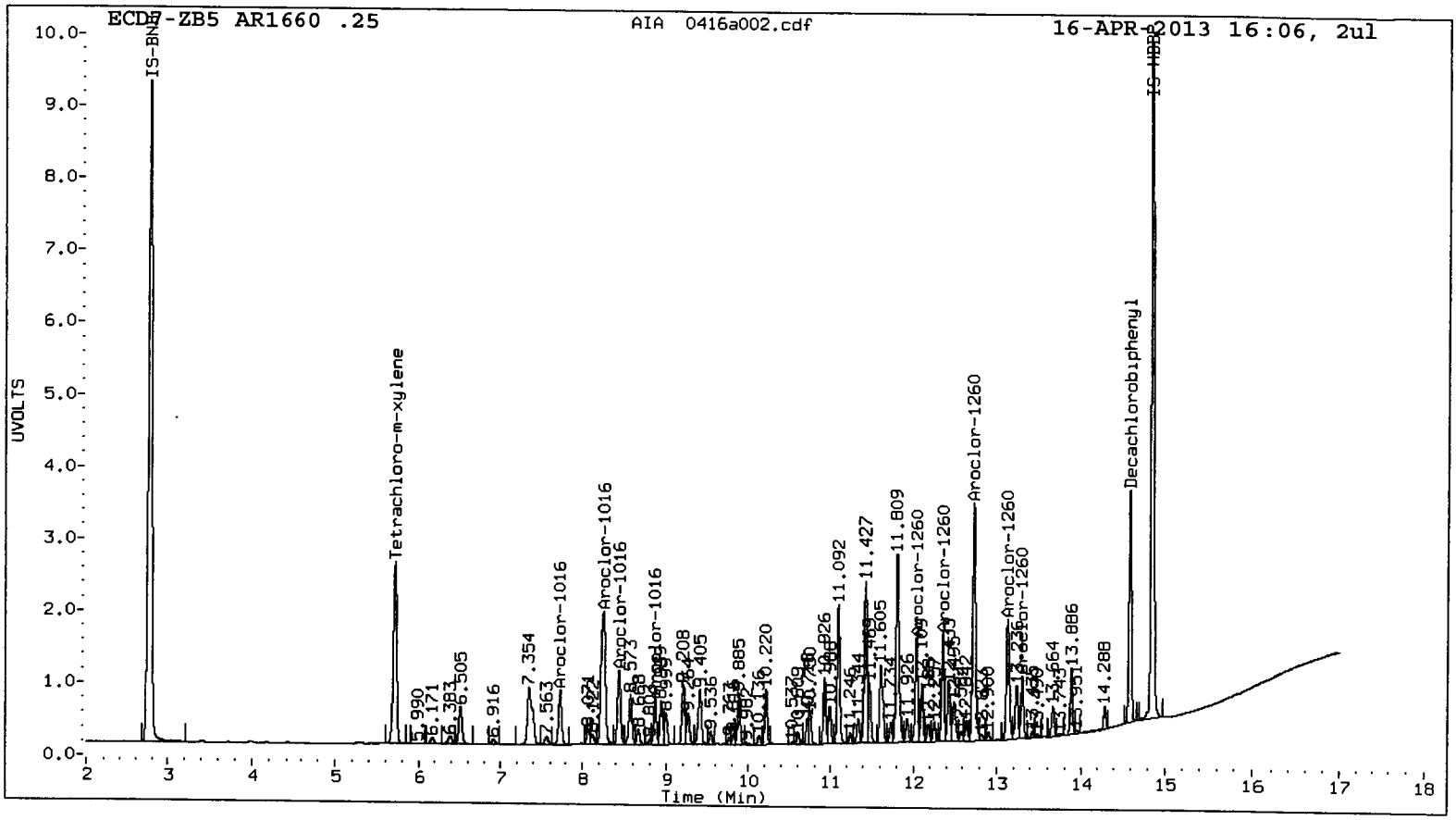
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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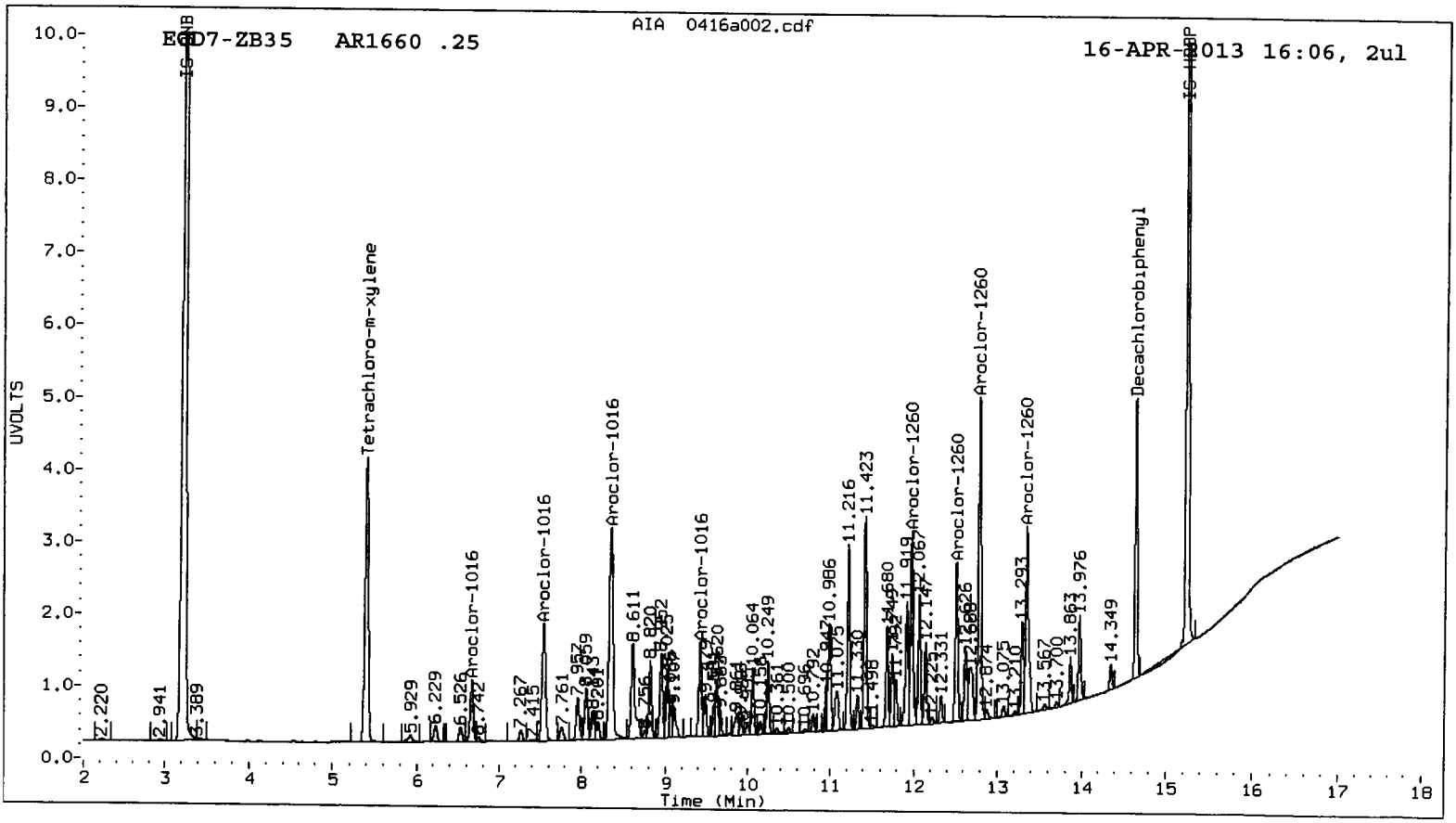
16-APR-2013 16:06, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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AIA 0416a002.cdf
16-APR-2013 16:06, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a003.d
Data file 2: 20130416.b/ical-2.b/0416a003.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 .02
Client ID:
Injection Date: 16-APR-2013 16:27
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	0.000	113218	5.401	0.001	221343	1.6	1.9	16.4	Tetrachloro-m-xylene
14.593	0.002	128894	14.651	0.002	108030	1.9	1.6	21.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.1	4.8
Decachlorobiphenyl	4.9	3.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5596271	0.1
Hexabromobiphenyl	4375297	4352111	-0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8598192	0.9
Hexabromobiphenyl	6077527	5984997	-1.5

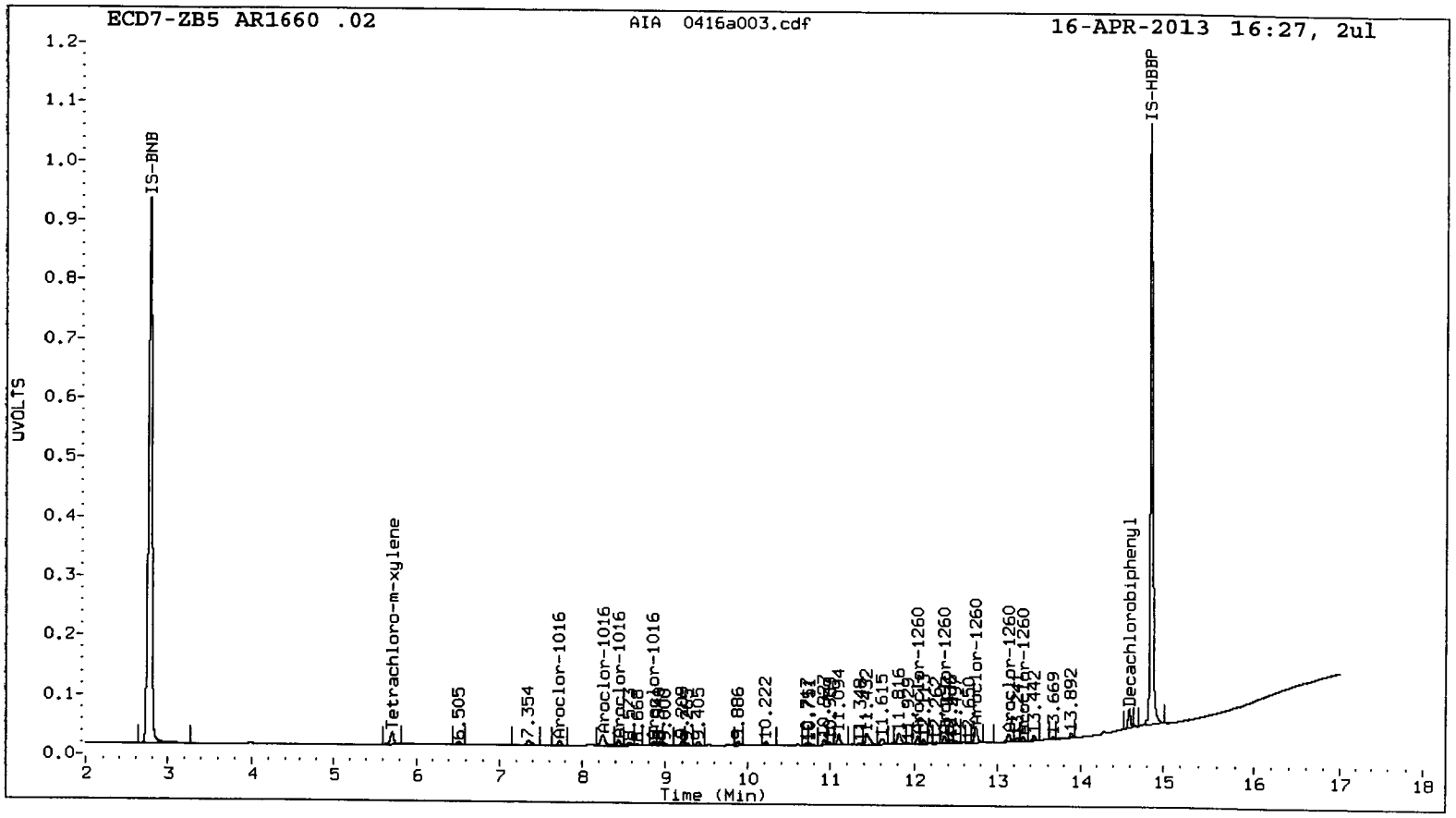
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	39547	23.4	1	6.662	0.001	50760	25.3
Aroclor-1016	2	8.249	-0.002	128857	22.7	2	7.543	0.002	116106	26.4
Aroclor-1016	3	8.438	0.000	51471	23.0	3	8.355	0.002	216173	25.2
Aroclor-1016	4	8.865	0.001	29811	23.3	4	9.421	0.003	68349	25.3
Total Col1Ave (4 peaks):					23.1	Total Col2Ave (4 peaks):				25.6 RPD = 10
Corrected Ave (3 peaks):					23.0	Corrected Ave (3 peaks):				25.3 RPD = 9
Aroclor-1260	1	12.043	0.003	62098	23.2	1	11.979	0.008	124418	24.9
Aroclor-1260	2	12.361	0.003	62072	23.2	2	12.521	0.005	93578	23.9
Aroclor-1260	3	12.738	0.009	144944	22.4	3	12.794	0.009	192253	23.7
Aroclor-1260	4	13.137	0.010	69466	20.8	4	13.354	0.006	123725	23.1
Aroclor-1260	5	13.310	0.005	36425	22.8	NS	---			----
Total Col1Ave (5 peaks):					22.5	Total Col2Ave (4 peaks):				23.9 RPD = 6
Corrected Ave (4 peaks):					22.3	Corrected Ave (3 peaks):				23.6 RPD = 6

Total PCB Area Col1 (5.816 - 14.491) = 1706078 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 2631784 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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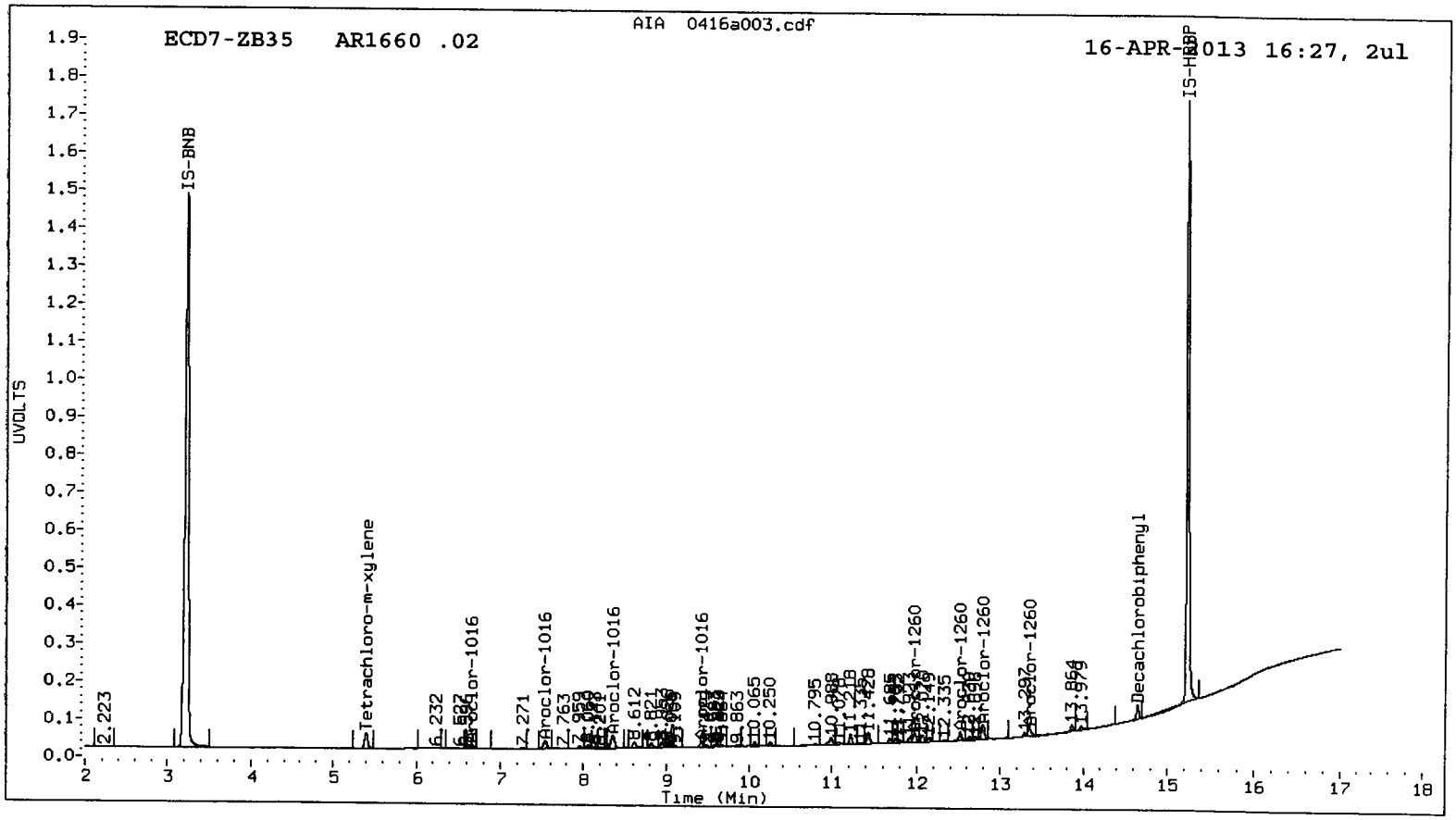
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)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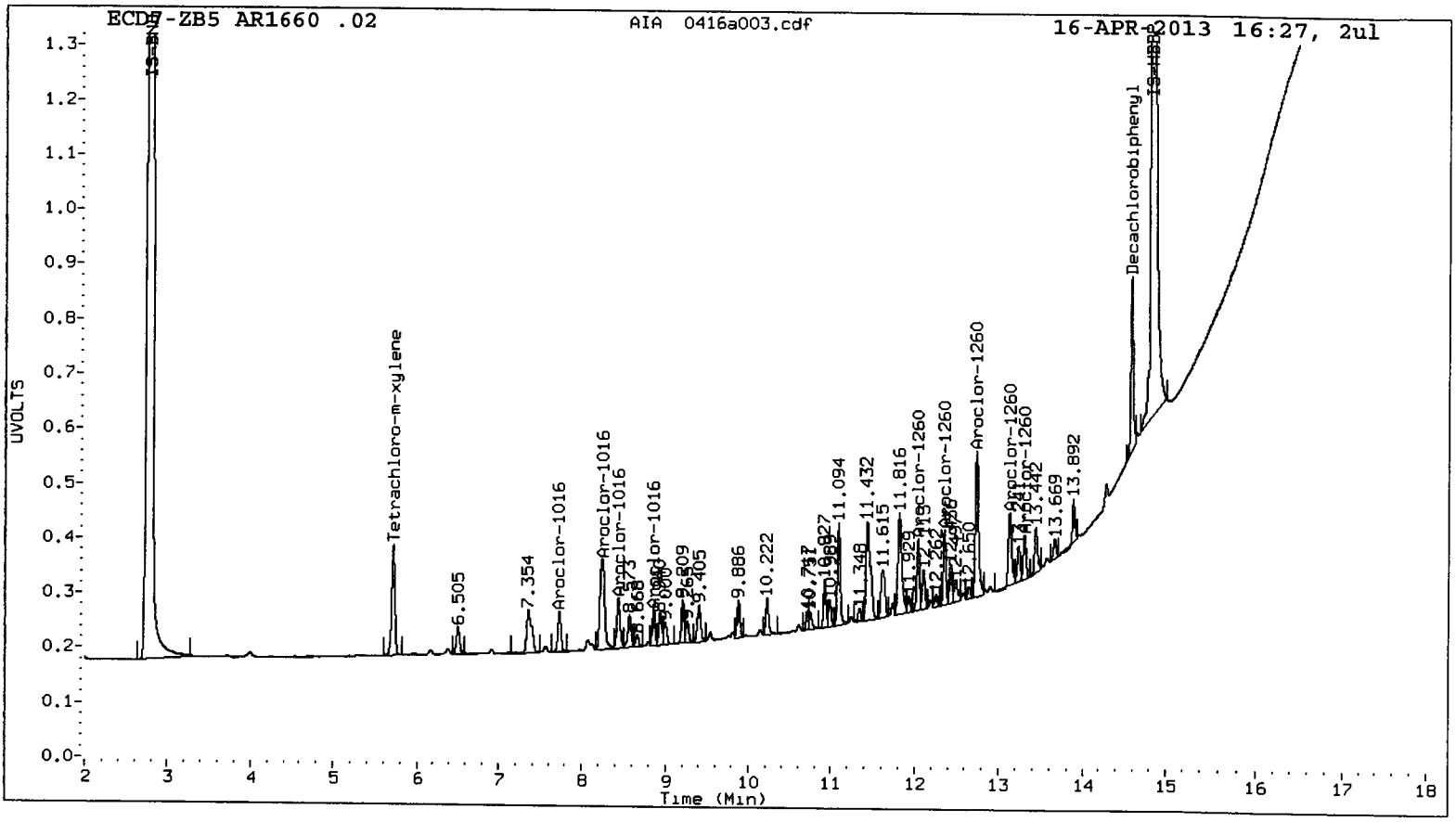
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)

WL NO: 01011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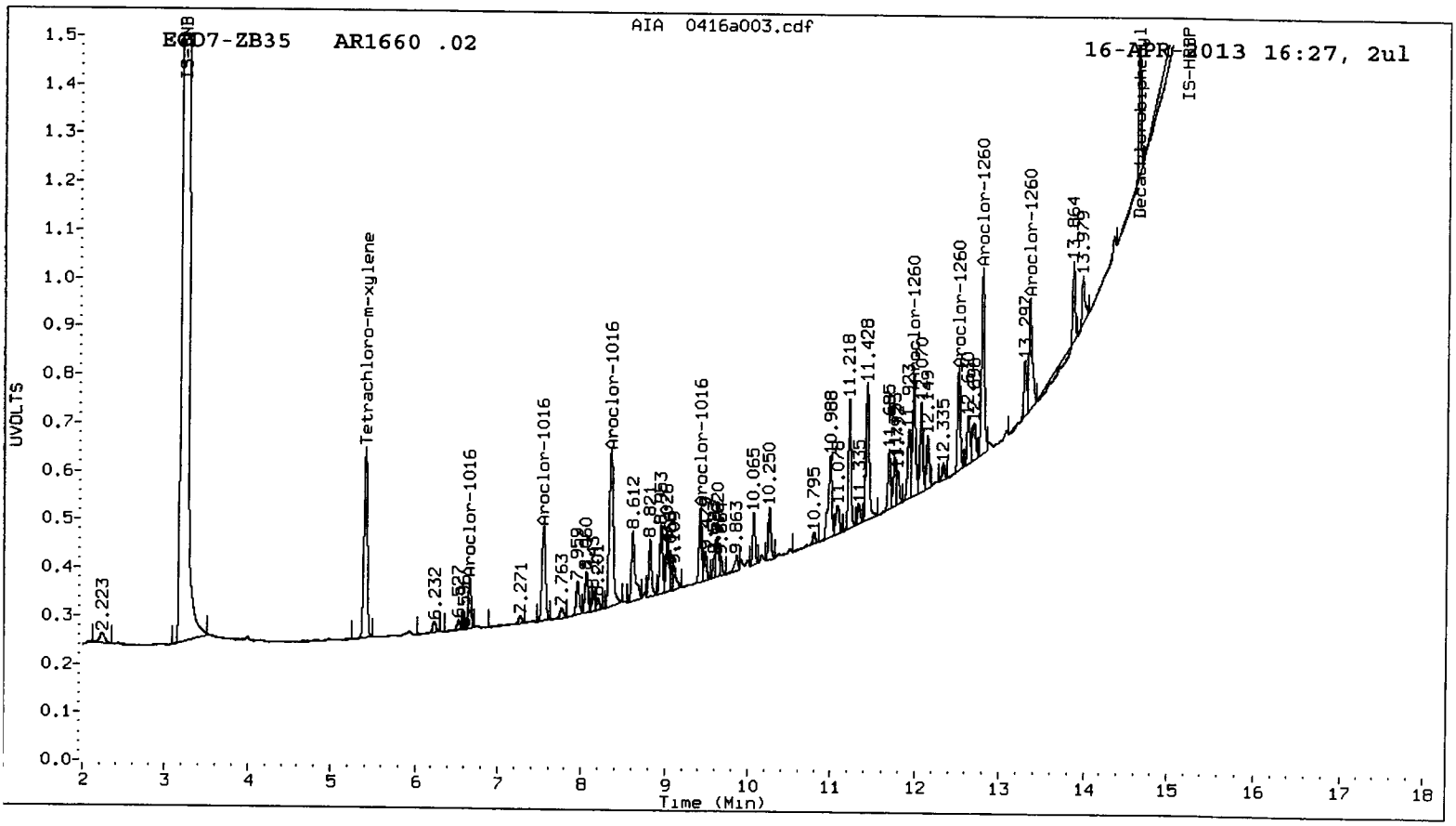
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260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AIA 0416a003.cdf
16-APR-2013 16:27, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a004.d
Data file 2: 20130416.b/ical-2.b/0416a004.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 .05
Client ID:
Injection Date: 16-APR-2013 16:47
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.716	0.000	267955	5.400	0.001	475971	3.9	4.1	6.6	Tetrachloro-m-xylene
14.592	0.000	279910	14.650	0.001	280285	4.2	4.0	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	9.7	10.3
Decachlorobiphenyl	10.4	10.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5580646	-0.2
Hexabromobiphenyl	4375297	4394416	0.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8596607	0.8
Hexabromobiphenyl	6077527	6084847	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

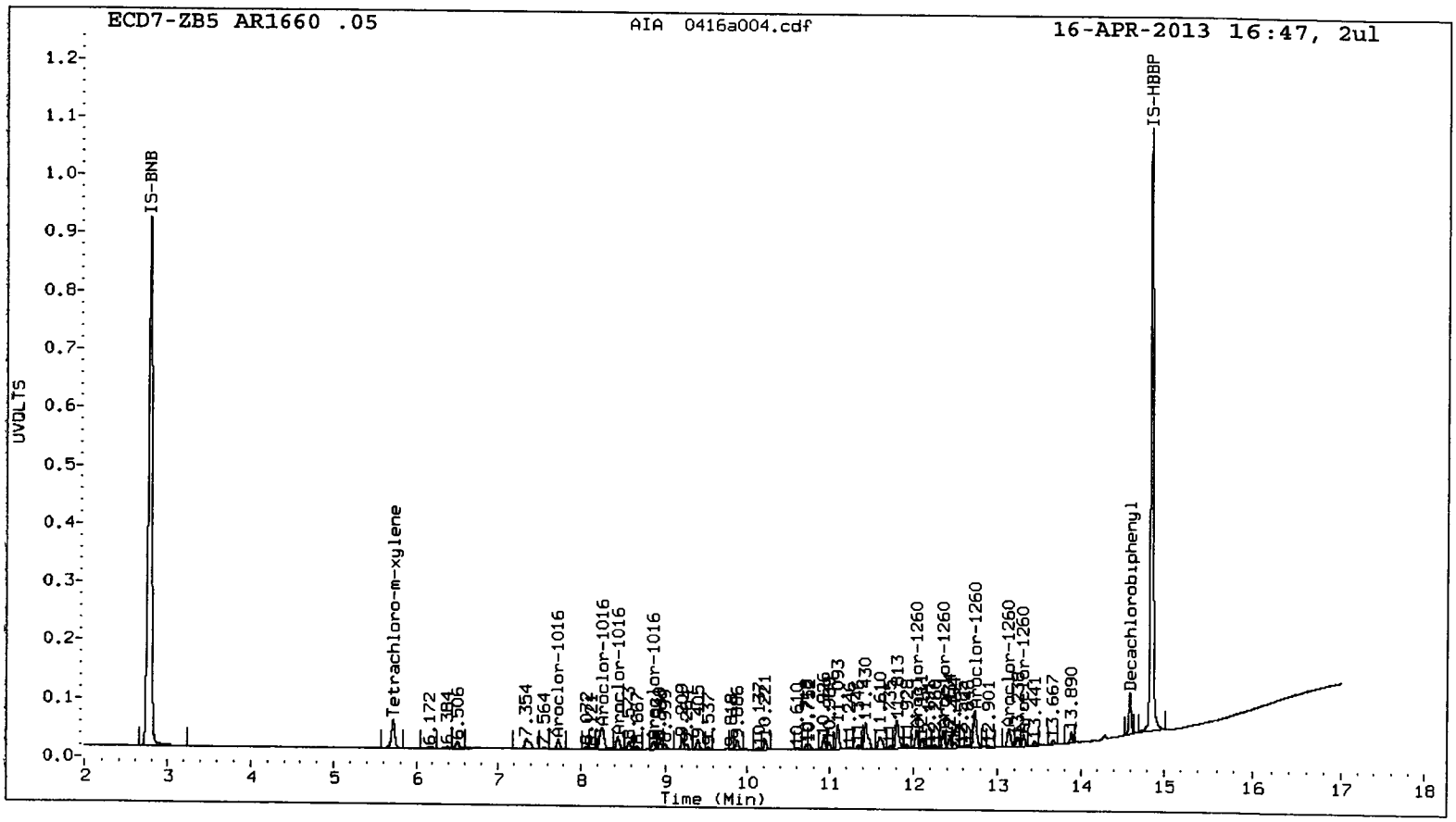
WL49:01613

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	86928	51.6	1	6.662	0.001	113878	56.8
Aroclor-1016	2	8.250	-0.001	287925	50.9	2	7.543	0.002	245309	55.8
Aroclor-1016	3	8.438	0.000	115778	51.9	3	8.353	0.000	464943	54.3
Aroclor-1016	4	8.864	0.000	66446	52.1	4	9.419	0.001	147247	54.6
Total Col1Ave (4 peaks):					51.6	Total Col2Ave (4 peaks):				55.4 RPD = 7
Corrected Ave (3 peaks):					51.5	Corrected Ave (3 peaks):				54.9 RPD = 6
Aroclor-1260	1	12.042	0.001	140589	52.0	1	11.976	0.005	273107	53.8
Aroclor-1260	2	12.360	0.002	139431	51.5	2	12.519	0.003	212059	53.3
Aroclor-1260	3	12.734	0.005	329127	50.4	3	12.792	0.007	429235	52.1
Aroclor-1260	4	13.133	0.006	171067	50.6	4	13.352	0.005	287224	52.7
Aroclor-1260	5	13.308	0.003	82222	50.9	NS	---			----
Total Col1Ave (5 peaks):					51.1	Total Col2Ave (4 peaks):				53.0 RPD = 4
Corrected Ave (4 peaks):					50.9	Corrected Ave (3 peaks):				52.7 RPD = 3

Total PCB Area Col1 (5.816 - 14.491) = 4050197 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 5948763 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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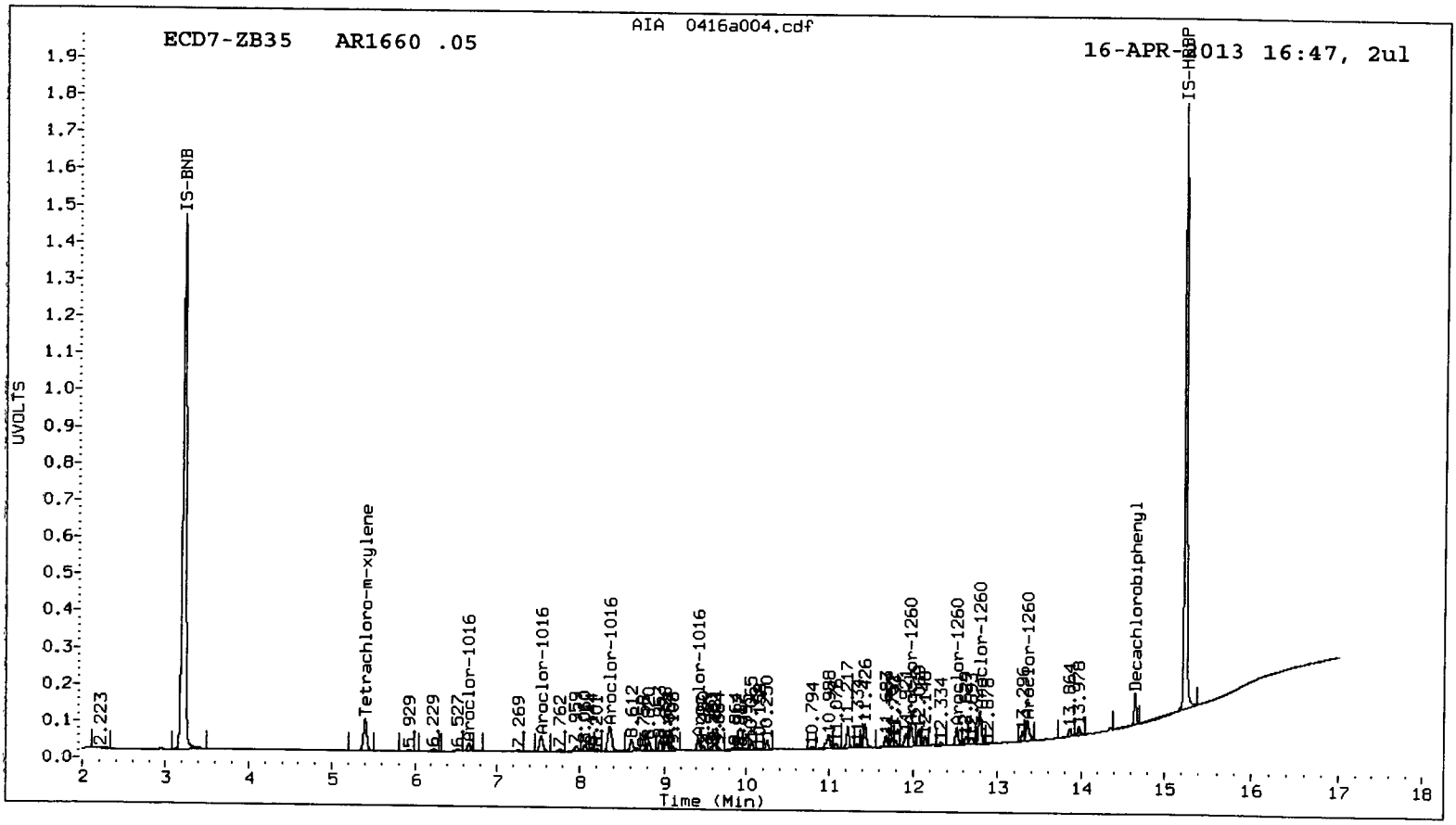
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)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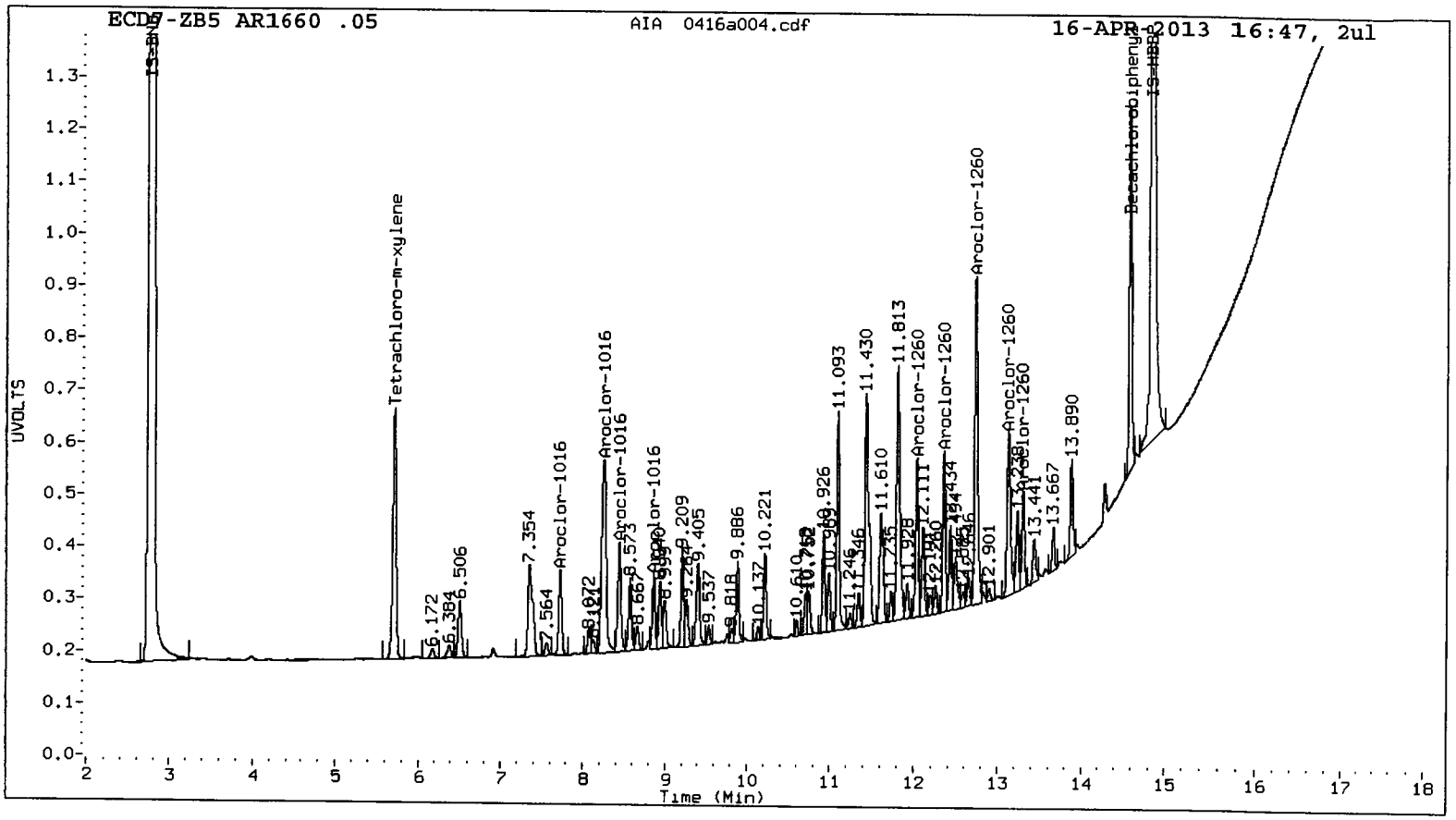
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)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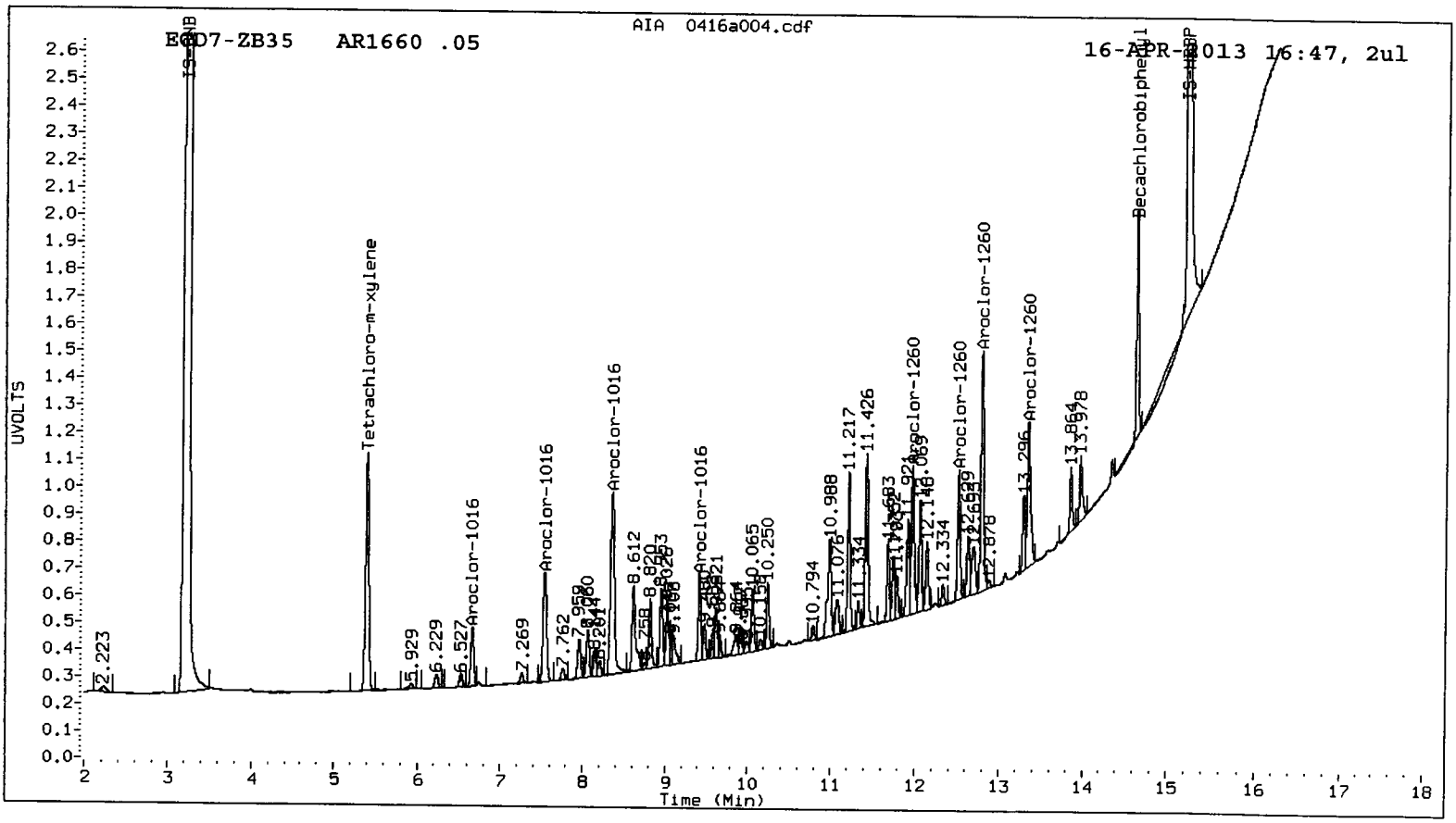
AIA 0416a004.cdf
16-APR-2013 16:47, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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16-APR-2013 16:47, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a005.d
Data file 2: 20130416.b/ical-2.b/0416a005.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 1
Client ID:
Injection Date: 16-APR-2013 17:08
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	5525080	5.400	0.000	8343554	80.8	72.8	10.5	Tetrachloro-m-xylene
14.590	-0.001	4744455	14.648	-0.001	5817973	69.9	79.2	12.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	202.1	181.9
Decachlorobiphenyl	174.9	198.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5497548	-1.7
Hexabromobiphenyl	4375297	4450563	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8542994	0.2
Hexabromobiphenyl	6077527	6408602	5.4

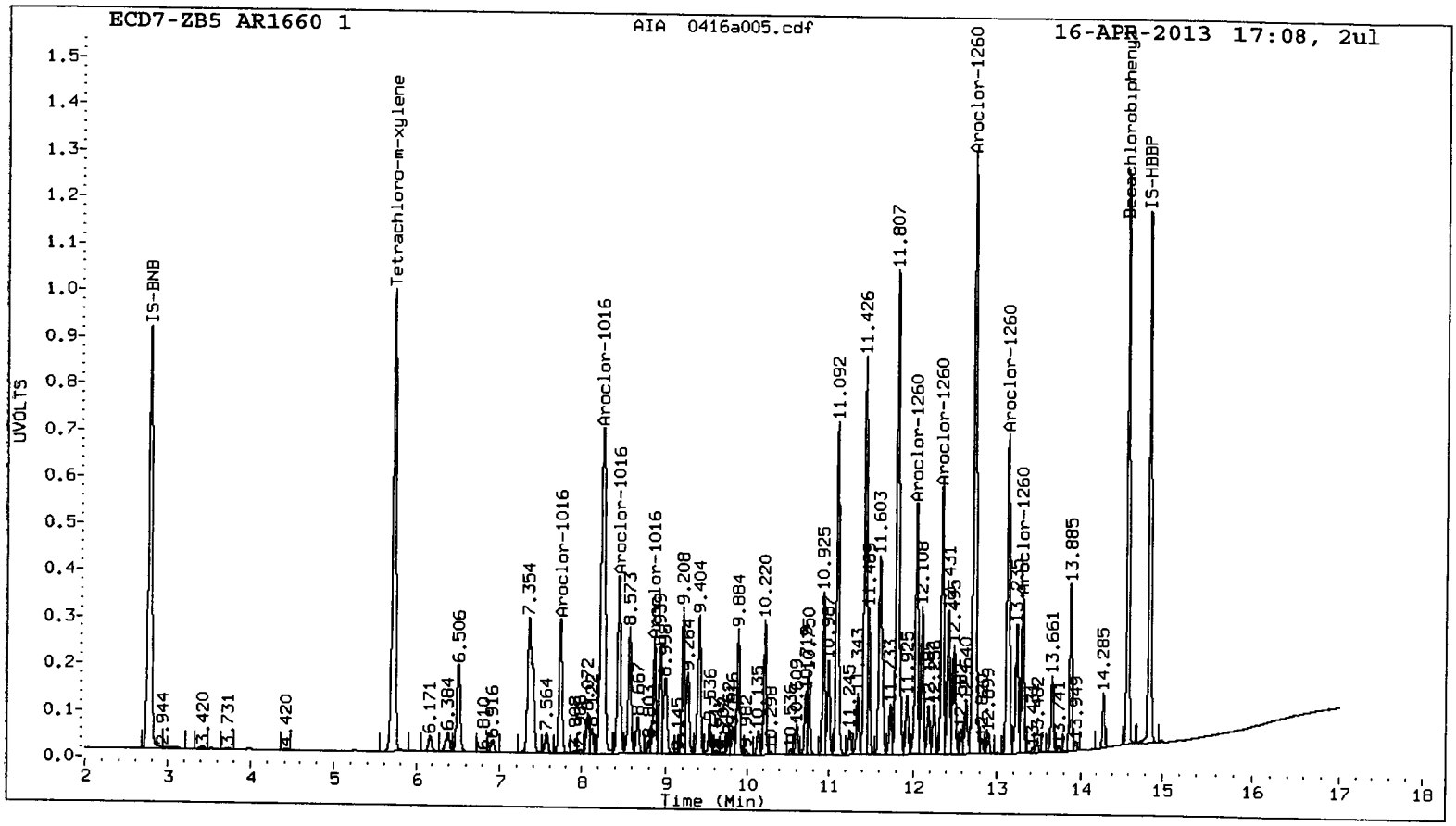
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.001	1503451	905.5	1	6.661	0.000	1559991	783.5
Aroclor-1016	2	8.248	-0.003	5123662	919.5	2	7.542	0.001	3467153	793.6
Aroclor-1016	3	8.437	0.000	1985453	903.9	3	8.354	0.001	7243674	850.5
Aroclor-1016	4	8.864	-0.001	1121914	892.1	4	9.419	0.001	2231739	832.9
Total Col1Ave (4 peaks):					905.2	Total Col2Ave (4 peaks):				815.1 RPD = 10
Corrected Ave (3 peaks):					900.5	Corrected Ave (3 peaks):				803.3 RPD = 11
Aroclor-1260	1	12.039	-0.001	2444434	893.2	1	11.972	0.001	4546815	850.2
Aroclor-1260	2	12.357	-0.001	2476008	903.1	2	12.516	0.000	3634745	867.0
Aroclor-1260	3	12.727	-0.002	6149643	930.0	3	12.786	0.000	7851531	904.3
Aroclor-1260	4	13.125	-0.002	3273980	956.7	4	13.346	-0.001	5126622	892.7
Aroclor-1260	5	13.304	-0.001	1505492	920.6	NS	---			----
Total Col1Ave (5 peaks):					920.7	Total Col2Ave (4 peaks):				878.6 RPD = 5
Corrected Ave (4 peaks):					911.7	Corrected Ave (3 peaks):				870.0 RPD = 5

Total PCB Area Col1 (5.816 - 14.491) = 73306500 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 95563051 Col2 Total PCB = 1.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical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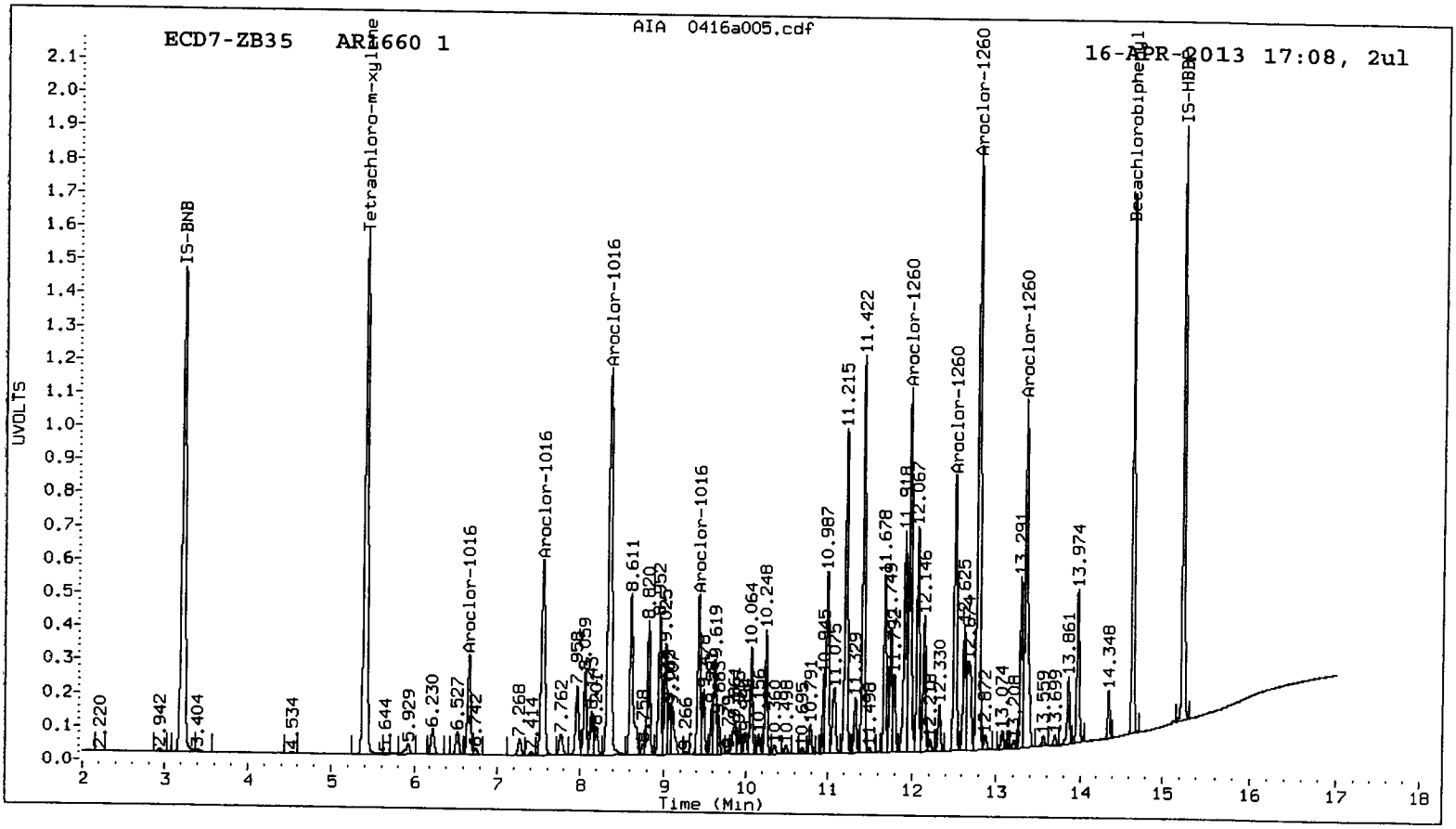
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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Time (Min)
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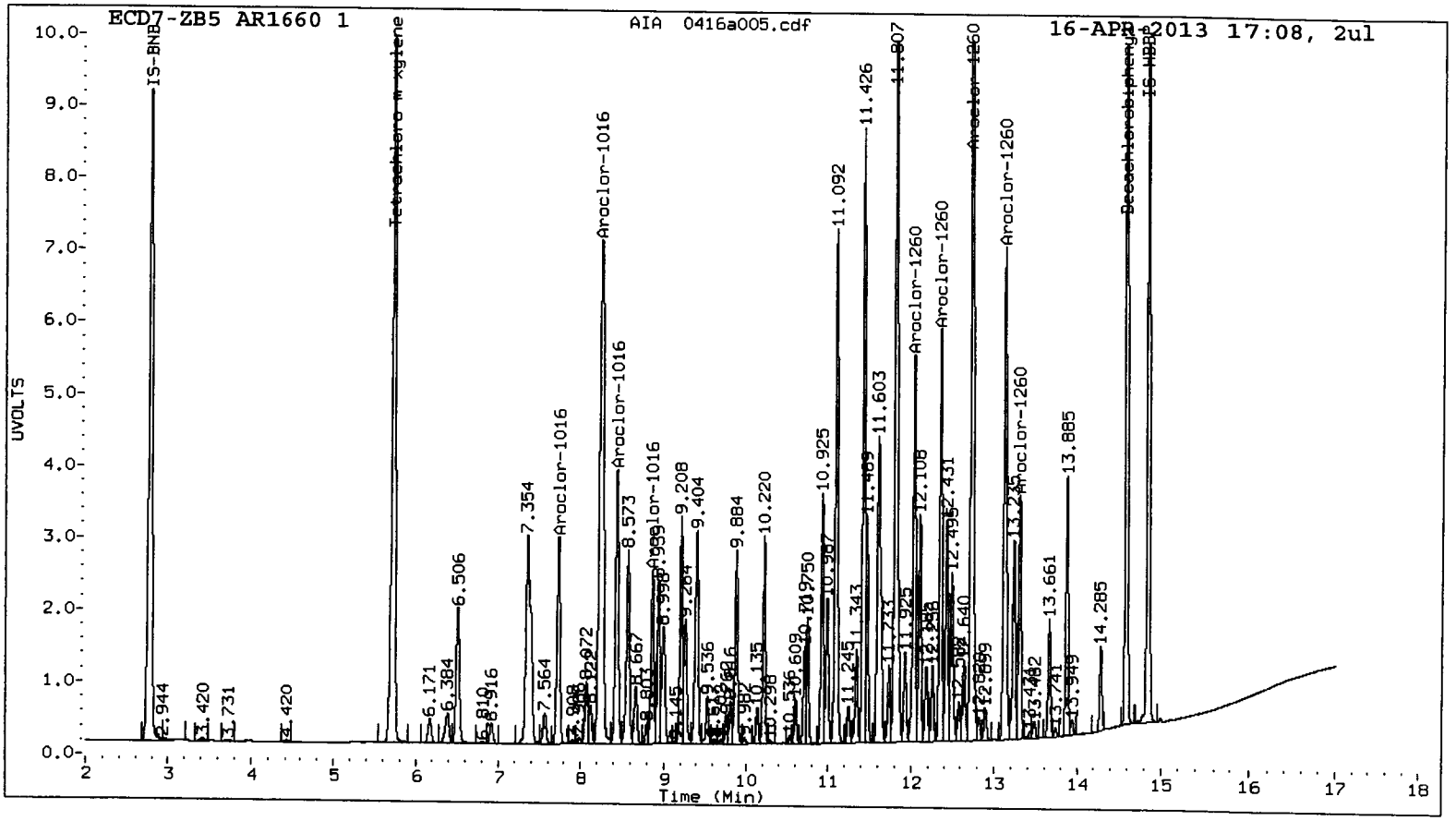
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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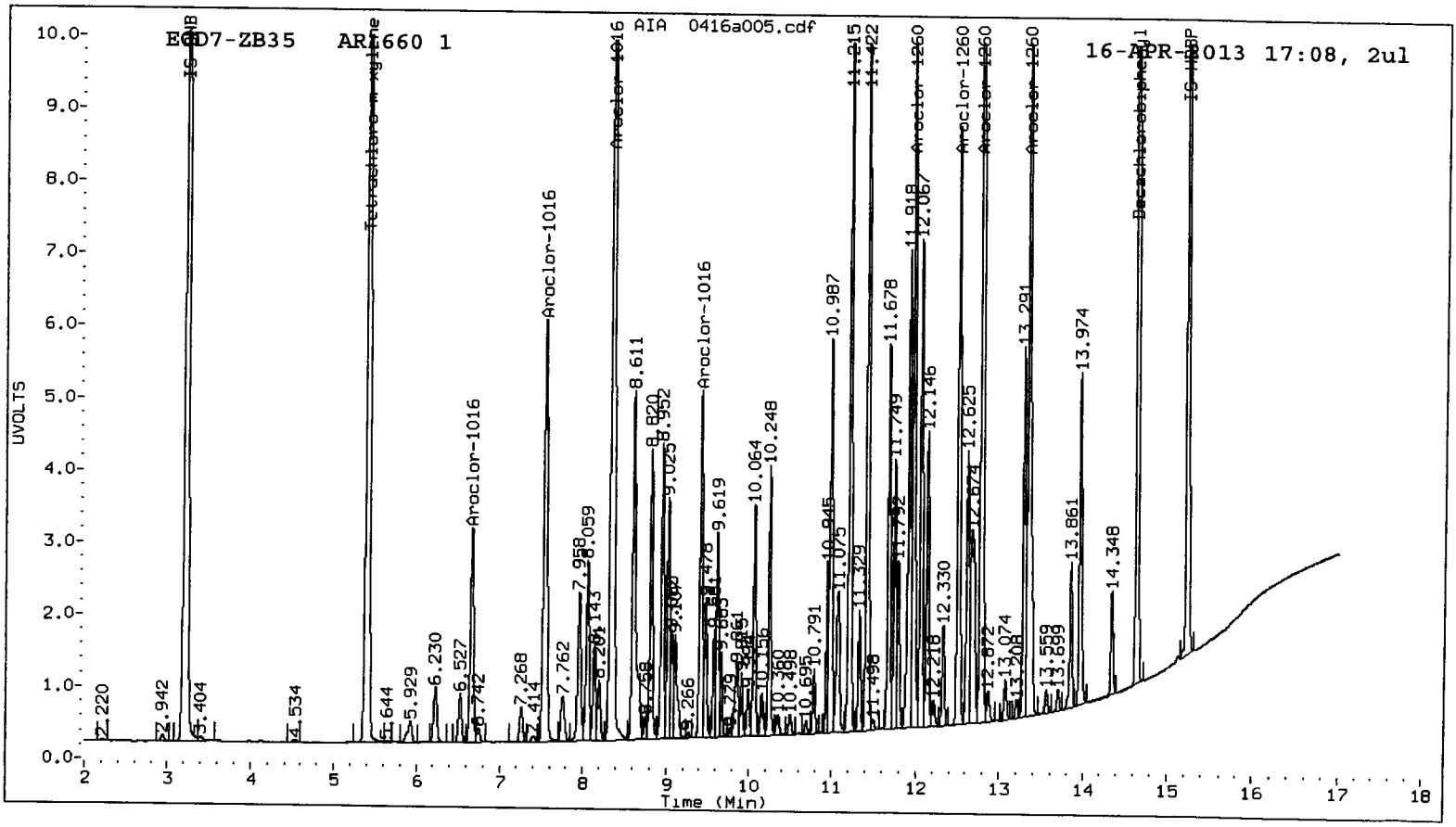
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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AIA 0416a005.cdf
16-APR-2013 17:08, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a006.d
Data file 2: 20130416.b/ical-2.b/0416a006.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 0.1
Client ID:
Injection Date: 16-APR-2013 17:29
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	0.000	548455	5.400	0.001	917098	8.0	8.0	0.2	Tetrachloro-m-xylene
14.591	-0.001	551432	14.649	0.000	581160	8.1	8.2	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	19.9	19.9
Decachlorobiphenyl	20.3	20.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5547889	-0.8
Hexabromobiphenyl	4375297	4450577	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8580903	0.7
Hexabromobiphenyl	6077527	6158519	1.3

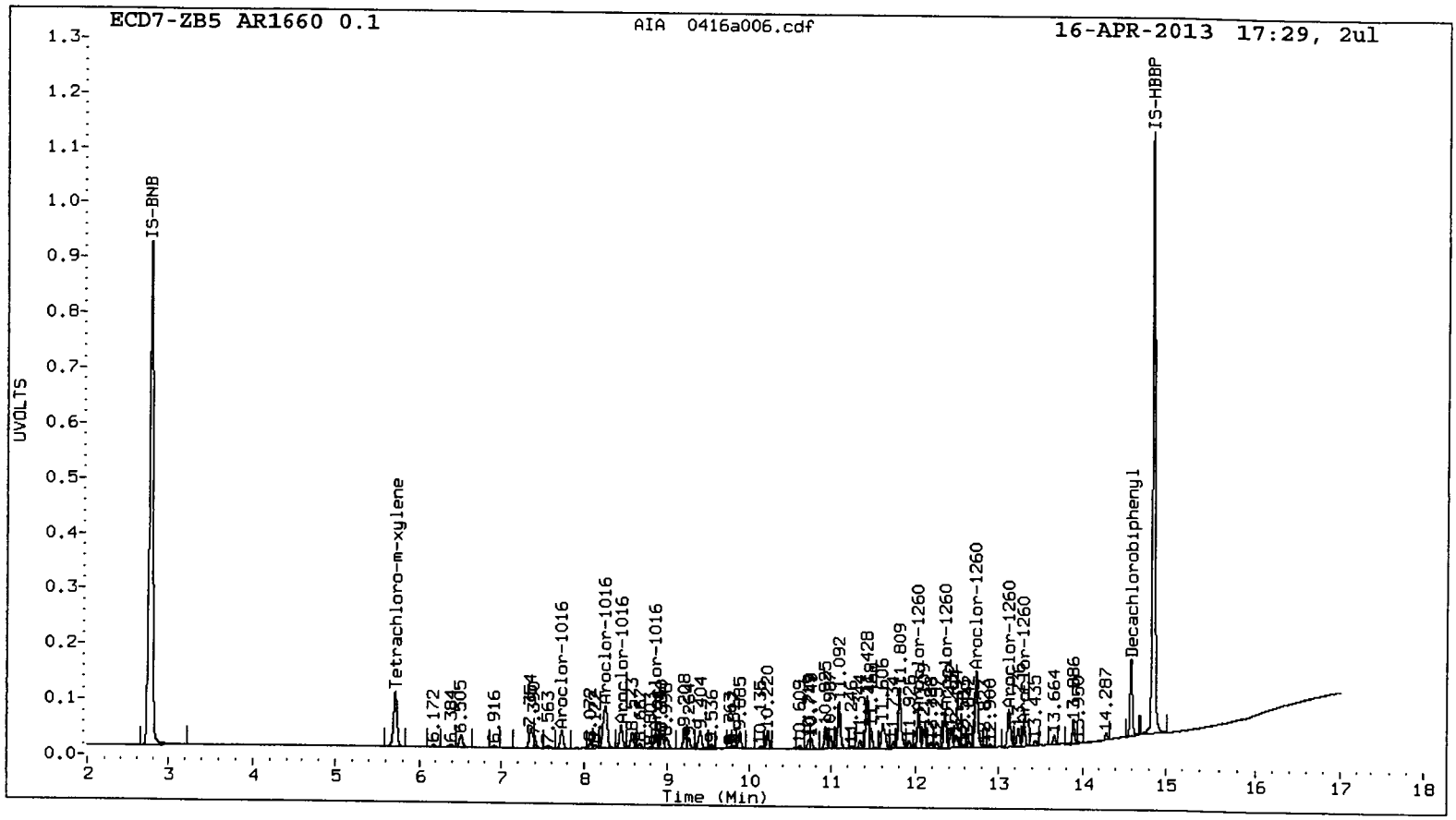
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	168682	100.7	1	6.661	0.000	210867	105.4
Aroclor-1016	2	8.248	-0.003	569896	101.3	2	7.541	0.000	449579	102.5
Aroclor-1016	3	8.437	-0.001	225228	101.6	3	8.353	-0.001	868993	101.6
Aroclor-1016	4	8.863	-0.001	129849	102.3	4	9.418	0.000	276079	102.6
Total Col1Ave (4 peaks):					101.5	Total Col2Ave (4 peaks):				103.0 RPD = 1
Corrected Ave (3 peaks):					101.2	Corrected Ave (3 peaks):				102.2 RPD = 1
Aroclor-1260	1	12.039	-0.001	277057	101.2	1	11.973	0.002	522740	101.7
Aroclor-1260	2	12.357	-0.001	276403	100.8	2	12.517	0.001	412347	102.4
Aroclor-1260	3	12.729	0.000	665122	100.6	3	12.788	0.003	842960	101.0
Aroclor-1260	4	13.128	0.001	348662	101.9	4	13.348	0.000	564281	102.2
Aroclor-1260	5	13.305	0.000	164340	100.5	NS	---			----
Total Col1Ave (5 peaks):					101.0	Total Col2Ave (4 peaks):				101.8 RPD = 1
Corrected Ave (4 peaks):					100.8	Corrected Ave (3 peaks):				101.7 RPD = 1

Total PCB Area Col1 (5.816 - 14.491) = 8121404 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 11482608 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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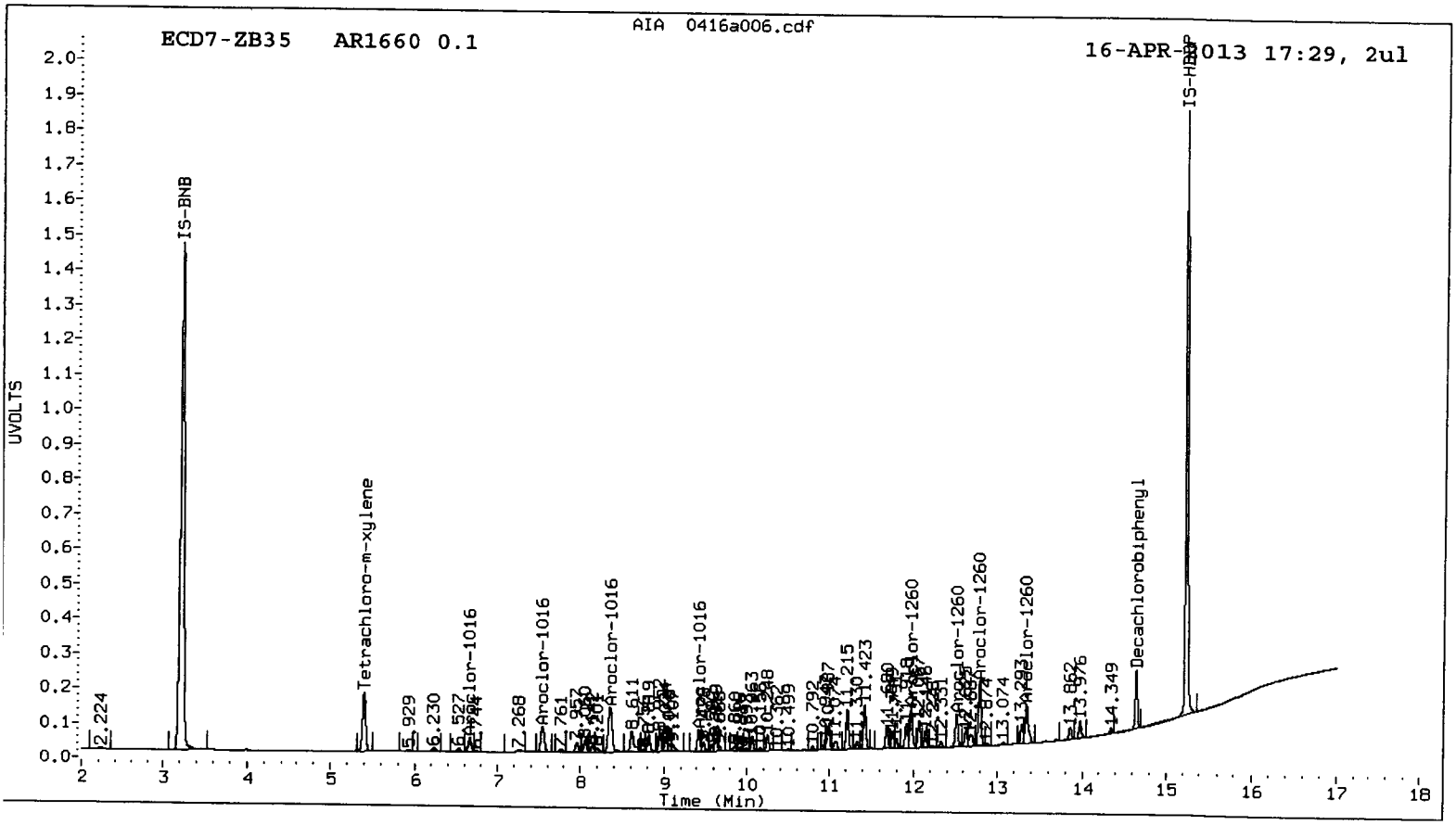
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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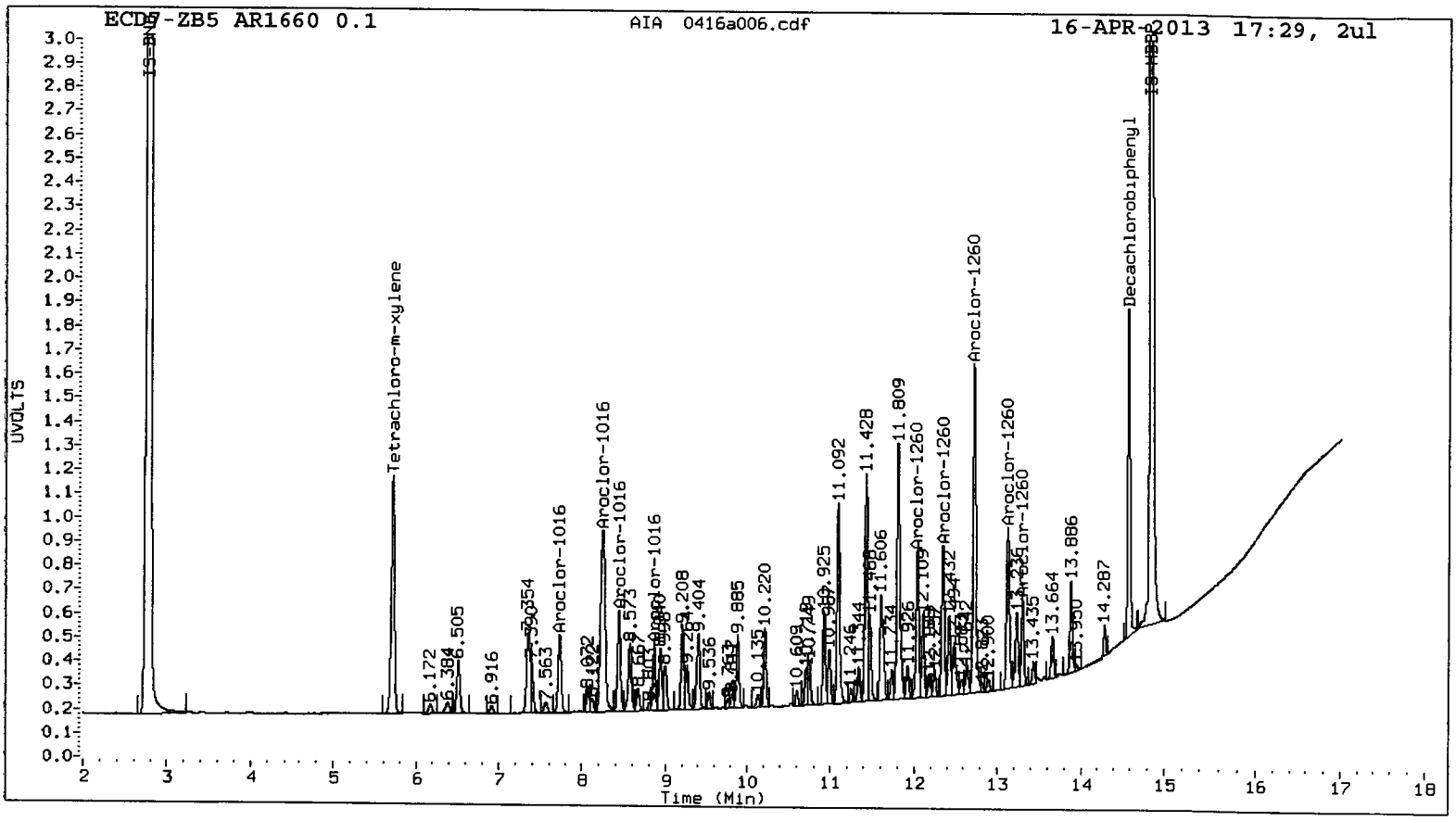
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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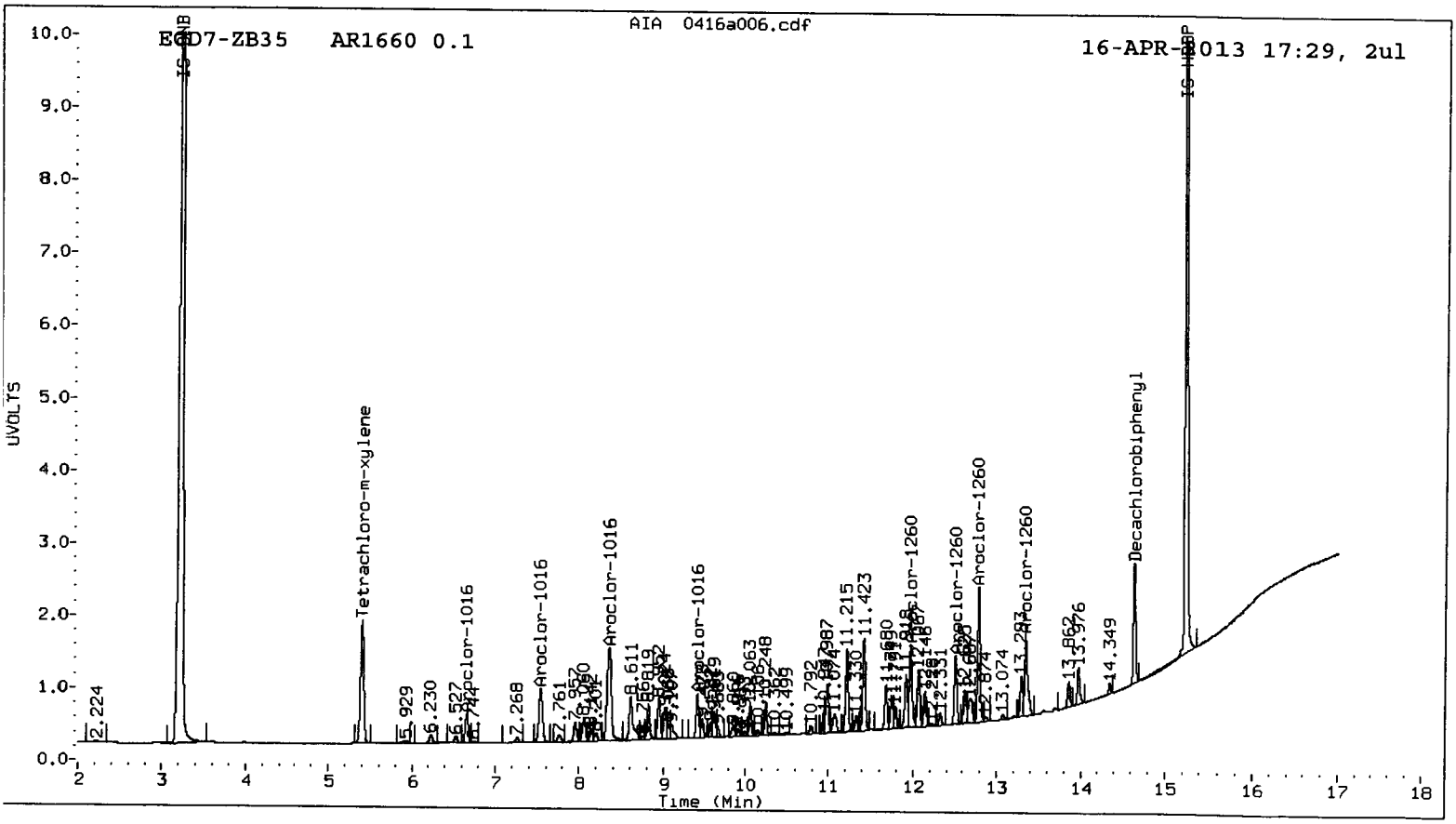
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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AIA 0416a006.cdf
16-APR-2013 17:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a007.d
Data file 2: 20130416.b/ical-2.b/0416a007.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 0.5
Client ID:
Injection Date: 16-APR-2013 17:49
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	-0.001	2796375	5.400	0.000	4240289	40.9	37.2	9.4	Tetrachloro-m-xylene
14.591	-0.001	2466631	14.649	0.000	2850108	36.4	39.3	7.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.2	93.1
Decachlorobiphenyl	91.0	98.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5500666	-1.6
Hexabromobiphenyl	4375297	4448503	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8487736	-0.4
Hexabromobiphenyl	6077527	6324175	4.1

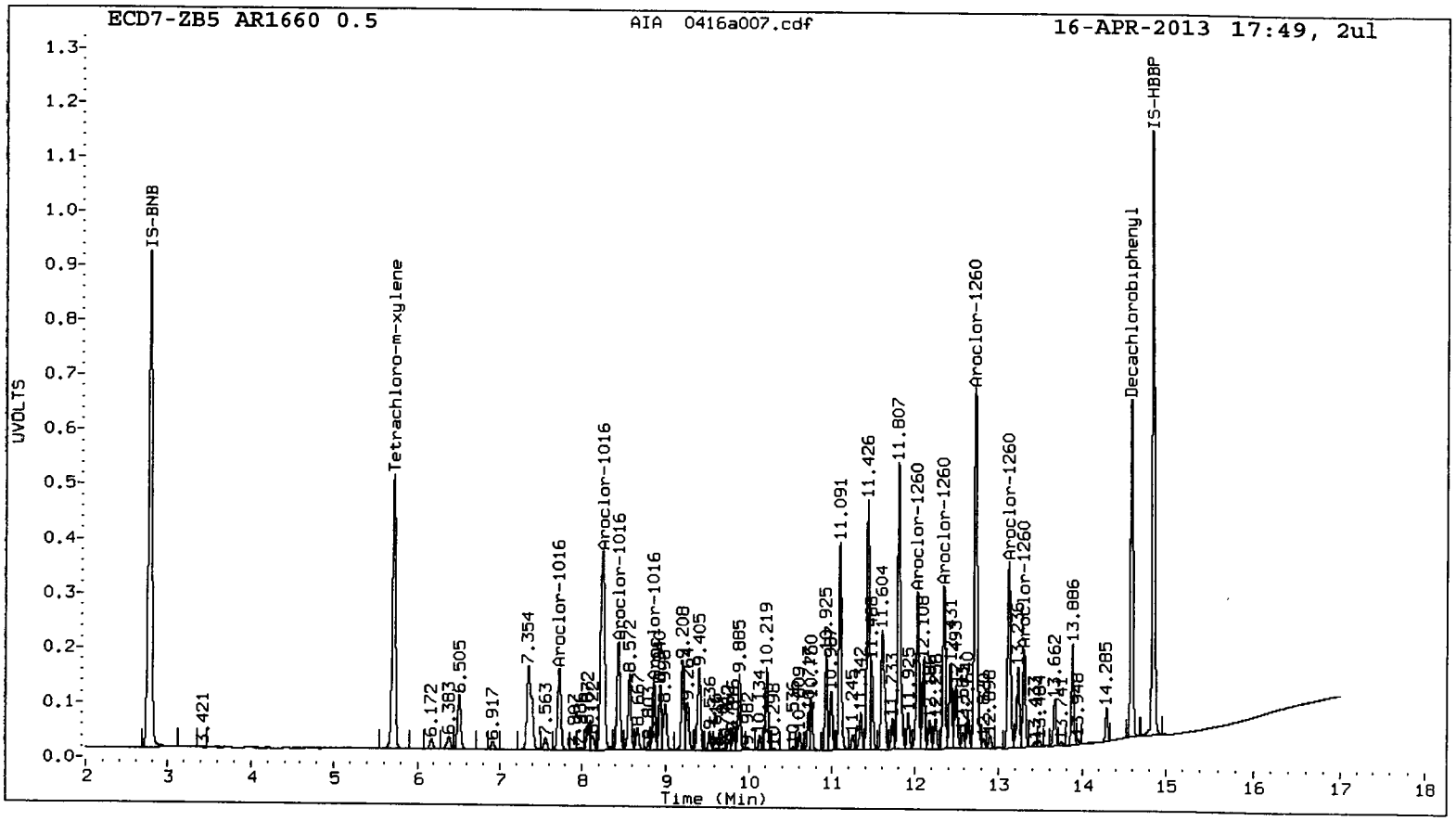
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.730	0.001	779033	468.9	1	6.661	0.000	836820	423.0
Aroclor-1016	2	8.250	-0.002	2666797	478.3	2	7.541	0.000	1839601	423.8
Aroclor-1016	3	8.437	-0.001	1033755	470.3	3	8.353	0.000	3716764	439.3
Aroclor-1016	4	8.864	-0.001	587423	466.8	4	9.418	0.000	1163537	437.1
Total Col1Ave (4 peaks):					471.1	Total Col2Ave (4 peaks):				430.8 RPD = 9
Corrected Ave (3 peaks):					468.7	Corrected Ave (3 peaks):				428.0 RPD = 9
Aroclor-1260	1	12.039	-0.001	1275279	466.2	1	11.971	0.000	2311541	438.0
Aroclor-1260	2	12.356	-0.002	1287606	469.9	2	12.516	0.000	1849259	447.0
Aroclor-1260	3	12.728	-0.001	3168940	479.5	3	12.785	0.000	3899627	455.2
Aroclor-1260	4	13.126	-0.001	1681382	491.5	4	13.347	0.000	2586591	456.4
Aroclor-1260	5	13.304	-0.001	777125	475.4	NS	---			----
Total Col1Ave (5 peaks):					476.5	Total Col2Ave (4 peaks):				449.1 RPD = 6
Corrected Ave (4 peaks):					472.7	Corrected Ave (3 peaks):				446.7 RPD = 6

Total PCB Area Col1 (5.816 - 14.491) = 38004762 Col1 Total PCB = 1.0 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 49650226 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1660 0.5
AIA 0416a007.cdf
16-APR-2013 17:49, 2ul
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Time (Min)
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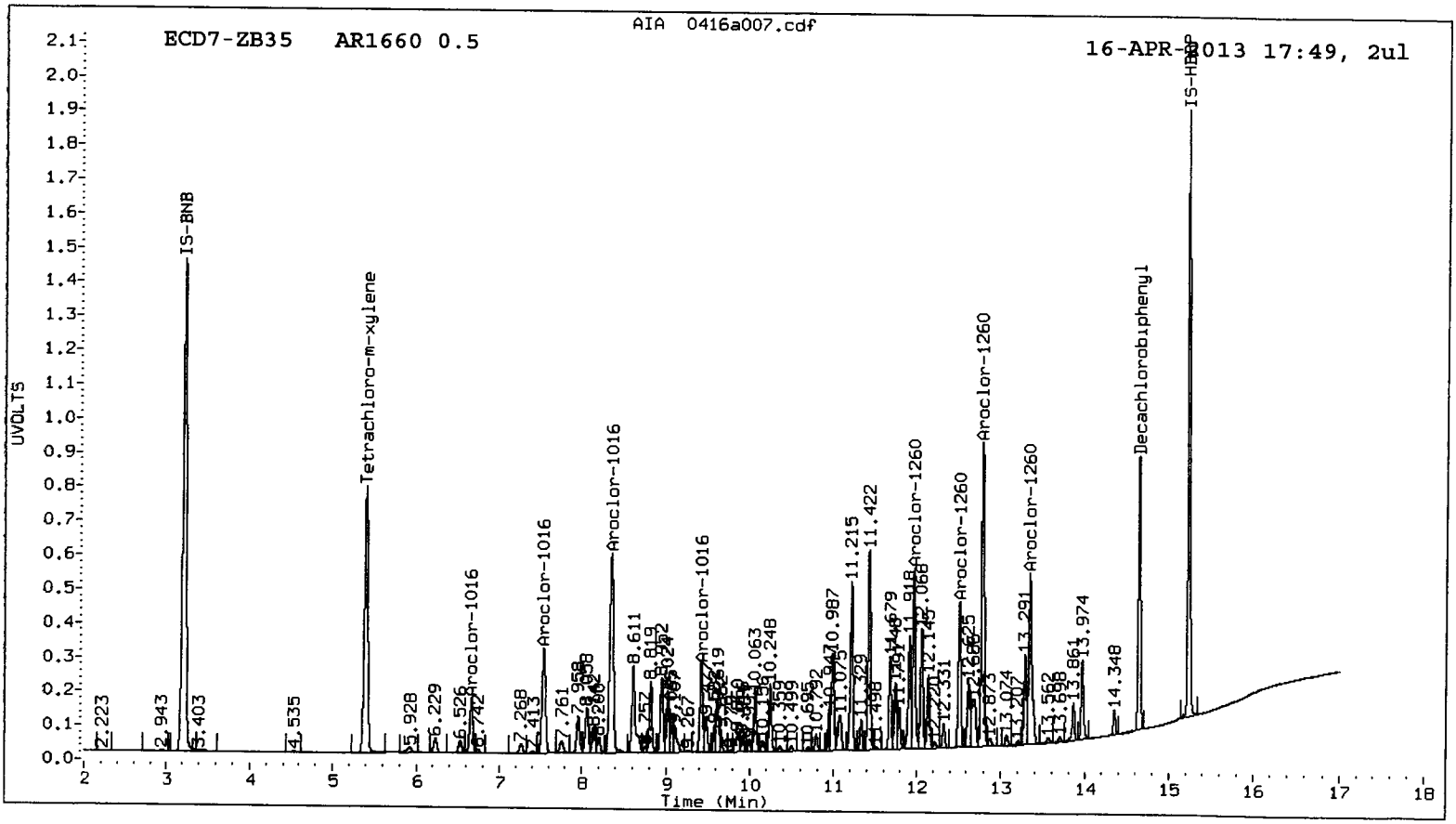
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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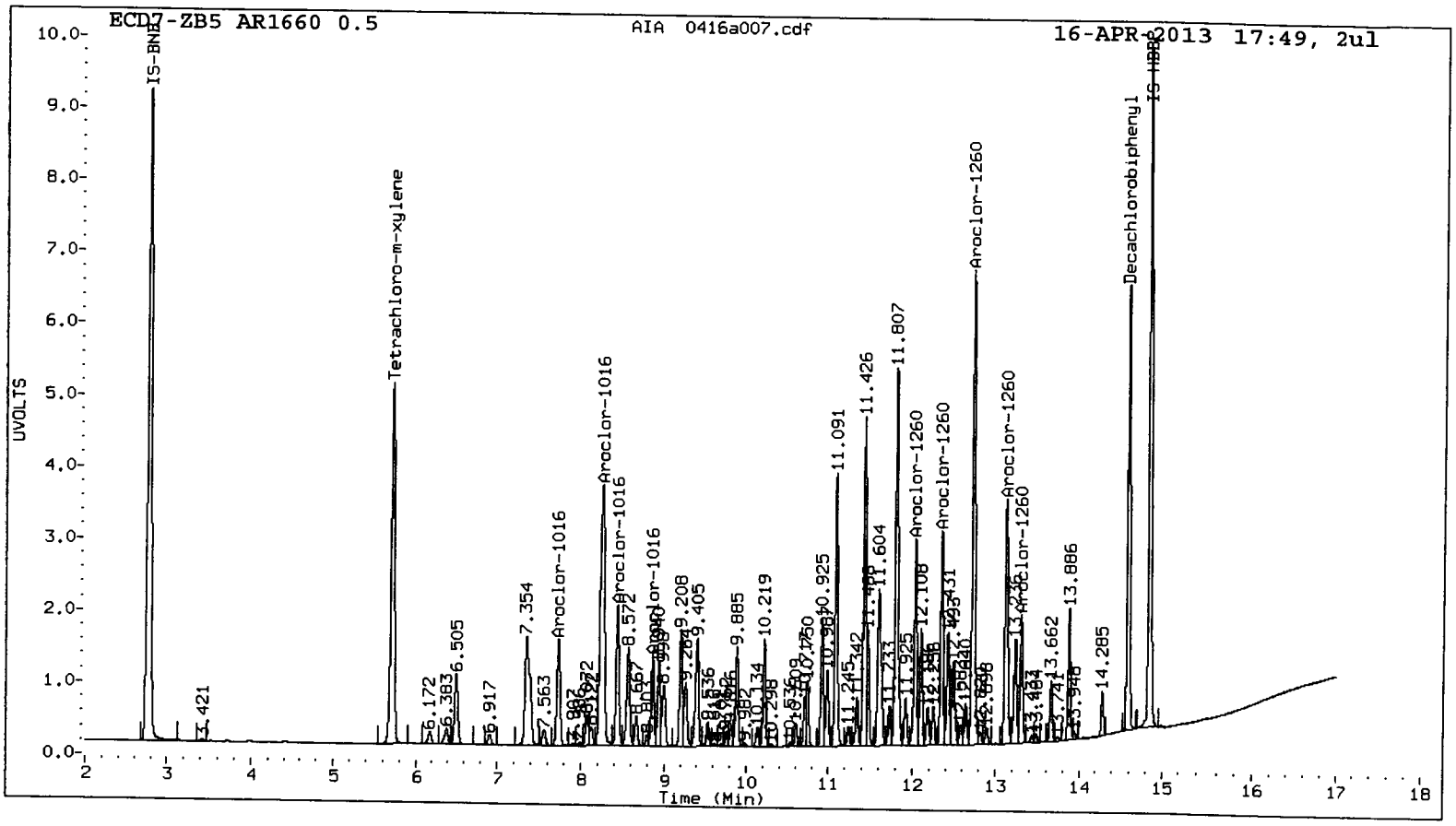
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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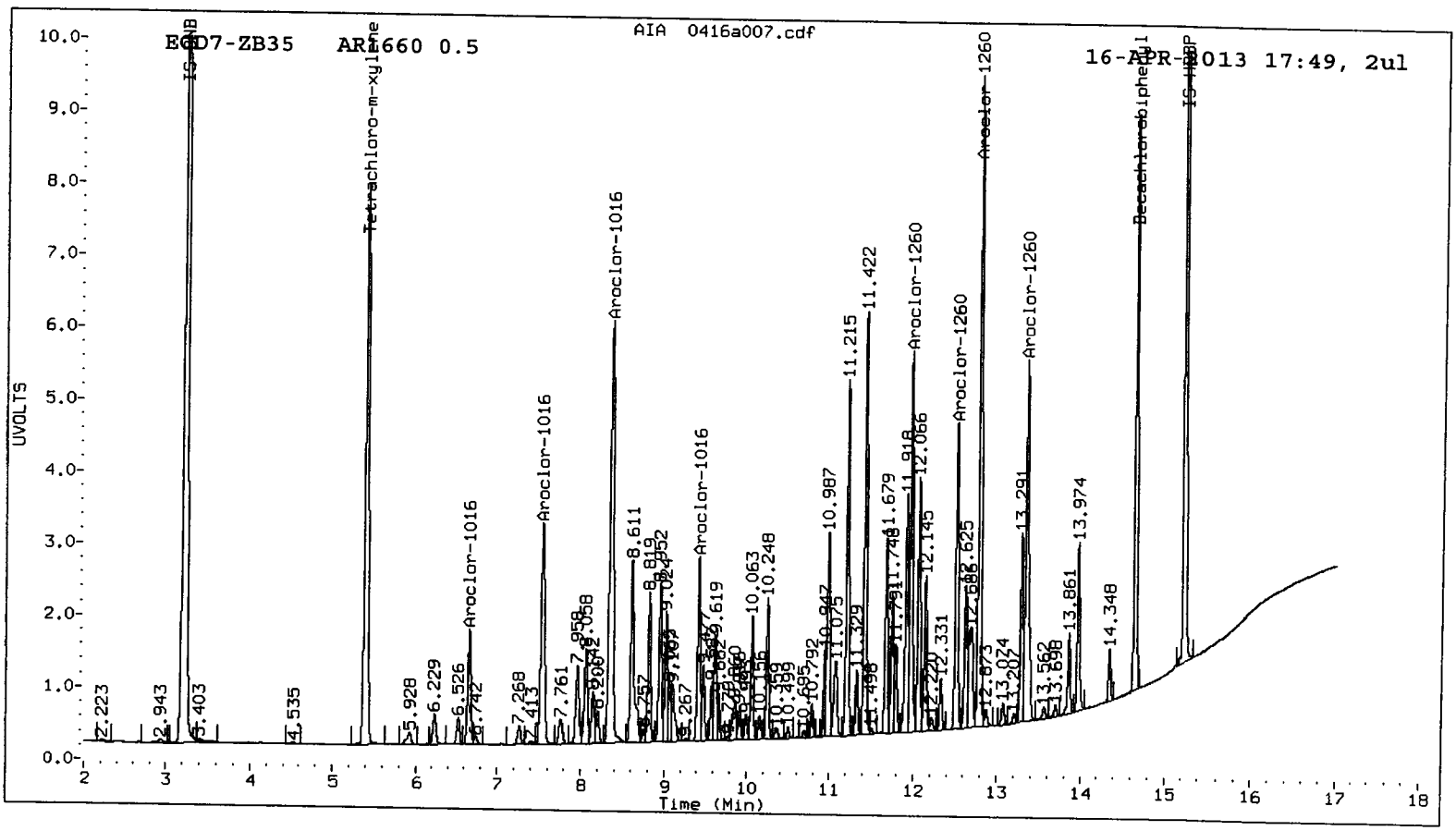
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB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16-APR-2013 17:49, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a008.d
Data file 2: 20130416.b/ical-2.b/0416a008.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 16-APR-2013 18:10
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	1361990	5.400	0.000	2146438	20.2	19.1	5.7	Tetrachloro-m-xylene
14.591	-0.001	1253808	14.649	0.000	1244268	19.2	18.6	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.6	47.7
Decachlorobiphenyl	47.9	46.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5416449	-3.1
Hexabromobiphenyl	4375297	4295436	-1.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8375773	-1.8
Hexabromobiphenyl	6077527	5833847	-4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	7.729	0.000	312320	250.0	1	6.661	0.000	389040	250.0
Aroclor-1242	2	8.249	0.000	1053656	250.0	2	7.541	0.000	776353	250.0
Aroclor-1242	3	8.437	0.000	415702	250.0	3	8.352	0.000	1535479	250.0
Aroclor-1242	4	9.404	0.000	389457	250.0	4	9.418	0.000	532676	250.0

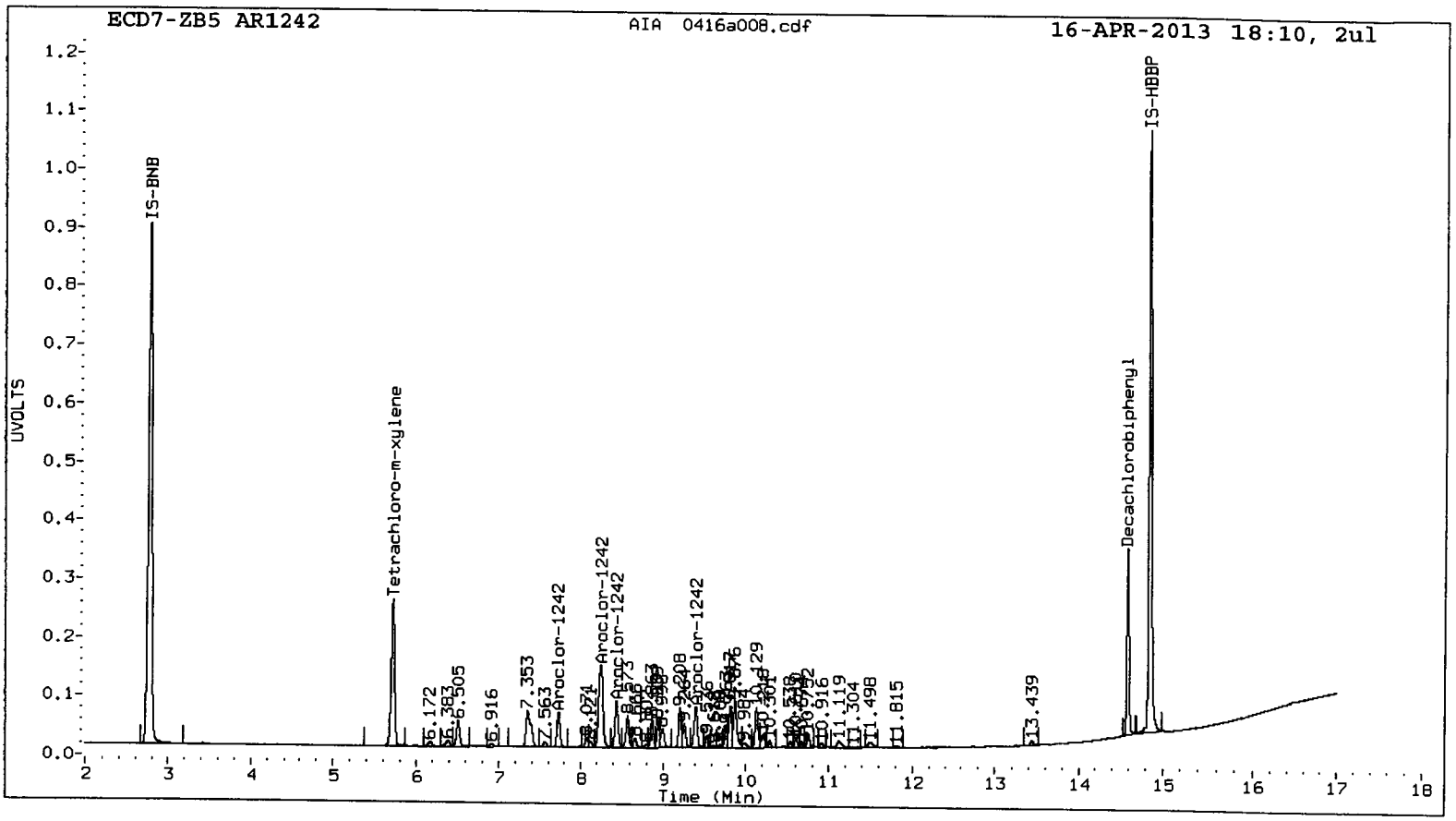
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 7028252 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 10755463 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0416a008.cdf
16-APR-2013 18:10, 2ul
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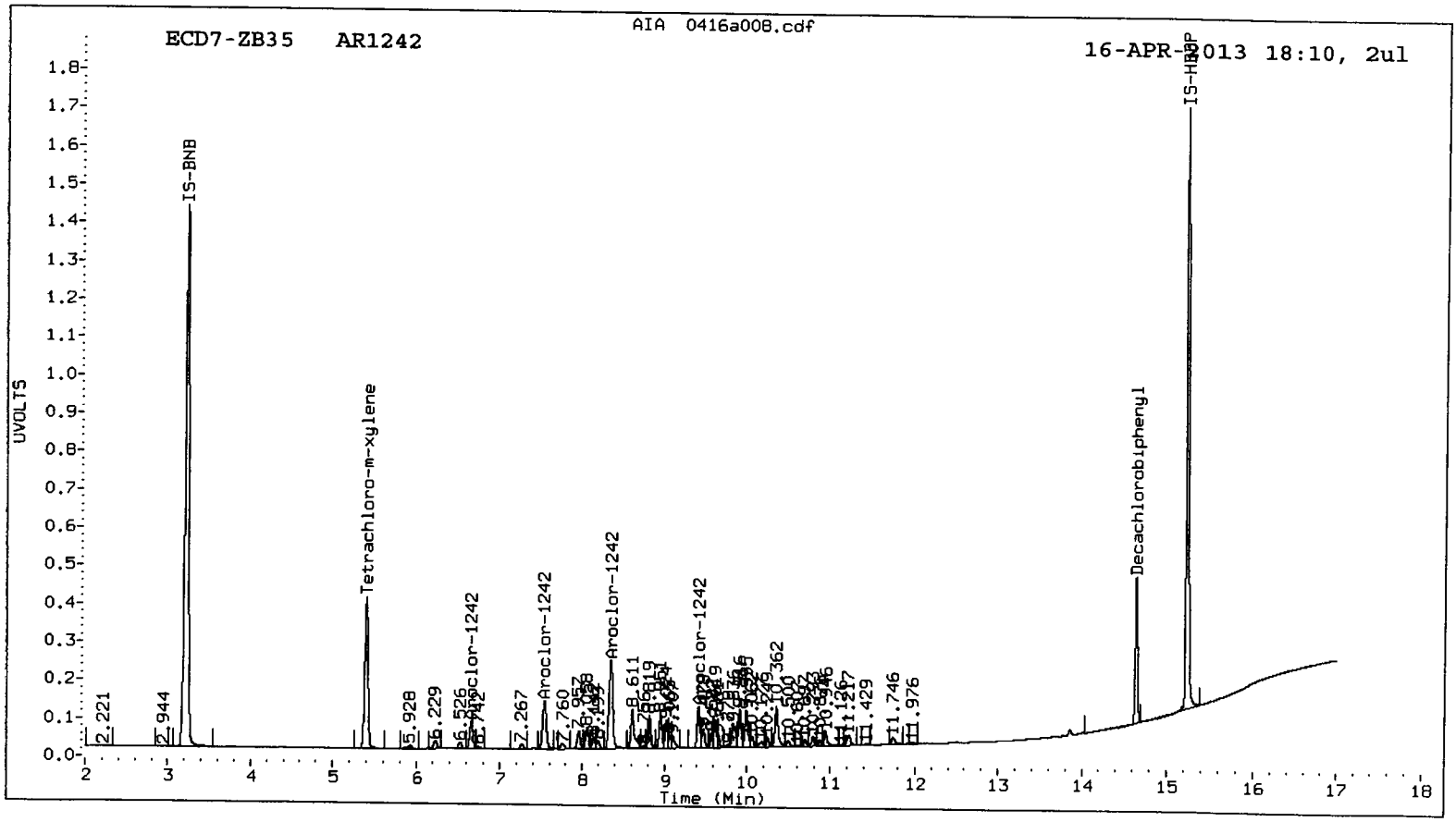
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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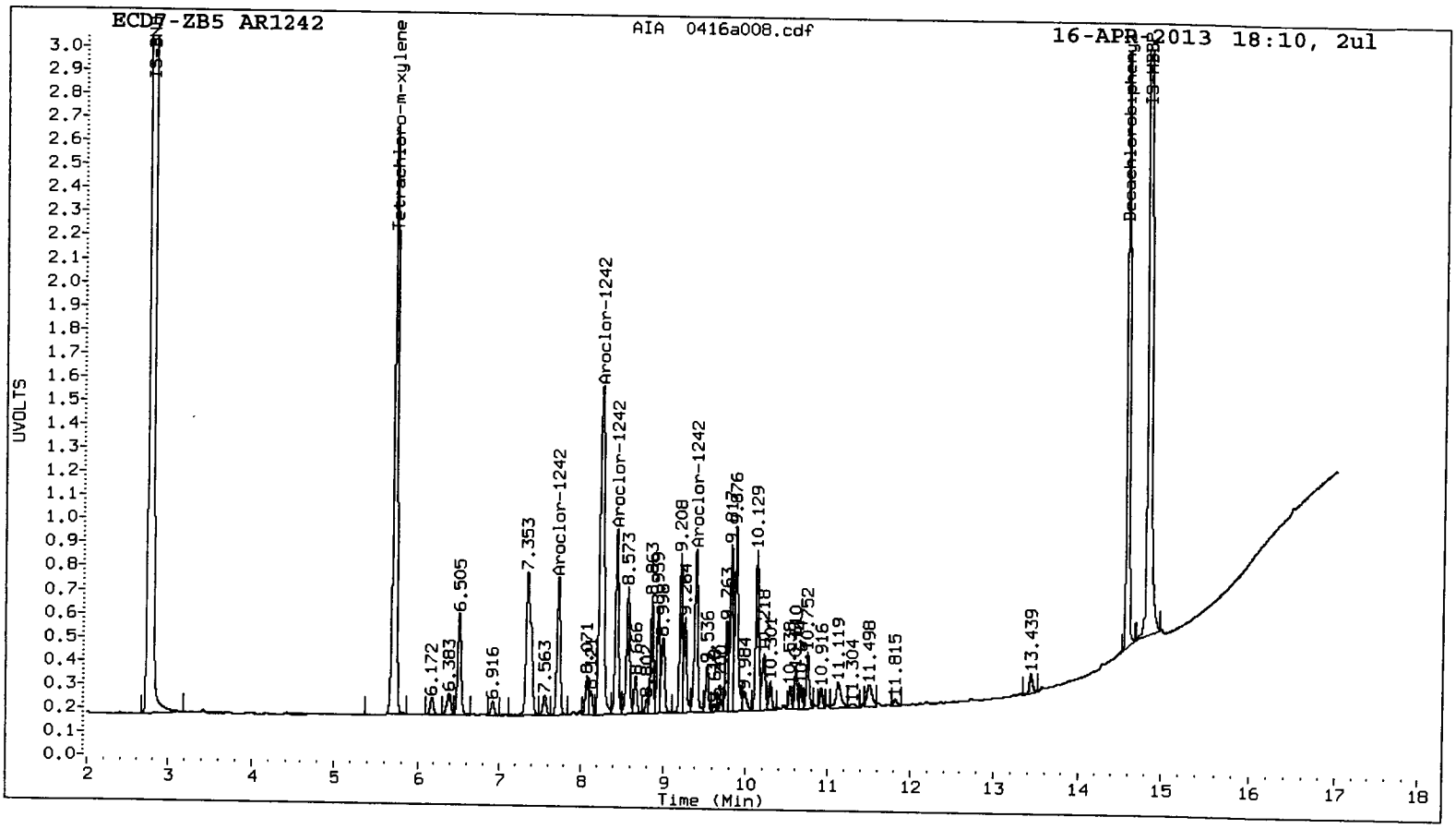
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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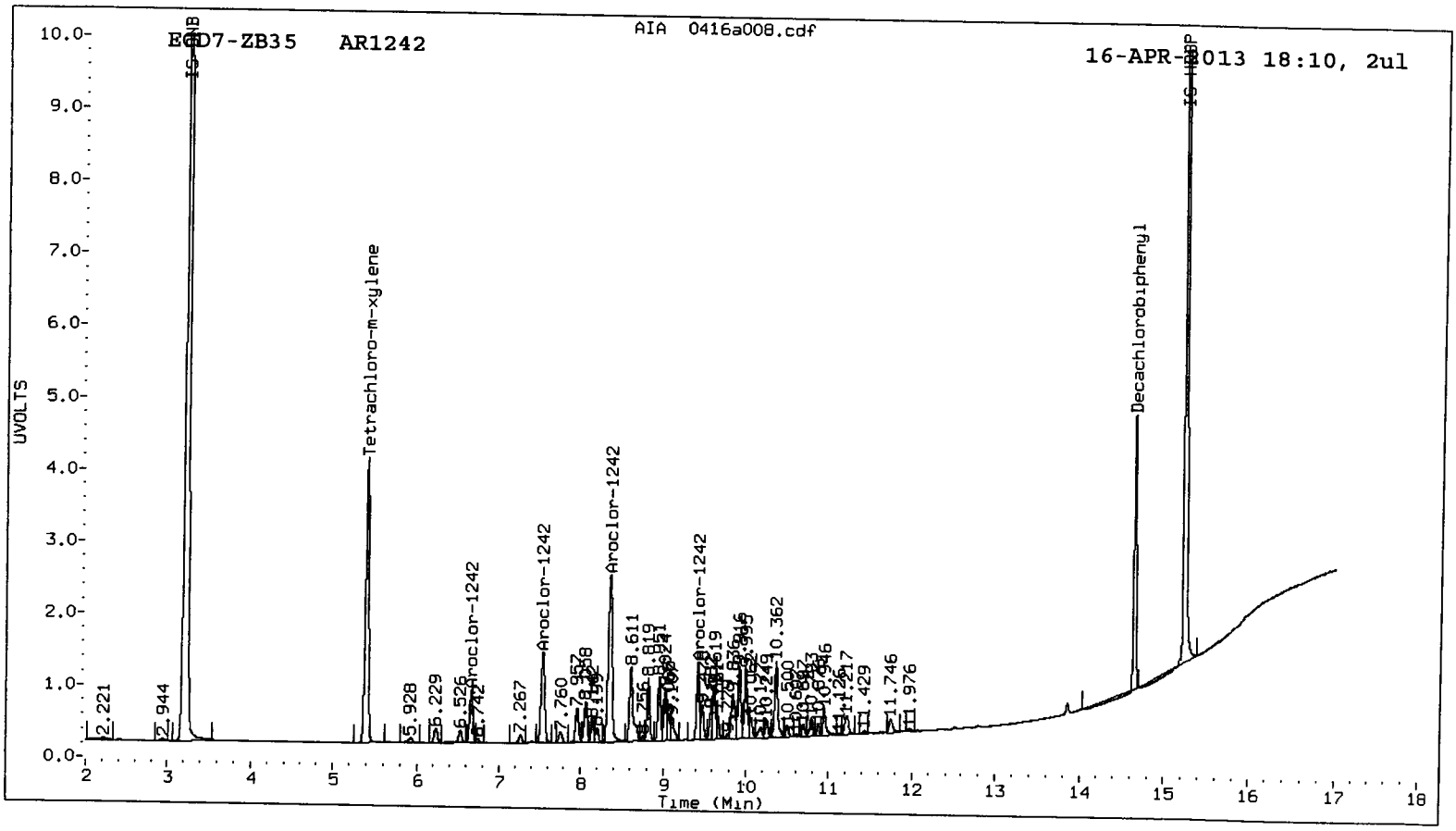
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl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AIA 0416a008.cdf
16-APR-2013 18:10, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a009.d
Data file 2: 20130416.b/ical-2.b/0416a009.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 16-APR-2013 18:30
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.714	-0.001	1461294	5.399	-0.001	2300123	22.3	21.0	5.9	Tetrachloro-m-xylene
14.592	0.000	1347669	14.649	0.000	1386097	21.2	21.3	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	55.8	52.6
Decachlorobiphenyl	53.0	53.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5269055	-5.8
Hexabromobiphenyl	4375297	4171971	-4.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8150106	-4.4
Hexabromobiphenyl	6077527	5682178	-6.5

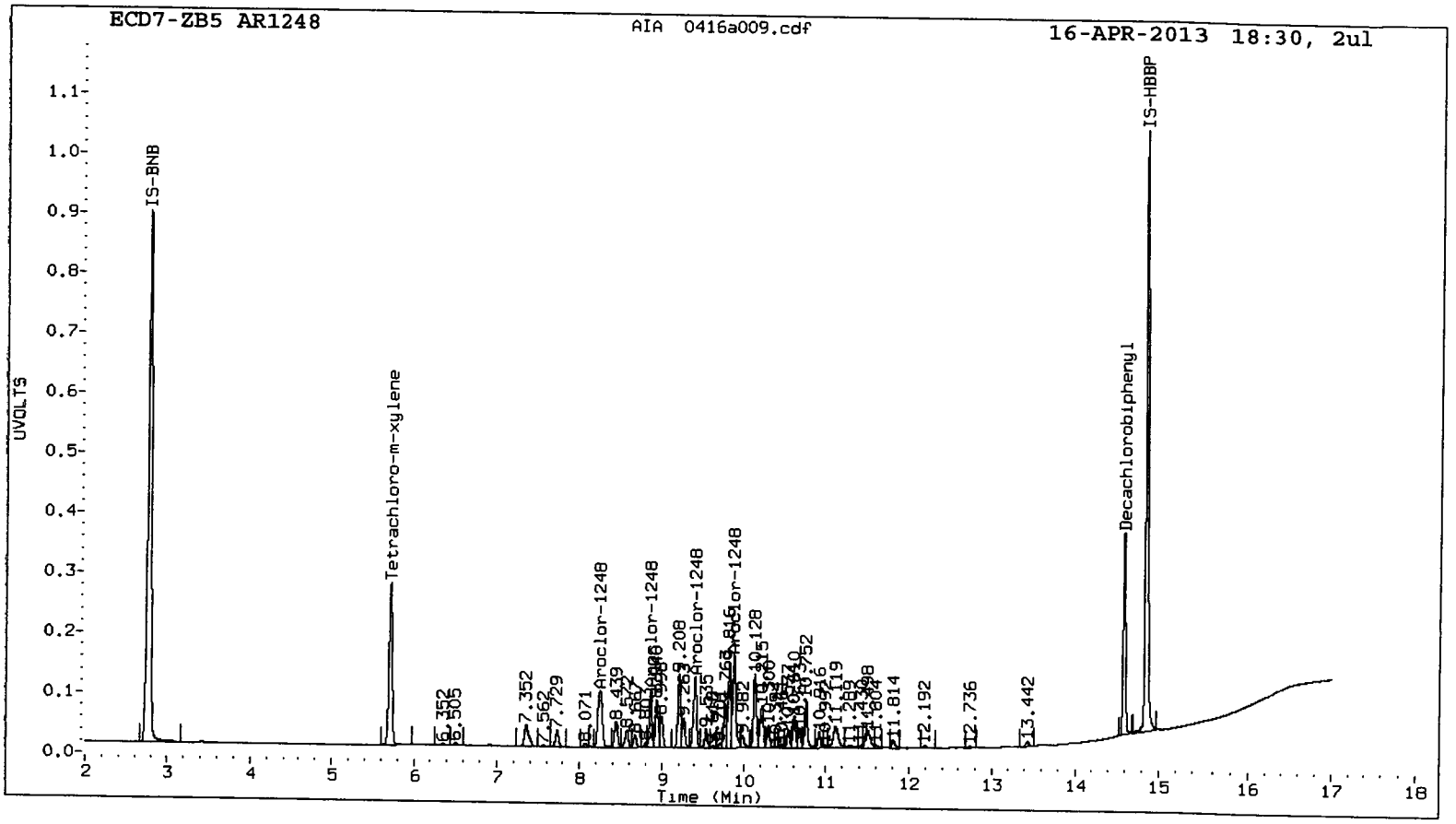
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1248	1	8.244	0.000	717831	250.0	1	7.539	0.000	416310	250.0
Aroclor-1248	2	8.864	0.000	456771	250.0	2	8.348	0.000	1070897	250.0
Aroclor-1248	3	9.404	0.000	634638	250.0	3	8.950	0.000	763751	250.0
Aroclor-1248	4	9.876	0.000	845203	250.0	4	10.361	0.000	1037311	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 9555423 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 13838740 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0416a009.cdf
16-APR-2013 18:30, 2ul
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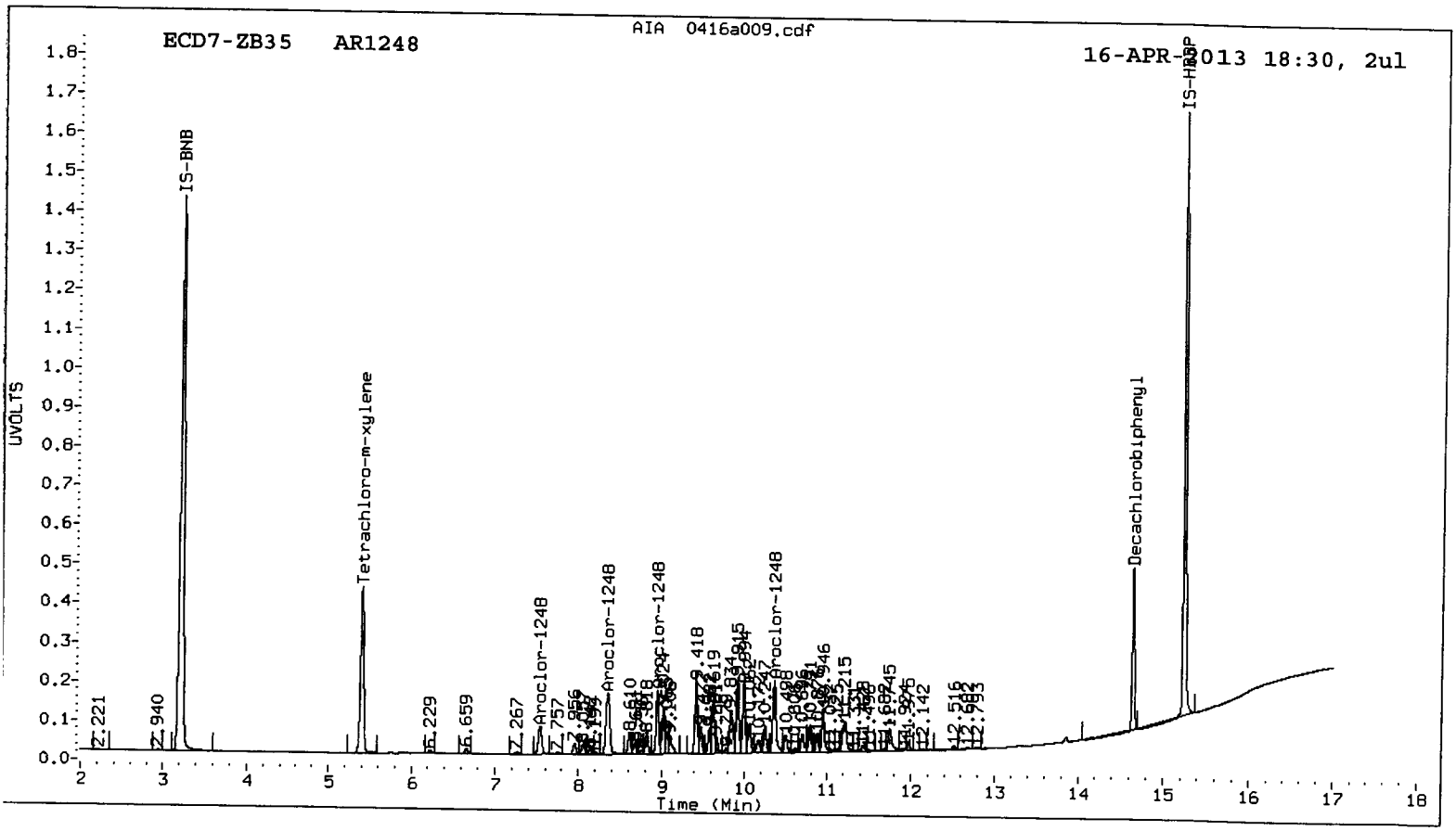
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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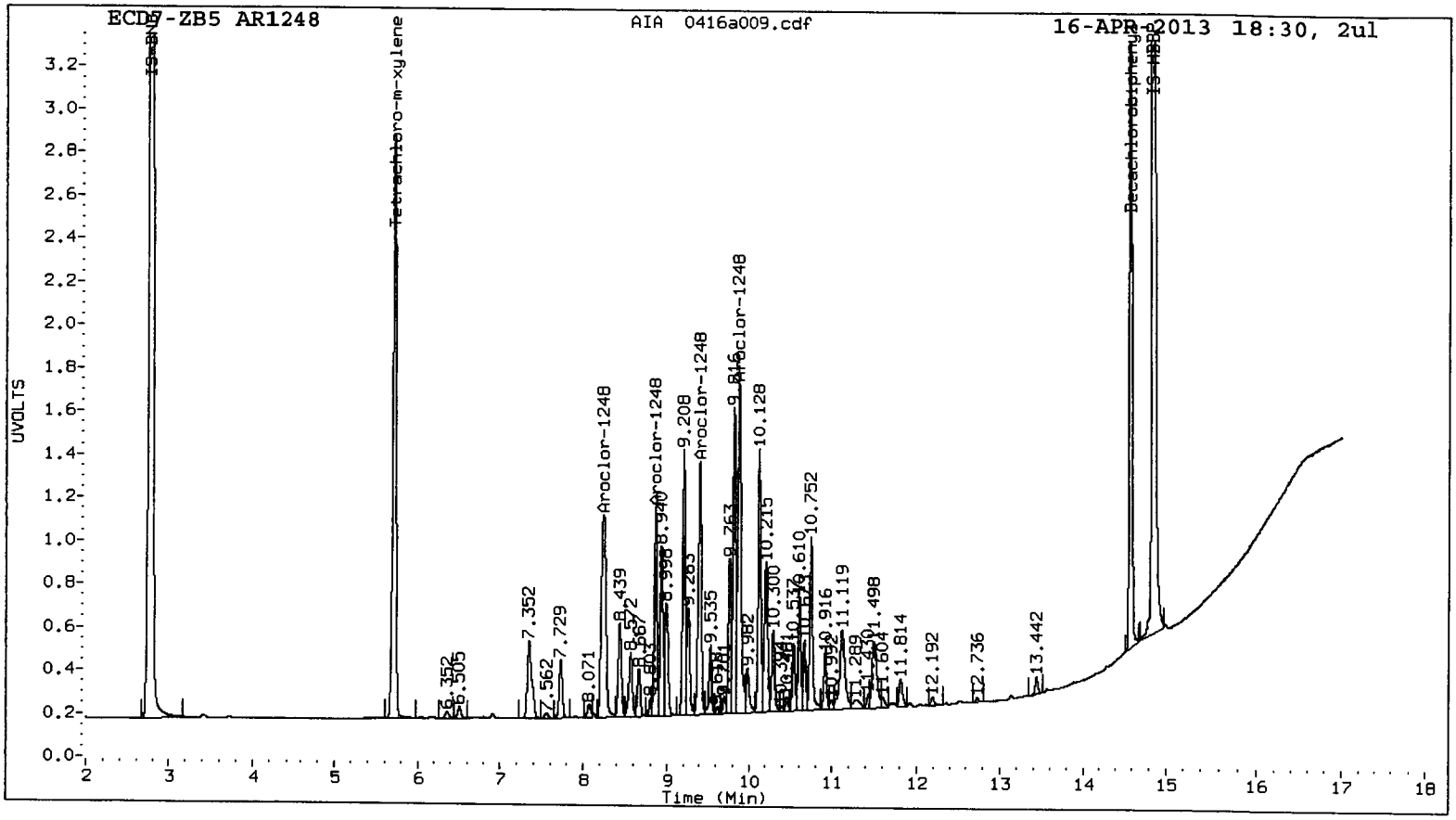
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB5 AR1248
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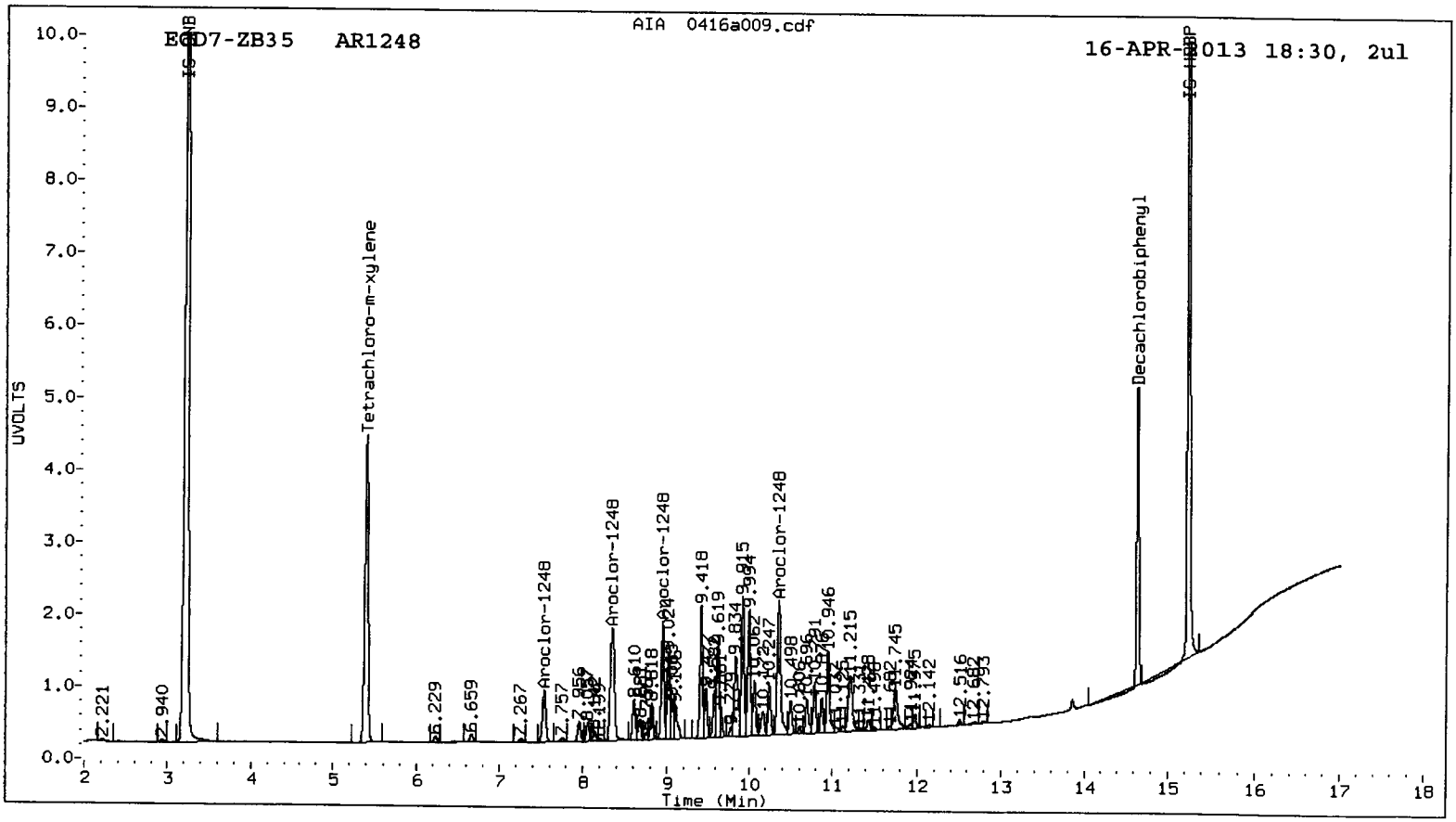
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)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16-APR-2013 18:30, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a010.d
Data file 2: 20130416.b/ical-2.b/0416a010.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 16-APR-2013 18:51
Report Date: 04/17/2013 11:43
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.712	-0.003	1373224	5.397	-0.003	2185516	20.1	19.3	4.3	Tetrachloro-m-xylene
14.591	0.000	1294137	14.648	-0.001	1422700	19.3	20.7	7.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.2	48.1
Decachlorobiphenyl	48.1	51.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5495311	-1.7
Hexabromobiphenyl	4375297	4409997	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8458741	-0.8
Hexabromobiphenyl	6077527	5993280	-1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

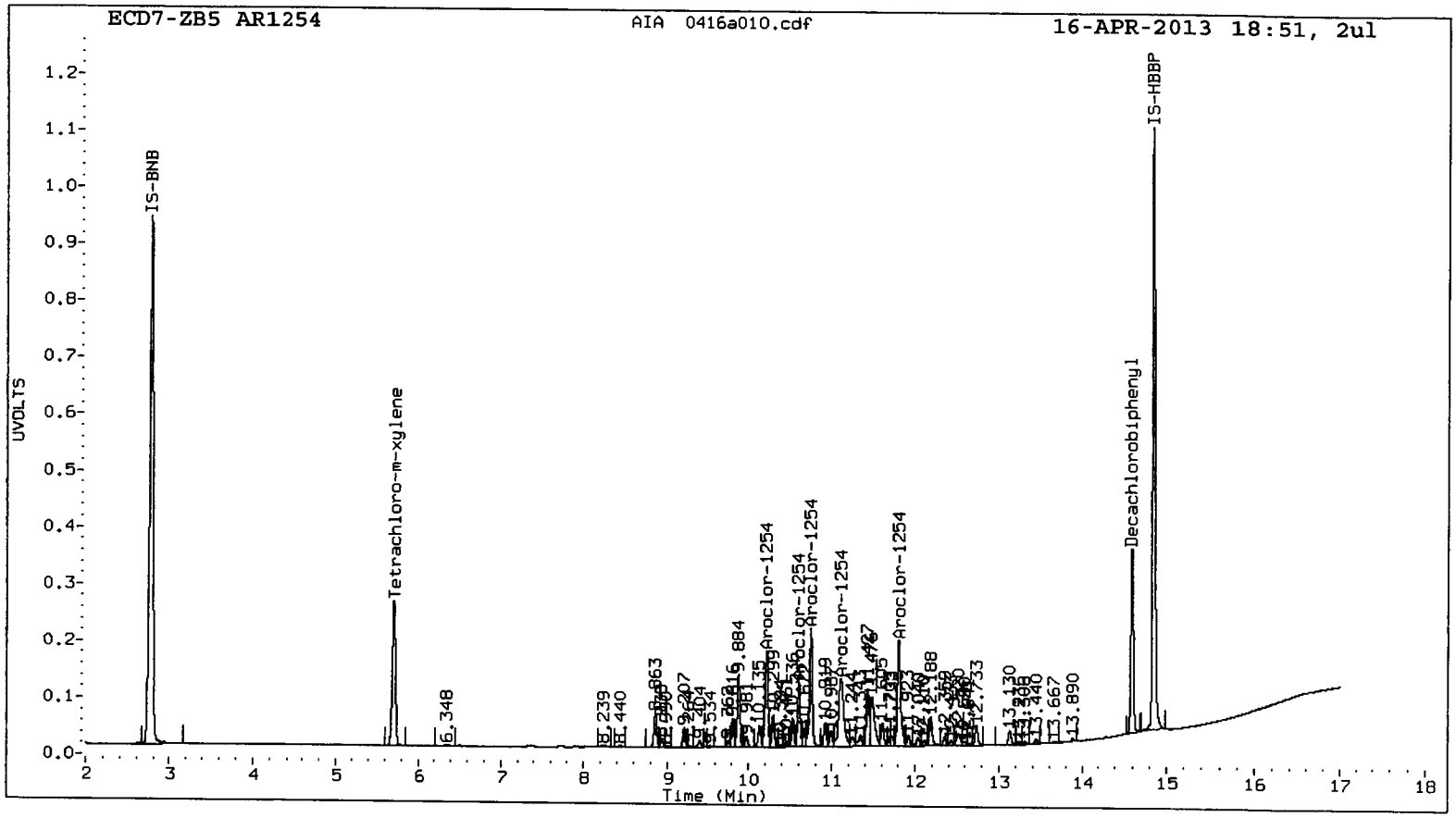
WL19 @1637

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	10.218	0.000	818688	250.0	1	10.062	0.000	681442	250.0
Aroclor-1254	2	10.609	0.000	494797	250.0	2	10.247	0.000	843973	250.0
Aroclor-1254	3	10.751	0.000	976748	250.0	3	10.945	0.000	1376606	250.0
Aroclor-1254	4	11.107	0.000	1038202	250.0	4	11.209	0.000	1367139	250.0
Aroclor-1254	5	11.810	0.000	979976	250.0	5	11.972	0.000	1015348	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):				250.0 RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 9795655 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 13285440 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
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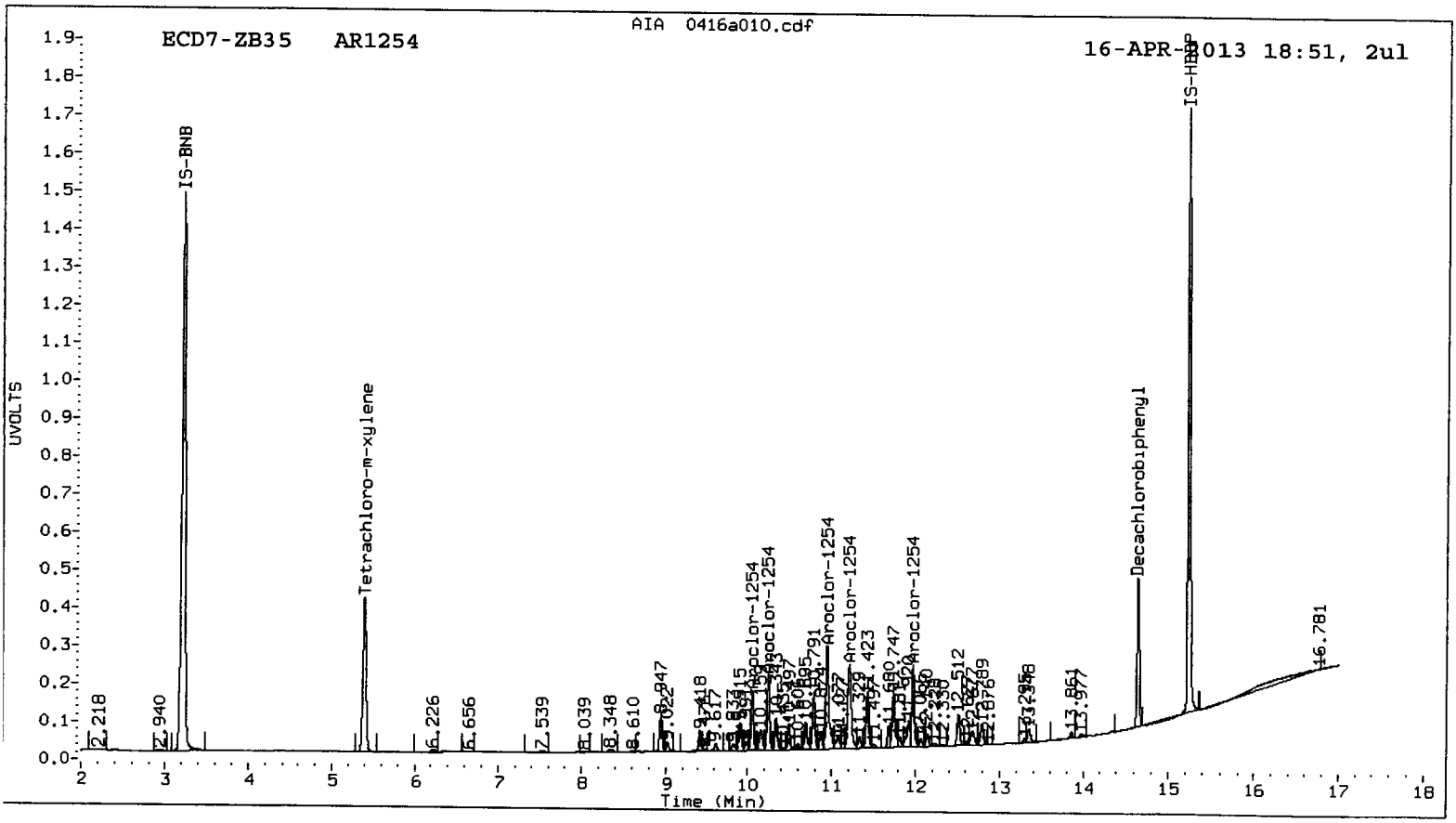
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
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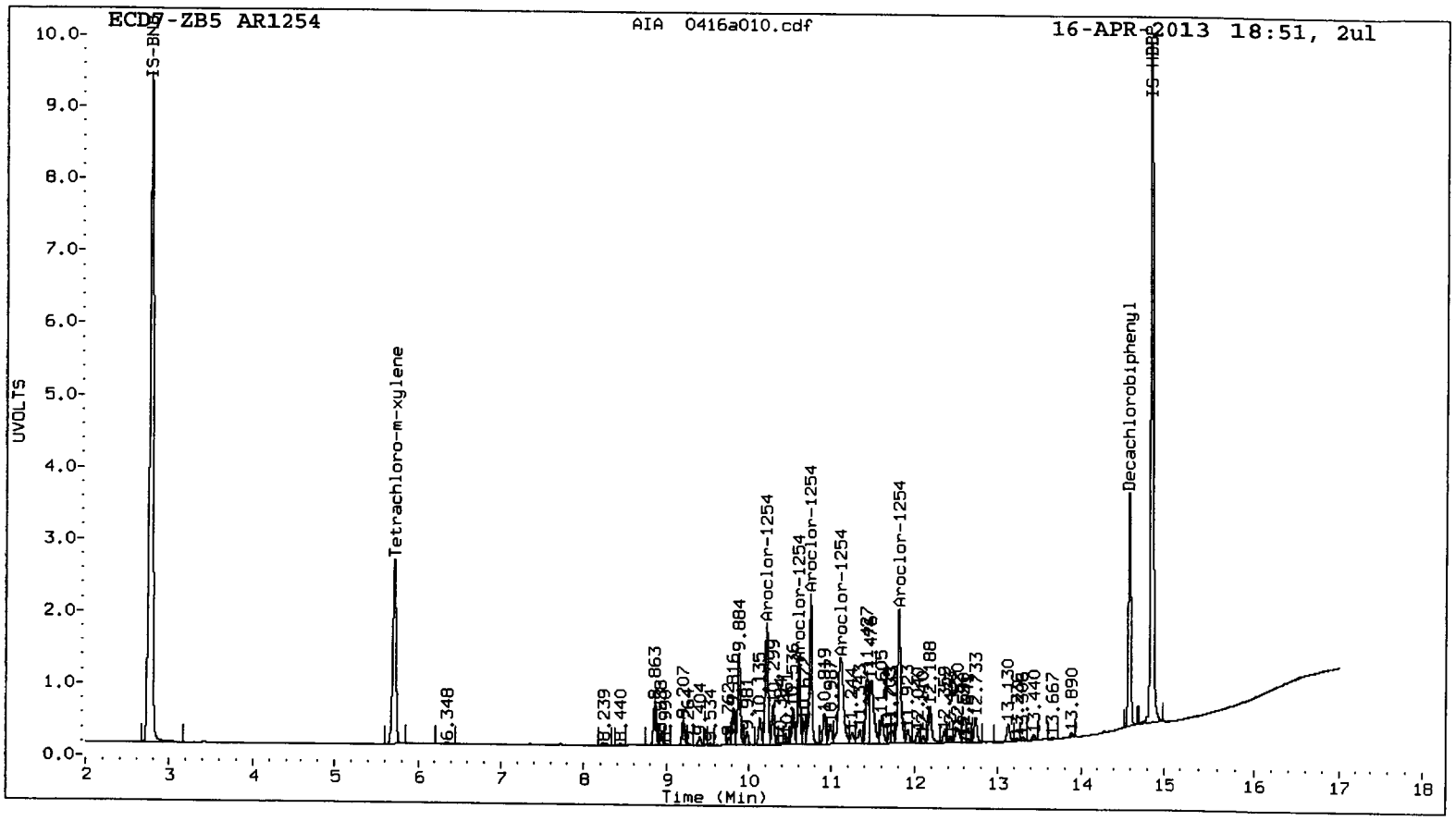
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
16.781
UVOLTS
Time (Min)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AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
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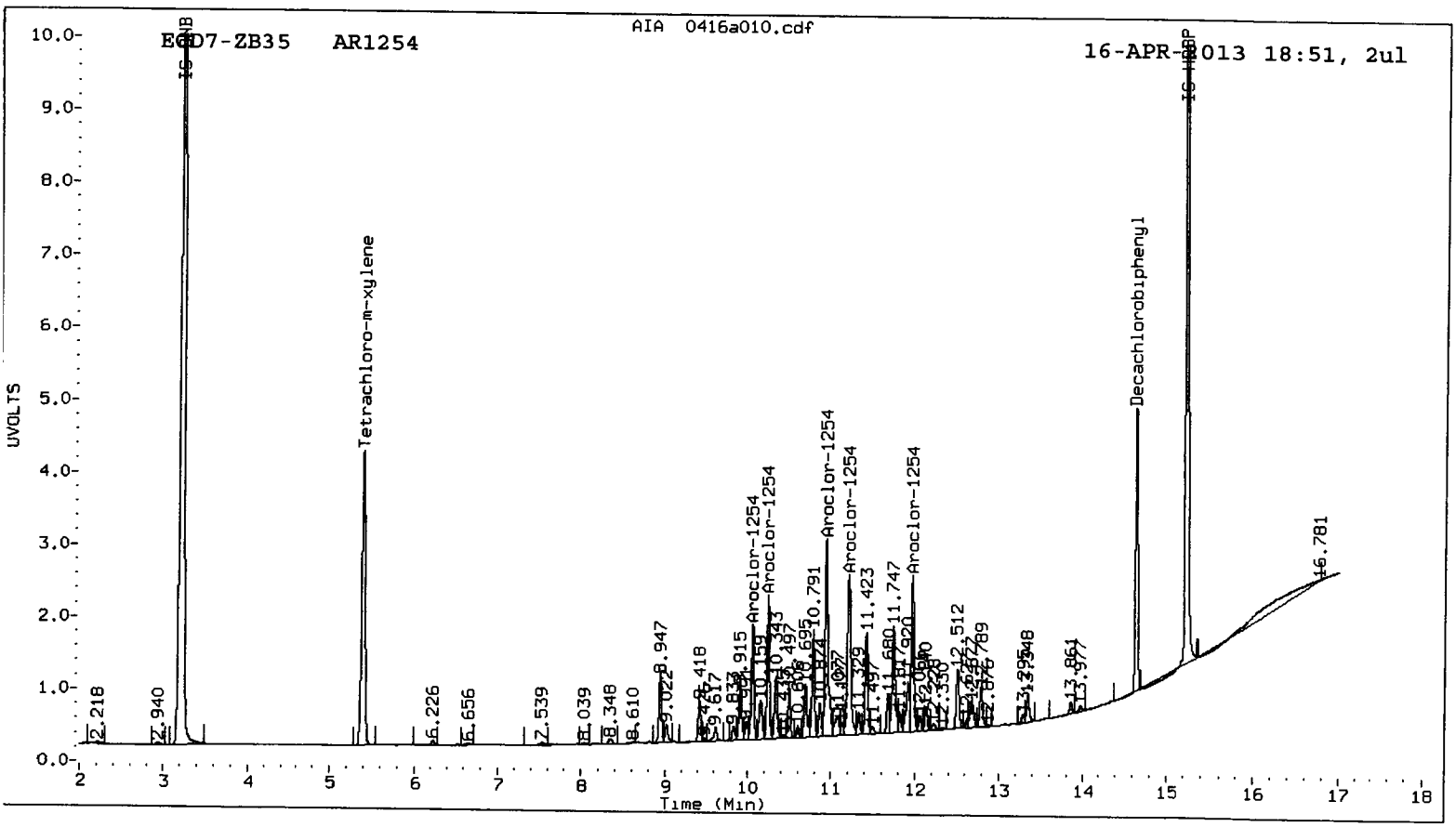
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1254
AIA 0416a010.cdf
16-APR-2013 18:51, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a011.d
Data file 2: 20130416.b/ical-2.b/0416a011.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 16-APR-2013 19:11
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	0.000	1413072	5.400	0.000	2176569	20.9	19.3	7.6	Tetrachloro-m-xylene
14.591	-0.001	1292049	14.648	-0.001	1423783	19.3	21.1	8.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	52.2	48.4
Decachlorobiphenyl	48.2	52.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5446032	-2.6
Hexabromobiphenyl	4375297	4395558	0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8381800	-1.7
Hexabromobiphenyl	6077527	5896928	-3.0

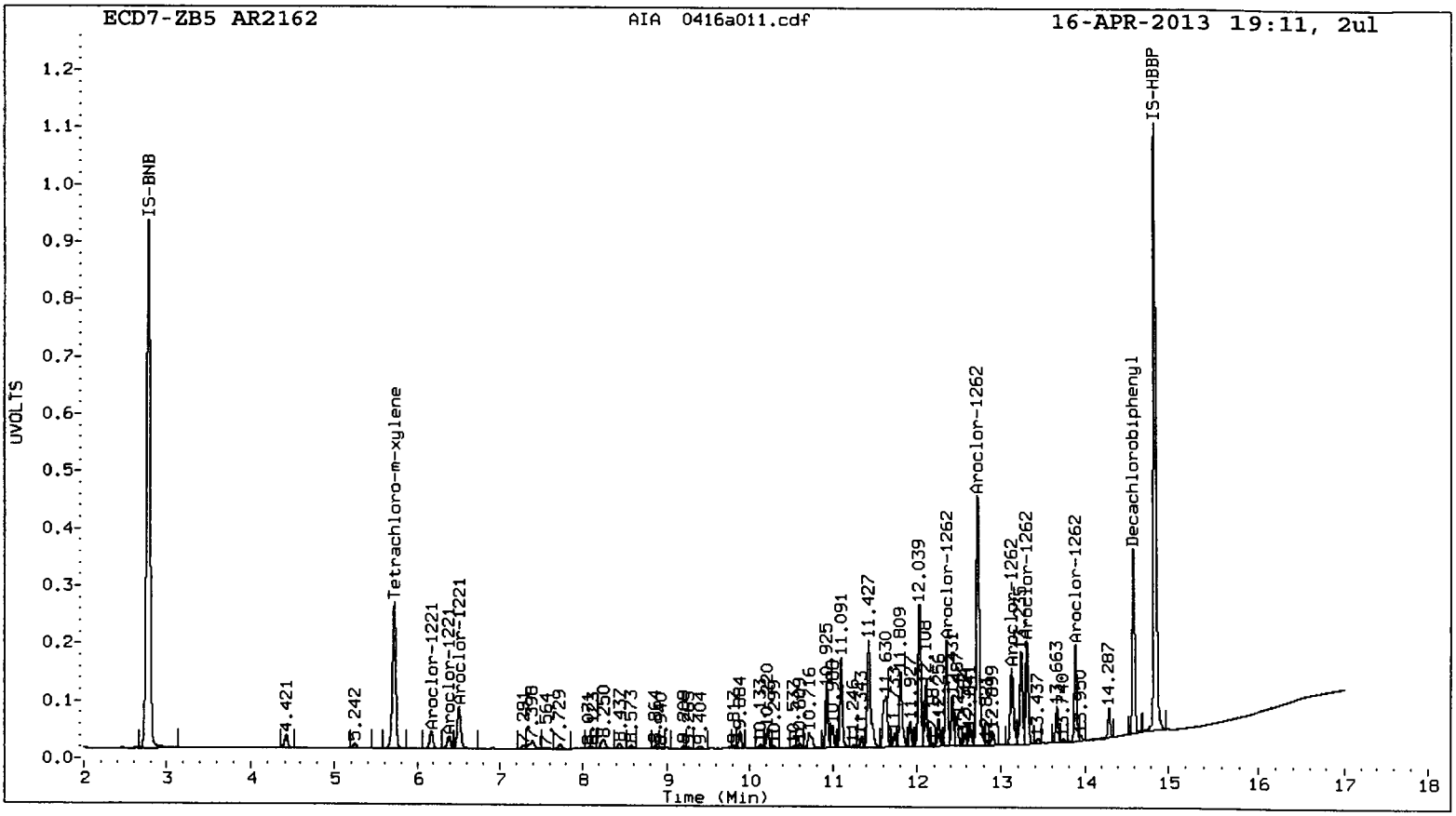
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	6.173	0.000	165839	250.0	1	6.227	0.000	323324	250.0
Aroclor-1221	2	6.384	0.000	125228	250.0	2	6.525	0.000	206087	250.0
Aroclor-1221	3	6.506	0.000	420069	250.0	3	6.661	0.000	595597	250.0
Aroclor-1221	NS	---			----	4	7.553	0.000	204551	250.0
	Total Col1Ave (3 peaks):				250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	12.357	0.000	798433	250.0	1	12.516	0.000	1118692	250.0
Aroclor-1262	2	12.729	0.000	2138598	250.0	2	12.786	0.000	2579025	250.0
Aroclor-1262	3	13.127	0.000	690165	250.0	3	13.291	0.000	984708	250.0
Aroclor-1262	4	13.305	0.000	804193	250.0	4	13.349	0.000	1615110	250.0
Aroclor-1262	5	13.887	0.000	705068	250.0	5	13.974	0.000	888575	250.0
	Total Col1Ave (5 peaks):				250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
	Corrected Ave (4 peaks):				250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 15013569 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 19484859 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Tetrachloro-m-xylene
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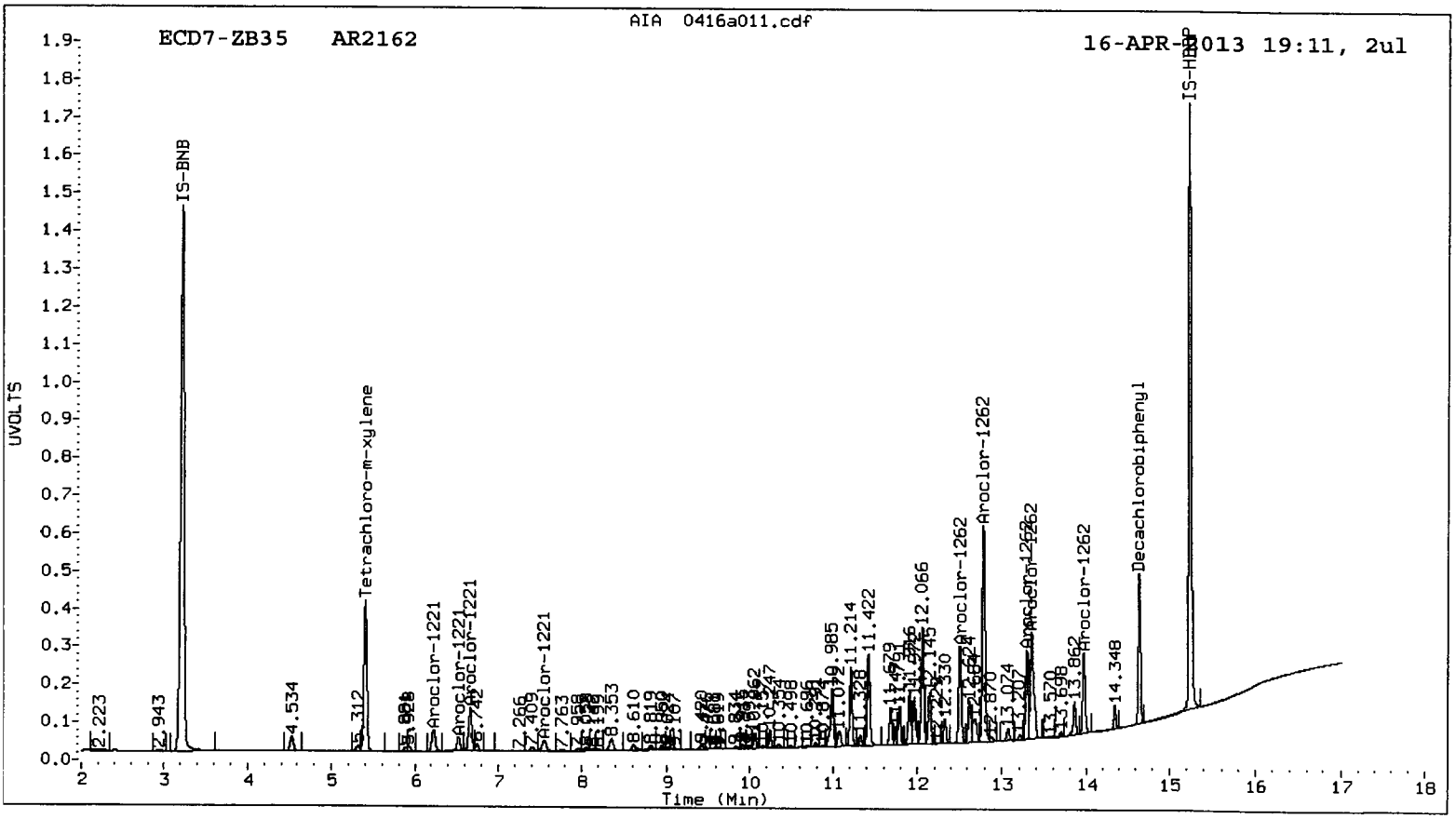
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Aroclor-1262
Aroclor-1262
Aroclor-1262
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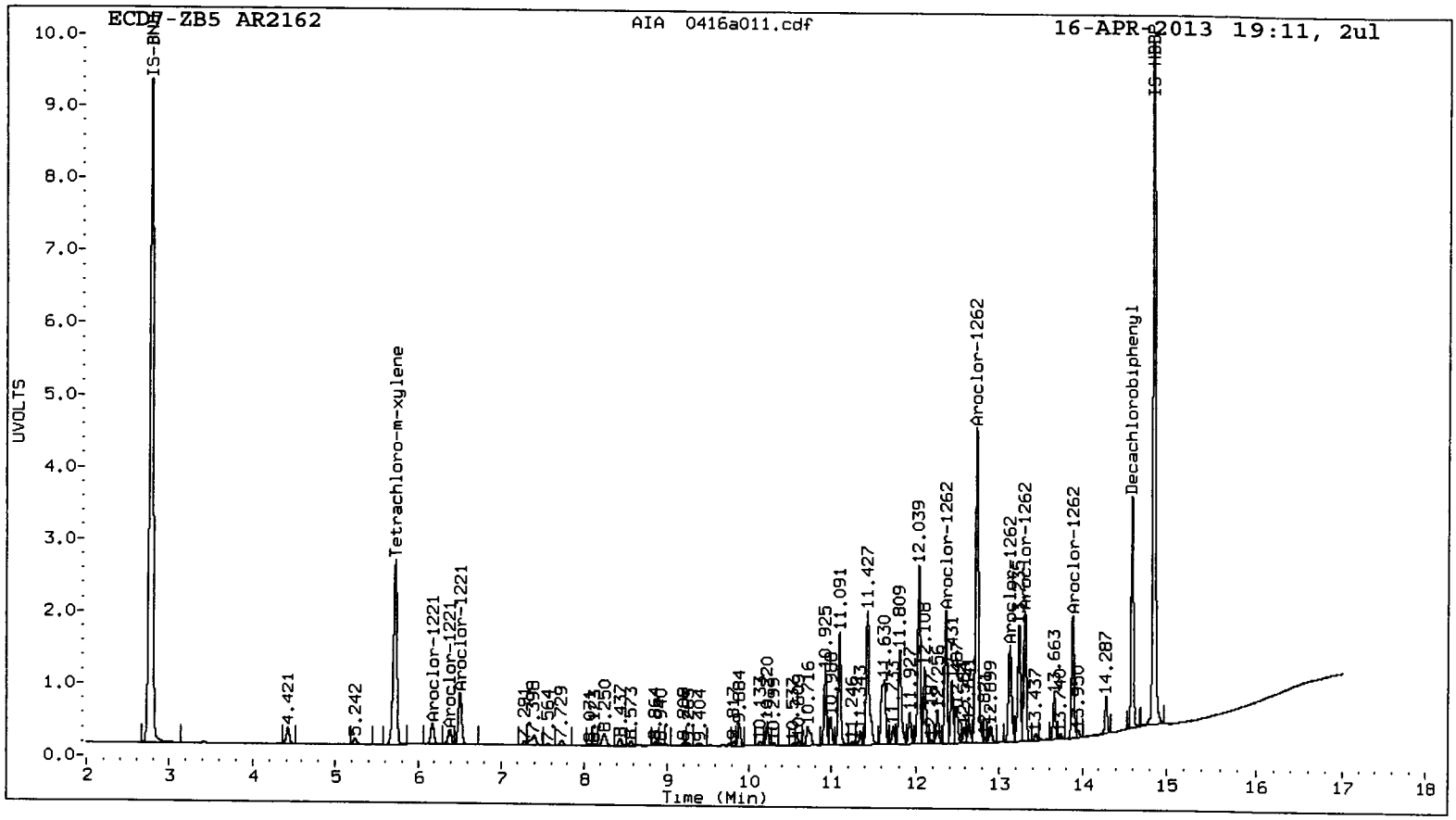
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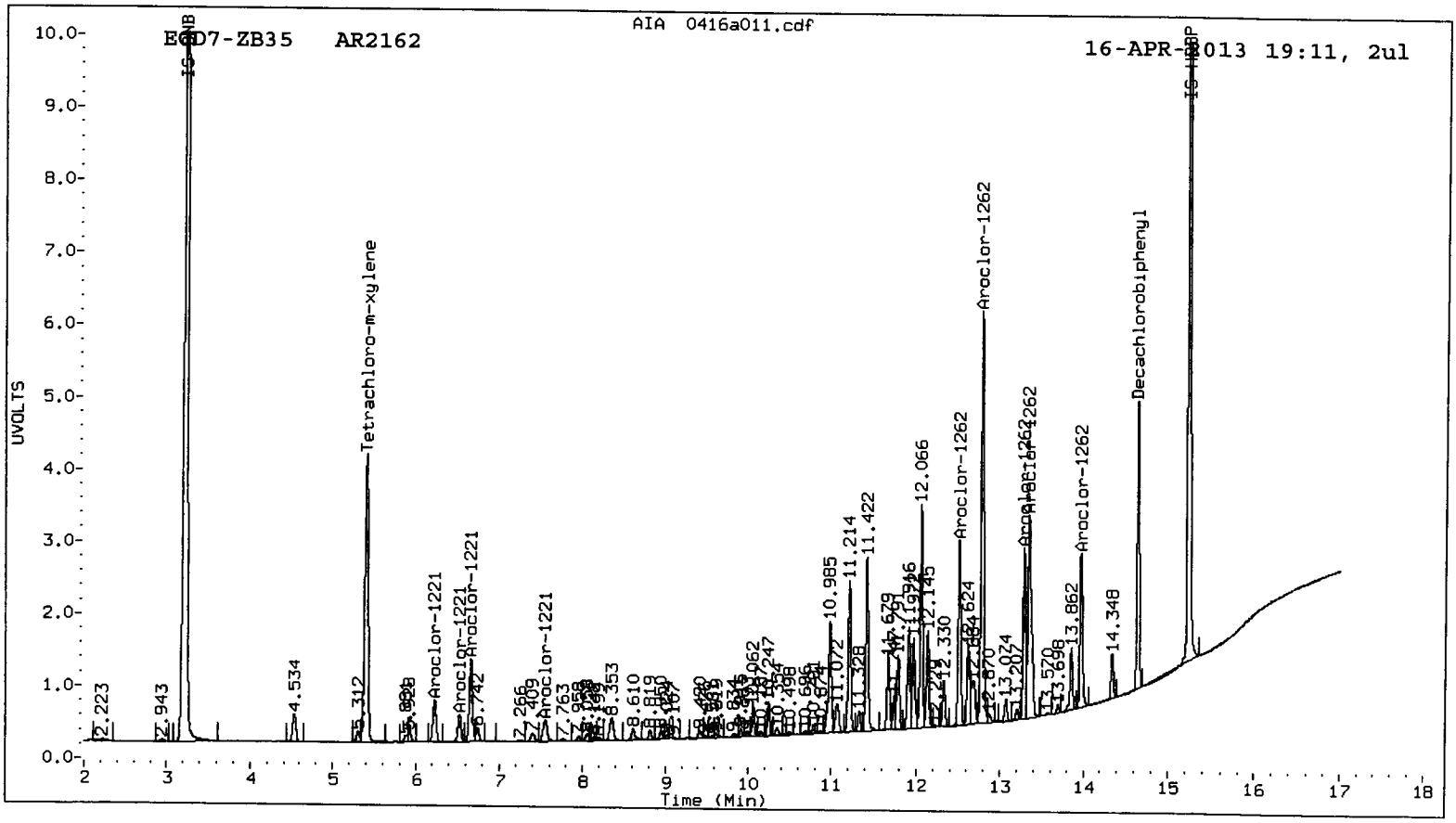
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a012.d
Data file 2: 20130416.b/ical-2.b/0416a012.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 16-APR-2013 19:32
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	0.000	1429119	5.398	-0.002	2210962	20.6	19.3	6.7	Tetrachloro-m-xylene
14.591	-0.001	2395915	14.648	-0.001	2713208	34.9	38.4	9.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.5	48.1
Decachlorobiphenyl	87.1	95.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5579954	-0.2
Hexabromobiphenyl	4375297	4509857	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8556043	0.4
Hexabromobiphenyl	6077527	6168153	1.5

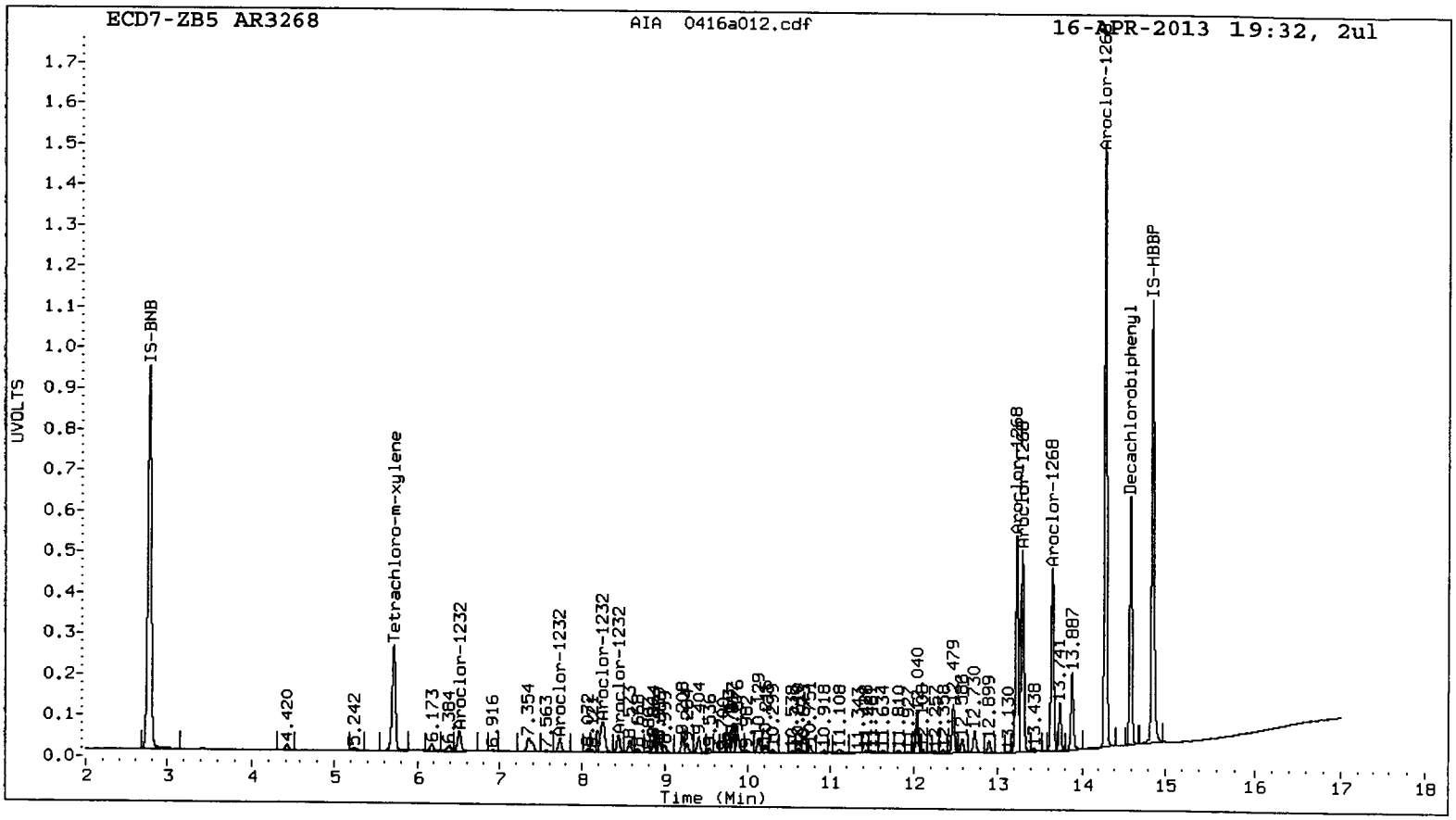
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.506	0.000	285035	250.0	1	6.660	0.000	424783	250.0
Aroclor-1232	2	7.729	0.000	165986	250.0	2	7.542	0.000	468947	250.0
Aroclor-1232	3	8.248	0.000	554649	250.0	3	8.351	0.000	844325	250.0
Aroclor-1232	4	8.437	0.000	222959	250.0	4	8.950	0.000	274873	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	13.236	0.000	2368478	250.0	1	13.290	0.000	2698865	250.0
Aroclor-1268	2	13.302	0.000	2209885	250.0	2	13.352	0.000	2561176	250.0
Aroclor-1268	3	13.649	0.000	1872087	250.0	3	13.698	0.000	2065605	250.0
Aroclor-1268	4	14.286	0.000	5716813	250.0	4	14.348	0.000	6776978	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.816 - 14.491) = 19418273 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 24727186 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
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Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
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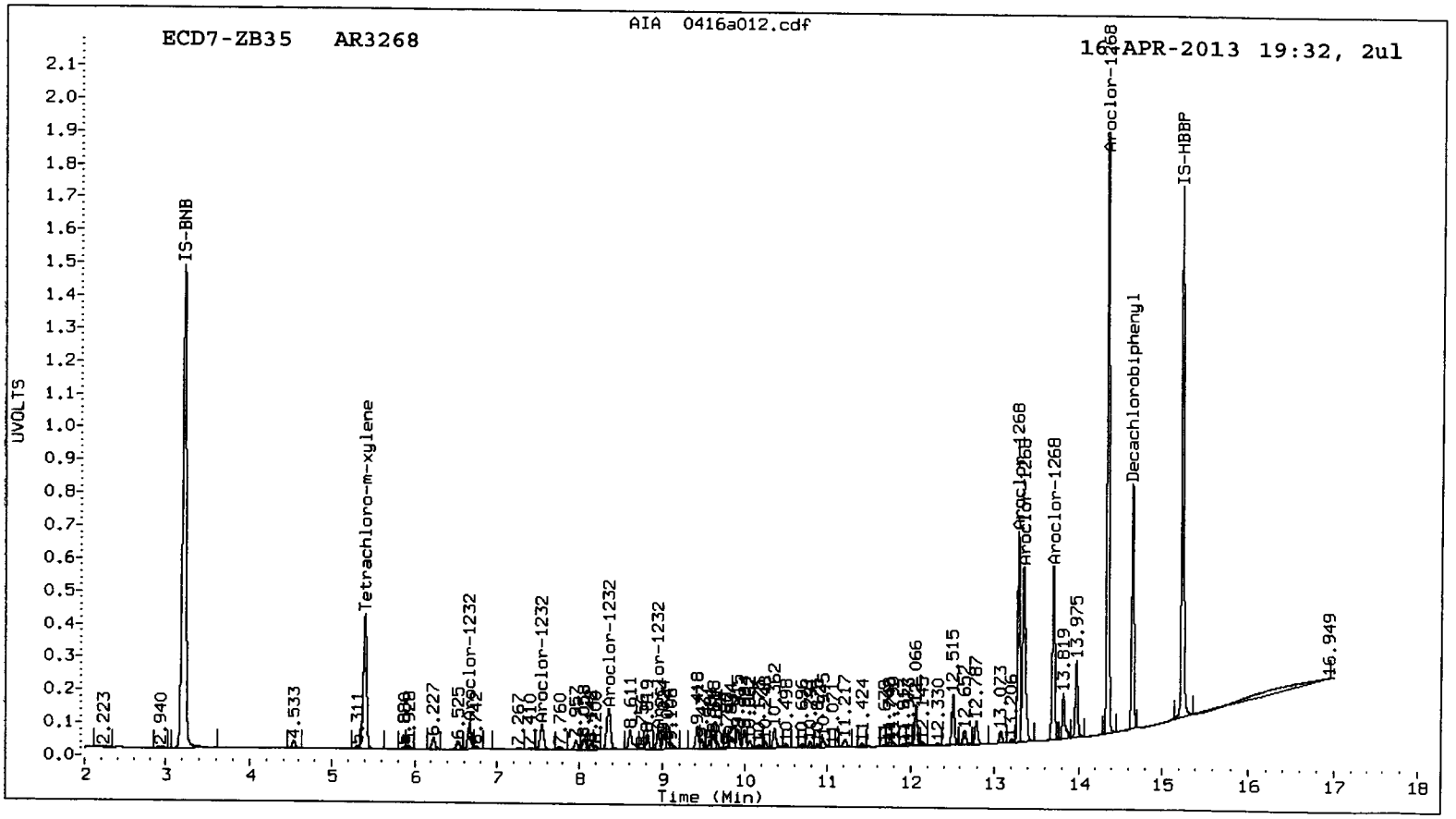
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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
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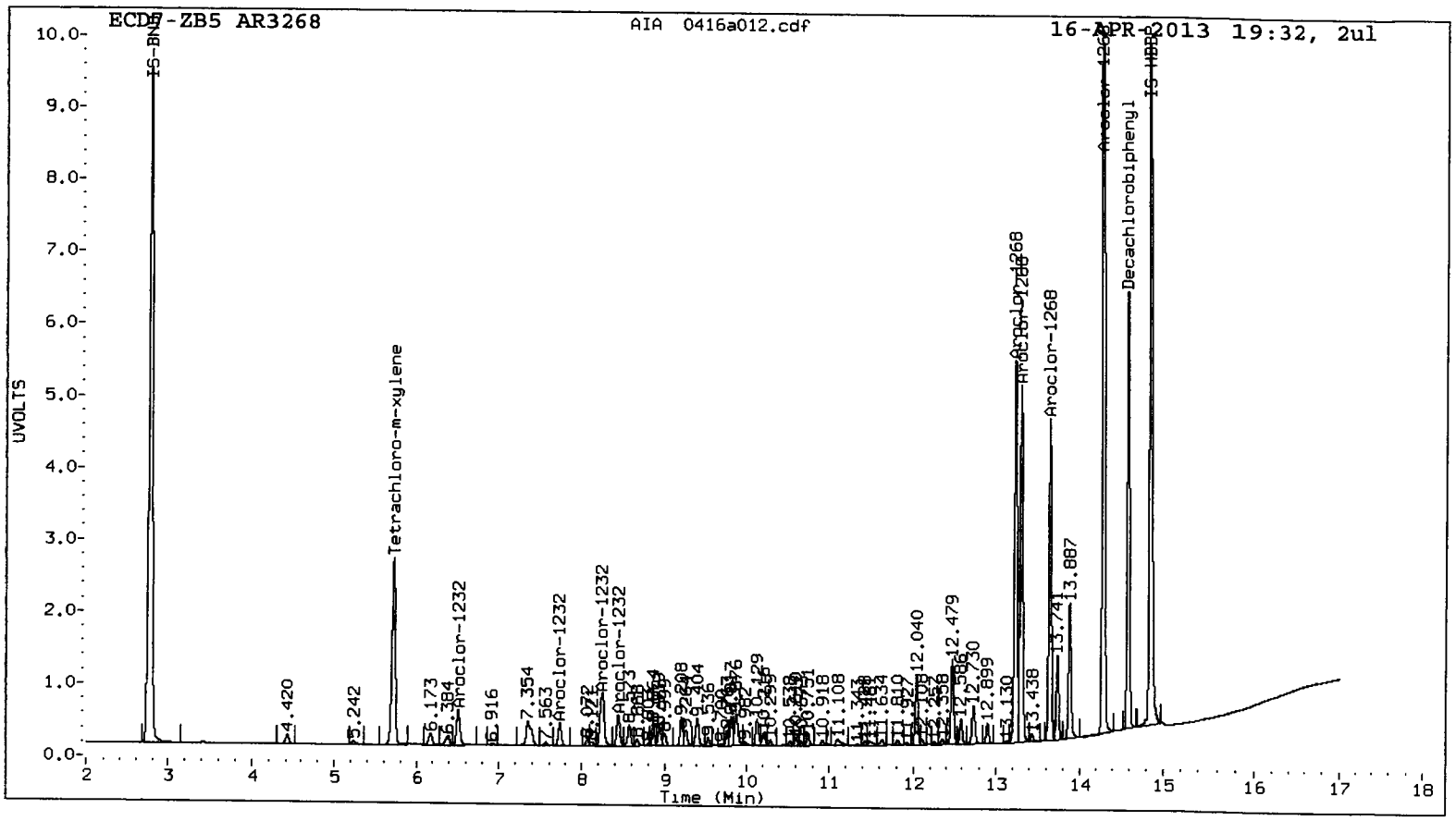
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16-APR-2013 19:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
4.420
5.242
6.173
6.384
6.916
7.354
7.563
8.072
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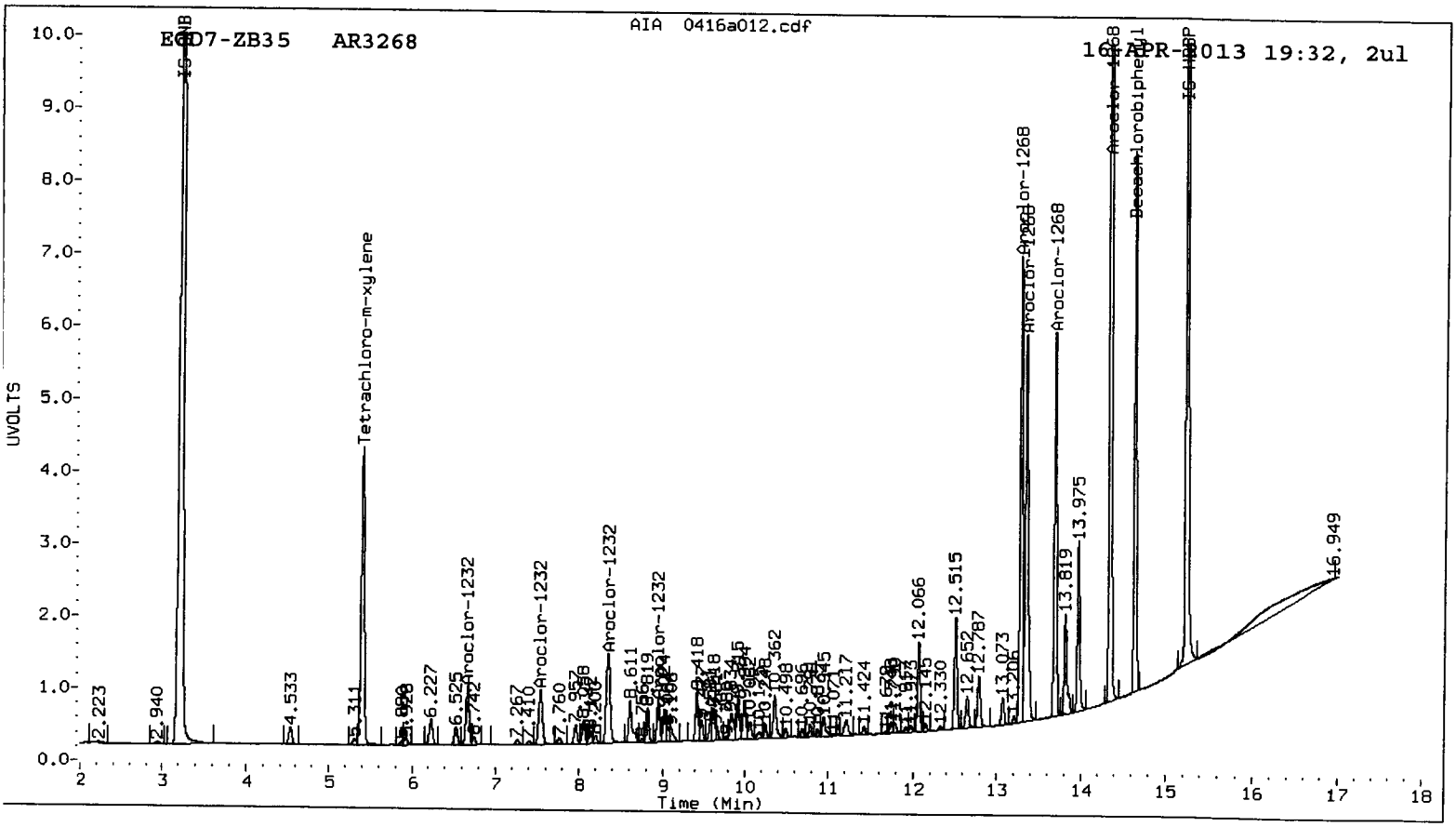
13.438
13.741
13.887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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
2.223
2.940
4.533
5.311
6.227
6.525
6.742
7.267
7.760
8.611
10.362
10.498
11.217
11.424
12.066
12.330
12.515
12.652
12.787
13.073
13.206
13.819
13.975
16.949

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a013.d
Data file 2: 20130416.b/ical-2.b/0416a013.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 16-APR-2013 19:53
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	-0.001	1511141	5.398	-0.002	2330305	22.8	21.2	7.2	Tetrachloro-m-xylene
14.591	0.000	1402470	14.648	-0.001	1543934	21.3	23.2	8.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	57.1	53.1
Decachlorobiphenyl	53.3	58.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5325274	-4.8
Hexabromobiphenyl	4375297	4313581	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8177137	-4.1
Hexabromobiphenyl	6077527	5796454	-4.6

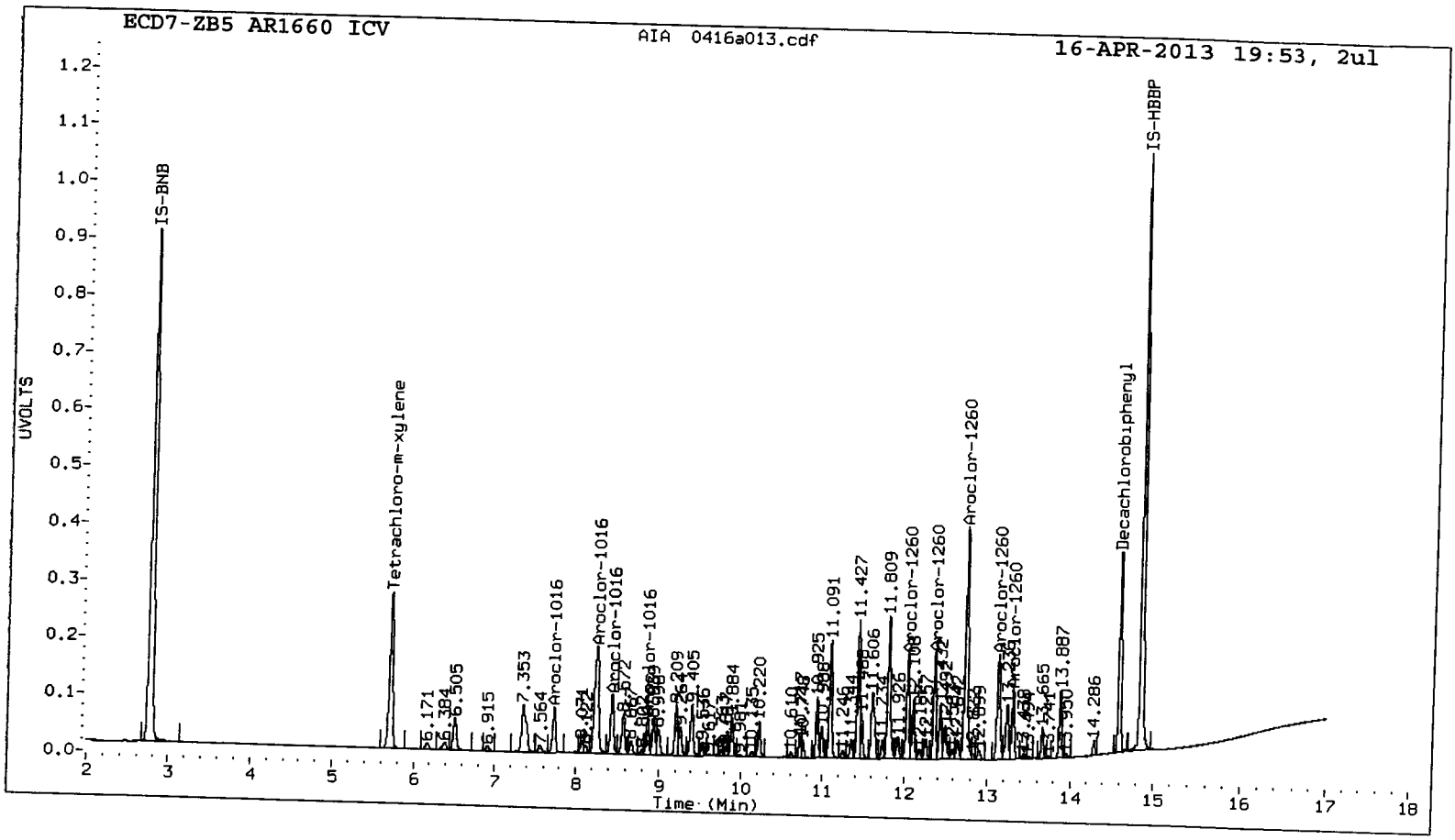
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.729	0.000	413544	257.1	1	6.659	-0.002	498998	261.8
Aroclor-1016	2	8.250	-0.001	1395198	258.5	2	7.541	0.000	1019540	243.8
Aroclor-1016	3	8.437	-0.001	554059	260.4	3	8.351	-0.002	2000333	245.4
Aroclor-1016	4	8.863	-0.001	308795	253.5	4	9.417	-0.001	653898	255.0
	Total Col1Ave (4 peaks):				257.4	Total Col2Ave (4 peaks):			251.5	RPD = 2
	Corrected Ave (3 peaks):				256.4	Corrected Ave (3 peaks):			248.0	RPD = 3
Aroclor-1260	1	12.040	-0.001	838362	316.1	1	11.972	0.001	1119062	231.3
Aroclor-1260	2	12.357	-0.001	816676	307.3	2	12.516	0.000	1120521	295.5
Aroclor-1260	3	12.730	0.001	1990658	310.6	3	12.787	0.002	2401954	305.9
Aroclor-1260	4	13.128	0.001	965587	291.1	4	13.347	0.000	1583097	304.8
Aroclor-1260	5	13.305	0.000	530848	334.9	NS	---			----
	Total Col1Ave (5 peaks):				312.0	Total Col2Ave (4 peaks):			284.4	RPD = 9
	Corrected Ave (4 peaks):				306.3	Corrected Ave (3 peaks):			277.2	RPD = 10

Total PCB Area Col1 (5.816 - 14.491) = 21203785 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 28196085 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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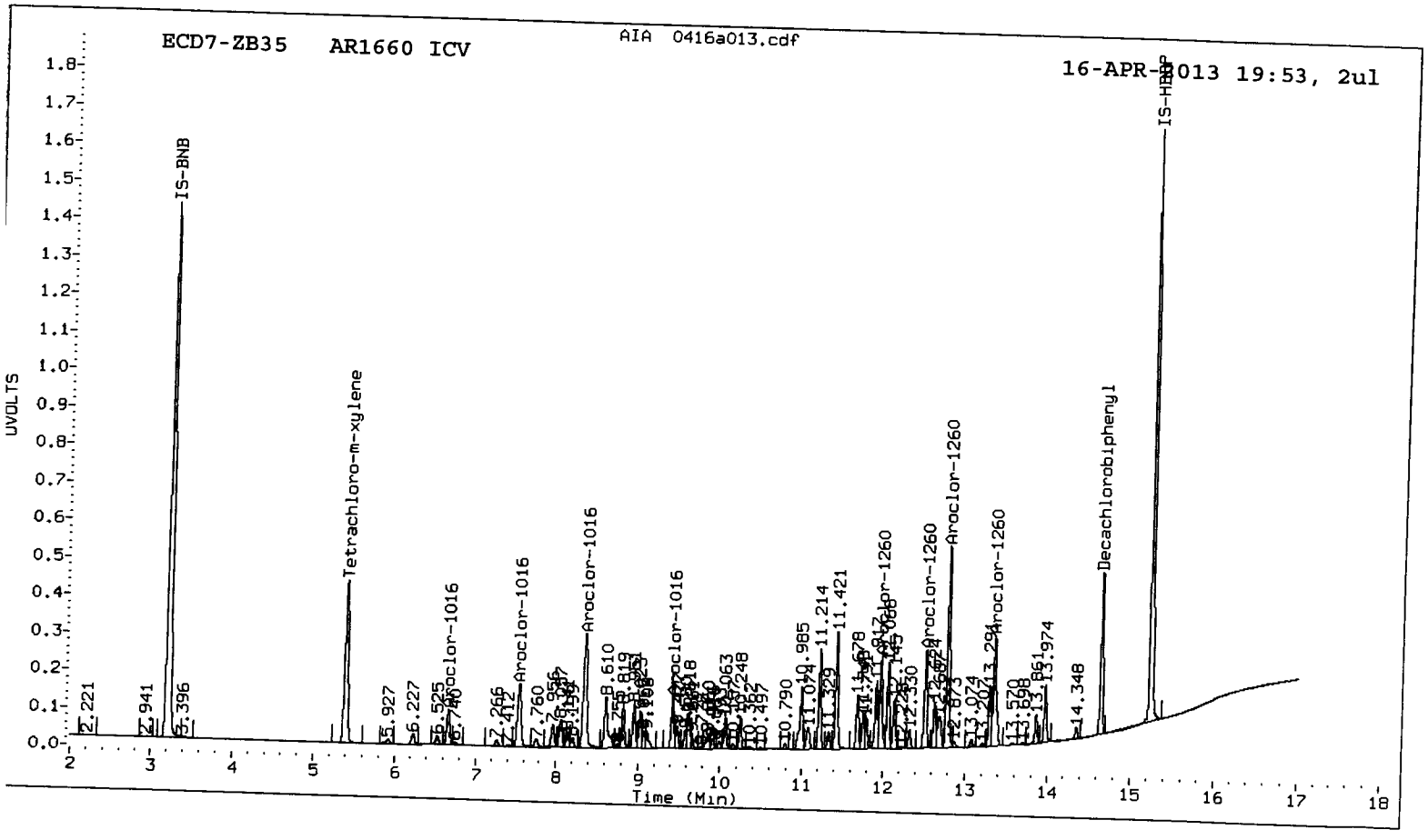
Decachlorobiphenyl
IS-HBBP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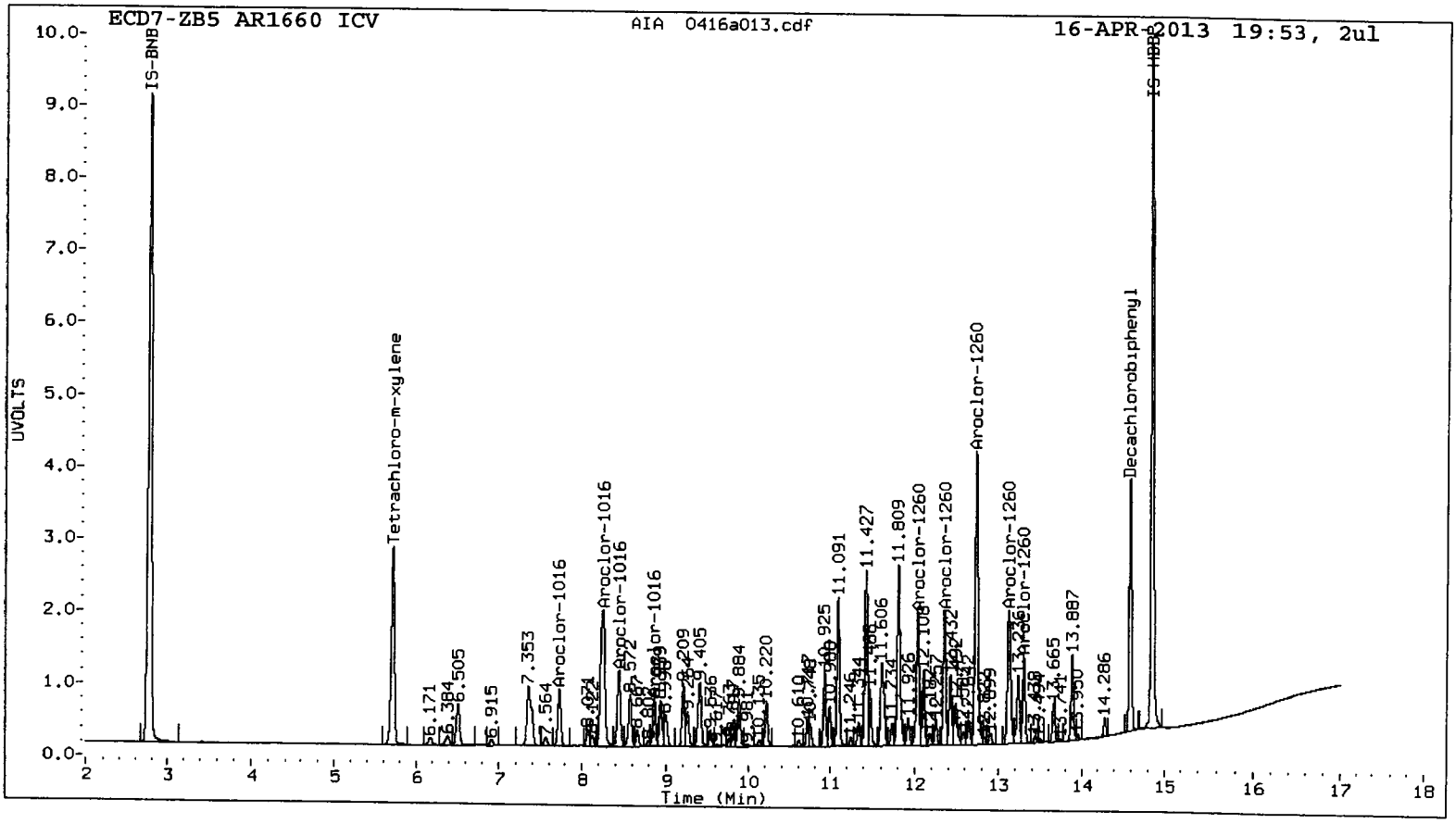
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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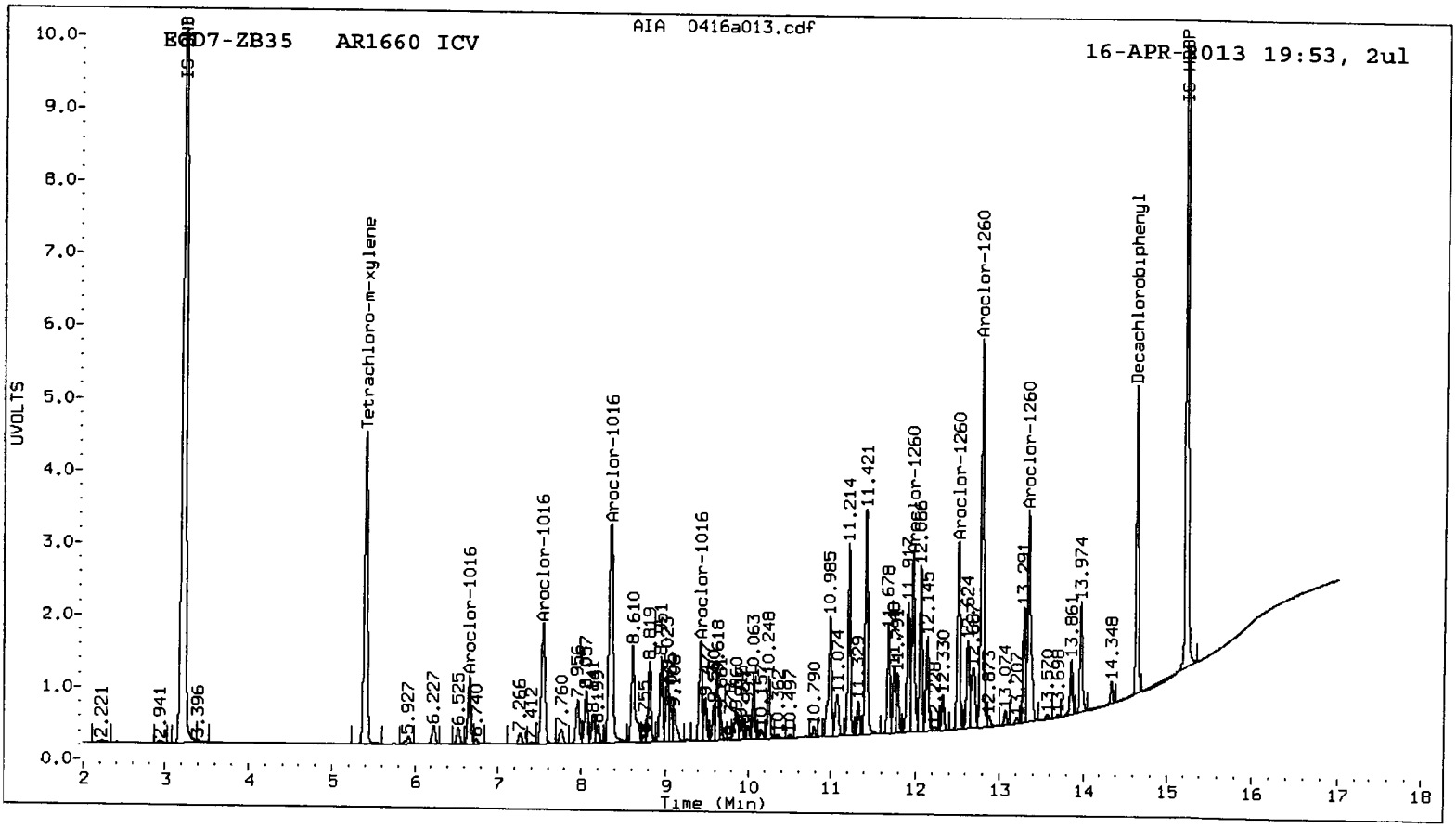
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a014.d
Data file 2: 20130416.b/ical-2.b/0416a014.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 16-APR-2013 20:13
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.000	1496919	5.399	-0.001	2329305	21.9	20.5	6.2	Tetrachloro-m-xylene
14.591	-0.001	1382924	14.648	-0.001	1402454	20.5	20.8	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	54.6	51.3
Decachlorobiphenyl	51.3	52.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5508987	-1.5
Hexabromobiphenyl	4375297	4423479	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8450305	-0.9
Hexabromobiphenyl	6077527	5884105	-3.2

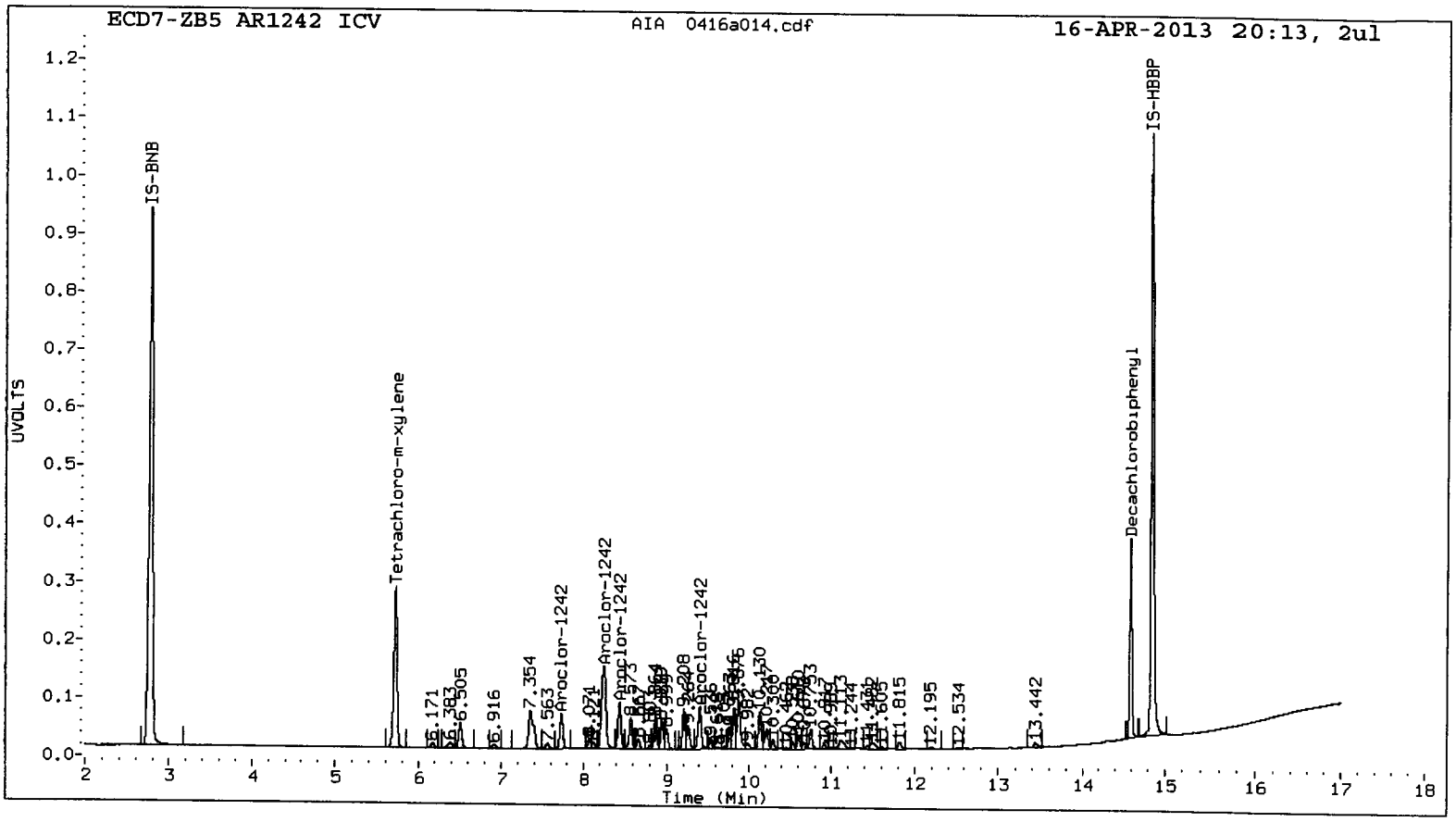
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

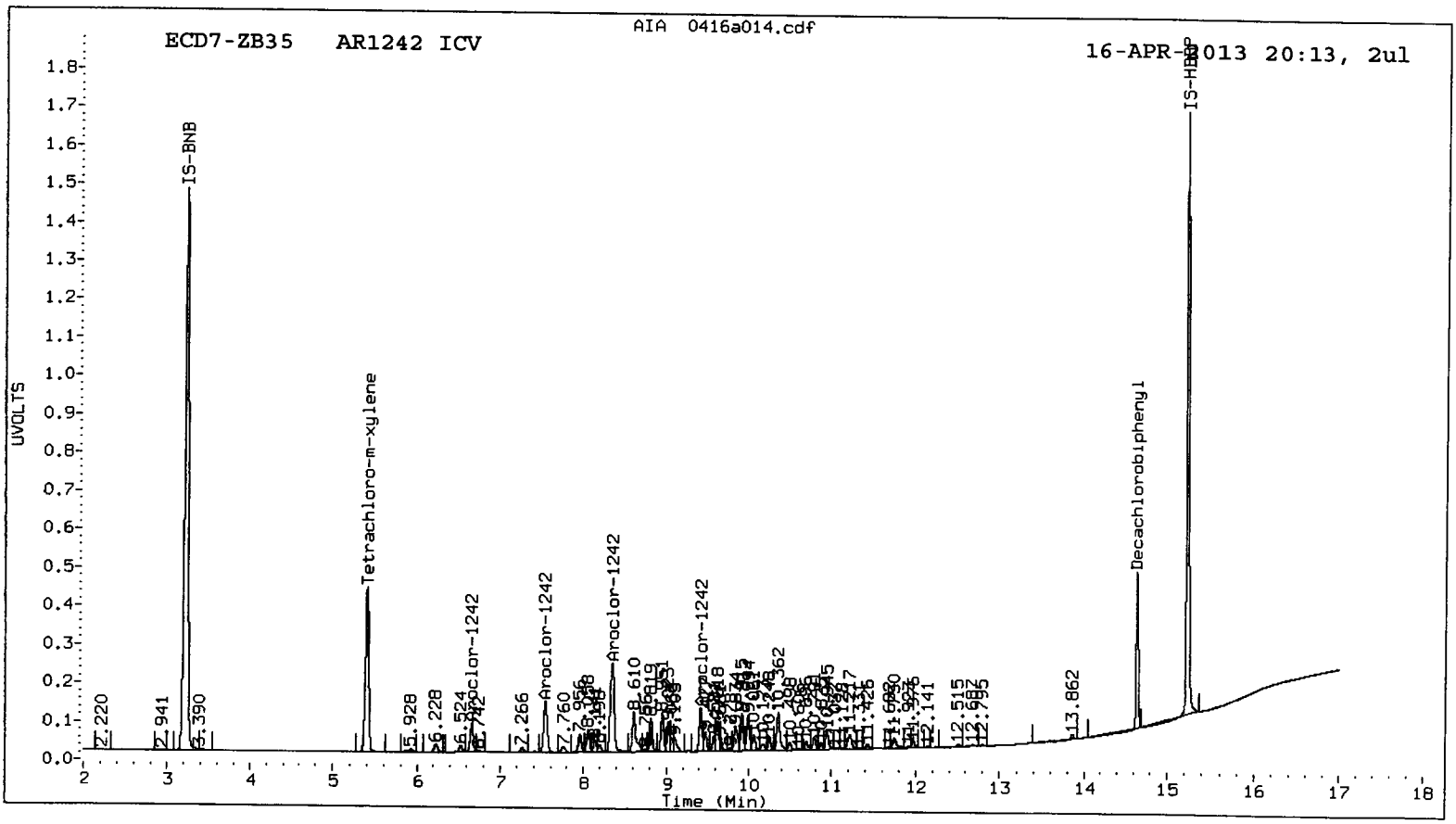
Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1242	1	7.729	0.000	317750	250.1	1	6.659	-0.001	390962	249.0
Aroclor-1242	2	8.250	0.001	1070743	249.8	2	7.540	-0.001	803690	256.5
Aroclor-1242	3	8.437	0.000	424550	251.0	3	8.352	0.000	1561229	252.0
Aroclor-1242	4	9.405	0.000	402842	254.2	4	9.418	-0.001	544683	253.4
Total Col1Ave (4 peaks):					251.3	Total Col2Ave (4 peaks):			252.7	RPD = 1
Corrected Ave (3 peaks):					250.3	Corrected Ave (3 peaks):			251.5	RPD = 0

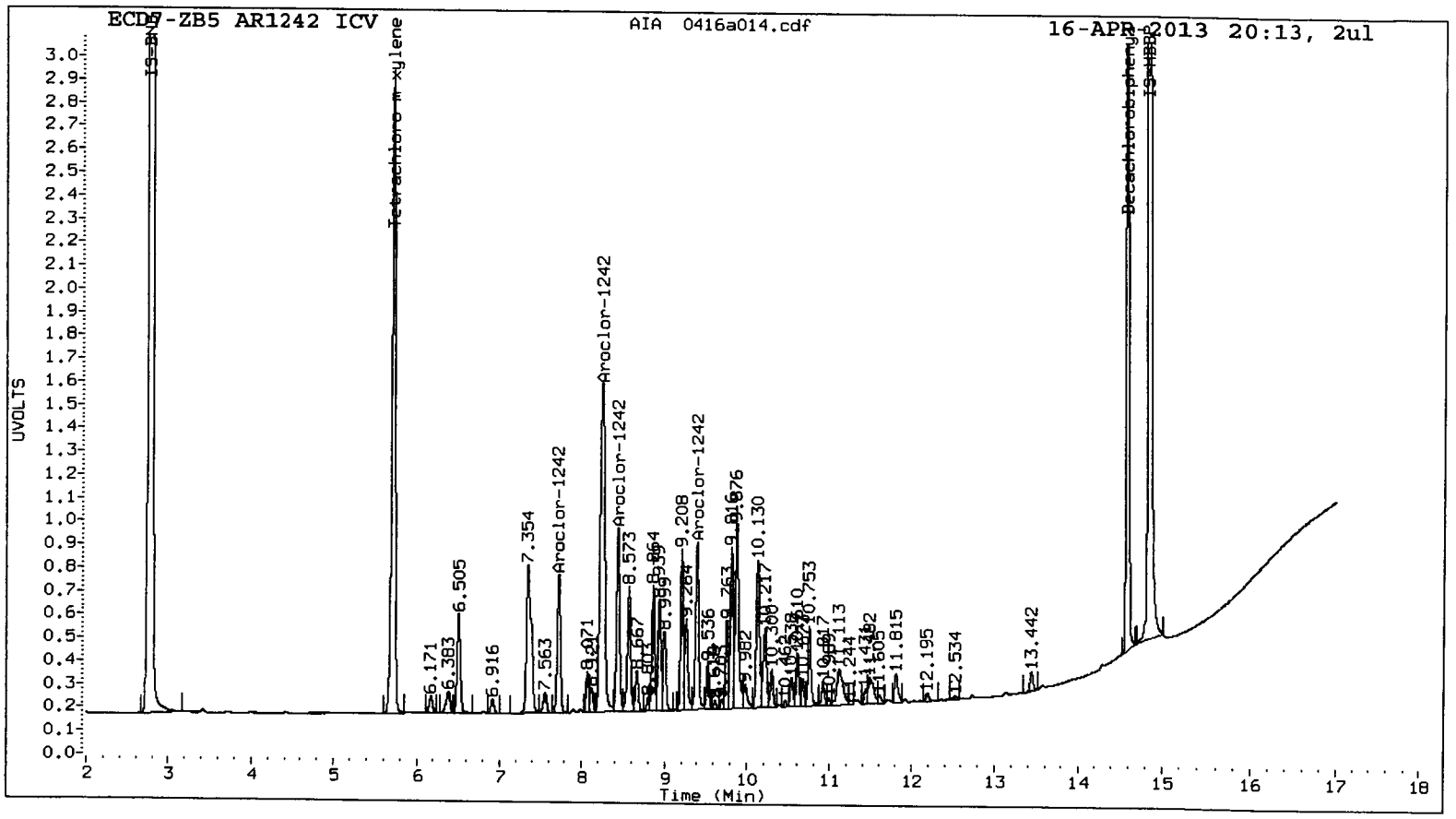
Total PCB Area Col1 (5.816 - 14.491) = 7582733 Col1 Total PCB = 0.2 ppm*

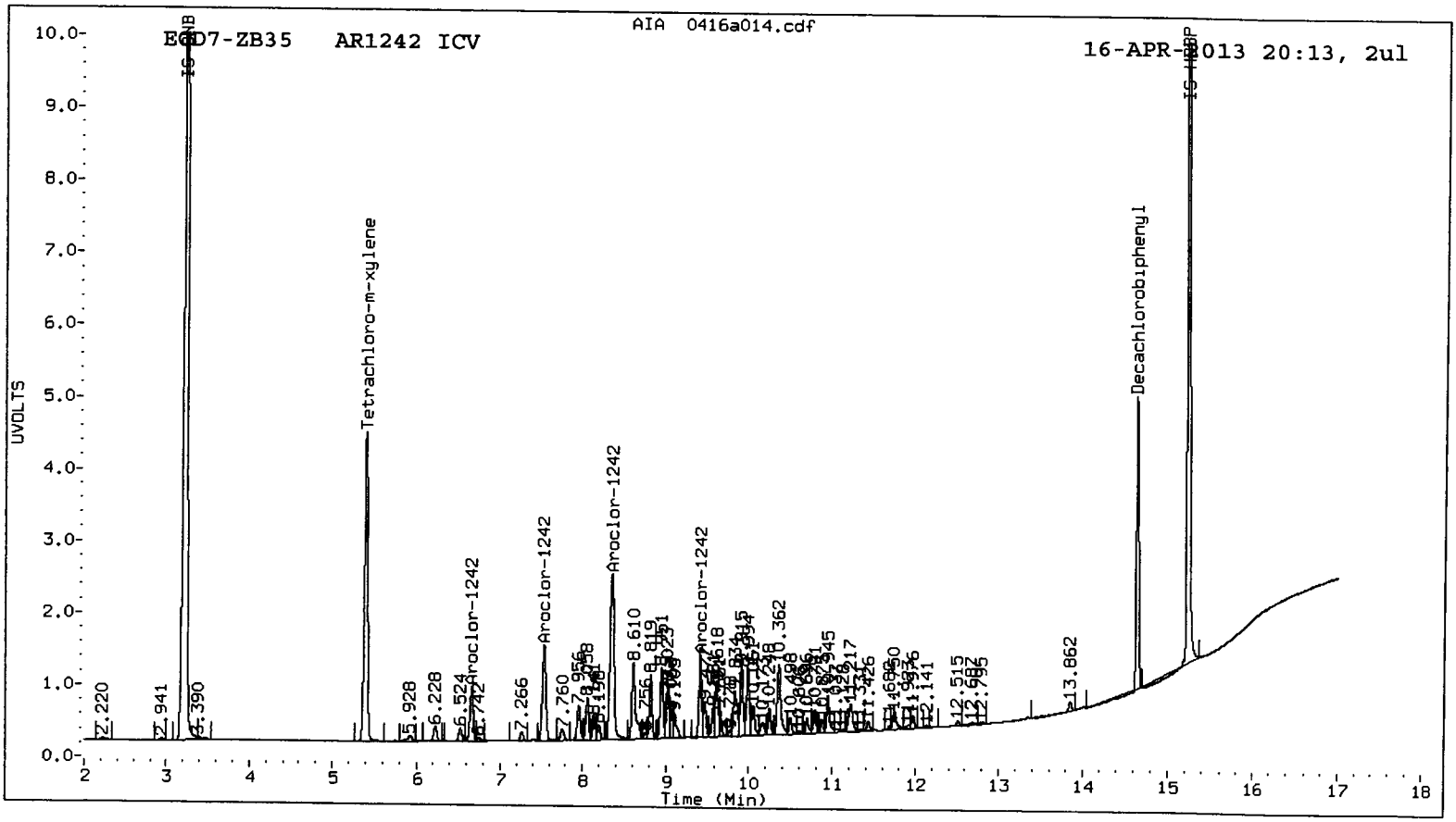
Total PCB Area Col2 (5.500 - 14.549) = 11666953 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD7-ZB35 AR1242 ICV
AIA 0416a014.cdf
16-APR-2013 20:13, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a015.d
Data file 2: 20130416.b/ical-2.b/0416a015.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 16-APR-2013 20:34
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	-0.001	1506819	5.399	-0.001	2369783	21.4	20.3	5.4	Tetrachloro-m-xylene
14.590	-0.001	1439319	14.648	-0.001	1551439	20.4	21.8	6.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.6	50.7
Decachlorobiphenyl	51.0	54.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5656162	1.2
Hexabromobiphenyl	4375297	4633321	5.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8702323	2.1
Hexabromobiphenyl	6077527	6212763	2.2

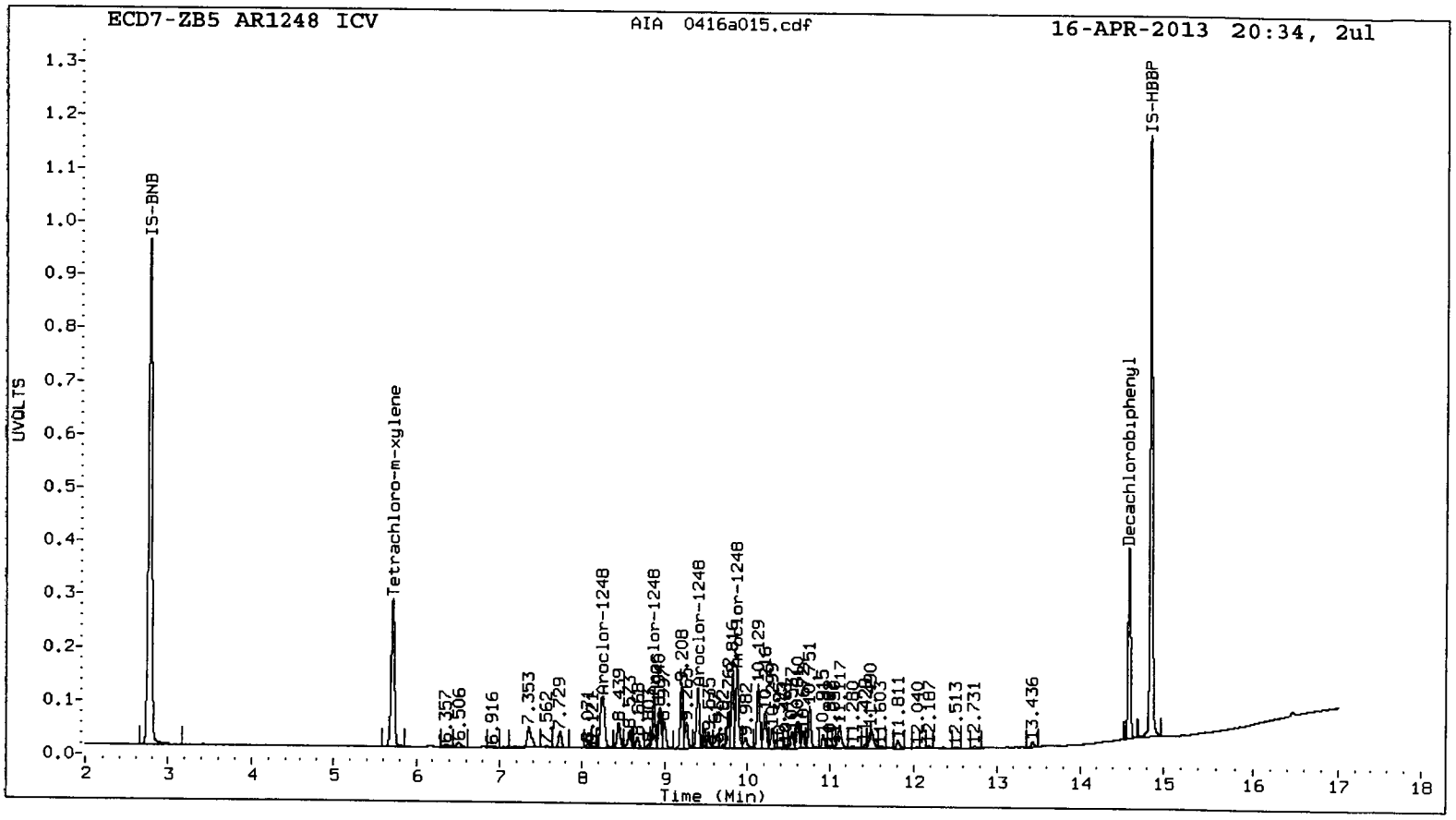
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

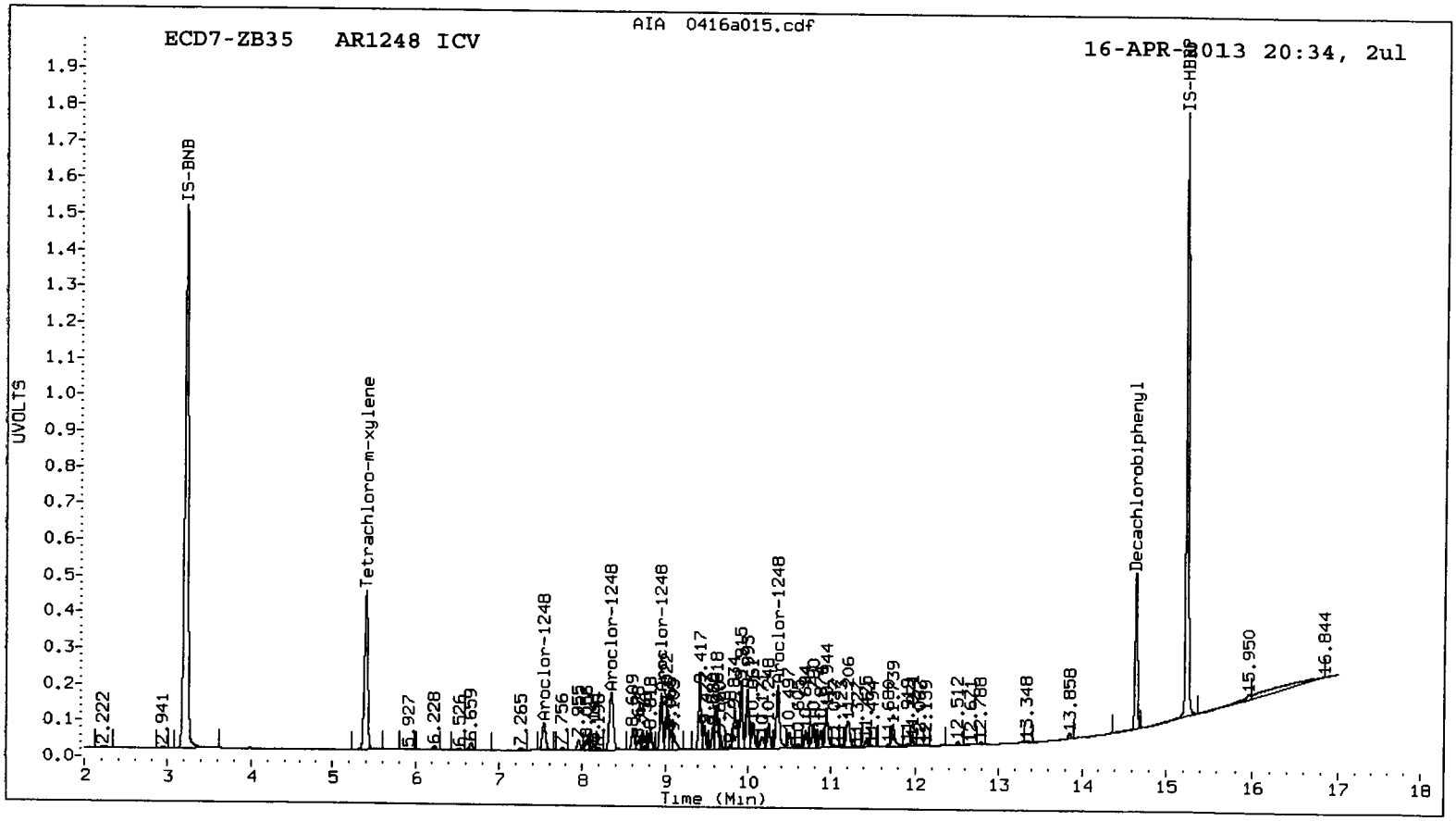
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.243	-0.001	734390	238.3	1	7.538	-0.001	451068	253.7
Aroclor-1248	2	8.864	0.000	445820	227.3	2	8.348	-0.001	1090062	238.3
Aroclor-1248	3	9.404	0.000	599365	219.9	3	8.949	-0.001	741042	227.2
Aroclor-1248	4	9.877	0.001	790147	217.7	4	10.360	0.000	969860	218.9
Total Col1Ave (4 peaks):					225.8	Total Col2Ave (4 peaks):				234.5 RPD = 4
Corrected Ave (3 peaks):					221.7	Corrected Ave (3 peaks):				228.1 RPD = 3

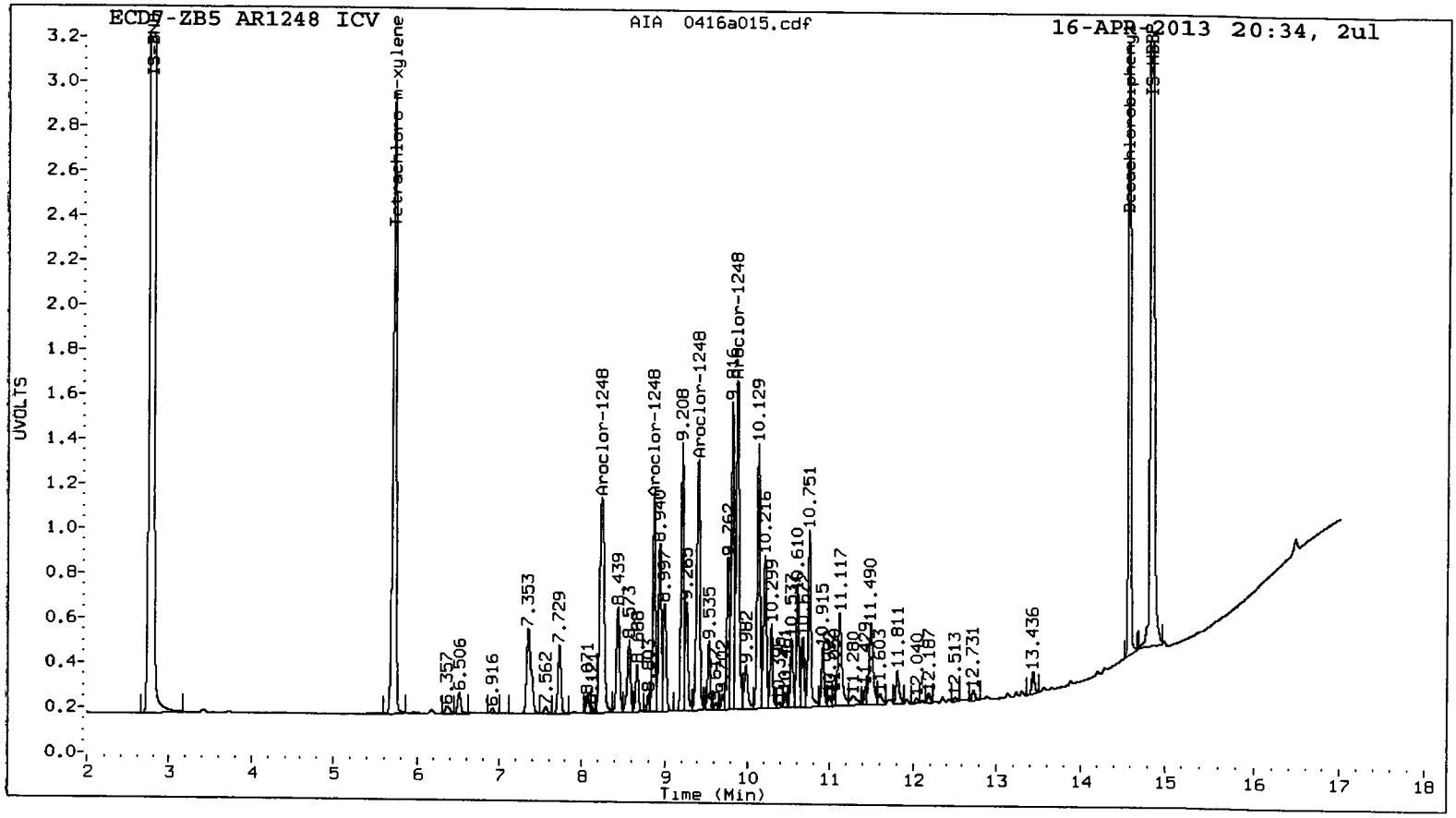
Total PCB Area Col1 (5.816 - 14.491) = 9372132 Col1 Total PCB = 0.2 ppm*

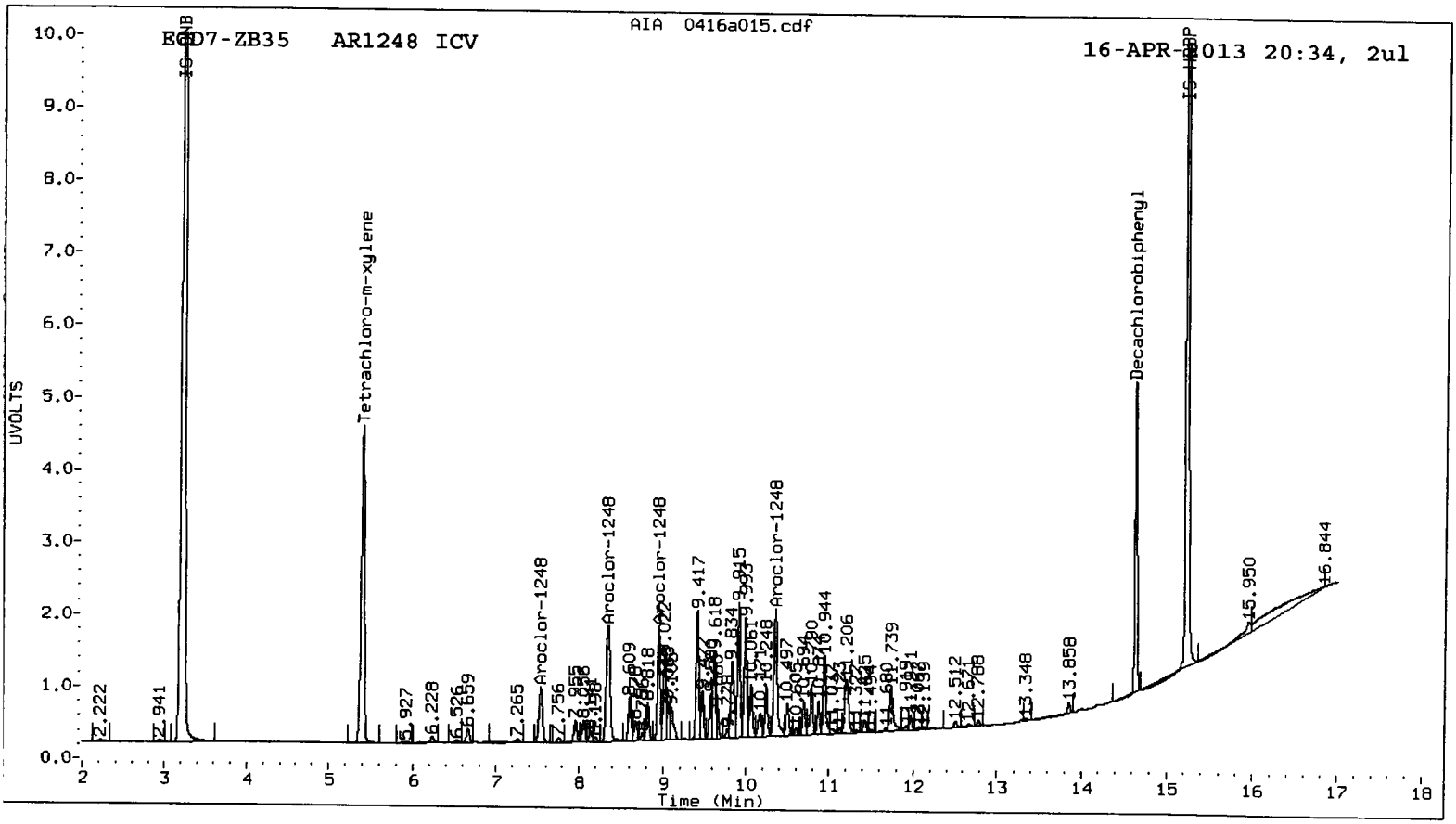
Total PCB Area Col2 (5.500 - 14.549) = 13673211 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB5 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)


ECD7-ZB35 AR1248 ICV
AIA 0416a015.cdf
16-APR-2013 20:34, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
UVOLTS
Time (Min)

WL40:01669

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a016.d
Data file 2: 20130416.b/ical-2.b/0416a016.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 16-APR-2013 20:54
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.716	0.001	1491741	5.399	-0.001	2350574	20.9	19.9	4.8	Tetrachloro-m-xylene
14.591	0.000	1443473	14.649	0.000	1559217	20.2	21.8	7.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	52.1	49.7
Decachlorobiphenyl	50.4	54.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5751969	2.9
Hexabromobiphenyl	4375297	4697181	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8808751	3.3
Hexabromobiphenyl	6077527	6232306	2.5

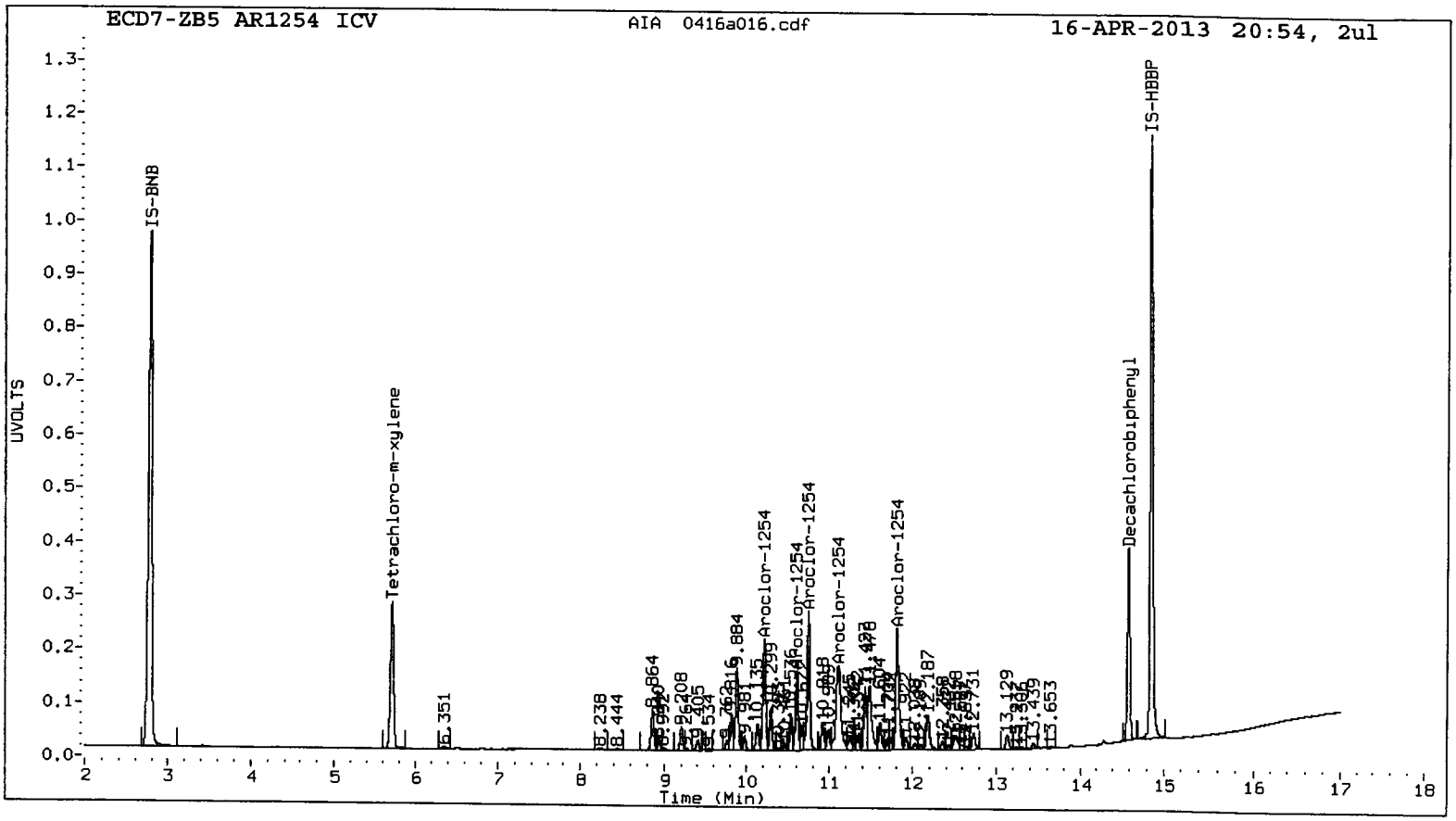
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

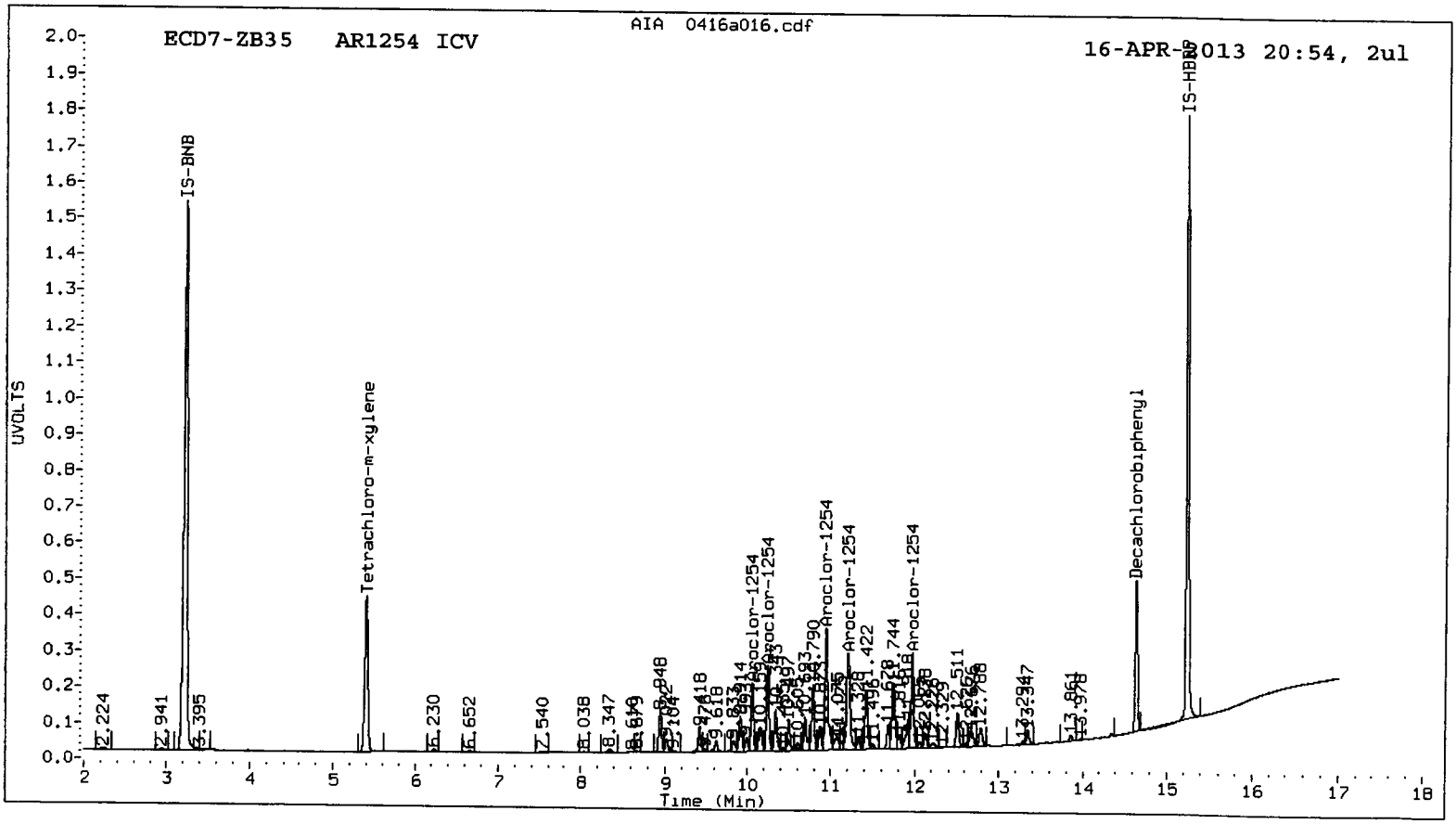
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.218	0.000	1021320	298.0	1	10.062	0.000	818499	288.4
Aroclor-1254	2	10.609	0.000	645047	311.4	2	10.247	0.000	1028657	292.6
Aroclor-1254	3	10.751	0.000	1205445	294.8	3	10.944	-0.001	1644767	286.8
Aroclor-1254	4	11.109	0.002	1317113	303.0	4	11.206	-0.003	1696414	297.9
Aroclor-1254	5	11.809	-0.001	1219415	297.2	5	11.971	-0.002	1230410	290.9
Total Col1Ave (5 peaks):					300.9	Total Col2Ave (5 peaks):				291.3 RPD = 3
Corrected Ave (4 peaks):					298.2	Corrected Ave (4 peaks):				289.7 RPD = 3

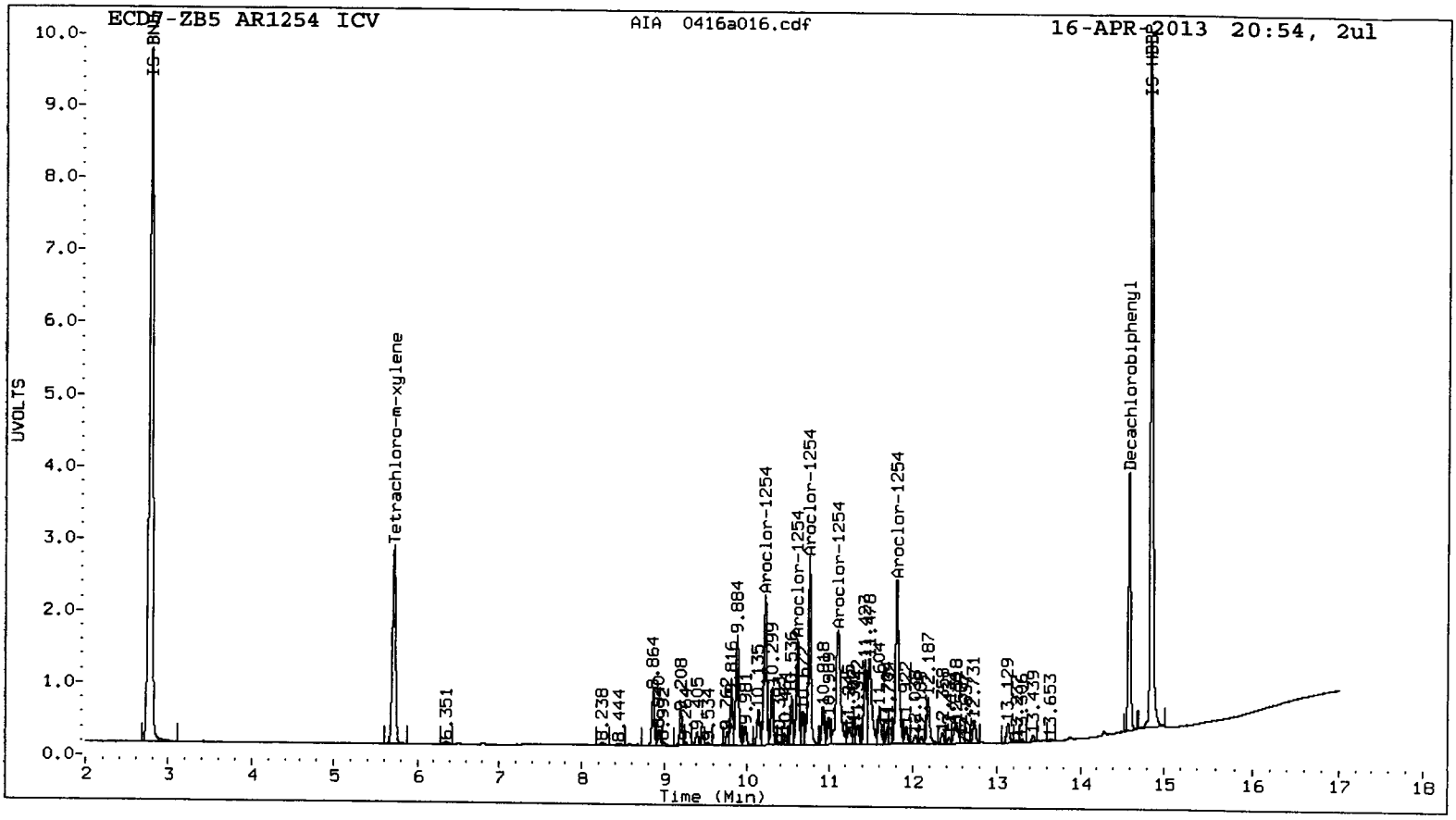
Total PCB Area Col1 (5.816 - 14.491) = 12369913 Col1 Total PCB = 0.3 ppm*

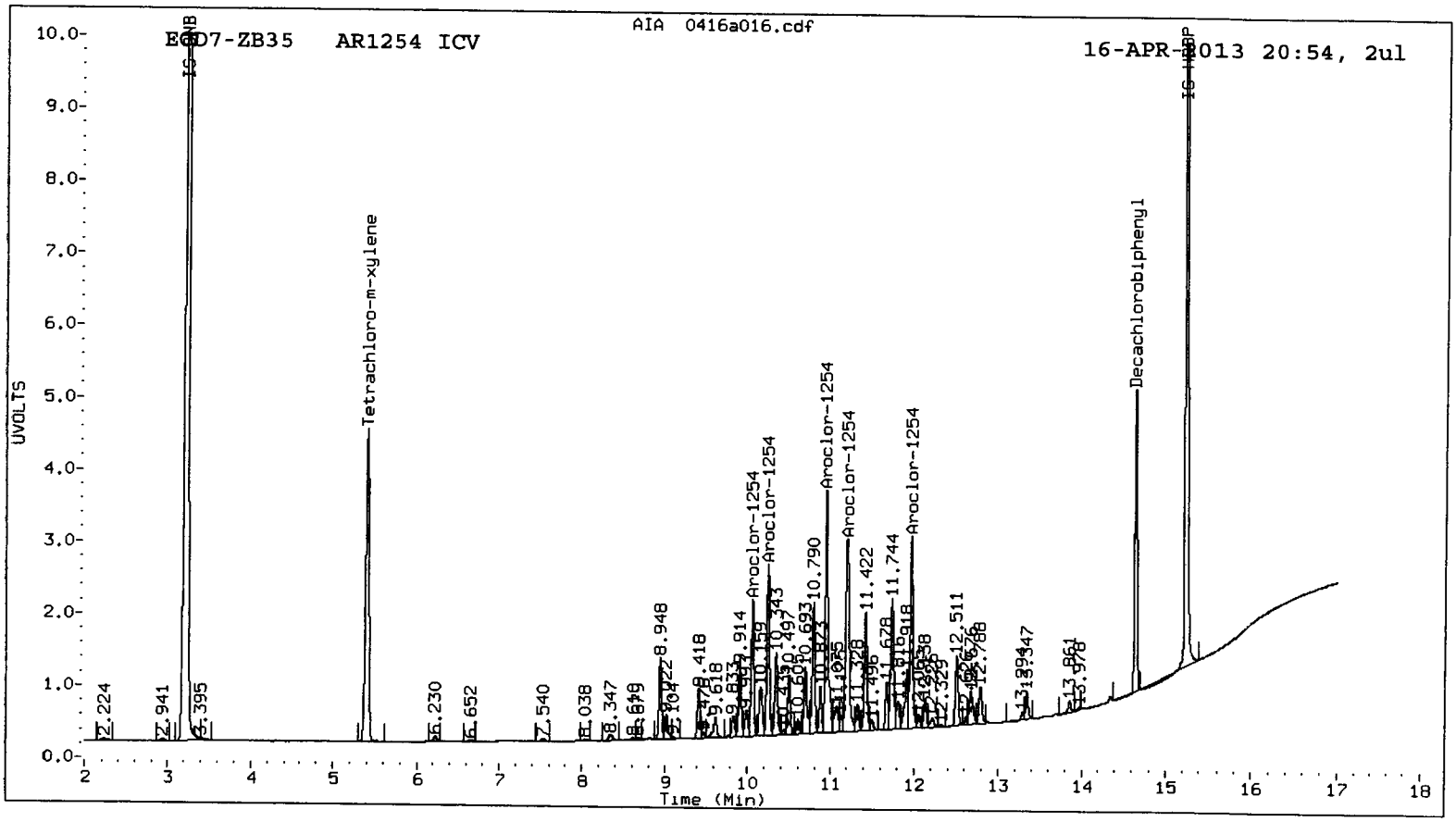
Total PCB Area Col2 (5.500 - 14.549) = 16362297 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB5 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1254 ICV
AIA 0416a016.cdf
16-APR-2013 20:54, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a017.d
Data file 2: 20130416.b/ical-2.b/0416a017.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 16-APR-2013 21:15
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.715	-0.001	1549600	5.398	-0.002	2341597	21.5	19.7	8.7	Tetrachloro-m-xylene
14.590	-0.001	1421980	14.648	-0.001	1542704	19.7	21.4	8.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	53.7	49.2
Decachlorobiphenyl	49.2	53.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5806766	3.9
Hexabromobiphenyl	4375297	4739232	8.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8866116	4.0
Hexabromobiphenyl	6077527	6276279	3.3

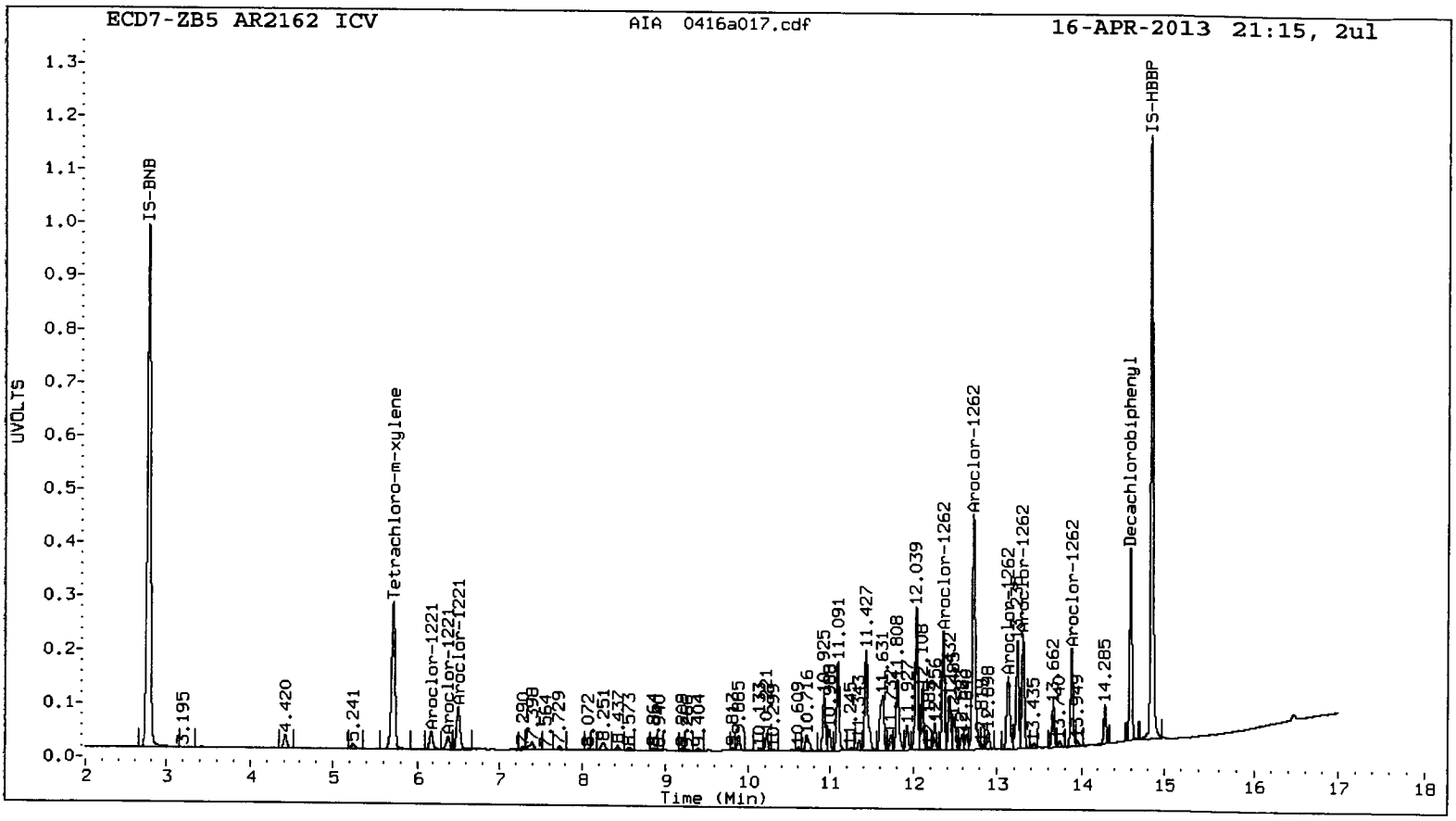
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

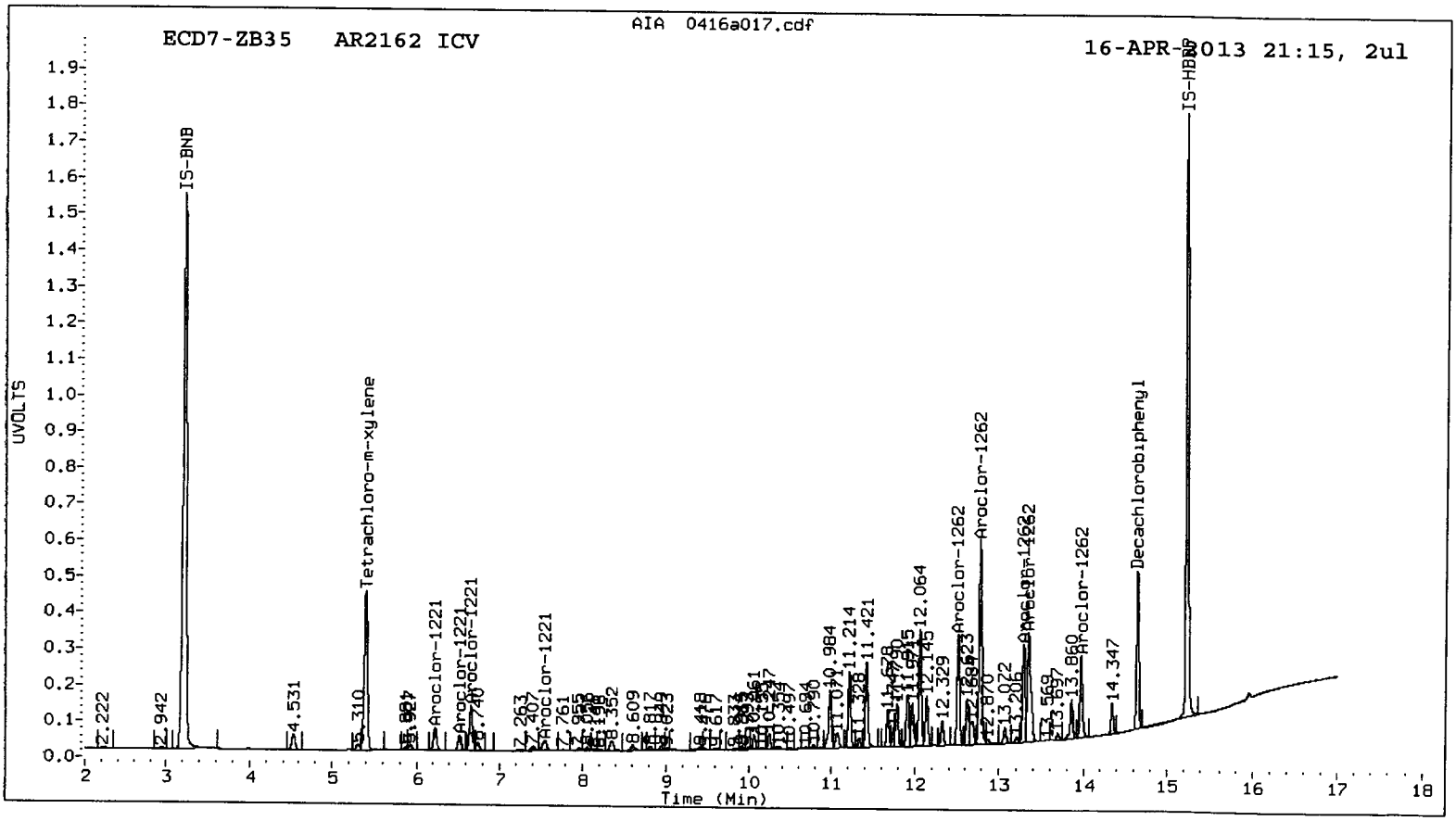
Aroclor	Peak#	RT	Shift	ZB5 Col Area	ZB5 Col Amount	Peak#	RT	Shift	ZB35 Col Area	ZB35 Col Amount
Aroclor-1221	1	6.173	0.000	189611	268.1	1	6.226	-0.001	353375	258.3
Aroclor-1221	2	6.384	0.000	141818	265.5	2	6.524	-0.001	217710	249.7
Aroclor-1221	3	6.506	0.000	466975	260.7	3	6.659	-0.002	646822	256.7
Aroclor-1221	NS	---			----	4	7.552	-0.001	201327	232.6
	Total Col1Ave (3 peaks):				264.8	Total Col2Ave (4 peaks):			249.3	RPD = 6
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			246.3	
Aroclor-1262	1	12.357	-0.001	966688	280.7	1	12.515	-0.001	1325047	278.2
Aroclor-1262	2	12.728	-0.001	2170164	235.3	2	12.785	-0.002	2561342	233.3
Aroclor-1262	3	13.128	0.000	707081	237.6	3	13.289	-0.001	1170410	279.2
Aroclor-1262	4	13.303	-0.001	947678	273.2	4	13.348	-0.001	1763506	256.5
Aroclor-1262	5	13.886	-0.001	756749	248.9	5	13.974	-0.001	930473	246.0
	Total Col1Ave (5 peaks):				255.1	Total Col2Ave (5 peaks):			258.6	RPD = 1
	Corrected Ave (4 peaks):				248.7	Corrected Ave (4 peaks):			253.5	RPD = 2

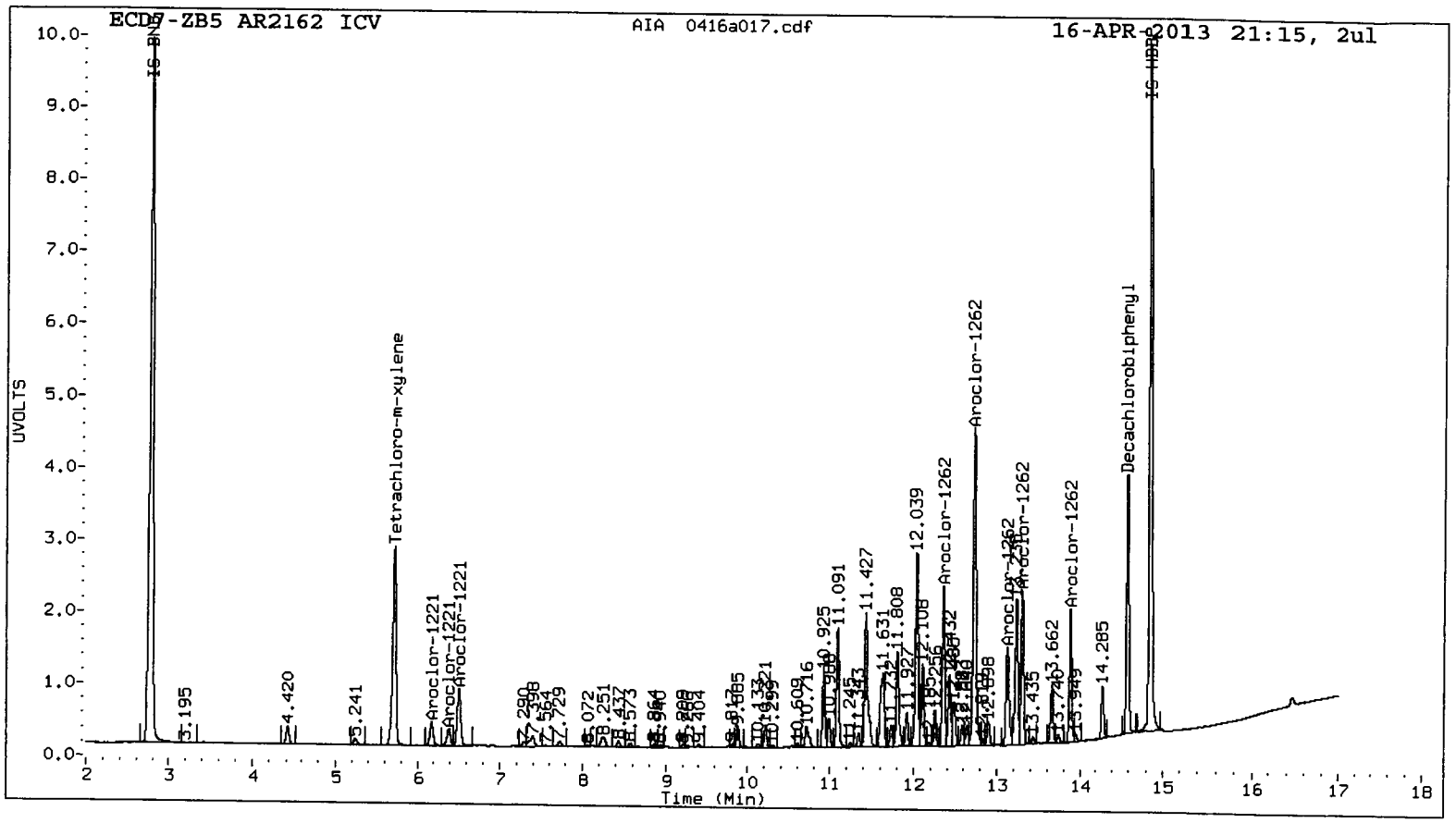
Total PCB Area Col1 (5.816 - 14.491) = 16252441 Col1 Total PCB = 0.4 ppm*

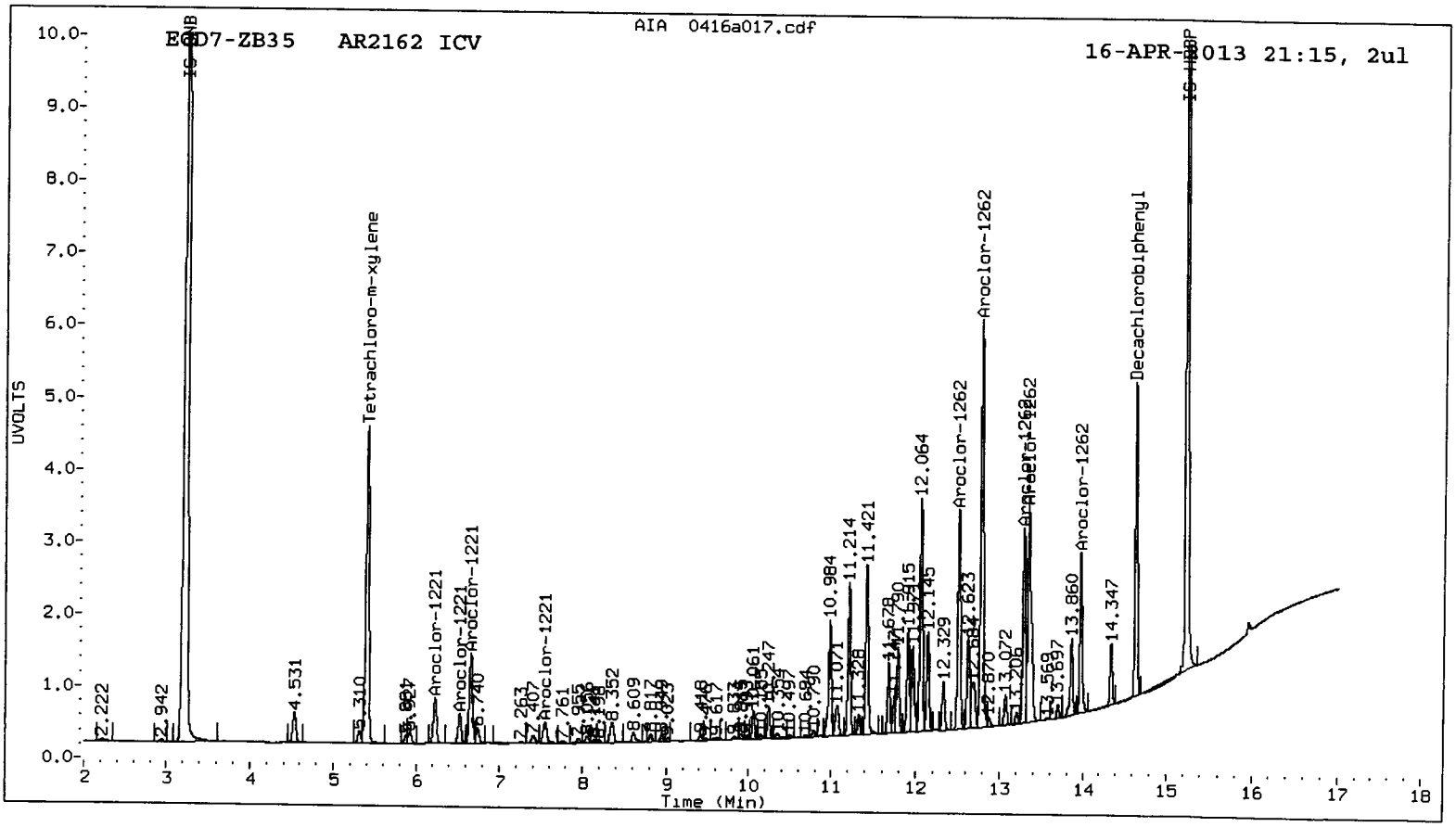
Total PCB Area Col2 (5.500 - 14.549) = 20578294 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD7-ZB5 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl


ECD7-ZB35 AR2162 ICV
AIA 0416a017.cdf
16-APR-2013 21:15, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/ical-1.b/0416a018.d
Data file 2: 20130416.b/ical-2.b/0416a018.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 16-APR-2013 21:35
Report Date: 04/17/2013 11:44
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.715	0.000	1544395	5.398	-0.002	2369259	21.9	20.4	6.8	Tetrachloro-m-xylene
14.590	-0.001	2328659	14.646	-0.003	2589635	33.0	37.3	12.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	54.7	51.1
Decachlorobiphenyl	82.6	93.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	5678965	1.6
Hexabromobiphenyl	4375297	4626646	5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	8638794	1.3
Hexabromobiphenyl	6077527	6054334	-0.4

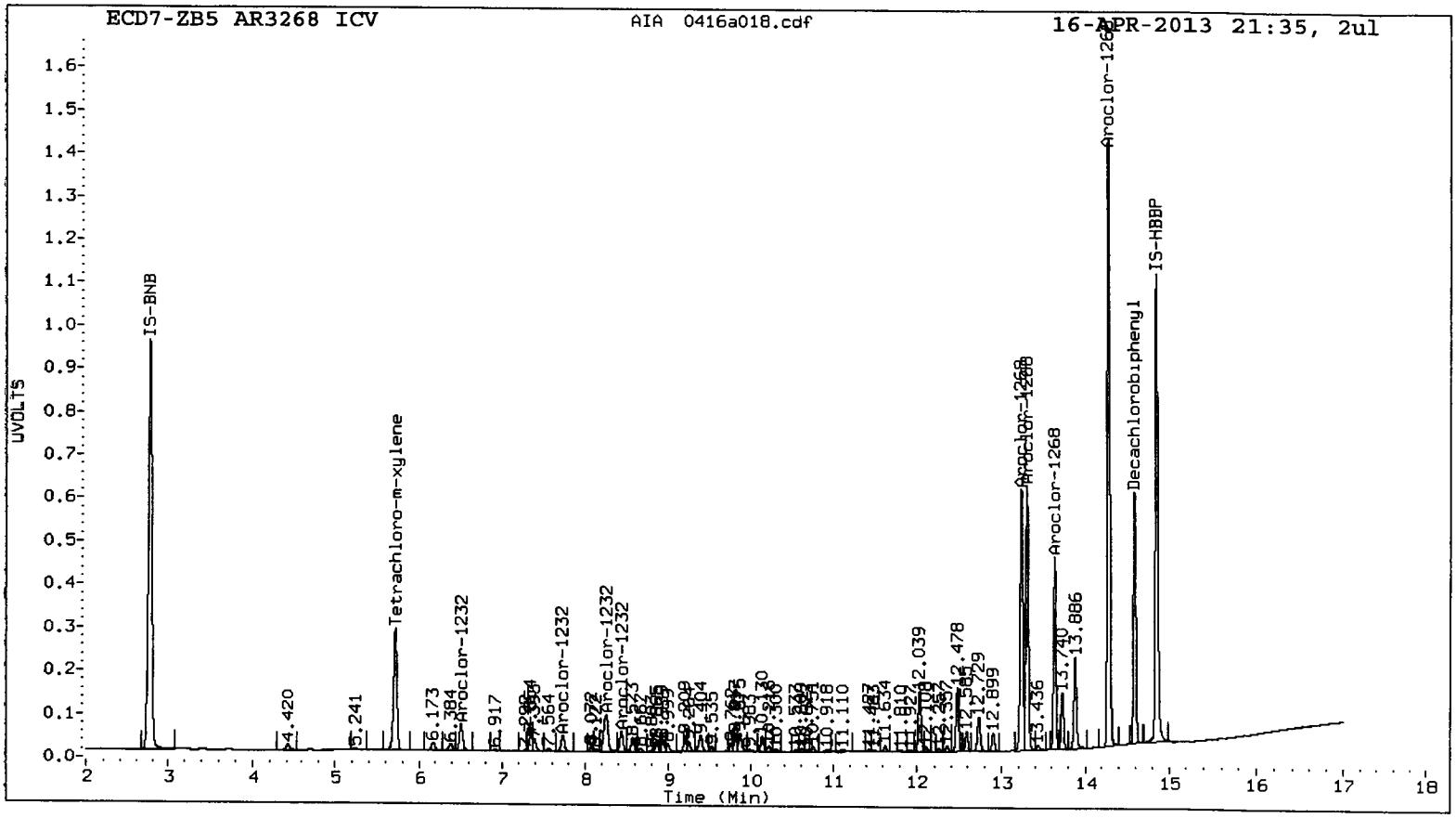
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

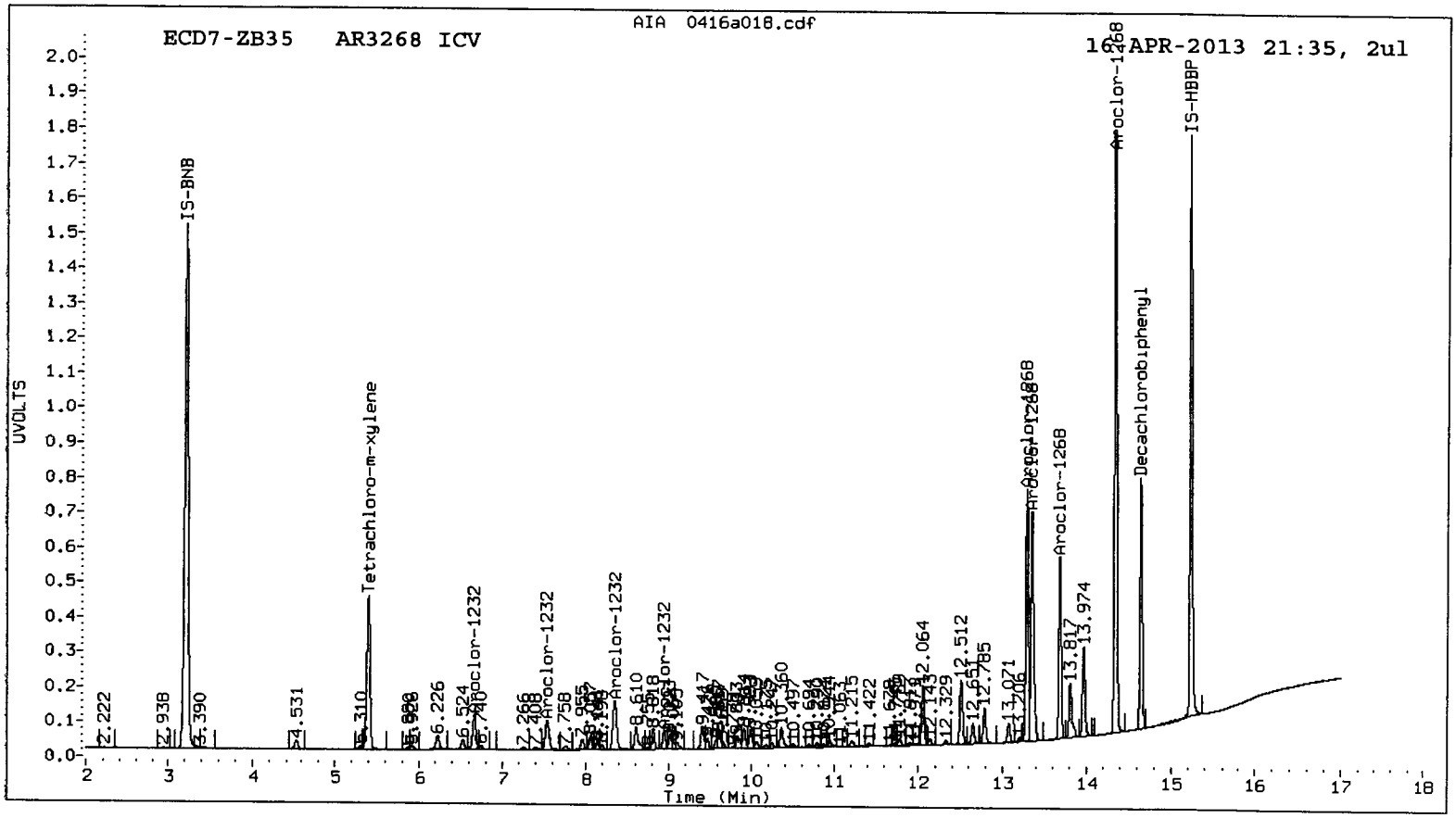
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.506	0.000	347554	299.5	1	6.659	-0.001	517513	301.7
Aroclor-1232	2	7.729	0.000	192801	285.3	2	7.540	-0.002	536257	283.1
Aroclor-1232	3	8.251	0.003	636348	281.8	3	8.352	0.001	953442	279.6
Aroclor-1232	4	8.437	0.000	255408	281.4	4	8.950	-0.001	257419	231.9
Total Col1Ave (4 peaks):					287.0	Total Col2Ave (4 peaks):				274.1 RPD = 5
Corrected Ave (3 peaks):					282.8	Corrected Ave (3 peaks):				264.9 RPD = 7
Aroclor-1268	1	13.235	-0.001	2677445	275.5	1	13.289	-0.002	3008694	283.9
Aroclor-1268	2	13.302	0.000	2739076	302.0	2	13.351	-0.001	3142092	312.5
Aroclor-1268	3	13.648	0.000	1894329	246.6	3	13.697	-0.002	2050022	252.8
Aroclor-1268	4	14.287	0.000	5458040	232.7	4	14.347	-0.001	6266962	235.5
Total Col1Ave (4 peaks):					264.2	Total Col2Ave (4 peaks):				271.2 RPD = 3
Corrected Ave (3 peaks):					251.6	Corrected Ave (3 peaks):				257.4 RPD = 2

Total PCB Area Col1 (5.816 - 14.491) = 20912941 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.500 - 14.549) = 26266615 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR3268 ICV
AIA 0416a018.cdf
16-APR-2013 21:35, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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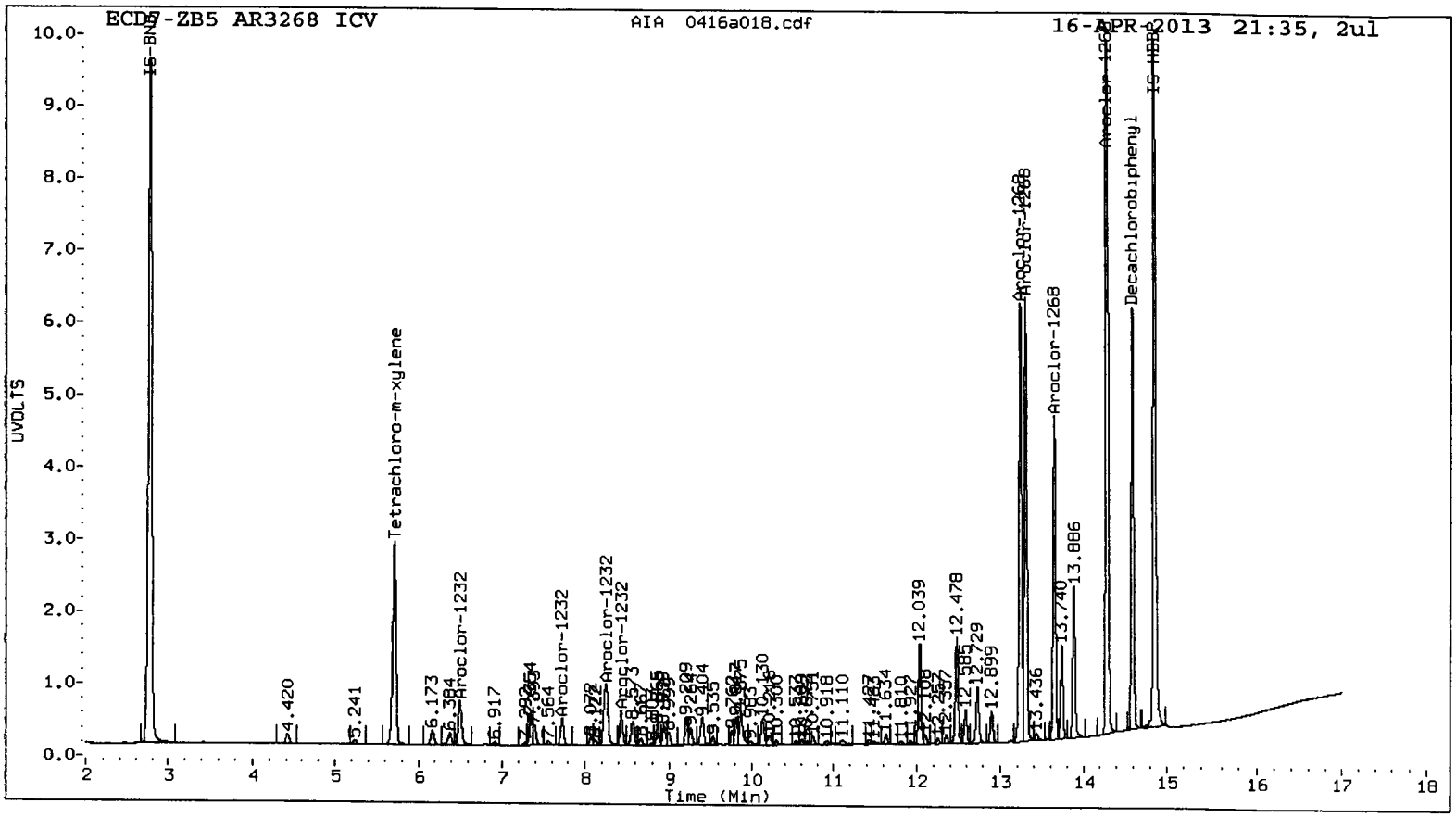
16-APR-2013 21:35, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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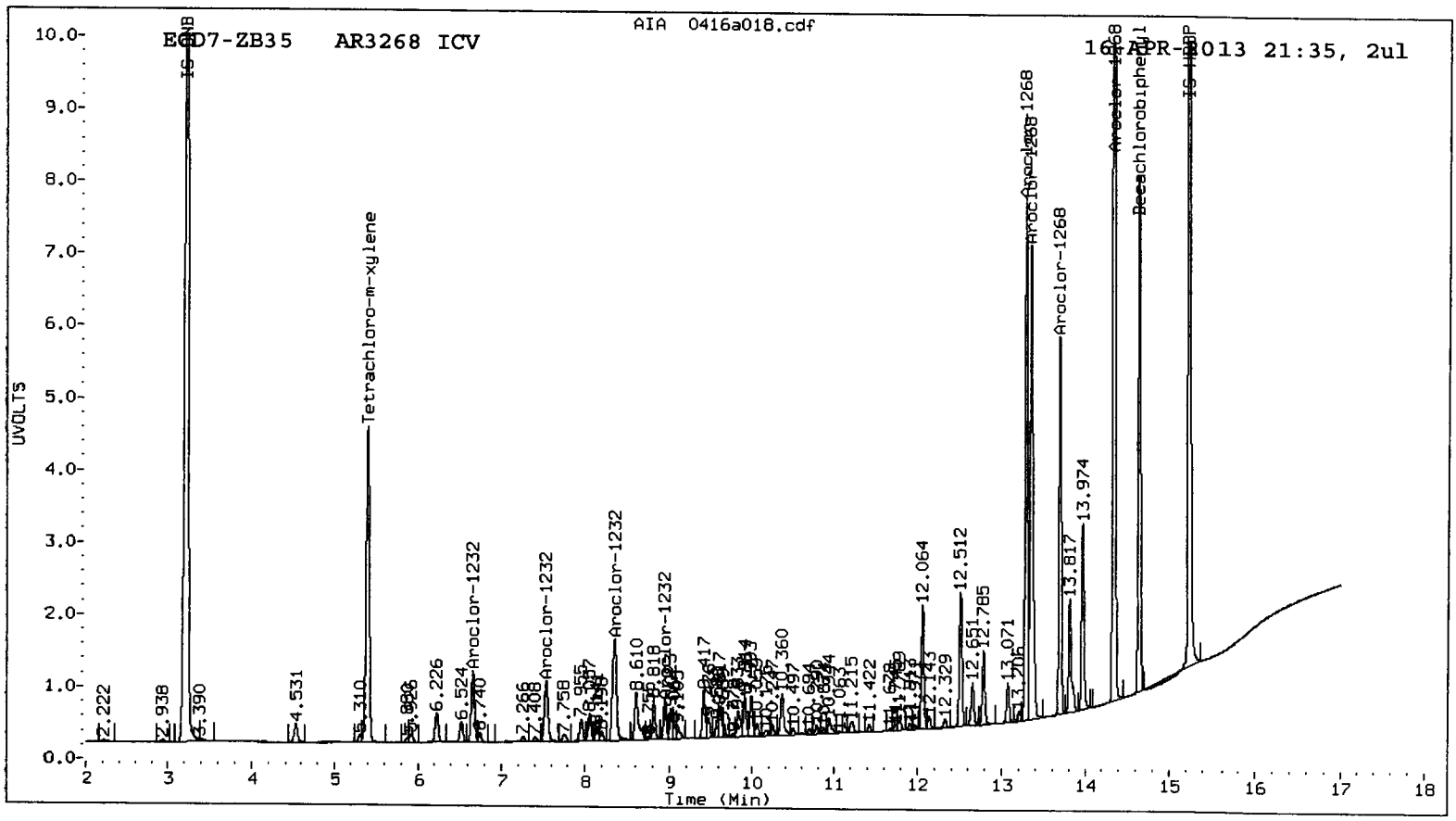
AIA 0416a018.cdf
16-APR-2013 21:35, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
13.886
13.740
13.436
12.478
12.039
12.699
11.110
10.918
6.173
6.384
5.241
4.420
6.917


ECD7-ZB35 AR3268 ICV
AIA 0416a018.cdf
16-APR-2013 21:35, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
13.974
13.817
12.512
12.064
12.785
12.651
12.329
12.143
11.422
11.215
10.497
10.360
8.610
6.524
6.226
5.310
4.531
4.390
2.938
2.222

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130416.b/ical-1.b/0416a019.d ARI ID: DDTS 0.1

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
10.182	0.000	4855760	10.338	0.000	6461008	0.100	0.100	0.0	2,4-DDE
10.758	0.000	4460663	10.737	0.000	10244505	0.100	0.100	0.0	2,4-DDD
11.277	0.000	5726542	11.516	0.000	9099887	0.100	0.200#	66.7*	2,4-DDT
10.634	0.000	7740183	11.046	0.000	5731712	0.100	0.100	0.0	4,4-DDE
11.224	0.000	6230195	11.516	0.000	9099887	0.100	0.200#	66.7*	4,4-DDD
11.744	0.000	7248048	11.954	0.000	9360726	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 16-APR-2013 22:16 Init. Calib. Date: 16-APR-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	10.638	18783
4,4-DDD	11.234	39306
4,4-DDT	11.745	7277827

Col 1: 4,4-DDT Percent Breakdown = 0.8 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.046	----
4,4-DDD/2,4-DDT	11.527	42740
4,4-DDT	11.954	9405760

Col 2: 4,4-DDT Percent Breakdown = 0.5 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL49 Client ID: NPDES sampling

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 04/16/13 Analysis Start Date: 04/22/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / <10%
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / NA
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ___

Detail problems, corrective actions and/or other pertinent information below

went w/ best fit, 60 could be a 60/62 mix
diluted sample ~~be~~ B because of yellow
color, possibly oily matrix. 1x of sample
B over linear curve, reporting 20x of
sample B.

(Review 1) Analyst: JR **Date:** 04/23/13

(Review 2) Reviewer: B **Date:** 4/23/13

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 04/22/13 Analysis: PCB's Analyst: JP

Column 1 Serial No.: 213734 Column Type: ZB5

Column 2 Serial No.: 175388 Column Type: ZB35

GC Method: PCB ICal Date: 04/10/13 Injection Volume: 2 µL

IS	Ical/Ccal	ICV
2006-1	1930-1,2,3,4,5,6	2009-1,2,3,4,5,6,7

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	22-APR-2013 08:04	0422a001.d	1	RINSE
2	22-APR-2013 08:26	0422a002.d	1	DDT BD
3	22-APR-2013 08:48	0422a003.d	1	AR1248
4	22-APR-2013 09:10	0422a004.d	1	AR1660
5	22-APR-2013 09:32	0422a005.d	10	WL68A
6	22-APR-2013 09:54	0422a006.d	25	WL68B
7	22-APR-2013 10:16	0422a007.d	1	AR1254
8	22-APR-2013 10:38	0422a008.d	1	AR1660
9	22-APR-2013 15:07	0422a010.d	1	AR1242
10	22-APR-2013 15:29	0422a011.d	1	AR1660
11	22-APR-2013 15:51	0422a012.d	1	WL49MBW1
12	22-APR-2013 16:13	0422a013.d	1	WL49LCSW1
13	22-APR-2013 16:35	0422a014.d	1	WL49LCSDW1
14	22-APR-2013 16:57	0422a015.d	1	WL49A
15	22-APR-2013 17:18	0422a016.d	1	WL49B
16	22-APR-2013 17:40	0422a017.d	20	WL49B
17	22-APR-2013 18:02	0422a018.d	1	WK61MBW1
18	22-APR-2013 18:24	0422a019.d	1	WK61A
19	22-APR-2013 18:46	0422a020.d	1	AR1248
20	22-APR-2013 19:08	0422a021.d	1	AR1660

4/23/13

Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130416.b/0422-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd7.i Date: 22-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0804	0422a001.d	RINSE		1	NO MANUAL INTEGRATION
0826	0422a002.d	DDT BD		1	NO MANUAL INTEGRATION
0848	0422a003.d	AR1248		1	NO MANUAL INTEGRATION
0910	0422a004.d	AR1660		1	NO MANUAL INTEGRATION
0932	0422a005.d	WL68A	HC-GR-MH-0	10	NO MANUAL INTEGRATION
0954	0422a006.d	WL68B	HC-GR-WS-0	25	NO MANUAL INTEGRATION
1016	0422a007.d	AR1254		1	NO MANUAL INTEGRATION
1038	0422a008.d	AR1660		1	NO MANUAL INTEGRATION
1507	0422a010.d	AR1242		1	NO MANUAL INTEGRATION
1529	0422a011.d	AR1660		1	NO MANUAL INTEGRATION
1551	0422a012.d	WL49MBW1		1	NO MANUAL INTEGRATION
1613	0422a013.d	WL49LCSW1		1	NO MANUAL INTEGRATION
1635	0422a014.d	WL49LCSDW1		1	NO MANUAL INTEGRATION
1657	0422a015.d	WL49A		1	NO MANUAL INTEGRATION
1718	0422a016.d	WL49B		1	NO MANUAL INTEGRATION
1740	0422a017.d	WL49B		20	NO MANUAL INTEGRATION
1802	0422a018.d	WK61MBW1		1	NO MANUAL INTEGRATION
1824	0422a019.d	WK61A		1	NO MANUAL INTEGRATION
1846	0422a020.d	AR1248		1	NO MANUAL INTEGRATION
1908	0422a021.d	AR1660		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a010.d
Data file 2: 20130416.b/0422-2.b/0422a010.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 22-APR-2013 15:07
Report Date: 04/23/2013 10:39
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.725	0.000	1886542	5.379	-0.015	2500480	20.1	18.9	6.3	Tetrachloro-m-xylene
14.594	0.003	1642098	14.640	-0.001	1662583	16.9	20.6	19.5	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	50.2	47.1
Decachlorobiphenyl	42.3	51.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7552804	35.1
Hexabromobiphenyl	4375297	6375087	45.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9881232	15.9
Hexabromobiphenyl	6077527	7055371	16.1

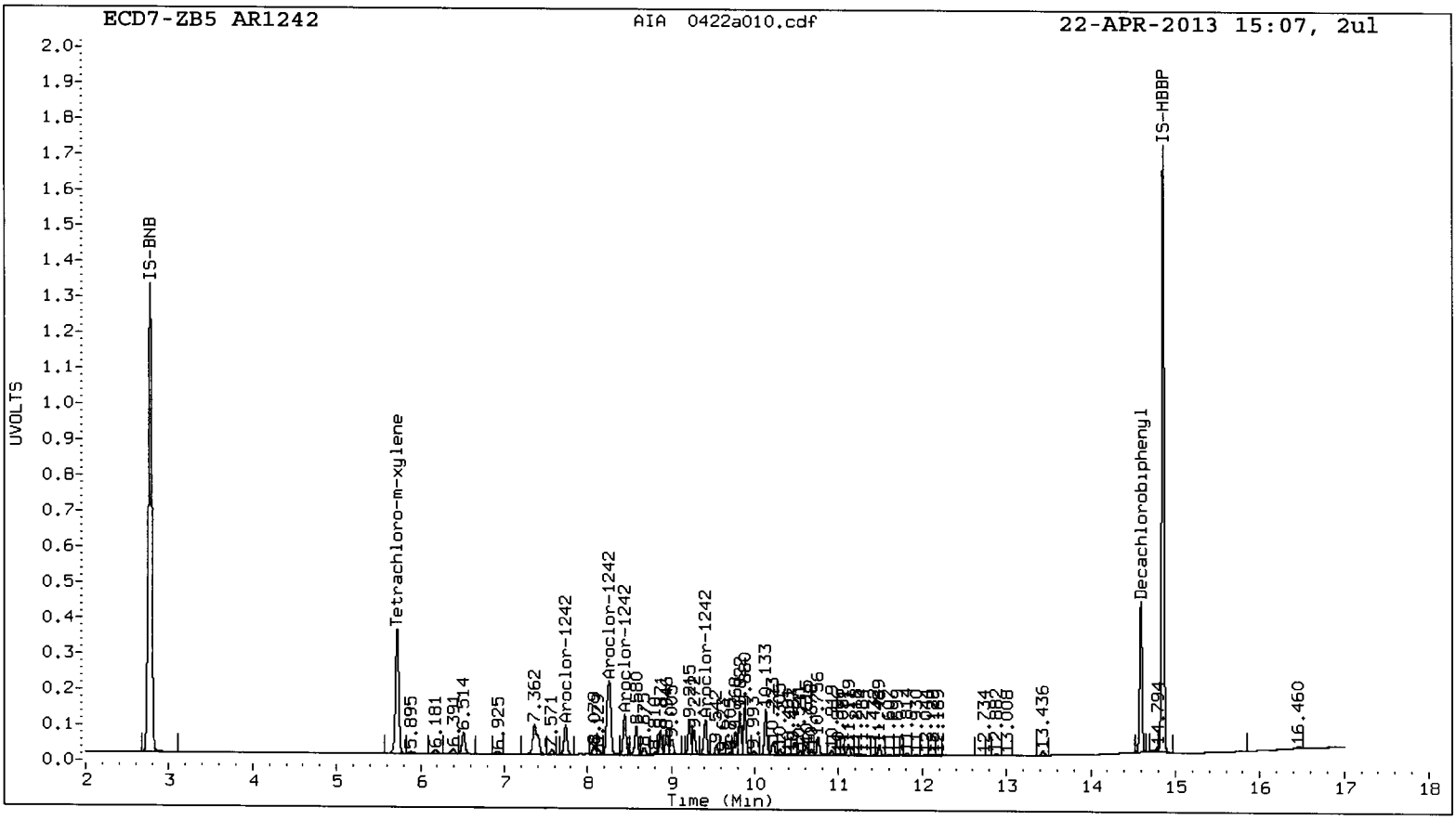
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	7.737	0.000	416635	239.2	1	6.638	0.000	442560	241.1
Aroclor-1242	2	8.257	0.000	1453485	247.3	2	7.521	0.000	885820	241.8
Aroclor-1242	3	8.444	0.000	559073	241.1	3	8.333	0.000	1763603	243.4
Aroclor-1242	4	9.411	0.000	512175	235.8	4	9.404	0.000	716716	285.1
Total Col1Ave (4 peaks):					240.8	Total Col2Ave (4 peaks):				252.8 RPD = 5
Corrected Ave (3 peaks):					238.7	Corrected Ave (3 peaks):				242.1 RPD = 1

Total PCB Area Col1 (5.825 - 14.491) = 10195905 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 13593429 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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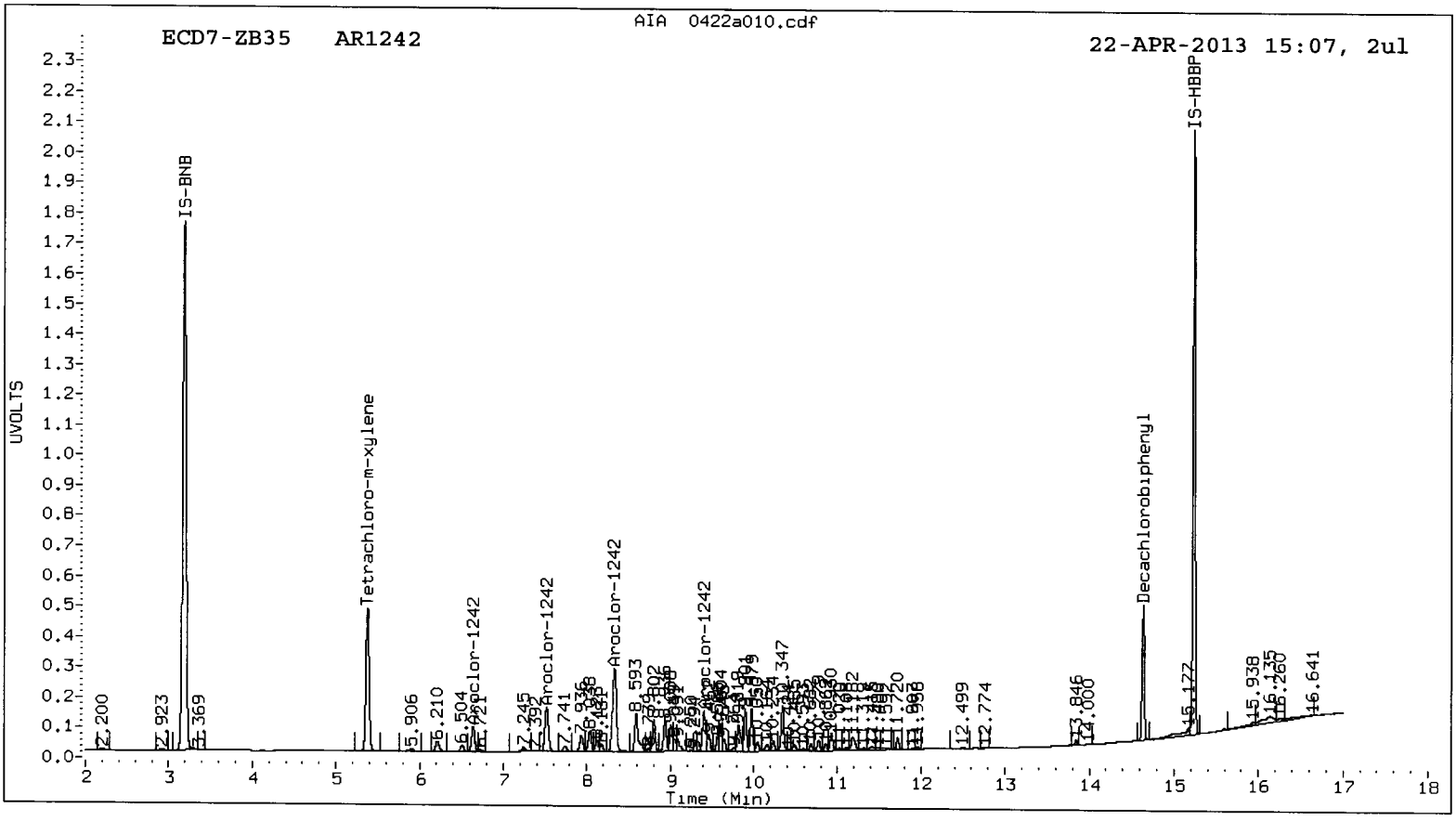
22-APR-2013 15:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP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22-APR-2013 15:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a011.d
Data file 2: 20130416.b/0422-2.b/0422a011.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 22-APR-2013 15:29
Report Date: 04/23/2013 10:39
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.720	-0.005	1854307	5.387	-0.006	2478221	20.4	19.3	5.7	Tetrachloro-m-xylene
14.591	-0.001	1629781	14.639	-0.001	1674197	17.1	20.9	19.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.0	48.2
Decachlorobiphenyl	42.8	52.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7304553	30.6
Hexabromobiphenyl	4375297	6248618	42.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9577921	12.3
Hexabromobiphenyl	6077527	6994575	15.1

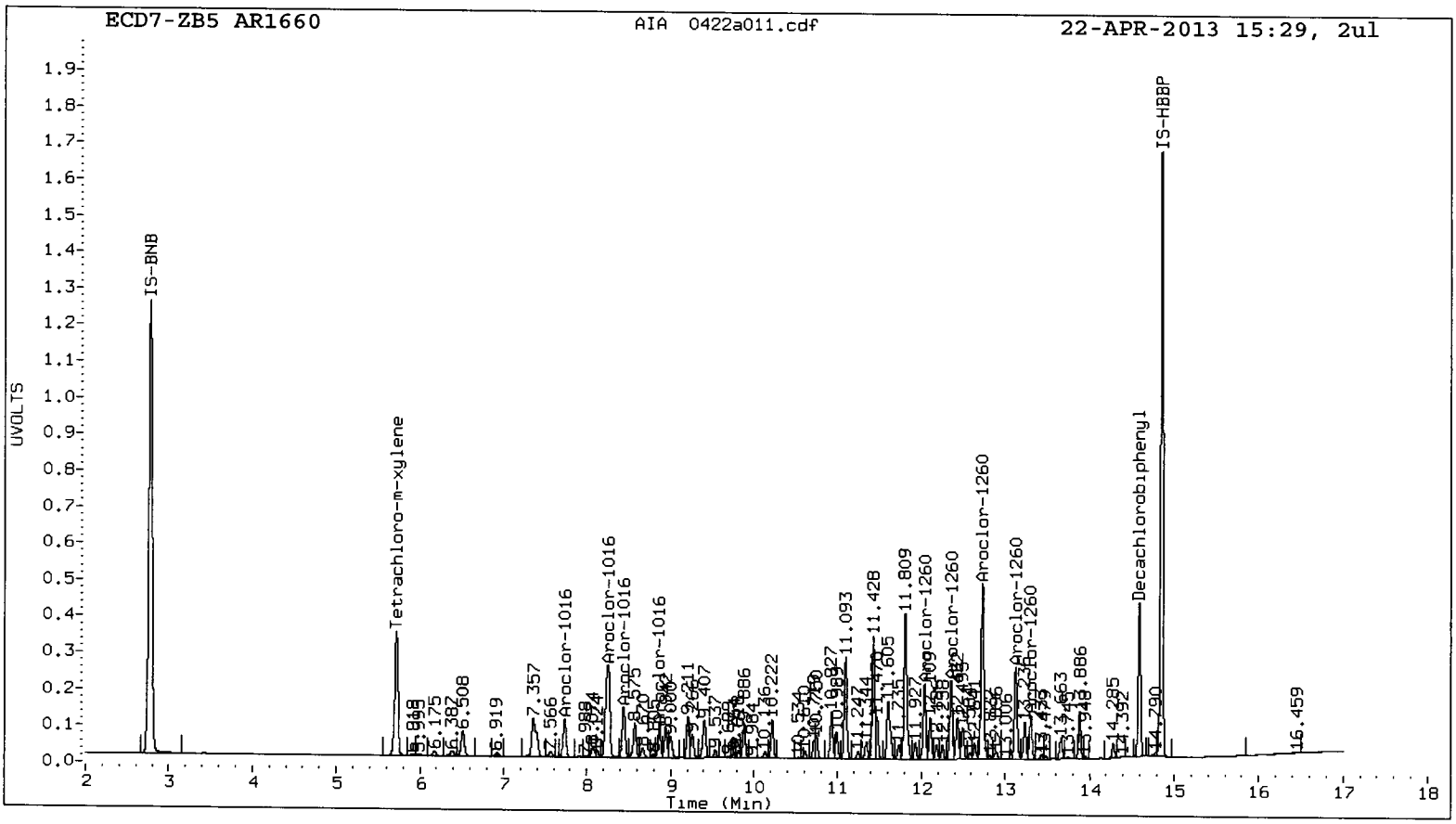
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.732	-0.004	523060	237.1	1	6.646	-0.005	518903	232.5
Aroclor-1016	2	8.253	-0.004	1821518	246.0	2	7.527	-0.005	1124463	229.6
Aroclor-1016	3	8.439	-0.004	700495	240.0	3	8.339	-0.004	2221348	232.6
Aroclor-1016	4	8.866	-0.004	399543	239.1	4	9.406	-0.004	763458	254.1
Total Col1Ave (4 peaks):					240.6	Total Col2Ave (4 peaks):				237.2 RPD = 1
Corrected Ave (3 peaks):					238.7	Corrected Ave (3 peaks):				231.6 RPD = 3
Aroclor-1260	1	12.041	-0.001	906821	236.0	1	11.959	-0.003	1405334	240.8
Aroclor-1260	2	12.357	-0.003	924934	240.3	2	12.503	-0.003	1147382	250.8
Aroclor-1260	3	12.729	-0.002	2261485	243.6	3	12.774	-0.002	2303596	243.1
Aroclor-1260	4	13.125	-0.001	1193670	248.4	4	13.335	-0.001	1557178	248.4
Aroclor-1260	5	13.305	-0.002	523599	228.0	NS	---			----
Total Col1Ave (5 peaks):					239.3	Total Col2Ave (4 peaks):				245.8 RPD = 3
Corrected Ave (4 peaks):					237.0	Corrected Ave (3 peaks):				244.1 RPD = 3

Total PCB Area Col1 (5.825 - 14.491) = 26552951 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 31461991 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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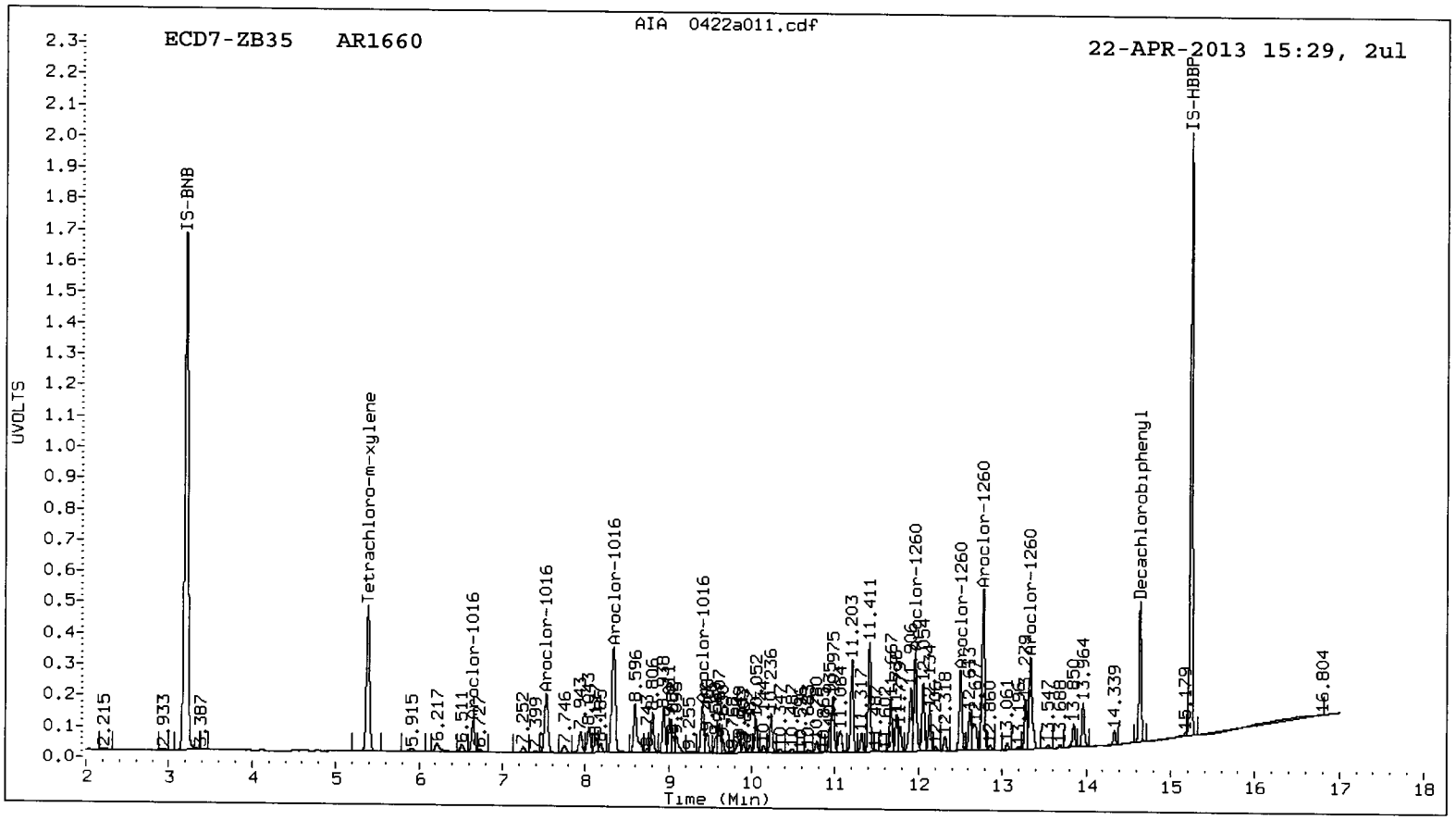
AIA 0422a011.cdf
22-APR-2013 15:29, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1660
AIA 0422a011.cdf
22-APR-2013 15:29, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a012.d
Data file 2: 20130416.b/0422-2.b/0422a012.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49MBW1
Client ID: WL49MBW1
Injection Date: 22-APR-2013 15:51
Report Date: 04/23/2013 10:34
Matrix: WATER
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.721	-0.005	2256553	5.388	-0.005	3091263	23.1	22.2	4.0	Tetrachloro-m-xylene
14.591	0.000	2300278	14.639	-0.001	2346927	21.8	25.8	16.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	57.7	55.4
Decachlorobiphenyl	54.6	64.5

04/23/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7865811	40.7
Hexabromobiphenyl	4375297	6909126	57.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10386197	21.8
Hexabromobiphenyl	6077527	7939966	30.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

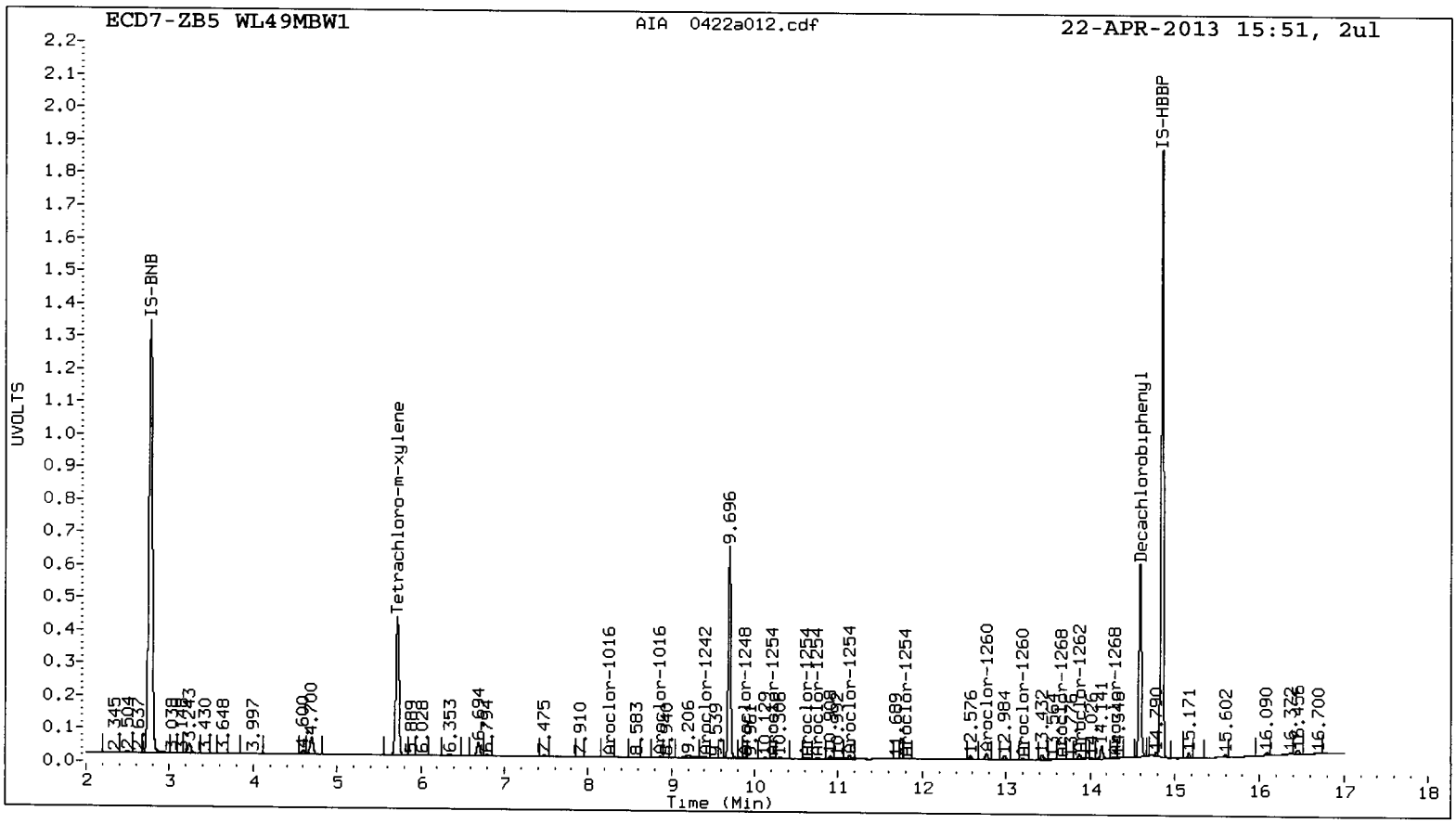
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	6.638	-0.014	24030	9.9
Aroclor-1016	2	8.255	-0.002	17546	2.2	2	7.527	-0.005	20905	3.9
Aroclor-1016	3	---			0.0	3	8.331	-0.012	51866	5.0
Aroclor-1016	4	8.868	-0.002	21279	11.8	4	9.404	-0.006	26758	8.2
	Col1Ave: <3 Quant Peaks						Col2Ave: 6.8			
Aroclor-1221	1	---			0.0	1	6.220	-0.007	73210	45.7
Aroclor-1221	2	---			0.0	2	6.521	-0.004	329100	322.2
Aroclor-1221	3	---			0.0	3	6.638	-0.023	24030	8.1
Aroclor-1221	NS	---			----	4	7.527	-0.027	20905	20.6
	Col1Ave: <3 Quant Peaks						Col2Ave: 99.2			
Aroclor-1232	1	---			0.0	1	6.638	-0.022	24030	11.7
Aroclor-1232	2	---			0.0	2	7.527	-0.015	20905	9.2
Aroclor-1232	3	---			0.0	3	8.331	-0.020	51866	12.7
Aroclor-1232	4	---			0.0	4	8.940	-0.010	11036	8.3
	Col1Ave: <3 Quant Peaks						Col2Ave: 10.4			
Aroclor-1242	1	---			0.0	1	6.638	0.000	24030	12.5
Aroclor-1242	2	8.255	-0.002	17546	2.9	2	7.527	0.006	20905	5.4
Aroclor-1242	3	---			0.0	3	8.331	-0.002	51866	6.8
Aroclor-1242	4	9.404	-0.008	29465	13.0	4	9.404	0.000	26758	10.1
	Col1Ave: <3 Quant Peaks						Col2Ave: 8.7			
Aroclor-1248	1	8.255	0.005	17546	4.1	1	7.527	-0.003	20905	9.9
Aroclor-1248	2	8.868	-0.003	21279	7.8	2	8.331	-0.010	51866	9.5
Aroclor-1248	3	9.404	-0.007	29465	7.8	3	8.940	-0.002	11036	2.8
Aroclor-1248	4	9.882	0.002	12186	2.4	4	10.344	-0.008	15350	2.9
	Total Col1Ave (4 peaks):				5.5	Total Col2Ave (4 peaks):			6.3	RPD = 13
	Corrected Ave (3 peaks):				4.8	Corrected Ave (3 peaks):			5.1	RPD = 6
Aroclor-1254	1	10.223	0.002	11067	2.4	1	10.055	0.000	41306	12.3
Aroclor-1254	2	10.622	0.011	13785	4.9	2	10.237	-0.002	13746	3.3
Aroclor-1254	3	10.751	-0.001	12820	2.3	3	10.933	-0.003	12024	1.8
Aroclor-1254	4	11.139	0.027	54829	9.2	4	11.196	0.007	18863	2.8
Aroclor-1254	5	11.809	-0.001	12446	2.2	5	11.961	-0.001	14717	3.0
	Total Col1Ave (5 peaks):				4.2	Total Col2Ave (5 peaks):			4.6	RPD = 10
	Corrected Ave (4 peaks):				2.9	Corrected Ave (4 peaks):			2.7	RPD = 8
Aroclor-1260	1	---			0.0	1	11.961	-0.001	14717	2.2
Aroclor-1260	2	---			0.0	2	12.500	-0.006	15525	3.0
Aroclor-1260	3	12.767	0.037	83586	8.1	3	12.778	0.002	21370	2.0
Aroclor-1260	4	13.196	0.070	11937	2.2	4	13.335	-0.001	16009	2.3
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks						Col2Ave: 2.4			
Aroclor-1262	1	---			0.0	1	12.500	-0.016	15525	2.6
Aroclor-1262	2	12.767	0.038	83586	6.2	2	12.778	-0.008	21370	1.5
Aroclor-1262	3	13.196	0.069	11937	2.8	3	13.335	0.044	16009	3.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	13.874	-0.013	91540	20.6	5	14.002	0.027	75141	15.7
	Total Col1Ave (3 peaks):				9.9	Total Col2Ave (4 peaks):			5.7	RPD = 53*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			2.4	
Aroclor-1268	1	13.196	-0.040	11937	0.8	1	13.335	0.044	16009	1.2
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	13.655	0.006	26326	2.3	3	13.681	-0.017	88124	8.3
Aroclor-1268	4	14.302	0.016	27698	0.8	4	14.293	-0.055	131039	3.8
	Total Col1Ave (3 peaks):				1.3	Total Col2Ave (3 peaks):			4.4	RPD = 109*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.825 - 14.491) = 4019439 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 4067666 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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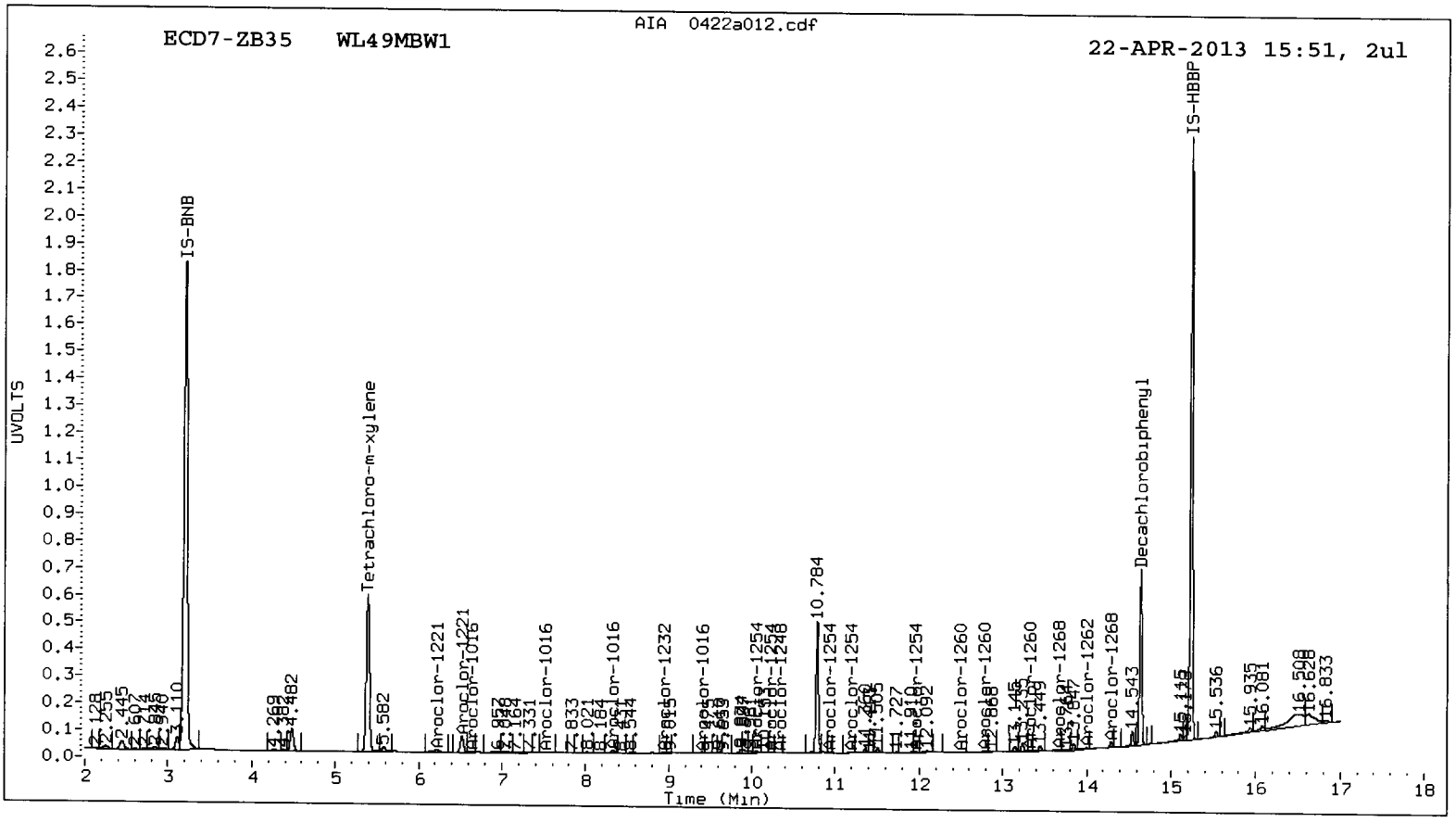
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
9.696
Decachlorobiphenyl
IS-HBBP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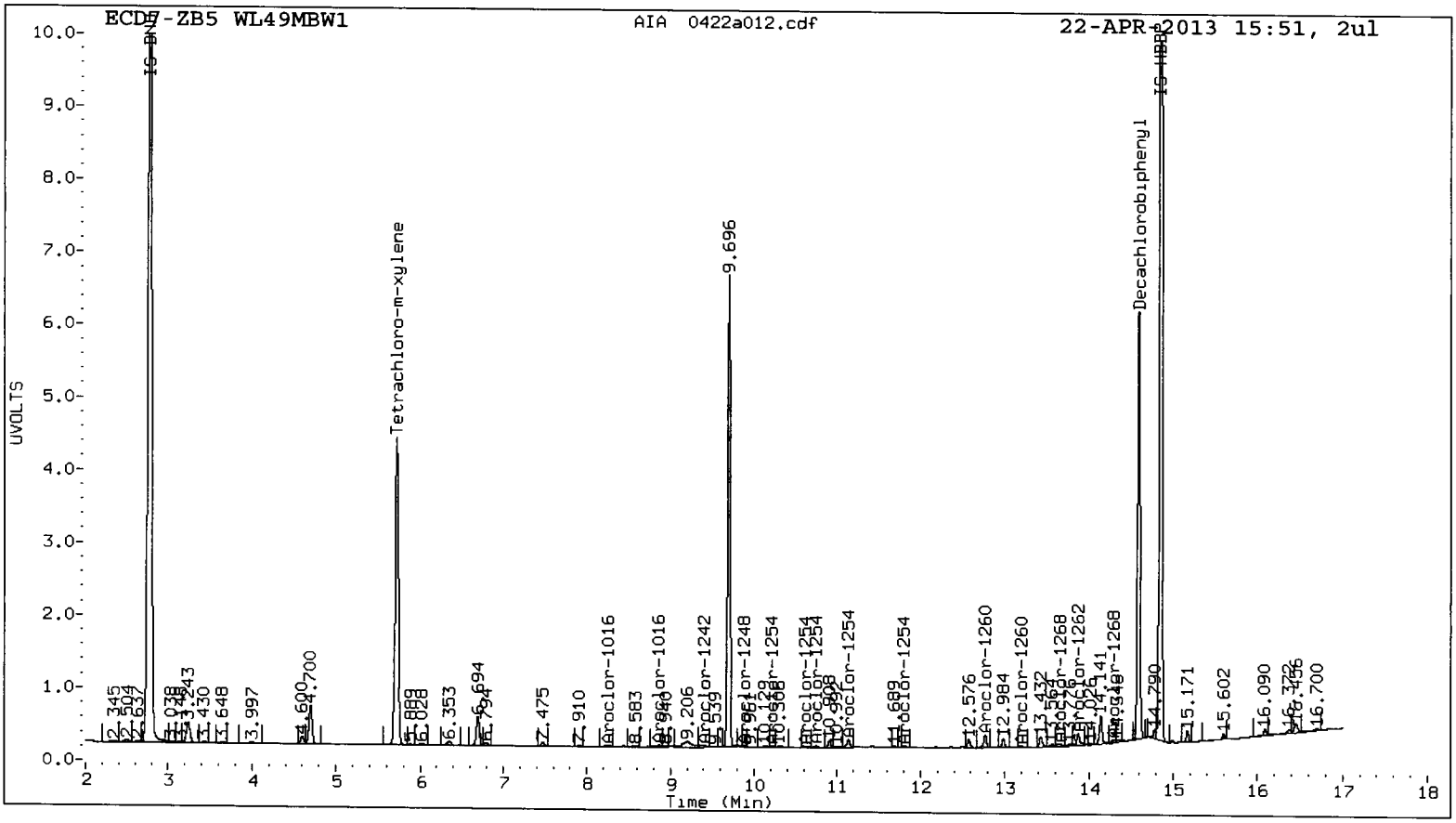
Decachlorobiphenyl
IS-HBBP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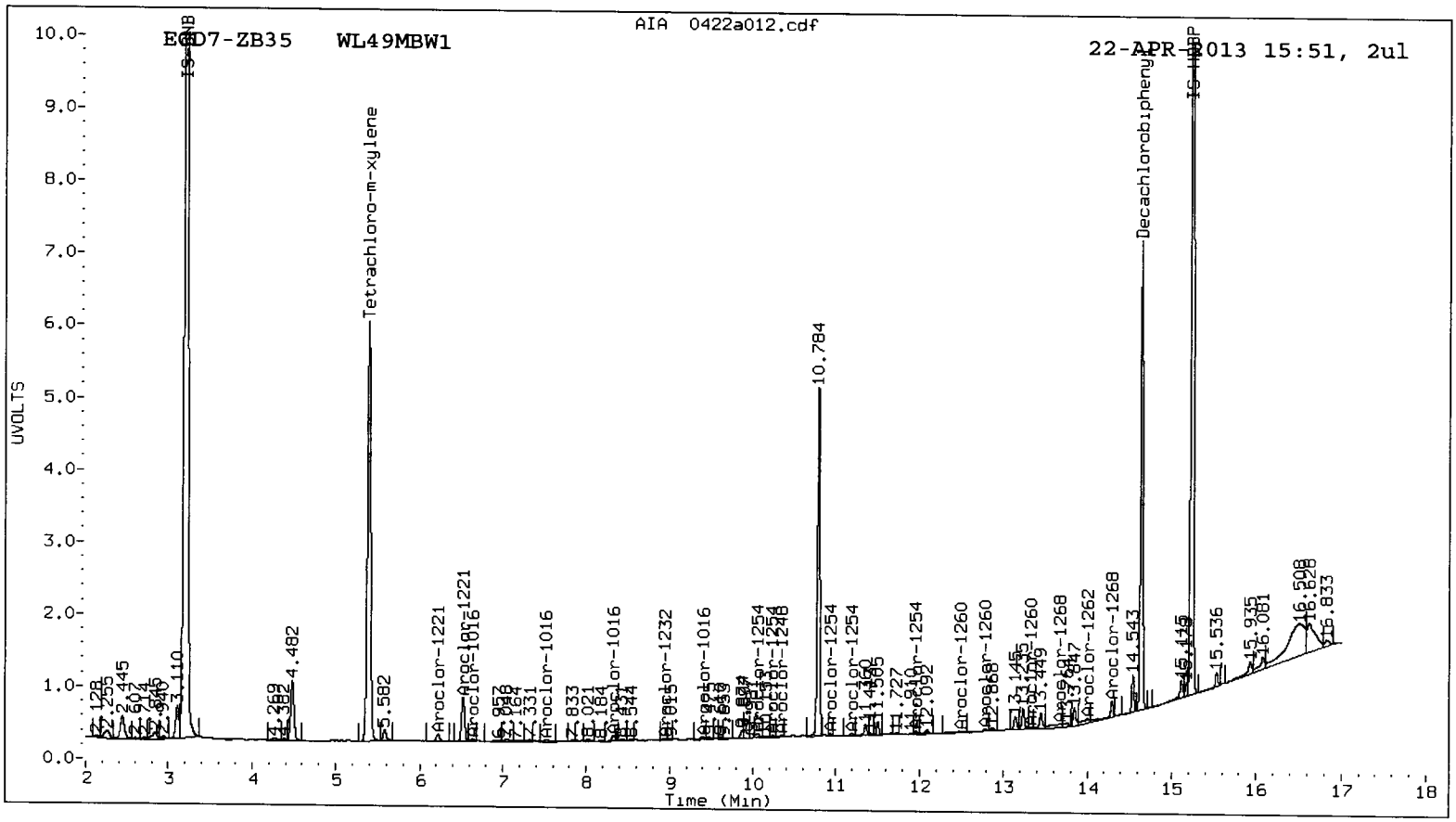
Tetrachloro-m-xylene
9.696
Decachlorobiphenyl
IS-HBB
UVOLTS
Time (Min)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22-APR-2013 15:51, 2ul
IS-DCB
Tetrachloro-m-xylene
10.784
Decachlorobiphenyl
IS-HBB
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a013.d
Data file 2: 20130416.b/0422-2.b/0422a013.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49LCSW1
Client ID: WL49LCSW1
Injection Date: 22-APR-2013 16:13
Report Date: 04/23/2013 10:34
Matrix: WATER
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.721	-0.005	2041265	5.389	-0.004	2787162	20.3	19.9	2.0	Tetrachloro-m-xylene
14.591	-0.001	2634081	14.640	-0.001	2551005	24.4	27.1	10.6	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	50.9	49.8
Decachlorobiphenyl	61.0	67.9

04/23/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	8069070	44.3
Hexabromobiphenyl	4375297	7080711	61.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10416476	22.2
Hexabromobiphenyl	6077527	8196943	34.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.733	-0.004	159682	65.5	1	6.648	-0.003	181263	74.7
Aroclor-1016	2	8.253	-0.004	562424	68.8	2	7.530	-0.003	397628	74.6
Aroclor-1016	3	8.440	-0.003	229794	71.3	3	8.340	-0.003	758829	73.1
Aroclor-1016	4	8.867	-0.002	146006	79.1	4	9.408	-0.002	291712	89.3
	Total Col1Ave (4 peaks):				71.2	Total Col2Ave (4 peaks):				77.9 RPD = 9
	Corrected Ave (3 peaks):				68.5	Corrected Ave (3 peaks):				74.1 RPD = 8
Aroclor-1221	1	6.176	0.002	25157	25.6	1	6.219	-0.008	80418	50.0
Aroclor-1221	2	6.355	-0.029	68576	92.4	2	6.521	-0.004	563763	550.3
Aroclor-1221	3	6.509	0.003	107372	43.1	3	6.648	-0.013	181263	61.2
Aroclor-1221	NS	---			----	4	7.530	-0.024	397628	391.1
	Total Col1Ave (3 peaks):				53.7	Total Col2Ave (4 peaks):				263.2 RPD = 132*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				167.4
Aroclor-1232	1	6.509	0.004	107372	65.1	1	6.648	-0.012	181263	87.6
Aroclor-1232	2	7.733	0.004	159682	166.3	2	7.530	-0.012	397628	174.1
Aroclor-1232	3	8.253	0.005	562424	175.3	3	8.340	-0.011	758829	184.6
Aroclor-1232	4	8.440	0.004	229794	178.2	4	8.940	-0.010	230848	172.5
	Total Col1Ave (4 peaks):				146.2	Total Col2Ave (4 peaks):				154.7 RPD = 6
	Corrected Ave (3 peaks):				135.6	Corrected Ave (3 peaks):				144.7 RPD = 7
Aroclor-1242	1	7.733	-0.005	159682	85.8	1	6.648	0.010	181263	93.7
Aroclor-1242	2	8.253	-0.004	562424	89.6	2	7.530	0.008	397628	103.0
Aroclor-1242	3	8.440	-0.004	229794	92.8	3	8.340	0.007	758829	99.3
Aroclor-1242	4	9.407	-0.004	184220	79.4	4	9.408	0.004	291712	110.1
	Total Col1Ave (4 peaks):				86.9	Total Col2Ave (4 peaks):				101.5 RPD = 16
	Corrected Ave (3 peaks):				84.9	Corrected Ave (3 peaks):				98.7 RPD = 15
Aroclor-1248	1	8.253	0.003	562424	127.9	1	7.530	0.000	397628	186.8
Aroclor-1248	2	8.867	-0.003	146006	52.2	2	8.340	0.000	758829	138.6
Aroclor-1248	3	9.407	-0.003	184220	47.4	3	8.940	-0.002	230848	59.1
Aroclor-1248	4	9.888	0.008	149020	28.8	4	10.352	0.000	24892	4.7
	Total Col1Ave (4 peaks):				64.1	Total Col2Ave (4 peaks):				97.3 RPD = 41*
	Corrected Ave (3 peaks):				42.8	Corrected Ave (3 peaks):				67.5 RPD = 45*
Aroclor-1254	1	10.223	0.002	162978	33.9	1	10.053	-0.002	179108	53.4
Aroclor-1254	2	10.611	0.000	37035	12.7	2	10.238	-0.001	204195	49.1
Aroclor-1254	3	10.751	-0.002	97037	16.9	3	10.936	0.000	100045	14.8
Aroclor-1254	4	11.094	-0.018	430593	70.6	4	11.204	0.016	505350	75.0
Aroclor-1254	5	11.809	-0.001	647817	112.6	5	11.960	-0.001	538165	107.6
	Total Col1Ave (5 peaks):				49.3	Total Col2Ave (5 peaks):				60.0 RPD = 19
	Corrected Ave (4 peaks):				33.5	Corrected Ave (4 peaks):				48.1 RPD = 36
Aroclor-1260	1	12.041	-0.002	313540	72.0	1	11.960	-0.002	538165	78.7
Aroclor-1260	2	12.358	-0.002	329644	75.6	2	12.505	-0.001	444139	82.8
Aroclor-1260	3	12.729	-0.002	1085863	103.2	3	12.775	-0.001	883465	79.6
Aroclor-1260	4	13.126	-0.001	408916	75.1	4	13.336	0.000	594216	80.9
Aroclor-1260	5	13.305	-0.001	177754	68.3	NS	---			----
	Total Col1Ave (5 peaks):				78.8	Total Col2Ave (4 peaks):				80.5 RPD = 2
	Corrected Ave (4 peaks):				72.8	Corrected Ave (3 peaks):				79.7 RPD = 9
Aroclor-1262	1	12.358	0.001	329644	64.1	1	12.505	-0.011	444139	71.4
Aroclor-1262	2	12.729	-0.001	1085863	78.8	2	12.775	-0.011	883465	61.6
Aroclor-1262	3	13.126	-0.002	408916	92.0	3	13.280	-0.011	251442	45.9
Aroclor-1262	4	13.305	0.001	177754	34.3	4	13.336	-0.013	594216	66.2
Aroclor-1262	5	13.878	-0.009	520961	114.7	5	13.963	-0.011	269657	54.6
	Total Col1Ave (5 peaks):				76.8	Total Col2Ave (5 peaks):				59.9 RPD = 25
	Corrected Ave (4 peaks):				67.3	Corrected Ave (4 peaks):				57.1 RPD = 16
Aroclor-1268	1	13.236	0.000	161445	10.9	1	13.280	-0.011	251442	17.5

Aroclor-1268	2	13.305	0.003	177754	12.8	2	13.336	-0.016	594216	43.6
Aroclor-1268	3	13.663	0.014	132868	11.3	3	13.687	-0.011	58373	5.3
Aroclor-1268	4	14.287	0.001	112310	3.1	4	14.339	-0.009	55781	1.5

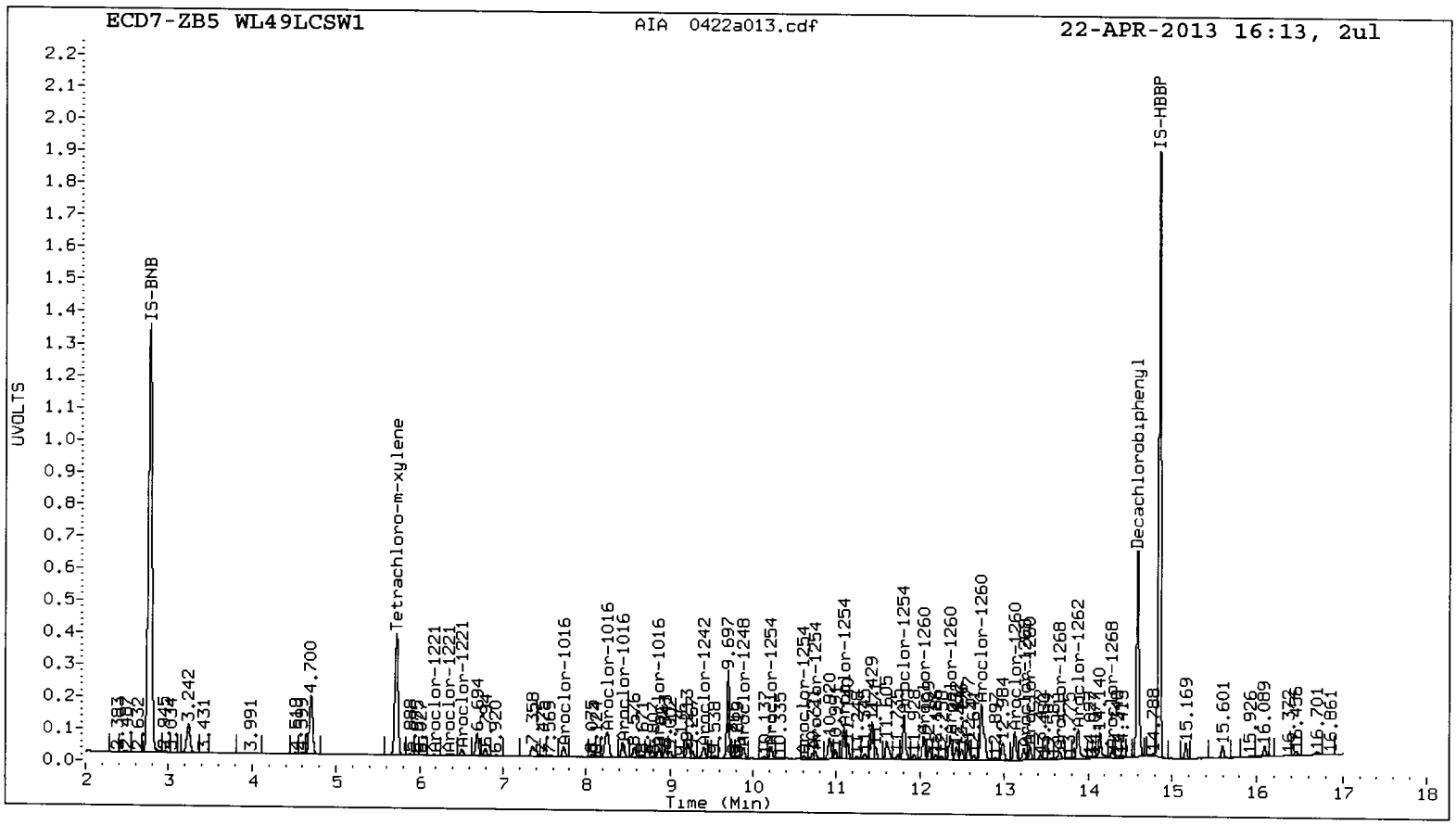
Total Col1Ave (4 peaks): 9.5 Total Col2Ave (4 peaks): 17.0 RPD = 56*

Corrected Ave (3 peaks): 8.4 Corrected Ave (3 peaks): 8.1 RPD = 4

Total PCB Area Col1 (5.825 - 14.491) = 12962923 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 15488556 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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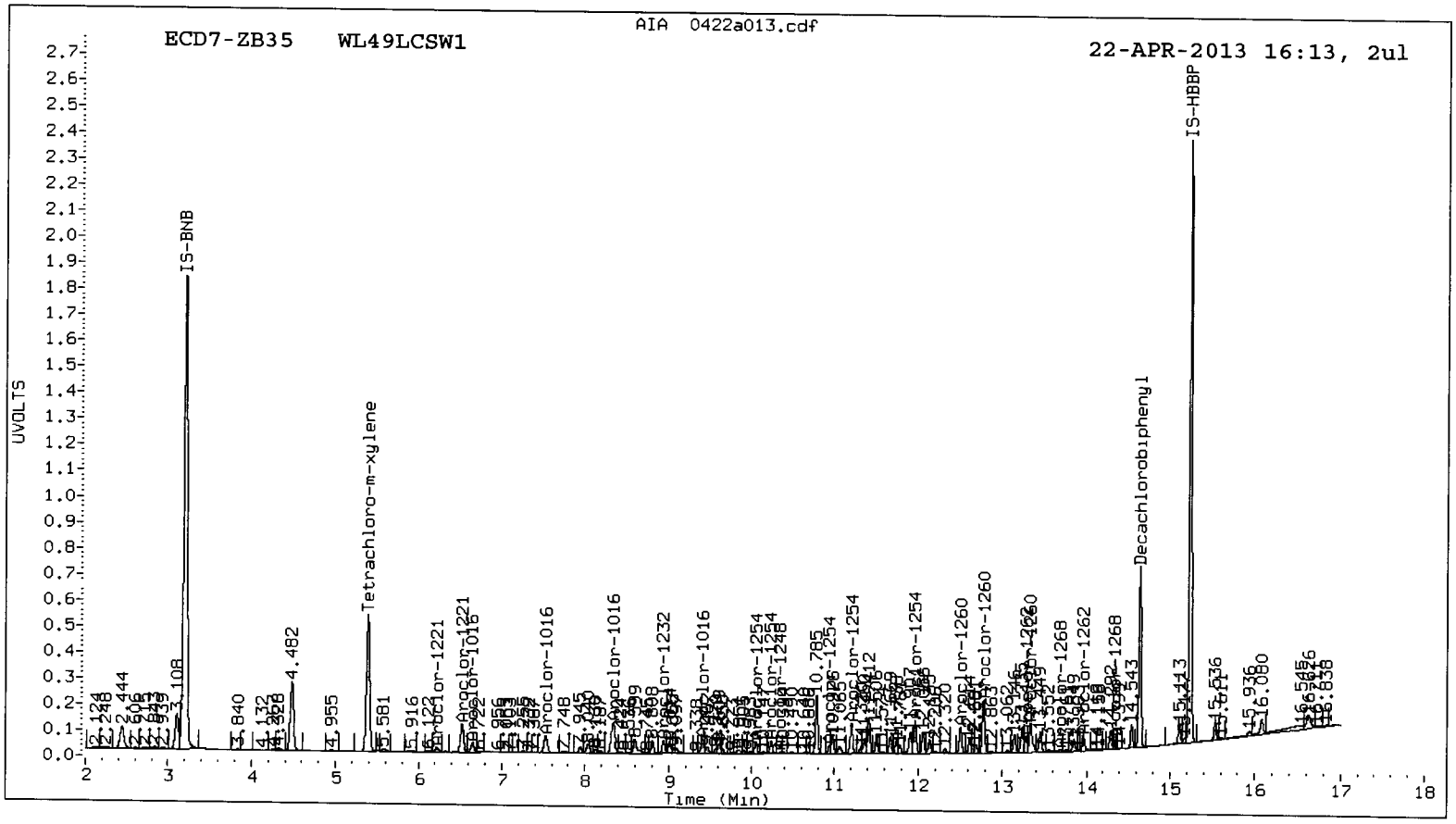
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl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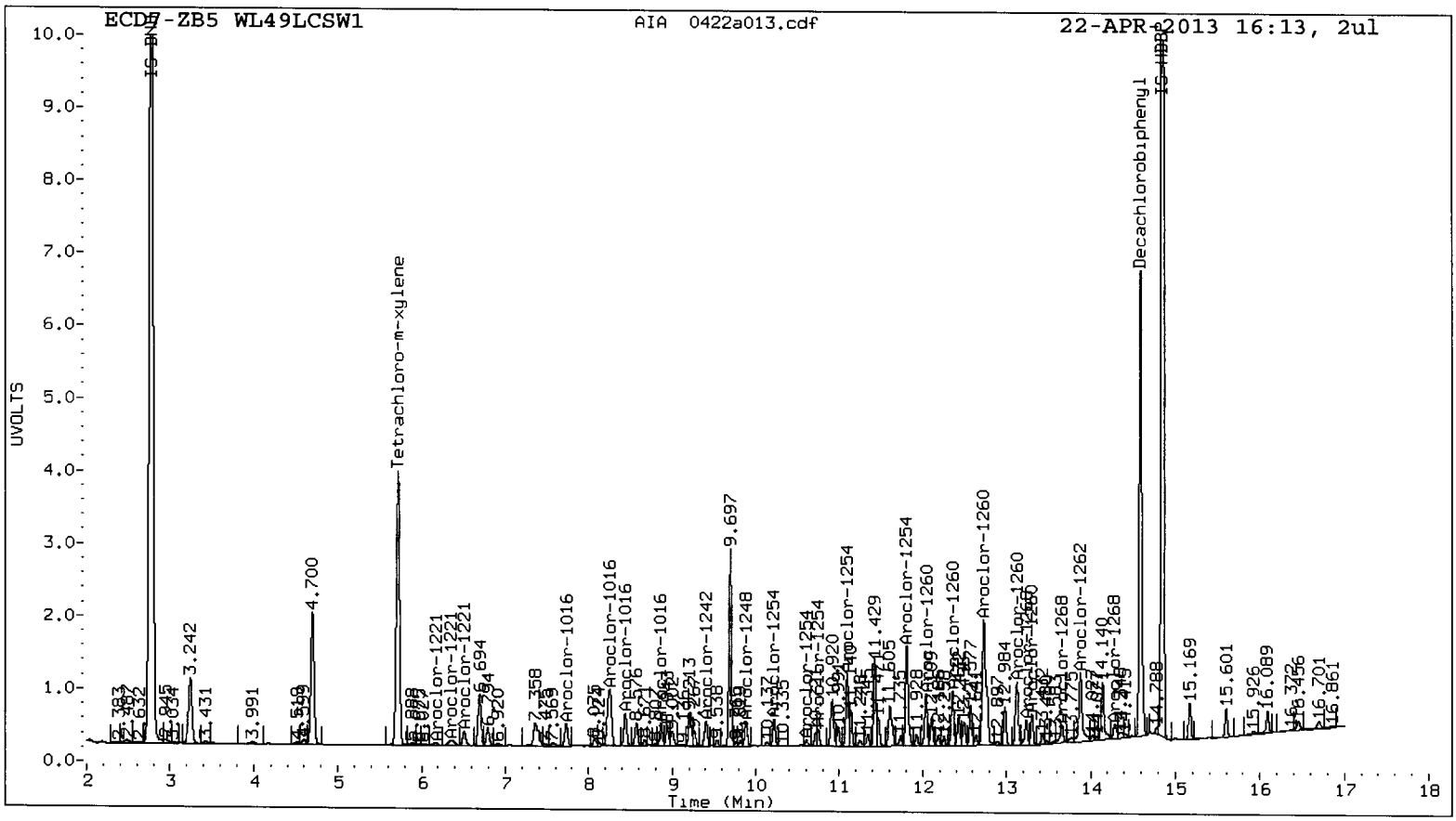
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
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Aroclor-1248
Aroclor-1254
Aroclor-1260
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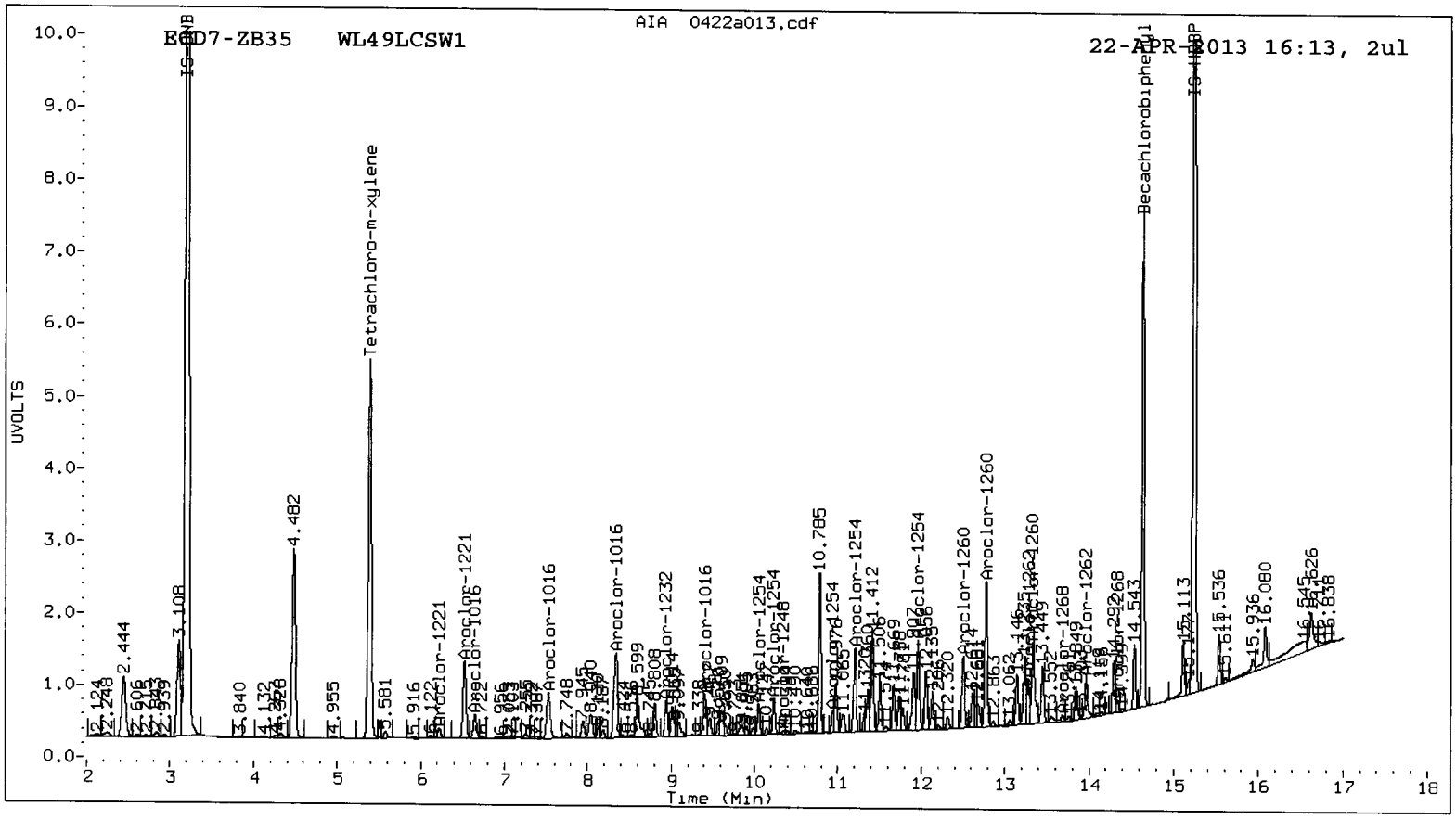
Aroclor-1268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Decachlorobiphenyl
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Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a014.d
Data file 2: 20130416.b/0422-2.b/0422a014.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49LCSDW1
Client ID: WL49LCSDW1
Injection Date: 22-APR-2013 16:35
Report Date: 04/23/2013 10:34
Matrix: WATER
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.725	0.000	2387999	5.392	-0.001	3270300	23.7	23.2	2.4	Tetrachloro-m-xylene
14.591	0.000	2676424	14.641	0.001	2737440	24.8	29.2	16.2	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	59.4	58.0
Decachlorobiphenyl	62.0	72.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	8089173	44.7
Hexabromobiphenyl	4375297	7079892	61.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10508404	23.3
Hexabromobiphenyl	6077527	8184358	34.7

* 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	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	7.736	0.000	174736	71.5	1	6.652	0.000	206433	84.3	
Aroclor-1016	2	8.256	-0.001	612294	74.7	2	7.533	0.001	419918	78.1	
Aroclor-1016	3	8.443	0.000	248824	77.0	3	8.343	-0.001	838453	80.0	
Aroclor-1016	4	8.870	0.000	155305	83.9	4	9.410	0.000	315959	95.9	
	Total Col1Ave (4 peaks):				76.8		Total Col2Ave (4 peaks):			84.6	RPD = 10
	Corrected Ave (3 peaks):				74.4		Corrected Ave (3 peaks):			80.8	RPD = 8
Aroclor-1221	1	6.179	0.006	24441	24.8	1	6.222	-0.005	88551	54.6	
Aroclor-1221	2	6.365	-0.019	64566	86.8	2	6.524	-0.001	376292	364.1	
Aroclor-1221	3	6.513	0.007	118558	47.5	3	6.652	-0.009	206433	69.1	
Aroclor-1221	NS	---			----	4	7.533	-0.020	419918	409.4	
	Total Col1Ave (3 peaks):				53.0		Total Col2Ave (4 peaks):			224.3	RPD = 124*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			162.6	
Aroclor-1232	1	6.513	0.007	118558	71.7	1	6.652	-0.008	206433	98.9	
Aroclor-1232	2	7.736	0.007	174736	181.5	2	7.533	-0.009	419918	182.3	
Aroclor-1232	3	8.256	0.008	612294	190.4	3	8.343	-0.009	838453	202.1	
Aroclor-1232	4	8.443	0.006	248824	192.5	4	8.943	-0.007	255788	189.4	
	Total Col1Ave (4 peaks):				159.0		Total Col2Ave (4 peaks):			168.2	RPD = 6
	Corrected Ave (3 peaks):				147.9		Corrected Ave (3 peaks):			156.9	RPD = 6
Aroclor-1242	1	7.736	-0.001	174736	93.7	1	6.652	0.014	206433	105.7	
Aroclor-1242	2	8.256	-0.001	612294	97.3	2	7.533	0.012	419918	107.8	
Aroclor-1242	3	8.443	-0.001	248824	100.2	3	8.343	0.010	838453	108.8	
Aroclor-1242	4	9.409	-0.002	198825	85.5	4	9.410	0.006	315959	118.2	
	Total Col1Ave (4 peaks):				94.1		Total Col2Ave (4 peaks):			110.1	RPD = 16
	Corrected Ave (3 peaks):				92.1		Corrected Ave (3 peaks):			107.4	RPD = 15
Aroclor-1248	1	8.256	0.006	612294	138.9	1	7.533	0.003	419918	195.6	
Aroclor-1248	2	8.870	-0.001	155305	55.4	2	8.343	0.002	838453	151.8	
Aroclor-1248	3	9.409	-0.001	198825	51.0	3	8.943	0.001	255788	64.9	
Aroclor-1248	4	9.889	0.009	169021	32.6	4	10.351	-0.002	34597	6.5	
	Total Col1Ave (4 peaks):				69.5		Total Col2Ave (4 peaks):			104.7	RPD = 40*
	Corrected Ave (3 peaks):				46.3		Corrected Ave (3 peaks):			74.4	RPD = 47*
Aroclor-1254	1	10.225	0.003	179813	37.3	1	10.055	0.000	195164	57.6	
Aroclor-1254	2	10.614	0.003	45391	15.6	2	10.240	0.001	224191	53.5	
Aroclor-1254	3	10.752	0.000	114516	19.9	3	10.938	0.002	124433	18.2	
Aroclor-1254	4	11.096	-0.017	525120	85.9	4	11.206	0.017	547357	80.6	
Aroclor-1254	5	11.810	0.000	700007	121.3	5	11.962	0.001	580891	115.1	
	Total Col1Ave (5 peaks):				56.0		Total Col2Ave (5 peaks):			65.0	RPD = 15
	Corrected Ave (4 peaks):				39.7		Corrected Ave (4 peaks):			52.5	RPD = 28
Aroclor-1260	1	12.042	-0.001	336478	77.3	1	11.962	0.000	580891	85.0	
Aroclor-1260	2	12.359	-0.001	345649	79.3	2	12.506	0.000	486166	90.8	
Aroclor-1260	3	12.730	-0.001	937337	89.1	3	12.776	-0.001	933436	84.2	
Aroclor-1260	4	13.127	0.000	442735	81.3	4	13.336	0.000	619299	84.4	
Aroclor-1260	5	13.306	-0.001	191320	73.5	NS	---			----	
	Total Col1Ave (5 peaks):				80.1		Total Col2Ave (4 peaks):			86.1	RPD = 7
	Corrected Ave (4 peaks):				77.9		Corrected Ave (3 peaks):			84.6	RPD = 8
Aroclor-1262	1	12.359	0.002	345649	67.2	1	12.506	-0.010	486166	78.3	
Aroclor-1262	2	12.730	0.001	937337	68.0	2	12.776	-0.011	933436	65.2	
Aroclor-1262	3	13.127	-0.001	442735	99.6	3	13.281	-0.010	271474	49.7	
Aroclor-1262	4	13.306	0.001	191320	36.9	4	13.336	-0.013	619299	69.1	
Aroclor-1262	5	13.883	-0.004	268660	59.1	5	13.964	-0.010	236953	48.0	
	Total Col1Ave (5 peaks):				66.2		Total Col2Ave (5 peaks):			62.0	RPD = 6
	Corrected Ave (4 peaks):				57.8		Corrected Ave (4 peaks):			58.0	RPD = 0
Aroclor-1268	1	13.237	0.001	172661	11.6	1	13.281	-0.009	271474	19.0	

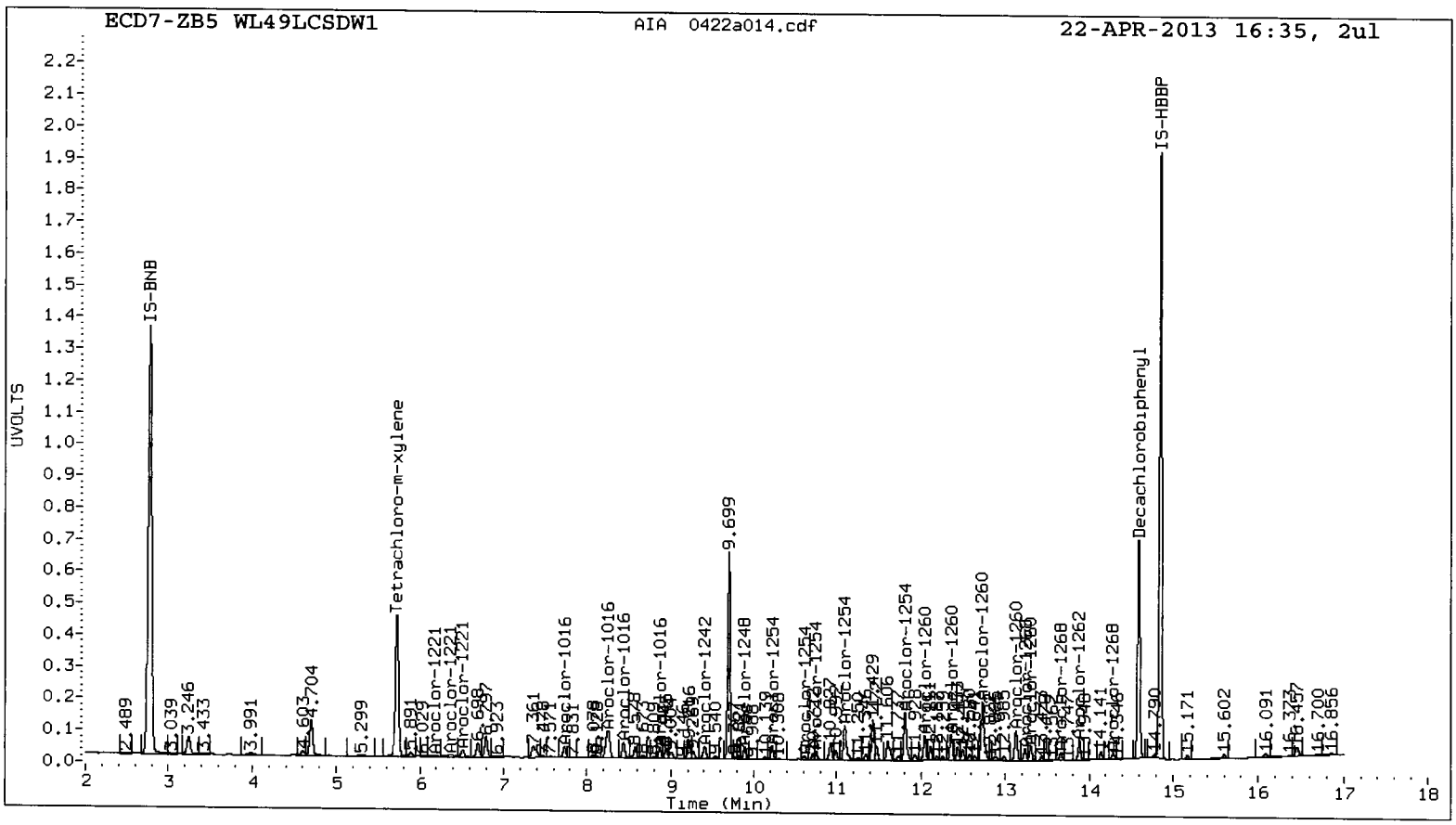
Aroclor-1268	2	13.306	0.003	191320	13.8	2	13.336	-0.016	619299	45.6
Aroclor-1268	3	13.663	0.015	107697	9.2	3	13.689	-0.010	15573	1.4
Aroclor-1268	4	14.288	0.001	81698	2.3	4	14.339	-0.009	61337	1.7
Total Col1Ave (4 peaks):					9.2	Total Col2Ave (4 peaks):				16.9 RPD = 59*
Corrected Ave (3 peaks):					7.7	Corrected Ave (3 peaks):				7.4 RPD = 4

Total PCB Area Col1 (5.825 - 14.491) = 13896946 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 16066434 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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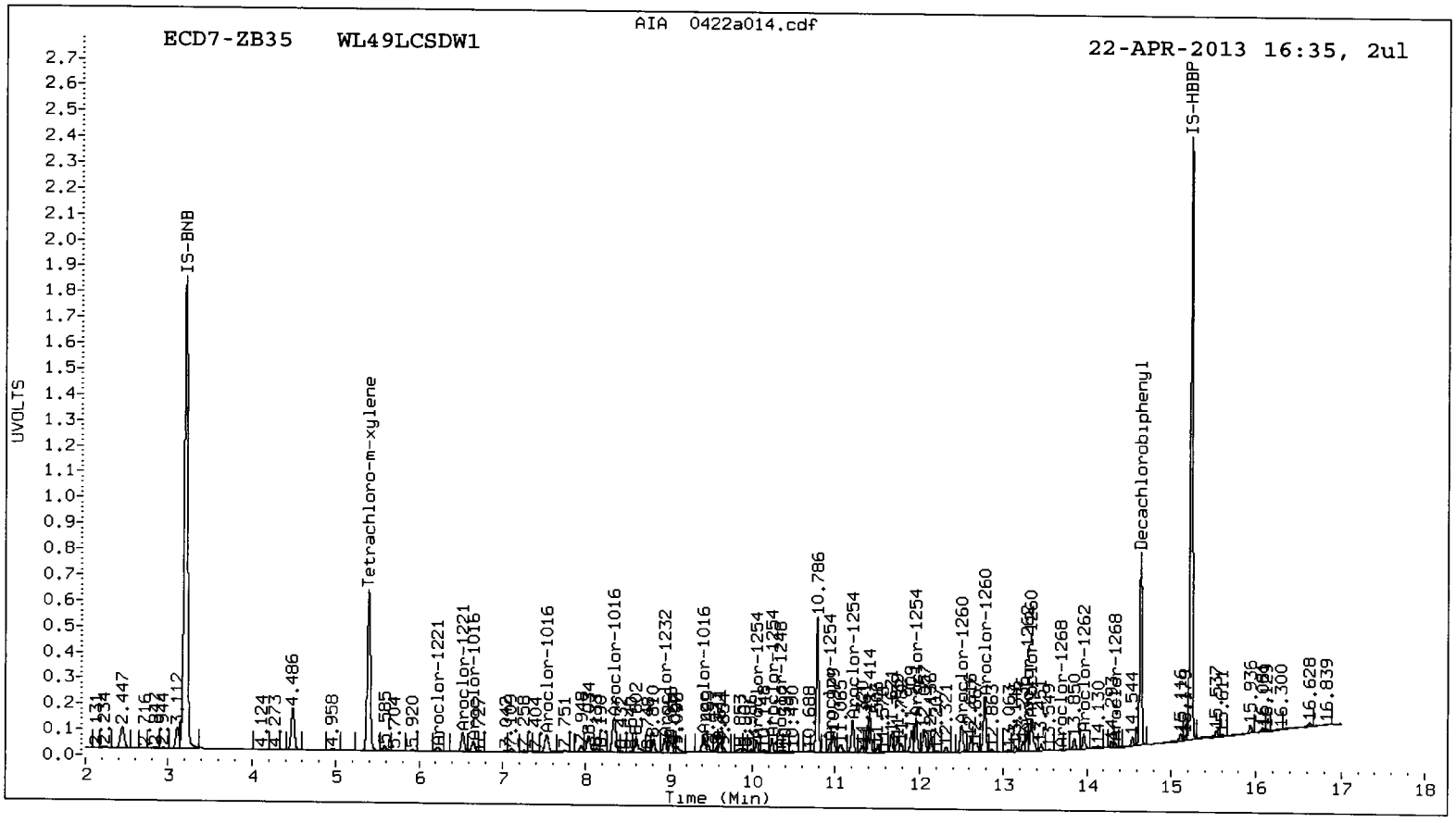
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
9.699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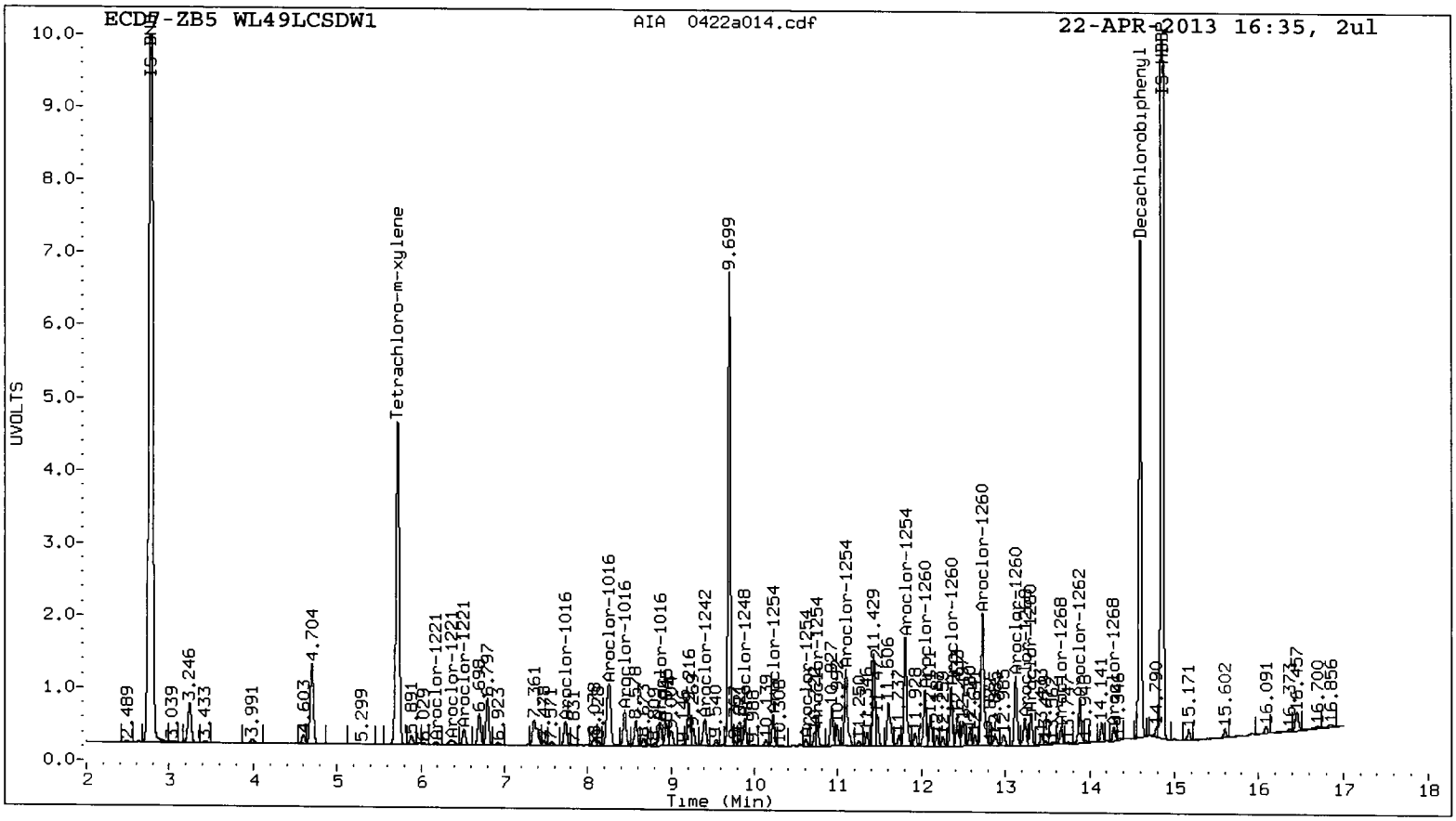
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
10.786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22-APR-2013 16:35, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
9.699
Decachlorobiphenyl
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
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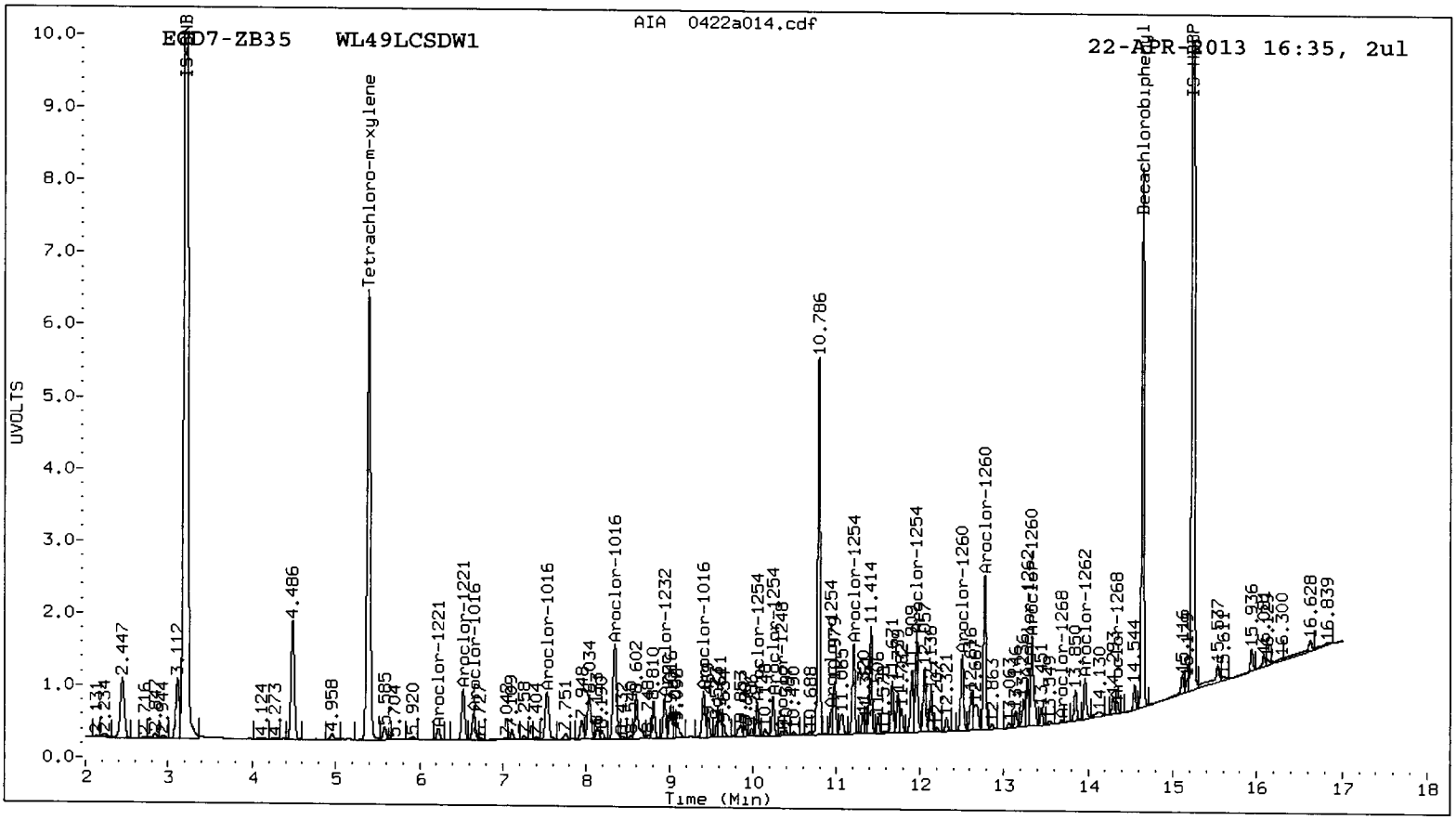
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UVOLTS
Time (Min)
Tetrachloro-m-xylene
10.786
Decachlorobiphenyl
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
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Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a015.d
Data file 2: 20130416.b/0422-2.b/0422a015.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

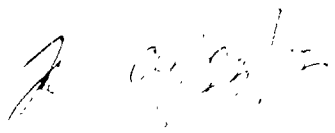
ARI ID: WL49A
Client ID: IM-MH-01-20130410-W
Injection Date: 22-APR-2013 16:57
Report Date: 04/23/2013 10:34
Matrix: WATER
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.724	-0.001	2360025	5.393	0.000	3312416	26.1	25.5	2.3	Tetrachloro-m-xylene
14.591	0.000	2678583	14.640	0.000	2831701	27.7	31.8	13.7	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	65.2	63.8
Decachlorobiphenyl	69.4	79.5



INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7272389	30.1
Hexabromobiphenyl	4375297	6334744	44.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9678988	13.5
Hexabromobiphenyl	6077527	7763500	27.7

* 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	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.735	-0.002	89364	40.7	1	6.669	0.018	303990	134.8
Aroclor-1016	2	8.256	-0.001	165663	22.5	2	7.532	0.000	176242	35.6
Aroclor-1016	3	8.445	0.002	55157	19.0	3	8.333	-0.010	519729	53.9
Aroclor-1016	4	8.870	0.000	68268	41.0	4	9.410	0.000	149285	49.2
Total Col1Ave (4 peaks):					30.8	Total Col2Ave (4 peaks):				68.4 RPD = 76*
Corrected Ave (3 peaks):					27.4	Corrected Ave (3 peaks):				46.2 RPD = 51*
Aroclor-1221	1	6.219	0.046	26895	30.4	1	6.227	0.000	115474	77.3
Aroclor-1221	2	6.354	-0.030	83198	124.4	2	6.525	0.000	83979	88.2
Aroclor-1221	3	6.515	0.008	25410	11.3	3	6.669	0.008	303990	110.5
Aroclor-1221	NS	---			----	4	7.532	-0.021	176242	186.5
Total Col1Ave (3 peaks):					55.4	Total Col2Ave (4 peaks):				115.6 RPD = 71*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				92.0
Aroclor-1232	1	6.515	0.009	25410	17.1	1	6.669	0.010	303990	158.2
Aroclor-1232	2	7.735	0.006	89364	103.3	2	7.532	-0.010	176242	83.1
Aroclor-1232	3	8.256	0.008	165663	57.3	3	8.333	-0.019	519729	136.0
Aroclor-1232	4	8.445	0.008	55157	47.5	4	8.942	-0.008	113611	91.3
Total Col1Ave (4 peaks):					56.3	Total Col2Ave (4 peaks):				117.1 RPD = 70*
Corrected Ave (3 peaks):					40.6	Corrected Ave (3 peaks):				103.5 RPD = 87*
Aroclor-1242	1	7.735	-0.003	89364	53.3	1	6.669	0.031	303990	169.0
Aroclor-1242	2	8.256	-0.001	165663	29.3	2	7.532	0.011	176242	49.1
Aroclor-1242	3	8.445	0.001	55157	24.7	3	8.333	0.000	519729	73.2
Aroclor-1242	4	9.409	-0.003	87719	41.9	4	9.410	0.006	149285	60.6
Total Col1Ave (4 peaks):					37.3	Total Col2Ave (4 peaks):				88.0 RPD = 81*
Corrected Ave (3 peaks):					32.0	Corrected Ave (3 peaks):				61.0 RPD = 62*
Aroclor-1248	1	8.256	0.006	165663	41.8	1	7.532	0.002	176242	89.1
Aroclor-1248	2	8.870	-0.001	68268	27.1	2	8.333	-0.008	519729	102.2
Aroclor-1248	3	9.409	-0.002	87719	25.0	3	8.942	0.000	113611	31.3
Aroclor-1248	4	9.884	0.004	77954	16.7	4	10.346	-0.006	106729	21.7
Total Col1Ave (4 peaks):					27.7	Total Col2Ave (4 peaks):				61.1 RPD = 75*
Corrected Ave (3 peaks):					22.9	Corrected Ave (3 peaks):				47.4 RPD = 69*
Aroclor-1254	1	10.222	0.001	65049	15.0	1	10.055	0.000	68442	21.9
Aroclor-1254	2	10.614	0.003	51400	19.6	2	10.240	0.001	87706	22.7
Aroclor-1254	3	10.754	0.001	85583	16.6	3	10.935	-0.001	92874	14.7
Aroclor-1254	4	11.126	0.013	139113	25.3	4	11.193	0.004	123228	19.7
Aroclor-1254	5	11.811	0.001	84749	16.3	5	11.958	-0.003	119368	25.7
Total Col1Ave (5 peaks):					18.6	Total Col2Ave (5 peaks):				21.0 RPD = 12
Corrected Ave (4 peaks):					16.9	Corrected Ave (4 peaks):				19.8 RPD = 16
Aroclor-1260	1	12.041	-0.001	27628	7.1	1	11.958	-0.004	119368	18.4
Aroclor-1260	2	12.359	-0.002	19493	5.0	2	12.503	-0.003	58070	11.4
Aroclor-1260	3	12.768	0.038	360646	38.3	3	12.777	0.000	71402	6.8
Aroclor-1260	4	13.126	0.000	30204	6.2	4	13.337	0.001	60550	8.7
Aroclor-1260	5	13.305	-0.001	24671	10.6	NS	---			----
Total Col1Ave (5 peaks):					13.4	Total Col2Ave (4 peaks):				11.3 RPD = 17
Corrected Ave (4 peaks):					7.2	Corrected Ave (3 peaks):				9.0 RPD = 22
Aroclor-1262	1	12.359	0.001	19493	4.2	1	12.503	-0.013	58070	9.9
Aroclor-1262	2	12.768	0.039	360646	29.3	2	12.777	-0.010	71402	5.3
Aroclor-1262	3	13.126	-0.001	30204	7.6	3	13.337	0.046	60550	11.7
Aroclor-1262	4	13.305	0.000	24671	5.3	4	---			0.0
Aroclor-1262	5	13.875	-0.012	204775	50.4	5	13.964	-0.010	52581	11.2
Total Col1Ave (5 peaks):					19.4	Total Col2Ave (4 peaks):				9.5 RPD = 68*
Corrected Ave (4 peaks):					11.6	Corrected Ave (3 peaks):				8.8 RPD = 28
Aroclor-1268	1	13.237	0.001	29712	2.2	1	13.337	0.047	60550	4.5

Aroclor-1268 2	13.305	0.003	24671	2.0	2	---			0.0
Aroclor-1268 3	13.655	0.007	86154	8.2	3	13.687	-0.011	33072	3.2
Aroclor-1268 4	14.301	0.015	109763	3.4	4	14.338	-0.010	19596	0.6

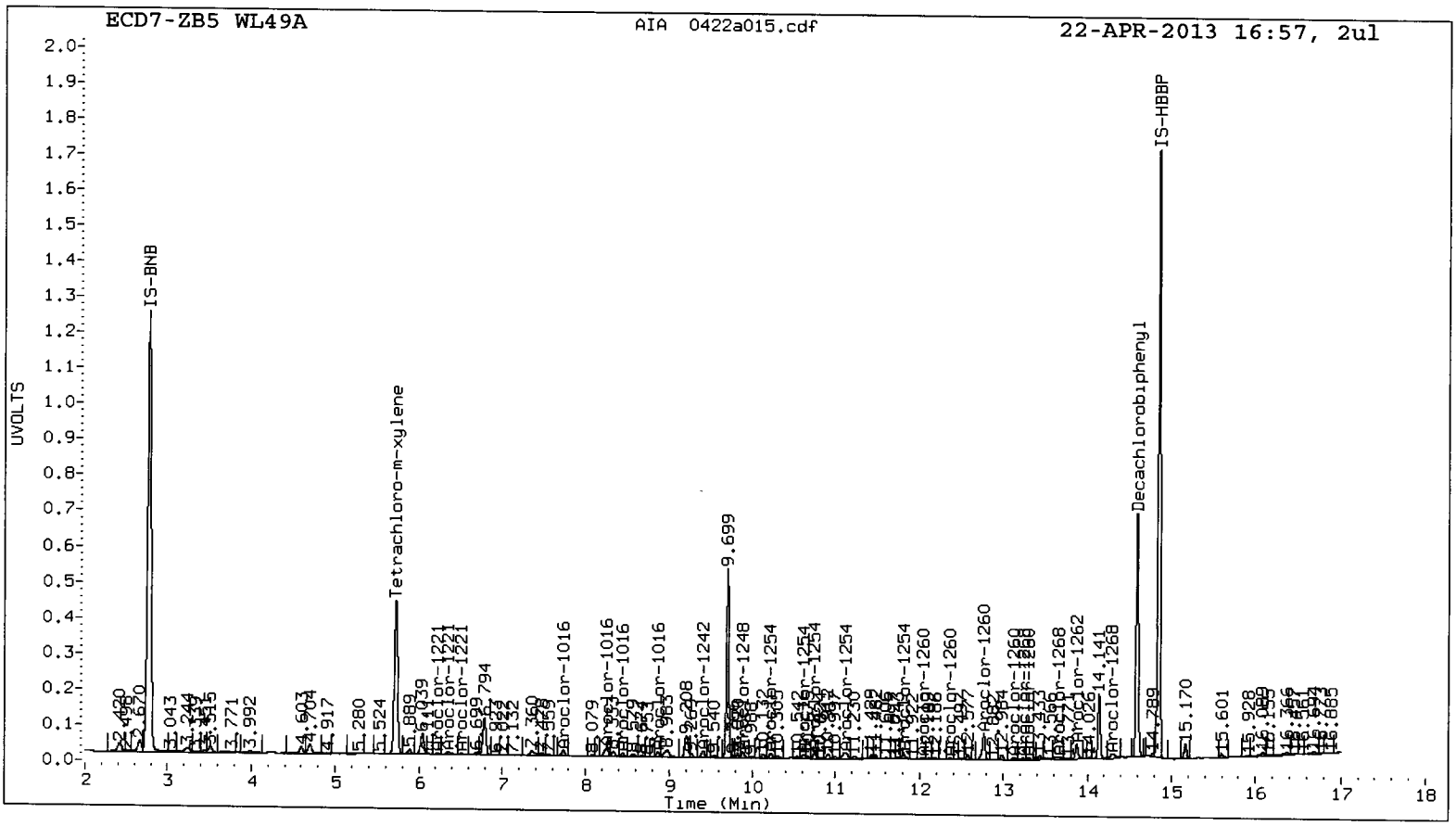
Total Col1Ave (4 peaks): 4.0 Total Col2Ave (3 peaks): 2.7 RPD = 36

Corrected Ave (3 peaks): 2.5 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (5.825 - 14.491) = 7731359 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 8713334 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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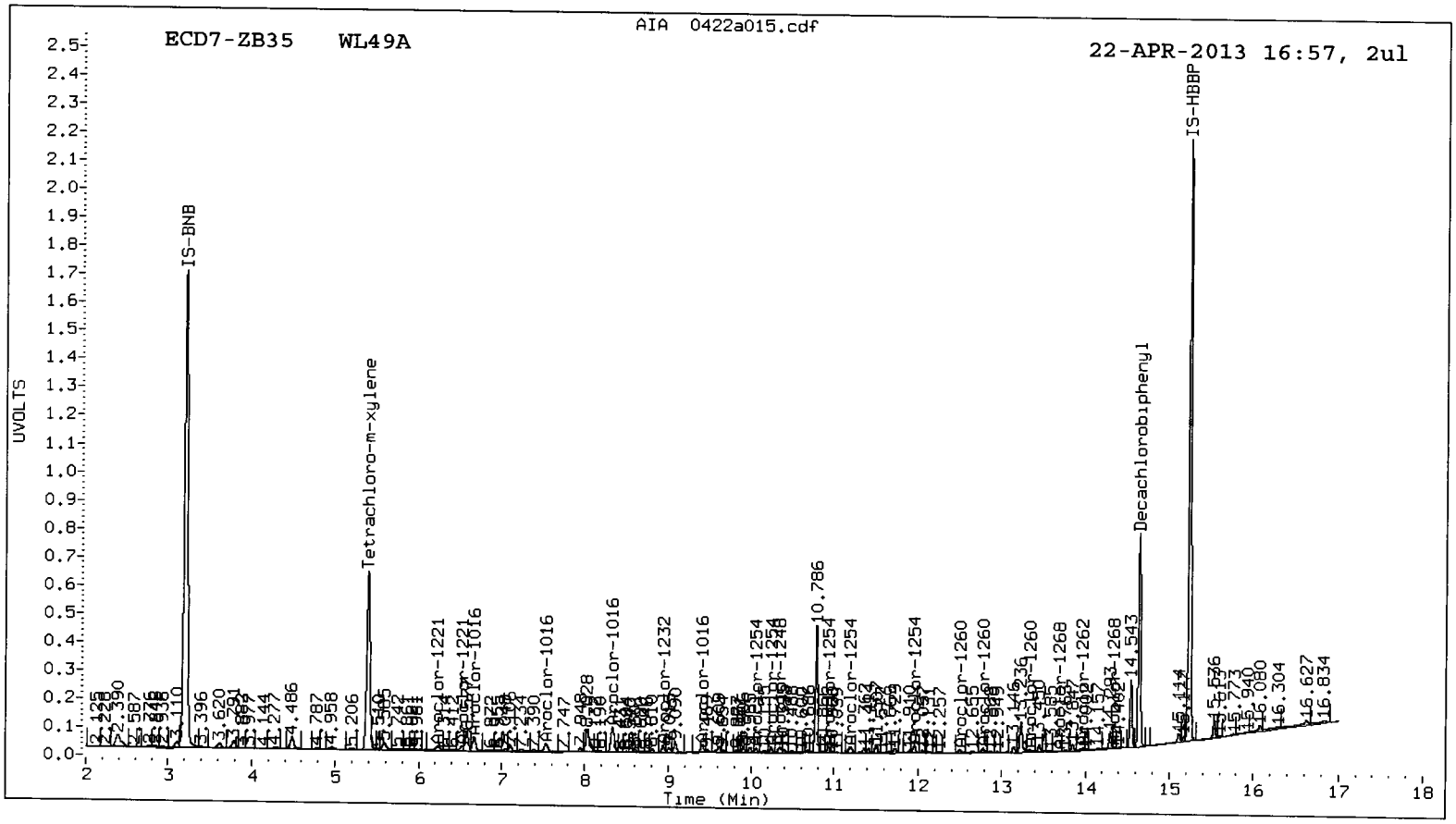
Tetrachloro-m-xylene
9.699
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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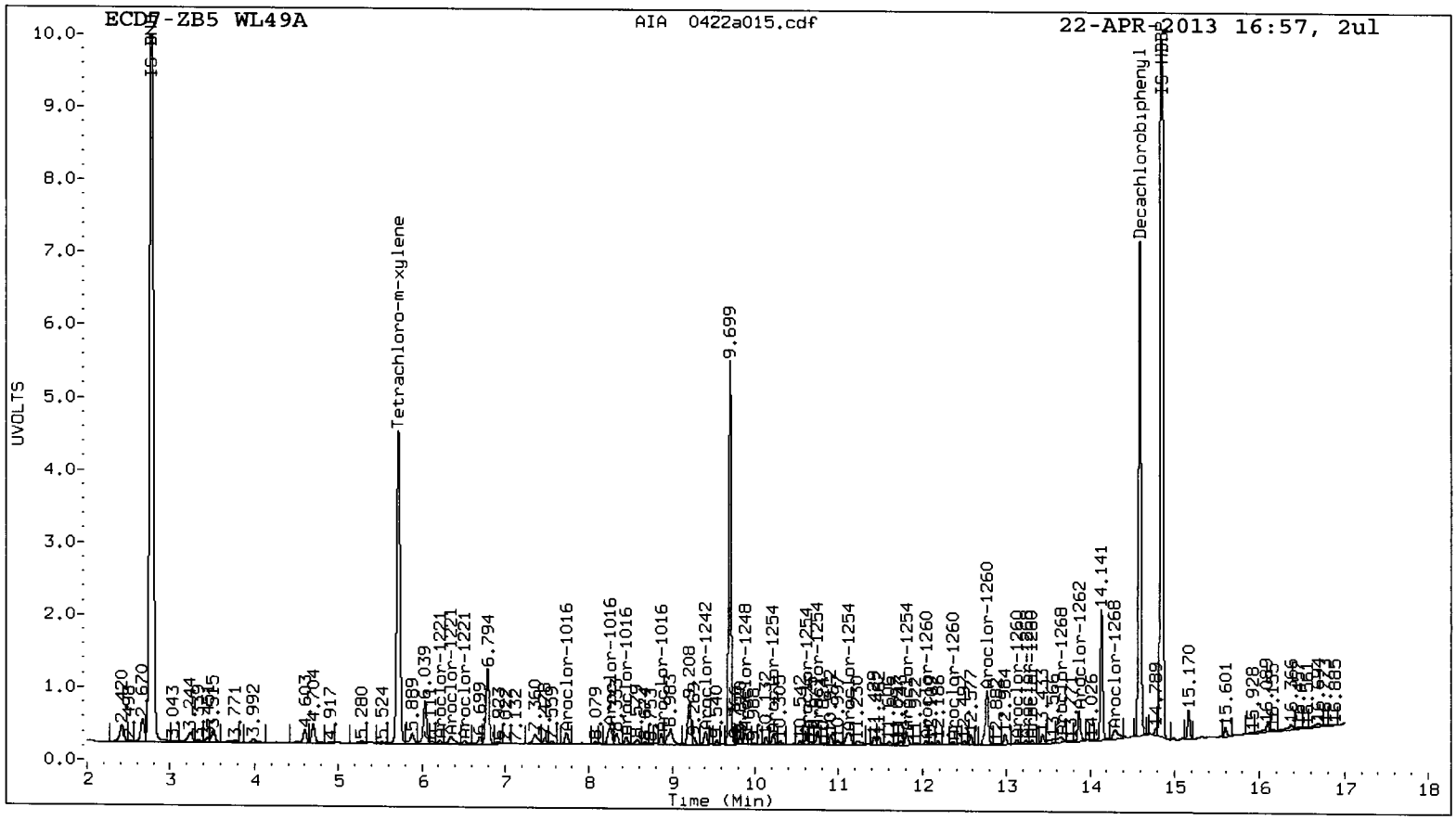
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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UVOLTS
Time (Min)
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Decachlorobiphenyl
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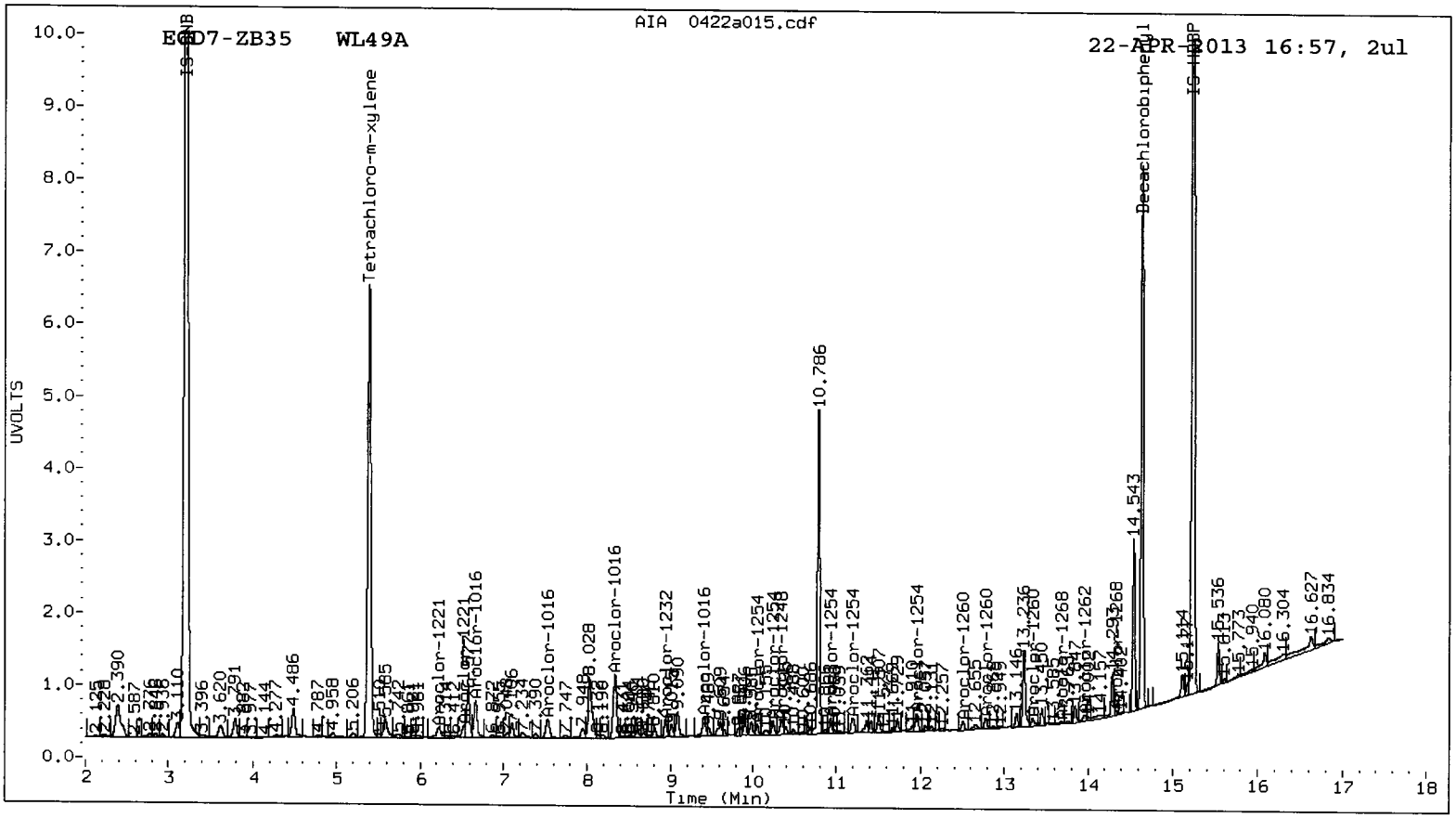
15.170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UVOLTS
Time (Min)
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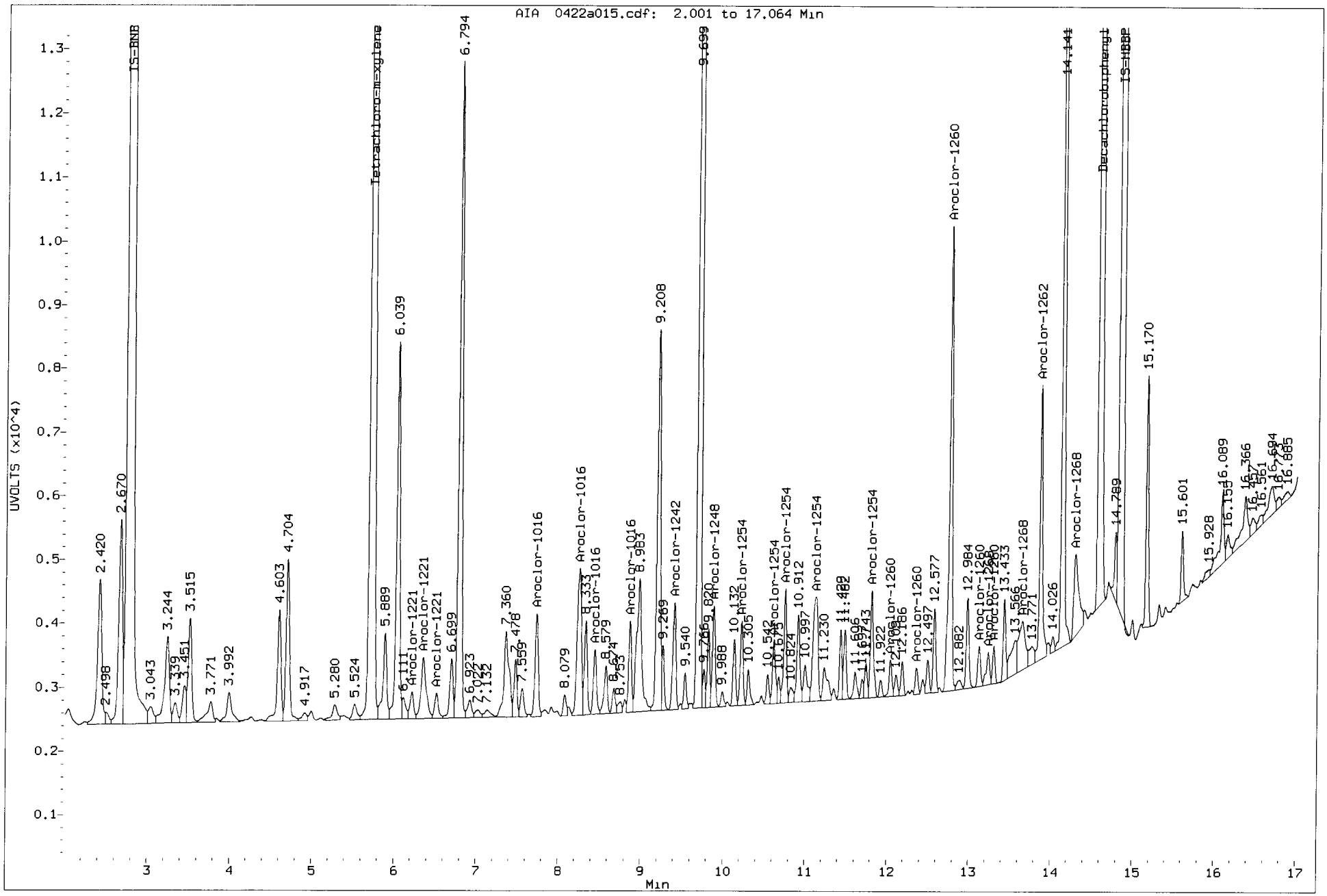
Instrument: ecd7.i
Client Sample ID: IM-MH-01-20130410-W



Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a017.d
Data file 2: 20130416.b/0422-2.b/0422a017.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49B
Client ID: IM-SW-01-20130410-W
Injection Date: 22-APR-2013 17:40
Report Date: 04/23/2013 10:34
Matrix: WATER
Dilution Factor: 20.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.728	0.002	119408	5.396	0.003	198924	1.3	1.5	13.5	Tetrachloro-m-xylene
14.593	0.001	110683	14.641	0.000	173631	1.4	2.0	37.6	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	64.9	74.3
Decachlorobiphenyl	67.9	99.4

04/23/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7397082	32.3
Hexabromobiphenyl	4375297	5345772	22.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9977274	17.0
Hexabromobiphenyl	6077527	7620163	25.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.738	0.001	92226	41.3	1	6.669	0.018	244626	105.2
Aroclor-1016	2	8.259	0.002	370034	49.4	2	7.534	0.002	206306	40.4
Aroclor-1016	3	8.445	0.002	143936	48.7	3	8.345	0.002	534475	53.7
Aroclor-1016	4	8.871	0.001	124505	73.6	4	9.411	0.002	285454	91.2
Total Col1Ave (4 peaks):					53.2	Total Col2Ave (4 peaks):				72.6 RPD = 31
Corrected Ave (3 peaks):					46.4	Corrected Ave (3 peaks):				61.8 RPD = 28
Aroclor-1221	1	---			0.0	1	6.227	0.000	23840	15.5
Aroclor-1221	2	6.395	0.010	15119	22.2	2	6.527	0.001	324845	331.0
Aroclor-1221	3	6.515	0.009	45227	19.8	3	6.669	0.008	244626	86.3
Aroclor-1221	NS	---			----	4	7.534	-0.020	206306	211.8
Col1Ave: <3 Quant Peaks						Col2Ave: 161.2				
Aroclor-1232	1	6.515	0.009	45227	29.9	1	6.669	0.009	244626	123.5
Aroclor-1232	2	7.738	0.009	92226	104.8	2	7.534	-0.008	206306	94.3
Aroclor-1232	3	8.259	0.011	370034	125.8	3	8.345	-0.006	534475	135.7
Aroclor-1232	4	8.445	0.008	143936	121.7	4	8.944	-0.006	220018	171.6
Total Col1Ave (4 peaks):					95.6	Total Col2Ave (4 peaks):				131.3 RPD = 31
Corrected Ave (3 peaks):					85.5	Corrected Ave (3 peaks):				117.8 RPD = 32
Aroclor-1242	1	7.738	0.000	92226	54.1	1	6.669	0.031	244626	132.0
Aroclor-1242	2	8.259	0.002	370034	64.3	2	7.534	0.012	206306	55.8
Aroclor-1242	3	8.445	0.001	143936	63.4	3	8.345	0.012	534475	73.1
Aroclor-1242	4	9.411	-0.001	180258	84.7	4	9.411	0.007	285454	112.5
Total Col1Ave (4 peaks):					66.6	Total Col2Ave (4 peaks):				93.3 RPD = 33
Corrected Ave (3 peaks):					60.6	Corrected Ave (3 peaks):				80.4 RPD = 28
Aroclor-1248	1	8.259	0.009	370034	91.8	1	7.534	0.004	206306	101.2
Aroclor-1248	2	8.871	0.000	124505	48.5	2	8.345	0.005	534475	101.9
Aroclor-1248	3	9.411	0.000	180258	50.6	3	8.944	0.001	220018	58.8
Aroclor-1248	4	9.886	0.006	197801	41.7	4	10.348	-0.005	294719	58.0
Total Col1Ave (4 peaks):					58.1	Total Col2Ave (4 peaks):				80.0 RPD = 32
Corrected Ave (3 peaks):					46.9	Corrected Ave (3 peaks):				72.7 RPD = 43*
Aroclor-1254	1	10.222	0.001	196244	44.5	1	10.056	0.001	166145	51.7
Aroclor-1254	2	10.634	0.023	374905	140.7	2	10.243	0.004	240004	60.3
Aroclor-1254	3	10.755	0.002	262558	49.9	3	10.936	0.000	288551	44.4
Aroclor-1254	4	11.108	-0.005	310317	55.5	4	11.200	0.011	384303	59.6
Aroclor-1254	5	11.811	0.001	335725	63.6	5	11.952	-0.009	861163	179.8
Total Col1Ave (5 peaks):					70.9	Total Col2Ave (5 peaks):				79.1 RPD = 11
Corrected Ave (4 peaks):					53.4	Corrected Ave (4 peaks):				54.0 RPD = 1
Aroclor-1260	1	12.043	0.001	130818	39.8	1	11.952	-0.010	861163	135.4
Aroclor-1260	2	12.361	0.000	130682	39.7	2	12.504	-0.002	210128	42.2
Aroclor-1260	3	12.733	0.003	532464	67.0	3	12.777	0.001	326864	31.7
Aroclor-1260	4	13.124	-0.003	374298	91.1	4	13.340	0.004	349557	51.2
Aroclor-1260	5	13.305	-0.001	117921	60.0	NS	---			----
Total Col1Ave (5 peaks):					59.5	Total Col2Ave (4 peaks):				65.1 RPD = 9
Corrected Ave (4 peaks):					51.6	Corrected Ave (3 peaks):				41.7 RPD = 21
Aroclor-1262	1	12.361	0.003	130682	33.6	1	12.504	-0.012	210128	36.3
Aroclor-1262	2	12.733	0.004	532464	51.2	2	12.777	-0.010	326864	24.5
Aroclor-1262	3	13.124	-0.004	374298	111.5	3	13.282	-0.009	166318	32.7
Aroclor-1262	4	13.305	0.001	117921	30.1	4	13.340	-0.009	349557	41.9
Aroclor-1262	5	13.881	-0.006	161261	47.0	5	13.966	-0.008	179773	39.1
Total Col1Ave (5 peaks):					54.7	Total Col2Ave (5 peaks):				34.9 RPD = 44*
Corrected Ave (4 peaks):					40.5	Corrected Ave (4 peaks):				33.2 RPD = 20
Aroclor-1268	1	13.237	0.001	150636	13.4	1	13.282	-0.009	166318	12.5
Aroclor-1268	2	13.305	0.003	117921	11.3	2	13.340	-0.012	349557	27.6

Aroclor-1268 3	13.660	0.012	118751	13.4	3	---			0.0
Aroclor-1268 4	14.291	0.004	111975	4.1	4	14.340	-0.008	82248	2.5

Total Col1Ave (4 peaks): 10.5 Total Col2Ave (3 peaks): 14.2 RPD = 29

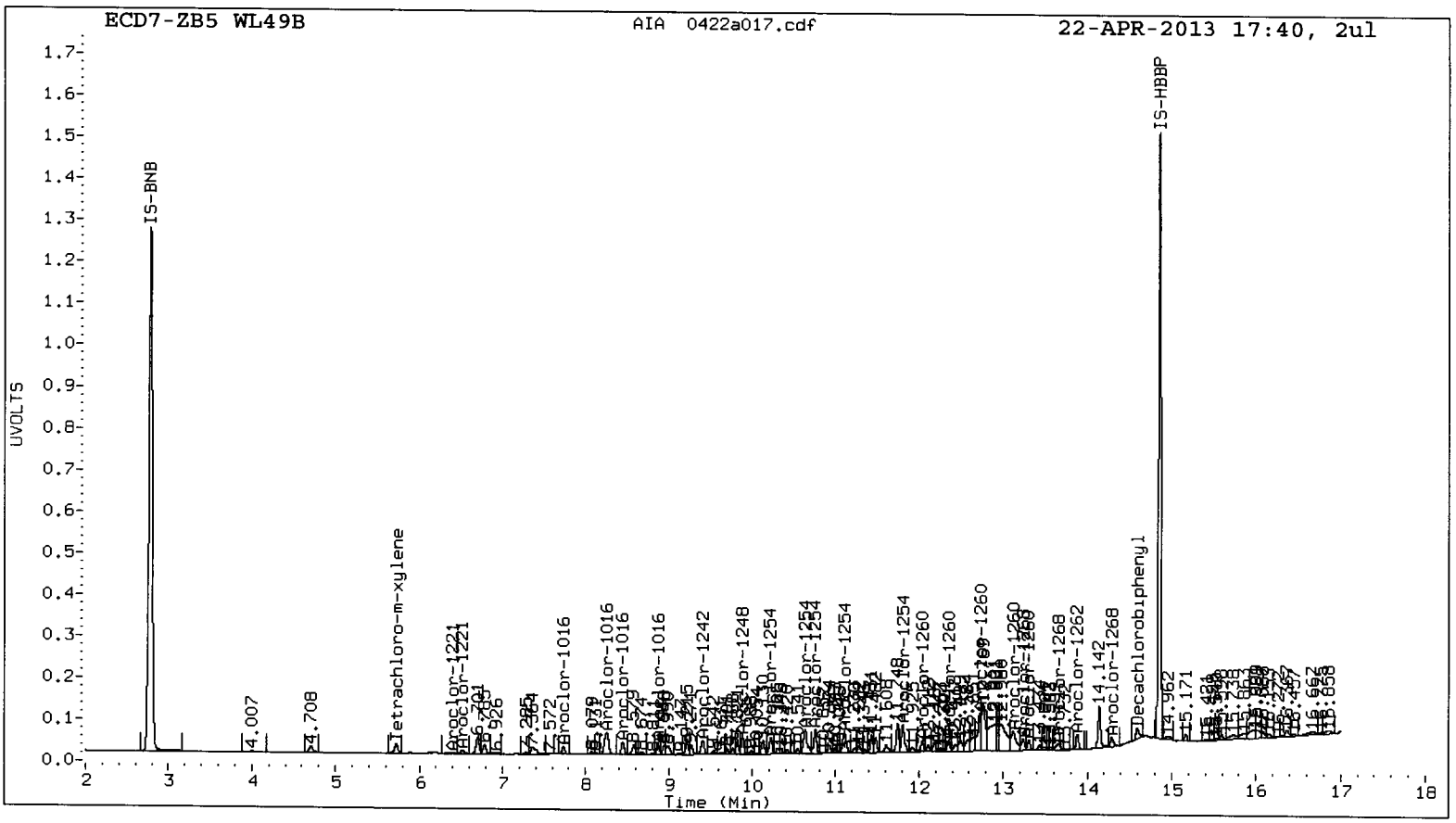
Corrected Ave (3 peaks): 9.6 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (5.825 - 14.491) = 11513926 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 16465620 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
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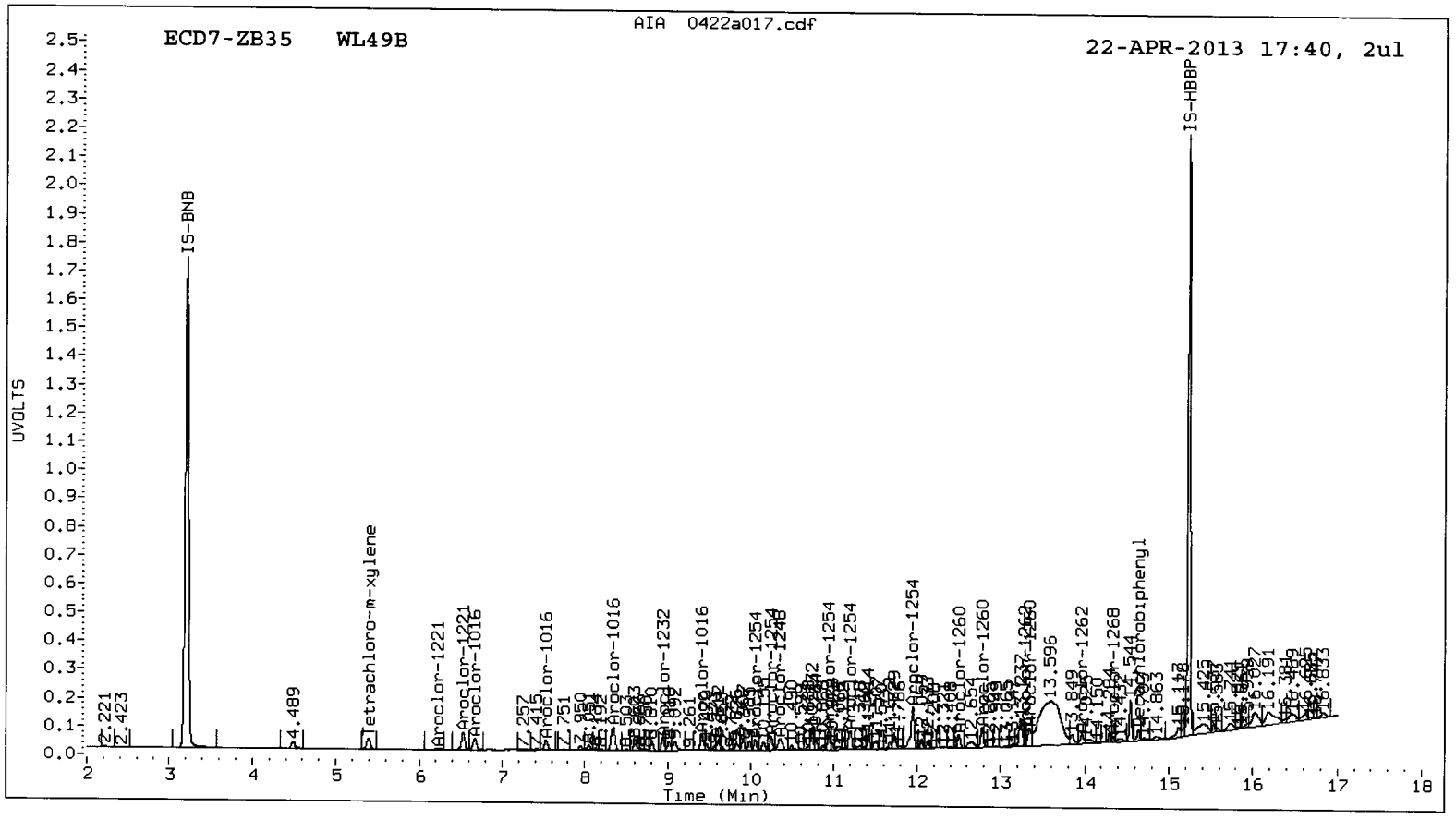
14.142
UVOLTS
Time (Min)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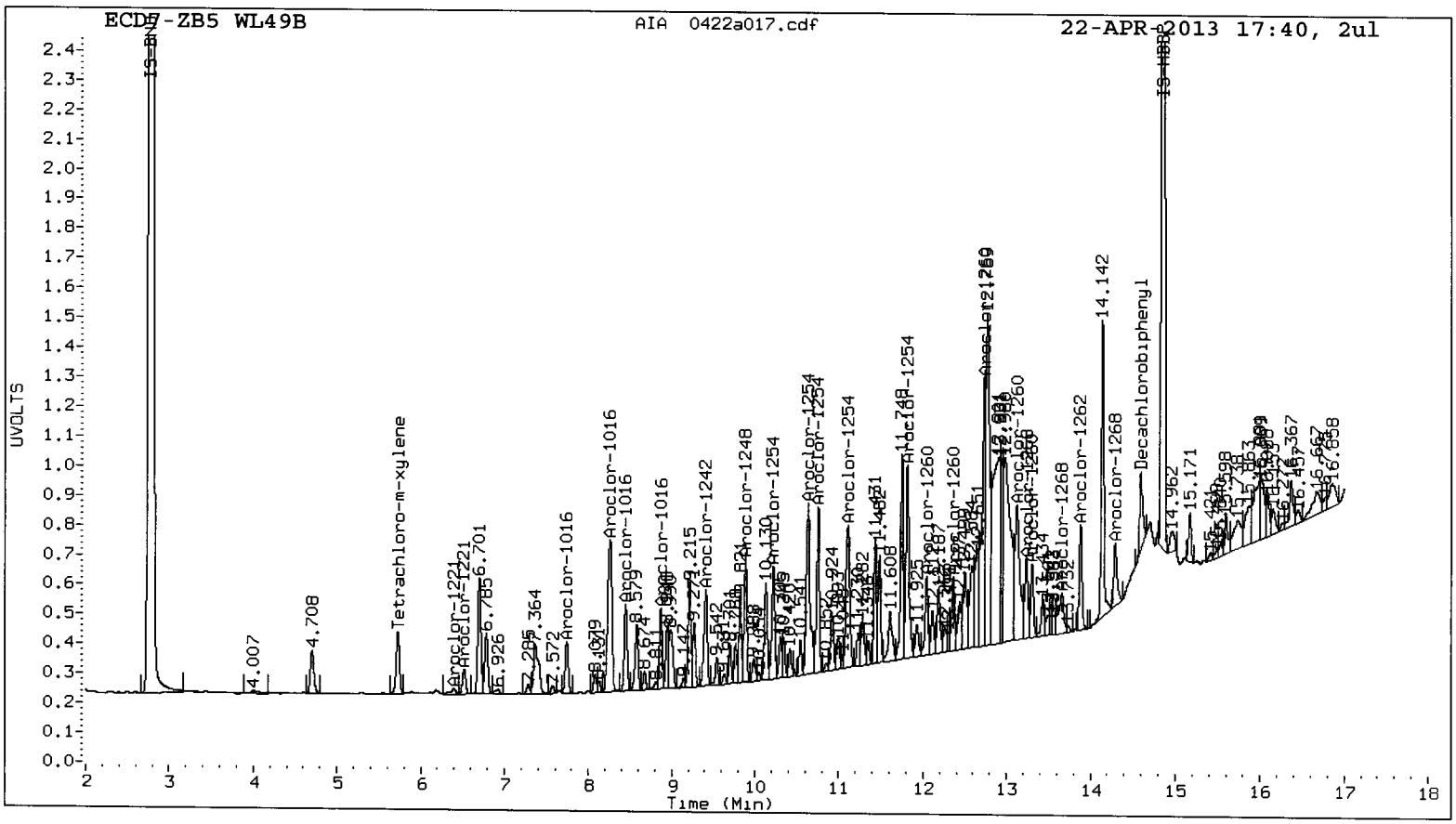
Time (Min)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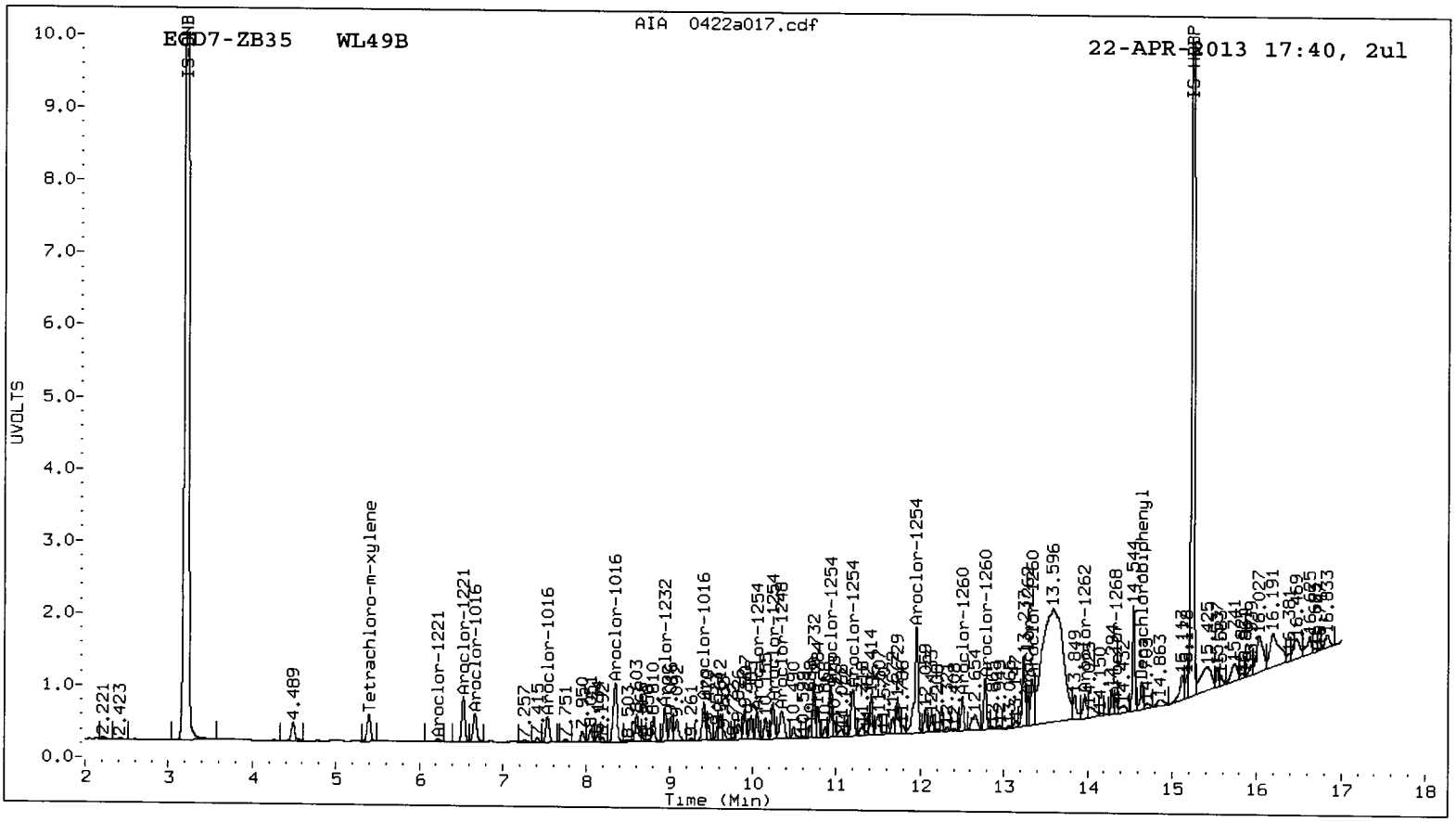
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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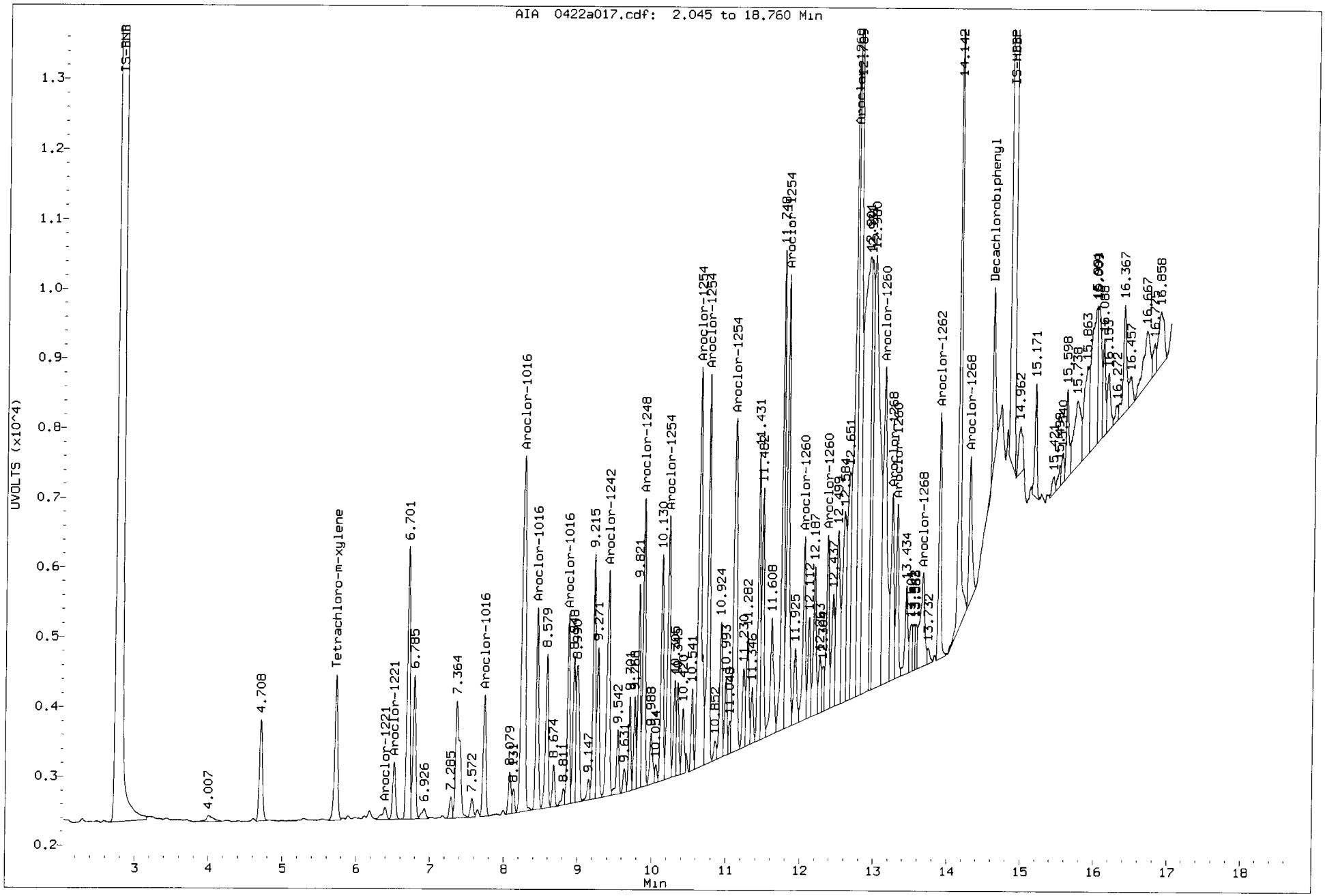
22-APR-2013 17:40, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Data File: /chem2/ecd7.i/20130416.b/0422-1.b/0422a017.d/0422a017.cdf
Injection Date: 22-APR-2013 17:40
Instrument: ecd7.i
Client Sample ID: IM-SW-01-20130410-W



Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a020.d
Data file 2: 20130416.b/0422-2.b/0422a020.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 22-APR-2013 18:46
Report Date: 04/23/2013 10:34
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.727	0.001	1908428	5.394	0.001	2636466	22.3	21.0	5.7	Tetrachloro-m-xylene
14.592	0.000	1464636	14.640	-0.001	1656525	18.5	22.7	20.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	55.6	52.5
Decachlorobiphenyl	46.2	56.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	6896105	23.3
Hexabromobiphenyl	4375297	5204261	18.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9348953	9.7
Hexabromobiphenyl	6077527	6378531	5.0

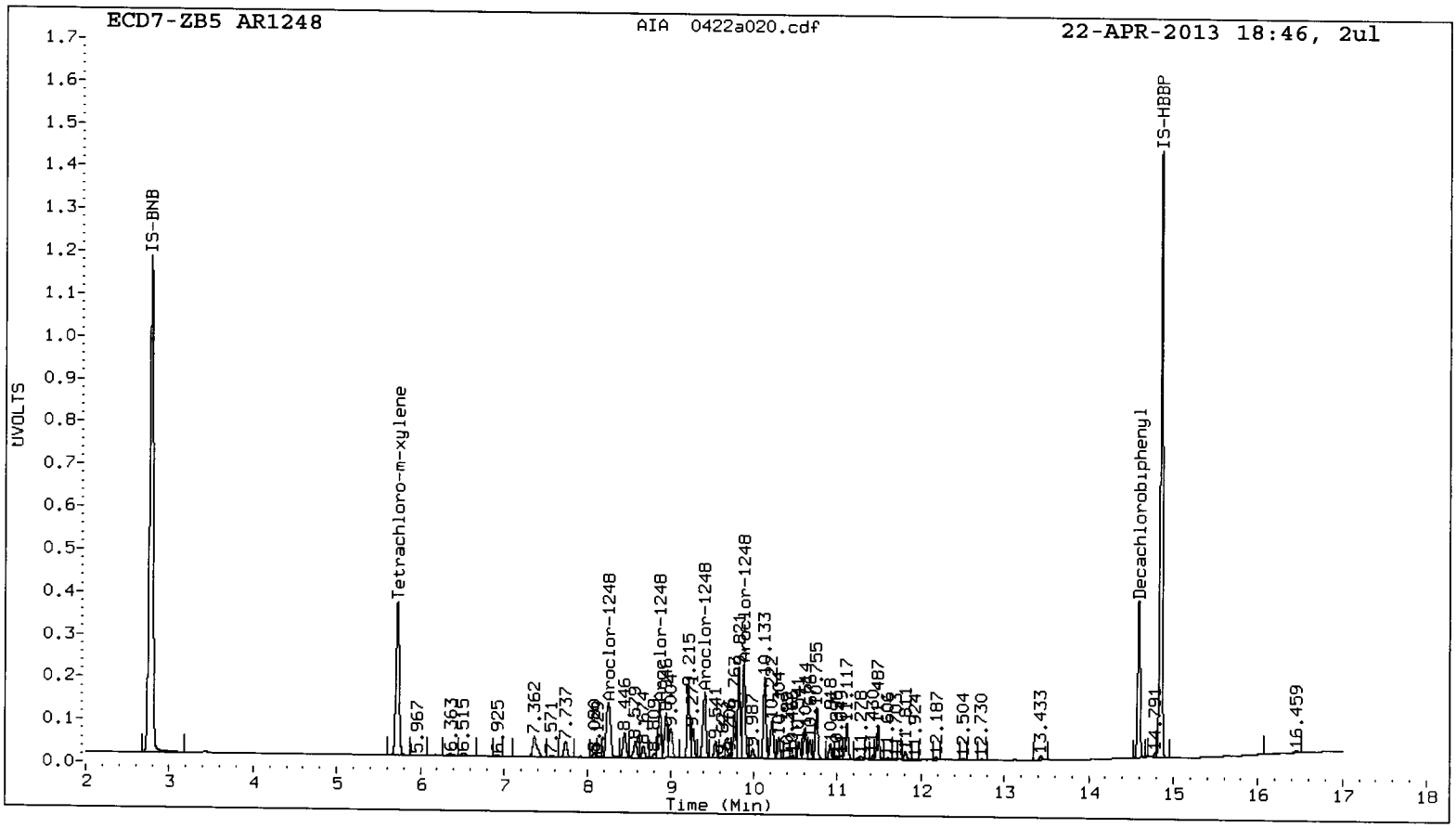
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.250	0.000	929105	247.2	1	7.530	0.000	472265	247.2
Aroclor-1248	2	8.871	0.000	592691	247.9	2	8.341	0.000	1224957	249.3
Aroclor-1248	3	9.411	0.000	813463	244.8	3	8.942	0.000	879343	250.9
Aroclor-1248	4	9.880	0.000	1032473	233.3	4	10.352	0.000	1153913	242.4
Total Col1Ave (4 peaks):					243.3	Total Col2Ave (4 peaks):				247.5 RPD = 2
Corrected Ave (3 peaks):					241.8	Corrected Ave (3 peaks):				246.3 RPD = 2

Total PCB Area Col1 (5.825 - 14.491) = 12239340 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 16052546 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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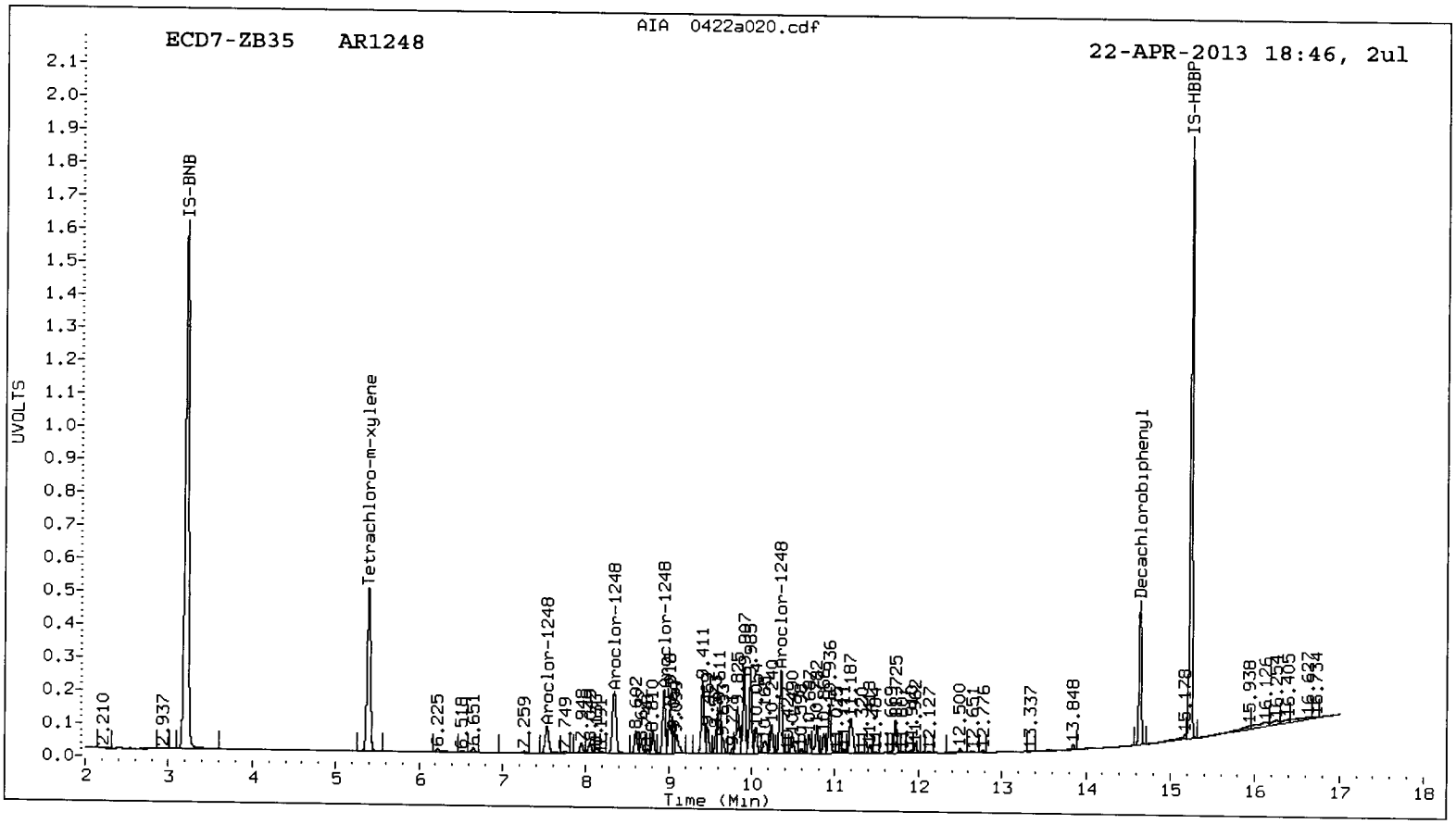
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
uVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
uVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0422-1.b/0422a021.d
Data file 2: 20130416.b/0422-2.b/0422a021.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 22-APR-2013 19:08
Report Date: 04/23/2013 10:34
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.725	0.000	1829018	5.393	0.000	2478453	20.5	19.3	6.1	Tetrachloro-m-xylene
14.591	0.000	1418656	14.640	0.000	1609118	16.8	21.0	22.1	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	51.2	48.2
Decachlorobiphenyl	42.1	52.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7181593	28.4
Hexabromobiphenyl	4375297	5529473	26.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9586496	12.4
Hexabromobiphenyl	6077527	6676451	9.9

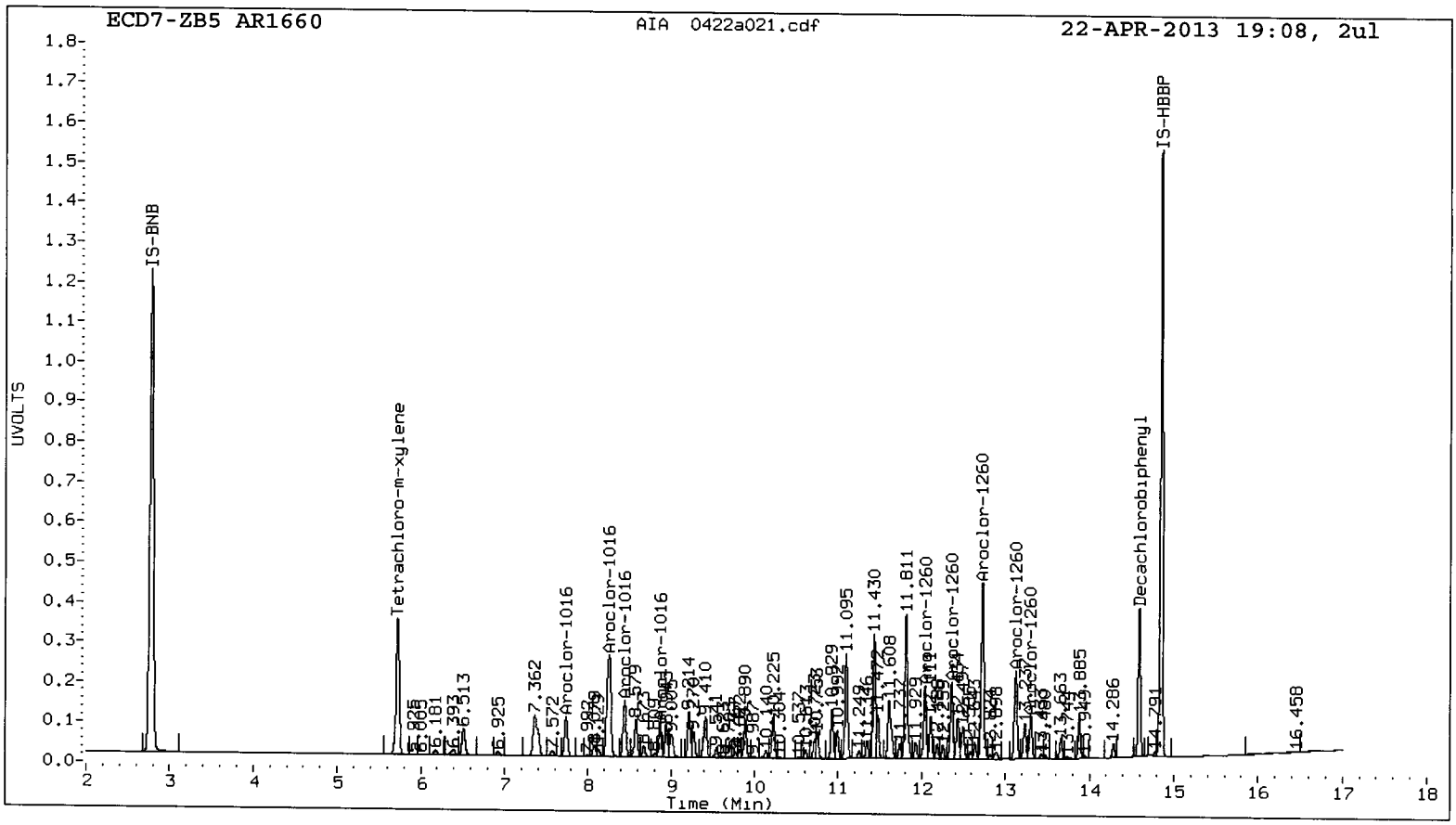
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.736	0.000	516951	238.3	1	6.651	0.000	519390	232.5
Aroclor-1016	2	8.257	0.000	1805364	248.0	2	7.532	0.000	1126379	229.8
Aroclor-1016	3	8.443	0.000	693912	241.8	3	8.343	0.000	2233701	233.7
Aroclor-1016	4	8.870	0.000	396336	241.3	4	9.410	0.000	771014	256.4
Total Col1Ave (4 peaks):					242.4	Total Col2Ave (4 peaks):				238.1 RPD = 2
Corrected Ave (3 peaks):					240.5	Corrected Ave (3 peaks):				232.0 RPD = 4
Aroclor-1260	1	12.042	0.000	820293	241.3	1	11.962	0.000	1381263	247.9
Aroclor-1260	2	12.360	0.000	824782	242.1	2	12.506	0.000	1132098	259.2
Aroclor-1260	3	12.730	0.000	1999552	243.4	3	12.776	0.000	2267712	250.7
Aroclor-1260	4	13.126	0.000	1052646	247.6	4	13.336	0.000	1507307	251.9
Aroclor-1260	5	13.306	0.000	460988	226.9	NS	---			----
Total Col1Ave (5 peaks):					240.2	Total Col2Ave (4 peaks):				252.4 RPD = 5
Corrected Ave (4 peaks):					238.4	Corrected Ave (3 peaks):				250.2 RPD = 5

Total PCB Area Col1 (5.825 - 14.491) = 24803345 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.493 - 14.540) = 31075686 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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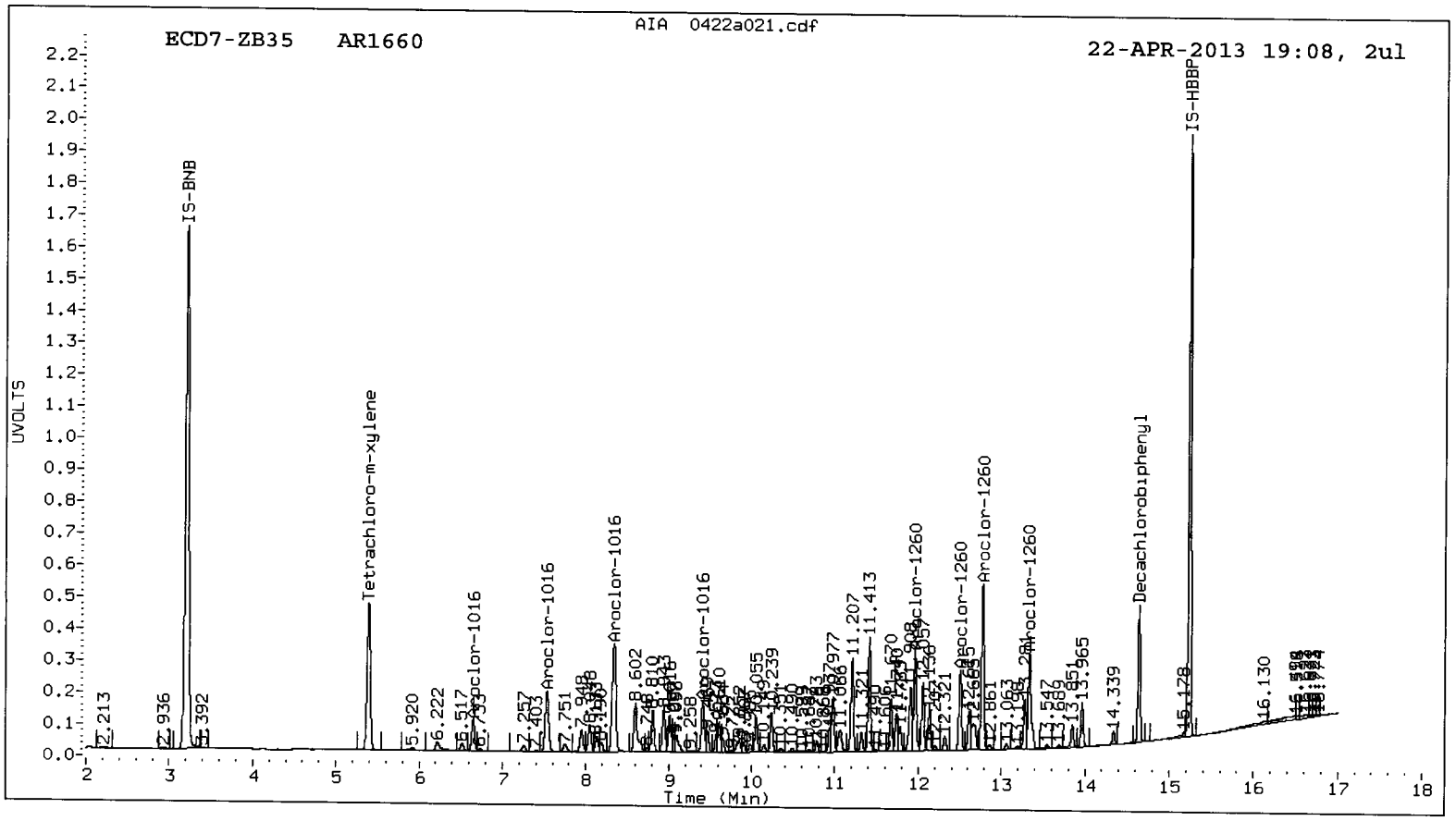
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 04/23/13 Analysis: PCB Analyst: M

Column 1 Serial No.: Z132434 Column Type: ZB5

Column 2 Serial No.: 175388 Column Type: ZB35

GC Method: PCB ICal Date: 04/16/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
2006-1	980-1,2,3,4,5,6	2009-2,3,4,5,6,7
~~2009~~ 04/24/13		

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	23-APR-2013 16:26	0423a001.d	1	RINSE
2	23-APR-2013 16:48	0423a002.d	1	DDT BD
3	23-APR-2013 17:10	0423a003.d	1	AR1254
4	23-APR-2013 17:32	0423a004.d	1	AR1660
5	23-APR-2013 17:54	0423a005.d	1	WL49MBS1
6	23-APR-2013 18:16	0423a006.d	1	WL49LCSS1
7	23-APR-2013 18:38	0423a007.d	1	WL49QLS
8	23-APR-2013 18:59	0423a008.d	1	WL49F
9	23-APR-2013 19:21	0423a009.d	1	WL49G
10	23-APR-2013 19:43	0423a010.d	1	WL49GMS
11	23-APR-2013 20:05	0423a011.d	1	WL49GMSD
12	23-APR-2013 20:27	0423a012.d	1	WL67A
13	23-APR-2013 20:49	0423a013.d	1	WL67B
14	23-APR-2013 21:11	0423a014.d	20	WL49F
15	23-APR-2013 21:33	0423a015.d	20	WL67A
16	23-APR-2013 21:55	0423a016.d	20	WL67B
17	23-APR-2013 22:17	0423a017.d	1	WK62MBS1
18	23-APR-2013 22:39	0423a018.d	1	WK62A
19	23-APR-2013 23:01	0423a019.d	1	AR1248
20	23-APR-2013 23:23	0423a020.d	1	AR1660

04/24/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130416.b/0423-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd7.i Date: 23-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1626	0423a001.d		RINSE	1	NO MANUAL INTEGRATION
1648	0423a002.d		DDT BD	1	NO MANUAL INTEGRATION
1710	0423a003.d		AR1254	1	NO MANUAL INTEGRATION
1732	0423a004.d		AR1660	1	NO MANUAL INTEGRATION
1754	0423a005.d		WL49MBS1	1	NO MANUAL INTEGRATION
1816	0423a006.d		WL49LCSS1	1	NO MANUAL INTEGRATION
1838	0423a007.d		WL49QLS	1	NO MANUAL INTEGRATION
1859	0423a008.d		WL49F	1	NO MANUAL INTEGRATION
1921	0423a009.d		WL49G	1	NO MANUAL INTEGRATION
1943	0423a010.d		WL49GMS	1	NO MANUAL INTEGRATION
2005	0423a011.d		WL49GMSD	1	NO MANUAL INTEGRATION
2027	0423a012.d		WL67A	1	NO MANUAL INTEGRATION
2049	0423a013.d		WL67B	1	NO MANUAL INTEGRATION
2111	0423a014.d		WL49F	20	NO MANUAL INTEGRATION
2133	0423a015.d		WL67A	20	NO MANUAL INTEGRATION
2155	0423a016.d		WL67B	20	NO MANUAL INTEGRATION
2217	0423a017.d	WK62MBS1	WK62MBS1	1	NO MANUAL INTEGRATION
2239	0423a018.d	WK62A	LOD1	1	NO MANUAL INTEGRATION
2301	0423a019.d		AR1248	1	NO MANUAL INTEGRATION
2323	0423a020.d		AR1660	1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a003.d
Data file 2: 20130416.b/0423-2.b/0423a003.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 23-APR-2013 17:10
Report Date: 04/24/2013 09:06
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.720	-0.009	1933493	5.387	-0.007	2660641	20.3	19.3	4.7	Tetrachloro-m-xylene
14.591	-0.001	1541036	14.640	0.001	1702081	16.8	20.8	21.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.6	48.3
Decachlorobiphenyl	42.0	51.9

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7676793	37.3
Hexabromobiphenyl	4375297	6025884	37.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10259981	20.3
Hexabromobiphenyl	6077527	7152297	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

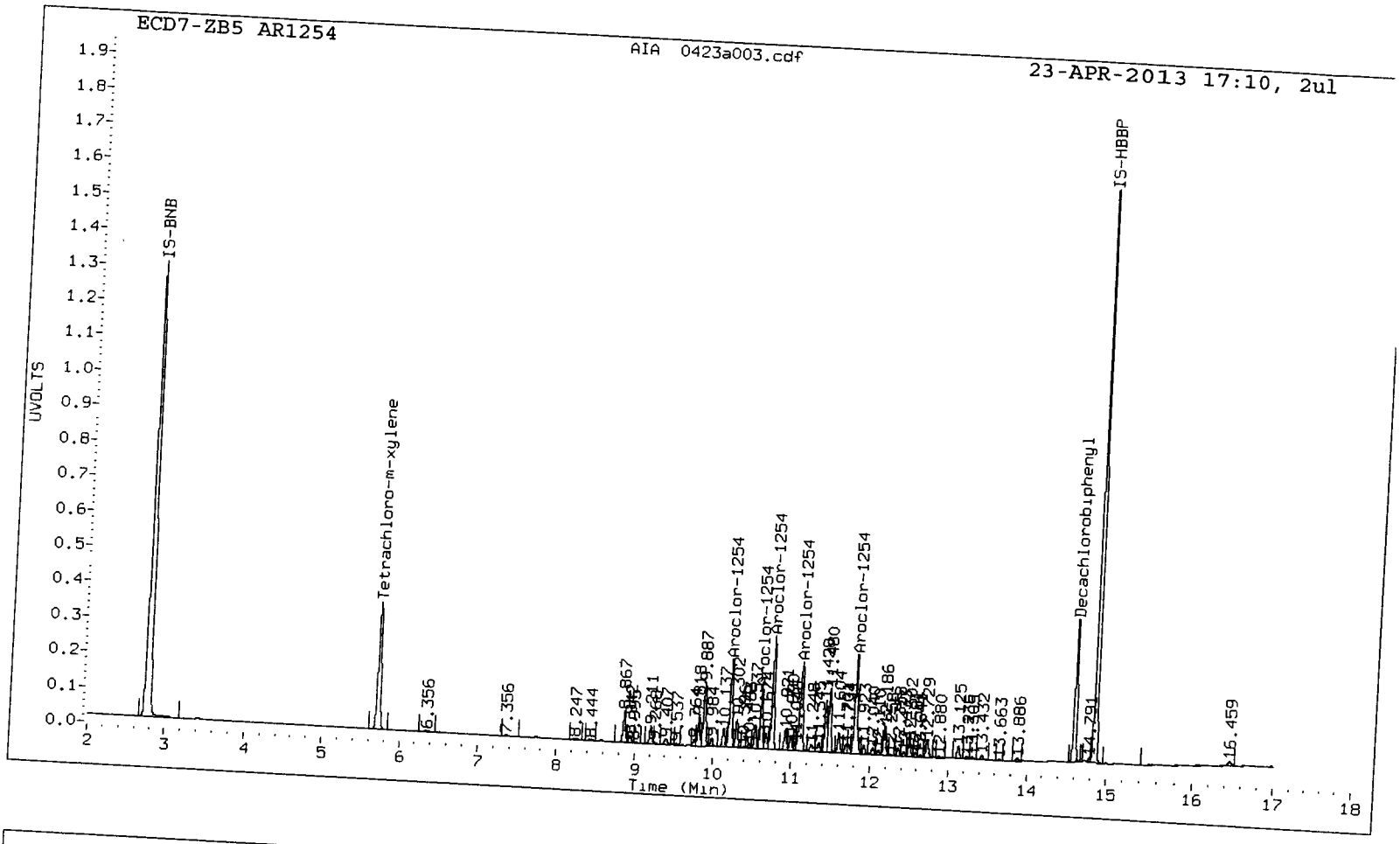
WL 19 01720

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	10.220	0.000	1163885	254.4	1	10.052	0.000	830566	251.2
Aroclor-1254	2	10.610	0.000	703818	254.6	2	10.237	0.000	1043253	254.8
Aroclor-1254	3	10.752	0.000	1383395	253.5	3	10.933	0.000	1691321	253.2
Aroclor-1254	4	11.111	0.000	1420025	244.8	4	11.187	0.000	1706504	257.3
Aroclor-1254	5	11.809	0.000	1347369	246.1	5	11.959	0.000	1215036	246.6
Total Col1Ave (5 peaks):					250.7	Total Col2Ave (5 peaks):				252.6 RPD = 1
Corrected Ave (4 peaks):					249.7	Corrected Ave (4 peaks):				251.5 RPD = 1

Total PCB Area Col1 (5.829 - 14.492) = 13656209 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 16812234 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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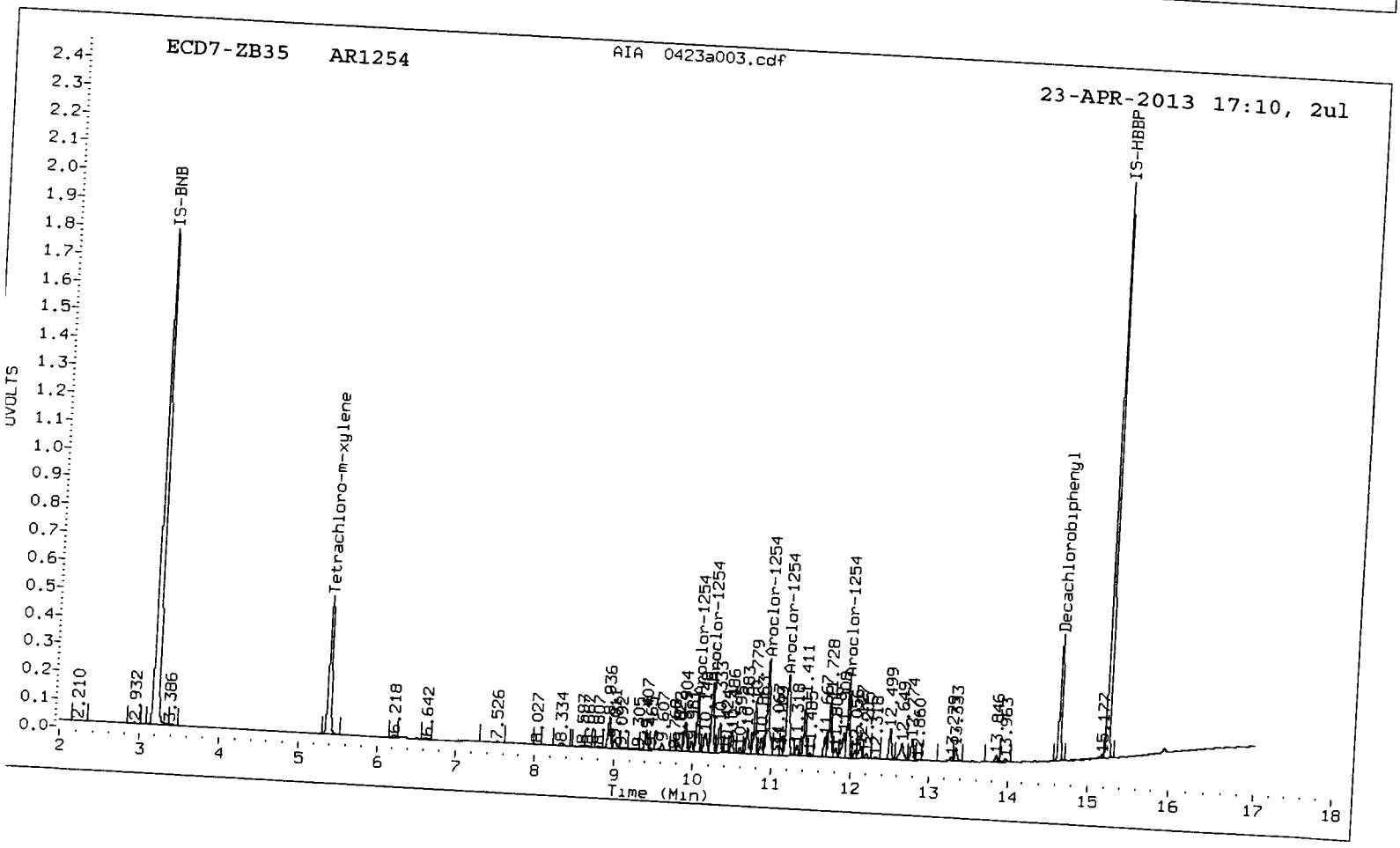
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
IS-HBBP
Decachlorobiphenyl
6.356
7.356
16.459
Time (Min)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UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
IS-HBBP
Decachlorobiphenyl
6.218
6.642
7.526
16.122
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a004.d
Data file 2: 20130416.b/0423-2.b/0423a004.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 23-APR-2013 17:32
Report Date: 04/24/2013 09:06
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.724	-0.005	1822855	5.392	-0.003	2495727	20.6	19.4	6.1	Tetrachloro-m-xylene
14.591	-0.001	1474622	14.639	0.000	1635720	17.0	21.1	21.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.4	48.4
Decachlorobiphenyl	42.5	52.7

JK 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7130069	27.5
Hexabromobiphenyl	4375297	5697247	30.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9610207	12.7
Hexabromobiphenyl	6077527	6765963	11.3

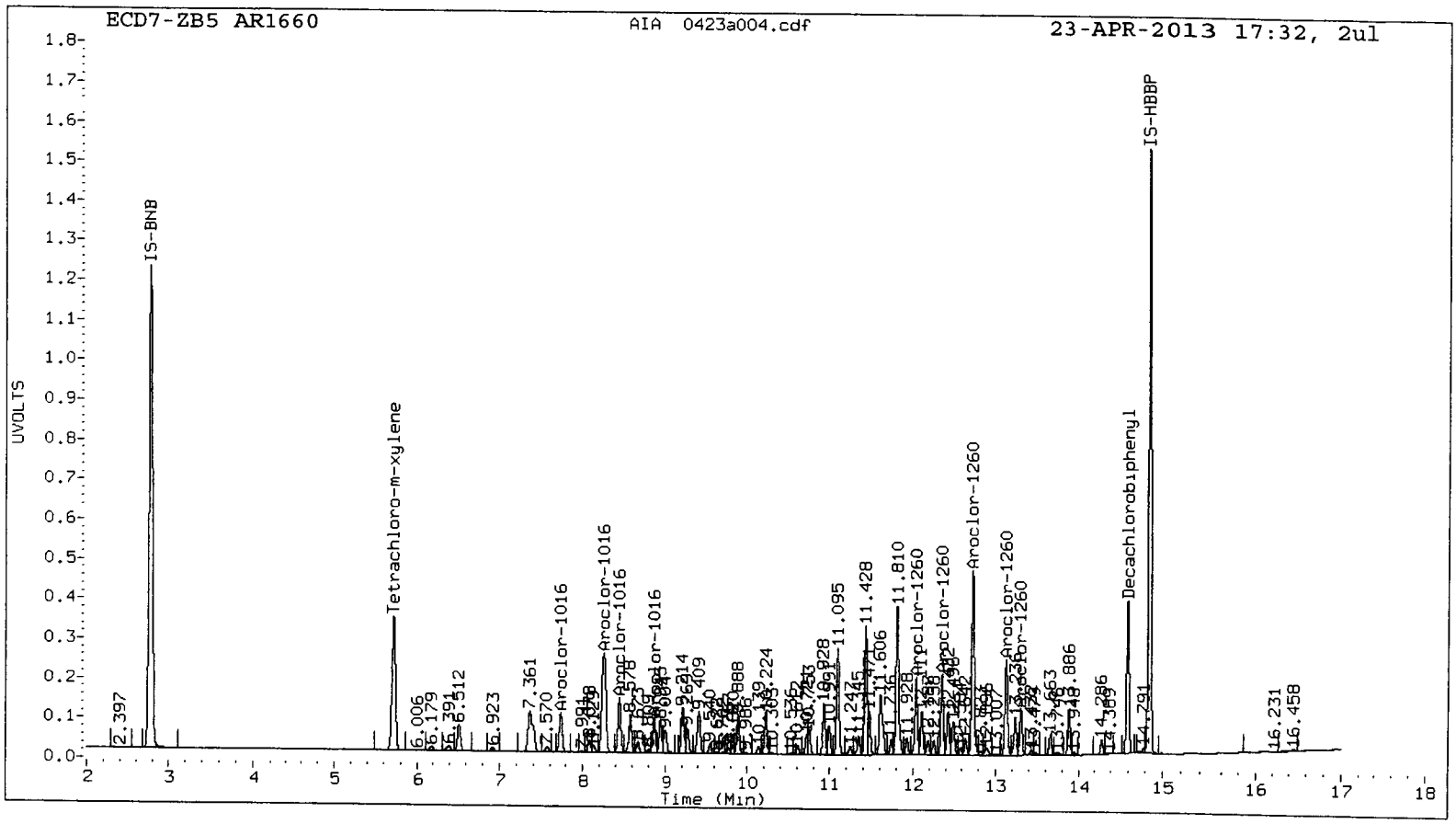
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.735	-0.005	515954	239.6	1	6.650	-0.002	524696	234.3
Aroclor-1016	2	8.255	-0.005	1793497	248.2	2	7.530	-0.001	1135460	231.0
Aroclor-1016	3	8.443	-0.003	691532	242.7	3	8.341	-0.001	2240999	233.9
Aroclor-1016	4	8.870	-0.004	395439	242.5	4	9.409	-0.001	780905	259.1
Total Col1Ave (4 peaks):					243.2	Total Col2Ave (4 peaks):				239.6 RPD = 2
Corrected Ave (3 peaks):					241.6	Corrected Ave (3 peaks):				233.1 RPD = 4
Aroclor-1260	1	12.042	-0.002	853029	243.5	1	11.960	0.000	1400561	248.0
Aroclor-1260	2	12.359	-0.002	867910	247.3	2	12.504	-0.001	1143064	258.3
Aroclor-1260	3	12.729	-0.002	2116980	250.1	3	12.773	-0.001	2286134	249.4
Aroclor-1260	4	13.127	0.000	1113496	254.2	4	13.335	0.002	1556766	256.8
Aroclor-1260	5	13.306	-0.002	488135	233.2	NS	---			----
Total Col1Ave (5 peaks):					245.6	Total Col2Ave (4 peaks):				253.1 RPD = 3
Corrected Ave (4 peaks):					243.5	Corrected Ave (3 peaks):				251.4 RPD = 3

Total PCB Area Col1 (5.829 - 14.492) = 25575057 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 31791722 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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23-APR-2013 17:32, 2ul
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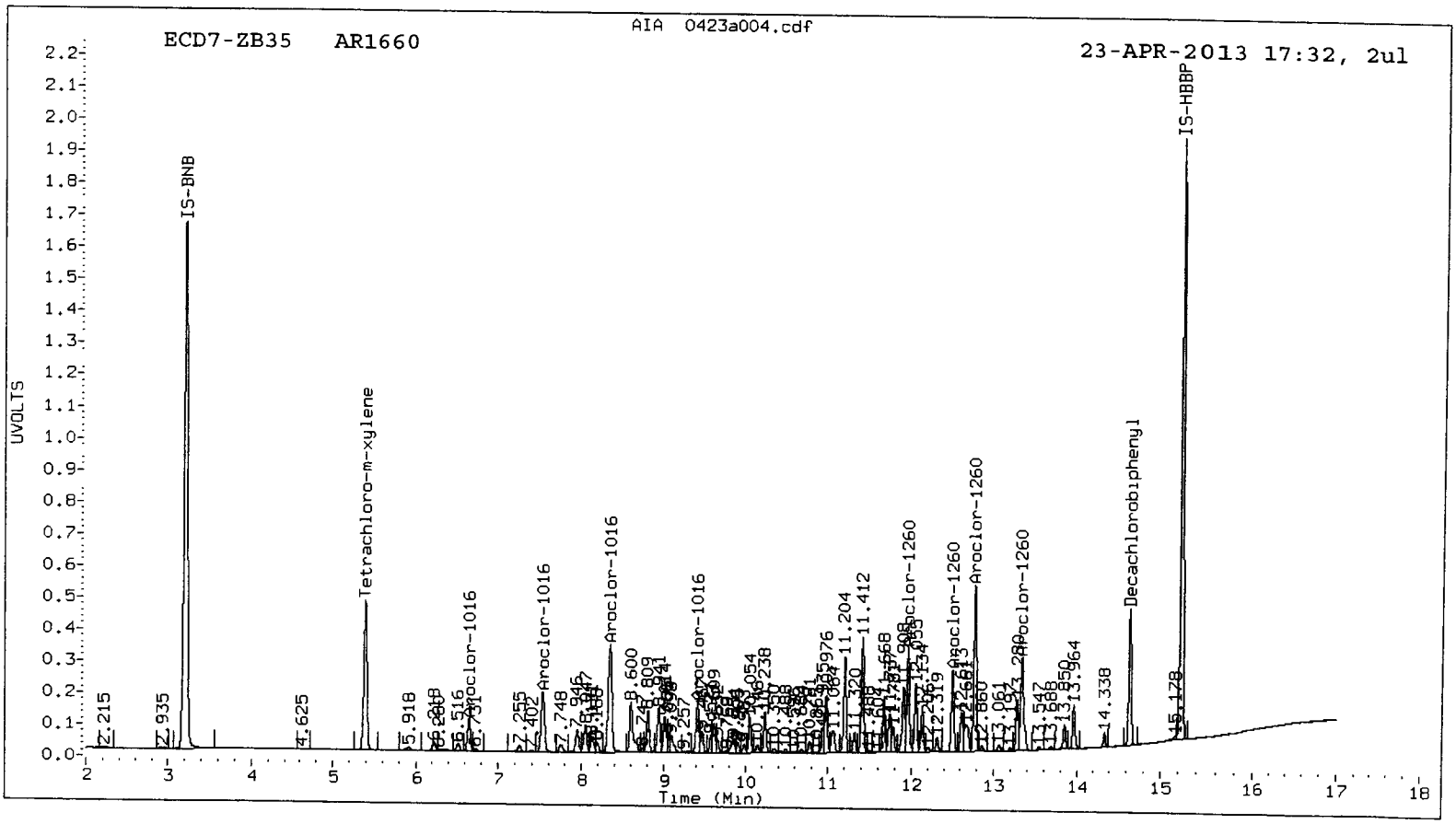
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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23-APR-2013 17:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a005.d
Data file 2: 20130416.b/0423-2.b/0423a005.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49MBS1
Client ID: WL49MBS1
Injection Date: 23-APR-2013 17:54
Report Date: 04/24/2013 09:06
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.725	-0.004	2805565	5.391	-0.003	3799706	29.8	27.5	7.8	Tetrachloro-m-xylene
14.591	-0.001	2877173	14.640	0.001	3146746	28.9	35.7	21.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	74.4	68.8
Decachlorobiphenyl	72.2	89.3

R 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7579277	35.6
Hexabromobiphenyl	4375297	6537300	49.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10284318	20.6
Hexabromobiphenyl	6077527	7683630	26.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

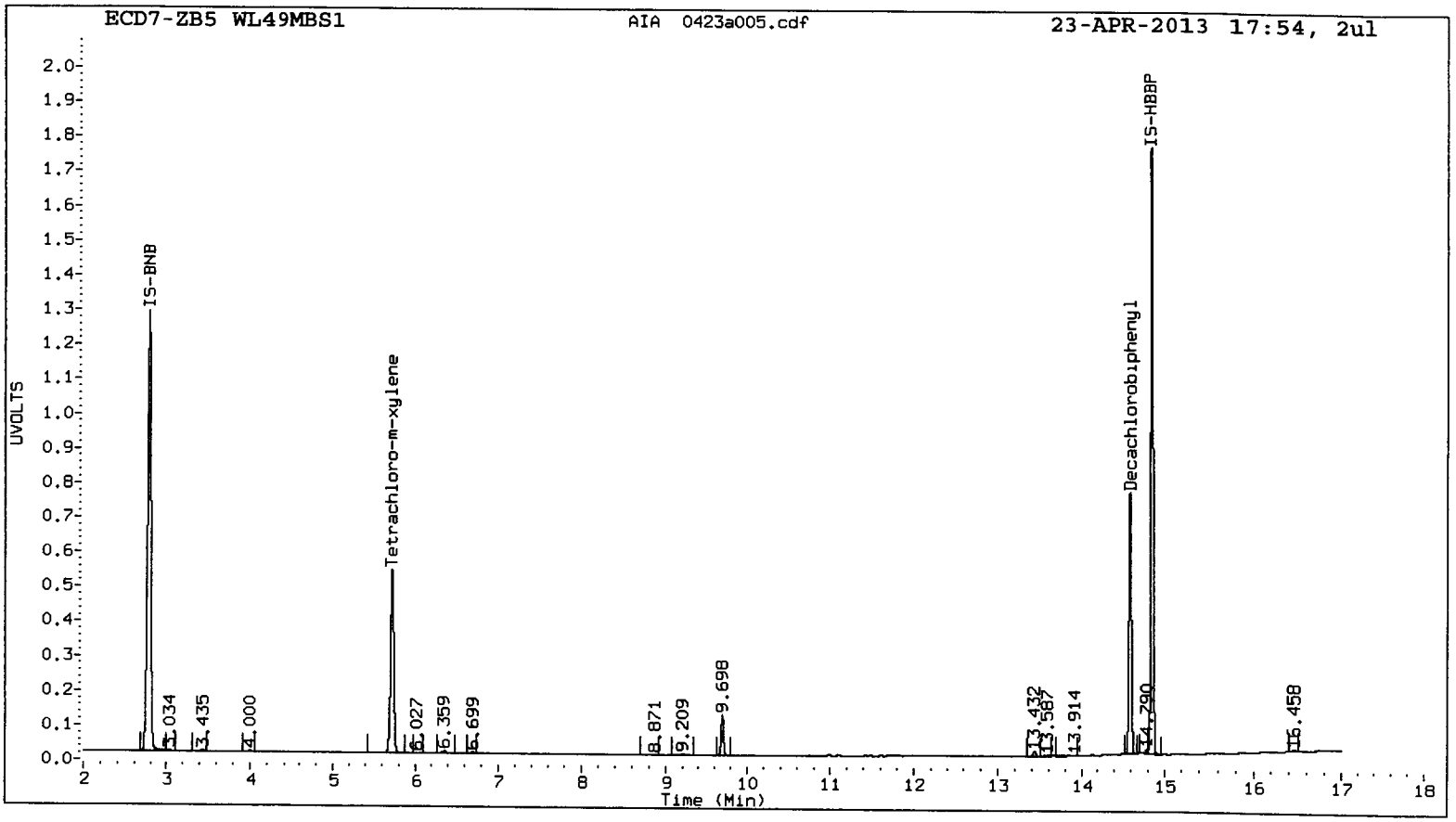
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	6.636	-0.015	14626	6.1
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	8.336	-0.006	17707	1.7
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	6.221	-0.006	54987	34.7
Aroclor-1221	2	---			0.0	2	6.523	-0.003	21103	20.9
Aroclor-1221	3	---			0.0	3	6.636	-0.025	14626	5.0
Aroclor-1221	NS	---			----	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave:	20.2		
Aroclor-1232	1	---			0.0	1	6.636	-0.023	14626	7.2
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	8.336	-0.015	17707	4.4
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	6.636	-0.002	14626	7.7
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	8.336	0.003	17707	2.3
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	---			0.0	1	10.058	0.006	10858	3.3
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	11.195	0.008	10491	1.6
Aroclor-1254	5	---			0.0	5	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	13.237	-0.054	12283	2.4
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	14.000	0.026	30881	6.7
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	13.237	-0.054	12283	0.9
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	13.680	-0.018	43594	4.2
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.829 - 14.492) = 642077 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 792139 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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23-APR-2013 17:54, 2ul
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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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4.435
5.000
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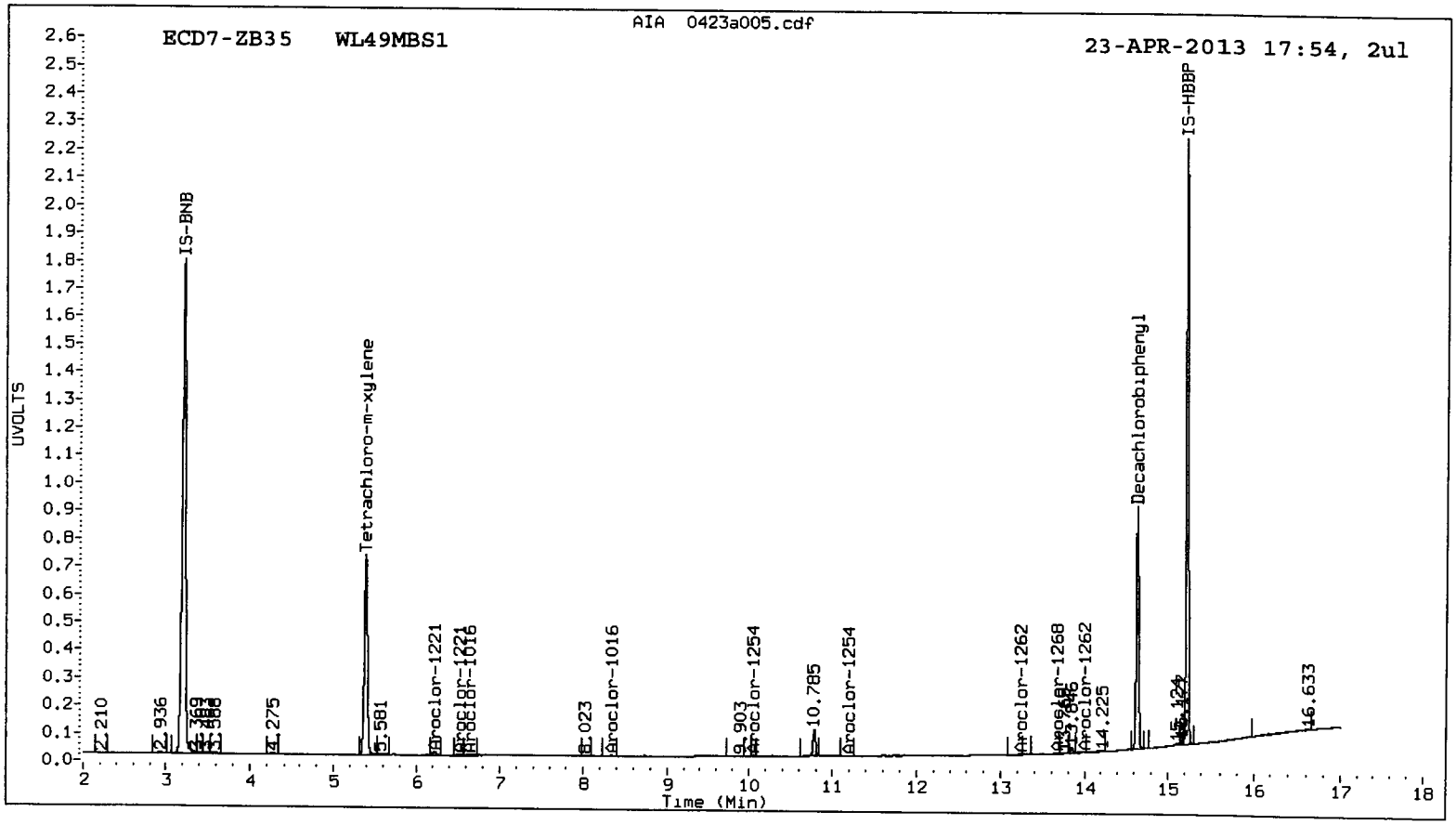
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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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2.936
3.275
5.581
Aroclor-1221
Aroclor-1016
8.023
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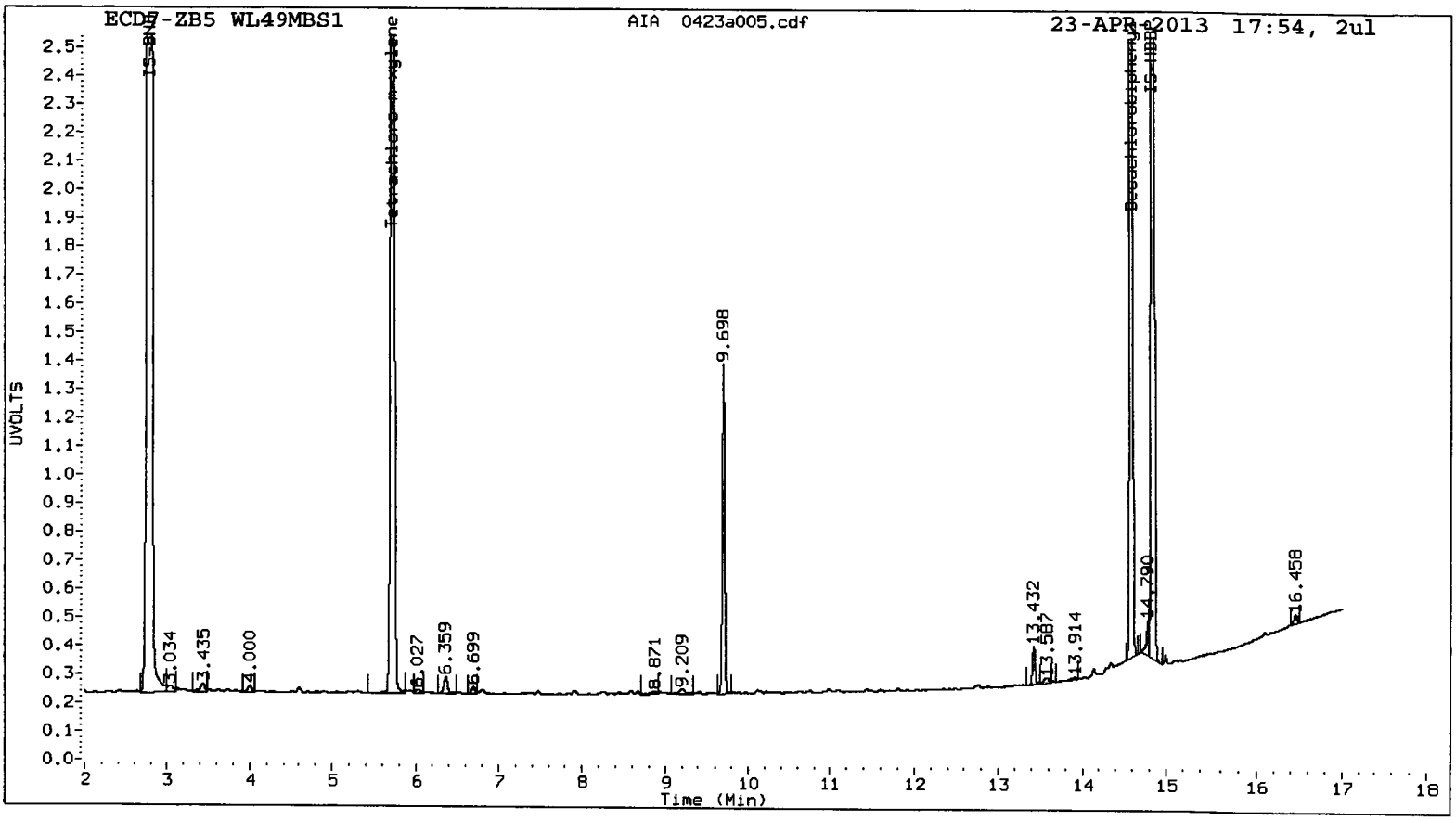
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UVOLTS
Time (Min)
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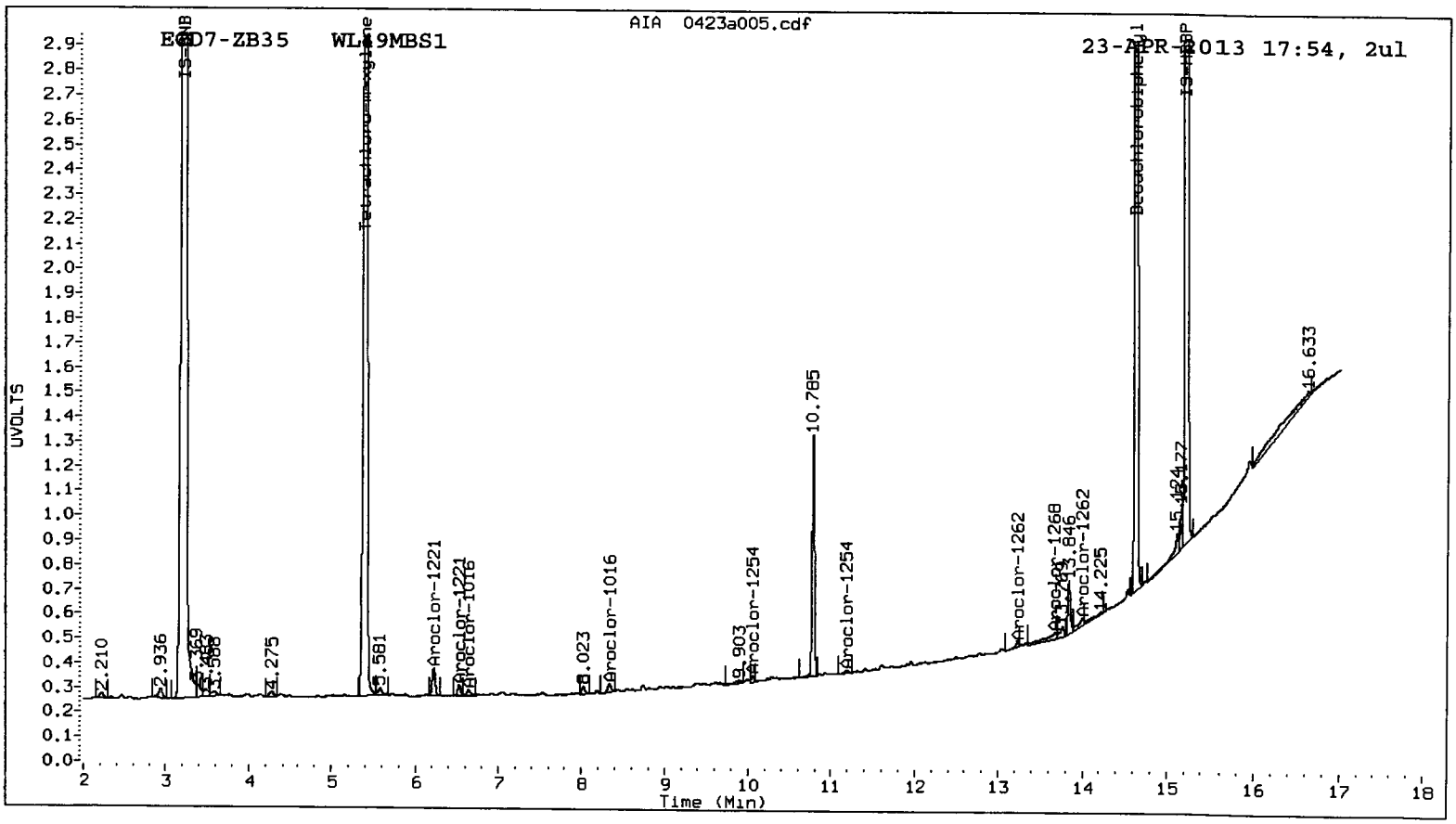
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AIA 0423a005.cdf
23-APR-2013 17:54, 2ul
UVOLTS
Time (Min)
10.785
16.633

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a006.d
Data file 2: 20130416.b/0423-2.b/0423a006.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49LCSS1
Client ID: WL49LCSS1
Injection Date: 23-APR-2013 18:16
Report Date: 04/24/2013 09:06
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.724	-0.005	2905140	5.391	-0.003	3887768	31.4	28.5	9.6	Tetrachloro-m-xylene
14.591	-0.001	3014311	14.639	0.001	3293065	30.6	38.0	21.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	78.4	71.2
Decachlorobiphenyl	76.5	94.9

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7448891	33.2
Hexabromobiphenyl	4375297	6465787	47.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10165748	19.2
Hexabromobiphenyl	6077527	7566852	24.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

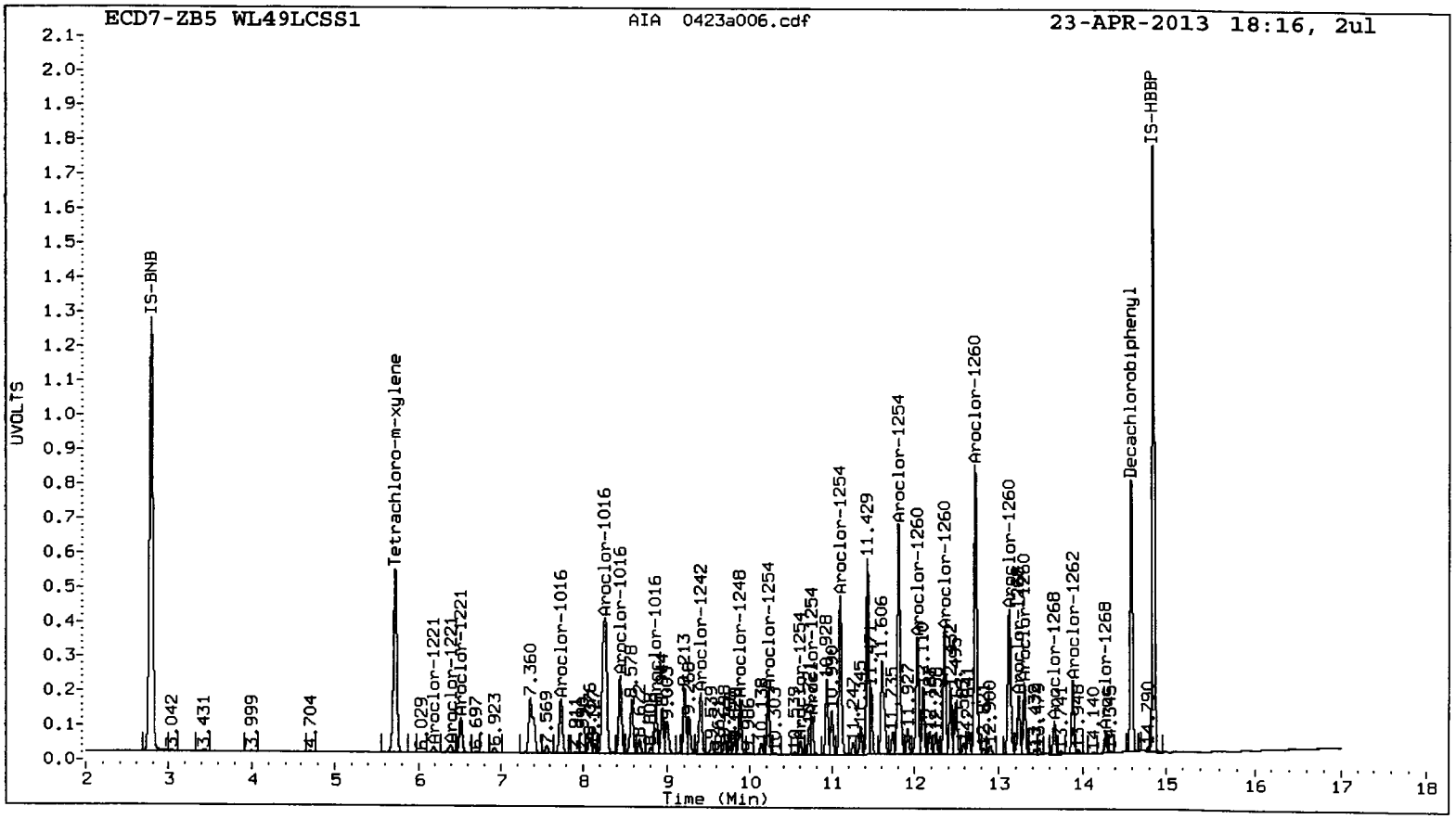
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.734	-0.005	808202	359.2	1	6.649	-0.003	747374	315.5
Aroclor-1016	2	8.256	-0.004	2879617	381.4	2	7.529	-0.003	1687550	324.6
Aroclor-1016	3	8.441	-0.005	1123689	377.5	3	8.341	-0.001	3543840	349.7
Aroclor-1016	4	8.868	-0.005	647595	380.1	4	9.408	-0.001	1212046	380.1
Total Col1Ave (4 peaks):					374.6	Total Col2Ave (4 peaks):				342.5 RPD = 9
Corrected Ave (3 peaks):					372.3	Corrected Ave (3 peaks):				329.9 RPD = 12
Aroclor-1221	1	6.179	0.005	96050	105.9	1	6.218	-0.009	202575	129.1
Aroclor-1221	2	6.390	0.006	145001	211.6	2	6.515	-0.010	189387	189.4
Aroclor-1221	3	6.512	0.006	552296	240.3	3	6.649	-0.012	747374	258.7
Aroclor-1221	NS	---			----	4	7.529	-0.025	1687550	1700.6
Total Col1Ave (3 peaks):					185.9	Total Col2Ave (4 peaks):				569.4 RPD = 102*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				192.4
Aroclor-1232	1	6.512	0.006	552296	362.9	1	6.649	-0.011	747374	370.2
Aroclor-1232	2	7.734	0.005	808202	911.9	2	7.529	-0.013	1687550	757.2
Aroclor-1232	3	8.256	0.008	2879617	972.3	3	8.341	-0.010	3543840	883.2
Aroclor-1232	4	8.441	0.004	1123689	943.8	4	8.941	-0.010	1023162	783.2
Total Col1Ave (4 peaks):					797.7	Total Col2Ave (4 peaks):				698.4 RPD = 13
Corrected Ave (3 peaks):					739.5	Corrected Ave (3 peaks):				636.9 RPD = 15
Aroclor-1242	1	7.734	-0.003	808202	470.4	1	6.649	0.011	747374	395.7
Aroclor-1242	2	8.256	-0.001	2879617	496.8	2	7.529	0.008	1687550	447.7
Aroclor-1242	3	8.441	-0.003	1123689	491.4	3	8.341	0.008	3543840	475.4
Aroclor-1242	4	9.408	-0.003	915102	427.1	4	9.408	0.004	1212046	468.7
Total Col1Ave (4 peaks):					471.4	Total Col2Ave (4 peaks):				446.9 RPD = 5
Corrected Ave (3 peaks):					463.0	Corrected Ave (3 peaks):				437.4 RPD = 6
Aroclor-1248	1	8.256	0.007	2879617	709.4	1	7.529	0.001	1687550	812.5
Aroclor-1248	2	8.868	-0.003	647595	250.7	2	8.341	0.003	3543840	663.3
Aroclor-1248	3	9.408	-0.003	915102	255.0	3	8.941	-0.001	1023162	268.5
Aroclor-1248	4	9.888	0.006	710031	148.6	4	10.349	-0.001	85166	16.5
Total Col1Ave (4 peaks):					340.9	Total Col2Ave (4 peaks):				440.2 RPD = 25
Corrected Ave (3 peaks):					218.1	Corrected Ave (3 peaks):				316.1 RPD = 37
Aroclor-1254	1	10.223	0.003	753907	169.8	1	10.053	0.001	739688	225.8
Aroclor-1254	2	10.612	0.001	157689	58.8	2	10.238	0.001	839336	206.9
Aroclor-1254	3	10.751	-0.001	468325	88.4	3	10.936	0.003	458512	69.3
Aroclor-1254	4	11.094	-0.017	2047692	363.8	4	11.204	0.017	2217238	337.4
Aroclor-1254	5	11.809	0.000	3161359	595.0	5	11.959	0.000	2419078	495.6
Total Col1Ave (5 peaks):					255.2	Total Col2Ave (5 peaks):				267.0 RPD = 5
Corrected Ave (4 peaks):					170.2	Corrected Ave (4 peaks):				209.8 RPD = 21
Aroclor-1260	1	12.040	-0.003	1512815	380.5	1	11.959	0.000	2419078	383.1
Aroclor-1260	2	12.358	-0.003	1549830	389.1	2	12.504	0.000	1945635	393.1
Aroclor-1260	3	12.728	-0.003	3826601	398.3	3	12.773	-0.001	4063072	396.3
Aroclor-1260	4	13.125	-0.002	2021694	406.6	4	13.334	0.000	2709007	399.5
Aroclor-1260	5	13.304	-0.003	890603	374.9	NS	---			----
Total Col1Ave (5 peaks):					389.9	Total Col2Ave (4 peaks):				393.0 RPD = 1
Corrected Ave (4 peaks):					385.7	Corrected Ave (3 peaks):				390.8 RPD = 1
Aroclor-1262	1	12.358	0.001	1549830	329.9	1	12.504	-0.012	1945635	338.8
Aroclor-1262	2	12.728	-0.001	3826601	304.1	2	12.773	-0.013	4063072	306.9
Aroclor-1262	3	13.125	-0.002	2021694	497.8	3	13.280	-0.011	1146693	226.9
Aroclor-1262	4	13.304	0.000	890603	188.2	4	13.334	-0.015	2709007	326.8
Aroclor-1262	5	13.885	-0.002	860119	207.3	5	13.963	-0.012	1016027	222.8
Total Col1Ave (5 peaks):					305.5	Total Col2Ave (5 peaks):				284.4 RPD = 7
Corrected Ave (4 peaks):					257.4	Corrected Ave (4 peaks):				270.8 RPD = 5
Aroclor-1268	1	13.235	0.000	768380	56.6	1	13.280	-0.011	1146693	86.6

Aroclor-1268 2	13.304	0.002	890603	70.3	2	13.334	-0.018	2709007	215.6
Aroclor-1268 3	13.663	0.014	416503	38.8	3	13.688	-0.011	97310	9.6
Aroclor-1268 4	14.286	-0.001	252212	7.7	4	14.338	-0.010	291319	8.8
Total Col1Ave (4 peaks):			43.3		Total Col2Ave (4 peaks):			80.1	RPD = 60*
Corrected Ave (3 peaks):			34.4		Corrected Ave (3 peaks):			35.0	RPD = 2

Total PCB Area Col1 (5.829 - 14.492) = 43980463 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 51246672 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical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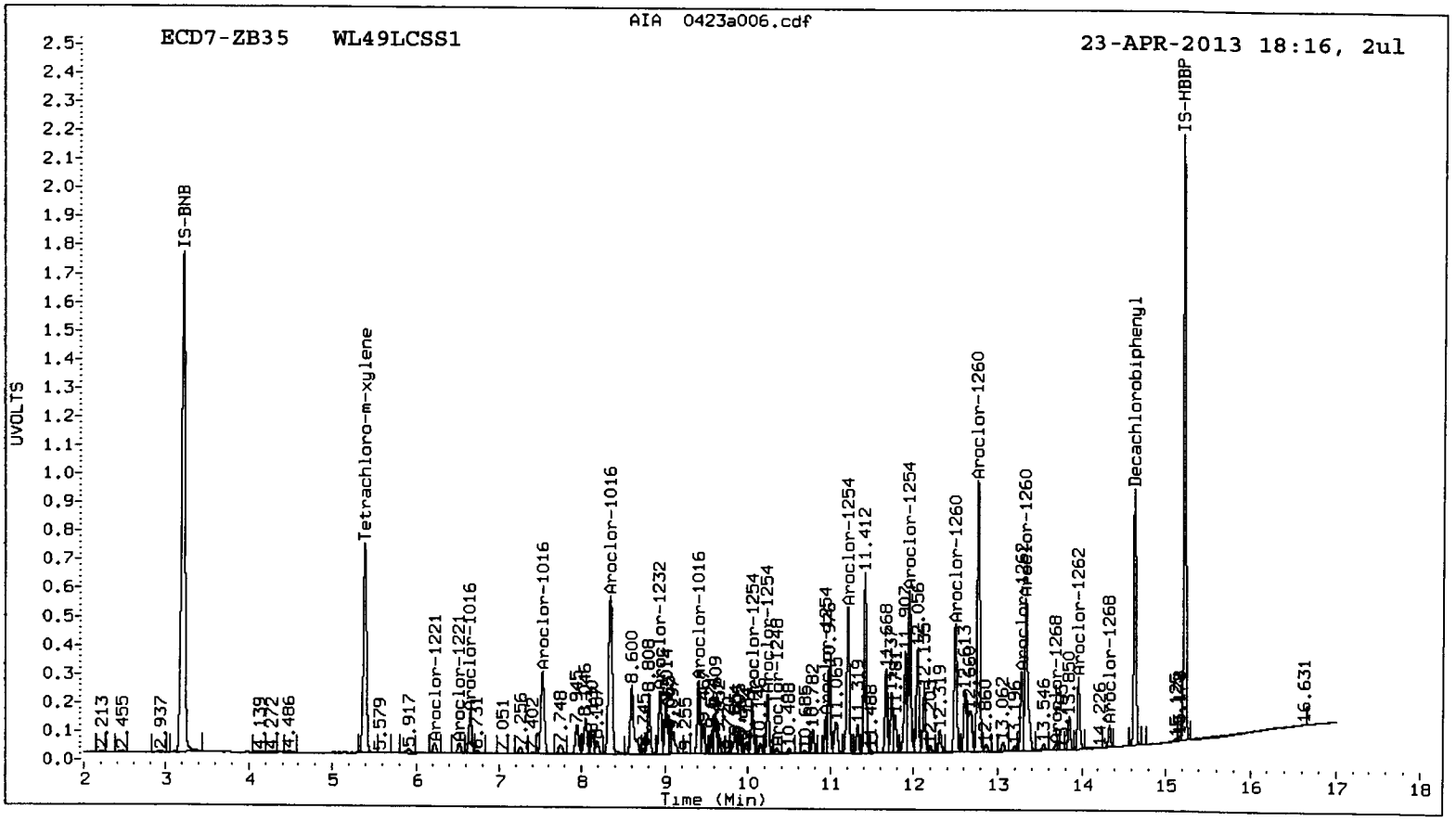
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
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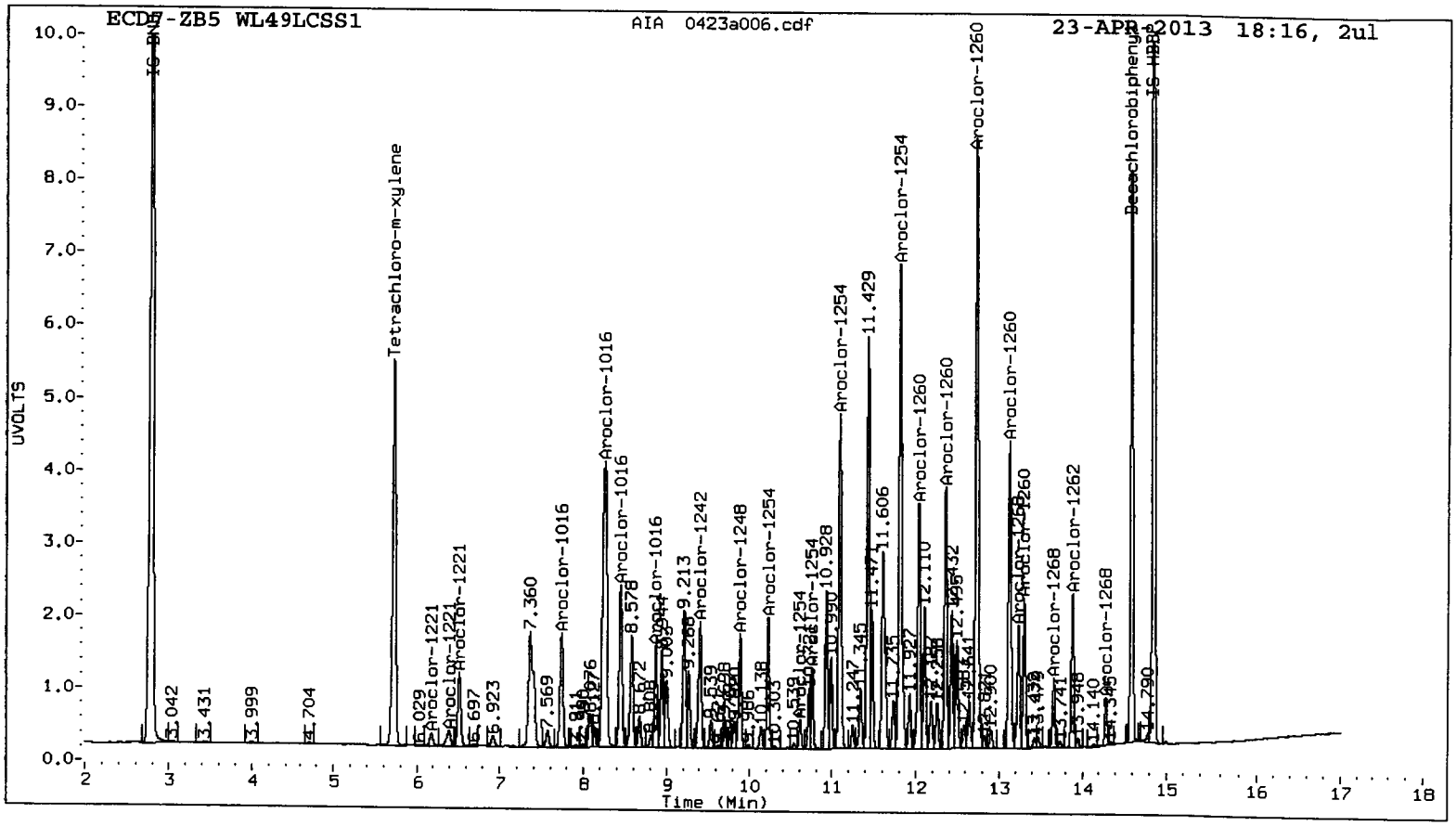
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Time (Min)
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Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
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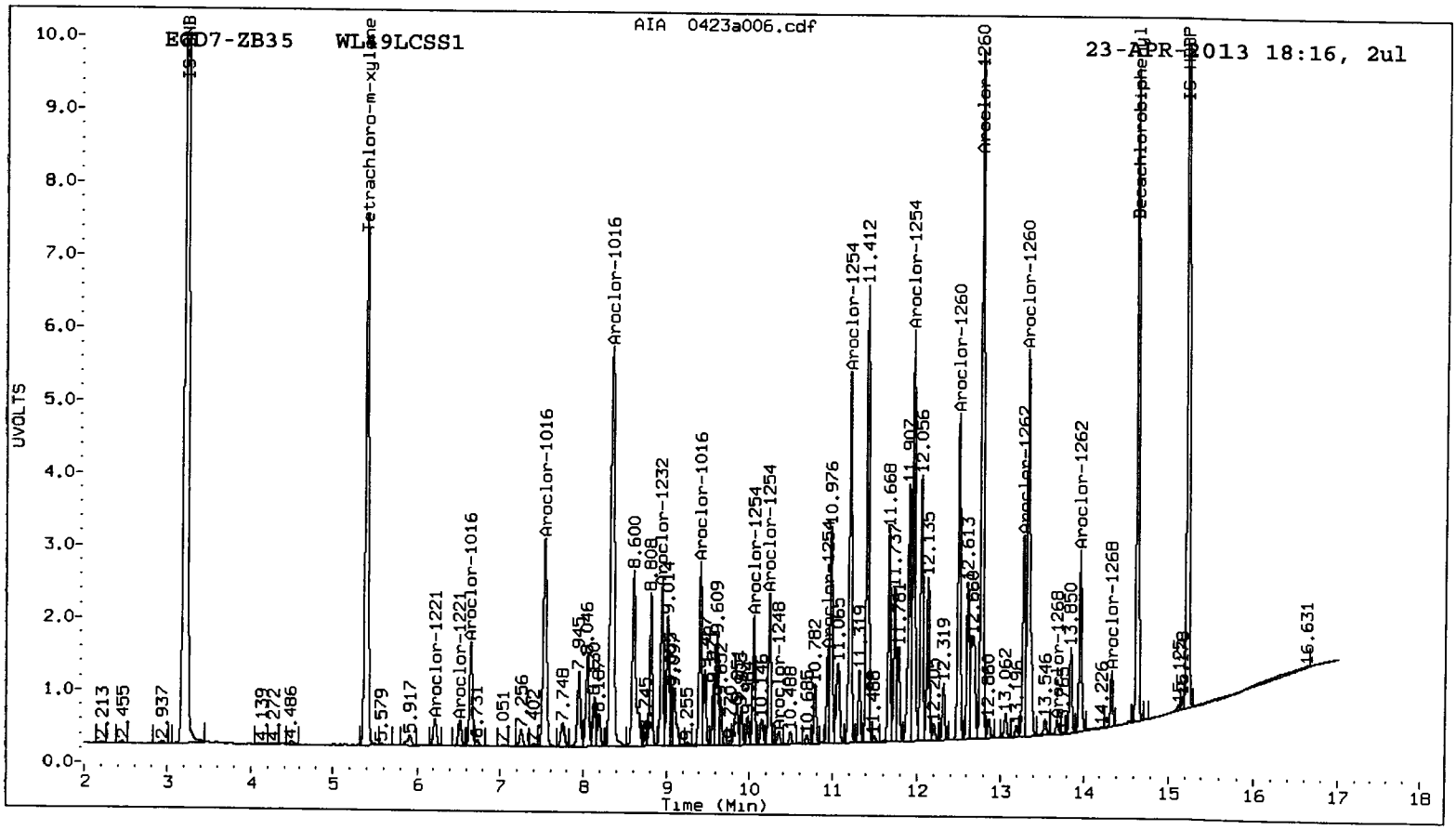
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Time (Min)
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Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a009.d
Data file 2: 20130416.b/0423-2.b/0423a009.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49G
Client ID: IM-CB-02-20130410-S
Injection Date: 23-APR-2013 19:21
Report Date: 04/24/2013 09:26
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.005	3161150	5.399	0.005	4278387	33.9	31.7	6.7	Tetrachloro-m-xylen
14.596	0.004	2432852	14.642	0.003	3050436	33.8	28.7	16.3	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	84.7	79.2
Decachlorobiphenyl	84.6	71.8

JK 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7500732	34.1
Hexabromobiphenyl	4375297	4716599	7.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10060256	18.0
Hexabromobiphenyl	6077527	9259857	52.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

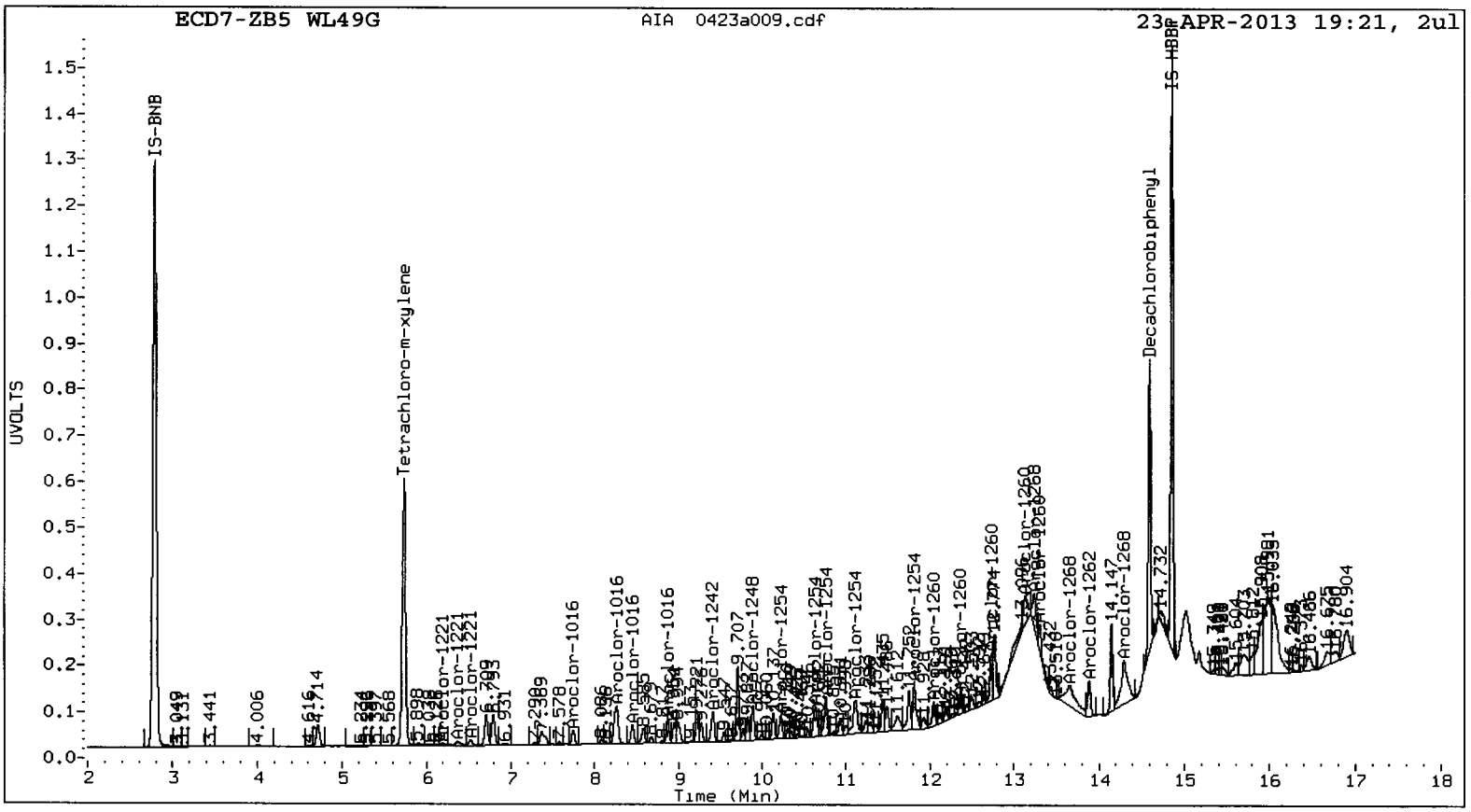
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.743	0.003	159329	70.3	1	6.674	0.023	534708	228.1
Aroclor-1016	2	8.267	0.007	590196	77.6	2	7.537	0.006	316935	61.6
Aroclor-1016	3	8.452	0.005	213628	71.3	3	8.348	0.006	778677	77.6
Aroclor-1016	4	8.876	0.003	247758	144.4	4	9.414	0.004	549471	174.1
Total Col1Ave (4 peaks):				90.9		Total Col2Ave (4 peaks):			135.4	RPD = 39
Corrected Ave (3 peaks):				73.1		Corrected Ave (3 peaks):			104.5	RPD = 35
Aroclor-1221	1	6.190	0.017	35159	38.5	1	6.229	0.002	84045	54.1
Aroclor-1221	2	6.371	-0.013	96747	140.2	2	6.530	0.005	521022	526.6
Aroclor-1221	3	6.522	0.015	77559	33.5	3	6.674	0.013	534708	187.0
Aroclor-1221	NS	---			----	4	7.537	-0.016	316935	322.7
Total Col1Ave (3 peaks):				70.7		Total Col2Ave (4 peaks):			272.6	RPD = 118*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			188.0	
Aroclor-1232	1	6.522	0.016	77559	50.6	1	6.674	0.015	534708	267.6
Aroclor-1232	2	7.743	0.014	159329	178.5	2	7.537	-0.005	316935	143.7
Aroclor-1232	3	8.267	0.018	590196	197.9	3	8.348	-0.004	778677	196.1
Aroclor-1232	4	8.452	0.015	213628	178.2	4	8.946	-0.004	413265	319.7
Total Col1Ave (4 peaks):				151.3		Total Col2Ave (4 peaks):			231.8	RPD = 42*
Corrected Ave (3 peaks):				135.8		Corrected Ave (3 peaks):			202.5	RPD = 39
Aroclor-1242	1	7.743	0.006	159329	92.1	1	6.674	0.036	534708	286.1
Aroclor-1242	2	8.267	0.009	590196	101.1	2	7.537	0.016	316935	85.0
Aroclor-1242	3	8.452	0.008	213628	92.8	3	8.348	0.015	778677	105.6
Aroclor-1242	4	9.415	0.004	348827	161.7	4	9.414	0.010	549471	214.7
Total Col1Ave (4 peaks):				111.9		Total Col2Ave (4 peaks):			172.8	RPD = 43*
Corrected Ave (3 peaks):				95.3		Corrected Ave (3 peaks):			135.1	RPD = 34
Aroclor-1248	1	8.267	0.018	590196	144.4	1	7.537	0.009	316935	154.2
Aroclor-1248	2	8.876	0.005	247758	95.3	2	8.348	0.010	778677	147.3
Aroclor-1248	3	9.415	0.004	348827	96.5	3	8.946	0.005	413265	109.6
Aroclor-1248	4	9.889	0.007	343770	71.4	4	10.353	0.003	495822	96.8
Total Col1Ave (4 peaks):				101.9		Total Col2Ave (4 peaks):			127.0	RPD = 22
Corrected Ave (3 peaks):				87.7		Corrected Ave (3 peaks):			117.9	RPD = 29
Aroclor-1254	1	10.228	0.007	258953	57.9	1	10.057	0.005	282321	87.1
Aroclor-1254	2	10.638	0.028	386705	143.1	2	10.245	0.008	333392	83.0
Aroclor-1254	3	10.760	0.007	404897	75.9	3	10.938	0.005	412049	62.9
Aroclor-1254	4	11.112	0.001	542437	95.7	4	11.201	0.013	550195	84.6
Aroclor-1254	5	11.815	0.006	539915	100.9	5	11.955	-0.004	1170191	242.3
Total Col1Ave (5 peaks):				94.7		Total Col2Ave (5 peaks):			112.0	RPD = 17
Corrected Ave (4 peaks):				82.6		Corrected Ave (4 peaks):			79.4	RPD = 4
Aroclor-1260	1	12.047	0.003	252377	87.0	1	11.955	-0.004	1170191	151.4
Aroclor-1260	2	12.365	0.004	138745	47.8	2	12.505	0.001	312385	51.6
Aroclor-1260	3	12.738	0.007	435748	62.2	3	12.778	0.004	690112	55.0
Aroclor-1260	4	13.130	0.003	430178	118.6	4	13.341	0.007	589439	71.0
Aroclor-1260	5	13.307	0.000	245521	141.7	NS	---			----
Total Col1Ave (5 peaks):				91.4		Total Col2Ave (4 peaks):			82.3	RPD = 11
Corrected Ave (4 peaks):				78.9		Corrected Ave (3 peaks):			59.2	RPD = 29
Aroclor-1262	1	12.365	0.007	138745	40.5	1	12.505	-0.011	312385	44.5
Aroclor-1262	2	12.738	0.009	435748	47.5	2	12.778	-0.008	690112	42.6
Aroclor-1262	3	13.130	0.002	430178	145.2	3	13.282	-0.009	295468	47.8
Aroclor-1262	4	13.307	0.003	245521	71.1	4	13.341	-0.008	589439	58.1
Aroclor-1262	5	13.886	-0.001	378814	125.2	5	13.968	-0.007	681272	122.1
Total Col1Ave (5 peaks):				85.9		Total Col2Ave (5 peaks):			63.0	RPD = 31
Corrected Ave (4 peaks):				71.1		Corrected Ave (4 peaks):			48.2	RPD = 38
Aroclor-1268	1	13.240	0.004	479008	48.3	1	13.282	-0.009	295468	18.2

Aroclor-1268 2	13.307	0.005	245521	26.6	2	13.341	-0.011	589439	38.3
Aroclor-1268 3	13.662	0.014	815960	104.2	3	13.699	0.001	15842949	1277.3
Aroclor-1268 4	14.295	0.008	1038672	43.4	4	14.342	-0.006	214102	5.3
Total Col1Ave (4 peaks):				55.6	Total Col2Ave (4 peaks):			334.8	RPD = 143*	
Corrected Ave (3 peaks):				39.4	Corrected Ave (3 peaks):			20.6	RPD = 63*	

Total PCB Area Col1 (5.829 - 14.492) = 17102743 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 37760914 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Decachlorobiphenyl
IS-HBBF
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Aroclor-1221
Aroclor-1232
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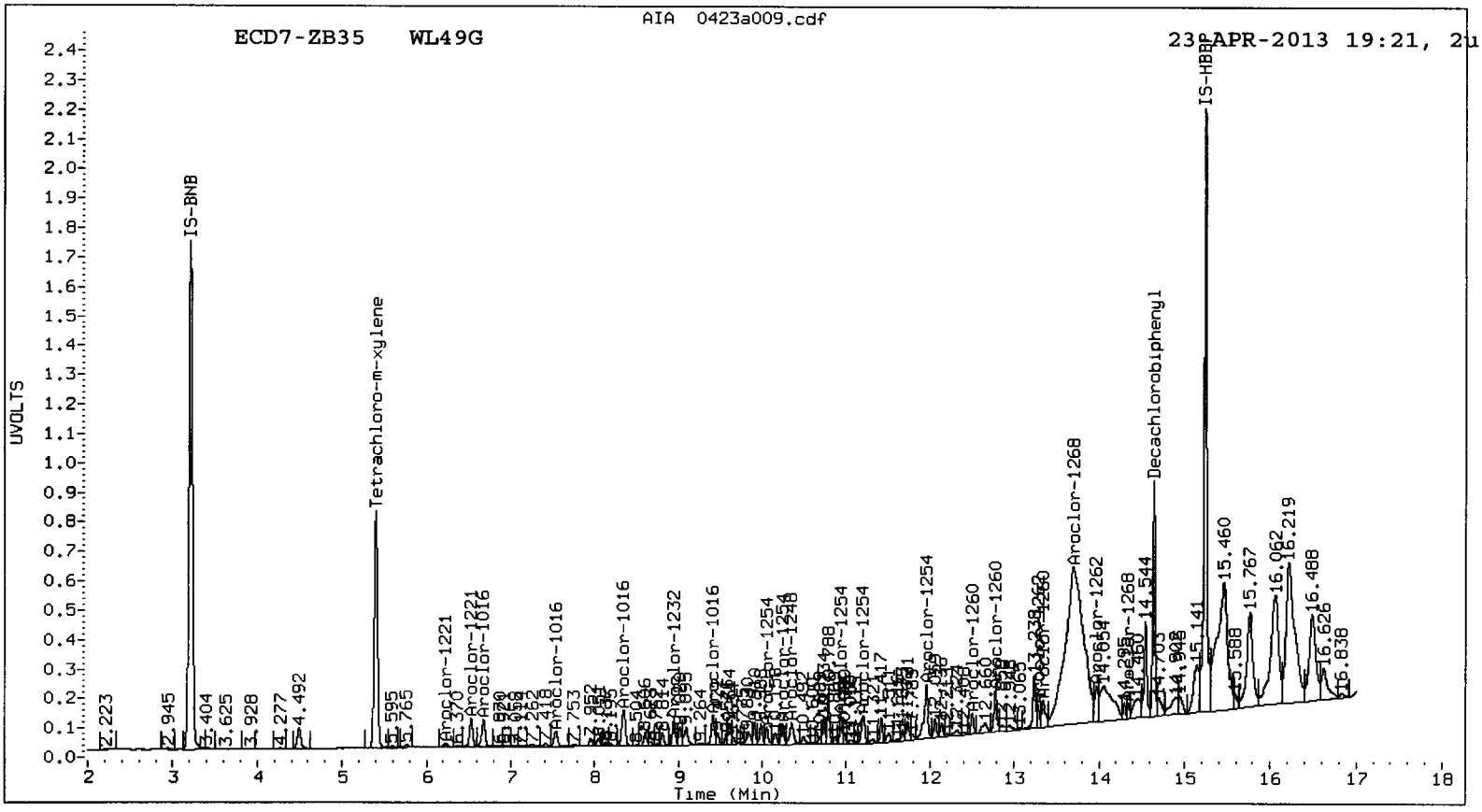
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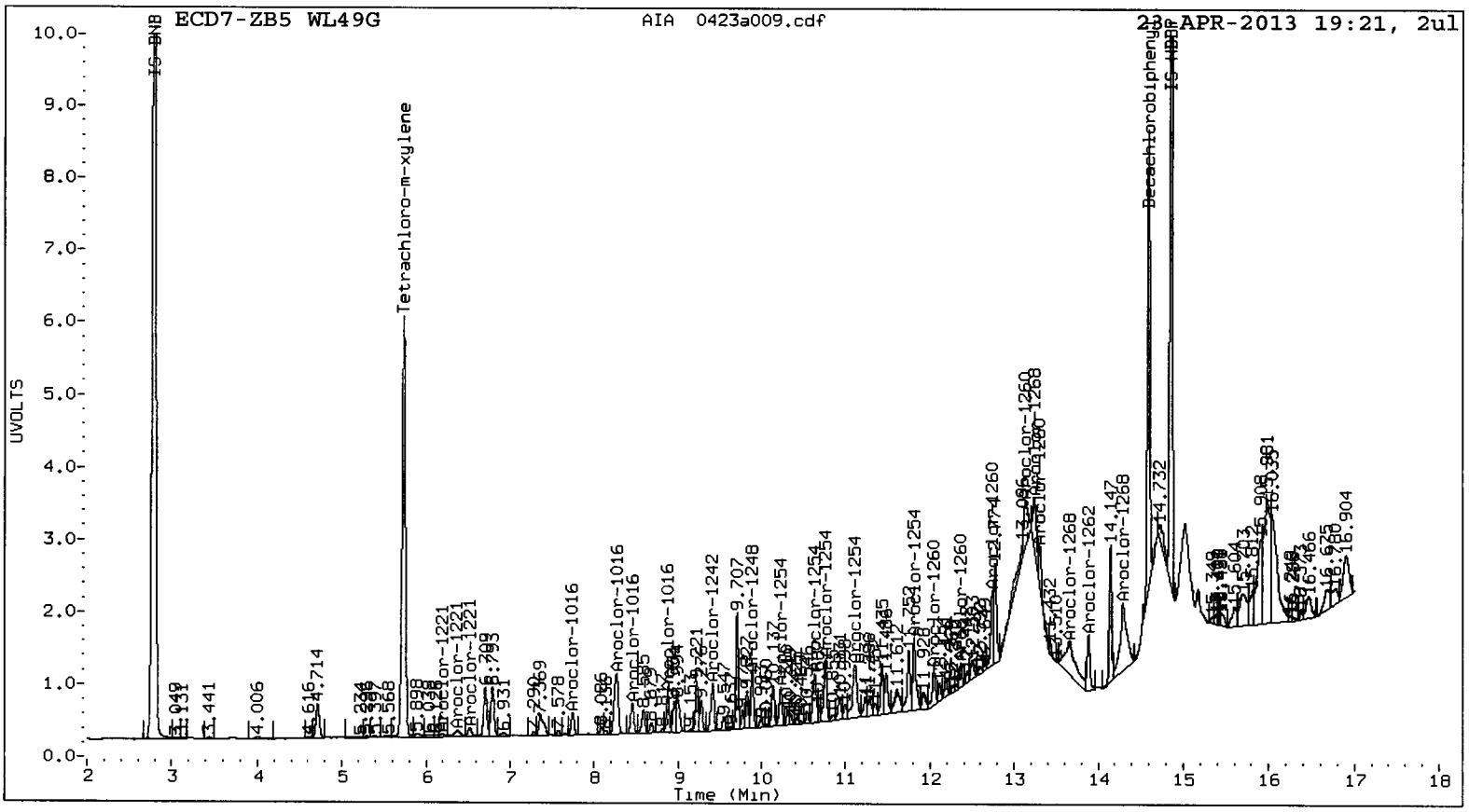
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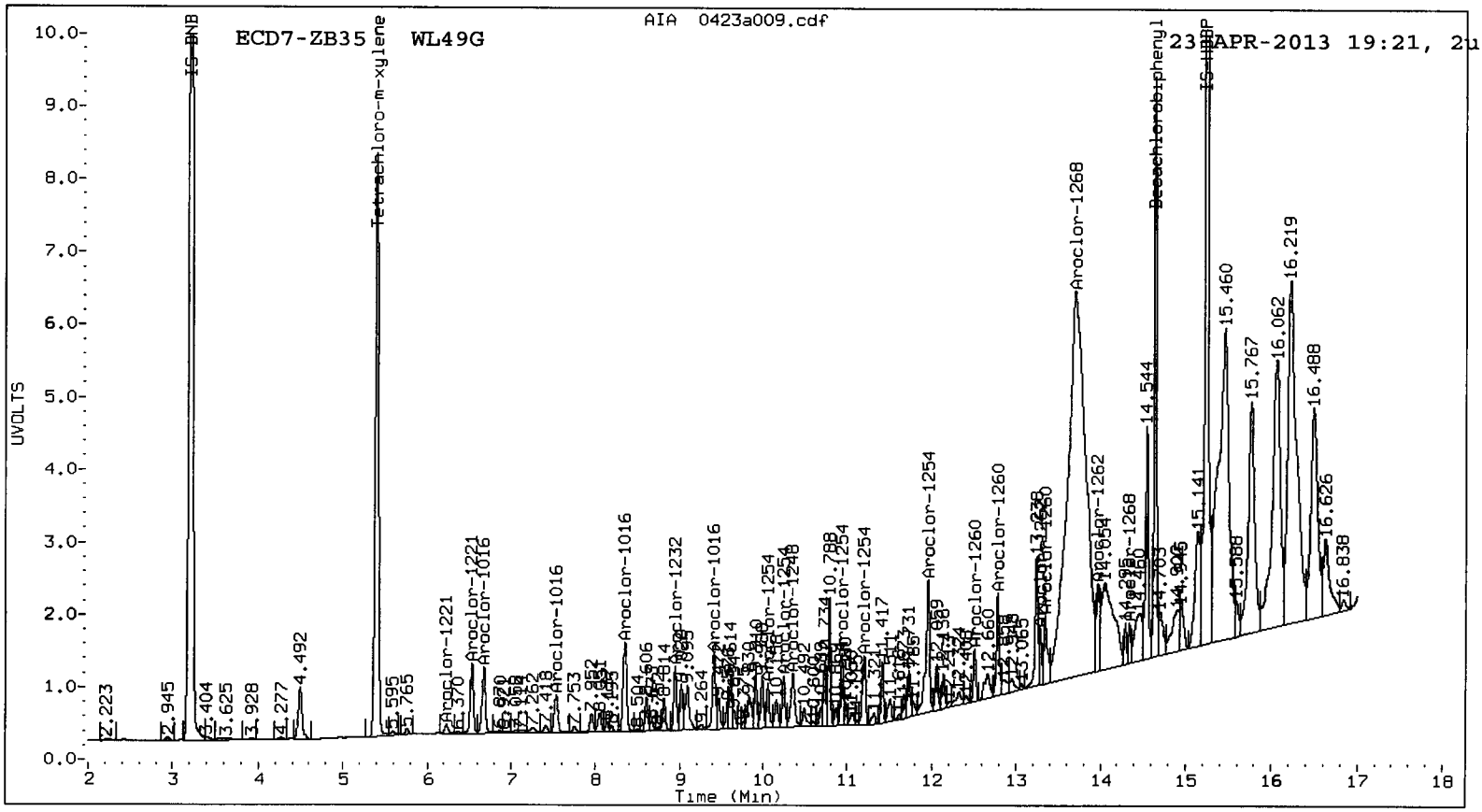
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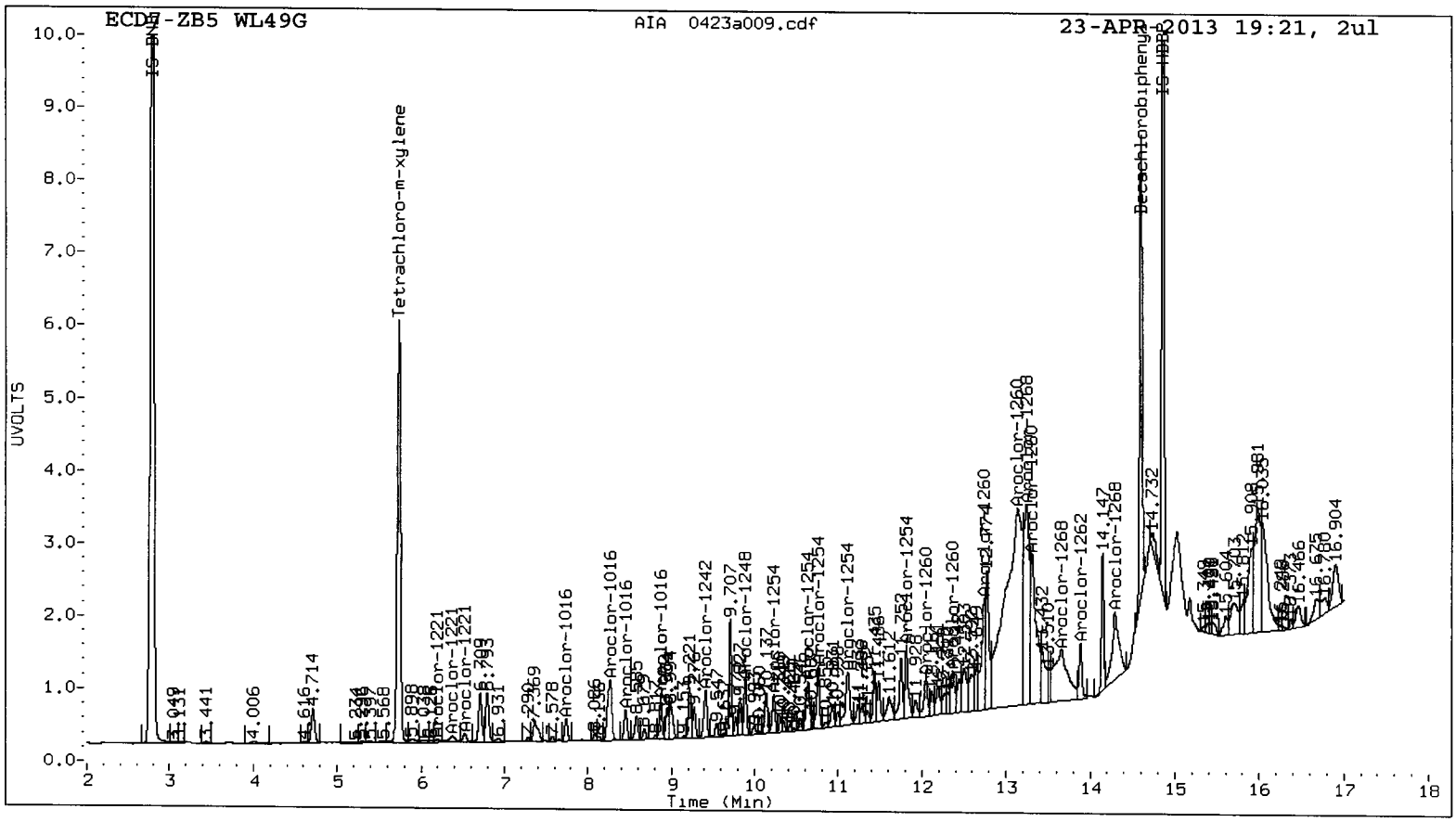
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Decachlorobiphenyl
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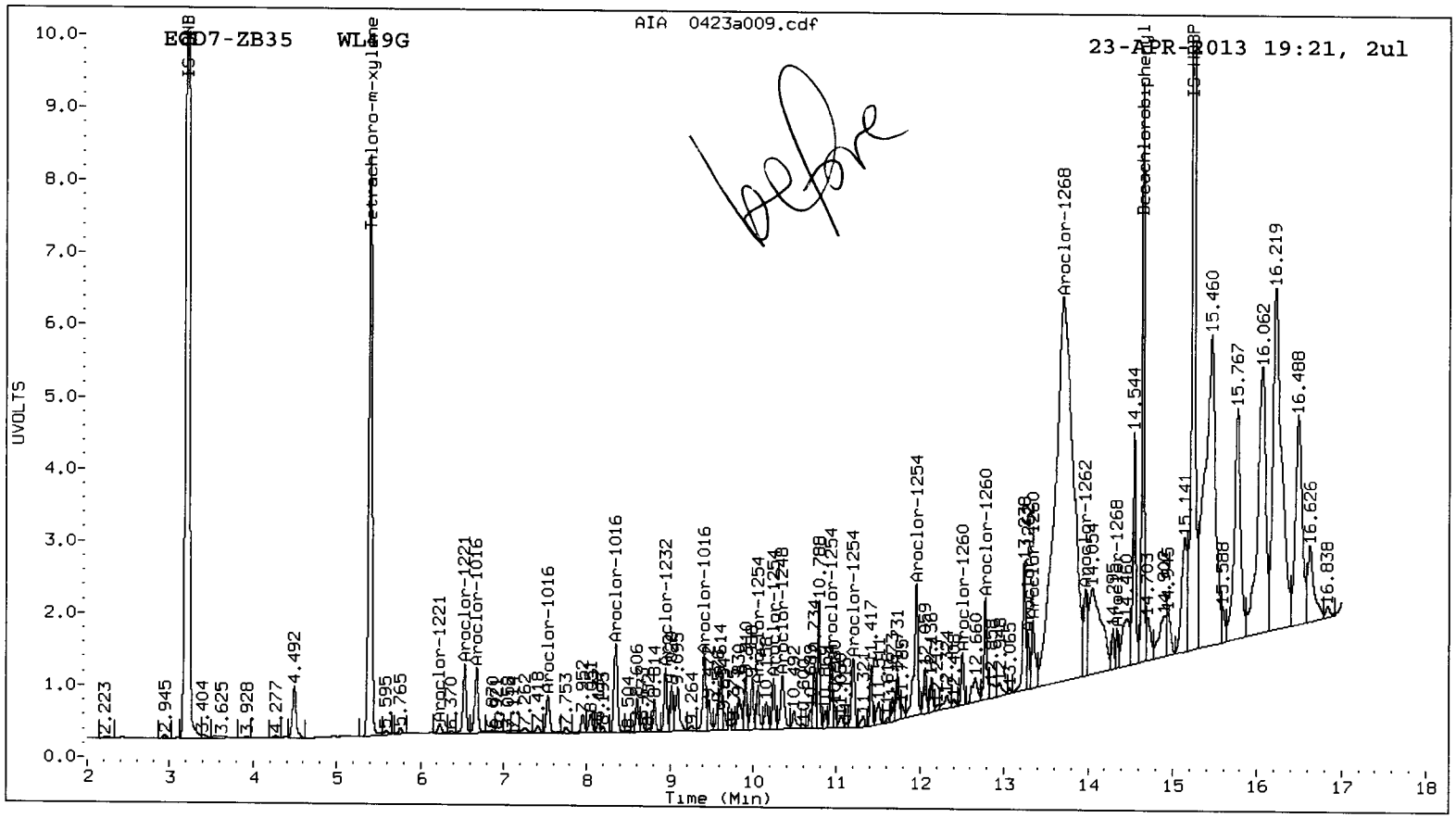
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Decachlorobiphenyl
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Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

before

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a010.d
Data file 2: 20130416.b/0423-2.b/0423a010.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49GMS
Client ID: IM-CB-02-201304 MS
Injection Date: 23-APR-2013 19:43
Report Date: 04/24/2013 09:06
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.732	0.002	3125809	5.397	0.003	4124130	33.0	30.2	9.1	Tetrachloro-m-xylene
14.594	0.002	2329624	14.642	0.003	2772421	30.5	35.7	15.8	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	82.5	75.4
Decachlorobiphenyl	76.2	89.3

JA 04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7616089	36.2
Hexabromobiphenyl	4375297	5014043	14.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10192509	19.6
Hexabromobiphenyl	6077527	6773424	11.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

WL49:81712

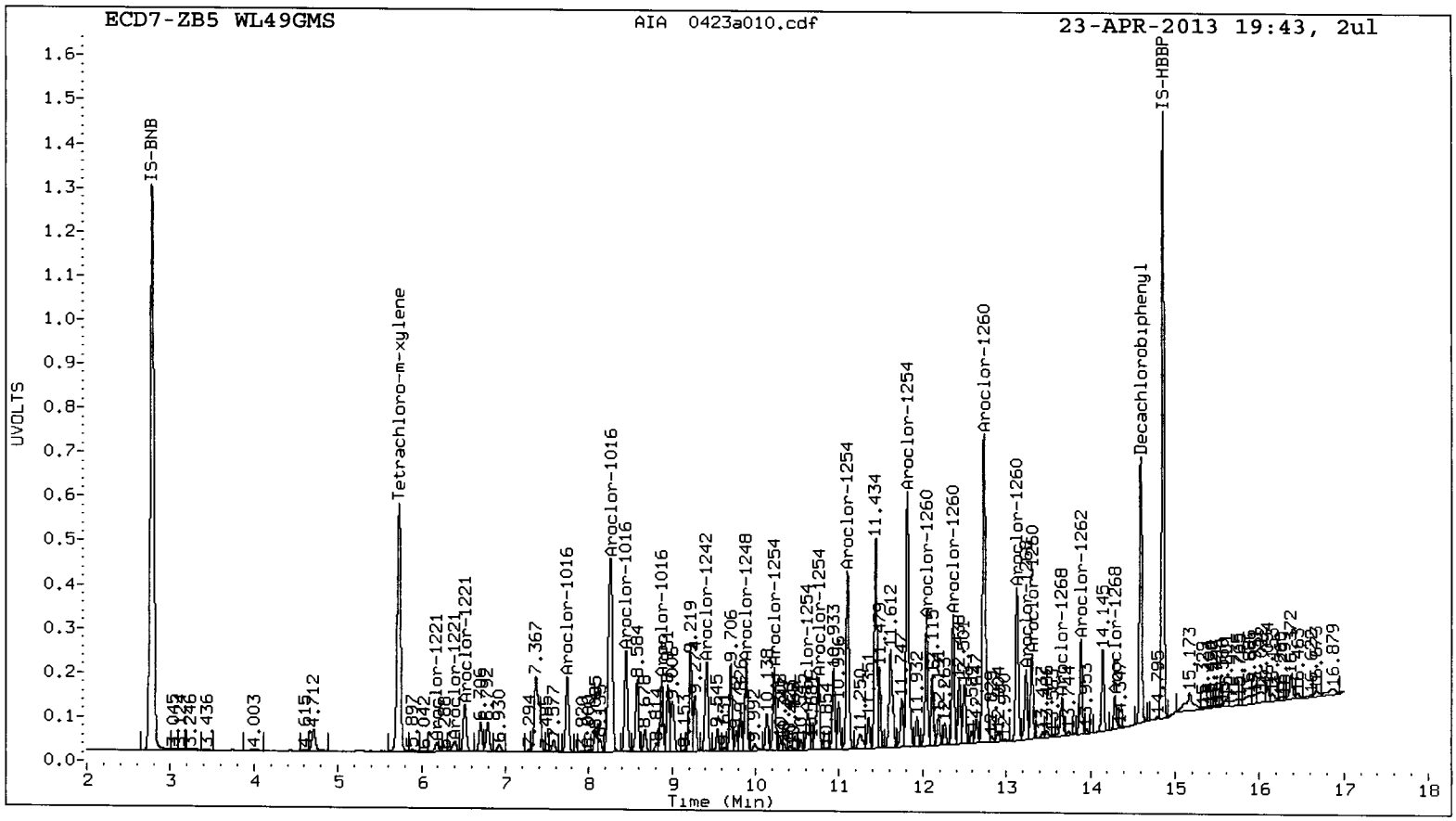
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.743	0.003	872965	379.5	1	6.660	0.009	1153607	485.7
Aroclor-1016	2	8.263	0.003	3071392	397.9	2	7.535	0.004	1821724	349.5
Aroclor-1016	3	8.450	0.003	1140674	374.8	3	8.347	0.005	4001084	393.8
Aroclor-1016	4	8.876	0.002	764784	439.0	4	9.412	0.002	1505396	470.9
	Total Col1Ave (4 peaks):				397.8		Total Col2Ave (4 peaks):			425.0 RPD = 7
	Corrected Ave (3 peaks):				384.1		Corrected Ave (3 peaks):			404.7 RPD = 5
Aroclor-1221	1	6.187	0.014	128656	138.7	1	6.225	-0.002	220153	140.0
Aroclor-1221	2	6.399	0.014	162050	231.3	2	6.527	0.002	648776	647.2
Aroclor-1221	3	6.519	0.013	589709	251.0	3	6.660	-0.001	1153607	398.2
Aroclor-1221	NS	---			----	4	7.535	-0.018	1821724	1831.0
	Total Col1Ave (3 peaks):				207.0		Total Col2Ave (4 peaks):			754.1 RPD = 114*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			395.1
Aroclor-1232	1	6.519	0.013	589709	378.9	1	6.660	0.000	1153607	569.9
Aroclor-1232	2	7.743	0.014	872965	963.3	2	7.535	-0.007	1821724	815.2
Aroclor-1232	3	8.263	0.015	3071392	1014.3	3	8.347	-0.004	4001084	994.5
Aroclor-1232	4	8.450	0.013	1140674	937.1	4	8.946	-0.005	1238630	945.7
	Total Col1Ave (4 peaks):				823.4		Total Col2Ave (4 peaks):			831.3 RPD = 1
	Corrected Ave (3 peaks):				759.8		Corrected Ave (3 peaks):			777.0 RPD = 2
Aroclor-1242	1	7.743	0.006	872965	497.0	1	6.660	0.022	1153607	609.2
Aroclor-1242	2	8.263	0.006	3071392	518.3	2	7.535	0.014	1821724	482.1
Aroclor-1242	3	8.450	0.006	1140674	487.9	3	8.347	0.014	4001084	535.3
Aroclor-1242	4	9.414	0.003	1074580	490.6	4	9.412	0.008	1505396	580.6
	Total Col1Ave (4 peaks):				498.4		Total Col2Ave (4 peaks):			551.8 RPD = 10
	Corrected Ave (3 peaks):				491.8		Corrected Ave (3 peaks):			532.7 RPD = 8
Aroclor-1248	1	8.263	0.014	3071392	740.0	1	7.535	0.007	1821724	874.8
Aroclor-1248	2	8.876	0.004	764784	289.6	2	8.347	0.009	4001084	746.9
Aroclor-1248	3	9.414	0.003	1074580	292.9	3	8.946	0.004	1238630	324.2
Aroclor-1248	4	9.892	0.010	905713	185.3	4	10.352	0.002	526881	101.5
	Total Col1Ave (4 peaks):				377.0		Total Col2Ave (4 peaks):			511.8 RPD = 30
	Corrected Ave (3 peaks):				255.9		Corrected Ave (3 peaks):			390.9 RPD = 42*
Aroclor-1254	1	10.229	0.009	836328	184.3	1	10.057	0.005	821035	250.0
Aroclor-1254	2	10.626	0.015	501077	182.7	2	10.242	0.006	974236	239.5
Aroclor-1254	3	10.758	0.006	937625	173.2	3	10.938	0.005	776689	117.1
Aroclor-1254	4	11.100	-0.012	1915767	332.9	4	11.207	0.019	2425436	368.1
Aroclor-1254	5	11.815	0.006	2753010	506.7	5	11.962	0.003	2855003	583.4
	Total Col1Ave (5 peaks):				275.9		Total Col2Ave (5 peaks):			311.6 RPD = 12
	Corrected Ave (4 peaks):				218.2		Corrected Ave (4 peaks):			243.7 RPD = 11
Aroclor-1260	1	12.046	0.002	1252591	406.3	1	11.962	0.002	2855003	505.1
Aroclor-1260	2	12.363	0.002	1227797	397.5	2	12.507	0.002	1902571	429.4
Aroclor-1260	3	12.735	0.003	3646669	489.5	3	12.778	0.004	3959139	431.5
Aroclor-1260	4	13.131	0.003	1624699	421.4	4	13.337	0.004	2664050	438.9
Aroclor-1260	5	13.310	0.003	813913	441.8	NS	---			----
	Total Col1Ave (5 peaks):				431.3		Total Col2Ave (4 peaks):			451.2 RPD = 5
	Corrected Ave (4 peaks):				416.7		Corrected Ave (3 peaks):			433.2 RPD = 4
Aroclor-1262	1	12.363	0.006	1227797	337.0	1	12.507	-0.009	1902571	370.2
Aroclor-1262	2	12.735	0.005	3646669	373.7	2	12.778	-0.008	3959139	334.1
Aroclor-1262	3	13.131	0.003	1624699	515.9	3	13.283	-0.008	1163183	257.1
Aroclor-1262	4	13.310	0.006	813913	221.8	4	13.337	-0.011	2664050	359.0
Aroclor-1262	5	13.888	0.001	880096	273.6	5	13.967	-0.007	1137513	278.6
	Total Col1Ave (5 peaks):				344.4		Total Col2Ave (5 peaks):			319.8 RPD = 7
	Corrected Ave (4 peaks):				301.5		Corrected Ave (4 peaks):			307.2 RPD = 2
Aroclor-1268	1	13.241	0.006	719707	68.3	1	13.283	-0.007	1163183	98.1

Aroclor-1268 2	13.310	0.008	813913	82.8	2	13.337	-0.015	2664050	236.8
Aroclor-1268 3	13.667	0.018	397384	47.7	3	13.691	-0.007	269993	29.8
Aroclor-1268 4	14.291	0.005	322212	12.7	4	14.342	-0.006	346971	11.7
Total Col1Ave (4 peaks):				52.9	Total Col2Ave (4 peaks):			94.1	RPD = 56*
Corrected Ave (3 peaks):				42.9	Corrected Ave (3 peaks):			46.5	RPD = 8

Total PCB Area Col1 (5.829 - 14.492) = 46426716 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 59504023 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Aroclor-1242
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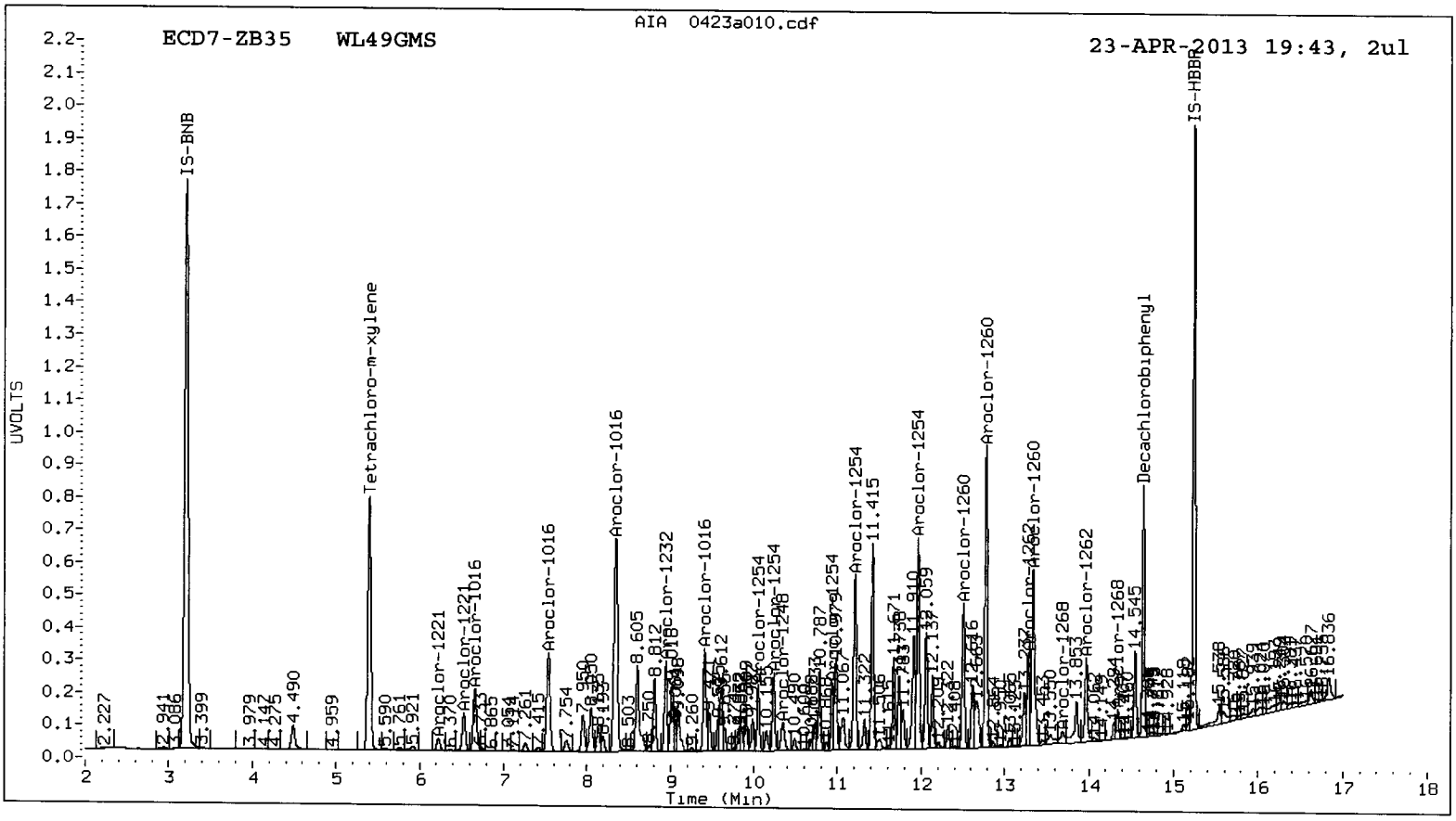
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Tetrachloro-m-xylene
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Aroclor-1242
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Aroclor-1260
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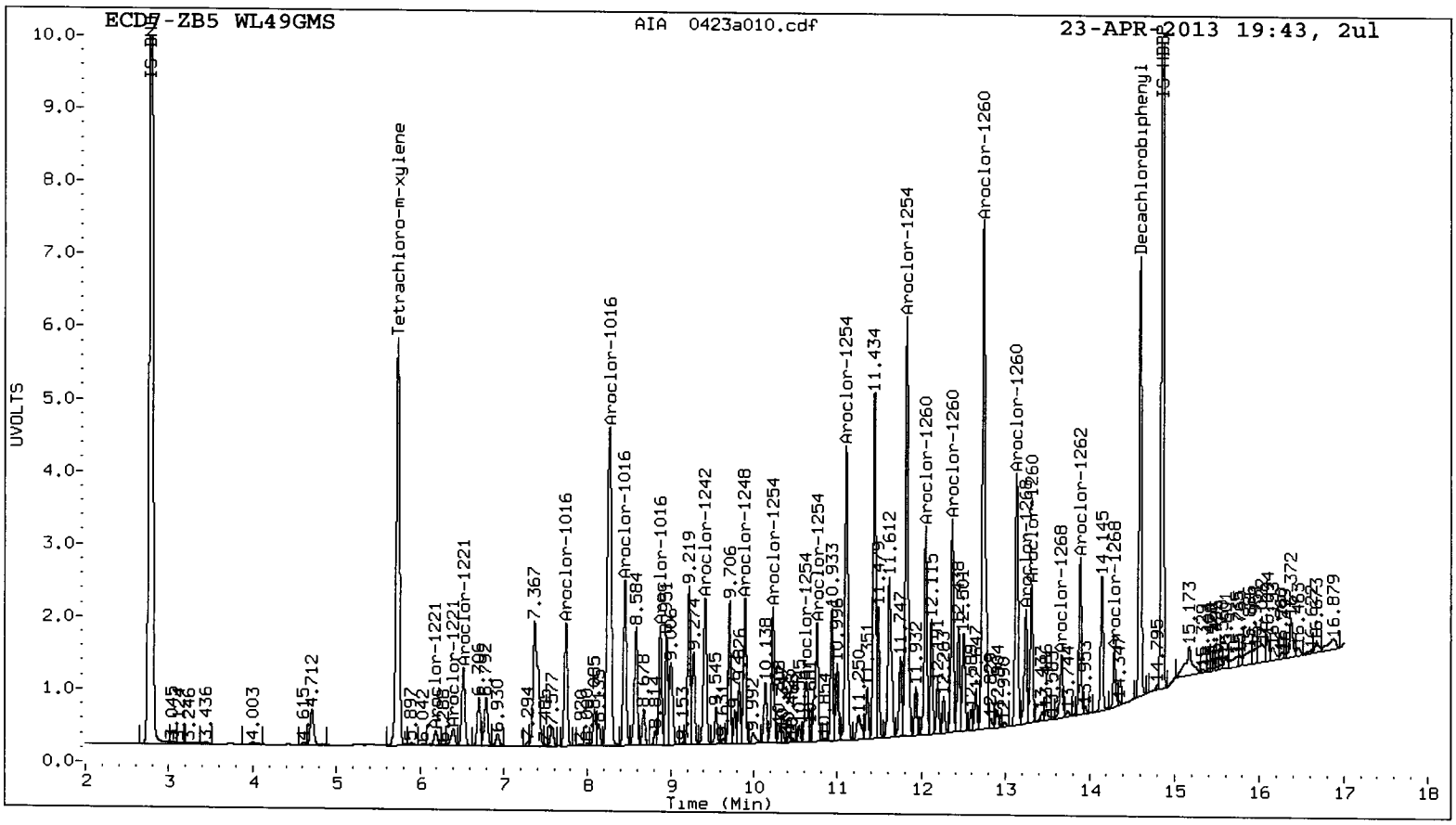
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
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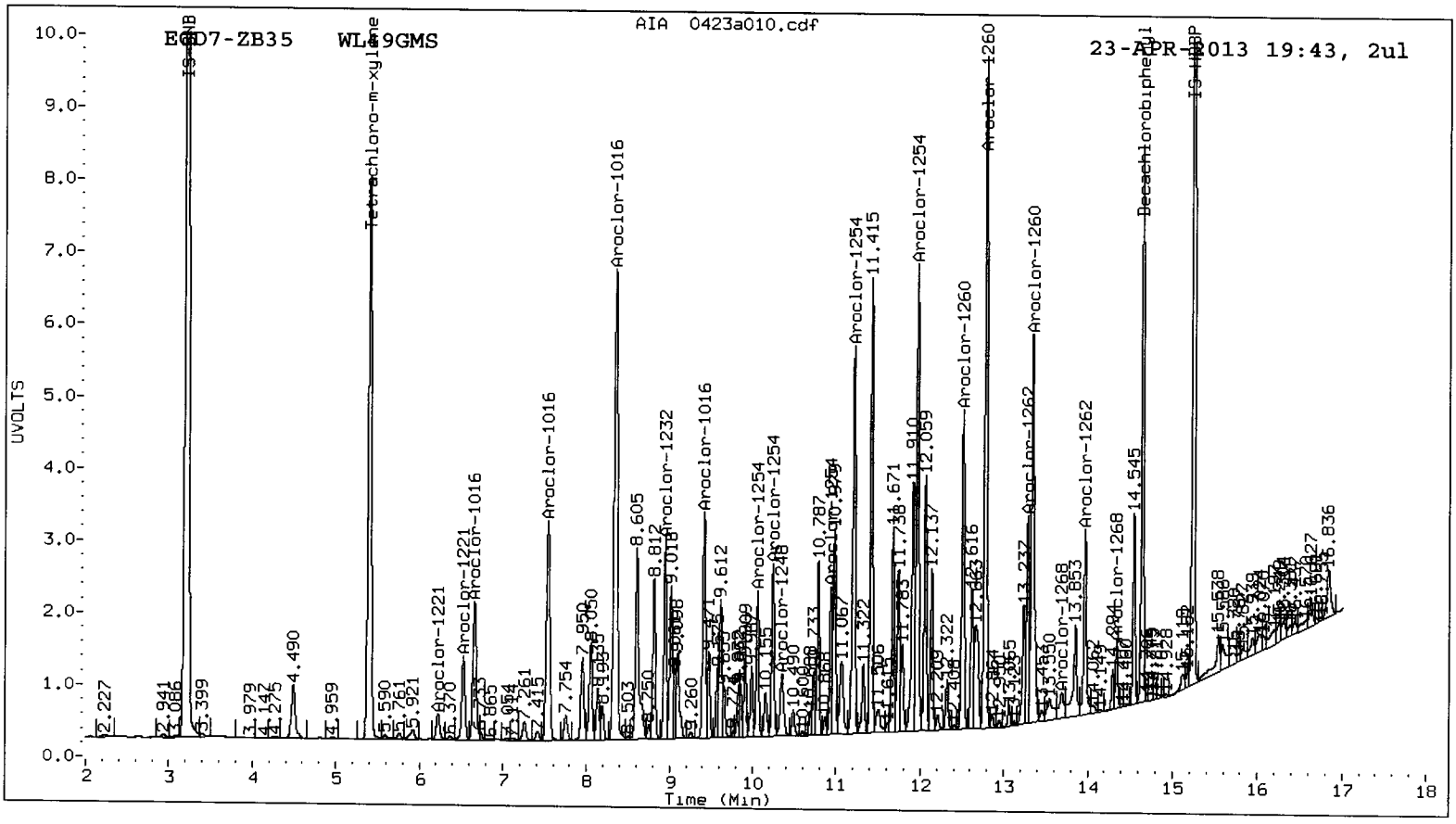
Aroclor-1262
Aroclor-1268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Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a011.d
Data file 2: 20130416.b/0423-2.b/0423a011.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49GMSD
Client ID: IM-CB-02-201304 MSD
Injection Date: 23-APR-2013 20:05
Report Date: 04/24/2013 09:07
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.731	0.001	3343102	5.395	0.001	4396487	35.1	32.2	8.8	Tetrachloro-m-xylene
14.595	0.003	2491878	14.642	0.003	2964704	33.2	33.5	0.8	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	87.8	80.4
Decachlorobiphenyl	82.9	83.6

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7653577	36.9
Hexabromobiphenyl	4375297	4927850	12.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	10186147	19.5
Hexabromobiphenyl	6077527	7728397	27.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

IM-CB-02-201304

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.740	0.000	938942	406.2	1	6.658	0.006	1192153	502.2
Aroclor-1016	2	8.261	0.002	3288281	423.9	2	7.532	0.001	1937323	371.9
Aroclor-1016	3	8.447	0.001	1216166	397.7	3	8.345	0.003	4261233	419.6
Aroclor-1016	4	8.873	0.000	814098	465.0	4	9.411	0.001	1590691	497.9
	Total Col1Ave (4 peaks):				423.2		Total Col2Ave (4 peaks):			447.9 RPD = 6
	Corrected Ave (3 peaks):				409.2		Corrected Ave (3 peaks):			429.8 RPD = 5
Aroclor-1221	1	6.185	0.011	137670	147.7	1	6.222	-0.005	248125	157.9
Aroclor-1221	2	6.395	0.011	184629	262.3	2	6.525	-0.001	658400	657.2
Aroclor-1221	3	6.517	0.011	624722	264.6	3	6.658	-0.003	1192153	411.8
Aroclor-1221	NS	---			----	4	7.532	-0.021	1937323	1948.4
	Total Col1Ave (3 peaks):				224.8		Total Col2Ave (4 peaks):			793.8 RPD = 112*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			408.9
Aroclor-1232	1	6.517	0.011	624722	399.5	1	6.658	-0.002	1192153	589.3
Aroclor-1232	2	7.740	0.011	938942	1031.0	2	7.532	-0.010	1937323	867.5
Aroclor-1232	3	8.261	0.013	3288281	1080.6	3	8.345	-0.006	4261233	1059.8
Aroclor-1232	4	8.447	0.011	1216166	994.2	4	8.943	-0.007	1352860	1033.5
	Total Col1Ave (4 peaks):				876.3		Total Col2Ave (4 peaks):			887.6 RPD = 1
	Corrected Ave (3 peaks):				808.2		Corrected Ave (3 peaks):			830.1 RPD = 3
Aroclor-1242	1	7.740	0.002	938942	531.9	1	6.658	0.020	1192153	629.9
Aroclor-1242	2	8.261	0.004	3288281	552.2	2	7.532	0.011	1937323	513.0
Aroclor-1242	3	8.447	0.003	1216166	517.6	3	8.345	0.012	4261233	570.5
Aroclor-1242	4	9.413	0.002	1132635	514.5	4	9.411	0.007	1590691	613.9
	Total Col1Ave (4 peaks):				529.1		Total Col2Ave (4 peaks):			581.8 RPD = 9
	Corrected Ave (3 peaks):				521.3		Corrected Ave (3 peaks):			565.8 RPD = 8
Aroclor-1248	1	8.261	0.012	3288281	788.4	1	7.532	0.004	1937323	930.8
Aroclor-1248	2	8.873	0.002	814098	306.8	2	8.345	0.007	4261233	795.9
Aroclor-1248	3	9.413	0.002	1132635	307.2	3	8.943	0.002	1352860	354.3
Aroclor-1248	4	9.891	0.009	935760	190.6	4	10.351	0.001	506253	97.6
	Total Col1Ave (4 peaks):				398.2		Total Col2Ave (4 peaks):			544.7 RPD = 31
	Corrected Ave (3 peaks):				268.2		Corrected Ave (3 peaks):			416.0 RPD = 43*
Aroclor-1254	1	10.228	0.008	879237	192.8	1	10.056	0.004	862272	262.7
Aroclor-1254	2	10.628	0.017	524213	190.2	2	10.241	0.005	1021954	251.4
Aroclor-1254	3	10.756	0.004	978363	179.8	3	10.936	0.004	799100	120.5
Aroclor-1254	4	11.099	-0.012	2031974	351.3	4	11.206	0.019	2528355	383.9
Aroclor-1254	5	11.814	0.004	2926589	536.1	5	11.961	0.002	3136736	641.4
	Total Col1Ave (5 peaks):				290.8		Total Col2Ave (5 peaks):			332.0 RPD = 13
	Corrected Ave (4 peaks):				228.5		Corrected Ave (4 peaks):			254.6 RPD = 11
Aroclor-1260	1	12.045	0.001	1362877	449.8	1	11.961	0.001	3136736	486.3
Aroclor-1260	2	12.362	0.001	1327808	437.4	2	12.506	0.002	2168423	428.9
Aroclor-1260	3	12.734	0.003	3888449	531.1	3	12.777	0.002	4420478	422.2
Aroclor-1260	4	13.130	0.003	1726173	455.5	4	13.338	0.004	2905198	419.5
Aroclor-1260	5	13.309	0.002	917158	506.5	NS	---			----
	Total Col1Ave (5 peaks):				476.1		Total Col2Ave (4 peaks):			439.2 RPD = 8
	Corrected Ave (4 peaks):				462.3		Corrected Ave (3 peaks):			423.5 RPD = 9
Aroclor-1262	1	12.362	0.004	1327808	370.8	1	12.506	-0.010	2168423	369.8
Aroclor-1262	2	12.734	0.005	3888449	405.5	2	12.777	-0.010	4420478	327.0
Aroclor-1262	3	13.130	0.003	1726173	557.7	3	13.282	-0.008	1311630	254.1
Aroclor-1262	4	13.309	0.004	917158	254.3	4	13.338	-0.011	2905198	343.1
Aroclor-1262	5	13.888	0.001	967942	306.1	5	13.966	-0.008	1086200	233.2
	Total Col1Ave (5 peaks):				378.9		Total Col2Ave (5 peaks):			305.4 RPD = 21
	Corrected Ave (4 peaks):				334.2		Corrected Ave (4 peaks):			289.3 RPD = 14
Aroclor-1268	1	13.241	0.006	799904	77.3	1	13.282	-0.008	1311630	97.0

Aroclor-1268	2	13.309	0.007	917158	95.0	2	13.338	-0.015	2905198	226.3
Aroclor-1268	3	13.666	0.017	501626	61.3	3	13.690	-0.008	136450	13.2
Aroclor-1268	4	14.291	0.005	428676	17.2	4	14.341	-0.008	412275	12.1

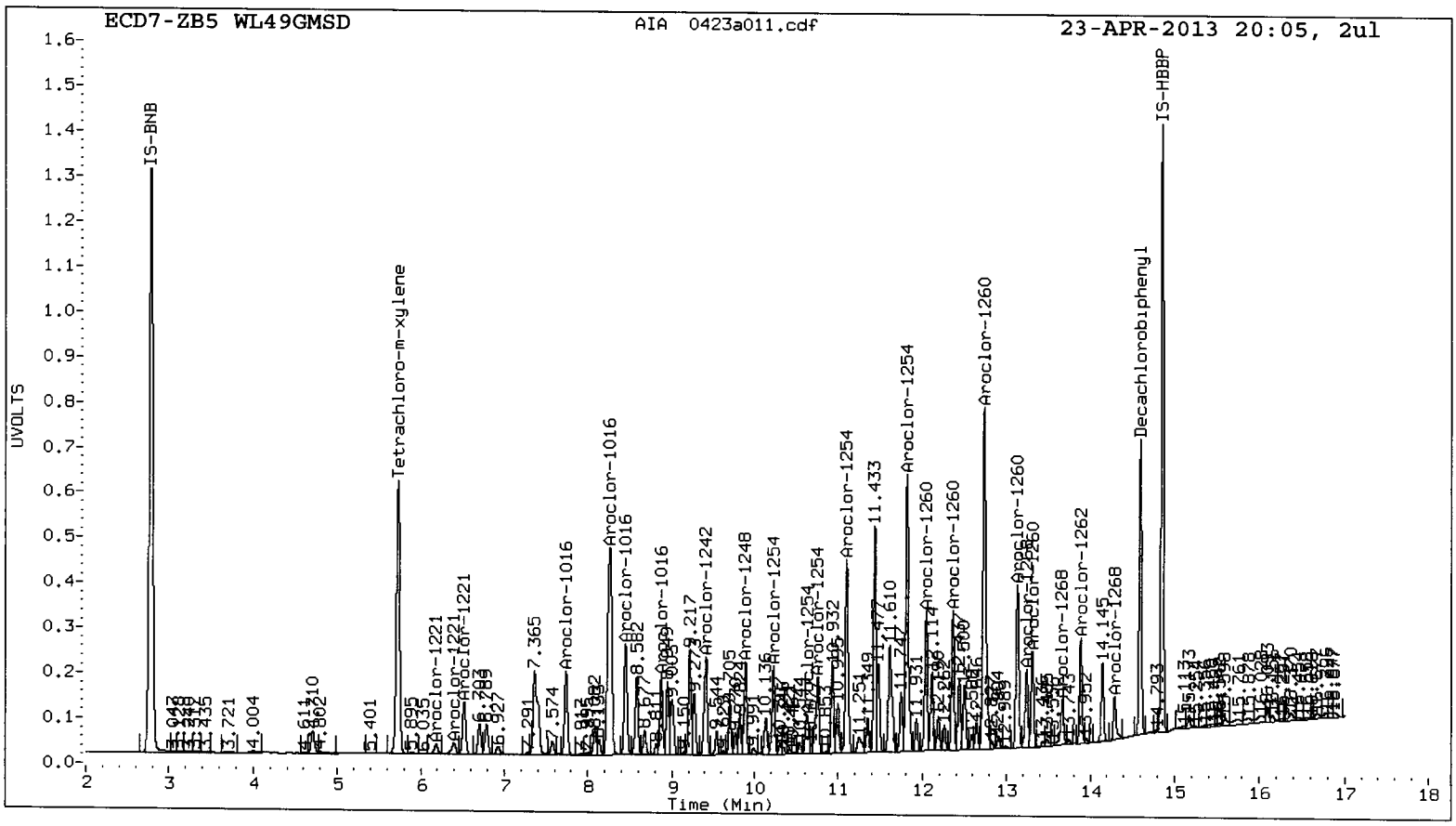
Total Col1Ave (4 peaks): 62.7 Total Col2Ave (4 peaks): 87.2 RPD = 33

Corrected Ave (3 peaks): 51.9 Corrected Ave (3 peaks): 40.8 RPD = 24

Total PCB Area Col1 (5.829 - 14.492) = 49242575 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 63151848 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-1016
Aroclor-1221
Aroclor-1242
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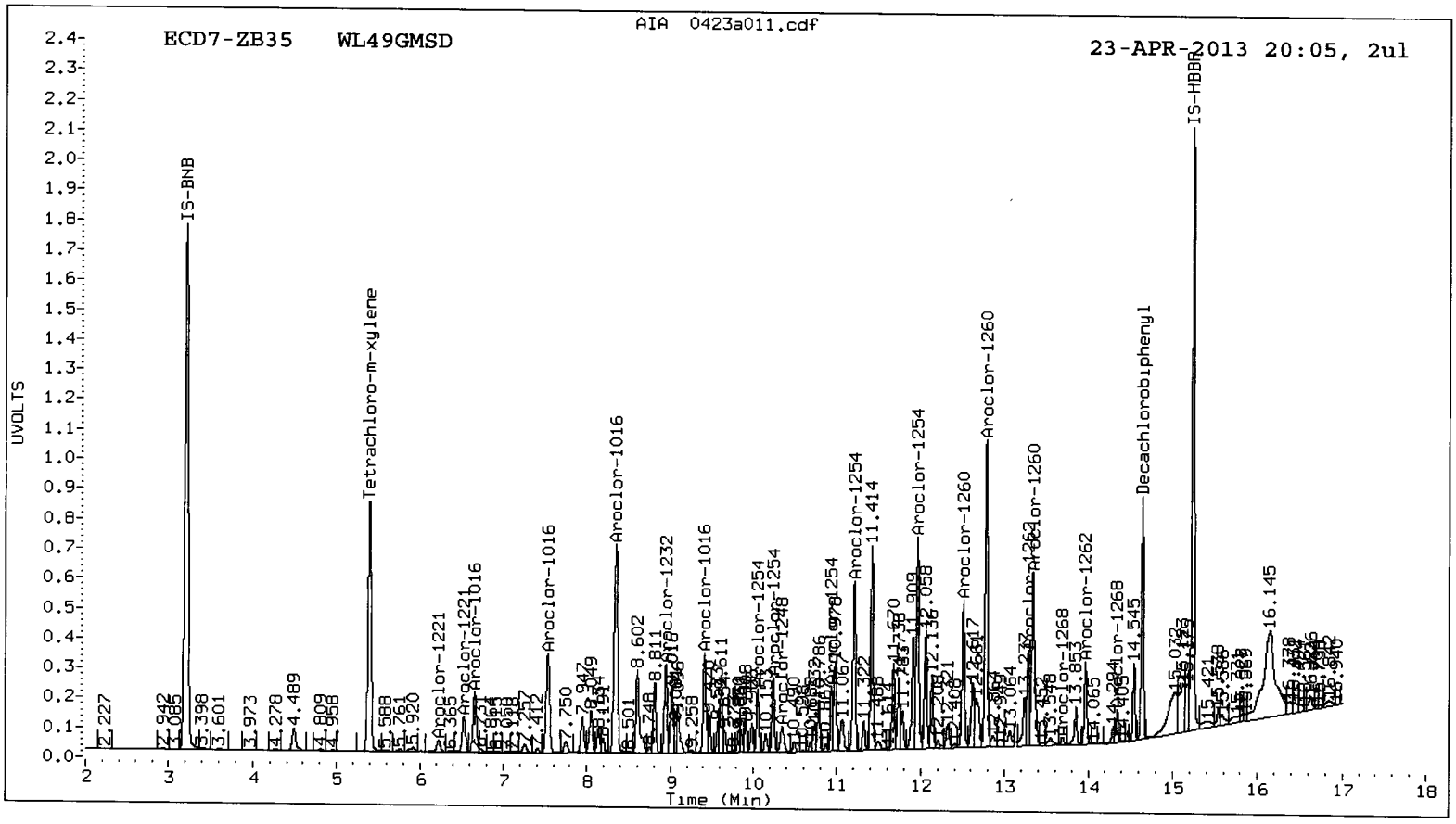
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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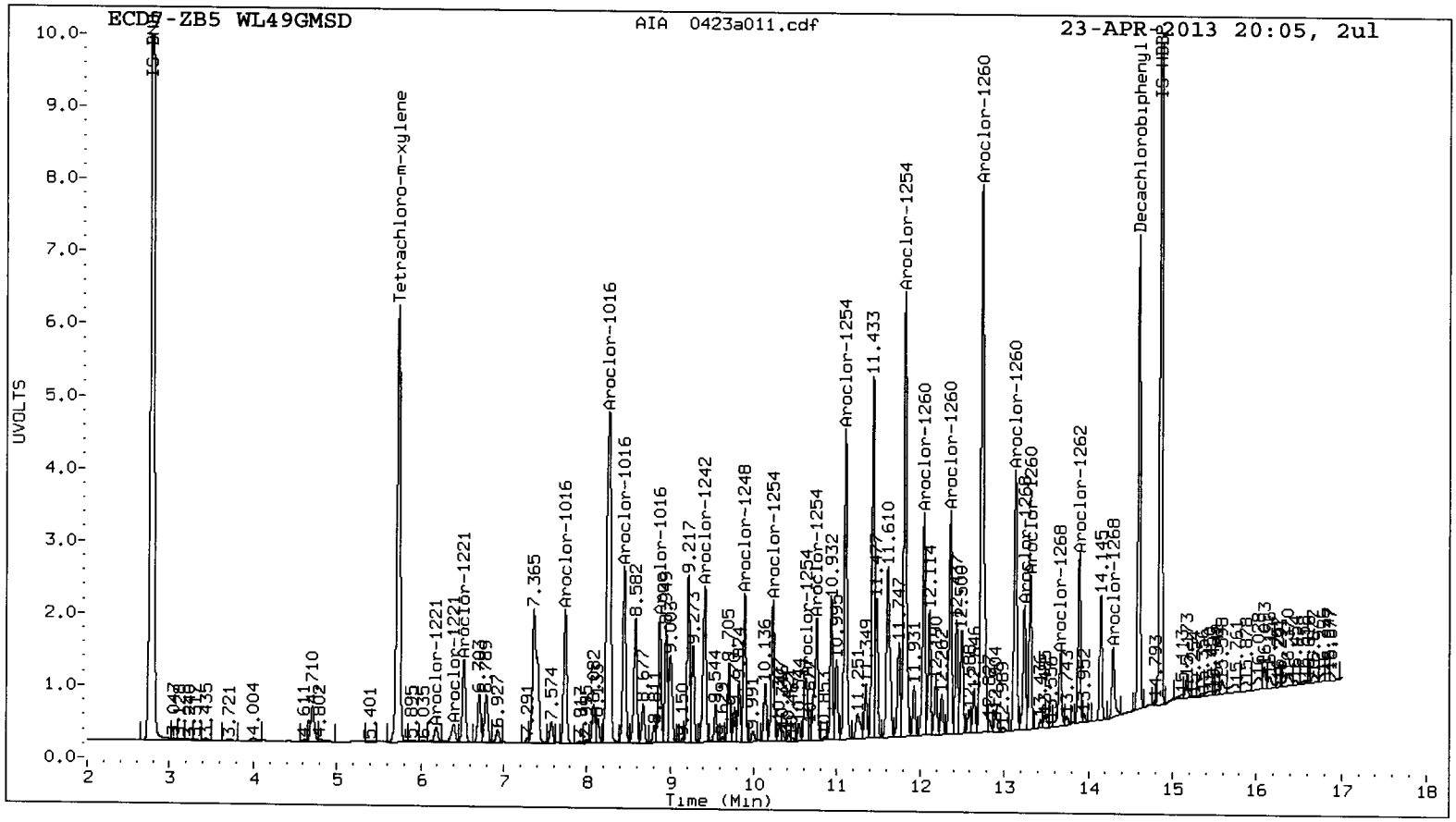
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBR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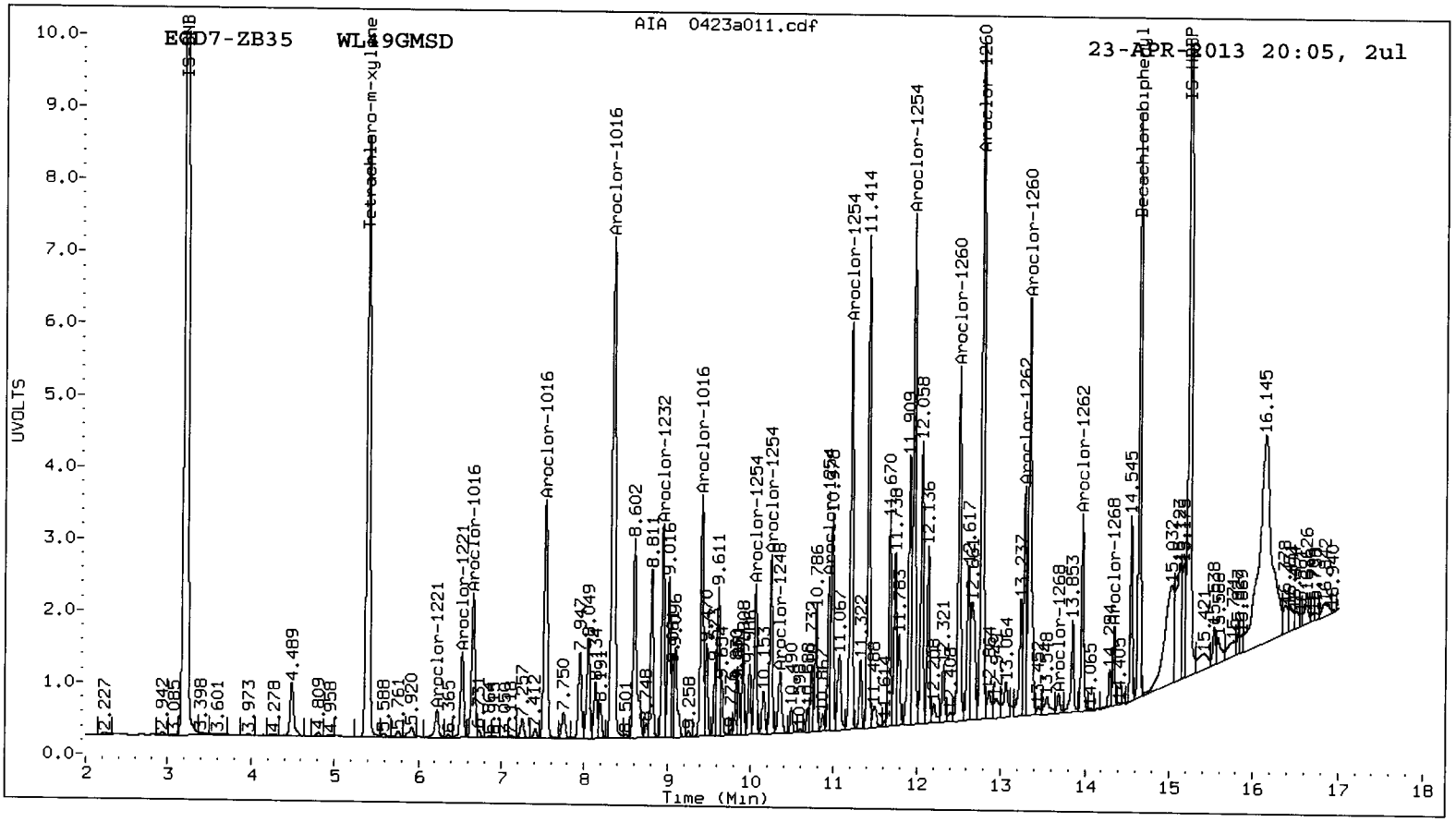
23-APR-2013 20:05, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a014.d
Data file 2: 20130416.b/0423-2.b/0423a014.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WL49F
Client ID: IM-CB-01-20130410-S
Injection Date: 23-APR-2013 21:11
Report Date: 04/24/2013 09:07
Matrix: SOIL
Dilution Factor: 20.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.733	0.003	193415	5.397	0.003	253858	2.2	2.1	5.6	Tetrachloro-m-xylene
14.601	0.009	243420	14.643	0.004	231750	3.1	2.6	15.1	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	109.3	103.3
Decachlorobiphenyl	153.6	132.0

NK

04/24/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7118271	27.3
Hexabromobiphenyl	4375297	5199799	18.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9157275	7.4
Hexabromobiphenyl	6077527	7654262	25.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

WL49F 01752

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.743	0.003	811492	377.4	1	6.660	0.008	1083340	507.6
Aroclor-1016	2	8.263	0.003	3064357	424.7	2	7.534	0.002	1684235	359.7
Aroclor-1016	3	8.449	0.003	1109868	390.2	3	8.347	0.005	3998003	437.9
Aroclor-1016	4	8.877	0.003	812509	499.0	4	9.413	0.004	1617553	563.2
Total Col1Ave (4 peaks):					422.8	Total Col2Ave (4 peaks):				467.1 RPD = 10
Corrected Ave (3 peaks):					397.5	Corrected Ave (3 peaks):				435.1 RPD = 9
Aroclor-1221	1	6.191	0.017	114752	132.3	1	6.224	-0.003	152076	107.6
Aroclor-1221	2	6.401	0.016	118173	180.5	2	6.524	-0.001	288231	320.0
Aroclor-1221	3	6.520	0.014	530753	241.7	3	6.660	-0.001	1083340	416.2
Aroclor-1221	NS	---			----	4	7.534	-0.020	1684235	1884.1
Total Col1Ave (3 peaks):					184.8	Total Col2Ave (4 peaks):				682.0 RPD = 115*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				281.3
Aroclor-1232	1	6.520	0.014	530753	364.9	1	6.660	0.000	1083340	595.7
Aroclor-1232	2	7.743	0.014	811492	958.1	2	7.534	-0.008	1684235	838.9
Aroclor-1232	3	8.263	0.015	3064357	1082.7	3	8.347	-0.004	3998003	1106.1
Aroclor-1232	4	8.449	0.013	1109868	975.5	4	8.946	-0.004	1257245	1068.4
Total Col1Ave (4 peaks):					845.3	Total Col2Ave (4 peaks):				902.3 RPD = 7
Corrected Ave (3 peaks):					766.2	Corrected Ave (3 peaks):				834.4 RPD = 9
Aroclor-1242	1	7.743	0.006	811492	494.3	1	6.660	0.022	1083340	636.8
Aroclor-1242	2	8.263	0.006	3064357	553.2	2	7.534	0.013	1684235	496.1
Aroclor-1242	3	8.449	0.005	1109868	507.9	3	8.347	0.014	3998003	595.4
Aroclor-1242	4	9.415	0.004	1257015	614.0	4	9.413	0.009	1617553	694.4
Total Col1Ave (4 peaks):					542.3	Total Col2Ave (4 peaks):				605.6 RPD = 11
Corrected Ave (3 peaks):					518.5	Corrected Ave (3 peaks):				576.1 RPD = 11
Aroclor-1248	1	8.263	0.014	3064357	790.0	1	7.534	0.006	1684235	900.2
Aroclor-1248	2	8.877	0.005	812509	329.2	2	8.347	0.009	3998003	830.7
Aroclor-1248	3	9.415	0.004	1257015	366.5	3	8.946	0.005	1257245	366.3
Aroclor-1248	4	9.890	0.008	1193404	261.3	4	10.354	0.005	1547665	332.0
Total Col1Ave (4 peaks):					436.7	Total Col2Ave (4 peaks):				607.3 RPD = 33
Corrected Ave (3 peaks):					319.0	Corrected Ave (3 peaks):				509.6 RPD = 46*
Aroclor-1254	1	10.230	0.010	991620	233.8	1	10.058	0.006	788174	267.1
Aroclor-1254	2	10.637	0.027	1582074	617.1	2	10.245	0.009	1050410	287.4
Aroclor-1254	3	10.762	0.010	1676780	331.3	3	10.941	0.008	1304334	218.8
Aroclor-1254	4	11.118	0.006	1595462	296.6	4	11.201	0.014	2500327	422.3
Aroclor-1254	5	11.818	0.009	1512146	297.8	5	11.960	0.001	3804230	865.2
Total Col1Ave (5 peaks):					355.3	Total Col2Ave (5 peaks):				412.2 RPD = 15
Corrected Ave (4 peaks):					289.9	Corrected Ave (4 peaks):				298.9 RPD = 3
Aroclor-1260	1	12.052	0.008	1090242	341.0	1	11.960	0.000	3804230	595.6
Aroclor-1260	2	12.367	0.006	718553	224.3	2	12.509	0.005	1310195	261.7
Aroclor-1260	3	12.742	0.011	2009124	260.1	3	12.783	0.008	2611258	251.8
Aroclor-1260	4	13.135	0.008	1093317	273.4	4	13.347	0.013	2963188	432.0
Aroclor-1260	5	13.315	0.008	1732451	906.7	NS	---			----
Total Col1Ave (5 peaks):					401.1	Total Col2Ave (4 peaks):				385.3 RPD = 4
Corrected Ave (4 peaks):					274.7	Corrected Ave (3 peaks):				315.2 RPD = 14
Aroclor-1262	1	12.367	0.010	718553	190.2	1	12.509	-0.007	1310195	225.6
Aroclor-1262	2	12.742	0.013	2009124	198.5	2	12.783	-0.004	2611258	195.0
Aroclor-1262	3	13.135	0.008	1093317	334.8	3	13.286	-0.005	1577985	308.6
Aroclor-1262	4	13.315	0.010	1732451	455.3	4	13.347	-0.002	2963188	353.4
Aroclor-1262	5	13.890	0.003	1855012	556.0	5	13.969	-0.005	1583442	343.2
Total Col1Ave (5 peaks):					347.0	Total Col2Ave (5 peaks):				285.2 RPD = 20
Corrected Ave (4 peaks):					294.7	Corrected Ave (4 peaks):				268.1 RPD = 9
Aroclor-1268	1	13.249	0.014	2216678	202.9	1	13.286	-0.004	1577985	117.8

Aroclor-1268	2	13.315	0.012	1732451	170.0	2	13.347	-0.005	2963188	233.1
Aroclor-1268	3	13.667	0.019	581792	67.4	3	13.692	-0.006	2325320	226.8
Aroclor-1268	4	14.294	0.008	1200445	45.5	4	14.343	-0.005	1206885	35.9

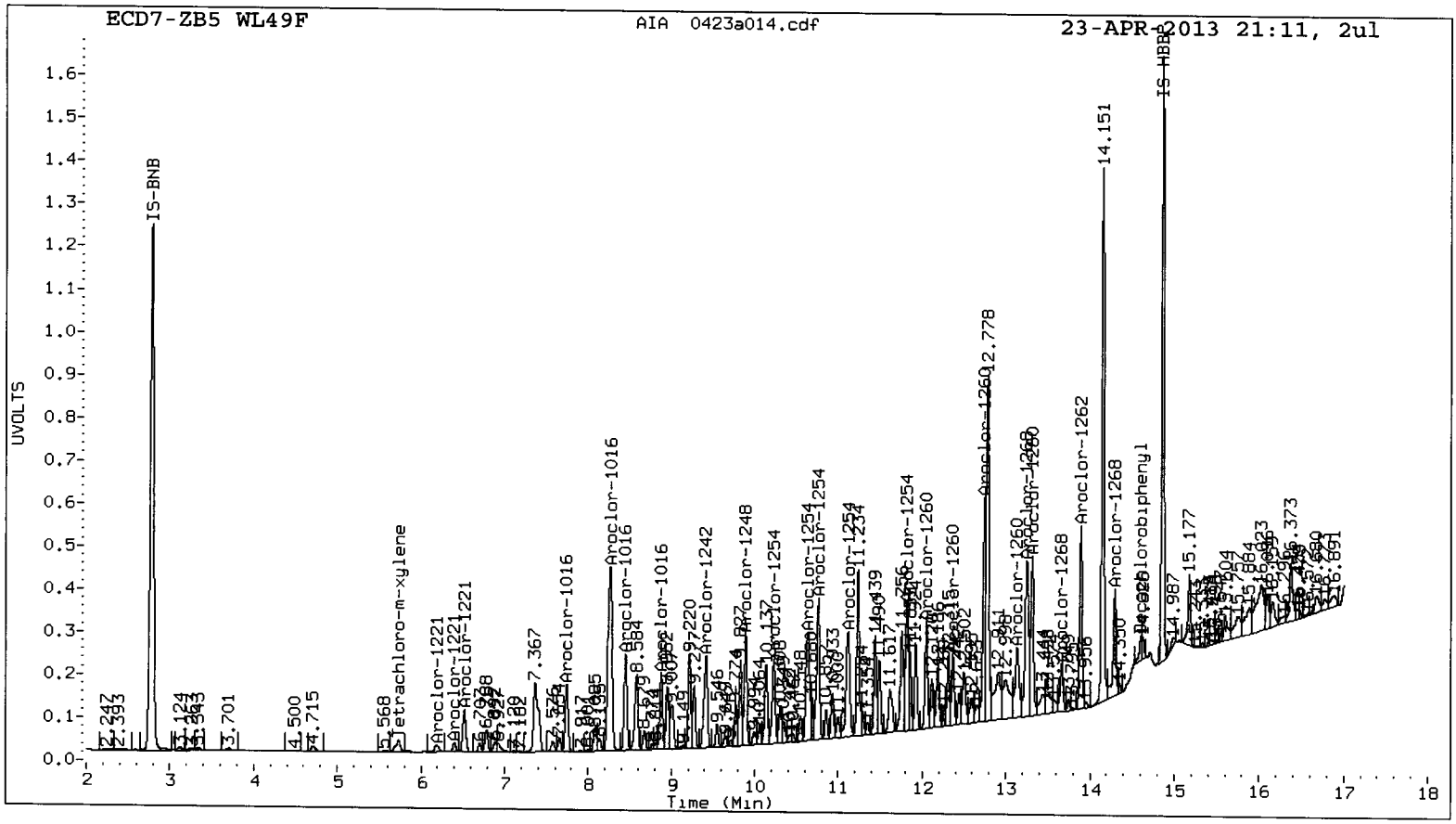
Total Col1Ave (4 peaks): 121.5 Total Col2Ave (4 peaks): 153.4 RPD = 23

Corrected Ave (3 peaks): 94.3 Corrected Ave (3 peaks): 126.8 RPD = 29

Total PCB Area Col1 (5.829 - 14.492) = 64118329 Col1 Total PCB = 1.3 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 75438035 Col2 Total PCB = 1.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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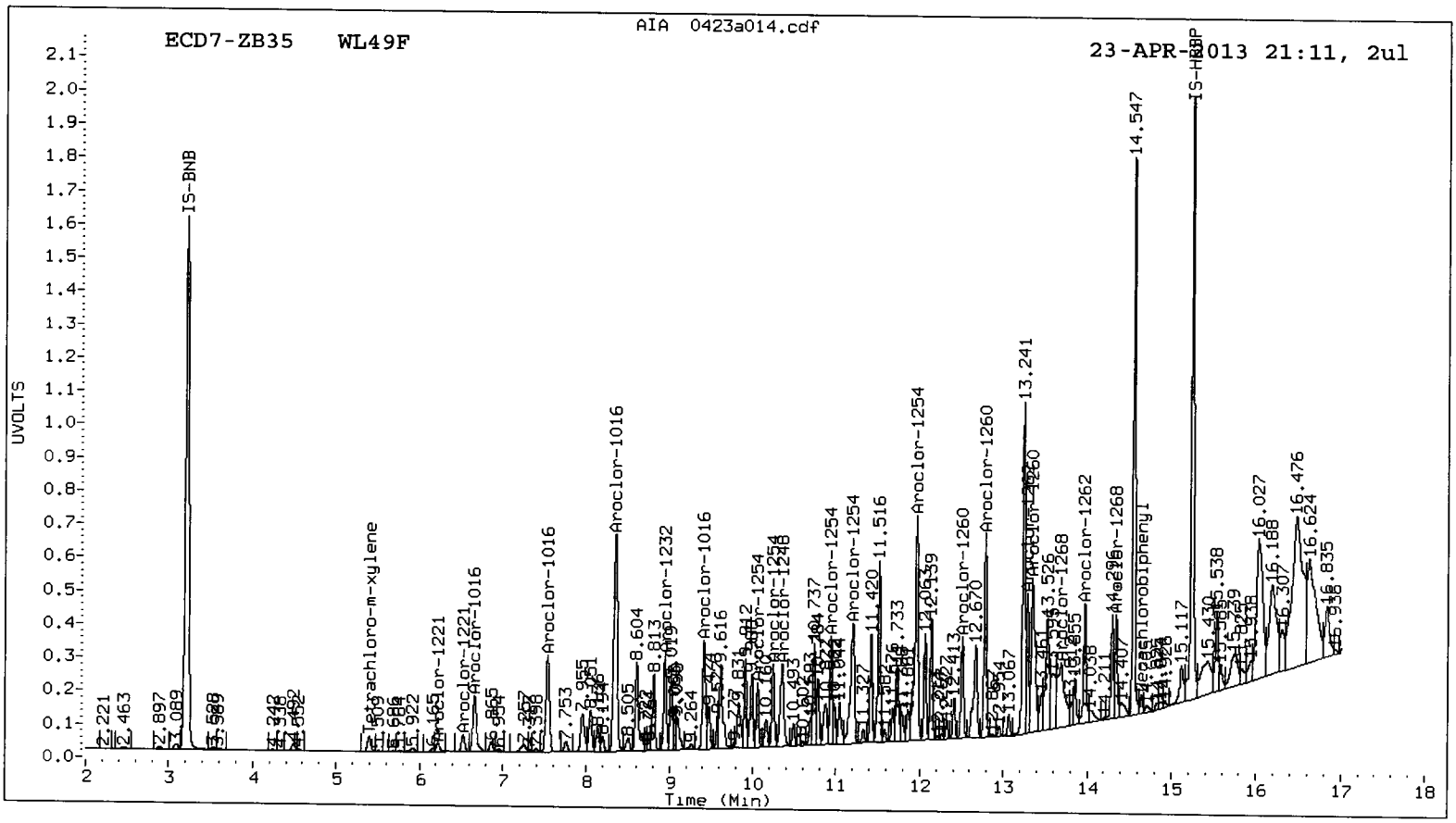
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1242
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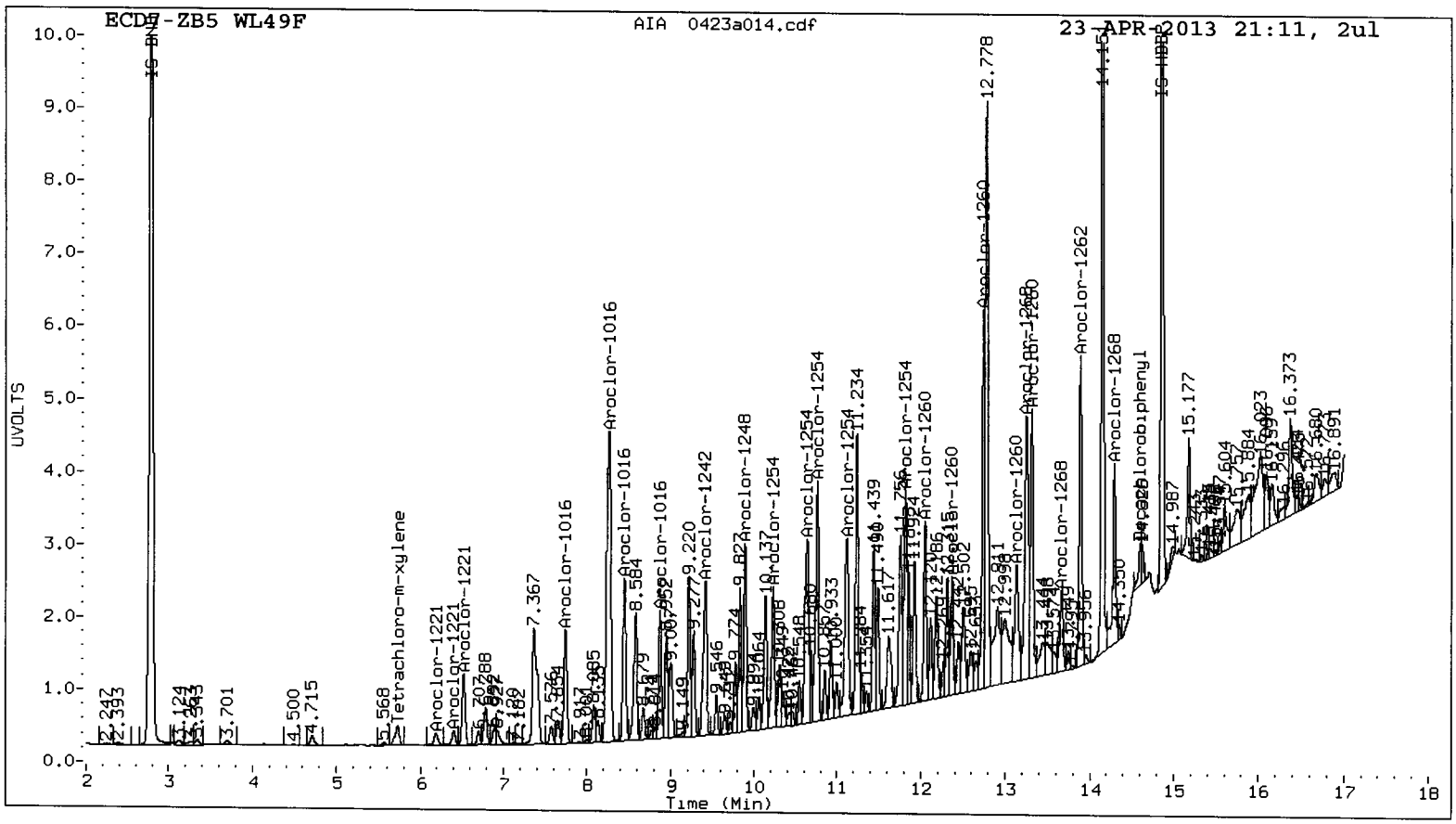
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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23-APR-2013 21:11, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
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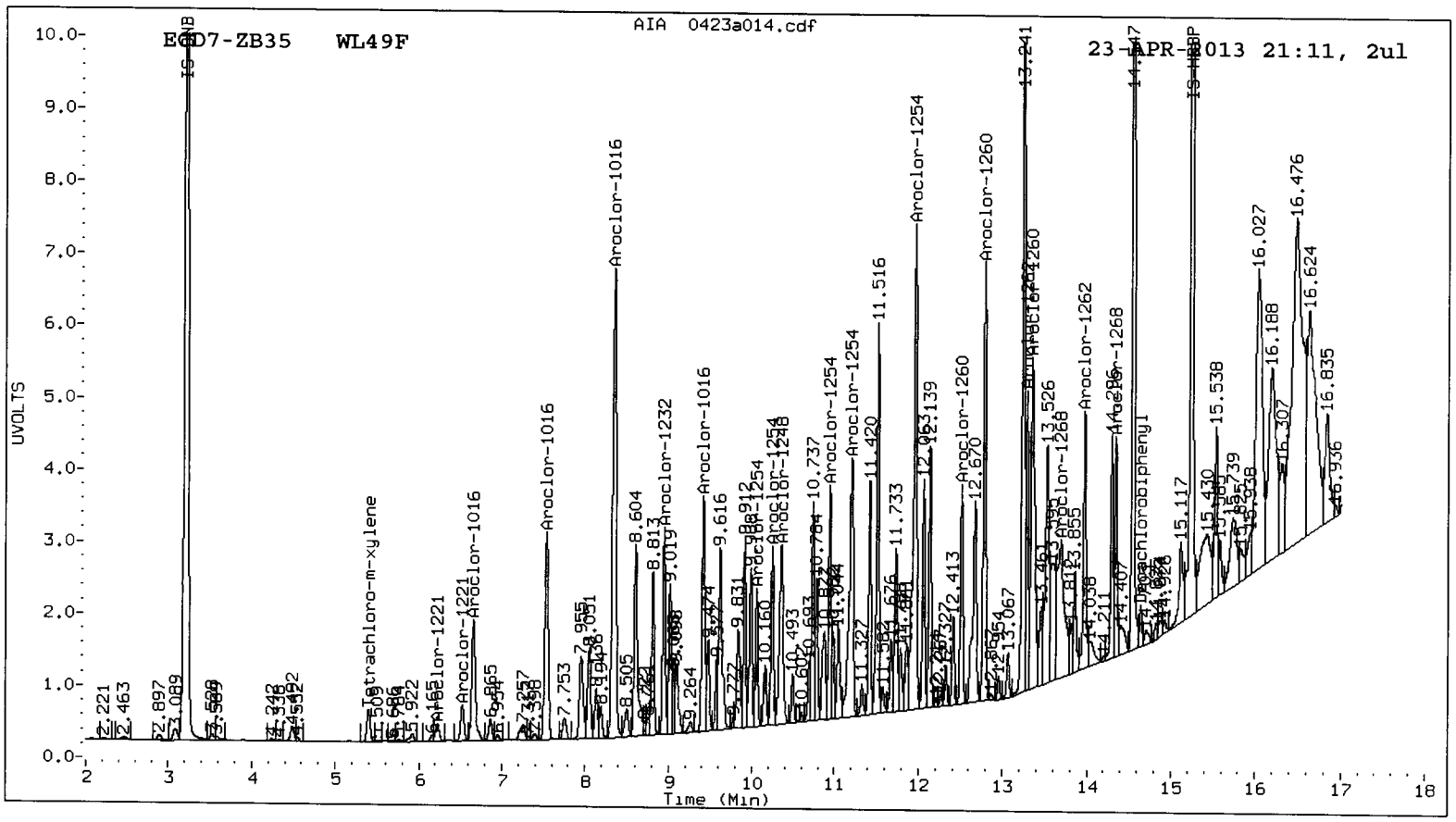
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a019.d
Data file 2: 20130416.b/0423-2.b/0423a019.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 23-APR-2013 23:01
Report Date: 04/24/2013 09:07
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.728	-0.002	2035991	5.393	-0.001	2830509	22.4	21.3	5.0	Tetrachloro-m-xylene
14.593	0.001	1388866	14.639	0.000	1814603	19.5	25.5	26.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	56.0	53.2
Decachlorobiphenyl	48.8	63.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7314104	30.8
Hexabromobiphenyl	4375297	4667881	6.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9906194	16.2
Hexabromobiphenyl	6077527	6215952	2.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.249	0.000	996770	250.1	1	7.528	0.000	502645	248.3
Aroclor-1248	2	8.871	0.000	636798	251.1	2	8.338	0.000	1316194	252.8
Aroclor-1248	3	9.411	0.000	884435	251.0	3	8.941	0.000	947620	255.2
Aroclor-1248	4	9.882	0.000	1119778	238.6	4	10.350	0.000	1246280	247.1

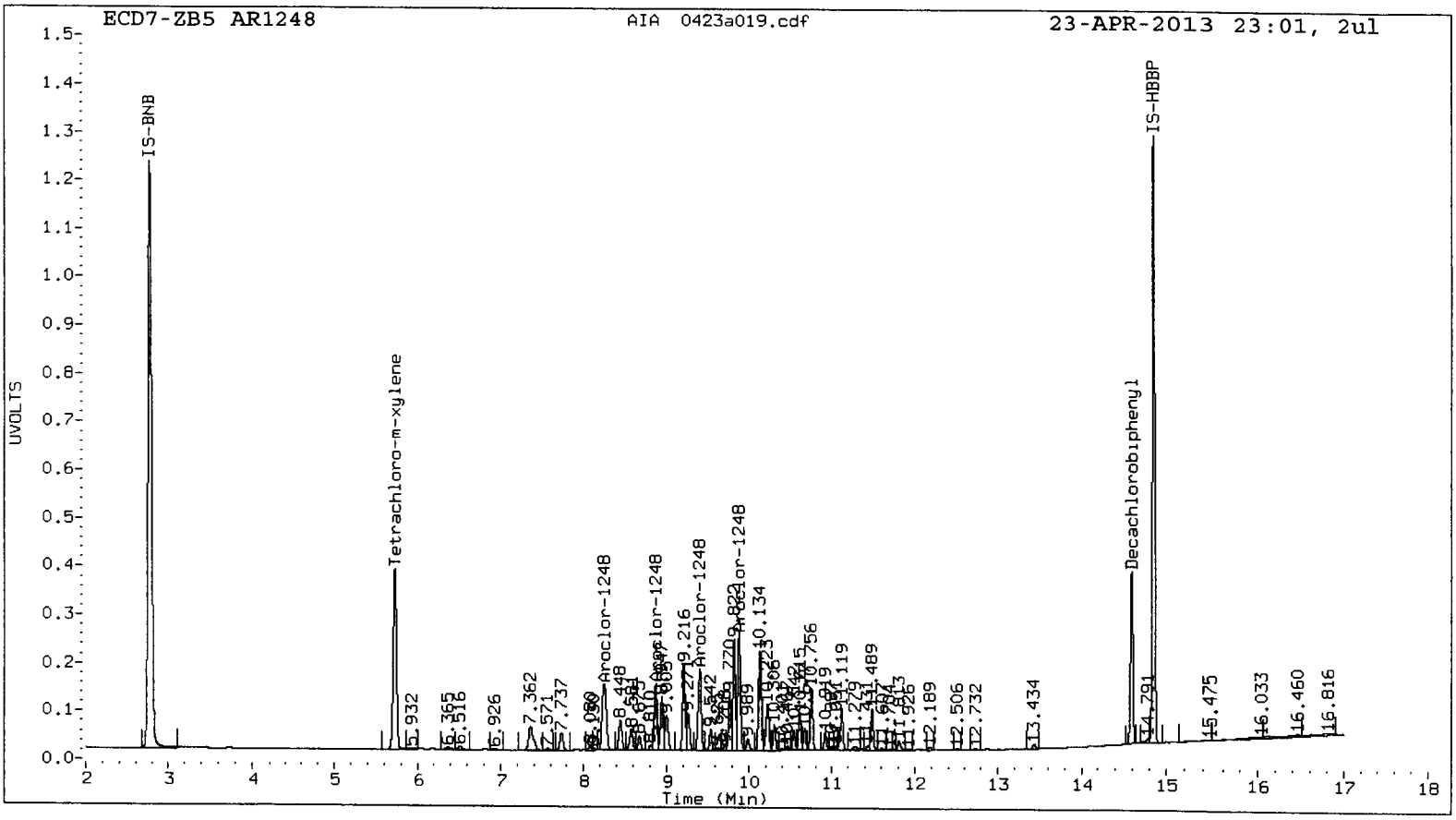
Total Col1Ave (4 peaks): 247.7 Total Col2Ave (4 peaks): 250.9 RPD = 1

Corrected Ave (3 peaks): 246.6 Corrected Ave (3 peaks): 249.4 RPD = 1

Total PCB Area Col1 (5.829 - 14.492) = 13116503 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 17269256 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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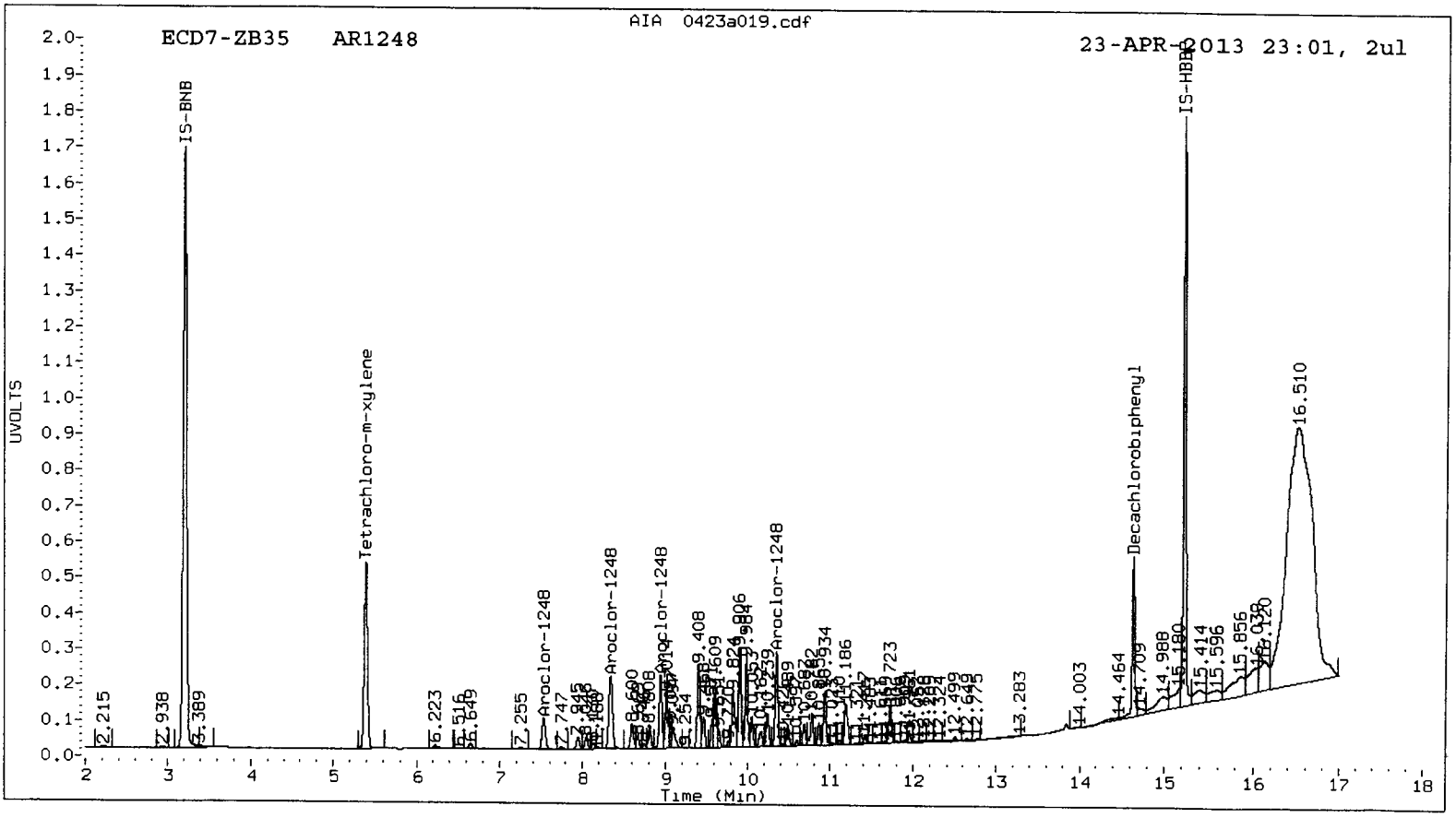
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
16.510
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130416.b/0423-1.b/0423a020.d
Data file 2: 20130416.b/0423-2.b/0423a020.d
Method: /chem2/ecd7.i/20130416.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 23-APR-2013 23:23
Report Date: 04/24/2013 09:07
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.729	0.000	1892604	5.394	0.000	2583776	20.5	19.6	4.9	Tetrachloro-m-xylene
14.592	0.000	1309813	14.639	0.000	1593050	17.8	22.9	24.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.3	48.9
Decachlorobiphenyl	44.5	57.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5591339	7411382	32.6
Hexabromobiphenyl	4375297	4822919	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	8525322	9841379	15.4
Hexabromobiphenyl	6077527	6076952	0.0

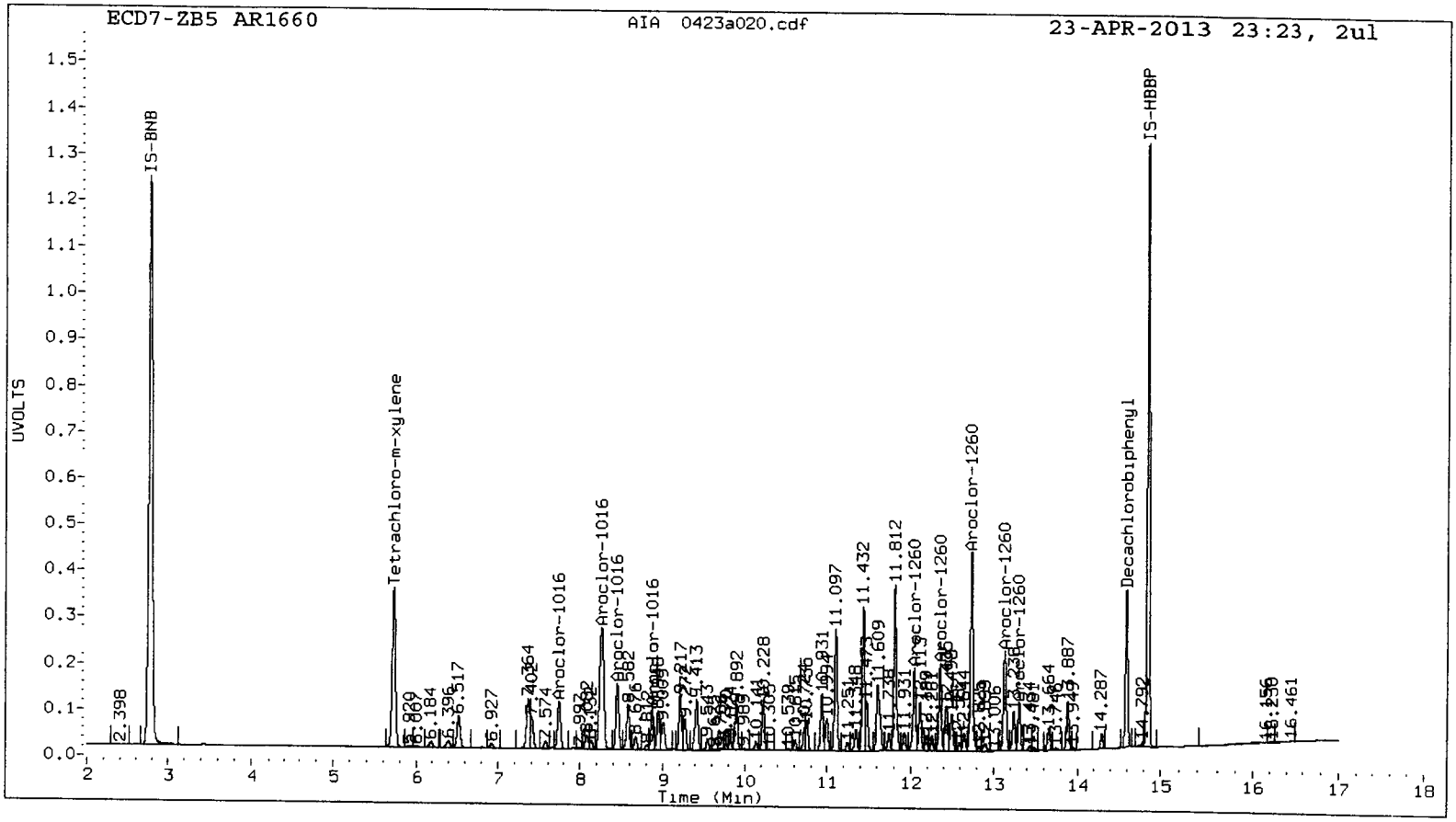
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-APR-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.740	0.000	538004	240.3	1	6.651	0.000	539896	235.4
Aroclor-1016	2	8.260	0.000	1879660	250.2	2	7.532	0.000	1177283	233.9
Aroclor-1016	3	8.446	0.000	722629	244.0	3	8.342	0.000	2322775	236.8
Aroclor-1016	4	8.873	0.000	412928	243.6	4	9.410	0.000	815740	264.3
Total Col1Ave (4 peaks):		244.5				Total Col2Ave (4 peaks):		242.6	RPD = 1	
Corrected Ave (3 peaks):		242.6				Corrected Ave (3 peaks):		235.4	RPD = 3	
Aroclor-1260	1	12.044	0.000	810966	273.5	1	11.960	0.000	1406137	277.3
Aroclor-1260	2	12.361	0.000	814054	274.0	2	12.504	0.000	1129320	284.1
Aroclor-1260	3	12.731	0.000	1961476	273.7	3	12.774	0.000	2275823	276.4
Aroclor-1260	4	13.127	0.000	1021520	275.4	4	13.334	0.000	1513019	277.8
Aroclor-1260	5	13.307	0.000	446066	251.7	NS	---			----
Total Col1Ave (5 peaks):		269.7				Total Col2Ave (4 peaks):		278.9	RPD = 3	
Corrected Ave (4 peaks):		268.2				Corrected Ave (3 peaks):		277.2	RPD = 3	

Total PCB Area Col1 (5.829 - 14.492) = 25030010 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.494 - 14.539) = 31928263 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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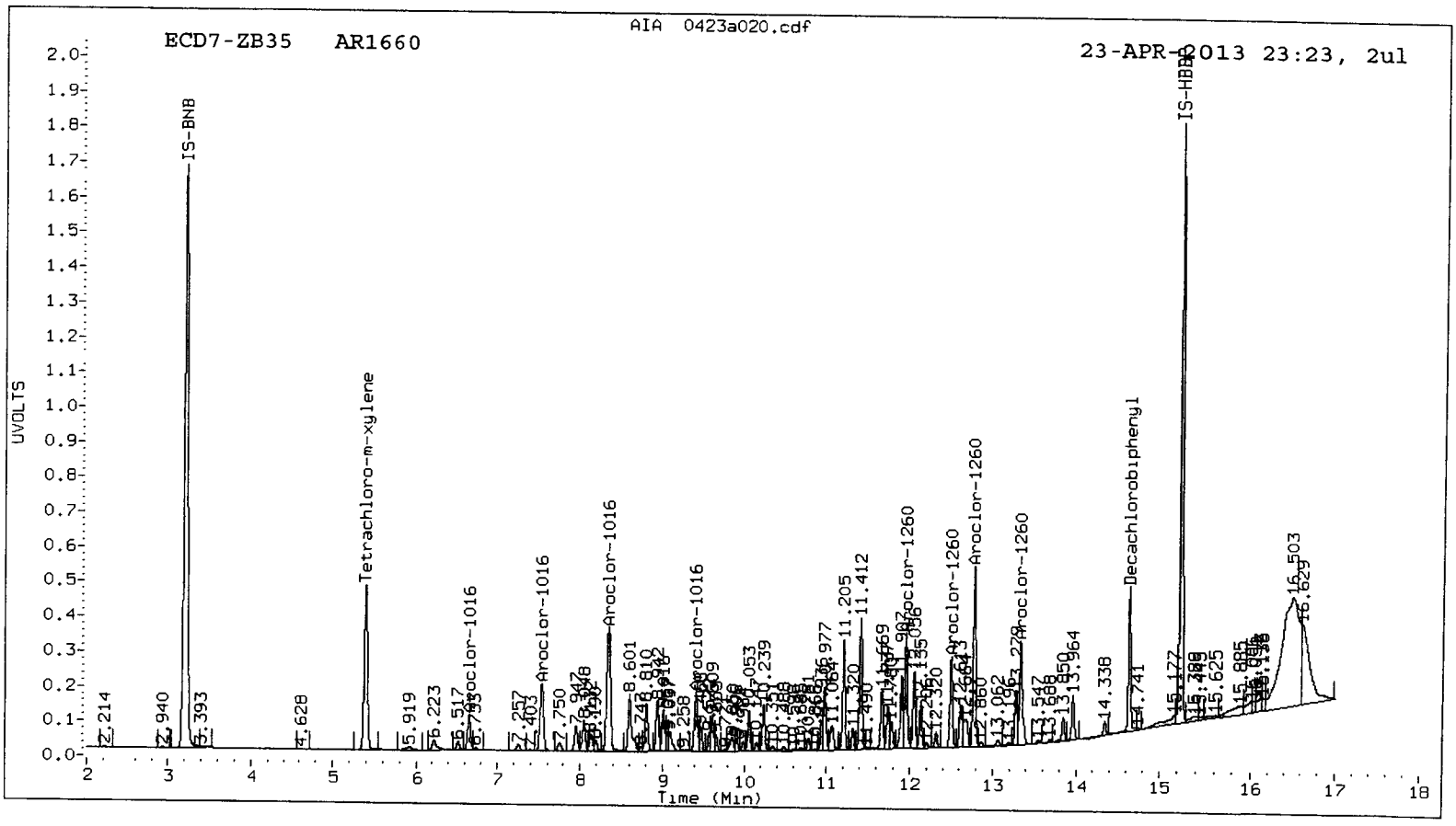
AIA 0423a020.cdf
23-APR-2013 23:23, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1660
AIA 0423a020.cdf
23-APR-2013 23:23, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WL49, WL65

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) WL49

Batch set up by: JH

Bottle #	ARI Sample I.D.	Verify Client ID	Weight ~~Or Volume~~ Extracted	~~Sonic Horn ID~~ + ~~Clnk~~	~~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
	WL49													
	MB	Date M	10.00g									10 mL	1 mL	
	SB	4/17/13	10.00g											
	~~SB Dup.~~													
	~~QLS~~													
8	WL49F	checked	10.24											
8	Fms		10.16											
8	Fmsd		10.27											
														SP 4/19/13
Analyst/Date:		M 4/17/13									SP 4/19/13	SP 4/19/13	SP 4/19/13	

Standard Conc.	Standard ID	Volume	Expiration Date	Analyst	Witness
HxID Surrogate 2,354	P (2031-4)	200 µL	10/24/13	M	SP
Spike		µL			
TPHD Spike 15,000	11 (2028-3)	1,000 µL	10/16/13	M	SP
Spike		µL			
~~QLS Spike~~		µL			

Extraction Time: 1210 **Balance ID:** ~~B146462~~ B14426/14 4/19/13 **Liq/Liq Start:** **Liq/Liq Stop:**

SPECIAL INSTRUCTIONS:

3057F

Revision 06
12/23/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WL49 Client ID:
Analyst: VD Date: 4/20/13

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
F	10	DCM	490	50X				
FMS, FMSD	10	"	"	"				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WL49 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)= 9.1	AC 4-12-13
☐ Standing Water Homogenized (Shared samples)=	↓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? 30% small-med. = g	
☐ Organics (Leaves/sticks/grass)= 10% = sticks = g AC 4-12-13	
☐ 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). Extracted	
(Centrifuge#1 used for all Centrifugations) Sample to a 10 mL final volume,	
based on sample pre-screen.	JL 4/16/13

TPHD Raw Data
Initial Calibration

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 3/22/13 Internal Standard ID N/A Expiration N/A

Endrin/DDT Breakdown <15%? YES / NO / NA		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	2021-3	4/9/13	Diesel/Ak102	2043-1	10/20/13
~~Motor Oil~~	~~2041-4~~	~~11/12~~	~~Motor Oil~~	~~2043-2~~	
RT	2043-4	10/22/13			
JB	2043-3	10/22/13			

Detail problems, corrective actions and/or other pertinent information below:

Modi for IT Diesel (Cal Diesel)

Analyst: JW **Date:** 4/18/13

Reviewer: [signature] **Date:** 4/18/13

WI 49:01768

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130322.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0322b005	0322b006	0322b007	0322b008	0322b009	0322b010
INJ.DATE:	22-MAR-2013	22-MAR-2013	22-MAR-2013	22-MAR-2013	22-MAR-2013	22-MAR-2013
INJ.TIME:	12:48	13:07	13:27	13:46	14:05	14:25

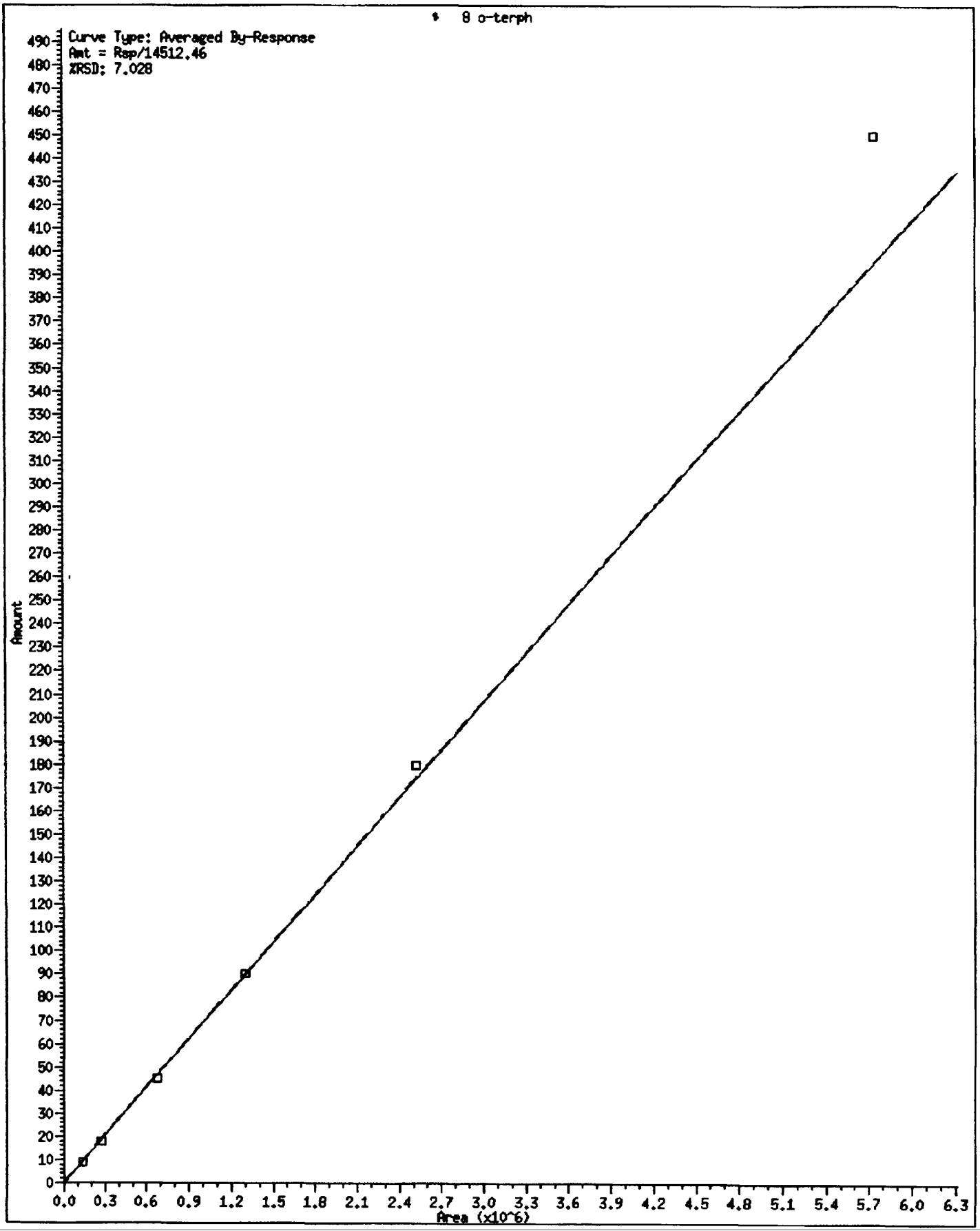
	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	0.812	0.810	0.812	0.811	0.826	0.815	0.815	0.715-0.915	0.814	0.006
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.974	0.967	0.968	0.969	0.985	0.949	0.949	0.849-1.049	0.969	0.012
	3 C10	2.334	2.336	2.337	2.339	2.339	2.347	2.347	2.297-2.397	2.339	0.005
	4 C12	3.099	3.099	3.099	3.115	3.101	3.107	3.107	3.057-3.157	3.103	0.006
	5 C14	3.689	3.687	3.688	3.691	3.690	3.685	3.685	3.635-3.735	3.688	0.002
	6 C16	4.188	4.193	4.192	4.193	4.197	4.185	4.185	4.135-4.235	4.191	0.004
	7 C18	4.648	4.647	4.649	4.652	4.652	4.639	4.639	4.589-4.689	4.648	0.005
$	8 o-terph	4.736	4.737	4.744	4.750	4.759	4.778	4.778	4.728-4.828	4.751	0.016
	9 C20	5.070	5.070	5.067	5.064	5.066	5.071	5.071	5.021-5.121	5.068	0.003
	10 C22	5.468	5.467	5.467	5.464	5.461	5.465	5.465	5.415-5.515	5.465	0.003
	11 C24	5.830	5.834	5.833	5.838	5.836	5.834	5.834	5.784-5.884	5.834	0.003
	12 C25	6.004	6.010	6.007	6.015	6.017	6.010	6.010	5.960-6.060	6.011	0.005
	13 C26	6.187	6.188	6.189	6.191	6.189	6.192	6.192	6.142-6.242	6.189	0.002
	14 C28	6.508	6.506	6.497	6.497	6.497	6.500	6.500	6.450-6.550	6.501	0.005
$	15 Triacon Surr	6.793	6.795	6.791	6.798	6.791	6.792	6.792	6.742-6.842	6.793	0.003
	16 C32	7.044	7.048	7.042	7.047	7.045	7.053	7.053	7.003-7.103	7.047	0.004

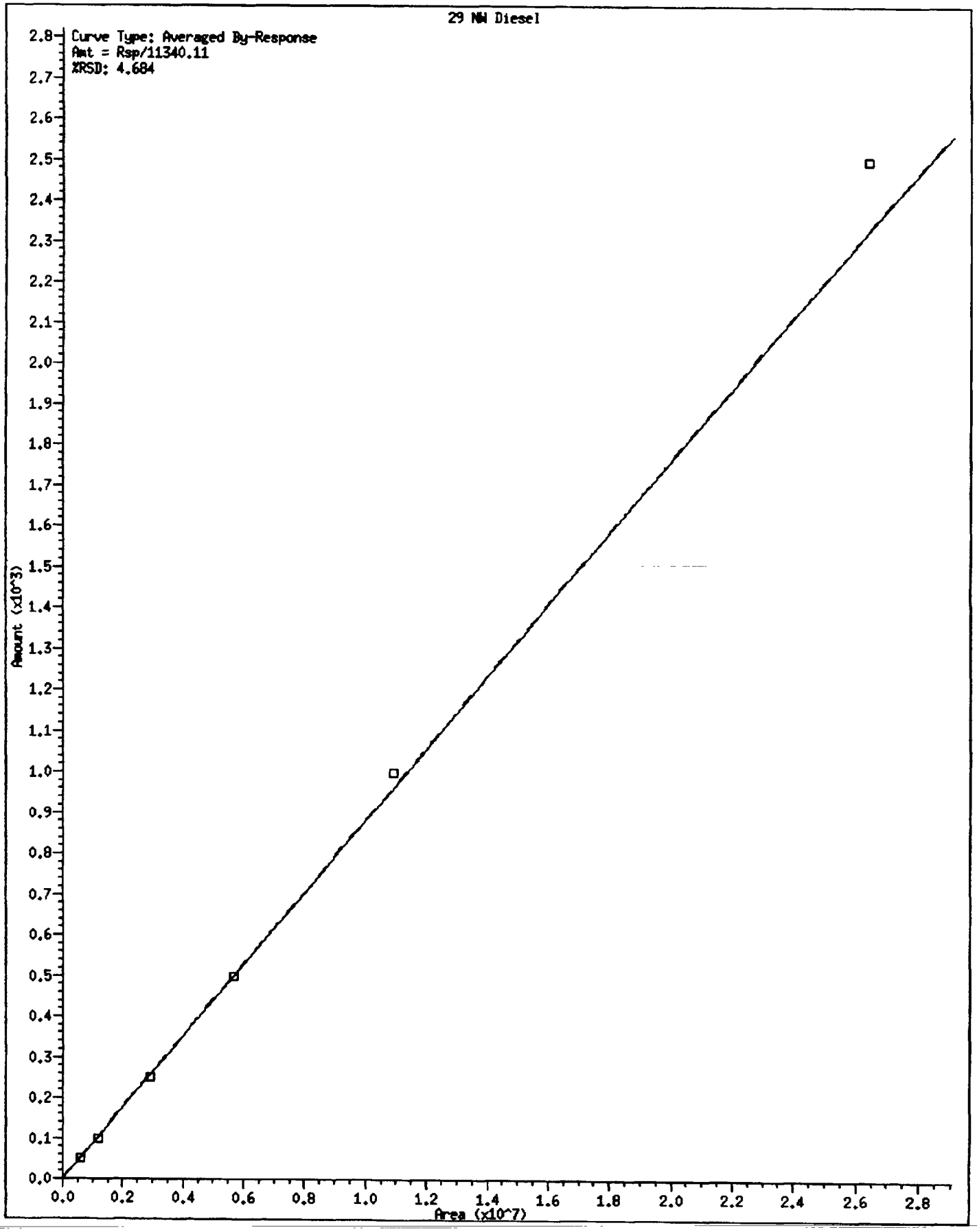
Reviewer 1 _____ Date: 3/25/13
Reviewer 2 _____ Date: 3/26/13

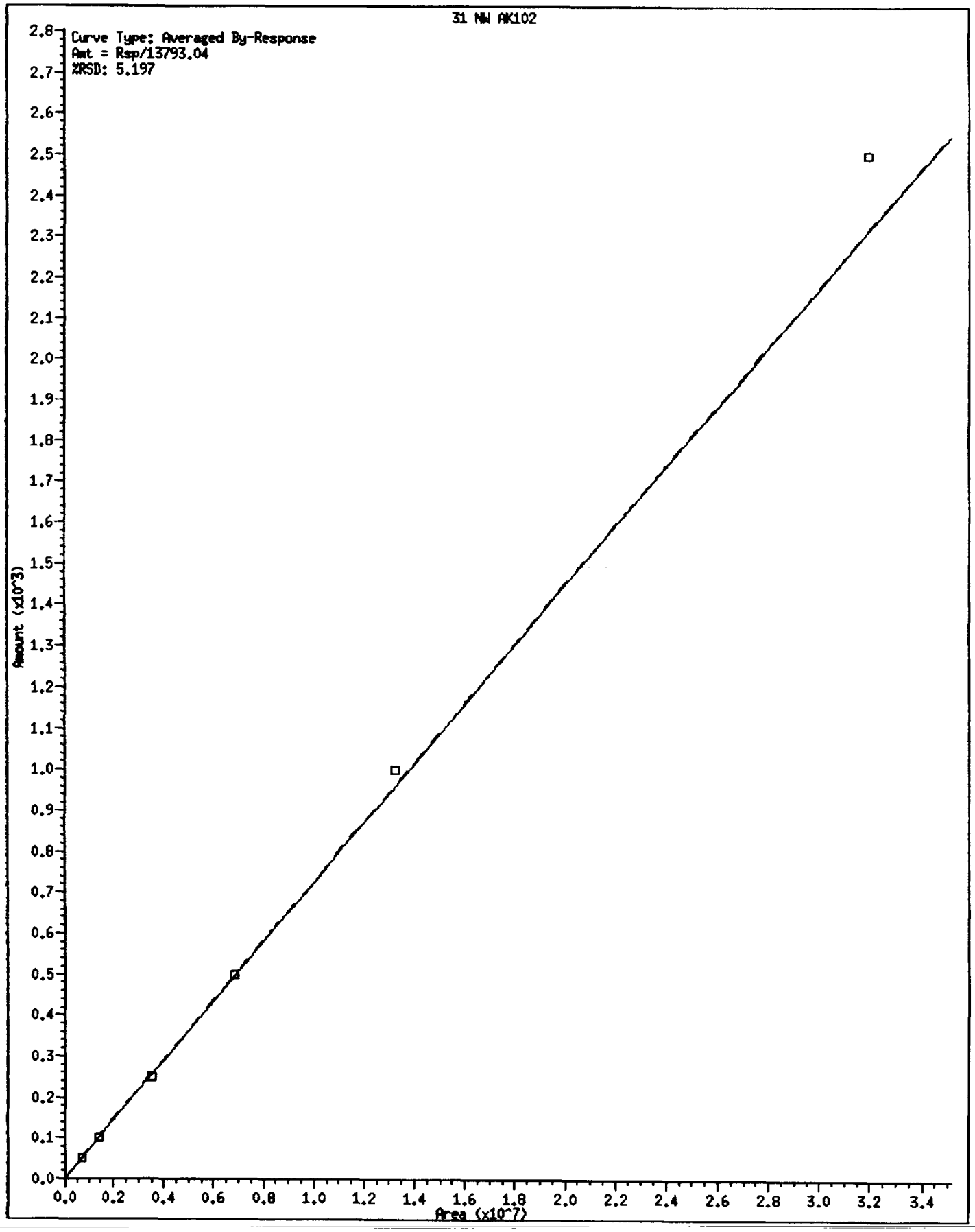
Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130322.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.282	7.283	7.284	7.281	7.285	7.282	7.282	7.232-7.332	7.283	0.001
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.500	7.499	7.501	7.499	7.503	7.497	7.497	7.447-7.547	7.500	0.002
20 C38	7.706	7.704	7.716	7.705	7.709	7.712	7.712	7.662-7.762	7.709	0.005
21 C40	7.899	7.902	7.899	7.901	7.898	7.903	7.903	7.853-7.953	7.900	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/14512.46
%RSD: 7.028
Amount
Area (x10^6)
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/11340.11
%RSD: 4.684
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/13793.04
%RSD: 5.197
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4

6a

DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130322

Instrument: FID3B.I Project:

Calibration Date: 22-MAR-2013 SDG No.: 20130322

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

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

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

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

FORM VI-Diesel

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130322.b

ARI Job No.: RT03 Method: i/20130322.b/ftphfid3b.m Instrument: fid3b.i Date: 22-MAR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1209	0322b003.d	RT0322		1	Toluene,
1229	0322b004.d	IB0322		1	NO MANUAL INTEGRATION
1248	0322b005.d	DIESEL50		1	o-terph,
1307	0322b006.d	DIESEL100		1	o-terph,
1327	0322b007.d	DIESEL250		1	o-terph,
1346	0322b008.d	DIESEL500		1	o-terph,
1405	0322b009.d	DIESEL1000		1	o-terph,
1425	0322b010.d	DIESEL2500		1	o-terph,
1444	0322b011.d	DIESELICV250		1	o-terph,
1504	0322b012.d	MOIL100		1	Triacon Surr,
1523	0322b013.d	MOIL250		1	Triacon Surr,
1543	0322b014.d	MOIL500		1	Triacon Surr,
1602	0322b015.d	MOIL1000		1	Triacon Surr,
1622	0322b016.d	MOIL2500		1	Triacon Surr,
1641	0322b017.d	MOIL5000		1	Triacon Surr,
1701	0322b018.d	MOILICV500		1	Triacon Surr,

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ARI

SDG No.: 20130322 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.76 TRIAC: 6.79

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

QC LIMITS

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

* Values outside of QC limits.

FORM VIII TPH

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 3/22/13 Analysis: TPHD Analyst: JV

GC Program: TPHD3 Column No: 1022005 Column Type: RTX-1

Instrument Tune (.U or .CT.): ——— EM Voltage: ———

Calibration File: ——— Curve Date: 3/22/13

IS/SS	Ical/Ccal	LCS/ICV
	2043-3,4	2043-1,2
	2041-3	
	2041-4	

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130322.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	22-MAR-2013 11:31	0322b001.d	1	RINSE	
2	22-MAR-2013 11:50	0322b002.d	1	RINSE	
3	22-MAR-2013 12:09	0322b003.d	1	RT0322	
4	22-MAR-2013 12:29	0322b004.d	1	IB0322	
5	22-MAR-2013 12:48	0322b005.d	1	DIESEL50	
6	22-MAR-2013 13:07	0322b006.d	1	DIESEL100	
7	22-MAR-2013 13:27	0322b007.d	1	DIESEL250	
8	22-MAR-2013 13:46	0322b008.d	1	DIESEL500	
9	22-MAR-2013 14:05	0322b009.d	1	DIESEL1000	
10	22-MAR-2013 14:25	0322b010.d	1	DIESEL2500	
11	22-MAR-2013 14:44	0322b011.d	1	DIESELICV250	
12	22-MAR-2013 15:04	0322b012.d	1	MOIL100	
13	22-MAR-2013 15:23	0322b013.d	1	MOIL250	
14	22-MAR-2013 15:43	0322b014.d	1	MOIL500	
15	22-MAR-2013 16:02	0322b015.d	1	MOIL1000	
16	22-MAR-2013 16:22	0322b016.d	1	MOIL2500	
17	22-MAR-2013 16:41	0322b017.d	1	MOIL5000	
18	22-MAR-2013 17:01	0322b018.d	1	MOILICV500	
19	22-MAR-2013 17:20	0322b019.d	1	AK102#1	
20	22-MAR-2013 17:39	0322b020.d	1	WI13MBW1	
21	22-MAR-2013 17:59	0322b021.d	1	WI13LCSW1	
22	22-MAR-2013 18:18	0322b022.d	1	WI13LCSDW1	
23	22-MAR-2013 18:37	0322b023.d	1	WI13QLS	
24	22-MAR-2013 18:56	0322b024.d	1	WI13A	
25	22-MAR-2013 19:14	0322b025.d	1	WI13B	
26	22-MAR-2013 19:33	0322b026.d	1	WI13F	
27	22-MAR-2013 19:52	0322b027.d	1	AK102#1	

3/25/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b005.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL50
Client ID:
Injection: 22-MAR-2013 12:48
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.812	0.036	8469	6024	WATPHG	(Tol-C12)	368833	13.59
C8	0.974	0.003	4480	2040	WATPHD	(C12-C24)	597112	52.65
C10	2.334	-0.009	6325	4784	WATPHM	(C24-C38)	25770	2.92
C12	3.099	-0.013	10154	7771	AK102	(C10-C25)	737045	53.44 M
C14	3.689	-0.003	4355	1922	AK103	(C25-C36)	16093	2.20
C16	4.188	-0.004	4819	2921	OR.DIES	(C10-C28)	739262	48.06 M
C18	4.648	0.005	8928	7883				
C20	5.070	0.004	2627	1345				
C22	5.468	0.003	1277	987				
C24	5.830	-0.005	361	243				
C25	6.004	-0.006	185	121				
C26	6.187	0.001	235	186				
C28	6.508	0.006	27	9	IT.DIES	(C10-C24)	736025	53.38
C32	7.044	-0.001	154	63				
C34	7.282	0.000	300	203				
Filter Peak	----							
C36	7.500	0.000	494	126	BUNKERC	(C10-C38)	761795	155.32
o-terph	4.736	-0.023	260701	139434	JET-A	(C10-C18)	582561	40.46
Triacon Surr	6.793	0.000	79	9				

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	139434	9.6	21.4
Triacontane	9	0.0	0.0

JW 4/18/13

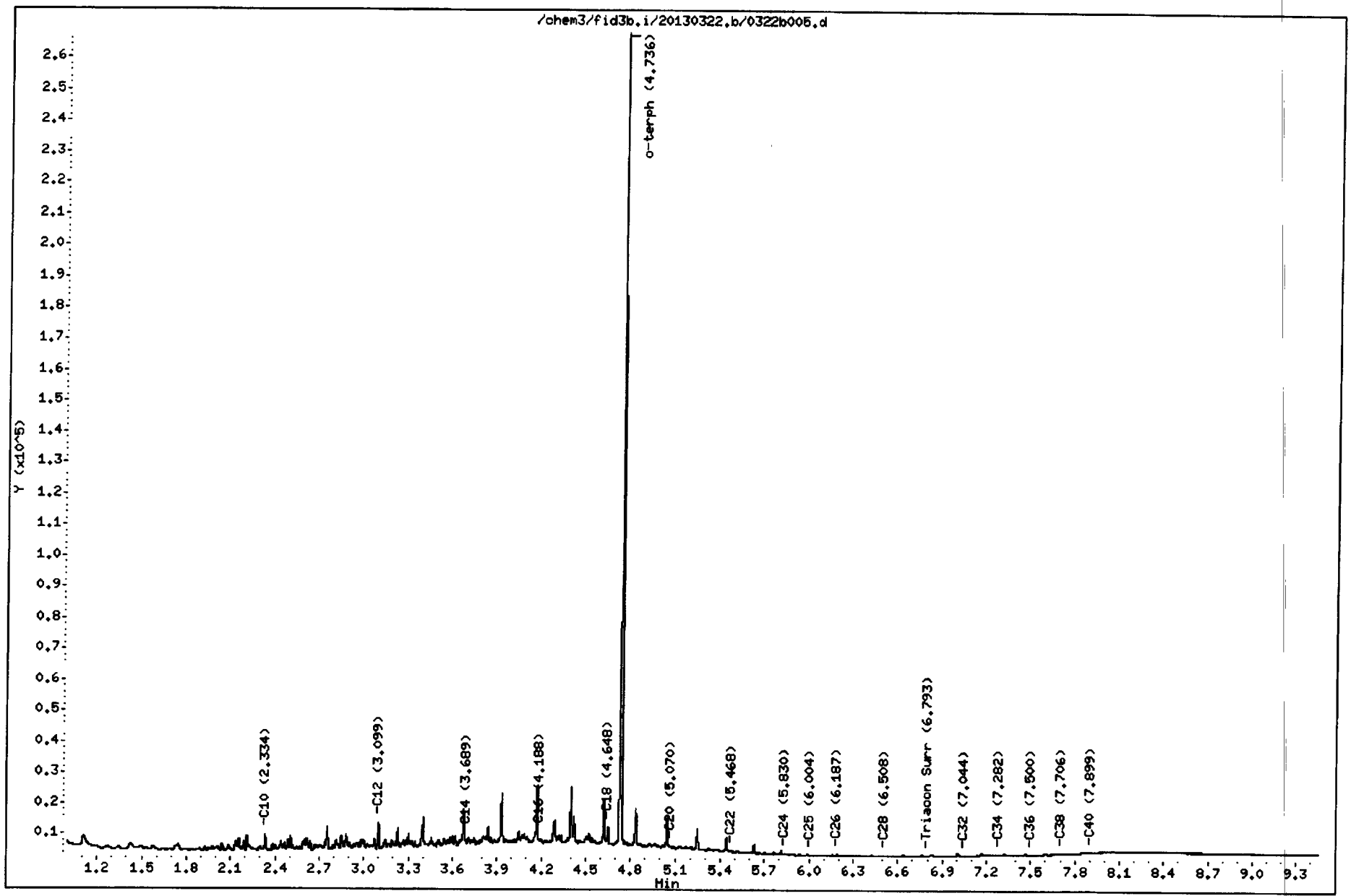
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130322.b/0322b005.d
Date : 22-MAR-2013 12:48
Client ID:
Sample Info: DIESEL50

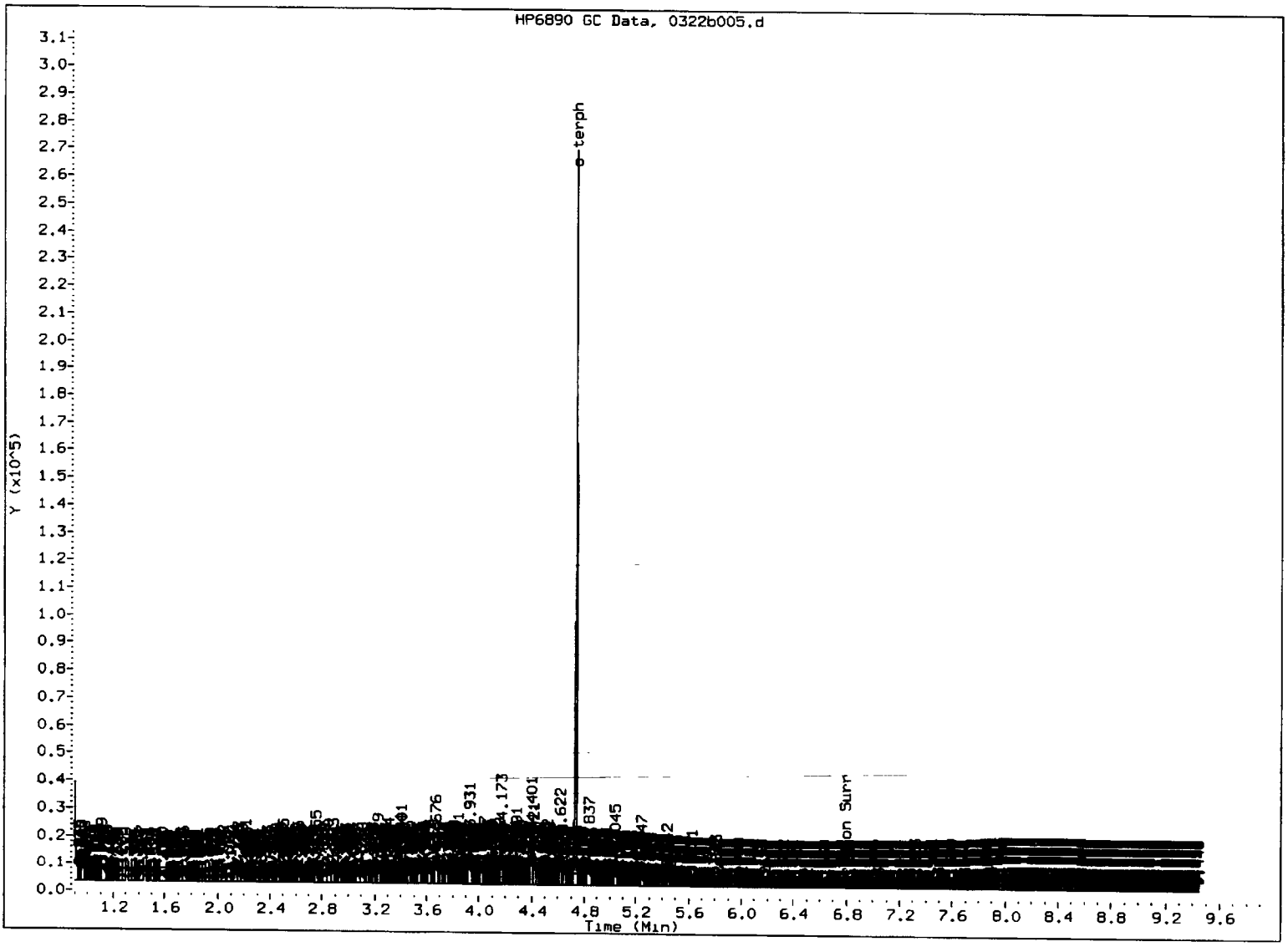
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL50 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b006.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL100
Client ID:
Injection: 22-MAR-2013 13:07
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.810	0.034	9094	6093	WATPHG	(Tol-C12)	587046	21.64
C8	0.967	-0.004	5320	6783	WATPHD	(C12-C24)	1174474	103.57
C10	2.336	-0.007	12139	9924	WATPHM	(C24-C38)	28868	3.27
C12	3.099	-0.013	20472	14980	AK102	(C10-C25)	1440235	104.42 M
C14	3.687	-0.005	8884	5031	AK103	(C25-C36)	18604	2.54
C16	4.193	0.001	9776	6677	OR.DIES	(C10-C28)	1445192	93.95 M
C18	4.647	0.003	17109	17917				
C20	5.070	0.004	5110	1906				
C22	5.467	0.002	2542	1500				
C24	5.834	-0.001	731	572				
C25	6.010	0.000	377	427				
C26	6.188	0.002	485	438				
C28	6.506	0.004	33	6	IT.DIES	(C10-C24)	1438229	104.30
C32	7.048	0.003	135	31				
C34	7.283	0.001	270	128				
Filter Peak	----							
C36	7.499	0.000	471	181	BUNKERC	(C10-C38)	1467098	299.11
o-terph	4.737	-0.022	510693	275405	JET-A	(C10-C18)	1132431	78.65
Triacon Surr	6.795	0.002	74	21				

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	275405	19.0	42.2
Triacontane	21	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

JCO 4/18/13

WL 19:01782

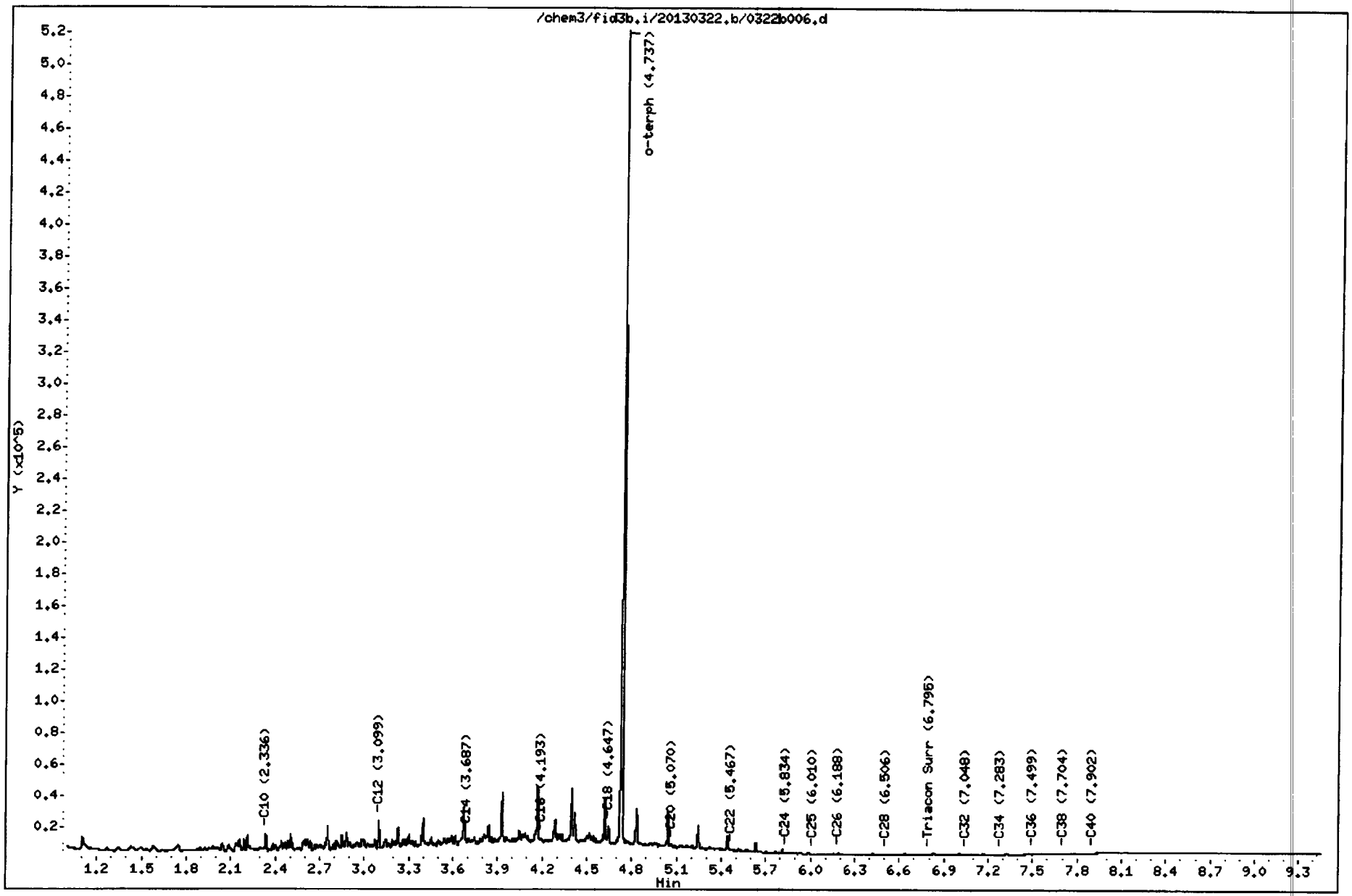
Data File: /chem3/fid3b.i/20130322.b/0322b006.d
Date : 22-MAR-2013 13:07
Client ID:
Sample Info: DIESEL100

Column phase: RTX-1

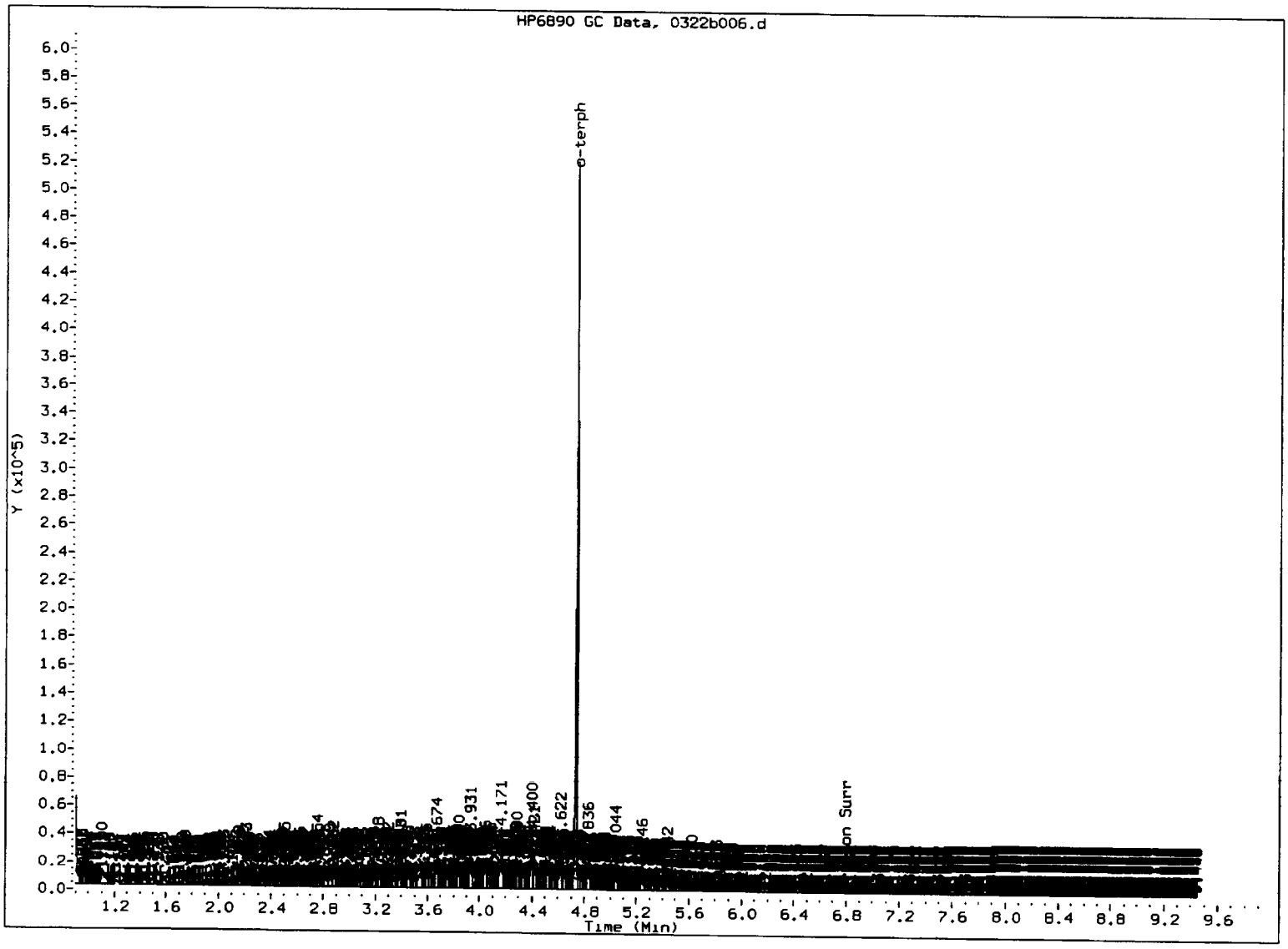
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/15/13



FID:3B-2C/RTX-1 DIESEL100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b007.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL250
Client ID:
Injection: 22-MAR-2013 13:27
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.812	0.036	10179	7141	WATPHG	(Tol-C12)	1217915	44.89
C8	0.968	-0.003	6711	8383	WATPHD	(C12-C24)	2894312	255.23
C10	2.337	-0.005	26098	22838	WATPHM	(C24-C38)	36063	4.08
C12	3.099	-0.013	47515	36530	AK102	(C10-C25)	3515372	254.87 M
C14	3.688	-0.005	21568	11811	AK103	(C25-C36)	23437	3.20
C16	4.192	0.000	24402	24894	OR.DIES	(C10-C28)	3527165	229.30 M
C18	4.649	0.005	40768	45572				
C20	5.067	0.001	13990	14480				
C22	5.467	0.002	6272	4062				
C24	5.833	-0.002	1780	754				
C25	6.007	-0.003	950	952				
C26	6.189	0.003	650	663				
C28	6.497	-0.005	120	80	IT.DIES	(C10-C24)	3510230	254.57
C32	7.042	-0.002	98	28				
C34	7.284	0.001	227	35				
Filter Peak	----							
C36	7.501	0.002	406	54	BUNKERC	(C10-C38)	3546293	723.02
o-terph	4.744	-0.015	1012058	677069	JET-A	(C10-C18)	2754868	191.32
Triacon Surr	6.791	-0.002	45	7				

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	677069	46.7	103.7
Triacontane	7	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

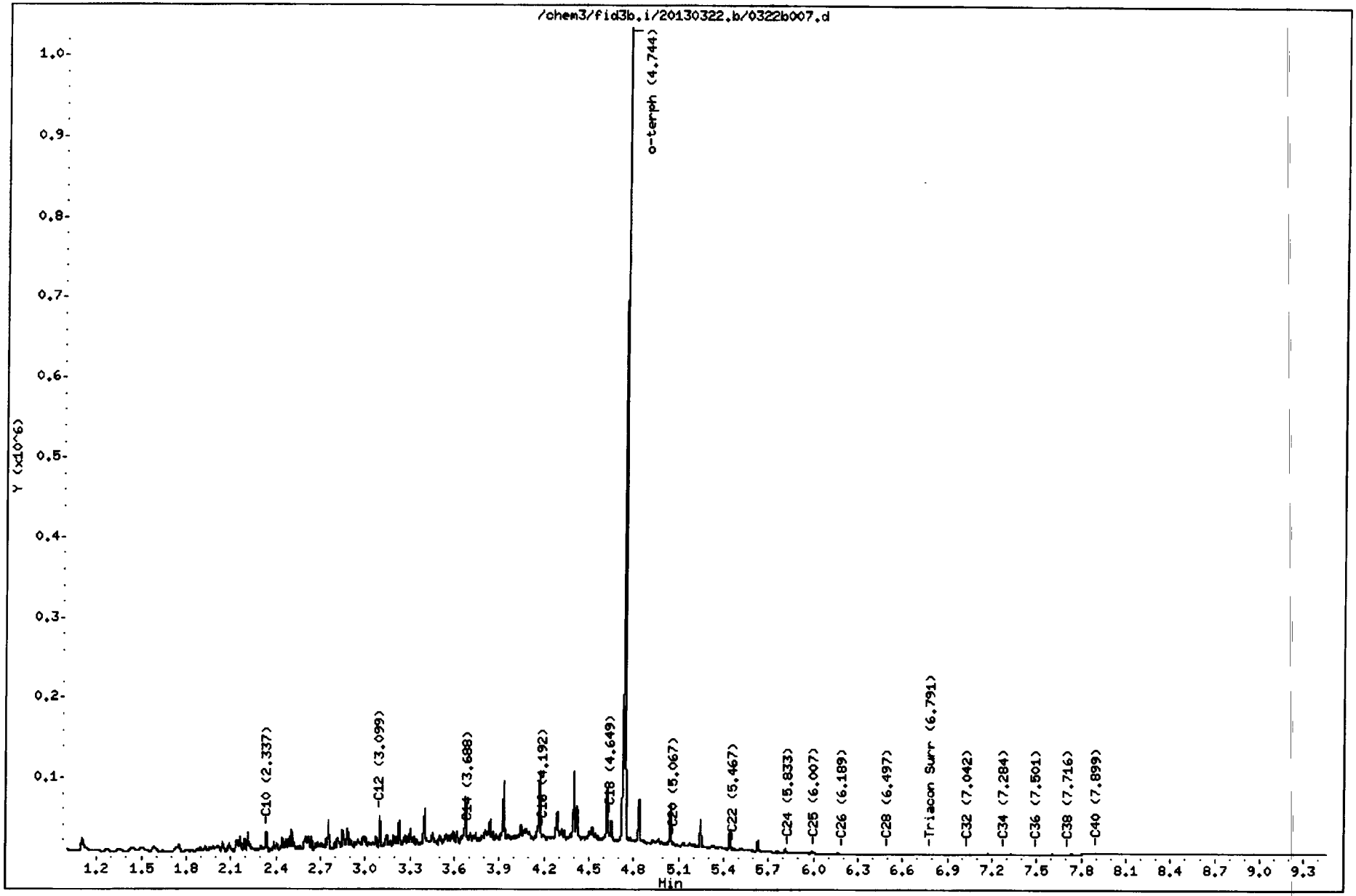
Data File: /chem3/fid3b.i/20130322.b/0322b007.d
Date : 22-MAR-2013 13:27
Client ID:
Sample Info: DIESEL250

Column phase: RTX-1

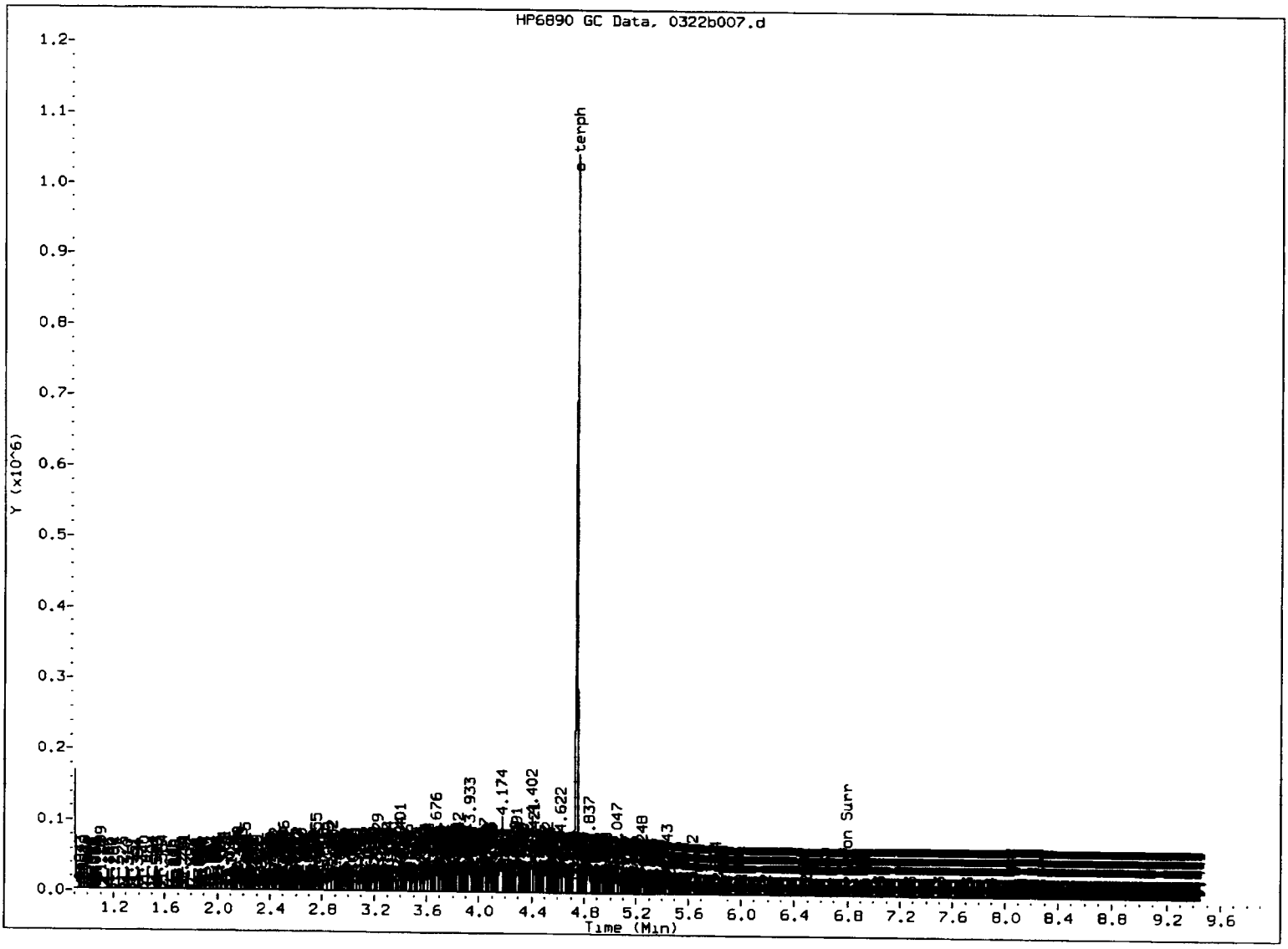
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/16/13



FID:3B-2C/RTX-1 DIESEL250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b008.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL500
Client ID:
Injection: 22-MAR-2013 13:46
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.811	0.035	10071	3808	WATPHG	(Tol-C12)	2157871	79.54	
C8	0.969	-0.002	7355	5728	WATPHD	(C12-C24)	5640000	497.35	
C10	2.339	-0.003	52589	43823	WATPHM	(C24-C38)	53486	6.05	
C12	3.115	0.002	16767	7378	AK102	(C10-C25)	6828477	495.07	M
C14	3.691	-0.002	43626	22590	AK103	(C25-C36)	34929	4.77	
C16	4.193	0.000	44220	16366	OR.DIES	(C10-C28)	6852528	445.49	M
C18	4.652	0.008	77908	93875					
C20	5.064	-0.002	26885	18440					
C22	5.464	-0.001	12502	2919					
C24	5.838	0.003	3509	2068					
C25	6.015	0.005	1519	180					
C26	6.191	0.005	1164	1507					
C28	6.497	-0.005	232	154	IT.DIES	(C10-C24)	6817346	494.40	
C32	7.047	0.002	82	24					
C34	7.281	-0.002	215	78					
Filter Peak	----								
C36	7.499	-0.001	391	151	BUNKERC	(C10-C38)	6870833	1400.84	
o-terph	4.750	-0.009	1617105	1300158	JET-A	(C10-C18)	5337304	370.67	
Triacon Surr	6.798	0.005	44	7					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1300158	89.6	199.1
Triacontane	7	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

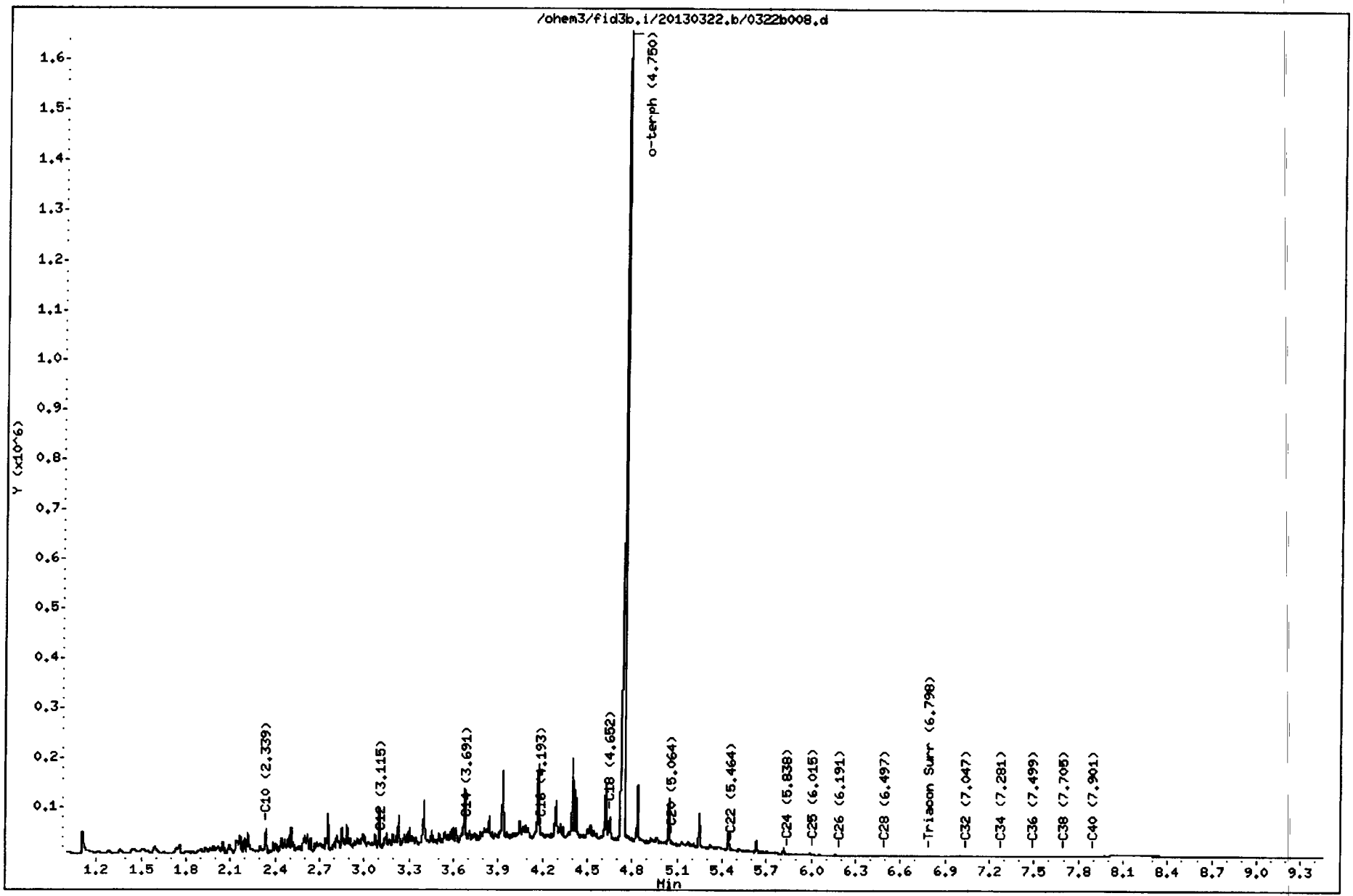
JW
4/18/13

Data File: /chem3/fid3b.i/20130322.b/0322b008.d
Date : 22-MAR-2013 13:46
Client ID:
Sample Info: DIESEL500

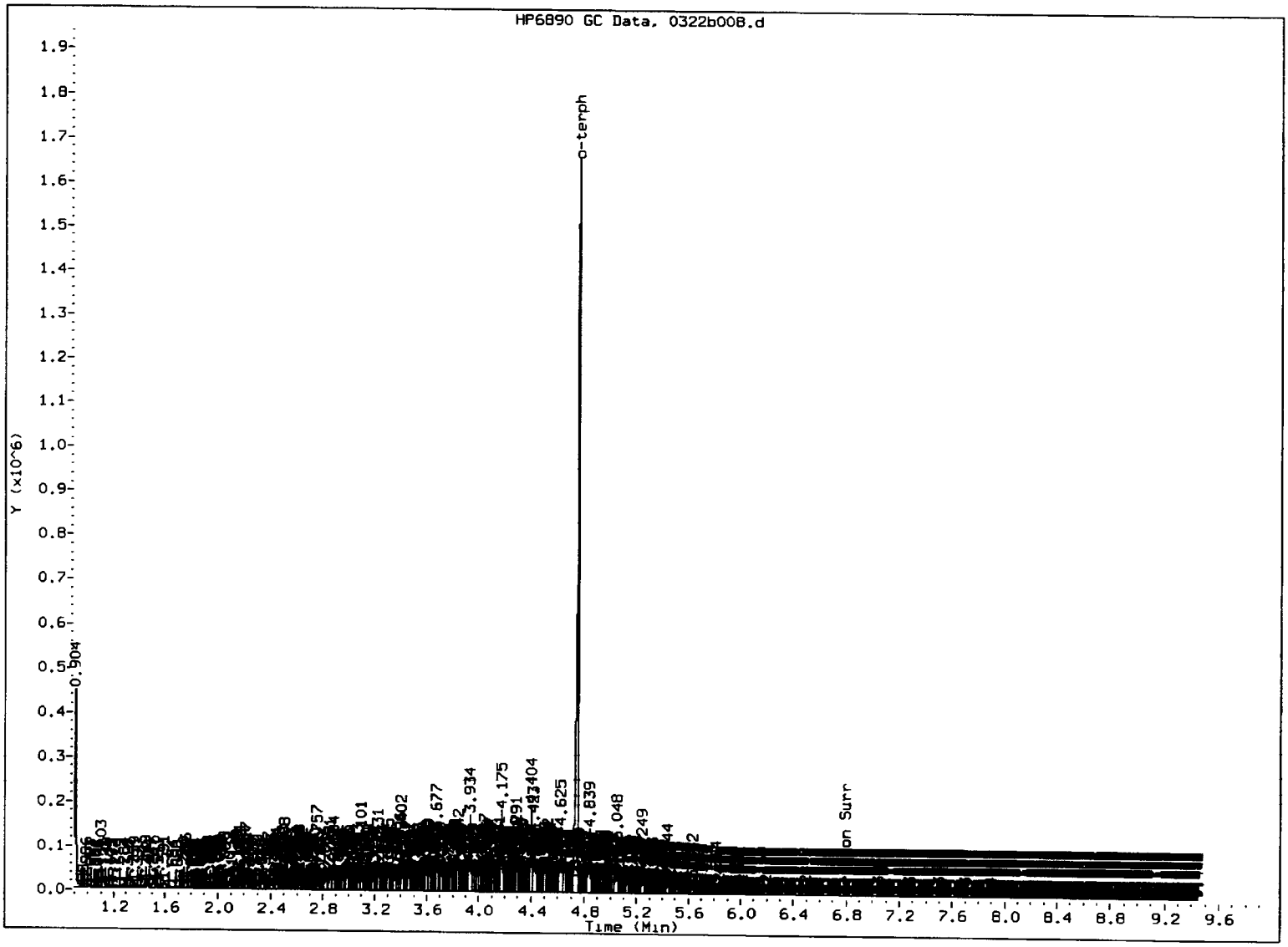
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b009.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL1000
Client ID:
Injection: 22-MAR-2013 14:05
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.826	0.050	12209	19674	WATPHG	(Tol-C12)	4168365	153.64	
C8	0.985	0.014	12369	27550	WATPHD	(C12-C24)	10897436	960.96	
C10	2.339	-0.004	102184	74669	WATPHM	(C24-C38)	87267	9.87	
C12	3.101	-0.011	173420	138132	AK102	(C10-C25)	13216784	958.22	M
C14	3.690	-0.002	82887	40878	AK103	(C25-C36)	59447	8.12	
C16	4.197	0.005	93667	75381	OR.DIES	(C10-C28)	13264224	862.32	M
C18	4.652	0.009	152597	128118					
C20	5.066	0.000	52869	55482					
C22	5.461	-0.004	24402	12548					
C24	5.836	0.001	6792	2132					
C25	6.017	0.007	2932	839					
C26	6.189	0.003	2095	2115					
C28	6.497	-0.005	461	346	IT.DIES	(C10-C24)	13196215	957.01	
C32	7.045	0.000	64	23					
C34	7.285	0.002	184	68					
Filter Peak	----								
C36	7.503	0.003	356	90	BUNKERC	(C10-C38)	13283482	2708.26	
o-terph	4.759	0.000	2297049	2527159	JET-A	(C10-C18)	10451409	725.84	
Triacon Surr	6.791	-0.002	31	3					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2527159	174.1	387.0
Triacontane	3	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

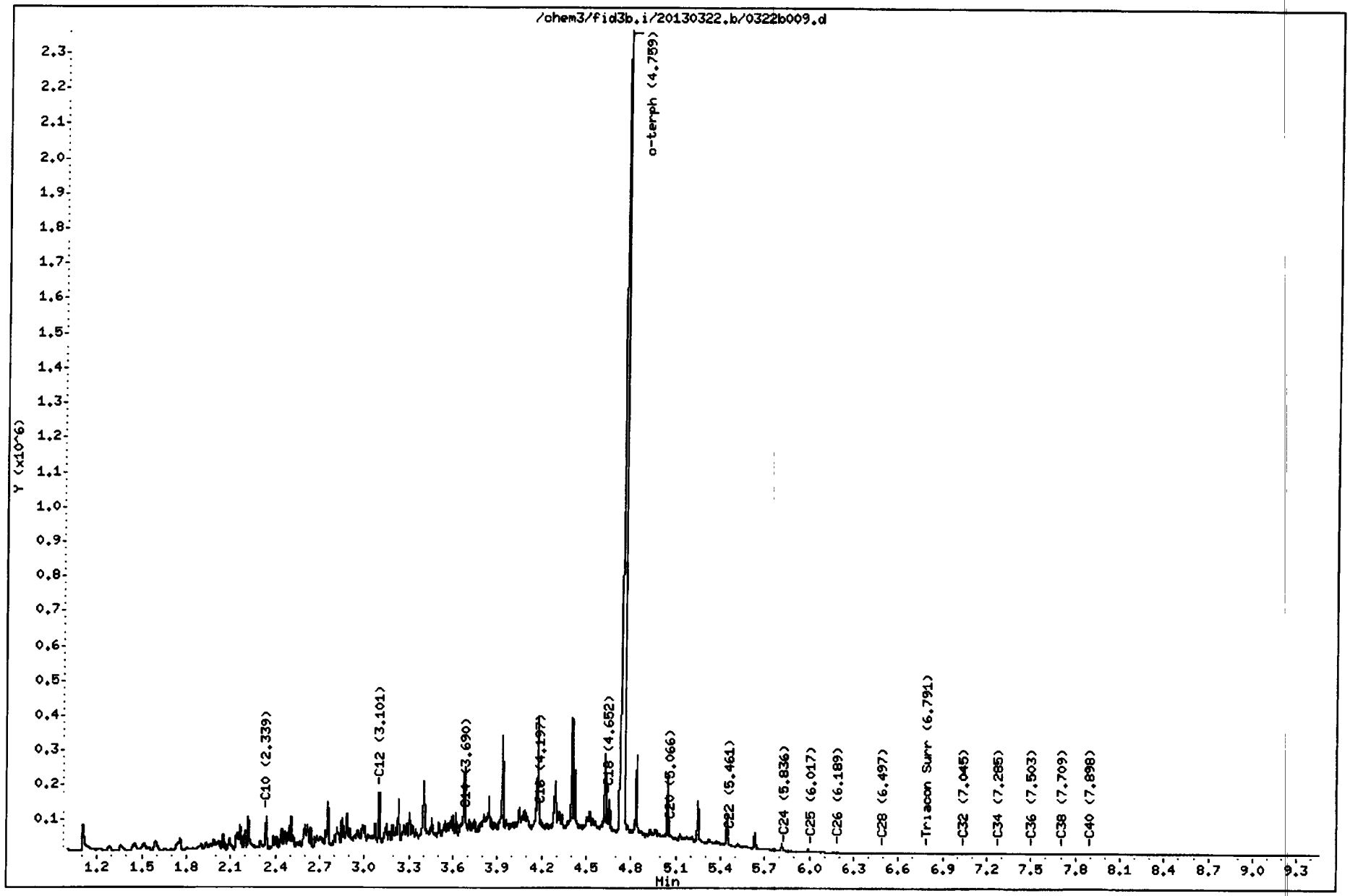
Data File: /chem3/fid3b.i/20130322.b/0322b009.d
Date : 22-MAR-2013 14:05
Client ID:
Sample Info: DIESEL1000

Column phase: RTX-1

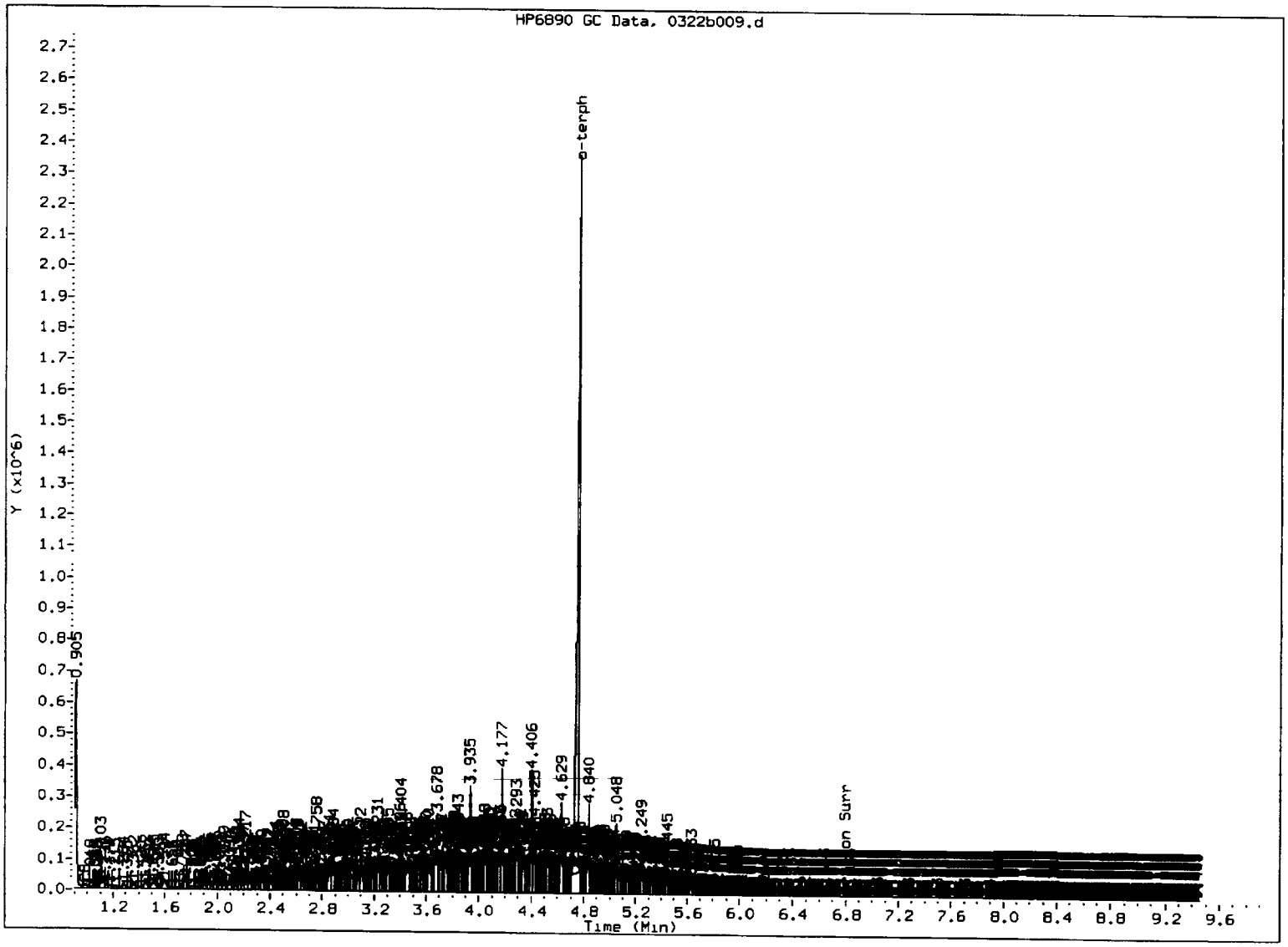
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/18/17



FID:3B-2C/RTX-1 DIESEL1000 FID:3B SIGNAL

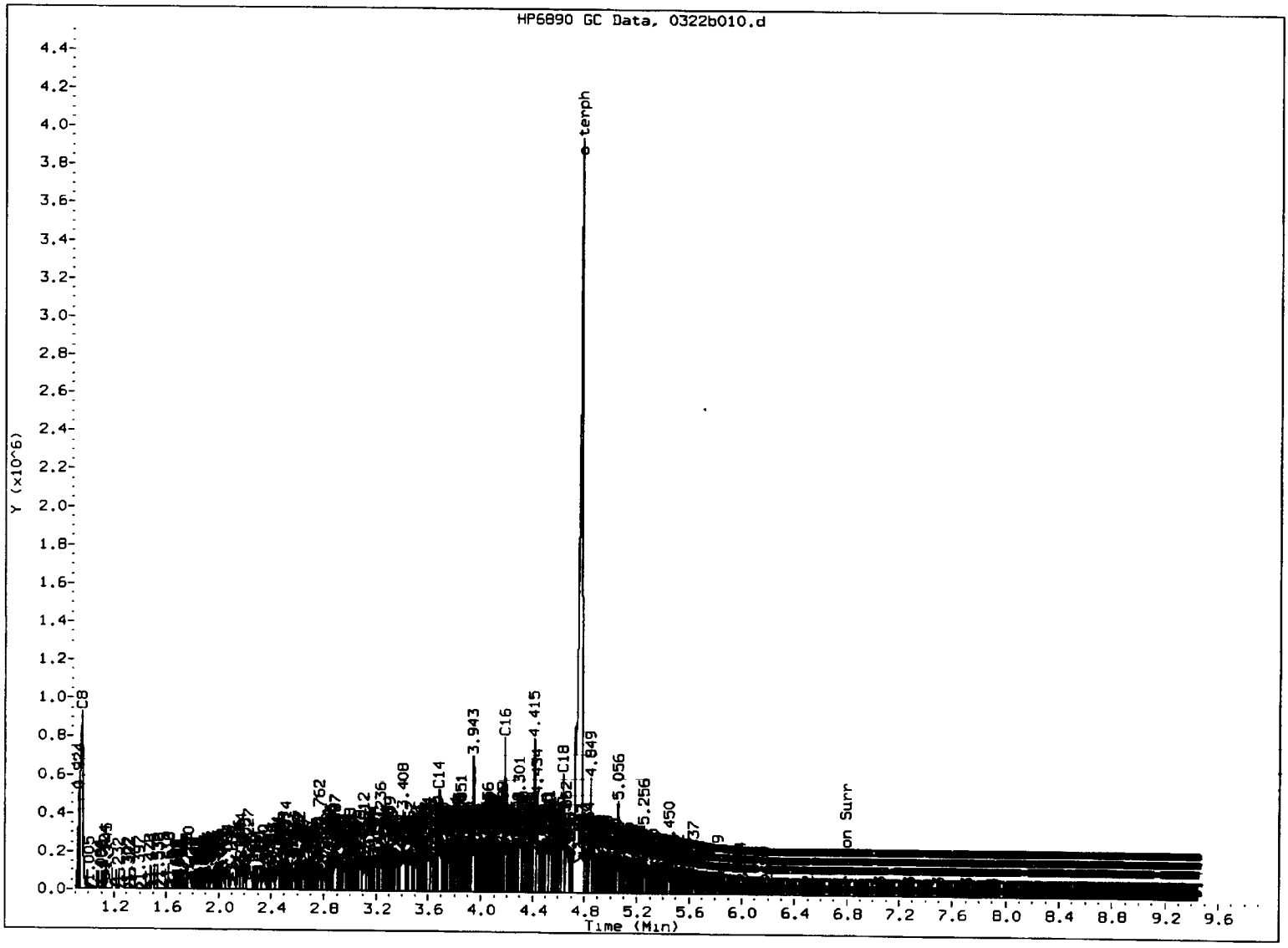


MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JD Date: 4/18/13

FID:3B-2C/RTX-1 DIESEL2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JCW Date: 4/18/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b010.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESEL2500
Client ID:
Injection: 22-MAR-2013 14:25
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.815	0.040	22846	17692	WATPHG	(Tol-C12)	9713796	358.04	
C8	0.949	-0.022	927267	1262122	WATPHD	(C12-C24)	26413051	2329.17	
C10	2.347	0.005	192206	202957	WATPHM	(C24-C38)	194367	21.99	
C12	3.107	-0.005	361109	340845	AK102	(C10-C25)	31949303	2316.34	M
C14	3.685	-0.007	529902	581793	AK103	(C25-C36)	138542	18.93	
C16	4.185	-0.007	808012	646100	OR.DIES	(C10-C28)	32069710	2084.89	M
C18	4.639	-0.005	621408	668347					
C20	5.071	0.005	120881	67422					
C22	5.465	0.001	59140	27761					
C24	5.834	-0.001	15688	2479					
C25	6.010	0.000	7983	4652					
C26	6.192	0.006	5056	4593					
C28	6.500	-0.002	1114	978	IT.DIES	(C10-C24)	31900437	2313.47	
C32	7.053	0.008	41	10					
C34	7.282	-0.001	199	131					
Filter Peak	----								
C36	7.497	-0.003	353	90	BUNKERC	(C10-C38)	32094804	6543.55	
o-terph	4.778	0.020	3751371	5737438	JET-A	(C10-C18)	25116064	1744.30	
Triacon Surr	6.792	-0.001	100	28					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5737438	395.3	878.5
Triacontane	28	0.0	0.0

JW 4/18/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

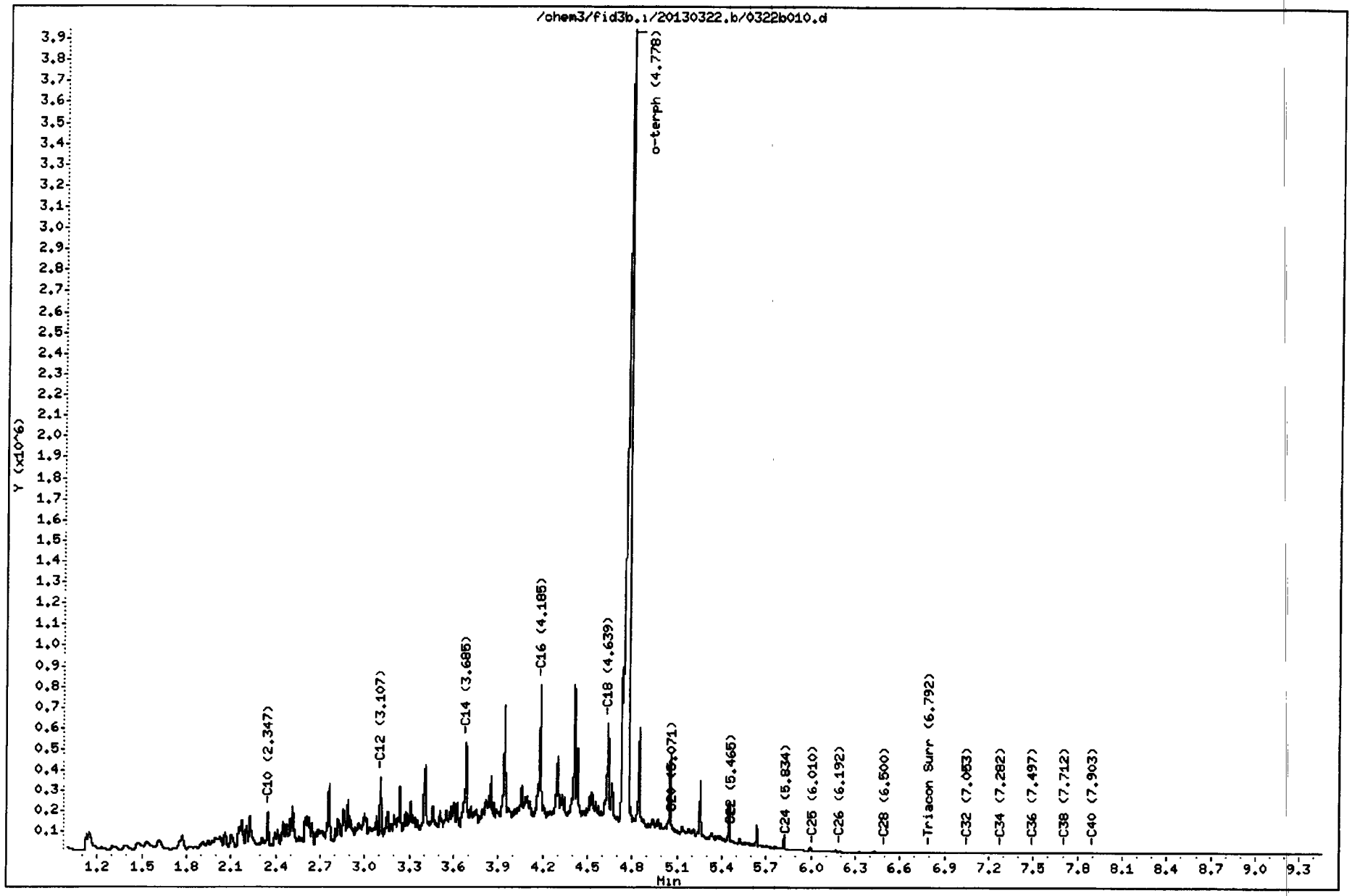
Data File: /chem3/fid3b.i/20130322.b/0322b010.d
Date : 22-MAR-2013 14:25
Client ID:
Sample Info: DIESEL2500

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/18/13



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130322.b/0322b011.d
Method: /chem3/fid3b.i/20130322.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/18/2013
Macro: FID:3B041313

ARI ID: DIESELICV250
Client ID:
Injection: 22-MAR-2013 14:44
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	0.812	0.037	11045	7627	WATPHG	(Tol-C12)	1295507	47.75	
C8	0.939	-0.032	7622	9371	WATPHD	(C12-C24)	2452034	216.23	
C10	2.340	-0.002	53807	43949	WATPHM	(C24-C38)	33149	3.75	
C12	3.101	-0.011	79598	48152	AK102	(C10-C25)	3294569	238.86	M
C14	3.677	-0.015	77460	64078	AK103	(C25-C36)	21853	2.99	
C16	4.176	-0.016	73037	56584	OR.DIES	(C10-C28)	3306914	214.99	M
C18	4.651	0.008	28584	27837					
C20	5.073	0.007	7745	3282					
C22	5.462	-0.003	3760	2081					
C24	5.836	0.001	1431	333					
C25	6.010	0.000	988	208					
C26	6.190	0.004	523	440					
C28	6.503	0.001	80	46	IT.DIES	(C10-C24)	3289989	238.60	
C32	7.052	0.007	93	41					
C34	7.284	0.001	215	39					
Filter Peak	----								
C36	7.498	-0.002	368	100	BUNKERC	(C10-C38)	3323138	677.53	
o-terph	4.745	-0.014	935337	641342	JET-A	(C10-C18)	2706999	188.00	
Triacon Surr	6.795	0.002	33	9					

Range Times: NW Diesel(3.162 - 5.885) NW Gas(0.726 - 3.162) NW M.Oil(5.885 - 7.758)
AK102(2.292 - 5.960) AK103(5.960 - 7.550) Jet A(2.292 - 4.694)

Surrogate	Area	Amount	%Rec
o-Terphenyl	641342	44.2	98.2
Triacontane	9	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	11474.8	22-MAR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	8840.0	22-MAR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012

JW 4/18/13

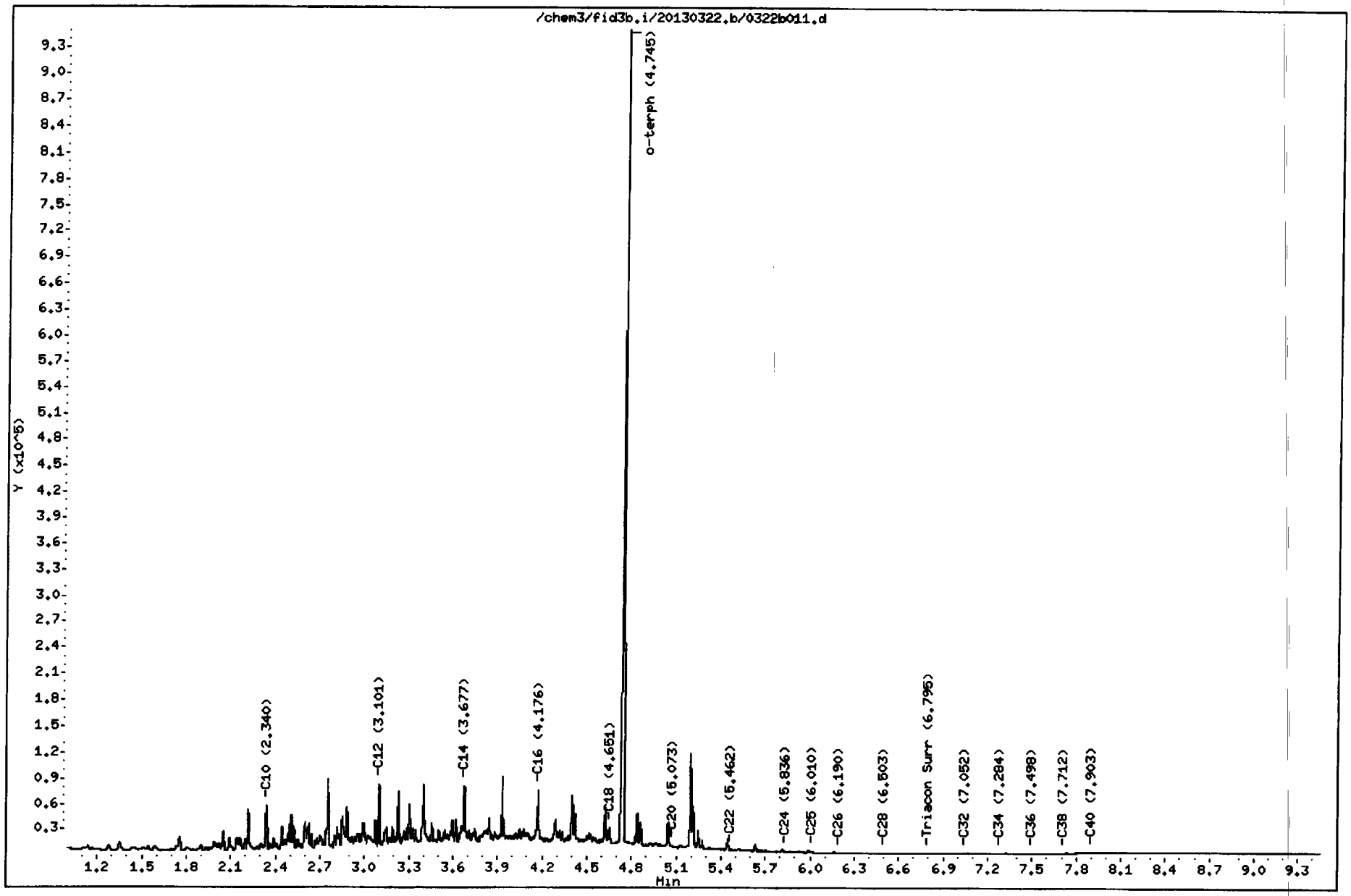
Data File: /chem3/fid3b.i/20130322.b/0322b011.d
Date : 22-MAR-2013 14:44
Client ID:
Sample Info: DIESELICV250

Column phase: RTX-1

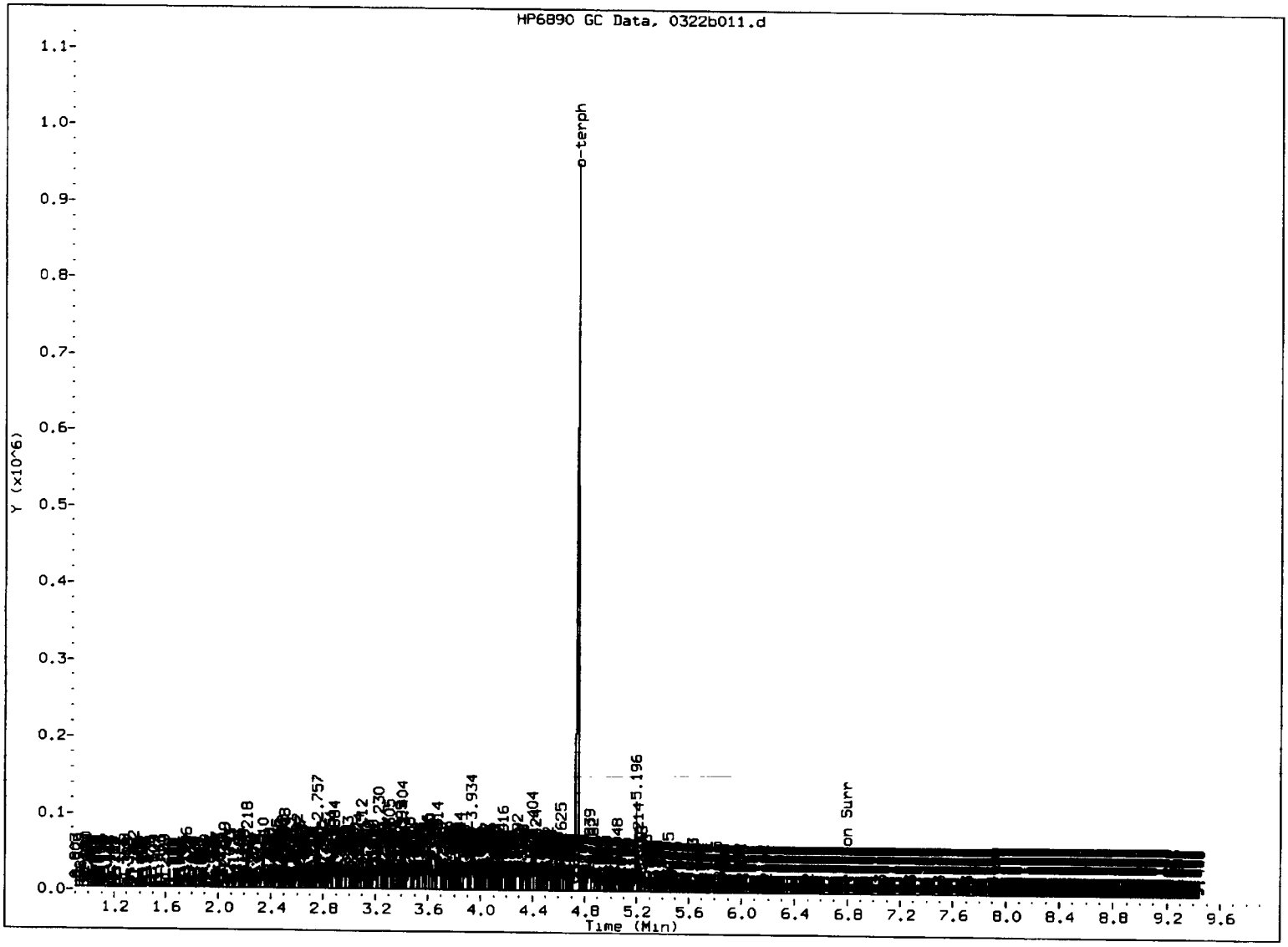
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/18/13



FID:3B-2C/RTX-1 DIESELICV250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/18/13

WLHG-01759

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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): 4/3/13 Internal Standard ID N/A Expiration 11/27/13

Endrin/DDT Breakdown <15%? YES / NO / (NA)		ICV Exceeding ±20%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
Manual Integrations for ICal?	(YES) / NO	Linear Fits Used?	YES / (NO)
Minimum Response S/N Met	(YES) / NO	Quadratic Fits Used?	YES / (NO)
		Calibration Points Dropped?	YES / (NO)

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
RT	2043-4	10/20/13	mail (valvoline)	2043-2	11/19/13
IB	2043-3	10/20/13			
mail (cheveron)	2041-4	11/27/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JW **Date:** 4/15/13

Reviewer: [signature] **Date:** 4/15/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130413.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413b006	0413b007	0413b008	0413b009	0413b010	0413b011
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	11:55	12:13	12:32	12:51	13:11	13:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.560-0.760	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.822	0.839	0.838	0.838	0.836	0.840	0.840	0.740-0.940	0.835	0.007
	3 C10	2.263	2.249	2.249	2.258	2.257	2.260	2.260	2.210-2.310	2.256	0.006
	4 C12	3.042	3.041	3.041	3.043	3.042	3.043	3.043	2.993-3.093	3.042	0.001
	5 C14	3.630	3.623	3.621	3.621	3.624	3.624	3.624	3.574-3.674	3.624	0.003
	6 C16	4.109	4.119	4.118	4.120	4.121	4.121	4.121	4.071-4.171	4.118	0.005
	7 C18	4.556	4.567	4.568	4.570	4.570	4.572	4.572	4.522-4.622	4.567	0.005
$	8 o-terph	4.679	4.683	4.686	4.676	4.675	4.675	4.675	4.625-4.725	4.679	0.005
	9 C20	4.981	4.991	4.985	4.988	4.985	4.987	4.987	4.937-5.037	4.986	0.003
	10 C22	5.383	5.387	5.390	5.385	5.389	5.389	5.389	5.339-5.439	5.387	0.003
	11 C24	5.763	5.760	5.760	5.759	5.760	5.755	5.755	5.705-5.805	5.759	0.003
	12 C25	5.939	5.940	5.935	5.939	5.939	5.939	5.939	5.889-5.989	5.939	0.002
	13 C26	6.111	6.115	6.119	6.115	6.117	6.119	6.119	6.069-6.169	6.116	0.003
	14 C28	6.430	6.434	6.425	6.433	6.432	6.431	6.431	6.381-6.481	6.431	0.003
$	15 Triacon Surr	6.716	6.723	6.729	6.740	6.758	6.765	6.765	6.715-6.815	6.738	0.020
	16 C32	6.977	6.974	6.981	6.981	6.983	6.975	6.975	6.925-7.025	6.978	0.004

Reviewer 1 JW Date: 4/15/13
Reviewer 2 Date: 4/15/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130413.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.218	7.216	7.216	7.218	7.216	7.218	7.218	7.168-7.268	7.217	0.001
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.438	7.442	7.436	7.435	7.433	7.440	7.440	7.390-7.490	7.437	0.003
20 C38	7.649	7.642	7.644	7.642	7.639	7.637	7.637	7.587-7.687	7.642	0.004
21 C40	7.835	7.833	7.835	7.836	7.832	7.835	7.835	7.785-7.885	7.835	0.001
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130413

Instrument: FID3B.I

Project:

Calibration Date: 13-APR-2013

SDG No.: 20130413

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

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

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

FORM VI-M.Oil

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130413.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-APR-2013 09:44	0413b001.d	1	RINSE	
2	13-APR-2013 10:02	0413b002.d	1	RT0413	
3	13-APR-2013 10:21	0413b003.d	1	IB0413	
4	13-APR-2013 10:40	0413b004.d	1	DIESEL#1	
5	13-APR-2013 10:59	0413b005.d	1	MOIL#1	
6	13-APR-2013 11:55	0413b006.d	1	MOIL100	
7	13-APR-2013 12:13	0413b007.d	1	MOIL250	
8	13-APR-2013 12:32	0413b008.d	1	MOIL500	
9	13-APR-2013 12:51	0413b009.d	1	MOIL1000	
10	13-APR-2013 13:11	0413b010.d	1	MOIL2500	
11	13-APR-2013 13:30	0413b011.d	1	MOIL5000	
12	13-APR-2013 13:49	0413b012.d	1	MOILICV500	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130413.b

ARI Job No.: RT04 Method: i/20130413.b/ftphfid3b.m Instrument: fid3b.i Date: 13-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1002	0413b002.d	RT0413		1	Toluene,
1021	0413b003.d	IB0413		1	NO MANUAL INTEGRATION
1155	0413b006.d	MOIL100		1	Triacon Surr,
1213	0413b007.d	MOIL250		1	Triacon Surr,
1232	0413b008.d	MOIL500		1	Triacon Surr,
1251	0413b009.d	MOIL1000		1	Triacon Surr,
1311	0413b010.d	MOIL2500		1	Triacon Surr,
1330	0413b011.d	MOIL5000		1	Triacon Surr,
1349	0413b012.d	MOILICV500		1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b002.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: RT0413
Client ID:
Injection: 13-APR-2013 10:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.660	0.000	226565	295835	WATPHG	(Tol-C12)	2776750	102.35 M
C8	0.836	0.000	186492	299072	WATPHD	(C12-C24)	2097769	184.99
C10	2.257	0.000	236238	207355	WATPHM	(C24-C38)	3102469	281.32
C12	3.043	0.000	418433	289020	AK102	(C10-C25)	2752449	199.55
C14	3.622	0.000	519586	314513	AK103	(C25-C36)	2718350	371.51
C16	4.120	0.000	503164	308307	OR.DIES	(C10-C28)	4365197	283.79
C18	4.569	0.000	381319	308690				
C20	4.989	0.000	404798	283635				
C22	5.389	0.000	398263	294091				
C24	5.761	0.000	432153	300046				
C25	5.936	0.000	381271	296430				
C26	6.115	0.000	1011494	547067				
C28	6.431	0.000	449053	318594	IT.DIES	(C10-C24)	2730717	149.35
C32	6.980	0.000	491363	334756				
C34	7.217	0.000	504125	338838				
Filter Peak	----							
C36	7.436	0.000	501994	342591	BUNKERC	(C10-C38)	5833186	1189.28
o-terph	4.681	0.000	980696	672571	JET-A	(C10-C18)	1639822	113.88
Triacon Surr	6.728	0.000	1034593	850158				

Range Times: NW Diesel(3.093 - 5.811) NW Gas(0.610 - 3.093) NW M.Oil(5.811 - 7.691)
AK102(2.207 - 5.886) AK103(5.886 - 7.486) Jet A(2.207 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	672571	46.3	103.0
Triacontane	850158	55.6	123.6

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

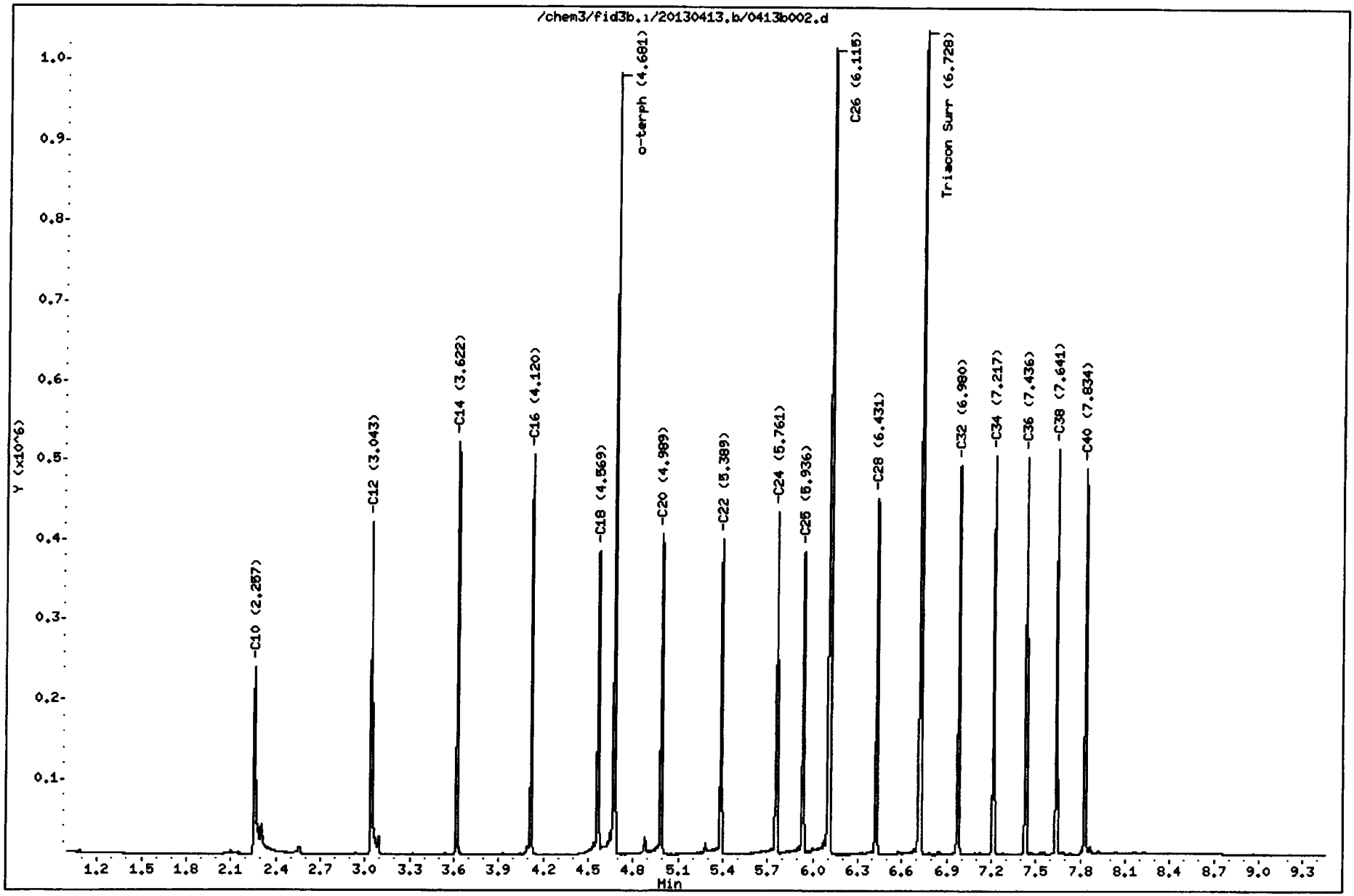
JW 4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b002.d
Date : 13-APR-2013 10:02
Client ID:
Sample Info: RT0413

Column phase: RTX-1

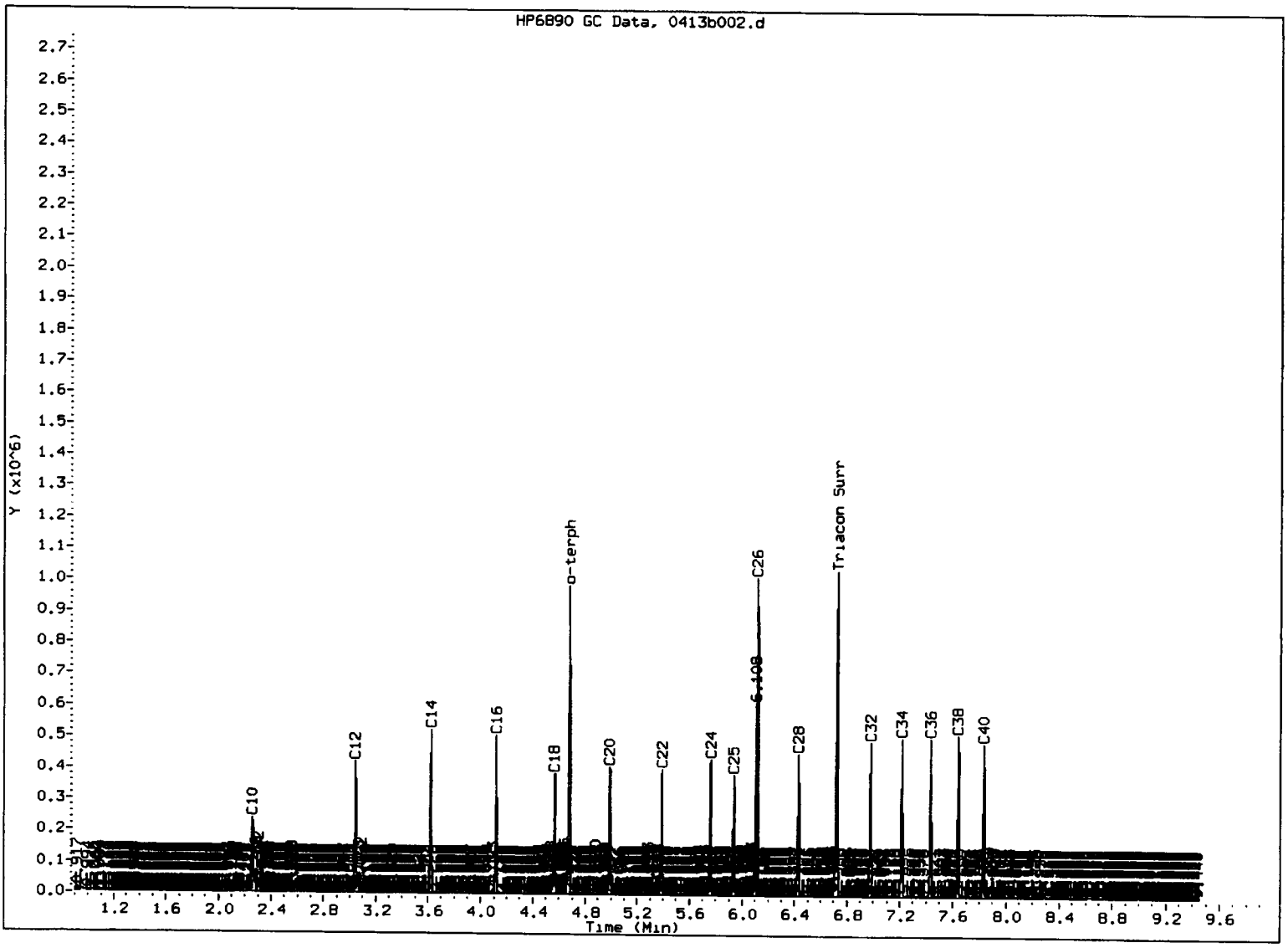
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 RT0413

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JC Date: 4/15/13

WLIP: 01929

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b003.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: IB0413
Client ID:
Injection: 13-APR-2013 10:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	45415	2
C8	0.830	-0.006	3045	7384	WATPHD	(C12-C24)	56215	4.96
C10	2.258	0.001	333	315	WATPHM	(C24-C38)	93171	8.45
C12	3.045	0.001	235	142	AK102	(C10-C25)	70518	5.11
C14	3.621	-0.001	235	159	AK103	(C25-C36)	72145	9.86
C16	4.118	-0.002	342	244	OR.DIES	(C10-C28)	77035	5.01
C18	4.571	0.002	531	256				
C20	4.987	-0.002	226	176				
C22	5.386	-0.003	123	122				
C24	5.758	-0.004	98	85				
C25	5.933	-0.003	64	34				
C26	6.101	-0.014	159	112				
C28	6.427	-0.004	791	802	IT.DIES	(C10-C24)	69761	3.82
C32	6.975	-0.005	8297	7477				
C34	7.222	0.005	567	353				
Filter Peak	----							
C36	7.444	0.008	924	562	BUNKERC	(C10-C38)	162932	33.22
o-terph	4.682	0.001	977333	711586	JET-A	(C10-C18)	34523	2.40
Triacon Surr	6.725	-0.003	913755	675138				

Range Times: NW Diesel(3.093 - 5.811) NW Gas(0.610 - 3.093) NW M.Oil(5.811 - 7.691)
AK102(2.207 - 5.886) AK103(5.886 - 7.486) Jet A(2.207 - 4.619)

Surrogate	Area	Amount	%Rec
o-Terphenyl	711586	49.0	109.0
Triacontane	675138	44.2	98.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW 4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b003.d

Date : 13-APR-2013 10:21

Client ID:

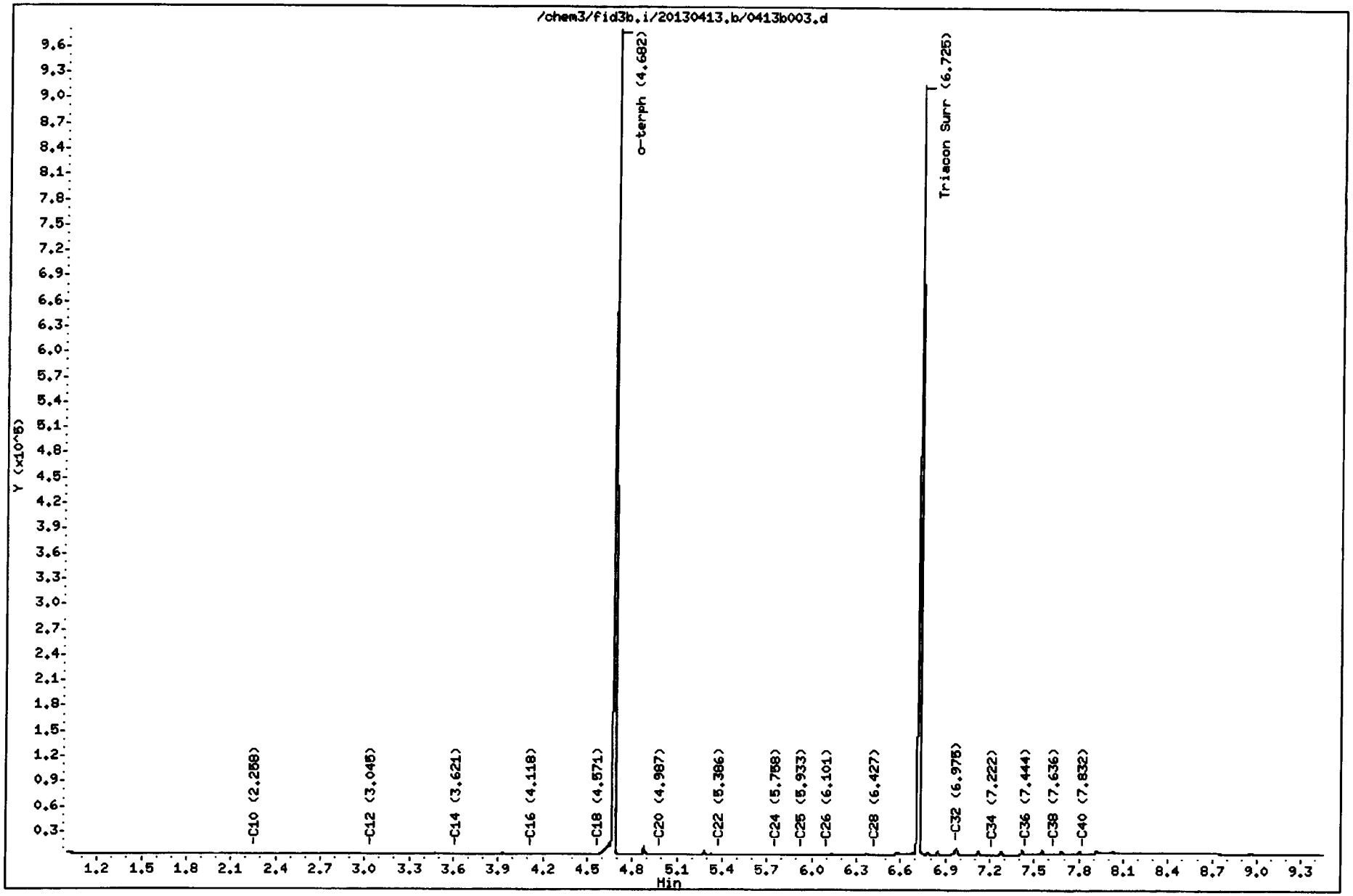
Sample Info: IB0413

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b006.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL100
Client ID:
Injection: 13-APR-2013 11:55
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	179099	7	
C8	0.822	-0.019	3794	2334	WATPHD	(C12-C24)	498826	43.99	
C10	2.263	0.002	1358	161	WATPHM	(C24-C38)	1121259	101.67	
C12	3.042	-0.001	3034	3927	AK102	(C10-C25)	643130	46.63	
C14	3.630	0.007	2665	1659	AK103	(C25-C36)	948494	129.63	M
C16	4.109	-0.012	22370	14852	OR.DIES	(C10-C28)	903133	58.71	
C18	4.556	-0.015	12549	8291					
C20	4.981	-0.006	1400	1529					
C22	5.383	-0.005	1494	1443					
C24	5.763	0.008	4715	1840					
C25	5.939	0.000	6136	1186					
C26	6.111	-0.008	7441	4611					
C28	6.430	-0.001	9244	7750	IT.DIES	(C10-C24)	617292	33.76	
C32	6.977	0.002	12921	7586					
C34	7.218	0.001	12833	2990					
Filter Peak	----								
C36	7.438	-0.002	12431	3618	BUNKERC	(C10-C38)	1738551	354.46	
o-terph	4.679	0.005	1854	1341	JET-A	(C10-C18)	384172	26.68	
Triacon Surr	6.716	-0.049	220348	140870					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1341	0.1	0.2
Triacontane	140870	9.2	20.5

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

JW 4/15/13

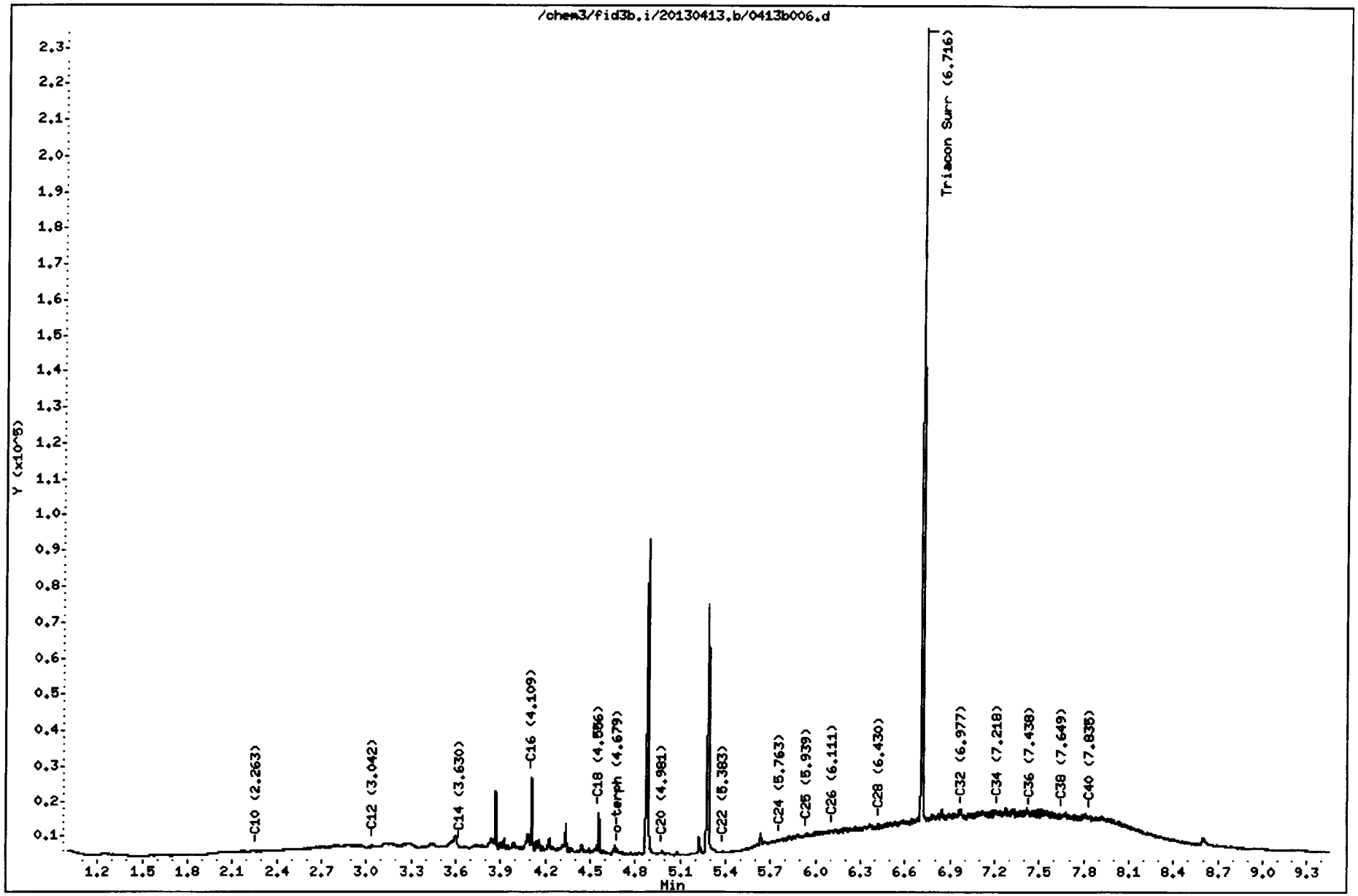
Data File: /chem3/fid3b.i/20130413.b/0413b006.d
Date : 13-APR-2013 11:55
Client ID:
Sample Info: MOIL100

Instrument: fid3b.i

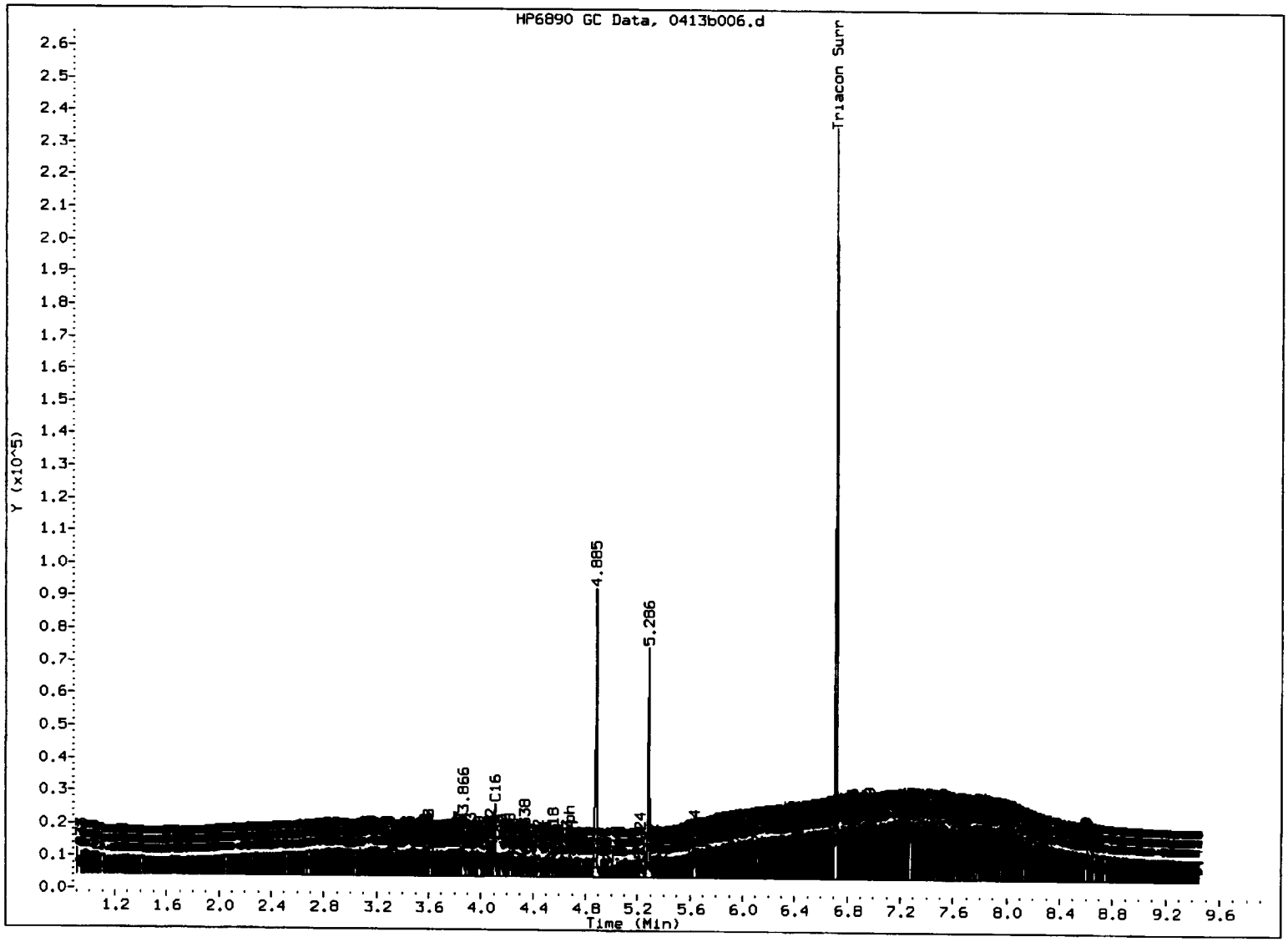
Operator: JW
Column diameter: 0.25

Column phase: RTX-1

JW 4/15/13



FID:3B-2C/RTX-1 MOIL100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 4/15/19

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b007.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL250
Client ID:
Injection: 13-APR-2013 12:13
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	113393	4
C8	0.839	-0.001	4823	1057	WATPHD	(C12-C24)	261960	23.10
C10	2.249	-0.011	945	1076	WATPHM	(C24-C38)	2846056	258.07
C12	3.041	-0.002	1280	948	AK102	(C10-C25)	354889	25.73
C14	3.623	-0.001	139	93	AK103	(C25-C36)	2428871	331.95 M
C16	4.119	-0.002	132	106	OR.DIES	(C10-C28)	1039478	67.58
C18	4.567	-0.005	220	199				
C20	4.991	0.004	806	468				
C22	5.387	-0.002	3141	1716				
C24	5.760	0.006	12391	5470				
C25	5.940	0.001	16746	12064				
C26	6.115	-0.004	19346	3774				
C28	6.434	0.003	23847	12235	IT.DIES	(C10-C24)	282441	15.45
C32	6.974	-0.001	37110	27826				
C34	7.216	-0.001	32746	5788				
Filter Peak	----							
C36	7.442	0.002	30009	11696	BUNKERC	(C10-C38)	3128497	637.84
o-terph	4.683	0.008	322	176	JET-A	(C10-C18)	31879	2.21
Triacon Surr	6.723	-0.042	494554	348683				

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	176	0.0	0.0
Triacontane	348683	22.8	50.7

JW 4/15/13

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130413.b/0413b007.d

Date : 13-APR-2013 12:13

Client ID:

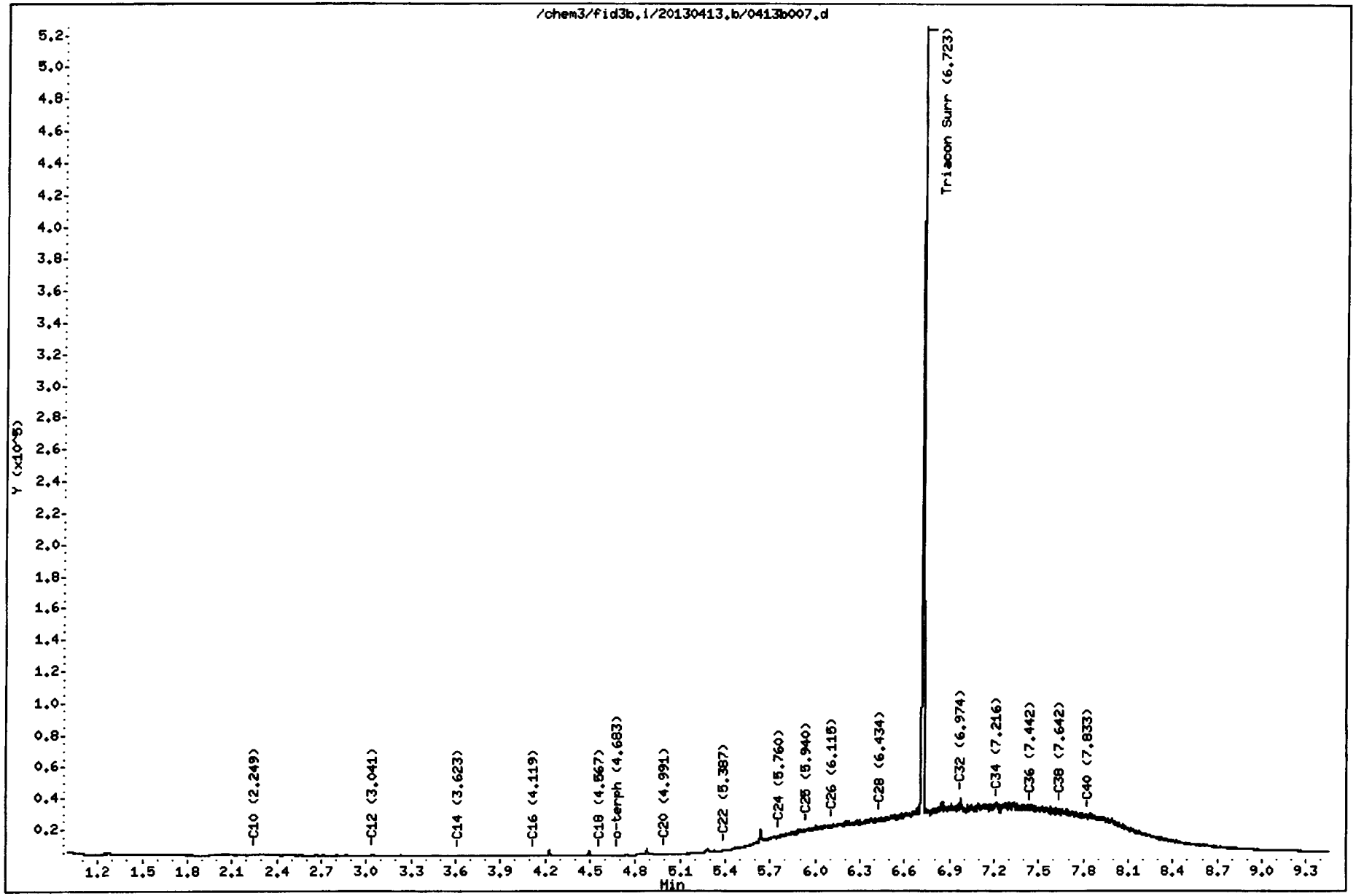
Sample Info: MOIL250

Column phase: RTX-1

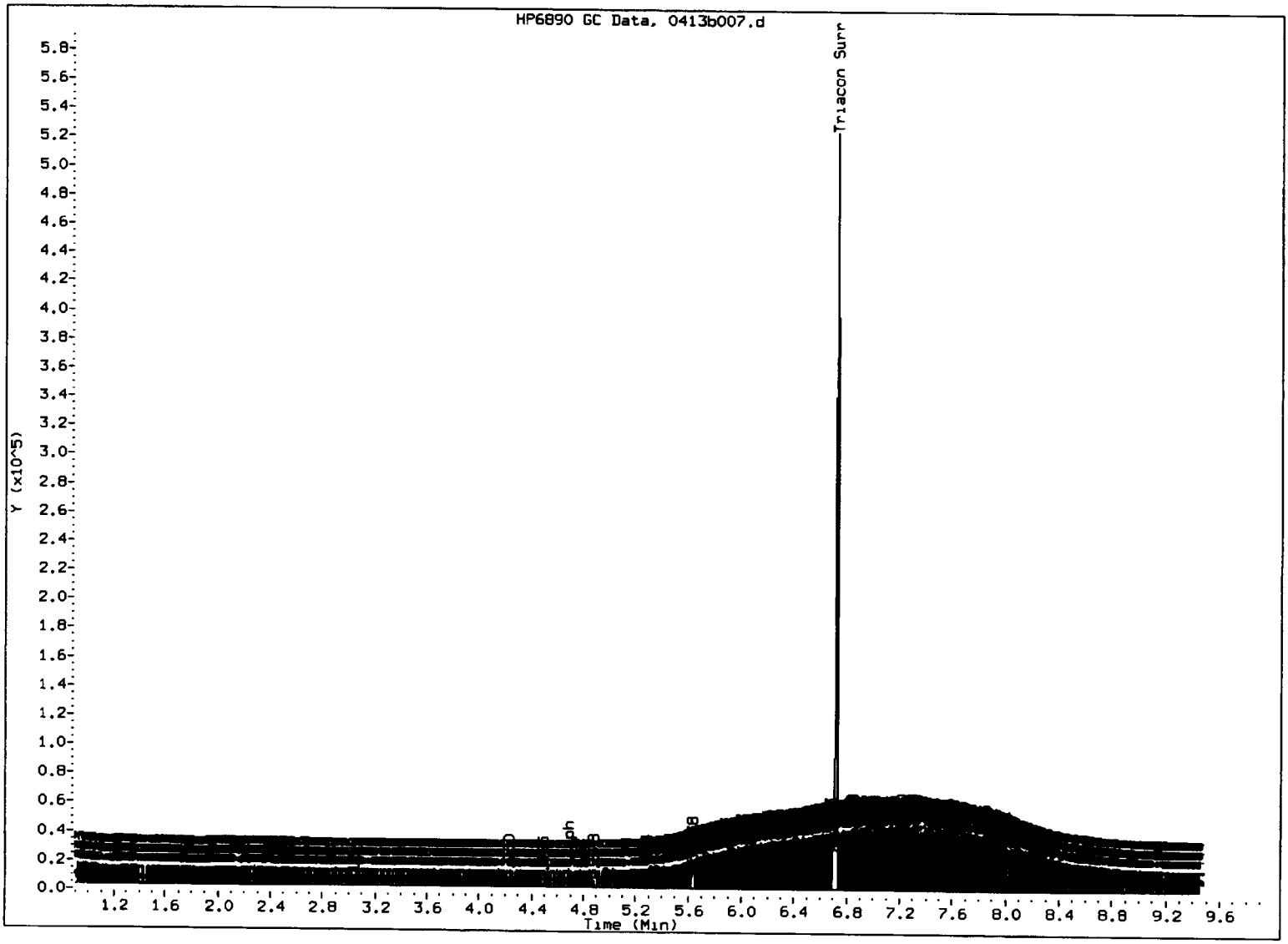
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 4/15/13

WLI0-81817

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b008.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL500
Client ID:
Injection: 13-APR-2013 12:32
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	103696	4	
C8	0.838	-0.002	6095	4246	WATPHD	(C12-C24)	516506	45.55	
C10	2.249	-0.011	870	1012	WATPHM	(C24-C38)	5676220	514.70	-
C12	3.041	-0.002	923	785	AK102	(C10-C25)	676631	49.06	
C14	3.621	-0.002	108	67	AK103	(C25-C36)	4849418	662.76	M
C16	4.118	-0.003	119	64	OR.DIES	(C10-C28)	2039978	132.62	
C18	4.568	-0.004	388	509					
C20	4.985	-0.002	1933	1590					
C22	5.390	0.001	6839	6071					
C24	5.760	0.005	25176	9580					
C25	5.935	-0.004	32093	10000					
C26	6.119	0.000	38484	11857					
C28	6.425	-0.007	47217	26600	IT.DIES	(C10-C24)	534531	29.23	
C32	6.981	0.006	67914	16845					
C34	7.216	-0.002	66838	46990					
Filter Peak	----								
C36	7.436	-0.004	62008	32447	BUNKERC	(C10-C38)	6210751	1266.26	
o-terph	4.686	0.012	562	350	JET-A	(C10-C18)	34658	2.41	
Triacon Surr	6.729	-0.036	878126	686173					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	350	0.0	0.1
Triacontane	686173	44.9	99.8

JC 4/15/13

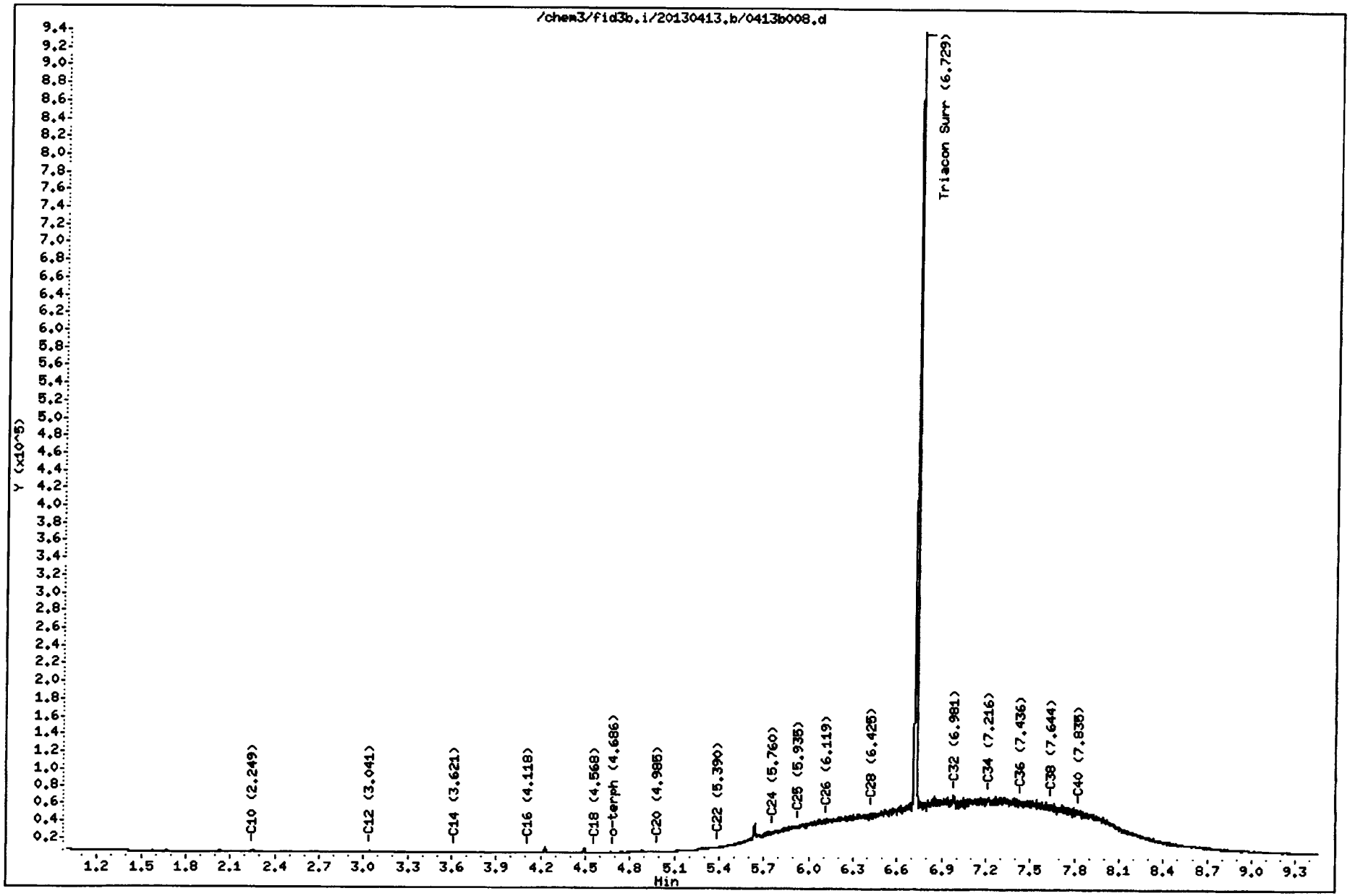
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130413.b/0413b008.d
Date : 13-APR-2013 12:32
Client ID:
Sample Info: HOIL500

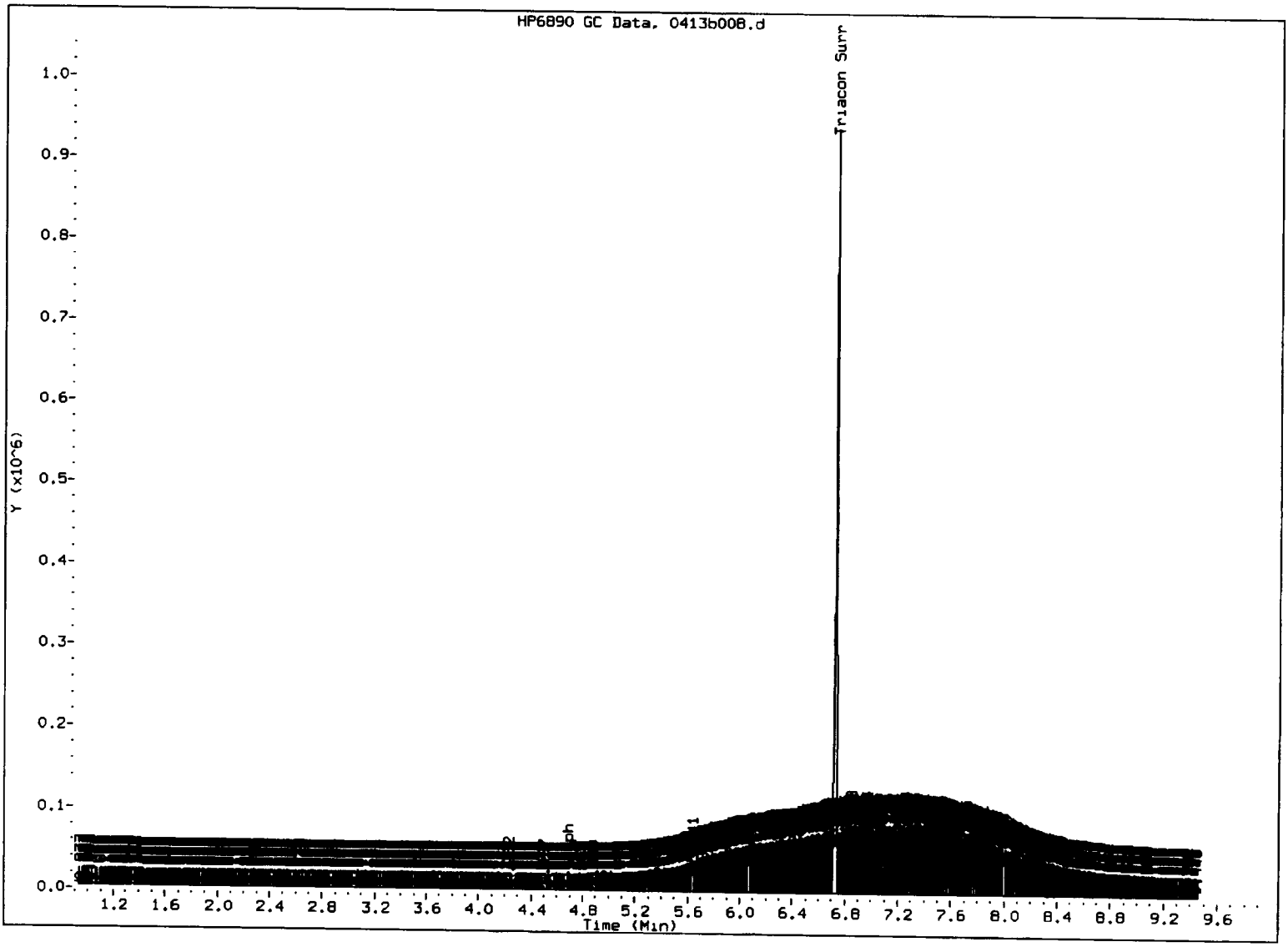
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: TU **Date:** 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b009.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL1000
Client ID:
Injection: 13-APR-2013 12:51
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	164198	6	
C8	0.838	-0.002	7679	4924	WATPHD	(C12-C24)	1032111	91.01	
C10	2.258	-0.002	1022	909	WATPHM	(C24-C38)	11113978	1007.78	—
C12	3.043	0.000	671	647	AK102	(C10-C25)	1314959	95.33	
C14	3.621	-0.003	103	65	AK103	(C25-C36)	9577376	1308.92	M
C16	4.120	-0.001	244	237	OR.DIES	(C10-C28)	3991753	259.51	
C18	4.570	-0.002	884	791					
C20	4.988	0.001	3697	2644					
C22	5.385	-0.004	13409	4443					
C24	5.759	0.005	49186	18060					
C25	5.939	-0.001	64363	43385					
C26	6.115	-0.004	78713	39786					
C28	6.433	0.001	88138	18975	IT.DIES	(C10-C24)	1052448	57.56	
C32	6.981	0.006	143289	87199					
C34	7.218	0.000	127909	17588					
Filter Peak	----								
C36	7.435	-0.005	124593	77124	BUNKERC	(C10-C38)	12166427	2480.51	
o-terph	4.676	0.001	1827	2741	JET-A	(C10-C18)	53497	3.72	
Triacon Surr	6.740	-0.025	1550090	1389738					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	2741	0.2	0.4	
Triacontane	1389738	90.9	202.1	—

JW 4/15/13

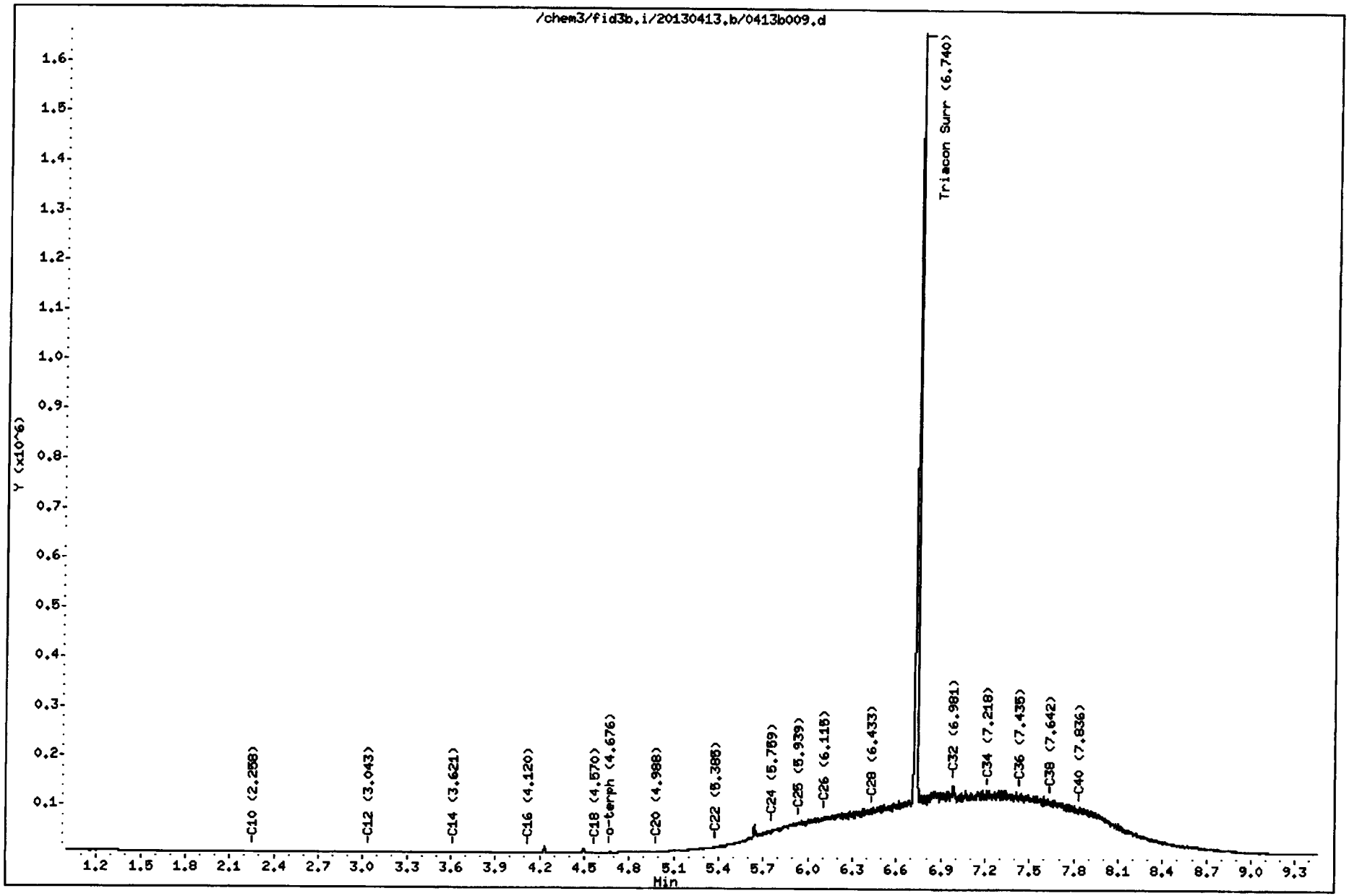
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Data File: /chem3/fid3b.i/20130413.b/0413b009.d
Date : 13-APR-2013 12:51
Client ID:
Sample Info: MOIL1000

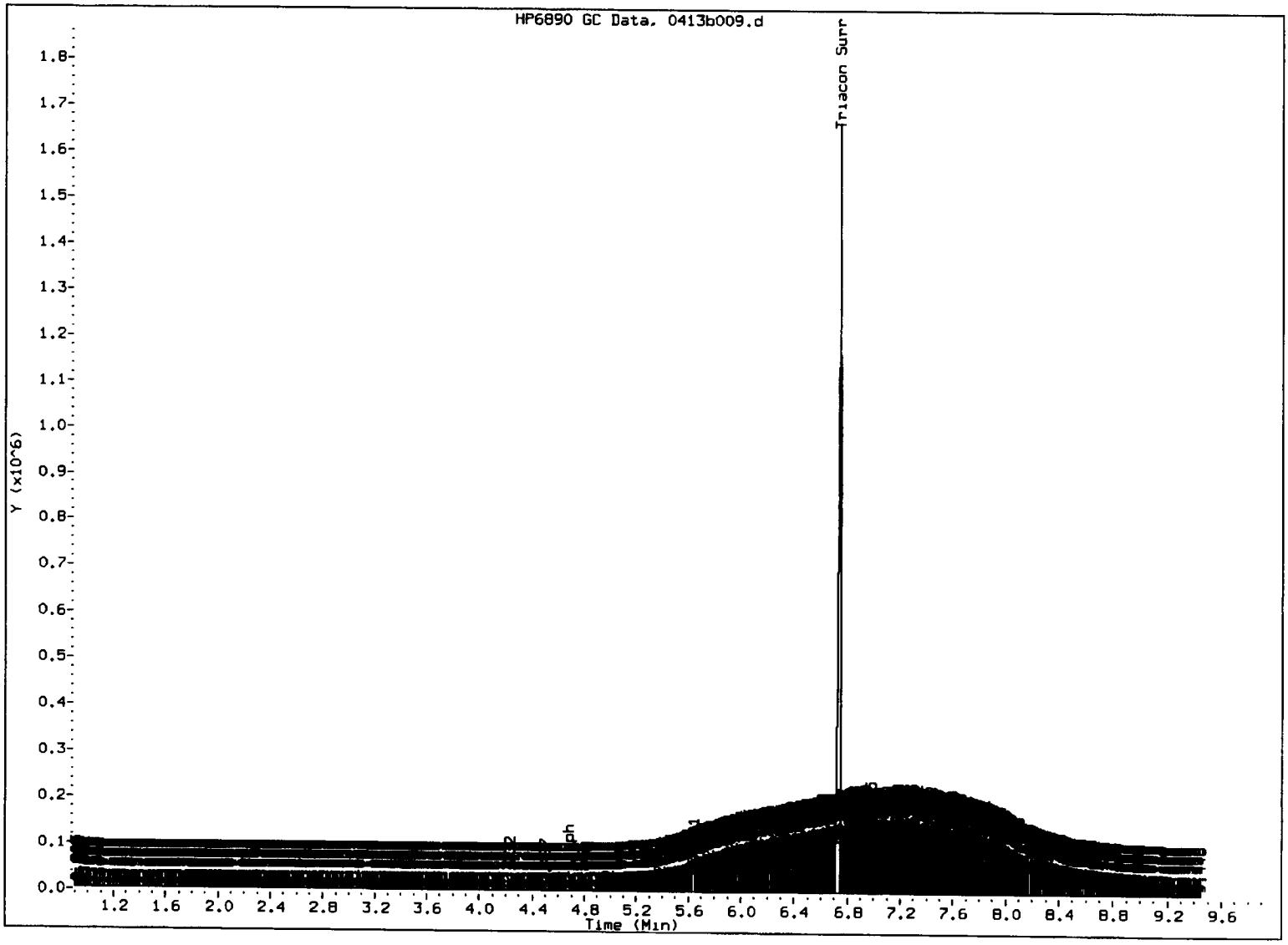
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b010.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL2500
Client ID:
Injection: 13-APR-2013 13:11
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	188819	7	
C8	0.836	-0.004	14740	9892	WATPHD	(C12-C24)	2510066	221.34	
C10	2.257	-0.003	1245	1720	WATPHM	(C24-C38)	26860369	2435.62	✓
C12	3.042	0.000	598	595	AK102	(C10-C25)	3193459	231.53	
C14	3.624	0.001	143	95	AK103	(C25-C36)	23046155	3149.67	M
C16	4.121	0.000	541	484	OR.DIES	(C10-C28)	9862804	641.19	
C18	4.570	-0.001	2275	1220					
C20	4.985	-0.002	9122	9850					
C22	5.389	0.001	31693	10496					
C24	5.760	0.006	115003	33488					
C25	5.939	0.000	153593	100225					
C26	6.117	-0.002	184336	103760					
C28	6.432	0.001	226090	56868	IT.DIES	(C10-C24)	2529770	138.36	
C32	6.983	0.008	293382	45657					
C34	7.216	-0.001	310401	124810					
Filter Peak	----								
C36	7.433	-0.007	284126	108325	BUNKERC	(C10-C38)	29390139	5992.12	
o-terph	4.675	0.001	4450	7316	JET-A	(C10-C18)	98718	6.86	
Triacon Surr	6.758	-0.007	1965018	3435299					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	7316	0.5	1.1	
Triacontane	3435299	224.8	499.6	✓

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

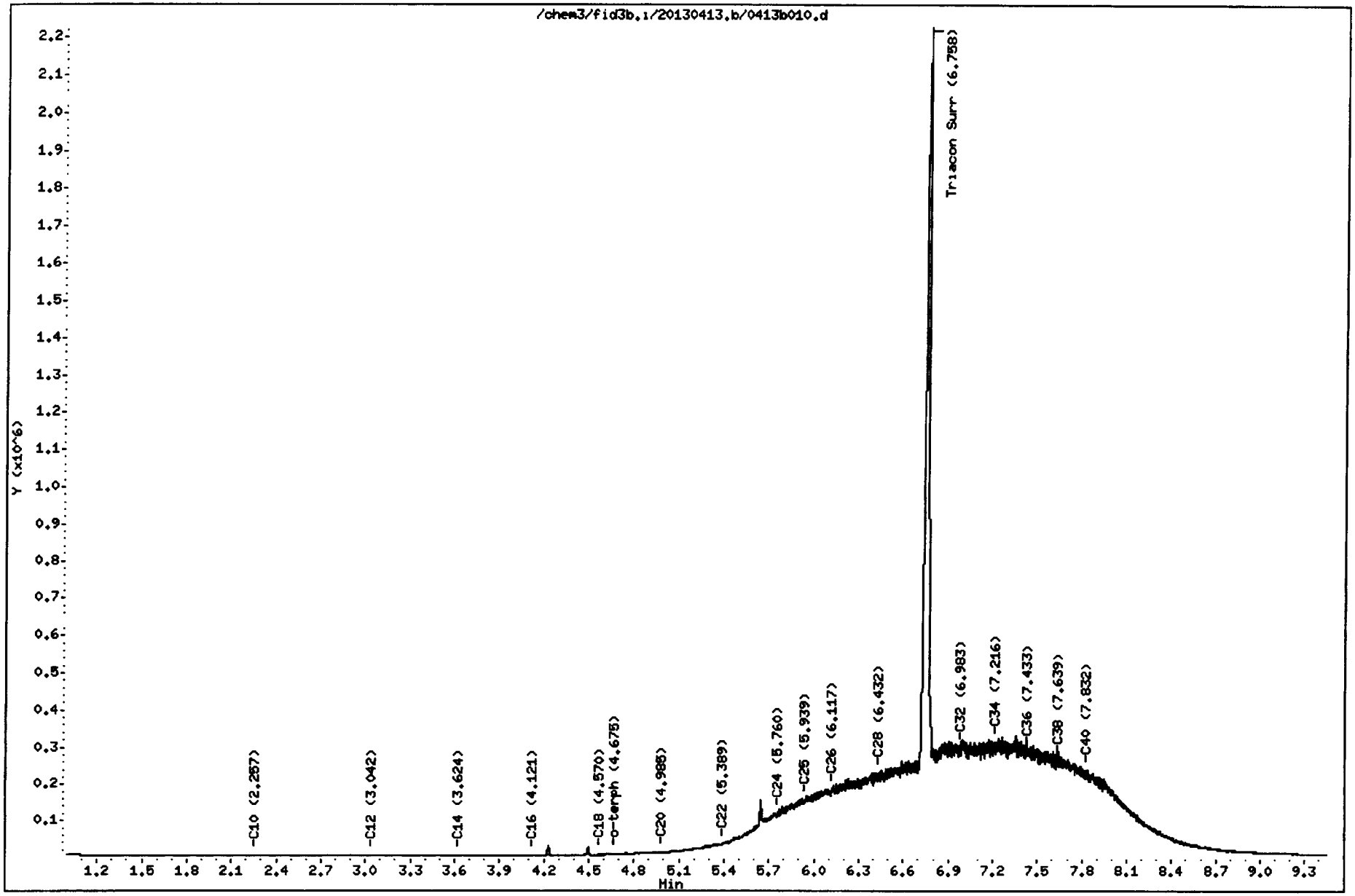
TW 4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b010.d
Date : 13-APR-2013 13:11
Client ID:
Sample Info: MOIL2500

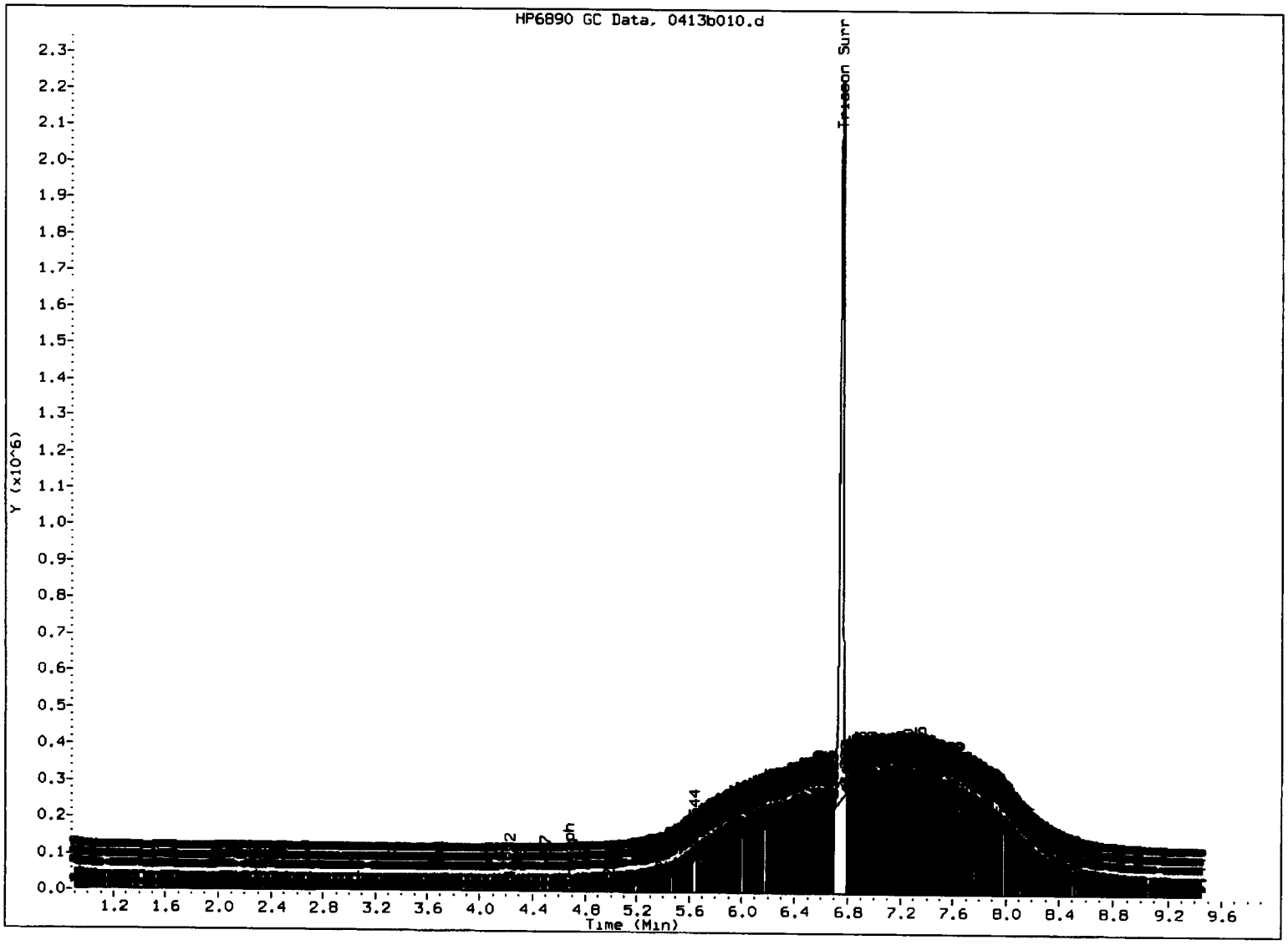
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 9/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b011.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOIL5000
Client ID:
Injection: 13-APR-2013 13:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	105713	4	
C8	0.840	0.000	5401	1077	WATPHD	(C12-C24)	4859556	428.53	
C10	2.260	0.000	1725	1485	WATPHM	(C24-C38)	51806930	4697.71	
C12	3.043	0.000	687	537	AK102	(C10-C25)	6072860	440.28	
C14	3.624	0.000	355	316	AK103	(C25-C36)	44673811	6105.48	M
C16	4.121	0.000	1226	986	OR.DIES	(C10-C28)	18889195	1228.01	
C18	4.572	0.000	4797	7537					
C20	4.987	0.000	17116	13458					
C22	5.389	0.000	60731	15407					
C24	5.755	0.000	221070	176933					
C25	5.939	0.000	301599	128180					
C26	6.119	0.000	357361	83552					
C28	6.431	0.000	431904	101220	IT.DIES	(C10-C24)	4876971	266.73	
C32	6.975	0.000	595763	456190					
C34	7.218	0.000	602959	375599					
Filter Peak	----								
C36	7.440	0.000	590001	381640	BUNKERC	(C10-C38)	56683900	11556.82	
o-terph	4.675	0.000	9018	16008	JET-A	(C10-C18)	179225	12.45	
Triacon Surr	6.765	0.000	2140769	6561813					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	16008	1.1	2.5
Triacontane	6561813	429.4	954.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

Tec 4/15/13

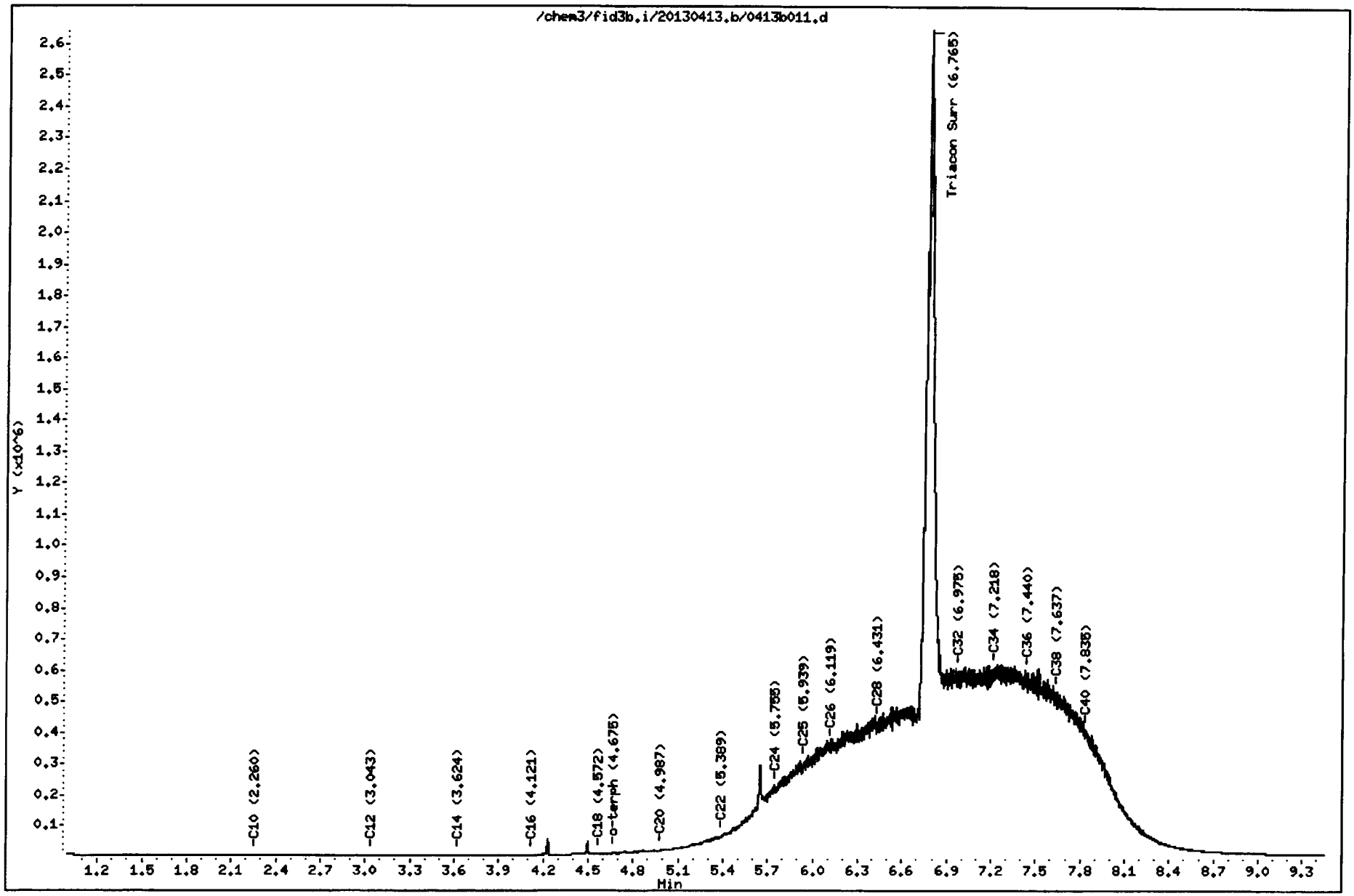
Data File: /chem3/fid3b.i/20130413.b/0413b011.d
Date : 13-APR-2013 13:30
Client ID:
Sample Info: MOIL5000

Column phase: RTX-1

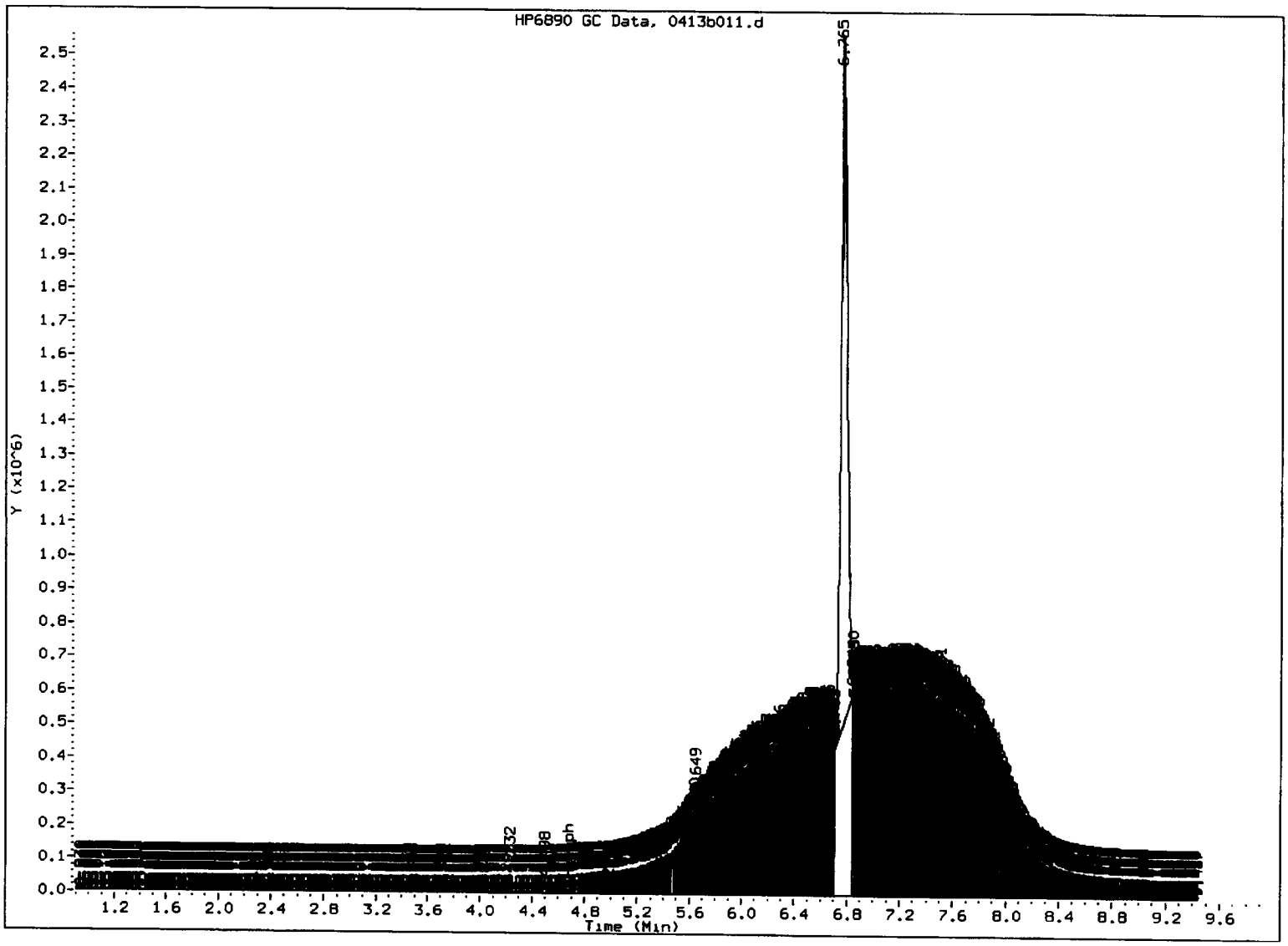
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 4/15/13



FID:3B-2C/RTX-1 MOIL5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JCI Date: 4/15/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130413.b/0413b012.d
Method: /chem3/fid3b.i/20130413.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 04/15/2013
Macro: FID:3B041313

ARI ID: MOILICV500
Client ID:
Injection: 13-APR-2013 13:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	141364	5	
C8	0.838	-0.002	6116	3749	WATPHD	(C12-C24)	615082	54.24	
C10	2.255	-0.005	1225	948	WATPHM	(C24-C38)	5408067	490.39	
C12	3.043	0.000	204	146	AK102	(C10-C25)	771562	55.94	
C14	3.623	-0.001	123	75	AK103	(C25-C36)	4593698	627.81	M
C16	4.118	-0.003	271	217	OR.DIES	(C10-C28)	2024424	131.61	
C18	4.568	-0.004	525	198					
C20	4.990	0.003	1813	2022					
C22	5.391	0.002	8744	4017					
C24	5.751	-0.003	25923	15048					
C25	5.939	0.000	30478	8312					
C26	6.117	-0.002	36591	12193					
C28	6.429	-0.002	42022	20272	IT.DIES	(C10-C24)	638391	34.92	
C32	6.972	-0.003	63398	23425					
C34	7.220	0.003	66596	45201					
Filter Peak	----								
C36	7.437	-0.003	62077	35598	BUNKERC	(C10-C38)	6046458	1232.76	
o-terph	4.675	0.000	884	1079	JET-A	(C10-C18)	39225	2.72	
Triacon Surr	6.729	-0.036	802375	597281					

Range Times: NW Diesel(3.093 - 5.805) NW Gas(0.610 - 3.093) NW M.Oil(5.805 - 7.687)
AK102(2.210 - 5.889) AK103(5.889 - 7.490) Jet A(2.210 - 4.622)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1079	0.1	0.2
Triacontane	597281	39.1	86.9

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	27130.1	19-OCT-2012
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	18284.0	
Bunker C	4904.8	14-SEP-2012

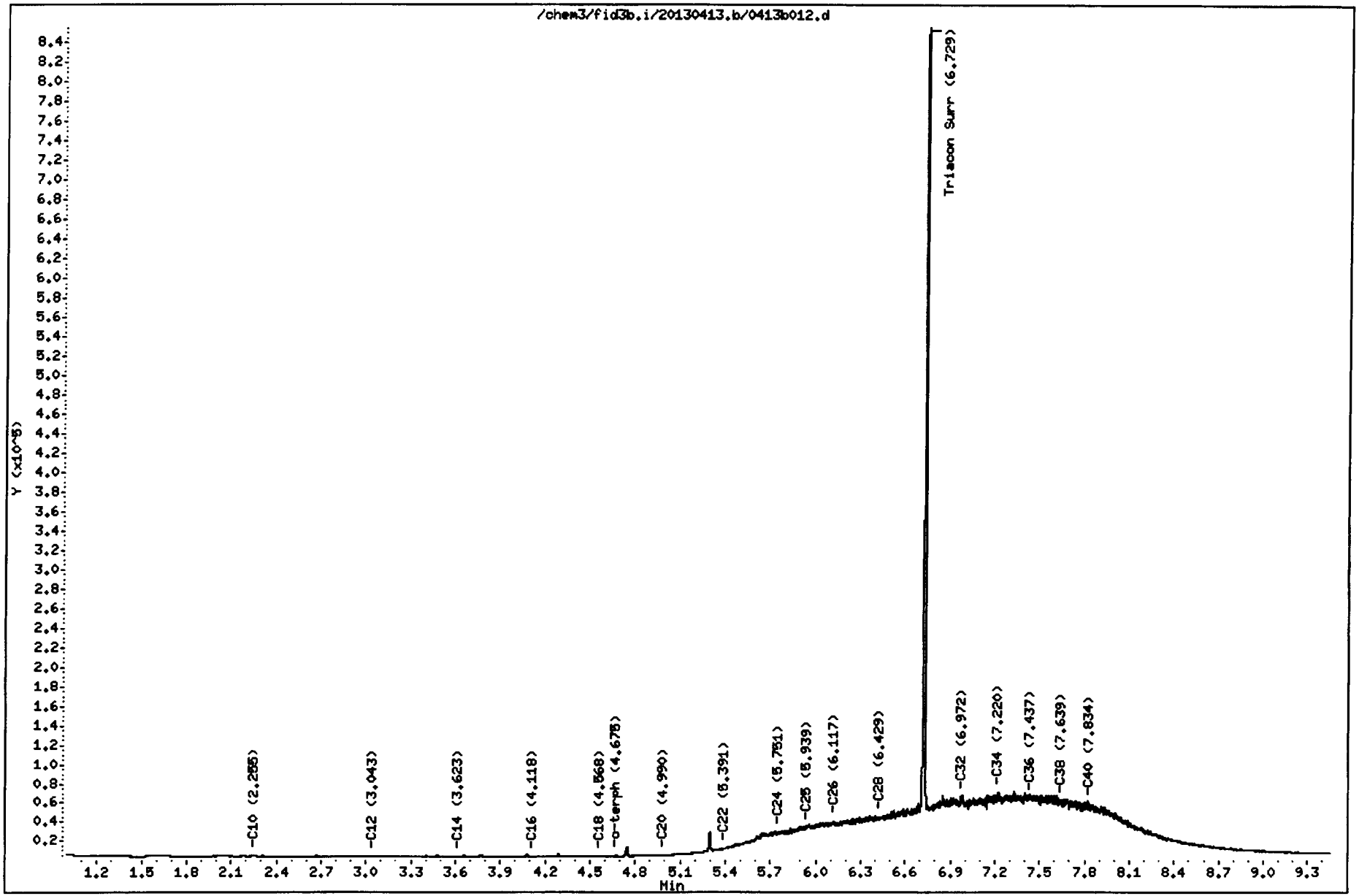
4/15/13

Data File: /chem3/fid3b.i/20130413.b/0413b012.d
Date : 13-APR-2013 13:49
Client ID:
Sample Info: MOILICV500

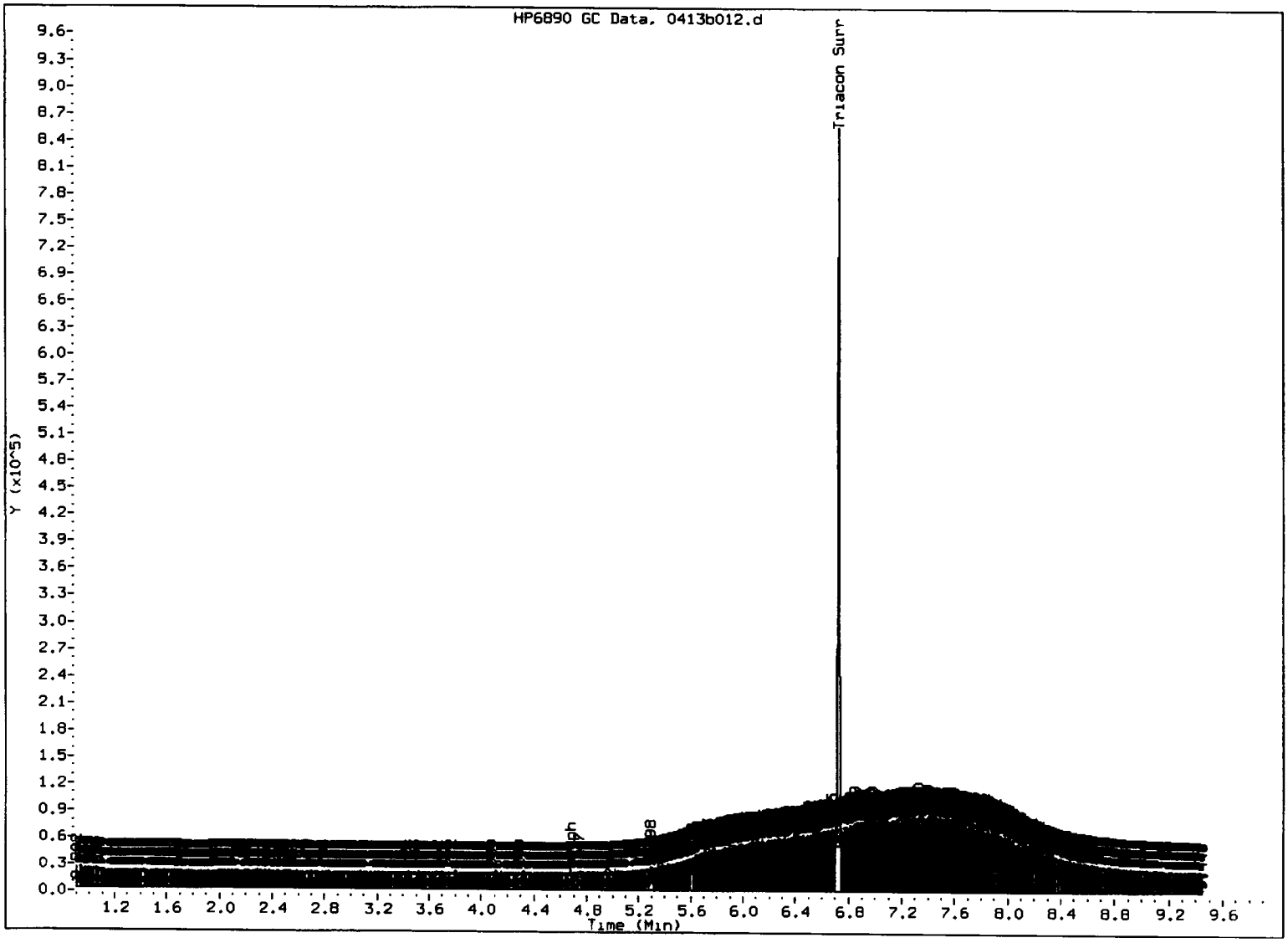
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

Column phase: RTX-1



FID:3B-2C/RTX-1 MOILICV500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/13/17

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ARI

SDG No.: 20130413 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.67 TRIAC: 6.76

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

QC LIMITS

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

* Values outside of QC limits.

FORM VIII TPH

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WL49 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: 3.22.13 -Dios 4.13.13 -mOil Analysis Start Date: _____

	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?	(1) (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

(1) Recovery not determined due to 50X dilution
- F, FMS, FMSD run at 50X. Previous runs at 10X
linear dynamic range.
- Full IV package.

(Review 1) Analyst: VD **Date:** 4.24.13

(Review 2) Reviewer: [signature] **Date:** 4/24

Form 4060F Version 008 02/28/13

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 04/20/13 Analysis: TPHd Analyst: JW

GC Program: TPHd3 Column No: 1072055 Column Type: RTX-1

Instrument Tune (.U or .CT.): N/A EM Voltage: N/A

Calibration File: N/A Curve Date: 03/22/13 & 04/13/13

IS/SS	Ical/Ccal	LCS/ICV
	2043-3,4	
	2041-4	
	2091-2	
	2028-1	

	Inject Date/Time	Filename	DF	LabID
1	20-APR-2013 14:00	0420b001.d	1	RINSE
2	20-APR-2013 14:18	0420b002.d	1	RINSE
3	20-APR-2013 14:38	0420b003.d	1	RT
4	20-APR-2013 14:57	0420b004.d	1	IB
5	20-APR-2013 15:17	0420b005.d	1	DIESEL#1
6	20-APR-2013 15:37	0420b006.d	1	MOIL#1
7	20-APR-2013 15:56	0420b007.d	1	CREOSOTE#1
8	20-APR-2013 16:58	0420b008.d	1	RINSE
9	20-APR-2013 17:18	0420b009.d	1	RINSE
10	20-APR-2013 17:37	0420b010.d	1	RINSE
11	20-APR-2013 17:57	0420b011.d	1	RINSE
12	20-APR-2013 18:16	0420b012.d	1	RT
13	20-APR-2013 18:36	0420b013.d	1	IB
14	20-APR-2013 18:55	0420b014.d	1	DIESEL#1
15	20-APR-2013 19:15	0420b015.d	1	MOIL#1
16	20-APR-2013 19:34	0420b016.d	1	WM08MBS1
17	20-APR-2013 19:53	0420b017.d	1	WM08LCSS1
18	20-APR-2013 20:12	0420b018.d	5	WM08A
19	20-APR-2013 20:31	0420b019.d	5	WM08B
20	20-APR-2013 20:50	0420b020.d	1	WL49MBS1
21	20-APR-2013 21:09	0420b021.d	1	WL49LCSS1
22	20-APR-2013 21:28	0420b022.d	50	WL49F
23	20-APR-2013 21:47	0420b023.d	50	WL49FMS
24	20-APR-2013 22:06	0420b024.d	50	WL49FMSD
25	20-APR-2013 22:25	0420b025.d	1	WL90MBW1
26	20-APR-2013 22:44	0420b026.d	1	WL90LCSW1
27	20-APR-2013 23:03	0420b027.d	1	WL90A
28	20-APR-2013 23:22	0420b028.d	1	DIESEL#2
29	20-APR-2013 23:40	0420b029.d	1	MOIL#2
30	20-APR-2013 23:59	0420b030.d	1	CREO 250
31	21-APR-2013 00:18	0420b031.d	1	CREO 2500
32	21-APR-2013 00:36	0420b032.d	1	CREO 1000
33	21-APR-2013 00:55	0420b033.d	1	CREO 500
34	21-APR-2013 01:14	0420b034.d	1	CREO100
35	21-APR-2013 01:33	0420b035.d	1	CREO 50
36	21-APR-2013 01:51	0420b036.d	1	WM16MBS1
37	21-APR-2013 02:10	0420b037.d	1	WM16LCSS1
38	21-APR-2013 02:28	0420b038.d	1	WM16LCSDS
39	21-APR-2013 02:47	0420b039.d	1	WM16QLS1
40	21-APR-2013 03:06	0420b040.d	1	WM16A
41	21-APR-2013 03:24	0420b041.d	1	WM16B
42	21-APR-2013 03:43	0420b042.d	1	WM16C
43	21-APR-2013 04:02	0420b043.d	1	WM16D
44	21-APR-2013 04:20	0420b044.d	1	WM00A
45	21-APR-2013 04:39	0420b045.d	1	WM36MBS1
46	21-APR-2013 04:57	0420b046.d	1	WM36LCSS1
47	21-APR-2013 05:16	0420b047.d	5	WM36A
48	21-APR-2013 05:35	0420b048.d	1	DIESEL#3
49	21-APR-2013 05:53	0420b049.d	1	MOIL#3
50	21-APR-2013 06:12	0420b050.d	1	CREOSOTE#
51	21-APR-2013 06:30	0420b051.d	1	WM77MBS1
52	21-APR-2013 06:49	0420b052.d	1	WM77LCSS1
53	21-APR-2013 07:08	0420b053.d	1	WM77LCSDS1
54	21-APR-2013 07:26	0420b054.d	10	WM77A
55	21-APR-2013 07:45	0420b055.d	10	WM77B
56	21-APR-2013 08:03	0420b056.d	10	WM77C
57	21-APR-2013 08:22	0420b057.d	1	DIESEL#4
58	21-APR-2013 08:41	0420b058.d	1	MOIL#4
59	21-APR-2013 09:00	0420b059.d	1	CREOSOTE#3

JW

Maintenance / Comments

JW 04/23/13

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130420.b

ARI Job No.: DIES Method: i/20130420.b/ftphfid3b.m Instrument: fid3b.i Date: 20-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1855	0420b014.d	DIESEL#1		1	o-terph,
1915	0420b015.d	MOIL#1		1	Triacon Surr,
2050	0420b020.d	WL49MBS1	WL49MBS1	1	NO MANUAL INTEGRATION
2109	0420b021.d	WL49LCSS1	WL49LCSS1	1	o-terph,
2128	0420b022.d	WL49F	IM-CB-01-2	50	NO MANUAL INTEGRATION
2147	0420b023.d	WL49FMS	IM-CB-01-2	50	NO MANUAL INTEGRATION
2206	0420b024.d	WL49FMSD	IM-CB-01-2	50	NO MANUAL INTEGRATION
2322	0420b028.d	DIESEL#2		1	o-terph,
2340	0420b029.d	MOIL#2		1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b014.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/24/2013
Macro: FID:3B042013

ARI ID: DIESEL#1
Client ID:
Injection: 20-APR-2013 18:55
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	771705	57
C8	0.838	-0.009	3801	6479	WATPHD	(C12-C24)	2724004	240.21
C10	2.259	-0.003	21880	14642	WATPHM	(C24-C38)	58098	5.27
C12	3.042	-0.001	36142	32555	AK102	(C10-C25)	3266386	236.81 M
C14	3.621	-0.002	61094	54273	AK103	(C25-C36)	39164	5.35
C16	4.120	-0.003	92987	72588	OR.DIES	(C10-C28)	3288240	213.77 M
C18	4.571	-0.002	80231	68333				
C20	4.992	-0.002	53788	48948				
C22	5.388	-0.005	27095	24010				
C24	5.761	-0.004	6392	7639				
C25	5.938	-0.001	2597	3991				
C26	6.110	-0.008	1142	1502				
C28	6.442	0.009	6941	6718	IT.DIES	(C10-C24)	3259946	236.42
C32	6.984	0.001	217	144				
C34	7.218	-0.001	589	1055	CREOSOT	(C8-C22)	2640111	816.52
Filter Peak	----							
C36	7.442	0.005	942	1195	BUNKERC	(C10-C38)	3318044	676.49
o-terph	4.683	0.000	982289	670720	JET-A	(C10-C18)	2499373	173.58
Triacon Surr	6.721	-0.010	385	370				

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	670720	46.2	102.7
Triacontane	370	0.0	0.1

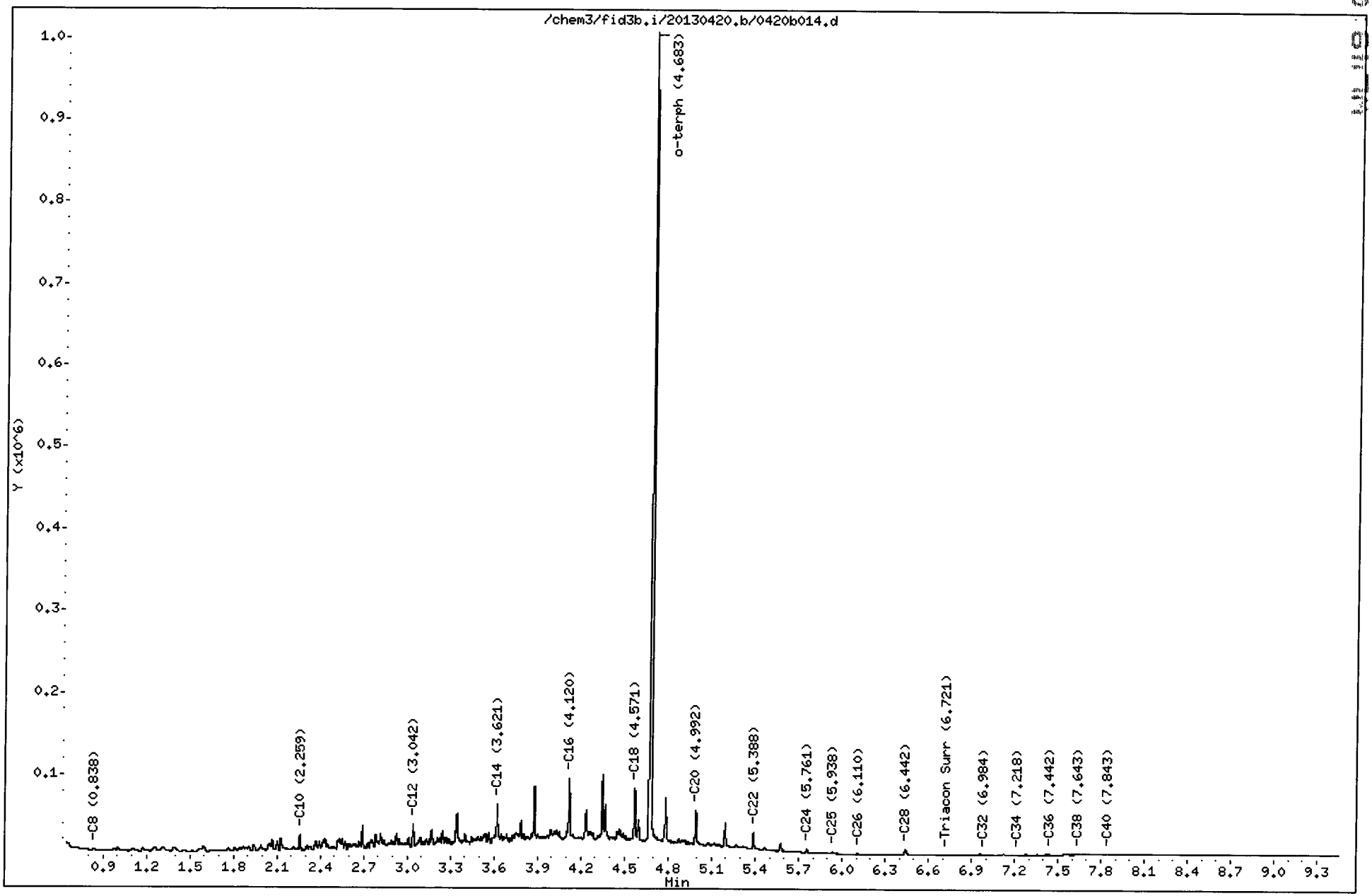
Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130420.b/0420b014.d
Date : 20-APR-2013 18:55
Client ID:
Sample Info: DIESEL#1

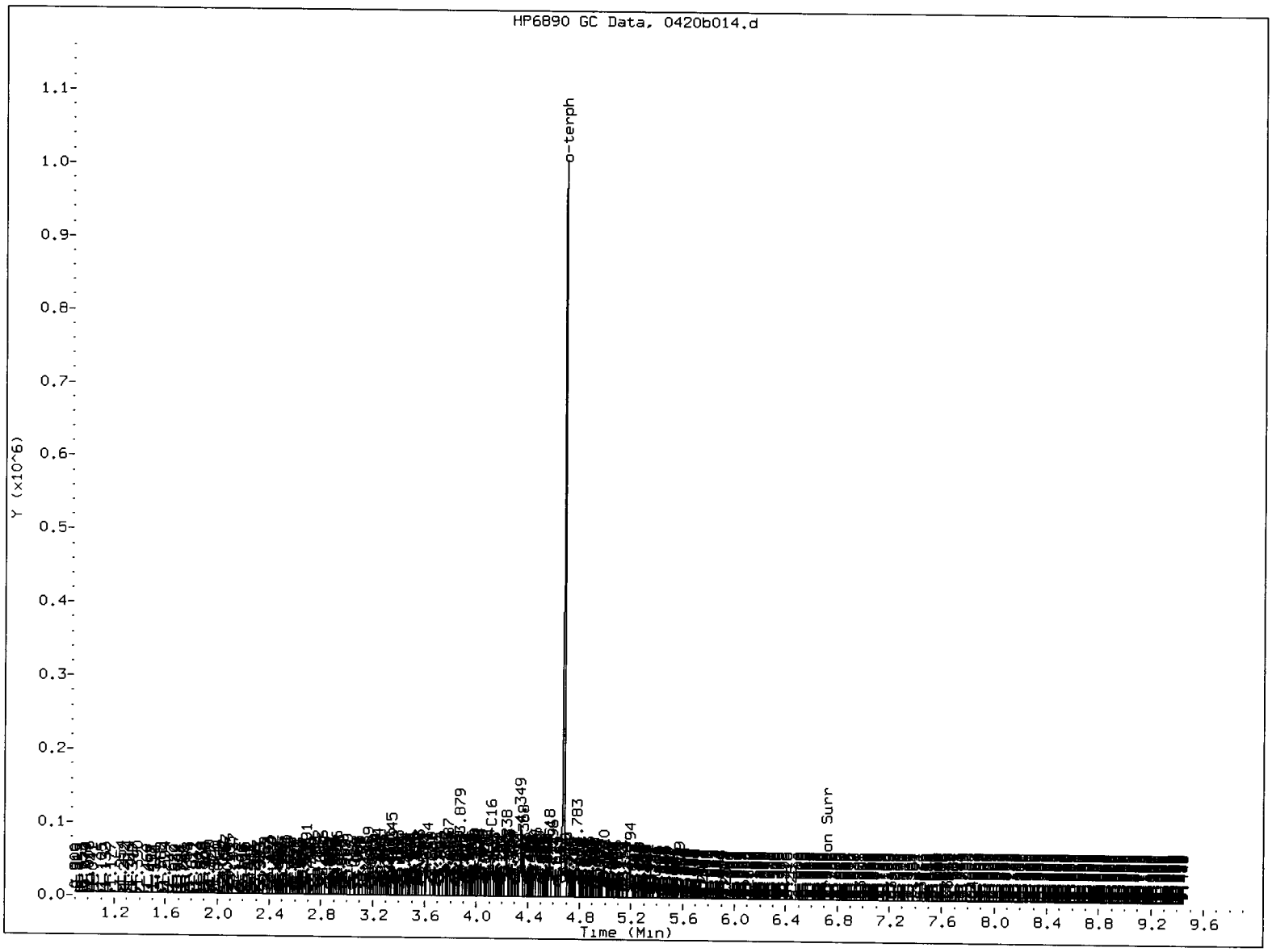
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW/VTS
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL#1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VB Date: 4.24.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b015.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/24/2013
Macro: FID:3B042013

ARI ID: MOIL#1
Client ID:
Injection: 20-APR-2013 19:15
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	121290	9
C8	0.853	0.006	4893	3491	WATPHD	(C12-C24)	498391	43.95
C10	2.257	-0.005	561	453	WATPHM	(C24-C38)	5160494	467.94
C12	3.047	0.004	698	702	AK102	(C10-C25)	636926	46.18
C14	3.624	0.001	435	547	AK103	(C25-C36)	4444349	607.40 M
C16	4.119	-0.003	389	421	OR.DIES	(C10-C28)	1902928	123.71
C18	4.568	-0.006	358	362				
C20	4.992	-0.002	1397	1031				
C22	5.392	-0.001	5883	3756				
C24	5.760	-0.004	22817	20134				
C25	5.941	0.002	29819	10554				
C26	6.117	0.000	36428	13345				
C28	6.431	-0.003	41158	8173	IT.DIES	(C10-C24)	524984	38.07
C32	6.978	-0.005	65182	38331				
C34	7.222	0.003	56545	23548	CREOSOT	(C8-C22)	147195	45.52
Filter Peak	----							
C36	7.439	0.002	55594	19516	BUNKERC	(C10-C38)	5685478	1159.17
o-terph	4.674	-0.009	1146	1426	JET-A	(C10-C18)	68182	4.74
Triacon Surr	6.729	-0.002	827362	630530				

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1426	0.1	0.2
Triacontane	630530	41.3	91.7

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

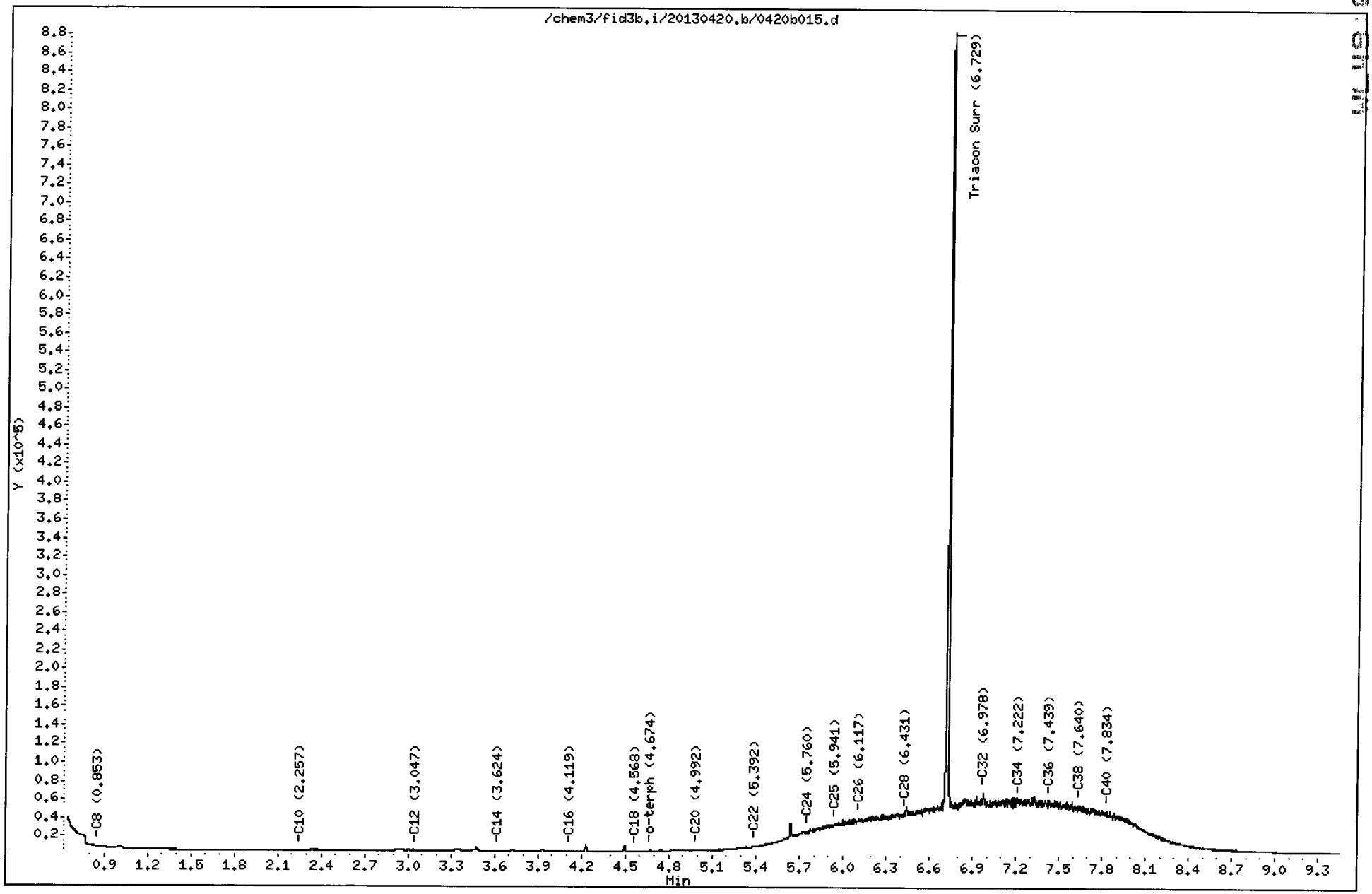
Data File: /chem3/fid3b.i/20130420.b/0420b015.d
Date : 20-APR-2013 19:15
Client ID:
Sample Info: MOIL#1

Column phase: RTX-1

VP
4.24.13

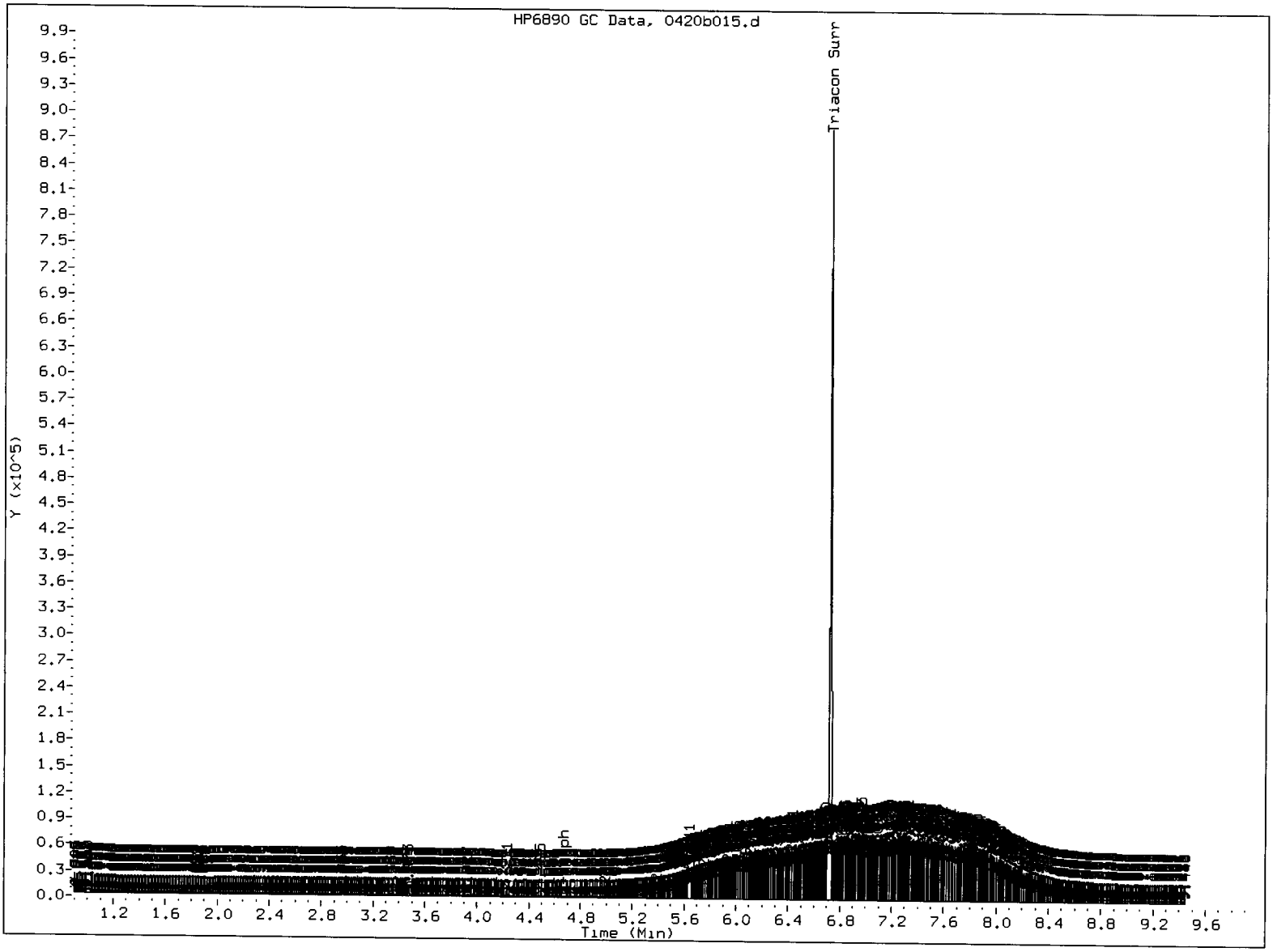
Instrument: fid3b.i

Operator: JW/VTS
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL#1

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: UD Date: 4.24.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b020.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/23/2013
Macro: FID:3B042013

ARI ID: WL49MBS1
Client ID: WL49MBS1
Injection: 20-APR-2013 20:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	89310	7
C8	0.847	-0.001	3446	2898	WATPHD	(C12-C24)	45355	4.00
C10	2.257	-0.004	682	941	WATPHM	(C24-C38)	76956	6.98
C12	3.048	0.005	668	672	AK102	(C10-C25)	73018	5.29
C14	3.623	0.000	416	375	AK103	(C25-C36)	56205	7.68
C16	4.119	-0.003	328	294	OR.DIES	(C10-C28)	78812	5.12
C18	4.568	-0.005	140	105				
C20	4.991	-0.003	119	74				
C22	5.396	0.003	61	9				
C24	5.761	-0.003	117	86				
C25	5.935	-0.003	93	56				
C26	6.123	0.005	84	15				
C28	6.441	0.007	1670	2071	IT.DIES	(C10-C24)	72729	5.27
C32	6.979	-0.004	1925	2308				
C34	7.218	-0.001	1029	613	CREOSOT	(C8-C22)	44459	13.75
Filter Peak	----							
C36	7.440	0.002	1468	1406	BUNKERC	(C10-C38)	149685	30.52
o-terph	4.683	0.000	962725	680208	JET-A	(C10-C18)	56312	3.91
Triacon Surr	6.727	-0.004	913747	685854				

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	680208	46.9	104.2
Triacontane	685854	44.9	99.7

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

VD 4.23.13

Data File: /chem3/fid3b.i/20130420.b/0420b020.d

Date : 20-APR-2013 20:50

Client ID: WL49MBS1

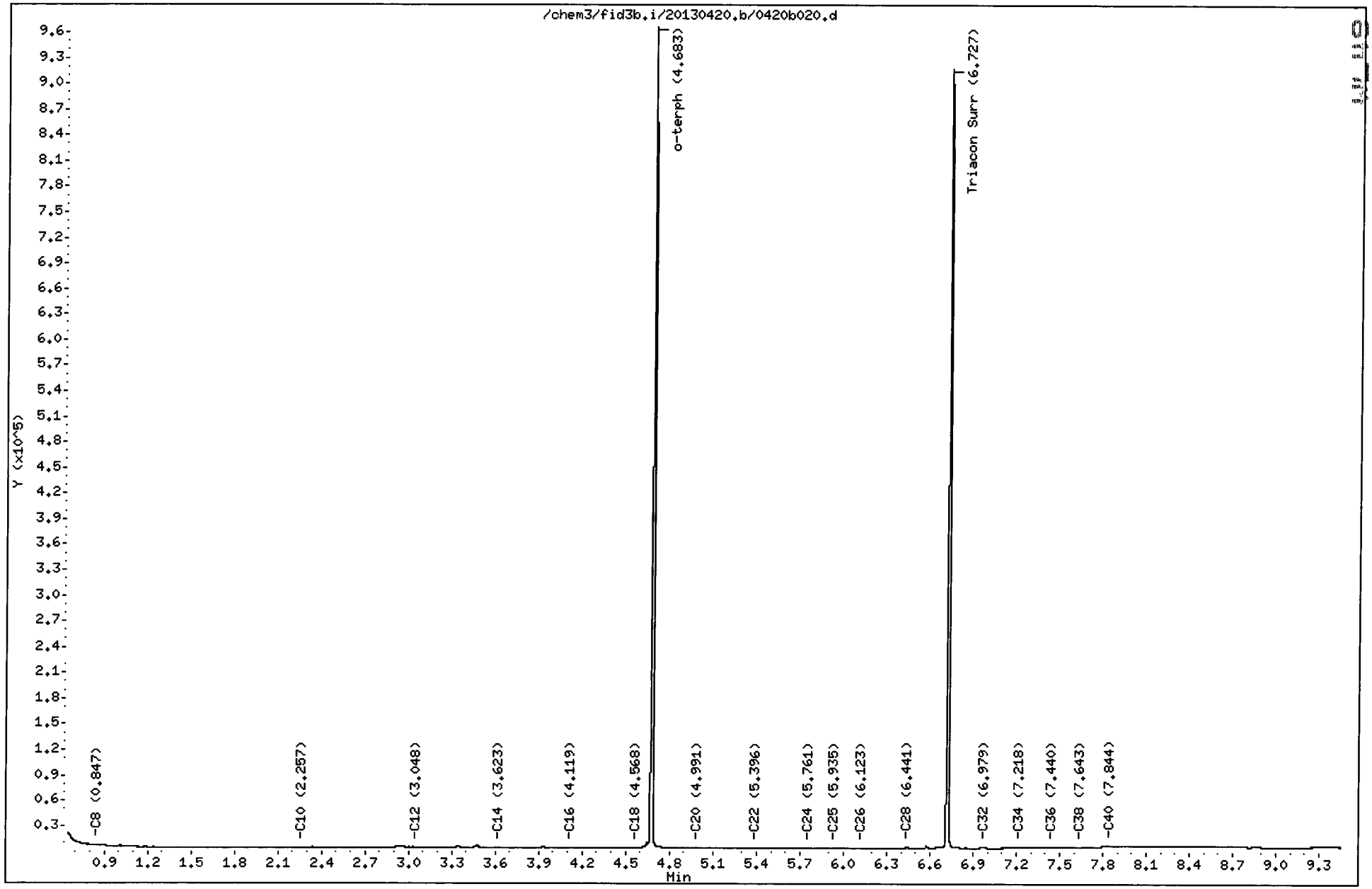
Sample Info: WL49MBS1

Instrument: fid3b.i

Operator: JW/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b021.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/23/2013
Macro: FID:3B042013

ARI ID: WL49LCSS1
Client ID: WL49LCSS1
Injection: 20-APR-2013 21:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	4444086	329
C8	0.849	0.002	9322	21012	WATPHD	(C12-C24)	17400603	1534.43
C10	2.261	0.000	132255	95288	WATPHM	(C24-C38)	179343	16.26
C12	3.045	0.002	193227	207933	AK102	(C10-C25)	20623397	1495.20 M
C14	3.626	0.003	341372	321378	AK103	(C25-C36)	129155	17.65
C16	4.126	0.004	509014	442386	OR.DIES	(C10-C28)	20717284	1346.85 M
C18	4.575	0.002	487327	426037				
C20	4.994	0.000	329845	316793				
C22	5.390	-0.003	187776	154196				
C24	5.761	-0.003	46466	48710				
C25	5.935	-0.004	17716	14477				
C26	6.106	-0.012	7544	8379				
C28	6.429	-0.005	1758	1801	IT.DIES	(C10-C24)	20585536	1492.90
C32	6.977	-0.006	1229	1177				
C34	7.219	0.000	301	352	CREOSOT	(C8-C22)	16849379	5211.11
Filter Peak	----							
C36	7.446	0.008	648	369	BUNKERC	(C10-C38)	20764879	4233.58
o-terph	4.686	0.003	997131	683477	JET-A	(C10-C18)	15639660	1086.17
Triacon Surr	6.728	-0.003	858420	663442				

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	683477	47.1	104.7
Triacontane	663442	43.4	96.5

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130420.b/0420b021.d
Date : 20-APR-2013 21:09
Client ID: WL49LCSS1
Sample Info: WL49LCSS1

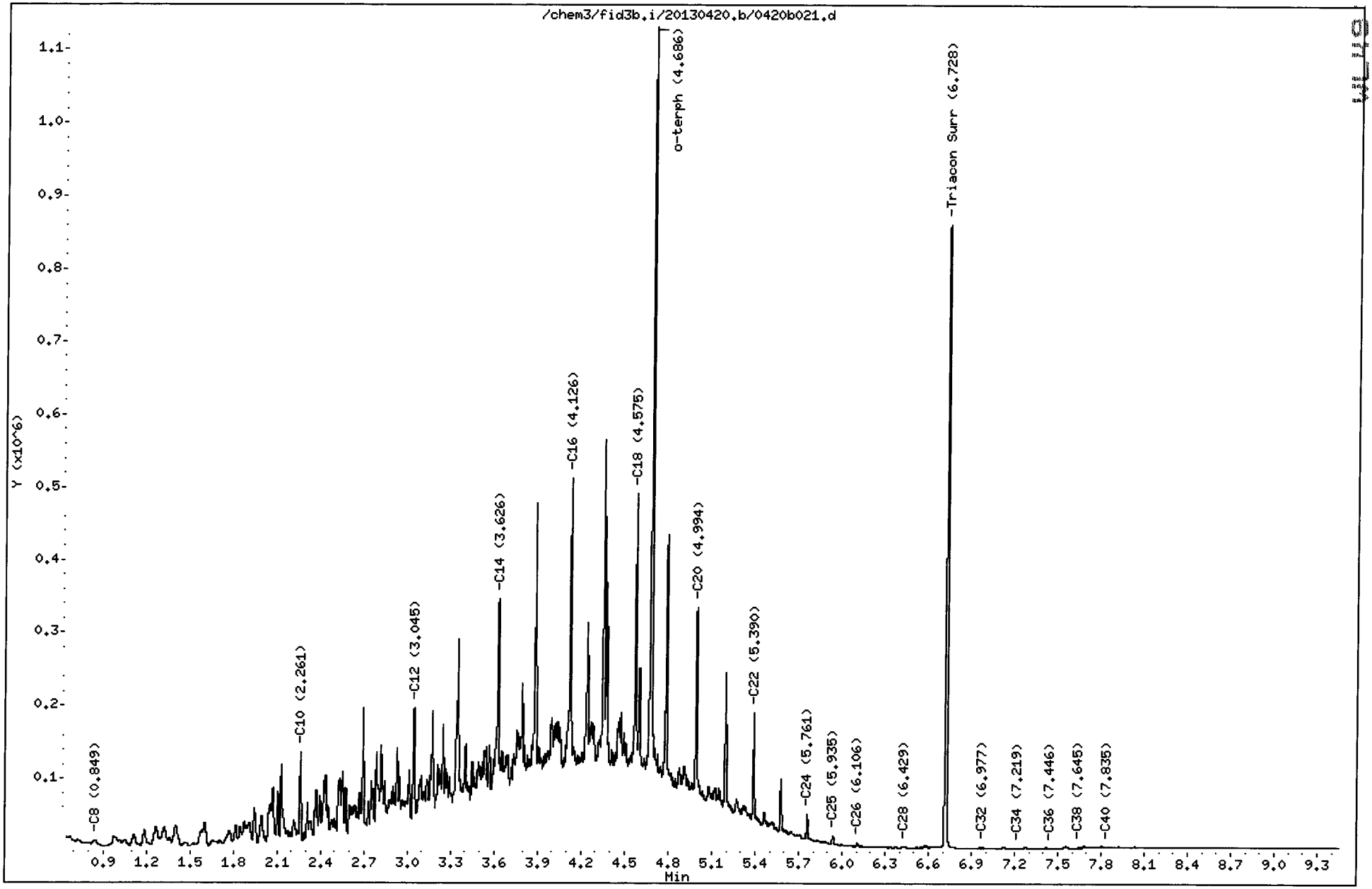
Column phase: RTX-1

VP 4.24.13

Instrument: fid3b.i

Operator: JW/VTS
Column diameter: 0.25

WL 49 61877



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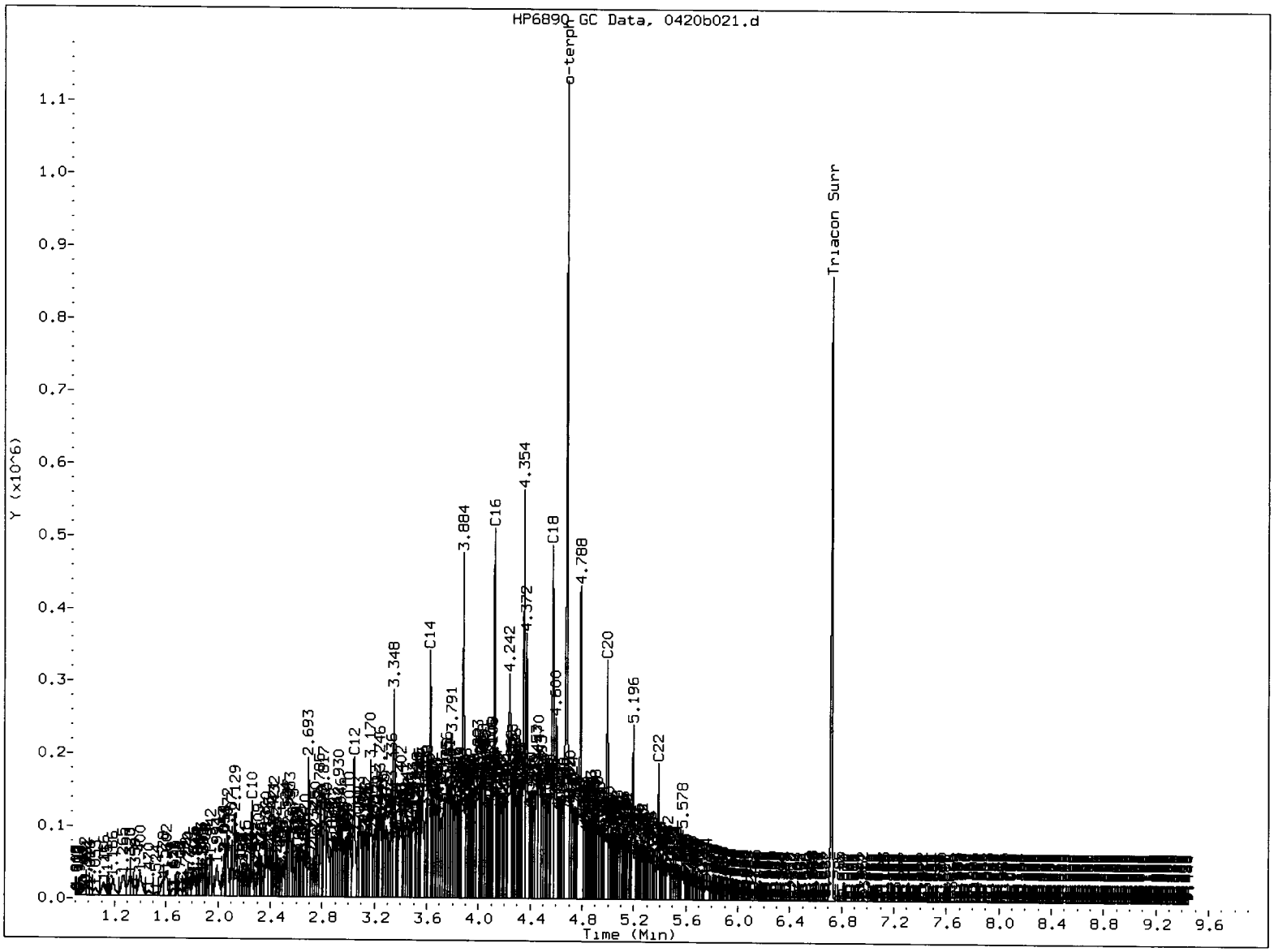
FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: VD Date: 4-24-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b022.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/23/2013
Macro: FID:3B042013

ARI ID: WL49F
Client ID: IM-CB-01-20130410-S
Injection: 20-APR-2013 21:28
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	192408	14
C8	0.852	0.005	3472	1918	WATPHD	(C12-C24)	3561676	314.08
C10	2.258	-0.003	4500	3563	WATPHM	(C24-C38)	6983343	633.23
C12	3.042	-0.001	11294	9323	AK102	(C10-C25)	3921738	284.33
C14	3.621	-0.002	23269	17434	AK103	(C25-C36)	6079836	830.92
C16	4.119	-0.003	35433	35613	OR.DIES	(C10-C28)	6416782	417.16
C18	4.568	-0.005	35190	36597				
C20	4.992	-0.002	33883	39024				
C22	5.392	-0.002	49506	36347				
C24	5.764	0.000	65654	35878				
C25	5.938	-0.001	73961	20269				
C26	6.119	0.001	72481	19968				
C28	6.436	0.002	69752	14889	IT.DIES	(C10-C24)	3673819	266.43
C32	6.980	-0.003	63956	28931				
C34	7.224	0.005	60495	12915	CREOSOT	(C8-C22)	2311341	714.84
Filter Peak	----							
C36	7.438	0.000	60672	35761	BUNKERC	(C10-C38)	10657162	2172.80
o-terph	----				JET-A	(C10-C18)	1069256	74.26
Triacon Surr	----							

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130420.b/0420b022.d

Date : 20-APR-2013 21:28

Client ID: IM-CB-01-20130410-S

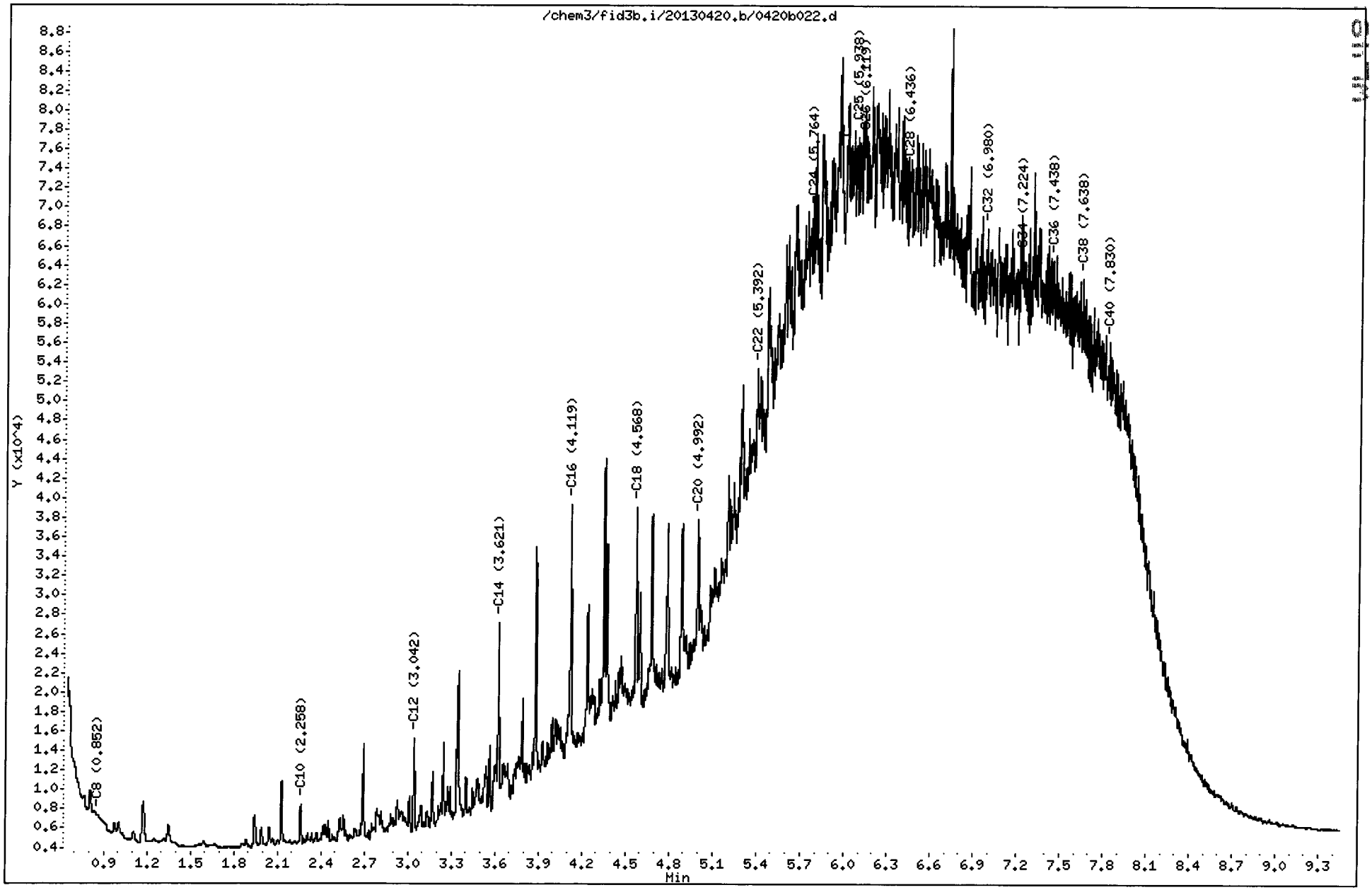
Sample Info: WL49F,50

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b023.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/23/2013
Macro: FID:3B042013

ARI ID: WL49FMS
Client ID: IM-CB-01-201304 MS
Injection: 20-APR-2013 21:47
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	262309	19
C8	0.836	-0.012	3868	4778	WATPHD	(C12-C24)	3832489	337.96
C10	2.258	-0.004	6893	5158	WATPHM	(C24-C38)	7025104	637.02
C12	3.042	-0.002	14317	13174	AK102	(C10-C25)	4286007	310.74
C14	3.622	-0.002	29596	23458	AK103	(C25-C36)	6044894	826.14
C16	4.120	-0.003	44152	42591	OR.DIES	(C10-C28)	6746170	438.58
C18	4.570	-0.004	46314	51313				
C20	4.992	-0.003	38495	43965				
C22	5.392	-0.002	50837	39677				
C24	5.760	-0.004	66104	37796				
C25	5.938	-0.001	72400	45896				
C26	6.119	0.001	77083	32385				
C28	6.434	0.000	69132	13680	IT.DIES	(C10-C24)	4002726	290.28
C32	6.979	-0.004	66114	48233				
C34	7.221	0.002	64175	22442	CREOSOT	(C8-C22)	2579528	797.79
Filter Peak	----							
C36	7.439	0.001	61248	42814	BUNKERC	(C10-C38)	11027829	2248.37
o-terph	----				JET-A	(C10-C18)	1343333	93.29
Triacon Surr	----							

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130420.b/0420b023.d

Date : 20-APR-2013 21:47

Client ID: IM-CB-01-201304 MS

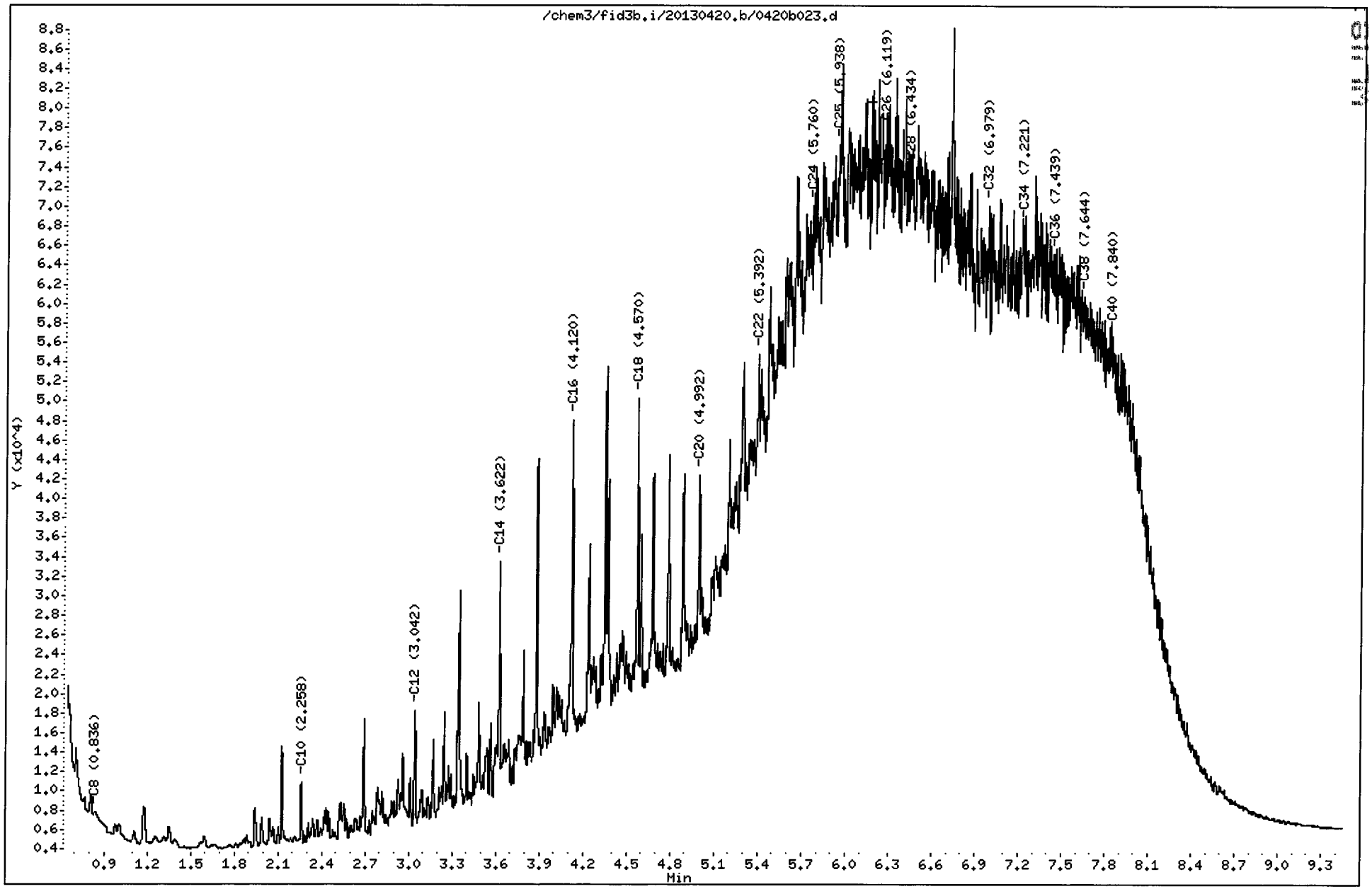
Sample Info: WL49FMS,50

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b024.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/23/2013
Macro: FID:3B042013

ARI ID: WL49FMSD
Client ID: IM-CB-01-201304 MSD
Injection: 20-APR-2013 22:06
Dilution Factor: 50

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	229470	17
C8	0.854	0.006	3045	1753	WATPHD	(C12-C24)	3520490	310.45
C10	2.259	-0.003	6027	4571	WATPHM	(C24-C38)	6910518	626.63
C12	3.042	-0.001	12869	11227	AK102	(C10-C25)	3945017	286.02
C14	3.622	-0.001	26828	22926	AK103	(C25-C36)	5966650	815.45
C16	4.120	-0.003	41293	30188	OR.DIES	(C10-C28)	6358480	413.37
C18	4.568	-0.006	42836	39057				
C20	4.992	-0.003	36277	44197				
C22	5.388	-0.005	47442	43747				
C24	5.762	-0.002	62522	32587				
C25	5.938	-0.001	72585	55363				
C26	6.119	0.001	70706	18000				
C28	6.431	-0.003	68509	26978	IT.DIES	(C10-C24)	3666467	265.90
C32	6.979	-0.004	64268	57694				
C34	7.221	0.002	61471	24541	CREOSOT	(C8-C22)	2360173	729.94
Filter Peak	----							
C36	7.441	0.003	57247	11226	BUNKERC	(C10-C38)	10576985	2156.46
o-terph	----				JET-A	(C10-C18)	1205118	83.69
Triacon Surr	----							

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	0	0.0	0.0
Triacontane	0	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

4.24.13

Data File: /chem3/fid3b.i/20130420.b/0420b024.d

Date : 20-APR-2013 22:06

Client ID: IM-CB-01-201304 MSD

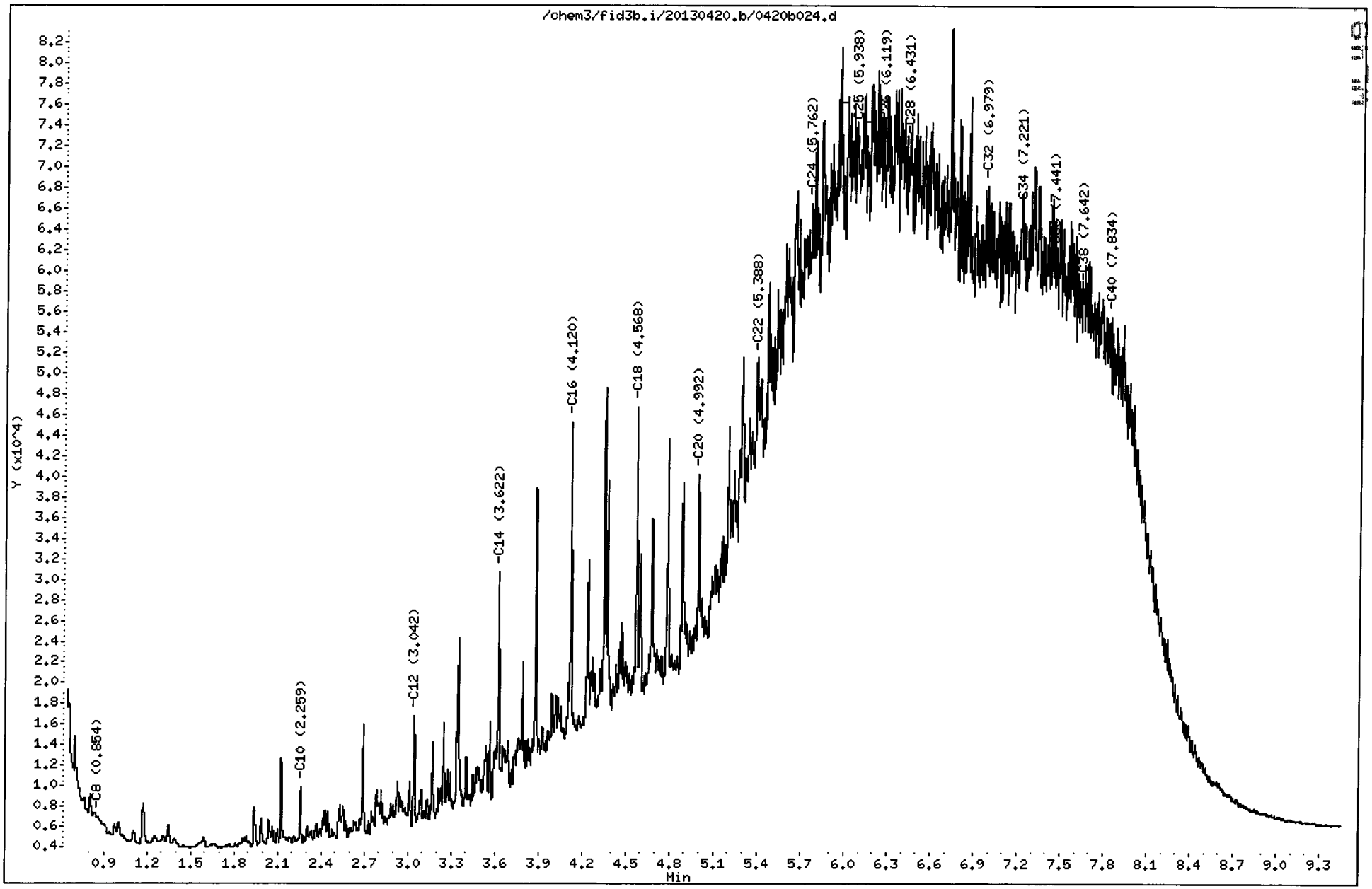
Sample Info: WL49FMSD,50

Instrument: fid3b.i

Operator: JW/VTS

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b028.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/24/2013
Macro: FID:3B042013

ARI ID: DIESEL#2
Client ID:
Injection: 20-APR-2013 23:22
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	815716	60
C8	0.857	0.009	3731	5174	WATPHD	(C12-C24)	2839394	250.39
C10	2.255	-0.006	22434	15401	WATPHM	(C24-C38)	48235	4.37
C12	3.042	-0.001	36696	32915	AK102	(C10-C25)	3387384	245.59 M
C14	3.622	-0.001	61632	53306	AK103	(C25-C36)	29548	4.04
C16	4.119	-0.003	99389	78719	OR.DIES	(C10-C28)	3403666	221.28 M
C18	4.570	-0.003	86852	73344				
C20	4.991	-0.004	55860	58839				
C22	5.389	-0.004	25989	28535				
C24	5.761	-0.003	6552	8437				
C25	5.937	-0.002	2512	3251				
C26	6.124	0.006	540	148				
C28	6.431	-0.003	178	88	IT.DIES	(C10-C24)	3380261	245.14
C32	6.986	0.003	125	59				
C34	7.215	-0.004	337	188	CREOSOT	(C8-C22)	2749492	850.35
Filter Peak	----							
C36	7.441	0.003	642	769	BUNKERC	(C10-C38)	3428497	699.01
o-terph	4.684	0.001	1012412	694882	JET-A	(C10-C18)	2567388	178.30
Triacon Surr	6.719	-0.011	295	316				

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	694882	47.9	106.4
Triacontane	316	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

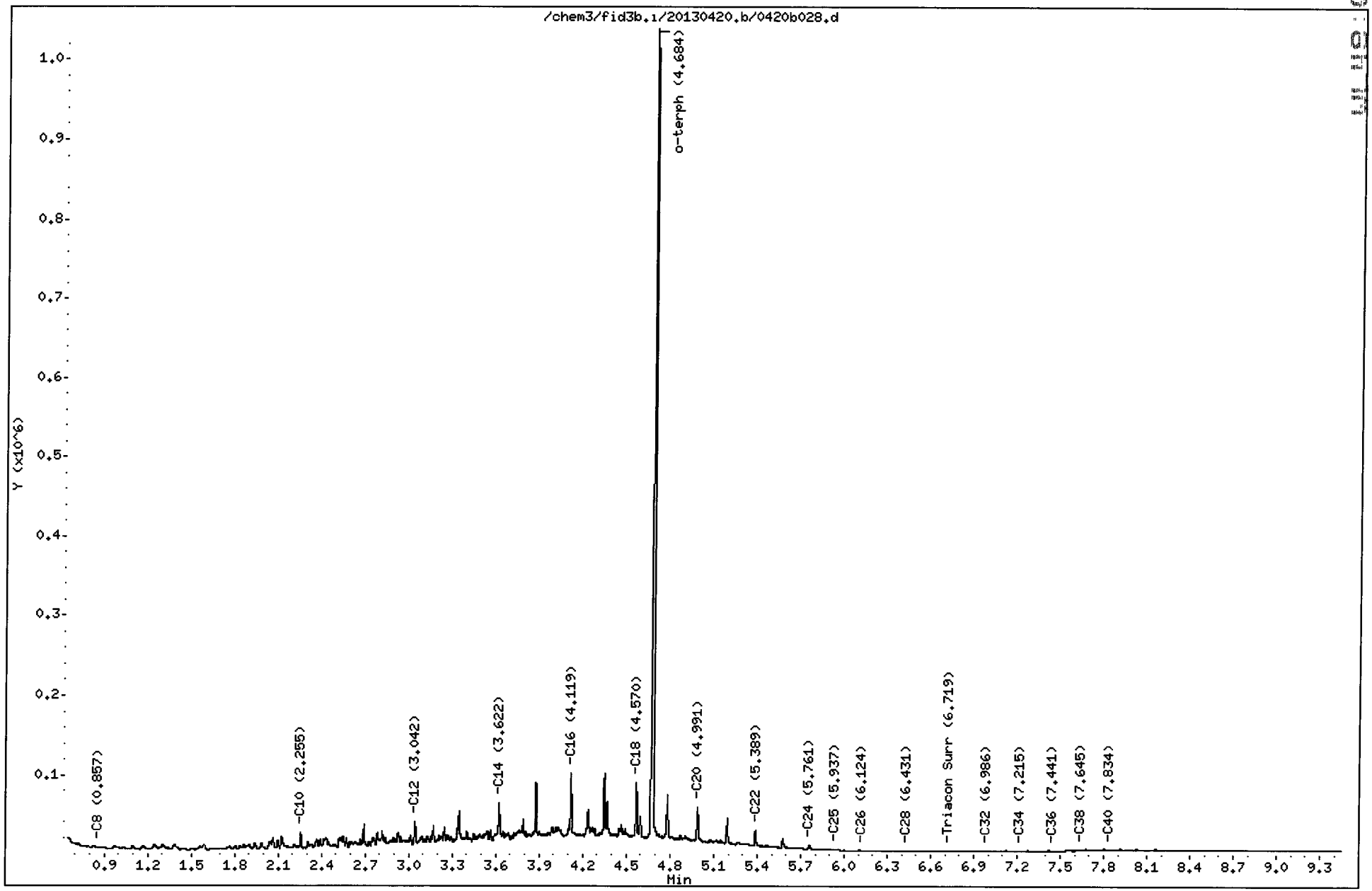
Data File: /chem3/fid3b.i/20130420.b/0420b028.d
Date : 20-APR-2013 23:22
Client ID:
Sample Info: DIESEL#2

Column phase: RTX-1

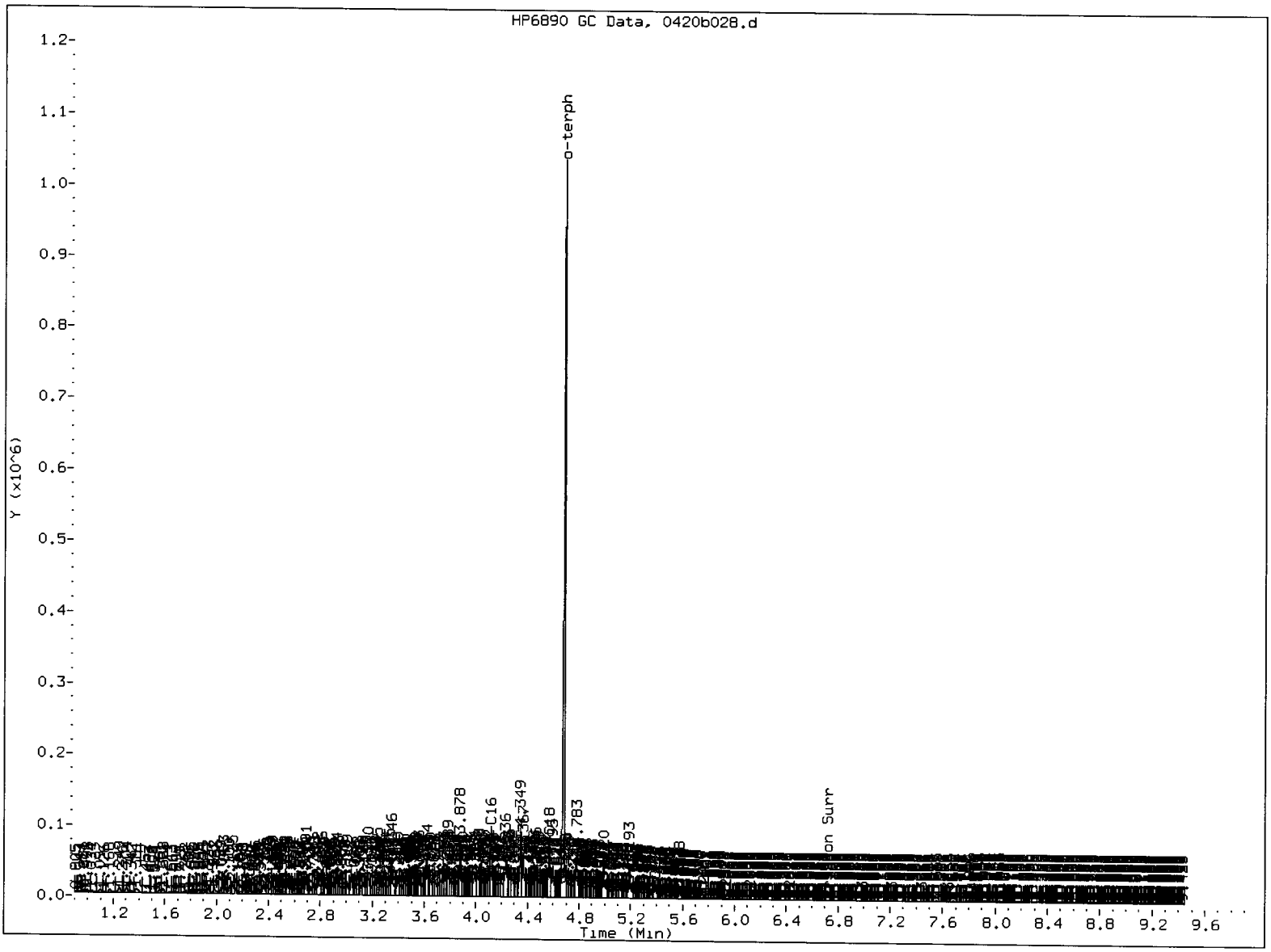
VT 4.24.13

Instrument: fid3b.i

Operator: JW/VTS
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL#2 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 4.24.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130420.b/0420b029.d
Method: /chem3/fid3b.i/20130420.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW/VTS
Report Date: 04/24/2013
Macro: FID:3B042013

ARI ID: MOIL#2
Client ID:
Injection: 20-APR-2013 23:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	103773	8	
C8	0.843	-0.005	4600	3564	WATPHD	(C12-C24)	466355	41.12	
C10	2.254	-0.008	592	659	WATPHM	(C24-C38)	4963711	450.10	
C12	3.044	0.001	521	100	AK102	(C10-C25)	596811	43.27	
C14	3.625	0.002	328	474	AK103	(C25-C36)	4249888	580.82	M
C16	4.118	-0.004	280	301	OR.DIES	(C10-C28)	1796066	116.76	
C18	4.569	-0.005	269	193					
C20	4.990	-0.005	1233	1135					
C22	5.393	0.000	5559	4328					
C24	5.759	-0.005	20822	11597					
C25	5.939	0.000	30660	21343					
C26	6.120	0.002	33419	8597					
C28	6.440	0.006	40640	8693	IT.DIES	(C10-C24)	491922	35.67	
C32	6.981	-0.002	66068	46131					
C34	7.219	0.000	57792	10236	CREOSOT	(C8-C22)	128329	39.69	
Filter Peak	----								
C36	7.439	0.001	57669	46089	BUNKERC	(C10-C38)	5455632	1112.30	
o-terph	4.687	0.004	400	205	JET-A	(C10-C18)	59825	4.15	
Triacon Surr	6.729	-0.002	866688	635493					

Range Times: NW Diesel(3.093 - 5.814) NW Gas(0.620 - 3.093) NW M.Oil(5.814 - 7.693)
AK102(2.212 - 5.889) AK103(5.889 - 7.488) Jet A(2.212 - 4.624)

Surrogate	Area	Amount	%Rec
o-Terphenyl	205	0.0	0.0
Triacontane	635493	41.6	92.4

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	15281.5	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	11028.1	13-APR-2013
AK102	13793.0	22-MAR-2013
AK103	7317.0	25-SEP-2012
JetA	14399.0	16-FEB-2012
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130420.b/0420b029.d

Date : 20-APR-2013 23:40

Client ID:

Sample Info: MOIL#2

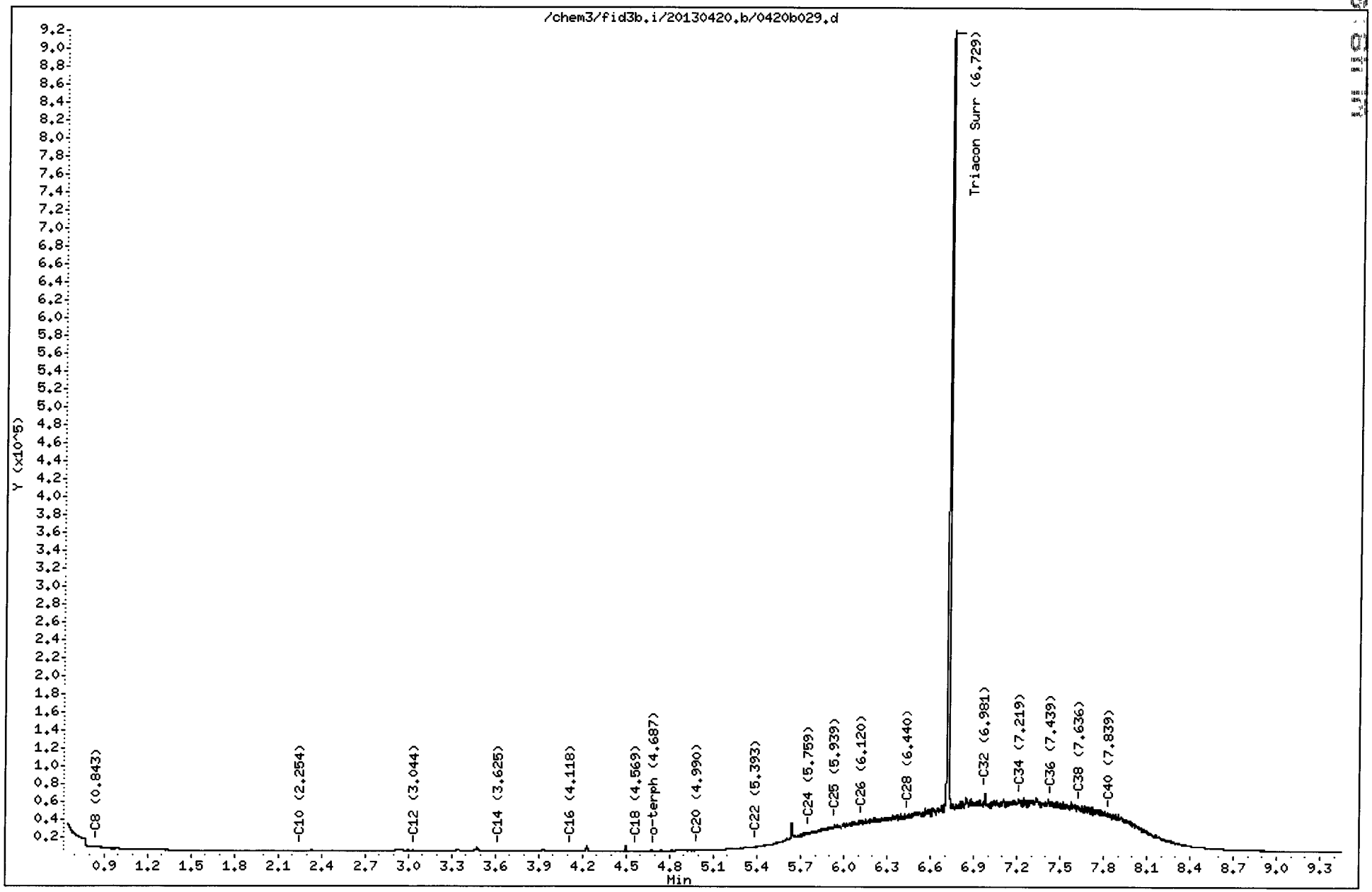
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW/VTS

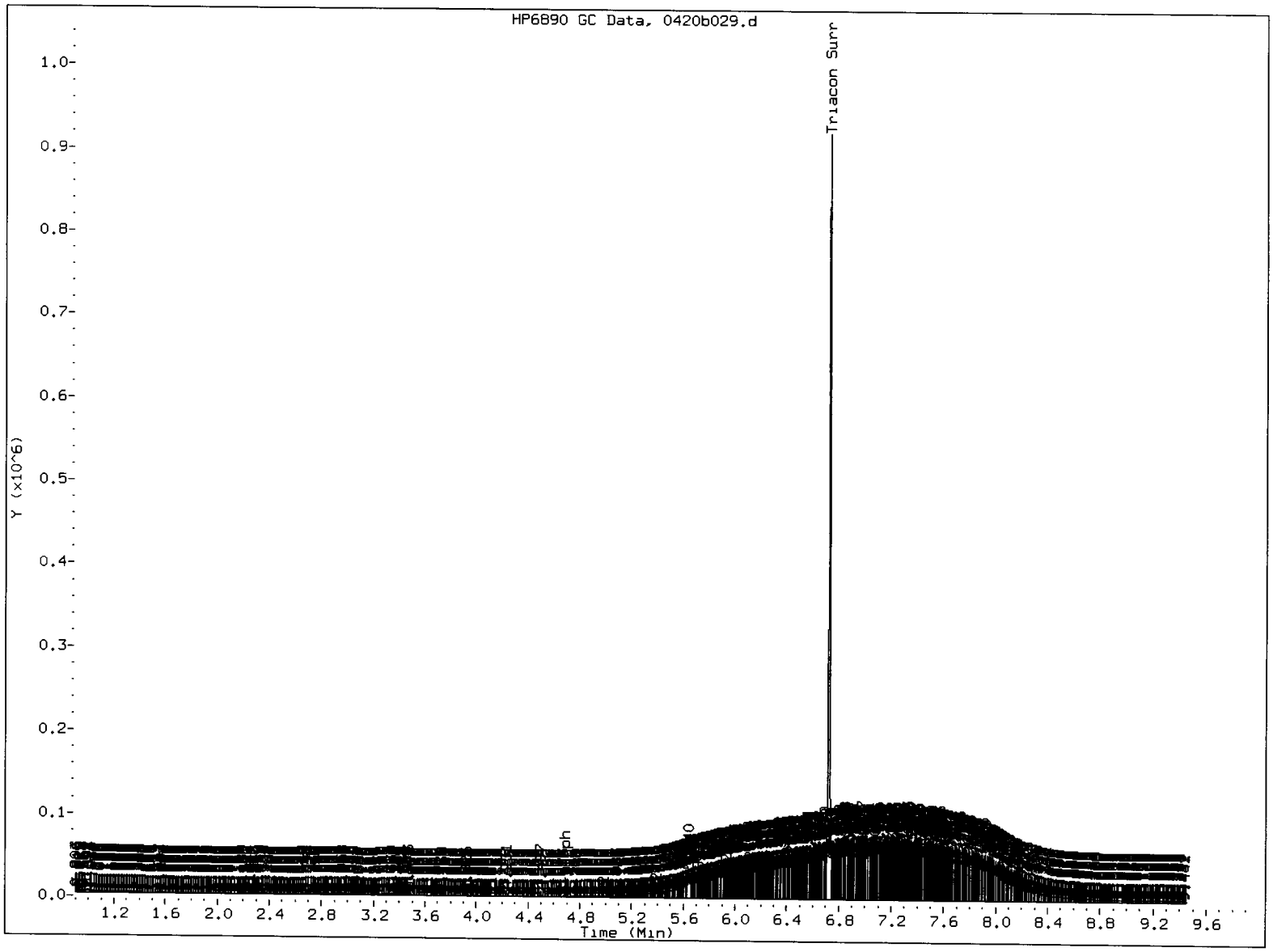
Column diameter: 0.25

VD 4.24.13



FID:3B-2C/RTX-1 MOIL#2

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: VD Date: 4.24.13

TPHG Raw Data
Preparation Log

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
		4/22/13		PL

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_4$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	
1	WQ49F	1		X	105695	36.66	28.209	8.451	5	900	
2	WQ5A	2		X		33.68	28.258				
3	1 B	2		X		33.29	28.332				
4	1 C			X		33.06	28.293				
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:	40050016 PT120					

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WL49, WL65

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	VM785-1	8/13/13	Ultra	VM765-1	3/13/13
Restek	VM772-3	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 0.5- poor signal to noise ratio.
MTBE 0.25 level not used, below RL

Analyst: PL **Date:** 3/18/13

Reviewer: DB **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
VW785-1	VW772-3	VW765-1

Document All Maintenance Tasks in StarLIMS

	Time	Filename	LabID	ClientID	Vial#	DF
1	1402	0315a001.d	RINSE			1
2	1431	0315a002.d	RT/BCAL 1			1
3	1501	0315a003.d	GCAL 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

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130315-1.b/FID.m
Batch File: /chem3/pid1.i/20130315-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.382	15.379	15.379	15.380	15.379	15.379	15.380	15.380	15.378	15.382	15.312-15.452	15.380	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.101	16.031-16.171	+++++	+++++
21 nc11	16.702	16.700	16.698	16.698	16.699	16.699	16.698	+++++	16.698	16.702	16.632-16.772	16.699	0.001
22 nC12-Dodecane	+++++	17.793	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.794	17.724-17.864	17.793	0.000
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.600	18.530-18.670	+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.800	18.730-18.870	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130315-2.b/PIDB.m
Batch File: /chem3/pid1.i/20130315-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0315a006	0315a007	0315a008	0315a009	0315a010	0315a011	0315a012	0315a013	0315a014
INJ.DATE:	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013	15-MAR-2013
INJ.TIME:	16:43	17:12	17:42	18:11	18:40	19:09	19:39	20:08	20:37

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.555	4.553	4.551	4.552	4.553	4.550	4.550	4.553	4.550	4.555	4.505-4.605	4.552	0.002
	2 Benzene	7.022	7.018	7.017	7.017	7.018	7.018	7.017	7.020	7.016	7.022	6.972-7.072	7.018	0.002
$	3 TFT(Surr)	7.853	7.849	7.848	7.849	7.849	7.849	7.850	7.850	7.848	7.853	7.803-7.903	7.849	0.001
	4 Toluene	9.882	9.876	9.875	9.876	9.876	9.876	9.873	9.877	9.874	9.882	9.832-9.932	9.876	0.002
	5 Ethylbenzene	12.776	12.770	12.768	12.768	12.768	12.769	12.767	12.763	12.767	12.776	12.726-12.826	12.769	0.003
	6 M/P-Xylene	12.941	12.933	12.930	12.928	12.928	12.928	12.927	12.927	12.927	12.941	12.891-12.991	12.930	0.005
	7 O-Xylene	13.885	13.879	13.877	13.877	13.877	13.876	13.873	13.883	13.876	13.885	13.855-13.915	13.878	0.004
$	8 BB(Surr)	15.389	15.387	15.387	15.387	15.387	15.386	15.387	15.387	15.386	15.389	15.339-15.439	15.387	0.001

Reviewer 1 _____ Date: 3/18/13
Reviewer 2 _____ Date: 3/18/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130315-1.b

ARI Job No.: BTEX Method: FID.m Instrument: pid1.i Date: 15-MAR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1643	0315a006.d	BTEX 200	BTEX 200	1	NO MANUAL INTEGRATION
1712	0315a007.d	BTEX 100	BTEX 100	1	NO MANUAL INTEGRATION
1742	0315a008.d	BTEX 50	BTEX 50	1	NO MANUAL INTEGRATION
1811	0315a009.d	BTEX 25	BTEX 25	1	NO MANUAL INTEGRATION
1840	0315a010.d	BTEX 5	BTEX 5	1	NO MANUAL INTEGRATION
1909	0315a011.d	BTEX 1	BTEX 1	1	NO MANUAL INTEGRATION
1939	0315a012.d	BTEX 0.5	BTEX 0.5	1	Toluene, MTBE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2008	0315a013.d	BTEX 0.25	BTEX 0.25	1	Toluene, MTBE, ETHYLBENZENE, O-XYLENE,
2037	0315a014.d	BTEX ICV 25		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130315-2.b

ARI Job No.: BTEX Method: PIDB.m Instrument: pid1.i Date: 15-MAR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1643	0315a006.d	BTEX 200	BTEX 200	1	NO MANUAL INTEGRATION
1712	0315a007.d	BTEX 100	BTEX 100	1	NO MANUAL INTEGRATION
1742	0315a008.d	BTEX 50	BTEX 50	1	NO MANUAL INTEGRATION
1811	0315a009.d	BTEX 25	BTEX 25	1	NO MANUAL INTEGRATION
1840	0315a010.d	BTEX 5	BTEX 5	1	NO MANUAL INTEGRATION
1909	0315a011.d	BTEX 1	BTEX 1	1	MTBE,
1939	0315a012.d	BTEX 0.5	BTEX 0.5	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2008	0315a013.d	BTEX 0.25	BTEX 0.25	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2037	0315a014.d	BTEX ICV 25	BTEX ICV 2	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-1.b/FID.m
Cal Date : 18-Mar-2013 09:20 paul
Curve Type : Average

Calibration File Names:
Level 2: /chem3/pid1.i/20130315-1.b/0315a013.d/0315a013.cdf
Level 3: /chem3/pid1.i/20130315-1.b/0315a012.d/0315a012.cdf
Level 4: /chem3/pid1.i/20130315-1.b/0315a011.d
Level 5: /chem3/pid1.i/20130315-1.b/0315a010.d
Level 6: /chem3/pid1.i/20130315-1.b/0315a009.d
Level 7: /chem3/pid1.i/20130315-1.b/0315a008.d
Level 8: /chem3/pid1.i/20130315-1.b/0315a007.d
Level 9: /chem3/pid1.i/20130315-1.b/0315a006.d

Compound	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	50.000 Level 7	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 / 100.000 Level 8	0.50000 Level 3 / 200.000 Level 9	1.000 Level 4	5.000 Level 5	25.000 Level 6	50.000 Level 7	RRF	% RSD
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					117	12.069
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					1.13000	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 10 TFT(Surr)	38.27273	39.72727	34.27273	33.85075	33.14000	33.12030		
	32.06742	33.04500					34.68702	7.973
$ 18 BB(Surr)	26.90909	26.90909	22.56818	22.22388	21.09000	21.29323		
	20.60112	20.99000					22.82308	11.408
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++ <-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-1.b/FID.m
Cal Date : 18-Mar-2013 09:20 paul
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.43682
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-2.b/PIDB.m
Cal Date : 18-Mar-2013 09:05 paul
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130315-2.b/0315a013.d/0315a013.cdf
Level 2: /chem3/pid1.i/20130315-2.b/0315a012.d/0315a012.cdf
Level 3: /chem3/pid1.i/20130315-2.b/0315a011.d/0315a011.cdf
Level 4: /chem3/pid1.i/20130315-2.b/0315a010.d
Level 5: /chem3/pid1.i/20130315-2.b/0315a009.d
Level 6: /chem3/pid1.i/20130315-2.b/0315a008.d
Level 7: /chem3/pid1.i/20130315-2.b/0315a007.d
Level 8: /chem3/pid1.i/20130315-2.b/0315a006.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	82.00000	79.00000	85.20000	86.12000	86.90000		
	84.76000	86.42500					84.34357	3.387
2 Benzene	224	240	229	250	248	246		
	239	244					240	3.823
4 Toluene	224	250	213	234	232	228		
	224	228					229	4.611
5 Ethylbenzene	176	188	186	202	203	200		
	196	198					194	4.860
6 M/P-Xylene	208	207	208	219	219	219		
	214	215					214	2.533
7 O-Xylene	160	162	166	175	178	177		
	173	174					171	4.073

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-2.b/PIDB.m
Cal Date : 18-Mar-2013 09:05 paul
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	41.45455	42.90909	38.43182	38.55224	38.50000	39.07519		
	38.53371	40.10500					39.69520	4.222
$ 8 BB(Surr)	96.45455	97.72727	84.68182	85.23881	83.28000	85.38346		
	83.83708	86.57500					87.89725	6.566

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2013 16:43
End Cal Date : 15-MAR-2013 20:08
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130315-2.b/PIDB.m
Cal Date : 18-Mar-2013 09:05 paul
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 4.26631
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

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

Concencration 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

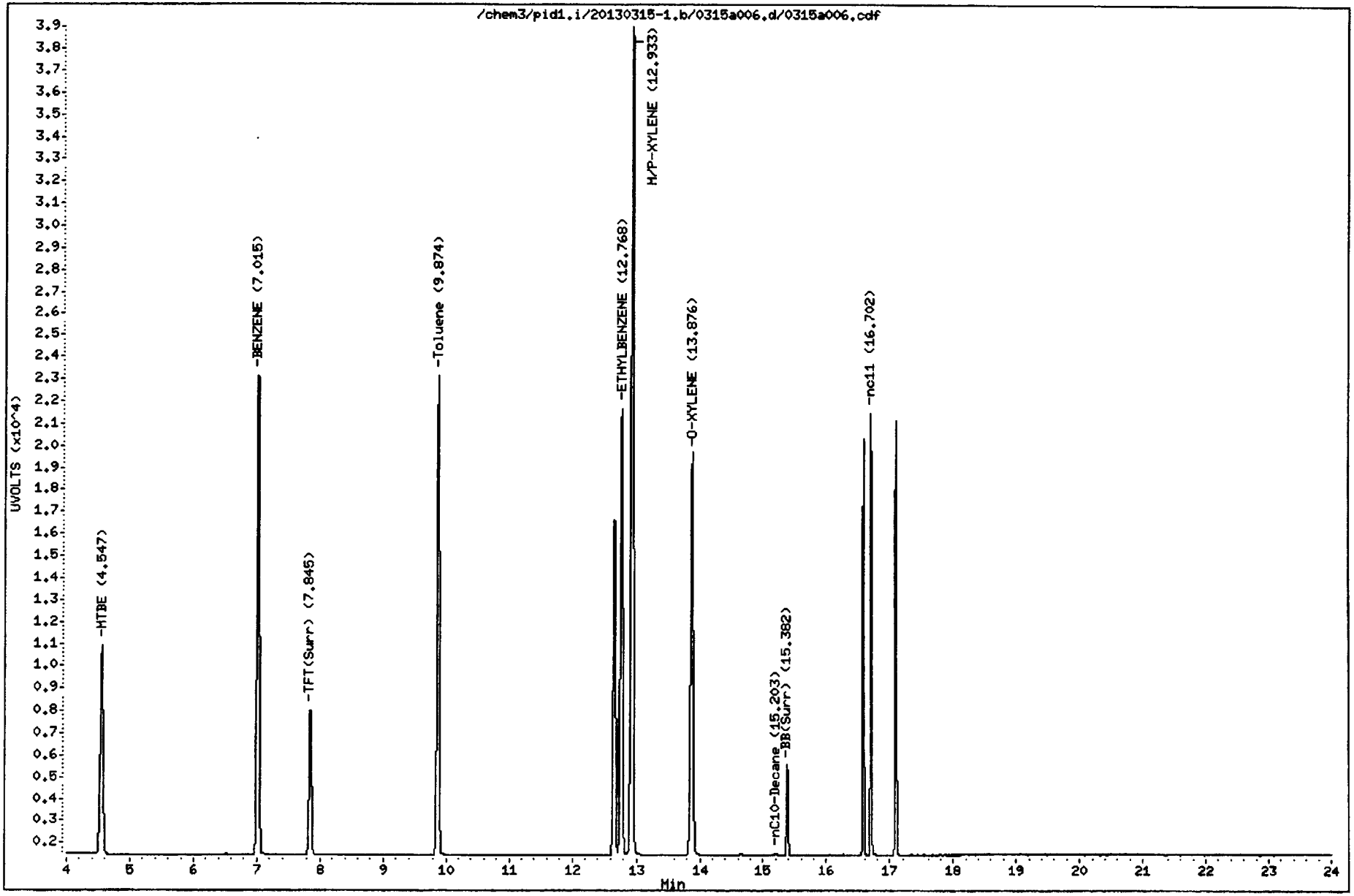
Sample Info: BTEX 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a006.d

Date : 15-MAR-2013 16:43

Client ID: BTEX 200

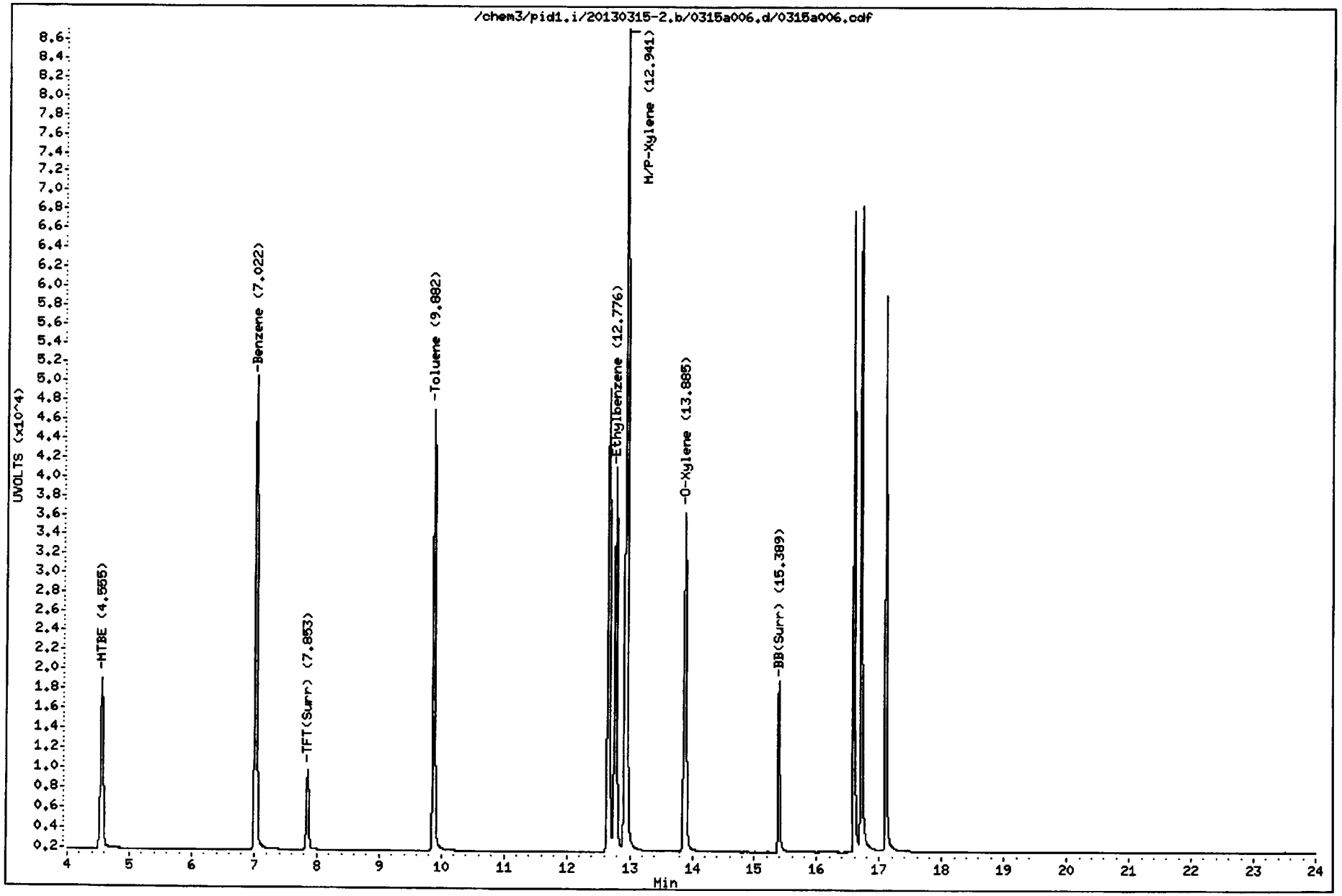
Sample Info: BTEX 200

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



PG 3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a007.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a007.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 100
Client ID: BTEX 100
Injection Date: 15-MAR-2013 17:12
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	-0.001	5708	71446	164.6	TFT(Surr)
15.379	-0.001	3667	30793	160.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	910832	2.543
8015C 2MP-TMB	(4.18 to 16.20)	723723	932787	1.289
AK101 nC6-nC10	(4.67 to 15.10)	582885	856273	1.469
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	911660	2.430

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	-0.001	6859	172.8	TFT(Surr)
15.387	0.000	14923	169.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	-0.002	23946	99.75	Benzene
9.876	0.000	22363	97.65	Toluene
12.770	0.007	19632	101.42	Ethylbenzene
12.933	0.006	42792	200.38	M/P-Xylene
13.879	-0.005	17309	101.46	O-Xylene
4.553	0.000	8476	100.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130315-1.b/0315a007.d
Lab Smp Id: BTEX 100 Client Smp ID: BTEX 100
Inj Date : 15-MAR-2013 17:12
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 100
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 17:12 Cal File: 0315a007.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

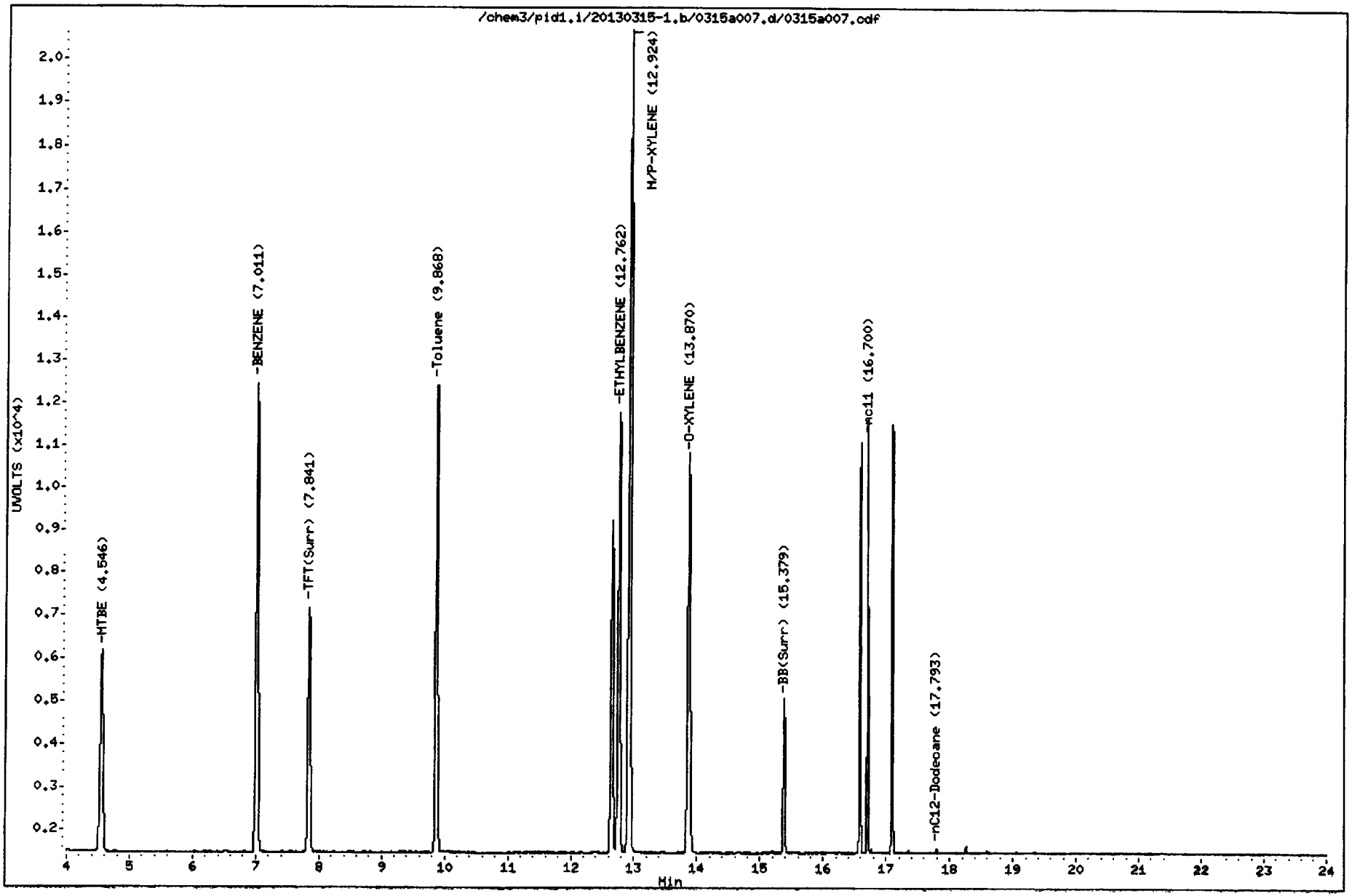
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.546	4.543	0.003	76514	100.000	90.46
9	BENZENE	7.011	7.008	0.003	135311	100.000	88.44
$ 10	TFT(Surr)	7.841	7.842	-0.001	5708	178.000	164.6
12	Toluene	9.868	9.867	0.001	131887	100.000	90.44
14	ETHYLBENZENE	12.762	12.760	0.002	10368	100.000	90.35
15	M/P-XYLENE	12.924	12.918	0.006	243691	200.000	175.2
16	O-XYLENE	13.870	13.863	0.007	126761	100.000	87.91
$ 18	BB(Surr)	15.379	15.380	-0.001	3667	178.000	160.7
21	nC11	16.700	16.698	0.002	10274	100.000	
22	nC12-Dodecane	17.793	17.793	0.000	113	100.000	

Data File: /chem3/pid1.i/20130315-1.b/0315a007.d
Date : 15-MAR-2013 17:12
Client ID: BTEX 100
Sample Info: BTEX 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a007.d

Date : 15-MAR-2013 17:12

Client ID: BTEX 100

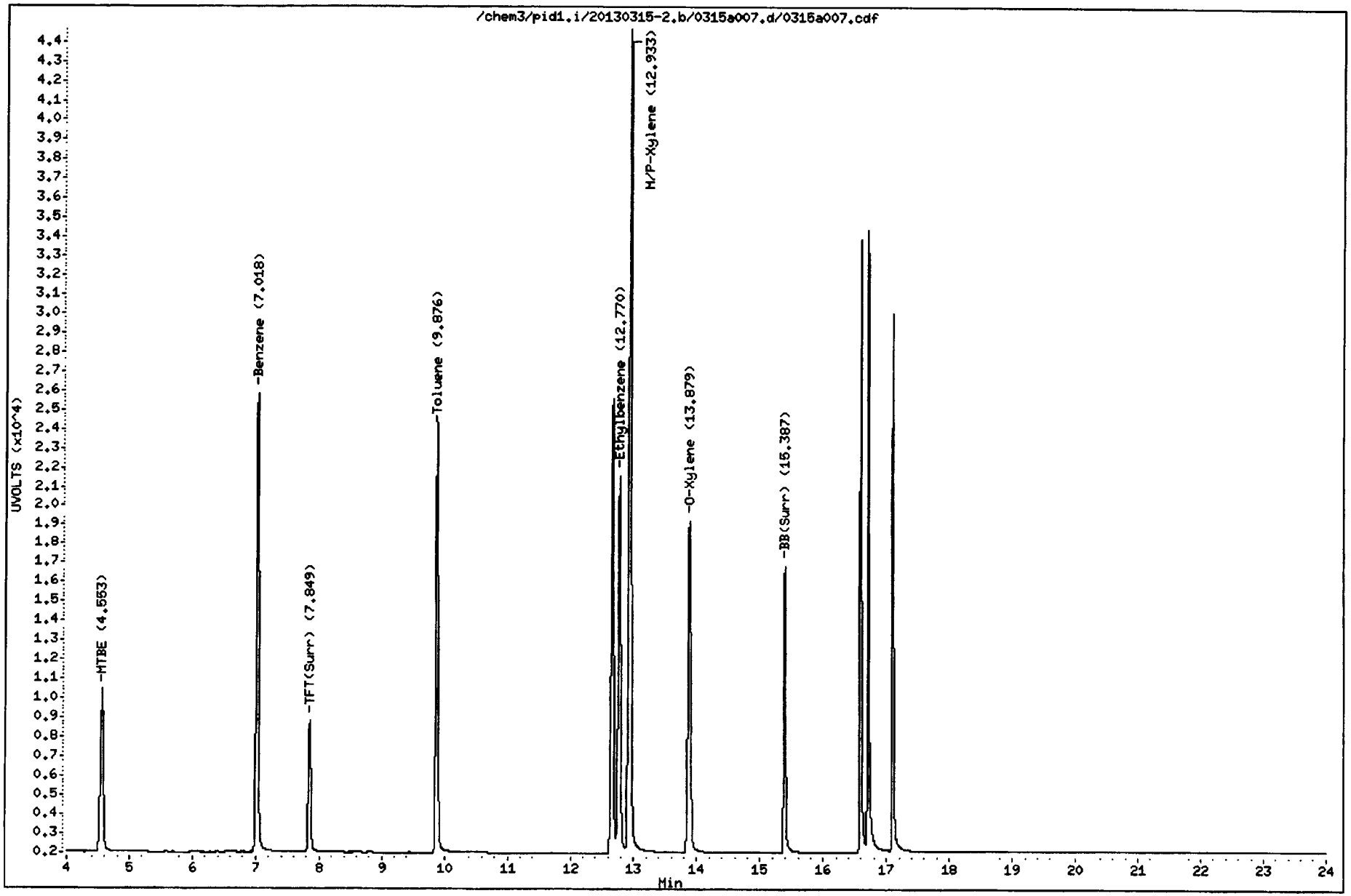
Sample Info: BTEX 100

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

3/18/13

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

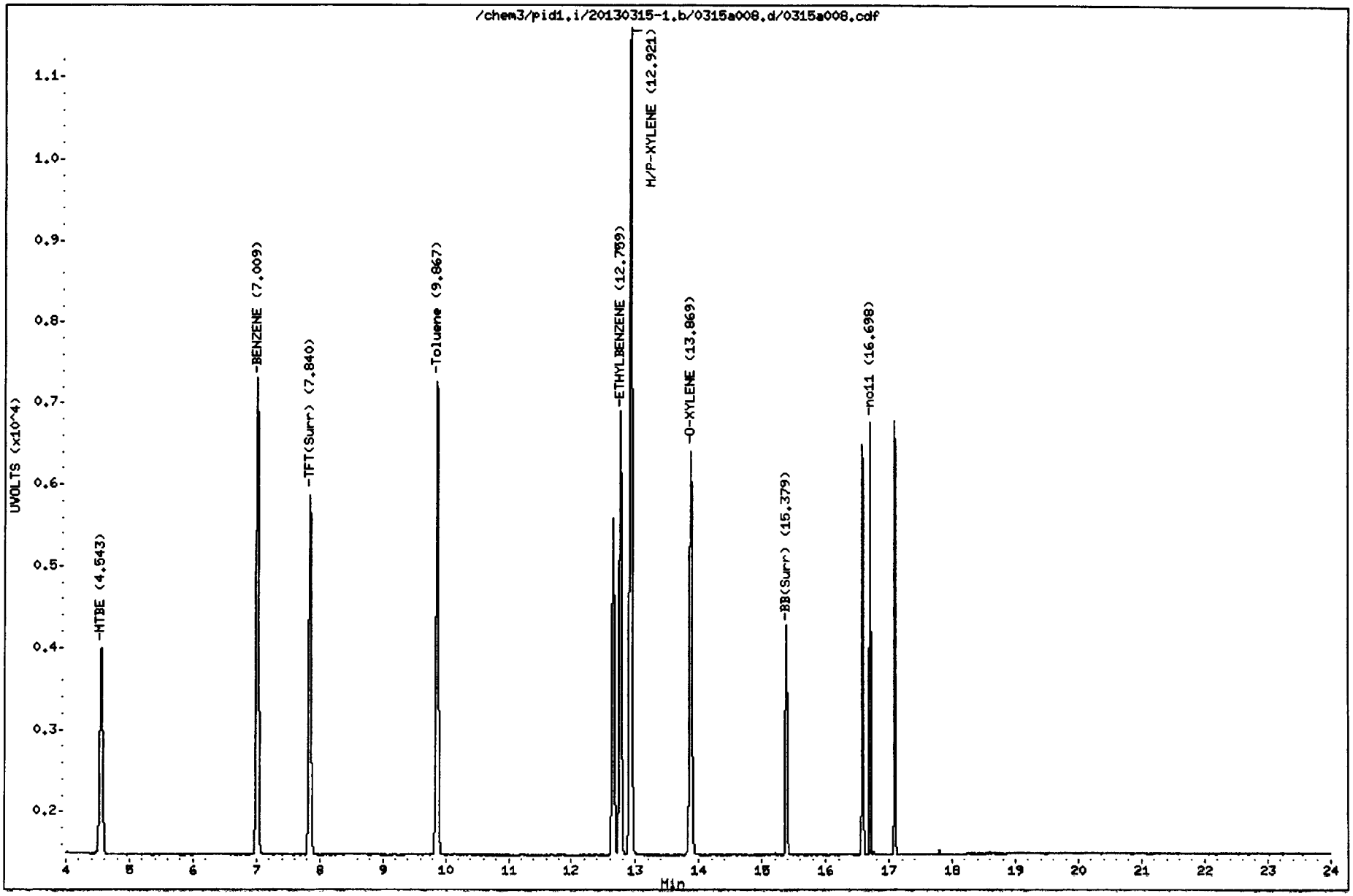
Sample Info: BTEX 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a008.d

Date : 15-MAR-2013 17:42

Client ID: BTEX 50

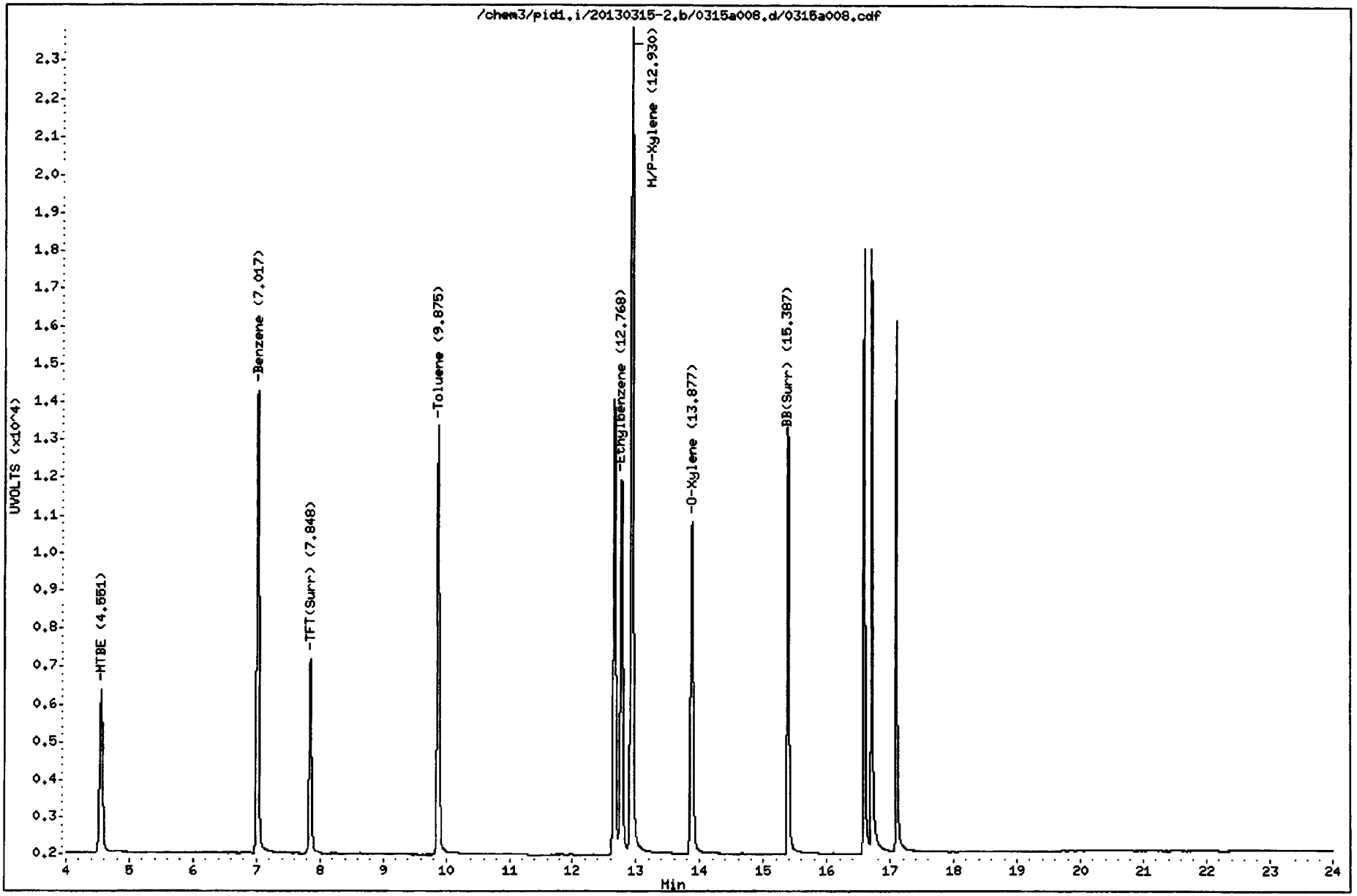
Sample Info: BTEX 50

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



3/18/13

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	

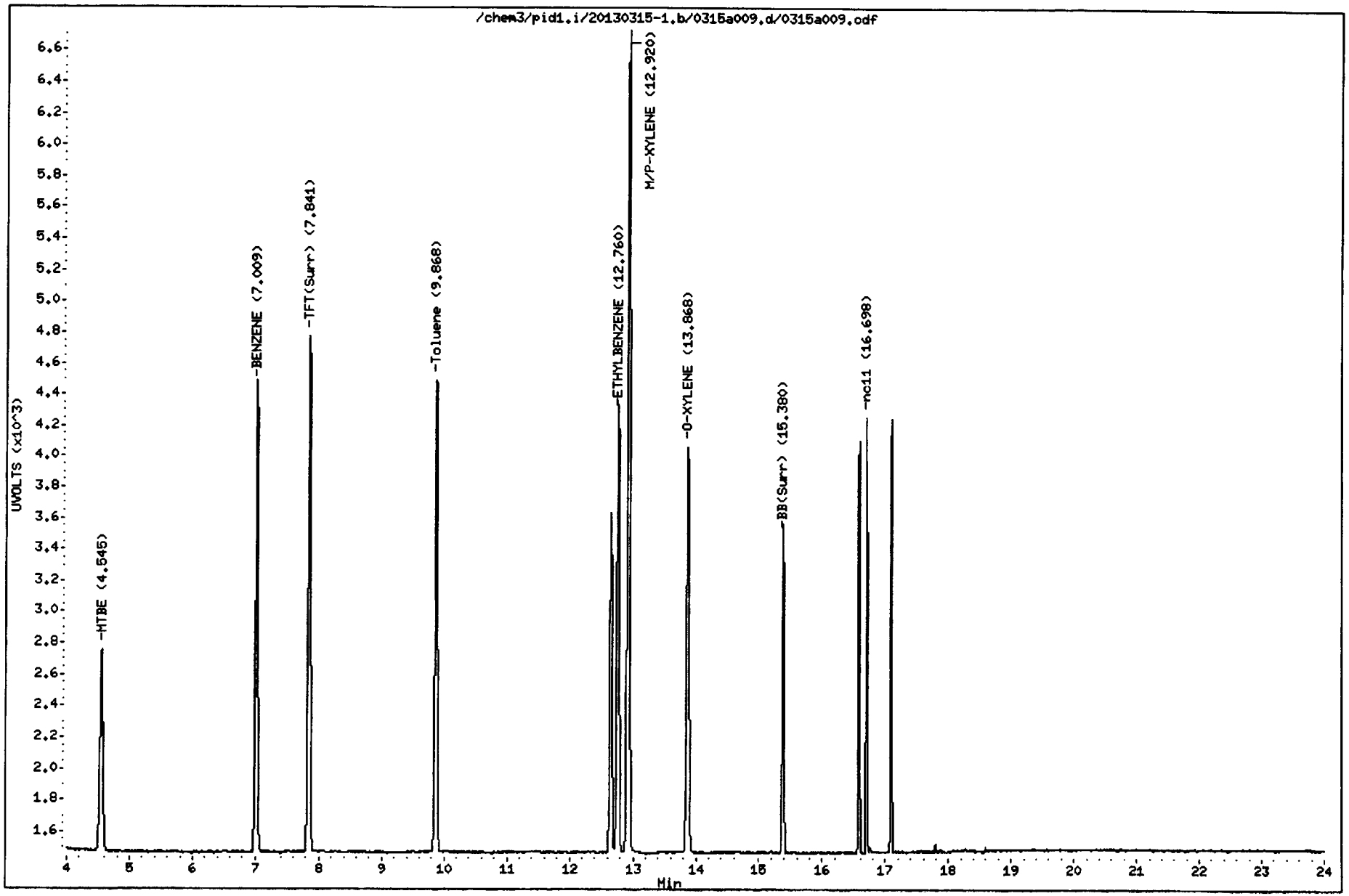
Data File: /chem3/pid1.i/20130315-1.b/0315a009.d
Date : 15-MAR-2013 18:11
Client ID: BTEX 25
Sample Info: BTEX 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18

EPA_IEB_0_012022



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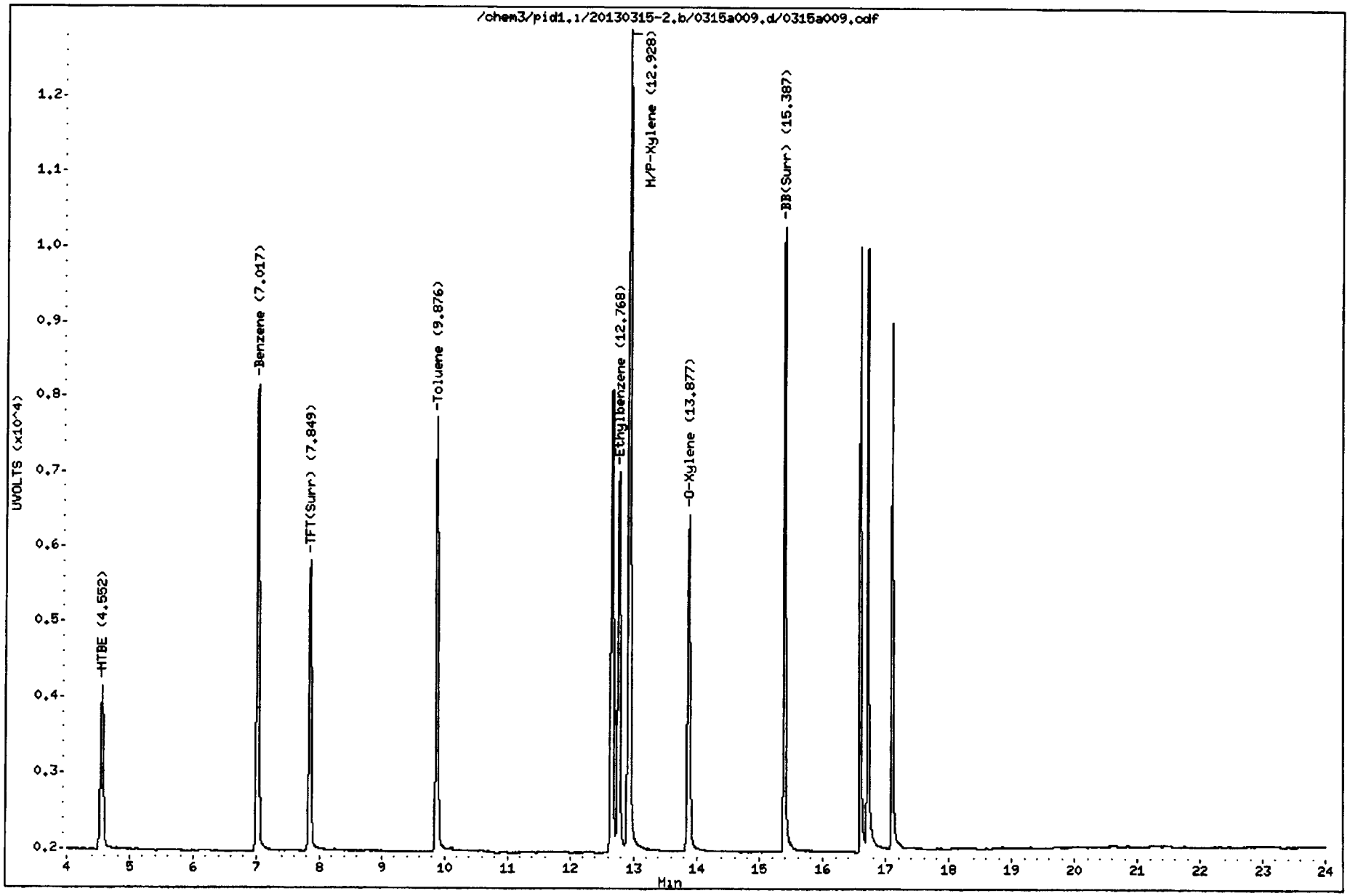
Date : 15-MAR-2013 18:11
Client ID: BTEX 25
Sample Info: BTEX 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



PC 3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a010.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a010.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 5
Client ID: BTEX 5
Injection Date: 15-MAR-2013 18:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	-0.001	2268	28456	65.4	TFT(Surr)
15.379	-0.001	1489	12609	65.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	53589	0.150
8015C 2MP-TMB	(4.18 to 16.20)	723723	54562	0.075
AK101 nC6-nC10	(4.67 to 15.10)	582885	50116	0.086
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	53589	0.143

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	-0.001	2583	65.1	TFT(Surr)
15.387	0.000	5711	65.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.018	-0.002	1248	5.20	Benzene
9.876	-0.001	1168	5.10	Toluene
12.768	0.005	1012	5.23	Ethylbenzene
12.928	0.002	2188	10.25	M/P-Xylene
13.877	-0.007	874	5.12	O-Xylene
4.553	-0.001	426	5.05	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130315-1.b/0315a010.d
Lab Smp Id: BTEX 5 Client Smp ID: BTEX 5
Inj Date : 15-MAR-2013 18:40
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 18:40 Cal File: 0315a010.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.545	4.543	0.002	4446	5.00000	5.26
	9 BENZENE	7.011	7.008	0.003	7904	5.00000	5.17
$	10 TFT(Surr)	7.841	7.842	-0.001	2268	67.0000	65.38
	12 Toluene	9.868	9.867	0.001	7770	5.00000	5.33
	14 ETHYLBENZENE	12.760	12.760	0.000	615	5.00000	5.36
	15 M/P-XYLENE	12.919	12.918	0.001	14208	10.0000	10.22
	16 O-XYLENE	13.868	13.863	0.005	7572	5.00000	5.25
$	18 BB(Surr)	15.379	15.380	-0.001	1489	67.0000	65.24
	21 nc11	16.699	16.698	0.001	607	5.00000	

Data File: /chem3/pid1.i/20130315-1.b/0315a010.d

Date : 15-MAR-2013 18:40

Client ID: BTEX 5

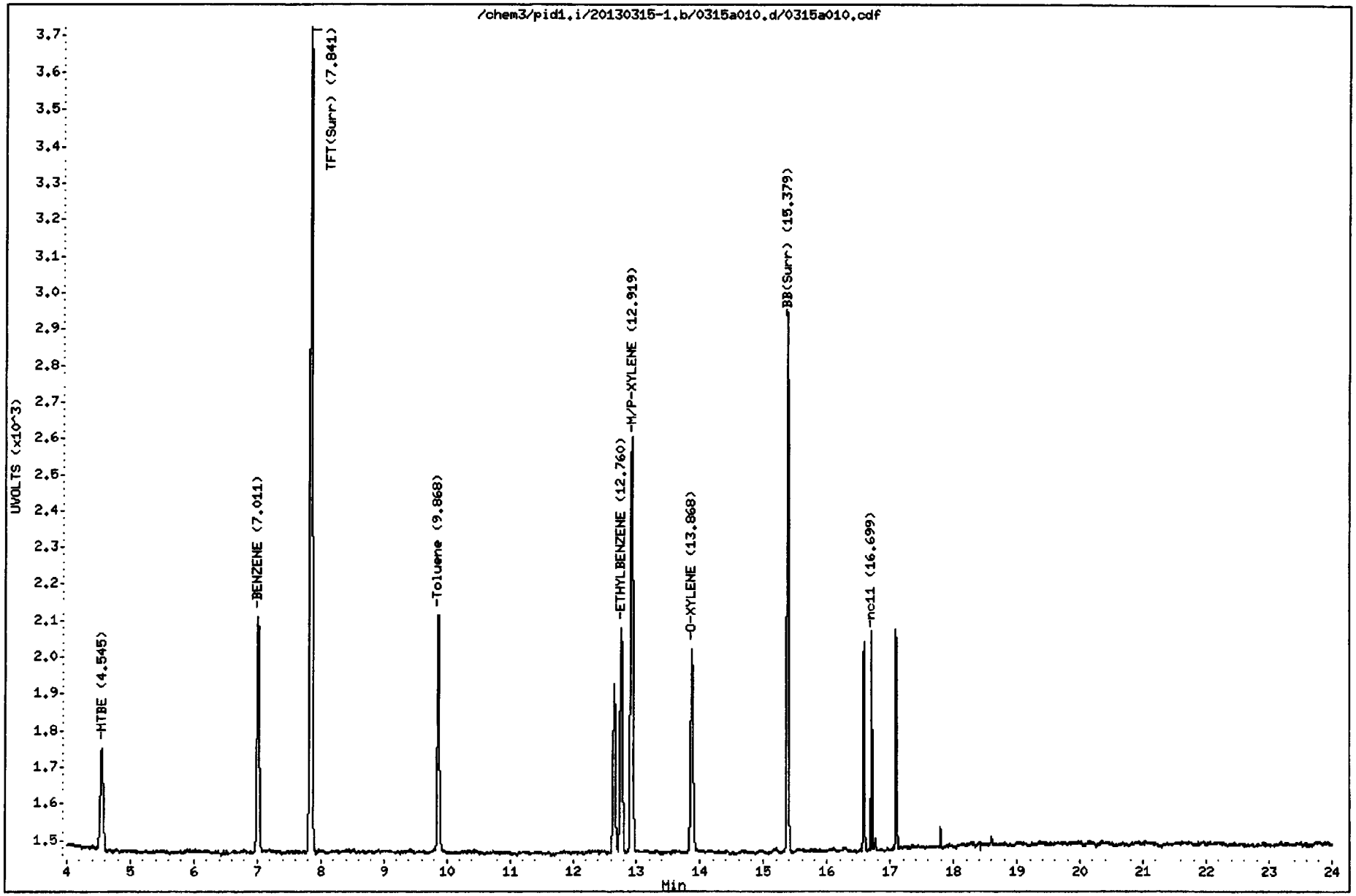
Sample Info: BTEX 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a010.d

Date : 15-MAR-2013 18:40

Client ID: BTEX 5

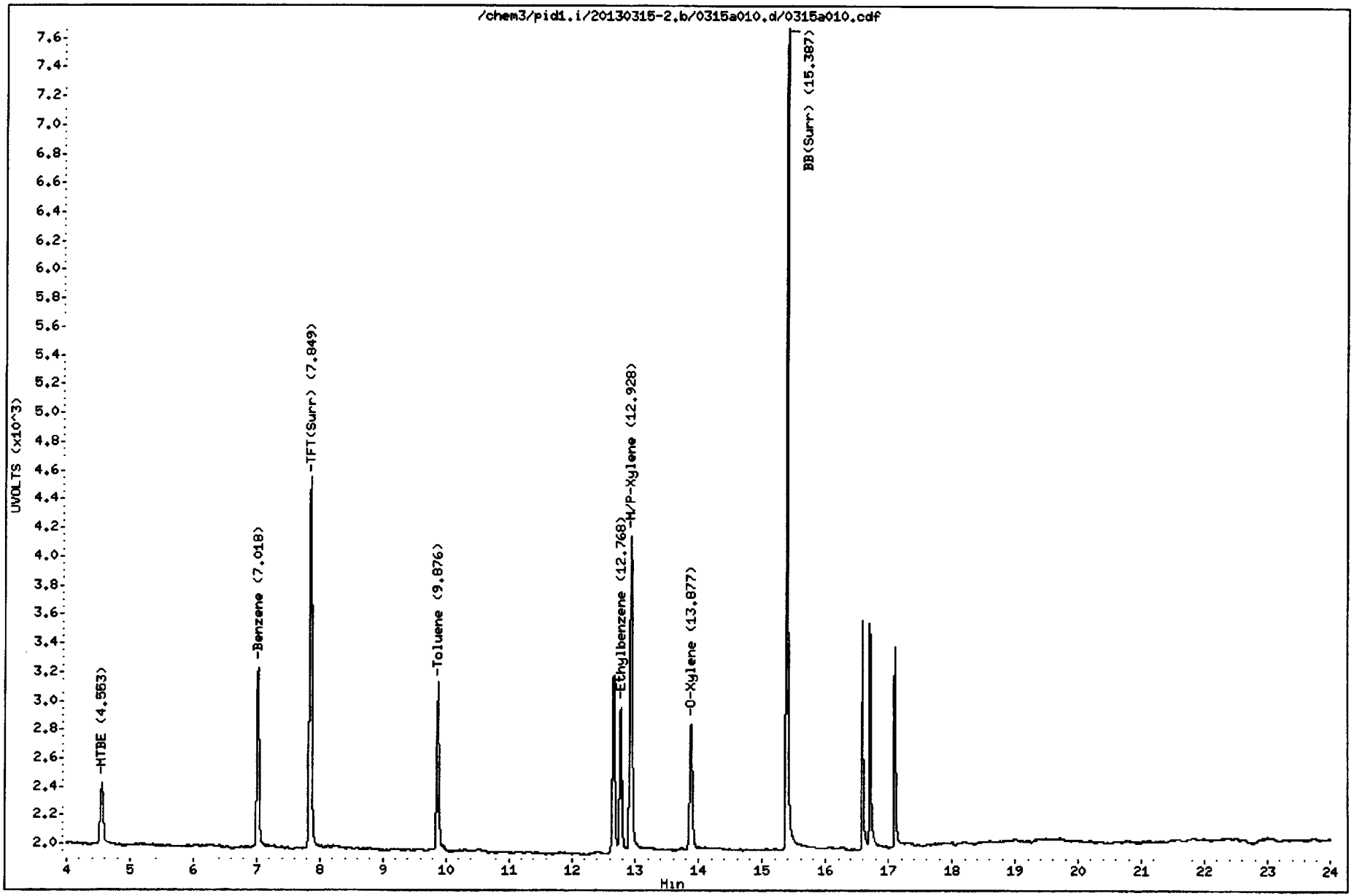
Sample Info: BTEX 5

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

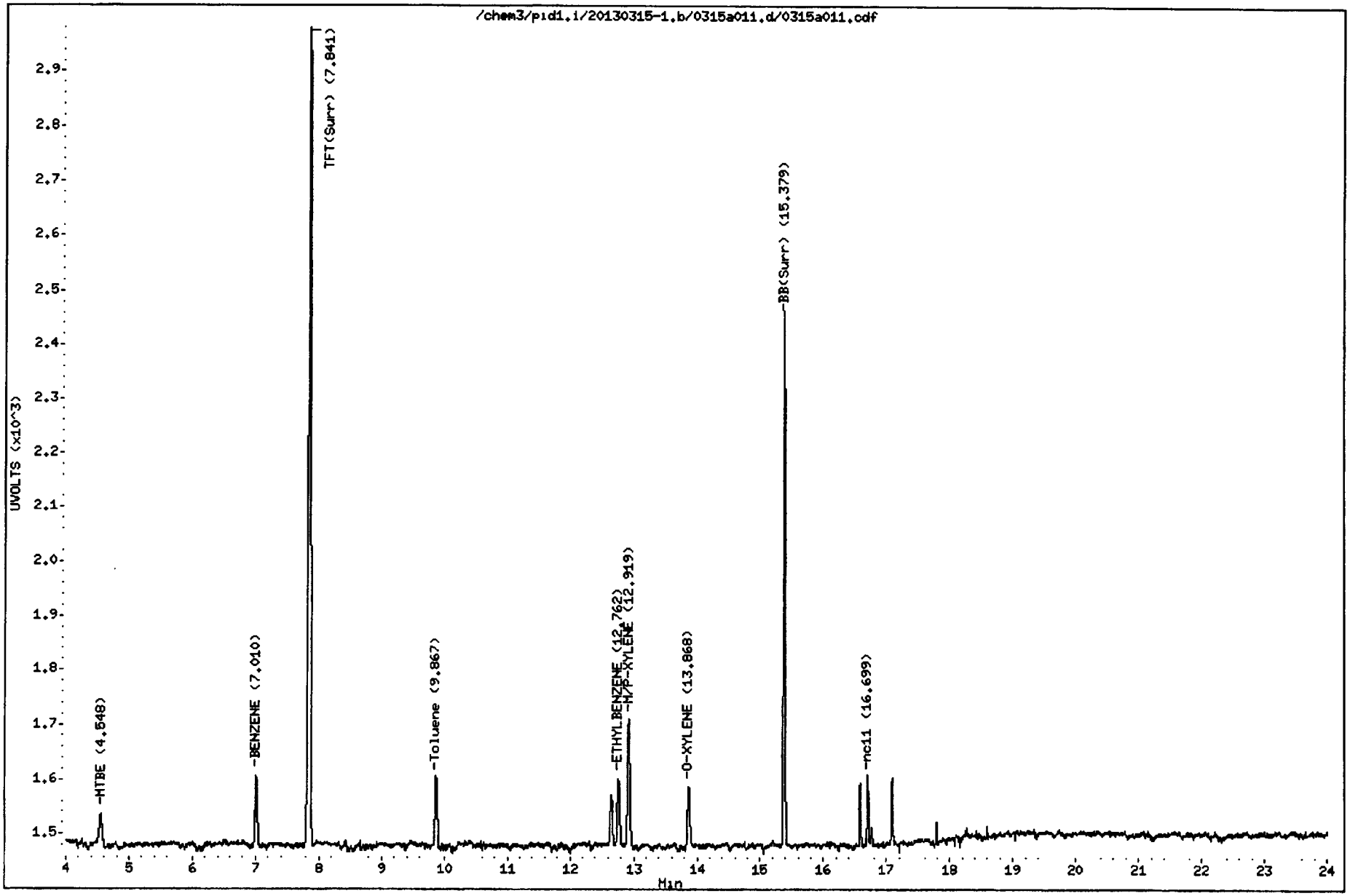
Sample Info: BTEX 1

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

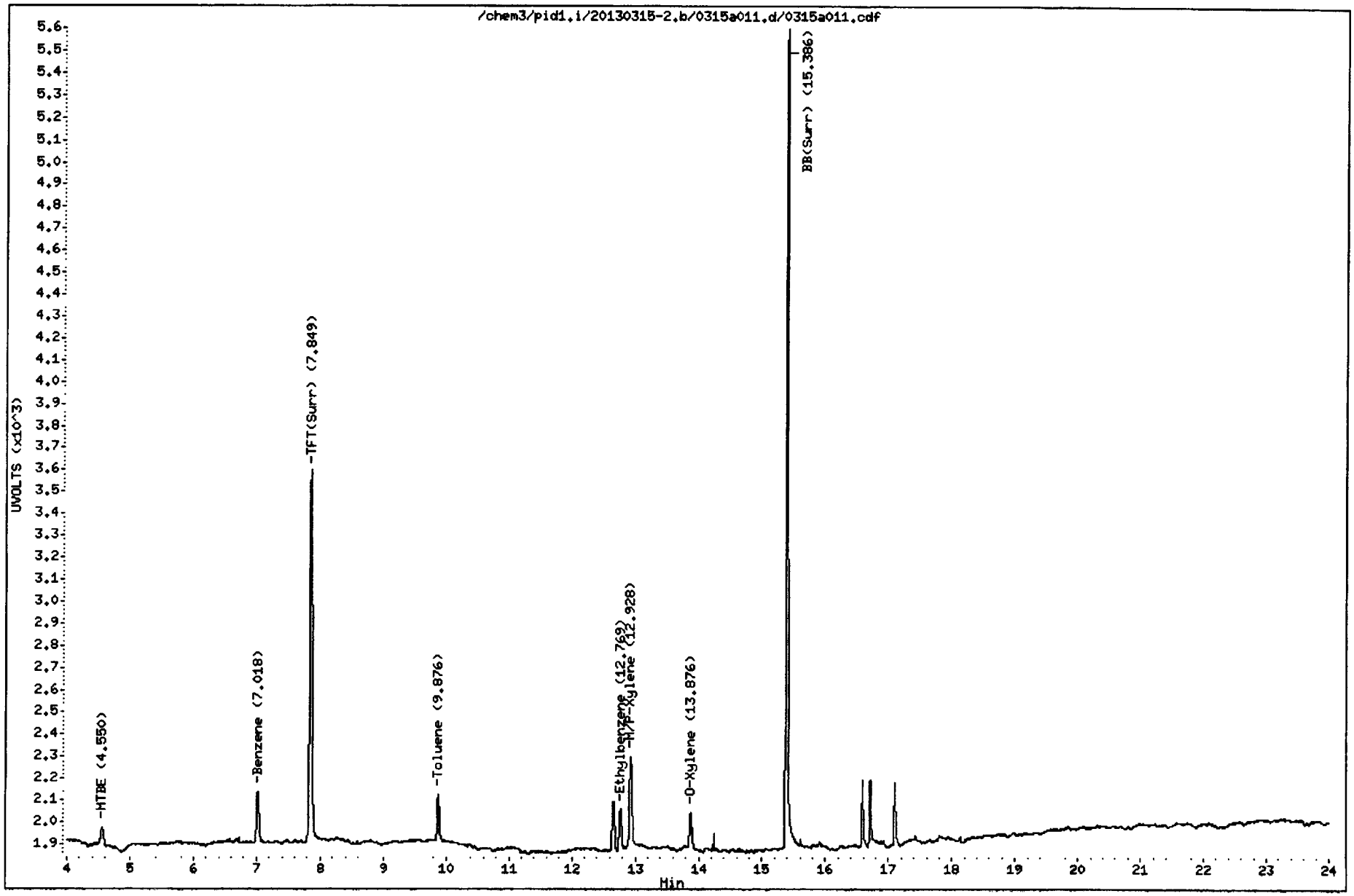
Sample Info: BTEX 1

Column phase: RTX 502-2 PID

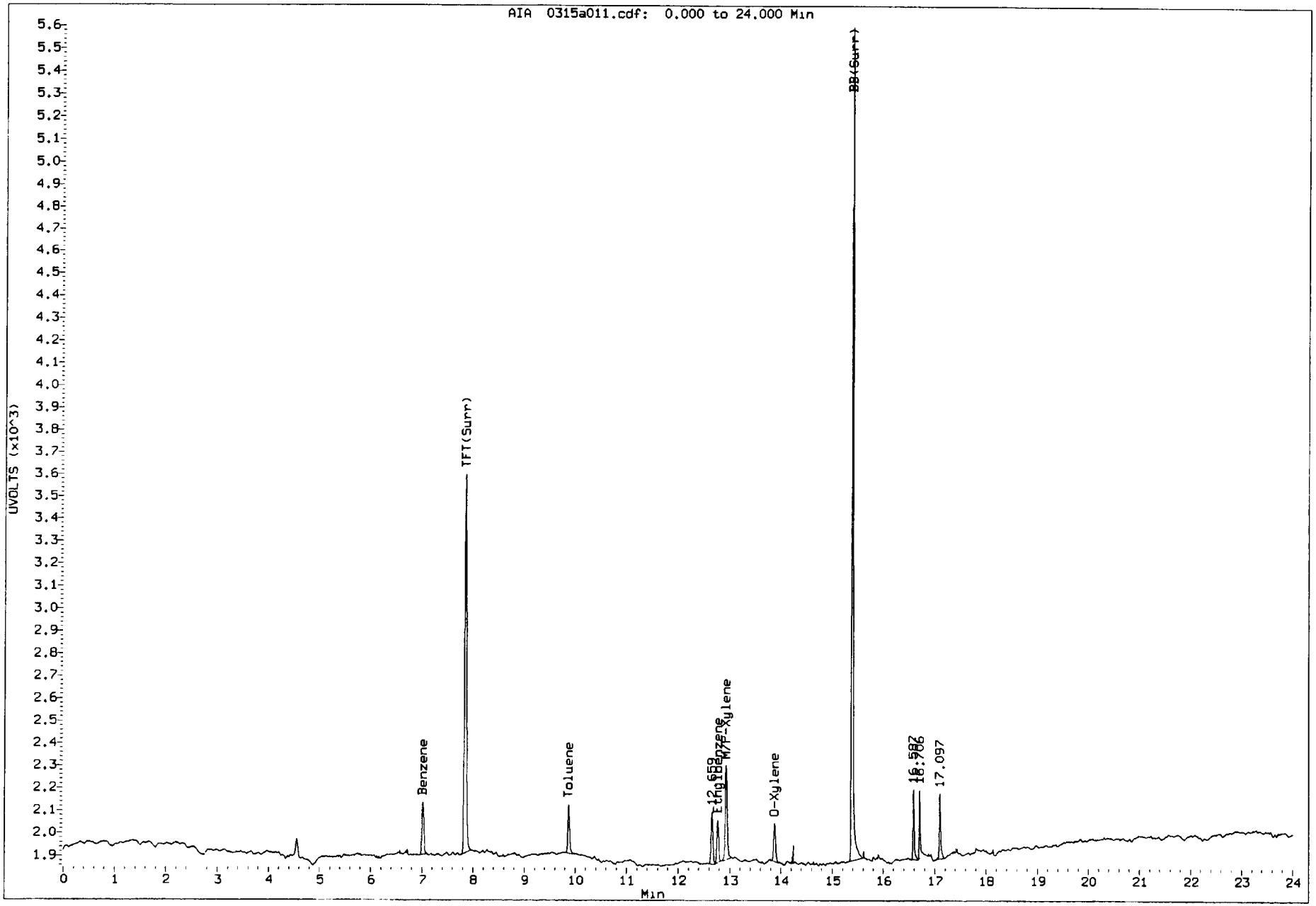
Instrument: pid1.i

Operator: LH

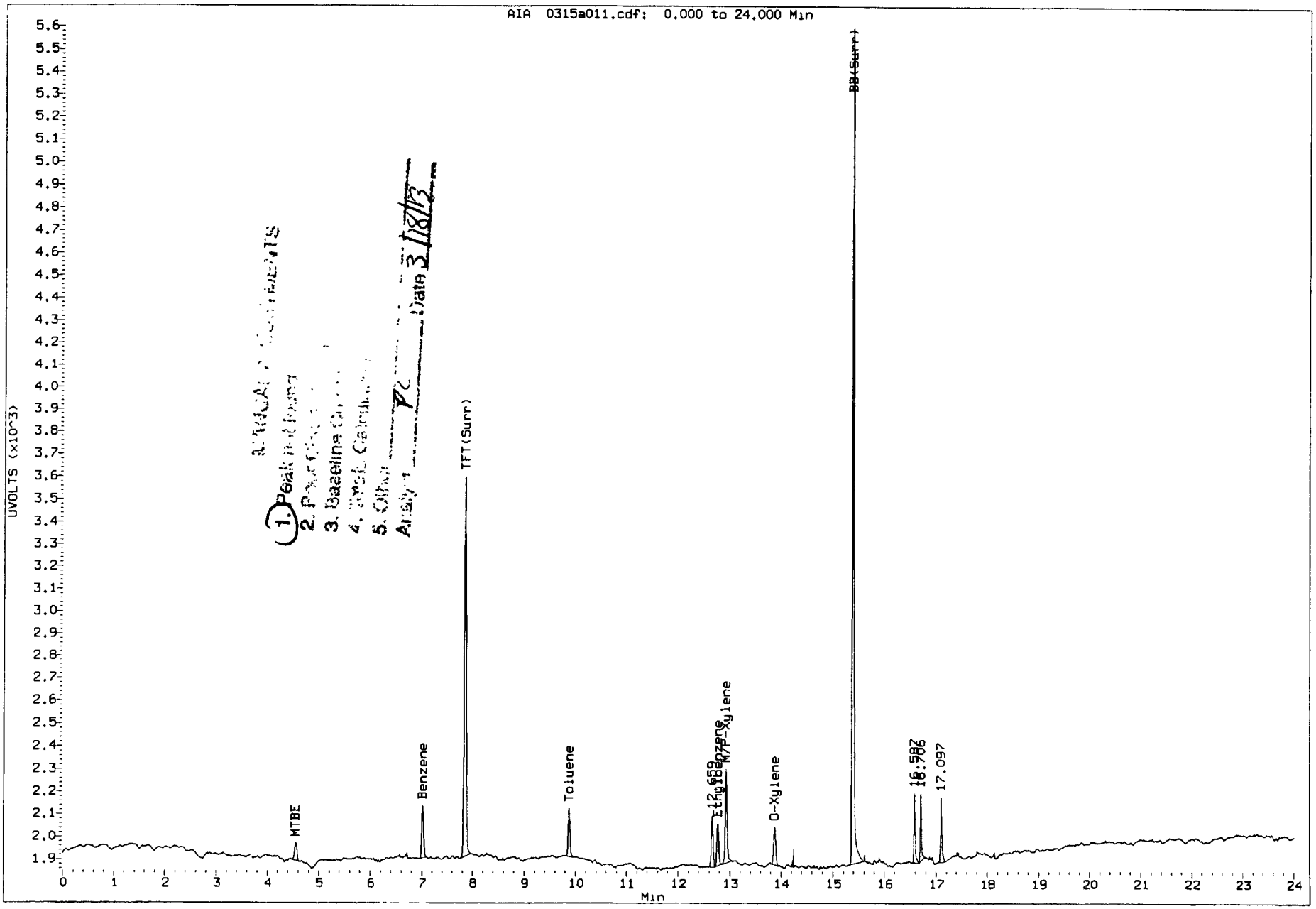
Column diameter: 0.18



Data File: /chem3/pid1.1/20130315-2.b/0315a011.d/0315a011.cdf
Injection Date: 15-MAR-2013 19:09
Instrument: pid1.1
Client Sample ID: BTEX 1



Data File: /chem3/pid1.i/20130315-2.b/0315a011.d/0315a011.cdf
Injection Date: 15-MAR-2013 19:09
Instrument: pid1.i
Client Sample ID: BTEX 1



VC 3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a012.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a012.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX 0.5
Client ID: BTEX 0.5
Injection Date: 15-MAR-2013 19:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.002	874	11084	25.2	TFT(Surr)
15.380	0.000	592	5049	25.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	4770	0.013 M
8015C 2MP-TMB	(4.18 to 16.20)	723723	5110	0.007 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	4619	0.008 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	4770	0.013 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.850	0.000	944	23.8	TFT(Surr)
15.387	0.000	2150	24.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.003	120	0.50N	Benzene
9.873	-0.003	125	0.55N	Toluene
12.767	0.003	94	0.49N	Ethylbenzene
12.927	0.000	207	0.97N	M/P-Xylene
13.873	-0.010	81	0.47N	O-Xylene
4.550	-0.003	41	0.49N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130315-1.b/0315a012.d
Lab Smp Id: BTEX 0.5 Client Smp ID: BTEX 0.5
Inj Date : 15-MAR-2013 19:39
Operator : LH Inst ID: pid1.i
Smp Info : BTEX 0.5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130315-1.b/FID.m
Meth Date : 18-Mar-2013 10:44 paul Quant Type: ESTD
Cal Date : 15-MAR-2013 19:39 Cal File: 0315a012.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

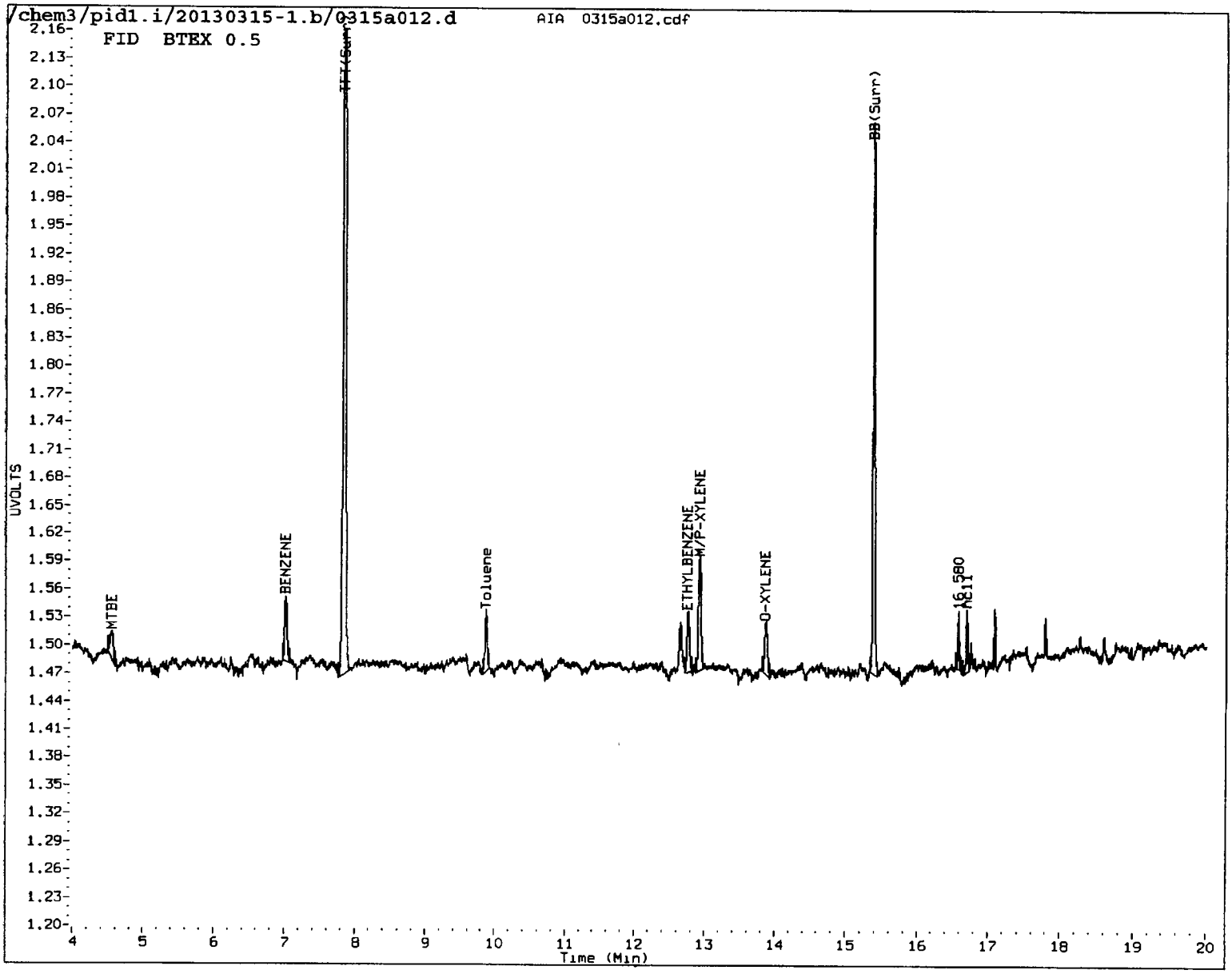
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.550	4.543	0.007	491	0.50000	0.580(M)
	9 BENZENE	7.013	7.008	0.005	818	0.50000	0.535
$	10 TFT(Surr)	7.840	7.842	-0.002	874	22.0000	25.20(M)
	12 Toluene	9.867	9.867	0.000	745	0.50000	0.511(M)
	14 ETHYLBENZENE	12.760	12.760	0.000	65	0.50000	0.566(M)
	15 M/P-XYLENE	12.920	12.918	0.002	1506	1.00000	1.08(M)
	16 O-XYLENE	13.867	13.863	0.004	758	0.50000	0.526(M)
$	18 BB(Surr)	15.380	15.380	0.000	592	22.0000	25.94(M)
	21 nc11	16.698	16.698	0.000	67	0.50000	

QC Flag Legend

M - Compound response manually integrated.



MANUAL INTEGRATION

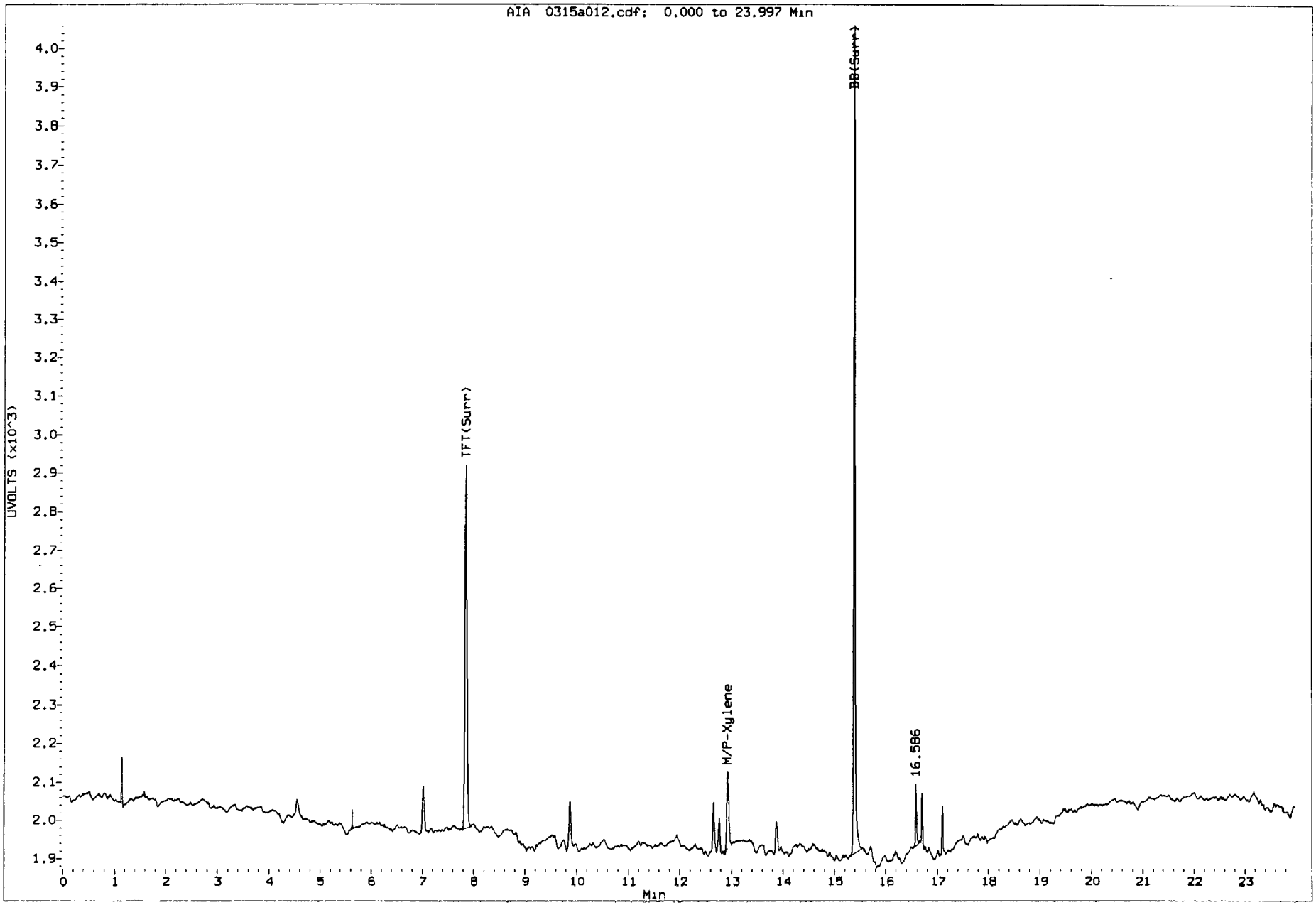
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: RC Date: 3/18/13

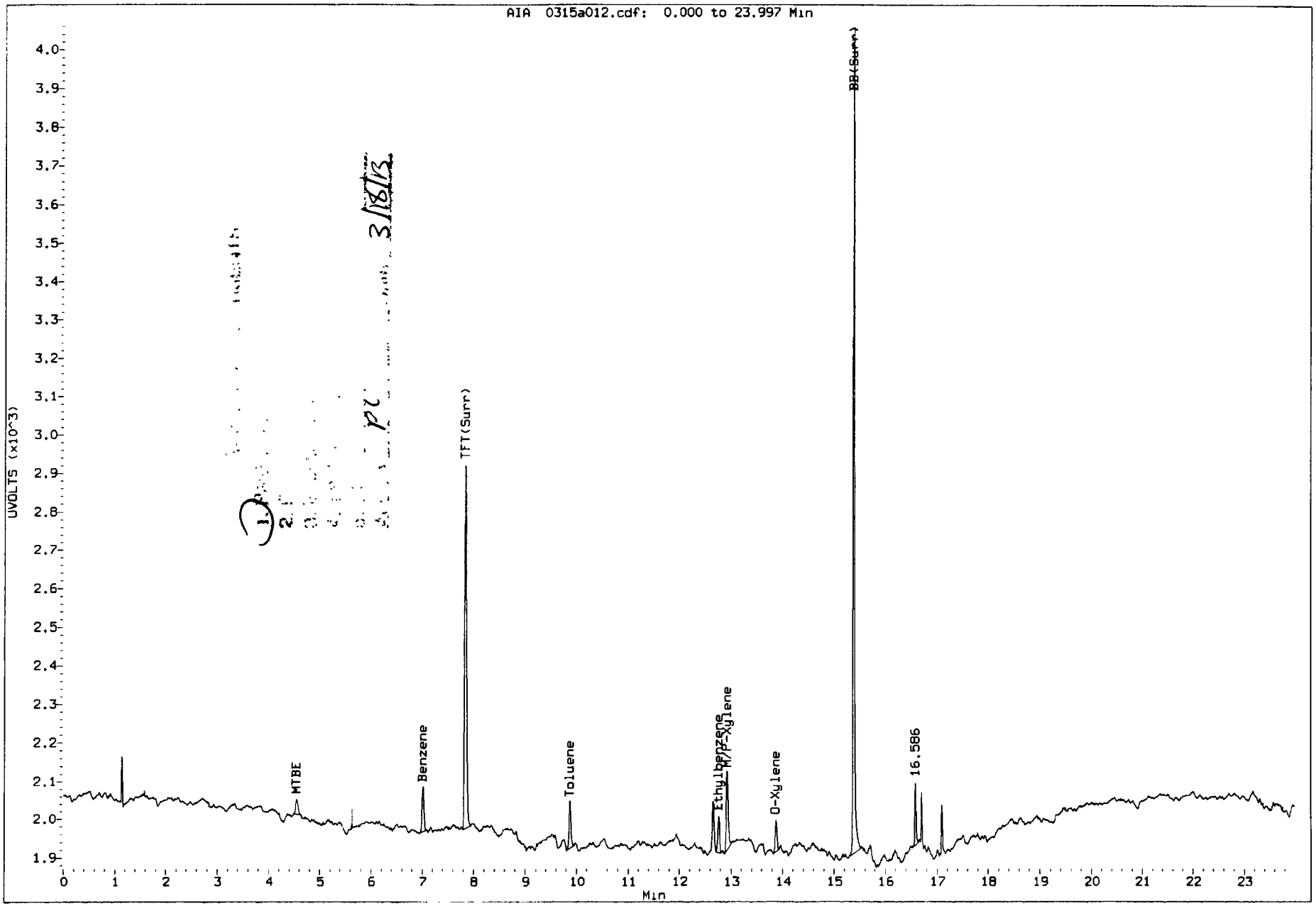
3/18/13

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



MW 10-61027

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



Data File: /chem3/pid1.i/20130315-1.b/0315a012.d

Date : 15-MAR-2013 19:39

Client ID: BTEX 0.5

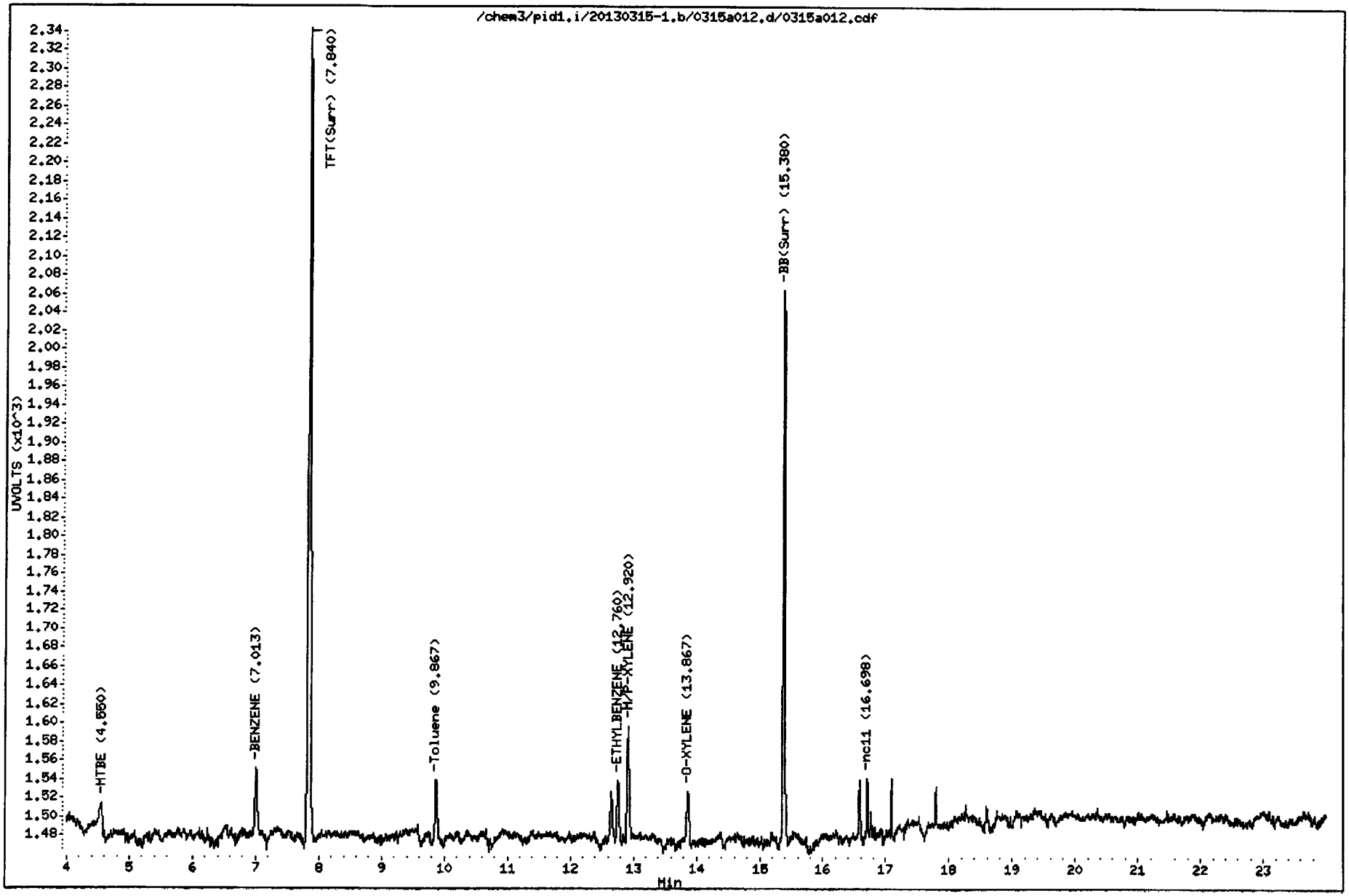
Sample Info: BTEX 0.5

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

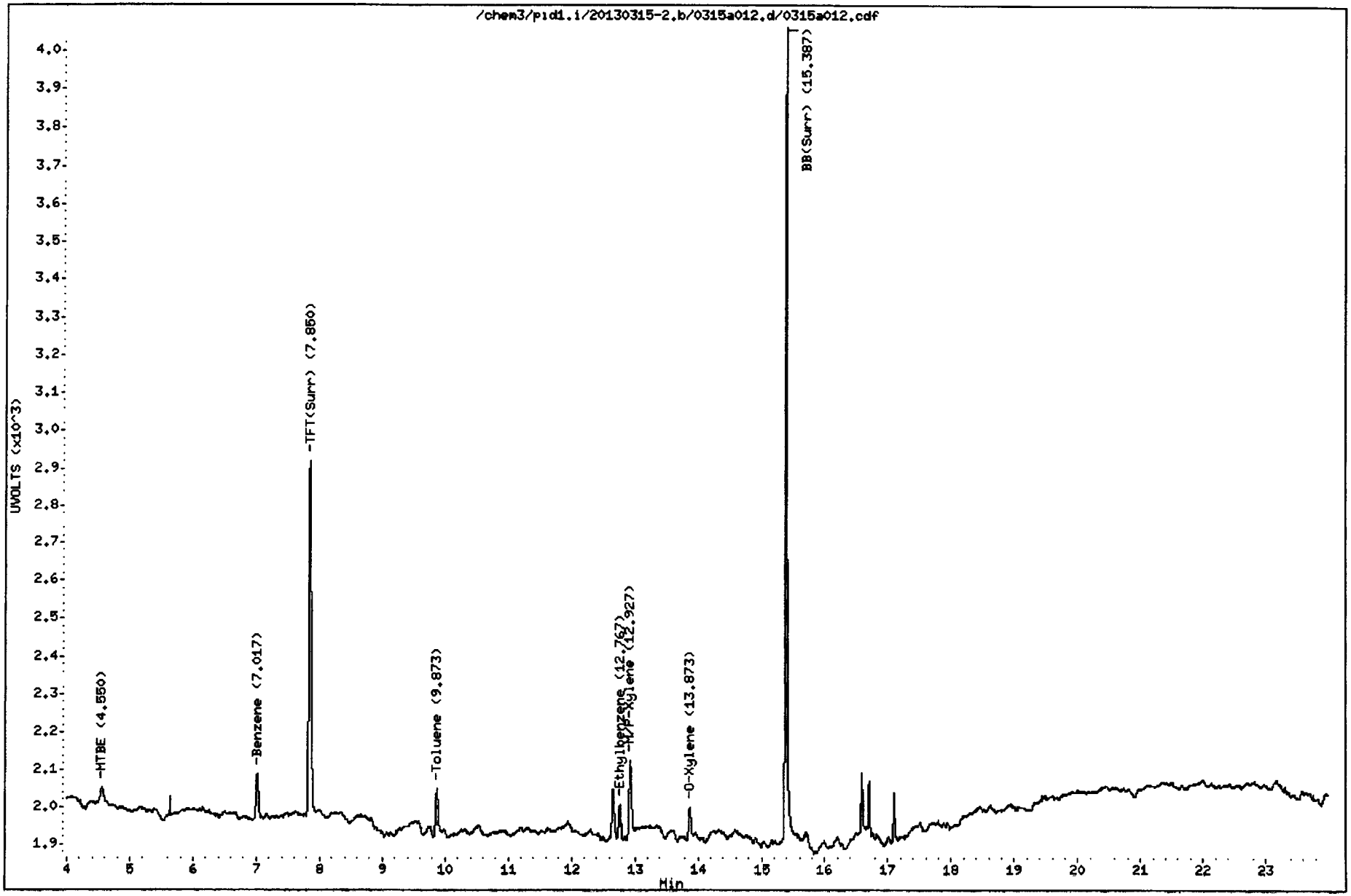
Sample Info: BTEX 0.5

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

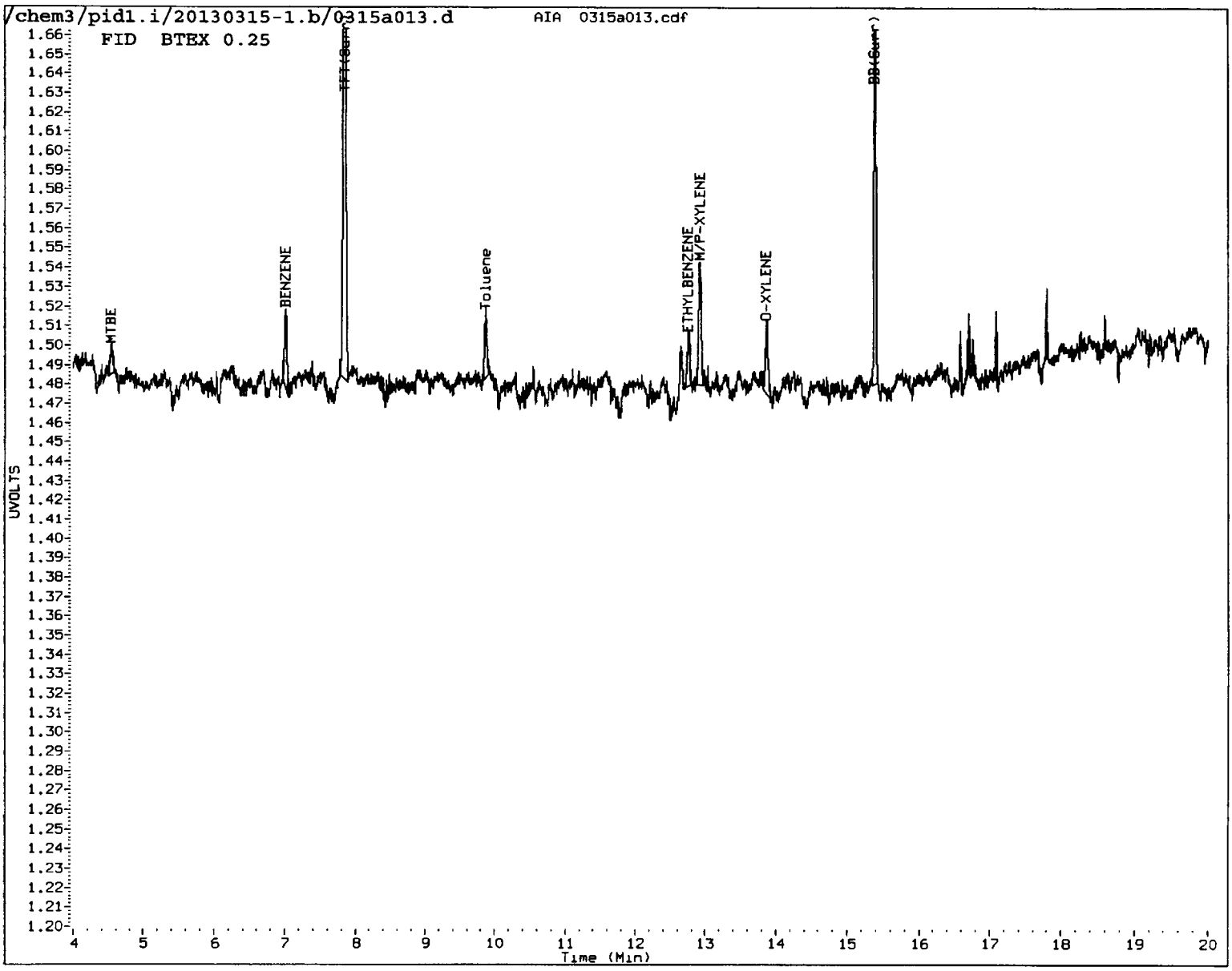
Concentration Formula: Amt * DF * CpndVariable

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

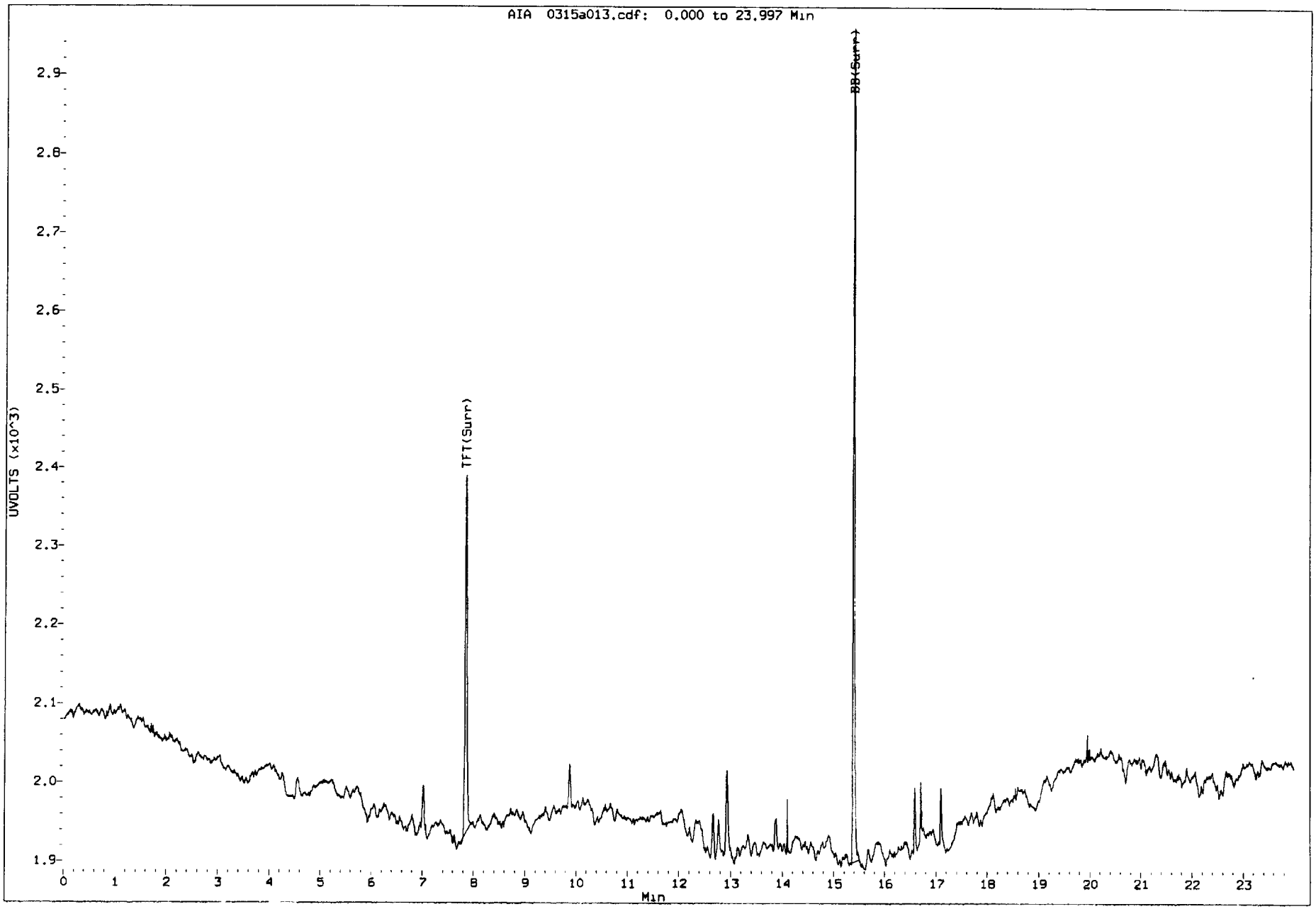
5. Other _____

Analyst: VC Date: 3/18/13

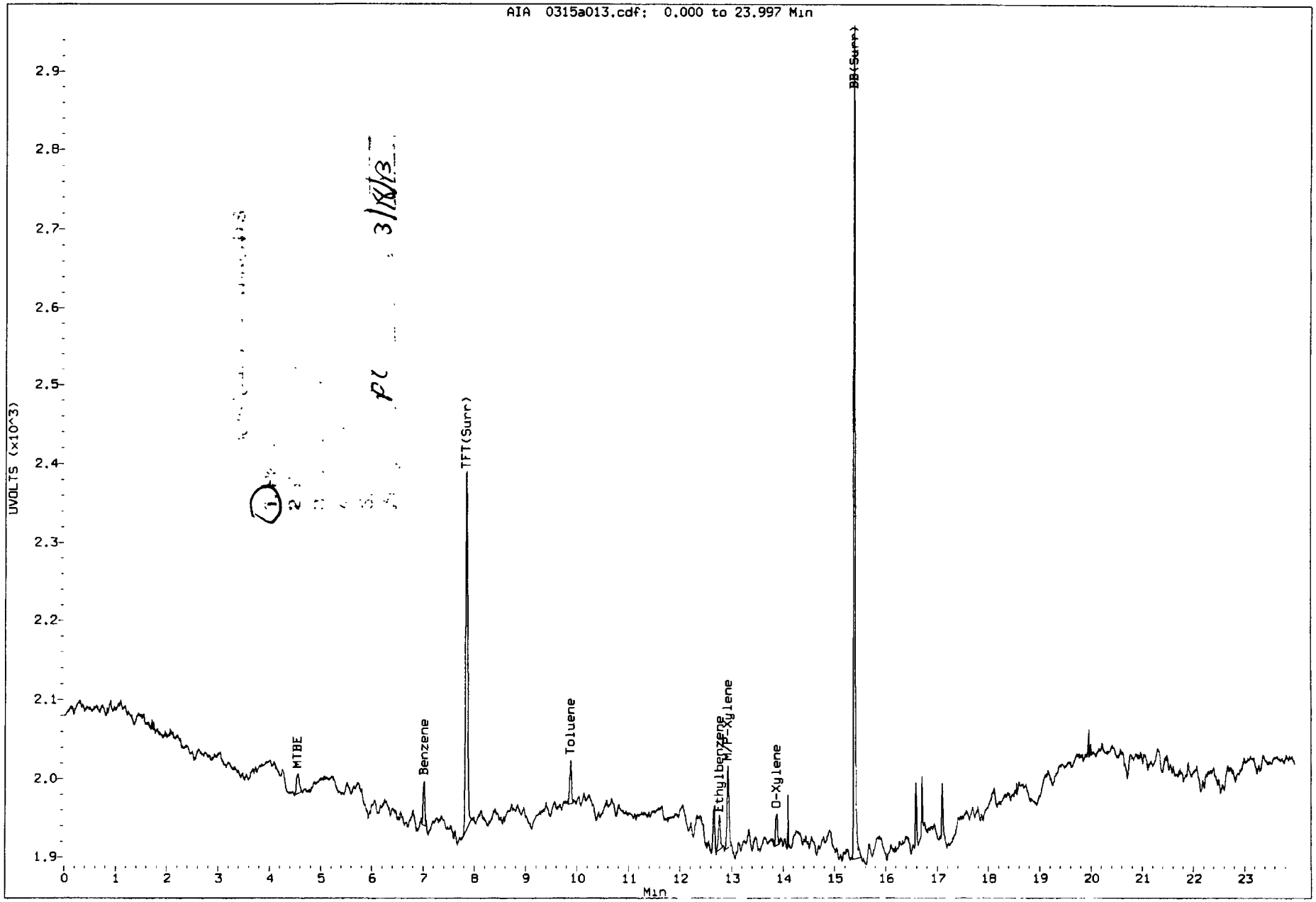
WLHS 02912

KDC 3/18/15

Data File: /chem3/pid1.i/20130315-2.b/0315a013.d/0315a013.cdf
Injection Date: 15-MAR-2013 20:08
Instrument: pid1.i
Client Sample ID: BTEX 0.25



Data File: /chem3/pid1.i/20130315-2.b/0315a013.d/0315a013.cdf
Injection Date: 15-MAR-2013 20:08
Instrument: pid1.i
Client Sample ID: BTEX 0.25



Data File: /chem3/pid1.i/20130315-1.b/0315a013.d

Date : 15-MAR-2013 20:08

Client ID: BTEX 0.25

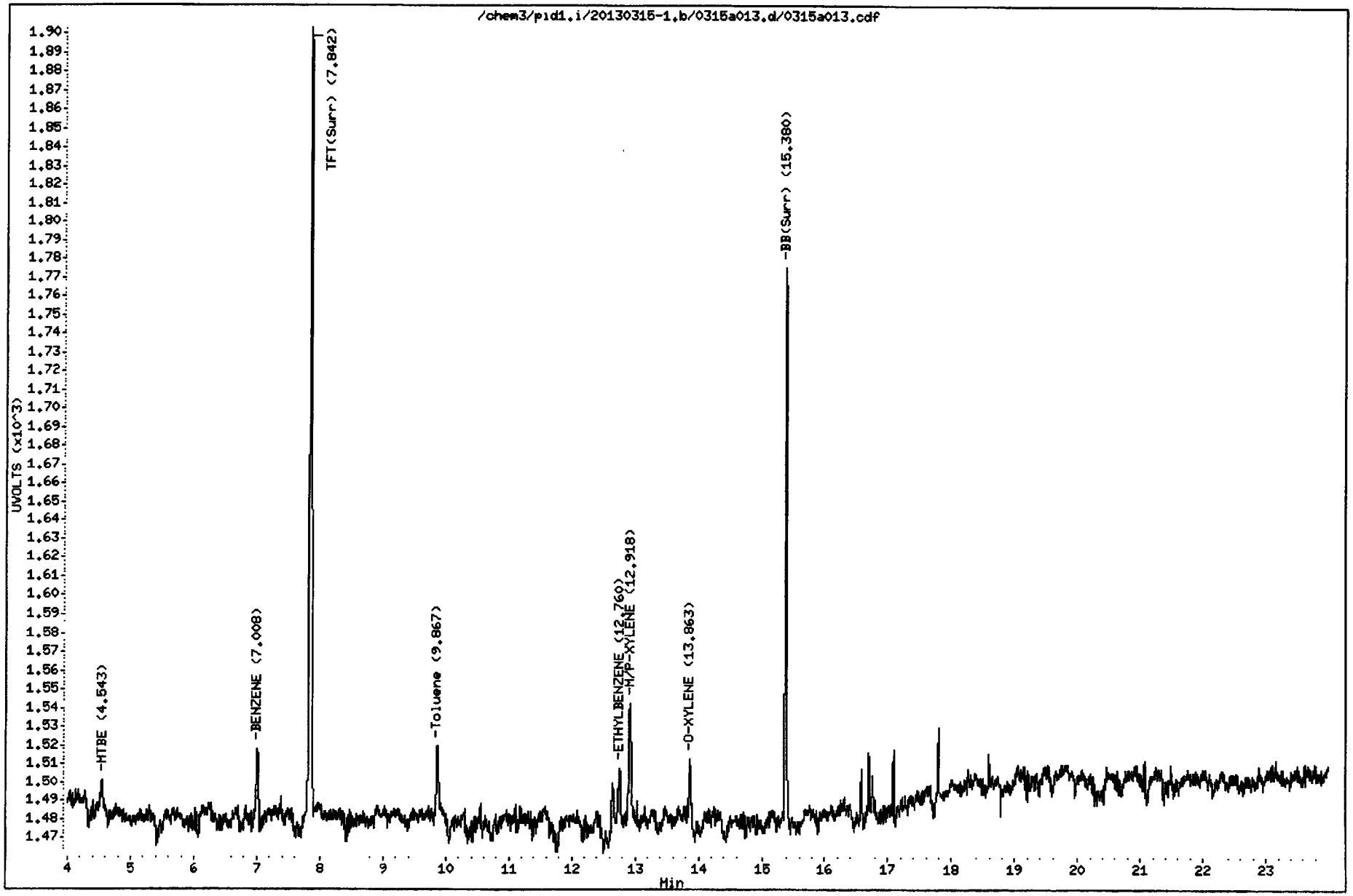
Sample Info: BTEX 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a013.d

Date : 15-MAR-2013 20:08

Client ID: BTEX 0.25

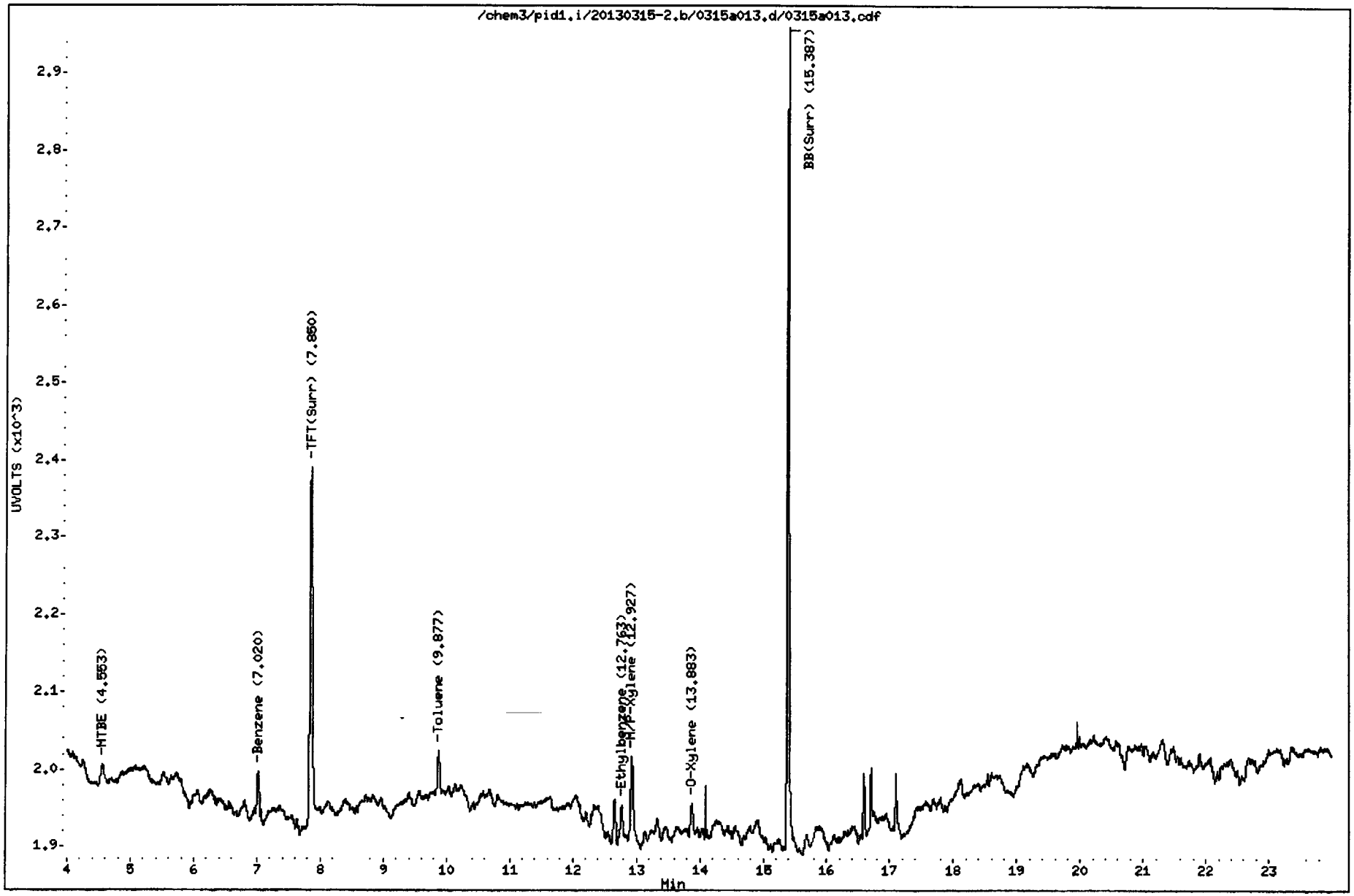
Sample Info: BTEX 0.25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



3/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130315-1.b/0315a014.d
Data file 2: /chem3/pid1.i/20130315-2.b/0315a014.d
Method: /chem3/pid1.i/20130315-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: BTEX ICV 25
Client ID: BTEX ICV 25
Injection Date: 15-MAR-2013 20:37
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	-0.003	3156	39299	91.0	TFT(Surr)
15.378	-0.002	2078	17374	91.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	243827	0.681
8015C 2MP-TMB	(4.18 to 16.20)	723723	249652	0.345
AK101 nC6-nC10	(4.67 to 15.10)	582885	229589	0.394
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	243827	0.650

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	-0.002	3663	92.3	TFT(Surr)
15.386	-0.001	8173	93.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	-0.004	6084	25.34	Benzene
9.874	-0.003	5655	24.69	Toluene
12.767	0.003	4924	25.44	Ethylbenzene
12.927	0.001	10616	49.71	M/P-Xylene
13.876	-0.008	4359	25.55	O-Xylene
4.550	-0.003	2099	24.89	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

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

Page 1

Date : 15-MAR-2013 20:37

Client ID:

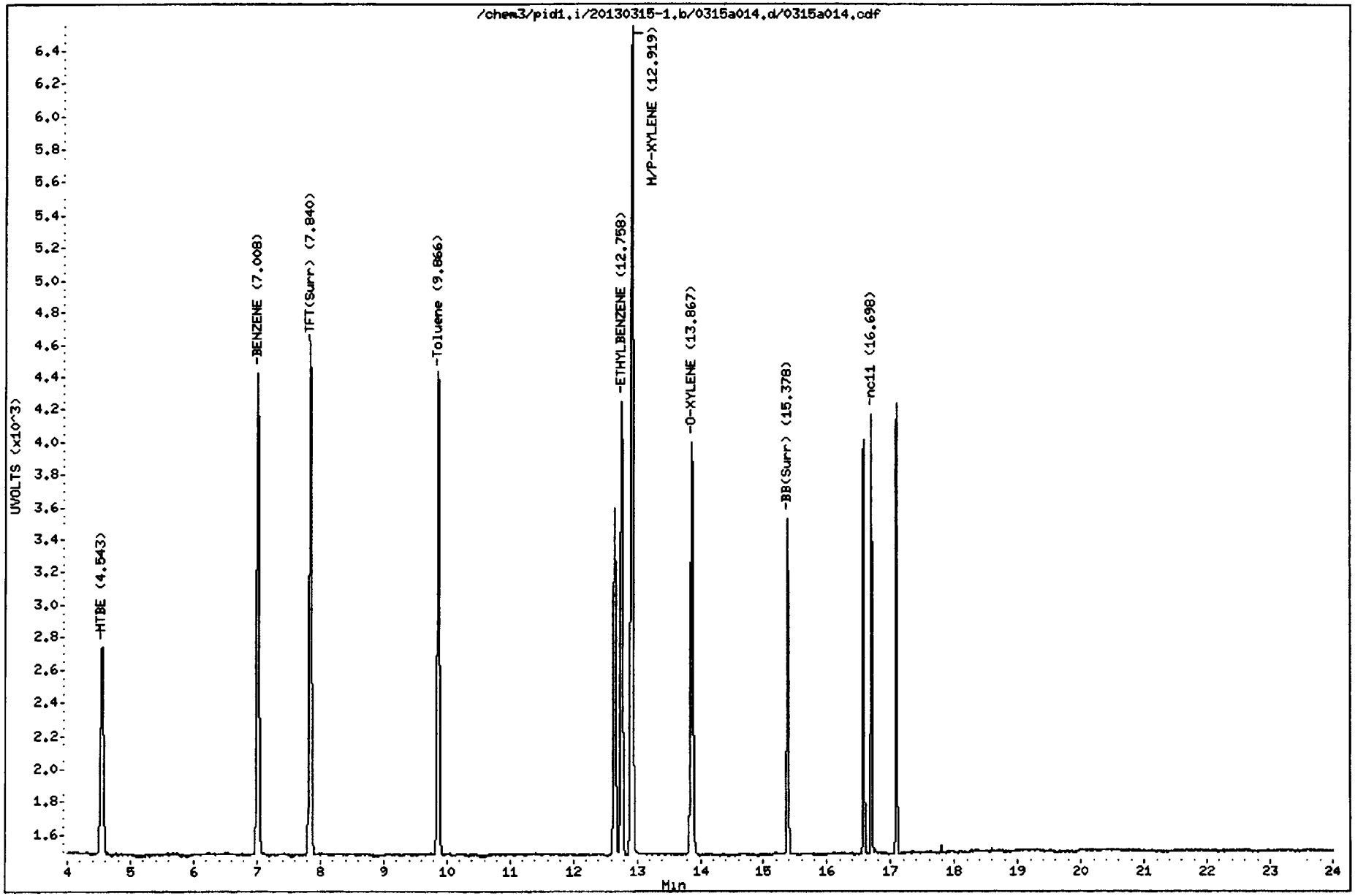
Instrument: pid1.i

Sample Info: BTEX ICV 25

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130315-2.b/0315a014.d

Date : 15-MAR-2013 20:37

Client ID: BTEX ICV 25

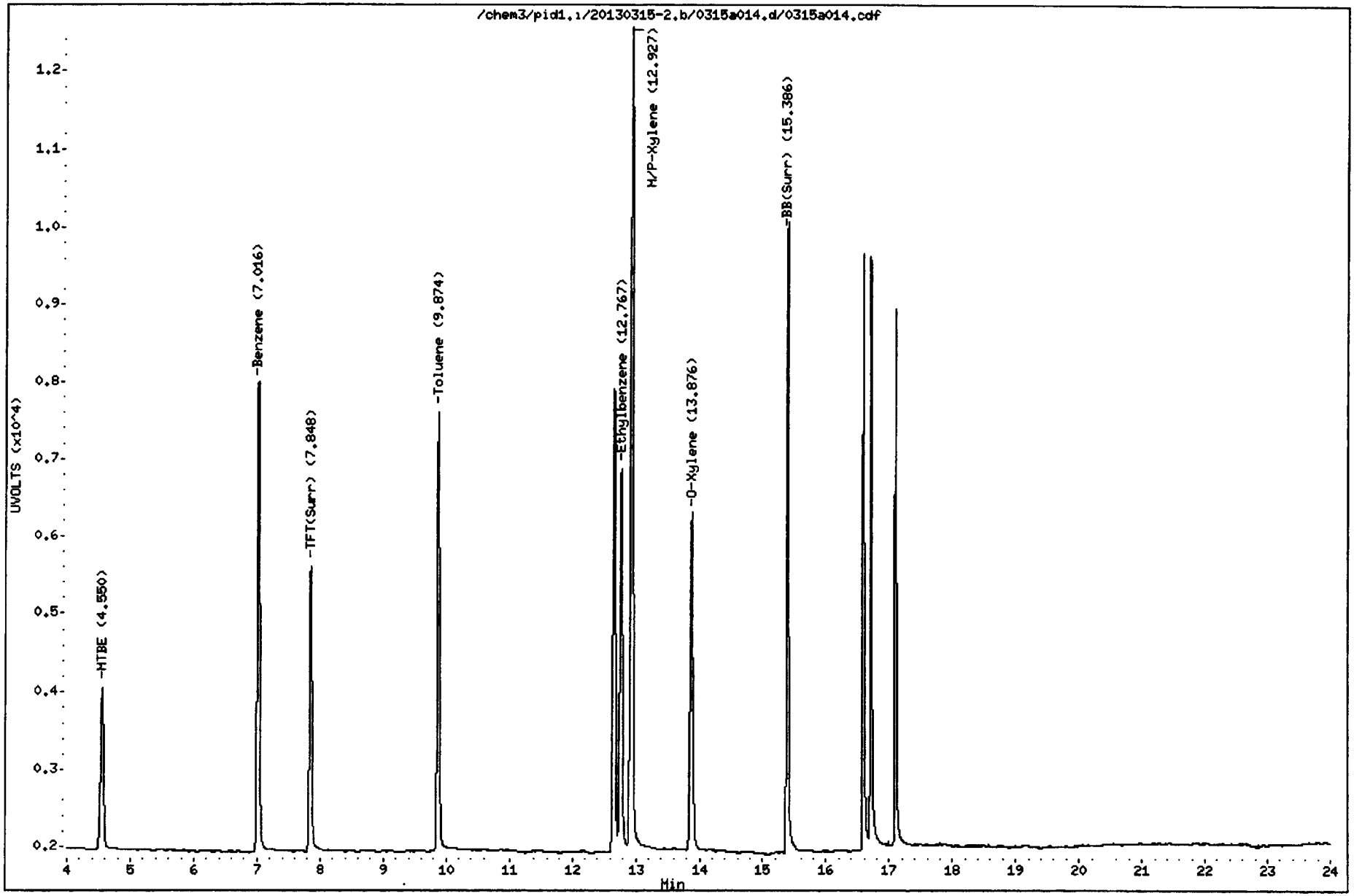
Sample Info: BTEX ICV 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 10/23/12 Internal Standard ID N/A Expiration N/A

BFB Tune Meets Criteria?	N/A YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	N/A YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	N/A YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW758-3	2/1/13	Ultra Scientific	VW765-1	3/13/12
SPEX	VW754	2/2/12	SPEX	VW765-5	3/27/12

Detail problems, corrective actions and/or other pertinent information below:

MI's for peaks not found, baseline corrections.
TFT inflated on high pt of gas curve due to hydrocarbon interference.
MTBE @ 0.25 & 0.5 pts of BETX curve dropped & low pt FID confirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-2.b/1023a011.d
Level 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Level 3: /chem3/pid1.i/20121023-2.b/1023a009.d
Level 4: /chem3/pid1.i/20121023-2.b/1023a008.d
Level 5: /chem3/pid1.i/20121023-2.b/1023a007.d
Level 6: /chem3/pid1.i/20121023-2.b/1023a006.d
Level 7: /chem3/pid1.i/20121023-2.b/1023a005.d
Level 8: /chem3/pid1.i/20121023-2.b/1023a004.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	+++++	72.00000	75.40000	71.84000	72.14000		
	72.39000	68.24000					72.00167	3.161
2 Benzene	228	254	260	255	246	248		
	247	246					248	3.847
4 Toluene	256	234	210	224	220	219		
	220	216					225	6.342
5 Ethylbenzene	192	200	198	201	196	198		
	199	193					197	1.663
6 M/P-Xylene	216	208	212	220	215	217		
	218	215					215	1.653
7 O-Xylene	160	158	168	171	172	171		
	173	170					168	3.365

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	___ RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	38.86364	37.09091	+++++	37.55224	37.30000	36.97744		
	38.10674	39.27500					37.88085	2.372
$ 8 BB(Surr)	81.36364	78.68182	+++++	80.38806	80.55000	80.24060		
	82.00562	79.97000					80.45710	1.310

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 2.96423
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Level 2: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Level 3: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Level 4: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Level 5: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Level 6: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Level 7: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Level 8: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	RRF	% RSD	
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575	561	509	560	9.173	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
9 BENZENE	1572	1618	1515	1498	1392	1352	1307	1232	1436	9.456	
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
12 Toluene	1464	1522	1397	1472	1356	1326	1283	1207	1378	7.690	
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
14 ETHYLBENZENE	132	126	121	118	109	107	103	95.88000	114	10.830	
15 M/P-XYLENE	1612	1580	1476	1417	1290	1260	1226	1156	1377	12.313	
16 O-XYLENE	1504	1538	1492	1414	1330	1289	1249	1171	1373	9.739	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.58832
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a004.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a004.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 200
Client ID:
Injection Date: 23-OCT-2012 17:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	6139	78345	194.1	TFT(Surr)
15.390	0.003	3786	32155	185.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1708650	4.771 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	1708791	2.361 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	1600978	2.747 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1713577	4.568 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.003	7855	207.4	TFT(Surr)
15.397	0.003	15994	198.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.001	49204	198.42	Benzene
9.910	0.003	43241	192.19N	Toluene
12.793	0.006	38665	196.10	Ethylbenzene
12.957	0.014	85891	399.48	M/P-Xylene
13.900	0.010	34089	203.10N	O-Xylene
4.650	-0.003	13648	189.55	MTBE

JW 10/25/12

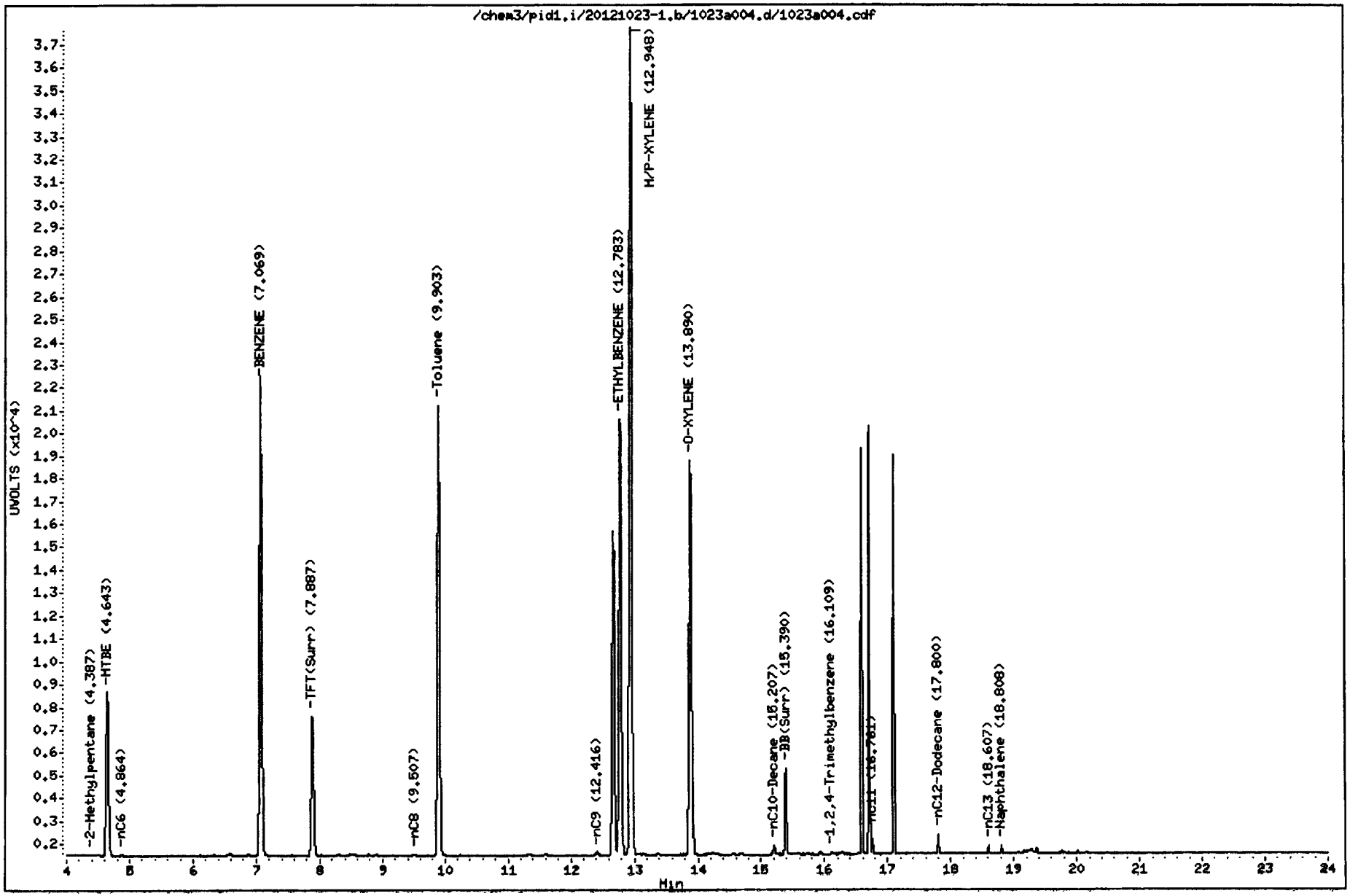
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d
Date : 23-OCT-2012 17:50
Client ID:
Sample Info: B 200

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18

Column phase: RTX 502-2 FID



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

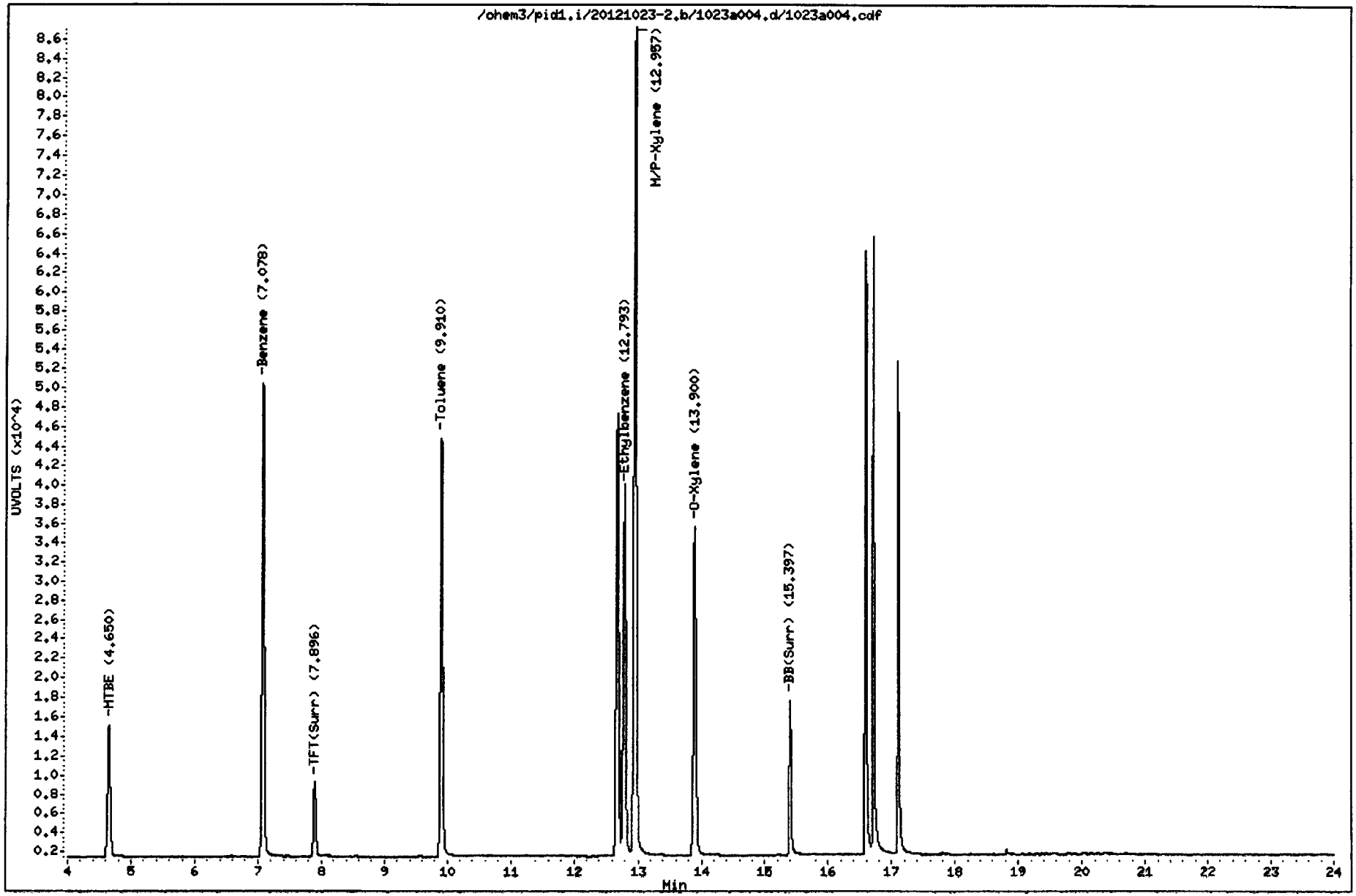
Sample Info: B 200

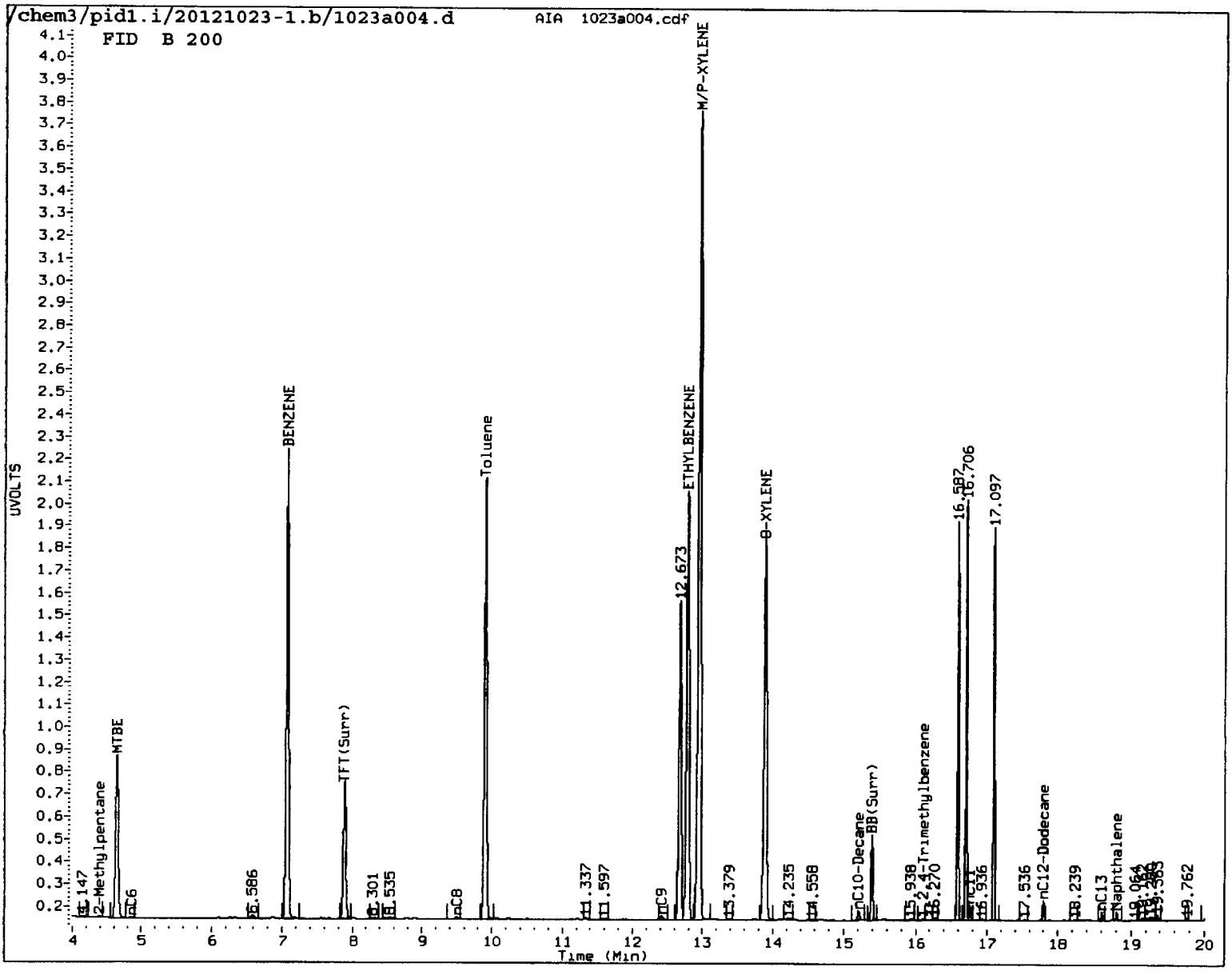
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

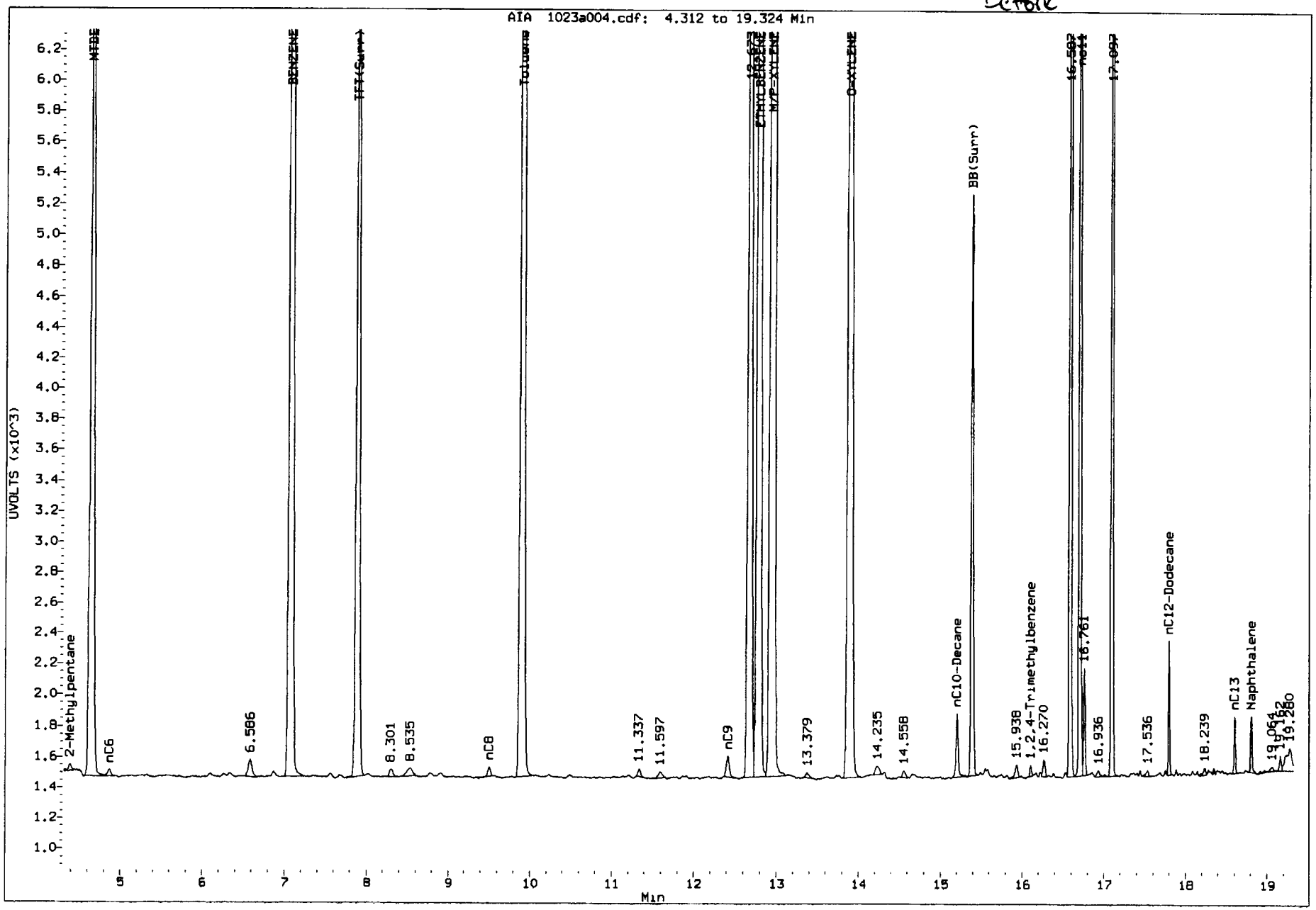
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

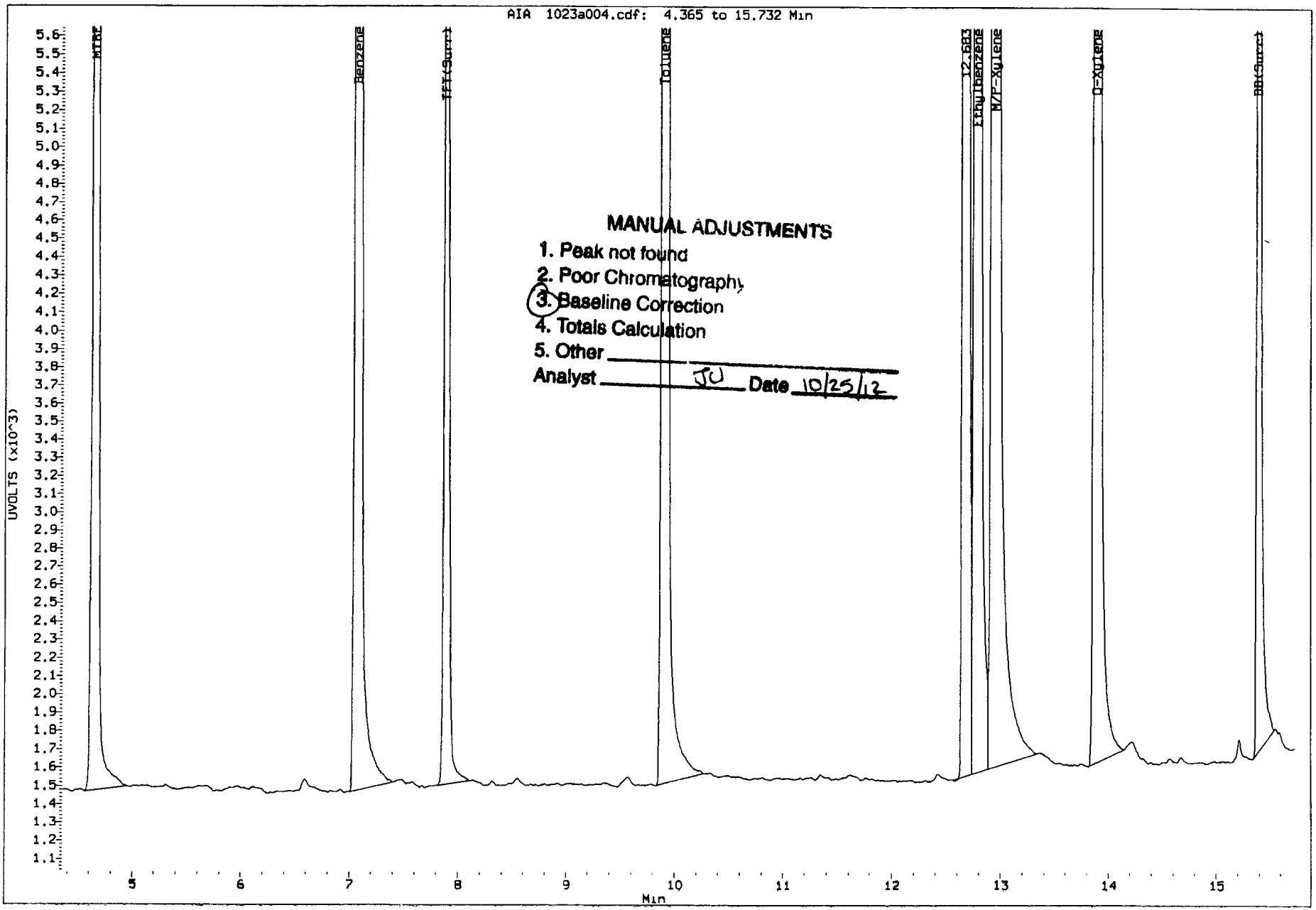
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before

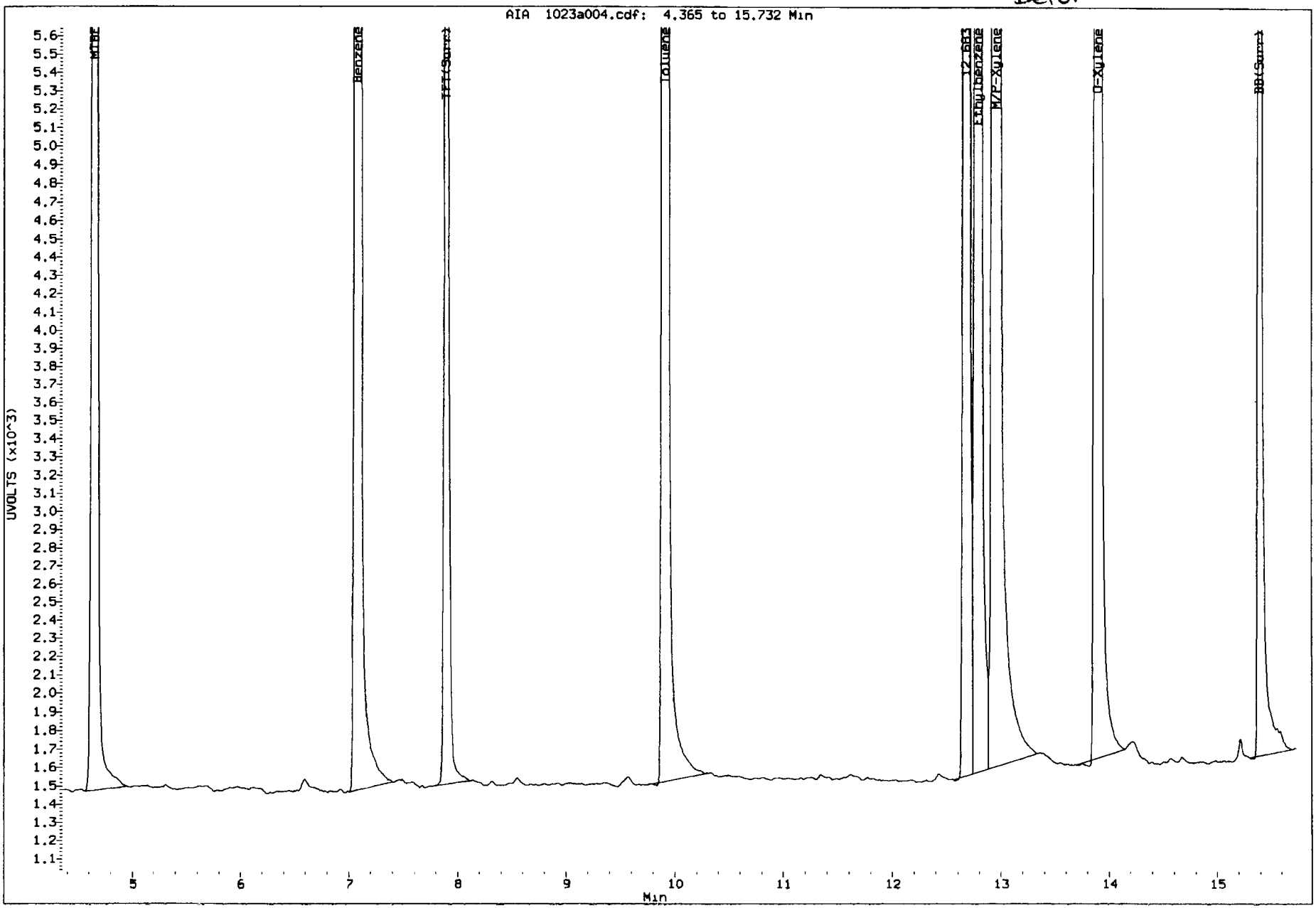


Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a005.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a005.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 100
Client ID:
Injection Date: 23-OCT-2012 18:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	5503	70111	174.0	TFT(Surr)
15.387	0.000	3532	29720	173.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	905684	2.529 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	901622	1.246 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	845537	1.451 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	906863	2.418 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	6783	179.1	TFT(Surr)
15.393	0.000	14597	181.4	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.073	-0.003	24688	99.56N	Benzene
9.903	-0.003	22030	97.92N	Toluene
12.785	-0.002	19930	101.08	Ethylbenzene
12.948	0.004	43574	202.66	M/P-Xylene
13.893	0.003	17274	102.92N	O-Xylene
4.650	-0.003	7239	100.54N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d

Page 1

Date : 23-OCT-2012 18:20

Client ID:

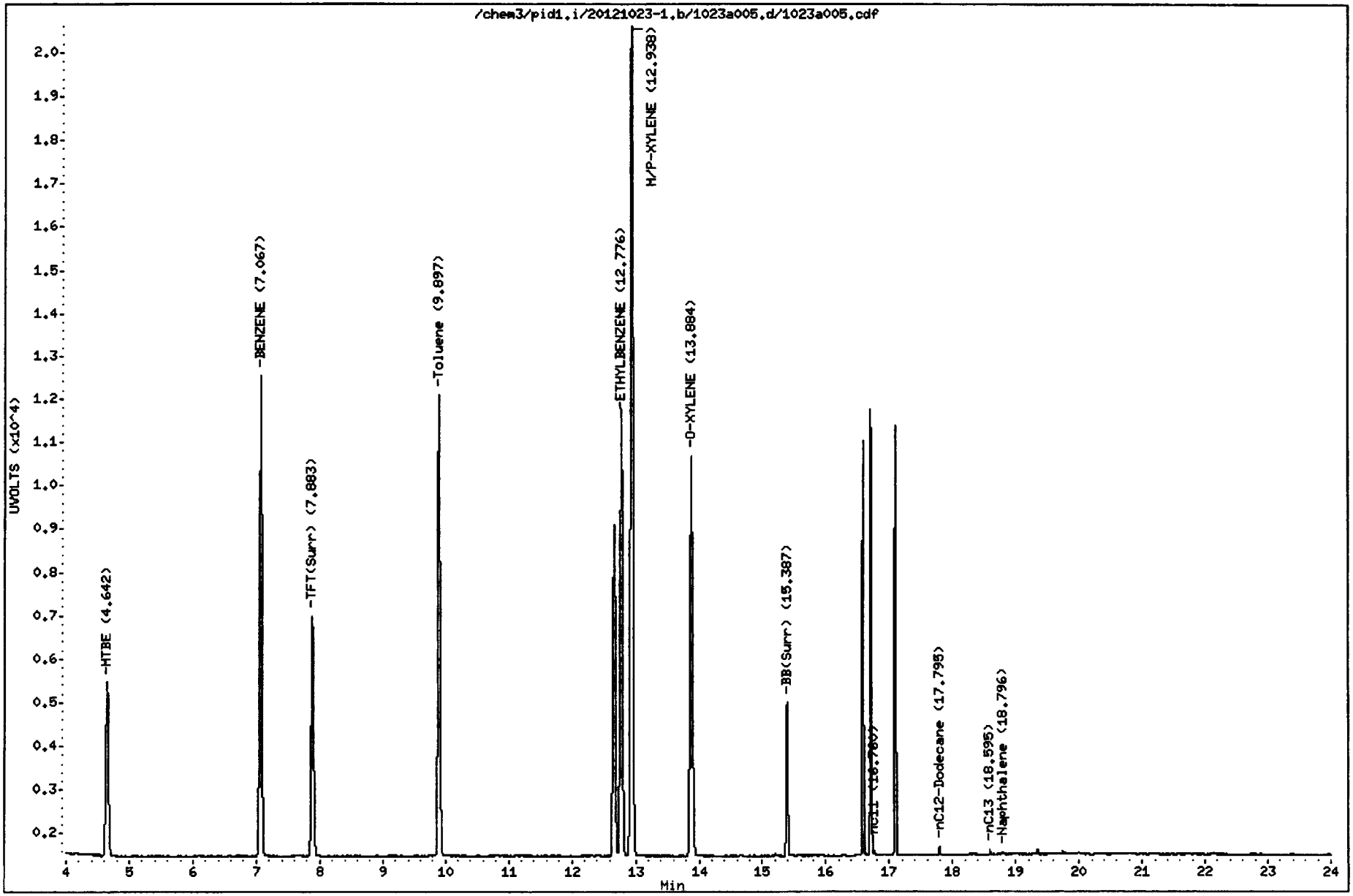
Instrument: pid1.i

Sample Info: B 100

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

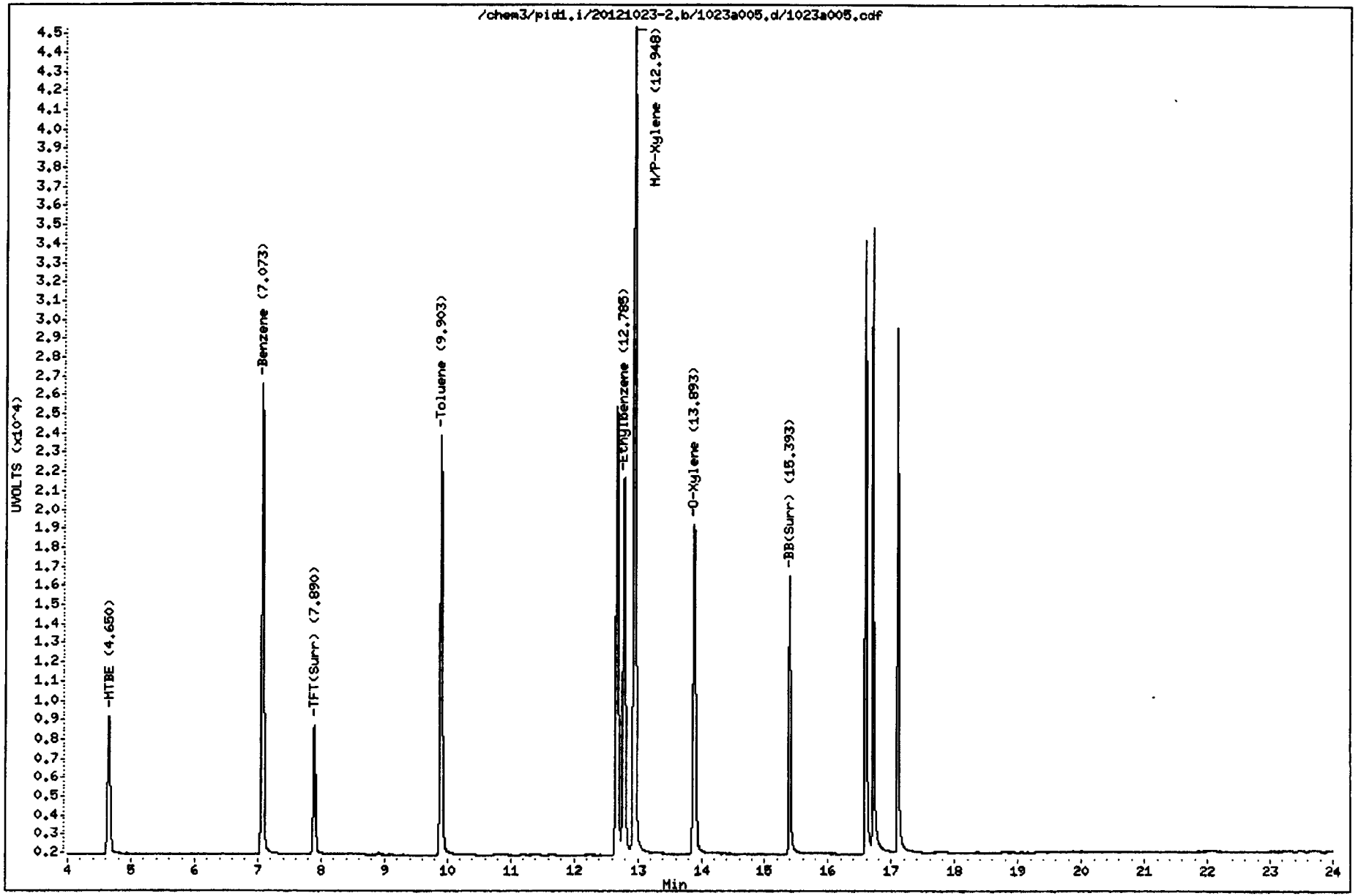
Sample Info: B 100

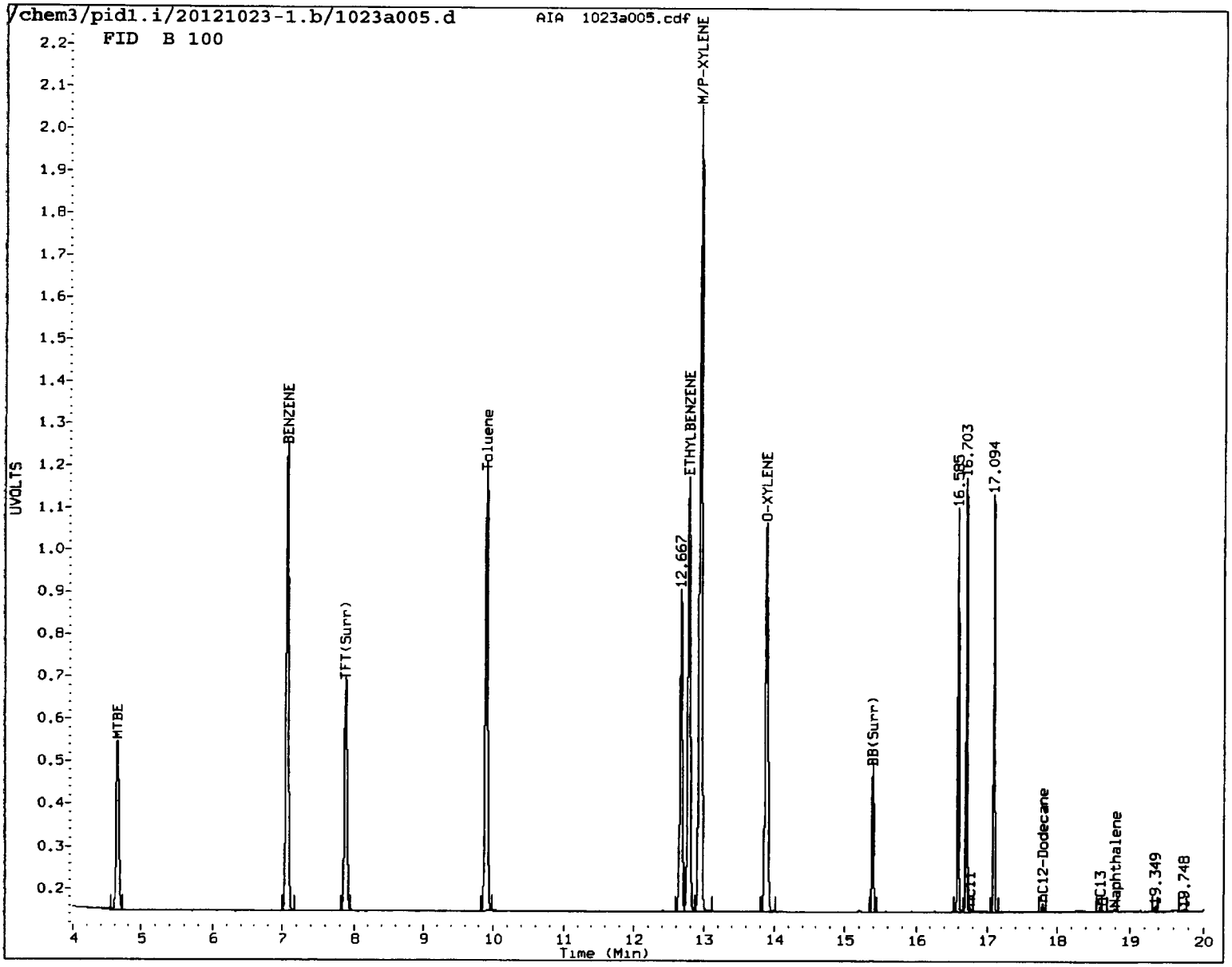
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

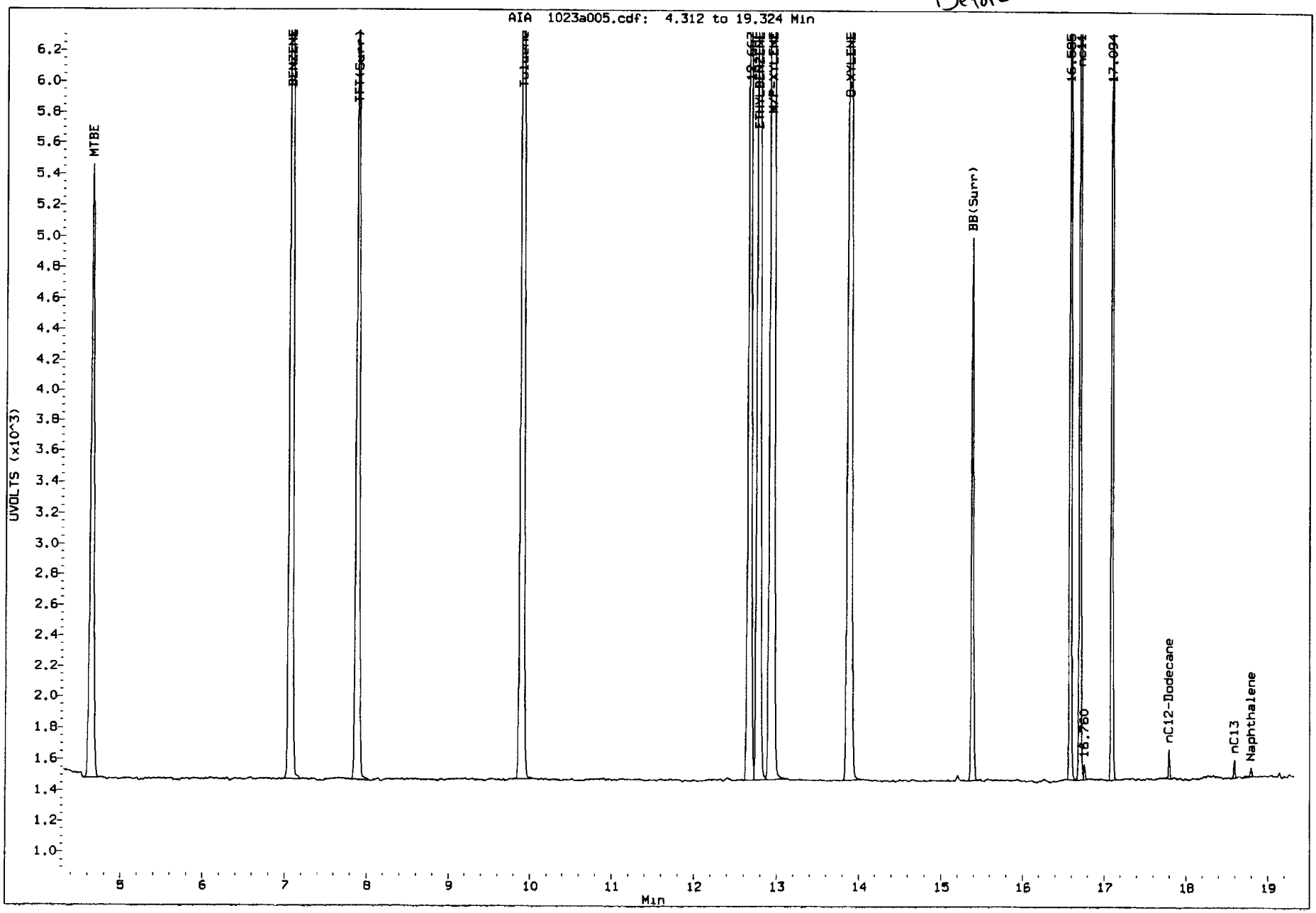
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

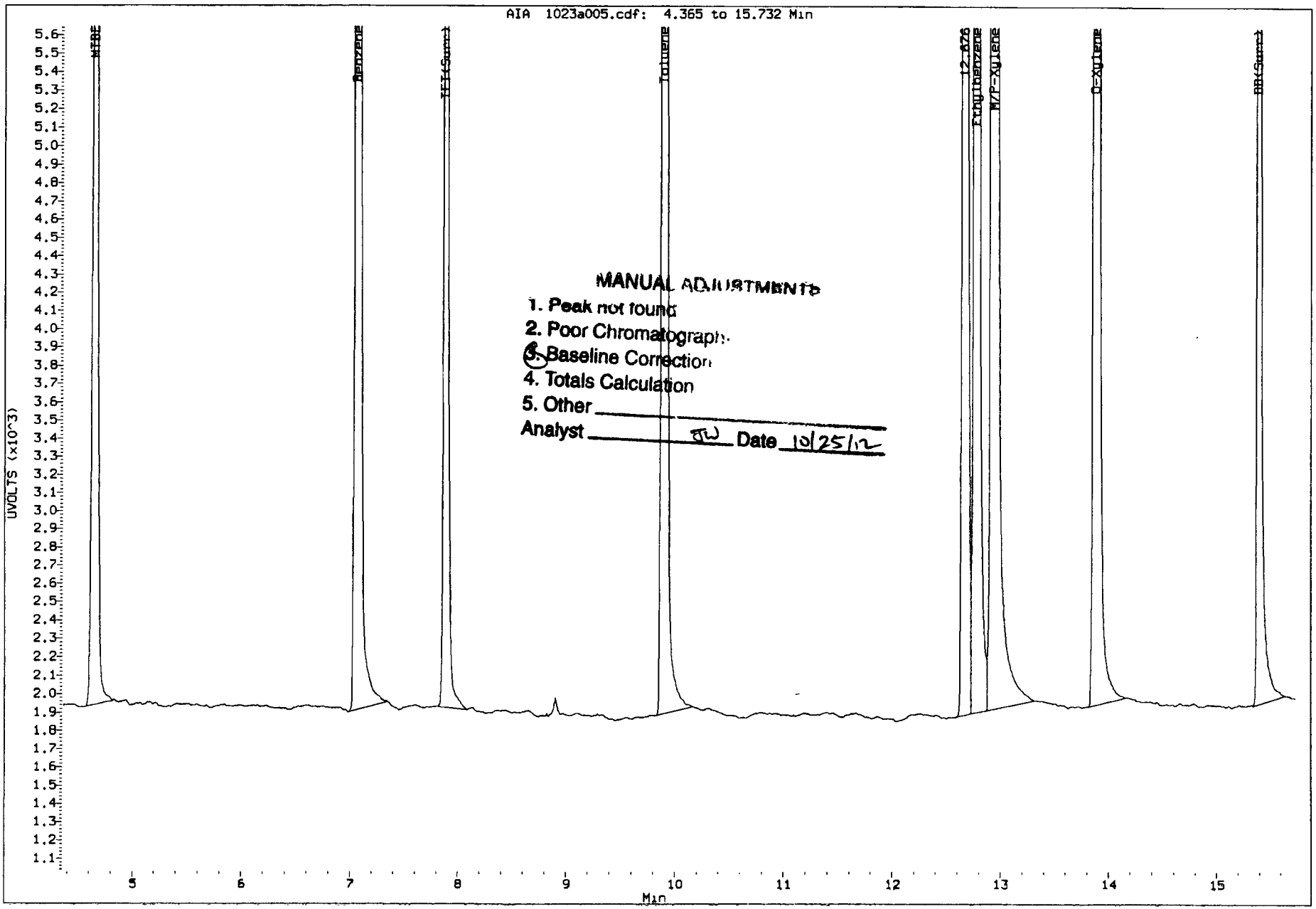
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

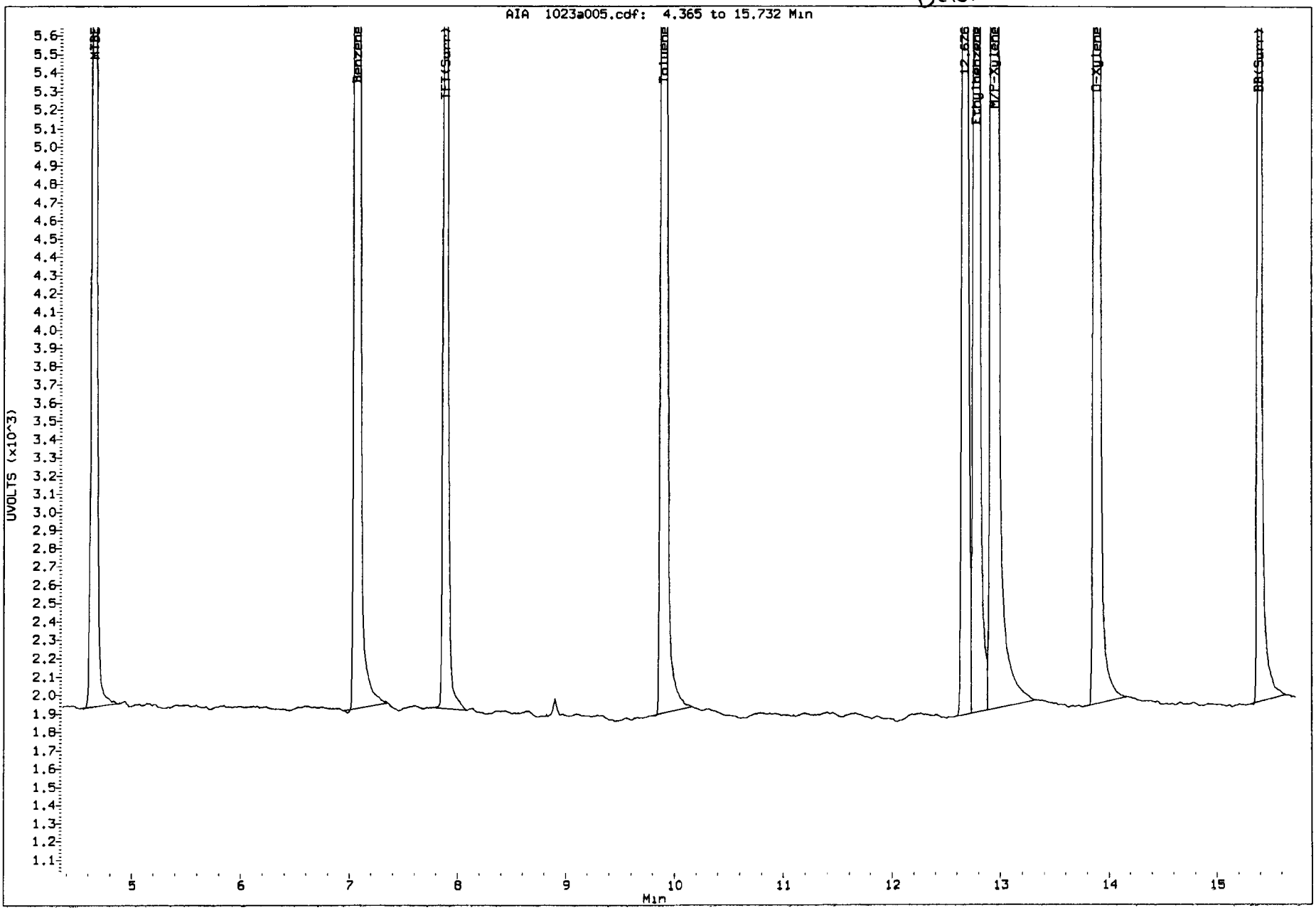


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a006.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a006.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 50
Client ID:
Injection Date: 23-OCT-2012 18:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	4094	52140	129.5	TFT(Surr)
15.387	0.000	2638	22027	129.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	466249	1.302 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	465082	0.643 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	436325	0.749 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	466249	1.243 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	4918	129.8	TFT(Surr)
15.393	0.000	10672	132.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	12380	49.92	Benzene
9.903	-0.003	10965	48.74N	Toluene
12.784	-0.003	9886	50.14	Ethylbenzene
12.946	0.002	21661	100.75	M/P-Xylene
13.890	0.000	8535	50.85N	O-Xylene
4.653	0.000	3607	50.10N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

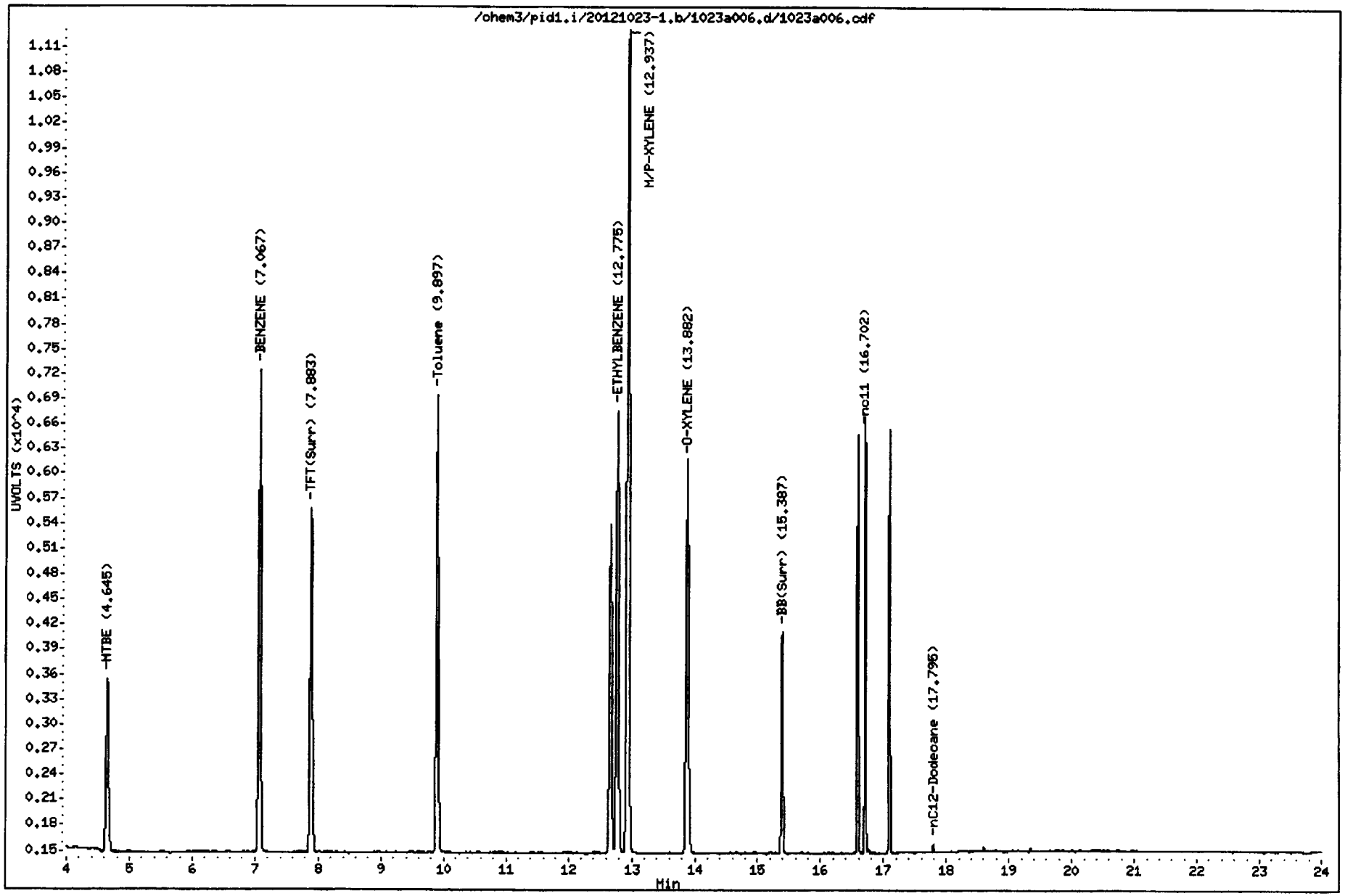
Sample Info: B 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

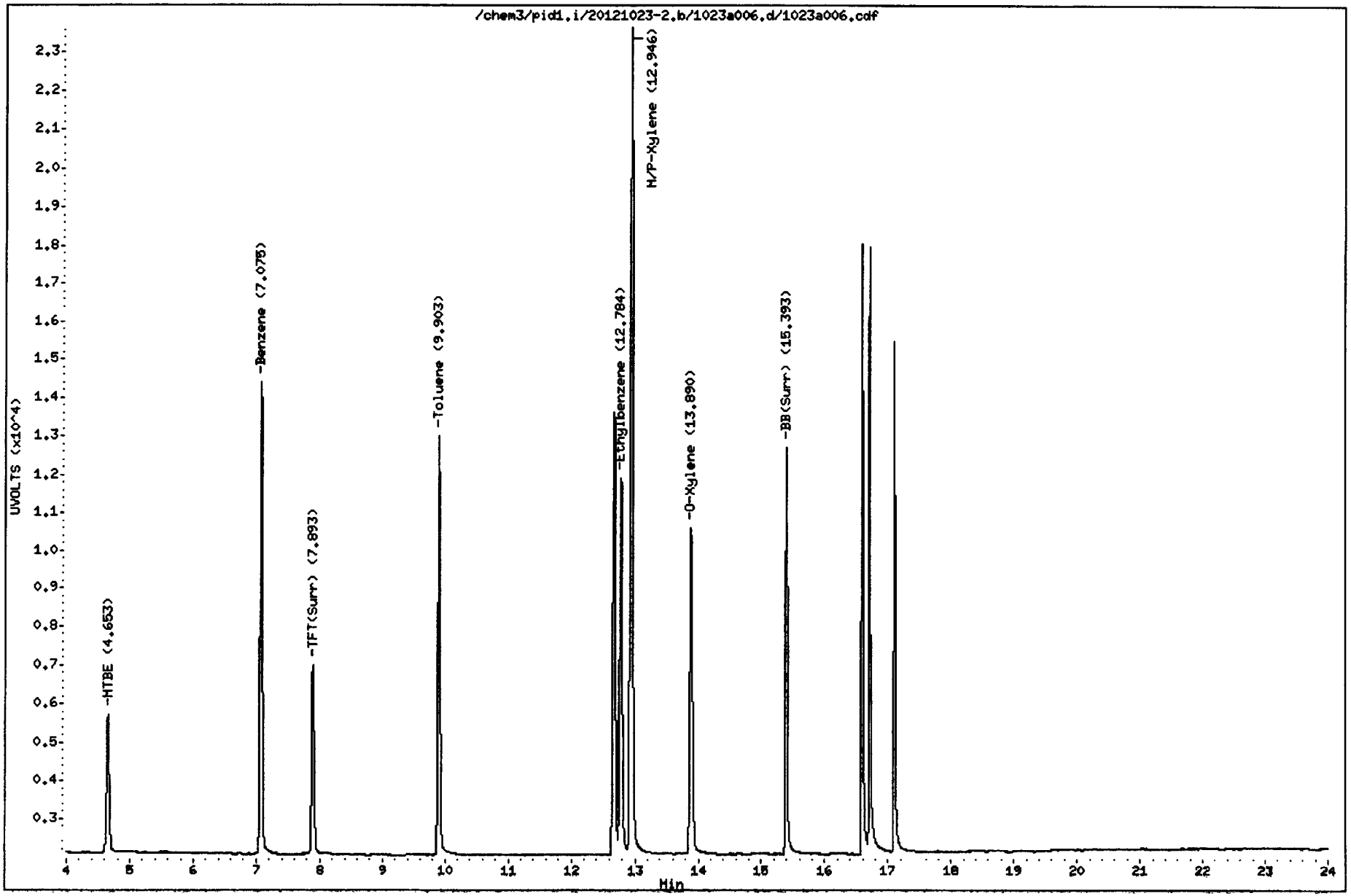
Sample Info: B 50

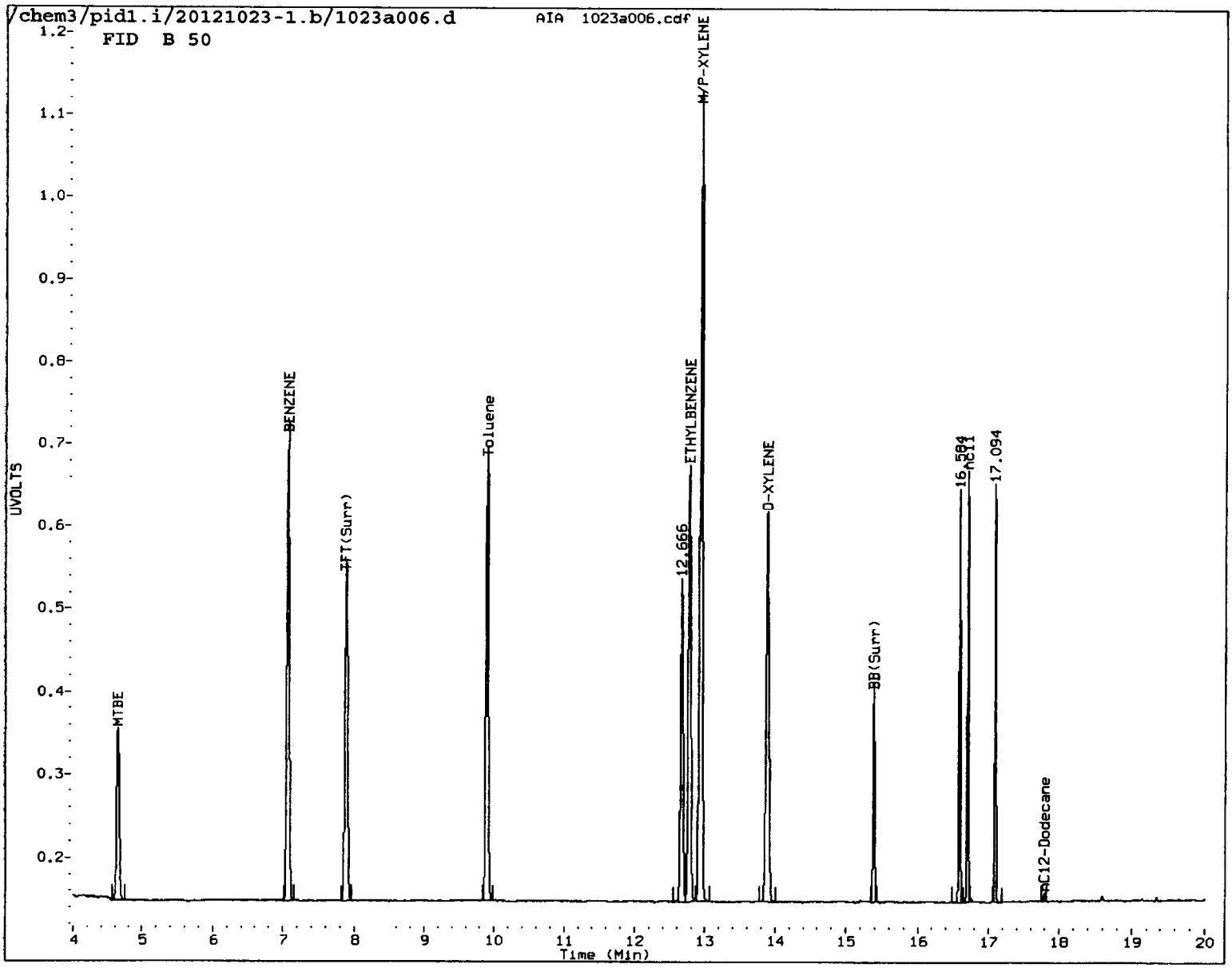
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

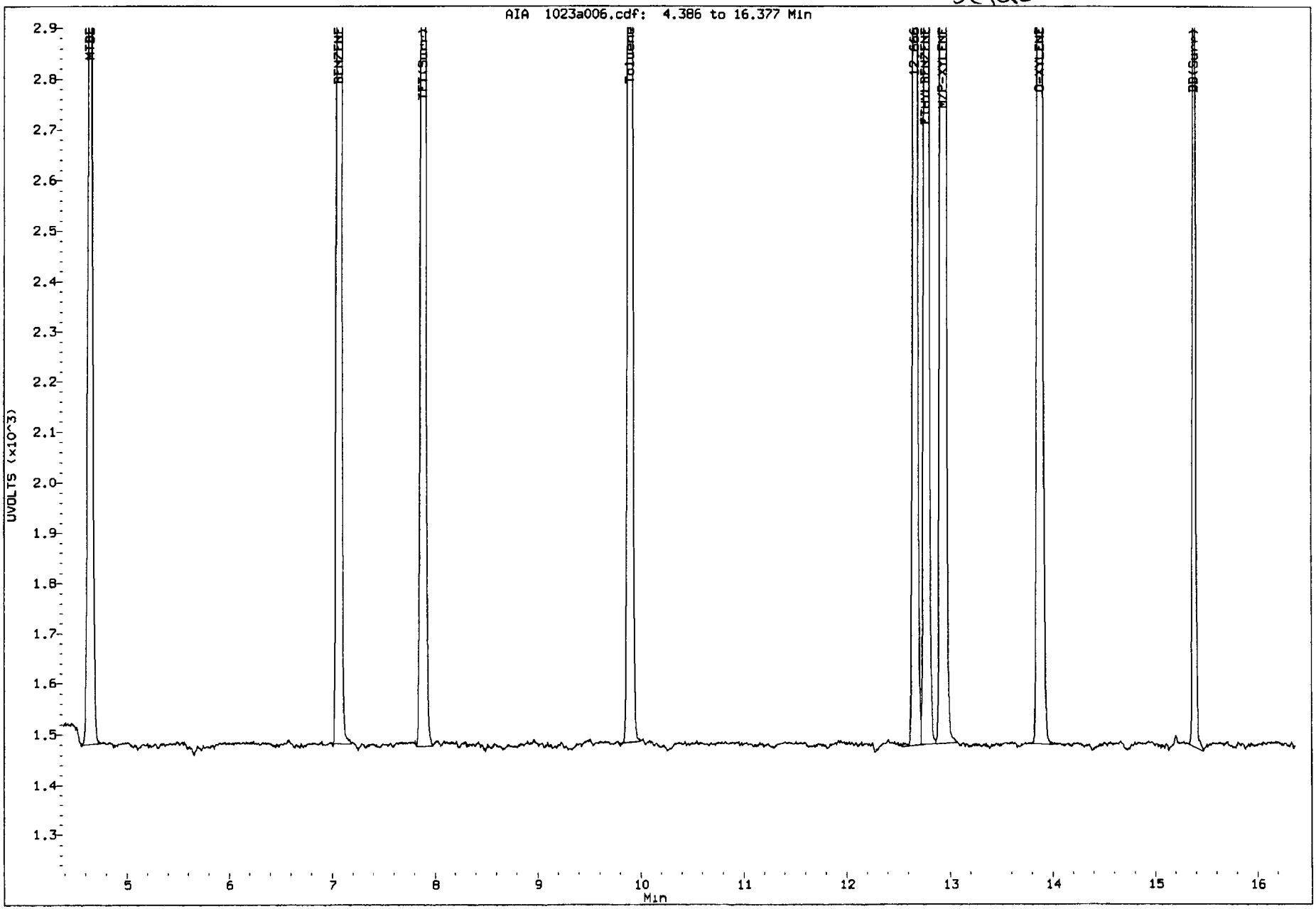
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

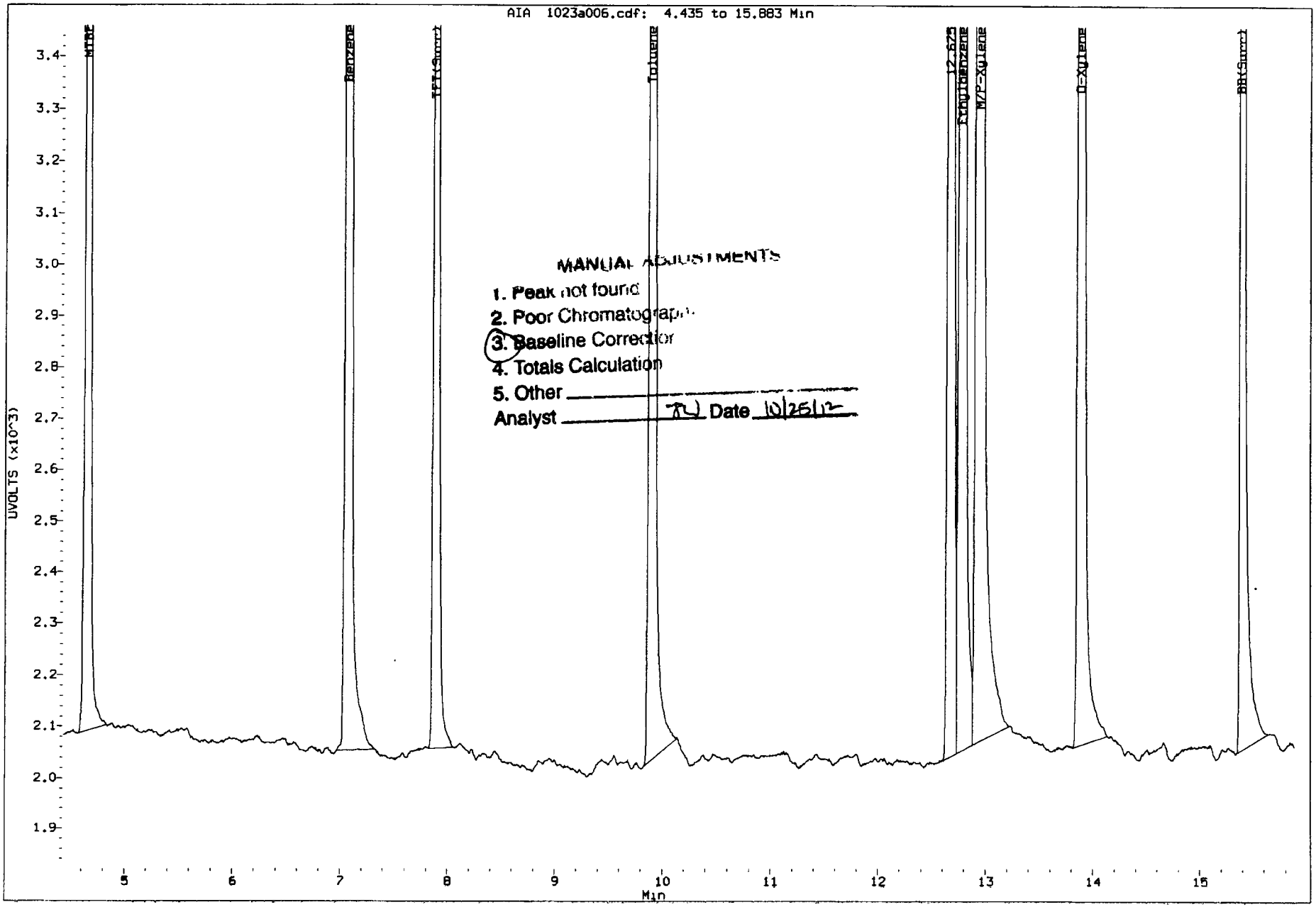
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



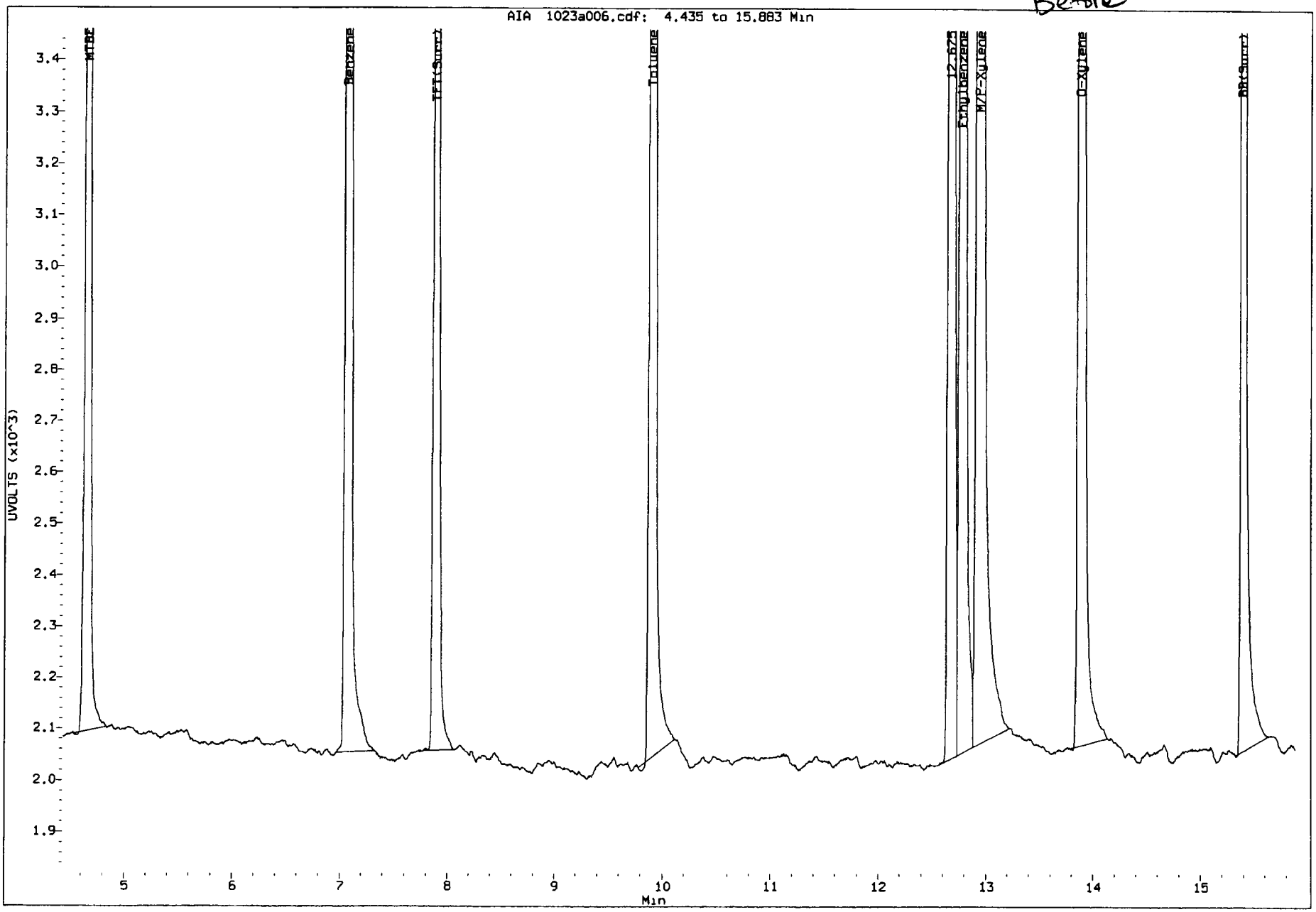
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst _____ Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

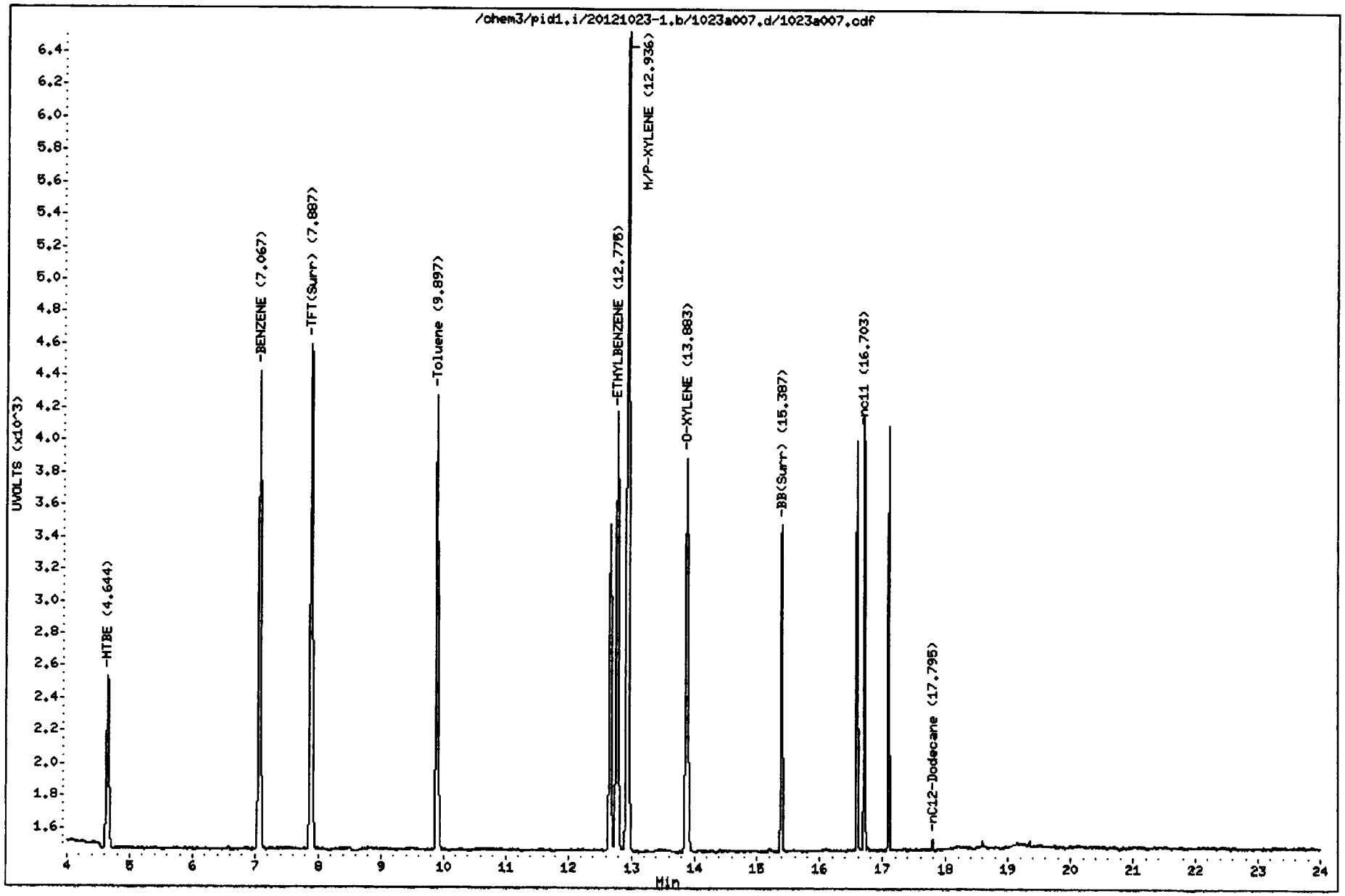
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18

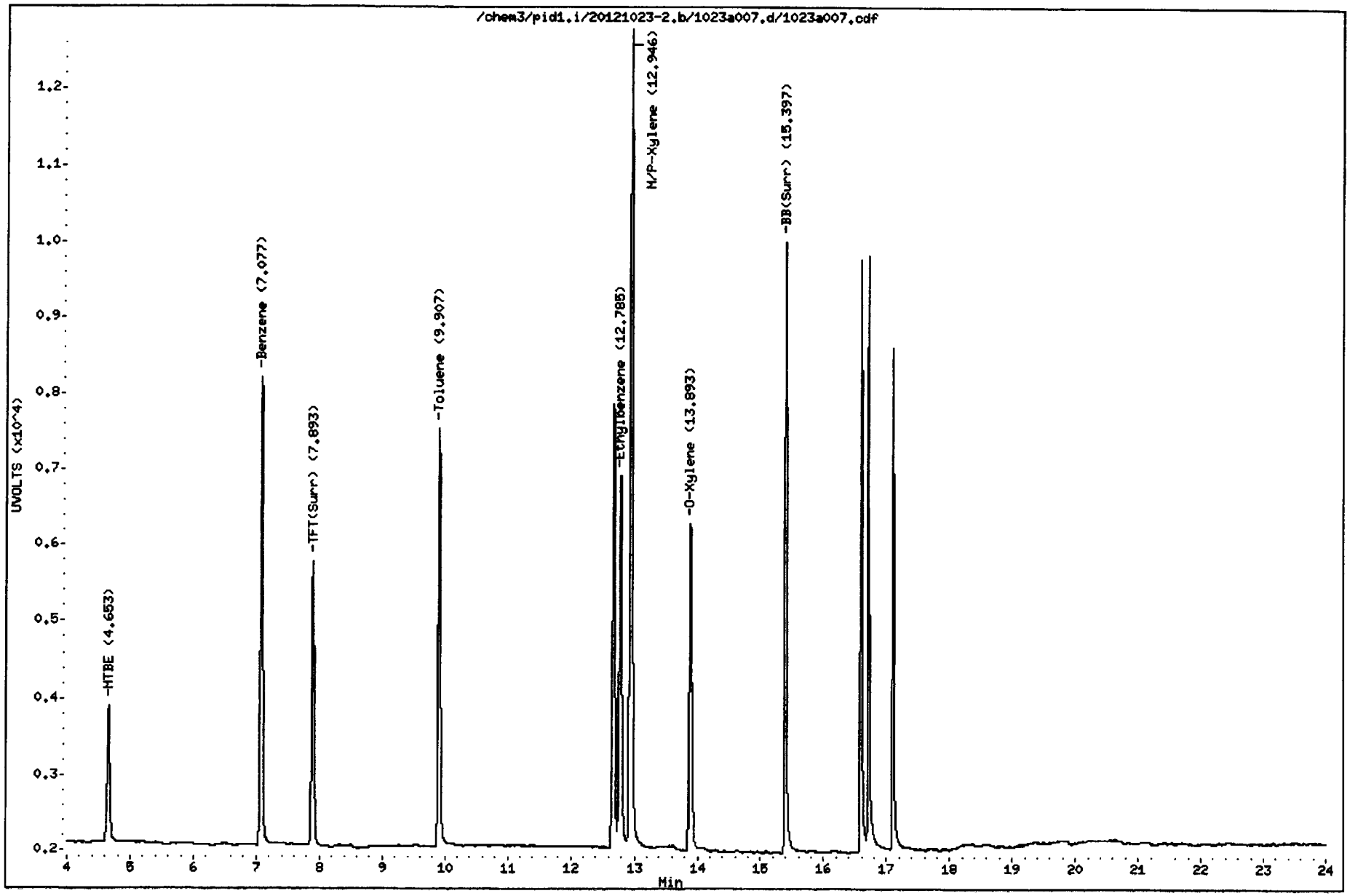


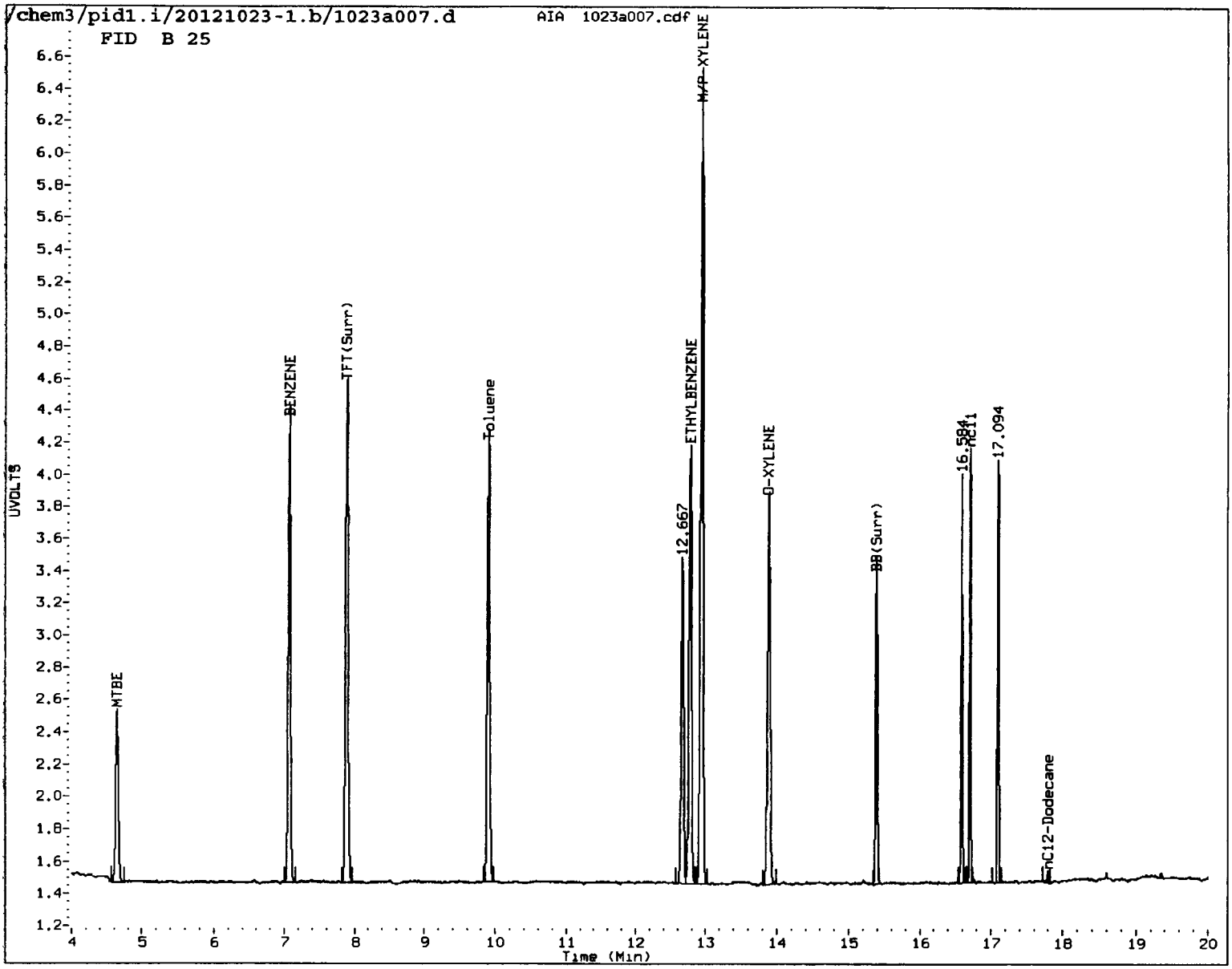
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

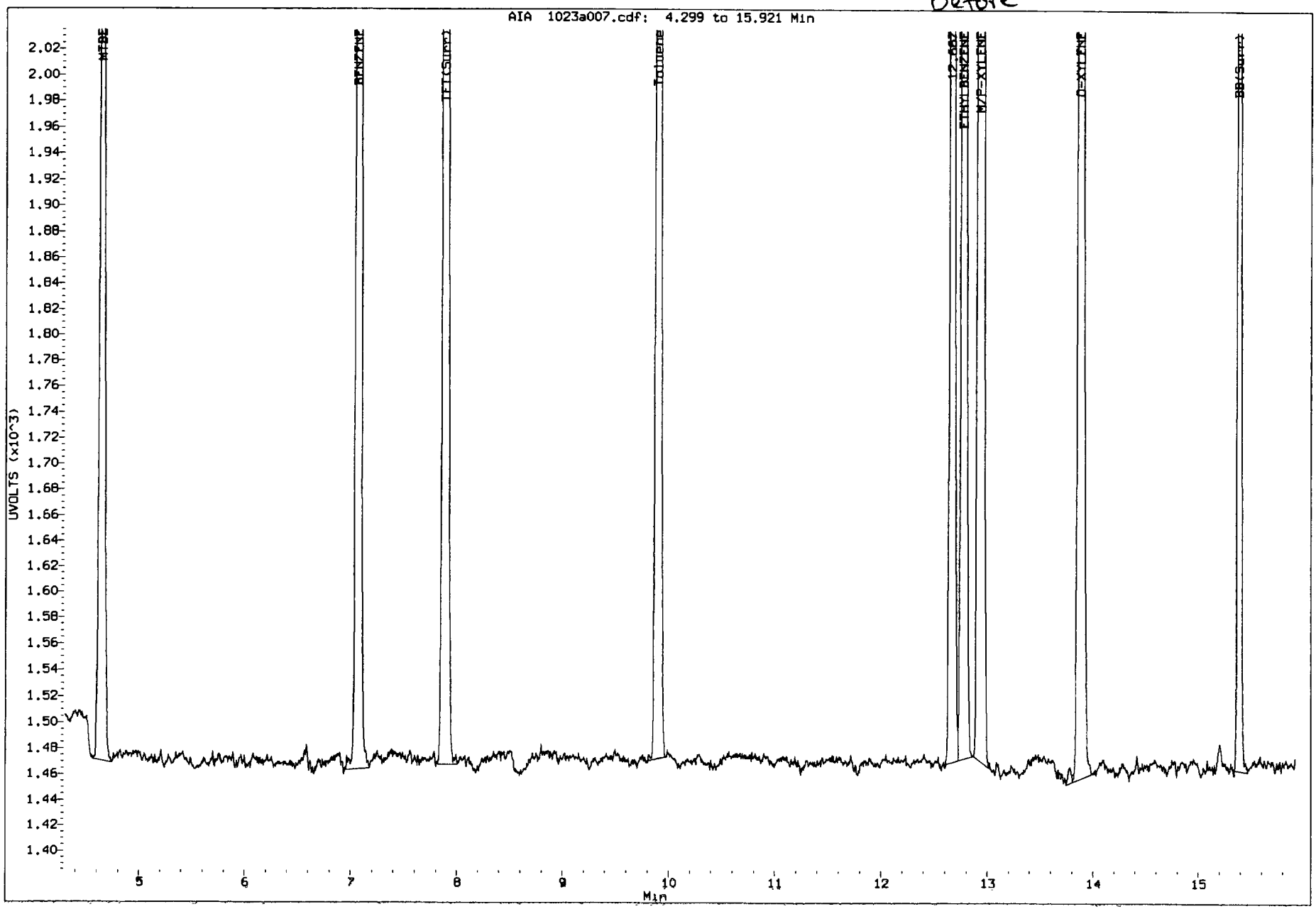
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

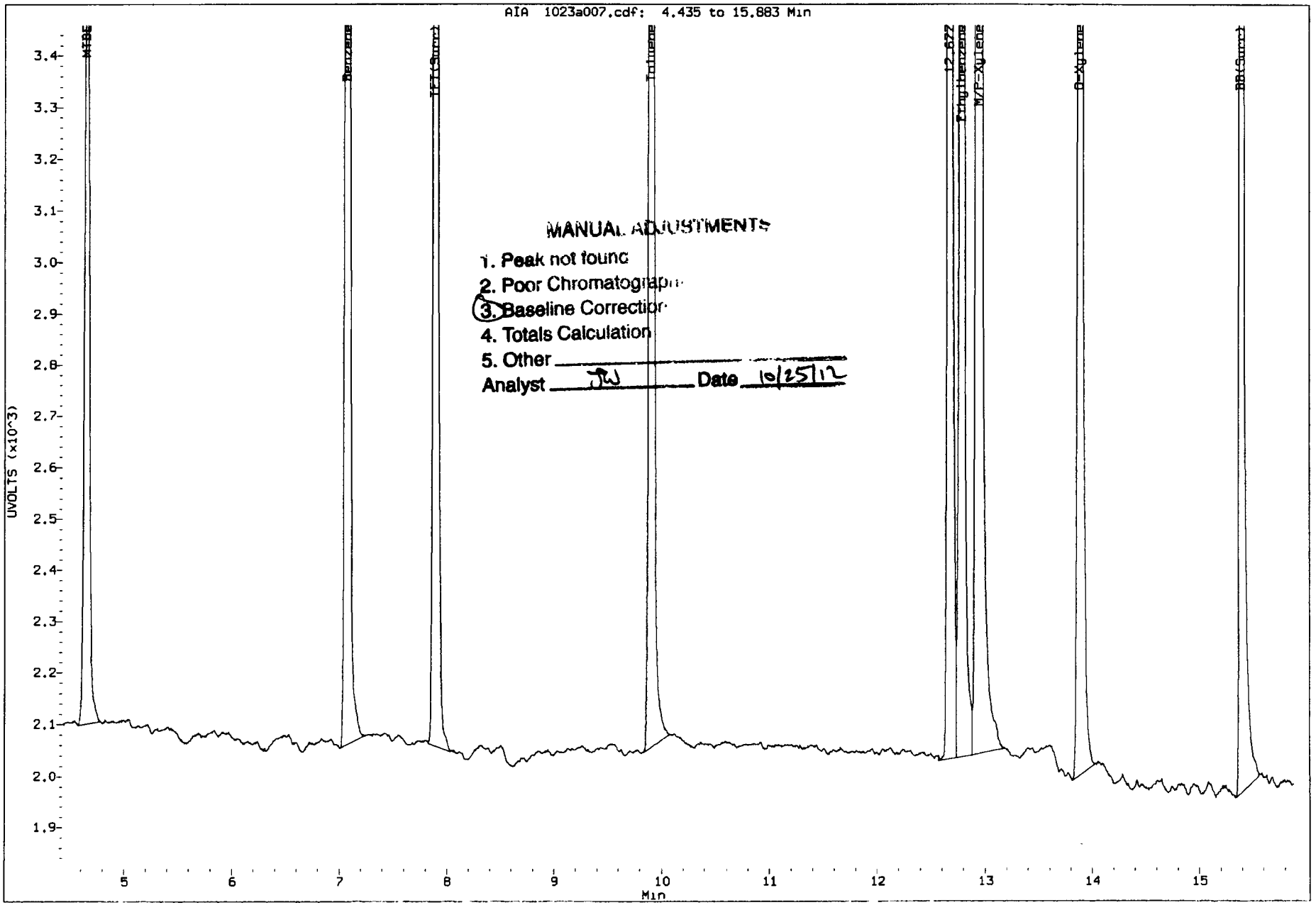
Analyst: JU Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



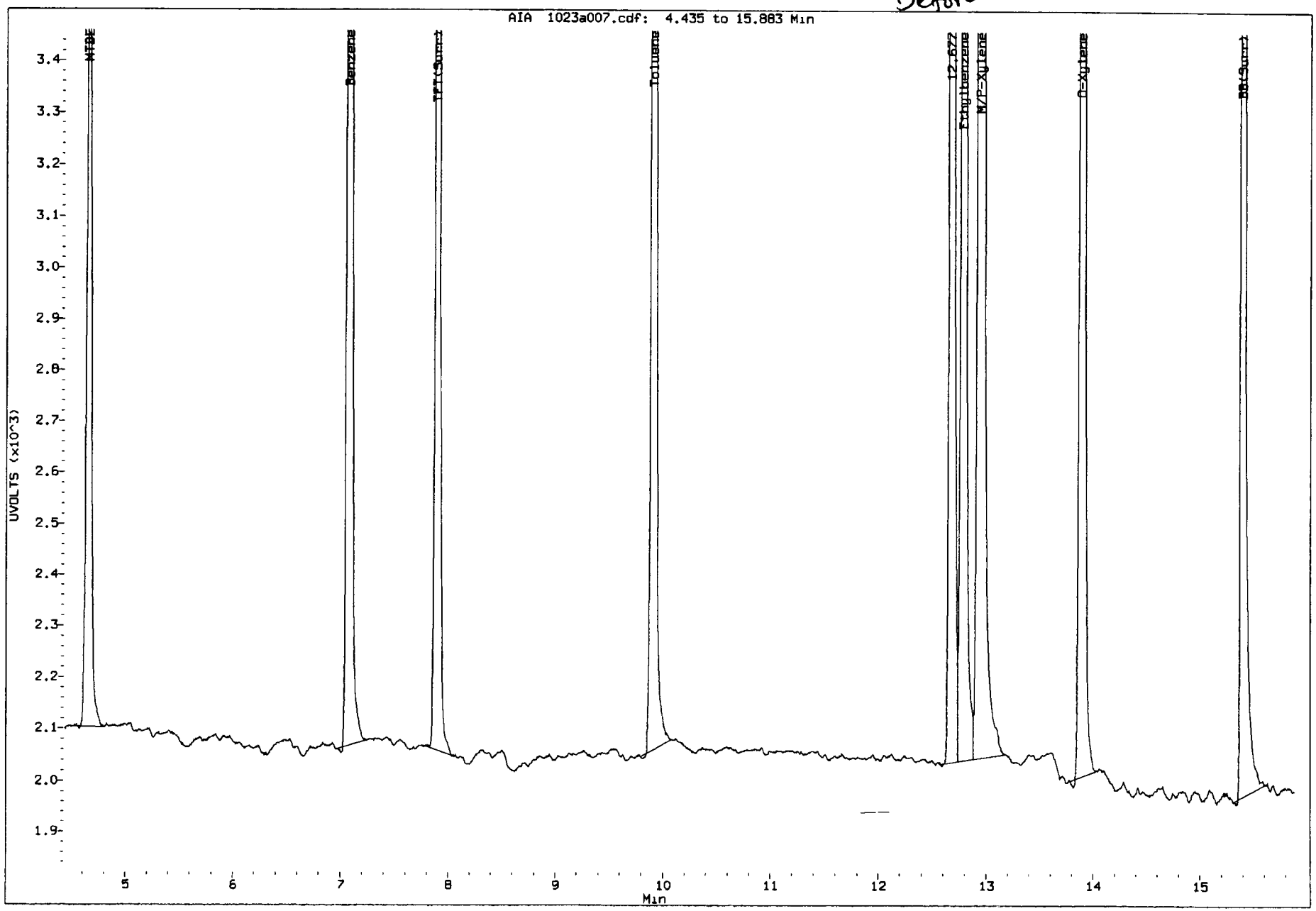
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatograph
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst JW Date 10/25/12

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:

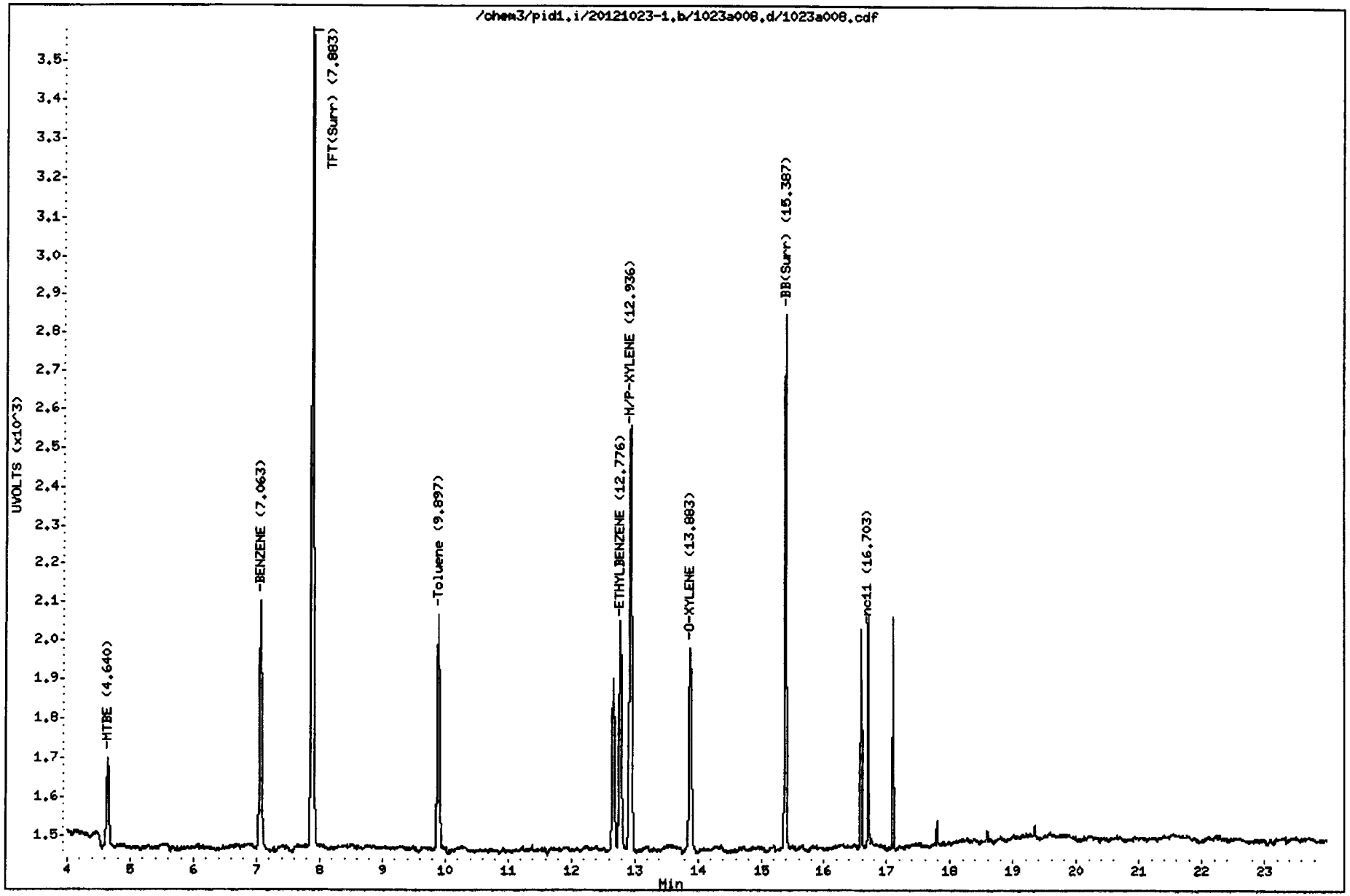
Sample Info: B 5

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:

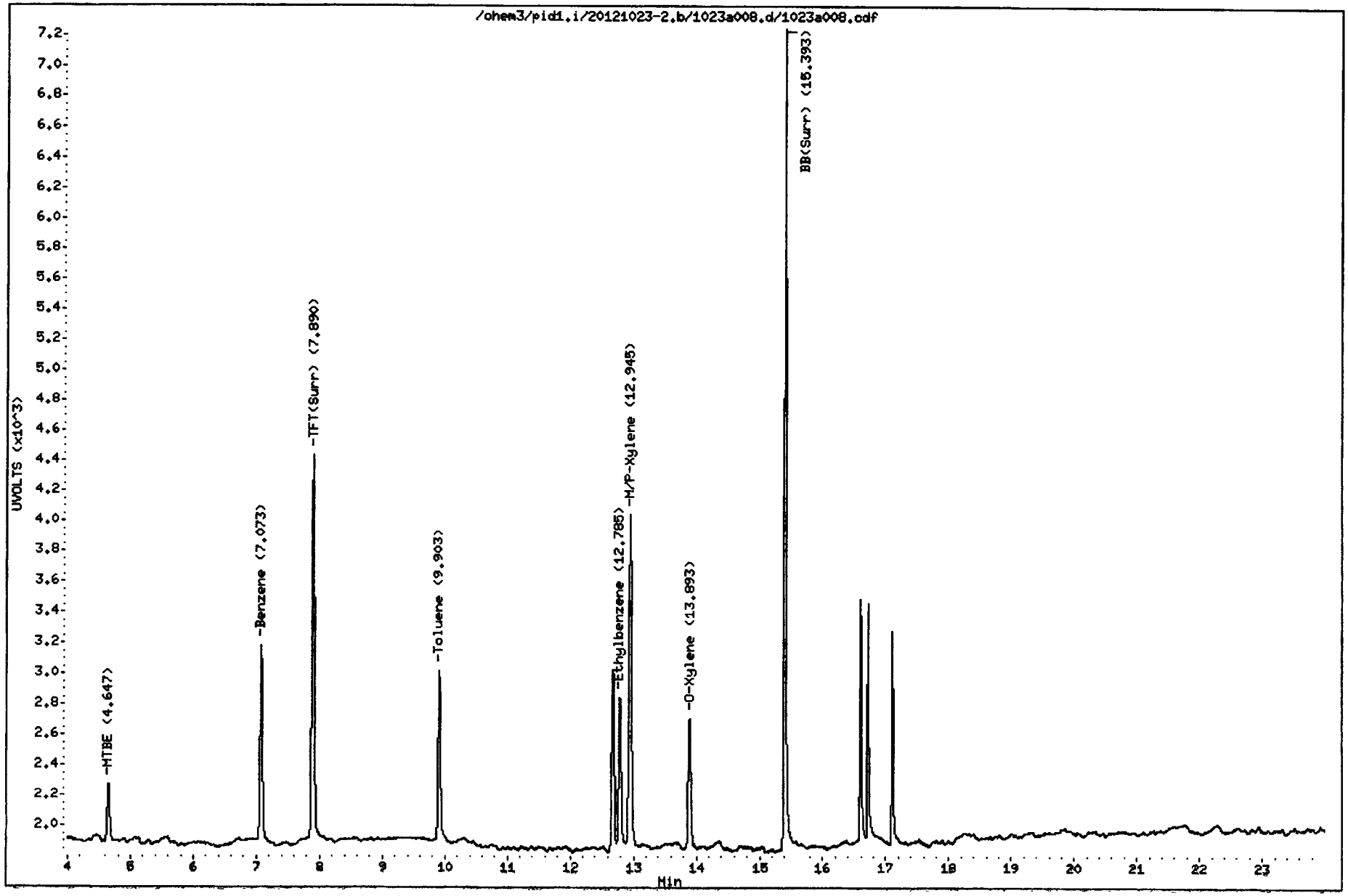
Sample Info: B 5

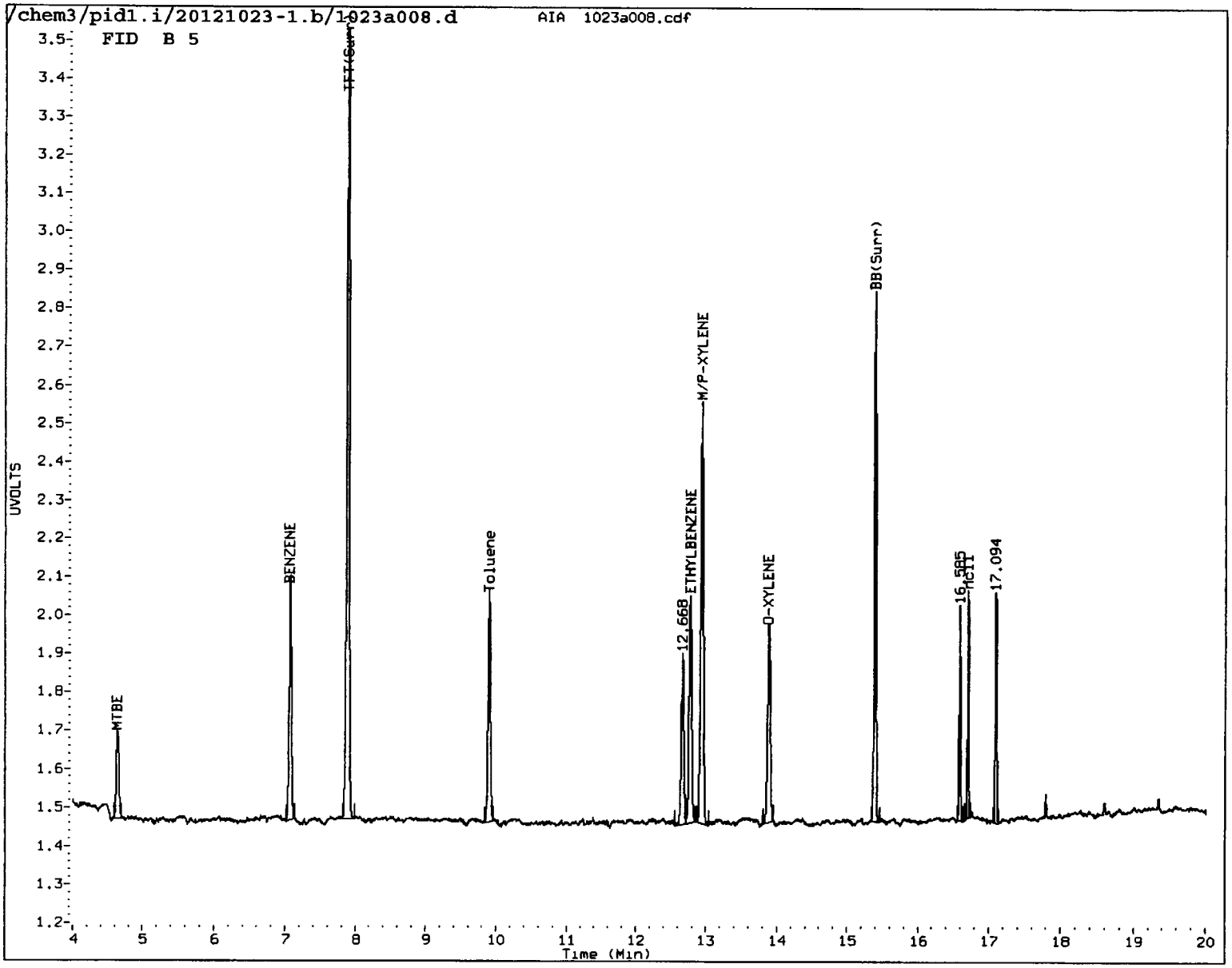
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

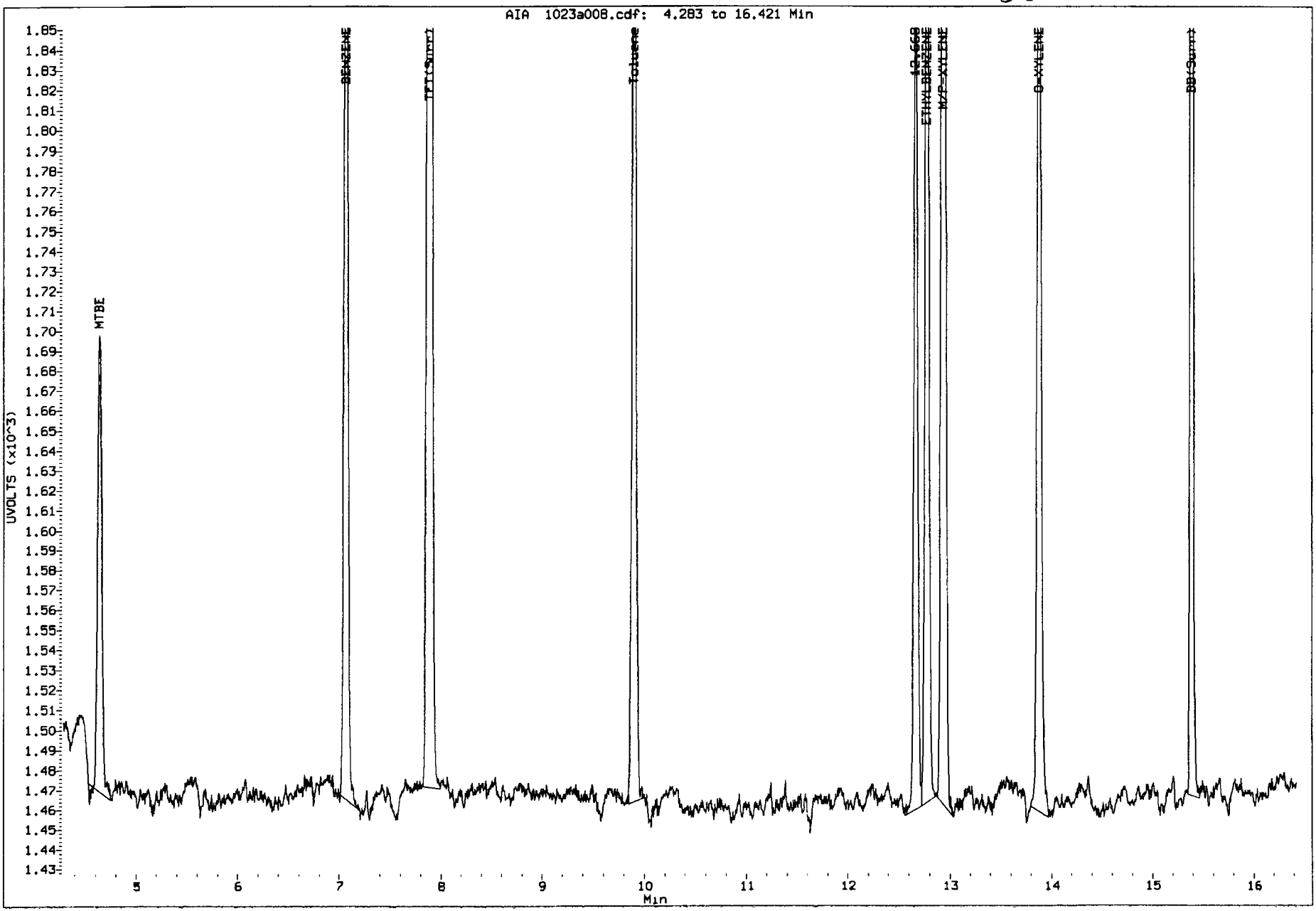
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

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



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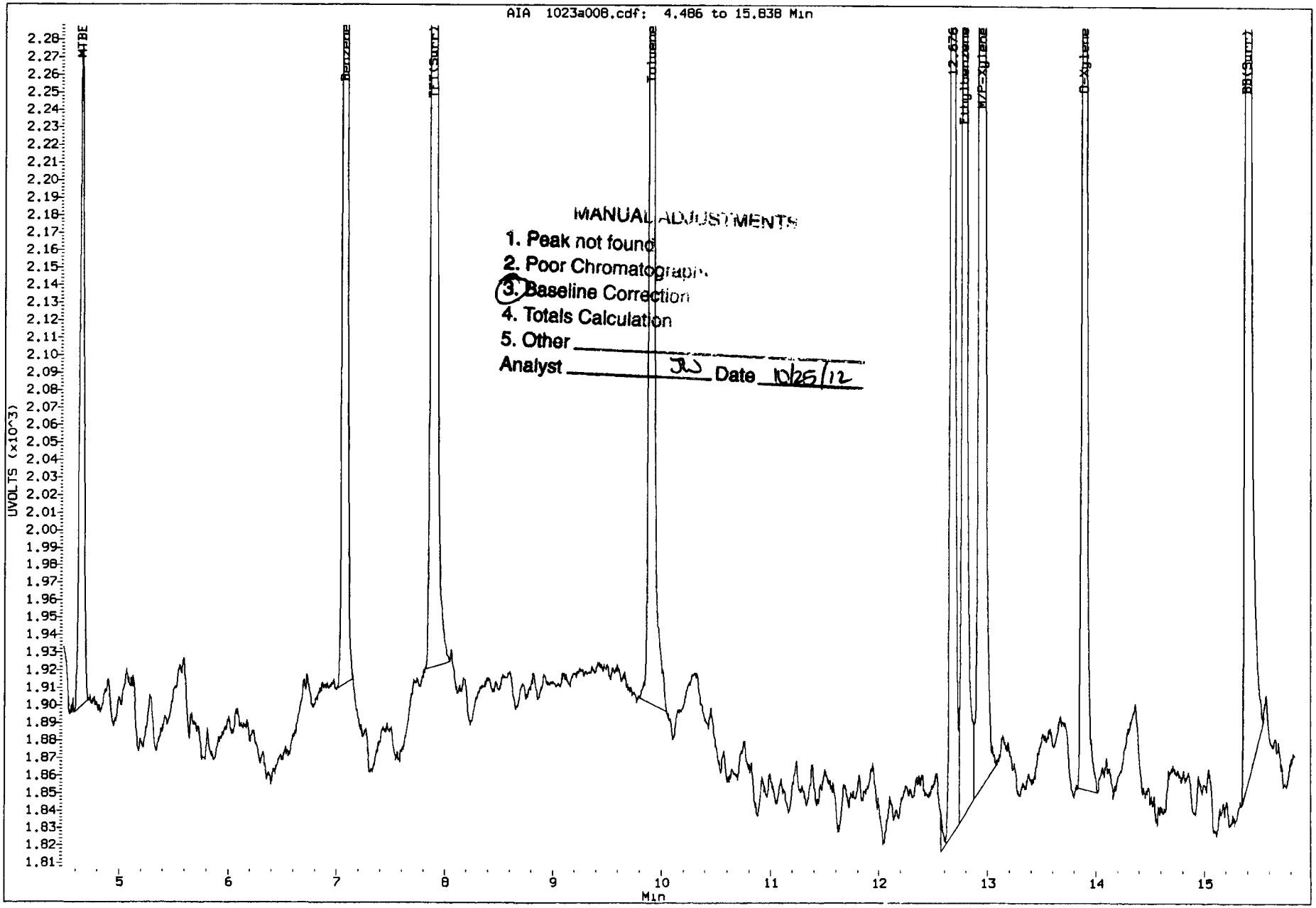
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



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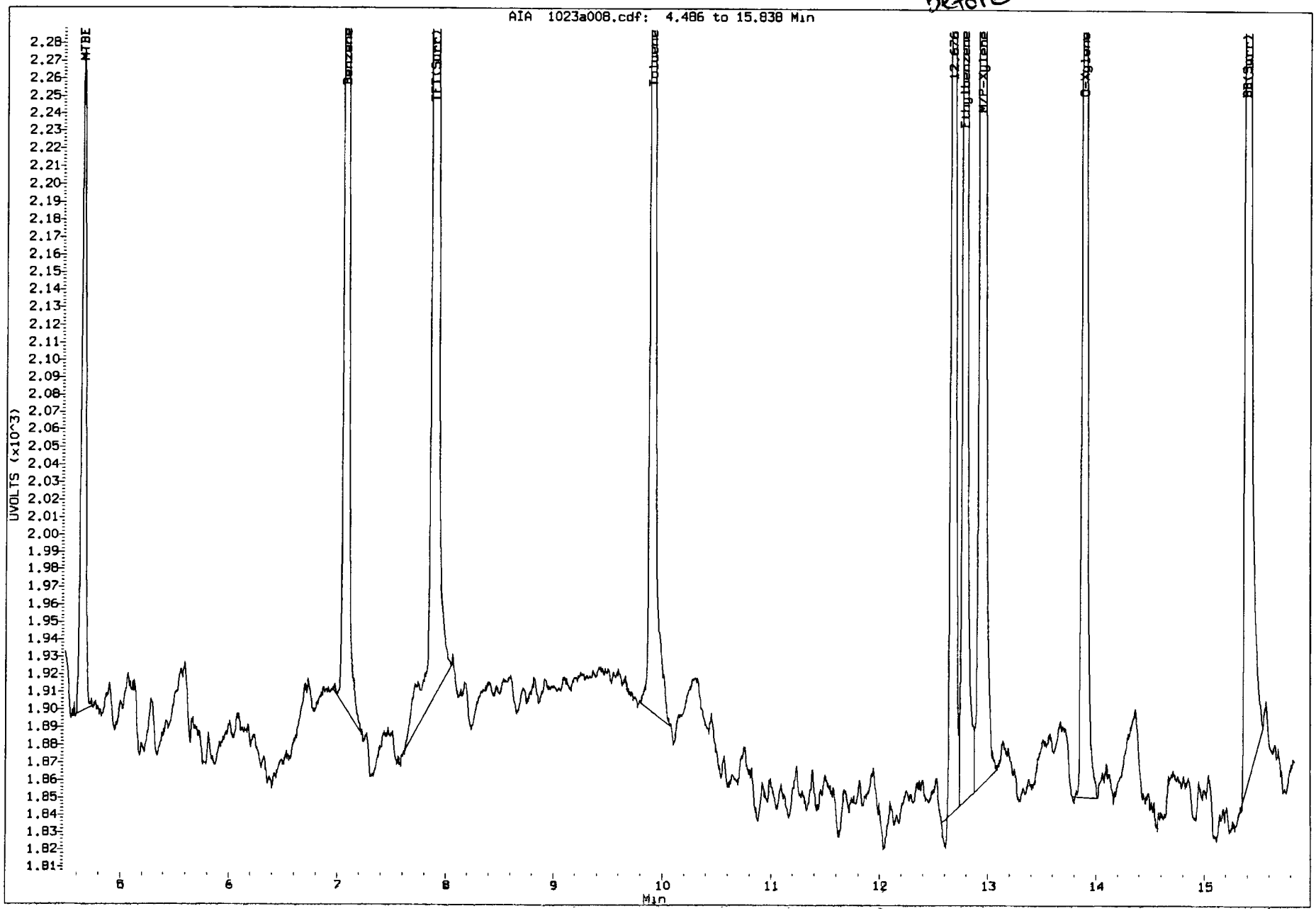
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

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

SW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

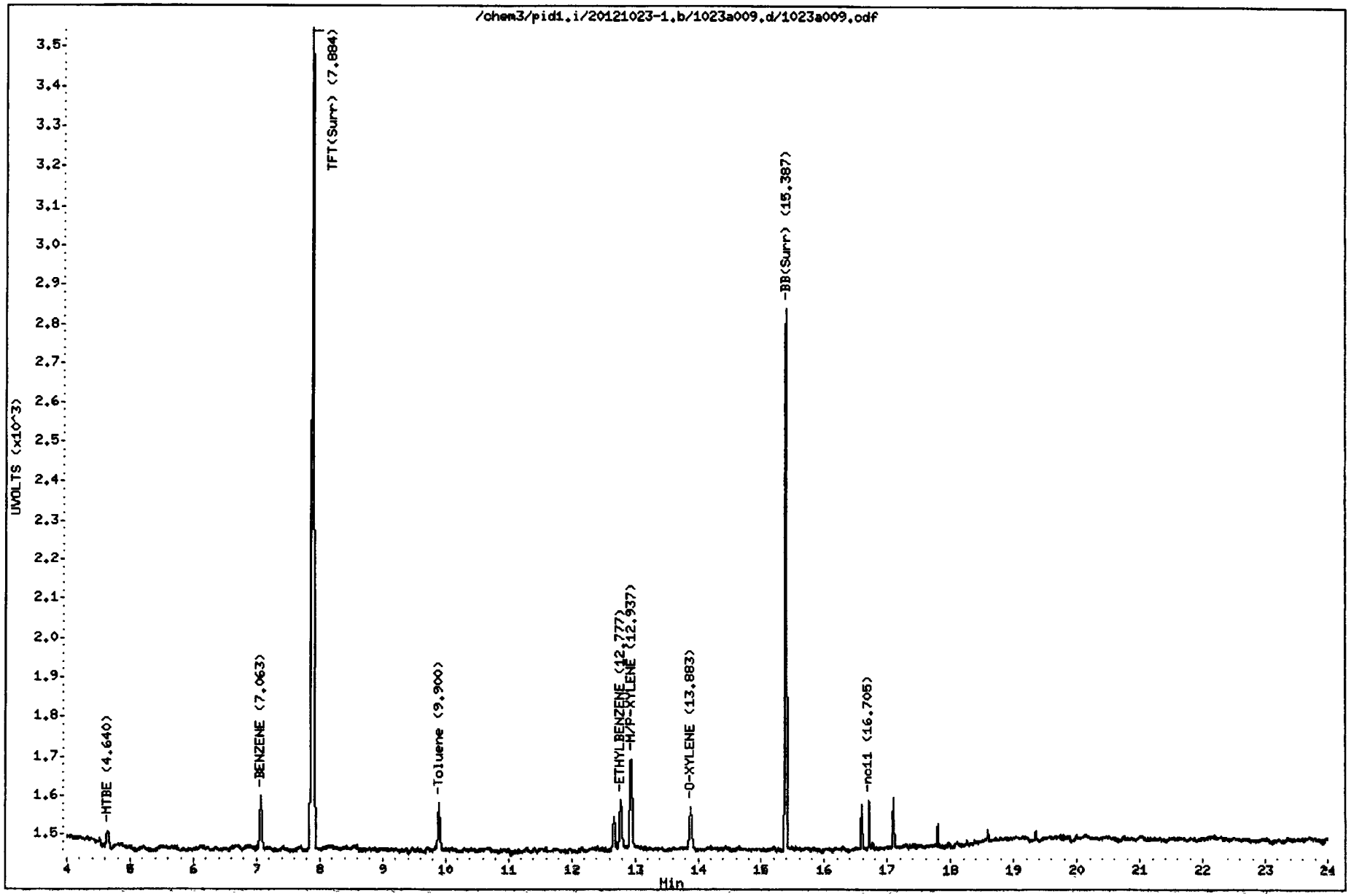
Sample Info: B 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

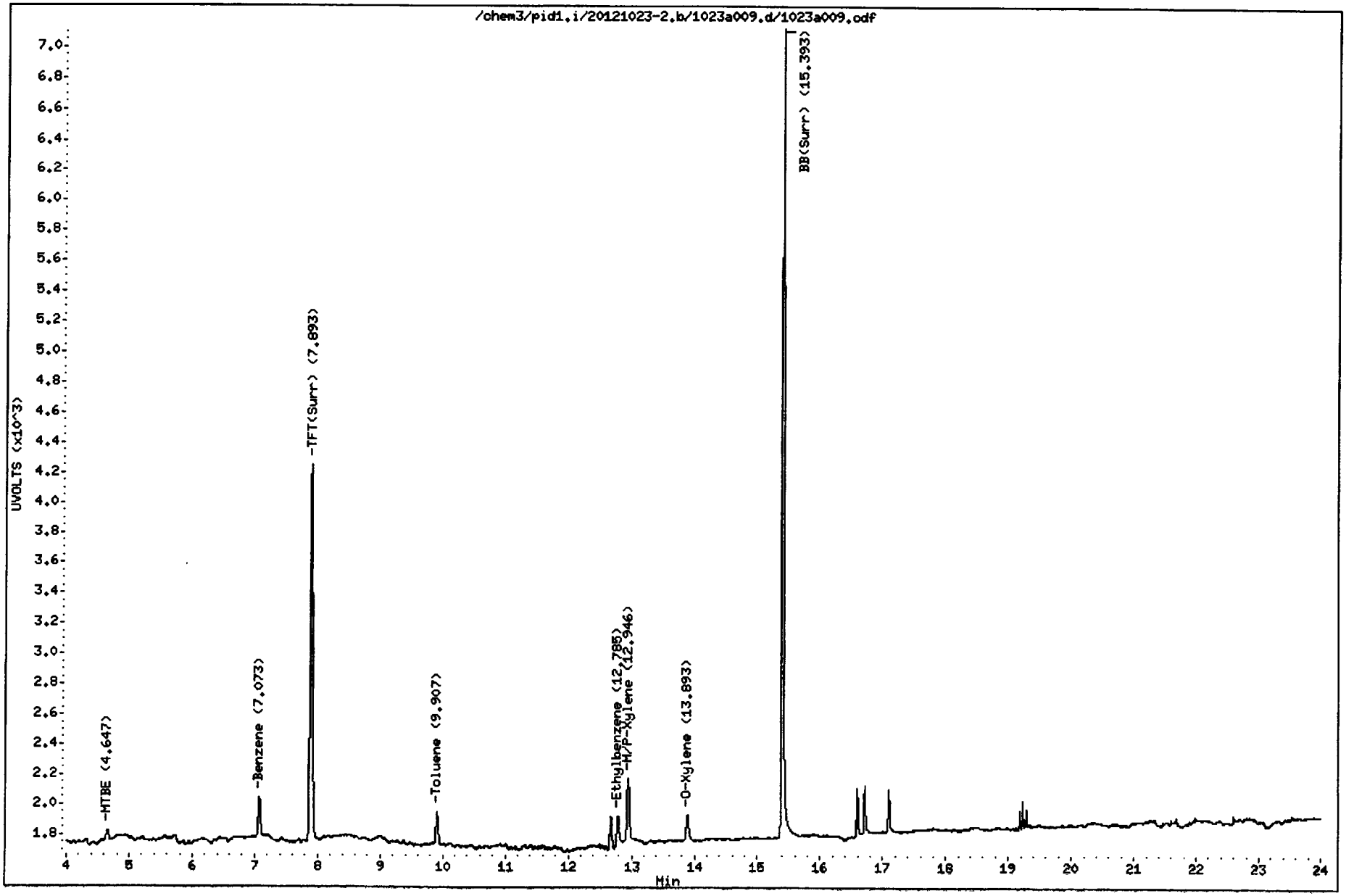
Sample Info: B 1

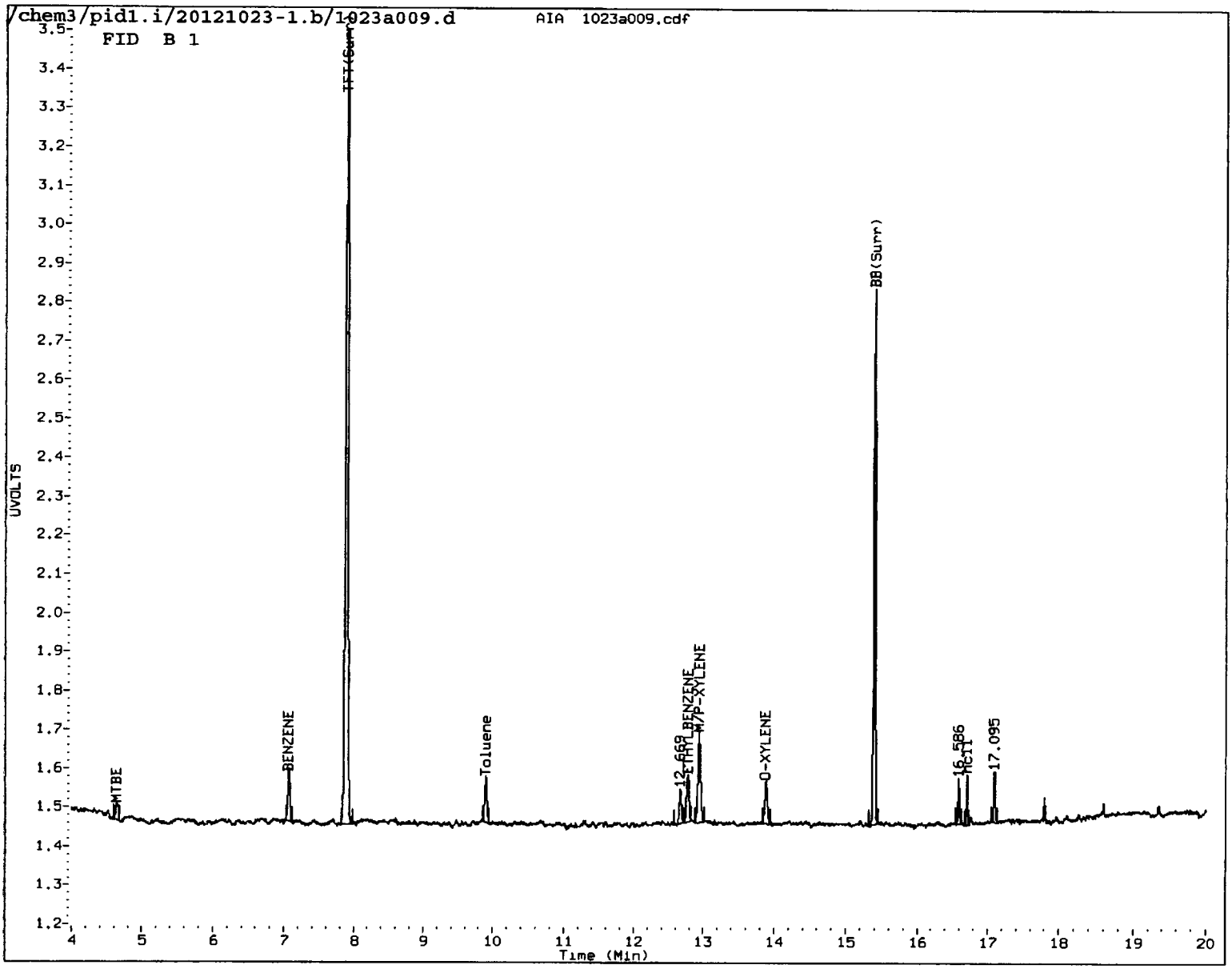
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

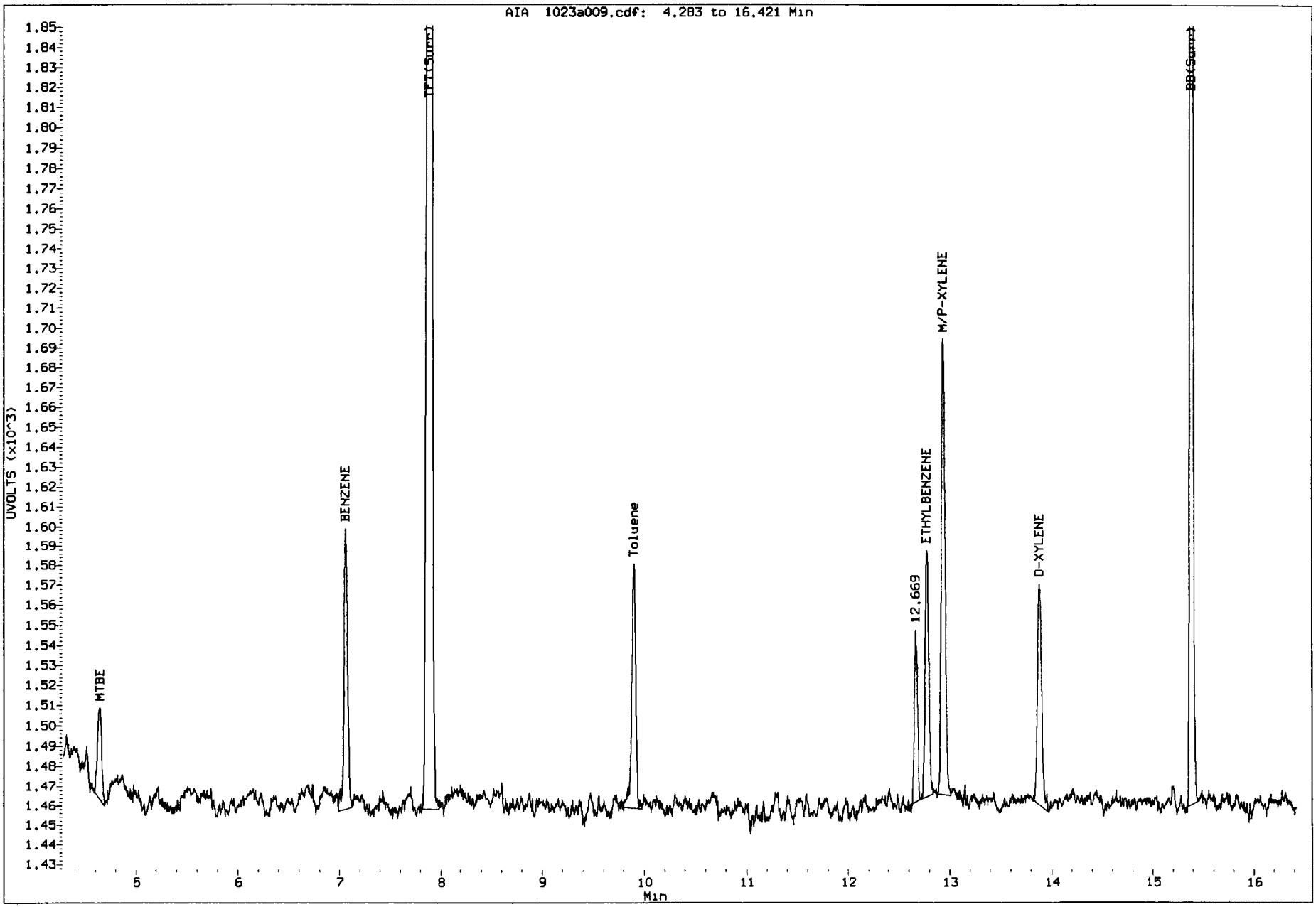
(1) Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

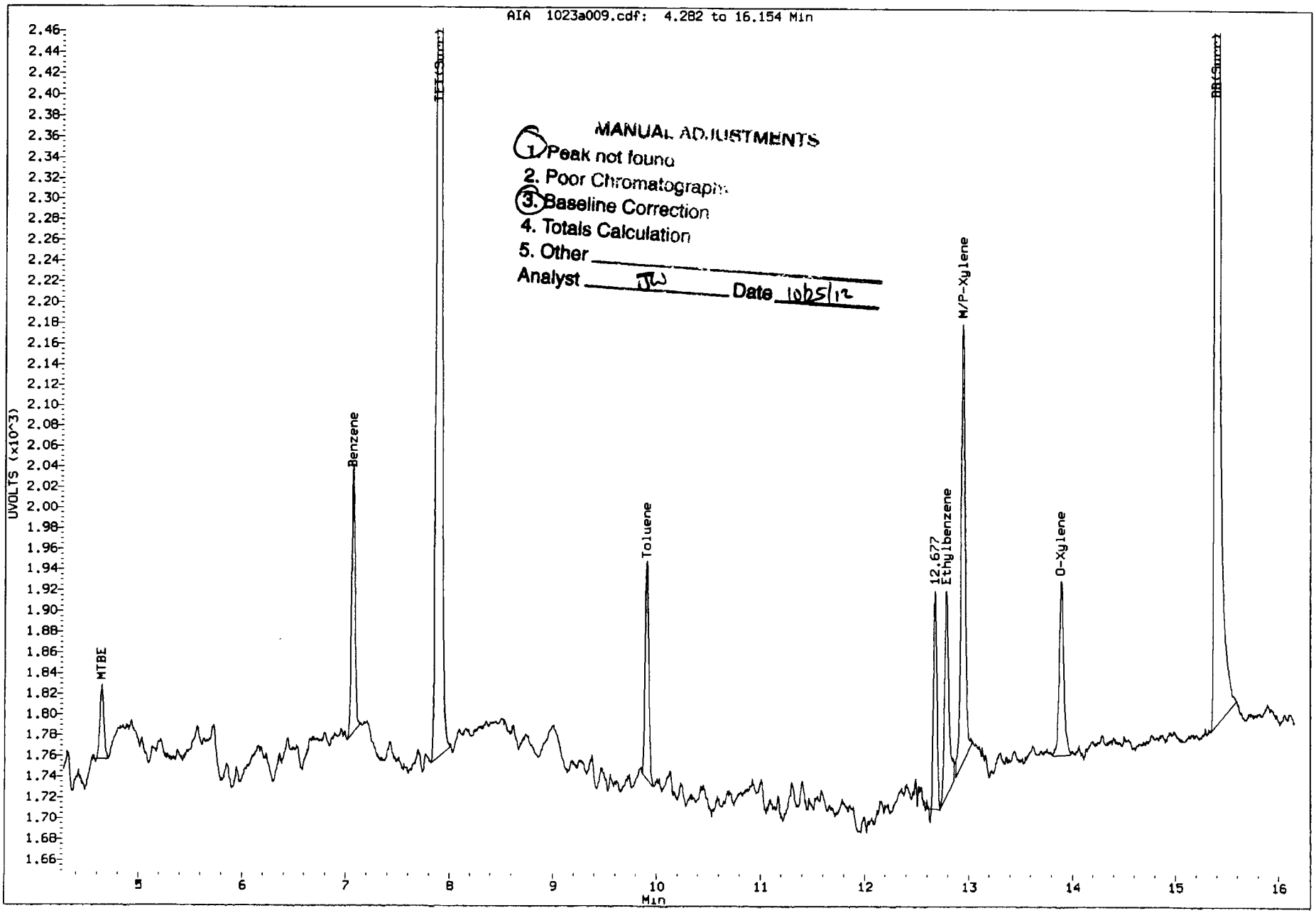
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before

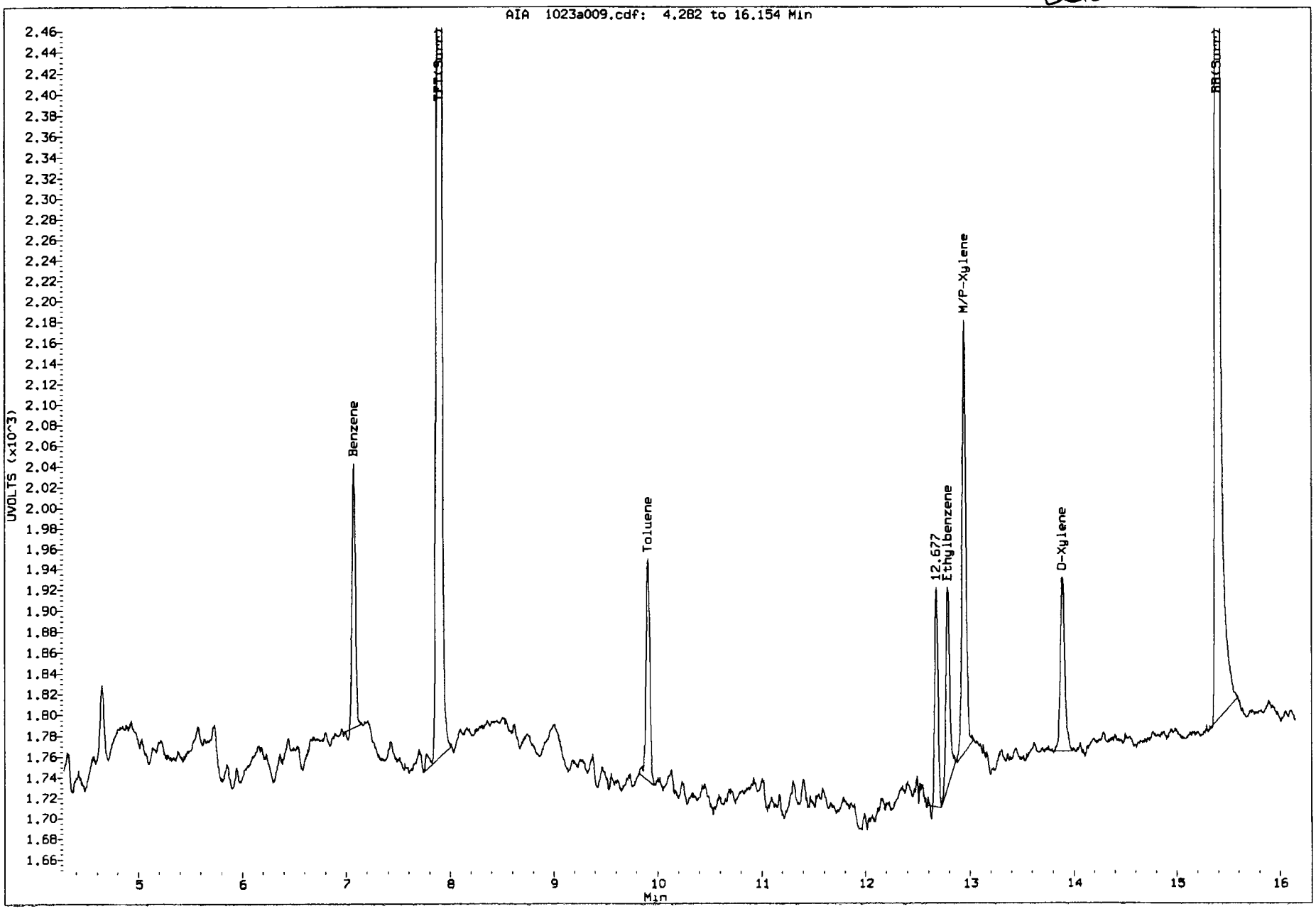


Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

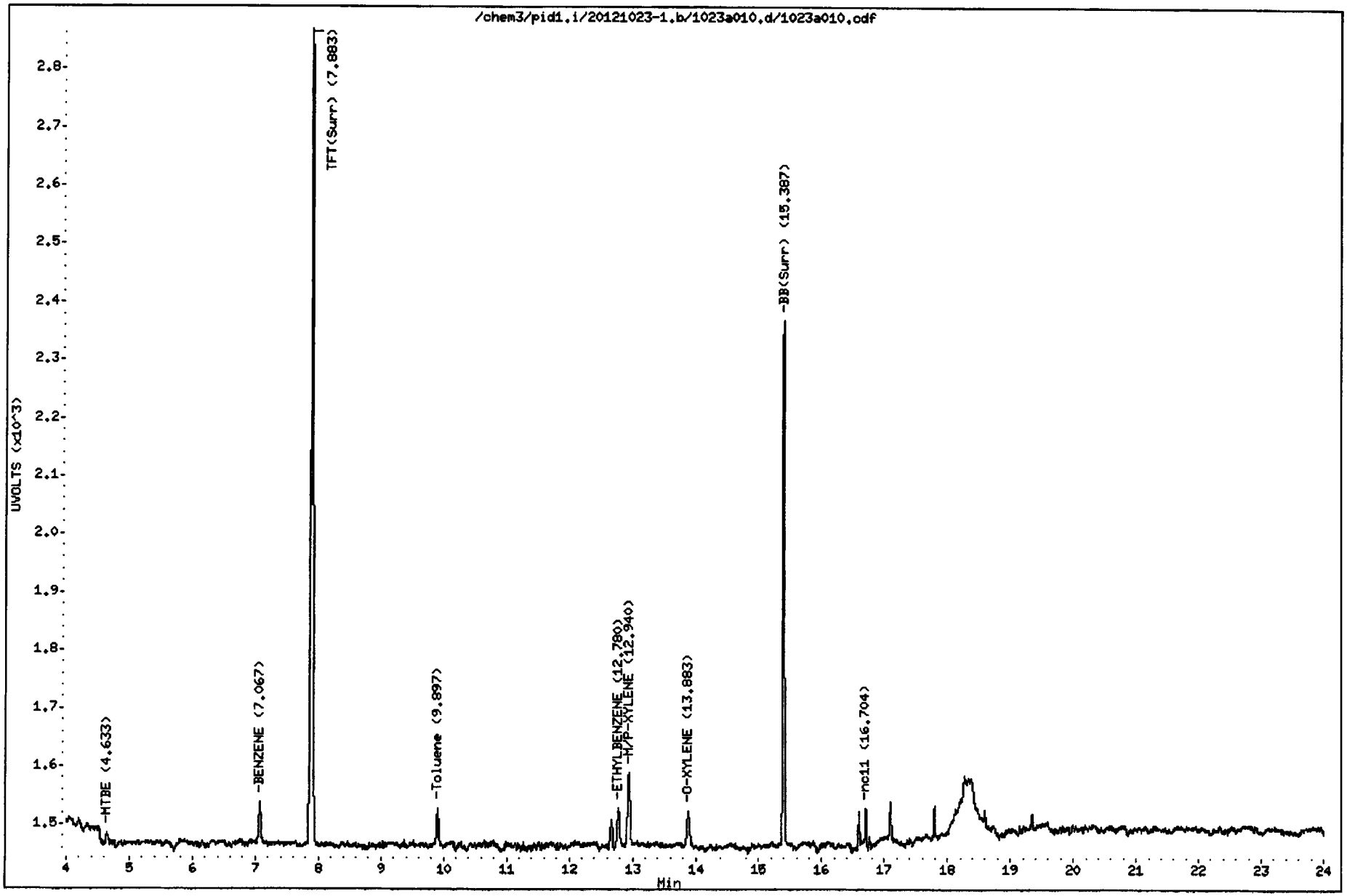
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

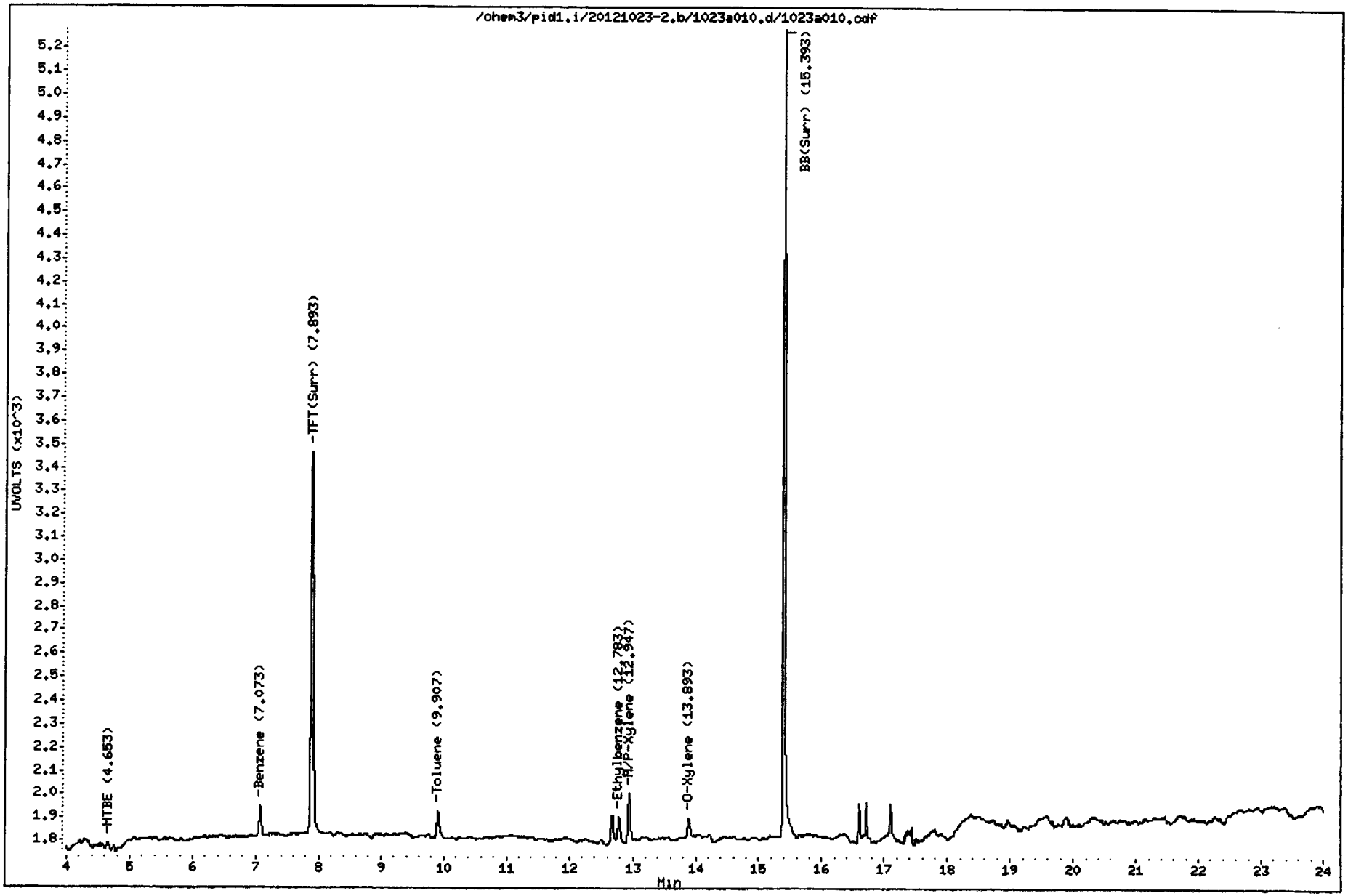
Sample Info: B 0.5

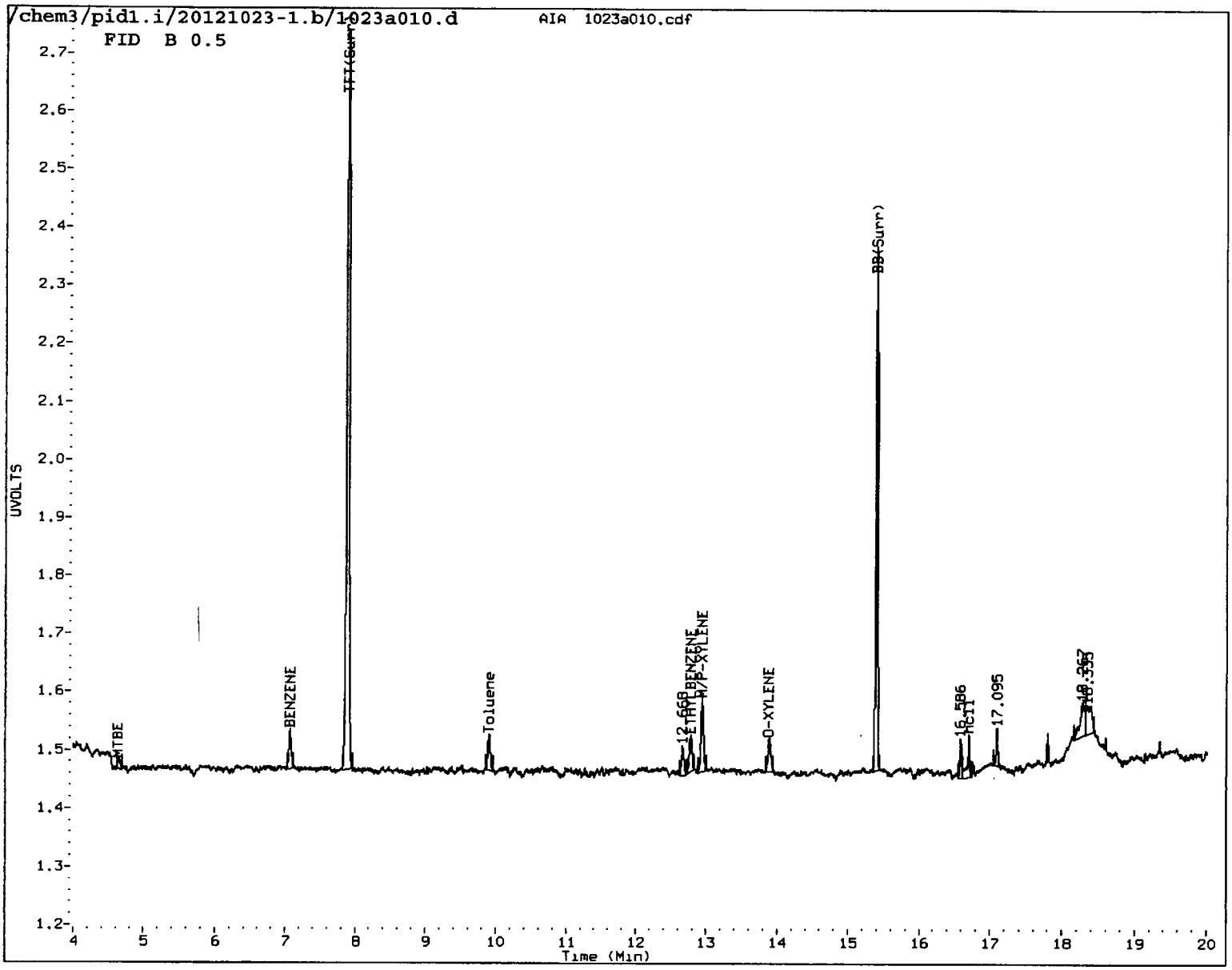
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

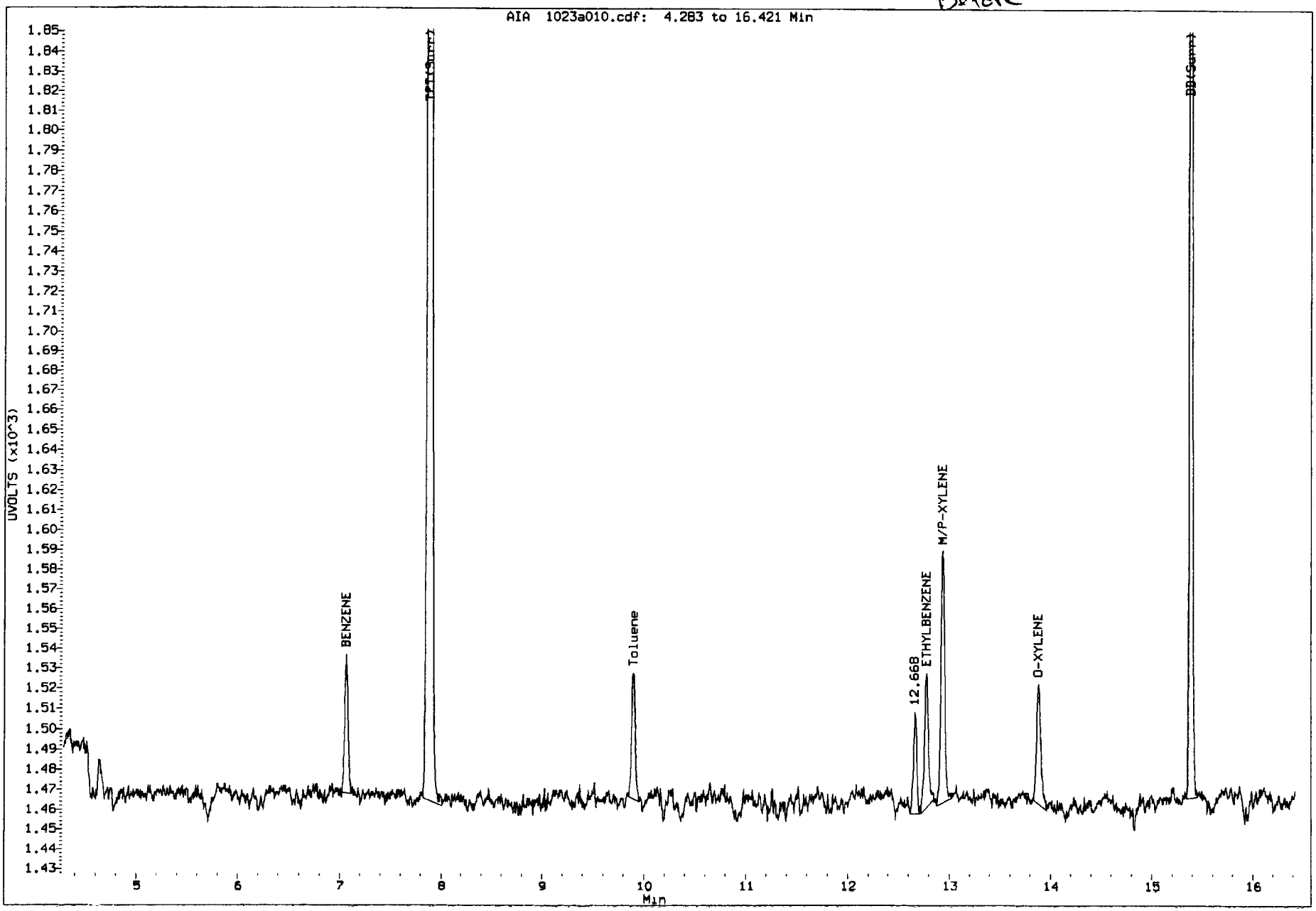
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

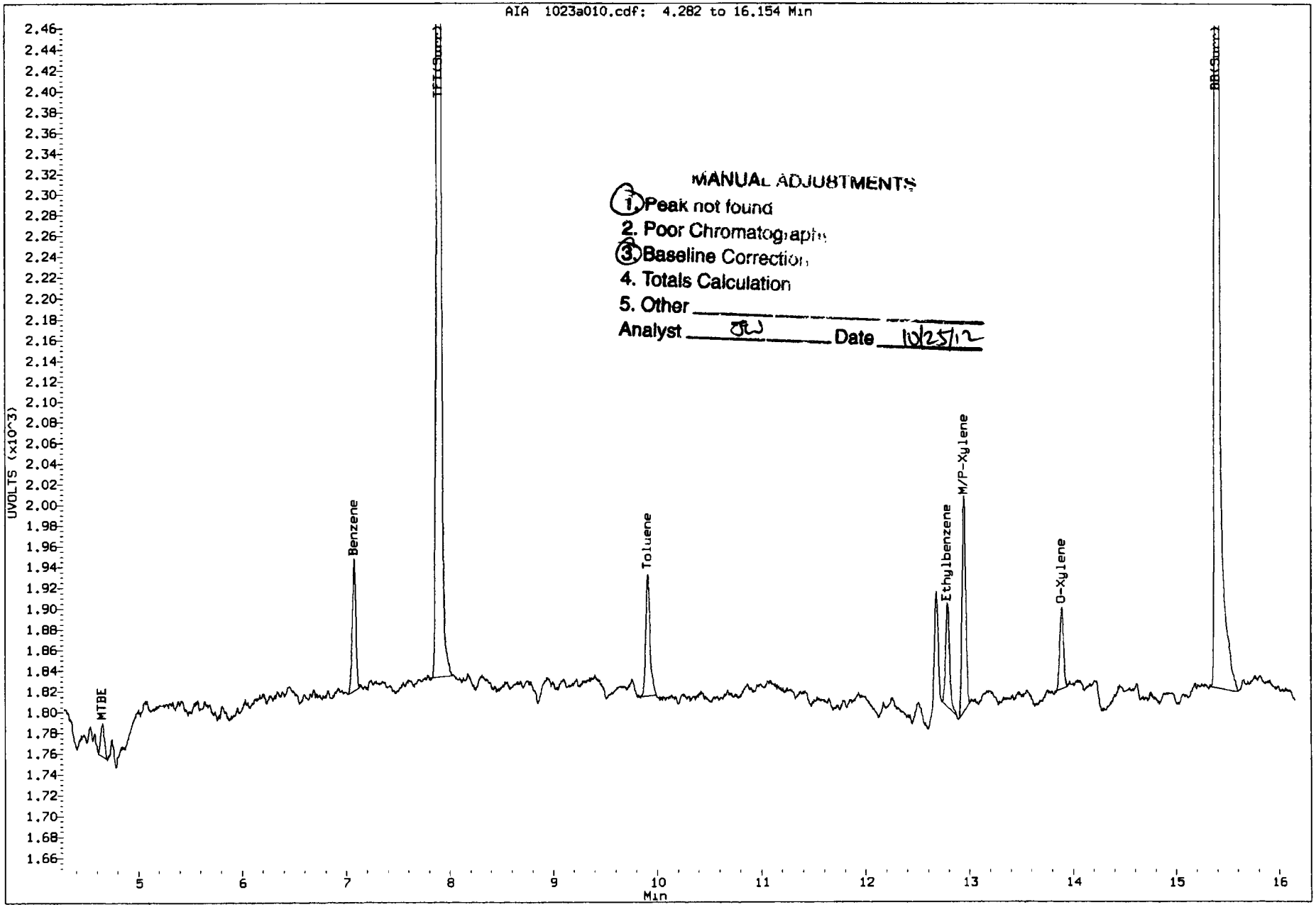
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:

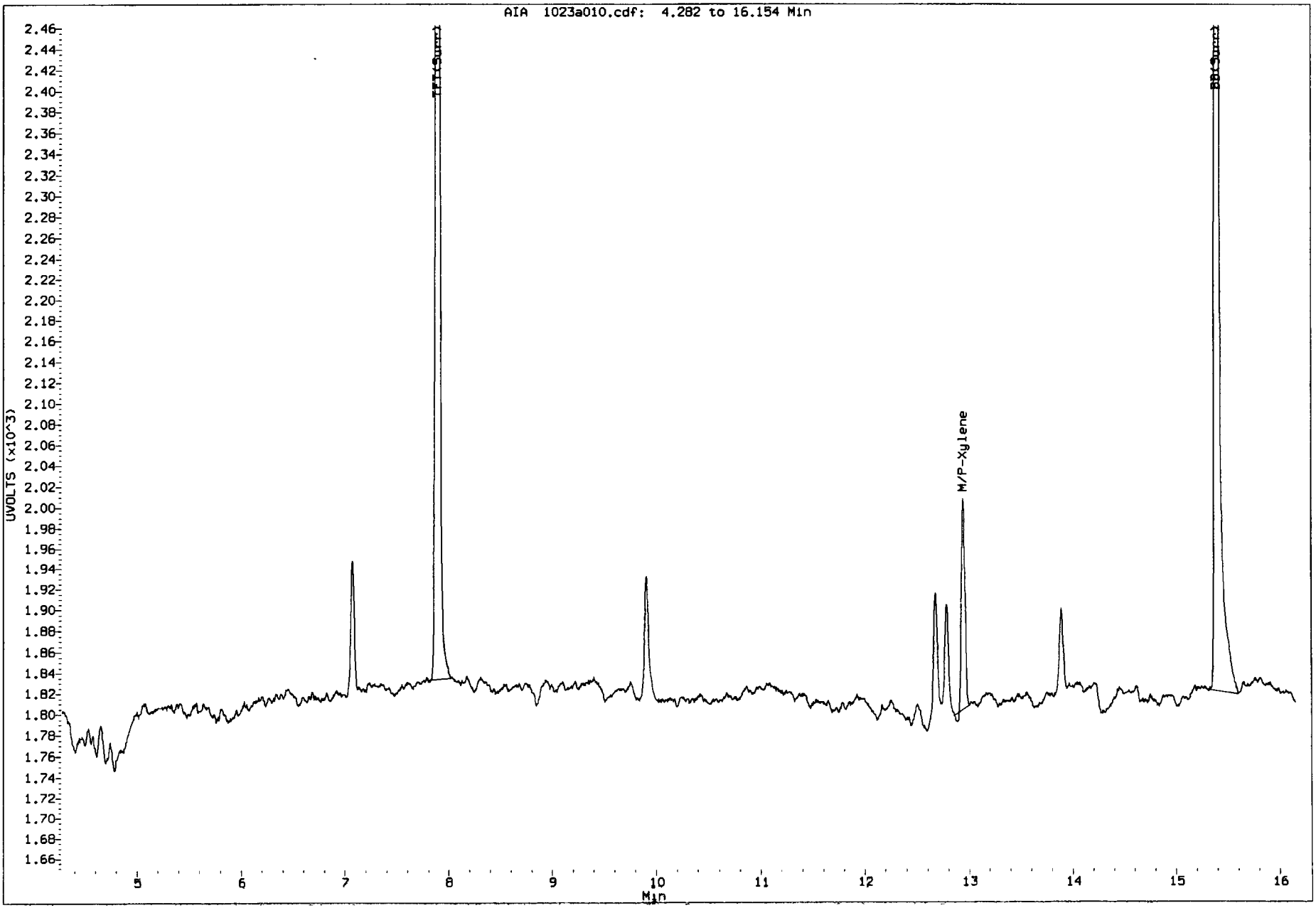
Before



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a011.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a011.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.25
Client ID:
Injection Date: 23-OCT-2012 21:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	733	9325	23.3	TFT(Surr)
15.387	0.000	484	4042	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	2310	0.006 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	2530	0.003 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	2276	0.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	2718	0.007 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	855	22.6	TFT(Surr)
15.393	0.000	1790	22.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	57	0.23N	Benzene
9.907	0.000	64	0.28N	Toluene
12.787	0.000	48	0.24N	Ethylbenzene
12.943	0.000	108	0.50N	M/P-Xylene
13.890	0.000	40	0.24N	O-Xylene
ND	---	---	---	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

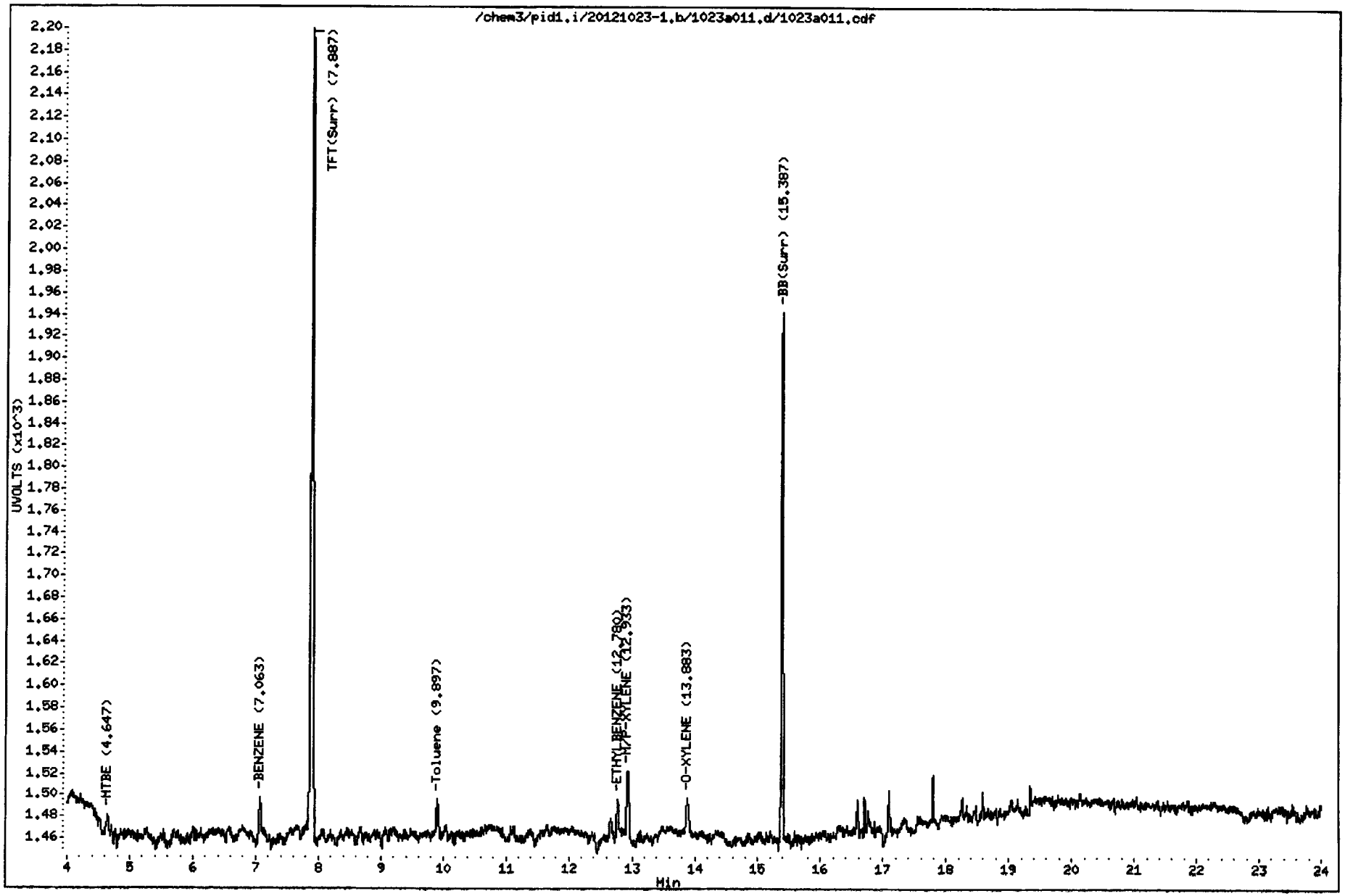
Sample Info: B 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

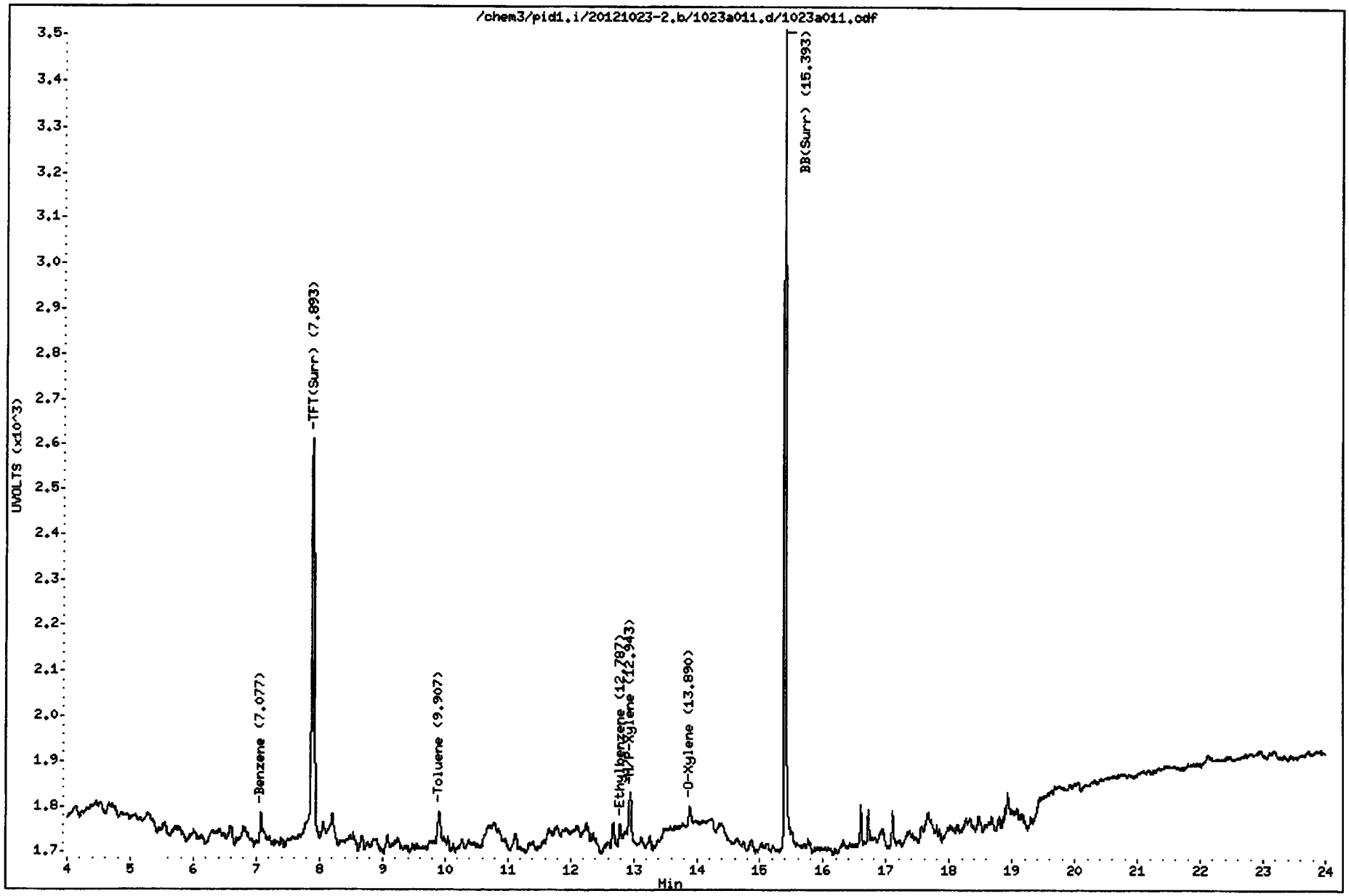
Sample Info: B 0.25

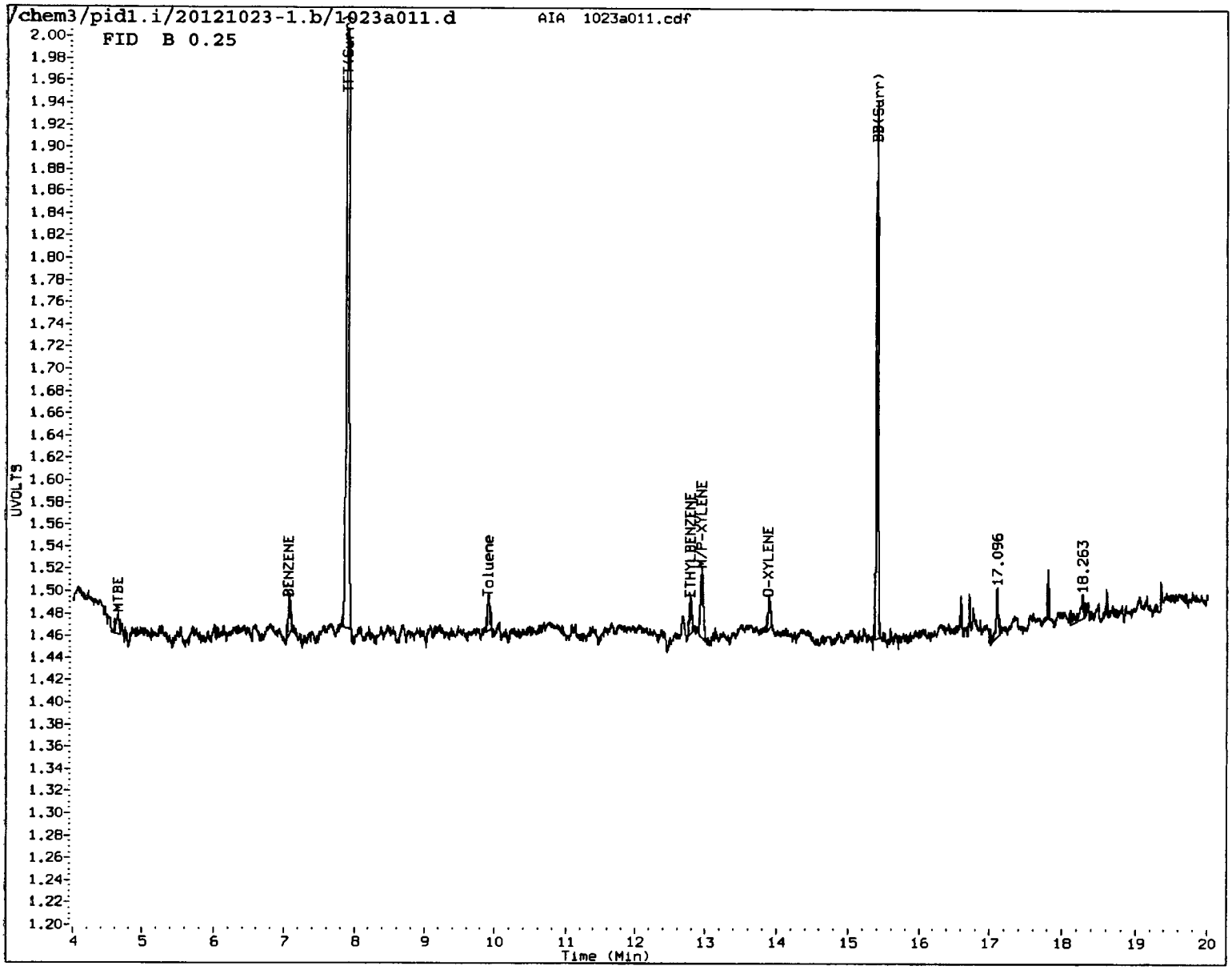
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

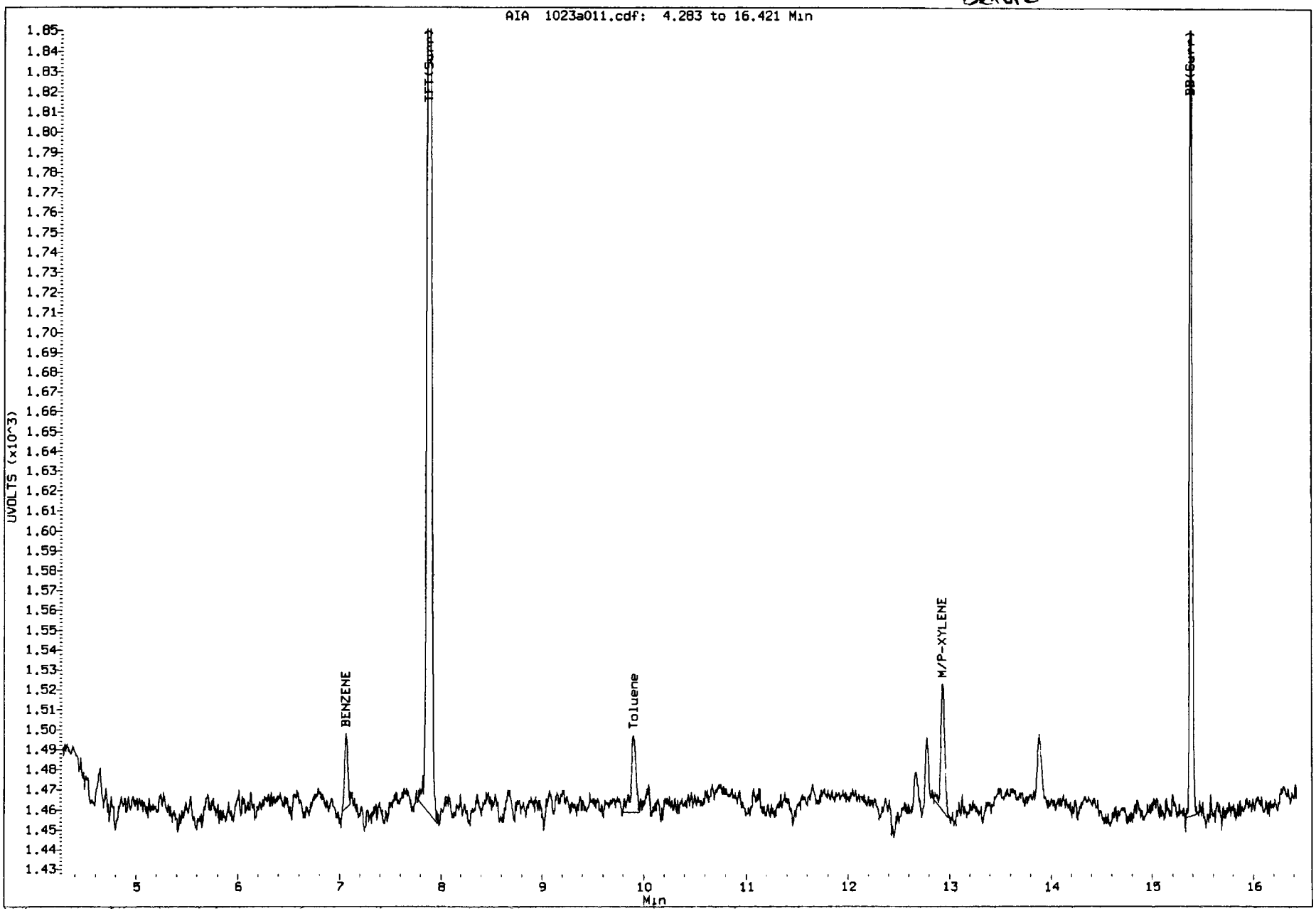
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

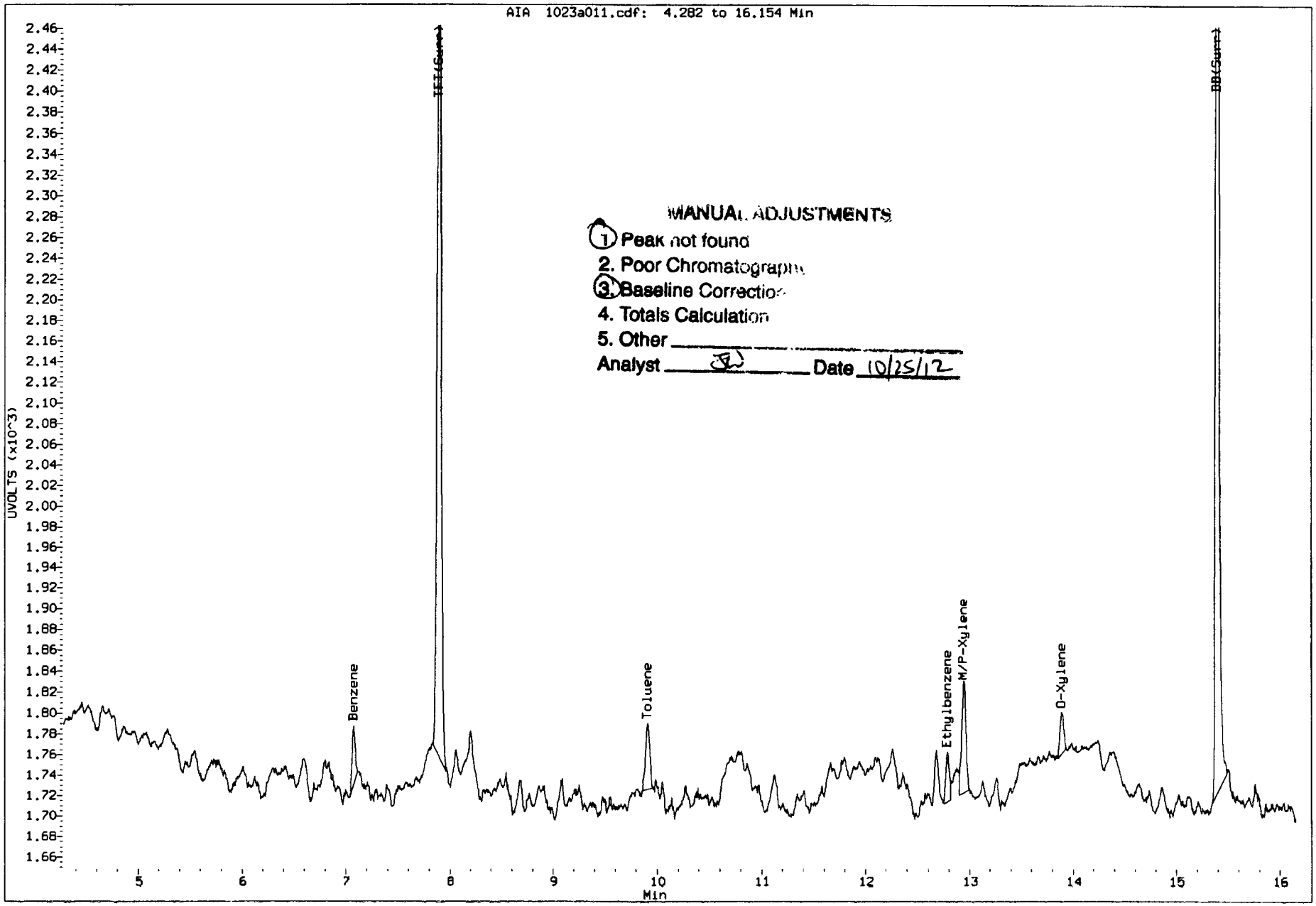
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before

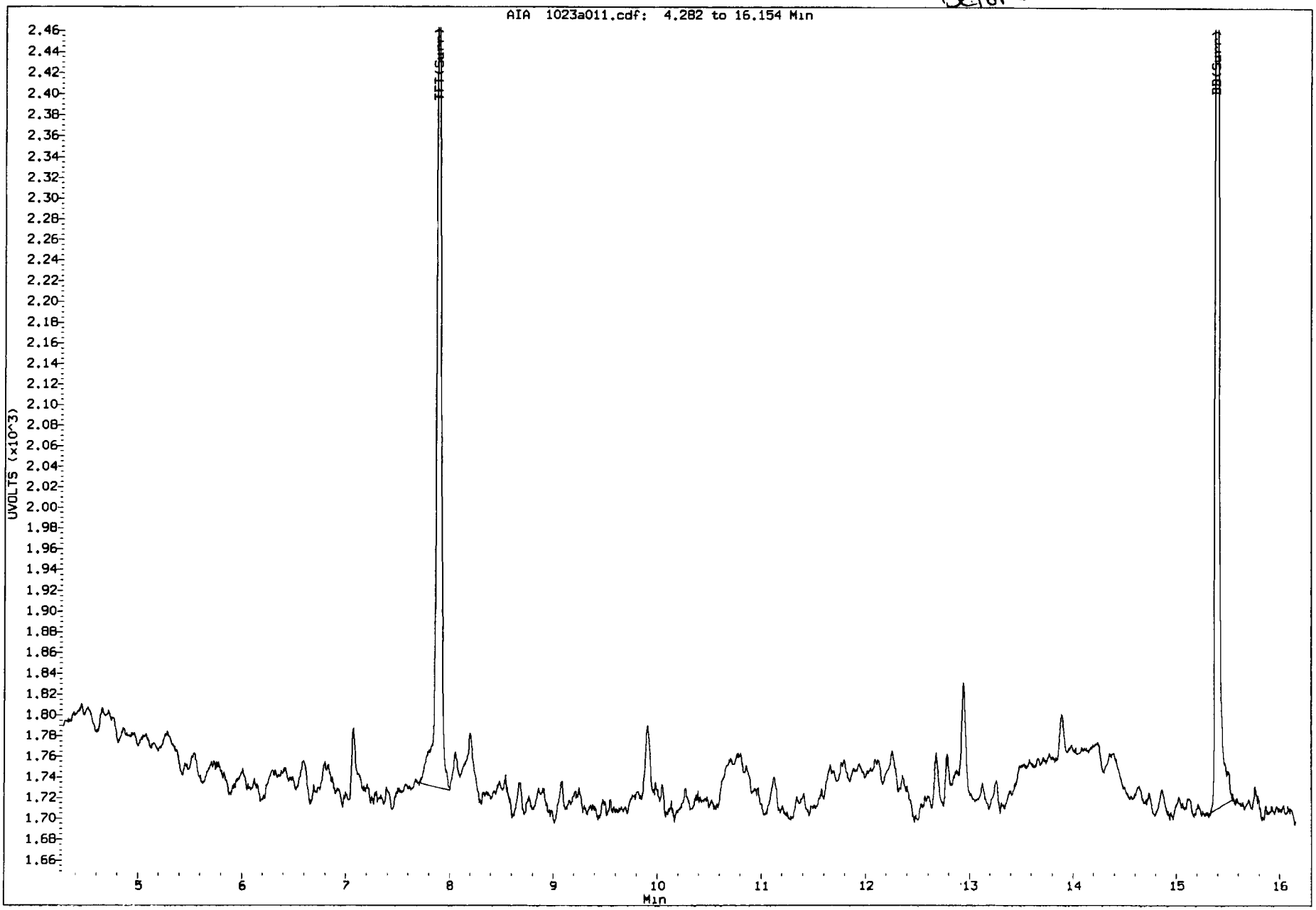


Data File: /chem3/pid1.1/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.1
Client Sample ID:



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



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:

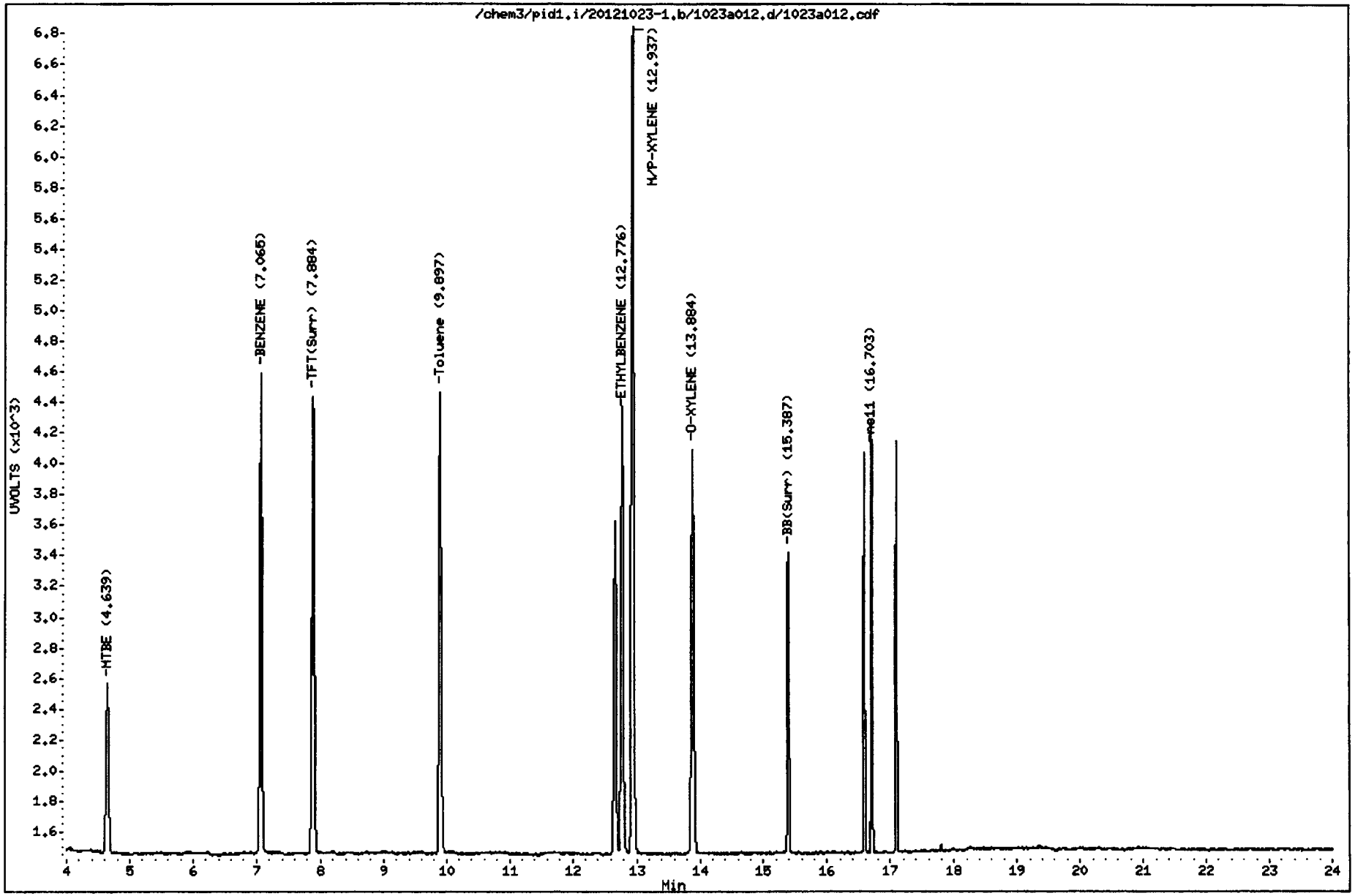
Instrument: pid1.i

Sample Info: BICV

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

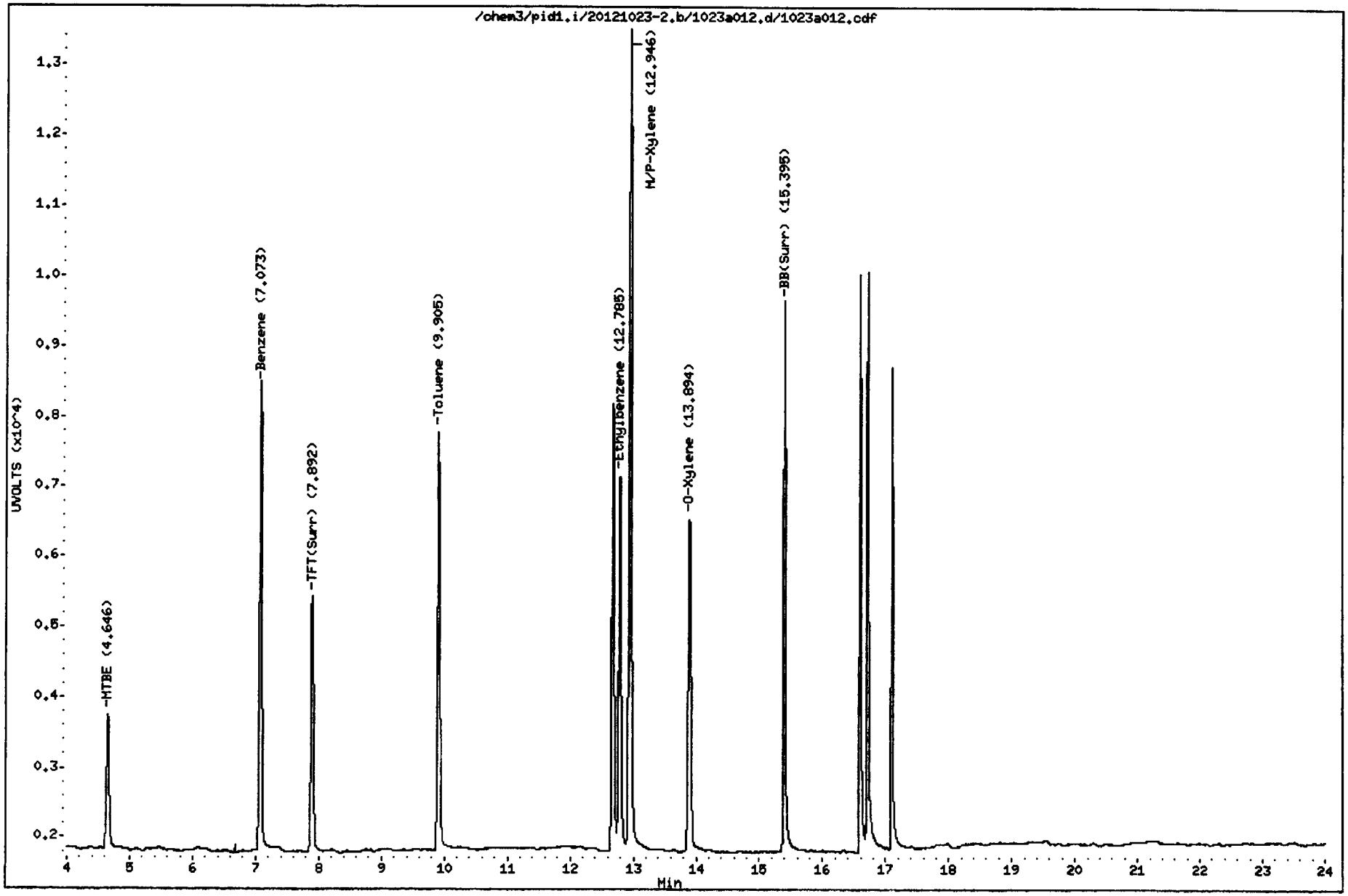
Sample Info: BICV

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Report Date : 25-Oct-2012 17:27

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.387	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.387	4.317-4.457	4.387	0.000
6	MTBE	4.643	4.642	4.645	4.644	4.640	4.640	4.633	4.647	4.643	4.573-4.713	4.642	0.004
7	nC6	4.864	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.864	4.794-4.934	4.864	0.000
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.864	6.794-6.934	+++++	+++++
9	BENZENE	7.069	7.067	7.067	7.067	7.063	7.063	7.067	7.063	7.069	6.999-7.139	7.066	0.002
$ 10	TFT(Surr)	7.887	7.883	7.883	7.887	7.883	7.884	7.883	7.887	7.887	7.817-7.957	7.885	0.002
11	nC8	9.507	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.507	9.437-9.577	9.507	0.000
12	Toluene	9.903	9.897	9.897	9.897	9.897	9.900	9.897	9.897	9.903	9.833-9.973	9.898	0.002
13	nC9	12.416	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.416	12.346-12.486	12.416	0.000
14	ETHYLBENZENE	12.783	12.776	12.775	12.775	12.776	12.777	12.780	12.780	12.783	12.713-12.853	12.778	0.003
15	M/P-XYLENE	12.948	12.938	12.937	12.936	12.936	12.937	12.940	12.933	12.948	12.878-13.018	12.938	0.004
16	O-XYLENE	13.890	13.884	13.882	13.883	13.883	13.883	13.883	13.883	13.890	13.820-13.960	13.884	0.002
17	nC10-Decane	15.207	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.207	15.137-15.277	15.207	0.000

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.390	15.387	15.387	15.387	15.387	15.387	15.387	15.387	15.390	15.320-15.460	15.387	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.109	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.109	16.039-16.179	16.109	0.000
21 nc11	16.761	16.760	16.702	16.703	16.703	16.705	16.704	+++++	16.761	16.691-16.831	16.720	0.028
22 nC12-Dodecane	17.800	17.795	17.795	17.795	+++++	+++++	+++++	+++++	17.800	17.730-17.870	17.796	0.003
23 nC13	18.607	18.595	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.537-18.677	18.601	0.008
24 Naphthalene	18.808	18.796	+++++	+++++	+++++	+++++	+++++	+++++	18.808	18.738-18.878	18.802	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
	2 Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$	3 TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
	4 Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
	5 Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
	6 M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
	7 O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$	8 BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12

Reviewer 2 Date: 10/24/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: 20121023-1

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

Calibration Date: 23-OCT-2012
SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates Rel. Rec.	RF1 22	RF2 44	RF3 67	RF4 100	RF5 133	RF6 178	Ave RF	%RSD

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

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

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

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a002.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a002.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT1023+BCAL1
Client ID:
Injection Date: 23-OCT-2012 10:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3182	41284	101.0	TFT(Surr)
15.387	0.000	2019	16909	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	475541	1.328
8015C 2MP-TMB	(4.29 to 16.21)	723723	578928	0.800
AK101 nC6-nC10	(4.76 to 15.11)	582885	402341	0.690
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	504301	1.344

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

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:

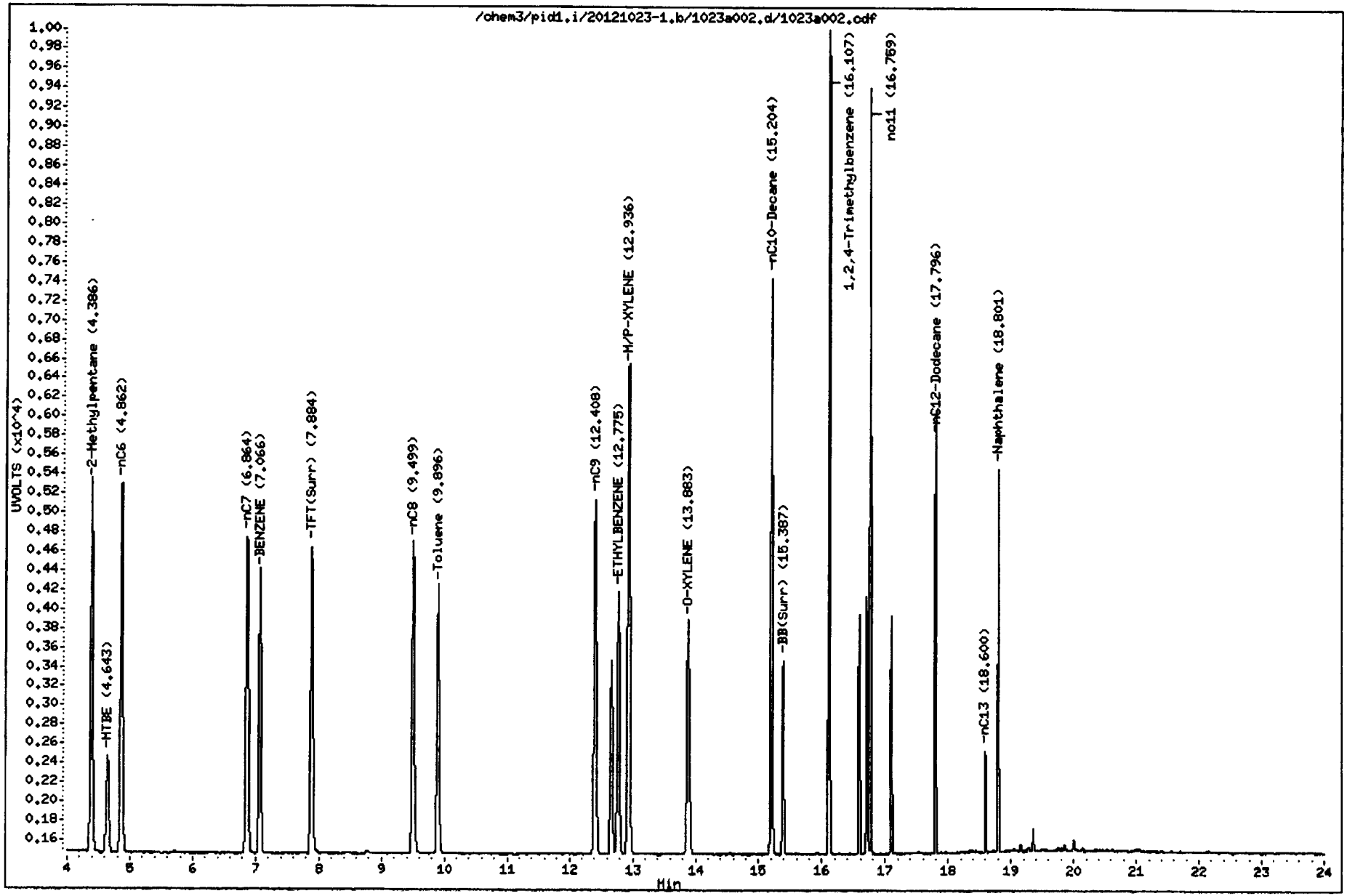
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

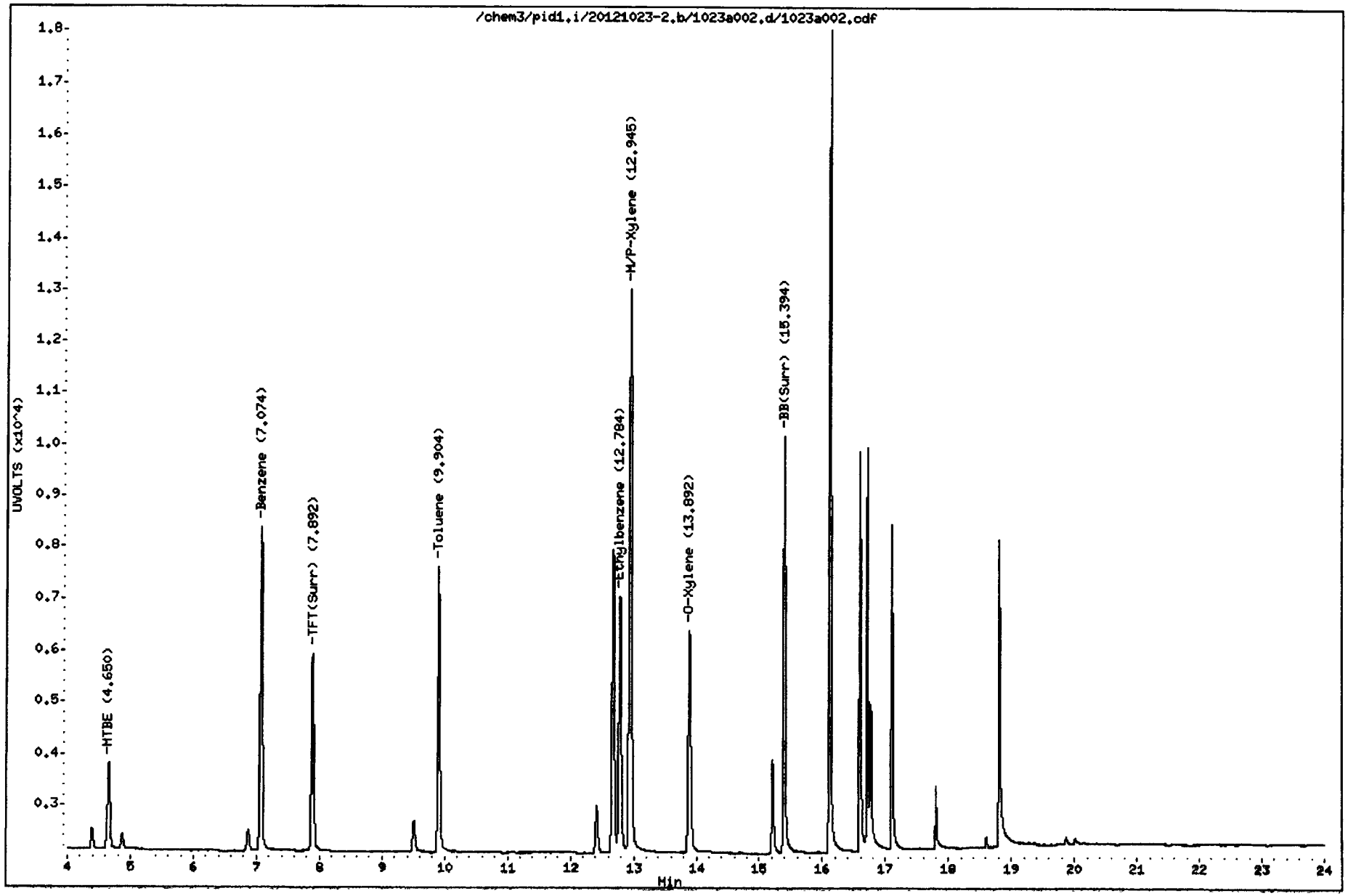


Data File: /chem3/pid1.i/20121023-2.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

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:

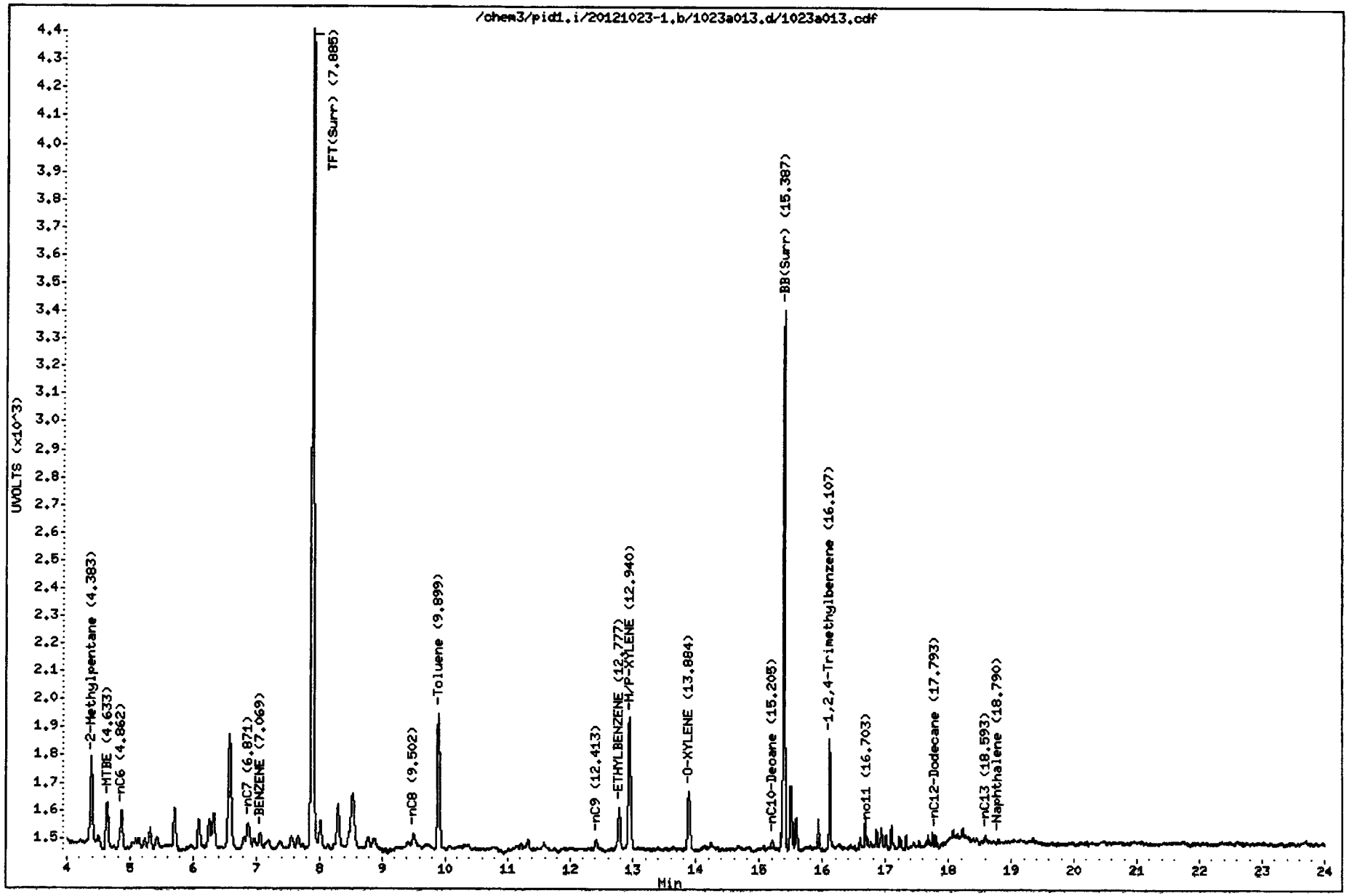
Sample Info: G 0.10

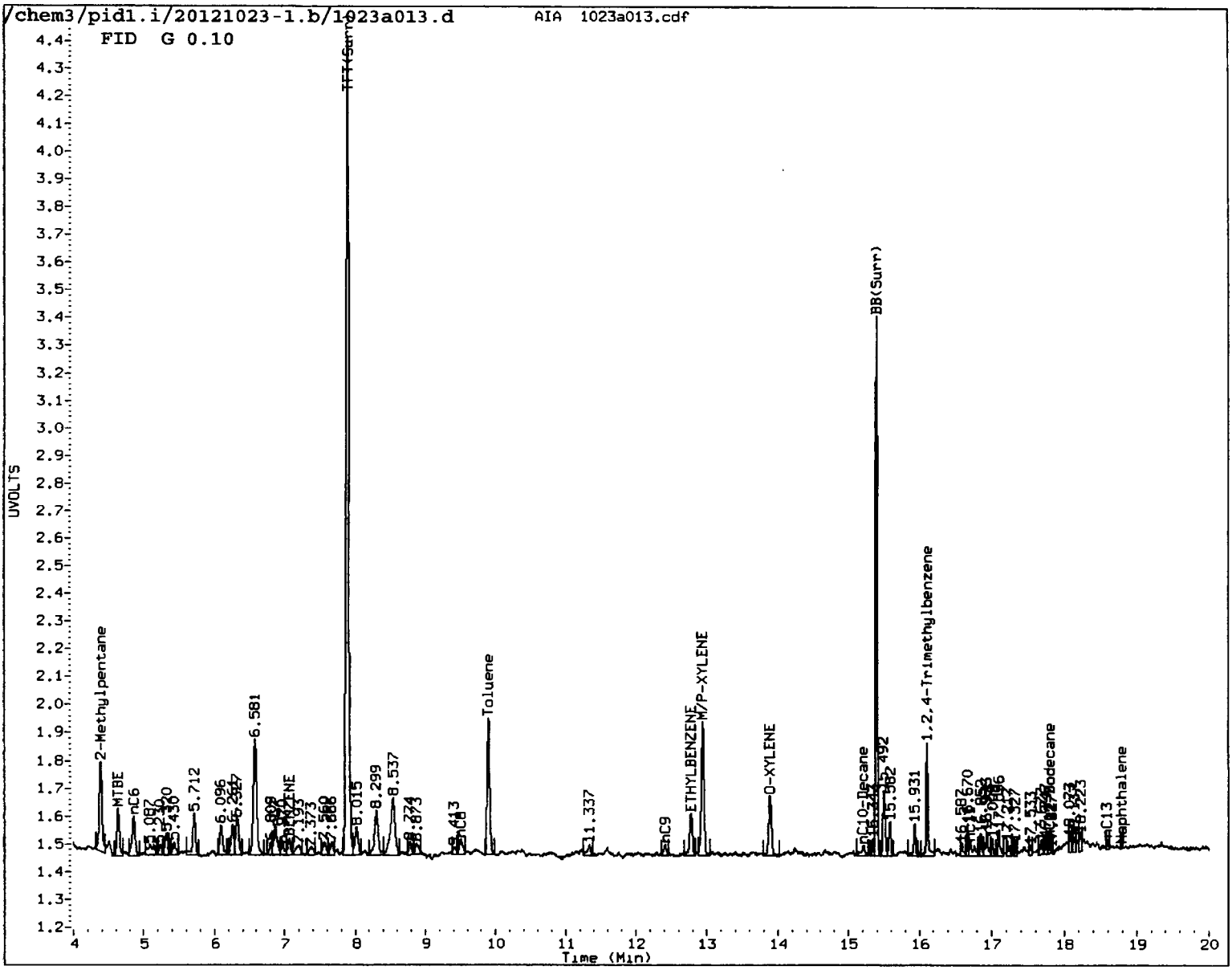
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

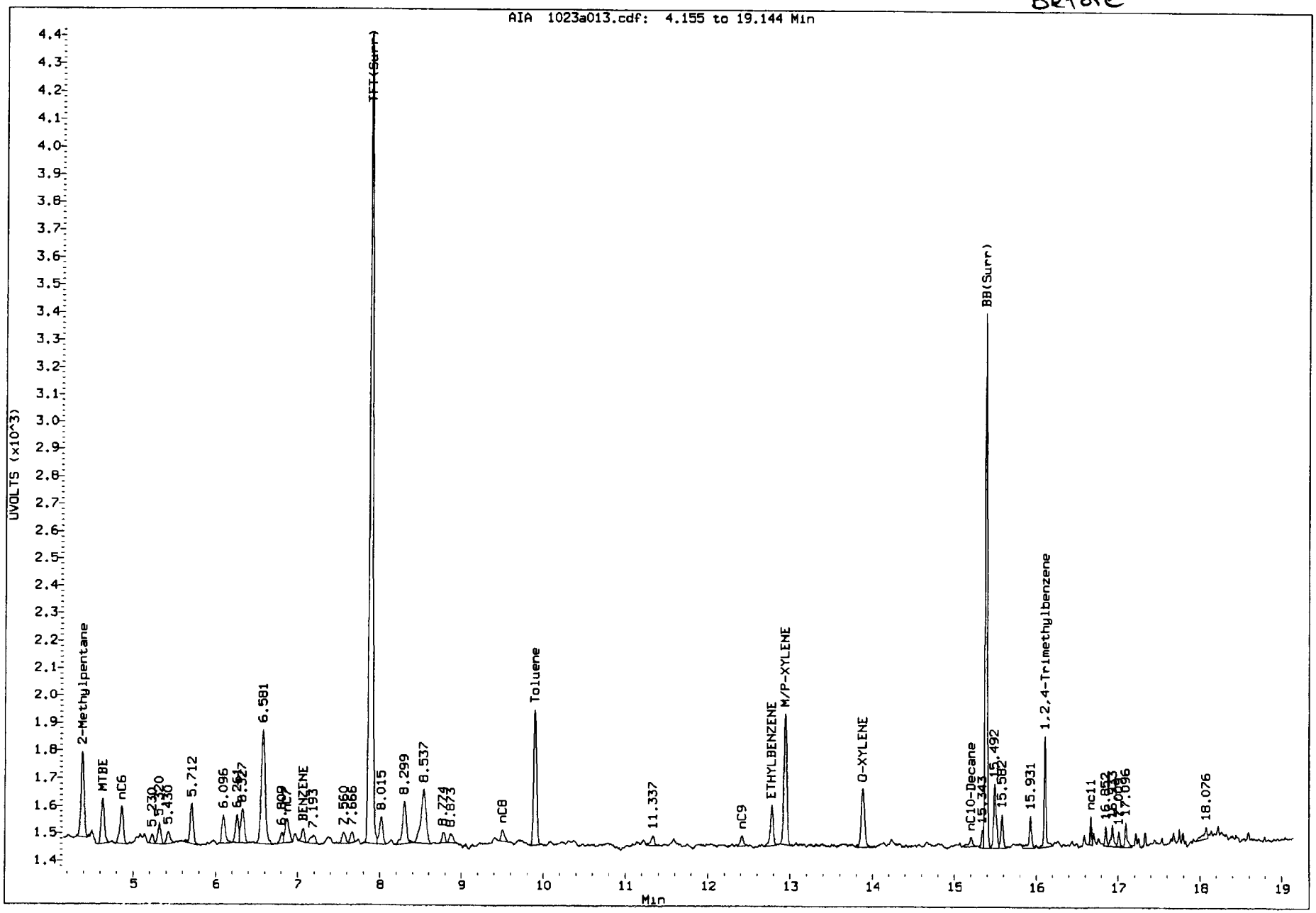
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

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:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

SW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d

Date : 23-OCT-2012 22:42

Client ID:

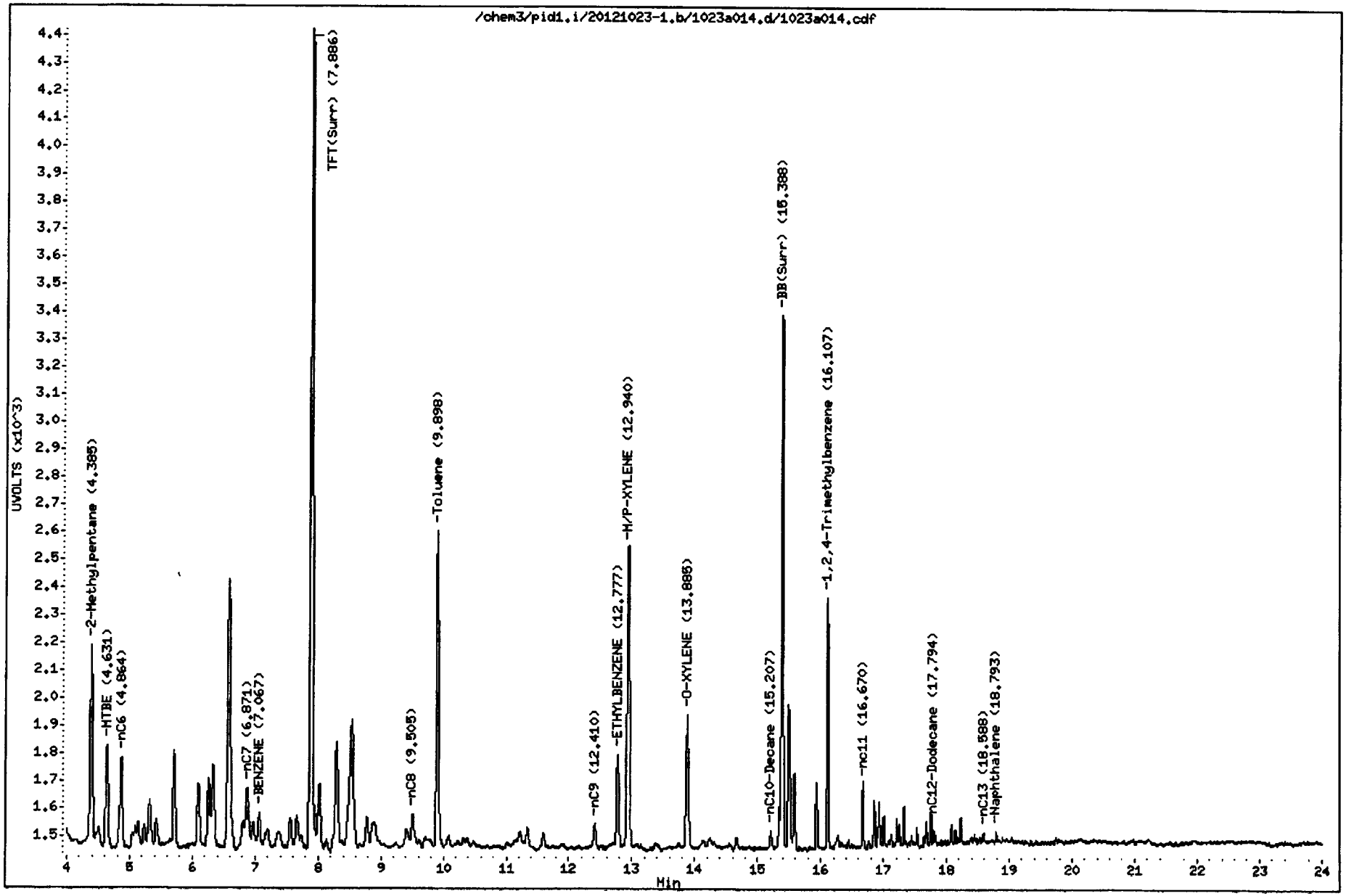
Sample Info: G 0.25

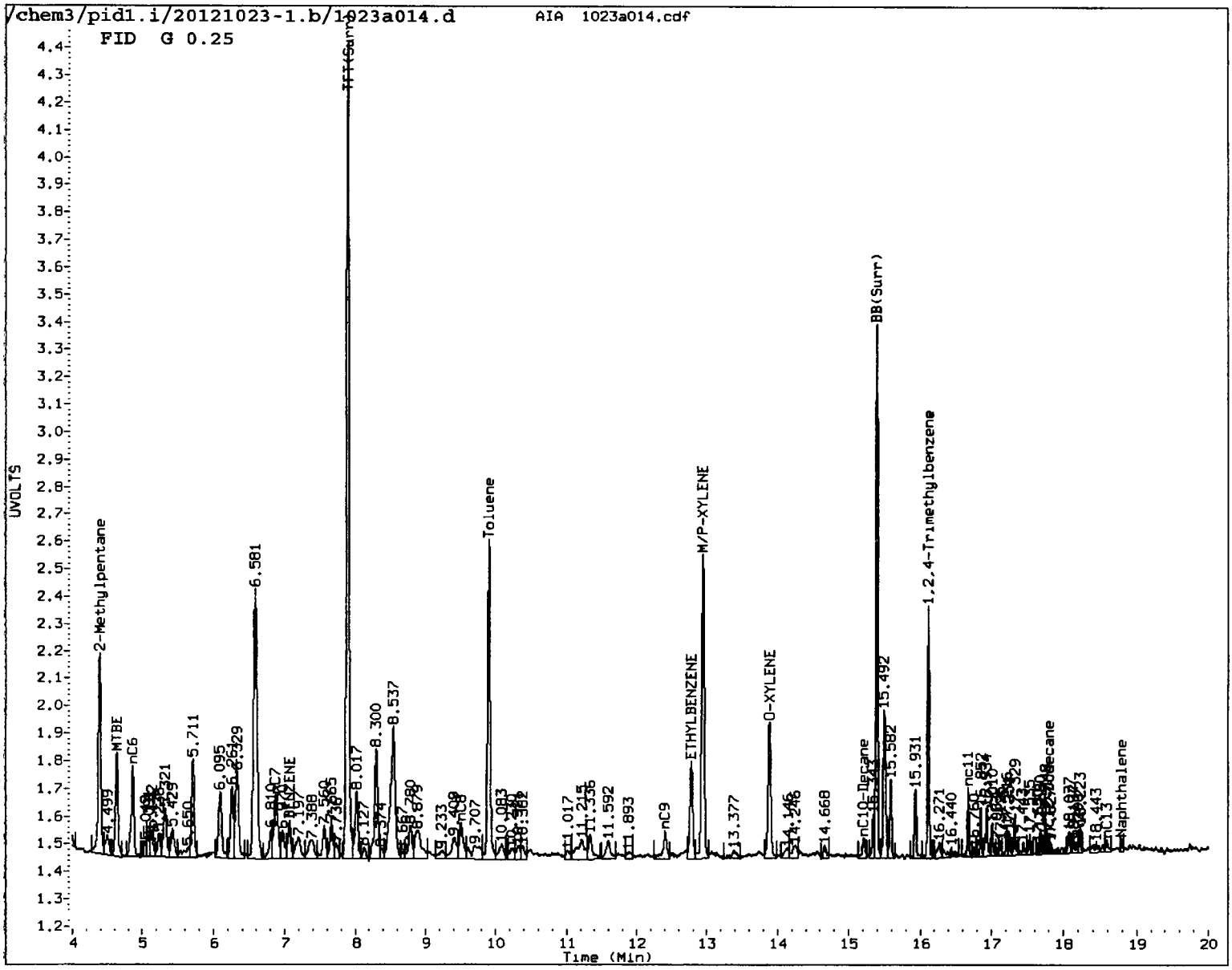
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

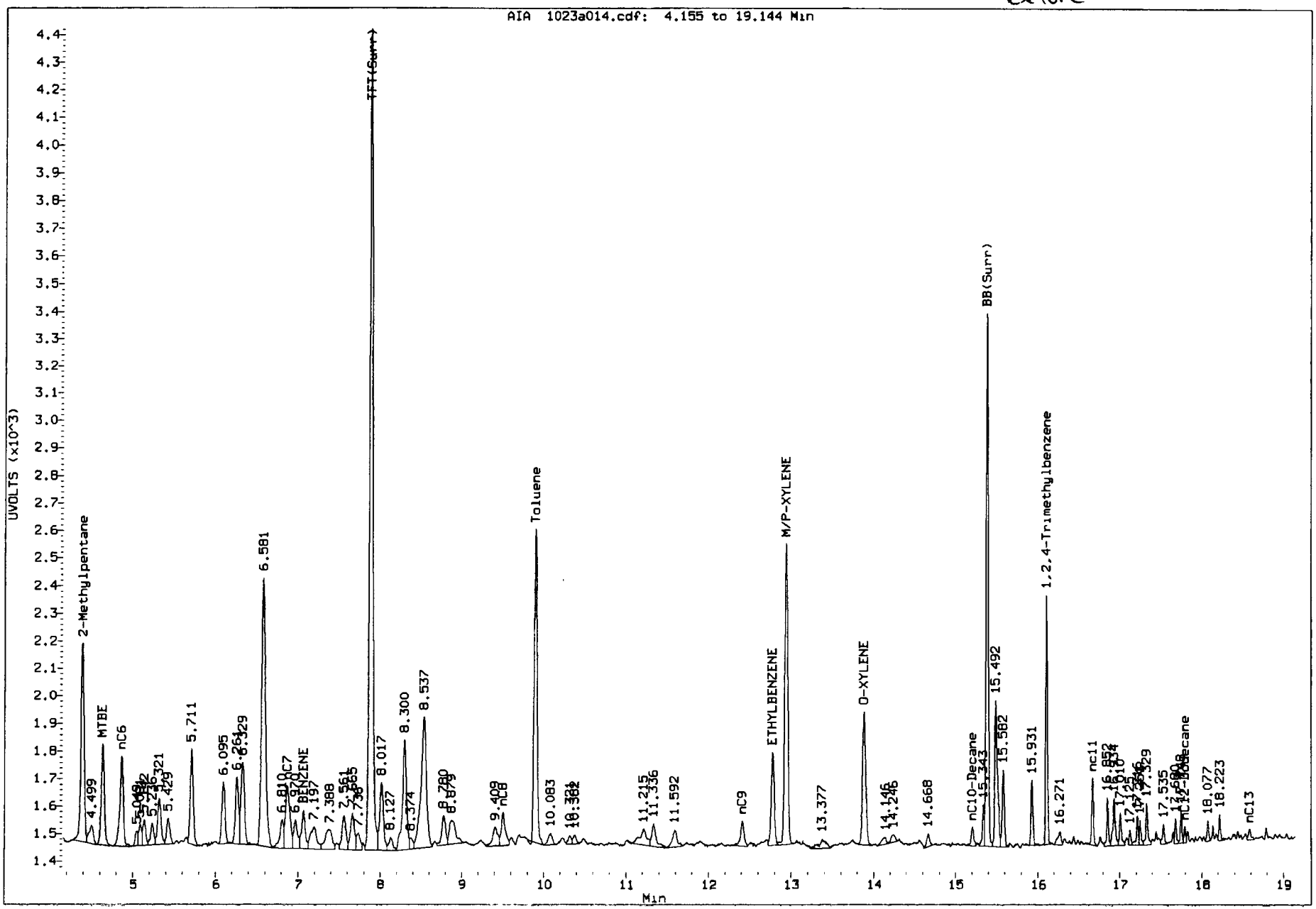
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d/1023a014.cdf
Injection Date: 23-OCT-2012 22:42
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a015.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a015.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 1.0
Client ID:
Injection Date: 23-OCT-2012 23:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	3079	44718	97.8	TFT(Surr)
15.387	0.000	1964	17721	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	358654	1.002 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	725276	1.002 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	585010	1.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	376837	1.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3709	97.9	TFT(Surr)
15.395	0.002	7881	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	965	3.89	Benzene
9.906	0.000	9089	40.40	Toluene
12.786	-0.001	2253	11.43	Ethylbenzene
12.949	0.006	9128	42.45	M/P-Xylene
13.894	0.004	3286	19.58	O-Xylene
4.635	-0.019	211	2.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a015.d

Date : 23-OCT-2012 23:11

Client ID:

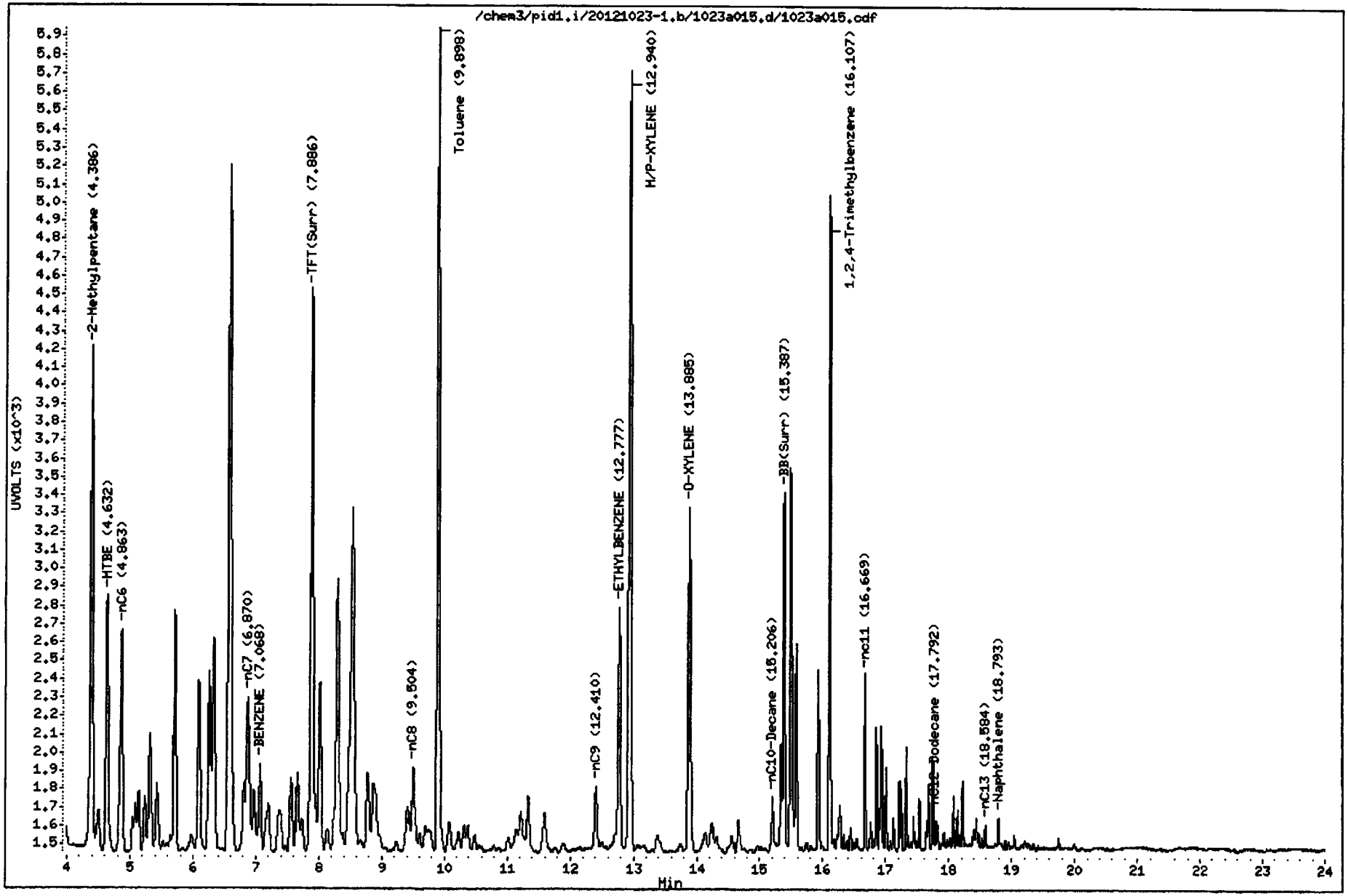
Sample Info: C 1.0

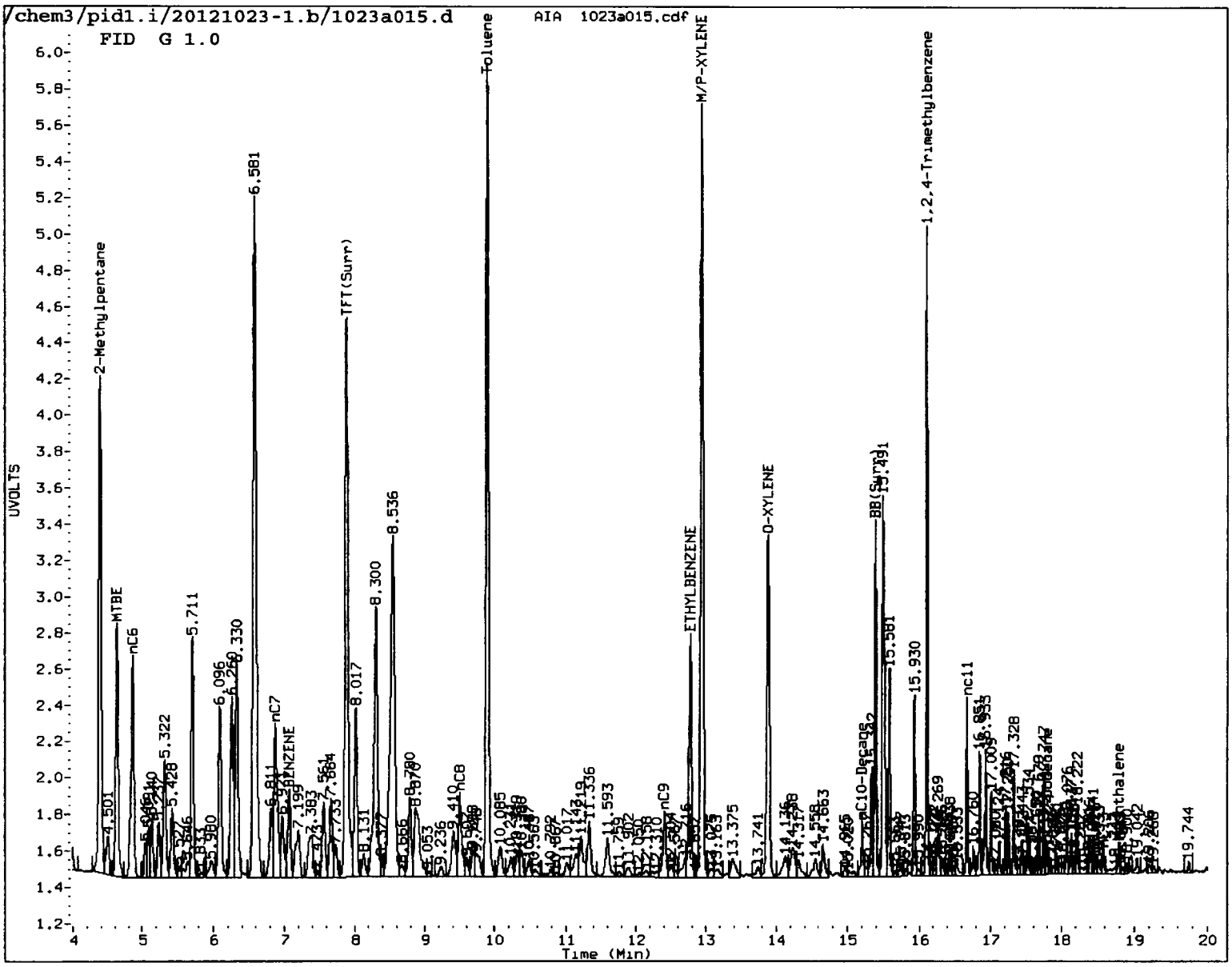
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





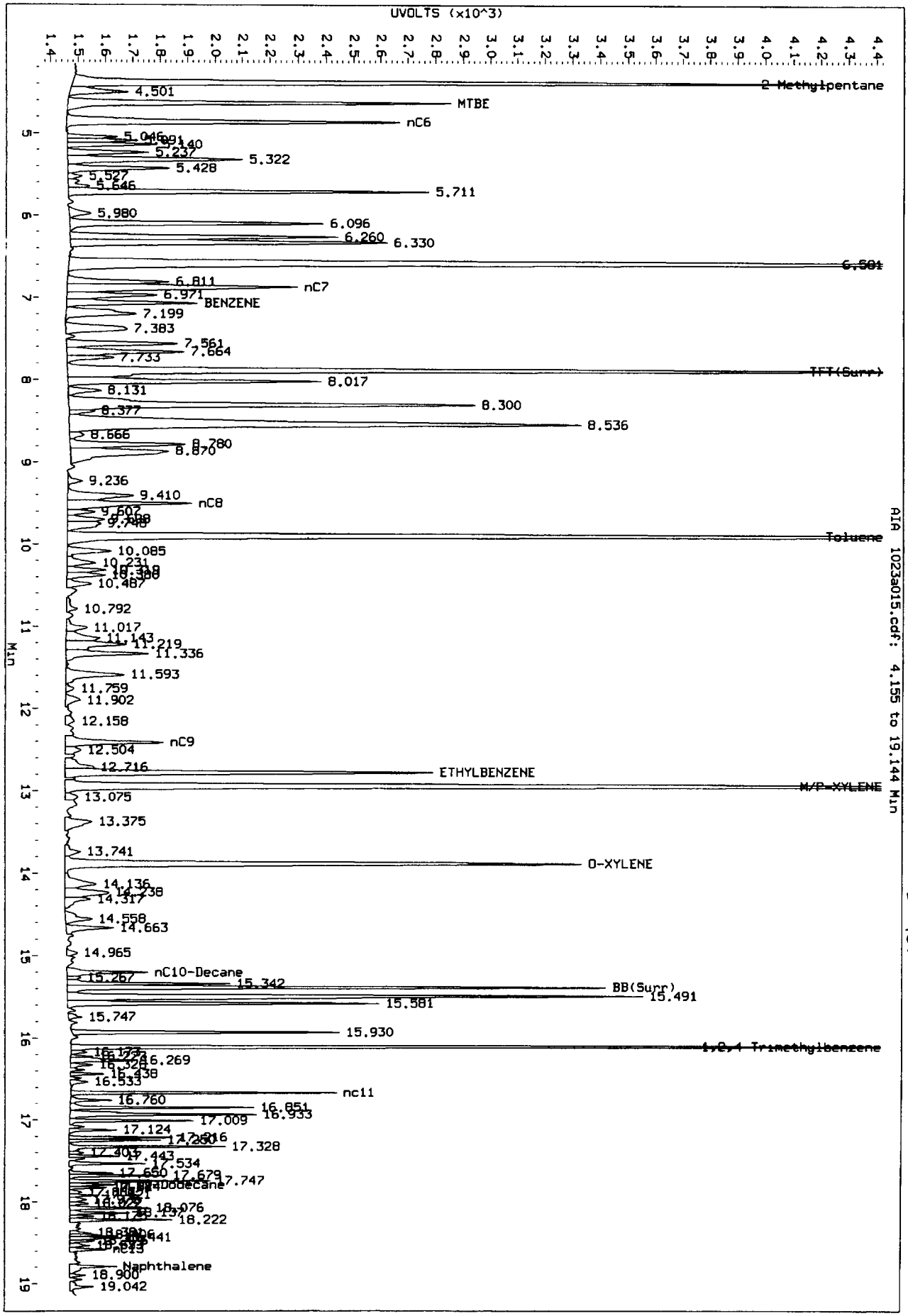
MANUAL INTEGRATION

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

5. Other _____

Analyst: JW Date: 10/25/12

VLM0: 82838


Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.cdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
Min
AIA 1023a015.cdf: 4.155 to 19.144 Min
2-Methylpentane
4.501
MTBE
nC6
5.322
5.711
6.096
6.330
6.811
nC7
6.971
BENZENE
7.199
7.383
8.017
8.300
8.536
9.236
9.410
nC8
Toluene
10.085
10.792
11.017
11.336
11.593
11.759
11.902
12.158
nC9
12.504
12.716
ETHYLBENZENE
M/P-XYLENE
13.075
13.375
13.741
O-XYLENE
14.136
14.317
14.558
14.663
14.965
nC10-Decane
15.267
15.342
BB(Surr)
15.491
15.581
15.747
15.930
1,2,4 Trimethylbenzene
16.269
16.533
nc11
16.760
16.851
16.933
17.009
17.124
17.328
17.443
17.534
17.650
17.679
17.747
18.076
18.222
Naphthalene
18.900
19.042

Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a016.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a016.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 2.5
Client ID:
Injection Date: 23-OCT-2012 23:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	3238	46993	102.8	TFT(Surr)
15.387	0.000	2003	18605	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	848232	2.369
8015C 2MP-TMB	(4.29 to 16.21)	723723	1687315	2.331
AK101 nC6-nC10	(4.76 to 15.11)	582885	1358261	2.330
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	884847	2.359

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3774	99.6	TFT(Surr)
15.395	0.002	8059	100.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2255	9.09	Benzene
9.907	0.000	21750	96.67	Toluene
12.785	-0.001	5424	27.51	Ethylbenzene
12.950	0.007	21923	101.96	M/P-Xylene
13.894	0.004	7944	47.33	O-Xylene
4.635	-0.018	486	6.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a016.d

Date : 23-OCT-2012 23:40

Client ID:

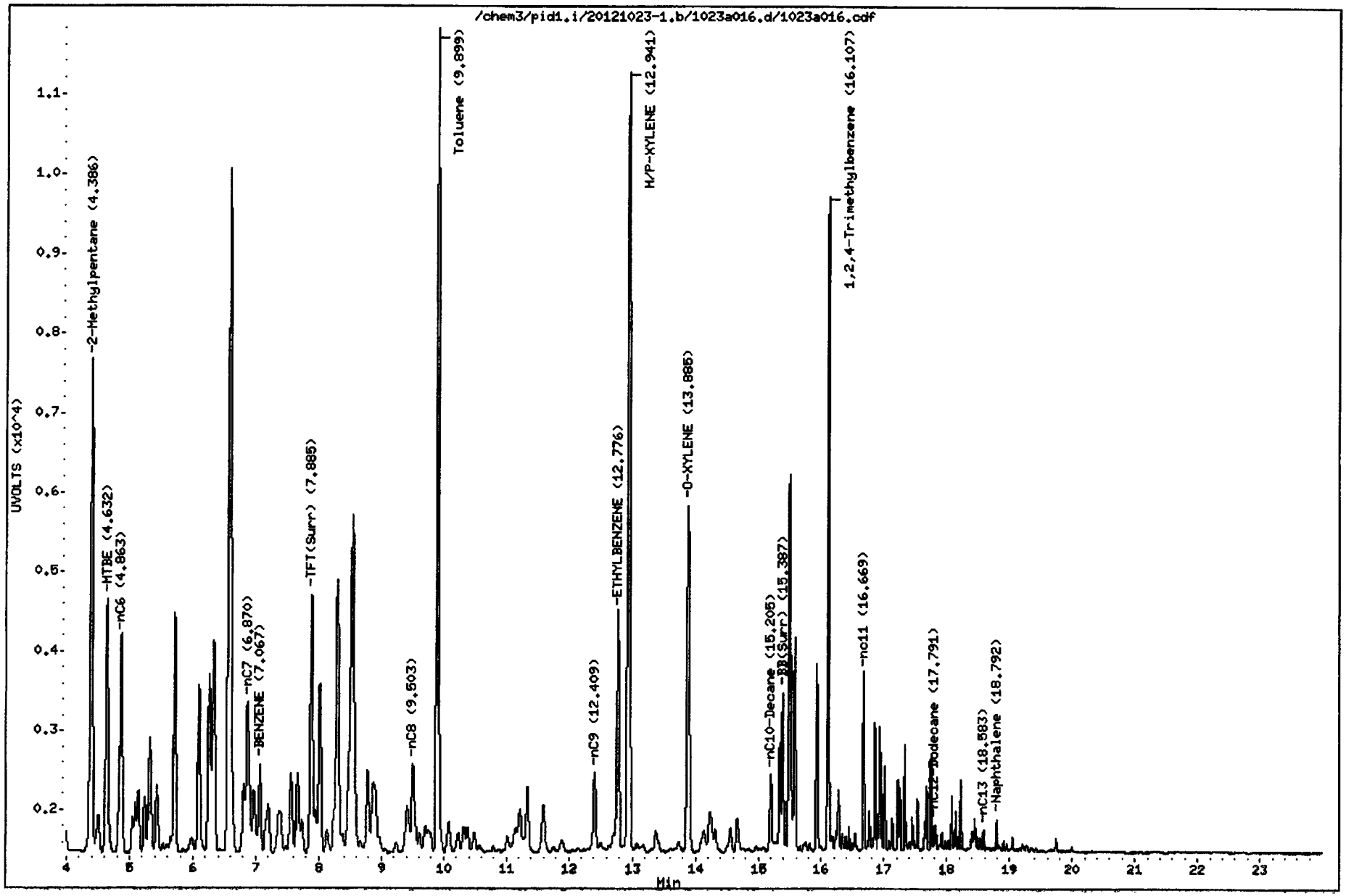
Sample Info: G 2.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a017.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a017.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 5.0
Client ID:
Injection Date: 24-OCT-2012 00:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	3585	55360	113.8	TFT(Surr)
15.387	0.000	2115	18935	104.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1701302	4.751
8015C 2MP-TMB	(4.29 to 16.21)	723723	3352467	4.632
AK101 nC6-nC10	(4.76 to 15.11)	582885	2711219	4.651
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1775567	4.734

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	4011	105.9	TFT(Surr)
15.395	0.001	8350	103.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.001	4431	17.87	Benzene
9.908	0.002	42408	188.49	Toluene
12.786	-0.001	10851	55.03	Ethylbenzene
12.952	0.009	43539	202.50	M/P-Xylene
13.895	0.005	15788	94.06	O-Xylene
4.636	-0.018	966	13.42	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a017.d

Date : 24-OCT-2012 00:10

Client ID:

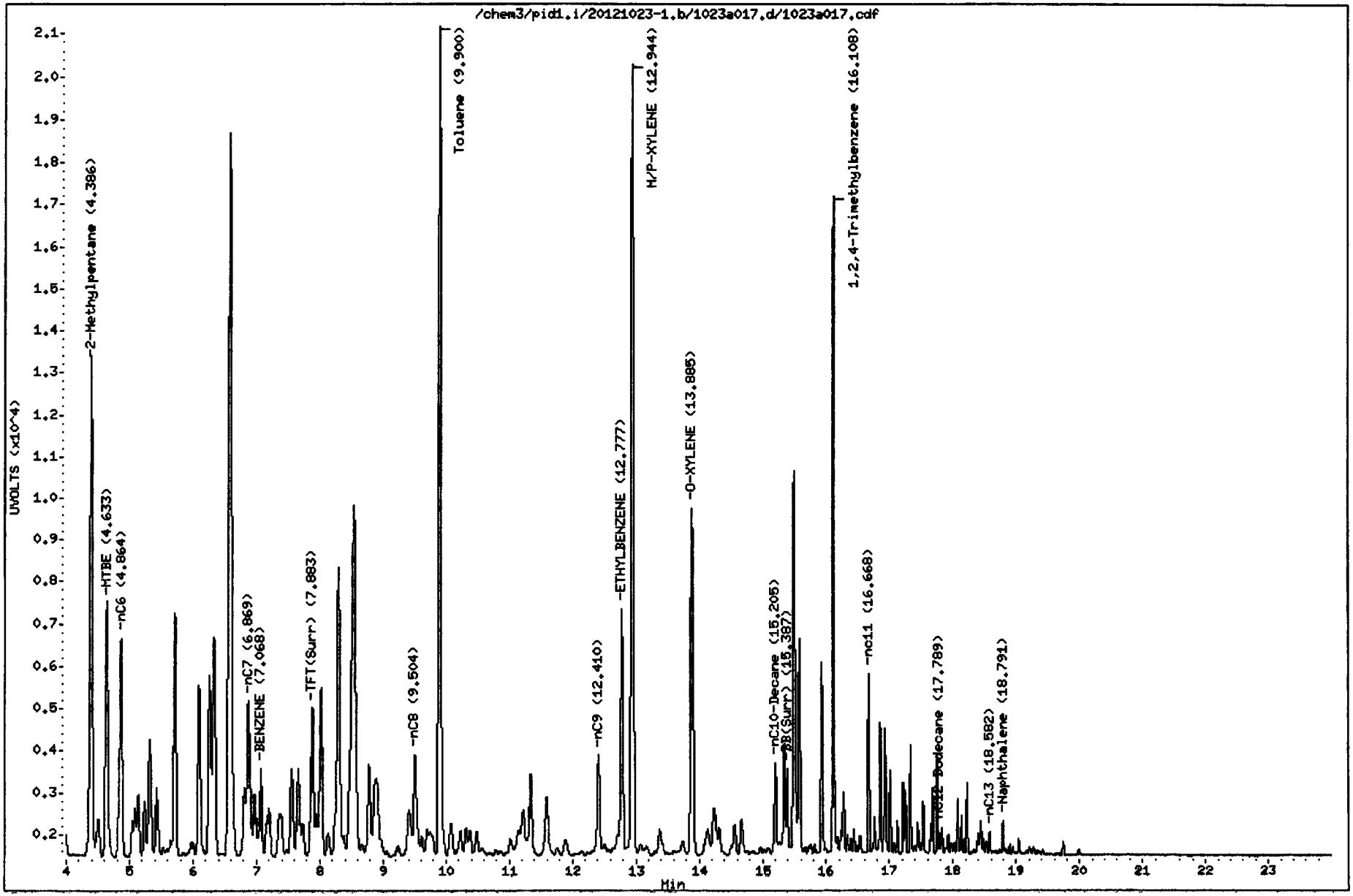
Sample Info: G 5.0

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a018.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a018.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 10
Client ID:
Injection Date: 24-OCT-2012 00:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.880	-0.007	4738	79062	150.4	TFT(Surr)
15.388	0.001	2439	22291	120.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	3600012	10.053
8015C 2MP-TMB	(4.29 to 16.21)	723723	7328267	10.126
AK101 nC6-nC10	(4.76 to 15.11)	582885	5986278	10.270
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	3755718	10.013

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.891	-0.003	4903	129.4	TFT(Surr)
15.395	0.002	9209	114.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a018.d

Date : 24-OCT-2012 00:39

Client ID:

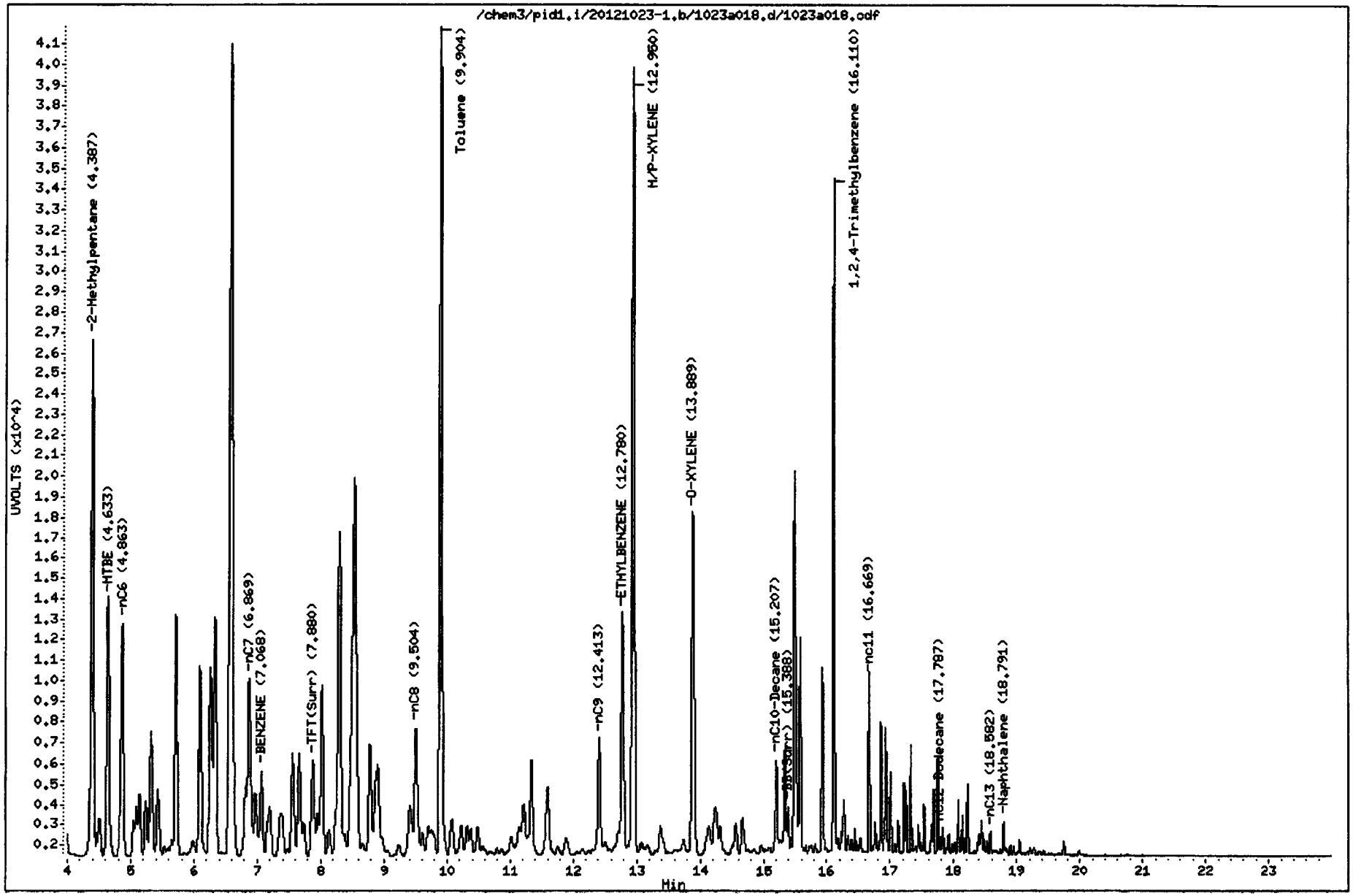
Sample Info: G 10

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a019.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a019.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GICV
Client ID:
Injection Date: 24-OCT-2012 01:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3250	47497	103.2	TFT(Surr)
15.387	0.000	2019	19039	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	917898	2.563
8015C 2MP-TMB	(4.29 to 16.21)	723723	1759198	2.431
AK101 nC6-nC10	(4.76 to 15.11)	582885	1408754	2.417
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	972996	2.594

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3791	100.1	TFT(Surr)
15.395	0.002	8074	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2306	9.30	Benzene
9.907	0.000	22198	98.66	Toluene
12.785	-0.001	5582	28.31	Ethylbenzene
12.950	0.007	22656	105.37	M/P-Xylene
13.894	0.004	8207	48.90	O-Xylene
4.635	-0.019	542	7.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

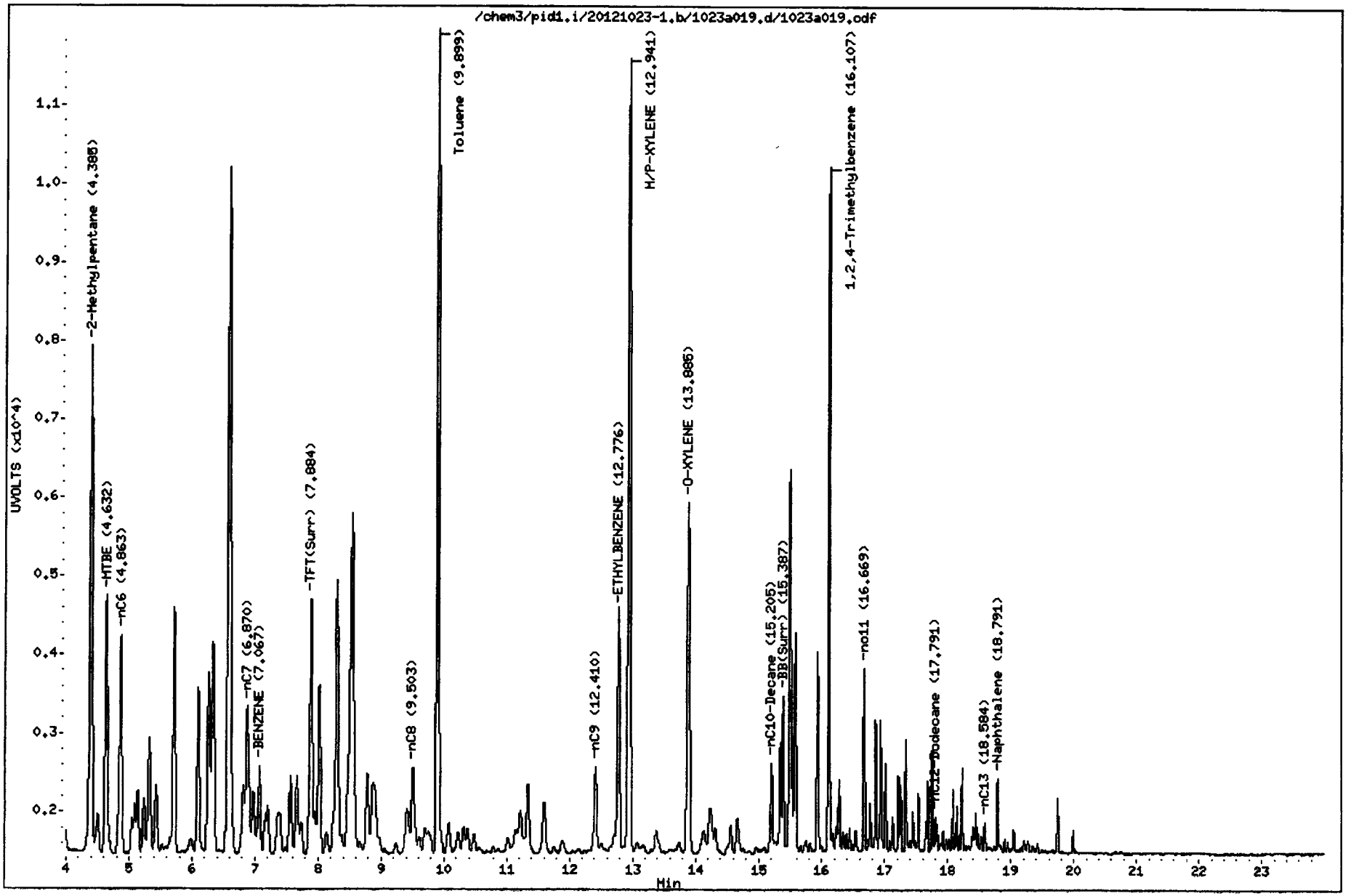
Sample Info: GICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.383	4.385	4.386	4.386	4.386	4.387	4.387	4.317-4.457	4.385	0.001
6	MTBE	4.633	4.631	4.632	4.632	4.633	4.633	4.647	4.577-4.717	4.632	0.001
7	nC6	4.862	4.864	4.863	4.863	4.864	4.863	4.864	4.794-4.934	4.863	0.001
8	nC7	6.871	6.871	6.870	6.870	6.869	6.869	6.864	6.794-6.934	6.870	0.001
9	BENZENE	7.069	7.067	7.068	7.067	7.068	7.068	7.063	6.993-7.133	7.068	0.001
$ 10	TFT(Surr)	7.885	7.886	7.886	7.885	7.883	7.880	7.887	7.817-7.957	7.884	0.002
11	nC8	9.502	9.505	9.504	9.503	9.504	9.504	9.507	9.437-9.577	9.504	0.001
12	Toluene	9.899	9.898	9.898	9.899	9.900	9.904	9.897	9.827-9.967	9.900	0.002
13	nC9	12.413	12.410	12.410	12.409	12.410	12.413	12.416	12.346-12.486	12.411	0.002
14	ETHYLBENZENE	12.777	12.777	12.777	12.776	12.777	12.780	12.780	12.710-12.850	12.777	0.001
15	M/P-XYLENE	12.940	12.940	12.940	12.941	12.944	12.950	12.933	12.863-13.003	12.942	0.004
16	O-XYLENE	13.884	13.885	13.885	13.885	13.885	13.889	13.883	13.813-13.953	13.885	0.002
17	nC10-Decane	15.205	15.207	15.206	15.205	15.205	15.207	15.207	15.137-15.277	15.206	0.001

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/25/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.387	15.388	15.387	15.387	15.387	15.388	15.387	15.317-15.457	15.387	0.000
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.107	16.107	16.107	16.107	16.108	16.110	16.109	16.039-16.179	16.108	0.001
21 nc11	16.703	16.670	16.669	16.669	16.668	16.669	16.704	16.634-16.774	16.675	0.014
22 nC12-Dodecane	17.793	17.794	17.792	17.791	17.789	17.787	17.795	17.725-17.865	17.791	0.003
23 nC13	18.593	18.588	18.584	18.583	18.582	18.582	18.595	18.525-18.665	18.585	0.004
24 Naphthalene	18.790	18.793	18.793	18.792	18.791	18.791	18.796	18.726-18.866	18.792	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	+++++	+++++	4.635	4.635	4.636	4.636	4.653	4.603-4.703	4.635	0.001
	2 Benzene	+++++	7.075	7.075	7.075	7.075	7.076	7.077	7.027-7.127	7.075	0.000
$	3 TFT(Surr)	7.893	7.894	7.894	7.893	7.892	7.891	7.893	7.843-7.943	7.893	0.001
	4 Toluene	9.907	9.906	9.906	9.907	9.908	9.912	9.907	9.857-9.957	9.908	0.002
	5 Ethylbenzene	12.785	12.786	12.786	12.785	12.786	12.789	12.787	12.737-12.837	12.786	0.001
	6 M/P-Xylene	12.948	12.948	12.949	12.950	12.952	12.958	12.943	12.893-12.993	12.951	0.004
	7 O-Xylene	13.893	13.894	13.894	13.894	13.895	13.898	13.890	13.860-13.920	13.895	0.002
$	8 BB(Surr)	15.395	15.396	15.395	15.395	15.395	15.395	15.393	15.343-15.443	15.395	0.000

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-XYLENE, TFT(Surr), BB(Surr),
1820	1023a005.d	B 100		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Toluene, BENZENE, O-XYLENE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Toluene, MTBE, BENZENE, O-XYLENE,
2016	1023a009.d	B 1		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE,
2045	1023a010.d	B 0.5		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	nC12-Dodecane, Naphthalene, nc11, nC13,
2242	1023a014.d	G 0.25		1	Naphthalene,
2311	1023a015.d	G 1.0		1	Naphthalene,
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-Xylene, BB(Surr),
1820	1023a005.d	B 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2016	1023a009.d	B 1		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2045	1023a010.d	B 0.5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	NO MANUAL INTEGRATION
2242	1023a014.d	G 0.25		1	NO MANUAL INTEGRATION
2311	1023a015.d	G 1.0		1	NO MANUAL INTEGRATION
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

TPHG Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WL49 Client ID: SAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 10/23/12 3/15/13 Analysis Start Date: 4/22/13

	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:

QC volume not provided

(Review 1)Analyst: PC **Date:** 4/25/13

(Review 2)Reviewer: [signature] **Date:** 4/25/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 4/22/13 Analysis: NWTPH/BTEX Analyst: PC

Column 1 Serial No.: 821724 Column Type: RTX502.2

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 VW772-3 VW787-1	VW787-1
dmt 4/24/13	dmt 4/24/13	dmt 4/24/13

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0924	0422a001.d	RINSE				1
2	0954	0422a002 d	RT/BCAL 1				1
3	1033	0422a003 d	GCAL 1				1
4	1052	0422a004.d	LCS0422				1
5	1121	0422a005.d	LCSD0422				1
6	1151	0422a006.d	MB0422				1
7	1319	0422a007.d	WL95A	EAL 146553	1	≤2	10
8	1348	0422a008.d	WL95D	EAL 146556	1		10
9	1418	0422a009.d	WL57N	FF1-13-04-337	3		1
10	1447	0422a010.d	WL57O	FF1-13-04-342	4		1
11	1516	0422a011.d	WL57P	FF1-13-04-335	5		1
12	1545	0422a012.d	WL57Q	FF1-13-04-604	5		1
13	1615	0422a013.d	BCAL 2				1
14	1644	0422a014.d	GCAL 2				1
15	1713	0422a015.d	WL57R	FF1-13-04-603	4	≤2	1
16	1743	0422a016 d	WL57S	FF1-13-04-603A	6		1
17	1812	0422a017 d	WL57T	FF1-13-04-340	3		1
18	1841	0422a018.d	WL49E	IM-TB-01-20130410-W	1		1
19	1910	0422a019.d	WL49F	IM-CB-01-20130410-S	1	Soil	1
20	1940	0422a020.d	WL85A	PCC-CAR01	2		1
21	2009	0422a021.d	WL85B	PCC-CAR02	2		1
22	2038	0422a022 d	WL85C	PCC-CAR03	2		1
23	2107	0422a023.d	WL85D	Trip Blank	2	≤2	1
24	2136	0422a024.d	BCAL 3				1
25	2206	0422a025 d	GCAL 3				1
26	2235	0422a026 d	WM35A	FW-3 INF	2	≤2	1
27	2304	0422a027.d	WL35B		2		1
28	2333	0422a028.d	WM35C	Tank #1 -EFF	3		1
29	0003	0422a029 d	BCAL 4				1

dmt 4/24/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130422-1.b

ARI Job No.: RT/B Method: FID.m Instrument: pid1.i Date: 22-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0954	0422a002.d	RT/BCAL 1	RT/BCAL 1	1	NO MANUAL INTEGRATION
1023	0422a003.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),
1052	0422a004.d	LCS0422	LCS0422	1	NO MANUAL INTEGRATION
1121	0422a005.d	LCSD0422	LCSD0422	1	NO MANUAL INTEGRATION
1151	0422a006.d	MB0422	MB0422	1	NO MANUAL INTEGRATION
1644	0422a014.d	GCAL 2	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),
1841	0422a018.d	WL49E	IM-TB-01-2	1	NO MANUAL INTEGRATION
1910	0422a019.d	WL49F	IM-CB-01-2	1	nC9, nC10-Decane, nC13,
2206	0422a025.d	GCAL 3	NPDES SAMP	1	NO MANUAL INTEGRATION

PC 4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a002.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a002.d
Method: /chem3/pid1.i/20130422-2.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: 22-APR-2013 09:54
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.827	0.000	3208	39169	92.5	TFT(Surr)
15.373	0.000	1977	16690	86.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	400399	1.118
8015C 2MP-TMB	(4.16 to 16.20)	723723	519258	0.717
AK101 nC6-nC10	(4.65 to 15.09)	582885	362164	0.621
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	428419	1.142

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
7.835	0.000	3770	95.0	TFT(Surr)
15.380	0.000	7884	89.7	BB(Surr)

SW8021 (PID)

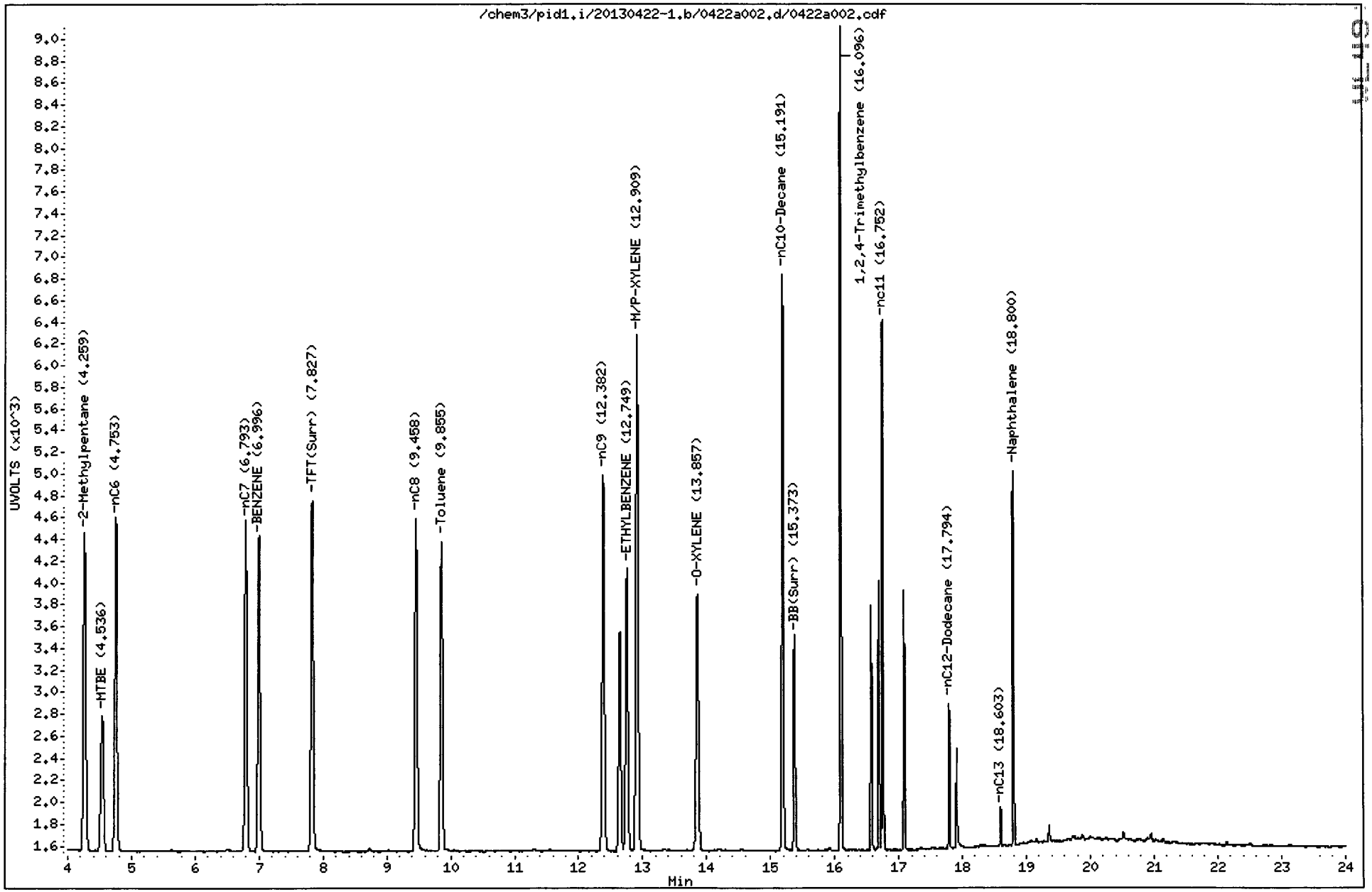
RT	Shift	Response	Amount	Compound
7.004	0.000	5955	24.81	Benzene
9.863	0.000	5433	23.72	Toluene
12.758	0.000	4554	23.53	Ethylbenzene
12.918	0.000	9814	45.96	M/P-Xylene
13.865	0.000	4018	23.55	O-Xylene
4.543	0.000	2083	24.70	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130422-1.b/0422a002.d
Date : 22-APR-2013 09:54
Client ID: RT/BCAL 1
Sample Info: RT/BCAL 1

Instrument: pid1.i
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID



PC 4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a003.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a003.d
Method: /chem3/pid1.i/20130422-2.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: 22-APR-2013 10:23
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.827	0.000	3379	46412	97.4	TFT(Surr)
15.373	0.001	2051	18468	89.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	780735	2.180
8015C 2MP-TMB	(4.16 to 16.20)	723723	1527436	2.111
AK101 nC6-nC10	(4.65 to 15.09)	582885	1247981	2.141
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	816425	2.177

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
7.835	0.001	3799	95.7	TFT(Surr)
15.380	0.000	7934	90.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.004	0.001	2053	8.55	Benzene
9.865	0.002	20548	89.73	Toluene
12.759	0.001	4952	25.58	Ethylbenzene
12.923	0.005	19617	91.86	M/P-Xylene
13.867	0.002	7046	41.30	O-Xylene
4.521	-0.023	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/20130422-1.b/0422a003.d

Date : 22-APR-2013 10:23

Client ID: GCAL 1

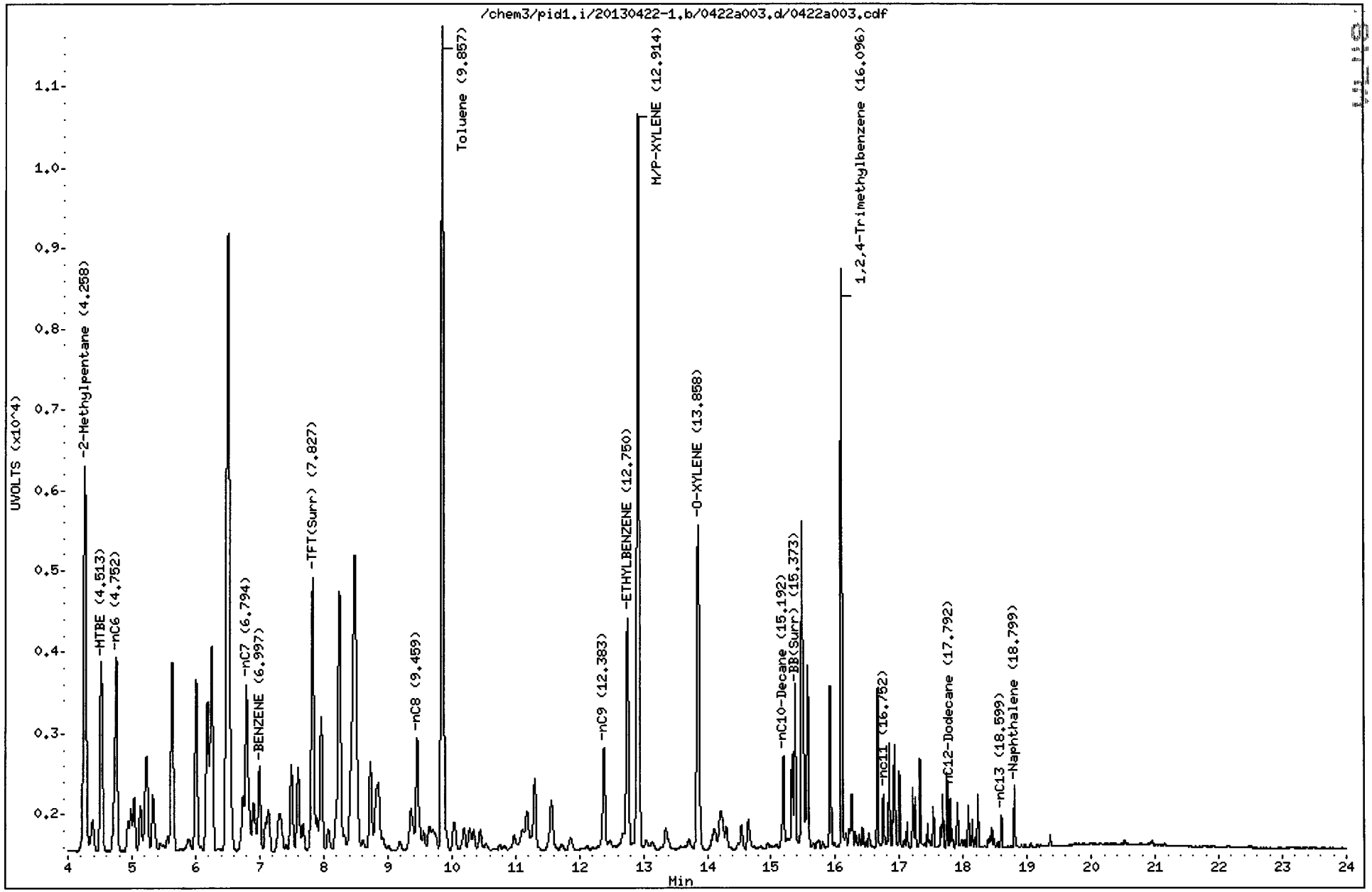
Sample Info: GCAL 1

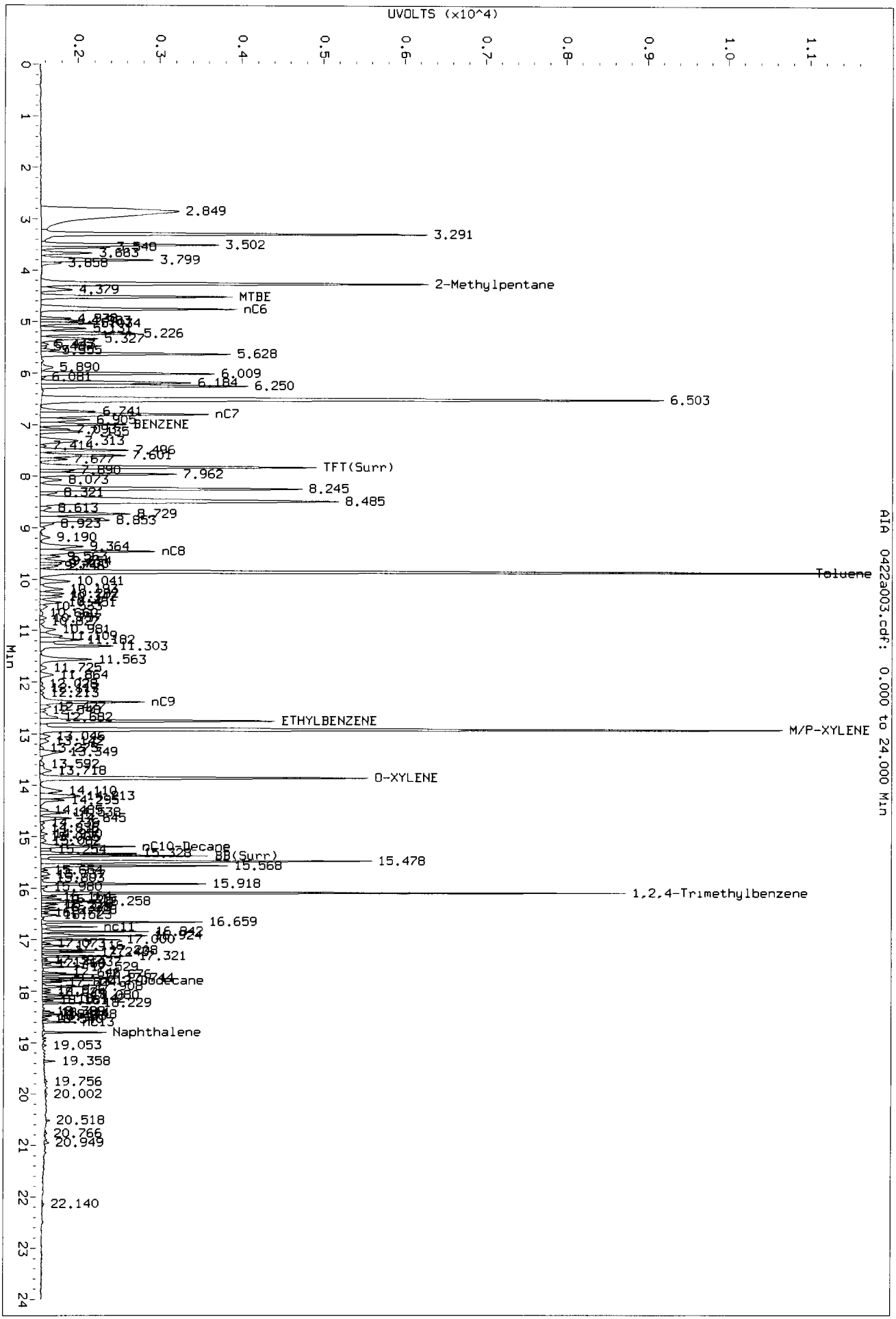
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18

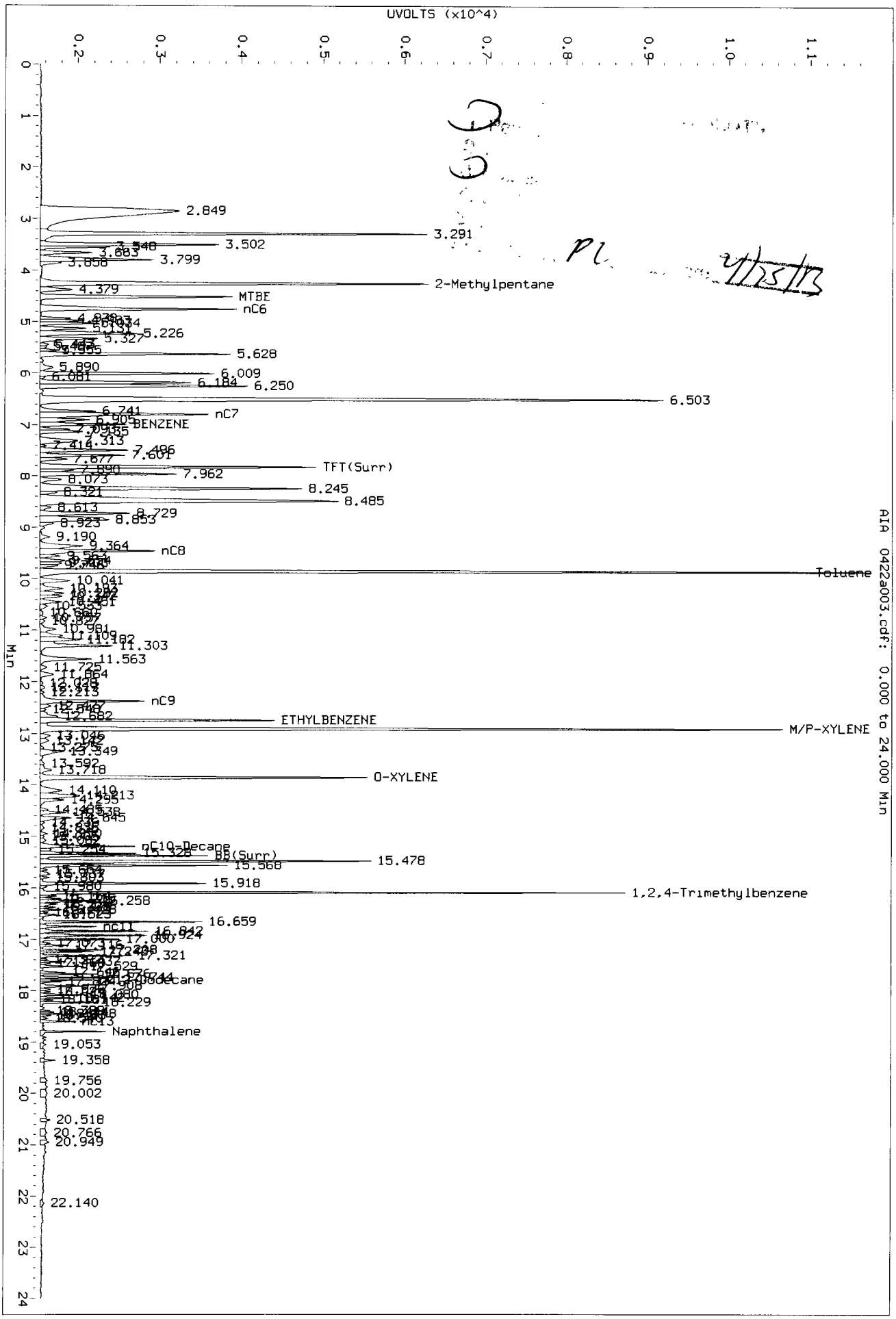




Data File: /chem3/pid1.i/20130422-1.b/0422a003.d/0422a003.cdf
Injection Date: 22-APR-2013 10:23
Instrument: pid1.i
Client Sample ID: GCAL 1

AIA 0422a003.cdf: 0.000 to 24.000 Min

PC 4/25/13



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Injection Date: 22-APR-2013 10:23
Instrument: pid1.i
Client Sample ID: NPDES SAMPLING

AIA 0422a003.cdf: 0.000 to 24.000 Min

MC 4/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a004.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a004.d
Method: /chem3/pid1.i/20130422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCS0422
Client ID:
Injection Date: 22-APR-2013 10:52
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.828	0.002	2937	40108	84.7	TFT(Surr)
15.374	0.001	1846	16088	80.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	308522	0.862 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	624336	0.863 M
AK101 nC6-nC10	(4.65 to 15.09)	582885	509134	0.873 M
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	325414	0.868 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
7.837	0.002	3338	84.1	TFT(Surr)
15.381	0.001	7187	81.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.005	0.002	750	3.12	Benzene
9.865	0.002	7603	33.20	Toluene
12.760	0.002	1789	9.24	Ethylbenzene
12.922	0.004	7211	33.77	M/P-Xylene
13.868	0.003	2616	15.33	O-Xylene
ND	---	---	---	MTBE

Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

WL09:02061

Data File: /chem3/pid1.i/20130422-1.b/0422a004.d

Date : 22-APR-2013 10:52

Client ID:

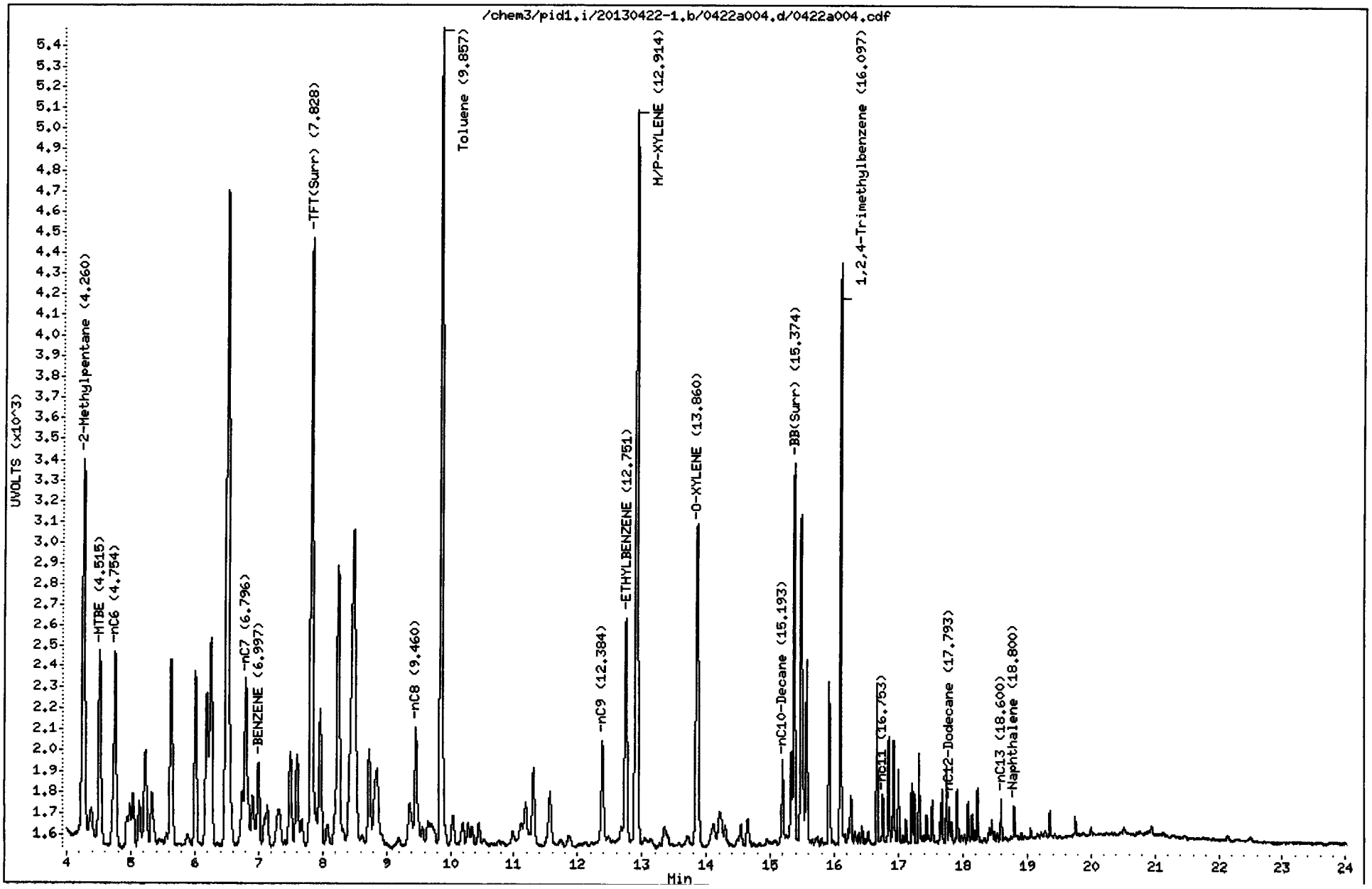
Sample Info: LCS0422

Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



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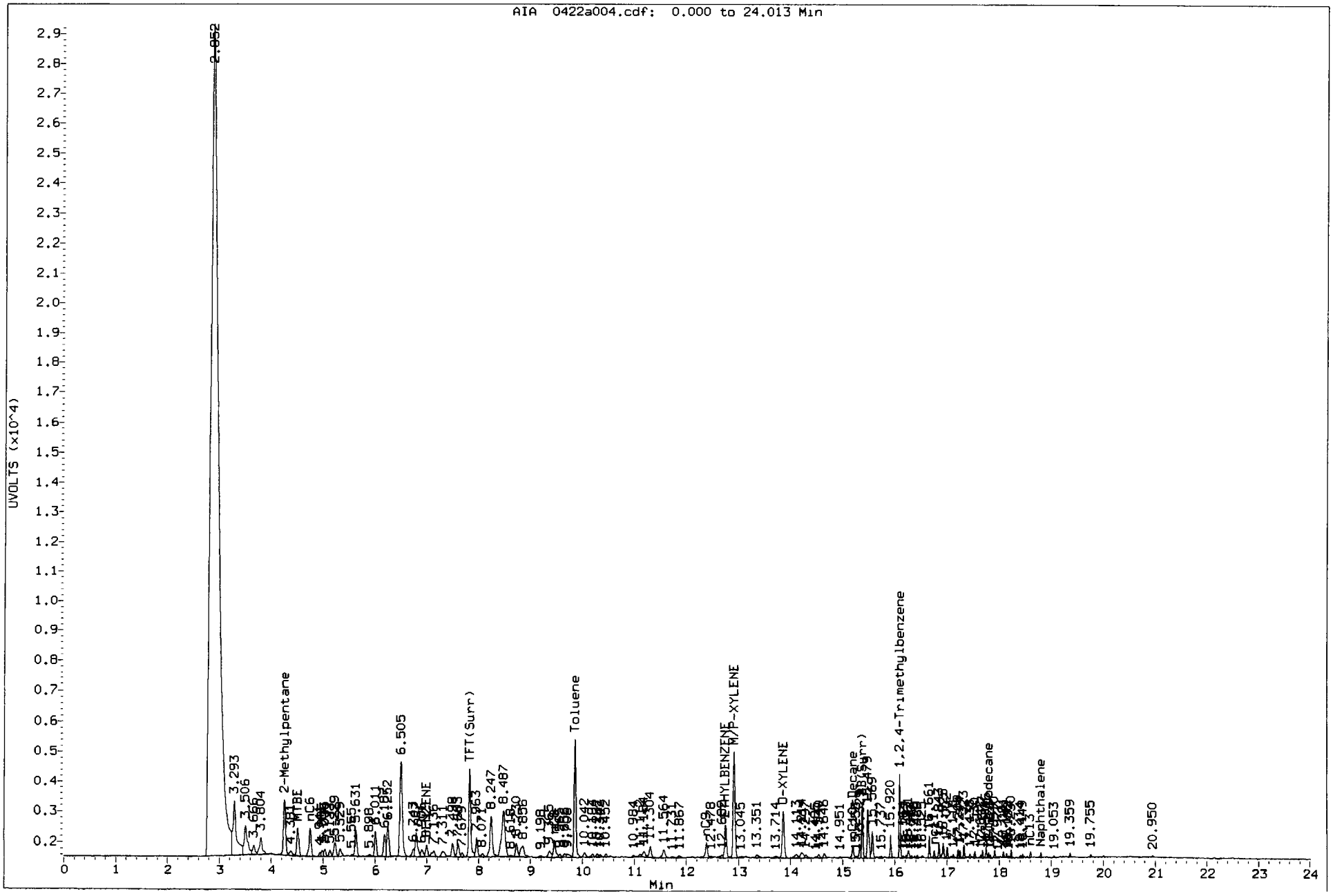
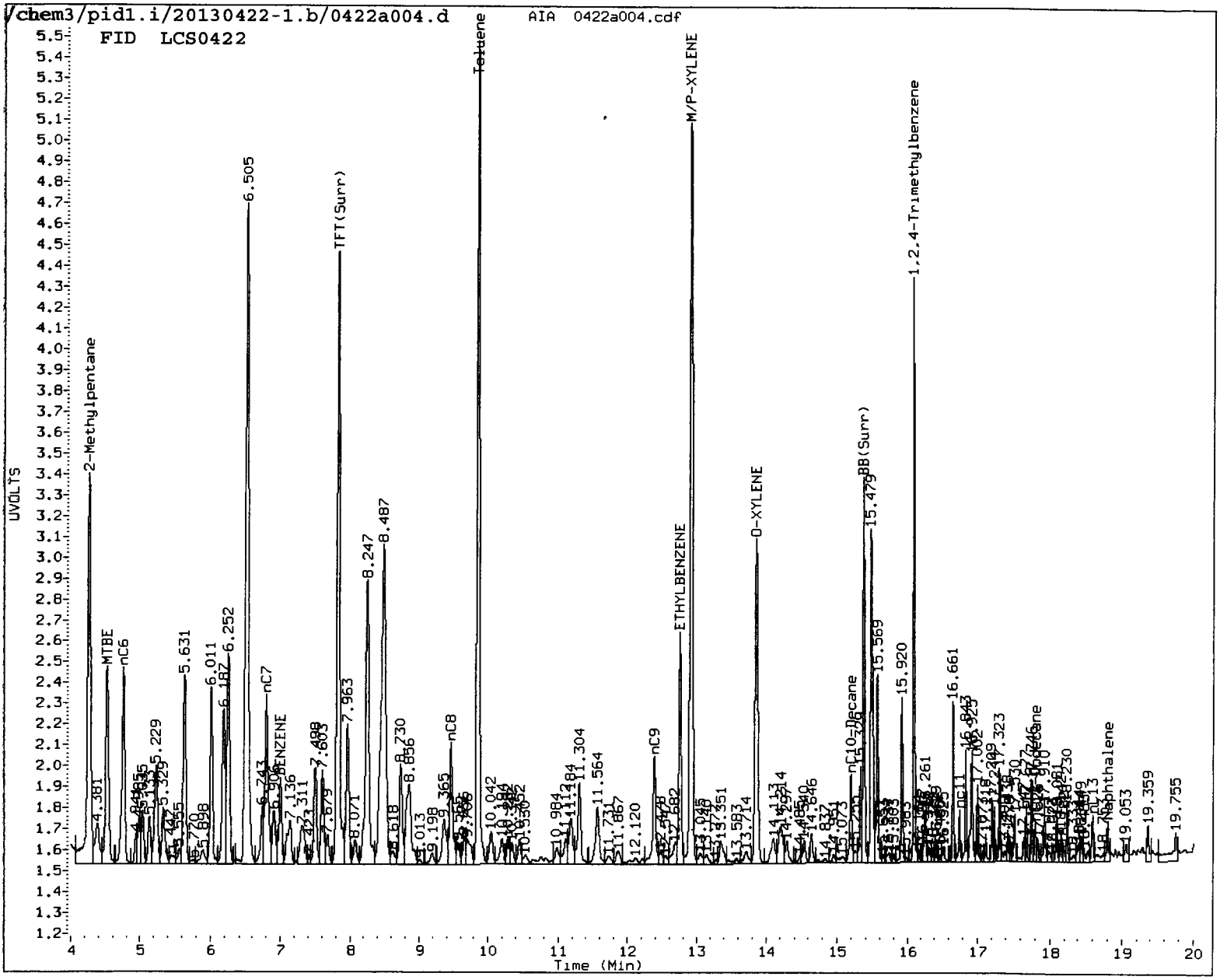
Injection Date: 22-APR-2013 10:52
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

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

5. Other _____

Analyst: KC Date: 4/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a005.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a005.d
Method: /chem3/pid1.i/20130422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: LCSD0422
Client ID:
Injection Date: 22-APR-2013 11:21
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.828	0.001	3154	42327	90.9	TFT(Surr)
15.373	0.000	1977	16985	86.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	307408	0.858 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	608780	0.841 M
AK101 nC6-nC10	(4.65 to 15.09)	582885	493918	0.847 M
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	325968	0.869 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
7.836	0.002	3614	91.0	TFT(Surr)
15.381	0.001	7699	87.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.004	0.001	805	3.35	Benzene
9.865	0.002	8076	35.27	Toluene
12.759	0.001	1896	9.79	Ethylbenzene
12.922	0.004	7660	35.87	M/P-Xylene
13.867	0.002	2768	16.22	O-Xylene
ND	---	---	---	MTBE

I Indicates Peak Area was used for quantitation instead of Height
M Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130422-1.b/0422a005.d

Date : 22-APR-2013 11:21

Client ID:

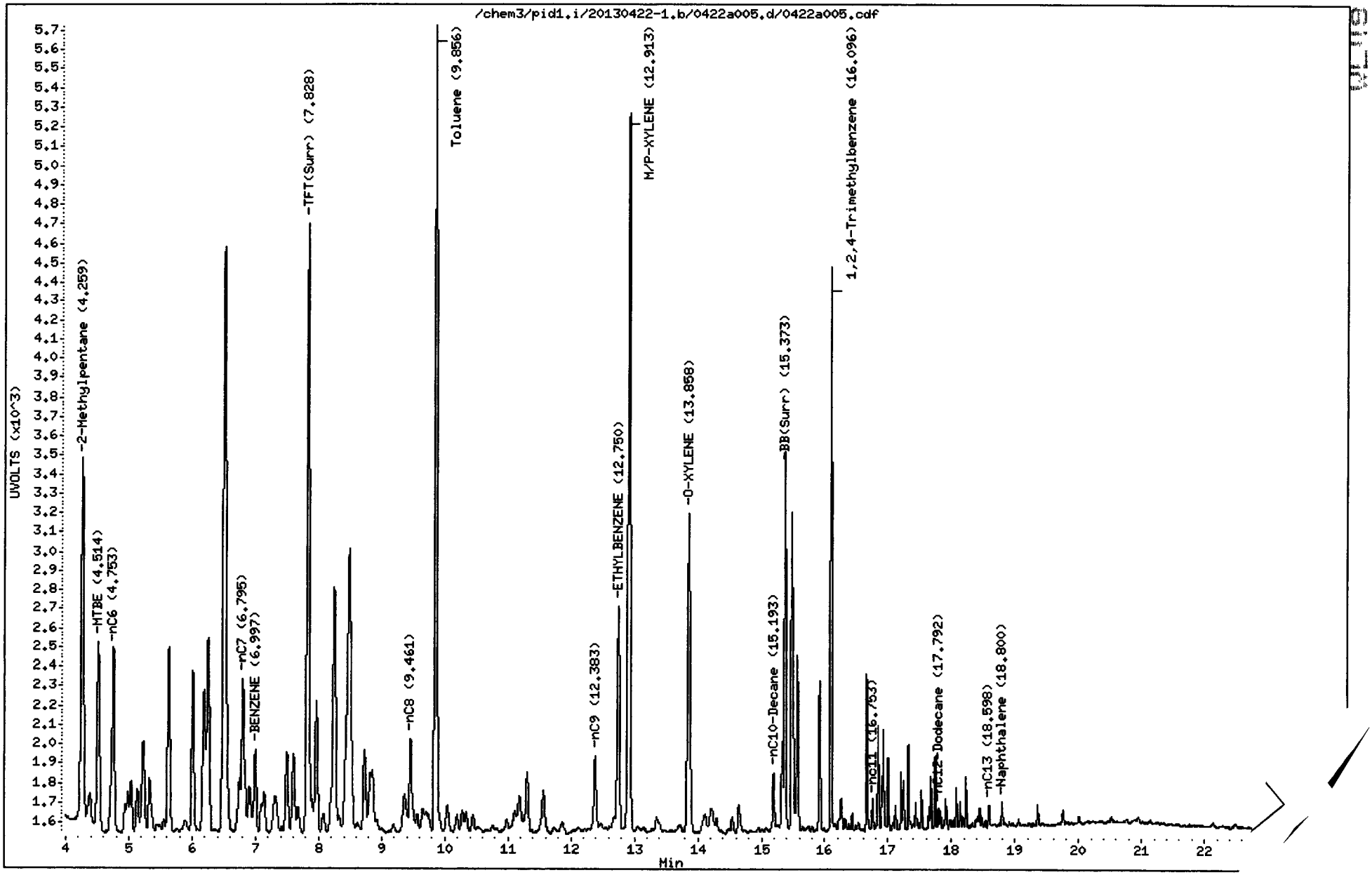
Sample Info: LCSD0422

Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



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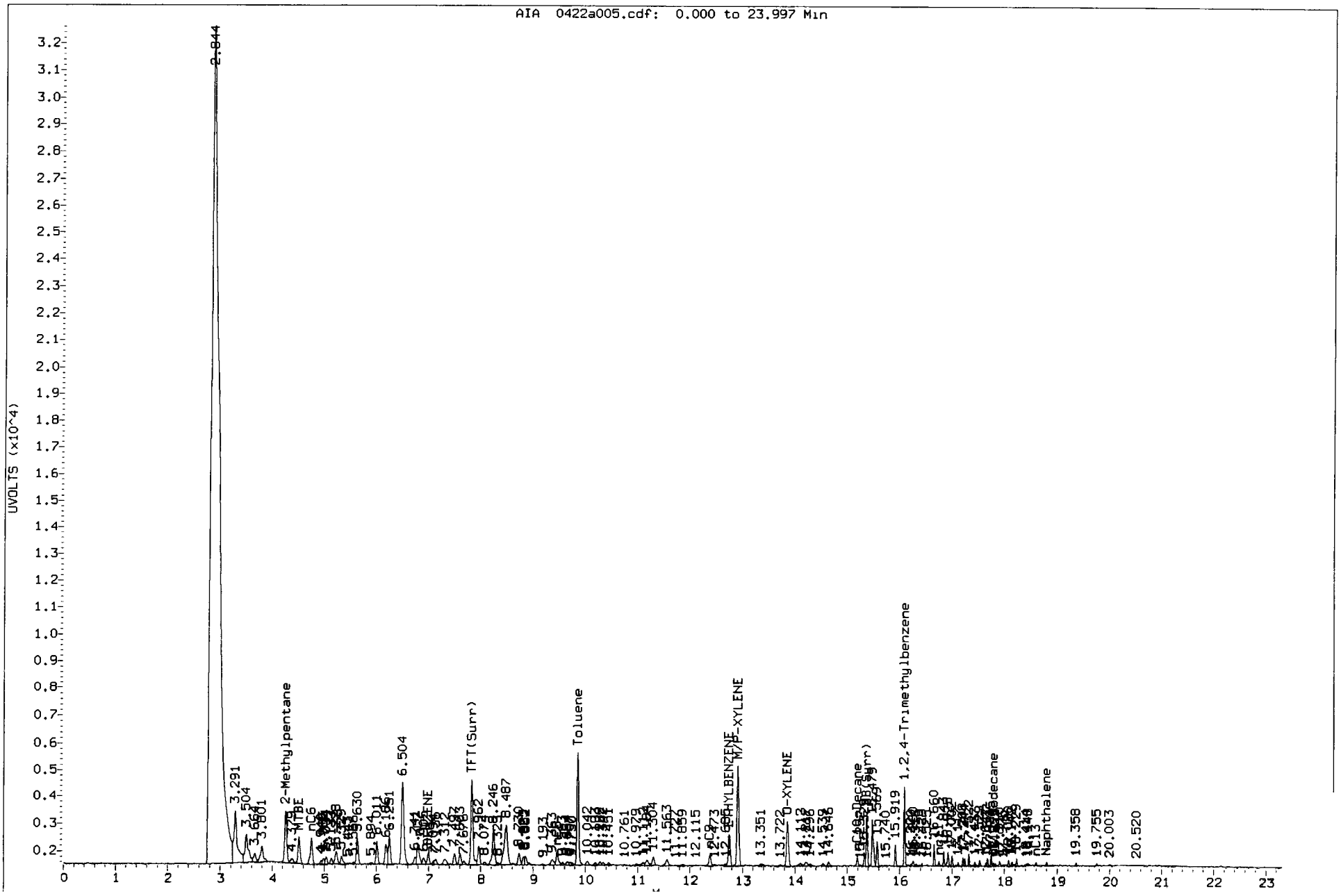
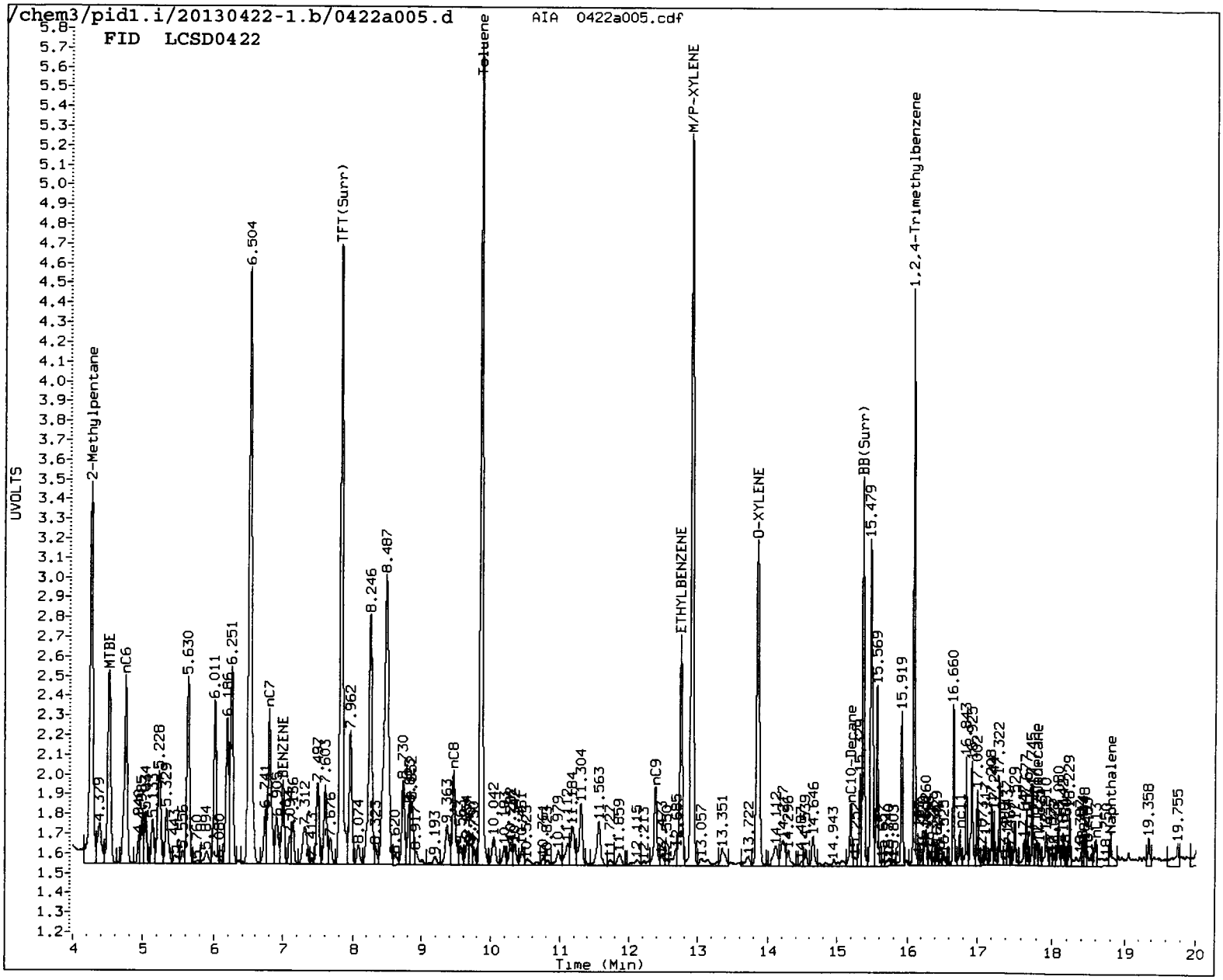
Injection Date: 22-APR-2013 11:21
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

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

5. Other _____

Analyst: JC Date: 4/23/13

PG 4/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a006.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a006.d
Method: /chem3/pid1.i/20130422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: MB0422
Client ID:
Injection Date: 22-APR-2013 11:51
Matrix: WATER
Dilution Factor: 1.000

==========

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.829	0.003	3140	38404	90.5	TFT(Surr)
15.373	0.001	2013	16761	88.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	1921	0.005
8015C 2MP-TMB	(4.16 to 16.20)	723723	5908	0.008
AK101 nC6-nC10	(4.65 to 15.09)	582885	5214	0.009
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	2788	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
7.837	0.002	3636	91.6	TFT(Surr)
15.381	0.001	7899	89.9	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

WL_19 : 02069

Data File: /chem3/pid1.i/20130422-1.b/0422a006.d

Date : 22-APR-2013 11:51

Client ID:

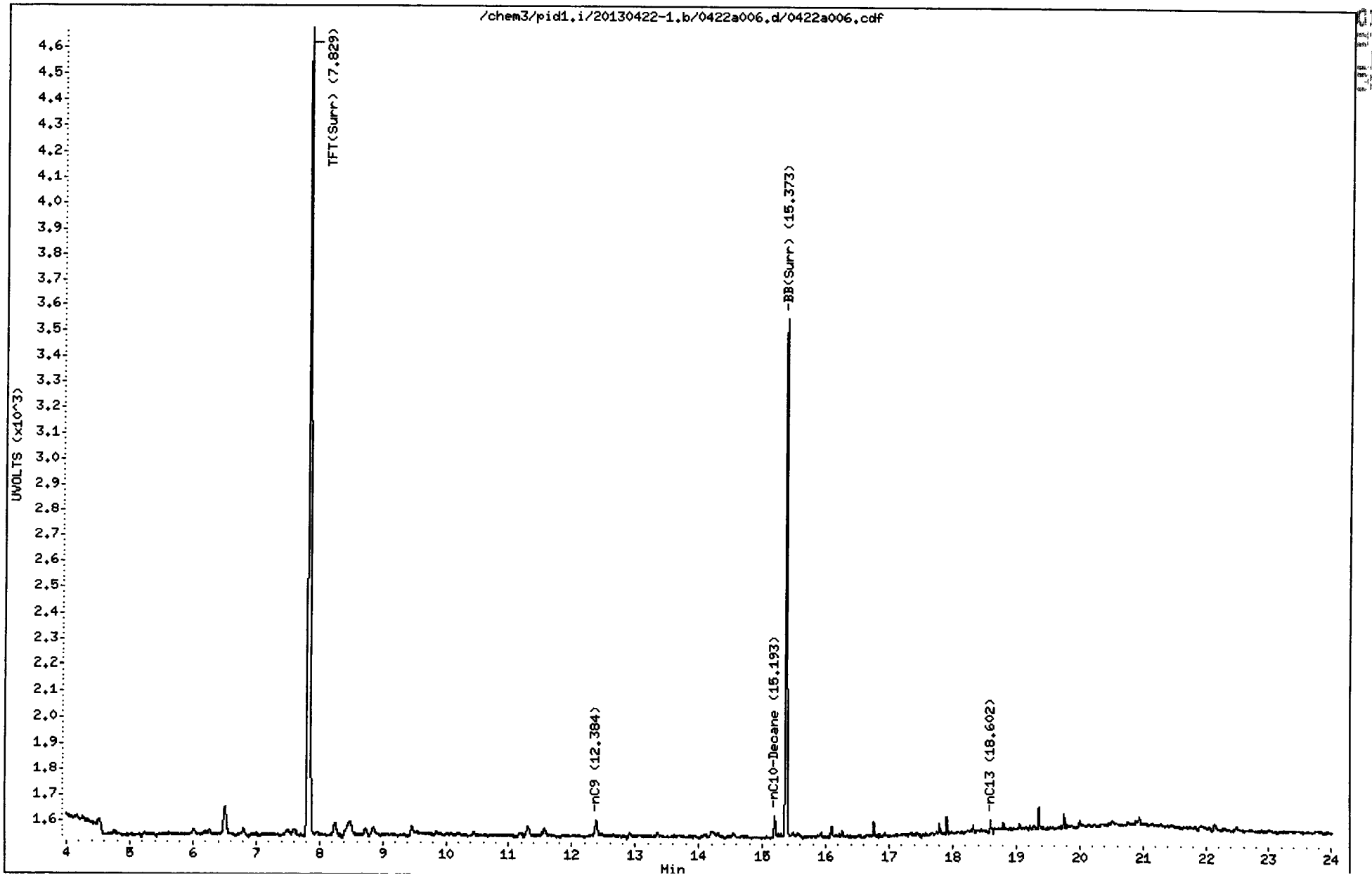
Sample Info: MB0422

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



AG 4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a014.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a014.d
Method: /chem3/pid1.i/20130422-2.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: 22-APR-2013 16:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.827	0.000	3402	46778	98.1	TFT(Surr)
15.373	0.001	2057	18866	90.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	801536	2.238
8015C 2MP-TMB	(4.16 to 16.20)	723723	1605117	2.218
AK101 nC6-nC10	(4.65 to 15.09)	582885	1304950	2.239
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	828526	2.209

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
7.836	0.002	3800	95.7	TFT(Surr)
15.382	0.001	7987	90.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.005	0.001	2200	9.16	Benzene
9.866	0.003	21665	94.60	Toluene
12.760	0.002	5066	26.17	Ethylbenzene
12.924	0.006	20402	95.54	M/P-Xylene
13.868	0.003	7320	42.91	O-Xylene
4.522	-0.022	313	3.71	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130422-1.b/0422a014.d

Date : 22-APR-2013 16:44

Client ID: GCAL 2

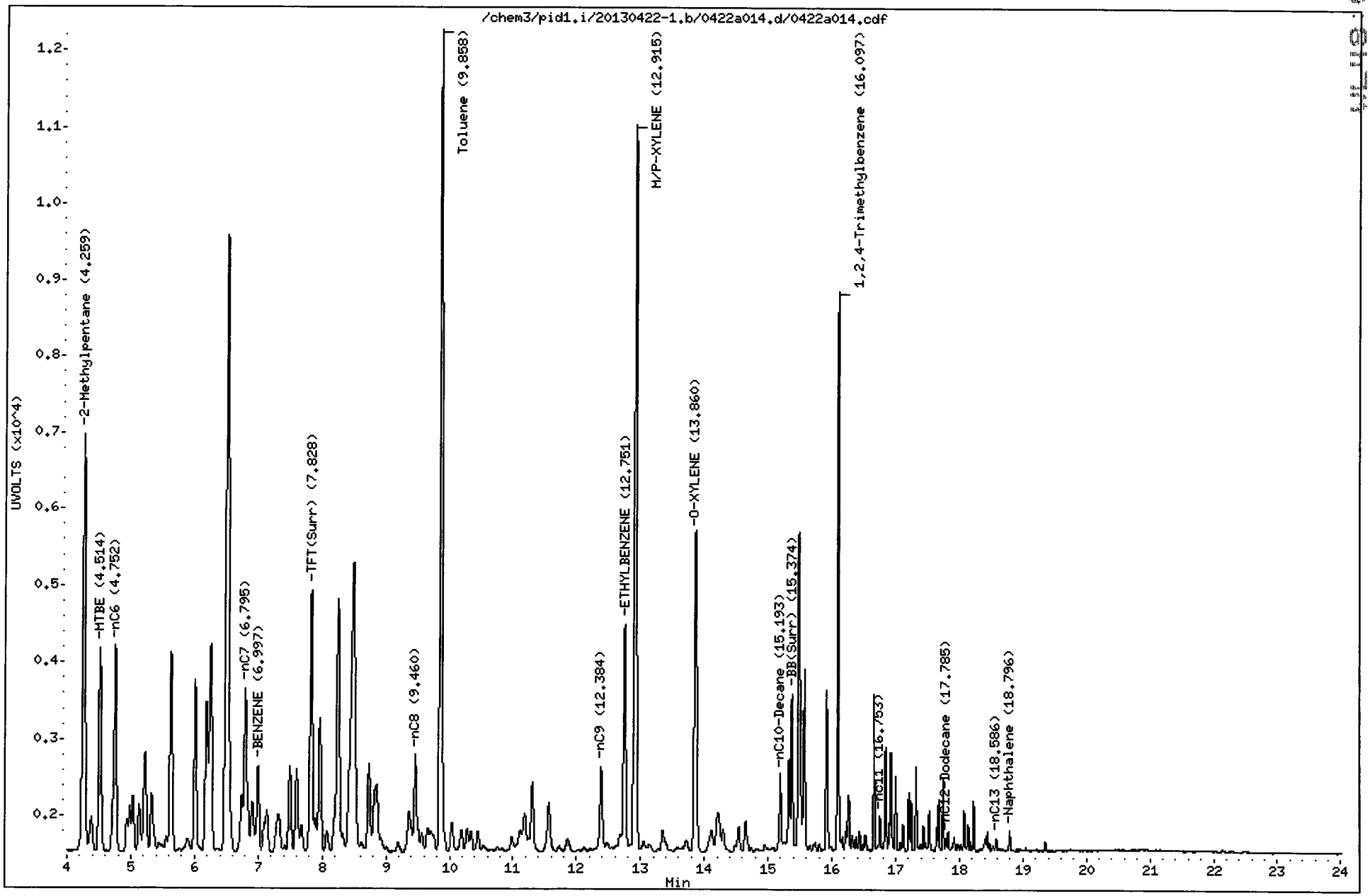
Sample Info: GCAL 2

Column phase: RTX 502-2 FID

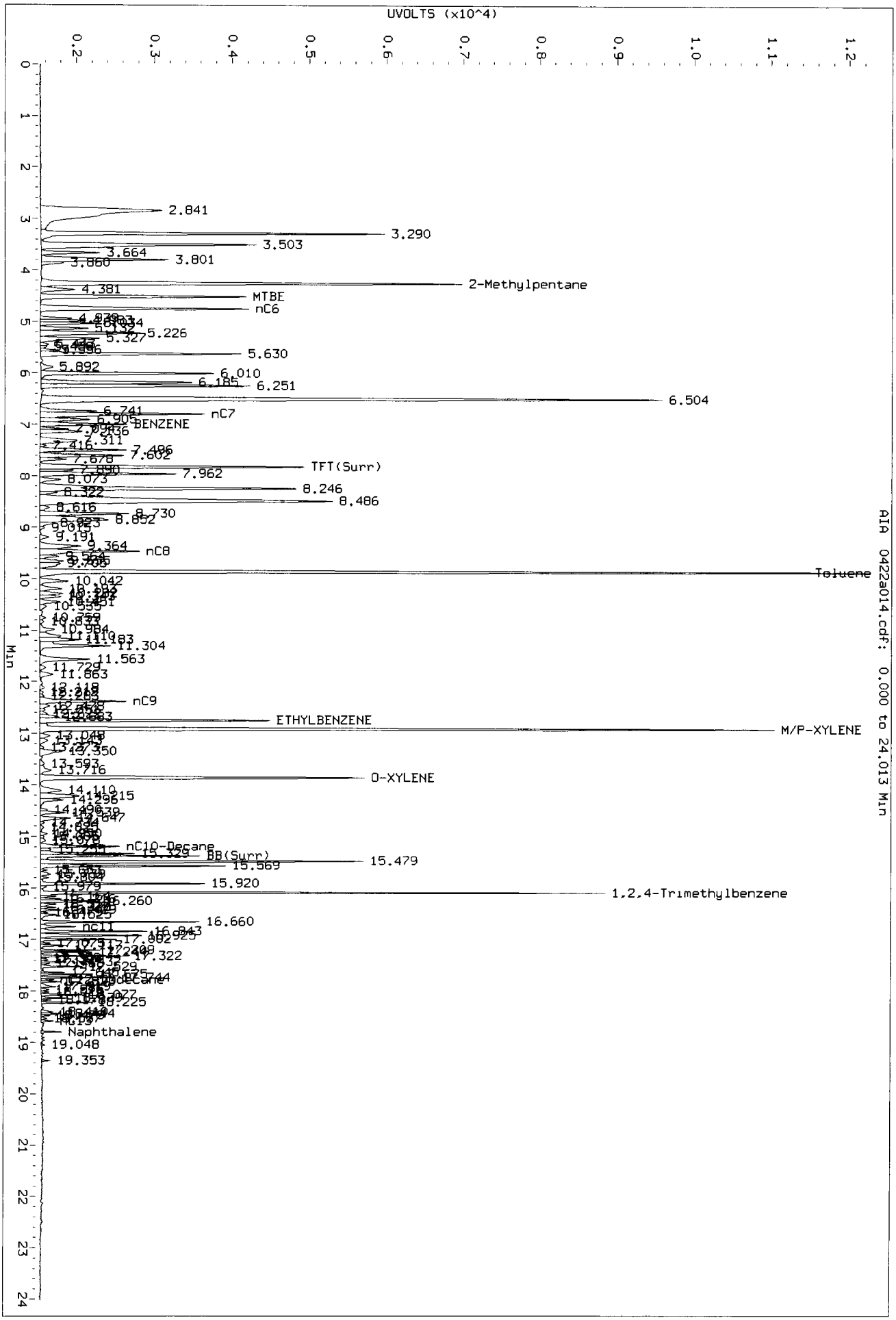
Instrument: pid1.i

Operator: PC

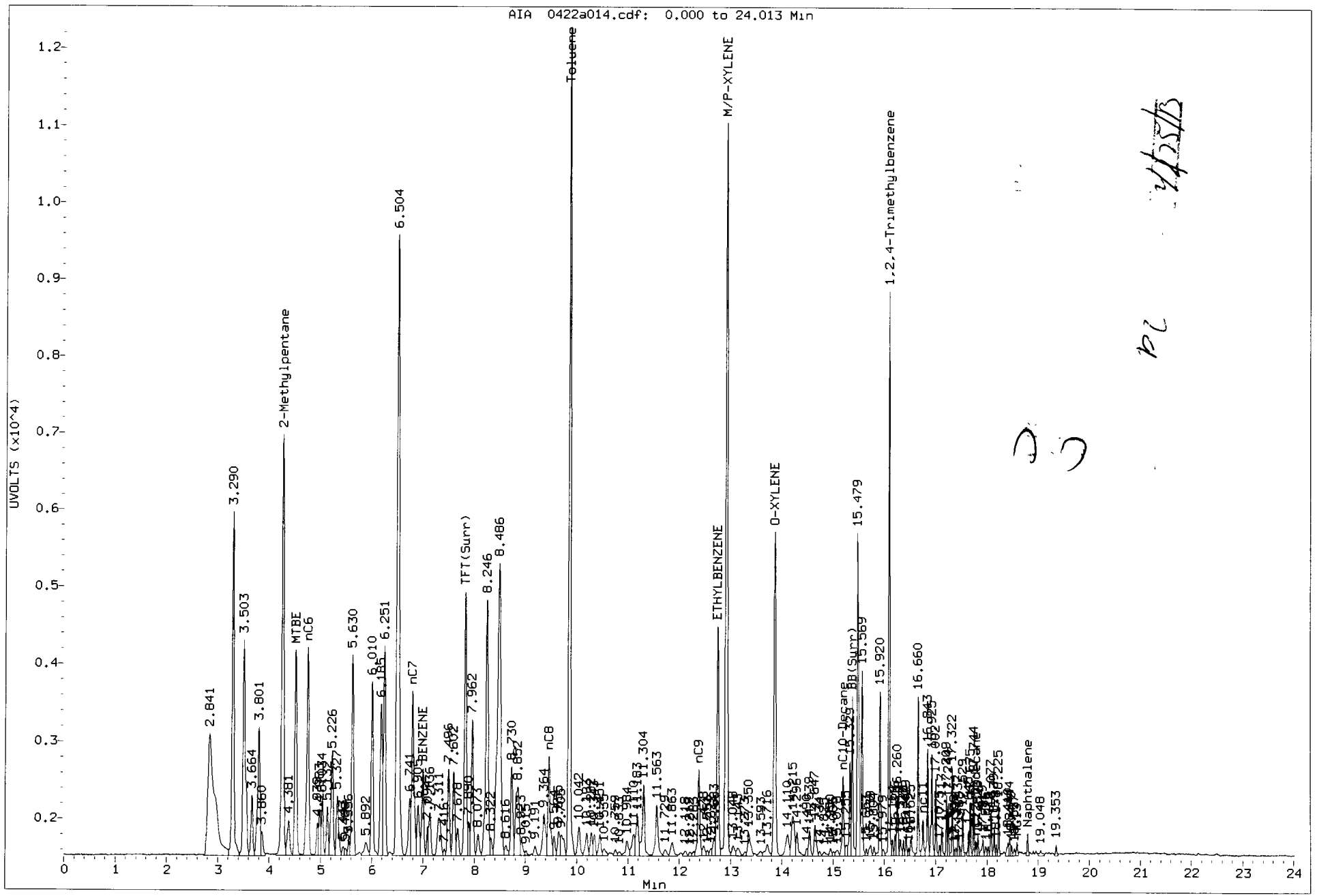
Column diameter: 0.18



PC
4/25/13


UVOLTS (x10^4)
Min
Data File: /chem3/pid1.i/20130422-1.b/0422a014.d/0422a014.cdf
Injection Date: 22-APR-2013 16:44
Instrument: pid1.i
Client Sample ID: GCAL 2
AIA 0422a014.cdf: 0.000 to 24.013 Min
2.841
3.290
3.503
3.664
3.801
2-Methylpentane
MTBE
nC6
5.226
5.630
6.010
6.251
6.504
nC7
BENZENE
TFT(Surr)
7.962
8.246
8.486
nC8
Toluene
11.304
11.563
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
BB(Surr)
15.479
15.569
15.920
1,2,4-Trimethylbenzene
16.660
Naphthalene
19.048
19.353

Data File: /chem3/pid1.i/20130422-1.b/0422a014.d/0422a014.cdf
Injection Date: 22-APR-2013 16:44
Instrument: pid1.i
Client Sample ID: NPDES SAMPLING



PC
4/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a018.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a018.d
Method: /chem3/pid1.i/20130422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: WL49E
Client ID: IM-TB-01-20130410-W
Injection Date: 22-APR-2013 18:41
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.830	0.003	3090	37739	89.1	TFT(Surr)
15.375	0.002	1969	16138	86.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	0	0.000
8015C 2MP-TMB	(4.16 to 16.20)	723723	0	0.000
AK101 nC6-nC10	(4.65 to 15.09)	582885	0	0.000
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	0	0.000

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
7.838	0.003	3550	89.4	TFT(Surr)
15.382	0.002	7650	87.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130422-1.b/0422a018.d

Page 1

Date : 22-APR-2013 18:41

Client ID: IM-TB-01-20130410-W

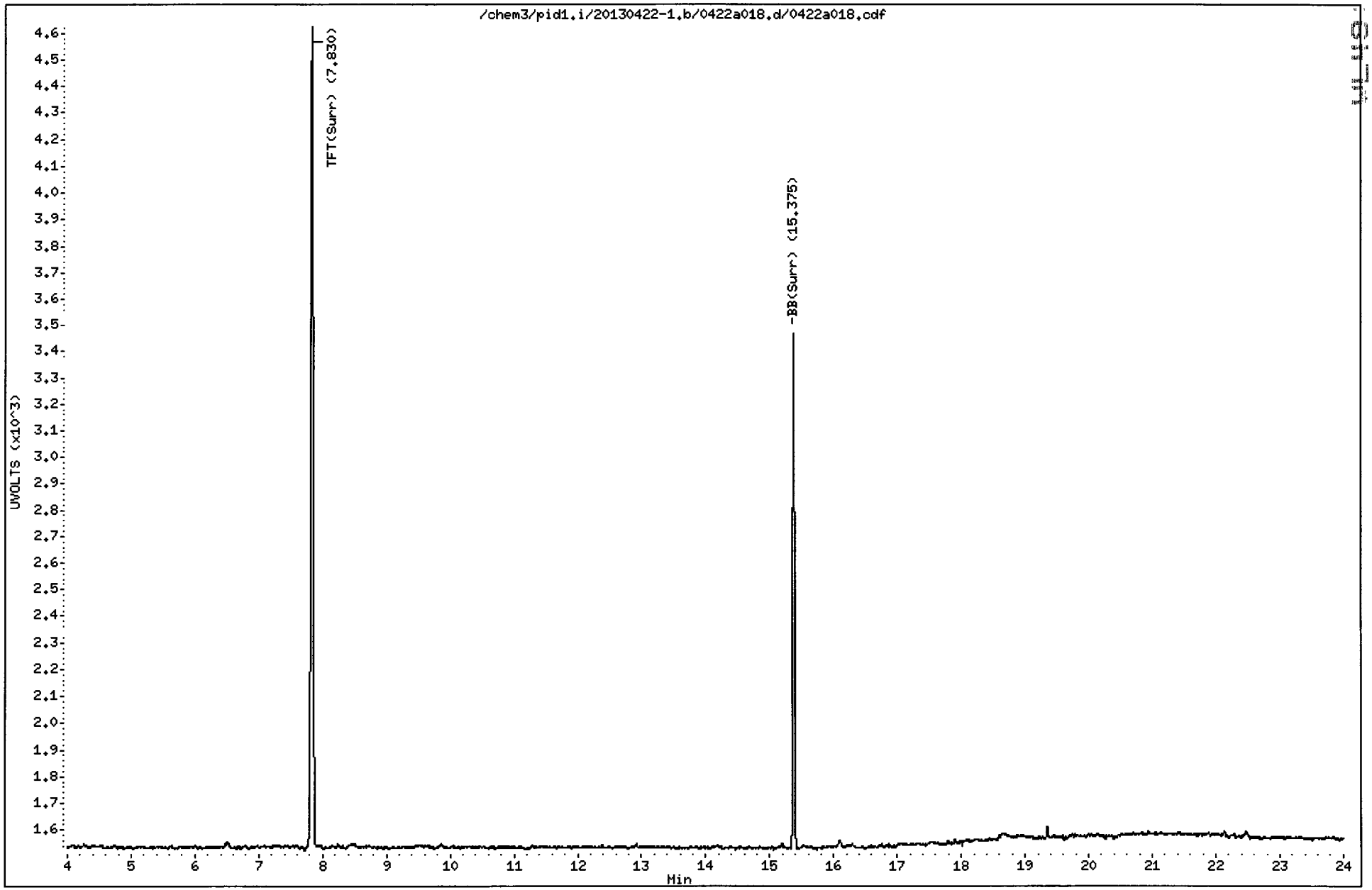
Instrument: pid1.i

Sample Info: WL49E

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



WL49 02675

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a019.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a019.d
Method: /chem3/pid1.i/20130422-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 15-MAR-2013

ARI ID: WL49F
Client ID: IM-CB-01-20130410-S
Injection Date: 22-APR-2013 19:10
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.829	0.002	2788	34375	80.4	TFT(Surr)
15.374	0.002	1820	15554	79.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	208338	0.582 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	181310	0.251 M
AK101 nC6-nC10	(4.65 to 15.09)	582885	133256	0.229 M
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	223232	0.595 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
7.837	0.002	3191	80.4	TFT(Surr)
15.382	0.002	7194	81.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.006	0.002	537	2.24	Benzene
9.865	0.002	6129	26.76	Toluene
12.760	0.003	1433	7.40	Ethylbenzene
12.923	0.005	6319	29.59	M/P-Xylene
13.869	0.003	2751	16.13	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/20130422-1.b/0422a019.d

Page 1

Date : 22-APR-2013 19:10

Client ID: IM-CB-01-20130410-S

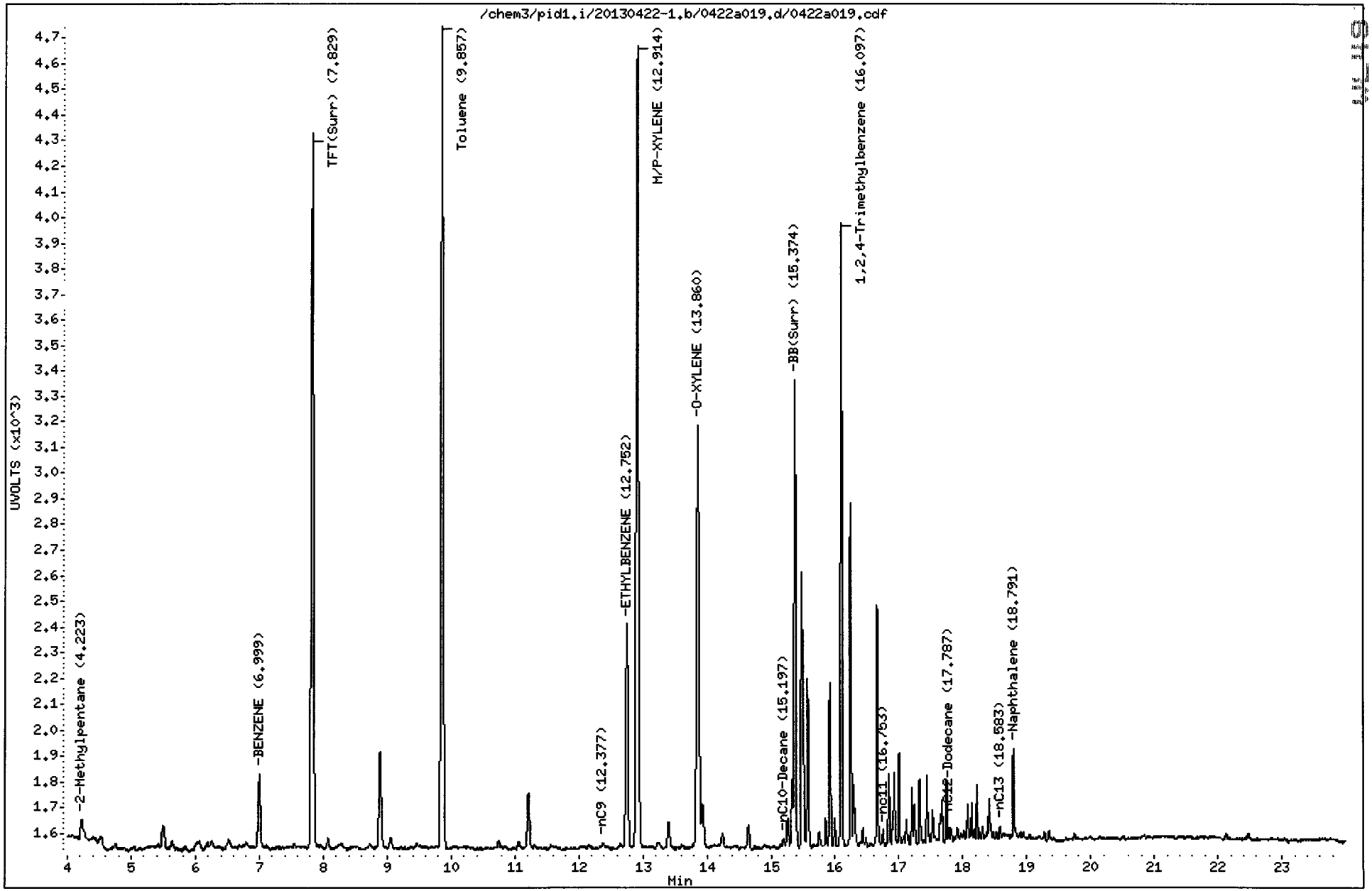
Instrument: pid1.i

Sample Info: WL49F

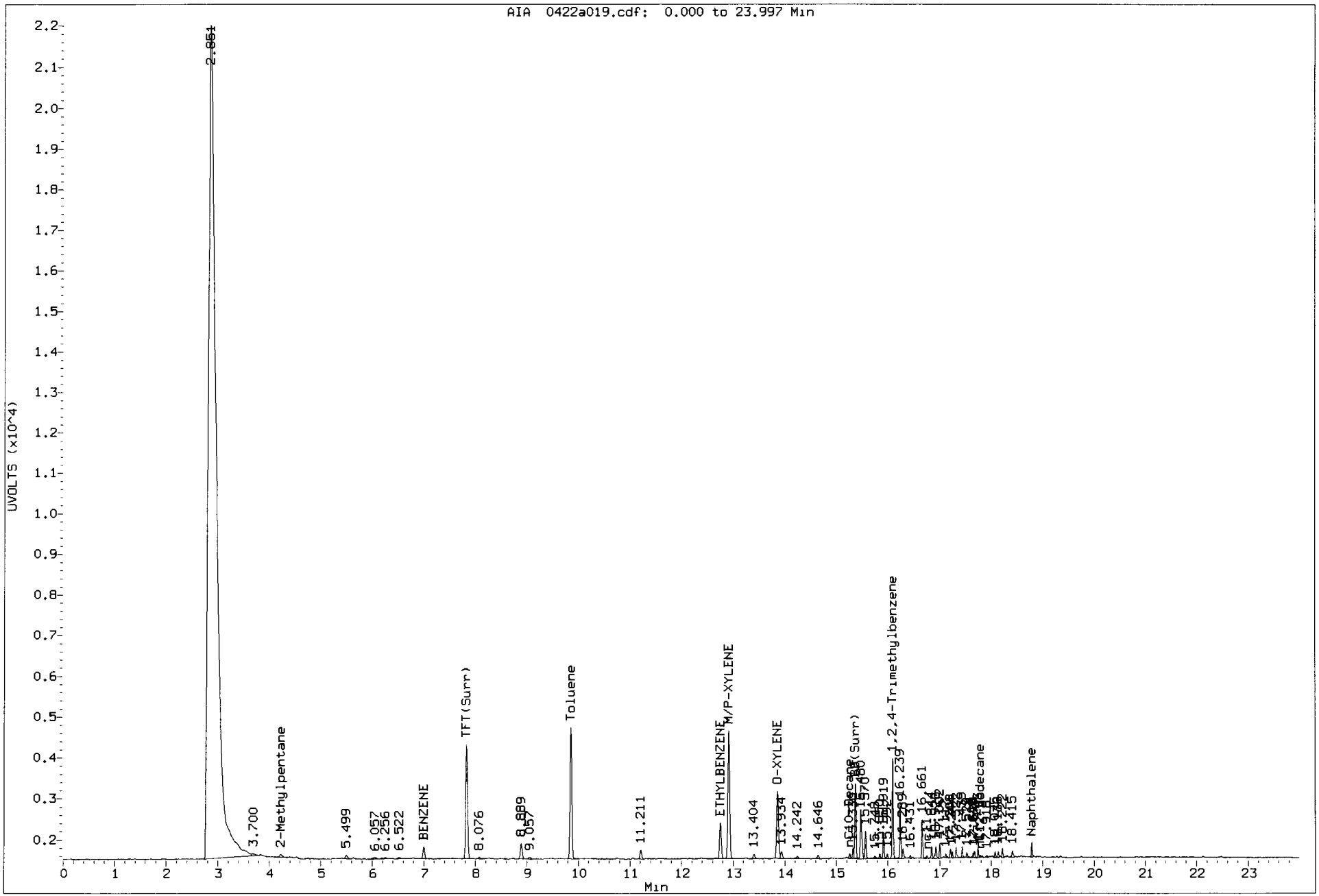
Operator: PC

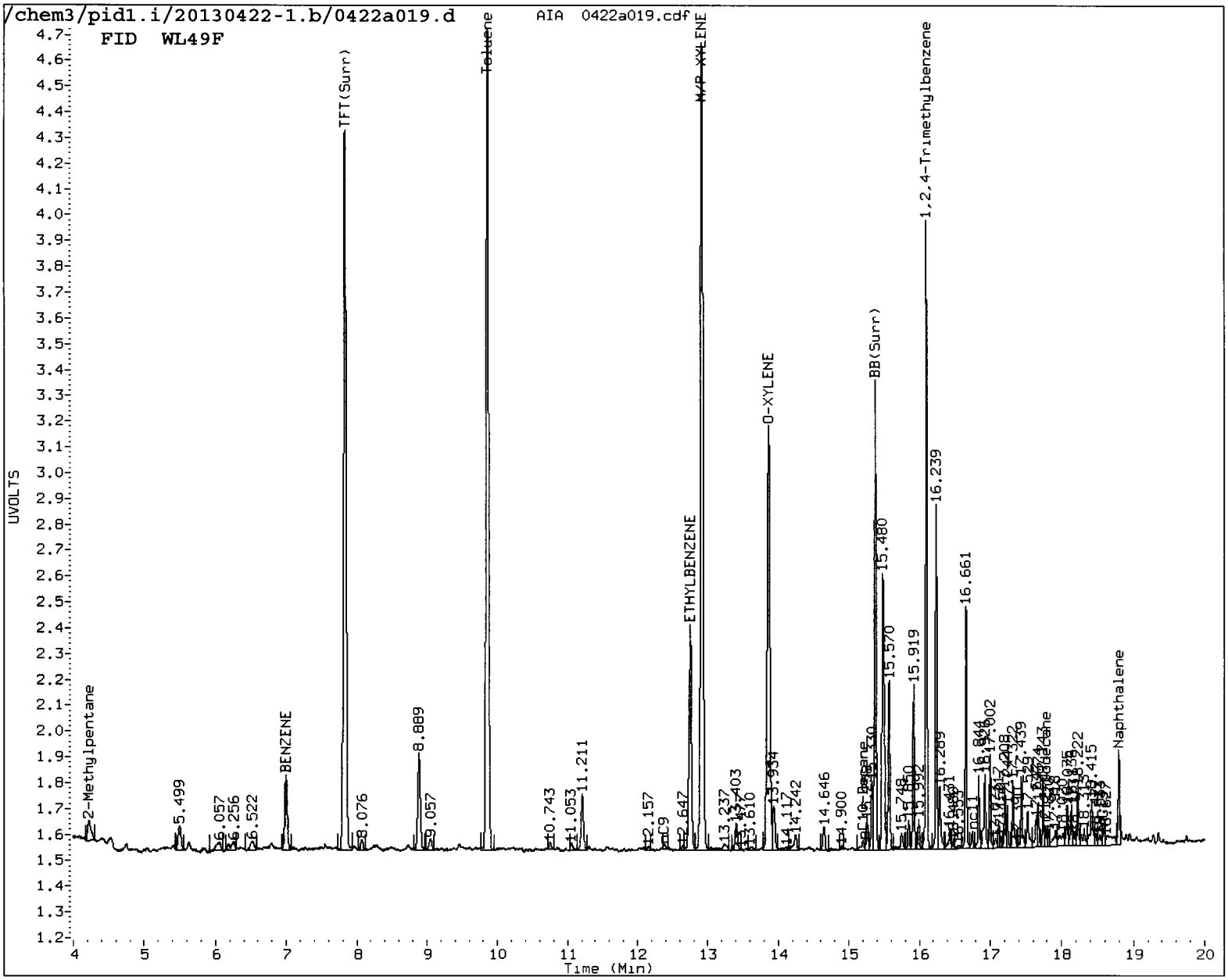
Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130422-1.b/0422a019.d/0422a019.cdf
Injection Date: 22-APR-2013 19:10
Instrument: pid1.i
Client Sample ID: IM-CB-01-20130410-S





MANUAL INTEGRATION

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

5. Other _____

Analyst: YT Date: 4/24/13

MC
4/25/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130422-1.b/0422a025.d
Data file 2: /chem3/pid1.i/20130422-2.b/0422a025.d
Method: /chem3/pid1.i/20130422-2.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: 22-APR-2013 22:06
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.828	0.002	3191	44177	92.0	TFT(Surr)
15.374	0.001	1986	17931	87.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.75 to 17.89)	358114	732169	2.045 M
8015C 2MP-TMB	(4.16 to 16.20)	723723	1426042	1.970 M
AK101 nC6-nC10	(4.65 to 15.09)	582885	1154744	1.981 M
NWTPHG Tol-Nap	(9.75 to 18.90)	375093	760384	2.027 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.837	0.002	3543	89.3	TFT(Surr)
15.381	0.001	7753	88.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.005	0.002	2072	8.63	Benzene
9.866	0.003	20388	89.03	Toluene
12.760	0.003	4733	24.45	Ethylbenzene
12.924	0.006	19014	89.04	M/P-Xylene
13.869	0.004	6846	40.13	O-Xylene
4.522	-0.021	269	3.19	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130422-1.b/0422a025.d

Date : 22-APR-2013 22:06

Client ID: GCAL 3

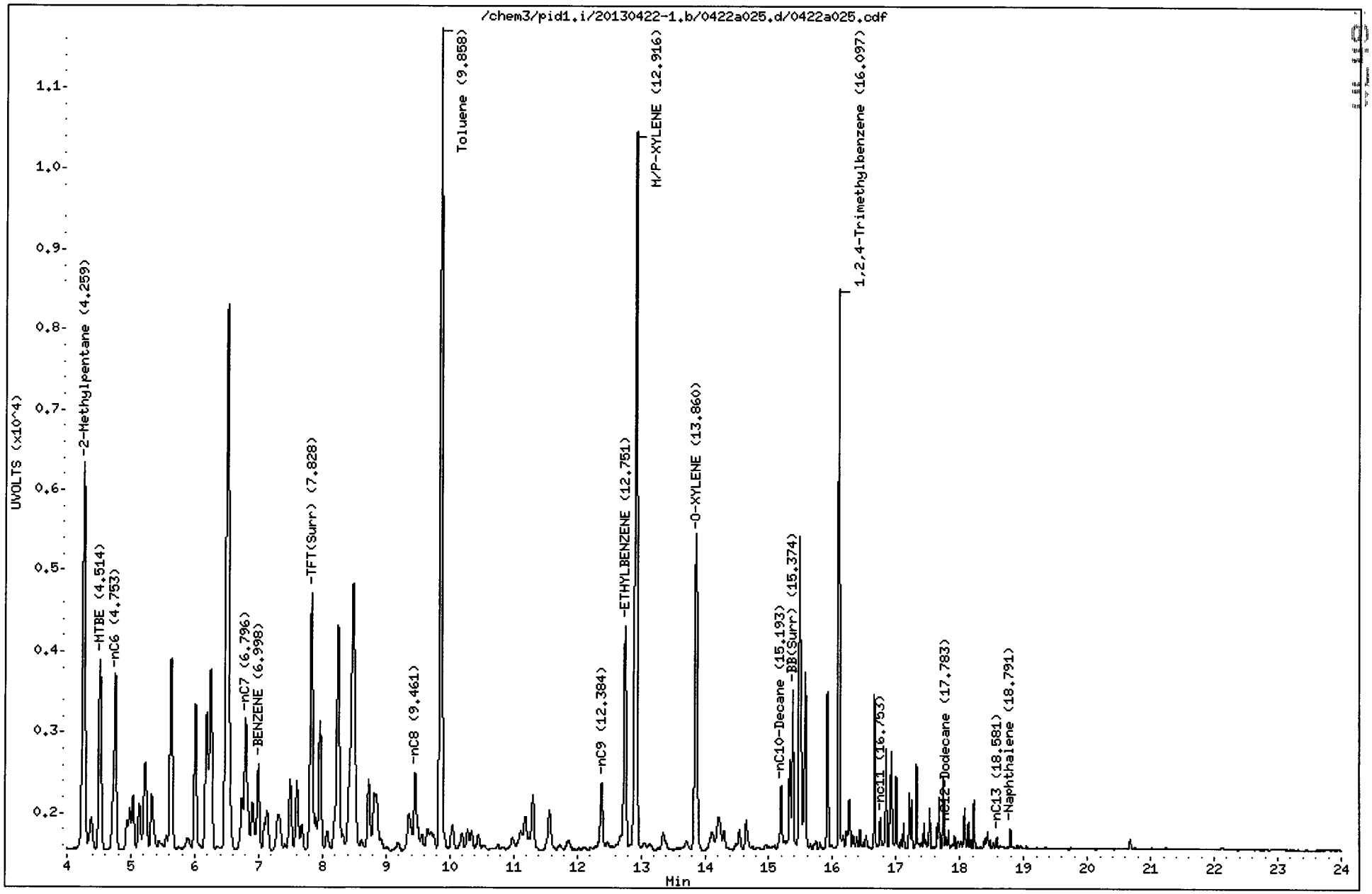
Sample Info: GCAL 3

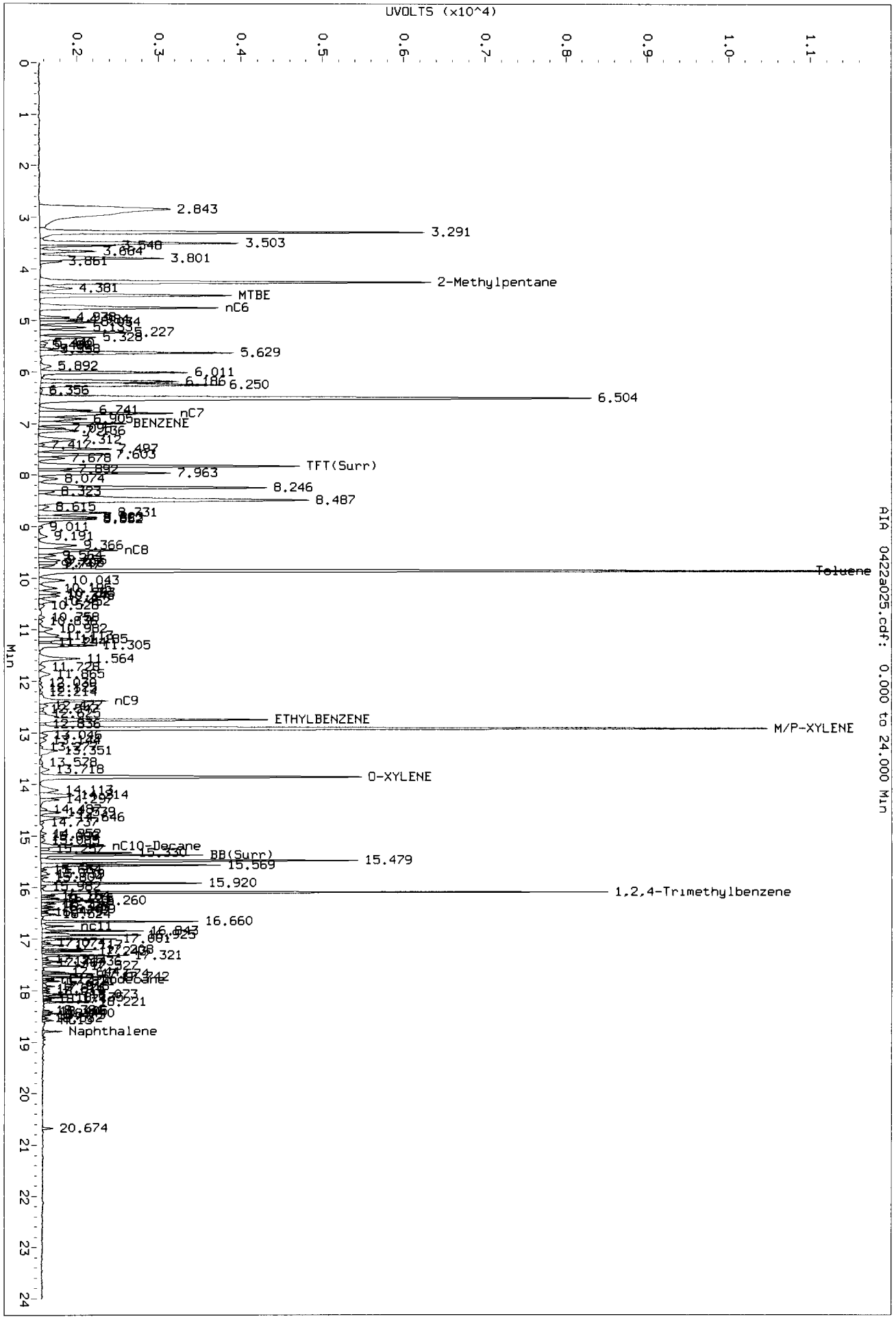
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

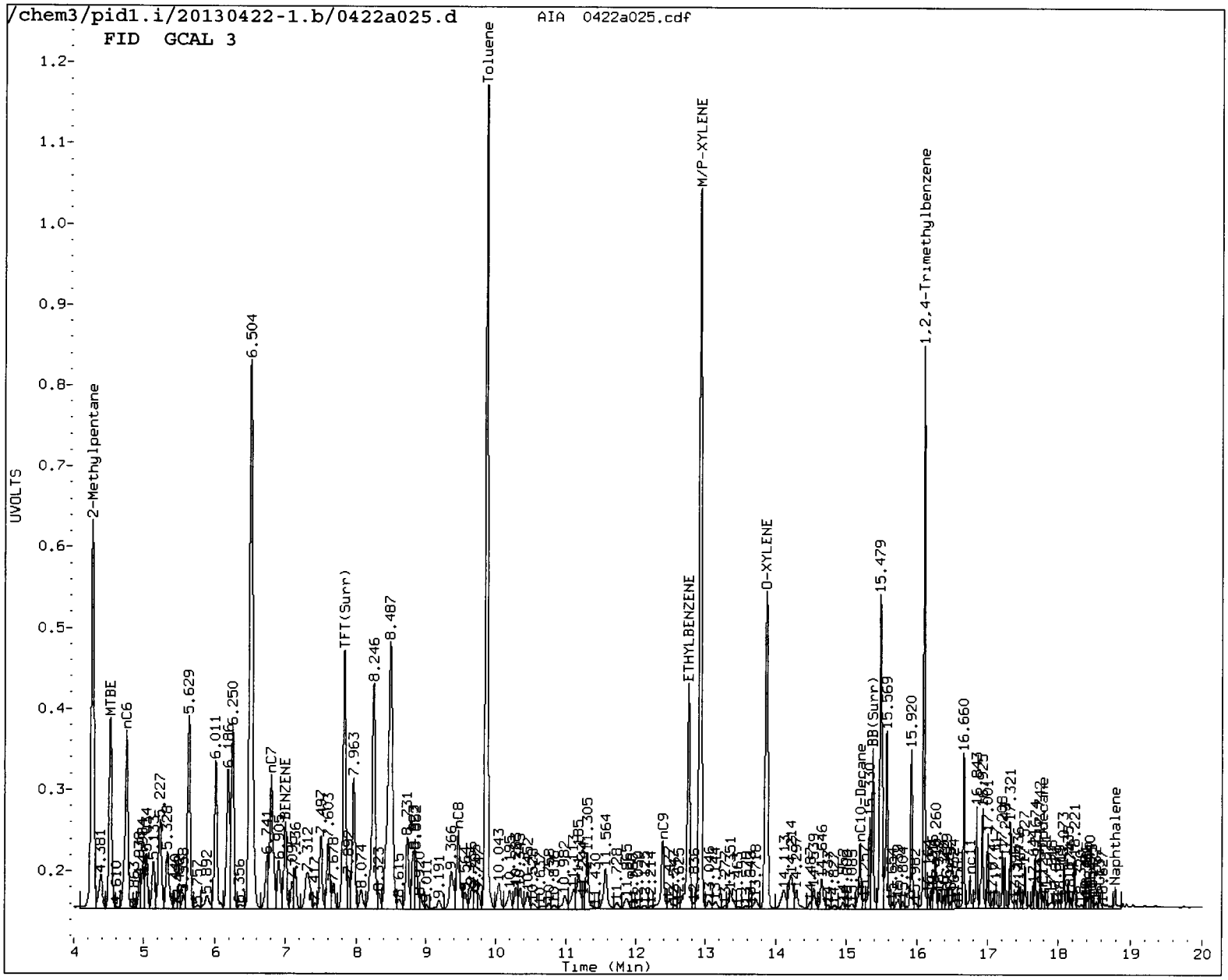
Column diameter: 0.18





Data File: /chem3/pid1.i/20130422-1.b/0422a025.d/0422a025.cdf
Injection Date: 22-APR-2013 22:06
Instrument: pid1.i
Client Sample ID:

PG 4/25/13



MANUAL INTEGRATION

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

5. Other _____

Analyst: PC Date: 4/25/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4-15-13

Final Volume 25

Final Volume (Hg):

Sample ID WL49 ASPK, MBSPK, CSPK, MB2SPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	REN	REN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	3021-15	3001-1	
	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.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 4-15-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WL49 FSPK, MBSPK
WL67 FSPK, MBSPK

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	3001-10		
	Vol Added (mL):	1.0		
	Ag	50		2.0
S	Al	200	200	
T	As	200		10
O	Ba	200	200	
C	Be	50 ↓	50	
K	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
C	Cr	50	50	
O	Cu	50 ↓	50	
N	Fe	200	200	
C	K	1000	1000	
E	Mg	1000	1000	
N	Mn	50	50	
T	Na	1000	1000	
R	Ni	50	50	
A	Pb	200		10
T	Se	200		10
I	Sr	50	50	
O	Tl	200		10
N	V	50	50	
	Zn	50 ↓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	3021-15	3001-1	
	1.0	1.0	
Ag	25 ↓		
Al			500
As	25 ↓		
Ba	25		
Be	25		
Ca			500
Cd	25 ↓		
Co	25		
Cr	25 ↓		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ↓		
Pb	25 ↓		
Sb		25 ↓	
Se	80 ↓		
Tl	25 ↓		
U	25		
V	25		
Zn	80 ~~↓~~	CB 4/15/13	

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SMM	CVA	1.0	0.05	3007-13
Hg MBSPK	↓	CVA	1.0	0.10	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 4-15-13 Time: 0815

Matrix: Water Block ID: #13 Block Temp: 94° 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
WL49 A	12	✓	50	25.0			
" AOLP	12	✓					
" AOSPK	12	✓					
" B	11	—					Preserved in Lab
" MB1	—	✓					
" MB1SPK	—	✓					
" C	1	—					
" COLP	1	—					
" OSPK	1	—					Filtered
" D	1	—					in Lab
" MB2	—	—					
" MB2SPK	—	—					
WL50 A	4	✓					
" MB	—	✓					
" MBSPK	—	✓					
WL80 A	2	✓					
" MB	—	✓					
" MBSPK	—	✓					
WL36 A	3	✓					
" AOLP	3	✓					
" AOSPK	3	✓					
" MB1	—	✓	↓	↓			
" MB1SPK	—	✓	50.0	25.0			
				4-15-13 DM			

Chemical/Reagent ID: HNO3 : MP2472 H2O2 : I7845 Tube Lot # ML27KK03
MP2452

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB **Date:** 04-15-13 **Time:** 1055

Matrix: Soil **Block ID:** #2/#5 **Block Temp:** 95°C/95°C **Thermometer:** MB046/MB60

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
WL49 F	6	–	1.004	50.0	1.062	50.0	
" FDup	6	–	1.006		1.058		
" FSpk	6	–	1.004		1.066		
" G	2	–	1.026		1.021		
" MB3	–	–	–		–		
" MB3Spk	–	–	–	50.0	–	50.0	
				CB 4-15-13			

Chemical/Reagent ID: HNO3: MP2473/I8169 H_2O_2: I7845 Tube lot #: ML27KK03

HCl: I7971

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm **Matrix:** Soil

Analyst: CB **Date:** 04-15-13

Bath Temp: 90°C **Start Time:** 1125 **End Time:** 1155

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WL49 F	6	~	0.277	50.0	4/25 1	Y	
" Fdup	6	~	0.279	↓	1	↓	
" FSpk	6	~	0.274		1		
" G	2	~	0.246		1		
" MB3	~	~	~		1		
" MB3SPK	~	~	~	50.0	1	Y	

CB
4/15/13

Chemical/Reagent ID:

HNO_3: I8169 **H_2SO_4:** I8044 **HCl:** ~

5% $K_2S_2O_8$: mp2439 **5% $KMnO_4$:** mp2445 **Digest Tube Lot:** MH21KK06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WL49
Unacceptable Blank:	☐	Date of Event:	4-19-13
Unacceptable Duplicate:	☐	Client ID:	
Unacceptable Spike:	☒	Method/Element:	Hg CVA
Unacceptable Reference:	☐	Prep Code:	5mm

Details of Problem/Recommended Corrective Action:

1st Analysis: F - 7.93ppb
FSPK - 9.53ppb %R = 160 High

2nd Analysis: F - 7.87ppb
FSPK - 9.45ppb %R = 156 High

Samples Affected: F, FDUP, FSPK, MB, MBSPK

Corrective Action Taken:

4/22/13

Analyst Initials: DM **Supervisor:**

Date: 4-19-13 **Date:**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:

ARI Job No.: WL49

Unacceptable Blank: ☐

Date of Event: 4-18-13

Unacceptable Duplicate: ☑

Client ID:

Unacceptable Spike: ☑

Method/Element: ICPMS

Unacceptable Reference: ☐

Prep Code: LEN / SW3

Details of Problem/Recommended Corrective Action:

See attached

~~LEN~~ ADup, A, Cr Ni Cu Cd high RPD 1x

rerun ADup OK 4-19-13

SW3 F, FDup Fspk 20x

Ag, Sb high RPD

Ni ~~Sb~~ high %R Sb low %R

post spike ok

Sb dissolved > total D & B Sb is poor behavior could be high solids in total which precipitates Sb -

Samples Affected:

Corrective Action Taken:

Analyst Initials: JM

Supervisor:

Date: 4-18-13

Date:

5049F

Revision 007
6/11/10

WL49 02092

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)

icpms

DUPLICATION:				SPIKE RECOVERY:				
	DUP	BKGD			SPIKE	BKGD	WL49 F 20X	
VOLUME	100	100		VOLUME	100	100		
SAMP WT	1.058	1.062		SAMP WT	1.066	1.0620		
ELEMENT	DUP	BKGD	% RPD	ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l			ug/l	ug/l	mg/L	#VALUE!
Be			#VALUE!	Be			25	0
Na			#DIV/0!	Na			5000	0
Mg			#VALUE!	Mg			5000	#VALUE!
Al			#VALUE!	Al			5000	#VALUE!
K			#DIV/0!	K			5000	0
Ca			#DIV/0!	Ca			5000	0
V			#DIV/0!	V			25	0
Cr	96.956	94.344	3.11	Cr	119.866	94.344	25	100.66662
Fe			#VALUE!	Fe			5000	#VALUE!
Mn			#VALUE!	Mn			25	#VALUE!
Co			#VALUE!	Co			25	#VALUE!
Ni	101.206	103.417	1.78	Ni	147.213	103.417	25	173.62593
Cu			#DIV/0!	Cu			25	0
Zn			#VALUE!	Zn			80	#VALUE!
As	10.985	10.717	2.85	As	36.784	10.717	25	104.10654
Se	0	0	#DIV/0!	Se	76.257	0	80	95.32125
Mo			#VALUE!	Mo			25	#VALUE!
Ag	1.293	1.748	29.56	Ag	23.295	1.748	25	86.161665
Cd	11.477	11.376	1.26	Cd	36.276	11.376	25	99.42861
Sb	2.227	1.81	21.03	Sb	2.745	1.81	25	3.7127307
Ba			#VALUE!	Ba			25	#VALUE!
Tl	0	0	#DIV/0!	Tl	21.939	0	25	87.756
Pb			#DIV/0!	Pb			25	0

TABLE 6

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 4-16-13

ICP 2	Analyst BA 4-17-13	Peer 4-17-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	↓
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	See log
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WL74
Matrix Duplicates	✓	✓	WL67
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst Notes and CAFs	✓	✓	CAF - WL67, WL74

WL 10 0205

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 1-22-13 Analysis Date: 4-16-13 Analyst: BA

LR Date: 1-22-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted. BA 4-16-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			3026-10
		2			3027-9
		3			-10
		4			-11
		5			-12
		ICV			3024-9
		ICB			Mo↑
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			Mo↑
		WL68 MB1	SWC	2	
	✓	B		↓	Fe > LR (RR 5x)
	✓	A-L		10	↑
	✓	A		2	Fe > LR (RR 10x)
	✓	ADUP			
	✓	ASPK			
222	✓	~~APOST~~ 222222			0.08 mL ICP Spk 3401-10
		REF1			
		MBSPK			
		CCV2			
		CCB2			
		WL68 B	SWC	5	

Analytical Resources, Incorporated
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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-16-13 Analyst: BA

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. BA 4-16-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WL68 A-L	SWC	50 ✓	
		A		10	
		ADUP		✓	
		ASPK		✓	Cu, Zn STL
		APOST			0.08 mL ICP Spk 3001-10 Cu OK, Zn STL
		CCV3			
		CCB3			
		CRI			
		ICSA			
		ICSAB			
		CCV4			
		CCB4			End WL68
		WL74 MB1	SWC	2	
		B			
		C			
		J-L		10 ✓	
		J		2	
		JDUP		✓	
		JSPK		✓	Sb ✓ (CAF)
		JPOST		✓	0.08 mL ICP Spk 3001-10 0.016 mL 1000 ppm Sb 2938-7 Sb OK
		REF1		✓	
		MB1SPK		✓	
		CCV5			
		CCB5			

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SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-16-13 Analyst: BA

LR Date: — Page: 3 of 4

All corrections made by analyst unless otherwise noted. BA 4-16-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WL74 D	SWC	2	
		E			
		F			
		G			
		H			
		I			
		CCV6			
		CCB6			
		CRI			
		ICSA			
		ICSAB			
		CCV7			
		CCB7			End WL74
		WL49 MB3	SWC	2	
		G		↓	
	✓	FDUP		5	FL>LR (RR 10x)
	✓	F			
	✓	FSPK			
zzz		~~FPOST~~ zzzzzz			0.05 mL ICP Spk 3401-10
		MB3SPK		2	
		CCV8			
		CCB8			
		WL67 MB1	SWC	2	
		B		5	

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Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 4-16-13 Analyst: BA

LR Date: — Page: 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WL67 ADUP	SWC	5 ✓	Cu, Zn wide RPD
		A			(CAF)
		ASPK		✓	Cu, Zn STL
		APOST		✓	0.08 mL ICP Spk 3001-10 Cu OK Zn STL
		MBISPK		2 ✓	
		CCV9			
		CCB9			End WL67
		WL86 MB	TWC		
	✓	A		5 ✓	B > LR
		MBSPK			
		CCV10			
		CCB10			B↑ (C.O.)
		WL49 FDUP	SWC	10	
		F			
		FSPK		✓	Cu, Zn STL
		FPOST			0.08 mL ICP Spk 3001-10 Cu OK Zn STL
		WL86 A	TWC		
		CCV11			B↑ (C.O.)
		CCB11			End Pkg (WL49)
		BA 4/16/13	BA 4/17/13		

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

==========

4/16/2013 8:05:46 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 2

==========

==========

Analysis Begun

Start Time: 4/16/2013 8:07:30 AM **Plasma On Time: 4/16/2013 7:17:05 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130416
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 8/13/2012 7:13:22 AM**
IEC File: IE073012A.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: B1 **Date Collected: 4/16/2013 8:07:36 AM**
Data Type: Original

Dilution: 1.000000X
User canceled analysis.

BA
4/16/13

==========

Analysis Begun

Start Time: 4/16/2013 8:08:20 AM **Plasma On Time: 4/16/2013 7:17:05 AM**

Analysis Begun

Start Time: 4/16/2013 8:40:18 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/16/2013 7:17:05 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130416
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 4/16/2013 8:40:19 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2759629.4	9304.47	0.34%	100.0	%
ScR 361.383	384701.2	1904.98	0.50%	100.0	%
Ag 328.068†	-9.0	11.04	122.25%	[0.00]	mg/L
Al 308.215†	144.1	1.38	0.96%	[0.00]	mg/L
As 188.979†	-5.1	1.84	35.82%	[0.00]	mg/L
B 249.677†	-60.2	2.05	3.40%	[0.00]	mg/L
Ba 233.527†	-9.5	1.15	12.17%	[0.00]	mg/L
Be 313.042†	632.2	5.17	0.82%	[0.00]	mg/L
Ca 317.933†	37.4	11.56	30.93%	[0.00]	mg/L
Cd 228.802†	232.6	1.03	0.44%	[0.00]	mg/L
Co 228.616†	-125.3	2.82	2.26%	[0.00]	mg/L
Cr 267.716†	-106.4	5.39	5.06%	[0.00]	mg/L
Cu 324.752†	2378.1	18.38	0.77%	[0.00]	mg/L
Fe 273.955†	-31.5	2.78	8.83%	[0.00]	mg/L
K 766.490†	245.7	15.96	6.50%	[0.00]	mg/L
Mg 279.077†	142.2	4.97	3.49%	[0.00]	mg/L
Mn 257.610†	78.1	4.14	5.30%	[0.00]	mg/L
Mo 202.031†	72.2	1.26	1.74%	[0.00]	mg/L
Na 589.592†	-395.9	26.58	6.71%	[0.00]	mg/L
Na 330.237†	38.7	13.18	34.08%	[0.00]	mg/L
Ni 231.604†	22.1	2.60	11.76%	[0.00]	mg/L
Pb 220.353†	-44.9	5.94	13.25%	[0.00]	mg/L
Sb 206.836†	8.1	0.75	9.26%	[0.00]	mg/L
Se 196.026†	-56.6	0.46	0.82%	[0.00]	mg/L
Si 288.158†	56.4	2.05	3.64%	[0.00]	mg/L
Sn 189.927†	-19.4	1.19	6.14%	[0.00]	mg/L
Sr 421.552†	288.7	33.72	11.68%	[0.00]	mg/L
Ti 334.903†	14.6	12.31	84.40%	[0.00]	mg/L
Tl 190.801†	-27.2	1.54	5.68%	[0.00]	mg/L
V 292.402†	24.6	5.95	24.23%	[0.00]	mg/L
Zn 206.200†	-9.7	2.45	25.16%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 4/16/2013 8:44:36 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected				Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2741683.3	5623.82	0.21%	99.35	%
ScR 361.383	383201.3	275.45	0.07%	99.61	%
Ba 233.527†	62845.3	422.74	0.67%	[10]	mg/L
Cd 228.802†	225239.0	900.30	0.40%	[10]	mg/L
Co 228.616†	326470.0	389.03	0.12%	[10]	mg/L
Cr 267.716†	83971.3	152.89	0.18%	[10]	mg/L
Cu 324.752†	2638992.6	4668.22	0.18%	[10]	mg/L
Mn 257.610†	520607.3	1918.38	0.37%	[10]	mg/L
V 292.402†	1384848.2	5494.71	0.40%	[10]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: STD3 **Date Collected: 4/16/2013 8:46:39 AM**
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2744052.5	11360.70	0.41%	99.44	%
ScR 361.383	378476.1	2083.89	0.55%	98.38	%
Ag 328.068†	232276.2	1052.89	0.45%	[1.0]	mg/L
As 188.979†	13722.6	139.03	1.01%	[10]	mg/L
B 249.677†	66792.2	50.10	0.08%	[10]	mg/L
Be 313.042†	2878981.2	11448.33	0.40%	[5.0]	mg/L
Na 589.592†	622657.3	969.52	0.16%	[50]	mg/L
Ni 231.604†	37847.3	205.07	0.54%	[10]	mg/L
Pb 220.353†	79844.3	835.96	1.05%	[10]	mg/L
Se 196.026†	15176.2	134.13	0.88%	[10]	mg/L
Sr 421.552†	4815447.3	13090.11	0.27%	[5]	mg/L
Tl 190.801†	18147.1	202.44	1.12%	[10]	mg/L
Zn 206.200†	41050.5	127.19	0.31%	[10]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: STD4 **Date Collected: 4/16/2013 8:49:13 AM**
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2772112.7	9481.22	0.34%	100.5	%
ScR 361.383	383934.6	1900.44	0.49%	99.80	%
Mo 202.031†	187151.6	1948.05	1.04%	[10]	mg/L
Sb 206.836†	27505.5	207.51	0.75%	[10]	mg/L
Si 288.158†	15051.3	126.07	0.84%	[10]	mg/L
Sn 189.927†	48574.6	519.24	1.07%	[10]	mg/L
Ti 334.903†	260644.4	150.96	0.06%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 4/16/2013 8:51:29 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2606176.2	5028.58	0.19%	94.44	%
ScR 361.383	378600.2	1290.79	0.34%	98.41	%
Al 308.215†	36465.7	75.93	0.21%	[30]	mg/L
Ca 317.933†	315087.7	435.68	0.14%	[30]	mg/L
Fe 273.955†	124870.5	305.28	0.24%	[100]	mg/L
K 766.490†	211302.6	370.00	0.18%	[100]	mg/L
Mg 279.077†	28494.0	36.25	0.13%	[30]	mg/L
Na 330.237†	3247.1	4.38	0.13%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	232300	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1216	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1372	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6679	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	6285	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	575800	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	10500	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22520	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	32650	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	8397	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	263900	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1249	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2113	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	949.8	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	52060	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	18720	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12450	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	32.47	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3785	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7984	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2751	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1518	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1505	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4857	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	963100	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	26060	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1815	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	138500	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4105	0.00000	1.000000	

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Analysis Begun

Start Time: 4/16/2013 8:58:03 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 4/16/2013 7:17:05 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130416
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 4/16/2013 8:58:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2745164.9	99.48	%	0.544				0.55%
ScR 361.383	376251.9	97.80	%	0.177				0.18%
Ag 328.068†	232273.4	1.000	mg/L	0.0027	1.000	mg/L	0.0027	0.27%
Al 308.215†	2563.3	2.075	mg/L	0.0069	2.075	mg/L	0.0069	0.33%
As 188.979†	2734.7	2.024	mg/L	0.0125	2.024	mg/L	0.0125	0.62%
B 249.677†	6783.7	1.015	mg/L	0.0025	1.015	mg/L	0.0025	0.25%
Ba 233.527†	6523.0	1.037	mg/L	0.0055	1.037	mg/L	0.0055	0.53%
Be 313.042†	576386.9	1.001	mg/L	0.0047	1.001	mg/L	0.0047	0.47%
Ca 317.933†	21976.3	2.092	mg/L	0.0021	2.092	mg/L	0.0021	0.10%
Cd 228.802†	23661.2	1.040	mg/L	0.0069	1.040	mg/L	0.0069	0.66%
Co 228.616†	33201.7	1.015	mg/L	0.0059	1.015	mg/L	0.0059	0.58%
Cr 267.716†	8877.9	1.057	mg/L	0.0019	1.057	mg/L	0.0019	0.18%
Cu 324.752†	265535.8	1.006	mg/L	0.0019	1.006	mg/L	0.0019	0.19%
Fe 273.955†	2624.1	2.096	mg/L	0.0045	2.096	mg/L	0.0045	0.21%
K 766.490†	42624.2	20.17	mg/L	0.118	20.17	mg/L	0.118	0.58%
Mg 279.077†	1925.0	2.033	mg/L	0.0075	2.033	mg/L	0.0075	0.37%
Mn 257.610†	51672.6	0.9929	mg/L	0.00561	0.9929	mg/L	0.00561	0.57%
Mo 202.031†	18896.5	1.010	mg/L	0.0057	1.010	mg/L	0.0057	0.57%
Na 589.592†	627543.4	50.39	mg/L	0.300	50.39	mg/L	0.300	0.60%
Na 330.237†	1704.6	52.47	mg/L	0.278	52.47	mg/L	0.278	0.53%
Ni 231.604†	3846.4	1.016	mg/L	0.0027	1.016	mg/L	0.0027	0.26%
Pb 220.353†	16069.1	2.014	mg/L	0.0111	2.014	mg/L	0.0111	0.55%
Sb 206.836†	5678.5	2.062	mg/L	0.0144	2.062	mg/L	0.0144	0.70%
Se 196.026†	3040.1	2.002	mg/L	0.0098	2.002	mg/L	0.0098	0.49%
Si 288.158†	3012.4	1.997	mg/L	0.0120	1.997	mg/L	0.0120	0.60%
Sn 189.927†	4803.2	0.9903	mg/L	0.00236	0.9903	mg/L	0.00236	0.24%
Sr 421.552†	959703.9	0.9965	mg/L	0.00390	0.9965	mg/L	0.00390	0.39%
Ti 334.903†	26283.7	1.007	mg/L	0.0043	1.007	mg/L	0.0043	0.43%
Tl 190.801†	3775.4	2.072	mg/L	0.0142	2.072	mg/L	0.0142	0.69%
V 292.402†	135231.0	0.9811	mg/L	0.00239	0.9811	mg/L	0.00239	0.24%
Zn 206.200†	4168.5	1.016	mg/L	0.0003	1.016	mg/L	0.0003	0.03%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 4/16/2013 9:01:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2750891.9	99.68	%	0.451				0.45%
ScR 361.383	384416.2	99.93	%	0.409				0.41%
Ag 328.068†	61.6	0.00027	mg/L	0.000133	0.00027	mg/L	0.000133	50.01%
Al 308.215†	0.7	0.00050	mg/L	0.004005	0.00050	mg/L	0.004005	800.91%
As 188.979†	-1.0	-0.00077	mg/L	0.001239	-0.00077	mg/L	0.001239	161.90%
B 249.677†	17.0	0.00255	mg/L	0.001804	0.00255	mg/L	0.001804	70.83%
Ba 233.527†	3.5	0.00056	mg/L	0.000329	0.00056	mg/L	0.000329	58.88%
Be 313.042†	51.0	0.00009	mg/L	0.000027	0.00009	mg/L	0.000027	30.31%
Ca 317.933†	10.7	0.00102	mg/L	0.000965	0.00102	mg/L	0.000965	94.69%
Cd 228.802†	6.3	0.00029	mg/L	0.000157	0.00029	mg/L	0.000157	54.98%
Co 228.616†	6.4	0.00020	mg/L	0.000212	0.00020	mg/L	0.000212	107.35%
Cr 267.716†	2.8	0.00033	mg/L	0.000430	0.00033	mg/L	0.000430	129.79%
Cu 324.752†	23.8	0.00009	mg/L	0.000151	0.00009	mg/L	0.000151	170.52%
Fe 273.955†	-0.4	-0.00031	mg/L	0.000543	-0.00031	mg/L	0.000543	174.68%
K 766.490†	25.3	0.01200	mg/L	0.013406	0.01200	mg/L	0.013406	111.75%
Mg 279.077†	-3.0	-0.00313	mg/L	0.006685	-0.00313	mg/L	0.006685	213.28%
Mn 257.610†	1.5	0.00003	mg/L	0.000057	0.00003	mg/L	0.000057	194.98%
Mo 202.031†	111.2	0.00594	mg/L	0.001115	0.00594	mg/L	0.001115	18.76%
Na 589.592†	49.6	0.00398	mg/L	0.003230	0.00398	mg/L	0.003230	81.06%
Na 330.237†	-4.7	-0.1451	mg/L	0.30556	-0.1451	mg/L	0.30556	210.63%
Ni 231.604†	2.8	0.00073	mg/L	0.001131	0.00073	mg/L	0.001131	155.07%
Pb 220.353†	9.6	0.00121	mg/L	0.000373	0.00121	mg/L	0.000373	30.87%
Sb 206.836†	19.6	0.00713	mg/L	0.001488	0.00713	mg/L	0.001488	20.86%
Se 196.026†	-1.5	-0.00100	mg/L	0.003358	-0.00100	mg/L	0.003358	335.64%
Si 288.158†	-7.0	-0.00463	mg/L	0.002168	-0.00463	mg/L	0.002168	46.79%
Sn 189.927†	5.7	0.00117	mg/L	0.000787	0.00117	mg/L	0.000787	67.41%
Sr 421.552†	-7.9	-0.00001	mg/L	0.000015	-0.00001	mg/L	0.000015	183.29%
Ti 334.903†	2.7	0.00010	mg/L	0.000523	0.00010	mg/L	0.000523	540.04%
Tl 190.801†	2.5	0.00136	mg/L	0.001717	0.00136	mg/L	0.001717	125.93%
V 292.402†	32.6	0.00024	mg/L	0.000330	0.00024	mg/L	0.000330	137.29%
Zn 206.200†	-0.1	-0.00003	mg/L	0.000198	-0.00003	mg/L	0.000198	748.58%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/16/2013 9:06:08 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2749306.6	99.63	%	0.694				0.70%
ScR 361.383	383739.1	99.75	%	0.814				0.82%
Ag 328.068†	761.9	0.00328	mg/L	0.000009	0.00328	mg/L	0.000009	0.28%
Al 308.215†	65.3	0.05359	mg/L	0.004070	0.05359	mg/L	0.004070	7.59%
As 188.979†	67.1	0.04907	mg/L	0.002795	0.04907	mg/L	0.002795	5.70%
B 249.677†	139.8	0.02093	mg/L	0.000890	0.02093	mg/L	0.000890	4.25%
Ba 233.527†	26.5	0.00420	mg/L	0.000014	0.00420	mg/L	0.000014	0.34%
Be 313.042†	589.2	0.00102	mg/L	0.000018	0.00102	mg/L	0.000018	1.78%
Ca 317.933†	701.0	0.06674	mg/L	0.002113	0.06674	mg/L	0.002113	3.17%
Cd 228.802†	55.3	0.00219	mg/L	0.000168	0.00219	mg/L	0.000168	7.66%
Co 228.616†	123.6	0.00378	mg/L	0.000103	0.00378	mg/L	0.000103	2.73%
Cr 267.716†	46.0	0.00547	mg/L	0.000487	0.00547	mg/L	0.000487	8.91%
Cu 324.752†	554.4	0.00210	mg/L	0.000119	0.00210	mg/L	0.000119	5.64%
Fe 273.955†	61.6	0.04935	mg/L	0.000988	0.04935	mg/L	0.000988	2.00%
K 766.490†	1087.0	0.5144	mg/L	0.00769	0.5144	mg/L	0.00769	1.49%
Mg 279.077†	50.1	0.05274	mg/L	0.007775	0.05274	mg/L	0.007775	14.74%
Mn 257.610†	58.8	0.00113	mg/L	0.000061	0.00113	mg/L	0.000061	5.37%
Mo 202.031†	109.8	0.00587	mg/L	0.000070	0.00587	mg/L	0.000070	1.20%
Na 589.592†	6161.3	0.4948	mg/L	0.00499	0.4948	mg/L	0.00499	1.01%
Na 330.237†	14.4	0.4423	mg/L	0.12473	0.4423	mg/L	0.12473	28.20%
Ni 231.604†	38.8	0.01026	mg/L	0.001936	0.01026	mg/L	0.001936	18.86%
Pb 220.353†	169.5	0.02125	mg/L	0.000541	0.02125	mg/L	0.000541	2.55%
Sb 206.836†	147.2	0.05352	mg/L	0.000535	0.05352	mg/L	0.000535	1.00%
Se 196.026†	78.0	0.05142	mg/L	0.000851	0.05142	mg/L	0.000851	1.65%
Si 288.158†	90.9	0.06029	mg/L	0.002689	0.06029	mg/L	0.002689	4.46%
Sn 189.927†	52.2	0.01078	mg/L	0.000774	0.01078	mg/L	0.000774	7.18%
Sr 421.552†	984.3	0.00102	mg/L	0.000024	0.00102	mg/L	0.000024	2.35%
Ti 334.903†	132.2	0.00506	mg/L	0.000526	0.00506	mg/L	0.000526	10.39%
Tl 190.801†	90.3	0.04971	mg/L	0.001668	0.04971	mg/L	0.001668	3.35%
V 292.402†	450.4	0.00327	mg/L	0.000049	0.00327	mg/L	0.000049	1.50%
Zn 206.200†	38.7	0.00943	mg/L	0.000385	0.00943	mg/L	0.000385	4.08%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/16/2013 9:10:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2636842.1	95.55	%	0.555				0.58%
ScR 361.383	367255.7	95.47	%	0.154				0.16%
Ag 328.068†	-276.5	-0.00051	mg/L	0.000111	-0.00051	mg/L	0.000111	21.87%
Al 308.215†	253389.2	208.5	mg/L	0.30	208.5	mg/L	0.30	0.14%
As 188.979†	59.0	0.03379	mg/L	0.000342	0.03379	mg/L	0.000342	1.01%
B 249.677†	99.7	0.01494	mg/L	0.001182	0.01494	mg/L	0.001182	7.91%
Ba 233.527†	160.9	-0.00296	mg/L	0.000341	-0.00296	mg/L	0.000341	11.53%
Be 313.042†	93.1	0.00016	mg/L	0.000012	0.00016	mg/L	0.000012	7.37%
Ca 317.933†	1103333.1	105.1	mg/L	1.19	105.1	mg/L	1.19	1.13%
Cd 228.802†	77.0	0.00318	mg/L	0.000303	0.00318	mg/L	0.000303	9.53%
Co 228.616†	66.3	0.00201	mg/L	0.000041	0.00201	mg/L	0.000041	2.02%
Cr 267.716†	9.4	-0.00441	mg/L	0.001274	-0.00441	mg/L	0.001274	28.90%
Cu 324.752†	-1887.0	0.00182	mg/L	0.000158	0.00182	mg/L	0.000158	8.68%
Fe 273.955†	242643.6	194.3	mg/L	1.42	194.3	mg/L	1.42	0.73%
K 766.490†	59.5	0.02817	mg/L	0.012125	0.02817	mg/L	0.012125	43.05%
Mg 279.077†	103391.4	108.7	mg/L	1.52	108.7	mg/L	1.52	1.39%
Mn 257.610†	93.6	0.00034	mg/L	0.000326	0.00034	mg/L	0.000326	94.87%
Mo 202.031†	112.6	0.00478	mg/L	0.000296	0.00478	mg/L	0.000296	6.18%
Na 589.592†	287.4	0.02307	mg/L	0.000576	0.02307	mg/L	0.000576	2.50%
Na 330.237†	-10.2	-0.3115	mg/L	0.15556	-0.3115	mg/L	0.15556	49.95%
Ni 231.604†	1.1	0.00029	mg/L	0.000774	0.00029	mg/L	0.000774	262.71%
Pb 220.353†	-473.4	-0.01326	mg/L	0.000961	-0.01326	mg/L	0.000961	7.24%
Sb 206.836†	-24.8	-0.00913	mg/L	0.001297	-0.00913	mg/L	0.001297	14.21%
Se 196.026†	11.7	-0.01628	mg/L	0.004379	-0.01628	mg/L	0.004379	26.90%
Si 288.158†	-18.6	0.00003	mg/L	0.004484	0.00003	mg/L	0.004484	>999.9%
Sn 189.927†	-91.9	-0.01013	mg/L	0.000682	-0.01013	mg/L	0.000682	6.73%
Sr 421.552†	4050.8	0.00421	mg/L	0.000115	0.00421	mg/L	0.000115	2.74%
Ti 334.903†	277.0	0.00438	mg/L	0.000352	0.00438	mg/L	0.000352	8.03%
Tl 190.801†	-19.5	0.01502	mg/L	0.001585	0.01502	mg/L	0.001585	10.55%
V 292.402†	1355.2	0.00004	mg/L	0.000486	0.00004	mg/L	0.000486	>999.9%
Zn 206.200†	-6.1	-0.00149	mg/L	0.000170	-0.00149	mg/L	0.000170	11.35%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/16/2013 9:14:42 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2688288.0	97.41	%	0.468				0.48%
ScR 361.383	368579.1	95.81	%	0.558				0.58%
Ag 328.068†	243029.6	1.047	mg/L	0.0044	1.047	mg/L	0.0044	0.42%
Al 308.215†	249766.9	205.5	mg/L	0.98	205.5	mg/L	0.98	0.48%
As 188.979†	1495.3	1.080	mg/L	0.0110	1.080	mg/L	0.0110	1.02%
B 249.677†	42.7	0.00408	mg/L	0.000896	0.00408	mg/L	0.000896	21.96%
Ba 233.527†	6784.7	1.051	mg/L	0.0095	1.051	mg/L	0.0095	0.91%
Be 313.042†	576298.9	1.001	mg/L	0.0065	1.001	mg/L	0.0065	0.65%
Ca 317.933†	1085230.7	103.3	mg/L	0.32	103.3	mg/L	0.32	0.31%
Cd 228.802†	24087.3	1.064	mg/L	0.0066	1.064	mg/L	0.0066	0.62%
Co 228.616†	32345.1	0.9905	mg/L	0.00465	0.9905	mg/L	0.00465	0.47%
Cr 267.716†	8902.1	1.055	mg/L	0.0048	1.055	mg/L	0.0048	0.45%
Cu 324.752†	270062.1	1.032	mg/L	0.0014	1.032	mg/L	0.0014	0.14%
Fe 273.955†	241301.9	193.2	mg/L	0.47	193.2	mg/L	0.47	0.24%
K 766.490†	61.8	0.02923	mg/L	0.005406	0.02923	mg/L	0.005406	18.50%
Mg 279.077†	97626.0	102.7	mg/L	0.47	102.7	mg/L	0.47	0.46%
Mn 257.610†	52013.1	0.9978	mg/L	0.00237	0.9978	mg/L	0.00237	0.24%
Mo 202.031†	117.0	0.00498	mg/L	0.000287	0.00498	mg/L	0.000287	5.77%
Na 589.592†	156.8	0.01260	mg/L	0.003114	0.01260	mg/L	0.003114	24.72%
Na 330.237†	-2.6	-0.3724	mg/L	0.08751	-0.3724	mg/L	0.08751	23.50%
Ni 231.604†	3783.9	0.9998	mg/L	0.00623	0.9998	mg/L	0.00623	0.62%
Pb 220.353†	7498.1	0.9850	mg/L	0.00747	0.9850	mg/L	0.00747	0.76%
Sb 206.836†	2825.7	1.016	mg/L	0.0049	1.016	mg/L	0.0049	0.48%
Se 196.026†	1559.2	1.003	mg/L	0.0145	1.003	mg/L	0.0145	1.44%
Si 288.158†	-31.4	-0.00565	mg/L	0.004790	-0.00565	mg/L	0.004790	84.79%
Sn 189.927†	-91.7	-0.00970	mg/L	0.000584	-0.00970	mg/L	0.000584	6.02%
Sr 421.552†	3915.7	0.00407	mg/L	Cont. 0.000014	0.00407	mg/L	0.000014	0.33%
Ti 334.903†	276.9	0.00428	mg/L	0.000337	0.00428	mg/L	0.000337	7.88%
Tl 190.801†	1765.8	0.9887	mg/L	0.00555	0.9887	mg/L	0.00555	0.56%
V 292.402†	137172.0	0.9856	mg/L	0.00307	0.9856	mg/L	0.00307	0.31%
Zn 206.200†	4075.7	0.9931	mg/L	0.00359	0.9931	mg/L	0.00359	0.36%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 4/16/2013 9:18:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2712051.1	98.28	%	0.177				0.18%
ScR 361.383	376179.8	97.78	%	0.123				0.13%
Ag 328.068†	246195.0	1.060	mg/L	0.0047	1.060	mg/L	0.0047	0.44%
Al 308.215†	2607.3	2.110	mg/L	0.0081	2.110	mg/L	0.0081	0.39%
As 188.979†	2823.7	2.089	mg/L	0.0051	2.089	mg/L	0.0051	0.24%
B 249.677†	6879.7	1.029	mg/L	0.0049	1.029	mg/L	0.0049	0.47%
Ba 233.527†	6653.6	1.058	mg/L	0.0046	1.058	mg/L	0.0046	0.43%
Be 313.042†	585916.7	1.017	mg/L	0.0046	1.017	mg/L	0.0046	0.45%
Ca 317.933†	22502.7	2.143	mg/L	0.0078	2.143	mg/L	0.0078	0.36%
Cd 228.802†	24303.3	1.068	mg/L	0.0048	1.068	mg/L	0.0048	0.45%
Co 228.616†	34255.0	1.047	mg/L	0.0027	1.047	mg/L	0.0027	0.25%
Cr 267.716†	9079.4	1.081	mg/L	0.0026	1.081	mg/L	0.0026	0.24%
Cu 324.752†	279864.1	1.060	mg/L	0.0016	1.060	mg/L	0.0016	0.15%
Fe 273.955†	2687.0	2.146	mg/L	0.0093	2.146	mg/L	0.0093	0.43%
K 766.490†	43307.1	20.50	mg/L	0.045	20.50	mg/L	0.045	0.22%
Mg 279.077†	1969.5	2.080	mg/L	0.0020	2.080	mg/L	0.0020	0.10%
Mn 257.610†	52579.1	1.010	mg/L	0.0055	1.010	mg/L	0.0055	0.54%
Mo 202.031†	19422.4	1.038	mg/L	0.0024	1.038	mg/L	0.0024	0.23%
Na 589.592†	633479.8	50.87	mg/L	0.122	50.87	mg/L	0.122	0.24%
Na 330.237†	1733.1	53.35	mg/L	0.224	53.35	mg/L	0.224	0.42%
Ni 231.604†	3960.7	1.047	mg/L	0.0058	1.047	mg/L	0.0058	0.55%
Pb 220.353†	16585.0	2.078	mg/L	0.0047	2.078	mg/L	0.0047	0.22%
Sb 206.836†	5856.4	2.127	mg/L	0.0100	2.127	mg/L	0.0100	0.47%
Se 196.026†	3139.0	2.067	mg/L	0.0022	2.067	mg/L	0.0022	0.11%
Si 288.158†	3051.0	2.022	mg/L	0.0106	2.022	mg/L	0.0106	0.53%
Sn 189.927†	4961.1	1.023	mg/L	0.0019	1.023	mg/L	0.0019	0.19%
Sr 421.552†	971562.6	1.009	mg/L	0.0013	1.009	mg/L	0.0013	0.13%
Ti 334.903†	26679.3	1.022	mg/L	0.0018	1.022	mg/L	0.0018	0.17%
Tl 190.801†	3896.7	2.139	mg/L	0.0130	2.139	mg/L	0.0130	0.61%
V 292.402†	142041.0	1.030	mg/L	0.0052	1.030	mg/L	0.0052	0.50%
Zn 206.200†	4286.6	1.045	mg/L	0.0035	1.045	mg/L	0.0035	0.34%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/16/2013 9:22:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2764108.4	100.2	%	0.12				0.12%
ScR 361.383	384200.7	99.87	%	0.524				0.52%
Ag 328.068†	34.2	0.00015	mg/L	0.000115	0.00015	mg/L	0.000115	78.05%
Al 308.215†	6.0	0.00481	mg/L	0.001784	0.00481	mg/L	0.001784	37.08%
As 188.979†	2.2	0.00160	mg/L	0.001640	0.00160	mg/L	0.001640	102.21%
B 249.677†	18.4	0.00276	mg/L	0.000700	0.00276	mg/L	0.000700	25.38%
Ba 233.527†	7.3	0.00116	mg/L	0.000372	0.00116	mg/L	0.000372	31.98%
Be 313.042†	47.9	0.00008	mg/L	0.000033	0.00008	mg/L	0.000033	39.77%
Ca 317.933†	30.4	0.00290	mg/L	0.001120	0.00290	mg/L	0.001120	38.62%
Cd 228.802†	7.3	0.00032	mg/L	0.000175	0.00032	mg/L	0.000175	55.37%
Co 228.616†	2.1	0.00006	mg/L	0.000162	0.00006	mg/L	0.000162	256.59%
Cr 267.716†	-8.2	-0.00098	mg/L	0.000375	-0.00098	mg/L	0.000375	38.37%
Cu 324.752†	90.5	0.00034	mg/L	0.000088	0.00034	mg/L	0.000088	25.83%
Fe 273.955†	2.4	0.00196	mg/L	0.000724	0.00196	mg/L	0.000724	36.95%
K 766.490†	7.7	0.00367	mg/L	0.004980	0.00367	mg/L	0.004980	135.87%
Mg 279.077†	4.0	0.00426	mg/L	0.005090	0.00426	mg/L	0.005090	119.50%
Mn 257.610†	2.4	0.00005	mg/L	0.000017	0.00005	mg/L	0.000017	37.53%
Mo 202.031†	95.4	0.00510	mg/L	0.000986	0.00510	mg/L	0.000986	19.35%
Na 589.592†	14.8	0.00119	mg/L	0.002920	0.00119	mg/L	0.002920	245.75%
Na 330.237†	-7.4	-0.2279	mg/L	0.28481	-0.2279	mg/L	0.28481	124.95%
Ni 231.604†	3.0	0.00080	mg/L	0.000502	0.00080	mg/L	0.000502	62.60%
Pb 220.353†	12.8	0.00160	mg/L	0.000524	0.00160	mg/L	0.000524	32.72%
Sb 206.836†	12.9	0.00472	mg/L	0.002370	0.00472	mg/L	0.002370	50.22%
Se 196.026†	-0.1	-0.00009	mg/L	0.000761	-0.00009	mg/L	0.000761	802.77%
Si 288.158†	-8.3	-0.00550	mg/L	0.003254	-0.00550	mg/L	0.003254	59.15%
Sn 189.927†	4.5	0.00093	mg/L	0.000551	0.00093	mg/L	0.000551	59.57%
Sr 421.552†	24.0	0.00002	mg/L	0.000010	0.00002	mg/L	0.000010	39.13%
Ti 334.903†	12.4	0.00047	mg/L	0.000820	0.00047	mg/L	0.000820	174.76%
Tl 190.801†	2.6	0.00143	mg/L	0.000693	0.00143	mg/L	0.000693	48.47%
V 292.402†	7.4	0.00005	mg/L	0.000092	0.00005	mg/L	0.000092	177.78%
Zn 206.200†	-1.4	-0.00033	mg/L	0.000361	-0.00033	mg/L	0.000361	108.45%

Sequence No.: 8
Sample ID: WL68 MB1 SWC

Autosampler Location: 304
Date Collected: 4/16/2013 9:26:50 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL68 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2752668.0	99.75	%	0.069				0.07%
ScR 361.383	385526.2	100.2	%	0.62				0.62%
Ag 328.068†	23.7	0.00010	mg/L	0.000082	0.00020	mg/L	0.000164	80.36%
Al 308.215†	15.7	0.01294	mg/L	0.001526	0.02588	mg/L	0.003051	11.79%
As 188.979†	0.5	0.00035	mg/L	0.000599	0.00071	mg/L	0.001198	169.21%
B 249.677†	7.2	0.00108	mg/L	0.000168	0.00216	mg/L	0.000335	15.51%
Ba 233.527†	4.9	0.00077	mg/L	0.000654	0.00154	mg/L	0.001309	85.16%
Be 313.042†	37.9	0.00007	mg/L	0.000007	0.00013	mg/L	0.000015	11.31%
Ca 317.933†	184.5	0.01757	mg/L	0.000764	0.03514	mg/L	0.001528	4.35%
Cd 228.802†	3.2	0.00014	mg/L	0.000048	0.00028	mg/L	0.000096	34.71%
Co 228.616†	3.2	0.00010	mg/L	0.000130	0.00020	mg/L	0.000260	132.03%
Cr 267.716†	1.4	0.00017	mg/L	0.001059	0.00034	mg/L	0.002119	632.03%
Cu 324.752†	204.0	0.00078	mg/L	0.000051	0.00155	mg/L	0.000101	6.53%
Fe 273.955†	52.0	0.04167	mg/L	0.003529	0.08333	mg/L	0.007058	8.47%
K 766.490†	4.0	0.00192	mg/L	0.018701	0.00383	mg/L	0.037401	976.33%
Mg 279.077†	4.7	0.00492	mg/L	0.005398	0.00985	mg/L	0.010797	109.66%
Mn 257.610†	66.9	0.00128	mg/L	0.000078	0.00257	mg/L	0.000157	6.09%
Mo 202.031†	13.7	0.00073	mg/L	0.000090	0.00146	mg/L	0.000180	12.32%
Na 589.592†	28.7	0.00231	mg/L	0.002425	0.00462	mg/L	0.004850	105.05%
Na 330.237†	5.8	0.1773	mg/L	0.29094	0.3547	mg/L	0.58189	164.07%
Ni 231.604†	-0.3	-0.00008	mg/L	0.001552	-0.00015	mg/L	0.003104	>999.9%
Pb 220.353†	7.9	0.00099	mg/L	0.000457	0.00198	mg/L	0.000913	46.11%
Sb 206.836†	5.2	0.00188	mg/L	0.001151	0.00375	mg/L	0.002301	61.37%
Se 196.026†	-2.1	-0.00140	mg/L	0.003420	-0.00281	mg/L	0.006841	243.59%
Si 288.158†	26.4	0.01757	mg/L	0.001421	0.03513	mg/L	0.002842	8.09%
Sn 189.927†	-1.8	-0.00037	mg/L	0.000468	-0.00074	mg/L	0.000935	125.78%
Sr 421.552†	19.0	0.00002	mg/L	0.000023	0.00004	mg/L	0.000046	116.67%
Ti 334.903†	-4.3	-0.00017	mg/L	0.001671	-0.00033	mg/L	0.003341	>999.9%
Tl 190.801†	0.5	0.00027	mg/L	0.000799	0.00053	mg/L	0.001598	300.68%
V 292.402†	24.1	0.00017	mg/L	0.000156	0.00035	mg/L	0.000312	89.77%
Zn 206.200†	6.3	0.00154	mg/L	0.000405	0.00308	mg/L	0.000809	26.27%

Sequence No.: 9
Sample ID: WL68 B SWC

Dilution: 2.000000X

Del

Autosampler Location: 305
Date Collected: 4/16/2013 9:31:07 AM
Data Type: Original

Nebulizer Parameters: WL68 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2769784.4	100.4	%	0.63				0.62%
ScR 361.383	384352.9	99.91	%	1.090				1.09%
Ag 328.068†	7559.7	0.03316	mg/L	0.000208	0.06631	mg/L	0.000417	0.63%
Al 308.215†	75783.2	62.33	mg/L	0.082	124.7	mg/L	0.16	0.13%
As 188.979†	-52.9	0.08599	mg/L	0.003378	0.1720	mg/L	0.00676	3.93%
B 249.677†	2018.0	0.3019	mg/L	0.00188	0.6037	mg/L	0.00376	0.62%
Ba 233.527†	11412.1	1.754	mg/L	0.0184	3.508	mg/L	0.0369	1.05%
Be 313.042†	160.7	0.00019	mg/L	0.000012	0.00038	mg/L	0.000025	6.63%
Ca 317.933†	878015.4	83.60	mg/L	0.828	167.2	mg/L	1.66	0.99%
Cd 228.802†	2384.0	0.1066	mg/L	0.00049	0.2133	mg/L	0.00099	0.46%
Co 228.616†	3669.7	0.1054	mg/L	0.00085	0.2107	mg/L	0.00170	0.81%
Cr 267.716†	5979.0	0.7210	mg/L	0.00374	1.442	mg/L	0.0075	0.52%
Cu 324.752†	1140318.2	4.341	mg/L	0.0118	8.682	mg/L	0.0237	0.27%
Fe 273.955†	526585.6	421.7	mg/L	2.86	843.4	mg/L	5.72	0.68%
K 766.490†	9785.2	4.631	mg/L	0.0196	9.262	mg/L	0.0392	0.42%
Mg 279.077†	24391.5	25.44	mg/L	0.134	50.88	mg/L	0.267	0.52%
Mn 257.610†	315981.2	6.070	mg/L	0.0369	12.14	mg/L	0.074	0.61%
Mo 202.031†	1721.8	0.09098	mg/L	0.000422	0.1820	mg/L	0.00084	0.46%
Na 589.592†	118324.4	9.502	mg/L	0.0631	19.00	mg/L	0.126	0.66%
Na 330.237†	648.0	9.766	mg/L	0.1834	19.53	mg/L	0.367	1.88%
Ni 231.604†	2536.1	0.6701	mg/L	0.00422	1.340	mg/L	0.0084	0.63%
Pb 220.353†	36647.1	4.580	mg/L	0.0146	9.160	mg/L	0.0292	0.32%
Sb 206.836†	208.7	0.07396	mg/L	0.001417	0.1479	mg/L	0.00283	1.92%
Se 196.026†	-14.5	-0.01689	mg/L	0.003715	-0.03378	mg/L	0.007431	22.00%
Si 288.158†	1306.2	0.8664	mg/L	0.01166	1.733	mg/L	0.0233	1.35%
Sn 189.927†	2608.0	0.5447	mg/L	0.00378	1.089	mg/L	0.0076	0.69%
Sr 421.552†	307517.6	0.3193	mg/L	0.00023	0.6386	mg/L	0.00046	0.07%
Ti 334.903†	100424.1	3.848	mg/L	0.0095	7.695	mg/L	0.0190	0.25%
Tl 190.801†	-70.6	0.01543	mg/L	0.005636	0.03087	mg/L	0.011273	36.52%
V 292.402†	30612.5	0.2017	mg/L	0.00124	0.4035	mg/L	0.00247	0.61%
Zn 206.200†	155623.3	37.91	mg/L	0.555	75.82	mg/L	1.111	1.46%

Sequence No.: 10
Sample ID: WL68 A-L SWC

Dilution: 10.000000X

Autosampler Location: 306
Date Collected: 4/16/2013 9:35:10 AM
Data Type: Original

Nebulizer Parameters: WL68 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2785846.9	101.0	%	0.54				0.53%
ScR 361.383	387695.7	100.8	%	0.88				0.88%
Ag 328.068†	518.5	0.00237	mg/L	0.000138	0.02368	mg/L	0.001379	5.82%
Al 308.215†	18546.3	15.25	mg/L	0.089	152.5	mg/L	0.89	0.59%
As 188.979†	-17.3	0.01907	mg/L	0.001614	0.1907	mg/L	0.01614	8.46%
B 249.677†	302.9	0.04527	mg/L	0.000732	0.4527	mg/L	0.00732	1.62%
Ba 233.527†	1880.6	0.2820	mg/L	0.00217	2.820	mg/L	0.0217	0.77%
Be 313.042†	106.9	0.00015	mg/L	0.000026	0.00153	mg/L	0.000263	17.18%
Ca 317.933†	169919.1	16.18	mg/L	0.021	161.8	mg/L	0.21	0.13%
Cd 228.802†	311.1	0.01401	mg/L	0.000349	0.1401	mg/L	0.00349	2.49%
Co 228.616†	855.2	0.02445	mg/L	0.000187	0.2445	mg/L	0.00187	0.76%
Cr 267.716†	2571.2	0.3084	mg/L	0.00186	3.084	mg/L	0.0186	0.60%
Cu 324.752†	183203.4	0.6997	mg/L	0.00257	6.997	mg/L	0.0257	0.37%
Fe 273.955†	145912.6	116.9	mg/L	0.46	1169	mg/L	4.55	0.39%
K 766.490†	2316.6	1.096	mg/L	0.0066	10.96	mg/L	0.066	0.60%
Mg 279.077†	9192.7	9.612	mg/L	0.0701	96.12	mg/L	0.701	0.73%
Mn 257.610†	187589.6	3.603	mg/L	0.0064	36.03	mg/L	0.064	0.18%
Mo 202.031†	483.6	0.02563	mg/L	0.000168	0.2563	mg/L	0.00168	0.65%
Na 589.592†	28210.5	2.265	mg/L	0.0151	22.65	mg/L	0.151	0.67%
Na 330.237†	106.6	2.174	mg/L	0.2631	21.74	mg/L	2.631	12.11%
Ni 231.604†	559.4	0.1478	mg/L	0.00124	1.478	mg/L	0.0124	0.84%
Pb 220.353†	6919.9	0.8642	mg/L	0.00752	8.642	mg/L	0.0752	0.87%
Sb 206.836†	34.6	0.01067	mg/L	0.001801	0.1067	mg/L	0.01801	16.88%
Se 196.026†	-2.6	-0.00354	mg/L	0.004501	-0.03545	mg/L	0.045006	126.97%
Si 288.158†	299.3	0.1987	mg/L	0.00732	1.987	mg/L	0.0732	3.68%
Sn 189.927†	757.5	0.1575	mg/L	0.00101	1.575	mg/L	0.0101	0.64%
Sr 421.552†	67570.4	0.07016	mg/L	0.000268	0.7016	mg/L	0.00268	0.38%
Ti 334.903†	25320.6	0.9704	mg/L	0.00185	9.704	mg/L	0.0185	0.19%
Tl 190.801†	-19.9	0.00396	mg/L	0.001076	0.03957	mg/L	0.010761	27.19%
V 292.402†	13502.3	0.09297	mg/L	0.000489	0.9297	mg/L	0.00489	0.53%
Zn 206.200†	19048.3	4.640	mg/L	0.0147	46.40	mg/L	0.147	0.32%

Sequence No.: 11
Sample ID: WL68 A SWC

Dilution: 2.000000X

Dal

Autosampler Location: 307
Date Collected: 4/16/2013 9:39:11 AM
Data Type: Original

Nebulizer Parameters: WL68 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2772622.0	100.5	%	0.50				0.50%
ScR 361.383	383029.7	99.57	%	0.411				0.41%
Ag 328.068†	2515.3	0.01152	mg/L	0.000258	0.02304	mg/L	0.000517	2.24%
Al 308.215†	95254.5	78.35	mg/L	0.044	156.7	mg/L	0.09	0.06%
As 188.979†	-100.8	0.08723	mg/L	0.001057	0.1745	mg/L	0.00211	1.21%
B 249.677†	1531.0	0.2288	mg/L	0.00130	0.4576	mg/L	0.00259	0.57%
Ba 233.527†	9479.0	1.422	mg/L	0.0041	2.845	mg/L	0.0083	0.29%
Be 313.042†	312.3	0.00038	mg/L	0.000028	0.00075	mg/L	0.000056	7.48%
Ca 317.933†	867675.0	82.61	mg/L	0.338	165.2	mg/L	0.68	0.41%
Cd 228.802†	1550.5	0.06987	mg/L	0.000848	0.1397	mg/L	0.00170	1.21%
Co 228.616†	4135.9	0.1178	mg/L	0.00100	0.2356	mg/L	0.00200	0.85%
Cr 267.716†	12970.6	1.556	mg/L	0.0044	3.111	mg/L	0.0088	0.28%
Cu 324.752†	923444.2	3.527	mg/L	0.0047	7.053	mg/L	0.0095	0.13%
Fe 273.955†	728512.9	583.4	mg/L	5.45	1167	mg/L	10.90	0.93%
K 766.490†	12011.7	5.685	mg/L	0.0187	11.37	mg/L	0.037	0.33%
Mg 279.077†	44325.0	46.34	mg/L	0.173	92.68	mg/L	0.345	0.37%
Mn 257.610†	943658.1	18.13	mg/L	0.131	36.25	mg/L	0.262	0.72%
Mo 202.031†	2261.6	0.1198	mg/L	0.00104	0.2396	mg/L	0.00208	0.87%
Na 589.592†	144981.6	11.64	mg/L	0.051	23.28	mg/L	0.103	0.44%
Na 330.237†	567.6	11.98	mg/L	0.244	23.96	mg/L	0.488	2.04%
Ni 231.604†	2771.1	0.7322	mg/L	0.00231	1.464	mg/L	0.0046	0.32%
Pb 220.353†	33543.5	4.189	mg/L	0.0287	8.379	mg/L	0.0575	0.69%
Sb 206.836†	140.3	0.04141	mg/L	0.001263	0.08281	mg/L	0.002527	3.05%
Se 196.026†	-4.1	-0.01208	mg/L	0.001636	-0.02417	mg/L	0.003272	13.54%
Si 288.158†	1611.3	1.069	mg/L	0.0082	2.138	mg/L	0.0165	0.77%
Sn 189.927†	3825.9	0.7955	mg/L	0.00147	1.591	mg/L	0.0029	0.18%
Sr 421.552†	343285.1	0.3564	mg/L	0.00042	0.7129	mg/L	0.00083	0.12%
Ti 334.903†	128511.4	4.925	mg/L	0.0110	9.850	mg/L	0.0219	0.22%
Tl 190.801†	-114.8	0.01120	mg/L	0.005145	0.02240	mg/L	0.010290	45.94%
V 292.402†	67838.1	0.4673	mg/L	0.00144	0.9346	mg/L	0.00288	0.31%
Zn 206.200†	94961.8	23.13	mg/L	0.200	46.27	mg/L	0.401	0.87%

Sequence No.: 12
Sample ID: WL68 ADUP SWC

Dil

Dilution: 2.000000X

Autosampler Location: 308
Date Collected: 4/16/2013 9:43:14 AM
Data Type: Original

Nebulizer Parameters: WL68 ADUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2763267.1	100.1	%	0.28				0.28%
ScR 361.383	387961.5	100.8	%	0.75				0.74%
Ag 328.068†	2150.3	0.00995	mg/L	0.000362	0.01991	mg/L	0.000724	3.64%
Al 308.215†	94069.6	77.37	mg/L	0.235	154.7	mg/L	0.47	0.30%
As 188.979†	-84.5	0.09030	mg/L	0.000498	0.1806	mg/L	0.00100	0.55%
B 249.677†	1268.3	0.1896	mg/L	0.00125	0.3791	mg/L	0.00251	0.66%
Ba 233.527†	9506.1	1.433	mg/L	0.0133	2.865	mg/L	0.0265	0.93%
Be 313.042†	367.5	0.00048	mg/L	0.000008	0.00097	mg/L	0.000016	1.69%
Ca 317.933†	894642.5	85.18	mg/L	0.305	170.4	mg/L	0.61	0.36%
Cd 228.802†	1499.3	0.06753	mg/L	0.000176	0.1351	mg/L	0.00035	0.26%
Co 228.616†	3986.2	0.1137	mg/L	0.00013	0.2273	mg/L	0.00027	0.12%
Cr 267.716†	9818.9	1.180	mg/L	0.0074	2.360	mg/L	0.0149	0.63%
Cu 324.752†	904222.9	3.452	mg/L	0.0098	6.904	mg/L	0.0195	0.28%
Fe 273.955†	678303.8	543.2	mg/L	2.27	1086	mg/L	4.55	0.42%
K 766.490†	11560.4	5.471	mg/L	0.0394	10.94	mg/L	0.079	0.72%
Mg 279.077†	39776.7	41.57	mg/L	0.173	83.14	mg/L	0.346	0.42%
Mn 257.610†	703304.1	13.51	mg/L	0.049	27.02	mg/L	0.098	0.36%
Mo 202.031†	2448.6	0.1298	mg/L	0.00127	0.2595	mg/L	0.00253	0.98%
Na 589.592†	138618.3	11.13	mg/L	0.036	22.26	mg/L	0.072	0.32%
Na 330.237†	539.4	11.27	mg/L	0.297	22.53	mg/L	0.594	2.64%
Ni 231.604†	2732.8	0.7221	mg/L	0.00381	1.444	mg/L	0.0076	0.53%
Pb 220.353†	29970.4	3.743	mg/L	0.0142	7.487	mg/L	0.0285	0.38%
Sb 206.836†	142.4	0.04753	mg/L	0.001016	0.09505	mg/L	0.002031	2.14%
Se 196.026†	1.1	-0.00849	mg/L	0.000772	-0.01699	mg/L	0.001544	9.09%
Si 288.158†	1703.0	1.129	mg/L	0.0107	2.258	mg/L	0.0214	0.95%
Sn 189.927†	4175.9	0.8677	mg/L	0.00417	1.735	mg/L	0.0083	0.48%
Sr 421.552†	328607.8	0.3412	mg/L	0.00071	0.6824	mg/L	0.00142	0.21%
Ti 334.903†	121702.1	4.664	mg/L	0.0120	9.328	mg/L	0.0241	0.26%
Tl 190.801†	-102.6	0.01292	mg/L	0.003648	0.02584	mg/L	0.007295	28.23%
V 292.402†	63190.3	0.4336	mg/L	0.00093	0.8671	mg/L	0.00185	0.21%
Zn 206.200†	91860.3	22.38	mg/L	0.120	44.76	mg/L	0.241	0.54%

Sequence No.: 13
Sample ID: WL68 ASPK SWC

Dilution: 2.000000X

Del

Autosampler Location: 309
Date Collected: 4/16/2013 9:47:17 AM
Data Type: Original

Nebulizer Parameters: WL68 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2763208.3	100.1	%	0.17				0.17%
ScR 361.383	381981.1	99.29	%	0.487				0.49%
Ag 328.068†	124161.0	0.5355	mg/L	0.00171	1.071	mg/L	0.0034	0.32%
Al 308.215†	97680.0	80.33	mg/L	0.284	160.7	mg/L	0.57	0.35%
As 188.979†	2851.5	2.232	mg/L	0.0189	4.464	mg/L	0.0378	0.85%
B 249.677†	1171.6	0.1739	mg/L	0.00223	0.3479	mg/L	0.00446	1.28%
Ba 233.527†	23070.0	3.578	mg/L	0.0259	7.156	mg/L	0.0517	0.72%
Be 313.042†	287082.9	0.4983	mg/L	0.00245	0.9966	mg/L	0.00491	0.49%
Ca 317.933†	1004374.3	95.63	mg/L	0.178	191.3	mg/L	0.36	0.19%
Cd 228.802†	14092.8	0.6151	mg/L	0.00196	1.230	mg/L	0.0039	0.32%
Co 228.616†	20807.5	0.6284	mg/L	0.00246	1.257	mg/L	0.0049	0.39%
Cr 267.716†	13934.2	1.671	mg/L	0.0141	3.343	mg/L	0.0282	0.84%
Cu 324.752†	1130147.6	4.312	mg/L	0.0073	8.625	mg/L	0.0146	0.17%
Fe 273.955†	787267.3	630.5	mg/L	4.38	1261	mg/L	8.75	0.69%
K 766.490†	33479.7	15.84	mg/L	0.099	31.69	mg/L	0.199	0.63%
Mg 279.077†	49409.9	51.66	mg/L	0.219	103.3	mg/L	0.44	0.42%
Mn 257.610†	735110.5	14.12	mg/L	0.055	28.24	mg/L	0.109	0.39%
Mo 202.031†	3092.3	0.1640	mg/L	0.00125	0.3280	mg/L	0.00250	0.76%
Na 589.592†	273748.8	21.98	mg/L	0.050	43.96	mg/L	0.101	0.23%
Na 330.237†	904.6	22.43	mg/L	0.217	44.87	mg/L	0.435	0.97%
Ni 231.604†	4864.7	1.285	mg/L	0.0140	2.569	mg/L	0.0280	1.09%
Pb 220.353†	48737.2	6.090	mg/L	0.0252	12.18	mg/L	0.050	0.41%
Sb 206.836†	155.0	0.04642	mg/L	0.003034	0.09284	mg/L	0.006069	6.54%
Se 196.026†	3230.3	2.118	mg/L	0.0158	4.237	mg/L	0.0317	0.75%
Si 288.158†	1760.0	1.171	mg/L	0.0082	2.342	mg/L	0.0164	0.70%
Sn 189.927†	3576.2	0.7452	mg/L	0.01157	1.490	mg/L	0.0231	1.55%
Sr 421.552†	835093.7	0.8671	mg/L	0.00183	1.734	mg/L	0.0037	0.21%
Ti 334.903†	124226.4	4.760	mg/L	0.0051	9.520	mg/L	0.0103	0.11%
Tl 190.801†	3436.4	1.970	mg/L	0.0088	3.939	mg/L	0.0177	0.45%
V 292.402†	131434.6	0.9242	mg/L	0.00203	1.848	mg/L	0.0041	0.22%
Zn 206.200†	93287.5	22.73	mg/L	0.085	45.45	mg/L	0.170	0.37%

Sequence No.: 14
Sample ID: ~~WL68 APOST SWC~~ 222222
RA 4/16/13
Dilution: 2.000000X

Autosampler Location: 310
Date Collected: 4/16/2013 9:50:23 AM
Data Type: Original

Nebulizer Parameters: WL68 APOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2770302.3	100.4	%	0.09				0.09%
ScR 361.383	381568.2	99.19	%	0.284				0.29%
Ag 328.068†	122191.6	0.5270	mg/L	0.00347	1.054	mg/L	0.0069	0.66%
Al 308.215†	98467.7	80.98	mg/L	0.234	162.0	mg/L	0.47	0.29%
As 188.979†	2839.0	2.229	mg/L	0.0094	4.458	mg/L	0.0189	0.42%
B 249.677†	1547.0	0.2300	mg/L	0.00316	0.4600	mg/L	0.00632	1.37%
Ba 233.527†	23269.5	3.616	mg/L	0.0189	7.233	mg/L	0.0379	0.52%
Be 313.042†	287533.5	0.4991	mg/L	0.00210	0.9982	mg/L	0.00419	0.42%
Ca 317.933†	985749.5	93.85	mg/L	0.401	187.7	mg/L	0.80	0.43%
Cd 228.802†	14043.0	0.6129	mg/L	0.00109	1.226	mg/L	0.0022	0.18%
Co 228.616†	20836.2	0.6290	mg/L	0.00144	1.258	mg/L	0.0029	0.23%
Cr 267.716†	17742.1	2.123	mg/L	0.0081	4.245	mg/L	0.0161	0.38%
Cu 324.752†	1065442.5	4.065	mg/L	0.0056	8.130	mg/L	0.0112	0.14%
Fe 273.955†	732168.7	586.3	mg/L	3.68	1173	mg/L	7.36	0.63%
K 766.490†	34331.2	16.25	mg/L	0.101	32.49	mg/L	0.203	0.62%
Mg 279.077†	54821.0	57.39	mg/L	0.295	114.8	mg/L	0.59	0.51%
Mn 257.610†	970753.1	18.65	mg/L	0.094	37.29	mg/L	0.188	0.50%
Mo 202.031†	2267.4	0.1199	mg/L	0.00032	0.2399	mg/L	0.00064	0.27%
Na 589.592†	276770.4	22.22	mg/L	0.008	44.45	mg/L	0.016	0.04%
Na 330.237†	938.5	23.14	mg/L	0.145	46.29	mg/L	0.291	0.63%
Ni 231.604†	4815.9	1.272	mg/L	0.0079	2.543	mg/L	0.0159	0.62%
Pb 220.353†	49798.5	6.226	mg/L	0.0165	12.45	mg/L	0.033	0.27%
Sb 206.836†	159.5	0.04244	mg/L	0.003573	0.08488	mg/L	0.007145	8.42%
Se 196.026†	3266.0	2.142	mg/L	0.0071	4.284	mg/L	0.0143	0.33%
Si 288.158†	1622.1	1.080	mg/L	0.0065	2.159	mg/L	0.0130	0.60%
Sn 189.927†	3772.7	0.7855	mg/L	0.00366	1.571	mg/L	0.0073	0.47%
Sr 421.552†	834262.3	0.8662	mg/L	0.00213	1.732	mg/L	0.0043	0.25%
Ti 334.903†	129114.5	4.948	mg/L	0.0168	9.895	mg/L	0.0335	0.34%
Tl 190.801†	3504.3	2.001	mg/L	0.0036	4.002	mg/L	0.0072	0.18%
V 292.402†	136215.5	0.9634	mg/L	0.00285	1.927	mg/L	0.0057	0.30%
Zn 206.200†	98649.9	24.03	mg/L	0.116	48.06	mg/L	0.233	0.48%

Sequence No.: 15
Sample ID: WL68 REF1 SWC

Autosampler Location: 311
Date Collected: 4/16/2013 9:53:29 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL68 REF1 SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2808816.2	101.8	%	0.45				0.45%
ScR 361.383	391414.1	101.7	%	0.13				0.13%
Ag 328.068†	258249.3	1.112	mg/L	0.0100	2.225	mg/L	0.0201	0.90%
Al 308.215†	117221.6	96.41	mg/L	0.091	192.8	mg/L	0.18	0.09%
As 188.979†	1826.5	1.405	mg/L	0.0125	2.811	mg/L	0.0251	0.89%
B 249.677†	7627.1	1.141	mg/L	0.0058	2.281	mg/L	0.0116	0.51%
Ba 233.527†	21375.4	3.379	mg/L	0.0332	6.758	mg/L	0.0664	0.98%
Be 313.042†	509969.5	0.8854	mg/L	0.00344	1.771	mg/L	0.0069	0.39%
Ca 317.933†	436100.3	41.52	mg/L	0.082	83.04	mg/L	0.164	0.20%
Cd 228.802†	16379.5	0.7201	mg/L	0.00366	1.440	mg/L	0.0073	0.51%
Co 228.616†	25224.4	0.7682	mg/L	0.00508	1.536	mg/L	0.0102	0.66%
Cr 267.716†	6516.5	0.7767	mg/L	0.00357	1.553	mg/L	0.0071	0.46%
Cu 324.752†	185647.5	0.7103	mg/L	0.00525	1.421	mg/L	0.0105	0.74%
Fe 273.955†	188759.2	151.2	mg/L	0.88	302.3	mg/L	1.77	0.58%
K 766.490†	77463.2	36.66	mg/L	0.145	73.32	mg/L	0.290	0.40%
Mg 279.077†	27833.1	29.22	mg/L	0.128	58.44	mg/L	0.256	0.44%
Mn 257.610†	240618.3	4.621	mg/L	0.0132	9.243	mg/L	0.0264	0.29%
Mo 202.031†	8831.7	0.4714	mg/L	0.00229	0.9427	mg/L	0.00458	0.49%
Na 589.592†	71763.9	5.763	mg/L	0.0268	11.53	mg/L	0.054	0.47%
Na 330.237†	175.8	5.500	mg/L	0.0723	11.00	mg/L	0.145	1.31%
Ni 231.604†	2182.8	0.5764	mg/L	0.00208	1.153	mg/L	0.0042	0.36%
Pb 220.353†	10416.5	1.323	mg/L	0.0070	2.646	mg/L	0.0141	0.53%
Sb 206.836†	1256.5	0.4640	mg/L	0.00499	0.9281	mg/L	0.00999	1.08%
Se 196.026†	2604.4	1.704	mg/L	0.0102	3.408	mg/L	0.0203	0.60%
Si 288.158†	4076.1	2.699	mg/L	0.0025	5.398	mg/L	0.0051	0.09%
Sn 189.927†	8258.9	1.704	mg/L	0.0047	3.409	mg/L	0.0094	0.28%
Sr 421.552†	533172.0	0.5536	mg/L	0.00045	1.107	mg/L	0.0009	0.08%
Ti 334.903†	60180.1	2.306	mg/L	0.0046	4.612	mg/L	0.0092	0.20%
Tl 190.801†	2453.0	1.365	mg/L	0.0129	2.729	mg/L	0.0258	0.95%
V 292.402†	119830.1	0.8607	mg/L	0.00799	1.721	mg/L	0.0160	0.93%
Zn 206.200†	7703.0	1.877	mg/L	0.0103	3.754	mg/L	0.0206	0.55%

Sequence No.: 16
Sample ID: WL68 MBlSPK SWC

Autosampler Location: 312
Date Collected: 4/16/2013 9:57:31 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL68 MBlSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 MBlSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2800426.5	101.5	%	0.86				0.85%
ScR 361.383	391109.2	101.7	%	0.64				0.63%
Ag 328.068†	126238.7	0.5437	mg/L	0.00509	1.087	mg/L	0.0102	0.94%
Al 308.215†	2659.1	2.180	mg/L	0.0205	4.360	mg/L	0.0409	0.94%
As 188.979†	2950.9	2.149	mg/L	0.0133	4.299	mg/L	0.0266	0.62%
B 249.677†	12.4	0.00064	mg/L	0.000601	0.00128	mg/L	0.001202	94.08%
Ba 233.527†	13161.5	2.094	mg/L	0.0072	4.188	mg/L	0.0144	0.34%
Be 313.042†	290174.5	0.5038	mg/L	0.00673	1.008	mg/L	0.0135	1.34%
Ca 317.933†	107867.6	10.27	mg/L	0.051	20.54	mg/L	0.101	0.49%
Cd 228.802†	12145.1	0.5276	mg/L	0.00561	1.055	mg/L	0.0112	1.06%
Co 228.616†	17005.9	0.5206	mg/L	0.00508	1.041	mg/L	0.0102	0.98%
Cr 267.716†	4566.0	0.5425	mg/L	0.00644	1.085	mg/L	0.0129	1.19%
Cu 324.752†	137008.6	0.5193	mg/L	0.00407	1.039	mg/L	0.0081	0.78%
Fe 273.955†	2770.7	2.216	mg/L	0.0194	4.432	mg/L	0.0389	0.88%
K 766.490†	21639.7	10.24	mg/L	0.062	20.48	mg/L	0.123	0.60%
Mg 279.077†	10203.7	10.74	mg/L	0.097	21.48	mg/L	0.193	0.90%
Mn 257.610†	26503.1	0.5094	mg/L	0.00391	1.019	mg/L	0.0078	0.77%
Mo 202.031†	72.8	0.00374	mg/L	0.000456	0.00748	mg/L	0.000911	12.19%
Na 589.592†	125427.1	10.07	mg/L	0.053	20.14	mg/L	0.106	0.53%
Na 330.237†	346.4	10.51	mg/L	0.082	21.03	mg/L	0.165	0.78%
Ni 231.604†	1999.4	0.5273	mg/L	0.00376	1.055	mg/L	0.0075	0.71%
Pb 220.353†	16689.4	2.091	mg/L	0.0167	4.182	mg/L	0.0335	0.80%
Sb 206.836†	26.5	0.00417	mg/L	0.001957	0.00834	mg/L	0.003914	46.91%
Se 196.026†	3231.5	2.129	mg/L	0.0174	4.257	mg/L	0.0348	0.82%
Si 288.158†	30.5	0.02327	mg/L	0.002734	0.04653	mg/L	0.005469	11.75%
Sn 189.927†	-9.1	-0.00102	mg/L	0.000503	-0.00203	mg/L	0.001005	49.43%
Sr 421.552†	481972.0	0.5004	mg/L	0.00219	1.001	mg/L	0.0044	0.44%
Ti 334.903†	100.8	0.00315	mg/L	0.000253	0.00630	mg/L	0.000506	8.04%
Tl 190.801†	3897.3	2.143	mg/L	0.0099	4.285	mg/L	0.0198	0.46%
V 292.402†	72112.1	0.5230	mg/L	0.00476	1.046	mg/L	0.0095	0.91%
Zn 206.200†	2148.1	0.5235	mg/L	0.00564	1.047	mg/L	0.0113	1.08%

Sequence No.: 17
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 4/16/2013 10:01:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2763528.9	100.1	%	0.71				0.71%
ScR 361.383	378259.4	98.33	%	0.165				0.17%
Ag 328.068†	244845.3	1.054	mg/L	0.0047	1.054	mg/L	0.0047	0.44%
Al 308.215†	2598.1	2.102	mg/L	0.0083	2.102	mg/L	0.0083	0.39%
As 188.979†	2831.4	2.094	mg/L	0.0146	2.094	mg/L	0.0146	0.70%
B 249.677†	6890.3	1.030	mg/L	0.0043	1.030	mg/L	0.0043	0.41%
Ba 233.527†	6759.5	1.075	mg/L	0.0017	1.075	mg/L	0.0017	0.16%
Be 313.042†	580393.2	1.008	mg/L	0.0052	1.008	mg/L	0.0052	0.51%
Ca 317.933†	22572.6	2.149	mg/L	0.0062	2.149	mg/L	0.0062	0.29%
Cd 228.802†	24189.8	1.063	mg/L	0.0050	1.063	mg/L	0.0050	0.47%
Co 228.616†	34420.2	1.052	mg/L	0.0065	1.052	mg/L	0.0065	0.61%
Cr 267.716†	9095.5	1.083	mg/L	0.0057	1.083	mg/L	0.0057	0.52%
Cu 324.752†	276422.1	1.047	mg/L	0.0049	1.047	mg/L	0.0049	0.46%
Fe 273.955†	2666.6	2.130	mg/L	0.0188	2.130	mg/L	0.0188	0.88%
K 766.490†	43411.0	20.54	mg/L	0.051	20.54	mg/L	0.051	0.25%
Mg 279.077†	1979.6	2.091	mg/L	0.0243	2.091	mg/L	0.0243	1.16%
Mn 257.610†	52244.9	1.004	mg/L	0.0037	1.004	mg/L	0.0037	0.37%
Mo 202.031†	19393.9	1.036	mg/L	0.0078	1.036	mg/L	0.0078	0.75%
Na 589.592†	631037.6	50.67	mg/L	0.276	50.67	mg/L	0.276	0.55%
Na 330.237†	1730.3	53.26	mg/L	0.246	53.26	mg/L	0.246	0.46%
Ni 231.604†	3990.7	1.054	mg/L	0.0048	1.054	mg/L	0.0048	0.45%
Pb 220.353†	16651.9	2.087	mg/L	0.0128	2.087	mg/L	0.0128	0.61%
Sb 206.836†	5836.9	2.120	mg/L	0.0134	2.120	mg/L	0.0134	0.63%
Se 196.026†	3136.1	2.065	mg/L	0.0117	2.065	mg/L	0.0117	0.57%
Si 288.158†	3054.2	2.024	mg/L	0.0030	2.024	mg/L	0.0030	0.15%
Sn 189.927†	4959.9	1.023	mg/L	0.0078	1.023	mg/L	0.0078	0.76%
Sr 421.552†	964505.1	1.001	mg/L	0.0009	1.001	mg/L	0.0009	0.09%
Ti 334.903†	26563.5	1.018	mg/L	0.0019	1.018	mg/L	0.0019	0.18%
Tl 190.801†	3916.1	2.149	mg/L	0.0153	2.149	mg/L	0.0153	0.71%
V 292.402†	141228.7	1.025	mg/L	0.0062	1.025	mg/L	0.0062	0.60%
Zn 206.200†	4324.2	1.054	mg/L	0.0059	1.054	mg/L	0.0059	0.56%

Sequence No.: 18
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 4/16/2013 10:05:36 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2786355.6	101.0	%	0.42				0.41%
ScR 361.383	386324.0	100.4	%	0.18				0.18%
Ag 328.068†	57.6	0.00025	mg/L	0.000107	0.00025	mg/L	0.000107	42.98%
Al 308.215†	5.6	0.00452	mg/L	0.001852	0.00452	mg/L	0.001852	40.93%
As 188.979†	-0.2	-0.00019	mg/L	0.001345	-0.00019	mg/L	0.001345	721.56%
B 249.677†	13.0	0.00195	mg/L	0.000942	0.00195	mg/L	0.000942	48.42%
Ba 233.527†	6.2	0.00099	mg/L	0.000588	0.00099	mg/L	0.000588	59.65%
Be 313.042†	63.5	0.00011	mg/L	0.000049	0.00011	mg/L	0.000049	44.43%
Ca 317.933†	13.3	0.00127	mg/L	0.000187	0.00127	mg/L	0.000187	14.76%
Cd 228.802†	4.1	0.00018	mg/L	0.000063	0.00018	mg/L	0.000063	34.54%
Co 228.616†	2.1	0.00006	mg/L	0.000096	0.00006	mg/L	0.000096	149.59%
Cr 267.716†	-4.6	-0.00055	mg/L	0.000380	-0.00055	mg/L	0.000380	68.80%
Cu 324.752†	63.8	0.00024	mg/L	0.000125	0.00024	mg/L	0.000125	52.10%
Fe 273.955†	6.0	0.00477	mg/L	0.000633	0.00477	mg/L	0.000633	13.26%
K 766.490†	5.1	0.00241	mg/L	0.012850	0.00241	mg/L	0.012850	532.98%
Mg 279.077†	-0.7	-0.00077	mg/L	0.008682	-0.00077	mg/L	0.008682	>999.9%
Mn 257.610†	9.5	0.00018	mg/L	0.000072	0.00018	mg/L	0.000072	39.16%
Mo 202.031†	90.4	0.00483	mg/L	0.000457	0.00483	mg/L	0.000457	9.46%
Na 589.592†	14.5	0.00116	mg/L	0.000953	0.00116	mg/L	0.000953	82.10%
Na 330.237†	-2.5	-0.07593	mg/L	0.307647	-0.07593	mg/L	0.307647	405.16%
Ni 231.604†	1.1	0.00028	mg/L	0.001667	0.00028	mg/L	0.001667	591.05%
Pb 220.353†	12.9	0.00161	mg/L	0.000611	0.00161	mg/L	0.000611	37.91%
Sb 206.836†	16.6	0.00606	mg/L	0.001077	0.00606	mg/L	0.001077	17.77%
Se 196.026†	1.5	0.00099	mg/L	0.001253	0.00099	mg/L	0.001253	126.46%
Si 288.158†	-6.8	-0.00451	mg/L	0.001706	-0.00451	mg/L	0.001706	37.78%
Sn 189.927†	5.2	0.00108	mg/L	0.000604	0.00108	mg/L	0.000604	55.94%
Sr 421.552†	37.6	0.00004	mg/L	0.000029	0.00004	mg/L	0.000029	74.20%
Ti 334.903†	5.3	0.00020	mg/L	0.000705	0.00020	mg/L	0.000705	356.76%
Tl 190.801†	3.3	0.00183	mg/L	0.003234	0.00183	mg/L	0.003234	176.58%
V 292.402†	12.7	0.00009	mg/L	0.000166	0.00009	mg/L	0.000166	180.27%
Zn 206.200†	2.4	0.00058	mg/L	0.000243	0.00058	mg/L	0.000243	41.77%

Sequence No.: 19
Sample ID: WL68 B SWC

Autosampler Location: 313
Date Collected: 4/16/2013 10:09:52 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL68 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2777999.4	100.7	%	0.28				0.28%
ScR 361.383	388796.7	101.1	%	0.69				0.68%
Ag 328.068†	3226.7	0.01415	mg/L	0.000151	0.07073	mg/L	0.000757	1.07%
Al 308.215†	32236.9	26.52	mg/L	0.248	132.6	mg/L	1.24	0.94%
As 188.979†	-15.1	0.04064	mg/L	0.002647	0.2032	mg/L	0.01324	6.51%
B 249.677†	836.1	0.1251	mg/L	0.00064	0.6253	mg/L	0.00321	0.51%
Ba 233.527†	4784.4	0.7353	mg/L	0.00836	3.677	mg/L	0.0418	1.14%
Be 313.042†	123.9	0.00018	mg/L	0.000007	0.00089	mg/L	0.000037	4.17%
Ca 317.933†	366073.0	34.85	mg/L	0.260	174.3	mg/L	1.30	0.74%
Cd 228.802†	1004.3	0.04489	mg/L	0.000306	0.2245	mg/L	0.00153	0.68%
Co 228.616†	1581.8	0.04553	mg/L	0.000141	0.2277	mg/L	0.00071	0.31%
Cr 267.716†	2474.8	0.2985	mg/L	0.00251	1.493	mg/L	0.0126	0.84%
Cu 324.752†	464267.9	1.768	mg/L	0.0080	8.838	mg/L	0.0401	0.45%
Fe 273.955†	220176.1	176.3	mg/L	0.87	881.6	mg/L	4.34	0.49%
K 766.490†	3961.7	1.875	mg/L	0.0215	9.374	mg/L	0.1075	1.15%
Mg 279.077†	10041.5	10.47	mg/L	0.096	52.36	mg/L	0.479	0.92%
Mn 257.610†	131337.8	2.523	mg/L	0.0171	12.61	mg/L	0.086	0.68%
Mo 202.031†	748.0	0.03954	mg/L	0.000353	0.1977	mg/L	0.00177	0.89%
Na 589.592†	48416.3	3.888	mg/L	0.0239	19.44	mg/L	0.119	0.61%
Na 330.237†	266.4	3.881	mg/L	0.3639	19.40	mg/L	1.820	9.38%
Ni 231.604†	1064.8	0.2814	mg/L	0.00379	1.407	mg/L	0.0190	1.35%
Pb 220.353†	15587.9	1.948	mg/L	0.0036	9.742	mg/L	0.0179	0.18%
Sb 206.836†	100.1	0.03562	mg/L	0.002645	0.1781	mg/L	0.01322	7.42%
Se 196.026†	-6.0	-0.00707	mg/L	0.006916	-0.03534	mg/L	0.034579	97.83%
Si 288.158†	528.2	0.3503	mg/L	0.00955	1.752	mg/L	0.0478	2.73%
Sn 189.927†	1083.9	0.2264	mg/L	0.00114	1.132	mg/L	0.0057	0.50%
Sr 421.552†	127040.3	0.1319	mg/L	0.00046	0.6595	mg/L	0.00228	0.35%
Ti 334.903†	41634.7	1.595	mg/L	0.0042	7.976	mg/L	0.0211	0.26%
Tl 190.801†	-19.2	0.01212	mg/L	0.002302	0.06062	mg/L	0.011511	18.99%
V 292.402†	12848.2	0.08470	mg/L	0.000239	0.4235	mg/L	0.00120	0.28%
Zn 206.200†	65857.1	16.04	mg/L	0.088	80.22	mg/L	0.442	0.55%

Sequence No.: 20
Sample ID: WL68 A-L SWC

Autosampler Location: 314
Date Collected: 4/16/2013 10:13:55 AM
Data Type: Original

Dilution: 50.000000X

Nebulizer Parameters: WL68 A-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL68 A-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2809839.2	101.8	%	0.62				0.61%
ScR 361.383	392176.5	101.9	%	0.41				0.40%
Ag 328.068†	144.7	0.00065	mg/L	0.000250	0.03243	mg/L	0.012502	38.56%
Al 308.215†	3646.4	2.999	mg/L	0.0138	150.0	mg/L	0.69	0.46%
As 188.979†	-3.1	0.00374	mg/L	0.001556	0.1872	mg/L	0.07778	41.56%
B 249.677†	61.4	0.00918	mg/L	0.001411	0.4590	mg/L	0.07055	15.37%
Ba 233.527†	363.9	0.05469	mg/L	0.000235	2.735	mg/L	0.0117	0.43%
Be 313.042†	70.1	0.00012	mg/L	0.000014	0.00577	mg/L	0.000705	12.20%
Ca 317.933†	31883.2	3.036	mg/L	0.0079	151.8	mg/L	0.39	0.26%
Cd 228.802†	65.1	0.00293	mg/L	0.000256	0.1465	mg/L	0.01282	8.75%
Co 228.616†	168.4	0.00483	mg/L	0.000163	0.2414	mg/L	0.00815	3.38%
Cr 267.716†	481.1	0.05769	mg/L	0.000250	2.885	mg/L	0.0125	0.43%
Cu 324.752†	34325.3	0.1311	mg/L	0.00085	6.555	mg/L	0.0425	0.65%
Fe 273.955†	27263.3	21.83	mg/L	0.179	1092	mg/L	8.97	0.82%
K 766.490†	450.0	0.2130	mg/L	0.01453	10.65	mg/L	0.727	6.82%
Mg 279.077†	1711.8	1.790	mg/L	0.0078	89.50	mg/L	0.389	0.43%
Mn 257.610†	35165.8	0.6755	mg/L	0.00260	33.77	mg/L	0.130	0.39%
Mo 202.031†	97.0	0.00514	mg/L	0.000054	0.2571	mg/L	0.00272	1.06%
Na 589.592†	5360.9	0.4305	mg/L	0.00162	21.52	mg/L	0.081	0.38%
Na 330.237†	17.5	0.3218	mg/L	0.10235	16.09	mg/L	5.118	31.81%
Ni 231.604†	110.5	0.02920	mg/L	0.000581	1.460	mg/L	0.0291	1.99%
Pb 220.353†	1344.8	0.1680	mg/L	0.00084	8.400	mg/L	0.0422	0.50%
Sb 206.836†	8.1	0.00259	mg/L	0.000311	0.1293	mg/L	0.01557	12.04%
Se 196.026†	3.2	0.00176	mg/L	0.002340	0.08820	mg/L	0.117021	132.67%
Si 288.158†	50.9	0.03377	mg/L	0.003686	1.689	mg/L	0.1843	10.91%
Sn 189.927†	148.3	0.03082	mg/L	0.000532	1.541	mg/L	0.0266	1.73%
Sr 421.552†	12914.2	0.01341	mg/L	0.000020	0.6705	mg/L	0.00098	0.15%
Ti 334.903†	4797.5	0.1839	mg/L	0.00117	9.193	mg/L	0.0586	0.64%
Tl 190.801†	-1.7	0.00183	mg/L	0.000712	0.09152	mg/L	0.035587	38.88%
V 292.402†	2583.3	0.01781	mg/L	0.000036	0.8904	mg/L	0.00179	0.20%
Zn 206.200†	3715.4	0.9051	mg/L	0.00507	45.26	mg/L	0.253	0.56%

Sequence No.: 21
Sample ID: WL68 A SWC

Autosampler Location: 315
Date Collected: 4/16/2013 10:17:55 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 A SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL68 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2795180.8	101.3	%	0.04				0.04%
ScR 361.383	391035.7	101.6	%	0.24				0.23%
Ag 328.068†	504.1	0.00230	mg/L	0.000087	0.02303	mg/L	0.000874	3.79%
Al 308.215†	18119.0	14.90	mg/L	0.053	149.0	mg/L	0.53	0.36%
As 188.979†	-16.7	0.01879	mg/L	0.003365	0.1879	mg/L	0.03365	17.91%
B 249.677†	294.0	0.04394	mg/L	0.001121	0.4394	mg/L	0.01121	2.55%
Ba 233.527†	1860.1	0.2793	mg/L	0.00134	2.793	mg/L	0.0134	0.48%
Be 313.042†	108.9	0.00016	mg/L	0.000005	0.00157	mg/L	0.000051	3.26%
Ca 317.933†	166527.5	15.86	mg/L	0.034	158.6	mg/L	0.34	0.21%
Cd 228.802†	308.3	0.01388	mg/L	0.000198	0.1388	mg/L	0.00198	1.43%
Co 228.616†	830.0	0.02371	mg/L	0.000144	0.2371	mg/L	0.00144	0.61%
Cr 267.716†	2507.5	0.3007	mg/L	0.00183	3.007	mg/L	0.0183	0.61%
Cu 324.752†	179675.4	0.6862	mg/L	0.00492	6.862	mg/L	0.0492	0.72%
Fe 273.955†	141774.4	113.5	mg/L	0.76	1135	mg/L	7.56	0.67%
K 766.490†	2301.8	1.089	mg/L	0.0020	10.89	mg/L	0.020	0.18%
Mg 279.077†	8964.8	9.374	mg/L	0.0418	93.74	mg/L	0.418	0.45%
Mn 257.610†	182908.0	3.513	mg/L	0.0184	35.13	mg/L	0.184	0.52%
Mo 202.031†	466.4	0.02472	mg/L	0.000262	0.2472	mg/L	0.00262	1.06%
Na 589.592†	27790.5	2.232	mg/L	0.0046	22.32	mg/L	0.046	0.21%
Na 330.237†	101.8	2.045	mg/L	0.2372	20.45	mg/L	2.372	11.60%
Ni 231.604†	545.8	0.1442	mg/L	0.00116	1.442	mg/L	0.0116	0.80%
Pb 220.353†	6781.0	0.8469	mg/L	0.00180	8.469	mg/L	0.0180	0.21%
Sb 206.836†	32.1	0.00981	mg/L	0.002410	0.09809	mg/L	0.024097	24.57%
Se 196.026†	-2.7	-0.00355	mg/L	0.002165	-0.03545	mg/L	0.021655	61.08%
Si 288.158†	296.4	0.1967	mg/L	0.00452	1.967	mg/L	0.0452	2.30%
Sn 189.927†	741.2	0.1541	mg/L	0.00114	1.541	mg/L	0.0114	0.74%
Sr 421.552†	66324.8	0.06887	mg/L	0.000232	0.6887	mg/L	0.00232	0.34%
Ti 334.903†	24764.2	0.9491	mg/L	0.00457	9.491	mg/L	0.0457	0.48%
Tl 190.801†	-14.0	0.00678	mg/L	0.003124	0.06781	mg/L	0.031238	46.07%
V 292.402†	13285.5	0.09154	mg/L	0.000815	0.9154	mg/L	0.00815	0.89%
Zn 206.200†	18700.5	4.556	mg/L	0.0288	45.56	mg/L	0.288	0.63%

Sequence No.: 22
Sample ID: WL68 ADUP SWC

Autosampler Location: 316
Date Collected: 4/16/2013 10:21:56 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 ADUP SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WL68 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2776996.4	100.6	%	0.64				0.64%
ScR 361.383	392001.4	101.9	%	0.10				0.10%
Ag 328.068†	451.5	0.00208	mg/L	0.000094	0.02080	mg/L	0.000936	4.50%
Al 308.215†	18232.0	15.00	mg/L	0.028	150.0	mg/L	0.28	0.19%
As 188.979†	-15.7	0.01828	mg/L	0.001586	0.1828	mg/L	0.01586	8.68%
B 249.677†	251.2	0.03754	mg/L	0.001253	0.3754	mg/L	0.01253	3.34%
Ba 233.527†	1893.9	0.2856	mg/L	0.00080	2.856	mg/L	0.0080	0.28%
Be 313.042†	109.5	0.00016	mg/L	0.000009	0.00159	mg/L	0.000094	5.89%
Ca 317.933†	174234.5	16.59	mg/L	0.051	165.9	mg/L	0.51	0.31%
Cd 228.802†	310.2	0.01396	mg/L	0.000262	0.1396	mg/L	0.00262	1.87%
Co 228.616†	835.0	0.02392	mg/L	0.000135	0.2392	mg/L	0.00135	0.56%
Cr 267.716†	1955.1	0.2349	mg/L	0.00116	2.349	mg/L	0.0116	0.49%
Cu 324.752†	181638.0	0.6933	mg/L	0.00447	6.933	mg/L	0.0447	0.64%
Fe 273.955†	134067.0	107.4	mg/L	0.29	1074	mg/L	2.95	0.27%
K 766.490†	2255.8	1.068	mg/L	0.0129	10.68	mg/L	0.129	1.21%
Mg 279.077†	8175.6	8.547	mg/L	0.0145	85.47	mg/L	0.145	0.17%
Mn 257.610†	138214.3	2.655	mg/L	0.0045	26.55	mg/L	0.045	0.17%
Mo 202.031†	517.9	0.02747	mg/L	0.000098	0.2747	mg/L	0.00098	0.36%
Na 589.592†	27038.3	2.171	mg/L	0.0098	21.71	mg/L	0.098	0.45%
Na 330.237†	103.4	2.120	mg/L	0.0660	21.20	mg/L	0.660	3.12%
Ni 231.604†	550.7	0.1455	mg/L	0.00124	1.455	mg/L	0.0124	0.85%
Pb 220.353†	6022.5	0.7521	mg/L	0.00526	7.521	mg/L	0.0526	0.70%
Sb 206.836†	28.3	0.00944	mg/L	0.001144	0.09436	mg/L	0.011441	12.12%
Se 196.026†	-0.9	-0.00241	mg/L	0.004216	-0.02414	mg/L	0.042163	174.64%
Si 288.158†	326.7	0.2166	mg/L	0.00264	2.166	mg/L	0.0264	1.22%
Sn 189.927†	838.8	0.1743	mg/L	0.00306	1.743	mg/L	0.0306	1.76%
Sr 421.552†	64796.4	0.06728	mg/L	0.000114	0.6728	mg/L	0.00114	0.17%
Ti 334.903†	23837.8	0.9135	mg/L	0.00133	9.135	mg/L	0.0133	0.15%
Tl 190.801†	-16.8	0.00445	mg/L	0.002439	0.04450	mg/L	0.024386	54.80%
V 292.402†	12686.5	0.08713	mg/L	0.000732	0.8713	mg/L	0.00732	0.84%
Zn 206.200†	18226.9	4.440	mg/L	0.0121	44.40	mg/L	0.121	0.27%

Sequence No.: 23
Sample ID: WL68 ASPK SWC

Autosampler Location: 317
Date Collected: 4/16/2013 10:25:57 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 ASPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL68 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2792074.8	101.2	%	0.24				0.24%
ScR 361.383	392995.6	102.2	%	0.33				0.32%
Ag 328.068†	25102.9	0.1083	mg/L	0.00038	1.083	mg/L	0.0038	0.35%
Al 308.215†	19442.3	15.99	mg/L	0.058	159.9	mg/L	0.58	0.36%
As 188.979†	562.5	0.4402	mg/L	0.00331	4.402	mg/L	0.0331	0.75%
B 249.677†	222.3	0.03298	mg/L	0.000554	0.3298	mg/L	0.00554	1.68%
Ba 233.527†	4501.6	0.6979	mg/L	0.00407	6.979	mg/L	0.0407	0.58%
Be 313.042†	56400.7	0.09790	mg/L	0.000297	0.9790	mg/L	0.00297	0.30%
Ca 317.933†	196054.3	18.67	mg/L	0.071	186.7	mg/L	0.71	0.38%
Cd 228.802†	2788.6	0.1217	mg/L	0.00065	1.217	mg/L	0.0065	0.53%
Co 228.616†	4301.4	0.1300	mg/L	0.00057	1.300	mg/L	0.0057	0.44%
Cr 267.716†	2686.3	0.3222	mg/L	0.00113	3.222	mg/L	0.0113	0.35%
Cu 324.752†	224965.4	0.8584	mg/L	0.00302	8.584	mg/L	0.0302	0.35%
Fe 273.955†	155969.1	124.9	mg/L	1.04	1249	mg/L	10.37	0.83%
K 766.490†	6419.1	3.038	mg/L	0.0255	30.38	mg/L	0.255	0.84%
Mg 279.077†	9914.6	10.37	mg/L	0.054	103.7	mg/L	0.54	0.52%
Mn 257.610†	145104.4	2.787	mg/L	0.0145	27.87	mg/L	0.145	0.52%
Mo 202.031†	637.3	0.03382	mg/L	0.000281	0.3382	mg/L	0.00281	0.83%
Na 589.592†	52833.8	4.243	mg/L	0.0121	42.43	mg/L	0.121	0.28%
Na 330.237†	171.2	4.163	mg/L	0.0866	41.63	mg/L	0.866	2.08%
Ni 231.604†	958.0	0.2529	mg/L	0.00135	2.529	mg/L	0.0135	0.54%
Pb 220.353†	10026.2	1.253	mg/L	0.0055	12.53	mg/L	0.055	0.44%
Sb 206.836†	30.6	0.00931	mg/L	0.000887	0.09309	mg/L	0.008875	9.53%
Se 196.026†	635.2	0.4165	mg/L	0.01004	4.165	mg/L	0.1004	2.41%
Si 288.158†	329.8	0.2194	mg/L	0.00252	2.194	mg/L	0.0252	1.15%
Sn 189.927†	708.8	0.1477	mg/L	0.00107	1.477	mg/L	0.0107	0.73%
Sr 421.552†	163779.0	0.1701	mg/L	0.00043	1.701	mg/L	0.0043	0.25%
Ti 334.903†	24416.4	0.9356	mg/L	0.00249	9.356	mg/L	0.0249	0.27%
Tl 190.801†	731.9	0.4183	mg/L	0.00382	4.183	mg/L	0.0382	0.91%
V 292.402†	26762.3	0.1883	mg/L	0.00045	1.883	mg/L	0.0045	0.24%
Zn 206.200†	18916.9	4.608	mg/L	0.0269	46.08	mg/L	0.269	0.58%

Sequence No.: 24
Sample ID: WL68 APOST SWC

Autosampler Location: 318
Date Collected: 4/16/2013 10:29:58 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL68 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: WL68 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767986.9	100.3	%	0.07				0.07%
ScR 361.383	386674.6	100.5	%	0.26				0.26%
Ag 328.068†	123092.4	0.5303	mg/L	0.00104	5.303	mg/L	0.0104	0.20%
Al 308.215†	22120.8	18.19	mg/L	0.045	181.9	mg/L	0.45	0.25%
As 188.979†	2904.6	2.148	mg/L	0.0019	21.48	mg/L	0.019	0.09%
B 249.677†	301.7	0.04387	mg/L	0.001084	0.4387	mg/L	0.01084	2.47%
Ba 233.527†	15339.4	2.423	mg/L	0.0051	24.23	mg/L	0.051	0.21%
Be 313.042†	281860.9	0.4894	mg/L	0.00458	4.894	mg/L	0.0458	0.94%
Ca 317.933†	279306.2	26.59	mg/L	0.118	265.9	mg/L	1.18	0.44%
Cd 228.802†	12629.8	0.5494	mg/L	0.00171	5.494	mg/L	0.0171	0.31%
Co 228.616†	17977.4	0.5486	mg/L	0.00030	5.486	mg/L	0.0030	0.05%
Cr 267.716†	7033.9	0.8385	mg/L	0.00324	8.385	mg/L	0.0324	0.39%
Cu 324.752†	325777.5	1.240	mg/L	0.0031	12.40	mg/L	0.031	0.25%
Fe 273.955†	146989.9	117.7	mg/L	0.67	1177	mg/L	6.68	0.57%
K 766.490†	23837.0	11.28	mg/L	0.029	112.8	mg/L	0.29	0.26%
Mg 279.077†	19288.8	20.24	mg/L	0.083	202.4	mg/L	0.83	0.41%
Mn 257.610†	212899.4	4.090	mg/L	0.0097	40.90	mg/L	0.097	0.24%
Mo 202.031†	501.4	0.02643	mg/L	0.000256	0.2643	mg/L	0.00256	0.97%
Na 589.592†	153784.8	12.35	mg/L	0.078	123.5	mg/L	0.78	0.63%
Na 330.237†	455.5	12.71	mg/L	0.036	127.1	mg/L	0.36	0.28%
Ni 231.604†	2516.1	0.6639	mg/L	0.00290	6.639	mg/L	0.0290	0.44%
Pb 220.353†	23706.7	2.968	mg/L	0.0059	29.68	mg/L	0.059	0.20%
Sb 206.836†	44.4	0.00891	mg/L	0.001881	0.08911	mg/L	0.018805	21.10%
Se 196.026†	3198.2	2.105	mg/L	0.0074	21.05	mg/L	0.074	0.35%
Si 288.158†	307.1	0.2068	mg/L	0.00225	2.068	mg/L	0.0225	1.09%
Sn 189.927†	752.9	0.1574	mg/L	0.00112	1.574	mg/L	0.0112	0.71%
Sr 421.552†	543563.5	0.5644	mg/L	0.00212	5.644	mg/L	0.0212	0.37%
Ti 334.903†	25612.2	0.9809	mg/L	0.00369	9.809	mg/L	0.0369	0.38%
Tl 190.801†	3767.0	2.086	mg/L	0.0023	20.86	mg/L	0.023	0.11%
V 292.402†	84881.6	0.6107	mg/L	0.00157	6.107	mg/L	0.0157	0.26%
Zn 206.200†	21957.8	5.349	mg/L	0.0275	53.49	mg/L	0.275	0.51%

Sequence No.: 25
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 4/16/2013 10:34:00 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2778352.7	100.7	%	0.23				0.23%
ScR 361.383	382950.3	99.54	%	0.539				0.54%
Ag 328.068†	246587.1	1.062	mg/L	0.0056	1.062	mg/L	0.0056	0.53%
Al 308.215†	2564.9	2.075	mg/L	0.0162	2.075	mg/L	0.0162	0.78%
As 188.979†	2789.6	2.064	mg/L	0.0053	2.064	mg/L	0.0053	0.26%
B 249.677†	6810.9	1.019	mg/L	0.0053	1.019	mg/L	0.0053	0.53%
Ba 233.527†	6744.0	1.073	mg/L	0.0063	1.073	mg/L	0.0063	0.59%
Be 313.042†	574297.9	0.9971	mg/L	0.00323	0.9971	mg/L	0.00323	0.32%
Ca 317.933†	22415.8	2.134	mg/L	0.0156	2.134	mg/L	0.0156	0.73%
Cd 228.802†	23826.2	1.047	mg/L	0.0047	1.047	mg/L	0.0047	0.45%
Co 228.616†	34142.3	1.044	mg/L	0.0030	1.044	mg/L	0.0030	0.29%
Cr 267.716†	9025.0	1.074	mg/L	0.0061	1.074	mg/L	0.0061	0.57%
Cu 324.752†	276105.1	1.046	mg/L	0.0048	1.046	mg/L	0.0048	0.46%
Fe 273.955†	2614.2	2.088	mg/L	0.0190	2.088	mg/L	0.0190	0.91%
K 766.490†	43181.2	20.44	mg/L	0.037	20.44	mg/L	0.037	0.18%
Mg 279.077†	1965.2	2.076	mg/L	0.0144	2.076	mg/L	0.0144	0.70%
Mn 257.610†	51905.4	0.9974	mg/L	0.00413	0.9974	mg/L	0.00413	0.41%
Mo 202.031†	19145.6	1.023	mg/L	0.0043	1.023	mg/L	0.0043	0.42%
Na 589.592†	629498.9	50.55	mg/L	0.186	50.55	mg/L	0.186	0.37%
Na 330.237†	1703.6	52.44	mg/L	0.238	52.44	mg/L	0.238	0.45%
Ni 231.604†	3963.2	1.047	mg/L	0.0110	1.047	mg/L	0.0110	1.05%
Pb 220.353†	16454.3	2.062	mg/L	0.0067	2.062	mg/L	0.0067	0.32%
Sb 206.836†	5768.3	2.095	mg/L	0.0056	2.095	mg/L	0.0056	0.27%
Se 196.026†	3095.0	2.038	mg/L	0.0075	2.038	mg/L	0.0075	0.37%
Si 288.158†	3009.0	1.994	mg/L	0.0096	1.994	mg/L	0.0096	0.48%
Sn 189.927†	4870.5	1.004	mg/L	0.0033	1.004	mg/L	0.0033	0.33%
Sr 421.552†	960964.2	0.9978	mg/L	0.00311	0.9978	mg/L	0.00311	0.31%
Ti 334.903†	26480.9	1.015	mg/L	0.0046	1.015	mg/L	0.0046	0.45%
Tl 190.801†	3887.8	2.134	mg/L	0.0098	2.134	mg/L	0.0098	0.46%
V 292.402†	142023.7	1.030	mg/L	0.0035	1.030	mg/L	0.0035	0.34%
Zn 206.200†	4294.4	1.047	mg/L	0.0084	1.047	mg/L	0.0084	0.80%

Sequence No.: 26
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 4/16/2013 10:38:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2800758.6	101.5	%	0.26				0.25%
ScR 361.383	388744.1	101.1	%	0.63				0.63%
Ag 328.068†	37.7	0.00016	mg/L	0.000085	0.00016	mg/L	0.000085	52.34%
Al 308.215†	2.5	0.00201	mg/L	0.005457	0.00201	mg/L	0.005457	271.58%
As 188.979†	2.8	0.00205	mg/L	0.002213	0.00205	mg/L	0.002213	107.97%
B 249.677†	5.2	0.00078	mg/L	0.000524	0.00078	mg/L	0.000524	67.25%
Ba 233.527†	7.5	0.00119	mg/L	0.000445	0.00119	mg/L	0.000445	37.55%
Be 313.042†	55.8	0.00010	mg/L	0.000028	0.00010	mg/L	0.000028	28.59%
Ca 317.933†	4.6	0.00043	mg/L	0.000110	0.00043	mg/L	0.000110	25.24%
Cd 228.802†	8.3	0.00036	mg/L	0.000135	0.00036	mg/L	0.000135	37.77%
Co 228.616†	3.5	0.00011	mg/L	0.000156	0.00011	mg/L	0.000156	148.13%
Cr 267.716†	-4.1	-0.00048	mg/L	0.000123	-0.00048	mg/L	0.000123	25.31%
Cu 324.752†	104.3	0.00039	mg/L	0.000115	0.00039	mg/L	0.000115	29.15%
Fe 273.955†	5.3	0.00424	mg/L	0.001496	0.00424	mg/L	0.001496	35.30%
K 766.490†	18.2	0.00862	mg/L	0.003700	0.00862	mg/L	0.003700	42.95%
Mg 279.077†	-1.0	-0.00107	mg/L	0.006284	-0.00107	mg/L	0.006284	587.07%
Mn 257.610†	6.6	0.00013	mg/L	0.000065	0.00013	mg/L	0.000065	51.08%
Mo 202.031†	88.8	0.00475	mg/L	0.000642	0.00475	mg/L	0.000642	13.53%
Na 589.592†	-1.5	-0.00012	mg/L	0.000669	-0.00012	mg/L	0.000669	540.54%
Na 330.237†	-11.9	-0.3661	mg/L	0.06143	-0.3661	mg/L	0.06143	16.78%
Ni 231.604†	3.4	0.00091	mg/L	0.000846	0.00091	mg/L	0.000846	92.94%
Pb 220.353†	5.1	0.00064	mg/L	0.000198	0.00064	mg/L	0.000198	31.13%
Sb 206.836†	12.7	0.00462	mg/L	0.000368	0.00462	mg/L	0.000368	7.97%
Se 196.026†	3.4	0.00225	mg/L	0.001856	0.00225	mg/L	0.001856	82.59%
Si 288.158†	-4.3	-0.00285	mg/L	0.005056	-0.00285	mg/L	0.005056	177.69%
Sn 189.927†	6.6	0.00136	mg/L	0.000491	0.00136	mg/L	0.000491	36.13%
Sr 421.552†	5.5	0.00001	mg/L	0.000033	0.00001	mg/L	0.000033	580.28%
Ti 334.903†	12.2	0.00046	mg/L	0.000504	0.00046	mg/L	0.000504	108.90%
Tl 190.801†	4.3	0.00239	mg/L	0.002304	0.00239	mg/L	0.002304	96.40%
V 292.402†	19.8	0.00014	mg/L	0.000125	0.00014	mg/L	0.000125	87.05%
Zn 206.200†	-1.4	-0.00035	mg/L	0.000664	-0.00035	mg/L	0.000664	191.46%

Sequence No.: 27
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/16/2013 10:42:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2790571.5	101.1	%	0.25				0.25%
ScR 361.383	388674.0	101.0	%	0.30				0.30%
Ag 328.068†	751.0	0.00323	mg/L	0.000117	0.00323	mg/L	0.000117	3.63%
Al 308.215†	71.7	0.05881	mg/L	0.005538	0.05881	mg/L	0.005538	9.42%
As 188.979†	70.1	0.05120	mg/L	0.001605	0.05120	mg/L	0.001605	3.13%
B 249.677†	135.2	0.02024	mg/L	0.000047	0.02024	mg/L	0.000047	0.23%
Ba 233.527†	27.1	0.00430	mg/L	0.000284	0.00430	mg/L	0.000284	6.61%
Be 313.042†	590.5	0.00102	mg/L	0.000015	0.00102	mg/L	0.000015	1.50%
Ca 317.933†	636.5	0.06060	mg/L	0.000267	0.06060	mg/L	0.000267	0.44%
Cd 228.802†	59.9	0.00238	mg/L	0.000132	0.00238	mg/L	0.000132	5.55%
Co 228.616†	115.7	0.00354	mg/L	0.000188	0.00354	mg/L	0.000188	5.32%
Cr 267.716†	42.1	0.00501	mg/L	0.000600	0.00501	mg/L	0.000600	11.98%
Cu 324.752†	635.5	0.00241	mg/L	0.000043	0.00241	mg/L	0.000043	1.80%
Fe 273.955†	63.5	0.05080	mg/L	0.002094	0.05080	mg/L	0.002094	4.12%
K 766.490†	1104.6	0.5228	mg/L	0.01821	0.5228	mg/L	0.01821	3.48%
Mg 279.077†	52.9	0.05571	mg/L	0.002280	0.05571	mg/L	0.002280	4.09%
Mn 257.610†	56.6	0.00109	mg/L	0.000088	0.00109	mg/L	0.000088	8.10%
Mo 202.031†	106.3	0.00568	mg/L	0.000159	0.00568	mg/L	0.000159	2.80%
Na 589.592†	6096.8	0.4896	mg/L	0.00247	0.4896	mg/L	0.00247	0.50%
Na 330.237†	10.3	0.3145	mg/L	0.15154	0.3145	mg/L	0.15154	48.19%
Ni 231.604†	43.4	0.01148	mg/L	0.000910	0.01148	mg/L	0.000910	7.93%
Pb 220.353†	173.5	0.02175	mg/L	0.000714	0.02175	mg/L	0.000714	3.28%
Sb 206.836†	148.0	0.05381	mg/L	0.001825	0.05381	mg/L	0.001825	3.39%
Se 196.026†	80.3	0.05290	mg/L	0.001301	0.05290	mg/L	0.001301	2.46%
Si 288.158†	83.7	0.05552	mg/L	0.001378	0.05552	mg/L	0.001378	2.48%
Sn 189.927†	49.8	0.01029	mg/L	0.000344	0.01029	mg/L	0.000344	3.34%
Sr 421.552†	1000.3	0.00104	mg/L	0.000026	0.00104	mg/L	0.000026	2.50%
Ti 334.903†	129.0	0.00494	mg/L	0.000640	0.00494	mg/L	0.000640	12.95%
Tl 190.801†	94.7	0.05215	mg/L	0.001684	0.05215	mg/L	0.001684	3.23%
V 292.402†	461.3	0.00335	mg/L	0.000074	0.00335	mg/L	0.000074	2.21%
Zn 206.200†	43.6	0.01063	mg/L	0.000348	0.01063	mg/L	0.000348	3.27%

Sequence No.: 28
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/16/2013 10:46:37 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2701296.5	97.89	%	0.457				0.47%
ScR 361.383	378259.8	98.33	%	0.279				0.28%
Ag 328.068†	-264.0	-0.00046	mg/L	0.000091	-0.00046	mg/L	0.000091	19.77%
Al 308.215†	248028.4	204.1	mg/L	0.85	204.1	mg/L	0.85	0.42%
As 188.979†	56.5	0.03199	mg/L	0.002851	0.03199	mg/L	0.002851	8.91%
B 249.677†	94.2	0.01411	mg/L	0.002090	0.01411	mg/L	0.002090	14.81%
Ba 233.527†	152.4	-0.00357	mg/L	0.000494	-0.00357	mg/L	0.000494	13.85%
Be 313.042†	86.9	0.00015	mg/L	0.000026	0.00015	mg/L	0.000026	17.55%
Ca 317.933†	1092187.2	104.0	mg/L	0.58	104.0	mg/L	0.58	0.55%
Cd 228.802†	75.9	0.00314	mg/L	0.000270	0.00314	mg/L	0.000270	8.58%
Co 228.616†	64.8	0.00196	mg/L	0.000146	0.00196	mg/L	0.000146	7.43%
Cr 267.716†	11.9	-0.00415	mg/L	0.000692	-0.00415	mg/L	0.000692	16.66%
Cu 324.752†	-1850.9	0.00172	mg/L	0.000085	0.00172	mg/L	0.000085	4.98%
Fe 273.955†	236400.8	189.3	mg/L	1.32	189.3	mg/L	1.32	0.70%
K 766.490†	63.5	0.03004	mg/L	0.010719	0.03004	mg/L	0.010719	35.68%
Mg 279.077†	102427.4	107.7	mg/L	0.27	107.7	mg/L	0.27	0.25%
Mn 257.610†	93.0	0.00036	mg/L	0.000169	0.00036	mg/L	0.000169	47.18%
Mo 202.031†	116.7	0.00501	mg/L	0.000208	0.00501	mg/L	0.000208	4.15%
Na 589.592†	238.1	0.01912	mg/L	0.001841	0.01912	mg/L	0.001841	9.63%
Na 330.237†	-8.3	-0.2517	mg/L	0.21229	-0.2517	mg/L	0.21229	84.33%
Ni 231.604†	4.6	0.00122	mg/L	0.001069	0.00122	mg/L	0.001069	87.29%
Pb 220.353†	-464.7	-0.01310	mg/L	0.000630	-0.01310	mg/L	0.000630	4.81%
Sb 206.836†	-23.5	-0.00866	mg/L	0.002788	-0.00866	mg/L	0.002788	32.20%
Se 196.026†	0.2	-0.02334	mg/L	0.002953	-0.02334	mg/L	0.002953	12.65%
Si 288.158†	-20.3	-0.00122	mg/L	0.004353	-0.00122	mg/L	0.004353	358.24%
Sn 189.927†	-100.0	-0.01189	mg/L	0.001693	-0.01189	mg/L	0.001693	14.25%
Sr 421.552†	3943.0	0.00409	mg/L Cont.	0.000031	0.00409	mg/L	0.000031	0.75%
Ti 334.903†	263.3	0.00391	mg/L	0.000371	0.00391	mg/L	0.000371	9.48%
Tl 190.801†	-17.4	0.01552	mg/L	0.001290	0.01552	mg/L	0.001290	8.32%
V 292.402†	1173.3	-0.00103	mg/L	0.000289	-0.00103	mg/L	0.000289	28.14%
Zn 206.200†	-3.4	-0.00084	mg/L	0.001134	-0.00084	mg/L	0.001134	135.38%

Sequence No.: 29
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/16/2013 10:50:54 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2694479.3	97.64	%	0.402				0.41%
ScR 361.383	378540.9	98.40	%	0.113				0.12%
Ag 328.068†	255280.4	1.100	mg/L	0.0032	1.100	mg/L	0.0032	0.29%
Al 308.215†	247625.2	203.7	mg/L	0.85	203.7	mg/L	0.85	0.42%
As 188.979†	1504.0	1.086	mg/L	0.0062	1.086	mg/L	0.0062	0.57%
B 249.677†	22.7	0.00105	mg/L	0.000636	0.00105	mg/L	0.000636	60.64%
Ba 233.527†	6835.8	1.060	mg/L	0.0026	1.060	mg/L	0.0026	0.25%
Be 313.042†	569193.7	0.9883	mg/L	0.00700	0.9883	mg/L	0.00700	0.71%
Ca 317.933†	1088306.8	103.6	mg/L	0.34	103.6	mg/L	0.34	0.32%
Cd 228.802†	24121.2	1.066	mg/L	0.0014	1.066	mg/L	0.0014	0.13%
Co 228.616†	32865.8	1.006	mg/L	0.0038	1.006	mg/L	0.0038	0.38%
Cr 267.716†	8844.2	1.048	mg/L	0.0011	1.048	mg/L	0.0011	0.10%
Cu 324.752†	278280.9	1.063	mg/L	0.0077	1.063	mg/L	0.0077	0.73%
Fe 273.955†	236122.3	189.1	mg/L	1.71	189.1	mg/L	1.71	0.91%
K 766.490†	49.9	0.02362	mg/L	0.007035	0.02362	mg/L	0.007035	29.78%
Mg 279.077†	98100.3	103.2	mg/L	0.18	103.2	mg/L	0.18	0.17%
Mn 257.610†	51064.4	0.9796	mg/L	0.00737	0.9796	mg/L	0.00737	0.75%
Mo 202.031†	108.2	0.00450	mg/L	0.000265	0.00450	mg/L	0.000265	5.88%
Na 589.592†	137.7	0.01106	mg/L	0.001889	0.01106	mg/L	0.001889	17.08%
Na 330.237†	-1.9	-0.3497	mg/L	0.16238	-0.3497	mg/L	0.16238	46.43%
Ni 231.604†	3811.8	1.007	mg/L	0.0023	1.007	mg/L	0.0023	0.23%
Pb 220.353†	7573.8	0.9942	mg/L	0.00525	0.9942	mg/L	0.00525	0.53%
Sb 206.836†	2841.9	1.023	mg/L	0.0020	1.023	mg/L	0.0020	0.20%
Se 196.026†	1578.6	1.016	mg/L	0.0112	1.016	mg/L	0.0112	1.11%
Si 288.158†	-33.7	-0.00709	mg/L	0.004759	-0.00709	mg/L	0.004759	67.16%
Sn 189.927†	-104.1	-0.01222	mg/L	0.000785	-0.01222	mg/L	0.000785	6.43%
Sr 421.552†	3901.9	0.00405	mg/L Conf.	0.000031	0.00405	mg/L	0.000031	0.77%
Ti 334.903†	259.0	0.00357	mg/L	0.000270	0.00357	mg/L	0.000270	7.54%
Tl 190.801†	1799.1	1.006	mg/L	0.0056	1.006	mg/L	0.0056	0.56%
V 292.402†	141795.7	1.019	mg/L	0.0041	1.019	mg/L	0.0041	0.40%
Zn 206.200†	4079.7	0.9941	mg/L	0.00209	0.9941	mg/L	0.00209	0.21%

Sequence No.: 30
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 4/16/2013 10:54:57 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2752184.5	99.73	%	0.073				0.07%
ScR 361.383	380381.8	98.88	%	0.611				0.62%
Ag 328.068†	250768.4	1.080	mg/L	0.0010	1.080	mg/L	0.0010	0.09%
Al 308.215†	2605.6	2.108	mg/L	0.0040	2.108	mg/L	0.0040	0.19%
As 188.979†	2841.7	2.102	mg/L	0.0069	2.102	mg/L	0.0069	0.33%
B 249.677†	6891.2	1.031	mg/L	0.0054	1.031	mg/L	0.0054	0.53%
Ba 233.527†	6855.3	1.090	mg/L	0.0048	1.090	mg/L	0.0048	0.44%
Be 313.042†	579859.1	1.007	mg/L	0.0021	1.007	mg/L	0.0021	0.21%
Ca 317.933†	22694.5	2.161	mg/L	0.0081	2.161	mg/L	0.0081	0.38%
Cd 228.802†	24181.7	1.063	mg/L	0.0044	1.063	mg/L	0.0044	0.42%
Co 228.616†	34779.1	1.063	mg/L	0.0052	1.063	mg/L	0.0052	0.49%
Cr 267.716†	9162.0	1.090	mg/L	0.0056	1.090	mg/L	0.0056	0.51%
Cu 324.752†	281314.7	1.066	mg/L	0.0013	1.066	mg/L	0.0013	0.13%
Fe 273.955†	2648.2	2.115	mg/L	0.0165	2.115	mg/L	0.0165	0.78%
K 766.490†	43588.5	20.63	mg/L	0.085	20.63	mg/L	0.085	0.41%
Mg 279.077†	1988.8	2.101	mg/L	0.0026	2.101	mg/L	0.0026	0.12%
Mn 257.610†	52279.8	1.005	mg/L	0.0042	1.005	mg/L	0.0042	0.42%
Mo 202.031†	19453.8	1.039	mg/L	0.0037	1.039	mg/L	0.0037	0.35%
Na 589.592†	637804.7	51.22	mg/L	0.171	51.22	mg/L	0.171	0.33%
Na 330.237†	1727.3	53.17	mg/L	0.201	53.17	mg/L	0.201	0.38%
Ni 231.604†	4023.5	1.063	mg/L	0.0060	1.063	mg/L	0.0060	0.56%
Pb 220.353†	16738.1	2.097	mg/L	0.0095	2.097	mg/L	0.0095	0.45%
Sb 206.836†	5879.6	2.135	mg/L	0.0110	2.135	mg/L	0.0110	0.52%
Se 196.026†	3146.1	2.072	mg/L	0.0130	2.072	mg/L	0.0130	0.63%
Si 288.158†	3042.3	2.016	mg/L	0.0121	2.016	mg/L	0.0121	0.60%
Sn 189.927†	4951.0	1.021	mg/L	0.0049	1.021	mg/L	0.0049	0.48%
Sr 421.552†	971384.5	1.009	mg/L	0.0009	1.009	mg/L	0.0009	0.09%
Ti 334.903†	26709.0	1.023	mg/L	0.0011	1.023	mg/L	0.0011	0.11%
Tl 190.801†	3954.0	2.170	mg/L	0.0136	2.170	mg/L	0.0136	0.63%
V 292.402†	144567.8	1.049	mg/L	0.0016	1.049	mg/L	0.0016	0.15%
Zn 206.200†	4346.3	1.059	mg/L	0.0047	1.059	mg/L	0.0047	0.45%

Sequence No.: 31
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/16/2013 10:59:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2771587.8	100.4	%	0.43				0.43%
ScR 361.383	384747.8	100.0	%	0.44				0.44%
Ag 328.068†	91.4	0.00039	mg/L	0.000198	0.00039	mg/L	0.000198	50.20%
Al 308.215†	9.6	0.00777	mg/L	0.001665	0.00777	mg/L	0.001665	21.41%
As 188.979†	2.4	0.00172	mg/L	0.000972	0.00172	mg/L	0.000972	56.44%
B 249.677†	8.9	0.00134	mg/L	0.000725	0.00134	mg/L	0.000725	54.18%
Ba 233.527†	2.3	0.00036	mg/L	0.000447	0.00036	mg/L	0.000447	124.54%
Be 313.042†	103.4	0.00018	mg/L	0.000004	0.00018	mg/L	0.000004	2.30%
Ca 317.933†	28.3	0.00270	mg/L	0.000999	0.00270	mg/L	0.000999	37.06%
Cd 228.802†	11.1	0.00049	mg/L	0.000094	0.00049	mg/L	0.000094	19.43%
Co 228.616†	2.0	0.00006	mg/L	0.000180	0.00006	mg/L	0.000180	297.84%
Cr 267.716†	-4.2	-0.00050	mg/L	0.000679	-0.00050	mg/L	0.000679	134.57%
Cu 324.752†	158.5	0.00060	mg/L	0.000066	0.00060	mg/L	0.000066	11.03%
Fe 273.955†	3.6	0.00284	mg/L	0.001808	0.00284	mg/L	0.001808	63.54%
K 766.490†	28.5	0.01348	mg/L	0.011862	0.01348	mg/L	0.011862	88.00%
Mg 279.077†	6.6	0.00693	mg/L	0.003479	0.00693	mg/L	0.003479	50.16%
Mn 257.610†	10.6	0.00020	mg/L	0.000057	0.00020	mg/L	0.000057	28.21%
Mo 202.031†	91.5	0.00489	mg/L	0.000762	0.00489	mg/L	0.000762	15.58%
Na 589.592†	-4.8	-0.00038	mg/L	0.001402	-0.00038	mg/L	0.001402	366.23%
Na 330.237†	-0.6	-0.01834	mg/L	0.294044	-0.01834	mg/L	0.294044	>999.9%
Ni 231.604†	5.8	0.00154	mg/L	0.000311	0.00154	mg/L	0.000311	20.20%
Pb 220.353†	7.7	0.00097	mg/L	0.000185	0.00097	mg/L	0.000185	19.07%
Sb 206.836†	11.3	0.00412	mg/L	0.001408	0.00412	mg/L	0.001408	34.18%
Se 196.026†	2.5	0.00165	mg/L	0.003372	0.00165	mg/L	0.003372	204.31%
Si 288.158†	-5.1	-0.00340	mg/L	0.001745	-0.00340	mg/L	0.001745	51.35%
Sn 189.927†	2.3	0.00047	mg/L	0.000551	0.00047	mg/L	0.000551	116.72%
Sr 421.552†	62.4	0.00006	mg/L	0.000030	0.00006	mg/L	0.000030	46.00%
Ti 334.903†	7.3	0.00027	mg/L	0.000499	0.00027	mg/L	0.000499	182.46%
Tl 190.801†	4.8	0.00265	mg/L	0.001752	0.00265	mg/L	0.001752	65.98%
V 292.402†	31.6	0.00023	mg/L	0.000151	0.00023	mg/L	0.000151	66.31%
Zn 206.200†	-1.3	-0.00031	mg/L	0.000653	-0.00031	mg/L	0.000653	210.02%

Sequence No.: 32
Sample ID: WL74 MB1 SWC

Autosampler Location: 319
Date Collected: 4/16/2013 11:03:17 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 MB1 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL74 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2785762.0	100.9	%	0.69				0.69%
ScR 361.383	390495.6	101.5	%	0.51				0.50%
Ag 328.068†	59.2	0.00025	mg/L	0.000193	0.00051	mg/L	0.000386	75.81%
Al 308.215†	12.3	0.01010	mg/L	0.004276	0.02020	mg/L	0.008552	42.33%
As 188.979†	1.0	0.00071	mg/L	0.002025	0.00142	mg/L	0.004050	286.12%
B 249.677†	7.5	0.00112	mg/L	0.000600	0.00223	mg/L	0.001200	53.72%
Ba 233.527†	6.5	0.00103	mg/L	0.000553	0.00205	mg/L	0.001106	53.84%
Be 313.042†	58.7	0.00010	mg/L	0.000018	0.00020	mg/L	0.000037	17.97%
Ca 317.933†	139.6	0.01329	mg/L	0.000458	0.02658	mg/L	0.000917	3.45%
Cd 228.802†	6.1	0.00027	mg/L	0.000294	0.00053	mg/L	0.000588	110.21%
Co 228.616†	0.1	0.00000	mg/L	0.000024	0.00000	mg/L	0.000047	>999.9%
Cr 267.716†	0.1	0.00001	mg/L	0.000111	0.00003	mg/L	0.000222	858.32%
Cu 324.752†	151.8	0.00058	mg/L	0.000070	0.00115	mg/L	0.000141	12.24%
Fe 273.955†	11.3	0.00906	mg/L	0.002221	0.01812	mg/L	0.004443	24.52%
K 766.490†	7.0	0.00332	mg/L	0.002866	0.00663	mg/L	0.005732	86.43%
Mg 279.077†	-0.7	-0.00077	mg/L	0.002233	-0.00153	mg/L	0.004466	291.82%
Mn 257.610†	27.8	0.00053	mg/L	0.000053	0.00107	mg/L	0.000106	9.95%
Mo 202.031†	7.1	0.00038	mg/L	0.000222	0.00075	mg/L	0.000444	58.87%
Na 589.592†	-0.5	-0.00004	mg/L	0.003250	-0.00008	mg/L	0.006501	>999.9%
Na 330.237†	-18.3	-0.5643	mg/L	0.22020	-1.129	mg/L	0.4404	39.02%
Ni 231.604†	5.8	0.00153	mg/L	0.000437	0.00306	mg/L	0.000874	28.58%
Pb 220.353†	6.5	0.00082	mg/L	0.000568	0.00163	mg/L	0.001135	69.45%
Sb 206.836†	5.5	0.00202	mg/L	0.001850	0.00403	mg/L	0.003699	91.70%
Se 196.026†	-1.4	-0.00092	mg/L	0.001414	-0.00184	mg/L	0.002828	153.85%
Si 288.158†	20.3	0.01349	mg/L	0.002599	0.02698	mg/L	0.005197	19.26%
Sn 189.927†	0.6	0.00012	mg/L	0.000599	0.00025	mg/L	0.001199	482.12%
Sr 421.552†	45.0	0.00005	mg/L	0.000018	0.00009	mg/L	0.000036	38.72%
Ti 334.903†	1.0	0.00004	mg/L	0.000260	0.00008	mg/L	0.000520	689.66%
Tl 190.801†	0.7	0.00041	mg/L	0.001522	0.00082	mg/L	0.003044	369.57%
V 292.402†	-0.4	-0.00000	mg/L	0.000067	-0.00001	mg/L	0.000134	>999.9%
Zn 206.200†	3.0	0.00074	mg/L	0.000933	0.00148	mg/L	0.001865	125.85%

Sequence No.: 33
Sample ID: WL74 B SWC

Autosampler Location: 320
Date Collected: 4/16/2013 11:07:34 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 B SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2761665.5	100.1	%	0.52				0.52%
ScR 361.383	388132.3	100.9	%	0.39				0.38%
Ag 328.068†	-391.3	-0.00125	mg/L	0.000188	-0.00251	mg/L	0.000376	15.02%
Al 308.215†	92077.6	75.73	mg/L	0.103	151.5	mg/L	0.21	0.14%
As 188.979†	-270.7	-0.00742	mg/L	0.003218	-0.01484	mg/L	0.006435	43.36%
B 249.677†	34.0	0.00497	mg/L	0.001291	0.00994	mg/L	0.002581	25.97%
Ba 233.527†	1221.5	0.1776	mg/L	0.00052	0.3553	mg/L	0.00105	0.30%
Be 313.042†	612.3	0.00091	mg/L	0.000024	0.00182	mg/L	0.000049	2.69%
Ca 317.933†	489680.4	46.62	mg/L	0.013	93.25	mg/L	0.027	0.03%
Cd 228.802†	56.6	0.00368	mg/L	0.000180	0.00735	mg/L	0.000361	4.91%
Co 228.616†	1628.8	0.04000	mg/L	0.000289	0.08000	mg/L	0.000579	0.72%
Cr 267.716†	1278.7	0.1527	mg/L	0.00061	0.3055	mg/L	0.00123	0.40%
Cu 324.752†	33158.5	0.1300	mg/L	0.00165	0.2600	mg/L	0.00330	1.27%
Fe 273.955†	141481.2	113.3	mg/L	0.62	226.6	mg/L	1.24	0.55%
K 766.490†	12096.1	5.725	mg/L	0.0697	11.45	mg/L	0.139	1.22%
Mg 279.077†	22801.6	23.94	mg/L	0.028	47.88	mg/L	0.057	0.12%
Mn 257.610†	47688.0	0.9155	mg/L	0.00319	1.831	mg/L	0.0064	0.35%
Mo 202.031†	158.3	0.00790	mg/L	0.000283	0.01580	mg/L	0.000566	3.58%
Na 589.592†	93143.6	7.480	mg/L	0.0393	14.96	mg/L	0.079	0.53%
Na 330.237†	201.1	7.694	mg/L	0.0383	15.39	mg/L	0.077	0.50%
Ni 231.604†	381.7	0.1009	mg/L	0.00022	0.2017	mg/L	0.00043	0.21%
Pb 220.353†	168.6	0.03566	mg/L	0.001103	0.07133	mg/L	0.002205	3.09%
Sb 206.836†	-14.5	-0.00160	mg/L	0.001394	-0.00321	mg/L	0.002788	86.97%
Se 196.026†	-4.2	-0.01175	mg/L	0.003853	-0.02350	mg/L	0.007706	32.80%
Si 288.158†	2498.2	1.663	mg/L	0.0104	3.325	mg/L	0.0208	0.63%
Sn 189.927†	-57.7	-0.00692	mg/L	0.000158	-0.01385	mg/L	0.000317	2.29%
Sr 421.552†	377676.5	0.3922	mg/L	0.00130	0.7843	mg/L	0.00260	0.33%
Ti 334.903†	146255.0	5.608	mg/L	0.0058	11.22	mg/L	0.012	0.10%
Tl 190.801†	-4.9	0.01053	mg/L	0.002059	0.02106	mg/L	0.004118	19.55%
V 292.402†	56173.2	0.3975	mg/L	0.00411	0.7951	mg/L	0.00822	1.03%
Zn 206.200†	895.7	0.2185	mg/L	0.00126	0.4370	mg/L	0.00252	0.58%

Sequence No.: 34
Sample ID: WL74 C SWC

Autosampler Location: 321
Date Collected: 4/16/2013 11:11:35 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 C SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2784183.5	100.9	%	0.22				0.22%
ScR 361.383	391054.8	101.7	%	0.26				0.26%
Ag 328.068†	-423.6	-0.00135	mg/L	0.000179	-0.00269	mg/L	0.000358	13.29%
Al 308.215†	71486.2	58.79	mg/L	0.104	117.6	mg/L	0.21	0.18%
As 188.979†	-242.6	-0.00084	mg/L	0.002252	-0.00168	mg/L	0.004504	268.15%
B 249.677†	55.6	0.00819	mg/L	0.000842	0.01638	mg/L	0.001684	10.28%
Ba 233.527†	778.7	0.1078	mg/L	0.00107	0.2157	mg/L	0.00214	0.99%
Be 313.042†	574.6	0.00085	mg/L	0.000008	0.00170	mg/L	0.000016	0.94%
Ca 317.933†	570609.2	54.33	mg/L	0.084	108.7	mg/L	0.17	0.15%
Cd 228.802†	52.3	0.00336	mg/L	0.000120	0.00673	mg/L	0.000241	3.58%
Co 228.616†	1849.0	0.04743	mg/L	0.000280	0.09485	mg/L	0.000560	0.59%
Cr 267.716†	1015.7	0.1215	mg/L	0.00084	0.2430	mg/L	0.00169	0.70%
Cu 324.752†	27656.1	0.1090	mg/L	0.00016	0.2181	mg/L	0.00032	0.15%
Fe 273.955†	135857.9	108.8	mg/L	1.11	217.6	mg/L	2.22	1.02%
K 766.490†	10968.6	5.191	mg/L	0.0125	10.38	mg/L	0.025	0.24%
Mg 279.077†	19785.5	20.77	mg/L	0.052	41.53	mg/L	0.105	0.25%
Mn 257.610†	44721.0	0.8585	mg/L	0.00669	1.717	mg/L	0.0134	0.78%
Mo 202.031†	169.2	0.00840	mg/L	0.000291	0.01679	mg/L	0.000582	3.47%
Na 589.592†	99911.8	8.023	mg/L	0.0093	16.05	mg/L	0.019	0.12%
Na 330.237†	218.2	8.117	mg/L	0.1311	16.23	mg/L	0.262	1.61%
Ni 231.604†	344.8	0.09110	mg/L	0.000561	0.1822	mg/L	0.00112	0.62%
Pb 220.353†	-0.1	0.01016	mg/L	0.000103	0.02031	mg/L	0.000206	1.02%
Sb 206.836†	-14.0	-0.00131	mg/L	0.001603	-0.00261	mg/L	0.003206	122.76%
Se 196.026†	-11.4	-0.01455	mg/L	0.005050	-0.02909	mg/L	0.010099	34.71%
Si 288.158†	1841.4	1.226	mg/L	0.0076	2.452	mg/L	0.0153	0.62%
Sn 189.927†	-60.5	-0.00694	mg/L	0.000679	-0.01387	mg/L	0.001357	9.78%
Sr 421.552†	386727.3	0.4015	mg/L	0.00113	0.8031	mg/L	0.00226	0.28%
Ti 334.903†	136293.2	5.226	mg/L	0.0185	10.45	mg/L	0.037	0.35%
Tl 190.801†	-0.9	0.01215	mg/L	0.001414	0.02431	mg/L	0.002827	11.63%
V 292.402†	54925.8	0.3888	mg/L	0.00102	0.7777	mg/L	0.00205	0.26%
Zn 206.200†	815.7	0.1989	mg/L	0.00163	0.3979	mg/L	0.00326	0.82%

Sequence No.: 35
Sample ID: WL74 J-L SWC

Autosampler Location: 322
Date Collected: 4/16/2013 11:15:36 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL74 J-L SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 J-L SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2795333.9	101.3	%	0.01				0.01%
ScR 361.383	392244.9	102.0	%	0.49				0.48%
Ag 328.068†	-57.4	-0.00011	mg/L	0.000285	-0.00111	mg/L	0.002845	256.02%
Al 308.215†	14656.1	12.05	mg/L	0.077	120.5	mg/L	0.77	0.64%
As 188.979†	-32.4	0.00691	mg/L	0.002173	0.06908	mg/L	0.021729	31.46%
B 249.677†	18.6	0.00276	mg/L	0.000291	0.02757	mg/L	0.002909	10.55%
Ba 233.527†	161.3	0.02276	mg/L	0.000407	0.2276	mg/L	0.00407	1.79%
Be 313.042†	96.3	0.00014	mg/L	0.000034	0.00141	mg/L	0.000345	24.39%
Ca 317.933†	184764.4	17.59	mg/L	0.079	175.9	mg/L	0.79	0.45%
Cd 228.802†	14.7	0.00079	mg/L	0.000048	0.00794	mg/L	0.000480	6.04%
Co 228.616†	324.8	0.00831	mg/L	0.000123	0.08314	mg/L	0.001230	1.48%
Cr 267.716†	193.3	0.02297	mg/L	0.000641	0.2297	mg/L	0.00641	2.79%
Cu 324.752†	4868.0	0.01921	mg/L	0.000219	0.1921	mg/L	0.00219	1.14%
Fe 273.955†	24584.7	19.69	mg/L	0.359	196.9	mg/L	3.59	1.83%
K 766.490†	2301.2	1.089	mg/L	0.0072	10.89	mg/L	0.072	0.66%
Mg 279.077†	4131.8	4.337	mg/L	0.0516	43.37	mg/L	0.516	1.19%
Mn 257.610†	8270.7	0.1587	mg/L	0.00223	1.587	mg/L	0.0223	1.40%
Mo 202.031†	49.6	0.00244	mg/L	0.000268	0.02443	mg/L	0.002678	10.96%
Na 589.592†	34694.5	2.786	mg/L	0.0110	27.86	mg/L	0.110	0.40%
Na 330.237†	65.4	2.263	mg/L	0.2115	22.63	mg/L	2.115	9.34%
Ni 231.604†	60.3	0.01594	mg/L	0.000889	0.1594	mg/L	0.00889	5.58%
Pb 220.353†	-4.6	0.00165	mg/L	0.000442	0.01650	mg/L	0.004416	26.76%
Sb 206.836†	-3.6	-0.00067	mg/L	0.000915	-0.00674	mg/L	0.009148	135.82%
Se 196.026†	-7.1	-0.00608	mg/L	0.003636	-0.06082	mg/L	0.036358	59.78%
Si 288.158†	354.7	0.2362	mg/L	0.00961	2.362	mg/L	0.0961	4.07%
Sn 189.927†	-28.8	-0.00429	mg/L	0.000446	-0.04293	mg/L	0.004465	10.40%
Sr 421.552†	94210.5	0.09782	mg/L	0.000306	0.9782	mg/L	0.00306	0.31%
Ti 334.903†	24187.3	0.9269	mg/L	0.00228	9.269	mg/L	0.0228	0.25%
Tl 190.801†	8.6	0.00704	mg/L	0.001946	0.07040	mg/L	0.019463	27.65%
V 292.402†	9683.5	0.06853	mg/L	0.000332	0.6853	mg/L	0.00332	0.48%
Zn 206.200†	146.2	0.03567	mg/L	0.001208	0.3567	mg/L	0.01208	3.39%

Sequence No.: 36
Sample ID: WL74 J SWC

Autosampler Location: 323
Date Collected: 4/16/2013 11:19:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 J SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2761818.2	100.1	%	0.07				0.07%
ScR 361.383	387826.3	100.8	%	0.48				0.47%
Ag 328.068†	-453.3	-0.00126	mg/L	0.000081	-0.00251	mg/L	0.000162	6.45%
Al 308.215†	74191.7	61.02	mg/L	0.188	122.0	mg/L	0.38	0.31%
As 188.979†	-206.9	0.00479	mg/L	0.004605	0.00958	mg/L	0.009211	96.15%
B 249.677†	87.3	0.01296	mg/L	0.000690	0.02592	mg/L	0.001380	5.33%
Ba 233.527†	791.7	0.1116	mg/L	0.00098	0.2232	mg/L	0.00195	0.87%
Be 313.042†	525.6	0.00078	mg/L	0.000004	0.00156	mg/L	0.000007	0.45%
Ca 317.933†	947091.1	90.17	mg/L	0.145	180.3	mg/L	0.29	0.16%
Cd 228.802†	48.9	0.00306	mg/L	0.000186	0.00612	mg/L	0.000372	6.07%
Co 228.616†	1585.8	0.04023	mg/L	0.000142	0.08047	mg/L	0.000283	0.35%
Cr 267.716†	995.5	0.1182	mg/L	0.00129	0.2364	mg/L	0.00258	1.09%
Cu 324.752†	24813.1	0.09779	mg/L	0.000504	0.1956	mg/L	0.00101	0.51%
Fe 273.955†	121647.6	97.42	mg/L	0.390	194.8	mg/L	0.78	0.40%
K 766.490†	11578.8	5.480	mg/L	0.0354	10.96	mg/L	0.071	0.65%
Mg 279.077†	20842.1	21.88	mg/L	0.048	43.76	mg/L	0.097	0.22%
Mn 257.610†	40907.9	0.7851	mg/L	0.00170	1.570	mg/L	0.0034	0.22%
Mo 202.031†	150.3	0.00696	mg/L	0.000321	0.01392	mg/L	0.000642	4.61%
Na 589.592†	177489.9	14.25	mg/L	0.057	28.51	mg/L	0.114	0.40%
Na 330.237†	440.9	14.84	mg/L	0.078	29.69	mg/L	0.155	0.52%
Ni 231.604†	307.1	0.08114	mg/L	0.001239	0.1623	mg/L	0.00248	1.53%
Pb 220.353†	-38.7	0.00654	mg/L	0.000588	0.01309	mg/L	0.001176	8.99%
Sb 206.836†	-8.5	0.00016	mg/L	0.001025	0.00032	mg/L	0.002049	647.24%
Se 196.026†	-11.6	-0.01486	mg/L	0.000741	-0.02973	mg/L	0.001481	4.98%
Si 288.158†	1928.3	1.284	mg/L	0.0107	2.568	mg/L	0.0214	0.83%
Sn 189.927†	-69.2	-0.00581	mg/L	0.001848	-0.01161	mg/L	0.003695	31.81%
Sr 421.552†	477926.3	0.4962	mg/L	0.00125	0.9925	mg/L	0.00249	0.25%
Ti 334.903†	123407.1	4.729	mg/L	0.0102	9.459	mg/L	0.0204	0.22%
Tl 190.801†	9.7	0.01665	mg/L	0.002133	0.03330	mg/L	0.004267	12.81%
V 292.402†	49244.1	0.3486	mg/L	0.00213	0.6973	mg/L	0.00426	0.61%
Zn 206.200†	719.5	0.1755	mg/L	0.00049	0.3510	mg/L	0.00098	0.28%

Sequence No.: 37
Sample ID: WL74 JDUP SWC

Autosampler Location: 324
Date Collected: 4/16/2013 11:23:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 JDUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 JDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2805497.1	101.7	%	0.80				0.79%
ScR 361.383	391813.1	101.8	%	0.42				0.41%
Ag 328.068†	-408.1	-0.00132	mg/L	0.000066	-0.00264	mg/L	0.000132	5.01%
Al 308.215†	77414.8	63.67	mg/L	0.237	127.3	mg/L	0.47	0.37%
As 188.979†	-292.1	-0.01288	mg/L	0.004857	-0.02576	mg/L	0.009715	37.72%
B 249.677†	98.6	0.01463	mg/L	0.000757	0.02926	mg/L	0.001514	5.17%
Ba 233.527†	776.7	0.1077	mg/L	0.00194	0.2155	mg/L	0.00388	1.80%
Be 313.042†	504.8	0.00073	mg/L	0.000019	0.00145	mg/L	0.000037	2.57%
Ca 317.933†	513504.9	48.89	mg/L	0.242	97.78	mg/L	0.483	0.49%
Cd 228.802†	43.5	0.00317	mg/L	0.000135	0.00635	mg/L	0.000270	4.25%
Co 228.616†	1840.2	0.04596	mg/L	0.000548	0.09192	mg/L	0.001096	1.19%
Cr 267.716†	1077.3	0.1285	mg/L	0.00078	0.2571	mg/L	0.00155	0.60%
Cu 324.752†	25128.9	0.09924	mg/L	0.000939	0.1985	mg/L	0.00188	0.95%
Fe 273.955†	133968.5	107.3	mg/L	0.68	214.6	mg/L	1.36	0.63%
K 766.490†	11414.4	5.402	mg/L	0.0164	10.80	mg/L	0.033	0.30%
Mg 279.077†	23011.1	24.16	mg/L	0.174	48.33	mg/L	0.348	0.72%
Mn 257.610†	43396.9	0.8331	mg/L	0.00355	1.666	mg/L	0.0071	0.43%
Mo 202.031†	128.5	0.00628	mg/L	0.000546	0.01256	mg/L	0.001091	8.69%
Na 589.592†	184441.1	14.81	mg/L	0.007	29.62	mg/L	0.015	0.05%
Na 330.237†	444.6	15.28	mg/L	0.406	30.56	mg/L	0.812	2.66%
Ni 231.604†	346.1	0.09144	mg/L	0.000189	0.1829	mg/L	0.00038	0.21%
Pb 220.353†	-44.5	0.00603	mg/L	0.000471	0.01206	mg/L	0.000942	7.81%
Sb 206.836†	-13.5	-0.00078	mg/L	0.002306	-0.00157	mg/L	0.004611	294.47%
Se 196.026†	-10.8	-0.01466	mg/L	0.004708	-0.02931	mg/L	0.009416	32.12%
Si 288.158†	2113.5	1.407	mg/L	0.0099	2.814	mg/L	0.0199	0.71%
Sn 189.927†	-59.1	-0.00697	mg/L	0.000862	-0.01394	mg/L	0.001725	12.38%
Sr 421.552†	383307.1	0.3980	mg/L	0.00054	0.7960	mg/L	0.00108	0.14%
Ti 334.903†	154025.7	5.906	mg/L	0.0220	11.81	mg/L	0.044	0.37%
Tl 190.801†	3.3	0.01432	mg/L	0.001591	0.02864	mg/L	0.003182	11.11%
V 292.402†	52636.5	0.3720	mg/L	0.00283	0.7440	mg/L	0.00566	0.76%
Zn 206.200†	793.6	0.1936	mg/L	0.00285	0.3871	mg/L	0.00571	1.47%

Sequence No.: 38
Sample ID: WL74 JSPK SWC

Autosampler Location: 325
Date Collected: 4/16/2013 11:27:54 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 JSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 JSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2776439.8	100.6	%	0.49				0.49%
ScR 361.383	386530.4	100.5	%	0.42				0.42%
Ag 328.068†	124652.0	0.5373	mg/L	0.00468	1.075	mg/L	0.0094	0.87%
Al 308.215†	80257.8	66.01	mg/L	0.091	132.0	mg/L	0.18	0.14%
As 188.979†	2716.4	2.132	mg/L	0.0140	4.264	mg/L	0.0281	0.66%
B 249.677†	88.3	0.01189	mg/L	0.000660	0.02378	mg/L	0.001321	5.55%
Ba 233.527†	14335.3	2.267	mg/L	0.0135	4.534	mg/L	0.0270	0.60%
Be 313.042†	289313.3	0.5022	mg/L	0.00147	1.004	mg/L	0.0029	0.29%
Ca 317.933†	671497.3	63.93	mg/L	0.141	127.9	mg/L	0.28	0.22%
Cd 228.802†	12439.5	0.5416	mg/L	0.00311	1.083	mg/L	0.0062	0.57%
Co 228.616†	18499.9	0.5583	mg/L	0.00261	1.117	mg/L	0.0052	0.47%
Cr 267.716†	5450.6	0.6477	mg/L	0.00348	1.295	mg/L	0.0070	0.54%
Cu 324.752†	165586.1	0.6312	mg/L	0.00606	1.262	mg/L	0.0121	0.96%
Fe 273.955†	119715.5	95.87	mg/L	0.541	191.7	mg/L	1.08	0.56%
K 766.490†	34148.4	16.16	mg/L	0.103	32.32	mg/L	0.206	0.64%
Mg 279.077†	32364.3	34.02	mg/L	0.126	68.03	mg/L	0.252	0.37%
Mn 257.610†	64161.5	1.232	mg/L	0.0055	2.464	mg/L	0.0110	0.45%
Mo 202.031†	140.0	0.00670	mg/L	0.000171	0.01339	mg/L	0.000343	2.56%
Na 589.592†	317998.7	25.54	mg/L	0.067	51.07	mg/L	0.134	0.26%
Na 330.237†	806.7	25.92	mg/L	0.113	51.84	mg/L	0.226	0.44%
Ni 231.604†	2267.6	0.5986	mg/L	0.00430	1.197	mg/L	0.0086	0.72%
Pb 220.353†	16604.1	2.093	mg/L	0.0123	4.185	mg/L	0.0245	0.59%
Sb 206.836†	2244.2	0.8137	mg/L	0.00812	1.627	mg/L	0.0162	1.00%
Se 196.026†	3182.6	2.089	mg/L	0.0129	4.178	mg/L	0.0259	0.62%
Si 288.158†	2161.5	1.442	mg/L	0.0165	2.884	mg/L	0.0330	1.15%
Sn 189.927†	-69.3	-0.00764	mg/L	0.000777	-0.01527	mg/L	0.001553	10.17%
Sr 421.552†	941047.9	0.9771	mg/L	0.00151	1.954	mg/L	0.0030	0.15%
Ti 334.903†	119506.5	4.581	mg/L	0.0052	9.162	mg/L	0.0103	0.11%
Tl 190.801†	3766.0	2.081	mg/L	0.0124	4.163	mg/L	0.0248	0.59%
V 292.402†	118105.0	0.8484	mg/L	0.00855	1.697	mg/L	0.0171	1.01%
Zn 206.200†	2814.6	0.6861	mg/L	0.00388	1.372	mg/L	0.0078	0.57%

Sequence No.: 39
Sample ID: WL74 JPOST SWC

Autosampler Location: 326
Date Collected: 4/16/2013 11:31:58 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 JPOST SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 JPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2755527.4	99.85	%	0.576				0.58%
ScR 361.383	381555.4	99.18	%	0.220				0.22%
Ag 328.068†	125540.8	0.5414	mg/L	0.00281	1.083	mg/L	0.0056	0.52%
Al 308.215†	78113.3	64.24	mg/L	0.155	128.5	mg/L	0.31	0.24%
As 188.979†	2795.4	2.194	mg/L	0.0138	4.388	mg/L	0.0277	0.63%
B 249.677†	95.0	0.01289	mg/L	0.000784	0.02577	mg/L	0.001569	6.09%
Ba 233.527†	14670.3	2.319	mg/L	0.0028	4.639	mg/L	0.0055	0.12%
Be 313.042†	291002.4	0.5051	mg/L	0.00295	1.010	mg/L	0.0059	0.58%
Ca 317.933†	1070306.9	101.9	mg/L	0.50	203.8	mg/L	1.00	0.49%
Cd 228.802†	12594.9	0.5482	mg/L	0.00304	1.096	mg/L	0.0061	0.55%
Co 228.616†	18769.5	0.5661	mg/L	0.00300	1.132	mg/L	0.0060	0.53%
Cr 267.716†	5617.0	0.6671	mg/L	0.00138	1.334	mg/L	0.0028	0.21%
Cu 324.752†	168849.5	0.6438	mg/L	0.00493	1.288	mg/L	0.0099	0.77%
Fe 273.955†	126000.1	100.9	mg/L	0.51	201.8	mg/L	1.03	0.51%
K 766.490†	34532.8	16.34	mg/L	0.045	32.69	mg/L	0.090	0.28%
Mg 279.077†	32904.0	34.58	mg/L	0.043	69.16	mg/L	0.087	0.13%
Mn 257.610†	68276.0	1.311	mg/L	0.0065	2.622	mg/L	0.0130	0.49%
Mo 202.031†	161.1	0.00737	mg/L	0.000193	0.01474	mg/L	0.000385	2.61%
Na 589.592†	312345.0	25.08	mg/L	0.060	50.16	mg/L	0.120	0.24%
Na 330.237†	801.9	25.83	mg/L	0.144	51.65	mg/L	0.287	0.56%
Ni 231.604†	2311.8	0.6110	mg/L	0.00108	1.222	mg/L	0.0022	0.18%
Pb 220.353†	16737.2	2.109	mg/L	0.0135	4.217	mg/L	0.0269	0.64%
Sb 206.836†	6465.7	2.348	mg/L	0.0098	4.697	mg/L	0.0197	0.42%
Se 196.026†	3272.6	2.148	mg/L	0.0193	4.296	mg/L	0.0387	0.90%
Si 288.158†	1943.6	1.297	mg/L	0.0111	2.594	mg/L	0.0221	0.85%
Sn 189.927†	-77.6	-0.00533	mg/L	0.001297	-0.01066	mg/L	0.002594	24.35%
Sr 421.552†	984895.7	1.023	mg/L	0.0012	2.045	mg/L	0.0024	0.12%
Ti 334.903†	125250.0	4.799	mg/L	0.0155	9.598	mg/L	0.0311	0.32%
Tl 190.801†	3816.5	2.110	mg/L	0.0134	4.219	mg/L	0.0269	0.64%
V 292.402†	122377.8	0.8790	mg/L	0.00586	1.758	mg/L	0.0117	0.67%
Zn 206.200†	2877.1	0.7013	mg/L	0.00241	1.403	mg/L	0.0048	0.34%

Sequence No.: 40
Sample ID: WL74 REF1 SWC

Autosampler Location: 327
Date Collected: 4/16/2013 11:36:02 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 REF1 SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2783916.1	100.9	%	0.16				0.16%
ScR 361.383	393113.3	102.2	%	0.28				0.27%
Ag 328.068†	259369.3	1.117	mg/L	0.0014	2.234	mg/L	0.0028	0.13%
Al 308.215†	116391.9	95.73	mg/L	0.123	191.5	mg/L	0.25	0.13%
As 188.979†	1780.3	1.373	mg/L	0.0084	2.747	mg/L	0.0169	0.61%
B 249.677†	7484.8	1.119	mg/L	0.0072	2.239	mg/L	0.0145	0.65%
Ba 233.527†	20985.4	3.317	mg/L	0.0144	6.635	mg/L	0.0287	0.43%
Be 313.042†	502291.3	0.8721	mg/L	0.00035	1.744	mg/L	0.0007	0.04%
Ca 317.933†	434003.2	41.32	mg/L	0.132	82.64	mg/L	0.264	0.32%
Cd 228.802†	16353.1	0.7191	mg/L	0.00206	1.438	mg/L	0.0041	0.29%
Co 228.616†	24905.7	0.7584	mg/L	0.00166	1.517	mg/L	0.0033	0.22%
Cr 267.716†	6387.8	0.7613	mg/L	0.00460	1.523	mg/L	0.0092	0.60%
Cu 324.752†	183407.1	0.7017	mg/L	0.00137	1.403	mg/L	0.0027	0.20%
Fe 273.955†	184806.1	148.0	mg/L	0.75	296.0	mg/L	1.50	0.51%
K 766.490†	78238.2	37.03	mg/L	0.152	74.05	mg/L	0.305	0.41%
Mg 279.077†	27697.1	29.08	mg/L	0.159	58.16	mg/L	0.319	0.55%
Mn 257.610†	235170.4	4.517	mg/L	0.0180	9.034	mg/L	0.0360	0.40%
Mo 202.031†	8692.7	0.4640	mg/L	0.00162	0.9279	mg/L	0.00323	0.35%
Na 589.592†	71684.6	5.756	mg/L	0.0278	11.51	mg/L	0.056	0.48%
Na 330.237†	172.7	5.437	mg/L	0.1473	10.87	mg/L	0.295	2.71%
Ni 231.604†	2133.8	0.5634	mg/L	0.00275	1.127	mg/L	0.0055	0.49%
Pb 220.353†	10405.2	1.322	mg/L	0.0040	2.643	mg/L	0.0081	0.31%
Sb 206.836†	1259.5	0.4651	mg/L	0.00311	0.9301	mg/L	0.00622	0.67%
Se 196.026†	2547.7	1.667	mg/L	0.0092	3.334	mg/L	0.0184	0.55%
Si 288.158†	4303.1	2.850	mg/L	0.0211	5.701	mg/L	0.0422	0.74%
Sn 189.927†	8058.1	1.663	mg/L	0.0064	3.326	mg/L	0.0128	0.39%
Sr 421.552†	525875.4	0.5460	mg/L	0.00098	1.092	mg/L	0.0020	0.18%
Ti 334.903†	61521.4	2.357	mg/L	0.0027	4.715	mg/L	0.0053	0.11%
Tl 190.801†	2443.7	1.359	mg/L	0.0070	2.718	mg/L	0.0141	0.52%
V 292.402†	119421.3	0.8578	mg/L	0.00309	1.716	mg/L	0.0062	0.36%
Zn 206.200†	7448.1	1.815	mg/L	0.0102	3.630	mg/L	0.0204	0.56%

Sequence No.: 41
Sample ID: WL74 MB1SPK SWC

Autosampler Location: 328
Date Collected: 4/16/2013 11:40:04 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 MB1SPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL74 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2774882.4	100.6	%	0.43				0.43%
ScR 361.383	389133.7	101.2	%	0.13				0.13%
Ag 328.068†	128727.4	0.5544	mg/L	0.00174	1.109	mg/L	0.0035	0.31%
Al 308.215†	2659.2	2.180	mg/L	0.0079	4.360	mg/L	0.0159	0.36%
As 188.979†	3030.7	2.207	mg/L	0.0141	4.415	mg/L	0.0282	0.64%
B 249.677†	15.7	0.00113	mg/L	0.000459	0.00225	mg/L	0.000918	40.80%
Ba 233.527†	13394.7	2.131	mg/L	0.0217	4.262	mg/L	0.0433	1.02%
Be 313.042†	292088.0	0.5072	mg/L	0.00370	1.014	mg/L	0.0074	0.73%
Ca 317.933†	109155.9	10.39	mg/L	0.039	20.79	mg/L	0.077	0.37%
Cd 228.802†	12374.6	0.5374	mg/L	0.00167	1.075	mg/L	0.0033	0.31%
Co 228.616†	17280.7	0.5290	mg/L	0.00194	1.058	mg/L	0.0039	0.37%
Cr 267.716†	4635.1	0.5507	mg/L	0.00099	1.101	mg/L	0.0020	0.18%
Cu 324.752†	139687.0	0.5295	mg/L	0.00190	1.059	mg/L	0.0038	0.36%
Fe 273.955†	2689.9	2.151	mg/L	0.0017	4.302	mg/L	0.0034	0.08%
K 766.490†	22077.4	10.45	mg/L	0.078	20.90	mg/L	0.156	0.75%
Mg 279.077†	10333.5	10.88	mg/L	0.029	21.76	mg/L	0.058	0.26%
Mn 257.610†	26653.1	0.5123	mg/L	0.00232	1.025	mg/L	0.0046	0.45%
Mo 202.031†	66.0	0.00338	mg/L	0.000255	0.00676	mg/L	0.000509	7.54%
Na 589.592†	129169.1	10.37	mg/L	0.027	20.74	mg/L	0.054	0.26%
Na 330.237†	351.5	10.67	mg/L	0.144	21.34	mg/L	0.288	1.35%
Ni 231.604†	2029.3	0.5362	mg/L	0.00313	1.072	mg/L	0.0063	0.58%
Pb 220.353†	16996.8	2.130	mg/L	0.0130	4.259	mg/L	0.0260	0.61%
Sb 206.836†	5909.9	2.143	mg/L	0.0102	4.286	mg/L	0.0203	0.47%
Se 196.026†	3298.8	2.173	mg/L	0.0041	4.346	mg/L	0.0082	0.19%
Si 288.158†	20.1	0.01642	mg/L	0.002983	0.03284	mg/L	0.005966	18.17%
Sn 189.927†	-21.8	-0.00252	mg/L	0.000525	-0.00503	mg/L	0.001049	20.85%
Sr 421.552†	492586.4	0.5115	mg/L	0.00116	1.023	mg/L	0.0023	0.23%
Ti 334.903†	69.7	0.00195	mg/L	0.000249	0.00390	mg/L	0.000499	12.79%
Tl 190.801†	4003.5	2.201	mg/L	0.0092	4.402	mg/L	0.0184	0.42%
V 292.402†	73505.4	0.5331	mg/L	0.00235	1.066	mg/L	0.0047	0.44%
Zn 206.200†	2163.3	0.5272	mg/L	0.00083	1.054	mg/L	0.0017	0.16%

Sequence No.: 42
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 4/16/2013 11:44:05 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2763933.6	100.2	%	0.73				0.73%
ScR 361.383	384095.9	99.84	%	0.690				0.69%
Ag 328.068†	247314.7	1.065	mg/L	0.0049	1.065	mg/L	0.0049	0.46%
Al 308.215†	2564.7	2.075	mg/L	0.0172	2.075	mg/L	0.0172	0.83%
As 188.979†	2824.5	2.089	mg/L	0.0146	2.089	mg/L	0.0146	0.70%
B 249.677†	6797.2	1.017	mg/L	0.0067	1.017	mg/L	0.0067	0.66%
Ba 233.527†	6666.4	1.060	mg/L	0.0119	1.060	mg/L	0.0119	1.12%
Be 313.042†	573872.9	0.9964	mg/L	0.00680	0.9964	mg/L	0.00680	0.68%
Ca 317.933†	22277.8	2.121	mg/L	0.0159	2.121	mg/L	0.0159	0.75%
Cd 228.802†	24151.5	1.061	mg/L	0.0054	1.061	mg/L	0.0054	0.51%
Co 228.616†	34438.5	1.053	mg/L	0.0067	1.053	mg/L	0.0067	0.64%
Cr 267.716†	8994.5	1.070	mg/L	0.0089	1.070	mg/L	0.0089	0.83%
Cu 324.752†	278196.2	1.054	mg/L	0.0064	1.054	mg/L	0.0064	0.61%
Fe 273.955†	2614.2	2.088	mg/L	0.0151	2.088	mg/L	0.0151	0.72%
K 766.490†	43304.0	20.49	mg/L	0.077	20.49	mg/L	0.077	0.38%
Mg 279.077†	1946.9	2.056	mg/L	0.0093	2.056	mg/L	0.0093	0.45%
Mn 257.610†	51853.3	0.9964	mg/L	0.00613	0.9964	mg/L	0.00613	0.62%
Mo 202.031†	19350.8	1.034	mg/L	0.0066	1.034	mg/L	0.0066	0.64%
Na 589.592†	633856.8	50.90	mg/L	0.151	50.90	mg/L	0.151	0.30%
Na 330.237†	1703.0	52.42	mg/L	0.544	52.42	mg/L	0.544	1.04%
Ni 231.604†	3949.0	1.043	mg/L	0.0104	1.043	mg/L	0.0104	1.00%
Pb 220.353†	16603.2	2.081	mg/L	0.0120	2.081	mg/L	0.0120	0.58%
Sb 206.836†	5875.9	2.134	mg/L	0.0143	2.134	mg/L	0.0143	0.67%
Se 196.026†	3124.4	2.057	mg/L	0.0148	2.057	mg/L	0.0148	0.72%
Si 288.158†	2998.0	1.987	mg/L	0.0087	1.987	mg/L	0.0087	0.44%
Sn 189.927†	4937.2	1.018	mg/L	0.0087	1.018	mg/L	0.0087	0.86%
Sr 421.552†	964103.4	1.001	mg/L	0.0034	1.001	mg/L	0.0034	0.34%
Ti 334.903†	26456.9	1.014	mg/L	0.0030	1.014	mg/L	0.0030	0.29%
Tl 190.801†	3919.7	2.151	mg/L	0.0131	2.151	mg/L	0.0131	0.61%
V 292.402†	142549.0	1.034	mg/L	0.0043	1.034	mg/L	0.0043	0.41%
Zn 206.200†	4255.7	1.037	mg/L	0.0083	1.037	mg/L	0.0083	0.80%

Sequence No.: 43
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 4/16/2013 11:48:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2797507.9	101.4	%	0.56				0.55%
ScR 361.383	391408.5	101.7	%	0.28				0.28%
Ag 328.068†	61.9	0.00027	mg/L	0.000169	0.00027	mg/L	0.000169	63.32%
Al 308.215†	12.3	0.01004	mg/L	0.006195	0.01004	mg/L	0.006195	61.70%
As 188.979†	1.4	0.00107	mg/L	0.002124	0.00107	mg/L	0.002124	197.96%
B 249.677†	9.6	0.00144	mg/L	0.001103	0.00144	mg/L	0.001103	76.82%
Ba 233.527†	2.4	0.00038	mg/L	0.000364	0.00038	mg/L	0.000364	95.81%
Be 313.042†	93.1	0.00016	mg/L	0.000039	0.00016	mg/L	0.000039	24.30%
Ca 317.933†	12.2	0.00116	mg/L	0.000141	0.00116	mg/L	0.000141	12.11%
Cd 228.802†	5.7	0.00025	mg/L	0.000076	0.00025	mg/L	0.000076	30.65%
Co 228.616†	7.8	0.00024	mg/L	0.000344	0.00024	mg/L	0.000344	145.47%
Cr 267.716†	-5.4	-0.00064	mg/L	0.000281	-0.00064	mg/L	0.000281	44.06%
Cu 324.752†	74.4	0.00028	mg/L	0.000051	0.00028	mg/L	0.000051	18.04%
Fe 273.955†	4.0	0.00321	mg/L	0.002513	0.00321	mg/L	0.002513	78.24%
K 766.490†	37.4	0.01771	mg/L	0.006380	0.01771	mg/L	0.006380	36.03%
Mg 279.077†	-5.8	-0.00606	mg/L	0.005386	-0.00606	mg/L	0.005386	88.87%
Mn 257.610†	3.5	0.00007	mg/L	0.000040	0.00007	mg/L	0.000040	59.51%
Mo 202.031†	86.8	0.00464	mg/L	0.000876	0.00464	mg/L	0.000876	18.89%
Na 589.592†	52.9	0.00424	mg/L	0.000803	0.00424	mg/L	0.000803	18.93%
Na 330.237†	-5.1	-0.1562	mg/L	0.40328	-0.1562	mg/L	0.40328	258.25%
Ni 231.604†	0.9	0.00025	mg/L	0.000671	0.00025	mg/L	0.000671	272.64%
Pb 220.353†	7.3	0.00091	mg/L	0.000579	0.00091	mg/L	0.000579	63.63%
Sb 206.836†	26.6	0.00968	mg/L	0.000849	0.00968	mg/L	0.000849	8.77%
Se 196.026†	3.5	0.00232	mg/L	0.001260	0.00232	mg/L	0.001260	54.27%
Si 288.158†	-7.6	-0.00503	mg/L	0.003639	-0.00503	mg/L	0.003639	72.36%
Sn 189.927†	4.9	0.00102	mg/L	0.000690	0.00102	mg/L	0.000690	67.47%
Sr 421.552†	74.1	0.00008	mg/L	0.000023	0.00008	mg/L	0.000023	29.74%
Ti 334.903†	28.6	0.00109	mg/L	0.000985	0.00109	mg/L	0.000985	90.24%
Tl 190.801†	5.4	0.00300	mg/L	0.000998	0.00300	mg/L	0.000998	33.25%
V 292.402†	22.5	0.00016	mg/L	0.000176	0.00016	mg/L	0.000176	108.74%
Zn 206.200†	-2.2	-0.00055	mg/L	0.000603	-0.00055	mg/L	0.000603	110.20%

Sequence No.: 44
Sample ID: WL74 D SWC

Autosampler Location: 329
Date Collected: 4/16/2013 11:52:25 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2776142.0	100.6	%	0.33				0.33%
ScR 361.383	391062.6	101.7	%	0.32				0.31%
Ag 328.068†	-366.9	-0.00123	mg/L	0.000181	-0.00246	mg/L	0.000362	14.73%
Al 308.215†	60799.5	50.00	mg/L	0.073	100.0	mg/L	0.15	0.15%
As 188.979†	-229.3	-0.01003	mg/L	0.002565	-0.02006	mg/L	0.005129	25.57%
B 249.677†	94.4	0.01403	mg/L	0.001004	0.02806	mg/L	0.002008	7.16%
Ba 233.527†	750.7	0.1055	mg/L	0.00105	0.2110	mg/L	0.00211	1.00%
Be 313.042†	501.5	0.00074	mg/L	0.000016	0.00148	mg/L	0.000032	2.13%
Ca 317.933†	390736.3	37.20	mg/L	0.048	74.41	mg/L	0.097	0.13%
Cd 228.802†	44.3	0.00293	mg/L	0.000139	0.00587	mg/L	0.000278	4.73%
Co 228.616†	1419.3	0.03530	mg/L	0.000300	0.07061	mg/L	0.000601	0.85%
Cr 267.716†	843.2	0.1009	mg/L	0.00028	0.2019	mg/L	0.00056	0.28%
Cu 324.752†	22324.4	0.08825	mg/L	0.000437	0.1765	mg/L	0.00087	0.50%
Fe 273.955†	118061.6	94.55	mg/L	0.336	189.1	mg/L	0.67	0.36%
K 766.490†	11652.9	5.515	mg/L	0.0235	11.03	mg/L	0.047	0.43%
Mg 279.077†	17869.1	18.76	mg/L	0.073	37.51	mg/L	0.147	0.39%
Mn 257.610†	36332.1	0.6975	mg/L	0.00143	1.395	mg/L	0.0029	0.21%
Mo 202.031†	118.4	0.00588	mg/L	0.000255	0.01176	mg/L	0.000511	4.34%
Na 589.592†	120859.8	9.705	mg/L	0.0223	19.41	mg/L	0.045	0.23%
Na 330.237†	288.5	10.13	mg/L	0.020	20.26	mg/L	0.041	0.20%
Ni 231.604†	251.9	0.06657	mg/L	0.000725	0.1331	mg/L	0.00145	1.09%
Pb 220.353†	-13.5	0.00685	mg/L	0.000684	0.01371	mg/L	0.001369	9.98%
Sb 206.836†	-0.6	0.00319	mg/L	0.002065	0.00637	mg/L	0.004129	64.80%
Se 196.026†	-5.7	-0.00973	mg/L	0.002616	-0.01947	mg/L	0.005232	26.87%
Si 288.158†	1947.0	1.296	mg/L	0.0043	2.592	mg/L	0.0087	0.33%
Sn 189.927†	-52.0	-0.00672	mg/L	0.000796	-0.01343	mg/L	0.001593	11.86%
Sr 421.552†	343632.3	0.3568	mg/L	0.00045	0.7136	mg/L	0.00089	0.13%
Ti 334.903†	120900.6	4.636	mg/L	0.0084	9.273	mg/L	0.0169	0.18%
Tl 190.801†	1.4	0.01179	mg/L	0.000959	0.02357	mg/L	0.001918	8.14%
V 292.402†	48012.3	0.3398	mg/L	0.00243	0.6797	mg/L	0.00485	0.71%
Zn 206.200†	660.5	0.1611	mg/L	0.00020	0.3223	mg/L	0.00040	0.12%

Sequence No.: 45
Sample ID: WL74 E SWC

Autosampler Location: 330
Date Collected: 4/16/2013 11:56:28 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 E SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2778295.9	100.7	%	0.09				0.09%
ScR 361.383	392606.5	102.1	%	0.27				0.27%
Ag 328.068†	-410.1	-0.00134	mg/L	0.000097	-0.00268	mg/L	0.000193	7.22%
Al 308.215†	93497.7	76.90	mg/L	0.185	153.8	mg/L	0.37	0.24%
As 188.979†	-277.8	-0.01368	mg/L	0.001000	-0.02737	mg/L	0.002001	7.31%
B 249.677†	27.8	0.00401	mg/L	0.000369	0.00801	mg/L	0.000738	9.21%
Ba 233.527†	2143.9	0.3235	mg/L	0.00167	0.6471	mg/L	0.00335	0.52%
Be 313.042†	727.0	0.00112	mg/L	0.000012	0.00223	mg/L	0.000025	1.10%
Ca 317.933†	496830.0	47.30	mg/L	0.113	94.61	mg/L	0.226	0.24%
Cd 228.802†	52.4	0.00354	mg/L	0.000165	0.00709	mg/L	0.000329	4.65%
Co 228.616†	2034.7	0.05246	mg/L	0.000172	0.1049	mg/L	0.00034	0.33%
Cr 267.716†	1229.3	0.1466	mg/L	0.00072	0.2931	mg/L	0.00145	0.49%
Cu 324.752†	28240.1	0.1117	mg/L	0.00043	0.2233	mg/L	0.00087	0.39%
Fe 273.955†	148926.8	119.3	mg/L	0.29	238.5	mg/L	0.58	0.24%
K 766.490†	9351.9	4.426	mg/L	0.0109	8.852	mg/L	0.0219	0.25%
Mg 279.077†	27135.8	28.50	mg/L	0.023	57.00	mg/L	0.046	0.08%
Mn 257.610†	67557.1	1.297	mg/L	0.0042	2.594	mg/L	0.0085	0.33%
Mo 202.031†	110.6	0.00534	mg/L	0.000128	0.01069	mg/L	0.000256	2.40%
Na 589.592†	61491.2	4.938	mg/L	0.0043	9.876	mg/L	0.0087	0.09%
Na 330.237†	113.4	4.971	mg/L	0.3145	9.942	mg/L	0.6291	6.33%
Ni 231.604†	469.8	0.1241	mg/L	0.00071	0.2483	mg/L	0.00142	0.57%
Pb 220.353†	-8.5	0.01349	mg/L	0.000706	0.02699	mg/L	0.001413	5.24%
Sb 206.836†	-8.3	0.00061	mg/L	0.002136	0.00122	mg/L	0.004272	349.88%
Se 196.026†	-1.9	-0.01036	mg/L	0.004740	-0.02073	mg/L	0.009481	45.74%
Si 288.158†	2188.2	1.457	mg/L	0.0026	2.914	mg/L	0.0052	0.18%
Sn 189.927†	-55.1	-0.00635	mg/L	0.000679	-0.01269	mg/L	0.001358	10.70%
Sr 421.552†	419313.2	0.4354	mg/L	0.00098	0.8708	mg/L	0.00196	0.23%
Ti 334.903†	145491.7	5.579	mg/L	0.0156	11.16	mg/L	0.031	0.28%
Tl 190.801†	-10.1	0.00848	mg/L	0.004757	0.01696	mg/L	0.009513	56.10%
V 292.402†	52434.3	0.3703	mg/L	0.00042	0.7406	mg/L	0.00084	0.11%
Zn 206.200†	1086.2	0.2649	mg/L	0.00054	0.5297	mg/L	0.00108	0.20%

Sequence No.: 46
Sample ID: WL74 F SWC

Autosampler Location: 331
Date Collected: 4/16/2013 12:00:30 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 F SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2775298.2	100.6	%	0.35				0.35%
ScR 361.383	390581.3	101.5	%	0.60				0.59%
Ag 328.068†	-515.1	-0.00148	mg/L	0.000121	-0.00295	mg/L	0.000243	8.22%
Al 308.215†	62274.2	51.22	mg/L	0.019	102.4	mg/L	0.04	0.04%
As 188.979†	-223.7	-0.00268	mg/L	0.001803	-0.00537	mg/L	0.003605	67.17%
B 249.677†	27.4	0.00398	mg/L	0.000499	0.00797	mg/L	0.000997	12.52%
Ba 233.527†	778.4	0.1098	mg/L	0.00061	0.2196	mg/L	0.00122	0.56%
Be 313.042†	528.6	0.00078	mg/L	0.000024	0.00155	mg/L	0.000048	3.07%
Ca 317.933†	1000657.2	95.27	mg/L	0.233	190.5	mg/L	0.47	0.24%
Cd 228.802†	46.7	0.00302	mg/L	0.000193	0.00604	mg/L	0.000385	6.38%
Co 228.616†	1689.8	0.04315	mg/L	0.000283	0.08631	mg/L	0.000567	0.66%
Cr 267.716†	1008.0	0.1197	mg/L	0.00117	0.2395	mg/L	0.00235	0.98%
Cu 324.752†	24903.5	0.09800	mg/L	0.000381	0.1960	mg/L	0.00076	0.39%
Fe 273.955†	118640.9	95.01	mg/L	0.385	190.0	mg/L	0.77	0.41%
K 766.490†	7910.6	3.744	mg/L	0.0154	7.487	mg/L	0.0307	0.41%
Mg 279.077†	18658.1	19.58	mg/L	0.023	39.16	mg/L	0.045	0.12%
Mn 257.610†	38271.9	0.7345	mg/L	0.00175	1.469	mg/L	0.0035	0.24%
Mo 202.031†	135.3	0.00610	mg/L	0.000258	0.01220	mg/L	0.000515	4.22%
Na 589.592†	84122.2	6.755	mg/L	0.0314	13.51	mg/L	0.063	0.46%
Na 330.237†	177.3	6.771	mg/L	0.0611	13.54	mg/L	0.122	0.90%
Ni 231.604†	279.4	0.07383	mg/L	0.000184	0.1477	mg/L	0.00037	0.25%
Pb 220.353†	-30.2	0.00509	mg/L	0.000808	0.01019	mg/L	0.001616	15.86%
Sb 206.836†	-3.4	0.00225	mg/L	0.001518	0.00450	mg/L	0.003035	67.40%
Se 196.026†	-9.5	-0.01239	mg/L	0.007225	-0.02479	mg/L	0.014451	58.30%
Si 288.158†	2097.3	1.396	mg/L	0.0091	2.792	mg/L	0.0183	0.65%
Sn 189.927†	-65.1	-0.00451	mg/L	0.000911	-0.00902	mg/L	0.001822	20.21%
Sr 421.552†	580688.8	0.6029	mg/L	0.00058	1.206	mg/L	0.0012	0.10%
Ti 334.903†	127339.0	4.880	mg/L	0.0046	9.760	mg/L	0.0092	0.09%
Tl 190.801†	14.9	0.01906	mg/L	0.002183	0.03812	mg/L	0.004367	11.46%
V 292.402†	53981.9	0.3829	mg/L	0.00190	0.7658	mg/L	0.00380	0.50%
Zn 206.200†	709.9	0.1732	mg/L	0.00168	0.3464	mg/L	0.00337	0.97%

Sequence No.: 47
Sample ID: WL74 G SWC

Dilution: 2.000000X

Autosampler Location: 332
Date Collected: 4/16/2013 12:04:32 PM
Data Type: Original

Nebulizer Parameters: WL74 G SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL74 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2765575.2	100.2	%	0.27				0.27%
ScR 361.383	392664.8	102.1	%	0.58				0.56%
Ag 328.068†	-375.0	-0.00124	mg/L	0.000251	-0.00248	mg/L	0.000502	20.21%
Al 308.215†	55976.9	46.04	mg/L	0.120	92.08	mg/L	0.240	0.26%
As 188.979†	-207.4	-0.00816	mg/L	0.002116	-0.01631	mg/L	0.004232	25.95%
B 249.677†	69.2	0.01027	mg/L	0.000608	0.02053	mg/L	0.001216	5.92%
Ba 233.527†	608.6	0.08513	mg/L	0.000816	0.1703	mg/L	0.00163	0.96%
Be 313.042†	435.5	0.00064	mg/L	0.000011	0.00128	mg/L	0.000022	1.74%
Ca 317.933†	443200.4	42.20	mg/L	0.168	84.40	mg/L	0.335	0.40%
Cd 228.802†	40.6	0.00268	mg/L	0.000144	0.00536	mg/L	0.000288	5.36%
Co 228.616†	1334.2	0.03339	mg/L	0.000126	0.06679	mg/L	0.000251	0.38%
Cr 267.716†	814.1	0.09706	mg/L	0.001236	0.1941	mg/L	0.00247	1.27%
Cu 324.752†	22545.6	0.08842	mg/L	0.000782	0.1768	mg/L	0.00156	0.88%
Fe 273.955†	98861.2	79.17	mg/L	0.358	158.3	mg/L	0.72	0.45%
K 766.490†	9085.2	4.300	mg/L	0.0070	8.599	mg/L	0.0141	0.16%
Mg 279.077†	16778.7	17.62	mg/L	0.086	35.23	mg/L	0.171	0.49%
Mn 257.610†	27012.6	0.5185	mg/L	0.00196	1.037	mg/L	0.0039	0.38%
Mo 202.031†	114.0	0.00559	mg/L	0.000083	0.01117	mg/L	0.000167	1.49%
Na 589.592†	216890.0	17.42	mg/L	0.039	34.83	mg/L	0.078	0.22%
Na 330.237†	553.9	18.20	mg/L	0.040	36.40	mg/L	0.079	0.22%
Ni 231.604†	236.1	0.06238	mg/L	0.000911	0.1248	mg/L	0.00182	1.46%
Pb 220.353†	-30.8	0.00443	mg/L	0.000476	0.00885	mg/L	0.000953	10.76%
Sb 206.836†	-6.6	0.00063	mg/L	0.002129	0.00126	mg/L	0.004258	336.78%
Se 196.026†	-7.9	-0.01073	mg/L	0.001500	-0.02146	mg/L	0.003000	13.98%
Si 288.158†	1957.4	1.303	mg/L	0.0070	2.605	mg/L	0.0140	0.54%
Sn 189.927†	-53.3	-0.00665	mg/L	0.000657	-0.01330	mg/L	0.001313	9.87%
Sr 421.552†	298609.6	0.3101	mg/L	0.00035	0.6201	mg/L	0.00069	0.11%
Ti 334.903†	110613.1	4.241	mg/L	0.0099	8.483	mg/L	0.0197	0.23%
Tl 190.801†	4.2	0.01139	mg/L	0.002490	0.02278	mg/L	0.004981	21.86%
V 292.402†	43334.7	0.3070	mg/L	0.00239	0.6140	mg/L	0.00477	0.78%
Zn 206.200†	602.1	0.1469	mg/L	0.00101	0.2938	mg/L	0.00202	0.69%

Sequence No.: 48
Sample ID: WL74 H SWC

Autosampler Location: 333
Date Collected: 4/16/2013 12:08:33 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 H SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL74 H SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2798311.2	101.4	%	0.32				0.31%
ScR 361.383	392959.5	102.1	%	0.22				0.21%
Ag 328.068†	-312.8	-0.00094	mg/L	0.000125	-0.00188	mg/L	0.000249	13.22%
Al 308.215†	63484.2	52.21	mg/L	0.135	104.4	mg/L	0.27	0.26%
As 188.979†	-213.3	-0.00317	mg/L	0.003350	-0.00635	mg/L	0.006699	105.50%
B 249.677†	101.1	0.01504	mg/L	0.000476	0.03007	mg/L	0.000953	3.17%
Ba 233.527†	661.0	0.09200	mg/L	0.000588	0.1840	mg/L	0.00118	0.64%
Be 313.042†	505.1	0.00075	mg/L	0.000019	0.00151	mg/L	0.000038	2.52%
Ca 317.933†	488027.2	46.47	mg/L	0.236	92.93	mg/L	0.471	0.51%
Cd 228.802†	44.6	0.00289	mg/L	0.000064	0.00577	mg/L	0.000128	2.22%
Co 228.616†	1475.4	0.03722	mg/L	0.000131	0.07445	mg/L	0.000262	0.35%
Cr 267.716†	843.6	0.1006	mg/L	0.00106	0.2012	mg/L	0.00212	1.06%
Cu 324.752†	23452.4	0.09228	mg/L	0.000372	0.1846	mg/L	0.00074	0.40%
Fe 273.955†	111443.8	89.25	mg/L	0.254	178.5	mg/L	0.51	0.28%
K 766.490†	10936.2	5.176	mg/L	0.0160	10.35	mg/L	0.032	0.31%
Mg 279.077†	19123.9	20.08	mg/L	0.055	40.16	mg/L	0.110	0.27%
Mn 257.610†	37042.6	0.7111	mg/L	0.00183	1.422	mg/L	0.0037	0.26%
Mo 202.031†	142.3	0.00705	mg/L	0.000167	0.01410	mg/L	0.000334	2.37%
Na 589.592†	193247.4	15.52	mg/L	0.093	31.04	mg/L	0.185	0.60%
Na 330.237†	486.1	16.18	mg/L	0.229	32.37	mg/L	0.458	1.41%
Ni 231.604†	267.8	0.07076	mg/L	0.001036	0.1415	mg/L	0.00207	1.46%
Pb 220.353†	-23.1	0.00653	mg/L	0.000189	0.01306	mg/L	0.000378	2.90%
Sb 206.836†	-4.2	0.00172	mg/L	0.004709	0.00343	mg/L	0.009418	274.21%
Se 196.026†	-4.6	-0.00925	mg/L	0.002936	-0.01851	mg/L	0.005872	31.73%
Si 288.158†	2037.0	1.356	mg/L	0.0122	2.711	mg/L	0.0244	0.90%
Sn 189.927†	-56.0	-0.00680	mg/L	0.000364	-0.01360	mg/L	0.000729	5.36%
Sr 421.552†	372266.5	0.3865	mg/L	0.00093	0.7731	mg/L	0.00187	0.24%
Ti 334.903†	117905.2	4.521	mg/L	0.0127	9.042	mg/L	0.0254	0.28%
Tl 190.801†	10.0	0.01585	mg/L	0.001375	0.03171	mg/L	0.002750	8.67%
V 292.402†	45098.8	0.3191	mg/L	0.00166	0.6383	mg/L	0.00332	0.52%
Zn 206.200†	652.1	0.1591	mg/L	0.00045	0.3182	mg/L	0.00091	0.28%

Sequence No.: 49
Sample ID: WL74 I SWC

Autosampler Location: 334
Date Collected: 4/16/2013 12:12:34 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL74 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: WL74 I SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2783800.2	100.9	%	0.31				0.31%
ScR 361.383	394416.1	102.5	%	0.43				0.42%
Ag 328.068†	-383.1	-0.00120	mg/L	0.000198	-0.00241	mg/L	0.000396	16.46%
Al 308.215†	66967.7	55.08	mg/L	0.223	110.2	mg/L	0.45	0.41%
As 188.979†	-212.5	-0.00269	mg/L	0.001856	-0.00538	mg/L	0.003711	68.97%
B 249.677†	91.9	0.01365	mg/L	0.000883	0.02729	mg/L	0.001766	6.47%
Ba 233.527†	666.7	0.09268	mg/L	0.000953	0.1854	mg/L	0.00191	1.03%
Be 313.042†	469.4	0.00069	mg/L	0.000044	0.00138	mg/L	0.000089	6.43%
Ca 317.933†	553626.0	52.71	mg/L	0.247	105.4	mg/L	0.49	0.47%
Cd 228.802†	41.7	0.00276	mg/L	0.000005	0.00551	mg/L	0.000010	0.18%
Co 228.616†	1487.2	0.03756	mg/L	0.000245	0.07512	mg/L	0.000491	0.65%
Cr 267.716†	875.5	0.1043	mg/L	0.00098	0.2086	mg/L	0.00196	0.94%
Cu 324.752†	23417.4	0.09222	mg/L	0.000307	0.1844	mg/L	0.00061	0.33%
Fe 273.955†	113379.1	90.80	mg/L	0.101	181.6	mg/L	0.20	0.11%
K 766.490†	10929.9	5.173	mg/L	0.0500	10.35	mg/L	0.100	0.97%
Mg 279.077†	19581.3	20.56	mg/L	0.078	41.12	mg/L	0.157	0.38%
Mn 257.610†	38065.7	0.7307	mg/L	0.00152	1.461	mg/L	0.0030	0.21%
Mo 202.031†	151.5	0.00747	mg/L	0.000095	0.01494	mg/L	0.000190	1.27%
Na 589.592†	204135.7	16.39	mg/L	0.062	32.78	mg/L	0.124	0.38%
Na 330.237†	508.5	16.88	mg/L	0.262	33.75	mg/L	0.523	1.55%
Ni 231.604†	274.9	0.07263	mg/L	0.000546	0.1453	mg/L	0.00109	0.75%
Pb 220.353†	-28.5	0.00655	mg/L	0.000060	0.01311	mg/L	0.000120	0.91%
Sb 206.836†	-15.7	-0.00252	mg/L	0.001207	-0.00503	mg/L	0.002415	47.97%
Se 196.026†	-6.8	-0.01103	mg/L	0.002989	-0.02206	mg/L	0.005978	27.10%
Si 288.158†	1975.4	1.315	mg/L	0.0053	2.630	mg/L	0.0105	0.40%
Sn 189.927†	-61.1	-0.00732	mg/L	0.000959	-0.01464	mg/L	0.001917	13.10%
Sr 421.552†	440506.7	0.4574	mg/L	0.00187	0.9148	mg/L	0.00374	0.41%
Ti 334.903†	118265.2	4.534	mg/L	0.0151	9.069	mg/L	0.0302	0.33%
Tl 190.801†	7.6	0.01472	mg/L	0.001847	0.02945	mg/L	0.003694	12.55%
V 292.402†	45571.9	0.3225	mg/L	0.00144	0.6450	mg/L	0.00288	0.45%
Zn 206.200†	672.3	0.1640	mg/L	0.00152	0.3280	mg/L	0.00304	0.93%

Sequence No.: 50
Sample ID: CV 6
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 4/16/2013 12:16:35 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2769299.6	100.4	%	0.40				0.40%
ScR 361.383	384568.5	99.97	%	0.399				0.40%
Ag 328.068†	247897.3	1.068	mg/L	0.0028	1.068	mg/L	0.0028	0.26%
Al 308.215†	2590.8	2.096	mg/L	0.0105	2.096	mg/L	0.0105	0.50%
As 188.979†	2861.6	2.117	mg/L	0.0044	2.117	mg/L	0.0044	0.21%
B 249.677†	6868.8	1.027	mg/L	0.0061	1.027	mg/L	0.0061	0.60%
Ba 233.527†	6731.8	1.071	mg/L	0.0010	1.071	mg/L	0.0010	0.09%
Be 313.042†	587668.4	1.020	mg/L	0.0101	1.020	mg/L	0.0101	0.99%
Ca 317.933†	22646.0	2.156	mg/L	0.0096	2.156	mg/L	0.0096	0.45%
Cd 228.802†	24324.3	1.069	mg/L	0.0056	1.069	mg/L	0.0056	0.52%
Co 228.616†	34696.0	1.061	mg/L	0.0042	1.061	mg/L	0.0042	0.40%
Cr 267.716†	9109.3	1.084	mg/L	0.0065	1.084	mg/L	0.0065	0.60%
Cu 324.752†	278744.0	1.056	mg/L	0.0049	1.056	mg/L	0.0049	0.46%
Fe 273.955†	2666.1	2.129	mg/L	0.0170	2.129	mg/L	0.0170	0.80%
K 766.490†	43543.3	20.61	mg/L	0.075	20.61	mg/L	0.075	0.37%
Mg 279.077†	1976.3	2.087	mg/L	0.0162	2.087	mg/L	0.0162	0.78%
Mn 257.610†	52266.0	1.004	mg/L	0.0048	1.004	mg/L	0.0048	0.48%
Mo 202.031†	19512.2	1.043	mg/L	0.0042	1.043	mg/L	0.0042	0.40%
Na 589.592†	640260.8	51.41	mg/L	0.341	51.41	mg/L	0.341	0.66%
Na 330.237†	1723.6	53.05	mg/L	0.235	53.05	mg/L	0.235	0.44%
Ni 231.604†	3992.0	1.055	mg/L	0.0070	1.055	mg/L	0.0070	0.67%
Pb 220.353†	16765.6	2.101	mg/L	0.0097	2.101	mg/L	0.0097	0.46%
Sb 206.836†	5883.5	2.137	mg/L	0.0089	2.137	mg/L	0.0089	0.42%
Se 196.026†	3166.9	2.085	mg/L	0.0104	2.085	mg/L	0.0104	0.50%
Si 288.158†	3032.7	2.010	mg/L	0.0163	2.010	mg/L	0.0163	0.81%
Sn 189.927†	4971.9	1.025	mg/L	0.0076	1.025	mg/L	0.0076	0.74%
Sr 421.552†	972866.6	1.010	mg/L	0.0034	1.010	mg/L	0.0034	0.34%
Ti 334.903†	26739.7	1.024	mg/L	0.0053	1.024	mg/L	0.0053	0.51%
Tl 190.801†	3947.5	2.167	mg/L	0.0073	2.167	mg/L	0.0073	0.34%
V 292.402†	143365.1	1.040	mg/L	0.0028	1.040	mg/L	0.0028	0.27%
Zn 206.200†	4333.2	1.056	mg/L	0.0059	1.056	mg/L	0.0059	0.56%

Sequence No.: 51
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/16/2013 12:20:39 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2817156.1	102.1	%	0.28				0.27%
ScR 361.383	391988.1	101.9	%	0.22				0.22%
Ag 328.068†	60.6	0.00026	mg/L	0.000028	0.00026	mg/L	0.000028	10.59%
Al 308.215†	8.3	0.00671	mg/L	0.005005	0.00671	mg/L	0.005005	74.62%
As 188.979†	1.0	0.00076	mg/L	0.001700	0.00076	mg/L	0.001700	224.62%
B 249.677†	13.1	0.00197	mg/L	0.000856	0.00197	mg/L	0.000856	43.45%
Ba 233.527†	4.2	0.00067	mg/L	0.000878	0.00067	mg/L	0.000878	130.95%
Be 313.042†	83.7	0.00015	mg/L	0.000025	0.00015	mg/L	0.000025	17.17%
Ca 317.933†	23.1	0.00220	mg/L	0.000602	0.00220	mg/L	0.000602	27.38%
Cd 228.802†	7.6	0.00034	mg/L	0.000220	0.00034	mg/L	0.000220	65.56%
Co 228.616†	3.2	0.00010	mg/L	0.000038	0.00010	mg/L	0.000038	38.40%
Cr 267.716†	-5.3	-0.00063	mg/L	0.000593	-0.00063	mg/L	0.000593	94.63%
Cu 324.752†	36.6	0.00014	mg/L	0.000054	0.00014	mg/L	0.000054	39.49%
Fe 273.955†	3.1	0.00248	mg/L	0.003043	0.00248	mg/L	0.003043	122.73%
K 766.490†	-0.7	-0.00032	mg/L	0.008976	-0.00032	mg/L	0.008976	>999.9%
Mg 279.077†	1.0	0.00105	mg/L	0.004821	0.00105	mg/L	0.004821	460.80%
Mn 257.610†	1.3	0.00003	mg/L	0.000076	0.00003	mg/L	0.000076	301.06%
Mo 202.031†	89.9	0.00480	mg/L	0.000657	0.00480	mg/L	0.000657	13.69%
Na 589.592†	27.7	0.00223	mg/L	0.002289	0.00223	mg/L	0.002289	102.79%
Na 330.237†	-2.3	-0.06948	mg/L	0.108770	-0.06948	mg/L	0.108770	156.55%
Ni 231.604†	-0.4	-0.00011	mg/L	0.000887	-0.00011	mg/L	0.000887	837.21%
Pb 220.353†	8.1	0.00101	mg/L	0.000258	0.00101	mg/L	0.000258	25.61%
Sb 206.836†	14.2	0.00517	mg/L	0.000589	0.00517	mg/L	0.000589	11.40%
Se 196.026†	3.9	0.00257	mg/L	0.001878	0.00257	mg/L	0.001878	73.17%
Si 288.158†	-4.0	-0.00269	mg/L	0.002959	-0.00269	mg/L	0.002959	110.11%
Sn 189.927†	5.8	0.00121	mg/L	0.000350	0.00121	mg/L	0.000350	29.00%
Sr 421.552†	64.3	0.00007	mg/L	0.000021	0.00007	mg/L	0.000021	31.48%
Ti 334.903†	5.4	0.00020	mg/L	0.000146	0.00020	mg/L	0.000146	72.69%
Tl 190.801†	5.6	0.00307	mg/L	0.000538	0.00307	mg/L	0.000538	17.50%
V 292.402†	31.8	0.00023	mg/L	0.000212	0.00023	mg/L	0.000212	92.58%
Zn 206.200†	-0.9	-0.00022	mg/L	0.000245	-0.00022	mg/L	0.000245	111.03%

Sequence No.: 52
Sample ID: CRI

Autosampler Location: 301
Date Collected: 4/16/2013 12:24:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	220.0 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	2816445.2	102.1	%	0.33				0.32%
ScR 361.383	393322.8	102.2	%	0.66				0.65%
Ag 328.068†	797.3	0.00343	mg/L	0.000132	0.00343	mg/L	0.000132	3.84%
Al 308.215†	70.1	0.05750	mg/L	0.002626	0.05750	mg/L	0.002626	4.57%
As 188.979†	72.3	0.05282	mg/L	0.002837	0.05282	mg/L	0.002837	5.37%
B 249.677†	140.4	0.02101	mg/L	0.000818	0.02101	mg/L	0.000818	3.89%
Ba 233.527†	24.3	0.00385	mg/L	0.000643	0.00385	mg/L	0.000643	16.70%
Be 313.042†	594.7	0.00103	mg/L	0.000024	0.00103	mg/L	0.000024	2.30%
Ca 317.933†	557.4	0.05307	mg/L	0.000445	0.05307	mg/L	0.000445	0.84%
Cd 228.802†	60.3	0.00239	mg/L	0.000154	0.00239	mg/L	0.000154	6.43%
Co 228.616†	117.3	0.00358	mg/L	0.000081	0.00358	mg/L	0.000081	2.25%
Cr 267.716†	42.5	0.00506	mg/L	0.000322	0.00506	mg/L	0.000322	6.38%
Cu 324.752†	562.3	0.00213	mg/L	0.000081	0.00213	mg/L	0.000081	3.78%
Fe 273.955†	66.2	0.05302	mg/L	0.001533	0.05302	mg/L	0.001533	2.89%
K 766.490†	1054.9	0.4992	mg/L	0.01918	0.4992	mg/L	0.01918	3.84%
Mg 279.077†	52.9	0.05571	mg/L	0.002115	0.05571	mg/L	0.002115	3.80%
Mn 257.610†	49.2	0.00095	mg/L	0.000043	0.00095	mg/L	0.000043	4.56%
Mo 202.031†	103.1	0.00551	mg/L	0.000194	0.00551	mg/L	0.000194	3.52%
Na 589.592†	6113.1	0.4909	mg/L	0.00051	0.4909	mg/L	0.00051	0.10%
Na 330.237†	15.8	0.4863	mg/L	0.25395	0.4863	mg/L	0.25395	52.22%
Ni 231.604†	45.3	0.01198	mg/L	0.000557	0.01198	mg/L	0.000557	4.65%
Pb 220.353†	174.9	0.02193	mg/L	0.000741	0.02193	mg/L	0.000741	3.38%
Sb 206.836†	147.3	0.05356	mg/L	0.001639	0.05356	mg/L	0.001639	3.06%
Se 196.026†	77.3	0.05092	mg/L	0.001019	0.05092	mg/L	0.001019	2.00%
Si 288.158†	88.6	0.05882	mg/L	0.007295	0.05882	mg/L	0.007295	12.40%
Sn 189.927†	48.5	0.01002	mg/L	0.000626	0.01002	mg/L	0.000626	6.24%
Sr 421.552†	947.5	0.00098	mg/L	0.000009	0.00098	mg/L	0.000009	0.91%
Ti 334.903†	131.8	0.00505	mg/L	0.001098	0.00505	mg/L	0.001098	21.75%
Tl 190.801†	93.9	0.05172	mg/L	0.004033	0.05172	mg/L	0.004033	7.80%
V 292.402†	456.9	0.00332	mg/L	0.000078	0.00332	mg/L	0.000078	2.35%
Zn 206.200†	39.7	0.00967	mg/L	0.000783	0.00967	mg/L	0.000783	8.10%

Sequence No.: 53
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 4/16/2013 12:29:12 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2740971.9	99.32	%	0.266				0.27%
ScR 361.383	388291.5	100.9	%	0.33				0.33%
Ag 328.068†	-307.1	-0.00065	mg/L	0.000093	-0.00065	mg/L	0.000093	14.37%
Al 308.215†	244515.7	201.2	mg/L	0.38	201.2	mg/L	0.38	0.19%
As 188.979†	57.6	0.03286	mg/L	0.003939	0.03286	mg/L	0.003939	11.99%
B 249.677†	94.5	0.01415	mg/L	0.001134	0.01415	mg/L	0.001134	8.01%
Ba 233.527†	152.5	-0.00373	mg/L	0.000157	-0.00373	mg/L	0.000157	4.20%
Be 313.042†	74.5	0.00013	mg/L	0.000008	0.00013	mg/L	0.000008	6.10%
Ca 317.933†	1088944.1	103.7	mg/L	0.60	103.7	mg/L	0.60	0.58%
Cd 228.802†	76.7	0.00317	mg/L	0.000082	0.00317	mg/L	0.000082	2.58%
Co 228.616†	65.3	0.00198	mg/L	0.000233	0.00198	mg/L	0.000233	11.75%
Cr 267.716†	12.7	-0.00389	mg/L	0.000912	-0.00389	mg/L	0.000912	23.46%
Cu 324.752†	-1922.2	0.00151	mg/L	0.000096	0.00151	mg/L	0.000096	6.34%
Fe 273.955†	237945.2	190.6	mg/L	0.84	190.6	mg/L	0.84	0.44%
K 766.490†	31.0	0.01465	mg/L	0.007379	0.01465	mg/L	0.007379	50.37%
Mg 279.077†	101111.6	106.3	mg/L	0.05	106.3	mg/L	0.05	0.04%
Mn 257.610†	83.9	0.00020	mg/L	0.000026	0.00020	mg/L	0.000026	12.91%
Mo 202.031†	115.5	0.00495	mg/L	0.000608	0.00495	mg/L	0.000608	12.28%
Na 589.592†	203.0	0.01630	mg/L	0.001497	0.01630	mg/L	0.001497	9.19%
Na 330.237†	-2.7	-0.07945	mg/L	0.308260	-0.07945	mg/L	0.308260	387.97%
Ni 231.604†	2.6	0.00068	mg/L	0.000373	0.00068	mg/L	0.000373	54.88%
Pb 220.353†	-473.5	-0.01505	mg/L	0.000442	-0.01505	mg/L	0.000442	2.93%
Sb 206.836†	-26.9	-0.00991	mg/L	0.004007	-0.00991	mg/L	0.004007	40.42%
Se 196.026†	-1.4	-0.02403	mg/L	0.005156	-0.02403	mg/L	0.005156	21.45%
Si 288.158†	-22.2	-0.00265	mg/L	0.001633	-0.00265	mg/L	0.001633	61.72%
Sn 189.927†	-98.4	-0.01157	mg/L	0.001096	-0.01157	mg/L	0.001096	9.47%
Sr 421.552†	3858.1	0.00401	mg/L Conf.	0.000019	0.00401	mg/L	0.000019	0.47%
Ti 334.903†	267.7	0.00410	mg/L	0.000285	0.00410	mg/L	0.000285	6.96%
Tl 190.801†	-22.1	0.01307	mg/L	0.001790	0.01307	mg/L	0.001790	13.69%
V 292.402†	1233.1	-0.00066	mg/L	0.000316	-0.00066	mg/L	0.000316	48.21%
Zn 206.200†	-6.9	-0.00170	mg/L	0.000739	-0.00170	mg/L	0.000739	43.50%

Sequence No.: 54
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 4/16/2013 12:33:28 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2745138.7	99.47	%	0.174				0.17%
ScR 361.383	383414.2	99.67	%	0.048				0.05%
Ag 328.068†	248656.5	1.072	mg/L	0.0049	1.072	mg/L	0.0049	0.46%
Al 308.215†	245245.6	201.7	mg/L	0.15	201.7	mg/L	0.15	0.08%
As 188.979†	1503.0	1.086	mg/L	0.0039	1.086	mg/L	0.0039	0.36%
B 249.677†	38.5	0.00344	mg/L	0.000635	0.00344	mg/L	0.000635	18.44%
Ba 233.527†	6733.4	1.043	mg/L	0.0065	1.043	mg/L	0.0065	0.62%
Be 313.042†	576449.5	1.001	mg/L	0.0019	1.001	mg/L	0.0019	0.19%
Ca 317.933†	1090095.6	103.8	mg/L	0.28	103.8	mg/L	0.28	0.27%
Cd 228.802†	23417.9	1.034	mg/L	0.0040	1.034	mg/L	0.0040	0.39%
Co 228.616†	32468.5	0.9943	mg/L	0.00406	0.9943	mg/L	0.00406	0.41%
Cr 267.716†	8908.0	1.055	mg/L	0.0022	1.055	mg/L	0.0022	0.21%
Cu 324.752†	274485.8	1.049	mg/L	0.0024	1.049	mg/L	0.0024	0.23%
Fe 273.955†	239035.8	191.4	mg/L	0.73	191.4	mg/L	0.73	0.38%
K 766.490†	-69.5	-0.03290	mg/L	0.018909	-0.03290	mg/L	0.018909	57.47%
Mg 279.077†	97651.9	102.7	mg/L	0.28	102.7	mg/L	0.28	0.28%
Mn 257.610†	51404.8	0.9862	mg/L	0.00372	0.9862	mg/L	0.00372	0.38%
Mo 202.031†	112.1	0.00471	mg/L	0.000430	0.00471	mg/L	0.000430	9.11%
Na 589.592†	137.3	0.01103	mg/L	0.001943	0.01103	mg/L	0.001943	17.61%
Na 330.237†	0.0	-0.2943	mg/L	0.21730	-0.2943	mg/L	0.21730	73.83%
Ni 231.604†	3814.8	1.008	mg/L	0.0021	1.008	mg/L	0.0021	0.21%
Pb 220.353†	7539.6	0.9893	mg/L	0.00522	0.9893	mg/L	0.00522	0.53%
Sb 206.836†	2821.4	1.015	mg/L	0.0064	1.015	mg/L	0.0064	0.63%
Se 196.026†	1584.5	1.020	mg/L	0.0098	1.020	mg/L	0.0098	0.96%
Si 288.158†	-34.4	-0.00771	mg/L	0.002492	-0.00771	mg/L	0.002492	32.33%
Sn 189.927†	-93.4	-0.01000	mg/L	0.000194	-0.01000	mg/L	0.000194	1.94%
Sr 421.552†	3903.9	0.00405	mg/L	Cont. 0.000027	0.00405	mg/L	0.000027	0.67%
Ti 334.903†	268.0	0.00391	mg/L	0.000465	0.00391	mg/L	0.000465	11.91%
Tl 190.801†	1768.1	0.9897	mg/L	0.00529	0.9897	mg/L	0.00529	0.53%
V 292.402†	139137.4	0.9998	mg/L	0.00465	0.9998	mg/L	0.00465	0.47%
Zn 206.200†	4124.8	1.005	mg/L	0.0025	1.005	mg/L	0.0025	0.25%

Sequence No.: 55
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 4/16/2013 12:37:31 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2815399.4	102.0	%	0.63				0.61%
ScR 361.383	391043.3	101.6	%	0.18				0.18%
Ag 328.068†	243714.1	1.050	mg/L	0.0084	1.050	mg/L	0.0084	0.80%
Al 308.215†	2568.6	2.078	mg/L	0.0054	2.078	mg/L	0.0054	0.26%
As 188.979†	2838.7	2.100	mg/L	0.0055	2.100	mg/L	0.0055	0.26%
B 249.677†	6800.0	1.017	mg/L	0.0025	1.017	mg/L	0.0025	0.24%
Ba 233.527†	6614.9	1.052	mg/L	0.0079	1.052	mg/L	0.0079	0.75%
Be 313.042†	584887.7	1.016	mg/L	0.0079	1.016	mg/L	0.0079	0.78%
Ca 317.933†	22511.6	2.143	mg/L	0.0068	2.143	mg/L	0.0068	0.32%
Cd 228.802†	24145.3	1.061	mg/L	0.0075	1.061	mg/L	0.0075	0.71%
Co 228.616†	34254.7	1.047	mg/L	0.0063	1.047	mg/L	0.0063	0.60%
Cr 267.716†	9056.8	1.078	mg/L	0.0020	1.078	mg/L	0.0020	0.18%
Cu 324.752†	275361.0	1.043	mg/L	0.0095	1.043	mg/L	0.0095	0.91%
Fe 273.955†	2675.7	2.137	mg/L	0.0116	2.137	mg/L	0.0116	0.54%
K 766.490†	43255.9	20.47	mg/L	0.074	20.47	mg/L	0.074	0.36%
Mg 279.077†	1959.7	2.070	mg/L	0.0139	2.070	mg/L	0.0139	0.67%
Mn 257.610†	52416.6	1.007	mg/L	0.0071	1.007	mg/L	0.0071	0.70%
Mo 202.031†	19328.8	1.033	mg/L	0.0068	1.033	mg/L	0.0068	0.66%
Na 589.592†	631610.5	50.72	mg/L	0.177	50.72	mg/L	0.177	0.35%
Na 330.237†	1699.8	52.32	mg/L	0.206	52.32	mg/L	0.206	0.39%
Ni 231.604†	3954.7	1.045	mg/L	0.0041	1.045	mg/L	0.0041	0.40%
Pb 220.353†	16616.8	2.082	mg/L	0.0126	2.082	mg/L	0.0126	0.60%
Sb 206.836†	5831.7	2.118	mg/L	0.0135	2.118	mg/L	0.0135	0.64%
Se 196.026†	3160.4	2.081	mg/L	0.0156	2.081	mg/L	0.0156	0.75%
Si 288.158†	3010.5	1.995	mg/L	0.0051	1.995	mg/L	0.0051	0.26%
Sn 189.927†	4967.0	1.024	mg/L	0.0088	1.024	mg/L	0.0088	0.86%
Sr 421.552†	963333.6	1.000	mg/L	0.0040	1.000	mg/L	0.0040	0.40%
Ti 334.903†	26475.1	1.014	mg/L	0.0051	1.014	mg/L	0.0051	0.51%
Tl 190.801†	3896.6	2.139	mg/L	0.0076	2.139	mg/L	0.0076	0.35%
V 292.402†	141228.0	1.025	mg/L	0.0083	1.025	mg/L	0.0083	0.81%
Zn 206.200†	4310.2	1.050	mg/L	0.0020	1.050	mg/L	0.0020	0.19%

Sequence No.: 56
Sample ID: CB 7

Autosampler Location: 1
Date Collected: 4/16/2013 12:41:35 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2837907.3	102.8	%	0.28				0.28%
ScR 361.383	394189.1	102.5	%	0.21				0.20%
Ag 328.068†	71.2	0.00031	mg/L	0.000134	0.00031	mg/L	0.000134	43.84%
Al 308.215†	13.6	0.01107	mg/L	0.003960	0.01107	mg/L	0.003960	35.77%
As 188.979†	1.4	0.00098	mg/L	0.001903	0.00098	mg/L	0.001903	193.78%
B 249.677†	10.9	0.00164	mg/L	0.000593	0.00164	mg/L	0.000593	36.10%
Ba 233.527†	3.3	0.00053	mg/L	0.000470	0.00053	mg/L	0.000470	88.98%
Be 313.042†	110.8	0.00019	mg/L	0.000034	0.00019	mg/L	0.000034	17.49%
Ca 317.933†	29.4	0.00280	mg/L	0.000890	0.00280	mg/L	0.000890	31.73%
Cd 228.802†	4.7	0.00020	mg/L	0.000344	0.00020	mg/L	0.000344	169.14%
Co 228.616†	9.3	0.00028	mg/L	0.000076	0.00028	mg/L	0.000076	26.86%
Cr 267.716†	-1.7	-0.00020	mg/L	0.000572	-0.00020	mg/L	0.000572	282.98%
Cu 324.752†	13.8	0.00005	mg/L	0.000027	0.00005	mg/L	0.000027	53.17%
Fe 273.955†	3.1	0.00252	mg/L	0.002142	0.00252	mg/L	0.002142	85.17%
K 766.490†	21.0	0.00993	mg/L	0.012626	0.00993	mg/L	0.012626	127.11%
Mg 279.077†	4.3	0.00454	mg/L	0.004378	0.00454	mg/L	0.004378	96.34%
Mn 257.610†	7.7	0.00015	mg/L	0.000111	0.00015	mg/L	0.000111	74.62%
Mo 202.031†	88.2	0.00471	mg/L	0.000793	0.00471	mg/L	0.000793	16.84%
Na 589.592†	27.5	0.00221	mg/L	0.001667	0.00221	mg/L	0.001667	75.40%
Na 330.237†	-9.1	-0.2787	mg/L	0.27795	-0.2787	mg/L	0.27795	99.72%
Ni 231.604†	3.7	0.00099	mg/L	0.000126	0.00099	mg/L	0.000126	12.76%
Pb 220.353†	7.2	0.00090	mg/L	0.000841	0.00090	mg/L	0.000841	93.30%
Sb 206.836†	17.2	0.00625	mg/L	0.001684	0.00625	mg/L	0.001684	26.94%
Se 196.026†	1.8	0.00117	mg/L	0.001904	0.00117	mg/L	0.001904	162.47%
Si 288.158†	-5.1	-0.00339	mg/L	0.005438	-0.00339	mg/L	0.005438	160.45%
Sn 189.927†	4.2	0.00086	mg/L	0.000040	0.00086	mg/L	0.000040	4.71%
Sr 421.552†	87.2	0.00009	mg/L	0.000042	0.00009	mg/L	0.000042	46.04%
Ti 334.903†	9.8	0.00037	mg/L	0.000945	0.00037	mg/L	0.000945	255.35%
Tl 190.801†	8.1	0.00447	mg/L	0.001297	0.00447	mg/L	0.001297	29.04%
V 292.402†	25.7	0.00019	mg/L	0.000182	0.00019	mg/L	0.000182	96.89%
Zn 206.200†	-0.9	-0.00021	mg/L	0.000258	-0.00021	mg/L	0.000258	122.63%

Sequence No.: 57
Sample ID: WL49 MB3 SWC

Autosampler Location: 335
Date Collected: 4/16/2013 12:45:51 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL49 MB3 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 MB3 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2844663.6	103.1	%	0.43				0.41%
ScR 361.383	398959.3	103.7	%	0.36				0.35%
Ag 328.068†	15.4	0.00007	mg/L	0.000139	0.00013	mg/L	0.000277	209.00%
Al 308.215†	11.4	0.00934	mg/L	0.002115	0.01869	mg/L	0.004229	22.63%
As 188.979†	-0.6	-0.00045	mg/L	0.000495	-0.00089	mg/L	0.000990	110.93%
B 249.677†	5.5	0.00083	mg/L	0.000535	0.00166	mg/L	0.001070	64.48%
Ba 233.527†	5.6	0.00089	mg/L	0.000929	0.00177	mg/L	0.001859	104.83%
Be 313.042†	25.1	0.00004	mg/L	0.000014	0.00009	mg/L	0.000028	32.67%
Ca 317.933†	193.7	0.01845	mg/L	0.000965	0.03689	mg/L	0.001930	5.23%
Cd 228.802†	-0.3	-0.00001	mg/L	0.000112	-0.00002	mg/L	0.000224	899.79%
Co 228.616†	2.1	0.00006	mg/L	0.000073	0.00013	mg/L	0.000146	113.64%
Cr 267.716†	-4.4	-0.00053	mg/L	0.000495	-0.00105	mg/L	0.000990	94.11%
Cu 324.752†	21.6	0.00008	mg/L	0.000183	0.00016	mg/L	0.000365	222.42%
Fe 273.955†	11.3	0.00908	mg/L	0.001706	0.01816	mg/L	0.003412	18.79%
K 766.490†	-9.9	-0.00468	mg/L	0.012235	-0.00937	mg/L	0.024470	261.19%
Mg 279.077†	8.1	0.00857	mg/L	0.005253	0.01714	mg/L	0.010506	61.31%
Mn 257.610†	13.3	0.00026	mg/L	0.000111	0.00051	mg/L	0.000221	43.30%
Mo 202.031†	5.5	0.00029	mg/L	0.000231	0.00058	mg/L	0.000462	79.24%
Na 589.592†	1.2	0.00010	mg/L	0.001951	0.00019	mg/L	0.003902	>999.9%
Na 330.237†	-7.8	-0.2390	mg/L	0.13622	-0.4780	mg/L	0.27244	57.00%
Ni 231.604†	1.5	0.00039	mg/L	0.000633	0.00079	mg/L	0.001266	160.58%
Pb 220.353†	5.8	0.00073	mg/L	0.000270	0.00146	mg/L	0.000539	36.88%
Sb 206.836†	4.5	0.00167	mg/L	0.001403	0.00333	mg/L	0.002806	84.21%
Se 196.026†	1.5	0.00099	mg/L	0.000706	0.00198	mg/L	0.001412	71.20%
Si 288.158†	23.0	0.01529	mg/L	0.004601	0.03057	mg/L	0.009202	30.10%
Sn 189.927†	4.2	0.00086	mg/L	0.000491	0.00172	mg/L	0.000983	57.31%
Sr 421.552†	-8.1	-0.00001	mg/L	0.000036	-0.00002	mg/L	0.000072	425.48%
Ti 334.903†	-3.9	-0.00015	mg/L	0.001059	-0.00030	mg/L	0.002118	699.98%
Tl 190.801†	1.7	0.00092	mg/L	0.001135	0.00183	mg/L	0.002270	123.89%
V 292.402†	-1.8	-0.00002	mg/L	0.000025	-0.00003	mg/L	0.000051	164.26%
Zn 206.200†	2.4	0.00060	mg/L	0.000142	0.00120	mg/L	0.000284	23.75%

Sequence No.: 58
Sample ID: WL49 G SWC

Autosampler Location: 336
Date Collected: 4/16/2013 12:50:08 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL49 G SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2770612.3	100.4	%	0.11				0.11%
ScR 361.383	388200.7	100.9	%	0.76				0.75%
Ag 328.068†	-363.3	-0.00056	mg/L	0.000196	-0.00112	mg/L	0.000391	35.07%
Al 308.215†	150556.6	123.8	mg/L	0.21	247.7	mg/L	0.43	0.17%
As 188.979†	-318.4	0.01108	mg/L	0.001110	0.02216	mg/L	0.002220	10.02%
B 249.677†	134.4	0.01991	mg/L	0.001521	0.03983	mg/L	0.003042	7.64%
Ba 233.527†	2798.2	0.4198	mg/L	0.00204	0.8395	mg/L	0.00408	0.49%
Be 313.042†	811.1	0.00124	mg/L	0.000013	0.00248	mg/L	0.000025	1.01%
Ca 317.933†	1430853.9	136.2	mg/L	0.20	272.5	mg/L	0.40	0.15%
Cd 228.802†	122.7	0.00695	mg/L	0.000345	0.01390	mg/L	0.000690	4.96%
Co 228.616†	2516.8	0.06402	mg/L	0.000290	0.1280	mg/L	0.00058	0.45%
Cr 267.716†	2848.5	0.3384	mg/L	0.00286	0.6768	mg/L	0.00573	0.85%
Cu 324.752†	113239.0	0.4360	mg/L	0.00197	0.8719	mg/L	0.00393	0.45%
Fe 273.955†	215798.9	172.8	mg/L	1.29	345.6	mg/L	2.58	0.75%
K 766.490†	14061.0	6.654	mg/L	0.0315	13.31	mg/L	0.063	0.47%
Mg 279.077†	41164.8	43.23	mg/L	0.088	86.46	mg/L	0.177	0.20%
Mn 257.610†	150591.1	2.891	mg/L	0.0146	5.783	mg/L	0.0291	0.50%
Mo 202.031†	313.4	0.01513	mg/L	0.000153	0.03025	mg/L	0.000306	1.01%
Na 589.592†	282326.3	22.67	mg/L	0.138	45.34	mg/L	0.276	0.61%
Na 330.237†	713.7	23.37	mg/L	0.099	46.73	mg/L	0.199	0.42%
Ni 231.604†	989.4	0.2614	mg/L	0.00125	0.5228	mg/L	0.00250	0.48%
Pb 220.353†	1588.1	0.2232	mg/L	0.00201	0.4465	mg/L	0.00401	0.90%
Sb 206.836†	-11.7	-0.00151	mg/L	0.001647	-0.00302	mg/L	0.003295	109.09%
Se 196.026†	-0.3	-0.01472	mg/L	0.001394	-0.02944	mg/L	0.002787	9.47%
Si 288.158†	1592.6	1.063	mg/L	0.0082	2.125	mg/L	0.0165	0.77%
Sn 189.927†	140.5	0.04171	mg/L	0.000341	0.08342	mg/L	0.000682	0.82%
Sr 421.552†	414243.7	0.4301	mg/L	0.00114	0.8602	mg/L	0.00227	0.26%
Ti 334.903†	192725.7	7.386	mg/L	0.0052	14.77	mg/L	0.010	0.07%
Tl 190.801†	-4.7	0.01835	mg/L	0.003996	0.03669	mg/L	0.007991	21.78%
V 292.402†	54533.6	0.3828	mg/L	0.00149	0.7656	mg/L	0.00299	0.39%
Zn 206.200†	9311.8	2.269	mg/L	0.0138	4.537	mg/L	0.0277	0.61%

Sequence No.: 59
Sample ID: WL49 FDUP SWC

Dil

Dilution: 5.000000X

Autosampler Location: 337
Date Collected: 4/16/2013 12:54:12 PM
Data Type: Original

Nebulizer Parameters: WL49 FDUP SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 FDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2814144.4	102.0	%	0.32				0.31%
ScR 361.383	395342.9	102.8	%	0.57				0.56%
Ag 328.068†	736.3	0.00363	mg/L	0.000220	0.01816	mg/L	0.001101	6.06%
Al 308.215†	45817.2	37.68	mg/L	0.170	188.4	mg/L	0.85	0.45%
As 188.979†	-44.5	0.04863	mg/L	0.004329	0.2431	mg/L	0.02165	8.90%
B 249.677†	1087.6	0.1627	mg/L	0.00053	0.8135	mg/L	0.00267	0.33%
Ba 233.527†	8769.2	1.356	mg/L	0.0152	6.781	mg/L	0.0758	1.12%
Be 313.042†	288.9	0.00044	mg/L	0.000009	0.00221	mg/L	0.000045	2.03%
Ca 317.933†	673680.8	64.14	mg/L	0.182	320.7	mg/L	0.91	0.28%
Cd 228.802†	1117.3	0.05016	mg/L	0.000188	0.2508	mg/L	0.00094	0.37%
Co 228.616†	1902.0	0.05360	mg/L	0.000098	0.2680	mg/L	0.00049	0.18%
Cr 267.716†	4286.7	0.5160	mg/L	0.00206	2.580	mg/L	0.0103	0.40%
Cu 324.752†	462336.0	1.764	mg/L	0.0033	8.822	mg/L	0.0165	0.19%
Fe 273.955†	332843.2	266.6	mg/L	0.79	1333	mg/L	3.96	0.30%
K 766.490†	6247.5	2.957	mg/L	0.0080	14.78	mg/L	0.040	0.27%
Mg 279.077†	16413.5	17.13	mg/L	0.056	85.64	mg/L	0.281	0.33%
Mn 257.610†	137704.0	2.645	mg/L	0.0056	13.23	mg/L	0.028	0.21%
Mo 202.031†	1324.8	0.07000	mg/L	0.000384	0.3500	mg/L	0.00192	0.55%
Na 589.592†	54298.7	4.360	mg/L	0.0033	21.80	mg/L	0.017	0.08%
Na 330.237†	276.8	4.295	mg/L	0.0797	21.48	mg/L	0.399	1.86%
Ni 231.604†	1606.0	0.4244	mg/L	0.00141	2.122	mg/L	0.0070	0.33%
Pb 220.353†	31147.3	3.896	mg/L	0.0092	19.48	mg/L	0.046	0.24%
Sb 206.836†	137.3	0.04593	mg/L	0.002488	0.2297	mg/L	0.01244	5.42%
Se 196.026†	-13.8	-0.01356	mg/L	0.003567	-0.06782	mg/L	0.017837	26.30%
Si 288.158†	782.7	0.5215	mg/L	0.00633	2.608	mg/L	0.0316	1.21%
Sn 189.927†	334.7	0.07477	mg/L	0.000322	0.3738	mg/L	0.00161	0.43%
Sr 421.552†	294414.0	0.3057	mg/L	0.00103	1.528	mg/L	0.0052	0.34%
Ti 334.903†	66119.9	2.533	mg/L	0.0050	12.66	mg/L	0.025	0.20%
Tl 190.801†	-29.0	0.01840	mg/L	0.002955	0.09201	mg/L	0.014774	16.06%
V 292.402†	20533.8	0.1361	mg/L	0.00052	0.6805	mg/L	0.00261	0.38%
Zn 206.200†	68209.1	16.62	mg/L	0.035	83.08	mg/L	0.175	0.21%

Sequence No.: 60
Sample ID: WL49 F SWC

Dilution: 5.000000X

Autosampler Location: 338
Date Collected: 4/16/2013 12:58:14 PM
Data Type: Original

Nebulizer Parameters: WL49 F SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 F SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2772264.4	100.5	%	0.18				0.18%
ScR 361.383	389840.1	101.3	%	0.56				0.56%
Ag 328.068†	833.9	0.00405	mg/L	0.000133	0.02026	mg/L	0.000663	3.27%
Al 308.215†	46716.3	38.42	mg/L	0.114	192.1	mg/L	0.57	0.30%
As 188.979†	-49.0	0.04735	mg/L	0.000827	0.2368	mg/L	0.00414	1.75%
B 249.677†	1083.3	0.1621	mg/L	0.00049	0.8103	mg/L	0.00246	0.30%
Ba 233.527†	9275.9	1.437	mg/L	0.0104	7.186	mg/L	0.0522	0.73%
Be 313.042†	284.7	0.00043	mg/L	0.000019	0.00216	mg/L	0.000094	4.34%
Ca 317.933†	673556.1	64.13	mg/L	0.095	320.7	mg/L	0.47	0.15%
Cd 228.802†	1147.8	0.05156	mg/L	0.000275	0.2578	mg/L	0.00138	0.53%
Co 228.616†	1927.1	0.05426	mg/L	0.000057	0.2713	mg/L	0.00029	0.11%
Cr 267.716†	3851.3	0.4641	mg/L	0.00235	2.320	mg/L	0.0118	0.51%
Cu 324.752†	467873.2	1.785	mg/L	0.0024	8.926	mg/L	0.0121	0.14%
Fe 273.955†	328594.0	263.1	mg/L	2.03	1316	mg/L	10.16	0.77%
K 766.490†	6393.9	3.026	mg/L	0.0313	15.13	mg/L	0.157	1.03%
Mg 279.077†	16278.6	16.99	mg/L	0.118	84.94	mg/L	0.588	0.69%
Mn 257.610†	135966.1	2.612	mg/L	0.0113	13.06	mg/L	0.057	0.43%
Mo 202.031†	1390.7	0.07353	mg/L	0.000320	0.3677	mg/L	0.00160	0.43%
Na 589.592†	55350.5	4.445	mg/L	0.0034	22.22	mg/L	0.017	0.08%
Na 330.237†	265.7	4.128	mg/L	0.2375	20.64	mg/L	1.188	5.75%
Ni 231.604†	1706.6	0.4510	mg/L	0.00542	2.255	mg/L	0.0271	1.20%
Pb 220.353†	32181.8	4.025	mg/L	0.0049	20.13	mg/L	0.025	0.12%
Sb 206.836†	134.5	0.04569	mg/L	0.001528	0.2285	mg/L	0.00764	3.34%
Se 196.026†	-7.5	-0.00949	mg/L	0.006496	-0.04747	mg/L	0.032481	68.42%
Si 288.158†	802.3	0.5346	mg/L	0.01013	2.673	mg/L	0.0507	1.90%
Sn 189.927†	322.3	0.07224	mg/L	0.001781	0.3612	mg/L	0.00891	2.47%
Sr 421.552†	299607.0	0.3111	mg/L	0.00014	1.555	mg/L	0.0007	0.05%
Ti 334.903†	67597.7	2.590	mg/L	0.0010	12.95	mg/L	0.005	0.04%
Tl 190.801†	-32.9	0.01582	mg/L	0.003745	0.07908	mg/L	0.018725	23.68%
V 292.402†	20930.3	0.1389	mg/L	0.00056	0.6944	mg/L	0.00281	0.41%
Zn 206.200†	65984.1	16.07	mg/L	0.048	80.37	mg/L	0.239	0.30%

Sequence No.: 61
Sample ID: WL49 FSPK SWC

Dil

Dilution: 5.000000X

Autosampler Location: 339
Date Collected: 4/16/2013 1:02:16 PM
Data Type: Original

Nebulizer Parameters: WL49 FSPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 FSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767403.4	100.3	%	0.29				0.29%
ScR 361.383	391796.7	101.8	%	0.51				0.50%
Ag 328.068†	49282.7	0.2127	mg/L	0.00068	1.064	mg/L	0.0034	0.32%
Al 308.215†	46944.6	38.61	mg/L	0.149	193.0	mg/L	0.74	0.39%
As 188.979†	1130.4	0.8997	mg/L	0.00654	4.498	mg/L	0.0327	0.73%
B 249.677†	1249.7	0.1865	mg/L	0.00154	0.9325	mg/L	0.00770	0.83%
Ba 233.527†	15558.1	2.438	mg/L	0.0182	12.19	mg/L	0.091	0.75%
Be 313.042†	114392.7	0.1986	mg/L	0.00098	0.9928	mg/L	0.00491	0.50%
Ca 317.933†	714440.9	68.02	mg/L	0.210	340.1	mg/L	1.05	0.31%
Cd 228.802†	6066.3	0.2652	mg/L	0.00107	1.326	mg/L	0.0054	0.41%
Co 228.616†	8657.2	0.2606	mg/L	0.00042	1.303	mg/L	0.0021	0.16%
Cr 267.716†	5403.9	0.6483	mg/L	0.00564	3.241	mg/L	0.0282	0.87%
Cu 324.752†	527685.6	2.012	mg/L	0.0039	10.06	mg/L	0.020	0.19%
Fe 273.955†	318790.7	255.3	mg/L	1.58	1276	mg/L	7.90	0.62%
K 766.490†	14614.3	6.916	mg/L	0.0370	34.58	mg/L	0.185	0.53%
Mg 279.077†	20029.0	20.94	mg/L	0.194	104.7	mg/L	0.97	0.93%
Mn 257.610†	140736.1	2.704	mg/L	0.0126	13.52	mg/L	0.063	0.47%
Mo 202.031†	1361.7	0.07192	mg/L	0.000009	0.3596	mg/L	0.00005	0.01%
Na 589.592†	105907.2	8.504	mg/L	0.0591	42.52	mg/L	0.295	0.69%
Na 330.237†	413.6	8.535	mg/L	0.2059	42.67	mg/L	1.030	2.41%
Ni 231.604†	2388.8	0.6309	mg/L	0.00517	3.154	mg/L	0.0259	0.82%
Pb 220.353†	39389.8	4.929	mg/L	0.0085	24.64	mg/L	0.042	0.17%
Sb 206.836†	264.8	0.09114	mg/L	0.001730	0.4557	mg/L	0.00865	1.90%
Se 196.026†	1274.6	0.8351	mg/L	0.00150	4.176	mg/L	0.0075	0.18%
Si 288.158†	804.2	0.5369	mg/L	0.00360	2.685	mg/L	0.0180	0.67%
Sn 189.927†	353.4	0.07895	mg/L	0.000549	0.3947	mg/L	0.00275	0.70%
Sr 421.552†	489693.8	0.5085	mg/L	0.00155	2.542	mg/L	0.0078	0.31%
Ti 334.903†	62506.4	2.394	mg/L	0.0078	11.97	mg/L	0.039	0.33%
Tl 190.801†	1424.8	0.8160	mg/L	0.00487	4.080	mg/L	0.0243	0.60%
V 292.402†	47487.5	0.3320	mg/L	0.00085	1.660	mg/L	0.0043	0.26%
Zn 206.200†	67295.9	16.39	mg/L	0.046	81.97	mg/L	0.232	0.28%

Sequence No.: 62
Sample ID: ~~WL49 FPOST SWC~~ 222222
BA 4/16/13
Dilution: 5.000000X

Autosampler Location: 340
Date Collected: 4/16/2013 1:06:19 PM
Data Type: Original

Nebulizer Parameters: WL49 FPOST SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 FPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2758073.6	99.94	%	0.378				0.38%
ScR 361.383	388932.3	101.1	%	0.89				0.88%
Ag 328.068†	125769.2	0.5422	mg/L	0.00194	2.711	mg/L	0.0097	0.36%
Al 308.215†	50755.9	41.74	mg/L	0.189	208.7	mg/L	0.94	0.45%
As 188.979†	2998.8	2.269	mg/L	0.0097	11.35	mg/L	0.048	0.43%
B 249.677†	1122.9	0.1668	mg/L	0.00276	0.8338	mg/L	0.01378	1.65%
Ba 233.527†	23109.4	3.638	mg/L	0.0407	18.19	mg/L	0.204	1.12%
Be 313.042†	294746.6	0.5117	mg/L	0.00467	2.559	mg/L	0.0234	0.91%
Ca 317.933†	799280.8	76.10	mg/L	0.680	380.5	mg/L	3.40	0.89%
Cd 228.802†	13941.8	0.6075	mg/L	0.00372	3.038	mg/L	0.0186	0.61%
Co 228.616†	19346.4	0.5874	mg/L	0.00316	2.937	mg/L	0.0158	0.54%
Cr 267.716†	8596.3	1.028	mg/L	0.0104	5.140	mg/L	0.0519	1.01%
Cu 324.752†	619537.1	2.360	mg/L	0.0017	11.80	mg/L	0.009	0.07%
Fe 273.955†	335783.4	268.9	mg/L	2.93	1345	mg/L	14.65	1.09%
K 766.490†	29253.7	13.84	mg/L	0.066	69.22	mg/L	0.332	0.48%
Mg 279.077†	27101.6	28.38	mg/L	0.321	141.9	mg/L	1.61	1.13%
Mn 257.610†	165685.1	3.183	mg/L	0.0279	15.92	mg/L	0.140	0.88%
Mo 202.031†	1396.4	0.07366	mg/L	0.000264	0.3683	mg/L	0.00132	0.36%
Na 589.592†	189629.9	15.23	mg/L	0.027	76.14	mg/L	0.136	0.18%
Na 330.237†	638.7	15.36	mg/L	0.202	76.81	mg/L	1.011	1.32%
Ni 231.604†	3762.3	0.9932	mg/L	0.01068	4.966	mg/L	0.0534	1.08%
Pb 220.353†	49079.4	6.143	mg/L	0.0073	30.71	mg/L	0.036	0.12%
Sb 206.836†	150.4	0.04578	mg/L	0.001760	0.2289	mg/L	0.00880	3.84%
Se 196.026†	3352.7	2.204	mg/L	0.0081	11.02	mg/L	0.041	0.37%
Si 288.158†	810.2	0.5430	mg/L	0.01206	2.715	mg/L	0.0603	2.22%
Sn 189.927†	315.5	0.07186	mg/L	0.001559	0.3593	mg/L	0.00779	2.17%
Sr 421.552†	807635.4	0.8386	mg/L	0.00283	4.193	mg/L	0.0142	0.34%
Ti 334.903†	69354.5	2.656	mg/L	0.0120	13.28	mg/L	0.060	0.45%
Tl 190.801†	3783.1	2.114	mg/L	0.0190	10.57	mg/L	0.095	0.90%
V 292.402†	93711.0	0.6666	mg/L	0.00171	3.333	mg/L	0.0085	0.26%
Zn 206.200†	69756.7	16.99	mg/L	0.114	84.97	mg/L	0.570	0.67%

Sequence No.: 63
Sample ID: WL49 MB3SPK SWC

Autosampler Location: 341
Date Collected: 4/16/2013 1:10:24 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL49 MB3SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL49 MB3SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2801194.4	101.5	%	0.06				0.06%
ScR 361.383	392147.3	101.9	%	0.38				0.37%
Ag 328.068†	128221.5	0.5523	mg/L	0.00100	1.105	mg/L	0.0020	0.18%
Al 308.215†	2652.5	2.174	mg/L	0.0094	4.349	mg/L	0.0187	0.43%
As 188.979†	3037.7	2.213	mg/L	0.0080	4.425	mg/L	0.0159	0.36%
B 249.677†	11.3	0.00045	mg/L	0.000675	0.00090	mg/L	0.001350	150.62%
Ba 233.527†	13301.0	2.116	mg/L	0.0089	4.232	mg/L	0.0178	0.42%
Be 313.042†	297466.6	0.5165	mg/L	0.00257	1.033	mg/L	0.0051	0.50%
Ca 317.933†	110078.7	10.48	mg/L	0.035	20.96	mg/L	0.071	0.34%
Cd 228.802†	12421.0	0.5395	mg/L	0.00185	1.079	mg/L	0.0037	0.34%
Co 228.616†	17362.9	0.5315	mg/L	0.00053	1.063	mg/L	0.0011	0.10%
Cr 267.716†	4676.4	0.5556	mg/L	0.00206	1.111	mg/L	0.0041	0.37%
Cu 324.752†	139666.8	0.5294	mg/L	0.00149	1.059	mg/L	0.0030	0.28%
Fe 273.955†	2772.2	2.217	mg/L	0.0033	4.434	mg/L	0.0066	0.15%
K 766.490†	22151.3	10.48	mg/L	0.047	20.97	mg/L	0.094	0.45%
Mg 279.077†	10401.7	10.95	mg/L	0.033	21.90	mg/L	0.065	0.30%
Mn 257.610†	27011.0	0.5192	mg/L	0.00337	1.038	mg/L	0.0067	0.65%
Mo 202.031†	34.2	0.00168	mg/L	0.000152	0.00335	mg/L	0.000303	9.04%
Na 589.592†	129407.9	10.39	mg/L	0.016	20.78	mg/L	0.031	0.15%
Na 330.237†	352.4	10.69	mg/L	0.191	21.39	mg/L	0.383	1.79%
Ni 231.604†	2050.0	0.5407	mg/L	0.00073	1.081	mg/L	0.0015	0.13%
Pb 220.353†	17091.0	2.141	mg/L	0.0032	4.283	mg/L	0.0064	0.15%
Sb 206.836†	16.6	0.00039	mg/L	0.001768	0.00078	mg/L	0.003535	454.47%
Se 196.026†	3316.2	2.184	mg/L	0.0173	4.369	mg/L	0.0346	0.79%
Si 288.158†	21.7	0.01751	mg/L	0.004854	0.03503	mg/L	0.009709	27.72%
Sn 189.927†	-22.8	-0.00382	mg/L	0.000355	-0.00764	mg/L	0.000711	9.30%
Sr 421.552†	493414.4	0.5123	mg/L	0.00112	1.025	mg/L	0.0022	0.22%
Ti 334.903†	80.1	0.00234	mg/L	0.000235	0.00468	mg/L	0.000471	10.04%
Tl 190.801†	3998.1	2.198	mg/L	0.0119	4.396	mg/L	0.0239	0.54%
V 292.402†	73544.6	0.5334	mg/L	0.00022	1.067	mg/L	0.0004	0.04%
Zn 206.200†	2202.2	0.5367	mg/L	0.00169	1.073	mg/L	0.0034	0.31%

Sequence No.: 64
Sample ID: CV 8
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 4/16/2013 1:14:25 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2777377.9	100.6	%	0.42				0.42%
ScR 361.383	387843.0	100.8	%	0.30				0.30%
Ag 328.068†	248689.8	1.071	mg/L	0.0044	1.071	mg/L	0.0044	0.41%
Al 308.215†	2591.0	2.096	mg/L	0.0089	2.096	mg/L	0.0089	0.42%
As 188.979†	2879.9	2.130	mg/L	0.0094	2.130	mg/L	0.0094	0.44%
B 249.677†	6884.8	1.030	mg/L	0.0010	1.030	mg/L	0.0010	0.09%
Ba 233.527†	6674.5	1.062	mg/L	0.0014	1.062	mg/L	0.0014	0.13%
Be 313.042†	594599.4	1.032	mg/L	0.0011	1.032	mg/L	0.0011	0.11%
Ca 317.933†	22744.2	2.166	mg/L	0.0036	2.166	mg/L	0.0036	0.17%
Cd 228.802†	23895.7	1.050	mg/L	0.0060	1.050	mg/L	0.0060	0.57%
Co 228.616†	34855.8	1.066	mg/L	0.0030	1.066	mg/L	0.0030	0.28%
Cr 267.716†	9172.9	1.092	mg/L	0.0007	1.092	mg/L	0.0007	0.07%
Cu 324.752†	280108.7	1.061	mg/L	0.0047	1.061	mg/L	0.0047	0.44%
Fe 273.955†	2703.0	2.159	mg/L	0.0009	2.159	mg/L	0.0009	0.04%
K 766.490†	44040.1	20.84	mg/L	0.044	20.84	mg/L	0.044	0.21%
Mg 279.077†	1981.2	2.093	mg/L	0.0068	2.093	mg/L	0.0068	0.32%
Mn 257.610†	53424.3	1.027	mg/L	0.0025	1.027	mg/L	0.0025	0.25%
Mo 202.031†	19616.6	1.048	mg/L	0.0048	1.048	mg/L	0.0048	0.46%
Na 589.592†	642661.3	51.61	mg/L	0.038	51.61	mg/L	0.038	0.07%
Na 330.237†	1724.6	53.08	mg/L	0.240	53.08	mg/L	0.240	0.45%
Ni 231.604†	4016.1	1.061	mg/L	0.0041	1.061	mg/L	0.0041	0.39%
Pb 220.353†	16849.4	2.111	mg/L	0.0078	2.111	mg/L	0.0078	0.37%
Sb 206.836†	5907.7	2.145	mg/L	0.0097	2.145	mg/L	0.0097	0.45%
Se 196.026†	3202.7	2.109	mg/L	0.0163	2.109	mg/L	0.0163	0.77%
Si 288.158†	3040.6	2.015	mg/L	0.0042	2.015	mg/L	0.0042	0.21%
Sn 189.927†	5027.4	1.036	mg/L	0.0057	1.036	mg/L	0.0057	0.55%
Sr 421.552†	981069.3	1.019	mg/L	0.0016	1.019	mg/L	0.0016	0.15%
Ti 334.903†	26974.9	1.033	mg/L	0.0042	1.033	mg/L	0.0042	0.41%
Tl 190.801†	3965.6	2.177	mg/L	0.0095	2.177	mg/L	0.0095	0.44%
V 292.402†	143790.6	1.043	mg/L	0.0032	1.043	mg/L	0.0032	0.30%
Zn 206.200†	4374.2	1.066	mg/L	0.0009	1.066	mg/L	0.0009	0.09%

Sequence No.: 65
Sample ID: CB

Autosampler Location: 1
Date Collected: 4/16/2013 1:18:29 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2820895.4	102.2	%	0.49				0.48%
ScR 361.383	394683.0	102.6	%	0.44				0.43%
Ag 328.068†	43.5	0.00019	mg/L	0.000209	0.00019	mg/L	0.000209	111.51%
Al 308.215†	6.7	0.00546	mg/L	0.001830	0.00546	mg/L	0.001830	33.50%
As 188.979†	4.4	0.00322	mg/L	0.001562	0.00322	mg/L	0.001562	48.57%
B 249.677†	13.2	0.00198	mg/L	0.000327	0.00198	mg/L	0.000327	16.55%
Ba 233.527†	2.7	0.00043	mg/L	0.000289	0.00043	mg/L	0.000289	67.60%
Be 313.042†	80.6	0.00014	mg/L	0.000016	0.00014	mg/L	0.000016	11.66%
Ca 317.933†	21.1	0.00201	mg/L	0.000661	0.00201	mg/L	0.000661	32.88%
Cd 228.802†	9.9	0.00042	mg/L	0.000108	0.00042	mg/L	0.000108	25.54%
Co 228.616†	6.2	0.00019	mg/L	0.000070	0.00019	mg/L	0.000070	37.01%
Cr 267.716†	-3.3	-0.00040	mg/L	0.000180	-0.00040	mg/L	0.000180	45.22%
Cu 324.752†	71.7	0.00027	mg/L	0.000057	0.00027	mg/L	0.000057	21.17%
Fe 273.955†	3.9	0.00312	mg/L	0.000291	0.00312	mg/L	0.000291	9.33%
K 766.490†	57.5	0.02720	mg/L	0.005769	0.02720	mg/L	0.005769	21.21%
Mg 279.077†	2.0	0.00212	mg/L	0.002332	0.00212	mg/L	0.002332	110.11%
Mn 257.610†	6.8	0.00013	mg/L	0.000029	0.00013	mg/L	0.000029	22.19%
Mo 202.031†	89.3	0.00477	mg/L	0.000669	0.00477	mg/L	0.000669	14.01%
Na 589.592†	35.5	0.00285	mg/L	0.001831	0.00285	mg/L	0.001831	64.32%
Na 330.237†	-6.6	-0.2024	mg/L	0.27061	-0.2024	mg/L	0.27061	133.70%
Ni 231.604†	5.4	0.00144	mg/L	0.000189	0.00144	mg/L	0.000189	13.20%
Pb 220.353†	15.4	0.00193	mg/L	0.000735	0.00193	mg/L	0.000735	38.15%
Sb 206.836†	17.6	0.00641	mg/L	0.001437	0.00641	mg/L	0.001437	22.41%
Se 196.026†	-2.7	-0.00177	mg/L	0.000779	-0.00177	mg/L	0.000779	43.92%
Si 288.158†	-10.6	-0.00702	mg/L	0.004335	-0.00702	mg/L	0.004335	61.73%
Sn 189.927†	3.6	0.00074	mg/L	0.000185	0.00074	mg/L	0.000185	24.95%
Sr 421.552†	63.9	0.00007	mg/L	0.000020	0.00007	mg/L	0.000020	29.73%
Ti 334.903†	18.8	0.00071	mg/L	0.000594	0.00071	mg/L	0.000594	83.17%
Tl 190.801†	5.9	0.00325	mg/L	0.000426	0.00325	mg/L	0.000426	13.13%
V 292.402†	32.6	0.00024	mg/L	0.000016	0.00024	mg/L	0.000016	6.82%
Zn 206.200†	0.9	0.00022	mg/L	0.000175	0.00022	mg/L	0.000175	79.78%

Sequence No.: 66
Sample ID: WL67 MB1 SWC

Autosampler Location: 342
Date Collected: 4/16/2013 1:22:45 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL67 MB1 SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL67 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2832488.2	102.6	%	0.44				0.43%
ScR 361.383	399717.6	103.9	%	0.54				0.52%
Ag 328.068†	51.2	0.00022	mg/L	0.000169	0.00044	mg/L	0.000339	76.81%
Al 308.215†	11.4	0.00941	mg/L	0.002344	0.01882	mg/L	0.004688	24.91%
As 188.979†	0.5	0.00037	mg/L	0.000919	0.00073	mg/L	0.001838	251.73%
B 249.677†	1.2	0.00018	mg/L	0.000672	0.00036	mg/L	0.001344	369.97%
Ba 233.527†	2.3	0.00037	mg/L	0.000443	0.00073	mg/L	0.000885	120.55%
Be 313.042†	39.3	0.00007	mg/L	0.000040	0.00014	mg/L	0.000079	58.02%
Ca 317.933†	130.6	0.01243	mg/L	0.001308	0.02486	mg/L	0.002617	10.53%
Cd 228.802†	4.7	0.00021	mg/L	0.000096	0.00042	mg/L	0.000193	46.21%
Co 228.616†	3.8	0.00012	mg/L	0.000058	0.00024	mg/L	0.000116	49.25%
Cr 267.716†	-3.0	-0.00036	mg/L	0.000276	-0.00072	mg/L	0.000553	76.98%
Cu 324.752†	22.1	0.00008	mg/L	0.000104	0.00017	mg/L	0.000208	123.42%
Fe 273.955†	13.3	0.01062	mg/L	0.001035	0.02124	mg/L	0.002070	9.75%
K 766.490†	3.9	0.00183	mg/L	0.008263	0.00366	mg/L	0.016525	451.95%
Mg 279.077†	-1.8	-0.00190	mg/L	0.003540	-0.00381	mg/L	0.007081	185.91%
Mn 257.610†	9.3	0.00018	mg/L	0.000032	0.00036	mg/L	0.000064	17.67%
Mo 202.031†	4.6	0.00025	mg/L	0.000079	0.00049	mg/L	0.000157	31.90%
Na 589.592†	1.8	0.00015	mg/L	0.002466	0.00030	mg/L	0.004931	>999.9%
Na 330.237†	-3.9	-0.1210	mg/L	0.27932	-0.2420	mg/L	0.55864	230.82%
Ni 231.604†	1.6	0.00042	mg/L	0.001344	0.00084	mg/L	0.002688	318.28%
Pb 220.353†	14.0	0.00175	mg/L	0.000347	0.00350	mg/L	0.000695	19.86%
Sb 206.836†	6.3	0.00229	mg/L	0.000460	0.00457	mg/L	0.000920	20.10%
Se 196.026†	-1.1	-0.00069	mg/L	0.000594	-0.00139	mg/L	0.001187	85.61%
Si 288.158†	12.9	0.00857	mg/L	0.000542	0.01714	mg/L	0.001085	6.33%
Sn 189.927†	4.2	0.00088	mg/L	0.000286	0.00175	mg/L	0.000572	32.63%
Sr 421.552†	11.0	0.00001	mg/L	0.000021	0.00002	mg/L	0.000041	181.84%
Ti 334.903†	-1.5	-0.00006	mg/L	0.000168	-0.00012	mg/L	0.000336	291.39%
Tl 190.801†	2.1	0.00114	mg/L	0.002623	0.00228	mg/L	0.005247	229.83%
V 292.402†	-0.8	-0.00001	mg/L	0.000030	-0.00002	mg/L	0.000059	370.68%
Zn 206.200†	1.8	0.00045	mg/L	0.000493	0.00089	mg/L	0.000986	110.27%

Sequence No.: 67
Sample ID: WL67 B SWC

Autosampler Location: 343
Date Collected: 4/16/2013 1:27:02 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL67 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2814542.1	102.0	%	0.41				0.41%
ScR 361.383	395928.1	102.9	%	0.40				0.39%
Ag 328.068†	1627.9	0.00724	mg/L	0.000161	0.03620	mg/L	0.000806	2.23%
Al 308.215†	30536.8	25.12	mg/L	0.092	125.6	mg/L	0.46	0.37%
As 188.979†	-12.0	0.04112	mg/L	0.002463	0.2056	mg/L	0.01232	5.99%
B 249.677†	703.4	0.1052	mg/L	0.00136	0.5261	mg/L	0.00682	1.30%
Ba 233.527†	4326.2	0.6648	mg/L	0.00376	3.324	mg/L	0.0188	0.56%
Be 313.042†	90.5	0.00012	mg/L	0.000010	0.00061	mg/L	0.000049	7.97%
Ca 317.933†	334947.4	31.89	mg/L	0.044	159.5	mg/L	0.22	0.14%
Cd 228.802†	960.8	0.04294	mg/L	0.000318	0.2147	mg/L	0.00159	0.74%
Co 228.616†	1479.0	0.04250	mg/L	0.000053	0.2125	mg/L	0.00027	0.13%
Cr 267.716†	2194.9	0.2648	mg/L	0.00046	1.324	mg/L	0.0023	0.18%
Cu 324.752†	437655.5	1.666	mg/L	0.0017	8.330	mg/L	0.0084	0.10%
Fe 273.955†	200121.8	160.3	mg/L	0.10	801.3	mg/L	0.49	0.06%
K 766.490†	3882.4	1.837	mg/L	0.0123	9.187	mg/L	0.0617	0.67%
Mg 279.077†	9348.2	9.751	mg/L	0.0473	48.75	mg/L	0.236	0.48%
Mn 257.610†	114069.0	2.191	mg/L	0.0017	10.96	mg/L	0.008	0.08%
Mo 202.031†	687.1	0.03633	mg/L	0.000538	0.1816	mg/L	0.00269	1.48%
Na 589.592†	44679.4	3.588	mg/L	0.0074	17.94	mg/L	0.037	0.21%
Na 330.237†	245.1	3.408	mg/L	0.1308	17.04	mg/L	0.654	3.84%
Ni 231.604†	999.4	0.2641	mg/L	0.00086	1.320	mg/L	0.0043	0.32%
Pb 220.353†	14254.0	1.782	mg/L	0.0090	8.909	mg/L	0.0451	0.51%
Sb 206.836†	92.8	0.03318	mg/L	0.003212	0.1659	mg/L	0.01606	9.68%
Se 196.026†	-4.9	-0.00621	mg/L	0.005492	-0.03105	mg/L	0.027462	88.45%
Si 288.158†	553.1	0.3670	mg/L	0.00410	1.835	mg/L	0.0205	1.12%
Sn 189.927†	980.4	0.2048	mg/L	0.00115	1.024	mg/L	0.0057	0.56%
Sr 421.552†	118756.5	0.1233	mg/L	0.00012	0.6165	mg/L	0.00061	0.10%
Ti 334.903†	40066.1	1.535	mg/L	0.0014	7.676	mg/L	0.0070	0.09%
Tl 190.801†	-19.2	0.01007	mg/L	0.002839	0.05036	mg/L	0.014193	28.18%
V 292.402†	11535.7	0.07586	mg/L	0.000170	0.3793	mg/L	0.00085	0.22%
Zn 206.200†	63096.9	15.37	mg/L	0.023	76.85	mg/L	0.115	0.15%

Sequence No.: 68
Sample ID: WL67 ADUP SWC

Autosampler Location: 344
Date Collected: 4/16/2013 1:31:03 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 ADUP SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL67 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2816181.0	102.0	%	0.26				0.26%
ScR 361.383	399744.7	103.9	%	0.30				0.29%
Ag 328.068†	617.7	0.00284	mg/L	0.000190	0.01421	mg/L	0.000949	6.68%
Al 308.215†	27331.2	22.48	mg/L	0.132	112.4	mg/L	0.66	0.59%
As 188.979†	-23.2	0.02593	mg/L	0.001106	0.1297	mg/L	0.00553	4.26%
B 249.677†	370.0	0.05531	mg/L	0.000055	0.2765	mg/L	0.00028	0.10%
Ba 233.527†	2568.8	0.3852	mg/L	0.00209	1.926	mg/L	0.0105	0.54%
Be 313.042†	130.8	0.00018	mg/L	0.000012	0.00092	mg/L	0.000062	6.80%
Ca 317.933†	230047.1	21.90	mg/L	0.065	109.5	mg/L	0.32	0.29%
Cd 228.802†	489.5	0.02199	mg/L	0.000157	0.1100	mg/L	0.00078	0.71%
Co 228.616†	1147.9	0.03280	mg/L	0.000111	0.1640	mg/L	0.00056	0.34%
Cr 267.716†	2450.5	0.2951	mg/L	0.00193	1.475	mg/L	0.0096	0.65%
Cu 324.752†	260875.7	0.9961	mg/L	0.00222	4.980	mg/L	0.0111	0.22%
Fe 273.955†	199657.0	159.9	mg/L	0.33	799.5	mg/L	1.66	0.21%
K 766.490†	3412.9	1.615	mg/L	0.0043	8.076	mg/L	0.0214	0.27%
Mg 279.077†	10674.8	11.15	mg/L	0.063	55.74	mg/L	0.317	0.57%
Mn 257.610†	190210.2	3.654	mg/L	0.0046	18.27	mg/L	0.023	0.13%
Mo 202.031†	643.0	0.03408	mg/L	0.000238	0.1704	mg/L	0.00119	0.70%
Na 589.592†	38987.4	3.131	mg/L	0.0040	15.65	mg/L	0.020	0.13%
Na 330.237†	147.8	2.958	mg/L	0.0682	14.79	mg/L	0.341	2.30%
Ni 231.604†	746.6	0.1973	mg/L	0.00209	0.9864	mg/L	0.01045	1.06%
Pb 220.353†	9362.3	1.169	mg/L	0.0005	5.847	mg/L	0.0024	0.04%
Sb 206.836†	38.5	0.01308	mg/L	0.001878	0.06540	mg/L	0.009391	14.36%
Se 196.026†	-5.4	-0.00620	mg/L	0.002497	-0.03101	mg/L	0.012485	40.26%
Si 288.158†	644.3	0.4276	mg/L	0.00145	2.138	mg/L	0.0073	0.34%
Sn 189.927†	1030.3	0.2142	mg/L	0.00106	1.071	mg/L	0.0053	0.50%
Sr 421.552†	97186.1	0.1009	mg/L	0.00018	0.5046	mg/L	0.00089	0.18%
Ti 334.903†	34156.8	1.309	mg/L	0.0014	6.545	mg/L	0.0070	0.11%
Tl 190.801†	-23.3	0.00762	mg/L	0.001654	0.03809	mg/L	0.008268	21.71%
V 292.402†	17927.4	0.1225	mg/L	0.00059	0.6126	mg/L	0.00295	0.48%
Zn 206.200†	27058.2	6.592	mg/L	0.0431	32.96	mg/L	0.216	0.65%

Sequence No.: 69
Sample ID: WL67 A SWC

Autosampler Location: 345
Date Collected: 4/16/2013 1:35:04 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 A SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL67 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2816356.9	102.1	%	0.11				0.11%
ScR 361.383	397429.1	103.3	%	0.62				0.60%
Ag 328.068†	1094.6	0.00494	mg/L	0.000077	0.02472	mg/L	0.000387	1.56%
Al 308.215†	33186.0	27.30	mg/L	0.137	136.5	mg/L	0.69	0.50%
As 188.979†	-23.2	0.03496	mg/L	0.002621	0.1748	mg/L	0.01311	7.50%
B 249.677†	399.0	0.05961	mg/L	0.000504	0.2981	mg/L	0.00252	0.85%
Ba 233.527†	3455.5	0.5191	mg/L	0.00143	2.596	mg/L	0.0071	0.28%
Be 313.042†	147.5	0.00020	mg/L	0.000010	0.00100	mg/L	0.000048	4.74%
Ca 317.933†	290879.1	27.70	mg/L	0.100	138.5	mg/L	0.50	0.36%
Cd 228.802†	612.7	0.02752	mg/L	0.000135	0.1376	mg/L	0.00068	0.49%
Co 228.616†	1520.0	0.04368	mg/L	0.000079	0.2184	mg/L	0.00039	0.18%
Cr 267.716†	3799.8	0.4568	mg/L	0.00210	2.284	mg/L	0.0105	0.46%
Cu 324.752†	339013.8	1.295	mg/L	0.0029	6.473	mg/L	0.0143	0.22%
Fe 273.955†	260591.9	208.7	mg/L	3.09	1043	mg/L	15.44	1.48%
K 766.490†	4098.8	1.940	mg/L	0.0344	9.699	mg/L	0.1718	1.77%
Mg 279.077†	13846.7	14.46	mg/L	0.066	72.30	mg/L	0.329	0.46%
Mn 257.610†	260365.9	5.001	mg/L	0.0576	25.01	mg/L	0.288	1.15%
Mo 202.031†	883.2	0.04684	mg/L	0.000277	0.2342	mg/L	0.00138	0.59%
Na 589.592†	49728.8	3.993	mg/L	0.0175	19.97	mg/L	0.087	0.44%
Na 330.237†	193.1	3.650	mg/L	0.1533	18.25	mg/L	0.766	4.20%
Ni 231.604†	1006.9	0.2661	mg/L	0.00183	1.330	mg/L	0.0091	0.69%
Pb 220.353†	13693.7	1.710	mg/L	0.0136	8.552	mg/L	0.0679	0.79%
Sb 206.836†	55.3	0.01800	mg/L	0.000806	0.09000	mg/L	0.004032	4.48%
Se 196.026†	-7.3	-0.00810	mg/L	0.001641	-0.04050	mg/L	0.008206	20.26%
Si 288.158†	594.7	0.3943	mg/L	0.00375	1.971	mg/L	0.0187	0.95%
Sn 189.927†	1454.3	0.3020	mg/L	0.00177	1.510	mg/L	0.0089	0.59%
Sr 421.552†	111712.4	0.1160	mg/L	0.00057	0.5800	mg/L	0.00287	0.49%
Ti 334.903†	41533.3	1.592	mg/L	0.0094	7.959	mg/L	0.0468	0.59%
Tl 190.801†	-28.8	0.01081	mg/L	0.002266	0.05404	mg/L	0.011329	20.97%
V 292.402†	23015.0	0.1576	mg/L	0.00100	0.7878	mg/L	0.00502	0.64%
Zn 206.200†	37860.0	9.223	mg/L	0.0383	46.12	mg/L	0.192	0.42%

Sequence No.: 70
Sample ID: WL67 ASPK SWC

Autosampler Location: 346
Date Collected: 4/16/2013 1:39:05 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL67 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2794059.3	101.2	%	0.12				0.12%
ScR 361.383	396305.0	103.0	%	0.31				0.30%
Ag 328.068†	50045.8	0.2158	mg/L	0.00059	1.079	mg/L	0.0029	0.27%
Al 308.215†	35146.3	28.90	mg/L	0.110	144.5	mg/L	0.55	0.38%
As 188.979†	1157.8	0.8979	mg/L	0.00354	4.489	mg/L	0.0177	0.39%
B 249.677†	435.2	0.06454	mg/L	0.001045	0.3227	mg/L	0.00522	1.62%
Ba 233.527†	9368.2	1.460	mg/L	0.0095	7.299	mg/L	0.0476	0.65%
Be 313.042†	117808.3	0.2045	mg/L	0.00089	1.022	mg/L	0.0045	0.44%
Ca 317.933†	361709.7	34.44	mg/L	0.128	172.2	mg/L	0.64	0.37%
Cd 228.802†	5663.5	0.2471	mg/L	0.00064	1.236	mg/L	0.0032	0.26%
Co 228.616†	8410.8	0.2545	mg/L	0.00034	1.272	mg/L	0.0017	0.13%
Cr 267.716†	5138.5	0.6156	mg/L	0.00131	3.078	mg/L	0.0065	0.21%
Cu 324.752†	424509.0	1.618	mg/L	0.0045	8.092	mg/L	0.0227	0.28%
Fe 273.955†	260887.3	208.9	mg/L	0.74	1045	mg/L	3.68	0.35%
K 766.490†	12750.8	6.034	mg/L	0.0363	30.17	mg/L	0.182	0.60%
Mg 279.077†	17958.7	18.79	mg/L	0.067	93.95	mg/L	0.335	0.36%
Mn 257.610†	273843.2	5.260	mg/L	0.0140	26.30	mg/L	0.070	0.27%
Mo 202.031†	806.2	0.04264	mg/L	0.000039	0.2132	mg/L	0.00020	0.09%
Na 589.592†	106185.9	8.527	mg/L	0.0445	42.63	mg/L	0.222	0.52%
Na 330.237†	341.1	8.345	mg/L	0.3284	41.72	mg/L	1.642	3.94%
Ni 231.604†	1808.4	0.4775	mg/L	0.00089	2.387	mg/L	0.0045	0.19%
Pb 220.353†	18348.5	2.294	mg/L	0.0079	11.47	mg/L	0.040	0.34%
Sb 206.836†	54.6	0.01627	mg/L	0.001968	0.08137	mg/L	0.009838	12.09%
Se 196.026†	1283.0	0.8418	mg/L	0.00679	4.209	mg/L	0.0340	0.81%
Si 288.158†	677.4	0.4505	mg/L	0.00097	2.253	mg/L	0.0049	0.22%
Sn 189.927†	1371.4	0.2855	mg/L	0.00125	1.428	mg/L	0.0062	0.44%
Sr 421.552†	314415.1	0.3265	mg/L	0.00063	1.632	mg/L	0.0031	0.19%
Ti 334.903†	43727.4	1.675	mg/L	0.0028	8.377	mg/L	0.0139	0.17%
Tl 190.801†	1460.5	0.8295	mg/L	0.00553	4.147	mg/L	0.0276	0.67%
V 292.402†	50737.9	0.3584	mg/L	0.00110	1.792	mg/L	0.0055	0.31%
Zn 206.200†	36314.4	8.847	mg/L	0.0389	44.23	mg/L	0.195	0.44%

Sequence No.: 71
Sample ID: WL67 APOST SWC

Autosampler Location: 347
Date Collected: 4/16/2013 1:43:07 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WL67 APOST SWC

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: WL67 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2784267.5	100.9	%	0.73				0.72%
ScR 361.383	394783.8	102.6	%	0.44				0.43%
Ag 328.068†	124959.4	0.5385	mg/L	0.00286	2.692	mg/L	0.0143	0.53%
Al 308.215†	36854.2	30.31	mg/L	0.111	151.5	mg/L	0.56	0.37%
As 188.979†	2980.7	2.224	mg/L	0.0162	11.12	mg/L	0.081	0.73%
B 249.677†	421.9	0.06180	mg/L	0.001640	0.3090	mg/L	0.00820	2.65%
Ba 233.527†	16898.7	2.657	mg/L	0.0195	13.28	mg/L	0.098	0.73%
Be 313.042†	294299.9	0.5109	mg/L	0.00145	2.555	mg/L	0.0072	0.28%
Ca 317.933†	409898.9	39.03	mg/L	0.174	195.1	mg/L	0.87	0.45%
Cd 228.802†	13269.5	0.5776	mg/L	0.00443	2.888	mg/L	0.0222	0.77%
Co 228.616†	18837.9	0.5738	mg/L	0.00589	2.869	mg/L	0.0295	1.03%
Cr 267.716†	8472.8	1.012	mg/L	0.0048	5.060	mg/L	0.0240	0.47%
Cu 324.752†	488718.3	1.862	mg/L	0.0043	9.311	mg/L	0.0215	0.23%
Fe 273.955†	270483.9	216.6	mg/L	1.11	1083	mg/L	5.56	0.51%
K 766.490†	26357.1	12.47	mg/L	0.028	62.37	mg/L	0.142	0.23%
Mg 279.077†	24529.1	25.70	mg/L	0.113	128.5	mg/L	0.57	0.44%
Mn 257.610†	294040.4	5.648	mg/L	0.0214	28.24	mg/L	0.107	0.38%
Mo 202.031†	924.5	0.04889	mg/L	0.000469	0.2444	mg/L	0.00234	0.96%
Na 589.592†	180762.2	14.52	mg/L	0.028	72.58	mg/L	0.138	0.19%
Na 330.237†	555.0	14.58	mg/L	0.048	72.90	mg/L	0.241	0.33%
Ni 231.604†	3012.5	0.7951	mg/L	0.00449	3.975	mg/L	0.0225	0.57%
Pb 220.353†	31317.6	3.918	mg/L	0.0341	19.59	mg/L	0.171	0.87%
Sb 206.836†	69.1	0.01748	mg/L	0.002294	0.08741	mg/L	0.011469	13.12%
Se 196.026†	3324.7	2.187	mg/L	0.0131	10.93	mg/L	0.065	0.60%
Si 288.158†	617.5	0.4125	mg/L	0.00626	2.062	mg/L	0.0313	1.52%
Sn 189.927†	1480.6	0.3084	mg/L	0.00078	1.542	mg/L	0.0039	0.25%
Sr 421.552†	602598.3	0.6257	mg/L	0.00038	3.128	mg/L	0.0019	0.06%
Ti 334.903†	42615.5	1.632	mg/L	0.0018	8.162	mg/L	0.0090	0.11%
Tl 190.801†	3754.3	2.091	mg/L	0.0162	10.46	mg/L	0.081	0.77%
V 292.402†	95741.7	0.6848	mg/L	0.00500	3.424	mg/L	0.0250	0.73%
Zn 206.200†	41011.0	9.991	mg/L	0.0462	49.95	mg/L	0.231	0.46%

Sequence No.: 72
Sample ID: WL67 MB1SPK SWC

Autosampler Location: 348
Date Collected: 4/16/2013 1:47:09 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WL67 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: WL67 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2816175.8	102.0	%	0.64				0.62%
ScR 361.383	394175.7	102.5	%	0.53				0.51%
Ag 328.068†	127533.3	0.5493	mg/L	0.00176	1.099	mg/L	0.0035	0.32%
Al 308.215†	2636.9	2.162	mg/L	0.0164	4.323	mg/L	0.0329	0.76%
As 188.979†	3047.4	2.220	mg/L	0.0131	4.439	mg/L	0.0262	0.59%
B 249.677†	9.5	0.00019	mg/L	0.001266	0.00038	mg/L	0.002531	669.58%
Ba 233.527†	13090.4	2.083	mg/L	0.0070	4.165	mg/L	0.0139	0.33%
Be 313.042†	295212.8	0.5126	mg/L	0.00429	1.025	mg/L	0.0086	0.84%
Ca 317.933†	109152.3	10.39	mg/L	0.032	20.79	mg/L	0.064	0.31%
Cd 228.802†	12393.1	0.5382	mg/L	0.00139	1.076	mg/L	0.0028	0.26%
Co 228.616†	17298.4	0.5296	mg/L	0.00018	1.059	mg/L	0.0004	0.03%
Cr 267.716†	4644.9	0.5518	mg/L	0.00250	1.104	mg/L	0.0050	0.45%
Cu 324.752†	139118.0	0.5273	mg/L	0.00144	1.055	mg/L	0.0029	0.27%
Fe 273.955†	2753.0	2.202	mg/L	0.0133	4.403	mg/L	0.0265	0.60%
K 766.490†	22129.2	10.47	mg/L	0.054	20.95	mg/L	0.108	0.52%
Mg 279.077†	10321.2	10.87	mg/L	0.045	21.73	mg/L	0.091	0.42%
Mn 257.610†	26908.7	0.5172	mg/L	0.00156	1.034	mg/L	0.0031	0.30%
Mo 202.031†	30.9	0.00150	mg/L	0.000251	0.00300	mg/L	0.000502	16.73%
Na 589.592†	129862.5	10.43	mg/L	0.052	20.86	mg/L	0.105	0.50%
Na 330.237†	351.6	10.67	mg/L	0.171	21.34	mg/L	0.341	1.60%
Ni 231.604†	2037.3	0.5374	mg/L	0.00276	1.075	mg/L	0.0055	0.51%
Pb 220.353†	17106.3	2.143	mg/L	0.0085	4.287	mg/L	0.0170	0.40%
Sb 206.836†	12.7	-0.00097	mg/L	0.001264	-0.00194	mg/L	0.002528	130.37%
Se 196.026†	3333.3	2.196	mg/L	0.0155	4.391	mg/L	0.0310	0.71%
Si 288.158†	12.3	0.01123	mg/L	0.005572	0.02246	mg/L	0.011144	49.62%
Sn 189.927†	-20.8	-0.00341	mg/L	0.000304	-0.00682	mg/L	0.000607	8.90%
Sr 421.552†	491845.7	0.5107	mg/L	0.00098	1.021	mg/L	0.0020	0.19%
Ti 334.903†	55.6	0.00141	mg/L	0.000220	0.00282	mg/L	0.000439	15.58%
Tl 190.801†	3957.3	2.176	mg/L	0.0181	4.351	mg/L	0.0361	0.83%
V 292.402†	73471.6	0.5329	mg/L	0.00170	1.066	mg/L	0.0034	0.32%
Zn 206.200†	2192.1	0.5342	mg/L	0.00385	1.068	mg/L	0.0077	0.72%

Sequence No.: 73
Sample ID: CV 9

Autosampler Location: 7
Date Collected: 4/16/2013 1:51:10 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2764071.2	100.2	%	0.37				0.37%
ScR 361.383	387517.4	100.7	%	0.41				0.40%
Ag 328.068†	248328.8	1.069	mg/L	0.0042	1.069	mg/L	0.0042	0.39%
Al 308.215†	2595.2	2.099	mg/L	0.0168	2.099	mg/L	0.0168	0.80%
As 188.979†	2887.3	2.136	mg/L	0.0136	2.136	mg/L	0.0136	0.64%
B 249.677†	6888.0	1.030	mg/L	0.0092	1.030	mg/L	0.0092	0.90%
Ba 233.527†	6708.7	1.067	mg/L	0.0081	1.067	mg/L	0.0081	0.76%
Be 313.042†	595525.9	1.034	mg/L	0.0032	1.034	mg/L	0.0032	0.31%
Ca 317.933†	22779.3	2.169	mg/L	0.0168	2.169	mg/L	0.0168	0.77%
Cd 228.802†	24001.6	1.055	mg/L	0.0057	1.055	mg/L	0.0057	0.54%
Co 228.616†	34836.6	1.065	mg/L	0.0062	1.065	mg/L	0.0062	0.59%
Cr 267.716†	9187.6	1.093	mg/L	0.0104	1.093	mg/L	0.0104	0.95%
Cu 324.752†	281016.3	1.065	mg/L	0.0065	1.065	mg/L	0.0065	0.61%
Fe 273.955†	2711.7	2.166	mg/L	0.0169	2.166	mg/L	0.0169	0.78%
K 766.490†	44337.6	20.98	mg/L	0.009	20.98	mg/L	0.009	0.04%
Mg 279.077†	1986.9	2.099	mg/L	0.0218	2.099	mg/L	0.0218	1.04%
Mn 257.610†	53286.1	1.024	mg/L	0.0016	1.024	mg/L	0.0016	0.15%
Mo 202.031†	19641.9	1.049	mg/L	0.0071	1.049	mg/L	0.0071	0.68%
Na 589.592†	651146.3	52.29	mg/L	0.193	52.29	mg/L	0.193	0.37%
Na 330.237†	1730.6	53.27	mg/L	0.375	53.27	mg/L	0.375	0.70%
Ni 231.604†	4011.0	1.060	mg/L	0.0135	1.060	mg/L	0.0135	1.27%
Pb 220.353†	16849.5	2.111	mg/L	0.0146	2.111	mg/L	0.0146	0.69%
Sb 206.836†	5927.3	2.153	mg/L	0.0175	2.153	mg/L	0.0175	0.81%
Se 196.026†	3209.9	2.114	mg/L	0.0086	2.114	mg/L	0.0086	0.41%
Si 288.158†	3047.5	2.020	mg/L	0.0163	2.020	mg/L	0.0163	0.81%
Sn 189.927†	5034.2	1.038	mg/L	0.0083	1.038	mg/L	0.0083	0.80%
Sr 421.552†	985973.5	1.024	mg/L	0.0010	1.024	mg/L	0.0010	0.10%
Ti 334.903†	26957.4	1.033	mg/L	0.0010	1.033	mg/L	0.0010	0.10%
Tl 190.801†	3955.1	2.171	mg/L	0.0157	2.171	mg/L	0.0157	0.72%
V 292.402†	143886.3	1.044	mg/L	0.0041	1.044	mg/L	0.0041	0.40%
Zn 206.200†	4382.1	1.068	mg/L	0.0093	1.068	mg/L	0.0093	0.87%

Sequence No.: 74
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 4/16/2013 1:55:14 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2808451.6	101.8	%	0.21				0.21%
ScR 361.383	391198.8	101.7	%	0.91				0.89%
Ag 328.068†	57.7	0.00025	mg/L	0.000146	0.00025	mg/L	0.000146	58.94%
Al 308.215†	12.2	0.00997	mg/L	0.001602	0.00997	mg/L	0.001602	16.08%
As 188.979†	2.1	0.00155	mg/L	0.000834	0.00155	mg/L	0.000834	53.94%
B 249.677†	8.9	0.00134	mg/L	0.001441	0.00134	mg/L	0.001441	107.79%
Ba 233.527†	7.4	0.00118	mg/L	0.001152	0.00118	mg/L	0.001152	97.20%
Be 313.042†	114.7	0.00020	mg/L	0.000025	0.00020	mg/L	0.000025	12.50%
Ca 317.933†	13.0	0.00123	mg/L	0.000627	0.00123	mg/L	0.000627	50.74%
Cd 228.802†	5.3	0.00023	mg/L	0.000201	0.00023	mg/L	0.000201	88.21%
Co 228.616†	9.4	0.00029	mg/L	0.000060	0.00029	mg/L	0.000060	20.95%
Cr 267.716†	-4.4	-0.00053	mg/L	0.000384	-0.00053	mg/L	0.000384	72.36%
Cu 324.752†	37.5	0.00014	mg/L	0.000081	0.00014	mg/L	0.000081	57.24%
Fe 273.955†	3.9	0.00310	mg/L	0.001176	0.00310	mg/L	0.001176	37.92%
K 766.490†	9.0	0.00426	mg/L	0.007005	0.00426	mg/L	0.007005	164.53%
Mg 279.077†	1.5	0.00162	mg/L	0.005543	0.00162	mg/L	0.005543	341.22%
Mn 257.610†	10.1	0.00019	mg/L	0.000056	0.00019	mg/L	0.000056	28.77%
Mo 202.031†	85.6	0.00457	mg/L	0.000832	0.00457	mg/L	0.000832	18.18%
Na 589.592†	22.3	0.00179	mg/L	0.002326	0.00179	mg/L	0.002326	129.85%
Na 330.237†	-0.4	-0.01241	mg/L	0.332442	-0.01241	mg/L	0.332442	>999.9%
Ni 231.604†	-0.9	-0.00023	mg/L	0.000838	-0.00023	mg/L	0.000838	358.17%
Pb 220.353†	10.6	0.00133	mg/L	0.000509	0.00133	mg/L	0.000509	38.35%
Sb 206.836†	14.7	0.00536	mg/L	0.000545	0.00536	mg/L	0.000545	10.18%
Se 196.026†	0.4	0.00026	mg/L	0.000324	0.00026	mg/L	0.000324	126.04%
Si 288.158†	-6.1	-0.00405	mg/L	0.002126	-0.00405	mg/L	0.002126	52.44%
Sn 189.927†	5.0	0.00103	mg/L	0.000335	0.00103	mg/L	0.000335	32.41%
Sr 421.552†	50.4	0.00005	mg/L	0.000042	0.00005	mg/L	0.000042	81.02%
Ti 334.903†	7.1	0.00027	mg/L	0.000493	0.00027	mg/L	0.000493	183.76%
Tl 190.801†	6.4	0.00353	mg/L	0.001671	0.00353	mg/L	0.001671	47.28%
V 292.402†	19.4	0.00014	mg/L	0.000103	0.00014	mg/L	0.000103	73.73%
Zn 206.200†	1.6	0.00038	mg/L	0.000345	0.00038	mg/L	0.000345	89.85%

Sequence No.: 75
Sample ID: WL86 MB TWC

Autosampler Location: 349
Date Collected: 4/16/2013 1:59:30 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WL86 MB TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL86 MB TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2820668.6	102.2	%	0.25				0.24%
ScR 361.383	396681.4	103.1	%	0.13				0.12%
Ag 328.068†	1.8	0.00001	mg/L	0.000038	0.00001	mg/L	0.000038	495.51%
Al 308.215†	2.9	0.00238	mg/L	0.002507	0.00238	mg/L	0.002507	105.14%
As 188.979†	3.1	0.00225	mg/L	0.002349	0.00225	mg/L	0.002349	104.42%
B 249.677†	1.8	0.00026	mg/L	0.000884	0.00026	mg/L	0.000884	335.67%
Ba 233.527†	5.8	0.00093	mg/L	0.000297	0.00093	mg/L	0.000297	31.94%
Be 313.042†	32.3	0.00006	mg/L	0.000023	0.00006	mg/L	0.000023	41.87%
Ca 317.933†	39.2	0.00373	mg/L	0.000311	0.00373	mg/L	0.000311	8.34%
Cd 228.802†	1.2	0.00004	mg/L	0.000046	0.00004	mg/L	0.000046	110.55%
Co 228.616†	3.4	0.00010	mg/L	0.000095	0.00010	mg/L	0.000095	91.75%
Cr 267.716†	-4.0	-0.00047	mg/L	0.000437	-0.00047	mg/L	0.000437	92.25%
Cu 324.752†	-12.3	-0.00005	mg/L	0.000070	-0.00005	mg/L	0.000070	150.82%
Fe 273.955†	0.6	0.00048	mg/L	0.000364	0.00048	mg/L	0.000364	76.19%
K 766.490†	-8.3	-0.00392	mg/L	0.003351	-0.00392	mg/L	0.003351	85.52%
Mg 279.077†	-1.5	-0.00156	mg/L	0.003821	-0.00156	mg/L	0.003821	245.46%
Mn 257.610†	-3.8	-0.00007	mg/L	0.000044	-0.00007	mg/L	0.000044	60.83%
Mo 202.031†	6.9	0.00037	mg/L	0.000221	0.00037	mg/L	0.000221	60.01%
Na 589.592†	132.5	0.01064	mg/L	0.003228	0.01064	mg/L	0.003228	30.34%
Na 330.237†	-8.1	-0.2495	mg/L	0.09711	-0.2495	mg/L	0.09711	38.92%
Ni 231.604†	1.1	0.00030	mg/L	0.000973	0.00030	mg/L	0.000973	323.08%
Pb 220.353†	13.1	0.00165	mg/L	0.000228	0.00165	mg/L	0.000228	13.87%
Sb 206.836†	1.8	0.00066	mg/L	0.001641	0.00066	mg/L	0.001641	247.20%
Se 196.026†	-1.4	-0.00090	mg/L	0.002735	-0.00090	mg/L	0.002735	303.87%
Si 288.158†	84.0	0.05578	mg/L	0.002894	0.05578	mg/L	0.002894	5.19%
Sn 189.927†	3.6	0.00074	mg/L	0.000479	0.00074	mg/L	0.000479	64.96%
Sr 421.552†	-1.7	-0.00000	mg/L	0.000015	-0.00000	mg/L	0.000015	880.63%
Ti 334.903†	-12.5	-0.00048	mg/L	0.000146	-0.00048	mg/L	0.000146	30.48%
Tl 190.801†	1.3	0.00072	mg/L	0.002600	0.00072	mg/L	0.002600	358.87%
V 292.402†	4.6	0.00003	mg/L	0.000089	0.00003	mg/L	0.000089	281.57%
Zn 206.200†	5.1	0.00126	mg/L	0.000636	0.00126	mg/L	0.000636	50.64%

Sequence No.: 76
Sample ID: WL86 A TWC

Del

Dilution: 5.000000X

Autosampler Location: 350
Date Collected: 4/16/2013 2:03:47 PM
Data Type: Original

Nebulizer Parameters: WL86 A TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL86 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2415858.4	87.54	%	0.309				0.35%
ScR 361.383	367670.9	95.57	%	0.213				0.22%
Ag 328.068†	-152.1	-0.00037	mg/L	0.000206	-0.00187	mg/L	0.001028	55.09%
Al 308.215†	47.4	0.03697	mg/L	0.002558	0.1849	mg/L	0.01279	6.92%
As 188.979†	81.7	0.05535	mg/L	0.002683	0.2768	mg/L	0.01342	4.85%
B 249.677†	589438.5	88.25	mg/L	0.507	441.2	mg/L	2.53	0.57%
Ba 233.527†	24.0	0.00379	mg/L	0.000360	0.01894	mg/L	0.001801	9.51%
Be 313.042†	116.5	0.00020	mg/L	0.000020	0.00101	mg/L	0.000101	10.02%
Ca 317.933†	458249.2	43.63	mg/L	0.269	218.2	mg/L	1.35	0.62%
Cd 228.802†	25.2	0.00082	mg/L	0.000165	0.00410	mg/L	0.000823	20.09%
Co 228.616†	16.8	0.00052	mg/L	0.000234	0.00258	mg/L	0.001172	45.47%
Cr 267.716†	1.7	-0.00042	mg/L	0.001060	-0.00210	mg/L	0.005299	252.13%
Cu 324.752†	12956.3	0.04907	mg/L	0.000427	0.2453	mg/L	0.00213	0.87%
Fe 273.955†	272.9	0.2185	mg/L	0.00211	1.093	mg/L	0.0105	0.96%
K 766.490†	5185.1	2.454	mg/L	0.1083	12.27	mg/L	0.541	4.41%
Mg 279.077†	662.0	0.6929	mg/L	0.00230	3.464	mg/L	0.0115	0.33%
Mn 257.610†	3793.0	0.07269	mg/L	0.000160	0.3635	mg/L	0.00080	0.22%
Mo 202.031†	2137.5	0.1137	mg/L	0.00134	0.5685	mg/L	0.00669	1.18%
Na 589.592†	Saturated3							
Na 330.237†	97270.3	2996	mg/L	17.43	14980	mg/L	87.17	0.58%
Ni 231.604†	141.1	0.03726	mg/L	0.000690	0.1863	mg/L	0.00345	1.85%
Pb 220.353†	269.3	0.03366	mg/L	0.001326	0.1683	mg/L	0.00663	3.94%
Sb 206.836†	-25.0	-0.00915	mg/L	0.001387	-0.04573	mg/L	0.006933	15.16%
Se 196.026†	-12.2	-0.00807	mg/L	0.008405	-0.04036	mg/L	0.042023	104.11%
Si 288.158†	68.8	0.04587	mg/L	0.003328	0.2293	mg/L	0.01664	7.25%
Sn 189.927†	-46.1	-0.00584	mg/L	0.000665	-0.02921	mg/L	0.003326	11.38%
Sr 421.552†	173777.8	0.1804	mg/L	0.00074	0.9022	mg/L	0.00371	0.41%
Ti 334.903†	140.0	0.00266	mg/L	0.000250	0.01329	mg/L	0.001251	9.41%
Tl 190.801†	26.2	0.01463	mg/L	0.002332	0.07315	mg/L	0.011660	15.94%
V 292.402†	23.8	0.00024	mg/L	0.000063	0.00118	mg/L	0.000315	26.70%
Zn 206.200†	500.5	0.1219	mg/L	0.00032	0.6096	mg/L	0.00160	0.26%

Sequence No.: 77
Sample ID: WL86 MBSPK TWC

Autosampler Location: 351
Date Collected: 4/16/2013 2:08:02 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WL86 MBSPK TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL86 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2799713.7	101.5	%	0.37				0.36%
ScR 361.383	395390.0	102.8	%	0.46				0.45%
Ag 328.068†	128962.5	0.5555	mg/L	0.00352	0.5555	mg/L	0.00352	0.63%
Al 308.215†	2654.0	2.176	mg/L	0.0121	2.176	mg/L	0.0121	0.55%
As 188.979†	3082.2	2.245	mg/L	0.0067	2.245	mg/L	0.0067	0.30%
B 249.677†	1092.9	0.1624	mg/L	0.02621	0.1624	mg/L	0.02621	16.14%
Ba 233.527†	13291.9	2.115	mg/L	0.0079	2.115	mg/L	0.0079	0.37%
Be 313.042†	300530.2	0.5218	mg/L	0.00267	0.5218	mg/L	0.00267	0.51%
Ca 317.933†	110268.9	10.50	mg/L	0.018	10.50	mg/L	0.018	0.17%
Cd 228.802†	12514.7	0.5434	mg/L	0.00400	0.5434	mg/L	0.00400	0.74%
Co 228.616†	17542.8	0.5370	mg/L	0.00319	0.5370	mg/L	0.00319	0.59%
Cr 267.716†	4680.6	0.5561	mg/L	0.00184	0.5561	mg/L	0.00184	0.33%
Cu 324.752†	140602.4	0.5329	mg/L	0.00388	0.5329	mg/L	0.00388	0.73%
Fe 273.955†	2759.5	2.207	mg/L	0.0077	2.207	mg/L	0.0077	0.35%
K 766.490†	22522.8	10.66	mg/L	0.051	10.66	mg/L	0.051	0.48%
Mg 279.077†	10381.8	10.93	mg/L	0.035	10.93	mg/L	0.035	0.32%
Mn 257.610†	27048.8	0.5199	mg/L	0.00153	0.5199	mg/L	0.00153	0.29%
Mo 202.031†	37.5	0.00185	mg/L	0.000044	0.00185	mg/L	0.000044	2.40%
Na 589.592†	134576.4	10.81	mg/L	0.057	10.81	mg/L	0.057	0.52%
Na 330.237†	360.6	10.95	mg/L	0.102	10.95	mg/L	0.102	0.93%
Ni 231.604†	2036.6	0.5372	mg/L	0.00333	0.5372	mg/L	0.00333	0.62%
Pb 220.353†	17260.3	2.163	mg/L	0.0132	2.163	mg/L	0.0132	0.61%
Sb 206.836†	17.9	0.00090	mg/L	0.000716	0.00090	mg/L	0.000716	79.79%
Se 196.026†	3368.3	2.219	mg/L	0.0091	2.219	mg/L	0.0091	0.41%
Si 288.158†	92.7	0.06466	mg/L	0.003099	0.06466	mg/L	0.003099	4.79%
Sn 189.927†	-21.4	-0.00353	mg/L	0.000217	-0.00353	mg/L	0.000217	6.13%
Sr 421.552†	499075.8	0.5182	mg/L	0.00070	0.5182	mg/L	0.00070	0.14%
Ti 334.903†	18.1	-0.00004	mg/L	0.000090	-0.00004	mg/L	0.000090	231.34%
Tl 190.801†	4006.0	2.202	mg/L	0.0091	2.202	mg/L	0.0091	0.41%
V 292.402†	74407.3	0.5397	mg/L	0.00319	0.5397	mg/L	0.00319	0.59%
Zn 206.200†	2186.4	0.5329	mg/L	0.00312	0.5329	mg/L	0.00312	0.59%

Sequence No.: 78
Sample ID: CV 10
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 4/16/2013 2:12:03 PM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	221.0 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	2785872.9	101.0	%	0.57				0.57%
ScR 361.383	390999.3	101.6	%	0.41				0.41%
Ag 328.068†	245927.5	1.059	mg/L	0.0081	1.059	mg/L	0.0081	0.77%
Al 308.215†	2572.7	2.081	mg/L	0.0246	2.081	mg/L	0.0246	1.18%
As 188.979†	2860.5	2.116	mg/L	0.0119	2.116	mg/L	0.0119	0.56%
B 249.677†	7248.7	1.084	mg/L	0.0069	1.084	mg/L	0.0069	0.64%
Ba 233.527†	6596.3	1.049	mg/L	0.0083	1.049	mg/L	0.0083	0.79%
Be 313.042†	597765.0	1.038	mg/L	0.0010	1.038	mg/L	0.0010	0.10%
Ca 317.933†	22625.6	2.154	mg/L	0.0142	2.154	mg/L	0.0142	0.66%
Cd 228.802†	24368.8	1.071	mg/L	0.0044	1.071	mg/L	0.0044	0.41%
Co 228.616†	34558.4	1.057	mg/L	0.0034	1.057	mg/L	0.0034	0.32%
Cr 267.716†	9113.7	1.085	mg/L	0.0063	1.085	mg/L	0.0063	0.58%
Cu 324.752†	279195.4	1.058	mg/L	0.0072	1.058	mg/L	0.0072	0.69%
Fe 273.955†	2692.8	2.151	mg/L	0.0122	2.151	mg/L	0.0122	0.57%
K 766.490†	44347.5	20.99	mg/L	0.082	20.99	mg/L	0.082	0.39%
Mg 279.077†	1960.2	2.070	mg/L	0.0048	2.070	mg/L	0.0048	0.23%
Mn 257.610†	53227.4	1.023	mg/L	0.0023	1.023	mg/L	0.0023	0.23%
Mo 202.031†	19514.6	1.043	mg/L	0.0062	1.043	mg/L	0.0062	0.59%
Na 589.592†	652559.4	52.40	mg/L	0.176	52.40	mg/L	0.176	0.34%
Na 330.237†	1721.9	53.00	mg/L	0.267	53.00	mg/L	0.267	0.50%
Ni 231.604†	3970.6	1.049	mg/L	0.0081	1.049	mg/L	0.0081	0.77%
Pb 220.353†	16734.9	2.097	mg/L	0.0113	2.097	mg/L	0.0113	0.54%
Sb 206.836†	5874.4	2.133	mg/L	0.0127	2.133	mg/L	0.0127	0.59%
Se 196.026†	3186.1	2.098	mg/L	0.0147	2.098	mg/L	0.0147	0.70%
Si 288.158†	3028.0	2.007	mg/L	0.0191	2.007	mg/L	0.0191	0.95%
Sn 189.927†	5004.3	1.032	mg/L	0.0094	1.032	mg/L	0.0094	0.91%
Sr 421.552†	986189.8	1.024	mg/L	0.0017	1.024	mg/L	0.0017	0.16%
Ti 334.903†	26940.9	1.032	mg/L	0.0003	1.032	mg/L	0.0003	0.03%
Tl 190.801†	3926.5	2.155	mg/L	0.0056	2.155	mg/L	0.0056	0.26%
V 292.402†	142821.8	1.036	mg/L	0.0082	1.036	mg/L	0.0082	0.79%
Zn 206.200†	4334.2	1.056	mg/L	0.0035	1.056	mg/L	0.0035	0.33%

Sequence No.: 79
Sample ID: CB 10

Autosampler Location: 1
Date Collected: 4/16/2013 2:16:07 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	2828823.9	102.5	%	0.18				0.17%
ScR 361.383	396034.9	102.9	%	0.71				0.69%
Ag 328.068†	49.3	0.00021	mg/L	0.000128	0.00021	mg/L	0.000128	60.23%
Al 308.215†	3.8	0.00306	mg/L	0.004771	0.00306	mg/L	0.004771	155.79%
As 188.979†	1.2	0.00088	mg/L	0.002310	0.00088	mg/L	0.002310	262.47%
B 249.677†	234.4	0.03510	mg/L	0.003412	0.03510	mg/L	0.003412	9.72%
Ba 233.527†	6.6	0.00106	mg/L	0.000461	0.00106	mg/L	0.000461	43.64%
Be 313.042†	113.5	0.00020	mg/L	0.000077	0.00020	mg/L	0.000077	38.86%
Ca 317.933†	10.6	0.00101	mg/L	0.000165	0.00101	mg/L	0.000165	16.28%
Cd 228.802†	4.2	0.00018	mg/L	0.000160	0.00018	mg/L	0.000160	88.39%
Co 228.616†	5.9	0.00018	mg/L	0.000138	0.00018	mg/L	0.000138	75.72%
Cr 267.716†	-5.7	-0.00068	mg/L	0.000497	-0.00068	mg/L	0.000497	73.33%
Cu 324.752†	-6.6	-0.00003	mg/L	0.000095	-0.00003	mg/L	0.000095	362.23%
Fe 273.955†	-1.7	-0.00136	mg/L	0.001566	-0.00136	mg/L	0.001566	114.89%
K 766.490†	41.6	0.01969	mg/L	0.020532	0.01969	mg/L	0.020532	104.28%
Mg 279.077†	-1.8	-0.00183	mg/L	0.003442	-0.00183	mg/L	0.003442	188.40%
Mn 257.610†	-0.2	-0.00000	mg/L	0.000062	-0.00000	mg/L	0.000062	>999.9%
Mo 202.031†	86.4	0.00461	mg/L	0.000893	0.00461	mg/L	0.000893	19.36%
Na 589.592†	842.2	0.06763	mg/L	0.005884	0.06763	mg/L	0.005884	8.70%
Na 330.237†	-6.7	-0.2061	mg/L	0.17302	-0.2061	mg/L	0.17302	83.95%
Ni 231.604†	1.1	0.00030	mg/L	0.000439	0.00030	mg/L	0.000439	146.36%
Pb 220.353†	9.4	0.00118	mg/L	0.000750	0.00118	mg/L	0.000750	63.77%
Sb 206.836†	17.4	0.00635	mg/L	0.002440	0.00635	mg/L	0.002440	38.45%
Se 196.026†	2.5	0.00162	mg/L	0.002698	0.00162	mg/L	0.002698	166.78%
Si 288.158†	-8.8	-0.00588	mg/L	0.002657	-0.00588	mg/L	0.002657	45.15%
Sn 189.927†	5.5	0.00114	mg/L	0.000896	0.00114	mg/L	0.000896	78.92%
Sr 421.552†	88.9	0.00009	mg/L	0.000019	0.00009	mg/L	0.000019	20.17%
Ti 334.903†	-9.1	-0.00035	mg/L	0.000482	-0.00035	mg/L	0.000482	136.02%
Tl 190.801†	4.9	0.00270	mg/L	0.001273	0.00270	mg/L	0.001273	47.14%
V 292.402†	25.5	0.00018	mg/L	0.000192	0.00018	mg/L	0.000192	104.30%
Zn 206.200†	-1.3	-0.00031	mg/L	0.000225	-0.00031	mg/L	0.000225	73.33%

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Analysis Begun

Start Time: 4/16/2013 2:20:17 PM **Plasma On Time: 4/16/2013 7:17:05 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\0416.sif
Batch ID:
Results Data Set: I2130416
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 352**
Sample ID: WL49 FDUP SWC **Date Collected: 4/16/2013 2:20:18 PM**
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL49 FDUP SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 FDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2802138.2	101.5	%	0.29				0.28%
ScR 361.383	400888.2	104.2	%	0.54				0.52%
Ag 328.068†	365.1	0.00180	mg/L	0.000167	0.01801	mg/L	0.001674	9.29%
Al 308.215†	23402.4	19.25	mg/L	0.103	192.5	mg/L	1.03	0.54%
As 188.979†	-14.0	0.03009	mg/L	0.002358	0.3009	mg/L	0.02358	7.84%
B 249.677†	946.7	0.1417	mg/L	0.00113	1.417	mg/L	0.0113	0.80%
Ba 233.527†	4288.5	0.6629	mg/L	0.00349	6.629	mg/L	0.0349	0.53%
Be 313.042†	163.5	0.00025	mg/L	0.000019	0.00254	mg/L	0.000187	7.37%
Ca 317.933†	334211.0	31.82	mg/L	0.036	318.2	mg/L	0.36	0.11%
Cd 228.802†	557.8	0.02501	mg/L	0.000131	0.2501	mg/L	0.00131	0.53%
Co 228.616†	957.9	0.02703	mg/L	0.000203	0.2703	mg/L	0.00203	0.75%
Cr 267.716†	2117.9	0.2550	mg/L	0.00091	2.550	mg/L	0.0091	0.36%
Cu 324.752†	237802.8	0.9073	mg/L	0.00540	9.073	mg/L	0.0540	0.60%
Fe 273.955†	165322.3	132.4	mg/L	1.29	1324	mg/L	12.93	0.98%
K 766.490†	3094.7	1.465	mg/L	0.0184	14.65	mg/L	0.184	1.26%
Mg 279.077†	7989.3	8.335	mg/L	0.0452	83.35	mg/L	0.452	0.54%
Mn 257.610†	68313.7	1.312	mg/L	0.0096	13.12	mg/L	0.096	0.74%
Mo 202.031†	681.0	0.03600	mg/L	0.000301	0.3600	mg/L	0.00301	0.84%
Na 589.592†	45500.9	3.654	mg/L	0.0100	36.54	mg/L	0.100	0.27%
Na 330.237†	181.1	3.422	mg/L	0.0789	34.22	mg/L	0.789	2.31%
Ni 231.604†	796.2	0.2104	mg/L	0.00077	2.104	mg/L	0.0077	0.37%
Pb 220.353†	15704.6	1.964	mg/L	0.0116	19.64	mg/L	0.116	0.59%
Sb 206.836†	77.3	0.02613	mg/L	0.000562	0.2613	mg/L	0.00562	2.15%
Se 196.026†	-10.5	-0.00922	mg/L	0.001197	-0.09218	mg/L	0.011972	12.99%
Si 288.158†	378.5	0.2522	mg/L	0.00289	2.522	mg/L	0.0289	1.14%
Sn 189.927†	155.0	0.03482	mg/L	0.000264	0.3482	mg/L	0.00264	0.76%
Sr 421.552†	148069.9	0.1537	mg/L	0.00017	1.537	mg/L	0.0017	0.11%
Ti 334.903†	32855.1	1.259	mg/L	0.0012	12.59	mg/L	0.012	0.09%
Tl 190.801†	-13.7	0.00951	mg/L	0.002786	0.09512	mg/L	0.027861	29.29%
V 292.402†	10298.4	0.06831	mg/L	0.000545	0.6831	mg/L	0.00545	0.80%
Zn 206.200†	34628.8	8.436	mg/L	0.0370	84.36	mg/L	0.370	0.44%

Sequence No.: 2
Sample ID: WL49 F SWC

Autosampler Location: 353
Date Collected: 4/16/2013 2:24:21 PM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL49 F SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2807839.6	101.7	%	0.34				0.34%
ScR 361.383	399374.6	103.8	%	0.31				0.30%
Ag 328.068†	386.6	0.00189	mg/L	0.000261	0.01891	mg/L	0.002605	13.77%
Al 308.215†	23705.2	19.50	mg/L	0.067	195.0	mg/L	0.67	0.35%
As 188.979†	-16.6	0.02884	mg/L	0.004182	0.2884	mg/L	0.04182	14.50%
B 249.677†	629.4	0.09417	mg/L	0.001521	0.9417	mg/L	0.01521	1.62%
Ba 233.527†	4498.4	0.6967	mg/L	0.00529	6.967	mg/L	0.0529	0.76%
Be 313.042†	165.3	0.00026	mg/L	0.000007	0.00257	mg/L	0.000071	2.75%
Ca 317.933†	330285.1	31.45	mg/L	0.103	314.5	mg/L	1.03	0.33%
Cd 228.802†	552.5	0.02479	mg/L	0.000042	0.2479	mg/L	0.00042	0.17%
Co 228.616†	950.8	0.02678	mg/L	0.000417	0.2678	mg/L	0.00417	1.56%
Cr 267.716†	1873.3	0.2258	mg/L	0.00084	2.258	mg/L	0.0084	0.37%
Cu 324.752†	239363.7	0.9131	mg/L	0.00488	9.131	mg/L	0.0488	0.53%
Fe 273.955†	162140.1	129.8	mg/L	0.91	1298	mg/L	9.12	0.70%
K 766.490†	3178.1	1.504	mg/L	0.0118	15.04	mg/L	0.118	0.78%
Mg 279.077†	7803.0	8.141	mg/L	0.0422	81.41	mg/L	0.422	0.52%
Mn 257.610†	67109.1	1.289	mg/L	0.0048	12.89	mg/L	0.048	0.37%
Mo 202.031†	701.3	0.03709	mg/L	0.000279	0.3709	mg/L	0.00279	0.75%
Na 589.592†	28338.2	2.276	mg/L	0.0093	22.76	mg/L	0.093	0.41%
Na 330.237†	132.8	2.057	mg/L	0.0294	20.57	mg/L	0.294	1.43%
Ni 231.604†	834.7	0.2206	mg/L	0.00273	2.206	mg/L	0.0273	1.24%
Pb 220.353†	15893.5	1.988	mg/L	0.0131	19.88	mg/L	0.131	0.66%
Sb 206.836†	65.7	0.02232	mg/L	0.003793	0.2232	mg/L	0.03793	16.99%
Se 196.026†	-7.2	-0.00705	mg/L	0.003690	-0.07048	mg/L	0.036896	52.35%
Si 288.158†	394.6	0.2629	mg/L	0.00054	2.629	mg/L	0.0054	0.21%
Sn 189.927†	150.8	0.03394	mg/L	0.000556	0.3394	mg/L	0.00556	1.64%
Sr 421.552†	149459.2	0.1552	mg/L	0.00027	1.552	mg/L	0.0027	0.18%
Ti 334.903†	33280.0	1.275	mg/L	0.0006	12.75	mg/L	0.006	0.04%
Tl 190.801†	-11.6	0.01035	mg/L	0.002435	0.1035	mg/L	0.02435	23.53%
V 292.402†	10263.7	0.06805	mg/L	0.000602	0.6805	mg/L	0.00602	0.88%
Zn 206.200†	33013.1	8.042	mg/L	0.0454	80.42	mg/L	0.454	0.56%

Sequence No.: 3
Sample ID: WL49 FSPK SWC

Autosampler Location: 354
Date Collected: 4/16/2013 2:28:22 PM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL49 FSPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL49 FSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2799167.8	101.4	%	0.04				0.04%
ScR 361.383	399866.7	103.9	%	0.40				0.38%
Ag 328.068†	24336.9	0.1050	mg/L	0.00061	1.050	mg/L	0.0061	0.58%
Al 308.215†	23693.7	19.49	mg/L	0.118	194.9	mg/L	1.18	0.60%
As 188.979†	559.4	0.4452	mg/L	0.00261	4.452	mg/L	0.0261	0.59%
B 249.677†	690.2	0.1030	mg/L	0.00139	1.030	mg/L	0.0139	1.35%
Ba 233.527†	7581.8	1.188	mg/L	0.0106	11.88	mg/L	0.106	0.89%
Be 313.042†	56767.5	0.09854	mg/L	0.000298	0.9854	mg/L	0.00298	0.30%
Ca 317.933†	351228.2	33.44	mg/L	0.141	334.4	mg/L	1.41	0.42%
Cd 228.802†	2979.9	0.1303	mg/L	0.00013	1.303	mg/L	0.0013	0.10%
Co 228.616†	4304.5	0.1296	mg/L	0.00060	1.296	mg/L	0.0060	0.46%
Cr 267.716†	2634.5	0.3161	mg/L	0.00249	3.161	mg/L	0.0249	0.79%
Cu 324.752†	257500.6	0.9817	mg/L	0.00347	9.817	mg/L	0.0347	0.35%
Fe 273.955†	158784.2	127.2	mg/L	1.26	1272	mg/L	12.63	0.99%
K 766.490†	7195.8	3.405	mg/L	0.0248	34.05	mg/L	0.248	0.73%
Mg 279.077†	9638.7	10.07	mg/L	0.072	100.7	mg/L	0.72	0.71%
Mn 257.610†	69917.4	1.343	mg/L	0.0099	13.43	mg/L	0.099	0.73%
Mo 202.031†	697.7	0.03687	mg/L	0.000054	0.3687	mg/L	0.00054	0.15%
Na 589.592†	52890.3	4.247	mg/L	0.0283	42.47	mg/L	0.283	0.67%
Na 330.237†	198.3	3.996	mg/L	0.0866	39.96	mg/L	0.866	2.17%
Ni 231.604†	1171.0	0.3092	mg/L	0.00100	3.092	mg/L	0.0100	0.32%
Pb 220.353†	19749.1	2.471	mg/L	0.0099	24.71	mg/L	0.099	0.40%
Sb 206.836†	135.3	0.04670	mg/L	0.002543	0.4670	mg/L	0.02543	5.45%
Se 196.026†	622.4	0.4077	mg/L	0.00255	4.077	mg/L	0.0255	0.63%
Si 288.158†	408.7	0.2728	mg/L	0.00303	2.728	mg/L	0.0303	1.11%
Sn 189.927†	164.4	0.03690	mg/L	0.000653	0.3690	mg/L	0.00653	1.77%
Sr 421.552†	243561.2	0.2529	mg/L	0.00124	2.529	mg/L	0.0124	0.49%
Ti 334.903†	30863.4	1.182	mg/L	0.0055	11.82	mg/L	0.055	0.47%
Tl 190.801†	716.9	0.4104	mg/L	0.00391	4.104	mg/L	0.0391	0.95%
V 292.402†	23562.9	0.1647	mg/L	0.00071	1.647	mg/L	0.0071	0.43%
Zn 206.200†	33704.3	8.211	mg/L	0.0545	82.11	mg/L	0.545	0.66%

Sequence No.: 4
Sample ID: WL49 FPOST SWC
Autosampler Location: 355
Date Collected: 4/16/2013 2:32:23 PM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL49 FPOST SWC

Analyte	Back Pressure	Flow
All	221.0 kPa	0.75 L/min

Mean Data: WL49 FPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2777767.1	100.7	%	0.35				0.35%
ScR 361.383	396594.7	103.1	%	0.07				0.07%
Ag 328.068†	126527.8	0.5452	mg/L	0.00219	5.452	mg/L	0.0219	0.40%
Al 308.215†	27138.2	22.31	mg/L	0.028	223.1	mg/L	0.28	0.13%
As 188.979†	3035.0	2.253	mg/L	0.0172	22.53	mg/L	0.172	0.77%
B 249.677†	620.1	0.09152	mg/L	0.001106	0.9152	mg/L	0.01106	1.21%
Ba 233.527†	18131.9	2.865	mg/L	0.0152	28.65	mg/L	0.152	0.53%
Be 313.042†	299088.8	0.5193	mg/L	0.00269	5.193	mg/L	0.0269	0.52%
Ca 317.933†	450816.6	42.92	mg/L	0.205	429.2	mg/L	2.05	0.48%
Cd 228.802†	13412.9	0.5837	mg/L	0.00340	5.837	mg/L	0.0340	0.58%
Co 228.616†	18589.3	0.5667	mg/L	0.00298	5.667	mg/L	0.0298	0.53%
Cr 267.716†	6532.9	0.7794	mg/L	0.00156	7.794	mg/L	0.0156	0.20%
Cu 324.752†	390706.5	1.487	mg/L	0.0069	14.87	mg/L	0.069	0.46%
Fe 273.955†	167765.4	134.3	mg/L	0.07	1343	mg/L	0.66	0.05%
K 766.490†	25779.8	12.20	mg/L	0.065	122.0	mg/L	0.65	0.53%
Mg 279.077†	18377.6	19.27	mg/L	0.026	192.7	mg/L	0.26	0.13%
Mn 257.610†	95598.3	1.837	mg/L	0.0005	18.37	mg/L	0.005	0.03%
Mo 202.031†	720.3	0.03794	mg/L	0.000565	0.3794	mg/L	0.00565	1.49%
Na 589.592†	162163.5	13.02	mg/L	0.087	130.2	mg/L	0.87	0.67%
Na 330.237†	485.9	12.70	mg/L	0.171	127.0	mg/L	1.71	1.35%
Ni 231.604†	2847.0	0.7513	mg/L	0.00212	7.513	mg/L	0.0212	0.28%
Pb 220.353†	33882.5	4.242	mg/L	0.0215	42.42	mg/L	0.215	0.51%
Sb 206.836†	78.1	0.02128	mg/L	0.002001	0.2128	mg/L	0.02001	9.40%
Se 196.026†	3366.6	2.215	mg/L	0.0123	22.15	mg/L	0.123	0.55%
Si 288.158†	392.3	0.2645	mg/L	0.00372	2.645	mg/L	0.0372	1.41%
Sn 189.927†	142.7	0.03323	mg/L	0.001046	0.3323	mg/L	0.01046	3.15%
Sr 421.552†	652452.8	0.6775	mg/L	0.00065	6.775	mg/L	0.0065	0.10%
Ti 334.903†	34284.6	1.313	mg/L	0.0011	13.13	mg/L	0.011	0.08%
Tl 190.801†	3887.1	2.154	mg/L	0.0126	21.54	mg/L	0.126	0.59%
V 292.402†	84028.9	0.6030	mg/L	0.00215	6.030	mg/L	0.0215	0.36%
Zn 206.200†	36283.0	8.839	mg/L	0.0113	88.39	mg/L	0.113	0.13%

Sequence No.: 5
Sample ID: WL86 A TWC

Autosampler Location: 356
Date Collected: 4/16/2013 2:36:25 PM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WL86 A TWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: WL86 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2533663.1	91.81	%	0.287				0.31%
ScR 361.383	377335.2	98.09	%	0.838				0.85%
Ag 328.068†	-29.5	0.00001	mg/L	0.000227	0.00013	mg/L	0.002272	>999.9%
Al 308.215†	52.7	0.04237	mg/L	0.002092	0.4237	mg/L	0.02092	4.94%
As 188.979†	48.4	0.03323	mg/L	0.005278	0.3323	mg/L	0.05278	15.88%
B 249.677†	295140.8	44.19	mg/L	0.169	441.9	mg/L	1.69	0.38%
Ba 233.527†	22.4	0.00353	mg/L	0.000314	0.03531	mg/L	0.003138	8.89%
Be 313.042†	147.1	0.00026	mg/L	0.000038	0.00255	mg/L	0.000384	15.03%
Ca 317.933†	228080.0	21.72	mg/L	0.105	217.2	mg/L	1.05	0.48%
Cd 228.802†	22.6	0.00082	mg/L	0.000166	0.00824	mg/L	0.001658	20.11%
Co 228.616†	13.6	0.00041	mg/L	0.000257	0.00415	mg/L	0.002572	61.98%
Cr 267.716†	-6.0	-0.00102	mg/L	0.000546	-0.01023	mg/L	0.005456	53.34%
Cu 324.752†	6539.9	0.02477	mg/L	0.000103	0.2477	mg/L	0.00103	0.41%
Fe 273.955†	282.2	0.2260	mg/L	0.00364	2.260	mg/L	0.0364	1.61%
K 766.490†	2344.7	1.110	mg/L	0.0078	11.10	mg/L	0.078	0.70%
Mg 279.077†	342.5	0.3585	mg/L	0.00426	3.585	mg/L	0.0426	1.19%
Mn 257.610†	1921.0	0.03682	mg/L	0.000380	0.3682	mg/L	0.00380	1.03%
Mo 202.031†	1068.9	0.05686	mg/L	0.000053	0.5686	mg/L	0.00053	0.09%
Na 589.592†	17963364.2	1442	mg/L	15.14	14420	mg/L	151.43	1.05%
Na 330.237†	47207.7	1454	mg/L	5.27	14540	mg/L	52.70	0.36%
Ni 231.604†	74.0	0.01955	mg/L	0.001428	0.1955	mg/L	0.01428	7.30%
Pb 220.353†	154.9	0.01937	mg/L	0.000218	0.1937	mg/L	0.00218	1.12%
Sb 206.836†	-9.7	-0.00356	mg/L	0.000746	-0.03556	mg/L	0.007462	20.98%
Se 196.026†	-7.2	-0.00476	mg/L	0.001445	-0.04759	mg/L	0.014447	30.36%
Si 288.158†	28.0	0.01867	mg/L	0.003895	0.1867	mg/L	0.03895	20.86%
Sn 189.927†	-29.5	-0.00425	mg/L	0.000370	-0.04246	mg/L	0.003703	8.72%
Sr 421.552†	87123.0	0.09046	mg/L	0.000374	0.9046	mg/L	0.00374	0.41%
Ti 334.903†	107.4	0.00277	mg/L	0.000311	0.02771	mg/L	0.003105	11.21%
Tl 190.801†	20.8	0.01157	mg/L	0.000413	0.1157	mg/L	0.00413	3.57%
V 292.402†	36.4	0.00028	mg/L	0.000192	0.00285	mg/L	0.001916	67.33%
Zn 206.200†	282.1	0.06871	mg/L	0.001840	0.6871	mg/L	0.01840	2.68%

Sequence No.: 6
Sample ID: CV 11

Autosampler Location: 7
Date Collected: 4/16/2013 2:40:54 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	222.0 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	2786656.2	101.0	%	0.28				0.28%
ScR 361.383	391825.7	101.9	%	0.42				0.41%
Ag 328.068†	246737.0	1.063	mg/L	0.0026	1.063	mg/L	0.0026	0.24%
Al 308.215†	2567.5	2.077	mg/L	0.0081	2.077	mg/L	0.0081	0.39%
As 188.979†	2875.6	2.127	mg/L	0.0058	2.127	mg/L	0.0058	0.27%
B 249.677†	7400.7	1.107	mg/L	0.0109	1.107	mg/L	0.0109	0.98%
Ba 233.527†	6596.4	1.049	mg/L	0.0072	1.049	mg/L	0.0072	0.69%
Be 313.042†	589272.3	1.023	mg/L	0.0012	1.023	mg/L	0.0012	0.11%
Ca 317.933†	22489.9	2.141	mg/L	0.0103	2.141	mg/L	0.0103	0.48%
Cd 228.802†	24406.2	1.073	mg/L	0.0010	1.073	mg/L	0.0010	0.09%
Co 228.616†	34591.6	1.058	mg/L	0.0027	1.058	mg/L	0.0027	0.25%
Cr 267.716†	9064.3	1.079	mg/L	0.0041	1.079	mg/L	0.0041	0.38%
Cu 324.752†	278863.6	1.056	mg/L	0.0035	1.056	mg/L	0.0035	0.33%
Fe 273.955†	2670.7	2.133	mg/L	0.0055	2.133	mg/L	0.0055	0.26%
K 766.490†	44226.2	20.93	mg/L	0.067	20.93	mg/L	0.067	0.32%
Mg 279.077†	1948.9	2.058	mg/L	0.0181	2.058	mg/L	0.0181	0.88%
Mn 257.610†	52534.0	1.009	mg/L	0.0031	1.009	mg/L	0.0031	0.31%
Mo 202.031†	19543.0	1.044	mg/L	0.0021	1.044	mg/L	0.0021	0.20%
Na 589.592†	651491.6	52.32	mg/L	0.041	52.32	mg/L	0.041	0.08%
Na 330.237†	1716.6	52.84	mg/L	0.146	52.84	mg/L	0.146	0.28%
Ni 231.604†	3954.2	1.045	mg/L	0.0075	1.045	mg/L	0.0075	0.72%
Pb 220.353†	16755.3	2.100	mg/L	0.0022	2.100	mg/L	0.0022	0.11%
Sb 206.836†	5900.6	2.143	mg/L	0.0047	2.143	mg/L	0.0047	0.22%
Se 196.026†	3184.6	2.097	mg/L	0.0051	2.097	mg/L	0.0051	0.24%
Si 288.158†	3003.0	1.990	mg/L	0.0131	1.990	mg/L	0.0131	0.66%
Sn 189.927†	5013.1	1.034	mg/L	0.0027	1.034	mg/L	0.0027	0.26%
Sr 421.552†	979597.1	1.017	mg/L	0.0006	1.017	mg/L	0.0006	0.06%
Ti 334.903†	26717.5	1.024	mg/L	0.0024	1.024	mg/L	0.0024	0.24%
Tl 190.801†	3921.8	2.153	mg/L	0.0046	2.153	mg/L	0.0046	0.21%
V 292.402†	142818.2	1.036	mg/L	0.0018	1.036	mg/L	0.0018	0.18%
Zn 206.200†	4297.3	1.047	mg/L	0.0043	1.047	mg/L	0.0043	0.41%

Sequence No.: 7
Sample ID: CB ||

Autosampler Location: 1
Date Collected: 4/16/2013 2:44:58 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	2831336.7	102.6	%	0.38				0.37%
ScR 361.383	398276.2	103.5	%	0.17				0.16%
Ag 328.068†	64.4	0.00028	mg/L	0.000274	0.00028	mg/L	0.000274	98.94%
Al 308.215†	4.5	0.00359	mg/L	0.002390	0.00359	mg/L	0.002390	66.59%
As 188.979†	2.8	0.00205	mg/L	0.001434	0.00205	mg/L	0.001434	69.79%
B 249.677†	255.6	0.03828	mg/L	0.003454	0.03828	mg/L	0.003454	9.02%
Ba 233.527†	4.8	0.00076	mg/L	0.000580	0.00076	mg/L	0.000580	76.30%
Be 313.042†	86.8	0.00015	mg/L	0.000002	0.00015	mg/L	0.000002	1.15%
Ca 317.933†	10.8	0.00103	mg/L	0.000906	0.00103	mg/L	0.000906	87.75%
Cd 228.802†	5.1	0.00022	mg/L	0.000059	0.00022	mg/L	0.000059	27.13%
Co 228.616†	4.6	0.00014	mg/L	0.000143	0.00014	mg/L	0.000143	100.08%
Cr 267.716†	-1.1	-0.00013	mg/L	0.000316	-0.00013	mg/L	0.000316	237.27%
Cu 324.752†	2.0	0.00001	mg/L	0.000016	0.00001	mg/L	0.000016	253.90%
Fe 273.955†	0.5	0.00043	mg/L	0.000799	0.00043	mg/L	0.000799	187.07%
K 766.490†	38.5	0.01822	mg/L	0.010801	0.01822	mg/L	0.010801	59.28%
Mg 279.077†	-4.2	-0.00439	mg/L	0.000983	-0.00439	mg/L	0.000983	22.36%
Mn 257.610†	-1.5	-0.00003	mg/L	0.000098	-0.00003	mg/L	0.000098	347.58%
Mo 202.031†	86.4	0.00461	mg/L	0.000668	0.00461	mg/L	0.000668	14.47%
Na 589.592†	1402.5	0.1126	mg/L	0.00810	0.1126	mg/L	0.00810	7.19%
Na 330.237†	-12.0	-0.3697	mg/L	0.36072	-0.3697	mg/L	0.36072	97.56%
Ni 231.604†	0.7	0.00018	mg/L	0.001121	0.00018	mg/L	0.001121	633.31%
Pb 220.353†	11.5	0.00145	mg/L	0.000749	0.00145	mg/L	0.000749	51.86%
Sb 206.836†	16.2	0.00589	mg/L	0.000432	0.00589	mg/L	0.000432	7.33%
Se 196.026†	-2.0	-0.00129	mg/L	0.003445	-0.00129	mg/L	0.003445	267.06%
Si 288.158†	-7.6	-0.00505	mg/L	0.001134	-0.00505	mg/L	0.001134	22.46%
Sn 189.927†	5.7	0.00117	mg/L	0.000191	0.00117	mg/L	0.000191	16.31%
Sr 421.552†	94.7	0.00010	mg/L	0.000036	0.00010	mg/L	0.000036	36.78%
Ti 334.903†	-2.3	-0.00009	mg/L	0.000367	-0.00009	mg/L	0.000367	393.75%
Tl 190.801†	3.2	0.00176	mg/L	0.000964	0.00176	mg/L	0.000964	54.65%
V 292.402†	25.6	0.00019	mg/L	0.000124	0.00019	mg/L	0.000124	66.19%
Zn 206.200†	1.0	0.00025	mg/L	0.000335	0.00025	mg/L	0.000335	136.38%

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Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4-18-13

MZ Nelson Set.	Analyst 4-4-13	Peer 4-22-13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓		
Standard deviations	✓	✓	
Curve fit	✓	✓	
QC			
ICV/CCV	✓	✓	See Log
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	See Log
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	See Log
Matrix Spikes	✓	✓	WL49 WL67 WL68
Matrix Duplicates	✓	✓	WL49 WL68
Method Blanks	✓	✓	
Data			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Comments, Notes and/or CAR's	✓		CAF WL49 WL68 WL67

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** KL **Page:** 1 of 4

All corrections made by analyst unless otherwise noted. ~~KA~~ 4-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3027-13
		1			3025-12
		2			3028-6
		3			3028-7
		4			3027-16
		5			3028-8
		Rinse Sample			
		ICV			Tl sl high 3023-5
		ICB			
		CCV1			
		CCB1			
ZZ		ZZZZZZ			No sample in place
		Low check			
		ICSA			
		ICSAB			MO ↑
		LR 200			^{82}Se, MO Ag^{107} Sb ↑
		LR 300			MO ^{137}Ba ↑
		B1			
		CCV2			
		CCB2			
		WLY9 MB1	REN	2	RR Se
	✓	ADMD			Re & all, Be(Li↑) many highRSD
		A			CAF
		ASPL			(Be, Zn low%R)

Please

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** NT **Page:** 2 of 4

All corrections made by analyst unless otherwise noted. 4-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WL49 CDup	REN	2	RR Be, Se
		C			
		Cspk			Li
		B			RR Cu Zn Cr Pb As, Se
		D			RR Se
		MB1spk			
		CCV3			Mo 53 Se
		CCB3			Th
		WL49 MB2	REN	2	RR Se
		MB3	SWN	20	
		G			
		FDup			RR Pb Ag, Sb high RRV
		F			CAS
		Fspk			Ni high % R Sb low % R
		FPost			0.6mL spk #2 1:10 0.06mL Spk #1 1:10 Sb Ni
		WL68 B			RR Pb
		WL49 MB3spk			
		MB2spk	REN	2	
		CCV4			Mo 53 Se
		CCB4			Th
		WL68 MB1	SWN	20	RR Se
		WL68 B		50	Pb
		WL67 B		50	Pb
		B		20	NO Pb RR Se

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-8-13 **Analyst:** AK **Page:** 3 of 4

All corrections made by analyst unless otherwise noted. AK 4-8-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WL68 A-L	SWN	100 ✓	RRPb
		A		20	CAF Cr high RPD
		ADup			
		Aspk		✓	Cr Ag Sb low %R
		APost			0.06 mL spk #2 %0 Cr Ag Sb Cr high %R 0.10 mL Spk #1 %0
		MBlspk			RRL As (high)
		CCV5			~~Sb~~ ^{82}Se high Mo high
		CCB5			Th A
		WL67 MBl	SWN	20	RLSe
		ADup		5 ✓	Pb
		A			
		Aspk		✓	
		ADup		20	RRSe
		A		20	RRSe CAF
		Aspk			Sb Ag, As low %R
		APost			0.06 mL spk #2 %0 0.10 mL spk #1 %0 Ag As Sb
		WL68 Rep1		50 ✓	
		WL67 MBlspk		20 ✓	also As
		CCV6			Mo ^{82}Se U A
		CCB6			Mo A
		WL68 A-L	SWN	500	Pb
		A		100	
		ADup			
		Aspk			STL

RRSe

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-18-13 **Analyst:** AT **Page:** 4 of 4

AT 4-18-13 4-19-13

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
zzz		zzzzzz	SWN	100	
		WL49 ADup			✓ Pb
		F			
		FSpk			SR
		WL49 B	REN	20	Cu Zn, As
		B		5	RR Se Mo Be Cr Th U
		QCV 7			82 Se Mo Th U
		CCB7			Mo
		WL49 ADup	REN	5	✓ Be Zn
		A			
		~~ASpk zzzzz~~			✓
zzz		~~APost~~			
		ADup		2	No Be Zn As Se
		C Dup		5	✓ Be
		C			
		Cspk			✓
zzz		~~zzzzzz CPost~~			
		CCV8			Se Mo U
		CCB8			
		Rinse DI			
		AT 4/19/13			

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, April 18, 2013 08:14:11
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check 1965
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File. C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm). 0 00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3771.3	3771.253	83.086	2.2	Standard
	Mg	24.0	36302.2	36302.239	365.760	1.0	Standard
	In	114.9	71392.5	71392.510	174.340	0.2	Standard
	Pb	208.0	33463.2	33463.188	229.909	0.7	Standard
	U	238.1	56794.9	56794.899	597.814	1.1	Standard
⌈	CeO	155.9	873.0	0.011	0.000	4.3	Standard
| >	Ce	139.9	76392.8	76392.822	144.543	0.2	Standard
⌊	Ce++	70.0	691.4	0.009	0.000	3.3	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

SmartTune Wizard - Details

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ptimization Details

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

ptimization Status

tart Time: 4/18/2013 8:14:10 AM

aily Performance Check
        Optimization Settings:
                Method: C:\NexIONData\Method\Daily Performancenew.mth.
                Intensity Criterion: Be 9.0122 > 3000
                Intensity Criterion: Mg 23.985 > 20000
                Intensity Criterion: In 114.904 > 50000
                Intensity Criterion: Pb 207.977 > 20000
                Intensity Criterion: U 238.05 > 40000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
                Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9.0122): 3771.25
                Obtained Intensity (Mg 23.985): 36302.24
                Obtained Intensity (In 114.904): 71392.51
                Obtained Intensity (Pb 207.977): 33463.19
                Obtained Intensity (U 238.05): 56794.90
                Obtained Intensity (Bkgd 220): 0.00
                Obtained Formula (CeO 155.9 / Ce 139.905): 0.011 (=873.05 / 76392.82)
                Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.009 (=691.36 / 76392.82)
Passed]  Optimum value(s): N/A

nd Time: 4/18/2013 8:16:46 AM
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SmartTune Wizard - Summary

)ptimization Summary

,martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

,tart Time: 4/18/2013 8:19:12 AM
.nd Time: 4/18/2013 8:20:23 AM

orch Alignment - [Passed]

Vertical	Horizontal	Intensity
-1.28 mm	1.70 mm	92114.30

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 4/18/2013 8:20:30 AM
End Time: 4/18/2013 8:22:41 AM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.699)
Target/Obtained mass (23.985/23.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.705)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/18/2013 8:23:00 AM
nd Time: 4/18/2013 8:27:10 AM

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.997; Intercept = -12.36

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, April 18, 2013 08:30:48
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1971
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse

Acq Dead Time (ns): 60
Current Dead Time (ns): 60

Torch Z position (mm): 0 00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4161.3	4161.306	78.909	1.9	Standard
	Mg	24.0	44730.3	44730.276	574.454	1.3	Standard
	In	114.9	86032.0	86031.952	452.521	0.5	Standard
	Pb	208.0	40090.3	40090.340	305.402	0.8	Standard
	U	238.1	68616.4	68616.359	731.657	1.1	Standard
⌈	CeO	155.9	1049.2	0.012	0.000	1.4	Standard
| >	Ce	139.9	87244.1	87244.077	800.812	0.9	Standard
⌊	Ce++	70.0	851.4	0.010	0.000	2.9	Standard
	Bkgd	220.0	0.1	0.100	0.224	223.6	Standard

Current Conditions File Data

Current Value	Description
1.03	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/18/2013 8:30:47 AM
nd Time: 4/18/2013 8:33:22 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 4161.31
Obtained Intensity (Mg 23.985): 44730.28
Obtained Intensity (In 114.904): 86031.95
Obtained Intensity (Pb 207.977): 40090.34
Obtained Intensity (U 238.05): 68616.36
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=1049.20 / 87244.08)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.010 (=851.38 / 87244.08)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:04:29
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L				1164625	1
[	Be	9		ug/L				11	15
	C	13		ug/L				104879	1
	Cl	37		ug/L				4277164	1
[>	Sc	45		ug/L				1025260	1
[	V	51		ug/L				5531	2
[	V-1	51		ug/L				509	4
[	Cr	52		ug/L				16367	2
[	Cr	53		ug/L				243	5
[	Mn	55		ug/L				685	3
[	Co	59		ug/L				119	8
[>	Ge	72		ug/L				592402	1
[	Ni	60		ug/L				86	6
[	Ni	62		ug/L				63	14
[	Cu	63		ug/L				91	4
[	Cu	65		ug/L				47	13
[	Zn	66		ug/L				191	16
[	Zn	67		ug/L				37	13
[	Zn	68		ug/L				353	3
[	As	75		ug/L				548	2
[	As-1	75		ug/L				7252	0
[	Se	82		ug/L				-19	57
[	Se	78		ug/L				7320	0
[	Mo	98		ug/L				10	48
	Y	89		ug/L				394786	3
	Kr	83		ug/L				872	0
[>	In	115		ug/L				1077756	0
[	Ag	107		ug/L				26	6
[	Cd	111		ug/L				127	12
[	Cd	114		ug/L				19	20
[	Sb	121		ug/L				152	23
[	Sb	123		ug/L				115	26
[	Ba	135		ug/L				7	41
[	Ba	137		ug/L				20	7
[>	Tb	159		ug/L				1262684	1
[	Tl	205		ug/L				290	3
[	Pb	208		ug/L				247	5
[	Bi	209		ug/L				3225208	0
[	Th	232		ug/L				157	40
[	U	238		ug/L				3	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:08:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1203245	2
	Be	9	0.200	ug/L	0.011	5	11	662	4
	C	13		ug/L			104879	108390	2
	Cl	37		ug/L			4277164	4167713	1
>	Sc	45		ug/L			1025260	1016780	0
	V	51	0.200	ug/L	0.010	5	5531	9447	1
	V-1	51	0.200	ug/L	0.004	1	509	4358	1
	Cr	52	0.500	ug/L	0.032	6	16367	24923	1
	Cr	53	0.500	ug/L	0.024	4	243	1189	3
	Mn	55	0.500	ug/L	0.024	4	685	11788	3
	Co	59	0.200	ug/L	0.002	0	119	3627	0
>	Ge	72		ug/L			592402	595913	1
	Ni	60	0.500	ug/L	0.010	2	86	1987	1
	Ni	62	0.500	ug/L	0.012	2	63	337	1
	Cu	63	0.500	ug/L	0.002	0	91	4334	0
	Cu	65	0.500	ug/L	0.004	0	47	1870	0
	Zn	66	4.000	ug/L	0.100	2	191	8597	1
	Zn	67	4.000	ug/L	0.080	2	37	1272	1
	Zn	68	4.000	ug/L	0.082	2	353	6017	1
	As	75	0.200	ug/L	0.009	4	548	971	2
	As-1	75	0.200	ug/L	0.063	31	7252	7677	0
	Se	82	0.500	ug/L	0.046	9	-19	100	10
	Se	78	0.500	ug/L	0.262	52	7320	7620	0
	Mo	98	0.200	ug/L	0.006	2	10	1100	2
	Y	89		ug/L			394786	395223	1
	Kr	83		ug/L			872	862	2
>	In	115		ug/L			1077756	1075166	0
	Ag	107	0.200	ug/L	0 002	0	26	2870	1
	Cd	111	0.100	ug/L	0.003	2	127	651	2
	Cd	114	0.100	ug/L	0.007	7	19	1324	7
	Sb	121	0.200	ug/L	0.005	2	152	3098	1
	Sb	123	0.200	ug/L	0.008	4	115	2401	3
	Ba	135	0.500	ug/L	0.022	4	7	2285	3
	Ba	137	0.500	ug/L	0.008	1	20	3957	1
>	Tb	159		ug/L			1262684	1264914	1
	Tl	205	0.200	ug/L	0.004	2	290	8512	0
	Pb	208	0.100	ug/L	0.003	2	247	6143	1
	Bi	209		ug/L			3225208	3254965	0
	Th	232	0.200	ug/L	0.013	6	157	7600	7
	U	238	0.200	ug/L	0.005	2	3	10356	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:12:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1184423	3
	Be	9	10.000	ug/L	0.314	3	11	31055	1
	C	13		ug/L			104879	108014	3
	Cl	37		ug/L			4277164	4235968	0
>	Sc	45		ug/L			1025260	1020668	0
	V	51	10.000	ug/L	0.280	2	5531	193042	2
	V-1	51	10.000	ug/L	0.144	1	509	187701	1
	Cr	52	9.998	ug/L	0 321	3	16367	179823	2
	Cr	53	9.999	ug/L	0 193	1	243	18611	1
	Mn	55	10.000	ug/L	0.121	1	685	223349	0
	Co	59	10.000	ug/L	0.155	1	119	166531	0
>	Ge	72		ug/L			592402	584746	1
	Ni	60	10.000	ug/L	0.020	0	86	36708	1
	Ni	62	9.998	ug/L	0.325	3	63	5127	2
	Cu	63	9.999	ug/L	0.432	4	91	80086	3
	Cu	65	10.000	ug/L	0.184	1	47	36189	1
	Zn	66	10.022	ug/L	0.325	3	191	21139	2
	Zn	67	10.156	ug/L	0.258	2	37	3444	3
	Zn	68	10.069	ug/L	0.504	5	353	14962	3
	As	75	10.000	ug/L	0.121	1	548	20139	0
	As-1	75	10.000	ug/L	0.182	1	7252	26172	1
	Se	82	9.998	ug/L	0 072	0	-19	2134	0
	Se	78	9.999	ug/L	0.267	2	7320	12136	0
	Mo	98	10.000	ug/L	0.010	0	10	54563	1
	Y	89		ug/L			394786	391539	1
	Kr	83		ug/L			872	891	3
>	In	115		ug/L			1077756	1065346	1
	Ag	107	10.000	ug/L	0.091	0	26	138902	1
	Cd	111	10.000	ug/L	0.032	0	127	50584	0
	Cd	114	10.000	ug/L	0.115	1	19	124617	0
	Sb	121	10.000	ug/L	0.053	0	152	152426	0
	Sb	123	10.000	ug/L	0.065	0	115	115082	0
	Ba	135	10.000	ug/L	0.073	0	7	45570	0
	Ba	137	10.000	ug/L	0.178	1	20	79182	1
>	Tb	159		ug/L			1262684	1248360	1
	Tl	205	10.000	ug/L	0.130	1	290	415495	0
	Pb	208	10.000	ug/L	0.075	0	247	549443	0
	Bi	209		ug/L			3225208	3223786	0
	Th	232	10.001	ug/L	0.085	0	157	473869	1
	U	238	10.000	ug/L	0.161	1	3	509927	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:17:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1186490	1
	Be	9	20.030	ug/L	0.729	3	11	62697	3
	C	13		ug/L			104879	110981	2
	Cl	37		ug/L			4277164	4226682	1
>	Sc	45		ug/L			1025260	1023584	1
	V	51	20.028	ug/L	0.608	3	5531	384285	2
	V-1	51	20.056	ug/L	0.561	2	509	381209	1
	Cr	52	19.962	ug/L	0.422	2	16367	341301	1
	Cr	53	20.054	ug/L	0.384	1	243	37583	0
	Mn	55	19.943	ug/L	0.401	2	685	441005	2
	Co	59	20.003	ug/L	0 255	1	119	334157	0
>	Ge	72		ug/L			592402	595259	1
	Ni	60	19.935	ug/L	0.372	1	86	73442	0
	Ni	62	19.890	ug/L	0.281	1	63	10100	0
	Cu	63	19.934	ug/L	0.119	0	91	160368	1
	Cu	65	19.831	ug/L	0.543	2	47	70617	1
	Zn	66	19.694	ug/L	0.127	0	191	40007	1
	Zn	67	20.006	ug/L	0.518	2	37	6874	1
	Zn	68	19.915	ug/L	0.223	1	353	29359	1
	As	75	19.943	ug/L	0.183	0	548	39888	1
	As-1	75	19.914	ug/L	0.210	1	7252	45179	1
	Se	82	19.932	ug/L	0.384	1	-19	4292	0
	Se	78	19.805	ug/L	0 530	2	7320	16886	0
	Mo	98	19.962	ug/L	0.265	1	10	110014	0
	Y	89		ug/L			394786	393695	2
	Kr	83		ug/L			872	899	0
>	In	115		ug/L			1077756	1052344	1
	Ag	107	20.036	ug/L	0.329	1	26	276812	1
	Cd	111	20.034	ug/L	0.351	1	127	100647	0
	Cd	114	20.087	ug/L	0.334	1	19	251631	1
	Sb	121	20.029	ug/L	0.177	0	152	303136	1
	Sb	123	20.085	ug/L	0.280	1	115	232120	0
	Ba	135	20.103	ug/L	0.364	1	7	92363	1
	Ba	137	20.048	ug/L	0.515	2	20	158290	1
>	Tb	159		ug/L			1262684	1255516	1
	Tl	205	19.985	ug/L	0.164	0	290	832331	0
	Pb	208	19.962	ug/L	0.176	0	247	1094582	0
	Bi	209		ug/L			3225208	3206290	0
	Th	232	20.122	ug/L	0.161	0	157	982730	1
	U	238	19.977	ug/L	0 261	1	3	1019754	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:21:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			1164625	1166304	1
[	**Be**	**9**	**49.686**	ug/L	1.269	2	11	148215	1
	C	**13**		ug/L			104879	110340	4
	Cl	**37**		ug/L			4277164	4290793	2
[>	**Sc**	**45**		ug/L			1025260	1003423	1
[	**V**	**51**	**50.039**	ug/L	1.328	2	5531	936712	1
[	**V-1**	**51**	**50.053**	ug/L	1.458	2	509	936916	1
[	**Cr**	**52**	**49.969**	ug/L	0.208	0	16367	811155	1
[	**Cr**	**53**	**50.019**	ug/L	0.669	1	243	91725	1
[	**Mn**	**55**	**49.782**	ug/L	0.533	1	685	1055255	2
[	**Co**	**59**	**50.000**	ug/L	1.246	2	119	818675	2
[>	**Ge**	**72**		ug/L			592402	577950	0
[	**Ni**	**60**	**49.827**	ug/L	0.901	1	86	175118	2
[	**Ni**	**62**	**50.073**	ug/L	2.169	4	63	24773	3
[	**Cu**	**63**	**49.799**	ug/L	2.023	4	91	381159	3
[	**Cu**	**65**	**50.095**	ug/L	0 193	0	47	174838	0
[	**Zn**	**66**	**49.769**	ug/L	0.538	1	191	95743	0
[	**Zn**	**67**	**49.939**	ug/L	0.594	1	37	16514	1
[	**Zn**	**68**	**49.794**	ug/L	0.339	0	353	69383	0
[	**As**	**75**	**49.916**	ug/L	1.076	2	548	95342	1
[	**As-1**	**75**	**49.945**	ug/L	1.214	2	7252	98848	1
[	**Se**	**82**	**49.772**	ug/L	0.846	1	-19	10204	1
[	**Se**	**78**	**49.869**	ug/L	1.327	2	7320	30146	1
[	**Mo**	**98**	**50.016**	ug/L	0.215	0	10	268091	0
	Y	**89**		ug/L			394786	386104	0
	Kr	**83**		ug/L			872	929	1
[>	**In**	**115**		ug/L			1077756	1031207	1
[	**Ag**	**107**	**49.895**	ug/L	0.643	1	26	668500	1
[	**Cd**	**111**	**49.827**	ug/L	0.662	1	127	240969	0
[	**Cd**	**114**	**49.768**	ug/L	0.767	1	19	597072	0
[	**Sb**	**121**	**50.002**	ug/L	0.404	0	152	741500	1
[	**Sb**	**123**	**49.932**	ug/L	0.660	1	115	561503	0
[	**Ba**	**135**	**50.091**	ug/L	1.139	2	7	227566	1
[	**Ba**	**137**	**49.951**	ug/L	0.370	0	20	384612	0
[>	**Tb**	**159**		ug/L			1262684	1248822	1
[	**Tl**	**205**	**49.927**	ug/L	4.055	8	290	2051853	6
[	**Pb**	**208**	**49.721**	ug/L	0.509	1	247	2637681	0
[	**Bi**	**209**		ug/L			3225208	3040915	0
[	**Th**	**232**	**50.867**	ug/L	0.896	1	157	2704944	1
[	**U**	**238**	**50.540**	ug/L	0.669	1	3	2712522	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:27:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1160868	3
	Be	9	100.093	ug/L	2.255	2	11	298051	2
	C	13		ug/L			104879	115679	3
	Cl	37		ug/L			4277164	4394145	2
>	Sc	45		ug/L			1025260	1008815	2
	V	51	100.167	ug/L	4.953	4	5531	1889002	2
	V-1	51	100.009	ug/L	4.840	4	509	1880990	2
	Cr	52	100.115	ug/L	4.180	4	16367	1622783	1
	Cr	53	99.590	ug/L	3.647	3	243	180812	1
	Mn	55	101.795	ug/L	2.767	2	685	2305892	2
	Co	59	99.194	ug/L	2.663	2	119	1589690	1
>	Ge	72		ug/L			592402	573339	1
	Ni	60	100.095	ug/L	2.436	2	86	349909	1
	Ni	62	99.723	ug/L	0.946	0	63	48442	1
	Cu	63	99.711	ug/L	2.946	2	91	749852	2
	Cu	65	99.894	ug/L	0.374	0	47	344583	1
	Zn	66	99.885	ug/L	2.020	2	191	189719	2
	Zn	67	99.801	ug/L	1.700	1	37	32484	1
	Zn	68	100.102	ug/L	0.848	0	353	138494	1
	As	75	100.178	ug/L	0.961	0	548	190401	0
	As-1	75	100.120	ug/L	1.344	1	7252	190240	0
	Se	82	100.019	ug/L	0.304	0	-19	20375	1
	Se	78	99.732	ug/L	1.869	1	7320	52316	0
	Mo	98	100.204	ug/L	0.840	0	10	536442	1
	Y	89		ug/L			394786	382877	0
	Kr	83		ug/L			872	922	2
>	In	115		ug/L			1077756	1009619	1
	Ag	107	99.530	ug/L	1.003	1	26	1285528	1
	Cd	111	100.027	ug/L	0.805	0	127	473948	0
	Cd	114	100.025	ug/L	0.252	0	19	1175989	1
	Sb	121	100.312	ug/L	1.784	1	152	1471431	0
	Sb	123	100.041	ug/L	0.300	0	115	1102956	1
	Ba	135	99.823	ug/L	0.468	0	7	441501	1
	Ba	137	100.573	ug/L	0.940	0	20	772959	1
>	Tb	159		ug/L			1262684	1261336	2
	Tl	205	100.929	ug/L	1.440	1	290	4324581	1
	Pb	208	100.251	ug/L	2.160	2	247	5415007	0
	Bi	209		ug/L			3225208	2979360	0
	Th	232	99.637	ug/L	2.799	2	157	5285379	0
	U	238	99.563	ug/L	3.098	3	3	5317406	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:34:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1176000	1
	Be	9	0.002	ug/L	0.002	84	11	16	28
	C	13		ug/L			104879	109489	1
	Cl	37		ug/L			4277164	4316805	1
>	Sc	45		ug/L			1025260	1030340	0
	V	51	-0.005	ug/L	0.010	216	5531	5468	4
	V-1	51	-0.007	ug/L	0.001	21	509	385	7
	Cr	52	-0.010	ug/L	0.019	194	16367	16291	2
	Cr	53	-0.016	ug/L	0.011	68	243	215	9
	Mn	55	0.001	ug/L	0.004	478	685	706	12
	Co	59	0.002	ug/L	0.002	98	119	148	19
>	Ge	72		ug/L			592402	613348	1
	Ni	60	0.027	ug/L	0.005	20	86	190	12
	Ni	62	0.034	ug/L	0.003	8	63	83	2
	Cu	63	0.011	ug/L	0.001	6	91	179	4
	Cu	65	0.009	ug/L	0.002	22	47	82	10
	Zn	66	0.112	ug/L	0.008	7	191	426	4
	Zn	67	0.094	ug/L	0.007	7	37	71	2
	Zn	68	0.111	ug/L	0.017	15	353	530	5
	As	75	0.005	ug/L	0.025	490	548	578	7
	As-1	75	-0.120	ug/L	0.045	37	7252	7272	0
	Se	82	0.074	ug/L	0.106	143	-19	-4	509
	Se	78	-0.476	ug/L	0.180	37	7320	7346	0
	Mo	98	0.024	ug/L	0.005	21	10	145	19
	Y	89		ug/L			394786	394269	0
	Kr	83		ug/L			872	868	2
>	In	115		ug/L			1077756	1069363	1
	Ag	107	0.004	ug/L	0.002	41	26	84	29
	Cd	111	-0.000	ug/L	0.002	671	127	124	8
	Cd	114	0.003	ug/L	0.002	72	19	55	48
	Sb	121	0.155	ug/L	0.031	20	152	2558	18
	Sb	123	0.161	ug/L	0.031	19	115	1986	17
	Ba	135	0.004	ug/L	0.002	49	7	27	36
	Ba	137	0.005	ug/L	0.002	44	20	63	31
>	Tb	159		ug/L			1262684	1248421	1
	Tl	205	0.004	ug/L	0.001	34	290	454	12
	Pb	208	0.004	ug/L	0.001	31	247	470	15
	Bi	209		ug/L			3225208	3218118	0
	Th	232	0.244	ug/L	0.010	4	157	12976	3
	U	238	0.006	ug/L	0.001	22	3	320	22

Sample Information

Sample Date/Time: Thursday, April 18, 2013 09:27:53
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.019	0.20	10	20	50	100
V-1	51	**1.0000**	0.019	0.20	10	20	50	100
Cr	52	**1.0000**	0.016	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**0.9995**	0.022	0.50	10	20	50	100
Co	59	**0.9999**	0.016	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.013	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.003	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.002	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.009	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**1.0000**	0.013	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**0.9999**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.034	0.20	10	20	50	100
Pb	208	**1.0000**	0.043	0.10	10	20	50	100
Bi	209							
Th	232	**0.9998**	0.042	0.20	10	20	50	100
U	238	**0.9999**	0.042	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:41:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1189861	2
	Be	9	50.710	ug/L	0.929	1	11	154800	1
	C	13		ug/L			104879	113017	3
	Cl	37		ug/L			4277164	4347482	1
>	Sc	45		ug/L			1025260	1061642	1
	V	51	48.433	ug/L	2.139	4	5531	964722	3
	V-1	51	48.454	ug/L	2.462	5	509	959839	4
	Cr	52	47.910	ug/L	0.868	1	16367	826532	0
	Cr	53	47.980	ug/L	1.675	3	243	91836	2
	Mn	55	47.171	ug/L	1.823	3	685	1124876	2
	Co	59	49.706	ug/L	0.914	1	119	838547	0
>	Ge	72		ug/L			592402	596118	0
	Ni	60	49.473	ug/L	0.937	1	86	179900	1
	Ni	62	50.142	ug/L	0.756	1	63	25358	1
	Cu	63	50.058	ug/L	1.556	3	91	391498	3
	Cu	65	50.494	ug/L	1.087	2	47	181129	2
	Zn	66	50.103	ug/L	1.808	3	191	99034	3
	Zn	67	49.332	ug/L	0.656	1	37	16715	0
	Zn	68	49.500	ug/L	0.835	1	353	71385	1
	As	75	49.962	ug/L	0.335	0	548	99015	0
	As-1	75	49.366	ug/L	0.412	0	7252	101237	0
	Se	82	76.750	ug/L	0.431	0	-19	15859	0
	Se	78	76.032	ug/L	0.427	0	7320	43214	1
	Mo	98	48.258	ug/L	0.723	1	10	268616	1
	Y	89		ug/L			394786	390758	1
	Kr	83		ug/L			872	913	3
>	In	115		ug/L			1077756	1053244	1
	Ag	107	50.068	ug/L	0.555	1	26	674592	0
	Cd	111	48.332	ug/L	0.297	0	127	238968	0
	Cd	114	48.585	ug/L	1.171	2	19	595832	1
	Sb	121	49.888	ug/L	0.270	0	152	763562	0
	Sb	123	50.052	ug/L	0.080	0	115	575714	0
	Ba	135	48.920	ug/L	0.822	1	7	225687	0
	Ba	137	49.179	ug/L	0.899	1	20	394291	1
>	Tb	159		ug/L			1262684	1276020	1
	Tl	205	49.763	ug/L	3.796	7	290	2156229	6
	Pb	208	49.038	ug/L	0.501	1	247	2680466	0
	Bi	209		ug/L			3225208	3101467	0
	Th	232	50.593	ug/L	0.814	1	157	2715996	0
	U	238	50.908	ug/L	0.153	0	3	2751918	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:48:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1179804	1
[	Be	9	0.001	ug/L	0.000	11	11	15	3
	C	13		ug/L			104879	110628	3
	Cl	37		ug/L			4277164	4136435	1
[>	Sc	45		ug/L			1025260	1028784	2
[	V	51	0.005	ug/L	0.012	255	5531	5637	2
[	V-1	51	-0.005	ug/L	0.003	61	509	414	12
[	Cr	52	0.013	ug/L	0.032	247	16367	16628	1
[	Cr	53	-0.019	ug/L	0.010	54	243	208	8
[	Mn	55	0.002	ug/L	0.002	82	685	736	3
[	Co	59	0.003	ug/L	0.003	93	119	171	26
[>	Ge	72		ug/L			592402	608089	1
[	Ni	60	0.045	ug/L	0.003	6	86	255	2
[	Ni	62	0.035	ug/L	0.020	58	63	83	10
[	Cu	63	0.013	ug/L	0 004	27	91	195	12
[	Cu	65	0.011	ug/L	0.001	13	47	86	4
[	Zn	66	0.169	ug/L	0.021	12	191	536	9
[	Zn	67	0.147	ug/L	0.057	38	37	89	21
[	Zn	68	0.178	ug/L	0.021	11	353	623	3
[	As	75	0.009	ug/L	0.010	106	548	581	4
[	As-1	75	-0.045	ug/L	0.099	222	7252	7355	0
[	Se	82	0.015	ug/L	0.066	454	-19	-17	79
[	Se	78	-0.173	ug/L	0.376	217	7320	7428	0
[	Mo	98	0.013	ug/L	0.002	13	10	84	10
	Y	89		ug/L			394786	389235	2
	Kr	83		ug/L			872	912	1
[>	In	115		ug/L			1077756	1075757	0
[	Ag	107	0.002	ug/L	0.002	98	26	58	54
[	Cd	111	0.001	ug/L	0.002	303	127	130	7
[	Cd	114	0.003	ug/L	0.002	52	19	59	35
[	Sb	121	0.042	ug/L	0.010	23	152	802	19
[	Sb	123	0.044	ug/L	0.008	18	115	634	15
[	Ba	135	0.005	ug/L	0.002	38	7	31	29
[	Ba	137	0.004	ug/L	0.002	41	20	55	26
[>	Tb	159		ug/L			1262684	1263339	1
[	Tl	205	0.004	ug/L	0.003	69	290	473	24
[	Pb	208	0.005	ug/L	0 002	42	247	523	20
[	Bi	209		ug/L			3225208	3236181	0
[	Th	232	0.129	ug/L	0.008	5	157	7017	4
[	U	238	0.005	ug/L	0.002	53	3	247	50

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:52:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1166435	1
	Be	9	50.463	ug/L	1.501	2	11	151047	3
	C	13		ug/L			104879	114081	3
	Cl	37		ug/L			4277164	4283786	1
>	Sc	45		ug/L			1025260	1023506	1
	V	51	48.775	ug/L	0.898	1	5531	936868	2
	V-1	51	48.728	ug/L	0.681	1	509	930812	1
	Cr	52	49.007	ug/L	0.523	1	16367	814751	0
	Cr	53	48.851	ug/L	2.286	4	243	90130	3
	Mn	55	48.036	ug/L	1.242	2	685	1104621	2
	Co	59	49.012	ug/L	0.932	1	119	797146	1
>	Ge	72		ug/L			592402	574195	2
	Ni	60	50.479	ug/L	1.334	2	86	176729	1
	Ni	62	51.146	ug/L	2.701	5	63	24910	5
	Cu	63	50.789	ug/L	1.181	2	91	382419	0
	Cu	65	50.482	ug/L	1.045	2	47	174373	1
	Zn	66	49.541	ug/L	0.677	1	191	94353	4
	Zn	67	49.537	ug/L	0.304	0	37	16168	3
	Zn	68	48.852	ug/L	0.686	1	353	67852	2
	As	75	49.502	ug/L	1.386	2	548	94451	0
	As-1	75	49.825	ug/L	1.517	3	7252	98304	0
	Se	82	50.196	ug/L	1.264	2	-19	9981	2
	Se	78	50.277	ug/L	1.272	2	7320	29917	1
	Mo	98	49.199	ug/L	1.999	4	10	263595	1
	Y	89		ug/L			394786	383668	0
	Kr	83		ug/L			872	920	8
>	In	115		ug/L			1077756	1034255	1
	Ag	107	50.574	ug/L	1.066	2	26	669008	0
	Cd	111	49.658	ug/L	1.225	2	127	241034	0
	Cd	114	49.760	ug/L	1.129	2	19	599175	0
	Sb	121	49.065	ug/L	1.018	2	152	737270	0
	Sb	123	49.469	ug/L	1.078	2	115	558623	0
	Ba	135	49.313	ug/L	0.843	1	7	223377	0
	Ba	137	49.687	ug/L	0.965	1	20	391100	0
>	Tb	159		ug/L			1262684	1235636	1
	Tl	205	50.975	ug/L	2.813	5	290	2141176	6
	Pb	208	49.603	ug/L	0.802	1	247	2625497	0
	Bi	209		ug/L			3225208	3083173	0
	Th	232	52.391	ug/L	1.088	2	157	2723486	0
	U	238	52.683	ug/L	1.098	2	3	2757357	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 09:59:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
[>	Li	6		ug/L			1164625	1186410	1
[	Be	9	0.000	ug/L	0.001	3150	11	11	30
	C	13		ug/L			104879	108114	3
	Cl	37		ug/L			4277164	4210696	2
[>	Sc	45		ug/L			1025260	1039256	1
[	V	51	-0.001	ug/L	0.008	1327	5531	5592	1
[	V-1	51	-0.008	ug/L	0.001	11	509	355	7
[	Cr	52	0.005	ug/L	0.036	658	16367	16674	1
[	Cr	53	-0.020	ug/L	0.006	27	243	209	3
[	Mn	55	-0.003	ug/L	0.002	75	685	619	7
[	Co	59	0.002	ug/L	0.001	41	119	146	9
[>	Ge	72		ug/L			592402	604780	1
[	Ni	60	0.048	ug/L	0.001	2	86	265	2
[	Ni	62	0.033	ug/L	0.015	46	63	82	7
[	Cu	63	0.011	ug/L	0.001	9	91	177	6
[	Cu	65	0.008	ug/L	0.001	14	47	78	3
[	Zn	66	0.136	ug/L	0.005	3	191	467	3
[	Zn	67	0.064	ug/L	0.006	9	37	60	3
[	Zn	68	0.120	ug/L	0.004	3	353	536	2
[	As	75	-0.028	ug/L	0.104	366	548	501	39
[	As-1	75	-0.028	ug/L	0 042	147	7252	7348	0
[	Se	82	0.010	ug/L	0.082	782	-19	-17	95
[	Se	78	-0.098	ug/L	0.170	173	7320	7425	0
[	Mo	98	0.010	ug/L	0.000	3	10	68	1
	Y	89		ug/L			394786	390771	3
	Kr	83		ug/L			872	818	33
[>	In	115		ug/L			1077756	1071888	0
[	Ag	107	0.002	ug/L	0.001	37	26	46	17
[	Cd	111	-0.001	ug/L	0.002	117	127	119	6
[	Cd	114	0.002	ug/L	0.000	10	19	49	6
[	Sb	121	0.074	ug/L	0.016	21	152	1310	19
[	Sb	123	0.077	ug/L	0.020	25	115	1012	23
[	Ba	135	0.005	ug/L	0.001	15	7	28	11
[	Ba	137	0.002	ug/L	0.000	18	20	38	8
[>	Tb	159		ug/L			1262684	1246718	1
[	Tl	205	0.004	ug/L	0.002	40	290	456	14
[	Pb	208	0.003	ug/L	0.000	10	247	412	4
[	Bi	209		ug/L			3225208	3225891	0
[	Th	232	0.147	ug/L	0.011	7	157	7846	6
[	U	238	0.004	ug/L	0.001	37	3	201	36

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~LOW CHECK~~ zzzzzz
Sample Dil Factor: 4-1873 AR
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:03:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1854235	9
	Be	**9**	**0.000**	ug/L	0.003	2161	11	17	68
	C	**13**		ug/L			104879	74205	17
	Cl	**37**		ug/L			4277164	1999370	12
>	**Sc**	**45**		ug/L			1025260	1540582	10
	V	**51**	**-0.205**	ug/L	0.005	2	5531	2438	14
	V-1	**51**	**-0.015**	ug/L	0.003	18	509	333	15
	Cr	**52**	**-0.712**	ug/L	0.019	2	16367	7167	16
	Cr	**53**	**-0.083**	ug/L	0.002	2	243	136	15
	Mn	**55**	**-0.007**	ug/L	0.001	14	685	785	13
	Co	**59**	**0.002**	ug/L	0.002	128	119	216	12
>	**Ge**	**72**		ug/L			592402	907306	11
	Ni	**60**	**0.009**	ug/L	0.008	92	86	177	17
	Ni	**62**	**-0.051**	ug/L	0.008	15	63	57	1
	Cu	**63**	**-0.003**	ug/L	0.002	82	91	105	27
	Cu	**65**	**-0.006**	ug/L	0.001	21	47	37	18
	Zn	**66**	**-0.048**	ug/L	0.009	18	191	146	15
	Zn	**67**	**-0.065**	ug/L	0.007	10	37	24	7
	Zn	**68**	**-0.112**	ug/L	0.012	10	353	298	19
	As	**75**	**-0.082**	ug/L	0.103	124	548	613	57
	As-1	**75**	**-1.849**	ug/L	0.025	1	7252	5756	12
	Se	**82**	**0.069**	ug/L	0.028	40	-19	-9	108
	Se	**78**	**-7.597**	ug/L	0.110	1	7320	5764	12
	Mo	**98**	**0.003**	ug/L	0.002	78	10	37	38
	Y	**89**		ug/L			394786	597173	12
	Kr	**83**		ug/L			872	838	57
>	**In**	**115**		ug/L			1077756	1821648	11
	Ag	**107**	**0.001**	ug/L	0.001	148	26	66	55
	Cd	**111**	**-0.011**	ug/L	0.003	31	127	121	22
	Cd	**114**	**0.002**	ug/L	0.002	96	19	73	50
	Sb	**121**	**0.002**	ug/L	0.007	332	152	309	58
	Sb	**123**	**0.002**	ug/L	0.007	296	115	236	52
	Ba	**135**	**0.002**	ug/L	0.002	106	7	23	42
	Ba	**137**	**0.001**	ug/L	0.002	241	20	45	61
>	**Tb**	**159**		ug/L			1262684	2493686	5
	Tl	**205**	**0.000**	ug/L	0.002	434	290	608	26
	Pb	**208**	**0.007**	ug/L	0.009	128	247	1239	73
	Bi	**209**		ug/L			3225208	5720416	3
	Th	**232**	**0.128**	ug/L	0.151	117	157	13165	111
	U	**238**	**0.001**	ug/L	0.001	77	3	150	75

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:10:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1199852	1
	Be	9	0.204	ug/L	0.008	4	11	639	3
	C	13		ug/L			104879	114117	2
	Cl	37		ug/L			4277164	4189505	0
>	Sc	45		ug/L			1025260	1014733	2
	V	51	0.205	ug/L	0.012	5	5531	9352	0
	V-1	51	0.197	ug/L	0.003	1	509	4240	3
	Cr	52	0.530	ug/L	0.064	12	16367	24738	1
	Cr	53	0.505	ug/L	0.022	4	243	1160	0
	Mn	55	0.486	ug/L	0.018	3	685	11744	1
	Co	59	0.213	ug/L	0.007	3	119	3555	1
>	Ge	72		ug/L			592402	597161	1
	Ni	60	0.532	ug/L	0.025	4	86	2025	5
	Ni	62	0.520	ug/L	0.044	8	63	326	5
	Cu	63	0.518	ug/L	0.013	2	91	4149	3
	Cu	65	0.499	ug/L	0.009	1	47	1839	2
	Zn	66	4.022	ug/L	0 088	2	191	8141	2
	Zn	67	3.578	ug/L	0.029	0	37	1249	1
	Zn	68	3.768	ug/L	0 055	1	353	5772	1
	As	75	0.107	ug/L	0.013	11	548	764	3
	As-1	75	0.169	ug/L	0.065	38	7252	7631	1
	Se	82	0.604	ug/L	0.021	3	-19	105	3
	Se	78	0.363	ug/L	0.218	60	7320	7549	1
	Mo	98	0.201	ug/L	0.013	6	10	1128	5
	Y	89		ug/L			394786	394732	1
	Kr	83		ug/L			872	555	8
>	In	115		ug/L			1077756	1065712	2
	Ag	107	0.217	ug/L	0.012	5	26	2981	3
	Cd	111	0.105	ug/L	0.008	7	127	652	4
	Cd	114	0.107	ug/L	0.001	1	19	1350	1
	Sb	121	0.201	ug/L	0.014	6	152	3258	3
	Sb	123	0.201	ug/L	0.007	3	115	2451	2
	Ba	135	0.480	ug/L	0.021	4	7	2246	3
	Ba	137	0.483	ug/L	0.008	1	20	3937	1
>	Tb	159		ug/L			1262684	1255880	1
	Tl	205	0.197	ug/L	0.004	2	290	8689	1
	Pb	208	0.104	ug/L	0.002	2	247	5842	0
	Bi	209		ug/L			3225208	3221081	1
	Th	232	0.142	ug/L	0.008	5	157	7679	6
	U	238	0.195	ug/L	0.005	2	3	10385	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:14:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1188628	1
	Be	9	-0.001	ug/L	0.001	167	11	9	32
	C	13		ug/L			104879	196844	1
	Cl	37		ug/L			4277164	11847008	0
>	Sc	45		ug/L			1025260	1001994	2
	V	51	0.112	ug/L	0.003	2	5531	7494	2
	V-1	51	0.433	ug/L	0.039	9	509	8576	6
	Cr	52	0.487	ug/L	0.017	3	16367	23772	3
	Cr	53	1.552	ug/L	0.122	7	243	3032	5
	Mn	55	0.068	ug/L	0.002	2	685	2194	1
	Co	59	0.023	ug/L	0.001	4	119	483	3
>	Ge	72		ug/L			592402	555202	0
	Ni	60	0.351	ug/L	0 017	4	86	1268	3
	Ni	62	1.682	ug/L	0 070	4	63	850	4
	Cu	63	0.726	ug/L	0.027	3	91	5371	3
	Cu	65	0.321	ug/L	0.009	2	47	1117	3
	Zn	66	0.875	ug/L	0.037	4	191	1787	4
	Zn	67	4.303	ug/L	0.185	4	37	1390	3
	Zn	68	0.375	ug/L	0.012	3	353	832	1
	As	75	-0.020	ug/L	0.059	292	548	476	22
	As-1	75	0.297	ug/L	0.092	31	7252	7322	1
	Se	82	-0.114	ug/L	0 039	34	-19	-40	18
	Se	78	0.893	ug/L	0.171	19	7320	7252	0
	Mo	98	475.326	ug/L	18.179	3	10	2463672	3
	Y	89		ug/L			394786	390594	2
	Kr	83		ug/L			872	674	6
>	In	115		ug/L			1077756	1002070	1
	Ag	107	0.019	ug/L	0.001	4	26	263	5
	Cd	111	0.083	ug/L	0.003	4	127	509	1
	Cd	114	0.253	ug/L	0.006	2	19	2964	3
	Sb	121	0.060	ug/L	0.007	12	152	1020	9
	Sb	123	0.063	ug/L	0.003	4	115	792	4
	Ba	135	0.046	ug/L	0.005	11	7	207	9
	Ba	137	0.039	ug/L	0.004	9	20	317	8
>	Tb	159		ug/L			1262684	1248825	0
	Tl	205	0.031	ug/L	0.001	3	290	1597	3
	Pb	208	0.033	ug/L	0.000	1	247	2031	1
	Bi	209		ug/L			3225208	2856072	0
	Th	232	0.052	ug/L	0.001	2	157	2864	2
	U	238	0.001	ug/L	0.000	46	3	41	43

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:20:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1233303	3
	Be	9	0.001	ug/L	0.001	47	11	15	9
	C	13		ug/L			104879	189539	3
	Cl	37		ug/L			4277164	12268717	3
>	Sc	45		ug/L			1025260	986819	1
	V	51	-0.100	ug/L	0.122	122	5531	3458	63
	V-1	51	0.451	ug/L	0.020	4	509	8792	4
	Cr	52	19.180	ug/L	0.712	3	16367	316914	1
	Cr	53	21.012	ug/L	0.320	1	243	37517	0
	Mn	55	18.261	ug/L	0.418	2	685	405154	0
	Co	59	19.603	ug/L	0.715	3	119	307369	1
>	Ge	72		ug/L			592402	548363	3
	Ni	60	19.699	ug/L	0.684	3	86	65895	2
	Ni	62	21.084	ug/L	0.668	3	63	9834	0
	Cu	63	20.487	ug/L	0.308	1	91	147387	2
	Cu	65	19.295	ug/L	0.231	1	47	63674	2
	Zn	66	19.601	ug/L	0.829	4	191	35712	1
	Zn	67	21.094	ug/L	0.584	2	37	6590	1
	Zn	68	18.178	ug/L	0.738	4	353	24298	0
	As	75	18.737	ug/L	0.620	3	548	34447	1
	As-1	75	19.650	ug/L	0.776	3	7252	41075	1
	Se	82	-0.201	ug/L	0.117	58	-19	-56	37
	Se	78	0.721	ug/L	0.597	82	7320	7081	0
	Mo	98	499.012	ug/L	24.859	4	10	2551785	1
	Y	89		ug/L			394786	402497	1
	Kr	83		ug/L			872	783	5
>	In	115		ug/L			1077756	1016684	0
	Ag	107	20.658	ug/L	0.305	1	26	268679	0
	Cd	111	19.981	ug/L	0.438	2	127	95425	1
	Cd	114	20.135	ug/L	0.324	1	19	238383	1
	Sb	121	0.064	ug/L	0.001	1	152	1087	0
	Sb	123	0.064	ug/L	0.004	6	115	819	5
	Ba	135	0.050	ug/L	0.007	13	7	228	11
	Ba	137	0.041	ug/L	0.005	11	20	333	11
>	Tb	159		ug/L			1262684	1248950	1
	Tl	205	0.027	ug/L	0.000	1	290	1445	1
	Pb	208	0.032	ug/L	0.001	2	247	1942	2
	Bi	209		ug/L			3225208	2862221	0
	Th	232	0.023	ug/L	0.001	5	157	1382	4
	U	238	0.001	ug/L	0.000	21	3	32	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:27:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1164625	1143703	3
	Be	9	202.727	ug/L	9 958	4	11	594440	3
	C	13		ug/L			104879	114748	3
	Cl	37		ug/L			4277164	4259084	2
>	Sc	45		ug/L			1025260	943957	3
	V	51	215.240	ug/L	5.349	2	5531	3793617	2
	V-1	51	211.681	ug/L	6.347	2	509	3725826	2
	Cr	52	208.120	ug/L	3.704	1	16367	3141281	2
	Cr	53	196.311	ug/L	7.090	3	243	333285	2
	Mn	55	198.648	ug/L	7.549	3	685	4207143	0
	Co	59	215.982	ug/L	3.682	1	119	3238908	2
>	Ge	72		ug/L			592402	520335	3
	Ni	60	204.202	ug/L	3.391	1	86	647778	2
	Ni	62	203.984	ug/L	3.021	1	63	89855	2
	Cu	63	201.514	ug/L	5.727	2	91	1374573	0
	Cu	65	193.032	ug/L	3.151	1	47	604087	1
	Zn	66	198.792	ug/L	7.067	3	191	342346	2
	Zn	67	193.871	ug/L	8.577	4	37	57196	2
	Zn	68	193.972	ug/L	3.774	1	353	243174	1
	As	75	206.111	ug/L	1.253	0	548	355013	2
	As-1	75	202.577	ug/L	1.137	0	7252	342831	2
	Se	82	223.075	ug/L	3.301	1	-19	40257	1
	Se	78	204.902	ug/L	3.059	1	7320	90731	1
	Mo	98	233.892	ug/L	5.728	2	10	1135849	1
	Y	89		ug/L			394786	384243	2
	Kr	83		ug/L			872	795	5
>	In	115		ug/L			1077756	988444	1
	Ag	107	231.608	ug/L	1.553	0	26	2928512	1
	Cd	111	197.560	ug/L	3.858	1	127	916232	1
	Cd	114	218.458	ug/L	3.660	1	19	2514172	1
	Sb	121	217.640	ug/L	2.357	1	152	3125508	1
	Sb	123	223.998	ug/L	1.694	0	115	2417443	0
	Ba	135	204.140	ug/L	2.248	1	7	883803	0
	Ba	137	199.042	ug/L	3.844	1	20	1497330	1
>	Tb	159		ug/L			1262684	1233569	1
	Tl	205	196.975	ug/L	2.547	1	290	8255143	1
	Pb	208	203.959	ug/L	2.070	1	247	10777026	0
	Bi	209		ug/L			3225208	2776246	1
	Th	232	193.610	ug/L	2.439	1	157	10047746	0
	U	238	193.164	ug/L	1.720	0	3	10094449	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:34:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1089241	2
	Be	9	299.057	ug/L	4.384	1	11	835682	1
	C	13		ug/L			104879	111871	6
	Cl	37		ug/L			4277164	4241404	1
>	Sc	45		ug/L			1025260	925906	2
	V	51	318.222	ug/L	6.711	2	5531	5500561	1
	V-1	51	312.457	ug/L	7.422	2	509	5395370	1
	Cr	52	310.865	ug/L	4.358	1	16367	4597077	3
	Cr	53	291.739	ug/L	7.085	2	243	485830	0
	Mn	55	288.831	ug/L	4.028	1	685	6005539	2
	Co	59	307.453	ug/L	12.064	3	119	4522462	3
>	Ge	72		ug/L			592402	497149	2
	Ni	60	299.502	ug/L	8.077	2	86	908133	4
	Ni	62	304.865	ug/L	3.232	1	63	128296	1
	Cu	63	295.882	ug/L	8.433	2	91	1928645	1
	Cu	65	294.428	ug/L	5 069	1	47	880432	1
	Zn	66	285.866	ug/L	7 241	2	191	470336	0
	Zn	67	292.495	ug/L	5.402	1	37	82483	1
	Zn	68	289.120	ug/L	2.991	1	353	346245	1
	As	75	309.567	ug/L	4.425	1	548	509148	0
	As-1	75	304.899	ug/L	3.730	1	7252	489875	1
	Se	82	326.863	ug/L	6 057	1	-19	56368	1
	Se	78	301.465	ug/L	2.435	0	7320	124667	1
	Mo	98	353.891	ug/L	4.167	1	10	1642763	2
	Y	89		ug/L			394786	364588	2
	Kr	83		ug/L			872	904	2
>	In	115		ug/L			1077756	967452	0
	Ag	107	325.281	ug/L	6.879	2	26	4025748	1
	Cd	111	290.891	ug/L	6.136	2	127	1320532	1
	Cd	114	316.565	ug/L	5.650	1	19	3566329	1
	Sb	121	323.019	ug/L	1.912	0	152	4540630	0
	Sb	123	327.549	ug/L	5 594	1	115	3460073	1
	Ba	135	298.662	ug/L	6.498	2	7	1265659	1
	Ba	137	330.168	ug/L	7.075	2	20	2431361	1
>	Tb	159		ug/L			1262684	1208610	1
	Tl	205	287.267	ug/L	7.607	2	290	11793170	1
	Pb	208	295.855	ug/L	4.127	1	247	15315445	0
	Bi	209		ug/L			3225208	2604864	1
	Th	232	284.222	ug/L	4.374	1	157	14450811	0
	U	238	278.671	ug/L	2.590	0	3	14267151	0

WL-10-82210

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:41:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1161734	2
	Be	9	0.007	ug/L	0.003	44	11	32	27
	C	13		ug/L			104879	113513	2
	Cl	37		ug/L			4277164	4187934	0
>	Sc	45		ug/L			1025260	970242	1
	V	51	0.000	ug/L	0.006	1774	5531	5239	0
	V-1	51	-0.005	ug/L	0.001	29	509	394	5
	Cr	52	0.012	ug/L	0.023	185	16367	15676	0
	Cr	53	-0.005	ug/L	0 007	144	243	222	4
	Mn	55	0.015	ug/L	0.001	5	685	984	2
	Co	59	0.004	ug/L	0.001	34	119	167	12
>	Ge	72		ug/L			592402	558112	1
	Ni	60	0.036	ug/L	0.004	10	86	204	4
	Ni	62	0.066	ug/L	0.009	13	63	91	6
	Cu	63	0.030	ug/L	0.002	8	91	308	3
	Cu	65	0.021	ug/L	0.005	23	47	115	12
	Zn	66	1.601	ug/L	0.086	5	191	3135	3
	Zn	67	1.361	ug/L	0.087	6	37	466	7
	Zn	68	1.552	ug/L	0.128	8	353	2416	6
	As	75	-0.066	ug/L	0 019	28	548	395	6
	As-1	75	0.135	ug/L	0.117	86	7252	7070	1
	Se	82	0.063	ug/L	0.046	73	-19	-6	135
	Se	78	0.528	ug/L	0.457	86	7320	7127	1
	Mo	98	0.057	ug/L	0.004	7	10	305	5
	Y	89		ug/L			394786	389224	1
	Kr	83		ug/L			872	621	1
>	In	115		ug/L			1077756	1052045	1
	Ag	107	0.008	ug/L	0.003	34	26	131	29
	Cd	111	0.005	ug/L	0.002	43	127	147	8
	Cd	114	0.007	ug/L	0.002	28	19	102	24
	Sb	121	0.404	ug/L	0.061	15	152	6309	13
	Sb	123	0.407	ug/L	0.056	13	115	4783	12
	Ba	135	0.021	ug/L	0.003	12	7	103	12
	Ba	137	0.019	ug/L	0.002	12	20	172	11
>	Tb	159		ug/L			1262684	1248667	0
	Tl	205	0.023	ug/L	0.001	5	290	1257	4
	Pb	208	0.022	ug/L	0.000	1	247	1403	1
	Bi	209		ug/L			3225208	3180757	1
	Th	232	0.286	ug/L	0.011	4	157	15177	3
	U	238	0.011	ug/L	0.002	19	3	581	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:47:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1198669	2
	Be	9	49.352	ug/L	1.925	3	11	151741	2
	C	13		ug/L			104879	113305	1
	Cl	37		ug/L			4277164	4293150	0
>	Sc	45		ug/L			1025260	977100	1
	V	51	48.407	ug/L	1.548	3	5531	887295	1
	V-1	51	48.847	ug/L	1.491	3	509	890524	1
	Cr	52	49.160	ug/L	1.443	2	16367	779964	0
	Cr	53	50.621	ug/L	1.410	2	243	89168	2
	Mn	55	48.426	ug/L	1.606	3	685	1062650	1
	Co	59	50.902	ug/L	1.268	2	119	790173	0
>	Ge	72		ug/L			592402	564810	1
	Ni	60	49.847	ug/L	0.446	0	86	171727	0
	Ni	62	49.940	ug/L	1.237	2	63	23924	1
	Cu	63	50.332	ug/L	1.903	3	91	372801	2
	Cu	65	49.177	ug/L	0 432	0	47	167139	1
	Zn	66	50.664	ug/L	1 213	2	191	94880	2
	Zn	67	48.938	ug/L	1.737	3	37	15705	1
	Zn	68	50.658	ug/L	0.832	1	353	69199	0
	As	75	50.240	ug/L	0.660	1	548	94323	0
	As-1	75	50.062	ug/L	0.598	1	7252	97165	0
	Se	82	53.535	ug/L	1.068	1	-19	10473	0
	Se	78	51.321	ug/L	1.132	2	7320	29900	0
	Mo	98	51.937	ug/L	0.912	1	10	273875	1
	Y	89		ug/L			394786	383912	0
	Kr	83		ug/L			872	593	3
>	In	115		ug/L			1077756	1042551	0
	Ag	107	51.765	ug/L	0.360	0	26	690428	0
	Cd	111	49.699	ug/L	0.151	0	127	243237	0
	Cd	114	49.556	ug/L	0.281	0	19	601645	0
	Sb	121	49.097	ug/L	0.342	0	152	743856	0
	Sb	123	49.916	ug/L	0.196	0	115	568332	0
	Ba	135	49.481	ug/L	0.025	0	7	225977	0
	Ba	137	48.846	ug/L	0.559	1	20	387658	1
>	Tb	159		ug/L			1262684	1247253	0
	Tl	205	46.005	ug/L	0.102	0	290	1949791	0
	Pb	208	48.902	ug/L	0.329	0	247	2613006	0
	Bi	209		ug/L			3225208	3052548	0
	Th	232	51.722	ug/L	1.063	2	157	2714400	2
	U	238	51.787	ug/L	0.718	1	3	2736265	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 10:54:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1177071	0
	Be	9	0.004	ug/L	0.002	54	11	22	26
	C	13		ug/L			104879	110981	3
	Cl	37		ug/L			4277164	4141625	1
>	Sc	45		ug/L			1025260	997135	2
	V	51	-0.011	ug/L	0.012	110	5531	5170	2
	V-1	51	-0.010	ug/L	0.001	6	509	316	3
	Cr	52	-0.029	ug/L	0.046	160	16367	15449	2
	Cr	53	-0.024	ug/L	0.008	31	243	193	4
	Mn	55	0.002	ug/L	0.000	13	685	715	2
	Co	59	0.001	ug/L	0.000	32	119	135	6
>	Ge	72		ug/L			592402	578759	2
	Ni	60	0.008	ug/L	0.003	37	86	111	7
	Ni	62	-0.004	ug/L	0.017	476	63	60	13
	Cu	63	0.013	ug/L	0.002	15	91	187	5
	Cu	65	0.008	ug/L	0.001	17	47	73	8
	Zn	66	0.121	ug/L	0 010	8	191	418	5
	Zn	67	0.077	ug/L	0.018	23	37	62	8
	Zn	68	0.105	ug/L	0.022	20	353	491	3
	As	75	-0.084	ug/L	0 013	15	548	375	6
	As-1	75	0.018	ug/L	0 110	599	7252	7115	0
	Se	82	0.078	ug/L	0.037	47	-19	-3	210
	Se	78	0.063	ug/L	0.459	726	7320	7176	0
	Mo	98	0.016	ug/L	0.005	29	10	98	23
	Y	89		ug/L			394786	388339	2
	Kr	83		ug/L			872	593	2
>	In	115		ug/L			1077756	1049293	0
	Ag	107	0.003	ug/L	0.002	55	26	72	36
	Cd	111	-0.001	ug/L	0.002	328	127	120	9
	Cd	114	0.003	ug/L	0.001	38	19	56	25
	Sb	121	0.115	ug/L	0.021	17	152	1908	17
	Sb	123	0.121	ug/L	0.024	19	115	1503	18
	Ba	135	0.005	ug/L	0.001	26	7	30	20
	Ba	137	0.004	ug/L	0.002	46	20	51	29
>	Tb	159		ug/L			1262684	1242591	0
	Tl	205	0.009	ug/L	0.003	31	290	685	17
	Pb	208	0.004	ug/L	0.001	20	247	443	8
	Bi	209		ug/L			3225208	3223002	1
	Th	232	0.182	ug/L	0.012	6	157	9654	6
	U	238	0.004	ug/L	0.001	32	3	217	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:02:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1221709	0
[	Be	9	0.003	ug/L	0.002	69	11	21	31
	C	13		ug/L			104879	125606	3
	Cl	37		ug/L			4277164	4229377	1
[>	Sc	45		ug/L			1025260	1007890	2
[	V	51	0.022	ug/L	0.006	27	5531	5848	2
[	V-1	51	-0.004	ug/L	0.002	44	509	422	5
[	Cr	52	0.084	ug/L	0 017	19	16367	17442	2
[	Cr	53	-0.002	ug/L	0.006	331	243	235	3
[	Mn	55	0.062	ug/L	0.001	1	685	2067	1
[	Co	59	0.002	ug/L	0.001	50	119	154	10
[>	Ge	72		ug/L			592402	589975	1
[	Ni	60	0.033	ug/L	0.001	4	86	204	2
[	Ni	62	0.024	ug/L	0.011	44	63	75	7
[	Cu	63	0.057	ug/L	0 008	13	91	534	10
[	Cu	65	0.052	ug/L	0.002	4	47	231	4
[	Zn	66	0.732	ug/L	0 019	2	191	1620	2
[	Zn	67	0.638	ug/L	0.055	8	37	250	6
[	Zn	68	0.682	ug/L	0.017	2	353	1320	0
[	As	75	-0.081	ug/L	0.002	3	548	387	2
[	As-1	75	0.038	ug/L	0.015	38	7252	7294	1
[	Se	82	0.110	ug/L	0.012	10	-19	2	85
[	Se	78	0.152	ug/L	0.084	55	7320	7360	0
[	Mo	98	0.018	ug/L	0.005	27	10	107	26
	Y	89		ug/L			394786	392268	3
	Kr	83		ug/L			872	595	1
[>	In	115		ug/L			1077756	1074131	0
[	Ag	107	0.002	ug/L	0.001	39	26	56	21
[	Cd	111	-0.002	ug/L	0.000	28	127	118	2
[	Cd	114	0.003	ug/L	0.000	16	19	51	10
[	Sb	121	0.049	ug/L	0.011	21	152	909	17
[	Sb	123	0.051	ug/L	0.010	19	115	711	15
[	Ba	135	0.024	ug/L	0.003	11	7	118	10
[	Ba	137	0.024	ug/L	0.003	12	20	214	12
[>	Tb	159		ug/L			1262684	1270880	0
[	Tl	205	0.012	ug/L	0.004	38	290	795	24
[	Pb	208	0.069	ug/L	0.001	0	247	4012	0
[	Bi	209		ug/L			3225208	3247791	0
[	Th	232	0.091	ug/L	0.011	11	157	5029	11
[	U	238	0.002	ug/L	0.000	30	3	88	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:06:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1404473	3
	Be	9	0.055	ug/L	0.006	10	11	210	7
	C	13		ug/L			104879	153319	2
	Cl	37		ug/L			4277164	6442782	2
>	Sc	45		ug/L			1025260	961101	2
	V	51	0.713	ug/L	0.038	5	5531	17969	4
	V-1	51	0.751	ug/L	0.018	2	509	13935	0
	Cr	52	2.087	ug/L	0.119	5	16367	47262	3
	Cr	53	2.213	ug/L	0.137	6	243	4050	3
	Mn	55	1023.264	ug/L	17.813	1	685	22081454	2
	Co	59	4.690	ug/L	0.082	1	119	71725	2
>	Ge	72		ug/L			592402	512303	0
	Ni	60	49.616	ug/L	1 302	2	86	155041	2
	Ni	62	51.121	ug/L	0.586	1	63	22216	0
	Cu	63	24.727	ug/L	0.621	2	91	166217	2
	Cu	65	22.349	ug/L	0.525	2	47	68914	1
	Zn	66	338.044	ug/L	9.383	2	191	573290	2
	Zn	67	300.521	ug/L	5.707	1	37	87344	1
	Zn	68	326.931	ug/L	9.426	2	353	403447	2
	As	75	1.847	ug/L	0.049	2	548	3603	2
	As-1	75	1.582	ug/L	0.053	3	7252	8858	0
	Se	82	3.295	ug/L	0.158	4	-19	568	5
	Se	78	2.295	ug/L	0.265	11	7320	7259	1
	Mo	98	6.766	ug/L	0.129	1	10	32376	2
	Y	89		ug/L			394786	407979	1
	Kr	83		ug/L			872	731	6
>	In	115		ug/L			1077756	975902	1
	Ag	107	0.061	ug/L	0.001	1	26	790	0
	Cd	111	0.703	ug/L	0.021	3	127	3334	1
	Cd	114	0.697	ug/L	0.004	0	19	7936	0
	Sb	121	4.817	ug/L	0.052	1	152	68432	1
	Sb	123	4.887	ug/L	0.140	2	115	52172	2
	Ba	135	46.074	ug/L	1.153	2	7	196930	1
	Ba	137	45.282	ug/L	0.434	0	20	336369	0
>	Tb	159		ug/L			1262684	1243685	2
	Tl	205	0.275	ug/L	0.006	2	290	11902	2
	Pb	208	18.352	ug/L	0.294	1	247	977731	1
	Bi	209		ug/L			3225208	2570075	1
	Th	232	0.095	ug/L	0.032	33	157	5100	30
	U	238	0.011	ug/L	0 000	4	3	556	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:10:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1418936	2
	Be	9	0.003	ug/L	0.001	38	11	23	19
	C	13		ug/L			104879	146788	2
	Cl	37		ug/L			4277164	6182839	1
>	Sc	45		ug/L			1025260	970096	0
	V	51	0.467	ug/L	0.031	6	5531	13680	4
	V-1	51	0.518	ug/L	0 012	2	509	9861	2
	Cr	52	0.925	ug/L	0 008	0	16367	29769	0
	Cr	53	1.096	ug/L	0.068	6	243	2142	5
	Mn	55	929.876	ug/L	10.447	1	685	20254578	0
	Co	59	3.596	ug/L	0.080	2	119	55545	1
>	Ge	72		ug/L			592402	504089	2
	Ni	60	28.226	ug/L	1.446	5	86	86760	3
	Ni	62	29.547	ug/L	0.177	0	63	12657	2
	Cu	63	18.450	ug/L	0.591	3	91	122004	1
	Cu	65	17.021	ug/L	0.441	2	47	51634	0
	Zn	66	280.170	ug/L	8.522	3	191	467354	0
	Zn	67	251.487	ug/L	6.951	2	37	71896	0
	Zn	68	268.311	ug/L	6.069	2	353	325759	0
	As	75	1.647	ug/L	0.053	3	548	3210	3
	As-1	75	1.330	ug/L	0.138	10	7252	8308	0
	Se	82	3.365	ug/L	0.084	2	-19	572	3
	Se	78	2.215	ug/L	0.554	24	7320	7108	0
	Mo	98	6.711	ug/L	0.176	2	10	31585	0
	Y	89		ug/L			394786	421687	1
	Kr	83		ug/L			872	727	4
>	In	115		ug/L			1077756	991820	1
	Ag	107	0.015	ug/L	0.000	1	26	219	2
	Cd	111	0.530	ug/L	0.004	0	127	2584	0
	Cd	114	0.542	ug/L	0 023	4	19	6277	2
	Sb	121	4.467	ug/L	0.003	0	152	64509	1
	Sb	123	4.530	ug/L	0.064	1	115	49161	0
	Ba	135	41.946	ug/L	0.920	2	7	182211	1
	Ba	137	42.301	ug/L	0.601	1	20	319342	1
>	Tb	159		ug/L			1262684	1257217	1
	Tl	205	0.030	ug/L	0 001	2	290	1579	2
	Pb	208	16.698	ug/L	0.289	1	247	899397	0
	Bi	209		ug/L			3225208	2587419	1
	Th	232	0.025	ug/L	0.002	6	157	1497	4
	U	238	0.008	ug/L	0.000	4	3	435	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:14:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[>	Li	6		ug/L			1164625	1431791	2
[	Be	9	18.507	ug/L	0.451	2	11	67982	0
	C	13		ug/L			104879	147231	2
	Cl	37		ug/L			4277164	6206802	2
[>	Sc	45		ug/L			1025260	958626	1
[	V	51	23.339	ug/L	0.356	1	5531	422500	0
[	V-1	51	23.412	ug/L	0 370	1	509	419085	1
[	Cr	52	23.122	ug/L	0.562	2	16367	368060	0
[	Cr	53	23.362	ug/L	0.387	1	243	40498	1
[	Mn	55	943.824	ug/L	9.023	0	685	20317666	2
[	Co	59	26.046	ug/L	0.319	1	119	396815	0
[>	Ge	72		ug/L			592402	500670	0
[	Ni	60	52.275	ug/L	0.801	1	86	159645	1
[	Ni	62	52.833	ug/L	0.032	0	63	22438	0
[	Cu	63	42.802	ug/L	0.429	1	91	281149	0
[	Cu	65	40.268	ug/L	0.890	2	47	121325	2
[	Zn	66	347.496	ug/L	7.210	2	191	575986	2
[	Zn	67	302.688	ug/L	7.624	2	37	85977	2
[	Zn	68	333.836	ug/L	2.749	0	353	402636	0
[	As	75	32.497	ug/L	0.407	1	548	54254	1
[	As-1	75	27.161	ug/L	0.332	1	7252	49538	1
[	Se	82	93.676	ug/L	1.093	1	-19	16261	1
[	Se	78	78.267	ug/L	0.819	1	7320	37179	0
[	Mo	98	39.683	ug/L	0.338	0	10	185527	1
	Y	89		ug/L			394786	422019	1
	Kr	83		ug/L			872	733	1
[>	In	115		ug/L			1077756	989468	0
[	Ag	107	21.807	ug/L	0.331	1	26	276049	1
[	Cd	111	24.196	ug/L	0.330	1	127	112451	1
[	Cd	114	23.783	ug/L	0 264	1	19	274040	0
[	Sb	121	28.936	ug/L	0.350	1	152	416123	0
[	Sb	123	29.375	ug/L	0.405	1	115	317460	0
[	Ba	135	65.950	ug/L	0.291	0	7	285853	0
[	Ba	137	65.669	ug/L	1 233	1	20	494590	1
[>	Tb	159		ug/L			1262684	1264147	0
[	Tl	205	20.552	ug/L	0.065	0	290	882988	0
[	Pb	208	37.176	ug/L	0.493	1	247	2013304	0
[	Bi	209		ug/L			3225208	2588361	1
[	Th	232	16.626	ug/L	0.365	2	157	884401	1
[	U	238	22.042	ug/L	0.198	0	3	1180416	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:18:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

Re Be, Sc

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1386998	1
	Be	9	0.003	ug/L	0.001	36	11	24	16
	C	13		ug/L			104879	147585	4
	Cl	37		ug/L			4277164	6248336	1
>	Sc	45		ug/L			1025260	960118	2
	V	51	0.365	ug/L	0.023	6	5531	11717	1
	V-1	51	0.413	ug/L	0.014	3	509	7864	1
	Cr	52	0.630	ug/L	0.055	8	16367	24940	1
	Cr	53	0.787	ug/L	0.018	2	243	1586	1
	Mn	55	910.718	ug/L	9 874	1	685	19631127	1
	Co	59	3.277	ug/L	0.054	1	119	50089	0
>	Ge	72		ug/L			592402	507025	1
	Ni	60	27.696	ug/L	0.710	2	86	85676	2
	Ni	62	29.241	ug/L	0.950	3	63	12596	1
	Cu	63	2.822	ug/L	0.025	0	91	18842	2
	Cu	65	1.529	ug/L	0.056	3	47	4702	1
	Zn	66	82.560	ug/L	1.136	1	191	138684	0
	Zn	67	74.701	ug/L	1.786	2	37	21507	1
	Zn	68	79.590	ug/L	1.841	2	353	97416	0
	As	75	1.342	ug/L	0.048	3	548	2718	1
	As-1	75	1.155	ug/L	0 116	10	7252	8074	0
	Se	82	3.096	ug/L	0 235	7	-19	527	6
	Se	78	2.467	ug/L	0.465	18	7320	7252	0
	Mo	98	5.956	ug/L	0.068	1	10	28201	1
	Y	89		ug/L			394786	425834	1
	Kr	83		ug/L			872	726	6
>	In	115		ug/L			1077756	998004	0
	Ag	107	0.008	ug/L	0.002	29	26	120	22
	Cd	111	0.151	ug/L	0.003	1	127	826	1
	Cd	114	0.150	ug/L	0.007	4	19	1765	3
	Sb	121	4.377	ug/L	0 046	1	152	63611	0
	Sb	123	4.392	ug/L	0 094	2	115	47959	1
	Ba	135	41.161	ug/L	0.709	1	7	179934	0
	Ba	137	41.239	ug/L	0 419	1	20	313280	0
>	Tb	159		ug/L			1262684	1267036	0
	Tl	205	0.015	ug/L	0.001	9	290	939	6
	Pb	208	4.584	ug/L	0 023	0	247	249041	0
	Bi	209		ug/L			3225208	2652025	0
	Th	232	0.086	ug/L	0.015	17	157	4755	17
	U	238	0.013	ug/L	0.001	7	3	713	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:22:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1399175	0
	Be	9	0.002	ug/L	0.002	89	11	21	34
	C	13		ug/L			104879	145693	2
	Cl	37		ug/L			4277164	6132926	4
>	Sc	45		ug/L			1025260	973319	1
	V	51	0.363	ug/L	0.013	3	5531	11846	0
	V-1	51	0.391	ug/L	0 011	2	509	7587	1
	Cr	52	0.536	ug/L	0.050	9	16367	23826	1
	Cr	53	0.629	ug/L	0.038	5	243	1330	3
	Mn	55	872.609	ug/L	15.142	1	685	19067999	1
	Co	59	3.175	ug/L	0.068	2	119	49199	0
>	Ge	72		ug/L			592402	502113	1
	Ni	60	27.513	ug/L	0.145	0	86	84305	1
	Ni	62	28.200	ug/L	0.619	2	63	12034	0
	Cu	63	2.676	ug/L	0.029	1	91	17699	0
	Cu	65	1.384	ug/L	0.030	2	47	4220	0
	Zn	66	76.475	ug/L	0.512	0	191	127247	0
	Zn	67	70.633	ug/L	1.266	1	37	20145	2
	Zn	68	75.460	ug/L	1.765	2	353	91493	1
	As	75	1.307	ug/L	0.020	1	548	2634	1
	As-1	75	1.120	ug/L	0 101	9	7252	7940	0
	Se	82	3.018	ug/L	0 066	2	-19	509	1
	Se	78	2.401	ug/L	0.391	16	7320	7156	0
	Mo	98	5.952	ug/L	0.041	0	10	27911	0
	Y	89		ug/L			394786	422816	1
	Kr	83		ug/L			872	729	2
>	In	115		ug/L			1077756	1006813	0
	Ag	107	0.003	ug/L	0.000	9	26	67	6
	Cd	111	0.132	ug/L	0.006	4	127	742	4
	Cd	114	0.140	ug/L	0.004	2	19	1658	2
	Sb	121	4.198	ug/L	0.040	0	152	61551	0
	Sb	123	4.271	ug/L	0.041	0	115	47061	0
	Ba	135	39.813	ug/L	0.300	0	7	175588	0
	Ba	137	40.113	ug/L	0.593	1	20	307447	1
>	Tb	159		ug/L			1262684	1274177	0
	Tl	205	0.009	ug/L	0.004	37	290	696	23
	Pb	208	4.439	ug/L	0.058	1	247	242541	0
	Bi	209		ug/L			3225208	2628227	1
	Th	232	0.022	ug/L	0 002	7	157	1330	6
	U	238	0.007	ug/L	0.002	23	3	401	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:27:02
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1430125	2
[	Be	9	19.033	ug/L	0.358	1	11	69835	1
	C	13		ug/L			104879	144488	1
	Cl	37		ug/L			4277164	6337058	0
[>	Sc	45		ug/L			1025260	991403	2
[	V	51	24.136	ug/L	1.038	4	5531	451404	1
[	V-1	51	24.157	ug/L	0.882	3	509	446964	1
[	Cr	52	23.549	ug/L	0.779	3	16367	387250	0
[	Cr	53	23.620	ug/L	0.291	1	243	42339	1
[	Mn	55	930.208	ug/L	40.894	4	685	20691441	1
[	Co	59	26.401	ug/L	0.524	1	119	415884	0
[>	Ge	72		ug/L			592402	504171	1
[	Ni	60	54.153	ug/L	0.437	0	86	166529	0
[	Ni	62	53.242	ug/L	0.693	1	63	22768	1
[	Cu	63	27.645	ug/L	0.430	1	91	182859	0
[	Cu	65	25.848	ug/L	0.602	2	47	78419	0
[	Zn	66	153.781	ug/L	6.880	4	191	256653	2
[	Zn	67	138.042	ug/L	3.481	2	37	39493	1
[	Zn	68	145.149	ug/L	4.601	3	353	176404	1
[	As	75	33.760	ug/L	0.306	0	548	56734	0
[	As-1	75	27.787	ug/L	0.483	1	7252	50892	1
[	Se	82	100.542	ug/L	1.359	1	-19	17574	0
[	Se	78	83.193	ug/L	1.419	1	7320	39400	1
[	Mo	98	40.382	ug/L	0.385	0	10	190098	1
	Y	89		ug/L			394786	425322	0
	Kr	83		ug/L			872	745	3
[>	In	115		ug/L			1077756	1012390	0
[	Ag	107	23.784	ug/L	0.126	0	26	308055	0
[	Cd	111	24.249	ug/L	0.097	0	127	115305	0
[	Cd	114	24.105	ug/L	0.270	1	19	284176	0
[	Sb	121	29.407	ug/L	0.195	0	152	432686	0
[	Sb	123	29.929	ug/L	0.365	1	115	330928	0
[	Ba	135	67.233	ug/L	0.759	1	7	298152	0
[	Ba	137	66.232	ug/L	0.906	1	20	510374	0
[>	Tb	159		ug/L			1262684	1294407	0
[	Tl	205	21.147	ug/L	0.240	1	290	930271	0
[	Pb	208	25.990	ug/L	0.269	1	247	1441281	0
[	Bi	209		ug/L			3225208	2608169	0
[	Th	232	20.071	ug/L	0.302	1	157	1093174	0
[	U	238	22.511	ug/L	0.053	0	3	1234440	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:31:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1164625	1076978	2
	Be	9	1.933	ug/L	0.066	3	11	5349	1
	C	13		ug/L			104879	152012	2
	Cl	37		ug/L			4277164	4094562	1
>	Sc	45		ug/L			1025260	1590469	1
	V	51	191.717	ug/L	3.173	1	5531	5696260	0
	V-1	51	189.055	ug/L	3 453	1	509	5609002	0
	Cr	52	132.127	ug/L	2.488	1	16367	3370127	0
	Cr	53	123.285	ug/L	3.885	3	243	352919	2
	Mn	55	1539.939	ug/L	20.313	1	685	54990427	0
	Co	59	47.084	ug/L	0.476	1	119	1190044	0
>	Ge	72		ug/L			592402	392783	0
	Ni	60	268.462	ug/L	2.210	0	86	643010	1
	Ni	62	286.877	ug/L	2.485	0	63	95394	0
	Cu	63	840.446	ug/L	1.593	0	91	4329906	0
	Cu	65	753.836	ug/L	6.940	0	47	1781353	1
	Zn	66	2195.593	ug/L	13.308	0	191	2854337	0
	Zn	67	1837.926	ug/L	29.582	1	37	409417	1
	Zn	68	1915.503	ug/L	26.668	1	353	1811239	0
	As	75	90.259	ug/L	0.682	0	548	117565	0
	As-1	75	93.183	ug/L	0.686	0	7252	121643	0
	Se	82	-8.125	ug/L	0.412	5	-19	-1121	5
	Se	78	2.767	ug/L	0.261	9	7320	5713	1
	Mo	98	16.310	ug/L	0.359	2	10	59828	2
	Y	89		ug/L			394786	1370151	0
	Kr	83		ug/L			872	5685	3
>	In	115		ug/L			1077756	885212	0
	Ag	107	1.051	ug/L	0.016	1	26	11919	1
	Cd	111	5.378	ug/L	0 023	0	127	22441	0
	Cd	114	5.171	ug/L	0.046	0	19	53313	0
	Sb	121	3.678	ug/L	0.049	1	152	47432	0
	Sb	123	3.608	ug/L	0.025	0	115	34962	0
	Ba	135	1001.258	ug/L	12.534	1	7	3882306	0
	Ba	137	1010.813	ug/L	9.400	0	20	6810858	0
>	Tb	159		ug/L			1262684	1134239	0
	Tl	205	0.332	ug/L	0.001	0	290	13041	0
	Pb	208	558.692	ug/L	6.176	1	247	27145054	0
	Bi	209		ug/L			3225208	1669460	1
	Th	232	5.082	ug/L	0.089	1	157	242645	1
	U	238	3.289	ug/L	0.056	1	3	158012	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:35:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1185737	3
	Be	9	0.000	ug/L	0.001	616	11	11	24
	C	13		ug/L			104879	126208	0
	Cl	37		ug/L			4277164	4357446	2
>	Sc	45		ug/L			1025260	978842	2
	V	51	13.278	ug/L	0.297	2	5531	247717	3
	V-1	51	13.414	ug/L	0.056	0	509	245401	2
	Cr	52	19.784	ug/L	0.659	3	16367	323767	2
	Cr	53	20.238	ug/L	0.532	2	243	35845	2
	Mn	55	0.835	ug/L	0.075	8	685	18994	8
	Co	59	0.192	ug/L	0.016	8	119	3093	5
>	Ge	72		ug/L			592402	530802	1
	Ni	60	1.038	ug/L	0.011	1	86	3436	1
	Ni	62	1.122	ug/L	0.039	3	63	561	4
	Cu	63	7.155	ug/L	0.110	1	91	49885	0
	Cu	65	6.768	ug/L	0.112	1	47	21650	0
	Zn	66	1.158	ug/L	0.025	2	191	2205	1
	Zn	67	1.616	ug/L	0.074	4	37	520	3
	Zn	68	1.929	ug/L	0 039	2	353	2782	2
	As	75	10.400	ug/L	0.132	1	548	18739	1
	As-1	75	10.976	ug/L	0.212	1	7252	25093	0
	Se	82	0.486	ug/L	0.103	21	-19	71	26
	Se	78	1.213	ug/L	0.354	29	7320	7066	0
	Mo	98	10.256	ug/L	0.253	2	10	50829	1
	Y	89		ug/L			394786	404460	2
	Kr	83		ug/L			872	699	4
>	In	115		ug/L			1077756	1041658	0
	Ag	107	0.004	ug/L	0 001	18	26	77	12
	Cd	111	0.003	ug/L	0.004	156	127	135	14
	Cd	114	0.009	ug/L	0.001	11	19	129	9
	Sb	121	20.268	ug/L	0.072	0	152	306893	0
	Sb	123	20.583	ug/L	0.313	1	115	234220	1
	Ba	135	6.576	ug/L	0.138	2	7	30011	2
	Ba	137	6.530	ug/L	0.092	1	20	51796	1
>	Tb	159		ug/L			1262684	1263154	0
	Tl	205	-0.001	ug/L	0.000	45	290	253	6
	Pb	208	0.213	ug/L	0.040	18	247	11761	19
	Bi	209		ug/L			3225208	3021351	1
	Th	232	0.027	ug/L	0.002	8	157	1584	8
	U	238	0.188	ug/L	0.006	2	3	10068	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:39:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1230899	1
[	Be	9	25.531	ug/L	0.433	1	11	80636	0
	C	13		ug/L			104879	126426	0
	Cl	37		ug/L			4277164	4397795	1
[>	Sc	45		ug/L			1025260	965478	1
[	V	51	24.901	ug/L	0.505	2	5531	453680	2
[	V-1	51	24.931	ug/L	0.293	1	509	449514	2
[	Cr	52	24.697	ug/L	0.683	2	16367	394892	1
[	Cr	53	24.798	ug/L	0.680	2	243	43290	3
[	Mn	55	23.795	ug/L	0.555	2	685	516392	1
[	Co	59	24.850	ug/L	0.636	2	119	381273	1
[>	Ge	72		ug/L			592402	533378	1
[	Ni	60	26.034	ug/L	0.290	1	86	84730	0
[	Ni	62	25.553	ug/L	0.418	1	63	11589	1
[	Cu	63	26.684	ug/L	0.935	3	91	186675	1
[	Cu	65	26.075	ug/L	0.756	2	47	83682	1
[	Zn	66	82.375	ug/L	2.654	3	191	145532	1
[	Zn	67	73.677	ug/L	0.665	0	37	22319	1
[	Zn	68	80.342	ug/L	1.503	1	353	103450	0
[	As	75	29.917	ug/L	0.909	3	548	53229	1
[	As-1	75	25.755	ug/L	0.737	2	7252	50366	0
[	Se	82	91.089	ug/L	2 316	2	-19	16839	1
[	Se	78	80.332	ug/L	1.647	2	7320	40471	0
[	Mo	98	29.766	ug/L	0.914	3	10	148196	1
	Y	89		ug/L			394786	403280	2
	Kr	83		ug/L			872	702	6
[>	In	115		ug/L			1077756	1069275	0
[	Ag	107	26.847	ug/L	0.526	1	26	367256	1
[	Cd	111	25.636	ug/L	0.220	0	127	128740	0
[	Cd	114	25.248	ug/L	0.205	0	19	314400	1
[	Sb	121	25.167	ug/L	0.152	0	152	391138	0
[	Sb	123	25.590	ug/L	0.326	1	115	298886	1
[	Ba	135	24.739	ug/L	0 240	0	7	115883	1
[	Ba	137	24.826	ug/L	0.238	0	20	202080	0
[>	Tb	159		ug/L			1262684	1280146	1
[	Tl	205	23.692	ug/L	0.310	1	290	1030643	0
[	Pb	208	25.276	ug/L	0.348	1	247	1386153	0
[	Bi	209		ug/L			3225208	3213566	0
[	Th	232	21.100	ug/L	0.050	0	157	1136644	1
[	U	238	24.099	ug/L	0.814	3	3	1306563	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:44:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1195871	0
	Be	9	50.941	ug/L	2.039	4	11	156319	3
	C	13		ug/L			104879	112470	2
	Cl	37		ug/L			4277164	4365655	1
>	Sc	45		ug/L			1025260	958487	1
	V	51	47.429	ug/L	1.013	2	5531	853079	0
	V-1	51	47.318	ug/L	0.820	1	509	846376	0
	Cr	52	48.286	ug/L	1.143	2	16367	751900	1
	Cr	53	47.920	ug/L	0.835	1	243	82821	1
	Mn	55	45.670	ug/L	1.259	2	685	983292	1
	Co	59	48.555	ug/L	0.765	1	119	739516	0
>	Ge	72		ug/L			592402	518960	1
	Ni	60	50.318	ug/L	0.789	1	86	159261	0
	Ni	62	50.044	ug/L	1.201	2	63	22027	1
	Cu	63	51.220	ug/L	1.686	3	91	348584	1
	Cu	65	50.294	ug/L	0.811	1	47	157042	1
	Zn	66	51.969	ug/L	1.491	2	191	89400	1
	Zn	67	51.790	ug/L	0 503	0	37	15275	2
	Zn	68	52.055	ug/L	1.758	3	353	65323	2
	As	75	52.724	ug/L	0.928	1	548	90924	1
	As-1	75	51.792	ug/L	0.878	1	7252	92139	0
	Se	82	58.533	ug/L	0.887	1	-19	10523	0
	Se	78	53.820	ug/L	0.821	1	7320	28499	0
	Mo	98	56.876	ug/L	0.817	1	10	275567	0
	Y	89		ug/L			394786	377451	2
	Kr	83		ug/L			872	710	2
>	In	115		ug/L			1077756	1026292	0
	Ag	107	52.683	ug/L	0.651	1	26	691711	1
	Cd	111	50.950	ug/L	0.686	1	127	245476	1
	Cd	114	50.913	ug/L	1.065	2	19	608433	1
	Sb	121	49.557	ug/L	0.254	0	152	739123	1
	Sb	123	50.568	ug/L	0.248	0	115	566758	0
	Ba	135	50.476	ug/L	0.223	0	7	226922	0
	Ba	137	49.821	ug/L	0.250	0	20	389217	0
>	Tb	159		ug/L			1262684	1258149	1
	Tl	205	46.019	ug/L	0.703	1	290	1967206	0
	Pb	208	48.464	ug/L	0.616	1	247	2611974	0
	Bi	209		ug/L			3225208	3099251	0
	Th	232	51.583	ug/L	1.434	2	157	2730157	1
	U	238	52.112	ug/L	1.583	3	3	2776905	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:51:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1227058	1
	Be	**9**	**0.000**	ug/L	0.001	405	11	12	24
	C	**13**		ug/L			104879	109830	4
	Cl	**37**		ug/L			4277164	4425531	3
>	**Sc**	**45**		ug/L			1025260	935469	1
	V	**51**	**-0.012**	ug/L	0.010	86	5531	4837	2
	V-1	**51**	**-0.011**	ug/L	0.001	10	509	278	5
	Cr	**52**	**-0.040**	ug/L	0 029	73	16367	14338	1
	Cr	**53**	**-0.036**	ug/L	0.010	26	243	162	9
	Mn	**55**	**0.017**	ug/L	0.006	35	685	975	11
	Co	**59**	**0.002**	ug/L	0 002	111	119	138	22
>	**Ge**	**72**		ug/L			592402	519558	1
	Ni	**60**	**-0.009**	ug/L	0.001	14	86	47	7
	Ni	**62**	**0.048**	ug/L	0.018	38	63	77	11
	Cu	**63**	**0.015**	ug/L	0.005	32	91	183	17
	Cu	**65**	**0.014**	ug/L	0.003	22	47	83	10
	Zn	**66**	**0.123**	ug/L	0.020	16	191	379	7
	Zn	**67**	**0.086**	ug/L	0.014	16	37	58	7
	Zn	**68**	**0.127**	ug/L	0.018	13	353	469	4
	As	**75**	**-0.029**	ug/L	0.028	94	548	430	11
	As-1	**75**	**0.263**	ug/L	0.079	30	7252	6796	1
	Se	**82**	**0.038**	ug/L	0.144	376	-19	-10	251
	Se	**78**	**1.093**	ug/L	0.305	27	7320	6868	1
	Mo	**98**	**0.014**	ug/L	0.003	25	10	74	21
	Y	**89**		ug/L			394786	377187	0
	Kr	**83**		ug/L			872	696	3
>	**In**	**115**		ug/L			1077756	1054024	0
	Ag	**107**	**0.002**	ug/L	0.000	19	26	51	9
	Cd	**111**	**0.004**	ug/L	0.003	88	127	143	11
	Cd	**114**	**0.002**	ug/L	0.000	25	19	42	13
	Sb	**121**	**0.092**	ug/L	0.010	10	152	1560	10
	Sb	**123**	**0.094**	ug/L	0.016	17	115	1192	16
	Ba	**135**	**0.006**	ug/L	0.004	62	7	34	49
	Ba	**137**	**0.005**	ug/L	0.002	43	20	58	28
>	**Tb**	**159**		ug/L			1262684	1237397	0
	Tl	**205**	**0.002**	ug/L	0.001	45	290	388	12
	Pb	**208**	**0.006**	ug/L	0.002	36	247	559	20
	Bi	**209**		ug/L			3225208	3189090	0
	Th	**232**	**0.202**	ug/L	0.015	7	157	10680	7
	U	**238**	**0.003**	ug/L	0.001	22	3	173	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 11:57:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1221345	0
	Be	9	0.005	ug/L	0.004	68	11	27	39
	C	13		ug/L			104879	123113	2
	Cl	37		ug/L			4277164	4439792	1
>	Sc	45		ug/L			1025260	961689	0
	V	51	0.043	ug/L	0.021	47	5531	5960	6
	V-1	51	0.033	ug/L	0.001	2	509	1070	1
	Cr	52	0.064	ug/L	0.054	85	16367	16327	4
	Cr	53	0.031	ug/L	0.013	43	243	281	8
	Mn	55	0.155	ug/L	0.002	1	685	3984	0
	Co	59	0.009	ug/L	0.001	5	119	246	2
>	Ge	72		ug/L			592402	530348	0
	Ni	60	0.119	ug/L	0.011	9	86	460	8
	Ni	62	0.137	ug/L	0.037	26	63	118	14
	Cu	63	0.050	ug/L	0.003	5	91	429	5
	Cu	65	0.046	ug/L	0.004	9	47	190	8
	Zn	66	0.877	ug/L	0.018	2	191	1710	2
	Zn	67	0.755	ug/L	0.071	9	37	260	7
	Zn	68	0.833	ug/L	0.028	3	353	1379	1
	As	75	-0.007	ug/L	0.032	481	548	479	10
	As-1	75	0.250	ug/L	0.082	32	7252	6915	1
	Se	82	0.072	ug/L	0.056	78	-19	-4	228
	Se	78	0.984	ug/L	0.281	28	7320	6965	1
	Mo	98	0.008	ug/L	0.003	35	10	51	28
	Y	89		ug/L			394786	386336	0
	Kr	83		ug/L			872	712	3
>	In	115		ug/L			1077756	1070136	1
	Ag	107	0.002	ug/L	0.000	16	26	57	9
	Cd	111	0.004	ug/L	0.002	46	127	147	7
	Cd	114	0.003	ug/L	0.000	18	19	50	10
	Sb	121	0.027	ug/L	0.008	29	152	578	21
	Sb	123	0.028	ug/L	0.006	22	115	444	16
	Ba	135	0.241	ug/L	0.005	1	7	1137	1
	Ba	137	0.231	ug/L	0.010	4	20	1897	3
>	Tb	159		ug/L			1262684	1265153	0
	Tl	205	0.006	ug/L	0.002	24	290	568	11
	Pb	208	0.058	ug/L	0.000	0	247	3366	0
	Bi	209		ug/L			3225208	3236024	0
	Th	232	0.097	ug/L	0.017	17	157	5342	17
	U	238	0.003	ug/L	0.001	22	3	145	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:01:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RLS

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1234010	2
[	Be	9	-0.000	ug/L	0.001	633	11	11	18
	C	13		ug/L			104879	120569	3
	Cl	37		ug/L			4277164	4335424	2
[>	Sc	45		ug/L			1025260	942663	1
[	V	51	0.003	ug/L	0.001	36	5531	5139	1
[	V-1	51	-0.012	ug/L	0.001	8	509	250	9
[	Cr	52	0.011	ug/L	0.009	80	16367	15210	0
[	Cr	53	-0.040	ug/L	0.004	10	243	155	3
[	Mn	55	0.010	ug/L	0.003	26	685	839	7
[	Co	59	0.002	ug/L	0.000	12	119	147	2
[>	Ge	72		ug/L			592402	549900	0
[	Ni	60	-0.011	ug/L	0.001	10	86	43	10
[	Ni	62	0.008	ug/L	0.022	265	63	63	17
[	Cu	63	0.012	ug/L	0 001	11	91	174	5
[	Cu	65	0.008	ug/L	0 002	22	47	71	8
[	Zn	66	0.263	ug/L	0.009	3	191	656	3
[	Zn	67	0.203	ug/L	0.016	7	37	98	5
[	Zn	68	0.250	ug/L	0.021	8	353	659	4
[	As	75	-0.034	ug/L	0.003	9	548	447	2
[	As-1	75	0.059	ug/L	0.038	64	7252	6835	1
[	Se	82	0.003	ug/L	0.047	1861	-19	-17	51
[	Se	78	0.231	ug/L	0.146	63	7320	6895	1
[	Mo	98	0.002	ug/L	0 001	57	10	22	31
	Y	89		ug/L			394786	387708	2
	Kr	83		ug/L			872	726	4
[>	In	115		ug/L			1077756	1063862	2
[	Ag	107	0.001	ug/L	0.001	71	26	43	28
[	Cd	111	0.001	ug/L	0.001	78	127	129	2
[	Cd	114	0.001	ug/L	0.000	37	19	32	15
[	Sb	121	0.007	ug/L	0.006	84	152	261	35
[	Sb	123	0.008	ug/L	0.006	81	115	202	35
[	Ba	135	0.007	ug/L	0.001	12	7	37	9
[	Ba	137	0.006	ug/L	0.001	10	20	65	7
[>	Tb	159		ug/L			1262684	1269160	1
[	Tl	205	-0.004	ug/L	0.000	6	290	131	7
[	Pb	208	0.010	ug/L	0.000	3	247	796	4
[	Bi	209		ug/L			3225208	3223791	0
[	Th	232	0.020	ug/L	0.001	7	157	1231	4
[	U	238	0.001	ug/L	0 000	29	3	38	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:05:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RLS

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1215820	2
[	Be	9	0.211	ug/L	0.012	5	11	669	3
	C	13		ug/L			104879	145918	8
	Cl	37		ug/L			4277164	4323827	1
[>	Sc	45		ug/L			1025260	1017008	2
[	V	51	37.465	ug/L	1.861	4	5531	715775	2
[	V-1	51	37.500	ug/L	2.043	5	509	711364	3
[	Cr	52	18.720	ug/L	0.303	1	16367	319238	1
[	Cr	53	18.833	ug/L	0.880	4	243	34663	2
[	Mn	55	289.519	ug/L	4 195	1	685	6612379	2
[	Co	59	6.851	ug/L	0.311	4	119	110755	2
[>	Ge	72		ug/L			592402	536533	1
[	Ni	60	27.856	ug/L	0.255	0	86	91194	0
[	Ni	62	30.627	ug/L	0.712	2	63	13961	1
[	Cu	63	50.157	ug/L	0.749	1	91	352996	0
[	Cu	65	49.346	ug/L	0.722	1	47	159307	1
[	Zn	66	89.612	ug/L	1.102	1	191	159282	0
[	Zn	67	86.205	ug/L	2.695	3	37	26257	1
[	Zn	68	87.788	ug/L	1.849	2	353	113677	0
[	As	75	3.497	ug/L	0.065	1	548	6697	0
[	As-1	75	3.665	ug/L	0.151	4	7252	12843	0
[	Se	82	-0.018	ug/L	0.119	666	-19	-21	104
[	Se	78	0.334	ug/L	0.324	97	7320	6769	0
[	Mo	98	0.796	ug/L	0.008	1	10	3994	1
	Y	89		ug/L			394786	516209	2
	Kr	83		ug/L			872	884	4
[>	In	115		ug/L			1077756	1029888	0
[	Ag	107	0.063	ug/L	0.003	5	26	856	5
[	Cd	111	0.271	ug/L	0.012	4	127	1431	4
[	Cd	114	0.193	ug/L	0.007	3	19	2335	3
[	Sb	121	0.041	ug/L	0.004	9	152	754	7
[	Sb	123	0.041	ug/L	0.007	16	115	572	13
[	Ba	135	46.479	ug/L	0.565	1	7	209692	1
[	Ba	137	46.749	ug/L	0.547	1	20	366498	1
[>	Tb	159		ug/L			1262684	1271157	0
[	Tl	205	0.026	ug/L	0.001	2	290	1435	2
[	Pb	208	18.745	ug/L	0.079	0	247	1020964	0
[	Bi	209		ug/L			3225208	3018918	0
[	Th	232	0.854	ug/L	0.015	1	157	45836	1
[	U	238	0.182	ug/L	0.001	0	3	9830	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:09:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1293459	1
[	Be	9	0.169	ug/L	0.004	2	11	574	3
	C	13		ug/L			104879	196138	2
	Cl	37		ug/L			4277164	4331235	0
[>	Sc	45		ug/L			1025260	988967	1
[	V	51	33.799	ug/L	1.392	4	5531	628745	3
[	V-1	51	33.460	ug/L	0.845	2	509	617673	2
[	Cr	52	96.956	ug/L	1.961	2	16367	1541989	1
[	Cr	53	95.848	ug/L	0.211	0	243	170704	1
[	Mn	55	639.131	ug/L	14.455	2	685	14189534	0
[	Co	59	12.492	ug/L	0.215	1	119	196440	2
[>	Ge	72		ug/L			592402	528062	1
[	Ni	60	101.206	ug/L	1.715	1	86	325965	2
[	Ni	62	104.729	ug/L	3.222	3	63	46848	2
[	Cu	63	515.214	ug/L	8.219	1	91	3568148	0
[	Cu	65	447.612	ug/L	14.176	3	47	1421654	2
[	Zn	66	4515.843	ug/L	166.049	3	191	7890311	2
[	Zn	67	3603.439	ug/L	87.925	2	37	1079066	1
[	Zn	68	4184.342	ug/L	91.215	2	353	5318341	1
[	As	75	10.985	ug/L	0 208	1	548	19664	0
[	As-1	75	11.362	ug/L	0.276	2	7252	25613	0
[	Se	82	0.291	ug/L	0.051	17	-19	35	25
[	Se	78	0.244	ug/L	0 290	118	7320	6625	0
[	Mo	98	16.399	ug/L	0.260	1	10	80858	0
	Y	89		ug/L			394786	489843	1
	Kr	83		ug/L			872	767	1
[>	In	115		ug/L			1077756	997342	1
[	Ag	107	1.293	ug/L	0.018	1	26	16517	1
[	Cd	111	11.477	ug/L	0.046	0	127	53824	1
[	Cd	114	11.369	ug/L	0.355	3	19	132021	1
[	Sb	121	2.227	ug/L	0.028	1	152	32402	0
[	Sb	123	2.190	ug/L	0.012	0	115	23955	1
[	Ba	135	366.187	ug/L	7.790	2	7	1599481	0
[	Ba	137	405.243	ug/L	3.316	0	20	3076258	0
[>	Tb	159		ug/L			1262684	1270643	1
[	Tl	205	0.052	ug/L	0.002	3	290	2544	2
[	Pb	208	1071.202	ug/L	10.913	1	247	58302679	0
[	Bi	209		ug/L			3225208	2985357	1
[	Th	232	0.755	ug/L	0.008	1	157	40532	0
[	U	238	0.289	ug/L	0.005	1	3	15563	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:13:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RLPb, Sb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1253905	2
[	Be	9	0.178	ug/L	0.008	4	11	585	5
	C	13		ug/L			104879	189095	2
	Cl	37		ug/L			4277164	4316589	2
[>	Sc	45		ug/L			1025260	987845	0
[	V	51	31.617	ug/L	1.139	3	5531	587927	3
[	V-1	51	31.550	ug/L	0.657	2	509	581827	1
[	Cr	52	94.344	ug/L	0.430	0	16367	1499359	0
[	Cr	53	94.137	ug/L	1.279	1	243	167476	1
[	Mn	55	621.137	ug/L	10.140	1	685	13778707	2
[	Co	59	13.095	ug/L	0.055	0	119	205670	0
[>	Ge	72		ug/L			592402	522702	0
[	Ni	60	103.417	ug/L	1.428	1	86	329693	2
[	Ni	62	107.109	ug/L	0.562	0	63	47435	1
[	Cu	63	543.618	ug/L	9.207	1	91	3726687	0
[	Cu	65	486.906	ug/L	4.706	0	47	1531044	0
[	Zn	66	4243.345	ug/L	56 597	1	191	7340818	1
[	Zn	67	3520.730	ug/L	63.675	1	37	1043652	1
[	Zn	68	3984.837	ug/L	133.849	3	353	5013260	2
[	As	75	10.717	ug/L	0.062	0	548	19004	0
[	As-1	75	11.110	ug/L	0.087	0	7252	24936	0
[	Se	82	0.298	ug/L	0 117	39	-19	36	57
[	Se	78	0.278	ug/L	0.258	92	7320	6573	0
[	Mo	98	16.650	ug/L	0.286	1	10	81270	1
	Y	89		ug/L			394786	493018	0
	Kr	83		ug/L			872	719	4
[>	In	115		ug/L			1077756	1000057	0
[	Ag	107	1.748	ug/L	0.018	1	26	22385	1
[	Cd	111	11.376	ug/L	0.063	0	127	53496	0
[	Cd	114	11.552	ug/L	0.132	1	19	134554	1
[	Sb	121	1.810	ug/L	0.021	1	152	26439	1
[	Sb	123	1.795	ug/L	0 006	0	115	19711	0
[	Ba	135	361.157	ug/L	4.228	1	7	1582127	1
[	Ba	137	395.957	ug/L	3.859	0	20	3014094	0
[>	Tb	159		ug/L			1262684	1275772	0
[	Tl	205	0.049	ug/L	0.001	2	290	2397	2
[	Pb	208	1015.229	ug/L	1.462	0	247	55483214	0
[	Bi	209		ug/L			3225208	2992983	1
[	Th	232	0.828	ug/L	0.016	1	157	44586	2
[	U	238	0.404	ug/L	0.007	1	3	21859	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:17:43
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1246408	1
	Be	9	24.698	ug/L	0 457	1	11	78985	0
	C	13		ug/L			104879	179143	2
	Cl	37		ug/L			4277164	4242267	0
>	Sc	45		ug/L			1025260	966097	0
	V	51	55.199	ug/L	1.661	3	5531	1000130	3
	V-1	51	56.190	ug/L	1.534	2	509	1013178	3
	Cr	52	119.866	ug/L	0.900	0	16367	1858885	1
	Cr	53	123.169	ug/L	0.852	0	243	214226	0
	Mn	55	694.976	ug/L	18.372	2	685	15077227	2
	Co	59	36.530	ug/L	0.408	1	119	560911	1
>	Ge	72		ug/L			592402	518697	1
	Ni	60	147.213	ug/L	3.208	2	86	465521	0
	Ni	62	148.611	ug/L	1.059	0	63	65291	2
	Cu	63	575.462	ug/L	7.469	1	91	3914509	0
	Cu	65	510.644	ug/L	2.108	0	47	1593524	2
	Zn	66	4636.809	ug/L	60.508	1	191	7959811	1
	Zn	67	3707.729	ug/L	60.401	1	37	1090554	1
	Zn	68	4237.574	ug/L	74.615	1	353	5290260	0
	As	75	36.784	ug/L	0.167	0	548	63558	1
	As-1	75	35.490	ug/L	0.405	1	7252	65108	1
	Se	82	76.257	ug/L	0.454	0	-19	13709	1
	Se	78	74.476	ug/L	1.549	2	7320	36956	0
	Mo	98	40.743	ug/L	1 222	2	10	197265	1
	Y	89		ug/L			394786	480979	2
	Kr	83		ug/L			872	748	3
>	In	115		ug/L			1077756	993595	0
	Ag	107	23.295	ug/L	0.278	1	26	296112	0
	Cd	111	36.276	ug/L	0.143	0	127	169235	0
	Cd	114	37.110	ug/L	0.145	0	19	429392	0
	Sb	121	2.745	ug/L	0.029	1	152	39770	0
	Sb	123	2.763	ug/L	0 021	0	115	30085	1
	Ba	135	390.848	ug/L	7.393	1	7	1701181	2
	Ba	137	434.714	ug/L	1.818	0	20	3287865	0
>	Tb	159		ug/L			1262684	1261708	0
	Tl	205	21.939	ug/L	0.271	1	290	940717	0
	Pb	208	1096.962	ug/L	4.560	0	247	59287838	0
	Bi	209		ug/L			3225208	2947106	1
	Th	232	22.544	ug/L	0.257	1	157	1196837	0
	U	238	22.543	ug/L	0 467	2	3	1204827	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FPOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:21:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1253204	1
	Be	9	25.149	ug/L	0.750	2	11	80858	1
	C	13		ug/L			104879	193682	2
	Cl	37		ug/L			4277164	4252693	1
>	Sc	45		ug/L			1025260	988308	1
	V	51	54.447	ug/L	2.866	5	5531	1008722	4
	V-1	51	54.932	ug/L	2.155	3	509	1012921	3
	Cr	52	117.209	ug/L	3.817	3	16367	1859196	1
	Cr	53	118.832	ug/L	0.586	0	243	211432	1
	Mn	55	642.242	ug/L	9.006	1	685	14251406	1
	Co	59	37.164	ug/L	1.126	3	119	583669	2
>	Ge	72		ug/L			592402	514112	0
	Ni	60	131.976	ug/L	2.515	1	86	413748	1
	Ni	62	132.749	ug/L	3.492	2	63	57813	3
	Cu	63	571.481	ug/L	4.319	0	91	3853710	1
	Cu	65	510.316	ug/L	12.121	2	47	1578414	2
	Zn	66	4470.282	ug/L	49.413	1	191	7606344	0
	Zn	67	3620.515	ug/L	63 137	1	37	1055697	1
	Zn	68	4099.356	ug/L	113.001	2	353	5073148	2
	As	75	38.524	ug/L	0.305	0	548	65953	0
	As-1	75	36.745	ug/L	0.158	0	7252	66599	0
	Se	82	84.545	ug/L	0.233	0	-19	15068	0
	Se	78	81.562	ug/L	0.980	1	7320	39519	1
	Mo	98	43.256	ug/L	0 385	0	10	207662	1
	Y	89		ug/L			394786	481047	1
	Kr	83		ug/L			872	765	3
>	In	115		ug/L			1077756	1000314	0
	Ag	107	25.845	ug/L	0.291	1	26	330741	0
	Cd	111	35.999	ug/L	0.336	0	127	169074	0
	Cd	114	36.381	ug/L	0.262	0	19	423799	0
	Sb	121	25.896	ug/L	0.228	0	152	376498	0
	Sb	123	25.775	ug/L	0.407	1	115	281621	1
	Ba	135	388.244	ug/L	1.571	0	7	1701194	0
	Ba	137	425.995	ug/L	2 605	0	20	3243690	1
>	Tb	159		ug/L			1262684	1269192	1
	Tl	205	22.580	ug/L	0.383	1	290	973865	0
	Pb	208	1040.765	ug/L	6.405	0	247	56582871	0
	Bi	209		ug/L			3225208	2937836	1
	Th	232	22.905	ug/L	0.081	0	157	1223285	0
	U	238	22.944	ug/L	0.122	0	3	1233596	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:25:58
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RPD 1 SD

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1237815	2
	Be	**9**	**0.166**	ug/L	0.014	8	11	540	7
	C	**13**		ug/L			104879	147102	3
	Cl	**37**		ug/L			4277164	4208340	2
>	**Sc**	**45**		ug/L			1025260	919420	0
	V	**51**	**17.564**	ug/L	0.567	3	5531	306178	2
	V-1	**51**	**17.348**	ug/L	0.556	3	509	297945	2
	Cr	**52**	**61.799**	ug/L	0.812	1	16367	919127	0
	Cr	**53**	**61.093**	ug/L	0.718	1	243	101228	0
	Mn	**55**	**541.924**	ug/L	14 776	2	685	11187139	2
	Co	**59**	**9.144**	ug/L	0.261	2	119	133683	2
>	**Ge**	**72**		ug/L			592402	516047	1
	Ni	**60**	**69.294**	ug/L	1.002	1	86	218082	0
	Ni	**62**	**70.899**	ug/L	1.270	1	63	31019	2
	Cu	**63**	**445.126**	ug/L	12.249	2	91	3012396	1
	Cu	**65**	**376.627**	ug/L	4.127	1	47	1169185	0
	Zn	**66**	**4011.596**	ug/L	110.337	2	191	6851458	2
	Zn	**67**	**3180.938**	ug/L	19.094	0	37	930957	0
	Zn	**68**	**3692.525**	ug/L	133.023	3	353	4586338	2
	As	**75**	**8.363**	ug/L	0.106	1	548	14744	1
	As-1	**75**	**8.719**	ug/L	0 103	1	7252	20681	1
	Se	**82**	**0.620**	ug/L	0.099	16	-19	93	19
	Se	**78**	**0.800**	ug/L	0.123	15	7320	6703	1
	Mo	**98**	**8.183**	ug/L	0.036	0	10	39441	1
	Y	**89**		ug/L			394786	393867	3
	Kr	**83**		ug/L			872	694	2
>	**In**	**115**		ug/L			1077756	1010884	0
	Ag	**107**	**1.599**	ug/L	0.025	1	26	20704	1
	Cd	**111**	**8.979**	ug/L	0.126	1	127	42710	1
	Cd	**114**	**9.022**	ug/L	0 075	0	19	106223	1
	Sb	**121**	**1.929**	ug/L	0 012	0	152	28478	0
	Sb	**123**	**1.912**	ug/L	0.032	1	115	21215	1
	Ba	**135**	**146.768**	ug/L	1.247	0	7	649918	1
	Ba	**137**	**147.933**	ug/L	0.534	0	20	1138327	0
>	**Tb**	**159**		ug/L			1262684	1223266	0
	Tl	**205**	**0.088**	ug/L	0.003	2	290	3925	2
	Pb	**208**	**445.311**	ug/L	6.475	1	247	23333926	0
	Bi	**209**		ug/L			3225208	3050438	1
	Th	**232**	**0.613**	ug/L	0 025	4	157	31722	3
	U	**238**	**0.296**	ug/L	0 025	8	3	15352	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:31:09
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1192606	0
	Be	9	25.366	ug/L	0.737	2	11	77629	2
	C	13		ug/L			104879	121860	3
	Cl	37		ug/L			4277164	4068011	0
>	Sc	45		ug/L			1025260	914454	1
	V	51	24.850	ug/L	0.724	2	5531	428722	1
	V-1	51	24.857	ug/L	0.488	1	509	424376	0
	Cr	52	24.623	ug/L	0.751	3	16367	372910	1
	Cr	53	24.647	ug/L	0.388	1	243	40749	2
	Mn	55	23.993	ug/L	0.324	1	685	493184	0
	Co	59	24.929	ug/L	0.470	1	119	362260	0
>	Ge	72		ug/L			592402	521606	1
	Ni	60	25.720	ug/L	0.286	1	86	81869	1
	Ni	62	25.032	ug/L	0.331	1	63	11105	1
	Cu	63	25.726	ug/L	1.216	4	91	176051	4
	Cu	65	25.202	ug/L	0.719	2	47	79104	1
	Zn	66	84.122	ug/L	3.581	4	191	145348	3
	Zn	67	75.810	ug/L	0.020	0	37	22459	1
	Zn	68	79.824	ug/L	0.721	0	353	100535	1
	As	75	29.707	ug/L	0.457	1	548	51705	0
	As-1	75	25.842	ug/L	0.548	2	7252	49407	0
	Se	82	90.775	ug/L	1.599	1	-19	16414	1
	Se	78	81.218	ug/L	1.950	2	7320	39945	0
	Mo	98	27.953	ug/L	0.607	2	10	136145	2
	Y	89		ug/L			394786	374031	2
	Kr	83		ug/L			872	692	1
>	In	115		ug/L			1077756	1033664	1
	Ag	107	26.975	ug/L	0.484	1	26	356666	0
	Cd	111	25.517	ug/L	0.443	1	127	123855	0
	Cd	114	26.034	ug/L	0.317	1	19	313337	0
	Sb	121	25.161	ug/L	0.488	1	152	377968	1
	Sb	123	25.680	ug/L	0.369	1	115	289893	0
	Ba	135	25.037	ug/L	0.537	2	7	113349	1
	Ba	137	24.860	ug/L	0.178	0	20	195613	1
>	Tb	159		ug/L			1262684	1211498	0
	Tl	205	24.030	ug/L	0.290	1	290	989385	1
	Pb	208	25.260	ug/L	0.118	0	247	1311162	0
	Bi	209		ug/L			3225208	3136570	0
	Th	232	22.018	ug/L	0.246	1	157	1122533	1
	U	238	23.867	ug/L	0.110	0	3	1224993	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:35:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1220549	1
	Be	9	23.704	ug/L	0.354	1	11	74243	1
	C	13		ug/L			104879	125037	3
	Cl	37		ug/L			4277164	4060943	0
>	Sc	45		ug/L			1025260	919331	2
	V	51	23.590	ug/L	0.582	2	5531	409538	3
	V-1	51	23.686	ug/L	0.608	2	509	406636	3
	Cr	52	23.276	ug/L	0.786	3	16367	355131	0
	Cr	53	23.594	ug/L	0.968	4	243	39202	1
	Mn	55	22.727	ug/L	0.984	4	685	469476	2
	Co	59	23.795	ug/L	1.072	4	119	347564	3
>	Ge	72		ug/L			592402	524012	1
	Ni	60	24.254	ug/L	0.502	2	86	77550	1
	Ni	62	24.304	ug/L	0.358	1	63	10832	1
	Cu	63	24.401	ug/L	1.003	4	91	167716	2
	Cu	65	24.462	ug/L	0.530	2	47	77146	2
	Zn	66	77.561	ug/L	2.002	2	191	134643	1
	Zn	67	71.499	ug/L	2.117	2	37	21274	1
	Zn	68	73.798	ug/L	1.341	1	353	93384	0
	As	75	26.758	ug/L	0.560	2	548	46828	0
	As-1	75	23.911	ug/L	0.261	1	7252	46408	1
	Se	82	79.798	ug/L	1.965	2	-19	14491	1
	Se	78	73.506	ug/L	0.790	1	7320	36935	1
	Mo	98	27.942	ug/L	0 761	2	10	136677	0
	Y	89		ug/L			394786	372947	1
	Kr	83		ug/L			872	697	2
>	In	115		ug/L			1077756	1040133	2
	Ag	107	25.377	ug/L	0.798	3	26	337540	0
	Cd	111	23.808	ug/L	0.585	2	127	116269	0
	Cd	114	23.942	ug/L	0.104	0	19	289991	1
	Sb	121	24.731	ug/L	0.379	1	152	373811	0
	Sb	123	25.135	ug/L	0.459	1	115	285494	0
	Ba	135	23.970	ug/L	0.137	0	7	109212	1
	Ba	137	23.576	ug/L	0.463	1	20	186625	0
>	Tb	159		ug/L			1262684	1224363	1
	Tl	205	22.606	ug/L	0.289	1	290	940589	0
	Pb	208	23.762	ug/L	0.122	0	247	1246469	1
	Bi	209		ug/L			3225208	3129424	1
	Th	232	20.395	ug/L	0.227	1	157	1050716	0
	U	238	22.833	ug/L	0.275	1	3	1184188	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:39:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1164625	1183842	3
	Be	9	50.861	ug/L	0.606	1	11	154471	2
	C	13		ug/L			104879	114552	1
	Cl	37		ug/L			4277164	4174074	1
>	Sc	45		ug/L			1025260	892304	1
	V	51	48.399	ug/L	1.261	2	5531	810290	1
	V-1	51	48.748	ug/L	1 162	2	509	811690	1
	Cr	52	49.091	ug/L	0.574	1	16367	711519	1
	Cr	53	50.251	ug/L	0.082	0	243	80849	1
	Mn	55	45.783	ug/L	0 327	0	685	917836	0
	Co	59	49.059	ug/L	2.116	4	119	695436	2
>	Ge	72		ug/L			592402	496025	1
	Ni	60	50.857	ug/L	0.528	1	86	153864	0
	Ni	62	50.468	ug/L	0.161	0	63	21237	1
	Cu	63	50.143	ug/L	1.432	2	91	326215	1
	Cu	65	48.865	ug/L	0.649	1	47	145838	1
	Zn	66	50.975	ug/L	1.903	3	191	83814	2
	Zn	67	50.331	ug/L	1.110	2	37	14188	1
	Zn	68	51.093	ug/L	0.071	0	353	61304	1
	As	75	52.660	ug/L	0.989	1	548	86799	0
	As-1	75	51.740	ug/L	0.810	1	7252	87984	0
	Se	82	58.292	ug/L	1.316	2	-19	10016	1
	Se	78	53.597	ug/L	0.633	1	7320	27153	0
	Mo	98	56.578	ug/L	0.516	0	10	262026	0
	Y	89		ug/L			394786	355072	0
	Kr	83		ug/L			872	673	2
>	In	115		ug/L			1077756	1003309	0
	Ag	107	52.152	ug/L	1.125	2	26	669326	1
	Cd	111	50.783	ug/L	1.064	2	127	239153	1
	Cd	114	50.757	ug/L	1.275	2	19	592951	1
	Sb	121	49.975	ug/L	1.380	2	152	728524	1
	Sb	123	50.886	ug/L	0.488	0	115	557530	0
	Ba	135	50.221	ug/L	0 835	1	7	220707	1
	Ba	137	49.454	ug/L	0.522	1	20	377697	1
>	Tb	159		ug/L			1262684	1217822	0
	Tl	205	45.647	ug/L	0.522	1	290	1888920	0
	Pb	208	48.163	ug/L	0.338	0	247	2512761	0
	Bi	209		ug/L			3225208	2960738	0
	Th	232	52.784	ug/L	1.071	2	157	2704475	1
	U	238	51.839	ug/L	0.165	0	3	2674474	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:46:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1185031	0
	Be	9	0.004	ug/L	0.006	148	11	23	76
	C	13		ug/L			104879	116700	4
	Cl	37		ug/L			4277164	4046328	0
>	Sc	45		ug/L			1025260	888380	0
	V	51	0.004	ug/L	0.013	347	5531	4853	3
	V-1	51	-0.015	ug/L	0.005	36	509	199	44
	Cr	52	0.013	ug/L	0.039	312	16367	14357	3
	Cr	53	-0.048	ug/L	0.012	25	243	134	15
	Mn	55	0.031	ug/L	0.014	45	685	1217	23
	Co	59	0.004	ug/L	0.004	99	119	156	33
>	Ge	72		ug/L			592402	515444	1
	Ni	60	-0.006	ug/L	0.004	66	86	56	24
	Ni	62	-0.007	ug/L	0.026	362	63	52	23
	Cu	63	0.024	ug/L	0.007	30	91	240	22
	Cu	65	0.018	ug/L	0.006	31	47	96	19
	Zn	66	0.349	ug/L	0.076	21	191	763	18
	Zn	67	0.320	ug/L	0.061	18	37	126	15
	Zn	68	0.358	ug/L	0.093	26	353	753	17
	As	75	-0.024	ug/L	0.031	129	548	436	13
	As-1	75	0.089	ug/L	0.086	96	7252	6455	0
	Se	82	0.070	ug/L	0.141	202	-19	-4	549
	Se	78	0.354	ug/L	0.381	107	7320	6511	0
	Mo	98	0.012	ug/L	0.002	14	10	67	14
	Y	89		ug/L			394786	354531	0
	Kr	83		ug/L			872	663	6
>	In	115		ug/L			1077756	1010373	1
	Ag	107	0.002	ug/L	0.002	84	26	53	45
	Cd	111	0.000	ug/L	0.003	793	127	120	9
	Cd	114	0.004	ug/L	0.003	80	19	60	56
	Sb	121	0.096	ug/L	0.016	16	152	1552	14
	Sb	123	0.097	ug/L	0.017	17	115	1178	16
	Ba	135	0.026	ug/L	0.036	136	7	122	128
	Ba	137	0.028	ug/L	0.041	147	20	230	134
>	Tb	159		ug/L			1262684	1196641	1
	Tl	205	0.010	ug/L	0.013	134	290	675	79
	Pb	208	0.043	ug/L	0.056	129	247	2464	117
	Bi	209		ug/L			3225208	3103965	0
	Th	232	0.274	ug/L	0.029	10	157	13930	10
	U	238	0.008	ug/L	0.007	90	3	385	90

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:53:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1201599	0
	Be	9	0.003	ug/L	0.001	40	11	22	19
	C	13		ug/L			104879	118515	1
	Cl	37		ug/L			4277164	3995999	0
>	Sc	45		ug/L			1025260	928209	1
	V	51	0.000	ug/L	0.009	2842	5531	5012	3
	V-1	51	-0.011	ug/L	0.001	10	509	276	8
	Cr	52	0.013	ug/L	0.036	276	16367	15009	3
	Cr	53	-0.023	ug/L	0.009	37	243	181	6
	Mn	55	0.177	ug/L	0.008	4	685	4306	3
	Co	59	0.005	ug/L	0.001	18	119	188	8
>	Ge	72		ug/L			592402	515728	0
	Ni	60	0.016	ug/L	0.005	33	86	123	13
	Ni	62	0.029	ug/L	0.016	55	63	68	10
	Cu	63	0.085	ug/L	0.005	6	91	656	5
	Cu	65	0.076	ug/L	0.006	7	47	277	6
	Zn	66	0.928	ug/L	0.019	2	191	1750	2
	Zn	67	0.832	ug/L	0.056	6	37	276	5
	Zn	68	0.886	ug/L	0.025	2	353	1408	2
	As	75	-0.025	ug/L	0.014	55	548	434	5
	As-1	75	0.144	ug/L	0.018	12	7252	6549	0
	Se	82	-0.004	ug/L	0.087	2355	-19	-17	87
	Se	78	0.535	ug/L	0.034	6	7320	6590	0
	Mo	98	0.010	ug/L	0.001	8	10	55	7
	Y	89		ug/L			394786	362263	1
	Kr	83		ug/L			872	685	7
>	In	115		ug/L			1077756	1035743	0
	Ag	107	0.001	ug/L	0.000	18	26	44	7
	Cd	111	0.001	ug/L	0.002	150	127	127	6
	Cd	114	0.005	ug/L	0.001	28	19	76	22
	Sb	121	0.023	ug/L	0.006	25	152	490	18
	Sb	123	0.023	ug/L	0.007	31	115	375	22
	Ba	135	0.036	ug/L	0.002	4	7	169	4
	Ba	137	0.034	ug/L	0.002	6	20	290	6
>	Tb	159		ug/L			1262684	1221518	0
	Tl	205	0.001	ug/L	0.000	18	290	320	1
	Pb	208	0.083	ug/L	0.002	2	247	4600	1
	Bi	209		ug/L			3225208	3147400	1
	Th	232	0.098	ug/L	0.004	3	157	5211	3
	U	238	0.004	ug/L	0.000	11	3	192	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 B SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 12:57:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1225885	0
	Be	**9**	**0.041**	ug/L	0.006	13	11	142	13
	C	**13**		ug/L			104879	127550	0
	Cl	**37**		ug/L			4277164	4212698	0
>	**Sc**	**45**		ug/L			1025260	937594	1
	V	**51**	**7.206**	ug/L	0.438	6	5531	131051	4
	V-1	**51**	**7.115**	ug/L	0.253	3	509	124859	2
	Cr	**52**	**24.841**	ug/L	1.183	4	16367	385545	3
	Cr	**53**	**24.542**	ug/L	0.830	3	243	41586	1
	Mn	**55**	**230.481**	ug/L	3.029	1	685	4853254	2
	Co	**59**	**3.711**	ug/L	0.081	2	119	55379	0
>	**Ge**	**72**		ug/L			592402	516140	0
	Ni	**60**	**28.956**	ug/L	0.752	2	86	91189	1
	Ni	**62**	**29.345**	ug/L	0.617	2	63	12871	1
	Cu	**63**	**165.241**	ug/L	2.409	1	91	1118657	0
	Cu	**65**	**163.978**	ug/L	1.439	0	47	509223	1
	Zn	**66**	**1713.635**	ug/L	10.373	0	191	2927427	0
	Zn	**67**	**1414.079**	ug/L	12.411	0	37	413949	0
	Zn	**68**	**1507.685**	ug/L	18.887	1	353	1873445	0
	As	**75**	**3.526**	ug/L	0.095	2	548	6493	1
	As-1	**75**	**3.770**	ug/L	0.099	2	7252	12529	0
	Se	**82**	**0.217**	ug/L	0.035	16	-19	21	28
	Se	**78**	**0.599**	ug/L	0.074	12	7320	6622	0
	Mo	**98**	**3.477**	ug/L	0.054	1	10	16765	0
	Y	**89**		ug/L			394786	382680	0
	Kr	**83**		ug/L			872	698	2
>	**In**	**115**		ug/L			1077756	1031972	0
	Ag	**107**	**0.693**	ug/L	0.021	2	26	9174	2
	Cd	**111**	**3.767**	ug/L	0.035	0	127	18359	0
	Cd	**114**	**3.775**	ug/L	0.042	1	19	45387	1
	Sb	**121**	**0.784**	ug/L	0.023	2	152	11895	2
	Sb	**123**	**0.787**	ug/L	0.016	2	115	8977	1
	Ba	**135**	**61.303**	ug/L	2.035	3	7	277100	2
	Ba	**137**	**60.752**	ug/L	1.147	1	20	477227	1
>	**Tb**	**159**		ug/L			1262684	1223402	1
	Tl	**205**	**0.023**	ug/L	0.001	3	290	1258	4
	Pb	**208**	**186.155**	ug/L	2.649	1	247	9754586	0
	Bi	**209**		ug/L			3225208	3127826	1
	Th	**232**	**0.251**	ug/L	0.003	1	157	13084	0
	U	**238**	**0.095**	ug/L	0.002	2	3	4909	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 B SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:01:21
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1226210	3
	Be	9	0.041	ug/L	0.004	10	11	142	10
	C	13		ug/L			104879	136675	1
	Cl	37		ug/L			4277164	4258884	3
>	Sc	45		ug/L			1025260	937525	2
	V	51	6.838	ug/L	0.305	4	5531	124620	3
	V-1	51	6.902	ug/L	0.171	2	509	121128	0
	Cr	52	22.464	ug/L	0.744	3	16367	350140	2
	Cr	53	22.681	ug/L	0.641	2	243	38449	1
	Mn	55	201.336	ug/L	3.113	1	685	4238250	1
	Co	59	3.423	ug/L	0.066	1	119	51096	0
>	Ge	72		ug/L			592402	512181	0
	Ni	60	24.686	ug/L	0.369	1	86	77163	1
	Ni	62	24.183	ug/L	0.581	2	63	10535	2
	Cu	63	157.360	ug/L	0.860	0	91	1057222	1
	Cu	65	152.056	ug/L	1.556	1	47	468542	0
	Zn	66	1655.286	ug/L	5.300	0	191	2806184	1
	Zn	67	1306.518	ug/L	10.670	0	37	379545	1
	Zn	68	1406.585	ug/L	19.135	1	353	1734636	2
	As	75	3.349	ug/L	0.016	0	548	6144	0
	As-1	75	3.653	ug/L	0.012	0	7252	12243	0
	Se	82	0.249	ug/L	0.083	33	-19	27	54
	Se	78	0.929	ug/L	0.053	5	7320	6705	0
	Mo	98	3.111	ug/L	0.020	0	10	14889	1
	Y	89		ug/L			394786	387451	3
	Kr	83		ug/L			872	706	2
>	In	115		ug/L			1077756	1023609	0
	Ag	107	0.609	ug/L	0.012	1	26	8002	1
	Cd	111	3.639	ug/L	0.019	0	127	17597	0
	Cd	114	3.584	ug/L	0.043	1	19	42738	1
	Sb	121	1.166	ug/L	0.001	0	152	17482	1
	Sb	123	1.168	ug/L	0.007	0	115	13162	0
	Ba	135	53.254	ug/L	0.762	1	7	238769	0
	Ba	137	53.194	ug/L	1.456	2	20	414425	2
>	Tb	159		ug/L			1262684	1228255	0
	Tl	205	0.020	ug/L	0.001	5	290	1110	3
	Pb	208	170.524	ug/L	1.177	0	247	8972357	0
	Bi	209		ug/L			3225208	3108286	0
	Th	232	0.222	ug/L	0.005	2	157	11621	2
	U	238	0.091	ug/L	0.001	1	3	4731	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:05:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RSE, Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1250210	1
	Be	9	0.104	ug/L	0.012	11	11	345	10
	C	13		ug/L			104879	158265	3
	Cl	37		ug/L			4277164	4246794	0
>	Sc	45		ug/L			1025260	969752	1
	V	51	16.347	ug/L	0.585	3	5531	300890	2
	V-1	51	15.883	ug/L	0.176	1	509	287787	0
	Cr	52	52.563	ug/L	2.710	5	16367	826613	4
	Cr	53	51.034	ug/L	1.415	2	243	89217	1
	Mn	55	467.786	ug/L	15.722	3	685	10184031	2
	Co	59	7.942	ug/L	0.189	2	119	122478	1
>	Ge	72		ug/L			592402	524044	3
	Ni	60	54.904	ug/L	1.129	2	86	175431	1
	Ni	62	56.723	ug/L	0.900	1	63	25209	3
	Cu	63	399.404	ug/L	18.185	4	91	2742779	1
	Cu	65	354.049	ug/L	1.433	0	47	1116165	2
	Zn	66	3649.882	ug/L	173.574	4	191	6324341	1
	Zn	67	2979.427	ug/L	47.650	1	37	885280	1
	Zn	68	3415.107	ug/L	17.587	0	353	4308859	3
	As	75	7.692	ug/L	0.083	1	548	13809	2
	As-1	75	8.012	ug/L	0.184	2	7252	19812	1
	Se	82	0.534	ug/L	0.131	24	-19	79	30
	Se	78	0.667	ug/L	0.424	63	7320	6748	0
	Mo	98	7.222	ug/L	0 216	2	10	35324	0
	Y	89		ug/L			394786	409441	0
	Kr	83		ug/L			872	712	6
>	In	115		ug/L			1077756	1029477	1
	Ag	107	1.415	ug/L	0.016	1	26	18668	2
	Cd	111	8.425	ug/L	0.080	0	127	40814	1
	Cd	114	8.382	ug/L	0.267	3	19	100469	2
	Sb	121	2.688	ug/L	0.019	0	152	40353	0
	Sb	123	2.735	ug/L	0.019	0	115	30857	1
	Ba	135	125.279	ug/L	2.288	1	7	564855	0
	Ba	137	123.337	ug/L	2.579	2	20	966321	0
>	Tb	159		ug/L			1262684	1240550	0
	Tl	205	0.057	ug/L	0.001	1	290	2667	1
	Pb	208	407.707	ug/L	6.853	1	247	21664977	1
	Bi	209		ug/L			3225208	3114665	0
	Th	232	0.522	ug/L	0.005	1	157	27417	0
	U	238	0.224	ug/L	0.003	1	3	11780	0

use 208

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:09:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RPD 4

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1220862	1
	Be	9	0.029	ug/L	0.001	5	11	102	3
	C	13		ug/L			104879	121105	1
	Cl	37		ug/L			4277164	4143134	0
>	Sc	45		ug/L			1025260	923603	1
	V	51	8.834	ug/L	0.357	4	5531	157165	3
	V-1	51	8.742	ug/L	0.214	2	509	151082	3
	Cr	52	26.654	ug/L	0.426	1	16367	406560	0
	Cr	53	26.354	ug/L	0.309	1	243	43995	2
	Mn	55	497.108	ug/L	12.904	2	685	10306724	1
	Co	59	1.973	ug/L	0.044	2	119	29063	2
>	Ge	72		ug/L			592402	512905	1
	Ni	60	13.592	ug/L	0.394	2	86	42580	3
	Ni	62	13.622	ug/L	0.286	2	63	5967	1
	Cu	63	69.484	ug/L	2.203	3	91	467389	1
	Cu	65	70.523	ug/L	1.894	2	47	217602	1
	Zn	66	443.780	ug/L	10.135	2	191	753391	1
	Zn	67	397.915	ug/L	7.735	1	37	115781	2
	Zn	68	430.908	ug/L	7.131	1	353	532258	0
	As	75	1.953	ug/L	0.029	1	548	3786	0
	As-1	75	2.170	ug/L	0.115	5	7252	9830	0
	Se	82	0.165	ug/L	0.025	14	-19	12	36
	Se	78	0.604	ug/L	0.318	52	7320	6581	0
	Mo	98	2.410	ug/L	0.097	4	10	11548	3
	Y	89		ug/L			394786	373904	1
	Kr	83		ug/L			872	665	4
>	In	115		ug/L			1077756	1021771	1
	Ag	107	0.217	ug/L	0.007	3	26	2862	1
	Cd	111	1.199	ug/L	0.043	3	127	5865	1
	Cd	114	1.165	ug/L	0.051	4	19	13877	3
	Sb	121	0.099	ug/L	0.007	7	152	1607	5
	Sb	123	0.097	ug/L	0.006	6	115	1192	6
	Ba	135	29.343	ug/L	0.599	2	7	131317	1
	Ba	137	28.917	ug/L	0.836	2	20	224857	1
>	Tb	159		ug/L			1262684	1235048	0
	Tl	205	0.014	ug/L	0.001	4	290	884	2
	Pb	208	69.431	ug/L	0.439	0	247	3673505	0
	Bi	209		ug/L			3225208	3111715	0
	Th	232	0.126	ug/L	0.003	2	157	6717	1
	U	238	0.066	ug/L	0.001	1	3	3446	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:13:43
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1252251	1
	Be	9	0.148	ug/L	0.007	4	11	486	3
	C	13		ug/L			104879	159268	3
	Cl	37		ug/L			4277164	4287636	0
>	Sc	45		ug/L			1025260	961662	1
	V	51	42.745	ug/L	2.356	5	5531	771834	4
	V-1	51	43.288	ug/L	1.391	3	509	776777	1
	Cr	52	134.056	ug/L	8.474	6	16367	2067455	6
	Cr	53	135.877	ug/L	2.765	2	243	235203	2
	Mn	55	2404.602	ug/L	58.865	2	685	51918063	2
	Co	59	9.776	ug/L	0.358	3	119	149455	2
>	Ge	72		ug/L			592402	521323	1
	Ni	60	68.473	ug/L	1.194	1	86	217691	0
	Ni	62	70.796	ug/L	2.293	3	63	31279	1
	Cu	63	390.856	ug/L	11.882	3	91	2672921	3
	Cu	65	347.704	ug/L	8.430	2	47	1090306	1
	Zn	66	2380.627	ug/L	63.002	2	191	4106763	1
	Zn	67	1889.966	ug/L	38.058	2	37	558729	0
	Zn	68	2217.606	ug/L	83.701	3	353	2782297	2
	As	75	9.868	ug/L	0.136	1	548	17488	0
	As-1	75	10.202	ug/L	0.204	1	7252	23357	0
	Se	82	0.559	ug/L	0.039	7	-19	83	8
	Se	78	0.387	ug/L	0.307	79	7320	6600	0
	Mo	98	12.036	ug/L	0.214	1	10	58590	1
	Y	89		ug/L			394786	416208	0
	Kr	83		ug/L			872	680	4
>	In	115		ug/L			1077756	1019527	0
	Ag	107	1.056	ug/L	0.031	2	26	13795	3
	Cd	111	5.803	ug/L	0.112	1	127	27879	1
	Cd	114	5.857	ug/L	0.171	2	19	69550	2
	Sb	121	0.460	ug/L	0.003	0	152	6955	0
	Sb	123	0.466	ug/L	0.009	1	115	5292	1
	Ba	135	148.706	ug/L	1.400	0	7	664124	1
	Ba	137	146.676	ug/L	0.318	0	20	1138319	0
>	Tb	159		ug/L			1262684	1244745	0
	Tl	205	0.080	ug/L	0.003	3	290	3654	2
	Pb	208	398.207	ug/L	1.068	0	247	21233074	0
	Bi	209		ug/L			3225208	3000055	1
	Th	232	0.646	ug/L	0.004	0	157	33966	0
	U	238	0.338	ug/L	0.003	0	3	17806	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:17:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RPD, Se

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1209155	2
	Be	9	0.145	ug/L	0.005	3	11	461	2
	C	13		ug/L			104879	146138	0
	Cl	37		ug/L			4277164	4242960	3
>	Sc	45		ug/L			1025260	937143	1
	V	51	39.694	ug/L	0.745	1	5531	698871	0
	V-1	51	40.218	ug/L	0.559	1	509	703422	0
	Cr	52	93.482	ug/L	2.341	2	16367	1409188	1
	Cr	53	95.232	ug/L	1.834	1	243	160693	1
	Mn	55	1300.246	ug/L	31.988	2	685	27353951	1
	Co	59	9.754	ug/L	0.110	1	119	145340	0
>	Ge	72		ug/L			592402	503832	0
	Ni	60	68.206	ug/L	1.374	2	86	209602	2
	Ni	62	69.301	ug/L	1.706	2	63	29604	3
	Cu	63	398.722	ug/L	9.032	2	91	2635184	2
	Cu	65	343.312	ug/L	10.355	3	47	1040503	2
	Zn	66	2495.637	ug/L	33.030	1	191	4161533	0
	Zn	67	1955.310	ug/L	7.002	0	37	558744	0
	Zn	68	2321.123	ug/L	40.707	1	353	2815309	1
	As	75	9.310	ug/L	0.104	1	548	15974	0
	As-1	75	9.715	ug/L	0.115	1	7252	21792	0
	Se	82	0.444	ug/L	0.137	30	-19	60	38
	Se	78	0.741	ug/L	0.177	23	7320	6520	0
	Mo	98	12.128	ug/L	0.103	0	10	57060	0
	Y	89		ug/L			394786	404807	1
	Kr	83		ug/L			872	718	4
>	In	115		ug/L			1077756	1003741	0
	Ag	107	1.205	ug/L	0.025	2	26	15492	1
	Cd	111	6.001	ug/L	0.046	0	127	28378	1
	Cd	114	5.953	ug/L	0 058	0	19	69595	0
	Sb	121	0.490	ug/L	0.010	2	152	7281	2
	Sb	123	0.494	ug/L	0.007	1	115	5516	1
	Ba	135	135.563	ug/L	1 904	1	7	596001	0
	Ba	137	134.421	ug/L	3.797	2	20	1026867	1
>	Tb	159		ug/L			1262684	1241593	0
	Tl	205	0.072	ug/L	0 004	4	290	3343	4
	Pb	208	412.969	ug/L	3.258	0	247	21964358	0
	Bi	209		ug/L			3225208	3025431	0
	Th	232	0.557	ug/L	0.005	0	157	29259	0
	U	238	0.295	ug/L	0.005	1	3	15527	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:21:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1226166	0
[	Be	9	25.993	ug/L	0.393	1	11	81788	1
	C	13		ug/L			104879	147594	3
	Cl	37		ug/L			4277164	4191646	1
[>	Sc	45		ug/L			1025260	937960	2
[	V	51	65.416	ug/L	1.627	2	5531	1149403	2
[	V-1	51	66.085	ug/L	1.083	1	509	1156536	1
[	Cr	52	128.416	ug/L	3.509	2	16367	1931591	1
[	Cr	53	130.652	ug/L	1.988	1	243	220550	1
[	Mn	55	1449.179	ug/L	31.592	2	685	30511263	1
[	Co	59	34.138	ug/L	0.144	0	119	508879	2
[>	Ge	72		ug/L			592402	506626	1
[	Ni	60	95.630	ug/L	2.384	2	86	295431	1
[	Ni	62	96.297	ug/L	4.001	4	63	41327	3
[	Cu	63	411.922	ug/L	18.899	4	91	2736353	3
[	Cu	65	358.278	ug/L	12.878	3	47	1091705	2
[	Zn	66	2574.110	ug/L	83.289	3	191	4316091	3
[	Zn	67	2012.912	ug/L	51.080	2	37	578285	1
[	Zn	68	2322.036	ug/L	39.194	1	353	2831954	1
[	As	75	38.216	ug/L	0.585	1	548	64470	0
[	As-1	75	36.032	ug/L	0.804	2	7252	64467	1
[	Se	82	85.586	ug/L	1.547	1	-19	15030	1
[	Se	78	81.071	ug/L	2.040	2	7320	38740	1
[	Mo	98	43.383	ug/L	0.254	0	10	205226	0
	Y	89		ug/L			394786	414852	1
	Kr	83		ug/L			872	721	4
[>	In	115		ug/L			1077756	1005757	1
[	Ag	107	11.340	ug/L	0.088	0	26	145924	0
[	Cd	111	31.550	ug/L	0.784	2	127	148973	1
[	Cd	114	31.844	ug/L	0.501	1	19	372920	0
[	Sb	121	2.133	ug/L	0.053	2	152	31303	1
[	Sb	123	2.102	ug/L	0.045	2	115	23182	0
[	Ba	135	167.857	ug/L	4.132	2	7	739362	1
[	Ba	137	169.068	ug/L	2.396	1	20	1294473	2
[>	Tb	159		ug/L			1262684	1240129	2
[	Tl	205	22.759	ug/L	0.624	2	290	958847	0
[	Pb	208	496.523	ug/L	12.651	2	247	26367519	0
[	Bi	209		ug/L			3225208	3006426	0
[	Th	232	23.268	ug/L	0.590	2	157	1213785	0
[	U	238	23.565	ug/L	0.563	2	3	1237610	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:26:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1221918	3
[	Be	9	25.709	ug/L	0.394	1	11	80608	2
	C	13		ug/L			104879	156204	2
	Cl	37		ug/L			4277164	4313524	1
[>	Sc	45		ug/L			1025260	927019	0
[	V	51	69.241	ug/L	3.289	4	5531	1202281	4
[	V-1	51	65.508	ug/L	1.919	2	509	1133140	2
[	Cr	52	165.664	ug/L	3.310	1	16367	2459305	1
[	Cr	53	153.305	ug/L	3.388	2	243	255790	2
[	Mn	55	2418.721	ug/L	41.682	1	685	50342734	1
[	Co	59	33.566	ug/L	0.382	1	119	494573	1
[>	Ge	72		ug/L			592402	499652	1
[	Ni	60	92.143	ug/L	2.386	2	86	280738	1
[	Ni	62	95.366	ug/L	1.574	1	63	40378	2
[	Cu	63	404.433	ug/L	9.877	2	91	2650237	1
[	Cu	65	363.518	ug/L	4.722	1	47	1092622	0
[	Zn	66	2453.739	ug/L	38.784	1	191	4058315	2
[	Zn	67	1954.927	ug/L	28.063	1	37	553969	1
[	Zn	68	2274.558	ug/L	15.104	0	353	2736185	1
[	As	75	38.198	ug/L	0.359	0	548	63561	1
[	As-1	75	36.027	ug/L	0.306	0	7252	63579	1
[	Se	82	87.840	ug/L	0.957	1	-19	15215	0
[	Se	78	83.665	ug/L	1.354	1	7320	39233	0
[	Mo	98	39.498	ug/L	0.916	2	10	184255	1
	Y	89		ug/L			394786	406110	2
	Kr	83		ug/L			872	724	3
[>	In	115		ug/L			1077756	987241	0
[	Ag	107	26.202	ug/L	0.340	1	26	330937	1
[	Cd	111	30.866	ug/L	0.332	1	127	143094	1
[	Cd	114	30.940	ug/L	0.360	1	19	355719	1
[	Sb	121	24.744	ug/L	0.244	0	152	355061	0
[	Sb	123	24.746	ug/L	0.182	0	115	266859	0
[	Ba	135	167.424	ug/L	1.237	0	7	724040	0
[	Ba	137	168.613	ug/L	1.818	1	20	1267092	0
[>	Tb	159		ug/L			1262684	1214181	0
[	Tl	205	22.912	ug/L	0.420	1	290	945391	1
[	Pb	208	410.869	ug/L	5 988	1	247	21368866	0
[	Bi	209		ug/L			3225208	3006837	0
[	Th	232	23.540	ug/L	0.158	0	157	1202697	0
[	U	238	23.734	ug/L	0.273	1	3	1220748	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:30:12
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RLAS 5

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1193177	0
	Be	9	25.519	ug/L	0.309	1	11	78138	1
	C	13		ug/L			104879	117116	3
	Cl	37		ug/L			4277164	4118586	0
>	Sc	45		ug/L			1025260	902848	2
	V	51	24.446	ug/L	0.836	3	5531	416353	0
	V-1	51	24.734	ug/L	0.745	3	509	416765	0
	Cr	52	24.215	ug/L	0.783	3	16367	362216	0
	Cr	53	25.169	ug/L	0 836	3	243	41061	2
	Mn	55	23.964	ug/L	1.228	5	685	485949	2
	Co	59	25.244	ug/L	0 267	1	119	362208	2
>	Ge	72		ug/L			592402	504495	1
	Ni	60	25.356	ug/L	0.256	1	86	78063	0
	Ni	62	25.560	ug/L	0.459	1	63	10967	2
	Cu	63	25.697	ug/L	0.811	3	91	170076	2
	Cu	65	26.145	ug/L	0.655	2	47	79385	2
	Zn	66	82.827	ug/L	1.632	1	191	138443	1
	Zn	67	76.964	ug/L	1.753	2	37	22049	1
	Zn	68	79.985	ug/L	3.079	3	353	97411	2
	As	75	30.720	ug/L	0 425	1	548	51703	1
	As-1	75	26.339	ug/L	0.124	0	7252	48593	0
	Se	82	94.833	ug/L	1.509	1	-19	16587	1
	Se	78	83.591	ug/L	0.387	0	7320	39588	1
	Mo	98	30.399	ug/L	0.268	0	10	143218	1
	Y	89		ug/L			394786	369955	3
	Kr	83		ug/L			872	706	3
>	In	115		ug/L			1077756	1013038	0
	Ag	107	27.886	ug/L	0.154	0	26	361414	0
	Cd	111	26.267	ug/L	0 257	0	127	124970	0
	Cd	114	26.256	ug/L	0.269	1	19	309739	0
	Sb	121	26.241	ug/L	0.441	1	152	386353	0
	Sb	123	26.606	ug/L	0.422	1	115	294410	1
	Ba	135	25.383	ug/L	0.506	1	7	112644	1
	Ba	137	25.069	ug/L	0.417	1	20	193326	1
>	Tb	159		ug/L			1262684	1191847	2
	Tl	205	23.840	ug/L	0.470	1	290	965379	0
	Pb	208	25.289	ug/L	0.486	1	247	1290985	0
	Bi	209		ug/L			3225208	3100535	0
	Th	232	22.462	ug/L	0.210	0	157	1126463	1
	U	238	24.205	ug/L	0.926	3	3	1221483	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:35:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1175278	1
	Be	9	51.790	ug/L	1.937	3	11	156135	2
	C	13		ug/L			104879	117746	2
	Cl	37		ug/L			4277164	4095840	1
>	Sc	45		ug/L			1025260	876461	1
	V	51	49.665	ug/L	0.532	1	5531	816837	2
	V-1	51	49.845	ug/L	0.453	0	509	815375	1
	Cr	52	49.825	ug/L	0.703	1	16367	709222	2
	Cr	53	50.421	ug/L	0.694	1	243	79674	0
	Mn	55	48.377	ug/L	0 553	1	685	952598	1
	Co	59	51.461	ug/L	0.539	1	119	716762	0
>	Ge	72		ug/L			592402	501669	2
	Ni	60	49.660	ug/L	1.386	2	86	151929	2
	Ni	62	50.136	ug/L	0.709	1	63	21333	0
	Cu	63	49.625	ug/L	1.262	2	91	326480	0
	Cu	65	48.042	ug/L	1.236	2	47	144988	1
	Zn	66	50.622	ug/L	1.271	2	191	84181	0
	Zn	67	49.743	ug/L	2.119	4	37	14178	3
	Zn	68	50.870	ug/L	1.318	2	353	61712	1
	As	75	52.179	ug/L	1.449	2	548	86974	1
	As-1	75	50.718	ug/L	1.211	2	7252	87334	0
	Se	82	58.935	ug/L	2.110	3	-19	10239	1
	Se	78	52.249	ug/L	1.538	2	7320	26921	0
	Mo	98	57.953	ug/L	2.510	4	10	271311	2
	Y	89		ug/L			394786	360306	0
	Kr	83		ug/L			872	702	2
>	In	115		ug/L			1077756	998260	1
	Ag	107	53.354	ug/L	0.824	1	26	681276	0
	Cd	111	50.814	ug/L	0.576	1	127	238102	1
	Cd	114	51.197	ug/L	1.183	2	19	595003	0
	Sb	121	50.095	ug/L	1.232	2	152	726527	1
	Sb	123	50.669	ug/L	1.059	2	115	552256	0
	Ba	135	50.609	ug/L	1.043	2	7	221257	0
	Ba	137	49.628	ug/L	1 375	2	20	377021	1
>	Tb	159		ug/L			1262684	1195487	1
	Tl	205	45.438	ug/L	0.310	0	290	1845742	1
	Pb	208	48.294	ug/L	0.524	1	247	2473190	0
	Bi	209		ug/L			3225208	2958476	1
	Th	232	54.020	ug/L	1.524	2	157	2716575	1
	U	238	53.402	ug/L	0.420	0	3	2704559	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:42:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1214560	2
	Be	9	0.001	ug/L	0.001	80	11	14	12
	C	13		ug/L			104879	115714	0
	Cl	37		ug/L			4277164	4024767	0
>	Sc	45		ug/L			1025260	900805	1
	V	51	-0.007	ug/L	0.018	269	5531	4748	5
	V-1	51	-0.019	ug/L	0.001	4	509	132	10
	Cr	52	-0.016	ug/L	0.052	325	16367	14145	4
	Cr	53	-0.057	ug/L	0.005	7	243	122	7
	Mn	55	0.014	ug/L	0.004	27	685	881	7
	Co	59	0.003	ug/L	0.000	15	119	143	5
>	Ge	72		ug/L			592402	510389	1
	Ni	60	-0.012	ug/L	0.004	31	86	36	31
	Ni	62	-0.016	ug/L	0.031	198	63	48	28
	Cu	63	0.015	ug/L	0.000	1	91	177	1
	Cu	65	0.008	ug/L	0.003	40	47	64	15
	Zn	66	0.125	ug/L	0.009	6	191	375	3
	Zn	67	0.095	ug/L	0.007	6	37	60	4
	Zn	68	0.116	ug/L	0.010	8	353	447	2
	As	75	-0.029	ug/L	0 015	53	548	424	5
	As-1	75	0.123	ug/L	0.019	15	7252	6448	1
	Se	82	0.017	ug/L	0.093	537	-19	-13	118
	Se	78	0.472	ug/L	0.044	9	7320	6496	1
	Mo	98	0.012	ug/L	0.003	22	10	64	19
	Y	89		ug/L			394786	357574	2
	Kr	83		ug/L			872	668	2
>	In	115		ug/L			1077756	1014683	0
	Ag	107	0.002	ug/L	0.000	23	26	51	12
	Cd	111	-0.002	ug/L	0.002	93	127	110	7
	Cd	114	0.001	ug/L	0.001	48	19	35	24
	Sb	121	0.089	ug/L	0.015	16	152	1453	14
	Sb	123	0.091	ug/L	0.015	16	115	1112	14
	Ba	135	0.004	ug/L	0.001	23	7	25	17
	Ba	137	0.003	ug/L	0.002	65	20	40	34
>	Tb	159		ug/L			1262684	1173734	1
	Tl	205	0.003	ug/L	0.001	44	290	398	13
	Pb	208	0.006	ug/L	0.001	12	247	554	7
	Bi	209		ug/L			3225208	3086967	0
	Th	232	0.249	ug/L	0.018	7	157	12465	7
	U	238	0.003	ug/L	0.001	22	3	172	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:48:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

PRS

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1164625	1218195	1
[	Be	9	0.001	ug/L	0.001	41	11	16	10
	C	13		ug/L			104879	132924	3
	Cl	37		ug/L			4277164	4049670	0
[>	Sc	45		ug/L			1025260	904539	0
[	V	51	0.010	ug/L	0.007	68	5531	5046	1
[	V-1	51	-0.014	ug/L	0.001	3	509	219	3
[	Cr	52	0.037	ug/L	0 017	46	16367	14975	0
[	Cr	53	-0.041	ug/L	0.005	13	243	148	6
[	Mn	55	0.159	ug/L	0.005	3	685	3825	1
[	Co	59	0.002	ug/L	0.001	43	119	134	8
[>	Ge	72		ug/L			592402	517904	0
[	Ni	60	0.010	ug/L	0.004	38	86	106	11
[	Ni	62	0.015	ug/L	0.013	88	63	62	9
[	Cu	63	0.071	ug/L	0.001	1	91	561	1
[	Cu	65	0.069	ug/L	0.002	3	47	257	2
[	Zn	66	1.404	ug/L	0.019	1	191	2574	1
[	Zn	67	1.221	ug/L	0.017	1	37	391	1
[	Zn	68	1.344	ug/L	0.032	2	353	1984	1
[	As	75	-0.041	ug/L	0.015	37	548	409	6
[	As-1	75	0.097	ug/L	0.042	43	7252	6499	0
[	Se	82	0.005	ug/L	0.026	551	-19	-16	28
[	Se	78	0.416	ug/L	0.140	33	7320	6569	0
[	Mo	98	0.006	ug/L	0.002	40	10	38	31
	Y	89		ug/L			394786	358160	1
	Kr	83		ug/L			872	685	2
[>	In	115		ug/L			1077756	1031639	1
[	Ag	107	0.001	ug/L	0.001	64	26	43	28
[	Cd	111	-0.003	ug/L	0.001	30	127	106	5
[	Cd	114	0.003	ug/L	0.001	30	19	57	21
[	Sb	121	0.022	ug/L	0.005	23	152	477	16
[	Sb	123	0.024	ug/L	0.008	31	115	377	23
[	Ba	135	0.033	ug/L	0.002	5	7	156	3
[	Ba	137	0.037	ug/L	0.001	3	20	308	4
[>	Tb	159		ug/L			1262684	1195755	0
[	Tl	205	-0.001	ug/L	0.001	104	290	238	16
[	Pb	208	0.076	ug/L	0.002	2	247	4110	2
[	Bi	209		ug/L			3225208	3114301	0
[	Th	232	0.111	ug/L	0.008	7	157	5716	6
[	U	238	0.001	ug/L	0.001	55	3	61	52

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ADUP SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:52:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1164625	1219742	2
	Be	9	0.054	ug/L	0.006	10	11	180	7
	C	13		ug/L			104879	134215	4
	Cl	37		ug/L			4277164	4147693	1
>	Sc	45		ug/L			1025260	923796	1
	V	51	15.843	ug/L	0.542	3	5531	277961	2
	V-1	51	15.868	ug/L	0.170	1	509	273892	1
	Cr	52	39.418	ug/L	0.659	1	16367	594378	1
	Cr	53	39.508	ug/L	0.624	1	243	65863	2
	Mn	55	492.296	ug/L	17.513	3	685	10214365	4
	Co	59	3.794	ug/L	0 080	2	119	55782	0
>	Ge	72		ug/L			592402	506388	0
	Ni	60	25.784	ug/L	0.417	1	86	79684	1
	Ni	62	26.381	ug/L	0.319	1	63	11359	1
	Cu	63	124.718	ug/L	0 754	0	91	828441	1
	Cu	65	124.519	ug/L	3 159	2	47	379408	3
	Zn	66	871.774	ug/L	5 654	0	191	1461294	1
	Zn	67	762.312	ug/L	19.502	2	37	218989	3
	Zn	68	840.987	ug/L	13 697	1	353	1025523	2
	As	75	3.580	ug/L	0.016	0	548	6462	0
	As-1	75	3.909	ug/L	0.046	1	7252	12517	0
	Se	82	0.181	ug/L	0.065	35	-19	14	76
	Se	78	0.916	ug/L	0.181	19	7320	6623	0
	Mo	98	5.210	ug/L	0.201	3	10	24638	3
	Y	89		ug/L			394786	381791	1
	Kr	83		ug/L			872	698	3
>	In	115		ug/L			1077756	1016707	1
	Ag	107	0.433	ug/L	0.005	1	26	5656	1
	Cd	111	2.242	ug/L	0.037	1	127	10811	0
	Cd	114	2.172	ug/L	0 029	1	19	25731	0
	Sb	121	0.194	ug/L	0.002	1	152	3009	2
	Sb	123	0.199	ug/L	0.003	1	115	2321	3
	Ba	135	50.264	ug/L	0.456	0	7	223845	0
	Ba	137	50.172	ug/L	0.252	0	20	388294	1
>	Tb	159		ug/L			1262684	1210314	0
	Tl	205	0.028	ug/L	0.001	2	290	1417	2
	Pb	208	147.817	ug/L	0 746	0	247	7664037	0
	Bi	209		ug/L			3225208	3069305	0
	Th	232	0.264	ug/L	0.003	1	157	13604	0
	U	238	0.121	ug/L	0.001	0	3	6218	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 A SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 13:57:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			1164625	1185880	1
[	**Be**	**9**	**0.045**	ug/L	0.002	5	11	149	3
	C	**13**		ug/L			104879	130430	3
	Cl	**37**		ug/L			4277164	4156102	0
[>	**Sc**	**45**		ug/L			1025260	910425	0
[	**V**	**51**	**14.685**	ug/L	0.248	1	5531	254338	1
[	**V-1**	**51**	**14.822**	ug/L	0.120	0	509	252179	1
[	**Cr**	**52**	**35.376**	ug/L	0.817	2	16367	527196	1
[	**Cr**	**53**	**35.834**	ug/L	0.524	1	243	58882	0
[	**Mn**	**55**	**465.084**	ug/L	13.001	2	685	9508590	3
[	**Co**	**59**	**3.651**	ug/L	0.099	2	119	52915	2
[>	**Ge**	**72**		ug/L			592402	506873	1
[	**Ni**	**60**	**25.126**	ug/L	0.807	3	86	77731	3
[	**Ni**	**62**	**25.420**	ug/L	0.891	3	63	10959	4
[	**Cu**	**63**	**132.175**	ug/L	2.350	1	91	878774	1
[	**Cu**	**65**	**129.371**	ug/L	1.133	0	47	394533	1
[	**Zn**	**66**	**822.043**	ug/L	23.346	2	191	1379054	2
[	**Zn**	**67**	**733.453**	ug/L	7.528	1	37	210871	1
[	**Zn**	**68**	**795.646**	ug/L	19.383	2	353	970982	1
[	**As**	**75**	**3.230**	ug/L	0.028	0	548	5881	1
[	**As-1**	**75**	**3.563**	ug/L	0.048	1	7252	11970	1
[	**Se**	**82**	**0.152**	ug/L	0.025	16	-19	9	46
[	**Se**	**78**	**0.978**	ug/L	0.082	8	7320	6655	1
[	**Mo**	**98**	**4.233**	ug/L	0.078	1	10	20042	0
	Y	**89**		ug/L			394786	371015	0
	Kr	**83**		ug/L			872	711	0
[>	**In**	**115**		ug/L			1077756	1006491	0
[	**Ag**	**107**	**0.429**	ug/L	0.009	2	26	5551	2
[	**Cd**	**111**	**2.181**	ug/L	0.022	0	127	10417	1
[	**Cd**	**114**	**2.147**	ug/L	0.023	1	19	25180	0
[	**Sb**	**121**	**0.163**	ug/L	0.005	3	152	2527	2
[	**Sb**	**123**	**0.160**	ug/L	0.003	1	115	1864	0
[	**Ba**	**135**	**50.007**	ug/L	1.002	2	7	220460	1
[	**Ba**	**137**	**49.606**	ug/L	1.261	2	20	380008	1
[>	**Tb**	**159**		ug/L			1262684	1185023	1
[	**Tl**	**205**	**0.026**	ug/L	0.001	1	290	1333	2
[	**Pb**	**208**	**153.916**	ug/L	2.677	1	247	7811826	0
[	**Bi**	**209**		ug/L			3225208	3059694	1
[	**Th**	**232**	**0.221**	ug/L	0.004	1	157	11170	2
[	**U**	**238**	**0.108**	ug/L	0.002	1	3	5400	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ASPK SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:01:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1207433	1
	Be	9	10.453	ug/L	0.381	3	11	32384	2
	C	13		ug/L			104879	133037	2
	Cl	37		ug/L			4277164	4261456	2
>	Sc	45		ug/L			1025260	921629	1
	V	51	24.986	ug/L	0.413	1	5531	434635	3
	V-1	51	25.281	ug/L	0.678	2	509	434967	1
	Cr	52	44.891	ug/L	1.475	3	16367	673591	5
	Cr	53	45.874	ug/L	1.415	3	243	76222	1
	Mn	55	481.569	ug/L	8.087	1	685	9965169	1
	Co	59	13.712	ug/L	0.280	2	119	200861	0
>	Ge	72		ug/L			592402	504713	2
	Ni	60	36.121	ug/L	0.427	1	86	111208	1
	Ni	62	36.729	ug/L	1.620	4	63	15732	2
	Cu	63	136.669	ug/L	3.654	2	91	904448	0
	Cu	65	136.080	ug/L	0.660	0	47	413190	1
	Zn	66	907.581	ug/L	52.052	5	191	1515255	4
	Zn	67	771.186	ug/L	33.993	4	37	220772	4
	Zn	68	854.022	ug/L	35.281	4	353	1037235	1
	As	75	15.109	ug/L	0.158	1	548	25677	2
	As-1	75	14.247	ug/L	0.239	1	7252	29128	1
	Se	82	34.634	ug/L	0.444	1	-19	6048	1
	Se	78	32.869	ug/L	0.843	2	7320	19352	0
	Mo	98	15.201	ug/L	0.572	3	10	71615	2
	Y	89		ug/L			394786	380495	2
	Kr	83		ug/L			872	696	4
>	In	115		ug/L			1077756	999057	1
	Ag	107	5.318	ug/L	0.072	1	26	67999	2
	Cd	111	12.598	ug/L	0.189	1	127	59169	1
	Cd	114	12.796	ug/L	0.108	0	19	148900	2
	Sb	121	0.643	ug/L	0.004	0	152	9478	0
	Sb	123	0.643	ug/L	0.009	1	115	7124	0
	Ba	135	63.014	ug/L	0.596	0	7	275754	0
	Ba	137	62.887	ug/L	0.507	0	20	478253	1
>	Tb	159		ug/L			1262684	1195167	1
	Tl	205	9.262	ug/L	0.135	1	290	376343	0
	Pb	208	162.745	ug/L	1.662	1	247	8331921	0
	Bi	209		ug/L			3225208	3053799	0
	Th	232	9.602	ug/L	0.096	0	157	482953	0
	U	238	9.697	ug/L	0.060	0	3	490982	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:05:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1216296	2
	Be	9	0.126	ug/L	0.002	1	11	404	3
	C	13		ug/L			104879	155119	2
	Cl	37		ug/L			4277164	4218427	0
>	Sc	45		ug/L			1025260	927731	1
	V	51	37.771	ug/L	0.669	1	5531	658633	1
	V-1	51	38.346	ug/L	0.456	1	509	664000	0
	Cr	52	94.097	ug/L	2.439	2	16367	1404172	1
	Cr	53	96.018	ug/L	2.120	2	243	160387	1
	Mn	55	1193.972	ug/L	43.525	3	685	24865078	2
	Co	59	9.310	ug/L	0.405	4	119	137300	3
>	Ge	72		ug/L			592402	505252	1
	Ni	60	62.210	ug/L	1 975	3	86	191690	2
	Ni	62	65.647	ug/L	1.826	2	63	28118	1
	Cu	63	332.742	ug/L	31.455	9	91	2203867	8
	Cu	65	303.802	ug/L	9.393	3	47	923263	2
	Zn	66	2329.396	ug/L	41.999	1	191	3894949	0
	Zn	67	1839.239	ug/L	16.533	0	37	527042	0
	Zn	68	2157.590	ug/L	76.094	3	353	2623966	2
	As	75	8.649	ug/L	0.149	1	548	14913	0
	As-1	75	9.041	ug/L	0.209	2	7252	20765	0
	Se	82	0.414	ug/L	0.080	19	-19	55	24
	Se	78	0.740	ug/L	0.240	32	7320	6538	0
	Mo	98	13.003	ug/L	0.276	2	10	61348	1
	Y	89		ug/L			394786	406689	0
	Kr	83		ug/L			872	714	2
>	In	115		ug/L			1077756	977279	1
	Ag	107	1.055	ug/L	0.024	2	26	13210	2
	Cd	111	5.403	ug/L	0.119	2	127	24889	1
	Cd	114	5.464	ug/L	0.075	1	19	62190	0
	Sb	121	0.478	ug/L	0.012	2	152	6931	1
	Sb	123	0.486	ug/L	0.006	1	115	5294	0
	Ba	135	124.338	ug/L	1.402	1	7	532269	1
	Ba	137	125.230	ug/L	2 436	1	20	931502	1
>	Tb	159		ug/L			1262684	1201184	1
	Tl	205	0.076	ug/L	0.001	0	290	3387	1
	Pb	208	386.044	ug/L	2.859	0	247	19863225	0
	Bi	209		ug/L			3225208	2996011	0
	Th	232	0.645	ug/L	0.007	1	157	32734	2
	U	238	0.308	ug/L	0.009	3	3	15659	2

WL 67 : 02369

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:09:23
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1197734	1
	Be	9	0.116	ug/L	0.003	2	11	367	1
	C	13		ug/L			104879	160958	1
	Cl	37		ug/L			4277164	4187226	1
>	Sc	45		ug/L			1025260	922418	1
	V	51	36.043	ug/L	0.735	2	5531	625246	2
	V-1	51	35.942	ug/L	0.354	0	509	618929	1
	Cr	52	88.138	ug/L	2.080	2	16367	1308953	2
	Cr	53	87.816	ug/L	0.893	1	243	145891	1
	Mn	55	1158.706	ug/L	19.717	1	685	23997150	1
	Co	59	9.031	ug/L	0.153	1	119	132482	2
>	Ge	72		ug/L			592402	498900	1
	Ni	60	61.326	ug/L	0.910	1	86	186631	2
	Ni	62	62.755	ug/L	1.171	1	63	26542	0
	Cu	63	373.626	ug/L	11.507	3	91	2444047	1
	Cu	65	325.038	ug/L	3.934	1	47	975471	1
	Zn	66	2274.444	ug/L	4.590	0	191	3755644	1
	Zn	67	1825.685	ug/L	38.726	2	37	516480	1
	Zn	68	2082.440	ug/L	71.748	3	353	2500108	1
	As	75	8.160	ug/L	0.171	2	548	13917	0
	As-1	75	8.568	ug/L	0.251	2	7252	19747	0
	Se	82	0.399	ug/L	0.014	3	-19	52	5
	Se	78	0.891	ug/L	0.312	35	7320	6514	0
	Mo	98	10.897	ug/L	0.085	0	10	50767	1
	Y	89		ug/L			394786	404014	1
	Kr	83		ug/L			872	721	4
>	In	115		ug/L			1077756	986002	1
	Ag	107	1.057	ug/L	0.036	3	26	13354	2
	Cd	111	5.474	ug/L	0.131	2	127	25437	1
	Cd	114	5.397	ug/L	0.090	1	19	61975	1
	Sb	121	0.405	ug/L	0.008	2	152	5935	2
	Sb	123	0.409	ug/L	0.009	2	115	4502	1
	Ba	135	126.391	ug/L	2.654	2	7	545806	0
	Ba	137	126.530	ug/L	1.424	1	20	949590	0
>	Tb	159		ug/L			1262684	1207170	0
	Tl	205	0.068	ug/L	0.002	2	290	3073	2
	Pb	208	400.434	ug/L	4.906	1	247	20706698	0
	Bi	209		ug/L			3225208	2993334	0
	Th	232	0.516	ug/L	0.002	0	157	26365	0
	U	238	0.274	ug/L	0.004	1	3	13998	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:13:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1164625	1200518	2
	Be	9	25.339	ug/L	0.415	1	11	78072	3
	C	13		ug/L			104879	151677	4
	Cl	37		ug/L			4277164	4166528	1
>	Sc	45		ug/L			1025260	926584	2
	V	51	63.110	ug/L	1.031	1	5531	1095617	1
	V-1	51	62.985	ug/L	1.819	2	509	1088631	1
	Cr	52	111.796	ug/L	2.178	1	16367	1663261	0
	Cr	53	111.392	ug/L	4.770	4	243	185714	2
	Mn	55	1183.503	ug/L	18.493	1	685	24620349	2
	Co	59	32.213	ug/L	1.553	4	119	474093	3
>	Ge	72		ug/L			592402	502087	1
	Ni	60	90.155	ug/L	0.439	0	86	276061	1
	Ni	62	92.775	ug/L	2.213	2	63	39482	3
	Cu	63	377.923	ug/L	12.733	3	91	2488623	3
	Cu	65	324.153	ug/L	6.849	2	47	979049	2
	Zn	66	2327.032	ug/L	18.542	0	191	3867072	1
	Zn	67	1883.937	ug/L	32.973	1	37	536391	0
	Zn	68	2190.276	ug/L	22.654	1	353	2647402	1
	As	75	36.437	ug/L	0.651	1	548	60936	0
	As-1	75	33.957	ug/L	0 352	1	7252	60567	0
	Se	82	80.889	ug/L	1.734	2	-19	14075	0
	Se	78	74.894	ug/L	0.646	0	7320	35943	1
	Mo	98	37.100	ug/L	0.534	1	10	173912	0
	Y	89		ug/L			394786	412104	1
	Kr	83		ug/L			872	711	2
>	In	115		ug/L			1077756	987579	0
	Ag	107	12.453	ug/L	0.136	1	26	157359	1
	Cd	111	30.574	ug/L	0.067	0	127	141791	0
	Cd	114	30.771	ug/L	0.378	1	19	353873	0
	Sb	121	1.553	ug/L	0.020	1	152	22428	0
	Sb	123	1.538	ug/L	0.023	1	115	16693	2
	Ba	135	153.639	ug/L	0.717	0	7	664653	0
	Ba	137	153.197	ug/L	1.068	0	20	1151663	0
>	Tb	159		ug/L			1262684	1197986	0
	Tl	205	22.623	ug/L	0.116	0	290	921089	0
	Pb	208	416.675	ug/L	4.679	1	247	21381995	0
	Bi	209		ug/L			3225208	2995868	0
	Th	232	23.422	ug/L	0.402	1	157	1180628	0
	U	238	23.566	ug/L	0.206	0	3	1196020	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:17:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1218586	4
	Be	9	25.764	ug/L	0.683	2	11	80514	2
	C	13		ug/L			104879	156576	3
	Cl	37		ug/L			4277164	4146461	1
>	Sc	45		ug/L			1025260	924995	1
	V	51	56.892	ug/L	0.959	1	5531	986891	3
	V-1	51	57.380	ug/L	0.674	1	509	990677	2
	Cr	52	107.577	ug/L	1.429	1	16367	1598595	0
	Cr	53	109.208	ug/L	1.947	1	243	181851	0
	Mn	55	1130.245	ug/L	16.783	1	685	23472729	1
	Co	59	33.688	ug/L	0.118	0	119	495285	1
>	Ge	72		ug/L			592402	500838	0
	Ni	60	84.922	ug/L	0.759	0	86	259397	1
	Ni	62	86.207	ug/L	0.742	0	63	36590	1
	Cu	63	389.244	ug/L	9.332	2	91	2557105	2
	Cu	65	329.212	ug/L	4.735	1	47	992011	2
	Zn	66	2292.656	ug/L	41.603	1	191	3800826	2
	Zn	67	1786.111	ug/L	52.871	2	37	507295	2
	Zn	68	2093.922	ug/L	59 930	2	353	2525094	3
	As	75	36.910	ug/L	0.207	0	548	61580	1
	As-1	75	34.140	ug/L	0.147	0	7252	60715	1
	Se	82	88.846	ug/L	0.454	0	-19	15427	1
	Se	78	82.551	ug/L	0.409	0	7320	38890	1
	Mo	98	37.589	ug/L	0.624	1	10	175794	1
	Y	89		ug/L			394786	395396	0
	Kr	83		ug/L			872	721	4
>	In	115		ug/L			1077756	991643	1
	Ag	107	26.293	ug/L	0.280	1	26	333532	1
	Cd	111	29.810	ug/L	0.653	2	127	138781	0
	Cd	114	30.163	ug/L	0.320	1	19	348285	1
	Sb	121	24.489	ug/L	0.155	0	152	352953	1
	Sb	123	24.603	ug/L	0.316	1	115	266464	1
	Ba	135	145.087	ug/L	2.805	1	7	630114	1
	Ba	137	144.511	ug/L	5.074	3	20	1090339	1
>	Tb	159		ug/L			1262684	1206117	1
	Tl	205	22.812	ug/L	0.225	0	290	934991	0
	Pb	208	409.494	ug/L	3.258	0	247	21155805	0
	Bi	209		ug/L			3225208	2994257	2
	Th	232	23.311	ug/L	0.161	0	157	1183095	1
	U	238	23.209	ug/L	0.327	1	3	1185896	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 REF1 SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:21:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1188576	1
	Be	9	37.384	ug/L	1.749	4	11	113972	3
	C	13		ug/L			104879	118471	2
	Cl	37		ug/L			4277164	4007519	2
>	Sc	45		ug/L			1025260	893674	2
	V	51	28.865	ug/L	0.604	2	5531	485868	0
	V-1	51	28.926	ug/L	0.885	3	509	482391	0
	Cr	52	27.160	ug/L	0.391	1	16367	400752	4
	Cr	53	27.364	ug/L	0.667	2	243	44173	1
	Mn	55	178.544	ug/L	3.273	1	685	3582416	1
	Co	59	28.900	ug/L	0.605	2	119	410350	0
>	Ge	72		ug/L			592402	492046	1
	Ni	60	22.842	ug/L	0.767	3	86	68598	3
	Ni	62	22.785	ug/L	0 617	2	63	9538	1
	Cu	63	27.104	ug/L	0.098	0	91	174993	1
	Cu	65	26.546	ug/L	0.282	1	47	78611	0
	Zn	66	74.248	ug/L	1.055	1	191	121083	2
	Zn	67	75.067	ug/L	0.672	0	37	20979	1
	Zn	68	77.886	ug/L	0.103	0	353	92545	1
	As	75	54.635	ug/L	0.654	1	548	89322	0
	As-1	75	52.299	ug/L	0.460	0	7252	88165	0
	Se	82	76.783	ug/L	1.584	2	-19	13094	1
	Se	78	68.345	ug/L	0.356	0	7320	32676	0
	Mo	98	16.957	ug/L	0 532	3	10	77895	1
	Y	89		ug/L			394786	443435	1
	Kr	83		ug/L			872	724	6
>	In	115		ug/L			1077756	1001443	0
	Ag	107	31.633	ug/L	0 051	0	26	405287	1
	Cd	111	27.824	ug/L	0.331	1	127	130849	0
	Cd	114	27.650	ug/L	0.503	1	19	322437	0
	Sb	121	2.385	ug/L	0.035	1	152	34849	1
	Sb	123	2.459	ug/L	0.040	1	115	26992	1
	Ba	135	125.872	ug/L	0.733	0	7	552163	0
	Ba	137	125.265	ug/L	1.021	0	20	954897	1
>	Tb	159		ug/L			1262684	1186916	0
	Tl	205	47.370	ug/L	0.301	0	290	1910568	0
	Pb	208	49.343	ug/L	0.860	1	247	2508962	1
	Bi	209		ug/L			3225208	3025939	0
	Th	232	3.721	ug/L	0.061	1	157	185978	1
	U	238	0.493	ug/L	0.005	0	3	24816	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL67 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:25:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

RL As. Se

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1230894	2
[	Be	9	25.964	ug/L	0.652	2	11	81988	1
	C	13		ug/L			104879	120655	2
	Cl	37		ug/L			4277164	3954541	0
[>	Sc	45		ug/L			1025260	904751	1
[	V	51	25.247	ug/L	0.939	3	5531	430841	2
[	V-1	51	25.389	ug/L	0.751	2	509	428800	1
[	Cr	52	24.674	ug/L	0.649	2	16367	369713	0
[	Cr	53	25.144	ug/L	0.052	0	243	41124	1
[	Mn	55	25.289	ug/L	0.550	2	685	514238	0
[	Co	59	25.577	ug/L	0.592	2	119	367722	1
[>	Ge	72		ug/L			592402	504324	1
[	Ni	60	26.000	ug/L	0.599	2	86	80030	3
[	Ni	62	26.544	ug/L	0.716	2	63	11382	3
[	Cu	63	26.777	ug/L	0.346	1	91	177185	0
[	Cu	65	26.765	ug/L	0.342	1	47	81255	2
[	Zn	66	85.455	ug/L	1.334	1	191	142798	2
[	Zn	67	78.247	ug/L	1.828	2	37	22416	3
[	Zn	68	83.852	ug/L	1.293	1	353	102086	1
[	As	75	30.813	ug/L	0.248	0	548	51837	0
[	As-1	75	26.471	ug/L	0.295	1	7252	48793	2
[	Se	82	95.298	ug/L	2.036	2	-19	16660	0
[	Se	78	84.192	ug/L	0.731	0	7320	39812	1
[	Mo	98	29.572	ug/L	0.803	2	10	139225	1
	Y	89		ug/L			394786	358974	1
	Kr	83		ug/L			872	673	2
[>	In	115		ug/L			1077756	1002435	1
[	Ag	107	28.045	ug/L	0.449	1	26	359607	0
[	Cd	111	26.450	ug/L	0.469	1	127	124499	0
[	Cd	114	26.577	ug/L	0.802	3	19	310141	1
[	Sb	121	26.241	ug/L	0.620	2	152	382225	0
[	Sb	123	26.444	ug/L	0.481	1	115	289485	0
[	Ba	135	25.793	ug/L	0.560	2	7	113237	0
[	Ba	137	25.659	ug/L	0.740	2	20	195733	0
[>	Tb	159		ug/L			1262684	1180765	0
[	Tl	205	23.879	ug/L	0.330	1	290	958205	1
[	Pb	208	25.601	ug/L	0.224	0	247	1295143	0
[	Bi	209		ug/L			3225208	3098767	1
[	Th	232	22.778	ug/L	0.267	1	157	1131775	1
[	U	238	24.292	ug/L	0.283	1	3	1215177	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:31:05
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1190511	3
	Be	9	51.816	ug/L	1.136	2	11	158224	1
	C	13		ug/L			104879	116977	3
	Cl	37		ug/L			4277164	4123037	1
>	Sc	45		ug/L			1025260	879626	3
	V	51	49.903	ug/L	1.573	3	5531	823096	0
	V-1	51	50.142	ug/L	1.939	3	509	822506	0
	Cr	52	49.777	ug/L	1.340	2	16367	710730	2
	Cr	53	50.570	ug/L	2.371	4	243	80124	1
	Mn	55	47.955	ug/L	0.797	1	685	947415	1
	Co	59	49.386	ug/L	1.307	2	119	690008	1
>	Ge	72		ug/L			592402	483506	0
	Ni	60	50.715	ug/L	0.720	1	86	149568	0
	Ni	62	51.430	ug/L	0.880	1	63	21096	2
	Cu	63	51.148	ug/L	1.068	2	91	324407	1
	Cu	65	50.345	ug/L	0.743	1	47	146489	2
	Zn	66	52.886	ug/L	1.159	2	191	84777	1
	Zn	67	51.191	ug/L	0.966	1	37	14066	1
	Zn	68	52.290	ug/L	1.168	2	353	61143	1
	As	75	53.813	ug/L	0.515	0	548	86468	1
	As-1	75	52.718	ug/L	0.507	0	7252	87289	1
	Se	82	59.810	ug/L	0.554	0	-19	10020	0
	Se	78	54.547	ug/L	0.739	1	7320	26832	0
	Mo	98	59.030	ug/L	0.743	1	10	266494	0
	Y	89		ug/L			394786	357792	1
	Kr	83		ug/L			872	715	3
>	In	115		ug/L			1077756	975920	1
	Ag	107	53.161	ug/L	1.167	2	26	663609	1
	Cd	111	51.366	ug/L	0.759	1	127	235290	0
	Cd	114	52.102	ug/L	0.819	1	19	592045	0
	Sb	121	50.862	ug/L	0.839	1	152	721215	0
	Sb	123	51.591	ug/L	0.355	0	115	549819	0
	Ba	135	51.018	ug/L	0.705	1	7	218082	0
	Ba	137	50.180	ug/L	1.257	2	20	372695	1
>	Tb	159		ug/L			1262684	1173898	0
	Tl	205	45.571	ug/L	0.314	0	290	1817758	0
	Pb	208	47.997	ug/L	0.471	0	247	2413690	0
	Bi	209		ug/L			3225208	2942979	0
	Th	232	54.961	ug/L	0.677	1	157	2714555	0
	U	238	55.359	ug/L	0.562	1	3	2752948	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:37:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1182563	2
	Be	9	0.004	ug/L	0.004	94	11	23	51
	C	13		ug/L			104879	113687	2
	Cl	37		ug/L			4277164	3890922	1
>	Sc	45		ug/L			1025260	880926	1
	V	51	-0.002	ug/L	0.014	702	5531	4717	3
	V-1	51	-0.017	ug/L	0.002	14	509	157	24
	Cr	52	-0.003	ug/L	0.034	1244	16367	14020	2
	Cr	53	-0.052	ug/L	0.013	24	243	126	16
	Mn	55	0.013	ug/L	0.007	49	685	853	14
	Co	59	0.005	ug/L	0.004	79	119	168	30
>	Ge	72		ug/L			592402	493730	0
	Ni	60	-0.010	ug/L	0.004	44	86	42	30
	Ni	62	-0.007	ug/L	0.024	332	63	50	19
	Cu	63	0.018	ug/L	0.001	7	91	189	3
	Cu	65	0.007	ug/L	0.004	47	47	61	16
	Zn	66	0.139	ug/L	0.006	4	191	387	3
	Zn	67	0.084	ug/L	0.021	25	37	55	11
	Zn	68	0.130	ug/L	0.016	12	353	449	3
	As	75	-0.011	ug/L	0.017	153	548	439	7
	As-1	75	0.245	ug/L	0.033	13	7252	6430	1
	Se	82	0.014	ug/L	0.090	625	-19	-13	109
	Se	78	0.952	ug/L	0.109	11	7320	6472	1
	Mo	98	0.015	ug/L	0.001	4	10	77	3
	Y	89		ug/L			394786	346745	4
	Kr	83		ug/L			872	679	4
>	In	115		ug/L			1077756	996182	2
	Ag	107	0.006	ug/L	0.007	120	26	97	89
	Cd	111	0.002	ug/L	0.012	592	127	126	40
	Cd	114	0.011	ug/L	0.014	129	19	138	112
	Sb	121	0.097	ug/L	0.005	5	152	1539	6
	Sb	123	0.096	ug/L	0.009	8	115	1152	7
	Ba	135	0.010	ug/L	0.012	112	7	51	96
	Ba	137	0.007	ug/L	0.008	121	20	68	86
>	Tb	159		ug/L			1262684	1160708	0
	Tl	205	0.007	ug/L	0.004	58	290	526	28
	Pb	208	0.010	ug/L	0 007	67	247	707	45
	Bi	209		ug/L			3225208	3052746	0
	Th	232	0.247	ug/L	0.011	4	157	12200	5
	U	238	0.006	ug/L	0.003	57	3	286	55

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A-L SWN
Sample Dil Factor: 500
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:47:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	**Li**	**6**		ug/L			1164625	1175926	1
	Be	**9**	**0.008**	ug/L	0.002	25	11	34	16
	C	**13**		ug/L			104879	116942	4
	Cl	**37**		ug/L			4277164	3963058	2
>	**Sc**	**45**		ug/L			1025260	909854	1
	V	**51**	**1.662**	ug/L	0.062	3	5531	33113	2
	V-1	**51**	**1.672**	ug/L	0.031	1	509	28830	0
	Cr	**52**	**5.119**	ug/L	0.219	4	16367	88648	2
	Cr	**53**	**5.154**	ug/L	0.133	2	243	8647	1
	Mn	**55**	**89.510**	ug/L	3.106	3	685	1828989	2
	Co	**59**	**0.404**	ug/L	0.021	5	119	5949	3
>	**Ge**	**72**		ug/L			592402	504011	2
	Ni	**60**	**2.736**	ug/L	0.046	1	86	8478	0
	Ni	**62**	**2.833**	ug/L	0.252	8	63	1261	6
	Cu	**63**	**13.779**	ug/L	0.062	0	91	91165	2
	Cu	**65**	**13.662**	ug/L	0.436	3	47	41449	2
	Zn	**66**	**91.161**	ug/L	1.611	1	191	152191	0
	Zn	**67**	**80.518**	ug/L	1.219	1	37	23042	0
	Zn	**68**	**85.501**	ug/L	1.099	1	353	104053	3
	As	**75**	**0.375**	ug/L	0.010	2	548	1092	0
	As-1	**75**	**0.606**	ug/L	0.075	12	7252	7143	0
	Se	**82**	**0.100**	ug/L	0.048	48	-19	0	1079
	Se	**78**	**0.853**	ug/L	0.269	31	7320	6566	0
	Mo	**98**	**0.492**	ug/L	0.011	2	10	2323	0
	Y	**89**		ug/L			394786	349238	0
	Kr	**83**		ug/L			872	674	2
>	**In**	**115**		ug/L			1077756	1008434	1
	Ag	**107**	**0.046**	ug/L	0.003	5	26	615	5
	Cd	**111**	**0.244**	ug/L	0.010	4	127	1275	2
	Cd	**114**	**0.231**	ug/L	0.002	1	19	2731	1
	Sb	**121**	**0.042**	ug/L	0.004	10	152	764	7
	Sb	**123**	**0.042**	ug/L	0.007	17	115	569	13
	Ba	**135**	**5.754**	ug/L	0 179	3	7	25421	2
	Ba	**137**	**5.706**	ug/L	0.095	1	20	43814	0
>	**Tb**	**159**		ug/L			1262684	1169081	1
	Tl	**205**	**0.010**	ug/L	0.001	6	290	674	3
	Pb	**208**	**14.099**	ug/L	0.296	2	247	706105	0
	Bi	**209**		ug/L			3225208	3078593	0
	Th	**232**	**0.130**	ug/L	0.016	12	157	6530	11
	U	**238**	**0.014**	ug/L	0.001	5	3	675	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 A SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:51:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			1164625	1193100	1
	Be	**9**	**0.035**	ug/L	0.004	12	11	117	11
	C	**13**		ug/L			104879	120380	2
	Cl	**37**		ug/L			4277164	4142965	1
>	**Sc**	**45**		ug/L			1025260	904975	0
	V	**51**	**9.175**	ug/L	0.336	3	5531	159750	2
	V-1	**51**	**9.246**	ug/L	0 199	2	509	156528	1
	Cr	**52**	**27.988**	ug/L	0.549	1	16367	417606	1
	Cr	**53**	**28.230**	ug/L	0.059	0	243	46159	0
	Mn	**55**	**530.303**	ug/L	10.548	1	685	10776867	2
	Co	**59**	**2.104**	ug/L	0.020	0	119	30360	0
>	**Ge**	**72**		ug/L			592402	505009	1
	Ni	**60**	**14.383**	ug/L	0.097	0	86	44363	1
	Ni	**62**	**15.221**	ug/L	0.382	2	63	6557	1
	Cu	**63**	**73.661**	ug/L	0.769	1	91	487957	0
	Cu	**65**	**73.447**	ug/L	1.769	2	47	223164	2
	Zn	**66**	**468.505**	ug/L	8.007	1	191	783189	1
	Zn	**67**	**424.942**	ug/L	5.060	1	37	121740	1
	Zn	**68**	**458.435**	ug/L	11.453	2	353	557519	1
	As	**75**	**2.046**	ug/L	0.037	1	548	3883	1
	As-1	**75**	**2.306**	ug/L	0.040	1	7252	9899	1
	Se	**82**	**0.129**	ug/L	0.099	76	-19	5	300
	Se	**78**	**0.718**	ug/L	0.134	18	7320	6526	0
	Mo	**98**	**2.603**	ug/L	0.054	2	10	12279	1
	Y	**89**		ug/L			394786	367647	2
	Kr	**83**		ug/L			872	653	1
>	**In**	**115**		ug/L			1077756	995277	0
	Ag	**107**	**0.234**	ug/L	0.005	1	26	3006	0
	Cd	**111**	**1.291**	ug/L	0.028	2	127	6145	2
	Cd	114	**1.250**	ug/L	0.014	1	19	14503	2
	Sb	**121**	**0.103**	ug/L	0.005	5	152	1625	4
	Sb	**123**	**0.103**	ug/L	0.003	2	115	1227	1
	Ba	**135**	**31.401**	ug/L	0.569	1	7	136897	1
	Ba	137	**30.952**	ug/L	0.340	1	20	234503	0
>	**Tb**	**159**		ug/L			1262684	1171829	0
	Tl	**205**	**0.023**	ug/L	0.001	5	290	1174	4
	Pb	**208**	**75.142**	ug/L	0.570	0	247	3772159	0
	Bi	**209**		ug/L			3225208	3049778	0
	Th	**232**	**0.171**	ug/L	0.002	0	157	8566	1
	U	**238**	**0.069**	ug/L	0.001	1	3	3407	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ADUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:55:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1216150	1
	Be	9	0.032	ug/L	0.004	12	11	111	9
	C	13		ug/L			104879	123161	4
	Cl	37		ug/L			4277164	4252000	1
>	Sc	45		ug/L			1025260	908694	1
	V	51	8.082	ug/L	0.166	2	5531	141878	0
	V-1	51	8.001	ug/L	0.331	4	509	136013	2
	Cr	52	19.351	ug/L	0.160	0	16367	294415	1
	Cr	53	19.084	ug/L	0.541	2	243	31393	1
	Mn	55	262.683	ug/L	3.451	1	685	5359956	1
	Co	59	2.030	ug/L	0.027	1	119	29422	3
>	Ge	72		ug/L			592402	503272	0
	Ni	60	13.531	ug/L	0.527	3	86	41584	3
	Ni	62	13.921	ug/L	0.303	2	63	5982	1
	Cu	63	69.874	ug/L	0.567	0	91	461293	0
	Cu	65	69.734	ug/L	0.420	0	47	211172	1
	Zn	66	437.071	ug/L	11.406	2	191	728080	1
	Zn	67	402.085	ug/L	10.676	2	37	114804	3
	Zn	68	438.291	ug/L	9.500	2	353	531231	1
	As	75	1.835	ug/L	0.028	1	548	3519	1
	As-1	75	2.093	ug/L	0 039	1	7252	9524	0
	Se	82	0.184	ug/L	0.074	40	-19	15	84
	Se	78	0.863	ug/L	0.125	14	7320	6562	0
	Mo	98	2.408	ug/L	0.081	3	10	11323	2
	Y	89		ug/L			394786	367022	0
	Kr	83		ug/L			872	682	0
>	In	115		ug/L			1077756	1004238	2
	Ag	107	0.250	ug/L	0.009	3	26	3230	1
	Cd	111	1.220	ug/L	0.037	3	127	5866	1
	Cd	114	1.188	ug/L	0 029	2	19	13910	1
	Sb	121	0.099	ug/L	0.003	2	152	1588	0
	Sb	123	0.101	ug/L	0.009	9	115	1211	6
	Ba	135	26.914	ug/L	0.687	2	7	118360	1
	Ba	137	26.663	ug/L	0.552	2	20	203769	0
>	Tb	159		ug/L			1262684	1179961	0
	Tl	205	0.021	ug/L	0.000	2	290	1106	1
	Pb	208	73.685	ug/L	0.777	1	247	3724542	0
	Bi	209		ug/L			3225208	3107727	0
	Th	232	0.134	ug/L	0.003	1	157	6793	2
	U	238	0.060	ug/L	0.001	1	3	3015	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL68 ASPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 14:59:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1229550	3
	Be	9	5.422	ug/L	0.293	5	11	17100	2
	C	13		ug/L			104879	128447	0
	Cl	37		ug/L			4277164	4242467	0
>	Sc	45		ug/L			1025260	918742	1
	V	51	13.584	ug/L	0.453	3	5531	237737	2
	V-1	51	13.513	ug/L	0.411	3	509	232018	3
	Cr	52	27.334	ug/L	0.422	1	16367	414353	0
	Cr	53	27.100	ug/L	0.154	0	243	44993	1
	Mn	55	306.742	ug/L	11 519	3	685	6325830	2
	Co	59	7.207	ug/L	0.116	1	119	105304	0
>	Ge	72		ug/L			592402	511787	0
	Ni	60	19.703	ug/L	0.448	2	86	61548	1
	Ni	62	20.084	ug/L	0.305	1	63	8753	1
	Cu	63	74.034	ug/L	1.192	1	91	497041	1
	Cu	65	74.999	ug/L	0.610	0	47	230951	1
	Zn	66	486.102	ug/L	11.370	2	191	823453	1
	Zn	67	432.865	ug/L	16.429	3	37	125676	3
	Zn	68	469.166	ug/L	16.780	3	353	578179	2
	As	75	8.038	ug/L	0.151	1	548	14074	1
	As-1	75	7.590	ug/L	0.099	1	7252	18664	0
	Se	82	18.487	ug/L	0.297	1	-19	3266	0
	Se	78	17.519	ug/L	0.454	2	7320	13414	0
	Mo	98	8.591	ug/L	0.136	1	10	41057	0
	Y	89		ug/L			394786	363794	2
	Kr	83		ug/L			872	688	2
>	In	115		ug/L			1077756	1005138	0
	Ag	107	2.456	ug/L	0.057	2	26	31608	2
	Cd	111	6.611	ug/L	0.101	1	127	31296	1
	Cd	114	6.669	ug/L	0.073	1	19	78074	0
	Sb	121	0.440	ug/L	0.009	2	152	6562	1
	Sb	123	0.451	ug/L	0.013	2	115	5052	2
	Ba	135	34.684	ug/L	0.511	1	7	152712	1
	Ba	137	34.502	ug/L	0.530	1	20	263985	1
>	Tb	159		ug/L			1262684	1167659	0
	Tl	205	4.847	ug/L	0.072	1	290	192564	1
	Pb	208	102.804	ug/L	1.054	1	247	5142268	0
	Bi	209		ug/L			3225208	3081571	0
	Th	232	4.963	ug/L	0 077	1	157	243990	1
	U	238	5.040	ug/L	0.094	1	3	249293	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WL68-APOST-SWN~~ 222222
Sample Dil Factor: 100
Comments: 4-18-13
Sample Date/Time: Thursday, April 18, 2013 15:03:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1211215	2
	Be	9	26.704	ug/L	1.428	5	11	82923	2
	C	13		ug/L			104879	127073	2
	Cl	37		ug/L			4277164	4165989	3
>	Sc	45		ug/L			1025260	906566	0
	V	51	34.492	ug/L	0.415	1	5531	588197	0
	V-1	51	34.620	ug/L	0.544	1	509	585864	0
	Cr	52	52.671	ug/L	1.198	2	16367	774528	1
	Cr	53	53.100	ug/L	1.226	2	243	86775	1
	Mn	55	547.915	ug/L	9.444	1	685	11153797	1
	Co	59	27.031	ug/L	1.098	4	119	389423	3
>	Ge	72		ug/L			592402	509188	1
	Ni	60	39.989	ug/L	1.041	2	86	124186	0
	Ni	62	40.010	ug/L	1.308	3	63	17293	3
	Cu	63	98.501	ug/L	2.593	2	91	657725	0
	Cu	65	97.824	ug/L	2.959	3	47	299595	1
	Zn	66	545.184	ug/L	10.332	1	191	918749	0
	Zn	67	490.895	ug/L	9.720	1	37	141804	3
	Zn	68	528.480	ug/L	4.514	0	353	648061	1
	As	75	31.958	ug/L	0.736	2	548	54257	1
	As-1	75	29.027	ug/L	0.550	1	7252	53406	0
	Se	82	93.931	ug/L	2.493	2	-19	16578	1
	Se	78	88.171	ug/L	2.393	2	7320	41792	1
	Mo	98	2.535	ug/L	0.055	2	10	12059	1
	Y	89		ug/L			394786	365636	0
	Kr	83		ug/L			872	676	2
>	In	115		ug/L			1077756	993625	0
	Ag	107	26.712	ug/L	0.282	1	26	339555	0
	Cd	111	27.231	ug/L	0.491	1	127	127069	1
	Cd	114	27.394	ug/L	0.454	1	19	316970	1
	Sb	121	0.099	ug/L	0.003	2	152	1568	1
	Sb	123	0.101	ug/L	0.006	5	115	1203	4
	Ba	135	56.576	ug/L	0.422	0	7	246260	1
	Ba	137	55.914	ug/L	0.667	1	20	422905	0
>	Tb	159		ug/L			1262684	1181486	0
	Tl	205	23.621	ug/L	0.444	1	290	948384	1
	Pb	208	106.288	ug/L	0.939	0	247	5379555	0
	Bi	209		ug/L			3225208	3036307	0
	Th	232	23.650	ug/L	0.148	0	157	1175808	0
	U	238	24.030	ug/L	0 167	0	3	1202820	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FDUP SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:07:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	Li	6		ug/L			1164625	1204164	0
	Be	9	0.051	ug/L	0.005	9	11	168	9
	C	13		ug/L			104879	131166	3
	Cl	37		ug/L			4277164	4201594	0
>	Sc	45		ug/L			1025260	913745	0
	V	51	6.815	ug/L	0.058	0	5531	121102	1
	V-1	51	6.886	ug/L	0.130	1	509	117825	2
	Cr	52	20.556	ug/L	0.239	1	16367	313570	0
	Cr	53	20.795	ug/L	0.476	2	243	34385	2
	Mn	55	141.598	ug/L	0.900	0	685	2905856	1
	Co	59	2.639	ug/L	0.035	1	119	38419	0
>	Ge	72		ug/L			592402	510977	1
	Ni	60	20.535	ug/L	0.846	4	86	64018	2
	Ni	62	21.624	ug/L	0.640	2	63	9406	4
	Cu	63	97.064	ug/L	2.344	2	91	650619	3
	Cu	65	95.580	ug/L	2.643	2	47	293956	4
	Zn	66	870.506	ug/L	8.320	0	191	1472176	1
	Zn	67	773.775	ug/L	7.353	0	37	224286	2
	Zn	68	844.147	ug/L	13.729	1	353	1038836	3
	As	75	2.293	ug/L	0.047	2	548	4345	0
	As-1	75	2.459	ug/L	0.114	4	7252	10263	0
	Se	82	0.106	ug/L	0.090	84	-19	2	795
	Se	78	0.392	ug/L	0.261	66	7320	6471	0
	Mo	98	3.495	ug/L	0.130	3	10	16677	1
	Y	89		ug/L			394786	375437	1
	Kr	83		ug/L			872	718	5
>	In	115		ug/L			1077756	996934	1
	Ag	107	0.284	ug/L	0.012	4	26	3649	2
	Cd	111	2.414	ug/L	0.063	2	127	11406	1
	Cd	114	2.367	ug/L	0.031	1	19	27490	1
	Sb	121	0.469	ug/L	0.012	2	152	6930	1
	Sb	123	0.464	ug/L	0.011	2	115	5160	1
	Ba	135	75.900	ug/L	1.265	1	7	331420	0
	Ba	137	74.666	ug/L	1.796	2	20	566529	1
>	Tb	159		ug/L			1262684	1178302	1
	Tl	205	0.020	ug/L	0.000	2	290	1059	2
	Pb	208	237.949	ug/L	2 368	0	247	12009596	0
	Bi	209		ug/L			3225208	3045240	0
	Th	232	0.353	ug/L	0.006	1	157	17628	0
	U	238	0.075	ug/L	0.002	2	3	3725	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 F SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:11:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1164625	1211131	2
	Be	**9**	**0.045**	ug/L	0.004	9	11	152	6
	C	**13**		ug/L			104879	131706	2
	Cl	**37**		ug/L			4277164	4135065	2
>	**Sc**	**45**		ug/L			1025260	897930	3
	V	**51**	**6.878**	ug/L	0.172	2	5531	120013	2
	V-1	**51**	**6.936**	ug/L	0.180	2	509	116568	0
	Cr	**52**	**20.436**	ug/L	0.609	2	16367	306272	0
	Cr	**53**	**20.633**	ug/L	0.804	3	243	33506	1
	Mn	**55**	**139.375**	ug/L	4.330	3	685	2808995	1
	Co	**59**	**2.895**	ug/L	0.040	1	119	41398	2
>	**Ge**	**72**		ug/L			592402	516240	1
	Ni	**60**	**21.005**	ug/L	0.501	2	86	66197	3
	Ni	**62**	**21.451**	ug/L	0.169	0	63	9426	1
	Cu	**63**	**100.603**	ug/L	1.384	1	91	681319	2
	Cu	**65**	**98.377**	ug/L	2.428	2	47	305509	1
	Zn	**66**	**844.419**	ug/L	18.675	2	191	1443162	3
	Zn	**67**	**733.055**	ug/L	1.189	0	37	214654	0
	Zn	**68**	**808.869**	ug/L	5.250	0	353	1005470	1
	As	**75**	**2.212**	ug/L	0.011	0	548	4254	1
	As-1	**75**	**2.311**	ug/L	0.032	1	7252	10128	1
	Se	**82**	**0.151**	ug/L	0.025	16	-19	9	47
	Se	**78**	**0.119**	ug/L	0.190	159	7320	6427	1
	Mo	**98**	**3.491**	ug/L	0 088	2	10	16835	1
	Y	**89**		ug/L			394786	369432	3
	Kr	**83**		ug/L			872	693	3
>	**In**	**115**		ug/L			1077756	988490	1
	Ag	**107**	**0.379**	ug/L	0 003	0	26	4811	0
	Cd	**111**	**2.420**	ug/L	0 049	2	127	11339	1
	Cd	**114**	**2.433**	ug/L	0.055	2	19	28015	1
	Sb	**121**	**0.372**	ug/L	0.002	0	152	5490	1
	Sb	**123**	**0.386**	ug/L	0.002	0	115	4267	0
	Ba	**135**	**75.196**	ug/L	1.414	1	7	325564	0
	Ba	**137**	**74.965**	ug/L	0.951	1	20	564029	0
>	**Tb**	**159**		ug/L			1262684	1164096	0
	Tl	**205**	**0.017**	ug/L	0.001	6	290	924	5
	Pb	**208**	**231.328**	ug/L	2.629	1	247	11535105	0
	Bi	**209**		ug/L			3225208	3014214	1
	Th	**232**	**0.221**	ug/L	0.008	3	157	10961	2
	U	**238**	**0.089**	ug/L	0.002	1	3	4379	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FSPK SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:15:52
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1205760	0
	Be	9	5.036	ug/L	0.089	1	11	15591	2
	C	13		ug/L			104879	126361	3
	Cl	37		ug/L			4277164	4226281	1
>	Sc	45		ug/L			1025260	916929	0
	V	51	11.250	ug/L	0.346	3	5531	197376	2
	V-1	51	11.350	ug/L	0.330	2	509	194578	2
	Cr	52	24.798	ug/L	0.491	1	16367	376573	1
	Cr	53	25.133	ug/L	0.667	2	243	41657	2
	Mn	55	141.174	ug/L	1.319	0	685	2907185	1
	Co	59	7.249	ug/L	0.217	2	119	105707	2
>	Ge	72		ug/L			592402	512217	1
	Ni	60	28.592	ug/L	0.944	3	86	89342	2
	Ni	62	29.361	ug/L	0.170	0	63	12782	2
	Cu	63	100.959	ug/L	3.900	3	91	678085	2
	Cu	65	100.486	ug/L	2.262	2	47	309595	0
	Zn	66	862.702	ug/L	24.664	2	191	1462162	1
	Zn	67	769.140	ug/L	23.693	3	37	223401	2
	Zn	68	812.805	ug/L	23.971	2	353	1002257	2
	As	75	7.420	ug/L	0.284	3	548	13035	2
	As-1	75	7.102	ug/L	0.289	4	7252	17877	1
	Se	82	16.077	ug/L	0.406	2	-19	2840	1
	Se	78	15.517	ug/L	0.504	3	7320	12613	0
	Mo	98	7.963	ug/L	0.170	2	10	38085	0
	Y	89		ug/L			394786	368100	0
	Kr	83		ug/L			872	725	1
>	In	115		ug/L			1077756	979926	1
	Ag	107	4.883	ug/L	0.050	1	26	61243	2
	Cd	111	7.310	ug/L	0.095	1	127	33720	0
	Cd	114	7.393	ug/L	0.129	1	19	84364	0
	Sb	121	0.551	ug/L	0.012	2	152	7987	1
	Sb	123	0.551	ug/L	0.005	0	115	6006	2
	Ba	135	78.228	ug/L	1.933	2	7	335726	1
	Ba	137	77.044	ug/L	1 162	1	20	574662	1
>	Tb	159		ug/L			1262684	1163571	0
	Tl	205	4.377	ug/L	0.035	0	290	173304	0
	Pb	208	233.877	ug/L	2.305	0	247	11657435	0
	Bi	209		ug/L			3225208	3040264	0
	Th	232	4.537	ug/L	0.093	2	157	222253	1
	U	238	4.606	ug/L	0.047	1	3	227054	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 B REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:19:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

As Cu Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1123762	1
	Be	9	0.251	ug/L	0.016	6	11	733	4
	C	13		ug/L			104879	120026	1
	Cl	37		ug/L			4277164	4147816	2
>	Sc	45		ug/L			1025260	941514	2
	V	51	32.922	ug/L	0.742	2	5531	583144	0
	V-1	51	33.064	ug/L	0.855	2	509	580944	0
	Cr	52	23.053	ug/L	0.599	2	16367	360455	2
	Cr	53	23.520	ug/L	0.821	3	243	40027	1
	Mn	55	320.698	ug/L	6.514	2	685	6778212	0
	Co	59	9.448	ug/L	0.168	1	119	141450	2
>	Ge	72		ug/L			592402	475922	1
	Ni	60	27.798	ug/L	0 676	2	86	80715	1
	Ni	62	29.364	ug/L	1.390	4	63	11874	4
	Cu	63	83.040	ug/L	0 945	1	91	518448	2
	Cu	65	81.983	ug/L	2.539	3	47	234698	1
	Zn	66	249.990	ug/L	9.146	3	191	393792	2
	Zn	67	234.275	ug/L	4.657	1	37	63253	0
	Zn	68	243.868	ug/L	0 902	0	353	279659	1
	As	75	10.019	ug/L	0 246	2	548	16202	1
	As-1	75	10.610	ug/L	0.323	3	7252	21941	1
	Se	82	0.057	ug/L	0.039	68	-19	-6	98
	Se	78	1.407	ug/L	0.356	25	7320	6409	1
	Mo	98	1.530	ug/L	0 024	1	10	6806	1
	Y	89		ug/L			394786	482011	1
	Kr	83		ug/L			872	893	3
>	In	115		ug/L			1077756	949151	0
	Ag	107	0.146	ug/L	0.005	3	26	1789	3
	Cd	111	0.700	ug/L	0 012	1	127	3231	2
	Cd	114	0.658	ug/L	0.009	1	19	7293	2
	Sb	121	0.413	ug/L	0.013	3	152	5828	2
	Sb	123	0.417	ug/L	0.020	4	115	4417	4
	Ba	135	108.389	ug/L	1.461	1	7	450632	1
	Ba	137	107.545	ug/L	1.092	1	20	776967	0
>	Tb	159		ug/L			1262684	1130350	0
	Tl	205	0.046	ug/L	0.000	1	290	2043	0
	Pb	208	66.592	ug/L	0.379	0	247	3224615	0
	Bi	209		ug/L			3225208	2785063	1
	Th	232	0.801	ug/L	0.011	1	157	38242	0
	U	238	0.407	ug/L	0.010	2	3	19467	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 B REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:24:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

Cr, Pb

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1098457	2
	Be	9	0.918	ug/L	0.010	1	11	2598	2
	C	13		ug/L			104879	127916	1
	Cl	37		ug/L			4277164	4137344	1
>	Sc	45		ug/L			1025260	1152678	3
	V	51	111.881	ug/L	3.641	3	5531	2410376	0
	V-1	51	111.876	ug/L	4.251	3	509	2404148	0
	Cr	52	70.973	ug/L	1.780	2	16367	1320016	1
	Cr	53	70.945	ug/L	3.709	5	243	147170	2
	Mn	55	930.891	ug/L	17.563	1	685	24084578	1
	Co	59	27.971	ug/L	1.060	3	119	512040	0
>	Ge	72		ug/L			592402	420890	1
	Ni	60	111.333	ug/L	0 970	0	86	285772	1
	Ni	62	117.701	ug/L	3.119	2	63	41958	1
	Cu	63	318.639	ug/L	9.485	2	91	1758884	2
	Cu	65	319.512	ug/L	0.465	0	47	809055	1
	Zn	66	937.674	ug/L	22.470	2	191	1306073	1
	Zn	67	855.821	ug/L	14.310	1	37	204293	1
	Zn	68	923.102	ug/L	21.625	2	353	935347	1
	As	75	39.625	ug/L	0.471	1	548	55523	0
	As-1	75	41.130	ug/L	0.427	1	7252	60411	0
	Se	82	-1.161	ug/L	0.105	9	-19	-183	9
	Se	78	2.397	ug/L	0 107	4	7320	5998	1
	Mo	98	6.768	ug/L	0.329	4	10	26594	3
	Y	89		ug/L			394786	805992	0
	Kr	83		ug/L			872	2015	2
>	In	115		ug/L			1077756	883241	0
	Ag	107	0.529	ug/L	0.010	1	26	5994	2
	Cd	111	2.525	ug/L	0.022	0	127	10568	0
	Cd	114	2.399	ug/L	0.047	1	19	24687	1
	Sb	121	1.716	ug/L	0.019	1	152	22144	0
	Sb	123	1.725	ug/L	0.023	1	115	16726	1
	Ba	135	420.212	ug/L	4.966	1	7	1625889	1
	Ba	137	479.878	ug/L	4.514	0	20	3226181	0
>	Tb	159		ug/L			1262684	1091827	0
	Tl	205	0.158	ug/L	0.002	1	290	6126	1
	Pb	208	289.902	ug/L	1.527	0	247	13559013	0
	Bi	209		ug/L			3225208	1980200	0
	Th	232	2.695	ug/L	0.031	1	157	123926	0
	U	238	1.561	ug/L	0.016	1	3	72187	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:29:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1146953	1
	Be	9	52.594	ug/L	1.698	3	11	154737	1
	C	13		ug/L			104879	114221	3
	Cl	37		ug/L			4277164	4139346	4
>	Sc	45		ug/L			1025260	884482	1
	V	51	49.281	ug/L	0.942	1	5531	818005	2
	V-1	51	49.139	ug/L	1.002	2	509	811270	2
	Cr	52	49.660	ug/L	0.649	1	16367	713317	1
	Cr	53	49.190	ug/L	0.392	0	243	78451	1
	Mn	55	47.439	ug/L	1.045	2	685	942706	2
	Co	59	49.182	ug/L	0.602	1	119	691300	1
>	Ge	72		ug/L			592402	495958	1
	Ni	60	49.111	ug/L	0.934	1	86	148566	1
	Ni	62	48.292	ug/L	0.614	1	63	20323	2
	Cu	63	50.390	ug/L	1 219	2	91	327894	3
	Cu	65	48.998	ug/L	1.184	2	47	146214	1
	Zn	66	50.295	ug/L	0.459	0	191	82714	1
	Zn	67	51.445	ug/L	1.060	2	37	14499	1
	Zn	68	50.118	ug/L	0 590	1	353	60125	0
	As	75	52.988	ug/L	0.789	1	548	87330	0
	As-1	75	51.437	ug/L	0 870	1	7252	87495	0
	Se	82	59.841	ug/L	0.723	1	-19	10283	0
	Se	78	52.825	ug/L	1.094	2	7320	26846	0
	Mo	98	57.812	ug/L	1.095	1	10	267716	1
	Y	89		ug/L			394786	358267	1
	Kr	83		ug/L			872	714	3
>	In	115		ug/L			1077756	963343	0
	Ag	107	54.496	ug/L	0.685	1	26	671643	1
	Cd	111	50.674	ug/L	0.077	0	127	229165	0
	Cd	114	50.780	ug/L	0 811	1	19	569640	1
	Sb	121	50.546	ug/L	0.257	0	152	707628	1
	Sb	123	50.853	ug/L	0.542	1	115	534982	0
	Ba	135	50.756	ug/L	0.670	1	7	214182	0
	Ba	137	49.835	ug/L	0.768	1	20	365442	1
>	Tb	159		ug/L			1262684	1121834	2
	Tl	205	47.001	ug/L	1.441	3	290	1790875	0
	Pb	208	49.430	ug/L	1.306	2	247	2374757	1
	Bi	209		ug/L			3225208	2951962	1
	Th	232	56.411	ug/L	1.713	3	157	2661660	1
	U	238	57.755	ug/L	1.746	3	3	2743604	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:36:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1179625	1
	Be	9	0.004	ug/L	0.007	192	11	22	96
	C	13		ug/L			104879	110443	2
	Cl	37		ug/L			4277164	4101646	3
>	Sc	45		ug/L			1025260	886391	1
	V	51	-0.000	ug/L	0.010	2380	5531	4772	1
	V-1	51	-0.011	ug/L	0.011	104	509	257	71
	Cr	52	-0.014	ug/L	0 024	174	16367	13953	2
	Cr	53	-0.049	ug/L	0.010	20	243	132	10
	Mn	55	0.054	ug/L	0.066	121	685	1661	77
	Co	59	0.006	ug/L	0.005	80	119	189	34
>	Ge	72		ug/L			592402	488526	0
	Ni	60	-0.008	ug/L	0.007	86	86	46	47
	Ni	62	0.001	ug/L	0.012	936	63	53	8
	Cu	63	0.034	ug/L	0.017	48	91	295	36
	Cu	65	0.017	ug/L	0.015	89	47	89	50
	Zn	66	0.175	ug/L	0.055	31	191	439	20
	Zn	67	0.120	ug/L	0.034	28	37	64	14
	Zn	68	0.174	ug/L	0.049	28	353	496	11
	As	75	-0.014	ug/L	0.007	48	548	430	2
	As-1	75	0.278	ug/L	0.045	16	7252	6413	1
	Se	82	0.060	ug/L	0.024	39	-19	-6	67
	Se	78	1.136	ug/L	0.174	15	7320	6475	1
	Mo	98	0.011	ug/L	0.001	8	10	56	7
	Y	89		ug/L			394786	355251	2
	Kr	83		ug/L			872	667	1
>	In	115		ug/L			1077756	983858	1
	Ag	107	0.003	ug/L	0 001	30	26	61	18
	Cd	111	0.003	ug/L	0.002	62	127	131	6
	Cd	114	0.002	ug/L	0.000	16	19	42	10
	Sb	121	0.092	ug/L	0 011	12	152	1448	10
	Sb	123	0.096	ug/L	0.005	5	115	1131	5
	Ba	135	0.068	ug/L	0.104	153	7	300	150
	Ba	137	0.067	ug/L	0.106	157	20	521	152
>	Tb	159		ug/L			1262684	1126978	1
	Tl	205	0.009	ug/L	0.009	106	290	595	60
	Pb	208	0.045	ug/L	0.062	136	247	2422	124
	Bi	209		ug/L			3225208	3083048	0
	Th	232	0.216	ug/L	0.009	4	157	10371	3
	U	238	0.006	ug/L	0.005	86	3	305	86

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ADUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:40:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1164625	1281334	2
	Be	9	0.004	ug/L	0.001	25	11	25	14
	C	13		ug/L			104879	131752	2
	Cl	37		ug/L			4277164	4886064	2
>	Sc	45		ug/L			1025260	873789	1
	V	51	0.212	ug/L	0.006	2	5531	8170	2
	V-1	51	0.212	ug/L	0.005	2	509	3884	2
	Cr	52	0.411	ug/L	0.023	5	16367	19659	1
	Cr	53	0.410	ug/L	0.026	6	243	850	3
	Mn	55	433.927	ug/L	10.106	2	685	8512267	0
	Co	59	1.598	ug/L	0.018	1	119	22286	0
>	Ge	72		ug/L			592402	476764	1
	Ni	60	12.354	ug/L	0.271	2	86	35978	2
	Ni	62	12.684	ug/L	0.454	3	63	5166	2
	Cu	63	9.277	ug/L	0.284	3	91	58066	1
	Cu	65	8.466	ug/L	0.191	2	47	24313	0
	Zn	66	126.756	ug/L	4.126	3	191	200109	2
	Zn	67	113.673	ug/L	4.951	4	37	30755	3
	Zn	68	122.148	ug/L	0.979	0	353	140463	1
	As	75	0.678	ug/L	0.012	1	548	1509	0
	As-1	75	0.814	ug/L	0.142	17	7252	7073	1
	Se	82	1.250	ug/L	0 056	4	-19	190	5
	Se	78	1.905	ug/L	0.579	30	7320	6607	1
	Mo	98	2.755	ug/L	0.091	3	10	12269	2
	Y	89		ug/L			394786	376461	2
	Kr	83		ug/L			872	730	4
>	In	115		ug/L			1077756	941190	1
	Ag	107	0.011	ug/L	0.001	6	26	156	5
	Cd	111	0.247	ug/L	0.008	3	127	1199	1
	Cd	114	0.240	ug/L	0.009	3	19	2651	2
	Sb	121	1.981	ug/L	0.070	3	152	27207	1
	Sb	123	2.006	ug/L	0.052	2	115	20709	1
	Ba	135	18.077	ug/L	0.514	2	7	74509	1
	Ba	137	17.599	ug/L	0.467	2	20	126064	0
>	Tb	159		ug/L			1262684	1134486	1
	Tl	205	0.028	ug/L	0.003	9	290	1341	6
	Pb	208	7.707	ug/L	0.122	1	247	374739	0
	Bi	209		ug/L			3225208	2759262	1
	Th	232	0.118	ug/L	0 009	7	157	5775	8
	U	238	0.004	ug/L	0.000	6	3	206	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 A REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:44:26
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

Zn, Be

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1295205	1
[	Be	9	0.002	ug/L	0.002	95	11	18	32
	C	13		ug/L			104879	126190	2
	Cl	37		ug/L			4277164	4995115	1
[>	Sc	45		ug/L			1025260	877678	0
[	V	51	0.199	ug/L	0.003	1	5531	7992	1
[	V-1	51	0.208	ug/L	0.005	2	509	3837	2
[	Cr	52	0.377	ug/L	0.028	7	16367	19280	1
[	Cr	53	0.407	ug/L	0.028	6	243	850	4
[	Mn	55	403.609	ug/L	8.510	2	685	7953696	1
[	Co	59	1.500	ug/L	0.011	0	119	21022	1
[>	Ge	72		ug/L			592402	473520	1
[	Ni	60	11.701	ug/L	0.013	0	86	33852	1
[	Ni	62	11.960	ug/L	0.385	3	63	4842	2
[	Cu	63	7.816	ug/L	0.118	1	91	48610	0
[	Cu	65	7.036	ug/L	0.089	1	47	20080	1
[	Zn	66	124.085	ug/L	0.833	0	191	194616	1
[	Zn	67	111.672	ug/L	2.604	2	37	30015	2
[	Zn	68	119.361	ug/L	1.735	1	353	136316	0
[	As	75	0.673	ug/L	0.027	4	548	1492	4
[	As-1	75	0.830	ug/L	0.073	8	7252	7050	0
[	Se	82	1.267	ug/L	0.119	9	-19	192	10
[	Se	78	2.056	ug/L	0.396	19	7320	6619	1
[	Mo	98	2.695	ug/L	0.033	1	10	11924	0
	Y	89		ug/L			394786	382112	1
	Kr	83		ug/L			872	749	2
[>	In	115		ug/L			1077756	964182	0
[	Ag	107	0.008	ug/L	0.001	9	26	124	7
[	Cd	111	0.241	ug/L	0.007	2	127	1206	2
[	Cd	114	0.230	ug/L	0.002	0	19	2598	1
[	Sb	121	1.879	ug/L	0.007	0	152	26458	0
[	Sb	123	1.896	ug/L	0.023	1	115	20059	0
[	Ba	135	16.899	ug/L	0.205	1	7	71379	1
[	Ba	137	16.909	ug/L	0.126	0	20	124115	0
[>	Tb	159		ug/L			1262684	1150151	1
[	Tl	205	0.022	ug/L	0.001	3	290	1127	2
[	Pb	208	7.340	ug/L	0 052	0	247	361863	0
[	Bi	209		ug/L			3225208	2786365	1
[	Th	232	0.034	ug/L	0.004	12	157	1793	12
[	U	238	0.004	ug/L	0.000	4	3	193	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ASPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:48:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1291767	2
	Be	9	9.146	ug/L	0.440	4	11	30308	2
	C	13		ug/L			104879	131025	1
	Cl	37		ug/L			4277164	4972645	3
>	Sc	45		ug/L			1025260	874654	0
	V	51	9.833	ug/L	0.077	0	5531	165162	0
	V-1	51	9.928	ug/L	0.155	1	509	162418	1
	Cr	52	9.670	ug/L	0.109	1	16367	148595	0
	Cr	53	9.986	ug/L	0.186	1	243	15913	1
	Mn	55	414.932	ug/L	2.838	0	685	8149383	0
	Co	59	11.013	ug/L	0.142	1	119	153176	2
>	Ge	72		ug/L			592402	476917	2
	Ni	60	20.905	ug/L	0.425	2	86	60869	3
	Ni	62	21.463	ug/L	0.511	2	63	8710	1
	Cu	63	17.504	ug/L	0.227	1	91	109547	1
	Cu	65	16.756	ug/L	0.970	5	47	48073	3
	Zn	66	151.435	ug/L	5.095	3	191	239061	1
	Zn	67	136.971	ug/L	5.085	3	37	37056	1
	Zn	68	147.108	ug/L	3.608	2	353	169105	0
	As	75	14.038	ug/L	0.595	4	548	22560	1
	As-1	75	11.538	ug/L	0.570	4	7252	23390	1
	Se	82	41.366	ug/L	1.444	3	-19	6827	1
	Se	78	34.133	ug/L	1.577	4	7320	18759	1
	Mo	98	16.243	ug/L	0.463	2	10	72310	0
	Y	89		ug/L			394786	387021	1
	Kr	83		ug/L			872	748	9
>	In	115		ug/L			1077756	968900	1
	Ag	107	8.870	ug/L	0.196	2	26	109954	1
	Cd	111	10.274	ug/L	0 093	0	127	46821	1
	Cd	114	10.199	ug/L	0.161	1	19	115096	2
	Sb	121	12.225	ug/L	0.018	0	152	172237	1
	Sb	123	12.282	ug/L	0.155	1	115	130025	0
	Ba	135	26.463	ug/L	0.526	1	7	112304	1
	Ba	137	26.821	ug/L	0.379	1	20	197815	1
>	Tb	159		ug/L			1262684	1160610	0
	Tl	205	9.022	ug/L	0.079	0	290	356031	1
	Pb	208	16.440	ug/L	0.079	0	247	817592	0
	Bi	209		ug/L			3225208	2826605	0
	Th	232	7.398	ug/L	0.098	1	157	361438	1
	U	238	9.430	ug/L	0 097	1	3	463687	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WL49 APOST REN~~ 222222-
Sample Dil Factor: 5 4-1943
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:52:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1288143	2
[	Be	9	23.807	ug/L	0.788	3	11	78683	2
	C	13		ug/L			104879	131621	2
	Cl	37		ug/L			4277164	5079986	2
[>	Sc	45		ug/L			1025260	874950	0
[	V	51	24.592	ug/L	0.170	0	5531	406136	1
[	V-1	51	24.614	ug/L	0.104	0	509	402167	0
[	Cr	52	24.674	ug/L	0.533	2	16367	357633	2
[	Cr	53	24.746	ug/L	0.616	2	243	39143	2
[	Mn	55	438.732	ug/L	14.684	3	685	8619085	2
[	Co	59	24.942	ug/L	0.699	2	119	346857	2
[>	Ge	72		ug/L			592402	480213	1
[	Ni	60	35.795	ug/L	0.901	2	86	104855	1
[	Ni	62	36.011	ug/L	1.741	4	63	14680	3
[	Cu	63	31.929	ug/L	0.248	0	91	201170	0
[	Cu	65	31.166	ug/L	0.161	0	47	90074	1
[	Zn	66	197.186	ug/L	2.727	1	191	313554	1
[	Zn	67	176.454	ug/L	3.900	2	37	48079	1
[	Zn	68	191.427	ug/L	6.073	3	353	221559	3
[	As	75	35.035	ug/L	0.279	0	548	56068	1
[	As-1	75	27.992	ug/L	0.392	1	7252	48784	0
[	Se	82	108.399	ug/L	1.063	0	-19	18051	2
[	Se	78	87.553	ug/L	1 345	1	7320	39183	0
[	Mo	98	2.756	ug/L	0 082	2	10	12365	2
	Y	89		ug/L			394786	393640	0
	Kr	83		ug/L			872	753	2
[>	In	115		ug/L			1077756	981406	1
[	Ag	107	27.357	ug/L	0.595	2	26	343400	0
[	Cd	111	25.236	ug/L	0.409	1	127	116301	0
[	Cd	114	25.298	ug/L	0.279	1	19	289111	1
[	Sb	121	1.854	ug/L	0.027	1	152	26573	0
[	Sb	123	1.876	ug/L	0.034	1	115	20205	1
[	Ba	135	41.996	ug/L	0.926	2	7	180498	0
[	Ba	137	41.783	ug/L	1.275	3	20	312039	1
[>	Tb	159		ug/L			1262684	1195871	1
[	Tl	205	22.108	ug/L	0.183	0	290	898513	1
[	Pb	208	30.308	ug/L	0.292	0	247	1552763	0
[	Bi	209		ug/L			3225208	2838460	0
[	Th	232	22.096	ug/L	0.455	2	157	1111797	1
[	U	238	23.326	ug/L	0.323	1	3	1181631	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 18, 2013 15:56:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			1164625	1475169	0
[	**Be**	**9**	**0.004**	ug/L	0.001	19	11	29	10
	C	**13**		ug/L			104879	161231	3
	Cl	**37**		ug/L			4277164	6110272	2
[>	**Sc**	**45**		ug/L			1025260	886000	2
[	**V**	**51**	**0.494**	ug/L	0.013	2	5531	12948	0
[	**V-1**	**51**	**0.526**	ug/L	0.007	1	509	9125	2
[	**Cr**	**52**	**0.852**	ug/L	0.056	6	16367	26153	1
[	**Cr**	**53**	**0.956**	ug/L	0.009	0	243	1732	1
[	**Mn**	**55**	**984.269**	ug/L	30.021	3	685	19575660	2
[	**Co**	**59**	**3.575**	ug/L	0.024	0	119	50438	1
[>	**Ge**	**72**		ug/L			592402	442229	1
[	**Ni**	**60**	**29.953**	ug/L	0.779	2	86	80827	2
[	**Ni**	**62**	**30.738**	ug/L	1.263	4	63	11547	3
[	**Cu**	**63**	**22.199**	ug/L	0.305	1	91	128823	0
[	**Cu**	**65**	**20.602**	ug/L	0.722	3	47	54830	2
[	**Zn**	**66**	**287.460**	ug/L	1.891	0	191	420871	0
[	**Zn**	**67**	**259.040**	ug/L	5.369	2	37	64987	1
[	**Zn**	**68**	**274.858**	ug/L	5.573	2	353	292829	1
[	**As**	**75**	**1.787**	ug/L	0 067	3	548	3021	3
[	**As-1**	**75**	**1.765**	ug/L	0 037	2	7252	7905	0
[	**Se**	**82**	**3.315**	ug/L	0.163	4	-19	494	5
[	**Se**	**78**	**3.817**	ug/L	0 253	6	7320	6799	0
[	**Mo**	**98**	**7.697**	ug/L	0.098	1	10	31789	0
	Y	**89**		ug/L			394786	408782	0
	Kr	**83**		ug/L			872	856	2
[>	**In**	**115**		ug/L			1077756	945488	0
[	**Ag**	**107**	**0.026**	ug/L	0.002	7	26	333	7
[	**Cd**	**111**	**0.559**	ug/L	0.012	2	127	2592	1
[	**Cd**	**114**	**0.565**	ug/L	0.001	0	19	6233	0
[	**Sb**	**121**	**4.673**	ug/L	0.048	1	152	64331	1
[	**Sb**	**123**	**4.703**	ug/L	0.049	1	115	48656	1
[	**Ba**	**135**	**43.918**	ug/L	0.247	0	7	181898	0
[	**Ba**	**137**	**43.549**	ug/L	0.482	1	20	313427	0
[>	**Tb**	**159**		ug/L			1262684	1189722	0
[	**Tl**	**205**	**0.033**	ug/L	0.002	5	290	1603	3
[	**Pb**	**208**	**16.810**	ug/L	0.130	0	247	856946	0
[	**Bi**	**209**		ug/L			3225208	2528574	0
[	**Th**	**232**	**0.198**	ug/L	0.020	9	157	10042	9
[	**U**	**238**	**0.017**	ug/L	0.001	6	3	862	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CDUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 16:00:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

Be 4-18-13

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1339710	0
[	Be	9	0.004	ug/L	0.001	38	11	26	19
	C	13		ug/L			104879	136122	1
	Cl	37		ug/L			4277164	5119442	2
[>	Sc	45		ug/L			1025260	906838	0
[	V	51	0.136	ug/L	0.016	12	5531	7187	3
[	V-1	51	0.152	ug/L	0.009	6	509	3021	4
[	Cr	52	0.168	ug/L	0.019	11	16367	16901	1
[	Cr	53	0.222	ug/L	0.014	6	243	577	3
[	Mn	55	378.296	ug/L	8.212	2	685	7702419	1
[	Co	59	1.284	ug/L	0.030	2	119	18603	2
[>	Ge	72		ug/L			592402	472503	0
[	Ni	60	11.216	ug/L	0.308	2	86	32382	2
[	Ni	62	11.196	ug/L	0.152	1	63	4527	1
[	Cu	63	1.146	ug/L	0 029	2	91	7175	2
[	Cu	65	0.625	ug/L	0.007	1	47	1813	0
[	Zn	66	34.815	ug/L	0.492	1	191	54593	0
[	Zn	67	31.507	ug/L	0.331	1	37	8472	0
[	Zn	68	34.042	ug/L	0.233	0	353	39002	1
[	As	75	0.569	ug/L	0.019	3	548	1326	2
[	As-1	75	0.831	ug/L	0.032	3	7252	7037	0
[	Se	82	1.170	ug/L	0.058	4	-19	176	6
[	Se	78	2.452	ug/L	0.115	4	7320	6754	0
[	Mo	98	2.478	ug/L	0.048	1	10	10940	2
	Y	89		ug/L			394786	395628	1
	Kr	83		ug/L			872	778	1
[>	In	115		ug/L			1077756	998027	0
[	Ag	107	0.003	ug/L	0.001	27	26	64	16
[	Cd	111	0.065	ug/L	0.002	2	127	423	2
[	Cd	114	0.062	ug/L	0.002	2	19	733	2
[	Sb	121	1.769	ug/L	0.018	1	152	25796	0
[	Sb	123	1.781	ug/L	0.017	0	115	19511	0
[	Ba	135	16.627	ug/L	0.236	1	7	72691	0
[	Ba	137	16.220	ug/L	0.089	0	20	123243	1
[>	Tb	159		ug/L			1262684	1210663	0
[	Tl	205	0.012	ug/L	0.000	3	290	783	2
[	Pb	208	1.938	ug/L	0.007	0	247	100744	0
[	Bi	209		ug/L			3225208	2868859	0
[	Th	232	0.024	ug/L	0.008	33	157	1374	29
[	U	238	0.004	ug/L	0.001	18	3	206	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 C REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 16:05:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	**Li**	**6**		ug/L			1164625	1341737	0
[	**Be**	**9**	**0.004**	ug/L	0.001	20	11	26	11
	C	**13**		ug/L			104879	133027	3
	Cl	**37**		ug/L			4277164	5078508	3
[>	**Sc**	**45**		ug/L			1025260	888197	1
[	**V**	**51**	**0.136**	ug/L	0.013	9	5531	7047	2
[	**V-1**	**51**	**0.152**	ug/L	0.003	1	509	2953	2
[	**Cr**	**52**	**0.186**	ug/L	0.026	14	16367	16804	1
[	**Cr**	**53**	**0.237**	ug/L	0.033	14	243	589	9
[	**Mn**	**55**	**384.856**	ug/L	7.085	1	685	7674736	0
[	**Co**	**59**	**1.305**	ug/L	0.010	0	119	18518	1
[>	**Ge**	**72**		ug/L			592402	474813	0
[	**Ni**	**60**	**10.899**	ug/L	0.091	0	86	31622	0
[	**Ni**	**62**	**11.368**	ug/L	0.183	1	63	4618	1
[	**Cu**	**63**	**1.115**	ug/L	0.026	2	91	7016	2
[	**Cu**	**65**	**0.629**	ug/L	0.009	1	47	1834	1
[	**Zn**	**66**	**34.407**	ug/L	0.888	2	191	54219	2
[	**Zn**	**67**	**31.798**	ug/L	0.829	2	37	8593	2
[	**Zn**	**68**	**33.356**	ug/L	0.381	1	353	38407	0
[	**As**	**75**	**0.542**	ug/L	0.022	4	548	1291	2
[	**As-1**	**75**	**0.751**	ug/L	0.040	5	7252	6951	1
[	**Se**	**82**	**1.151**	ug/L	0.013	1	-19	173	0
[	**Se**	**78**	**2.171**	ug/L	0.089	4	7320	6682	0
[	**Mo**	**98**	**2.490**	ug/L	0.078	3	10	11048	3
	Y	**89**		ug/L			394786	389884	0
	Kr	**83**		ug/L			872	758	1
[>	**In**	**115**		ug/L			1077756	987254	0
[	**Ag**	**107**	**0.003**	ug/L	0.001	19	26	59	11
[	**Cd**	**111**	**0.065**	ug/L	0.003	3	127	418	3
[	**Cd**	**114**	**0.064**	ug/L	0.001	1	19	753	1
[	**Sb**	**121**	**1.760**	ug/L	0.024	1	152	25386	0
[	**Sb**	**123**	**1.800**	ug/L	0.011	0	115	19508	0
[	**Ba**	**135**	**16.677**	ug/L	0.240	1	7	72123	0
[	**Ba**	**137**	**16.376**	ug/L	0 140	0	20	123074	0
[>	**Tb**	**159**		ug/L			1262684	1224764	1
[	**Tl**	**205**	**0.012**	ug/L	0.001	8	290	776	3
[	**Pb**	**208**	**1.914**	ug/L	0.048	2	247	100606	0
[	**Bi**	**209**		ug/L			3225208	2900933	0
[	**Th**	**232**	**0.015**	ug/L	0.005	30	157	908	27
[	**U**	**238**	**0.003**	ug/L	0.000	12	3	153	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CSPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 18, 2013 16:09:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1164625	1332481	0
[	Be	9	9.543	ug/L	0.144	1	11	32642	1
	C	13		ug/L			104879	133386	2
	Cl	37		ug/L			4277164	4975048	2
[>	Sc	45		ug/L			1025260	891229	0
[	V	51	9.893	ug/L	0.246	2	5531	169290	2
[	V-1	51	9.907	ug/L	0.186	1	509	165135	1
[	Cr	52	9.653	ug/L	0.206	2	16367	151172	2
[	Cr	53	9.698	ug/L	0.111	1	243	15753	0
[	Mn	55	407.498	ug/L	5 063	1	685	8154577	0
[	Co	59	10.881	ug/L	0.021	0	119	154198	0
[>	Ge	72		ug/L			592402	469440	1
[	Ni	60	21.135	ug/L	0.701	3	86	60547	2
[	Ni	62	21.782	ug/L	0.752	3	63	8703	3
[	Cu	63	11.049	ug/L	0.337	3	91	68091	2
[	Cu	65	10.446	ug/L	0.405	3	47	29531	3
[	Zn	66	67.590	ug/L	0.485	0	191	105160	0
[	Zn	67	62.048	ug/L	0.752	1	37	16549	1
[	Zn	68	64.814	ug/L	1.393	2	353	73512	1
[	As	75	14.941	ug/L	0.164	1	548	23621	0
[	As-1	75	12.036	ug/L	0.235	1	7252	23783	1
[	Se	82	45.972	ug/L	1.224	2	-19	7474	2
[	Se	78	37.584	ug/L	0.106	0	7320	19755	0
[	Mo	98	16.929	ug/L	0 416	2	10	74211	2
	Y	89		ug/L			394786	398338	0
	Kr	83		ug/L			872	773	2
[>	In	115		ug/L			1077756	999263	0
[	Ag	107	9.945	ug/L	0.161	1	26	127155	1
[	Cd	111	10.445	ug/L	0 049	0	127	49088	0
[	Cd	114	10.272	ug/L	0.100	0	19	119549	0
[	Sb	121	12.248	ug/L	0.057	0	152	177965	1
[	Sb	123	12.423	ug/L	0.112	0	115	135642	0
[	Ba	135	27.001	ug/L	0.228	0	7	118195	0
[	Ba	137	26.899	ug/L	0.239	0	20	204612	0
[>	Tb	159		ug/L			1262684	1222974	0
[	Tl	205	8.990	ug/L	0.131	1	290	373796	0
[	Pb	208	11.262	ug/L	0.202	1	247	590190	0
[	Bi	209		ug/L			3225208	2881785	0
[	Th	232	8.491	ug/L	0.236	2	157	436994	1
[	U	238	9.319	ug/L	0.200	2	3	482757	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WL49 CPOST REN~~ zzzzzz
Sample Dil Factor: 5 4-19-13
Comments:
Sample Date/Time: Thursday, April 18, 2013 16:13:18
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1347776	1
	Be	9	23.023	ug/L	0.601	2	11	79616	1
	C	13		ug/L			104879	139321	1
	Cl	37		ug/L			4277164	5053929	2
>	Sc	45		ug/L			1025260	890554	0
	V	51	24.193	ug/L	0.222	0	5531	406736	0
	V-1	51	24.236	ug/L	0.374	1	509	403047	1
	Cr	52	24.008	ug/L	0.593	2	16367	354575	2
	Cr	53	24.149	ug/L	0.901	3	243	38887	3
	Mn	55	410.005	ug/L	4.639	1	685	8198870	0
	Co	59	24.839	ug/L	0.190	0	119	351587	0
>	Ge	72		ug/L			592402	479110	0
	Ni	60	35.398	ug/L	0.530	1	86	103469	1
	Ni	62	35.941	ug/L	0.261	0	63	14623	1
	Cu	63	25.605	ug/L	0.474	1	91	160974	1
	Cu	65	24.934	ug/L	0.706	2	47	71898	2
	Zn	66	112.308	ug/L	1 099	0	191	178238	0
	Zn	67	102.844	ug/L	2.257	2	37	27973	1
	Zn	68	110.178	ug/L	1.751	1	353	127351	1
	As	75	35.386	ug/L	0.477	1	548	56493	1
	As-1	75	28.061	ug/L	0.674	2	7252	48780	1
	Se	82	109.573	ug/L	0.521	0	-19	18204	0
	Se	78	87.723	ug/L	1.129	1	7320	39160	0
	Mo	98	2.433	ug/L	0.007	0	10	10892	0
	Y	89		ug/L			394786	399511	2
	Kr	83		ug/L			872	775	3
>	In	115		ug/L			1077756	992940	0
	Ag	107	27.634	ug/L	0.261	0	26	351031	0
	Cd	111	25.578	ug/L	0.525	2	127	119276	1
	Cd	114	25.357	ug/L	0.216	0	19	293207	0
	Sb	121	1.758	ug/L	0.015	0	152	25499	1
	Sb	123	1.779	ug/L	0.017	0	115	19395	0
	Ba	135	41.745	ug/L	0.317	0	7	181577	0
	Ba	137	41.358	ug/L	0.454	1	20	312599	0
>	Tb	159		ug/L			1262684	1222749	0
	Tl	205	22.384	ug/L	0.470	2	290	930099	1
	Pb	208	24.842	ug/L	0.172	0	247	1301408	0
	Bi	209		ug/L			3225208	2888806	1
	Th	232	22.395	ug/L	0.211	0	157	1152243	0
	U	238	22.984	ug/L	0.553	2	3	1190428	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 16:17:27
Number of Replicates: 3
Method File. C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1295538	1
	Be	9	51.218	ug/L	1.424	2	11	170227	1
	C	13		ug/L			104879	125283	2
	Cl	37		ug/L			4277164	4361620	0
>	Sc	45		ug/L			1025260	903266	2
	V	51	48.683	ug/L	1 352	2	5531	824820	0
	V-1	51	48.215	ug/L	1.963	4	509	812275	1
	Cr	52	49.959	ug/L	0.599	1	16367	732775	2
	Cr	53	48.407	ug/L	1.929	3	243	78791	1
	Mn	55	46.670	ug/L	0.257	0	685	947175	2
	Co	59	47.887	ug/L	1.281	2	119	687320	3
>	Ge	72		ug/L			592402	492915	0
	Ni	60	49.628	ug/L	0.595	1	86	149214	0
	Ni	62	50.260	ug/L	1.245	2	63	21015	1
	Cu	63	50.963	ug/L	1.785	3	91	329534	3
	Cu	65	49.981	ug/L	1 498	2	47	148228	2
	Zn	66	51.070	ug/L	1.712	3	191	83468	3
	Zn	67	50.799	ug/L	1.122	2	37	14232	2
	Zn	68	51.245	ug/L	0 833	1	353	61095	1
	As	75	54.805	ug/L	0.599	1	548	89761	0
	As-1	75	52.490	ug/L	0.827	1	7252	88621	0
	Se	82	64.850	ug/L	1.310	2	-19	11077	1
	Se	78	55.144	ug/L	0.811	1	7320	27588	0
	Mo	98	63.028	ug/L	1.219	1	10	290098	2
	Y	89		ug/L			394786	380565	0
	Kr	83		ug/L			872	746	2
>	In	115		ug/L			1077756	1014105	0
	Ag	107	54.541	ug/L	1.037	1	26	707556	1
	Cd	111	51.195	ug/L	0.521	1	127	243718	1
	Cd	114	51.676	ug/L	0.618	1	19	610245	0
	Sb	121	49.874	ug/L	0.243	0	152	735006	0
	Sb	123	51.092	ug/L	0.485	0	115	565827	0
	Ba	135	50.917	ug/L	0.978	1	7	226175	1
	Ba	137	50.373	ug/L	0 612	1	20	388846	0
>	Tb	159		ug/L			1262684	1218811	0
	Tl	205	45.765	ug/L	0.321	0	290	1895432	1
	Pb	208	47.912	ug/L	0.141	0	247	2501757	0
	Bi	209		ug/L			3225208	3077887	0
	Th	232	54.575	ug/L	1.061	1	157	2798781	1
	U	238	55.237	ug/L	0.277	0	3	2852167	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 18, 2013 16:24:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1164625	1289697	2
	Be	9	0.002	ug/L	0.002	74	11	19	24
	C	13		ug/L			104879	124787	2
	Cl	37		ug/L			4277164	4201825	1
>	Sc	45		ug/L			1025260	906465	1
	V	51	-0.008	ug/L	0.007	92	5531	4759	0
	V-1	51	-0.016	ug/L	0.001	3	509	173	7
	Cr	52	-0.017	ug/L	0.019	109	16367	14221	0
	Cr	53	-0.046	ug/L	0.007	15	243	140	9
	Mn	55	0.016	ug/L	0.002	14	685	923	3
	Co	59	0.003	ug/L	0.001	35	119	148	9
>	Ge	72		ug/L			592402	502924	2
	Ni	60	-0.012	ug/L	0.000	3	86	37	2
	Ni	62	0.004	ug/L	0.021	607	63	55	18
	Cu	63	0.015	ug/L	0.002	13	91	176	6
	Cu	65	0.009	ug/L	0 002	26	47	66	9
	Zn	66	0.127	ug/L	0.009	7	191	373	4
	Zn	67	0.085	ug/L	0.034	40	37	56	15
	Zn	68	0.143	ug/L	0.018	12	353	473	4
	As	75	-0.013	ug/L	0 018	136	548	443	5
	As-1	75	0.277	ug/L	0.067	24	7252	6600	0
	Se	82	-0.032	ug/L	0.051	160	-19	-22	40
	Se	78	1.111	ug/L	0.249	22	7320	6655	0
	Mo	98	0.012	ug/L	0.002	14	10	65	13
	Y	89		ug/L			394786	380329	1
	Kr	83		ug/L			872	727	0
>	In	115		ug/L			1077756	1034280	1
	Ag	107	0.002	ug/L	0.001	42	26	49	20
	Cd	111	-0.000	ug/L	0 003	26829	127	122	10
	Cd	114	0.002	ug/L	0.001	30	19	47	18
	Sb	121	0.093	ug/L	0.014	15	152	1538	15
	Sb	123	0.093	ug/L	0.012	12	115	1160	12
	Ba	135	0.005	ug/L	0.001	24	7	28	17
	Ba	137	0.004	ug/L	0.001	21	20	47	12
>	Tb	159		ug/L			1262684	1216951	0
	Tl	205	0.004	ug/L	0.002	41	290	437	15
	Pb	208	0.005	ug/L	0.001	10	247	517	5
	Bi	209		ug/L			3225208	3207823	0
	Th	232	0.163	ug/L	0.005	3	157	8503	2
	U	238	0.004	ug/L	0.001	30	3	204	30

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (CP-MS) GFA CVA **Analysis Date:** 4-19-13

MR Nexion SOP	Analyst #4-22-13	Peer 4-22-13	Comment
Logbooks			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	See Log
Calibration Verification			
ICV/CCV	✓	✓	See Log
ICB/CCB	✓	✓	See Log
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analytes Noted and QA'd	—	—	

WL 10 · 9220

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-19-13 **Analyst:** M **Page:** 1 of 5

All corrections made by analyst unless otherwise noted. 4-19-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
zzz		zzzzzz			Air
		STD 0			
		1			
		2			
		3			
		4			
		5			
		Rinse Sample			Il poor fit
		Dual Det Cal			
		STD 0			3027-13 (Sb Th high int) a.o.
		1			3025-12
		2			3028-6
		3			3028-7
		4			3027-16
		5			3028-8
		Rinse Sample			
		ICV			3023-5
		ICB			
		CCV1			
		CCB1			
		Low check			Sb low (NR)
		ICSA			
		ICSAB			
		~~10 Hg~~ B1			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-19-13 **Analyst:** MK **Page:** 2 **of** 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCV2			
		CCB2			
		WL49 MB1	REN	2	Se
		ADup			As, Se
		A			
		Aspk			
		CDup			Se
		C			
		Cspk			
		B		10	As, Se
		D		2	Se
		MB1spk			
		CCV3			Ag
		CCB3			
		WL49 MB2	REN	2	Se
		MB3	SWN	20	
		G			
		FDup			
		F			
		Fspk			
		WL74 D	SWN	20	
		E			
		WL49 MB3spk			Se
		MB2spk	REN	2	

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4-9-13 **Analyst:** H **Page:** 3 of 5

All corrections made by analyst unless otherwise noted. H 4-9-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCV4			
		CCB4			
		WL68 MB1	SWN	20	As Se
		A-L		100 ✓	
		A		20	
		ADup		✓	
		ASpk		✓	
ZZZ		ZZZ ~~ASpk~~			
		B			
		WL74 B			
dd		WL68 Rep1		50 ✓	Se
		MBSpk		20	As, Se
		CCV5			
		CCB5			
		WL67 MB1	SWN	20	Se As
		ADup		✓	
		A			
		ASpk		✓	
		B			
		WL74 F			
		G			
		H			
		I			
		WL67 MB1Spk			As Se

4/22/13

WL HG : 022267

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, April 19, 2013 08:28:04
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1972
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3568.8	3568.831	90.582	2.5	Standard
	Mg	24.0	38879.6	38879.621	1196.829	3.1	Standard
	In	114.9	71437.9	71437.860	817.012	1.1	Standard
	Pb	208.0	31649.3	31649.254	149.914	0.5	Standard
	U	238.1	53959.1	53959.141	443.582	0.8	Standard
⌈	CeO	155.9	805.9	0.011	0.000	1.7	Standard
\>	Ce	139.9	75534.7	75534.719	1192.311	1.6	Standard
⌊	Ce++	70.0	610.6	0.008	0.000	4.4	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.03	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1300.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/19/2013 8:28:03 AM
nd Time: 4/19/2013 8:30:39 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3568.83
Obtained Intensity (Mg 23.985): 38879.62
Obtained Intensity (In 114.904): 71437.86
Obtained Intensity (Pb 207.977): 31649.25
Obtained Intensity (U 238.05): 53959.14
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (CeO 155.9 / Ce 139.905): 0.011 (=805.91 / 75534.72)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.008 (=610.56 / 75534.72)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 4/19/2013 8:31:37 AM
nd Time: 4/19/2013 8:32:35 AM

orch Alignment - [Passed]

Vertical	Horizontal	Intensity
-1.32 mm	1.78 mm	83930.54

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 4/19/2013 8:32:50 AM
d Time: 4/19/2013 8:35:01 AM

ss Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.714)
Target/Obtained mass (23.985/24.075), Target/Obtained resolution (0.7/0.687)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.697)

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 4/19/2013 8:35:37 AM
d Time: 4/19/2013 8:39:47 AM

itoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.992; Intercept = -10.55

SmartTune Wizard - Details

ptimization Details

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

ptimization Status

tart Time: 4/19/2013 8:39:54 AM

aily Performance Check
Optimization Settings:
Method: C:\NexIONData\Method\Daily Performancenew.mth.
Intensity Criterion: Be 9.0122 > 3000
Intensity Criterion: Mg 23.985 > 20000
Intensity Criterion: In 114.904 > 50000
Intensity Criterion: Pb 207.977 > 20000
Intensity Criterion: U 238.05 > 40000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

Optimization Results:
Initial Try
Obtained Intensity (Be 9.0122): 5007.77
Obtained Intensity (Mg 23.985): 47112.21
Obtained Intensity (In 114.904): 84543.25
Obtained Intensity (Pb 207.977): 36250.28
Obtained Intensity (U 238.05): 63078.64
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.012 (=1022.53 / 87100.10)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.011 (=1001.06 / 87100.10)
Passed] Optimum value(s): N/A

nd Time: 4/19/2013 8:42:28 AM

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Friday, April 19, 2013 10:14:07
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.1987
MassCal File: C:\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	5616.2	5616.225	57.496	1.0	Standard
	Mg	24.0	52852.7	52852.683	421.010	0.8	Standard
	In	114.9	100985.4	100985.353	690.387	0.7	Standard
	Pb	208.0	44222.4	44222.443	588.088	1.3	Standard
	U	238.1	78411.5	78411.452	486.813	0.6	Standard
⌈	CeO	155.9	1230.5	0.012	0.000	2.0	Standard
|>	Ce	139.9	100392.8	100392.779	469.147	0.5	Standard
⌊	Ce++	70.0	1234.8	0.012	0.000	1.9	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.03	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1862.00	Analog Stage Voltage
1400.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:21:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L				129716	1
	Cl	37		ug/L				4359635	3
>	Ge	72		ug/L				754356	3
	Ni	60		ug/L				83	11
	Ni	62		ug/L				89	10
	Cu	63		ug/L				257	8
	Cu	65		ug/L				102	11
	Zn	66		ug/L				202	4
	Zn	67		ug/L				32	30
	Zn	68		ug/L				485	5
	As	75		ug/L				431	5
	As-1	75		ug/L				9696	0
	Se	82		ug/L				4	162
	Se	78		ug/L				9817	0
	Y	89		ug/L				452367	1
	Kr	83		ug/L				721	1
>	In	115		ug/L				1192772	1
	Ag	107		ug/L				83	16
	Cd	111		ug/L				153	1
	Cd	114		ug/L				68	10
	Sb	121		ug/L				2040	7
	Sb	123		ug/L				1508	10
>	Tb	159		ug/L				1408020	1
	Tl	205		ug/L				698	1
	Pb	208		ug/L				726	4
	Bi	209		ug/L				3188747	0
	Th	232		ug/L				3367	6
	U	238		ug/L				106	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:25:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	133461	3
	Cl	37		ug/L			4359635	4256101	2
>	Ge	72		ug/L			754356	745364	0
	Ni	60	0.500	ug/L	0.010	1	83	2337	2
	Ni	62	0.500	ug/L	0.041	8	89	405	6
	Cu	63	0.500	ug/L	0 016	3	257	5357	3
	Cu	65	0.500	ug/L	0.028	5	102	2416	4
	Zn	66	4.000	ug/L	0.207	5	202	10925	4
	Zn	67	4.000	ug/L	0 120	3	32	1691	2
	Zn	68	4.000	ug/L	0.072	1	485	7980	1
	As	75	0.200	ug/L	0.021	10	431	921	5
	As-1	75	0.200	ug/L	0.053	26	9696	10210	1
	Se	82	0.500	ug/L	0.039	7	4	136	7
	Se	78	0.500	ug/L	0.131	26	9817	10153	0
	Y	89		ug/L			452367	454230	2
	Kr	83		ug/L			721	696	2
>	In	115		ug/L			1192772	1183942	2
	Ag	107	0.200	ug/L	0.002	0	83	2777	2
	Cd	111	0.100	ug/L	0.009	9	153	739	4
	Cd	114	0.100	ug/L	0.004	3	68	1527	1
	Sb	121	0.200	ug/L	0.014	6	2040	4502	3
	Sb	123	0.200	ug/L	0.022	11	1508	3405	3
>	Tb	159		ug/L			1408020	1419840	1
	Tl	205	0.200	ug/L	0.006	2	698	9951	1
	Pb	208	0.100	ug/L	0.002	2	726	6875	0
	Bi	209		ug/L			3188747	3180985	0
	Th	232	0.200	ug/L	0.023	11	3367	9955	7
	U	238	0.200	ug/L	0.003	1	106	11568	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:28:48
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	132208	4
	Cl	37		ug/L			4359635	4235053	2
>	Ge	72		ug/L			754356	759971	1
	Ni	60	10.000	ug/L	0.356	3	83	46380	3
	Ni	62	10.000	ug/L	0.138	1	89	6620	2
	Cu	63	9.999	ug/L	0.150	1	257	100864	0
	Cu	65	10.000	ug/L	0.435	4	102	47311	4
	Zn	66	10.022	ug/L	0.140	1	202	27985	1
	Zn	67	10.127	ug/L	0.262	2	32	4684	1
	Zn	68	10.077	ug/L	0.350	3	485	20735	3
	As	75	10.000	ug/L	0.164	1	431	25676	1
	As-1	75	9.999	ug/L	0.093	0	9696	35071	0
	Se	82	9.999	ug/L	0.317	3	4	2615	2
	Se	78	9.990	ug/L	0.347	3	9817	16549	1
	Y	89		ug/L			452367	454159	3
	Kr	83		ug/L			721	687	4
>	In	115		ug/L			1192772	1174192	1
	Ag	107	10.000	ug/L	0.244	2	83	129185	2
	Cd	111	10.000	ug/L	0.196	1	153	56545	0
	Cd	114	10.000	ug/L	0.249	2	68	145539	1
	Sb	121	10.001	ug/L	0.256	2	2040	172641	1
	Sb	123	10.001	ug/L	0.246	2	1508	132854	1
>	Tb	159		ug/L			1408020	1421709	0
	Tl	205	10.000	ug/L	0.216	2	698	464982	2
	Pb	208	10.000	ug/L	0.139	1	726	603837	0
	Bi	209		ug/L			3188747	3173139	1
	Th	232	10.002	ug/L	0.084	0	3367	552730	1
	U	238	10.000	ug/L	0.105	1	106	580870	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:32:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	130123	3
	Cl	37		ug/L			4359635	4365020	4
>	Ge	72		ug/L			754356	760643	2
	Ni	60	19.949	ug/L	0.605	3	83	91548	1
	Ni	62	20.050	ug/L	0.305	1	89	13324	1
	Cu	63	20.090	ug/L	1.011	5	257	206214	4
	Cu	65	19.946	ug/L	0.529	2	102	93319	1
	Zn	66	19.838	ug/L	0.772	3	202	53715	1
	Zn	67	19.862	ug/L	0.583	2	32	8949	1
	Zn	68	19.870	ug/L	0.615	3	485	39553	2
	As	75	20.003	ug/L	0.510	2	431	50987	2
	As-1	75	20.011	ug/L	0.547	2	9696	60553	1
	Se	82	19.949	ug/L	0.494	2	4	5164	1
	Se	78	19.986	ug/L	0.970	4	9817	23186	0
	Y	89		ug/L			452367	461357	0
	Kr	83		ug/L			721	678	3
>	In	115		ug/L			1192772	1183638	0
	Ag	107	20.024	ug/L	0.516	2	83	261948	2
	Cd	111	19.962	ug/L	0.073	0	153	112801	0
	Cd	114	19.968	ug/L	0.556	2	68	291028	2
	Sb	121	20.010	ug/L	0 255	1	2040	346967	1
	Sb	123	19.957	ug/L	0.060	0	1508	263558	0
>	Tb	159		ug/L			1408020	1385271	2
	Tl	205	20.109	ug/L	0 274	1	698	930507	2
	Pb	208	20.100	ug/L	0.435	2	726	1205626	0
	Bi	209		ug/L			3188747	3103882	0
	Th	232	20.230	ug/L	0.354	1	3367	1137863	1
	U	238	20.057	ug/L	0.514	2	106	1147878	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:36:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	127823	2
	Cl	37		ug/L			4359635	4358358	1
>	Ge	72		ug/L			754356	753020	1
	Ni	60	49.899	ug/L	1.358	2	83	224370	1
	Ni	62	49.920	ug/L	0.727	1	89	32455	1
	Cu	63	49.727	ug/L	1.874	3	257	491779	4
	Cu	65	49.765	ug/L	1.118	2	102	225107	1
	Zn	66	49.835	ug/L	1.156	2	202	131251	1
	Zn	67	49.965	ug/L	2.599	5	32	22162	4
	Zn	68	49.877	ug/L	1.245	2	485	96434	1
	As	75	49.868	ug/L	1.484	2	431	123562	1
	As-1	75	49.888	ug/L	1.795	3	9696	133607	1
	Se	82	49.696	ug/L	0.830	1	4	12356	0
	Se	78	49.802	ug/L	1.954	3	9817	41954	1
	Y	89		ug/L			452367	449195	2
	Kr	83		ug/L			721	710	1
>	In	115		ug/L			1192772	1149003	1
	Ag	107	49.924	ug/L	1.050	2	83	629081	2
	Cd	111	49.992	ug/L	0.438	0	153	273763	0
	Cd	114	49.833	ug/L	0.908	1	68	693390	1
	Sb	121	50.145	ug/L	1.238	2	2040	853338	2
	Sb	123	50.166	ug/L	1.174	2	1508	651603	1
>	Tb	159		ug/L			1408020	1407475	1
	Tl	205	50.010	ug/L	1.192	2	698	2352132	1
	Pb	208	49.783	ug/L	0.698	1	726	2968879	0
	Bi	209		ug/L			3188747	3074076	1
	Th	232	50.292	ug/L	0.598	1	3367	2955444	0
	U	238	49.957	ug/L	0.929	1	106	2892896	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:42:07
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	132163	1
	Cl	37		ug/L			4359635	4219205	0
>	Ge	72		ug/L			754356	720747	2
	Ni	60	100.236	ug/L	1.680	1	83	434757	1
	Ni	62	99.732	ug/L	2.493	2	89	61414	1
	Cu	63	100.191	ug/L	2.033	2	257	953788	0
	Cu	65	99.944	ug/L	3.019	3	102	431850	3
	Zn	66	100.046	ug/L	4.363	4	202	252319	2
	Zn	67	99.799	ug/L	1.507	1	32	42068	1
	Zn	68	99.374	ug/L	2.408	2	485	179690	0
	As	75	100.406	ug/L	3.361	3	431	240923	1
	As-1	75	100.441	ug/L	3.189	3	9696	251632	0
	Se	82	100.157	ug/L	3.298	3	4	23950	1
	Se	78	100.339	ug/L	2.505	2	9817	72099	0
	Y	89		ug/L			452367	441015	1
	Kr	83		ug/L			721	757	1
>	In	115		ug/L			1192772	1130542	1
	Ag	107	99.786	ug/L	2.988	2	83	1227980	2
	Cd	111	99.619	ug/L	1.286	1	153	529859	0
	Cd	114	99.773	ug/L	1.295	1	68	1355605	0
	Sb	121	100.154	ug/L	2.071	2	2040	1683532	0
	Sb	123	99.647	ug/L	2.876	2	1508	1257163	1
>	Tb	159		ug/L			1408020	1379195	1
	Tl	205	99.693	ug/L	1.851	1	698	4547880	1
	Pb	208	99.875	ug/L	1.374	1	726	5811384	0
	Bi	209		ug/L			3188747	2924754	1
	Th	232	99.724	ug/L	1.461	1	3367	5687588	2
	U	238	99.578	ug/L	1.755	1	106	5571892	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:48:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	**13**		ug/L			129716	125814	1
	Cl	**37**		ug/L			4359635	4242962	0
>	**Ge**	**72**		ug/L			754356	751772	0
	Ni	**60**	**0.000**	ug/L	0.003	1841	83	84	13
	Ni	**62**	**-0.025**	ug/L	0.029	116	89	73	25
	Cu	**63**	**-0.004**	ug/L	0.002	46	257	221	7
	Cu	**65**	**-0.002**	ug/L	0.002	72	102	92	6
	Zn	**66**	**-0.001**	ug/L	0.003	447	202	200	3
	Zn	**67**	**0.018**	ug/L	0.024	137	32	40	26
	Zn	**68**	**-0.018**	ug/L	0.008	44	485	449	3
	As	**75**	**-0.007**	ug/L	0.006	91	431	412	3
	As-1	**75**	**-0.011**	ug/L	0.042	370	9696	9635	0
	Se	**82**	**0.041**	ug/L	0.026	64	4	15	43
	Se	**78**	**-0.034**	ug/L	0.146	436	9817	9761	0
	Y	**89**		ug/L			452367	448656	2
	Kr	**83**		ug/L			721	672	2
>	**In**	**115**		ug/L			1192772	1175671	1
	Ag	**107**	**-0.001**	ug/L	0.001	42	83	63	11
	Cd	**111**	**-0.004**	ug/L	0.001	28	153	131	3
	Cd	**114**	**0.000**	ug/L	0.001	1635	68	68	17
	Sb	**121**	**0.082**	ug/L	0.027	32	2040	3436	13
	Sb	**123**	**0.083**	ug/L	0.032	38	1508	2575	16
>	**Tb**	**159**		ug/L			1408020	1394510	0
	Tl	**205**	**0.002**	ug/L	0.002	90	698	770	8
	Pb	**208**	**-0.001**	ug/L	0.000	25	726	640	3
	Bi	**209**		ug/L			3188747	3165160	0
	Th	**232**	**0.194**	ug/L	0.013	6	3367	14506	5
	U	**238**	**0.002**	ug/L	0.000	21	106	204	9

Sample Information

Sample Date/Time: Friday, April 19, 2013 10:42:07
Method File: C:\NexION Data\Method\200.8GFA+.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.013	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.003	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**1.0000**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**1.0000**	0.011	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Tb	159							
Tl	205	**1.0000**	0.033	0.20	10	20	50	100
Pb	208	**1.0000**	0.042	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.041	0.20	10	20	50	100
U	238	**1.0000**	0.041	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 10:54:41
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	132407	2
	Cl	37		ug/L			4359635	4216667	4
>	Ge	72		ug/L			754356	752326	1
	Ni	60	49.164	ug/L	0.864	1	83	222648	1
	Ni	62	49.912	ug/L	0.660	1	89	32133	0
	Cu	63	50.648	ug/L	1.697	3	257	503464	2
	Cu	65	51.126	ug/L	1.506	2	102	230607	2
	Zn	66	49.097	ug/L	1.221	2	202	129399	1
	Zn	67	48.726	ug/L	1.214	2	32	21459	2
	Zn	68	49.201	ug/L	0.409	0	485	93147	1
	As	75	49.080	ug/L	0.768	1	431	123200	1
	As-1	75	49.249	ug/L	0.757	1	9696	133769	1
	Se	82	77.316	ug/L	1.534	1	4	18978	0
	Se	78	75.871	ug/L	1.323	1	9817	59296	0
	Y	89		ug/L			452367	453742	1
	Kr	83		ug/L			721	710	4
>	In	115		ug/L			1192772	1158620	0
	Ag	107	49.259	ug/L	1 547	3	83	621337	2
	Cd	111	48.618	ug/L	0.598	1	153	265118	1
	Cd	114	48.754	ug/L	0.555	1	68	679001	1
	Sb	121	49.596	ug/L	0.823	1	2040	855489	0
	Sb	123	50.325	ug/L	0.323	0	1508	651579	0
>	Tb	159		ug/L			1408020	1405419	1
	Tl	205	49.861	ug/L	0.336	0	698	2318404	1
	Pb	208	50.230	ug/L	0.476	0	726	2978817	0
	Bi	209		ug/L			3188747	3067689	0
	Th	232	50.126	ug/L	0.701	1	3367	2914717	1
	U	238	50.172	ug/L	1.210	2	106	2860654	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:00:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	128847	2
	Cl	37		ug/L			4359635	4162354	1
>	Ge	72		ug/L			754356	738241	2
	Ni	60	-0.003	ug/L	0.003	81	83	67	15
	Ni	62	-0.026	ug/L	0.008	31	89	70	5
	Cu	63	-0.003	ug/L	0.001	40	257	217	4
	Cu	65	-0.001	ug/L	0.003	181	102	93	12
	Zn	66	-0.006	ug/L	0.003	52	202	183	2
	Zn	67	-0.012	ug/L	0.016	133	32	27	25
	Zn	68	-0.005	ug/L	0.013	268	485	466	6
	As	75	0.002	ug/L	0.016	800	431	426	9
	As-1	75	0.056	ug/L	0.099	177	9696	9623	0
	Se	82	0.024	ug/L	0.041	171	4	10	94
	Se	78	0.223	ug/L	0.366	164	9817	9746	0
	Y	89		ug/L			452367	452088	0
	Kr	83		ug/L			721	701	1
>	In	115		ug/L			1192772	1169917	2
	Ag	107	-0.002	ug/L	0.001	22	83	50	13
	Cd	111	-0.006	ug/L	0.002	42	153	119	12
	Cd	114	-0.001	ug/L	0.001	61	68	52	18
	Sb	121	-0.037	ug/L	0.011	31	2040	1359	13
	Sb	123	-0.035	ug/L	0.012	34	1508	1027	14
>	Tb	159		ug/L			1408020	1393612	0
	Tl	205	-0.001	ug/L	0.003	263	698	647	18
	Pb	208	-0.001	ug/L	0 002	300	726	676	19
	Bi	209		ug/L			3188747	3168462	1
	Th	232	0.084	ug/L	0.007	8	3367	8189	4
	U	238	0.001	ug/L	0.001	124	106	156	40

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:04:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	128230	1
	Cl	37		ug/L			4359635	4173447	1
>	Ge	72		ug/L			754356	741657	1
	Ni	60	49.879	ug/L	3.563	7	83	222525	5
	Ni	62	50.369	ug/L	0.382	0	89	31973	2
	Cu	63	50.054	ug/L	1.449	2	257	490429	1
	Cu	65	50.821	ug/L	0.450	0	102	226045	2
	Zn	66	51.305	ug/L	1.323	2	202	133267	0
	Zn	67	50.798	ug/L	1.571	3	32	22048	1
	Zn	68	52.125	ug/L	2.533	4	485	97204	3
	As	75	49.628	ug/L	0.828	1	431	122783	0
	As-1	75	49.680	ug/L	1.077	2	9696	132913	0
	Se	82	50.370	ug/L	0.775	1	4	12191	2
	Se	78	49.726	ug/L	1.448	2	9817	41631	0
	Y	89		ug/L			452367	456053	2
	Kr	83		ug/L			721	724	3
>	In	115		ug/L			1192772	1151835	1
	Ag	107	49.848	ug/L	1.327	2	83	625021	1
	Cd	111	50.083	ug/L	1.070	2	153	271464	1
	Cd	114	49.687	ug/L	0.755	1	68	687908	1
	Sb	121	49.500	ug/L	0.855	1	2040	848777	0
	Sb	123	49.802	ug/L	0.606	1	1508	641005	0
>	Tb	159		ug/L			1408020	1388133	2
	Tl	205	50.637	ug/L	0.791	1	698	2324869	1
	Pb	208	50.101	ug/L	1.777	3	726	2932942	0
	Bi	209		ug/L			3188747	3035266	0
	Th	232	50.523	ug/L	1.081	2	3367	2901107	2
	U	238	50.646	ug/L	1.510	2	106	2851230	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:10:28
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	123955	1
	Cl	37		ug/L			4359635	4018524	1
>	Ge	72		ug/L			754356	752495	1
	Ni	60	0.001	ug/L	0.009	1816	83	85	47
	Ni	62	-0.033	ug/L	0.010	28	89	67	9
	Cu	63	-0.001	ug/L	0.005	589	257	247	19
	Cu	65	0.000	ug/L	0.006	1673	102	103	23
	Zn	66	0.000	ug/L	0.007	1890	202	202	8
	Zn	67	0.000	ug/L	0.011	3640	32	32	12
	Zn	68	-0.015	ug/L	0.013	85	485	456	3
	As	75	0.008	ug/L	0.002	30	431	449	1
	As-1	75	0.042	ug/L	0.109	262	9696	9775	1
	Se	82	0.048	ug/L	0.068	143	4	16	102
	Se	78	0.134	ug/L	0 423	316	9817	9877	1
	Y	89		ug/L			452367	452401	1
	Kr	83		ug/L			721	685	6
>	In	115		ug/L			1192772	1169110	1
	Ag	107	-0.002	ug/L	0.001	52	83	59	19
	Cd	111	-0.006	ug/L	0.001	16	153	119	3
	Cd	114	-0.001	ug/L	0.001	51	68	51	14
	Sb	121	-0.014	ug/L	0.018	132	2040	1757	16
	Sb	123	-0.009	ug/L	0.018	202	1508	1358	16
>	Tb	159		ug/L			1408020	1397222	0
	Tl	205	0.001	ug/L	0.001	109	698	728	5
	Pb	208	-0.000	ug/L	0.003	861	726	699	27
	Bi	209		ug/L			3188747	3179969	0
	Th	232	0.120	ug/L	0.013	10	3367	10271	7
	U	238	0.004	ug/L	0.007	159	106	349	111

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:14:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	135684	1
	Cl	37		ug/L			4359635	4072729	1
>	Ge	72		ug/L			754356	759413	0
	Ni	60	0.485	ug/L	0.015	3	83	2298	3
	Ni	62	0.495	ug/L	0.033	6	89	410	4
	Cu	63	0.496	ug/L	0.023	4	257	5233	4
	Cu	65	0.492	ug/L	0.023	4	102	2341	3
	Zn	66	3.948	ug/L	0.022	0	202	10691	0
	Zn	67	3.666	ug/L	0.189	5	32	1660	5
	Zn	68	3.913	ug/L	0.110	2	485	7925	1
	As	75	0.185	ug/L	0.025	13	431	901	6
	As-1	75	0.145	ug/L	0.014	9	9696	10130	0
	Se	82	0.512	ug/L	0.098	19	4	131	17
	Se	78	0.317	ug/L	0.060	19	9817	10091	0
	Y	89		ug/L			452367	450012	4
	Kr	83		ug/L			721	707	2
>	In	115		ug/L			1192772	1177306	1
	Ag	107	0.200	ug/L	0.003	1	83	2651	0
	Cd	111	0.099	ug/L	0.001	1	153	700	0
	Cd	114	0.103	ug/L	0.000	0	68	1522	1
	Sb	121	0.114	ug/L	0.010	8	2040	4009	4
	Sb	123	0.120	ug/L	0.009	7	1508	3064	3
>	Tb	159		ug/L			1408020	1387809	1
	Tl	205	0.194	ug/L	0.000	0	698	9603	1
	Pb	208	0.098	ug/L	0.002	2	726	6446	0
	Bi	209		ug/L			3188747	3146359	0
	Th	232	0.138	ug/L	0 014	9	3367	11255	6
	U	238	0.199	ug/L	0.002	0	106	11310	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:17:33
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	216398	4
	Cl	37		ug/L			4359635	11566154	7
>	Ge	72		ug/L			754356	711442	5
	Ni	60	0.335	ug/L	0.030	8	83	1507	3
	Ni	62	1.786	ug/L	0.091	5	89	1167	3
	Cu	63	0.787	ug/L	0.044	5	257	7625	1
	Cu	65	0.334	ug/L	0.029	8	102	1518	3
	Zn	66	0.912	ug/L	0.057	6	202	2456	1
	Zn	67	4.877	ug/L	0.292	5	32	2055	2
	Zn	68	0.411	ug/L	0.026	6	485	1187	1
	As	75	0.110	ug/L	0.027	24	431	667	9
	As-1	75	0.233	ug/L	0.227	97	9696	9681	0
	Se	82	-0.191	ug/L	0.036	19	4	-39	25
	Se	78	0.557	ug/L	0.911	163	9817	9582	0
	Y	89		ug/L			452367	433875	1
	Kr	83		ug/L			721	886	1
>	In	115		ug/L			1192772	1117335	1
	Ag	107	0.015	ug/L	0.001	5	83	263	3
	Cd	111	0.114	ug/L	0.017	14	153	744	13
	Cd	114	0.240	ug/L	0.006	2	68	3283	3
	Sb	121	-0.027	ug/L	0.003	10	2040	1469	4
	Sb	123	-0.020	ug/L	0.005	27	1508	1166	6
>	Tb	159		ug/L			1408020	1368795	1
	Tl	205	0.027	ug/L	0.003	9	698	1883	5
	Pb	208	0.027	ug/L	0.001	4	726	2283	2
	Bi	209		ug/L			3188747	2837898	1
	Th	232	0.104	ug/L	0.051	49	3367	9180	31
	U	238	-0.001	ug/L	0.000	66	106	74	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:23:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	219387	3
	Cl	37		ug/L			4359635	11996628	1
>	Ge	72		ug/L			754356	710336	3
	Ni	60	19.935	ug/L	0.700	3	83	85239	1
	Ni	62	21.720	ug/L	0.224	1	89	13254	4
	Cu	63	20.168	ug/L	0.295	1	257	189421	2
	Cu	65	19.973	ug/L	0.835	4	102	85062	1
	Zn	66	19.265	ug/L	0.948	4	202	48018	2
	Zn	67	21.604	ug/L	1.020	4	32	8992	1
	Zn	68	18.054	ug/L	0.353	1	485	32547	1
	As	75	19.425	ug/L	0.701	3	431	46251	0
	As-1	75	19.366	ug/L	0.812	4	9696	55167	0
	Se	82	-0.153	ug/L	0.093	60	4	-30	68
	Se	78	0.398	ug/L	0.440	110	9817	9483	0
	Y	89		ug/L			452367	422164	1
	Kr	83		ug/L			721	854	3
>	In	115		ug/L			1192772	1124532	0
	Ag	107	21.138	ug/L	0.695	3	83	258880	3
	Cd	111	19.940	ug/L	0.165	0	153	105621	0
	Cd	114	19.918	ug/L	0.418	2	68	269237	1
	Sb	121	-0.021	ug/L	0.006	27	2040	1579	6
	Sb	123	-0.019	ug/L	0.005	23	1508	1181	4
>	Tb	159		ug/L			1408020	1382246	1
	Tl	205	0.022	ug/L	0.001	4	698	1702	3
	Pb	208	0.027	ug/L	0.001	2	726	2262	1
	Bi	209		ug/L			3188747	2861115	1
	Th	232	0.003	ug/L	0.007	212	3367	3504	12
	U	238	-0.001	ug/L	0.000	5	106	46	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:29:46
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	135321	1
	Cl	37		ug/L			4359635	4067667	1
>	Ge	72		ug/L			754356	745749	1
	Ni	60	0.051	ug/L	0.003	5	83	311	3
	Ni	62	0.003	ug/L	0.020	630	89	90	14
	Cu	63	0.017	ug/L	0.002	14	257	419	4
	Cu	65	0.018	ug/L	0.003	18	102	182	7
	Zn	66	0.790	ug/L	0 034	4	202	2259	2
	Zn	67	0.722	ug/L	0.044	6	32	347	4
	Zn	68	0.756	ug/L	0.018	2	485	1890	1
	As	75	-0.004	ug/L	0.002	64	431	417	1
	As-1	75	-0.037	ug/L	0.091	246	9696	9492	1
	Se	82	0.007	ug/L	0.034	471	4	6	125
	Se	78	-0.159	ug/L	0.351	220	9817	9600	1
	Y	89		ug/L			452367	446698	0
	Kr	83		ug/L			721	682	1
>	In	115		ug/L			1192772	1191884	1
	Ag	107	-0.002	ug/L	0.000	13	83	56	5
	Cd	111	-0.010	ug/L	0.000	4	153	97	2
	Cd	114	-0.001	ug/L	0.000	31	68	47	12
	Sb	121	-0.094	ug/L	0.003	3	2040	369	15
	Sb	123	-0.093	ug/L	0.003	3	1508	274	15
>	Tb	159		ug/L			1408020	1409700	1
	Tl	205	-0.002	ug/L	0.001	52	698	595	10
	Pb	208	0.019	ug/L	0.001	2	726	1864	1
	Bi	209		ug/L			3188747	3180566	1
	Th	232	-0.050	ug/L	0.001	1	3367	458	11
	U	238	-0.001	ug/L	0.000	3	106	28	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:34:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	124541	4
	Cl	37		ug/L			4359635	4220436	2
>	Ge	72		ug/L			754356	741491	1
	Ni	60	49.109	ug/L	1.274	2	83	219193	2
	Ni	62	49.708	ug/L	0.390	0	89	31545	1
	Cu	63	50.116	ug/L	1.060	2	257	491140	3
	Cu	65	49.666	ug/L	0.865	1	102	220807	0
	Zn	66	48.885	ug/L	2.029	4	202	126961	2
	Zn	67	50.526	ug/L	1.773	3	32	21925	2
	Zn	68	49.196	ug/L	0.793	1	485	91789	1
	As	75	48.664	ug/L	1.264	2	431	120378	1
	As-1	75	48.748	ug/L	1.220	2	9696	130574	0
	Se	82	49.942	ug/L	1.026	2	4	12083	0
	Se	78	49.434	ug/L	1.057	2	9817	41439	0
	Y	89		ug/L			452367	440745	0
	Kr	83		ug/L			721	742	6
>	In	115		ug/L			1192772	1160101	1
	Ag	107	50.998	ug/L	1.344	2	83	644144	2
	Cd	111	50.931	ug/L	0.803	1	153	278110	2
	Cd	114	50.016	ug/L	0 496	0	68	697493	2
	Sb	121	49.450	ug/L	0.951	1	2040	854019	1
	Sb	123	49.963	ug/L	1.104	2	1508	647657	1
>	Tb	159		ug/L			1408020	1399539	0
	Tl	205	50.595	ug/L	0.820	1	698	2342470	0
	Pb	208	50.244	ug/L	0.570	1	726	2967207	0
	Bi	209		ug/L			3188747	3043525	1
	Th	232	49.939	ug/L	1.064	2	3367	2891548	1
	U	238	50.127	ug/L	0.792	1	106	2846472	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 11:40:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	129732	2
	Cl	37		ug/L			4359635	4169677	3
>	Ge	72		ug/L			754356	742154	3
	Ni	60	-0.007	ug/L	0.002	33	83	52	16
	Ni	62	-0.049	ug/L	0.006	11	89	56	9
	Cu	63	-0.010	ug/L	0.002	16	257	157	6
	Cu	65	-0.006	ug/L	0.002	28	102	72	9
	Zn	66	0.025	ug/L	0.010	41	202	263	7
	Zn	67	0.021	ug/L	0.012	55	32	41	10
	Zn	68	0.001	ug/L	0.010	707	485	480	3
	As	75	-0.007	ug/L	0.006	95	431	407	7
	As-1	75	0.048	ug/L	0.123	253	9696	9653	0
	Se	82	0.031	ug/L	0.015	47	4	12	27
	Se	78	0.209	ug/L	0.519	248	9817	9784	0
	Y	89		ug/L			452367	441774	1
	Kr	83		ug/L			721	683	1
>	In	115		ug/L			1192772	1181918	0
	Ag	107	-0.002	ug/L	0.001	33	83	52	20
	Cd	111	-0.009	ug/L	0.001	13	153	103	5
	Cd	114	-0.002	ug/L	0.000	7	68	43	3
	Sb	121	-0.019	ug/L	0.014	72	2040	1683	14
	Sb	123	-0.016	ug/L	0.013	82	1508	1284	12
>	Tb	159		ug/L			1408020	1403922	1
	Tl	205	-0.003	ug/L	0.001	28	698	551	6
	Pb	208	-0.001	ug/L	0.000	11	726	637	1
	Bi	209		ug/L			3188747	3170182	0
	Th	232	0.116	ug/L	0.012	10	3367	10064	8
	U	238	-0.000	ug/L	0 000	3313	106	105	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:46:24
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	138336	2
	Cl	37		ug/L			4359635	4097886	0
>	Ge	72		ug/L			754356	763218	0
	Ni	60	0.004	ug/L	0.004	104	83	100	16
	Ni	62	-0.023	ug/L	0.010	45	89	75	8
	Cu	63	0.028	ug/L	0.002	7	257	541	3
	Cu	65	0.029	ug/L	0.002	7	102	236	3
	Zn	66	0.217	ug/L	0.018	8	202	783	5
	Zn	67	0.195	ug/L	0.037	18	32	120	13
	Zn	68	0.198	ug/L	0.007	3	485	868	0
	As	75	0.004	ug/L	0.005	123	431	446	2
	As-1	75	-0.008	ug/L	0.015	179	9696	9789	0
	Se	82	-0.027	ug/L	0.056	206	4	11	120
	Se	78	-0.039	ug/L	0.040	103	9817	9906	0
	Y	89		ug/L			452367	468921	2
	Kr	83		ug/L			721	716	2
>	In	115		ug/L			1192772	1214850	0
	Ag	107	-0.003	ug/L	0.001	17	83	43	16
	Cd	111	-0.008	ug/L	0.002	22	153	109	9
	Cd	114	-0.002	ug/L	0.000	23	68	43	15
	Sb	121	-0.079	ug/L	0.006	7	2040	648	15
	Sb	123	-0.076	ug/L	0.003	4	1508	507	7
>	Tb	159		ug/L			1408020	1440567	1
	Tl	205	-0.010	ug/L	0.000	2	698	262	5
	Pb	208	0.049	ug/L	0.001	1	726	3738	0
	Bi	209		ug/L			3188747	3259881	1
	Th	232	0.021	ug/L	0.011	53	3367	4684	15
	U	238	-0.001	ug/L	0.000	5	106	38	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:49:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	171075	4
	Cl	37		ug/L			4359635	6319800	1
>	Ge	72		ug/L			754356	660393	1
	Ni	60	29.712	ug/L	0.723	2	83	118174	3
	Ni	62	32.153	ug/L	1.448	4	89	18205	5
	Cu	63	21.978	ug/L	0.452	2	257	191952	3
	Cu	65	20.486	ug/L	0.154	0	102	81176	1
	Zn	66	285.840	ug/L	8.240	2	202	660313	1
	Zn	67	253.008	ug/L	6.222	2	32	97671	1
	Zn	68	276.189	ug/L	7.525	2	485	456875	1
	As	75	1.393	ug/L	0.029	2	431	3436	3
	As-1	75	1.046	ug/L	0.044	4	9696	10800	1
	Se	82	2.405	ug/L	0.052	2	4	522	3
	Se	78	1.129	ug/L	0.235	20	9817	9239	1
	Y	89		ug/L			452367	409645	2
	Kr	83		ug/L			721	725	3
>	In	115		ug/L			1192772	1123636	2
	Ag	107	0.014	ug/L	0.002	13	83	244	9
	Cd	111	0.536	ug/L	0.013	2	153	2979	1
	Cd	114	0.540	ug/L	0.010	1	68	7350	2
	Sb	121	4.402	ug/L	0.112	2	2040	75381	1
	Sb	123	4.452	ug/L	0.064	1	1508	57183	0
>	Tb	159		ug/L			1408020	1373250	1
	Tl	205	0.023	ug/L	0.000	1	698	1731	1
	Pb	208	18.354	ug/L	0.229	1	726	1063918	0
	Bi	209		ug/L			3188747	2643833	1
	Th	232	0.023	ug/L	0.024	103	3367	4564	27
	U	238	0.007	ug/L	0.000	1	106	484	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:53:29
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	165607	0
	Cl	37		ug/L			4359635	6291612	4
>	Ge	72		ug/L			754356	650206	1
	Ni	60	28.426	ug/L	1.109	3	83	111282	3
	Ni	62	29.609	ug/L	0.513	1	89	16510	3
	Cu	63	18.617	ug/L	0.059	0	257	160115	1
	Cu	65	17.380	ug/L	0.523	3	102	67800	1
	Zn	66	280.550	ug/L	10.777	3	202	638043	2
	Zn	67	251.644	ug/L	7.213	2	32	95661	2
	Zn	68	267.229	ug/L	6.312	2	485	435258	0
	As	75	1.415	ug/L	0.052	3	431	3429	2
	As-1	75	1.049	ug/L	0.159	15	9696	10639	1
	Se	82	2.392	ug/L	0.075	3	4	511	2
	Se	78	1.072	ug/L	0.510	47	9817	9063	1
	Y	89		ug/L			452367	408870	3
	Kr	83		ug/L			721	732	2
>	In	115		ug/L			1192772	1124962	1
	Ag	107	0.014	ug/L	0.001	5	83	247	2
	Cd	111	0.533	ug/L	0.021	3	153	2966	2
	Cd	114	0.523	ug/L	0.011	2	68	7132	2
	Sb	121	4.350	ug/L	0.121	2	2040	74591	1
	Sb	123	4.310	ug/L	0.108	2	1508	55474	0
>	Tb	159		ug/L			1408020	1369229	1
	Tl	205	0.023	ug/L	0.001	5	698	1737	3
	Pb	208	17.797	ug/L	0.356	2	726	1028623	0
	Bi	209		ug/L			3188747	2691006	1
	Th	232	-0.028	ug/L	0.002	8	3367	1677	7
	U	238	0.007	ug/L	0.000	2	106	481	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 11:57:02
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	164934	5
	Cl	37		ug/L			4359635	6415948	5
>	Ge	72		ug/L			754356	668385	1
	Ni	60	51.413	ug/L	1.769	3	83	206839	3
	Ni	62	52.754	ug/L	1.689	3	89	30161	1
	Cu	63	42.092	ug/L	0.440	1	257	371836	1
	Cu	65	40.517	ug/L	0.590	1	102	162385	0
	Zn	66	328.359	ug/L	7.607	2	202	767745	0
	Zn	67	302.149	ug/L	14.150	4	32	118031	3
	Zn	68	324.271	ug/L	8.114	2	485	542886	1
	As	75	24.668	ug/L	0.707	2	431	55186	1
	As-1	75	24.654	ug/L	0.754	3	9696	63771	1
	Se	82	71.584	ug/L	1.834	2	4	15609	0
	Se	78	69.160	ug/L	1.665	2	9817	48785	1
	Y	89		ug/L			452367	416749	1
	Kr	83		ug/L			721	742	3
>	In	115		ug/L			1192772	1144644	1
	Ag	107	20.352	ug/L	0.733	3	83	253602	2
	Cd	111	23.712	ug/L	0.601	2	153	127782	0
	Cd	114	23.433	ug/L	0.687	2	68	322346	1
	Sb	121	28.318	ug/L	1.021	3	2040	483265	2
	Sb	123	28.792	ug/L	0.837	2	1508	368780	1
>	Tb	159		ug/L			1408020	1395140	0
	Tl	205	22.777	ug/L	0.211	0	698	1051643	0
	Pb	208	40.067	ug/L	0.580	1	726	2358901	0
	Bi	209		ug/L			3188747	2733951	0
	Th	232	18.586	ug/L	0.057	0	3367	1075035	1
	U	238	24.222	ug/L	0.555	2	106	1371150	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:00:34
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	172909	1
	Cl	37		ug/L			4359635	6485016	6
>	Ge	72		ug/L			754356	663804	1
	Ni	60	26.582	ug/L	0.560	2	83	106276	3
	Ni	62	27.907	ug/L	0.783	2	89	15887	2
	Cu	63	2.816	ug/L	0.057	2	257	24912	0
	Cu	65	1.408	ug/L	0.071	5	102	5688	3
	Zn	66	73.578	ug/L	2.833	3	202	170989	2
	Zn	67	69.210	ug/L	1.660	2	32	26880	2
	Zn	68	72.616	ug/L	1.464	2	485	121119	3
	As	75	1.075	ug/L	0.057	5	431	2751	2
	As-1	75	0.707	ug/L	0.086	12	9696	10103	0
	Se	82	2.268	ug/L	0.140	6	4	495	4
	Se	78	0.885	ug/L	0.256	28	9817	9146	0
	Y	89		ug/L			452367	409151	2
	Kr	83		ug/L			721	711	1
>	In	115		ug/L			1192772	1116709	2
	Ag	107	0.001	ug/L	0.001	79	83	89	9
	Cd	111	0.139	ug/L	0.005	3	153	876	2
	Cd	114	0.140	ug/L	0.005	3	68	1944	1
	Sb	121	4.126	ug/L	0.141	3	2040	70315	0
	Sb	123	4.220	ug/L	0 130	3	1508	53923	0
>	Tb	159		ug/L			1408020	1413860	0
	Tl	205	0.001	ug/L	0.001	54	698	749	4
	Pb	208	4.668	ug/L	0.052	1	726	279170	0
	Bi	209		ug/L			3188747	2740516	0
	Th	232	0.038	ug/L	0.017	45	3367	5606	17
	U	238	0.010	ug/L	0.002	19	106	703	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:04:06
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	171217	1
	Cl	37		ug/L			4359635	5973104	3
>	Ge	72		ug/L			754356	660222	2
	Ni	60	26.691	ug/L	1.120	4	83	106085	3
	Ni	62	28.062	ug/L	0.732	2	89	15886	2
	Cu	63	2.888	ug/L	0.199	6	257	25376	4
	Cu	65	1.455	ug/L	0.097	6	102	5839	4
	Zn	66	73.595	ug/L	3.046	4	202	170031	1
	Zn	67	68.880	ug/L	0.784	1	32	26613	3
	Zn	68	72.429	ug/L	2.740	3	485	120083	3
	As	75	1.086	ug/L	0.078	7	431	2757	4
	As-1	75	0.735	ug/L	0.091	12	9696	10108	0
	Se	82	2.219	ug/L	0.258	11	4	481	9
	Se	78	0.937	ug/L	0.326	34	9817	9125	0
	Y	89		ug/L			452367	417007	2
	Kr	83		ug/L			721	730	1
>	In	115		ug/L			1192772	1128175	1
	Ag	107	-0.001	ug/L	0.001	125	83	70	15
	Cd	111	0.135	ug/L	0.008	6	153	863	5
	Cd	114	0.139	ug/L	0.006	4	68	1955	5
	Sb	121	4.076	ug/L	0.095	2	2040	70216	0
	Sb	123	4.128	ug/L	0.114	2	1508	53344	1
>	Tb	159		ug/L			1408020	1455057	1
	Tl	205	-0.000	ug/L	0.001	349	698	712	4
	Pb	208	4.592	ug/L	0.112	2	726	282541	0
	Bi	209		ug/L			3188747	2780661	1
	Th	232	-0.029	ug/L	0.001	4	3367	1715	4
	U	238	0.005	ug/L	0.001	11	106	388	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:07:39
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	165286	1
	Cl	37		ug/L			4359635	6122472	1
>	Ge	72		ug/L			754356	653831	1
	Ni	60	52.806	ug/L	2.682	5	83	207742	3
	Ni	62	54.083	ug/L	1.212	2	89	30249	0
	Cu	63	27.329	ug/L	1.074	3	257	236225	3
	Cu	65	26.371	ug/L	0.220	0	102	103439	2
	Zn	66	151.642	ug/L	4.907	3	202	346896	1
	Zn	67	137.287	ug/L	4.376	3	32	52483	2
	Zn	68	148.957	ug/L	2.244	1	485	244178	0
	As	75	25.214	ug/L	0.565	2	431	55179	1
	As-1	75	25.753	ug/L	0.739	2	9696	64788	1
	Se	82	75.126	ug/L	0.835	1	4	16027	0
	Se	78	74.711	ug/L	1.529	2	9817	50871	0
	Y	89		ug/L			452367	413791	4
	Kr	83		ug/L			721	745	1
>	In	115		ug/L			1192772	1140077	1
	Ag	107	23.930	ug/L	0.469	1	83	297104	2
	Cd	111	24.271	ug/L	0.255	1	153	130312	2
	Cd	114	23.617	ug/L	0.126	0	68	323659	1
	Sb	121	28.983	ug/L	0.393	1	2040	492713	0
	Sb	123	29.222	ug/L	0.677	2	1508	372817	1
>	Tb	159		ug/L			1408020	1423837	1
	Tl	205	23.207	ug/L	0.572	2	698	1093288	0
	Pb	208	27.957	ug/L	0.435	1	726	1679844	0
	Bi	209		ug/L			3188747	2751200	1
	Th	232	22.338	ug/L	0.269	1	3367	1317707	0
	U	238	24.297	ug/L	0.748	3	106	1403448	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 B REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Friday, April 19, 2013 12:11:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	134789	3
	Cl	37		ug/L			4359635	4421764	1
>	Ge	72		ug/L			754356	671054	1
	Ni	60	55.008	ug/L	3.714	6	83	222279	7
	Ni	62	58.644	ug/L	0.736	1	89	33669	2
	Cu	63	162.793	ug/L	4.193	2	257	1443419	3
	Cu	65	166.383	ug/L	1.507	0	102	669315	1
	Zn	66	468.641	ug/L	4.900	1	202	1100243	0
	Zn	67	442.524	ug/L	16.491	3	32	173575	2
	Zn	68	467.907	ug/L	7.188	1	485	786469	2
	As	75	19.710	ug/L	0.149	0	431	44361	1
	As-1	75	19.553	ug/L	0.198	1	9696	52574	1
	Se	82	-0.091	ug/L	0.049	54	4	-15	70
	Se	78	U 0.662	ug/L	0.263	39	9817	9117	1
	Y	89		ug/L			452367	717496	2
	Kr	83		ug/L			721	1229	1
>	In	115		ug/L			1192772	1135508	0
	Ag	107	0.286	ug/L	0.004	1	83	3615	1
	Cd	111	1.302	ug/L	0.019	1	153	7103	2
	Cd	114	1.253	ug/L	0.012	0	68	17165	1
	Sb	121	0.732	ug/L	0.041	5	2040	14294	4
	Sb	123	0.734	ug/L	0.033	4	1508	10724	4
>	Tb	159		ug/L			1408020	1406587	1
	Tl	205	0.086	ug/L	0.002	2	698	4689	2
	Pb	208	139.255	ug/L	2.708	1	726	8263182	0
	Bi	209		ug/L			3188747	2849534	1
	Th	232	1.501	ug/L	0.026	1	3367	90608	1
	U	238	0.833	ug/L	0.016	1	106	47655	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:14:43
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	145200	1
	Cl	37		ug/L			4359635	4640109	1
>	Ge	72		ug/L			754356	733626	2
	Ni	60	0.814	ug/L	0.035	4	83	3672	2
	Ni	62	0.650	ug/L	0.012	1	89	493	2
	Cu	63	7.075	ug/L	0.088	1	257	68801	2
	Cu	65	6.547	ug/L	0.111	1	102	28886	2
	Zn	66	1.081	ug/L	0.037	3	202	2969	2
	Zn	67	1.647	ug/L	0.163	9	32	736	7
	Zn	68	1.917	ug/L	0.101	5	485	3989	2
	As	75	10.384	ug/L	0.379	3	431	25733	1
	As-1	75	10.289	ug/L	0.474	4	9696	34693	1
	Se	82	0.372	ug/L	0.080	21	4	93	21
	Se	78	0.295	ug/L	0.412	139	9817	9730	0
	Y	89		ug/L			452367	433728	2
	Kr	83		ug/L			721	711	6
>	In	115		ug/L			1192772	1194916	1
	Ag	107	-0.001	ug/L	0.001	77	83	72	10
	Cd	111	-0.001	ug/L	0.003	223	153	146	13
	Cd	114	0.006	ug/L	0.000	5	68	153	2
	Sb	121	20.021	ug/L	0.222	1	2040	357362	1
	Sb	123	20.341	ug/L	0.464	2	1508	272469	1
>	Tb	159		ug/L			1408020	1466035	1
	Tl	205	-0.007	ug/L	0.000	4	698	392	5
	Pb	208	0.191	ug/L	0.005	2	726	12565	0
	Bi	209		ug/L			3188747	3205951	1
	Th	232	-0.016	ug/L	0.001	4	3367	2532	3
	U	238	0.195	ug/L	0.009	4	106	11716	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:18:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	142466	2
	Cl	37		ug/L			4359635	4474969	3
>	Ge	72		ug/L			754356	750254	1
	Ni	60	24.967	ug/L	0.172	0	83	112806	1
	Ni	62	25.692	ug/L	0.718	2	89	16543	4
	Cu	63	25.352	ug/L	0.423	1	257	251476	1
	Cu	65	25.294	ug/L	0.950	3	102	113807	2
	Zn	66	76.579	ug/L	1.929	2	202	201143	1
	Zn	67	71.327	ug/L	1.278	1	32	31316	2
	Zn	68	76.262	ug/L	1.868	2	485	143720	3
	As	75	22.972	ug/L	1.110	4	431	57709	3
	As-1	75	23.629	ug/L	0.998	4	9696	68998	2
	Se	82	73.786	ug/L	1.806	2	4	18061	1
	Se	78	73.654	ug/L	1.352	1	9817	57688	0
	Y	89		ug/L			452367	443116	0
	Kr	83		ug/L			721	717	9
>	In	115		ug/L			1192772	1236218	0
	Ag	107	28.024	ug/L	0.592	2	83	377208	1
	Cd	111	25.057	ug/L	0.539	2	153	145858	1
	Cd	114	24.572	ug/L	0.264	1	68	365135	0
	Sb	121	24.869	ug/L	0 382	1	2040	458744	0
	Sb	123	25.431	ug/L	0.344	1	1508	352078	0
>	Tb	159		ug/L			1408020	1482237	1
	Tl	205	24.962	ug/L	0.301	1	698	1224322	0
	Pb	208	25.565	ug/L	0.557	2	726	1599126	0
	Bi	209		ug/L			3188747	3349738	1
	Th	232	22.134	ug/L	0.428	1	3367	1359327	1
	U	238	25.104	ug/L	0.873	3	106	1509838	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 12:22:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	129668	2
	Cl	37		ug/L			4359635	4406301	2
>	Ge	72		ug/L			754356	719711	2
	Ni	60	49.368	ug/L	2.804	5	83	213752	3
	Ni	62	50.091	ug/L	1.698	3	89	30846	2
	Cu	63	48.005	ug/L	1.011	2	257	456462	0
	Cu	65	49.431	ug/L	1.550	3	102	213364	4
	Zn	66	49.698	ug/L	1.670	3	202	125258	1
	Zn	67	50.039	ug/L	1.929	3	32	21070	1
	Zn	68	51.534	ug/L	3.164	6	485	93241	4
	As	75	48.268	ug/L	1.778	3	431	115865	2
	As-1	75	48.290	ug/L	2.123	4	9696	125589	2
	Se	82	49.792	ug/L	1.156	2	4	11692	0
	Se	78	49.071	ug/L	3.025	6	9817	39973	2
	Y	89		ug/L			452367	424378	1
	Kr	83		ug/L			721	743	4
>	In	115		ug/L			1192772	1174881	1
	Ag	107	55.667	ug/L	1.055	1	83	712049	1
	Cd	111	50.715	ug/L	1.772	3	153	280380	2
	Cd	114	50.007	ug/L	0.411	0	68	706178	0
	Sb	121	49.631	ug/L	1.424	2	2040	868006	1
	Sb	123	50.417	ug/L	1.351	2	1508	661814	1
>	Tb	159		ug/L			1408020	1448954	2
	Tl	205	50.242	ug/L	0.917	1	698	2407935	0
	Pb	208	50.147	ug/L	1.632	3	726	3064957	1
	Bi	209		ug/L			3188747	3128548	1
	Th	232	49.369	ug/L	1.004	2	3367	2959111	0
	U	238	49.663	ug/L	0.995	2	106	2919154	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 12:29:11
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	126732	4
	Cl	37		ug/L			4359635	4329032	1
>	Ge	72		ug/L			754356	718920	1
	Ni	60	-0.009	ug/L	0.001	15	83	42	15
	Ni	62	-0.013	ug/L	0.013	102	89	77	11
	Cu	63	-0.010	ug/L	0.001	9	257	149	4
	Cu	65	-0.006	ug/L	0.001	17	102	71	4
	Zn	66	0.016	ug/L	0.004	22	202	234	3
	Zn	67	0.016	ug/L	0.003	21	32	37	3
	Zn	68	-0.004	ug/L	0.017	469	485	456	5
	As	75	-0.001	ug/L	0.003	406	431	408	1
	As-1	75	0.005	ug/L	0.062	1288	9696	9251	0
	Se	82	0.012	ug/L	0.026	210	4	7	81
	Se	78	0.048	ug/L	0.264	555	9817	9383	0
	Y	89		ug/L			452367	434469	1
	Kr	83		ug/L			721	698	3
>	In	115		ug/L			1192772	1190347	1
	Ag	107	-0.002	ug/L	0.001	22	83	54	11
	Cd	111	-0.005	ug/L	0.002	29	153	122	8
	Cd	114	-0.002	ug/L	0.000	14	68	39	11
	Sb	121	-0.009	ug/L	0.022	257	2040	1881	20
	Sb	123	-0.003	ug/L	0.023	721	1508	1461	20
>	Tb	159		ug/L			1408020	1439075	1
	Tl	205	-0.005	ug/L	0.001	17	698	486	9
	Pb	208	-0.005	ug/L	0.000	6	726	466	4
	Bi	209		ug/L			3188747	3276238	1
	Th	232	0.139	ug/L	0.013	9	3367	11691	6
	U	238	0.000	ug/L	0.000	6441	106	109	14

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 12:32:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	144075	2
	Cl	37		ug/L			4359635	4358558	0
>	Ge	72		ug/L			754356	745532	3
	Ni	60	0.008	ug/L	0.004	46	83	119	11
	Ni	62	-0.004	ug/L	0.006	154	89	86	5
	Cu	63	0.016	ug/L	0.001	6	257	411	5
	Cu	65	0.018	ug/L	0.003	14	102	181	9
	Zn	66	0.350	ug/L	0.013	3	202	1113	5
	Zn	67	0.335	ug/L	0.021	6	32	178	5
	Zn	68	0.330	ug/L	0.015	4	485	1095	2
	As	75	0.002	ug/L	0.009	472	431	431	8
	As-1	75	-0.006	ug/L	0.142	2198	9696	9559	1
	Se	82	-0.023	ug/L	0.059	260	4	0	3179
	Se	78	-0.016	ug/L	0.573	3489	9817	9683	0
	Y	89		ug/L			452367	452229	2
	Kr	83		ug/L			721	742	3
>	In	115		ug/L			1192772	1240965	2
	Ag	107	-0.003	ug/L	0.001	27	83	47	20
	Cd	111	-0.004	ug/L	0 001	28	153	136	6
	Cd	114	-0.002	ug/L	0.000	20	68	41	13
	Sb	121	-0.080	ug/L	0.008	10	2040	654	22
	Sb	123	-0.076	ug/L	0 008	10	1508	512	21
>	Tb	159		ug/L			1408020	1489051	1
	Tl	205	-0.006	ug/L	0.001	14	698	441	11
	Pb	208	0.036	ug/L	0.000	0	726	3045	1
	Bi	209		ug/L			3188747	3326861	1
	Th	232	0.062	ug/L	0.021	34	3367	7374	17
	U	238	0.000	ug/L	0.000	5	106	138	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:36:17
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	137619	2
	Cl	37		ug/L			4359635	4325970	2
>	Ge	72		ug/L			754356	752556	2
	Ni	60	0.030	ug/L	0.003	10	83	217	5
	Ni	62	0.009	ug/L	0.004	39	89	95	4
	Cu	63	0.005	ug/L	0.001	27	257	306	6
	Cu	65	0.009	ug/L	0.002	20	102	141	6
	Zn	66	0.541	ug/L	0.030	5	202	1623	2
	Zn	67	0.489	ug/L	0.025	5	32	247	2
	Zn	68	0.477	ug/L	0.012	2	485	1383	1
	As	75	0.002	ug/L	0.011	697	431	433	4
	As-1	75	-0.119	ug/L	0.128	107	9696	9368	1
	Se	82	-0.006	ug/L	0.027	487	4	3	196
	Se	78	-0.472	ug/L	0.466	98	9817	9480	1
	Y	89		ug/L			452367	452866	3
	Kr	83		ug/L			721	718	1
>	In	115		ug/L			1192772	1218740	0
	Ag	107	-0.003	ug/L	0.000	16	83	45	14
	Cd	111	-0.003	ug/L	0.001	40	153	137	6
	Cd	114	-0.001	ug/L	0.001	51	68	55	14
	Sb	121	-0.095	ug/L	0.004	4	2040	373	20
	Sb	123	-0.094	ug/L	0.004	4	1508	268	20
>	Tb	159		ug/L			1408020	1463277	1
	Tl	205	-0.007	ug/L	0.000	3	698	372	2
	Pb	208	0.010	ug/L	0.000	4	726	1346	3
	Bi	209		ug/L			3188747	3302417	1
	Th	232	-0.026	ug/L	0.001	4	3367	1926	3
	U	238	-0.001	ug/L	0.000	14	106	45	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:39:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	167299	1
	Cl	37		ug/L			4359635	4448659	2
>	Ge	72		ug/L			754356	749099	2
	Ni	60	27.714	ug/L	0.764	2	83	125018	3
	Ni	62	30.520	ug/L	0.669	2	89	19595	0
	Cu	63	49.035	ug/L	0.931	1	257	485353	1
	Cu	65	49.404	ug/L	3.007	6	102	221752	4
	Zn	66	84.351	ug/L	3.906	4	202	221141	3
	Zn	67	85.333	ug/L	2.453	2	32	37385	1
	Zn	68	85.233	ug/L	2.677	3	485	160311	3
	As	75	3.502	ug/L	0.132	3	431	9146	1
	As-1	75	3.327	ug/L	0.189	5	9696	17969	0
	Se	82	0.001	ug/L	0.069	8406	4	4	352
	Se	78	-0.360	ug/L	0.271	75	9817	9512	0
	Y	89		ug/L			452367	595545	0
	Kr	83		ug/L			721	894	4
>	In	115		ug/L			1192772	1182872	1
	Ag	107	0.063	ug/L	0.002	2	83	895	2
	Cd	111	0.247	ug/L	0.003	1	153	1524	1
	Cd	114	0.184	ug/L	0.004	2	68	2683	0
	Sb	121	-0.064	ug/L	0.005	7	2040	902	8
	Sb	123	-0.059	ug/L	0.007	12	1508	713	12
>	Tb	159		ug/L			1408020	1461659	1
	Tl	205	0.024	ug/L	0.001	5	698	1882	3
	Pb	208	19.184	ug/L	0.062	0	726	1183739	0
	Bi	209		ug/L			3188747	3171734	0
	Th	232	0.816	ug/L	0.023	2	3367	52771	2
	U	238	0.192	ug/L	0.005	2	106	11490	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:43:22
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
	C	13		ug/L			129716	223163	3
	Cl	37		ug/L			4359635	4545576	2
>	Ge	72		ug/L			754356	736402	1
	Ni	60	100.697	ug/L	1.136	1	83	446340	1
	Ni	62	102.705	ug/L	2.658	2	89	64630	2
	Cu	63	460.693	ug/L	3.705	0	257	4481733	2
	Cu	65	466.888	ug/L	7.996	1	102	2061156	2
	Zn	66	4079.083	ug/L	92.489	2	202	10506885	1
	Zn	67	3642.032	ug/L	204.452	5	32	1566930	4
	Zn	68	3719.952	ug/L	126.801	3	485	6855652	2
	As	75	11.051	ug/L	0.084	0	431	27478	1
	As-1	75	10.802	ug/L	0.190	1	9696	36107	0
	Se	82	0.202	ug/L	0.108	53	4	53	47
	Se	78	0.301	ug/L	0.445	147	9817	9388	1
	Y	89		ug/L			452367	591771	3
	Kr	83		ug/L			721	827	7
>	In	115		ug/L			1192772	1141887	0
	Ag	107	1.331	ug/L	0.039	2	83	16620	2
	Cd	111	11.169	ug/L	0.173	1	153	60144	2
	Cd	114	11.081	ug/L	0.156	1	68	152144	1
	Sb	121	2.156	ug/L	0.034	1	2040	38524	1
	Sb	123	2.110	ug/L	0.033	1	1508	28309	0
>	Tb	159		ug/L			1408020	1420134	0
	Tl	205	0.052	ug/L	0.001	1	698	3162	2
	Pb	208	1040.454	ug/L	8.147	0	726	62336191	0
	Bi	209		ug/L			3188747	3094035	1
	Th	232	0.755	ug/L	0.007	0	3367	47694	0
	U	238	0.312	ug/L	0.006	1	106	18080	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:46:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	223715	3
	Cl	37		ug/L			4359635	4426795	3
>	Ge	72		ug/L			754356	719201	1
	Ni	60	105.837	ug/L	4.447	4	83	458003	3
	Ni	62	108.528	ug/L	3.222	2	89	66712	3
	Cu	63	507.623	ug/L	10.064	1	257	4821814	0
	Cu	65	523.682	ug/L	14.736	2	102	2257120	1
	Zn	66	3965.149	ug/L	113.492	2	202	9974169	1
	Zn	67	3609.264	ug/L	132.445	3	32	1517017	2
	Zn	68	3611.813	ug/L	95.271	2	485	6504340	3
	As	75	11.019	ug/L	0.220	1	431	26758	0
	As-1	75	10.764	ug/L	0.261	2	9696	35170	0
	Se	82	0.272	ug/L	0.020	7	4	68	8
	Se	78	-0.265	ug/L	0.161	60	9817	9193	0
	Y	89		ug/L			452367	591197	0
	Kr	83		ug/L			721	804	2
>	In	115		ug/L			1192772	1152595	1
	Ag	107	1.863	ug/L	0.054	2	83	23452	2
	Cd	111	11.525	ug/L	0.329	2	153	62623	2
	Cd	114	11.309	ug/L	0.209	1	68	156723	2
	Sb	121	1.771	ug/L	0.036	2	2040	32283	1
	Sb	123	1.768	ug/L	0.053	2	1508	24167	1
>	Tb	159		ug/L			1408020	1423030	0
	Tl	205	0.051	ug/L	0.002	3	698	3128	2
	Pb	208	1016.964	ug/L	12.305	1	726	61053118	0
	Bi	209		ug/L			3188747	3130223	0
	Th	232	0.868	ug/L	0.007	0	3367	54476	0
	U	238	0.453	ug/L	0.007	1	106	26249	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 FSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:50:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	211877	5
	Cl	37		ug/L			4359635	4417133	2
>	Ge	72		ug/L			754356	739065	3
	Ni	60	**142.899**	ug/L	4.179	2	83	635333	2
	Ni	62	**149.037**	ug/L	5.086	3	89	94034	2
	Cu	63	**527.633**	ug/L	19.432	3	257	5147839	3
	Cu	65	**539.218**	ug/L	31.832	5	102	2385373	2
	Zn	66	**4122.095**	ug/L	261.721	6	202	10641291	2
	Zn	67	**3704.729**	ug/L	181.419	4	32	1598557	1
	Zn	68	**3797.285**	ug/L	154.456	4	485	7019223	1
	As	75	**33.817**	ug/L	1.916	5	431	83407	1
	As-1	75	**33.797**	ug/L	1.928	5	9696	93043	1
	Se	82	**72.749**	ug/L	3.436	4	4	17524	1
	Se	78	**70.499**	ug/L	3 398	4	9817	54758	0
	Y	89		ug/L			452367	604757	3
	Kr	83		ug/L			721	818	5
>	In	115		ug/L			1192772	1136899	0
	Ag	107	**24.214**	ug/L	0.731	3	83	299734	2
	Cd	111	**36.128**	ug/L	0.419	1	153	193346	0
	Cd	114	**36.783**	ug/L	0.552	1	68	502657	1
	Sb	121	**2.719**	ug/L	0.064	2	2040	47854	1
	Sb	123	**2.740**	ug/L	0.054	1	1508	36171	1
>	Tb	159		ug/L			1408020	1417156	1
	Tl	205	**24.223**	ug/L	0.251	1	698	1136074	1
	Pb	208	**1088.356**	ug/L	17.149	1	726	65060373	0
	Bi	209		ug/L			3188747	3096869	1
	Th	232	**24.888**	ug/L	0.344	1	3367	1460813	0
	U	238	**25.047**	ug/L	0.978	3	106	1439807	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:53:59
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	151939	2
	Cl	37		ug/L			4359635	4282643	3
>	Ge	72		ug/L			754356	727806	2
	Ni	60	6.920	ug/L	0.246	3	83	30367	0
	Ni	62	7.936	ug/L	0.227	2	89	5017	5
	Cu	63	8.510	ug/L	0.170	1	257	82029	1
	Cu	65	8.537	ug/L	0.175	2	102	37333	2
	Zn	66	17.418	ug/L	1.691	9	202	44458	6
	Zn	67	18.213	ug/L	0.981	5	32	7772	3
	Zn	68	17.443	ug/L	1.033	5	485	32210	2
	As	75	1.403	ug/L	0.062	4	431	3807	1
	As-1	75	1.327	ug/L	0.190	14	9696	12581	0
	Se	82	ω0.128	ug/L	0.065	51	4	34	42
	Se	78	-0.086	ug/L	0.544	634	9817	9410	1
	Y	89		ug/L			452367	535684	0
	Kr	83		ug/L			721	732	5
>	In	115		ug/L			1192772	1184018	0
	Ag	107	0.022	ug/L	0.002	8	83	365	6
	Cd	111	0.056	ug/L	0.007	11	153	466	8
	Cd	114	0.039	ug/L	0.002	5	68	619	4
	Sb	121	-0.095	ug/L	0.003	2	2040	351	12
	Sb	123	-0.092	ug/L	0.005	5	1508	278	23
>	Tb	159		ug/L			1408020	1438438	0
	Tl	205	0.038	ug/L	0.005	13	698	2520	10
	Pb	208	1.707	ug/L	0.324	19	726	104385	19
	Bi	209		ug/L			3188747	3187953	0
	Th	232	0.861	ug/L	0.009	1	3367	54616	1
	U	238	0.181	ug/L	0.003	1	106	10645	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL74 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 12:57:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	165490	4
	Cl	37		ug/L			4359635	4302383	2
>	Ge	72		ug/L			754356	726714	2
	Ni	60	11.315	ug/L	0.148	1	83	49554	1
	Ni	62	12.750	ug/L	0.414	3	89	7997	5
	Cu	63	11.900	ug/L	0.319	2	257	114430	1
	Cu	65	11.944	ug/L	0.424	3	102	52092	1
	Zn	66	26.050	ug/L	1.653	6	202	66353	4
	Zn	67	27.366	ug/L	0.471	1	32	11656	3
	Zn	68	26.292	ug/L	0.172	0	485	48292	2
	As	75	1.538	ug/L	0.080	5	431	4127	2
	As-1	75	1.459	ug/L	0.150	10	9696	12887	0
	Se	82	0.047	ug/L	0.051	109	4	15	76
	Se	78	-0.099	ug/L	0.357	361	9817	9391	0
	Y	89		ug/L			452367	570998	1
	Kr	83		ug/L			721	786	1
>	In	115		ug/L			1192772	1177160	1
	Ag	107	0.025	ug/L	0.003	12	83	398	8
	Cd	111	0.081	ug/L	0.004	4	153	598	2
	Cd	114	0.042	ug/L	0.005	10	68	660	8
	Sb	121	-0.100	ug/L	0.002	1	2040	268	9
	Sb	123	-0.098	ug/L	0.002	2	1508	197	13
>	Tb	159		ug/L			1408020	1432061	0
	Tl	205	0.033	ug/L	0.001	3	698	2283	2
	Pb	208	1.994	ug/L	0.014	0	726	121209	0
	Bi	209		ug/L			3188747	3174918	1
	Th	232	0.868	ug/L	0.009	1	3367	54803	1
	U	238	0.171	ug/L	0.004	2	106	10026	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB3SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, April 19, 2013 13:01:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	134178	1
	Cl	37		ug/L			4359635	4231468	4
>	Ge	72		ug/L			754356	730041	2
	Ni	60	24.679	ug/L	0.845	3	83	108453	1
	Ni	62	25.113	ug/L	0 045	0	89	15733	2
	Cu	63	24.999	ug/L	0.224	0	257	241287	1
	Cu	65	25.476	ug/L	0.776	3	102	111534	1
	Zn	66	80.082	ug/L	3.415	4	202	204599	2
	Zn	67	72.656	ug/L	3.853	5	32	31015	3
	Zn	68	78.580	ug/L	1.204	1	485	144070	2
	As	75	23.662	ug/L	1.050	4	431	57819	2
	As-1	75	24.029	ug/L	1.070	4	9696	68102	1
	Se	82	77.312	ug/L	2.726	3	4	18409	1
	Se	78	75.939	ug/L	2.650	3	9817	57564	0
	Y	89		ug/L			452367	444706	2
	Kr	83		ug/L			721	708	2
>	In	115		ug/L			1192772	1200679	0
	Ag	107	26.312	ug/L	0.664	2	83	344017	2
	Cd	111	24.750	ug/L	0.181	0	153	139939	0
	Cd	114	24.872	ug/L	0.609	2	68	358959	2
	Sb	121	23.880	ug/L	0.220	0	2040	427955	1
	Sb	123	24.166	ug/L	0.321	1	1508	325028	0
>	Tb	159		ug/L			1408020	1445445	1
	Tl	205	24.283	ug/L	0.731	3	698	1161337	1
	Pb	208	24.798	ug/L	0.251	1	726	1512838	0
	Bi	209		ug/L			3188747	3270763	0
	Th	232	23.019	ug/L	0.642	2	3367	1378409	2
	U	238	24.601	ug/L	0.041	0	106	1442929	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WL49 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, April 19, 2013 13:04:36
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	141521	1
	Cl	37		ug/L			4359635	4259332	8
>	Ge	72		ug/L			754356	721754	0
	Ni	60	24.506	ug/L	1 116	4	83	106523	4
	Ni	62	24.537	ug/L	0.913	3	89	15198	3
	Cu	63	24.876	ug/L	0.463	1	257	237389	1
	Cu	65	25.149	ug/L	0.235	0	102	108899	1
	Zn	66	73.890	ug/L	0.714	0	202	186765	1
	Zn	67	68.342	ug/L	3.346	4	32	28866	5
	Zn	68	73.772	ug/L	3.225	4	485	133737	4
	As	75	22.811	ug/L	0.529	2	431	55153	2
	As-1	75	23.227	ug/L	0.176	0	9696	65429	0
	Se	82	71.912	ug/L	1.170	1	4	16937	1
	Se	78	70.879	ug/L	1.801	2	9817	53767	2
	Y	89		ug/L			452367	447961	2
	Kr	83		ug/L			721	646	2
>	In	115		ug/L			1192772	1205276	1
	Ag	107	25.532	ug/L	0.547	2	83	335058	1
	Cd	111	23.945	ug/L	0.520	2	153	135895	1
	Cd	114	23.577	ug/L	0.227	0	68	341587	0
	Sb	121	24.712	ug/L	0.473	1	2040	444434	0
	Sb	123	24.885	ug/L	0.553	2	1508	335895	0
>	Tb	159		ug/L			1408020	1453093	1
	Tl	205	23.801	ug/L	0.169	0	698	1144538	1
	Pb	208	24.212	ug/L	0.562	2	726	1484739	0
	Bi	209		ug/L			3188747	3303398	2
	Th	232	21.722	ug/L	0.480	2	3367	1307775	1
	U	238	24.137	ug/L	0.625	2	106	1422837	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 13:09:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
	C	13		ug/L			129716	131397	1
	Cl	37		ug/L			4359635	4236623	1
>	Ge	72		ug/L			754356	698402	1
	Ni	60	49.975	ug/L	1.675	3	83	210058	2
	Ni	62	50.233	ug/L	0.355	0	89	30023	1
	Cu	63	49.790	ug/L	0.576	1	257	459507	0
	Cu	65	50.273	ug/L	1.035	2	102	210511	0
	Zn	66	50.589	ug/L	2.048	4	202	123740	2
	Zn	67	51.140	ug/L	1.572	3	32	20903	2
	Zn	68	50.955	ug/L	0.879	1	485	89524	1
	As	75	49.457	ug/L	1.096	2	431	115225	0
	As-1	75	49.663	ug/L	1.308	2	9696	125126	1
	Se	82	50.764	ug/L	0.247	0	4	11570	1
	Se	78	50.723	ug/L	1 005	1	9817	39811	0
	Y	89		ug/L			452367	420020	1
	Kr	83		ug/L			721	706	6
>	In	115		ug/L			1192772	1153917	0
	Ag	107	53.420	ug/L	1.101	2	83	671225	2
	Cd	111	50.465	ug/L	1.227	2	153	274041	1
	Cd	114	50.297	ug/L	1.043	2	68	697552	1
	Sb	121	49.990	ug/L	0.483	0	2040	858825	1
	Sb	123	50.507	ug/L	0.385	0	1508	651263	0
>	Tb	159		ug/L			1408020	1419797	1
	Tl	205	50.509	ug/L	1.116	2	698	2372181	1
	Pb	208	49.717	ug/L	0.410	0	726	2978672	0
	Bi	209		ug/L			3188747	3114719	1
	Th	232	49.987	ug/L	0.903	1	3367	2936462	1
	U	238	50.444	ug/L	1.422	2	106	2905566	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, April 19, 2013 13:15:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8GFA+.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\041913.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
	C	13		ug/L			129716	133188	2
	Cl	37		ug/L			4359635	4072745	2
>	Ge	72		ug/L			754356	714772	2
	Ni	60	-0.006	ug/L	0.004	62	83	52	33
	Ni	62	-0.041	ug/L	0.008	20	89	59	6
	Cu	63	-0.004	ug/L	0.005	124	257	205	24
	Cu	65	-0.002	ug/L	0.003	104	102	86	13
	Zn	66	0.045	ug/L	0.021	47	202	304	18
	Zn	67	0.031	ug/L	0.026	83	32	44	23
	Zn	68	0.024	ug/L	0.035	148	485	502	13
	As	75	-0.005	ug/L	0.010	183	431	395	3
	As-1	75	0.030	ug/L	0.125	411	9696	9256	1
	Se	82	-0.001	ug/L	0.071	8525	4	4	388
	Se	78	0.127	ug/L	0.488	382	9817	9376	1
	Y	89		ug/L			452367	433486	1
	Kr	83		ug/L			721	676	5
>	In	115		ug/L			1192772	1171264	1
	Ag	107	0.001	ug/L	0.003	441	83	92	47
	Cd	111	-0.005	ug/L	0.002	48	153	122	10
	Cd	114	0.001	ug/L	0.002	313	68	77	41
	Sb	121	-0.008	ug/L	0.025	322	2040	1868	23
	Sb	123	-0.003	ug/L	0.029	967	1508	1442	26
>	Tb	159		ug/L			1408020	1394851	1
	Tl	205	-0.003	ug/L	0.002	88	698	576	18
	Pb	208	0.003	ug/L	0.007	233	726	899	47
	Bi	209		ug/L			3188747	3190821	1
	Th	232	0.180	ug/L	0.029	16	3367	13706	11
	U	238	0.002	ug/L	0.002	86	106	223	46

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 4-19-13

	Analyst 4-19 DM	Peer 4-22-13	Comment
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	√	✓	
ICB/CCB	√	✓	
Samples			
RSD's & SD's	√	✓	
Internal Standards	—	—	
Carry-over	—	—	
Method QC			
CRI/CRA	√	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Method QC			
SRM/LCS	√	✓	
Matrix Spikes	√	✓	SEE RUN LOG
Matrix Duplicates	√	✓	SEE RUN LOG
Method Blanks	√	✓	
Data Transfer			
Requested elements/isotope identified	√	✓	
Correct samples identified for distribution	√	✓	
Raw data match distributed data	√	✓	
Data filename correct	√	✓	
Notes	√	✓	SEE CAF5

WL_HQ_022417

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

Page: 1 of 26

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments (DM 4-19-13)
STD 0.0	5MM	1X		
" 0.1				
" 0.5				
" 1.0				
" 2.0				
" 5.0				
" 10.0				
ICV			8.20	Begin CLP %R=103 ✓
ICB			-0.02	✓
CCV1			4.11	%R=103 ✓
CCB1			0.01	✓
CRA			0.11	✓
WM16 MB1			0.01	✓
" MB1SPK			2.20	%R=110 ✓
" MB1SPD			2.19	%R=110 ✓
" A			0.04	
" ADUP			0.05	NO RPD: Undetected ✓
" ASPK			1.20	%R=120 ✓
" B				
" C				
" D				
CCV2			4.10	%R=103 ✓
CCB2			0.00	✓
WL49 MB3			0.00	✓
" MB3SPK			2.K	%R=108 ✓
" F			7.93	
" FDUP			9.50	RPD=18.0 ✓
" FSPK			9.55	%R=160 High X
" G				
WLL6 MB1	↓	↓	0.00	✓

Chemical/Reagent ID:

10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP249

Standard ID:

Standard: 3027-14

ICV/CCV: 59.6

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

Page: 2 of 26

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments (DM 4-19-13)	
WLL8 MBIBPK	5mm	1X	2.21	%R=111	√
" REA		5X	6.85	8.39mg/kg	√
" A		1X	8.33		
CCV3			4.04	%R=101	√
CCB3			0.00		√
WLL8 AOUP			7.09	RPD=7.99	√
" ABPK			8.68	%R=35 LOW	X
" B					
WM28 MBI			-0.03		√
" MBISPK			2.09	%R=105	√
" A			0.25		
" AOUP			0.38	Diff > 0.1	X
" ABPK			1.28	%R=103	√
" B					
" C					
CCV4			4.05	%R=101	√
CCB4			0.00		√
WM28 D					
" E					
CCV5			4.05	%R=101	√
CCB5			-0.00		√
WL49 F			7.87		
" FOUP			9.44	RPD=18.1	√
" FSPK			9.45	%R=158 High	X
WLL8 A			8.10		
" AOUP			7.45	RPD=8.86	√
" ASPK			8.42	%R=32 LOW	X
WM28 A			0.22		
" AOUP			0.37	Diff > 0.1	X
" ASPK	↓	↓	1.26	%R=104	√

Chemical/Reagent ID:
10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2436

Standard ID:
Standard: 5027-14

ICV/CCV: 59-6

WL49:023US

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-19-13

Page: 43 of 76

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments (on 4-19-13)	
CCV6	SMM	1X	4.01	%R=100	✓
CCB6			0.01		✓
WL74 MB1			0.00		✓
" MB1SPK			2.09	%R=105	✓
" REF1		5X	6.69	8.27mg/kg	✓
" B		1X			
" C					
" D					
" E					
" F					
" G					
" H					
CCV7			4.02	%R=101	✓
CCB7			-0.00		✓
WL74 I					
" J			0.05		
" JDUP			0.04	NO RPD: Undetected	✓
" JSPK			1.12	%R=112	✓
WL67 MB1			-0.00		✓
" MB1SPK			1.99	%R=100	✓
" A			5.61		
" ADUP			6.54	RPD=15.3	✓
" ASPK			7.88	%R=227 High	X
" B					
CCV8			3.99	%R=100	✓
CCB8			-0.01	ENDCLP	✓
WM08 MB1			0.00		✓
" MB1SPK			2.07	%R=104	✓
" A			0.12		
" ADUP			0.09		✓

4-22-13

Chemical/Reagent ID:

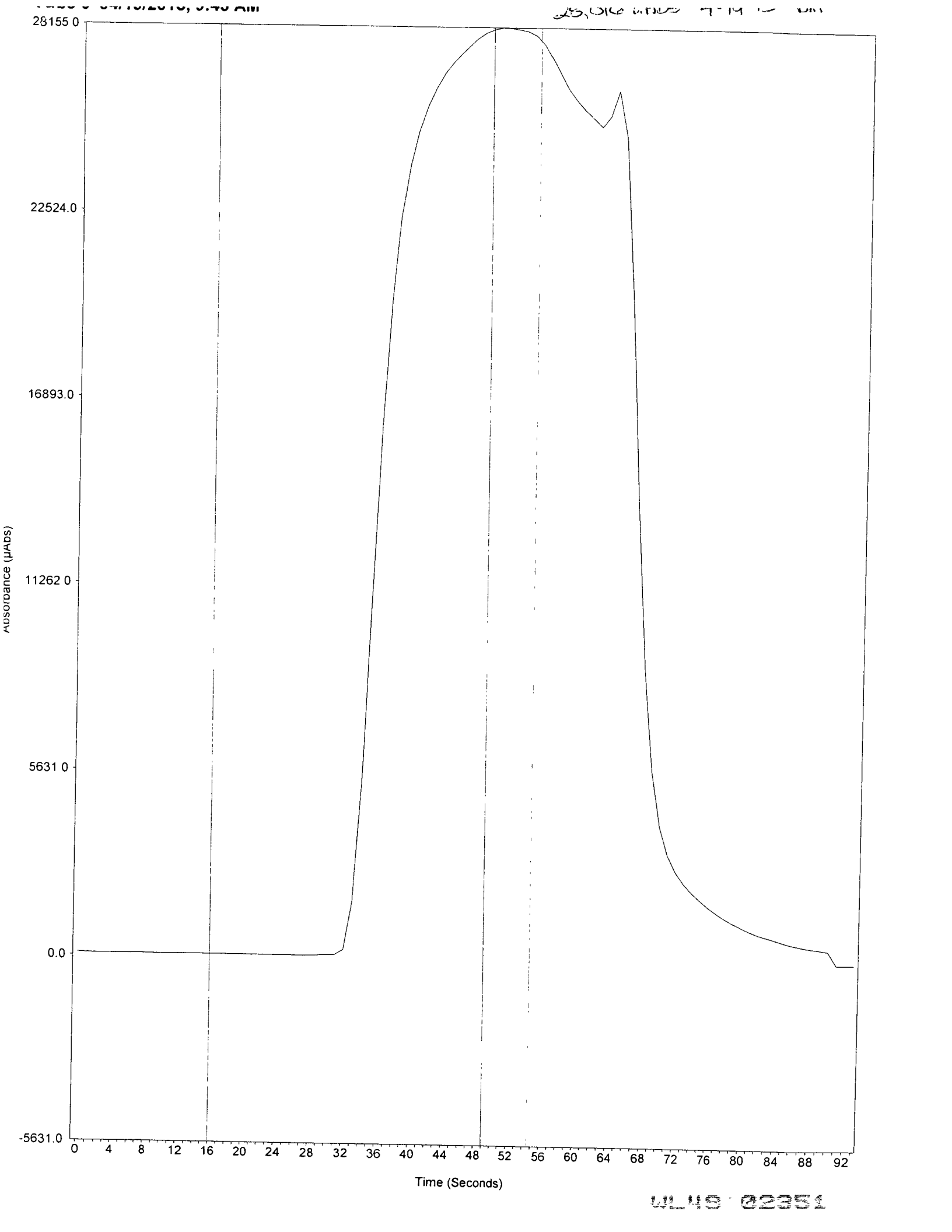
10% $SnCl_2$: MP2479

14% NH_2OH/NaCl: MP2436

Standard ID:

Standard: 3027-14

ICV/CCV: 59.6


28155 0
22524.0
16893.0
11262 0
5631 0
0.0
-5631.0
Absorbance (µABS)
0
4
8
12
16
20
24
28
32
36
40
44
48
52
56
60
64
68
72
76
80
84
88
92
Time (Seconds)

CETAC Hg Analysis Report - 13041900.DB - Friday, April 19, 2013, 2:16:07 PM

Analyst
Date Started Friday, April 19, 2013, 09:42:11
Worksheet ARI 10ppb CALIB
Comment

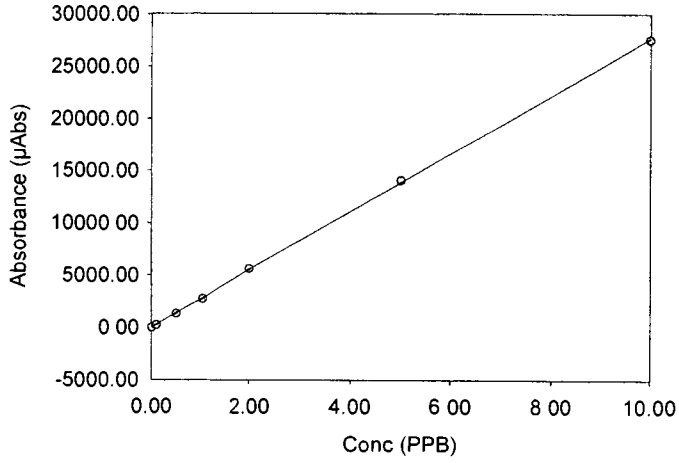
Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	19-Apr-2013, 09:42	10.00	0.29	28000.00	1.00	

Information about this calibration could not be retrieved from the Master File

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	19-Apr-2013, 09:45	0.00	8.72	-37.30	1 00	
Standard #1	19-Apr-2013, 09:47	0.10	1.76	225 00	1.00	
Standard #2	19-Apr-2013, 09:48	0.50	0.23	1310.00	1.00	
Standard #3	19-Apr-2013, 09:50	1 00	0.43	2740.00	1.00	
Standard #4	19-Apr-2013, 09:51	2.00	0.42	5600.00	1.00	
Standard #5	19-Apr-2013, 09:53	5.00	0.27	14100.00	1.00	
Standard #6	19-Apr-2013, 09:55	10.00	0.30	27600 00	1.00	

SMM

Calibration Data



Int.	0.000
Slope	2768.570
Correlation	0 99993

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	19-Apr-2013, 09:58	8.20	0.40	22700 00	1 00	
ICB	19-Apr-2013, 09:59	-0 02	15 80	-43 40	1 00	

Bgn CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10:01	4.11	0.32	11400.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 10:03	0.01	15 40	21 80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	19-Apr-2013, 10:04	0.11	0.45	312 00	1.00	
WM16 MB1 SMM	19-Apr-2013, 10:06	0.01	29.40	14 60	1.00	
WM16 MB1SPK SMM	19-Apr-2013, 10:07	2 20	0 34	6100 00	1 00	
WM16 MB1SPD SMM	19-Apr-2013, 10:09	2.19	0 20	6060.00	1.00	
WM16 A SMM	19-Apr-2013, 10:11	0.04	1.81	120.00	1.00	
WM16 ADUP SMM	19-Apr-2013, 10:12	0.05	3 94	147 00	1.00	
WM16 ASPK SMM	19-Apr-2013, 10.14	1.20	0.46	3320.00	1.00	
WM16 B SMM	19-Apr-2013, 10:16	0.05	3.69	135.00	1.00	
WM16 C SMM	19-Apr-2013, 10:17	0.16	0.97	448.00	1 00	
WM16 D SMM	19-Apr-2013, 10:19	0.09	3.63	241 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10.20	4.10	0.69	11400.00	1.00	

ML_HG : 02352

Analyst
Date Started Friday, April 19, 2013, 10:22:37
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 10.22	0.00	125.00	3.27	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL49 MB3 SMM	19-Apr-2013, 10:24	0.00	19.00	9 77	1.00	
WL49 MB3SPK SMM	19-Apr-2013, 10 25	2 16	0 54	5970.00	1 00	
WL49 F SMM	19-Apr-2013, 10:27	7.93	0 44	22000.00	1.00	
WL49 FDUP SMM	19-Apr-2013, 10:29	9.50	0.34	26300.00	1.00	
WL49 FSPK SMM	19-Apr-2013, 10:30	9.53	0 41	26400 00	1 00	- HIGH %R
WL49 G SMM	19-Apr-2013, 10.32	0.08	0 99	223.00	1.00	
WL68 MB1 SMM	19-Apr-2013, 10:33	0.00	29 90	10.10	1 00	
WL68 MB1SPK SMM	19-Apr-2013, 10:35	2.21	0.28	6120.00	1 00	
WL68 REF1 SMM	19-Apr-2013, 10:37	6.85	0.22	19000.00	5.00	
WL68 A SMM	19-Apr-2013, 10:38	8.33	0.40	23100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10:40	4.04	0.16	11200 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 10:42	0.00	28 80	6 64	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL68 ADUP SMM	19-Apr-2013, 10.43	7.69	0.39	21300.00	1.00	
WL68 ASPK SMM	19-Apr-2013, 10:45	8.68	0.18	24000.00	1 00	- LOW %R
WL68 B SMM	19-Apr-2013, 10:46	7.84	0.45	21700.00	1.00	
WM28 MB1 SMM	19-Apr-2013, 10:48	-0.03	9 58	-71.00	1 00	
WM28 MB1SPK SMM	19-Apr-2013, 10.50	2.09	0.16	5790.00	1.00	
WM28 A SMM	19-Apr-2013, 10:51	0.25	1.43	689.00	1.00	
WM28 ADUP SMM	19-Apr-2013, 10:53	0.38	0.51	1060.00	1 00	- D.FF70.1
WM28 ASPK SMM	19-Apr-2013, 10:55	1.28	0.11	3540 00	1.00	
WM28 B SMM	19-Apr-2013, 10 56	0.36	0.42	1010.00	1.00	
WM28 C SMM	19-Apr-2013, 10:58	0 27	0 58	743.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 10.59	4.05	0 25	11200.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11:01	0.00	192 00	3 80	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM28 D SMM	19-Apr-2013, 11:03	0.36	0.19	1010.00	1.00	
WM28 E SMM	19-Apr-2013, 11:04	0.17	0.86	477.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 11:06	4.05	0.29	11200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11.08	-0.00	267.00	-2 44	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL49 F SMM	19-Apr-2013, 11:10	7.87	0.39	21800.00	1 00	
WL49 FDUP SMM	19-Apr-2013, 11:11	9.44	0.43	26100 00	1 00	
WL49 FSPK SMM	19-Apr-2013, 11:13	9 45	0.41	26200.00	1.00	- HIGH %R
WL68 A SMM	19-Apr-2013, 11.14	8.10	0.45	22400.00	1.00	
WL68 ADUP SMM	19-Apr-2013, 11.16	7.45	0.48	20600.00	1.00	
WL68 ASPK SMM	19-Apr-2013, 11:18	8.42	0.21	23300.00	1 00	- LOW %R
WM28 A SMM	19-Apr-2013, 11:19	0.22	1.33	602.00	1 00	
WM28 ADUP SMM	19-Apr-2013, 11:21	0.37	0 92	1020 00	1 00	- D.FF70.1
WM28 ASPK SMM	19-Apr-2013, 11:22	1.26	0 56	3490 00	1.00	

Analyst
Date Started Friday, April 19, 2013, 11:24.32
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 11:24	4.01	0.20	11100.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11:26	0.01	20.00	21.10	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL74 MB1 SMM	19-Apr-2013, 11:28	0 00	30.10	7.30	1 00	
WL74 MB1SPK SMM	19-Apr-2013, 11:29	2.09	0.31	5780.00	1 00	
WL74 REF1 SMM	19-Apr-2013, 11:31	6.69	0.36	18500.00	5.00	
WL74 B SMM	19-Apr-2013, 11:32	0 03	0.71	95 50	1 00	
WL74 C SMM	19-Apr-2013, 11:34	0.02	3.63	67.30	1.00	
WL74 D SMM	19-Apr-2013, 11.36	0.04	3.50	98 20	1.00	
WL74 E SMM	19-Apr-2013, 11:37	0.09	2.42	241 00	1.00	
WL74 F SMM	19-Apr-2013, 11:39	0.04	0.89	110 00	1 00	
WL74 G SMM	19-Apr-2013, 11:40	0 04	2 13	100.00	1 00	
WL74 H SMM	19-Apr-2013, 11:42	0 03	6.60	81.20	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 11:44	4.02	0.29	11100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 11:45	-0.00	214.00	-2.35	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WL74 I SMM	19-Apr-2013, 11.47	0.04	6.77	109 00	1 00	
WL74 J SMM	19-Apr-2013, 11:49	0 05	7.07	128.00	1 00	
WL74 JDUP SMM	19-Apr-2013, 11:50	0.04	2.70	102 00	1.00	
WL74 JSPK SMM	19-Apr-2013, 11:52	1.12	0.52	3100.00	1.00	
WL67 MB1 SMM	19-Apr-2013, 11:53	-0.00	454.00	-2 52	1 00	
WL67 MB1SPK SMM	19-Apr-2013, 11:55	1.99	1.19	5520.00	1.00	
WL67 A SMM	19-Apr-2013, 11:57	5.61	0.21	15500 00	1.00	
WL67 ADUP SMM	19-Apr-2013, 11:58	6 54	0.30	18100.00	1.00	
WL67 ASPK SMM	19-Apr-2013, 12:00	7.88	0 54	21800.00	1.00	H, 2, R
WL67 B SMM	19-Apr-2013, 12:01	7.21	0.37	20000.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 12:03	3.99	0.26	11100.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	19-Apr-2013, 12:05	-0.01	8.41	-20 00	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WM08 MB1 SMM	19-Apr-2013, 12.06	0.00	86.20	1 54	1 00	
WM08 MB1SPK SMM	19-Apr-2013, 12:08	2.07	0.44	5740 00	1 00	
WM08 A SMM	19-Apr-2013, 12:10	0.12	1 10	333.00	1 00	
WM08 ADUP SMM	19-Apr-2013, 12:11	0.09	2.82	253 00	1.00	
WM08 ASPK SMM	19-Apr-2013, 12:13	1.18	0.42	3280.00	1.00	
WM08 B SMM	19-Apr-2013, 12:15	0.09	0.99	255.00	1 00	
WL85 MB SMM	19-Apr-2013, 12:16	-0 00	62.60	-7.54	1.00	
WL85 MBSPK SMM	19-Apr-2013, 12:18	2.01	0.39	5560.00	1 00	
WL85 A SMM	19-Apr-2013, 12:19	0.03	4.15	80.60	1 00	
WL85 ADUP SMM	19-Apr-2013, 12:21	0.04	6 06	100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	19-Apr-2013, 12:23	4.01	0.29	11100.00	1.00	

CETAC Hg Analysis Report - 13041900.DB - Friday, April 19, 2013, 2:16:10 PM

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Digested 20.0 mL

Prep Code: TWM Instrument: CETAC
Analyst: NB Date: 04-12-13
Bath Temp: 90°C Start Time: 1442 End Time: 1642

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1 3 NB 4-12-13
STD1	3027-8	0.01		0.1	1
STD2		0.05		0.5	1
STD3		0.10		1.0	1
STD4		0.20		2.0	1
STD5		0.50		5.0	1
STD6		1.00		10.0	1
CRA	↓	0.01		0.1	1
ICB/CCB	—	0.00		0.0	1
ICV/LCS	59-6	0.16	↓	8.0	1
CCV	↓	0.08	100.0	4.0	1

Chemical/Reagent ID:
HNO_3: I8169 H_2SO_4: I8044 HCl: —
5% $K_2S_2O_8$: MP2439 5% $KMnO_4$: MP2445

Prep Code: SMM Instrument: CETAC
Analyst: CB Date: 04-15-13
Bath Temp: 90°C Start Time: 1355 End Time: 1425

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	3022-14	0.01		0.1	2
STD2		0.05		0.5	2
STD3		0.10		1.0	2
STD4		0.20		2.0	2
STD5		0.50		5.0	2
STD6		1.00		10.0	2
CRA	↓	0.01		0.1	1
ICB/CCB	—	0.00		0.0	3
ICV/LCS	59-6	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:
HNO_3: I8169 H_2SO_4: I8044 HCl: —
5% $K_2S_2O_8$: MP2462 5% $KMnO_4$: MP2445

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm **Matrix:** Soil
Analyst: CB **Date:** 04-15-13
Bath Temp: 90°C **Start Time:** 1125 **End Time:** 1155

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WL49 F	6	~	0.277	50.0	4/25, 1	Y	
" Fdup	6	~	0.279	↓	1	↓	
" Fspk	6	~	0.274		1		
" G	2	~	0.246		1		
" mB3	~	~	~	↓	1	↓	
" mB3spk	~	~	~	50.0	1	Y	

CB
4/15/13

Chemical/Reagent ID:

HNO_3: I8169 **H_2SO_4:** I8044 **HCl:** ~
5% $K_2S_2O_8$: mp2439 **5% $KMnO_4$:** mp2445 **Digest Tube Lot:** MH21KK06

Mercury Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WL49, WL65

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4-15-13

Final Volume _____

Final Volume (Hg): 20

Sample ID WLLS CSPK, 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	DM	CVA	1.0	0.02	3007-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 4-15-13

Final Volume _____

Final Volume (Hg): 20

Sample ID WLLS ASPK, MBISPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	TLM	CVA	1.0	0.02	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: 1015
Matrix: Water
Date: 4-15-13
End Time: 1215

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WLL65 A	1	✓	20.0	20.0	4/25 1	Y	
" ADUP	1	✓			1		
" ASPK	1	✓			1		
" B	1	—			1		
" MB1	—	✓			1		
" MB1SPK	—	✓			1		
" C	1	—			1		
" CDUP	1	—			1		
" CSPK	1	—			1		DLM
" D	1	—			1		
" MB2	—	—			1		
" MB2SPK	—	—	20.0	20.0	1	Y	

4-15-13 DM

Chemical/Reagent ID:
HNO_3: I8109/MP2452 H_2SO_4: I8044 HCl: —
5% $K_2S_2O_8$: MP2489 5% $KMnO_4$: MP2445 Digest Tube Lot: ML27KK03

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WL65
Unacceptable Blank:	☐	Date of Event:	4-18-13
Unacceptable Duplicate:	☐	Client ID:	
Unacceptable Spike:	☒	Method/Element:	Hg CVL
Unacceptable Reference:	☐	Prep Code:	TLM

Details of Problem/Recommended Corrective Action:

1st Analysis: A - 60.49 ppt
APSPK - 91.00 ppt %R = 51 LOW

2nd Analysis: A - 59.60 ppt
APSPK - 92.14 ppt %R = 33 LOW

Samples Affected: A, ADUP, APSPK, MB, MRSPK

Corrective Action Taken:

Analyst Initials: DM **Supervisor:**

Date: 4-18-13 **Date:**

Mercury Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WL49, WL65

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 4-16-13

Low Level	Analyst 4-18 CM	Peer 4/18/13	Comment
Analyst, Date, Method info	√	✓	
Sample ID's	√	✓	
Standard/QC solution ID's recorded	√	✓	
Prep codes	√	✓	
Dilution factors	√	✓	
Crossouts/Corrections/Deletions	√	✓	
Blank & Standard intensities	√	✓	
Standard deviations	√	✓	
Curve fit	√	✓	
ICV/CCV	√	✓	
ICB/CCB	√	✓	
RSD's & SD's	√	✓	
Internal Standards	—	—	
Carry-over	—	—	
CRI/CRA	√	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
SRM/LCS	√	✓	
Matrix Spikes	√	✓	WLCS ASPK LOW JOR
Matrix Duplicates	√	✓	
Method Blanks	√	✓	
Requested elements/isotope identified	√	✓	
Correct samples identified for distribution	√	✓	
Raw data match distributed data	√	✓	
Data filename correct	√	✓	
	√	✓	See CAF

Mercury Analysis Log

Analyst: DM

Date: 4-18-13

Instrument: CETAC

Page: 1 of 2

ARI Sample ID	Prep Code	Dilution	QC Data (ppb) ~~ppt~~	Comments	
STD 0.0	TLM	1X			
" 20.0					
" 50.0					
" 100.0					
" 200.0					
" 400.0					
" 1000.0					
ICV			495.36	Begin CLP %R=99	√
ICB			1.66		√
CCV1			501.40	%R=100	√
CCB1			2.74		√
CRA			22.60		√
WLG5 MB1			2.14		√
" MB1SPK			205.98	%R=102	√
" A			60.49		
" ADUP			60.15	RPD 4-18-13	√
" ASPK			91.00	%R=81 LOW	X
" B	↓				
" MB2	DLM		-1.24		√
" MB2SPK			201.45	%R=101	√
" C	↓		13.80		
CCV2	TLM		498.64	%R=100	√
CCB2	↓		1.49		√
WLG5 CDUP	DLM		17.15	NO RPD. Undetected	√
" CSPK			121.79	%R=122	√
" D	↓				
CCV3	TLM		511.50	%R=102	√
CCB3			0.04		√
WLG5 A			69.60		
" ADUP	↓	↓	60.12		√

Chemical/Reagent ID:

10% $SnCl_2$: MR2471

14% NH_2OH/NaCl: MP2482

Standard ID:

Standard: 3028-4

ICV/CCV: 3028-5

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 4-18-13

Page: 2 of 2

ARI Sample ID	Prep Code	Dilution	QC Data ~~(ppb)~~ ppt	Comments
WLL5 PREP	TLM	1X	92.14	%R = 33 LOW X
CCV4	↓	↓	499.87	%R = 100 √
CCB4	↓	↓	1.65	END CLP √
			4-18-13 DM	

Chemical/Reagent ID:

10% $SnCl_2$: MP2471

14% $NH_2OH/NaCl$: MP2436

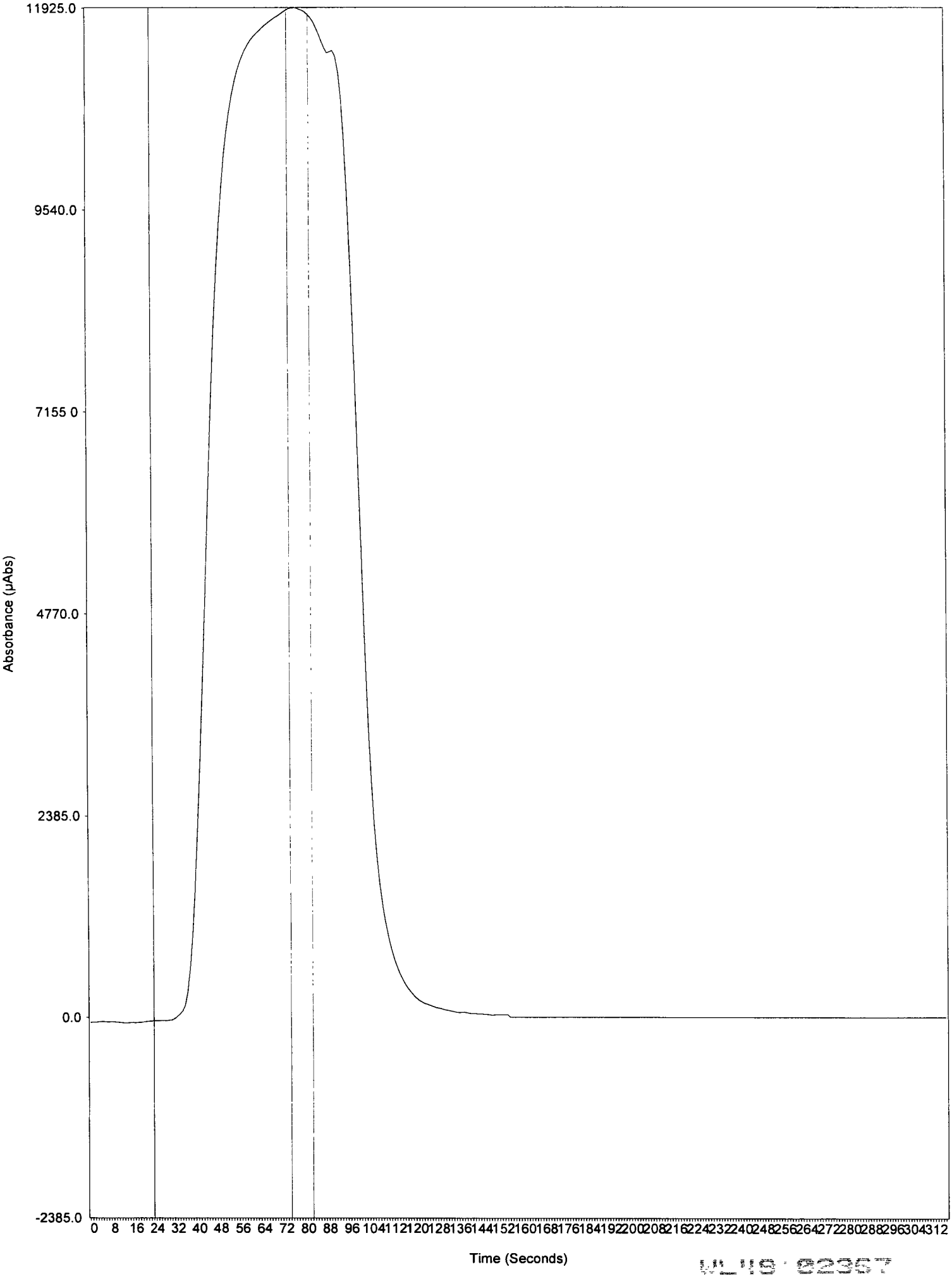
Standard ID:

Standard: 3026-4

ICV/CCV: 3026-5

Std Tube 6 04/18/2013, 10:44 AM

11.955 uAbs 4-18-13 DM



WL 18-2367

CETAC Hg Analysis Report - 13041800.DB - Thursday, April 18, 2013, 12:16:28 PM

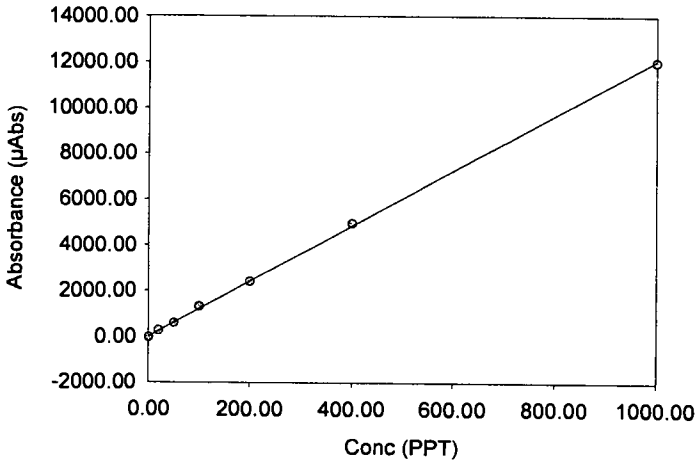
Analyst
Date Started Thursday, April 18, 2013, 10:43:56
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Std Tube 6	18-Apr-2013, 10:43	1000.00	0.18	12000.00	11964	11974	11957	11924	

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	18-Apr-2013, 10:46	0.00	19.70	-29.30	-22	-28	-35	-32	
Standard #1	18-Apr-2013, 10:48	20.00	0.61	255.00	254	258	254	255	
Standard #2	18-Apr-2013, 10:51	50.00	0.78	578.00	582	581	577	572	
Standard #3	18-Apr-2013, 10:54	100.00	0.40	1310.00	1307	1308	1311	1319	
Standard #4	18-Apr-2013, 10:56	200.00	0.22	2410.00	2401	2406	2406	2414	
Standard #5	18-Apr-2013, 10:59	400.00	0.06	4940.00	4942	4942	4944	4948	
Standard #6	18-Apr-2013, 11:02	1000.00	0.19	12000.00	12056	12041	12026	12001	

Calibration Data



Int.	0.000
Slope	12.083
Correlation	0.99988

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	18-Apr-2013, 11:06	495.00	0.12	5990.00	5995	5987	5979	5980	Bgnd LP
ICB	18-Apr-2013, 11:09	1.66	5.22	20.00	19	20	20	21	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	18-Apr-2013, 11:12	501.00	0.09	6060.00	6051	6058	6060	6064	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	18-Apr-2013, 11:14	2.74	23.60	33.10	22	35	40	36	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	18-Apr-2013, 11:17	22.60	0.85	273.00	272	270	274	276	
WL65 MB1 TLM	18-Apr-2013, 11:20	2.14	9.17	25.80	23	25	28	28	
WL65 MB1SPK TLM	18-Apr-2013, 11:22	204.00	0.29	2460.00	2467	2468	2469	2454	
WL65 A TLM	18-Apr-2013, 11:25	60.50	0.26	731.00	733	729	729	733	
WL65 ADUP TLM	18-Apr-2013, 11:28	60.20	1.11	727.00	737	730	720	720	
WL65 ASPK TLM	18-Apr-2013, 11:30	91.00	0.41	1100.00	1095	1097	1102	1105	LOW %R
WL65 B TLM	18-Apr-2013, 11:33	910.00	0.10	11000.00	10988	10990	10999	11012	
WL65 MB2 DLM	18-Apr-2013, 11:36	-1.24	7.82	-15.00	-13	-16	-15	-16	
WL65 MB2SPK DLM	18-Apr-2013, 11:39	201.00	0.21	2430.00	2441	2431	2430	2435	
WL65 C DLM	18-Apr-2013, 11:41	13.80	2.12	167.00	172	165	164	165	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	18-Apr-2013, 11:44	499.00	0.11	6020.00	6030	6031	6021	6018	

WL 13 : 02268

Analyst
Date Started Thursday, April 18, 2013, 11:47:16
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	18-Apr-2013, 11:47	1.49	51.50	18.00	30	20	13	9	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WL65 CDUP DLM	18-Apr-2013, 11:49	17.20	1.02	207.00	205	210	206	207	
WL65 CSPK DLM	18-Apr-2013, 11:52	122.00	0.36	1470.00	1469	1478	1474	1466	
WL65 D DLM	18-Apr-2013, 11:55	5.25	5.58	63.40	62	60	63	68	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	18-Apr-2013, 11:58	512.00	0.26	6180.00	6158	6182	6195	6186	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	18-Apr-2013, 12:00	0.04	456.00	0.46	2	-2	-1	2	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WL65 A TLM	18-Apr-2013, 12:03	59.60	0.89	720.00	723	727	719	712	
WL65 ADUP TLM	18-Apr-2013, 12:06	60.10	0.42	726.00	725	730	728	723	
WL65 ASPK TLM	18-Apr-2013, 12:09	92.10	0.70	1110.00	1104	1110	1118	1122	LOW %R

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	18-Apr-2013, 12:11	500.00	0.16	6040.00	6042	6045	6046	6025	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	18-Apr-2013, 12:14	1.65	28.00	19.90	28	20	17	15	END CLP

Analyst	
Date Created:	Wednesday, November 27, 2002
Worksheet	LOW LEVEL CALIB 20 TO 1000 PPT
Comment	
Sip Duration (Sec.):	55
Rinse Duration (Sec.):	100
Read Delay:	75
Integration Time/Replicate:	2.00
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	20
Baseline Point 1 End Time:	24
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	148
Baseline Point 2 End Time:	152
Gas Flow (ml/min):	30
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	2
Calibration Standard #1 Conc.:	20.00 PPT
Calibration Standard #2 Conc.:	50.00 PPT
Calibration Standard #3 Conc.:	100.00 PPT
Calibration Standard #4 Conc.:	200.00 PPT
Calibration Standard #5 Conc.:	400.00 PPT
Calibration Standard #6 Conc.:	1000.00 PPT
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 200, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 90% .. 110%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -20 .. 20,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: TLM Digested 25.0mL Instrument: CETAC
Analyst: DM Date: 4-17-13
Bath Temp: 95°C Start Time: 0910 End Time: 1110

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	3028-4	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	3028-5 ~~0.5~~	~~0.5~~ 1.0	↓	0.5	1
CCV	↓ 4-17-13	~~0.5~~ 1.0	100.0	0.5	1

Chemical/Reagent ID:

HNO_3: IB169 H_2SO_4: IB044 HCl: —

5% $K_2S_2O_8$: MP2439 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: TLM | DLM
Analyst: DM
Bath Temp: 95°C
Start Time: 1015
Matrix: Water
Date: 4-15-13
End Time: 1215

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WLCS A	1	√	20.0	20.0	4/5 1	(Y)	
" ADUP	1	√			1		
" ASPK	1	√			1		
" B	1	—			1		
" MB1	—	√			1		
" MB1SPK	—	√			1		
" C	1	—			1		
" CDUP	1	—			1		
" CSPK	1	—			1		DLM
" D	1	—			1		
" MB2	—	—			1		
" MB2SPK	—	—	20.0	20.0	1	(Y)	

4-15-13 DM

Chemical/Reagent ID:
HNO_3: I8K09 | MP2452
H_2SO_4: I8044
HCl: —
5% $K_2S_2O_8$: MP2439
5% $KMnO_4$: MP2445
Digest Tube Lot: ML27KK03

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WL49, WL65

pH EPA 150.1 No: 3889
Data Analyst: Ursula Walter Analyzed by: UW
Comments: Date Analyzed: 4/11/13
Print Date: 4/11/13 18:49 Time Analyzed: 8:20

4/12/13

	ARI ID	Result	Q	RL	SPK	UAD
1.	ICVL	6.97		0.01	7.00	0.03
2.	WL49A	6.37		0.01		
3.	WL49A DUP	6.32		0.01		0.05
4.	WL49B	8.99		0.01		
5.	CCVL	7.03		0.01	7.00	0.03

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	4-11-13		Buffer	Source	Lot #	pH	Temp.
Time:	6:10		2.00	Ricca	1207705	2.00	19.7
Analyst:	(W)		4.00	Fisher	115547	4.00	19.7
			7.00	Ricca	120552	7.02	19.6
			10.00	Fisher	126248	10.06	19.6
			12.00	Ricca	1212084	12.01	19.7
			Verification	Fisher	124864	7.00	19.8

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
(W)	~~8:20~~ 4-11	ICV	6.97	6.97			20.3
		WL49A2	6.37	6.36			21.4
		↓ dup	6.32	6.32			21.2
		↓ B2	8.99	8.99			21.8
		CCV	7.03	7.02			20.7
W	9:30	CCV	6.99	6.99			21.6
		WL50A1	8.58	8.58			22.0
		↓ A1 dup	8.59	8.59			22.0
		CCV	7.02	7.02			22.0
W	12:15	CCV	6.98	6.98			20.3
		WL51A1	7.42	7.43		Bad	18.3
		~~↓ CCV~~ B1	7.39	7.39			18.5
		CCV	7.00	7.00			20.1
W	12:55	CCV	6.97	6.97			20.3
		WL52A2	5.50	5.51			21.8
		↓ A2 dup	5.49	5.48			21.7
		↓ B2	6.69	6.69			20.9
		CCV	7.00	7.00			20.5
W	17:10	CCV	7.00	7.01			20.5
		WL56A1	7.11	7.10			18.5
		↓ A1 dup	7.09	7.10			18.6
		CCV	7.02	7.01			20.2
		CCV					

Continued next page

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Continued

Calibration

Date:	4-11-13		Buffer	Source	Lot #	pH	Temp.
Time:			2.00	Ricca			
Analyst:			4.00	Fisher			
			7.00	Ricca			
			10.00	Fisher			
			12.00	Ricca			
			Verification	Fisher			

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
LW	14:40	ICV	6.96	6.97			20.4
		WL59A1	6.86	6.85			20.1
		A1 dup	6.88	6.88			20.0
		B1	6.21	6.20			19.9
		C1	6.11	6.12			19.9
		CCV	6.99	6.99			21.0
		CCV					
		CCV					

W
4-12-17

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS) DATE: 4/12/13 (A)

Methods : SM 2540 D-97, 2540 E-97 ANALYST: KE 7:42

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				4/12/13 9:08 KE	4/12/13 10:40 KE										
Cal Wt (g) 10.0000				10.0000	10.0000										
record weights to 4 places				*Cal OK!*	*Cal OK!*										
BLANK		1000	0.1096	0.1096	0.1096	STOP		0.0	< 1						
LCS # 00614-05		1000	0.1140	0.1636	0.1635	STOP		49.5	49.5	99.0%	% Recovery				
WL27 A3		560	0.1138	0.1173	0.1172	STOP		3.4	6.1						
WL28 A3		270	0.1125	0.1246	0.1246	STOP		12.1	44.8						
WL28 A3 dup		270	0.1123	0.1239	0.1237	STOP		11.4	42.2						
								RPD =	*6.0%*					*RPD =*	*NA*
WL32 A5		940	0.1130	0.1202	0.1199	STOP		6.9	7.3						
WL32 B5		940	0.1118	0.1148	0.1148	STOP		3.0	3.2						
WL32 C5		950	0.1116	0.1118	0.1117	STOP		0.1	< 1.1						
WL35 A2		410	0.1140	0.1195	0.1193	STOP		5.3	12.9						
WL35 A2 dup		410	0.1142	0.1198	0.1197	STOP		5.5	13.4						
								RPD =	*3.8%*					*RPD =*	*NA*
WL36 A1		940	0.1113	0.1117	0.1117	STOP		0.4	< 1.1						
WL36 B1		940	0.1108	0.1113	0.1113	STOP		0.5	< 1.1						
WL48 A1		1000	0.1120	0.1188	0.1187	STOP		6.7	6.7						
WL49 A10		610	0.1131	0.1188	0.1188	STOP		5.7	9.3						
WL49 B9		25	0.1130	0.1662	0.1659	STOP		52.9	2116.0						
WL49 B9 dup		25	0.1130	0.1741	0.1739	STOP		60.9	2436.0						
								RPD =	*14.1%*					*RPD =*	*NA*
WL50 A2		50	0.1118	0.1682	0.1681	STOP		56.3	1126.0						
WL50 A2 dup		50	0.1122	0.1689	0.1690	STOP		56.7	1134.0						

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS) DATE: 4/12/13 (A)

Methods : SM 2540 D-97, 2540 E-97 ANALYST: KE 7:42

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)
								RPD =	*0.7%*					*RPD =*	*NA*
WL56 A2		460	0.1113	0.1171	0.1170	STOP		5.7	12.4						
WL56 A2 dup		460	0.1114	0.1181	0.1182	STOP		6.7	14.6						
								RPD =	*16.3%*					*RPD =*	*NA*

(1) 4-12-13 (A)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(2) 560 4-12-13 (2)

TOTAL SUSPENDED (TSS) / TOTAL VOLATILE SUSPENDED SOLID(TVSS) BENCHSHEET

Analyst: (W)	Date/Time: 2-12-13 7:42	Oven #: 012	Muffle Furnace: 62790918520	Balance: 1123230597

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TSS (mg/L) calculated as:
Final Dry Weight (mg) = (Min Dry Weight – Tare Weight) * 1000
TSS = (Final Dry Weight) / (mL Sample) * 1000
If dry wt < 1 mg / mL sample * 1000 use "<" flag

Loss on Ignition (LOI) = TVSS (mg / L) is calculated as:
LOI (mg / L) = Dry Weight (mg) – [(Minimum Ash Weight – Tare Weight) * 1000]
TVSS (mg / L) = LOI / mL sample * 1,000
If LOI < 1 mg, TVSS = < 1 mg / mL sample * 1000 use "<" flag

LCS (Cellulose from MP Biochemicals) Lot #	6399J	0.0500 Gram to 1000 mL = **50 mg / L TSS**								
Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02	
Date & Time:			4-12-13 9:08	4-12-13 10:40						
Cal Weight (10.0000g):			10.0000 (W)	10.0000 (W)						

Sample ID	Dish #	Filtered mL	Tare	Dry Weight 104°C (grams)			Dry Wt mg	TSS	Ash Weight 550°C		LOI - mg	TVSS mg/L
				1	2	3			1	2		
BLANK	P6188	1000	0.1096	0.1096	0.1096							
LCS #00614-05	P6186	1000	0.1140	0.1636	0.1635							
WL27 A3	P6191	(2) 320	0.1138	0.1173	0.1172							
WL28 A3	P7886	270	0.1125	0.1246	0.1246							
↓ MA3	P8926	270	0.1123	0.1239	0.1237							
WL32 A5	P6323	940	0.1130	0.1204	0.1199 (1)	0.1199						
B5	P6324	940	0.1118	0.1148	0.1148							
↓ C5	P6192	950	0.1116	0.1118	0.1117							
WL35 A2	P7051	410	0.1140	0.1195	0.1193							
↓ MA2	P7055	410	0.1142	0.1198	0.1197							
WL36 A1	P0997	940	0.1113	0.1117	0.1117							
↓ B1	P0998	940	0.1108	0.1113	0.1113							
WL48 A1	P1008	1000	0.1120	0.1188	0.1187							
WL49 A10	P0999	610	0.1131	0.1188	0.1188							
B9	P2859	25	0.1130	0.1662	0.1659							
↓ MB9	P1007	25	0.1130	0.1741	0.1739							
WL50 A2	P0910	50	0.1118	0.1682	0.1681							
↓ MA2	P0911	50	0.1122	0.1689	0.1690							
WL56 A2	P0924	460	0.1113	0.1171	0.1170							
↓ MA2	P0926	460	0.1114	0.1161	0.1182							
					4-12-13 (W)							

Amount Summary

Sequence Details

Name	**APR1113RR**	*Calibration.*	**MAR2313RR**	**ARI # 613-02**
Directory	**Instrument Data\2013 DATA\APR 2013**	*Calibration exp.*	**5/23/2013**	
Data Vault	**ChromeleonLocal**	*Queue Start*	4/11/2013 12 54	
No of Injections	**21.000**	*User*	**RR**	

By Component

		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	3 051	3.028	3 043	3 034	3 139	3.000	2 966
%R=		**101.7%**	**100.9%**	**101.4%**	**101.1%**	**104.6%**	**100.0%**	**98.9%**
ICB	1 0	n a.	n a	n.a.	n a	n.a.	n.a	n.a
LOW	1 0	0 086	0 094	0 085	0 081	0 096	0.076	0 083
WL49 A2	1.0	n a.	57.186	n.a.	n a	n a.	n.a.	n a
WL49 A2 DUP	1.0	n a	57 224	n.a.	n a	n.a.	n.a.	n a
%RPD=			**0.07%**					
WL49 A2 MS	1.0	0.987	58 752	1.953	n a	n a	1.829	n a
%R=		**49.4%**	**78.3%**	**97.6%**			**91.4%**	
SPK=	**0.055mL*200ppm/5.5mL**		**=2ppm**					
WL49 B2	1.0	0 045	8 580	0.094	n a	n a	0.143	n a
WL49 A2	20.0	n.a	54.968	n a	1 399	239 518	n a	n a
WL49 A2 DUP	20.0	n a	55.125	n a.	1 445	240 189	n a	n a
%RPD=			**0.28%**		**3.24%**	**0.28%**		
WL49 A2 MS	20.0	n a.	105 447	n a	1 380	238 138	n a	n a
%R=			**101.0%**					
SPK=	**0.025mL*10000ppm/5mL**		**=50ppm**					
WL49 B2	2.0	0 026	8.451	0 088	n a	38 911	0 125	n a
WL49 B2	10.0	n a	7 854	0 082	n a	36.790	0 083	n a
CCV	1 0	3 043	3.029	3.033	3 023	3 132	2 994	2 940
%R=		**101.4%**	**101.0%**	**101.1%**	**100.8%**	**104.4%**	**99.8%**	**98.0%**
CCB	1.0	n a	n.a.	n.a	n a	n.a.	n a	n a
WL49 A2	50.0	n a	52.807	n a	n a	233.850	n.a	n a
WL49 A2 DUP	50.0	n a	139 300	n a	n a	231.878	n a	n.a.
%RPD=						**0.85%**		
WL49 A2 MS	100.0	n a	49 317	n a.	n.a	432.213	n a.	n a
%R=						**99.2%**		
SPK=	**0.1mL*10000ppm/5mL**		**=200ppm**					
CCV	1 0	3.048	3 030	3.034	3 020	3.135	2 995	2 960
%R=		**101.6%**	**101.0%**	**101.1%**	**100.7%**	**104.5%**	**99.8%**	**98.7%**
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.

WL49 : 02868

Sequence Overview

Sequence Details

Name:	**APR1113RR**	*Queue Start:*	**2013-04-11T12:54:22-**
Directory:	**Instrument Data\2013 DATA\APR 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**21**		

Injection Details

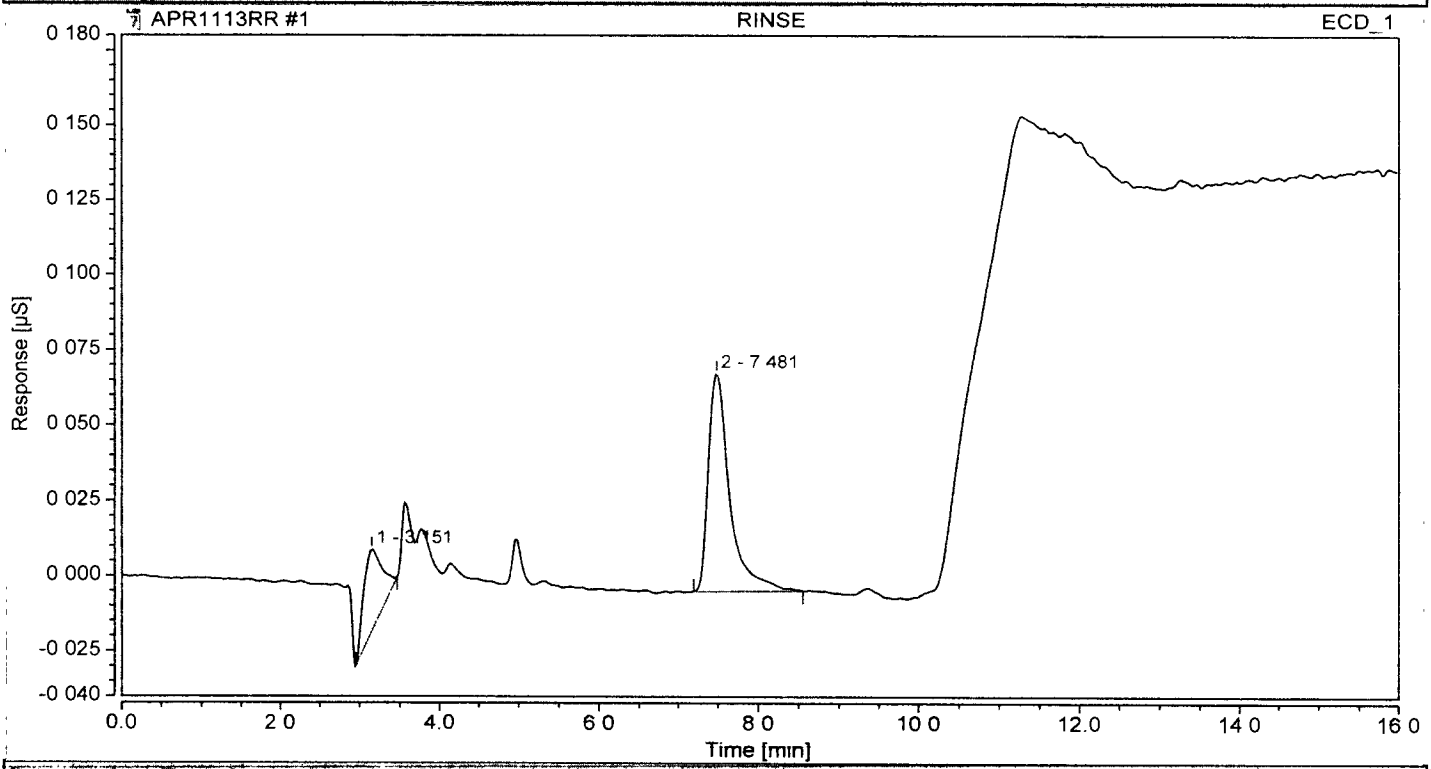
No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	1	Unknown		1.0	11/Apr/13 12:54:22
2	ICV	2	Check Standard	06	1.0	11/Apr/13 13:13:18
3	ICB	3	Blank		1.0	11/Apr/13 13:32:28
4	LOW	4	Unknown		1.0	11/Apr/13 13:51:45
5	WL49 A2	5	Unknown		1.0	11/Apr/13 14:11:07
6	WL49 A2 DUP	6	Unknown		1.0	11/Apr/13 14:30:34
7	WL49 A2 MS	7	Unknown		1.0	11/Apr/13 14:50:07
8	WL49 B2	8	Unknown		1.0	11/Apr/13 15:09:46
9	WL49 A2	9	Unknown		20.0	11/Apr/13 15:29:30
10	WL49 A2 DUP	10	Unknown		20.0	11/Apr/13 15:49:20
11	WL49 A2 MS	11	Unknown		20.0	11/Apr/13 16:09:15
12	WL49 B2	12	Unknown		2.0	11/Apr/13 16:29:15
13	WL49 B2	13	Unknown		10.0	11/Apr/13 16:49:21
14	CCV	2	Check Standard	06	1.0	11/Apr/13 17:09:33
15	CCB	3	Blank		1.0	11/Apr/13 17:30:08
16	WL49 A2	14	Unknown		50.0	11/Apr/13 17:50:50
17	WL49 A2 DUP	15	Unknown		50.0	11/Apr/13 18:11:18
18	WL49 A2 MS	16	Unknown		100.0	11/Apr/13 18:31:50
19	CCV	2	Check Standard	06	1.0	11/Apr/13 18:52:28
20	CCB	3	Blank		1.0	11/Apr/13 19:13:52
21	STOP	1	Unknown		1.0	11/Apr/13 19:35:28

Chromatogram and Results

Injection Details

Injection Name:	*RINSE*	Inject Number:	1
Vial Number:	*1*	User:	pat
Injection Type.	*Unknown*	Sequence:	APR1113RR
Dilution Factor:	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*11/04/13 12:54*		

Chromatogram



Integration Results

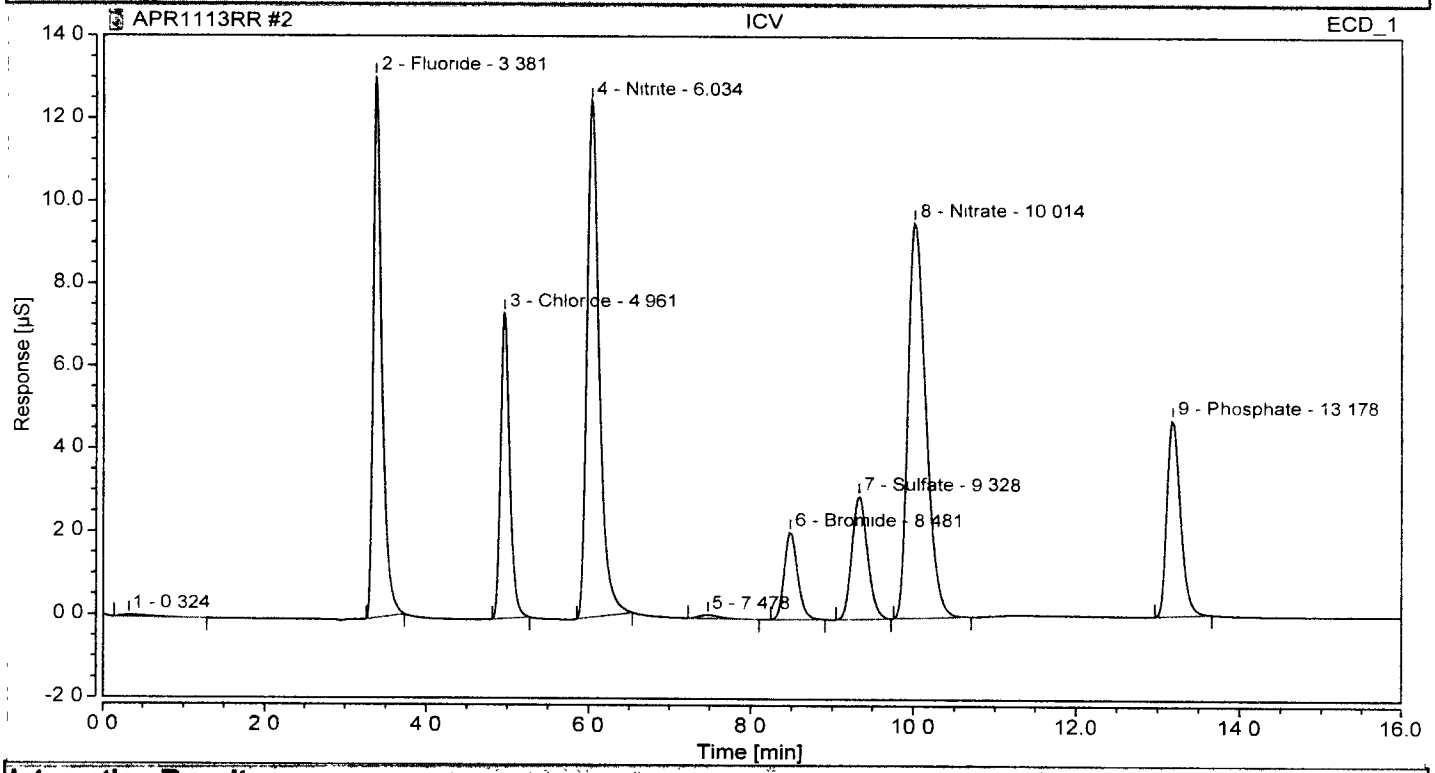
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	3.15	0.007	0.027	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.48	0.023	0.072	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*ICV*	Inject Number:	2
Vial Number:	*2*	User:	pat
Injection Type.	*Check Standard*	Sequence:	APR1113RR
Dilution Factor:	*1.0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*11/04/13 13:13*		

Chromatogram



Integration Results

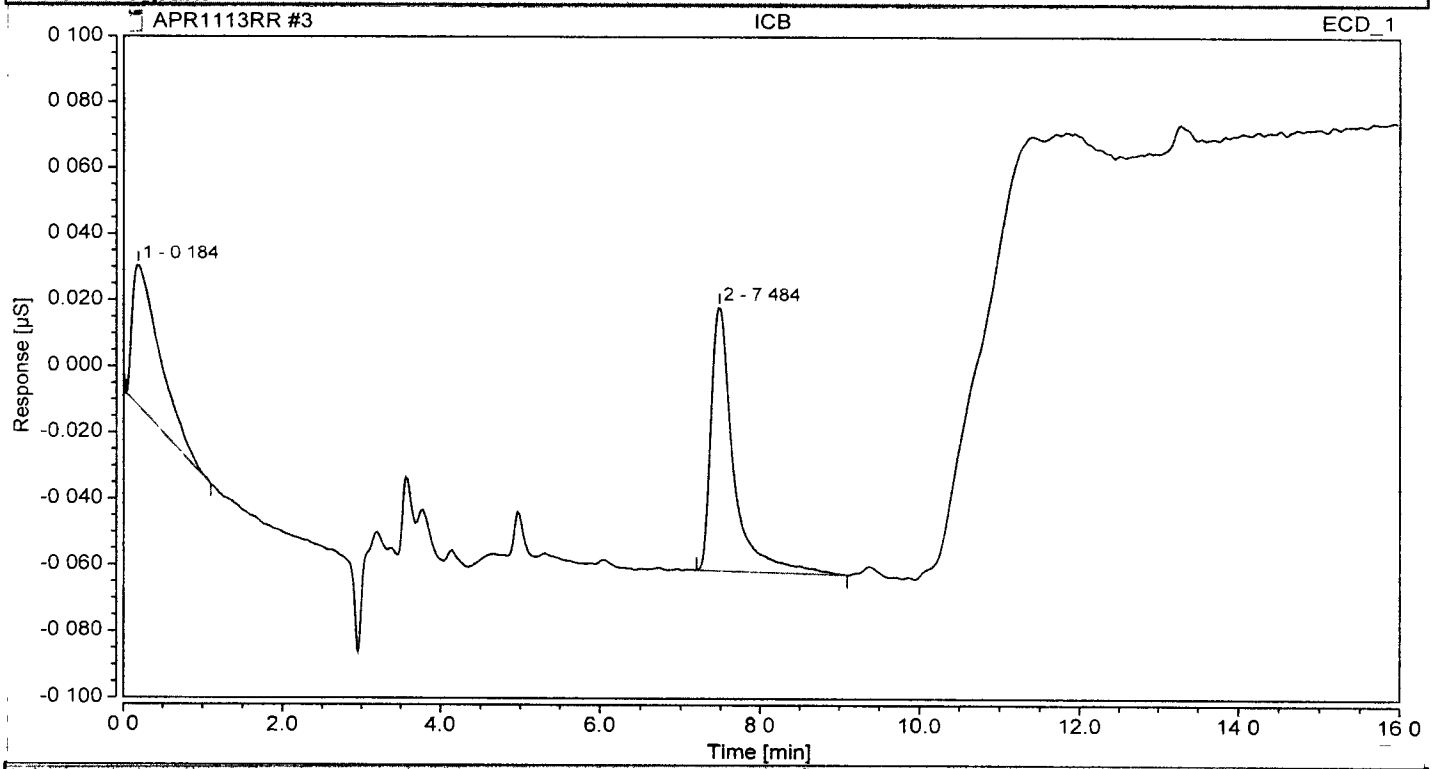
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	0.32	0.021	0.050	FALSE	n.a.
2	Fluoride	1.0	3.051	3.38	1.575	13.093	FALSE	1.70
3	Chloride	1.0	3.028	4.96	0.953	7.386	FALSE	0.95
4	Nitrite	1.0	3.043	6.03	2.196	12.483	FALSE	1.43
5		1.0	n.a.	7.48	0.025	0.086	FALSE	n.a.
6	Bromide	1.0	3.034	8.48	0.403	2.105	FALSE	1.15
7	Sulfate	1.0	3.139	9.33	0.675	2.963	FALSE	4.65
8	Nitrate	1.0	3.000	10.01	2.397	9.561	FALSE	0.00
9	Phosphate	1.0	2.966	13.18	0.911	4.721	FALSE	-1.14

Chromatogram and Results

Injection Details

Injection Name:	*ICB*	Inject Number.	3
Vial Number	*3*	User:	pat
Injection Type.	*Blank*	Sequence:	APR1113RR
Dilution Factor	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*11/04/13 13:32*		

Chromatogram



Integration Results

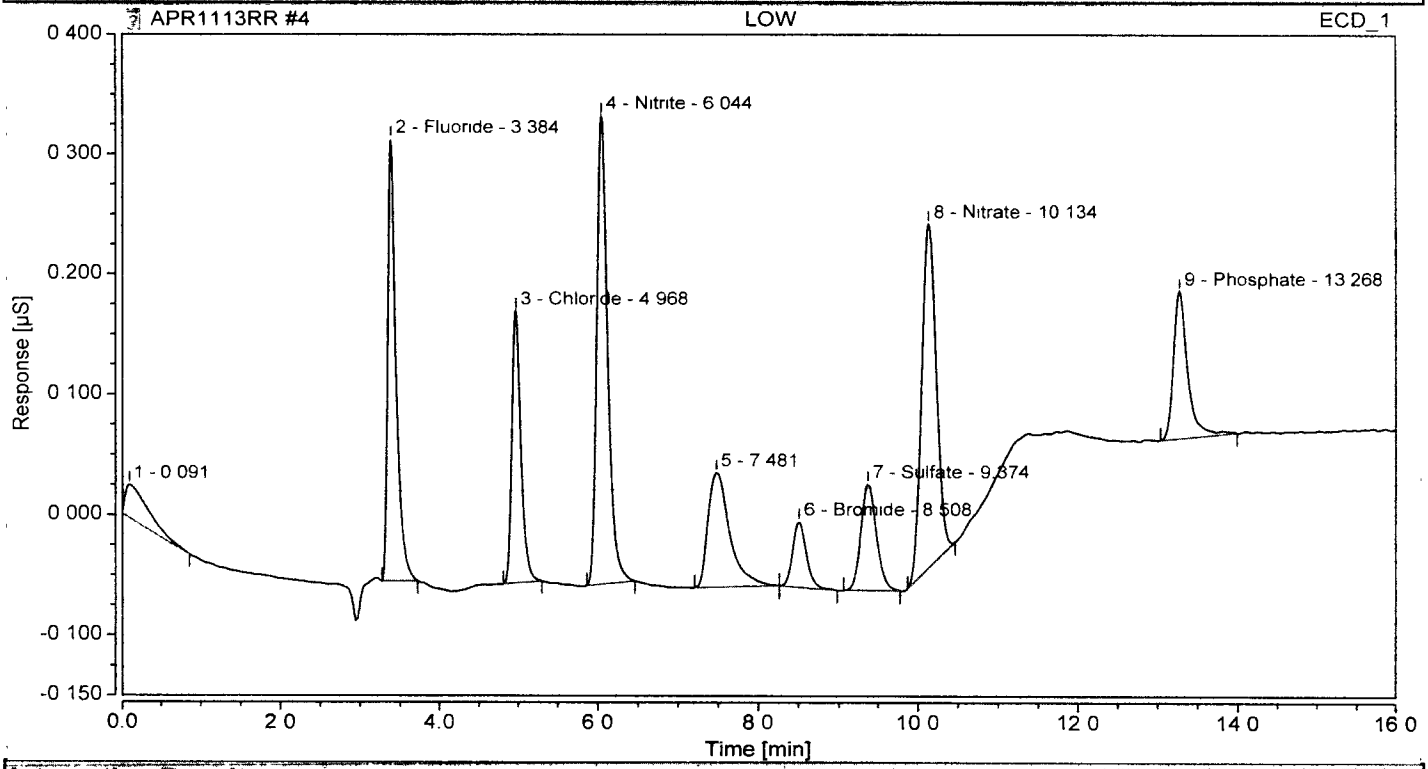
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	0.18	0.017	0.042	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.48	0.026	0.080	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*LOW*	Inject Number	4
Vial Number.	*4*	User	pat
Injection Type.	*Unknown*	Sequence.	APR1113RR
Dilution Factor:	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*11/04/13 13:51*		

Chromatogram



Integration Results

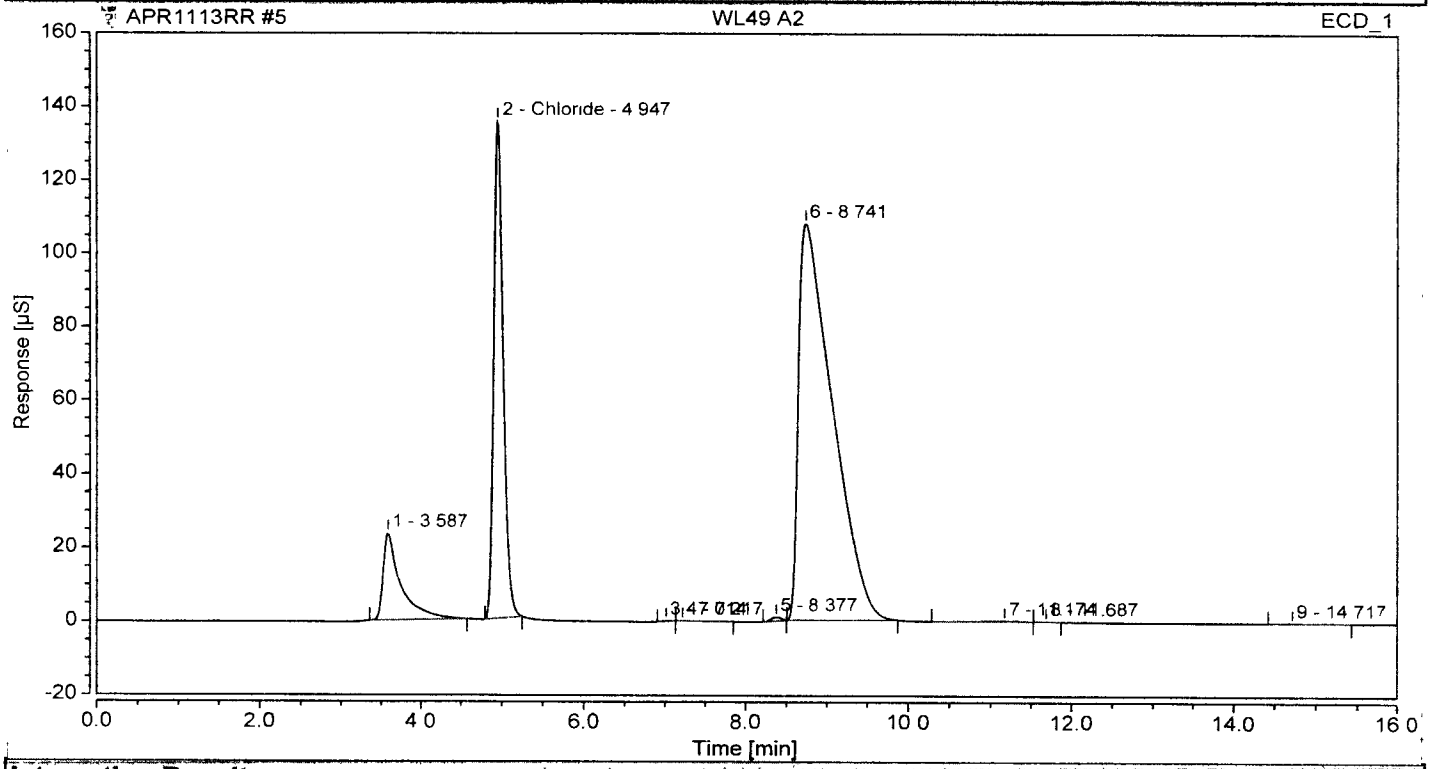
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	0.09	0.010	0.027	FALSE	n.a.
2	Fluoride	1.0	0.086	3.38	0.044	0.368	FALSE	n.a.
3	Chloride	1.0	0.094	4.97	0.030	0.226	FALSE	n.a.
4	Nitrite	1.0	0.085	6.04	0.061	0.390	FALSE	n.a.
5		1.0	n.a.	7.48	0.030	0.095	FALSE	n.a.
6	Bromide	1.0	0.081	8.51	0.011	0.055	FALSE	n.a.
7	Sulfate	1.0	0.096	9.37	0.021	0.088	FALSE	n.a.
8	Nitrate	1.0	0.076	10.13	0.061	0.286	FALSE	n.a.
9	Phosphate	1.0	0.083	13.27	0.025	0.122	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WL49 A2*	Inject Number.	5
Vial Number.	*5*	User	pat
Injection Type.	*Unknown*	Sequence:	APR1113RR
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*11/04/13 14:11*		

Chromatogram



Integration Results

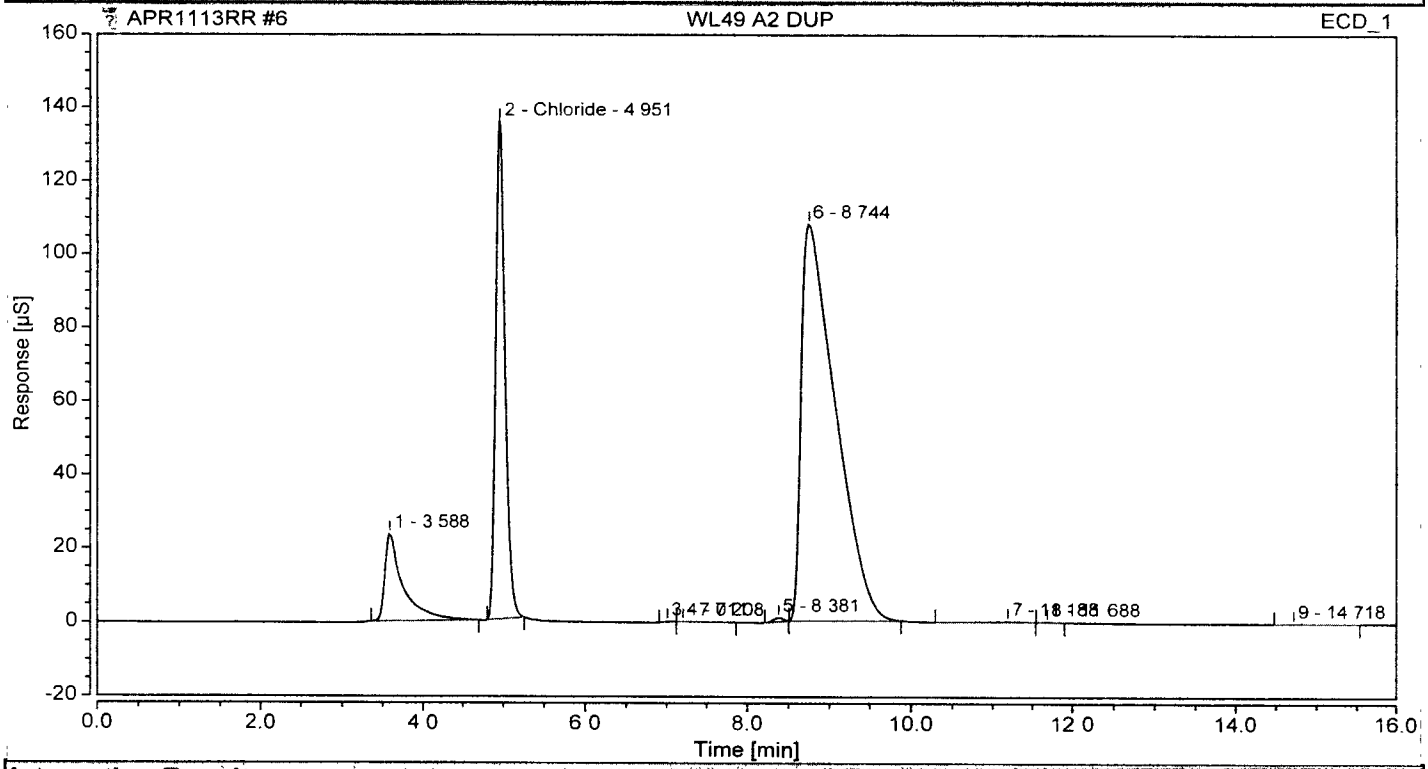
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	3.59	6.021	23.601	FALSE	n.a
2	Chloride	1.0	57.186	4.95	17.991	135.147	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.01	0.014	0.109	FALSE	n.a.
4		1.0	n.a.	7.22	0.018	0.026	FALSE	n.a.
5		1.0	n.a.	8.38	0.144	1.051	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6		1.0	n.a.	8.74	52.399	107.857	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.
7		1.0	n.a.	11.17	0.081	0.131	FALSE	n.a.
8		1.0	n.a.	11.69	0.009	0.064	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9		1.0	n.a.	14.72	0.025	0.094	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WL49 A2 DUP*	Inject Number:	6
Vial Number.	*6*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR1113RR
Dilution Factor:	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/04/13 14:30*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	3.59	6.128	23.609	FALSE	n.a.
2	Chloride	1.0	57.224	4.95	18.003	135.211	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.	7.01	0.014	0.108	FALSE	n.a.
4		1.0	n.a.	7.21	0.018	0.023	FALSE	n.a.
5		1.0	n.a.	8.38	0.144	1.050	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6		1.0	n.a.	8.74	52.483	107.935	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.
7		1.0	n.a.	11.19	0.077	0.128	FALSE	n.a.
8		1.0	n.a.	11.69	0.011	0.075	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9		1.0	n.a.	14.72	0.018	0.060	FALSE	n.a.

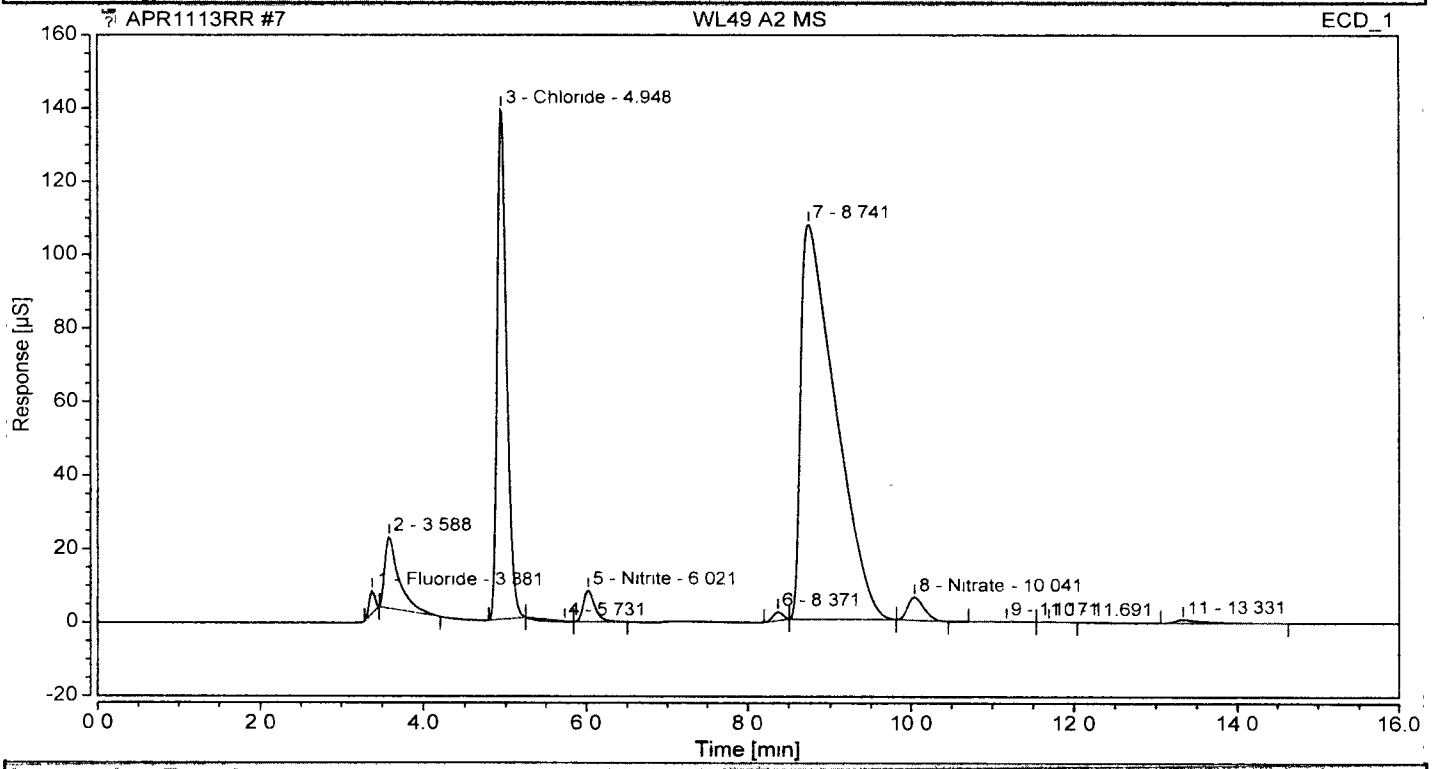
WL49 · 02367

Chromatogram and Results

Injection Details

Injection Name.	*WL49 A2 MS*	Inject Number:	7
Vial Number	*7*	User:	pat
Injection Type	*Unknown*	Sequence:	APR1113RR
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*11/04/13 14:50*		

Chromatogram



Integration Results

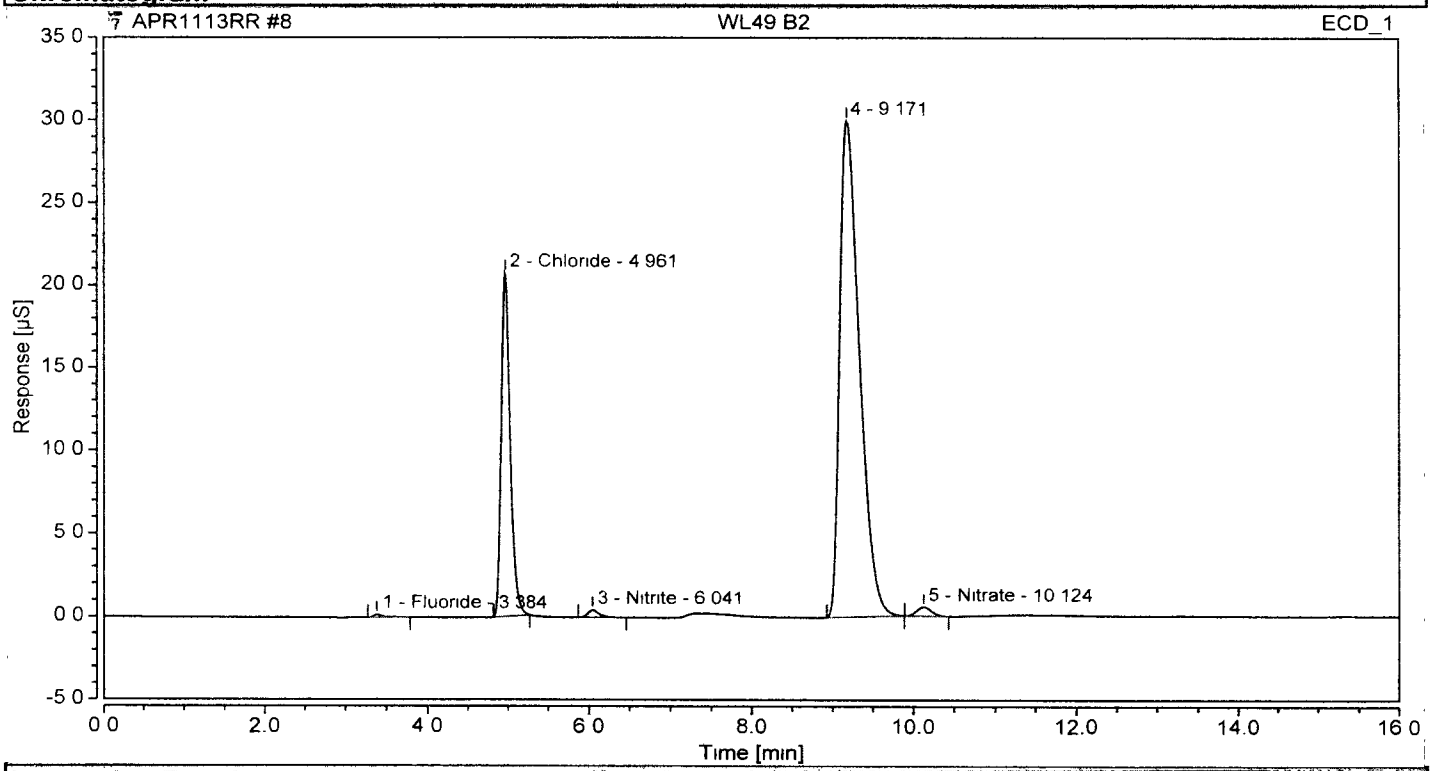
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.987	3.38	0.510	6.060	FALSE	n.a.
2		1.0	n.a.	3.59	3.884	19.467	FALSE	n.a.
3	Chloride	1.0	58.752	4.95	18.484	138.736	FALSE	n.a.
4		1.0	n.a.	5.73	0.183	0.182	FALSE	n.a.
5	Nitrite	1.0	1.953	6.02	1.409	8.524	FALSE	n.a.
6		1.0	n.a.	8.37	0.333	2.324	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7		1.0	n.a.	8.74	52.062	107.438	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
8	Nitrate	1.0	1.829	10.04	1.461	6.203	FALSE	n.a.
9		1.0	n.a.	11.17	0.035	0.083	FALSE	n.a.
10		1.0	n.a.	11.69	0.012	0.075	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11		1.0	n.a.	13.33	0.358	0.922	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WL49 B2*	Inject Number	8
Vial Number	*8*	User:	pat
Injection Type	*Unknown*	Sequence.	APR1113RR
Dilution Factor	*1.0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*11/04/13 15:09*		

Chromatogram



Integration Results

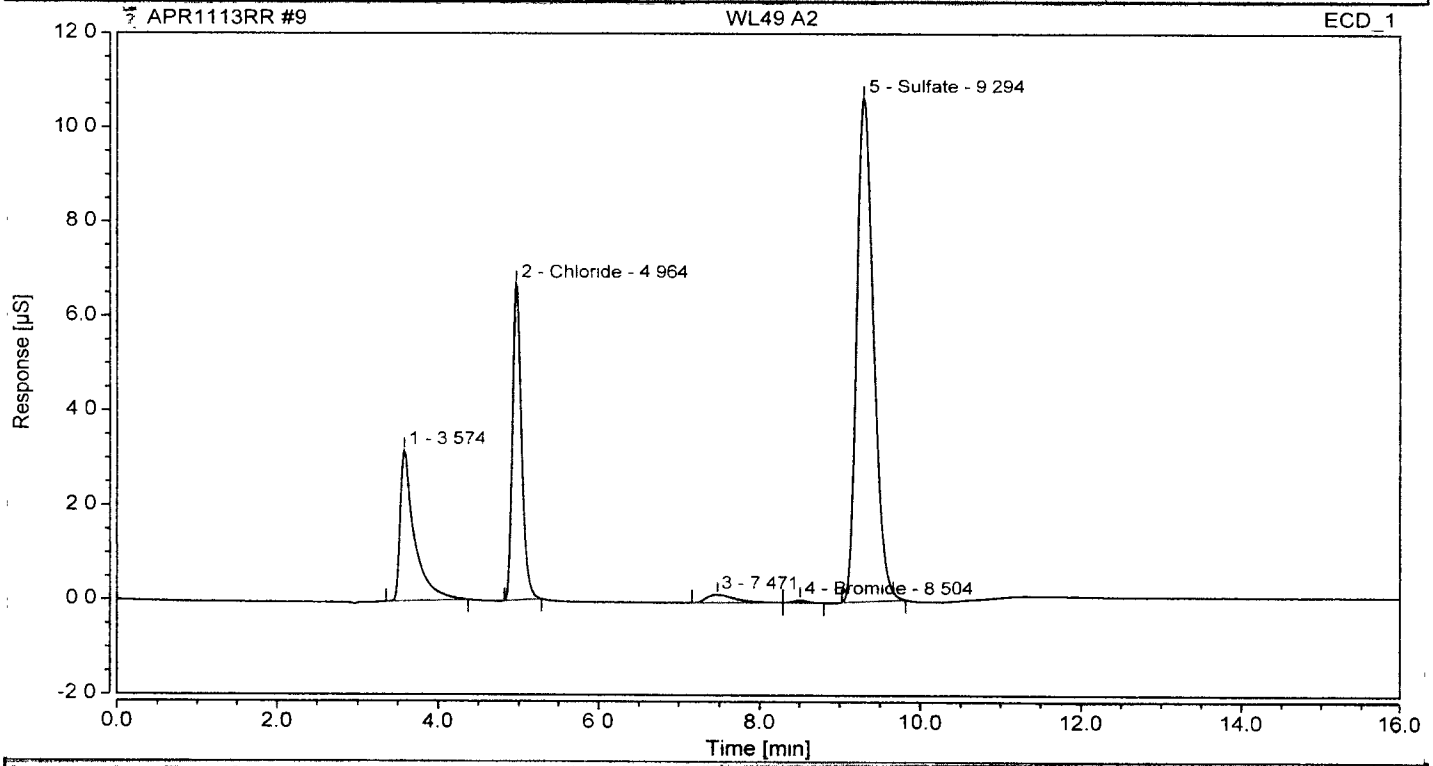
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.045	3.38	0.023	0.174	FALSE	n.a.
2	Chloride	1.0	8.580	4.96	2.699	20.731	FALSE	n.a.
3	Nitrite	1.0	0.094	6.04	0.068	0.438	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		1.0	n.a.	9.17	8.441	29.974	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Nitrate	1.0	0.143	10.12	0.114	0.542	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WL49 A2*	Inject Number:	9
Vial Number.	*9*	User:	pat
Injection Type.	*Unknown*	Sequence:	APR1113RR
Dilution Factor	*20 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*11/04/13 15 29*		

Chromatogram



Integration Results

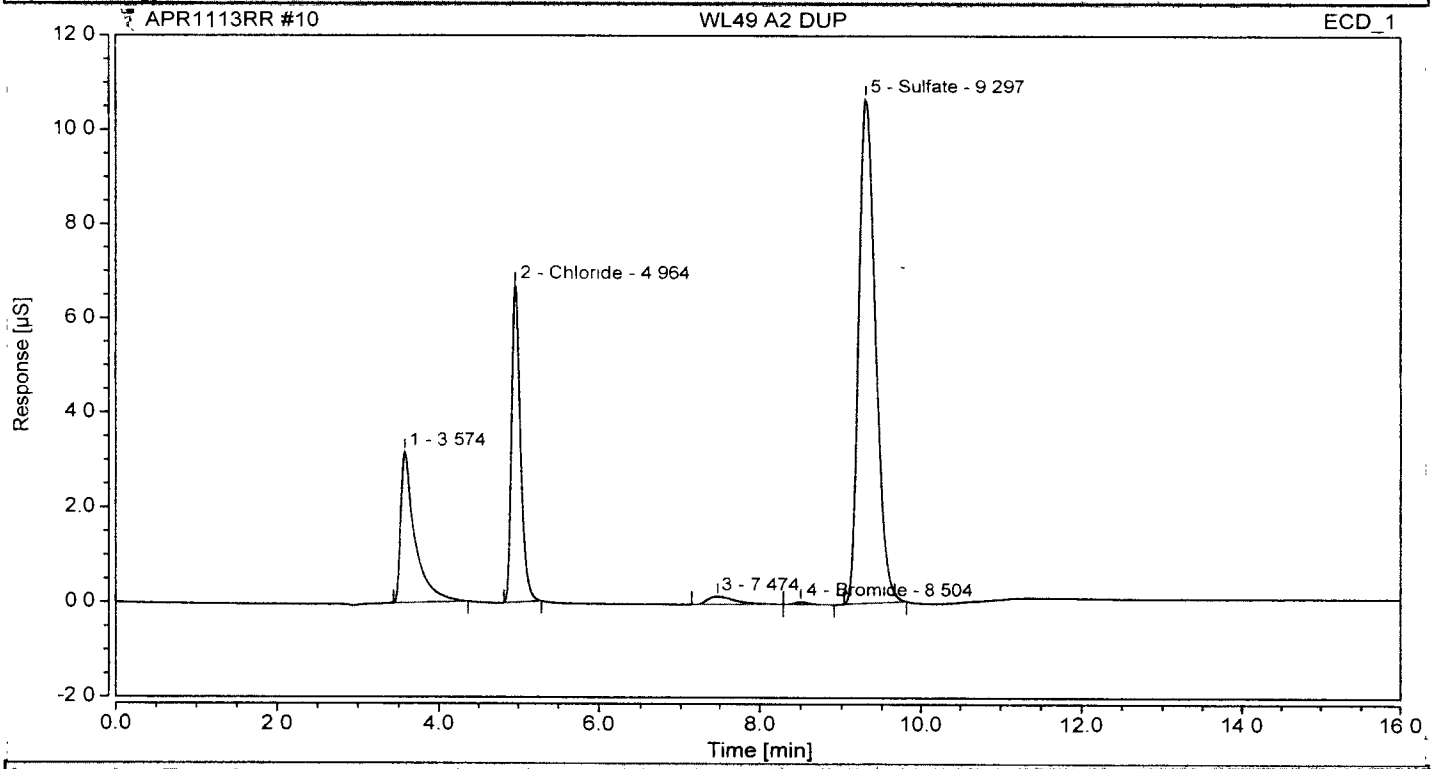
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		20.0	n.a.	3.57	0.649	3.181	FALSE	n.a.
2	Chloride	20.0	54.968	4.96	0.865	6.692	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		20.0	n.a.	7.47	0.067	0.163	FALSE	n.a.
4	Bromide	20.0	1.399	8.50	0.009	0.051	FALSE	n.a.
5	Sulfate	20.0	239.518	9.29	2.575	10.647	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WL49 A2 DUP*	Inject Number:	10
Vial Number	*10*	User:	pat
Injection Type	*Unknown*	Sequence:	APR1113RR
Dilution Factor	*20 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time:	*11/04/13 15:49*		

Chromatogram



Integration Results

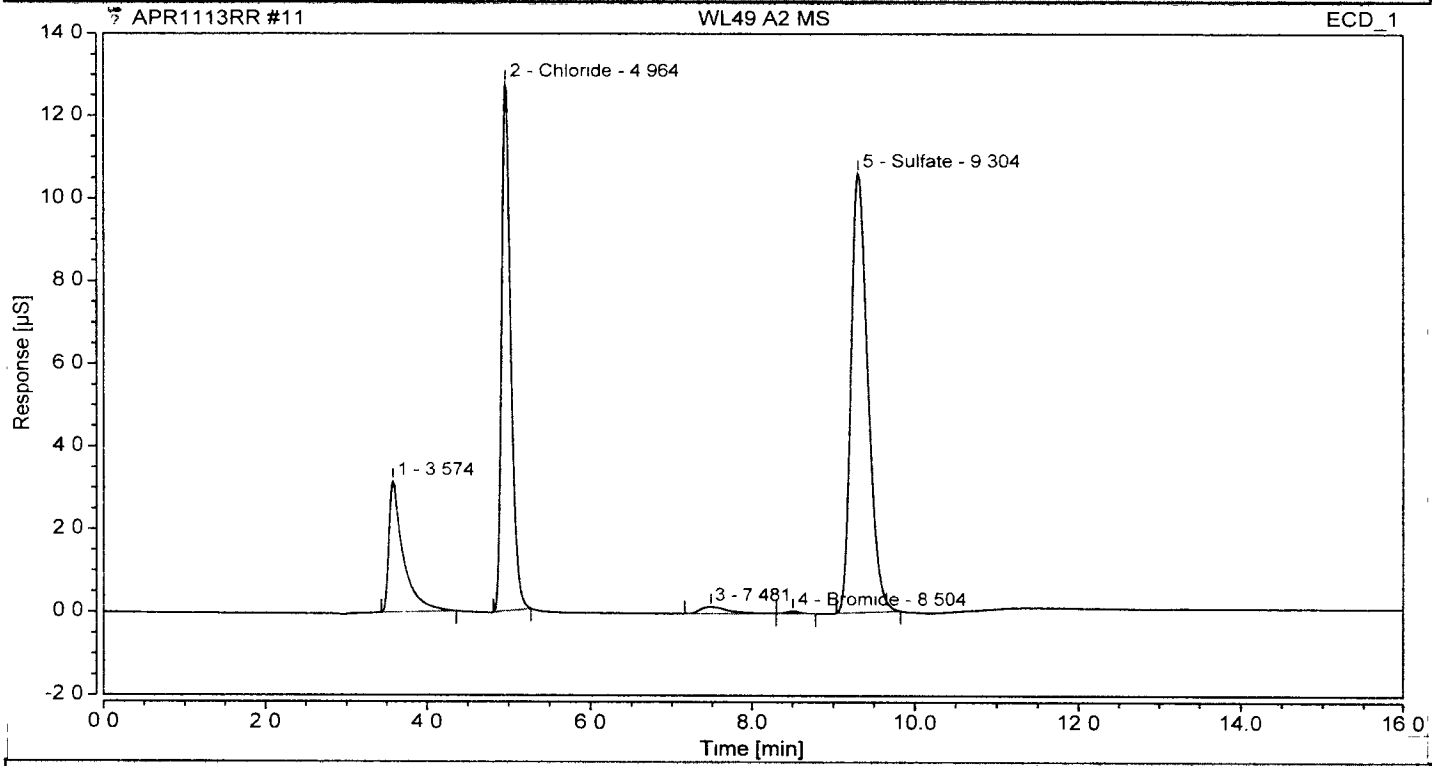
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		20.0	n.a.	3.57	0.646	3.181	FALSE	n.a.
2	Chloride	20.0	55.125	4.96	0.867	6.711	FALSE	n.a
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		20.0	n.a.	7.47	0.066	0.163	FALSE	n.a.
4	Bromide	20.0	1.445	8.50	0.010	0.051	FALSE	n.a.
5	Sulfate	20.0	240.189	9.30	2.582	10.675	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WL49 A2 MS*	Inject Number:	11
Vial Number	*11*	User:	pat
Injection Type	*Unknown*	Sequence:	APR1113RR
Dilution Factor	*20 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time:	*11/04/13 16:09*		

Chromatogram



Integration Results

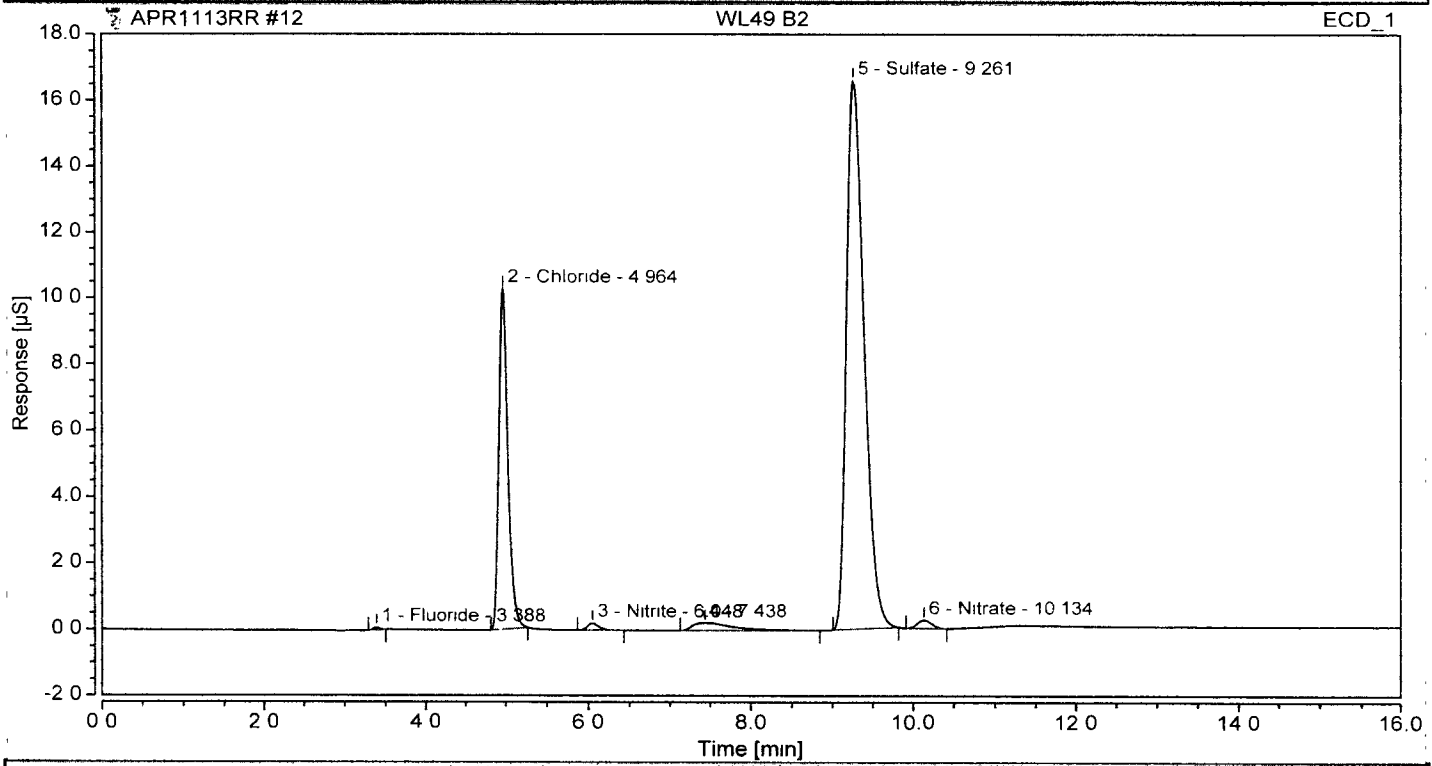
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		20.0	n.a.	3.57	0.642	3.159	FALSE	n.a.
2	Chloride	20.0	105.447	4.96	1.659	12.778	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		20.0	n.a.	7.48	0.061	0.155	FALSE	n.a.
4	Bromide	20.0	1.380	8.50	0.009	0.050	FALSE	n.a.
5	Sulfate	20.0	238.138	9.30	2.560	10.617	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WL49 B2*	Inject Number.	12
Vial Number	*12*	User	pat
Injection Type:	*Unknown*	Sequence.	APR1113RR
Dilution Factor	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time	*11/04/13 16:29*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.026	3.39	0.007	0.073	FALSE	n.a.
2	Chloride	2.0	8.451	4.96	1.329	10.276	FALSE	n.a.
3	Nitrite	2.0	0.088	6.05	0.032	0.205	FALSE	n.a.
4		2.0	n.a.	7.44	0.131	0.226	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	2.0	38.911	9.26	4.184	16.585	FALSE	n.a.
6	Nitrate	2.0	0.125	10.13	0.050	0.246	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

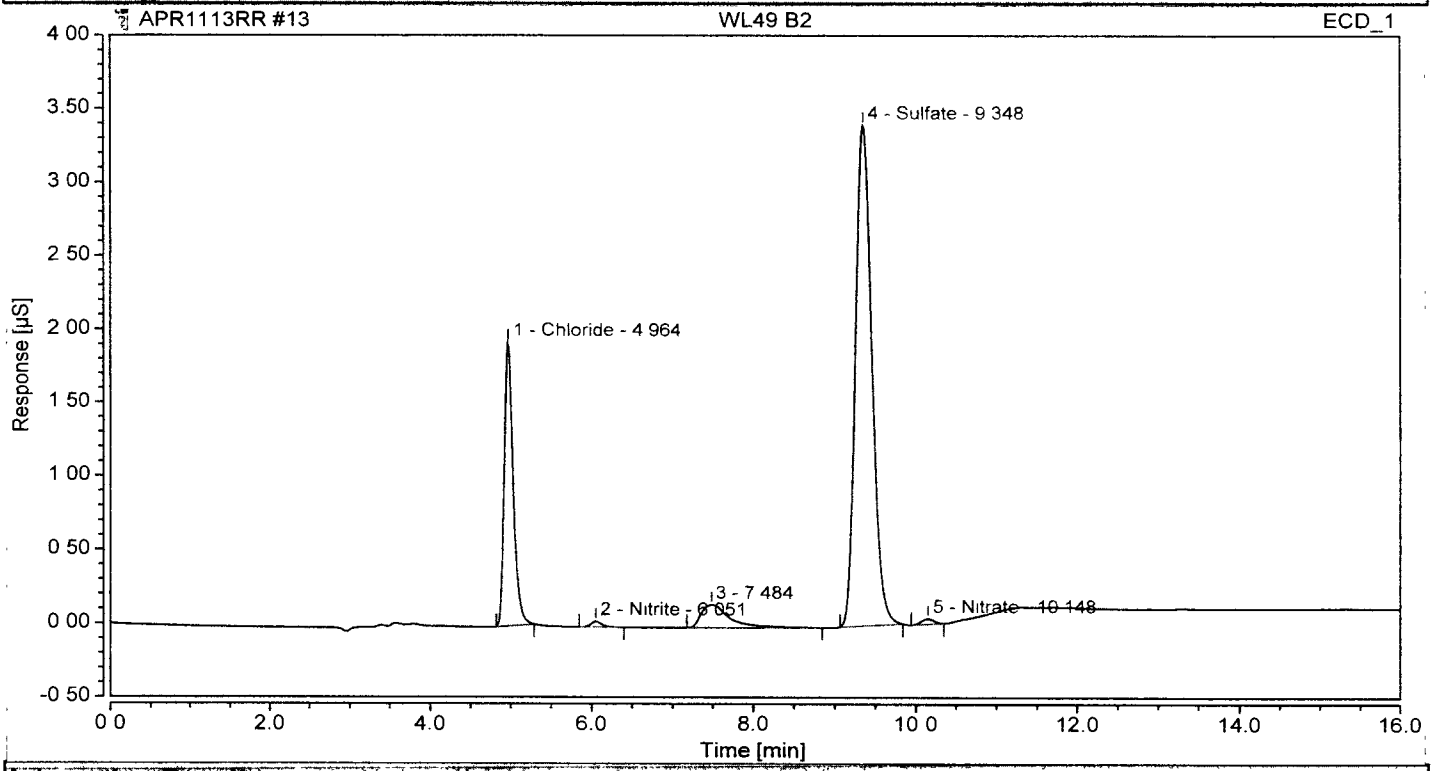
WL49 02999

Chromatogram and Results

Injection Details

Injection Name:	*WL49 B2*	Inject Number.	13
Vial Number	*13*	User	pat
Injection Type.	*Unknown*	Sequence	APR1113RR
Dilution Factor	*10 0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*11/04/13 16:49*		

Chromatogram



Integration Results

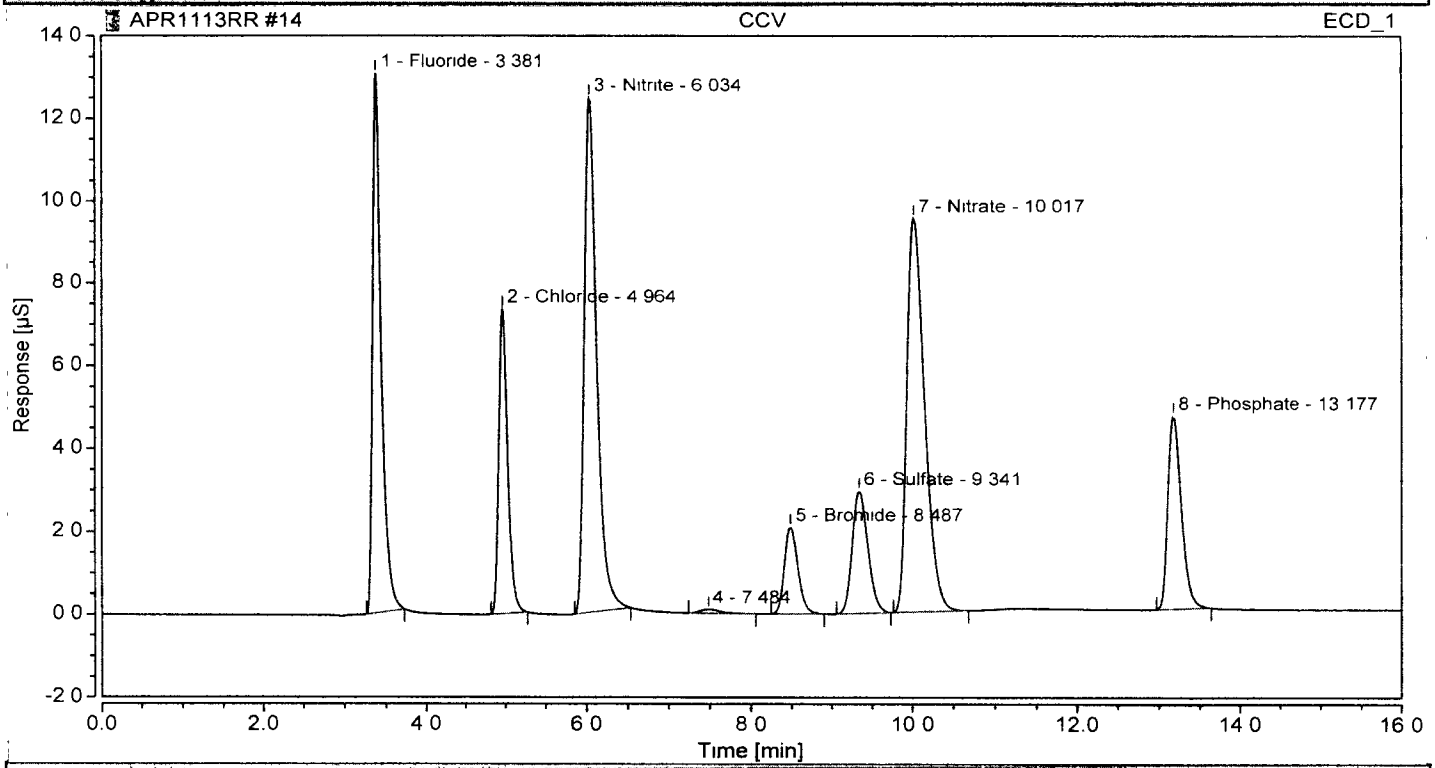
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	10.0	7.854	4.96	0.247	1.930	FALSE	n.a.
2	Nitrite	10.0	0.082	6.05	0.006	0.038	FALSE	n.a.
3		10.0	n.a.	7.48	0.064	0.154	FALSE	n.a.
n.a.	Bromide	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	10.0	36.790	9.35	0.791	3.403	FALSE	n.a.
5	Nitrate	10.0	0.083	10.15	0.007	0.036	FALSE	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	14
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence.	APR1113RR
Dilution Factor.	*1.0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*11/04/13 17:09*		

Chromatogram



Integration Results

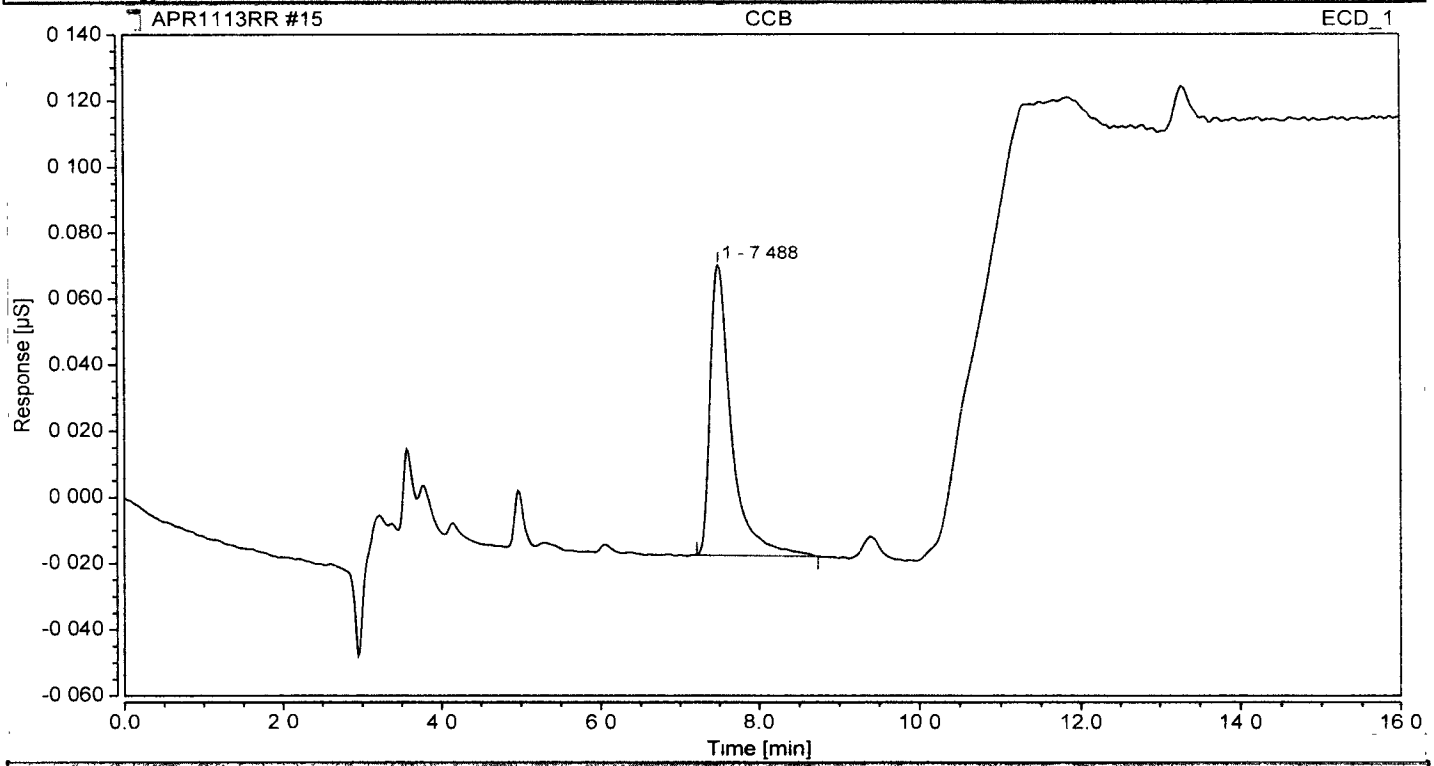
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.043	3.38	1.570	13.065	FALSE	1.42
2	Chloride	1.0	3.029	4.96	0.953	7.362	FALSE	0.95
3	Nitrite	1.0	3.033	6.03	2.188	12.461	FALSE	1.10
4		1.0	n.a.	7.48	0.026	0.092	FALSE	n.a.
5	Bromide	1.0	3.023	8.49	0.401	2.098	FALSE	0.75
6	Sulfate	1.0	3.132	9.34	0.674	2.955	FALSE	4.41
7	Nitrate	1.0	2.994	10.02	2.393	9.517	FALSE	-0.20
8	Phosphate	1.0	2.940	13.18	0.903	4.666	FALSE	-2.00

Chromatogram and Results

Injection Details

Injection Name.	*CCB*	Inject Number:	15
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence.	APR1113RR
Dilution Factor:	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*11/04/13 17 30*		

Chromatogram



Integration Results

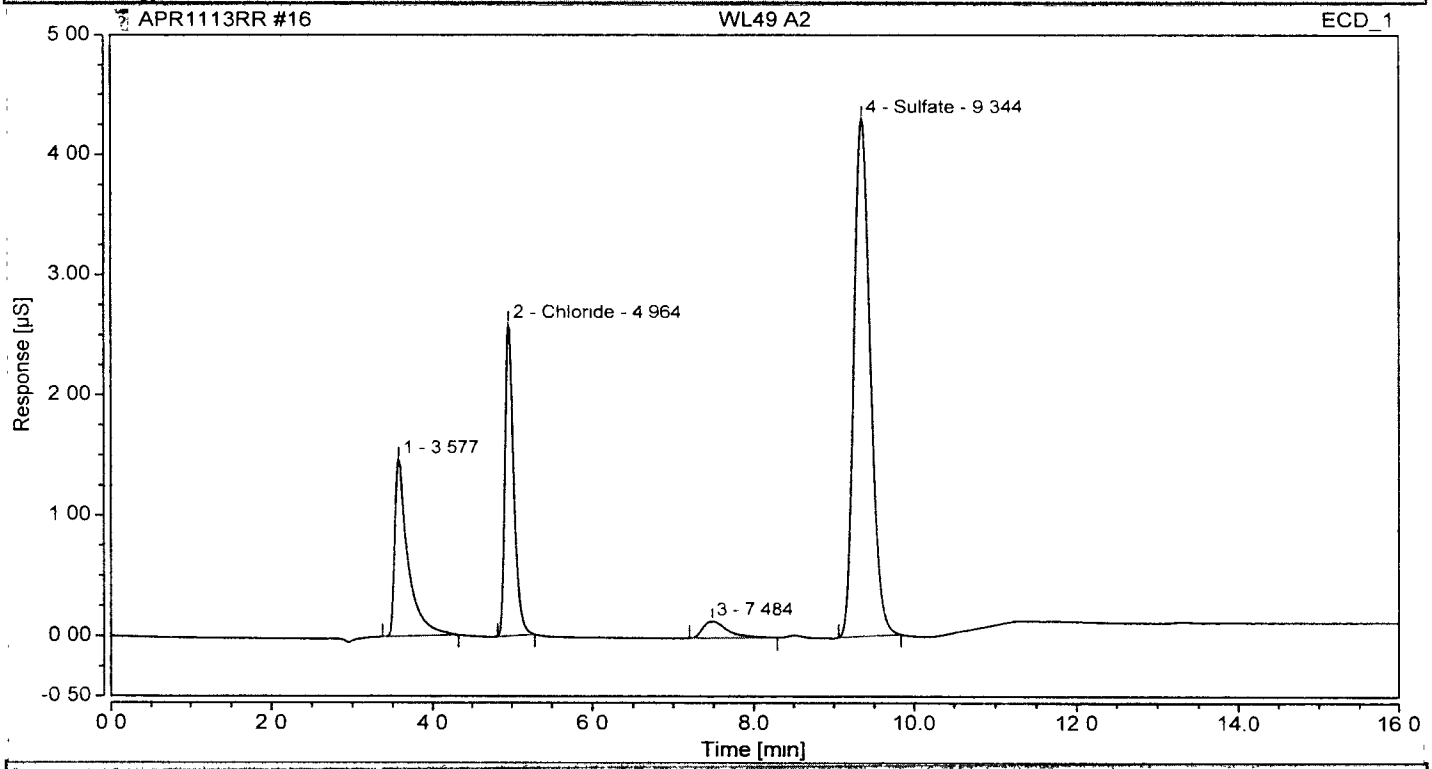
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.49	0.028	0.088	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WL49 A2*	Inject Number.	16
Vial Number.	*14*	User:	pat
Injection Type.	*Unknown*	Sequence.	APR1113RR
Dilution Factor:	*50 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*11/04/13 17:50*		

Chromatogram



Integration Results

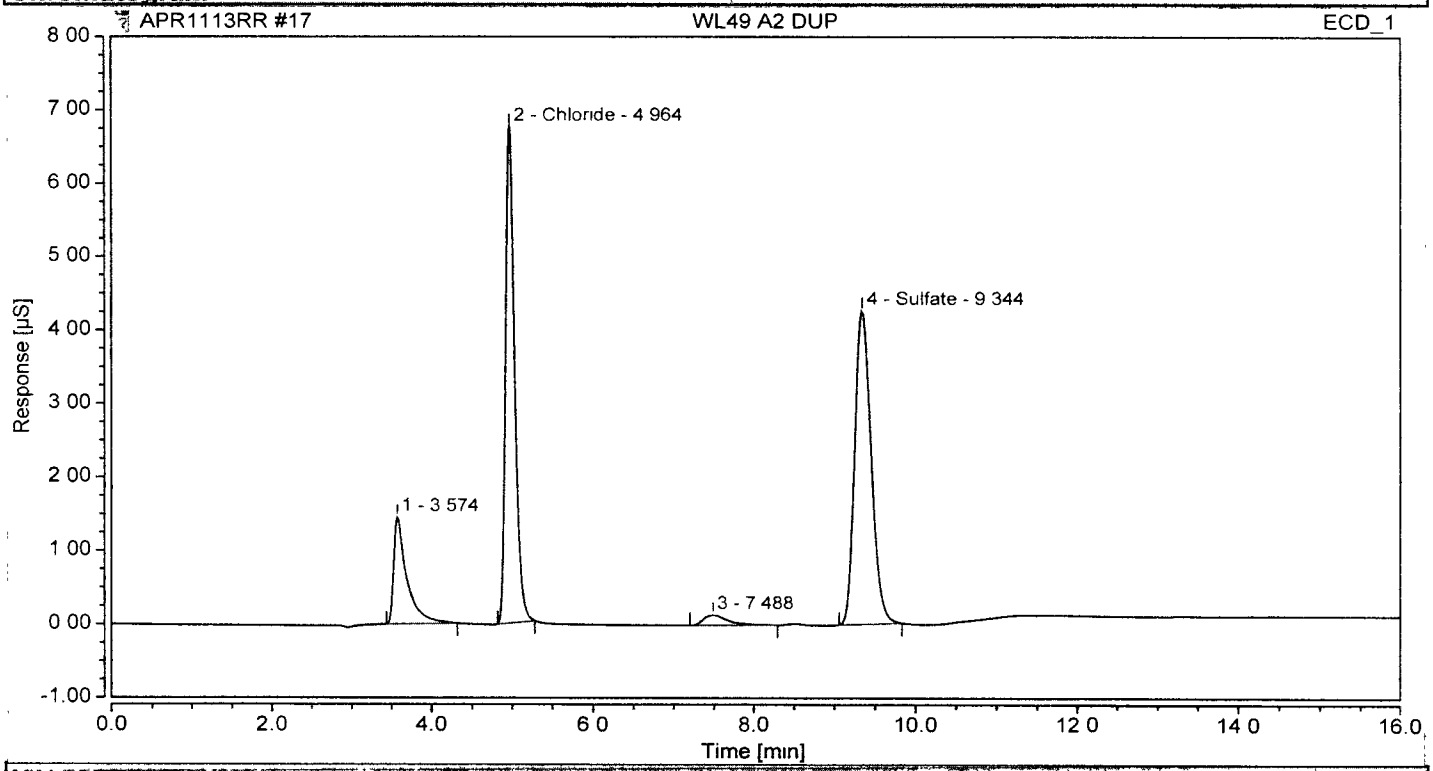
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		50.0	n.a.	3.58	0.279	1.466	FALSE	n.a.
2	Chloride	50.0	52.807	4.96	0.332	2.591	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		50.0	n.a.	7.48	0.048	0.136	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	50.0	233.850	9.34	1.006	4.299	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WL49 A2 DUP*	Inject Number:	17
Vial Number:	*15*	User:	pat
Injection Type:	*Unknown*	Sequence:	APR1113RR
Dilution Factor:	*50.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/04/13 18:11*		

Chromatogram



Integration Results

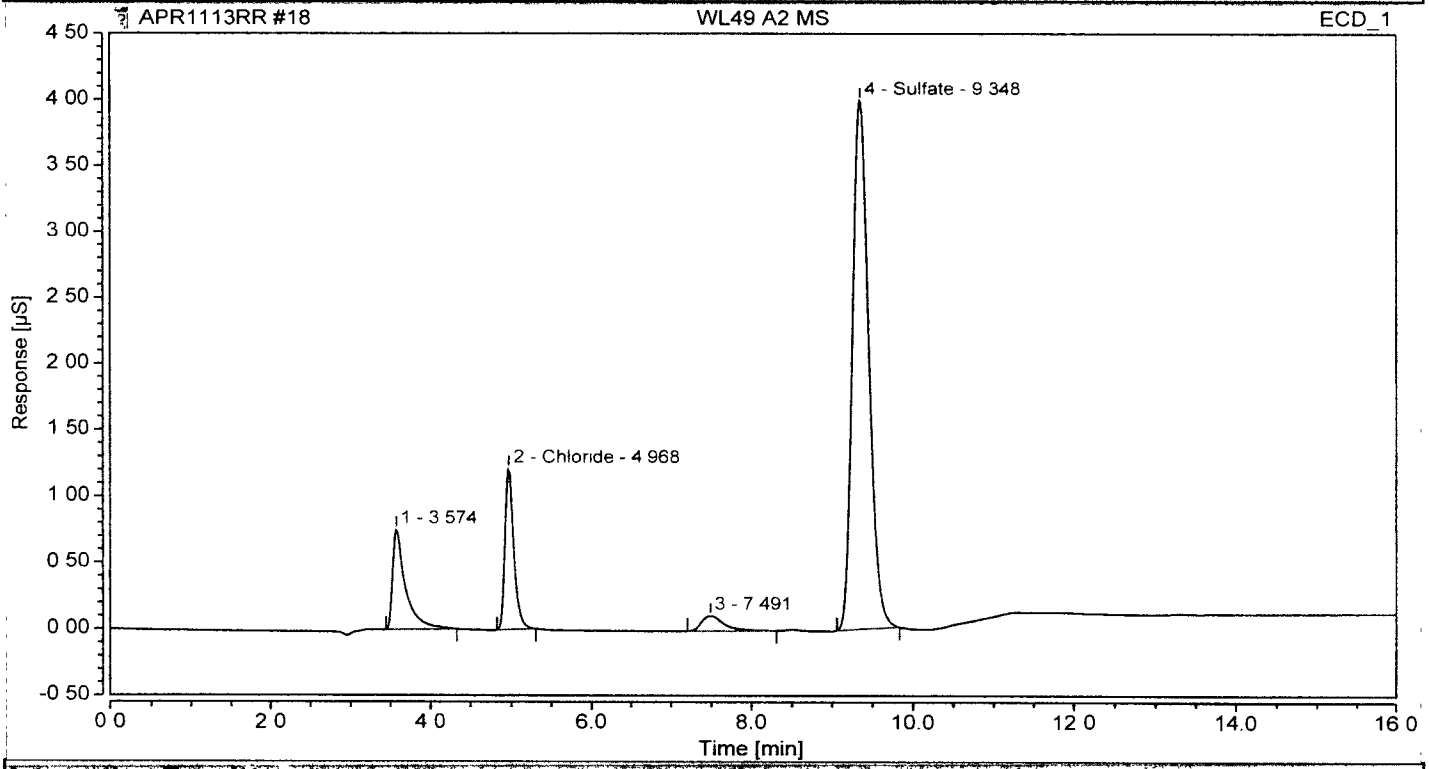
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		50.0	n.a.	3.57	0.276	1.452	FALSE	n.a.
2	Chloride	50.0	139.300	4.96	0.877	6.757	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		50.0	n.a.	7.49	0.048	0.136	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	50.0	231.878	9.34	0.997	4.265	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WL49 A2 MS*	Inject Number.	18
Vial Number:	*16*	User:	pat
Injection Type.	*Unknown*	Sequence:	APR1113RR
Dilution Factor:	*100 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/04/13 18:31*		

Chromatogram



Integration Results

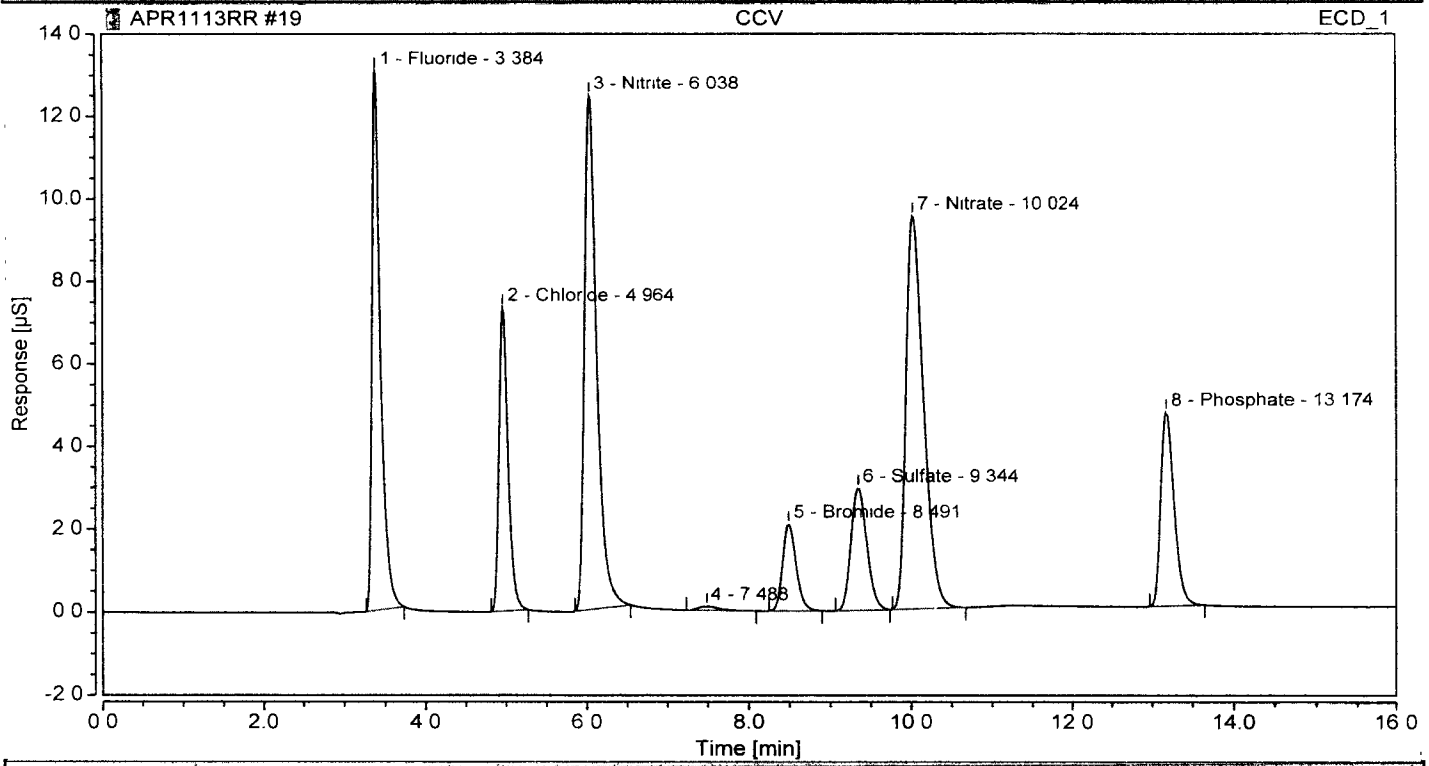
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		100.0	n.a.	3.57	0.140	0.752	FALSE	n.a.
2	Chloride	100.0	49.317	4.97	0.155	1.210	FALSE	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		100.0	n.a.	7.49	0.037	0.113	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	100.0	432.213	9.35	0.929	3.991	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	19
Vial Number:	*2*	User:	pat
Injection Type	*Check Standard*	Sequence.	APR1113RR
Dilution Factor.	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*11/04/13 18:52*		

Chromatogram



Integration Results

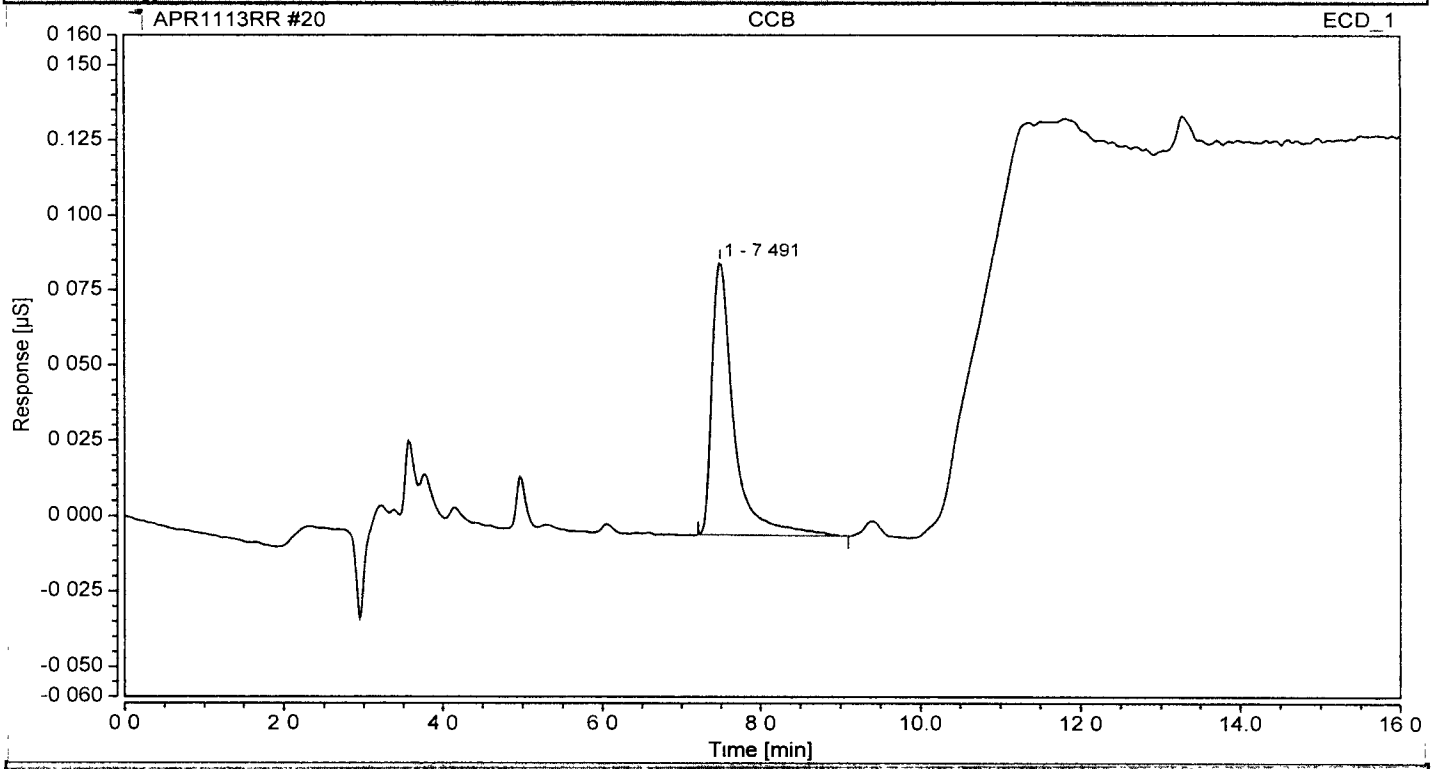
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.048	3.38	1.573	13.072	FALSE	1.60
2	Chloride	1.0	3.030	4.96	0.953	7.347	FALSE	1.01
3	Nitrite	1.0	3.034	6.04	2.189	12.443	FALSE	1.12
4		1.0	n.a.	7.49	0.027	0.094	FALSE	n.a.
5	Bromide	1.0	3.020	8.49	0.401	2.094	FALSE	0.66
6	Sulfate	1.0	3.135	9.34	0.674	2.951	FALSE	4.49
7	Nitrate	1.0	2.995	10.02	2.393	9.513	FALSE	-0.17
8	Phosphate	1.0	2.960	13.17	0.909	4.692	FALSE	-1.34

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	20
Vial Number	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	APR1113RR
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*11/04/13 19:13*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.49	0.029	0.091	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*STOP*	Inject Number:	21
Vial Number.	*1*	User:	pat
Injection Type:	*Unknown*	Sequence.	APR1113RR
Dilution Factor:	*1 0*		
Instrument Method:	*SHUTDOWN*		
Processing Method	*processmethodal*		
Injection Date/Time.	*11/04/13 19:35*		

Chromatogram

Can't read channel ECD_1 from injection #21 - STOP
Channel is not available

Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			n.a.	min	matogram in con	matogram in		n.a.

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W
4-12-13

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 4/12/13 14:18

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) =	19.8		*Expected*
input µS =	1277	Adjust to	*Displayed*
Cell constant =	0.9914		%

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		20.9		0.5		OK!
ICV		19.8		1009		100.90%
WL49 A2		19.7		929		
WL49 A2 dup		19.7		931		RPD =0.22 %
WL49 B2		19.5		200		
CCB		20.9		0.5		OK!
CCV		19.9		1007		100.70%

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 4-12-13 14:18

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : (KN)

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 #	0613-06	ARI #	
µS/cm =	1,413	*Current value*	*Cal Temp (°C)*
Cal Temp (°C) =	19.8		*Expected*
input µS =	1277	Adjust to	*Displayed*
Cell constant =	0.9914		%

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		20.9		0.5		
ICV		19.8		1009		
WL49 A2		19.7		929		
↓ mA2		19.7		931		
√ D2		19.5		200		
CCB		20.9		0.5		
CCV		19.9		1007		
CCB						
CCV						
CCB						
CCV						

4-12-13 (KN)

Calibration

CALIBRATION FILE NAME: JAN2213RR

Calibration Details — Fluoride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	0 5038
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9999

Calibration Results — Fluoride

No.	Injection Name	Calibration Level	X Value Fluoride	Y Value Fluoride	Amount mg/l Fluoride	Area µS*min Fluoride	Height µS Fluoride
1	STD1	01	0.1000	0.0439	0.0872	0.044	0.390
2	STD2	02	0.5000	0.2431	0.4825	0.243	2.182
3	STD3	03	1.0000	0.5008	0.9941	0.501	4.518
4	STD4	04	2.5000	1.2684	2.5177	1.268	11.142
5	STD5	05	5.0000	2.5161	4.9943	2.516	21.325

Calibration Details — Chloride

Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.3053
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9991

Calibration Results — Chloride

No.	Injection Name	Calibration Level	X Value Chloride	Y Value Chloride	Amount mg/l Chloride	Area µS*min Chloride	Height µS Chloride
1	STD1	01	0.1000	0.0304	0.0996	0.030	0.245
2	STD2	02	0.5000	0.1337	0.4377	0.134	1.080
3	STD3	03	1.0000	0.2833	0.9278	0.283	2.275
4	STD4	04	2.5000	0.7452	2.4406	0.745	5.932
5	STD5	05	5.0000	1.5421	5.0504	1.542	12.207

Calibration Details — Nitrite

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	0.7112
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9999

Calibration Results — Nitrite

No.	Injection Name	Calibration Level	X Value Nitrite	Y Value Nitrite	Amount mg/l Nitrite	Area µS*min Nitrite	Height µS Nitrite
1	STD1	01	0.1000	0.0607	0.0854	0.061	0.408
2	STD2	02	0.5000	0.3422	0.4812	0.342	2.236
3	STD3	03	1.0000	0.7127	1.0021	0.713	4.504
4	STD4	04	2.5000	1.7948	2.5236	1.795	10.660
5	STD5	05	5.0000	3.5488	4.9899	3.549	19.741

Calibration Details — Bromide

Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.1304
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9975

Calibration Results — Bromide

No.	Injection Name	Calibration Level	X Value Bromide	Y Value Bromide	Amount mg/l Bromide	Area µS*min Bromide	Height µS Bromide
1	STD1	01	0.1000	0.0102	0.0780	0.010	0.052
2	STD2	02	0.5000	0.0536	0.4107	0.054	0.280
3	STD3	03	1.0000	0.1146	0.8788	0.115	0.603
4	STD4	04	2.5000	0.3122	2.3939	0.312	1.647
5	STD5	05	5.0000	0.6635	5.0866	0.663	3.466

Calibration Details	**Sulfate**		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2098
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9984

Calibration Results — **Sulfate**

No	Injection Name	Calibration Level	X Value Sulfate	Y Value Sulfate	Amount mg/l Sulfate	Area µS*min Sulfate	Height µS Sulfate
1	STD1	01	0.1000	0.0197	0.0940	0.020	0.085
2	STD2	02	0.5000	0.0891	0.4244	0.089	0.384
3	STD3	03	1.0000	0.1886	0.8989	0.189	0.824
4	STD4	04	2.5000	0.5077	2.4199	0.508	2.216
5	STD5	05	5.0000	1.0633	5.0679	1.063	4.622

Calibration Details	**Nitrate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	0.7740
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9993

Calibration Results — **Nitrate**

No.	Injection Name	Calibration Level	X Value Nitrate	Y Value Nitrate	Amount mg/l Nitrate	Area µS*min Nitrate	Height µS Nitrate
1	STD1	01	0.1000	0.0640	0.0827	0.064	0.331
2	STD2	02	0.5000	0.3369	0.4352	0.337	1.705
3	STD3	03	1.0000	0.7234	0.9346	0.723	3.515
4	STD4	04	2.5000	1.9054	2.4616	1.905	8.453
5	STD5	05	5.0000	3.9004	5.0391	3.900	15.264

Calibration Details	**Phosphate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	0.3073
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9978

Calibration Results — **Phosphate**

No.	Injection Name	Calibration Level	X Value Phosphate	Y Value Phosphate	Amount mg/l Phosphate	Area µS*min Phosphate	Height µS Phosphate
1	STD1	01	0.1000	0.0186	0.0604	0.019	0.107
2	STD2	02	0.5000	0.1256	0.4087	0.126	0.661
3	STD3	03	1.0000	0.2688	0.8747	0.269	1.455
4	STD4	04	2.5000	0.7437	2.4199	0.744	3.857
5	STD5	05	5.0000	1.5597	5.0750	1.560	7.387

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE: 4/12/2013

ANALYST: KE 14:02

HCL 10% ID:

HCL ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1351		13.1353	0.2 mg	
WL49 F5		++-	13.0783	19.7008	17.0537	60.03%	
WL49 F5 dup		++-	13.0469	18.8180	16.5395	60.52%	RPD = 0.81%
WL49 F5 trip		++-	13.2204	19.8275	17.0905	58.57%	RSD = 1.69%
WL49 G1		++-	13.1679	18.6015	18.0366	89.60%	
WL67 A7		++-	13.0464	18.7110	15.3334	40.37%	
WL67 B7		++-	13.1006	18.2388	14.6389	29.94%	
WL68 A6		++-	13.0654	19.4869	15.6067	39.57%	
WL68 A6 dup		++-	13.1144	18.8088	15.3829	39.84%	RPD = 0.66%
WL68 A6 trip		++-	13.1581	19.9793	16.0361	42.19%	RSD = 3.56%
WL68 B6		++-	13.1614	17.6754	14.5614	31.01%	
WL69 A1		-	13.0775	19.9054	15.4868	35.29%	
WL69 B1		-	13.1507	19.0865	14.5369	23.35%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 4-12-13 (2)

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (O) 14:02 Date 4-12-13

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.1351	0	13.1353		
WL49 FS		++-	13.0783	19.7008	17.0537		Oily Sediment Mixture
DP FS		++-	13.0469	18.8180	16.5395		"
TP FS		++-	13.2204	19.8275-17	0905		"
" G1		++-	13.1679	18.6095	18.0866		Wet Sand + Rocks
WL67 A7		++-	13.0464	18.7110	15.3334		Oily Sediment + Rocks
" B7		++-	13.1006	18.2388	14.6389		
WL68 A6		++-	13.0654	19.4869	15.6067		
DP A6		++-	13.1144	18.8088	15.3829		
TP A6		++-	13.1581	19.9793	16.0361		
" B6		++-	13.1614	17.6754	14.5614		
WL69 A1		-	13.0725	19.9054		15.4868	
" B1		-	13.1507	19.0865		14.5369	

4-12-13 (O)

4-15-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

DATE: 4/12/2013 (B)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

ANALYST: KE/RR 13:58

Instrumentation **Drying Ovens:** 12 **Muffle Furnace:** N/A **Analytical Balance:** 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

4/12/2013 13:58 date/time in oven KE

4/13/2013 11:25 date/time out RR

elapsed hrs = 21.5

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	4/12/13 13:34	4/12/13 12:46	4/13/13 11:40										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
record weights to 4 places		*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank		0.0000	1.0908	1.0908			0.00							
~~WL46 A1~~		~~7.8439~~	~~1.1129~~				-						-	-
~~WL46 A1 dup~~		~~7.8346~~	~~1.0847~~				-	-					-	-
							~~RPD =~~	~~NA~~				~~RPD =~~	~~NA~~	
WL46 B1		6.5552	1.1303	6.1983			5.07	93.42%						
WL46 C1		6.9584	1.1085	6.3143			5.21	88.99%						
WL46 D1		8.6676	1.1067	6.6203			5.51	72.92%						
WL46 E1		6.7315	1.0993	5.3863			4.29	76.12%						
WL49 F5		8.0019	1.0945	4.8808			3.79	54.82%						
WL49 F5 dup		8.4960	1.1063	5.0478			3.94	53.34%						
							RPD =	2.73%				RPD =	NA	
WL49 F5 trp		8.6709	1.0884	5.1441			4.06	53.49%						
							RSD =	1.51%				RSD =	NA	
WL49 G1		7.6602	1.0888	6.6485			5.56	84.60%						
WL67 A7		6.4581	1.1015	2.9283			1.83	34.10%						
WL67 B7		6.6702	1.0696	2.4742			1.40	25.08%						
WL68 A6		6.2384	1.0708	2.8504			1.78	34.44%						
WL68 A6 dup		6.0612	1.1091	2.7510			1.64	33.16%						
							RPD =	3.79%				RPD =	NA	
WL68 A6 trp		6.5280	1.0655	2.9770			1.91	34.99%						
							RSD =	2.76%				RSD =	NA	
WL68 B6		6.2864	1.0915	2.3177			1.23	23.60%						
WL69 A1		6.7728	1.1221	3.0246			1.90	33.67%						
WL69 B1		6.5781	1.1025	2.2850			1.18	21.60%						

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analyst: (D)	Date: 4-12-13	13:58	Oven ID: 012	Balance ID: 1123230597
Time in Oven:	Time Out of Oven:	4/13/13 11:25	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		4-12-13 13:34	4-12-13 13:46	4/13/13 11:40						
Cal Weight (10.0000):		10.0000 (C)	10.0000 (D)	10.0000						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.0908	1.0908						
~~WL46 A1~~	2	~~7.8439~~	~~1.1129~~	~~7.1~~	lost tin			Reran on 4-15-13 (C)		
~~WL46 A1~~	3	~~7.8348~~	~~1.0847~~	~~7.2587~~						
B1	4	6.5552	1.1303	6.1983						
C1	5	6.9584	1.1085	6.3143						
D1	6	8.6676	1.1067	6.6203						
E1	7	6.7315	1.0993	5.3863						
WL49 F5	8	8.0019	1.0945	4.8808						
##F5	9	8.4960	1.1063	5.0478						
##F5	10	8.6709	1.0884	5.1441						
## G1	11	7.6602	1.0888	6.6185						
WL67 A7	12	6.4587	1.1015	2.9283						
B7	13	6.6702	1.0696	2.4742						
WL68 A6	14	6.2387 (3)	~~1.0708~~	2.8504						
~~##A6~~	15	6.0612	1.1091	~~2.9770~~	2.7510					
~~##A6~~	16	6.5280	1.0655	~~2.9770~~						
B6	17	6.2864	1.0915	~~2.9770~~	2.3177					
WL69 A1	18	6.7738	1.1221	~~2.9770~~	3.0246					
B1	19	6.5781	1.1025	2.2850						
					4-12-13 (A)					

6053F (2) 1.0708 4-12-13 (B)

Revision 002
12/28/09

ALKALINITY BENCHSHEET

methods: **SM 2320 B-97**

Date/Time: 4/18/13 5:50

Analyst: KE

pH meter verification — **pH meter ID:** ACCUMET AR60 — **Buret ID:** 01G30627

Buffer pH 7.00 — **pH Probe ID :** AR60

Measured pH 7.02 — *Calibration OK* — **Acid ARI ID:** LOW CURVE

Standardization of acid titrant *(titration to pH 4.5)*

ARI ID: 00137-10

grams Na2CO3 =	0.6267	*to*	250	*ml DI*
Normality Na2CO3 =	0.0473			
Assumed Acid Normality =	0.02			
Standardized Acid Normality=	0.0209	***OK!***		

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	11.30	0.021
2	0.00	5	11.38	0.021
3	0.00	5	11.35	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: 00137-11 — *mg/L CaCO3*

grams Na2CO3 = 0.6254 — *grams in* 250 — *mL =* 2360

dilution: 5.0 — *mL to* 95 — *CVS =* 124.2

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

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		10.14	100	20.2	5.53	11.37	0.00	57.7	118.5		*95.4%*	*OK!*		
ICB		4.13	100	20.0	0.00	0.00	0.00	0.0		0.0	0.0	0.0	0.0	0.0
DQL Std (2ppm)		8.01	100	20.2	0.21	0.24	0.00	2.2		5.0				
LCS		8.64	50	20.3	0.71	1.98	2.01	14.8	41.3		*98.5%*	*OK!*		
WL32 A3		6.96	100	22.0	0.00	1.69	1.80	0.0		16.5	16.5	0.0	0.0	3.6
WL32 A3 dup		6.94	100	21.9	0.00	1.70	1.78	0.0		16.9	16.9	0.0	0.0	3.9
RPD =										*2.5%*	*2.5%*			*7.1%*
WL32 B3		6.72	100	21.9	0.00	1.87	2.02	0.0		17.9	17.9	0.0	0.0	6.8
WL32 C3		4.88	100	21.5	0.00	0.05	0.14	0.0		-0.4	-0.4	0.0	0.0	-11.0
WL49 A11		6.37	100	20.3	0.00	14.29	0.00	0.0	149.0		149.0	0.0	0.0	127.1
WL49 A11 dup		6.40	100	20.4	0.00	14.21	0.00	0.0	148.1		148.1	0.0	0.0	118.0
RPD =									*0.6%*		*0.6%*			*7.5%*
~~WL49 B10~~		~~9.08~~	~~100~~	~~20.4~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.0~~	**RERUN**	**ON**	**HIGH**	**CURVE**	~~0.0~~	~~0.0~~
WL98 A5		6.49	100	20.5	0.00	14.86	0.00	0.0	154.9		154.9	0.0	0.0	100.3
WL98 A5 dup		6.48	100	20.4	0.00	14.83	0.00	0.0	154.6		154.6	0.0	0.0	102.4
RPD =									*0.2%*		*0.2%*			*2.1%*
~~WL98 B5~~		~~6.34~~	~~100~~	~~20.6~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.0~~	**RERUN**	**ON**	**HIGH**	**CURVE**	~~0.0~~	~~0.0~~
CCV		10.18	100	20.4	5.55	11.33	0.00	57.9	118.1		*95.1%*	*OK!*		
WL98 C5		6.46	100	20.3	0.00	20.47	0.00	0.0	213.4		213.4	0.0	0.0	148.0
WL98 D5		6.37	100	20.5	0.00	20.65	0.00	0.0	215.3		215.3	0.0	0.0	183.7
WL98 E5		6.44	100	20.2	0.00	26.12	0.00	0.0	272.3		272.3	0.0	0.0	197.7
~~WL98 F5~~		~~6.96~~	~~100~~	~~20.1~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.0~~	**RERUN**	**ON**	**HIGH**	**CURVE**	~~0.0~~	~~0.0~~
WL98 G5		6.34	100	20.2	0.00	17.12	0.00	0.0	178.5		178.5	0.0	0.0	163.2
WL98 H5		6.44	100	20.1	0.00	18.97	0.00	0.0	197.8		197.8	0.0	0.0	143.6
~~WM22 A5~~		~~6.45~~	100	~~20.2~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.0~~	**RERUN**	**ON**	**HIGH**	**CURVE**	~~0.0~~	~~0.0~~
~~WM22 A5 dup~~		~~0.00~~	100	~~0.0~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.0~~	**RERUN**	**ON**	**HIGH**	**CURVE**	~~0.0~~	~~0.0~~

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample *(shaded cells are calculated, make no entries)*

low level = {{{(2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4			ALK (mg CaCO3/l)			Partitioning (mg/l CaCO3)			(mg/l)
					pH=8.3	pH =4.5	pH=4.2	Phenolph	TOT HIGH	TOT LOW	HCO3	CO3	OH	FREE CO2
~~RPD =~~								-	-	-	-	-	-	-
~~WM22 B5~~		~~6.43~~	~~100~~	~~20.3~~	~~0.00~~	~~0.00~~	~~0.00~~	~~0.0~~	**RERUN**	**ON**	**HIGH**	**CURVE**	~~0.0~~	~~0.0~~
WM22 C5		7.83	100	20.0	0.00	26.97	0.00	0.0	281.2		281.2	0.0	0.0	8.3
CCV		10.11	100	20.3	5.55	11.31	0.00	57.9	117.9		*94.9%*	*OK!*		
WM22 D5		6.40	100	20.2	0.00	10.87	0.00	0.0	113.3		113.3	0.0	0.0	90.2
WM22 E5		6.12	100	20.0	0.00	24.78	0.00	0.0	258.3		258.3	0.0	0.0	391.9
WM22 F5		7.47	100	20.1	0.00	10.01	0.00	0.0	104.4		104.4	0.0	0.0	7.1
WM22 G5		6.63	100	20.0	0.00	11.47	0.00	0.0	119.6		119.6	0.0	0.0	56.1
WM40 A5		6.14	100	20.1	0.00	16.54	0.00	0.0	172.4		172.4	0.0	0.0	249.8
WM40 B5		6.22	100	20.0	0.00	19.12	0.00	0.0	199.3		199.3	0.0	0.0	240.2
WM40 C5		6.49	100	20.0	0.00	26.96	0.00	0.0	281.1		281.1	0.0	0.0	181.9
WM40 D5		5.90	100	20.1	0.00	6.95	0.00	0.0	72.5		72.5	0.0	0.0	182.4
CCV		10.23	100	21.2	5.61	11.33	0.00	58.5	118.1		*95.1%*	*OK!*		

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 4-18-13

pH meter verification **pH meter ID:** **ACCUMET AR60** **Buret ID:** 01G30627 Analyst: W 5:50

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: **00137-10**

grams Na2CO3 = 0.6267 to 250 ml DI

Normality Na2CO3 = 0.0473

Assumed Acid Normality = 0.02

Standardized Acid Normality=

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	11.30	
2	0.00	5	11.38	
3	0.00	5	11.35	
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: **00137-11** mg/L CaCO3

grams Na2CO3 = 0.6254 grams in 250 mL = 2360

dilution: 5.0 mL to 95 CVS = 124.2

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 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		10.14	100	20.2	5.53	11.37	0.00							
ICB		4.13	100	20.0	0.00	0.00	0.00							
DQL Std (2ppm)		8.01	100	20.2	0.20	0.20	0.24							
LCS		8.64	50	20.3	0.71	1.98	2.01							
WL32 A3		6.96	100	22.0	0.00	1.69	1.80							
WP A3		6.94	100	21.9	0.00	1.70	1.78							
B3		6.72	100	21.9	0.00	1.87	2.02							
C3		4.88	100	21.5	0.00	0.09	0.14							
WL44 A11		6.37	100	20.3	0.00	14.29	0.00							
WP A11		6.40	100	20.4	0.00	14.21	0.00							
B11		9.05	100	20.4	Rerun on high Curve									
WL98 A5 (WL49)		6.49	100	20.5	0.00	14.86	0.00							
WP A5		6.48	100	20.4	0.00	14.83	0.00							
B5		6.34	100	20.6	0.00	Rerun on high Curve								
CCV		10.18	100	20.4	5.55	11.33	0.00							
WL98 C5		6.46	100	20.3	0.00	20.47	0.00							
D5		6.37	100	20.5	0.00	20.65	0.00							
E5		6.44	100	20.2	0.00	26.12	0.00							
F5		6.96	100	20.1	0.00	Rerun on high Curve								
G5		6.34	100	20.2	0.00	17.12	0.00							
H5		6.44	100	20.1	0.00	18.97	0.00							
WM22 A6		6.45	100	20.2	0.00		0.00	high Curve						
WP A5			100		0.00		0.00	high Curve						
B5	6.43	~~5.00~~	100	20.3	0.00	Rerun on high Curve								
C5		7.83	100	20.0	0.00	26.97	0.00							
CCV		10.11	100	20.3	5.55	11.31	0.00							

(2) → 0.00 26.91 0.00

Vol PH Temp

(2) CSDP – 6.45 – 100 – 20.0 04-18-13 (4)

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 4-18-13

pH meter verification **pH meter ID:** **ACCUMET AR60** **Buret ID:** **01G30627** Analyst: (2) SSD

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	(mg/l CaCO3) HCO3	(mg/l CaCO3) CO3	(mg/l CaCO3) OH	(mg/l) FREE CO2
WM12 DS		6.40	100	20.2	0.00	10.87	0.00							
ES		6.12	100	20.0	0.00	24.78	0.00							
FS		7.47	100	20.1	0.00	10.01	0.00							
GS		6.63	100	20.0	0.00	11.47	0.00							
WM40 AS		6.14	100	20.1	0.00	16.54	0.00							
BS		6.22	100	20.0	0.00	19.12	0.00							
(2) CS		6.49	100	20.0	0.00	16.96	0.00							
DS		5.90	100	20.1	0.00	6.95	0.00							
CCV		10.23	100	21.2	5.61	11.33	0.00							
CCV														
CCV														
CCV														

4-18-13 (4)

4-19-13

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 4/18/13 12:27

pH meter verification **pH meter ID:** **ACCUMET AR60** **Buret ID:** **01G30627** Analyst: KE

Buffer pH **7.00** **pH Probe ID :** **AR60**

Measured pH 7.02 *Calibration OK* **Acid ARI ID:** **HIGH CURVE**

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: ***00137-10***

grams Na2CO3 =	**0.6267**	*to*	**250**	*ml DI*
Normality Na2CO3 =	0.0473			
Assumed Acid Normality =	**0.1**			
Standardized Acid Normality=	0.1008	***OK!***		

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	2.32	0.102
2	0.00	5	2.35	0.101
3	0.00	5	2.37	0.100
AVERAGE	0.00			0.101

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: ***00137-11*** *mg/L CaCO3*

grams Na2CO3 = **0.6254** *grams in* **250** *mL =* *2360*

dilution: **5.0** *mL to* **95** *CVS =* **124.2**

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 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		10.36	100	21.2	1.17	2.35	0.00	59.0	118.4		*95.3%*	*OK!*		
ICB		4.04	100	21.3	0.00	0.00	0.00	0.0		0.0	0.0	0.0	0.0	0.0
LCS		8.77	50	20.6	0.18	0.39	0.43	18.1	39.3		*93.8%*	*OK!*		
WL49 B10		9.05	100	20.2	0.43	15.22	0.00	21.7	767.1		723.7	43.3	0.0	1.3
WL49 B10 dup		9.04	100	20.3	0.45	15.18	0.00	22.7	765.0		719.7	45.4	0.0	1.3
RPD =								*4.5%*	*0.3%*		*0.6%*	*4.5%*		*1.7%*
WL98 B5		6.39	100	20.0	0.00	9.73	0.00	0.0	490.4		490.4	0.0	0.0	399.5
WL98 F5		6.96	100	20.2	0.00	7.69	0.00	0.0	387.6		387.6	0.0	0.0	85.0
WM22 A5		6.62	100	20.0	0.00	12.96	0.00	0.0	653.2		653.2	0.0	0.0	313.4
WM22 A5 dup		6.55	100	20.1	0.00	12.82	0.00	0.0	646.1		646.1	0.0	0.0	364.2
RPD =									*1.1%*		*1.1%*			*15.0%*
WM22 B5		6.44	100	20.0	0.00	6.60	0.00	0.0	332.6		332.6	0.0	0.0	241.5
CCV		10.31	100	21.2	1.15	2.34	0.00	58.0	117.9		*94.9%*	*OK!*	0.0	0.0

04-18-13 (W)

ALKALINITY BENCHSHEET

methods: **SM 2320 B-97**

Date/Time: 4/18/13 [illegible]

Analyst: (W)

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:** HIGH CURVE

Standardization of acid titrant *(titration to pH 4.5)*

ARI ID:	00137-10		
grams Na2CO3 =	0.6267	to	250 ml DI
Normality Na2CO3 =	0.0473		
Assumed Acid Normality =	~~0.02~~ 0.1 (1)		
Standardized Acid Normality=			

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	2.32	
2	0.00	5	2.35	
3	0.00	5	2.37	
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:	00137-11				mg/L CaCO3
grams Na2CO3 =	0.6254	grams in	250	mL =	2360
dilution:	5.0	mL to	95	CVS =	124.2
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 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		10.36	100	21.2	1.17	2.35	0.00							
ICB		4.04	100	21.3	0.00	0.00	0.00							
LCS		8.77	50	20.6	0.18	0.39	0.43							
WL49 B10		9.05	100	20.2	0.43	15.22	0.00							
↓ dp B10		9.04	100	20.3	0.45	15.18	0.00							
WL98 B5		6.39	100	20.0	0.00	9.73	0.00							
↓ F5		6.95	100	20.2	0.00	9.69	0.00							
WM22 A5		6.62	100	20.0	0.00	(2) 12.96	0.00							
↓ mA5		6.55	100	20.1	0.00	(3) 12.82	0.00							
↓ B5		6.44	100	20.0	0.00	6.60	0.00							
CCV		10.31	100	21.2	1.15	2.34	0.00							
CCV														
CCV														

4/18/13 (W)

(2) 12.96 - 4-18-13 (W)

(3) 12.82 4-18-13 (W)

CJ
4-22-13

TOC, Solids Data Analysis

DATE: 4/18/2013
ANALYST: KE 7:14

Instrument: Apollo 1
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
9.6	17.3	14.7				13.9	28.3%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	970	970	97.00%
Blank				1.00		40.0	-43.08	-43	Blank OK
NIST 1941B				1.00		1.7	27700	27,700	92.64%
Silica Blanks 1				1.00		48.4	9.59	10	Low Scale
Silica Blanks 2				1.00		48.8	17.29	17	Low Scale
Silica Blanks 3				1.00		52.1	14.72	15	Low Scale
~~WL49 F5~~	~~17.9~~	~~176.1~~	~~89.84%~~	~~9.84~~		~~1.6~~	~~11604~~	~~114,037~~	~~Range OK!~~
~~WL49 F5 dup~~	~~17.6~~	~~175.4~~	~~89.97%~~	~~9.97~~		~~1.4~~	~~15787~~	~~167,207~~	~~RPD=31.8%~~
~~WL49 F5 trp~~	~~16.4~~	~~162.4~~	~~89.90%~~	~~9.90~~		~~1.4~~	~~8872~~	~~87,731~~	~~RSD=29.3%~~
~~WL49 F5~~	~~17.9~~	~~176.1~~	~~89.84%~~	~~9.84~~		~~2.2~~	~~8463~~	~~83,136~~	~~Range OK!~~
WL49 F5 dup	17.6	175.4	89.97%	9.97		2.1	10650	106,013	RPD=4.9%
WL49 F5 trp	16.4	162.1	89.88%	9.88		2.3	12756	125,959	RSD=9.1%
WL49 F5	17.9	176.1	89.84%	9.84		2.2	11330	111,342	Range OK!
WL49 F5 ms	17.9	176.1	89.84%	9.84	10	2.3	21315	209,574	Range OK!
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*106,935*	*ppm*		*92%*	
CCV				1.00		40.0	1030	1,030	103.00%
Blank				1.00		40.0	-44.99	-45	Blank OK
WL49 G1				1.00		1.5	10300	10,300	Range OK!
WL67 A7				1.00		0.9	79985	79,985	Range OK!
WL67 B7				1.00		0.9	79041	79,041	Range OK!
WL69 A1				1.00		1.3	34354	34,354	Range OK!
WL69 B1				1.00		1.5	39923	39,923	Range OK!
NIST 1941B				1.00		1.5	25670	25,670	85.85%
CCV				1.00		40.0	1000	1,000	100.00%
Blank				1.00		40.0	-47.42	-47	Blank OK

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 4-18-13 (2)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler		
Standards:	Source	Conc (ppm)	Analyst:	(2)	
Calibration:	ARI – 00136-09	5000	Date:	7:14 4-18-13	
Verification:	ERA -0409-12-01	5000 to 1000 for CVS	Time:	7:14	
SRM:	NBS (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145	
Sample Sequence:					

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941B			1.7			
SB 1			48.4			
2			48.8			
3			52.1			
WL49 FS	17.9	176.1	1.6			
FS	17.6	175.4	1.4			
FS	16.4	162.1	1.4			Re-Sample & Re-Run
FS	17.9	176.1	(1) 2.2			
DUP FS	17.6	175.4	2.1			
DUP FS	16.4	162.1	2.3			
FS	17.9	176.1	2.2			
MS FS	17.9	176.1	2.3	2500	10	
CCV MS FS (1)			40			
CCB			40			
WL49 G1			1.5			
WL67 A7			0.9			
B7			0.9			
WL69 A'			1.3			
B'			1.5			
NBS 1941B			1.5			
CCV			40			
CCB			40			

4-18-13 (2)

4-18-13 @

Detailed Analysis Report Print Date/Time: 2013/04/18 13:21:06

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180612
Timestamp: 2013/04/18 06:20
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	969.8969	38.7959	5575536	22.100	23.099	157

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180633
Timestamp: 2013/04/18 06:37
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-43.0802	-1.7232	48097	22.124	22.200	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180647
Timestamp: 2013/04/18 06:53
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27699.5977	47.0893	6706891	22.029	23.029	258

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180718
Timestamp: 2013/04/18 07:22
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.5931	0.4643	63339	22.307	23.302	49

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180729
Timestamp: 2013/04/18 07:42
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17.2896	0.8437	115098	21.931	22.927	58

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180750
Timestamp: 2013/04/18 07:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14.7245	0.7671	104651	22.051	23.046	56

Sample ID: WL49 F5
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04180803
Timestamp: 2013/04/18 08:07
Sample Type: Sample

4-18-13 @

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

WL 49 02102

1	11603.6504	18.5658	2532672	21.929	22.929	103

Sample ID: WL49 F5 Mode: TOC
Method: Boat Sampler Filename: 04180842
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 08:59
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15787.3076	22.1022	3015091	23.791	24.789	118

Sample ID: WL49 F5 DUP Mode: TOC
Method: Boat Sampler Filename: 04180904
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:09
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8872.4658	12.4215	1694481	24.064	25.057	94

Sample ID: WL49 F5 Mode: TOC
Method: Boat Sampler Filename: 04180922
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:25
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8463.3984	18.6195	2539989	24.128	25.128	106

Sample ID: WL49 F5 DUP Mode: TOC
Method: Boat Sampler Filename: 04180930
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:40
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10650.4209	22.3659	3051057	24.346	25.341	106

Sample ID: WL49 F5 TRIP Mode: TOC
Method: Boat Sampler Filename: 04180946
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 09:53
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12756.1230	29.3391	4002311	24.403	25.402	123

Sample ID: WL49 F5 ~~TRIP~~ Original Mode: TOC
Method: Boat Sampler Filename: 04181002
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 10:05
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11330.0508	24.9261	3400313	24.518	25.518	114

Sample ID: WL49 F5 ~~TRIP~~ Mode: TOC
Method: Boat Sampler Filename: 04181011
Cal. Curve: 041613 BOAT CAL Timestamp: 2013/04/18 10:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21314.7695	49.0240	6687639	24.795	25.795	126

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181029
Timestamp: 2013/04/18 10:33
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1030.1005	41.2040	5904045	24.543	25.540	153

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181104
Timestamp: 2013/04/18 11:09
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-44.9948	-1.7998	37650	24.215	24.194	120

Last Message: Low Sample Detected

Sample ID: WG49 G1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181127
Timestamp: 2013/04/18 11:30
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10299.8818	15.4498	2107598	24.058	25.054	120

Sample ID: WL67 A2
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181200
Timestamp: 2013/04/18 12:07
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	79984.9375	71.9864	9820080	24.079	25.078	232

Sample ID: WL67 B7
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181213
Timestamp: 2013/04/18 12:23
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	79040.8359	71.1368	9704169	24.732	25.730	252

Sample ID: WL69 A1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181230
Timestamp: 2013/04/18 12:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34353.6445	44.6597	6092289	26.111	27.107	176

Sample ID: WL69 B1
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181242
Timestamp: 2013/04/18 12:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	39922.6016	59.8839	8169103	27.372	28.369	213

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181256
Timestamp: 2013/04/18 13:04
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25669.9238	38.5049	5535840	28.933	29.931	222

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181305
Timestamp: 2013/04/18 13:11
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1000.3041	40.0122	5741457	29.378	30.377	193

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04181312
Timestamp: 2013/04/18 13:16
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-47.4220	-1.8969	24405	29.632	29.645	120

Last Message: Low Sample Detected

Calibration Report Print Date/Time: 2013/04/16 13:28:35

Cal. Curve ID: 041613 BOAT CAL
Created: 2013/04/16 13:28
Calibration Factor (m): 1.364e+05
Y Intercept (b): 283170
r-squared: 0.99719

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	30947	0.000	-1.849	Low Sample De	2013/04/16 11:57
200 ppm	1289927	8.000	7.380		2013/04/16 12:08
500 ppm	3068066	20.000	20.415		2013/04/16 12:22
1000 ppm	6214396	40.000	43.479	Max Integrati	2013/04/16 12:57
2500 ppm	13730347	100.000	98.575	Max Integrati	2013/04/16 13:27

Detailed Analysis Report Print Date/Time: 2013/04/16 13:42:05

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161147
Timestamp: 2013/04/16 11:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			20761	29.379	29.279	120
2			48615	29.188	29.234	120
3			23464	29.319	29.351	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 30947 Std Dev: 15361 RSD: 49.64

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161159
Timestamp: 2013/04/16 12:08
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1353145	29.481	30.480	97
2			1276437	29.655	30.655	100
3			1240200	29.890	30.886	102

<<<Statistics>>> Mean: 1289927 Std Dev: 57668 RSD: 4.47

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161209
Timestamp: 2013/04/16 12:22
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2972064	30.477	31.476	150
2			3043364	31.094	32.093	147
3			3188769	31.696	32.696	202

<<<Statistics>>> Mean: 3068066 Std Dev: 110444 RSD: 3.60

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161223
Timestamp: 2013/04/16 12:34
Sample Type: TOC Standard

Canceled 4/16/13

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6028195	32.752	34.573	301
2			-10861519	144.712	37.341	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -2416662 Std Dev: 11942831 RSD: -494.19

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 04161235
Timestamp: 2013/04/16 12:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6153702	36.612	38.838	300
2			6228680	39.843	41.810	300
3			6260806	41.504	43.301	301

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 6214396 Std Dev: 54962 RSD: 0.88

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161300
Timestamp: 2013/04/16 13:27
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			13471712	43.807	45.798	300
2			13847641	46.690	48.258	301
3			13871687	47.866	50.704	300

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 13730347 Std Dev: 224307 RSD: 1.63

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161329
Timestamp: 2013/04/16 13:35
Sample Type: Cal. Verification

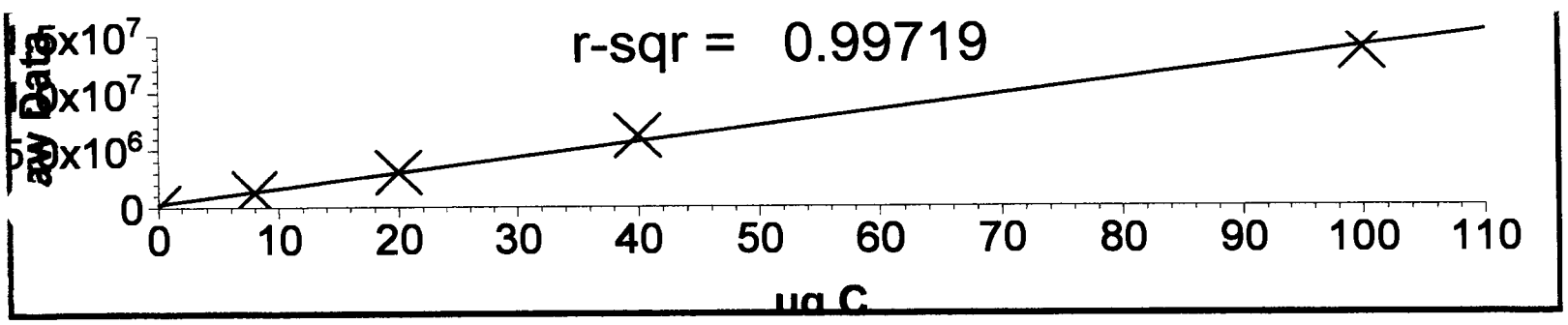
Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1069.2297	42.7692	6117558	49.225	51.488	300

Last Message: Max Integration Time Reached

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 041613 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 04161336
Timestamp: 2013/04/16 13:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.7771	0.1911	309237	50.289	51.285	104


r-sqr = 0.99719
x10^7
x10^7
x10^6
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20
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50
60
70
80
90
100
110
ug C

TOC, Aqueous Data Summary (Apollo 9000) DATE: 4/23/13 15:22

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	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 =*	[illegible]	250	*mL =*	[illegible]

Sample Data **ALL SAMPLES FOR DOC**

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	2	19.8218	0.37	[illegible]	[illegible]	[illegible]
ICB	1	NPOC	2	0.3763	0.01	[illegible]	[illegible]	[illegible]
1.5 ppm	1	NPOC	2	1.5284	0.12	[illegible]	[illegible]	[illegible]
IC Sparge Check	1	NPOC	2	19.6370	0.42	[illegible]	[illegible]	[illegible]
WL49 FILTER BL	1	NPOC	2	0.0448	0.15	[illegible]	[illegible]	[illegible]
WL49 A1	10	NPOC	2	7.3932	0.21	[illegible]	[illegible]	[illegible]
WL49 A1dup	10	NPOC	2	7.5468	0.06	[illegible]	[illegible]	[illegible]
WL49 A1ms	10	NPOC	2	12.4054	0.25	[illegible]	[illegible]	[illegible]
Spike at	0.025	*mL of*	5,000	*ppm Std to*	2.50	*mL =*	50.0	*mg/L*
WL49 B1	1	NPOC	2	8.5965	0.08	[illegible]	[illegible]	[illegible]
WL49 B1	5	NPOC	2	1.9349	0.06	[illegible]	[illegible]	[illegible]
WM84 FILTER BL	1	NPOC	2	0.0011	0.14	[illegible]	[illegible]	[illegible]
WM84 A6	1	NPOC	2	1.1880	0.09	[illegible]	[illegible]	[illegible]
WM84 B6	1	NPOC	2	1.1197	0.25	[illegible]	[illegible]	[illegible]
WM84 C6	1	NPOC	2	2.3011	0.09	[illegible]	[illegible]	[illegible]
WM84 D6	1	NPOC	2	2.7734	0.09	[illegible]	[illegible]	[illegible]
WK83 FILTER BL	1	NPOC	2	0.0957	0.09	[illegible]	[illegible]	[illegible]
WK83 A2	1	NPOC	2	1.3144	0.18	[illegible]	[illegible]	[illegible]
WK83 B3	1	NPOC	2	4.4870	0.15	[illegible]	[illegible]	[illegible]
CCV	1	NPOC	2	19.1159	0.01	[illegible]	[illegible]	[illegible]
CCB	1	NPOC	2	0.4498	0.07	[illegible]	[illegible]	[illegible]
WK83 C3	1	NPOC	2	5.2283	0.05	[illegible]	[illegible]	[illegible]
WK83 D3	1	NPOC	2	5.7626	0.16	[illegible]	[illegible]	[illegible]
WL32 A2	1	NPOC	2	2.2810	0.03	[illegible]	[illegible]	[illegible]
WL32 B2	1	NPOC	2	2.7130	0.12	[illegible]	[illegible]	[illegible]
WL32 C2	1	NPOC	2	0.6377	0.09	[illegible]	[illegible]	[illegible]
WL55 FILTER BL	1	NPOC	2	0.1630	0.10	[illegible]	[illegible]	[illegible]
WL55 A1	1	NPOC	2	1.4327	0.21	[illegible]	[illegible]	[illegible]
WL55 A1dup	1	NPOC	2	1.2715	0.25	[illegible]	[illegible]	[illegible]
WL55 A1ms	1	NPOC	2	20.2796	0.06	[illegible]	[illegible]	[illegible]
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
CCV	1	NPOC	2	19.4718	0.12	[illegible]	[illegible]	[illegible]
CCB	1	NPOC	2	0.3553	0.20	[illegible]	[illegible]	[illegible]

* = Sample is < 5x the MRL (7.5) and RSD >5% is expected due to low concentration in sample.

DOC ICUN 4/23/13
Curve STOCK MAP
ARI 00137-12
verification STOCK
ERA 0409-12-01
sysblank 54322

Autosampler Setup File Print Date/Time: 2013/04/0023 16:27:20
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C:\APOLLO.2\ASSETUP\042313B.SET

Rack Style -- 40 mL vial

#	Pos	Sample ID	Sample Type	Method ID	Reps	Status	Message
1	1	DI Wate	TOC Standard	TOC 0_50 ppm	2	Done	
2	2	1.5 ppm	TOC Standard	TOC 0_50 ppm	2	Done	
3	3	5.0 ppm.	TOC Standard.....	TOC 0_50 ppm.....	2..	Done..	
4	4	10 ppm	TOC Standard	TOC 0_50 ppm	2	Done	
5	5	25 ppm	TOC Standard	TOC 0_50 ppm	2	Done	
6	6	50 ppm..	TOC Standard.....	TOC 0_50 ppm.....	2..	Done..	
7	29	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Done	
8	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Done	
9	31.	1.5 PPM.	Cal. Verification...	TOC 0_50 ppm.....	2..	Done..	
10	32	CHECK	Cal. Verification	TOC 0_50 ppm	2	Done	
11	1	WL49 FB	Sample	TOC 0_50 ppm	2	Runni	
12.	2..	WL49 A1.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
13	3	WL49 A1	Sample	TOC 0_50 ppm	2	Ready	
14	4	WL49 A1	Sample	TOC 0_50 ppm	2	Ready	50 MG/L .025 mL 5000 to 2.5
15.	5..	WL49 B1.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
16	6	WL49B 5	Sample	TOC 0_50 ppm	2	Ready	
17	7	WM84 FB	Sample	TOC 0_50 ppm	2	Ready	
18.	8..	WM84 A6.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
19	9	WM84 B6	Sample	TOC 0_50 ppm	2	Ready	
20	10	WM84 C6	Sample	TOC 0_50 ppm	2	Ready	
21.	11.	WM84 D6.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
22	12	WK83 FB	Sample	TOC 0_50 ppm	2	Ready	
23	13	WK83 A2	Sample	TOC 0_50 ppm	2	Ready	
24.	14.	WK83 B3.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
25	29	ICV CCV	Cal. Verification	TOC 0_50 ppm	2	Ready	
26	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Ready	
27.	15.	WK83 C3.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
28	16	WK83 D3	Sample	TOC 0_50 ppm	2	Ready	
29	17	WL32 A2	Sample	TOC 0_50 ppm	2	Ready	
30.	18.	WL32 B2.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
31	19	WL32 C2	Sample	TOC 0_50 ppm	2	Ready	
32	20	WL55 FB	Sample	TOC 0_50 ppm	2	Ready	
33.	21.	WL55 A1.	Sample.....	TOC 0_50 ppm.....	2..	Ready.	
34	22	WL55 A1	Sample	TOC 0_50 ppm	2	Ready	
35	23	WL55 Am	Sample	TOC 0_50 ppm	2	Ready	0.1 mL 5000 to 25
36.	29.	ICV CCV.	Cal. Verification...	TOC 0_50 ppm.....	2..	Ready.	
37	30	ICB CCB	Cal. Verification	TOC 0_50 ppm	2	Ready	

End of Autosampler Setup File: 042313B

Calibration Report Print Date/Time: 2013/04/23 15:01:46

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

Detailed Analysis Report Print Date/Time: 2013/04/24 6:51:38

Sample ID: Rinse
Method: TOC 0_50 ppm
Cal. Curve: 042213Cal
Operator ID: MIKE
Mode: TOC
Filename: 04230911
Timestamp: 2013/04/23 09:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.8228	0.4114	112056	7.258	7.754	131
2	0.4965	0.2483	82362	7.082	7.574	126
3	0.4973	0.2486	82433	6.845	7.344	128
4	0.3283	0.1641	67053	6.804	7.301	124
5	0.3125	0.1563	65619	6.722	7.219	122

<<<Statistics>>> Mean: 0.4915 Std Dev: 0.2052 RSD: 41.76

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042213Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231010
Timestamp: 2013/04/23 10:33
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18.0623	9.0312	1743535	6.142	6.632	172
2	17.2378	8.6189	1668502	6.013	6.513	157
3	17.8476	8.9238	1723995	5.498	5.998	173

Last Message: Out of Calibration
<<<Statistics>>> Mean: 17.7159 Std Dev: 0.4277 RSD: 2.41

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042213Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231010
Timestamp: 2013/04/23 10:55
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.4277	-0.2139	60980	5.126	5.626	119
2	-0.5383	-0.2691	50922	4.604	5.100	117
3	-0.5431	-0.2716	50482	4.157	4.656	118

<<<Statistics>>> Mean: -0.5030 Std Dev: 0.0653 RSD: -12.98

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042213Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231109
Timestamp: 2013/04/23 11:33
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18.2212	9.1106	1757995	4.627	5.124	185
2	18.0006	9.0003	1737919	4.668	5.168	181
3	17.4770	8.7385	1690274	4.839	5.338	179

Last Message: Out of Calibration
<<<Statistics>>> Mean: 17.8996 Std Dev: 0.3822 RSD: 2.14

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042213Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231109
Timestamp: 2013/04/23 11:54
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-0.2998	-0.1499	72625	5.904	6.404	124
2	-0.3233	-0.1617	70481	5.911	6.411	124
3	-0.4543	-0.2272	58563	5.860	6.357	121

<<<Statistics>>> Mean: -0.3591 Std Dev: 0.0833 RSD: -23.18

Reset system blank

Sample ID: ICB CCB Mode: TC
Method: Blank TOC_TC Rng 1 Filename: 04231159
Cal. Curve: default Timestamp: 2013/04/23 12:53
Operator ID: MIKE Sample Type: Blank TOC_TC Rng 1

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			117244	6.912	7.110	154
2			84158	7.071	7.271	138
3			71365	7.126	7.321	125
4			64433	7.134	7.333	136
5			56218	7.252	7.451	124
6			42315	7.313	7.509	114

<<<Statistics>>> Mean: 72622 Std Dev: 26002 RSD: 35.80

New curve

Sample ID: DI Water Mode: TOC
Method: TOC 0_50 ppm Filename: 04231308
Cal. Curve: 042313Cal Timestamp: 2013/04/23 13:25
Operator ID: MIKE Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			73111	7.230	7.723	125
2			50454	7.200	7.695	117

<<<Statistics>>> Mean: 61782 Std Dev: 16021 RSD: 25.93

Sample ID: 1.5 ppm Mode: TOC
Method: TOC 0_50 ppm Filename: 04231308
Cal. Curve: 042313Cal Timestamp: 2013/04/23 13:43
Operator ID: MIKE Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			178401	7.273	7.771	127
2			178447	7.074	7.568	129

<<<Statistics>>> Mean: 178424 Std Dev: 33 RSD: 0.02

Sample ID: 5.0 ppm Mode: TOC
Method: TOC 0_50 ppm Filename: 04231308
Cal. Curve: 042313Cal Timestamp: 2013/04/23 14:01
Operator ID: MIKE Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			495459	7.520	8.018	135
2			477990	7.370	7.868	129

<<<Statistics>>> Mean: 486724 Std Dev: 12352 RSD: 2.54

Sample ID: 10 ppm Mode: TOC
Method: TOC 0_50 ppm Filename: 04231308
Cal. Curve: 042313Cal Timestamp: 2013/04/23 14:20
Operator ID: MIKE Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			922910	7.974	8.473	144
2			879190	7.957	8.451	135

<<<Statistics>>> Mean: 901050 Std Dev: 30915 RSD: 3.43

Sample ID: 25 ppm
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04231308
Timestamp: 2013/04/23 14:39
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2273412	8.158	8.656	151
2			2221425	7.876	8.369	145

<<<Statistics>>> Mean: 2247418 Std Dev: 36760 RSD: 1.64

Sample ID: 50 ppm
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04231308
Timestamp: 2013/04/23 14:58
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			4662004	7.473	7.973	185
2			4554440	7.404	7.904	171

<<<Statistics>>> Mean: 4608222 Std Dev: 76059 RSD: 1.65

Begin Run

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 15:22
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.5597	9.7798	1806016	6.589	7.086	167
2	20.0839	10.0420	1853711	6.540	7.039	179

<<<Statistics>>> Mean: 19.8218 ✓ Std Dev: 0.3707 RSD: 1.87

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 15:40
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.3718	0.1859	60358	6.895	7.395	120
2	0.3809	0.1905	61193	6.754	7.251	121

<<<Statistics>>> Mean: 0.3763 ✓ Std Dev: 0.0064 RSD: 1.71

Sample ID: 1.5 PPM
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 15:58
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.6102	0.8051	173032	7.142	7.636	125
2	1.4466	0.7233	158141	6.829	7.324	121

<<<Statistics>>> Mean: 1.5284 Std Dev: 0.1157 RSD: 7.57

Sample ID: CHECK
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 16:17
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.9350	9.9675	1840164	7.259	7.758	179

2	19.3390	9.6695	1785939	7.258	7.758	159

<<<Statistics>>> Mean: 19.6370 ✓ Std Dev: 0.4214 RSD: 2.15

Sample ID: WL49 FB DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 16:35
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1516	0.0758	68110	7.698	8.189	121
2	-0.0619	-0.0309	48694	7.429	7.929	117

<<<Statistics>>> Mean: 0.0448 ✓ Std Dev: 0.1510 RSD: 336.60

Sample ID: WL49 A1 10X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 16:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7.5402	3.7701	740310	7.596	8.095	140
2	7.2462	3.6231	713556	7.503	8.000	132

<<<Statistics>>> Mean: 7.3932 ✓ Std Dev: 0.2079 RSD: 2.81

Sample ID: WL49 A1dup 10x
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 17:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7.5014	3.7507	736774	7.650	8.147	134
2	7.5921	3.7961	745032	7.521	8.013	134

<<<Statistics>>> Mean: 7.5468 ✓ Std Dev: 0.0641 RSD: 0.85

Sample ID: WL49 A1 ms 10x
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 17:30
Sample Type: Sample

0.025 mL 5000 to 2.5mL

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12.2275	6.1138	1166748	7.384	7.884	137
2	12.5833	6.2916	1199110	7.069	7.568	147

<<<Statistics>>> Mean: 12.4054 ✓ Std Dev: 0.2516 RSD: 2.03

Sample ID: WL49 B1 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 17:49
Sample Type: Sample

Contained fine colloidal particulate possible settling issue MP 4-24

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.6523	4.3262	841486	7.533	8.032	137
2	8.5407	4.2703	831327	7.068	7.568	135

<<<Statistics>>> Mean: 8.5965 Std Dev: 0.0789 RSD: 0.92

Sample ID: WL49B 5x
Method: TOC 0_50 ppm
Mode: TOC
Filename: 04231503

WL 49 02138

Cal. Curve: 042313Cal Timestamp: 2013/04/23 18:07
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.9804	0.9902	234493	7.129	7.629	124
2	1.8895	0.9448	226225	6.796	7.294	125

<<<Statistics>>> Mean: 1.9349 Std Dev: 0.0643 RSD: 3.32

Sample ID: WM84 FB DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04231503
Cal. Curve: 042313Cal Timestamp: 2013/04/23 18:24
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.1018	0.0509	63584	7.586	8.081	117
2	-0.0996	-0.0498	45259	7.171	7.663	114

<<<Statistics>>> Mean: 0.0011 Std Dev: 0.1424 RSD: 12946.48

Sample ID: WM84 A6 Mode: TOC
Method: TOC 0_50 ppm Filename: 04231503
Cal. Curve: 042313Cal Timestamp: 2013/04/23 18:42
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.2523	0.6261	168250	7.566	8.064	122
2	1.1237	0.5618	156552	7.187	7.683	120

<<<Statistics>>> Mean: 1.1880 Std Dev: 0.0909 RSD: 7.65

Sample ID: WM84 B6 DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04231503
Cal. Curve: 042313Cal Timestamp: 2013/04/23 19:00
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.2983	0.6491	172436	7.561	8.058	126
2	0.9411	0.4705	139940	7.416	7.913	117

<<<Statistics>>> Mean: 1.1197 Std Dev: 0.2526 RSD: 22.56

Sample ID: WM84 C6 DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04231503
Cal. Curve: 042313Cal Timestamp: 2013/04/23 19:18
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.3656	1.1828	269541	7.919	8.417	128
2	2.2365	1.1182	257788	7.810	8.307	125

<<<Statistics>>> Mean: 2.3011 Std Dev: 0.0913 RSD: 3.97

Sample ID: WM84 D6 DOC Mode: TOC
Method: TOC 0_50 ppm Filename: 04231503
Cal. Curve: 042313Cal Timestamp: 2013/04/23 19:36
Operator ID: MIKE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.8307	1.4154	311852	7.793	8.288	130
2	2.7162	1.3581	301430	7.781	8.278	127

<<<Statistics>>> Mean: 2.7734 Std Dev: 0.0810 RSD: 2.92

Sample ID: WK83 FB DOC2WK83 A2 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 19:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.0291	0.0145	56968	7.815	8.312	118
2	0.1622	0.0811	69076	7.558	8.055	119

<<<Statistics>>> Mean: 0.0957 Std Dev: 0.0941 RSD: 98.40

Sample ID: WK83 A2 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 20:12
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.4436	0.7218	185653	6.998	7.487	120
2	1.1852	0.5926	162146	6.439	6.938	118

<<<Statistics>>> Mean: 1.3144 Std Dev: 0.1827 RSD: 13.90

Sample ID: WK83 B3 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 20:30
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.5903	2.2952	471937	5.484	5.983	128
2	4.3837	2.1918	453135	5.017	5.508	128

<<<Statistics>>> Mean: 4.4870 Std Dev: 0.1461 RSD: 3.26

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 20:49
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.1251	9.5626	1766486	4.758	5.257	163
2	19.1067	9.5534	1764810	4.508	5.007	157

<<<Statistics>>> Mean: 19.1159 Std Dev: 0.0130 RSD: 0.07

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 21:07
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.5028	0.2514	72278	4.142	4.641	120
2	0.3969	0.1985	62649	3.861	4.358	118

<<<Statistics>>> Mean: 0.4498 Std Dev: 0.0749 RSD: 16.65

Sample ID: WK83 C3 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 21:25
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.2608	2.6304	532933	4.427	4.919	135
2	5.1958	2.5979	527019	4.249	4.746	131

<<<Statistics>>> Mean: 5.2283 Std Dev: 0.0460 RSD: 0.88

Sample ID: WK83 D3 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 21:44
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.8762	2.9381	588920	4.985	5.483	151
2	5.6490	2.8245	568256	5.260	5.754	132

<<<Statistics>>> Mean: 5.7626 Std Dev: 0.1607 RSD: 2.79

Sample ID: WL32 A2 OC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 22:02
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.2993	1.1496	263501	5.604	6.097	129
2	2.2628	1.1314	260187	5.542	6.039	127

<<<Statistics>>> Mean: 2.2810 Std Dev: 0.0258 RSD: 1.13

Sample ID: WL32 B2 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 22:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	2.8004	1.4002	309090	6.308	6.805	130
2	2.6256	1.3128	293191	6.314	6.808	127

<<<Statistics>>> Mean: 2.7130 Std Dev: 0.1236 RSD: 4.56

Sample ID: WL32 C2 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 22:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.6988	0.3494	117897	6.274	6.774	124
2	0.5765	0.2883	106771	6.346	6.844	122

<<<Statistics>>> Mean: 0.6377 Std Dev: 0.0865 RSD: 13.56

Sample ID: WL55 FB DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 22:56
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.2344	0.1172	75646	6.606	7.104	126
2	0.0915	0.0457	62645	6.733	7.229	123

<<<Statistics>>> Mean: 0.1630 Std Dev: 0.1010 RSD: 62.01

WL 49 02139

Sample ID: WL55 A1 DOC
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 23:14
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.5797	0.7899	198040	6.608	7.103	129
2	1.2857	0.6428	171287	6.700	7.198	124

<<<Statistics>>> Mean: 1.4327 Std Dev: 0.2079 RSD: 14.51

Sample ID: WL55 A1dup
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 23:32
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.4465	0.7232	185916	7.426	7.923	126
2	1.0964	0.5482	154068	7.299	7.798	120

<<<Statistics>>> Mean: 1.2715 Std Dev: 0.2476 RSD: 19.47

Sample ID: WL55 Ams 20
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/23 23:51
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.3231	10.1615	1903257	7.045	7.543	166
2	20.2361	10.1181	1895347	7.151	7.645	156

<<<Statistics>>> Mean: 20.2796 Std Dev: 0.0615 RSD: 0.30

Sample ID: ICV CCV
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/24 00:11
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19.5537	9.7769	1805475	7.726	8.223	168
2	19.3899	9.6950	1790573	7.511	8.010	158

<<<Statistics>>> Mean: 19.4718 Std Dev: 0.1158 RSD: 0.59

Sample ID: ICB CCB
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE
Mode: TOC
Filename: 04231503
Timestamp: 2013/04/24 00:28
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.4955	0.2477	71611	7.140	7.640	122
2	0.2151	0.1075	46103	7.137	7.633	117

<<<Statistics>>> Mean: 0.3553 Std Dev: 0.1983 RSD: 55.80

WL 19 02149

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 =*	[illegible]

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	[illegible]		
ICB	1	NPOC	2	0.4985	0.07	[illegible]		
1.5 ppm	1	NPOC	2	1.6407	0.04	[illegible]		[illegible]
IC Sparge Check	1	NPOC	2	19.5467	0.07	[illegible]		
WL49 A1	10	NPOC	2	6.5615	0.20	[illegible]		
WL49 A1dup	10	NPOC	2	6.5504	0.22	[illegible]		
WL49 A1ms	10	NPOC	2	11.3468	0.13	[illegible]		
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		[illegible]		
WL49 B1	5	NPOC	1	20.4331		[illegible]		
WM84 A6	1	NPOC	2	4.4354	0.30	[illegible]		[illegible]
WM84 A6dup	1	NPOC	2	4.1999	0.63	[illegible]		
WM84 A6ms	1	NPOC	2	24.5767	0.13	[illegible]		
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	[illegible]		
WM84 C6	1	NPOC	1	41.4643		[illegible]		
WM84 C6	5	NPOC	2	7.2588	0.11	[illegible]		
WM84 D6	1	NPOC	2	12.9292	0.56	[illegible]		
Rinse	1	NPOC	2			[illegible]		
WL04 MB2	1	NPOC	2	-0.1344	0.12	[illegible]		
WL04 B	5	NPOC	1	~~105.7503~~		[illegible]		
WL04 B	5	NPOC	1	~~80.4994~~		[illegible]		
WL04 B	10	NPOC	1	~~55.4912~~		[illegible]		
WL04 B	10	NPOC	1	37.8791		[illegible]		
WL04 B	25	NPOC	2	15.4253		[illegible]		
WN31 B1	1	NPOC	2	5.6062		[illegible]		
CCV	1	NPOC	2	20.0335	0.19	[illegible]		
CCB	1	NPOC	2	0.1088	0.06	[illegible]		
INFORMATIONAL ADD-ONS FOR BOD EVALUATION								
WN32 A	500	NPOC	1	24.7980		[illegible]		
WN32 B	2500	NPOC	1	35.1905		[illegible]		
WN32 C	500	NPOC	1	2.6474		[illegible]		

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.	} 2x 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
22	13	WL04 B	Sample	TOC 0_50 ppm	1	Ready	highly particulated
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

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

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 A1ms 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			

100X pre-dilution

Sample ID: WN32 A 5X
Method: TOC 0_50 ppm
Cal. Curve: 042313Cal
Operator ID: MIKE

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 A1ms 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 B 25X 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

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Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WL419
Unacceptable Blank:	☐	Date of Event:	4/8-13
Unacceptable Duplicate: + Trip −	☑	Client ID:	
Unacceptable Spike:	☐	Method/Element:	TOC
Unacceptable Reference:	☐	Prep Code:	

Details of Problem/Recommended Corrective Action:

high Dup Low trip / then high trip & high Dup
Rerun Original
Re Digested + Re Seaved Dilutal Samples
+ Reran

Dup still higher than original

Samples Affected: F2

Corrective Action Taken: ~~Re digested + Reran~~

Same Result Reran Orginal. It Was
same as Very first run Second Run Low
Possible Matrix Interference

Analyst Initials: 4-18-13 **Supervisor:** v

Date: 4/18/13 **Date:** 4-22-13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventionals Laboratory Analyst Notes

ARI Job No.: WL49 Client ID: SAIC

Parameter: TOC Client Project:

List problems, concerns, corrective actions and any other pertinent information
No preserved volume was sent by client for TOC. Ran unpreserved an unfiltered volume left over from DOC. Analyst who logged in samples did not realize she should have split the volume and preserve left over for TOC! Preserved TOC-volume on 4-27-10.
DOC on sample B with colloidal material after Filtration - settled during analysis - used 5x dilution to avoid subsampling problems.

Analyst Initials:	W	Date:	4-27-10

Analytical Resources, Incorporated
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Conventionals Laboratory Analyst Notes

ARI Job No.: WL49

Client ID: SAIC

Parameter: DOC

Client Project: _____

List problems, concerns, corrective actions and any other pertinent information
samples filtered and preserved on arrival in lab.

Analyst Initials:	W	Date:	4-11-17

6147F

Revision 007
6/11/10

WL_110 : 02U59

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventionals Laboratory Analyst Notes

ARI Job No.: WL49 A & B

Client ID: SAIC

Parameter: TOC

Client Project:

List problems, concerns, corrective actions and any other pertinent information
Samples highly particulated, TOC run with dilution and auto-sampler mixing and sparging in an attempt to achieve more uniform subsample volumes
FOR SAMPLE B with higher particulates only single injections were used to avoid settling problems – both single injections were reported as duplicates

Analyst Initials:		Date:	9-26-13

WL49 : 82166

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WL49, WL65

SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WL49 ARI Sample No. F Client Sample No. IM-CB-DL-20130410-S

Set-up Date: 4.22.2013 Sample Description: SANDY, CLAYEY SILT, ORGANIC DEBRIS; FINES FUEL-LIKE ODOR

Sieve Set # 1 Date Sieved: 4/23/13

SOLIDS CONTENT

Moisture Content	Initials ey
Container No.	223
Tare Weight	1.4876
Wet Weight + Tare	33.0846
Dry Weight + Tare	18.6483

Test Sample	Initials ey
Container No.	223
Tare Weight	49.5298
Wet Weight + Tare	83.9729
Dry Weight + Tare	56.4472

SIEVE ANALYSIS
Initials JC

Sieve Size	Weight Retained
Tare	49.5590
4	50.1250
10	50.8411
18	51.4255
35	52.2516
60	53.4300
120	54.6957
230	56.0097
PAN	0.5603

SEDIGRAPH ANALYSIS
Initials ey
Date Sedigraphed 4.25.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	10D

SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WL49 ARI Sample No. G Client Sample No. IM-CB02-20130410-S

Set-up Date: 4.22.13 Sample Description: CLAYEY SAND W/GRAVEL

Sieve Set # 2 Date Sieved: 4/22/13

SOLIDS CONTENT

Moisture Content	Initials eg
Container No.	208
Tare Weight	1.4958
Wet Weight + Tare	105.0137
Dry Weight + Tare	91.2128

Test Sample	Initials eg
Container No.	208
Tare Weight	49.0893
Wet Weight + Tare	173.4615
Dry Weight + Tare	151.6615

SIEVE ANALYSIS
Initials JC

Sieve Size	Weight Retained
Tare	49.1151
4	76.4123
10	93.2369
18	102.7160
35	115.1160
60	131.4141
120	141.7330
230	147.0092
PAN	5.0575

SEDIGRAPH ANALYSIS
Initials eg
Date Sedigraphed 4.25.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	101

WL49 02403

Sample: IM-CB-01-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49F5.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 1:39:26PM
Reported: 4/25/2013 1:50:05PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 76 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	89.9	0.3	117.79403
917.3	0.125	89.6	0.3	104.98404
866.0	0.208	89.3	0.3	93.56712
817.5	0.291	89.0	0.3	83.39179
771.8	0.374	88.7	0.3	74.32301
728.6	0.457	88.3	0.3	66.24045
687.9	0.540	88.0	0.4	59.03686
649.4	0.623	87.6	0.4	52.61666
613.1	0.706	87.2	0.4	46.89465
578.8	0.789	86.8	0.4	41.79490
546.4	0.872	86.3	0.4	37.24974
515.8	0.955	85.9	0.5	33.19887
487.0	1.038	85.4	0.5	29.58852
459.7	1.121	84.9	0.5	26.37080
434.0	1.204	84.4	0.5	23.50300
409.7	1.287	83.9	0.5	20.94707
386.8	1.370	83.4	0.5	18.66910
365.2	1.453	82.9	0.5	16.63885
344.7	1.536	82.3	0.5	14.82939
325.5	1.619	81.8	0.5	13.21671
307.3	1.702	81.3	0.5	11.77940
290.1	1.786	80.7	0.5	10.49840
273.8	1.869	80.2	0.5	9.35671
258.5	1.952	79.6	0.6	8.33918
244.1	2.035	79.1	0.6	7.43230
230.4	2.118	78.5	0.6	6.62405
217.5	2.201	77.9	0.6	5.90369
205.4	2.284	77.4	0.6	5.26167
193.9	2.367	76.8	0.6	4.68946
183.0	2.450	76.2	0.6	4.17949
172.8	2.533	75.7	0.6	3.72497
163.1	2.616	75.1	0.6	3.31989
154.0	2.699	74.6	0.6	2.95885
145.4	2.782	74.0	0.6	2.63708
137.2	2.865	73.4	0.6	2.35030
129.6	2.948	72.9	0.6	2.09471
122.3	3.031	72.3	0.6	1.86691
115.5	3.114	71.7	0.6	1.66388
109.0	3.197	71.1	0.6	1.48294
102.9	3.280	70.4	0.6	1.32167

Sample: IM-CB-01-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49F5.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 1:39:26PM
Reported: 4/25/2013 1:50:05PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 76 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	69.8	0.6	1.17794
91.73	3.447	69.2	0.6	1.04984
86.60	3.530	68.5	0.6	0.93567
81.75	3.613	67.9	0.6	0.83392
77.18	3.696	67.3	0.6	0.74323
72.86	3.779	66.8	0.6	0.66240
68.79	3.862	66.3	0.5	0.59037
64.94	3.945	65.8	0.5	0.52617
61.31	4.028	65.5	0.3	0.46895
57.88	4.111	65.5	0.0	0.41795
54.64	4.194	65.4	0.1	0.37250
51.58	4.277	65.3	0.1	0.33199
48.70	4.360	65.1	0.1	0.29589
45.97	4.443	65.0	0.2	0.26371
43.40	4.526	64.8	0.2	0.23503
40.97	4.609	64.6	0.2	0.20947
38.68	4.692	64.3	0.2	0.18669
36.52	4.775	64.1	0.3	0.16639
34.47	4.858	63.7	0.3	0.14829
32.55	4.941	63.3	0.4	0.13217
30.73	5.024	62.8	0.6	0.11779
29.01	5.107	62.0	0.8	0.10498
27.38	5.191	61.0	1.0	0.09357
25.85	5.274	59.6	1.3	0.08339
24.41	5.357	57.9	1.7	0.07432
23.04	5.440	55.7	2.2	0.06624
21.75	5.523	53.0	2.8	0.05904
20.54	5.606	49.5	3.4	0.05262
19.39	5.689	45.4	4.1	0.04689
18.30	5.772	40.7	4.7	0.04179
17.28	5.855	35.6	5.1	0.03725
16.31	5.938	30.6	5.0	0.03320
15.40	6.021	25.9	4.6	0.02959
14.54	6.104	22.0	3.9	0.02637
13.72	6.187	19.0	3.0	0.02350
12.96	6.270	16.8	2.2	0.02095
12.23	6.353	15.4	1.5	0.01867
11.55	6.436	14.4	0.9	0.01664
10.90	6.519	13.8	0.7	0.01483
10.29	6.602	13.2	0.5	0.01322

Sample: IM-CB-01-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49F5.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 1:39:26PM
Reported: 4/25/2013 1:50:05PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 76 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	12.7	0.5	0.01178
9.173	6.768	12.2	0.5	0.01050
8.660	6.851	11.7	0.5	0.00936
8.175	6.935	11.3	0.5	0.00834
7.718	7.018	10.8	0.4	0.00743
7.286	7.101	10.4	0.4	0.00662
6.879	7.184	10.0	0.4	0.00590
6.494	7.267	9.7	0.3	0.00526
6.131	7.350	9.3	0.3	0.00469
5.788	7.433	9.0	0.3	0.00418
5.464	7.516	8.7	0.3	0.00372
5.158	7.599	8.3	0.3	0.00332
4.870	7.682	8.0	0.3	0.00296
4.597	7.765	7.7	0.3	0.00264
4.340	7.848	7.5	0.2	0.00235
4.097	7.931	7.3	0.2	0.00209
3.868	8.014	7.1	0.2	0.00187
3.652	8.097	7.0	0.2	0.00166
3.447	8.180	6.8	0.1	0.00148
3.255	8.263	6.7	0.2	0.00132
3.073	8.346	6.5	0.2	0.00118
2.901	8.429	6.3	0.2	0.00105
2.738	8.512	6.1	0.2	0.00094
2.585	8.595	5.9	0.2	0.00083
2.441	8.679	5.7	0.2	0.00074
2.304	8.762	5.6	0.1	0.00066
2.175	8.845	5.5	0.1	0.00059
2.054	8.928	5.4	0.1	0.00053
1.939	9.011	5.3	0.1	0.00047
1.830	9.094	5.2	0.1	0.00042
1.728	9.177	5.1	0.1	0.00037
1.631	9.260	4.9	0.2	0.00033
1.540	9.343	4.8	0.2	0.00030
1.454	9.426	4.6	0.2	0.00026
1.372	9.509	4.4	0.2	0.00024
1.296	9.592	4.2	0.2	0.00021
1.223	9.675	4.0	0.2	0.00019
1.155	9.758	3.6	0.3	0.00017
1.090	9.841	3.2	0.5	0.00015
1.029	9.924	2.5	0.7	0.00013

Sample: IM-CB-01-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49F5.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 1:39:26PM
Reported: 4/25/2013 1:50:05PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 76 kCnts/s
Reynolds Number: 0.42

Report by Size Table

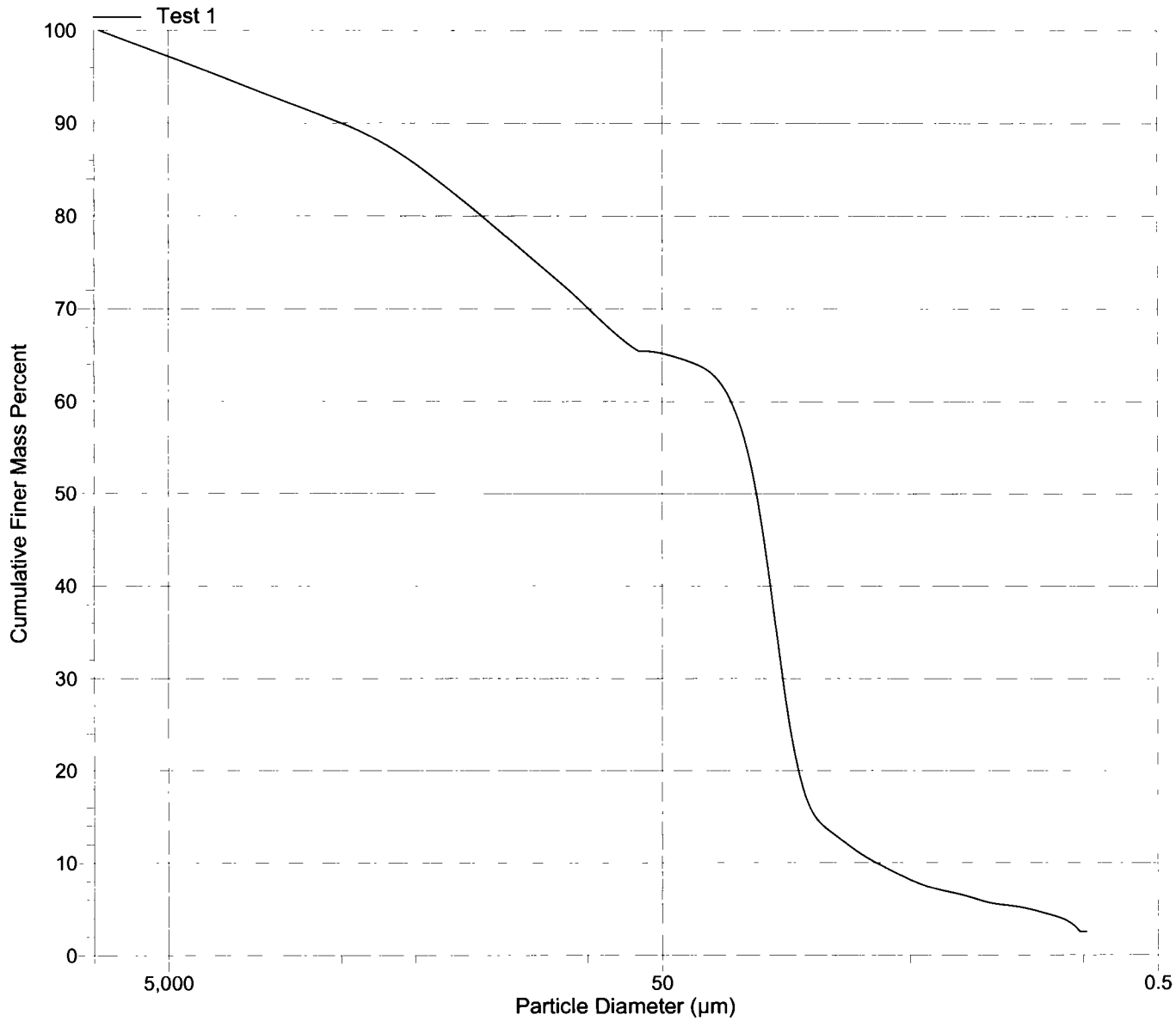
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	65.6	6.9
4750	97.0	3.0	31.00	62.9	2.7
2000	93.1	3.9	15.60	26.9	35.9
1000	90.0	3.1	7.800	10.9	16.0
500.0	85.6	4.4	3.900	7.1	3.8
250.0	79.3	6.3	2.000	5.4	1.8
125.0	72.5	6.8	1.000	2.5	2.9

Sample: IM-CB-01-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49F5.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 1:39:26PM
Reported: 4/25/2013 1:50:05PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 76 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample: IM-CB-02-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49G2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 2:24:02PM
Reported: 4/25/2013 2:34:46PM
Liquid Visc: 0.7226 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	49.9	0.8	117.78971
917.3	0.125	49.0	0.9	104.98019
866.0	0.208	48.1	0.9	93.56369
817.5	0.291	47.2	0.9	83.38873
771.8	0.374	46.3	0.9	74.32028
728.6	0.457	45.4	0.9	66.23802
687.9	0.540	44.4	1.0	59.03470
649.4	0.623	43.4	1.0	52.61473
613.1	0.706	42.4	1.0	46.89293
578.8	0.789	41.4	1.0	41.79337
546.4	0.872	40.4	1.0	37.24838
515.8	0.955	39.4	1.0	33.19765
487.0	1.038	38.3	1.1	29.58744
459.7	1.121	37.2	1.1	26.36983
434.0	1.204	35.9	1.2	23.50214
409.7	1.287	34.7	1.3	20.94630
386.8	1.370	33.3	1.3	18.66841
365.2	1.453	32.0	1.4	16.63824
344.7	1.536	30.6	1.4	14.82885
325.5	1.619	29.2	1.4	13.21622
307.3	1.702	27.9	1.3	11.77897
290.1	1.786	26.6	1.3	10.49802
273.8	1.869	25.4	1.2	9.35637
258.5	1.952	24.2	1.2	8.33887
244.1	2.035	23.2	1.1	7.43203
230.4	2.118	22.2	1.0	6.62380
217.5	2.201	21.2	1.0	5.90347
205.4	2.284	20.3	0.9	5.26147
193.9	2.367	19.4	0.9	4.68929
183.0	2.450	18.6	0.8	4.17934
172.8	2.533	17.8	0.8	3.72484
163.1	2.616	17.1	0.7	3.31977
154.0	2.699	16.4	0.7	2.95874
145.4	2.782	15.7	0.7	2.63698
137.2	2.865	15.1	0.6	2.35021
129.6	2.948	14.5	0.6	2.09463
122.3	3.031	13.9	0.6	1.86684
115.5	3.114	13.3	0.6	1.66382
109.0	3.197	12.8	0.6	1.48288
102.9	3.280	12.2	0.5	1.32162

Sample: IM-CB-02-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49G2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 2:24:02PM
Reported: 4/25/2013 2:34:46PM
Liquid Visc: 0.7226 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	11.7	0.5	1.17790
91.73	3.447	11.2	0.5	1.04980
86.60	3.530	10.7	0.5	0.93564
81.75	3.613	10.3	0.4	0.83389
77.18	3.696	10.0	0.4	0.74320
72.86	3.779	9.7	0.3	0.66238
68.79	3.862	9.4	0.2	0.59035
64.94	3.945	9.3	0.2	0.52615
61.31	4.028	9.2	0.1	0.46893
57.88	4.111	9.1	0.0	0.41793
54.64	4.194	9.1	0.1	0.37248
51.58	4.277	9.0	0.1	0.33198
48.70	4.360	8.9	0.1	0.29587
45.97	4.443	8.7	0.1	0.26370
43.40	4.526	8.6	0.2	0.23502
40.97	4.609	8.4	0.2	0.20946
38.68	4.692	8.2	0.2	0.18668
36.52	4.775	8.0	0.2	0.16638
34.47	4.858	7.8	0.2	0.14829
32.55	4.941	7.6	0.2	0.13216
30.73	5.024	7.3	0.2	0.11779
29.01	5.107	7.1	0.2	0.10498
27.38	5.191	6.9	0.2	0.09356
25.85	5.274	6.7	0.2	0.08339
24.41	5.357	6.5	0.2	0.07432
23.04	5.440	6.3	0.2	0.06624
21.75	5.523	6.0	0.2	0.05903
20.54	5.606	5.8	0.2	0.05261
19.39	5.689	5.6	0.2	0.04689
18.30	5.772	5.4	0.2	0.04179
17.28	5.855	5.3	0.2	0.03725
16.31	5.938	5.1	0.2	0.03320
15.40	6.021	5.0	0.1	0.02959
14.54	6.104	4.8	0.1	0.02637
13.72	6.187	4.7	0.1	0.02350
12.96	6.270	4.6	0.1	0.02095
12.23	6.353	4.4	0.1	0.01867
11.55	6.436	4.3	0.1	0.01664
10.90	6.519	4.2	0.1	0.01483
10.29	6.602	4.1	0.1	0.01322

Sample: IM-CB-02-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49G2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 2:24:02PM
Reported: 4/25/2013 2:34:46PM
Liquid Visc: 0.7226 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	4.0	0.1	0.01178
9.173	6.768	3.9	0.1	0.01050
8.660	6.851	3.8	0.1	0.00936
8.175	6.935	3.6	0.1	0.00834
7.718	7.018	3.5	0.1	0.00743
7.286	7.101	3.4	0.1	0.00662
6.879	7.184	3.3	0.1	0.00590
6.494	7.267	3.2	0.1	0.00526
6.131	7.350	3.1	0.1	0.00469
5.788	7.433	3.0	0.1	0.00418
5.464	7.516	2.9	0.1	0.00372
5.158	7.599	2.8	0.1	0.00332
4.870	7.682	2.7	0.1	0.00296
4.597	7.765	2.6	0.1	0.00264
4.340	7.848	2.5	0.1	0.00235
4.097	7.931	2.4	0.1	0.00209
3.868	8.014	2.3	0.1	0.00187
3.652	8.097	2.2	0.1	0.00166
3.447	8.180	2.1	0.1	0.00148
3.255	8.263	2.0	0.1	0.00132
3.073	8.346	1.9	0.1	0.00118
2.901	8.429	1.9	0.1	0.00105
2.738	8.512	1.8	0.1	0.00094
2.585	8.595	1.7	0.1	0.00083
2.441	8.679	1.7	0.1	0.00074
2.304	8.762	1.6	0.1	0.00066
2.175	8.845	1.6	0.1	0.00059
2.054	8.928	1.5	0.1	0.00053
1.939	9.011	1.5	0.1	0.00047
1.830	9.094	1.4	0.1	0.00042
1.728	9.177	1.3	0.1	0.00037
1.631	9.260	1.3	0.1	0.00033
1.540	9.343	1.2	0.1	0.00030
1.454	9.426	1.1	0.1	0.00026
1.372	9.509	1.1	0.1	0.00024
1.296	9.592	1.0	0.1	0.00021
1.223	9.675	1.0	0.0	0.00019
1.155	9.758	0.9	0.0	0.00017
1.090	9.841	0.9	0.0	0.00015
1.029	9.924	0.9	0.0	0.00013

Sample: IM-CB-02-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49G2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 2:24:02PM
Reported: 4/25/2013 2:34:46PM
Liquid Visc: 0.7226 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Table

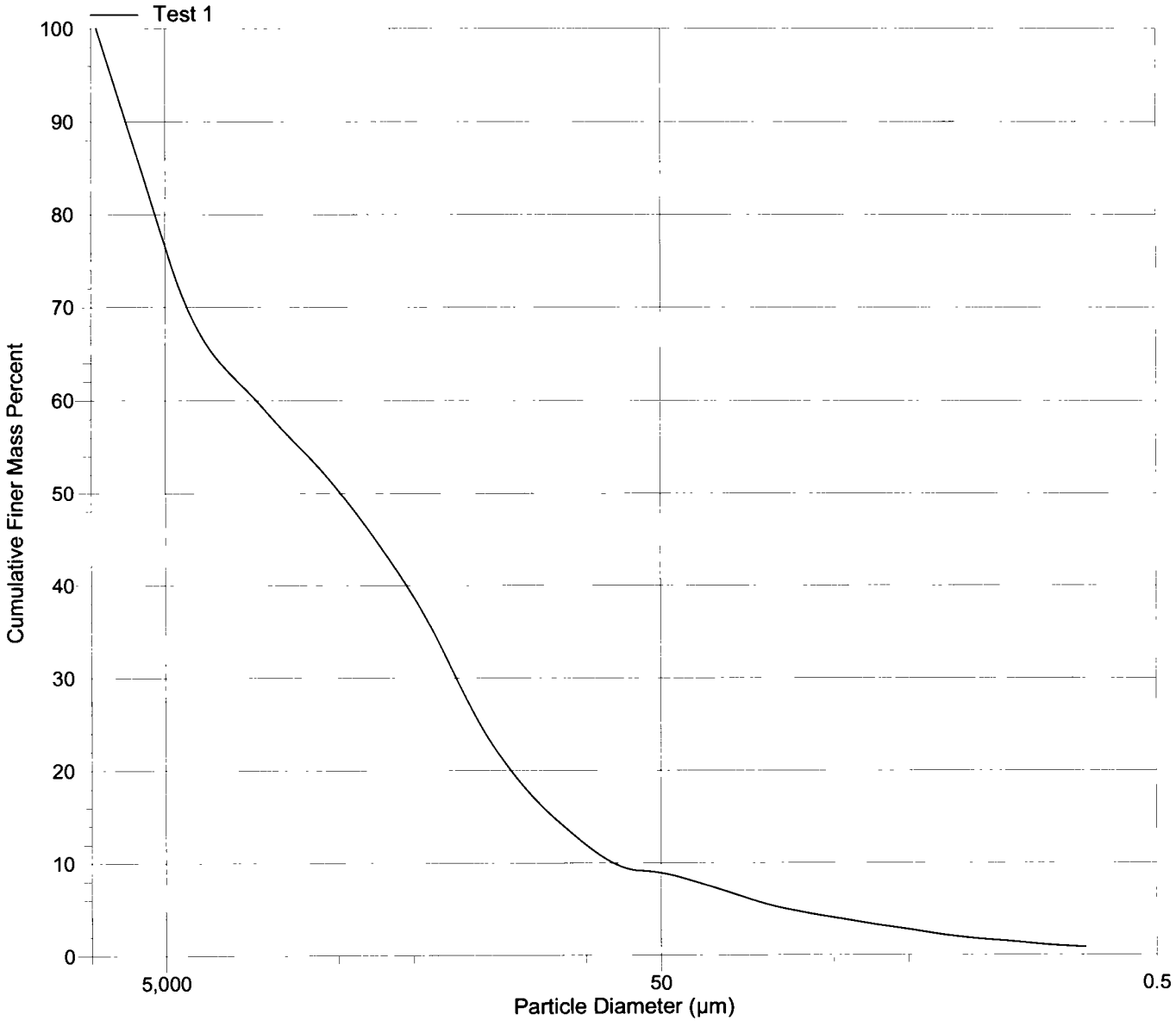
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	9.2	4.9
4750	74.7	25.3	31.00	7.4	1.8
2000	59.1	15.6	15.60	5.0	2.4
1000	50.3	8.8	7.800	3.6	1.4
500.0	38.8	11.5	3.900	2.3	1.3
250.0	23.6	15.2	2.000	1.5	0.8
125.0	14.1	9.5	1.000	0.9	0.6

Sample: IM-CB-02-20130410-S
Operator: EG
Submitter: SAIC
File: C:\5120\DATA\WL49\WL49G2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 4/25/2013 2:24:02PM
Reported: 4/25/2013 2:34:46PM
Liquid Visc: 0.7226 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 109 / 84 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample ID: IM-MH-01-20130410-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.25 L	Sample ID:	A5781_11228_PCB_003	Date Extracted:	13-Aug-2013
Date Collected:	10-Apr-2013	pH	7	QC Batch No.:	11228	Date Analyzed:	20-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	5.83			J	ES PCB-1	56.8
PCB-81 344'5-TeCB	ND	0.964			ES PCB-3	65.7
PCB-105 233'44'-PeCB	60.6				ES PCB-4	75.3
PCB-114 2344'5-PeCB	4.21			J	ES PCB-15	93.6
PCB-118 23'44'5-PeCB	147				ES PCB-19	87.9
PCB-123 23'44'5'-PeCB	2.69			J	ES PCB-37	90.1
PCB-126 33'44'5-PeCB	ND	0.741			ES PCB-54	88.2
PCB-156/157 233'44'5/233'44'5'-HxCB	27.3			C	ES PCB-77	112
PCB-167 23'44'55'-HxCB	8.37				ES PCB-81	109
PCB-169 33'44'55'-HxCB	ND	0.764			ES PCB-104	99.1
PCB-189 233'44'55'-HpCB	1.51			J	ES PCB-105	110
					ES PCB-114	110
TEQs (WHO M/H)					ES PCB-118	106
					ES PCB-123	107
ND = 0	0.00812		0.00812		ES PCB-126	121
ND = 0.5 x DL	0.0568		0.0568		ES PCB-153	92.4
ND = DL	0.105		0.105		ES PCB-155	75.8
					ES PCB-156/157	90.7
Totals					ES PCB-167	89
Mono-CBs	53.8				ES PCB-169	93.2
Di-CBs	973				ES PCB-170	90.1
Tri-CBs	3,740				ES PCB-180	90.7
Tetra-CBs	2,400		2,400		ES PCB-188	96.1
Penta-CBs	1,200		1,200		ES PCB-189	96
Hexa-CBs	890				ES PCB-202	98.7
Hepta-CBs	377		388		ES PCB-205	84.1
Octa-CBs	188		196		ES PCB-206	90.1
Nona-CBs	43.4				ES PCB-208	93.1
Deca-CB	4.04			J B	ES PCB-209	78.8
					CS PCB-28	86.9
Total PCB (Mono-Deca)	9,870		9,890		CS PCB-111	104
					CS PCB-178	109

Checkcode: 252-587-LFB SGS AP PCB 2013 Rev. 2.0 Report Created: 21-Aug-2013 13:32 Analyst: LB

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Sample ID: IM-MH-01-20130410-W — Method 1668C

Client Data		**Sample Data**		**Laboratory Data**			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.25 L	Sample ID:	A5781_11228_PCB_003	Date Extracted:	13-Aug-2013
Date Collected:	10-Apr-2013	pH	7	QC Batch No.:	11228	Date Analyzed:	20-Aug-2013
		Units	pg/L	Checkcode:	252-587-LFB	Time Analyzed:	18:10:24

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	44.5		PCB-19	159		PCB-54	0.977	J	PCB-72	1.19	J
PCB-2	1.96	J	PCB-30/18	803	C	PCB-50/53	61.2	C	PCB-68	(0.895)	
PCB-3	7.35	J B	PCB-17	404		PCB-45	82.2		PCB-57	1.31	J
			PCB-27	69		PCB-51	25.2	B	PCB-58	(0.962)	
Conc.	53.8		PCB-24	12.3		PCB-46	37		PCB-67	6.24	J
EMPC	53.8		PCB-16	438		PCB-52	365		PCB-63	7.16	J
			PCB-32	378		PCB-73	1.79	J	PCB-61/70/74/76	263	C
Di	**Conc.**	**Qualifiers**	PCB-34	(2.41)		PCB-43	20.5		PCB-66	125	
PCB-4	429		PCB-23	(2.34)		PCB-69/49	234	C	PCB-55	2.5	J
PCB-10	38.2		PCB-26/29	56.4	C	PCB-48	107		PCB-56	60	
PCB-9	18.2		PCB-25	32.4		PCB-44/47/65	363	C	PCB-60	31.3	
PCB-7	11.6		PCB-31	486		PCB-59/62/75	34.1	C	PCB-80	(0.858)	
PCB-6	44.1		PCB-28/20	514	C	PCB-42	125		PCB-79	[1.17]	J EMPC
PCB-5	6.63	J	PCB-21/33	184	C	PCB-41	54.4		PCB-78	(1)	
PCB-8	310		PCB-22	157		PCB-71/40	216	C	PCB-81	(0.964)	
PCB-14	(1.59)		PCB-36	(2.3)		PCB-64	171		PCB-77	5.83	J
PCB-11	12	B	PCB-39	(2.18)							
PCB-13/12	6.28	J C	PCB-38	(2.41)							
PCB-15	96.4		PCB-35	(2.47)							
			PCB-37	47.9							
Conc.	973		**Conc.**	3,740					**Conc.**	2,400	
EMPC	973		**EMPC**	3,740					**EMPC**	2,400	

SGS Analytical Perspectives

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Totals	Conc.	EMPC
Mono-Tri	4,770	4,770
Tetra-Hexa	4,490	4,490
Hepta-Deca	612	631
Mono-Deca	9,870	9,890

Sample ID: IM-MH-01-20130410-W — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.457)		PCB-109/119/86/97/125/87	140	C	PCB-155	(0.45)		PCB-165	(0.524)	
PCB-96	2.71	J	PCB-117	6.47	J	PCB-152	(0.476)		PCB-146	24.1	
PCB-103	1.24	J	PCB-116/85	28.1	C	PCB-150	(0.47)		PCB-161	(0.47)	
PCB-94	(1.04)		PCB-110	230		PCB-136	16.9		PCB-153/168	153	C
PCB-95	127		PCB-115	4.79	J	PCB-145	(0.497)		PCB-141	36.3	
PCB-100/93	2.19	J C	PCB-82	28.7		PCB-148	(0.611)		PCB-130	14.6	
PCB-102	7.52	J	PCB-111	(0.715)		PCB-151/135	52.3	C	PCB-137	13.6	
PCB-98	(1.18)		PCB-120	(0.71)		PCB-154	1.31	J	PCB-164	13.1	
PCB-88	(1.12)		PCB-108/124	7.52	J C	PCB-144	7.61	J	PCB-163/138/129	227	C
PCB-91	27.8		PCB-107	11.5		PCB-147/149	143	C	PCB-160	(0.485)	
PCB-84	47.7		PCB-123	2.69	J	PCB-134	12.3		PCB-158	22.1	
PCB-89	[3.1]	J EMPC	PCB-106	(0.77)		PCB-143	1.16	J	PCB-128/166	38.5	C
PCB-121	(0.717)		PCB-118	147		PCB-139/140	3.59	J C	PCB-159	(0.659)	
PCB-92	33.2		PCB-122	3.02	J	PCB-131	3.88	J	PCB-162	(0.623)	
PCB-113/90/101	182	C	PCB-114	4.21	J	PCB-142	(0.65)		PCB-167	8.37	
PCB-83	10.9		PCB-105	60.6		PCB-132	67.4		PCB-156/157	27.3	C
PCB-99	80.2		PCB-127	(0.799)		PCB-133	2.18	J	PCB-169	(0.764)	
PCB-112	(0.731)		PCB-126	(0.741)							
			Conc.	1,200					**Conc.**	890	
			EMPC	1,200					**EMPC**	890	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.483)		PCB-174	49.6		PCB-202	13.3		PCB-208	7.7	J
PCB-179	21.7		PCB-177	24		PCB-201	[6.54]	J EMPC	PCB-207	4.26	J
PCB-184	(0.54)		PCB-181	(0.927)		PCB-204	(0.535)		PCB-206	31.4	
PCB-176	[5.45]	J EMPC	PCB-171/173	12.6	J C	PCB-197	1.74	J			
PCB-186	(0.507)		PCB-172	6.33	J	PCB-200	7.61	J	**Conc.**	43.4	
PCB-178	9.49		PCB-192	(0.802)		PCB-198/199	55	C	**EMPC**	43.4	
PCB-175	1.82	J	PCB-180/193	105	C	PCB-196	21.1				
PCB-187	71.7		PCB-191	(0.765)		PCB-203	38.3		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.875)		PCB-170	37.3		PCB-195	13.1		PCB-209	4.04	J B
PCB-183	28.5		PCB-190	7.9	J	PCB-194	37.8				
PCB-185	[5.41]	J EMPC	PCB-189	1.51	J	PCB-205	[1.61]	J EMPC			
			Conc.	377		**Conc.**	188				
			EMPC	388		**EMPC**	196				

Sample ID: IM-SW-01-20130410-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:	1.20 L	Sample ID:	A5781_11228_PCB_004	Date Extracted:	13-Aug-2013
Date Collected:	10-Apr-2013	pH	6	QC Batch No.:	11228	Date Analyzed:	20-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	467				ES PCB-1	70.7
PCB-81 344'5-TeCB	22.8				ES PCB-3	75.7
PCB-105 233'44'-PeCB	3,270				ES PCB-4	88.2
PCB-114 2344'5-PeCB	157				ES PCB-15	102
PCB-118 23'44'5-PeCB	6,810				ES PCB-19	99.8
PCB-123 23'44'5'-PeCB	121				ES PCB-37	94.1
PCB-126 33'44'5-PeCB	46.2				ES PCB-54	99
PCB-156/157 233'44'5/233'44'5'-HxCB	1,310			C	ES PCB-77	98.6
PCB-167 23'44'55'-HxCB	422				ES PCB-81	97
PCB-169 33'44'55'-HxCB	ND	4.11			ES PCB-104	105
PCB-189 233'44'55'-HpCB	106				ES PCB-105	93.5
					ES PCB-114	96.2
TEQs (WHO M/H)					ES PCB-118	93.9
					ES PCB-123	93.9
ND = 0	5.04		5.04		ES PCB-126	90.2
ND = 0.5 x DL	5.1		5.1		ES PCB-153	83.7
ND = DL	5.16		5.16		ES PCB-155	81.9
					ES PCB-156/157	65.8
Totals					ES PCB-167	67.4
Mono-CBs	201				ES PCB-169	51.5
Di-CBs	12,300				ES PCB-170	57.5
Tri-CBs	64,000				ES PCB-180	60.1
Tetra-CBs	68,600				ES PCB-188	89.9
Penta-CBs	55,600				ES PCB-189	43.9
Hexa-CBs	54,400				ES PCB-202	77.7
Hepta-CBs	35,400				ES PCB-205	34.5
Octa-CBs	10,200				ES PCB-206	37.6
Nona-CBs	1,610				ES PCB-208	53.7
Deca-CB	146				ES PCB-209	38.7
					CS PCB-28	92.6
Total PCB (Mono-Deca)	302,000		302,000		CS PCB-111	100
					CS PCB-178	112

Checkcode: 281-032-XWB

Report Created: 21-Aug-2013 13:32 Analyst: LB

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Sample ID: IM-SW-01-20130410-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:	1.20 L	Sample ID:	A5781_11228_PCB_004	Date Extracted:	13-Aug-2013
Date Collected:	10-Apr-2013	pH	6	QC Batch No.:	11228	Date Analyzed:	20-Aug-2013
		Units	pg/L	Checkcode:	281-032-XWB	Time Analyzed:	19:05:24

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	122		PCB-19	831		PCB-54	22.2		PCB-72	38.2	
PCB-2	13.9		PCB-30/18	8,380	C	PCB-50/53	1,470	C	PCB-68	17.3	B
PCB-3	65.2		PCB-17	3,840		PCB-45	1,920		PCB-57	38.6	
			PCB-27	648		PCB-51	446		PCB-58	12.8	
Conc.	201		PCB-24	152		PCB-46	792		PCB-67	269	
EMPC	201		PCB-16	4,660		PCB-52	11,100		PCB-63	224	
			PCB-32	2,730		PCB-73	36.9		PCB-61/70/74/76	9,770	C
Di	**Conc.**	**Qualifiers**	PCB-34	31.9		PCB-43	444		PCB-66	4,720	
PCB-4	1,770		PCB-23	11.3		PCB-69/49	5,410	C	PCB-55	106	
PCB-10	87.8		PCB-26/29	2,080	C	PCB-48	2,570		PCB-56	2,260	
PCB-9	322		PCB-25	961		PCB-44/47/65	10,300	C	PCB-60	1,210	
PCB-7	169		PCB-31	10,700		PCB-59/62/75	989	C	PCB-80	(4.26)	
PCB-6	1,020		PCB-28/20	12,300	C	PCB-42	2,940		PCB-79	49	
PCB-5	98.1		PCB-21/33	7,960	C	PCB-41	1,460		PCB-78	(4.99)	
PCB-8	5,020		PCB-22	5,160		PCB-71/40	5,180	C	PCB-81	22.8	
PCB-14	(2.16)		PCB-36	(5.47)		PCB-64	4,270		PCB-77	467	
PCB-11	709		PCB-39	39.5							
PCB-13/12	352	C	PCB-38	(5.73)							
PCB-15	2,720		PCB-35	206							
			PCB-37	3,400							
Conc.	12,300		**Conc.**	64,000					**Conc.**	68,600	
EMPC	12,300		**EMPC**	64,000					**EMPC**	68,600	

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Totals	Conc.	EMPC
Mono-Tri	76,500	76,500
Tetra-Hexa	179,000	179,000
Hepta-Deca	47,300	47,300
Mono-Deca	302,000	302,000

Sample ID: IM-SW-01-20130410-W — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.618)		PCB-109/119/86/97/125/87	5,900	C	PCB-155	(0.505)		PCB-165	(0.66)	
PCB-96	98.7		PCB-117	235		PCB-152	8.47		PCB-146	1,600	
PCB-103	40.5		PCB-116/85	1,150	C	PCB-150	12.1		PCB-161	2.24	J
PCB-94	47.1		PCB-110	11,500		PCB-136	1,470		PCB-153/168	8,800	C
PCB-95	7,180		PCB-115	182		PCB-145	5.41	J	PCB-141	2,270	
PCB-100/93	84.9	C	PCB-82	1,200		PCB-148	6.96	J	PCB-130	801	
PCB-102	257		PCB-111	(3.74)		PCB-151/135	3,990	C	PCB-137	575	
PCB-98	(6.17)		PCB-120	(3.72)		PCB-154	88.3		PCB-164	835	
PCB-88	(5.86)		PCB-108/124	329	C	PCB-144	578		PCB-163/138/129	12,600	C
PCB-91	1,030		PCB-107	499		PCB-147/149	9,880	C	PCB-160	(0.61)	
PCB-84	2,470		PCB-123	121		PCB-134	675		PCB-158	1,180	
PCB-89	111		PCB-106	(4.03)		PCB-143	54.9		PCB-128/166	2,210	C
PCB-121	(3.75)		PCB-118	6,810		PCB-139/140	202	C	PCB-159	132	
PCB-92	1,410		PCB-122	114		PCB-131	170		PCB-162	41.8	
PCB-113/90/101	7,810	C	PCB-114	157		PCB-142	(0.818)		PCB-167	422	
PCB-83	440		PCB-105	3,270		PCB-132	4,260		PCB-156/157	1,310	C
PCB-99	3,120		PCB-127	(4.11)		PCB-133	158		PCB-169	(4.11)	
PCB-112	(3.83)		PCB-126	46.2							
			Conc.	55,600					**Conc.**	54,400	
			EMPC	55,600					**EMPC**	54,400	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	8.97		PCB-174	5,360		PCB-202	778		PCB-208	300	
PCB-179	1,910		PCB-177	2,620		PCB-201	400		PCB-207	132	
PCB-184	5.98	J	PCB-181	39.8		PCB-204	(0.961)		PCB-206	1,170	
PCB-176	478		PCB-171/173	1,190	C	PCB-197	88.7				
PCB-186	(0.774)		PCB-172	661		PCB-200	402		**Conc.**	1,610	
PCB-178	781		PCB-192	(5.02)		PCB-198/199	2,570	C	**EMPC**	1,610	
PCB-175	209		PCB-180/193	8,190	C	PCB-196	932				
PCB-187	6,710		PCB-191	153		PCB-203	1,450		**Deca**	**Conc.**	**Qualifiers**
PCB-182	51.3		PCB-170	3,210		PCB-195	1,040		PCB-209	146	
PCB-183	2,440		PCB-190	641		PCB-194	2,410				
PCB-185	669		PCB-189	106		PCB-205	98.9				
			Conc.	35,400		**Conc.**	10,200				
			EMPC	35,400		**EMPC**	10,200				